



# UNIVERSAL ENGINEERING SCIENCES

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May 20, 2016

Larry Wray, P.E.  
CPH Engineers, Inc.  
500 West Fulton Street  
Sanford, FL 32771

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Reference: **INITIAL GEOTECHNICAL EXPLORATION REPORT**  
***Proposed Wal-Mart Store No. 3873-00***  
***SEC I-75 and US Highway 441***  
***Alachua, Alachua County, Florida***  
**UES Project No. 0795.1400110.0000**  
**UES Report No. 1211903**

Dear Mr. Wray:

Universal Engineering Sciences, Inc. has completed a subsurface exploration at the above referenced site in Alachua, Alachua County, Florida. The exploration was conducted in general accordance with authorized proposal 1173904, dated November 5, 2014. This exploration was performed in accordance with generally accepted soil and foundation engineering practices and Walmart's "Geotechnical Investigation Specifications and Report Requirements" dated September 8, 2014.

The following report presents the results of our field exploration and a geotechnical engineering interpretation of those results with respect to the project characteristics provided to us. Included are: general recommendations for site preparation procedures, foundation design parameters, pavement design and subgrade preparation. A final report will be issued upon receipt and disposition of comments and questions from the project design team.

We appreciate the opportunity to have worked with you on this project and look forward to a continued association. Please contact us if you have any questions, or if we may further assist you as your plans proceed.

Sincerely,

**UNIVERSAL ENGINEERING SCIENCES, INC.**

Certificate of Authorization Number 549

[Reviewed by:]

Eduardo Suarez, P.E.  
Project Engineer  
Florida P.E. No. 60272  
Date:

Jeff S. Pruett, P.E.  
Vice President  
Florida P.E. No. 50775

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## **EXECUTIVE SUMMARY**

**We have prepared this executive summary as a general overview. Please refer to, and rely on, the full report for information about findings, recommendations, and other considerations.**

### **Project Location and Description**

The proposed Walmart Store No. 3873 will be a prototype C-151-SGR-QR and will be approximately 158,562 square feet, with truck well, associated drives and parking areas, and one (1) outparcel. The project site will be located near the southeast corner of Interstate-75 and US Highway 441, Alachua, Alachua County, Florida. Currently, the site is currently an undeveloped pasture.

Finish floor elevation for the proposed Wal-Mart Store No. 3873 will be set at 118 ft NAVD. We anticipate, within the building area, a significant amount of cut and fill (up to 20 foot of cut and 8 foot of fill) will be required to achieve the proposed finish floor elevation. A cut slope up to 20 feet in height will be at the southwest end. Existing elevations within the proposed building footprint range from approximately 110 ft to 138 ft NAVD. Additionally, we anticipate significant amounts of cut and fill to achieve the proposed parking and drive grades. Cuts of greater than 10 feet will be required in the higher elevations of the site.

### **Soil and Groundwater Conditions**

Groundwater readings indicate the groundwater level varied from 3 to 23 feet below existing grade at 24 hours after soil samples were collected. The difference in groundwater levels can most likely be attributed to topographic differences across the site and varying depths of clayey sands and clays encountered at the site. We believe the encountered groundwater level is a result of a perched condition. Based on available data, we estimate the permanent water table to be near elevation +60 feet NAVD.

Based on the completed soil borings, the generalized subsurface soil profile consists of very loose to medium dense sands with varying silt and clay content in the upper 2 feet, underlain by very loose to medium dense silty sands and clayey sands with layers of clay at varying depths and thicknesses from a depth of 2 to 20 feet below existing grade to the boring termination depth of our most recent exploration, or until limestone was encountered. Hard limestone was encountered at one boring location (C-22a) within the proposed stormwater retention area during our most recent field exploration at 10.5 feet below existing grade. Limestone was encountered in previous explorations at depths ranging from 14.5 to 57 feet below existing grade and remained continuous to the boring termination depths with the exception of boring GB-16. Excavations into limestone may prove to be difficult and should be accounted for in construction. Organic soils, other than surficial topsoil, were not encountered at the boring locations performed.

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### Groundwater Considerations

Groundwater levels and seasonal high groundwater levels may be affected by the proposed construction which will modify the surface and subsurface hydrology. It may be necessary to provide a permanent subsurface drainage system for some improvements to maintain the recommended separation between the perched water table and various structural elements in the building, pavement, and truck well areas.

Based upon the review of U.S.G.S. data, NRCS Soils Survey, and site boring data, a reasonable estimate for the temporary perched seasonal high groundwater table is from 0.5 to 1 foot below the existing land surface (bls). Based on available data, we estimate the permanent water table to be near elevation +60 feet NAVD. However, perched groundwater from seasonal rainfall and irrigation may affect the proposed improvements unless positive surface gradients and avoidance of trapped water conditions are incorporated into the site design.

### Site Preparation

Site preparation for the Wal-Mart site will consist of stripping of surficial organics and clearing of trees/vegetation and their associated root systems greater than ½ inch in diameter, followed by cut and fill sections necessitating cut slopes of up to 20 feet in height and fill depths of up to 20 feet in the proposed parking areas. In addition selective **undercut of the native in-situ expansive clays to provide a minimum of 5 feet of separation from the base of foundation footings and slab and selectively to 2 feet below the bottom of the stabilized subgrade component of the pavement section will be required.** Normal proof-rolling and compaction of exposed subgrade, and filling to grade with compacted structural fill is also expected.

### Foundation Design

After successful completion of the building site preparation, we recommend a shallow foundation system for support of the proposed building. The shallow spread foundations should be designed with a gross allowable soil bearing pressure of 3,000 pounds per square foot (psf) provided the building pad preparation recommendations presented in Section 9.3 of this report are followed. **Additionally, we recommend that the continuous footings be designed with top and bottom steel in consideration of potential upward or downward flexure from minor movement/pressures from the undercut expansive clays to limit the potential heave to less than 1 inch. The steel size and placement should be designed by a registered structural engineer.**

### Pavement Design

A rigid or flexible pavement section could be used on this project. Flexible pavement combines the strength and durability of several layer components to produce an appropriate and cost-effective combination of available construction materials and is less susceptible to movement from the under laying clays. Concrete pavement has the advantage of the ability to “bridge” over isolated soft areas, it requires less security lighting, and it typically has a longer service life than asphalt pavement. However, concrete pavement can allow water intrusion which can aggravate

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the expansive soils. Recommendations for both rigid and flexible pavements are presented in Section 9.2 of this report.

Typically, the most prevalent flexible pavement base material in Alachua County is limerock because of its local availability. Alternative base materials may be considered.

### **On-site Borrow and Excavation Considerations**

Excess topsoil and organic soil may be used in landscaped areas. Expansive clay material undercut from the building footprint and pavement and drive areas will need to be hauled off site or disposed of in non-structural areas.

With the exception of topsoil, debris, undiscovered organic soils and any expansive clay, some of the near surface on-site soils may be reused as structural fill, but they will require careful moisture control. Soils classified as SP, SP-SM and SP-SC which are excavated from the proposed stormwater management areas may be used for structural fill provided the organic content is less than 5 percent. Soils classified as SM and SC with less than 25 percent fines and less than 5 percent organic content are generally suitable for use as structural fill with the understanding that greater than normal moisture control will be required for compaction. SM and SC soils with more than 25 percent fines and Plasticity Index of 15 or less are generally not suitable for structural fill but may be used deeper than 5 feet below finished grades in pavement area fills and will require significant moisture conditioning and working to effect the recommended compaction. It should be expected that most site soils reused as fill material will require greater handling on the part of the earthwork contractor to dry and work the soils.

Limestone was encountered as shallow as about 10 to 15 feet below the existing surface in several boring locations. Pinnacles of limestone could impact excavation of deeper utility trenches at isolated locations and may be encountered at isolated locations in the stormwater pond location.

## **1.0 INTRODUCTION**

Universal Engineering Sciences, Inc. (UES) has completed the subsurface exploration for the proposed Wal-Mart Store No. 3873-00, which will be located at the SEC of I-75 and US Highway 441 in Alachua, Alachua County, Florida. Our exploration was authorized by Larry Wray, P.E. of CPH Engineers Inc. and was conducted as outlined in our Proposal Numbers 04WM-038J dated April 1, 2008, 04WM-038K dated May 29, 2008, 04WM-038L dated February 11, 2009 and 04WM-038M dated October 9, 2010, and 1173904 dated November 5, 2014. This exploration was performed in accordance with generally accepted soil and foundation engineering practices and Wal-Mart's "Geotechnical Investigation Specifications and Report Requirements", dated September 8, 2014.

Universal Engineering Sciences previously completed an initial geotechnical report for this project. These services are documented under our Report No. 863725, dated December 2, 2010, and Project No. 70080-077-06 dated April 30, 2005. Additionally, Geophysical Survey-Sinkhole Studies for the building and stormwater management areas of the site dated November 22, 2004, December 7, 2005, and January 24, 2006 and February 16, 2006 are included in Appendix E. The borings and tests associated with this previous study were considered and included in this engineering report.

Universal Engineering Sciences also reviewed a Phase I Environmental Site Assessment (ESA) of the property prepared by Universal Engineering Sciences, dated October 18, 2004. We have also reviewed a Phase II ESA report prepared by UES dated August 4, 2005. Additionally, UES reviewed a Phase I ESA update report prepared by UES dated July 17, 2006, and updated on May 2015. These reports were used to evaluate whether or not additional subsurface exploration was required because of cited subsurface environmental concerns such as dumps, landfills, buried organics, etc.

## **2.0 PROJECT CONSIDERATIONS**

The geotechnical exploration was planned and executed based on a Site Plan dated May 8, 2014, revised February 17, 2015 prepared by CPH Engineers Inc. These plans were also used in developing the scope of the geotechnical subsurface exploration. The proposed Wal-Mart Store No. 3873 will include an approximately 158,562 square foot retail building, with truck well, associated drive and parking areas, and one (1) outparcel. The parking lot will occupy the western, eastern, and northern portion of the property. A stormwater management facility will be located along the north portion of the site.

The proposed Wal-Mart Store No. 3873 will be a single story, high bay commercial structure. The store building will be constructed of a combination of load-bearing concrete block walls and steel columns supporting roof loads by means of steel joist girders and steel joists. Typical bay spacing between columns is approximately 55 by 48 feet. Typical gravity loads for interior columns are 85 kips with a maximum total loading under severe live load conditions of 150 kips. Maximum column uplift force from wind is estimated at 30 kips. Typical gravity loads for exterior columns are 50 kips each. The concrete block wall gravity loads will range from 1.5 to 2.0 kips per lineal foot for non-load bearing walls and 4.0 to 6.0 kips per lineal foot for load bearing wall. The estimated maximum uniform floor slab live load is 125 pounds per square foot, and the estimated maximum concentrated floor slab load is 5 kips.

Two types of pavement sections will be required at the project; standard duty and heavy duty pavements. Per Wal-Mart requirements the standard duty pavement will be designed for

equivalent 18 kip single axle loads ( $E_{18}$ SAL) of 109,500 over a 20 year design life. The heavy duty pavement section will be designed for approximately 335,800  $E_{18}$ SALs over a 20 year design life. Terminal serviceability, initial serviceability, and reliability for all pavement sections will be 2.0, 4.2, and 85%, respectively.

Across the proposed building, the site grades range from a high of about +138 feet, NAVD to a low of about +110 feet, NAVD sloping from the southwest to the northeast. Based on the final floor elevation of +118, NAVD provided, we anticipate that the building limits will be filled as much as 8 feet at the northeast end and cut into grade as much as 20 feet at the southwest end.

Current grading plans require cut and fill slopes equal to or greater than 3H:1V and more than 10 feet in height.

We assume the building will be constructed with an exposed concrete floor slab throughout the facility and founded on a minimum 4 inch thick compacted base material.

If any of the above information is incorrect or changes prior to construction, please contact UES immediately so that revisions to the recommendations contained in this report can be made, as necessary. In order to verify that these recommendations are properly interpreted and implemented, UES must be allowed to review the final design and specifications prior to the start of construction and understands that this is part of the overall geotechnical contract.

Deviations from the GISRR are listed below.

- Limerock Bearing Ratio (LBR) FM 5-515 was used to test the subgrade soils in lieu of California Bearing Ratio (CBR) tests since LBR is the standard test required by the Florida Department of Transportation (FDOT) to test the base and stabilized subgrade materials for pavements.
- The site and planned construction are not located in a jurisdiction governed by International Building Code (IBC) and therefore the 100 feet deep test boring was not performed, however, in the absence of any governing standard for seismic matters in Florida, and based on our general geologic knowledge of the site and vicinity, we assigned an IBC site classification in order to meet Wal-Mart report content specification.

### **3.0 SITE DESCRIPTION**

#### **3.1 General**

The subject site is a proposed Wal-Mart Store Supercenter located within Sections 15, 16 and 37, Township 9 South, Range 18 East in Alachua County, Florida. More specifically, the property is a combination of trapezoid and rectangle shapes, approximately 31 acres in size that is bounded by I-75 to the west, NW 158<sup>th</sup> Lane to the north, pasture to the east, and an apartment complex and additional pasture land to the south of the property. The parcel location is superimposed on a street map presented as the Site Location Map, Appendix A.

#### **3.2 Soil Survey**

Based on the 1985 Soil Survey for Alachua County, Florida, as prepared by the US Department of Agriculture, Natural Resources Conservation Service (NCRS), the predominant soil types at

the site are identified as 8C Millhopper sand, 29B and C Lochloosa fine sand, 31B Blichton sand, 33B and C Norfolk loamy fine sands, and 35B Gainesville sand soils. The published general description of these soils with depth, their published range of permeability characteristics and their published range of seasonal high groundwater levels, is presented in Table 1 below.

Soil Type	Constituents	Hydrologic Group	Natural Drainage	Soil Permeability (Inches/Hr)	Seasonal High Water Table
Millhopper Sand (8C)	0-54" Sand. 54-56" Loamy sand, loamy fine sand. 56-80" Sandy loam, fine sandy loam, sandy clay loam.	A	Moderately Well Drained	0-54" 6.0 – 20 54-56" 2.0 – 6.0 56-80" 0.06 – 2.0	3.5 to 6 feet below ground surface
Lochloosa fine sand (29B)	0-31" Fine sand. 31-35" Fine sandy loam, sandy loam, loamy sand. 35-54" Sandy clay loam, sandy loam. 54-83" Sandy clay, sandy clay loam.	C	Poorly Drained	0-31" 2.0 – 20 31-35" 0.6 – 6.0 35-54" 0.6 – 0.2 54-83" 0.06 – 0.2	2.5 to 5 feet below ground surface
Lochloosa fine sand (29C)	0-25" Fine sand. 25-30" Fine sandy loam, sandy loam, loamy sand. 30-67" Sandy clay loam, sandy loam. 67-80" Sandy clay, sandy clay loam.	C	Poorly Drained	0-25" 2.0 – 20 25-30" 0.6 – 6.0 30-67" 0.6 – 0.2 67-80" 0.06 – 0.2	2.5 to 5 feet below ground surface
Blichton sand (31B)	0-28" Sand. 28-62" Sandy clay loam. 62-80" Sandy clay loam, sandy clay.	C	Poorly Drained	0-28" 6.0 – 20 28-62" 0.06 – 0.6 62-80" 0.06 – 0.6	0 to 1 foot below ground surface
Norfolk loamy fine sand (33B)	0-9" Loamy fine sand. 9-41" Sandy loam, sandy clay loam, clay loam. 41-80" Sandy clay loam, clay loam, sandy clay.	B	Well Drained	0-9" 2.0 – 20 9-41" 0.6 – 2.0 41-80" 0.06 – 2.0	4 to 6 feet below ground surface
Norfolk loamy fine sand (33C)	0-11" Loamy fine sand. 11-46" Sandy loam, sandy clay loam, clay loam. 46-75" Sandy clay loam, clay loam, sandy clay.	B	Well Drained	0-11" 2.0 – 20 11-46" 0.6 – 2.0 46-75" <0.06 – 2.0	4 to 6 feet below ground surface
Gainesville sand (35B)	0-82" Sand, fine sand, loamy sand, loamy fine sand.	A	Well Drained	0-82" 6.0 – 20	Greater than 6 feet below ground surface

### **3.3 Topography**

Based on the High Springs United States Geologic Survey (USGS) quadrangle map, the average ground surface elevation near the site appears to be approximately +100 feet NAVD with a range of +80 to +150 ft. NAVD. A reproduction of a portion of the USGS Map for the site area is included in Appendix A.

### **3.4 Geology**

The general geology of Alachua County is characterized by 30 to 50 feet of undifferentiated fine to medium grained sands and clayey sands of Holocene age (the last 10,000 years) overlying the Miocene age (circa 10 millions years old) Hawthorne Formation.

The Hawthorne is approximately 0 to 50 feet thick and is comprised of interbedded layers of clay, clayey sand, sandy clay, and phosphate carbonates. The underlying Tertiary age (circa 50 million years old) carbonates gently dip east under an increasing thickness of younger sediments. The general area of the proposed parcel is characterized with unconsolidated and undifferentiated quartz sands near surface, and karst (sinkhole) features such as collapse depressions, sinkholes, disappearing streams, springs, and mapped underground caves.

A "sinkhole" is defined as "a depression caused by the soil and other materials subsiding into an open hole or void below the ground surface." Sinkholes generally occur from the collapse of subsurface voids or from the erosion or raveling of overburden soil into the voids. The resulting surface expression of these karst features consisted of depressional areas often circular in shape and commonly referred to as "sinkholes."

Typically, the soil existing immediately above the limestone consists of sandy clays, clayey sands, and other low permeability soils commonly referred to as the Hawthorn Formation. In general, the thicker the Hawthorn Formation, the less susceptible the site is to sinkhole development. However, in areas where the limestone deposits include voids and where the Hawthorn Formation is relatively weak, breaches of the Hawthorn Formation occur, providing paths through which groundwater travels, taking erodible soil with it. In these cases, the surficial relatively sandy soils ravel into the cavities and fractures in the limestone.

The confining Hawthorn layer also forms a barrier to groundwater, which ordinarily would be continuous from the surface soils downward into the limestone. The groundwater level or potentiometric surface in the soils above the confining layer frequently differs from that in the porous limestone because the confining layer prevents a normal hydrostatic condition. Provided the confining layer remains intact, the two groundwater regions remain independent.

It is important to understand from a regional context that sinkholes are a characteristic feature of North Central Florida geology and can occur anywhere in the general region depending on the presence of a cavernous void in the limestone deposit. These generalized conditions described above apply to the subject site and the region.

The Hawthorne formation is generally non-uniform with significant variance in the layer thickness and elevational gradients. Due to the high fines content and plastic behavior of the Hawthorne stratum, special considerations are required for development. These considerations include perched water, stormwater runoff, pumping of soils, the effects of clay shrink/swell behavior on adjacent structures, and bearing capacity.

## **4.0 PURPOSE AND SCOPE OF SERVICES**

### **4.1 Purpose**

The purposes of this exploration were:

- to explore and evaluate the subsurface conditions at the site and note potential geotechnical considerations that may affect the proposed design, construction, or serviceability of the proposed improvements,
- to evaluate slope stability of proposed cut slopes, and
- to provide geotechnical engineering recommendations for site preparation, pavement and foundation design parameters, and stormwater soil design parameters.

### **4.2 Scope of Service**

As part of our contracted scope of services, UES reviewed several Phase I ESA reports prepared by UES. UES Phase I ESA report dated October 15, 2004 identified RECs in connection with the subject property and UES recommended further investigation of the soil and groundwater. Following the 2004 Phase I ESA, UES completed a Phase II ESA and reported its findings in a report dated August 4, 2005. Based on the findings of the Phase II ESA investigation, no further assessment was recommended. Subsequently, UES performed a Phase I ESA update and issued a report dated July 17, 2006, updated May 2015. The 2015 Phase I ESA update report did not identify any additional RECs in connection with the subject property that would cause UES to recommend additional subsurface exploration specifically to address such environmental findings. We note that the lack of such identification in the Phase I ESA does not preclude the presence of finding of detrimental buried materials during site development.

Since our involvement with this project in 2005, UES has performed multiple field exploration programs at this site. During this time the site design was altered based on the project requirements and limitations. During the iteration process UES performed field explorations to comply with the most recent Wal-Mart Geotechnical Investigation Specifications. As a result, all the boring labels do not correspond to a logical progression (i.e. All "A" borings are not within the current parking area). Please refer to Appendix B: General Description of Boring Locations, for the general location description for corresponding boring numbers.

Additional field testing activities were started on March 9, 2015 and completed on March 10, 2015. These tests ten (10) additional auger borings in the driveway/pavement areas each to a depth of 10 feet, one (1) SPT boring at the proposed outprcel, and collected three "undisturbed" Shelby tube samples for swell tests.

A compilation of the services conducted by Universal to date for the subsurface exploration program are as follows:

- Advancing fifty-two (52) Standard Penetration Test (SPT) borings in the proposed Wal-Mart building area to depths between 10 feet and 100 feet below existing land surface (bls).



- Advancing twenty-nine (29) SPT borings each to depths between 15 feet and 20 feet below the existing land surface along a proposed cut/fill slope alignment along the south perimeter of the proposed stormwater management system.
- Advancing thirty-nine (39) SPT borings to depths between 15 feet and 30 feet below the existing land surface along the proposed cut slope alignment.
- Advancing seventy-three (73) SPT borings to depths between 15 feet and 100 feet (bls) within the proposed parking lot and drive areas.
- Advancing four (4) SPT borings to depths of 30 feet beneath the proposed outparcel.
- Advancing fifty-two (52) SPT borings to depths between 30 feet 55 feet below the existing land surface within the proposed stormwater retention facility number 1.
- Advancing six (6) SPT borings to depths of 15 feet below the existing land surface within the proposed stormwater retention facility number 2.
- Advancing thirty-seven (37) Auger borings to depths of 10 feet below the existing land surface within the proposed roadway.\*
- Advancing one (1) SPT boring to a depth of 20 feet within the proposed outparcel.\*
- Performing several geophysical surveys for the proposed building and retention facility areas to assess the site for potential sinkhole activity.
- Collection of twenty-two (22) “undisturbed” Shelby tube samples.\*
- Securing samples of representative soils found in the soil borings for laboratory analysis and classification by a member of our geotechnical staff.
- Measuring the existing site groundwater levels at the boring locations and providing an estimate of the typical wet season groundwater level.
- Conducting laboratory tests on selected disturbed and “undisturbed” soil samples obtained in the field to evaluate their engineering properties.
- Assessing the existing soil conditions with respect to the proposed construction.
- Preparing a report which documents the results of our subsurface exploration and analysis with geotechnical engineering recommendations.

\*Includes recent field tests

The quantity, location and depth of the building and non-building area test borings may have been adjusted by UES based on our local knowledge of soil conditions and the project characteristics described to us.

#### **4.3 Limitations**

This report has been prepared for the exclusive use of CPH Engineers Inc. to aid the Architect/Engineer in the design of the proposed Wal-Mart Supercenter Store No. 3873-00. This report is also hereby certified to Wal-Mart Stores, Inc., and its affiliates, successors, and assigns (hereinafter referred to collectively as "Wal-Mart"). Accordingly, Wal-Mart has a right to rely on this report and all of the contents therein as though it were issued to Wal-Mart directly. The scope is limited to the specific project and locations described herein. Our description of the project's design parameters represents our understanding of the significant aspects relevant to soil and foundation characteristics. In the event that any changes in the design or location of the structures or improvements as outlined in this report are planned, we should be informed so the changes can be reviewed and the conclusions of this report modified, if required, and approved in writing by UES.

The recommendations submitted in this report are based upon the data obtained from the soil borings performed at the locations indicated on the Boring Location Plan and from other information as referenced. This report does not reflect any variations which may occur between the boring locations. The nature and extent of such variations may not become evident until the course of construction. If variations become evident, it will then be necessary for a re-evaluation of the recommendations of this report after performing on-site observations during the construction period and noting the characteristics of the variations.

If UES provided any quantity estimates of unsuitable soils or materials as part of our evaluation, we recommend that contractors submitting bids verify such quantities with their own field exploration and/or that any user of the estimated quantities apply appropriate contingency factors based on their own experience and industry norms.

Although borings were placed in the proposed out-parcel lots, the information obtained may not be sufficient for final design of these areas. A geotechnical review for each out-parcel should be conducted after site specific grading and structural loading information is available to determine if additional recommendations are warranted.

All users of this report are cautioned that there was no requirement for UES to attempt to locate any man-made buried objects or identify any other potentially hazardous conditions that may exist at the site during the course of this exploration. Therefore, no attempt was made by UES to locate or identify such concerns. UES cannot be responsible for any buried man-made objects or subsurface hazards which may be subsequently encountered during construction that are not discussed within the text of this report. We can provide this service if requested.

For a further description of the scope and limitations of this report please review the document attached within Appendix G, "Important Information About Your Geotechnical Engineering Report" prepared by ASFE.

### **5.0 FIELD EXPLORATION**

#### **5.1 General**

The soil borings were performed with a drill rig mounted on a rubber-tired truck. The boring locations were pre-staked by CPH Engineers Inc. prior to our mobilization to the site. The approximate locations of the borings are shown on the Boring Location Plan presented in Appendix B. Prior to finalization of this report UES received horizontal and vertical control data

for each boring which is presented in tabular form, Boring Survey Control, in Appendix B with ground surface elevations also presented on the boring logs.

## **5.2 Standard Penetration Test Borings**

As previously described in Section 4.2 and as indicated on the Boring Location Plan and General Description of Boring Locations in Appendix B, fifty-two (52) SPT borings were drilled to depths between 10 feet and 100 feet in the proposed Wal-Mart building area. Borings drilled during the preliminary subsurface exploration and are also included in this report. Twenty-nine (29) SPT borings were drilled to depths between 15 feet and 20 feet below the existing land surface along the proposed south perimeter of the proposed stormwater management system. Thirty-nine (39) SPT borings were drilled to depths between 15 feet and 30 feet below the existing land surface along the proposed cut slope alignment. Fifty-eight (58) Standard Penetration Test (SPT) borings were drilled in the proposed stormwater pond areas (52 at DRA#1 and 6 at DRA#2) to depths between 15 feet and 55 feet below existing land surface (bls). Seventy-three (73) SPT borings were drilled to depths between 15 feet and 100 feet below the existing land surface within the proposed parking and access drive areas. Five (5) SPT borings were drilled to depths of 20 to 30 feet below the existing land surface along the proposed Out Parcel No. 1. The SPT borings were performed in general accordance with the procedures of ASTM D 1586 (Standard Method for Penetration Test and Split-Barrel Sampling of Soils). In addition, continuous sampling was performed within the upper 10 feet. The SPT drilling technique involves driving a standard split-barrel sampler into the soil by a 140-pound hammer, free falling 30 inches. The number of blows required to drive the sampler 1 foot, after an initial seating of 6 inches, is designated the penetration resistance, or N-value, an index to soil strength and consistency.

## **5.3 Auger Borings**

UES completed thirty-seven (37) auger borings within the proposed access road alignment. Auger borings were advanced to depths of 10 feet below existing grade, according to the procedures of ASTM D-1452. Auger borings were performed by advancing a solid stem auger into the soil to the required depth. We evaluated the soil type by visually examining the cuttings recovered from the auger.

## **5.4 “Undisturbed” Shelby Tube Sampling**

We obtained twenty-two (22) “undisturbed” Shelby tube samples of cohesive soils in general accordance with ASTM D 1587-00. These samples were collected to evaluate pertinent strength characteristics and geotechnical behavior of representative clay soils.

## **5.5 Geophysical Survey**

The subsurface conditions within the proposed building structures were surveyed with geophysical methods in order to identify possible anomalies associated with sinkhole conditions. The geophysical survey was performed by Geoview, Inc. Electrical Resistivity Imaging (ERI) methods were employed in an attempt to detect and identify subsurface anomalous features. A more detailed description of the geophysical methods and findings is included in the Geophysical survey report. A copy of the ERI report is included in **Appendix E** for your review.

## 6.0 LABORATORY TESTING

The soil samples recovered from the split-barrel sampler were visually classified in general accordance with the guidelines of ASTM D 2487 Standard Classification of Soils for Engineering Purposes (Unified Soil Classification System). The soil samples recovered from the split-barrel sampler were visually classified in general accordance with the guidelines of ASTM D 2487 Standard Classification of Soils for Engineering Purposes (Unified Soil Classification System). Representative soil samples were then selected from the retained soils and tested in our laboratory. The following is a summary of the laboratory tests performed in all studies for this site to date:

- One-hundred eighty-two (182) Wash #200 fines content determinations - ASTM D-1140 (Standard Method for Particle Size Analysis of Soils).\*
- Nine (9) full sieve gradation, and two (2) Hydrometer Analysis tests – ASTM D 422\*
- One (1) organic content test – ASTM D 2974 (Standard Test Methods for Moisture, Ash, and Organic Matter of Peat and Other Organic Soils).
- Ninety-one (91) Atterberg Limits Tests – ASTM D 4318-05\*
- Nine (9) Swell Tests – ASTM D 4546-03\*
- One-hundred sixty (160) moisture content tests - ASTM D-2216\*
- Two (2) Limerock Bearing Ratio (LBR) tests in lieu of the California Bearing Ratio (CBR) tests - Florida Department of Transportation FM-515 (Limerock Bearing Ratio).
- Ten (10) Corrosion Series (pH, sulfates, chlorides, and resistivity)\*
- One (1) Topsoil Series per Walmart specifications
- One (1) Specific Gravity Test – ASTM D-854
- Eleven (11) Unconfined Compression Tests – ASTM D-2166-06
- Fourteen (14) Triaxial Shear Tests – ASTM D-2850-03a
- One (1) Consolidation Test – ASTM D-2435

\*Includes recent lab tests

Lab testing activities from recently pulled samples include five (5) moisture content determinations, four (4) Wash #200 fines content tests, four (4) swelling tests, three (3) Atterberg Limits tests, two (2) full sieve gradation tests, two (2) Hydrometer Analysis tests, and one (1) corrosion series test.

These tests were performed to aid in classifying the recovered samples and to help in evaluating the general engineering characteristics of the site soils. The laboratory classification data is presented on the Boring Logs at the approximate depth sampled in Appendix B. All

laboratory data is summarized and report sheets included in Appendix C. In addition, the detailed laboratory test procedures are enclosed in Appendix C.

The quantity and type of laboratory tests performed for the geotechnical exploration were selected by UES based on the soil conditions found and our experience and knowledge concerning the local soil conditions. We note that since most shallow sands in Florida are poorly graded fine sand it is customary to perform percent fines content testing only for classification purposes. Also, unconsolidated undrained (UU) strength tests were performed on recovered "undisturbed" clay samples to obtain conservative strength values. Finally, unconfined compression tests were performed to evaluate bearing capacity of native plastic soils.

## 7.0 SOIL STRATIGRAPHY

### 7.1 Generalized Soil Profile

The results of our field exploration and laboratory analysis, together with pertinent information obtained from the SPT and auger borings, such as soil profiles, penetration resistance and stabilized groundwater levels are shown on the boring logs included in Appendix B. The Key to Boring Logs is also included in Appendix B. The soil profiles were prepared from field logs after the recovered soil samples were visually classified by a member of our geotechnical staff. The stratification lines shown on the boring logs represent the approximate boundaries between soil types, and may not depict exact subsurface soil conditions. The actual soil boundaries may be more transitional than depicted. A composite generalized profile of the soils found at our boring locations is presented below in Table 2. For soil profiles at individual boring locations, please refer to the soil boring logs, Appendix B.

TABLE 2 GENERAL SOIL PROFILE		
Typical depth (ft.)		Soil Descriptions
From	To	
0	2	Very loose to medium dense, brown SAND to SAND with silt [SP, SP-SM]
2	15	Loose to medium dense, brown SAND with silt to silty SAND [SP-SM, SM] and orange gray clayey SAND [SC] to stiff to very stiff sandy CLAY [CL] and stiff green CLAY [CH] and sandy SILT [MH]
15	57	Medium dense orange gray clayey SAND [SC] to stiff to very stiff sandy CLAY [CL] and stiff green CLAY [CH] and LIMESTONE [LS]
57	100*	LIMESTONE [LS] (found at 10.5 feet at boring location C-22a)
* Termination of Deepest Boring [ ] Indicates Unified Soil Classification		

Notable features within the general soil profile were: 1) The presence of pockets of expansive clays within the building footprint 2) The presence of a very loose sand layer from 0 to 7 feet below land surface in some of the borings; and 3) Limestone was encountered at varying depths throughout the project site.

## **7.2 Soil Corrosion Characteristics**

UES routinely performs pH, resistivity, sulfates and chloride tests for evaluation of corrosion potential of soils. According to the guidelines of the Florida Department of Transportation (FDOT) "Florida-Concrete Design, Environmental Classification and Construction Criteria" (based on the three tier scale of slightly, moderately, and extremely aggressive) the results of the pH, sulfate, chloride, and resistivity tests indicate that the surficial soils in the building and parking area are "extremely aggressive" to steel and concrete. The controlling factor in the test results was the pH level (pH=4.22). Therefore we recommend use of Type II cement with fly ash for below grade concrete construction. Further, adequate concrete cover should be provided for concrete substructures and protective galvanized coating is recommended for steel utility lines which extend below the seasonal high groundwater level. Accelerated corrosion conditions typically occur when below grade structures are in prolonged contact with groundwater, allowing the contact of corrosive compounds to the concrete and reinforcing steel. The results of these tests are listed on the Report of Corrosion Parameters sheet enclosed with the laboratory test results in Appendix C. Results of pH and resistivity tests with recommended measures are also presented on the "Geotechnical Investigation Fact Sheet".

## **7.3 Topsoil Analysis**

Per Wal-Mart criteria, one topsoil analyses was performed on a composite of five individual surface samples collected. The results are presented in Appendix C and summarized in tabular form in Appendix C.

# **8.0 GROUNDWATER CONSIDERATIONS**

## **8.1 Existing Groundwater Level**

Water levels in the boreholes were measured at 24 hours after soil samples were collected. The groundwater levels are shown on the attached boring logs. At the time the most recent field exploration was conducted, shallow groundwater was not encountered in the vast majority of borings. Previous explorations encountered transient perched groundwater levels at depths of approximately 3 to 23 feet below existing grade. Fluctuations in groundwater levels should be anticipated throughout the year, primarily due to seasonal variations in rainfall, surface runoff, construction activity, and other site specific factors that may vary from the time the borings were conducted. Based on available data, we estimate the permanent water table to be near elevation +60 feet NAVD.

## **8.2 Typical Wet Season Groundwater Level**

The typical wet season groundwater level is defined as the highest groundwater level sustained for a period of 2 to 4 weeks during the "wet" season of the year, for existing site conditions, in a year with average normal rainfall amounts. Based on historical data and the Climatic Atlas of the United States, the rainy season in Alachua County, Florida typically occurs between June and September. To estimate the wet season water level at the boring locations, many factors may be considered.

As mentioned previously, we found shallow deposits of clayey sands and sandy clays across the site during our site exploration. Due to the poor permeability characteristics of these clayey soils, these soils tend to act as an aquiclude (a sediment through which groundwater cannot pass) to the natural infiltration of the rainwater. Therefore, surface water will most likely

temporarily perch on top of these relatively impermeable soils causing isolated areas with temporary groundwater levels significantly higher during periods of heavy rainfall or artificial irrigation.

Based upon the review of U.S.G.S. data, NRCS Soils Survey, and site boring data, a reasonable estimate for the temporary perched seasonal high groundwater table is from 0.5 to 1 foot below the land surface (bls). In cut areas where clays are exposed, the cut surface will become the new temporary perched water table surface. Please note, however, that peak stage elevations immediately following various intense storm events, may perch temporarily on the shallow, low permeability (clayey) soils. Further, it should be understood that changes in the surface hydrology and subsurface drainage from on-site and/or off-site improvements could have significant effects on the normal and seasonal high groundwater levels. Potential for water to perch will be directly related to grading and rainfall/irrigation amounts.

**The potential for transient perched groundwater levels shall be considered during the design of the site grades and during construction.**

Our estimated seasonal high groundwater levels are based on the existing site conditions and are presented on each of the boring logs shown in **Appendix B**. Please note, however, that peak stage elevations immediately following various intense storm events, may be somewhat higher than the estimated typical wet season levels. Further, it shall be understood that changes in the surface hydrology and subsurface drainage from on-site or off-site improvements could have significant effects on the normal and seasonal high groundwater levels.

## **9.0 ANALYSIS AND RECOMMENDATIONS**

Our geotechnical engineering evaluation and recommendations for building pad and pavement area preparation and foundation design are based on (1) our site observations, (2) the collected field and laboratory data, and (3) our understanding of the project and structural information presented in this report.

It should be noted that pockets and lenses of expansive clays were encountered in the borings performed at the project site. Representative clayey samples taken from within the building footprint tested in our previous field exploration services had liquid limit (LL) values ranging from approximately 27 to 127 and correspondingly plasticity index (PI) values of approximately 9 to 100. Laboratory testing was performed to characterize the shrink/swell characteristics of the recovered soils. Laboratory test results indicate a swell index of 0.07 and associated volume change of 0.8% to 4.4%. According to published literature the clay soils typically found onsite should be considered to have a moderate to high swell potential.

Lab tests from our recent field exploration produced liquid limit (LL) values ranging from 47 to 92 and plasticity index (PI) values of 29 to 59. Swell test results indicate maximum percent swell of 0.2% to 9%. Based on soil borings and the laboratory results, the potential heave of the clay when undercut 5 feet below the bottom of the footing is less than 1 inch.

Care should be exercised in performing the site preparation procedures due the presence of clayey soils near the existing ground surface. The use of heavy-vibratory equipment is not recommended due to the potential for disturbance and pumping of the near surface clayey soils. To avoid pumping of the underlying clayey soils, we recommend self propelled vibrating equipment remain a minimum of two feet above the clayey soils. The sandy soils could be compacted with a vibratory roller operating in static mode or with a track-mounted dozer to

avoid disturbance of the clayey soils prior to operation. We recommend a minimum of 2 feet of sand overlying the clayey soils prior to operation of construction equipment. Excessive disturbance of the clayey soils will degrade the strength characteristics of the soil and may result in an unsuitable soil which will require over-excavation and subsequent backfilling with selected material.

The subgrade after excavation, in some areas include very clayey sands and clay, which will be difficult to compact. The clayey sandy soils may require stringent moisture control during compaction, particularly during rainy periods. Footings that are excavated through the upper layer of compacted sand fill soils into the native clayey sands, shall be visually inspected and tested to verify the in-place density and condition of the subgrade bearing soils. Normal proof-rolling and compaction of exposed subgrade, and filling to grade with compacted selected structural fill is also expected. If these soils are soft in nature, they should be over-excavated and removed under the direction of the testing agency representative. The over-excavated areas shall be backfilled with a compacted, low permeability, engineered fill material. Fill material shall consist of poorly draining, silty-clayey sand with between 15% to 30% material passing the No. 200 sieve, a Liquid Limit (LL) value less than 30, and a Plasticity Index (PI) value less than 15. Special compaction equipment and strict moisture control may be required to achieve the minimum compaction specifications. Loose lift thicknesses of 8 inches or less are recommended.

Due to the low degree of saturation on the clays, swelling and softening may occur very rapidly if surface water is admitted to the foundation/building pad areas. We recommend performing the excavation as quickly as possible and reloading the ground without delay to prevent swelling. Further, due to large excavation areas we recommend to manage the areas in controlled/designated areas thus the excavated areas are replaced and backfill as soon as possible.

Our local experience has found that clay layers are often laterally discontinuous, which makes it more difficult to ascertain their presence on a given project parcel. We recommend that any native grades above elevation +111.5 ft. within the building footprint plus 5 foot margins beyond, be undercut to Elevation +111.5 ft. Clay and very clayey sands should be selectively removed during the undercutting process so that the remaining soils may be re-used as fill material within the building and parking areas. If it is undesirable or not cost effective to selectively remove such materials, the undercut soils may all be re-used as fill at depths greater than 5 feet below grade in the building or greater than 2 feet below pavement base grade in the pavement areas. If the finished floor elevation (FFE) is lower than +118 ft. our recommendation for the above referenced undercut is invalid and we must review the final FFE and provide supplemental recommendations.

The soil borings performed within the parking area also encountered sand-clay mixtures at shallow depths. We recommend selective undercut of the native in-situ clayey soils to provide a minimum of 2 foot of separation below the bottom of the base course in accordance with FDOT index 500. We recommend the expansive clayey soils be a minimum distance of 5 feet below the proposed bottom of retaining wall footings.

Due to the presence of subsurface expansive clays it is important that the foundation design incorporate factors to minimize water seepage around the foundation perimeter. The design factors should include positive drainage such that water flows away from the structure, gutters tied into the drainage system, use of drought tolerant landscaping plus limiting irrigating and ponding of surface waters around the structure. A perimeter underdrain extending a minimum 5



feet below finished grades around the building perimeter is also recommended. The underdrain system may be designed for moderate water removal as described in FDOT Standards Type 2, Index 286. Further, you should consider placing an underdrain pipe beneath the down slope edge of each landscape island. Landscaped islands typically collect irrigation water, and the water slowly leaches laterally into the pavement section. You should also consider constructing a drainage system/underdrain along the south edges of the loading/parking to intercept perched groundwater flowing from off site, prior to it reaching the pavement subgrade.

Please note, excavations through isolated, random, shallow hard limestone deposits and limestone boulders should be anticipated and may prove to be difficult for the foundation excavations, as well as subsurface utility installations.

If the structural conditions or other project information are incorrect, please contact us so that we can review our recommendations. Also, the discovery of any site or subsurface conditions during construction which deviate from the data obtained during this geotechnical exploration should also be reported to us for further evaluation.

We consider the recommendations presented in the subsequent sections of this report appropriate for the planned construction. As part of the overall geotechnical contract, we recommend that UES be provided the opportunity to review the foundation plans and earthwork specifications to verify that our recommendations have been properly interpreted and incorporated into the design documents.

## 9.1 Foundation Design Recommendations

The recommendations presented below for foundation design and performance may not be appropriate for the proposed outparcel building area to be located near the east side of the proposed Wal-Mart Store No. 3873. For this building, additional exploration and specific geotechnical engineering evaluations are recommended once site, earthwork, and structural plans are known.

As mentioned before, the undercut should extend down to elevation +111.5 feet, NAVD to provide the minimum 5 feet separation between the top of the clays and the bottom of the footing/base. The ground surface for at least 5 feet around the building should be sloped to create positive drainage away from the building so the stormwater and irrigation waters do not become trapped adjacent to the building and in the backfill. In addition, we recommend that a 5 feet deep perimeter drain be installed around the perimeter of the building to help maintain more uniform moisture content in the upper soils beneath the building. The drain system should be designed for minimum water removal as described in FDOT Standards Type 2, Index 286. **The over-excavated areas should be backfilled with a compacted, low permeability, non-plastic engineered fill material. Fill material should consist of poorly draining, silty sand or clayey sand with between 10% to 25% material passing the No. 200 sieve, a Liquid Limit (LL) value less than 30, and a Plasticity Index (PI) value less than 15.**

Based on the results of our exploration, it is our opinion that the subsurface conditions at the Wal-Mart site are adaptable for support of the proposed structure on a properly designed and constructed shallow foundation system, provided the site preparation and earthwork construction recommendations outlined in Section 9.3 of this report are performed. Provided the improvements and specific site preparation procedures are carefully followed, the parameters outlined below may be used for foundation design.

#### 9.1.1 Bearing Pressure

The maximum gross allowable soil bearing pressure for use in shallow foundation design should not exceed 3,000 psf due to dead plus live load structural loads per current Florida Building Code. The allowable bearing pressure may be increased by 25 percent to account for short duration loadings such as wind or seismic.

#### 9.1.2 Foundation Size

The minimum width recommended for any isolated column or continuous wall footing is 30 and 18 inches, respectively. Even though the maximum allowable soil bearing pressure may not be fully achieved, this width recommendation should control the minimum size of the foundations.

**Additionally, we recommend that the continuous footings be designed with top and bottom steel in consideration of potential upward or downward flexure from minor movement/pressures from the undercut expansive clays to limit the potential heave to less than 1 inch. The steel size and placement should be designed by a registered structural engineer.** The deeper concrete section, and top and bottom steel configuration of a typical grade beam foundation, should help mitigate differential settlement concerns. A modulus of subgrade reaction of 100 pounds per cubic inch (pci) may be used for grade beam foundation design.

#### 9.1.3 Bearing Depth

The exterior foundations should bear at a depth of at least 18 inches below the finished exterior grades and the interior foundations should bear at a depth of at least 18 inches below the finish floor elevation to provide confinement of the bearing level soils. It is recommended that stormwater be diverted away from the building area both during and permanently following construction.

#### 9.1.4 Bearing Material

The foundations and floor slabs should bear on a compacted low permeability structural fill. The bearing level soils should be densified to at least 95 percent of the modified Proctor maximum dry density (ASTM D 1557) to a depth of at least five feet below the bearing levels.

#### 9.1.5 Settlement Estimates

Post-construction settlements of the structure will be influenced by several interrelated factors, such as (1) subsurface stratification and strength/compressibility characteristics; (2) footing size, bearing level, applied loads, and resulting bearing pressures beneath the foundations; and (3) site preparation and earthwork construction techniques used by the contractor. Our settlement estimates for the structure are based on the site preparation/earthwork construction recommendations in Section 9.3 of this report. Any non conformance with these recommendations could result in an increase in the estimated post-construction settlements of the structure.

Using the recommended maximum bearing pressure, the provided maximum structural loads, the anticipated fill loading and the field data which we have correlated to geotechnical strength and compressibility characteristics of the subsurface soils using N-value data, we estimate that total settlements of the structure should be less than 3/4 inch if the site preparation

recommendations in Section 9.3 are followed. Without appropriate site preparation procedures, total settlements could exceed 3/4 inch.

Differential settlements result from differences in applied bearing pressures and variations in the compressibility characteristics of the subsurface soils. We anticipate that differential settlements should be within tolerable limits of 1/2 inch or less in 40 feet length for masonry walls and 3/4 inch or less between isolated interior columns, and 3/4 inch between columns and floor slabs.

#### 9.1.6 Floor Slab

The floor slab recommendations are predicated upon the understanding that Wal-Mart structures have exposed concrete floor slabs throughout. The floor slab can be constructed as a slab-on-grade provided the expansive soils are undercut below the bottom of the slab and the subsequent lifts of structural backfill are compacted and tested in accordance with the recommendations included in this report. The floor slab can be designed using a subgrade reaction modulus of 150 pounds per cubic inch for slabs founded on the Wal-Mart required minimum 4 inch aggregate base and well compacted subgrade. Therefore, there is no cost premium to attain the recommended subgrade modulus.

The Wal-Mart geotechnical requirements prefer the use of a capillary break consisting of free-draining aggregate. The specifications further allow use a plastic vapor barrier if justified by site conditions or required by local building codes. In addressing the requirements outlined in the current Wal-Mart "Geotechnical Investigation Specifications and Report Requirements" the current Florida Building Code requires the use of vapor barriers beneath floor slabs. Typically, polyethylene plastic sheets are used in Florida to reduce floor dampness and minimize moisture emissions through floor slabs. In conformance with the Florida Building Code, we recommend the use of a vapor barrier beneath the floor slab.

The "vapor barrier" should consist of a polyvinyl chloride or polyethylene plastic sheet or membrane (minimum 15 MIL thickness meeting ASTM E1745, Class 'A' requirements). The performance of the "vapor barrier" is ultimately dependent upon its proper installation, including lapping and sealing plus repair of tears and punctures prior to placement of concrete. The vapor barrier should be placed immediately beneath the concrete slab atop 4 inches of compacted aggregate base. UES recommends the aggregate base material be constructed on a compacted subgrade fill in accordance with the Foundation Subsurface Preparation note included in this report.

#### 9.1.7 Site Walls

Earth pressures on retaining walls are influenced by structural design of walls, conditions of wall restraint, construction methods, and the strength of the materials being restrained. The most common conditions assumed for earth retaining wall design are the active and at-rest conditions.

Active conditions apply to relatively flexible earth retention structures, such as free-standing walls, where some movement and rotation may occur to mobilize shear strength. Walls which are rigidly restrained, such as loading dock or service pits walls, should be designed for the at-rest condition. However, if the walls will be backfilled before they are braced by the floor slabs, they should also be designed to withstand active earth pressures as self supporting cantilever walls.

Development of the full active earth pressure case requires a magnitude of horizontal wall movement that often cannot be tolerated or cannot occur due to the rigidity of the wall and other design restrictions such as the impact on adjacent structures. In such cases, walls are often designed for either the at-rest condition or a condition intermediate of the active and at-rest conditions, depending on the amount of permissible wall movement.

Passive earth pressure represents the maximum possible pressure when a structure is pushed against the soil, and is used in wall foundation design to help resist active or at-rest pressures. Because significant wall movements are required to develop the passive pressure, the total calculated passive pressure is usually reduced by one-half for design purposes.

We recommend that any proprietary retaining walls be backfilled with materials deemed suitable by the retaining wall designer. For all other walls, typically sandy soils [SP, SP-SM, SP-SC] should be used as backfill. We recommend that the soils selected for use as backfill be tested as specified by either the proprietary retaining wall designer or UES prior to commencement of wall construction. Recommended soil parameters for design of low retaining walls for loading docks and landscape features using SP, SP-SM or SP-SC soils found on site are shown in Table 3.

<b>TABLE 3</b> <b>Lateral Earth Pressure Design Parameters (Level Backfill)*</b>	
<b>Design Parameter</b>	<b>Recommended Value</b>
At-rest Earth Pressure Coefficient, $K_o$	0.5
Active Earth Pressure Coefficient, $K_a$	0.33
Passive Earth Pressure Coefficient, $K_p$	3.0
Wet Unit Soil Weight (pounds per cubic foot - pcf)	125
Submerged Unit Weight of Soil (pcf)	62
Coefficient of Friction (sliding)	0.4
Angle of Internal Friction, $\phi$	30 degrees

\* For sloping backfill or backfill with clayey sands the table values must be adjusted.

\*\*Hydrostatic pressure should be accounted for based on seasonal high water table estimates and other site drainage considerations

The recommended lateral earth pressure coefficients and equivalent fluid pressures do not consider the development of hydrostatic pressure behind the earth retaining wall structures. As such, positive wall drainage must be provided for all earth retaining structures. These drainage systems can be constructed of open-graded washed stone isolated from the soil backfill with a geosynthetic filter fabric and drained by perforated pipe, or with one of several wall drainage products made specifically for this application.

Our recommendations assume that the ground surface above the wall is level and that native or imported soils consisting of sands and sands with silt or clays will be used for wall backfill. Lateral earth pressures arising from surcharge loading should be added to the above earth pressures to determine the total lateral pressure. Additional consideration must also be given for sloped backfill at the top of the wall. In each circumstance the earth pressure coefficients for

active and at-rest conditions will increase based upon the amount of surcharge and angle above horizontal of the sloped backfill.

#### 9.1.8 Cut Slope Stability

We performed a slope stability evaluation for the proposed cut slope areas using the software program "STABLE". We developed the parameters used in our slope stability evaluation from the information obtained during our field exploration and laboratory testing, from the proposed grading and site topographic information provided by CPH Engineers, Inc. and the design recommendations of this report. The proposed cuts have slopes of 3.5:1 and 4:1 ratio (Horizontal: Vertical).

The results of our evaluation indicate that the factor of safety of the proposed cut slope area is more than 1.5 which exceeds the generally required values. A more detailed presentation of the results of our slope stability evaluation is included in Appendix F: Slope Stability Analysis.

During the wet season, infiltrated rain water may perch on top of the shallow deposits of clayey soils; this groundwater may seep along those shallow deposits of low permeable material and daylight through the face of the slope. These seepage phenomena toward the face of the slope could cause erosion to the slope face and lead to a reduced stability of the slope. Therefore, measures should be taken to prevent erosion of the slope face such as using geosynthetics and vegetation.

#### 9.1.9 Geologic Hazards

The general geology of Alachua County is characterized by 30 to 50 feet of undifferentiated fine to medium grained sands and clayey sands of Holocene age (the last 10,000 years) overlying the Miocene age (circa 10 millions years old) Hawthorne Formation.

The Hawthorne is approximately 0 to 50 feet thick and is comprised of interbedded layers of clay, clayey sand, sandy clay, and phosphate carbonates. The underlying Tertiary age (circa 50 million years old) carbonates gently dip east under an increasing thickness of younger sediments. The general area of the proposed parcel is characterized with unconsolidated and undifferentiated quartz sands near surface, and karst (sinkhole) features such as collapse depressions, sinkholes, disappearing streams, springs, and mapped underground caves.

A "sinkhole" is defined as "a depression caused by the soil and other materials subsiding into an open hole or void below the ground surface." Sinkholes generally occur from the collapse of subsurface voids or from the erosion or raveling of overburden soil into the voids. The resulting surface expression of these karst features consisted of depressional areas often circular in shape and commonly referred to as "sinkholes."

Typically, the soil existing immediately above the limestone consists of sandy clays, clayey sands, and other low permeability soils commonly referred to as the Hawthorn Formation. In general, the thicker the Hawthorn Formation, the less susceptible the site is to sinkhole development. However, in areas where the limestone deposits include voids and where the Hawthorn Formation is relatively weak, breaches of the Hawthorn Formation occur, providing paths through which groundwater travels, taking erodible soil with it. In these cases, the surficial relatively sandy soils ravel into the cavities and fractures in the limestone.

The confining Hawthorn layer also forms a barrier to groundwater, which ordinarily would be continuous from the surface soils downward into the limestone. The groundwater level or potentiometric surface in the soils above the confining layer frequently differs from that in the porous limestone because the confining layer prevents a normal hydrostatic condition. Provided the confining layer remains intact, the two groundwater regimes remain independent.

It is important to understand from a regional context that sinkholes are a characteristic feature of North Central Florida geology and can occur anywhere in the general region depending on the presence of a cavernous void in the limestone deposit. These generalized conditions described above apply to the subject site and the region.

Universal Engineering has previously performed a geophysical survey of the site to address the potential for surface expression of deep geological conditions such as sinkhole and related karst activity. The findings and opinions were report in UES Report 385573.1 dated February 16, 2006. We have included a copy of this report in Appendix E. The findings outlined in our February 16, 2006 report did not suggest subsurface conditions beneath the proposed building footprint and beneath the proposed stormwater retention pond area that may be associated with imminent ground subsidence due to sinkhole activity.

There are no fault zones, landslides or other geologic hazards associated with the site and immediate vicinity other than sinkholes and expansive clays. There is a fairly thick sequence of Hawthorne clays mantling the underlying limestone which acts to resist raveling from differential aquifer heads. Therefore, it is our opinion that the proposed building area is at no greater risk of ground subsidence related to sinkhole activity than other properties in the general vicinity of the site and that no special ground modifications or greater than normal foundation design procedure need to be undertaken for sinkhole considerations. As previously discussed, there are pockets of expansive clays beneath the building pad area and pavement areas that could affect future performance of each. Therefore, we have recommended undercutting the building area to Elevation 111.5 ft N.G.V.D. and selectively undercutting the expansive clays exposed at pavement subgrade to reduce the adverse affects. In addition, we have recommended top and bottom steel reinforcement for foundations to make the foundation more resistant to alternate minor bending stresses from the expansive soils.

With regard to seismic considerations, UES reviewed the Florida Building Code (FBC) which has jurisdiction in the State of Florida. Since seismic design is not part of the FBC, we consulted the only available recognized source of seismic information, the International Building Code 2006 (Section 1613). Per Table 1613.5.2 we recommend a Site Class of C for this project site. Due to the deep permanent water table, the overall fines content of the soils and the minimal expected ground accelerations per Figures 1613.5(1) and (2), it is our opinion that the liquefaction potential of the site is minimal.

#### 9.1.10 Expansive Clay Considerations

Portions of Alachua County, Florida are known to have shallow expansive clays which can cause differential foundation movement and associated cracking and distress to structures that are not adequately designed for these subsurface conditions. Part of the purpose of our exploration program was to identify the presence of potentially expansive soils on site and provide geotechnical recommendations for site preparation and foundation design to minimize the potential impact if these are found.

We performed laboratory Atterberg Limit testing on representative samples of the clayey deposits found on site during our exploration program. The samples tested had liquid limit (LL) values of approximately 27 to 127 and plasticity index (PI) values of approximately 9 to 100. Laboratory testing was performed to characterize the shrink/swell characteristics of the recovered soils. Laboratory test results indicate maximum percent swell of 0.2% to 9%. Based on soil borings and lab testing performed the potential heave after undercutting and replacement five (5) feet below the bottom of the footing is less than 1 inch. According to published literature the clay soils typically found onsite shall be considered to have a moderate to high swell potential. The USDA Soil Survey of Alachua County, Florida also identifies the surficial soils on site as having low to high swell potential.

Based upon the findings of our field exploration, our experience in the general vicinity of the subject site, and the laboratory test results, it is our professional opinion that special foundation design considerations for expansive soils are necessary. The potential detrimental effect of the expansive clays can be reduced to tolerable levels by the recommended undercut and replacement and use of top and bottom reinforcement in continuous footings.

## **9.2 Pavement Recommendations**

### **9.2.1 General**

A rigid or flexible pavement section could be used on this project for the new pavement areas. Flexible pavement combines the strength and durability of several layer components to produce an appropriate and cost-effective combination of available construction materials and is less susceptible to movement from the under laying clays. Concrete pavement has the advantage of the ability to "bridge" over isolated soft areas, it requires less security lighting, and it typically has a longer service life than asphalt pavement. However, concrete pavement can allow water intrusion which can aggravate the expansive soils. Disadvantages of rigid pavement may also include an initial higher cost and more difficult patching of distressed areas than occurs with flexible pavement.

**We recommend undercutting the clayey sands and clays to a depth of 24 inches below the bottom of the base course in accordance with FDOT index 500. We recommend proof-rolling of the exposed subgrade to help determine area that will need to be undercut. Positive drainage around the roadway area shall be established to prevent irrigation and stormwater from migrating into the pavement area.**

The design calculations and pavement section details for both a rigid and flexible pavement section are enclosed in Appendix D.

Referencing the "Geotechnical Investigation Specifications and Report Requirements" as provided by Wal-Mart, the Minimum Pavement Surface Thickness is specified as follows:

#### **A) Standard Duty**

Asphalt - 3 inches  
Concrete - 5 inches

#### **B) Heavy Duty**

Asphalt - 4 inches  
Concrete - 6 inches

Further, the pavement section is to be designed for a 20 year life based on a terminal serviceability index ( $P_t$ ) of 2, reliability of 85 percent, initial serviceability of 4.2 and a standard deviation of 0.45 for flexible pavement and 0.35 for rigid pavement.

Within the following tables, we have provided our recommendations for pavement design. These recommendations incorporate Wal-Mart's minimum pavement surface thickness specifications referenced above. UES has selected pavement materials that are cost effective and locally available.

#### 9.2.2 Asphalt (Flexible) Pavement

Tables 4 and 5 contain our recommendations for standard and heavy duty pavement sections designed for Wal-Mart's requirement for total equivalent 18 kips single axle loads ( $E_{18}$ SAL) of 109,500 and 335,800, respectively.

TABLE 4 STANDARD DUTY FLEXIBLE PAVEMENT DESIGN		
Pavement Layer	Thickness	Minimum Requirements
Asphalt Surface (FDOT SP-9.5) Asphalt Binder (FDOT SP-12.5)	1.5 Inch Minimum 1.5 Inch Minimum	93% (tolerance $\pm 2\%$ ) Laboratory Maximum Density ( $G_{mm}$ )
Limerock or Crushed Concrete Base	6 Inch Minimum	98% Modified Proctor test maximum dry density, Limerock Bearing Ratio (LBR) of 100
Stabilized Subgrade	6 Inch Minimum	98% Modified Proctor test maximum dry density, Limerock Bearing Ratio (LBR) of 40.

TABLE 5 HEAVY DUTY FLEXIBLE PAVEMENT DESIGN		
Pavement Layer	Thickness	Minimum Requirements
Asphalt Surface (FDOT SP-9.5) Asphalt Binder (FDOT SP-12.5)	1.5 Inch Minimum 2.5 Inch Minimum	93% (tolerance $\pm 2\%$ ) Laboratory Maximum Density ( $G_{mm}$ )
Limerock or Crushed Concrete Base	6 Inch Minimum	98% Modified Proctor test maximum dry density, Limerock Bearing Ratio (LBR) of at least 100
Stabilized Subgrade	6 Inch Minimum	98% Modified Proctor test maximum dry density, Limerock Bearing Ratio (LBR) of 40.

##### 9.2.2.1 Stabilized Subgrade

We recommend that subgrade materials be compacted to at least 98 percent of the modified Proctor maximum dry density (ASTM D 1557/ AASHTO T-180) value. Further, beneath the base course, stabilize the subgrade materials to a minimum Limerock Bearing Ratio (LBR) of 40 as specified by the current version of the Florida Department of Transportation (FDOT) "Standard Specifications for Roadway and Bridge Construction" (SSRBC) requirements for Type B Stabilized Subgrade, Section 160 and Section 914. For crushed concrete base, the subgrade material should be "free-draining" ( $k > 1 \times 10^{-3}$  cm/sec) and therefore on-site clay sands, clays or other impermeable stabilization material shall not be used for mixing with the in-place sands.



Based on the completed LBR test results (LBR 62 and 92), the soil from the upper 2 feet of parking lot subgrade across the site is suitable for use as a stabilized subgrade material (meeting a minimum LBR value of 40).

The primary function of stabilized subgrade beneath the base course is to provide a stable and firm subgrade so that the base can be properly and uniformly placed. Depending upon the soil type, fill material from an off-site source may have sufficient stability to provide the needed support without additional stabilizing material. Generally sands with shell or rock should have sufficient stability and may not require additional stabilizing material. Prior to compaction of the subgrade, the representative samples of soils exposed at rough subgrade from both on and off-site fill sources should be tested for Limerock Bearing Ratio (LBR) value on a frequency of one test per 20,000 square feet to evaluate whether or not additional stabilization will be required beneath the base course.

#### 9.2.2.2 Base Course

We recommend the base course consist of locally available limerock complying with the requirements of the current version of the FDOT SSRBC, Section 200, pages 207-213, and Section 911, pages 1003-1005. The limerock should have a minimum LBR of 100 percent and should be mined or supplied from an FDOT approved source. Place the limerock in maximum 6 inch thick loose lifts and compact each lift to a minimum density of 98 percent of the modified Proctor maximum dry density (ASTM D1557/AASHTO T-180).

Alternatively, we believe locally available crushed concrete base of equal thickness could be substituted for the limerock. Crushed concrete should be supplied by an FDOT approved plant with quality control procedures and should have an average LBR value of not less than 100. The gradation for crushed concrete should meet the current requirements for graded aggregate base per Section 204, FDOT SSRBC, pages 214-216.

A prime and sand coat should be applied to the base to provide for a smooth, uniform surface for asphalt placement. Perform compliance testing for limerock or crushed concrete for full depth of the base at a frequency of one test per 10,000 square feet. Compliance testing should consist of performing in-place density tests and thickness measurements at the recommended frequency.

#### 9.2.2.3 Surface and Binder Course

The wearing surface shall consist of Florida Department of Transportation (FDOT) Type SP asphaltic concrete. Specific requirements for Type SP asphaltic concrete, Traffic Level C/D wearing surface are outlined in the Florida Department of Transportation (FDOT), *Standard Specifications for Road and Bridge Construction, current Edition*.

The asphaltic concrete should be placed in two layers. Specifically for light duty areas, the lower binder course shall consist of a minimum of 1.5 inches of FDOT Type SP-12.5. The surface course shall be a minimum of 1.5 inch of FDOT Type SP-9.5. For heavy duty pavements, the binder shall consist of a minimum of 2.5 inches of Type SP-12.5 with a surface course consisting of a minimum 1.5 inches of Type SP-9.5. Per FDOT, the SuperPave (SP) surface course may contain up to 20 percent recycled asphalt pavement (RAP).

After placement and field compaction, the wearing surface should be cored to evaluate material thickness and to perform laboratory densities. Cores should be obtained at frequencies of at least one core per 10,000 square feet of placed pavement or a minimum of two cores per day's production.

#### 9.2.2.4 Curbing

Typical curbing is extruded and placed atop the asphaltic concrete surface. This type of curbing does not act as a horizontal cutoff for lateral migration of storm and irrigation water into the base material and as a result of this it is not uncommon for base and subgrade materials adjacent to these areas to become saturated, promoting subsequent localized pavement deterioration. Consequently, we recommend that most pavements abutting irrigated landscape areas be equipped with an underdrain system that penetrates a minimum depth equivalent to the bottom of the stabilized subgrade to intercept trapped shallow water and discharge it into a closed system or other acceptable discharge point.

Alternatively, curbing around landscaped sections adjacent to the parking lots and driveways could be constructed with full-depth curb sections to reduce horizontal water migration. However, underdrains may still be recommended dependent upon the soil type and spatial relationships. UES should review final grading plans to evaluate the need and placement of pavement and landscape underdrains.

#### 9.2.3 Concrete (Rigid) Pavements

Concrete pavement is a rigid pavement that transfers reduced wheel pressures to the underlying subgrade soils when compared to a flexible pavement section. Current Wal-Mart specifications require a base course beneath concrete pavement. We recommend that the base course be supported on a stabilized subgrade. Our recommendations for the rigid pavement system are presented below:

1. The stabilized subgrade should be at least 4 inches thick, "free-draining" ( $k \geq 1 \times 10^{-3}$  cm/sec), and have a minimum LBR value of 40. The base course should be at least 4 inches thick, "free-draining" ( $k \geq 1 \times 10^{-3}$  cm/sec), and have a minimum LBR value of 100.

As an alternative, If recommended "free-draining" materials are not available, and very poor drainage base material such as crushed concrete aggregate base material over compacted subgrade is used, the concrete thickness should be increased. The stabilized subgrade shall be densified to at least 98 percent of modified Proctor test maximum dry density (ASTM D1557/AASHTO T-180) to a depth of at least 12 inches and have a minimum LBR value of 40.

2. The stabilized subgrade and base materials should be densified to at least 98 percent of modified Proctor test maximum dry density (ASTM D1557/AASHTO T-180).
3. The surface of the subgrade soils must be level, and any disturbances or wheel rutting corrected prior to placement of concrete.
4. Concrete pavement thickness should be uniform throughout, with exception to thickened edges (curb or footing).

5. The bottom of the pavement should be separated from the estimated typical wet season groundwater level by at least 12 inches.

Our recommendations for slab thickness for standard and heavy duty concrete pavements are presented below.

TABLE 6 (UNREINFORCED) CONCRETE PAVEMENT WITH FREE-DRAINING BASE		
Minimum Pavement Thickness*	Maximum Control Joint Spacing	Recommended Sawcut Depth
Standard Duty - 5 Inches	10 Feet x 10 Feet	1 ¼ Inches
Heavy Duty - 6 Inches	12 Feet x 12 Feet	1 ½ Inches

\*Minimum pavement thickness values if the "free-draining" base material is available. Free draining material should be at least 4 inches and have a minimum LBR of 100.

TABLE 7 (UNREINFORCED) CONCRETE PAVEMENT – WITH POORLY DRAINING MATERIAL		
Minimum Pavement Thickness*	Maximum Control Joint Spacing	Recommended Sawcut Depth
Standard Duty – 6 Inches	10 Feet x 10 Feet	1 ½ Inches
Heavy Duty - 7 Inches	12 Feet x 12 Feet	1 ¾ Inches

\*Minimum pavement thickness values if the "free-draining" base material is not available. Poorly drainage material such as crushed concrete aggregate base should be at least 4 inches and have a minimum LBR of 100. Crushed concrete aggregate base material should be placed over compacted stabilized subgrade.

We recommend using concrete with a minimum 28-day compressive strength of 4,000 psi and minimum 28-day flexural strength (modulus of rupture) of at least 600 pounds per square inch, based on 3rd point loading of concrete beam test samples. Layout of the sawcut control joints should form square panels, and the depth of sawcut joints should be ¼ of the concrete slab thickness. The control joints should be sawed within 6 hours of concrete placement or as soon as the concrete has sufficient strength to support workers and equipment. We recommend allowing UES to review and comment on the final concrete pavement design, including section and joint details (type of joints, joint spacing, etc.), prior to the start of construction.

For further details on concrete pavement construction, please reference the "Guide to Jointing of Non-Reinforced Concrete Pavements" published by the Florida Concrete and Products Association, Inc., and "Building Quality Concrete Parking Areas", published by the Portland Cement Association.

#### 9.2.4 Groundwater Considerations

One of the most critical influences on pavement performance is the relationship between the pavement subgrade and the seasonal high groundwater level. It has been our experience that roadways and parking areas may be damaged as a result of deterioration of the base and the base/surface course bond from saturation of the subgrade and/or base materials. We recommend that the seasonal high groundwater and the bottom of the base course be separated by at least 24 inches. For concrete pavement the minimum separation may be reduced to 18 inches provided the compacted base and subgrade is "free-draining" material.

**Provided the native in-situ clays are selectively undercut a minimum of 2 feet below the bottom of the base of the pavement section, the recommended separation should be provided. The separation should be confirmed by reviewing the final site grading and paving plan. If the separation is not provided by grading and/or permanent surface drainage improvements, underdrains may be required.**

#### 9.2.5 Construction Traffic

Light duty roadways and incomplete pavement sections may not perform satisfactorily under construction traffic loadings. We recommend that construction traffic (construction equipment, concrete trucks, sod trucks, garbage trucks, dump trucks, etc.) be re-routed away from these roadways or that the pavement section design account for these loadings.

### 9.3 **Site Preparation**

#### 9.3.1 General

We recommend normal, good practice dry weather site preparation procedures for the building and pavement areas. These procedures include: stripping/demolition of the site to remove: vegetation, surficial organics, trees and root systems greater than ½ inch in diameter and other debris. Following stripping/demolition, the exposed subgrade soils in areas to receive fill or at the subgrade elevation in cut areas should be proof-rolled to detect soft or loose soils. A more detailed description of this work is as follows:

1. Prior to construction, existing underground utility lines within the construction area should be located. Provisions should be made to relocate interfering utilities to appropriate locations. It should be noted that if underground pipes are not properly removed or plugged, they may serve as conduits for subsurface erosion which may lead to excessive settlement of overlying structures.
2. Strip/demolish the proposed construction limits of topsoil, asphalt, and other deleterious materials within and 5 feet beyond the perimeter of the proposed building and pavement areas.
3. The site should be graded to direct surface water runoff away from the construction areas. Positive drainage of improved areas shall be maintained during construction and throughout the design life of the project. Further, we recommend drainage swales/underdrain system be implemented to intercept and evacuate stormwater runoff before it travels to excavated areas.
4. After clearing and stripping of the site is completed, the prepared subgrade soils within fill areas of the building area (Elevation +111.5 ft. NAVD) should be observed and probed by a qualified agent of Wal-Mart's testing agency to locate any surficial deposits of vegetation, excessive roots or debris. If identified, undercut the vegetation, organics, muck, or deleterious material until clean natural soils are encountered and backfill the resulting excavations according to the fill placement procedures provided later in this section.
5. The Wal-Mart building pad area, including a margin of 5 feet beyond should be undercut to a uniform elevation of +111.5 ft. NAVD. The cut area should be proof-rolled and tested for compliance to compaction requirements, to a depth of 12 inches below

elevation +111.5 ft NAVD. The over-excavated areas should be backfilled with a compacted, low permeability, non-plastic engineered fill material. Fill material should consist of poorly draining, silty sand or clayey sand with between 10% to 25% material passing the No. 200 sieve, a Liquid Limit (LL) value less than 30, and a Plasticity Index (PI) value less than 15. Special compaction equipment (i.e. Sheepsfoot Roller) and strict moisture control may be required to achieve the minimum compaction specifications. Loose lift thicknesses of 8 inches or less are recommended.

6. In the areas to receive fill or at subgrade cut elevation (other than the Wal-Mart building pad) resulting from Item 2 and 4 above, the subgrades should be compacted using a smooth drum vibratory roller having a minimum static, at-drum weight on the order of 10 tons and a drum diameter on the order of 3 to 4 feet making a minimum of eight overlapping passes with the second set of 4 passes perpendicular to the first set of 4 passes. If wet conditions are prevalent anywhere on site, at the discretion of a qualified representative of Wal-Mart's testing agency, a bridge lift of "dry" sand may be placed to raise the compaction surface above the water table sufficiently to enable effective compaction. Typically, the material should exhibit moisture contents within +/- 2 percent of the modified Proctor optimum moisture content (ASTM D-1557) during the compaction operations. Compaction should continue until densities of at least 95 percent of the modified Proctor maximum dry density (ASTM D-1557) have been uniformly achieved within the upper 24 inches of the compacted subgrade surface.
7. Site preparation includes backfilling some drainage areas/gullies. Contractor should have these areas drained prior to work commencing. All material cleared, de-mucked and grubbed from the drained areas/gullies should be disposed. A layer of bi-axial geotextile should be placed over the excavated subgrade for constructability purposes to allow for a platform to start placing the backfill. Backfill and fill should be placed in uniform 8- to 10-inch loose lifts, and each lift should be compacted to a minimum density of 95 percent of the modified Proctor maximum dry density. Backfill material shall consist of low permeability, engineered fill material. Allow the backfill to consolidate under the weight of the fill material.
8. Place fill material, as required. In the Wal-Mart Building pad area, fill material should consist of low permeability material as described in section 9.3.1.5. In areas other than the Wal-Mart building pad area, the fill should consist of sand with less than 10 percent soil fines. Place fill in uniform 10- to 12-inch lifts and compact each lift to a minimum density of at least 95 percent of the modified Proctor maximum dry density (ASTM D1557). The last 12 inches of fill beneath the parking areas should be compacted to at least 98 percent of the Modified Proctor maximum dry density. Stabilize the upper 6 inches of this zone with shell or limerock as required to meet the subgrade recommendations contained in Section 9.2.2.1 and the Pavement Section Design, Appendix D.
9. Test the subgrade and each lift of backfill in over-excavated and fill areas for compaction at a frequency of not less than one test per 2,500 square feet in the building areas and one test per 10,000 square feet in paved areas.
10. In the building areas, test all footing cuts for compaction to a depth of 1 foot. We recommend you test every column footing, and conduct one test for every 100 lineal feet of wall footing.

11. If difficult compaction conditions are encountered during the site work operations, the compaction efforts should stop and a qualified representative of Wal-Mart's testing agency should be consulted for recommendations. The qualified representative of Wal-Mart's testing agency should observe proof-rolling of the exposed subgrade to determine if additional compaction is warranted or if any soil material needs to be over-excavated and replaced.
12. If site preparation work is performed during the rainy season (June through September, reference historic data and Climatic Atlas of the United States), special care should be taken to maintain positive drainage from the building pad and paved areas to drains or ditches around the site. Unexpected wet periods can also occur in Florida during the "dry" season. Such events can raise water tables to levels above seasonal highs without the associated high temperatures to evaporate ponded water. Therefore, the contractor should practice wet weather means and methods for earthwork during the "dry" season as well. Groundwater and surface water control, use of granular fill material and aeration are the normal means to accommodate wet weather construction. All fill materials that are excavated from below the water table should be stockpiled for a sufficiently long period to allow drainage.

### 9.3.2 Suitability of Overexcavated Site Materials

#### 9.3.2.1 Suitability Designation

From the point of view of evaluating the quality of site soils for re-use as fill material, we have subdivided the soil layers into four groups (Group A, Group B, Group C, Group D, and Group E) based on the percent fines determined from our laboratory tests. Please note that these groupings are not in accordance with industry standards but offered for ease of presentation and end use of the excavated soils. Also, organic soils are not suitable and are not recommended for use as structural fill material. Brief descriptions of the various groups based on fill suitability are presented in the following paragraphs. Table 8 shows the soil suitability groups.

TABLE 8 SUITABILITY OF EXCAVATED SOILS FOR RE-USE AS FILL			
Designation	% fines passing No. 200 sieve	USCS Soil Classification	Suitability for re-use as fill material
Group A	0 - 5	SP	Favorable, freely draining, clean sands
Group B	5 - 12	SP - SM, SP - SC	Suitable, impedes infiltration and will require some aeration and moisture control
Group C	12 - 25	SM, SC, SM - SC	Poor, impedes infiltration, limit overall use, may be used for stabilizing material. Will require very strict moisture control.
Group D	> 25	SM, SC, SM - SC, CL, CH, ML, CH	Very Poor, not recommended for fill material, may be used as stabilizing material in pavement subgrade or used in green areas
Group E	organic	PT, OL, SP-OL, SM-OL	Unsuitable, must be removed/demucked and replaced with Group A or B soils

### 9.3.2.2 Soils & Suitability

A review of the subsurface conditions found in our Borings indicates that the predominate soil designation is Group D, which is not suitable for re-use as fill. Individual boring logs must be reviewed to determine the actual soil classification at any boring location. We estimate that about 80 to 90 percent of the soils to be overexcavated will be designated as Group D. If encountered during excavation, soils in **Group D should not be used as backfill material due to difficulties in material handling**, however, these soils may be used in non-structural areas (green areas). Alternatively, they may be used greater than 5 feet below finished grade in deep fills for pavement areas with the understanding that there may be a negative effect on the project scheduling due to handling problems associated with moisture. Additionally, if these soils are not properly placed pavement performance may be negatively impacted. It should be noted that the successful use of group C and D soil types will be related to the sitework contractor's experience in working with these types of soils.

## 9.4 Sewer and Utility Lines

### 9.4.1 General Recommendations

We assume that proposed sewer and other deep utility lines at the site may have invert elevations several feet below existing grades. In general, the soils at this approximate level may be clayey sands and or clay [SC, CL, CH]. **The clayey soils [CL, CH] should not be used as backfill material beside or above the utilities.**

### 9.4.2 Trench Excavation and Backfill Recommendations

The following are our recommendations for construction of the proposed utility lines.

1. If deemed necessary by the contractor, install a dewatering system capable of maintaining a groundwater level at least 2 feet below bottom of pipe level.
2. After excavation to design invert elevations, the in-situ bedding soils should be compacted to at least 95 percent of the modified Proctor test maximum dry density (ASTM D 1557) to a depth of 12 inches below the bedding level. If limestone is encountered at invert elevations it should be undercut at least 12-inches, the sides and bottom of the undercut lined with geo-textile filter fabric and backfilled with compacted sand comparable in composition to the native sands. **The limestone excavation may require use of ripping teeth, headache balls, etc. to facilitate removal.** Compaction in confined areas can probably be achieved using jumping jacks or light weight walk-behind vibratory sleds and/or rollers.
3. After constructing the utility lines, backfill with suitable sand fill placed in 4 to 6 inch thick loose lifts. Each lift of backfill should be compacted to at least 95 percent of the modified Proctor test maximum dry density (ASTM D 1557). Beneath pavement areas, the top 12 inches of backfill should be compacted to at least 98 percent. Additionally, local jurisdictional compaction requirements should be followed when stricter than the recommendations herein.
4. If difficult compaction operations are encountered beneath the utilities due to excessive fines and/or wet conditions, a qualified representative of Wal-Mart's testing agency

should be consulted for recommendations. It may be an option to over-excavate and replace the saturated soils with FDOT No. 57 stone.

5. All excavation work must meet OSHA Excavation Standard Subpart P regulations. Either a trench box, braced sheet pile structure or an excavation with temporary side slopes cut back at 1.5 horizontal to 1.0 vertical can be implemented. The side slope of 1.5 horizontal to 1.0 vertical is contingent upon the dewatering system adequately controlling slope seepage. Sheet piling should be designed according to OSHA sheeting and bracing requirements. We recommend a Florida registered Professional Engineer design any required sheeting/bracing system. Provisions for maintaining workman safety within excavations is the sole responsibility of the contractor.

## **9.5 Excavations**

Excavations should be sloped as necessary to prevent slope failure and to allow backfilling. Temporary excavations below a depth of 4 feet should be sloped in accordance with OSHA regulations (29 CFR Part 1926) dated October 31, 1989. Where lateral confinement will not permit slopes to be laid back, the excavation should be shored in accordance with OSHA requirements. During excavation, excavated material should not be stockpiled at the top of the slope within a horizontal distance equal to the excavation depth. Provisions for maintaining workman safety within excavations is the sole responsibility of the contractor.

## **10.0 CLOSURE**

Our interpretation of the site soil and groundwater conditions is based on our general knowledge of the area, subsurface borings performed and laboratory analysis conducted. UES did identify any geotechnical considerations that will significantly impact the planned development of the site, as we currently understand it, using conventional construction practices.

The identified considerations are: expansive clay foundation soils.

1. Deposits of potential expansive Clays: The potential detrimental effect of the expansive clays can be reduced to tolerable levels by the recommended undercut and replacement and use of top and bottom reinforcement in continuous footings.;
2. Shallow deposits of Clayey Sands and Sandy Clays [SC, CL] that may not be re-usable as fill in utility excavations;
3. The subgrade after excavation, in some areas may include very clayey sands, which will be difficult to compact. The clayey sandy soils may require stringent moisture control during compaction, particularly during rainy periods.

The potential detrimental effect of the expansive clays can be reduced to tolerable levels by the recommended undercut and replacement and use of top and bottom reinforcement in continuous footings.



Wal-Mart Super Center Store No: 3873-00

UES Project No. 0795.1400110

Date: May 20, 2016

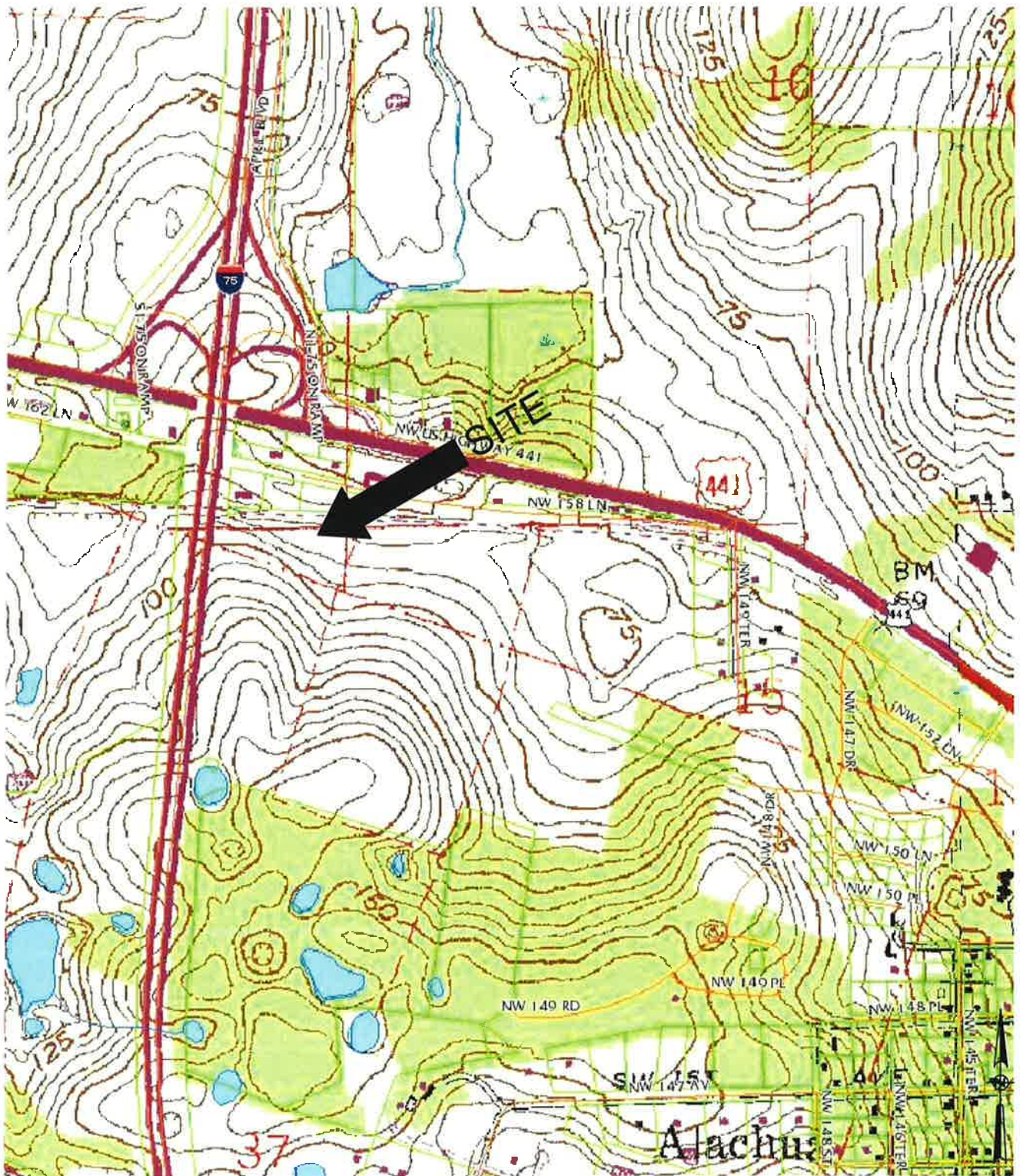
Standard methods of surficial stripping, general excavation, proof-rolling, compaction and backfilling should adequately prepare the site. Wal-Mart's testing agency (CTL) should provide observation and testing services during the site preparation procedures to confirm that the earthwork operations meet the intent of the recommendations presented in this report.

**Universal Engineering Sciences strongly recommends that a pre-construction meeting be held with the following representatives in attendance at a minimum: Wal-Mart representative, general contractor, site (earthwork) contractor, civil engineer, underground utility contractor, UES geotechnical engineer, Wal-Mart's CTL and material testing technician.** At this meeting, UES would describe in detail the geotechnical considerations that would impact the construction process and future serviceability of the improvements.



## **APPENDIX A**

**SITE LOCATION MAP  
USGS SITE LOCATION MAP**



Source of United States Geological Survey: Mapwise, Inc.



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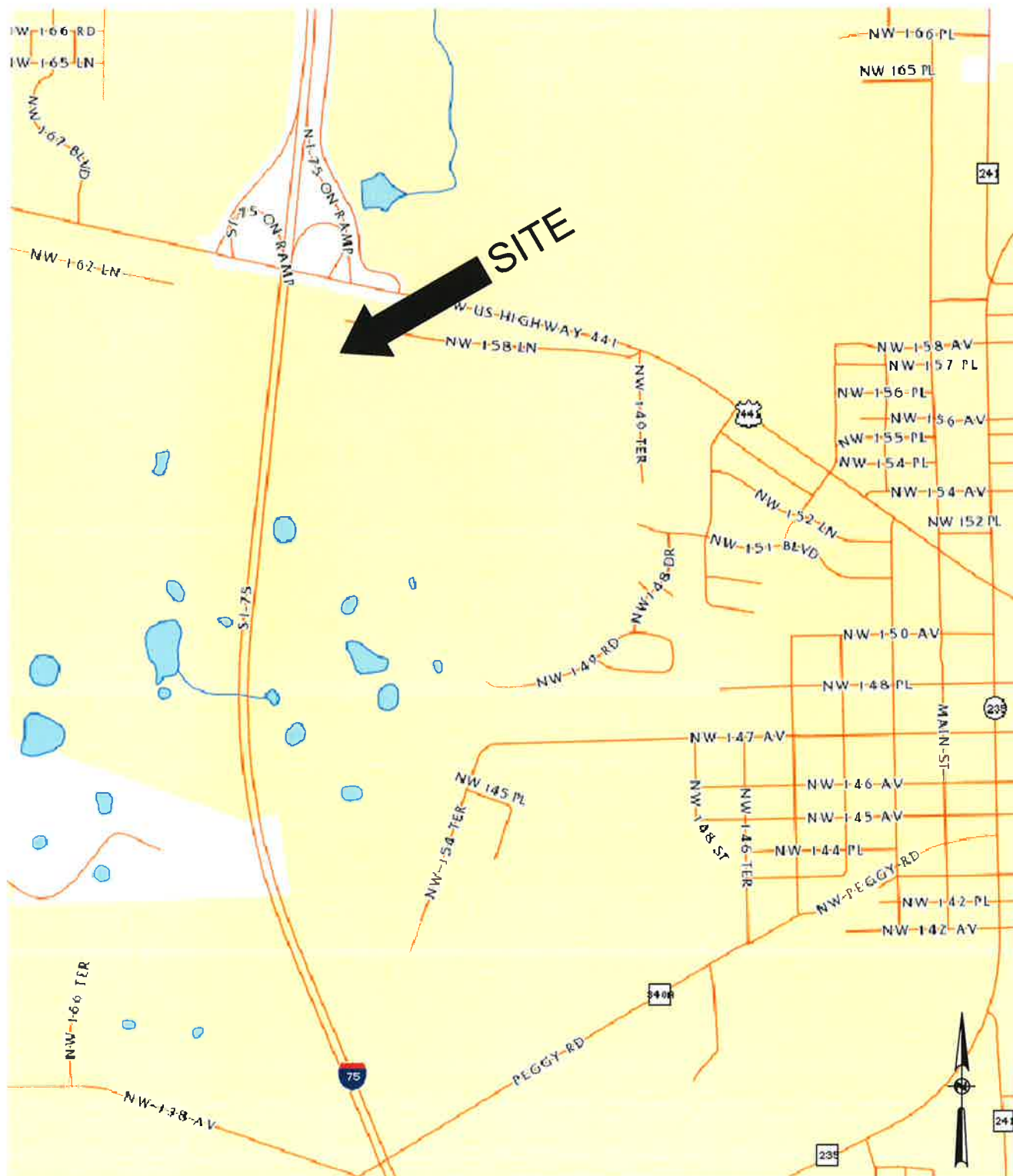
**Walmart\*** STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

### U.S.G.S. VICINITY MAP

DRAWN BY	KD	DATE	4/30/15	CHECKED BY:	ES	DATE	4/30/15
SCALE	NTS	FILE NO	0795.1400110.0000	REPORT NO.	1211903	PAGE NO:	A - 1

0795.1400110-D





Source of Site Location Map: Mapwise, Inc.



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ENGINEERING SCIENCES



**Walmart** STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

### SITE LOCATION MAP

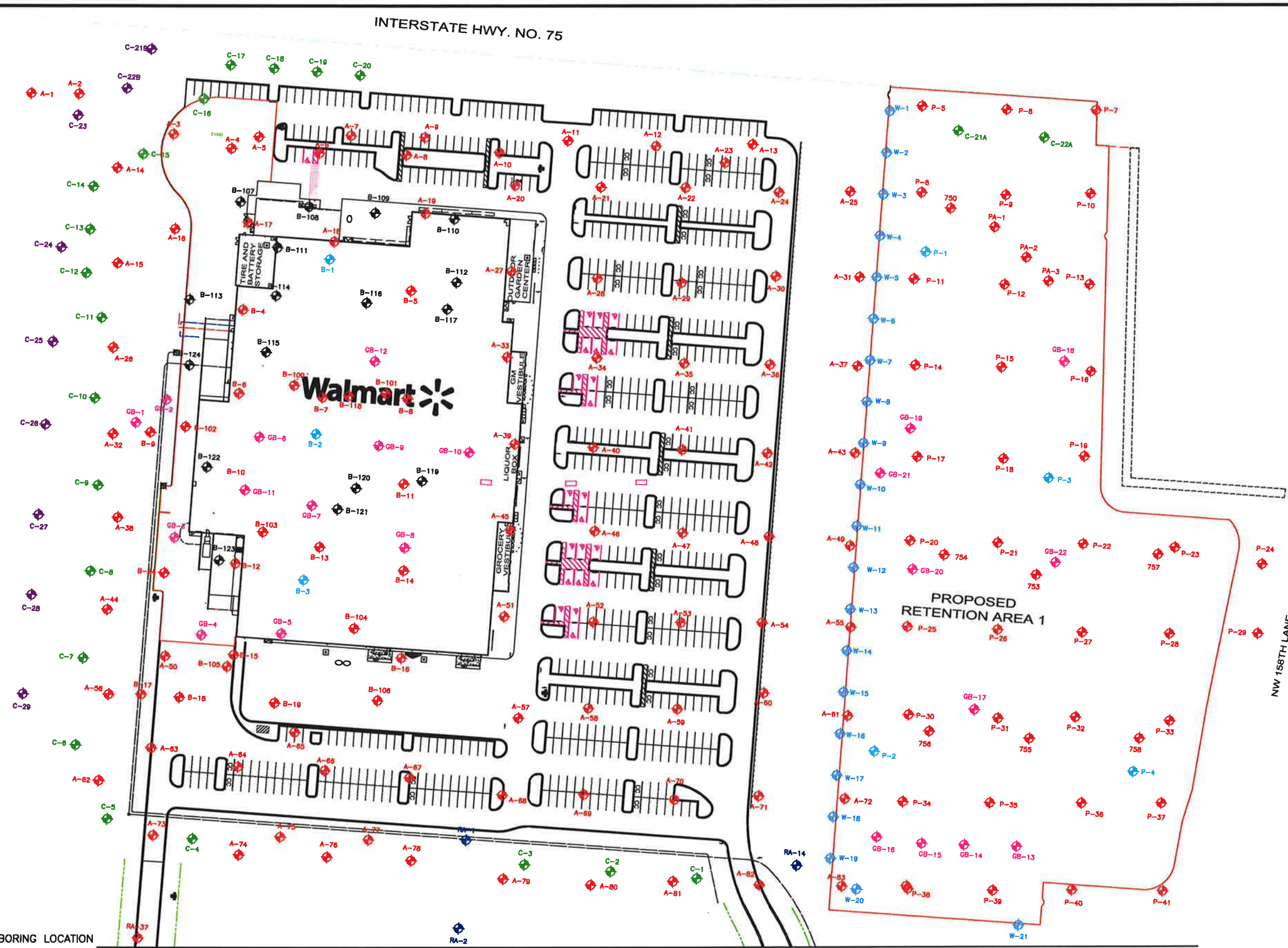
DRAWN BY:	KD	DATE:	4/30/15	CHECKED BY:	ES	DATE:	4/30/15
SCALE:	NTS	FILE NO:	0795.1400110.0000	REPORT NO:	1211903	PAGE NO:	A - 2

0795.1400110-D



## **APPENDIX B**

**OVERALL SITE LOCATION INDEX  
BORING LOCATION PLANS  
BORING LOGS  
KEY TO BORING LOGS  
BORING NORTHING, EASTING, & ELEVATION**




LEGEND

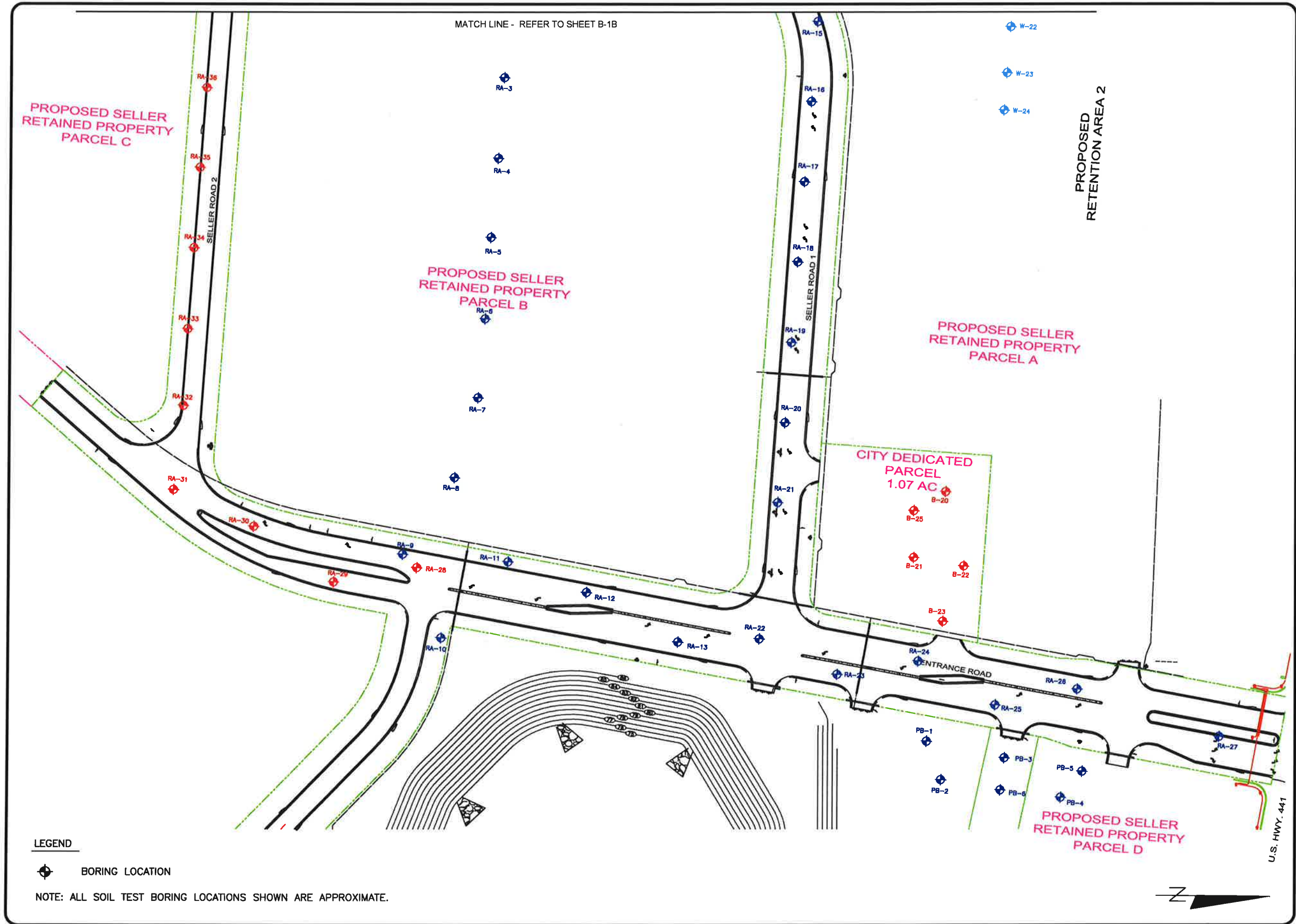
 BORING LOCATION

NOTE: ALL SOIL TEST BORING LOCATIONS SHOWN ARE APPROXIMATE.

MATCH LINE - REFER TO SHEET B-1B

CLIENT:  <b>CPH ENGINEERS, INC.</b>	DRAWN BY: KD	DATE: 5/19/16
	CHECKED BY: ES	DATE: 5/19/16
	SCALE: 1"=120'	ACAD FILE: 0795.1400110-F
	PROJECT NO: 0795.1400110.0000	REPORT NO: 1211903
WALMART STORE NO. 3873-00 SEC OF US HIGHWAY 441 AND INTERSTATE 75 ALACHUA, ALACHUA COUNTY, FLORIDA		
BORING LOCATION PLAN		
 <b>UNIVERSAL</b> ENGINEERING SCIENCES		
PAGE NO: <b>B - 1A</b>		






LEGEND

 BORING LOCATION

NOTE: ALL SOIL TEST BORING LOCATIONS SHOWN ARE APPROXIMATE.

WALMART STORE NO 3873-00 SEC OF US HIGHWAY 441 AND INTERSTATE 75 ALACHUA, ALACHUA COUNTY, FLORIDA		CLIENT: CPH ENGINEERS, INC.	
BORING LOCATION PLAN		DRAWN BY: KD	DATE: 5/19/16
		CHECKED BY: ES	DATE: 5/19/16
		SCALE: 1"=120"	ACADFILE:0795.1400110-F
		PROJECT NO: 0795.1400110.0000	REPORT NO:211903

 UNIVERSAL ENGINEERING SCIENCES
PAGE NO: B - 1B







# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

PAGE: B-2

PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **A-1**SHEET: **1 of 1**

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

GS ELEVATION(ft): 135.35 DATE STARTED: 2/7/05

WATER TABLE (ft): NE DATE FINISHED: 2/7/05

DATE OF READING: NA DRILLED BY: R. WOODARD

EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1	X					Brown clayey SAND [SC]						
2	X	1-1-3	4			Very loose...						
3	X											
4	X	4-6-7	13			Medium dense gray, orange and tan						
5	X											
6	X	5-7-7	14									
7	X											
8	X	9-7-8	15									
9	X											
10	X	9-9-8	17			Medium dense...						
11												
12												
13						Green and orange fat CLAY [CH]						
14	X											
15	X	3-5-6	11			Stiff...						
16												
17												
18												
19	X											
20	X	2-3-3	6			Firm....						
21												
22												
23						Medium dense light gray clayey SAND [SC]						
24	X											
25		4-6-8	14			Boring Terminated at 25'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

PAGE: B-3

PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **A-2** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

GS ELEVATION(ft): 135.00 DATE STARTED: 2/7/05  
WATER TABLE (ft): NE DATE FINISHED: 2/7/05  
DATE OF READING: NA DRILLED BY: R. WOODARD  
EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1	X					Brown poorly graded SAND [SP]						
2	X	1-1-3	4			Very loose brown and orange clayey SAND [SC]						
3	X											
4	X	3-4-6	10									
5	X	4-5-6	11			Green, orange and gray fat CLAY, with sand [CH] Stiff...						
6	X											
7	X	8-7-8	15									
8	X	8-8-9	17			Very stiff...						
9	X											
10	X	9-10-10	20			Medium dense gray and orange clayey SAND [SC]						
11												
12						Green and orange CLAY [CH]						
13												
14	X	2-2-3	5			Firm...						
15												
16												
17						Green, with limestone						
18												
19	X	2-2-3	5			Firm...						
20												
21												
22						Light gray to white clayey SAND [SC]						
23												
24	X	4-5-6	11			Medium dense...						
25						Boring Terminated at 25'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

PAGE: B-4

PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

BORING NO: **A-3** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

GS ELEVATION(ft): 136.27 DATE STARTED: 2/7/05

WATER TABLE (ft): NE DATE FINISHED: 2/7/05

DATE OF READING: NA DRILLED BY: R. WOODARD

EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1	X					Brown clayey SAND [SC]						
2	X	1-2-3	5			Loose...						
3	X											
4	X	4-5-7	12			Medium dense orange and gray...						
5	X											
6	X	5-7-5	12			Gray and orange...						
7	X											
8	X	6-5-6	11									
9	X	7-8-6	14									
10	X	6-8-8	16			Medium dense...						
11												
12						Green and orange fat CLAY [CH]						
13												
14	X	2-3-4	7			Firm...						
15												
16												
17												
18												
19	X	2-3-3	6			Firm...						
20												
21												
22												
23						Light tan to white clayey SAND [SC]						
24	X	3-6-6	12			Medium dense...						
25						Boring Terminated at 25'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

PAGE: B-5

PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **A-4** SHEET: **1 of 1**

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E  
GS ELEVATION(ft): 134.69 DATE STARTED: 2/7/05  
WATER TABLE (ft): NE DATE FINISHED: 2/7/05  
DATE OF READING: NA DRILLED BY: R. WOODARD  
EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1						Brown poorly graded SAND [SP]						
2	X	1-1-2	3			Very loose brown silty SAND [SM]						
3	X	2-2-4	6			Loose brown clayey SAND [SC]						
4	X											
5	X	7-6-6	12			Medium dense orange and light gray...						
6	X	6-7-7	14									
7	X	6-7-6	13									
8	X											
9	X	5-6-7	13			Medium dense...						
10												
11												
12						Green and orange fat CLAY, with sand [CH]						
13												
14	X	3-3-5	8			Stiff...						
15												
16												
17												
18												
19	X	2-3-5	8			Stiff...						
20												
21												
22						Light gray to white clayey SAND [SC]						
23												
24	X	1-2-2	4			Very loose...						
25						Boring Terminated at 25'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

PAGE: B-6

PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

BORING NO: **A-5** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

GS ELEVATION(ft): 133.88 DATE STARTED: 2/8/05

WATER TABLE (ft): 23 DATE FINISHED: 2/8/05

DATE OF READING: 2/9/05 DRILLED BY: J. STILLSON

EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1						Brown poorly graded SAND [SP]						
2	X	4-6-7	13			Stiff orange and gray sandy CLAY [CH]						
3	X	2-5-7	12									
4	X	2-5-8	13			Medium dense orange and brown clayey SAND [SC]						
5	X	2-5-8	13									
6	X	4-5-8	13									
7	X	3-4-6	10									
8	X	3-6-6	12			Medium dense orange and gray...						
9												
10												
11												
12												
13												
14	X	3-5-6	11			Green and orange fat CLAY [CH] Stiff...						
15												
16												
17												
18												
19	X	3-4-5	9			Stiff...						
20												
21												
22												
23						Light gray clayey SAND [SC]						
24	X	3-5-7	12			Medium dense...						
25						Boring Terminated at 25'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

PAGE: B-7

PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

BORING NO: **A-6** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

GS ELEVATION(ft): 132.94 DATE STARTED: 2/8/05

WATER TABLE (ft): NE DATE FINISHED: 2/8/05

DATE OF READING: NA DRILLED BY: J. STILLSON

EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1						Brown poorly graded SAND [SP]						
2	X	4-4-6	10			Loose brown and orange clayey SAND [SC]						
3	X	4-5-8	13			Medium dense..						
4	X	4-5-8	13									
5	X	4-5-8	13									
6	X	4-8-8	16									
7	X	4-6-8	14									
8	X	4-5-7	12			Stiff green and orange fat CLAY, with sand [CH]						
9	X											
10												
11												
12												
13												
14	X	5-5-7	12			Stiff...						
15												
16												
17												
18												
19	X	3-3-4	7			Firm...						
20												
21												
22												
23												
24	X	3-4-6	10			Stiff...	87					
25						Boring Terminated at 25'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

PAGE: B-8

PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **A-7** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.

GS ELEVATION(ft): 130.99 DATE STARTED: 2/8/05

LOCATION: SEE BORING LOCATION PLAN

WATER TABLE (ft): NE DATE FINISHED: 2/8/05

REMARKS:

DATE OF READING: NA DRILLED BY: J. STILLSON

EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1	X					Brown poorly graded SAND [SP]						
2	X	4-5-6	11			Medium dense brown and orange clayey SAND [SC]						
3	X											
4	X	4-5-5	10									
5	X	3-6-11	17			Medium dense light brown, light gray and orange...						
6	X											
7	X	3-3-7	10									
8	X	3-3-4	7			Firm orange and green fat CLAY, with sand [CH]						
9	X											
10	X	3-4-5	9			Stiff...						
11												
12												
13												
14	X	3-4-6	10			Stiff...						
15												
16												
17												
18						Light gray silty SAND [SM]						
19	X	4-4-4	8			Loose...						
20												
21												
22												
23												
24	X	5-6-7	13			Medium dense...						
25						Boring Terminated at 25'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

PAGE: B-9

PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

BORING NO: **A-8** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

GS ELEVATION(ft): 128.43 DATE STARTED: 2/7/05

WATER TABLE (ft): NE DATE FINISHED: 2/7/05

DATE OF READING: NA DRILLED BY: J. STILLSON

EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1	X					Brown poorly graded SAND [SP]						
2	X	2-3-6	9			Loose brown and orange clayey SAND [SC]						
3	X											
4	X	2-3-6	9									
5	X	2-4-6	10									
6	X											
7	X	3-4-5	9			Loose orange and gray...						
8	X											
9	X	3-4-5	9									
10	X	3-4-4	8			Stiff green and orange sandy CLAY [CH]						
11												
12												
13												
14	X											
15	X	4-4-9	13			Stiff...						
16												
17						Light gray and orange clayey SAND [SC]						
18												
19	X											
20	X	2-3-6	9			Loose...						
21												
22												
23						Light gray silty SAND [SM]						
24	X											
25	X	5-5-5	10			Medium dense...						
						Boring Terminated at 25'						





# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

PAGE: B-10

PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

BORING NO: **A-9** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

GS ELEVATION(ft): 126.22 DATE STARTED: 2/7/05

WATER TABLE (ft): NE DATE FINISHED: 2/7/05

DATE OF READING: NA DRILLED BY: J. STILLSON

EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1	X					Brown silty SAND [SM]						
2	X	2-2-2	4									
3	X	2-3-3	6			Loose to medium dense brown clayey SAND [SC]						
4	X											
5	X	2-3-5	8									
6	X	3-4-4	8									
7	X											
8	X	3-4-5	9									
9	X											
10	X	3-5-8	13			Medium dense orange and light gray...						
11												
12												
13						Green and orange fat CLAY [CH]						
14	X	3-7-9	16			Very stiff...						
15												
16												
17												
18												
19	X	4-5-6	11			Stiff...						
20												
21												
22												
23						Light gray clayey SAND [SC]						
24	X	3-5-6	11			Medium dense...						
25						Boring Terminated at 25'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

PAGE: B-11

PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

CLIENT: CPH ENGINEERS, INC.

LOCATION: SEE BORING LOCATION PLAN

REMARKS:

BORING NO: **A-10** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

GS ELEVATION(ft): 124.28 DATE STARTED: 2/7/05

WATER TABLE (ft): NE DATE FINISHED: 2/7/05

DATE OF READING: NA DRILLED BY: J. STILLSON

EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1						Brown poorly graded SAND [SP]						
2		2-4-6	10			Brown and orange clayey SAND [SC]						
3						Loose...						
4		2-3-6	9									
5		3-3-6	9									
6		2-3-5	8			Stiff orange and green fat CLAY, with sand [CH]						
7		2-3-6	9									
8		2-3-6	9									
9		3-3-6	9			Stiff...						
10												
11												
12												
13												
14		2-4-5	9			Loose light gray clayey SAND [SC]						
15												
16												
17												
18												
19		3-4-5	9			Loose tan and light gray ..						
20												
21												
22												
23						Light gray poorly graded SAND [SP]						
24		2-5-6	11			Medium dense...						
25						Boring Terminated at 25'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

PAGE: B-12

PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **A-11** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.

GS ELEVATION(ft): 120.65 DATE STARTED: 1/28/05

LOCATION: SEE BORING LOCATION PLAN

WATER TABLE (ft): NE DATE FINISHED: 1/28/05

REMARKS:

DATE OF READING: NA DRILLED BY: M. BOATRIGHT

EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1	X					Brown poorly graded SAND [SP]						
2	X	4-4-3	7			Brown and orange clayey SAND [SC]						
3	X	4-6-6	12									
4	X	2-3-3	6			Stiff tan, brown and orange sandy CLAY [CH]						
5	X	2-3-4	7									
6	X	3-5-6	11			Stiff green and orange...						
7	X	2-3-5	8									
8	X											
9	X											
10	X											
11	X											
12	X											
13	X											
14	X	2-2-3	5									
15						Boring Terminated at 15'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

PAGE: B-13

PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **A-12** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.

GS ELEVATION(ft): 115.77 DATE STARTED: 2/1/05

LOCATION: SEE BORING LOCATION PLAN

WATER TABLE (ft): NE DATE FINISHED: 2/1/05

REMARKS:

DATE OF READING: NA DRILLED BY: J. STILLSON

EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W T	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1												
2	X	2-2-4	6			Brown and orange sandy CLAY [CH]						
3	X	4-3-5	8									
4	X											
5	X	5-6-5	11			Stiff...						
6	X	4-5-7	12									
7	X											
8	X	5-5-6	11									
9	X											
10	X	5-7-7	14			Stiff...						
11												
12												
13												
14	X	2-2-4	6			Loose light gray and tan silty SAND [SM]						
15						Boring Terminated at 15'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **A-13** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

GS ELEVATION(ft): 108.87 DATE STARTED: 2/2/05  
WATER TABLE (ft): NE DATE FINISHED: 2/2/05  
DATE OF READING: NA DRILLED BY: G. WHITAKER  
EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT / DAY)	ORG. CONT. (%)
									LL	PI		
0												
1	X					Loose brown clayey SAND [SC]						
2	X	1-2-2	4									
3	X	2-2-3	5			Loose...						
4	X											
5	X	3-4-4	8			Loose orange and brown...						
6	X											
7	X	4-6-7	13									
8	X	5-7-9	16			Stiff green and orange fat CLAY [CH]						
9	X											
10	X	5-7-8	15			Stiff...						
11												
12												
13												
14	X	2-4-8	12			Stiff...						
15						Boring Terminated at 15'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **A-14** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

GS ELEVATION(ft): 138.93 DATE STARTED: 2/7/05  
WATER TABLE (ft): NE DATE FINISHED: 2/7/05  
DATE OF READING: NA DRILLED BY: R. WOODARD  
EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1	X					Brown poorly graded SAND [SP]						
2	X	1-1-3	4									
3	X	3-4-5	9			Loose brown clayey SAND [SC]						
4	X											
5	X	4-5-6	11			Medium dense orange, tan and gray...						
6	X	7-5-5	10									
7	X											
8	X	6-7-7	14									
9	X	7-9-9	18									
10												
11												
12						Green and orange fat CLAY [CH]						
13												
14	X	2-2-3	5			Firm...						
15												
16												
17												
18												
19	X	3-3-3	6			Firm...						
20												
21												
22						Light gray to white clayey SAND [SC]						
23												
24	X	4-5-6	11			Medium dense...						
25						Boring Terminated at 25'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **A-15** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.

GS ELEVATION(ft): 140.14

DATE STARTED: 2/7/05

LOCATION: SEE BORING LOCATION PLAN

WATER TABLE (ft): NE

DATE FINISHED: 2/7/05

REMARKS:

DATE OF READING: NA

DRILLED BY: R. WOODARD

EST. WSWT (ft): NA

TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1	X					Brown poorly graded SAND [SP]						
2	X	1-2-2	4									
3	X					Loose brown clayey SAND [SC]						
4	X	2-3-4	7									
5	X					Very stiff orange and gray sandy CLAY [CH]						
6	X	5-7-9	16									
7	X	10-8-8	16			Medium dense gray and orange clayey SAND [SC]						
8	X	8-8-6	14									
9	X					Medium dense...						
10	X	7-7-8	15									
11												
12						Green and orange fat CLAY [CH]						
13												
14	X					Stiff...						
15	X	3-4-4	8									
16												
17												
18												
19	X					Firm...						
20	X	2-3-4	7									
21												
22						Loose light gray clayey SAND [SC]						
23												
24	X											
25		3-3-3	6			Boring Terminated at 25'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

BORING NO: **A-16** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

GS ELEVATION(ft): 139.41 DATE STARTED: 2/7/05

WATER TABLE (ft): NE DATE FINISHED: 2/7/05

DATE OF READING: NA DRILLED BY: R. WOODARD

EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1	X					Brown SAND [SP]						
2	X	1-1-2	3									
3	X	1-2-3	5			Very loose to loose brown clayey SAND [SC]						
4	X											
5	X	2-3-5	8									
6	X	5-3-5	8			Loose light gray and orange...						
7	X	5-6-4	10									
8	X											
9	X	5-6-7	13			Medium dense...						
10	X											
11												
12						Green and orange fat CLAY [CH]						
13												
14	X	3-4-4	8			Stiff...						
15												
16												
17												
18												
19	X	1-2-3	5			Firm...						
20												
21												
22												
23												
24	X	2-3-4	7			Firm...						
25						Boring Terminated at 25'						





# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **A-17** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.

GS ELEVATION(ft): 136.73

DATE STARTED: 2/7/05

LOCATION: SEE BORING LOCATION PLAN

WATER TABLE (ft): NE

DATE FINISHED: 2/7/05

REMARKS:

DATE OF READING: NA

DRILLED BY: R. WOODARD

EST. WSWT (ft): NA

TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1	X					Brown clayey SAND [SC]						
2	X	1-2-3	5			Loose...						
3	X											
4	X	3-3-5	8									
5	X	7-8-12	20			Very stiff orange and gray sandy CLAY [CH]						
6	X											
7	X	10-10-10	20									
8	X											
9	X	11-10-9	19			Medium dense gray and orange clayey SAND [SC]						
10	X	8-8-8	16									
11												
12						Green and orange fat CLAY [CH]						
13												
14	X	2-3-4	7			Firm...						
15												
16												
17												
18												
19	X	2-2-4	6			Firm...						
20												
21												
22												
23						Light gray to white clayey SAND [SC]						
24	X	4-5-6	11			Medium dense...						
25						Boring Terminated at 25'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **A-18** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.

GS ELEVATION(ft): 133.29 DATE STARTED: 2/8/05

LOCATION: SEE BORING LOCATION PLAN

WATER TABLE (ft): NE DATE FINISHED: 2/8/05

REMARKS:

DATE OF READING: NA DRILLED BY: R. WOODARD

EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1	X					Brown clayey SAND [SC]						
2	X	1-3-4	7			Loose orange, light gray & tan...						
3	X											
4	X	5-6-7	13			Medium dense...						
5	X											
6	X	7-8-9	17									
7	X											
8	X	8-8-6	14									
9	X					Orange, green and gray fat CLAY, with sand [CH]						
10	X	6-7-8	15			Stiff...						
11												
12												
13						Green...						
14	X											
15	X	2-3-4	7			Firm...						
16												
17												
18						Light gray to white clayey SAND [SC]						
19	X											
20	X	2-2-3	5			Loose...						
21												
22												
23												
24	X											
25	X	5-5-5	10			Medium dense...						
						Boring Terminated at 25'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **A-19** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.

GS ELEVATION(ft): 128.56

DATE STARTED: 2/8/05

LOCATION: SEE BORING LOCATION PLAN

WATER TABLE (ft): NE

DATE FINISHED: 2/8/05

REMARKS:

DATE OF READING: NA

DRILLED BY: R. WOODARD

EST. WSWT (ft): NA

TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W T	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1	X					Brown clayey SAND [SC]						
2	X	1-2-3	5			Loose...						
3	X											
4	X	3-6-7	13			Medium dense...						
5	X	4-6-7	13			Stiff gray and orange sandy CLAY [CH]						
6	X					Medium dense brown and tan clayey SAND [SC]						
7	X	7-7-8	15			Orange and tan...						
8	X	8-8-7	15									
9	X	6-9-8	17									
10												
11						Orange and green sandy CLAY [CH]						
12												
13												
14	X	2-3-4	7			Firm...						
15												
16												
17												
18						Light gray and orange clayey SAND [SC]						
19	X	2-2-2	4			Loose...						
20												
21												
22						White...						
23												
24	X	4-6-7	13			Medium dense...						
25						Boring Terminated at 25'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **A-20** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.

GS ELEVATION(ft): 124.85 DATE STARTED: 2/7/05

LOCATION: SEE BORING LOCATION PLAN

WATER TABLE (ft): NE DATE FINISHED: 2/7/05

REMARKS:

DATE OF READING: NA DRILLED BY: J. STILLSON

EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1	X					Brown poorly graded SAND [SP]						
2	X	3-3-5	8			Loose brown and orange clayey SAND [SC]						
3	X											
4	X	3-3-4	7			Loose orange and light gray...						
5	X											
6	X	2-4-6	10			Green and orange sandy CLAY [CH]						
7	X	3-4-6	10			Stiff...						
8	X	3-4-5	9									
9	X					Stiff...						
10	X	3-4-4	8									
11												
12												
13												
14	X											
15	X	3-3-5	8			Loose light gray and orange silty clayey SAND [SC-SM]						
16												
17												
18												
19	X											
20	X	3-4-7	11			Medium dense...	27					
21												
22												
23						Light gray...						
24	X											
25	X	3-6-7	13			Medium dense...						
						Boring Terminated at 25'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO : 0795.1400110.0000

REPORT NO.: 1211903

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **A-21** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.

GS ELEVATION(ft): 119.64 DATE STARTED: 1/28/05

LOCATION: SEE BORING LOCATION PLAN

WATER TABLE (ft): NE DATE FINISHED: 1/28/05

REMARKS:

DATE OF READING: NA DRILLED BY: M. BOATRIGHT

EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W T	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1						Brown poorly graded SAND [SP]						
2		4-5-5	10			Loose tan, brown and orange clayey SAND [SC]						
3		5-4-4	8									
4		5-6-6	12			Firm...						
5		2-4-3	7			Stiff green and orange sandy lean CLAY [CL]						
6		5-7-7	14									
7		3-3-4	7			Firm...						
8												
9												
10												
11												
12												
13												
14		3-4-4	8									
15						Boring Terminated at 15'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

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PAGE: B-23

PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **A-22** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

GS ELEVATION(ft): 114.08 DATE STARTED: 2/3/05  
WATER TABLE (ft): NE DATE FINISHED: 2/3/05  
DATE OF READING: NA DRILLED BY: J. STILLSON  
EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1	X					Brown clayey SAND [SC]						
2	X	1-2-3	5			Loose...						
3	X											
4	X	2-2-3	5									
5	X	3-4-4	8			Stiff green and orange fat CLAY [CH]						
6	X	3-4-4	8			Stiff...						
7	X											
8	X	4-5-5	10									
9	X	5-7-8	15			Stiff...						
10												
11												
12						Loose light gray to tan clayey SAND [SC]						
13												
14	X	3-4-5	9									
15						Boring Terminated at 15'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

PAGE: B-24

PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

BORING NO: **A-23** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

GS ELEVATION(ft): 110.54 DATE STARTED: 2/2/05

WATER TABLE (ft): NE DATE FINISHED: 2/2/05

DATE OF READING: NA DRILLED BY: G. WHITAKER

EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT / DAY)	ORG. CONT. (%)
									LL	PI		
0												
1	X					Brown clayey SAND [SC]						
2	X	1-2-2	4			Loose...						
3	X											
4	X	2-2-3	5									
5	X	3-4-4	8			Loose brown and orange...						
6	X											
7	X	3-4-5	9									
8	X											
9	X	4-6-10	16			Medium dense light gray and orange...						
10	X	5-7-9	16									
11												
12						Green and orange fat CLAY [CH]						
13												
14	X	3-5-7	12			Stiff...						
15						Boring Terminated at 15'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **A-24** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

GS ELEVATION(ft): 107.25 DATE STARTED: 2/2/05  
WATER TABLE (ft): NE DATE FINISHED: 2/2/05  
DATE OF READING: NA DRILLED BY: G. WHITAKER  
EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1	X					Brown clayey SAND [SC]						
2	X	1-2-3	5			Loose...						
3	X					Stiff brown and orange sandy CLAY [CH]						
4	X	3-4-6	10									
5	X	5-6-7	13									
6	X	5-7-8	15			Stiff green and orange...						
7	X											
8	X	4-5-7	12									
9	X					Medium dense light brown to tan clayey SAND [SC]						
10	X	6-8-8	16				26					
11												
12												
13												
14	X	3-5-5	10			Medium dense...						
15						Boring Terminated at 15'						





# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **A-25** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

GS ELEVATION(ft): 102.00 DATE STARTED: 2/3/05  
WATER TABLE (ft): NE DATE FINISHED: 2/3/05  
DATE OF READING: NA DRILLED BY: R. WOODARD  
EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1	X					Brown silty SAND [SM]						
2	X	WOH-1	1			Very loose...						
3	X											
4	X	WOH-1-0	1			Very loose dark brown clayey SAND [SC]						
5	X	1-1-2	3									
6	X	2-1-2	3									
7	X											
8	X	1-2-2	4			Loose...						
9	X											
10	X	2-2-2	4			Very loose...						
11												
12												
13												
14	X	2-2-3	5			Loose...						
15						Boring Terminated at 15'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **A-26** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.

GS ELEVATION(ft): 137.23 DATE STARTED: 2/4/05

LOCATION: SEE BORING LOCATION PLAN

WATER TABLE (ft): NE DATE FINISHED: 2/4/05

REMARKS:

DATE OF READING: NA DRILLED BY: R. WOODARD

EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1	X					Brown clayey SAND [SC]						
2	X	1-2-3	5			Loose orange and gray...						
3	X	5-6-7	13			Medium dense...						
4	X	4-5-5	10			Medium dense tan, orange and gray...						
5	X	6-7-9	16			Medium dense...						
6	X	9-10-9	19			Medium dense orange and gray silty SAND [SM]						
7	X	8-8-8	16			Medium dense gray and orange clayey SAND [SC]						
8												
9												
10												
11												
12						Green and orange sandy CLAY [CH]						
13												
14	X	1-2-3	5			Firm...						
15												
16												
17												
18						Light gray to tan clayey SAND [SC]						
19	X	2-3-4	7			Loose...						
20												
21												
22												
23												
24	X	2-3-5	8			Loose...						
25						Boring Terminated at 25'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

PAGE: B-28

PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **A-27** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

GS ELEVATION(ft): 124.45 DATE STARTED: 2/7/05  
WATER TABLE (ft): NE DATE FINISHED: 2/7/05  
DATE OF READING: NA DRILLED BY: J. STILLSON  
EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1						Brown poorly graded SAND [SP]						
2	X	3-6-7	13			Medium dense brown and orange clayey SAND [SC]						
3	X	3-4-7	11			Medium dense light brown & light gray...						
4	X											
5	X	3-4-8	12									
6	X	3-4-8	12			Stiff orange & gray sandy CLAY [CH]						
7	X											
8	X	4-4-8	12									
9	X	4-6-9	15			Stiff green and orange...						
10												
11												
12												
13												
14	X	7-8-9	17			Very stiff...						
15												
16												
17												
18												
19	X	4-5-8	13			Medium dense light gray and orange clayey SAND [SC]						
20												
21												
22												
23												
24	X	7-8-9	17									
25						Boring Terminated at 25'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

PAGE: B-29

PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **A-28** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.

GS ELEVATION(ft): 119.28 DATE STARTED: 1/28/05

LOCATION: SEE BORING LOCATION PLAN

WATER TABLE (ft): NE DATE FINISHED: 1/28/05

REMARKS:

DATE OF READING: NA DRILLED BY: M. BOATRIGHT

EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1						Brown poorly graded SAND [SP]						
2	X	2-3-3	6			Loose brown and orange clayey SAND [SC]						
3	X	4-5-4	9									
4	X	4-4-5	9									
5	X	4-4-4	8			Stiff light green and orange sandy CLAY [CH]						
6	X	3-3-3	6									
7	X	4-6-8	14			Stiff...						
8	X											
9	X											
10	X											
11	X											
12	X					Loose tan and orange clayey SAND [SC]						
13	X	1-3-3	6									
14	X											
15						Boring Terminated at 15'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

PAGE: B-30

PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

BORING NO: **A-29** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

GS ELEVATION(ft): 113.45 DATE STARTED: 2/3/05

WATER TABLE (ft): NE DATE FINISHED: 2/3/05

DATE OF READING: NA DRILLED BY: G. WHITAKER

EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT / DAY)	ORG. CONT. (%)
									LL	PI		
0												
1	X					Brown silty SAND [SM]						
2	X	1-2-5	7			Loose...						
3	X	3-4-6	10									
4	X	4-4-4	8			Light gray, orange & brown...						
5	X	4-5-4	9			Stiff green and orange CLAY [CH]						
6	X	4-6-6	12				78					
7	X	4-5-7	12									
8	X											
9	X											
10	X											
11	X											
12	X					Loose light gray to tan clayey SAND [SC]						
13	X											
14	X	2-4-6	10									
15	X					Boring Terminated at 15'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

PAGE: B-31

PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **A-30** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

GS ELEVATION(ft): 106.43 DATE STARTED: 2/3/05  
WATER TABLE (ft): NE DATE FINISHED: 2/3/05  
DATE OF READING: NA DRILLED BY: G. WHITAKER  
EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT / DAY)	ORG. CONT. (%)
									LL	PI		
0												
1	X					Brown clayey SAND [SC]						
2	X	1-2-4	6			Loose...						
3	X	3-4-5	9									
4	X	4-4-5	9									
5	X	5-6-6	12			Stiff green and orange sandy CLAY [CH]						
6	X	5-7-8	15									
7	X	3-4-6	10									
8	X											
9	X											
10	X											
11												
12						Tan and orange clayey SAND [SC]						
13												
14	X	3-4-6	10			Loose...						
15						Boring Terminated at 15'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

PAGE: B-32

PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

BORING NO: **A-31** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

GS ELEVATION(ft): 101.07 DATE STARTED: 2/3/05

WATER TABLE (ft): NE DATE FINISHED: 2/3/05

DATE OF READING: NA DRILLED BY: R. WOODARD

EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1	X					Brown clayey SAND [SC]						
2	X	1-1-2	3			Very loose...	38					
3	X											
4	X	1-2-2	4									
5	X	3-4-6	10									
6	X	6-6-5	11			Stiff green and orange fat CLAY, with sand [CH]						
7	X											
8	X	5-6-6	12									
9	X	6-7-7	14			Medium dense tan clayey SAND [SC]						
10	X											
11												
12												
13												
14	X	2-3-4	7			Loose...						
15						Boring Terminated at 15'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

PAGE: B-33

PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **A-32** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

GS ELEVATION(ft): 129.48 DATE STARTED: 2/4/05  
WATER TABLE (ft): 4.5 DATE FINISHED: 2/4/05  
DATE OF READING: 2/5/05 DRILLED BY: R. WOODARD  
EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1						Light brown silty SAND [SM]						
2	X	1-1-1	2			Very loose...						
3	X	1-3-4	7			Loose...						
4	X											
5	X	3-3-4	7									
6	X	6-4-4	8									
7	X											
8	X	5-6-5	11			Medium dense...						
9	X	4-6-8	14									
10												
11												
12												
13												
14	X	3-4-4	8			Loose...						
15												
16												
17												
18												
19	X	3-5-6	11			Medium dense...						
20												
21												
22												
23												
24	X	1-2-2	4			Very loose gray and brown...						
25						Boring Terminated at 25'						





# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

PAGE: B-34

PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **A-33** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.

GS ELEVATION(ft): 120.90 DATE STARTED:

LOCATION: SEE BORING LOCATION PLAN

WATER TABLE (ft): NE DATE FINISHED:

REMARKS:

DATE OF READING: NA DRILLED BY: M. B0ATRIGHT

EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1	X					Brown poorly graded SAND [SP]						
2	X	1-2-3	5			Loose brown and orange clayey SAND [SC]						
3	X											
4	X	4-5-5	10									
5	X	5-7-8	15			Medium dense...						
6	X						34					
7	X	4-4-4	8									
8	X	5-5-5	10			Stiff green and orange fat CLAY [CH]						
9	X											
10	X	5-6-6	12									
11												
12												
13												
14	X	3-3-4	7			Loose brown and tan clayey SAND [SC]						
15						Boring Terminated at 15'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

PAGE: B-35

PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

BORING NO: **A-34** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

GS ELEVATION(ft): 116.20 DATE STARTED: 1/28/05

WATER TABLE (ft): NE DATE FINISHED: 1/28/05

DATE OF READING: NA DRILLED BY: M. BOATRIGHT

EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1	X					Brown poorly graded SAND [SP]						
2	X	2-4-4	8			Brown and orange clayey SAND [SC]						
3	X	3-4-5	9									
4	X	4-5-6	11									
5	X	4-4-5	9			Stiff green and orange sandy CLAY [CH]						
6	X	3-4-5	9									
7	X	4-6-8	14									
8	X											
9	X											
10	X											
11												
12						Tan and brown clayey SAND [SC]						
13												
14	X	2-3-4	7			Loose...						
15						Boring Terminated at 15'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

PAGE: B-36

PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **A-35** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

GS ELEVATION(ft): 110.42 DATE STARTED: 2/3/05  
WATER TABLE (ft): NE DATE FINISHED: 2/3/05  
DATE OF READING: NA DRILLED BY: G. WHITAKER  
EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W T	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1	X					Brown clayey SAND [SC]						
2	X	1-2-4	6									
3	X	2-3-4	7			Loose light brown, gray and orange...						
4	X											
5	X	3-3-4	7									
6	X	3-5-6	11			Medium dense gray and orange...						
7	X											
8	X	7-8-10	18									
9	X					Stiff light gray and orange sandy fat CLAY [CH]						
10	X	3-4-5	9									
11												
12												
13												
14	X	4-5-7	12			Stiff green and orange...						
15						Boring Terminated at 15'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

PAGE: B-37

PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

BORING NO: **A-36** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

GS ELEVATION(ft): 104.15 DATE STARTED: 2/3/05

WATER TABLE (ft): NE DATE FINISHED: 2/3/05

DATE OF READING: NA DRILLED BY: G. WHITAKER

EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1	X					Brown clayey SAND [SC]						
2	X	1-2-2	4			Loose...						
3	X	2-2-3	5			Loose...						
4	X											
5	X	2-2-3	5									
6	X	2-3-5	8			Loose brown and orange clayey...						
7	X											
8	X	5-8-8	16			Very stiff green and orange fat CLAY [CH]						
9	X					Stiff...						
10	X	3-4-5	9									
11												
12												
13												
14	X	3-5-7	12			Stiff...						
15						Boring Terminated at 15'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

PAGE: B-38

PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **A-37** SHEET: **1 of 1**

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E  
GS ELEVATION(ft): 98.16 DATE STARTED: 2/3/05  
WATER TABLE (ft): NE DATE FINISHED: 2/3/05  
DATE OF READING: NA DRILLED BY: R. WOODARD  
EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1						Brown clayey SAND [SC]						
2	X	WOH	WOH			Very loose...						
3	X											
4	X	WOH-1-1	2									
5	X	1-0-1	1									
6	X	1-1-1	2									
7	X	1-1-1	2									
8	X	1-1-1	2									
9	X	2-2-3	5			Loose...						
10												
11												
12												
13												
14	X	5-6-8	14			Medium dense gray and orange...						
15						Boring Terminated at 15'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

PAGE: B-39

PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

BORING NO: **A-38** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

GS ELEVATION(ft): 132.31 DATE STARTED: 2/4/05

WATER TABLE (ft): NE DATE FINISHED: 2/4/05

DATE OF READING: NA DRILLED BY: R. WOODARD

EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1	X					Brown clayey SAND [SC]						
2	X	1-2-2	4			Loose...						
3	X											
4	X	2-3-4	7			Medium dense light gray & orange...						
5	X											
6	X	4-6-8	14									
7	X											
8	X	8-8-8	16			Very stiff green and tan sandy fat CLAY [CH]						
9	X											
10	X	10-10-9	19									
11	X	7-10-10	20									
12												
13												
14	X											
15	X	3-4-5	9			Stiff...						
16												
17												
18												
19	X											
20	X	2-2-4	6			Firm...						
21												
22												
23												
24	X											
25	X	3-4-7	11			Stiff...						
						Boring Terminated at 25'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

PAGE: B-40

PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

BORING NO: **A-39** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

GS ELEVATION(ft): 116.11 DATE STARTED: 1/27/05

WATER TABLE (ft): NE DATE FINISHED: 1/27/05

DATE OF READING: NA DRILLED BY: M. BOATRIGHT

EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT / DAY)	ORG. CONT. (%)
									LL	PI		
0												
1	X					Brown poorly graded SAND [SP]						
2	X	2-2-5	7			Loose brown and orange clayey SAND, with trace of roots [SC]						
3	X											
4	X	4-5-6	11			Medium dense brown silty SAND [SM]						
5	X											
6	X	6-8-7	15									
7	X	3-3-3	6			Firm green and orange sandy fat CLAY [CH]						
8	X					Stiff...						
9	X	3-5-6	11									
10	X	2-2-3	5			Firm...						
11												
12												
13												
14	X											
15		3-2-3	5			Firm...						
						Boring Terminated at 15'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

PAGE: B-41

PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

BORING NO: **A-40** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

GS ELEVATION(ft): 111.63 DATE STARTED: 1/28/05

WATER TABLE (ft): NE DATE FINISHED: 1/28/05

DATE OF READING: NA DRILLED BY: M. BOATRIGHT

EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1						Brown poorly graded SAND [SP]						
2		3-1-2	3									
3		3-4-4	8			Very loose brown clayey SAND [SC]						
4		3-4-4	8									
5		4-4-5	9			Loose brown and orange...						
6		3-4-6	10									
7		4-5-7	12			Medium dense gray, brown and orange...						
8												
9						Stiff gray, light green and orange sandy fat CLAY [CH]						
10												
11												
12												
13												
14		5-6-6	12									
15						Boring Terminated at 15'						





# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

PAGE: B-42

PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

BORING NO: **A-41** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

GS ELEVATION(ft): 106.50 DATE STARTED: 2/2/05

WATER TABLE (ft): NE DATE FINISHED: 2/2/05

DATE OF READING: NA DRILLED BY: J. STILLSON

EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0						Brown poorly graded SAND [SP]						
1	X					Loose brown clayey SAND [SC]						
2	X	2-3-4	7									
3	X	2-1-2	3			Very loose...						
4	X											
5	X	1-2-2	4									
6	X	2-3-4	7			Loose...						
7	X											
8	X	3-4-5	9			Loose orange and gray...						
9	X	2-5-7	12			Medium dense...						
10												
11												
12												
13												
14	X	3-4-6	10			Loose light gray...						
15						Boring Terminated at 15'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

PAGE: B-43

PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **A-42** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

GS ELEVATION(ft): 101.50 DATE STARTED: 2/3/05  
WATER TABLE (ft): NE DATE FINISHED: 2/3/05  
DATE OF READING: NA DRILLED BY: G. WHITAKER  
EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1						Brown clayey SAND [SC]						
2		1-2-2	4			Loose...						
3		2-2-2	4									
4		2-2-2	4									
5		2-2-2	4									
6		2-3-5	8			Loose gray, brown and orange...						
7		4-6-8	14									
8		3-5-6	11			Stiff green and orange fat CLAY [CH]						
9												
10												
11												
12												
13												
14		3-4-6	10									
15						Boring Terminated at 15'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

PAGE: B-44

PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **A-43** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

GS ELEVATION(ft): 96.29 DATE STARTED: 2/4/05  
WATER TABLE (ft): NE DATE FINISHED: 2/4/05  
DATE OF READING: NA DRILLED BY: R. WOODARD  
EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT / DAY)	ORG. CONT. (%)
									LL	PI		
0												
1						Brown clayey SAND [SC]						
2	X	WOH	WOH			Very loose...						
3	X											
4	X	1-1-1	2									
5	X	1-0-1	1									
6	X	1-1-1	2									
7	X	1-1-1	2									
8	X	1-1-1	2									
9	X	1-1-1	2			Very loose...						
10	X											
11												
12												
13												
14	X	2-3-4	7			Loose...						
15						Boring Terminated at 15'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

PAGE: B-45

PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **A-44** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

GS ELEVATION(ft): 133.73 DATE STARTED: 2/4/05  
WATER TABLE (ft): 4 DATE FINISHED: 2/4/05  
DATE OF READING: 2/5/05 DRILLED BY: R. WOODARD  
EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1	X					Brown silty SAND [SM]						
2	X	1-1-1	2			Very loose...						
3	X	1-1-0	1									
4	X	1-2-3	5			Loose light gray and orange...						
5	X											
6	X	3-5-8	13			Medium dense...						
7	X											
8	X	9-10-10	20									
9	X	10-11-11	22			Medium dense gray clayey SAND [SC]						
10												
11												
12						Green and orange fat CLAY, with sand and limestone fragments [CH]						
13												
14	X	4-5-6	11			Stiff...						
15												
16												
17												
18												
19	X	3-3-4	7			Firm...						
20												
21												
22												
23												
24	X	3-4-5	9			Stiff...						
25						Boring Terminated at 25'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

PAGE: B-46

PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **A-45** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

GS ELEVATION(ft): 110.61 DATE STARTED: 1/27/05  
WATER TABLE (ft): NE DATE FINISHED: 1/27/05  
DATE OF READING: NA DRILLED BY: M. BOATRIGHT  
EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1						Brown poorly graded SAND [SP]						
2	X	2-2-2	4			Loose brown silty SAND [SM]						
3	X	2-3-4	7									
4	X	3-3-5	8			Loose gray, orange and brown clayey SAND [SC]						
5	X	4-5-7	12									
6	X	8-8-10	18									
7	X	4-4-6	10			Stiff green and orange sandy fat CLAY [CH]						
8	X											
9	X											
10	X											
11	X											
12	X											
13	X											
14	X	3-3-5	8			Stiff...						
15						Boring Terminated at 15'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

PAGE: B-47

PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

BORING NO: **A-46** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

GS ELEVATION(ft): 106.41 DATE STARTED: 1/28/05

WATER TABLE (ft): NE DATE FINISHED: 1/28/05

DATE OF READING: NA DRILLED BY: M. BOATRIGHT

EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1						Brown poorly graded SAND, with silt [SP-SM]						
2	X	2-2-2	4			Loose...						
3	X											
4	X	2-2-2	4			Loose brown and orange clayey SAND [SC]						
5	X											
6	X	3-3-4	7			Loose...						
7	X											
8	X	4-5-5	10			Medium dense...						
9	X											
10	X	4-5-5	10									
11	X											
12	X	3-4-4	8			Loose...						
13												
14	X					Green and orange sandy fat CLAY [CH]						
15	X	2-3-5	8			Stiff...						
						Boring Terminated at 15'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

PAGE: B-48

PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

BORING NO: **A-47** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

GS ELEVATION(ft): 103.28 DATE STARTED: 2/2/05

WATER TABLE (ft): NE DATE FINISHED: 2/2/05

DATE OF READING: NA DRILLED BY: J. STILLSON

EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT / DAY)	ORG. CONT. (%)
									LL	PI		
0												
1						Brown poorly graded SAND [SP]						
2	X	2-1-1	2									
3	X	1-2-1	3			Very loose...						
4	X	2-2-2	4			Very loose brown clayey SAND [SC]						
5	X	2-3-5	8			Loose gray and orange...						
6	X											
7	X	4-5-6	11			Medium dense...						
8	X											
9	X	4-5-7	12									
10												
11												
12						Orange and gray sandy fat CLAY [CH]						
13												
14	X	2-3-4	7			Firm...						
15						Boring Terminated at 15'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

PAGE: B-49

PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

BORING NO: **A-48** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

GS ELEVATION(ft): 99.54 DATE STARTED: 2/3/05

WATER TABLE (ft): NE DATE FINISHED: 2/3/05

DATE OF READING: NA DRILLED BY: G. WHITAKER

EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1	X					Brown clayey SAND [SC]						
2	X	1-2-2	4			Loose...						
3	X											
4	X	2-2-2	4									
5	X	2-3-2	5			Loose...						
6	X											
7	X	2-2-2	4									
8	X	2-3-3	6									
9	X											
10	X	5-6-7	13			Medium dense...						
11												
12												
13												
14	X	2-3-5	8			Green and orange fat CLAY, with sand [CH] Stiff...						
15						Boring Terminated at 15'						





# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

PAGE: B-50

PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **A-49** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.

GS ELEVATION(ft): 95.15 DATE STARTED: 2/4/05

LOCATION: SEE BORING LOCATION PLAN

WATER TABLE (ft): NE DATE FINISHED: 2/4/05

REMARKS:

DATE OF READING: NA DRILLED BY: R. WOODARD

EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1	X					Brown clayey SAND [SC]						
2	X	WOH	WOH			Very loose...						
3	X											
4	X	WOH-1-1	2									
5	X	1-1-2	3									
6	X	2-2-2	4			Loose...						
7	X	2-2-2	4			Gray and orange...						
8	X	2-2-2	4									
9	X	4-4-4	8			Loose...						
10												
11												
12												
13						Green, orange and gray fat CLAY [CH]						
14	X	3-3-5	8			Stiff...						
15						Boring Terminated at 15'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

PAGE: B-51

PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS: OFFSET 30' SOUTHEAST (NO ACCESS)

BORING NO: **A-50** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

GS ELEVATION(ft): 125.55 DATE STARTED: 2/7/05

WATER TABLE (ft): 3 DATE FINISHED: 2/7/05

DATE OF READING: 2/8/05 DRILLED BY: J. STILLSON

EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1	X					Brown poorly graded SAND [SP]						
2	X	2-2-2	4			Loose...						
3	X											
4	X	1-2-2	4			Loose gray and orange clayey SAND [SC]						
5	X											
6	X	1-2-3	5									
7	X											
8	X	2-2-3	5									
9	X	2-4-4	8									
10	X	4-5-6	11			Medium dense light brown poorly graded SAND [SP]						
11												
12						Gray clayey SAND [SC]						
13												
14	X											
15	X	2-2-2	4			Loose...						
16												
17												
18												
19	X											
20	X	2-6-7	13			Medium dense...						
21												
22												
23												
24	X					Stiff green sandy fat CLAY [CH]						
25		3-6-6	12			Boring Terminated at 25'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

BORING NO: **A-51** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

GS ELEVATION(ft): 106.69 DATE STARTED: 1/27/05

WATER TABLE (ft): NE DATE FINISHED: 1/27/05

DATE OF READING: NA DRILLED BY: M. BOATRIGHT

EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1	X					Brown poorly graded SAND [SP]						
2	X	1-2-4	6			Loose brown clayey SAND [SC]						
3	X	5-5-5	10									
4	X	3-4-5	9									
5	X	5-7-7	14			Medium brown and gray silty SAND [SM]						
6	X	2-3-3	6			Green and orange fat CLAY, with sand [CH]						
7	X	3-4-7	11			Stiff...						
8												
9												
10												
11												
12												
13												
14	X	3-4-6	10			Stiff...						
15						Boring Terminated at 15'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

PAGE: B-53

PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

BORING NO: **A-52** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

GS ELEVATION(ft): 102.70 DATE STARTED: 1/31/05

WATER TABLE (ft): NE DATE FINISHED: 1/31/05

DATE OF READING: NA DRILLED BY: G. WHITAKER

EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT / DAY)	ORG. CONT. (%)
									LL	PI		
0												
1	X					Brown clayey SAND [SC]						
2	X	1-2-3	5			Loose...						
3	X	2-2-2	4									
4	X	3-4-6	10									
5	X	2-3-4	7			Firm to stiff green and orange fat CLAY [CH]	87					
6	X	4-5-7	12									
7	X	5-6-6	12			Stiff...						
8												
9												
10												
11												
12												
13												
14	X	4-4-5	9			Loose light gray clayey SAND [SC]						
15						Boring Terminated at 15'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

PAGE: B-54

PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **A-53** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

GS ELEVATION(ft): 99.12 DATE STARTED: 2/2/05  
WATER TABLE (ft): 11 DATE FINISHED: 2/2/05  
DATE OF READING: 2/3/05 DRILLED BY: J. STILLSON  
EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0						Brown poorly graded SAND [SP]						
1	X					Very loose brown silty SAND [SM]						
2	X	1-2-1	3									
3	X											
4	X	1-2-3	5			Loose brown clayey SAND [SC]						
5	X											
6	X	3-4-5	9									
7	X											
8	X	3-3-5	8									
9	X											
10	X	2-2-2	4									
11												
12						Gray and orange sandy fat CLAY [CH]						
13												
14	X					Stiff...						
15		4-5-6	11			Boring Terminated at 15'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

PAGE: B-55

PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

BORING NO: **A-54** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

GS ELEVATION(ft): 95.81 DATE STARTED: 2/3/05

WATER TABLE (ft): NE DATE FINISHED: 2/3/05

DATE OF READING: NA DRILLED BY: G. WHITAKER

EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT / DAY)	ORG. CONT. (%)
									LL	PI		
0												
1						Very loose brown silty SAND [SM]						
2		1-1-1	2			Loose brown clayey SAND [SC]						
3		1-2-2	4									
4		3-4-4	8									
5		3-5-6	11			Medium dense...						
6		5-6-8	14			Stiff gray and orange sandy fat CLAY [CH]						
7		6-8-8	16									
8												
9												
10												
11												
12						Green and orange...						
13												
14		3-3-4	7			Firm...						
15						Boring Terminated at 15'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

PAGE: B-56

PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **A-55** SHEET: **1 of 1**

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E  
GS ELEVATION(ft): 92.98 DATE STARTED: 2/4/05  
WATER TABLE (ft): NE DATE FINISHED: 2/4/05  
DATE OF READING: NA DRILLED BY: R. WOODARD  
EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT / DAY)	ORG. CONT. (%)
									LL	PI		
0												
1	X					Brown clayey SAND [SC]						
2	X	WOH	WOH			Very loose...						
3	X											
4	X	1-1-2	3									
5	X	2-2-3	5			Loose...						
6	X											
7	X	4-4-5	9									
8	X	6-7-5	12			Medium dense...						
9	X											
10	X	5-6-6	12									
11												
12						Green and orange fat CLAY [CH]						
13												
14	X	2-3-4	7			Medium...						
15						Boring Terminated at 15'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

PAGE: B-57

PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

BORING NO: **A-56** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

GS ELEVATION(ft): 135.24 DATE STARTED: 2/4/05

WATER TABLE (ft): 6 DATE FINISHED: 2/4/05

DATE OF READING: 2/5/05 DRILLED BY: R. WOODARD

EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1	X					Brown silty SAND [SM]						
2	X	WOH	WOH			Very loose...						
3	X											
4	X	1-0-1	1									
5	X	1-1-1	2									
6	X	1-1-1	2									
7	X	1-1-1	2									
8	X	1-1-1	2									
9	X	1-2-2	4			Loose...						
10	X											
11												
12						Gray clayey SAND [SC]						
13												
14	X	1-2-3	5			Loose...						
15	X											
16												
17						Gray sandy fat CLAY [CH]						
18												
19	X	1-2-2	4			Soft...						
20	X											
21												
22												
23												
24	X	1-1-2	3			Soft...						
25						Boring Terminated at 25'						





# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

PAGE: B-58

PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **A-57** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.

GS ELEVATION(ft): 107.40 DATE STARTED: 1/27/05

LOCATION: SEE BORING LOCATION PLAN

WATER TABLE (ft): NE DATE FINISHED: 1/27/05

REMARKS:

DATE OF READING: NA DRILLED BY: M. BOATRIGHT

EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT / DAY)	ORG. CONT. (%)
									LL	PI		
0												
1						Brown poorly graded SAND [SP]						
2		1-2-2	4			Loose light brown and orange clayey SAND [SC]						
3		3-4-4	8									
4		4-6-7	13									
5		3-4-5	9			Medium dense...						
6		5-6-10	16			Medium dense...						
7		4-6-9	15			Stiff green and orange sandy fat CLAY [CH]						
8												
9												
10												
11												
12												
13												
14		5-6-7	13			Stiff...						
15						Boring Terminated at 15'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

PAGE: B-59

PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **A-58** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

GS ELEVATION(ft): 102.38 DATE STARTED: 1/27/05  
WATER TABLE (ft): NE DATE FINISHED: 1/27/05  
DATE OF READING: NA DRILLED BY: M. BOATRIGHT  
EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1	X					Loose brown clayey SAND [SC]						
2	X	2-4-4	8									
3	X	4-5-5	10									
4	X											
5	X	3-4-5	9									
6	X	3-5-8	13			Medium dense brown and orange...						
7	X					Stiff green, gray and orange sandy fat CLAY [CH]						
8	X	4-6-9	15									
9	X	5-9-11	20			Very stiff...						
10												
11												
12												
13												
14	X	3-3-3	6			Firm...						
15						Boring Terminated at 15'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

PAGE: B-60

PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **A-59** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.

GS ELEVATION(ft): 97.93

DATE STARTED: 2/2/05

LOCATION: SEE BORING LOCATION PLAN

WATER TABLE (ft): NE

DATE FINISHED: 2/2/05

REMARKS:

DATE OF READING: NA

DRILLED BY: J. STILLSON

EST. WSWT (ft): NA

TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1						Brown poorly graded SAND [SP]						
2		2-4-5	9			Brown clayey SAND [SC]	41					
3		2-3-3	6									
4						Loose...						
5		3-3-3	6									
6		2-3-3	6									
7		2-3-3	6									
8		2-3-3	6									
9		2-3-5	8			Loose...						
10												
11												
12						Orange and gray sandy fat CLAY [CH]						
13												
14		3-5-6	11			Stiff...						
15						Boring Terminated at 15'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

PAGE: B-61

PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **A-60** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

GS ELEVATION(ft): 94.54 DATE STARTED: 2/3/05  
WATER TABLE (ft): NE DATE FINISHED: 2/3/05  
DATE OF READING: NA DRILLED BY: G. WHITAKER  
EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1	X					Brown silty SAND [SM]						
2	X	1-1-1	2			Very loose...						
3	X											
4	X	1-1-2	3			Brown clayey SAND [SC]						
5	X	2-4-4	8			Loose...						
6	X											
7	X	3-4-5	9									
8	X	4-5-6	11			Medium dense...						
9	X											
10	X	5-6-8	14									
11												
12												
13						Gray and orange...						
14	X											
15		1-3-5	8									
						Boring Terminated at 15'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

PAGE: B-62

PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **A-61** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

GS ELEVATION(ft): 92.13 DATE STARTED: 2/4/05  
WATER TABLE (ft): NE DATE FINISHED: 2/4/05  
DATE OF READING: NA DRILLED BY: R. WOODARD  
EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1	X					Brown silty SAND [SM]						
2	X	WOH	WOH			Very loose...						
3	X											
4	X	1-1-0	1									
5	X	1-2-3	5			Loose brown clayey SAND [SC]						
6	X											
7	X	4-4-5	9									
8	X	6-5-4	9									
9	X											
10	X	4-5-6	11			Medium dense...						
11												
12												
13												
14	X	2-3-4	7			Loose...						
15						Boring Terminated at 15'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

PAGE: B-63

PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **A-62** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

GS ELEVATION(ft): 138.89 DATE STARTED: 2/5/05  
WATER TABLE (ft): 18 DATE FINISHED: 2/5/05  
DATE OF READING: 2/6/05 DRILLED BY: D.M./J.C.  
EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1						Brown and tan silty SAND [SM]						
2	X	3-3-4	7			Loose...						
3	X	2-2-2	4			Loose brown and tan clayey SAND [SC]						
4	X											
5	X	3-3-4	7			Loose...						
6	X	4-4-9	13			Medium dense...						
7	X											
8	X	7-10-18	28									
9	X	16-16-11	27			Medium dense gray...						
10												
11												
12												
13												
14	X	3-5-6	11			Medium dense...						
15												
16												
17												
18												
19	X	5-15-12	27			Medium dense...						
20												
21												
22												
23												
24	X	4-10-15	25			Medium dense...						
25						Boring Terminated at 25'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

PAGE: B-64

PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

BORING NO: **A-63** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

GS ELEVATION(ft): 133.82 DATE STARTED: 2/7/05

WATER TABLE (ft): NE DATE FINISHED: 2/7/05

DATE OF READING: NA DRILLED BY: J. STILLSON

EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1	X					Brown silty SAND [SM]						
2	X	2-2-3	5			Loose orange and gray clayey SAND [SC]						
3	X											
4	X	2-3-4	7									
5	X	2-3-6	9			Gray and orange sandy fat CLAY [CH] Stiff...						
6	X											
7	X	2-6-8	14									
8	X	3-6-9	15									
9	X					Stiff green and orange...						
10	X	5-6-8	14			Stiff...						
11												
12												
13												
14	X					Stiff...						
15	X	4-5-6	11									
16												
17												
18												
19	X					Stiff...						
20	X	4-5-6	11									
21												
22												
23												
24	X					Very stiff...						
25		5-7-9	16									
						Boring Terminated at 25'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

PAGE: B-65

PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **A-64** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

GS ELEVATION(ft): 127.48 DATE STARTED: 2/5/05  
WATER TABLE (ft): NE DATE FINISHED: 2/5/05  
DATE OF READING: NA DRILLED BY: G. WHITAKER  
EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1						Brown silty SAND [SM]						
2	X	1-1-2	3									
3	X	2-2-4	6			Very loose brown, gray and orange clayey SAND [SC]						
4	X											
5	X	5-6-6	12									
6	X	5-7-9	16									
7	X	6-8-9	17									
8	X											
9	X	6-7-7	14			Green and orange fat CLAY [CH]						
10												
11												
12												
13												
14	X	2-2-4	6			Firm...						
15												
16												
17												
18						Medium dense light gray clayey SAND [SC]						
19	X	3-5-8	13									
20												
21												
22												
23												
24	X	5-8-9	17			Medium dense...						
25						Boring Terminated at 25'						





# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

PAGE: B-66

PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **A-65** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.

GS ELEVATION(ft): 121.44 DATE STARTED: 2/5/05

LOCATION: SEE BORING LOCATION PLAN

WATER TABLE (ft): NE DATE FINISHED: 2/5/05

REMARKS:

DATE OF READING: NA DRILLED BY: G. WHITAKER

EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1						Brown silty SAND [SM]						
2	X	1-1-2	3			Very loose to medium dense gray, brown and orange clayey SAND [SC]						
3	X	3-4-5	9									
4	X											
5	X	5-7-5	12									
6	X	5-5-6	11									
7	X					Medium dense...						
8	X	6-7-9	16									
9	X											
10	X	6-8-10	18									
11						Very stiff green and orange sandy fat CLAY [CH]						
12												
13												
14	X											
15	X	2-4-4	8			Stiff...						
16												
17												
18												
19	X					Green and orange clayey SAND [SC]						
20	X	4-4-5	9			Loose...						
21												
22												
23												
24	X					Light gray...						
25	X	4-7-7	14			Boring Terminated at 25'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

BORING NO: **A-66** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

GS ELEVATION(ft): 120.27 DATE STARTED: 2/5/05

WATER TABLE (ft): 8 DATE FINISHED: 2/5/05

DATE OF READING: 2/6/05 DRILLED BY: G. WHITAKER

EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1	X					Brown silty SAND [SM]						
2	X	1-1-1	2									
3	X	1-2-4	6			Very loose brown clayey SAND [SC]						
4	X											
5	X	4-5-6	11									
6	X	4-5-5	10			Medium dense orange & gray...						
7	X											
8	X	5-7-8	15									
9	X	5-7-9	16									
10	X											
11												
12												
13						Green and orange fat CLAY [CH]						
14	X	2-3-5	8			Stiff...						
15												
16												
17												
18												
19	X	2-2-4	6			Firm...						
20												
21												
22												
23												
24	X	3-3-5	8			Stiff light gray...						
25						Boring Terminated at 25'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

PAGE: B-68

PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **A-67** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.

GS ELEVATION(ft): 113.86 DATE STARTED: 2/4/05

LOCATION: SEE BORING LOCATION PLAN

WATER TABLE (ft): NE DATE FINISHED: 2/4/05

REMARKS:

DATE OF READING: NA DRILLED BY: G. WHITAKER

EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1	X					Very loose to loose brown clayey SAND [SC]						
2	X	1-1-2	3									
3	X											
4	X	2-4-5	9									
5	X											
6	X	5-6-5	11			Medium dense gray and orange...						
7	X											
8	X	3-5-7	12									
9	X											
10	X	6-6-7	13									
11	X											
12	X	3-5-6	11									
13	X											
14	X											
15	X	3-4-5	9			Loose...						
16	X											
17	X											
18	X					Green and orange fat CLAY [CH]						
19	X											
20	X	2-2-4	6			Stiff...						
21	X											
22	X											
23	X											
24	X											
25	X	2-4-5	9			Stiff...						
						Boring Terminated at 25'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

PAGE: B-69

PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

BORING NO: **A-68** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

GS ELEVATION(ft): 108.33 DATE STARTED: 1/27/05

WATER TABLE (ft): NE DATE FINISHED: 1/27/05

DATE OF READING: NA DRILLED BY: M. BOATRIGHT

EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1						Brown poorly graded SAND [SP]						
2		1-3-4	7			Loose brown clayey SAND [SC]						
3		4-4-7	11			Medium dense brown and orange...						
4												
5		4-5-7	12			Stiff green and orange sandy fat CLAY, with						
6						trace of limestone [CH]						
7		4-7-10	17			Very stiff...						
8		4-5-6	11			Light gray...						
9												
10		4-6-8	14			Stiff...						
11												
12												
13												
14		2-3-3	6			Firm...						
15						Boring Terminated at 15'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

PAGE: B-70

PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **A-69** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

GS ELEVATION(ft): 102.23 DATE STARTED: 1/27/05  
WATER TABLE (ft): NE DATE FINISHED: 1/27/05  
DATE OF READING: NA DRILLED BY: M. BOATRIGHT  
EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1	X					Brown poorly graded SAND [SP]						
2	X	1-1-2	3									
3	X	3-3-5	8			Loose dark brown clayey SAND [SC]						
4	X	7-8-9	17			Medium dense...						
5	X	6-6-8	14									
6	X	5-7-9	16			Medium dense light gray and brown...						
7	X	5-6-6	12									
8												
9												
10												
11												
12												
13												
14	X	3-5-8	13			Stiff green and orange sandy fat CLAY [CH]						
15						Boring Terminated at 15'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

PAGE: B-71

PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

BORING NO: **A-70** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

GS ELEVATION(ft): 97.76 DATE STARTED: 2/2/05

WATER TABLE (ft): 12 DATE FINISHED: 2/2/05

DATE OF READING: 2/3/05 DRILLED BY: J. STILLSON

EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1	X					Brown poorly graded SAND [SP]						
2	X	2-3-3	6			Brown clayey SAND [SC]						
3	X											
4	X	2-3-3	6			Loose...						
5	X											
6	X	2-3-3	6			Loose...						
7	X											
8	X	3-2-2	4									
9	X											
10	X	3-2-3	5									
11	X											
12	X	2-4-4	8			Loose...						
13												
14	X					Gray...						
15		1-2-2	4									
						Boring Terminated at 15'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

PAGE: B-72

PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **A-71** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

GS ELEVATION(ft): 93.24 DATE STARTED: 2/4/05  
WATER TABLE (ft): NE DATE FINISHED: 2/4/05  
DATE OF READING: NA DRILLED BY: G. WHITAKER  
EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1	X					Very loose brown silty SAND [SM]						
2	X	1-1-2	3				30					
3	X					Loose...						
4	X	2-2-2	4									
5	X	2-2-3	5									
6	X	2-3-3	6									
7	X	2-2-3	5									
8	X											
9	X	2-3-4	7			Loose brown clayey SAND [SC]						
10												
11												
12						Gray and orange...						
13												
14	X	4-7-9	16			Medium dense...						
15						Boring Terminated at 15'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

PAGE: B-73

PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

BORING NO: **A-72** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

GS ELEVATION(ft): 90.43 DATE STARTED: 2/4/05

WATER TABLE (ft): NE DATE FINISHED: 2/4/05

DATE OF READING: NA DRILLED BY: G. WHITAKER

EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1	X					Very loose brown clayey SAND [SC]						
2	X	1-1-1	2									
3	X	1-1-1	2									
4	X	1-1-1	2									
5	X	1-1-1	2									
6	X	1-1-2	3									
7	X	2-4-6	10			Loose brown...						
8	X	5-6-7	13			Medium dense...						
9	X											
10	X											
11	X											
12	X					Brown and gray...						
13	X											
14	X	4-8-10	18									
15						Boring Terminated at 15'						





# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

PAGE: B-74

PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **A-73**SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN

GS ELEVATION(ft): 136.00 DATE STARTED: 2/5/05

WATER TABLE (ft): NE DATE FINISHED: 2/5/05

DATE OF READING: NA DRILLED BY: D.M./J.C.

EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1						Brown silty SAND [SM]						
2	X	3-3-2	5			Loose...						
3	X	4-5-10	15									
4	X	6-6-11	17			Medium dense gray and brown clayey SAND [SC]						
5	X	7-5-12	17									
6	X	10-11-8	19									
7	X	11-9-9	18			Medium dense...						
8												
9												
10												
11												
12												
13												
14	X	4-4-6	10			Loose gray...						
15												
16												
17												
18												
19	X	5-6-9	15			Medium dense...						
20												
21												
22												
23												
24	X	7-12-16	28			Medium dense...						
25						Boring Terminated at 25'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

PAGE: B-75

PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

BORING NO: **A-74** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

GS ELEVATION(ft): 128.26 DATE STARTED: 2/5/05

WATER TABLE (ft): NE DATE FINISHED: 2/5/05

DATE OF READING: NA DRILLED BY: G. WHITAKER

EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1						Brown silty SAND [SM]						
2	X	1-1-2	3			Brown and orange clayey SAND [SC]						
3	X	2-3-5	8			Loose...						
4	X	4-5-5	10			Medium dense ..						
5	X	4-5-7	12									
6	X	7-8-10	18									
7	X	7-9-8	17									
8	X											
9	X											
10	X											
11	X											
12	X					Green sandy fat CLAY [CH]						
13	X	2-3-5	8			Stiff...						
14	X											
15	X											
16	X											
17	X											
18	X	3-4-5	9			Stiff...						
19	X											
20	X											
21	X											
22	X					Medium light gray to tan clayey SAND [SC]						
23	X											
24	X	4-6-9	15									
25	X					Boring Terminated at 25'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

PAGE: B-76

PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

BORING NO: **A-75** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

GS ELEVATION(ft): 124.48 DATE STARTED: 2/4/05

WATER TABLE (ft): NE DATE FINISHED: 2/4/05

DATE OF READING: NA DRILLED BY: G. WHITAKER

EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1	X					Brown poorly graded SAND [SP]						
2	X	2-2-2	4									
3	X	4-5-7	12			Loose brown clayey SAND [SC]						
4	X	6-7-5	12									
5	X	3-4-5	9			Medium dense gray, orange and tan...						
6	X	3-4-7	11									
7	X	4-7-7	14			Medium dense...						
8	X											
9	X											
10	X											
11	X					Green fat CLAY [CH]						
12	X											
13	X	2-2-4	6			Firm...						
14	X											
15	X											
16	X											
17	X											
18	X	3-4-6	10			Stiff...						
19	X											
20	X											
21	X											
22	X											
23	X											
24	X	4-5-7	12			Medium light green to tan clayey SAND [SC]						
25	X					Boring Terminated at 25'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

PAGE: B-77

PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **A-76** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

GS ELEVATION(ft): 121.77 DATE STARTED: 2/4/05  
WATER TABLE (ft): NE DATE FINISHED: 2/4/05  
DATE OF READING: NA DRILLED BY: G. WHITAKER  
EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1	⊗	1-1-1	2			Brown silty SAND [SM] Very loose...						
2	⊗											
3	⊗	1-2-4	6			Brown clayey SAND [SC] Loose...						
4	⊗											
5	⊗	5-5-5	10			Medium dense gray and orange...						
6	⊗											
7	⊗	3-3-4	7									
8	⊗	3-4-6	10									
9	⊗	4-4-5	9									
10												
11						Green and orange fat CLAY [CH]						
12												
13												
14	⊗	3-4-6	10			Stiff...						
15												
16												
17												
18												
19	⊗	3-4-4	8			Stiff...						
20												
21												
22												
23						Light green to gray clayey SAND [SC]						
24	⊗	8-9-9	18			Medium dense...						
25						Boring Terminated at 25'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

PAGE: B-78

PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

BORING NO: **A-77** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

GS ELEVATION(ft): 117.83 DATE STARTED: 2/4/05

WATER TABLE (ft): NE DATE FINISHED: 2/4/05

DATE OF READING: NA DRILLED BY: G. WHITAKER

EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT / DAY)	ORG. CONT. (%)
									LL	PI		
0												
1	X					Brown clayey SAND [SC]						
2	X	1-1-1	2			Very loose...						
3	X											
4	X	2-5-7	12			Medium dense...						
5	X											
6	X	5-7-7	14			Gray to light brown & orange...						
7	X											
8	X	4-5-8	13									
9	X											
10	X	3-4-5	9			Medium dense...	41					
11												
12						Green and orange sandy fat CLAY [CH]						
13												
14	X											
15	X	3-3-5	8			Stiff...						
16												
17												
18												
19	X											
20	X	3-4-5	9			Stiff...						
21												
22												
23												
24	X					Tan silty SAND [SM]						
25	X	2-3-3	6			Loose...						
						Boring Terminated at 25'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

PAGE: B-79

PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

BORING NO: **A-78** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

GS ELEVATION(ft): 114.58 DATE STARTED: 2/4/05

WATER TABLE (ft): 12 DATE FINISHED: 2/4/05

DATE OF READING: 2/5/05 DRILLED BY: G. WHITAKER

EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1	X					Very loose brown clayey SAND [SC]						
2	X	1-1-1	2									
3	X	1-4-5	9			Loose...						
4	X	3-5-5	10			Medium dense...						
5	X	5-6-8	14									
6	X	6-8-10	18			Medium dense light gray...						
7	X	5-9-11	20									
8	X											
9	X											
10	X											
11												
12												
13						Stiff light green, tan and orange fat CLAY [CH]						
14	X	4-6-7	13									
15	X											
16												
17												
18												
19	X	3-4-5	9			Stiff green and orange...						
20	X											
21												
22												
23												
24	X	4-5-6	11									
25						Boring Terminated at 25'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

PAGE: B-80

PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **A-79** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

GS ELEVATION(ft): 108.06 DATE STARTED: 1/27/05  
WATER TABLE (ft): NE DATE FINISHED: 1/27/05  
DATE OF READING: NA DRILLED BY: M. BOATRIGHT  
EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W T	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1	X					Brown poorly graded SAND [SP]						
2	X	1-1-1	2			Very loose...						
3	X											
4	X	3-2-3	5			Loose brown and orange silty SAND [SM]						
5	X											
6	X	2-2-2	4			Loose...						
7	X											
8	X	2-2-1	3									
9	X	2-2-3	5			Loose...						
10	X	2-3-4	7									
11												
12												
13												
14	X					Medium dense brown, orange and gray clayey SAND [SC]						
15		4-5-6	11			Boring Terminated at 15'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

PAGE: B-81

PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **A-80** SHEET: **1 of 1**

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E  
GS ELEVATION(ft): 103.20 DATE STARTED: 1/27/05  
WATER TABLE (ft): NE DATE FINISHED: 1/27/05  
DATE OF READING: NA DRILLED BY: M. BOATRIGHT  
EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W T	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1						Brown poorly graded SAND [SP]						
2		1-2-3	5			Loose brown clayey SAND [SC]						
3		3-4-7	11									
4		4-3-3	6			Loose tan and orange...						
5		3-4-4	8									
6		4-5-5	10									
7		6-7-7	14			Medium dense light gray and orange...						
8												
9												
10												
11												
12						Green and orange fat CLAY [CH]						
13												
14		2-3-4	7			Firm...						
15						Boring Terminated at 15'						





# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

PAGE: B-82

PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

BORING NO: **A-81** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

GS ELEVATION(ft): 98.04 DATE STARTED: 2/1/05

WATER TABLE (ft): 12 DATE FINISHED: 2/1/05

DATE OF READING: 2/2/05 DRILLED BY: J. STILLSON

EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT / DAY)	ORG. CONT. (%)
									LL	PI		
0						Brown poorly graded SAND						
1						Very loose brown clayey SAND [SC]						
2	X	1-1-1	2									
3	X	1-1-2	3									
4	X	2-1-2	3									
5	X	2-3-4	7			Loose...						
6	X	3-4-5	9			Loose gray and orange...						
7	X	3-4-5	9			Loose...						
8	X											
9	X											
10	X											
11												
12												
13												
14	X	2-3-4	7			Firm gray and orange very sandy CLAY [CH]						
15						Boring Terminated at 15'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

PAGE: B-83

PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **A-82** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

GS ELEVATION(ft): 94.30 DATE STARTED: 2/4/05  
WATER TABLE (ft): NE DATE FINISHED: 2/4/05  
DATE OF READING: NA DRILLED BY: G. WHITAKER  
EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1						Brown silty SAND [SM]						
2	X	1-1-1	2			Very loose...						
3	X	1-1-1	2									
4	X	1-1-1	2									
5	X	1-1-1	2									
6	X	1-1-2	3			Very loose light gray, brown and orange clayey SAND [SC]						
7	X	2-4-6	10			Stiff light gray and orange sandy fat CLAY [CH]						
8	X	6-7-7	14									
9	X											
10	X											
11												
12						Green & orange...						
13												
14	X	2-3-6	9			Stiff...						
15						Boring Terminated at 15'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **A-83** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

GS ELEVATION(ft): 91.14 DATE STARTED: 2/4/05  
WATER TABLE (ft): NE DATE FINISHED: 2/4/05  
DATE OF READING: NA DRILLED BY: G. WHITAKER  
EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1						Brown silty SAND [SM]						
2		1-1-1	2			Very loose...						
3		1-1-1	2									
4		1-1-1	2									
5		1-1-1	2									
6		1-1-1	2									
7		1-2-2	4									
8		2-4-6	10			Very loose brown, gray and orange clayey SAND [SC]						
9												
10												
11												
12						Green and orange sandy fat CLAY [CH]						
13												
14		2-3-5	8			Stiff...						
15						Boring Terminated at 15'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **B-1** SHEET: **1 of 1**

SECTION: 15,16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.

GS ELEVATION(ft): +132 (MSL) DATE STARTED: 10/12/04

LOCATION: SEE BORING LOCATION PLAN

WATER TABLE (ft): NE DATE FINISHED: 10/12/04

REMARKS: Air blowing out of borehole at depth of  
45 feet

40 to

DATE OF READING: NA DRILLED BY: R. WOODARD

EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1	X					Firm brown SANDY CLAY [CH]						
2	X	1-4-5	9									
3	X	3-4-4	8			Loose light brown, orange & tan CLAYEY to very CLAYEY SAND [SC]						
4	X					...loose						
5	X	4-3-4	7									
6	X	4-3-3	6			...loose						
7	X					...loose						
8	X	4-5-4	9									
9	X					...loose						
10	X	5-7-8	15			...firm						
11												
12												
13												
14	X	1-2-2	4									
15						...soft clay lense						
16						...loose tan & brown						
17												
18												
19	X	1-2-3	5									
20												
21												
22						Light tan to white SAND [SP]						
23												
24	X	3-4-5	9			...loose						
25												
26												
27												
28												
29	X	3-4-6	10			...loose						
30												
31												
32												
33												
34	X	2-2-2	4			...very loose						
35												
36												
37												
38						Very loose light green to light tan CLAYEY SAND [SC]						
39	X	1-0-1	1									
40												
41												
42						Very soft green CLAY, trace of limestone fragments [CH]						
43												
44	X	WOH-1-1	2									
45												
46						Tan LIMESTONE						
47												
48												
49	X	7-7-11	18									
50						Boring terminated at 50'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **B-2** SHEET: **1 of 1**

SECTION: 15,16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.

GS ELEVATION(ft): +125 (MSL) DATE STARTED: 10/12/04

LOCATION: SEE BORING LOCATION PLAN

WATER TABLE (ft): NE DATE FINISHED: 10/12/04

REMARKS: Air blowing out of borehole at depth of 34 feet

DATE OF READING: NA DRILLED BY: R. WOODARD

EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1	X					Brown & gray CLAYEY SAND [SC]						
2	X	1-1-2	3			...very loose						
3	X	3-4-5	9			...loose						
4	X											
5	X	3-4-5	9			Loose green & orange very CLAYEY SAND [SC/CL]						
6	X	6-4-5	9			...loose						
7	X											
8	X	5-7-5	12			...firm						
9	X	6-6-7	13			...firm						
10												
11												
12												
13						Stiff green slightly SANDY CLAY [CH]						
14	X	2-3-5	8									
15												
16												
17												
18						Light tan to white SAND [SP]						
19	X	2-3-4	7			...loose						
20												
21												
22												
23												
24	X	2-3-4	7			...loose						
25												
26												
27												
28						Tan LIMESTONE						
29	X	10-50/4"	50/4"									
30												
31												
32												
33	X	13-50/3"	50/3"									
34												
						Extremely hard Boring terminated at 34.5'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **B-3** SHEET: **1 of 1**

CLIENT: CPH ENGINEERS, INC.

LOCATION: SEE BORING LOCATION PLAN

REMARKS: Air blowing out of borehole at depth of  
38 feet

SECTION: 15,16 TOWNSHIP: 8S RANGE: 18E

GS ELEVATION(ft): +116 (MSL) DATE STARTED: 10/12/04

WATER TABLE (ft): NE DATE FINISHED: 10/13/04

DATE OF READING: NA DRILLED BY: R. WOODARD

EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT / DAY)	ORG. CONT. (%)
									LL	PI		
0						Brown SAND [SP]						
1	X											
2	X	WOH-1	1									
3	X	1-1-1	2			Brown & gray CLAYEY SAND [SC] ...very loose						
4	X											
5	X	1-1-1	2			...very loose						
6	X											
7	X	2-3-4	7			...loose tan, gray & orange						
8	X	5-5-4	9			...loose						
9	X											
10	X	5-6-6	12			...firm						
11												
12						Stiff green & orange SANDY CLAY [CH]						
13												
14	X	2-4-6	10									
15	X											
16												
17												
18												
19	X	3-4-5	9			Loose tan CLAYEY SAND [SC]						
20	X											
21												
22												
23						Light tan to white SAND [SP]						
24	X	4-4-5	9			...loose						
25	X											
26												
27												
28												
29	X	3-4-4	8			...loose						
30	X											
31												
32												
33												
34	X	24-21-14	35			Tan LIMESTONE						
35	X											
36												
37												
38												
39	X	35-50/4"	50/4"									
40	X											
41												
42												
43												
44	X	50/5"	50/5"									
45	X											
46												
47												
48												
49	X	52-27-60	87									
50	X					Boring terminated at 50'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **B-4**SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.

GS ELEVATION(ft): 137.04

DATE STARTED: 1/25/05

LOCATION: SEE BORING LOCATION PLAN

WATER TABLE (ft): NE

DATE FINISHED: 1/25/05

REMARKS: 30% Loss of circulation at 33'

100%

DATE OF READING: NA

DRILLED BY: J. STILLSON

Loss of circulation at 38' and 42'

EST. WSWT (ft): NA

TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1						Brown poorly graded SAND, with silt [SP-SM]						
2	X	1-1-1	2			Very loose brown clayey SAND [SC]						
3	X	1-2-2	4									
4	X					Medium dense orange and tan...						
5	X	3-5-6	11									
6	X	4-5-8	13									
7	X					Very stiff green and orange fat sandy CLAY [CH]						
8	X	4-8-8	16									
9	X					Very stiff...						
10	X	5-8-9	17									
11												
12												
13												
14	X	4-5-6	11			Stiff...	76		88	54		
15	X											
16												
17												
18												
19	X	3-4-7	11			Light gray to tan clayey SAND [SC]						
20	X											
21							29					
22												
23												
24	X	3-6-7	13			Medium dense...						
25	X											
26												
27												
28												
29	X	3-5-6	11			Medium dense...						
30	X											
31												
32												
33												
34	X	3-6-14	20			Medium dense...						
35	X											
36												
37												
38												
39	X	15-13-11	24			Medium dense...						
40	X											
41												
42												
43												
44	X	50/5"	50/5"			LIMESTONE						
45	X											
46												
47												
48												
49	X	50/5"	50/5"									
50						Boring Terminated at 50'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **B-5** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

GS ELEVATION(ft): 128.05 DATE STARTED: 1/26/05

WATER TABLE (ft): NE DATE FINISHED: 1/26/05

DATE OF READING: NA DRILLED BY: J. STILLSON

EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS: 100% Loss of circulation at 36'

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1						Brown poorly graded SAND [SP]						
2	X	2-2-2	4			Very loose brown clayey SAND [SC]						
3	X											
4	X	2-3-3	6			Loose orange and gray...						
5	X											
6	X	2-4-6	10									
7	X											
8	X	3-4-6	10			Medium dense orange and gray sandy SILT to SILT, with sand [MH]						
9	X											
10	X	2-5-8	13				89		102	57		
11												
12						Green and orange...						
13												
14	X											
15	X	2-4-5	9			Stiff...	83		85	46		
16												
17												
18												
19	X					Loose light gray to tan clayey SAND [SC]						
20	X	1-2-3	5									
21												
22												
23												
24	X											
25	X	4-7-10	17			Medium dense...						
26												
27												
28												
29	X											
30	X	4-5-9	14			Medium dense tan to white...						
31												
32						Medium dense light gray to tan silty SAND [SM]						
33												
34	X											
35	X	6-10-12	22			Medium dense...						
36												
37						LIMESTONE						
38												
39	X											
40	X	50/2"	50/2"									
41												
42												
43												
44	X											
45	X	50/4"	50/4"									
46												
47												
48												
49	X											
50	X	50/3"	50/3"									
						Boring Terminated at 50'						





# UNIVERSAL ENGINEERING SCIENCES

## BORING LOG

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **B-6** SHEET: **1 of 1**

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS: 100% Loss of circulation at 27'

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E  
GS ELEVATION(ft): 131.09 DATE STARTED: 1/25/05  
WATER TABLE (ft): NE DATE FINISHED: 1/25/05  
DATE OF READING: NA DRILLED BY: M. BOATRIGHT  
EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0						Brown poorly graded SAND [SP]						
1						Very loose brown clayey SAND [SC]						
2	X	1-1-2	3									
3	X	3-4-4	8			Loose brown, gray and orange...						
4	X											
5	X	4-6-6	12			Stiff green and orange sandy fat CLAY [CH]						
6	X	3-6-7	13									
7	X	4-5-5	10									
8	X											
9	X	3-4-5	9			Stiff...						
10												
11												
12						Loose tan and light gray silty clayey SAND [SC-SM]						
13												
14	X	3-4-4	8									
15												
16												
17												
18												
19	X	4-3-3	6			Loose tan...						
20												
21												
22												
23												
24	X	4-5-5	10			Medium dense...	16					
25												
26												
27						LIMESTONE						
28												
29	X	50/2"	50/2"									
30												
31												
32												
33												
34	X	21-23-20	43									
35												
36												
37												
38												
39	X	21-22-22	44									
40												
41												
42												
43												
44	X	19-14-25	39									
45												
46												
47												
48												
49	X	50/1"	50/1"									
50						Boring Terminated at 50'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **B-7** SHEET: **1 of 1**

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS: 100% Loss of circulation at 37'

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E  
GS ELEVATION(ft): 128.67 DATE STARTED: 1/25/05  
WATER TABLE (ft): NE DATE FINISHED: 1/25/05  
DATE OF READING: NA DRILLED BY: G. WHITAKER  
EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1	X					Very loose silty SAND [SM]						
2	X	1-1-2	3			Loose brown clayey SAND [SC]						
3	X	3-3-3	6									
4	X	3-3-3	6			Stiff green and orange sandy fat CLAY [CH]						
5	X	4-3-3	6									
6	X	5-6-7	13			Stiff...						
7	X	3-4-5	9									
8	X	4-5-6	11			Stiff...						
9	X											
10												
11												
12												
13												
14	X	3-4-6	10			Loose light green silty clayey SAND [SC-SM]						
15												
16												
17												
18												
19	X	2-3-3	6				31					
20												
21												
22						White to light tan...						
23												
24	X	2-3-4	7			Loose...						
25												
26												
27												
28												
29	X	3-6-6	12			Medium dense white to light gray...						
30												
31												
32												
33												
34	X	3-4-5	9			Loose white...						
35												
36												
37						LIMESTONE						
38						Possible Cavity from 37' to 38'						
39	X	30-30-10	40									
40												
41												
42												
43												
44	X	27-36-30	66									
45												
46												
47												
48												
49	X	65/6"	65/6"									
50						Boring Terminated at 50'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **B-8**SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.

GS ELEVATION(ft): 124.85

DATE STARTED: 1/25/05

LOCATION: SEE BORING LOCATION PLAN

WATER TABLE (ft): NE

DATE FINISHED: 1/25/05

REMARKS: 100% Loss of circulation at 36'

DATE OF READING: NA

DRILLED BY: R. WOODARD

EST. WSWT (ft): NA

TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1						Brown and orange clayey SAND [SC]						
2	X	3-3-4	7			Loose...						
3	X	4-4-5	9									
4	X	3-4-5	9			Loose to medium dense green and orange elastic SILT, with sand [MH]	86		71	31		
5	X	6-5-5	10									
6	X	5-5-5	10			Stiff sandy CLAY [CH]						
7	X	6-7-7	14				83		62	34		
8												
9												
10												
11												
12						Loose light gray silty SAND [SM]						
13												
14	X	3-4-5	9									
15												
16												
17						Light tan to white clayey SAND [SC]						
18												
19	X	3-4-5	9			Loose...						
20												
21												
22												
23												
24	X	2-3-4	7			Loose...						
25												
26												
27												
28												
29	X	2-3-4	7			Loose...						
30												
31												
32												
33												
34	X	50/2"	50/2"			LIMESTONE						
35												
36												
37												
38												
39	X	50/4"	50/4"									
40												
41												
42												
43												
44	X	50/4"	50/4"									
45												
46												
47												
48												
49	X	10-8-16	24									
50						Boring Terminated at 50'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **B-9** SHEET: **1 of 1**

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS: 100% Loss of circulation at 47.5'

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E  
GS ELEVATION(ft): 128.35 DATE STARTED: 1/25/05  
WATER TABLE (ft): NE DATE FINISHED: 1/25/05  
DATE OF READING: NA DRILLED BY: J. STILLSON  
EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0						Brown poorly graded SAND, with silt [SP-SM]						
1	X					Very loose...						
2	X	1-1-1	2									
3	X	1-2-1	3									
4	X	3-4-5	9			Loose brown clayey SAND [SC]						
5	X	4-5-6	11			Medium dense gray and orange...						
6	X	3-5-6	11									
7	X	4-5-6	11			Stiff green and orange sandy fat CLAY [CH]						
8	X											
9	X											
10	X											
11	X											
12	X											
13	X											
14	X	3-4-4	8			Stiff...						
15	X											
16	X											
17	X											
18	X											
19	X	2-3-6	9			Stiff...						
20	X											
21	X											
22	X											
23	X											
24	X	5-9-10	19			Very stiff light gray to tan...						
25	X											
26	X											
27	X											
28	X											
29	X	5-11-13	24			Very stiff...	79					
30	X											
31	X					Gray and orange clayey SAND [SC]						
32	X											
33	X	8-16-19	35			Dense...						
34	X											
35	X											
36	X											
37	X											
38	X	7-12-16	28			Medium dense, with limestone fragments...						
39	X											
40	X											
41	X											
42	X											
43	X	3-11-21	33			LIMESTONE						
44	X											
45	X											
46	X											
47	X											
48	X											
49	X	50/5"	50/5"									
50	X					Boring Terminated at 50'						

[illegible]



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **B-10**SHEET: **2 of 2**

SECTION: 15/16

TOWNSHIP: 8S

RANGE: 18E

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT / DAY)	ORG. CONT. (%)
									LL	PI		
55												
56						Tan and orange silty SAND, with lenses of limestone [SM]						
57	X	3-5-6	11			LIMESTONE						
58												
59	X	6-9-9	18									
60						Boring Terminated at 60'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **B-11** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS: 100% Loss of circulation at 46'

GS ELEVATION(ft): 119.13 DATE STARTED: 1/26/05  
WATER TABLE (ft): 20 DATE FINISHED: 1/26/05  
DATE OF READING: 1/27/05 DRILLED BY: J. STILLSON  
EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1	X					Brown clayey SAND [SC]						
2	X	1-2-2	4			Very loose...						
3	X											
4	X	2-3-4	7			Loose...						
5	X						35					
6	X	4-4-5	9									
7	X	4-5-6	11			Medium dense...						
8	X											
9	X	3-4-4	8			Loose...						
10	X						25					
11												
12												
13												
14	X											
15	X	5-6-6	12			Medium dense orange and brown...						
16												
17												
18						Stiff green and orange fat sandy CLAY [CH]						
19	X											
20	X	2-4-6	10	▼			73		88	51		
21												
22												
23												
24	X											
25	X	9-9-10	19			Very stiff...						
26												
27												
28												
29	X											
30	X	3-4-6	10			Stiff...						
31												
32												
33												
34	X											
35	X	3-3-5	8			Stiff...						
36												
37												
38												
39	X											
40	X	2-3-5	8			Stiff...						
41												
42												
43												
44	X											
45	X	3-3-3	6			Firm...						
46						Light gray and orange...						
47												
48												
49	X											
50		3-3-5	8			Stiff...						
						Boring Terminated at 50'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **B-12** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS: 30% Loss of circulation at 38'

GS ELEVATION(ft): 117.32 DATE STARTED: 2/1/05  
WATER TABLE (ft): NE DATE FINISHED: 2/1/05  
DATE OF READING: NA DRILLED BY: G. WHITAKER  
EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1	X					Brown poorly graded SAND [SP]						
2	X	1-2-2	4			Loose...						
3	X											
4	X	1-2-3	5			Loose brown and orange clayey SAND [SC]						
5	X	2-3-5	8									
6	X	4-5-7	12			Medium dense orange and gray...						
7	X											
8	X	6-8-9	17									
9	X	5-7-8	15			Stiff green and orange sandy fat CLAY [CH]						
10												
11												
12						Tan and orange clayey SAND [SC]						
13												
14	X	5-6-11	17			Medium dense...						
15												
16												
17						Green fat CLAY [CH]						
18												
19	X	2-3-3	6			Firm...						
20												
21												
22												
23												
24	X	7-7-8	15			Stiff...						
25												
26												
27												
28												
29	X	4-5-8	13			Medium dense light green and orange clayey SAND [SC]	45		36	13		
30												
31												
32												
33												
34	X	5-8-9	17			Medium dense tan to orange...						
35												
36												
37												
38												
39	X	30-21-10	21			Light gray and white poorly graded SAND [SP], with limestone fragments						
40												
41												
42												
43						Dense gray and white clayey SAND, with limestone fragments [SC]						
44	X	14-23-25	48									
45												
46												
47												
48												
49	X	5-8-12	20			Medium dense...						
50						Boring Terminated at 50'						





# UNIVERSAL ENGINEERING SCIENCES BORING LOG

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **B-13** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS: 100 Loss of circulation at 31'

GS ELEVATION(ft): 112.94 DATE STARTED: 1/31/05  
WATER TABLE (ft): NE DATE FINISHED: 1/31/05  
DATE OF READING: NA DRILLED BY: G. WHITAKER  
EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1	X					Brown silty SAND [SM]						
2	X	1-1-2	3			Very loose dark brown clayey SAND [SC]						
3	X	1-1-2	3									
4	X	2-2-2	4			Loose...						
5	X	2-3-4	7									
6	X	4-6-7	13			Stiff green and orange fat CLAY, with sand [CH]						
7	X	4-7-7	14									
8	X						84		60	33		
9	X											
10	X											
11	X											
12	X					Medium dense light brown clayey SAND [SC]						
13	X											
14	X	5-9-11	20									
15	X											
16	X											
17	X											
18	X											
19	X	4-7-7	14			Medium dense...						
20	X											
21	X											
22	X											
23	X											
24	X	2-5-6	11			Medium dense tan to white...	24					
25	X											
26	X											
27	X											
28	X											
29	X	3-4-6	10			Loose...						
30	X											
31	X					LIMESTONE						
32	X											
33	X											
34	X	31-21-50/5"	50/5"									
35	X											
36	X											
37	X											
38	X											
39	X	50/1"	50/1"									
40	X											
41	X											
42	X											
43	X											
44	X	50/0"	50/0"									
45	X											
46	X											
47	X											
48	X											
49	X	50/0"	50/0"									
50	X					Boring terminated at 50'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **B-14** SHEET: **1 of 1**

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN

REMARKS: 100% Loss of circulation at 23'  
Loss of circulation at 44'  
38'6" to 43'6"

100%  
Weight of Rod from

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

GS ELEVATION(ft): 110.88 DATE STARTED: 1/26/05

WATER TABLE (ft): NE DATE FINISHED: 1/31/05

DATE OF READING: NA DRILLED BY: G. WHITAKER

EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1	X					Brown poorly graded SAND, with silt [SP-SM]						
2	X	1-1-2	3			Very loose...						
3	X	3-1-2	3									
4	X											
5	X	1-2-3	5			Loose brown clayey SAND [SC]						
6	X	2-2-3	5									
7	X	1-2-2	4									
8	X											
9	X	3-5-6	11			Medium dense...						
10												
11												
12												
13												
14	X	2-3-5	8			Loose...	37		41	20		
15												
16												
17												
18												
19	X	2-2-3	5			Firm green and orange fat CLAY [CH]	85		73	46		
20												
21												
22						Light gray to tan clayey SAND [SC]						
23												
24	X	2-3-3	6									
25												
26												
27												
28						Loose light gray to tan clayey SAND, with lenses of limestone [SC]						
29	X	3-4-4	8									
30												
31												
32												
33												
34	X	1-1-1	2			Very loose...						
35												
36												
37												
38												
39	X	0-0-0	0			Very loose...						
40												
41												
42												
43												
44	X	5-3-8	11			LIMESTONE						
45												
46												
47												
48												
49	X	6-3-3	6									
50						Boring Terminated at 50'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **B-15** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS: 100 Loss of circulation at 45'

GS ELEVATION(ft): 122.98 DATE STARTED: 1/26/05  
WATER TABLE (ft): NE DATE FINISHED: 1/26/05  
DATE OF READING: NA DRILLED BY: J. STILLSON  
EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0						Brown poorly graded SAND [SP]						
1						Very loose brown clayey SAND [SC]						
2	X	1-1-1	2									
3	X	1-2-3	5			Loose...						
4	X											
5	X	2-2-4	6			Medium dense gray and orange...						
6	X											
7	X	5-6-7	13									
8	X	7-7-6	13									
9	X	7-10-7	17			Stiff green and orange sandy fat CLAY [CH] Very stiff...						
10	X											
11												
12												
13												
14	X	2-3-4	7			Firm...						
15	X											
16												
17												
18												
19	X	2-4-5	9			Stiff...						
20	X											
21												
22												
23						Light gray clayey SAND [SC]						
24	X	4-5-5	10			Loose...						
25	X											
26												
27												
28												
29	X	3-4-5	9			Loose light gray and tan...						
30	X					Light gray and white...						
31												
32												
33												
34	X	7-9-13	22			Medium dense...	19					
35	X											
36												
37												
38												
39	X	50/4"	50/4"			LIMESTONE						
40	X											
41												
42												
43												
44	X	50/3"	50/3"									
45	X											
46												
47												
48												
49	X	50/3"	50/3"									
50	X					Boring Terminated at 50'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **B-16** SHEET: **1 of 1**

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS: 100% Loss of circulation at 31'

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E  
GS ELEVATION(ft): 111.36 DATE STARTED: 1/26/05  
WATER TABLE (ft): NE DATE FINISHED: 1/27/05  
DATE OF READING: NA DRILLED BY: J. STILLSON  
EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0						Very loose brown poorly graded SAND, with silt [SP-SM]						
1	X											
2	X	1-1-1	2									
3	X	1-2-1	3			Very loose dark brown and orange clayey SAND [SC]						
4	X											
5	X	3-4-4	8			Loose...						
6	X											
7	X	3-4-6	10									
8	X	4-5-6	11			Stiff green and orange fat CLAY [CH]						
9	X											
10	X	4-5-6	11			Stiff...						
11												
12												
13												
14	X	3-4-4	8			Stiff...						
15						Gray and orange clayey SAND [SC]						
16												
17												
18												
19	X	3-3-4	7			Loose...	38		41	23		
20												
21												
22												
23												
24	X	3-6-8	14			Medium dense light gray to tan...						
25												
26												
27												
28												
29	X	5-8-12	20			Medium dense gray and orange, w/trace of limestone fragments						
30												
31						LIMESTONE						
32												
33												
34	X	50/1"	50/1"									
35												
36												
37												
38												
39	X	50/1"	50/1"									
40												
41												
42												
43												
44	X	50/1/2"	50/1/2"									
45												
46												
47												
48												
49	X	50/1"	50/1"									
50						Boring Terminated at 50'						



# UNIVERSAL ENGINEERING SCIENCES

## BORING LOG

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **B-17** SHEET: **1 of 1**

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E  
GS ELEVATION(ft): 132.69 DATE STARTED: 1/31/05  
WATER TABLE (ft): NE DATE FINISHED: 1/31/05  
DATE OF READING: NA DRILLED BY: J. STILLSON  
EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0						Dark brown poorly graded SAND, with silt [SP-SM]						
1	X											
2	X	1-2-2	4			Very loose orange to brown clayey SAND [SC]						
3	X											
4	X	2-2-2	4									
5	X	2-3-4	7			Loose gray and brown...						
6	X											
7	X	2-4-5	9									
8	X	4-5-9	14			Stiff gray sandy fat CLAY, with limestone [CH]						
9	X											
10	X	4-6-10	16			Very stiff gray and orange sandy...						
11												
12						Green and orange...						
13												
14	X											
15	X	3-5-9	14			Stiff...						
16												
17												
18												
19	X											
20	X	4-5-7	12			Stiff...						
21												
22												
23												
24	X											
25	X	4-5-5	10			Stiff...						
26												
27												
28												
29	X											
30	X	3-4-3	7			Firm green...						
31												
32												
33						Light gray and orange clayey SAND [SC]						
34	X											
35	X	6-9-12	21			Medium dense...						
36												
37												
38												
39	X											
40	X	4-7-9	16			Medium dense gray...						
41												
42												
43												
44	X											
45	X	6-8-9	17			Medium dense...						
46												
47												
48						Gray and tan, with limestone fragments						
49	X											
50	X	5-9-8	17			Boring Terminated at 50'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **B-18** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS: 100% Loss of circulation at 47'

GS ELEVATION(ft): 129.35 DATE STARTED: 1/31/05  
WATER TABLE (ft): NE DATE FINISHED: 1/31/05  
DATE OF READING: NA DRILLED BY: J. STILLSON  
EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1						Brown poorly graded SAND [SP]						
2	X	2-2-2	4			Very loose to medium dense orange and brown clayey SAND [SC]						
3	X	3-3-3	6									
4	X	3-4-5	9									
5	X	3-5-5	10									
6	X	3-5-5	10			Stiff gray and orange fat CLAY [CH]						
7	X	3-6-6	12									
8	X	3-6-9	15									
9	X	3-6-9	15									
10												
11						Green...						
12												
13												
14	X	2-4-6	10			Stiff...						
15												
16												
17												
18												
19	X	1-2-3	5			Firm...						
20												
21												
22												
23												
24	X	5-11-9	20			Very stiff...						
25												
26												
27												
28												
29	X	7-7-13	20			Very stiff...						
30												
31												
32						Gray...						
33												
34	X	7-15-15	30			Very stiff...	55		60	34		
35												
36												
37												
38												
39	X	8-16-22	38			Dense gray silty SAND, with limestone fragments [SM]	16					
40												
41												
42												
43												
44	X	10-20-25	45			Dense light gray clayey SAND [SC]						
45												
46												
47												
48						Sandy fat CLAY, with limestone fragments [CH]						
49	X	2-8-20	28									
50						LIMESTONE Boring Terminated at 50'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **B-19** SHEET: **1 of 1**

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS: 100% Loss of circulation at 42'

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E  
GS ELEVATION(ft): 122.09 DATE STARTED: 1/26/05  
WATER TABLE (ft): NE DATE FINISHED: 1/26/05  
DATE OF READING: NA DRILLED BY: J. STILLSON  
EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT / DAY)	ORG. CONT. (%)
									LL	PI		
0						Brown poorly graded SAND [SP]						
1	X	2-2-2	4			Very loose to medium dense brown clayey SAND [SC]						
2	X	2-2-3	5									
3	X	3-5-6	11									
4	X	3-5-5	10									
5	X	3-4-5	9			Stiff green and orange fat CLAY, with sand [CH]						
6	X	3-5-5	10			Stiff...	82					
7												
8												
9	X	3-4-5	9			Stiff green and orange...						
10												
11												
12												
13												
14	X	3-4-5	9			Stiff light gray...						
15												
16												
17												
18												
19	X	4-4-5	9			Medium dense light gray and tan clayey SAND [SC]						
20												
21												
22												
23	X	5-6-6	12			Medium dense...	18					
24												
25												
26												
27												
28	X	5-7-8	15			Medium dense...						
29												
30												
31												
32												
33	X	4-6-8	14			LIMESTONE						
34												
35												
36												
37												
38	X	32-35-50/2"	50/2"									
39												
40												
41												
42												
43	X	20-50/5"	50/5"									
44												
45												
46												
47												
48	X	35-50/4"	50/4"									
49												
50						Boring Terminated at 50'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

PAGE: B-105

PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **B-20** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

GS ELEVATION(ft): 86.41 DATE STARTED: 2/8/05  
WATER TABLE (ft): NE DATE FINISHED: 2/8/05  
DATE OF READING: NA DRILLED BY: R. WOODARD  
EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1						Light brown to tan silty SAND [SM]						
2	X	WOH	WOH			Very loose...						
3	X	WOH	WOH									
4	X	WOH-1-2	3									
5	X											
6	X	2-3-4	7			Loose brown and orange clayey SAND [SC]						
7	X	5-5-4	9									
8	X	6-7-7	14			Stiff gray and orange sandy fat CLAY [CH]						
9	X											
10	X					Gray and orange clayey SAND [SC]						
11												
12												
13												
14	X	3-4-5	9			Loose...						
15	X											
16												
17												
18												
19	X	2-3-5	8			Loose...						
20	X											
21												
22						Light brown and gray...						
23												
24	X	2-2-2	4			Very loose...						
25	X											
26						LIMESTONE						
27												
28												
29	X	6-9-15	24									
30	X					Boring Terminated at 30'						





# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

BORING NO: **B-21** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

GS ELEVATION(ft): 84.87 DATE STARTED: 2/8/05

WATER TABLE (ft): NE DATE FINISHED: 2/8/05

DATE OF READING: NA DRILLED BY: J. STILLSON

EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1						Brown and orange poorly graded SAND, with silt [SP-SM]						
2	X	2-2-2	4			Loose...						
3	X											
4	X	2-2-2	4									
5	X	2-3-4	7			Loose brown and orange clayey SAND [SC]						
6	X											
7	X	2-3-4	7			Loose orange and gray...						
8	X											
9	X	3-4-4	8									
10	X	5-5-6	11			Medium dense...						
11												
12						Gray...						
13												
14	X											
15	X	2-4-6	10			Loose...						
16												
17												
18						Gray and tan...						
19	X											
20	X	3-4-5	9			Loose...						
21												
22												
23												
24	X											
25	X	3-4-14	18			LIMESTONE						
26												
27												
28												
29	X											
30	X	12-25-29	54			Boring Terminated at 30'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **B-22** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.

GS ELEVATION(ft): 83.94 DATE STARTED: 2/8/05

LOCATION: SEE BORING LOCATION PLAN

WATER TABLE (ft): NE DATE FINISHED: 2/8/05

REMARKS:

DATE OF READING: NA DRILLED BY: R. WOODARD

EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1	X					Light brown silty SAND [SM]						
2	X	1-1-2	3			Very loose...						
3	X											
4	X	1-1-0	1									
5	X	1-2-3	5			Loose brown and orange clayey SAND [SC]						
6	X											
7	X	3-3-4	7									
8	X	5-5-6	11			Medium dense...						
9	X											
10	X	7-8-9	17									
11												
12						Gray and brown...						
13												
14	X											
15	X	4-6-7	13			Medium dense...						
16												
17												
18						Light gray and orange...						
19	X											
20	X	3-4-6	10			Loose...						
21												
22												
23						Light gray and tan...						
24	X											
25	X	2-2-3	5			Loose...						
26												
27						Tan and orange...						
28												
29	X											
30	X	2-2-3	5			Loose...						
						Boring Terminated at 30'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

PAGE: B-108

PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **B-23** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

GS ELEVATION(ft): 81.92 DATE STARTED: 2/8/05  
WATER TABLE (ft): NE DATE FINISHED: 2/8/05  
DATE OF READING: NA DRILLED BY: J. STILLSON  
EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1	X					Brown poorly graded SAND [SP]						
2	X	2-1-1	2			Very loose...						
3	X	1-P-1	1									
4	X											
5	X	1-1-1	2									
6	X											
7	X	3-5-7	12									
8	X	4-8-8	16			Medium dense brown to orange clayey SAND [SC]						
9	X	4-5-6	11			Medium dense...						
10												
11												
12												
13												
14	X	2-3-6	9			Loose...						
15												
16												
17												
18												
19	X	5-5-5	10			Medium dense...						
20												
21												
22												
23						Gray and orange sandy fat CLAY [CH]						
24	X	5-6-6	12			Stiff...						
25												
26												
27												
28												
29	X	6-8-12	20			Very stiff...						
30						Boring Terminated at 30'						



# UNIVERSAL ENGINEERING SCIENCES

## BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

PAGE: B-109

PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **B-24** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

GS ELEVATION(ft): 127.28 DATE STARTED: 1/31/05  
WATER TABLE (ft): NE DATE FINISHED: 1/31/05  
DATE OF READING: NA DRILLED BY: J. STILLSON  
EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1						Loose brown poorly graded SAND [SP]						
2	X	2-3-3	6			Loose orange and gray clayey SAND [SC]						
3	X	3-3-4	7									
4	X											
5	X	4-5-6	11									
6	X	4-5-6	11			Stiff green and orange sandy fat CLAY [CH]						
7	X											
8	X	3-5-6	11									
9	X	2-4-6	10									
10												
11												
12												
13												
14	X	2-4-4	8			Stiff...						
15												
16												
17												
18												
19	X	3-3-3	6			Firm...						
20												
21												
22												
23												
24	X	5-9-14	23			Very stiff...	51		52	29		
25												
26												
27												
28												
29	X	3-5-7	12			Stiff...						
30												
31												
32												
33												
34	X	50/2"	50/2"			Dense tan silty SAND [SM]						
35												
36												
37												
38												
39	X	13-14-20	34			Dense...						
40												
41												
42						Gray...						
43												
44	X	15-30-30	60			Dense...						
45												
46												
47						Dense gray clayey SAND, with limestone fragements [SC]						
48												
49	X	16-25-30	55									
50						Boring Terminated at 50'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

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PROJECT: WALMART STORE #3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **B-25** SHEET: **1 of 1**

SECTION: 37 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

GS ELEVATION(ft): 86.27 DATE STARTED: 3/9/15  
WATER TABLE (ft): NE DATE FINISHED: 3/9/15  
DATE OF READING: NA DRILLED BY: R. WOODARD  
EST. WSWT (ft): 4 TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0						Loose to very loose tan SAND, with clay [SP-SC]						
1												
2		1-2-2	4									
3												
4		1-1-1	2	▽								
5		1-1-0	1			Very loose to loose brown very clayey SAND [SC]						
6												
7		1-2-3	5									
8						Loose to medium dense gray and orange clayey SAND to sandy CLAY [SC/CH]						
9		4-6-5	11									
10		8-10-11	21									
11												
12												
13												
14												
15		3-4-6	10									
16												
17						Medium dense to loose light gray and orange clayey SAND [SC]						
18												
19												
20		3-4-5	9			Boring Terminated at 20'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 775047

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

BORING NO: **B-100** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

GS ELEVATION(ft): 130.33 DATE STARTED: 5/5/08

WATER TABLE (ft): NE DATE FINISHED: 5/5/08

DATE OF READING: NA DRILLED BY: R. WOODARD

EST. WSWT (ft): 0.5 TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1												
2		2-3-4	7			Loose brown clayey SAND [SC]						
3												
4		2-3-5	8									
5		3-5-6	11			Medium dense green, orange and gray elastic SILT [MH]	90	47	74	34		
6		6-4-5	9									
7												
8		5-5-4	9									
9												
10		4-5-5	10									
11												
12												
13						Loose tan clayey SAND [SC]						
14												
15		2-3-4	7									
16												
17												
18						Loose light orange and tan poorly graded SAND, with clay [SP-SC]						
19												
20		2-3-3	6									
						Boring Terminated at 20'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 775047

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **B-101** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.

GS ELEVATION(ft): 126.05 DATE STARTED: 5/5/08

LOCATION: SEE BORING LOCATION PLAN

WATER TABLE (ft): NE DATE FINISHED: 5/5/08

REMARKS: Shelby tube sample taken from 4' to 6'

DATE OF READING: NA DRILLED BY: R. WOODARD

EST. WSWT (ft): 0.5 TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1	X					Loose brown clayey SAND [SC]						
2	X	2-2-3	5									
3	X	3-3-4	7			Firm to stiff green and orange fat CLAY, with sand [CH]	84	44	95	58		
4	X	3-5-5	10				82	38	62	34		
5	X	6-5-6	11			Stiff green and orange fat CLAY [CH]	89	39	127	100		
6	X	6-7-6	13									
7	X	6-7-7	14				90	30	75	45		
8	X											
9	X											
10	X											
11	X											
12	X											
13	X					Loose tan clayey SAND [SC]						
14	X	3-4-5	9				23	26				
15	X											
16	X											
17	X											
18	X											
19	X	3-3-5	8									
20	X					Boring Terminated at 20'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 775047

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **B-102** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.

GS ELEVATION(ft): 128.06 DATE STARTED: 5/5/08

LOCATION: SEE BORING LOCATION PLAN

WATER TABLE (ft): NE DATE FINISHED: 5/5/08

REMARKS:

DATE OF READING: NA DRILLED BY: J. STILLSON

EST. WSWT (ft): 0.5 TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1						Brown poorly graded SAND, with silt [SP-SM]						
2	X	1-4-5	9			Stiff orange and gray sandy lean CLAY [CL]	60	34				
3	X	2-3-5	8									
4	X					Loose gray and orange clayey SAND [SC]	46	30				
5	X	3-3-5	8									
6	X	2-3-6	9			Stiff green and orange sandy lean CLAY [CL]						
7	X											
8	X	2-3-4	7									
9	X	2-3-5	8									
10												
11												
12						Firm green and orange fat CLAY [CH]						
13												
14	X	2-2-4	6				87	48	109	82		
15												
16												
17												
18						Medium dense green clayey SAND [SC]						
19	X	2-4-6	10									
20						Boring Terminated at 20'						





# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 775047

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **B-103** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.

GS ELEVATION(ft): 116.67

DATE STARTED: 5/5/08

LOCATION: SEE BORING LOCATION PLAN

WATER TABLE (ft): NE

DATE FINISHED: 5/5/08

REMARKS:

DATE OF READING: NA

DRILLED BY: J. STILLSON

EST. WSWT (ft): 1

TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT / DAY)	ORG. CONT. (%)
									LL	PI		
0												
1												
2	X	1-1-2	3			Loose dark brown poorly graded SAND, with clay [SP-SC]						
3	X	2-4-6	10			Stiff gray and orange sandy lean CLAY [CL]	56	30				
4	X	2-4-7	11			Stiff gray and orange sandy lean CLAY [CL]	63	30	45	19		
5	X	2-5-7	12			Stiff gray and orange sandy lean CLAY [CL]						
6	X	6-9-9	18			Very stiff gray and orange sandy lean CLAY [CL]						
7	X	7-9-12	21									
8												
9												
10												
11												
12												
13						Medium dense gray clayey SAND [SC]						
14	X	3-5-7	12									
15												
16												
17												
18						Stiff green fat CLAY [CH]						
19	X	2-5-6	11									
20						Boring Terminated at 20'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

BORING NO: **B-104** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

GS ELEVATION(ft): 114.97 DATE STARTED: 5/6/08

WATER TABLE (ft): NE DATE FINISHED: 5/6/08

DATE OF READING: NA DRILLED BY: J. STILLSON

EST. WSWT (ft): 0.5 TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT / DAY)	ORG. CONT. (%)
									LL	PI		
0												
1						Brown poorly graded SAND [SP]						
2	X	1-4-6	10			Loose to medium dense orange clayey SAND [SC]						
3	X	2-3-4	7									
4	X	2-3-3	6			Loose gray and orange clayey SAND [SC]						
5	X	2-3-4	7									
6	X	2-4-5	9			Stiff gray and orange sandy lean CLAY [CL]						
7	X	2-4-6	10									
8	X					Stiff green and orange sandy lean CLAY [CL]						
9	X											
10	X											
11												
12												
13												
14	X	1-3-5	8									
15	X					Firm green and gray fat CLAY [CH]						
16												
17												
18												
19	X	1-2-3	5				92	61	100	67		
20						Boring Terminated at 20'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 775047

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

BORING NO: **B-105** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

GS ELEVATION(ft): 124.03 DATE STARTED: 5/5/08

WATER TABLE (ft): NE DATE FINISHED: 5/5/08

DATE OF READING: NA DRILLED BY: J. STILLSON

EST. WSWT (ft): 1 TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT / DAY)	ORG. CONT. (%)
									LL	PI		
0												
1	X				▽	Very loose to loose brown silty SAND [SM]						
2	X	1-1-1	2				14	9				
3	X	2-3-3	6									
4	X											
5	X	3-3-4	7									
6	X	2-2-4	6			Loose gray poorly graded SAND, with silt [SP-SM]						
7	X	2-4-7	11			Medium dense orange and gray clayey SAND [SC]						
8	X	2-4-6	10			Stiff sandy lean CLAY [CL]	65	36				
9												
10												
11						Firm green and gray fat CLAY [CH]						
12												
13												
14	X	1-2-4	6									
15												
16												
17												
18												
19	X	2-3-3	6									
20						Boring Terminated at 20'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 775047

PAGE: B-116

PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **B-106** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.

GS ELEVATION(ft): 115.02 DATE STARTED: 5/6/08

LOCATION: SEE BORING LOCATION PLAN

WATER TABLE (ft): NE DATE FINISHED: 5/6/08

REMARKS:

DATE OF READING: NA DRILLED BY: J. STILLSON

EST. WSWT (ft): 0.5 TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1						Brown poorly graded SAND [SP]						
2	X	3-4-8	12			Medium dense orange clayey SAND [SC]						
3	X											
4	X	2-4-8	12			Medium dense to loose orange and gray clayey SAND [SC]						
5	X	3-6-8	14									
6	X											
7	X	2-3-5	8									
8	X	2-3-5	8			Stiff gray sandy lean CLAY [CL]	55	30	49	22		
9	X											
10	X	2-3-6	9									
11												
12						Firm green and orange fat CLAY [CH]						
13												
14	X											
15	X	2-2-4	6									
16												
17												
18												
19	X											
20	X	1-3-4	7									
						Boring Terminated at 20'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1000100.0000

REPORT NO.: 863725

PAGE: B-117

PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **B-107** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

GS ELEVATION(ft): 136.66 DATE STARTED: 6/11/09  
WATER TABLE (ft): NE DATE FINISHED: 6/11/09  
DATE OF READING: NA DRILLED BY: M. BOATRIGHT  
EST. WSWT (ft): 1 TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0						Brown and orange clayey SAND [SC]						
1												
2												
3												
4												
5	X	5-6-6	12			Stiff brown and orange sandy CLAY [CH]						
6	X											
7												
8												
9	X					Stiff green and orange...						
10	X	4-4-4	8									
11												
12						Firm green CLAY [CH]						
13												
14	X											
15	X	2-2-3	5									
16												
17						Loose light greenish-gray clayey SAND [SC]						
18												
19	X											
20	X	2-3-3	6									
21	X	3-4-5	9									
22	X											
23	X	5-5-5	10			Stiff green and orange CLAY, with trace of sand [CH]						
24	X					Loose to medium dense tan silty SAND [SM]						
25	X	4-4-5	9									
26	X	4-6-6	12				19	13				
27	X	3-4-5	9									
28	X											
29	X	4-6-8	14			Boring Terminated at 29'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1000100.0000

REPORT NO.: 863725

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

BORING NO: **B-108** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

GS ELEVATION(ft): 134.70 DATE STARTED: 6/22/09

WATER TABLE (ft): NE DATE FINISHED: 6/22/09

DATE OF READING: NA DRILLED BY: M. BOATRIGHT

EST. WSWT (ft): 1 TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0						Brown SAND [SP]						
1					▽	Tan and orange very clayey SAND [SC]						
2												
3												
4	X					Stiff tan and orange sandy CLAY [CH]						
5	X	4-5-6	11									
6												
7												
8												
9	X					Stiff...						
10	X	4-5-5	10									
11						Stiff light green and orange CLAY, with trace of sand [CH]						
12												
13												
14	X						89	43	74	47		
15		2-3-5	8			Shelby tube sample taken from 15' to 17'						
16												
17						Loose tan silty SAND, with trace of clay [SM]	32	21				
18	X	1-2-2	4									
19	X											
20	X	1-2-2	4									
21	X	3-4-6	10			Loose green and orange clayey SAND [SC]	30	25				
22	X											
23	X	2-3-3	6			Medium dense tan silty SAND, with trace of clay [SM]	39	30	51	30		
24	X	5-7-7	14									
25	X											
26	X	4-5-6	11									
27	X	7-9-11	20			Boring Terminated at 27.5'						



# UNIVERSAL ENGINEERING SCIENCES

## BORING LOG

PROJECT NO.: 0795.1000100.0000

REPORT NO.: 863725

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

BORING NO: **B-109** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

GS ELEVATION(ft): 131.50 DATE STARTED: 6/23/09

WATER TABLE (ft): NE DATE FINISHED: 6/23/09

DATE OF READING: NA DRILLED BY: M. BOATRIGHT

EST. WSWT (ft): 1 TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0						Brown SAND [SP]						
1					▽	Loose brown clayey SAND [SC]		21				
2		2-2-3	5									
3						Stiff light brown and orange sandy CLAY [CL/CH]	35	27	43	20		
4		6-7-8	15									
5		4-4-5	9			Firm green and orange CLAY [CL/CH]	51	30	42	19		
6							80	59	71	35		
7		2-2-3	5									
8		3-4-6	10				76	46	96	71		
9												
10		3-3-4	7				90	54	92	56		
11												
12												
13												
14						Firm...						
15		1-3-4	7				88	46	47	17		
16												
17												
18						Loose tan silty clayey SAND [SM-SC]						
19												
20		2-3-3	6					16				
						Boring Terminated at 20'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1000100.0000

REPORT NO.: 863725

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **B-110** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.

GS ELEVATION(ft): 127.41 DATE STARTED: 6/23/09

LOCATION: SEE BORING LOCATION PLAN

WATER TABLE (ft): NE DATE FINISHED: 6/23/09

REMARKS:

DATE OF READING: NA DRILLED BY: M. BOATRIGHT

EST. WSWT (ft): 1 TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0						Brown SAND [SP]						
1					▽							
2						Brown very clayey SAND [SC]						
3												
4												
5	X	1-2-3	5			Loose...						
6	X											
7												
8												
9	X					Loose light brown...						
10	X	4-4-4	8									
11	X	1-2-3	5									
12	X						40	20	41	24		
13	X	2-3-4	7									
14	X	2-3-6	9			Loose to medium dense tan and orange clayey SAND [SC], with limestone fragments	40	23	44	25		
15	X											
16	X	4-6-8	14									
17	X	1-3-5	8				49	27	45	23		
18	X											
19	X	5-5-7	12									
20	X	5-10-12	22				49	79	49	21		
						Boring Terminated at 20.5						



[illegible]



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1000100.0000


REPORT NO.: 863725

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **B-111** SHEET: **2 of 2**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT / DAY)	ORG. CONT. (%)
									LL	PI		
	X	6-7-7	14			Boring Terminated at 31'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1000100.0000

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **B-112** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

GS ELEVATION(ft): 125.92 DATE STARTED: 6/23/09  
WATER TABLE (ft): NE DATE FINISHED: 6/23/09  
DATE OF READING: NA DRILLED BY: M. BOATRIGHT  
EST. WSWT (ft): 1.5 TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0						Brown SAND [SP]						
1					▽							
2					///	Brown clayey SAND [SC]						
3						Medium dense to loose brown silty SAND [SM]						
4	X											
5	X	4-5-6	11									
6	X											
7	X											
8	X	3-3-3	6									
9	X	3-3-3	6			Loose...						
10	X											
11	X	2-3-2	5				19	11				
12	X	3-2-3	5									
13	X											
14	X	3-4-4	8			Loose to medium dense brown clayey SAND [SC]						
15	X	3-3-3	6				25					
16	X											
17	X	3-5-6	11									
18	X	2-2-3	5									
						Boring Terminated at 18.5'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1000100.0000

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **B-113** SHEET: **1 of 2**

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS: Shelby tube sample taken from 21' to 23'

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E  
GS ELEVATION(ft): 138.67 DATE STARTED: 6/23/09  
WATER TABLE (ft): NE DATE FINISHED: 6/23/09  
DATE OF READING: NA DRILLED BY: R. WOODARD  
EST. WSWT (ft): 1 TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0						Brown SAND [SP]						
1					▽							
2						Brown very clayey SAND [SC]						
3												
4												
5						Gray and orange CLAY, with trace of sand and limestone [CH]						
6												
7												
8												
9												
10						Tan clayey SAND, with lenses of clay [SC]						
11												
12						Orange and green CLAY [CH]						
13												
14												
15												
16												
17							89	50	91	59		
18												
19												
20												
21												
22												
23		0-2-2	4			Loose to medium dense light tan to white clayey SAND [SC]						
24												
25		4-4-4	8				28	19				
26												
27		5-5-6	11									
28												
29		5-5-6	11									
30												
		6-4-4	8					25				



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1000100.0000

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PROJECT: WALMART STORE NO. 3873-00  
S E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **B-113** SHEET: **2 of 2**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
30	X	6-7	13									
31						Boring Terminated at 31'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1000100.0000

REPORT NO.: 863725

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **B-114** SHEET: **1 of 2**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.

GS ELEVATION(ft): 135.64 DATE STARTED: 6/23/09

LOCATION: SEE BORING LOCATION PLAN

WATER TABLE (ft): NE DATE FINISHED: 6/24/09

REMARKS:

DATE OF READING: NA DRILLED BY: M. BOATRIGHT

EST. WSWT (ft): 1 TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT / DAY)	ORG. CONT. (%)
									LL	PI		
0						Brown SAND [SP]						
1					▽	Brown very clayey SAND [SC]						
2						Light brown sandy CLAY [CH]						
3												
4												
5	X	3-3-4	7			Firm gray and orange...						
6	X											
7												
8						Stiff green and orange CLAY [CH]						
9	X											
10	X	3-4-6	10									
11												
12												
13												
14	X					Stiff...						
15	X	2-4-5	9									
16												
17												
18												
19	X	2-2-3	5			Loose tan clayey SAND [SC]		23				
20	X											
21	X	3-4-4	8				26	26				
22	X					Firm to stiff green CLAY, with trace of sand [CH]						
23	X	3-3-4	7				90	57	82	61		
24	X	4-7-8	15			Loose tan clayey SAND [SC]						
25	X						17	18				
26	X	3-4-4	8				15	17				
27	X	4-5-6	11									
28	X											
29	X	3-3-4	7					20				
30	X	3-5-7	12					22				



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1000100.0000

REPORT NO.: 863725

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

CLIENT: CPH ENGINEERS, INC.

LOCATION: SEE BORING LOCATION PLAN

REMARKS:

BORING NO: **B-115** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

GS ELEVATION(ft): 133.53 DATE STARTED: 6/22/09

WATER TABLE (ft): NE DATE FINISHED: 6/22/09

DATE OF READING: NA DRILLED BY: R. WOODARD

EST. WSWT (ft): 1 TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0						Brown, tan and orange clayey SAND [SC]						
1					▽							
2												
3												
4												
5												
6												
7						Green and orange CLAY [CH]						
8												
9												
10												
11												
12												
13												
14												
15												
16	×					Firm...						
17	×	2-2-3	5				87	33	82	55		
18	×	4-4-6	10			Medium dense light tan to white clayey SAND [SC]						
19	×											
20	×	7-9-9	18									
21	×											
22	×	9-10-12	22									
23	×	5-5-5	10			Stiff green and orange CLAY [CH]	92	55	113	89		
24	×	6-6-6	12			Medium dense light tan to white clayey SAND [SC]						
25	×											
26	×					Boring Terminated at 26'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1000100.0000

REPORT NO.: 863725

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **B-116** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

GS ELEVATION(ft): 130.98 DATE STARTED: 6/11/09

WATER TABLE (ft): NE DATE FINISHED: 6/11/09

DATE OF READING: NA DRILLED BY: M. BOATRIGHT

EST. WSWT (ft): 1 TYPE OF SAMPLING: ASTM D-1586

CLIENT: CPH ENGINEERS, INC  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W T	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0						Brown SAND [SP]						
1					▽	Stiff brown, gray and orange sandy CLAY [CH]						
2												
3												
4	X											
5	X	4-4-5	9									
6												
7												
8												
9	X					Firm green and orange...						
10	X	3-3-4	7									
11												
12												
13	X											
14	X	2-3-4	7									
15	X					Stiff...						
16	X	3-4-5	9									
17	X	1-2-3	5				69	46	68	44		
18	X					Loose light brown and tan clayey SAND [SC]						
19	X	3-4-4	8									
20	X	2-4-4	8			Stiff green and orange sandy CLAY [CH]	31	28				
21	X											
22	X	2-2-3	5									
23	X	3-3-5	8									
						Boring Terminated at 23.5'						





# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1000100.0000

REPORT NO.: 863725

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **B-117** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.

GS ELEVATION(ft): 126.11 DATE STARTED: 6/23/09

LOCATION: SEE BORING LOCATION PLAN

WATER TABLE (ft): NE DATE FINISHED: 6/23/09

REMARKS: Shelby tube sample taken from 15' to 17'

DATE OF READING: NA DRILLED BY: M. BOATRIGHT

EST. WSWT (ft): 1 TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0						Brown SAND [SP]						
1												
2		1-2-3	5			Loose to medium dense brown heavy clayey SAND [SC]						
3												
4		3-5-6	11									
5		4-4-7	11			Stiff light green, gray and orange sandy CLAY [CL/CH]						
6												
7		7-9-9	18									
8		4-4-4	8				57	24				
9						Stiff...						
10		5-7-7	14				68	28	44	23		
11												
12												
13												
14						Firm green and orange...						
15		2-3-4	7				97	51	75	48		
16												
17						Light green and orange sandy CLAY [CH]						
18						Green and orange CLAY [CH]						
19						Loose light green clayey SAND [SC]						
20		3-3-5	8				31	23				
						Boring Terminated at 20'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1000100.0000

REPORT NO.: 863725

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **B-118** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.

GS ELEVATION(ft): 127.91 DATE STARTED: 6/22/09

LOCATION: SEE BORING LOCATION PLAN

WATER TABLE (ft): NE DATE FINISHED: 6/22/09

REMARKS: Shelby tube sample taken from 8' to 10'

DATE OF READING: NA DRILLED BY: R. WOODARD

EST. WSWT (ft): 1 TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1												
2		1-3-3	6			Loose to medium dense brown, orange and tan clayey SAND [SC]						
3												
4		5-6-7	13									
5		6-5-5	10			Stiff green and orange CLAY [CH]						
6												
7		4-4-6	10									
8		5-6	11				91	44	92	57		
9												
10												
11												
12						Loose tan clayey SAND, with lenses of clay [SC]						
13												
14												
15		2-3-4	7				43	25				
16												
17												
18												
19						Loose...						
20		2-2-3	5			Boring Terminated at 20'	35	33	44	22		



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1000100,0000

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

BORING NO: **B-119** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

GS ELEVATION(ft): 118.74 DATE STARTED: 6/22/09

WATER TABLE (ft): NE DATE FINISHED: 6/22/09

DATE OF READING: NA DRILLED BY: R. WOODARD

EST. WSWT (ft): 2 TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0						Loose light brown SAND [SP]						
1												
2		1-2-2	4			Loose to medium dense brown, tan and orange clayey SAND [SC]						
3												
4		3-4-3	7									
5		4-5-6	11									
6						Medium dense gray and orange...						
7		7-5-6	11									
8		6-6-5	11									
9						Stiff gray sandy CLAY [CH]						
10		6-8-7	15			Gray and orange clayey SAND [SC]						
11						Boring Terminated at 11'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1000100.0000

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

CLIENT: CPH ENGINEERS, INC.

LOCATION: SEE BORING LOCATION PLAN

REMARKS:

BORING NO: **B-120** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

GS ELEVATION(ft): 120.82 DATE STARTED: 6/23/09

WATER TABLE (ft): NE DATE FINISHED: 6/23/09

DATE OF READING: NA DRILLED BY: R. WOODARD

EST. WSWT (ft): 1 TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1												
2		2-4-5	9									
3												
4		5-5-5	10									
5		5-5-6	11									
6							26	19				
7		7-6-6	12									
8		4-5-6	11			Stiff to very stiff green and orange CLAY [CH]	88	44	100	63		
9							57	29	41	24		
10		9-8-8	16				70	30	79	51		
11								20				
12		7-8-8	16									
13		8-7-7	14			Medium dense tan clayey SAND [SC]						
						Boring Terminated at 13'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **B-121** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.

GS ELEVATION(ft): 119.45 DATE STARTED: 6/23/09

LOCATION: SEE BORING LOCATION PLAN

WATER TABLE (ft): NE DATE FINISHED: 6/23/09

REMARKS: Shelby tube sample taken from 4' to 6'

DATE OF READING: NA DRILLED BY: R. WOODARD

EST. WSWT (ft): 0 TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0				▽		Loose gray and orange very clayey SAND [SC]						
1	⊗						45	19				
2	⊗	2-4-4	8									
3	⊗					Loose to medium dense green and orange CLAY, with trace of sand [CH]	61	28				
4	⊗	4-5-5	10				78	35	72	42		
5	⊗	4-4-5	9				58	29	59	36		
6	⊗											
7	⊗	6-5-5	10				60	16	62	40		
8	⊗	6-7-7	14			Medium dense tan clayey SAND [SC]						
9	⊗						42	17				
10	⊗	8-7-8	15				35	17				
11	⊗	8-9-9	18			Boring Terminated at 11'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

BORING NO: **B-122** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

GS ELEVATION(ft): 124.70 DATE STARTED: 6/22/09

WATER TABLE (ft): NE DATE FINISHED: 6/22/09

DATE OF READING: NA DRILLED BY: R. WOODARD

EST. WSWT (ft): 0 TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT / DAY)	ORG. CONT. (%)
									LL	PI		
0				▽		Very loose brown and orange clayey SAND [SC]						
1	⊗							20				
2	⊗	1-2-1	3					23				
3	⊗											
4	⊗	3-3-3	6									
5	⊗					Loose gray and orange...	43	26				
6	⊗	2-3-4	7				26	18	27	9		
7	⊗	6-5-5	10			Medium dense...						
8	⊗							29				
9	⊗	5-6-6	12									
10	⊗	8-10-10	20					22				
11												
12												
13												
14	⊗					Medium dense light tan to white..						
15	⊗	4-5-6	11				24	15				
16												
17						Boring Terminated at 17'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1000100.0000

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

CLIENT: CPH ENGINEERS, INC.

LOCATION: SEE BORING LOCATION PLAN

REMARKS: Shelby tube sample taken from 5' to 7'

BORING NO: **B-123** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

GS ELEVATION(ft): 117.46 DATE STARTED: 6/23/09

WATER TABLE (ft): NE DATE FINISHED: 6/23/09

DATE OF READING: NA DRILLED BY: R. WOODARD

EST. WSWT (ft): 3 TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0						Very loose to loose brown SAND [SP]						
1	X							8				
2	X	1-1-1	2					6				
3	X											
4	X	2-3-3	6									
5	X	2-2-3	5			Loose to medium dense gray and orange clayey SAND [SC]		21				
6							38	25				
7	X	4-3-3	6									
8	X	4-4-4	8				40	28	31	13		
9	X											
10	X	5-5-6	11				42	22				
						Boring Terminated at 10'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **B-124** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.

GS ELEVATION(ft): 135.01

DATE STARTED: 6/22/09

LOCATION: SEE BORING LOCATION PLAN

WATER TABLE (ft): NE

DATE FINISHED: 6/22/09

REMARKS: Shelby tube sample taken from 17' to 19'

DATE OF READING: NA

DRILLED BY: R. WOODARD

EST. WSWT (ft): 0

TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0				▽		Brown clayey SAND [SC]						
1												
2												
3												
4												
5												
6						Green and orange CLAY, with trace of sand [CH]						
7												
8												
9												
10							59	29	61	36		
11												
12												
13												
14												
15												
16												
17												
18												
19												
20						Firm...	92	47	103	75		
21		2-3-4	7									
22		5-5-6	11			Stiff...	93	54	104	75		
23												
24		6-7-7	14			Medium dense light tan to white clayey SAND [SC]	31	18	34	9		
25		7-7-7	14				27	20				
26												
27		7-8-9	17			Boring Terminated at 27'						





# UNIVERSAL ENGINEERING SCIENCES BORING LOG

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REPORT NO.: 775047

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

BORING NO: **C-1**SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

GS ELEVATION(ft): 96.71

DATE STARTED: 5/6/08

WATER TABLE (ft): NE

DATE FINISHED: 5/6/08

DATE OF READING: NA

DRILLED BY: J. STILLSON

EST. WSWT (ft): 0.5

TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1												
2	X	1-1-2	3			Very loose brown-orange silty clayey SAND [SM-SC]	26	10				
3	X	1-1-2	3									
4	X	1-1-2	3									
5	X	1-1-2	3									
6	X	2-2-4	6			Very loose to medium dense gray and orange clayey SAND [SC]						
7	X	2-2-4	6									
8	X	2-4-6	10									
9	X	2-4-7	11									
10												
11												
12												
13						Stiff orange and green fat CLAY [CH]						
14	X	2-3-6	9									
15						Boring Terminated at 15'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **C-2** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN

GS ELEVATION(ft): 101.10 DATE STARTED: 5/6/08

WATER TABLE (ft): NE DATE FINISHED: 5/6/08

REMARKS: Shelby tube sample taken from 11' to 13'

DATE OF READING: NA DRILLED BY: J. STILLSON

EST. WSWT (ft): 0.5 TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1						Brown poorly graded SAND, with silt [SP-SM]						
2		1-1-3	4			Loose orange clayey SAND [SC]	37	19				
3		2-2-2	4									
4		2-2-3	5									
5		2-4-6	10			Stiff gray and orange elastic SILT [MH]						
6		2-4-4	8			Loose gray and orange clayey SAND [SC]	63	33	52	21		
7		2-3-4	7									
8												
9												
10												
11						Stiff green and orange sandy fat CLAY [CH]						
12							51	29	63	44		
13												
14		1-3-5	8									
15						Boring Terminated at 15'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **C-3** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

GS ELEVATION(ft): 106.23 DATE STARTED: 5/6/08  
WATER TABLE (ft): NE DATE FINISHED: 5/6/08  
DATE OF READING: NA DRILLED BY: J. STILLSON  
EST. WSWT (ft): 1 TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1	X				▽	Loose brown poorly graded SAND, with silt [SP-SM]						
2	X	1-2-3	5			Loose to very loose orange clayey SAND [SC]						
3	X											
4	X	1-2-3	5									
5	X	2-2-3	5									
6	X	1-2-3	5									
7	X	1-2-3	5									
8	X	1-2-3	5									
9	X	2-3-4	7									
10												
11												
12												
13												
14	X	1-1-1	2									
15						Boring Terminated at 15'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

BORING NO: **C-4** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

GS ELEVATION(ft): 132.61 DATE STARTED: 5/7/08

WATER TABLE (ft): NE DATE FINISHED: 5/7/08

DATE OF READING: NA DRILLED BY: J. STILLSON

EST. WSWT (ft): 0.5 TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1						Brown poorly graded SAND, with silt [SP-SM]						
2	X	1-2-3	5			Loose to very loose orange and gray clayey SAND [SC]						
3	X	2-1-1	2									
4	X	1-1-2	3				47	38				
5	X	1-2-3	5			Soft to firm gray and orange sandy lean CLAY [CL]						
6	X	2-3-4	7			Firm to soft green and orange fat CLAY [CH]						
7	X	2-4-4	8									
8												
9												
10												
11												
12												
13												
14	X	1-2-2	4									
15												
16												
17												
18						Loose gray clayey SAND [SC]						
19	X	3-4-4	8									
20						Boring Terminated at 20'						

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1	X				▽	Very loose brown poorly graded SAND, with silt [SP-SM]						
2	X	1-1-1	2									
3	X	2-4-4	8			Very loose to loose orange and gray clayey SAND [SC]						
4	X											
5	X	2-4-5	9			Loose gray and orange clayey SAND [SC]						
6	X	2-3-5	8									
7	X	2-3-5	8			Loose gray and orange clayey SAND [SC]						
8	X											
9	X	2-3-4	7									
10												
11												
12												
13												
14	X	2-3-4	7									
15	X					Firm green and orange fat CLAY [CH]						
16												
17						Stiff green fat CLAY [CH]						
18												
19	X	5-5-6	11									
20						Boring Terminated at 20'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **C-6** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.

GS ELEVATION(ft): 139.41

DATE STARTED: 5/7/08

LOCATION: SEE BORING LOCATION PLAN

WATER TABLE (ft): NE

DATE FINISHED: 5/7/08

REMARKS:

DATE OF READING: NA

DRILLED BY: J. STILLSON

EST. WSWT (ft): 1

TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1												
2	X	1-1-2	3		▽	Very loose brown poorly graded SAND, with silt [SP-SM]	12	7				
3	X	1-2-1	3			Very loose silty SAND [SM]	17	15				
4	X	2-1-2	3			Very loose tan poorly graded SAND [SP]						
5	X	1-2-2	4			Loose tan clayey SAND [SC]						
6	X	2-3-3	6			Loose gray and orange clayey SAND [SC]						
7	X	2-3-4	7									
8	X											
9	X											
10	X											
11	X					Stiff to very stiff green fat CLAY [CH]						
12	X											
13	X											
14	X	2-3-4	7									
15	X											
16	X											
17	X											
18	X											
19	X	8-8-12	20									
20	X					Boring Terminated at 20'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 775047

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

BORING NO: **C-7** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

GS ELEVATION(ft): 135.90 DATE STARTED: 5/7/08

WATER TABLE (ft): NE DATE FINISHED: 5/7/08

DATE OF READING: NA DRILLED BY: J. STILLSON

EST. WSWT (ft): 1 TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1												
2	X	1-1-2	3			Very loose brown poorly graded SAND, with silt [SP-SM]						
3	X	1-1-1	2									
4	X	1-1-1	2									
5	X	1-1-1	2									
6	X	1-1-1	2									
7	X	1-1-1	2									
8	X	1-1-1	2									
9	X	1-1-1	2									
10							11	24				
11												
12												
13						Loose gray clayey SAND [SC]						
14	X	1-2-3	5									
15												
16												
17						Medium dense gray poorly graded SAND [SP]						
18												
19	X	4-8-8	16									
20						Boring Terminated at 20'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

BORING NO: **C-8** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

GS ELEVATION(ft): 134.60 DATE STARTED: 5/7/08

WATER TABLE (ft): NE DATE FINISHED: 5/7/08

DATE OF READING: NA DRILLED BY: J. STILLSON

EST. WSWT (ft): 1 TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1	X				▽	Very loose brown poorly graded SAND, with silt [SP-SM]						
2	X	1-1-1	2									
3	X	1-2-2	4									
4	X	2-2-2	4			Very loose to medium dense orange clayey SAND [SC]						
5	X	3-4-7	11									
6	X	4-6-9	15			Medium dense gray and orange clayey SAND [SC]						
7	X	5-9-9	18									
8	X											
9	X											
10	X											
11	X											
12	X											
13	X											
14	X	7-7-8	15			Stiff orange and gray sandy lean CLAY [CL]						
15	X											
16	X											
17	X					Stiff green and orange sandy lean CLAY [CL]						
18	X											
19	X	2-3-6	9									
20	X					Boring Terminated at 20'						





# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 775047

PAGE: B-143

PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **C-9**SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.

GS ELEVATION(ft): 129.92

DATE STARTED: 5/7/08

LOCATION: SEE BORING LOCATION PLAN

WATER TABLE (ft): NE

DATE FINISHED: 5/7/08

REMARKS:

DATE OF READING: NA

DRILLED BY: R. WOODARD

EST. WSWT (ft): 1

TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1												
2	X	3-4-3	7		▽	Loose brown poorly graded SAND, with silt [SP-SM]						
3	X	5-8-6	14			Medium dense gray and orange clayey SAND [SC]						
4	X	4-3-5	8			Loose to medium dense orange and gray clayey SAND [SC]	47	19				
5	X	6-7-8	15			Stiff to very stiff green and orange sandy CLAY [CL]						
6	X	10-10-8	18			Very stiff green and orange fat CLAY [CH]						
7	X	11-12-12	24									
8												
9												
10												
11												
12												
13						Medium dense tan and orange clayey SAND [SC]						
14	X	4-6-8	14									
15												
16												
17						Firm green and orange fat CLAY [CH]						
18												
19	X	2-3-3	6									
20						Boring Terminated at 20'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 775047

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **C-10** SHEET: **1 of 1**

CLIENT: CPH ENGINEERS, INC.

LOCATION: SEE BORING LOCATION PLAN

REMARKS: Shelby tube sample taken from 15' to 17'

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

GS ELEVATION(ft): 132.66 DATE STARTED: 5/7/08

WATER TABLE (ft): NE DATE FINISHED: 5/7/08

DATE OF READING: NA DRILLED BY: R. WOODARD

EST. WSWT (ft): 0.5 TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1												
2	X	1-3-3	6			Loose to medium dense brown and orange clayey SAND [SC]						
3	X	4-5-6	11									
4	X	4-4-6	10			Medium dense gray, tan and orange clayey SAND [SC]						
5	X	7-6-6	12									
6	X	8-8-7	15									
7	X	9-9-9	18									
8	X											
9	X											
10	X											
11	X											
12	X					Stiff to firm green and orange fat CLAY [CH]						
13	X											
14	X	2-4-5	9									
15							92	53	155	124		
16												
17												
18												
19	X	2-2-3	5									
20						Boring Terminated at 20'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **C-11** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.

GS ELEVATION(ft): 139.21 DATE STARTED: 5/7/08

LOCATION: SEE BORING LOCATION PLAN

WATER TABLE (ft): NE DATE FINISHED: 5/7/08

REMARKS:

DATE OF READING: NA DRILLED BY: R. WOODARD

EST. WSWT (ft): 1 TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1												
2	X	1-2-3	5			Loose brown poorly graded SAND, with silt [SP-SM]						
3	X	4-5-7	12			Loose to medium dense brown and orange clayey SAND [SC]						
4	X	7-7-9	16			Medium dense gray, orange and tan clayey SAND [SC]						
5	X	9-7-7	14			Stiff to very stiff gray and orange sandy lean CLAY [CL]						
6	X	8-9-7	16			Stiff to very stiff gray and orange sandy lean CLAY [CL]						
7	X	8-9-9	18			Stiff to very stiff gray and orange sandy lean CLAY [CL]						
8												
9												
10												
11												
12						Firm green and orange fat CLAY [CH]						
13												
14	X	2-3-4	7			Firm green and orange fat CLAY [CH]						
15												
16												
17												
18												
19	X	2-3-4	7			Firm green and orange fat CLAY [CH]						
20						Boring Terminated at 20'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **C-12** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.

GS ELEVATION(ft): 140.38 DATE STARTED: 5/7/08

LOCATION: SEE BORING LOCATION PLAN

WATER TABLE (ft): NE DATE FINISHED: 5/7/08

REMARKS:

DATE OF READING: NA DRILLED BY: R. WOODARD

EST. WSWT (ft): 1 TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1												
2		1-2-2	4			Loose light brown poorly graded SAND, with silt [SP-SM]						
3		3-4-4	8			Loose brown poorly graded SAND, with trace of clay [SP-SC]						
4		3-4-4	8			Loose to medium dense brown and orange clayey SAND [SC]						
5		7-7-8	15			Medium dense gray, orange and tan clayey SAND, with lenses of clay [SC]						
6		9-10-9	19									
7		7-8-7	15									
8												
9												
10												
11												
12						Stiff green and orange fat CLAY [CH]						
13												
14		3-4-5	9									
15												
16												
17						Stiff green fat CLAY [CH]						
18												
19		3-4-4	8									
20						Boring Terminated at 20'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

BORING NO: **C-13** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

GS ELEVATION(ft): 140.67 DATE STARTED: 5/7/08

WATER TABLE (ft): NE DATE FINISHED: 5/7/08

DATE OF READING: NA DRILLED BY: R. WOODARD

EST. WSWT (ft): 1 TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1												
2		1-1-2	3			Very loose light brown poorly graded SAND, with silt [SP-SM]						
3		4-6-5	11			Very loose to medium dense brown clayey SAND [SC]	24	14				
4												
5		3-4-7	11									
6		7-6-6	12			Medium dense orange and tan clayey SAND [SC]						
7												
8		8-8-7	15									
9		8-8-7	15									
10												
11												
12						Stiff to firm orange and green fat CLAY, with sand [CH]						
13												
14		2-3-5	8									
15												
16												
17												
18												
19		2-3-3	6									
20						Boring Terminated at 20'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

BORING NO: **C-14** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

GS ELEVATION(ft): 139.99 DATE STARTED: 5/6/08

WATER TABLE (ft): NE DATE FINISHED: 5/6/08

DATE OF READING: NA DRILLED BY: R. WOODARD

EST. WSWT (ft): 1 TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1												
2	X	1-2-2	4			Loose brown poorly graded SAND, with trace of clay [SP-SC]						
3	X	2-2-3	5			Loose brown and orange clayey SAND [SC]						
4	X	4-4-4	8			Loose to medium dense gray, tan and orange clayey SAND [SC]						
5	X											
6	X	5-5-6	11									
7	X	6-7-6	13									
8	X	7-8-9	17			Medium dense orange and tan sandy lean CLAY [CL]						
9	X											
10												
11						Stiff to firm green and orange fat CLAY [CH]						
12												
13												
14	X	3-3-5	8									
15												
16												
17												
18												
19	X	2-3-4	7									
20						Boring Terminated at 20'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

CLIENT: CPH ENGINEERS, INC.

LOCATION: SEE BORING LOCATION PLAN

REMARKS:

BORING NO: **C-15** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

GS ELEVATION(ft): 138.06 DATE STARTED: 5/6/08

WATER TABLE (ft): NE DATE FINISHED: 5/6/08

DATE OF READING: NA DRILLED BY: R. WOODARD

EST. WSWT (ft): 0.5 TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1												
2	X	2-2-3	5			Loose to medium dense brown and orange clayey SAND [SC]						
3	X	5-5-6	11									
4	X	6-8-8	16			Very stiff tan, gray and orange sandy lean CLAY [CL]	54	28				
5	X	9-7-7	14									
6	X	10-10-6	16									
7	X	8-9-8	17									
8												
9												
10												
11												
12						Stiff to firm green and orange fat CLAY, with sand [CH]						
13												
14	X	3-4-5	9									
15												
16												
17												
18												
19	X	2-2-3	5									
20						Boring Terminated at 20'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

BORING NO: **C-16** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

GS ELEVATION(ft): 133.94 DATE STARTED: 5/6/08

WATER TABLE (ft): NE DATE FINISHED: 5/6/08

DATE OF READING: NA DRILLED BY: R. WOODARD

EST. WSWT (ft): 0 TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT / DAY)	ORG. CONT. (%)
									LL	PI		
0					▽							
1						Stiff brown and orange fat CLAY, with sand [CH]						
2	X	2-3-5	8				56	20	51	26		
3	X											
4	X	3-4-5	9			Stiff gray, orange and brown sandy lean CLAY [CL]	51	25				
5	X	3-4-5	9									
6	X	5-3-4	7			Loose to medium dense tan, orange and gray clayey SAND [SC]						
7	X											
8	X	6-6-5	11									
9	X	5-6-7	13			Stiff to firm green and orange fat CLAY [CH]						
10												
11												
12												
13												
14	X	3-4-5	9									
15												
16												
17												
18												
19	X	2-3-4	7									
20						Boring Terminated at 20'						





# UNIVERSAL ENGINEERING SCIENCES BORING LOG

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

BORING NO: **C-17** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

GS ELEVATION(ft): 131.30 DATE STARTED: 5/6/08

WATER TABLE (ft): NE DATE FINISHED: 5/6/08

DATE OF READING: NA DRILLED BY: R. WOODARD

EST. WSWT (ft): 0 TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT / DAY)	ORG. CONT. (%)
									LL	PI		
0					▽							
1	×					Stiff brown and orange sandy lean CLAY [CL]						
2	×	4-6-7	13				56	23	45	18		
3	×	4-6-8	14									
4	×	4-6-6	12			Medium dense tan and orange clayey SAND; with lenses of clay [SC]						
5	×	7-6-7	13									
6	×	7-8-7	15									
7	×	8-7-8	15									
8	×											
9	×											
10	×											
11	×					Firm green and orange fat CLAY, with sand [CH]						
12	×											
13	×											
14	×	2-3-4	7									
15						Boring Terminated at 15'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

BORING NO: **C-18** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

GS ELEVATION(ft): 129.96 DATE STARTED: 5/6/08

WATER TABLE (ft): NE DATE FINISHED: 5/6/08

DATE OF READING: NA DRILLED BY: R. WOODARD

EST. WSWT (ft): 0 TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0					▽							
1						Stiff brown and orange sandy lean CLAY [CL]						
2		1-5-6	11				51	27	45	21		
3		4-5-6	11			Stiff light brown, orange and tan sandy lean CLAY [CL]						
4		5-6-7	13									
5		8-7-7	14			Medium dense orange and tan clayey SAND, with lenses of clay [SC]						
6		8-9-9	18									
7		8-8-8	16			Stiff to firm green and orange fat CLAY, with sand [CH]						
8												
9												
10												
11												
12												
13												
14		2-3-4	7									
15						Boring Terminated at 15'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

CLIENT: CPH ENGINEERS, INC.

LOCATION: SEE BORING LOCATION PLAN

REMARKS: Shelby tube sample taken from 10' to 12'

BORING NO: **C-19** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

GS ELEVATION(ft): 128.97 DATE STARTED: 5/6/08

WATER TABLE (ft): NE DATE FINISHED: 5/6/08

DATE OF READING: NA DRILLED BY: R. WOODARD

EST. WSWT (ft): 0.5 TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1												
2	X	1-3-6	9			Loose to medium dense brown, orange and tan clayey SAND [SC]						
3	X											
4	X	5-6-6	12									
5	X	7-6-8	14									
6	X											
7	X	8-5-6	11			Medium dense green and orange SILT [MH]	86	48	92	49		
8	X	6-6-5	11									
9	X	7-7-6	13									
10												
11						Stiff green and orange fat CLAY, with sand [CH]	84	44	122	99		
12												
13												
14	X	3-4-5	9			Loose tan clayey SAND [SC]						
15						Boring Terminated at 15'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **C-20** SHEET: **1 of 1**

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

GS ELEVATION(ft): 127.74 DATE STARTED: 5/6/08

WATER TABLE (ft): NE DATE FINISHED: 5/6/08

DATE OF READING: NA DRILLED BY: R. WOODARD

EST. WSWT (ft): 0 TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0				▽								
1	⊗					Firm to stiff brown, gray and orange sandy lean CLAY [CL]						
2	⊗	2-3-4	7				50	25				
3	⊗											
4	⊗	5-5-6	11									
5	⊗											
6	⊗	8-9-8	17									
7	⊗					Stiff to firm green and orange fat CLAY, with sand [CH]						
8	⊗	7-5-5	10									
9	⊗	6-6-5	11									
10	⊗	6-5-6	11									
11												
12												
13												
14	⊗	2-3-4	7									
15						Boring Terminated at 15'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **C-21a** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.

GS ELEVATION(ft): 96.80

DATE STARTED: 5/5/08

LOCATION: SEE BORING LOCATION PLAN

WATER TABLE (ft): NE

DATE FINISHED: 5/5/08

REMARKS:

DATE OF READING: NA

DRILLED BY: R. WOODARD

EST. WSWT (ft): 0.5

TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1						Very loose brown clayey SAND [SC]						
2		1-1-0	1									
3		WOH	WOH				23	11				
4												
5		1-1-0	1									
6		1-1-1	2			Very loose to medium dense brown clayey SAND [SC]						
7		1-2-2	4									
8												
9		3-5-6	11			Medium dense brown poorly graded SAND, with clay [SP-SC]						
10												
11												
12						Loose brown clayey SAND [SC]						
13												
14		2-3-5	8									
15						Boring Terminated at 15'						





# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 775047

PAGE: B-157

PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **C-22a** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.

GS ELEVATION(ft): 93.73

DATE STARTED: 5/5/08

LOCATION: SEE BORING LOCATION PLAN

WATER TABLE (ft): NE

DATE FINISHED: 5/5/08

REMARKS:

DATE OF READING: NA

DRILLED BY: R. WOODARD

EST. WSWT (ft): 1

TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT / DAY)	ORG. CONT. (%)
									LL	PI		
0												
1												
2		1-2-2	4			Very loose brown poorly graded SAND, with clay [SP-SC]						
3		1-1-2	3			Very loose to loose brown clayey SAND [SC]						
4												
5		2-2-3	5									
6		2-2-2	4			Loose to medium dense tan clayey SAND [SC]						
7												
8		3-4-6	10			Stiff green and orange fat CLAY, with sand and limestone [CH]						
9		6-7-7	14									
10						LIMESTONE						
11												
12												
13												
14		50/1"	50/1"									
15						Boring Terminated at 15'						

[illegible]





# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1000100.0000

REPORT NO.: 863725

PAGE: B-159

PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **C-23** SHEET: **1 of 2**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

GS ELEVATION(ft): 136.48 DATE STARTED: 6/17/09  
WATER TABLE (ft): NE DATE FINISHED: 6/17/09  
DATE OF READING: NA DRILLED BY: R. WOODARD  
EST. WSWT (ft): TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT (%)
									LL	PI		
0												
1						Loose to medium dense brown clayey SAND [SC]						
2		1-2-3	5				41	21				
3						Medium dense gray and orange...						
4		4-5-8	13									
5		4-4-6	10				46	33				
6						Stiff tan, gray and orange sandy CLAY [CL/CH]						
7		6-7-6	13									
8		6-7-5	12				53	45	49	25		
9						Stiff...						
10		5-6-7	13				71	38	78	46		
11												
12												
13												
14						Firm...						
15		1-3-4	7				93	57	113	71		
16												
17												
18												
19						Loose light tan to white clayey SAND [SC]						
20		1-2-2	4				37	29				
21												
22												
23												
24						Medium dense ...						
25		3-5-7	12				15	16				
26												
27												
28												
29												
30		4-5-6	11					21				

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]



DEPTH (FT.)	SAMP PLE	BLOWS PER 6" INCREMENT	N VALUE	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1	X				[Hatched]	Very loose brown clayey SAND [SC]						
2	X	0-1-2	3		[Hatched]	Soft green-gray and red-brown CLAY, with trace						
3	X	2-3-4	7		[Hatched]	of sand and limestone fragments in upper 18						
4	X				[Hatched]	inches [CH]						
5	X	4-4-6	10		[Hatched]	Stiff...						
6	X				[Hatched]							
7	X	2-4-3	7		[Hatched]	Medium...						
8	X	2-2-3	5		[Hatched]	Medium...						
9	X				[Hatched]							
10	X	2-1-2	3		[Hatched]	Soft, with trace of limestone fragments...						
11					[Hatched]							
12					[Hatched]							
13					[Hatched]							
14	X	1-2-2	4		[Hatched]	Soft...						
15					[Hatched]							
16					[Hatched]							
17					[Hatched]							
18					[Hatched]							
19	X	2-3-4	7		[Hatched]	Medium...						
20					[Hatched]							
21					[Hatched]							
22					[Hatched]							
23					[Hatched]							
24	X	2-3-5	8		[Hatched]	Medium greenish-gray sandy to very sandy						
25					[Hatched]	CLAY [CL]						
26					[Hatched]							
27					[Hatched]							
28					[Hatched]							
29	X	3-4-4	8		[Hatched]	Medium...						
30					[Hatched]							
31					[Hatched]							
32					[Hatched]							
33					[Hatched]							
34	X	3-3-5	8		[Hatched]	Medium...						
35					[Hatched]							
36					[Hatched]							
37					[Hatched]							
38					[Hatched]							
39	X	3-2-2	4		[Hatched]	Soft...						
40					[Hatched]							
41					[Hatched]							
42					[Hatched]							
43					[Hatched]							
44	X	0-0-0	0		[Hatched]	Very soft...						
45					[Hatched]							
46					[Hatched]							
47					[Hatched]							
48					[Brick]	Tan LIMESTONE						
49	X	12-32-15	47		[Brick]							
50					[Brick]	(100% Loss of drilling fluid circulation at 50'						
51					[Brick]	depth)						
52					[Brick]	(Moderately to well-cemented limestone matrix						
53					[Brick]	encountered from 48' to 100' depth)						
54	X	30-45-50/3"	50/3"		[Brick]							
55					[Brick]							





# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

PAGE: B-167

PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **GB-1** SHEET: **2 of 2**

SECTION: 15,16 TOWNSHIP: 8S RANGE: 18E

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
55												
56												
57												
58												
59	X	13-23-19	42									
60												
61												
62												
63												
64	X	19-17-18	35									
65												
66												
67												
68												
69	X	14-15-16	31									
70												
71												
72												
73												
74	X	9-10-12	22									
75												
76												
77												
78												
79	X	20-27-26	53									
80												
81												
82												
83												
84	X	27-34-43	77									
85												
86												
87												
88												
89	X	18-16-11	27									
90												
91												
92												
93												
94	X	11-11-8	19									
95												
96												
97												
98												
99	X	5-10-6	16									
100						Boring terminated at 100'						





# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

PAGE: B-169

PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **GB-2**SHEET: **2 of 2**

SECTION: 15,16

TOWNSHIP: 8S

RANGE: 18E

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
55												
56												
57												
58												
59	X	10-14-16	30									
60												
61												
62												
63												
64	X	1-13-26	39									
65												
66												
67												
68												
69	X	15-15-14	29									
70												
71												
72												
73												
74	X	13-14-14	28									
75												
76												
77												
78												
79	X	18-18-24	42									
80												
81												
82												
83												
84	X	20-28-40	68									
85												
86												
87												
88												
89	X	22-13-13	26									
90												
91												
92												
93												
94	X	16-16-12	28									
95												
96												
97												
98												
99	X	13-19-17	36									
100						Boring terminated at 100'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

PAGE: B-170

PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **GB-3** SHEET: **1 of 1**

SECTION: 15,16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

GS ELEVATION(ft): +121(EST) DATE STARTED: 1/10/06

WATER TABLE (ft): NE DATE FINISHED: 1/11/06

DATE OF READING: NA DRILLED BY: R. WOODARD

EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1						Very loose gray silty SAND [SM]						
2	X	0-0-1	1			Loose brown and orange very clayey SAND [SC]						
3	X	1-3-4	7			Medium gray and orange sandy CLAY [CL]						
4	X											
5	X	3-4-4	8			Stiff...						
6	X	7-6-8	14			Very stiff green, orange and gray CLAY [CH]						
7	X											
8	X	9-9-8	17			Very stiff...						
9	X	8-8-8	16									
10												
11						Medium tan clayey SAND [SC]						
12												
13												
14	X	2-4-7	11									
15												
16												
17												
18												
19	X	4-5-7	12			Medium...						
20												
21												
22												
23												
24	X	3-4-5	9			Loose...						
25												
26												
27												
28												
29	X	7-5-4	9			Loose...						
30												
31												
32												
33												
34	X	6-50 1/2"	50 1/2"			Tan LIMESTONE						
35						(100% Loss of drilling fluid circulation at 35', 41.5' and 50' depths)						
36												
37												
38												
39	X	5-3-9	12									
40												
41						(Porous to very porous limestone matrix from 34' to 53' depth)						
42												
43												
44	X	11-43-8	51									
45												
46												
47												
48												
49	X	16-29-3	32									
50												
51												
52												
53						Boring terminated at 53' due to very hard limestone, 2 hours to drill 2 feet						

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1	X					Very loose brown and orange clayey SAND [SC]						
2	X	1-2-2	4									
3	X											
4	X	2-3-4	7			Loose...						
5	X											
6	X	3-4-5	9			Loose gray; orange and tan...						
7	X											
8	X	5-5-5	10			Loose...						
9	X											
10	X	6-7-7	14			Stiff light green and orange CLAY, with trace of sand [CH]						
11	X											
12	X	8-9-9	18			Very stiff...						
13												
14	X											
15	X	1-2-3	5			Medium...						
16												
17												
18												
19	X											
20	X	1-2-3	5			Medium...						
21												
22						Loose light tan to white clayey SAND [SC]						
23												
24	X											
25	X	4-5-6	11			Medium...						
26												
27												
28												
29	X											
30	X	3-4-5	9			Loose...						
31												
32												
33												
34	X											
35	X	1-2-2	4			Soft light brown sandy CLAY [CL]						
36												
37												
38						Very loose tan and orange very clayey SAND [SC], with trace of limestone fragments						
39	X											
40	X	0-0-0	0									
41												
42						(100 Loss of drilling fluid circulation at 36 5' depth)						
43												
44	X											
45	X	0-0-8	8			Tan LIMESTONE						
46												
47												
48												
49	X											
50	X	12-28-36	64									
51												
52												
53												
54	X											
55	X	22-38-14	42			(100 Loss of drilling fluid circulation at 45' and 53' depths)						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **GB-4**SHEET: **2 of 2**

SECTION: 15,16

TOWNSHIP: 8S

RANGE: 18E

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
55												
56												
57												
58												
59	X	12-19-12	31									
60												
61												
62												
63												
64	X	14-16-19	35									
65												
66												
67												
68						(Moderately to well-cemented limestone matrix encountered from 44' to 100' depth)						
69	X	12-18-28	46									
70												
71												
72												
73												
74	X	21-22-29	51									
75												
76												
77												
78												
79	X	31-45-30	95									
80												
81												
82												
83												
84	X	20-15-19	34									
85												
86												
87												
88												
89	X	22-21-31	52									
90												
91												
92												
93												
94	X	14-17-17	34									
95												
96												
97												
98												
99	X	12-14-16	30									
100						Boring Terminated at 100'						

[illegible]



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **GB-5** SHEET: **2 of 2**

SECTION: 15,16 TOWNSHIP: 8S RANGE: 18E

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
55												
56												
57												
58												
59	X	11-16-10	26									
60												
61												
62												
63												
64	X	10-14-14	28									
65												
66												
67												
68												
69	X	21-23-10	33									
70												
71												
72												
73												
74	X	15-14-16	30									
75												
76												
77												
78												
79	X	11-22-19	41									
80												
81												
82												
83												
84	X	5-5-11	16									
85												
86												
87												
88												
89	X	6-9-18	27									
90												
91												
92												
93												
94	X	14-15-11	26									
95												
96												
97												
98												
99	X	18-19-21	40									
100						Boring Terminated at 100'						







# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **GB-6**SHEET: **2 of 2**

SECTION: 15,16

TOWNSHIP: 8S

RANGE: 18E

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
55												
56												
57												
58												
59	X	16-12-20	32									
60												
61												
62												
63												
64	X	20-21-29	50									
65												
66												
67												
68												
69	X	9-27-27	54									
70												
71												
72												
73												
74	X	23-45-33	78									
75												
76												
77												
78												
79	X	30-40-25	65									
80												
81												
82												
83												
84	X	22-20-32	52									
85												
86												
87												
88												
89	X	12-7-6	13									
90												
91												
92												
93												
94	X	5-10-18	28									
95												
96												
97												
98												
99	X	8-10-9	19									
100						Boring terminated at 100'						

[illegible]



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

PAGE: B-178

PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA


































BORING NO: **GB-7**SHEET: **2 of 2**

SECTION: 15,16

TOWNSHIP: 8S

RANGE: 18E

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
55												
56												
57												
58												
59	X	16-20-15	35									
60												
61												
62												
63												
64	X	17-18-16	34									
65												
66												
67												
68												
69	X	20-32-21	53									
70												
71												
72												
73				▼								
74	X	12-11-9	20									
75												
76												
77												
78												
79	X	8-10-10	20									
80												
81												
82												
83												
84	X	11-9-10	19									
85												
86												
87												
88												
89	X	13-14-12	26									
90												
91												
92												
93												
94	X	16-21-10	31									
95												
96												
97												
98												
99	X	15-24-14	38									
100						Boring terminated at 100'						

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1	X					Loose brown, gray and orange clayey SAND [SC]						
2	X	2-2-3	5									
3	X					Medium green, gray and orange CLAY [CH]						
4	X	2-3-3	6									
5	X	3-4-5	9			Stiff...						
6	X	6-5-6	11			Stiff...						
7	X	7-7-5	12									
8	X					Medium tan clayey SAND [SC]						
9	X	5-5-6	11									
10												
11												
12												
13												
14	X	2-3-4	7			Loose...						
15	X											
16												
17												
18												
19	X	3-4-6	10			Loose...						
20	X											
21												
22												
23												
24	X	4-6-7	13			Medium, with trace of limestone fragments...						
25	X											
26						Tan LIMESTONE						
27												
28												
29	X	21-29-44	73									
30	X											
31												
32												
33												
34	X	10-25-27	52			(100% Loss of drilling fluid circulation at 27' depth)						
35	X											
36												
37												
38												
39	X	11-8-27	35			(Possible soil-filled solution cavity from 27' to 28.5' and 49' to 50' depths)						
40	X											
41												
42												
43												
44	X	18-21-20	41									
45	X											
46												
47												
48												
49	X											
50	X											
51												
52												
53												
54	X	28-29-34	63									
55	X											



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **GB-8**SHEET: **2 of 2**

SECTION: 15,16

TOWNSHIP: 8S

RANGE: 18E

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
55												
56												
57												
58												
59	X	33-23-27	50			(Moderately to well-cemented limestone matrix encountered from 26' to 100' depth)						
60												
61												
62												
63												
64	X	18-21-20	41									
65												
66												
67												
68												
69	X	8-9-2	11									
70												
71												
72												
73												
74	X	6-7-7	14									
75												
76												
77												
78												
79	X	10-9-8	17									
80												
81												
82												
83												
84	X	14-12-15	27									
85												
86												
87												
88												
89	X	12-20-12	32									
90												
91												
92												
93												
94	X	15-17-20	37									
95												
96												
97												
98												
99	X	17-25-21	46									
100						Boring terminated at 100'						

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1	X	1-1-2	3		[Diagonal Lines]	Soft light brown and red-brown CLAY [CH]						
2	X	3-4-5	9		[Diagonal Lines]	Stiff...						
3	X	4-4-5	9		[Diagonal Lines]	Stiff gray...						
4	X				[Diagonal Lines]							
5	X	3-3-2	5		[Diagonal Lines]	Medium green-gray and red-brown...						
6	X				[Diagonal Lines]							
7	X	2-2-2	4		[Diagonal Lines]	Soft...						
8	X	1-2-2	4		[Diagonal Lines]	Soft...						
9	X				[Diagonal Lines]							
10	X	2-2-2	4		[Diagonal Lines]	Soft...						
11					[Diagonal Lines]							
12					[Diagonal Lines]							
13					[Diagonal Lines]							
14	X	2-2-2	4		[Diagonal Lines]	Soft...						
15					[Diagonal Lines]							
16					[Diagonal Lines]							
17					[Diagonal Lines]							
18					[Diagonal Lines]							
19	X	2-2-2	4		[Diagonal Lines]	Soft...						
20					[Diagonal Lines]							
21					[Diagonal Lines]							
22					[Diagonal Lines]							
23					[Diagonal Lines]							
24	X	4-4-3	7		[Dashed Pattern]	Loose green-gray clayey SAND [SC]						
25					[Dashed Pattern]							
26					[Dashed Pattern]							
27					[Dashed Pattern]							
28					[Dashed Pattern]							
29	X	2-5-4	9		[Dotted Pattern]	Loose green-gray slightly clayey SAND [SM]						
30					[Dotted Pattern]							
31					[Dotted Pattern]							
32					[Dotted Pattern]							
33					[Dotted Pattern]							
34	X	32-50/½"	50/½"		[Brick Pattern]	Tan LIMESTONE						
35					[Brick Pattern]							
36					[Brick Pattern]	(100% Loss of drilling fluid circulation at 36' depth)						
37					[Brick Pattern]							
38					[Brick Pattern]							
39	X	14-15-18	33		[Brick Pattern]							
40					[Brick Pattern]							
41					[Brick Pattern]							
42					[Brick Pattern]							
43					[Brick Pattern]							
44	X	23-18-21	39		[Brick Pattern]	(Moderately to well-cemented limestone matrix encountered from 34' to 100' depth)						
45					[Brick Pattern]							
46					[Brick Pattern]							
47					[Brick Pattern]							
48					[Brick Pattern]							
49	X	14-15-7	22		[Brick Pattern]							
50					[Brick Pattern]							
51					[Brick Pattern]							
52					[Brick Pattern]							
53					[Brick Pattern]							
54	X	5-11-13	24		[Brick Pattern]							
55					[Brick Pattern]							



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PROJECT NO.: 0795.1400110.0000

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **GB-9**SHEET: **2 of 2**

SECTION: 15,16

TOWNSHIP: 8S

RANGE: 18E

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
55												
56												
57												
58												
59	X	15-21-23	44									
60												
61												
62												
63												
64	X	20-23-22	45									
65												
66												
67												
68												
69	X	30-29-34	63									
70												
71												
72												
73												
74	X	17-26-22	48									
75												
76												
77												
78												
79	X	12-14-21	35									
80												
81												
82												
83												
84	X	7-5-4	9									
85												
86												
87												
88												
89	X	5-13-13	26									
90												
91												
92												
93												
94	X	7-12-7	19									
95												
96												
97												
98												
99	X	10-16-13	29									
100						Boring terminated at 100'						



DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1	X					Very loose brown and orange clayey SAND [SC]						
2	X	1-1-3	4									
3	X											
4	X	3-3-4	7			Loose...						
5	X	5-6-6	12			Medium...						
6	X	7-6-7	13									
7	X					Stiff orange and gray sandy CLAY [CL]						
8	X	8-9-7	16			Very stiff green and orange CLAY [CH]						
9	X	8-8-9	17									
10												
11												
12												
13												
14	X	2-2-3	5			Medium...						
15												
16												
17												
18						Very loose tan and brown clayey SAND [SC]						
19	X	1-1-1	2									
20												
21												
22						Loose tan clayey SAND [SC]						
23												
24	X	3-3-4	7									
25												
26												
27												
28												
29	X	3-4-5	9									
30												
31												
32												
33												
34	X	4-7-8	15			Stiff gray and orange CLAY [CH], with limestone fragments						
35												
36												
37						Tan LIMESTONE						
38												
39	X	2-1-1	2			(Porous to very porous limestone matrix from 37' to 49' depth)						
40												
41												
42												
43												
44	X	4-7-3	10									
45												
46												
47												
48												
49	X	0-11-14	25									
50												
51												
52						(100% Loss of drilling fluid circulation at 36.5' and 51.5' depths)						
53												
54	X	11-13-14	27									
55												



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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **GB-10** SHEET: **2 of 2**

SECTION: 15,16 TOWNSHIP: 8S RANGE: 18E

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
55												
56												
57												
58												
59	X	12-27-18	45									
60												
61												
62												
63												
64	X	9-12-21	33									
65												
66						(Moderately to well-cemented limestone matrix encountered from 50' to 100' depth)						
67												
68												
69	X	12-18-24	42									
70												
71												
72												
73												
74	X	9-11-15	26									
75												
76												
77												
78												
79	X	9-7-18	25									
80												
81												
82												
83												
84	X	10-15-17	32									
85												
86												
87												
88												
89	X	12-8-11	19									
90												
91												
92												
93												
94	X	7-8-11	19									
95												
96												
97												
98												
99	X	8-9-9	17									
100						Boring Terminated at 100'						

[illegible]



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **GB-11** SHEET: **2 of 2**

SECTION: 15,16 TOWNSHIP: 8S RANGE: 18E

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
55												
56												
57												
58												
59	X	22-25-43	68									
60												
61												
62												
63												
64	X	24-40-48	88									
65												
66												
67												
68												
69	X	33-50-55	105									
70												
71												
72												
73												
74	X	30-38-42	80									
75												
76												
77												
78												
79	X	19-33-19	52	▼								
80												
81												
82												
83												
84	X	12-20-18	38									
85												
86												
87												
88												
89	X	19-11-9	20									
90												
91												
92												
93												
94	X	10-12-10	22									
95												
96												
97												
98												
99	X	12-6-13	19									
100						Boring terminated at 100'						

[illegible]



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **GB-12** SHEET: **2 of 2**

SECTION: 15,16 TOWNSHIP: 8S RANGE: 18E

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
55												
56												
57												
58												
59	X	12-13-20	33									
60												
61												
62												
63												
64	X	9-14-12	26									
65												
66												
67												
68												
69	X	13-18-11	29									
70												
71												
72												
73												
74	X	2-1-0	1			(Possible soil-filled solution cavity from 72' to 75' depth)						
75												
76												
77												
78												
79	X	4-15-16	31									
80												
81												
82												
83												
84	X	13-16-16	32									
85												
86												
87												
88												
89	X	8-11-10	21									
90												
91												
92												
93												
94	X	11-15-10	25									
95												
96												
97												
98												
99	X	9-7-9	16									
100						Boring Terminated at 100'						



# UNIVERSAL ENGINEERING SCIENCES

## BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **GB-13** SHEET: **1 of 1**

SECTION: 15,16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

GS ELEVATION(ft): +83(EST) DATE STARTED: 1/15/06  
WATER TABLE (ft): NE DATE FINISHED: 1/15/06  
DATE OF READING: NA DRILLED BY: G. DAVIS  
EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1	X					Loose brown slightly clayey SAND [SP-SM]						
2	X	2-3-3	6									
3	X	4-3-2	5			Loose...						
4	X											
5	X	2-1-1	2			Very loose...						
6	X											
7	X	1-1-1	2									
8	X	1-1-2	3			Very loose tan clayey SAND [SC], with limestone fragments						
9	X											
10	X	2-3-3	6			Loose...						
11												
12												
13												
14	X	2-19-24	43			Medium gray and orange CLAY [CH], with limestone fragments						
15						Tan LIMESTONE						
16												
17												
18												
19	X	14-28-30	58									
20												
21												
22												
23												
24	X	15-17-18	35			(Moderately to well-cemented limestone matrix encountered from 15' to 50' depth)						
25												
26												
27												
28												
29	X	15-15-16	31									
30												
31												
32												
33												
34	X	13-15-17	32									
35												
36												
37												
38												
39	X	11-17-18	35									
40												
41												
42						(Possible soil-filled solution cavity from 41.5' to 44' depth, 100% loss of drilling fluid circulation)						
43												
44	X	0-3-14	17									
45												
46												
47												
48												
49	X	7-14-15	19									
50						Boring terminated at 50'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **GB-14** SHEET: **1 of 1**

SECTION: 15,16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.

GS ELEVATION(ft): +86(EST) DATE STARTED: 1/12/06

LOCATION: SEE BORING LOCATION PLAN

WATER TABLE (ft): NE DATE FINISHED: 1/12/06

REMARKS:

DATE OF READING: NA DRILLED BY: J. STILLSON

EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1	X					Loose brown SAND [SP]						
2	X	2-3-3	6			Loose brown clayey SAND [SC], with roots						
3	X											
4	X	2-3-4	7									
5	X	3-4-4	8			Loose...						
6	X	3-4-5	9			Loose...						
7	X											
8	X	3-4-4	8			Loose tan and orange...						
9	X											
10	X	3-4-4	8			Loose...						
11												
12												
13												
14	X	4-4-4	8			Loose orange and gray slightly clayey SAND [SM], with trace of limestone fragments						
15												
16												
17												
18												
19	X	3-4-5	9			Loose...						
20												
21												
22												
23												
24	X	5-6-7	13			Tan LIMESTONE						
25												
26												
27						(Rotary washed from 25' to 30')						
28												
29												
30						Boring terminated at 30'						





# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **GB-15** SHEET: **1 of 1**

SECTION: 15,16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN

GS ELEVATION(ft): +87(EST) DATE STARTED: 1/12/06

WATER TABLE (ft): 48 DATE FINISHED: 1/12/06

DATE OF READING: 1/12/06 DRILLED BY: J. STILLSON

EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

REMARKS:

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1	X					Very loose dark brown SAND [SP]						
2	X	1-2-2	4			Very loose orange clayey SAND [SC]						
3	X											
4	X	2-2-2	4			Very loose...						
5	X											
6	X	2-2-2	4			Very loose...						
7	X											
8	X	2-2-2	4			Very loose...						
9	X											
10	X	2-3-6	9			Loose orange and gray...						
11	X											
12	X	4-6-9	15			Stiff orange and gray sandy CLAY [CL]						
13	X											
14	X											
15	X	4-5-5	10			Loose gray and orange slightly clayey SAND [SM]						
16	X											
17	X											
18	X											
19	X	3-4-5	9			Loose...						
20	X											
21	X											
22	X											
23	X											
24	X	5-7-9	16			Tan LIMESTONE						
25	X											
26	X											
27	X											
28	X											
29	X	7-8-8	16									
30	X											
31	X											
32	X											
33	X											
34	X	30-20-23	43			(Moderately to well-cemented limestone matrix encountered from 32' to 50' depth)						
35	X											
36	X											
37	X											
38	X											
39	X	21-27-33	60									
40	X											
41	X											
42	X											
43	X											
44	X	32-36-46	82									
45	X											
46	X											
47	X											
48	X											
49	X	41-47-50/5"	50/5"									
50	X					Boring terminated at 50'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **GB-16** SHEET: **1 of 1**

SECTION: 15,16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.

GS ELEVATION(ft): +89(EST) DATE STARTED: 1/19/06

LOCATION: SEE BORING LOCATION PLAN

WATER TABLE (ft): NE DATE FINISHED: 1/19/06

REMARKS:

DATE OF READING: NA DRILLED BY: G. DAVIS

EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1	X					Very loose brown clayey SAND [SC]						
2	X	1-1-1	2									
3	X					Very loose...						
4	X	1-0-1	1									
5	X	0-1-0	1			Very loose...						
6	X											
7	X	1-1-3	4			Very loose gray and orange...						
8	X	4-5-5	10			Stiff green and orange CLAY [CH]						
9	X											
10	X	7-7-8	15			Stiff...						
11												
12												
13												
14	X					Medium green, gray and orange sandy CLAY [CL]						
15	X	3-3-4	7									
16												
17												
18						Loose green and orange clayey SAND [SC]						
19	X											
20	X	2-2-3	5									
21												
22												
23												
24	X					Loose brown and orange...						
25	X	2-3-4	7									
26												
27												
28												
29	X					Loose gray and orange...						
30	X	3-4-6	10									
31												
32												
33												
34	X					Tan LIMESTONE						
35	X	2-1-0	1			(100% Loss of drilling fluid circulation at 33') (Possible solution cavity from 34.5' to 36' depth)						
36												
37												
38												
39	X											
40	X	1-4-6	10									
41												
42						Soft gray and orange sandy CLAY [CL], with limestone fragments						
43												
44	X											
45	X	1-2-2	4									
46												
47						(Possible soil-filled solution channel or cavity within limestone matrix from 42' to 50' depth)						
48												
49	X					Soft...						
50		1-2-2	4			Boring terminated at 50'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **GB-17** SHEET: **1 of 1**

SECTION: 15,16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.

GS ELEVATION(ft): +88(EST) DATE STARTED: 1/12/06

LOCATION: SEE BORING LOCATION PLAN

WATER TABLE (ft): NE DATE FINISHED: 1/12/06

REMARKS:

DATE OF READING: NA DRILLED BY: J. STILLSON

EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1	X					Very loose brown SAND [SP]						
2	X	1-1-1	2			Loose brown clayey SAND [SC]						
3	X	2-3-4	7									
4	X					Loose...						
5	X	3-4-5	9									
6	X	3-4-5	9			Loose brown slightly clayey SAND [SM]						
7	X					Loose...						
8	X	3-4-4	8									
9	X	3-4-5	9			Loose...						
10												
11												
12												
13												
14	X	3-5-6	11			Medium brown clayey SAND [SC]						
15												
16												
17												
18												
19	X	3-4-5	9			Loose...						
20												
21												
22												
23												
24	X	5-6-6	12			Medium...						
25												
26												
27												
28						Stiff gray and orange sandy CLAY [CL]						
29	X	5-6-6	12									
30												
31												
32												
33												
34	X	3-4-5	9			Stiff green and orange...						
35												
36												
37												
38						Loose orange and gray clayey SAND [SC]						
39	X	3-4-5	9									
40												
41												
42												
43						Medium gray and orange slightly clayey SAND [SM]						
44	X	5-6-7	13									
45												
46												
47												
48												
49	X	6-7-8	15			Medium gray...						
50						Boring terminated at 50'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **GB-18** SHEET: **1 of 1**

SECTION: 15,16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

GS ELEVATION(ft): +86(EST) DATE STARTED: 1/17/06  
WATER TABLE (ft): NE DATE FINISHED: 1/17/06  
DATE OF READING: NA DRILLED BY: G. DAVIS  
EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT / DAY)	ORG. CONT. (%)
									LL	PI		
0												
1	X					Very loose brown SAND [SP]						
2	X	1-1-1	2			Very loose brown slightly clayey SAND [SM]						
3	X	1-0-1	1									
4	X	1-0-1	1			Very loose brown clayey SAND [SC]						
5	X	0-1-1	2									
6	X	1-2-2	4			Very loose...						
7	X	3-5-7	12			Medium...						
8												
9												
10												
11												
12												
13												
14	X	2-3-5	8			Loose gray and orange...						
15												
16												
17												
18												
19	X	2-3-3	6			Loose...						
20												
21												
22												
23												
24	X	2-2-2	4									
25												
26						Tan LIMESTONE						
27												
28												
29	X	0-0-1	1			(Very weathered limestone matrix, mostly clay and sand from 25' to 33' depth)						
30												
31												
32												
33						(100% Loss of drilling fluid circulation at 25' depth)						
34	X	11-18-24	42									
35												
36												
37												
38												
39	X	18-21-25	46									
40												
41												
42												
43												
44	X	9-13-17	30									
45												
46												
47												
48												
49	X	3-4-4	8									
50						Boring terminated at 50'						





# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **GB-19** SHEET: **2 of 2**

SECTION: 15,16 TOWNSHIP: 8S RANGE: 18E

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT / DAY)	ORG. CONT. (%)
									LL	PI		
						Boring terminated at 55'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **GB-20** SHEET: **1 of 1**

SECTION: 15,16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

GS ELEVATION(ft): +91(EST) DATE STARTED: 1/20/06  
WATER TABLE (ft): NE DATE FINISHED: 1/20/06  
DATE OF READING: NA DRILLED BY: G. DAVIS  
EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0						Very loose brown-orange clayey SAND [SC]						
1	X					Very loose...						
2	X	1-1-0	1			Very loose...						
3	X	1-0-0	0			Very loose...						
4	X					Very loose...						
5	X	1-1-1	2			Very loose...						
6	X	1-1-2	3			Very loose...						
7	X					Loose...						
8	X	2-3-3	6			Loose...						
9	X	5-7-8	15			Medium...						
10												
11												
12												
13						Medium green, gray and orange CLAY, with sand lenses[CH]						
14	X	3-3-4	7									
15												
16						Medium gray and orange sandy CLAY [CL], with trace of limestone fragments						
17												
18												
19	X	1-2-3	5			Medium...						
20												
21												
22												
23						Loose light gray and orange clayey SAND [SC]						
24	X	3-3-5	8									
25												
26												
27												
28												
29	X	4-5-7	12			Medium...						
30												
31												
32												
33												
34	X	4-6-7	13			Medium... (100% Loss of drilling fluid circulation at 35' depth)						
35												
36												
37						Tan LIMESTONE						
38												
39	X	4-6-5	11									
40												
41												
42												
43												
44	X	5-8-11	19									
45						(Rotary washed from 45' to 50' depth)						
46												
47												
48												
49												
50						Boring terminated at 50'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **GB-21** SHEET: **1 of 1**

SECTION: 15,16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN

GS ELEVATION(ft): +96(EST) DATE STARTED: 1/20/06

WATER TABLE (ft): NE DATE FINISHED: 1/20/06

DATE OF READING: NA DRILLED BY: G. DAVIS

EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1						Very loose brown-orange clayey SAND [SC]						
2	X	1-1-2	3									
3	X	1-1-1	2			Very loose...						
4	X	1-1-1	2			Very loose...						
5	X	2-2-7	9			Loose...						
6	X	7-9-6	15			Medium...						
7	X	6-9-9	18			Medium gray and orange...						
8												
9												
10												
11												
12						Medium gray and orange CLAY [CH]						
13												
14	X	3-4-4	8			Medium...						
15												
16												
17												
18												
19	X	2-3-3	6			Loose gray and orange clayey SAND [SC]						
20												
21												
22												
23												
24	X	3-4-4	8			Loose green and orange...						
25												
26												
27												
28												
29	X	3-3-3	6			Loose...						
30												
31												
32												
33												
34	X	2-2-3	5			Loose...						
35						(100% Loss of drilling fluid circulation at 35' depth)						
36												
37												
38												
39	X	4-7-13	20			Tan LIMESTONE						
40												
41						(Possible solution cavity from 41.5' to 43' depth)						
42												
43												
44	X	13-15-15	30									
45												
46												
47												
48												
49	X	15-23-26	49									
50						Boring terminated at 50'						





# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **GB-22** SHEET: **1 of 1**

SECTION: 15,16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

GS ELEVATION(ft): +87(EST) DATE STARTED: 1/21/06  
WATER TABLE (ft): NE DATE FINISHED: 1/21/06  
DATE OF READING: NA DRILLED BY: G. DAVIS  
EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1						Very loose brown clayey SAND [SC]						
2	X	2-1-1	2									
3	X	0-0-0	0			Very loose...						
4	X	0-0-0	0			Very loose...						
5	X	1-0-1	1			Very loose...						
6	X	1-1-1	2			Very loose...						
7	X	1-2-1	3			Very loose gray and orange...						
8	X											
9	X											
10	X											
11												
12												
13												
14	X	1-2-3	5			Loose...						
15	X											
16												
17												
18												
19	X	2-3-5	8			Loose...						
20	X											
21												
22												
23												
24	X	3-3-5	8			Loose tan...						
25	X											
26												
27												
28												
29	X	3-9-11	20			Medium gray and tan...						
30	X											
31												
32						Tan LIMESTONE						
33												
34	X	4-5-5	10									
35	X					(100% Loss of drilling fluid circulation at 35')						
36												
37												
38												
39	X	19-20-20	40									
40	X											
41												
42												
43												
44	X	22-27-22	49									
45	X											
46												
47												
48												
49	X	18-19-31	50									
50	X					Boring terminated at 50'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **P-1** SHEET: **1 of 1**

SECTION: 15,16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

GS ELEVATION(ft): +95 (MSL) DATE STARTED: 10/12/04  
WATER TABLE (ft): NE DATE FINISHED: 10/12/04  
DATE OF READING: NA DRILLED BY: M. BOATRIGHT  
EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1	X					Brown SAND [SP-SM]						
2	X	2-2-3	5			...loose						
3	X	1-2-2	4			...very loose						
4	X											
5	X	1-3-5	8									
6	X	6-2-3	5			Loose brown & orange CLAYEY SAND [SC]						
7	X					...very loose						
8	X	5-7-5	12									
9	X	9-10-12	22			Very stiff green & orange slightly SANDY CLAY [CH]						
10												
11												
12						Loose brown CLAYEY SAND [SC]						
13												
14	X	4-5-5	10									
15												
16						Loose tan & orange SAND [SP-SM]						
17												
18												
19	X	2-3-4	7									
20												
21												
22												
23												
24	X	3-5-5	10			...loose						
25												
26												
27												
28												
29	X	2-3-4	7			...loose						
30												
31												
32												
33												
34	X	7-10-11	21			Tan LIMESTONE						
35												
36												
37												
38												
39	X	23-36-16	52									
40						Boring terminated at 40'						



# UNIVERSAL ENGINEERING SCIENCES

## BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **P-2** SHEET: **1 of 1**

SECTION: 15,16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.

GS ELEVATION(ft): +89 (MSL) DATE STARTED: 10/13/04

LOCATION: SEE BORING LOCATION PLAN

WATER TABLE (ft): NE DATE FINISHED: 10/13/04

REMARKS:

DATE OF READING: NA DRILLED BY: M. BOATRIGHT

EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT / DAY)	ORG. CONT. (%)
									LL	PI		
0												
1	X					Very loose brown & orange SAND [SP]						
2	X	1-1-1	2									
3	X					...very loose						
4	X	1-2-2	4									
5	X	2-3-3	6			...loose clayey zone						
6	X											
7	X	4-3-3	6									
8	X	4-5-3	8			Loose brown very CLAYEY SAND [SC]						
9	X											
10	X	4-5-5	10			...loose						
11												
12						...brown, gray & orange						
13												
14	X											
15	X	3-6-7	13			...firm						
16												
17						...orange & gray						
18												
19	X											
20	X	4-4-6	10			...loose						
21												
22												
23												
24	X					Loose light brown, tan & orange SAND [SP-SM]						
25	X	2-3-3	6									
26												
27												
28												
29	X											
30	X	3-5-4	9			...loose light brown, gray & orange						
31												
32						...tan & orange						
33												
34	X											
35	X	6-10-5	15			...firm						
36												
37						Tan & orange CLAYEY SAND, w/limestone fragments [SC]						
38												
39	X											
40	X	2-3-3	6									
						Boring terminated at 40'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **P-3** SHEET: **1 of 1**

SECTION: 15,16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.

GS ELEVATION(ft): +86 (MSL) DATE STARTED: 10/12/04

LOCATION: SEE BORING LOCATION PLAN

WATER TABLE (ft): NE DATE FINISHED: 10/12/04

REMARKS:

DATE OF READING: NA DRILLED BY: M. BOATRIGHT

EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1	X					Very loose brown SAND [SP]						
2	X	1-2-1	3									
3	X					...brown & orange						
4	X	1-1-1	2			...very loose						
5	X	1-0-0	0			...very loose						
6	X					...very loose						
7	X	1-1-0	1			...very loose						
8	X	1-1-1	2			...very loose						
9	X					...very loose						
10	X	1-0-1	1			...very loose						
11												
12												
13						Firm brown & orange CLAYEY SAND [SC]						
14	X											
15	X	2-5-6	11									
16												
17												
18												
19	X					...loose gray, brown & orange						
20	X	2-3-4	7									
21												
22												
23												
24	X					...very firm, very clayey						
25	X	7-11-11	22			...gray & orange						
26												
27												
28												
29	X					...firm						
30	X	4-5-7	12									
31												
32												
33												
34	X					Loose gray, tan & orange SAND [SP-SM]						
35	X	3-4-6	10									
36						...tan & orange						
37												
38												
39	X					...loose						
40	X	3-5-5	10			Boring terminated at 40'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

PAGE: B-201

PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **P-4**SHEET: **1 of 1**

SECTION: 15,16 TOWNSHIP: 8S RANGE: 18E

GS ELEVATION(ft): +79 (MSL) DATE STARTED: 10/12/04

WATER TABLE (ft): NE DATE FINISHED: 10/13/04

DATE OF READING: NA DRILLED BY: R. WOODARD

EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1	X					Firm brown & orange SANDY CLAY [CH]						
2	X	2-3-4	7									
3	X	4-5-6	11			Brown CLAYEY to very CLAYEY SAND [SC]						
4	X	2-2-3	5			...loose						
5	X	4-3-3	6			...loose						
6	X	4-4-2	6			...loose						
7	X	3-5-6	11			...firm brown & orange						
8												
9												
10												
11						...orange & gray						
12												
13	X	7-10-12	22			...very firm						
14												
15												
16						...firm gray & white						
17												
18	X	3-8-5	13									
19												
20												
21												
22						Loose tan, orange & brown SAND [SP-SM]						
23												
24	X	2-3-3	6									
25												
26						...tan & orange, w/limestone fragments						
27												
28	X	5-3-2	5			...loose						
29												
30												
31												
32												
33	X	4-17-14	31			Light brown SANDY CLAY, w/limestone [CH]						
34						Tan LIMESTONE						
35												
36												
37												
38												
39	X	8-21-10	31									
40						Boring terminated at 40'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

PAGE: B-202

PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **P-5** SHEET: **1 of 1**

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E  
GS ELEVATION(ft): 98.32 DATE STARTED: 1/24/05  
WATER TABLE (ft): NE DATE FINISHED: 1/24/05  
DATE OF READING: NA DRILLED BY: R. WOODARD  
EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1												
2	X	1-0-0	0			Dark brown and orange poorly graded SAND, with silt [SP-SM]						
3	X	WOH	WOH			Very loose dark brown...						
4	X	WOH	WOH									
5	X	WOH	WOH									
6	X	WOH	WOH			Very loose...						
7	X											
8	X	1-1-1	2									
9	X	1-1-2	3			Very loose...						
10	X											
11												
12												
13												
14	X	2-2-3	5			Loose light brown...						
15	X											
16												
17						Light brown clayey SAND [SC]						
18												
19	X	3-5-6	11			Medium dense...						
20	X											
21												
22												
23												
24	X	4-4-5	9			Loose...						
25	X											
26												
27												
28												
29	X	3-4-5	9			Loose brown...						
30	X											
31												
32												
33												
34	X	2-3-4	7			Loose...						
35	X											
36												
37												
38												
39	X	2-3-3	6			Loose...						
40	X					Boring terminated at 40'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

PAGE: B-203

PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **P-6** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

GS ELEVATION(ft): 95.18 DATE STARTED: 1/24/05  
WATER TABLE (ft): NE DATE FINISHED: 1/24/05  
DATE OF READING: NA DRILLED BY: J. STILLSON  
EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1						Brown poorly graded SAND [SP]						
2	X	2-1-1	2			Very loose brown and orange clayey SAND [SC]						
3	X	1-1-2	3									
4	X	2-3-4	7			Loose...						
5	X	4-5-6	11			Medium dense light brown...						
6	X	3-3-4	7									
7	X	4-5-5	10			Medium dense...						
8	X											
9	X											
10	X											
11												
12												
13												
14	X	3-3-4	7			Loose light brown to yellow silty SAND [SM]						
15												
16												
17												
18												
19	X	1-2-2	4			Loose...						
20												
21												
22												
23												
24	X	1-2-3	5			Loose...						
25												
26												
27												
28												
29	X	2-3-5	8			Loose orange and gray clayey SAND [SC]						
30												
31												
32												
33						LIMESTONE						
34	X	18-18-21	39									
35												
36												
37												
38												
39	X	20-30-23	53									
40						Boring terminated at 40'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

PAGE: B-204

PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **P-7** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.

GS ELEVATION(ft): 93.13

DATE STARTED: 1/24/05

LOCATION: SEE BORING LOCATION PLAN

WATER TABLE (ft): NE

DATE FINISHED: 1/24/05

REMARKS:

DATE OF READING: NA

DRILLED BY: M. BOATRIGHT

EST. WSWT (ft): NA

TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1						Brown poorly graded SAND [SP]						
2	X	2-2-2	4									
3	X	2-1-2	3			Very loose...						
4	X											
5	X	2-3-3	6			Loose dark brown to orange clayey SAND [SC]						
6	X	3-3-4	7									
7	X											
8	X	4-5-6	11			Stiff brown and orange sandy fat CLAY [CH]						
9	X	3-2-3	5			Loose light green and brown clayey SAND [SC]						
10												
11												
12												
13												
14	X	3-4-5	9			Loose...						
15												
16						Tan and orange silty SAND [SM]						
17												
18												
19	X	3-4-3	7			Loose tan and orange...						
20												
21												
22												
23												
24	X	3-4-4	8			Loose...						
25												
26												
27						Tan, orange and green clayey SAND [SC]						
28												
29	X	3-3-4	7			Loose tan and orange...						
30												
31												
32												
33												
34	X	3-4-4	8			Loose...						
35												
36												
37												
38												
39	X	3-3-3	6			Loose...						
40						Boring terminated at 40'						





# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

PAGE: B-205

PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **P-8** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN

GS ELEVATION(ft): 98.07 DATE STARTED: 1/24/05

WATER TABLE (ft): NE DATE FINISHED: 1/24/05

DATE OF READING: NA DRILLED BY: R. WOODARD

EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1	X					Dark brown to orange poorly graded SAND, with silt [SP-SM]						
2	X	1-0-1	1									
3	X	WOH	WOH			Very loose dark brown...						
4	X											
5	X	WOH-1	1			Very loose...						
6	X											
7	X	1-WOH-1	1									
8	X	1-0-1	1			Very loose...						
9	X											
10	X	1-1-1	2									
11												
12												
13												
14	X	1-2-2	4			Very loose brown...						
15												
16												
17						Light brown clayey SAND [SC]						
18												
19	X	1-3-5	8			Loose...						
20												
21												
22												
23												
24	X	2-2-3	5			Loose...						
25												
26												
27						Light green and tan clayey SAND [SC]						
28												
29	X	2-3-4	7			Loose...						
30												
31						Brown, light green and orange sandy fat CLAY [CH]						
32												
33												
34	X	1-2-3	5			Firm...						
35												
36												
37												
38												
39	X	5-6-6	12			Stiff...						
40						Boring terminated at 40'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **P-9**SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.

GS ELEVATION(ft): 93.88

DATE STARTED: 1/24/05

LOCATION: SEE BORING LOCATION PLAN

WATER TABLE (ft): NE

DATE FINISHED: 1/24/05

REMARKS:

DATE OF READING: NA

DRILLED BY: J. STILLSON

EST. WSWT (ft): NA

TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1	X					Brown SAND, with silt [SP-SM]						
2	X	2-2-2	4			Very loose dark brown to orange...						
3	X											
4	X	2-3-2	5			Loose...						
5	X											
6	X	2-2-2	4									
7	X	2-5-6	11			Very loose brown and tan silty clayey SAND [SC-SM]						
8	X											
9	X	2-3-4	7									
10	X	2-4-3	7			Loose light brown and orange...						
11												
12												
13												
14	X											
15	X	5-6-6	12			Medium dense light brown to yellow...						
16												
17												
18												
19	X											
20	X	4-5-6	11			Medium dense...						
21												
22												
23												
24	X											
25	X	3-4-5	9			Loose...						
26												
27												
28												
29	X											
30	X	1-2-3	5			Loose gray and orange...						
31												
32												
33												
34	X					LIMESTONE						
35	X	20-25-27	52									
36												
37												
38												
39	X											
40	X	25-35-30	65									
						Boring terminated at 40'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

PAGE: B-207

PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **P-10** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

GS ELEVATION(ft): 90.80 DATE STARTED: 1/24/05  
WATER TABLE (ft): NE DATE FINISHED: 1/24/05  
DATE OF READING: NA DRILLED BY: M. BOATRIGHT  
EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1						Brown poorly graded SAND [SP]						
2	X	2-3-4	7									
3	X					Light brown...						
4	X	2-2-2	4			Very loose brown clayey SAND [SC]						
5	X	3-4-5	9			Loose gray and tan...						
6	X											
7	X	4-4-5	9									
8	X	6-6-7	13									
9	X					Stiff green and tan fat CLAY [CH]						
10	X	5-6-8	14			Medium dense light green and brown silty SAND [SM]						
11												
12												
13												
14	X	2-3-5	8			Loose tan and orange...						
15												
16						Light gray and orange clayey SAND [SC]						
17												
18												
19	X	3-4-4	8			Loose...	27				2	
20												
21												
22												
23												
24	X	2-2-2	4			Very loose light green and orange...						
25												
26												
27												
28												
29	X	2-2-3	5			Loose tan and orange...						
30												
31												
32												
33												
34	X	3-4-3	7			Loose...						
35												
36												
37												
38												
39	X	3-2-3	5			Loose tan, gray and orange...						
40						Boring terminated at 40'						



# UNIVERSAL ENGINEERING SCIENCES

## BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **P-11** SHEET: **1 of 1**

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E  
GS ELEVATION(ft): 97.36 DATE STARTED: 1/24/05  
WATER TABLE (ft): NE DATE FINISHED: 1/24/05  
DATE OF READING: NA DRILLED BY: R. WOODARD  
EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1						Dark brown poorly graded SAND, with silt [SP-SM]						
2	X	1-1-1	2			Very loose...						
3	X	2-2-3	5			Loose...						
4	X											
5	X	2-2-3	5									
6	X	4-3-4	7									
7	X											
8	X	5-6-5	11			Medium dense brown clayey SAND [SC]						
9	X	6-7-7	14			Stiff light green, gray and orange sandy fat CLAY [CH]						
10												
11												
12												
13												
14	X	2-4-4	8			Stiff...						
15												
16												
17						Light brown and orange clayey SAND [SC]						
18												
19	X	3-3-3	6			Loose green and orange...						
20												
21												
22												
23												
24	X	2-2-3	5			Loose...						
25												
26												
27						Tan clayey SAND [SC]						
28												
29	X	1-2-2	4			Very loose...						
30												
31												
32												
33												
34	X	1-1-2	3			Very loose tan...	15				8	
35												
36												
37												
38												
39	X	1-1-1	2			Very loose...						
40						Boring terminated at 40'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

BORING NO: **P-12** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

GS ELEVATION(ft): 92.73 DATE STARTED: 1/21/05

WATER TABLE (ft): NE DATE FINISHED: 1/21/05

DATE OF READING: NA DRILLED BY: J. STILLSON

EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1	X					Brown poorly graded SAND, with silt [SP-SM]						
2	X	2-1-1	2			Very loose dark brown to orange...						
3	X											
4	X	1-2-2	4									
5	X	2-3-4	7									
6	X					Loose brown and light green clayey SAND [SC]						
7	X	3-4-5	9									
8	X	3-3-3	6			Loose light brown and orange silty SAND [SM]						
9	X											
10	X	3-4-3	7			Loose...						
11												
12						Tan to white SAND [SP]						
13												
14	X	5-6-6	12			Medium dense...						
15												
16												
17												
18												
19	X	5-5-6	11			Orange and gray silty SAND [SM]						
20												
21												
22												
23						Gray and orange clayey SAND [SC]						
24	X	3-4-4	8			Loose...	23					
25												
26												
27												
28												
29	X	1-2-3	5			Loose gray...						
30												
31												
32												
33						LIMESTONE						
34	X	11-17-25	42									
35												
36												
37												
38												
39	X	20-25-19	44									
40						Boring terminated at 40'						



# UNIVERSAL ENGINEERING SCIENCES

## BORING LOG

PROJECT NO.: 0795.1400110.0000

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **P-13** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

GS ELEVATION(ft): 89.04 DATE STARTED: 1/21/05  
WATER TABLE (ft): NE DATE FINISHED: 1/24/05  
DATE OF READING: NA DRILLED BY: R. WOODARD  
EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1						Brown poorly graded SAND, with silt [SP-SM]						
2	X	1-1-1	2			Very loose dark brown and orange...						
3	X											
4	X	1-1-2	3									
5	X	1-2-1	3			Very loose dark brown to orange and tan clayey						
6	X					SAND [SC]						
7	X	3-3-3	6			Loose...						
8	X	3-3-2	5									
9	X	3-4-5	9									
10												
11												
12												
13												
14	X	4-5-6	11			Medium dense brown, gray and tan...						
15												
16												
17												
18												
19	X	2-3-4	7			Loose...						
20												
21												
22						LIMESTONE						
23												
24	X	32-18-30	48									
25												
26												
27												
28												
29	X	8-15-17	32									
30												
31												
32												
33												
34	X	22-30-25	55									
35												
36												
37												
38												
39	X	14-25-26	51									
40						Boring terminated at 40'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **P-14** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN

GS ELEVATION(ft): 94.66 DATE STARTED: 1/25/05  
WATER TABLE (ft): NE DATE FINISHED: 1/25/05  
DATE OF READING: NA DRILLED BY: R. WOODARD  
EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

REMARKS:

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT / DAY)	ORG. CONT. (%)
									LL	PI		
0												
1	X					Brown to orange poorly graded SAND, with silt [SP-SM]						
2	X	1-1-1	2									
3	X											
4	X	1-0-1	1									
5	X	1-0-0	0			Very loose...						
6	X											
7	X	1-0-1	1									
8	X	1-1-1	2									
9	X											
10	X	1-1-1	2			Very loose...						
11												
12						Brown clayey SAND [SC]						
13												
14	X	2-3-4	7			Loose...						
15												
16												
17												
18						Light green, gray and orange sandy fat CLAY [CH]						
19	X	3-5-6	11			Stiff...						
20												
21												
22												
23						Gray and orange clayey SAND [SC]						
24	X	4-5-6	11			Medium dense...						
25												
26												
27												
28												
29	X	3-4-5	9			Loose...						
30												
31												
32												
33												
34	X	3-4-5	9			Loose light green and orange...						
35												
36												
37												
38						Tan and orange poorly graded SAND, with clay [SP-SC]						
39	X	2-3-4	7			Loose...						
40						Boring terminated at 40'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **P-15** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

GS ELEVATION(ft): 90.57 DATE STARTED: 1/21/05  
WATER TABLE (ft): NE DATE FINISHED: 1/21/05  
DATE OF READING: NA DRILLED BY: J. STILLSON  
EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1						Brown to orange poorly graded SAND [SP]						
2	X	2-2-1	3			Very loose...						
3	X	1-2-1	3									
4	X	1-1-1	2			Very loose...						
5	X	1-1-1	2									
6	X	1-1-1	2									
7	X	1-1-1	2									
8	X	2-2-2	4			Very loose...						
9	X											
10	X											
11												
12						Gray and orange clayey SAND [SC]						
13												
14	X	5-7-7	14			Medium dense...						
15												
16												
17												
18												
19	X	3-5-7	12			Medium dense...						
20												
21												
22												
23												
24	X	4-5-7	12			Medium dense...						
25												
26												
27												
28												
29	X	3-4-5	9			Loose tan to white silty SAND [SM]						
30												
31												
32												
33												
34	X	4-5-6	11			Stiff orange and gray CLAY [CH], with sand and limestone fragments						
35												
36												
37												
38												
39	X	2-2-2	4			Soft...						
40						Boring terminated at 40'						





# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **P-16** SHEET: **1 of 1**

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E  
GS ELEVATION(ft): 88.25 DATE STARTED: 1/21/05  
WATER TABLE (ft): NE DATE FINISHED: 1/21/05  
DATE OF READING: NA DRILLED BY: R. WOODARD  
EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0						Brown poorly graded SAND, with silt [SP-SM]						
1	X					Very loose dark brown to orange...						
2	X	1-1-1	2									
3	X	1-1-2	3									
4	X	1-1-2	3			Very loose...						
5	X	2-1-2	3									
6	X	2-2-2	4									
7	X	3-4-4	8			Very loose light brown and tan...						
8												
9												
10												
11												
12												
13												
14	X	3-3-4	7									
15						Loose light brown and tan clayey SAND [SC]						
16												
17												
18												
19	X	3-3-4	7			Loose...	22				3	
20												
21												
22												
23												
24	X	3-4-6	10			Loose light green, orange and gray...						
25												
26												
27												
28												
29	X	4-7-23	30			LIMESTONE						
30												
31												
32												
33												
34	X	3-2-3	5									
35												
36												
37												
38												
39	X	6-11-12	23									
40						Boring terminated at 40'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **P-17** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

GS ELEVATION(ft): 93.50 DATE STARTED: 1/25/05  
WATER TABLE (ft): NE DATE FINISHED: 1/25/05  
DATE OF READING: NA DRILLED BY: R. WOODARD  
EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1						Brown to orange poorly graded SAND, with silt [SP-SM]						
2	X	1-1-1	2			Very loose...						
3	X											
4	X	WOH-1	1									
5	X	1-1-0	1			Very loose...						
6	X	1-1-1	2									
7	X	1-2-1	3									
8	X	1-1-1	2			Very loose...						
9	X											
10	X											
11												
12												
13												
14	X	4-4-3	7			Loose...						
15	X											
16												
17												
18												
19	X	4-5-5	10			Loose...						
20	X											
21												
22						Gray and orange clayey SAND [SC]						
23												
24	X	3-5-5	10			Loose...	34				4	
25	X											
26												
27												
28												
29	X	1-2-4	6			Firm gray and orange sandy fat CLAY [CH]						
30	X											
31												
32												
33												
34	X	2-4-6	10			Stiff...						
35	X											
36												
37												
38						Light green and tan clayey SAND [SC]						
39	X	3-4-6	10			Loose...						
40	X					Boring terminated at 40'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **P-18** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

GS ELEVATION(ft): 89.22 DATE STARTED: 1/21/05  
WATER TABLE (ft): NE DATE FINISHED: 1/21/05  
DATE OF READING: NA DRILLED BY: J. STILLSON  
EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1						Brown poorly graded SAND [SP]						
2	X	2-1-1	2			Very loose dark brown to orange...						
3	X	1-1-1	2									
4	X	1-1-1	2			Very loose...						
5	X	1-1-1	2									
6	X	1-1-1	2									
7	X	1-1-1	2									
8	X	1-1-1	2									
9	X	1-2-2	4			Very loose...						
10												
11												
12												
13												
14	X	2-2-2	4			Very loose gray and orange clayey SAND [SC]						
15												
16												
17												
18												
19	X	3-4-5	9			Loose gray...	35				2	
20												
21												
22												
23												
24	X	4-6-11	17			Medium dense...						
25												
26												
27												
28												
29	X	3-5-6	11			Medium dense gray and orange...						
30												
31												
32						Light green and orange silty SAND [SM]						
33												
34	X	7-8-9	17			Medium dense...						
35												
36						Very stiff gray and orange sandy fat CLAY [CH]						
37												
38												
39	X	4-7-10	17									
40						Boring terminated at 40'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

BORING NO: **P-19** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

GS ELEVATION(ft): 87.62 DATE STARTED: 1/21/05

WATER TABLE (ft): NE DATE FINISHED: 1/21/05

DATE OF READING: NA DRILLED BY: R. WOODARD

EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1	X					Brown poorly graded SAND [SP]						
2	X	1-1-2	3			Very loose...						
3	X											
4	X	1-2-1	3									
5	X	1-1-1	2			Very loose dark brown to orange silty SAND [SM]						
6	X											
7	X	1-1-1	2									
8	X	1-2-1	3									
9	X											
10	X	1-2-2	4			Loose...						
11												
12												
13												
14	X											
15	X	4-3-4	7			Loose...						
16												
17												
18						Light brown, orange and tan clayey SAND [SC]						
19	X											
20	X	4-7-6	13			Medium dense...						
21												
22												
23												
24	X											
25	X	4-5-7	12			Medium dense...						
26												
27												
28						Light brown to tan silty SAND [SM]						
29	X											
30	X	3-4-6	10			Loose light tan to white...						
31												
32												
33												
34	X											
35	X	3-4-3	7			Loose...						
36												
37												
38												
39	X											
40	X	2-2-3	5									
						Boring terminated at 40'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

BORING NO: **P-20** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

GS ELEVATION(ft): 91.91 DATE STARTED: 1/24/05

WATER TABLE (ft): NE DATE FINISHED: 1/24/05

DATE OF READING: NA DRILLED BY: M. BOATRIGHT

EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT / DAY)	ORG. CONT. (%)
									LL	PI		
0												
1												
2	X	2-2-1	3			Very loose brown to orange poorly graded SAND, with silt [SP-SM]						
3	X	1-0-1	1									
4	X	1-1-1	2			Very loose...						
5	X	1-1-1	2									
6	X	2-1-2	3			Very loose light brown...						
7	X	3-3-3	6			Loose brown and orange...						
8												
9												
10												
11												
12												
13												
14	X	4-4-3	7			Loose brown...						
15												
16												
17												
18												
19	X	5-6-7	13			Stiff gray and orange sandy fat CLAY [CH]						
20												
21												
22												
23												
24	X	4-4-6	10			Stiff gray, orange and light green...						
25												
26												
27												
28												
29	X	5-6-6	12			Stiff light green and orange...						
30												
31												
32												
33												
34	X	3-4-5	9			Stiff gray, tan and orange...						
35												
36												
37												
38												
39	X	3-5-6	11			Stiff brown, gray and orange...						
40						Boring terminated at 40'						



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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **P-21** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

GS ELEVATION(ft): 87.83 DATE STARTED: 1/21/05  
WATER TABLE (ft): NE DATE FINISHED: 1/21/05  
DATE OF READING: NA DRILLED BY: J. STILLSON  
EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1	X					Brown poorly graded SAND, with silt [SP-SM]						
2	X	1-2-2	4			Very loose...						
3	X											
4	X	1-1-2	3									
5	X	1-2-1	3			Very loose dark brown to orange...						
6	X											
7	X	1-2-1	3									
8	X	1-2-2	4									
9	X	1-2-3	5			Loose orange and gray clayey SAND [SC]						
10												
11												
12												
13												
14	X	5-6-6	12			Medium dense...						
15												
16												
17												
18												
19	X	8-8-8	16			Medium dense...						
20												
21												
22												
23						Medium dense gray and orange silty SAND [SM], with limestone fragments						
24	X	6-9-10	19									
25												
26												
27												
28												
29	X	6-10-10	20			Medium dense gray and brown clayey SAND [SC], with limestone fragments						
30												
31												
32												
33						LIMESTONE						
34	X	14-14-15	29									
35												
36												
37												
38												
39	X	20-19-16	35									
40						Boring terminated at 40'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **P-22** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

GS ELEVATION(ft): 86.92 DATE STARTED: 1/21/05  
WATER TABLE (ft): NE DATE FINISHED: 1/21/05  
DATE OF READING: NA DRILLED BY: R. WOODARD  
EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1						Brown and tan poorly graded SAND [SP]						
2	X	1-2-2	4									
3	X	3-2-1	3			Very loose dark brown to orange...						
4	X											
5	X	WOH	WOH									
6	X											
7	X	1-1-1	2									
8	X	1-1-1	2									
9	X	1-2-2	4									
10												
11						Very loose dark brown to orange clayey SAND [SC]						
12												
13												
14	X	3-3-4	7			Loose...	23				3	
15												
16												
17												
18												
19	X	3-6-7	13			Medium dense brown, gray and orange...						
20												
21												
22						Gray and orange sandy fat CLAY [CH]						
23												
24	X	2-4-6	10			Stiff...						
25												
26												
27						Gray and orange clayey SAND [SC]						
28												
29	X	5-9-9	18			Medium dense...						
30												
31												
32												
33												
34	X	3-6-8	14			Medium dense tan and orange...						
35												
36												
37												
38												
39	X	3-5-7	12									
40						Boring terminated at 40'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **P-23** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

GS ELEVATION(ft): 81.02 DATE STARTED: 1/19/05  
WATER TABLE (ft): NE DATE FINISHED: 1/19/05  
DATE OF READING: NA DRILLED BY: J. STILLSON  
EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1						Brown poorly graded SAND [SP]						
2	X	10-10-10	20			Medium dense dark brown to orange silty SAND [SM]						
3	X	8-9-7	16									
4	X	2-2-2	4			Very loose dark brown to orange clayey SAND [SC]						
5	X	2-3-5	8									
6	X	4-4-5	9			Loose gray and orange...						
7	X	4-5-6	11			Medium dense...						
8												
9												
10												
11												
12												
13												
14	X	4-5-7	12			Medium dense...						
15												
16												
17												
18												
19	X	5-6-7	13			Medium dense...						
20												
21												
22						Hard green and orange sandy fat CLAY [CH]						
23												
24	X	7-12-19	31									
25												
26												
27						Medium dense orange clayey SAND [SC]						
28												
29	X	4-7-8	15									
30												
31												
32						LIMESTONE						
33												
34	X	4-7-4	11									
35												
36												
37												
38												
39	X	12-10-12	22									
40						Boring terminated at 40'						





# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **P-24** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.

GS ELEVATION(ft): 77.52

DATE STARTED: 1/25/05

LOCATION: SEE BORING LOCATION PLAN

WATER TABLE (ft): NE

DATE FINISHED: 1/25/05

REMARKS:

DATE OF READING: NA

DRILLED BY: J. STILLSON

EST. WSWT (ft): NA

TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1	X					Dark brown to orange clayey SAND [SC]						
2	X	5-2-2	4			Very loose dark brown to orange poorly graded SAND [SP]						
3	X	1-2-2	4									
4	X					Loose orange clayey SAND [SC]						
5	X	2-2-2	4									
6	X	1-2-2	4									
7	X					Medium dense...						
8	X	3-5-6	11									
9	X	4-5-8	13									
10												
11												
12												
13												
14	X	4-6-9	15			Medium dense orange and gray...						
15												
16												
17												
18												
19	X	4-8-9	17			Medium dense...						
20												
21												
22												
23												
24	X	6-9-11	20			LIMESTONE						
25												
26												
27												
28												
29	X	10-10-26	36									
30												
31												
32												
33												
34	X	18-20-20	40									
35												
36												
37												
38												
39	X	18-10-21	31									
40						Boring terminated at 40'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

PAGE: B-222

PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **P-25** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

GS ELEVATION(ft): 91.15 DATE STARTED: 1/24/05  
WATER TABLE (ft): NE DATE FINISHED: 1/25/05  
DATE OF READING: NA DRILLED BY: M. BOATRIGHT  
EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1						Very loose brown poorly graded SAND, with silt [SP-SM]						
2	X	1-1-1	2									
3	X	1-2-1	3			Very loose dark brown and orange clayey SAND [SC]						
4	X											
5	X	2-1-1	2			Loose...						
6	X	2-2-4	6									
7	X											
8	X	3-4-7	11			Loose light brown very clayey...						
9	X	5-7-9	16			Very stiff orange and tan sandy fat CLAY [CH]						
10												
11												
12												
13												
14	X	3-5-6	11			Stiff light green and orange...						
15												
16												
17						Lose gray and tan clayey SAND [SC]						
18												
19	X	3-5-5	10									
20												
21												
22												
23												
24	X	3-5-4	9			Loose tan and yellow...	16				9	
25												
26												
27												
28												
29	X	3-4-4	8			Loose tan and orange...						
30												
31												
32						Stiff gray and tan sandy CLAY [CH], with limestone fragments						
33												
34	X	7-7-5	12									
35												
36												
37												
38												
39	X	9-13-15	28			LIMESTONE						
40						Boring terminated at 40'						



# UNIVERSAL ENGINEERING SCIENCES

## BORING LOG

PROJECT NO.: 0795.1400110.0000

REPORT NO.: 1211903

PAGE: B-223

PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **P-26** SHEET: **1 of 1**

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E  
GS ELEVATION(ft): 87.43 DATE STARTED: 1/21/05  
WATER TABLE (ft): NE DATE FINISHED: 1/21/05  
DATE OF READING: NA DRILLED BY: J. STILLSON  
EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1						Very loose dark brown to orange poorly graded SAND, with silt [SP-SM]						
2	X	1-2-2	4									
3	X	1-2-2	4									
4	X	1-2-2	4									
5	X	1-2-2	4									
6	X	1-2-3	5			Dark brown to orange clayey SAND [SC]						
7	X	2-3-4	7			Loose dark brown...						
8	X	4-5-7	12			Medium dense...						
9												
10												
11												
12												
13												
14	X	4-9-11	20			Medium dense light green...						
15												
16												
17												
18												
19	X	5-6-10	16			Medium dense...						
20												
21												
22												
23						Light gray and orange silty SAND [SM]						
24	X	4-5-8	13			Medium dense...						
25												
26												
27												
28												
29	X	3-4-5	9			Loose...						
30												
31												
32												
33												
34	X	3-3-5	8			Loose gray and orange clayey SAND [SC]						
35												
36												
37												
38						LIMESTONE						
39	X	20-10-20	30									
40						Boring terminated at 40'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **P-27** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

GS ELEVATION(ft): 85.77 DATE STARTED: 1/20/05  
WATER TABLE (ft): NE DATE FINISHED: 1/20/05  
DATE OF READING: NA DRILLED BY: J. STILLSON  
EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1	X					Brown poorly graded SAND, with silt [SP-SM]						
2	X	4-4-4	8			Loose dark brown to orange clayey SAND [SC]						
3	X	3-2-3	5									
4	X											
5	X	3-3-3	6			Loose...						
6	X											
7	X	3-4-5	9									
8	X	5-6-6	12			Medium dense...						
9	X											
10	X	5-6-8	14			Medium dense...						
11												
12												
13												
14	X	7-10-15	25			Medium dense gray and orange...						
15												
16												
17												
18												
19	X	4-7-10	17			Medium dense...						
20												
21												
22						Light gray and orange silty SAND [SM]						
23												
24	X	7-6-5	11			Medium dense...						
25												
26												
27												
28												
29	X	4-4-4	8			Loose...						
30												
31												
32												
33												
34	X	2-2-3	5			Loose...						
35												
36												
37												
38						Gray and orange clayey SAND [SC]						
39	X	1-2-2	4			Very loose...						
40						Boring terminated at 40'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **P-28** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

GS ELEVATION(ft): 80.41 DATE STARTED: 1/19/05  
WATER TABLE (ft): NE DATE FINISHED: 1/19/05  
DATE OF READING: NA DRILLED BY: J. STILLSON  
EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1	X					Very loose dark brown to orange poorly graded SAND, with silt [SP-SM]						
2	X	2-2-2	4									
3	X	2-1-2	3									
4	X											
5	X	2-2-2	4			Dark brown to orange clayey SAND [SC]						
6	X											
7	X	2-2-2	4			Very loose...						
8	X	2-3-6	9			Loose dark brown to orange & gray...						
9	X											
10	X	3-6-8	14			Medium dense...						
11												
12												
13												
14	X	4-7-9	16			Medium dense light gray and orange...						
15												
16												
17												
18												
19	X	4-6-5	11			Medium dense...						
20												
21												
22												
23												
24	X	3-6-7	13			Medium dense light gray...						
25												
26												
27												
28												
29	X	2-3-8	11			Weathered LIMESTONE						
30												
31												
32												
33												
34	X	11-5-1	6									
35												
36												
37												
38												
39	X	20-12-50/1"	50/1"									
40						Boring terminated at 40'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **P-29** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

CLIENT: CPH ENGINEERS, INC.

GS ELEVATION(ft): 77.45 DATE STARTED: 1/19/05

LOCATION: SEE BORING LOCATION PLAN

WATER TABLE (ft): NE DATE FINISHED: 1/19/05

REMARKS:

DATE OF READING: NA DRILLED BY: J. STILLSON

EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1						Brown poorly graded SAND [SP]						
2	X	5-5-7	12			Medium dense dark brown to orange silty SAND [SM]						
3	X	4-4-5	9			Loose...						
4	X	2-3-5	8									
5	X	4-5-6	11			Medium dense...						
6	X	5-6-6	12			Stiff gray and orange sandy fat CLAY [CH]						
7	X	4-7-9	16			Very stiff...						
8						Gray and orange clayey SAND [SC]						
9												
10												
11												
12												
13												
14	X	4-5-7	12			Medium dense...						
15												
16												
17												
18												
19	X	3-6-7	13			Medium dense gray and brown...						
20												
21												
22						Stiff gray and orange CLAY [CH]						
23												
24	X	3-4-9	13			Weathered LIMESTONE						
25												
26												
27												
28												
29	X	2-3-3	6									
30												
31												
32												
33												
34	X	5-4-3	7									
35												
36												
37												
38												
39	X	P-P-4	4									
40						Boring terminated at 40'						



# UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0795.1400110.0000

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PROJECT: WALMART STORE NO. 3873-00  
S.E. CORNER OF I-75 AND U.S. HIGHWAY 441  
ALACHUA, ALACHUA COUNTY, FLORIDA

BORING NO: **P-30** SHEET: **1 of 1**

SECTION: 15/16 TOWNSHIP: 8S RANGE: 18E

GS ELEVATION(ft): 89.53 DATE STARTED: 1/25/05

WATER TABLE (ft): NE DATE FINISHED: 1/25/05

DATE OF READING: NA DRILLED BY: M. BOATRIGHT

EST. WSWT (ft): NA TYPE OF SAMPLING: ASTM D-1586

CLIENT: CPH ENGINEERS, INC.  
LOCATION: SEE BORING LOCATION PLAN  
REMARKS:

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT./ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1						Very loose brown poorly graded SAND, with silt [SP-SM]						
2	X	1-1-1	2									
3	X	2-3-4	7			Loose dark brown clayey SAND [SC]						
4	X											
5	X	5-5-6	11									
6	X	4-5-5	10									
7	X	5-4-3	7									
8	X	2-2-3	5									
9	X											
10												
11												
12												
13												
14	X	4-6-9	15									
15	X											
16												
17						Stiff brown and orange sandy fat CLAY [CH]						
18												
19	X	4-6-6	12									
20	X											
21												
22												
23												
24	X	4-5-6	11			Stiff light green and tan...						
25	X											
26												
27												
28												
29	X	3-3-5	8			Stiff light green and orange...						
30	X											
31												
32												
33						Medium dense brown, orange and tan clayey SAND [SC]						
34	X	3-5-6	11									
35	X											
36												
37												
38												
39	X	5-6-9	15			Medium dense tan and orange...						
40	X					Boring terminated at 40'						