FINAL ROADWAY SOIL SURVEY REPORT
SR 429 WEKIVA PARKWAY SECTION 7A
FDOT FPID No. 240200-2-52-01
AEA PROJECT No. 201314

Antillian Engineering Associates, Inc.
3331 Bartlett Boulevard
Orlando, Florida 32811
(407) 422-1441

ANTILLIAN
ENGINEERING ASSOCIATES, INC.

July13, 2017

AECOM
315 East Robinson Street, Suite 245
Orlando, Florida 32801

Attention: Steve Noppinger, P.E.

Reference: Final Roadway Soil Survey Report
SR 429 Wekiva Parkway Section 7A
FDOT FPID No. 240200-2-52-01
AEA Project No. 201314

Dear Mr. Noppinger:

Antillian Engineering Associates, Inc. has completed geotechnical investigations and assessments to support roadway and drainage designs for the Wekiva Parkway Section 7A project. This report presents a description of the proposed project and summaries of readily available geotechnical related information. Also presented are summaries of the field testing and laboratory testing programs, assessments of the encountered subsurface conditions as they relate to the design and construction of the project, recommendations for roadway design, stormwater pond design, and other concerns as appropriate.

It has been our pleasure to serve AECOM and the Florida Department of Transportation on this project. Please contact our office if you have any questions or if you need additional information.

ANTILLIAN ENGINEERING ASSOCIATES, INC.
Certificate of Authorization No. EB6685

PETER GREGORY SUAH
LICENSE
No 46910
STATE OF
PROFESSIONAL ENGINEER
07.13.2017

Peter G. Suah, P.E.
Principal Engineer
Florida Registration No. 46910

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PROJECT DESCRIPTION

The Florida Department of Transportation ("FDOT") is planning to construct portions of State Road 429 ("SR 429", also known as "Wekiva Parkway") in Lake County and Seminole County, Florida. FDOT selected AECOM to design Section 7A, which is entirely within Seminole County. Construction of this portion will require extensive modification of SR 46 from about 1,600 feet east of the Wekiva River to the intersection with Orange Boulevard. FDOT transferred the segment from the Wekiva River to the beginning of this project to Section 6B. A new roadway spur from Glade View Drive southeast to about 500 feet east of the intersection of Orange Boulevard and Walden View Drive is also planned, yielding an overall project length of about three-and-a-half miles. Approximate project limits are shown on Figure 1.

Most of the new roadway and the spur will be a four-lane section elevated above the natural terrain on earth fill retained by mechanically-stabilized earth ("MSE") walls. The portion of SR 46 between Glade View Drive and Orange Boulevard will be widened to a six-lane section near existing grade and will be connected to the elevated mainline roadway by entrance and exit ramps. Frontage roads will be constructed near existing grade along both sides of the elevated roadway from the Wekiva River to the ramps. Related improvements include reconfiguration of the southern portions of South Orange Avenue and Wayside Drive into a two-lane, urban roadway. Eleven potential sites were considered for stormwater management ponds. Four other sites were considered for floodplain compensation ponds. The project also includes seven bridge pairs over major cross streets, with associated elevated ramps and retaining walls.

AECOM retained Antillian Engineering Associates, Inc. ("AEA") to conduct geotechnical engineering investigations and provide evaluations and recommendations for design of the planned roadways and stormwater ponds. AECOM also retained Geotechnical and Environmental Consultants, Inc. ("GEC") to conduct geotechnical investigations and evaluations for foundation design of the bridges, MSE walls associated with the elevated mainline roadway, as well as the miscellaneous structures. Results of the investigations and evaluations by GEC were reported under their own cover.

AVAILABLE INFORMATION

We examined the United States Geological Survey ("USGS") quadrangle topographic map of the area, the United States Department of Agriculture Soil Conservation Service ("SCS") Soil Survey of Seminole County, Florida and the May, 2009 USGS map "Potentiometric Surface of the Upper Florida Aquifer in the St Johns River Water Management District" to obtain general information about the project vicinity. We also examined information from the Line and Grade phase of the project, which included roadway design drawings prepared by Bowyer Singleton and Associates and a geotechnical-engineering report prepared by Ardaman and Associates, Inc.

AECOM initially provided figures that showed preliminary frontage road and mainline alignments, planned bridge locations and potential pond sites (with their designations and preliminary elevation

contours) superimposed on recent aerial images of the project vicinity. Before the 90% submittal, AECOM furnished Pond Detail sheets, Pond Cross Section sheets for preferred pond sites, and a Spreader Swale Detail sheet. Those drawings showed the preferred locations for pond and spreader swales, design high-water levels, and proposed and existing grades. We examined those figures and drawings for additional project-related information.

The USGS topographic map (reproduced as Figure 1) showed land usage in the project area as mostly agricultural and rural residential. SR 46, Longwood Markham Road, Lake Markham Road, Wayside Drive and Orange Boulevard were shown. The map also showed that the alignment near the Wekiva River was along the side of a low, gently sloping ridge with ground surface elevations rising from west to east between the Elevation 30 feet NGVD (El. 30) contour and the El. 50 contour. The Wekiva River was mapped below the El. 10 contour. An irregularly-shaped marsh was shown just south of this portion of the alignment. Ground surface elevation in this marsh area was mapped below the El. 35 contour. A semi-circular water body identified as Miranda Lake was shown northeast of this portion of the alignment. Its water surface elevation was also mapped near the El. 35 contour. Yankee Lake was shown on the northern side of SR 46 near the central portion of the alignment. The water surface elevation on the lake was mapped below the El. 35 contour, while the land surrounding it was mapped near the El. 40 contour. Two other irregularly-shaped marshes were shown on the southern side of SR 46 in the same general area. The water surface elevation in both marshes was mapped near the El. 40 contour, while the surrounding land was mapped near the El. 45 contour. Ground surface elevations were mapped between the El. 50 contour and the El. 70 contour along the eastern portion of the alignment from Yankee Lake to Orange Boulevard.

Sheets in the USDA SCS Soil Survey of Seminole County (reproduced as Figure 2) showed soil units typically found on the nearly level to gently sloping uplands and wooded plains in the northwestern part of the county. Isolated soil units typical of lowland features such as swamps, depressions and floodplains were also reported. These features usually retain water for most of the year. Soil units surrounding the water bodies and marshes depicted on the USGS map were shown as depressional. Typical groundwater depths for the upland soil units were reported to range from about three feet to more than six feet below the natural ground surface, while typical groundwater depths for the lowland soil units were reported to be at or near the natural ground surface.

The USGS potentiometric surface map (reproduced as Figure 3) showed that the surface of the Upper Floridan aquifer was near the El. 20 feet NGVD contour in the general area of the project, and was below the El. 20 contour near the Wekiva River.

The Line and Grade Roadway Design drawings (dated December, 2012) prepared by Bowyer Singleton Associates ("BSA") showed that the mainline roadway would be a four-lane, divided, limited-access highway. Grading plans showed that the mainline would be elevated above the natural ground surface on fill formed into embankment or supported by MSE walls. Fill heights ranged from between five feet and ten feet to more than 25 feet near the beginning of the project and at planned bridge approaches. Embankment slopes were typically inclined at 6 Horizontal to 1 Vertical (6H:1V).

The BSA drawings showed that the planned eastbound frontage road would begin on a high, earth embankment near the beginning of the project (approximate Station 245+00) and slope downward to existing grade near approximate Station 301+00. Between approximate Station 301+00 and Station 331+00, proposed grades were shown to be as much as 12 feet above existing. From approximate Station 331+00 to the end of the roadway (approximate Station 395+00), fill heights and cut depths were shown to vary between two feet and five feet of existing grade.

The BSA drawings also showed that the grades of the planned westbound frontage road would be near existing grade from the beginning of its alignment (approximate Station 529+60) to about Station 565+00. Between approximate Station 565+00 and Station 631+00, proposed grades were shown to be as much as 12 feet above existing. From approximate Station 631+00 to the end of the roadway (approximate Station 690+00), fill heights and cut depths were typically within four feet of existing grade.

The BSA drawings did not include information for the South Orange Avenue realignment as this was not part of the Line and Grade concept.

An electronic copy of the geotechnical-engineering report prepared by Ardaman and Associates, Inc. ("the Ardaman report") for the subject project during the Line and Grade design phase entitled Preliminary Roadway Soil Survey Relative to Line and Grade Submittal, Wekiva Parkway (SR 429) from the Wekiva River to SR 400 (I-4) dated May 16, 2012, was furnished by AECOM. Examination of that report revealed that 51 auger borings had been drilled by Ardaman to a depth of 20 feet at approximate 500-foot intervals along the originally proposed roadway alignment. Ardaman designated those borings as "AB-930" through "AB-1170," and "AB-003_35+00." These boring locations appeared to have been designated by the mainline roadway stationing. Encountered soils were reported to be mostly "select" fine sands with trace to little amounts of silt and clay. Ardaman assigned these soils the American Association of State Highway and Transportation Officials ("PASHTO") group designations "A-3" and "A-2-4." Intermittent clayey sand and clay layers (AASHTO A-2-6, A-6 and A-7-6) and isolated zones of organic-laden soil (AASHTO A-8) were also reported.

Also included in the Ardaman report were results of manual probes conducted on the northern side of the mainline. Manual probe results indicated that about two feet of organic soil was present near the ground surface between approximate Station 937+00 and Station 939+00 and that up to five feet of organic soil was present near the ground surface between approximate Station 1023+00 and Station 1025+00.

The Ardaman report also included subsurface information from 36 auger borings drilled to a depth of 20 feet within originally proposed stormwater pond sites. Those boring locations were designated by the planned pond name and boring number. Soils encountered in pond borings were similar to those encountered in the roadway borings, and were reported to be mostly select fine sands with occasional intermittent clayey sand and clay layers.

Groundwater was encountered about five feet below the ground surface at AB-930, AB-935, AB-940, AB-1130 and AB-1137, and at depths near ten feet or more at most of the remaining roadway boring locations. Groundwater was not encountered in AB-955 through AB-980. Where encountered, groundwater depths within originally proposed pond sites varied from about five feet to ten feet below ground surface.

Ardaman conducted 18 field permeability tests at selected locations within pond sites. Test locations were designated by the planned pond name and corresponding boring number. Ardaman reported measured permeability values of the A-3 and A-2-4 soils that ranged from 1.5 feet per day (ft/day) to 68.5 ft/day, with most values between 5 ft/day and 25 ft/day.

Figures furnished by AECOM indicated that eleven potential stormwater pond sites were considered. During early stages of project design, AECOM identified six of those sites as "preferred" pond sites, designated from west to east as "WR1," "WR2," "YL1," "YL2," "LS" and "CC." General information about the planned pond sites is presented below in Table 1.

TABLE 1
GENERAL INFORMATION FOR PREFERRED STORMWATER POND SITES

POND	DESCRIPTION	APPROXIMATE STATIONING	APPROXIMATE EXISTING GROUND ELEVATION(S) (feet NAVD)
WR1	Heavily-wooded, rectangular area on northern side of alignment, east of Wekiva Park Drive	933+00 to 940+00	+30 to +35
WR2	Heavily-wooded, rectangular area on northern side of alignment within Wekiva River State Park	955+00 to 962+00	+50 to +65
YL1	Heavily-wooded, rectangular area on southern side of alignment, east of Bella Foresta Drive	1006+00 to 1012+00	+43 to +47
YL2	Sparsely-wooded, rectangular residential property on northern side of alignment, east of FGT Easement	1033+00 to 1039+00	+41 to +47
LS	Moderately-wooded, rectangular area on northern side of alignment across from Glade View Drive	1056+00 to 1070+00	+55 to +65
CC	Sparsely-wooded, rectangular residential property on southern side of alignment, east of Orange Avenue	1088+00 to 1090+00	+65 to +70

AECOM also identified five alternate pond sites, which they designated from west to east as "YL1 Alt 1," "YL1 Alt 2," "LS Alt 1," "CC Alt 1," and "CC Alt 2." General information about planned alternate pond sites is below in Table 2.

TABLE 2
GENERAL INFORMATION FOR ALTERNATE STORMWATER POND SITES

POND	DESCRIPTION	APPROXIMATE STATIONING	APPROXIMATE EXISTING GROUND ELEVATION(S) (feet NAVD)
YL1 Alt 1	Heavily-wooded, irregularly-shaped area on northern side of alignment, south of Yankee Lake	997+00 to 1013+00	+35 to +50
YL1 Alt 2	Moderately-wooded, rectangular area on northern side of alignment, east of Yankee Lake Road	981+00 to 989+00	+45 to +50
LS Alt 1	Heavily-wooded, rectangular area on southern side of alignment, west of Orange Avenue	1081+00 to 1086+00	+60 to +65
CC Alt 1	Heavily-wooded, triangular area on southern side of alignment, north of Orange Avenue	1092+00 to 1096+00	+70
CC Alt 2	Heavily-wooded, triangular area on southern side of alignment, south of Orange Avenue	1099+00 to 1103+00	+70 to +75

AECOM also identified four potential floodplain compensation pond sites, and designated those sites from west to east as "FPC," "FPC Alt 1", "FPC Alt 2" and "FPC Alt 3." AECOM identified the "FPC" site as the preferred floodplain compensation pond site. General information about planned floodplain compensation pond sites is presented below in Table 3.

TABLE 3
GENERAL INFORMATION FOR FLOODPLAIN COMPENSATION POND SITES

POND	DESCRIPTION	APPROXIMATE STATIONING	APPROXIMATE EXISTING GROUND ELEVATION(S) (feet NAVD)
FPC	Part of YL1 Alt 1	1001+00 to 1010+00	+35 to +45
FPC Alt 1	Heavily-wooded, irregularly-shaped area on northern side of alignment, south of Yankee Lake	1014+00 to 1019+00	+35 to +40
FPC Alt 2	Heavily-wooded, irregularly-shaped area on northern side of alignment, south of Yankee Lake	1019+00 to 1024+00	+35
FPC Alt 3	Heavily-wooded, irregularly-shaped area on northern side of alignment, south of Yankee Lake	1024+00 to 1032+00	+35 to +50

Preliminary information furnished by AECOM indicated that the ponds on the preferred sites and alternate sites were planned as dry-bottom retention ponds. Preliminary grading plans shown on the AECOM drawings indicated that earthen embankments would be constructed around the perimeter of Pond WR1, along the western and northwestern sides of Pond WR2, around the perimeter of Pond YL1 and along the western and northwestern sides of Pond YL2. Those embankments were needed to enclose the ponds because of the sloping ground surface on those sites. Preliminary grading plans for Pond LS and Pond CC indicated that these ponds would be fully incised.

Information shown on the preliminary Pond Detail sheets and pond cross sections indicated that embankment slopes and pond side slopes would be inclined at 4 Horizontal to 1 Vertical ("4H:1V"). Maintenance berms were shown to be about 20 feet wide. A maximum embankment height about six feet above existing grade was shown for Pond WR1 and Pond WR2. A maximum embankment height about four feet above existing grade was shown for Pond YL1 and Pond YL2.

The Pond Detail sheets indicated that the design high water level would be El. 36.25 in Pond WR1, El. 46.26 in Pond WR2, El. 44.35 in Pond YL1 and El. 42.75 in Pond YL2. Additional information in the Pond Siting Report indicated that the design high water level would be El. 47.86 in Pond LS and El. 61.53 in Pond CC.

Information shown on the Spreader Swale Detail sheet indicated that this feature would be located on the western side of Wekiva Park Drive and north of the westbound frontage road. It would be excavated about six feet to eight feet below the existing ground surface. Three concrete ditch blocks and rubble rip-rap were shown along the bottom of the swale.

[END OF SECTION]

FIELD INVESTIGATIONS

Field visits were conducted by this firm to prepare for the drilling and field testing programs, observe field conditions and stake boring locations to facilitate identification by the field crews and for underground utility location and marking as required by Florida Statutes. AECOM surveyors established and staked boring locations along planned frontage roads at 500-foot intervals beginning at Station 930+00. Boring locations between these staked locations, as well as boring locations along the mainline and within potential stormwater-pond sites were established in the field by this firm using measurements from AECOM's staked locations, GPS coordinates and scaled dimensions from existing features shown on the figures furnished by AECOM. Pond boring locations were surveyed by AECOM following the completion of drilling. Locations not surveyed by AECOM should be considered approximate. Boring locations, and their elevations where available, are presented on the Report of Auger Boring sheets and the Report of SPT Borings sheets in Appendix A. Stations and offsets were referenced to the project baseline of survey, while elevations were in feet and were referenced to 1988 North American Vertical Datum (NAVD).

Subsurface investigations consisted of auger borings, test borings with split-spoon soil sampling and field permeability testing. These investigations were conducted between September, 2013 and April, 2015.

Auger borings were drilled at approximate 100-foot intervals along the planned mainline and frontage road alignments, along selected side streets and at selected, accessible locations within potential stormwater pond sites. The depths of the borings drilled along the roadways ranged from five feet to 20 feet. Borings within potential pond sites were drilled to depths between 20 feet and 40 feet. Shallow boreholes (typically to depths of less than ten feet below ground surface) were manually advanced using a hand-held bucket auger. Boreholes completed to deeper depths were advanced using continuous-flight augers powered by a rotary drill rig. Drilling and sampling of the auger borings was done in general accordance with ASTM D 1452.

Test borings were drilled at accessible locations within Pond WR1, along the perimeters of Pond WR2, Pond FPC and Pond YL1 Alt 2 and within the planned spreader swale. These boreholes were advanced by continuous split-spoon soil sampling and/or mud-rotary drilling methods and were terminated at depths between 10 feet and 50 feet. The Standard Penetration Test (SPT) was conducted in conjunction with the split-spoon soil sampling in general accordance with ASTM D 1586. Testing and sampling were conducted continuously from the ground surface to a depth of ten feet, then typically at five-foot intervals from ten feet to the indicated completion depths.

Soils recovered in each split-spoon sampler and from the augers, sampler penetration resistance expressed in hammer blows per foot (the "SPT N-value"), and other noteworthy observations were logged by the field crew during drilling. Representative soil samples were sealed in clean, airtight containers for transportation to our Orlando office for further classification and laboratory testing. Groundwater depth in each borehole was measured when encountered and recorded on the field logs.

Shallow auger boreholes were backfilled with soil cuttings. A perforated plastic "standpipe" was installed within the boreholes of deeper auger boreholes and most test borings to keep them open temporarily for groundwater level measurements. The deeper auger boreholes were then backfilled with soil cuttings, while the boreholes of the test borings were grouted.

Field permeability tests were conducted near selected borings drilled within potential stormwater pond sites. Each test was conducted by installing either three-inch-diameter or four-inch-diameter casing to the required test depth. Soils within the casing were removed by drilling. The bottom two feet of casing was gravel-packed with pea-size gravel. The casing was then raised two feet then slowly filled with water to the top. At some locations, a "falling-head" test was conducted where the rate of drop of the water level inside the casing was recorded. At other locations, a "constant-head" test was conducted by filling the casing with water to maintain a constant level and recording the flow rate. The test procedures were repeated at least three times at each location. Test data were evaluated and used to calculate the coefficient of permeability in the horizontal direction at the depth at which the test was conducted using equations presented in the St. Johns River Water Management District Special Publication SJ93-SP10. Field permeability test results are discussed in the SUBSURFACE CONDITIONS section of this report.

LABORATORY TESTING

The recovered soil samples were examined in our office by a geotechnical engineer who confirmed the descriptions on the field logs, classified the soils visually in accordance with ASTM D 2488 or ASTM D 3282, and developed a representation of the soil stratigraphy at each boring location. Representative soil samples were selected for laboratory classification testing, which consisted of 303 full soil gradation analyses, 21 percent-fines tests, 127 natural moisture content tests, 55 Atterberg limits test series, 52 organic content tests and 16 soil corrosion potential test series. All testing was conducted in general accordance with the appropriate ASTM test procedures or Florida Method of Test procedures.

Test results are summarized on the Roadway Soils Survey sheet and are also presented on the Report of SPT Borings sheets. Detailed test results are also tabulated in Appendix A.

[END OF SECTION]

SURFACE CONDITIONS

As mentioned, most of the planned alignment was within the existing SR 46 right-of-way. From the beginning of the project near the Wekiva River to Longwood Markham Road, the ground surface sloped gradually upward from west to east. It appeared to be nearly level to level between Longwood Markham Road and Yankee Lake, and then sloped gradually downward between Yankee Lake and Glade View Drive. From Glade View Drive to the end of the project, the ground surface sloped gradually upward from west to east.

Most of the planned alignment was bordered by undeveloped, often heavily-wooded lands or by residential properties. Wooded areas were typically mixtures of large trees, scrub oaks and saw palmettos. A few nurseries and other commercial businesses were near the central portion of the alignment in the vicinity of Glade View Drive.

SR 46 from the beginning of the project to near Orange Boulevard was a two-lane rural roadway with paved shoulders that was raised above the natural ground surface on a low embankment. Turn lanes were provided at most cross streets. Shallow drainage ditches were observed along both sides of the road embankment. During the field investigations, some of the ditches near the central portion of the project contained a few inches of standing water after heavy/prolonged rainfall, while ditches near the western and eastern ends of the project were mostly dry. Broad, grassed fields were present between SR 46 and the edges of the wood lines along the northern right-of-way. These fields appeared to be nearly level to level, and tended to be at about the same elevation as SR 46. Ground cover consisted of well-maintained grass turf. Overhead utility lines were along those wood lines. The section of SR 46 near Orange Boulevard was a four-lane divided roadway with turn lanes, concrete sidewalks and overhead traffic signals.

With the exception of Pond YL2 and Pond CC which were sparsely-wooded residential properties, potential pond sites were densely wooded with mixtures of large trees, scrub oaks and saw palmetto.

SUBSURFACE CONDITIONS

The stratigraphy, soil types and groundwater levels described below are based on the results of the borings and laboratory testing. Soils were classified and grouped into seven types or strata, each with its own characteristics and properties. SPT N-values, where recorded, were used as empirical indications of soil conditions. The descriptions below are general. Detailed subsurface characteristics at each boring location are shown on the Report of Auger Borings sheets, the Report of SPT Borings sheets and the Summary of Laboratory Test Results tables presented in Appendix A. Characteristics of each soil type are described in the following paragraphs. Tabulated field permeability test results are also presented in Appendix A.

Stratum 1 and Stratum 2

The colors of Stratum 1 and Stratum 2 varied widely but were mostly yellowish brown, pale brown, brown, grayish brown and pale yellow. Stratum 1 soils were fine sands that contained trace to few amounts of silt or clay, and were non-plastic. Stratum 2 soils were also fine sands but contained more (i.e., little to some) silt or clay than Stratum 1 soils and exhibited a slightly plastic texture. Both occasionally contained trace amounts of organic matter. Encountered thicknesses ranged from five feet to about 40 feet. Actual thicknesses could not be confirmed in most shallow borings because the boreholes were terminated in these soils without penetrating them completely. SPT N-values, where recorded, ranged from 2 blows per foot (bpf) to higher than 45 bpf with most values between 4 bpf and 30 bpf, indicating that these soils were very loose to very dense but mostly loose to medium dense.

Soil gradation analysis of 140 samples of Stratum 1 soils indicated fines contents (fraction by dry weight passing the U.S. Standard No. 200 sieve) between 1 percent and 10 percent. Additional testing indicated natural moisture contents between 2 percent and 30 percent, and organic contents between 2 percent and 5 percent. Based on visual classification and laboratory testing, Stratum 1 soils were classified as "A-3" using AASHTO Designation M-145. Similar soils encountered in the test borings were classified as for poorly graded sand ("SP"), sand with silt ("SP-SM") and sand with clay ("SP-SC") using Unified Soil Classification System ("USCS") designations.

Soil gradation analysis of 139 samples of Stratum 2 soils indicated fines contents between 10 percent and 35 percent. Additional testing indicated natural moisture contents between 7 percent and 32 percent, an organic content of 4 percent, liquid limit values that ranged from non-plastic to 29 and plasticity index values that ranged from non-plastic to 9. Based on visual classification and laboratory testing, Stratum 2 soils were classified as "A-2-4" using AASHTO Designation M-145. Similar soils encountered in test borings were classified as silty sand ("SM") and clayey sand ("SC") using USCS designations.

Field permeability testing of Stratum 1 soils yielded coefficients of permeability in the horizontal direction that ranged from 0.5 ft/day to 40 ft/day. Field permeability testing of Stratum 2 soils yielded coefficients of permeability in the horizontal direction that ranged from 0.2 ft/day to 28 ft/day.

Electro-chemical testing of 14 Stratum 1 samples and two Stratum 2 samples indicated pH that ranged from 4.4 to 6.1, chloride contents less than 80 parts per million (ppm), sulfate contents that ranged from less than 5 ppm to 65 ppm, and electrical resistivity that ranged from 18,000 ohm-centimeters (ohm-cm) to 250,000 ohm-cm. Based on these test results, Stratum 1 soils were classified using criteria presented in the Florida Department of Transportation (FDOT) Structures Design Guidelines as having slightly aggressive to moderately aggressive corrosion potential for concrete and moderately aggressive to extremely aggressive corrosion potential for steel. Stratum 2 soils were classified as having extremely aggressive corrosion potential for both steel and concrete.

Stratum 3

The colors of Stratum 3 soils also varied widely but were mostly yellowish brown, pale brown, gray, brownish yellow and strong brown. Stratum 3 soils were comprised of fine sands that contained few to little amounts clay, and exhibited a plastic texture. Encountered thicknesses ranged from a foot to about 10 feet. Actual thicknesses could not be confirmed in some borings because they were terminated in this soil without penetrating it completely. SPT N-values, where recorded, ranged from 3 bpf to 9 bpf, indicating that these soils were very loose to loose. Soil gradation analysis of eight samples indicated fines contents between 26 percent and 63 percent. Additional testing indicated natural moisture contents between 14 percent and 37 percent, liquid limit values between 27 and 42 and plasticity index values between 11 and 19. Based on visual classification and laboratory testing, Stratum 3 soils were classified as "A-2-6", "A-6" and "A-7-6" using AASHTO Designation M-145. Similar soils encountered in test borings were classified as clayey sand (SC) using USCS designation.

Field permeability testing of Stratum 3 soils at one location yielded a coefficient of permeability in the horizontal direction of 11 ft/day. No electro-chemical testing was conducted on Stratum 3 soils.

Stratum 4

The colors of Stratum 4 soils were typically very dark brown, very dark gray and black. Stratum 4 soils consisted of fine sands containing organic matter, as well as organic silts, organic clays and fibrous plant matter in varying stages of decay. These soils often exhibited a faint to strong odor of decaying plant matter. Encountered thicknesses ranged from about a foot to 25 feet. Soil gradation analysis of 12 samples indicated fines contents between 5 percent and 38 percent. Additional laboratory tests indicated natural moisture contents between 15 percent and 461 percent and organic contents between 5 percent and 64 percent. Based on visual classification and laboratory testing, Stratum 4 soils were classified as "A-8" using AASHTO Designation M-145. Similar soils encountered in test borings were classified using USCS designations "PT" for peat and "SP-SM" for sand with silt and "SM" for silty sand despite their visibly organic nature.

No field permeability testing or electro-chemical testing was conducted on Stratum 4 soils.

Stratum 5

Stratum 5 soils were similar in color and texture to Stratum 1 soils and Stratum 2 soils, but were often weakly to partially cemented. These soils were non-plastic in texture and occasionally contained traces of organic matter. Encountered thicknesses were typically about a foot to two feet. Soil gradation analysis of four samples indicated fines contents between 14 percent and 17 percent. Based on visual classification and laboratory testing, Stratum 5 soils were classified as "A-3" and "A-2-4" using AASHTO Designation M-145.

No field permeability testing or electro-chemical testing was conducted on Stratum 5 soils.

Stratum 6

Stratum 6 soils were typically light gray, brownish yellow, gray and brownish yellow and strong brown silts and clays that contained few to some amounts of sand and exhibited a high-plastic texture. Encountered thicknesses ranged from about two feet to eight feet. Soil gradation analyses of nine samples indicated fines contents that ranged from 64 percent to 94 percent. Additional laboratory testing indicated natural moisture contents between 25 percent and 43 percent, liquid limit values between 51 and 97, and plasticity index values between 31 and 70. Based on visual classification and laboratory testing, Stratum 6 soils were classified as "A-7-5" and "A-7-6" using AASHTO Designation M-145. Similar soils encountered in test borings were classified using USCS designations "MH" for high-plasticity ("elastic") silt and "CH" for high-plasticity ("fat") clay.

No field permeability testing or electro-chemical testing was conducted on Stratum 6 soils.

Stratum 7

Stratum 7 soils were similar in color and texture to Stratum 1 soils and Stratum 2 soils, but often contained varying amounts of limestone, asphalt, glass, metal and/or wood, or were mixed with clayey sands and clay. Encountered thicknesses ranged from about a foot to six feet. Actual thicknesses could not be confirmed in some of the shallow borings which were terminated in this material without penetrating it completely. Soil gradation analysis of 12 samples indicated fines contents that ranged from 2 percent to 24 percent. Additional testing indicated natural moisture contents between 9 percent and 12 percent, and liquid limit values and plasticity index values that were non-plastic. Based on visual classification and laboratory testing, Stratum 7 soils were classified as "A-3" and "A-2-4" using AASHTO Designation M-145. Stratum 7 soils were also characterized as "possible fill" based on the presence of the constituents listed above or on their variation in composition.

No field permeability testing or electro-chemical testing was conducted on Stratum 7 soils.

Groundwater was not encountered in most shallow borings drilled along the alignments of the planned roadways. As exceptions, groundwater was encountered within a few feet of the ground surface in boreholes drilled between approximate Station 930+00 and Station 941+00 along the frontage road and mainline, and between approximate Station 1015+00 and Station 1025+00 along the frontage roads. Where encountered in deeper borings drilled along the alignments of the planned frontage roads and mainline, groundwater was encountered at depths between five feet and 15 feet below the ground surface.

Groundwater was not encountered in the shallow borings along the planned South Orange Avenue realignment but was encountered more than ten feet below the ground surface in the deep borings.

Encountered groundwater levels are also discussed in the ASSESSMENT OF ENCOUNTERED SOILS - PREFERRED STORMWATER PONDS section later in this report.

GENERAL COMMENTS ON RECOMMENDATIONS

The following recommendations are based on a review of the available information, the field and laboratory test results discussed in this report and our experience with similar projects and subsurface conditions. Soils are natural materials, so variations in composition and other physical characteristics are normal and should be expected. Because of natural variations in depth, composition and consistency of soils and the broad spacing between the borings drilled for this investigation, unsuitable materials and other soils not encountered by the borings may exist between the boring locations.

If plans for the proposed construction change from those discussed in this report, we request the opportunity to review our recommendations and amend them as needed to accommodate those changes. In addition, if subsurface conditions encountered during construction differ significantly from those encountered in the borings, those conditions should be reported to us for our observation and comment.

Geotechnical concerns include zones of weak, highly compressible Stratum 4 soils encountered in borings drilled along the westbound frontage road between approximate Station 934+50 and Station 940+00 and along the westbound frontage road between approximate Station 1020+00 and Station 1025+00 that are expected to settle under the weight of the fill embankments.

ASSESSMENT OF ENCOUNTERED SUBSURFACE CONDITIONS - ROADWAY

In general, the soil types and groundwater levels encountered along the planned mainline and frontage road alignments appeared to be suitable for support of the planned roadway and amendable for roadway construction, with exception of Stratum 4 soils. Within the upper 15 feet in the test borings were soils that exhibited mostly low to moderate but occasionally high resistance to penetration testing. As a result, conventional construction equipment should be capable of excavating these soils. However, the contractor should select equipment that can operate effectively even if less-favorable conditions are encountered during excavation. Soils excavated from below the groundwater level will require time to dry.

As discussed earlier in this report, the uppermost soils were mostly loose to medium dense fine sands that contained trace to some silt or trace to some clay. Occasionally, these soils were weakly to partially cemented or were mixed with small amounts of limestone, asphalt, glass, metal, wood, clayey sands and/or clay. These soils were identified as Stratum 1 (A-3), Stratum 2 (A-2-4), Stratum 5 (A-3, A-2-4) and Stratum 7 (A-3, A-2-4) on the Report of Auger Borings sheets, and also given the USCS designations SP, SP-SM, SP-SC and some of the SM soils and SC soils shown on the Report of SPT Borings sheets. These soils should be treated as “select” materials in accordance with FDOT Index 500, and may be reused as select fill in accordance with FDOT Index 505 provided they can be readily placed and compacted and are not mixed with less-desirable materials.

Fill for embankment construction and any backfill for excavations should consist of select soils. They should be placed, compacted and tested in accordance with the FDOT Standard Specifications for Road and Bridge Construction. With proper moisture conditioning, these select soils should densify using conventional compaction equipment. Copious amounts of water will likely need to be added to Stratum 1 soils to achieve the desired degree of compaction. However, the A-2-4 soils of Stratum 2, Stratum 5 and Stratum 7 may retain excess moisture and may be difficult to handle, moisture-condition and compact. As a result, these soils will require careful selection of compaction equipment and close attention to moisture content to achieve satisfactory densification. In general, the required level of compactive effort and moisture conditioning will increase as the fines content of the soil increases. The A-2-4 soils may be blended with A-3 soils to help improve their compaction characteristics.

As mentioned, Stratum 5 soils were often weakly to partially cemented. As a result, these soils may be difficult to excavate or penetrate, particularly in confined excavations such as utility trenches, and may be excavated as cobble-size or boulder-size pieces that could be difficult to handle, place and compact. Special equipment and/or procedures may be needed to facilitate excavation and penetration of these soils.

Stratum 3 soils, identified on the Report of Auger Borings sheets as A-2-6, A-6 and A-7-6 soils and on the Report of SPT Borings sheets as some of the SC soils, should be treated as plastic materials in accordance with FDOT Index 500 and FDOT Index 505. Plastic soils encountered in excavations along the mainline and frontage road alignments should be removed in accordance with FDOT Index 500 unless otherwise shown on the plans. Plastic soils will likely be encountered during excavation of planned stormwater ponds. Reuse of these soils should be in accordance with FDOT Index 505. Plastic soils are not typically considered suitable for use as fill for embankment construction and excavation backfill because of the increased difficulty with handling, moisture conditioning and compacting these soils. These plastic soils may be blended with A-3 soils to help improve their compaction characteristics.

Stratum 4 soils (A-8) should be treated as muck in accordance with FDOT Index 500 and Index 505. Stratum 4 soils are not considered suitable for use as foundation materials beneath the planned roadways and planned pond embankments. As a result, Stratum 4 soils encountered along the mainline and frontage road alignments and beneath planned stormwater pond embankments should be removed in accordance with FDOT Index 500 unless otherwise shown on the plans. These soils are not considered suitable for use as fill for embankment construction and excavation backfill and should only be reused in accordance with FDOT Index 505.

Thin, isolated zones of Stratum 4 soils were encountered in borings drilled along the alignments of the frontage roads and mainline between approximate Station 930+00 and 939+00, and near the ground surface at borings WR1-B5 and WR1-B8 drilled within Pond WR1. Stratum 4 soils were encountered in greater thicknesses and to deeper depths in borings drilled along the westbound frontage road between approximate Station 1020+00 and Station 1025+00, and within planned flood plain compensation ponds. The contractor should anticipate greater depths and thicknesses of Stratum 4 soils at unexplored locations.

Stratum 6 soils, identified on the Report of Auger Borings sheets as A-7-5 and A-7-6 soils and on the Report of SPT Borings sheets as MH and CH soils should be treated as high-plastic materials in accordance with FDOT Index 500 and Index 505. Where encountered in borings drilled along the mainline and frontage road alignments, these soils were at significant depths below the ground surface. As a result, they are not expected to be encountered in most excavations along the roadways. High-plastic soils encountered in excavations along the mainline and frontage road alignments should be removed in accordance with FDOT Index 500 unless otherwise shown on the plans. High-plastic soils will likely be encountered during excavation of Pond YL1. High-plastic soils are not considered suitable for use as fill for embankment construction and excavation backfill because of the increased difficulty with handling, moisture conditioning and compacting these soils. Reuse of these soils should be in accordance with Index 505.

Based on the encountered depths to groundwater, dewatering will likely be needed to lower groundwater levels and to facilitate excavation and below-grade construction. All dewatering for excavation activities should be conducted in accordance with FDOT Standard Specifications for Road and Bridge Construction. Dewatering is discussed in the GROUNDWATER CONTROL section later in this report.

ASSESSMENT OF ENCOUNTERED SUBSURFACE CONDITIONS - PREFERRED POND SITES

Based on the results of the borings, the predominant soil types encountered in the preferred stormwater pond sites (Pond WR1, Pond WR2, Pond YL1, Pond YL2, Pond LS and Pond CC) and the preferred floodplain compensation pond (Pond FPC) during this investigation were Stratum 1 and Stratum 2. Intermittent, discontinuous zones of Stratum 3 soils and Stratum 6 soils were also encountered within and beneath these soils. Groundwater was encountered near El. 30 in Pond WR1, and between El. 30 and El 35 in Pond WR2, Pond YL1 and Pond YL2. Groundwater was encountered between El. 35 and El 40 in Pond LS. Groundwater was encountered near El. 55 in Pond CC. Groundwater was encountered between El. 29 and El. 33 in Pond FPC.

Dry-bottom retention ponds are planned for each preferred stormwater pond site. The encountered soil types and groundwater levels should not adversely affect pond design, construction and functionality. For pond drawdown analyses, an unsaturated vertical infiltration rate can be estimated by dividing measured coefficients of permeability in the horizontal direction by 1.5. Additionally, a fillable porosity of 25 percent may be used. Additional geotechnical-related pond design information is presented in the following report sections.

Pond WR1

The soil types encountered uppermost in borings drilled within Pond WR1 were Stratum 1 and Stratum 2. Encountered thicknesses were between 17 feet and 32 feet. SPT N-values, where recorded, ranged from 2 bpf to 34 bpf, indicating that the sands were very loose to dense. Beneath the sands were intermittent zones of clayey sand (Stratum 3 and SC) and clay (Stratum 6 and CH). Stratum 3 was encountered near El. 17 feet in boring AB-4. The SC soil was encountered in borings

WR1-B2 and WR1-B9 below El. 5. Clay was encountered in borings WR1-B1 and WR1-B2 near El. 0. Dense sands were also encountered beneath El. 5. Groundwater was encountered in the boreholes between El. 30 and El. 35.

Results of field permeability testing at seven locations indicated coefficients of permeability in the horizontal direction that ranged from 1.5 ft/day to 40 ft/day, with most values between 2 ft/day and about 10 ft/day. These characteristics suggested that the near-surface sands should drain well and should have favorable infiltration rates. Based on the inherently lower permeability rates of soils having high fines contents, the zones of clayey sand and clay are likely to restrict the downward flow of groundwater.

For design of Pond WR1, a base of aquifer near El. 5 was estimated. This elevation corresponded to the average elevation at which the clay and dense sands were encountered. The seasonal high groundwater level was estimated to be near El. 30.

Pond WR2

The encountered soil types in Pond WR2 were similar to the soil types in Pond WR1, which were predominantly the fine sands of Stratum 1 and Stratum 2. Encountered thicknesses ranged from 30 feet to 40 feet. SPT N-values ranged from 2 bpf to 38 bpf, with most values between 4 bpf and 30 bpf indicating that these soils were very loose to dense but mostly loose to medium dense. Isolated zones of clayey sand were encountered in borings AB-11 and AB-12 between approximate El. 57 and El. 42, and in boring WR2-B3 between approximate El. 45 and El. 38. Groundwater was encountered in the boreholes between El. 30 and El. 35.

Results of field permeability testing at eight locations indicated coefficients of permeability in the horizontal direction that ranged from 0.5 ft/day to 40 ft/day, with most values between 10 ft/day and 20 ft/day. These characteristics suggested that the near-surface sands should drain well and should have favorable infiltration rates.

Since no soil types or soil conditions that would represent a definitive confining layer were encountered in borings drilled within Pond WR2, a base of aquifer was estimated near the termination elevation of the deepest borings drilled in this pond (i.e., near El. 26). The seasonal high groundwater level was estimated to be near El. 35.

Pond YL1

Borings drilled within Pond YL1 encountered Stratum 1 soils and Stratum 2 soils that extended from the ground surface to the termination elevations of the borings (approximate El. 25 to El. 5). Multiple layers of Stratum 6 (clay) were encountered near the same elevation within the sands in most borings and appeared to be laterally continuous within the pond. Stratum 6 was typically encountered near El. 38, and the thicknesses ranged from about a foot to as much as ten feet. Groundwater was encountered in the boreholes near El. 30.

Results of field permeability testing at five locations in Stratum 1 and Stratum 2 soils indicated coefficients of permeability in the horizontal direction that ranged from 0.5 ft/day to 40 ft/day, with

most values near 1 ft/day. These characteristics suggested that the near-surface sands do not drain well and have moderate infiltration rates. No field permeability testing was done in Stratum 6 soils.

Based on the inherently lower permeability rates of soils having high fines contents, Stratum 6 soils are likely to restrict the downward flow of water within Pond YL1. As a result, a base of aquifer near El. 38 was estimated. This elevation corresponded to the average elevation at which Stratum 6 soils were encountered. For pond recovery analyses, a groundwater level slightly above El. 38 should be used to simulate groundwater perched temporarily on the Stratum 6 soils.

Pond YL2

Soils encountered in Pond YL2 were predominantly Stratum 1 and Stratum 2 that extended from the ground surface to the termination elevations of the borings near El. 10. A thin layer of Stratum 6 was encountered near El. 20 within these soils at AB-1. Its encountered thickness was only about a foot. Groundwater was encountered in the boreholes between El. 30 and El. 35.

Results of field permeability testing at four locations indicated coefficients of permeability in the horizontal direction between 7.6 ft/day and 16 ft/day. These characteristics suggested that the near-surface sands should drain well and should have favorable infiltration rates.

Since no soil types or soil conditions that would represent a definitive confining layer were encountered in borings drilled within Pond YL2, a base of aquifer was estimated near the termination elevation of the deepest borings drilled in this pond (i.e., near El. 10). The seasonal high groundwater level was estimated to be near El. 35.

Pond LS

The predominant soil types encountered in borings drilled in Pond LS were Stratum 1 and Stratum 2. These soils extended from the ground surface to the termination elevations of the borings (near El. 35 to El. 25). Groundwater was encountered in the boreholes near El. 40.

Results of field permeability testing at eight locations indicated coefficients of permeability in the horizontal direction that ranged from 0.5 ft/day to 28 ft/day, with most values between about 6 ft/day and 12 ft/day. These characteristics suggested that the near-surface sands should drain well and should have favorable infiltration rates.

Soil types or conditions that could represent a confining layer were not encountered in borings drilled within Pond LS, so base of aquifer was estimated near the termination elevation of the deepest borings in this pond, i.e., near El. 25. Seasonal high groundwater level was estimated near El. 35.

Pond CC

Soils encountered in the Pond CC borings were mostly Stratum 1 soils that extended from the ground surface to the termination elevations of the borings, i.e., between El. 50 and El. 35. Stratum 3 soils were encountered within the sands near El. 60, and appeared to be laterally continuous within the pond as this soil was encountered at about the same elevation in the borings. Stratum 3 soils ranged from about three feet to seven feet thick. Groundwater was encountered in the boreholes near El. 55.

Results of field permeability testing at three locations in Stratum 1 soils indicated coefficients of permeability in the horizontal direction that ranged from 18 ft/day to 40 ft/day. These characteristics suggested that near-surface Stratum 1 sands should have favorable infiltration rates and drain well.

Based on the inherently lower permeability rates of soils having high fines contents, Stratum 3 soils are likely to restrict the downward flow of water within Pond CC. In order to facilitate pond drawdown, Stratum 3 soils beneath the planned pond bottom should be over-excavated to El. 55 and replaced with Stratum 1 soils from El. 55 to the planned pond bottom elevation. If this earthwork recommendation is followed, a base of aquifer near El. 35 may be used for design of Pond CC. This elevation coincided with the termination elevation of the deepest boring drilled in this pond. The seasonal high groundwater level was estimated to be near El. 57.

Pond FPC

As mentioned, AECOM identified the Pond FPC site as the preferred floodplain compensation pond site. Pond FPC was originally the eastern part of an alternate pond site that AECOM designated Pond YL1 Alt 1. Two auger borings (AB-11 and AB-12) and five test borings (YL1 Alt1-B8, YL1 Alt1-B9, YL1 Alt1-B10, YL1 Alt1-B13 and YL1 Alt1-B14) were drilled within that part of Pond YL1 Alt 1 that became Pond FPC. The predominant soil types encountered in Pond FPC were the fine sands of Stratum 1 and Stratum 2. Encountered thicknesses ranged from 20 feet to 25 feet. SPT N-values, where recorded, ranged from 4 bpf to 31 bpf, indicating that these soils were loose to dense. Isolated zones of clayey sand were encountered in borings B-13 and B-14 between approximate El. 23 and El. 13. Groundwater was encountered in the seven boreholes between El. 29 and El. 33. No field permeability testing was conducted in Pond FPC. The seasonal high groundwater level was estimated to be near El. 33.

ANALYSES FOR POND EMBANKMENTS

As mentioned, earthen embankments were planned around the perimeter of Pond WR1, along the western and northwestern sides of Pond WR2, around the perimeter of Pond YL1 and along the western and northwestern sides of Pond YL2. Pond cross sections and pond detail sheets indicated that Pond LS and Pond CC would be fully incised.

Proposed pond embankments and pond side slopes were analyzed using the pond grading plans and design high water levels furnished by AECOM, as well as the subsurface conditions and groundwater levels encountered during our investigations. These analyses included estimates of foundation soil settlement beneath the planned embankments, stability of embankment side slopes and pond side slopes and assessments of seepage potential through the embankments. Results of these analyses are presented in the following sections of this report. Earthwork recommendations for pond embankment construction are also presented.

POND EMBANKMENT SETTLEMENT

Pond embankment construction will require the placement of compacted earth fill to heights about four feet to six feet above existing grades. The self-weight of the fill will induce vertical stresses in the soils beneath the embankments. These induced stresses are related to the height of the fill.

The Federal Highway Administration (FHWA) computer program "EMBANK" was used to estimate total settlement of each embankment. The program used properties of the embankment soils, properties of the foundation soils within the anticipated zones of stress influence and embankment geometry to calculate vertical stresses induced in the subsurface layers, the compression of each layer in response to the induced stresses and the overall displacement, or settlement, at the ground surface. Foundation settlement estimates were based on a unit weight of 105 pounds per cubic foot (pcf) for embankment fill. Properties of the foundation soils were developed using empirical correlations with SPT N-values and soil types and our experience with similar soils. Each embankment was modeled as a loaded trapezoidal area and foundation settlement was estimated near the center of the embankment where the highest amount of fill would be placed.

Results of settlement analyses are presented below in Table 4. Sample computer outputs generated by EMBANK are presented in Appendix B.

TABLE 4
ESTIMATED TOTAL POND EMBANKMENT SETTLEMENT

POND	MAXIMUM ANTICIPATED FILL HEIGHT (feet)	ANTICIPATED EMBANKMENT LOADING (psf)	ESTIMATED TOTAL SETTLEMENT (inches)	
			SHORT TERM	LONG TERM
WR1	6	630	1 to 2	< 1
WR2	6	630	1 to 1½	< 1
YL1	4	420	1	< 1
YL2	4	420	1	< 1

The results of the analyses indicated that total settlements of the planned embankments of Pond WR1 and Pond WR2 would be between an inch and about two inches. Total settlement of the planned embankments of Pond YL1 and Pond YL2 would be less than an inch. Measurable long-term settlements were not expected because compressible fine-grained soils were not encountered within the anticipated zones of stress influence. Due to the predominantly cohesionless, granular nature of the encountered soils, the estimated total settlements should be short-term, with the majority of settlement occurring progressively as embankments are constructed.

POND EMBANKMENT SEEPAGE

Existing ground elevations within and around Pond WR1 were shown near El. 33. The design high water level of El. 36.25 in this pond indicated that water would be impounded about three feet above surrounding grades following the design rainfall event. Existing ground elevations within and around Pond YL1 were shown between El. 43 and El. 47. The design high water level of El. 44.35 in Pond YL1 indicated that surface water would be impounded about two feet above surrounding grades. Existing ground elevations within and around Pond YL2 were shown between El. 41 and El. 47. The design high water level of El. 42.75 in Pond YL2 indicated that surface water would be impounded about two feet above surrounding grades.

Based on the proposed embankment geometry and the low head differences between the design high water elevations and outside finished grades, the phreatic water surfaces in the embankments of Pond WR1, Pond YL1 and Pond YL2 were not anticipated to emerge along the outboard slopes. In addition, seepage rates and seepage volumes through these embankments as a result of the design high water levels are expected to be low, and piping failures by internal erosion are not likely. However, higher seepage rates and volumes would occur if the ponds stage above their design high water levels for extended periods of time.

Existing ground elevations within and around Pond WR2 were shown between El. 50 and El. 65. The design high water level of El. 45.26 for this pond was below surrounding grades and the planned embankment foundation elevation, so seepage through the embankment of Pond WR2 as a result of the design high water level is not anticipated.

STABILITY AGAINST DEEP ROTATIONAL FAILURE

As discussed above, seepage through the planned embankments, if any, is expected to be transient in nature and of low volume and low rate. As a result, water is not expected to saturate the embankments and elevate pore-water pressures to levels that could reduce the shear strength of the embankment soils. In addition, embankments will be built with compacted soils that should have sufficient shear strength. Furthermore, the proposed 4H:1V inclination of the embankment slopes and pond side slopes is generally considered stable under the expected service conditions.

In order to confirm these conditions, embankment slopes and pond slopes were analyzed for stability against deep rotational failure using the computer program “STAB6H”. Circular-arc-type failure modes were analyzed using the Modified Bishop Method, a widely accepted two-dimensional limit-state method. Embankment geometry and pond side slopes were modeled using the AECOM drawings and subsurface conditions encountered by the borings. Engineering properties for various soil types were estimated using empirical correlations with SPT N-values. A pseudo-static loading of 250 pound per square foot (psf) was used to simulate vehicle loads.

Stability was analyzed initially under the design high water condition, which simulated seepage through the embankment. As mentioned, the phreatic water surfaces in the embankments of

Pond WR1, Pond WR2, Pond YL1 and Pond YL2 were not anticipated to emerge along the outboard slopes, so the phreatic water surface was assumed to extend from the design high water elevation to the outside toe of slope. Because the planned embankments will be subjected to short-term water storage, a rapid-drawdown condition was also analyzed to simulate the situation where a pond was drawn down from the design high water elevation to the pond bottom within a few days.

As mentioned, embankments were planned to be constructed around the perimeter of Pond WR1. The embankments of the west-to-east cross section and the north-to-south cross section were approximately symmetrical about the centerline of the pond, but the western embankment was considered to be critical because of potential downstream effects. As a result, analyses were conducted for the western embankment of Pond WR1 using a portion of the west-to-east cross section presented in the construction plans.

Embankments were planned to impound the western and northwestern sides of Pond WR2. The grading plans indicated that the maximum height of embankment fill was near the northwest corner of the pond, so analyses were conducted using a portion of the west-to-east cross section presented in the construction plans.

Embankments were planned to be constructed around the perimeter of Pond YL1. Both the northern embankment and the southern embankment were considered to be critical. As a result, analyses were conducted for these embankments.

Embankments were planned to be constructed along the northwestern and northern sides of Pond YL2. The northern embankment and the southern pond slope were considered to be critical. Analyses were conducted for the northern embankment and the southern pond slope using portions of the north-to-south cross section presented in the construction plans.

As mentioned, pond cross sections and pond detail sheets indicated that Pond LS and Pond CC were fully incised, and that no embankments were planned around these ponds.

The lowest factor of safety that is widely accepted for long-term stability against deep rotational failure is 1.5. A factor of safety of 1.3 is often accepted for the rapid drawdown condition. The results of the analyses indicated that the minimum factors of safety against deep rotational failure were higher than 1.5 for the design high water condition and higher than 1.3 for the rapid drawdown condition. Results of the analyses are summarized on the following page in Table 5, with plots presented in Appendix C.

TABLE 5
POND EMBANKMENT AND POND SLOPE
DEEP ROTATIONAL STABILITY ANALYSIS RESULTS

POND	LOCATION	CONDITION	Fs_{min}
WR1	Western embankment	Design high water	1.9
		Rapid drawdown	1.5
WR2	Northwestern corner	Design high water	1.9
		Rapid drawdown	1.8
YL1	Northern Embankment	Design high water	1.7
		Rapid drawdown	1.3
	Southern Embankment	Design high water	1.6
		Rapid drawdown	1.3
YL2	Northern embankment	Design high water	1.7
		Rapid drawdown	1.3
	Southern embankment	Design high water	1.8
		Rapid drawdown	1.4

The factors of safety in Table 5 are for deep rotational failures. Shallow sloughing failures typically have lower factors of safety. To minimize the potential for minor surface erosion or sloughing, finished surfaces of the slopes should be stabilized with grass turf or other appropriate methods. Rapid pumping of water from the ponds should be avoided.

EARTHWORK FOR POND EMBANKMENTS

All organic topsoil, roots, vegetation, tree stumps, and other deleterious or unsuitable materials within ten feet of the "footprint" areas of the proposed embankments should be removed completely. Prior to placement of fill, exposed subgrade soils beneath the proposed embankments should be examined. Any loose or soft soils that are not suitable for foundation support should be removed and replaced with compacted A-3 soils.

It is anticipated that soils excavated from the pond areas will be used to build the embankments. Fill for embankment construction and any backfill for excavations should consist of select soils that are free of roots, vegetation and debris or other deleterious or objectionable materials that can be readily placed and compacted. Excavated deleterious materials should not be used as embankment fill.

The proposed embankments should be constructed in accordance with Section 120-8.2.1 of the FDOT Standard Specifications for Road and Bridge Construction. Fill soils differing significantly

in composition should not be placed adjacent to each other to reduce the potential for localized high hydraulic gradients that could result in internal erosion (piping) of the embankment. The compacted surfaces of the subgrade soils and each completed lift should be scarified before placing the next lift in order to achieve a good bond and avoid the formation of preferential seepage planes between lifts. Filling, scarifying and compacting should continue in lifts until the desired elevations are reached.

ROADWAY EMBANKMENT SETTLEMENT

As mentioned, most of the new mainline and spur will be a four-lane section elevated between 10 feet and about 35 feet above the natural terrain on earth fill retained by MSE walls. Portions of the frontage roads will also be elevated up to 12 feet above existing grade. The self-weight of the fill will induce vertical stresses in the soils beneath the areas where it is placed. These induced stresses (and the resulting settlement) are related to the height of the fill. GEC conducted analyses to estimate settlement of foundation soils due to fill placement, and reported those results under separate cover.

ESTIMATED SEASONAL HIGH GROUNDWATER LEVEL

During the rainy season in Florida, groundwater levels are generally higher than those observed at other times of the year. The extent of that variation depends on several factors, including the terrain, the intensity and duration of rainfall, the hydrogeologic properties of the soils and the presence and proximity of artificial drainage facilities. Higher groundwater levels under the normal, cyclical influence of seasonal rainfall should be expected. In addition, groundwater will likely perch temporarily at higher levels above clayey sand, clay or dense to very dense sand horizons.

Encountered and estimated seasonal high groundwater levels are shown on the Report of Auger Borings sheets and the Report of SPT Borings sheets in Appendix A.

DESIGN HIGH GROUNDWATER LEVEL

A design high groundwater level at the existing ground surface or proposed finished grade, whichever is higher, should be assumed in calculations for design of buried pipes and structures, as well as for dewatering systems and temporary excavation support systems.

GROUNDWATER CONTROL

All excavation activities should be conducted in accordance with FDOT Standard Specifications for Road and Bridge Construction. Below-grade construction should be conducted "in-the-dry". Based on the encountered depths to groundwater, the estimated seasonal high groundwater levels and the anticipated excavation depths, groundwater will likely be encountered during excavation. Contract

documents should require the contractor to verify groundwater levels before starting below-grade construction and to be responsible for all dewatering activities, including groundwater monitoring, regardless of the groundwater levels at the time of and during construction.

Dewatering should be accomplished in accordance with FDOT Standard Specifications for Road and Bridge Construction. To prevent trench instability, groundwater should be drawn down prior to excavation and should be maintained at the recommended level for the duration of all below-grade construction. Dewatering systems should not be decommissioned until excavation, placement and compaction of fill and backfill soils is complete, and sufficient deadweight exists on pipes and buried/embedded structures to prevent uplift. Decommissioning of dewatering systems should be addressed in the contractor's dewatering submittal. Water from dewatering pumps should be discharged as far as practically possible away from the work areas to prevent return flow or erosion.

If wet weather conditions are encountered during construction, the contractor should limit the duration of open cuts, slope the bottoms of the excavations to facilitate drainage and/or provide berms to limit runoff into the excavations. The contractor should have submersible pumps ready to intercept and remove any localized inflows. In addition, excavated materials should be stockpiled to promote runoff and limit wetting of the materials.

It is expected that excavations will be kept dry so that work can proceed safely and efficiently. As indicated previously, groundwater should be maintained below the lowest level of any excavations for below-grade construction activity. However, dewatering systems can fail, allowing groundwater to return to pre-construction level and possibly fill excavations. Subsequent rapid removal of the water by pumping out the excavation to resume work should be avoided as this could create a "rapid drawdown" condition in which hydrostatic pressures in the soil outside the excavation are raised to a point that soil strength is reduced.

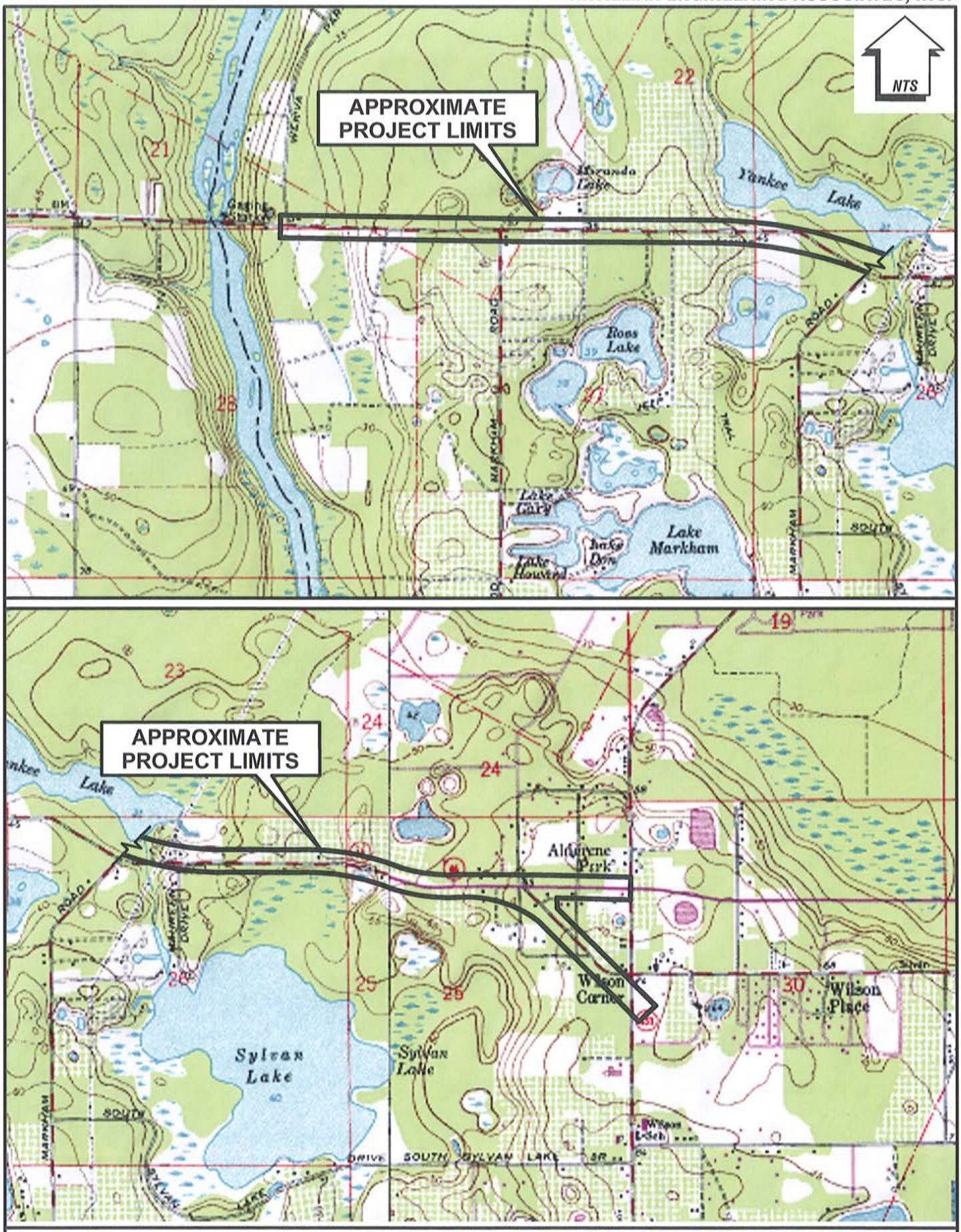
LIMITATIONS

This report presents evaluations of the subsurface conditions at the indicated locations on the basis of accepted geotechnical procedures for site characterization. Recovered soil samples were not examined or tested in any way for chemical composition or environmental hazards.

Investigations were confined to the zones of soil that were most likely to be affected by the proposed construction. They did not address the potential of surface expression of deep geologic activity such as sinkholes, which requires more extensive services than those performed for this study.

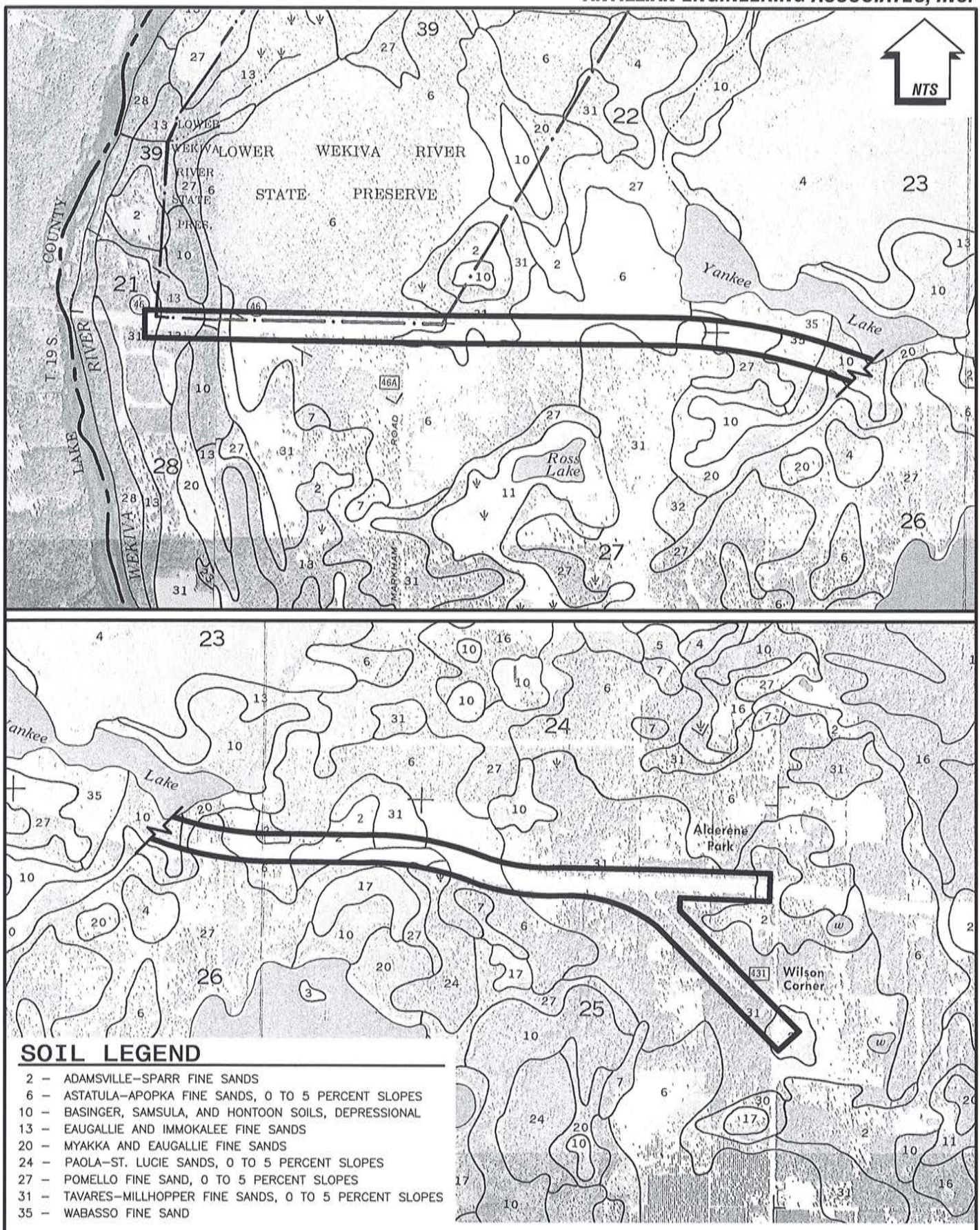
Because of the natural limitations inherent in working below the ground surface, a geotechnical engineer cannot predict and address all possible problems. During construction, ground-related issues not addressed in this report may arise. The bulletin "Important Information About This Geotechnical Engineering Report" published by the Geoprofessional Business Association (GBA) is presented in Appendix D to help explain the nature of geotechnical issues. Additional narrative is presented in Appendix E to help explain the nature of geotechnical engineering issues and to bring attention to potential concerns and basic limitations of a typical geotechnical engineering report.

FIGURES



PROJECT LOCATION MAP

201314	WEKIVA PARKWAY 7A	FIG. 1



SOIL LEGEND

- 2 – ADAMSVILLE–SPARR FINE SANDS
- 6 – ASTATULA–APOPKA FINE SANDS, 0 TO 5 PERCENT SLOPES
- 10 – BASINGER, SAMSULA, AND HONTOON SOILS, DEPRESSIONAL
- 13 – EAUGALLIE AND IMMOKALEE FINE SANDS
- 20 – MYAKKA AND EAUGALLIE FINE SANDS
- 24 – PAOLA–ST. LUCIE SANDS, 0 TO 5 PERCENT SLOPES
- 27 – POMELLO FINE SAND, 0 TO 5 PERCENT SLOPES
- 31 – TAVARES–MILLHOPPER FINE SANDS, 0 TO 5 PERCENT SLOPES
- 35 – WABASSO FINE SAND

Figure developed from UDSA SCS Soil Survey of Seminole County, Florida, issued March, 1990

USDA SCS SOIL SURVEY MAP

201314	WEKIVA PARKWAY 7A	FIG. 2

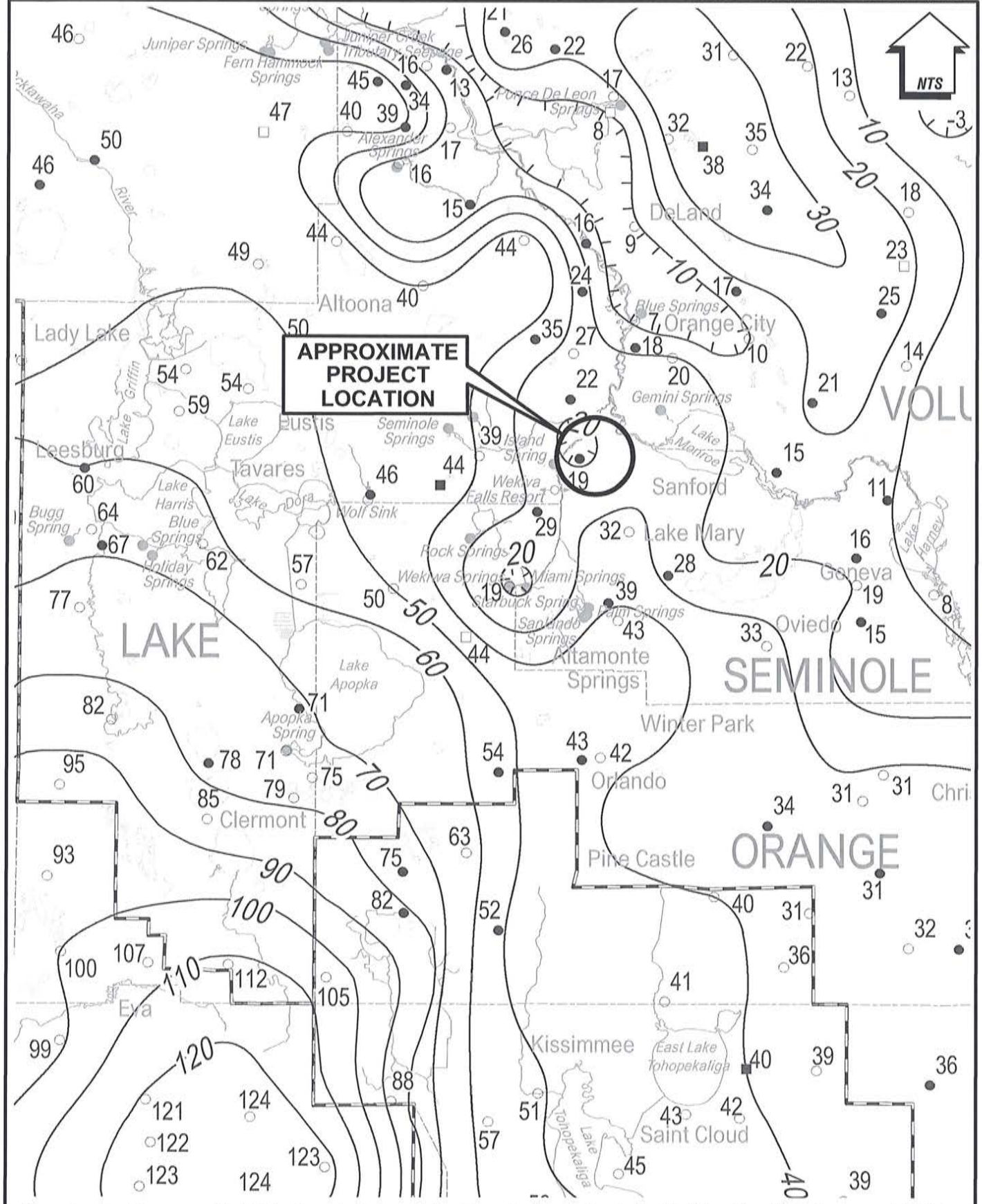


Figure developed from map titled "Potentiometric Surface of the Upper Floridan Aquifer in the St. Johns River Water Management District and Vicinity, Florida, September 2008"

POTENTIOMETRIC SURFACE MAP OF THE UPPER FLORIDAN AQUIFER

201314	WEKIVA PARKWAY 7A	FIG. 3

APPENDIX A

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION
MATERIALS AND RESEARCH

DATE OF SURVEY: 09/2013 TO 04/2015
SURVEY MADE BY: ANTILLIAN ENGINEERING ASSOC., INC.
SUBMITTED BY: PETER G. SUAH, P.E.

PROJECT NAME: S.R. 429 SECTION 7A
FINANCIAL PROJECT ID: 240200-2-52-01

DISTRICT: 5
ROAD NO.: S.R. 429
COUNTY: SEMINOLE

CROSS SECTION SOIL SURVEY FOR THE DESIGN OF ROADS

SURVEY BEGINS STA.: 930+00 SURVEY ENDS STA.: 1114+00
REFERENCE: BASELINE SURVEY

	ORGANIC CONTENT			SIEVE ANALYSIS RESULTS (% PASSING)						ATTERBERG LIMITS (%)					CORROSION TEST RESULTS				ENVIRONMENTAL CLASSIFICATION (SUBSTRUCTURE)	
STRATUM NO.	NO. OF TESTS	% ORGANIC	MOISTURE CONTENT	NO. OF TESTS	#10 MESH	#40 MESH	#60 MESH	#100 MESH	#200 MESH	NO. OF TESTS	LIQUID LIMIT	PLASTICITY INDEX	AASHTO GROUP	DESCRIPTION	RESISTIVITY ohm-cm	CHLORIDES ppm	SULFATES ppm	pH	CONCRETE	STEEL
1	14	2-5	12-27	140 (3)	100	97-100	70-99	13-68	1-10	0	--	--	A-3	WHITE TO GRAY, LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, VERY PALE BROWN TO PALE BROWN, LIGHT BROWN TO VERY DARK BROWN, GRAYISH BROWN TO DARK GRAYISH BROWN, PALE YELLOW, DARK YELLOWISH BROWN TO BROWNISH YELLOW, STRONG BROWN, AND VERY DARK GRAY TO BLACK FINE SAND; TRACE TO FEW SILT OR CLAY; OCCASIONAL TRACE ORGANIC MATTER AND OCCASIONAL TRACE ROOTS	18,000-250,000	<80	<5-30	4.5-6.1	MODERATELY AGGRESSIVE	EXTREMELY AGGRESSIVE
2	1	4	20	139 (9)	100	86-100	31-99	14-89	10-35	36	NP-29	NP-9	A-2-4	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN, GREENISH GRAY, AND BLACK FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE ORGANIC MATTER	22,000-81,000	<60	<5-65	4.4-4.6	EXTREMELY AGGRESSIVE	EXTREMELY AGGRESSIVE
3	0	--	--	8 (4)	100	99-100	92-99	47-87	26-63	8	27-42	11-19	A-2-6 A-6 A-7-6	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN AND GREENISH GRAY FINE SAND; FEW TO LITTLE CLAY	--	--	--	--	--	--
4	37	5-64	15-461	12	100	92-99	69-93	18-56	5-38	0	--	--	A-8	VERY DARK BROWN, VERY DARK GRAY AND BLACK FINE SAND WITH ORGANIC MATTER, SANDY PEAT, ORGANIC SILT AND ORGANIC CLAY	--	--	--	--	--	--
5	0	--	--	4	100	99-100	91-94	36-45	14-17	0	--	--	A-3 A-2-4	DARK BROWN TO VERY DARK BROWN, DARK YELLOWISH BROWN FINE SAND; TRACE TO LITTLE SILT; TRACE CEMENTATION (HARDPAN-TYPE)	--	--	--	--	--	--
6	0	--	--	9 (5)	100	98-100	91-99	84-96	64-94	9	51-97	31-70	A-7-5 A-7-6	LIGHT GRAY, BROWNISH YELLOW, GRAY AND BROWNISH YELLOW, AND STRONG BROWN SANDY CLAY, CLAY AND SILT	--	--	--	--	--	--
7	0	--	--	12	98-100	90-100	69-95	18-46	2-24	2	NP	NP	A-3 A-2-4	YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, AND STRONG BROWN, FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE TO FEW FRAGMENTS OF LIMESTONE, ASPHALT, GLASS, METAL, WOOD AND ROOTS; OFTEN MIXED WITH CLAYEY SANDS (POSSIBLE FILL)	--	--	--	--	--	--

EMBANKMENT AND SUBGRADE MATERIAL

STRATA BOUNDARIES ARE APPROXIMATE. MAKE FINAL CHECK AFTER GRADING

1. SOIL BOUNDARIES ARE APPROXIMATE AND REPRESENT SOIL STRATA AT EACH BORING LOCATION ONLY. ANY SUBSOIL CONNECTING LINES SHOWN ARE FOR ESTIMATING EARTHWORK ONLY AND DO NOT INDICATE ACTUAL STRATUM LIMITS. SUBSURFACE VARIATIONS BETWEEN BORINGS SHOULD BE ANTICIPATED AS INDICATED IN SECTION 2-4 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION. FOR FURTHER DETAILS SEE SECTION 120-3.
2. WATER TABLE SHOWN AS $\underline{\blacktriangledown}$ WHERE ENCOUNTERED AT TIME OF SURVEY. GNE DENOTES GROUNDWATER NOT ENCOUNTERED. ESTIMATED SEASONAL HIGH GROUNDWATER LEVEL SHOWN AS $\underline{\triangledown}$. ESTIMATED SEASONAL HIGH GROUNDWATER LEVEL ABOVE EXISTING GROUND SURFACE SHOWN AS $\frac{\triangledown}{AGS}$. AT LOCATIONS WHERE NO SEASONAL HIGH GROUNDWATER LEVEL SYMBOL IS SHOWN, THE SEASONAL HIGH GROUNDWATER LEVEL WAS ESTIMATED TO BE DEEPER THAN THE BORING COMPLETION DEPTH.
3. REMOVAL OF MUCK AND PLASTIC MATERIAL OCCURRING WITHIN THE ROADWAY SHALL BE ACCOMPLISHED IN ACCORDANCE WITH INDEX NO. 500, UNLESS OTHERWISE SHOWN ON THE PLANS. THE MATERIAL USED IN EMBANKMENT CONSTRUCTION SHALL BE IN ACCORDANCE WITH INDEX NO. 505 FOR FDOT DESIGN STANDARDS.
4. SOIL PARAMETER NOT TESTED DENOTED AS "--" ABOVE.
5. STRATA NOS. 1, 2, 5 AND 7 SHALL BE TREATED AS SELECT (S) MATERIAL IN ACCORDANCE WITH FDOT INDEX 500 AND INDEX 505.
6. STRATUM 3 SHALL BE TREATED AS PLASTIC (P) MATERIAL IN ACCORDANCE WITH FDOT INDEX 500 AND INDEX 505.
7. STRATA NOS. 2, 3, 5 AND 7 MAY RETAIN EXCESS MOISTURE AND MAY BE DIFFICULT TO DRY AND COMPACT.
8. STRATUM NO. 6 SHALL BE TREATED AS HIGH PLASTIC (H) IN ACCORDANCE WITH FDOT INDEX 500 AND INDEX 505.
9. STRATUM NO. 4 SHALL BE TREATED AS MUCK (M) IN ACCORDANCE WITH FDOT INDEX 500 AND INDEX 505.
10. "NP" DENOTES NON-PLASTIC. () DENOTES PERCENT FINES TESTS ONLY.
11. LAYERS OF VERY HARD MATERIALS SUCH AS HARDPAN TYPE SOILS MAY BE ENCOUNTERED IN VARIOUS AREAS OF THE PROJECT. SUCH MATERIALS WILL BE DIFFICULT TO EXCAVATE OR PENETRATE. THE CONTRACTOR SHALL EXPECT TO ENCOUNTER THESE VERY HARD MATERIALS IN ALL EXCAVATIONS AND SHALL USE SPECIALIZED EQUIPMENT AND/OR PROCEDURES AS NECESSARY TO FACILITATE EXCAVATION/PENETRATION.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

PETER G. SUAH, P.E.
P.E. LICENSE NO. 46910
ANTILLIAN ENGINEERING ASSOCIATES, INC.
3331 BARTLETT BOULEVARD
ORLANDO, FLORIDA 32811
CERTIFICATE OF AUTHORIZATION EB6685

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

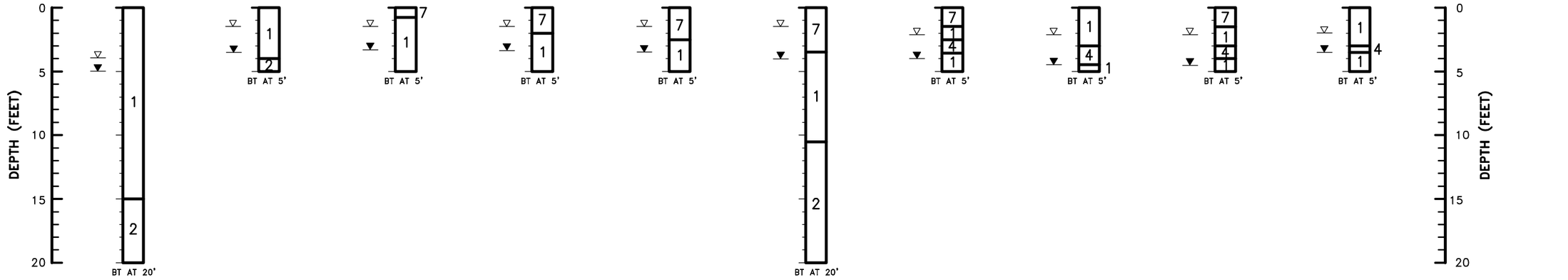
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
429	SEMINOLE	240200-2-52-01

ROADWAY SOILS SURVEY

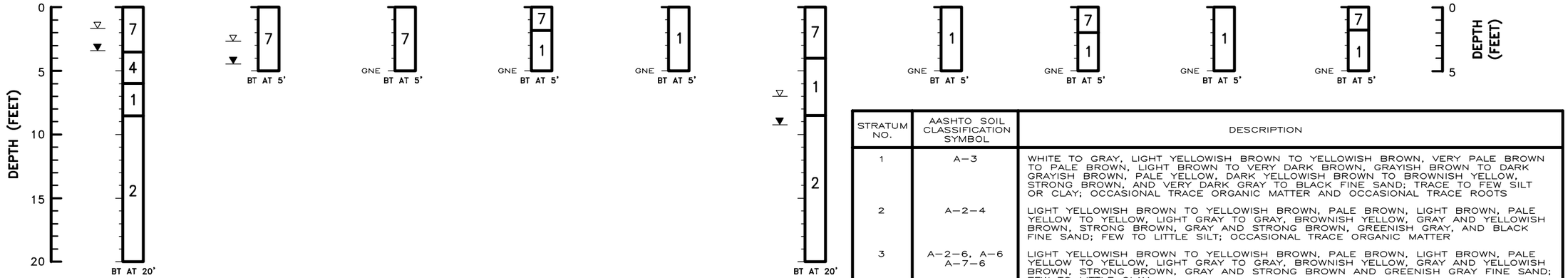
SHEET NO.
XX

NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED UNDER RULE 61G15-23.003, F.A.C.

BORING NUMBER	EB930	EB931	EB932	EB933	EB934	EB935	EB936	EB937	EB938	EB939	BORING NUMBER
APPROXIMATE STATION	930+00	931+00	932+00	933+00	934+00	935+00	936+00	937+00	938+00	939+00	APPROXIMATE STATION
APPROXIMATE OFFSET	113' RT	115' RT	89' RT	125' RT	93' RT	89' RT	90' RT	118' RT	90' RT	118' RT	APPROXIMATE OFFSET
GSE (NAVD88)	27.9	NOT SURVEYED	NOT SURVEYED	NOT SURVEYED	NOT SURVEYED	33.2	NOT SURVEYED	NOT SURVEYED	NOT SURVEYED	NOT SURVEYED	GSE (NAVD88)
DATE DRILLED	09-27-13	10-21-13	10-21-13	10-21-13	10-21-13	09-27-13	10-21-13	10-21-13	10-21-13	10-21-13	DATE DRILLED



BORING NUMBER	EB940	EB941	EB942	EB943	EB944	EB945	EB946	EB947	EB948	EB949	BORING NUMBER
APPROXIMATE STATION	940+00	941+00	942+00	943+00	944+00	945+00	946+00	947+00	948+00	949+00	APPROXIMATE STATION
APPROXIMATE OFFSET	117' RT	118' RT	128' RT	85' RT	120' RT	102' RT	126' RT	109' RT	130' RT	115' RT	APPROXIMATE OFFSET
GSE (NAVD88)	35.2	NOT SURVEYED	NOT SURVEYED	NOT SURVEYED	NOT SURVEYED	45.5	NOT SURVEYED	NOT SURVEYED	NOT SURVEYED	NOT SURVEYED	GSE (NAVD88)
DATE DRILLED	09-27-13	10-22-13	10-22-13	10-22-13	10-22-13	09-27-13	10-22-13	10-22-13	10-22-13	10-22-13	DATE DRILLED



STRATUM NO.	AASHTO SOIL CLASSIFICATION SYMBOL	DESCRIPTION
1	A-3	WHITE TO GRAY, LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, VERY PALE BROWN TO PALE BROWN, LIGHT BROWN TO VERY DARK BROWN, GRAYISH BROWN TO DARK GRAYISH BROWN, PALE YELLOW, DARK YELLOWISH BROWN TO BROWNISH YELLOW, STRONG BROWN, AND VERY DARK GRAY TO BLACK FINE SAND; TRACE TO FEW SILT OR CLAY; OCCASIONAL TRACE ORGANIC MATTER AND OCCASIONAL TRACE ROOTS
2	A-2-4	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN, GREENISH GRAY, AND BLACK FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE ORGANIC MATTER
3	A-2-6, A-6 A-7-6	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN AND GREENISH GRAY FINE SAND; FEW TO LITTLE CLAY
4	A-8	VERY DARK BROWN, VERY DARK GRAY AND BLACK FINE SAND WITH ORGANIC MATTER, SANDY PEAT, ORGANIC SILT AND ORGANIC CLAY
5	A-3, A-2-4	DARK BROWN TO VERY DARK BROWN, DARK YELLOWISH BROWN FINE SAND; TRACE TO LITTLE SILT; TRACE CEMENTATION (HARDPAN-TYPE)
6	A-7-5, A-7-6	LIGHT GRAY, BROWNISH YELLOW, GRAY AND BROWNISH YELLOW, AND STRONG BROWN SANDY CLAY, CLAY AND SILT
7	A-3, A-2-4	YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, AND STRONG BROWN, FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE TO FEW FRAGMENTS OF LIMESTONE, ASPHALT, GLASS, METAL, WOOD AND ROOTS; OFTEN MIXED WITH CLAYEY SANDS (POSSIBLE FILL)

REVISIONS					
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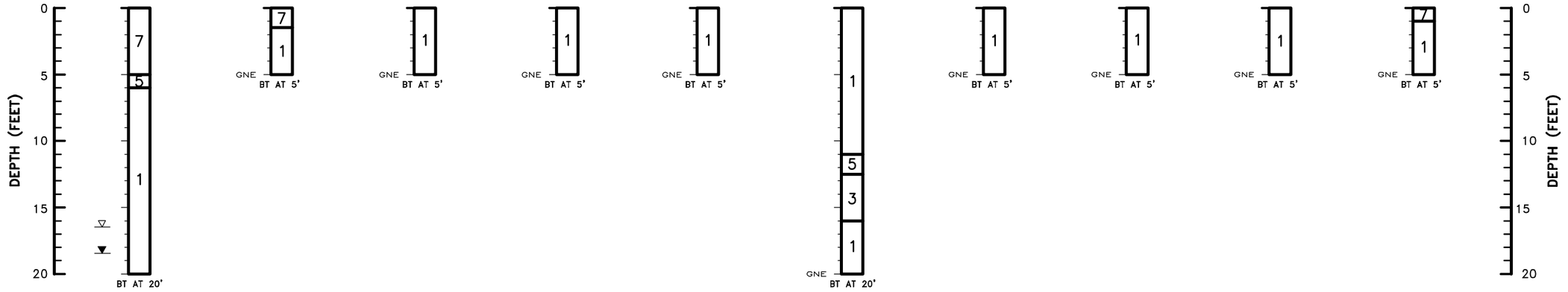
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
429	SEMINOLE	240200-2-52-01

REPORT OF ROADWAY AUGER BORINGS
WEKIVA PARKWAY 7A

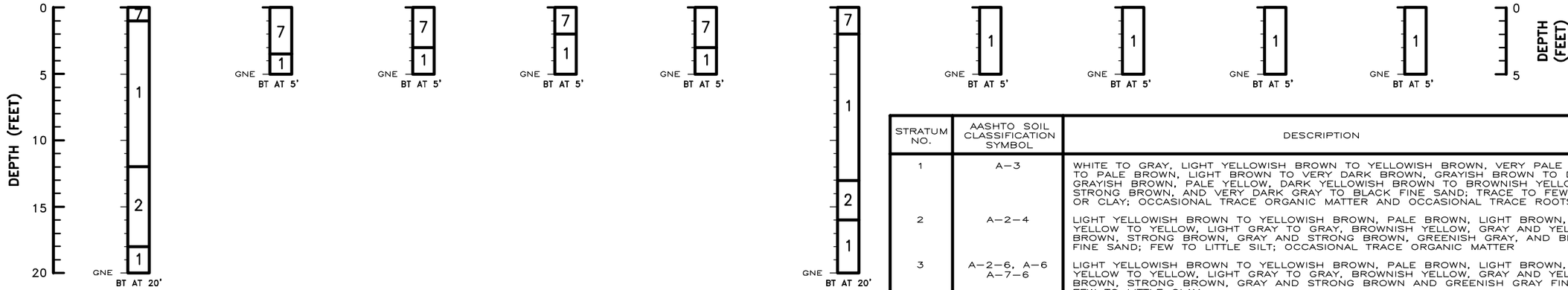
SHEET NO. XX

NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED UNDER RULE 61G15-23.003, F.A.C.

BORING NUMBER	EB950	EB951	EB952	EB953	EB954	EB955	EB956	EB957	EB958	EB959	BORING NUMBER
APPROXIMATE STATION	950+00	951+00	952+00	953+00	954+00	955+00	956+00	957+00	958+00	959+00	APPROXIMATE STATION
APPROXIMATE OFFSET	134' RT	120' RT	140' RT	115' RT	133' RT	99' RT	125' RT	100' RT	122' RT	95' RT	APPROXIMATE OFFSET
GSE (NAVD88)	54.5	NOT SURVEYED	NOT SURVEYED	NOT SURVEYED	NOT SURVEYED	60.4	NOT SURVEYED	NOT SURVEYED	NOT SURVEYED	NOT SURVEYED	GSE (NAVD88)
DATE DRILLED	09-27-13	10-22-13	10-22-13	10-22-13	10-22-13	09-27-13	10-22-13	10-22-13	10-22-13	10-22-13	DATE DRILLED



BORING NUMBER	EB960	EB961	EB962	EB963	EB964	EB965	EB966	EB967	EB968	EB969	BORING NUMBER
APPROXIMATE STATION	960+00	961+00	962+00	963+00	964+00	965+00	966+00	967+00	968+00	969+00	APPROXIMATE STATION
APPROXIMATE OFFSET	114' RT	100' RT	113' RT	113' RT	113' RT	81' RT	118' RT	98' RT	112' RT	95' RT	APPROXIMATE OFFSET
GSE (NAVD88)	56.5	NOT SURVEYED	NOT SURVEYED	NOT SURVEYED	NOT SURVEYED	58.3	NOT SURVEYED	NOT SURVEYED	NOT SURVEYED	NOT SURVEYED	GSE (NAVD88)
DATE DRILLED	09-27-13	10-22-13	10-22-13	10-22-13	10-22-13	09-27-13	10-23-13	10-23-13	10-23-13	10-23-13	DATE DRILLED



STRATUM NO.	AASHTO SOIL CLASSIFICATION SYMBOL	DESCRIPTION
1	A-3	WHITE TO GRAY, LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, VERY PALE BROWN TO PALE BROWN, LIGHT BROWN TO VERY DARK BROWN, GRAYISH BROWN TO DARK GRAYISH BROWN, PALE YELLOW, DARK YELLOWISH BROWN TO BROWNISH YELLOW, STRONG BROWN, AND VERY DARK GRAY TO BLACK FINE SAND; TRACE TO FEW SILT OR CLAY; OCCASIONAL TRACE ORGANIC MATTER AND OCCASIONAL TRACE ROOTS
2	A-2-4	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN, GREENISH GRAY, AND BLACK FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE ORGANIC MATTER
3	A-2-6, A-6 A-7-6	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN AND GREENISH GRAY FINE SAND; FEW TO LITTLE CLAY
4	A-8	VERY DARK BROWN, VERY DARK GRAY AND BLACK FINE SAND WITH ORGANIC MATTER, SANDY PEAT, ORGANIC SILT AND ORGANIC CLAY
5	A-3, A-2-4	DARK BROWN TO VERY DARK BROWN, DARK YELLOWISH BROWN FINE SAND; TRACE TO LITTLE SILT; TRACE CEMENTATION (HARDPAN-TYPE)
6	A-7-5, A-7-6	LIGHT GRAY, BROWNISH YELLOW, GRAY AND BROWNISH YELLOW, AND STRONG BROWN SANDY CLAY, CLAY AND SILT
7	A-3, A-2-4	YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, AND STRONG BROWN, FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE TO FEW FRAGMENTS OF LIMESTONE, ASPHALT, GLASS, METAL, WOOD AND ROOTS; OFTEN MIXED WITH CLAYEY SANDS (POSSIBLE FILL)

NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED UNDER RULE 61G15-23.003, F.A.C.

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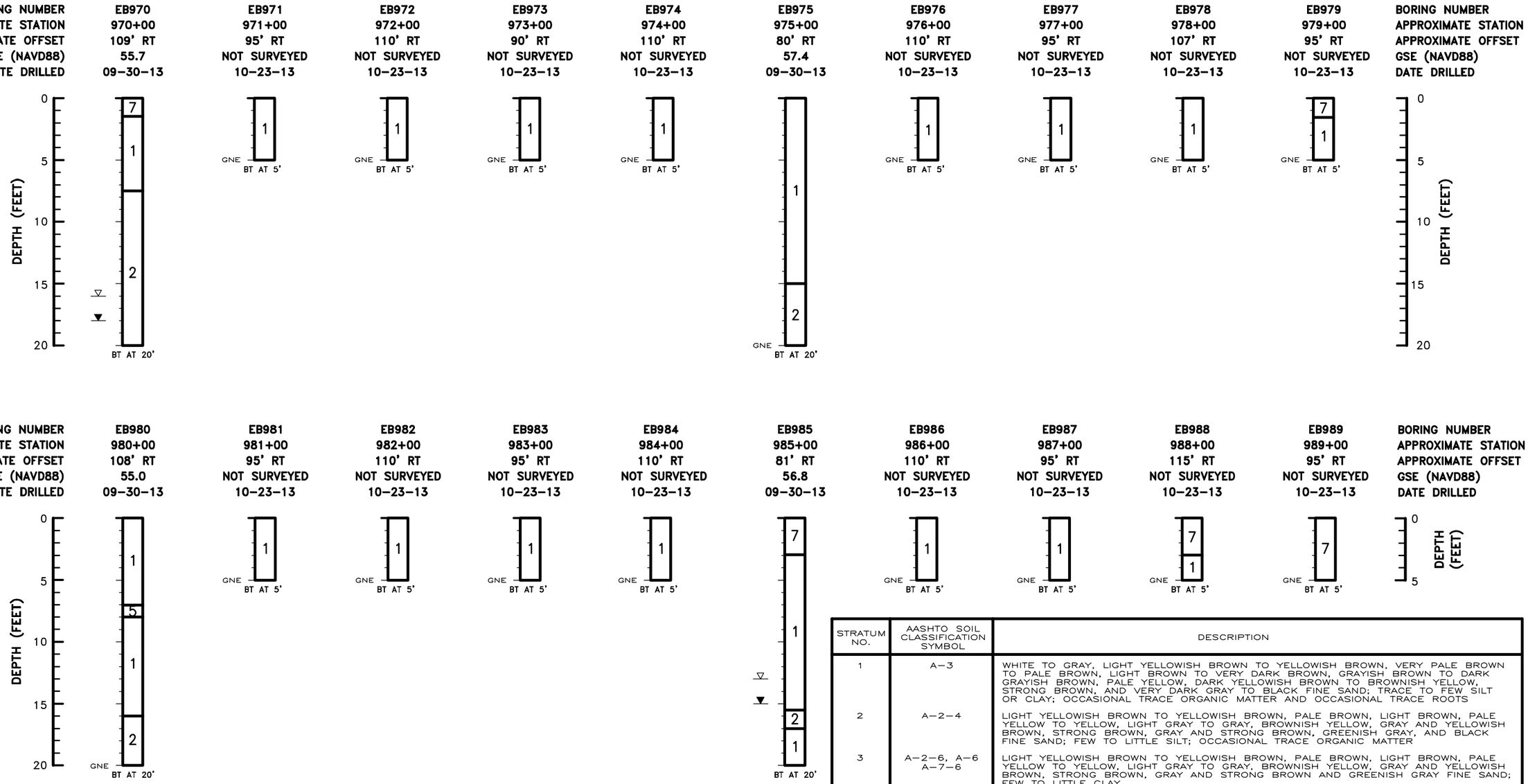
REPORT OF ROADWAY AUGER BORINGS
WEKIVA PARKWAY 7A

SHEET NO. XX



STRATUM NO.	AASHTO SOIL CLASSIFICATION SYMBOL	DESCRIPTION
1	A-3	WHITE TO GRAY, LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, VERY PALE BROWN TO PALE BROWN, LIGHT BROWN TO VERY DARK BROWN, GRAYISH BROWN TO DARK GRAYISH BROWN, PALE YELLOW, DARK YELLOWISH BROWN TO BROWNISH YELLOW, STRONG BROWN, AND VERY DARK GRAY TO BLACK FINE SAND; TRACE TO FEW SILT OR CLAY; OCCASIONAL TRACE ORGANIC MATTER AND OCCASIONAL TRACE ROOTS
2	A-2-4	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN, GREENISH GRAY, AND BLACK FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE ORGANIC MATTER
3	A-2-6, A-6 A-7-6	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN AND GREENISH GRAY FINE SAND; FEW TO LITTLE CLAY
4	A-8	VERY DARK BROWN, VERY DARK GRAY AND BLACK FINE SAND WITH ORGANIC MATTER, SANDY PEAT, ORGANIC SILT AND ORGANIC CLAY
5	A-3, A-2-4	DARK BROWN TO VERY DARK BROWN, DARK YELLOWISH BROWN FINE SAND; TRACE TO LITTLE SILT; TRACE CEMENTATION (HARDPAN-TYPE)
6	A-7-5, A-7-6	LIGHT GRAY, BROWNISH YELLOW, GRAY AND BROWNISH YELLOW, AND STRONG BROWN SANDY CLAY, CLAY AND SILT
7	A-3, A-2-4	YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, AND STRONG BROWN, FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE TO FEW FRAGMENTS OF LIMESTONE, ASPHALT, GLASS, METAL, WOOD AND ROOTS; OFTEN MIXED WITH CLAYEY SANDS (POSSIBLE FILL)

NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED UNDER RULE 61G15-23.003, F.A.C.

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DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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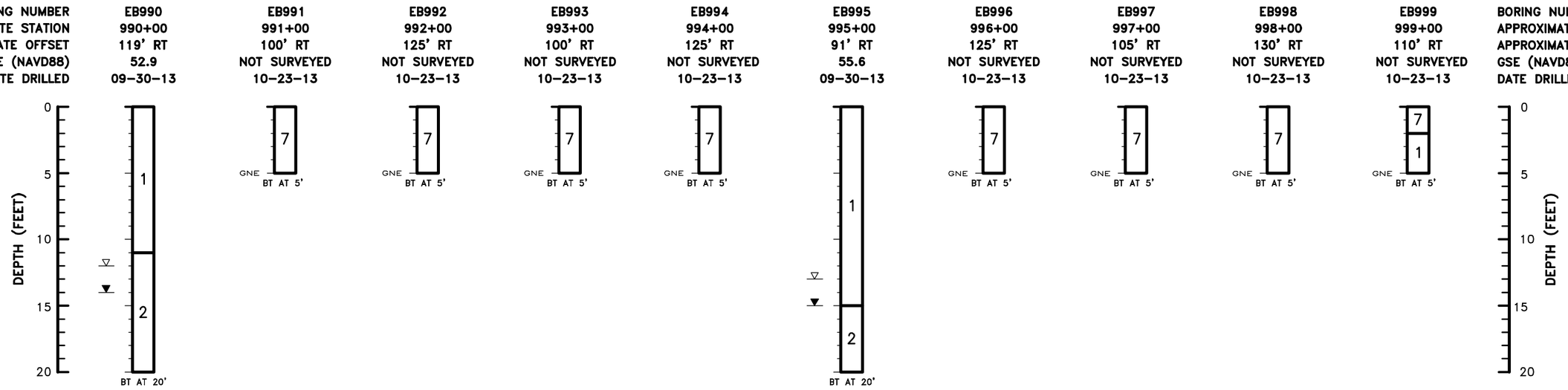
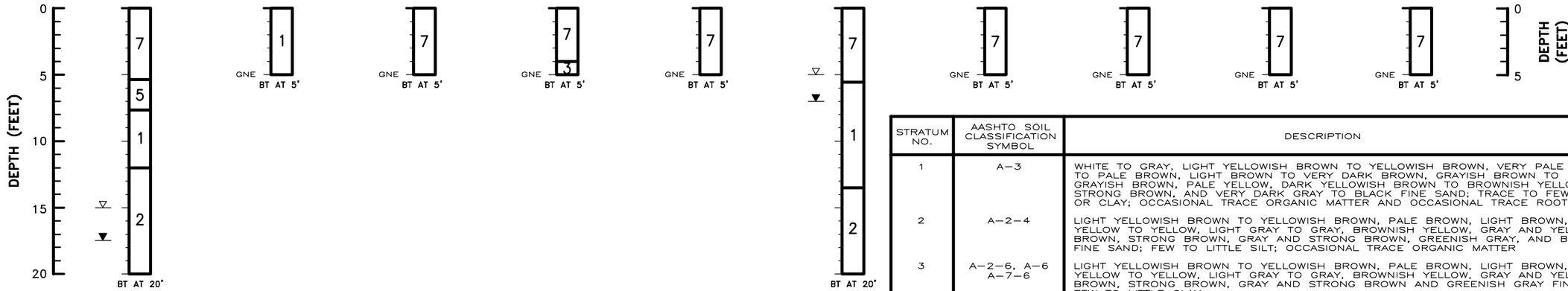
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
429	SEMINOLE	240200-2-52-01

REPORT OF ROADWAY AUGER BORINGS
WEKIVA PARKWAY 7A

SHEET NO. XX





STRATUM NO.	AASHTO SOIL CLASSIFICATION SYMBOL	DESCRIPTION
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2	A-2-4	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN, GREENISH GRAY, AND BLACK FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE ORGANIC MATTER
3	A-2-6, A-6 A-7-6	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN AND GREENISH GRAY FINE SAND; FEW TO LITTLE CLAY
4	A-8	VERY DARK BROWN, VERY DARK GRAY AND BLACK FINE SAND WITH ORGANIC MATTER, SANDY PEAT, ORGANIC SILT AND ORGANIC CLAY
5	A-3, A-2-4	DARK BROWN TO VERY DARK BROWN, DARK YELLOWISH BROWN FINE SAND; TRACE TO LITTLE SILT; TRACE CEMENTATION (HARDPAN-TYPE)
6	A-7-5, A-7-6	LIGHT GRAY, BROWNISH YELLOW, GRAY AND BROWNISH YELLOW, AND STRONG BROWN SANDY CLAY, CLAY AND SILT
7	A-3, A-2-4	YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, AND STRONG BROWN, FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE TO FEW FRAGMENTS OF LIMESTONE, ASPHALT, GLASS, METAL, WOOD AND ROOTS; OFTEN MIXED WITH CLAYEY SANDS (POSSIBLE FILL)

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

PETER G. SUAH, P.E.
P.E. LICENSE NO. 46910

ANTILLIAN ENGINEERING ASSOCIATES, INC.
3331 BARTLETT BOULEVARD
ORLANDO, FLORIDA 32811
CERTIFICATE OF AUTHORIZATION EB6685

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

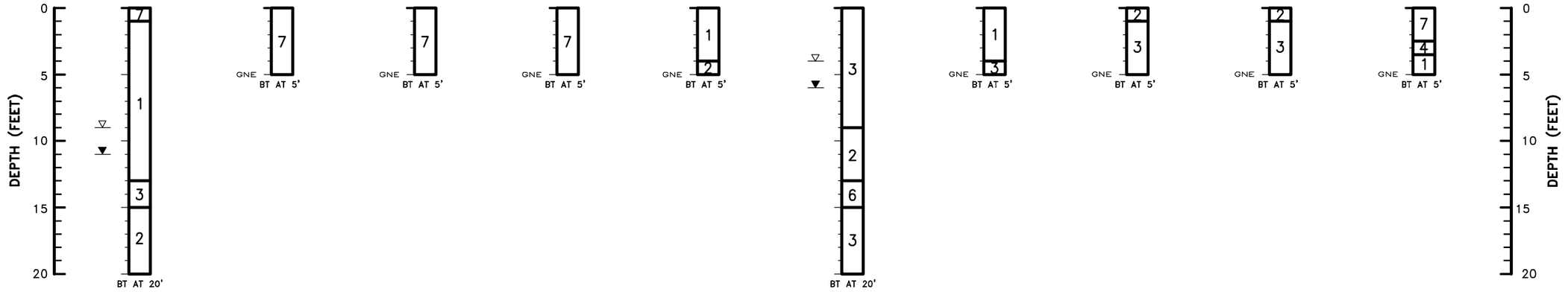
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
429	SEMINOLE	240200-2-52-01

REPORT OF ROADWAY AUGER BORINGS
WEKIVA PARKWAY 7A

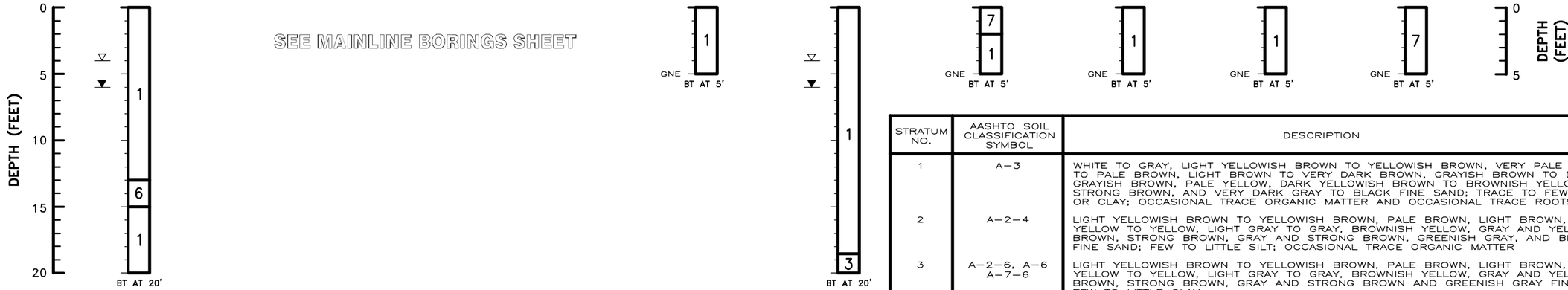
SHEET NO. XX

NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED UNDER RULE 61G15-23.003, F.A.C.

BORING NUMBER	EB1010	EB1011	EB1012	EB1013	EB1014	EB1015	EB1016	EB1017	EB1018	EB1019	BORING NUMBER
APPROXIMATE STATION	1010+00	1011+00	1012+00	1013+00	1014+00	1015+00	1016+00	1017+00	1018+00	1019+00	APPROXIMATE STATION
APPROXIMATE OFFSET	119' RT	105' RT	90' RT	115' RT	90' RT	91' RT	90' RT	117' RT	85' RT	112' RT	APPROXIMATE OFFSET
GSE (NAVD88)	43.3	NOT SURVEYED	NOT SURVEYED	NOT SURVEYED	NOT SURVEYED	37.1	NOT SURVEYED	NOT SURVEYED	NOT SURVEYED	NOT SURVEYED	GSE (NAVD88)
DATE DRILLED	10-04-13	10-24-13	10-24-13	10-24-13	10-24-13	10-04-13	10-24-13	10-24-13	10-24-13	10-24-13	DATE DRILLED



BORING NUMBER	EB1020	1021+00	1022+00	1023+00	EB1024	EB1025	EB1026	EB1027	EB1028	EB1029	BORING NUMBER
APPROXIMATE STATION	1020+00				1024+00	1025+00	1026+00	1027+00	1028+00	1029+00	APPROXIMATE STATION
APPROXIMATE OFFSET	111' RT				110' RT	81' RT	110' RT	77' RT	110' RT	77' RT	APPROXIMATE OFFSET
GSE (NAVD88)	37.8				NOT SURVEYED	37.3	NOT SURVEYED	NOT SURVEYED	NOT SURVEYED	NOT SURVEYED	GSE (NAVD88)
DATE DRILLED	XX-XX-XX				10-24-13	10-04-13	10-24-13	10-24-13	10-24-13	10-24-13	DATE DRILLED



SEE MAINLINE BORINGS SHEET

STRATUM NO.	AASHTO SOIL CLASSIFICATION SYMBOL	DESCRIPTION
1	A-3	WHITE TO GRAY, LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, VERY PALE BROWN TO PALE BROWN, LIGHT BROWN TO VERY DARK BROWN, GRAYISH BROWN TO DARK GRAYISH BROWN, PALE YELLOW, DARK YELLOWISH BROWN TO BROWNISH YELLOW, STRONG BROWN, AND VERY DARK GRAY TO BLACK FINE SAND; TRACE TO FEW SILT OR CLAY; OCCASIONAL TRACE ORGANIC MATTER AND OCCASIONAL TRACE ROOTS
2	A-2-4	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN, GREENISH GRAY, AND BLACK FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE ORGANIC MATTER
3	A-2-6, A-6 A-7-6	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN AND GREENISH GRAY FINE SAND; FEW TO LITTLE CLAY
4	A-8	VERY DARK BROWN, VERY DARK GRAY AND BLACK FINE SAND WITH ORGANIC MATTER, SANDY PEAT, ORGANIC SILT AND ORGANIC CLAY
5	A-3, A-2-4	DARK BROWN TO VERY DARK BROWN, DARK YELLOWISH BROWN FINE SAND; TRACE TO LITTLE SILT; TRACE CEMENTATION (HARDPAN-TYPE)
6	A-7-5, A-7-6	LIGHT GRAY, BROWNISH YELLOW, GRAY AND BROWNISH YELLOW, AND STRONG BROWN SANDY CLAY, CLAY AND SILT
7	A-3, A-2-4	YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, AND STRONG BROWN, FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE TO FEW FRAGMENTS OF LIMESTONE, ASPHALT, GLASS, METAL, WOOD AND ROOTS; OFTEN MIXED WITH CLAYEY SANDS (POSSIBLE FILL)

NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED UNDER RULE 61G15-23.003, F.A.C.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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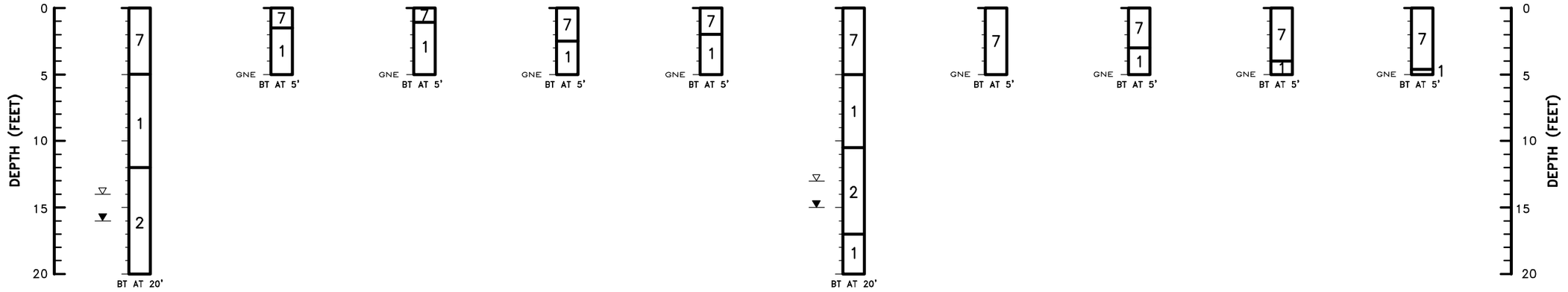
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
429	SEMINOLE	240200-2-52-01

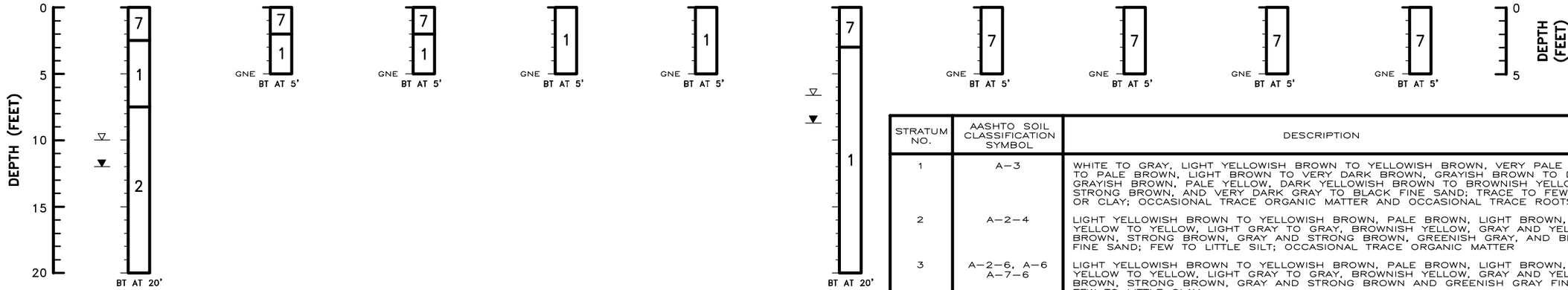
REPORT OF ROADWAY AUGER BORINGS
WEKIVA PARKWAY 7A

SHEET NO. XX

BORING NUMBER	EB1030	EB1031	EB1032	EB1033	EB1034	EB1035	EB1036	EB1037	EB1038	EB1039	BORING NUMBER
APPROXIMATE STATION	1030+00	1031+00	1032+00	1033+00	1034+00	1035+00	1036+00	1037+00	1038+00	1039+00	APPROXIMATE STATION
APPROXIMATE OFFSET	109' RT	78' RT	90' RT	75' RT	115' RT	81' RT	110' RT	108' RT	108' RT	108' RT	APPROXIMATE OFFSET
GSE (NAVD88)	47.1	NOT SURVEYED	NOT SURVEYED	NOT SURVEYED	NOT SURVEYED	50.8	NOT SURVEYED	NOT SURVEYED	NOT SURVEYED	NOT SURVEYED	GSE (NAVD88)
DATE DRILLED	10-04-13	10-24-13	10-24-13	10-24-13	10-24-13	10-04-13	10-24-13	10-24-13	10-24-13	10-24-13	DATE DRILLED



BORING NUMBER	EB1040	EB1041	EB1042	EB1043	EB1044	EB1045	EB1046	EB1047	EB1048	EB1049	BORING NUMBER
APPROXIMATE STATION	1040+00	1041+00	1042+00	1043+00	1044+00	1045+00	1046+00	1047+00	1048+00	1049+00	APPROXIMATE STATION
APPROXIMATE OFFSET	109' RT	125' RT	105' RT	105' RT	108' RT	81' RT	110' RT	110' RT	110' RT	110' RT	APPROXIMATE OFFSET
GSE (NAVD88)	48.9	NOT SURVEYED	NOT SURVEYED	NOT SURVEYED	NOT SURVEYED	49.4	NOT SURVEYED	NOT SURVEYED	NOT SURVEYED	NOT SURVEYED	GSE (NAVD88)
DATE DRILLED	10-04-13	10-24-13	10-24-13	10-24-13	10-24-13	10-04-13	10-24-13	10-24-13	10-24-13	10-24-13	DATE DRILLED



STRATUM NO.	AASHTO SOIL CLASSIFICATION SYMBOL	DESCRIPTION
1	A-3	WHITE TO GRAY, LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, VERY PALE BROWN TO PALE BROWN, LIGHT BROWN TO VERY DARK BROWN, GRAYISH BROWN TO DARK GRAYISH BROWN, PALE YELLOW, DARK YELLOWISH BROWN TO BROWNISH YELLOW, STRONG BROWN, AND VERY DARK GRAY TO BLACK FINE SAND; TRACE TO FEW SILT OR CLAY; OCCASIONAL TRACE ORGANIC MATTER AND OCCASIONAL TRACE ROOTS
2	A-2-4	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN, GREENISH GRAY, AND BLACK FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE ORGANIC MATTER
3	A-2-6, A-6 A-7-6	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN AND GREENISH GRAY FINE SAND; FEW TO LITTLE CLAY
4	A-8	VERY DARK BROWN, VERY DARK GRAY AND BLACK FINE SAND WITH ORGANIC MATTER, SANDY PEAT, ORGANIC SILT AND ORGANIC CLAY
5	A-3, A-2-4	DARK BROWN TO VERY DARK BROWN, DARK YELLOWISH BROWN FINE SAND; TRACE TO LITTLE SILT; TRACE CEMENTATION (HARDPAN-TYPE)
6	A-7-5, A-7-6	LIGHT GRAY, BROWNISH YELLOW, GRAY AND BROWNISH YELLOW, AND STRONG BROWN SANDY CLAY, CLAY AND SILT
7	A-3, A-2-4	YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, AND STRONG BROWN, FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE TO FEW FRAGMENTS OF LIMESTONE, ASPHALT, GLASS, METAL, WOOD AND ROOTS; OFTEN MIXED WITH CLAYEY SANDS (POSSIBLE FILL)

NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED UNDER RULE 61G15-23.003, F.A.C.

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DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

PETER G. SUAH, P.E.
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3331 BARTLETT BOULEVARD
ORLANDO, FLORIDA 32811
CERTIFICATE OF AUTHORIZATION EB6685

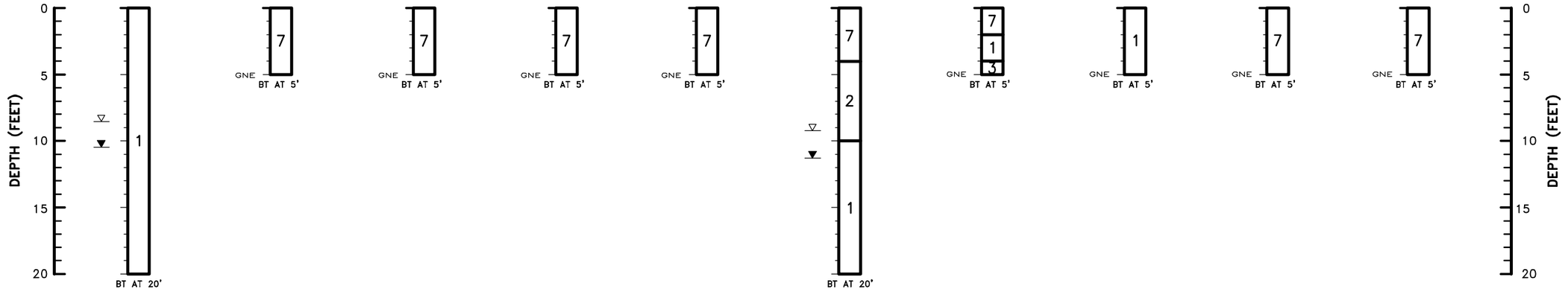
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
429	SEMINOLE	240200-2-52-01

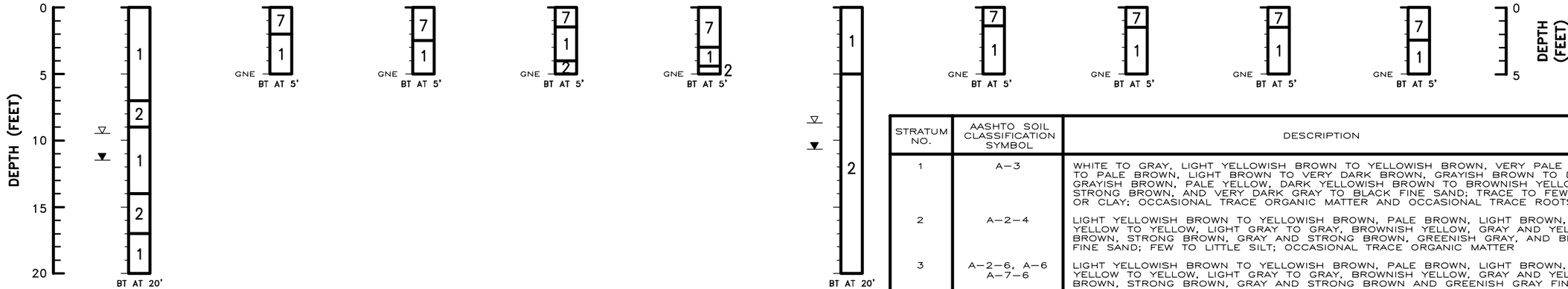
REPORT OF ROADWAY AUGER BORINGS
WEKIVA PARKWAY 7A

SHEET NO. XX

BORING NUMBER	EB1050	EB1051	EB1052	EB1053	EB1054	EB1055	EB1056	EB1057	EB1058	EB1059
APPROXIMATE STATION	1050+00	1051+00	1052+00	1053+00	1054+00	1055+00	1056+00	1057+00	1058+40	1059+00
APPROXIMATE OFFSET	109' RT	110' RT	115' RT	115' RT	115' RT	69' RT	118' RT	125' RT	125' RT	85' RT
GSE (NAVD88)	47.3	NOT SURVEYED	NOT SURVEYED	NOT SURVEYED	NOT SURVEYED	49.0	NOT SURVEYED	NOT SURVEYED	NOT SURVEYED	NOT SURVEYED
DATE DRILLED	10-10-13	10-25-13	10-25-13	10-25-13	10-25-13	10-10-13	10-25-13	10-25-13	10-25-13	10-25-13



BORING NUMBER	EB1060	EB1061	EB1062	EB1063	EB1064	EB1065	EB1066	EB1067	EB1068	EB1069
APPROXIMATE STATION	1060+00	1061+00	1062+00	1063+00	1064+00	1065+00	1066+00	1067+00	1068+00	1069+00
APPROXIMATE OFFSET	123' RT	100' RT	122' RT	115' RT	145' RT	129' RT	160' RT	140' RT	173' RT	150' RT
GSE (NAVD88)	49.7	NOT SURVEYED	NOT SURVEYED	NOT SURVEYED	NOT SURVEYED	51.9	NOT SURVEYED	NOT SURVEYED	NOT SURVEYED	NOT SURVEYED
DATE DRILLED	10-10-13	10-25-13	10-25-13	10-25-13	10-25-13	10-10-13	10-25-13	10-25-13	10-25-13	10-25-13



STRATUM NO.	AASHTO SOIL CLASSIFICATION SYMBOL	DESCRIPTION
1	A-3	WHITE TO GRAY, LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, VERY PALE BROWN TO PALE BROWN, LIGHT BROWN TO VERY DARK BROWN, GRAYISH BROWN TO DARK GRAYISH BROWN, PALE YELLOW, DARK YELLOWISH BROWN TO BROWNISH YELLOW, STRONG BROWN, AND VERY DARK GRAY TO BLACK FINE SAND; TRACE TO FEW SILT OR CLAY; OCCASIONAL TRACE ORGANIC MATTER AND OCCASIONAL TRACE ROOTS
2	A-2-4	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN, GREENISH GRAY, AND BLACK FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE ORGANIC MATTER
3	A-2-6, A-6 A-7-6	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN AND GREENISH GRAY FINE SAND; FEW TO LITTLE CLAY
4	A-8	VERY DARK BROWN, VERY DARK GRAY AND BLACK FINE SAND WITH ORGANIC MATTER, SANDY PEAT, ORGANIC SILT AND ORGANIC CLAY
5	A-3, A-2-4	DARK BROWN TO VERY DARK BROWN, DARK YELLOWISH BROWN FINE SAND; TRACE TO LITTLE SILT; TRACE CEMENTATION (HARDPAN-TYPE)
6	A-7-5, A-7-6	LIGHT GRAY, BROWNISH YELLOW, GRAY AND BROWNISH YELLOW, AND STRONG BROWN SANDY CLAY, CLAY AND SILT
7	A-3, A-2-4	YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, AND STRONG BROWN, FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE TO FEW FRAGMENTS OF LIMESTONE, ASPHALT, GLASS, METAL, WOOD AND ROOTS; OFTEN MIXED WITH CLAYEY SANDS (POSSIBLE FILL)

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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CERTIFICATE OF AUTHORIZATION EB6685

STATE OF FLORIDA
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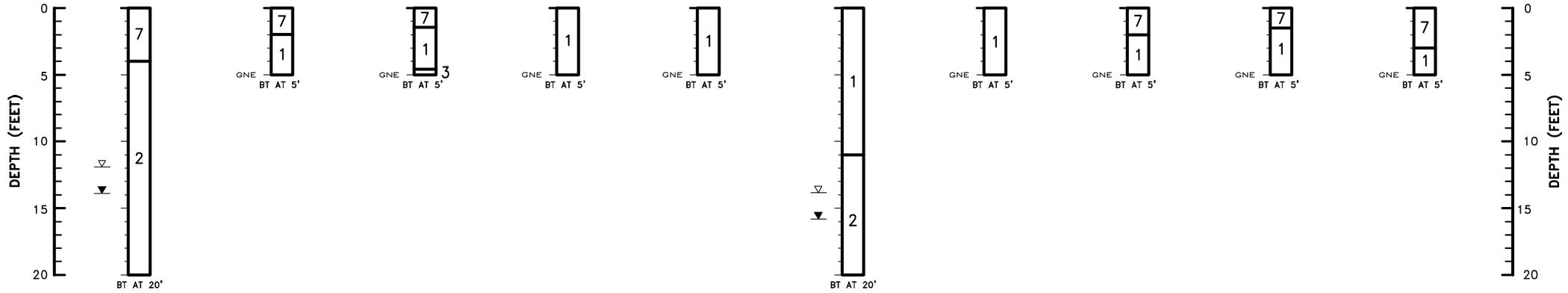
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
429	SEMINOLE	240200-2-52-01

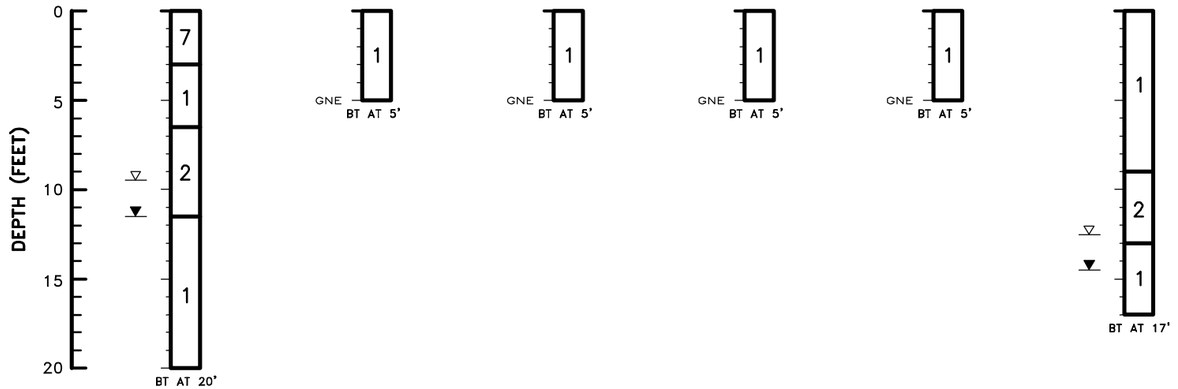
REPORT OF ROADWAY AUGER BORINGS
WEKIVA PARKWAY 7A

SHEET NO. XX

BORING NUMBER	EB1070	EB1071	EB1072	EB1073	EB1074	EB1075	EB1076	EB1077	EB1078	EB1079	BORING NUMBER
APPROXIMATE STATION	1070+00	1071+00	1072+00	1073+00	1074+00	1075+00	1076+00	1077+00	1078+00	1079+00	APPROXIMATE STATION
APPROXIMATE OFFSET	187' RT	165' RT	183' RT	165' RT	205' RT	180' RT	200' RT	165' RT	200' RT	150' RT	APPROXIMATE OFFSET
GSE (NAVD88)	55.4	NOT SURVEYED	NOT SURVEYED	NOT SURVEYED	NOT SURVEYED	60.1	NOT SURVEYED	NOT SURVEYED	NOT SURVEYED	NOT SURVEYED	GSE (NAVD88)
DATE DRILLED	10-10-13	10-25-13	10-25-13	10-25-13	10-25-13	10-10-13	06-18-14	06-18-14	06-18-14	06-18-14	DATE DRILLED



BORING NUMBER	EB1080	EB1081	EB1082	EB1083	EB1084	EB1085	EB174	EB175	EB177	BORING NUMBER
APPROXIMATE STATION	1080+00	1081+00	1082+00	1083+00	1084+00	1085+00	174+50	175+50	177+00	APPROXIMATE STATION
APPROXIMATE OFFSET	200' RT	100' RT	100' RT	CL	65' RT	179' LT	125' RT	95' RT	175' RT	APPROXIMATE OFFSET
GSE (NAVD88)	62.0	NOT SURVEYED	NOT SURVEYED	NOT SURVEYED	NOT SURVEYED	65.2	NOT SURVEYED	NOT SURVEYED	NOT SURVEYED	GSE (NAVD88)
DATE DRILLED	06-23-14	06-18-14	06-18-14	06-18-14	06-18-14	07-17-14	10-25-13	10-25-13	10-28-13	DATE DRILLED



STRATUM NO.	AASHTO SOIL CLASSIFICATION SYMBOL	DESCRIPTION
1	A-3	WHITE TO GRAY, LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, VERY PALE BROWN TO PALE BROWN, LIGHT BROWN TO VERY DARK BROWN, GRAYISH BROWN TO DARK GRAYISH BROWN, PALE YELLOW, DARK YELLOWISH BROWN TO BROWNISH YELLOW, STRONG BROWN, AND VERY DARK GRAY TO BLACK FINE SAND; TRACE TO FEW SILT OR CLAY; OCCASIONAL TRACE ORGANIC MATTER AND OCCASIONAL TRACE ROOTS
2	A-2-4	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN, GREENISH GRAY, AND BLACK FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE ORGANIC MATTER
3	A-2-6, A-6 A-7-6	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN AND GREENISH GRAY FINE SAND; FEW TO LITTLE CLAY
4	A-8	VERY DARK BROWN, VERY DARK GRAY AND BLACK FINE SAND WITH ORGANIC MATTER, SANDY PEAT, ORGANIC SILT AND ORGANIC CLAY
5	A-3, A-2-4	DARK BROWN TO VERY DARK BROWN, DARK YELLOWISH BROWN FINE SAND; TRACE TO LITTLE SILT; TRACE CEMENTATION (HARDPAN-TYPE)
6	A-7-5, A-7-6	LIGHT GRAY, BROWNISH YELLOW, GRAY AND BROWNISH YELLOW, AND STRONG BROWN SANDY CLAY, CLAY AND SILT
7	A-3, A-2-4	YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, AND STRONG BROWN, FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE TO FEW FRAGMENTS OF LIMESTONE, ASPHALT, GLASS, METAL, WOOD AND ROOTS; OFTEN MIXED WITH CLAYEY SANDS (POSSIBLE FILL)

NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED UNDER RULE 61G15-23.003, F.A.C.

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DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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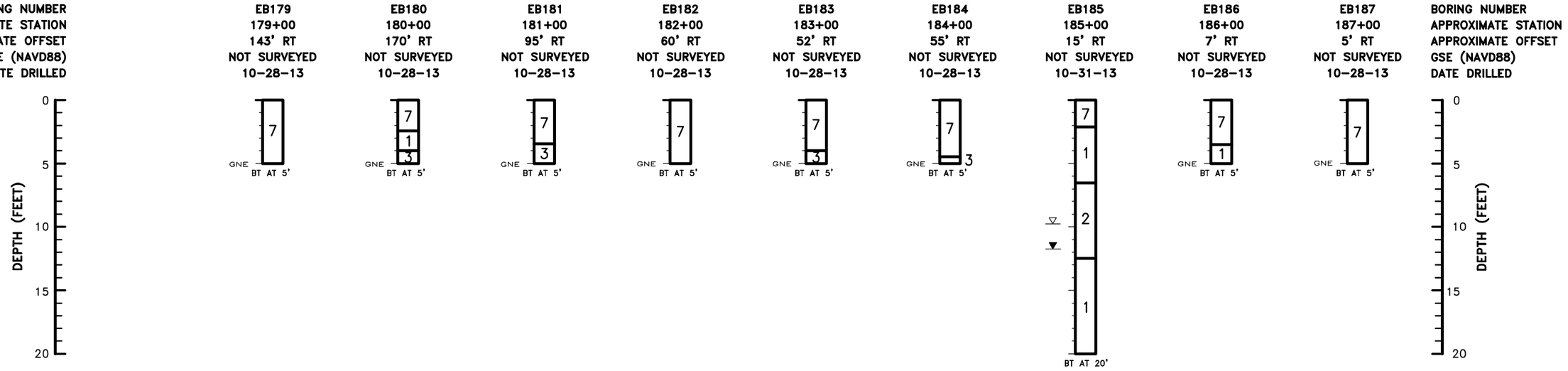
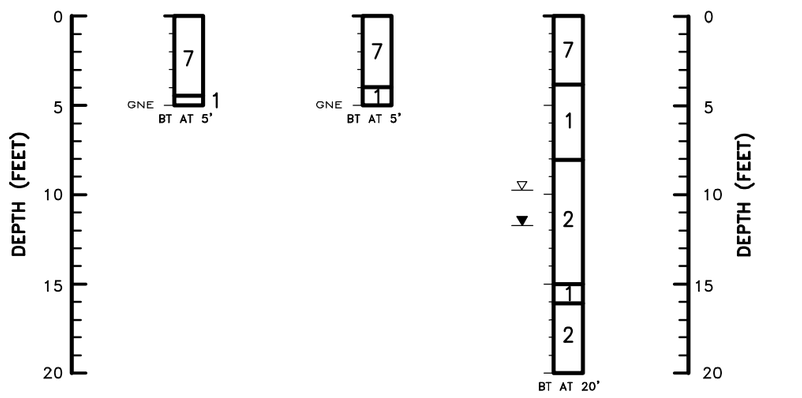
429	SEMINOLE	240200-2-52-01

REPORT OF ROADWAY AUGER BORINGS
WEKIVA PARKWAY 7A

SHEET NO. XX





STRATUM NO.	AASHTO SOIL CLASSIFICATION SYMBOL	DESCRIPTION
1	A-3	WHITE TO GRAY, LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, VERY PALE BROWN TO PALE BROWN, LIGHT BROWN TO VERY DARK BROWN, GRAYISH BROWN TO DARK GRAYISH BROWN, PALE YELLOW, DARK YELLOWISH BROWN TO BROWNISH YELLOW, STRONG BROWN, AND VERY DARK GRAY TO BLACK FINE SAND; TRACE TO FEW SILT OR CLAY; OCCASIONAL TRACE ORGANIC MATTER AND OCCASIONAL TRACE ROOTS
2	A-2-4	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN, GREENISH GRAY, AND BLACK FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE ORGANIC MATTER
3	A-2-6, A-6 A-7-6	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN AND GREENISH GRAY FINE SAND; FEW TO LITTLE CLAY
4	A-8	VERY DARK BROWN, VERY DARK GRAY AND BLACK FINE SAND WITH ORGANIC MATTER, SANDY PEAT, ORGANIC SILT AND ORGANIC CLAY
5	A-3, A-2-4	DARK BROWN TO VERY DARK BROWN, DARK YELLOWISH BROWN FINE SAND; TRACE TO LITTLE SILT; TRACE CEMENTATION (HARDPAN-TYPE)
6	A-7-5, A-7-6	LIGHT GRAY, BROWNISH YELLOW, GRAY AND BROWNISH YELLOW, AND STRONG BROWN SANDY CLAY, CLAY AND SILT
7	A-3, A-2-4	YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, AND STRONG BROWN, FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE TO FEW FRAGMENTS OF LIMESTONE, ASPHALT, GLASS, METAL, WOOD AND ROOTS; OFTEN MIXED WITH CLAYEY SANDS (POSSIBLE FILL)

NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED UNDER RULE 61G15-23.003, F.A.C.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

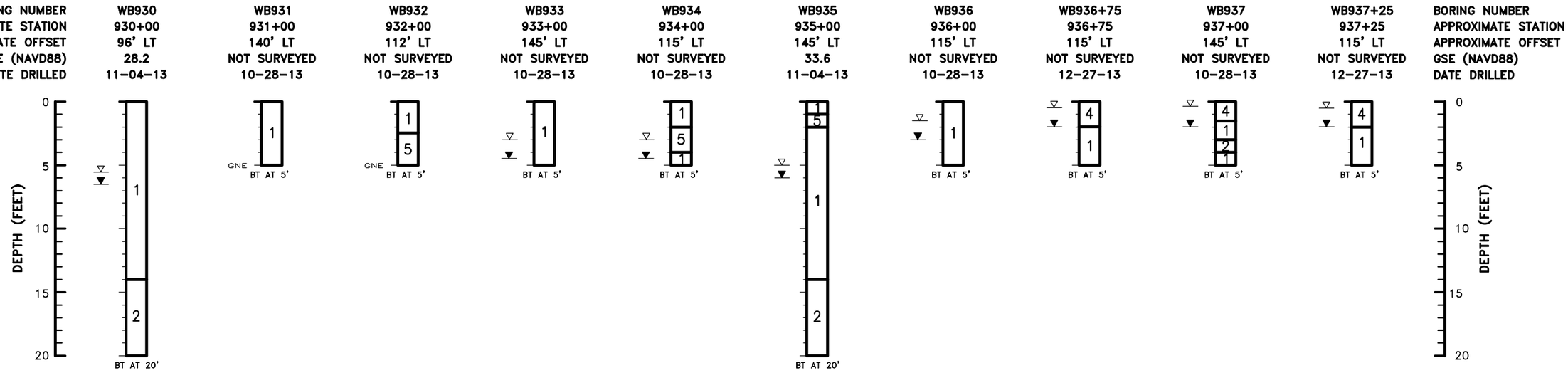
PETER G. SUAH, P.E.
P.E. LICENSE NO. 46910
ANTILLIAN ENGINEERING ASSOCIATES, INC.
3331 BARTLETT BOULEVARD
ORLANDO, FLORIDA 32811
CERTIFICATE OF AUTHORIZATION EB6685

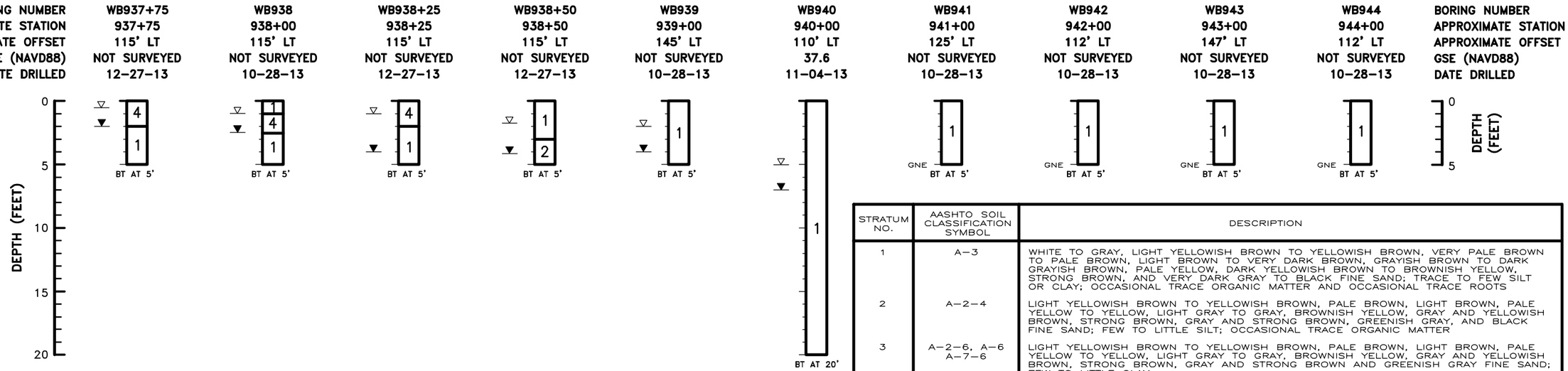
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
429	SEMINOLE	240200-2-52-01

REPORT OF ROADWAY AUGER BORINGS
WEKIVA PARKWAY 7A

SHEET NO.
XX





STRATUM NO.	AASHTO SOIL CLASSIFICATION SYMBOL	DESCRIPTION
1	A-3	WHITE TO GRAY, LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, VERY PALE BROWN TO PALE BROWN, LIGHT BROWN TO VERY DARK BROWN, GRAYISH BROWN TO DARK GRAYISH BROWN, PALE YELLOW, DARK YELLOWISH BROWN TO BROWNISH YELLOW, STRONG BROWN, AND VERY DARK GRAY TO BLACK FINE SAND; TRACE TO FEW SILT OR CLAY; OCCASIONAL TRACE ORGANIC MATTER AND OCCASIONAL TRACE ROOTS
2	A-2-4	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN, GREENISH GRAY, AND BLACK FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE ORGANIC MATTER
3	A-2-6, A-6 A-7-6	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN AND GREENISH GRAY FINE SAND; FEW TO LITTLE CLAY
4	A-8	VERY DARK BROWN, VERY DARK GRAY AND BLACK FINE SAND WITH ORGANIC MATTER, SANDY PEAT, ORGANIC SILT AND ORGANIC CLAY
5	A-3, A-2-4	DARK BROWN TO VERY DARK BROWN, DARK YELLOWISH BROWN FINE SAND; TRACE TO LITTLE SILT; TRACE CEMENTATION (HARDPAN-TYPE)
6	A-7-5, A-7-6	LIGHT GRAY, BROWNISH YELLOW, GRAY AND BROWNISH YELLOW, AND STRONG BROWN SANDY CLAY, CLAY AND SILT
7	A-3, A-2-4	YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, AND STRONG BROWN, FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE TO FEW FRAGMENTS OF LIMESTONE, ASPHALT, GLASS, METAL, WOOD AND ROOTS; OFTEN MIXED WITH CLAYEY SANDS (POSSIBLE FILL)

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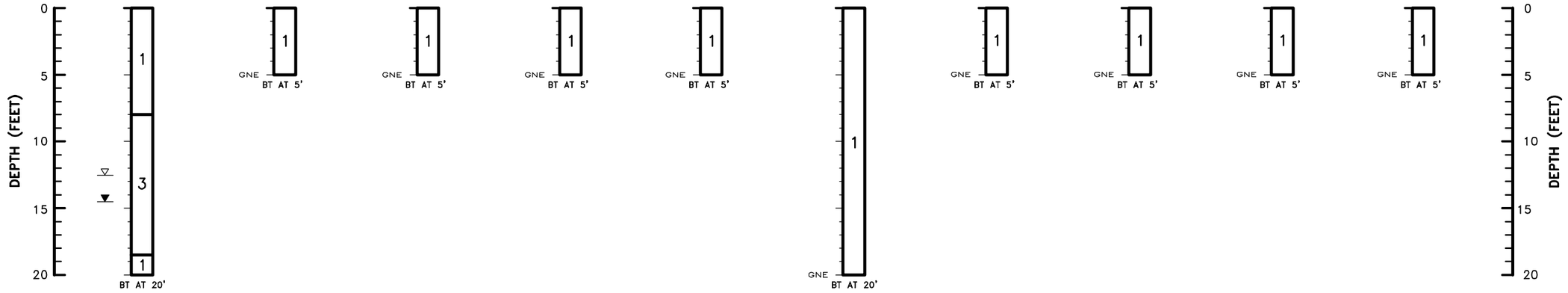
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
429	SEMINOLE	240200-2-52-01

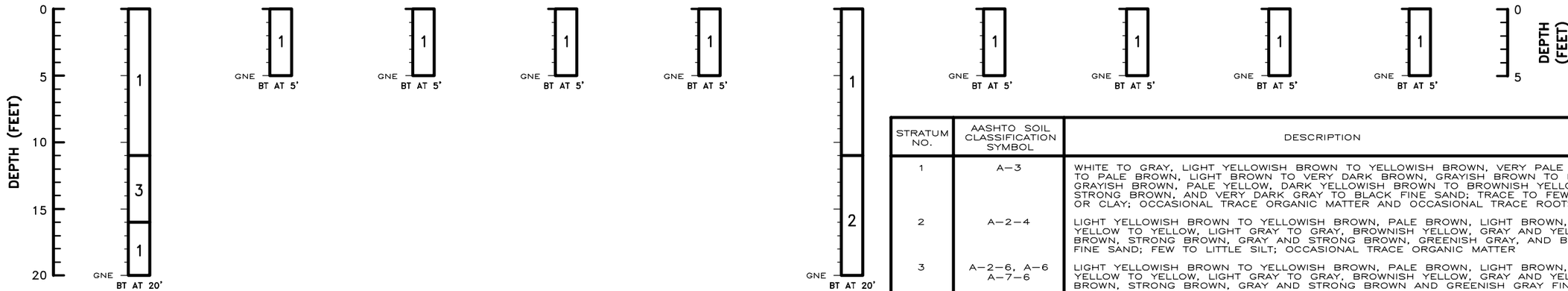
REPORT OF ROADWAY AUGER BORINGS
WEKIVA PARKWAY 7A

SHEET NO. XX

BORING NUMBER	WB945	WB946	WB947	WB948	WB949	WB950	WB951	WB952	WB953	WB954	BORING NUMBER
APPROXIMATE STATION	945+00	946+00	947+00	948+00	949+00	950+00	951+00	952+00	953+00	954+00	APPROXIMATE STATION
APPROXIMATE OFFSET	119' LT	105' LT	120' LT	105' LT	120' LT	103' LT	120' LT	80' LT	118' LT	90' LT	APPROXIMATE OFFSET
GSE (NAVD88)	47.0	NOT SURVEYED	NOT SURVEYED	NOT SURVEYED	NOT SURVEYED	53.0	NOT SURVEYED	NOT SURVEYED	NOT SURVEYED	NOT SURVEYED	GSE (NAVD88)
DATE DRILLED	11-05-13	10-30-13	10-30-13	10-30-13	10-30-13	11-05-13	10-30-13	10-30-13	10-30-13	10-30-13	DATE DRILLED



BORING NUMBER	WB955	WB956	WB957	WB958	WB959	WB960	WB961	WB962	WB963	WB964	BORING NUMBER
APPROXIMATE STATION	955+00	956+00	957+00	958+00	959+00	960+00	961+00	962+00	963+00	964+00	APPROXIMATE STATION
APPROXIMATE OFFSET	117' LT	88' LT	115' LT	88' LT	115' LT	86' LT	115' LT	85' LT	112' LT	82' LT	APPROXIMATE OFFSET
GSE (NAVD88)	57.0	NOT SURVEYED	NOT SURVEYED	NOT SURVEYED	NOT SURVEYED	55.8	NOT SURVEYED	NOT SURVEYED	NOT SURVEYED	NOT SURVEYED	GSE (NAVD88)
DATE DRILLED	11-05-13	10-30-13	10-30-13	10-30-13	10-30-13	11-05-13	10-30-13	10-30-13	10-30-13	10-30-13	DATE DRILLED



STRATUM NO.	AASHTO SOIL CLASSIFICATION SYMBOL	DESCRIPTION
1	A-3	WHITE TO GRAY, LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, VERY PALE BROWN TO PALE BROWN, LIGHT BROWN TO VERY DARK BROWN, GRAYISH BROWN TO DARK GRAYISH BROWN, PALE YELLOW, DARK YELLOWISH BROWN TO BROWNISH YELLOW, STRONG BROWN, AND VERY DARK GRAY TO BLACK FINE SAND; TRACE TO FEW SILT OR CLAY; OCCASIONAL TRACE ORGANIC MATTER AND OCCASIONAL TRACE ROOTS
2	A-2-4	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN, GREENISH GRAY, AND BLACK FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE ORGANIC MATTER
3	A-2-6, A-6 A-7-6	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN AND GREENISH GRAY FINE SAND; FEW TO LITTLE CLAY
4	A-8	VERY DARK BROWN, VERY DARK GRAY AND BLACK FINE SAND WITH ORGANIC MATTER, SANDY PEAT, ORGANIC SILT AND ORGANIC CLAY
5	A-3, A-2-4	DARK BROWN TO VERY DARK BROWN, DARK YELLOWISH BROWN FINE SAND; TRACE TO LITTLE SILT; TRACE CEMENTATION (HARDPAN-TYPE)
6	A-7-5, A-7-6	LIGHT GRAY, BROWNISH YELLOW, GRAY AND BROWNISH YELLOW, AND STRONG BROWN SANDY CLAY, CLAY AND SILT
7	A-3, A-2-4	YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, AND STRONG BROWN, FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE TO FEW FRAGMENTS OF LIMESTONE, ASPHALT, GLASS, METAL, WOOD AND ROOTS; OFTEN MIXED WITH CLAYEY SANDS (POSSIBLE FILL)

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REVISIONS					
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ORLANDO, FLORIDA 32811
CERTIFICATE OF AUTHORIZATION EB6685

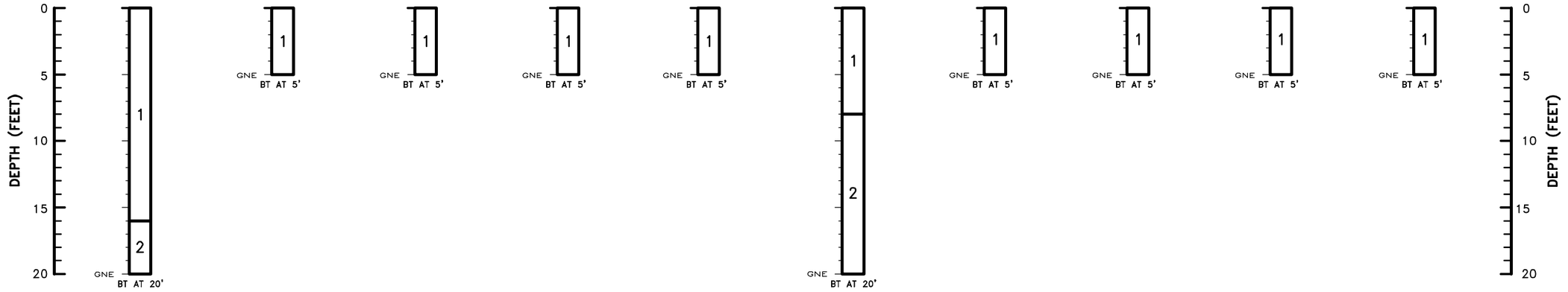
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
429	SEMINOLE	240200-2-52-01

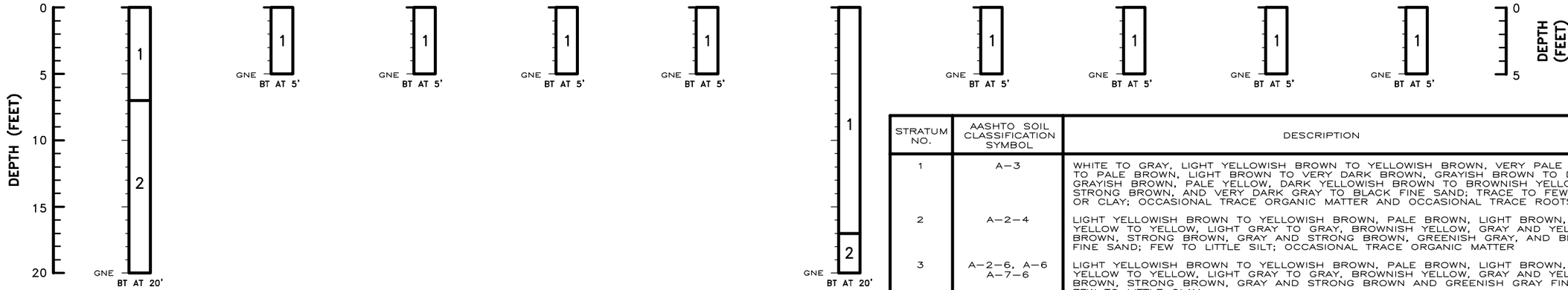
REPORT OF ROADWAY AUGER BORINGS
WEKIVA PARKWAY 7A

SHEET NO. XX

BORING NUMBER	WB965	WB966	WB967	WB968	WB969	WB970	WB971	WB972	WB973	WB974	BORING NUMBER
APPROXIMATE STATION	965+00	966+00	967+00	968+00	969+00	970+00	971+00	972+00	973+00	974+00	APPROXIMATE STATION
APPROXIMATE OFFSET	110' LT	85' LT	112' LT	65' LT	108' LT	81' LT	110' LT	80' LT	110' LT	78' LT	APPROXIMATE OFFSET
GSE (NAVD88)	55.5	NOT SURVEYED	NOT SURVEYED	NOT SURVEYED	NOT SURVEYED	54.5	NOT SURVEYED	NOT SURVEYED	NOT SURVEYED	NOT SURVEYED	GSE (NAVD88)
DATE DRILLED	09-27-13	10-30-13	10-30-13	10-30-13	10-30-13	11-05-13	10-30-13	10-30-13	10-30-13	10-30-13	DATE DRILLED



BORING NUMBER	WB975	WB976	WB977	WB978	WB979	WB980	WB981	WB982	WB983	WB984	BORING NUMBER
APPROXIMATE STATION	975+00	976+00	977+00	978+00	979+00	980+00	981+00	982+00	983+00	984+00	APPROXIMATE STATION
APPROXIMATE OFFSET	109' LT	80' LT	108' LT	80' LT	108' LT	80' LT	105' LT	82' LT	108' LT	80' LT	APPROXIMATE OFFSET
GSE (NAVD88)	53.7	NOT SURVEYED	NOT SURVEYED	NOT SURVEYED	NOT SURVEYED	54.5	NOT SURVEYED	NOT SURVEYED	NOT SURVEYED	NOT SURVEYED	GSE (NAVD88)
DATE DRILLED	11-05-13	10-30-13	10-30-13	10-30-13	10-30-13	11-05-13	11-08-13	11-08-13	11-08-13	11-08-13	DATE DRILLED



STRATUM NO.	AASHTO SOIL CLASSIFICATION SYMBOL	DESCRIPTION
1	A-3	WHITE TO GRAY, LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, VERY PALE BROWN TO PALE BROWN, LIGHT BROWN TO VERY DARK BROWN, GRAYISH BROWN TO DARK GRAYISH BROWN, PALE YELLOW, DARK YELLOWISH BROWN TO BROWNISH YELLOW, STRONG BROWN, AND VERY DARK GRAY TO BLACK FINE SAND; TRACE TO FEW SILT OR CLAY; OCCASIONAL TRACE ORGANIC MATTER AND OCCASIONAL TRACE ROOTS
2	A-2-4	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN, GREENISH GRAY, AND BLACK FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE ORGANIC MATTER
3	A-2-6, A-6 A-7-6	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN AND GREENISH GRAY FINE SAND; FEW TO LITTLE CLAY
4	A-8	VERY DARK BROWN, VERY DARK GRAY AND BLACK FINE SAND WITH ORGANIC MATTER, SANDY PEAT, ORGANIC SILT AND ORGANIC CLAY
5	A-3, A-2-4	DARK BROWN TO VERY DARK BROWN, DARK YELLOWISH BROWN FINE SAND; TRACE TO LITTLE SILT; TRACE CEMENTATION (HARDPAN-TYPE)
6	A-7-5, A-7-6	LIGHT GRAY, BROWNISH YELLOW, GRAY AND BROWNISH YELLOW, AND STRONG BROWN SANDY CLAY, CLAY AND SILT
7	A-3, A-2-4	YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, AND STRONG BROWN, FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE TO FEW FRAGMENTS OF LIMESTONE, ASPHALT, GLASS, METAL, WOOD AND ROOTS; OFTEN MIXED WITH CLAYEY SANDS (POSSIBLE FILL)

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3331 BARTLETT BOULEVARD
ORLANDO, FLORIDA 32811
CERTIFICATE OF AUTHORIZATION EB6685

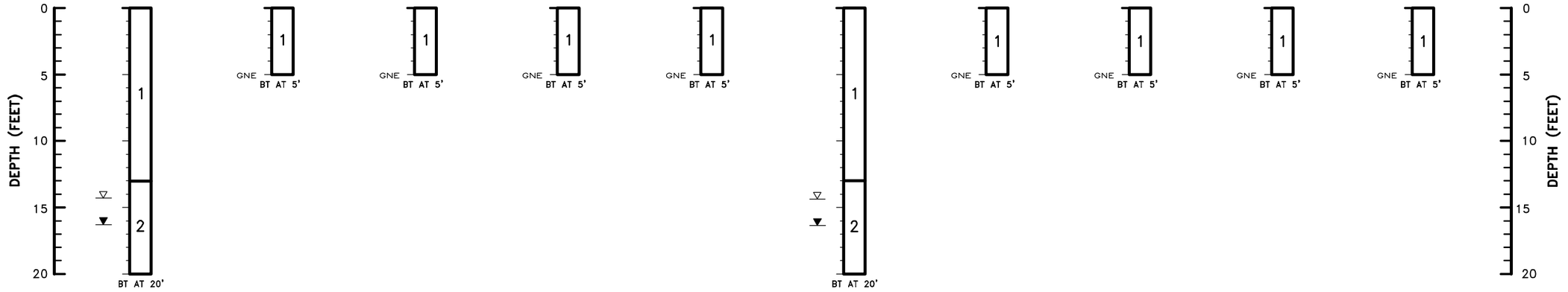
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
429	SEMINOLE	240200-2-52-01

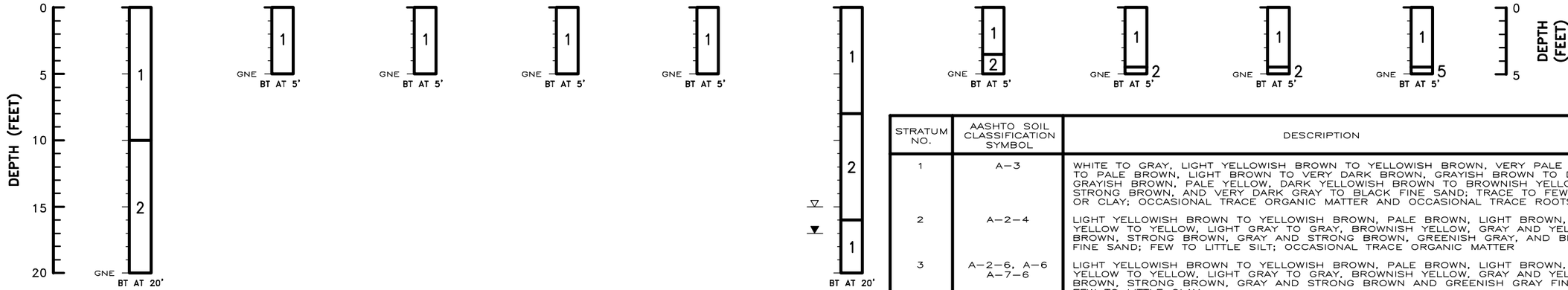
REPORT OF ROADWAY AUGER BORINGS
WEKIVA PARKWAY 7A

SHEET NO. XX

BORING NUMBER	WB985	WB986	WB987	WB988	WB989	WB990	WB991	WB992	WB993	WB994	BORING NUMBER
APPROXIMATE STATION	985+00	986+00	987+00	988+00	989+00	990+00	991+00	992+00	993+00	994+00	APPROXIMATE STATION
APPROXIMATE OFFSET	110' LT	78' LT	115' LT	78' LT	123' LT	86' LT	128' LT	95' LT	135' LT	95' LT	APPROXIMATE OFFSET
GSE (NAVD88)	53.2	NOT SURVEYED	NOT SURVEYED	NOT SURVEYED	NOT SURVEYED	53.4	NOT SURVEYED	NOT SURVEYED	NOT SURVEYED	NOT SURVEYED	GSE (NAVD88)
DATE DRILLED	11-05-13	11-08-13	11-08-13	11-08-13	11-08-13	11-05-13	11-08-13	11-08-13	11-08-13	11-08-13	DATE DRILLED



BORING NUMBER	WB995	WB996	WB997	WB998	WB999	WB1000	WB1001	WB1002	WB1003	WB1004	BORING NUMBER
APPROXIMATE STATION	995+00	996+00	997+00	998+00	999+00	1000+00	1001+00	1002+00	1003+00	1004+00	APPROXIMATE STATION
APPROXIMATE OFFSET	145' LT	95' LT	150' LT	95' LT	150' LT	119' LT	140' LT	115' LT	140' LT	110' LT	APPROXIMATE OFFSET
GSE (NAVD88)	55.3	NOT SURVEYED	NOT SURVEYED	NOT SURVEYED	NOT SURVEYED	49.3	NOT SURVEYED	NOT SURVEYED	NOT SURVEYED	NOT SURVEYED	GSE (NAVD88)
DATE DRILLED	11-05-13	11-08-13	11-08-13	11-08-13	11-08-13	12-30-13	12-30-13	10-30-13	10-30-13	10-30-13	DATE DRILLED



STRATUM NO.	AASHTO SOIL CLASSIFICATION SYMBOL	DESCRIPTION
1	A-3	WHITE TO GRAY, LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, VERY PALE BROWN TO PALE BROWN, LIGHT BROWN TO VERY DARK BROWN, GRAYISH BROWN TO DARK GRAYISH BROWN, PALE YELLOW, DARK YELLOWISH BROWN TO BROWNISH YELLOW, STRONG BROWN, AND VERY DARK GRAY TO BLACK FINE SAND; TRACE TO FEW SILT OR CLAY; OCCASIONAL TRACE ORGANIC MATTER AND OCCASIONAL TRACE ROOTS
2	A-2-4	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN, GREENISH GRAY, AND BLACK FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE ORGANIC MATTER
3	A-2-6, A-6 A-7-6	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN AND GREENISH GRAY FINE SAND; FEW TO LITTLE CLAY
4	A-8	VERY DARK BROWN, VERY DARK GRAY AND BLACK FINE SAND WITH ORGANIC MATTER, SANDY PEAT, ORGANIC SILT AND ORGANIC CLAY
5	A-3, A-2-4	DARK BROWN TO VERY DARK BROWN, DARK YELLOWISH BROWN FINE SAND; TRACE TO LITTLE SILT; TRACE CEMENTATION (HARDPAN-TYPE)
6	A-7-5, A-7-6	LIGHT GRAY, BROWNISH YELLOW, GRAY AND BROWNISH YELLOW, AND STRONG BROWN SANDY CLAY, CLAY AND SILT
7	A-3, A-2-4	YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, AND STRONG BROWN, FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE TO FEW FRAGMENTS OF LIMESTONE, ASPHALT, GLASS, METAL, WOOD AND ROOTS; OFTEN MIXED WITH CLAYEY SANDS (POSSIBLE FILL)

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STATE OF FLORIDA
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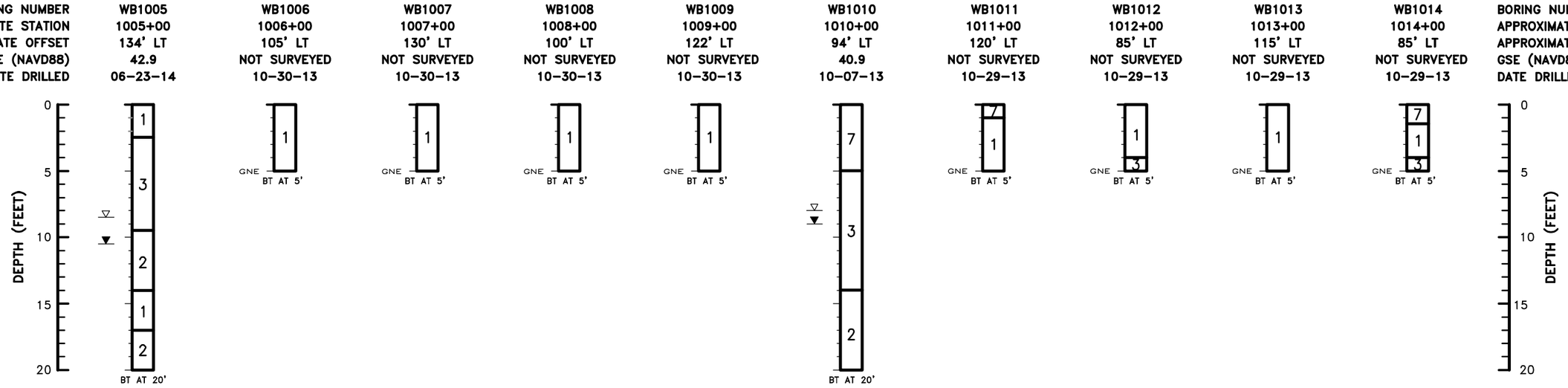
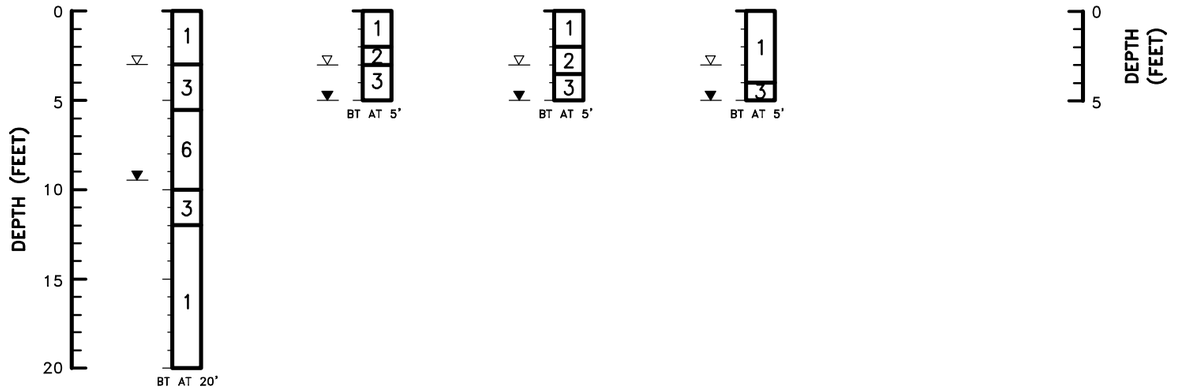
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
429	SEMINOLE	240200-2-52-01

REPORT OF ROADWAY AUGER BORINGS
WEKIVA PARKWAY 7A

SHEET NO. XX





BORING NUMBER
APPROXIMATE STATION
APPROXIMATE OFFSET
GSE (NAVD88)
DATE DRILLED

DEPTH (FEET)
0
5

STRATUM NO.	AASHTO SOIL CLASSIFICATION SYMBOL	DESCRIPTION
1	A-3	WHITE TO GRAY, LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, VERY PALE BROWN TO PALE BROWN, LIGHT BROWN TO VERY DARK BROWN, GRAYISH BROWN TO DARK GRAYISH BROWN, PALE YELLOW, DARK YELLOWISH BROWN TO BROWNISH YELLOW, STRONG BROWN, AND VERY DARK GRAY TO BLACK FINE SAND; TRACE TO FEW SILT OR CLAY; OCCASIONAL TRACE ORGANIC MATTER AND OCCASIONAL TRACE ROOTS
2	A-2-4	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN, GREENISH GRAY, AND BLACK FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE ORGANIC MATTER
3	A-2-6, A-6 A-7-6	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN AND GREENISH GRAY FINE SAND; FEW TO LITTLE CLAY
4	A-8	VERY DARK BROWN, VERY DARK GRAY AND BLACK FINE SAND WITH ORGANIC MATTER, SANDY PEAT, ORGANIC SILT AND ORGANIC CLAY
5	A-3, A-2-4	DARK BROWN TO VERY DARK BROWN, DARK YELLOWISH BROWN FINE SAND; TRACE TO LITTLE SILT; TRACE CEMENTATION (HARDPAN-TYPE)
6	A-7-5, A-7-6	LIGHT GRAY, BROWNISH YELLOW, GRAY AND BROWNISH YELLOW, AND STRONG BROWN SANDY CLAY, CLAY AND SILT
7	A-3, A-2-4	YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, AND STRONG BROWN, FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE TO FEW FRAGMENTS OF LIMESTONE, ASPHALT, GLASS, METAL, WOOD AND ROOTS; OFTEN MIXED WITH CLAYEY SANDS (POSSIBLE FILL)

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REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

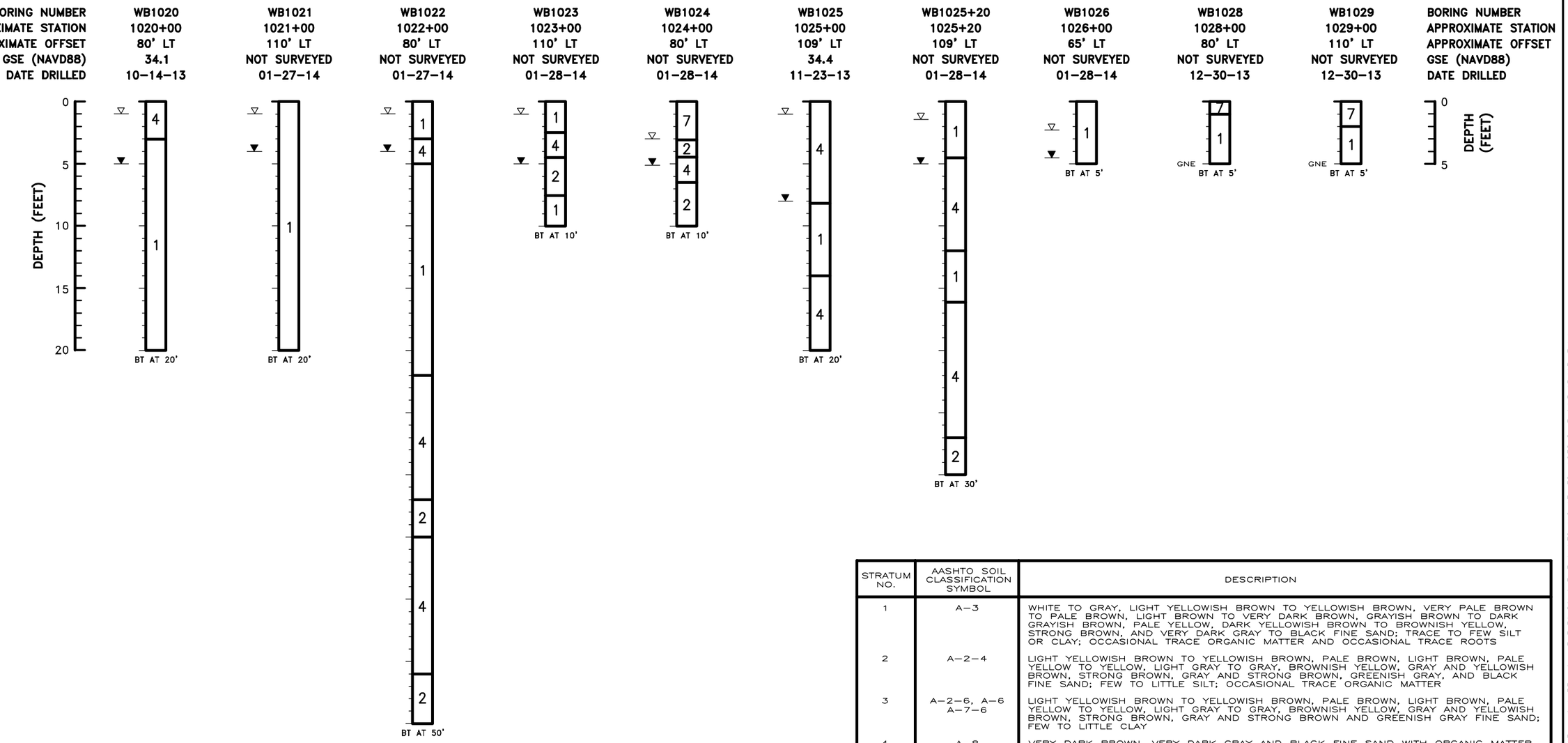
PETER G. SUAH, P.E.
P.E. LICENSE NO. 46910
ANTILLIAN ENGINEERING ASSOCIATES, INC.
3331 BARTLETT BOULEVARD
ORLANDO, FLORIDA 32811
CERTIFICATE OF AUTHORIZATION EB6685

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
429	SEMINOLE	240200-2-52-01

REPORT OF ROADWAY AUGER BORINGS
WEKIVA PARKWAY 7A

SHEET NO.
XX



STRATUM NO.	AASHTO SOIL CLASSIFICATION SYMBOL	DESCRIPTION
1	A-3	WHITE TO GRAY, LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, VERY PALE BROWN TO PALE BROWN, LIGHT BROWN TO VERY DARK BROWN, GRAYISH BROWN TO DARK GRAYISH BROWN, PALE YELLOW, DARK YELLOWISH BROWN TO BROWNISH YELLOW, STRONG BROWN, AND VERY DARK GRAY TO BLACK FINE SAND; TRACE TO FEW SILT OR CLAY; OCCASIONAL TRACE ORGANIC MATTER AND OCCASIONAL TRACE ROOTS
2	A-2-4	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN, GREENISH GRAY, AND BLACK FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE ORGANIC MATTER
3	A-2-6, A-6 A-7-6	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN AND GREENISH GRAY FINE SAND; FEW TO LITTLE CLAY
4	A-8	VERY DARK BROWN, VERY DARK GRAY AND BLACK FINE SAND WITH ORGANIC MATTER, SANDY PEAT, ORGANIC SILT AND ORGANIC CLAY
5	A-3, A-2-4	DARK BROWN TO VERY DARK BROWN, DARK YELLOWISH BROWN FINE SAND; TRACE TO LITTLE SILT; TRACE CEMENTATION (HARDPAN-TYPE)
6	A-7-5, A-7-6	LIGHT GRAY, BROWNISH YELLOW, GRAY AND BROWNISH YELLOW, AND STRONG BROWN SANDY CLAY, CLAY AND SILT
7	A-3, A-2-4	YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, AND STRONG BROWN, FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE TO FEW FRAGMENTS OF LIMESTONE, ASPHALT, GLASS, METAL, WOOD AND ROOTS; OFTEN MIXED WITH CLAYEY SANDS (POSSIBLE FILL)

NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED UNDER RULE 61G15-23.003, F.A.C.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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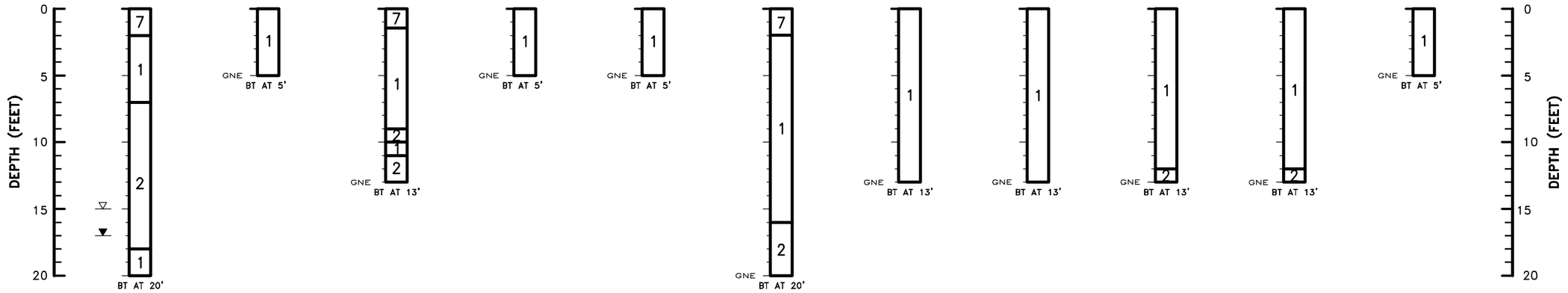
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
429	SEMINOLE	240200-2-52-01

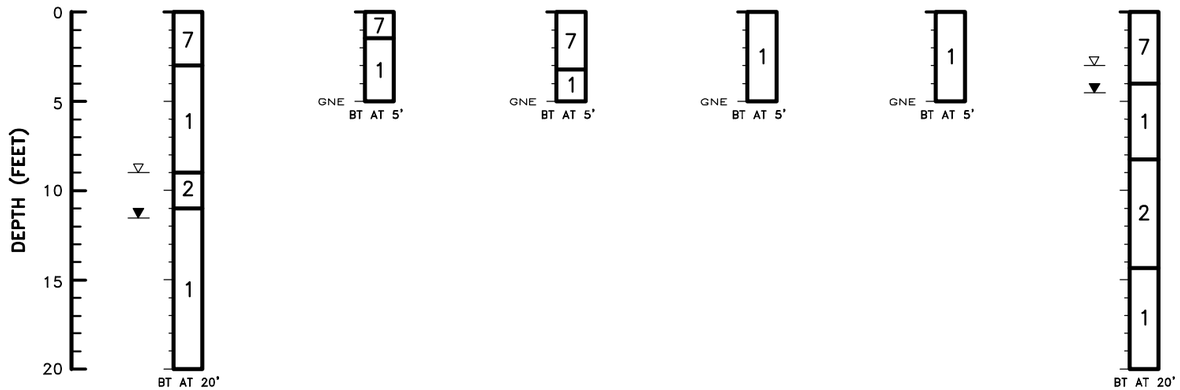
REPORT OF ROADWAY AUGER BORINGS
WEKIVA PARKWAY 7A

SHEET NO. XX

BORING NUMBER	WB1030	WB1031	WB1032	WB1033	WB1034	WB1035	WB1035+50	WB1036	WB1037	WB1038	WB1039	BORING NUMBER
APPROXIMATE STATION	1030+30	1031+00	1032+00	1033+00	1034+00	1035+00	1035+50	1036+00	1037+00	1038+00	1039+00	APPROXIMATE STATION
APPROXIMATE OFFSET	80' LT	110' LT	80' LT	110' LT	80' LT	109' LT	80' LT	80' LT	110' LT	80' LT	110' LT	APPROXIMATE OFFSET
GSE (NAVD88)	49.1	NOT SURVEYED	NOT SURVEYED	NOT SURVEYED	NOT SURVEYED	52.0	NOT SURVEYED	NOT SURVEYED	NOT SURVEYED	NOT SURVEYED	NOT SURVEYED	GSE (NAVD88)
DATE DRILLED	11-23-13	12-30-13	7-21-15	12-30-13	12-30-13	11-23-13	7-21-15	7-21-15	7-17-15	7-17-15	12-27-13	DATE DRILLED



BORING NUMBER	WB1040	WB1041	WB1042	WB1043	WB1044	WB1045	WB1046	WB1047	WB1048	WB1049	BORING NUMBER
APPROXIMATE STATION	1040+00	1041+00	1042+00	1043+00	1044+00	1045+00	1046+00	1047+00	1048+00	1049+00	APPROXIMATE STATION
APPROXIMATE OFFSET	81' LT	110' LT	80' LT	108' LT	75' LT	109' LT	78' LT	107' LT	78' LT	115' LT	APPROXIMATE OFFSET
GSE (NAVD88)	50.4	NOT SURVEYED	NOT SURVEYED	NOT SURVEYED	NOT SURVEYED	47.4	NOT SURVEYED	NOT SURVEYED	NOT SURVEYED	NOT SURVEYED	GSE (NAVD88)
DATE DRILLED	10-07-13	12-27-13	12-27-13	11-01-13	11-01-13	10-10-13	11-01-13	11-01-13	11-01-13	11-01-13	DATE DRILLED



STRATUM NO.	AASHTO SOIL CLASSIFICATION SYMBOL	DESCRIPTION
1	A-3	WHITE TO GRAY, LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, VERY PALE BROWN TO PALE BROWN, LIGHT BROWN TO VERY DARK BROWN, GRAYISH BROWN TO DARK GRAYISH BROWN, PALE YELLOW, DARK YELLOWISH BROWN TO BROWNISH YELLOW, STRONG BROWN, AND VERY DARK GRAY TO BLACK FINE SAND; TRACE TO FEW SILT OR CLAY; OCCASIONAL TRACE ORGANIC MATTER AND OCCASIONAL TRACE ROOTS
2	A-2-4	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN, GREENISH GRAY, AND BLACK FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE ORGANIC MATTER
3	A-2-6, A-6 A-7-6	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN AND GREENISH GRAY FINE SAND; FEW TO LITTLE CLAY
4	A-8	VERY DARK BROWN, VERY DARK GRAY AND BLACK FINE SAND WITH ORGANIC MATTER, SANDY PEAT, ORGANIC SILT AND ORGANIC CLAY
5	A-3, A-2-4	DARK BROWN TO VERY DARK BROWN, DARK YELLOWISH BROWN FINE SAND; TRACE TO LITTLE SILT; TRACE CEMENTATION (HARDPAN-TYPE)
6	A-7-5, A-7-6	LIGHT GRAY, BROWNISH YELLOW, GRAY AND BROWNISH YELLOW, AND STRONG BROWN SANDY CLAY, CLAY AND SILT
7	A-3, A-2-4	YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, AND STRONG BROWN, FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE TO FEW FRAGMENTS OF LIMESTONE, ASPHALT, GLASS, METAL, WOOD AND ROOTS; OFTEN MIXED WITH CLAYEY SANDS (POSSIBLE FILL)

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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3331 BARTLETT BOULEVARD
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CERTIFICATE OF AUTHORIZATION EB6685

STATE OF FLORIDA
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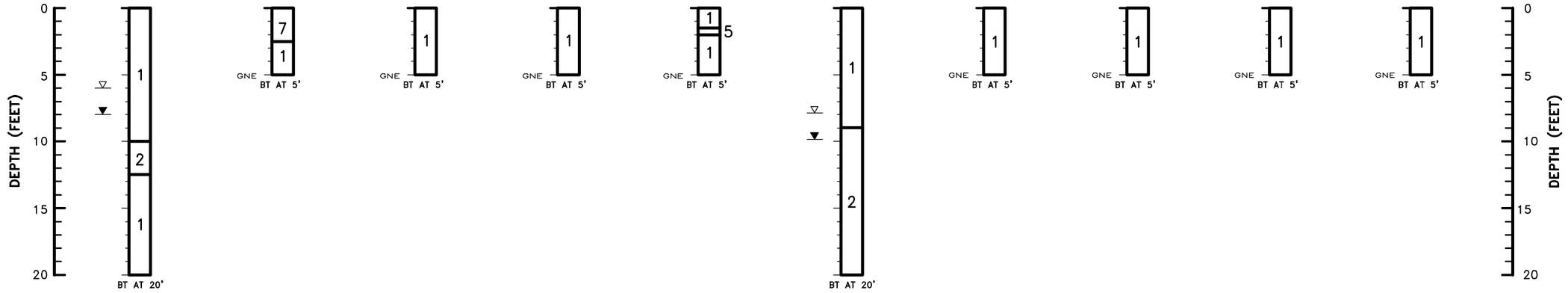
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
429	SEMINOLE	240200-2-52-01

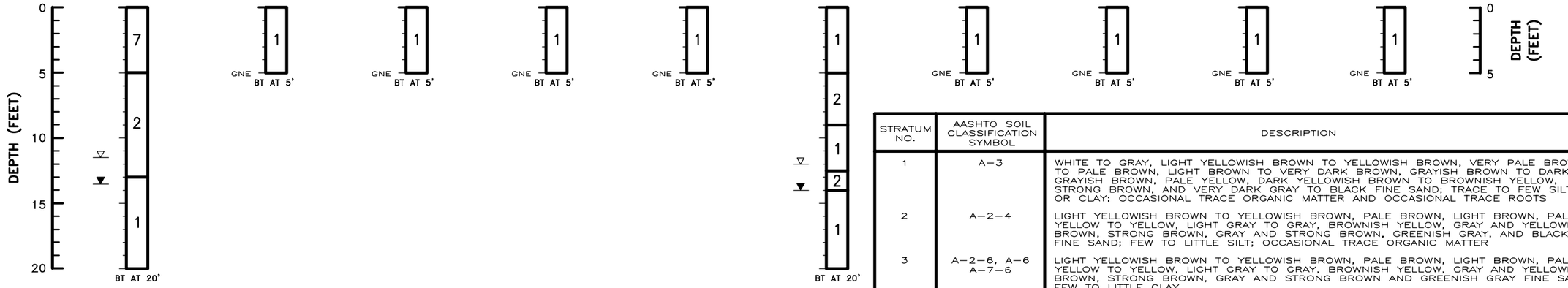
REPORT OF ROADWAY AUGER BORINGS
WEKIVA PARKWAY 7A

SHEET NO.
XX

BORING NUMBER	WB1050	WB1051	WB1052	WB1053	WB1054	WB1055	WB1056	WB1057	WB1058	WB1059	BORING NUMBER
APPROXIMATE STATION	1050+00	1051+00	1052+00	1053+00	1054+00	1055+00	1056+00	1057+00	1058+00	1059+00	APPROXIMATE STATION
APPROXIMATE OFFSET	85' LT	120' LT	88' LT	118' LT	93' LT	121' LT	92' LT	125' LT	75' LT	122' LT	APPROXIMATE OFFSET
GSE (NAVD88)	50.4	NOT SURVEYED	NOT SURVEYED	NOT SURVEYED	NOT SURVEYED	49.6	NOT SURVEYED	NOT SURVEYED	NOT SURVEYED	NOT SURVEYED	GSE (NAVD88)
DATE DRILLED	10-10-13	11-01-13	11-01-13	11-01-13	11-01-13	10-10-13	11-01-13	11-01-13	11-01-13	11-01-13	DATE DRILLED



BORING NUMBER	WB1060	WB1061	WB1062	WB1063	WB1064	WB1065	WB1066	WB1067	WB1068	WB1069	BORING NUMBER
APPROXIMATE STATION	1060+00	1061+00	1062+00	1063+00	1064+00	1065+00	1066+00	1067+00	1068+00	1069+00	APPROXIMATE STATION
APPROXIMATE OFFSET	81' LT	120' LT	90' LT	120' LT	90' LT	121' LT	90' LT	118' LT	90' LT	118' LT	APPROXIMATE OFFSET
GSE (NAVD88)	52.5	NOT SURVEYED	NOT SURVEYED	NOT SURVEYED	NOT SURVEYED	53.5	NOT SURVEYED	NOT SURVEYED	NOT SURVEYED	NOT SURVEYED	GSE (NAVD88)
DATE DRILLED	10-10-13	11-01-13	11-01-13	11-01-13	11-01-13	12-23-13	11-01-13	11-01-13	11-01-13	11-01-13	DATE DRILLED



STRATUM NO.	AASHTO SOIL CLASSIFICATION SYMBOL	DESCRIPTION
1	A-3	WHITE TO GRAY, LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, VERY PALE BROWN TO PALE BROWN, LIGHT BROWN TO VERY DARK BROWN, GRAYISH BROWN TO DARK GRAYISH BROWN, PALE YELLOW, DARK YELLOWISH BROWN TO BROWNISH YELLOW, STRONG BROWN, AND VERY DARK GRAY TO BLACK FINE SAND; TRACE TO FEW SILT OR CLAY; OCCASIONAL TRACE ORGANIC MATTER AND OCCASIONAL TRACE ROOTS
2	A-2-4	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN, GREENISH GRAY, AND BLACK FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE ORGANIC MATTER
3	A-2-6, A-6 A-7-6	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN AND GREENISH GRAY FINE SAND; FEW TO LITTLE CLAY
4	A-8	VERY DARK BROWN, VERY DARK GRAY AND BLACK FINE SAND WITH ORGANIC MATTER, SANDY PEAT, ORGANIC SILT AND ORGANIC CLAY
5	A-3, A-2-4	DARK BROWN TO VERY DARK BROWN, DARK YELLOWISH BROWN FINE SAND; TRACE TO LITTLE SILT; TRACE CEMENTATION (HARDPAN-TYPE)
6	A-7-5, A-7-6	LIGHT GRAY, BROWNISH YELLOW, GRAY AND BROWNISH YELLOW, AND STRONG BROWN SANDY CLAY, CLAY AND SILT
7	A-3, A-2-4	YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, AND STRONG BROWN, FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE TO FEW FRAGMENTS OF LIMESTONE, ASPHALT, GLASS, METAL, WOOD AND ROOTS; OFTEN MIXED WITH CLAYEY SANDS (POSSIBLE FILL)

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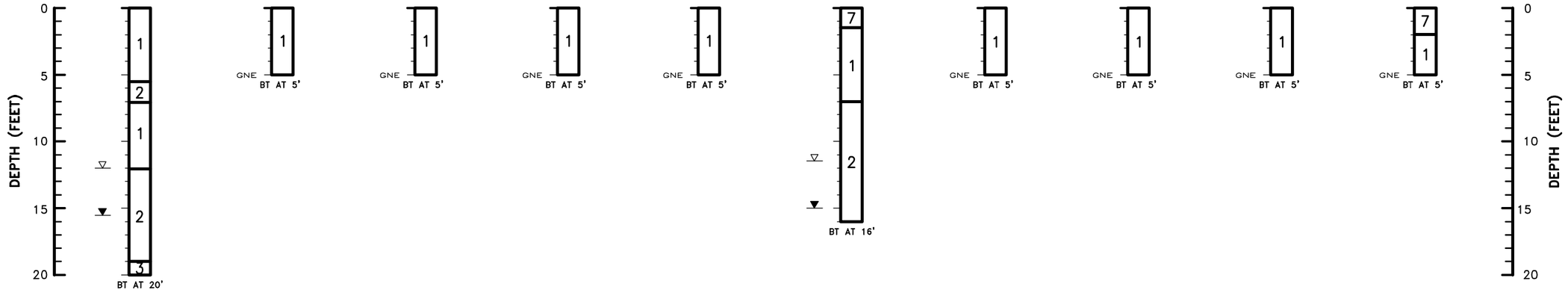
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
429	SEMINOLE	240200-2-52-01

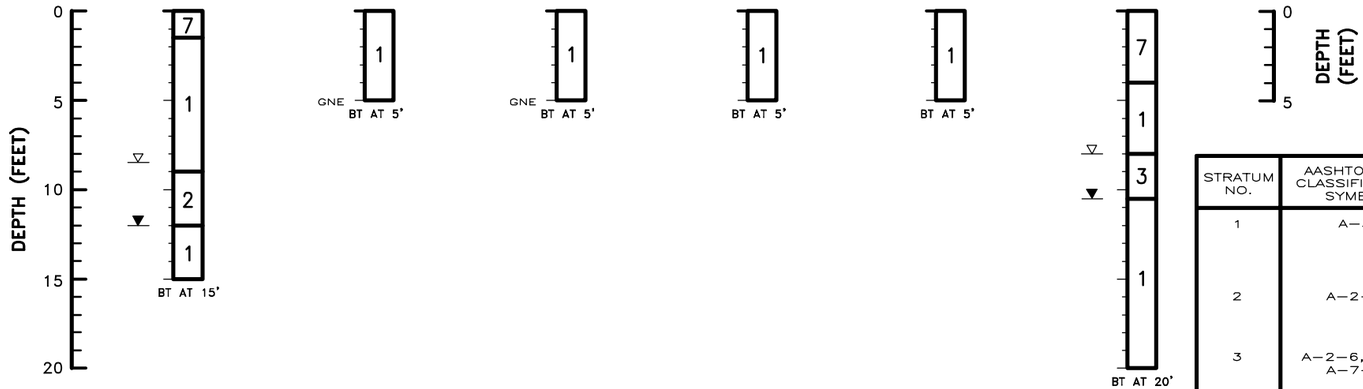
REPORT OF ROADWAY AUGER BORINGS
WEKIVA PARKWAY 7A

SHEET NO. XX

BORING NUMBER	WB1070	WB1071	WB1072	WB1073	WB1074	WB1075	WB1076	WB1077	WB1078	WB1079	BORING NUMBER
APPROXIMATE STATION	1070+00	1071+00	1072+00	1073+00	1074+00	1075+00	1076+00	1077+00	1078+00	1079+00	APPROXIMATE STATION
APPROXIMATE OFFSET	93' LT	125' LT	98' LT	135' LT	110' LT	135' LT	130' LT	170' LT	155' LT	200' LT	APPROXIMATE OFFSET
GSE (NAVD88)	56.7	NOT SURVEYED	NOT SURVEYED	NOT SURVEYED	NOT SURVEYED	58.4	NOT SURVEYED	NOT SURVEYED	NOT SURVEYED	NOT SURVEYED	GSE (NAVD88)
DATE DRILLED	11-23-13	11-01-13	11-01-13	11-01-13	11-01-13	06-18-14	11-01-13	11-01-13	11-01-13	11-01-13	DATE DRILLED



BORING NUMBER	WB1080	WB1081	WB1082	WB1083	WB1084	WB1085	BORING NUMBER
APPROXIMATE STATION	1080+00	1081+00	1082+00	1083+00	1084+00	1085+00	APPROXIMATE STATION
APPROXIMATE OFFSET	200' LT	205' LT	255' LT	255' LT	320' LT	361' LT	APPROXIMATE OFFSET
GSE (NAVD88)	61.5	NOT SURVEYED	NOT SURVEYED	NOT SURVEYED	NOT SURVEYED	65.2	GSE (NAVD88)
DATE DRILLED	06-18-14	11-01-13	11-01-13	11-01-13	11-01-13	11-23-13	DATE DRILLED



STRATUM NO.	AASHTO SOIL CLASSIFICATION SYMBOL	DESCRIPTION
1	A-3	WHITE TO GRAY, LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, VERY PALE BROWN TO PALE BROWN, LIGHT BROWN TO VERY DARK BROWN, GRAYISH BROWN TO DARK GRAYISH BROWN, PALE YELLOW, DARK YELLOWISH BROWN TO BROWNISH YELLOW, STRONG BROWN, AND VERY DARK GRAY TO BLACK FINE SAND; TRACE TO FEW SILT OR CLAY; OCCASIONAL TRACE ORGANIC MATTER AND OCCASIONAL TRACE ROOTS
2	A-2-4	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN, GREENISH GRAY, AND BLACK FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE ORGANIC MATTER
3	A-2-6, A-6 A-7-6	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN AND GREENISH GRAY FINE SAND; FEW TO LITTLE CLAY
4	A-8	VERY DARK BROWN, VERY DARK GRAY AND BLACK FINE SAND WITH ORGANIC MATTER, SANDY PEAT, ORGANIC SILT AND ORGANIC CLAY
5	A-3, A-2-4	DARK BROWN TO VERY DARK BROWN, DARK YELLOWISH BROWN FINE SAND; TRACE TO LITTLE SILT; TRACE CEMENTATION (HARDPAN-TYPE)
6	A-7-5, A-7-6	LIGHT GRAY, BROWNISH YELLOW, GRAY AND BROWNISH YELLOW, AND STRONG BROWN SANDY CLAY, CLAY AND SILT
7	A-3, A-2-4	YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, AND STRONG BROWN, FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE TO FEW FRAGMENTS OF LIMESTONE, ASPHALT, GLASS, METAL, WOOD AND ROOTS; OFTEN MIXED WITH CLAYEY SANDS (POSSIBLE FILL)

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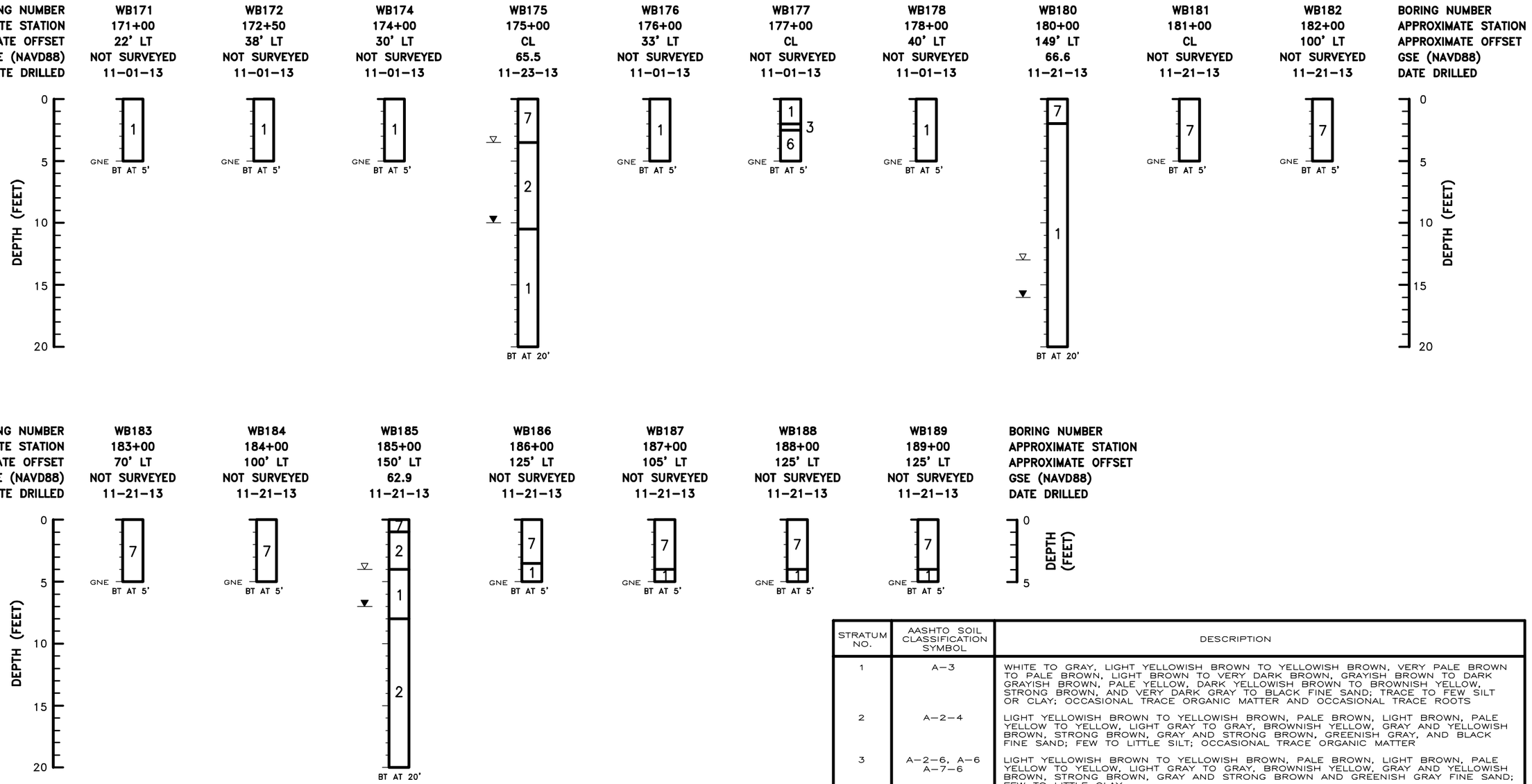
429	SEMINOLE	240200-2-52-01

REPORT OF ROADWAY AUGER BORINGS
WEKIVA PARKWAY 7A

SHEET NO. XX



STRATUM NO.	AASHTO SOIL CLASSIFICATION SYMBOL	DESCRIPTION
1	A-3	WHITE TO GRAY, LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, VERY PALE BROWN TO PALE BROWN, LIGHT BROWN TO VERY DARK BROWN, GRAYISH BROWN TO DARK GRAYISH BROWN, PALE YELLOW, DARK YELLOWISH BROWN TO BROWNISH YELLOW, STRONG BROWN, AND VERY DARK GRAY TO BLACK FINE SAND; TRACE TO FEW SILT OR CLAY; OCCASIONAL TRACE ORGANIC MATTER AND OCCASIONAL TRACE ROOTS
2	A-2-4	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN, GREENISH GRAY, AND BLACK FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE ORGANIC MATTER
3	A-2-6, A-6 A-7-6	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN AND GREENISH GRAY FINE SAND; FEW TO LITTLE CLAY
4	A-8	VERY DARK BROWN, VERY DARK GRAY AND BLACK FINE SAND WITH ORGANIC MATTER, SANDY PEAT, ORGANIC SILT AND ORGANIC CLAY
5	A-3, A-2-4	DARK BROWN TO VERY DARK BROWN, DARK YELLOWISH BROWN FINE SAND; TRACE TO LITTLE SILT; TRACE CEMENTATION (HARDPAN-TYPE)
6	A-7-5, A-7-6	LIGHT GRAY, BROWNISH YELLOW, GRAY AND BROWNISH YELLOW, AND STRONG BROWN SANDY CLAY, CLAY AND SILT
7	A-3, A-2-4	YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, AND STRONG BROWN, FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE TO FEW FRAGMENTS OF LIMESTONE, ASPHALT, GLASS, METAL, WOOD AND ROOTS; OFTEN MIXED WITH CLAYEY SANDS (POSSIBLE FILL)

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ROAD NO.	COUNTY	FINANCIAL PROJECT ID
429	SEMINOLE	240200-2-52-01

REPORT OF ROADWAY AUGER BORINGS
WEKIVA PARKWAY 7A

SHEET NO.
XX

NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED UNDER RULE 61G15-23.003, F.A.C.

BORING NUMBER	ML932L	ML933L		ML935L	ML936L	ML937L	ML938L	ML939L		ML941L	BORING NUMBER
APPROXIMATE STATION	932+00	933+00		935+00	936+00	937+00	938+00	939+00		941+00	APPROXIMATE STATION
APPROXIMATE OFFSET	40' LT	45' LT		55' LT	35' LT	55' LT	35' LT	60' LT		60' LT	APPROXIMATE OFFSET
GSE (NAVD88)	XX.X	XX.X		XX.X	XX.X	XX.X	XX.X	XX.X		XX.X	GSE (NAVD88)
DATE DRILLED	06-10-14	06-10-14		06-10-14	06-10-14	06-10-14	06-10-14	06-10-14		06-10-14	DATE DRILLED
DEPTH (FEET) 0	7	7		1	4	7	4				0
5	1	1		4	1	2	1	1		1	5 DEPTH (FEET)
		2		1		1	2				
		1									
	BT AT 7'	BT AT 7'		BT AT 7'	BT AT 7'	BT AT 7'	BT AT 7'	BT AT 7'		BT AT 7'	

BORING NUMBER											BORING NUMBER
APPROXIMATE STATION											APPROXIMATE STATION
APPROXIMATE OFFSET											APPROXIMATE OFFSET
GSE (NAVD88)											GSE (NAVD88)
DATE DRILLED											DATE DRILLED
DEPTH (FEET) 0											0
5											5 DEPTH (FEET)

BORING NUMBER	ML932R	ML933R	ML934R	ML935R	ML936R	ML937R	ML938R	ML939R		ML941R	BORING NUMBER
APPROXIMATE STATION	932+00	933+00	934+00	935+00	936+00	937+00	938+00	939+00		941+00	APPROXIMATE STATION
APPROXIMATE OFFSET	40' RT	50' RT	35' RT	50' RT	35' RT	50' RT	40' RT	60' RT		10' RT	APPROXIMATE OFFSET
GSE (NAVD88)	XX.X	XX.X	XX.X	XX.X	XX.X	XX.X	XX.X	XX.X		XX.X	GSE (NAVD88)
DATE DRILLED	06-10-14	06-10-14	06-10-14	06-10-14	06-10-14	06-10-14	06-10-14	06-10-14		06-11-14	DATE DRILLED
DEPTH (FEET) 0	7	7	7	4	7	7	7	1		7	0
5	2	2	1	1	2	1	2	2		1	5 DEPTH (FEET)
	BT AT 7'	BT AT 7'	BT AT 7'	BT AT 6'	BT AT 7'	BT AT 7'	BT AT 7'	BT AT 7'		BT AT 7'	

STRATUM NO.	AASHTO SOIL CLASSIFICATION SYMBOL	DESCRIPTION
1	A-3	WHITE TO GRAY, LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, VERY PALE BROWN TO PALE BROWN, LIGHT BROWN TO VERY DARK BROWN, GRAYISH BROWN TO DARK GRAYISH BROWN, PALE YELLOW, DARK YELLOWISH BROWN TO BROWNISH YELLOW, STRONG BROWN, AND VERY DARK GRAY TO BLACK FINE SAND; TRACE TO FEW SILT OR CLAY; OCCASIONAL TRACE ORGANIC MATTER AND OCCASIONAL TRACE ROOTS
2	A-2-4	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN, GREENISH GRAY, AND BLACK FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE ORGANIC MATTER
3	A-2-6, A-6 A-7-6	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN AND GREENISH GRAY FINE SAND; FEW TO LITTLE CLAY
4	A-8	VERY DARK BROWN, VERY DARK GRAY AND BLACK FINE SAND WITH ORGANIC MATTER, SANDY PEAT, ORGANIC SILT AND ORGANIC CLAY
5	A-3, A-2-4	DARK BROWN TO VERY DARK BROWN, DARK YELLOWISH BROWN FINE SAND; TRACE TO LITTLE SILT; TRACE CEMENTATION (HARDPAN-TYPE)
6	A-7-5, A-7-6	LIGHT GRAY, BROWNISH YELLOW, GRAY AND BROWNISH YELLOW, AND STRONG BROWN SANDY CLAY, CLAY AND SILT
7	A-3, A-2-4	YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, AND STRONG BROWN, FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE TO FEW FRAGMENTS OF LIMESTONE, ASPHALT, GLASS, METAL, WOOD AND ROOTS; OFTEN MIXED WITH CLAYEY SANDS (POSSIBLE FILL)

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

PETER G. SUAH, P.E.
P.E. LICENSE NO. 46910
ANTILLIAN ENGINEERING ASSOCIATES, INC.
3331 BARTLETT BOULEVARD
ORLANDO, FLORIDA 32811
CERTIFICATE OF AUTHORIZATION EB6685

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
429	SEMINOLE	240200-2-52-01

REPORT OF ROADWAY AUGER BORINGS
WEKIVA PARKWAY 7A

SHEET NO. XX

NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED UNDER RULE 61G15-23.003, F.A.C.

BORING NUMBER	ML943L	ML946L	ML947L	ML948L	ML949L	ML950L			BORING NUMBER
APPROXIMATE STATION	943+00	946+00	947+00	948+00	949+00	950+00			APPROXIMATE STATION
APPROXIMATE OFFSET	60' LT	40' LT	65' LT	40' LT	35' LT	45' LT			APPROXIMATE OFFSET
GSE (NAVD88)	XX.X	XX.X	XX.X	XX.X	XX.X	XX.X			GSE (NAVD88)
DATE DRILLED	06-11-14	06-11-14	06-11-14	06-11-14	06-11-14	06-24-14			DATE DRILLED
DEPTH (FEET) 0	7	1	1	1	1	1			0
5	1	GNE	GNE	GNE	GNE	GNE			5 DEPTH (FEET)
	2	BT AT 5'	BT AT 5'	BT AT 5'	BT AT 5'	BT AT 5'			
	BT AT 7'								

BORING NUMBER	ML944CL								BORING NUMBER
APPROXIMATE STATION	944+00								APPROXIMATE STATION
APPROXIMATE OFFSET	CL								APPROXIMATE OFFSET
GSE (NAVD88)	X.X								GSE (NAVD88)
DATE DRILLED	06-11-14								DATE DRILLED
DEPTH (FEET) 0	7								0
5	GNE								5 DEPTH (FEET)
	BT AT 7'								

BORING NUMBER	ML942R	ML945R	ML946R	ML948R	ML949R	ML951R			BORING NUMBER
APPROXIMATE STATION	942+00	945+00	946+00	948+00	949+00	951+00			APPROXIMATE STATION
APPROXIMATE OFFSET	15' RT	40' RT	40' RT	40' RT	50' RT	40' RT			APPROXIMATE OFFSET
GSE (NAVD88)	XX.X	XX.X	XX.X	XX.X	XX.X	XX.X			GSE (NAVD88)
DATE DRILLED	06-11-14	06-11-14	06-11-14	06-11-14	06-23-14	06-23-14			DATE DRILLED
DEPTH (FEET) 0	7	7	7	7	7	7			0
5	1	1	1	1	1	1			5 DEPTH (FEET)
	2	GNE	GNE	5	GNE	GNE			
	BT AT 7'	BT AT 7'	BT AT 5'	BT AT 5'	BT AT 5'	BT AT 5'			

STRATUM NO.	AASHTO SOIL CLASSIFICATION SYMBOL	DESCRIPTION
1	A-3	WHITE TO GRAY, LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, VERY PALE BROWN TO PALE BROWN, LIGHT BROWN TO VERY DARK BROWN, GRAYISH BROWN TO DARK GRAYISH BROWN, PALE YELLOW, DARK YELLOWISH BROWN TO BROWNISH YELLOW, STRONG BROWN, AND VERY DARK GRAY TO BLACK FINE SAND; TRACE TO FEW SILT OR CLAY; OCCASIONAL TRACE ORGANIC MATTER AND OCCASIONAL TRACE ROOTS
2	A-2-4	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN, GREENISH GRAY, AND BLACK FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE ORGANIC MATTER
3	A-2-6, A-6 A-7-6	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN AND GREENISH GRAY FINE SAND; FEW TO LITTLE CLAY
4	A-8	VERY DARK BROWN, VERY DARK GRAY AND BLACK FINE SAND WITH ORGANIC MATTER, SANDY PEAT, ORGANIC SILT AND ORGANIC CLAY
5	A-3, A-2-4	DARK BROWN TO VERY DARK BROWN, DARK YELLOWISH BROWN FINE SAND; TRACE TO LITTLE SILT; TRACE CEMENTATION (HARDPAN-TYPE)
6	A-7-5, A-7-6	LIGHT GRAY, BROWNISH YELLOW, GRAY AND BROWNISH YELLOW, AND STRONG BROWN SANDY CLAY, CLAY AND SILT
7	A-3, A-2-4	YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, AND STRONG BROWN, FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE TO FEW FRAGMENTS OF LIMESTONE, ASPHALT, GLASS, METAL, WOOD AND ROOTS; OFTEN MIXED WITH CLAYEY SANDS (POSSIBLE FILL)

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

PETER G. SUAH, P.E.
P.E. LICENSE NO. 46910

ANTILLIAN ENGINEERING ASSOCIATES, INC.
3331 BARTLETT BOULEVARD
ORLANDO, FLORIDA 32811
CERTIFICATE OF AUTHORIZATION EB6685

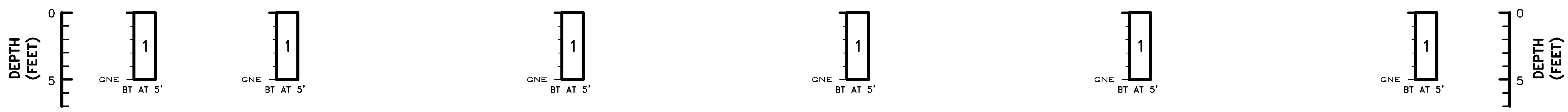
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
429	SEMINOLE	240200-2-52-01

REPORT OF ROADWAY AUGER BORINGS
WEKIVA PARKWAY 7A

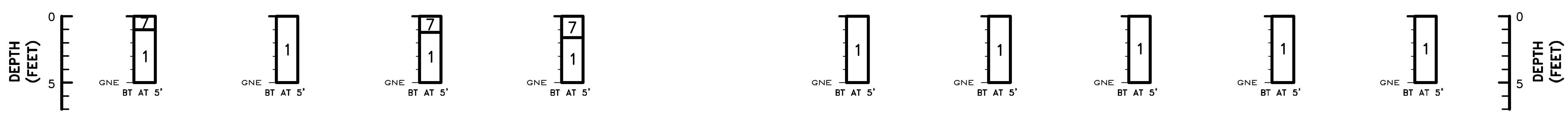
SHEET NO. XX

BORING NUMBER	ML952L	ML953L	ML955L	ML957L	ML959L	ML961L	BORING NUMBER
APPROXIMATE STATION	952+00	953+00	955+00	957+00	959+00	961+00	APPROXIMATE STATION
APPROXIMATE OFFSET	30' LT	75' LT	90' LT	50' LT	50' LT	45' LT	APPROXIMATE OFFSET
GSE (NAVD88)	XX.X	XX.X	XX.X	XX.X	XX.X	XX.X	GSE (NAVD88)
DATE DRILLED	06-24-14	06-24-14	06-24-14	06-24-14	06-24-14	06-24-14	DATE DRILLED



BORING NUMBER	BORING NUMBER
APPROXIMATE STATION	APPROXIMATE STATION
APPROXIMATE OFFSET	APPROXIMATE OFFSET
GSE (NAVD88)	GSE (NAVD88)
DATE DRILLED	DATE DRILLED

BORING NUMBER	ML952R	ML953R	ML954R	ML955R	ML957R	ML958R	ML959R	ML960R	ML961R	BORING NUMBER
APPROXIMATE STATION	952+00	953+00	954+00	955+00	957+00	958+00	959+00	960+00	961+00	APPROXIMATE STATION
APPROXIMATE OFFSET	50' RT	25' RT	50' RT	60' RT	40' RT	40' RT	60' RT	50' RT	40' RT	APPROXIMATE OFFSET
GSE (NAVD88)	XX.X	XX.X	XX.X	XX.X	XX.X	XX.X	XX.X	XX.X	XX.X	GSE (NAVD88)
DATE DRILLED	06-23-14	06-23-14	06-23-14	06-23-14	06-23-14	06-23-14	06-24-14	06-24-14	06-24-14	DATE DRILLED



STRATUM NO.	AASHTO SOIL CLASSIFICATION SYMBOL	DESCRIPTION
1	A-3	WHITE TO GRAY, LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, VERY PALE BROWN TO PALE BROWN, LIGHT BROWN TO VERY DARK BROWN, GRAYISH BROWN TO DARK GRAYISH BROWN, PALE YELLOW, DARK YELLOWISH BROWN TO BROWNISH YELLOW, STRONG BROWN, AND VERY DARK GRAY TO BLACK FINE SAND; TRACE TO FEW SILT OR CLAY; OCCASIONAL TRACE ORGANIC MATTER AND OCCASIONAL TRACE ROOTS
2	A-2-4	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN, GREENISH GRAY, AND BLACK FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE ORGANIC MATTER
3	A-2-6, A-6 A-7-6	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN AND GREENISH GRAY FINE SAND; FEW TO LITTLE CLAY
4	A-8	VERY DARK BROWN, VERY DARK GRAY AND BLACK FINE SAND WITH ORGANIC MATTER, SANDY PEAT, ORGANIC SILT AND ORGANIC CLAY
5	A-3, A-2-4	DARK BROWN TO VERY DARK BROWN, DARK YELLOWISH BROWN FINE SAND; TRACE TO LITTLE SILT; TRACE CEMENTATION (HARDPAN-TYPE)
6	A-7-5, A-7-6	LIGHT GRAY, BROWNISH YELLOW, GRAY AND BROWNISH YELLOW, AND STRONG BROWN SANDY CLAY, CLAY AND SILT
7	A-3, A-2-4	YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, AND STRONG BROWN, FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE TO FEW FRAGMENTS OF LIMESTONE, ASPHALT, GLASS, METAL, WOOD AND ROOTS; OFTEN MIXED WITH CLAYEY SANDS (POSSIBLE FILL)

NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED UNDER RULE 61G15-23.003, F.A.C.

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

PETER G. SUAH, P.E.
P.E. LICENSE NO. 46910
ANTILLIAN ENGINEERING ASSOCIATES, INC.
3331 BARTLETT BOULEVARD
ORLANDO, FLORIDA 32811
CERTIFICATE OF AUTHORIZATION EB6685

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
429	SEMINOLE	240200-2-52-01

REPORT OF ROADWAY AUGER BORINGS
WEKIVA PARKWAY 7A

SHEET NO. XX

BORING NUMBER	ML962L	ML963L			ML965L	ML966L												BORING NUMBER	
APPROXIMATE STATION	962+00	963+00			965+00	966+00												APPROXIMATE STATION	
APPROXIMATE OFFSET	35' LT	40' LT			40' LT	35' LT												APPROXIMATE OFFSET	
GSE (NAVD88)	XX.X	XX.X			XX.X	XX.X												GSE (NAVD88)	
DATE DRILLED	06-24-14	06-24-14			06-24-14	06-24-14												DATE DRILLED	
DEPTH (FEET) 0 5	1 GNE BT AT 5'	1 GNE BT AT 5'			1 GNE BT AT 5'	1 GNE BT AT 5'												0 5 DEPTH (FEET)	
BORING NUMBER							ML967CL								ML971CL			BORING NUMBER	
APPROXIMATE STATION							967+00								971+00			APPROXIMATE STATION	
APPROXIMATE OFFSET							CL								CL			APPROXIMATE OFFSET	
GSE (NAVD88)							X.X								X.X			GSE (NAVD88)	
DATE DRILLED							06-24-14								06-24-14			DATE DRILLED	
DEPTH (FEET) 0 5							1 GNE BT AT 5'								1 GNE BT AT 5'			0 5 DEPTH (FEET)	
BORING NUMBER		ML963R			ML965R	ML966R			ML968R	ML969R	ML970R	ML971R						BORING NUMBER	
APPROXIMATE STATION		963+00			965+00	966+00			968+00	969+00	970+00	971+00						APPROXIMATE STATION	
APPROXIMATE OFFSET		45' RT			40' RT	50' RT			45' RT	35' RT	35' RT	65' RT						APPROXIMATE OFFSET	
GSE (NAVD88)		XX.X			XX.X	XX.X			XX.X	XX.X	XX.X	XX.X						GSE (NAVD88)	
DATE DRILLED		06-24-14			06-24-14	06-24-14			06-24-14	06-24-14	06-24-14	06-24-14						DATE DRILLED	
DEPTH (FEET) 0 5		1 GNE BT AT 5'			1 GNE BT AT 5'	7 1 GNE BT AT 5'			1 GNE BT AT 5'	1 GNE BT AT 5'	1 GNE BT AT 5'	7 1 GNE BT AT 5'						0 5 DEPTH (FEET)	

STRATUM NO.	AASHTO SOIL CLASSIFICATION SYMBOL	DESCRIPTION
1	A-3	WHITE TO GRAY, LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, VERY PALE BROWN TO PALE BROWN, LIGHT BROWN TO VERY DARK BROWN, GRAYISH BROWN TO DARK GRAYISH BROWN, PALE YELLOW, DARK YELLOWISH BROWN TO BROWNISH YELLOW, STRONG BROWN, AND VERY DARK GRAY TO BLACK FINE SAND; TRACE TO FEW SILT OR CLAY; OCCASIONAL TRACE ORGANIC MATTER AND OCCASIONAL TRACE ROOTS
2	A-2-4	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN, GREENISH GRAY, AND BLACK FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE ORGANIC MATTER
3	A-2-6, A-6 A-7-6	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN AND GREENISH GRAY FINE SAND; FEW TO LITTLE CLAY
4	A-8	VERY DARK BROWN, VERY DARK GRAY AND BLACK FINE SAND WITH ORGANIC MATTER, SANDY PEAT, ORGANIC SILT AND ORGANIC CLAY
5	A-3, A-2-4	DARK BROWN TO VERY DARK BROWN, DARK YELLOWISH BROWN FINE SAND; TRACE TO LITTLE SILT; TRACE CEMENTATION (HARDPAN-TYPE)
6	A-7-5, A-7-6	LIGHT GRAY, BROWNISH YELLOW, GRAY AND BROWNISH YELLOW, AND STRONG BROWN SANDY CLAY, CLAY AND SILT
7	A-3, A-2-4	YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, AND STRONG BROWN, FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE TO FEW FRAGMENTS OF LIMESTONE, ASPHALT, GLASS, METAL, WOOD AND ROOTS; OFTEN MIXED WITH CLAYEY SANDS (POSSIBLE FILL)

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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ROAD NO.	COUNTY	FINANCIAL PROJECT ID
429	SEMINOLE	240200-2-52-01

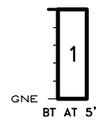
REPORT OF ROADWAY AUGER BORINGS
WEKIVA PARKWAY 7A

SHEET NO. XX

NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED UNDER RULE 61G15-23.003, F.A.C.

BORING NUMBER
APPROXIMATE STATION
APPROXIMATE OFFSET
GSE (NAVD88)
DATE DRILLED

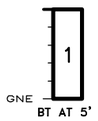
ML977L
977+00
50' LT
XX.X
06-24-14



BORING NUMBER
APPROXIMATE STATION
APPROXIMATE OFFSET
GSE (NAVD88)
DATE DRILLED

BORING NUMBER
APPROXIMATE STATION
APPROXIMATE OFFSET
GSE (NAVD88)
DATE DRILLED

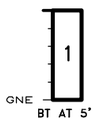
ML973CL
973+00
CL
X.X
06-24-14



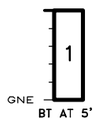
BORING NUMBER
APPROXIMATE STATION
APPROXIMATE OFFSET
GSE (NAVD88)
DATE DRILLED

BORING NUMBER
APPROXIMATE STATION
APPROXIMATE OFFSET
GSE (NAVD88)
DATE DRILLED

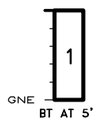
ML972R
972+00
55' RT
XX.X
06-24-14



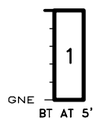
ML974R
974+00
40' RT
XX.X
06-24-14



ML976R
976+00
35' RT
XX.X
07-02-14



ML978R
978+00
35' RT
XX.X
06-26-14



BORING NUMBER
APPROXIMATE STATION
APPROXIMATE OFFSET
GSE (NAVD88)
DATE DRILLED

STRATUM NO.	AASHTO SOIL CLASSIFICATION SYMBOL	DESCRIPTION
1	A-3	WHITE TO GRAY, LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, VERY PALE BROWN TO PALE BROWN, LIGHT BROWN TO VERY DARK BROWN, GRAYISH BROWN TO DARK GRAYISH BROWN, PALE YELLOW, DARK YELLOWISH BROWN TO BROWNISH YELLOW, STRONG BROWN, AND VERY DARK GRAY TO BLACK FINE SAND; TRACE TO FEW SILT OR CLAY; OCCASIONAL TRACE ORGANIC MATTER AND OCCASIONAL TRACE ROOTS
2	A-2-4	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN, GREENISH GRAY, AND BLACK FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE ORGANIC MATTER
3	A-2-6, A-6 A-7-6	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN AND GREENISH GRAY FINE SAND; FEW TO LITTLE CLAY
4	A-8	VERY DARK BROWN, VERY DARK GRAY AND BLACK FINE SAND WITH ORGANIC MATTER, SANDY PEAT, ORGANIC SILT AND ORGANIC CLAY
5	A-3, A-2-4	DARK BROWN TO VERY DARK BROWN, DARK YELLOWISH BROWN FINE SAND; TRACE TO LITTLE SILT; TRACE CEMENTATION (HARDPAN-TYPE)
6	A-7-5, A-7-6	LIGHT GRAY, BROWNISH YELLOW, GRAY AND BROWNISH YELLOW, AND STRONG BROWN SANDY CLAY, CLAY AND SILT
7	A-3, A-2-4	YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, AND STRONG BROWN, FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE TO FEW FRAGMENTS OF LIMESTONE, ASPHALT, GLASS, METAL, WOOD AND ROOTS; OFTEN MIXED WITH CLAYEY SANDS (POSSIBLE FILL)

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

PETER G. SUAH, P.E.
P.E. LICENSE NO. 46910

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ORLANDO, FLORIDA 32811
CERTIFICATE OF AUTHORIZATION EB6685

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

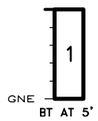
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
429	SEMINOLE	240200-2-52-01

REPORT OF ROADWAY AUGER BORINGS
WEKIVA PARKWAY 7A

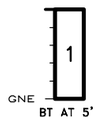
SHEET NO.
XX

BORING NUMBER ML983L
APPROXIMATE STATION 983+00
APPROXIMATE OFFSET 50' LT
GSE (NAVD88) XX.X
DATE DRILLED 06-24-14

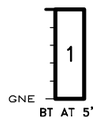
BORING NUMBER ML985L
APPROXIMATE STATION 985+00
APPROXIMATE OFFSET 50' LT
GSE (NAVD88) XX.X
DATE DRILLED 07-02-14



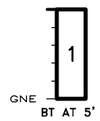
BORING NUMBER ML986L
APPROXIMATE STATION 986+00
APPROXIMATE OFFSET 45' LT
GSE (NAVD88) XX.X
DATE DRILLED 07-11-14



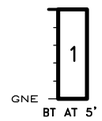
BORING NUMBER ML988L
APPROXIMATE STATION 988+00
APPROXIMATE OFFSET 35' LT
GSE (NAVD88) XX.X
DATE DRILLED 07-02-14



BORING NUMBER ML989L
APPROXIMATE STATION 989+00
APPROXIMATE OFFSET 60' LT
GSE (NAVD88) XX.X
DATE DRILLED 07-02-14



BORING NUMBER ML991L
APPROXIMATE STATION 991+00
APPROXIMATE OFFSET 50' LT
GSE (NAVD88) XX.X
DATE DRILLED 07-09-14

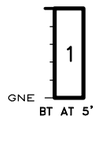


BORING NUMBER
APPROXIMATE STATION
APPROXIMATE OFFSET
GSE (NAVD88)
DATE DRILLED

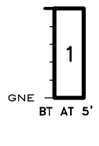
BORING NUMBER
APPROXIMATE STATION
APPROXIMATE OFFSET
GSE (NAVD88)
DATE DRILLED

BORING NUMBER ML983R
APPROXIMATE STATION 983+00
APPROXIMATE OFFSET 45' RT
GSE (NAVD88) XX.X
DATE DRILLED 06-26-14

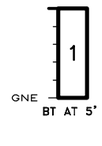
BORING NUMBER ML984R
APPROXIMATE STATION 984+00
APPROXIMATE OFFSET 35' RT
GSE (NAVD88) XX.X
DATE DRILLED 06-26-14



BORING NUMBER ML987R
APPROXIMATE STATION 987+00
APPROXIMATE OFFSET 50' RT
GSE (NAVD88) XX.X
DATE DRILLED 06-26-14



BORING NUMBER ML990R
APPROXIMATE STATION 990+00
APPROXIMATE OFFSET 50' RT
GSE (NAVD88) XX.X
DATE DRILLED 06-26-14



BORING NUMBER
APPROXIMATE STATION
APPROXIMATE OFFSET
GSE (NAVD88)
DATE DRILLED

STRATUM NO.	AASHTO SOIL CLASSIFICATION SYMBOL	DESCRIPTION
1	A-3	WHITE TO GRAY, LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, VERY PALE BROWN TO PALE BROWN, LIGHT BROWN TO VERY DARK BROWN, GRAYISH BROWN TO DARK GRAYISH BROWN, PALE YELLOW, DARK YELLOWISH BROWN TO BROWNISH YELLOW, STRONG BROWN, AND VERY DARK GRAY TO BLACK FINE SAND; TRACE TO FEW SILT OR CLAY; OCCASIONAL TRACE ORGANIC MATTER AND OCCASIONAL TRACE ROOTS
2	A-2-4	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN, GREENISH GRAY, AND BLACK FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE ORGANIC MATTER
3	A-2-6, A-6 A-7-6	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN AND GREENISH GRAY FINE SAND; FEW TO LITTLE CLAY
4	A-8	VERY DARK BROWN, VERY DARK GRAY AND BLACK FINE SAND WITH ORGANIC MATTER, SANDY PEAT, ORGANIC SILT AND ORGANIC CLAY
5	A-3, A-2-4	DARK BROWN TO VERY DARK BROWN, DARK YELLOWISH BROWN FINE SAND; TRACE TO LITTLE SILT; TRACE CEMENTATION (HARDPAN-TYPE)
6	A-7-5, A-7-6	LIGHT GRAY, BROWNISH YELLOW, GRAY AND BROWNISH YELLOW, AND STRONG BROWN SANDY CLAY, CLAY AND SILT
7	A-3, A-2-4	YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, AND STRONG BROWN, FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE TO FEW FRAGMENTS OF LIMESTONE, ASPHALT, GLASS, METAL, WOOD AND ROOTS; OFTEN MIXED WITH CLAYEY SANDS (POSSIBLE FILL)

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

PETER G. SUAH, P.E.
P.E. LICENSE NO. 46910

ANTILLIAN ENGINEERING ASSOCIATES, INC.
3331 BARTLETT BOULEVARD
ORLANDO, FLORIDA 32811
CERTIFICATE OF AUTHORIZATION EB6685

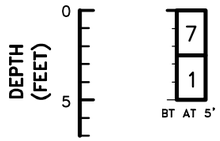
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
429	SEMINOLE	240200-2-52-01

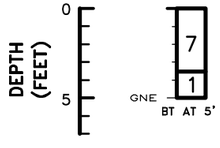
REPORT OF ROADWAY AUGER BORINGS
WEKIVA PARKWAY 7A

SHEET NO. XX

BORING NUMBER	ML992L		ML994L	ML995L		ML997L	ML998L	ML999L	ML1000L	ML1001L
APPROXIMATE STATION	992+00		994+00	995+00		997+00	998+00	999+00	1000+00	1001+00
APPROXIMATE OFFSET	30' LT		50' LT	60' LT		45' LT	25' LT	25' LT	60' LT	60' LT
GSE (NAVD88)	XX.X		XX.X	XX.X		XX.X	XX.X	XX.X	XX.X	XX.X
DATE DRILLED	07-09-14		07-11-14	07-11-14		07-09-14	07-09-14	07-09-14	07-11-14	07-10-14



BORING NUMBER	ML992R	ML993R	ML994R		ML996R	ML997R	ML998R	ML999R	ML1000R	
APPROXIMATE STATION	992+00	993+00	994+00		996+00	997+00	998+00	999+00	1000+00	
APPROXIMATE OFFSET	35' RT	50' RT	20' RT		20' RT	35' RT	35' RT	35' RT	50' RT	
GSE (NAVD88)	XX.X	XX.X	XX.X		XX.X	XX.X	XX.X	XX.X	XX.X	
DATE DRILLED	06-26-14	06-26-14	06-26-14		06-26-14	06-26-14	06-26-14	06-26-14	06-26-14	



STRATUM NO.	AASHTO SOIL CLASSIFICATION SYMBOL	DESCRIPTION
1	A-3	WHITE TO GRAY, LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, VERY PALE BROWN TO PALE BROWN, LIGHT BROWN TO VERY DARK BROWN, GRAYISH BROWN TO DARK GRAYISH BROWN, PALE YELLOW, DARK YELLOWISH BROWN TO BROWNISH YELLOW, STRONG BROWN, AND VERY DARK GRAY TO BLACK FINE SAND; TRACE TO FEW SILT OR CLAY; OCCASIONAL TRACE ORGANIC MATTER AND OCCASIONAL TRACE ROOTS
2	A-2-4	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN, GREENISH GRAY, AND BLACK FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE ORGANIC MATTER
3	A-2-6, A-6 A-7-6	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN AND GREENISH GRAY FINE SAND; FEW TO LITTLE CLAY
4	A-8	VERY DARK BROWN, VERY DARK GRAY AND BLACK FINE SAND WITH ORGANIC MATTER, SANDY PEAT, ORGANIC SILT AND ORGANIC CLAY
5	A-3, A-2-4	DARK BROWN TO VERY DARK BROWN, DARK YELLOWISH BROWN FINE SAND; TRACE TO LITTLE SILT; TRACE CEMENTATION (HARDPAN-TYPE)
6	A-7-5, A-7-6	LIGHT GRAY, BROWNISH YELLOW, GRAY AND BROWNISH YELLOW, AND STRONG BROWN SANDY CLAY, CLAY AND SILT
7	A-3, A-2-4	YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, AND STRONG BROWN, FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE TO FEW FRAGMENTS OF LIMESTONE, ASPHALT, GLASS, METAL, WOOD AND ROOTS; OFTEN MIXED WITH CLAYEY SANDS (POSSIBLE FILL)

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

PETER G. SUAH, P.E.
P.E. LICENSE NO. 46910

ANTILLIAN ENGINEERING ASSOCIATES, INC.
3331 BARTLETT BOULEVARD
ORLANDO, FLORIDA 32811

CERTIFICATE OF AUTHORIZATION EB6685

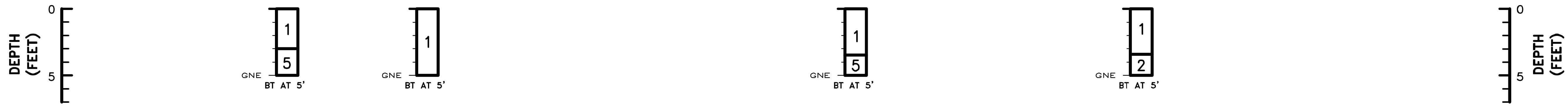
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
429	SEMINOLE	240200-2-52-01

REPORT OF ROADWAY AUGER BORINGS
WEKIVA PARKWAY 7A

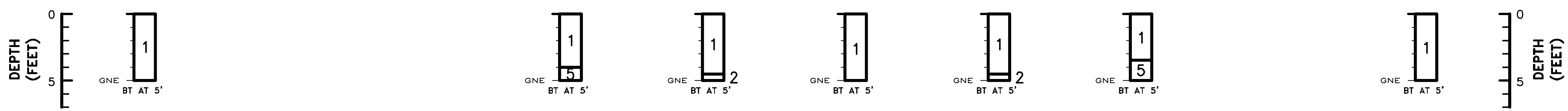
SHEET NO. XX

BORING NUMBER	ML1003L	ML1004L	ML1007L	ML1009L
APPROXIMATE STATION	1003+00	1004+00	1007+00	1009+00
APPROXIMATE OFFSET	50' LT	15' LT	80' LT	50' LT
GSE (NAVD88)	XX.X	XX.X	XX.X	XX.X
DATE DRILLED	07-10-14	07-10-14	07-10-14	07-10-14



BORING NUMBER
APPROXIMATE STATION
APPROXIMATE OFFSET
GSE (NAVD88)
DATE DRILLED

BORING NUMBER	ML1002R	ML1005R	ML1006R	ML1007R	ML1008R	ML1009R	ML1011R
APPROXIMATE STATION	1002+00	1005+00	1006+00	1007+00	1008+00	1009+00	1011+00
APPROXIMATE OFFSET	50' RT	40' RT	40' RT	25' RT	30' RT	35' RT	55' RT
GSE (NAVD88)	XX.X	XX.X	XX.X	XX.X	XX.X	XX.X	XX.X
DATE DRILLED	06-26-14	06-30-14	06-30-14	06-30-14	06-30-14	07-01-14	07-01-14



STRATUM NO.	AASHTO SOIL CLASSIFICATION SYMBOL	DESCRIPTION
1	A-3	WHITE TO GRAY, LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, VERY PALE BROWN TO PALE BROWN, LIGHT BROWN TO VERY DARK BROWN, GRAYISH BROWN TO DARK GRAYISH BROWN, PALE YELLOW, DARK YELLOWISH BROWN TO BROWNISH YELLOW, STRONG BROWN, AND VERY DARK GRAY TO BLACK FINE SAND; TRACE TO FEW SILT OR CLAY; OCCASIONAL TRACE ORGANIC MATTER AND OCCASIONAL TRACE ROOTS
2	A-2-4	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN, GREENISH GRAY, AND BLACK FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE ORGANIC MATTER
3	A-2-6, A-6 A-7-6	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN AND GREENISH GRAY FINE SAND; FEW TO LITTLE CLAY
4	A-8	VERY DARK BROWN, VERY DARK GRAY AND BLACK FINE SAND WITH ORGANIC MATTER, SANDY PEAT, ORGANIC SILT AND ORGANIC CLAY
5	A-3, A-2-4	DARK BROWN TO VERY DARK BROWN, DARK YELLOWISH BROWN FINE SAND; TRACE TO LITTLE SILT; TRACE CEMENTATION (HARDPAN-TYPE)
6	A-7-5, A-7-6	LIGHT GRAY, BROWNISH YELLOW, GRAY AND BROWNISH YELLOW, AND STRONG BROWN SANDY CLAY, CLAY AND SILT
7	A-3, A-2-4	YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, AND STRONG BROWN, FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE TO FEW FRAGMENTS OF LIMESTONE, ASPHALT, GLASS, METAL, WOOD AND ROOTS; OFTEN MIXED WITH CLAYEY SANDS (POSSIBLE FILL)

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

PETER G. SUAH, P.E.
P.E. LICENSE NO. 46910
ANTILLIAN ENGINEERING ASSOCIATES, INC.
3331 BARTLETT BOULEVARD
ORLANDO, FLORIDA 32811
CERTIFICATE OF AUTHORIZATION EB6685

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

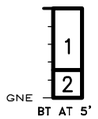
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
429	SEMINOLE	240200-2-52-01

REPORT OF ROADWAY AUGER BORINGS
WEKIVA PARKWAY 7A

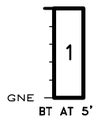
SHEET NO. XX

BORING NUMBER
APPROXIMATE STATION
APPROXIMATE OFFSET
GSE (NAVD88)
DATE DRILLED

DEPTH (FEET)

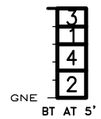


ML1013L
1013+00
35' LT
XX.X
07-11-14

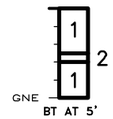


ML1015L
1015+00
25' LT
XX.X
07-11-14

ML1018L
1018+00
25' LT
XX.X
07-11-14



ML1019L
1019+00
50' LT
XX.X
07-11-14

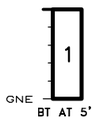


ML1021L
1021+00
40' LT
XX.X
07-11-14

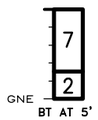
BORING NUMBER
APPROXIMATE STATION
APPROXIMATE OFFSET
GSE (NAVD88)
DATE DRILLED

BORING NUMBER
APPROXIMATE STATION
APPROXIMATE OFFSET
GSE (NAVD88)
DATE DRILLED

DEPTH (FEET)



ML1012CL
1012+00
CL
X.X
07-10-14

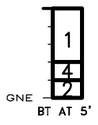


ML1016CL
1016+00
CL
X.X
07-11-14

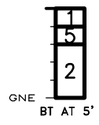
BORING NUMBER
APPROXIMATE STATION
APPROXIMATE OFFSET
GSE (NAVD88)
DATE DRILLED

BORING NUMBER
APPROXIMATE STATION
APPROXIMATE OFFSET
GSE (NAVD88)
DATE DRILLED

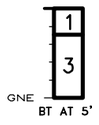
DEPTH (FEET)



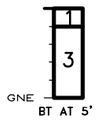
ML1013R
1013+00
35' RT
XX.X
07-01-14



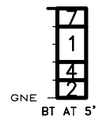
ML1014R
1014+00
35' RT
XX.X
07-01-14



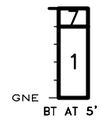
ML1017R
1017+00
35' RT
XX.X
07-01-14



ML1018R
1018+00
50' RT
XX.X
07-01-14

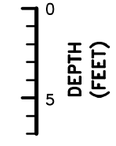


ML1019R
1019+00
60' RT
XX.X
07-01-14



ML1021R
1021+00
75' RT
XX.X
07-01-14

BORING NUMBER
APPROXIMATE STATION
APPROXIMATE OFFSET
GSE (NAVD88)
DATE DRILLED



STRATUM NO.	AASHTO SOIL CLASSIFICATION SYMBOL	DESCRIPTION
1	A-3	WHITE TO GRAY, LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, VERY PALE BROWN TO PALE BROWN, LIGHT BROWN TO VERY DARK BROWN, GRAYISH BROWN TO DARK GRAYISH BROWN, PALE YELLOW, DARK YELLOWISH BROWN TO BROWNISH YELLOW, STRONG BROWN, AND VERY DARK GRAY TO BLACK FINE SAND; TRACE TO FEW SILT OR CLAY; OCCASIONAL TRACE ORGANIC MATTER AND OCCASIONAL TRACE ROOTS
2	A-2-4	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN, GREENISH GRAY, AND BLACK FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE ORGANIC MATTER
3	A-2-6, A-6 A-7-6	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN AND GREENISH GRAY FINE SAND; FEW TO LITTLE CLAY
4	A-8	VERY DARK BROWN, VERY DARK GRAY AND BLACK FINE SAND WITH ORGANIC MATTER, SANDY PEAT, ORGANIC SILT AND ORGANIC CLAY
5	A-3, A-2-4	DARK BROWN TO VERY DARK BROWN, DARK YELLOWISH BROWN FINE SAND; TRACE TO LITTLE SILT; TRACE CEMENTATION (HARDPAN-TYPE)
6	A-7-5, A-7-6	LIGHT GRAY, BROWNISH YELLOW, GRAY AND BROWNISH YELLOW, AND STRONG BROWN SANDY CLAY, CLAY AND SILT
7	A-3, A-2-4	YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, AND STRONG BROWN, FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE TO FEW FRAGMENTS OF LIMESTONE, ASPHALT, GLASS, METAL, WOOD AND ROOTS; OFTEN MIXED WITH CLAYEY SANDS (POSSIBLE FILL)

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

PETER G. SUAH, P.E.
P.E. LICENSE NO. 46910

ANTILLIAN ENGINEERING ASSOCIATES, INC.
3331 BARTLETT BOULEVARD
ORLANDO, FLORIDA 32811

CERTIFICATE OF AUTHORIZATION EB6685

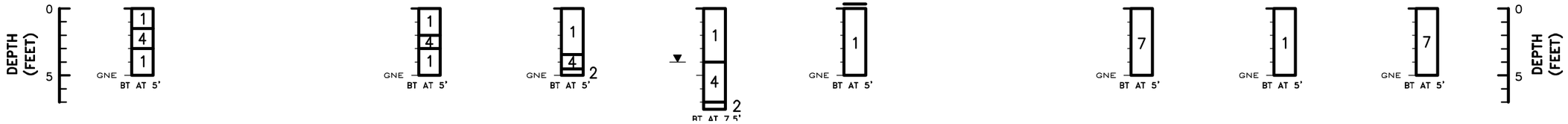
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
429	SEMINOLE	240200-2-52-01

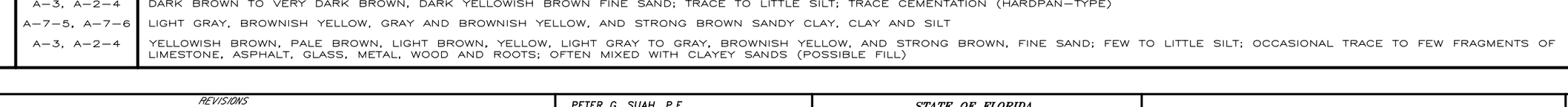
REPORT OF ROADWAY AUGER BORINGS
WEKIVA PARKWAY 7A

SHEET NO.
XX

BORING NUMBER	ML1022L	ML1024L	ML1025L	ML1026L	ML1027L				ML1029L	ML1030L	ML1031L	BORING NUMBER
APPROXIMATE STATION	1022+00	1024+00	1025+00	1026+00	1027+00				1029+00	1030+00	1031+00	APPROXIMATE STATION
APPROXIMATE OFFSET	30' LT	40' LT	50' LT	35' LT	45' LT				50' LT	30' LT	10' LT	APPROXIMATE OFFSET
GSE (NAVD88)	XX.X	XX.X	XX.X	XX.X	XX.X				XX.X	XX.X	XX.X	GSE (NAVD88)
DATE DRILLED	07-11-14	07-15-14	07-15-14	07-15-14	07-15-14				07-15-14	07-15-14	07-15-14	DATE DRILLED



BORING NUMBER												BORING NUMBER
APPROXIMATE STATION												APPROXIMATE STATION
APPROXIMATE OFFSET												APPROXIMATE OFFSET
GSE (NAVD88)												GSE (NAVD88)
DATE DRILLED												DATE DRILLED



BORING NUMBER	ML1022R	ML1024R					ML1028R	ML1029R				BORING NUMBER
APPROXIMATE STATION	1022+00	1024+00					1028+00	1029+00				APPROXIMATE STATION
APPROXIMATE OFFSET	35' RT	35' RT					40' RT	25' RT				APPROXIMATE OFFSET
GSE (NAVD88)	XX.X	XX.X					XX.X	XX.X				GSE (NAVD88)
DATE DRILLED	07-02-14	07-17-14					07-17-14	07-17-14				DATE DRILLED

STRATUM NO.	AASHTO SOIL CLASSIFICATION SYMBOL	DESCRIPTION
1	A-3	WHITE TO GRAY, LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, VERY PALE BROWN TO PALE BROWN, LIGHT BROWN TO VERY DARK BROWN, GRAYISH BROWN TO DARK GRAYISH BROWN, PALE YELLOW, DARK YELLOWISH BROWN TO BROWNISH YELLOW, STRONG BROWN, AND VERY DARK GRAY TO BLACK FINE SAND; TRACE TO FEW SILT OR CLAY; OCCASIONAL TRACE ORGANIC MATTER AND OCCASIONAL TRACE ROOTS
2	A-2-4	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN, GREENISH GRAY, AND BLACK FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE ORGANIC MATTER
3	A-2-6, A-6 A-7-6	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN AND GREENISH GRAY FINE SAND; FEW TO LITTLE CLAY
4	A-8	VERY DARK BROWN, VERY DARK GRAY AND BLACK FINE SAND WITH ORGANIC MATTER, SANDY PEAT, ORGANIC SILT AND ORGANIC CLAY
5	A-3, A-2-4	DARK BROWN TO VERY DARK BROWN, DARK YELLOWISH BROWN FINE SAND; TRACE TO LITTLE SILT; TRACE CEMENTATION (HARDPAN-TYPE)
6	A-7-5, A-7-6	LIGHT GRAY, BROWNISH YELLOW, GRAY AND BROWNISH YELLOW, AND STRONG BROWN SANDY CLAY, CLAY AND SILT
7	A-3, A-2-4	YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, AND STRONG BROWN, FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE TO FEW FRAGMENTS OF LIMESTONE, ASPHALT, GLASS, METAL, WOOD AND ROOTS; OFTEN MIXED WITH CLAYEY SANDS (POSSIBLE FILL)

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

PETER G. SUAH, P.E.
P.E. LICENSE NO. 46910

ANTILLIAN ENGINEERING ASSOCIATES, INC.
3331 BARTLETT BOULEVARD
ORLANDO, FLORIDA 32811

CERTIFICATE OF AUTHORIZATION EB6685

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

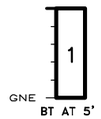
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
429	SEMINOLE	240200-2-52-01

REPORT OF ROADWAY AUGER BORINGS
WEKIVA PARKWAY 7A

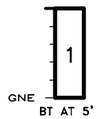
SHEET NO. XX

BORING NUMBER
APPROXIMATE STATION
APPROXIMATE OFFSET
GSE (NAVD88)
DATE DRILLED

ML1033L
1033+00
40' LT
XX.X
07-15-14



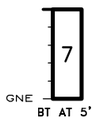
ML1035L
1035+00
50' LT
XX.X
07-15-14



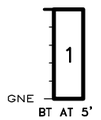
BORING NUMBER
APPROXIMATE STATION
APPROXIMATE OFFSET
GSE (NAVD88)
DATE DRILLED

BORING NUMBER
APPROXIMATE STATION
APPROXIMATE OFFSET
GSE (NAVD88)
DATE DRILLED

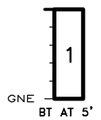
ML1032CL
1032+00
CL
X.X
07-15-14



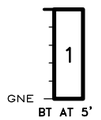
ML1038CL
1038+00
CL
X.X
07-15-14



ML1039CL
1039+00
CL
X.X
07-15-14



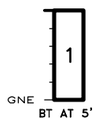
ML1041CL
1041+00
CL
X.X
07-15-14



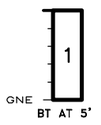
BORING NUMBER
APPROXIMATE STATION
APPROXIMATE OFFSET
GSE (NAVD88)
DATE DRILLED

BORING NUMBER
APPROXIMATE STATION
APPROXIMATE OFFSET
GSE (NAVD88)
DATE DRILLED

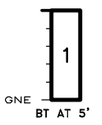
ML1034R
1034+00
25' RT
XX.X
07-17-14



ML1036R
1036+00
15' RT
XX.X
07-17-14



ML1037R
1037+00
15' RT
XX.X
07-17-14



BORING NUMBER
APPROXIMATE STATION
APPROXIMATE OFFSET
GSE (NAVD88)
DATE DRILLED

STRATUM NO.	AASHTO SOIL CLASSIFICATION SYMBOL	DESCRIPTION
1	A-3	WHITE TO GRAY, LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, VERY PALE BROWN TO PALE BROWN, LIGHT BROWN TO VERY DARK BROWN, GRAYISH BROWN TO DARK GRAYISH BROWN, PALE YELLOW, DARK YELLOWISH BROWN TO BROWNISH YELLOW, STRONG BROWN, AND VERY DARK GRAY TO BLACK FINE SAND; TRACE TO FEW SILT OR CLAY; OCCASIONAL TRACE ORGANIC MATTER AND OCCASIONAL TRACE ROOTS
2	A-2-4	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN, GREENISH GRAY, AND BLACK FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE ORGANIC MATTER
3	A-2-6, A-6 A-7-6	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN AND GREENISH GRAY FINE SAND; FEW TO LITTLE CLAY
4	A-8	VERY DARK BROWN, VERY DARK GRAY AND BLACK FINE SAND WITH ORGANIC MATTER, SANDY PEAT, ORGANIC SILT AND ORGANIC CLAY
5	A-3, A-2-4	DARK BROWN TO VERY DARK BROWN, DARK YELLOWISH BROWN FINE SAND; TRACE TO LITTLE SILT; TRACE CEMENTATION (HARDPAN-TYPE)
6	A-7-5, A-7-6	LIGHT GRAY, BROWNISH YELLOW, GRAY AND BROWNISH YELLOW, AND STRONG BROWN SANDY CLAY, CLAY AND SILT
7	A-3, A-2-4	YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, AND STRONG BROWN, FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE TO FEW FRAGMENTS OF LIMESTONE, ASPHALT, GLASS, METAL, WOOD AND ROOTS; OFTEN MIXED WITH CLAYEY SANDS (POSSIBLE FILL)

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

PETER G. SUAH, P.E.
P.E. LICENSE NO. 46910

ANTILLIAN ENGINEERING ASSOCIATES, INC.
3331 BARTLETT BOULEVARD
ORLANDO, FLORIDA 32811
CERTIFICATE OF AUTHORIZATION EB6685

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
429	SEMINOLE	240200-2-52-01

REPORT OF ROADWAY AUGER BORINGS
WEKIVA PARKWAY 7A

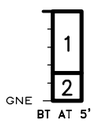
SHEET NO.
XX

BORING NUMBER
APPROXIMATE STATION
APPROXIMATE OFFSET
GSE (NAVD88)
DATE DRILLED

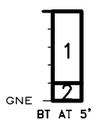
BORING NUMBER
APPROXIMATE STATION
APPROXIMATE OFFSET
GSE (NAVD88)
DATE DRILLED

BORING NUMBER
APPROXIMATE STATION
APPROXIMATE OFFSET
GSE (NAVD88)
DATE DRILLED

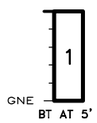
ML1042CL
1042+00
CL
X.X
07–15–14



ML1043CL
1043+00
CL
X.X
07–15–14



ML1044CL
1044+00
CL
X.X
07–15–14



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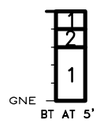
CL
X.X
07–15–14



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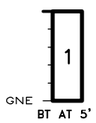
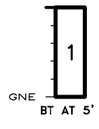
1051+00
CL
X.X
07–16–14



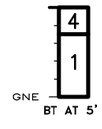
BORING NUMBER
APPROXIMATE STATION
APPROXIMATE OFFSET
GSE (NAVD88)
DATE DRILLED

BORING NUMBER
APPROXIMATE STATION
APPROXIMATE OFFSET
GSE (NAVD88)
DATE DRILLED

ML1046R
1046+00
20' RT
XX.X
07–16–14



ML1048R
1048+00
25' RT
XX.X
07–16–14



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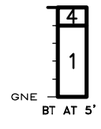
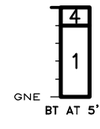
1049+00
20' RT
XX.X
07–16–14



ML1050R
1050+00
60' RT
XX.X
07–16–14



BORING NUMBER
APPROXIMATE STATION
APPROXIMATE OFFSET
GSE (NAVD88)
DATE DRILLED

STRATUM NO.	AASHTO SOIL CLASSIFICATION SYMBOL	DESCRIPTION
1	A–3	WHITE TO GRAY, LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, VERY PALE BROWN TO PALE BROWN, LIGHT BROWN TO VERY DARK BROWN, GRAYISH BROWN TO DARK GRAYISH BROWN, PALE YELLOW, DARK YELLOWISH BROWN TO BROWNISH YELLOW, STRONG BROWN, AND VERY DARK GRAY TO BLACK FINE SAND; TRACE TO FEW SILT OR CLAY; OCCASIONAL TRACE ORGANIC MATTER AND OCCASIONAL TRACE ROOTS
2	A–2–4	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN, GREENISH GRAY, AND BLACK FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE ORGANIC MATTER
3	A–2–6, A–6 A–7–6	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN AND GREENISH GRAY FINE SAND; FEW TO LITTLE CLAY
4	A–8	VERY DARK BROWN, VERY DARK GRAY AND BLACK FINE SAND WITH ORGANIC MATTER, SANDY PEAT, ORGANIC SILT AND ORGANIC CLAY
5	A–3, A–2–4	DARK BROWN TO VERY DARK BROWN, DARK YELLOWISH BROWN FINE SAND; TRACE TO LITTLE SILT; TRACE CEMENTATION (HARDPAN–TYPE)
6	A–7–5, A–7–6	LIGHT GRAY, BROWNISH YELLOW, GRAY AND BROWNISH YELLOW, AND STRONG BROWN SANDY CLAY, CLAY AND SILT
7	A–3, A–2–4	YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, AND STRONG BROWN, FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE TO FEW FRAGMENTS OF LIMESTONE, ASPHALT, GLASS, METAL, WOOD AND ROOTS; OFTEN MIXED WITH CLAYEY SANDS (POSSIBLE FILL)

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

PETER G. SUAH, P.E.
P.E. LICENSE NO. 46910

ANTILLIAN ENGINEERING ASSOCIATES, INC.
3331 BARTLETT BOULEVARD
ORLANDO, FLORIDA 32811

CERTIFICATE OF AUTHORIZATION EB6685

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

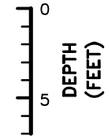
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
429	SEMINOLE	240200-2-52-01

REPORT OF ROADWAY AUGER BORINGS
WEKIVA PARKWAY 7A

SHEET NO.
XX

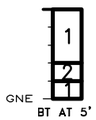
BORING NUMBER
APPROXIMATE STATION
APPROXIMATE OFFSET
GSE (NAVD88)
DATE DRILLED

BORING NUMBER
APPROXIMATE STATION
APPROXIMATE OFFSET
GSE (NAVD88)
DATE DRILLED



BORING NUMBER
APPROXIMATE STATION
APPROXIMATE OFFSET
GSE (NAVD88)
DATE DRILLED

ML1052CL
1052+00
CL
X.X
07-16-14



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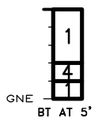
1053+00
CL
X.X
07-16-14



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1054+00
CL
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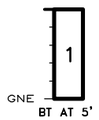
07-16-14



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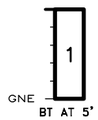


BORING NUMBER
APPROXIMATE STATION
APPROXIMATE OFFSET
GSE (NAVD88)
DATE DRILLED

BORING NUMBER
APPROXIMATE STATION
APPROXIMATE OFFSET
GSE (NAVD88)
DATE DRILLED

BORING NUMBER
APPROXIMATE STATION
APPROXIMATE OFFSET
GSE (NAVD88)
DATE DRILLED

STRATUM NO.	AASHTO SOIL CLASSIFICATION SYMBOL	DESCRIPTION
1	A-3	WHITE TO GRAY, LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, VERY PALE BROWN TO PALE BROWN, LIGHT BROWN TO VERY DARK BROWN, GRAYISH BROWN TO DARK GRAYISH BROWN, PALE YELLOW, DARK YELLOWISH BROWN TO BROWNISH YELLOW, STRONG BROWN, AND VERY DARK GRAY TO BLACK FINE SAND; TRACE TO FEW SILT OR CLAY; OCCASIONAL TRACE ORGANIC MATTER AND OCCASIONAL TRACE ROOTS
2	A-2-4	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN, GREENISH GRAY, AND BLACK FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE ORGANIC MATTER
3	A-2-6, A-6 A-7-6	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN AND GREENISH GRAY FINE SAND; FEW TO LITTLE CLAY
4	A-8	VERY DARK BROWN, VERY DARK GRAY AND BLACK FINE SAND WITH ORGANIC MATTER, SANDY PEAT, ORGANIC SILT AND ORGANIC CLAY
5	A-3, A-2-4	DARK BROWN TO VERY DARK BROWN, DARK YELLOWISH BROWN FINE SAND; TRACE TO LITTLE SILT; TRACE CEMENTATION (HARDPAN-TYPE)
6	A-7-5, A-7-6	LIGHT GRAY, BROWNISH YELLOW, GRAY AND BROWNISH YELLOW, AND STRONG BROWN SANDY CLAY, CLAY AND SILT
7	A-3, A-2-4	YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, AND STRONG BROWN, FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE TO FEW FRAGMENTS OF LIMESTONE, ASPHALT, GLASS, METAL, WOOD AND ROOTS; OFTEN MIXED WITH CLAYEY SANDS (POSSIBLE FILL)

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

PETER G. SUAH, P.E.
P.E. LICENSE NO. 46910

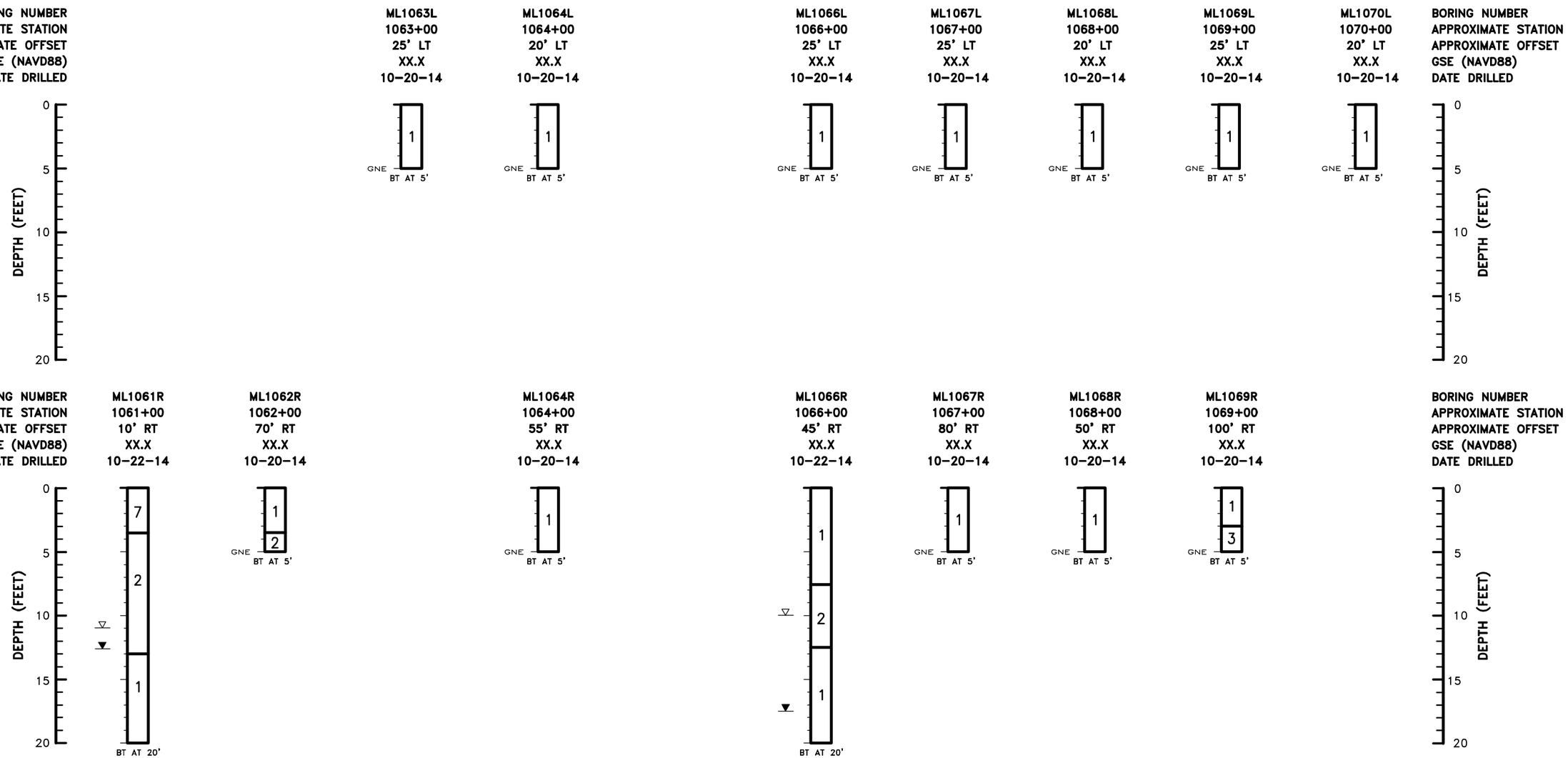
ANTILLIAN ENGINEERING ASSOCIATES, INC.
3331 BARTLETT BOULEVARD
ORLANDO, FLORIDA 32811
CERTIFICATE OF AUTHORIZATION EB6685

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
429	SEMINOLE	240200-2-52-01

REPORT OF ROADWAY AUGER BORINGS
WEKIVA PARKWAY 7A

SHEET NO.
XX



STRATUM NO.	AASHTO SOIL CLASSIFICATION SYMBOL	DESCRIPTION
1	A-3	WHITE TO GRAY, LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, VERY PALE BROWN TO PALE BROWN, LIGHT BROWN TO VERY DARK BROWN, GRAYISH BROWN TO DARK GRAYISH BROWN, PALE YELLOW, DARK YELLOWISH BROWN TO BROWNISH YELLOW, STRONG BROWN, AND VERY DARK GRAY TO BLACK FINE SAND; TRACE TO FEW SILT OR CLAY; OCCASIONAL TRACE ORGANIC MATTER AND OCCASIONAL TRACE ROOTS
2	A-2-4	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN, GREENISH GRAY, AND BLACK FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE ORGANIC MATTER
3	A-2-6, A-6 A-7-6	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN AND GREENISH GRAY FINE SAND; FEW TO LITTLE CLAY
4	A-8	VERY DARK BROWN, VERY DARK GRAY AND BLACK FINE SAND WITH ORGANIC MATTER, SANDY PEAT, ORGANIC SILT AND ORGANIC CLAY
5	A-3, A-2-4	DARK BROWN TO VERY DARK BROWN, DARK YELLOWISH BROWN FINE SAND; TRACE TO LITTLE SILT; TRACE CEMENTATION (HARDPAN-TYPE)
6	A-7-5, A-7-6	LIGHT GRAY, BROWNISH YELLOW, GRAY AND BROWNISH YELLOW, AND STRONG BROWN SANDY CLAY, CLAY AND SILT
7	A-3, A-2-4	YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, AND STRONG BROWN, FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE TO FEW FRAGMENTS OF LIMESTONE, ASPHALT, GLASS, METAL, WOOD AND ROOTS; OFTEN MIXED WITH CLAYEY SANDS (POSSIBLE FILL)

REVISIONS					
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STATE OF FLORIDA
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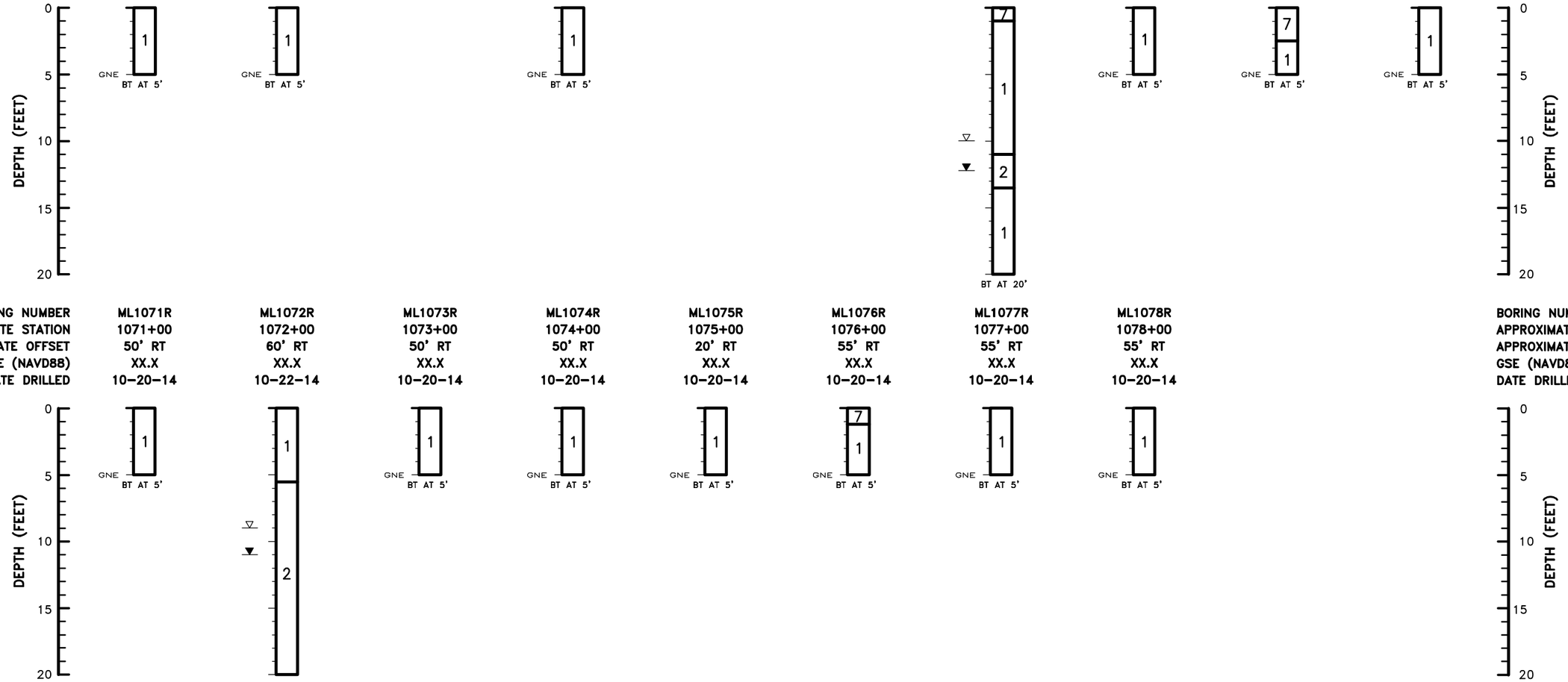
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
429	SEMINOLE	240200-2-52-01

REPORT OF ROADWAY AUGER BORINGS
WEKIVA PARKWAY 7A

SHEET NO.
XX



STRATUM NO.	AASHTO SOIL CLASSIFICATION SYMBOL	DESCRIPTION
1	A-3	WHITE TO GRAY, LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, VERY PALE BROWN TO PALE BROWN, LIGHT BROWN TO VERY DARK BROWN, GRAYISH BROWN TO DARK GRAYISH BROWN, PALE YELLOW, DARK YELLOWISH BROWN TO BROWNISH YELLOW, STRONG BROWN, AND VERY DARK GRAY TO BLACK FINE SAND; TRACE TO FEW SILT OR CLAY; OCCASIONAL TRACE ORGANIC MATTER AND OCCASIONAL TRACE ROOTS
2	A-2-4	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN, GREENISH GRAY, AND BLACK FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE ORGANIC MATTER
3	A-2-6, A-6 A-7-6	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN AND GREENISH GRAY FINE SAND; FEW TO LITTLE CLAY
4	A-8	VERY DARK BROWN, VERY DARK GRAY AND BLACK FINE SAND WITH ORGANIC MATTER, SANDY PEAT, ORGANIC SILT AND ORGANIC CLAY
5	A-3, A-2-4	DARK BROWN TO VERY DARK BROWN, DARK YELLOWISH BROWN FINE SAND; TRACE TO LITTLE SILT; TRACE CEMENTATION (HARDPAN-TYPE)
6	A-7-5, A-7-6	LIGHT GRAY, BROWNISH YELLOW, GRAY AND BROWNISH YELLOW, AND STRONG BROWN SANDY CLAY, CLAY AND SILT
7	A-3, A-2-4	YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, AND STRONG BROWN, FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE TO FEW FRAGMENTS OF LIMESTONE, ASPHALT, GLASS, METAL, WOOD AND ROOTS; OFTEN MIXED WITH CLAYEY SANDS (POSSIBLE FILL)

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429	SEMINOLE	240200-2-52-01

REPORT OF ROADWAY AUGER BORINGS
WEKIVA PARKWAY 7A

SHEET NO.
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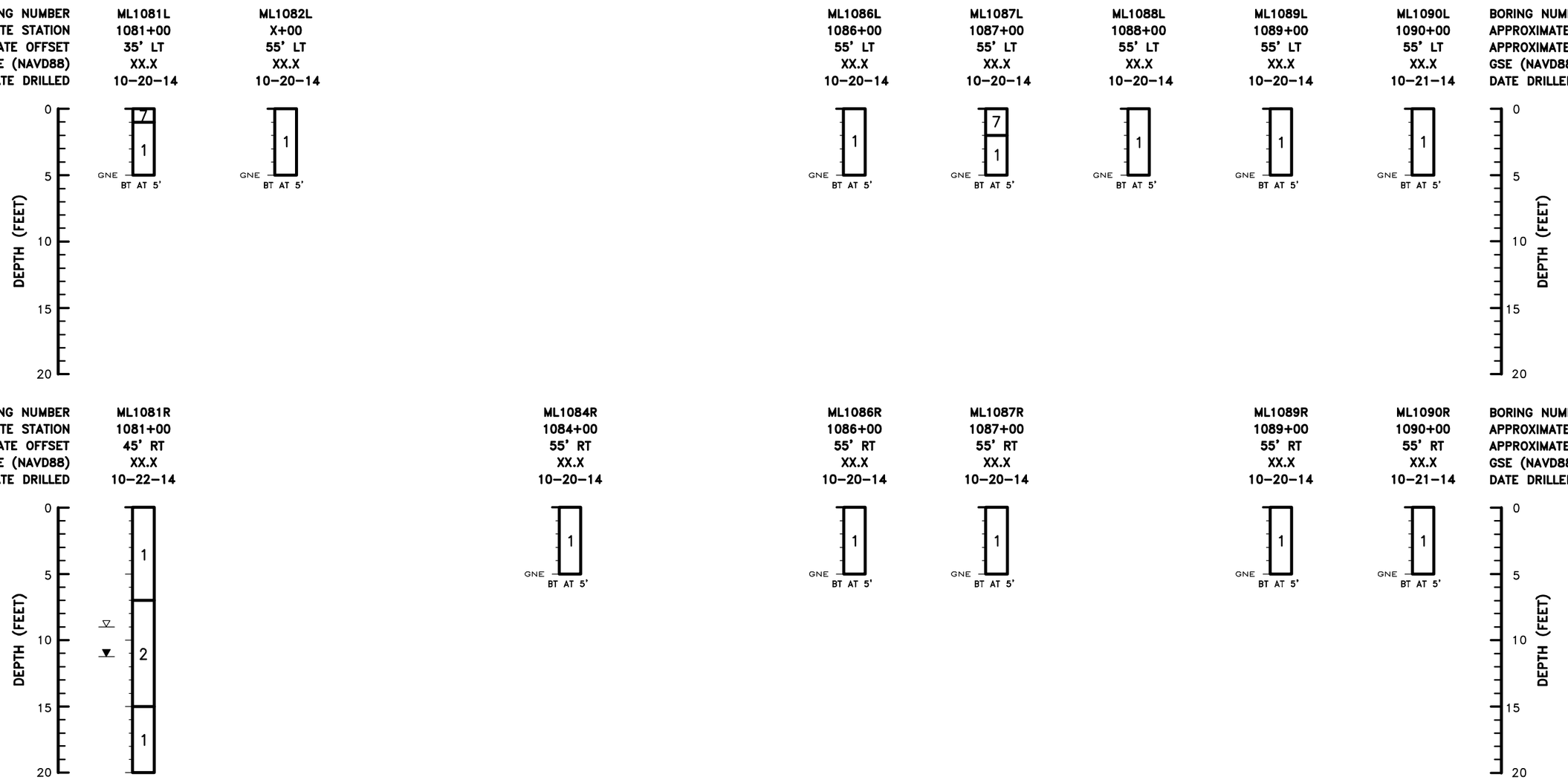

STRATUM NO.	AASHTO SOIL CLASSIFICATION SYMBOL	DESCRIPTION
1	A-3	WHITE TO GRAY, LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, VERY PALE BROWN TO PALE BROWN, LIGHT BROWN TO VERY DARK BROWN, GRAYISH BROWN TO DARK GRAYISH BROWN, PALE YELLOW, DARK YELLOWISH BROWN TO BROWNISH YELLOW, STRONG BROWN, AND VERY DARK GRAY TO BLACK FINE SAND; TRACE TO FEW SILT OR CLAY; OCCASIONAL TRACE ORGANIC MATTER AND OCCASIONAL TRACE ROOTS
2	A-2-4	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN, GREENISH GRAY, AND BLACK FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE ORGANIC MATTER
3	A-2-6, A-6 A-7-6	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN AND GREENISH GRAY FINE SAND; FEW TO LITTLE CLAY
4	A-8	VERY DARK BROWN, VERY DARK GRAY AND BLACK FINE SAND WITH ORGANIC MATTER, SANDY PEAT, ORGANIC SILT AND ORGANIC CLAY
5	A-3, A-2-4	DARK BROWN TO VERY DARK BROWN, DARK YELLOWISH BROWN FINE SAND; TRACE TO LITTLE SILT; TRACE CEMENTATION (HARDPAN-TYPE)
6	A-7-5, A-7-6	LIGHT GRAY, BROWNISH YELLOW, GRAY AND BROWNISH YELLOW, AND STRONG BROWN SANDY CLAY, CLAY AND SILT
7	A-3, A-2-4	YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, AND STRONG BROWN, FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE TO FEW FRAGMENTS OF LIMESTONE, ASPHALT, GLASS, METAL, WOOD AND ROOTS; OFTEN MIXED WITH CLAYEY SANDS (POSSIBLE FILL)

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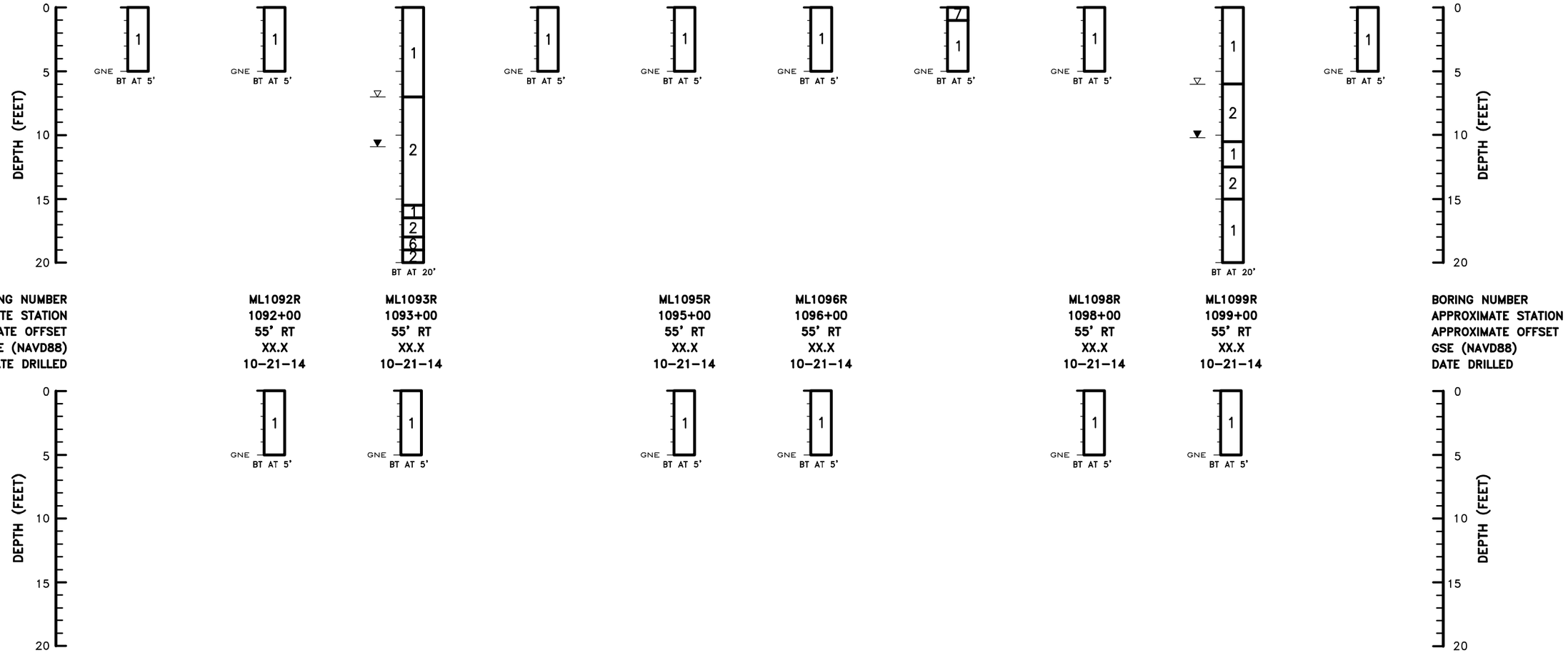
429	SEMINOLE	240200-2-52-01

REPORT OF ROADWAY AUGER BORINGS
WEKIVA PARKWAY 7A

SHEET NO.
XX



STRATUM NO.	AASHTO SOIL CLASSIFICATION SYMBOL	DESCRIPTION
1	A-3	WHITE TO GRAY, LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, VERY PALE BROWN TO PALE BROWN, LIGHT BROWN TO VERY DARK BROWN, GRAYISH BROWN TO DARK GRAYISH BROWN, PALE YELLOW, DARK YELLOWISH BROWN TO BROWNISH YELLOW, STRONG BROWN, AND VERY DARK GRAY TO BLACK FINE SAND; TRACE TO FEW SILT OR CLAY; OCCASIONAL TRACE ORGANIC MATTER AND OCCASIONAL TRACE ROOTS
2	A-2-4	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN, GREENISH GRAY, AND BLACK FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE ORGANIC MATTER
3	A-2-6, A-6 A-7-6	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN AND GREENISH GRAY FINE SAND; FEW TO LITTLE CLAY
4	A-8	VERY DARK BROWN, VERY DARK GRAY AND BLACK FINE SAND WITH ORGANIC MATTER, SANDY PEAT, ORGANIC SILT AND ORGANIC CLAY
5	A-3, A-2-4	DARK BROWN TO VERY DARK BROWN, DARK YELLOWISH BROWN FINE SAND; TRACE TO LITTLE SILT; TRACE CEMENTATION (HARDPAN-TYPE)
6	A-7-5, A-7-6	LIGHT GRAY, BROWNISH YELLOW, GRAY AND BROWNISH YELLOW, AND STRONG BROWN SANDY CLAY, CLAY AND SILT
7	A-3, A-2-4	YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, AND STRONG BROWN, FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE TO FEW FRAGMENTS OF LIMESTONE, ASPHALT, GLASS, METAL, WOOD AND ROOTS; OFTEN MIXED WITH CLAYEY SANDS (POSSIBLE FILL)

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ORLANDO, FLORIDA 32811

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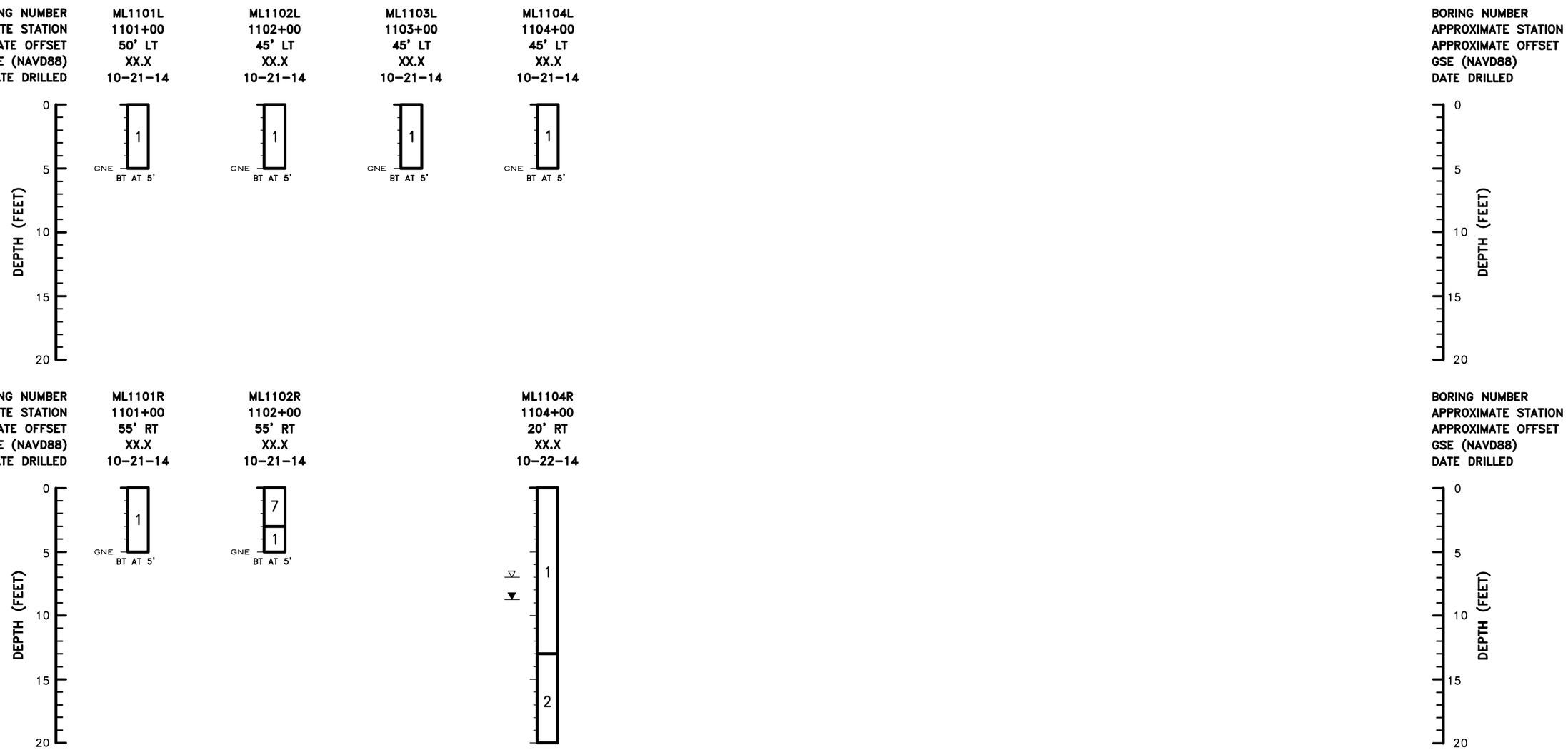
429	SEMINOLE	240200-2-52-01

REPORT OF ROADWAY AUGER BORINGS
WEKIVA PARKWAY 7A

SHEET NO.
XX



STRATUM NO.	AASHTO SOIL CLASSIFICATION SYMBOL	DESCRIPTION
1	A-3	WHITE TO GRAY, LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, VERY PALE BROWN TO PALE BROWN, LIGHT BROWN TO VERY DARK BROWN, GRAYISH BROWN TO DARK GRAYISH BROWN, PALE YELLOW, DARK YELLOWISH BROWN TO BROWNISH YELLOW, STRONG BROWN, AND VERY DARK GRAY TO BLACK FINE SAND; TRACE TO FEW SILT OR CLAY; OCCASIONAL TRACE ORGANIC MATTER AND OCCASIONAL TRACE ROOTS
2	A-2-4	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN, GREENISH GRAY, AND BLACK FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE ORGANIC MATTER
3	A-2-6, A-6 A-7-6	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN AND GREENISH GRAY FINE SAND; FEW TO LITTLE CLAY
4	A-8	VERY DARK BROWN, VERY DARK GRAY AND BLACK FINE SAND WITH ORGANIC MATTER, SANDY PEAT, ORGANIC SILT AND ORGANIC CLAY
5	A-3, A-2-4	DARK BROWN TO VERY DARK BROWN, DARK YELLOWISH BROWN FINE SAND; TRACE TO LITTLE SILT; TRACE CEMENTATION (HARDPAN-TYPE)
6	A-7-5, A-7-6	LIGHT GRAY, BROWNISH YELLOW, GRAY AND BROWNISH YELLOW, AND STRONG BROWN SANDY CLAY, CLAY AND SILT
7	A-3, A-2-4	YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, AND STRONG BROWN, FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE TO FEW FRAGMENTS OF LIMESTONE, ASPHALT, GLASS, METAL, WOOD AND ROOTS; OFTEN MIXED WITH CLAYEY SANDS (POSSIBLE FILL)

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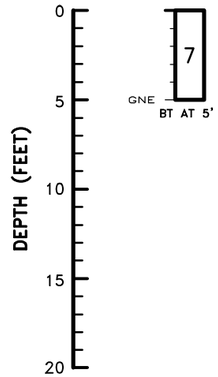
429	SEMINOLE	240200-2-52-01

REPORT OF ROADWAY AUGER BORINGS
WEKIVA PARKWAY 7A

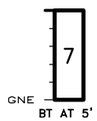
SHEET NO.
XX

NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED UNDER RULE 61G15-23.003, F.A.C.

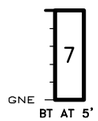
BORING NUMBER ML1110L
APPROXIMATE STATION 1110+00
APPROXIMATE OFFSET 30' LT
GSE (NAVD88) XX.X
DATE DRILLED 10-21-14



BORING NUMBER ML1112L
APPROXIMATE STATION 1112+00
APPROXIMATE OFFSET 55' LT
GSE (NAVD88) XX.X
DATE DRILLED 10-21-14



BORING NUMBER ML1113L
APPROXIMATE STATION 1113+00
APPROXIMATE OFFSET 55' LT
GSE (NAVD88) XX.X
DATE DRILLED 10-21-14



BORING NUMBER
APPROXIMATE STATION
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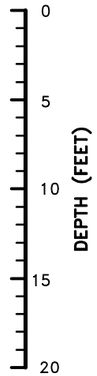
GSE (NAVD88)
DATE DRILLED



BORING NUMBER
APPROXIMATE STATION
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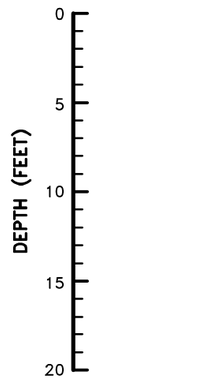
DATE DRILLED



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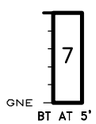
APPROXIMATE STATION 1111+00
APPROXIMATE OFFSET 55' RT
GSE (NAVD88) XX.X
DATE DRILLED 10-21-14



BORING NUMBER ML1113R
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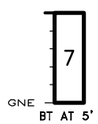
DATE DRILLED 10-21-14



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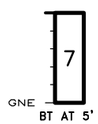
APPROXIMATE OFFSET 50' RT
GSE (NAVD88) XX.X
DATE DRILLED 10-21-14



BORING NUMBER
APPROXIMATE STATION
APPROXIMATE OFFSET
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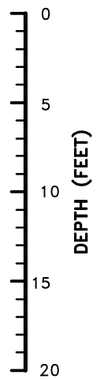


STRATUM NO.	AASHTO SOIL CLASSIFICATION SYMBOL	DESCRIPTION
1	A-3	WHITE TO GRAY, LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, VERY PALE BROWN TO PALE BROWN, LIGHT BROWN TO VERY DARK BROWN, GRAYISH BROWN TO DARK GRAYISH BROWN, PALE YELLOW, DARK YELLOWISH BROWN TO BROWNISH YELLOW, STRONG BROWN, AND VERY DARK GRAY TO BLACK FINE SAND; TRACE TO FEW SILT OR CLAY; OCCASIONAL TRACE ORGANIC MATTER AND OCCASIONAL TRACE ROOTS
2	A-2-4	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN, GREENISH GRAY, AND BLACK FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE ORGANIC MATTER
3	A-2-6, A-6 A-7-6	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN AND GREENISH GRAY FINE SAND; FEW TO LITTLE CLAY
4	A-8	VERY DARK BROWN, VERY DARK GRAY AND BLACK FINE SAND WITH ORGANIC MATTER, SANDY PEAT, ORGANIC SILT AND ORGANIC CLAY
5	A-3, A-2-4	DARK BROWN TO VERY DARK BROWN, DARK YELLOWISH BROWN FINE SAND; TRACE TO LITTLE SILT; TRACE CEMENTATION (HARDPAN-TYPE)
6	A-7-5, A-7-6	LIGHT GRAY, BROWNISH YELLOW, GRAY AND BROWNISH YELLOW, AND STRONG BROWN SANDY CLAY, CLAY AND SILT
7	A-3, A-2-4	YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, AND STRONG BROWN, FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE TO FEW FRAGMENTS OF LIMESTONE, ASPHALT, GLASS, METAL, WOOD AND ROOTS; OFTEN MIXED WITH CLAYEY SANDS (POSSIBLE FILL)

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

PETER G. SUAH, P.E.
P.E. LICENSE NO. 46910

ANTILLIAN ENGINEERING ASSOCIATES, INC.
3331 BARTLETT BOULEVARD
ORLANDO, FLORIDA 32811

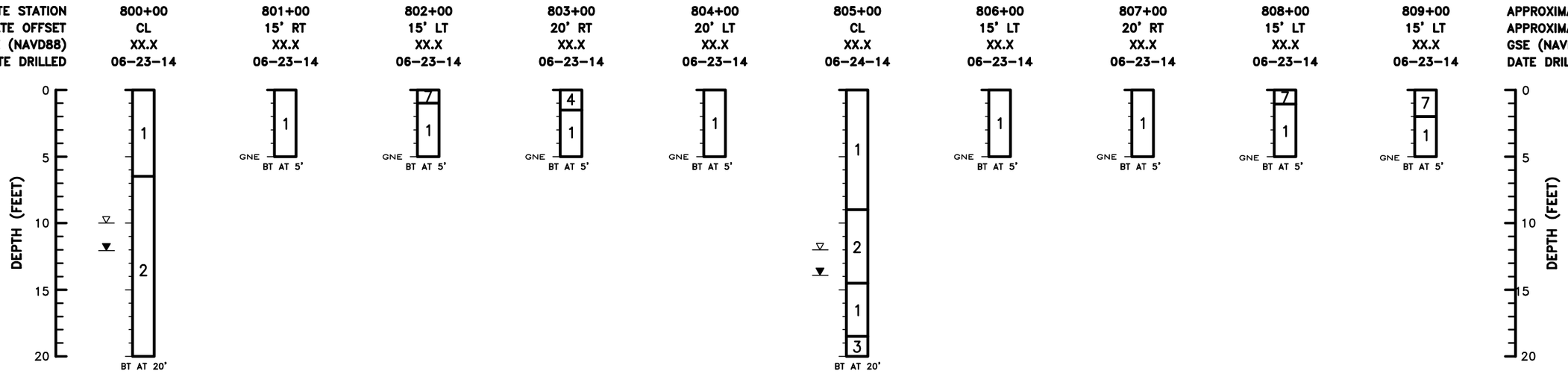
CERTIFICATE OF AUTHORIZATION EB6685

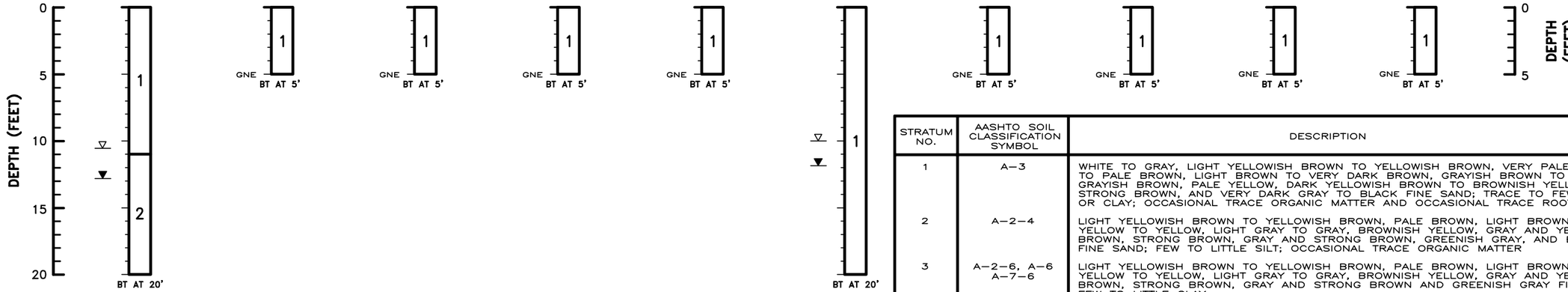
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
429	SEMINOLE	240200-2-52-01

REPORT OF ROADWAY AUGER BORINGS
WEKIVA PARKWAY 7A

SHEET NO. XX





STRATUM NO.	AASHTO SOIL CLASSIFICATION SYMBOL	DESCRIPTION
1	A-3	WHITE TO GRAY, LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, VERY PALE BROWN TO PALE BROWN, LIGHT BROWN TO VERY DARK BROWN, GRAYISH BROWN TO DARK GRAYISH BROWN, PALE YELLOW, DARK YELLOWISH BROWN TO BROWNISH YELLOW, STRONG BROWN, AND VERY DARK GRAY TO BLACK FINE SAND; TRACE TO FEW SILT OR CLAY; OCCASIONAL TRACE ORGANIC MATTER AND OCCASIONAL TRACE ROOTS
2	A-2-4	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN, GREENISH GRAY, AND BLACK FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE ORGANIC MATTER
3	A-2-6, A-6 A-7-6	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN AND GREENISH GRAY FINE SAND; FEW TO LITTLE CLAY
4	A-8	VERY DARK BROWN, VERY DARK GRAY AND BLACK FINE SAND WITH ORGANIC MATTER, SANDY PEAT, ORGANIC SILT AND ORGANIC CLAY
5	A-3, A-2-4	DARK BROWN TO VERY DARK BROWN, DARK YELLOWISH BROWN FINE SAND; TRACE TO LITTLE SILT; TRACE CEMENTATION (HARDPAN-TYPE)
6	A-7-5, A-7-6	LIGHT GRAY, BROWNISH YELLOW, GRAY AND BROWNISH YELLOW, AND STRONG BROWN SANDY CLAY, CLAY AND SILT
7	A-3, A-2-4	YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, AND STRONG BROWN, FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE TO FEW FRAGMENTS OF LIMESTONE, ASPHALT, GLASS, METAL, WOOD AND ROOTS; OFTEN MIXED WITH CLAYEY SANDS (POSSIBLE FILL)

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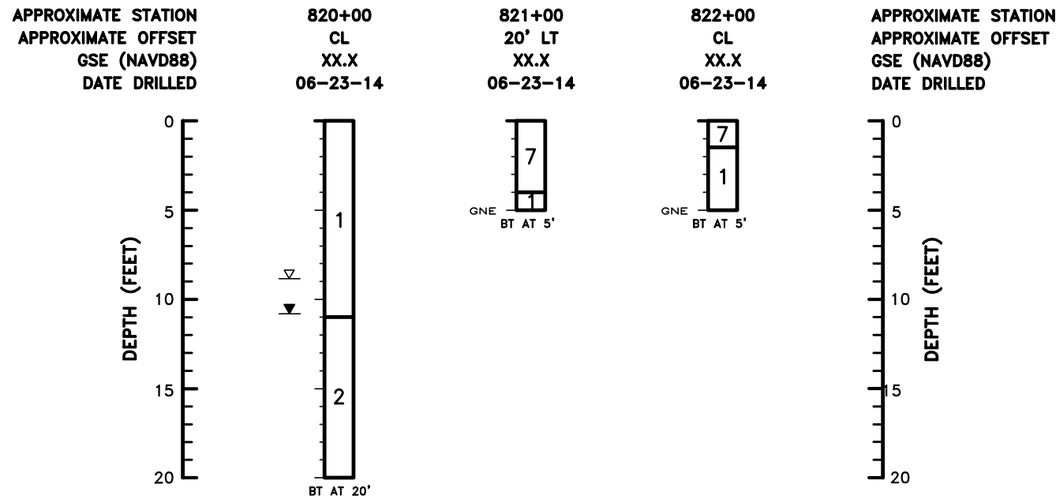
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
429	SEMINOLE	240200-2-52-01

REPORT OF ROADWAY AUGER BORINGS FOR ORANGE AVENUE REALIGNMENT (1 OF 2) WEKIVA PARKWAY 7A

SHEET NO.
XX



STRATUM NO.	AASHTO SOIL CLASSIFICATION SYMBOL	DESCRIPTION
1	A-3	WHITE TO GRAY, LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, VERY PALE BROWN TO PALE BROWN, LIGHT BROWN TO VERY DARK BROWN, GRAYISH BROWN TO DARK GRAYISH BROWN, PALE YELLOW, DARK YELLOWISH BROWN TO BROWNISH YELLOW, STRONG BROWN, AND VERY DARK GRAY TO BLACK FINE SAND; TRACE TO FEW SILT OR CLAY; OCCASIONAL TRACE ORGANIC MATTER AND OCCASIONAL TRACE ROOTS
2	A-2-4	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN, GREENISH GRAY, AND BLACK FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE ORGANIC MATTER
3	A-2-6, A-6 A-7-6	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN AND GREENISH GRAY FINE SAND; FEW TO LITTLE CLAY
4	A-8	VERY DARK BROWN, VERY DARK GRAY AND BLACK FINE SAND WITH ORGANIC MATTER, SANDY PEAT, ORGANIC SILT AND ORGANIC CLAY
5	A-3, A-2-4	DARK BROWN TO VERY DARK BROWN, DARK YELLOWISH BROWN FINE SAND; TRACE TO LITTLE SILT; TRACE CEMENTATION (HARDPAN-TYPE)
6	A-7-5, A-7-6	LIGHT GRAY, BROWNISH YELLOW, GRAY AND BROWNISH YELLOW, AND STRONG BROWN SANDY CLAY, CLAY AND SILT
7	A-3, A-2-4	YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, AND STRONG BROWN, FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE TO FEW FRAGMENTS OF LIMESTONE, ASPHALT, GLASS, METAL, WOOD AND ROOTS; OFTEN MIXED WITH CLAYEY SANDS (POSSIBLE FILL)

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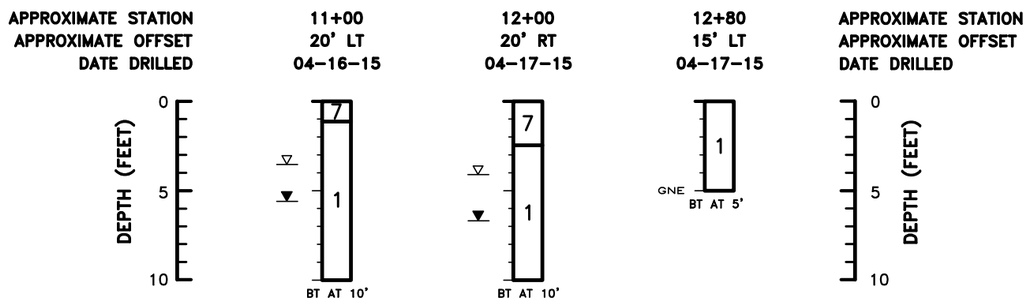
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
429	SEMINOLE	240200-2-52-01

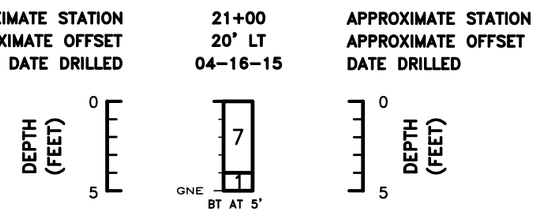
REPORT OF ROADWAY AUGER BORINGS FOR ORANGE AVENUE REALIGNMENT (2 OF 2) WEKIVA PARKWAY 7A

SHEET NO. XX

WEKIVA PARK DRIVE



OSPREY HAMMOCK TRAIL



LAKE MARKHAM ROAD

STRATUM NO.	AASHTO SOIL CLASSIFICATION SYMBOL	DESCRIPTION
1	A-3	WHITE TO GRAY, LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, VERY PALE BROWN TO PALE BROWN, LIGHT BROWN TO VERY DARK BROWN, GRAYISH BROWN TO DARK GRAYISH BROWN, PALE YELLOW, DARK YELLOWISH BROWN TO BROWNISH YELLOW, STRONG BROWN, AND VERY DARK GRAY TO BLACK FINE SAND; TRACE TO FEW SILT OR CLAY; OCCASIONAL TRACE ORGANIC MATTER AND OCCASIONAL TRACE ROOTS
2	A-2-4	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN, GREENISH GRAY, AND BLACK FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE ORGANIC MATTER
3	A-2-6, A-6 A-7-6	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN AND GREENISH GRAY FINE SAND; FEW TO LITTLE CLAY
4	A-8	VERY DARK BROWN, VERY DARK GRAY AND BLACK FINE SAND WITH ORGANIC MATTER, SANDY PEAT, ORGANIC SILT AND ORGANIC CLAY
5	A-3, A-2-4	DARK BROWN TO VERY DARK BROWN, DARK YELLOWISH BROWN FINE SAND; TRACE TO LITTLE SILT; TRACE CEMENTATION (HARDPAN-TYPE)
6	A-7-5, A-7-6	LIGHT GRAY, BROWNISH YELLOW, GRAY AND BROWNISH YELLOW, AND STRONG BROWN SANDY CLAY, CLAY AND SILT
7	A-3, A-2-4	YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, AND STRONG BROWN, FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE TO FEW FRAGMENTS OF LIMESTONE, ASPHALT, GLASS, METAL, WOOD AND ROOTS; OFTEN MIXED WITH CLAYEY SANDS (POSSIBLE FILL)

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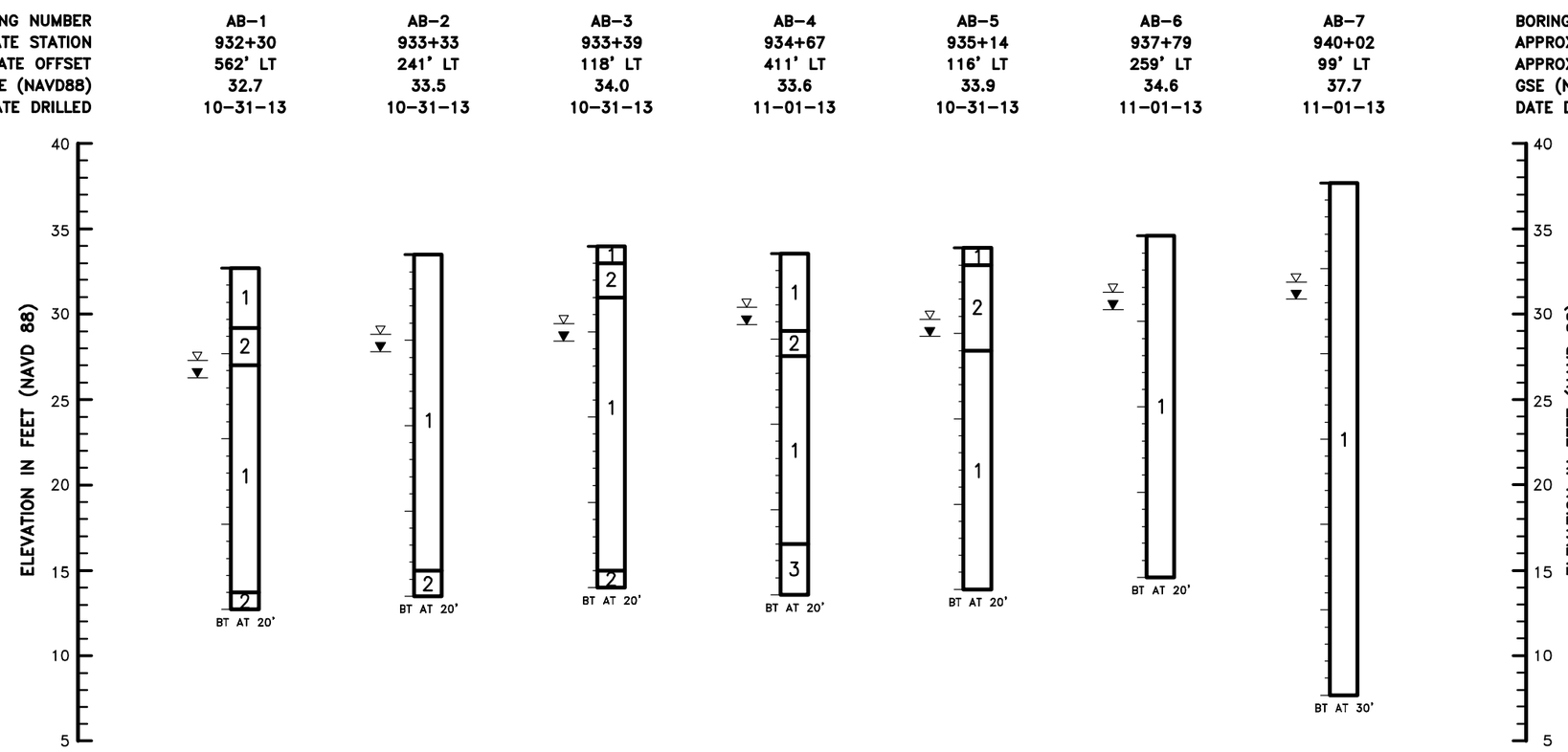
429	SEMINOLE	240200-2-52-01

REPORT OF ROADWAY AUGER BORINGS
WEKIVA PARKWAY 7A

SHEET NO. XX



STRATUM NO.	AASHTO SOIL CLASSIFICATION SYMBOL	DESCRIPTION
1	A-3	WHITE TO GRAY, LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, VERY PALE BROWN TO PALE BROWN, LIGHT BROWN TO VERY DARK BROWN, GRAYISH BROWN TO DARK GRAYISH BROWN, PALE YELLOW, DARK YELLOWISH BROWN TO BROWNISH YELLOW, STRONG BROWN, AND VERY DARK GRAY TO BLACK FINE SAND; TRACE TO FEW SILT OR CLAY; OCCASIONAL TRACE ORGANIC MATTER AND OCCASIONAL TRACE ROOTS
2	A-2-4	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN, GREENISH GRAY, AND BLACK FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE ORGANIC MATTER
3	A-2-6, A-6 A-7-6	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN AND GREENISH GRAY FINE SAND; FEW TO LITTLE CLAY
4	A-8	VERY DARK BROWN, VERY DARK GRAY AND BLACK FINE SAND WITH ORGANIC MATTER, SANDY PEAT, ORGANIC SILT AND ORGANIC CLAY
5	A-3, A-2-4	DARK BROWN TO VERY DARK BROWN, DARK YELLOWISH BROWN FINE SAND; TRACE TO LITTLE SILT; TRACE CEMENTATION (HARDPAN-TYPE)
6	A-7-5, A-7-6	LIGHT GRAY, BROWNISH YELLOW, GRAY AND BROWNISH YELLOW, AND STRONG BROWN SANDY CLAY, CLAY AND SILT
7	A-3, A-2-4	YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, AND STRONG BROWN, FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE TO FEW FRAGMENTS OF LIMESTONE, ASPHALT, GLASS, METAL, WOOD AND ROOTS; OFTEN MIXED WITH CLAYEY SANDS (POSSIBLE FILL)

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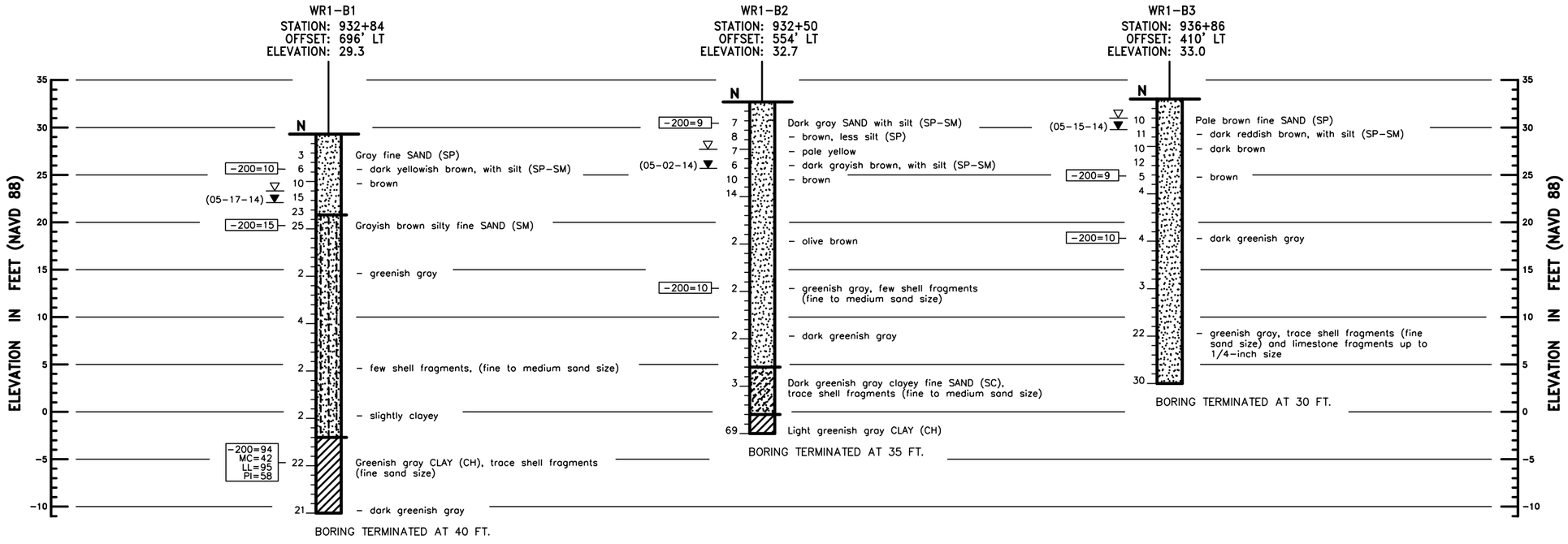
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
429	SEMINOLE	240200-2-52-01

REPORT OF AUGER BORINGS FOR POND WR1 WEKIVA PARKWAY 7A

SHEET NO. XX



LEGEND

SAND	CHANGE IN SOIL STRATA
SILTY SAND	N — SPT N-VALUE IN BLOWS PER FOOT (ASTM D 1586)
CLAYEY SAND	(SP) — UNIFIED SOIL CLASSIFICATION SYSTEM GROUP SYMBOL BASED ON VISUAL EXAMINATION AND LABORATORY TESTING
CLAY	(05-02-14) ▼ — GROUNDWATER LEVEL ENCOUNTERED DURING DRILLING
	▽ — ESTIMATED SEASONAL HIGH GROUNDWATER LEVEL
	-200 — PERCENT PASSING U.S. STANDARD NO. 200 SIEVE
	MC — MOISTURE CONTENT IN PERCENT
	LL — LIQUID LIMIT
	PI — PLASTICITY INDEX

NOTES

1. BORINGS WERE DRILLED BY RELIABLE FIELD SERVICES, INC. BETWEEN 05/02/14 AND 05/17/14 USING A MAROOKA RIG. SPT WAS CONDUCTED WITH A MANUAL HAMMER.
2. STATIONING IS APPROXIMATE AND IS PROVIDED FOR REFERENCE PURPOSES ONLY.

SOIL CONSISTENCY
(BASED ON EMPIRICAL CORRELATION WITH SPT N-VALUE)

GRANULAR SOILS	
VERY LOOSE	LESS THAN 4 BLOWS/FT.
LOOSE	4 TO 10 BLOWS/FT.
MEDIUM DENSE	10 TO 30 BLOWS/FT.
DENSE	30 TO 50 BLOWS/FT.
VERY DENSE	MORE THAN 50 BLOWS/FT.

FINE-GRAINED SOILS	
VERY SOFT	LESS THAN 2 BLOWS/FT.
SOFT	2 TO 4 BLOWS/FT.
FIRM	4 TO 8 BLOWS/FT.
STIFF	8 TO 15 BLOWS/FT.
VERY STIFF	15 TO 30 BLOWS/FT.
HARD	MORE THAN 30 BLOWS/FT.

REVISIONS					
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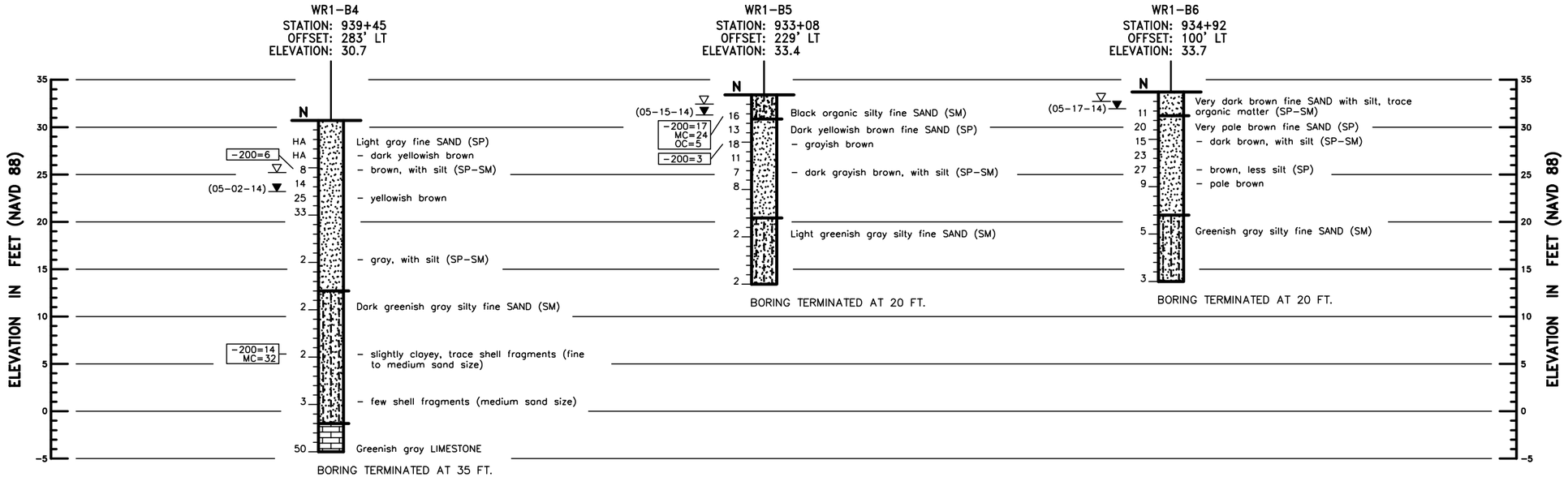
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
429	SEMINOLE	240200-2-52-01

REPORT OF SPT BORINGS FOR POND WR1 (1 OF 3) WEKIVA PARKWAY 7A

SHEET NO. XX



LEGEND

- SAND
- SILTY SAND
- ORGANIC SILTY SAND
- LIMESTONE

⊢	CHANGE IN SOIL STRATA
N	SPT N-VALUE IN BLOWS PER FOOT (ASTM D 1586)
HA	HAND AUGER WAS USED TO AVOID CONFLICT WITH UTILITIES
(SP)	UNIFIED SOIL CLASSIFICATION SYSTEM GROUP SYMBOL BASED ON VISUAL EXAMINATION AND LABORATORY TESTING
(05-02-14) ▼	GROUNDWATER LEVEL ENCOUNTERED DURING DRILLING
▽	ESTIMATED SEASONAL HIGH GROUNDWATER LEVEL
-200	PERCENT PASSING U.S. STANDARD NO. 200 SIEVE
MC	MOISTURE CONTENT IN PERCENT
OC	ORGANIC CONTENT

NOTES

1. BORINGS WERE DRILLED BY RELIABLE FIELD SERVICES, INC. BETWEEN 05/02/14 AND 05/17/14 USING A MAROOKA RIG. SPT WAS CONDUCTED WITH A MANUAL HAMMER.
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SOIL CONSISTENCY
(BASED ON EMPIRICAL CORRELATION WITH SPT N-VALUE)

GRANULAR SOILS

VERY LOOSE	LESS THAN 4 BLOWS/FT.
LOOSE	4 TO 10 BLOWS/FT.
MEDIUM DENSE	10 TO 30 BLOWS/FT.
DENSE	30 TO 50 BLOWS/FT.
VERY DENSE	MORE THAN 50 BLOWS/FT.

FINE-GRAINED SOILS

VERY SOFT	LESS THAN 2 BLOWS/FT.
SOFT	2 TO 4 BLOWS/FT.
FIRM	4 TO 8 BLOWS/FT.
STIFF	8 TO 15 BLOWS/FT.
VERY STIFF	15 TO 30 BLOWS/FT.
HARD	MORE THAN 30 BLOWS/FT.

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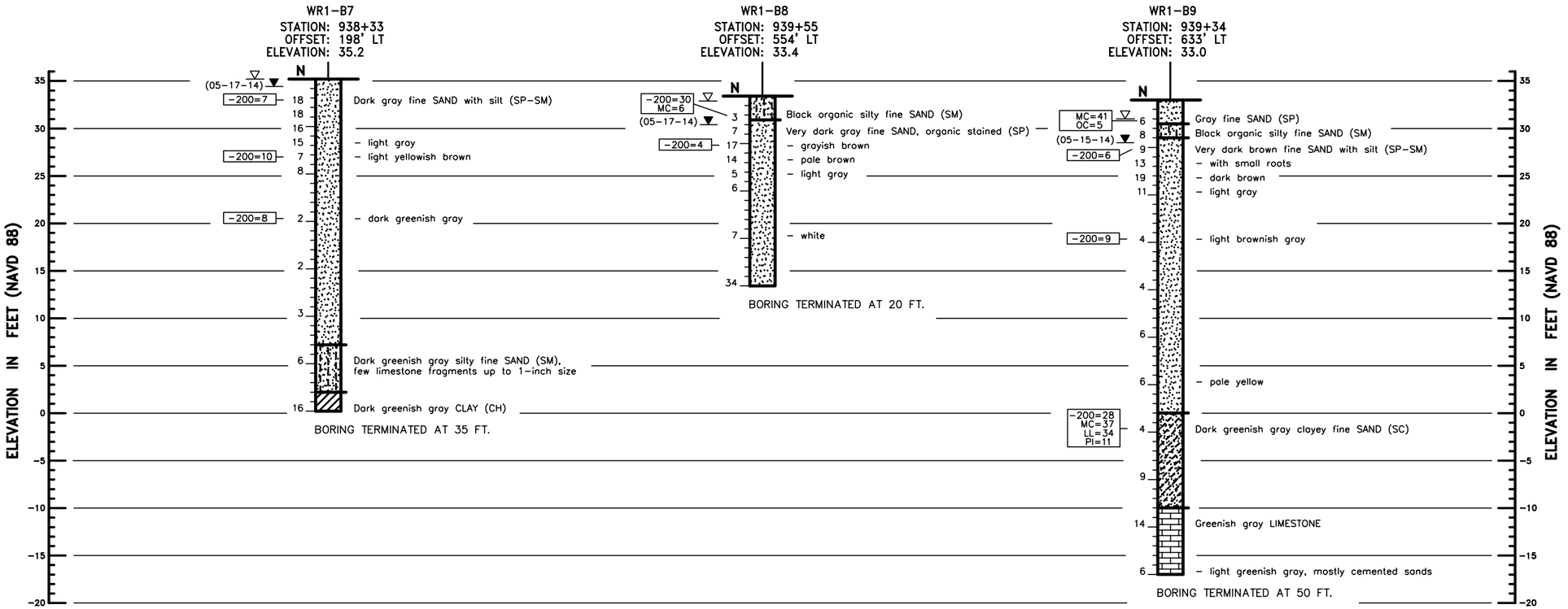
REPORT OF SPT BORINGS FOR POND WR1 (2 OF 3) WEKIVA PARKWAY 7A

SHEET NO. XX



LEGEND

- SAND
- SILTY SAND
- ORGANIC SILTY SAND
- CLAYEY SAND
- CLAY
- LIMESTONE

	CHANGE IN SOIL STRATA
N	SPT N–VALUE IN BLOWS PER FOOT (ASTM D 1586)
(SP)	UNIFIED SOIL CLASSIFICATION SYSTEM GROUP SYMBOL BASED ON VISUAL EXAMINATION AND LABORATORY TESTING
(05–17–14) ▼	GROUNDWATER LEVEL ENCOUNTERED DURING DRILLING
▽	ESTIMATED SEASONAL HIGH GROUNDWATER LEVEL
–200	PERCENT PASSING U.S. STANDARD NO. 200 SIEVE
MC	MOISTURE CONTENT IN PERCENT
OC	ORGANIC CONTENT
LL	LIQUID LIMIT

NOTES

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SOIL CONSISTENCY
(BASED ON EMPIRICAL CORRELATION WITH SPT N–VALUE)

GRANULAR SOILS	
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FINE–GRAINED SOILS	
VERY SOFT	LESS THAN 2 BLOWS/FT.
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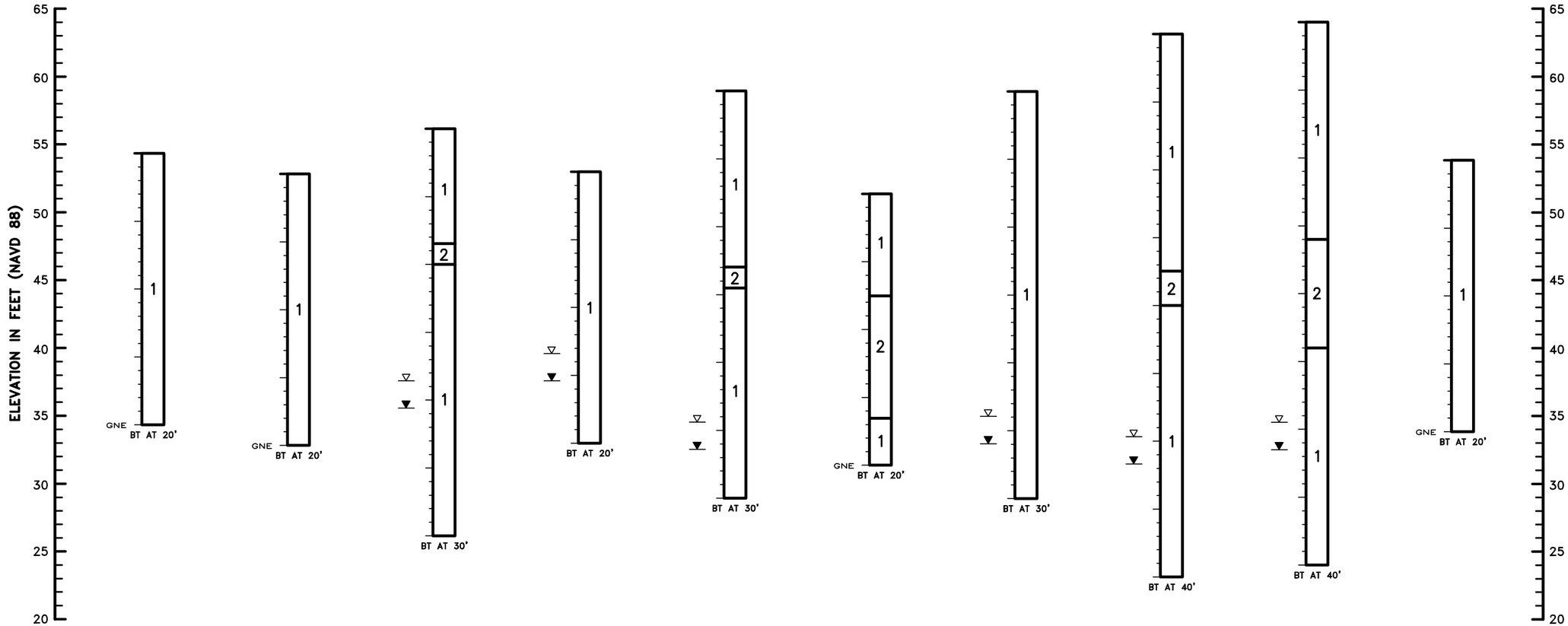
REPORT OF SPT BORINGS FOR POND WR1 (3 OF 3) WEKIVA PARKWAY 7A

SHEET NO. XX



STRATUM NO.	AASHTO SOIL CLASSIFICATION SYMBOL	DESCRIPTION
1	A-3	WHITE TO GRAY, LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, VERY PALE BROWN TO PALE BROWN, LIGHT BROWN TO VERY DARK BROWN, GRAYISH BROWN TO DARK GRAYISH BROWN, PALE YELLOW, DARK YELLOWISH BROWN TO BROWNISH YELLOW, STRONG BROWN, AND VERY DARK GRAY TO BLACK FINE SAND; TRACE TO FEW SILT OR CLAY; OCCASIONAL TRACE ORGANIC MATTER AND OCCASIONAL TRACE ROOTS
2	A-2-4	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN, GREENISH GRAY, AND BLACK FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE ORGANIC MATTER
3	A-2-6, A-6 A-7-6	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN AND GREENISH GRAY FINE SAND; FEW TO LITTLE CLAY
4	A-8	VERY DARK BROWN, VERY DARK GRAY AND BLACK FINE SAND WITH ORGANIC MATTER, SANDY PEAT, ORGANIC SILT AND ORGANIC CLAY
5	A-3, A-2-4	DARK BROWN TO VERY DARK BROWN, DARK YELLOWISH BROWN FINE SAND; TRACE TO LITTLE SILT; TRACE CEMENTATION (HARDPAN-TYPE)
6	A-7-5, A-7-6	LIGHT GRAY, BROWNISH YELLOW, GRAY AND BROWNISH YELLOW, AND STRONG BROWN SANDY CLAY, CLAY AND SILT
7	A-3, A-2-4	YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, AND STRONG BROWN, FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE TO FEW FRAGMENTS OF LIMESTONE, ASPHALT, GLASS, METAL, WOOD AND ROOTS; OFTEN MIXED WITH CLAYEY SANDS (POSSIBLE FILL)

NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED UNDER RULE 61G15-23.003, F.A.C.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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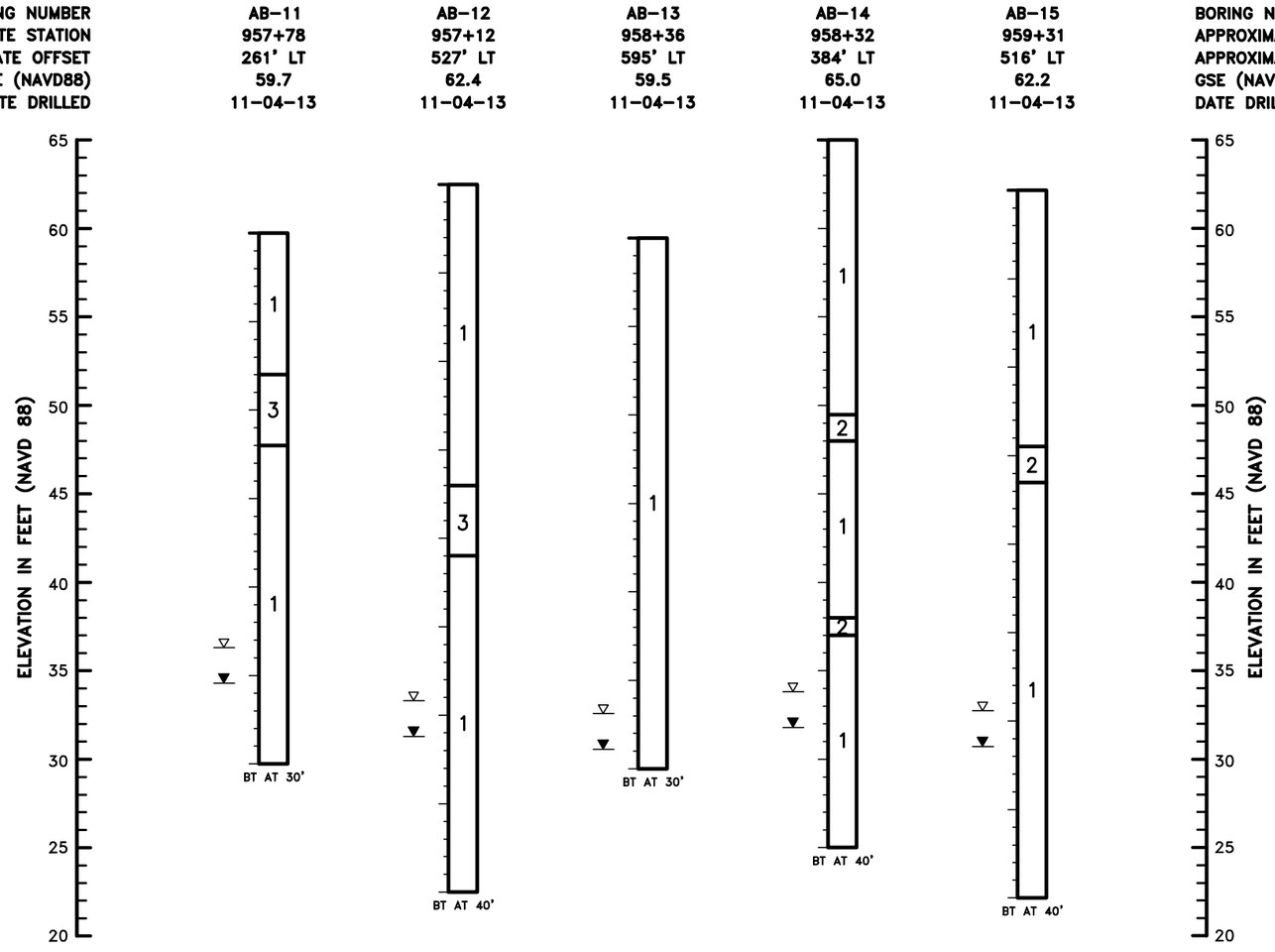
P.E. LICENSE NO. 46910
ANTILLIAN ENGINEERING ASSOCIATES, INC.
3331 BARTLETT BOULEVARD
ORLANDO, FLORIDA 32811
CERTIFICATE OF AUTHORIZATION EB6685

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
429	SEMINOLE	240200-2-52-01

REPORT OF AUGER BORINGS FOR POND WR2 (1 OF 2) WEKIVA PARKWAY 7A

SHEET NO.
XX



STRATUM NO.	AASHTO SOIL CLASSIFICATION SYMBOL	DESCRIPTION
1	A-3	WHITE TO GRAY, LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, VERY PALE BROWN TO PALE BROWN, LIGHT BROWN TO VERY DARK BROWN, GRAYISH BROWN TO DARK GRAYISH BROWN, PALE YELLOW, DARK YELLOWISH BROWN TO BROWNISH YELLOW, STRONG BROWN, AND VERY DARK GRAY TO BLACK FINE SAND; TRACE TO FEW SILT OR CLAY; OCCASIONAL TRACE ORGANIC MATTER AND OCCASIONAL TRACE ROOTS
2	A-2-4	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN, GREENISH GRAY, AND BLACK FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE ORGANIC MATTER
3	A-2-6, A-6 A-7-6	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN AND GREENISH GRAY FINE SAND; FEW TO LITTLE CLAY
4	A-8	VERY DARK BROWN, VERY DARK GRAY AND BLACK FINE SAND WITH ORGANIC MATTER, SANDY PEAT, ORGANIC SILT AND ORGANIC CLAY
5	A-3, A-2-4	DARK BROWN TO VERY DARK BROWN, DARK YELLOWISH BROWN FINE SAND; TRACE TO LITTLE SILT; TRACE CEMENTATION (HARDPAN-TYPE)
6	A-7-5, A-7-6	LIGHT GRAY, BROWNISH YELLOW, GRAY AND BROWNISH YELLOW, AND STRONG BROWN SANDY CLAY, CLAY AND SILT
7	A-3, A-2-4	YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, AND STRONG BROWN, FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE TO FEW FRAGMENTS OF LIMESTONE, ASPHALT, GLASS, METAL, WOOD AND ROOTS; OFTEN MIXED WITH CLAYEY SANDS (POSSIBLE FILL)

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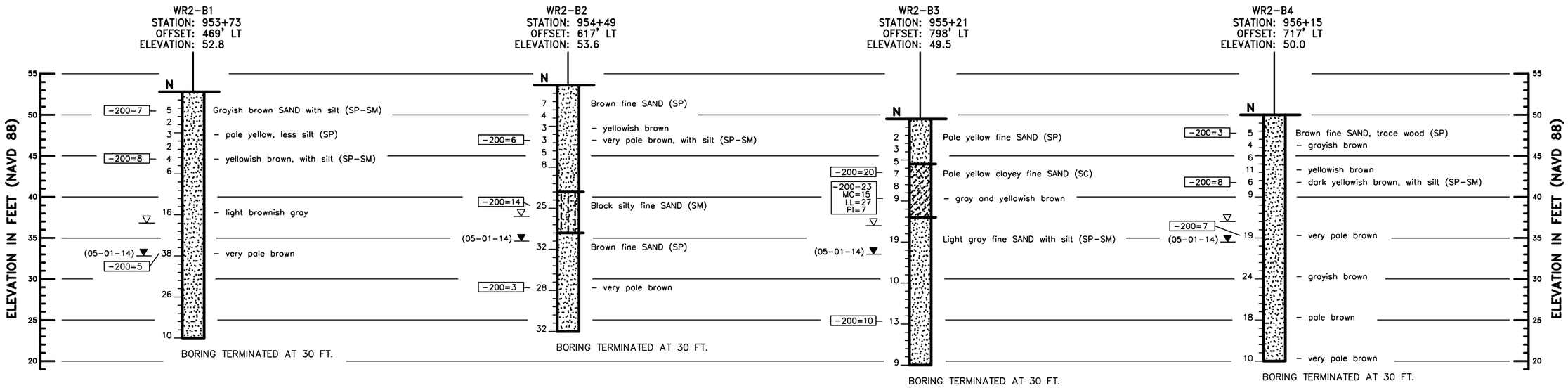
429	SEMINOLE	240200-2-52-01

REPORT OF AUGER BORINGS FOR POND WR2 (2 OF 2) WEKIVA PARKWAY 7A

SHEET NO.
XX



LEGEND

- SAND
- SILTY SAND
- CLAYEY SAND
- CHANGE IN SOIL STRATA
- N — SPT N-VALUE IN BLOWS PER FOOT (ASTM D 1586)
- (SP) — UNIFIED SOIL CLASSIFICATION SYSTEM GROUP SYMBOL BASED ON VISUAL EXAMINATION AND LABORATORY TESTING
- (05-01-14) ▼ — GROUNDWATER LEVEL ENCOUNTERED DURING DRILLING
- ▽ — ESTIMATED SEASONAL HIGH GROUNDWATER LEVEL
- -200 — PERCENT PASSING U.S. STANDARD NO. 200 SIEVE
- MC — MOISTURE CONTENT IN PERCENT
- LL — LIQUID LIMIT
- PI — PLASTICITY INDEX

NOTES

1. BORINGS WERE DRILLED BY RELIABLE FIELD SERVICES, INC. ON 05/01/14 USING A MAROOKA RIG. SPT WAS CONDUCTED WITH A MANUAL HAMMER.
2. STATIONING IS APPROXIMATE AND IS PROVIDED FOR REFERENCE PURPOSES ONLY.

SOIL CONSISTENCY
(BASED ON EMPIRICAL CORRELATION WITH SPT N-VALUE)

GRANULAR SOILS	
VERY LOOSE	LESS THAN 4 BLOWS/FT.
LOOSE	4 TO 10 BLOWS/FT.
MEDIUM DENSE	10 TO 30 BLOWS/FT.
DENSE	30 TO 50 BLOWS/FT.
VERY DENSE	MORE THAN 50 BLOWS/FT.

FINE-GRAINED SOILS	
VERY SOFT	LESS THAN 2 BLOWS/FT.
SOFT	2 TO 4 BLOWS/FT.
FIRM	4 TO 8 BLOWS/FT.
STIFF	8 TO 15 BLOWS/FT.
VERY STIFF	15 TO 30 BLOWS/FT.
HARD	MORE THAN 30 BLOWS/FT.

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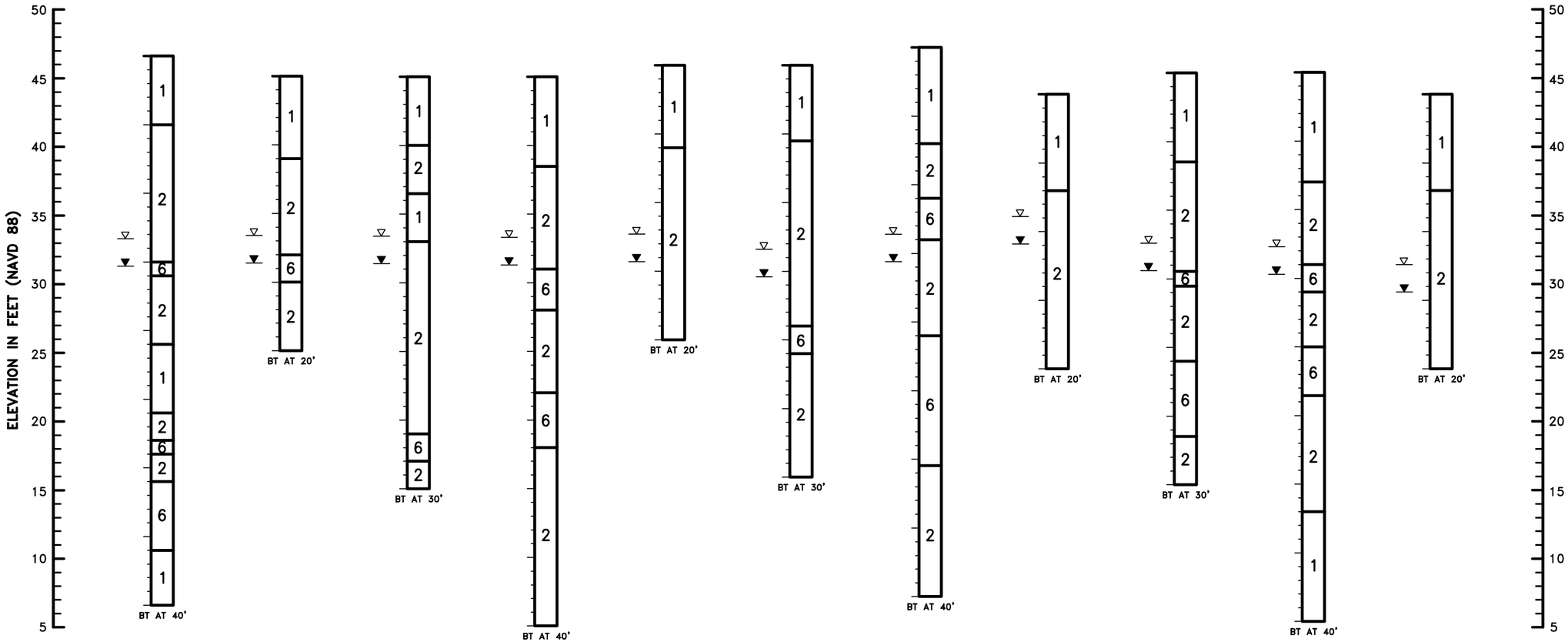
429	SEMINOLE	240200-2-52-01

REPORT OF SPT BORINGS FOR POND WR2 WEKIVA PARKWAY 7A

SHEET NO. XX



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2	A–2–4	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN, GREENISH GRAY, AND BLACK FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE ORGANIC MATTER
3	A–2–6, A–6 A–7–6	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN AND GREENISH GRAY FINE SAND; FEW TO LITTLE CLAY
4	A–8	VERY DARK BROWN, VERY DARK GRAY AND BLACK FINE SAND WITH ORGANIC MATTER, SANDY PEAT, ORGANIC SILT AND ORGANIC CLAY
5	A–3, A–2–4	DARK BROWN TO VERY DARK BROWN, DARK YELLOWISH BROWN FINE SAND; TRACE TO LITTLE SILT; TRACE CEMENTATION (HARDPAN–TYPE)
6	A–7–5, A–7–6	LIGHT GRAY, BROWNISH YELLOW, GRAY AND BROWNISH YELLOW, AND STRONG BROWN SANDY CLAY, CLAY AND SILT
7	A–3, A–2–4	YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, AND STRONG BROWN, FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE TO FEW FRAGMENTS OF LIMESTONE, ASPHALT, GLASS, METAL, WOOD AND ROOTS; OFTEN MIXED WITH CLAYEY SANDS (POSSIBLE FILL)

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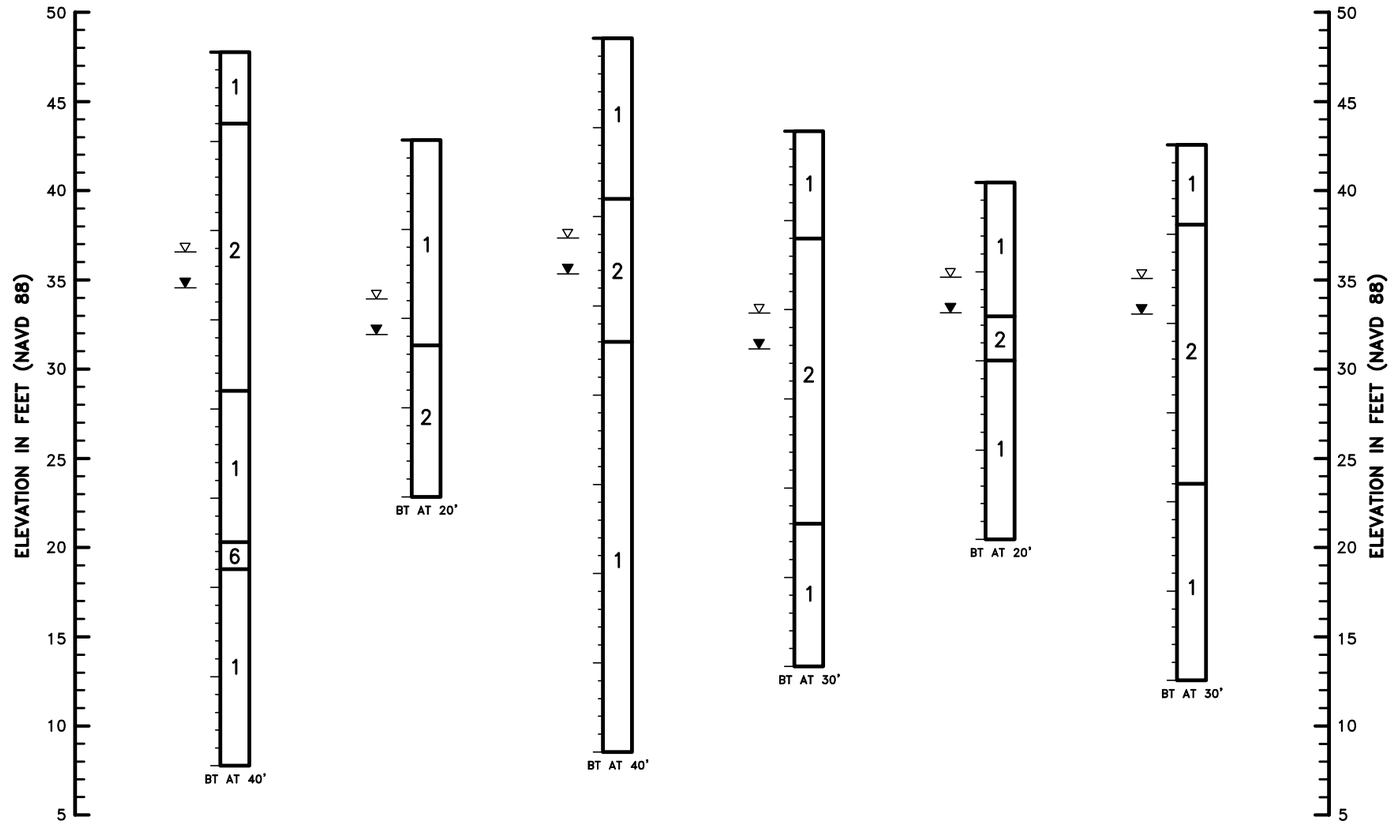
REPORT OF AUGER BORINGS FOR POND YL1 WEKIVA PARKWAY 7A

SHEET NO. XX



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1	A–3	WHITE TO GRAY, LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, VERY PALE BROWN TO PALE BROWN, LIGHT BROWN TO VERY DARK BROWN, GRAYISH BROWN TO DARK GRAYISH BROWN, PALE YELLOW, DARK YELLOWISH BROWN TO BROWNISH YELLOW, STRONG BROWN, AND VERY DARK GRAY TO BLACK FINE SAND; TRACE TO FEW SILT OR CLAY; OCCASIONAL TRACE ORGANIC MATTER AND OCCASIONAL TRACE ROOTS
2	A–2–4	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN, GREENISH GRAY, AND BLACK FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE ORGANIC MATTER
3	A–2–6, A–6 A–7–6	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN AND GREENISH GRAY FINE SAND; FEW TO LITTLE CLAY
4	A–8	VERY DARK BROWN, VERY DARK GRAY AND BLACK FINE SAND WITH ORGANIC MATTER, SANDY PEAT, ORGANIC SILT AND ORGANIC CLAY
5	A–3, A–2–4	DARK BROWN TO VERY DARK BROWN, DARK YELLOWISH BROWN FINE SAND; TRACE TO LITTLE SILT; TRACE CEMENTATION (HARDPAN–TYPE)
6	A–7–5, A–7–6	LIGHT GRAY, BROWNISH YELLOW, GRAY AND BROWNISH YELLOW, AND STRONG BROWN SANDY CLAY, CLAY AND SILT
7	A–3, A–2–4	YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, AND STRONG BROWN, FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE TO FEW FRAGMENTS OF LIMESTONE, ASPHALT, GLASS, METAL, WOOD AND ROOTS; OFTEN MIXED WITH CLAYEY SANDS (POSSIBLE FILL)

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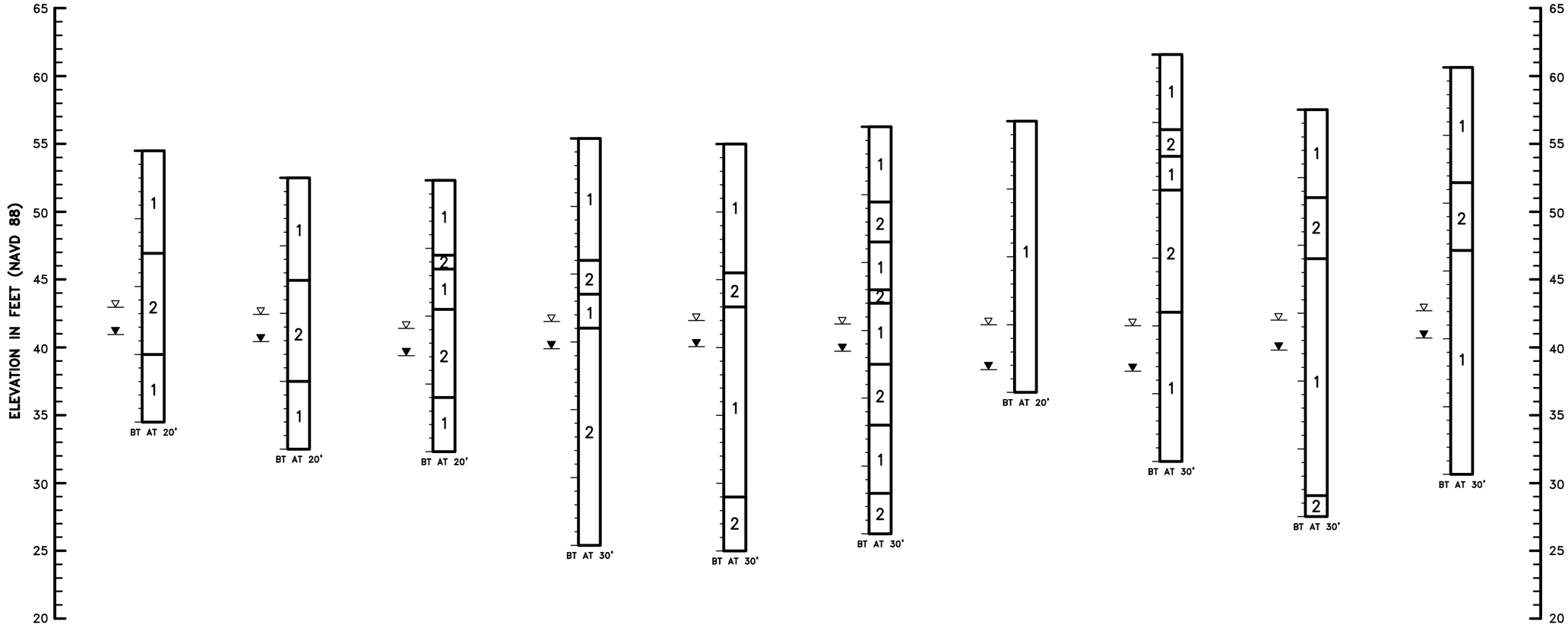
REPORT OF AUGER BORINGS FOR POND YL2 WEKIVA PARKWAY 7A

SHEET NO. XX



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1	A-3	WHITE TO GRAY, LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, VERY PALE BROWN TO PALE BROWN, LIGHT BROWN TO VERY DARK BROWN, GRAYISH BROWN TO DARK GRAYISH BROWN, PALE YELLOW, DARK YELLOWISH BROWN TO BROWNISH YELLOW, STRONG BROWN, AND VERY DARK GRAY TO BLACK FINE SAND; TRACE TO FEW SILT OR CLAY; OCCASIONAL TRACE ORGANIC MATTER AND OCCASIONAL TRACE ROOTS
2	A-2-4	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN, GREENISH GRAY, AND BLACK FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE ORGANIC MATTER
3	A-2-6, A-6 A-7-6	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN AND GREENISH GRAY FINE SAND; FEW TO LITTLE CLAY
4	A-8	VERY DARK BROWN, VERY DARK GRAY AND BLACK FINE SAND WITH ORGANIC MATTER, SANDY PEAT, ORGANIC SILT AND ORGANIC CLAY
5	A-3, A-2-4	DARK BROWN TO VERY DARK BROWN, DARK YELLOWISH BROWN FINE SAND; TRACE TO LITTLE SILT; TRACE CEMENTATION (HARDPAN-TYPE)
6	A-7-5, A-7-6	LIGHT GRAY, BROWNISH YELLOW, GRAY AND BROWNISH YELLOW, AND STRONG BROWN SANDY CLAY, CLAY AND SILT
7	A-3, A-2-4	YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, AND STRONG BROWN, FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE TO FEW FRAGMENTS OF LIMESTONE, ASPHALT, GLASS, METAL, WOOD AND ROOTS; OFTEN MIXED WITH CLAYEY SANDS (POSSIBLE FILL)

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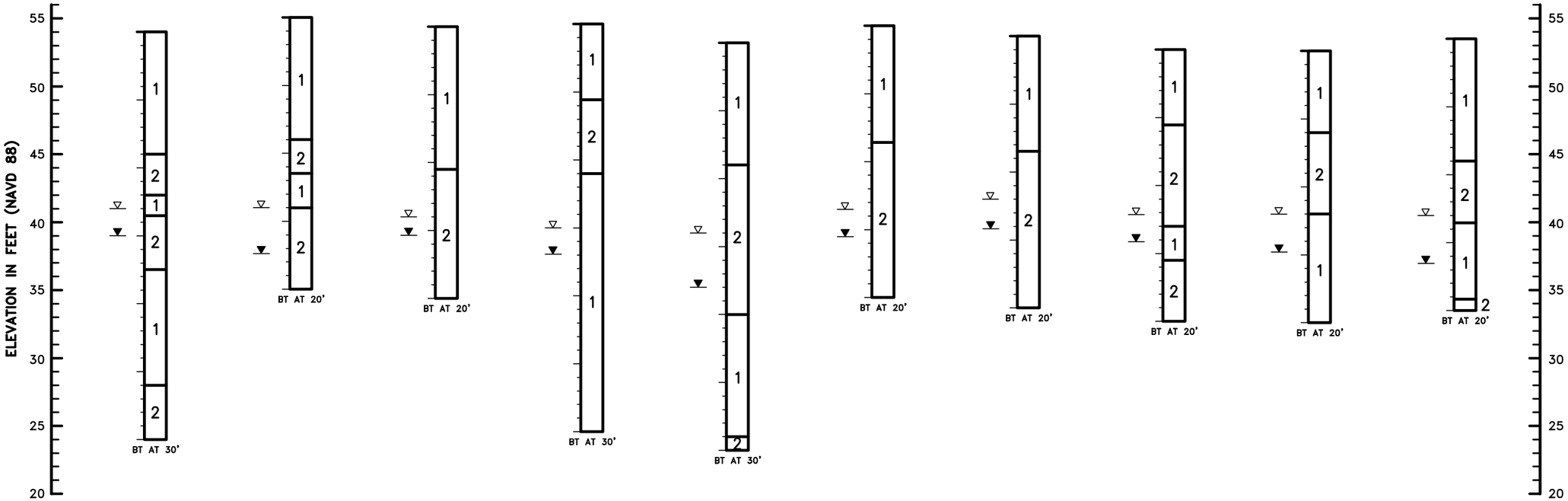
429	SEMINOLE	240200-2-52-01

REPORT OF AUGER BORINGS FOR POND LS (1 OF 3) WEKIVA PARKWAY 7A

SHEET NO.: XX

BORING NUMBER	AB-11	AB-12	AB-13	AB-14	AB-15	AB-16	AB-18	AB-21	AB-22	AB-23
APPROXIMATE STATION	1059+10	1062+15	1062+87	1062+99	1063+25	1063+48	1064+16	1064+51	1065+34	1066+50
APPROXIMATE OFFSET	219' LT	213' LT	663' LT	491' LT	365' LT	194' LT	576' LT	425' LT	285' LT	250' LT
GSE (NAVD88)	54.0	55.1	54.4	54.6	53.2	54.5	53.7	52.7	52.6	53.5
DATE DRILLED	01-24-14	05-07-14	01-23-14	05-05-14	05-07-14	01-23-14	05-07-14	01-23-14	05-07-14	05-07-14



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3	A-2-6, A-6 A-7-6	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN AND GREENISH GRAY FINE SAND; FEW TO LITTLE CLAY
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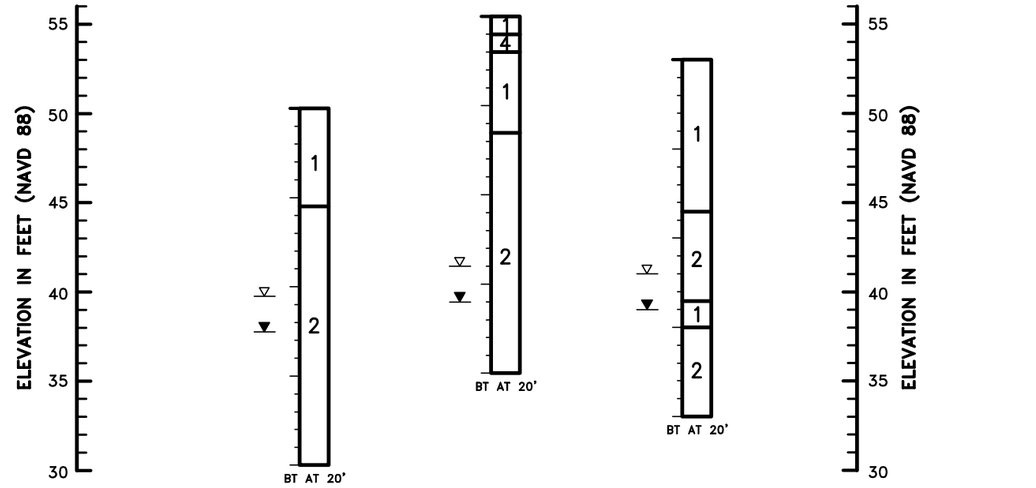

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6	A–7–5, A–7–6	LIGHT GRAY, BROWNISH YELLOW, GRAY AND BROWNISH YELLOW, AND STRONG BROWN SANDY CLAY, CLAY AND SILT
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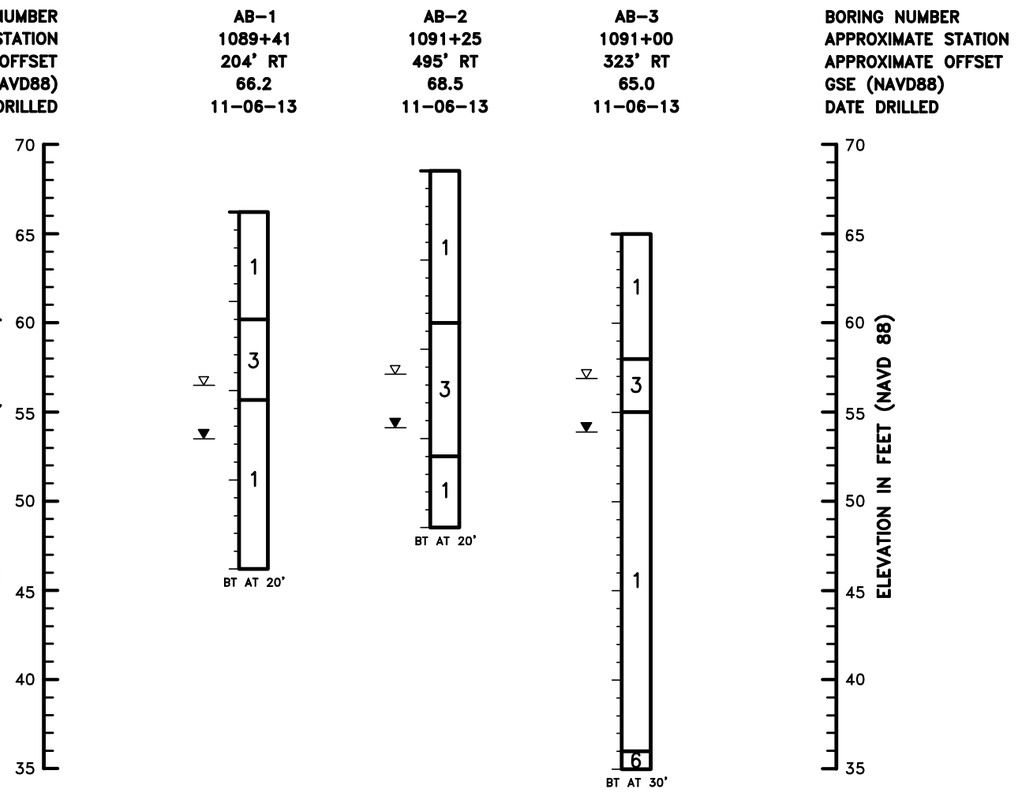
REPORT OF AUGER BORINGS FOR POND LS (3 OF 3) WEKIVA PARKWAY 7A

SHEET NO. XX



STRATUM NO.	AASHTO SOIL CLASSIFICATION SYMBOL	DESCRIPTION
1	A-3	WHITE TO GRAY, LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, VERY PALE BROWN TO PALE BROWN, LIGHT BROWN TO VERY DARK BROWN, GRAYISH BROWN TO DARK GRAYISH BROWN, PALE YELLOW, DARK YELLOWISH BROWN TO BROWNISH YELLOW, STRONG BROWN, AND VERY DARK GRAY TO BLACK FINE SAND; TRACE TO FEW SILT OR CLAY; OCCASIONAL TRACE ORGANIC MATTER AND OCCASIONAL TRACE ROOTS
2	A-2-4	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN, GREENISH GRAY, AND BLACK FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE ORGANIC MATTER
3	A-2-6, A-6 A-7-6	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN AND GREENISH GRAY FINE SAND; FEW TO LITTLE CLAY
4	A-8	VERY DARK BROWN, VERY DARK GRAY AND BLACK FINE SAND WITH ORGANIC MATTER, SANDY PEAT, ORGANIC SILT AND ORGANIC CLAY
5	A-3, A-2-4	DARK BROWN TO VERY DARK BROWN, DARK YELLOWISH BROWN FINE SAND; TRACE TO LITTLE SILT; TRACE CEMENTATION (HARDPAN-TYPE)
6	A-7-5, A-7-6	LIGHT GRAY, BROWNISH YELLOW, GRAY AND BROWNISH YELLOW, AND STRONG BROWN SANDY CLAY, CLAY AND SILT
7	A-3, A-2-4	YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, AND STRONG BROWN, FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE TO FEW FRAGMENTS OF LIMESTONE, ASPHALT, GLASS, METAL, WOOD AND ROOTS; OFTEN MIXED WITH CLAYEY SANDS (POSSIBLE FILL)

NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED UNDER RULE 61G15-23.003, F.A.C.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

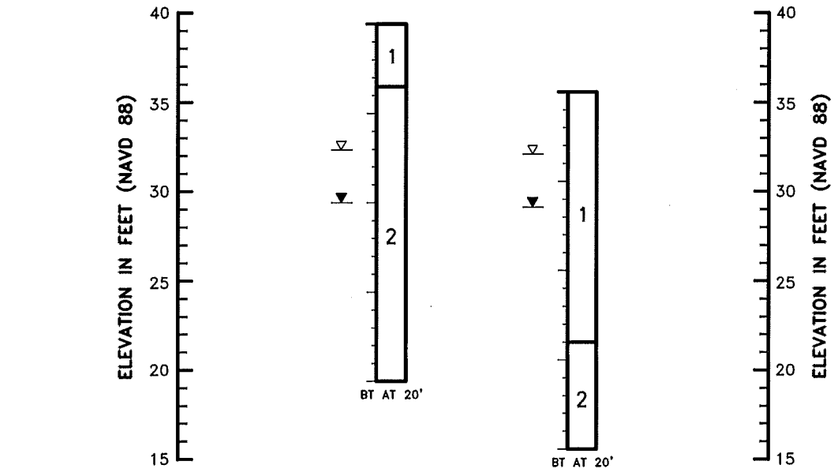
PETER G. SUAH, P.E.
P.E. LICENSE NO. 46910
ANTILLIAN ENGINEERING ASSOCIATES, INC.
3331 BARTLETT BOULEVARD
ORLANDO, FLORIDA 32811
CERTIFICATE OF AUTHORIZATION EB6685

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
429	SEMINOLE	240200-2-52-01

REPORT OF AUGER BORINGS FOR POND CC WEKIVA PARKWAY 7A

SHEET NO. XX



STRATUM NO.	AASHTO SOIL CLASSIFICATION SYMBOL	DESCRIPTION
1	A-3	WHITE TO GRAY, LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, VERY PALE BROWN TO PALE BROWN, LIGHT BROWN TO VERY DARK BROWN, GRAYISH BROWN TO DARK GRAYISH BROWN, PALE YELLOW, DARK YELLOWISH BROWN TO BROWNISH YELLOW, STRONG BROWN, AND VERY DARK GRAY TO BLACK FINE SAND; TRACE TO FEW SILT OR CLAY; OCCASIONAL TRACE ORGANIC MATTER AND OCCASIONAL TRACE ROOTS
2	A-2-4	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN, GREENISH GRAY, AND BLACK FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE ORGANIC MATTER
3	A-2-6, A-6 A-7-6	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN AND GREENISH GRAY FINE SAND; FEW TO LITTLE CLAY
4	A-8	VERY DARK BROWN, VERY DARK GRAY AND BLACK FINE SAND WITH ORGANIC MATTER, SANDY PEAT, ORGANIC SILT AND ORGANIC CLAY
5	A-3, A-2-4	DARK BROWN TO VERY DARK BROWN, DARK YELLOWISH BROWN FINE SAND; TRACE TO LITTLE SILT; TRACE CEMENTATION (HARDPAN-TYPE)
6	A-7-5, A-7-6	LIGHT GRAY, BROWNISH YELLOW, GRAY AND BROWNISH YELLOW, AND STRONG BROWN SANDY CLAY, CLAY AND SILT
7	A-3, A-2-4	YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, AND STRONG BROWN, FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE TO FEW FRAGMENTS OF LIMESTONE, ASPHALT, GLASS, METAL, WOOD AND ROOTS; OFTEN MIXED WITH CLAYEY SANDS (POSSIBLE FILL)

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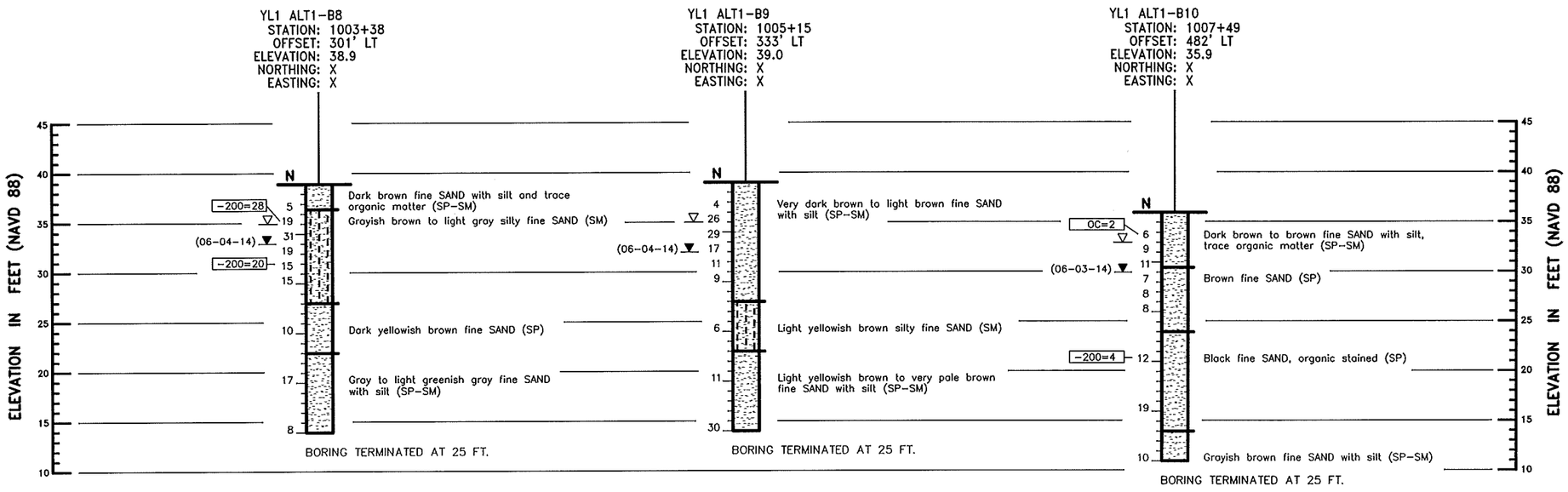
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
429	SEMINOLE	240200-2-52-01

REPORT OF AUGER BORINGS FOR POND FPC WEKIVA PARKWAY 7A

SHEET NO. XX



LEGEND

- SAND
- SILTY SAND
- CHANGE IN SOIL STRATA
- N — SPT N-VALUE IN BLOWS PER FOOT (ASTM D 1586)
- (SP) — UNIFIED SOIL CLASSIFICATION SYSTEM GROUP SYMBOL BASED ON VISUAL EXAMINATION AND LABORATORY TESTING
- (06-04-14) ▼ — GROUNDWATER LEVEL ENCOUNTERED DURING DRILLING
- -200 — PERCENT PASSING U.S. STANDARD NO. 200 SIEVE
- OC — ORGANIC CONTENT IN PERCENT

NOTES

1. BORINGS WERE DRILLED BY RELIABLE FIELD SERVICES, INC. ON 06/04/14 USING A MAROOKA RIG. SPT WAS CONDUCTED WITH A MANUAL HAMMER.
2. STATIONING AND OFFSET ARE APPROXIMATE AND ARE PROVIDED FOR REFERENCE PURPOSES ONLY.

SOIL CONSISTENCY (BASED ON EMPIRICAL CORRELATION WITH SPT N-VALUE)	
GRANULAR SOILS	
VERY LOOSE	LESS THAN 4 BLOWS/FT.
LOOSE	4 TO 10 BLOWS/FT.
MEDIUM DENSE	10 TO 30 BLOWS/FT.
DENSE	30 TO 50 BLOWS/FT.
VERY DENSE	MORE THAN 50 BLOWS/FT.
FINE-GRAINED SOILS	
VERY SOFT	LESS THAN 2 BLOWS/FT.
SOFT	2 TO 4 BLOWS/FT.
FIRM	4 TO 8 BLOWS/FT.
STIFF	8 TO 15 BLOWS/FT.
VERY STIFF	15 TO 30 BLOWS/FT.
HARD	MORE THAN 30 BLOWS/FT.

REVISIONS					
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STATE OF FLORIDA
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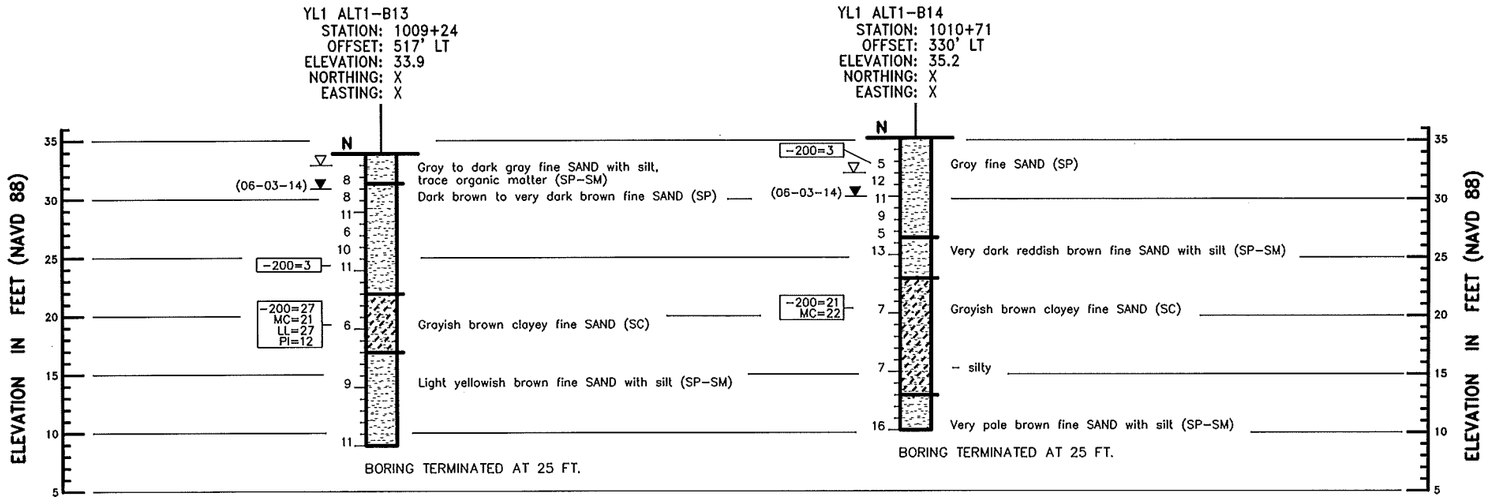
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
429	SEMINOLE	240200-2-52-01

REPORT OF SPT BORINGS FOR POND FPC (1 of 2) WEKIVA PARKWAY 7A

SHEET NO. XX



LEGEND

- SAND
- CLAYEY SAND
- CHANGE IN SOIL STRATA
- N — SPT N-VALUE IN BLOWS PER FOOT (ASTM D 1586)
- (SP) — UNIFIED SOIL CLASSIFICATION SYSTEM GROUP SYMBOL BASED ON VISUAL EXAMINATION AND LABORATORY TESTING
- (06-03-14) ▼ — GROUNDWATER LEVEL ENCOUNTERED DURING DRILLING
- -200 — PERCENT PASSING U.S. STANDARD NO. 200 SIEVE
- MC — MOISTURE CONTENT IN PERCENT
- LL — LIQUID LIMIT IN PERCENT
- PI — PLASTICITY INDEX

NOTES

1. BORINGS WERE DRILLED BY RELIABLE FIELD SERVICES, INC. ON 06/03/14 USING A MAROOKA RIG. SPT WAS CONDUCTED WITH A MANUAL HAMMER.
2. STATIONING AND OFFSET ARE APPROXIMATE AND ARE PROVIDED FOR REFERENCE PURPOSES ONLY.

SOIL CONSISTENCY
(BASED ON EMPIRICAL CORRELATION WITH SPT N-VALUE)

GRANULAR SOILS	
VERY LOOSE	LESS THAN 4 BLOWS/FT.
LOOSE	4 TO 10 BLOWS/FT.
MEDIUM DENSE	10 TO 30 BLOWS/FT.
DENSE	30 TO 50 BLOWS/FT.
VERY DENSE	MORE THAN 50 BLOWS/FT.

FINE-GRAINED SOILS	
VERY SOFT	LESS THAN 2 BLOWS/FT.
SOFT	2 TO 4 BLOWS/FT.
FIRM	4 TO 8 BLOWS/FT.
STIFF	8 TO 15 BLOWS/FT.
VERY STIFF	15 TO 30 BLOWS/FT.
HARD	MORE THAN 30 BLOWS/FT.

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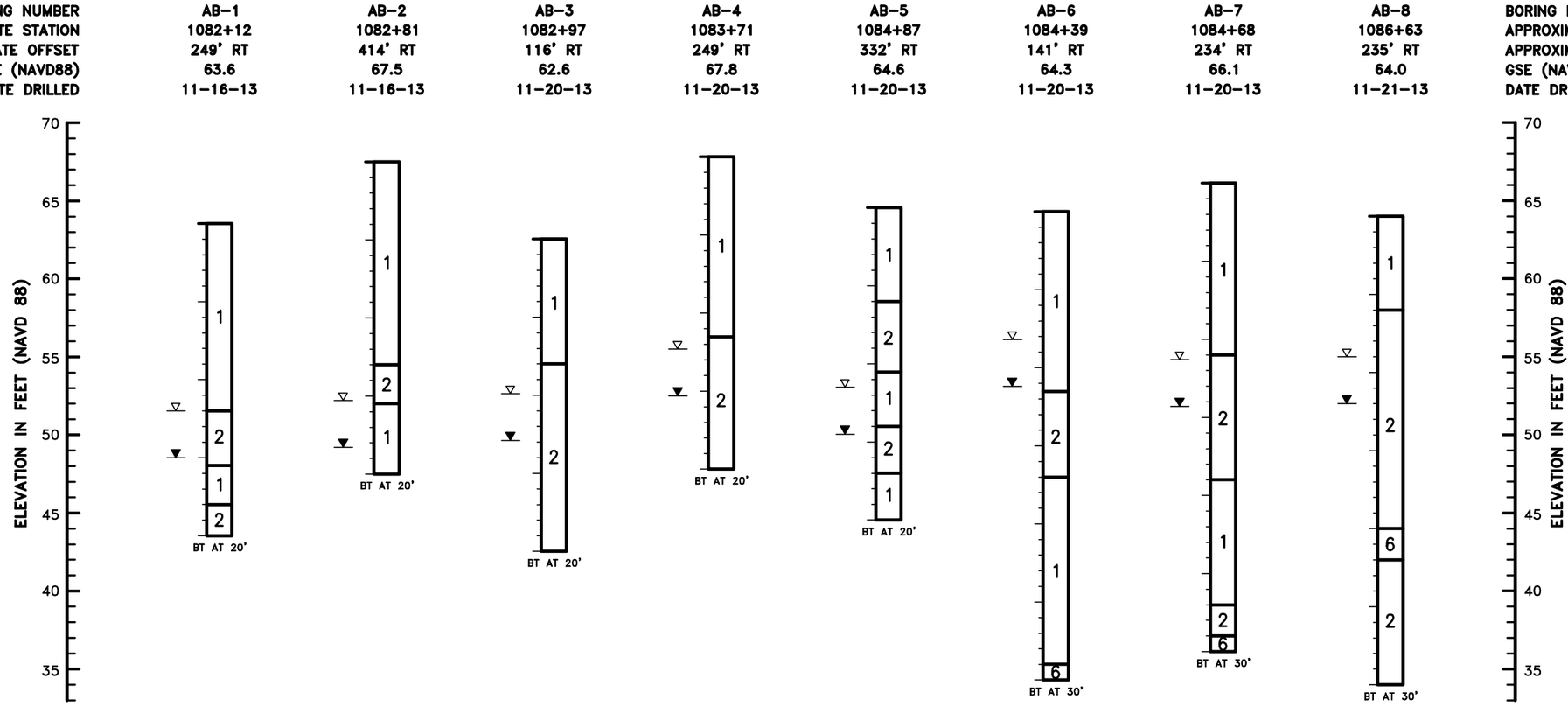
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
429	SEMINOLE	240200-2-52-01

REPORT OF SPT BORINGS
FOR POND FPC (2 of 2)
WEKIVA PARKWAY 7A

SHEET NO. XX



STRATUM NO.	AASHTO SOIL CLASSIFICATION SYMBOL	DESCRIPTION
1	A-3	WHITE TO GRAY, LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, VERY PALE BROWN TO PALE BROWN, LIGHT BROWN TO VERY DARK BROWN, GRAYISH BROWN TO DARK GRAYISH BROWN, PALE YELLOW, DARK YELLOWISH BROWN TO BROWNISH YELLOW, STRONG BROWN, AND VERY DARK GRAY TO BLACK FINE SAND; TRACE TO FEW SILT OR CLAY; OCCASIONAL TRACE ORGANIC MATTER AND OCCASIONAL TRACE ROOTS
2	A-2-4	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN, GREENISH GRAY, AND BLACK FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE ORGANIC MATTER
3	A-2-6, A-6 A-7-6	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN AND GREENISH GRAY FINE SAND; FEW TO LITTLE CLAY
4	A-8	VERY DARK BROWN, VERY DARK GRAY AND BLACK FINE SAND WITH ORGANIC MATTER, SANDY PEAT, ORGANIC SILT AND ORGANIC CLAY
5	A-3, A-2-4	DARK BROWN TO VERY DARK BROWN, DARK YELLOWISH BROWN FINE SAND; TRACE TO LITTLE SILT; TRACE CEMENTATION (HARDPAN-TYPE)
6	A-7-5, A-7-6	LIGHT GRAY, BROWNISH YELLOW, GRAY AND BROWNISH YELLOW, AND STRONG BROWN SANDY CLAY, CLAY AND SILT
7	A-3, A-2-4	YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, AND STRONG BROWN, FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE TO FEW FRAGMENTS OF LIMESTONE, ASPHALT, GLASS, METAL, WOOD AND ROOTS; OFTEN MIXED WITH CLAYEY SANDS (POSSIBLE FILL)

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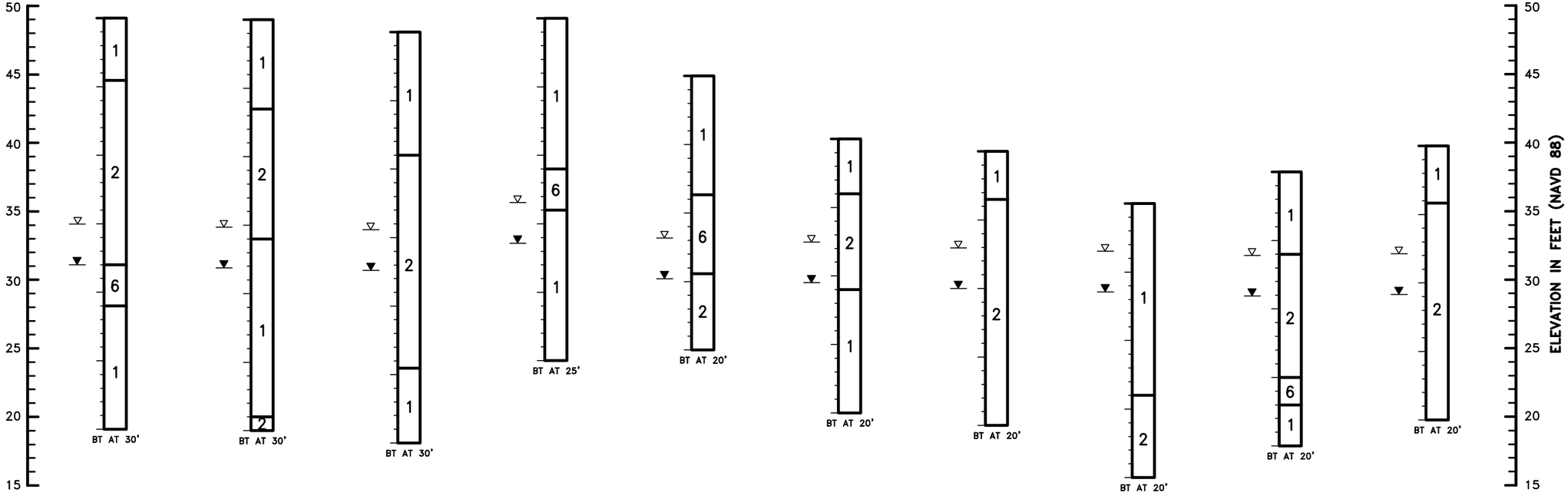
429	SEMINOLE	240200-2-52-01

REPORT OF AUGER BORINGS FOR POND LS (ALT 1) WEKIVA PARKWAY 7A

SHEET NO. XX



STRATUM NO.	AASHTO SOIL CLASSIFICATION SYMBOL	DESCRIPTION
1	A-3	WHITE TO GRAY, LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, VERY PALE BROWN TO PALE BROWN, LIGHT BROWN TO VERY DARK BROWN, GRAYISH BROWN TO DARK GRAYISH BROWN, PALE YELLOW, DARK YELLOWISH BROWN TO BROWNISH YELLOW, STRONG BROWN, AND VERY DARK GRAY TO BLACK FINE SAND; TRACE TO FEW SILT OR CLAY; OCCASIONAL TRACE ORGANIC MATTER AND OCCASIONAL TRACE ROOTS
2	A-2-4	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN, GREENISH GRAY, AND BLACK FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE ORGANIC MATTER
3	A-2-6, A-6 A-7-6	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN AND GREENISH GRAY FINE SAND; FEW TO LITTLE CLAY
4	A-8	VERY DARK BROWN, VERY DARK GRAY AND BLACK FINE SAND WITH ORGANIC MATTER, SANDY PEAT, ORGANIC SILT AND ORGANIC CLAY
5	A-3, A-2-4	DARK BROWN TO VERY DARK BROWN, DARK YELLOWISH BROWN FINE SAND; TRACE TO LITTLE SILT; TRACE CEMENTATION (HARDPAN-TYPE)
6	A-7-5, A-7-6	LIGHT GRAY, BROWNISH YELLOW, GRAY AND BROWNISH YELLOW, AND STRONG BROWN SANDY CLAY, CLAY AND SILT
7	A-3, A-2-4	YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, AND STRONG BROWN, FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE TO FEW FRAGMENTS OF LIMESTONE, ASPHALT, GLASS, METAL, WOOD AND ROOTS; OFTEN MIXED WITH CLAYEY SANDS (POSSIBLE FILL)

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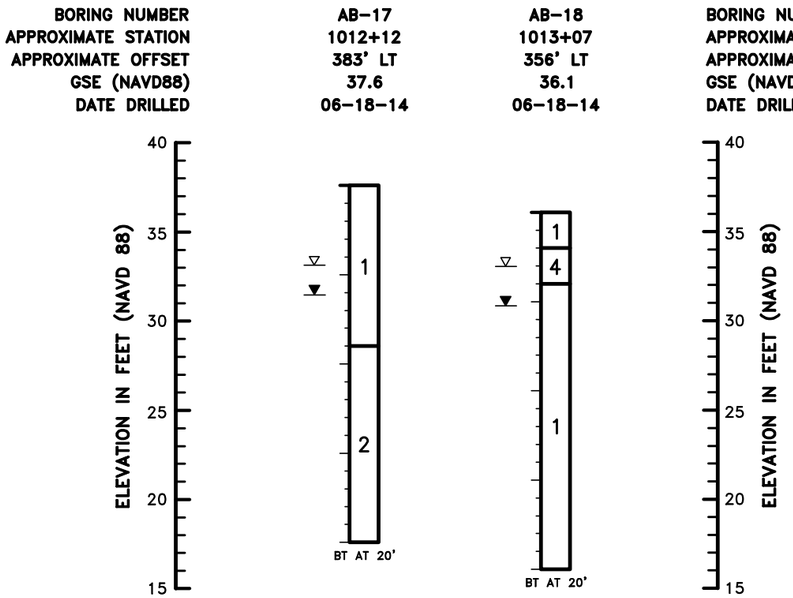
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
429	SEMINOLE	240200-2-52-01

REPORT OF AUGER BORINGS FOR POND YL1 ALT1 (1 OF 2) WEKIVA PARKWAY 7A

SHEET NO.
XX



STRATUM NO.	AASHTO SOIL CLASSIFICATION SYMBOL	DESCRIPTION
1	A-3	WHITE TO GRAY, LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, VERY PALE BROWN TO PALE BROWN, LIGHT BROWN TO VERY DARK BROWN, GRAYISH BROWN TO DARK GRAYISH BROWN, PALE YELLOW, DARK YELLOWISH BROWN TO BROWNISH YELLOW, STRONG BROWN, AND VERY DARK GRAY TO BLACK FINE SAND; TRACE TO FEW SILT OR CLAY; OCCASIONAL TRACE ORGANIC MATTER AND OCCASIONAL TRACE ROOTS
2	A-2-4	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN, GREENISH GRAY, AND BLACK FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE ORGANIC MATTER
3	A-2-6, A-6 A-7-6	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN AND GREENISH GRAY FINE SAND; FEW TO LITTLE CLAY
4	A-8	VERY DARK BROWN, VERY DARK GRAY AND BLACK FINE SAND WITH ORGANIC MATTER, SANDY PEAT, ORGANIC SILT AND ORGANIC CLAY
5	A-3, A-2-4	DARK BROWN TO VERY DARK BROWN, DARK YELLOWISH BROWN FINE SAND; TRACE TO LITTLE SILT; TRACE CEMENTATION (HARDPAN-TYPE)
6	A-7-5, A-7-6	LIGHT GRAY, BROWNISH YELLOW, GRAY AND BROWNISH YELLOW, AND STRONG BROWN SANDY CLAY, CLAY AND SILT
7	A-3, A-2-4	YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, AND STRONG BROWN, FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE TO FEW FRAGMENTS OF LIMESTONE, ASPHALT, GLASS, METAL, WOOD AND ROOTS; OFTEN MIXED WITH CLAYEY SANDS (POSSIBLE FILL)

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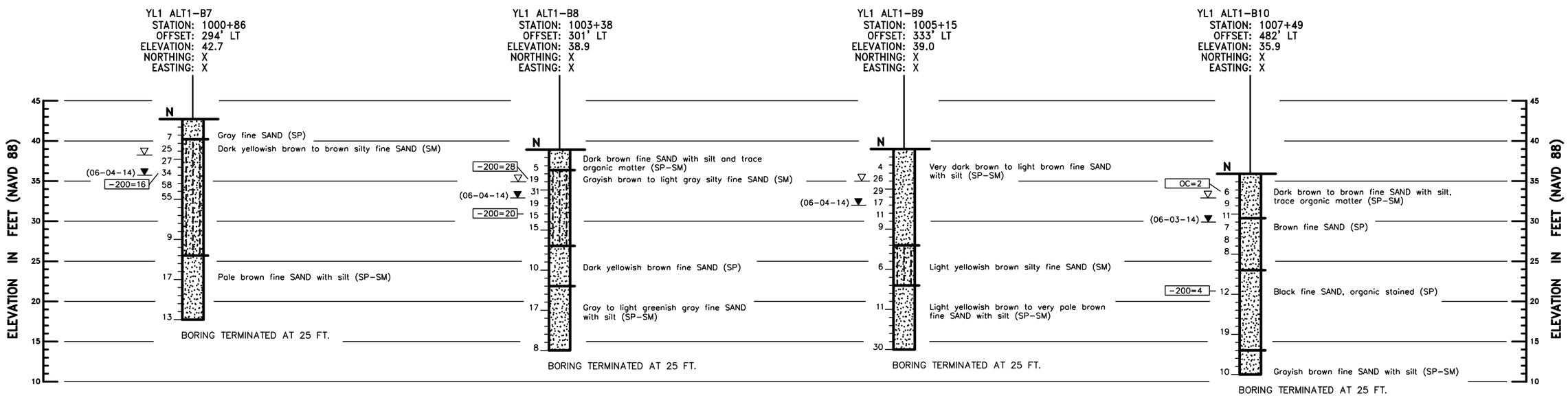
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
429	SEMINOLE	240200-2-52-01

REPORT OF AUGER BORINGS FOR POND YL1 ALT1 (2 OF 2) WEKIVA PARKWAY 7A

SHEET NO. XX



LEGEND

SAND	CHANGE IN SOIL STRATA
SILTY SAND	N — SPT N-VALUE IN BLOWS PER FOOT (ASTM D 1586)
	(SP) — UNIFIED SOIL CLASSIFICATION SYSTEM GROUP SYMBOL BASED ON VISUAL EXAMINATION AND LABORATORY TESTING
	(06-04-14) ▼ — GROUNDWATER LEVEL ENCOUNTERED DURING DRILLING
	-200 — PERCENT PASSING U.S. STANDARD NO. 200 SIEVE
	OC — ORGANIC CONTENT IN PERCENT

NOTES

1. BORINGS WERE DRILLED BY RELIABLE FIELD SERVICES, INC. ON 06/04/14 USING A MAROOKA RIG. SPT WAS CONDUCTED WITH A MANUAL HAMMER.
2. STATIONING AND OFFSET ARE APPROXIMATE AND ARE PROVIDED FOR REFERENCE PURPOSES ONLY.

SOIL CONSISTENCY
(BASED ON EMPIRICAL CORRELATION WITH SPT N-VALUE)

GRANULAR SOILS	
VERY LOOSE	LESS THAN 4 BLOWS/FT.
LOOSE	4 TO 10 BLOWS/FT.
MEDIUM DENSE	10 TO 30 BLOWS/FT.
DENSE	30 TO 50 BLOWS/FT.
VERY DENSE	MORE THAN 50 BLOWS/FT.

FINE-GRAINED SOILS	
VERY SOFT	LESS THAN 2 BLOWS/FT.
SOFT	2 TO 4 BLOWS/FT.
FIRM	4 TO 8 BLOWS/FT.
STIFF	8 TO 15 BLOWS/FT.
VERY STIFF	15 TO 30 BLOWS/FT.
HARD	MORE THAN 30 BLOWS/FT.

REVISIONS					
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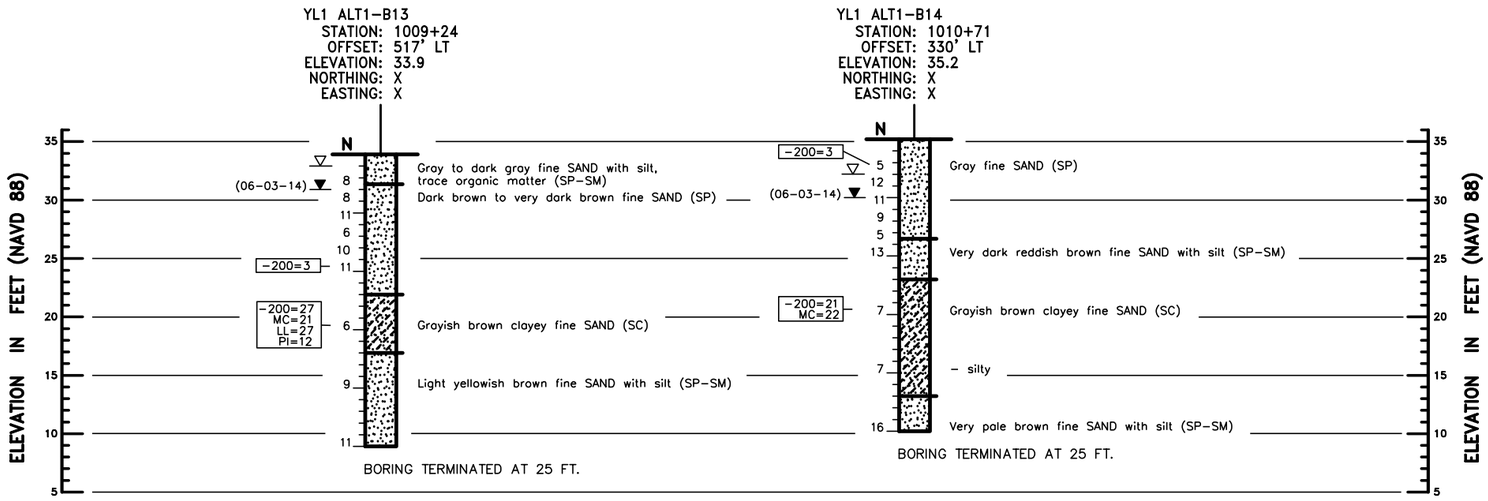
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
429	SEMINOLE	240200-2-52-01

REPORT OF SPT BORINGS FOR POND YL1 ALT1 (1 OF 2) WEKIVA PARKWAY 7A

SHEET NO. XX



LEGEND

SAND	CHANGE IN SOIL STRATA
CLAYEY SAND	N — SPT N–VALUE IN BLOWS PER FOOT (ASTM D 1586)
	(SP) — UNIFIED SOIL CLASSIFICATION SYSTEM GROUP SYMBOL BASED ON VISUAL EXAMINATION AND LABORATORY TESTING
	(06–03–14) ▼ — GROUNDWATER LEVEL ENCOUNTERED DURING DRILLING
	–200 — PERCENT PASSING U.S. STANDARD NO. 200 SIEVE
	MC — MOISTURE CONTENT IN PERCENT
	LL — LIQUID LIMIT IN PERCENT
	PI — PLASTICITY INDEX

NOTES

1. BORINGS WERE DRILLED BY RELIABLE FIELD SERVICES, INC. ON 06/03/14 USING A MAROOKA RIG. SPT WAS CONDUCTED WITH A MANUAL HAMMER.
2. STATIONING AND OFFSET ARE APPROXIMATE AND ARE PROVIDED FOR REFERENCE PURPOSES ONLY.

SOIL CONSISTENCY
(BASED ON EMPIRICAL CORRELATION WITH SPT N–VALUE)

GRANULAR SOILS

VERY LOOSE	– LESS THAN 4 BLOWS/FT.
LOOSE	– 4 TO 10 BLOWS/FT.
MEDIUM DENSE	– 10 TO 30 BLOWS/FT.
DENSE	– 30 TO 50 BLOWS/FT.
VERY DENSE	– MORE THAN 50 BLOWS/FT.

FINE–GRAINED SOILS

VERY SOFT	– LESS THAN 2 BLOWS/FT.
SOFT	– 2 TO 4 BLOWS/FT.
FIRM	– 4 TO 8 BLOWS/FT.
STIFF	– 8 TO 15 BLOWS/FT.
VERY STIFF	– 15 TO 30 BLOWS/FT.
HARD	– MORE THAN 30 BLOWS/FT.

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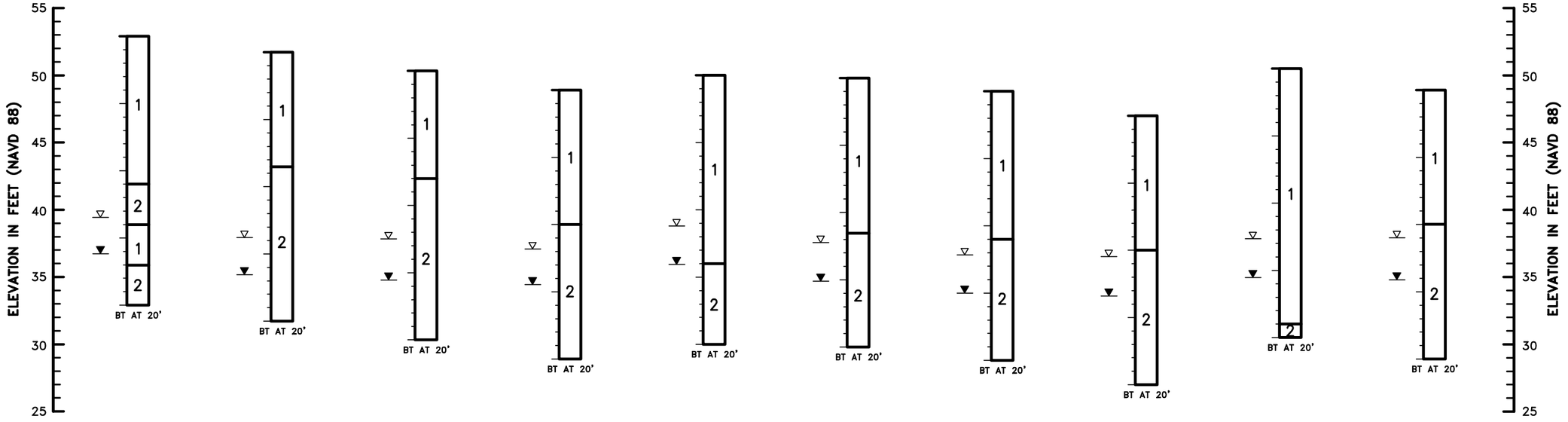
REPORT OF SPT BORINGS FOR POND YL1 ALT1 (2 OF 2) WEKIVA PARKWAY 7A

SHEET NO. XX

BORING NUMBER	AB-3	AB-4	AB-5	AB-6	AB-7	AB-8	AB-9	AB-10	AB-11	AB-12
APPROXIMATE STATION	982+45	982+50	982+25	982+20	984+53	984+32	983+78	983+92	985+95	985+20
APPROXIMATE OFFSET	288' LT	448' LT	607' LT	760' LT	339' LT	478' LT	634' LT	769' LT	411' LT	665' LT
GSE (NAVD88)	52.9	51.7	50.3	48.9	50.0	49.8	48.6	47.0	50.5	48.9
DATE DRILLED	05-30-14	05-30-14	05-30-14	05-30-14	05-30-14	06-01-14	06-01-14	05-30-14	05-30-14	05-30-14



STRATUM NO.	AASHTO SOIL CLASSIFICATION SYMBOL	DESCRIPTION
1	A-3	WHITE TO GRAY, LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, VERY PALE BROWN TO PALE BROWN, LIGHT BROWN TO VERY DARK BROWN, GRAYISH BROWN TO DARK GRAYISH BROWN, PALE YELLOW, DARK YELLOWISH BROWN TO BROWNISH YELLOW, STRONG BROWN, AND VERY DARK GRAY TO BLACK FINE SAND; TRACE TO FEW SILT OR CLAY; OCCASIONAL TRACE ORGANIC MATTER AND OCCASIONAL TRACE ROOTS
2	A-2-4	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN, GREENISH GRAY, AND BLACK FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE ORGANIC MATTER
3	A-2-6, A-6 A-7-6	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN AND GREENISH GRAY FINE SAND; FEW TO LITTLE CLAY
4	A-8	VERY DARK BROWN, VERY DARK GRAY AND BLACK FINE SAND WITH ORGANIC MATTER, SANDY PEAT, ORGANIC SILT AND ORGANIC CLAY
5	A-3, A-2-4	DARK BROWN TO VERY DARK BROWN, DARK YELLOWISH BROWN FINE SAND; TRACE TO LITTLE SILT; TRACE CEMENTATION (HARDPAN-TYPE)
6	A-7-5, A-7-6	LIGHT GRAY, BROWNISH YELLOW, GRAY AND BROWNISH YELLOW, AND STRONG BROWN SANDY CLAY, CLAY AND SILT
7	A-3, A-2-4	YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, AND STRONG BROWN, FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE TO FEW FRAGMENTS OF LIMESTONE, ASPHALT, GLASS, METAL, WOOD AND ROOTS; OFTEN MIXED WITH CLAYEY SANDS (POSSIBLE FILL)

NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED UNDER RULE 61G15-23.003, F.A.C.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

PETER G. SUAH, P.E.
P.E. LICENSE NO. 46910
ANTILLIAN ENGINEERING ASSOCIATES, INC.
3331 BARTLETT BOULEVARD
ORLANDO, FLORIDA 32811
CERTIFICATE OF AUTHORIZATION EB6685

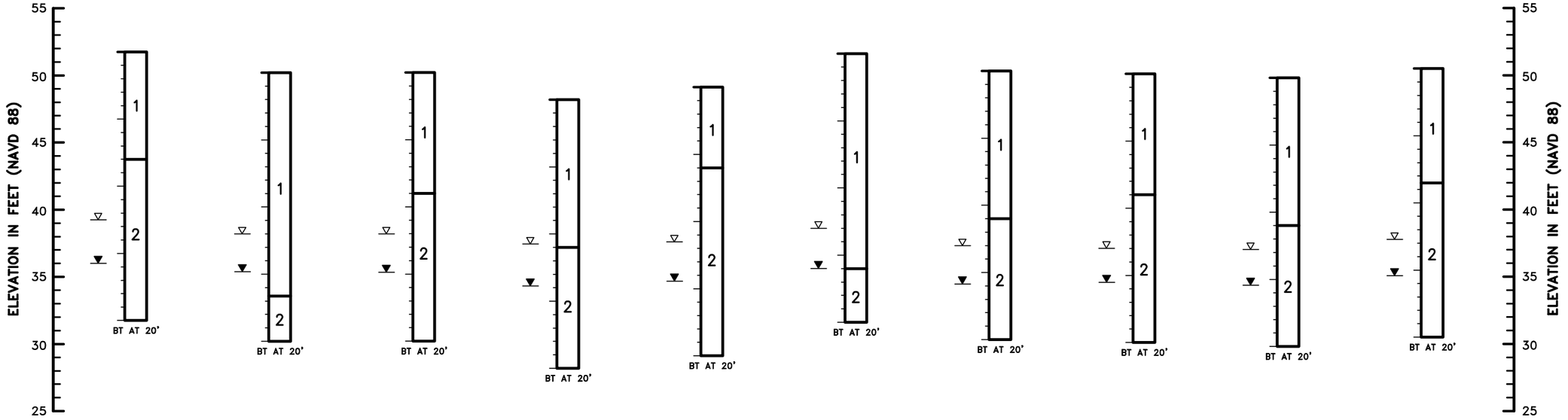
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
429	SEMINOLE	240200-2-52-01

REPORT OF AUGER BORINGS FOR POND YL1 ALT2 (1 OF 2) WEKIVA PARKWAY 7A

SHEET NO. XX

BORING NUMBER	AB-13	AB-14	AB-15	AB-16	AB-17	AB-18	AB-19	AB-20	AB-21	AB-22
APPROXIMATE STATION	986+77	986+85	986+63	986+74	985+92	988+58	988+82	988+50	988+25	988+32
APPROXIMATE OFFSET	312' LT	456' LT	609' LT	744' LT	871' LT	321' LT	428' LT	577' LT	739' LT	866' LT
GSE (NAVD88)	51.7	50.2	50.2	48.2	49.1	51.6	50.3	50.1	49.8	50.5
DATE DRILLED	05-31-14	05-31-14	05-30-14	05-30-14	05-31-14	05-31-14	05-31-14	05-31-14	05-31-14	05-31-14



STRATUM NO.	AASHTO SOIL CLASSIFICATION SYMBOL	DESCRIPTION
1	A-3	WHITE TO GRAY, LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, VERY PALE BROWN TO PALE BROWN, LIGHT BROWN TO VERY DARK BROWN, GRAYISH BROWN TO DARK GRAYISH BROWN, PALE YELLOW, DARK YELLOWISH BROWN TO BROWNISH YELLOW, STRONG BROWN, AND VERY DARK GRAY TO BLACK FINE SAND; TRACE TO FEW SILT OR CLAY; OCCASIONAL TRACE ORGANIC MATTER AND OCCASIONAL TRACE ROOTS
2	A-2-4	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN, GREENISH GRAY, AND BLACK FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE ORGANIC MATTER
3	A-2-6, A-6 A-7-6	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN AND GREENISH GRAY FINE SAND; FEW TO LITTLE CLAY
4	A-8	VERY DARK BROWN, VERY DARK GRAY AND BLACK FINE SAND WITH ORGANIC MATTER, SANDY PEAT, ORGANIC SILT AND ORGANIC CLAY
5	A-3, A-2-4	DARK BROWN TO VERY DARK BROWN, DARK YELLOWISH BROWN FINE SAND; TRACE TO LITTLE SILT; TRACE CEMENTATION (HARDPAN-TYPE)
6	A-7-5, A-7-6	LIGHT GRAY, BROWNISH YELLOW, GRAY AND BROWNISH YELLOW, AND STRONG BROWN SANDY CLAY, CLAY AND SILT
7	A-3, A-2-4	YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, AND STRONG BROWN, FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE TO FEW FRAGMENTS OF LIMESTONE, ASPHALT, GLASS, METAL, WOOD AND ROOTS; OFTEN MIXED WITH CLAYEY SANDS (POSSIBLE FILL)

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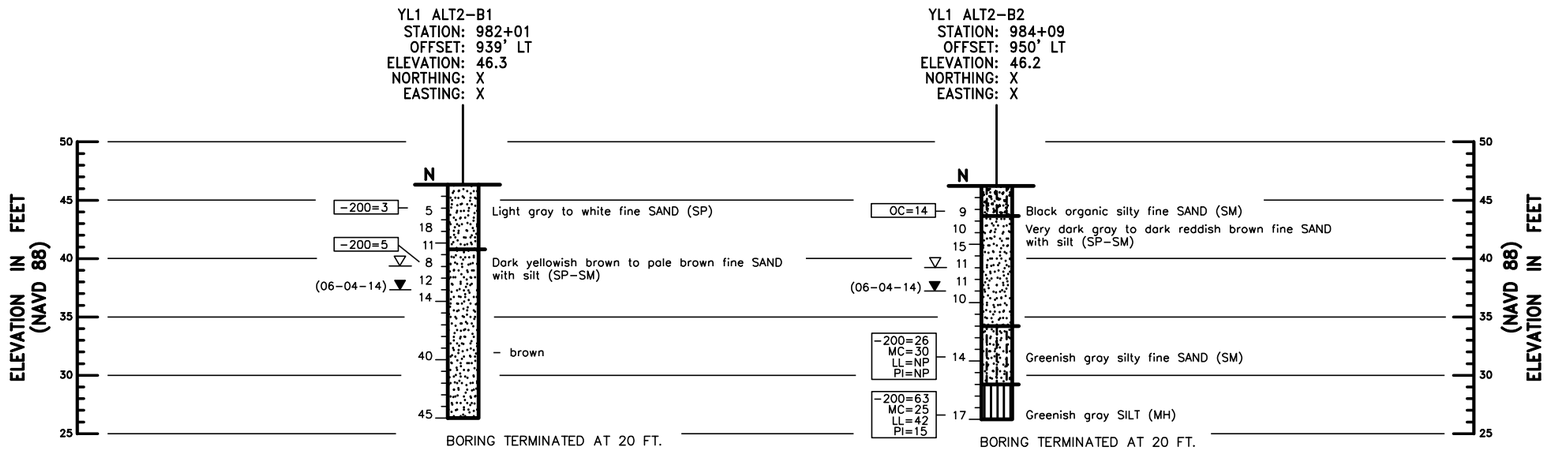
429	SEMINOLE	240200-2-52-01

REPORT OF AUGER BORINGS FOR POND YL1 ALT2 (2 OF 2) WEKIVA PARKWAY 7A

SHEET NO. XX



LEGEND

SAND	CHANGE IN SOIL STRATA
ORGANIC SILTY SAND	N — SPT N-VALUE IN BLOWS PER FOOT (ASTM D 1586)
SILTY SAND	(SP) — UNIFIED SOIL CLASSIFICATION SYSTEM GROUP SYMBOL BASED ON VISUAL EXAMINATION AND LABORATORY TESTING
SILT	(06-04-14) ▼ — GROUNDWATER LEVEL ENCOUNTERED DURING DRILLING
	-200 — PERCENT PASSING U.S. STANDARD NO. 200 SIEVE
	MC — MOISTURE CONTENT IN PERCENT
	LL — LIQUID LIMIT IN PERCENT
	PI — PLASTICITY INDEX
	NP — NON PLASTIC

NOTES

1. BORINGS WERE DRILLED BY RELIABLE FIELD SERVICES, INC. ON 06/04/14 USING A MAROOKA RIG. SPT WAS CONDUCTED WITH A MANUAL HAMMER.
2. STATIONING AND OFFSET ARE APPROXIMATE AND ARE PROVIDED FOR REFERENCE PURPOSES ONLY.

SOIL CONSISTENCY
(BASED ON EMPIRICAL CORRELATION WITH SPT N-VALUE)

GRANULAR SOILS	
VERY LOOSE	LESS THAN 4 BLOWS/FT.
LOOSE	4 TO 10 BLOWS/FT.
MEDIUM DENSE	10 TO 30 BLOWS/FT.
DENSE	30 TO 50 BLOWS/FT.
VERY DENSE	MORE THAN 50 BLOWS/FT.

FINE-GRAINED SOILS	
VERY SOFT	LESS THAN 2 BLOWS/FT.
SOFT	2 TO 4 BLOWS/FT.
FIRM	4 TO 8 BLOWS/FT.
STIFF	8 TO 15 BLOWS/FT.
VERY STIFF	15 TO 30 BLOWS/FT.
HARD	MORE THAN 30 BLOWS/FT.

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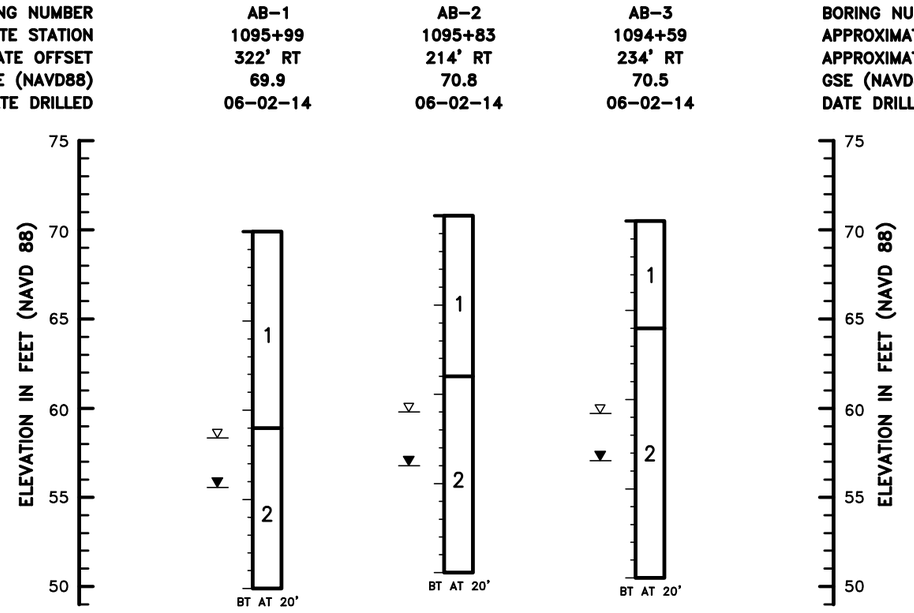

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2	A-2-4	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN, GREENISH GRAY, AND BLACK FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE ORGANIC MATTER
3	A-2-6, A-6 A-7-6	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN AND GREENISH GRAY FINE SAND; FEW TO LITTLE CLAY
4	A-8	VERY DARK BROWN, VERY DARK GRAY AND BLACK FINE SAND WITH ORGANIC MATTER, SANDY PEAT, ORGANIC SILT AND ORGANIC CLAY
5	A-3, A-2-4	DARK BROWN TO VERY DARK BROWN, DARK YELLOWISH BROWN FINE SAND; TRACE TO LITTLE SILT; TRACE CEMENTATION (HARDPAN-TYPE)
6	A-7-5, A-7-6	LIGHT GRAY, BROWNISH YELLOW, GRAY AND BROWNISH YELLOW, AND STRONG BROWN SANDY CLAY, CLAY AND SILT
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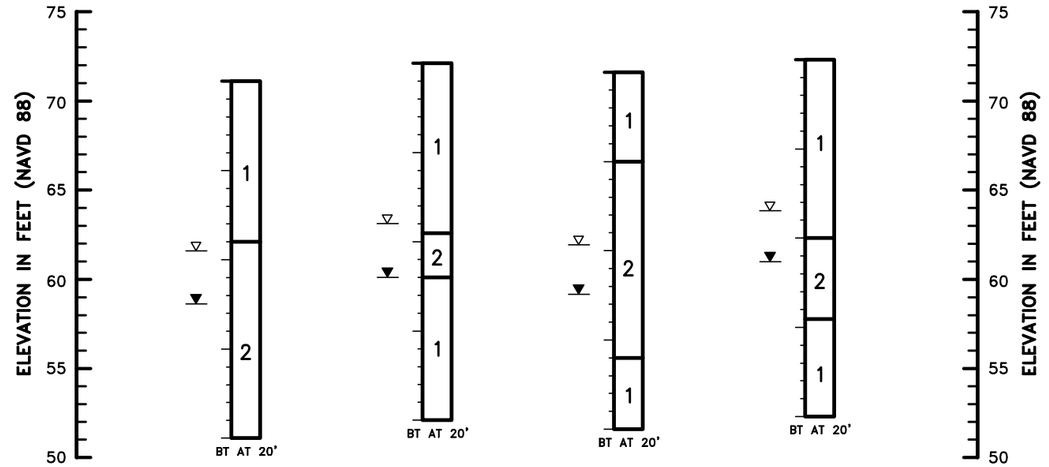
REPORT OF AUGER BORINGS FOR POND CC ALT1 WEKIVA PARKWAY 7A

SHEET NO. XX



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4	A-8	VERY DARK BROWN, VERY DARK GRAY AND BLACK FINE SAND WITH ORGANIC MATTER, SANDY PEAT, ORGANIC SILT AND ORGANIC CLAY
5	A-3, A-2-4	DARK BROWN TO VERY DARK BROWN, DARK YELLOWISH BROWN FINE SAND; TRACE TO LITTLE SILT; TRACE CEMENTATION (HARDPAN-TYPE)
6	A-7-5, A-7-6	LIGHT GRAY, BROWNISH YELLOW, GRAY AND BROWNISH YELLOW, AND STRONG BROWN SANDY CLAY, CLAY AND SILT
7	A-3, A-2-4	YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, AND STRONG BROWN, FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE TO FEW FRAGMENTS OF LIMESTONE, ASPHALT, GLASS, METAL, WOOD AND ROOTS; OFTEN MIXED WITH CLAYEY SANDS (POSSIBLE FILL)

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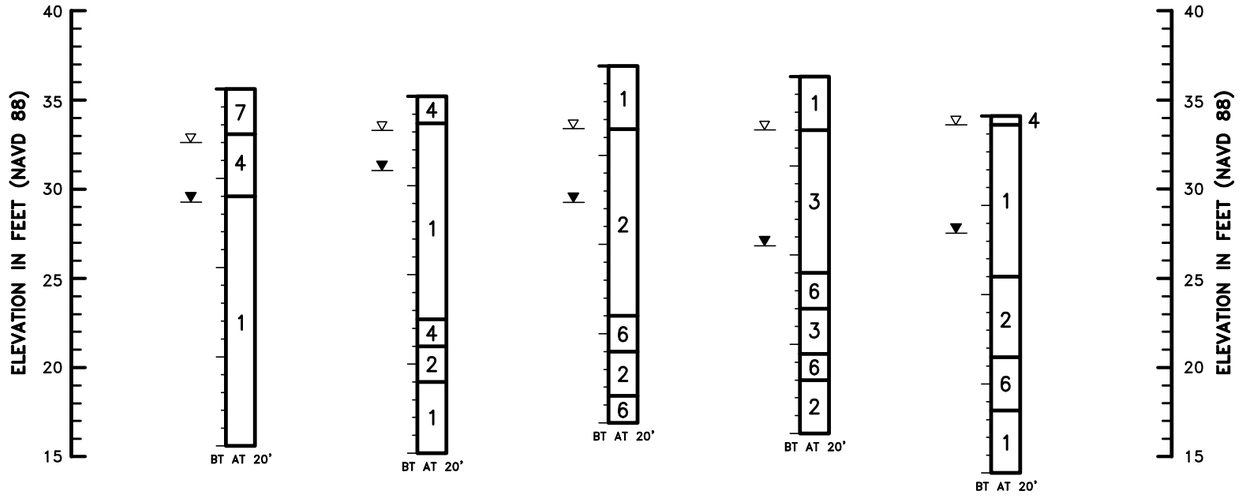
REPORT OF AUGER BORINGS FOR POND CC ALT2 WEKIVA PARKWAY 7A

SHEET NO.
XX



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3	A–2–6, A–6 A–7–6	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN AND GREENISH GRAY FINE SAND; FEW TO LITTLE CLAY
4	A–8	VERY DARK BROWN, VERY DARK GRAY AND BLACK FINE SAND WITH ORGANIC MATTER, SANDY PEAT, ORGANIC SILT AND ORGANIC CLAY
5	A–3, A–2–4	DARK BROWN TO VERY DARK BROWN, DARK YELLOWISH BROWN FINE SAND; TRACE TO LITTLE SILT; TRACE CEMENTATION (HARDPAN–TYPE)
6	A–7–5, A–7–6	LIGHT GRAY, BROWNISH YELLOW, GRAY AND BROWNISH YELLOW, AND STRONG BROWN SANDY CLAY, CLAY AND SILT
7	A–3, A–2–4	YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, AND STRONG BROWN, FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE TO FEW FRAGMENTS OF LIMESTONE, ASPHALT, GLASS, METAL, WOOD AND ROOTS; OFTEN MIXED WITH CLAYEY SANDS (POSSIBLE FILL)

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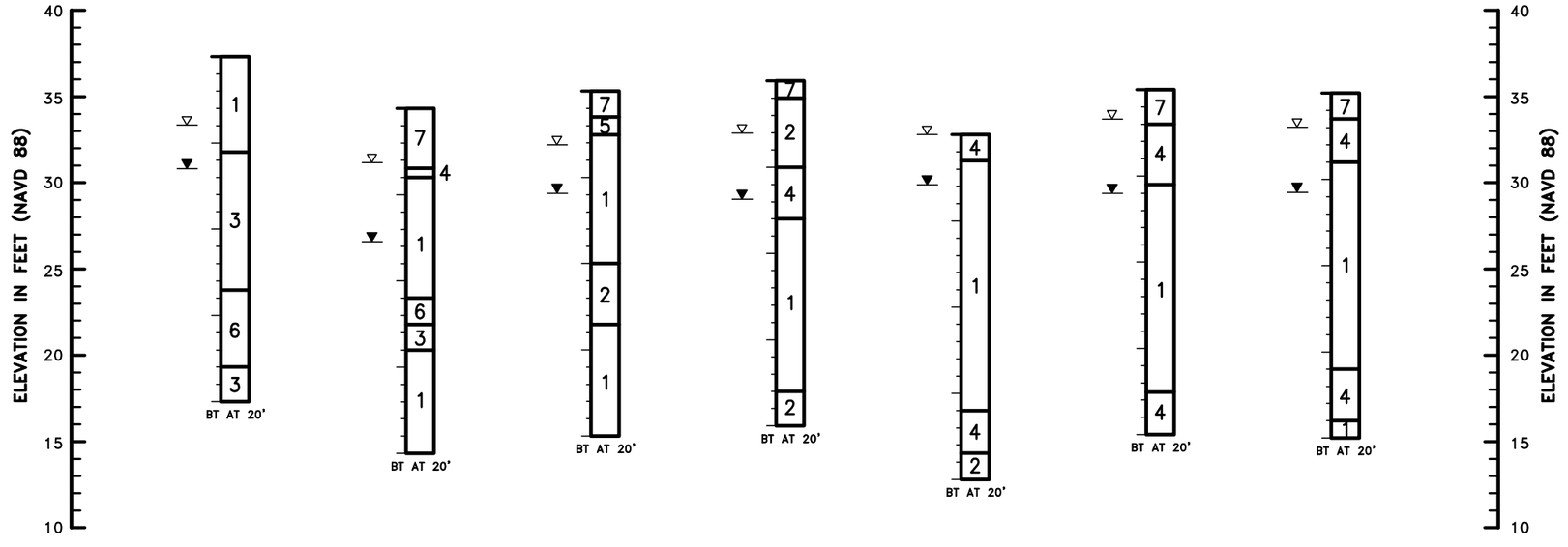
REPORT OF AUGER BORINGS FOR POND FPC ALT1 WEKIVA PARKWAY 7A

SHEET NO. XX



STRATUM NO.	AASHTO SOIL CLASSIFICATION SYMBOL	DESCRIPTION
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2	A-2-4	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN, GREENISH GRAY, AND BLACK FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE ORGANIC MATTER
3	A-2-6, A-6 A-7-6	LIGHT YELLOWISH BROWN TO YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, PALE YELLOW TO YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, GRAY AND YELLOWISH BROWN, STRONG BROWN, GRAY AND STRONG BROWN AND GREENISH GRAY FINE SAND; FEW TO LITTLE CLAY
4	A-8	VERY DARK BROWN, VERY DARK GRAY AND BLACK FINE SAND WITH ORGANIC MATTER, SANDY PEAT, ORGANIC SILT AND ORGANIC CLAY
5	A-3, A-2-4	DARK BROWN TO VERY DARK BROWN, DARK YELLOWISH BROWN FINE SAND; TRACE TO LITTLE SILT; TRACE CEMENTATION (HARDPAN-TYPE)
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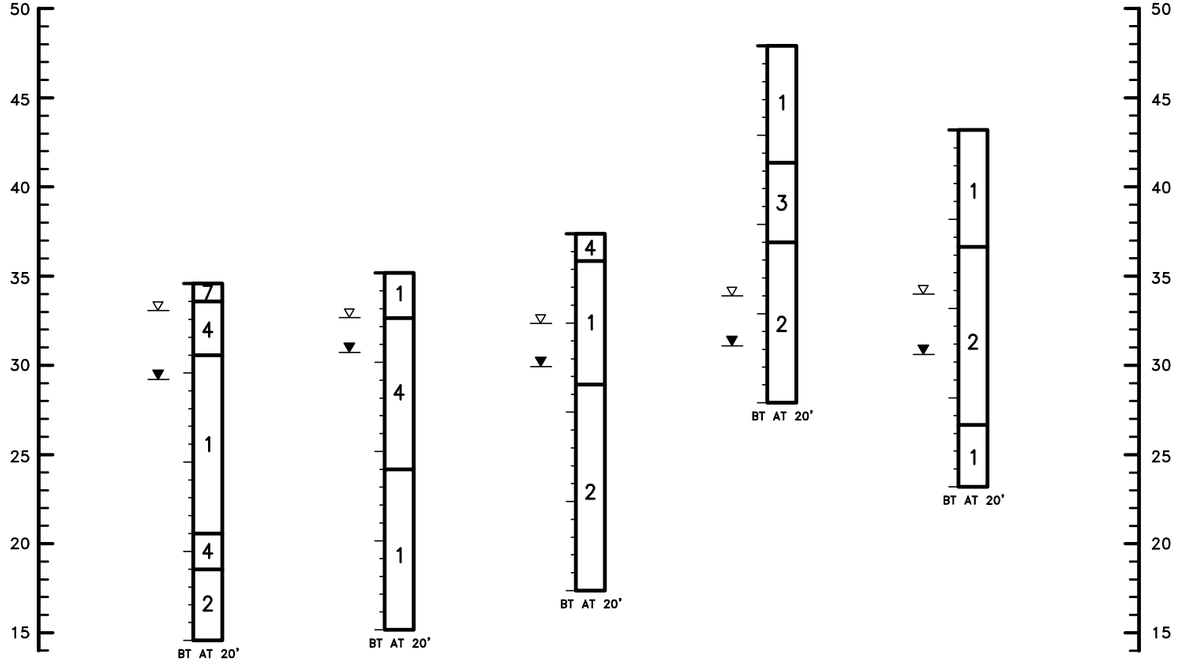
REPORT OF AUGER BORINGS FOR POND FPC ALT2 WEKIVA PARKWAY 7A

SHEET NO. XX



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4	A-8	VERY DARK BROWN, VERY DARK GRAY AND BLACK FINE SAND WITH ORGANIC MATTER, SANDY PEAT, ORGANIC SILT AND ORGANIC CLAY
5	A-3, A-2-4	DARK BROWN TO VERY DARK BROWN, DARK YELLOWISH BROWN FINE SAND; TRACE TO LITTLE SILT; TRACE CEMENTATION (HARDPAN-TYPE)
6	A-7-5, A-7-6	LIGHT GRAY, BROWNISH YELLOW, GRAY AND BROWNISH YELLOW, AND STRONG BROWN SANDY CLAY, CLAY AND SILT
7	A-3, A-2-4	YELLOWISH BROWN, PALE BROWN, LIGHT BROWN, YELLOW, LIGHT GRAY TO GRAY, BROWNISH YELLOW, AND STRONG BROWN, FINE SAND; FEW TO LITTLE SILT; OCCASIONAL TRACE TO FEW FRAGMENTS OF LIMESTONE, ASPHALT, GLASS, METAL, WOOD AND ROOTS; OFTEN MIXED WITH CLAYEY SANDS (POSSIBLE FILL)

NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED UNDER RULE 61G15-23.003, F.A.C.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

PETER G. SUAH, P.E.
P.E. LICENSE NO. 46910

ANTILLIAN ENGINEERING ASSOCIATES, INC.
3331 BARTLETT BOULEVARD
ORLANDO, FLORIDA 32811

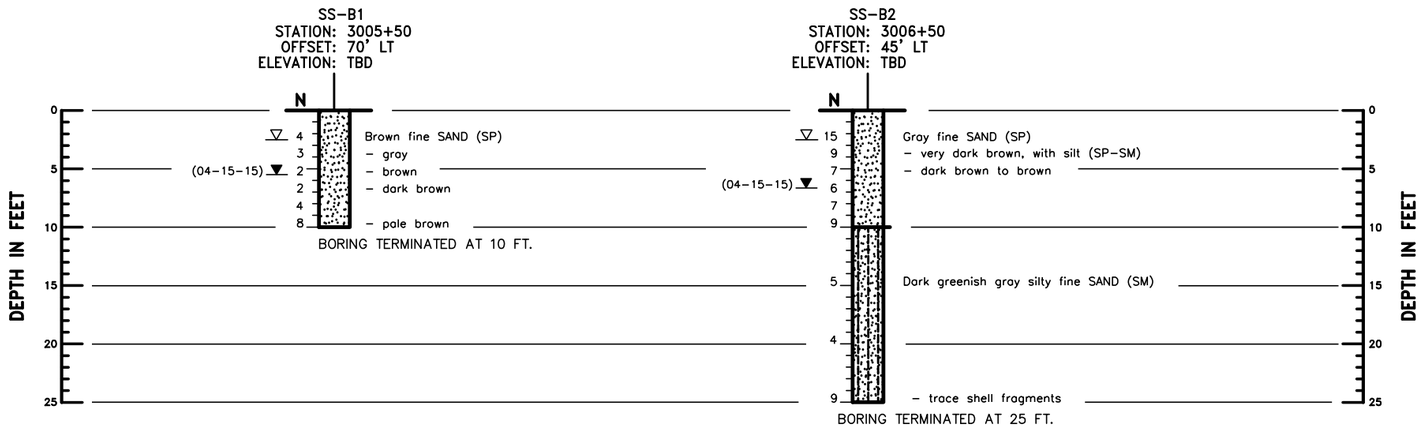
CERTIFICATE OF AUTHORIZATION EB6685

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
429	SEMINOLE	240200-2-52-01

REPORT OF AUGER BORINGS FOR POND FPC ALT3 WEKIVA PARKWAY 7A

SHEET NO.
XX



LEGEND

SAND	CHANGE IN SOIL STRATA
SILTY SAND	N — SPT N-VALUE IN BLOWS PER FOOT (ASTM D 1586)
	TBD — TO BE DETERMINED
	(SP) — UNIFIED SOIL CLASSIFICATION SYSTEM GROUP SYMBOL BASED ON VISUAL EXAMINATION AND LABORATORY TESTING
	(04-15-15) ▼ — GROUNDWATER LEVEL ENCOUNTERED DURING DRILLING
	▽ — ESTIMATED SEASONAL HIGH GROUNDWATER LEVEL

NOTES

1. BORINGS WERE DRILLED BY RELIABLE FIELD SERVICES, INC. ON 04/15/15 USING A MAROOKA RIG. SPT WAS CONDUCTED WITH A MANUAL HAMMER.
2. STATIONING IS APPROXIMATE AND IS PROVIDED FOR REFERENCE PURPOSES ONLY.

SOIL CONSISTENCY
(BASED ON EMPIRICAL CORRELATION WITH SPT N-VALUE)

GRANULAR SOILS

VERY LOOSE	LESS THAN 4 BLOWS/FT.
LOOSE	4 TO 10 BLOWS/FT.
MEDIUM DENSE	10 TO 30 BLOWS/FT.
DENSE	30 TO 50 BLOWS/FT.
VERY DENSE	MORE THAN 50 BLOWS/FT.

FINE-GRAINED SOILS

VERY SOFT	LESS THAN 2 BLOWS/FT.
SOFT	2 TO 4 BLOWS/FT.
FIRM	4 TO 8 BLOWS/FT.
STIFF	8 TO 15 BLOWS/FT.
VERY STIFF	15 TO 30 BLOWS/FT.
HARD	MORE THAN 30 BLOWS/FT.

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

PETER G. SUAH, P.E.
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3331 BARTLETT BOULEVARD
ORLANDO, FLORIDA 32811
CERTIFICATE OF AUTHORIZATION EB6685

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
429	SEMINOLE	240200-2-52-01

REPORT OF SPT BORINGS FOR SPREADER SWALE WEKIVA PARKWAY 7A

SHEET NO. XX

Field Permeability Test Results
SR 429 Wekiva Parkway 7A
Seminole County, Florida
FDOT FPID No. 240200-2-52-01
AEA Project No. 201314

POND	BORING	APPROXIMATE STATION	APPROXIMATE OFFSET (feet)	STRATUM	TEST DEPTH INTERVAL (feet)	MEASURED HORIZONTAL PERMEABILITY K_h (feet/day)
WR1	AB-2	933+33	241 LT	1	4 - 6	40
	AB-4	934+67	411 LT	1	8 - 10	2.0
	AB-5	935+14	116 LT	2	4 - 6	1.5
	AB-6	937+79	259 LT	1	4 - 6	2.1
	B-1	932+84	696 LT	1	3 - 5	9.5
	B-8	939+55	554 LT	1	4 - 6	7.5
	B-9	939+34	633 LT	1	3 - 5	2.5
WR2	AB-1	952+74	257 LT	1	4 - 6	40
	AB-4	953+98	536 LT	1	13 - 15	11
	AB-6	954+85	674 LT	1	8 - 10	18
	AB-10	957+03	661 LT	2	12 - 14	0.5
	AB-11	957+78	261 LT	1	9 - 11	11
	AB-11	957+78	261 LT	3	18 - 20	1.5
	AB-13	958+36	595 LT	1	7 - 9	15
	AB-13	958+36	595 LT	1	20 - 22	18
YL1	AB-1	1006+50	181 RT	2	9 - 11	1.0
	AB-4	1008+47	246 RT	1	2 - 4	40
	AB-5	1009+81	383 RT	2	6 - 8	0.5
	AB-8	1011+02	548 RT	2	7 - 9	0.5
	AB-10	1011+93	392 RT	1	5 - 7	5.5
YL2	AB-1	1033+06	190 LT	2	8 - 10	7.6
	AB-4	1034+88	547 LT	1	2 - 4	16
	AB-5	1036+41	422 LT	1	4 - 6	9.5
	AB-6	1036+38	563 LT	2	5 - 7	9.5

Field Permeability Test Results (continued)
SR 429 Wekiva Parkway 7A
Seminole County, Florida
FDOT FPID No. 240200-2-52-01
AEA Project No. 201314

POND	BORING	APPROXIMATE STATION	APPROXIMATE OFFSET (feet)	STRATUM	TEST DEPTH INTERVAL (feet)	MEASURED HORIZONTAL PERMEABILITY K_h (feet/day)
LS	AB-2	1056+35	416 LT	1	4 - 6	12
	AB-6	1058+87	589 LT	1	14 - 16	0.5
	AB-11	1059+10	219 LT	1	6 - 8	7.5
	AB-13	1062+87	663 LT	1	4 - 6	20
	AB-16	1063+48	194 LT	2	10 - 12	2.5
	AB-24	1066+93	412 LT	2	7 - 9	5.5
	AB-26	1067+52	184 LT	2	10 - 12	28
	AB-28	1069+89	338 LT	1	4 - 6	11
CC	AB-1	1095+99	322 RT	1	4 - 6	18
	AB-2	1095+83	214 RT	1	6 - 8	40
	AB-3	1094+59	234 RT	1	3 - 5	24
YL1 ALT 2	YL1 ALT2-B1	982+01	939 LT	1	3 - 5	20
	AB-3	982+45	288 LT	1	8 - 10	15
	AB-5	982+25	607 LT	2	6 - 8	14
	AB-13	986+77	312 LT	1	8 - 10	1.5
	AB-17	985+92	871 LT	1	4 - 6	14
	AB-19	988+82	428 LT	1	3 - 5	2.9
	AB-21	988+25	739 LT	2	4 - 6	2.7
YL1 ALT 1	AB-1	998+10	358 LT	2	15 - 17	0.5
	AB-3	997+92	733 LT	2	10 - 12	0.2
	YL1 ALT1-B7	1000+86	294 LT	1	10 - 12	0.2
	YL1 ALT1-B9	1005+15	333 LT	2	5 - 7	0.2
	AB-11	1007+52	272 LT	1	6 - 8	1.5
	YL1 ALT1-B14	1010+71	330 LT	1	5 - 7	4.0
	AB-18	1013+07	356 LT	1	5 - 7	24
LS ALT 1	AB-1	1082+12	249 RT	1	6 - 8	5.5
	AB-3	1082+97	116 RT	2	4 - 6	15
	AB-5	1084+87	332 RT	2	6 - 8	4.5
	AB-8	1086+63	235 RT	1	7 - 9	2.5
CC ALT 1	AB-2	1101+32	425 RT	2	4 - 6	22
	AB-3	1101+55	245 RT	2	6 - 8	2.0

Laboratory Test Results
SR 429 Wekiva Parkway 7A
Seminole County, Florida
FDOT FPID No. 240200-2-52-01
AEA Project No. 201314

Stratum	Boring	Depth Interval (feet)	# 10 Sieve	#40 Sieve	#60 Sieve	#100 Sieve	#200 Sieve	Moisture Content	Liquid Limit	Plasticity Index	Organic Content	AASHTO Classification
1	WB929	2-4	100	99	94	40	9	---	---	---	---	A-3
1	WB938+25	1-2.5	100	99	93	33	8	26	---	---	4	A-3
1	WB950	7.5-10	100	100	98	37	9	---	---	---	---	A-3
1	WB950	15-17	100	100	98	26	6	13	---	---	4	A-3
1	WB960	0-2	100	100	93	28	5	---	---	---	---	A-3
1	WB970	0-2.5	100	99	90	25	6	---	---	---	---	A-3
1	EB985	4-6	100	99	87	22	5	---	---	---	---	A-3
1	WB990	2-4	100	99	89	26	4	---	---	---	---	A-3
1	WB995	2.5-5	100	99	90	26	4	---	---	---	---	A-3
1	WB1021	2-4	100	99	91	23	3	---	---	---	---	A-3
1	WB1021	9-12	100	99	89	20	4	22	---	---	2	A-3
1	WB1021	15-17	100	99	94	33	6	24	---	---	---	A-3
1	WB1022	5-8	100	99	89	23	4	25	---	---	---	A-3
1	WB1022	32-35	100	99	90	25	7	24	---	---	---	A-3
1	WB1023	7.5-9	100	99	92	24	3	23	---	---	---	A-3
1	WB1025+20	27-30	100	99	92	30	10	24	---	---	---	A-3
1	WB1025+20	12-14	100	99	89	24	4	27	---	---	2	A-3
1	EB1030	5-7	100	99	91	24	4	---	---	---	---	A-3
1	WB1035	2-4	100	100	93	24	1	---	---	---	---	A-3
1	EB1060	4-5.5	100	99	93	38	8	---	---	---	---	A-3
1	EB1075	0-3	100	99	88	23	4	---	---	---	---	A-3
1	ML932L	3.5-5	100	99	91	24	3	---	---	---	---	A-3
1	ML946L	1.5-3	100	99	93	27	4	---	---	---	---	A-3
1	ML952L	0-2	100	99	92	25	5	---	---	---	---	A-3
1	ML955R	1.5-4	100	100	92	25	4	---	---	---	---	A-3
1	ML960R	0.5-3	100	99	90	26	7	---	---	---	---	A-3

Laboratory Test Results
SR 429 Wekiva Parkway 7A
Seminole County, Florida
FDOT FPID No. 240200-2-52-01
AEA Project No. 201314

Stratum	Boring	Depth Interval (feet)	# 10 Sieve	#40 Sieve	#60 Sieve	#100 Sieve	#200 Sieve	Moisture Content	Liquid Limit	Plasticity Index	Organic Content	AASHTO Classification
1	ML962L	2-5	100	99	90	26	7	---	---	---	---	A-3
1	ML963R	0-2.5	100	99	90	26	7	---	---	---	---	A-3
1	ML972R	1.5-4	100	99	90	24	6	---	---	---	---	A-3
1	ML977L	2-5	100	99	89	23	2	---	---	---	---	A-3
1	ML978R	1-4	100	99	90	25	6	---	---	---	---	A-3
1	ML985L	1-4	100	99	87	22	5	---	---	---	---	A-3
1	ML989L	0-3.5	100	98	89	24	4	---	---	---	---	A-3
1	ML997R	1.5-4	100	99	90	24	3	---	---	---	---	A-3
1	ML1042CL	2-3.5	---	---	---	---	---	12	---	---	3	A-3
1	ML1053CL	3.5-4	---	---	---	---	---	12	---	---	2	A-3
1	ML1064L	0-3.5	100	98	89	24	2	---	---	---	---	A-3
1	ML1066R	12.5-16	100	99	97	59	6	---	---	---	---	A-3
1	ML1069L	0-4	100	98	84	19	3	---	---	---	---	A-3
1	ML1095R	0-3	100	98	87	21	4	---	---	---	---	A-3
1	ML1099L	15-17	100	99	83	16	6	---	---	---	---	A-3
1	ML1104R	3.5-6.5	100	99	86	22	4	---	---	---	---	A-3
1	ML1104R	10.5-13	100	98	85	24	9	---	---	---	---	A-3
1	ML1114R	0-3.5	100	98	86	25	6	---	---	---	---	A-3
1	AB-2 (WR1)	5-7	100	99	89	31	9	---	---	---	---	A-3
1	AB-4 (WR1)	6-8	100	98	86	25	5	---	---	---	---	A-3
1	AB-5 (WR1)	8-10	100	98	84	21	4	---	---	---	---	A-3
1	AB-6 (WR1)	4-6.5	100	99	92	36	6	---	---	---	---	A-3
1	AB-6 (WR1)	17-20	100	99	96	61	8	---	---	---	---	A-3
1	AB-7 (WR1)	2.5-5.5	100	99	91	27	3	---	---	---	---	A-3
1	WR1-B1	2.5-4	100	98	90	36	10	---	---	---	---	A-3
1	WR1-B2	1-2.5	100	99	89	31	9	---	---	---	---	A-3

Laboratory Test Results
SR 429 Wekiva Parkway 7A
Seminole County, Florida
FDOT FPID No. 240200-2-52-01
AEA Project No. 201314

Stratum	Boring	Depth Interval (feet)	# 10 Sieve	#40 Sieve	#60 Sieve	#100 Sieve	#200 Sieve	Moisture Content	Liquid Limit	Plasticity Index	Organic Content	AASHTO Classification
1	WR1-B2	18.5-20	100	87	81	36	11	30	---	---	---	A-3
1	WR1-B3	7-8.5	100	99	94	46	9	---	---	---	---	A-3
1	WR1-B3	13.5-15	100	99	95	44	10	---	---	---	---	A-3
1	WR1-B4	4-5.5	100	99	86	27	6	---	---	---	---	A-3
1	WR1-B5	4-5.5	100	99	91	34	3	---	---	---	---	A-3
1	WR1-B7	1-2.5	100	99	91	34	7	---	---	---	---	A-3
1	WR1-B7	7-8.5	100	99	96	48	10	---	---	---	---	A-3
1	WR1-B7	13.5-15	100	100	96	48	8	--	---	---	---	A-3
1	WR1-B8	4-5.5	100	99	93	36	4	---	---	---	---	A-3
1	WR1-B9	4-5.5	100	99	92	30	6	---	---	---	---	A-3
1	WR1-B9	13.5-15	100	100	96	46	9	---	---	---	---	A-3
1	AB-1 (WR2)	2-5	100	99	91	25	7	---	---	---	---	A-3
1	AB-2 (WR2)	12-14.5	100	100	95	29	6	---	---	---	---	A-3
1	AB-7 (WR2)	2.5-5	100	100	92	22	3	---	---	---	---	A-3
1	AB-7 (WR2)	14.5 - 17	100	100	95	23	7	---	---	---	---	A-3
1	AB-8 (WR2)	7-10	100	99	88	18	1	---	---	---	---	A-3
1	AB-8 (WR2)	36.5-38	100	100	93	45	4	---	---	---	---	A-3
1	WR2-B1	2.5-4	100	99	92	27	7	---	---	---	---	A-3
1	WR2-B1	7-8.5	100	100	93	24	8	---	---	---	---	A-3
1	WR2-B1	18.5-20	---	---	---	---	5	---	---	---	---	A-3
1	WR2-B2	5.5-7	100	99	92	26	6	---	---	---	---	A-3
1	WR2-B2	23.5-25	---	---	---	---	3	---	---	---	---	A-3
1	WR2-B3	23.5-25	---	---	---	---	10	---	---	---	---	A-3
1	WR2-B4	1-2.5	100	99	93	25	3	---	---	---	---	A-3
1	WR2-B4	7-8.5	100	99	90	24	8	---	---	---	---	A-3
1	WR2-B4	13.5-15	100	99	96	42	7	---	---	---	---	A-3

Laboratory Test Results
SR 429 Wekiva Parkway 7A
Seminole County, Florida
FDOT FPID No. 240200-2-52-01
AEA Project No. 201314

Stratum	Boring	Depth Interval (feet)	# 10 Sieve	#40 Sieve	#60 Sieve	#100 Sieve	#200 Sieve	Moisture Content	Liquid Limit	Plasticity Index	Organic Content	AASHTO Classification
1	AB-1 (CC)	0-2	100	99	86	21	4	---	---	---	---	A-3
1	AB-1 (CC)	13-15	100	99	85	22	4	---	---	---	---	A-3
1	AB-2 (CC)	2-5	100	99	84	17	3	---	---	---	---	A-3
1	AB-3 (CC)	13-15	100	99	86	24	9	---	---	---	---	A-3
1	AB-1 (BBT)	0-1.5	100	99	92	29	3	---	---	---	---	A-3
1	AB-2 (BBT)	4-6	100	99	95	34	2	---	---	---	---	A-3
1	AB-1 (BBT)	15-17	100	100	98	49	5	---	---	---	---	A-3
1	AB-3 (BBT)	1-4	100	99	93	29	2	---	---	---	---	A-3
1	AB-3 (BBT)	16-17.5	100	99	96	39	8	23	---	---	---	A-3
1	AB-5 (BBT)	1.5-4	100	98	91	30	2	---	---	---	---	A-3
1	AB-6 (BBT)	3-4.5	100	99	91	30	2	---	---	---	---	A-3
1	AB-11 (BBT)	1.5-4.5	100	99	91	32	2	---	---	---	---	A-3
1	AB-13 (BBT)	4.5-7	100	98	87	19	1	---	---	---	---	A-3
1	AB-24 (BBT)	1-2.5	100	99	90	21	1	---	---	---	---	A-3
1	AB-26 (BBT)	1-2	100	98	84	22	5	12	---	---	5	A-3
1	AB-26 (BBT)	2-4.5	100	97	81	16	2	---	---	---	---	A-3
1	AB-28 (BBT)	3.5-7	100	99	89	26	1	---	---	---	---	A-3
1	AB-22 (BBT)	17-19	100	100	99	68	10	---	---	---	---	A-3
1	AB-1 (YL1 ALT1)	21-24.5	100	100	96	27	8	---	---	---	---	A-3
1	AB-5 (YL1 ALT1)	2-4	100	99	93	33	4	---	---	---	---	A-3
1	AB-11 (YL1 ALT1)	0-2	100	99	91	33	10	---	---	---	3	A-3
1	YL1 ALT1-B10	1-2.5	---	---	---	---	---	---	---	---	2	A-3
1	YL1 ALT1-B10	13.5-15	100	98	86	19	4	---	---	---	---	A-3
1	YL1 ALT1-B13	8.5-10	100	99	86	18	3	---	---	---	3	A-3
1	YL1 ALT1-B14	2.5-4	100	99	88	21	3	---	---	---	3	A-3
1	AB-3 (YL1 ALT2)	4-6.5	100	98	86	21	4	---	---	---	---	A-3

Laboratory Test Results
SR 429 Wekiva Parkway 7A
Seminole County, Florida
FDOT FPID No. 240200-2-52-01
AEA Project No. 201314

Stratum	Boring	Depth Interval (feet)	# 10 Sieve	#40 Sieve	#60 Sieve	#100 Sieve	#200 Sieve	Moisture Content	Liquid Limit	Plasticity Index	Organic Content	AASHTO Classification
1	AB-3 (YL1 ALT2)	8-11	100	99	87	18	5	---	---	---	---	A-3
1	AB-6 (YL1 ALT2)	7-10	100	99	88	22	6	---	---	---	---	A-3
1	AB-11 (YL1 ALT2)	6.5-8.5	100	99	91	27	9	---	---	---	---	A-3
1	AB-13 (YL1 ALT2)	2-4	100	98	86	21	5	---	---	---	---	A-3
1	AB-17 (YL1 ALT2)	2-4	100	99	90	28	8	---	---	---	---	A-3
1	AB-21 (YL1 ALT2)	9-11	100	99	89	23	6	---	---	---	---	A-3
1	YL1 ALT2-B1	2.5-4	100	99	88	21	3	---	---	---	3	A-3
1	YL1 ALT2-B1	7-8.5	100	99	89	21	5	---	---	---	---	A-3
1	AB-1 (FPC1 ALT1)	5.5-8	100	98	86	22	4	---	---	---	---	A-3
1	AB-1 (FPC1 ALT1)	12-15	100	99	84	16	1	---	---	---	---	A-3
1	AB-2 (FPC1 ALT1)	2.5-4.5	100	99	88	23	4	---	---	---	---	A-3
1	AB-2 (FPC1 ALT1)	8.5-11	100	99	86	20	7	24	---	---	4	A-3
1	AB-3 (FPC1 ALT1)	12-14	100	98	70	13	10	22	---	---	---	A-3
1	AB-5 (FPC1 ALT1)	3-5	100	99	89	26	4	---	---	---	---	A-3
1	AB-2 (FPC1 ALT2)	1-3.5	100	99	88	27	7	---	---	---	---	A-3
1	AB-2 (FPC1 ALT2)	5.5-8	100	99	91	25	4	---	---	---	---	A-3
1	AB-4 (FPC1 ALT2)	11-13	100	99	86	20	5	---	---	---	---	A-3
1	AB-6 (FPC1 ALT2)	5.5-8	100	99	90	24	3	---	---	---	---	A-3
1	AB-2 (FPC1 ALT3)	11-13.5	100	99	89	23	4	27	---	---	2	A-3
1	AB-3 (FPC1 ALT3)	1.5-4	100	99	87	20	4	---	---	---	---	A-3
1	AB-4 (FPC1 ALT3)	6.5-9	100	99	89	19	2	---	---	---	---	A-3
1	AB-5 (FPC1 ALT3)	2-4	100	99	90	20	3	---	---	---	---	A-3
1	AB-1 (YL1)	21-24	100	100	96	24	3	---	---	---	---	A-3
1	AB-1 (YL1)	0-2	100	99	88	27	3	---	---	---	---	A-3
1	AB-4 (YL1)	1.5-4	100	99	91	25	2	2	---	---	---	A-3
1	AB-5 (YL1)	2-5	100	99	88	21	2	---	---	---	---	A-3

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Stratum	Boring	Depth Interval (feet)	# 10 Sieve	#40 Sieve	#60 Sieve	#100 Sieve	#200 Sieve	Moisture Content	Liquid Limit	Plasticity Index	Organic Content	AASHTO Classification
1	AB-10 (YL1)	2-4	100	100	92	21	2	---	---	---	---	A-3
1	AB-1 (YL2)	24-26	100	100	96	35	7	---	---	---	---	A-3
1	AB-1 (YL2)	6-8	100	100	91	22	1	---	---	---	---	A-3
1	AB-3 (YL2)	17-20.5	100	100	96	26	10	---	---	---	---	A-3
1	AB-3 (YL2)	33-36	100	99	88	19	7	---	---	---	---	A-3
1	AB-3 (YL2)	11.5-14.5	100	99	85	17	8	---	---	---	---	A-3
1	AB-2 (LS ALT1)	2-5	100	99	89	19	3	---	---	---	---	A-3
1	AB-2 (LS ALT1)	10-13	100	99	88	21	3	---	---	---	---	A-3
1	AB-3 (LS ALT1)	1-4.5	100	98	85	18	3	---	---	---	---	A-3
1	AB-5 (LS ALT1)	17-19	100	99	87	18	2	---	---	---	---	A-3
1	AB-6 (LS ALT1)	2-4	100	99	89	20	3	---	---	---	---	A-3
1	AB-6 (LS ALT1)	20.5-24	100	99	79	15	7	---	---	---	---	A-3
1	AB-1 (CC ALT1)	2-4	100	99	86	18	2	---	---	---	---	A-3
1	AB-2 (CC ALT1)	4-6	100	99	86	18	2	---	---	---	---	A-3
1	AB-1 (CC ALT2)	4-7	100	98	87	23	3	---	---	---	---	A-3
2	WB929	17-19	100	97	83	37	20	27	NP	NP	---	A-2-4
2	EB931	4-5	100	93	74	30	17	---	---	---	---	A-2-4
2	WB934	2-4	100	99	90	35	13	---	---	---	---	A-2-4
2	WB938	1-2.5	100	99	91	38	11	20	---	---	4	A-2-4
2	WB938+50	3-4.5	100	99	93	36	12	---	---	---	---	A-2-4
2	ML939R	3-5	100	99	91	36	14	---	---	---	---	A-2-4
2	WB960	11-13	100	95	31	14	14	---	---	---	---	A-2-4
2	WB970	7.5-10	100	100	93	29	15	---	---	---	---	A-2-4
2	EB970	8.5-11	100	100	96	45	27	18	NP	NP	---	A-2-4
2	EB985	15-17	100	100	93	33	15	21	---	---	---	A-2-4
2	WB990	15-17	100	100	93	35	12	---	---	---	---	A-2-4

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Stratum	Boring	Depth Interval (feet)	# 10 Sieve	#40 Sieve	#60 Sieve	#100 Sieve	#200 Sieve	Moisture Content	Liquid Limit	Plasticity Index	Organic Content	AASHTO Classification
2	WB995	10-12	100	100	94	39	19	15	NP	NP	---	A-2-4
2	WB1000	8-10	100	100	93	40	12	---	---	---	---	A-2-4
2	ML1000L	4-5	100	100	94	42	23	15	NP	NP	---	A-2-4
2	WB1001	3.5-5	100	100	96	56	28	11	27	9	---	A-2-4
2	EB1012	2-3.5	100	93	44	24	24	---	---	---	---	A-2-4
2	ML1013L	3.5-5	100	99	91	35	12	---	---	---	---	A-2-4
2	EB1014	4-5	100	100	92	35	22	---	---	---	---	A-2-4
2	WB1022	46-49	100	99	90	29	12	31	---	---	---	A-2-4
2	EB1030	12-14	100	100	92	42	26	15	NP	NP	---	A-2-4
2	WB1035	16-19	100	90	31	19	19	7	NP	NP	---	A-2-4
2	EB1040	9.5-11	100	99	94	36	22	14	NP	NP	---	A-2-4
2	ML1047CL	1-2	100	99	91	31	14	11	NP	NP	---	A-2-4
2	EB1060	7-9	100	97	46	41	17	---	---	---	---	A-2-4
2	ML1061R	3.5-5.5	100	98	92	42	17	9	NP	NP	---	A-2-4
2	ML1061R	11-13	100	100	98	52	15	---	---	---	---	A-2-4
2	ML1066R	7.5-10	100	100	96	45	21	13	NP	NP	---	A-2-4
2	WB1070	5.5-7	100	98	88	39	18	---	---	---	---	A-2-4
2	ML1072R	5.5-7.5	100	97	88	43	23	16	25	7	---	A-2-4
2	ML1072R	13-15.5	100	98	89	34	13	---	---	---	---	A-2-4
2	EB1075	14-16	100	88	41	30	18	10	NP	NP	---	A-2-4
2	WB175	3.5-6.5	100	99	90	36	20	12	NP	NP	---	A-2-4
2	WB175	8-10.5	100	99	91	37	14	16	---	---	---	A-2-4
2	ML1077L	11-13	100	99	88	25	15	---	---	---	---	A-2-4
2	ML1081R	9-12	100	99	88	30	16	---	---	---	---	A-2-4
2	ML1093L	7-9	100	98	88	34	20	12	NP	NP	---	A-2-4
2	ML1093L	12-16	100	100	94	45	16	---	---	---	---	A-2-4

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Stratum	Boring	Depth Interval (feet)	# 10 Sieve	#40 Sieve	#60 Sieve	#100 Sieve	#200 Sieve	Moisture Content	Liquid Limit	Plasticity Index	Organic Content	AASHTO Classification
2	ML1099L	6-8	100	98	87	30	13	---	---	---	---	A-2-4
2	WB185	3-4	100	99	87	31	16	13	NP	NP	---	A-2-4
2	WB185	10.5-13.5	100	99	94	53	17	---	---	---	---	A-2-4
2	AB-1 (WR1)	3.5-5.5	100	99	88	34	11	---	---	---	---	A-2-4
2	AB-5 (WR1)	1-3.5	100	99	89	34	11	---	---	---	---	A-2-4
2	WR1-B1	8.5-10	100	98	85	30	15	---	---	---	---	A-2-4
2	WR1-B4	23.5-25	---	---	---	---	14	32	---	---	---	A-2-4
2	WR2-B2	13.5-15	---	---	---	---	14	---	---	---	---	A-2-4
2	WR2-B3	5.5-7	100	100	92	33	20	---	---	---	---	A-2-4
2	WR2-B3	8.5-10	---	---	---	---	23	15	27	7	---	A-2-4
2	AB-8	18-20	100	99	91	28	14	---	---	---	---	A-2-4
2	AB-1 (CC)	8-10	100	99	87	29	17	8	NP	NP	---	A-2-4
2	AB-2 (CC)	11-13	100	99	86	32	18	14	NP	NP	---	A-2-4
2	AB-1 (BBT)	7.5-9	100	100	99	61	20	10	NP	NP	---	A-2-4
2	AB-1 (BBT)	12-13.5	100	100	99	51	16	---	---	---	---	A-2-4
2	AB-3 (BBT)	5-6.5	100	99	95	41	19	8	NP	NP	---	A-2-4
2	AB-4 (BBT)	9-11.5	100	100	99	49	17	---	---	---	---	A-2-4
2	AB-4 (BBT)	16-20	100	99	98	48	12	---	---	---	---	A-2-4
2	AB-5 (BBT)	9-11.5	100	100	98	46	18	---	---	---	---	A-2-4
2	AB-5 (BBT)	26-29	100	100	99	89	21	---	---	---	---	A-2-4
2	AB-6 (BBT)	6-9	100	99	96	59	23	10	NP	NP	---	A-2-4
2	AB-6 (BBT)	17.5-20	100	100	99	55	14	24	---	---	---	A-2-4
2	AB-8 (BBT)	5.5-7.5	100	99	90	28	13	---	---	---	---	A-2-4
2	AB-8 (BBT)	12-14	100	99	97	60	17	---	---	---	---	A-2-4
2	AB-8 (BBT)	16-19	100	100	99	57	11	---	---	---	---	A-2-4
2	AB-11 (BBT)	9-12	100	100	98	49	15	---	NP	NP	---	A-2-4

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Stratum	Boring	Depth Interval (feet)	# 10 Sieve	#40 Sieve	#60 Sieve	#100 Sieve	#200 Sieve	Moisture Content	Liquid Limit	Plasticity Index	Organic Content	AASHTO Classification
2	AB-11 (BBT)	13.-16	100	100	99	62	14	---	NP	NP	---	A-2-4
2	AB-12 (BBT)	9-14	---	---	---	---	26	13	29	9	---	A-2-4
2	AB-13 (BBT)	11-12.5	100	99	93	44	18	---	NP	NP	---	A-2-4
2	AB-15 (BBT)	11-14	100	100	99	64	13	---	---	---	---	A-2-4
2	AB-15 (BBT)	17-20	100	100	98	59	13	---	---	---	---	A-2-4
2	AB-16 (BBT)	8.5-12.5	100	99	96	63	23	10	---	---	---	A-2-4
2	AB-16 (BBT)	14-17	100	100	98	65	11	22	---	---	---	A-2-4
2	AB-18 (BBT)	8.5-11	---	---	---	---	17	---	---	---	---	A-2-4
2	AB-18 (BBT)	13.5-16.5	---	---	---	---	13	---	---	---	---	A-2-4
2	AB-21 (BBT)	5.5-7	100	99	92	37	18	13	NP	NP	---	A-2-4
2	AB-21 (BBT)	15.5-17.5	100	100	99	61	11	23	---	---	---	A-2-4
2	AB-22 (BBT)	6-9	100	99	95	53	20	---	---	---	---	A-2-4
2	AB-24 (BBT)	5.5-7	100	97	82	35	19	---	---	---	---	A-2-4
2	AB-24 (BBT)	12-13.5	100	100	98	63	21	22	NP	NP	---	A-2-4
2	AB-26 (BBT)	6.5-8	100	97	80	32	22	10	NP	NP	---	A-2-4
2	AB-28 (BBT)	12-14	100	98	81	49	20	16	---	---	---	A-2-4
2	AB-1 (YL1 ALT 1)	4.5-6	100	99	92	30	12	---	---	---	---	A-2-4
2	AB-3 (YL1 ALT 1)	9-11.5	100	100	92	33	18	---	---	---	---	A-2-4
2	AB-3 (YL1 ALT 1)	18-21	100	100	97	57	15	---	---	---	---	A-2-4
2	AB-5 (YL1 ALT 1)	8.5-11	100	100	98	71	35	---	---	---	---	A-2-4
2	AB-5 (YL1 ALT 1)	14.5-16.5	100	100	97	37	14	---	---	---	---	A-2-4
2	AB-11 (YL1 ALT 1)	3-5	100	99	90	31	14	---	---	---	---	A-2-4
2	AB-14	13.5-15	100	100	92	42	21	22	---	---	---	A-2-4
2	YL1 ALT1-B7	5.5-7	100	100	93	40	16	---	---	---	---	A-2-4
2	YL1 ALT1-B8	2.5-4	100	100	95	57	28	---	---	---	---	A-2-4
2	YL1 ALT1-B8	7-8.5	100	100	98	68	20	---	---	---	---	A-2-4

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Stratum	Boring	Depth Interval (feet)	# 10 Sieve	#40 Sieve	#60 Sieve	#100 Sieve	#200 Sieve	Moisture Content	Liquid Limit	Plasticity Index	Organic Content	AASHTO Classification
2	YL1 ALT2-B2	13.5-15	---	---	---	---	26	30	NP	NP	---	A-2-4
2	AB-4 (YL1 ALT 2)	13.5-16	100	99	92	33	12	---	---	---	---	A-2-4
2	AB-5 (YL1 ALT 2)	14-16	100	100	93	35	16	---	---	---	---	A-2-4
2	AB-7 (YL1 ALT 2)	14-16	100	100	94	39	16	---	---	---	---	A-2-4
2	AB-8 (YL1 ALT 2)	11.5-14	100	99	92	38	15	---	---	---	---	A-2-4
2	AB-9 (YL1 ALT 2)	15-17	100	100	98	56	18	---	---	---	---	A-2-4
2	AB-10 (YL1 ALT 2)	10-14	100	99	91	33	15	---	---	---	---	A-2-4
2	AB-12 (YL1 ALT 2)	10-11.5	100	99	93	37	14	---	---	---	---	A-2-4
2	AB-13 (YL1 ALT 2)	8-12	100	99	90	30	14	---	---	---	---	A-2-4
2	AB-14 (YL1 ALT 2)	16.5-19	100	100	97	53	13	---	---	---	---	A-2-4
2	AB-15 (YL1 ALT 2)	14.5-17	100	100	97	57	16	---	---	---	---	A-2-4
2	AB-16 (YL1 ALT 2)	11-14	100	100	98	57	13	---	---	---	---	A-2-4
2	AB-17 (YL1 ALT 2)	6-9	100	99	91	27	12	---	---	---	---	A-2-4
2	AB-18 (YL1 ALT 2)	15-16	100	100	93	39	15	---	---	---	---	A-2-4
2	AB-19 (YL1 ALT 2)	11-12	100	100	94	35	12	---	---	---	---	A-2-4
2	AB-20 (YL1 ALT 2)	9-11	100	99	92	29	12	---	---	---	---	A-2-4
2	AB-20 (YL1 ALT 2)	12-14	100	100	95	42	14	---	---	---	---	A-2-4
2	AB-22 (YL1 ALT 2)	16.5-19	100	100	99	64	16	---	---	---	---	A-2-4
2	AB-3 (FPC ALT1)	5.5-8	100	99	91	42	23	19	NP	NP	---	A-2-4
2	AB-5 (FPC ALT1)	10.5-12	100	95	69	26	23	19	---	---	---	A-2-4
2	AB-3 (FPC ALT1)	8.5-11	---	---	---	---	19	23	NP	NP	---	A-2-4
2	AB-4 (FPC ALT1)	11-14	100	98	73	21	15	---	---	---	---	A-2-4
2	AB-5 (FPC ALT1)	6.5-9	100	99	92	33	26	---	---	---	---	A-2-4
2	AB-1 (YL1)	6-9	100	100	91	43	20	10	---	---	---	A-2-4
2	AB-2 (YL1)	9.5-11	100	100	91	44	22	13	---	---	---	A-2-4
2	AB-5 (YL1)	11.5-14	100	100	93	67	24	21	---	---	---	A-2-4

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Stratum	Boring	Depth Interval (feet)	# 10 Sieve	#40 Sieve	#60 Sieve	#100 Sieve	#200 Sieve	Moisture Content	Liquid Limit	Plasticity Index	Organic Content	AASHTO Classification
2	AB-8 (YL1)	7-9.5	100	99	90	38	17	8	---	---	---	A-2-4
2	AB-10 (YL1)	8-11	100	99	90	39	15	14	---	---	---	A-2-4
2	AB-1 (YL2)	15-18	100	99	83	33	18	22	NP	NP	---	A-2-4
2	AB-3 (YL2)	9-11	100	99	89	29	18	15	NP	NP	---	A-2-4
2	AB-5 (YL2)	1.5-4	100	99	88	22	11	---	---	---	---	A-2-4
2	AB-5 (YL2)	7.5-10	100	99	89	30	19	---	---	---	---	A-2-4
2	AB-3 (LS ALT1)	8-10	100	99	87	30	15	10	NP	NP	---	A-2-4
2	AB-3 (LS ALT1)	15-17	100	99	85	26	14	19	---	---	---	A-2-4
2	AB-5 (LS ALT1)	6-9.5	100	97	82	31	20	---	---	---	---	A-2-4
2	AB-5 (LS ALT1)	10.5-12	100	99	84	22	10	21	NP	NP	---	A-2-4
2	AB-6 (LS ALT1)	13-15.5	100	86	82	24	10	---	---	---	---	A-2-4
2	AB-8 (LS ALT1)	6-9	100	98	87	34	21	12	---	---	---	A-2-4
2	AB-8 (LS ALT1)	24-27	---	---	---	---	12	25	---	---	---	A-2-4
2	AB-1 (CC ALT1)	11.5-14	100	99	87	32	20	---	---	---	---	A-2-4
2	AB-2 (CC ALT1)	9-11.5	100	99	88	30	17	---	---	---	---	A-2-4
2	AB-2 (CC ALT1)	17-19	100	98	90	42	13	---	---	---	---	A-2-4
2	AB-3 (CC ALT1)	6-9	100	99	89	30	15	---	---	---	---	A-2-4
2	AB-3 (CC ALT1)	11-14	100	98	86	25	14	---	---	---	---	A-2-4
2	AB-1 (CC ALT2)	9-12	100	99	88	32	19	---	---	---	---	A-2-4
2	AB-2 (CC ALT2)	9.5-12	100	98	87	31	16	---	---	---	---	A-2-4
2	AB-3 (CC ALT2)	5-8	100	99	87	26	11	---	---	---	---	A-2-4
2	AB-4 (CC ALT2)	10-12	100	98	86	27	12	---	---	---	---	A-2-4
3	WB1015	8-10	100	100	99	87	37	21	36	19	---	A-6
3	EB1018	1-2.5	100	100	93	47	30	16	30	14	---	A-2-6
3	ML1018R	1-5	100	100	94	48	29	14	29	12	---	A-2-6
3	WR1-B9	33.5-35	---	---	---	---	28	37	34	11	---	A-2-6

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Stratum	Boring	Depth Interval (feet)	# 10 Sieve	#40 Sieve	#60 Sieve	#100 Sieve	#200 Sieve	Moisture Content	Liquid Limit	Plasticity Index	Organic Content	AASHTO Classification
3	AB-13 (YL1 ALT 1)	13.5-15	---	---	---	---	27	21	27	12	---	A-2-6
3	AB-4 (FPC ALT1)	4.5-7	100	99	92	47	28	18	29	13	---	A-2-6
3	AB-1 (FPC ALT2)	7-9.5	---	---	---	---	26	17	29	11	---	A-2-6
4	ML935L	1.5-3	100	99	87	31	11	17	---	---	6	A-8
4	ML935R	0-1.5	---	---	---	---	---	42	---	---	5	A-8
4	ML936L	0-2	100	96	81	34	14	22	---	---	6	A-8
4	EB937	3-4.5	100	99	91	39	21	27	---	---	17	A-8
4	WB937+25	0-2	100	99	90	32	10	23	---	---	5	A-8
4	WB937+75	0-2	---	---	---	---	---	67	---	---	26	A-8
4	EB938	3-4	100	99	93	56	38	94	---	---	26	A-8
4	ML938L	0-1.5	100	92	69	32	14	25	---	---	6	A-8
4	EB939	3-3.5	100	99	93	38	14	37	---	---	7	A-8
4	ML1013R	3-4	---	---	---	---	---	20	---	---	8	A-8
4	EB1019	2.5-3.5	100	99	90	38	24	23	---	---	14	A-8
4	ML1019L	2-3.5	100	99	91	37	18	28	---	---	11	A-8
4	ML1019R	3-4	---	---	---	---	---	18	---	---	7	A-8
4	WB1020	1-2	---	---	---	---	---	146	---	---	56	A-8
4	WB1022	3-5	---	---	---	---	---	191	---	---	33	A-8
4	WB1022	22-25	---	---	---	---	---	84	---	---	25	A-8
4	ML1022L	1.5-3	100	99	91	35	18	26	---	---	11	A-8
4	WB1023	2.5-4.5	---	---	---	---	---	123	---	---	38	A-8
4	WB1024	4.5-6.5	---	---	---	---	---	461	---	---	33	A-8
4	WB1025	6-7	---	---	---	---	---	337	---	---	38	A-8
4	WB1025	14-16	---	---	---	---	---	48	---	---	11	A-8
4	WB1025+20	8.5-10	---	---	---	---	---	147	---	---	32	A-8
4	WB1025+20	19-21	---	---	---	---	---	41	---	---	9	A-8

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Stratum	Boring	Depth Interval (feet)	# 10 Sieve	#40 Sieve	#60 Sieve	#100 Sieve	#200 Sieve	Moisture Content	Liquid Limit	Plasticity Index	Organic Content	AASHTO Classification
4	ML1048R	0-1.5	---	---	---	---	---	19	---	---	10	A-8
4	ML1049R	0-1.5	---	---	---	---	---	18	---	---	12	A-8
4	ML1050R	0-1	---	---	---	---	---	20	---	---	12	A-8
4	WR1-B5	1-2.5	100	99	92	43	17	24	---	---	5	A-8
4	WR1-B8	1-2.5	---	---	---	---	---	30	---	---	6	A-8
4	WR1-B9	2.5-4	---	---	---	---	---	41	---	---	5	A-8
4	YL1 ALT2-B2	1-2.5	---	---	---	---	---	---	---	---	14	A-8
4	AB-1 (FPC ALT1)	2.5-4.5	---	---	---	---	---	28	---	---	15	A-8
4	AB-2 (FPC ALT1)	0-1.5	---	---	---	---	---	289	---	---	64	A-8
4	AB-4 (FPC ALT2)	5-8	---	---	---	---	---	32	---	---	5	A-8
4	AB-6 (FPC ALT2)	4.5-5	---	---	---	---	---	454	---	---	64	A-8
4	AB-2 (FPC ALT3)	2.5-5	---	---	---	---	---	239	---	---	29	A-8
4	AB-2 (FPC ALT3)	7-9	---	---	---	---	---	348	---	---	35	A-8
4	AB-3 (FPC ALT3)	0-1.5	100	98	86	18	5	15	---	---	7	A-8
5	ML948R	4-5	100	100	94	36	16	---	---	---	---	A-2-4
5	ML1003L	3-4	100	99	93	45	17	---	---	---	---	A-2-4
5	ML1005R	4-5	100	99	92	43	14	---	---	---	---	A-2-4
5	ML1009R	3.5-5	100	99	91	45	17	---	---	---	---	A-2-4
6	WR1-B1	33.5-35	---	---	---	---	94	42	95	58	---	A-7-5
6	AB-1 (YL1 ALT1)	18-21	100	100	99	96	84	28	59	35	---	A-7-6
6	YL1 ALT2-B2	18.5-20	---	---	---	---	63	25	42	15	---	A-7-6
6	AB-4 (FPC ALT1)	11-13	100	100	98	91	83	33	51	31	---	A-7-6
6	AB-5 (FPC ALT1)	13.5-16.5	100	98	91	90	88	43	62	46	---	A-7-6
6	AB-1 (FPC ALT2)	13.5-17	---	---	---	---	90	43	97	70	---	A-7-6
6	AB-4 (YL1)	23-27	100	100	98	84	75	42	67	46	---	A-7-6
6	AB-10 (YL1)	20-23.5	100	100	98	87	78	39	72	47	---	A-7-6

Laboratory Test Results
SR 429 Wekiva Parkway 7A
Seminole County, Florida
FDOT FPID No. 240200-2-52-01
AEA Project No. 201314

Stratum	Boring	Depth Interval (feet)	# 10 Sieve	#40 Sieve	#60 Sieve	#100 Sieve	#200 Sieve	Moisture Content	Liquid Limit	Plasticity Index	Organic Content	AASHTO Classification
6	AB-6 (LS ALT1)	29-30	---	---	---	---	83	31	72	49	---	A-7-6
6	AB-8 (LS ALT1)	20-22	---	---	---	---	64	28	61	41	---	A-7-6
7	WB1024	1.5-3	100	99	86	18	2	12	---	---	---	A-3
7	EB1030	0-2.5	98	95	86	27	6	---	---	---	---	A-3
7	ML949R	0-1.5	98	92	78	27	9	---	---	---	---	A-3
7	ML992R	0-3.5	100	98	88	28	7	---	---	---	---	A-3
7	ML943L	0-1.5	100	99	95	45	15	---	---	---	---	A-2-4
7	EB970	0-1.5	100	97	85	35	13	---	---	---	---	A-2-4
7	EB979	1-2	100	100	95	46	22	9	NP	NP	---	A-2-4
7	WB184	1-4	100	99	87	37	24	12	NP	NP	---	A-2-4
7	ML1076R	0-1.5	100	98	90	38	10	---	---	---	---	A-2-4
7	ML1079L	0-2.5	100	99	93	43	14	---	---	---	---	A-2-4
7	ML1097L	0-1.5	100	99	89	33	14	---	---	---	---	A-2-4
7	ML1112L	0-2.5	100	90	69	23	7	---	---	---	---	A-3

Soil Corrosion Potential Test Results
SR 429 Wekiva Parkway 7A
Seminole County, Florida
FDOT FPID No. 240200-2-52-01
AEA Project No. 201314

STRATUM	POND	BORING	pH (FM 5-550)	CHLORIDE CONTENT (FM 5-552) (ppm)	SULFATE CONTENT (FM 5-553) (ppm)	ELECTRICAL RESISTIVITY (FM 5-551) (ohm-cm)	CORROSION POTENTIAL[1]	
							Steel	Concrete
1	WR2	AB-5	5.5	< 60	< 5	140,000	Extremely Aggressive	Moderately Aggressive
		AB-8	5.3	< 40	< 5	130,000	Extremely Aggressive	Moderately Aggressive
		AB-9	5.4	< 60	< 5	110,000	Extremely Aggressive	Moderately Aggressive
		AB-12	4.8	< 60	15	98,000	Extremely Aggressive	Extremely Aggressive
		AB-14	5.0	< 40	15	250,000	Extremely Aggressive	Extremely Aggressive
1	YL1	AB-5	4.5	< 80	< 5	65,000	Extremely Aggressive	Extremely Aggressive
		AB-9	4.5	< 60	< 5	52,000	Extremely Aggressive	Extremely Aggressive
2		AB-3	4.4	< 60	65	22,000	Extremely Aggressive	Extremely Aggressive
		AB-4	4.6	< 60	< 5	81,000	Extremely Aggressive	Extremely Aggressive
1	LS	AB-4	6.1	< 60	30	150,000	Moderately Aggressive	Slightly Aggressive
		AB-5	5.4	< 60	25	18,000	Extremely Aggressive	Moderately Aggressive
		AB-8	5.7	< 60	25	140,000	Extremely Aggressive	Moderately Aggressive
		AB-9	5.8	< 40	< 5	80,000	Extremely Aggressive	Moderately Aggressive
		AB-10	5.7	< 60	< 5	110,000	Extremely Aggressive	Moderately Aggressive
		AB-14	6.0	< 60	10	83,000	Extremely Aggressive	Moderately Aggressive
		AB-15	5.6	< 40	< 5	66,000	Extremely Aggressive	Moderately Aggressive

NOTES:
1. Soil corrosion potential based on criteria presented in FDOT Structures Design Manual.

APPENDIX B

ÚÄÄÄÄÄ ONE DIMENSIONAL SETTLEMENT ANALYSIS/Federal Highway Administration ÄÄÄÄÄ¿

STRIP SYMMETRICAL VERTICAL EMBANKMENT LOADING

Project Name : WEKIVA 7A WR1 Client : AECOM
File Name : WR1B1.EMB Project Manager : PGS
Date : 04/20/15 Computed by : WLF

Settlement for X = 34.00 (ft)

Embankment slope a = 24.00 (ft) Height of fill H = 6.00 (ft)
Embankment top width = 20.00 (ft) Unit weight of fill = 105.00 (pcf)
Embankment bottom width = 68.00 (ft) p load/unit area = 630.00 (psf)
Ground Surface Elev. = 29.00 (ft) Foundation Elev. = 29.00 (ft)
Water table Elev. = 22.00 (ft) Unit weight of Wat. = 62.40 (pcf)

N§.	LAYER TYPE	THICK. (ft)	COMP. RATIO	RECOMP. RATIO	SWELL.	UNIT WEIGHT (pcf)	Settlement (in.)
1	COMP.	5.0	0.020	0.000	0.000	100.00	0.66
2	COMP.	5.0	0.013	0.000	0.000	115.00	0.20
3	COMP.	14.0	0.023	0.000	0.000	100.00	0.65
4	COMP.	5.0	0.001	0.000	0.000	135.00	0.01

Total Settlement = 1.51

N§.	SUBLAYER THICK. (ft)	ELEV. (ft)	SOIL STRESSES INITIAL (psf)	INCREMENT (psf)	MAX.PAST PRESS. (psf)	SETTLEMENT (in.)
1	5.00	26.50	250.00	629.24	250.00	0.66
2	5.00	21.50	756.30	614.18	756.30	0.20
3	14.00	12.00	1151.00	540.21	1151.00	0.65
4	5.00	2.50	1595.70	456.03	1595.70	0.01

Total Settlement = 1.51 (in.)

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ÚÄÄÄÄÄ ONE DIMENSIONAL SETTLEMENT ANALYSIS/Federal Highway Administration ÄÄÄÄÄ¿

STRIP SYMMETRICAL VERTICAL EMBANKMENT LOADING

Project Name : WEKIVA 7A WR1 Client : AECOM
File Name : WR1B2.EMB Project Manager : PGS
Date : 04/20/15 Computed by : WLF

Settlement for X = 34.00 (ft)

Embankment slope a = 24.00 (ft) Height of fill H = 6.00 (ft)
Embankment top width = 20.00 (ft) Unit weight of fill = 105.00 (pcf)
Embankment bottom width = 68.00 (ft) p load/unit area = 630.00 (psf)
Ground Surface Elev. = 33.00 (ft) Foundation Elev. = 33.00 (ft)
Water table Elev. = 25.00 (ft) Unit weight of Wat. = 62.40 (pcf)

N§.	LAYER TYPE	THICK. (ft)	COMP. RATIO	RECOMP. RATIO	SWELL.	UNIT WEIGHT (pcf)		Settlement (in.)
1	COMP.	9.0	0.019	0.000	0.000	105.00		0.75
2	COMP.	5.0	0.017	0.000	0.000	110.00		0.20
3	COMP.	17.0	0.023	0.000	0.000	100.00		0.60
4	INCOMP.	2.0	-----	-----	-----	135.00	0.00	

Total Settlement = 1.55

N§.	SUBLAYER THICK. (ft)	ELEV. (ft)	SOIL STRESSES INITIAL (psf)	INCREMENT (psf)	MAX.PAST PRESS. (psf)	SETTLEMENT (in.)
1	9.00	28.50	472.50	625.90	472.50	0.75
2	5.00	21.50	1001.60	587.57	1001.60	0.20
3	17.00	10.50	1440.20	490.45	1440.20	0.60
4	INCOMP.					

Total Settlement = 1.55 (in.)

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ÚÄÄÄÄÄ ONE DIMENSIONAL SETTLEMENT ANALYSIS/Federal Highway Administration ÄÄÄÄÄ¿

STRIP SYMMETRICAL VERTICAL EMBANKMENT LOADING

Project Name : WEVIVA 7A WR1 Client : AECOM
File Name : WR1B4.EMB Project Manager : PGS
Date : 2/18/11 Computed by : WLF

Settlement for X = 38.00 (ft)

Embankment slope a = 28.00 (ft) Height of fill H = 7.00 (ft)
Embankment top width = 20.00 (ft) Unit weight of fill = 110.00 (pcf)
Embankment bottom width = 76.00 (ft) p load/unit area = 770.00 (psf)
Ground Surface Elev. = 131.00 (ft) Foundation Elev. = 131.00 (ft)
Water table Elev. = 121.00 (ft) Unit weight of Wat. = 62.40 (pcf)

N§.	LAYER TYPE	THICK. (ft)	COMP. RATIO	RECOMP. RATIO	SWELL.	UNIT WEIGHT (pcf)	Settlement (in.)
1	COMP.	7.0	0.018	0.000	0.000	105.00	0.74
2	COMP.	3.0	0.009	0.000	0.000	115.00	0.08
3	COMP.	23.0	0.023	0.000	0.000	100.00	0.96
4	COMP.	2.0	0.007	0.000	0.000	100.00	0.02

Total Settlement = 1.80

N§.	SUBLAYER THICK. (ft)	ELEV. (ft)	SOIL STRESSES INITIAL (psf)	INCREMENT (psf)	MAX.PAST PRESS. (psf)	SETTLEMENT (in.)
1	7.00	127.50	367.50	767.84	367.50	0.74
2	3.00	122.50	907.50	746.94	907.50	0.08
3	23.00	109.50	1512.40	626.25	1512.40	0.96
4	2.00	97.00	1982.40	509.34	1982.40	0.02

Total Settlement = 1.80 (in.)

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ÚÄÄÄÄÄ ONE DIMENSIONAL SETTLEMENT ANALYSIS/Federal Highway Administration ÄÄÄÄÄ¿

STRIP SYMMETRICAL VERTICAL EMBANKMENT LOADING

Project Name : WEKIVA 7A WR1 Client : AECOM
File Name : WR1B7.EMB Project Manager : PGS
Date : 04/20/15 Computed by : WLF

Settlement for X = 34.00 (ft)

Embankment slope a = 24.00 (ft) Height of fill H = 6.00 (ft)
Embankment top width = 20.00 (ft) Unit weight of fill = 105.00 (pcf)
Embankment bottom width = 68.00 (ft) p load/unit area = 630.00 (psf)
Ground Surface Elev. = 35.00 (ft) Foundation Elev. = 35.00 (ft)
Water table Elev. = 35.00 (ft) Unit weight of Wat. = 62.40 (pcf)

N§.	LAYER TYPE	THICK. (ft)	COMP. RATIO	RECOMP. RATIO	SWELL.	UNIT WEIGHT (pcf)	Settlement (in.)
1	COMP.	7.0	0.012	0.000	0.000	110.00	0.62
2	COMP.	5.0	0.019	0.000	0.000	105.00	0.43
3	COMP.	21.0	0.023	0.000	0.000	100.00	1.06

Total Settlement = 2.10

SUBLAYER N§.	THICK. (ft)	ELEV. (ft)	SOIL STRESSES INITIAL (psf)	INCREMENT (psf)	MAX.PAST PRESS. (psf)	SETTLEMENT (in.)
1	7.00	31.50	200.00	627.98	200.00	0.62
2	5.00	25.50	439.70	602.16	439.70	0.43
3	21.00	12.50	941.00	490.45	941.00	1.06

Total Settlement = 2.10 (in.)

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ÚÄÄÄÄÄ ONE DIMENSIONAL SETTLEMENT ANALYSIS/Federal Highway Administration ÄÄÄÄÄ¿

STRIP SYMMETRICAL VERTICAL EMBANKMENT LOADING

Project Name : WEKIVA 7A WR2 Client : AECOM
File Name : WR2B1.EMB Project Manager : PGS
Date : 04/20/15 Computed by : WLF

Settlement for X = 26.00 (ft)

Embankment slope a = 16.00 (ft) Height of fill H = 4.00 (ft)
Embankment top width = 20.00 (ft) Unit weight of fill = 105.00 (pcf)
Embankment bottom width = 52.00 (ft) p load/unit area = 420.00 (psf)
Ground Surface Elev. = 53.00 (ft) Foundation Elev. = 53.00 (ft)
Water table Elev. = 33.00 (ft) Unit weight of Wat. = 62.40 (pcf)

N§.	LAYER TYPE	THICK. (ft)	COMP. RATIO	RECOMP. RATIO	SWELL.	UNIT WEIGHT (pcf)	Settlement (in.)
1	COMP.	12.0	0.022	0.000	0.000	105.00	0.69
2	COMP.	5.0	0.017	0.000	0.000	110.00	0.09
3	COMP.	13.0	0.012	0.000	0.000	120.00	0.10

Total Settlement = 0.88

SUBLAYER N§.	THICK. (ft)	ELEV. (ft)	SOIL STRESSES INITIAL (psf)	INCREMENT (psf)	MAX.PAST PRESS. (psf)	SETTLEMENT (in.)
1	12.00	47.00	630.00	411.77	630.00	0.69
2	5.00	38.50	1535.00	360.57	1535.00	0.09
3	13.00	29.50	2371.60	295.94	2371.60	0.10

Total Settlement = 0.88 (in.)

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ÚÄÄÄÄÄ ONE DIMENSIONAL SETTLEMENT ANALYSIS/Federal Highway Administration ÄÄÄÄÄ¿

STRIP SYMMETRICAL VERTICAL EMBANKMENT LOADING

Project Name	: WEKIVA 7A WR2	Client	: AECOM
File Name	: WR2B3.EMB	Project Manager	: PGS
Date	: 04/20/15	Computed by	: WLF

Settlement for X = 34.00 (ft)

Embankment slope a	= 24.00 (ft)	Height of fill H	= 6.00 (ft)
Embankment top width	= 20.00 (ft)	Unit weight of fill	= 105.00 (pcf)
Embankment bottom width	= 68.00 (ft)	p load/unit area	= 630.00 (psf)
Ground Surface Elev.	= 50.00 (ft)	Foundation Elev.	= 50.00 (ft)
Water table Elev.	= 35.00 (ft)	Unit weight of Wat.	= 62.40 (pcf)

N§.	LAYER TYPE	THICK. (ft)	COMP. RATIO	RECOMP. RATIO	SWELL.	UNIT WEIGHT (pcf)	Settlement (in.)
1	COMP.	5.0	0.022	0.000	0.000	100.00	0.72
2	COMP.	7.0	0.020	0.000	0.000	105.00	0.39
3	COMP.	8.0	0.016	0.000	0.000	115.00	0.19
4	COMP.	10.0	0.020	0.000	0.000	108.00	0.21

Total Settlement = 1.51

SUBLAYER N§.	THICK. (ft)	ELEV. (ft)	SOIL STRESSES INITIAL (psf)	INCREMENT (psf)	MAX.PAST PRESS. (psf)	SETTLEMENT (in.)
1	5.00	47.50	250.00	629.24	250.00	0.72
2	7.00	41.50	867.50	608.54	867.50	0.39
3	8.00	34.00	1632.60	549.24	1632.60	0.19
4	10.00	25.00	2071.00	468.67	2071.00	0.21

Total Settlement = 1.51 (in.)

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ÚÄÄÄÄÄ ONE DIMENSIONAL SETTLEMENT ANALYSIS/Federal Highway Administration ÄÄÄÄÄ¿

STRIP SYMMETRICAL VERTICAL EMBANKMENT LOADING

Project Name	: WEKIVA 7A WR2	Client	: AECONM
File Name	: WR2B4.EMB	Project Manager	: PGS
Date	: 04/20/15	Computed by	: WLF

Settlement for X = 34.00 (ft)

Embankment slope a	= 24.00 (ft)	Height of fill H	= 6.00 (ft)
Embankment top width	= 20.00 (ft)	Unit weight of fill	= 105.00 (pcf)
Embankment bottom width	= 68.00 (ft)	p load/unit area	= 630.00 (psf)
Ground Surface Elev.	= 50.00 (ft)	Foundation Elev.	= 50.00 (ft)
Water table Elev.	= 35.00 (ft)	Unit weight of Wat.	= 62.40 (pcf)

N§.	LAYER TYPE	THICK. (ft)	COMP. RATIO	RECOMP. RATIO	SWELL.	UNIT WEIGHT (pcf)	Settlement (in.)
1	COMP.	13.0	0.021	0.000	0.000	105.00	0.92
2	COMP.	17.0	0.016	0.000	0.000	115.00	0.33

Total Settlement = 1.24

N§.	SUBLAYER THICK. (ft)	ELEV. (ft)	SOIL STRESSES INITIAL (psf)	INCREMENT (psf)	MAX.PAST PRESS. (psf)	SETTLEMENT (in.)
1	13.00	43.50	682.50	618.99	682.50	0.92
2	17.00	28.50	1936.90	499.37	1936.90	0.33

Total Settlement = 1.24 (in.)

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ÚÄÄÄÄÄ ONE DIMENSIONAL SETTLEMENT ANALYSIS/Federal Highway Administration ÄÄÄÄÄ¿

STRIP SYMMETRICAL VERTICAL EMBANKMENT LOADING

Project Name : Wekive 7A YL1 Client : AECOM
File Name : YL1.emb Project Manager : PGS
Date : 04/21/15 Computed by : WLF

Settlement for X = 26.00 (ft)

Embankment slope a = 16.00 (ft) Height of fill H = 4.00 (ft)
Embankment top width = 20.00 (ft) Unit weight of fill = 105.00 (pcf)
Embankment bottom width = 52.00 (ft) p load/unit area = 420.00 (psf)
Ground Surface Elev. = 43.00 (ft) Foundation Elev. = 43.00 (ft)
Water table Elev. = 30.00 (ft) Unit weight of Wat. = 62.40 (pcf)

N§.	LAYER TYPE	THICK. (ft)	COMP. RATIO	RECOMP. RATIO	SWELL.	UNIT WEIGHT (pcf)	Settlement (in.)
1	COMP.	5.0	0.021	0.000	0.000	100.00	0.54
2	COMP.	13.0	0.014	0.000	0.000	105.00	0.27

Total Settlement = 0.80

N§.	SUBLAYER THICK. (ft)	ELEV. (ft)	SOIL STRESSES INITIAL (psf)	INCREMENT (psf)	MAX.PAST PRESS. (psf)	SETTLEMENT (in.)
1	5.00	40.50	250.00	419.29	250.00	0.54
2	13.00	31.50	1182.50	381.95	1182.50	0.27

Total Settlement = 0.80 (in.)

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ÚÄÄÄÄÄ ONE DIMENSIONAL SETTLEMENT ANALYSIS/Federal Highway Administration ÄÄÄÄÄ¿

STRIP SYMMETRICAL VERTICAL EMBANKMENT LOADING

Project Name	: WEKIVA 7A YL2	Client	: AECOM
File Name	: YL2.EMB	Project Manager	: PGS
Date	: 04/21/15	Computed by	: WLF

Settlement for X = 26.00 (ft)

Embankment slope a	= 16.00 (ft)	Height of fill H	= 4.00 (ft)
Embankment top width	= 20.00 (ft)	Unit weight of fill	= 105.00 (pcf)
Embankment bottom width	= 52.00 (ft)	p load/unit area	= 420.00 (psf)
Ground Surface Elev.	= 41.00 (ft)	Foundation Elev.	= 41.00 (ft)
Water table Elev.	= 35.00 (ft)	Unit weight of Wat.	= 62.40 (pcf)

N§.	LAYER TYPE	THICK. (ft)	COMP. RATIO	RECOMP. RATIO	SWELL.	UNIT WEIGHT (pcf)	Settlement (in.)
1	COMP.	6.0	0.017	0.000	0.000	100.00	0.46
2	COMP.	25.0	0.017	0.000	0.000	105.00	0.57

Total Settlement = 1.03

N§.	SUBLAYER THICK. (ft)	ELEV. (ft)	SOIL STRESSES INITIAL (psf)	INCREMENT (psf)	MAX.PAST PRESS. (psf)	SETTLEMENT (in.)
1	6.00	38.00	300.00	418.79	300.00	0.46
2	25.00	22.50	1132.50	330.98	1132.50	0.57

Total Settlement = 1.03 (in.)

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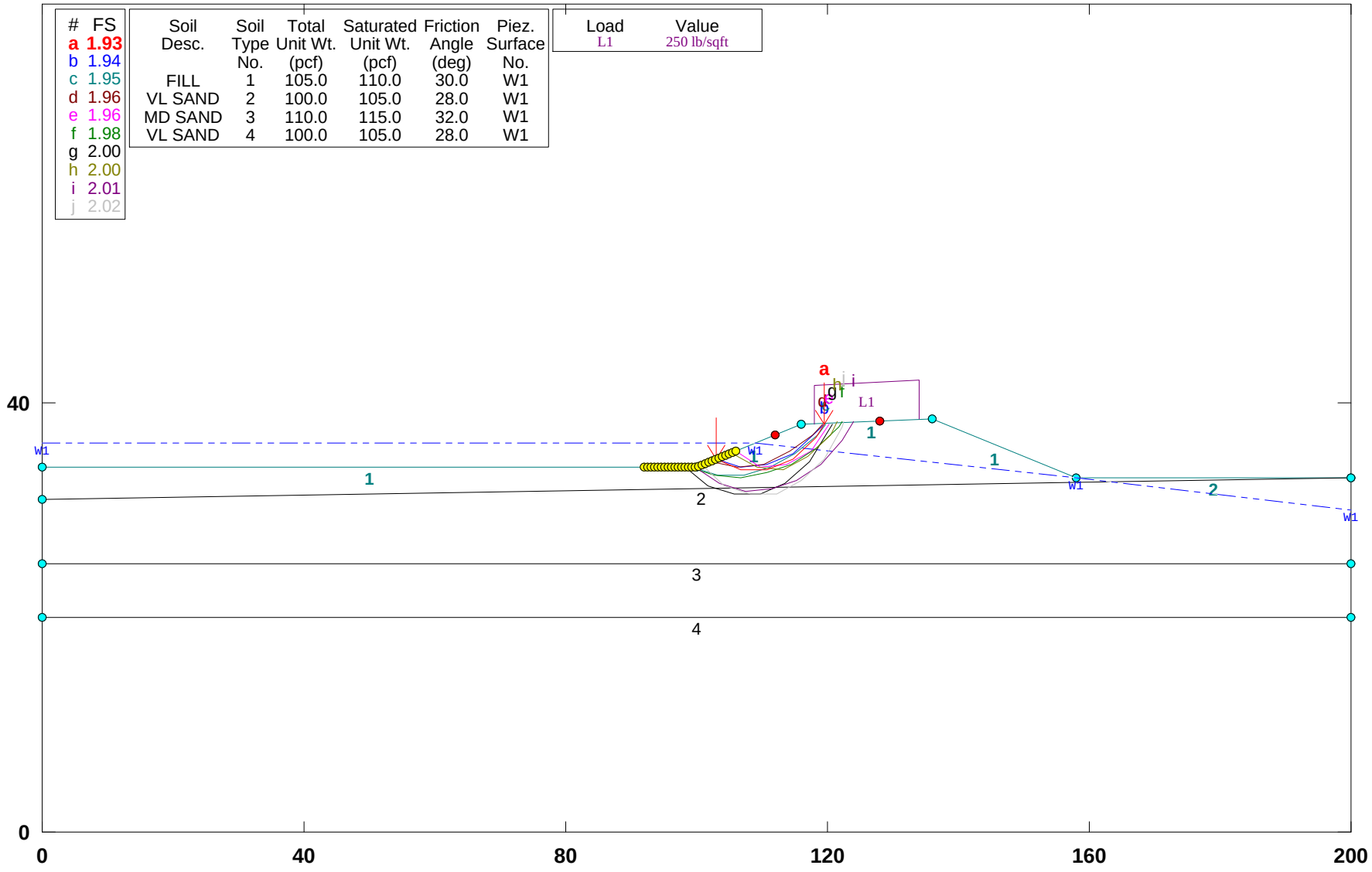
APPENDIX C

Wekiva Parkway 7A - Pond WR1 Western Embankment - DHWL



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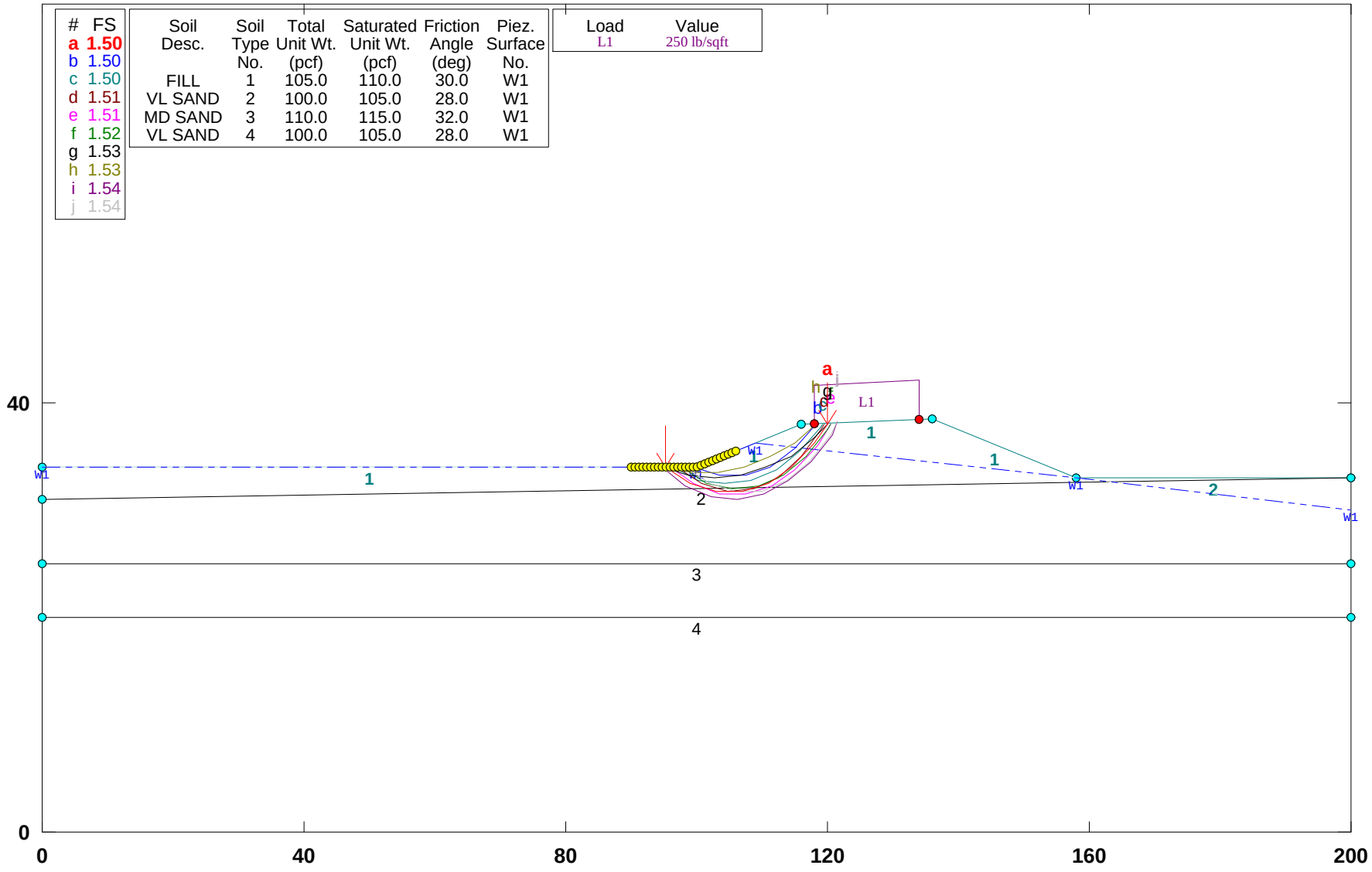
Safety Factors Are Calculated By The Modified Bishop Method

STED

Wekiva Parkway 7A - Pond WR1 Western Embankment - Rapid Drawdown

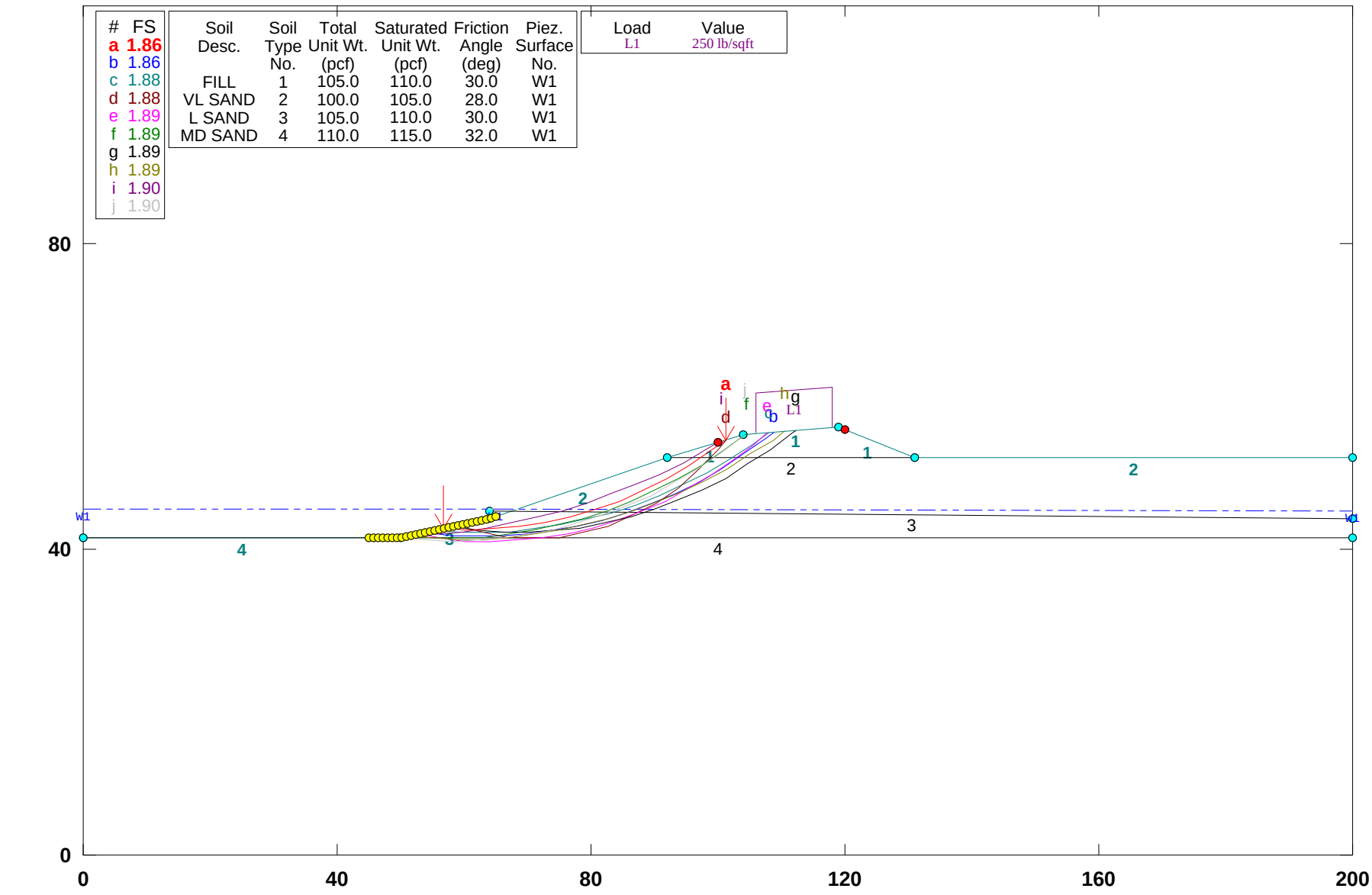


STABL6H FSmin=1.50

Safety Factors Are Calculated By The Modified Bishop Method

STED

Wekiva Parkway 7A - Pond WR2 Western Embankment - DHWL

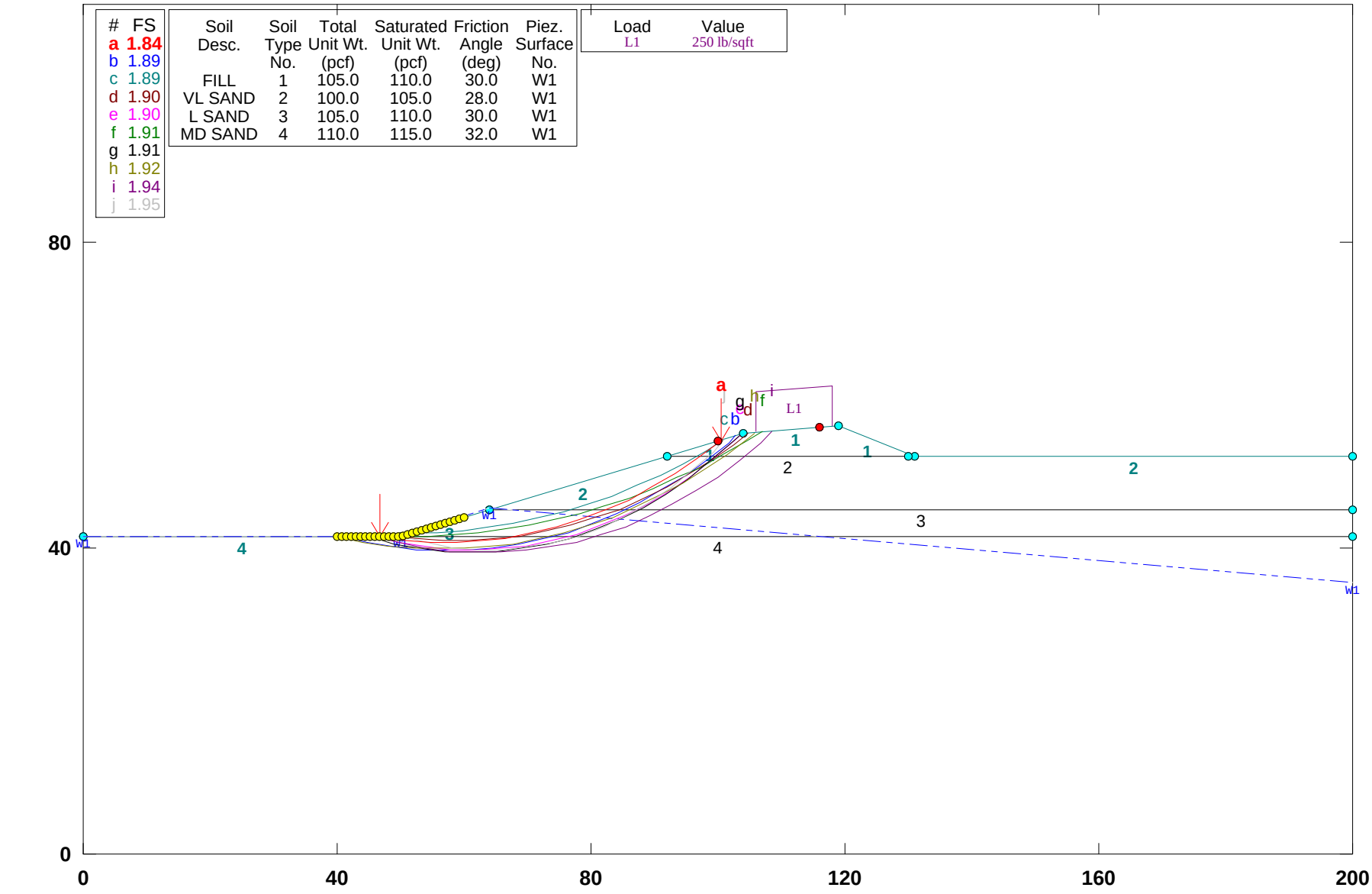


STABL6H FSmin=1.86

Safety Factors Are Calculated By The Modified Bishop Method

STED

Wekiva Parkway 7A - Pond WR2 Western Embankment - Rapid Drawdown

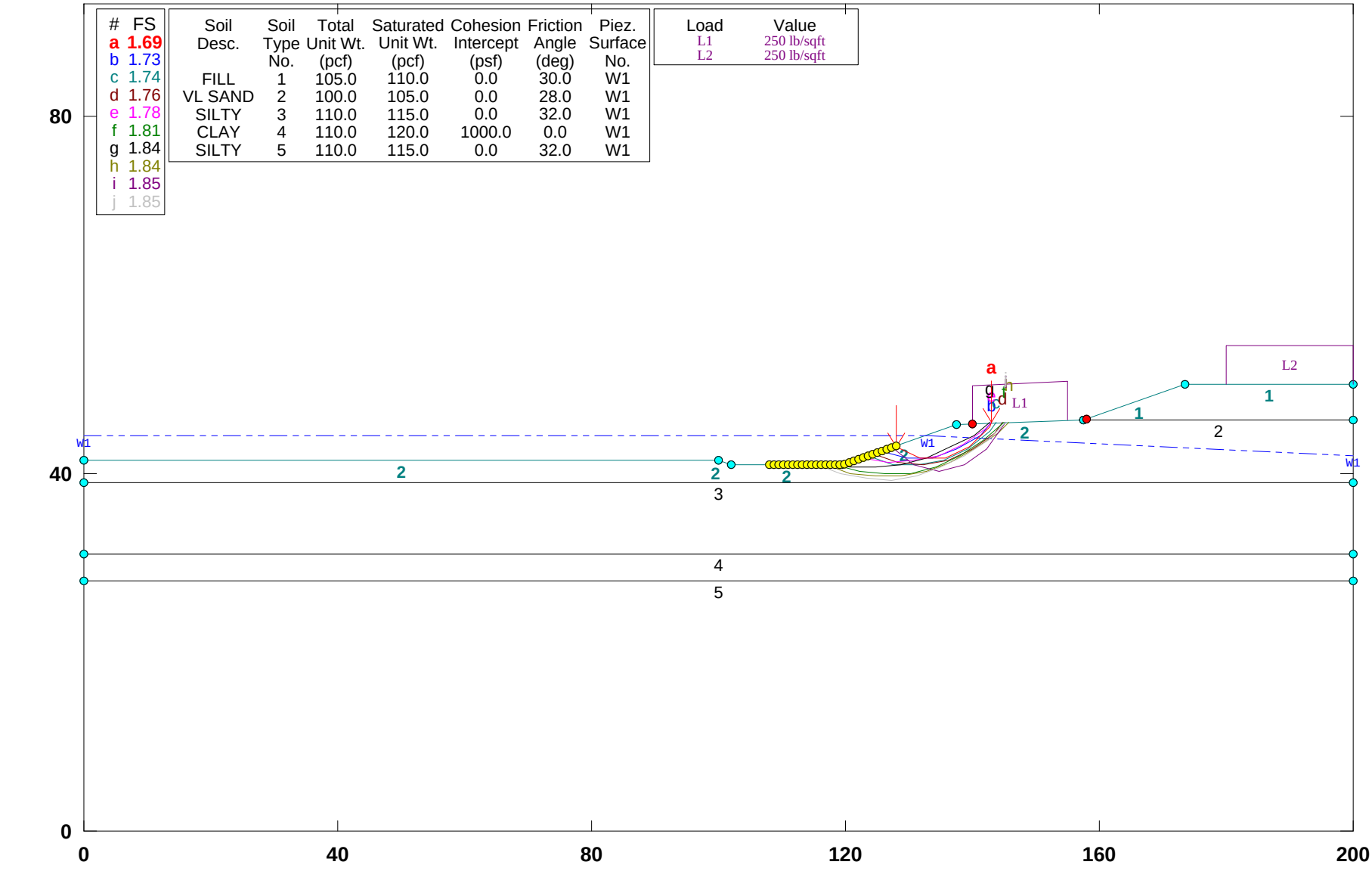


STABL6H FSmin=1.84

Safety Factors Are Calculated By The Modified Bishop Method

STED

Wekiva Parkway 7A - Pond YL1 Northern Embankment - DHWL



#	FS
a	1.69
b	1.73
c	1.74
d	1.76
e	1.78
f	1.81
g	1.84
h	1.84
i	1.85
j	1.85

Soil Desc.	Soil Type No.	Total Unit Wt. (pcf)	Saturated Unit Wt. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Piez. Surface No.
FILL	1	105.0	110.0	0.0	30.0	W1
VL SAND	2	100.0	105.0	0.0	28.0	W1
SILTY	3	110.0	115.0	0.0	32.0	W1
CLAY	4	110.0	120.0	1000.0	0.0	W1
SILTY	5	110.0	115.0	0.0	32.0	W1

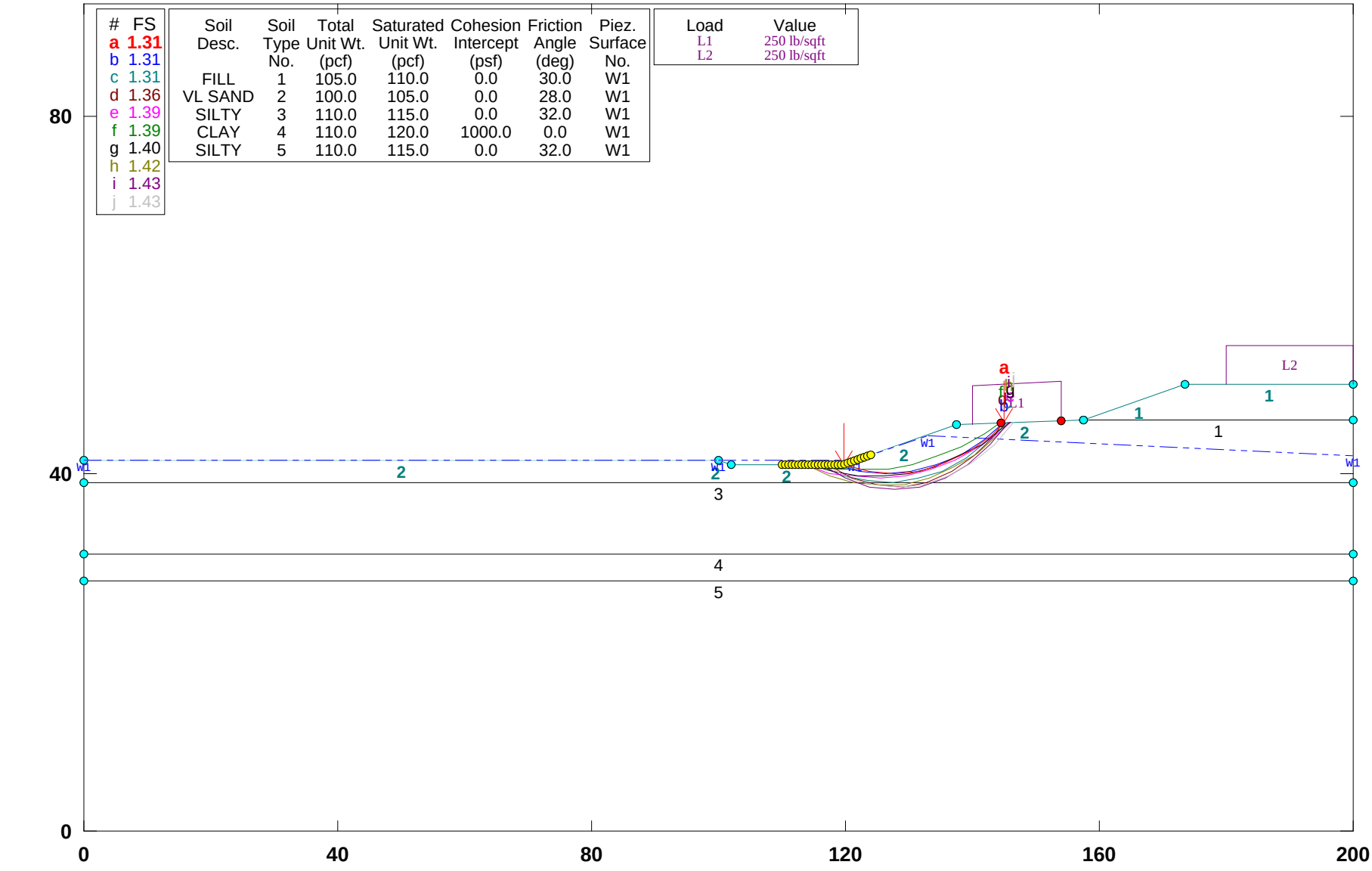
Load	Value
L1	250 lb/sqft
L2	250 lb/sqft

STABL6H FSmin=1.69

Safety Factors Are Calculated By The Modified Bishop Method

STED

Wekiva Parkway 7A - Pond YL1 Northern Embankment - Rapid Drawdown



STABL6H FSmin=1.31

Safety Factors Are Calculated By The Modified Bishop Method

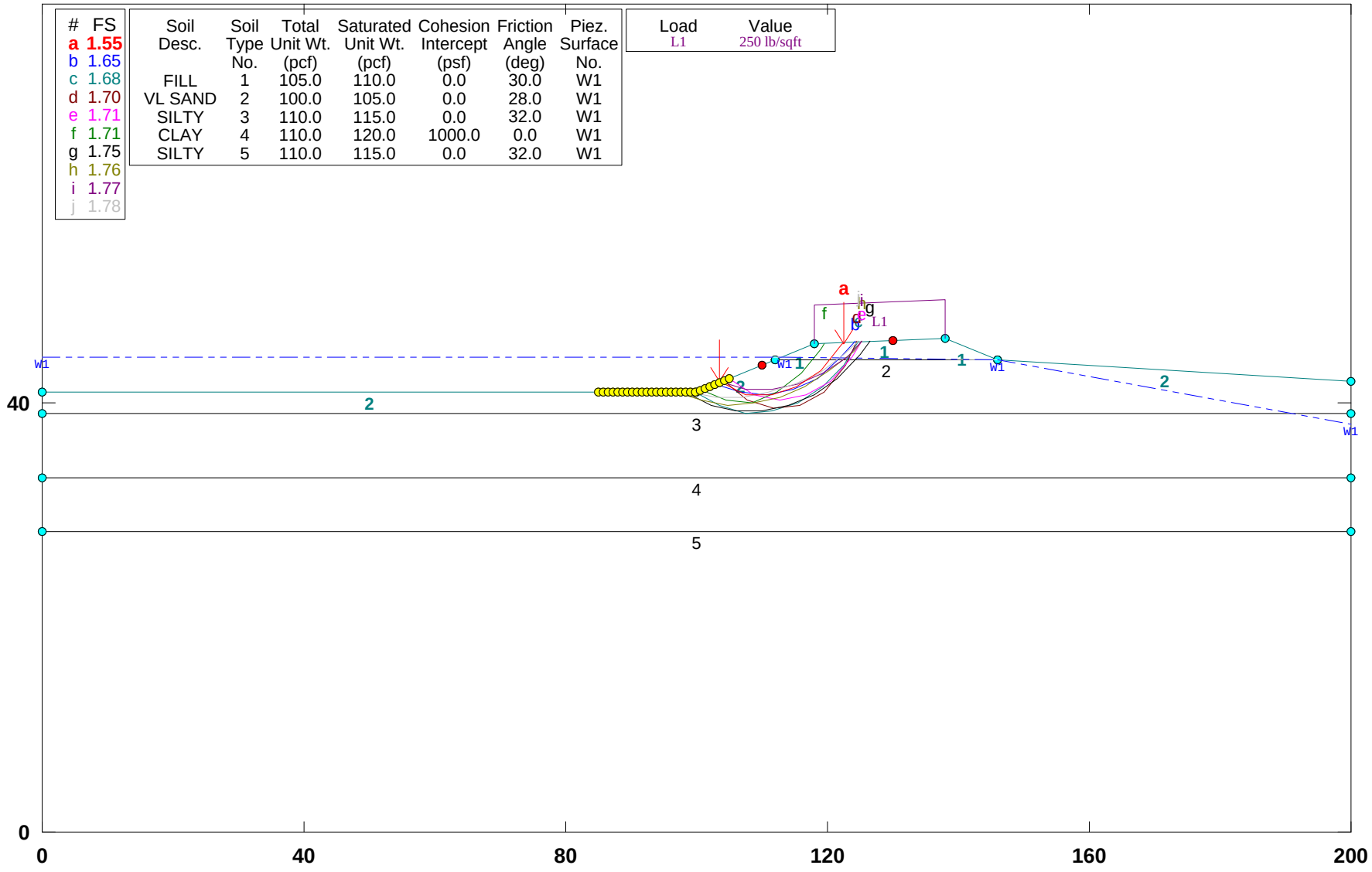
STED

Wekiva Parkway 7A - Pond YL1 Southern Embankment - DHWL

#	FS
a	1.55
b	1.65
c	1.68
d	1.70
e	1.71
f	1.71
g	1.75
h	1.76
i	1.77
j	1.78

Soil Desc.	Soil Type No.	Total Unit Wt. (pcf)	Saturated Unit Wt. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Piez. Surface No.
FILL	1	105.0	110.0	0.0	30.0	W1
VL SAND	2	100.0	105.0	0.0	28.0	W1
SILTY	3	110.0	115.0	0.0	32.0	W1
CLAY	4	110.0	120.0	1000.0	0.0	W1
SILTY	5	110.0	115.0	0.0	32.0	W1

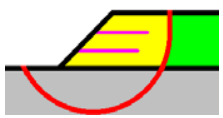
Load	Value
L1	250 lb/sqft



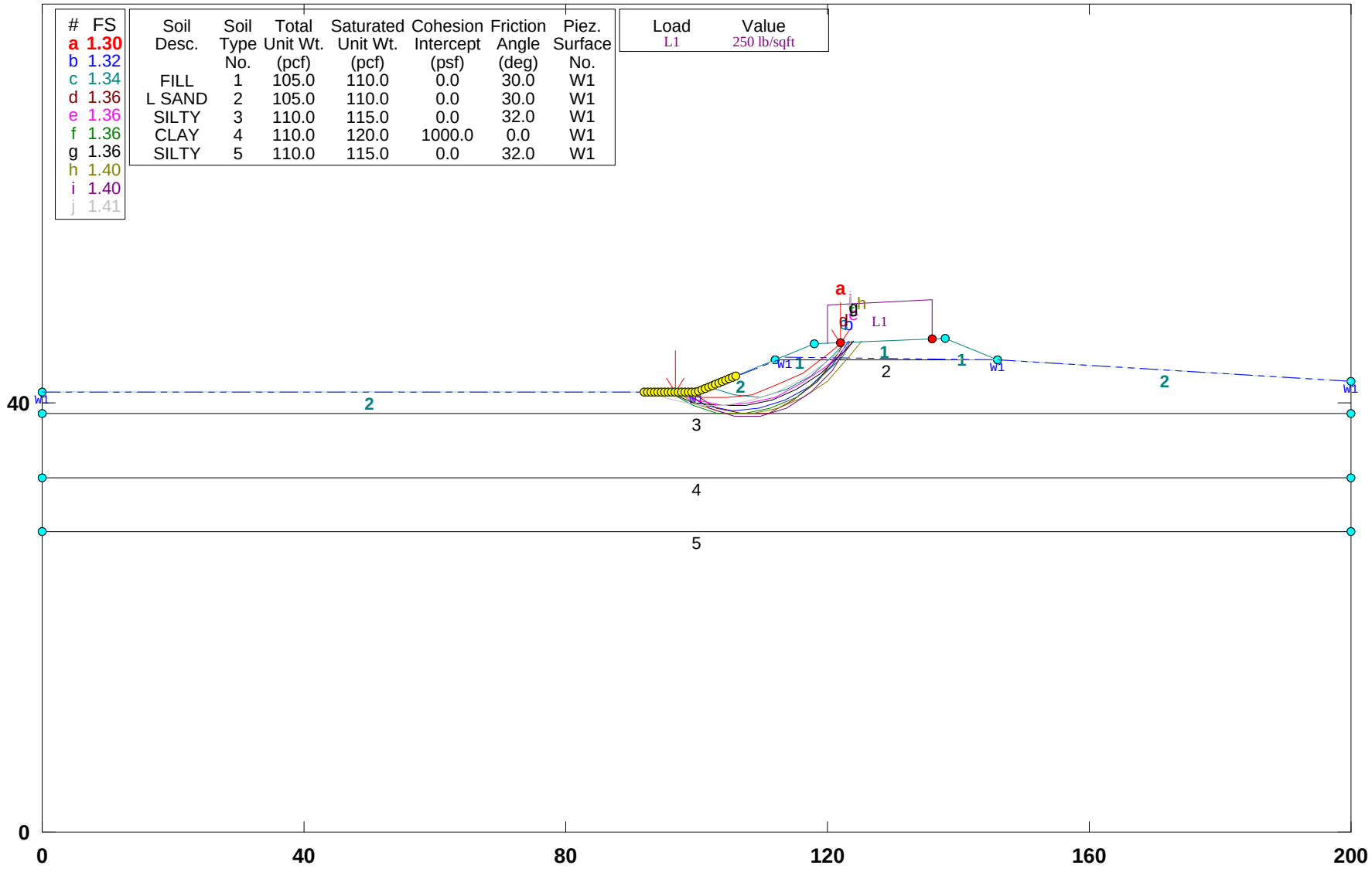
STABL6H FSmin=1.55

Safety Factors Are Calculated By The Modified Bishop Method

STED



Wekiva Parkway 7A - Pond YL1 Southern Embankment - Rapid Drawdown



STABL6H FSmin=1.30

Safety Factors Are Calculated By The Modified Bishop Method

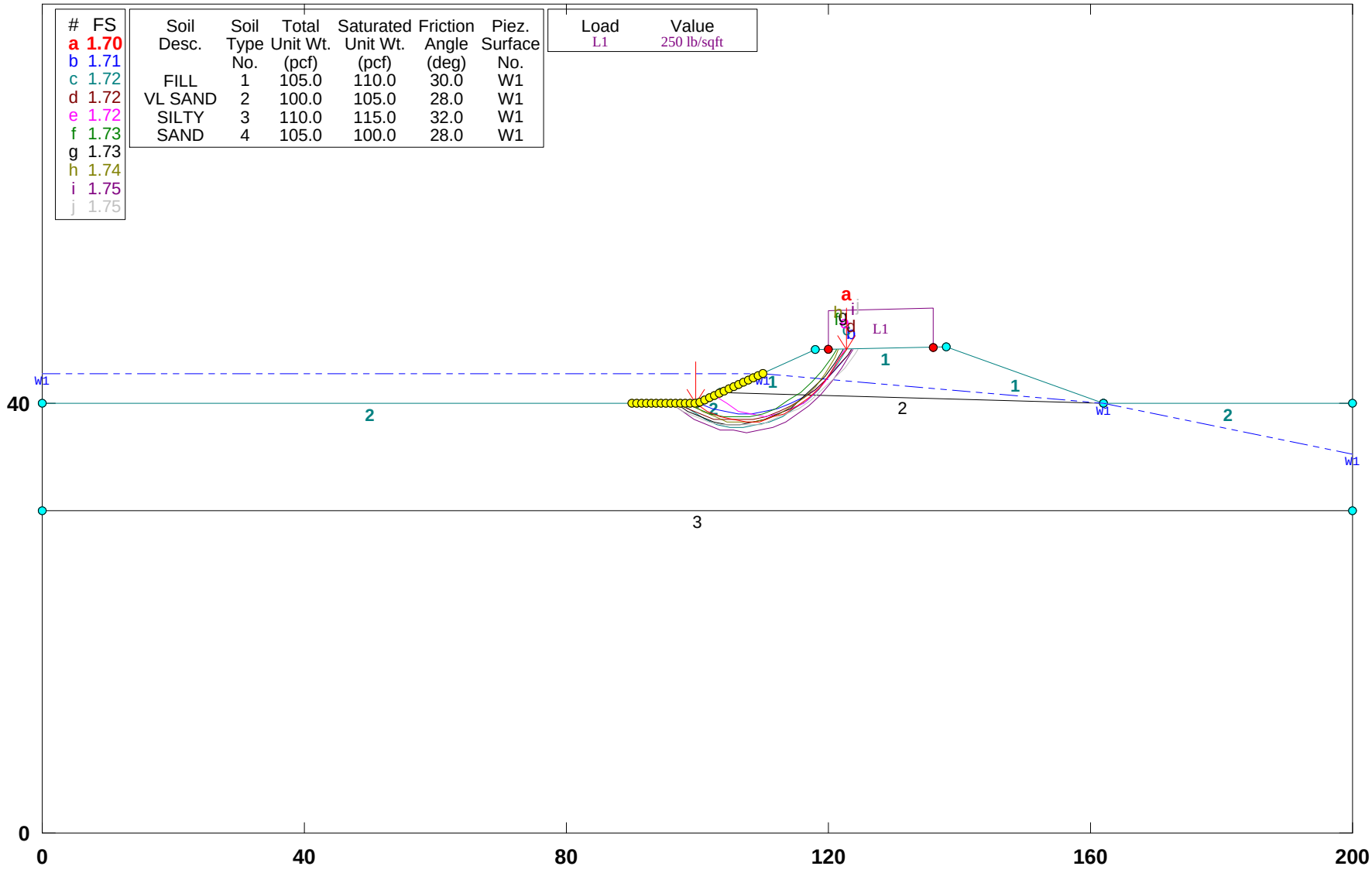
STED

Wekiva Parkway 7A - Pond YL2 Northern Embankment - DHWL

#	FS
a	1.70
b	1.71
c	1.72
d	1.72
e	1.72
f	1.73
g	1.73
h	1.74
i	1.75
j	1.75

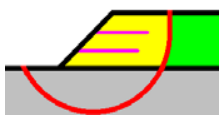
Soil Desc.	Soil Type No.	Total Unit Wt. (pcf)	Saturated Unit Wt. (pcf)	Friction Angle (deg)	Piez. Surface No.
FILL	1	105.0	110.0	30.0	W1
VL SAND	2	100.0	105.0	28.0	W1
SILTY SAND	3	110.0	115.0	32.0	W1
SAND	4	105.0	100.0	28.0	W1

Load	Value
L1	250 lb/sqft

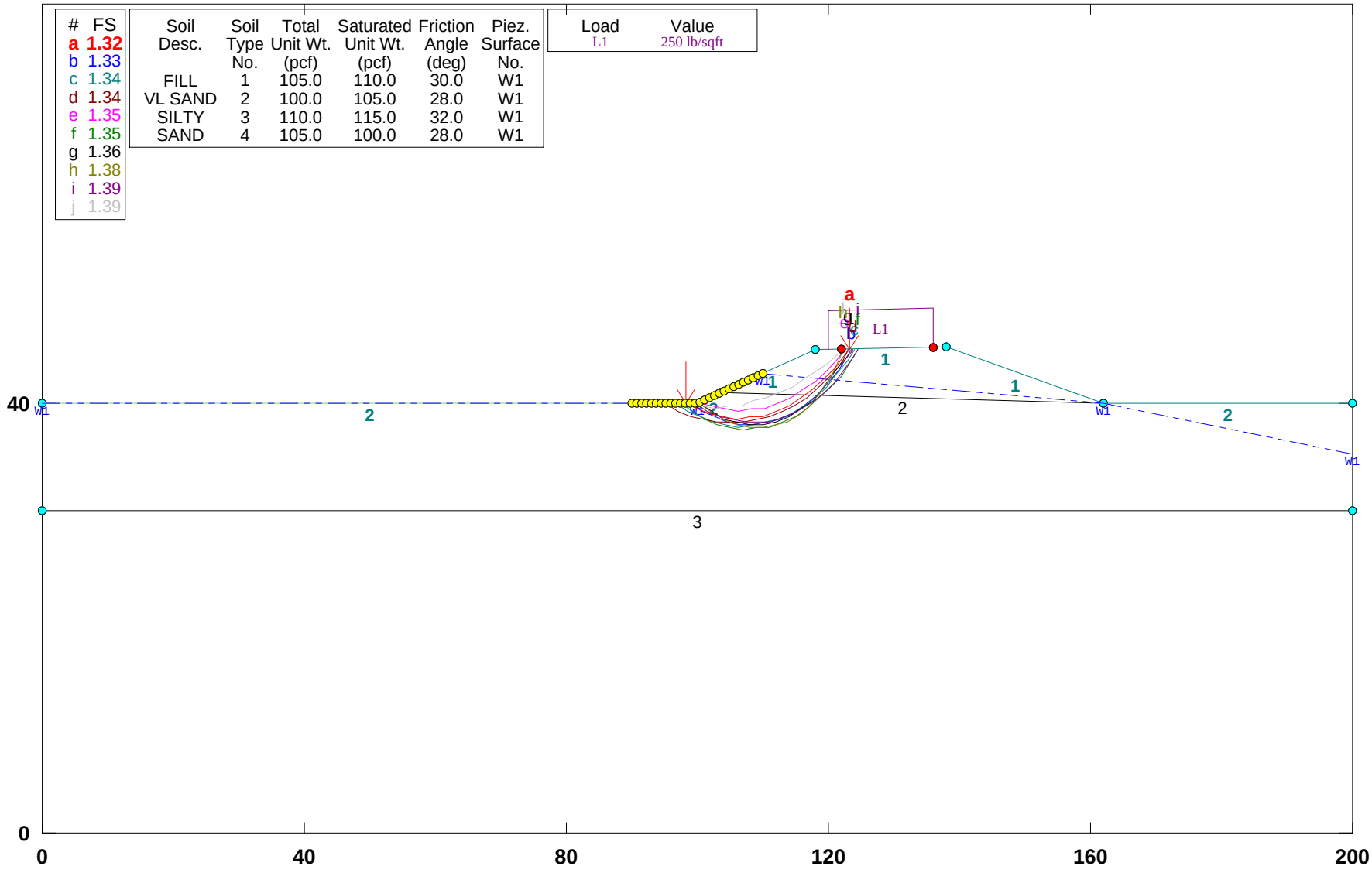


STABL6H FSmin=1.70
Safety Factors Are Calculated By The Modified Bishop Method

STED



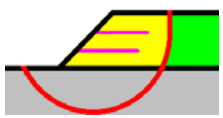
Wekiva Parkway 7A - Pond YL2 Northern Embankment - Rapid Drawdown



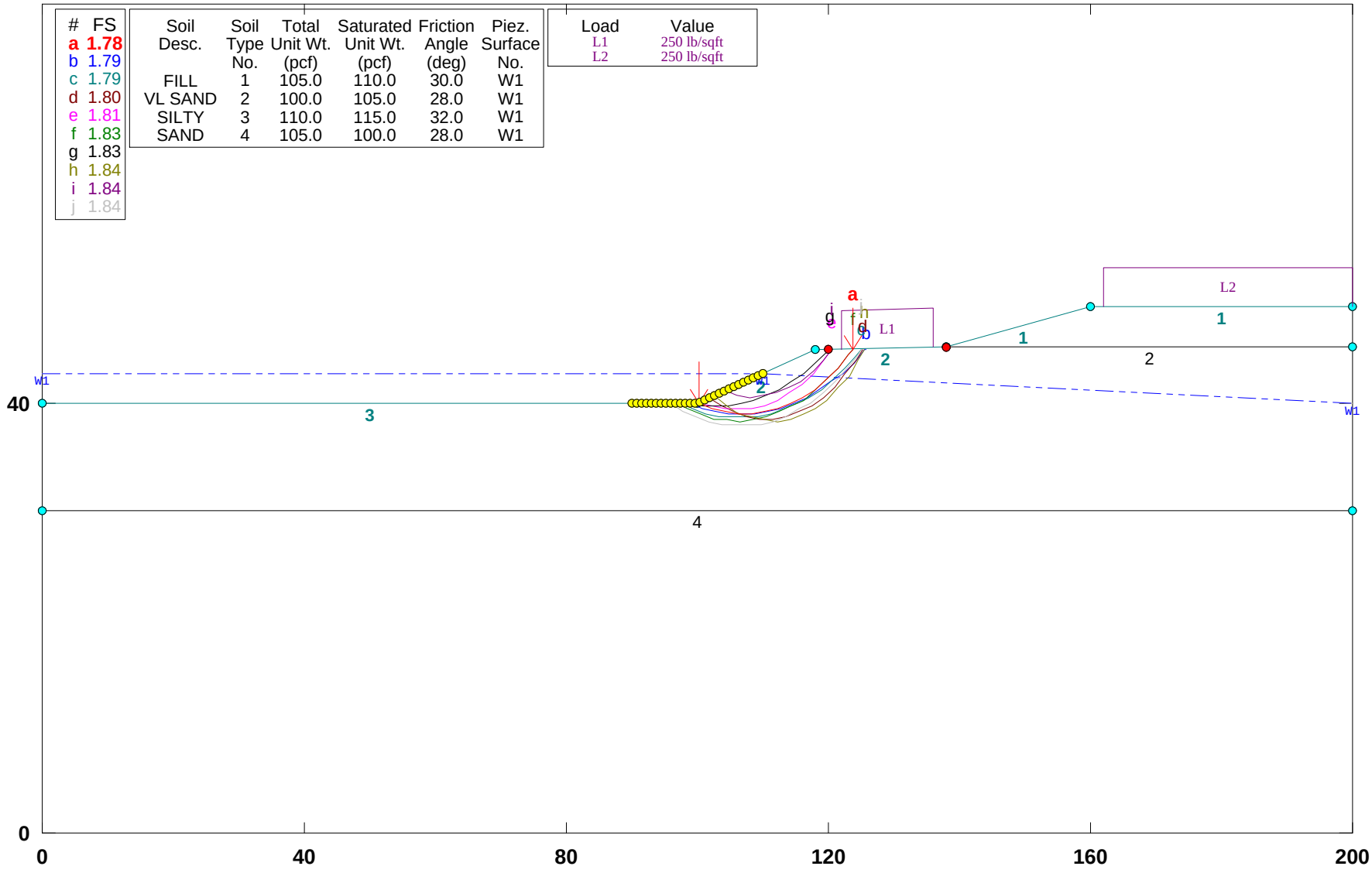
STABL6H FSmin=1.32

Safety Factors Are Calculated By The Modified Bishop Method

STED



Wekiva Parkway 7A - Pond YL2 Southern Embankment - DHWL

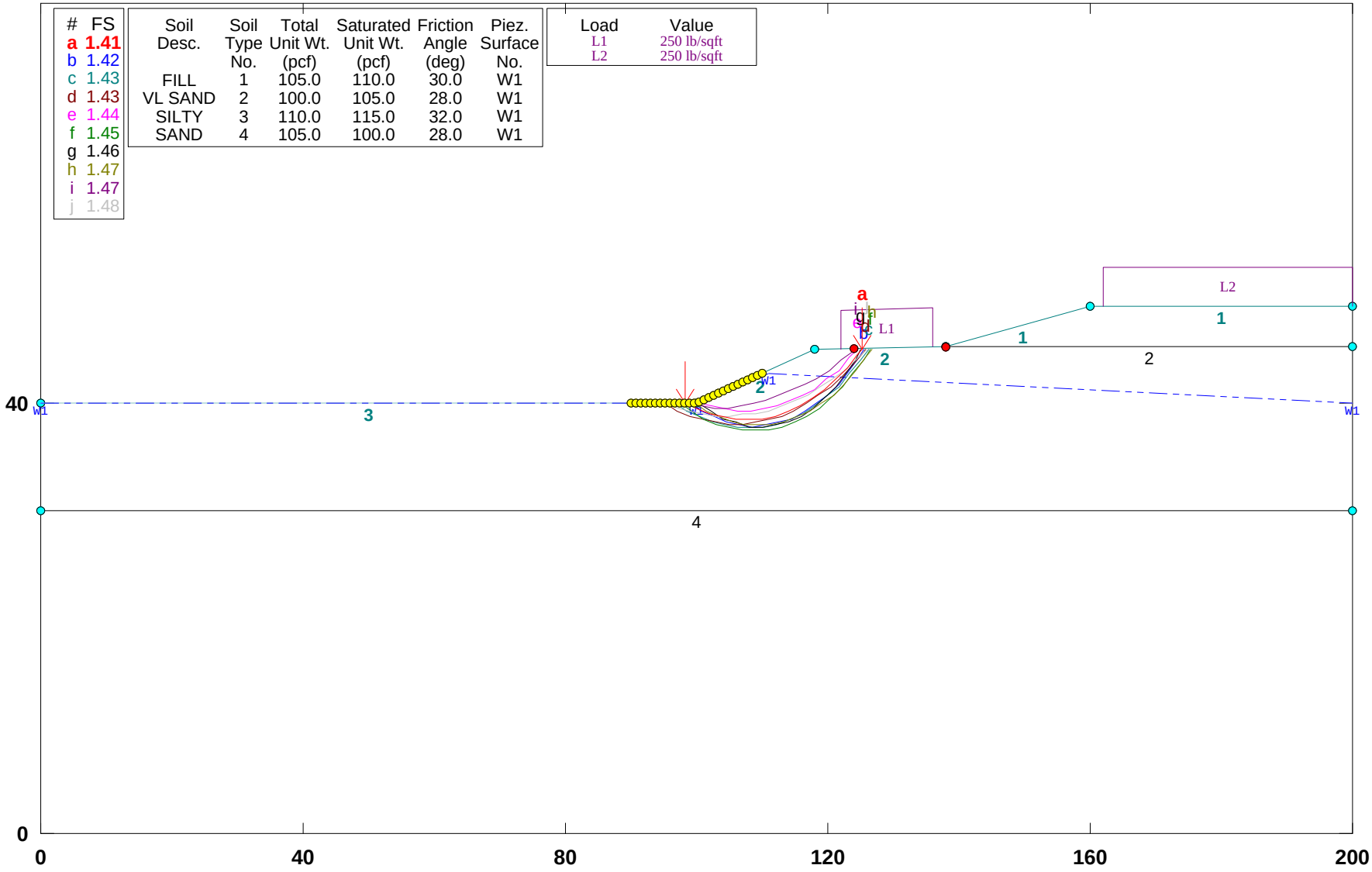


STABL6H FSmin=1.78

Safety Factors Are Calculated By The Modified Bishop Method

STED

Wekiva Parkway 7A - Pond YL2 Southern Embankment - Rapid Drawdown



STABL6H FSmin=1.41

Safety Factors Are Calculated By The Modified Bishop Method

STED

APPENDIX D

Important Information about This

Geotechnical-Engineering Report

Subsurface problems are a principal cause of construction delays, cost overruns, claims, and disputes.

While you cannot eliminate all such risks, you can manage them. The following information is provided to help.

Geotechnical Services Are Performed for Specific Purposes, Persons, and Projects

Geotechnical engineers structure their services to meet the specific needs of their clients. A geotechnical-engineering study conducted for a civil engineer may not fulfill the needs of a constructor — a construction contractor — or even another civil engineer. Because each geotechnical- engineering study is unique, each geotechnical-engineering report is unique, prepared *solely* for the client. No one except you should rely on this geotechnical-engineering report without first conferring with the geotechnical engineer who prepared it. *And no one — not even you* — should apply this report for any purpose or project except the one originally contemplated.

Read the Full Report

Serious problems have occurred because those relying on a geotechnical-engineering report did not read it all. Do not rely on an executive summary. Do not read selected elements only.

Geotechnical Engineers Base Each Report on a Unique Set of Project-Specific Factors

Geotechnical engineers consider many unique, project-specific factors when establishing the scope of a study. Typical factors include: the client's goals, objectives, and risk-management preferences; the general nature of the structure involved, its size, and configuration; the location of the structure on the site; and other planned or existing site improvements, such as access roads, parking lots, and underground utilities. Unless the geotechnical engineer who conducted the study specifically indicates otherwise, do not rely on a geotechnical-engineering report that was:

- not prepared for you;
- not prepared for your project;
- not prepared for the specific site explored; or
- completed before important project changes were made.

Typical changes that can erode the reliability of an existing geotechnical-engineering report include those that affect:

- the function of the proposed structure, as when it's changed from a parking garage to an office building, or from a light-industrial plant to a refrigerated warehouse;
- the elevation, configuration, location, orientation, or weight of the proposed structure;
- the composition of the design team; or
- project ownership.

As a general rule, *always* inform your geotechnical engineer of project changes—even minor ones—and request an assessment of their impact. *Geotechnical engineers cannot accept responsibility or liability for problems that occur because their reports do not consider developments of which they were not informed.*

Subsurface Conditions Can Change

A geotechnical-engineering report is based on conditions that existed at the time the geotechnical engineer performed the study. *Do not rely on a geotechnical-engineering report whose adequacy may have been affected by*: the passage of time; man-made events, such as construction on or adjacent to the site; or natural events, such as floods, droughts, earthquakes, or groundwater fluctuations. *Contact the geotechnical engineer before applying this report to determine if it is still reliable.* A minor amount of additional testing or analysis could prevent major problems.

Most Geotechnical Findings Are Professional Opinions

Site exploration identifies subsurface conditions only at those points where subsurface tests are conducted or samples are taken. Geotechnical engineers review field and laboratory data and then apply their professional judgment to render an opinion about subsurface conditions throughout the site. Actual subsurface conditions may differ — sometimes significantly — from those indicated in your report. Retaining the geotechnical engineer who developed your report to provide geotechnical-construction observation is the most effective method of managing the risks associated with unanticipated conditions.

A Report's Recommendations Are Not Final

Do not overrely on the confirmation-dependent recommendations included in your report. *Confirmation-dependent recommendations are not final,* because geotechnical engineers develop them principally from judgment and opinion. Geotechnical engineers can finalize their recommendations *only* by observing actual subsurface conditions revealed during construction. *The geotechnical engineer who developed your report cannot assume responsibility or liability for the report's confirmation-dependent recommendations if that engineer does not perform the geotechnical-construction observation required to confirm the recommendations' applicability.*

A Geotechnical-Engineering Report Is Subject to Misinterpretation

Other design-team members' misinterpretation of geotechnical-engineering reports has resulted in costly

problems. Confront that risk by having your geotechnical engineer confer with appropriate members of the design team after submitting the report. Also retain your geotechnical engineer to review pertinent elements of the design team's plans and specifications. Constructors can also misinterpret a geotechnical-engineering report. Confront that risk by having your geotechnical engineer participate in prebid and preconstruction conferences, and by providing geotechnical construction observation.

Do Not Redraw the Engineer's Logs

Geotechnical engineers prepare final boring and testing logs based upon their interpretation of field logs and laboratory data. To prevent errors or omissions, the logs included in a geotechnical-engineering report should *never* be redrawn for inclusion in architectural or other design drawings. Only photographic or electronic reproduction is acceptable, *but recognize that separating logs from the report can elevate risk.*

Give Constructors a Complete Report and Guidance

Some owners and design professionals mistakenly believe they can make constructors liable for unanticipated subsurface conditions by limiting what they provide for bid preparation. To help prevent costly problems, give constructors the complete geotechnical-engineering report, *but* preface it with a clearly written letter of transmittal. In that letter, advise constructors that the report was not prepared for purposes of bid development and that the report's accuracy is limited; encourage them to confer with the geotechnical engineer who prepared the report (a modest fee may be required) and/or to conduct additional study to obtain the specific types of information they need or prefer. A prebid conference can also be valuable. *Be sure constructors have sufficient time* to perform additional study. Only then might you be in a position to give constructors the best information available to you, while requiring them to at least share some of the financial responsibilities stemming from unanticipated conditions.

Read Responsibility Provisions Closely

Some clients, design professionals, and constructors fail to recognize that geotechnical engineering is far less exact than other engineering disciplines. This lack of understanding has created unrealistic expectations that have led to disappointments, claims, and disputes. To help reduce the risk of such outcomes, geotechnical engineers commonly include a variety of explanatory provisions in their reports. Sometimes labeled "limitations," many of these provisions indicate where geotechnical engineers' responsibilities begin and end, to help others recognize their own responsibilities and risks. *Read these provisions closely.* Ask questions. Your geotechnical engineer should respond fully and frankly.

Environmental Concerns Are Not Covered

The equipment, techniques, and personnel used to perform an *environmental* study differ significantly from those used to perform a *geotechnical* study. For that reason, a geotechnical-engineering report does not usually relate any environmental findings, conclusions, or recommendations; e.g., about the likelihood of encountering underground storage tanks or regulated contaminants. *Unanticipated environmental problems have led to numerous project failures.* If you have not yet obtained your own environmental information, ask your geotechnical consultant for risk-management guidance. *Do not rely on an environmental report prepared for someone else.*

Obtain Professional Assistance To Deal with Mold

Diverse strategies can be applied during building design, construction, operation, and maintenance to prevent significant amounts of mold from growing on indoor surfaces. To be effective, all such strategies should be devised for the *express purpose* of mold prevention, integrated into a comprehensive plan, and executed with diligent oversight by a professional mold-prevention consultant. Because just a small amount of water or moisture can lead to the development of severe mold infestations, many mold- prevention strategies focus on keeping building surfaces dry. While groundwater, water infiltration, and similar issues may have been addressed as part of the geotechnical- engineering study whose findings are conveyed in this report, the geotechnical engineer in charge of this project is not a mold prevention consultant; *none of the services performed in connection with the geotechnical engineer's study were designed or conducted for the purpose of mold prevention. Proper implementation of the recommendations conveyed in this report will not of itself be sufficient to prevent mold from growing in or on the structure involved.*

Rely, on Your GBC-Member Geotechnical Engineer for Additional Assistance

Membership in the Geotechnical Business Council of the Geoprofessional Business Association exposes geotechnical engineers to a wide array of risk-confrontation techniques that can be of genuine benefit for everyone involved with a construction project. Confer with you GBC-Member geotechnical engineer for more information.

GEOTECHNICAL BUSINESS COUNCIL
of the Geoprofessional Business Association

8811 Colesville Road/Suite G106, Silver Spring, MD 20910
Telephone: 301/565-2733 Facsimile: 301/589-2017
e-mail: info@geoprofessional.org www.geoprofessional.org

APPENDIX E

ANTILLIAN ENGINEERING ASSOCIATES, INC.
CONSTRAINTS AND RESTRICTIONS

WARRANTY

Antillian Engineering Associates, Inc. has prepared this report for our client for his exclusive use, in accordance with generally accepted soil and foundation engineering practices, and makes no other warranty either expressed or implied as to the professional advice provided in the report.

UNANTICIPATED SOIL CONDITIONS

The analysis and recommendations submitted in this report are based upon the data obtained from soil borings performed at the locations indicated on the Boring Location Plan. This report does not reflect any variations which may occur between these borings.

CHANGED CONDITIONS

We recommend that the specifications for the project require that the contractor immediately notify Antillian Engineering Associates, Inc., as well as the owner, when subsurface conditions are encountered that are different from those present in this report.

No claim by the contractor for any conditions differing from those anticipated in the plans, specifications, and those found in this report, should be allowed unless the contractor notifies the owner and Antillian Engineering Associates, Inc. of such changed conditions. Further, we recommend that all foundation work and site improvements be observed by a representative of Antillian Engineering Associates, Inc. to monitor field conditions and changes, to verify design assumptions and to evaluate and recommend any appropriate modifications to this report.

MISINTERPRETATION OF SOIL ENGINEERING REPORT

Antillian Engineering Associates, Inc. is responsible for the conclusions and opinions contained within this report based upon the data relating only to the specific project and location discussed herein. If the conclusions or recommendations based upon the data presented are made by others, those conclusions or recommendations are not the responsibility of Antillian Engineering Associates, Inc..

CHANGED STRUCTURE OR LOCATION

This report was prepared in order to aid in the evaluation of this project and to assist the architect or engineer in the design of this project. If any changes in the design or location of the structure as outlined in this report are planned, or if any structures are included or added that are not discussed in the report, the conclusions and recommendations contained in this report shall not be considered valid unless the changes are reviewed and the conclusions modified or approved by Antillian Engineering Associates, Inc..

USE OF REPORT BY BIDDERS

Bidders who are examining the report prior to submission of a bid are cautioned that this report was prepared as an aid to the designers of the project and it may affect actual construction operations.

Bidders are urged to make their own soil borings, test pits, test caissons or other investigations to determine those conditions that may affect construction operations. Antillian Engineering Associates, Inc. cannot be responsible for any interpretations made from this report or the attached boring logs with regard to their adequacy in reflecting subsurface conditions which will affect construction operations.

STRATA CHANGES

Strata changes are indicated by a definite line on the boring logs which accompany this report. However, the actual change in the ground may be more gradual. Where changes occur between soil samples, the location of the change must necessarily be estimated using all available information and may not be shown at the exact depth.

OBSERVATIONS DURING DRILLING

Attempts are made to detect and/or identify occurrences during drilling and sampling, such as: water level, boulders, zones of lost circulation, relative ease or resistance to drilling progress, unusual sample recovery, variation of driving resistance, obstructions, etc.; however, lack of mention does not preclude their presence.

WATER LEVELS

Water level readings have been made in the drill holes during drilling and they indicate normally occurring conditions. Water levels may not have been stabilized at the last reading. This data has been reviewed and interpretations made in this report. However, it must be noted that fluctuations in the level of the groundwater may occur due to variations in rainfall, temperature, tides, and other factors not evident at the time measurements were made and reported. Since the probability of such variations is anticipated, design drawings and specifications should accommodate such possibilities and construction planning should be based upon such assumptions of variations.

LOCATION OF BURIED OBJECTS

All users of this report are cautioned that there was no requirement for Antillian Engineering Associates, Inc. to attempt to locate any man-made buried objects during the course of this exploration and that no attempt was made by Antillian Engineering Associates, Inc. to locate any such buried objects. Antillian Engineering Associates, Inc. cannot be responsible for any buried man-made objects which are subsequently encountered during construction that are not discussed within the text of this report.

TIME

This report reflects the soil conditions at the time of investigation. If the report is not used in a reasonable amount of time, significant changes to the site may occur and additional reviews may be required.