DRAFT Geotechnical Technical Memorandum

Poinciana Parkway Extension SR 538 from S. of CR 532 to the Sinclair Road/SR 429 Interchange

Orange and Polk Counties, Florida

Financial Project ID: 446581-1-22-01

Project Development and Environment Study

Florida Department of Transportation Florida's Turnpike Enterprise



November 2022

Tierra, Inc.
7351 Temple Terrace Highway • Tampa, Florida 33637
Phone (813) 989-1354 • Fax (813) 989-1355

November 7, 2022

RS&H, Inc. 1715 N Westshore Blvd, Suite 600 Tampa, FL 33607

Attn: Douglas Reed, P.E.

RE: Geotechnical Technical Memorandum PD&E Study for Poinciana Parkway

SR 538 from S. of CR 532 to the Sinclair Road/SR 429 Interchange

Osceola County, Florida FPN: 446581-1-22-01

Tierra Project No.: 6511-20-202-001

Mr. Reed:

Tierra, Inc. (Tierra) has performed Geotechnical Engineering Services for the referenced project. The results of our review and the limited field exploration program and review of the USDA Soil Surveys are presented in this report.

Tierra appreciates the opportunity to be of service to RS&H on this project. If you have any questions or comments regarding this report, please contact our office at your earliest convenience.

Sincerely,

TIERRA, INC.

Tyler R. Jean, E.I.

Geotechnical Engineer Intern

Kevin H. Scott, P.E.

Senior Geotechnical Engineer

Florida License No. 65514

Larry P. Moore, P.E.

Principal Geotechnical Engineer

Florida License No. 47673

Table of Contents Page 1 of 2

1.0 1.1 1.2	Project Description General Site Conditions	1
2.0	PURPOSE AND SCOPE OF SERVICES	1
3.0 3.1 3.2 3.3	REVIEW OF PUBLISHED DATA USGS Quadrangle Map USDA Soil Survey Review of Potentiometric Surface Information	2
4.0 4.1 4.2	SUBSURFACE EXPLORATION	3
5.0 5.1 5.2	LABORATORY TESTING	3
6.0 6.1 6.2 6.3	RESULTS OF SUBSURFACE EXPLORATION	4 4
7.0 7.1 7.2 7.3	PRELIMINARY ENGINEERING EVALUATIONS General Roadway Construction Pond Soil Parameters Discussion	5 6
8.0	REPORT LIMITATIONS	. 7

Table of Contents Page 2 of 2

APPENDIX A

USDA Soil Survey & USGS Quadrangle Maps

APPENDIX B

Roadway Soil Survey Roadway Boring Location Plan Roadway Soil Profiles Pond Soil Survey Sheets Boring Locations Table – Latitude and Longitude

APPENDIX C

Summary of USDA Soil Survey Information – Osceola County Summary of USDA Soil Survey Information – Polk County Summary of Seasonal High Groundwater Table Estimates – Roadway Summary of Seasonal High Groundwater Table Estimates - Ponds

APPENDIX D

Summary of Laboratory Classification Test Results for Soil Classification

Tierra Project No.: 6511-20-202-001

Page 1 of 7

1.0 PROJECT INFORMATION

1.1 Project Description

The project involves extending Poinciana Parkway (SR 538) from County Road 532 (CR 532) to the Interstate 4 (I-4)/State Road 429 (SR 429) interchange, modifying the I-4/SR 429 interchange to accommodate the Poinciana Parkway connection, and increasing capacity of the segment of SR 429 from the I-4/SR 429 interchange to the SR 429/Sinclair Road interchange. The total project length is approximately four miles.

Poinciana Parkway is a section of a future limited access toll facility, often referred to as the "Southern Beltway". The Southern Beltway would provide a regional, limited access facility that connects I-4 on the west to the interchange of Boggy Creek Road/SR 417 on the east, a distance of approximately 50 miles. The westernmost portion of the Southern Beltway is referred to as the Poinciana Parkway.

Tierra previously submitted a Geotechnical Technical Memorandum to support the PD&E study for the Widen Western Beltway project (FPID No. 446164-1-22-01) in which Tierra completed a review of existing pile driving information for Bridges Bridge No. 920601, Bridge No. 920602, Bridge No. 920605, Bridge No. 920606, Bridge No. 920603, Bridge No. 920604, Bridge No. 750614, Bridge No. 750615, Bridge No. 750616, Bridge No. 750617, and Bridge No. 920608.

1.2 General Site Conditions

The existing roadways for SR 429 and I-4 are typically supported on embankments utilized to separate the pavement section from the historical groundwater conditions. The areas of the alignment alternatives for the SR 538 extension are generally undeveloped. Land use adjacent to the existing roadway alignments in the project area generally consists of urban land (residential and commercial developments), agricultural and forested land.

2.0 PURPOSE AND SCOPE OF SERVICES

The purpose of the geotechnical portion of the PD&E study is to evaluate published information regarding the existing subsurface conditions within the project vicinity along with performing a limited geotechnical field exploration to assist in the preparation of the PD&E Report for the project. The following services were provided to achieve the preceding objective:

- 1. Reviewed soil information from the "Soil Survey of Osceola County, Florida" and "Soil Survey of Polk County, Florida" published by the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS). Reviewed topographic obtained from the "Intercession, Florida" Quadrangle Map.
- 2. Conducted a visual reconnaissance of the project site. Coordinated utility clearance via Sunshine State One Call.

Tierra Project No.: 6511-20-202-001

Page 2 of 7

- 3. Performed a preliminary geotechnical field study for the proposed improvements consisting of borings, subsurface sampling, and field testing.
- 4. Measured groundwater table levels and estimated the seasonal high groundwater levels at the boring locations.
- 5. Coordinated with the project surveyor to provide survey data (location and elevation) for selected borings performed along the proposed project alignment.
- Visually examined the recovered soil samples in the laboratory. Performed laboratory tests on selected representative samples to develop the soil legend for the project using the American Association of State Highway and Transportation Officials (AASHTO) soil classification system.
- Prepared this Geotechnical Technical Memorandum which summarizes the course of study pursued, the field and laboratory data generated and the subsurface conditions encountered.

3.0 REVIEW OF PUBLISHED DATA

3.1 USGS Quadrangle Map

Based on a review of the "Intercession, Florida" USGS Quadrangle Map, it appears that the natural ground surface in the vicinity of proposed widening is on the order of approximately +70 to +140 feet, National Geodetic Vertical Datum of 1929 (NGVD). The USCS Quadrangle map of the project site is illustrated in **Appendix A**.

3.2 USDA Soil Survey

The USDA Soil Survey along the roadway alignment alternatives were reviewed for information regarding near surface soil and groundwater information. The Osceola and Polk County Soil Surveys identify more than 18 total soil-mapping units in the vicinity of the proposed project. The USDA Soil units are shown on the USDA Soil Survey Maps Illustrated in **Appendix A**. The general descriptions of the mapping units encountered are summarized in **Appendix C**.

3.3 Review of Potentiometric Surface Information

Based on a review of the "Potentiometric Surface of the Upper Floridan Aquifer, West-Central Florida" maps published by the USGS; the potentiometric surface elevation of the upper Floridan Aquifer in the project vicinity ranges from approximately +90 to +110 feet, NGVD29.

4.0 SUBSURFACE EXPLORATION

Limited geotechnical field services were included in the PD&E study. These geotechnical services were to perform preliminary borings along the alignment and within pond alternative sites to estimate SHGWT levels. This report and information obtained is preliminary in nature

Tierra Project No.: 6511-20-202-001

Page 3 of 7

and is intended to support the PD&E evaluations and provide preliminary information with regards to the existing subsurface conditions. Additional geotechnical explorations will be required during the design phase of this project.

4.1 Boring Location Plan and Utility Clearance

Prior to commencing our subsurface explorations, a boring location plan for the proposed roadway alignment alternatives was developed. The borings were located and staked in the field using hand-held Garmin eTrex™ Global Positioning System (GPS) equipment with a reported accuracy of 10 feet.

Utility clearances were coordinated by Tierra and updated as required prior to performing the soil borings in order to reduce the potential for damage to the underground utilities during the boring process.

4.2 Soil Borings

To evaluate the subsurface conditions in the areas of proposed roadway alignment alternatives, and within pond alternatives, Tierra performed auger borings. The results of the auger borings performed and Standard Penetration Test (SPT) borings. The results of the borings performed **Appendix B**.

The hand auger borings were performed by manually twisting and advancing a bucket auger into the ground, typically in 6-inch increments. As each soil type was revealed, representative samples were placed in air-tight containers and returned to our office for confirmation of the field classification by a geotechnical engineer.

The SPT borings were performed with the use of mechanical drill rig using bentonite mud rotary drilling procedures. The soil sampling for the SPT borings was performed in accordance with American Society for Testing and Materials (ASTM) Test designation D-1586.

5.0 LABORATORY TESTING

5.1 General

Representative soil samples collected from the borings were classified and stratified in general accordance with the AASHTO soil classification system. Our classification was based on visual observations using the results from the laboratory testing as confirmation. These tests included fines content (percentage passing No. 200 mesh sieve), Atterberg Limits, organic content determination, and natural moisture content determination.

5.2 Test Designation

The following list summarizes the laboratory tests performed and respective test methods.

Tierra Project No.: 6511-20-202-001

Page 4 of 7

- <u>Fines Content Analyses</u> The fines content tests were conducted in general accordance with the AASHTO test designation T-088 (ASTM test designation D-1140).
- <u>Natural Moisture Content</u> The laboratory moisture content tests were performed in general accordance with the AASHTO test designation T-265 (ASTM test designation D-2216).
- Organic Content The organic content tests were performed in general accordance with AASHTO T-267.

A summary of the laboratory test results for each soil stratum is presented on the **Roadway Soil Survey** sheet in **Appendix B**. This sheet includes ranges of laboratory test results for different stratum soil samples collected from borings included in this report. A detailed summary of the laboratory tests with the corresponding results is also presented in **Appendix D**.

6.0 RESULTS OF SUBSURFACE EXPLORATION

6.1 General Soil Condition

Generally, the borings encountered sandy (A-3) soils to the borings termination depths. The soil types encountered during exploration have been assigned a stratum number. The stratum numbers and soil types associated with this project are listed in the following table.

Stratum Number	Typical Soil Description	AASHTO Classification
1	Light Brown to Gray to Pale Orange Sand to Sand with Silt	A-3
2	Dark Gray Organic Sand to Organic Silty Sand to Organic Silt to Peat	A-8
3	Light Gray to Pale Orange Silty Sand	A-2-4

A geotechnical engineer bases soil stratification on a visual review of the recovered samples, laboratory testing, and interpretation of the field boring logs. The boring stratification lines represent the approximate boundaries between soil types of significantly different engineering properties; however, the actual transition may be gradual. In some cases, small variations in properties not considered pertinent to our engineering evaluation may have been abbreviated or omitted for clarity. The boring profiles represent the conditions at the particular boring location and variations do occur among the borings. The results of the borings performed for this project along with the boring location plans are presented in **Appendix B**.

6.2 Groundwater

The groundwater table, when encountered, was measured at the boring locations during our field exploration. The depths to the encountered groundwater table are depicted adjacent to the soil profiles on the **Roadway Soil Profiles** sheet in **Appendix B**. In some of the auger borings

Tierra Project No.: 6511-20-202-001

Page 5 of 7

performed, the groundwater table was not encountered prior to the boring termination depth. As a result, GNE (Groundwater Not Encountered) is shown adjacent to these soil profiles.

Groundwater conditions will vary with environmental variations and seasonal conditions, such as the frequency and magnitude of rainfall patterns, as well as man-made influences (i.e. existing water management canals, swales, drainage ponds, underdrains and areas of covered soils, such as paved parking lots and sidewalks).

6.3 Seasonal High Groundwater Estimates

Seasonal high groundwater table levels were estimated at select boring locations. Estimated SHGWT levels for the project are presented on the **Roadway Soil Profiles** sheets in **Appendix B** and summarized in the **Summary of Seasonal High Groundwater Table Estimates** table in **Appendix C**.

The SHGWT levels at the boring locations were estimated based on a review of the soil samples, the USDA Osceola/Polk County Soil Survey information, surrounding topography, natural indicators within the soils and measured groundwater levels in the borings.

7.0 PRELIMINARY ENGINEERING EVALUATIONS

7.1 General

Based upon the USDA-NRCS Soil Surveys for Osceola and Polk Counties, sandy soils are reported along the majority of the project corridor to depths of 80 inches below the natural ground surface. Organic soils are present along relatively isolated areas associated with existing wetlands. The limited geotechnical exploration performed along the project alignment confirm the information provided in the published Soil Surveys.

In general, the sandy soils are suitable for supporting proposed roadway embankments after proper subgrade preparation including removal and replacement of unsuitable materials. The following report sections discuss potential impacts where shallow groundwater conditions and/or organic A-8 material may be encountered along the project.

7.1.1 Shallow Groundwater

The Seasonal High Groundwater Table (SHGWT) along the project alignment is expected to range from at or above the predevelopment natural grade to a depth greater than 6 feet below the predevelopment natural grade within the project limits. Grades for the roadway should be set in accordance with FDOT Specifications to provide a minimum separation between the bottom of the base and the estimated seasonal high groundwater levels. Correspondingly, the base should remain equally above sustained water treatment levels in roadside ditches/swales, making positive drainage of the ditches/swales important. The choice of base material would depend upon the relationship of final roadway improvement grades and the bottom of the base to the estimated seasonal high groundwater table levels.

Tierra Project No.: 6511-20-202-001

Page 6 of 7

In areas where the existing SHGWT is above grade, the SHWGT will have to be established by the project biologist utilizing biological indicators. Additionally, drainage design will need to consider the impact of shallow groundwater levels on stormwater management facilities.

7.1.2 Organic Soils

According to the USDA Soil Survey information and the limited geotechnical exploration performed for this study, organic (A-8) materials are reported at several areas along the proposed project alignment. Organic/muck (A-8) soil should be removed in accordance with FDOT Standard Plans, Index 120-002 and replaced with backfill in accordance with Index 120-001.

7.2 Roadway Construction

Site preparation should consist of normal clearing and grubbing followed by compaction of subgrade soils. Subgrade preparation should include the removal of plastic soils, top-soils, organic soils, and unsuitable materials in accordance with FDOT Standard Plans, Index 120-002. Backfill embankment materials should consist of materials conforming to the FDOT Standard Plans, Index 120-001. Clearing and grubbing and compaction should be accomplished in accordance with the FDOT Standard Specifications.

The general suitability and preliminary evaluations of the soils encountered during our geotechnical exploration is presented on the **Roadway Soil Survey** sheet in **Appendix B**. FDOT Standard Indices 120-001 and 120-002 of the Design Standards should be consulted to determine the specific use/suitability of the soil types present within the project limits.

The overall site preparation and mechanical densification work for the construction of the proposed roadway improvements should be in accordance with FDOT Standard Specifications and Standard Plans Index requirements. In general, the existing subsurface soils appear capable of supporting the construction of the proposed roadway improvements subject to the above geotechnical considerations and after proper subgrade preparation.

7.3 Pond Soil Information

Tierra performed preliminary borings within the pond site alternatives to provide preliminary information for inclusion in the PD&E Study.

As previously mentioned SHGWT levels are presented on the Summary of Seasonal High Groundwater Table Estimates Preliminary Pond Locations table in Appendix C and on the Soil Profiles sheets in Appendix B.

Tierra Project No.: 6511-20-202-001

Page 7 of 7

8.0 REPORT LIMITATIONS

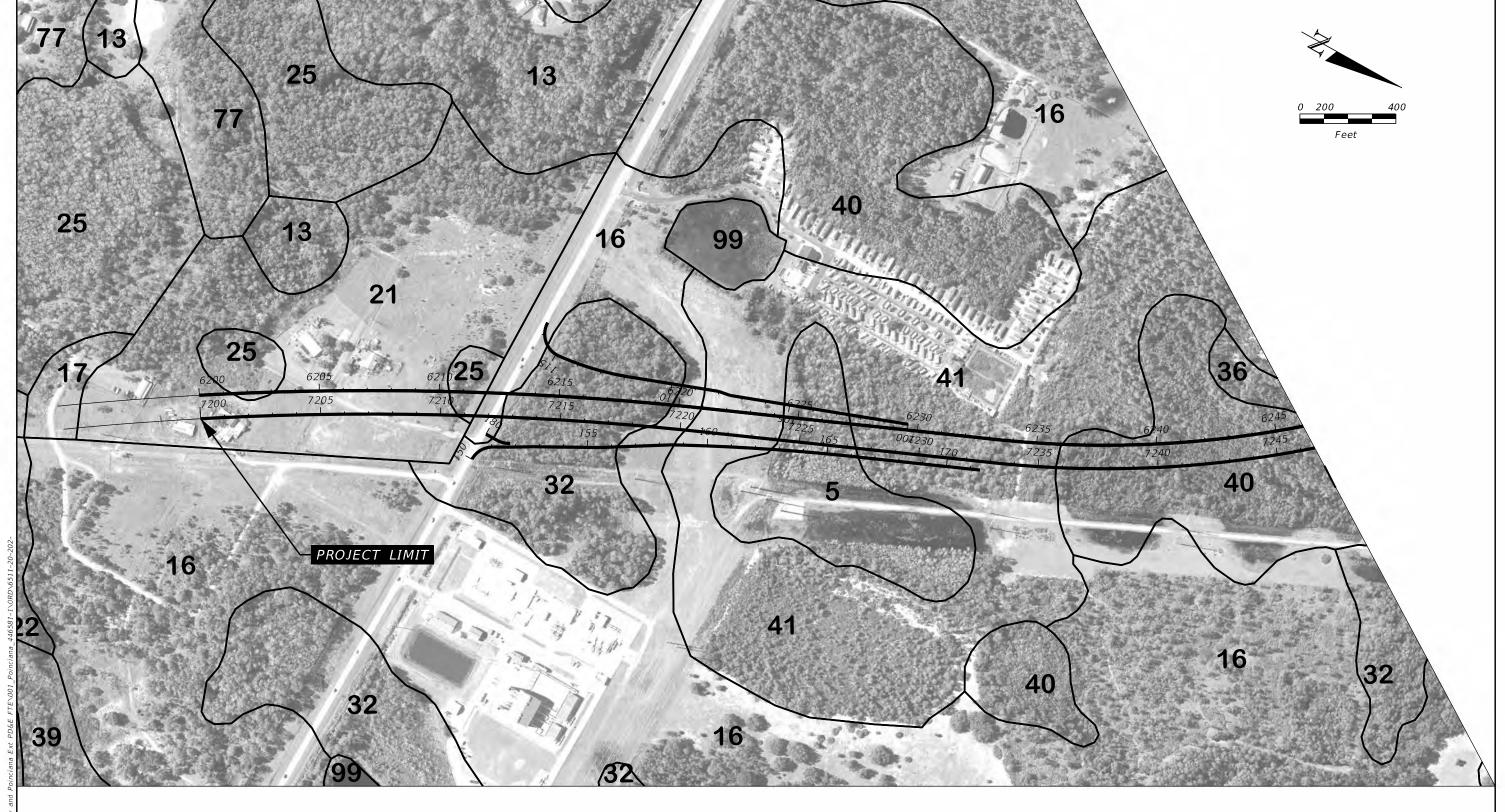
The scope of the geotechnical portion of the PD&E study is to provide preliminary information on the existing subsurface conditions along the project alignment based on a review of the Soil Surveys, published by the USDA-NRCS and the limited geotechnical testing to assist in the preparation of the PD&E Report for this project. The preliminary evaluations submitted in this report are based upon the data obtained from the published information. Additional geotechnical explorations will be required during the design phase of this project should adhere to the FDOT Soils and Foundation handbook guidelines. Should subsoil variations become evident during the course of this project, a re-evaluation will be necessary after we have had an opportunity to observe the characteristics of the conditions encountered. The applicability of the report should also be reviewed in the event significant changes occur in the design, nature, or location of the proposed roadway construction and stormwater management areas.

The scope of services, included herein, did not include any environmental assessment for the presence or absence of hazardous or toxic materials in the soil, surface water, groundwater, air, on the site, below and around the site. Any statements in this report or on the boring logs regarding odors, colors, unusual or suspicious items and conditions are strictly for the information of RS&H.

Our services have been performed, our findings obtained, and our preliminary evaluations prepared in accordance with generally accepted geotechnical engineering principles and practices at the time of this report. Tierra is not responsible for the conclussions, opinions, or recommendations made by others based on this data.

APPENDIX A

USDA Soil Survey & USGS Quadrangle Maps

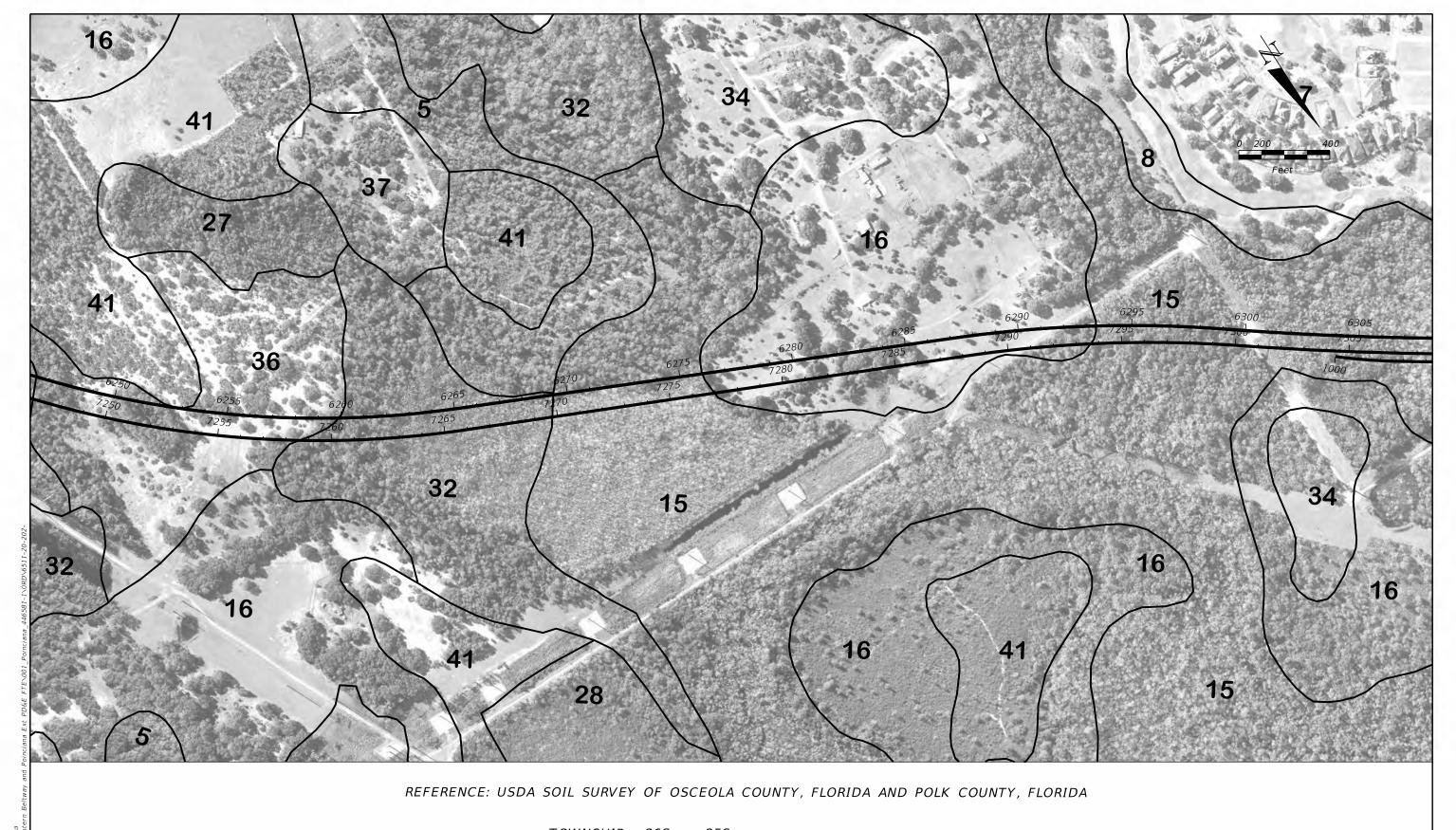


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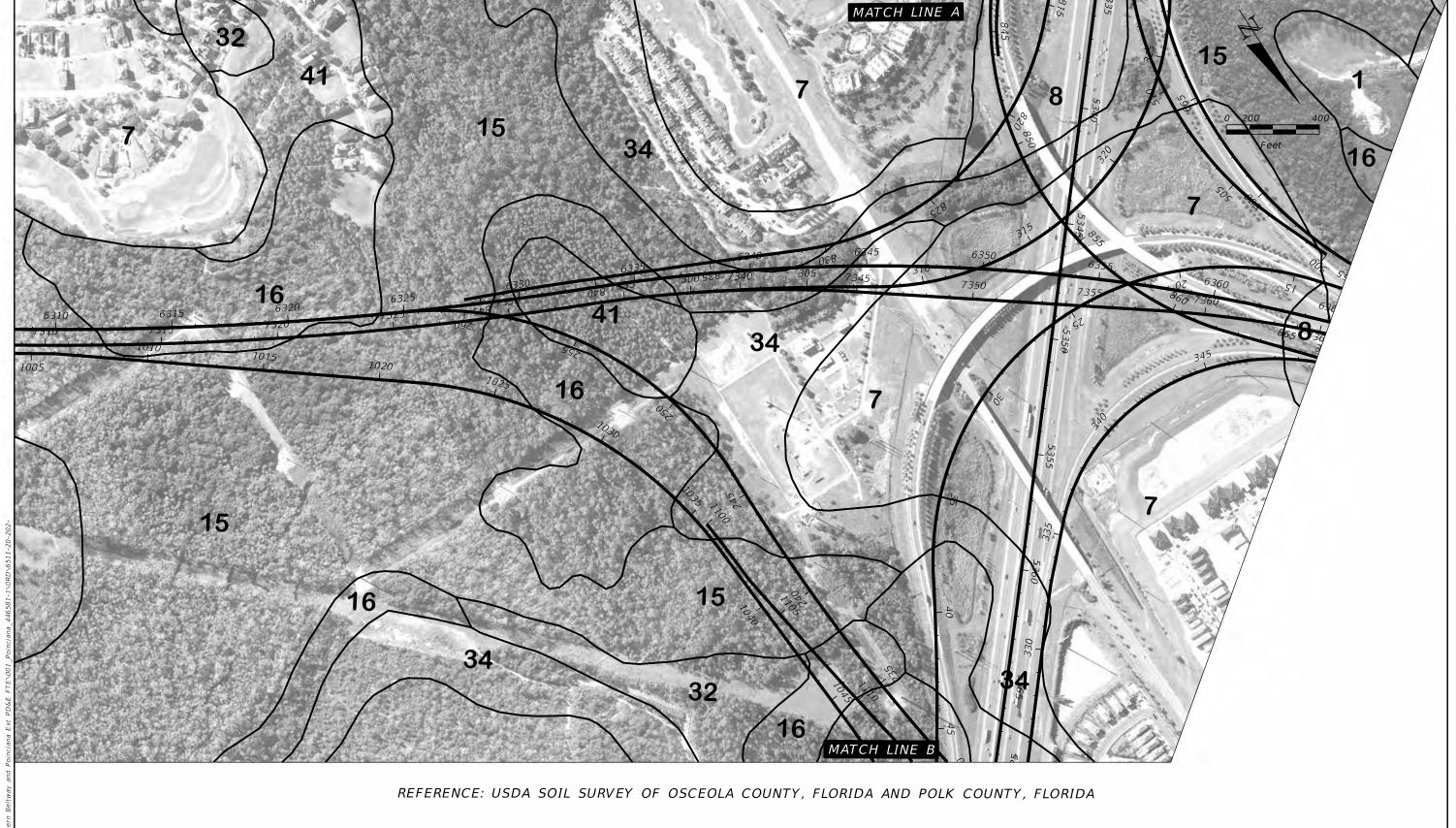
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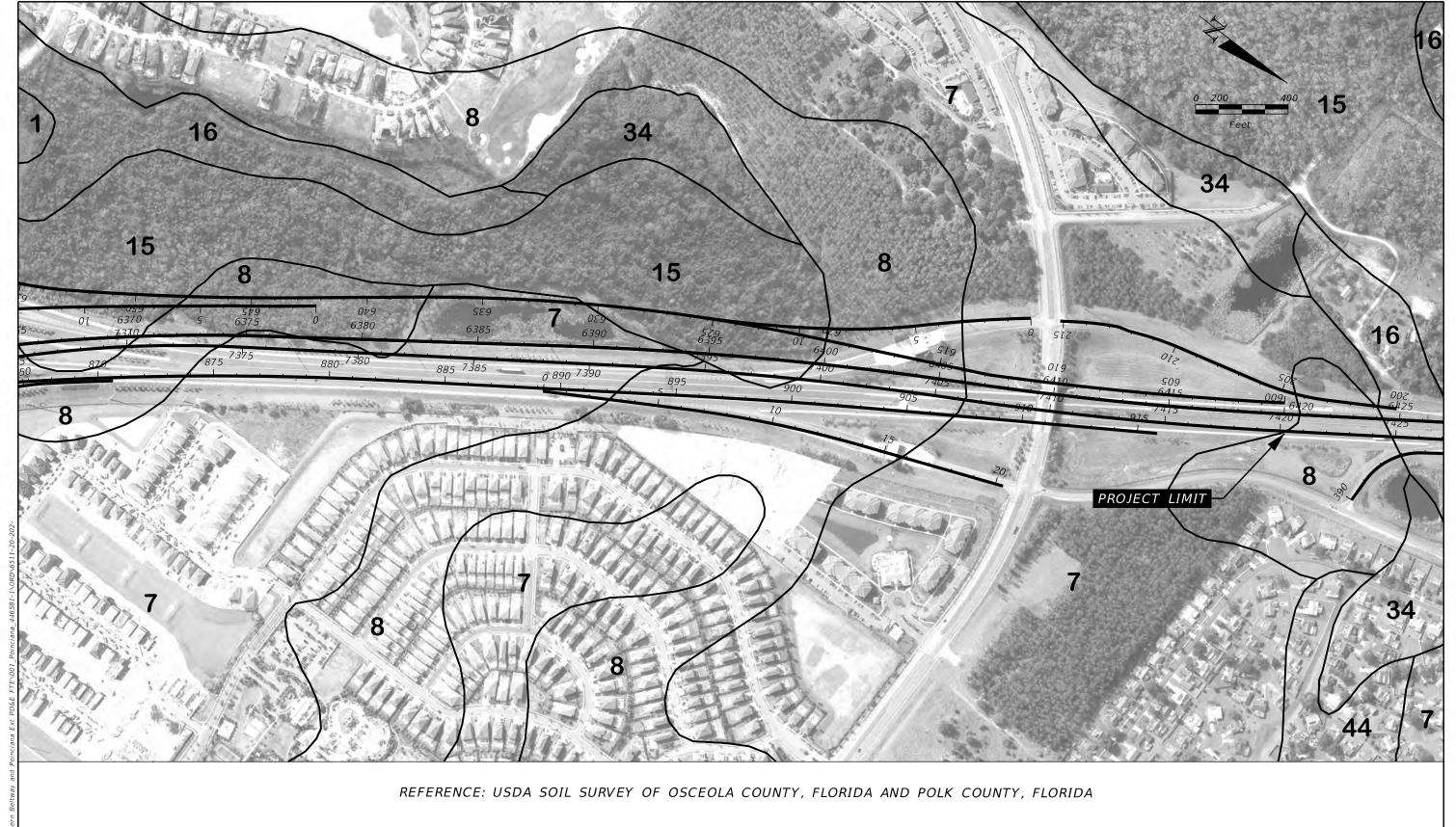
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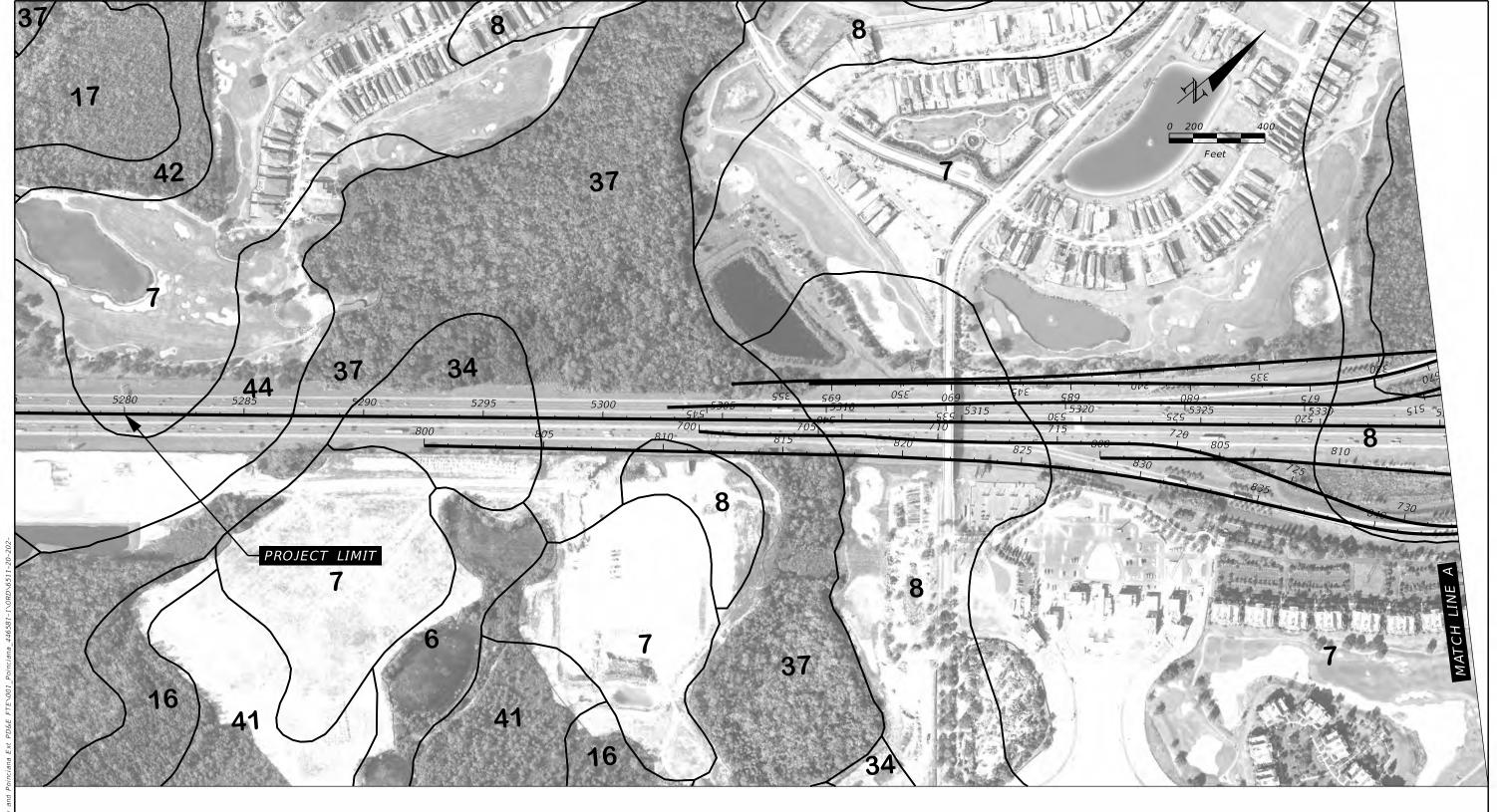
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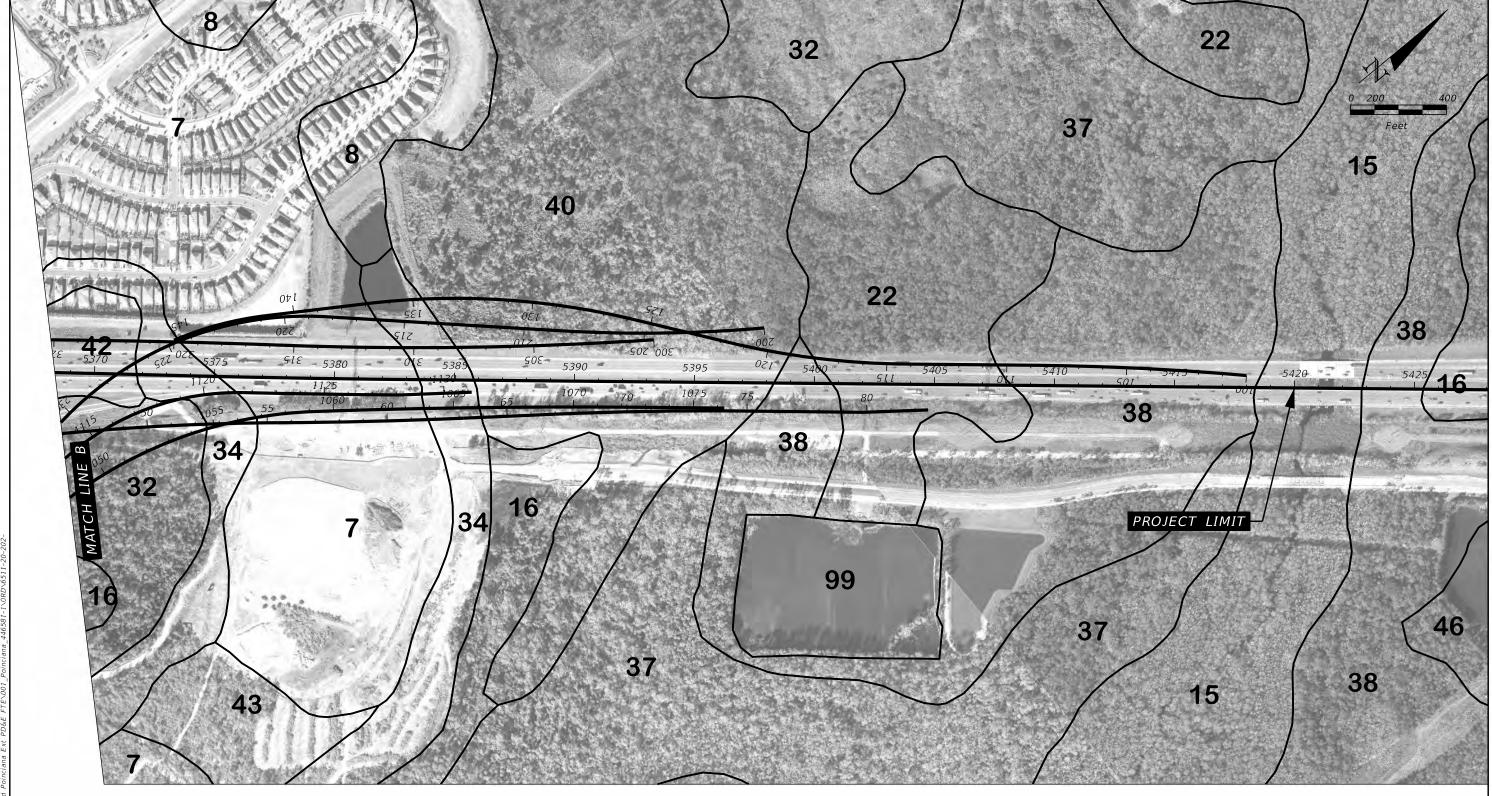


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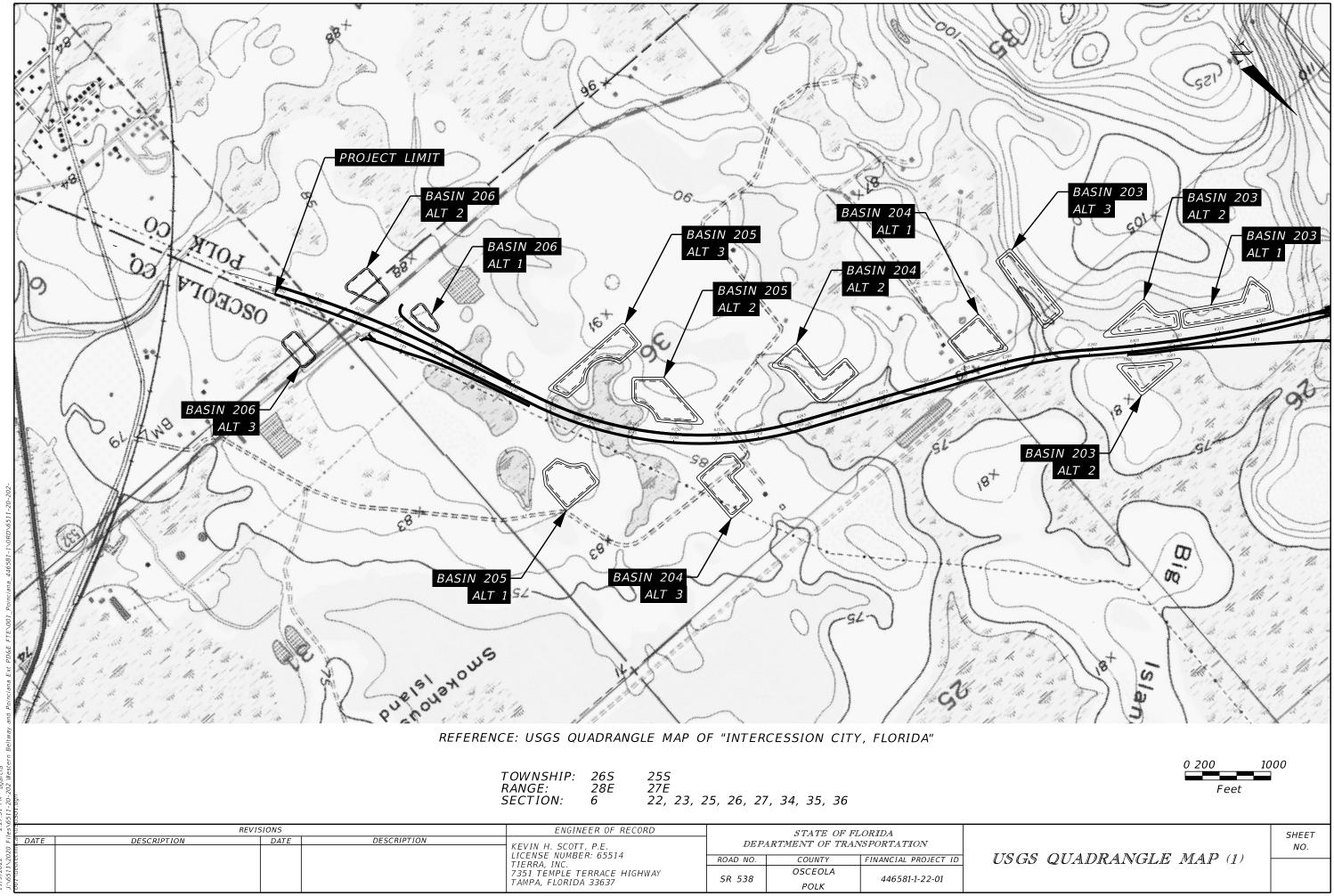
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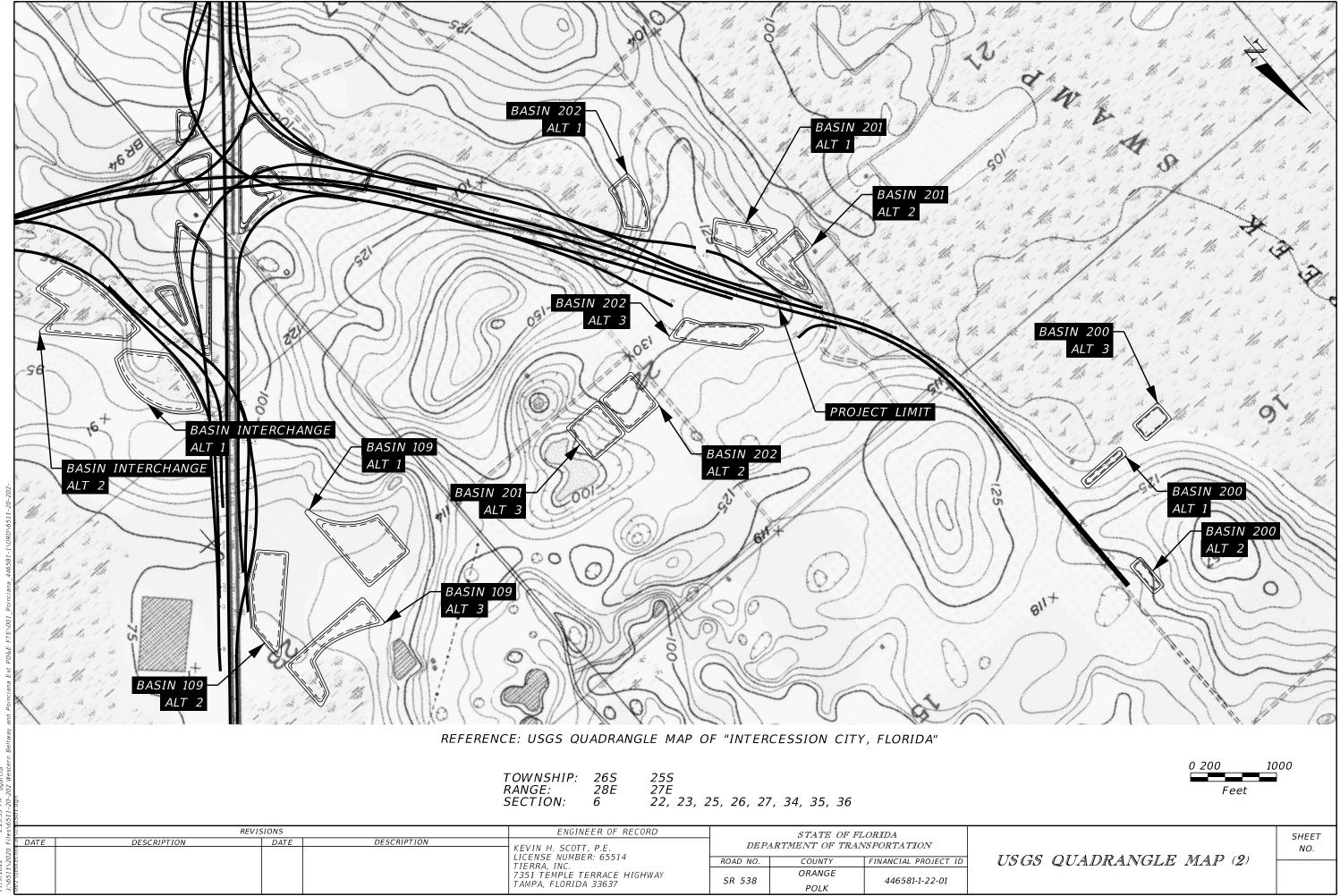
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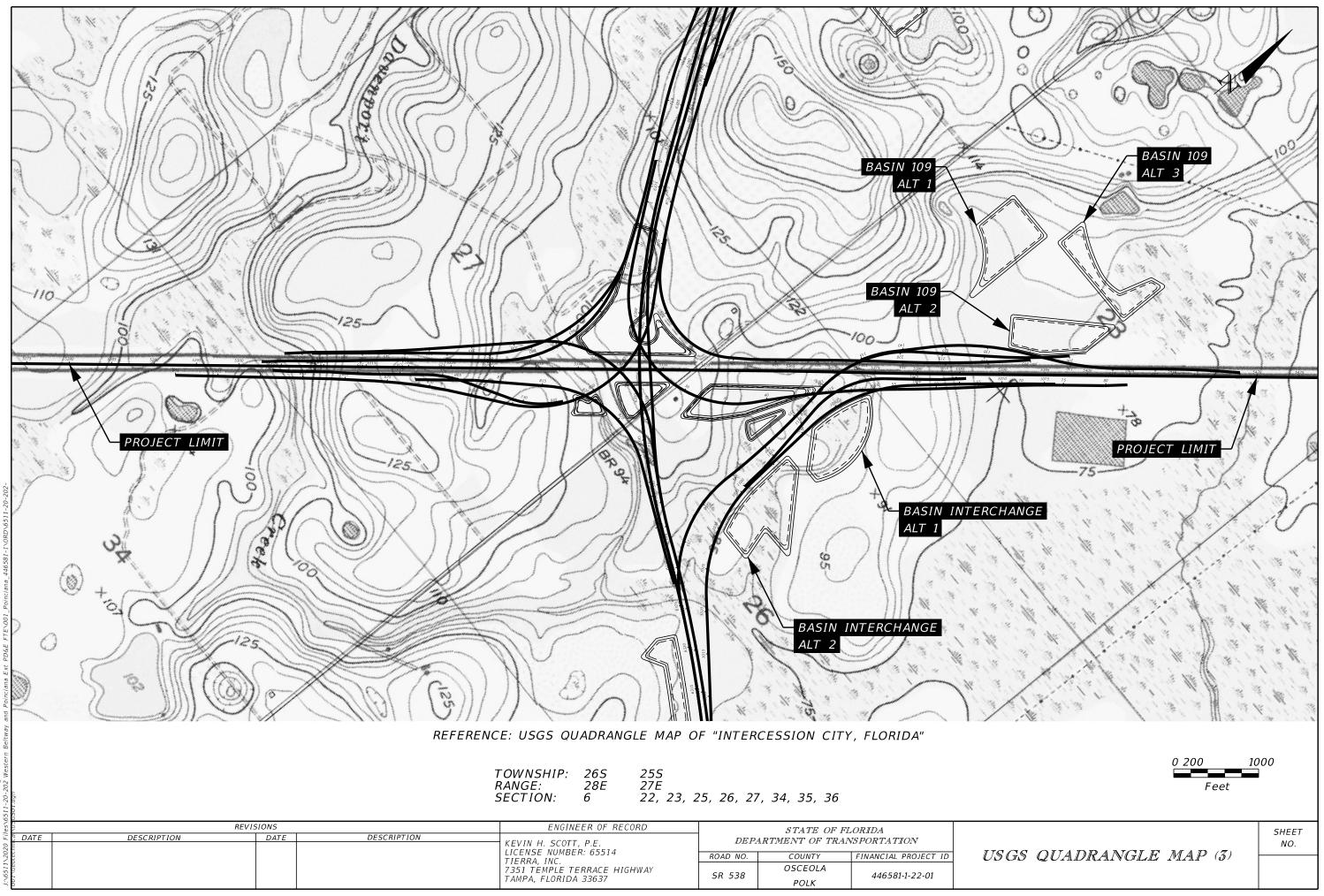
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APPENDIX B

Roadway Soil Survey

Roadway Boring Location Plan

Roadway Soil Profiles

Pond Soil Survey Sheets

Boring Locations Table – Latitude and Longitude

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION MATERIALS AND RESEARCH

FINANCIAL PROJECT ID: 446581-1-22-01

DISTRICT: TURNPIKE ROAD NO.: SR 538

COUNTY: OSCEOLA & POLK

PROJECT NAME: POINCIANA PARKWAY EXTENSION (SR 538 FROM SOUTH OF CR 532 TO THE SINCLAIR ROAD/SR 429 INTERCHANGE)

CROSS SECTION SOIL SURVEY FOR THE DESIGN OF ROADS

SURVEY BEGINS STA.: 6200+00 SURVEY ENDS STA.: 6474+00 REFERENCE: SB SR 538 EXTENSION SURVEY BEGINS STA.: 7200+00 SURVEY ENDS STA.: 7374+00 REFERENCE: NB SR 538 EXTENSION

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3					1					17				A-2-4	LIGHT GRAY TO PALE ORANGE SILTY SAND					

NOTES:

EMBANKMENT AND SUBGRADE MATERIAL

1. THE MATERIAL FROM STRATUM 1 (A-3) APPEARS SATISFACTORY FOR USE IN THE EMBANKMENT WHEN UTILIZED IN ACCORDANCE WITH STANDARD PLANS, INDEX 120-001.

DATE OF SURVEY: JANUARY 2022 TO OCTOBER 2022

KEVIN H. SCOTT, P.E.

SURVEY MADE BY: TIERRA, INC.

SUBMITTED BY:

- THE MATERIAL FROM STRATUM 2 (A-8) IS MUCK MATERIAL AND SHALL BE REMOVED IN ACCORDANCE WITH STANDARD PLANS, INDEX 120-002 AND UTILIZED IN ACCORDANCE WITH STANDARD PLANS, INDEX 12-001.
- THE MATERIAL FROM STRATUM 3 (A-2-4) APPEARS SATISFACTORY FOR USE IN THE EMBANKMENT WHEN UTILIZED IN ACCORDANCE WITH STANDARD PLANS, INDEX 120-001. HOWEVER, THIS MATERIAL IS LIKELY TO RETAIN EXCESS MOISTURE AND MAY BE DIFFICULT TO DRY AND COMPACT. IT SHOULD BE USED IN THE EMBANKMENT ABOVE THE WATER LEVEL EXISTING AT THE TIME OF CONSTRUCTION.
- 4. THE "--" INDICATES AN UNMEASURED PARAMETER.

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□ - ESTIMATED SEASONAL HIGH GROUNDWATER TABLE

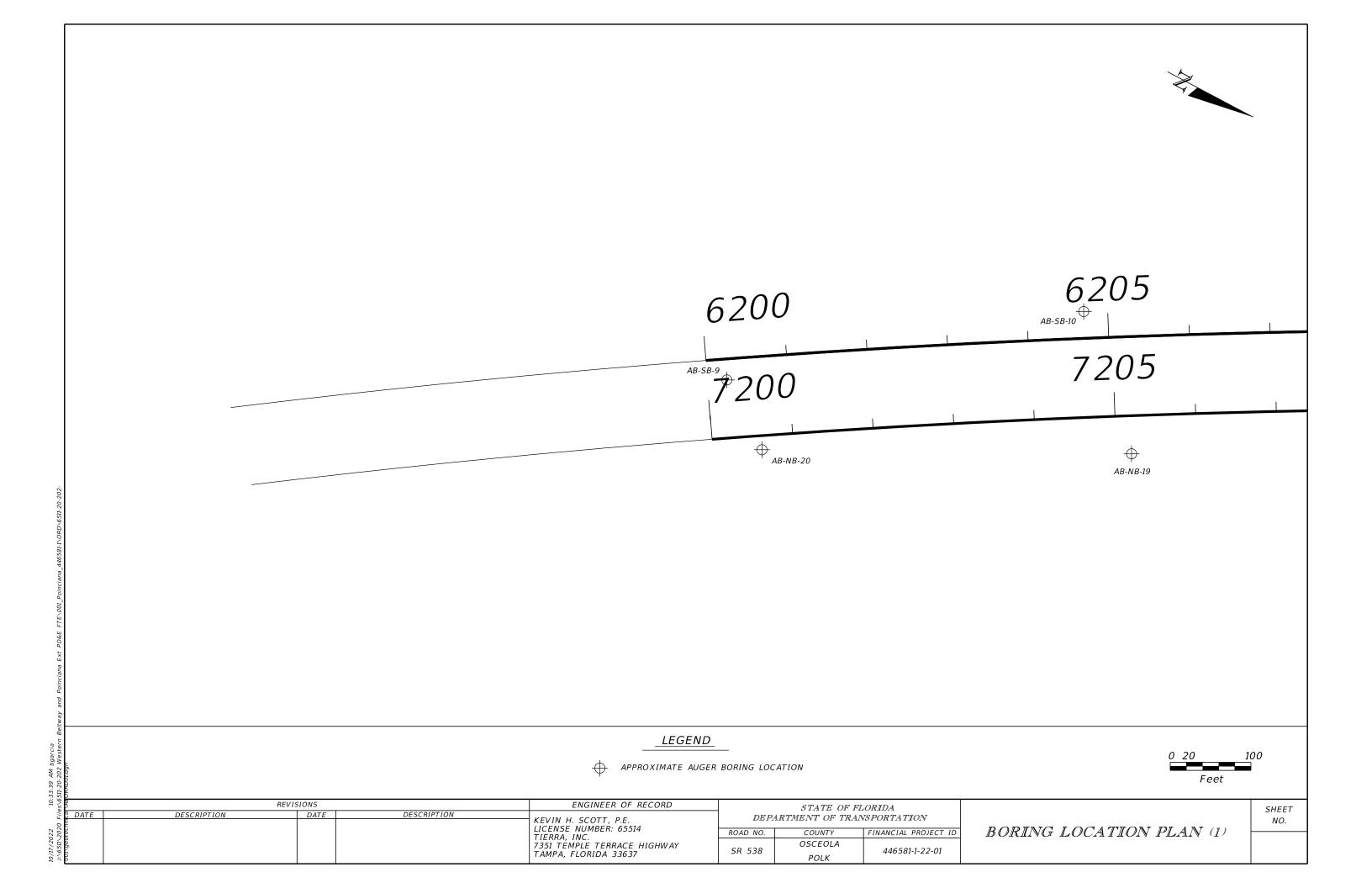
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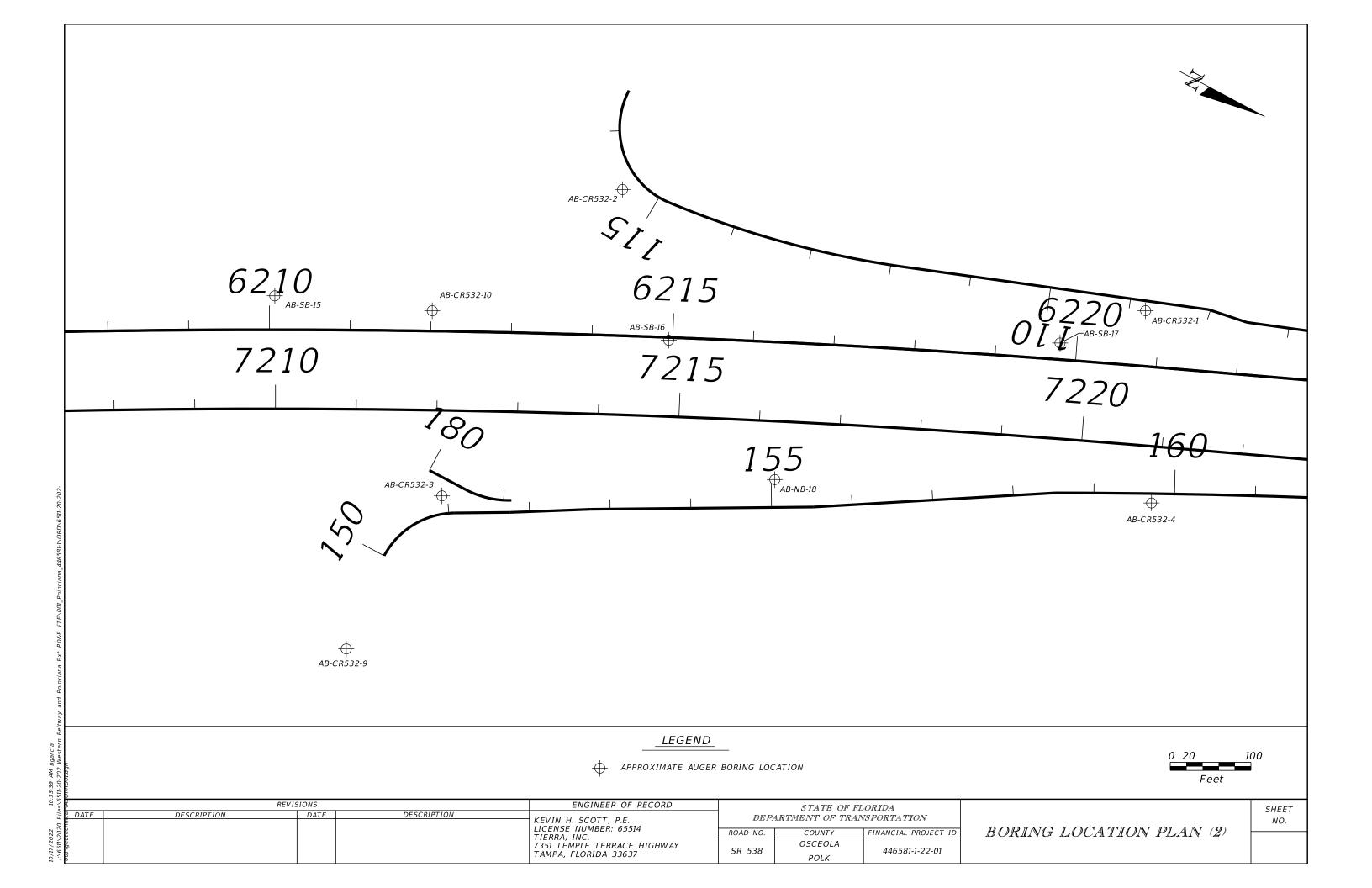
▼ - WATER TABLE ENCOUNTERED

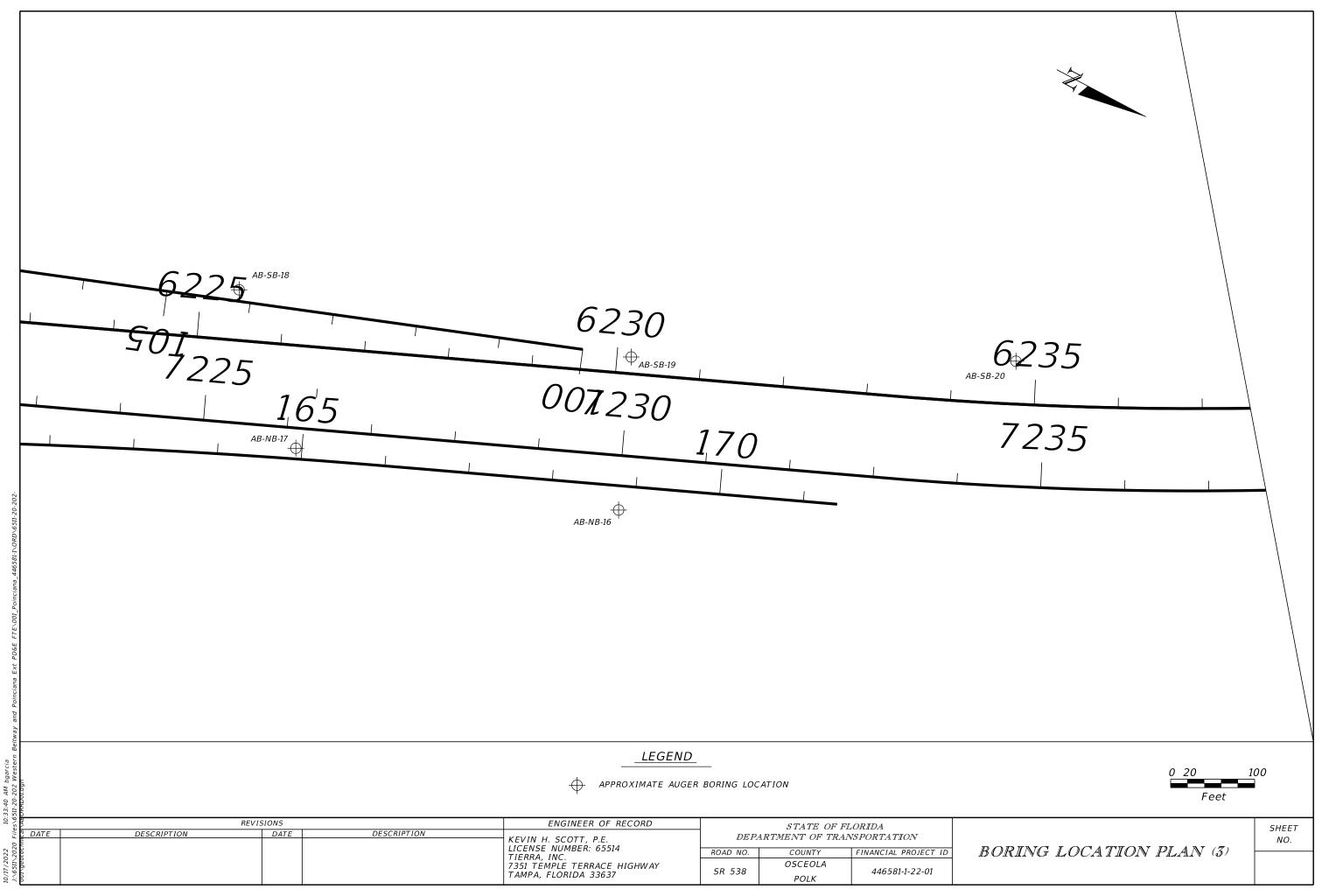
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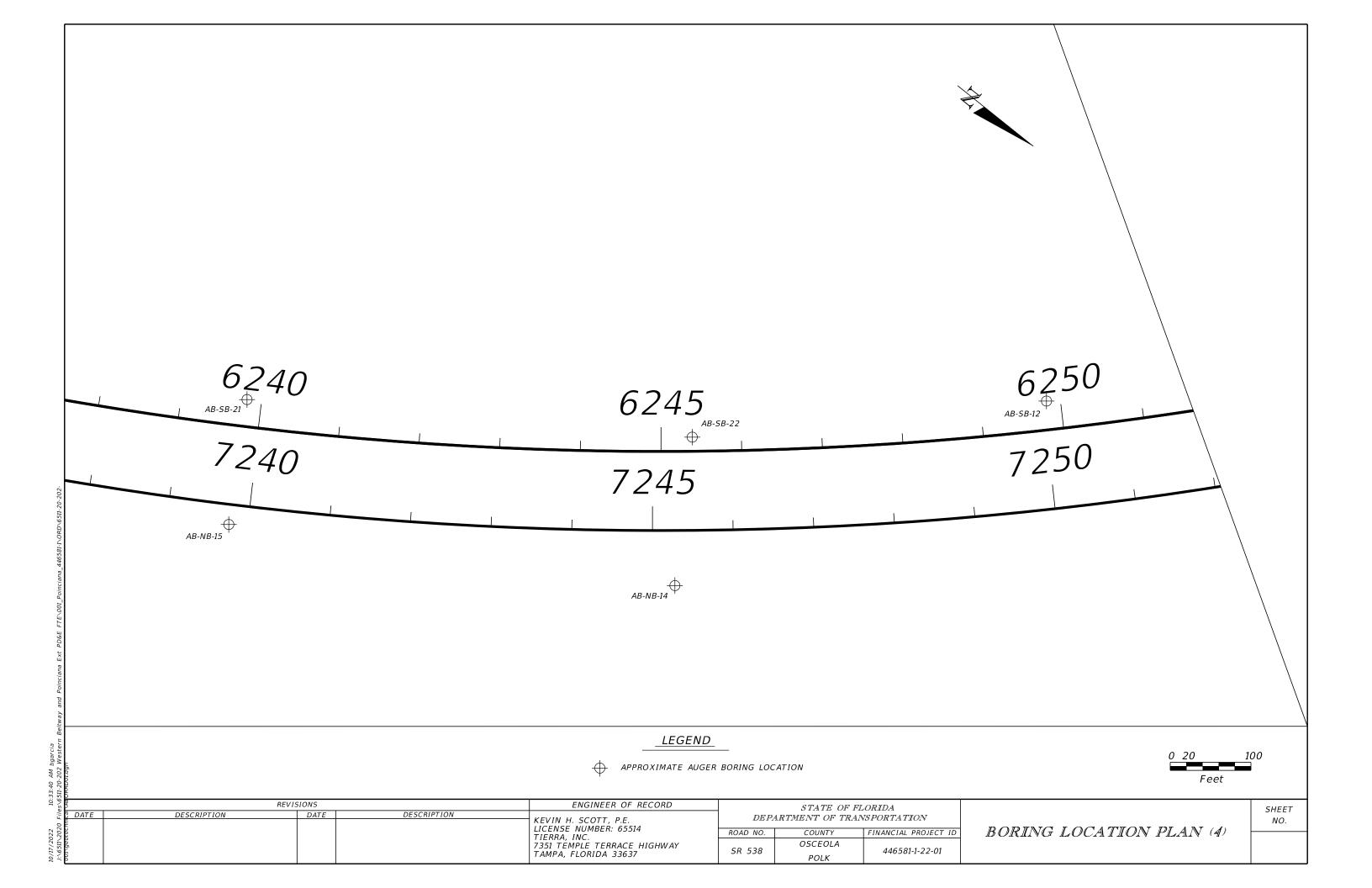
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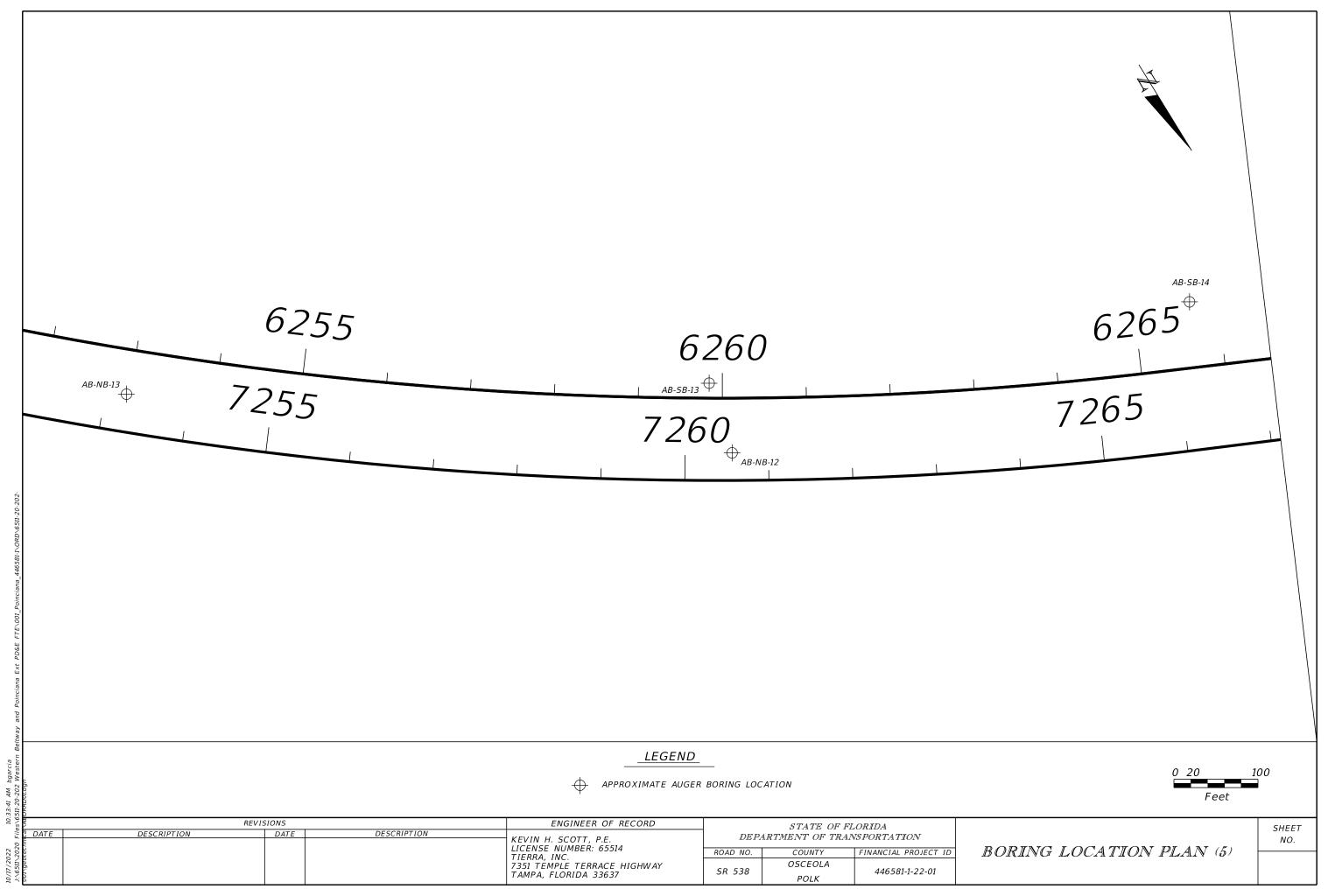
ROADWAY SOIL SURVEY

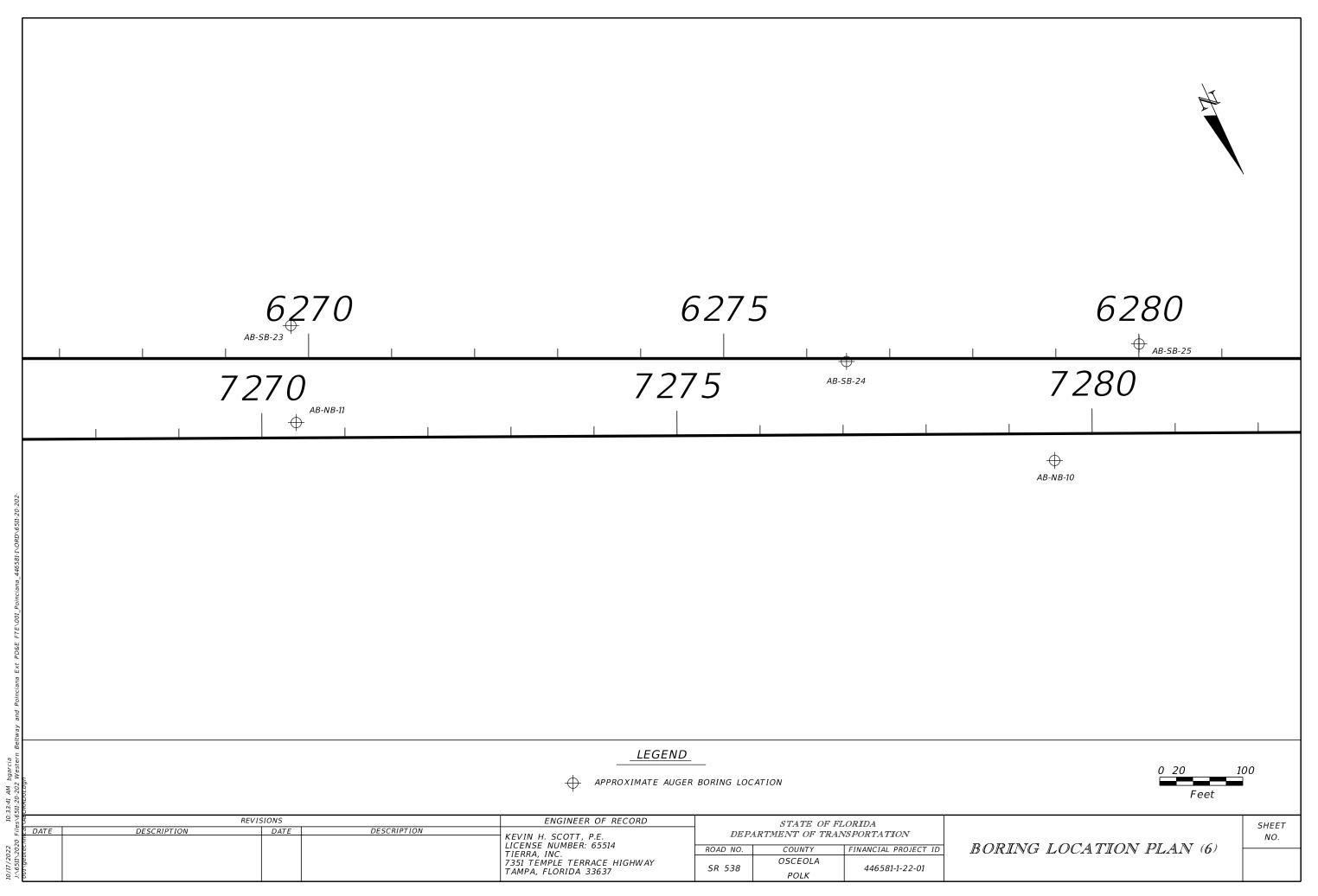


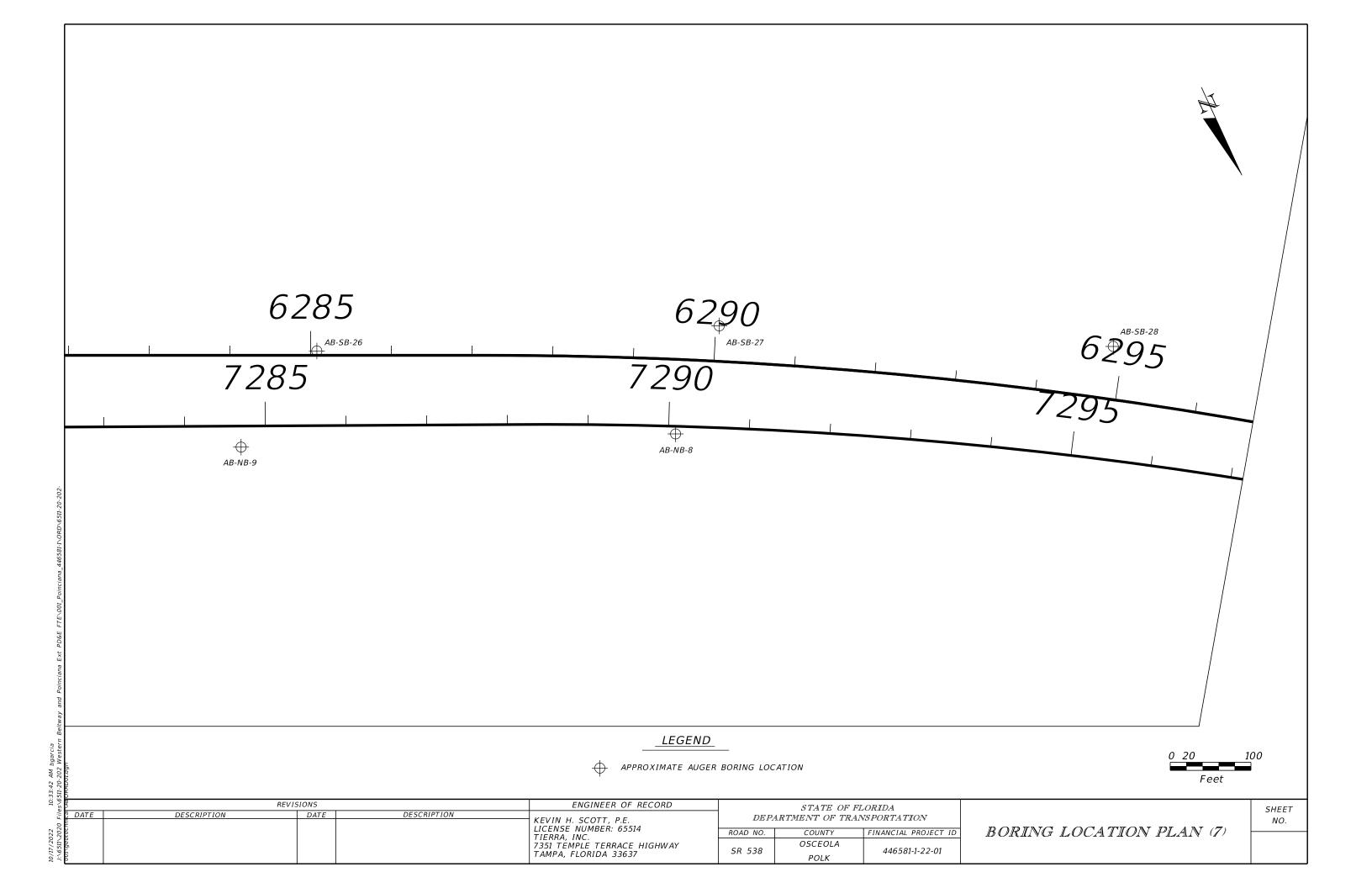


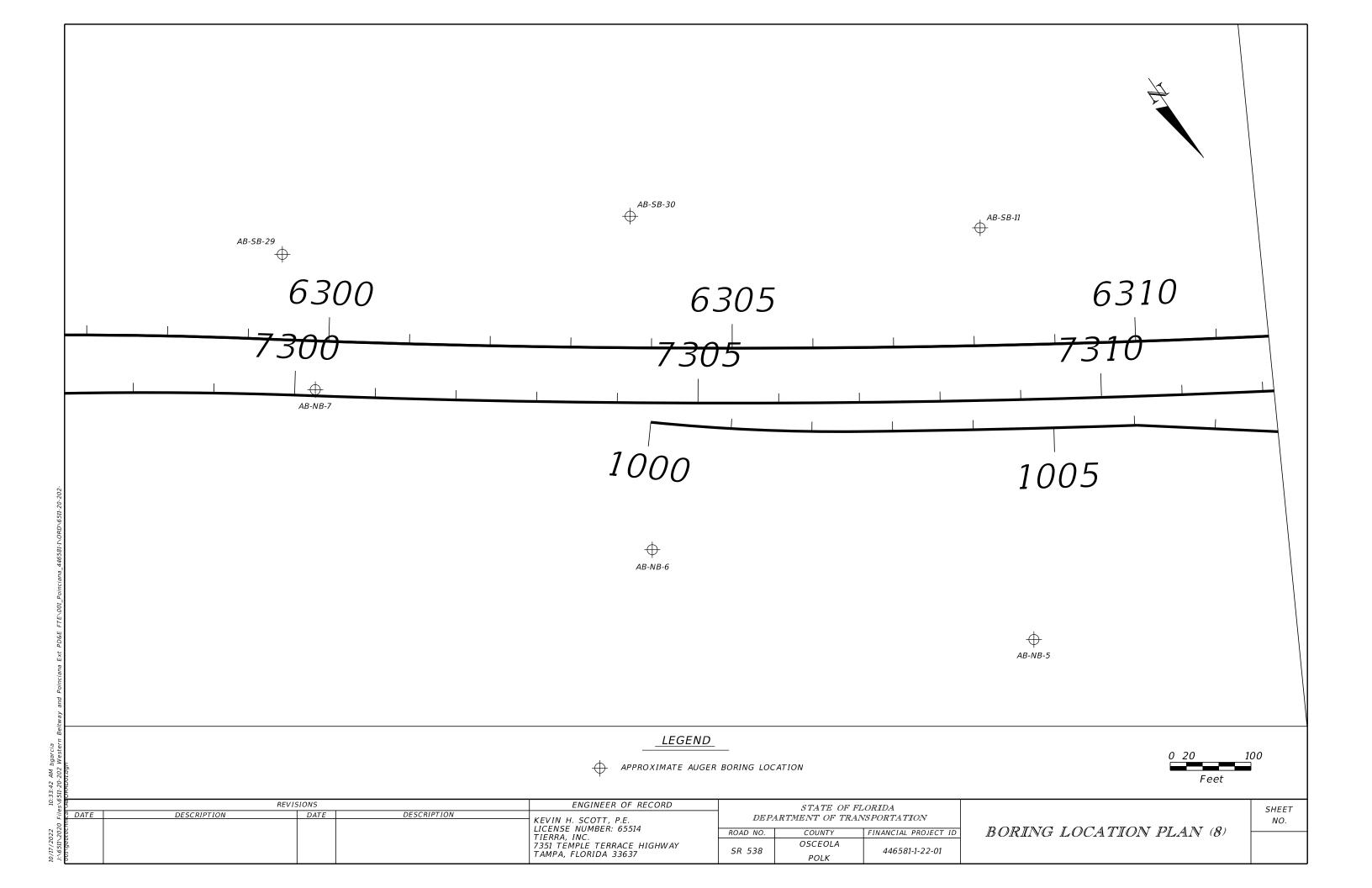


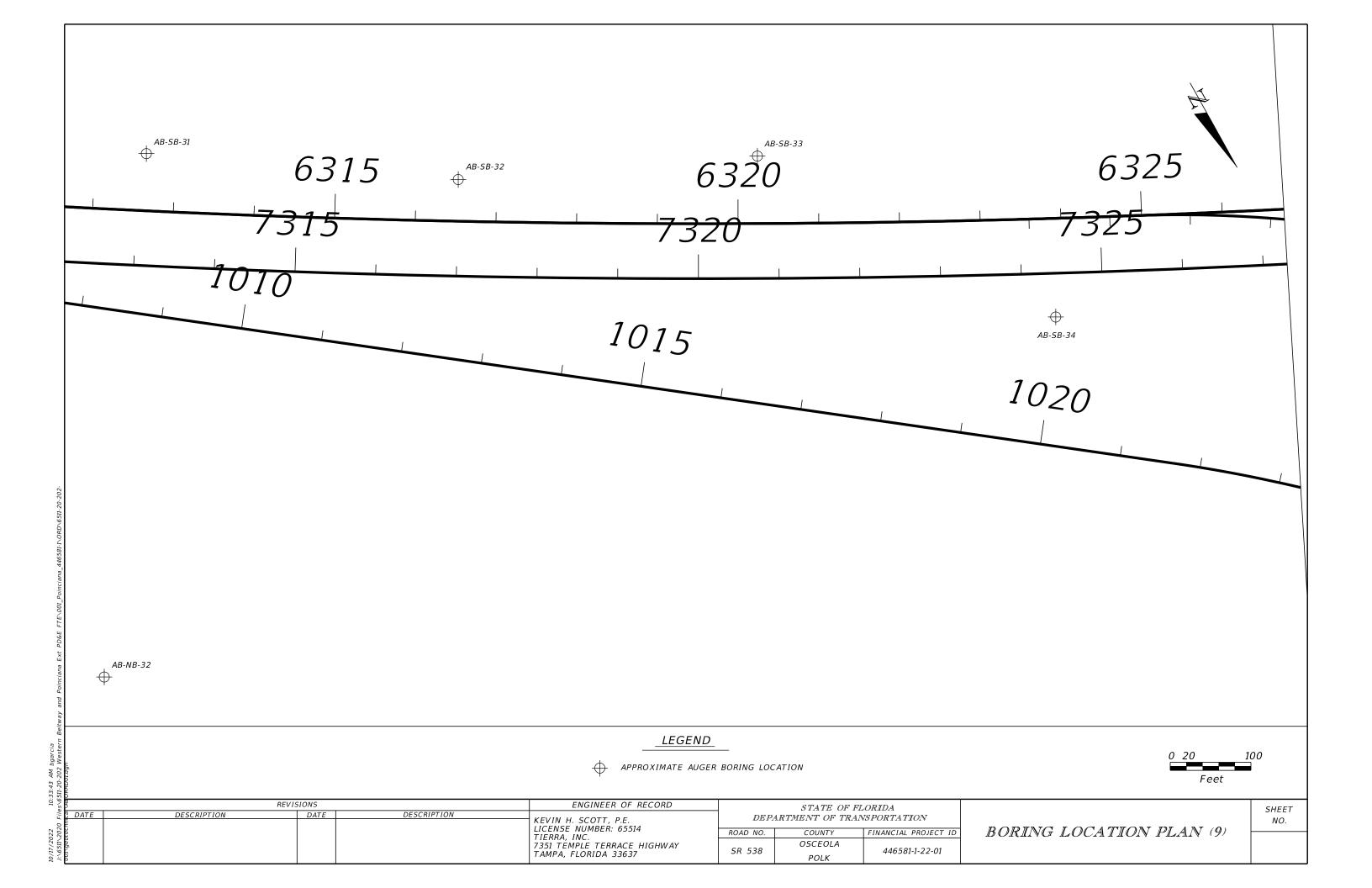


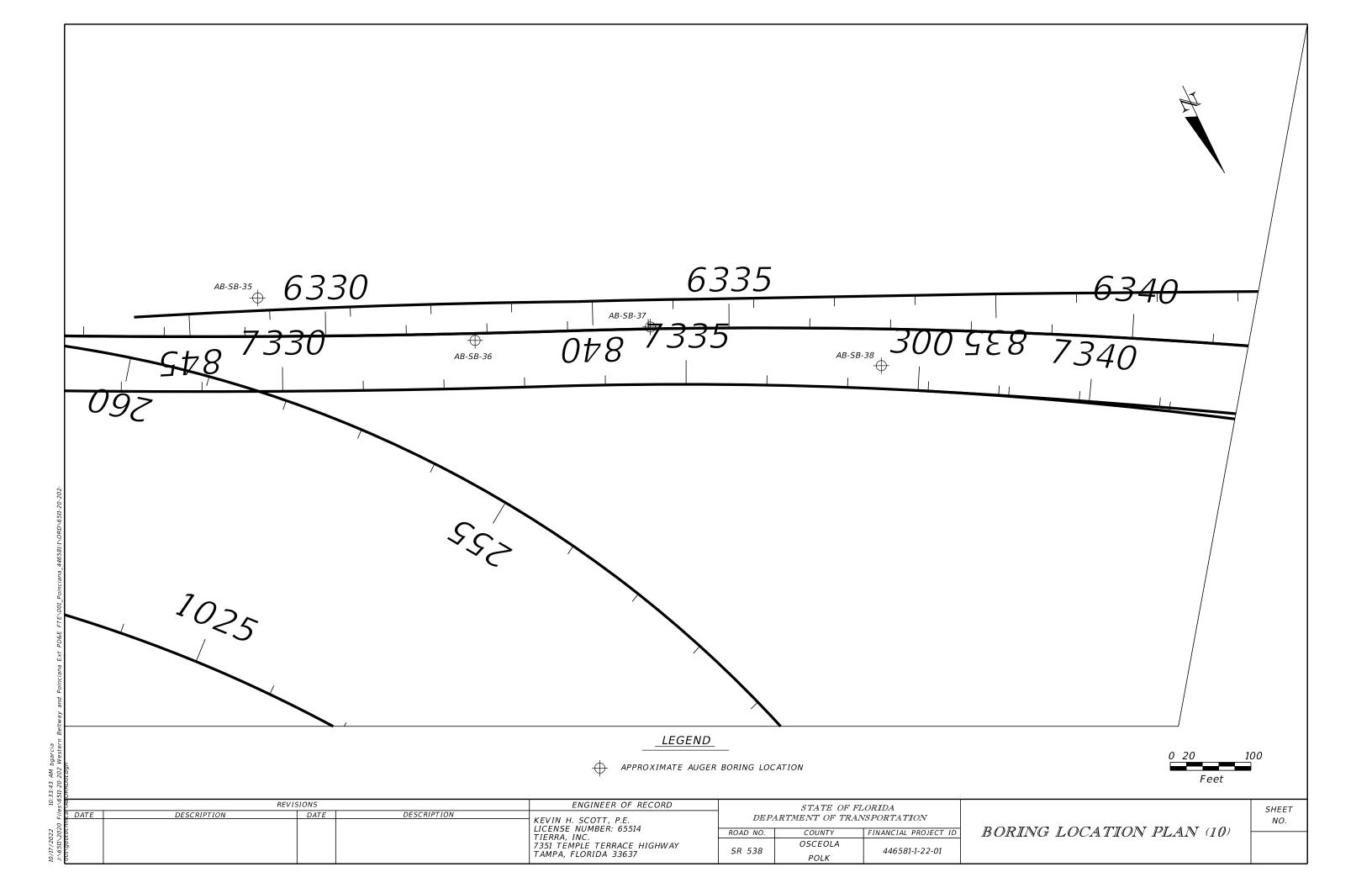


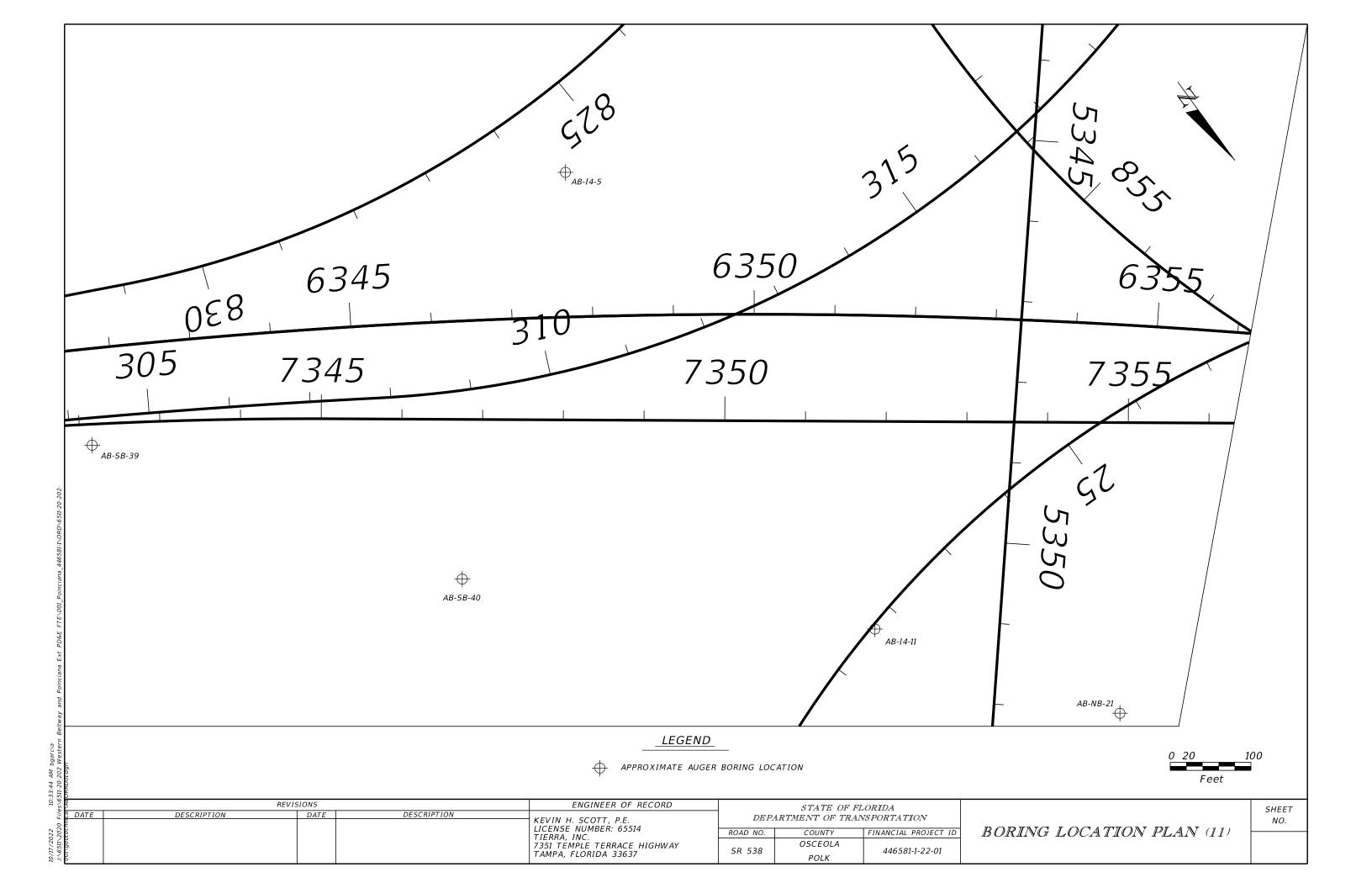


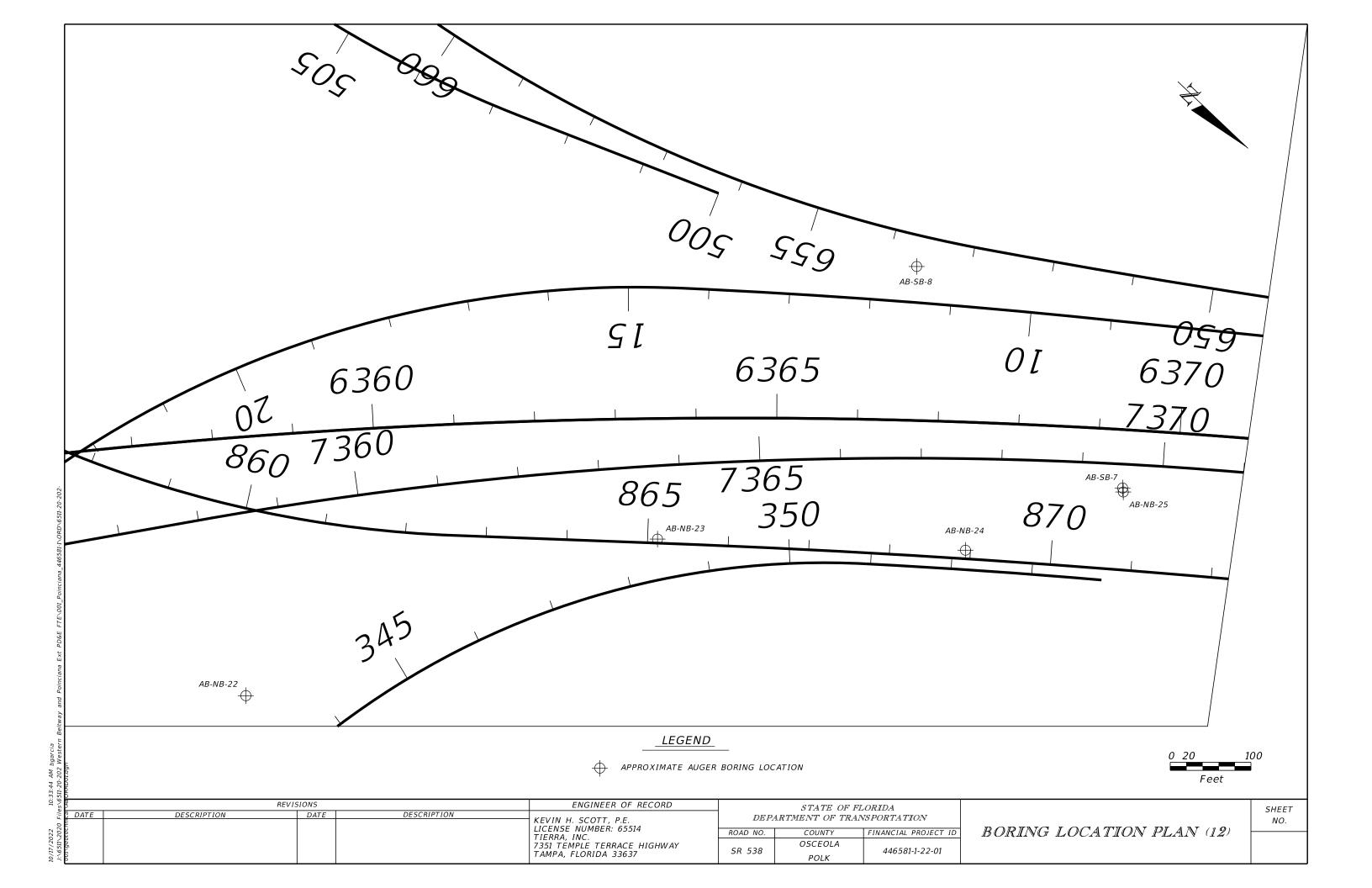


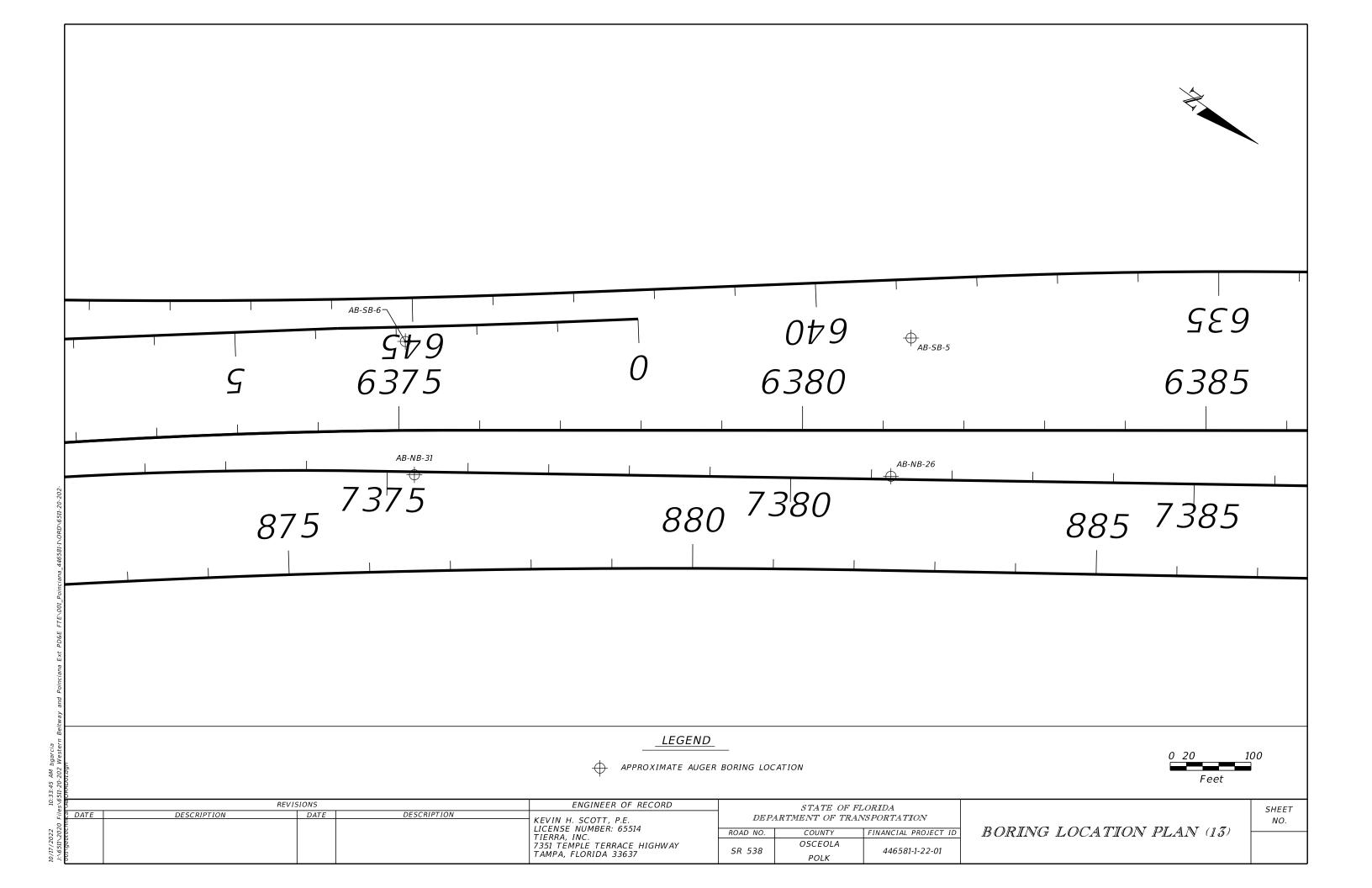


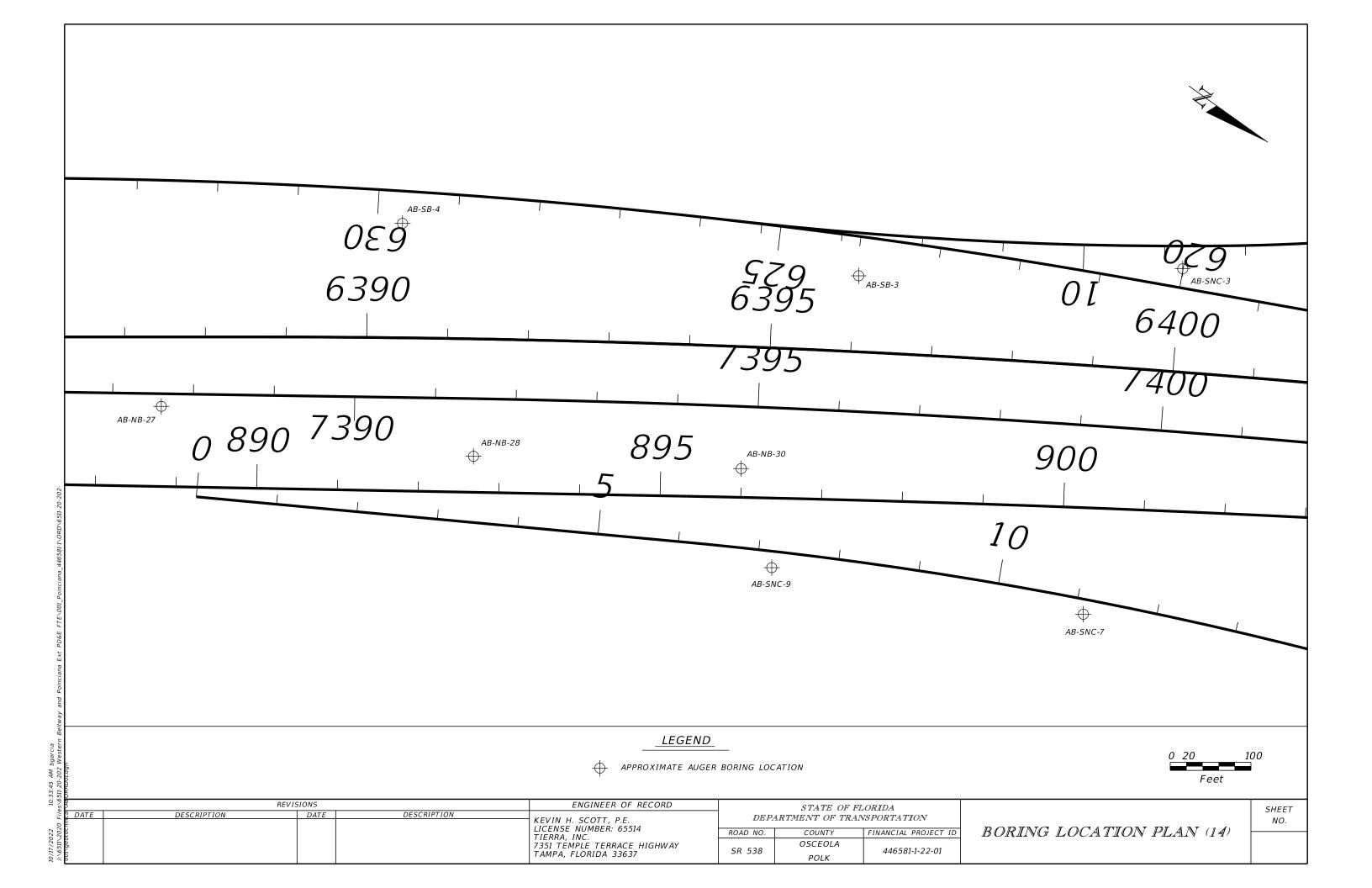


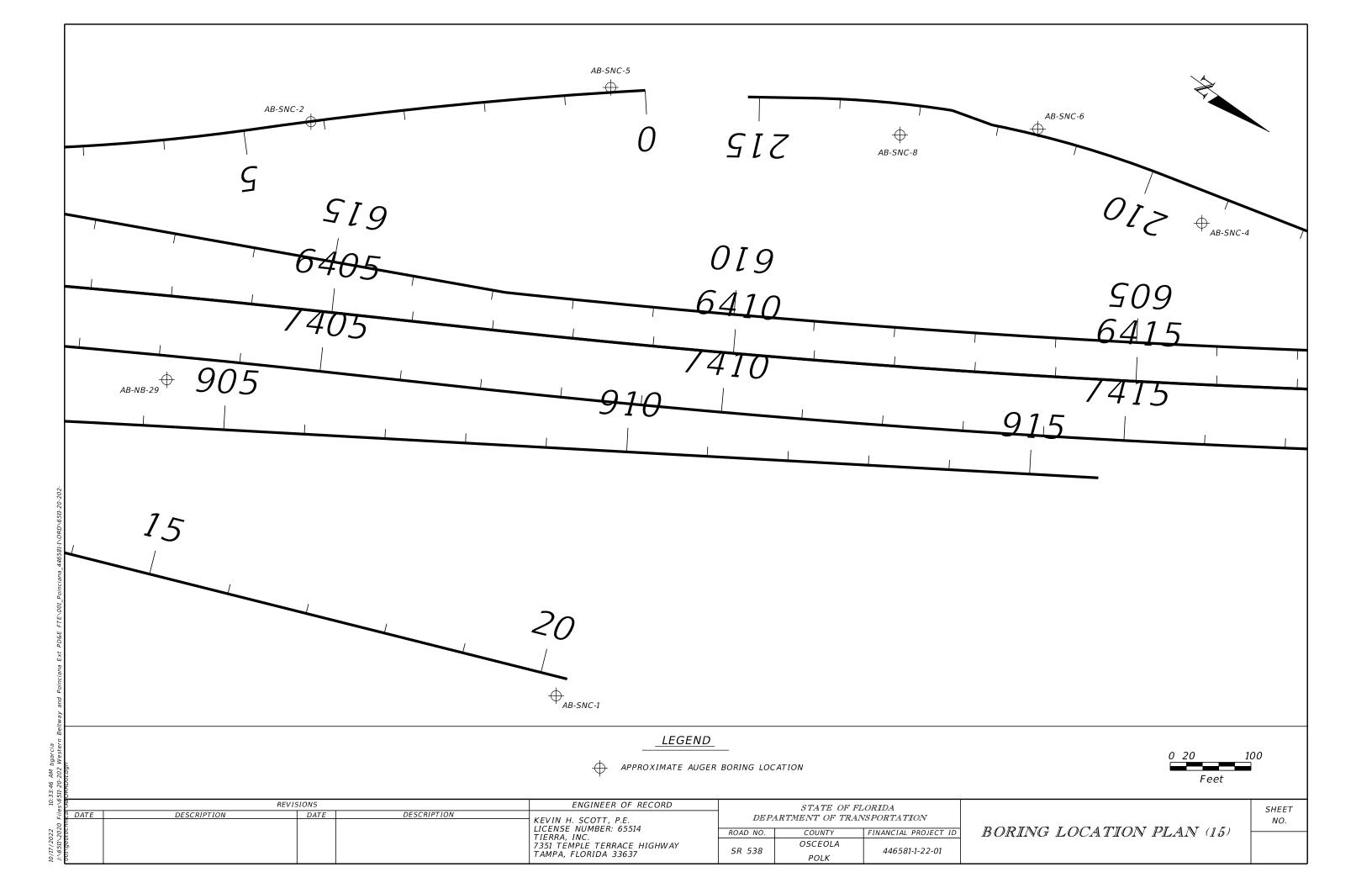


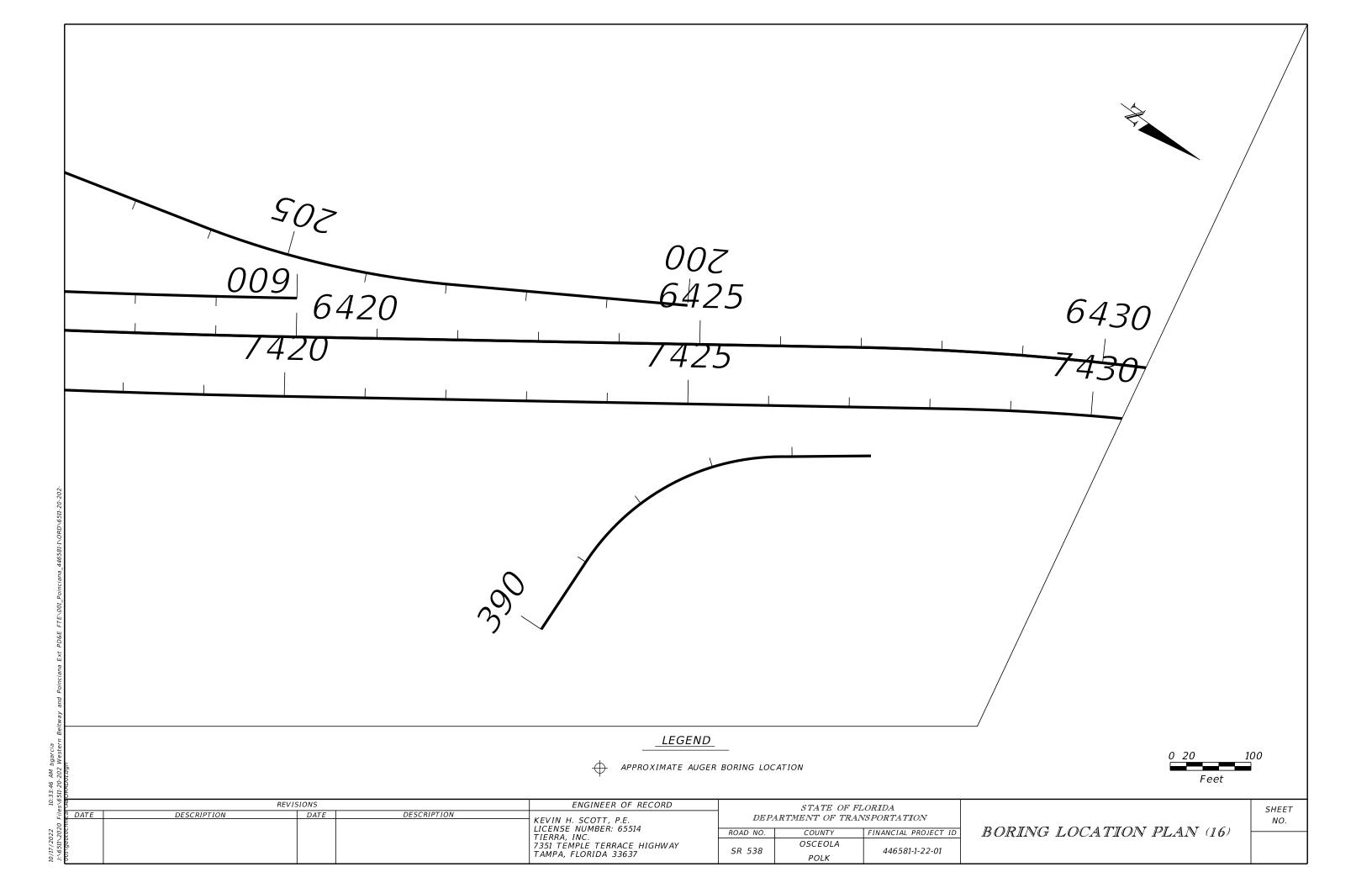


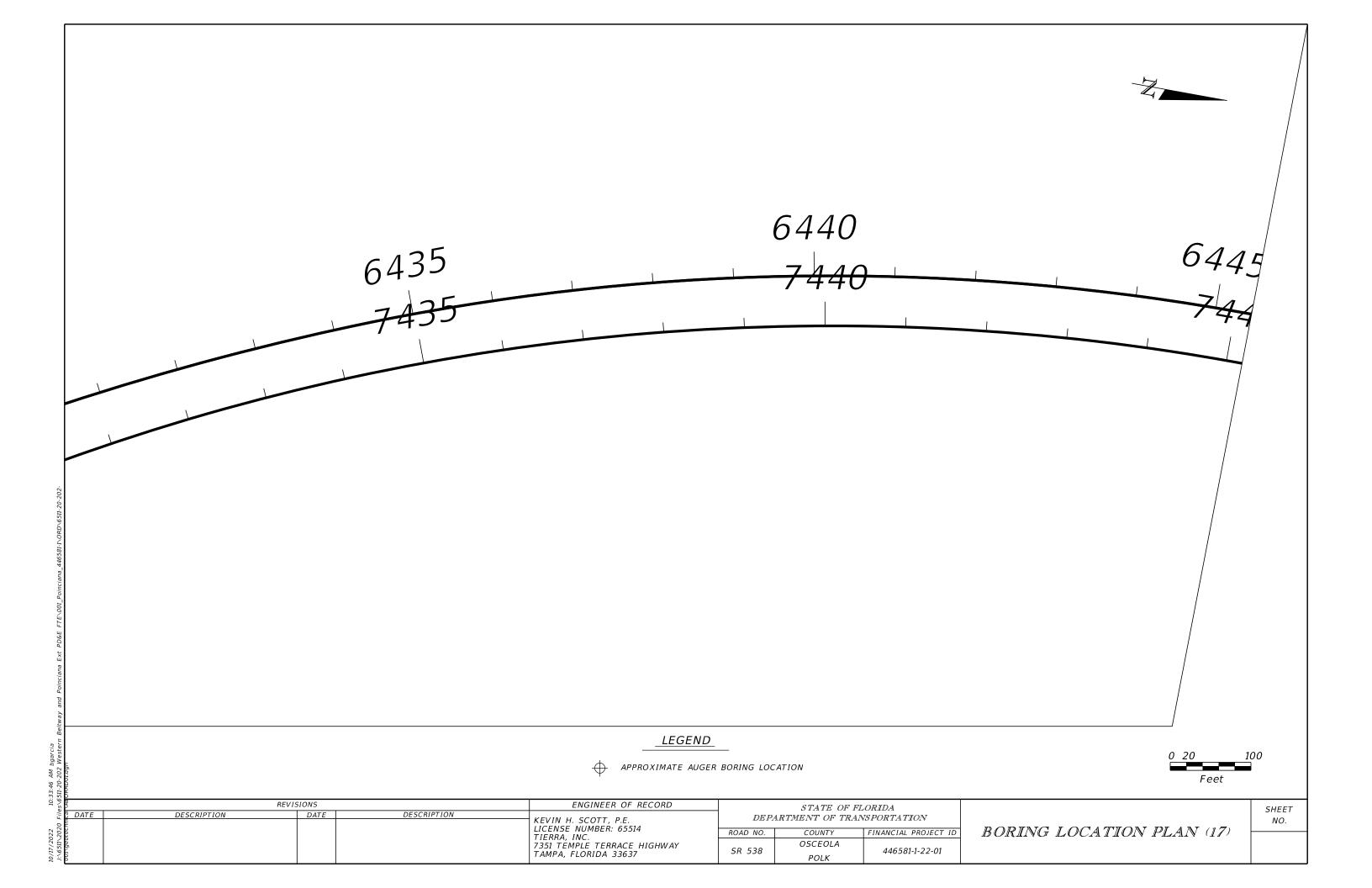


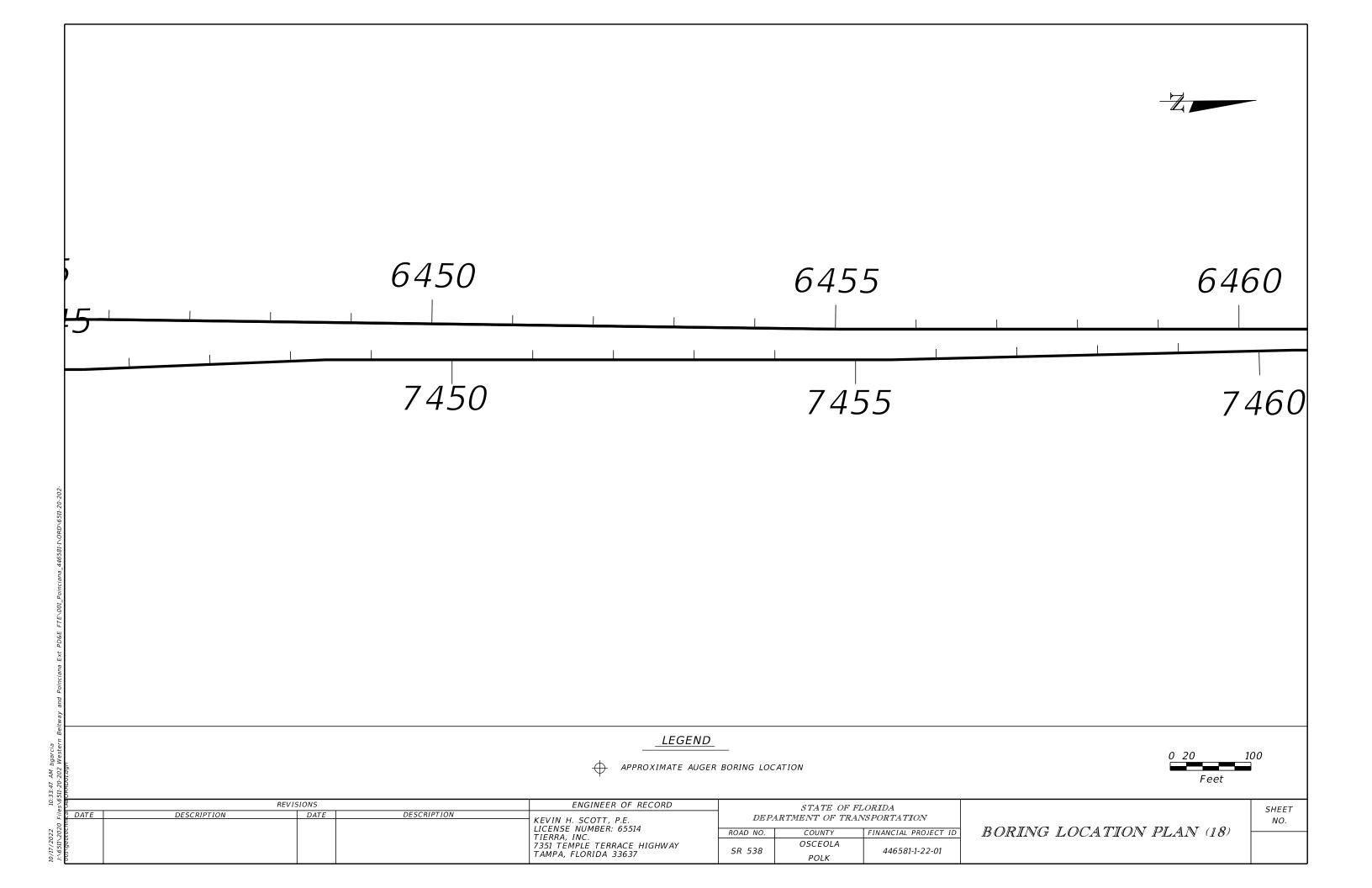


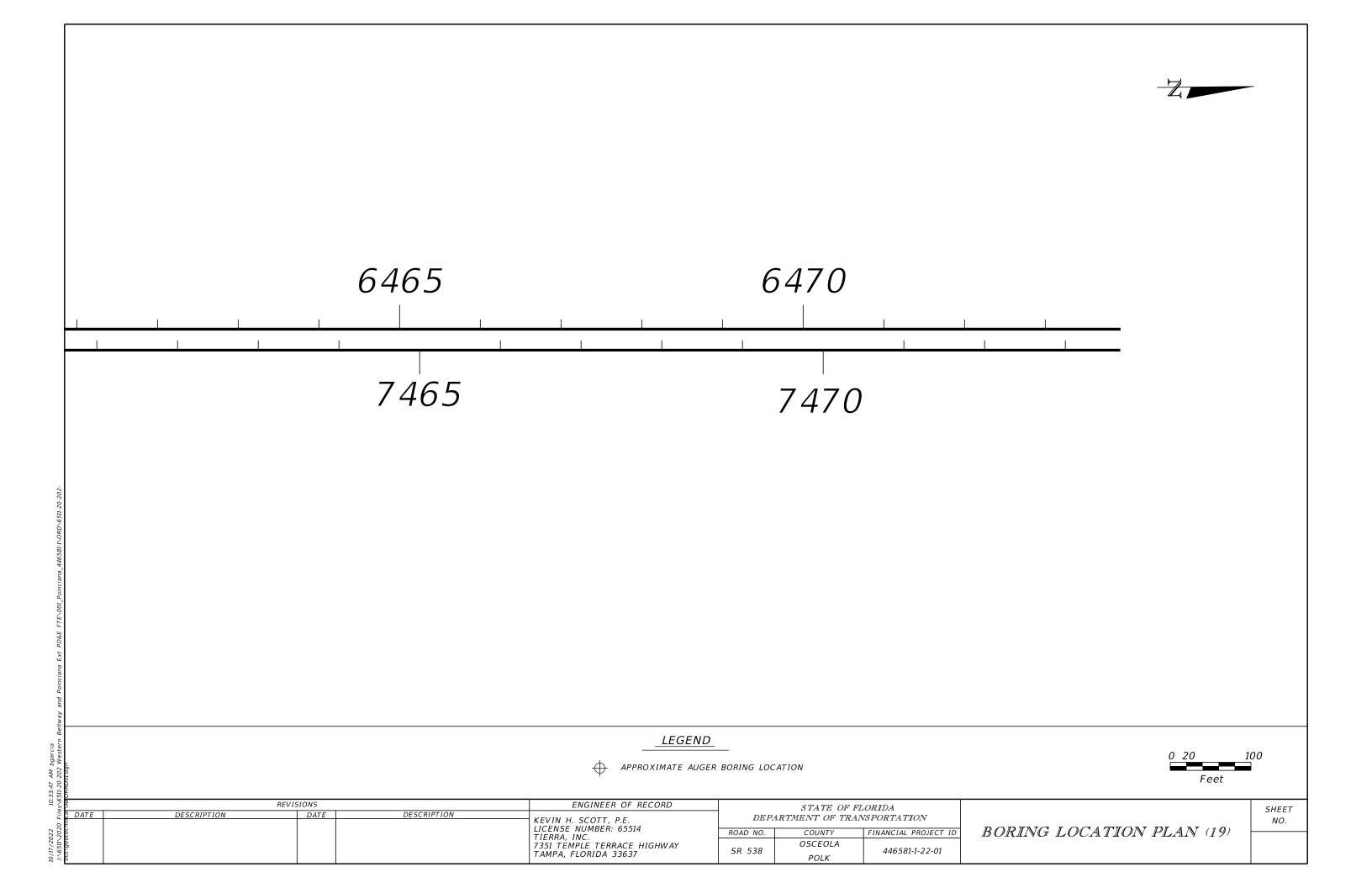


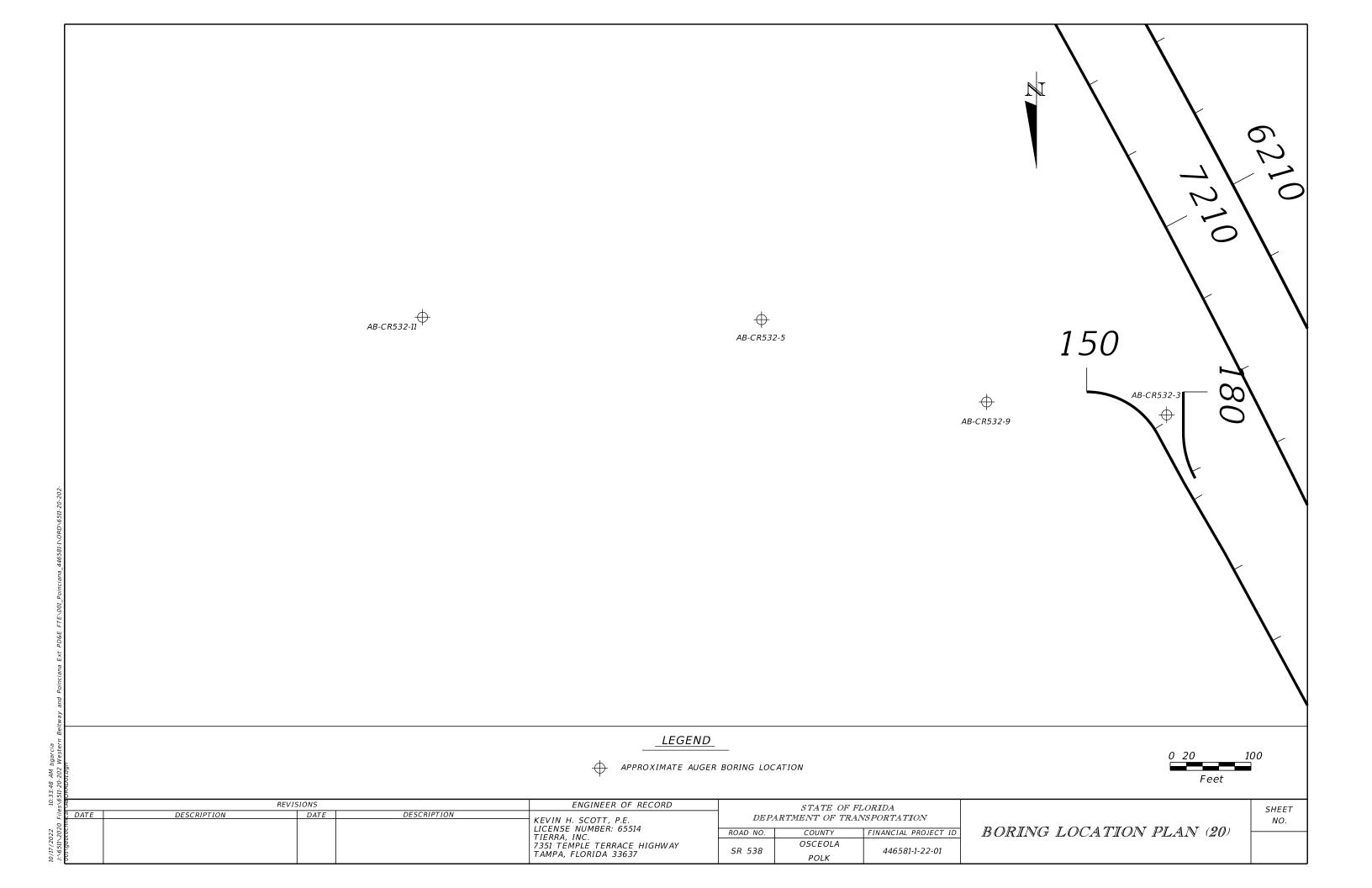


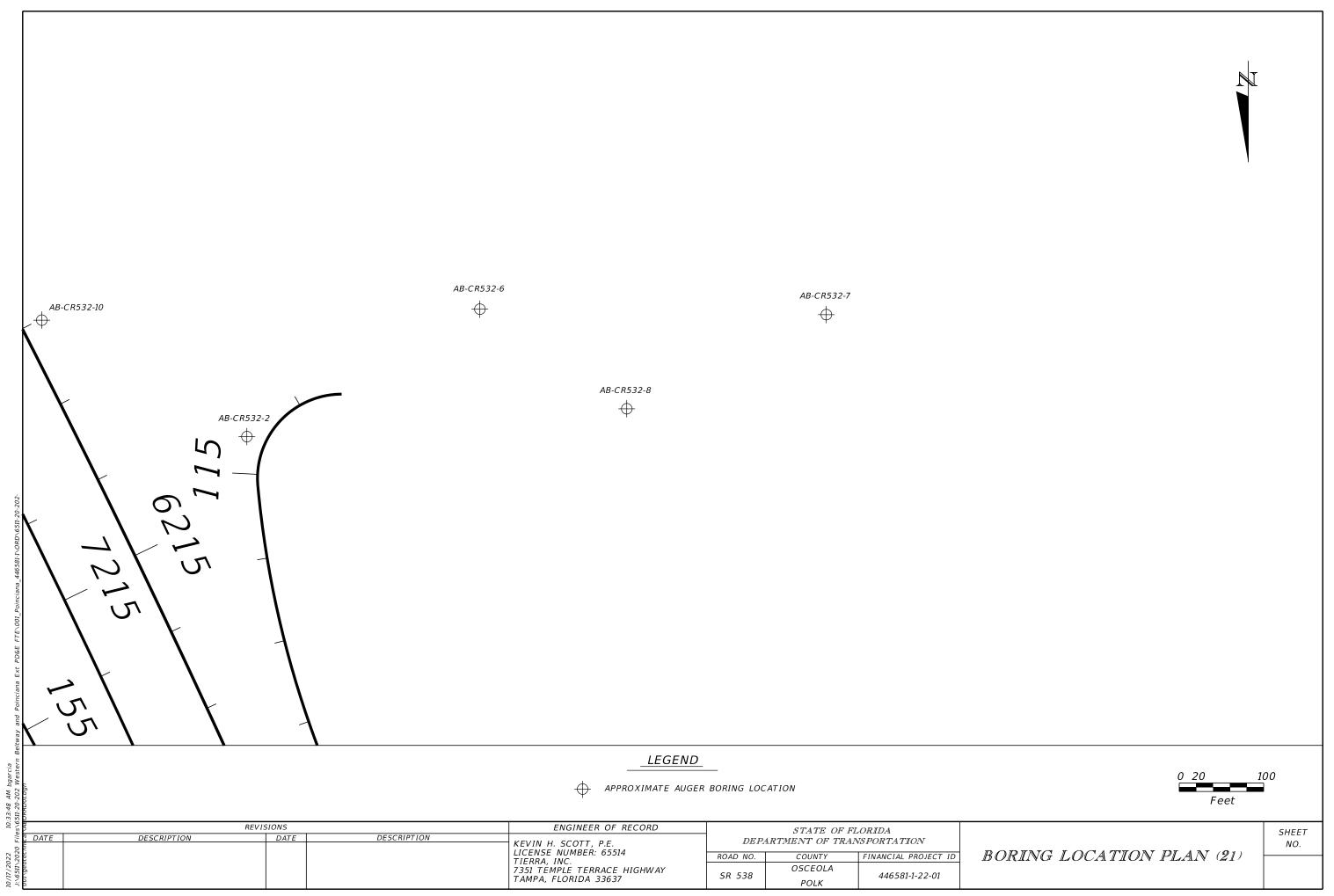


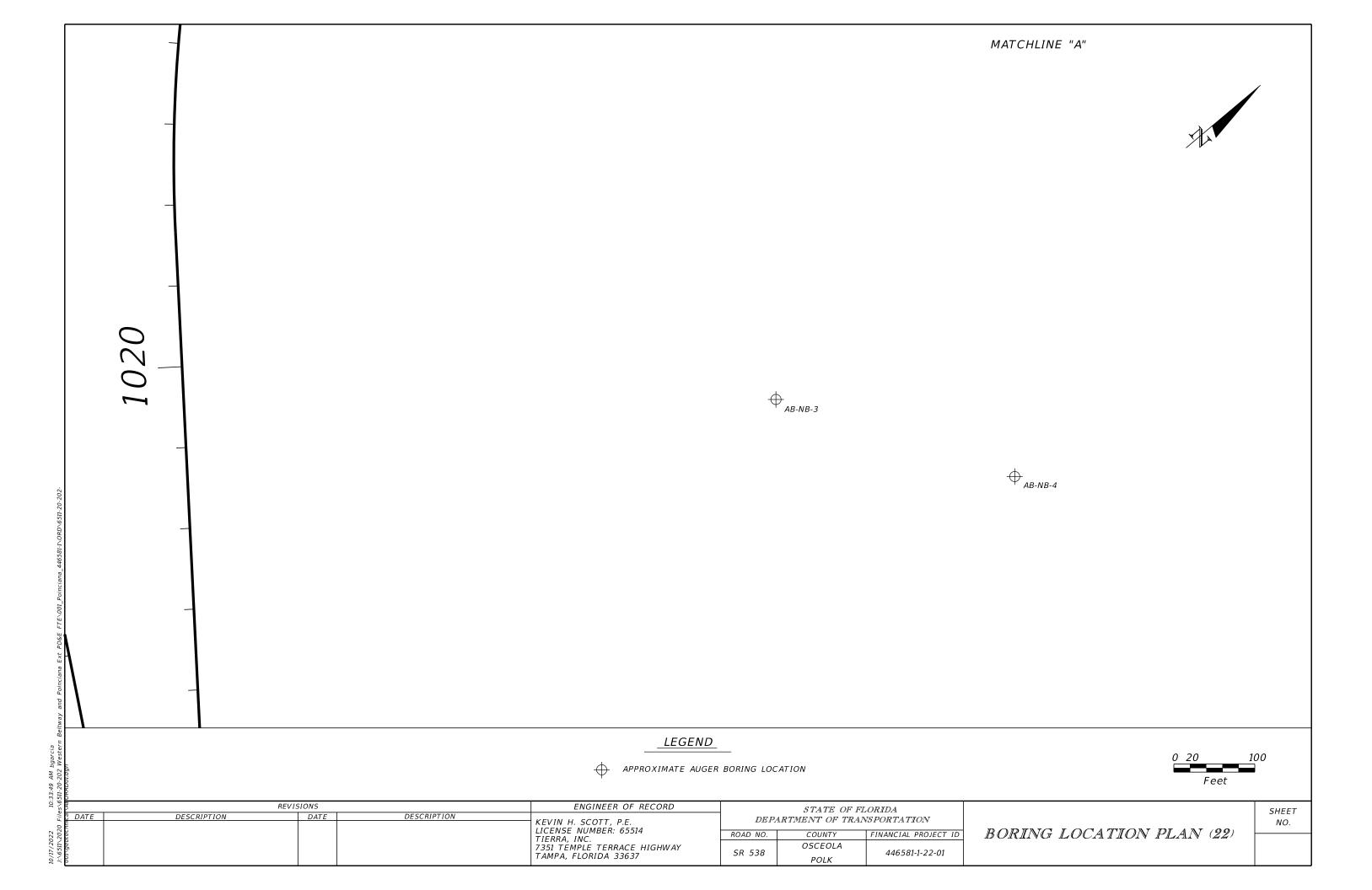


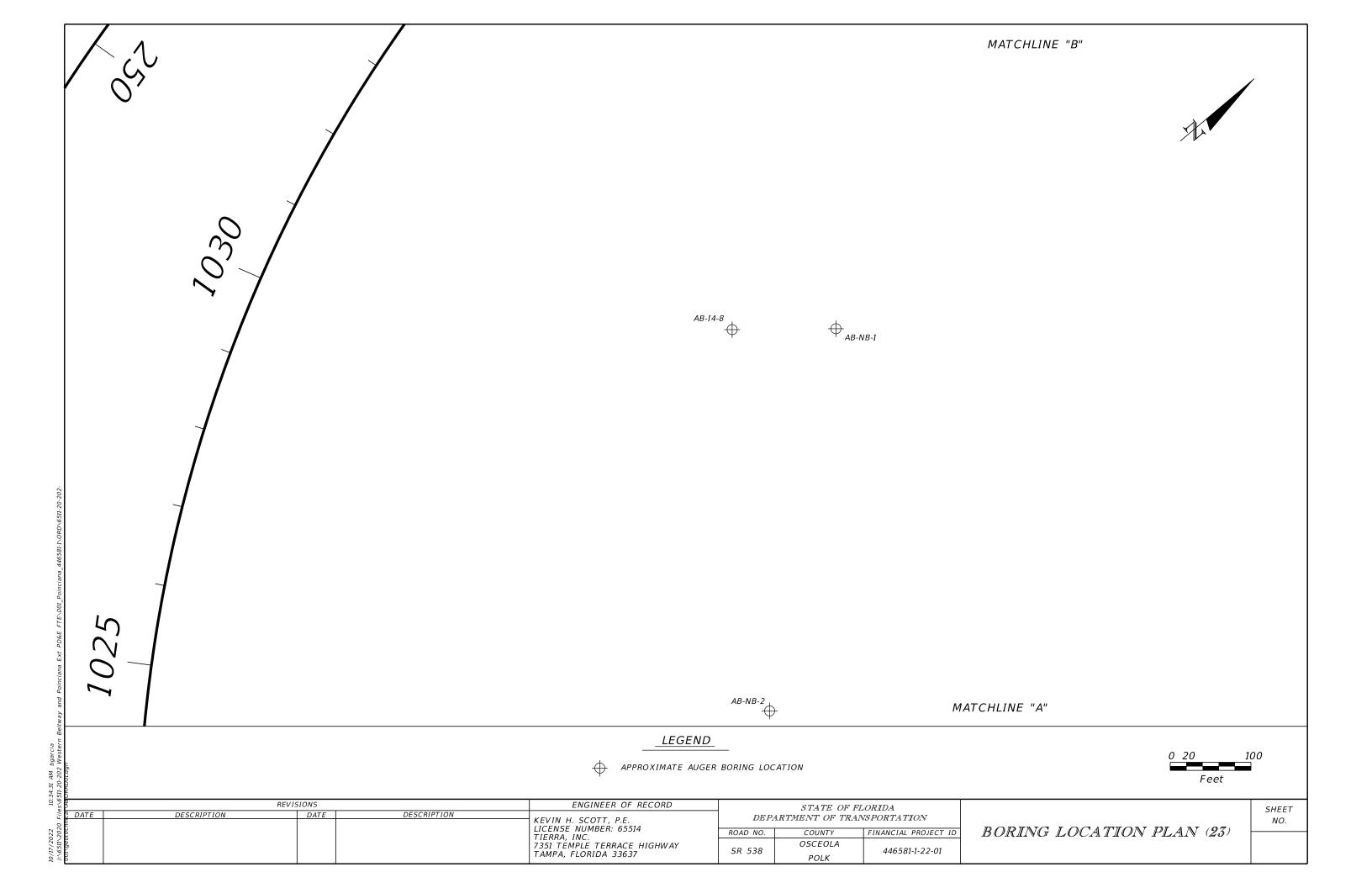


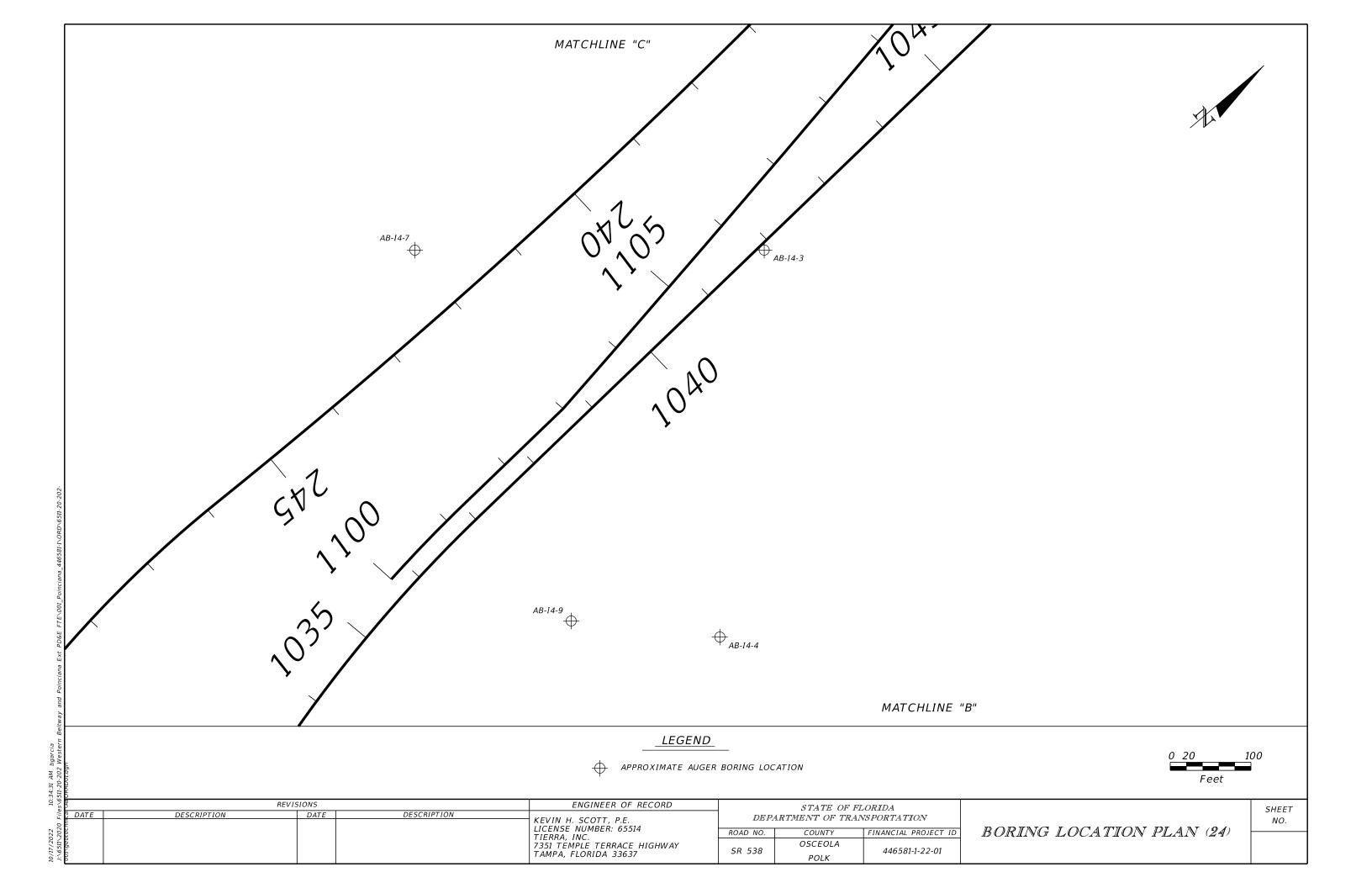


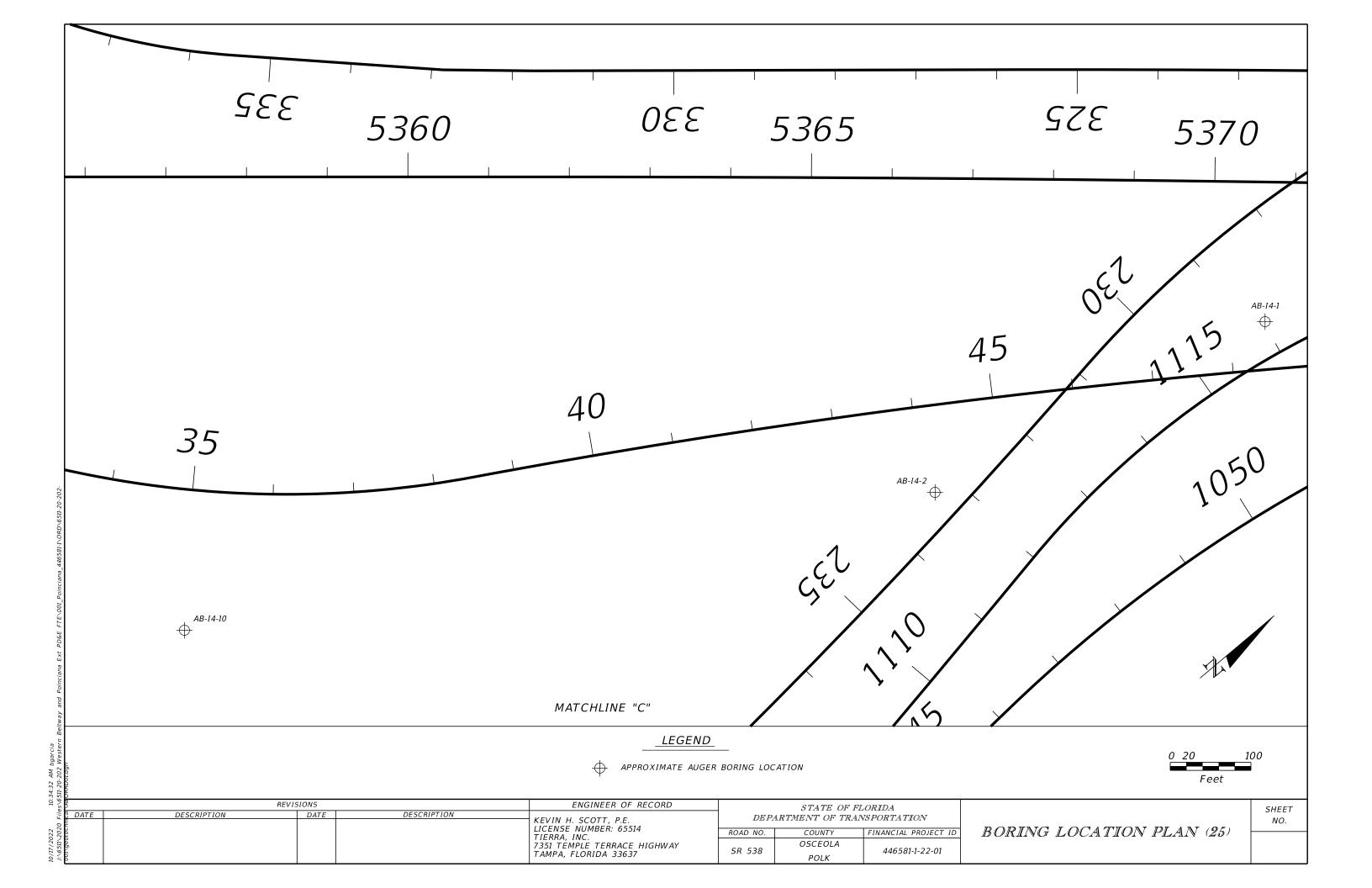


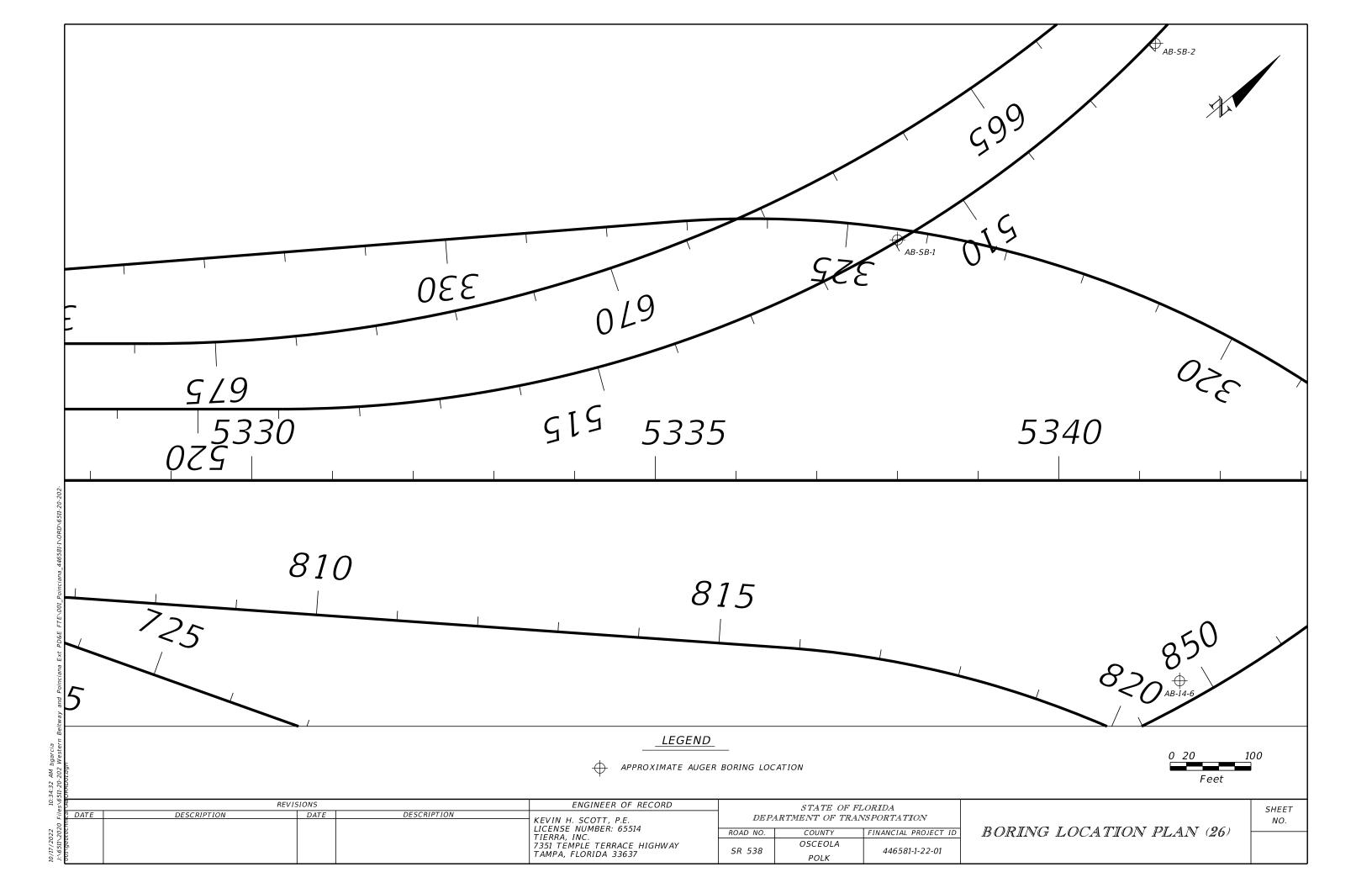


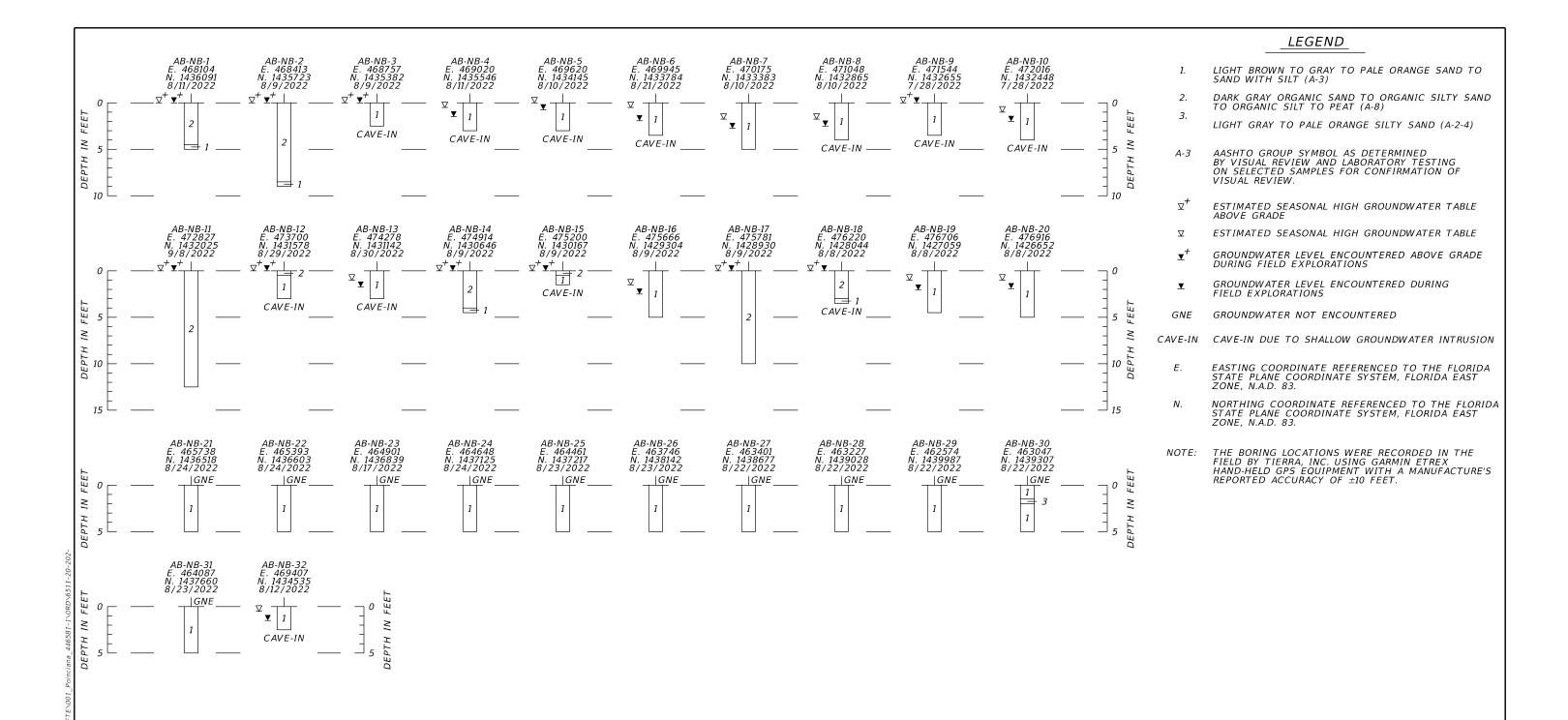












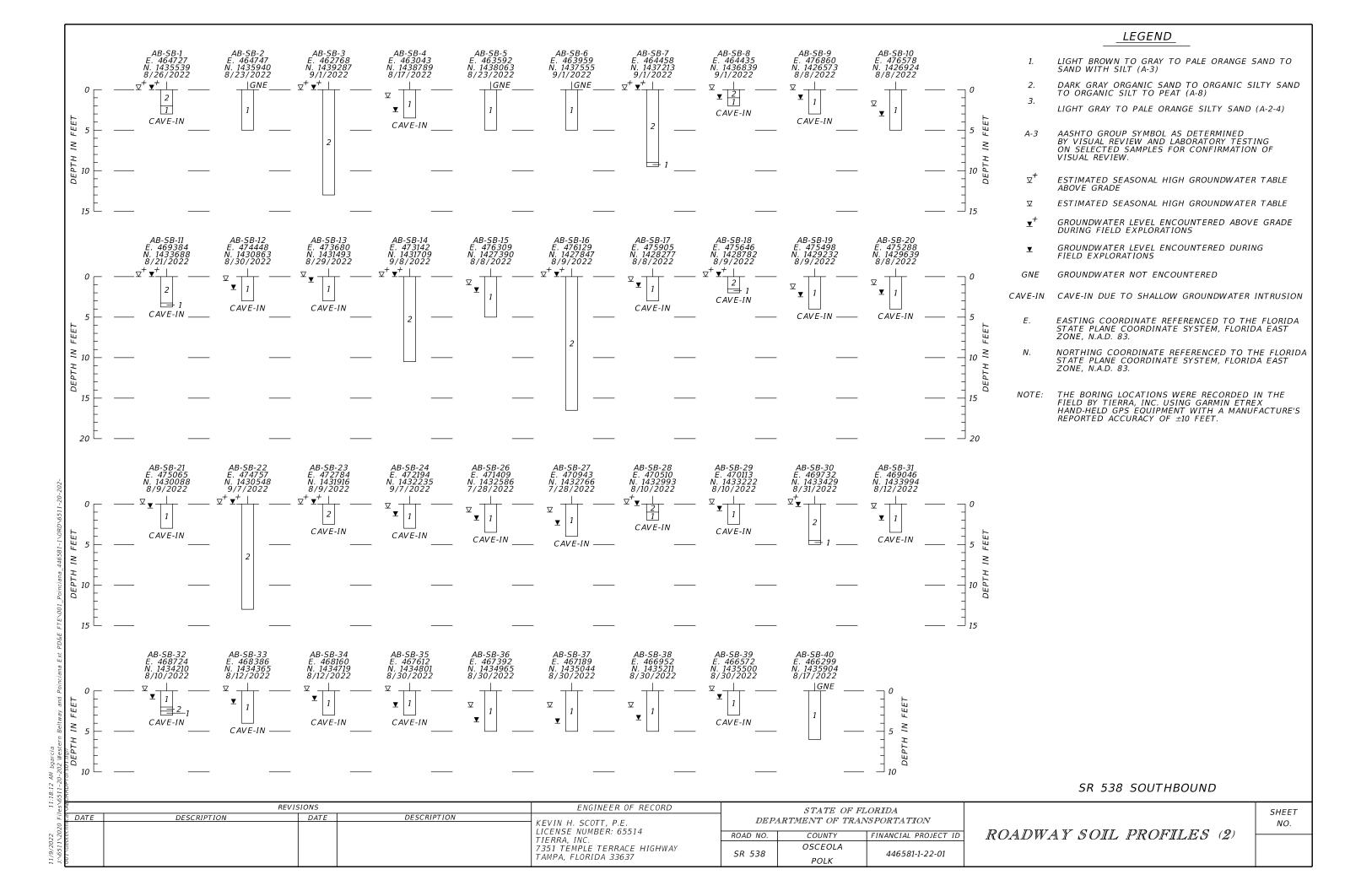
SR 538 NORTHBOUND

ŝ	Š	REVIS	SIONS		ENGINEER OF RECORD	STATE OF FLORIDA		
	DATE	DESCRIPTION	DATE	DESCRIPTION	KEVIN H. SCOTT, P.E.	DEPA	ARTMENT OF TRAI	
707					LICENSE NUMBER: 65514 TIERRA, INC.	ROAD NO.	COUNTY	FINANCIAL PROJECT ID
77.00	Ď				7351 TEMPLE TERRACE HIGHWAY	SR 538	OSCEOLA	446581-1-22-01
ζ.					TAMPA, FLORIDA 33637	3N 330	POLK	440381-1-22-01

ROADWAY SOIL PROFILES (1)

SHEET NO.

11/9/2022 11:18:12 AM haardia



AB-SNC-1 E. 462613 N. 1440607 8/24/2022 AB-SNC-2 E. 462210 N. 1439947 8/22/2022 AB-SNC-4 E. 461672 N. 1440919 8/17/2022 AB-SNC-5 E. 461960 N. 1440225 8/17/2022 AB-SNC-6 E. 461695 N. 1440686 8/17/2022 AB-SNC-7 E. 462948 N. 1439757 8/24/2022 AB-SNC-8 E. 461800 N. 1440551 8/17/2022 AB-SNC-9 E. 463125 N. 1439409 8/24/2022 AB-SNC-3 E. 462528 N. 1439609 9/1/2022 GNE GNE GNE GNE <u>|GNE</u> <u>|GNE</u> GNE <u>|GNE</u> |GNE DEPTH IN DEPTH IN

LEGEND

- 1. LIGHT BROWN TO GRAY TO PALE ORANGE SAND TO SAND WITH SILT (A-3)
- 2. DARK GRAY ORGANIC SAND TO ORGANIC SILTY SAND TO ORGANIC SILT TO PEAT (A-8)
- LIGHT GRAY TO PALE ORANGE SILTY SAND (A-2-4)
- A-3 AASHTO GROUP SYMBOL AS DETERMINED BY VISUAL REVIEW AND LABORATORY TESTING ON SELECTED SAMPLES FOR CONFIRMATION OF VISUAL REVIEW.
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- □ ESTIMATED SEASONAL HIGH GROUNDWATER TABLE
- g* GROUNDWATER LEVEL ENCOUNTERED ABOVE GRADE DURING FIELD EXPLORATIONS
- ▼ GROUNDWATER LEVEL ENCOUNTERED DURING FIELD EXPLORATIONS
- GNE GROUNDWATER NOT ENCOUNTERED
- CAVE-IN CAVE-IN DUE TO SHALLOW GROUNDWATER INTRUSION
- E. EASTING COORDINATE REFERENCED TO THE FLORIDA STATE PLANE COORDINATE SYSTEM, FLORIDA EAST ZONE, N.A.D. 83.
- N. NORTHING COORDINATE REFERENCED TO THE FLORIDA STATE PLANE COORDINATE SYSTEM, FLORIDA EAST ZONE, N.A.D. 83.
- NOTE: THE BORING LOCATIONS WERE RECORDED IN THE FIELD BY TIERRA, INC. USING GARMIN ETREX HAND-HELD GPS EQUIPMENT WITH A MANUFACTURE'S REPORTED ACCURACY OF ±10 FEET.

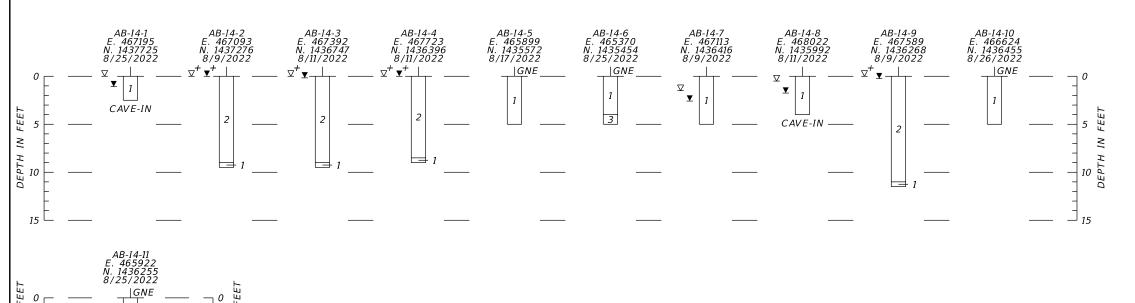
SINCLAIR ROAD

0							
VAE	REVI.	SIONS		ENGINEER OF RECORD		STATE OF FL	ORIDA
DATE	DESCRIPTION	DATE	DESCRIPTION	KENTA II CCOTT B.E.		ARTMENT OF TRAN	
Ē				KEVIN H. SCOTT, P.E.	103311	31(11/43)114 O4 14(141	01 01(11111101)
นะย				LICENSE NUMBER: 65514 TIERRA. INC.	ROAD NO.	COUNTY	FINANCIAL PROJECT ID
ינפני				7351 TEMPLE TERRACE HIGHWAY	SR 538	OSCEOLA	446581-1-22-01
100				TAMPA, FLORIDA 33637	34 330	POLK	440301-1-22-01

ROADWAY SOIL PROFILES (3)

SHEET NO.

11/9/2022 11/9/2022 11:18:13 AM Dgarcia 1785117 2020 Ellocy 6511 20 202 Western Boltway and Bolts



LEGEND

- 1. LIGHT BROWN TO GRAY TO PALE ORANGE SAND TO SAND WITH SILT (A-3)
- 2. DARK GRAY ORGANIC SAND TO ORGANIC SILTY SAND TO ORGANIC SILT TO PEAT (A-8)
- LIGHT GRAY TO PALE ORANGE SILTY SAND (A-2-4)
- A-3 AASHTO GROUP SYMBOL AS DETERMINED BY VISUAL REVIEW AND LABORATORY TESTING ON SELECTED SAMPLES FOR CONFIRMATION OF VISUAL REVIEW.
- □ ESTIMATED SEASONAL HIGH GROUNDWATER TABLE
- g* GROUNDWATER LEVEL ENCOUNTERED ABOVE GRADE DURING FIELD EXPLORATIONS
- ▼ GROUNDWATER LEVEL ENCOUNTERED DURING FIELD EXPLORATIONS
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I-4

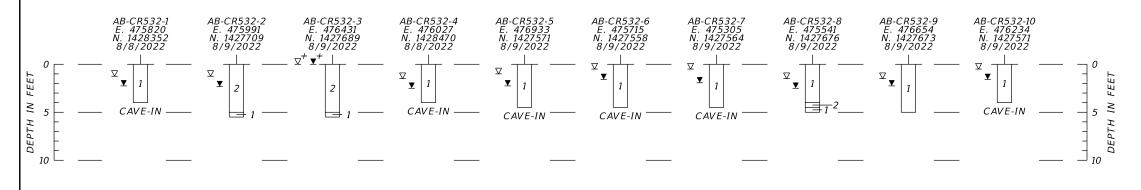
REVISIONS			ENGINEER OF RECORD	STATE OF FLORIDA			
DATE	DESCRIPTION	DATE	DESCRIPTION	KEVIN H. SCOTT, P.E. LICENSE NUMBER: 65514	DEPA	ARTMENT OF TRAN	NSPORTATION
ле				TIERRA, INC.	ROAD NO.	COUNTY	FINANCIAL PROJECT ID
707 ree				7351 TEMPLE TERRACE HIGHWAY TAMPA, FLORIDA 33637	SR 538	OSCEOLA POLK	446581-1-22-01

ROADWAY SOIL PROFILES (4)

SHEET NO.

/2022 11:18:14 AM bgarcia

DEPTH IN



LEGEND

- 1. LIGHT BROWN TO GRAY TO PALE ORANGE SAND TO SAND WITH SILT (A-3)
- 2. DARK GRAY ORGANIC SAND TO ORGANIC SILTY SAND TO ORGANIC SILT TO PEAT (A-8)
- LIGHT GRAY TO PALE ORANGE SILTY SAND (A-2-4)
- A-3 AASHTO GROUP SYMBOL AS DETERMINED BY VISUAL REVIEW AND LABORATORY TESTING ON SELECTED SAMPLES FOR CONFIRMATION OF VISUAL REVIEW.
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- □ ESTIMATED SEASONAL HIGH GROUNDWATER TABLE
- **▼**⁺ GROUNDWATER LEVEL ENCOUNTERED ABOVE GRADE DURING FIELD EXPLORATIONS
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CR 532

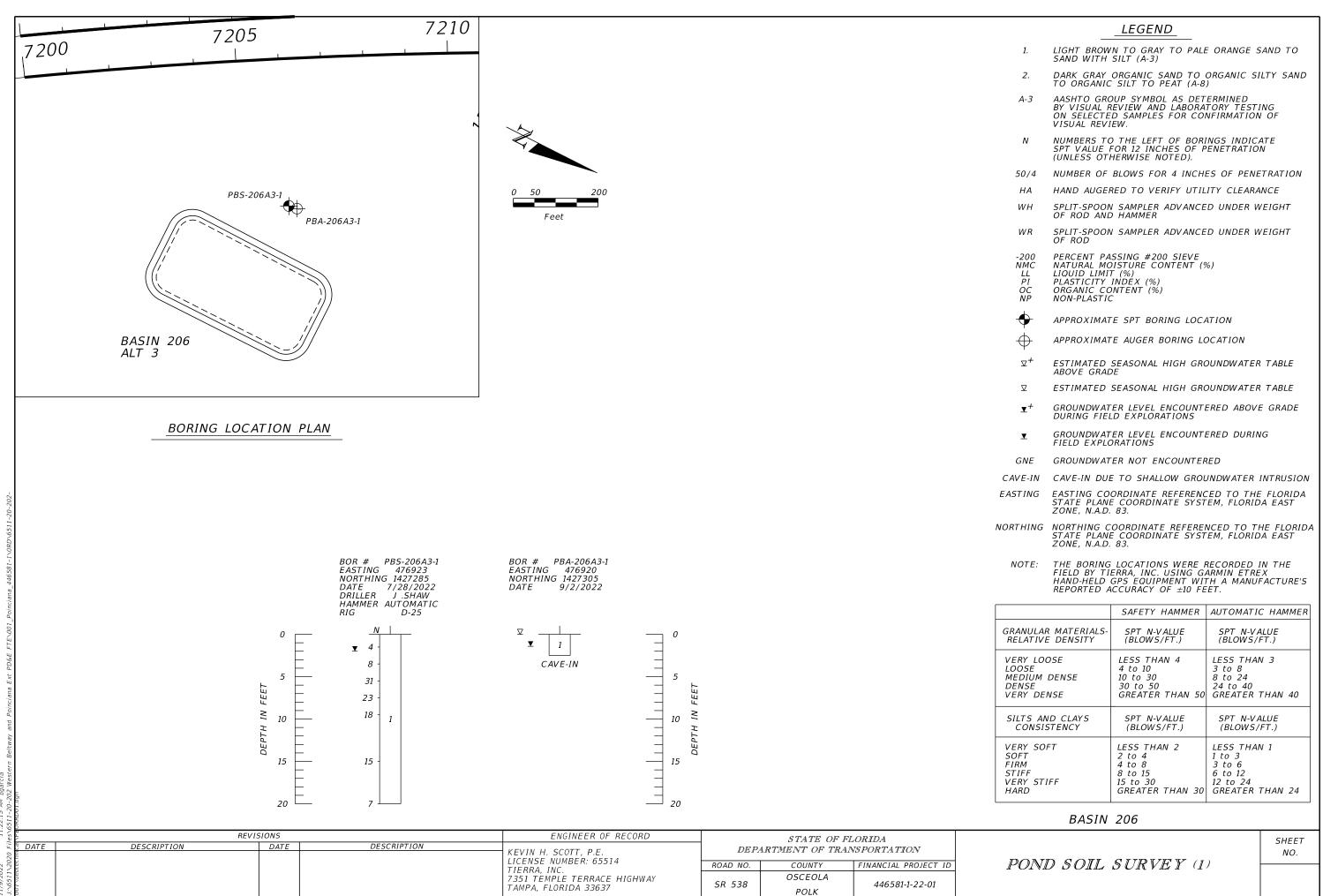
REVISIONS			ENGINEER OF RECORD		STATE OF FLORIDA		
DATE	DESCRIPTION	DATE	DESCRIPTION	KEVIN H. SCOTT, P.E.	DEPA	ARTMENT OF TRAN	NSPORTATION
лес				LICENSE NUMBER: 65514 TIERRA. INC.	ROAD NO.	COUNTY	FINANCIAL PROJECT ID
101 VD				7351 TEMPLE TERRACE HIGHWAY TAMPA, FLORIDA 33637	SR 538	OSCEOLA POLK	446581-1-22-01
2						TOLK	

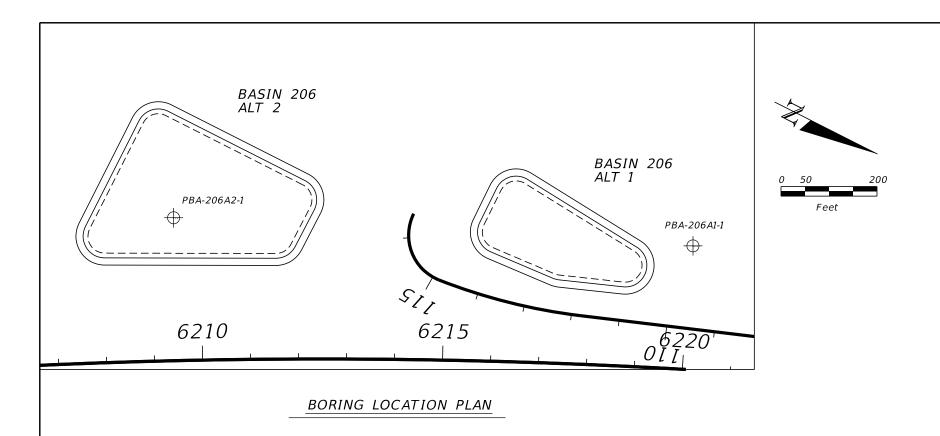
ROADWAY SOIL PROFILES (5)

SHEET NO.

11.16:15 AM Dgarcía N.2020 Eilockés 11.20.202 Western Poltumas and Deinsiana Ext. 6 DEPTH IN 2

N





BOR # PBA-206A2-1 EASTING 476112 NORTHING 1427216

1

CAVE-IN

FEET

N

DEPTH

5

9/2/2022

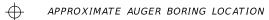
LEGEND

- LIGHT BROWN TO GRAY TO PALE ORANGE SAND TO SAND WITH SILT (A-3)
- DARK GRAY ORGANIC SAND TO ORGANIC SILTY SAND TO ORGANIC SILT TO PEAT (A-8)
- AASHTO GROUP SYMBOL AS DETERMINED BY VISUAL REVIEW AND LABORATORY TESTING ON SELECTED SAMPLES FOR CONFIRMATION OF VISUAL REVIEW.
- NUMBERS TO THE LEFT OF BORINGS INDICATE SPT VALUE FOR 12 INCHES OF PENETRATION (UNLESS OTHERWISE NOTED).
- NUMBER OF BLOWS FOR 4 INCHES OF PENETRATION 50/4
- HAND AUGERED TO VERIFY UTILITY CLEARANCE
- WHSPLIT-SPOON SAMPLER ADVANCED UNDER WEIGHT
- SPLIT-SPOON SAMPLER ADVANCED UNDER WEIGHT
- PERCENT PASSING #200 SIEVE NATURAL MOISTURE CONTENT (%) -200 NMC

- NATURAL MOISTURE CO. LIQUID LIMIT (%) PLASTICITY INDEX (%) ORGANIC CONTENT (%) NON-PLASTIC



APPROXIMATE SPT BORING LOCATION



- ∇^+ ESTIMATED SEASONAL HIGH GROUNDWATER TABLE ABOVE GRADE
- ESTIMATED SEASONAL HIGH GROUNDWATER TABLE
- GROUNDWATER LEVEL ENCOUNTERED ABOVE GRADE DURING FIELD EXPLORATIONS
- GROUNDWATER LEVEL ENCOUNTERED DURING FIELD EXPLORATIONS
- GROUNDWATER NOT ENCOUNTERED
- CAVE-IN CAVE-IN DUE TO SHALLOW GROUNDWATER INTRUSION
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	CAESTY WARRED	
	SAFETY HAMMER	AUTOMATIC HAMMER
GRANULAR MATERIALS-	SPT N-VALUE	SPT N-VALUE
RELATIVE DENSITY	(BLOWS/FT.)	(BLOWS/FT.)
VERY LOOSE	LESS THAN 4	LESS THAN 3
LOOSE	4 to 10	3 to 8
MEDIUM DENSE	10 to 30	8 to 24
DENSE	30 to 50	24 to 40
VERY DENSE	GREATER THAN 50	GREATER THAN 40
SILTS AND CLAYS	SPT N-VALUE	SPT N-VALUE
CONSISTENCY	(BLOWS/FT.)	(BLOWS/FT.)
VERY SOFT	LESS THAN 2	LESS THAN 1
SOFT	2 to 4	1 to 3
FIRM	4 to 8	3 to 6
STIFF	8 to 15	6 to 12
VERY STIFF	15 to 30	12 to 24
HARD	GREATER THAN 30	GREATER THAN 24

SHEET NO.

BASIN 206

POND SOIL SURVEY (2)

5							
	REV	ISIONS		ENGINEER OF RECORD		STATE OF F	LORIDA
DATE	DESCRIPTION	DATE	DESCRIPTION	KEVIN H. SCOTT, P.E.	\bigcap DEP.	ARTMENT OF TRAI	NS PORTATION
E				LICENSE NUMBER: 65514			
лец				TIERRA, INC.	ROAD NO.	COUNTY	FINANCIAL PROJECT ID
299				7351 TEMPLE TERRACE HIGHWAY	CD 530	OSCEOLA	44650112201
a				TAMPA, FLORIDA 33637	SR 538	BOLK	446581-1-22-01

BOR # PBA-206A1-1 EASTING 475676 NORTHING 1428208

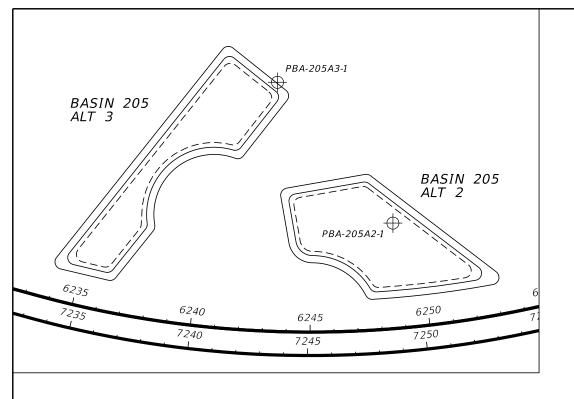
CAVE-IN

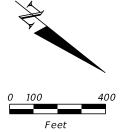
9/2/2022

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DEPTH

DATE





BORING LOCATION PLAN

BOR # PBA-205A3-1 EASTING 474067 NORTHING 1429773 DATE9/2/2022





BOR # PBA-205A2-1 EASTING 474225 NORTHING 1430515 DATE9/2/2022





LEGEND

- LIGHT BROWN TO GRAY TO PALE ORANGE SAND TO SAND WITH SILT (A-3)
- DARK GRAY ORGANIC SAND TO ORGANIC SILTY SAND TO ORGANIC SILT TO PEAT (A-8)
- AASHTO GROUP SYMBOL AS DETERMINED BY VISUAL REVIEW AND LABORATORY TESTING ON SELECTED SAMPLES FOR CONFIRMATION OF VISUAL REVIEW.
- NUMBERS TO THE LEFT OF BORINGS INDICATE SPT VALUE FOR 12 INCHES OF PENETRATION (UNLESS OTHERWISE NOTED).
- NUMBER OF BLOWS FOR 4 INCHES OF PENETRATION 50/4
- HAHAND AUGERED TO VERIFY UTILITY CLEARANCE
- WHSPLIT-SPOON SAMPLER ADVANCED UNDER WEIGHT
- SPLIT-SPOON SAMPLER ADVANCED UNDER WEIGHT WR
- PERCENT PASSING #200 SIEVE NATURAL MOISTURE CONTENT (%)

- LIQUID LIMIT (%)
 PLASTICITY INDEX (%)
 ORGANIC CONTENT (%)
 NON-PLASTIC



APPROXIMATE SPT BORING LOCATION



- APPROXIMATE AUGER BORING LOCATION
- ∇^+ ESTIMATED SEASONAL HIGH GROUNDWATER TABLE ABOVE GRADE
- ESTIMATED SEASONAL HIGH GROUNDWATER TABLE
- GROUNDWATER LEVEL ENCOUNTERED ABOVE GRADE DURING FIELD EXPLORATIONS
- GROUNDWATER LEVEL ENCOUNTERED DURING FIELD EXPLORATIONS
- GROUNDWATER NOT ENCOUNTERED
- CAVE-IN CAVE-IN DUE TO SHALLOW GROUNDWATER INTRUSION
- EASTING COORDINATE REFERENCED TO THE FLORIDA STATE PLANE COORDINATE SYSTEM, FLORIDA EAST ZONE, N.A.D. 83.
- NORTHING NORTHING COORDINATE REFERENCED TO THE FLORIDA STATE PLANE COORDINATE SYSTEM, FLORIDA EAST ZONE, N.A.D. 83.
 - THE BORING LOCATIONS WERE RECORDED IN THE FIELD BY TIERRA, INC. USING GARMIN ETREX HAND-HELD GPS EQUIPMENT WITH A MANUFACTURE'S REPORTED ACCURACY OF ±10 FEET.

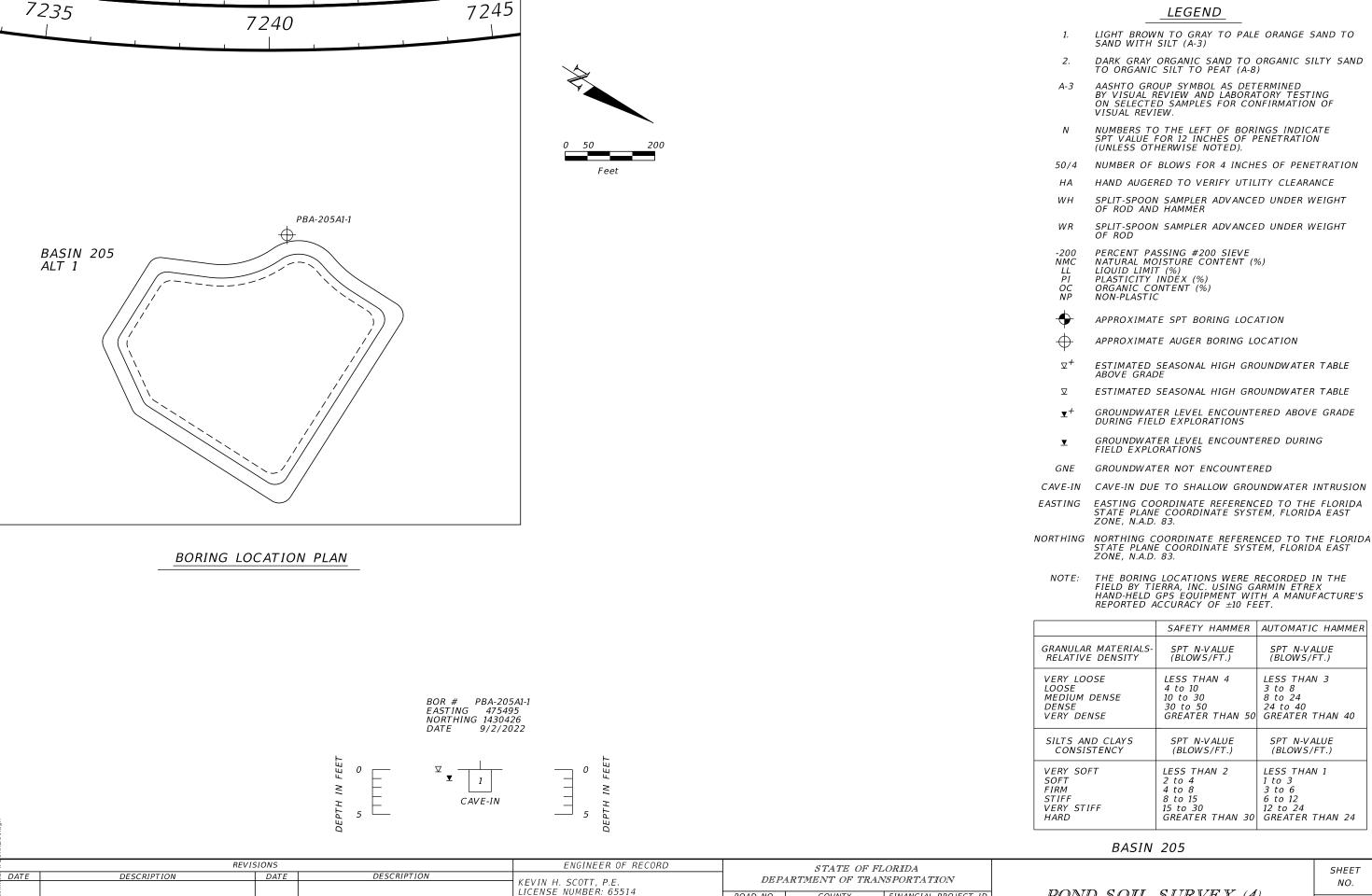
	SAFETY HAMMER	AUTOMATIC HAMMER
GRANULAR MATERIALS-	SPT N-VALUE	SPT N-VALUE
RELATIVE DENSITY	(BLOWS/FT.)	(BLOWS/FT.)
VERY LOOSE	LESS THAN 4	LESS THAN 3
LOOSE	4 to 10	3 to 8
MEDIUM DENSE	10 to 30	8 to 24
DENSE	30 to 50	24 to 40
VERY DENSE	GREATER THAN 50	GREATER THAN 40
SILTS AND CLAYS	SPT N-VALUE	SPT N-VALUE
CONSISTENCY	(BLOWS/FT.)	(BLOWS/FT.)
VERY SOFT	LESS THAN 2	LESS THAN 1
SOFT	2 to 4	1 to 3
FIRM	4 to 8	3 to 6
STIFF	8 to 15	6 to 12
VERY STIFF	15 to 30	12 to 24
HARD	GREATER THAN 30	GREATER THAN 24

SHEET NO.

BASIN 205

POND SOIL SURVEY (3)

	REVIS	SIONS		ENGINEER OF RECORD		STATE OF FL	ORIDA
DATE	DESCRIPTION	DATE	DESCRIPTION	KEVIN H. SCOTT, P.E.	DEPA	ARTMENT OF TRAN	
				LICENSE NUMBER: 65514 TIERRA, INC.	ROAD NO.	COUNTY	FINANCIAL PROJECT ID
				7351 TEMPLE TERRACE HIGHWAY	SR 538	OSCEOLA	446581-1-22-01
				TAMPA, FLORIDA 33637	3K 330	POLK	44030112201



ROAD NO.

SR 538

TIERRA, INC.

7351 TEMPLE TERRACE HIGHWAY

TAMPA, FLORIDA 33637

COUNTY

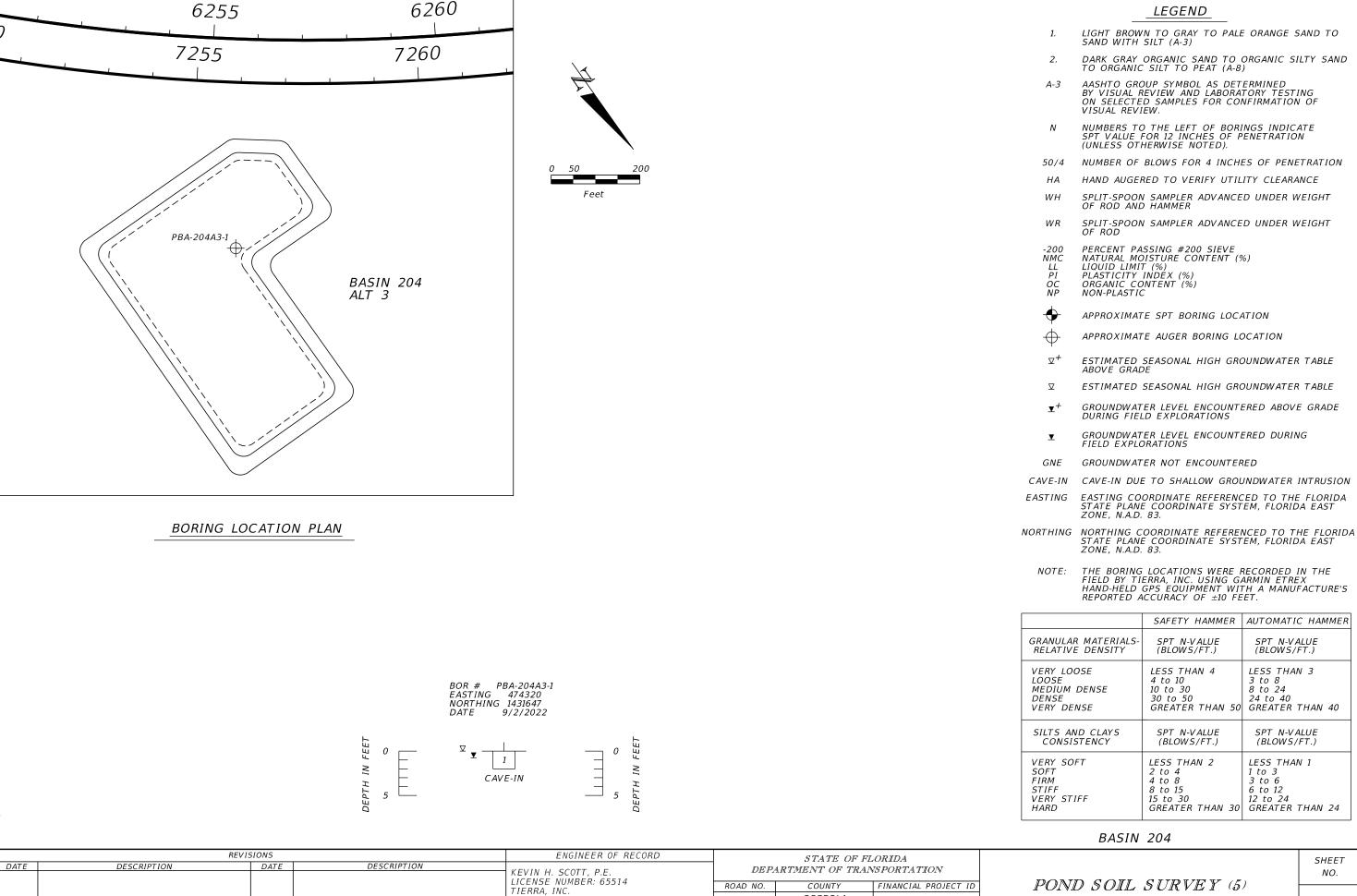
OSCEOLA

POLK

FINANCIAL PROJECT ID

446581-1-22-01

POND SOIL SURVEY (4)



7351 TEMPLE TERRACE HIGHWAY

TAMPA, FLORIDA 33637

OSCEOLA

POLK

446581-1-22-01

SR 538

SHEET

NO.

SPT N-VALUE (BLOWS/FT.)

LESS THAN 3 3 to 8 8 to 24

24 to 40 GREATER THAN 40

SPT N-VALUE

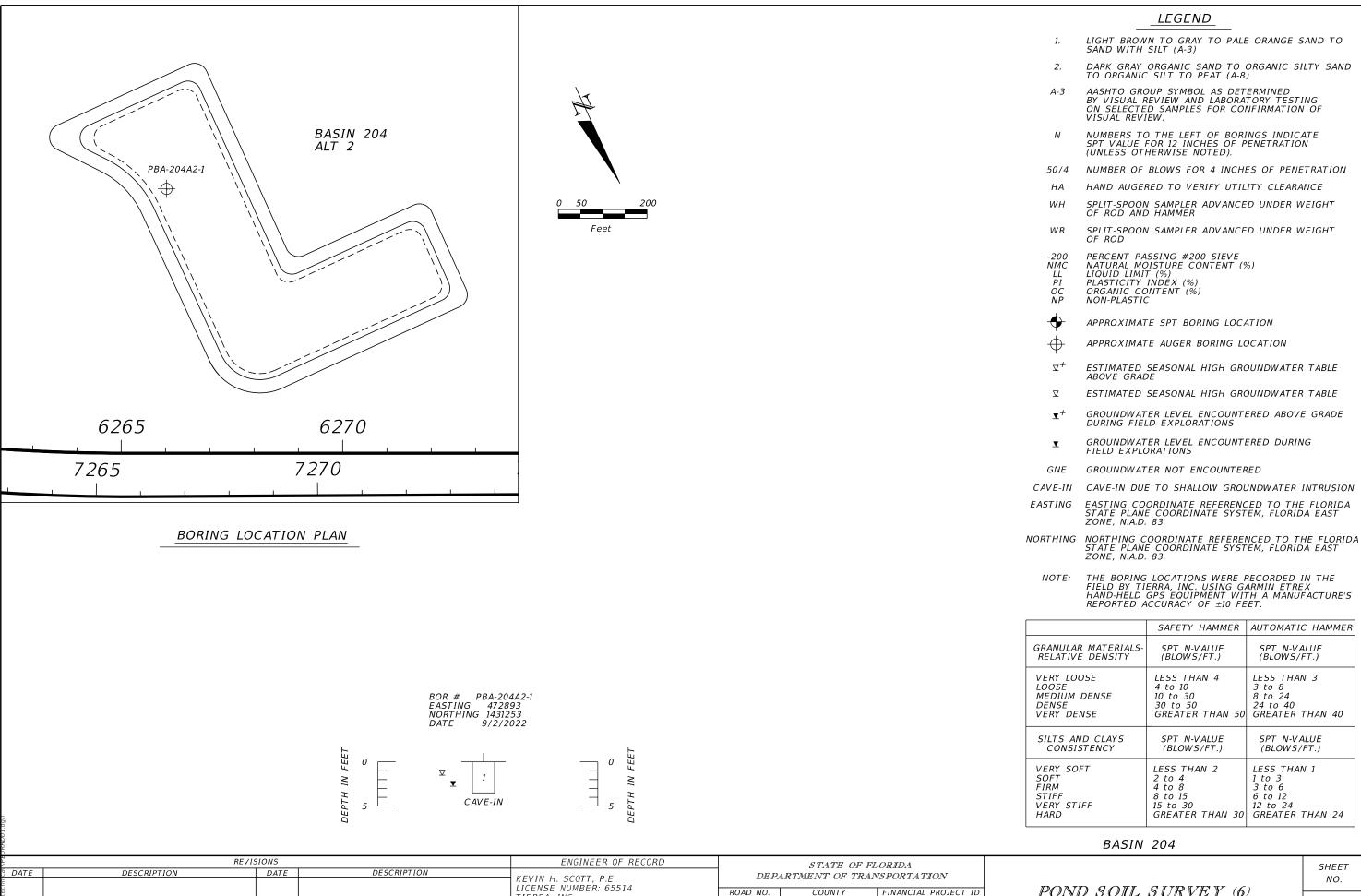
(BLOWS/FT.)

LESS THAN 1

1 to 3

6 to 12

POND SOIL SURVEY (5)



OSCEOLA

POLK

446581-1-22-01

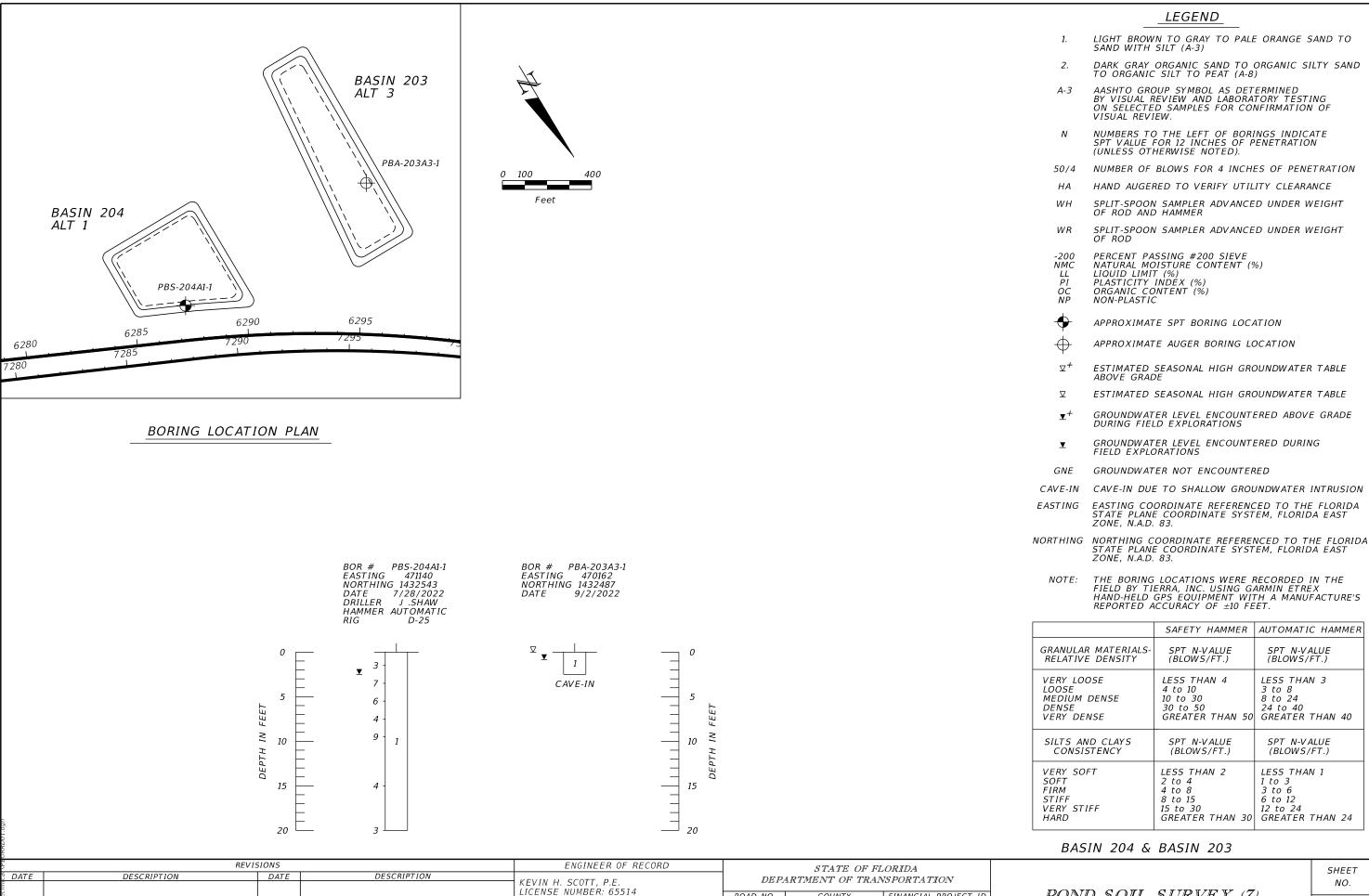
SR 538

TIERRA, INC.

TAMPA, FLORIDA 33637

7351 TEMPLE TERRACE HIGHWAY

POND SOIL SURVEY (6)



ROAD NO.

SR 538

TIERRA, INC.

7351 TEMPLE TERRACE HIGHWAY

TAMPA, FLORIDA 33637

COUNTY

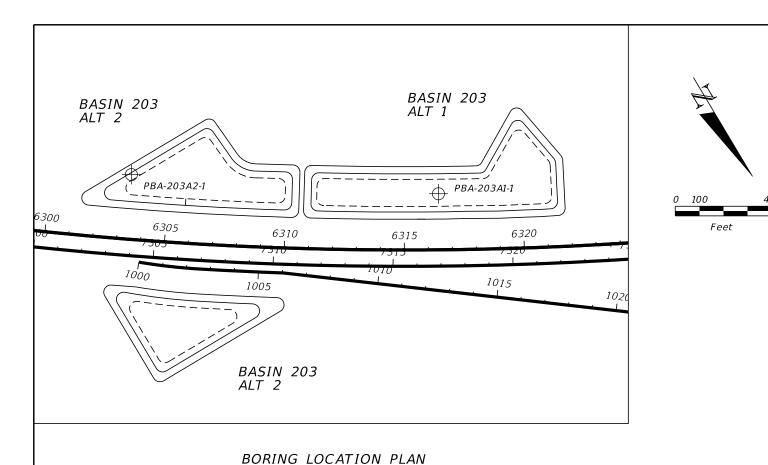
OSCEOLA

POLK

FINANCIAL PROJECT ID

446581-1-22-01

POND SOIL SURVEY (7)





- LIGHT BROWN TO GRAY TO PALE ORANGE SAND TO SAND WITH SILT (A-3)
- DARK GRAY ORGANIC SAND TO ORGANIC SILTY SAND TO ORGANIC SILT TO PEAT (A-8)
- AASHTO GROUP SYMBOL AS DETERMINED BY VISUAL REVIEW AND LABORATORY TESTING ON SELECTED SAMPLES FOR CONFIRMATION OF VISUAL REVIEW.
- NUMBERS TO THE LEFT OF BORINGS INDICATE SPT VALUE FOR 12 INCHES OF PENETRATION (UNLESS OTHERWISE NOTED).
- NUMBER OF BLOWS FOR 4 INCHES OF PENETRATION 50/4
- HAHAND AUGERED TO VERIFY UTILITY CLEARANCE
- SPLIT-SPOON SAMPLER ADVANCED UNDER WEIGHT WH
- SPLIT-SPOON SAMPLER ADVANCED UNDER WEIGHT WR
- PERCENT PASSING #200 SIEVE NATURAL MOISTURE CONTENT (%)

- LIQUID LIMIT (%)
 PLASTICITY INDEX (%)
 ORGANIC CONTENT (%)
- NON-PLASTIC

APPROXIMATE SPT BORING LOCATION



- ∇^+ ESTIMATED SEASONAL HIGH GROUNDWATER TABLE ABOVE GRADE
- ESTIMATED SEASONAL HIGH GROUNDWATER TABLE
- GROUNDWATER LEVEL ENCOUNTERED ABOVE GRADE DURING FIELD EXPLORATIONS
- GROUNDWATER LEVEL ENCOUNTERED DURING FIELD EXPLORATIONS
- GROUNDWATER NOT ENCOUNTERED
- CAVE-IN CAVE-IN DUE TO SHALLOW GROUNDWATER INTRUSION
- EASTING COORDINATE REFERENCED TO THE FLORIDA STATE PLANE COORDINATE SYSTEM, FLORIDA EAST ZONE, N.A.D. 83.
- NORTHING NORTHING COORDINATE REFERENCED TO THE FLORIDA STATE PLANE COORDINATE SYSTEM, FLORIDA EAST ZONE, N.A.D. 83.
 - THE BORING LOCATIONS WERE RECORDED IN THE FIELD BY TIERRA, INC. USING GARMIN ETREX HAND-HELD GPS EQUIPMENT WITH A MANUFACTURE'S REPORTED ACCURACY OF ±10 FEET.

	SAFETY HAMMER	AUTOMATIC HAMMER
GRANULAR MATERIALS-	SPT N-VALUE	SPT N-VALUE
RELATIVE DENSITY	(BLOWS/FT.)	(BLOWS/FT.)
VERY LOOSE	LESS THAN 4	LESS THAN 3
LOOSE	4 to 10	3 to 8
MEDIUM DENSE	10 to 30	8 to 24
DENSE	30 to 50	24 to 40
VERY DENSE	GREATER THAN 50	GREATER THAN 40
SILTS AND CLAYS	SPT N-VALUE	SPT N-VALUE
CONSISTENCY	(BLOWS/FT.)	(BLOWS/FT.)
VERY SOFT	LESS THAN 2	LESS THAN 1
SOFT	2 to 4	1 to 3
FIRM	4 to 8	3 to 6
STIFF	8 to 15	6 to 12
VERY STIFF	15 to 30	12 to 24
HARD	GREATER THAN 30	GREATER THAN 24

SHEET NO.

BASIN 203

POND SOIL SURVEY (8)

	_	ı
	PD&E	
	Ext	l
	Poinciana	
	and	ı
	Be/tway	
arcia	Western	
11:22:20 AM bgarcia	J:\6511\2020 Files\6511-20-202 Western Beltway and Poinciana Ext PD&E	
11/9/2022	J:\6511\2020 Fi	

DA CO							
74	RE	VISIONS		ENGINEER OF RECORD		STATE OF F	LORIDA
DATE	DESCRIPTION	DATE	DESCRIPTION	KEVIN H. SCOTT, P.E.	DEP.	ARTMENT OF TRAI	NS PORTATION
) rect				LICENSE NUMBER: 65514 TIERRA. INC.	ROAD NO.	COUNTY	FINANCIAL PROJECT ID
907706				7351 TEMPLE TERRACE HIGHWAY TAMPA, FLORIDA 33637	SR 538	OSCEOLA POLK	446581-1-22-01

BOR # PBA-203A1-1 EASTING 470162 NORTHING 1432487

9/8/2022

DEPTH IN

DATE

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BOR # PBA-203A2-1 EASTING 469696 NORTHING 1433324

CAVE-IN

9/8/2022

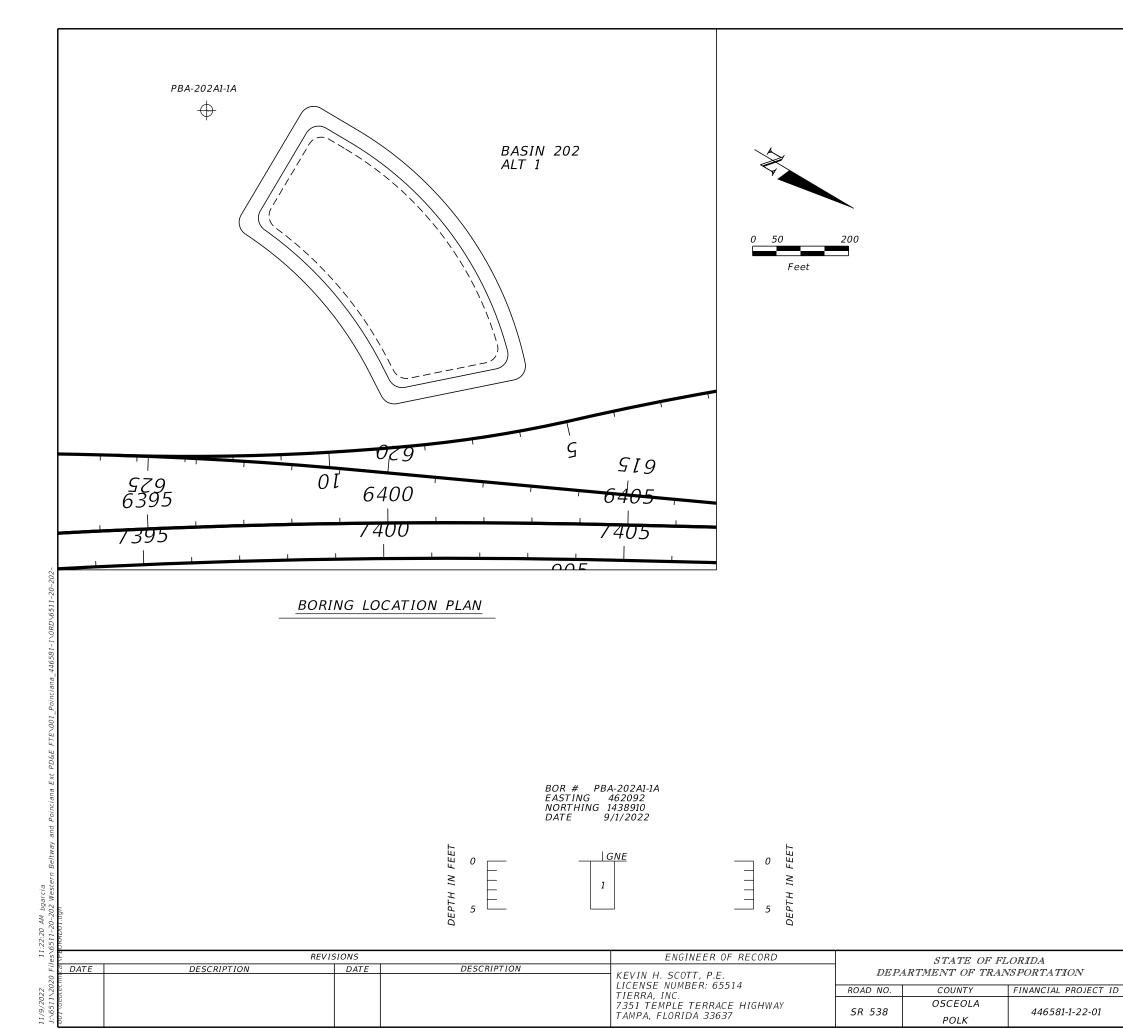
DATE

-200=6 NMC=59

OC=7

DEPTH IN

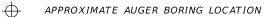
5



LEGEND

- LIGHT BROWN TO GRAY TO PALE ORANGE SAND TO SAND WITH SILT (A-3)
- DARK GRAY ORGANIC SAND TO ORGANIC SILTY SAND TO ORGANIC SILT TO PEAT (A-8)
- AASHTO GROUP SYMBOL AS DETERMINED BY VISUAL REVIEW AND LABORATORY TESTING ON SELECTED SAMPLES FOR CONFIRMATION OF VISUAL REVIEW.
- NUMBERS TO THE LEFT OF BORINGS INDICATE SPT VALUE FOR 12 INCHES OF PENETRATION (UNLESS OTHERWISE NOTED).
- NUMBER OF BLOWS FOR 4 INCHES OF PENETRATION 50/4
- HAHAND AUGERED TO VERIFY UTILITY CLEARANCE
- SPLIT-SPOON SAMPLER ADVANCED UNDER WEIGHT WH
- SPLIT-SPOON SAMPLER ADVANCED UNDER WEIGHT WR
- PERCENT PASSING #200 SIEVE NATURAL MOISTURE CONTENT (%) -200 NMC
- NATURAL MOISTURE CO. LIQUID LIMIT (%) PLASTICITY INDEX (%) ORGANIC CONTENT (%) NON-PLASTIC





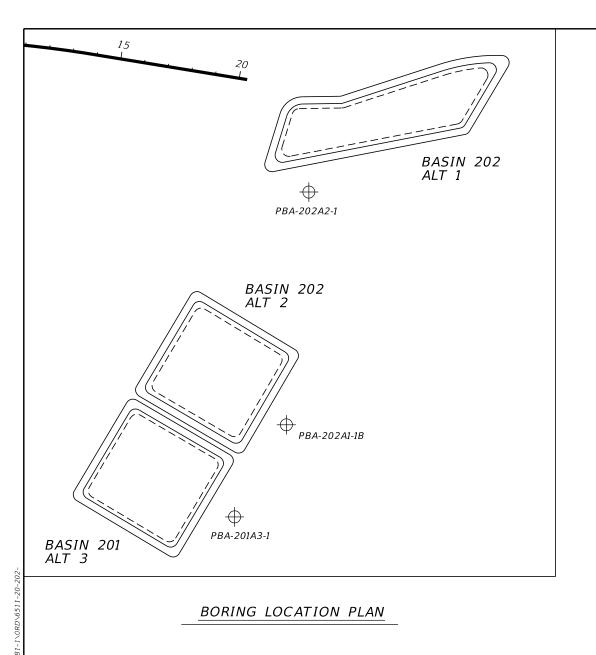
- ∇^+ ESTIMATED SEASONAL HIGH GROUNDWATER TABLE ABOVE GRADE
- ESTIMATED SEASONAL HIGH GROUNDWATER TABLE
- GROUNDWATER LEVEL ENCOUNTERED ABOVE GRADE DURING FIELD EXPLORATIONS
- GROUNDWATER LEVEL ENCOUNTERED DURING FIELD EXPLORATIONS
- GROUNDWATER NOT ENCOUNTERED
- CAVE-IN CAVE-IN DUE TO SHALLOW GROUNDWATER INTRUSION
- EASTING COORDINATE REFERENCED TO THE FLORIDA STATE PLANE COORDINATE SYSTEM, FLORIDA EAST ZONE, N.A.D. 83.
- NORTHING NORTHING COORDINATE REFERENCED TO THE FLORIDA STATE PLANE COORDINATE SYSTEM, FLORIDA EAST ZONE, N.A.D. 83.

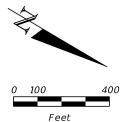
 - THE BORING LOCATIONS WERE RECORDED IN THE FIELD BY TIERRA, INC. USING GARMIN ETREX HAND-HELD GPS EQUIPMENT WITH A MANUFACTURE'S REPORTED ACCURACY OF ±10 FEET.

	SAFETY HAMMER	AUTOMATIC HAMMER
GRANULAR MATERIALS-	SPT N-VALUE	SPT N-VALUE
RELATIVE DENSITY	(BLOWS/FT.)	(BLOWS/FT.)
VERY LOOSE	LESS THAN 4	LESS THAN 3
LOOSE	4 to 10	3 to 8
MEDIUM DENSE	10 to 30	8 to 24
DENSE	30 to 50	24 to 40
VERY DENSE	GREATER THAN 50	GREATER THAN 40
SILTS AND CLAYS	SPT N-VALUE	SPT N-VALUE
CONSISTENCY	(BLOWS/FT.)	(BLOWS/FT.)
VERY SOFT	LESS THAN 2	LESS THAN 1
SOFT	2 to 4	1 to 3
FIRM	4 to 8	3 to 6
STIFF	8 to 15	6 to 12
VERY STIFF	15 to 30	12 to 24
HARD	GREATER THAN 30	GREATER THAN 24

BASIN 202

POND SOIL SURVEY (9)





BOR # PBA-202A1-1B EASTING 463742 NORTHING 1441480 DATE 9/1/2022

FEET

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DEPTH

DESCRIPTION

DATE

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REVISIONS

DATE

BOR # PBA-202A2-1 EASTING 462860 NORTHING 1441066 9/1/2022

TIERRA, INC.

BOR # PBA-201A3-1

EASTING 464182 NORTHING 1441490

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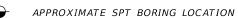
DESCRIPTION

9/1/2022

ENGINEER OF RECORD STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION KEVIN H. SCOTT, P.E. LICENSE NUMBER: 65514 ROAD NO. COUNTY FINANCIAL PROJECT ID OSCEOLA 7351 TEMPLE TERRACE HIGHWAY SR 538 446581-1-22-01 TAMPA, FLORIDA 33637 POLK

LEGEND

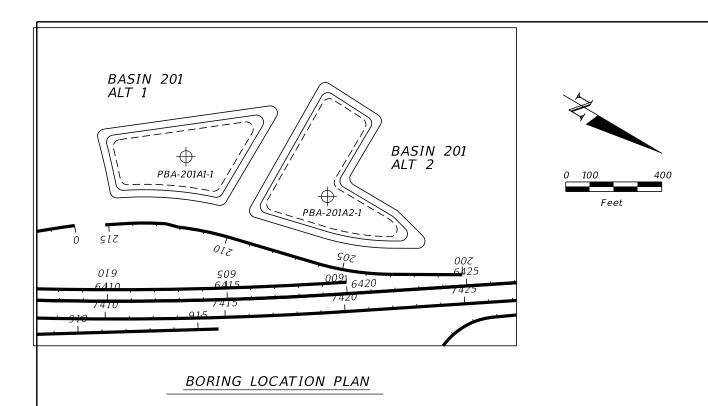
- LIGHT BROWN TO GRAY TO PALE ORANGE SAND TO SAND WITH SILT (A-3)
- DARK GRAY ORGANIC SAND TO ORGANIC SILTY SAND TO ORGANIC SILT TO PEAT (A-8)
- AASHTO GROUP SYMBOL AS DETERMINED BY VISUAL REVIEW AND LABORATORY TESTING ON SELECTED SAMPLES FOR CONFIRMATION OF VISUAL REVIEW.
- NUMBERS TO THE LEFT OF BORINGS INDICATE SPT VALUE FOR 12 INCHES OF PENETRATION (UNLESS OTHERWISE NOTED).
- 50/4 NUMBER OF BLOWS FOR 4 INCHES OF PENETRATION
- HAHAND AUGERED TO VERIFY UTILITY CLEARANCE
- SPLIT-SPOON SAMPLER ADVANCED UNDER WEIGHT WH
- SPLIT-SPOON SAMPLER ADVANCED UNDER WEIGHT WR
- PERCENT PASSING #200 SIEVE NATURAL MOISTURE CONTENT (%)
- LIQUID LIMIT (%) PLASTICITY INDEX (%)
- ORGANIC CONTENT (%)
- NON-PLASTIC



- APPROXIMATE AUGER BORING LOCATION
- ∇^+ ESTIMATED SEASONAL HIGH GROUNDWATER TABLE ABOVE GRADE
- ESTIMATED SEASONAL HIGH GROUNDWATER TABLE
- GROUNDWATER LEVEL ENCOUNTERED ABOVE GRADE DURING FIELD EXPLORATIONS
- GROUNDWATER LEVEL ENCOUNTERED DURING FIELD EXPLORATIONS
- GROUNDWATER NOT ENCOUNTERED
- CAVE-IN CAVE-IN DUE TO SHALLOW GROUNDWATER INTRUSION
- EASTING COORDINATE REFERENCED TO THE FLORIDA STATE PLANE COORDINATE SYSTEM, FLORIDA EAST
- NORTHING NORTHING COORDINATE REFERENCED TO THE FLORIDA STATE PLANE COORDINATE SYSTEM, FLORIDA EAST ZONE, N.A.D. 83.
 - THE BORING LOCATIONS WERE RECORDED IN THE FIELD BY TIERRA, INC. USING GARMIN ETREX HAND-HELD GPS EQUIPMENT WITH A MANUFACTURE'S REPORTED ACCURACY OF ±10 FEET.
- SAFETY HAMMER AUTOMATIC HAMMER GRANULAR MATERIALS RELATIVE DENSITY SPT N-VALUE SPT N-VALUE (BLOWS/FT.) (BLOWS/FT.) VERY LOOSE LESS THAN 4 LESS THAN 3 4 to 10 3 to 8 MEDIUM DENSE 10 to 30 8 to 24 DENSE VERY DENSE 30 to 50 GREATER THAN 50 24 to 40 GREATER THAN 40 SILTS AND CLAYS SPT N-VALUE SPT N-VALUE CONSISTENCY (BLOWS/FT.) (BLOWS/FT.)
- VERY SOFT LESS THAN 2 LESS THAN 1 SOFT 2 to 4 1 to 3 FIRM 4 to 8 STIFF 8 to 15 6 to 12 VERY STIFF 15 to 30 12 to 24 GREATER THAN 30 GREATER THAN 24 HARD

BASIN 201 & BASIN 202

POND SOIL SURVEY (10)



BOR # PBA-201A1-1 EASTING 461455 NORTHING 1440515

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DEPTH

BOR # PBA-201A2-1 EASTING 461297 NORTHING 1441106



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LEGEND

- LIGHT BROWN TO GRAY TO PALE ORANGE SAND TO SAND WITH SILT (A-3)
- DARK GRAY ORGANIC SAND TO ORGANIC SILTY SAND TO ORGANIC SILT TO PEAT (A-8)
- AASHTO GROUP SYMBOL AS DETERMINED BY VISUAL REVIEW AND LABORATORY TESTING ON SELECTED SAMPLES FOR CONFIRMATION OF VISUAL REVIEW.
- NUMBERS TO THE LEFT OF BORINGS INDICATE SPT VALUE FOR 12 INCHES OF PENETRATION (UNLESS OTHERWISE NOTED).
- NUMBER OF BLOWS FOR 4 INCHES OF PENETRATION 50/4
- HAHAND AUGERED TO VERIFY UTILITY CLEARANCE
- SPLIT-SPOON SAMPLER ADVANCED UNDER WEIGHT WH
- SPLIT-SPOON SAMPLER ADVANCED UNDER WEIGHT WR
- PERCENT PASSING #200 SIEVE NATURAL MOISTURE CONTENT (%) -200 NMC
- LIQUID LIMIT (%)
 PLASTICITY INDEX (%)
 ORGANIC CONTENT (%)

- NON-PLASTIC



APPROXIMATE SPT BORING LOCATION



- ∇^+ ESTIMATED SEASONAL HIGH GROUNDWATER TABLE ABOVE GRADE
- ESTIMATED SEASONAL HIGH GROUNDWATER TABLE
- GROUNDWATER LEVEL ENCOUNTERED ABOVE GRADE DURING FIELD EXPLORATIONS
- GROUNDWATER LEVEL ENCOUNTERED DURING FIELD EXPLORATIONS
- GROUNDWATER NOT ENCOUNTERED
- CAVE-IN CAVE-IN DUE TO SHALLOW GROUNDWATER INTRUSION
- EASTING COORDINATE REFERENCED TO THE FLORIDA STATE PLANE COORDINATE SYSTEM, FLORIDA EAST ZONE, N.A.D. 83.
- NORTHING NORTHING COORDINATE REFERENCED TO THE FLORIDA STATE PLANE COORDINATE SYSTEM, FLORIDA EAST ZONE, N.A.D. 83.
 - THE BORING LOCATIONS WERE RECORDED IN THE FIELD BY TIERRA, INC. USING GARMIN ETREX HAND-HELD GPS EQUIPMENT WITH A MANUFACTURE'S REPORTED ACCURACY OF ±10 FEET.

	SAFETY HAMMER	AUTOMATIC HAMMER
GRANULAR MATERIALS-	SPT N-VALUE	SPT N-VALUE
RELATIVE DENSITY	(BLOWS/FT.)	(BLOWS/FT.)
VERY LOOSE	LESS THAN 4	LESS THAN 3
LOOSE	4 to 10	3 to 8
MEDIUM DENSE	10 to 30	8 to 24
DENSE	30 to 50	24 to 40
VERY DENSE	GREATER THAN 50	GREATER THAN 40
SILTS AND CLAYS	SPT N-VALUE	SPT N-VALUE
CONSISTENCY	(BLOWS/FT.)	(BLOWS/FT.)
VERY SOFT	LESS THAN 2	LESS THAN 1
SOFT	2 to 4	1 to 3
FIRM	4 to 8	3 to 6
STIFF	8 to 15	6 to 12
VERY STIFF	15 to 30	12 to 24
HARD	GREATER THAN 30	GREATER THAN 24

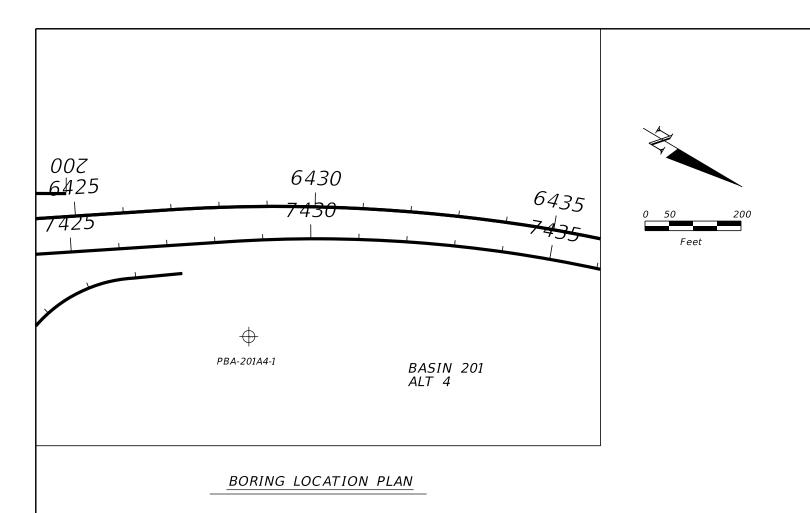
SHEET

NO.

BASIN 201

POND SOIL SURVEY (11)

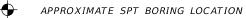
REVISIONS ENGINEER OF RECORD STATE OF FLORIDA DESCRIPTION DESCRIPTION DATE DATE DEPARTMENT OF TRANSPORTATION KEVIN H. SCOTT, P.E. LICENSE NUMBER: 65514 ROAD NO. COUNTY FINANCIAL PROJECT ID TIERRA, INC. OSCEOLA 7351 TEMPLE TERRACE HIGHWAY SR 538 446581-1-22-01 TAMPA, FLORIDA 33637 POLK



LEGEND

- LIGHT BROWN TO GRAY TO PALE ORANGE SAND TO SAND WITH SILT (A-3)
- DARK GRAY ORGANIC SAND TO ORGANIC SILTY SAND TO ORGANIC SILT TO PEAT (A-8)
- AASHTO GROUP SYMBOL AS DETERMINED BY VISUAL REVIEW AND LABORATORY TESTING ON SELECTED SAMPLES FOR CONFIRMATION OF VISUAL REVIEW.
- NUMBERS TO THE LEFT OF BORINGS INDICATE SPT VALUE FOR 12 INCHES OF PENETRATION (UNLESS OTHERWISE NOTED).
- NUMBER OF BLOWS FOR 4 INCHES OF PENETRATION 50/4
- HAHAND AUGERED TO VERIFY UTILITY CLEARANCE
- SPLIT-SPOON SAMPLER ADVANCED UNDER WEIGHT WH
- SPLIT-SPOON SAMPLER ADVANCED UNDER WEIGHT WR
- PERCENT PASSING #200 SIEVE NATURAL MOISTURE CONTENT (%) -200 NMC

- LIQUID LIMIT (%)
 PLASTICITY INDEX (%)
 ORGANIC CONTENT (%)
- NON-PLASTIC



- APPROXIMATE AUGER BORING LOCATION
- ∇^+ ESTIMATED SEASONAL HIGH GROUNDWATER TABLE ABOVE GRADE
- ESTIMATED SEASONAL HIGH GROUNDWATER TABLE
- GROUNDWATER LEVEL ENCOUNTERED ABOVE GRADE DURING FIELD EXPLORATIONS
- GROUNDWATER LEVEL ENCOUNTERED DURING FIELD EXPLORATIONS
- GROUNDWATER NOT ENCOUNTERED
- CAVE-IN CAVE-IN DUE TO SHALLOW GROUNDWATER INTRUSION
- EASTING COORDINATE REFERENCED TO THE FLORIDA STATE PLANE COORDINATE SYSTEM, FLORIDA EAST ZONE, N.A.D. 83.
- NORTHING NORTHING COORDINATE REFERENCED TO THE FLORIDA STATE PLANE COORDINATE SYSTEM, FLORIDA EAST ZONE, N.A.D. 83.
 - THE BORING LOCATIONS WERE RECORDED IN THE FIELD BY TIERRA, INC. USING GARMIN ETREX HAND-HELD GPS EQUIPMENT WITH A MANUFACTURE'S REPORTED ACCURACY OF ±10 FEET.

	SAFETY HAMMER	AUTOMATIC HAMMER
	JAILII HAMMEN	AUTOMATIC HAMMER
GRANULAR MATERIALS-	SPT N-VALUE	SPT N-VALUE
RELATIVE DENSITY	(BLOWS/FT.)	(BLOWS/FT.)
VERY LOOSE	LESS THAN 4	LESS THAN 3
LOOSE	4 to 10	3 to 8
MEDIUM DENSE	10 to 30	8 to 24
DENSE	30 to 50	24 to 40
VERY DENSE	GREATER THAN 50	GREATER THAN 40
SILTS AND CLAYS	SPT N-VALUE	SPT N-VALUE
CONSISTENCY	(BLOWS/FT.)	(BLOWS/FT.)
VERY SOFT	LESS THAN 2	LESS THAN 1
SOFT	2 to 4	1 to 3
FIRM	4 to 8	3 to 6
STIFF	8 to 15	6 to 12
VERY STIFF	15 to 30	12 to 24
HARD	GREATER THAN 30	GREATER THAN 24

BASIN 201

POND SOIL SURVEY (12)

SHEET NO.

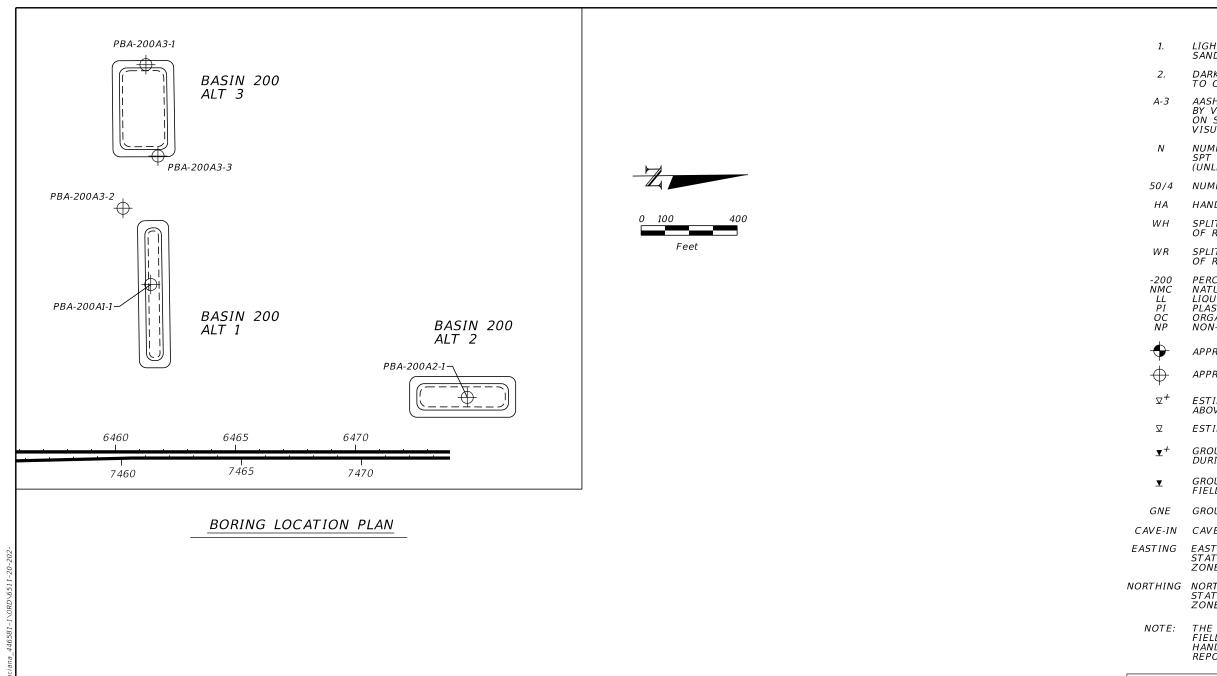
BOR # PBA-201A4-1 EASTING 461353 NORTHING 1442235





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REVISIONS ENGINEER OF RECORD STATE OF FLORIDA DESCRIPTION DESCRIPTION DATE DATE DEPARTMENT OF TRANSPORTATION KEVIN H. SCOTT, P.E. LICENSE NUMBER: 65514 ROAD NO. COUNTY FINANCIAL PROJECT ID TIERRA, INC. 7351 TEMPLE TERRACE HIGHWAY TAMPA, FLORIDA 33637 OSCEOLA SR 538 446581-1-22-01 POLK



$\nabla^{+} \mathbf{Y}^{+} $ $CAVE-IN$	5	DEPTH IN FEET
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BOR # PBA-200A3-3 EASTING 459450 NORTHING 1445336

9/8/2022

LEGEND

- LIGHT BROWN TO GRAY TO PALE ORANGE SAND TO SAND WITH SILT (A-3)
- DARK GRAY ORGANIC SAND TO ORGANIC SILTY SAND TO ORGANIC SILT TO PEAT (A-8)
- AASHTO GROUP SYMBOL AS DETERMINED BY VISUAL REVIEW AND LABORATORY TESTING ON SELECTED SAMPLES FOR CONFIRMATION OF VISUAL REVIEW.
- NUMBERS TO THE LEFT OF BORINGS INDICATE SPT VALUE FOR 12 INCHES OF PENETRATION (UNLESS OTHERWISE NOTED).
- NUMBER OF BLOWS FOR 4 INCHES OF PENETRATION
- HAND AUGERED TO VERIFY UTILITY CLEARANCE
- SPLIT-SPOON SAMPLER ADVANCED UNDER WEIGHT OF ROD AND HAMMER
- SPLIT-SPOON SAMPLER ADVANCED UNDER WEIGHT
- PERCENT PASSING #200 SIEVE NATURAL MOISTURE CONTENT (%)

- LIQUID LIMIT (%)
 PLASTICITY INDEX (%)
 ORGANIC CONTENT (%)
- NON-PLASTIC
- APPROXIMATE SPT BORING LOCATION



- ESTIMATED SEASONAL HIGH GROUNDWATER TABLE ABOVE GRADE
- ESTIMATED SEASONAL HIGH GROUNDWATER TABLE
- GROUNDWATER LEVEL ENCOUNTERED ABOVE GRADE DURING FIELD EXPLORATIONS
- GROUNDWATER LEVEL ENCOUNTERED DURING FIELD EXPLORATIONS
- GROUNDWATER NOT ENCOUNTERED
- CAVE-IN CAVE-IN DUE TO SHALLOW GROUNDWATER INTRUSION
- EASTING COORDINATE REFERENCED TO THE FLORIDA STATE PLANE COORDINATE SYSTEM, FLORIDA EAST ZONE, N.A.D. 83.
- NORTHING NORTHING COORDINATE REFERENCED TO THE FLORIDA STATE PLANE COORDINATE SYSTEM, FLORIDA EAST ZONE, N.A.D. 83.
 - THE BORING LOCATIONS WERE RECORDED IN THE FIELD BY TIERRA, INC. USING GARMIN ETREX HAND-HELD GPS EQUIPMENT WITH A MANUFACTURE'S REPORTED ACCURACY OF ±10 FEET.

SAFETY HAMMER	AUTOMATIC HAMMER
SPT N-VALUE (BLOWS/FT.)	SPT N-VALUE (BLOWS/FT.)
-	LESS THAN 3 3 to 8 8 to 24 24 to 40 GREATER THAN 40
(BLOWS/FT.)	(BLOWS/FT.)
LESS THAN 2 2 to 4 4 to 8 8 to 15 15 to 30 GREATER THAN 30	LESS THAN 1 1 to 3 3 to 6 6 to 12 12 to 24 GREATER THAN 24
	SPT N-VALUE (BLOWS/FT.) LESS THAN 4 4 to 10 10 to 30 30 to 50 GREATER THAN 50 SPT N-VALUE (BLOWS/FT.) LESS THAN 2 2 to 4 4 to 8 8 to 15 15 to 30

BASIN 200

,	REVI.	SIONS		ENGINEER OF RECORD		STATE OF FL	CORIDA
DATE	DESCRIPTION	DATE	DESCRIPTION	KEVIN H. SCOTT, P.E.	DEPA	ARTMENT OF TRAN	
				LICENSE NUMBER: 65514 TIERRA, INC.	ROAD NO.	COUNTY	FINANCIAL PROJECT ID
				7351 TEMPLE TERRACE HIGHWAY	CD 530	OSCEOLA	4465011 22 01
				TAMPA, FLORIDA 33637	SR 538	POLK	446581-1-22-01

BOR # PBA-200A3-1 EASTING 459069 NORTHING 1445290

9/8/2022

DATE

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-200=7 NMC=207 OC=23

BOR # PBA-200A3-2 EASTING 459666 NORTHING 1445188

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-200=29 NMC=552

OC=58

9/8/2022

BOR # PBA-200A1-1 EASTING 459985 NORTHING 1445300

1

CAVE-IN

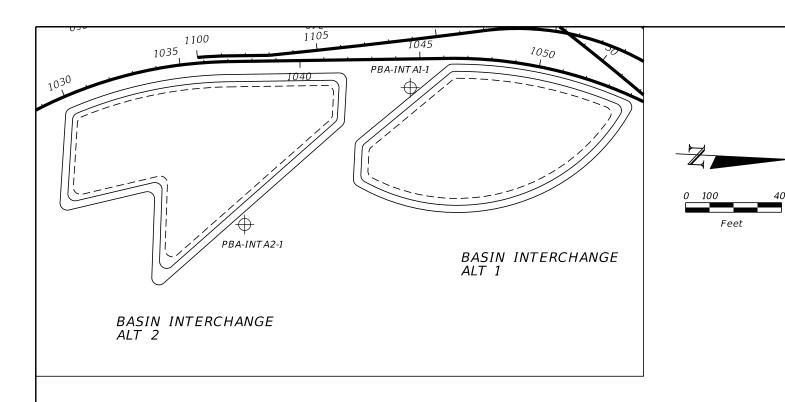
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BOR # PBA-200A2-1 EASTING 460470 NORTHING 1446613

9/8/2022

GNE

POND SOIL SURVEY (13)



BORING LOCATION PLAN

LEGEND

- LIGHT BROWN TO GRAY TO PALE ORANGE SAND TO SAND WITH SILT (A-3)
- DARK GRAY ORGANIC SAND TO ORGANIC SILTY SAND TO ORGANIC SILT TO PEAT (A-8)
- AASHTO GROUP SYMBOL AS DETERMINED BY VISUAL REVIEW AND LABORATORY TESTING ON SELECTED SAMPLES FOR CONFIRMATION OF VISUAL REVIEW.
- NUMBERS TO THE LEFT OF BORINGS INDICATE SPT VALUE FOR 12 INCHES OF PENETRATION (UNLESS OTHERWISE NOTED).
- NUMBER OF BLOWS FOR 4 INCHES OF PENETRATION 50/4
- HAND AUGERED TO VERIFY UTILITY CLEARANCE
- SPLIT-SPOON SAMPLER ADVANCED UNDER WEIGHT WH
- SPLIT-SPOON SAMPLER ADVANCED UNDER WEIGHT WR
- PERCENT PASSING #200 SIEVE NATURAL MOISTURE CONTENT (%)

- LIQUID LIMIT (%)
 PLASTICITY INDEX (%)
 ORGANIC CONTENT (%)
- NON-PLASTIC



 ∇^+

APPROXIMATE SPT BORING LOCATION



- ESTIMATED SEASONAL HIGH GROUNDWATER TABLE ABOVE GRADE
- ESTIMATED SEASONAL HIGH GROUNDWATER TABLE
- GROUNDWATER LEVEL ENCOUNTERED ABOVE GRADE DURING FIELD EXPLORATIONS
- GROUNDWATER LEVEL ENCOUNTERED DURING FIELD EXPLORATIONS
- GROUNDWATER NOT ENCOUNTERED
- CAVE-IN CAVE-IN DUE TO SHALLOW GROUNDWATER INTRUSION
- EASTING COORDINATE REFERENCED TO THE FLORIDA STATE PLANE COORDINATE SYSTEM, FLORIDA EAST ZONE, N.A.D. 83.
- NORTHING NORTHING COORDINATE REFERENCED TO THE FLORIDA STATE PLANE COORDINATE SYSTEM, FLORIDA EAST ZONE, N.A.D. 83.
 - THE BORING LOCATIONS WERE RECORDED IN THE FIELD BY TIERRA, INC. USING GARMIN ETREX HAND-HELD GPS EQUIPMENT WITH A MANUFACTURE'S REPORTED ACCURACY OF ±10 FEET.

	SAFETY HAMMER	AUTOMATIC HAMMER
GRANULAR MATERIALS-	SPT N-VALUE	SPT N-VALUE
RELATIVE DENSITY	(BLOWS/FT.)	(BLOWS/FT.)
VERY LOOSE	LESS THAN 4	LESS THAN 3
LOOSE	4 to 10	3 to 8
MEDIUM DENSE	10 to 30	8 to 24
DENSE	30 to 50	24 to 40
VERY DENSE	GREATER THAN 50	GREATER THAN 40
SILTS AND CLAYS	SPT N-VALUE	SPT N-VALUE
CONSISTENCY	(BLOWS/FT.)	(BLOWS/FT.)
VERY SOFT	LESS THAN 2	LESS THAN 1
SOFT	2 to 4	1 to 3
FIRM	4 to 8	3 to 6
STIFF	8 to 15	6 to 12
VERY STIFF	15 to 30	12 to 24
HARD	GREATER THAN 30	GREATER THAN 24

SHEET

NO.

BASIN INTERCHANGE

POND SOIL SURVEY (14)

DATE

1 \geq CAVE-IN DEPTH

DESCRIPTION

5

REVISIONS

DATE

DESCRIPTION

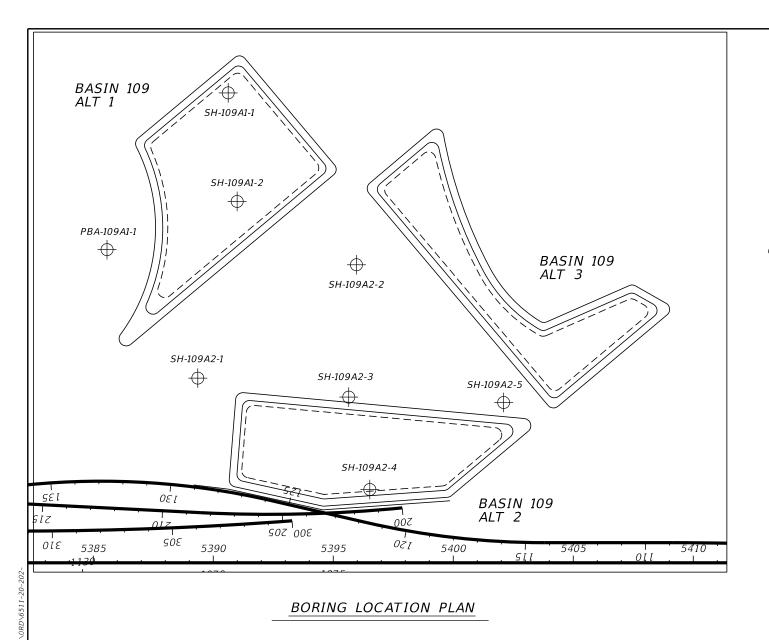
BOR # PBA-INTA2-1 EASTING 468091

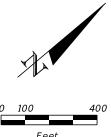
NORTHING 1436363

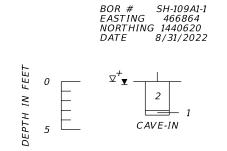
CAVE-IN

BOR # PBA-INTA1-1 EASTING 467487 NORTHING 1437023

	ENGINEER OF RECORD	STATE OF FLORIDA		ORIDA
KEVIN H. SCOTT, P.E. LICENSE NUMBER: 65514		DEPARTMENT OF TRANSPORTATION		
TIERRA, INC.	ROAD NO.	COUNTY	FINANCIAL PROJECT ID	
7351 TEMPLE TERRACE HIGHWAY		SR 538	OSCEOLA	446581-1-22-01
	TAMPA, FLORIDA 33637		POLK	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,







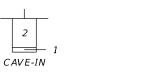
DESCRIPTION

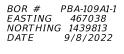
REVISIONS

DATE

BOR # SH-109A1-2 EASTING 467234 NORTHING 1440357 DATE 8/31/2022

DESCRIPTION







BOR # SH-109A2-1 EASTING 467691 NORTHING 1439757 9/6/2022 DATE

CAVE-IN



ENGINEER OF RECORD	STATE OF FLORIDA		ORIDA	l
KEVIN H. SCOTT, P.E. LICENSE NUMBER: 65514	DEPARTMENT OF TRANSPORTATION			
TIERRA, INC.	ROAD NO.	COUNTY	FINANCIAL PROJECT ID	i
7351 TEMPLE TERRACE HIGHWAY	SR 538	OSCEOLA	446581-1-22-01	l
TAMPA, FLORIDA 33637	3K 336	POLK	440361-1-22-01	<u></u>

LEGEND

- LIGHT BROWN TO GRAY TO PALE ORANGE SAND TO SAND WITH SILT (A-3)
- DARK GRAY ORGANIC SAND TO ORGANIC SILTY SAND TO ORGANIC SILT TO PEAT (A-8)
- AASHTO GROUP SYMBOL AS DETERMINED BY VISUAL REVIEW AND LABORATORY TESTING ON SELECTED SAMPLES FOR CONFIRMATION OF VISUAL REVIEW.
- NUMBERS TO THE LEFT OF BORINGS INDICATE SPT VALUE FOR 12 INCHES OF PENETRATION (UNLESS OTHERWISE NOTED).
- 50/4 NUMBER OF BLOWS FOR 4 INCHES OF PENETRATION
- HAHAND AUGERED TO VERIFY UTILITY CLEARANCE
- SPLIT-SPOON SAMPLER ADVANCED UNDER WEIGHT WH
- SPLIT-SPOON SAMPLER ADVANCED UNDER WEIGHT WR
- PERCENT PASSING #200 SIEVE NATURAL MOISTURE CONTENT (%) -200 NMC
- LIQUID LIMIT (%) PLASTICITY INDEX (%)
- ORGANIC CONTENT (%)
- NON-PLASTIC

APPROXIMATE SPT BORING LOCATION

- APPROXIMATE AUGER BORING LOCATION
- ∇^+ ESTIMATED SEASONAL HIGH GROUNDWATER TABLE ABOVE GRADE
- ESTIMATED SEASONAL HIGH GROUNDWATER TABLE
- GROUNDWATER LEVEL ENCOUNTERED ABOVE GRADE DURING FIELD EXPLORATIONS
- GROUNDWATER LEVEL ENCOUNTERED DURING FIELD EXPLORATIONS
- GROUNDWATER NOT ENCOUNTERED
- CAVE-IN CAVE-IN DUE TO SHALLOW GROUNDWATER INTRUSION
- EASTING COORDINATE REFERENCED TO THE FLORIDA STATE PLANE COORDINATE SYSTEM, FLORIDA EAST ZONE, N.A.D. 83.
- NORTHING NORTHING COORDINATE REFERENCED TO THE FLORIDA STATE PLANE COORDINATE SYSTEM, FLORIDA EAST ZONE, N.A.D. 83.
 - THE BORING LOCATIONS WERE RECORDED IN THE FIELD BY TIERRA, INC. USING GARMIN ETREX HAND-HELD GPS EQUIPMENT WITH A MANUFACTURE'S REPORTED ACCURACY OF ±10 FEET.

	SAFETY HAMMER	AUTOMATIC HAMMER
GRANULAR MATERIALS-	SPT N-VALUE	SPT N-VALUE
RELATIVE DENSITY	(BLOWS/FT.)	(BLOWS/FT.)
VERY LOOSE	LESS THAN 4	LESS THAN 3
LOOSE	4 to 10	3 to 8
MEDIUM DENSE	10 to 30	8 to 24
DENSE	30 to 50	24 to 40
VERY DENSE	GREATER THAN 50	GREATER THAN 40
SILTS AND CLAYS	SPT N-VALUE	SPT N-VALUE
CONSISTENCY	(BLOWS/FT.)	(BLOWS/FT.)
VERY SOFT	LESS THAN 2	LESS THAN 1
SOFT	2 to 4	1 to 3
FIRM	4 to 8	3 to 6
STIFF	8 to 15	6 to 12
VERY STIFF	15 to 30	12 to 24
HARD	GREATER THAN 30	GREATER THAN 24

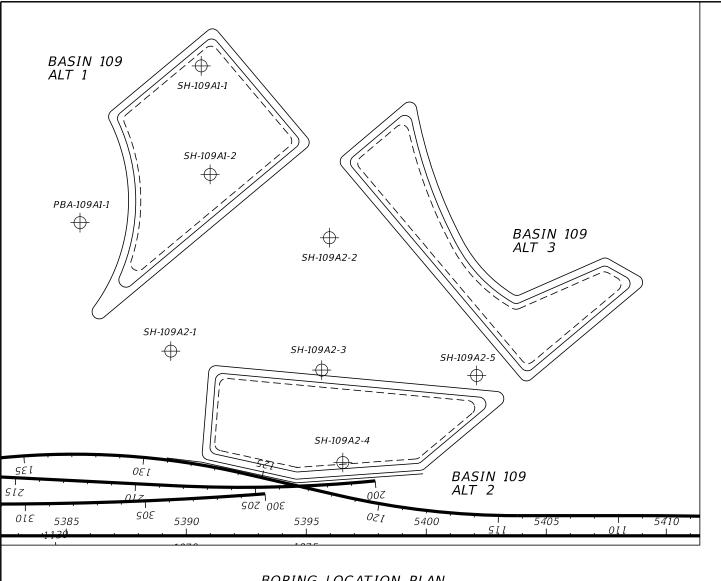
BASIN 109

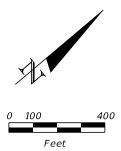
POND SOIL SURVEY (15)

DATE

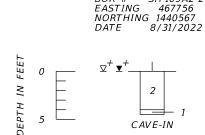
SHEET

NO.





BORING LOCATION PLAN



BOR # SH-109A2-2

REVISIONS

BOR # SH-109A2-3 EASTING 468157 EASTING 468157 NORTHING 1440187 DATE 9/9/2022

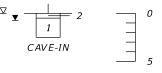


BOR # SH-109A2-4

9/9/2022

EASTING 468508 NORTHING 1440006

BOR # SH-109A2-5 EASTING 468590 NORTHING 1440666 DATF8/31/2022



☑ ▼	o	1 / V
CAVE-IN		1

LEGEND	

- LIGHT BROWN TO GRAY TO PALE ORANGE SAND TO SAND WITH SILT (A-3)
- DARK GRAY ORGANIC SAND TO ORGANIC SILTY SAND TO ORGANIC SILT TO PEAT (A-8)
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- 50/4 NUMBER OF BLOWS FOR 4 INCHES OF PENETRATION
- HAHAND AUGERED TO VERIFY UTILITY CLEARANCE
- SPLIT-SPOON SAMPLER ADVANCED UNDER WEIGHT WH
- SPLIT-SPOON SAMPLER ADVANCED UNDER WEIGHT WR
- PERCENT PASSING #200 SIEVE NATURAL MOISTURE CONTENT (%) -200 NMC
- LIQUID LIMIT (%) PLASTICITY INDEX (%)
- ORGANIC CONTENT (%)
- NON-PLASTIC



APPROXIMATE SPT BORING LOCATION



- ∇^+ ESTIMATED SEASONAL HIGH GROUNDWATER TABLE ABOVE GRADE
- ESTIMATED SEASONAL HIGH GROUNDWATER TABLE
- GROUNDWATER LEVEL ENCOUNTERED ABOVE GRADE DURING FIELD EXPLORATIONS
- GROUNDWATER LEVEL ENCOUNTERED DURING FIELD EXPLORATIONS
- GROUNDWATER NOT ENCOUNTERED
- CAVE-IN CAVE-IN DUE TO SHALLOW GROUNDWATER INTRUSION
- EASTING COORDINATE REFERENCED TO THE FLORIDA STATE PLANE COORDINATE SYSTEM, FLORIDA EAST
- NORTHING NORTHING COORDINATE REFERENCED TO THE FLORIDA STATE PLANE COORDINATE SYSTEM, FLORIDA EAST ZONE, N.A.D. 83.
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	SAFETY HAMMER	AUTOMATIC HAMMER
GRANULAR MATERIALS-	SPT N-VALUE	SPT N-VALUE
RELATIVE DENSITY	(BLOWS/FT.)	(BLOWS/FT.)
VERY LOOSE	LESS THAN 4	LESS THAN 3
LOOSE	4 to 10	3 to 8
MEDIUM DENSE	10 to 30	8 to 24
DENSE	30 to 50	24 to 40
VERY DENSE	GREATER THAN 50	GREATER THAN 40
SILTS AND CLAYS	SPT N-VALUE	SPT N-VALUE
CONSISTENCY	(BLOWS/FT.)	(BLOWS/FT.)
VERY SOFT	LESS THAN 2	LESS THAN 1
SOFT	2 to 4	1 to 3
FIRM	4 to 8	3 to 6
STIFF	8 to 15	6 to 12
VERY STIFF	15 to 30	12 to 24
HARD	GREATER THAN 30	GREATER THAN 24

BASIN 109

POND SOIL SURVEY (16)

ENGINEER OF RECORD STATE OF FLORIDA DESCRIPTION DATE DESCRIPTION DATE DEPARTMENT OF TRANSPORTATION KEVIN H. SCOTT, P.E. LICENSE NUMBER: 65514 ROAD NO. COUNTY FINANCIAL PROJECT ID TIERRA, INC. OSCEOLA 7351 TEMPLE TERRACE HIGHWAY SR 538 446581-1-22-01 TAMPA, FLORIDA 33637 POLK

Summary of Latitude/Longitude for Roadway Borings Poinciana Parkway Extension

SR 538 from S. of CR 532 to the Sinclair Road/SR 429 Interchange Osceola and Polk Counties, Florida

FPID No. 446581-1-22-01

Tierra Project No. 6511-20-202-001

Boring Location	Latitude	Longitude
AB-CR532-1	28.26193	-81.56024
AB-CR532-2	28.26017	-81.55970
AB-CR532-3	28.26012	-81.55833
AB-CR532-4	28.26226	-81.55960
AB-CR532-5	28.25980	-81.55677
AB-CR532-6	28.25975	-81.56056
AB-CR532-7	28.25976	-81.56183
AB-CR532-8	28.26007	-81.56110
AB-CR532-9	28.26008	-81.55764
AB-CR532-10	28.25979	-81.55894
AB-CR532-11	28.25980	-81.55547
AB-I4-1	28.28760	-81.58717
AB-I4-2	28.28636	-81.58748
AB-I4-3	28.28491	-81.58655
AB-I4-4	28.28395	-81.58551
AB-I4-5	28.28166	-81.59117
AB-I4-6	28.28133	-81.59281
AB-I4-7	28.28400	-81.58741
AB-I4-8	28.28285	-81.58458
AB-I4-9	28.28360	-81.58593
AB-I4-10	28.28410	-81.58893
AB-I4-11	28.28354	-81.59111
AB-NB-1	28.28312	-81.58433
AB-NB-2	28.28211	-81.58336
AB-NB-3	28.28118	-81.58229
AB-NB-4	28.28163	-81.58147
AB-NB-5	28.27779	-81.57959
AB-NB-6	28.27680	-81.57857
AB-NB-7	28.27570	-81.57785
AB-NB-8	28.27429	-81.57513
AB-NB-9	28.27371	-81.57359
AB-NB-10	28.27315	-81.57212
AB-NB-11	28.27200	-81.56959
AB-NB-12	28.27078	-81.56687
AB-NB-13	28.26959	-81.56507
AB-NB-14	28.26823	-81.56309
AB-NB-15	28.26692	-81.56219
AB-NB-16	28.26455	-81.56073
AB-NB-17	28.26352	-81.56037

Summary of Latitude/Longitude for Roadway Borings Poinciana Parkway Extension

SR 538 from S. of CR 532 to the Sinclair Road/SR 429 Interchange Osceola and Polk Counties, Florida

FPID No. 446581-1-22-01

Tierra Project No. 6511-20-202-001

Boring Location	Latitude	Longitude
AB-NB-18	28.26109	-81.55899
AB-NB-19	28.25839	-81.55747
AB-NB-20	28.25727	-81.55681
AB-NB-21	28.28426	-81.59168
AB-NB-22	28.28449	-81.59276
AB-NB-23	28.28513	-81.59429
AB-NB-24	28.28592	-81.59508
AB-NB-25	28.28617	-81.59566
AB-NB-26	28.28870	-81.59790
AB-NB-27	28.29017	-81.59898
AB-NB-28	28.29113	-81.59952
AB-NB-29	28.29376	-81.60157
AB-NB-30	28.29190	-81.60009
AB-NB-31	28.28738	-81.59683
AB-NB-32	28.27886	-81.58025
AB-SB-1	28.28156	-81.59481
AB-SB-2	28.28266	-81.59475
AB-SB-3	28.29184	-81.60095
AB-SB-4	28.29047	-81.60009
AB-SB-5	28.28848	-81.59837
AB-SB-6	28.28709	-81.59723
AB-SB-7	28.28616	-81.59567
AB-SB-8	28.28513	-81.59574
AB-SB-9	28.25706	-81.55698
AB-SB-10	28.25802	-81.55787
AB-SB-11	28.27653	-81.58031
AB-SB-12	28.26882	-81.56454
AB-SB-13	28.27055	-81.56693
AB-SB-14	28.27113	-81.56861
AB-SB-15	28.25930	-81.55871
AB-SB-16	28.26055	-81.55927
AB-SB-17	28.26173	-81.55998
AB-SB-18	28.26312	-81.56079
AB-SB-19	28.26435	-81.56125
AB-SB-20	28.26547	-81.56191
AB-SB-21	28.26670	-81.56261
AB-SB-22	28.26796	-81.56357
AB-SB-23	28.27170	-81.56972
AB-SB-24	28.27257	-81.57156

Summary of Latitude/Longitude for Roadway Borings Poinciana Parkway Extension

SR 538 from S. of CR 532 to the Sinclair Road/SR 429 Interchange

Osceola and Polk Counties, Florida FPID No. 446581-1-22-01

Boring Location	Latitude	Longitude
AB-SB-25	28.27292	-81.57259
AB-SB-26	28.27352	-81.57401
AB-SB-27	28.27401	-81.57546
AB-SB-28	28.27463	-81.57680
AB-SB-29	28.27526	-81.57804
AB-SB-30	28.27582	-81.57923
AB-SB-31	28.27736	-81.58137
AB-SB-32	28.27795	-81.58237
AB-SB-33	28.27838	-81.58342
AB-SB-34	28.27935	-81.58413
AB-SB-35	28.27956	-81.58583
AB-SB-36	28.28001	-81.58652
AB-SB-37	28.28023	-81.58715
AB-SB-38	28.28068	-81.58789
AB-SB-39	28.28147	-81.58908
AB-SB-40	28.28258	-81.58993
AB-SNC-1	28.29547	-81.60146
AB-SNC-2	28.29364	-81.60270
AB-SNC-3	28.29272	-81.60170
AB-SNC-4	28.29631	-81.60438
AB-SNC-5	28.29530	-81.60398
AB-SNC-6	28.29567	-81.60431
AB-SNC-7	28.29313	-81.60040
AB-SNC-8	28.29530	-81.60398
AB-SNC-9	28.29218	-81.59985
PBA-109A1-1	28.29334	-81.58769
PBA-200A1-1	28.30834	-81.60970
PBA-200A2-1	28.31195	-81.60821
PBA-200A3-1	28.30843	-81.61136
PBA-200A3-2	28.30802	-81.61068
PBA-200A3-3	28.30843	-81.61136
PBA-201A1-1	28.29520	-81.60505
PBA-201A2-1	28.29682	-81.60555
PBA-201A3-1	28.29792	-81.59659
PBA-201A4-1	28.29993	-81.60540
PBA-202A1-1A	28.29079	-81.60305
PBA-202A1-1B	28.29788	-81.59796
PBA-202A2-1	28.29673	-81.60070
PBA-203A1-1	28.27323	-81.57788

Summary of Latitude/Longitude for Roadway Borings Poinciana Parkway Extension

SR 538 from S. of CR 532 to the Sinclair Road/SR 429 Interchange Osceola and Polk Counties, Florida FPID No. 446581-1-22-01

Boring Location	Latitude	Longitude		
PBA-203A2-1	28.27553	-81.57934		
PBA-203A3-1	28.27323	-81.57788		
PBA-204A2-1	28.26988	-81.56938		
PBA-204A3-1	28.27098	-81.56495		
PBA-205A1-1	28.26763	-81.56128		
PBA-205A2-1	28.26786	-81.56523		
PBA-205A3-1	28.26582	-81.56571		
PBA-206A1-1	28.26154	-81.56069		
PBA-206A2-1	28.25881	-81.55932		
PBA-206A3-1	28.25907	-81.55681		
PBA-INTA1-1	28.28567	-81.58626		
PBA-INTA2-1	28.28387	-81.58437		
PBS-204A1-1	28.27340	-81.57484		
PBS-206A3-1	28.25901	-81.55680		
SH-109A1-1	28.29556	-81.58825		
SH-109A1-2	28.29484	-81.58709		
SH-109A2-1	28.29320	-81.58566		
SH-109A2-2	28.29543	-81.58547		
SH-109A2-3	28.29439	-81.58422		
SH-109A2-4	28.29389	-81.58313		
SH-109A2-5	28.29571	-81.58288		

APPENDIX C

Summary of USDA Soil Survey Information – Osceola County

Summary of USDA Soil Survey Information – Polk County

Summary of Seasonal High Groundwater Table Estimates – Roadway

Summary of Seasonal High Groundwater Table Estimates - Ponds

		Sum	mary of US Osceola Cou	DA Soil Surve	Э у		
USDA Map Unit and		Soil Classi		•		Seasona	l High Water Table
Soil Name	Depth (in)	uscs	AASHTO	Permeability (in/hr)	рН	Depth (feet)	Months
	0-2	SP-SM, SM	A-2-4, A-3	6.0 - 20.0	4.5-6.0		
(5)	2-18	SP-SM, SM	A-3, A-2-4	6.0 - 20.0	4.5-6.0	0040	
Basinger fine sand, 0 to 2 percent slopes	18-36	SP-SM, SM	A-2-4, A-3	6.0 - 20.0	4.5-6.0	0.0-1.0	Jul-Oct
	36-80	SP-SM, SM	A-3, A-2-4	6.0 - 20.0	5.1-6.5		
(7)	0-6	SP, SP-SM	A-3	6.0 - 50.0	4.5-6.0		
Candler fine sand,	6-63	SP, SP-SM	A-3, A-2-4	6.0 - 50.0	4.5-6.0	>6.0	Jan-Dec
0 to 5 percent slopes	63-80	SP-SM	A-2-4, A-3	6.0 - 20.0	4.5-6.3		
(8)	0-5	SP-SM, SP, SM	A-3, A-2-4	20.0 - 50.0	4.5-6.0		
Candler fine sand,	5-67	SP-SM, SP, SM	A-3, A-2-4	20.0 - 50.0	4.5-6.0	>6.0	Jan-Dec
5 to 12 percent slopes	67-80	SP-SM, SC-SM	A-2-4, A-3	6.0 - 20.0	4.5-6.0		
(15)	0-5	PT	A-8	6.0 - 20.0	3.5-4.5		
Hontoon muck,	5-60	PT	A-8	6.0 - 20.0	3.5-4.5	+2.0-0.0	Jan, Feb-May, Jun-Dec
frequently ponded	60-65	PT	A-8	6.0 - 20.0	3.5-5.0		
	0-6	SP-SM, SM	A-3, A-2-4	6.0 - 20.0	3.5-6.0		
(16)	6-35	SP-SM, SM	A-3, A-2-4	6.0 - 20.0	3.5-6.0	1	
Immokalee	35-54	SP-SM, SM	A-3, A-2-4	0.6 - 2.0	3.5-6.0	0.5-1.5	June-Nov
	54-80	SM, SP-SM	A-2-4, A-3	6.0 - 20.0	3.5-6.0	1	
	0-4	SP, SP-SM	A-3	6.0 - 20.0	4.5-7.3		
	4-27	SP, SP-SM	A-3	6.0 - 20.0	4.5-7.3	1	
(18)	27-35	SP, SP-SM	A-2-4, A-3	6.0 - 20.0	5.6-8.4	1	
Lokosee	35-43	SP, SP-SM	A-3	0.6 - 6.0	5.6-8.4	0.5-1.5	June-Sept
	43-49	SM, SP-SM	A-2-4, A-3	6.0 - 20.0	4.5-8.4	1	
	49-57	SC, SC-SM, SM	A-2, A-4, A-6	0.6 - 6.0	4.5-8.4	†	
	0-4	SP-SM, SM	A-2-4, A-3	6.0 - 20.0	4.5-6.0		
(27)	4-22	SM, SP-SM	A-2-4, A-3	0.6 - 2.0	4.5-6.0	0.5-1.5	June-Nov
Ona	22-80	SP-SM, SM	A-2-4, A-3	6.0 - 20.0	4.5-6.0	1	
(32)	0-24	SP-SM, SM	A-3, A-2-4	6.0 - 20.0	3.5-5.5		Jan, Feb, Jun,
Placid	24-80	SM, SP-SM	A-3, A-2-4	6.0 - 20.0	3.5-6.5	+2.0-0.0	Jul-Oct, Nov-Dec
	0-4	SP-SM	A-3	20.0 - 50.0	4.5-6.0		
(0.4)	4-47	SP-SM	A-3	20.0 - 50.0	4.5-6.0	1	
(34) Pomello fine sand,	47-58	SP-SM	A-2-4	0.6 - 6.0	4.3-6.0	2.0-3.5	July-Nov
0 to 5 percent slopes	58-65	SP-SM	A-3	0.6 - 6.0	4.5-6.0	1	J,
	65-80	SP	A-3	6.0 - 20.0	4.0-6.0	1	
(36)	0-4	SP-SM, SM	A-2-4, A-3	6.0 - 20.0	4.5-6.5		
Pomona	4-80	SM, SP-SM	A-3, A-2-4-	6.0 - 20.0	4.5-7.3	0.3-1.5	Jul-Oct
(37)	0-12	SP-SM, SM	A-3, A-2-4	6.0 - 20.0	4.5-7.8		Jan, Feb, Jun,
Pomona fine sand, frequently ponded,	12-80	SP-SM, SM	A-3, A-2-4	6.0 - 20.0	4.5-7.8	+2.0-0.0	Jul-Oct, Nov-Dec
frequently portued,	0-24	PT	A-8	6.0 - 20.0	3.5-4.4		
(40)	24-32	PT	A-8	6.0 - 20.0	3.5-4.4	1	
Samsula muck,	32-35	SM, SP-SM	A-3, A-2-4	6.0 - 20.0	3.5-6.0	+2.0-0.0	Jan, Feb-May, Jun-Dec
frequently ponded, 0 to 1 percent slopes	35-44	SP-SM, SM	A-2-4, A-3	6.0 - 20.0	3.5-6.0	1	
2 to 1 po. 30111 010pou	44-80	SM, SP-SM	A-2-4, A-3	6.0 - 20.0	3.5-6.0	1	
(44)	0-6	SP, SP-SM	A-3	20.0 - 50.0	4.5-7.0		
(41) Satellite sand,	6-13	SP, SP-SM	A-3, A-2-4	20.0 - 50.0	4.2-7.0	1.5-3.5	June-Nov
0 to 2 percent slopes	13-80	SP, SP-SM	A-3, A-2-4	20.0 - 50.0	4.2-7.0	1	
	0-4	SP-SM, SM	A-3, A-2-4	6.0 - 20.0	4.0-5.6		
}	4-13	SP-SM, SM	A-3, A-2-4	6.0 - 20.0	4.0-5.6	1	
(42)	13-18	SP-SM, SM	A-2-4, A-3	0.6 - 6.0	4.0-5.6	1	
(42) Smyrna, non-hydric	18-49	SP-SM, SM	A-2-4, A-3	6.0 - 20.0	4.0-5.6	0.5-1.5	Jun-Nov
	49-80	SP-SM, SM	A-3, A-2-4	6.0 - 20.0	4.0-5.6	†	
	70-80	SP-SM	A-2-4, A-3	20.0 - 50.0	4.5-5.5	†	
	7 0-00	Oi -Oivi	/\-Z- -1 , /\-U	20.0 - 00.0	7.0-0.0		I

	Summary of USDA Soil Survey Polk County, Florida														
LICDA Man Cambal		Soil Clas		Seasonal Hi	gh Water Table										
USDA Map Symbol - and Soil Name	Depth (in)	uscs	AASHTO	Perme	ability (in/hr)	рН	Depth (feet)	Months							
	0-7	SP, SP-SM	A-3	6.0	- 20.0	3.5-6.0									
	7-39	SP, SP-SM	A-3	6.0	- 20.0	3.5-6.0									
	39-58	SM, SP-SM	A-2-4, A-3	0.6	- 2.0	3.5-6.0	0.5-1.5	Jun-Oct							
(21)	58-66	SP, SP-SM	A-3	6.0	- 20.0	3.5-6.0									
Immokalee, non-	66-80	SM, SP-SM	A-2-4, A-3	0.6	- 2.0	3.5-6.0									
hydric - Immokalee,	0-7	SP, SP-SM	A-3	6.0	- 20.0	3.5-6.0									
Hydric	7-39	SP, SP-SM	A-3	6.0	- 20.0	3.5-6.0									
	39-58	SM, SP-SM	A-2-4, A-3	0.6	- 2.0	3.5-6.0	0.0-1.0	Jun-Oct							
	58-66	SP, SP-SM	A-3	6.0	- 20.0	3.5-6.0									
	66-80	SM, SP-SM	A-2-4, A-3	0.6	- 2.0	3.5-6.0									
	0-18	SM, SP, SP-SM	A-3, A-2-4	6.0	- 20.0	3.5-5.5	+2.0-0.0	Jan-Mar,							
4	18-80	SP-SM, SM, SP	A-2-4, A-3	6.0	- 20.0	3.5-5.5	+2.0-0.0	Jun-Dec							
(25)	0-3	SP, SP-SM	A-3	6.0	- 20.0	3.5-6.5									
Placid, depressional Myakka, depressional	3-25	SP, SP-SM	A-3	6.0	- 20.0	3.5-6.5	1	Jan-Feb,							
myanna, uepiessionai	25-35	SM, SP-SM	A-2-4, A-3	0.6	- 6.0	3.5-6.5	+2.0-0.0	Jun-Dec							
	35-80	SP, SP-SM	A-3	6.0	- 20.0	3.5-6.5									

Poinciana Parkway Extension - Roadway

SR 538 from S. of CR 532 to the Sinclair Road/SR 429 Interchange

Osceola and Polk Counties, Florida

FPID No. 446581-1-22-01

Tierra Project No. 6511-20-202-001

	Boring L	ocation ⁽¹⁾	Approximate	Boring	ricita i roject	Measure		USDA	Soil Survey	Estimated		
Daring Name	(FL	East)	Ground		Gr	oundwater	Table		Estimated] ;	SHGWT ⁽⁵⁾	
Boring Name	Facting	Northing	Elevation ⁽²⁾	Depth ⁽³⁾	Date	Depth ⁽³⁾	Elevation	Map Symbol	SHGWT ⁽⁴⁾ Depth	Depth	Elevation	
	Easting	Northing	(feet, NAVD 88)	(feet)	Recorded	(feet)	(feet, NAVD 88)		(feet)	(feet)	(feet, NAVD 88)	
AB - NB-1	468104	1436091	N/A	5.0	08/11/22	ABG	N/A	15	+2.0-0.0	ABG	N/A	
AB - NB-2	468413	1435723	N/A	9.0	08/09/22	ABG	N/A	15	+2.0-0.0	ABG	N/A	
AB - NB-3	468757	1435382	N/A	2.5	08/09/22	ABG	N/A	15	+2.0-0.0	ABG	N/A	
AB - NB-4	469020	1435546	N/A	3.0	08/11/22	1.5	N/A	15	+2.0-0.0	0.5	N/A	
AB - NB-5	469620	1434145	N/A	3.0	08/10/22	0.8	N/A	15	+2.0-0.0	0.0	N/A	
AB - NB-6	469945	1433784	N/A	3.5	08/21/22	1.9	N/A	15/16	+2.0-0.0/0.5 - 1.5	0.5	N/A	
AB - NB-7	470175	1433383	N/A	5.0	08/10/22	2.8	N/A	15	+2.0-0.0	1.8	N/A	
AB - NB-8	471048	1432865	N/A	4.0	08/10/22	2.5	N/A	15	+2.0-0.0	1.8	N/A	
AB - NB-9	471544	1432655	N/A	3.5	07/28/22	2.0	N/A	16	0.5 - 1.5	0.0	N/A	
AB - NB-10	472016	1432448	N/A	4.0	07/28/22	2.0	N/A	16	0.5 - 1.5	1.0	N/A	
AB - NB-11	472827	1432025	N/A	12.5	09/08/22	ABG	N/A	15/32	+2.0-0.0	ABG	N/A	
AB - NB-12	473700	1431578	N/A	3.0	08/29/22	ABG	N/A	32/36	+2.0-0.0/0.3 - 1.5	ABG	N/A	
AB - NB-13	474278	1431142	N/A	3.0	08/30/22	1.8	N/A	36	0.3 - 1.5	1.0	N/A	
AB - NB-14	474914	1430646	N/A	0.0	09/07/22	ABG	N/A	40	+2.0-0.0	ABG	N/A	
AB - NB-15	475200	1430167	N/A	1.5	08/09/22	ABG	N/A	40	+2.0-0.0	ABG	N/A	
AB - NB-16	475666	1429304	N/A	5.0	08/09/22	2.5	N/A	41	1.5 - 3.5	1.5	N/A	
AB - NB-17	475781	1428930	N/A	10.0	08/09/22	ABG	N/A	5	0.0 - 1.0	ABG	N/A	
AB - NB-18	476220	1428044	N/A	3.5	08/08/22	0.0	N/A	32	+2.0-0.0	0.0	N/A	
AB - NB-19	476706	1427059	N/A	4.5	08/08/22	2.1	N/A	21	0.0 - 1.0/0.5 -1 .5	1.0	N/A	
AB - NB-20*	476916	1426652	N/A	5.0	08/08/22	1.9	N/A	21	0.0 - 1.0/0.5 -1 .5	1.0	N/A	
AB - NB-21	465738	1436518	N/A	5.0	08/24/22	GNE	N/A	7	>6.0	>5.0	N/A	
AB - NB-22	465393	1436603	N/A	5.0	08/24/22	GNE	N/A	7	>6.0	>5.0	N/A	
AB - NB-23	464901	1436839	N/A	5.0	08/17/22	GNE	N/A	7/8	>6.0	>5.0	N/A	
AB - NB-24	464648	1437125	N/A	5.0	08/24/22	GNE	N/A	8	>6.0	>5.0	N/A	
AB - NB-25	464461	1437217	N/A	5.0	08/23/22	GNE	N/A	8	>6.0	>5.0	N/A	
AB - NB-26	463746	1438142	N/A	5.0	08/23/22	GNE	N/A	7/8	>6.0	>5.0	N/A	
AB - NB-27	463401	1438677	N/A	5.0	08/22/22	GNE	N/A	7	>6.0	>5.0	N/A	
AB - NB-28	463227	1439028	N/A	5.0	08/22/22	GNE	N/A	7/8	>6.0	>5.0	N/A	
AB - NB-29	462574	1439987	N/A	5.0	08/22/22	GNE	N/A	8	>6.0	>5.0	N/A	
AB - NB-30	463047	1439307	N/A	5.0	08/22/22	GNE	N/A	8	>6.0	>5.0	N/A	
AB - NB-31	464087	1437660	N/A	5.0	08/23/22	GNE	N/A	7/8	>6.0	>5.0	N/A	
AB - NB-32	469407	1434535	N/A	2.5	08/12/22	1.5	N/A	15	+2.0-0.0	0.5	N/A	

Boring locations were estimated using Garmin eTrex GPS coordinates.

⁽²⁾ Ground elevations not available at the time of this submittal.

⁽³⁾ Depth below existing grades at time of augering.

⁽⁴⁾ Seasonal high groundwater table depth estimated based on the Osceola County, Florida USDA Soil Survey information, unless otherwise noted.

⁵⁾ Seasonal High Groundwater Table depth estimated based on soil stratigraphy, measured groundwater levels from the borings, and review of the USDA Soil Survey information.

^{*} Seasonal high groundwater table depth estimated based on the Polk County, Florida USDA Soil Survey information.

Poinciana Parkway Extension - Roadway

SR 538 from S. of CR 532 to the Sinclair Road/SR 429 Interchange

Osceola and Polk Counties, Florida

FPID No. 446581-1-22-01

Tierra Project No. 6511-20-202-001

	Boring L	ocation ⁽¹⁾	Approximate		Tierra i Toject	Measure		USDA	Soil Survey	Estimated	
		East)	Ground	Boring	Gr	oundwater	Table		Estimated		SHGWT ⁽⁵⁾
Boring Name	•		Elevation ⁽²⁾	Depth ⁽³⁾	Date	Depth ⁽³⁾		Map Symbol	SHGWT ⁽⁴⁾ Depth	Depth	Elevation
	Easting	Northing	(feet, NAVD 88)	(feet)	Recorded	(feet)	(feet, NAVD 88)		(feet)	(feet)	(feet, NAVD 88)
AB - SB-1	464727	1435539	N/A	3.0	08/26/22	ABG	N/A	15	+2.0-0.0	ABG	N/A
AB - SB-2	464747	1435940	N/A	5.0	08/23/22	GNE	N/A	7	>6.0	>5.0	N/A
AB - SB-3	462768	1439287	N/A	13.0	09/01/22	ABG	N/A	15	+2.0-0.0	ABG	N/A
AB - SB-4	463043	1438789	N/A	3.5	08/17/22	2.8	N/A	7	>6.0	1.0	N/A
AB - SB-5	463592	1438063	N/A	5.0	08/23/22	GNE	N/A	8	>6.0	>5.0	N/A
AB - SB-6	463959	1437555	N/A	5.0	09/01/22	GNE	N/A	8	>6.0	>5.0	N/A
AB - SB-7	464458	1437213	N/A	9.0	09/01/22	ABG	N/A	15	+2.0-0.0	ABG	N/A
AB - SB-8	464435	1436839	N/A	2.0	09/01/22	1.2	N/A	15	+2.0-0.0	0.0	N/A
AB - SB-9*	476860	1426573	N/A	3.0	08/08/22	1.2	N/A	21	0.0 - 1.0/0.5 -1 .5	0.0	N/A
AB - SB-10*	476578	1426924	N/A	5.0	08/08/22	3.0	N/A	21	0.0 - 1.0/0.5 -1 .5	2.0	N/A
AB - SB-11	469384	1433688	N/A	0.0	08/21/22	ABG	N/A	15	+2.0-0.0	ABG	N/A
AB - SB-12	474448	1430863	N/A	3.0	08/30/22	1.6	N/A	36/41	0.3 - 1.5/1.5 -3.5	6.0	N/A
AB - SB-13	473680	1431493	N/A	3.0	08/29/22	8.0	N/A	32/36	0.0 - 1.0/0.3 - 1.5	0.0	N/A
AB - SB-14	473142	1431709	N/A	10.5	09/08/22	ABG	N/A	5/32	+2.0-0.0/0.0 - 1.0	ABG	N/A
AB - SB-15*	476309	1427390	N/A	5.0	08/08/22	1.9	N/A	21	0.0 - 1.0/0.5 -1 .5	1.0	N/A
AB - SB-16	476129	1427847	N/A	16.5	08/09/22	ABG	N/A	32	+2.0-0.0	ABG	N/A
AB - SB-17	475905	1428277	N/A	3.0	08/08/22	1.3	N/A	16/32	+2.0 - 0.0/0.5 - 1.5	0.6	N/A
AB - SB-18	475646	1428782	N/A	2.0	08/09/22	ABG	N/A	5	0.0 - 1.0	ABG	N/A
AB - SB-19	475498	1429232	N/A	4.0	08/09/22	2.5	N/A	41	1.5 - 3.5	1.5	N/A
AB - SB-20	475288	1429639	N/A	4.0	08/08/22	2.2	N/A	41	1.5 - 3.5	1.0	N/A
AB - SB-21	475065	1430088	N/A	3.0	08/09/22	6.0	N/A	40	+2.0-0.0	0.0	N/A
AB - SB-22	474757	1430548	N/A	13.0	09/07/22	ABG	N/A	40	+2.0-0.0	ABG	N/A
AB - SB-23	472784	1431916	N/A	11.0	08/09/22	ABG	N/A	15	+2.0-0.0	ABG	N/A
AB - SB-24	472194	1432235	N/A	2.0	09/07/22	1.5	N/A	15	+2.0-0.0	0.5	N/A
AB - SB-26	471409	1432586	N/A	3.5	07/28/22	2.0	N/A	16	0.5 - 1.5	1.0	N/A
AB - SB-27	470943	1432766	N/A	4.0	07/28/22	2.6	N/A	16	0.5 - 1.5	1.0	N/A
AB - SB-28	470510	1432993	N/A	2.0	08/10/22	0.2	N/A	15	+2.0-0.0	ABG	N/A
AB - SB-29	470113	1433222	N/A	2.5	08/10/22	10.0	N/A	15	+2.0-0.0	ABG	N/A
AB - SB-30	469732	1433429	N/A	5.0	08/31/22	4.0	N/A	15	+2.0-0.0	ABG	N/A
AB - SB-31	469046	1433994	N/A	3.5	08/12/22	2.0	N/A	16	0.5 - 1.5	6.0	N/A
AB - SB-32	468724	1434210	N/A	3.0	08/10/22	1.0	N/A	16	0.5 - 1.5	0.0	N/A
AB - SB-33	468386	1434365	N/A	4.0	08/12/22	1.6	N/A	16	0.5 - 1.5	0.0	N/A
AB - SB-34	468160	1434719	N/A	3.0	08/12/22	1.2	N/A	15	+2.0-0.0	0.0	N/A
AB - SB-35	467612	1434801	N/A	3.0	08/30/22	2.0	N/A	16	0.5 - 1.5	0.0	N/A
AB - SB-36	467392	1434965	N/A	5.0	08/30/22	3.8	N/A	41	1.5 - 3.5	>5.0	N/A
AB - SB-37	467189	1435044	N/A	5.0	08/30/22	4.0	N/A	16/41	0.5 - 1.5/1.5 - 3.5	2.0	N/A
AB - SB-38	466952	1435211	N/A	5.0	08/30/22	3.6	N/A	15	+2.0-0.0	2.0	N/A
AB - SB-39	466572	1435500	N/A	3.0	08/30/22	1.0	N/A	15	+2.0-0.0	ABG	N/A
AB - SB-40	466299	1435904	N/A	6.0	08/17/22	GNE	N/A	7	>6.0	6.5	N/A

⁽¹⁾ Boring locations were estimated using Garmin eTrex GPS coordinates and should be considered approximate..

GNE: Groundwater Not Encountered

⁽²⁾ Ground elevations not available at the time of this submittal.

⁽³⁾ Depth below existing grades at time of augering.

⁽⁴⁾ Seasonal high groundwater table depth estimated based on the Osceola County, Florida USDA Soil Survey information.

Seasonal High Groundwater Table depth estimated based on soil stratigraphy, measured groundwater levels from the borings, and review of the USDA Soil Survey information.

Seasonal high groundwater table depth estimated based on the Polk County, Florida USDA Soil Survey information.

Poinciana Parkway Extension - Roadway

SR 538 from S. of CR 532 to the Sinclair Road/SR 429 Interchange

Osceola and Polk Counties, Florida

FPID No. 446581-1-22-01

Tierra Project No. 6511-20-202-001

	_	ocation ⁽¹⁾	Approximate	Boring	-	Measure		USDA	Soil Survey	Estimated	
Boring Name	(FL I	East)	Ground	Depth ⁽³⁾	Gr	oundwater			Estimated		SHGWT ⁽⁵⁾
Borning Hame	Easting	Northing	Elevation ⁽²⁾ (feet, NAVD 88)	(foot)	Date Recorded	Depth ⁽³⁾ (feet)	Elevation (feet, NAVD 88)	Map Symbol	SHGWT ⁽⁴⁾ Depth (feet)	Depth (feet)	Elevation (feet, NAVD 88)
AB - I4-1	467195	1437725	N/A	2.5	08/25/22	1.1	N/A	32	+2.0-0.0	0.0	N/A
AB - I4-2	467093	1437276	N/A	9.5	08/09/22	ABG	N/A	32	+2.0-0.0	ABG	N/A
AB - I4-3	467392	1436747	N/A	9.5	08/11/22	0.2	N/A	15	+2.0-0.0	ABG	N/A
AB - I4-4	467723	1436396	N/A	9.0	08/11/22	ABG	N/A	15	+2.0-0.0	ABG	N/A
AB - I4-5	465899	1435572	N/A	5.0	08/17/22	GNE	N/A	34	2.0 - 3.5	>5.0	N/A
AB - I4-6	465370	1435454	N/A	5.0	08/25/22	GNE	N/A	8	>6.0	>5.0	N/A
AB - I4-7	467113	1436416	N/A	5.0	08/09/22	2.6	N/A	34	2.0 - 3.5	1.5	N/A
AB - I4-8	468022	1435992	N/A	4.0	08/11/22	1.8	N/A	16	0.5 - 1.5	0.5	N/A
AB - I4-9	467589	1436268	N/A	11.5	08/09/22	0.3	N/A	15	+2.0-0.0	ABG	N/A
AB - I4-10	466624	1436455	N/A	5.0	08/26/22	GNE	N/A	7	>6.0	>5.0	N/A
AB - I4-11	465922	1436255	N/A	5.0	08/25/22	GNE	N/A	7	>6.0	>5.0	N/A

¹⁾ Boring locations were estimated using Garmin eTrex GPS coordinates.

GNE: Groundwater Not Encountered

⁽²⁾ Ground elevations not available at the time of this submittal.

⁽³⁾ Depth below existing grades at time of augering.

⁽⁴⁾ Seasonal high groundwater table depth estimated based on the Osceola County, Florida USDA Soil Survey information, unless otherwise noted.

⁽⁵⁾ Seasonal High Groundwater Table depth estimated based on soil stratigraphy, measured groundwater levels from the borings, and review of the USDA Soil Survey information.

^{*} Seasonal high groundwater table depth estimated based on the Polk County, Florida USDA Soil Survey information.

Poinciana Parkway Extension - Roadway

SR 538 from S. of CR 532 to the Sinclair Road/SR 429 Interchange

Osceola and Polk Counties, Florida

FPID No. 446581-1-22-01

Tierra Project No. 6511-20-202-001

	Boring L	ocation ⁽¹⁾	Approximate	Boring		Measure	d	USDA	Soil Survey	Estimated SHGWT ⁽⁵⁾	
Boring Name	(FL I	East)	Ground	Depth ⁽³⁾	Gr	oundwater	Table		Estimated		
Borning Name	Easting	Northing	Elevation ⁽²⁾ (feet, NAVD 88)	(foot)	Date Recorded	Depth ⁽³⁾ (feet)	Elevation (feet, NAVD 88)	Map Symbol	SHGWT ⁽⁴⁾ Depth (feet)	Depth (feet)	Elevation (feet, NAVD 88)
AB - SNC-1	462613	1440607	N/A	5.0	08/24/22	GNE	N/A	7	+2.0-0.0	>5.0	N/A
AB - SNC-2	462210	1439947	N/A	5.0	08/22/22	GNE	N/A	8	+2.0-0.0	>5.0	N/A
AB - SNC-3	462528	1439609	N/A	5.0	09/01/22	GNE	N/A	8	+2.0-0.0	>5.0	N/A
AB - SNC-4	461672	1440919	N/A	5.0	08/17/22	GNE	N/A	8	+2.0-0.0	>5.0	N/A
AB - SNC-5	461800	1440551	N/A	5.0	08/17/22	GNE	N/A	8	+2.0-0.0	>5.0	N/A
AB - SNC-6	461695	1440686	N/A	5.0	08/17/22	GNE	N/A	8	+2.0-0.0	>5.0	N/A
AB - SNC-7	462948	1439757	N/A	5.0	08/24/22	GNE	N/A	8	+2.0-0.0	>5.0	N/A
AB - SNC-8	461800	1440551	N/A	5.0	08/17/22	GNE	N/A	8	+2.0-0.0	>5.0	N/A
AB - SNC-9	463125	1439409	N/A	5.0	08/24/22	GNE	N/A	8	+2.0-0.0	>5.0	N/A

¹⁾ Boring locations were estimated using Garmin eTrex GPS coordinates.

GNE: Groundwater Not Encountered

⁽²⁾ Ground elevations not available at the time of this submittal.

⁽³⁾ Depth below existing grades at time of augering.

⁽⁴⁾ Seasonal high groundwater table depth estimated based on the Osceola County, Florida USDA Soil Survey information, unless otherwise noted.

⁽⁵⁾ Seasonal High Groundwater Table depth estimated based on soil stratigraphy, measured groundwater levels from the borings, and review of the USDA Soil Survey information.

^{*} Seasonal high groundwater table depth estimated based on the Polk County, Florida USDA Soil Survey information.

Poinciana Parkway Extension - Roadway

SR 538 from S. of CR 532 to the Sinclair Road/SR 429 Interchange

Osceola and Polk Counties, Florida

FPID No. 446581-1-22-01

Tierra Project No. 6511-20-202-001

	_	ocation ⁽¹⁾	Approximate	Boring		Measure		USDA	Soil Survey	ł	stimated
Boring Name	(FL I	East)	Ground	Depth ⁽³⁾	Gr	oundwater			Estimated		SHGWT ⁽⁵⁾
Dorning Marine	Easting	Northing	Elevation ⁽²⁾	(feet)	Date	Depth ⁽³⁾		Map Symbol	-	Depth	Elevation
			(feet, NAVD 88)		Recorded	` ′	(feet, NAVD 88)		(feet)	` '	(feet, NAVD 88)
AB - CR532-1	475820	1428352	N/A	4.0	08/08/22	2.3	N/A	16	0.5 - 1.5	1.3	N/A
AB - CR532-2	475991	1427709	N/A	5.0	08/09/22	2.3	N/A	16	0.5 - 1.5	1.3	N/A
AB - CR532-3	476431	1427689	N/A	5.5	08/09/22	ABG	N/A	32	+2.0-0.0	ABG	N/A
AB - CR532-4	476027	1428470	N/A	4.0	08/08/22	2.5	N/A	41	1.5 - 3.5	1.5	N/A
AB - CR532-5	476933	1427571	N/A	4.5	08/09/22	2.3	N/A	16	0.5 - 1.5	1.0	N/A
AB - CR532-6	475715	1427558	N/A	4.5	08/09/22	1.6	N/A	16	0.5 - 1.5	0.5	N/A
AB - CR532-7	475305	1427564	N/A	4.5	08/09/22	1.9	N/A	16	0.5 - 1.5	0.5	N/A
AB - CR532-8	475541	1427676	N/A	5.0	08/09/22	2.5	N/A	16	0.5 - 1.5	1.5	N/A
AB - CR532-9	476654	1427673	N/A	5.0	08/09/22	2.3	N/A	16	0.5 - 1.5	1.5	N/A
AB - CR532-10	476234	1427571	N/A	4.0	08/09/22	1.6	N/A	16	0.5 - 1.5	0.5	N/A
AB - CR532-11	477353	1427568	N/A	5.0	08/09/22	2.3	N/A	16	0.5 - 1.5	1.0	N/A

⁽¹⁾ Boring locations were estimated using Garmin eTrex GPS coordinates.

GNE: Groundwater Not Encountered

⁽²⁾ Ground elevations not available at the time of this submittal.

⁽³⁾ Depth below existing grades at time of augering.

⁽⁴⁾ Seasonal high groundwater table depth estimated based on the Osceola County, Florida USDA Soil Survey information, unless otherwise noted.

⁽⁵⁾ Seasonal High Groundwater Table depth estimated based on soil stratigraphy, measured groundwater levels from the borings, and review of the USDA Soil Survey information.

^{*} Seasonal high groundwater table depth estimated based on the Polk County, Florida USDA Soil Survey information.

Poinciana Parkway Extension - Ponds

SR 538 from S. of CR 532 to the Sinclair Road/SR 429 Interchange

Osceola and Polk Counties, Florida FPID No. 446581-1-22-01

	Boring Lo	ocation ⁽¹⁾	Approximate	Boring		Measure	d	USDA	Soil Survey	Е	stimated
Boring Name	(FL E	East)	Ground	Depth ⁽³⁾	Gı	roundwater	Table		Estimated	,	SHGWT ⁽⁵⁾
Dorning Name	Easting	Northing	Elevation ⁽²⁾		Date	Depth ⁽³⁾	Elevation	Map Symbol	SHGWT ⁽⁴⁾ Depth	Depth	Elevation
	Lasting	Northing	(feet, NAVD 88)	(feet)	Recorded	(feet)	(feet, NAVD 88)		(feet)	(feet)	(feet, NAVD 88)
SH - 109A1-1	466864	1440620	N/A	3.5	08/31/22	0.3	N/A	8	>6.0	ABG	N/A
SH - 109A1-2	467234	1440357	N/A	3.5	08/31/22	0.2	N/A	40	+2.0-0.0	ABG	N/A
PBA - 109A1-1	467038	1439813	N/A	5.0	09/08/22	4.2	N/A	40	+2.0-0.0	3.5	N/A
SH - 109A2-1	467691	1439757	N/A	2.5	09/06/22	0.4	N/A	40	+2.0-0.0	ABG	N/A
SH - 109A2-2	467756	1440567	N/A	4.5	08/31/22	ABG	N/A	32/40	+2.0-0.0	ABG	N/A
SH - 109A2-3	468157	1440187	N/A	2.0	09/09/22	ABG	N/A	40	+2.0-0.0	ABG	N/A
SH - 109A2-4	468508	1440006	N/A	1.5	09/09/22	ABG	N/A	40	+2.0-0.0	ABG	N/A
SH - 109A2-5	468590	1440666	N/A	2.5	08/31/22	8.0	N/A	40	+2.0-0.0	0.0	N/A
PBA - 200A1-1	459985	1445300	N/A	1.0	09/08/22	2.0	N/A	15/37	+2.0-0.0	ABG	N/A
PBA - 200A2-1	460470	1446613	N/A	5.0	09/08/22	GNE	N/A	7	>6.0	>5.0	N/A
PBA - 200A3-1	459069	1445290	N/A	9.0	09/08/22	ABG	N/A	15/37	+2.0-0.0	ABG	N/A
PBA - 200A3-2	459666	1445188	N/A	7.0	09/08/22	ABG	N/A	15/37	+2.0-0.0	ABG	N/A
PBA - 200A3-3	459450	1445336	N/A	2.0	09/08/22	ABG	N/A	15/37	+2.0-0.0	ABG	N/A
PBA - 201A1-1	461455	1440515	N/A	5.0	09/01/22	GNE	N/A	7	>6.0	>5.0	N/A
PBA - 201A2-1	461297	1441106	N/A	3.0	09/01/22	1.2	N/A	7	>6.0	0.5	N/A
PBA - 201A3-1	464182	1441490	N/A	5.0	09/01/22	GNE	N/A	7	>6.0	>5.0	N/A
PBA - 201A4-1	461353	1442235	N/A	3.0	09/01/22	0.5	N/A	16	0.5 - 1.5	ABG	N/A
PBA - 202A1-1A	462092	1438910	N/A	5.0	09/01/22	GNE	N/A	7	>6.0	>5.0	N/A
PBA - 202A1-1B	463742	1441480	N/A	5.0	09/01/22	GNE	N/A	7	>6.0	>5.0	N/A
PBA - 202A2-1	462860	1441066	N/A	5.0	09/01/22	GNE	N/A	7	>6.0	>5.0	N/A
PBA - 203A1-1	470162	1432487	N/A	5.0	09/08/22	3.1	N/A	8	>6.0	2.0	N/A
PBA - 203A2-1	469696	1433324	N/A	3.5	09/08/22	0.5	N/A	15	+2.0-0.0	ABG	N/A
PBA - 203A3-1	468639	1434049	N/A	2.5	09/02/22	0.8	N/A	16	0.5 - 1.5	0.0	N/A
PBS - 204A1-1	471140	1432543	N/A	20.0	07/28/22	2.5	N/A	16	0.5 - 1.5	ND	N/A
PBA - 204A2-1	472893	1431253	N/A	3.5	09/02/22	2.8	N/A	5/41	0.0 - 1.0/1.5 - 3.5	1.5	N/A
PBA - 204A3-1	474320	1431647	N/A	2.0	09/02/22	8.0	N/A	16	0.5 - 1.5	0.0	N/A
PBA - 205A1-1	475495	1430426	N/A	2.5	09/02/22	1.3	N/A	16	0.5 - 1.5	0.3	N/A
PBA - 205A2-1	474225	1430515	N/A	4.0	09/02/22	3.0	N/A	41	1.5 - 3.5	1.5	N/A
PBA - 205A3-1	474067	1429773	N/A	3.5	09/02/22	2.5	N/A	41	1.5 - 3.5	1.3	N/A
PBA - 206A1-1	475676	1428208	N/A	2.5	09/02/22	1.7	N/A	16	0.5 - 1.5	0.5	N/A
PBA - 206A2-1*	476112	1427216	N/A	2.5	09/02/22	1.3	N/A	16	0.5 - 1.5	0.0	N/A
PBS - 206A3-1	476923	1427285	N/A	20.0	07/28/22	2.0	N/A	16	0.5 - 1.5	ND	N/A
PBA - 206A3-1	476920	1427305	N/A	2.5	09/02/22	1.4	N/A	16	0.5 - 1.5	0.0	N/A
PBA - INTA1-1	467487	1437023	N/A	2.5	09/06/22	1.5	N/A	16	0.5 - 1.5	0.5	N/A
PBA - INTA2-1	468091	1436363	N/A	2.0	09/06/22	0.5	N/A	15	+2.0-0.0	ABG	N/A

⁽¹⁾ Boring locations were estimated using Garmin eTrex GPS coordinates.

⁽²⁾ Ground elevations not available at the time of this submittal.

⁽³⁾ Depth below existing grades at time of augering.

⁽⁴⁾ Seasonal high groundwater table depth estimated based on the Osceola County, Florida USDA Soil Survey information, unless otherwise noted.

Seasonal High Groundwater Table depth estimated based on soil stratigraphy, measured groundwater levels from the borings, and review of the USDA Soil Survey information.

^{*} Seasonal high groundwater table depth estimated based on the Polk County, Florida USDA Soil Survey information. ABG: Above Grade

APPENDIX D

Summary of Laboratory Classification Test Results for Soil Classification

Summary of Laboratory Classification Test Results for Soil Classification Poinciana Parkway Extension SR 538 from S. of CR 532 to the Sinclair Road/SR 429 Interchange Osceola and Polk Counties, Florida FPID No. 446581-1-22-01

	Sampl	lo F)onth	Stratum	AASHTO		Att	terberg Lin	nits	Organic	Natural Moisture
Boring Number	-	(ft)	eptii	Number	Symbol	#200	Liquid Limit	Plastic Limit	Plasticity Index	Content (%)	Content (%)
AB-SB-2	4.5	-	5.0	1	A-3	2	-	-	-	-	-
AB-SB-33	1.0	-	1.5	1	A-3	2	-	-	-	-	-
AB-SB-31	1.0	-	1.5	1	A-3	2	-	-	-	-	1
AB-NB-4	1.0	-	1.5	1	A-3	2	-	-	-	-	-
AB-SB-4	2.0	-	2.5	1	A-3	2	-	-	-	-	-
AB-SB-40	4.5	-	5.0	1	A-3	2	-	-	-	-	-
AB-NB-31	3.0	-	3.5	1	A-3	3	-	-	-	-	-
AB-I4-7	4.5	-	5.0	1	A-3	3	-	-	-	-	-
AB-NB-32	0.5	-	1.0	1	A-3	3	-	-	-	-	-
AB-I4-1	1.5	-	2.0	1	A-3	3	-	-	-	-	-
AB-NB-26	3.5	-	4.0	1	A-3	3	-	-	-	-	-
AB-NB-7	4.5	-	5.0	1	A-3	3	-	-	-	-	-
AB-SNC-2	2.0	-	2.5	1	A-3	3	-	-	-	-	-
AB-NB-22	2.0	-	2.5	1	A-3	3	-	-	-	-	-
AB-I4-11	2.0	-	2.5	1	A-3	4	-	-	-	-	-
AB-SNC-4	2.5	-	3.0	1	A-3	4	-	-	-	-	-
AB-SNC-6	4.0	-	4.5	1	A-3	4	-	-	-	-	-
AB-I4-8	3.0	-	3.5	1	A-3	4	-	-	-	-	-
AB-SNC-1	2.5	-	3.0	1	A-3	4	-	-	-	-	-
AB-SNC-8	4.5	-	5.0	1	A-3	5	-	-	-	-	-
AB-NB-23	3.0	-	3.5	1	A-3	5	-	-	-	-	-
AB-SNC-7	2.0	-	2.5	1	A-3	5	-	-	-	-	-
AB-SB-34	2.0	-	2.5	1	A-3	6	-	-	-	-	-
AB-NB-25	3.0	-	3.5	1	A-3	7	-	-	-	-	-

Summary of Laboratory Classification Test Results for Soil Classification Poinciana Parkway Extension SR 538 from S. of CR 532 to the Sinclair Road/SR 429 Interchange Osceola and Polk Counties, Florida FPID No. 446581-1-22-01

	Sample Depth	Stratum	AASHTO		Att	erberg Lin	nits	Organic	Natural Moisture
Boring Number	(ft)	Number	Symbol	#200	Liquid Limit	Plastic Limit	Plasticity Index	Content (%)	Content (%)
PBA-200A3-1	0.0 - 8.0	2	A-8	7	-	-	-	23	207
AB-CR532-8	4.0 - 4.5	2	A-8	10	-	-	-	9	54
AB-SB-18	0.0 - 1.5	2	A-8	11	-	-	-	36	176
AB-NB-18	0.0 - 2.5	2	A-8	11	-	-	-	39	162
AB-SB-1	0.5 - 1.0	2	A-8	11	-	-	-	26	97
AB-CR532-2	0.0 - 5.0	2	A-8	15	-	-	-	26	265
AB-I4-3	0.0 - 9.0	2	A-8	16	-	-	-	63	560
AB-I4-9	0.0 - 11.0	2	A-8	17	-	-	-	84	306
AB-SB-28	0.0 - 1.0	2	A-8	17	-	-	-	34	231
AB-I4-2	0.0 - 9.5	2	A-8	18	1	-	-	51	328
AB-I4-4	0.0 - 8.5	2	A-8	18	-	-	-	66	641
AB-NB-1	0.0 - 4.5	2	A-8	28	ı	-	-	73	492
PBA-200A3-2	0.0 - 6.0	2	A-8	29	-	-	-	58	552
AB-NB-2	0.0 - 8.5	2	A-8	30	-	-	-	58	168
AB-NB-14	0.0 - 4.0	2	A-8	30	1	-	-	67	422
AB-SB-22	0.0 - 11.0	2	A-8	31	-	-	-	96	263
SH-109A2-1	0.0 - 2.0	2	A-8	33	-	-	-	79	260
AB-NB-17	0.0 - 10.0	2	A-8	42	-	-	-	71	310
AB-SB-16	0.0 - 16.5	2	A-8	79	-	-	-	91	263
AB-NB-30	1.5 - 2.0	3	A-2-4	17	-	-	-	-	-