M E M O R A N D U M

TO: Mr. Mark Schilling – Gulf Interstate Engineering

FROM: Mr. Jonathan K. Thrasher, P.E. and Mr. Ian Kinnear, P.E. – PSI

DATE: November 13, 2014

RE: Summary of Findings
Geotechnical Study
Proposed FSC Meter Station
Sabal Trail Project
Davenport, Osceola County, Florida
PSI Project No. 07571055

The purpose of this memo is to provide a summary of findings of the geotechnical study that we are currently carrying out in connection with the noted project.

The FSC Meter Station site being evaluated is located on the north side of Osceola Polk Line Road approximately 0.8 miles west of the intersection of Osceola Polk Line Road and US 17-92. The site is west of the Compressor Station 7 site and south of the Gulfstream Meter Station site. A plan view of the site is presented on **Sheet 1**. The geotechnical study included drilling and sampling two engineering borings and six auger borings. The approximate locations at which the borings were completed are shown on **Sheet 1**.

The engineering borings were sampled following Standard Penetration Test (SPT) procedures of ASTM D-1586. SPT samples were recovered continuously to a depth of 10 feet and at 5 foot intervals thereafter. The engineering borings were extended to depths of up to 75 feet below the existing grade.

Drilling was carried out by a PSI drill crew with a Field Representative on site to log the materials recovered from the explorations and to generally coordinate/supervise field activities. The engineering borings were performed with an ATV rig with a safety hammer used to drive the SPT sample spoon.

Samples recovered from the SPT borings were visually stratified in our Orlando laboratory following guidelines contained in the Unified Soil Classification System (USCS). Boring logs are attached. Select samples have been tested in our laboratory and the results of these tests are included on the boring logs adjacent to the depth interval at which the samples were obtained.

The six auger borings were each advanced to a depth of 8 feet below grade. Soil samples were recovered from the flights of the auger at regular intervals on extraction from the ground. The auger borings were completed to assess the shallow soil conditions and groundwater levels in the planned pavement areas. Boring logs indicating the results of the auger borings are also attached.

The results of the borings indicate an overburden consisting primarily of interbedded layers of clean fine sands, slightly silty fine sands, silty fine sands, silts and clays. The overburden extended to a depth of about 60 to 65 feet below the existing ground surface. The sands varied from being in a very loose to medium-dense condition with occasional dense to very dense layers. The dense and very dense layers typically consisted of a slightly silty sand or silty sand formation locally referred to as “hardpan”. The silts and clays were encountered beginning at about 35 to 40 feet below the existing ground surface and had a stiff to very stiff consistency.

In borings FSC-1 and FSC-2, shells were encountered. It is within these materials that we lost circulation of drilling fluid at a depth of about 60 and 62 feet below the ground surface in FSC-1 and FSC-2 respectively.

Below the overburden soils, limestone is present. The limestone is a sandy silty rock that is locally very hard and well-cemented. The material is porous and is part of the Floridian Aquifer. In boring FSC-1, SPT blow counts in the limestone were greater than 50 blows for essentially no sample spoon penetration. In boring FSC-2, weight of rod material was encountered at about 65 feet below the surface. The other N-values in the limestone ranged between 13 blows per foot to greater than 50 blows per foot.

GeoView performed a Ground Penetrating Radar (GPR) survey along a series of perpendicular transects in the area of the meter station. As noted in the attached report from GeoView, one anomaly was identified. GeoView is refining their analyses based on the results of our borings. The results of GeoView’s updated evaluations and analyses will be included in our design-level geotechnical report for the facility.

The results of the shallow auger borings disclosed a varying sequence of relatively clean sands, slightly silty sands and silty sands in the upper 8 feet. This is consistent with the USDA Soil Survey for Osceola County, which maps the site as being mantled by surficial soil group 16, Immokalee sand.

Groundwater was observed in the SPT and auger borings at depths ranging from approximately 1.5 to 2 feet below grade at the time of drilling. Water levels will fluctuate seasonally in response to rainfall and lack thereof. We estimate that the normal wet season high groundwater table will be within one foot of the natural ground surface.

The potentiometric surface in the Floridan Aquifer (limestone) is reported to be between about +80 and +90 feet. We have not been provided with site specific topographic data at this time, but based on published topographic information, the ground surface elevation at the site is between about +80 and +90 feet. Therefore, the potentiometric surface is close to that of the ground surface.

A more detailed geotechnical report with site preparation and foundation design recommendations will follow. In the meantime, we trust that the foregoing and accompanying attachments are of assistance to you. Let us know if you have any questions and/or comments or if you require additional information.

Sincerely,

PROFESSIONAL SERVICE INDUSTRIES, INC.
Certificate of Authorization No. 3684

Jonathan K. Thrasher

Jonathan K. Thrasher, P.E.
Project Engineer
Florida License No. 76641

Ian Kinnear, P.E.
Chief Geotechnical Engineer
Florida License No. 32614

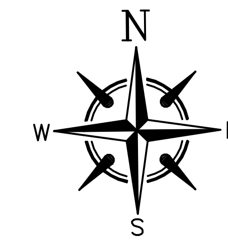
07571055 (FSC Meter Station Data Memo)

Attachments

- Sheet 1 – Boring Location Plan
- Boring Logs
- GeoView Geophysical Investigation Report dated August 29, 2014

LOCATION PLAN

SCALE: 1"=60'



WORK PLAN

SABAL PIPELINE
FSC M&R STATION

SITE PLAN

Information To Build On

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DRAWN: DJW	SCALE: NOTED	PROJ. NO: 07571055
CHKD: JKT	DATE: 10-14-14	SHEET: 1

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BORING LOG

BORING NO. FSC-1 SHEET 1 OF 1

BORING LOC. SEE SHEET 1

DRILLER BRANDON LOGGED BY BRANDON

STARTED 9-2-14 FINISHED 9-2-14

CLIENT GULF INTERSTATE ENGINEERING JOB NO. 07571055

JOB NAME SABAL TRAIL – FSC M&R STATION

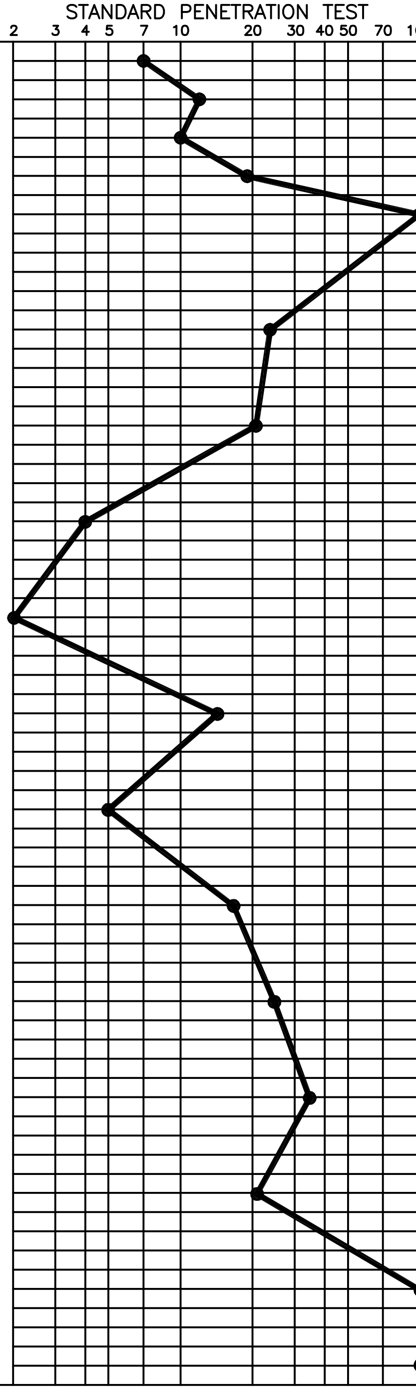
JOB LOC. REUNION, OSCEOLA COUNTY, FLORIDA

GROUND ELEV. – CASING LENGTH 60.0' NW

GROUNDWATER TABLE 1.5 FT.

FEET	DESCRIPTION OF SOIL	BLOWS ON SAMPLER	N VALUE
0–23.5	LIGHT GRAY TO DARK BROWN FINE SAND TO FINE SAND WITH SILT, (SP), (SP-SM)	3,4,3	7
		4,7,6	13
		2,4,6	10
		6,10,9	19
		50/4"	50/4"
		4,11,13	24
		11,9,12	21
23.5–38.5	LIGHT BROWN TO GREEN SILTY FINE SAND, (SM); –200=23	2,1,3	4
		1,1,1	2
		3,6,9	15
38.5–48.5	DARK GREEN-GRAY INORGANIC SILTS AND VERY FINE SANDS, (ML); W=52, –200=59, LL=NP, PI=NP	2,1,4	5
		8,7,10	17
48.5–63.5	GREEN-GRAY SILTY FINE SAND WITH SHELL, (SM); 60.0' NW	3,8,17	25
		11,14,21	35
		8,8,13	21
63.5–69.0	LIMEROCK	50/.5"	50/.5"
		50/.5"	50/.5"

STANDARD PENETRATION TEST



BORING TERMINATED AND GROUTED AT 69.0'

50/4" = NUMBER OF BLOWS REQUIRED (50) TO DRIVE SAMPLING SPOON 4 INCHES

W = NATURAL MOISTURE CONTENT IN PERCENT

LL = LIQUID LIMIT IN PERCENT

–200 = FINES PASSING #200 SIEVE IN PERCENT

PI = PLASTICITY INDEX

REMARKS SAFETY HAMMER USED FOR SAMPLING

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BORING LOG

BORING NO. FSC-2 SHEET 1 OF 1

BORING LOC. SEE SHEET 1

CLIENT GULF INTERSTATE ENGINEERING JOB NO. 07571055

JOB NAME SABAL TRAIL – FSC M&R STATION

JOB LOC. OSCEOLA COUNTY, FLORIDA

DRILLER BRANDON LOGGED BY BRANDON

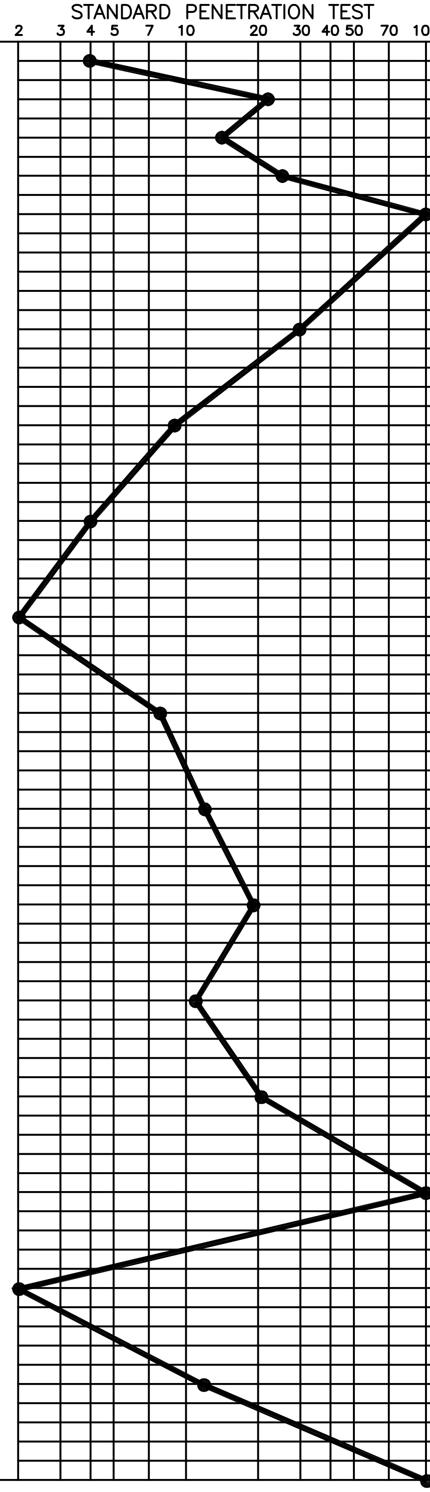
STARTED 8-28-14 FINISHED 8-28-14

GROUND ELEV. – CASING LENGTH –

GROUNDWATER TABLE 1.5 FT.

FEET	DESCRIPTION OF SOIL
	LIGHT GRAY O BROWN FINE SAND TO SLIGHTLY SILTY FINE SAND, (SP), (SP-SM)
5	DARK BROWN SILTY FINE SAND WITH HARDPAN, (SM)
10	BROWN SILTY FINE SAND, (SM)
15	BROWN FINE SAND TO SLIGHTLY SILTY FINE SAND, (SP), (SP-SM)
20	
25	
30	LIGHT BROWN TO LIGHT GREEN-GRAY SILTY FINE SAND, (SM)
35	DARK GREEN-GRAY CLAY, (CH)
40	W=40, -200=24, LL=NP, PI=NP
45	GREEN-GRAY INORGANIC SILTY SANDS, (SM)
50	GREEN-GRAY SILTY FINE SAND WITH SHELL, (SM)
55	-200=30
60	62.0'
65	LIGHT GREEN-GRAY LIMESTONE WITH LIMESILTS
70	
75	

STANDARD PENETRATION TEST



BLOWS ON SAMPLER	N VALUE
2,2,2	4
6,10,13	23
5,7,8	15
4,11,15	26
50/5"	50/5"
8,13,17	30
4,5,4	9
2,2,2	4
1,1,1	2
5,4,4	8
3,5,8	13
6,8,11	19
5,7,5	12
4,8,13	21
50/5"	50/5"
WR	WR
WR,5,8	13
50/0"	50/0"

BORING TERMINATED AND GROUTED AT 75.0'

50/5" = NUMBER OF BLOWS REQUIRED (50) TO DRIVE SAMPLING SPOON 5 INCHES

REMARKS SAFETY HAMMER USED FOR SAMPLING

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BORING LOG

BORING NO. FSC-3 SHEET 1 OF 1

BORING LOC. SEE SHEET 1

CLIENT GULF INTERSTATE ENGINEERING JOB NO. 07571055

JOB NAME SABAL TRAIL – FSC M&R STATION

JOB LOC. OSCEOLA COUNTY, FLORIDA

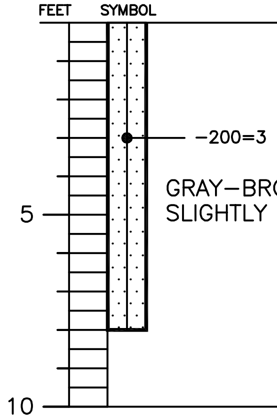
DRILLER BRANDON LOGGED BY BRANDON

STARTED 8-28-14 FINISHED 8-28-14

GROUND ELEV. – CASING LENGTH –

GROUNDWATER TABLE 2.0 FT.

FEET | SAMPLE SYMBOL | DESCRIPTION OF SOIL



GRAY–BROWN TO DARK BROWN FINE SAND TO SLIGHTLY SILTY FINE SAND, (SP), (SP–SM)

BORING TERMINATED AND GROUTED AT 8.0'

–200 = FINES PASSING #200 SIEVE IN PERCENT

REMARKS

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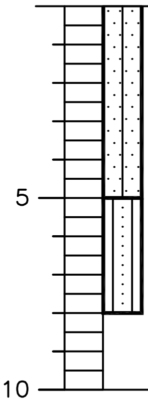
BORING LOG

BORING NO. FSC-4 SHEET 1 OF 1
BORING LOC. SEE SHEET 1

DRILLER BRANDON LOGGED BY BRANDON
STARTED 8-28-14 FINISHED 8-28-14
GROUND ELEV. – CASING LENGTH –
GROUNDWATER TABLE 2.0 FT.

CLIENT GULF INTERSTATE ENGINEERING JOB NO. 07571055
JOB NAME SABAL TRAIL – FSC M&R STATION
JOB LOC. OSCEOLA COUNTY, FLORIDA

FEET	SAMPLE SYMBOL	DESCRIPTION OF SOIL
0–5		GRAY-BROWN FINE SAND TO SLIGHTLY SILTY FINE SAND, (SP), (SP-SM)
5–8		DARK BROWN SILTY FINE SAND, (SM)



BORING TERMINATED AND GROUTED AT 8.0'

REMARKS

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BORING LOG

BORING NO. FSC-5	SHEET 1 OF 1
BORING LOC. SEE SHEET 1	
DRILLER BRANDON	LOGGED BY BRANDON
CLIENT GULF INTERSTATE ENGINEERING	JOB NO. 07571055
STARTED 8-26-14	FINISHED 8-26-14
JOB NAME SABAL TRAIL – FSC M&R STATION	
GROUND ELEV. –	CASING LENGTH –
JOB LOC. OSCEOLA COUNTY, FLORIDA	
GROUNDWATER TABLE 2.0 FT.	

FEET	SAMPLE SYMBOL	DESCRIPTION OF SOIL
0–8		GRAY-BROWN TO DARK BROWN FINE SAND TO SLIGHTLY SILTY FINE SAND, (SP), (SP-SM)
5		
10		

BORING TERMINATED AND GROUTED AT 8.0'

REMARKS

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BORING LOG

BORING NO. FSC-6	SHEET 1 OF 1
BORING LOC. SEE SHEET 1	
CLIENT GULF INTERSTATE ENGINEERING	JOB NO. 07571055
JOB NAME SABAL TRAIL – FSC M&R STATION	
JOB LOC. OSCEOLA COUNTY, FLORIDA	
DRILLER BRANDON	LOGGED BY BRANDON
STARTED 8-26-14	FINISHED 8-26-14
GROUND ELEV. –	CASING LENGTH –
GROUNDWATER TABLE 1.5 FT.	

FEET	SAMPLE SYMBOL	DESCRIPTION OF SOIL
0–8		LIGHT GRAY–BROWN TO DARK BROWN FINE SAND TO SLIGHTLY SILTY FINE SAND, (SP), (SP–SM)
5		
10		

BORING TERMINATED AND GROUTED AT 8.0'

REMARKS

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BORING LOG

BORING NO. FSC-7	SHEET 1 OF 1
BORING LOC. SEE SHEET 1	
DRILLER BRANDON	LOGGED BY BRANDON
STARTED 8-26-14	FINISHED 8-26-14
GROUND ELEV. –	CASING LENGTH –
GROUNDWATER TABLE 2.0 FT.	

CLIENT GULF INTERSTATE ENGINEERING JOB NO. 07571055

JOB NAME SABAL TRAIL – FSC M&R STATION

JOB LOC. OSCEOLA COUNTY, FLORIDA

FEET	SAMPLE SYMBOL	DESCRIPTION OF SOIL
0–6		GRAY-BROWN TO BROWN FINE SAND TO SLIGHTLY SILTY FINE SAND, (SP), (SP-SM)
6–8		BROWN SILTY FINE SAND, (SM)
10		

BORING TERMINATED AND GROUTED AT 8.0'

REMARKS

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BORING LOG

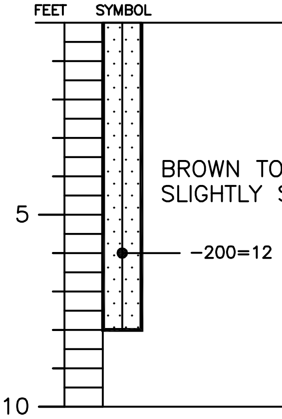
BORING NO. FSC-8	SHEET 1 OF 1
BORING LOC. SEE SHEET 1	
DRILLER BRANDON	LOGGED BY BRANDON
STARTED 8-26-14	FINISHED 8-26-14
GROUND ELEV. –	CASING LENGTH –
GROUNDWATER TABLE 1.5 FT.	

CLIENT GULF INTERSTATE ENGINEERING JOB NO. 07571055

JOB NAME SABAL TRAIL – FSC M&R STATION

JOB LOC. OSCEOLA COUNTY, FLORIDA

FEET | SAMPLE SYMBOL | DESCRIPTION OF SOIL



BROWN TO DARK BROWN FINE SAND TO SLIGHTLY SILTY FINE SAND, (SP), (SP–SM)

BORING TERMINATED AND GROUTED AT 8.0'

−200 = FINES PASSING #200 SIEVE IN PERCENT

REMARKS

FINAL REPORT
GEOPHYSICAL INVESTIGATION
SABLE TRAIL PROJECT - FSC M&R STATION
REUNION, FL

Prepared for Professional Service Industries, Inc.
Orlando, FL

Prepared by GeoView, Inc.
St. Petersburg, FL

August 29, 2014

Mr. Ian Kinnear, P.E.
Professional Service Industries, Inc.
1748 33rd Street
Orlando, FL 32839

Subject: Transmittal of Final Report for Geophysical Investigation
Sable Trail Project - FSC M&R Station - Reunion, FL
GeoView Project Number 21154.06

Dear Mr. Kinnear,

GeoView, Inc. (GeoView) is pleased to submit the final report that summarizes and presents the results of the geophysical investigation conducted at the FSC M&R Station. Ground penetrating radar was used to evaluate near-surface geological conditions. GeoView appreciates the opportunity to have assisted you on this project. If you have any questions or comments about the report, please contact us.

GEOVIEW, INC.

Michael J. Wightman, P.G.
Principal Geophysicist, President
Florida Professional Geologist
Number 1423

Chris Taylor, P.G.
Vice President
Florida Professional Geologist
Number 2256

1.0 Introduction

A geophysical investigation was conducted at the Sabal Trail Project FSC M&R Station located near MP 474.3 in Reunion, Florida. The investigation was conducted on August 21, 2014.

The purpose of the geophysical investigation was to help characterize near-surface geological conditions in the survey area and to identify subsurface features that may be associated with sinkhole activity. The location of the geophysical survey area is provided on Figure 1. A discussion of the field methods used to generate the report figures is provided in Appendix A2.1.

2.0 Description of Geophysical Investigation

2.1 Ground Penetrating Radar Survey

A Ground Penetrating Radar (GPR) survey was conducted along a series of perpendicular transects spaced 10 ft apart. The locations of the GPR transects are shown on Figure 1. The GPR data was collected with a Mala radar system. The GPR settings used for the survey are presented in Table 1.

Table 1
GPR Equipment Settings Used for Exterior and Interior Surveys

Antenna Frequency	Time Range (nano-seconds)	Estimated Depth of GPR Signal Penetration
250 MHz [1/]	313	35 to 40 ft bls

1/ MHz means mega-Hertz and is the mid-range operating frequency of the GPR antenna.

A description of the GPR technique and the methods employed for geological characterization studies is provided in Appendix A2.2.

3.0 Identification of Possible Sinkhole Features Using GPR

The features observed on GPR data that are most commonly associated with sinkhole activity are:

- A downwarping of GPR reflector sets, that are associated with suspected lithological contacts, toward a common center. Such features typically have a bowl or funnel shaped configuration and can be associated with a deflection of overlying sediment horizons caused by the migration of sediments into voids in the underlying limestone. If the GPR reflector sets are sharply downwarping and intersect, they can create "bow-tie" shaped GPR reflection feature, which often designates the apparent center of the GPR anomaly.

- A localized significant increase in the depth of the penetration and/or amplitude of the GPR signal response. The increase in GPR signal penetration depth or amplitude is often associated with either a localized increase in sand content at depth or decrease in soil density.
- An apparent discontinuity in GPR reflector sets, that are associated with suspected lithological contacts. The apparent discontinuities and/or disruption of the GPR reflector sets may be associated with the downward migration sediments.

The greater the severity of these features or a combination of these features the greater the likelihood that the identified feature is a sinkhole. It is not possible based on the GPR data alone to determine if an identified feature is a sinkhole or, more important, whether that feature is an active sinkhole.

4.0 Survey Results

Results of the GPR survey indicated the presence of two well-defined, relatively continuous sets of GPR reflectors at depth ranges of 10 to 20 ft bls and 20 to 27 ft bls. The reflector sets are most likely associated with some change in lithological conditions at those depth ranges.

One GPR anomaly area possibly associated with karst activity was identified in the western portion of the site. The anomaly is semi-elliptical in shape with a total area of approximately 300 square ft. The apparent vertical relief of the upper portion of the anomaly area is 5 to 10 ft as characterized by the observed downwarping of the GPR reflector sets. A localized increase in the depth of penetration of the GPR signal was also observed within the anomaly area. The apparent center of the feature is characterized as the area of maximum downwarping of the previously referenced GPR reflectors.

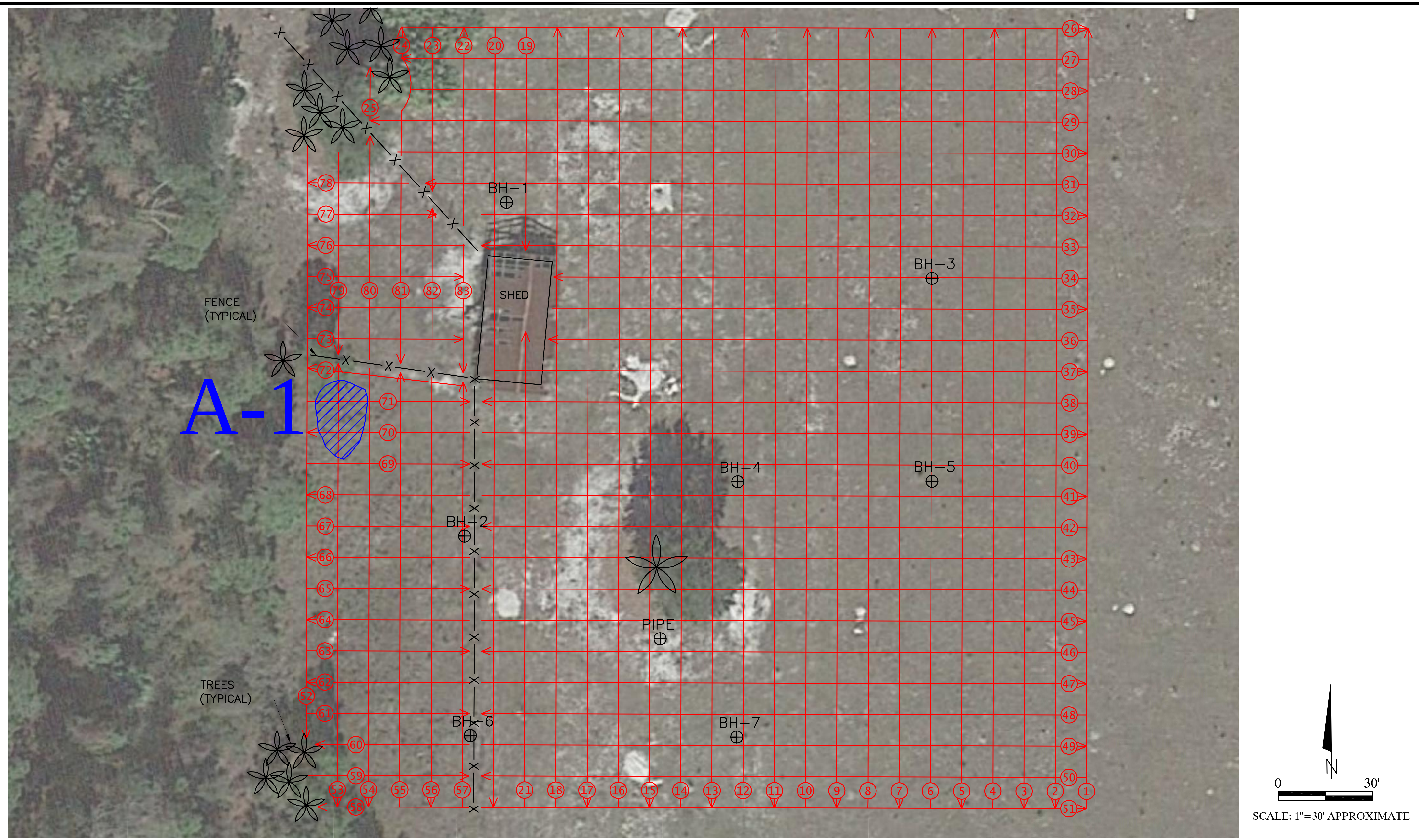
The coordinates of the center of the GPR anomaly are provided in Table 2. An example of the GPR data collected across the anomaly area is provided in Appendix 1. A discussion of the limitations of the GPR technique in geological characterization studies is provided in Appendix 2.

Table 2
Coordinates of Anomaly Centers

Name	Latitude	Longitude
A-1	28.261006°	-81.557257°

APPENDIX 1

FIGURE AND EXAMPLE OF GPR ANOMALY



EXPLANATION

10 PATH OF GPR TRANSECT LINES WITH DESIGNATION NUMBER

A-1 LOCATION OF GPR ANOMALY WITH DESIGNATION

BH-3 STAKED LOCATION OF PROPOSED BORING

GeoView

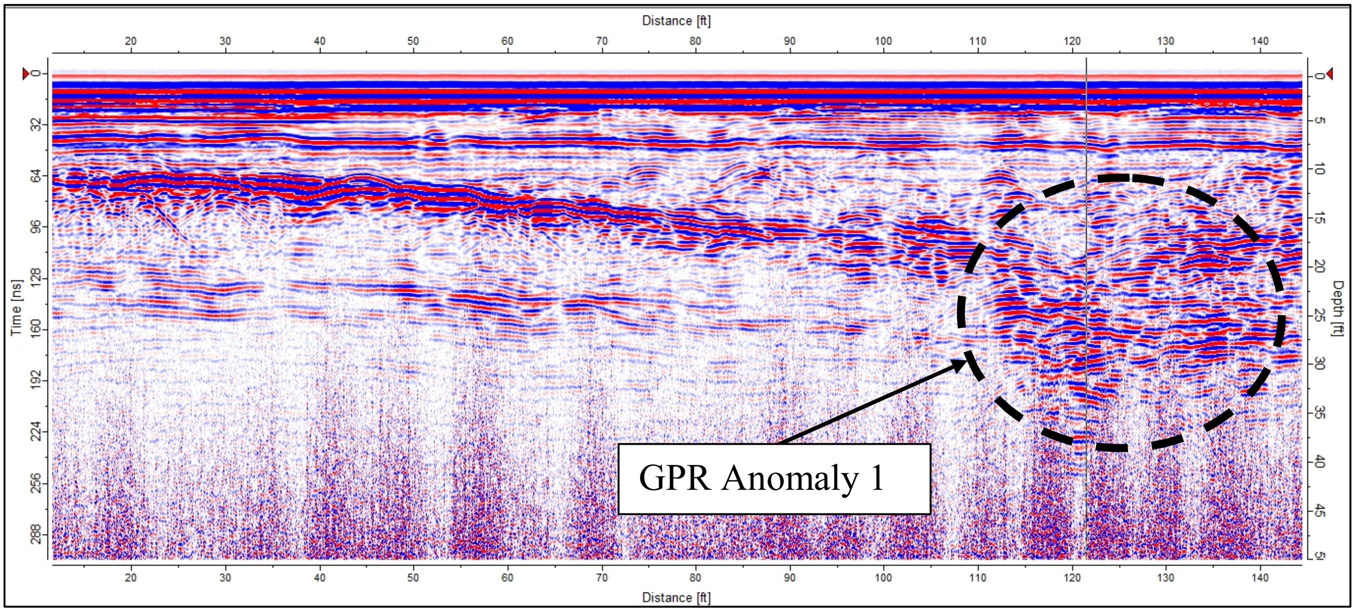
FIGURE 1

SITE MAP SHOWING RESULTS OF GEOPHYSICAL INVESTIGATION

SABAL TRAIL PROJECT
FSC M&R STATION SITE
REUNION, FLORIDA

PROFESSIONAL SERVICE INDUSTRIES, INC.
ORLANDO, FLORIDA

PROJECT: 21154.06
DATE: 08/29/14



GPR Transect 53 Showing Example of GPR Anomaly 1

APPENDIX 2
DESCRIPTION OF GEOPHYSICAL METHODS, SURVEY METHODOLOGIES AND LIMITATIONS

A2.1 On Site Measurements

The measurements that were collected and used to create the site map were made using a fiberglass measuring tape and a sub-meter GPS system.

A2.2 Ground Penetrating Radar

Ground Penetrating Radar (GPR) consists of a set of integrated electronic components that transmits high frequency (200 to 1500 megahertz [MHz]) electromagnetic waves into the ground and records the energy reflected back to the ground surface. The GPR system consists of an antenna, which serves as both a transmitter and receiver, and a profiling recorder that both processes the incoming signal and provides a graphic display of the data. The GPR data can be reviewed as both printed hard copy output or recorded on the profiling recorder's hard drive for later review. GeoView uses a Mala GPR system.

A GPR survey provides a graphic cross-sectional view of subsurface conditions. This cross-sectional view is created from the reflections of repetitive short-duration electromagnetic (EM) waves that are generated as the antenna is pulled across the ground surface. The reflections occur at the subsurface contacts between materials with differing electrical properties. The electrical property contrast that causes the reflections is the dielectric permittivity that is directly related to conductivity of a material. The GPR method is commonly used to identify such targets as underground utilities, underground storage tanks or drums, buried debris, voids or geological features.

The greater the electrical contrast between the surrounding earth materials and target of interest, the greater the amplitude of the reflected return signal. Unless the buried object is metal, only part of the signal energy will be reflected back to the antenna with the remaining portion of the signal continuing to propagate downward to be reflected by deeper features. If there is little or no electrical contrast between the target interest and surrounding earth materials it will be very difficult if not impossible to identify the object using GPR.

The depth of penetration of the GPR signal is very site specific and is controlled by two primary factors: subsurface soil conditions and selected antenna frequency. The GPR signal is attenuated (absorbed) as is passes through earth materials. As the energy of the GPR signal is diminished due to attenuation, the energy of the reflected waves is reduced, eventually to the level that the reflections can no longer be detected. As the conductivity of the earth materials increases, the attenuation of the GPR signal increases thereby reducing the signal penetration depth. In Florida, the typical soil conditions that severely limit GPR signal penetration are near-surface clays and/or organic materials.

The depth of penetration of the GPR signal is also reduced as the antenna frequency is increased. However, as antenna frequency is increased the resolution of the GPR data is improved. Therefore, when designing a GPR survey a tradeoff is made between the required depth of penetration and desired resolution of the data. As a rule, the highest frequency antenna that will still provide the desired maximum depth of penetration should be used. For geologic surveys, a low-frequency (250 MHz) antenna is used.

A GPR survey is conducted along survey lines (transects) that are measured paths along which the GPR antenna is moved. An integrated survey wheel electronically records the distance of the GPR system along the transect lines.

For geological characterization surveys, the GPR survey is conducted along a set of perpendicularly orientated transects. The survey is conducted in two directions because subsurface features such as sinkholes are often asymmetric. Spacing between the transects typically ranges from 10 to 50 ft. Closely spaced grids are used when the objective of the GPR survey is to identify all sinkhole features within a project site. Coarser grids are used when the objective is to provide a general overview of site conditions. After completion of a survey using a given grid spacing, additional more-closely spaced GPR transects are often performed to better characterize sinkhole features identified by the initial survey. This information can be used to provide recommended locations for geotechnical borings.

Depth estimates to the top of lithological contacts or sinkhole features are determined by dividing the time of travel of the GPR signal from the ground surface to the top of the feature by the velocity of the GPR signal. The velocity of the GPR signal is usually obtained from published tables of velocities for the type and condition (saturated vs. unsaturated) of soils underlying the site. The accuracy of GPR-derived depths typically ranges from 20 to 40 percent of the total depth.

<u>Interpretation and Limitations of GPR data</u>

The analysis and collection of GPR data is both a technical and interpretative skill. The technical aspects of the work are learned from both training and experience. Having the opportunity to compare GPR data collected in numerous settings to the results from geotechnical studies performed at the same locations develops interpretative skills for geological characterization studies.

The ability of GPR to collect interpretable information at a project site is limited by the attenuation (absorption) of the GPR signal by underlying soils. Once the GPR signal has been attenuated at a particular depth, information regarding deeper geological conditions will not be obtained. In addition, GPR data can only resolve subsurface features that have a sufficient electrical contrast between the feature in question and surrounding earth materials. If an insufficient contrast is present, the subsurface feature will not be identified. GeoView can make no warranties or representations of geological conditions that may be present beyond the depth of investigation or resolving capability of the GPR equipment or in areas that were not accessible to the geophysical investigation.