GEO-TECH, INC.
ENGINEERING CONSULTANTS IN GEOTECHNICAL • ENVIRONMENTAL • CONSTRUCTION MATERIALS TESTING

April 28, 2026
Project No. 26-11086.01.1

Christopher Lewis
City of Ocala - Community Development Services
201 SE 3rd Street, 2nd Floor
Ocala, Florida 34471

Reference: Surface Depression, Existing Residence, 1011 W Silver Springs Place
Ocala, Florida
Geotechnical Site Evaluation

Dear Mr. Lewis:

Geo-Technologies, Inc. (Geo-Tech) has completed a geotechnical evaluation of the site as requested. Services were conducted in accordance with our Proposal No. 16536 dated February 26, 2026.

Our findings, evaluations and recommendations are presented in the following report. Generally accepted soils and foundation engineering practices were employed in the preparation of this report.

Geo-Tech appreciates the opportunity to provide our services for this project. Should you have any questions regarding the contents of this report or if we may be of further assistance, please do not hesitate to contact the undersigned.

Sincerely,

Grady N. Polk, E.I.
Staff Engineer
GNP/CAH

CRAIG AUSTIN HAMPY LIC. NO. 83240 STATE OF FLORIDA PROFESSIONAL ENGINEER 4/28/26

Craig A. Hampy, P.E.
Florida Registration No. 83240

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Purposes of Exploration
Purposes of this evaluation were to characterize representative subsurface conditions adjacent to the observed surface depression and to provide applicable remediation recommendations based on our findings.

Site Description
The site is located at 1011 W Silver Springs Place in Ocala, Florida. Geo-Tech observed a surface depression approximately three (3) feet in diameter and two (2) feet deep adjacent to the west exterior residence wall on our initial site visit. We refer you to the GPR Survey and Boring Location Map presented in Appendix III for the approximate surface depression location.

Field Exploration Program
Field exploration services for this geotechnical site evaluation consisted of the following:

- Ground penetrating radar (GPR) survey adjacent to the surface depression and in accessible areas around the existing residence. The GPR survey was performed on March 16, 2026.

- Two (2) standard penetration test (SPT) borings to depths of approximately thirty-one and one-half (31.5) feet below existing grade adjacent to the surface depression (ASTM D1586). SPT borings were performed on April 23, 2026.

Sampling and Testing Descriptions

GPR Survey
GPR is an electromagnetic geophysical method used to detects interfaces between subsurface materials with differing dielectric constants. The GPR system consists of an antenna which houses a transmitter and receiver and a profiling recorder which processes the received signal, records the data in a portable computer and produces a continuous cross-section of the subsurface interface reflections (reflectors) on a graphic display.

The transmitter radiates repetitive short-duration electromagnetic waves into the earth from an antenna moving across the ground surface. These radar waves are reflected back to the receiver by interfaces between materials with different dielectric constants. Travel times of the signal are used to estimate the depth of signal penetration. Intensity of the reflected signal is a function of the contrast in the dielectric constants between materials, the conductivity of the material through which the wave is traveling and the frequency of the signal. Subsurface features which commonly cause such reflections are changes in sediment composition, bedding and cementation horizons, voids, water content along with unnatural changes to the subsurface such as disturbed soils, soil backfill, buried debris, tanks, pipelines and utilities.

Normal subsurface conditions are frequently characterized by relatively continuous and horizontal reflectors. Anomalous subsurface features, such as voids, exhibit reflectors which dip down toward the center of a void or are discontinuous. Water is typically characterized by relatively high-amplitude reflectors. Fractures are typically characterized by an abrupt increase in

the depth of penetration of the GPR signal and high-angle reflectors near the boundaries of the suspected fracture.

GPR signal penetration depth is highly site-specific and is limited by signal attenuation (absorption) in subsurface materials. Signal attenuation is dependent upon the electrical conductivity and moisture content of subsurface materials. Signal attenuation is greatest in materials with relatively high electrical conductivities such as clays and brackish groundwater and lowest in relatively low-conductivity materials such as dry sand or rock. GPR signal penetration depth is also dependent on the antenna's transmitting frequency. GPR signal penetration depth generally increases as the antenna's transmitting frequency decreases.

A GPR survey is conducted along transects which are measured paths along which the antenna is moved. Calibrated survey wheel measurements are used to determine the position of the antenna. The antenna location is recorded in the GPR survey data to allow correlation of the data to actual field locations.

Standard Penetration Test (SPT) Boring
SPT borings were performed in accordance with ASTM D1586. This SPT boring method consists of a split-barrel sampler driven into the subsurface soils by a one hundred and forty (140) pound hammer falling thirty (30) inches. The number of blows required to drive the sampler one (1) foot, after seating six (6) inches, is the designated resistance or N-Value and is an index to soil strength and consistency.

Soil samples recovered during the performance of the SPT borings were visually classified in the field. Representative soil samples were placed in containers and transported to our laboratory for further analysis.

Findings

GPR Survey
The GPR survey was performed utilizing a shielded one hundred sixty (160) MHz antenna and the GX HDR monitor manufactured by Mala Geoscience of Mala, Vasterbotten Municipality, Sweden.

Data from the GPR survey was transferred from the GX HDR monitor to a desktop computer where processing was performed utilizing MALA Object Mapper Version 2.0.1804.102 software produced by Mala Geoscience of Mala, Vasterbotten Municipality, Sweden.

GPR transects were constructed by Geo-Tech on approximately five (5) to ten (10) foot centers throughout accessible areas around the surface depression and adjacent to the existing residence. The GPR survey was performed by towing the antenna along each transect line. We refer the reader to the GPR Survey and Boring Location Map presented in Appendix III for the approximate GPR survey area.

The GPR survey data indicated a maximum signal penetration depth of approximately thirty-three (33) feet below existing grade. Subsurface conditions located below the maximum signal penetration depth were not detected by the antenna.

Geo-Tech observed no indications of downwarping, discontinuous strata and/or localized areas of deeper signal penetration in the GPR survey data.

SPT Borings

General subsurface conditions encountered in the soil borings are graphically presented on the soil profiles in Appendix II. Horizontal lines designating the interface between differing materials represent approximate boundaries. Transition between soil layers is typically gradual.

Soils encountered in boring B-1 generally consisted of a surficial layer of loose clayey sand approximately two and one-half (2.5) feet thick underlain by limestone and very loose to loose fine sand to the depth drilled. A weight-of-hammer (WOH) zone was encountered in boring B-1 between depths of approximately thirteen and one-half (13.5) to twenty-six (26) feet below existing grade.

Soils encountered in boring B-2 generally consisted of a surficial layer of loose to medium dense fine sand approximately eight (8) feet thick underlain by very loose to medium dense clayey sand, very soft to medium stiff slightly sandy clay and limestone to the depths drilled. WOH zones were encountered in boring B-2 between depths of approximately twenty-three and one-half (23.5) to twenty-four (24) and twenty-four and one-half (24.5) to twenty-five (25) feet below existing grade.

Groundwater was not encountered within ten (10) feet below existing grade in the borings at the time of drilling.

Evaluations

Geo-Tech observed indications of subsurface sinkhole type activity at the site as determined by the WOH zones encountered in borings B-1 and B-2.

Most sinkhole activity in Florida is the result of subterranean erosion (raveling) of subsurface soils into solution channels and cavities in the underlying limestone. This erosion is generally caused by downward seepage of groundwater (recharge) into the limestone aquifer along with downward migration of subsurface soils. This erosion propagates upward toward the ground surface as a sinkhole develops and can cause WOH zones as encountered in borings B-1 and B-2. These zones can cause settlement to structures placed above them.

Remediation Recommendations

Geo-Tech recommends remediating the subsurface sinkhole type activity encountered in borings B-1 and B-2 with deep soil stabilization by means of low slump, sand-cement compaction grout. Nine (9) injection pipes should be installed to limestone refusal conditions at the locations depicted on the Grout Injection Plan presented in Appendix I. Additional injection pipes may be added depending on grout intakes.

Geo-Tech understands that the existing residence will be demolished which will allow for the installation of grout pipes as depicted on the Grout Injection Plan presented in Appendix I. In addition, care should be taken to ensure that grout pipes are only installed on the subject property.

Geo-Tech estimates grout quantities for this project to range between eighty (80) to one hundred twenty (120) cubic yards. Grout mix specifications and pumping procedures are presented in Appendix I. The Grouting Contractor should present submittals to Geo-Tech for approval.

Geo-Tech also recommends backfilling the observed depression with sandy soils. Backfill operations should continue until backfill material elevations are high enough to keep surface water runoff from ponding. The surface depression areas should also be monitored for future subsidence, and additional backfilling should be performed as needed.

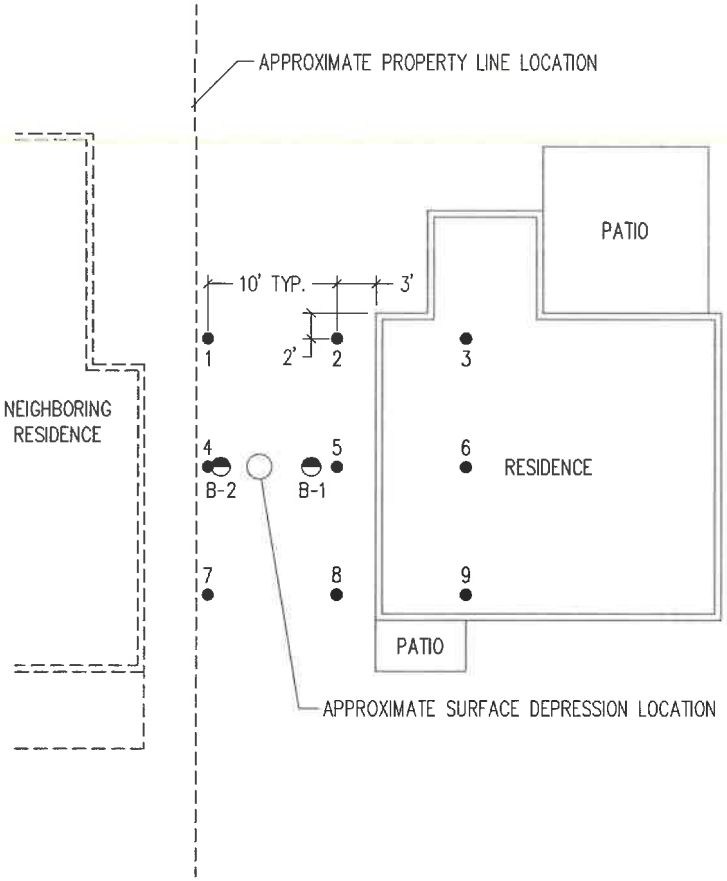
Closure/General Qualifications

This report has been prepared in order to aid in the evaluation of the site. The scope of this geotechnical site evaluation is limited to this specific project and the location described herein.

Evaluations and recommendations submitted in this report are based on our findings from the soil borings performed. Soil, limestone and groundwater conditions may vary between boring locations. These variations were not taken into consideration for this report. However, variations may become evident during the remediation. Geo-Tech should be informed if variations are encountered during remediation so our evaluations and recommendations can be reviewed.

APPENDIX I

COMPACTION GROUTING SPECIFICATIONS
&
GROUT INJECTION PLAN



● = PROPOSED GROUT PIPE INJECTION LOCATION

◓ = APPROXIMATE STANDARD PENETRATION TEST (SPT) BORING LOCATION

NOTES

1. GEO-TECH UNDERSTANDS THAT THE EXISTING RESIDENCE WILL BE DEMOLISHED.
2. CARE SHOULD BE TAKEN TO ENSURE THAT GROUT PIPES ARE ARE ONLY INSTALLED ON THE SUBJECT PROPERTY.

CITY OF OCALA - COMMUNITY DEVELOPMENT SERVICES

SURFACE DEPRESSION, EXISTING RESIDENCE
1011 W SILVER SPRINGS PLACE
OCALA, FLORIDA

GROUT INJECTION PLAN

GEO-TECH, INC.
■GEOTECHNICAL ■ENVIRONMENTAL
■CONSTRUCTION MATERIALS TESTING ■GEOPHYSICAL EXPLORATION
1016 SE 3rd AVENUE, OCALA, FLORIDA 34471 ~ (352) 694-7711

PROJECT NO.	26-11086.01.1
SCALE:	N.T.S.
DATE:	4-27-26
FIGURE:	1

Compaction Grouting Specifications

General
The following grouting specifications are for stabilization and improvement of deep subsurface soil conditions at the project site as indicated in the Remediation Recommendations section of this report.

Scope
The scope of work consists of furnishing all labor, equipment and materials and performing all work connected with the injection of the cementaceous grout to fill, seal and stabilize subsurface soils.

Subsurface Soil Stabilization
The subsurface soils stabilization program shall consist of pumping sand-cement grout with suitable chemical additives to the recommended depths and at pressures necessary to fill, stabilize and cement subsurface soils in order to minimize the potential for future subsidence.

Contractor
The compaction grouting Contractor shall submit their qualifications to Soil Engineer and the Owner. The Contractor shall have at least five (5) years of experience in similar deep and shallow compaction grouting jobs and shall submit references of their activities. The Contractor shall submit a project schedule to Soil Engineer for approval prior to mobilization to the site. The Contractor shall also provide sufficient labor and equipment to ensure the project site is protected from pedestrians and non-essential construction vehicles by means of caution tape and/or protective fencing in order to provide a safe working environment for construction and non-construction personnel.

Equipment
a. Grout Injection Equipment: A continuous flow, positive displacement model with a pugmill type mixing vat having a minimum shaft speed of sixty (60) rpm and incorporated as an integral part of the mudjack equipment. Alternate equipment may be used at the discretion of Geo-Tech.

b. Mixer: (If On-Site Mixing is Used) Machine driven rotary mixer with a minimum seven (7) cubic foot capacity; agitate during pumping operations.

c. Injection Pipes: Minimum diameter two (2) inch I.D., Maximum Diameter four (4) inch I.D.

d. Pressure Gauge: Sufficient size (4-inch face) in order to be legible while monitoring grouting pressures from a safe distance.

Grout Mixture
The mixture used for grouting shall be a creamy consistency which will permit the grout mixture, when set aside in a standard concrete test mold, to show less than one percent of the mixture height of free water on the surface after standing not less than twelve (12) hours. The grout

mixture shall have a time of efflux (ASTM C939-81) greater than thirty-five (35) seconds. Geo-Tech recommends utilizing a compaction grout mix option as presented in Table 1 below. Please note that either mix option may be used subject to minor variation of any constituent if found necessary to meet the above requirements.

Table 1 Compaction Grout Mix Options

Constituent	Mix A	Mix B
Fly Ash (Gs = 2.5)	500 pounds	n/a
Cement (Gs = 3.15)	500 pounds	900 pounds
Water	55 gallons	55 gallons
Sand (Gs = 2.65)	2,300 pounds	2,300 pounds
Darex (or equal)	1 ounce	1 ounce
WRDA-79 (or equal)	45 ounces	45 ounces

Note: Quantities presented in Table 1 are for one (1) cubic yard of material.

Grout Mixture and Placement

Facilities shall be provided to accurately measure ingredients in each batch of grout if on-site mixing is used. Ingredients shall be thoroughly mixed and immediately pumped to the grout pipes through a flexible hose connection not more than two hundred fifty (250) feet long.

Compaction Grouting Procedure

a. The scope of this compaction grout program includes grouting at pipe locations on approximately ten (10) foot centers. However, the program may be modified by the Soil Engineer as dictated by the actual field conditions encountered. Some injection pipe locations may be deleted and/or alternate locations may be added to the program if directed by the Soil Engineer.

b. Grout pipes shall be installed to refusal conditions. The Contractor shall rotary drill (using a Bentonite slurry) the injection pipes to a minimum depth of fifteen (15) feet and then either drill or drive, at the discretion of the Soil Engineer, to the refusal depth. Any other method of installation shall not be accepted unless approved by the Soil Engineer.

c. Grouting operations may begin following satisfactory installation of injection pipes. The rate of pumping shall not exceed six (6) cubic feet per minute. Pumping pressures should range between one-hundred (100) to one-hundred fifty (150) psi at the tip of the casing. The in-line pressure gauge should be of sufficient size in order to be legible while monitoring grouting pressures from a safe distance (4-inch face).

d. Shallow grouting may be performed at the discretion of the Soil Engineer to re-level concrete slabs, footings or other structures.

e. All grouting operations shall be monitored by a Geo-Tech representative.

Soil Engineer Monitoring

The Soil Engineer will monitor the compaction grouting operations and represent the Owner to assure compliance with the specifications outlined above and the duties discussed below. The Soil Engineer shall recommend intervals of grouting and shall decide if additional or less grout is necessary.

a. The Soil Engineer can stop the grouting operation at any time if the operation does not comply with the abovementioned specifications or if the work is unsuitable. The Soil Engineering will not be responsible for damage to the lawn, landscape areas or structures due to grouting procedures.

b. The Soil Engineer will make all measurements of grout heave, settlement and grout quantity pumped. The Soil Engineer will maintain daily records of the grouting operation for the benefit of the Owner and Contractor. The grout quantity recorded by the Soil Engineer shall be considered the final amount of grout pumped for billing purposes. The Contractor will be responsible for laser equipment necessary to monitor at least three (3) locations continuously during the grouting operation.

c. The Soil Engineer shall observe any vertical movement of the ground during the grouting operation. The grouting operation shall cease and observations shall continue for thirty (30) minutes if a momentary downward movement is observed. Pumping shall be resumed at a lower rate of discharge if the ground does not return to its original grade. The grouting operation shall cease if upward movement is observed.

d. The Contractor shall exercise care when grouting beneath and adjacent to existing structures. The Contractor is responsible for ensuring that the grouting operation does not cause unnecessary damage to existing structures.

e. Grouting operations shall cease and the Soil Engineer shall be notified when grout injection pipes in undeveloped areas are ten (10) feet or shallower measured from existing grade, when grout injection pipes in close proximity to existing buildings are fifteen (15) feet or shallower measured from existing grade and when grout injection pipes adjacent to in-ground pools are twenty (20) feet or shallower from existing grade. Grouting operations shall cease and the Soil Engineer shall be notified when grout injection pipes in close proximity to existing buildings are fifteen (15) feet or shallower measured from existing grade. These points may be abandoned or relocated by the Soil Engineer.

Considerations

Unit prices per cubic yard of grout, per foot for pipe installation/removal and per day of shallow grouting shall be applicable to quantities over or under the estimated amounts.

APPENDIX II

SOIL PROFILES

Log of Borehole: B-1

GEO-TECH, INC.
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Ocala, Florida
352.694.7711
WWW.GEOTECHFL.COM

Project: DEPRESSION, 1011 W SILVER SPRINGS PLACE, OCALA, FL
Project No: 26-11086.01.1
Boring Location: (SEE BORING LOCATION MAP)
Engineer: CAH
Client: CITY OF OCALA - COMMUNITY DEVELOPMENT SERVICES
Enclosure: BORING MAP

Depth (ft)	Symbol	Description	Consistency	Depth/Elev.	Number	Type	Blows/ft	Standard Penetration Test N-Values (0 20 40 60 80 100)
0		Ground Surface		0.0				
0-2		**CLAYEY SAND** YELLOWISH BROWN CLAYEY SAND (SC)	SCP = 22 SCP = 34					
2				2.5				
2-5		**LIMESTONE** LIGHT BROWN LIMESTONE (POSSIBLE BOULDER)	SCP = 40+ SCP = 40+					
5			30 BLOWS - 12"		1		30	30
7			39 BLOWS - 12"		2		39	39
9			39 BLOWS - 12"		3		39	39
12		LOSS OF DRILLING FLUID CIRCULATION AT APPROX. 13.5 FEET						
13				13.5				
14		**FINE SAND** BROWN FINE SAND (SP)	WOH (13.5' - 26.0')		4		0	0
19			WOH		5		0	0
24			WOH		6		0	0
29			LOOSE	30.0	7		8	8
30-31		**LIMESTONE** LIGHT BROWN LIMESTONE	50 BLOWS - 0"	31.5	8		50	50
32		End of Borehole						

Groundwater Depth: GREATER THAN 10.0 FEET
Drill Date: APRIL 23, 2026
Drilled By: DB/KH/AB
Drill Method: ASTM D1586

Remarks: UNIFIED SOIL CLASSIFICATION SYMBOL AS DETERMINED BY VISUAL REVIEW

Soil Profile : 1 OF 2

Log of Borehole: B-2

Contract# CHS/260731

GEO-TECH, INC.
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Ocala, Florida
352.694.7711
WWW.GEOTECHFL.COM

Project: DEPRESSION, 1011 W SILVER SPRINGS PLACE, OCALA, FL
Project No: 26-11086.01.1

Boring Location: (SEE BORING LOCATION MAP)
Engineer: CAH

Client: CITY OF OCALA - COMMUNITY DEVELOPMENT SERVICES
Enclosure: BORING MAP

Depth (ft)	Symbol	Description	Consistency	Depth/Elev.	Number	Type	Blows/ft	Standard Penetration Test N-Values (0 20 40 60 80 100)
0		Ground Surface		0.0				
0–8		**FINE SAND** BROWN FINE SAND (SP)	SCP = 40+					
			SCP = 40+					
			SCP = 40+					
			SCP = 40+					
5			LOOSE		1		6	6
7			LOOSE	8.0	2		8	8
8–13		**CLAYEY SAND** YELLOWISH BROWN CLAYEY SAND (SC)	MEDIUM DENSE		3		11	11
13				13.5				
14–23		**SLIGHTLY SANDY CLAY** GRAY AND YELLOWISH BROWN SLIGHTLY SANDY CLAY (CH)	STIFF		4		14	14
19		LOSS OF DRILLING FLUID CIRCULATION AT APPROX. 20.0 FEET	MEDIUM STIFF		5		6	6
23			WOH (23.5' - 24.0')	23.5	6		0	0
24–28		**CLAYEY SAND** YELLOWISH BROWN AND GRAY CLAYEY SAND (SC)	VERY LOOSE		7		1	1
26			WOH (24.5' - 25.0')		8		0	0
28				28.5				
29–31		**LIMESTONE** LIGHT BROWN LIMESTONE	1 BLOW - 12"		9		1	1
31			50 BLOWS - 1"	31.5	10		50	50
32		End of Borehole						

Groundwater Depth: GREATER THAN 10.0 FEET
Drill Date: APRIL 23, 2026

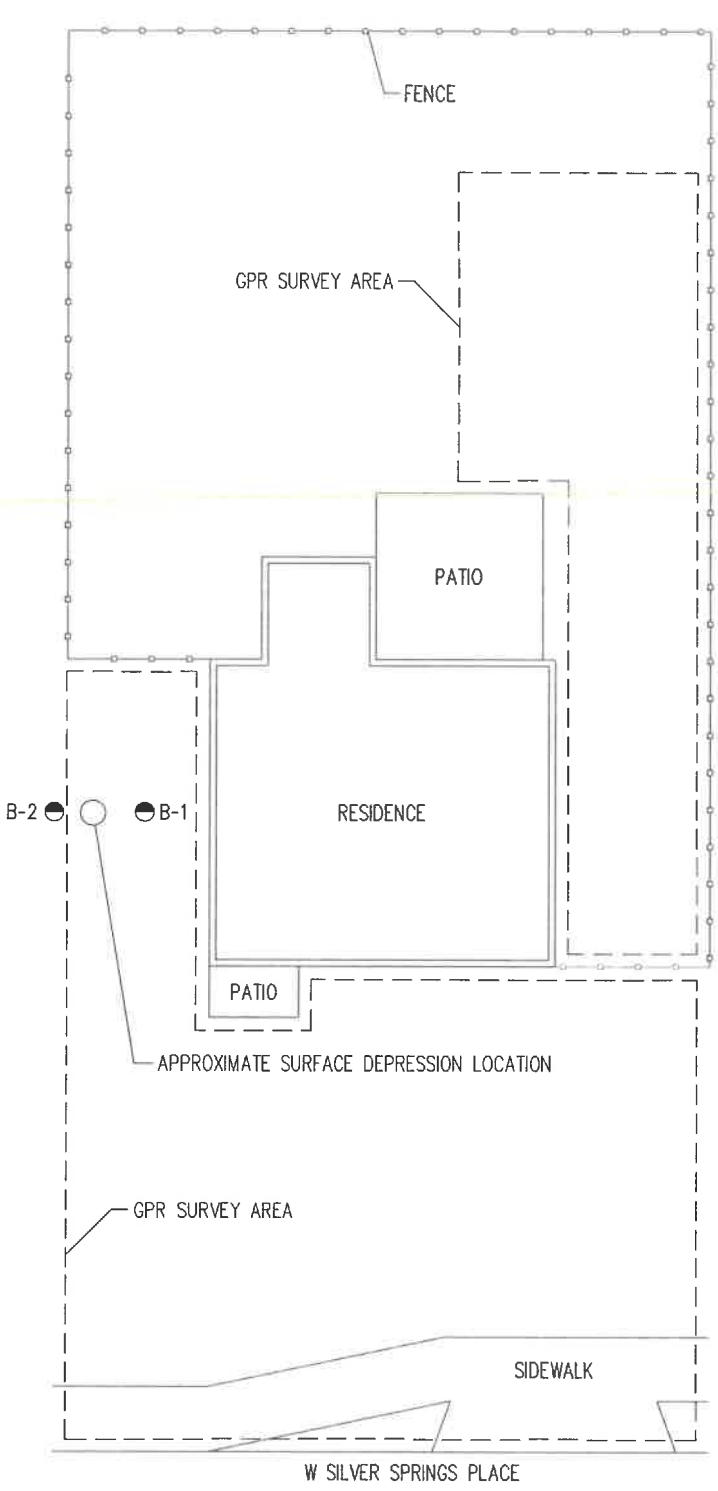
Drilled By: DB/KH/AB
Drill Method: ASTM D1586

Remarks: UNIFIED SOIL CLASSIFICATION SYMBOL AS DETERMINED BY VISUAL REVIEW

Soil Profile : 2 OF 2

APPENDIX III

GPR SURVEY AND BORING LOCATION MAP



◓ = APPROXIMATE STANDARD PENETRATION TEST (SPT) BORING LOCATION

CITY OF OCALA - COMMUNITY DEVELOPMENT SERVICES

SURFACE DEPRESSION, EXISTING RESIDENCE
1011 W SILVER SPRINGS PLACE
OCALA, FLORIDA

GPR SURVEY AND BORING LOCATION MAP

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