



UNITED
CONSULTING

REPORT

For

Mr. James L. Rhoden III

Mr. James R. Baker

Macallan Capital, LLC

Report of Preliminary Geotechnical
Exploration

Alcovy SFD

1563 Alcovy Road

Lawrenceville, Georgia

Project No.: MACPR-22-GA-06097-01



April 15, 2022

Mr. James L. Rhoden III
Mr. James R. Baker
Macallan Capital, LLC
1642 Powers Ferry Road SE
Suite 250
Marietta, GA 30067

Via Email: j.baker@macallangroup.com; jay.rhoden@macallangroup.com


RE: Report of Preliminary Geotechnical Exploration
Alcovy SFD
1563 Alcovy Road
Lawrenceville, Georgia
Project No.: MACPR-22-GA-06097-01

Gentlemen:


United Consulting is pleased to submit this report of our Preliminary Geotechnical Exploration for the above-referenced project. We appreciate the opportunity to assist you with this project and look forward to our continued participation. Please contact us if you have any questions or if we can be of further assistance.

Sincerely,

UNITED CONSULTING





Nhan "Yung" Dang
Senior Geotechnical Engineer



Scott D. Smelter
Principal

YD/MAK/SDS/DPD/rg

unc-sps: Geotechnical Documents/MACPR-22-GA-06097-01- Geo.doc



Michael A. Kemp, P.E.
Senior Geotechnical Engineer

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1.0 EXECUTIVE SUMMARY

United Consulting has completed a Preliminary Geotechnical Exploration for the proposed sewer alignment project (Alcovy SFD) located at 1563 Alcovy Road, Lawrenceville, Georgia. Please refer to the text of the report for a more detailed discussion of the items summarized below.

1. Fill soils were encountered in all 10 borings to depths ranging from approximately 2 to 7 feet. The fill encountered appeared to be debris-free and mostly low (poorly compacted) consistency. With any undocumented fill, it is possible that areas of poor-quality fill, debris or other deleterious materials could be present intermediate of the boring locations.
2. Low consistency (N<5) residual soils were encountered in borings B-4 and B-9 at depths ranging from approximately 2 to 5 feet. It is likely that other areas of low consistency soils are present in other areas of the Site. These materials may need to be compacted in-place or removed and replaced if they are encountered near planned subgrade elevations; therefore, we recommend that contingency funds be included in the project budget for such remediation.
3. Based on the boring results, it appears that the onsite soils, including the existing fill, are generally suitable for reuse as engineered fill. As mentioned above, because of the presence of undocumented fill materials, it would not be unusual to encounter localized areas of buried trash, debris or other deleterious materials intermediate of the boring locations that would not be suitable for reuse.
4. Partially weathered rock (PWR) was encountered in borings B-7 and B-9 at depths of approximately 5.5 and 8.5 feet, respectively. Hard drilling, which may indicate PWR or boulder, was encountered in boring B-8 at between the depths of approximately 12.5 and 13.5 feet. Auger refusal did not occur in any of the borings to the proposed depths. Difficult excavation conditions (blasting, the use of ram hoes, jack hammers, etc.) below the levels of PWR or hard drilling shown on the boring logs for B-7 through B-9 are expected. The remaining 7 borings did not encounter PWR or rock within the depths drilled. We note that shallower PWR or rock may be present between or away from the areas explored.
5. Groundwater was generally not encountered at the time of drilling in the borings; however, we note that groundwater, which was possibly perched due to the rain the day before, was encountered in boring B-5 and three offset borings, which were performed for the infiltration test around boring B-5, at depths ranging from approximately 2.5 to 4 feet. Perched groundwater-related difficulties may be encountered during construction, and the contractor should be prepared to manage perched water and groundwater if encountered.
6. After completion of the field exploration for this study we were informed that the proposed sewer depths are up to 20 feet deep, especially near Alcovy Road. Supplemental geotechnical exploration to deeper depths is recommended if the sewer inverts are lower than the depths explored for this exploration.

2.0 PROJECT INFORMATION

The Project Site (the Site) is located at 1563 Alcovy Road, Lawrenceville, Georgia and is mostly wooded. The Site is bounded to the north by wooded areas and Sweet Pond Road beyond, to the east by wooded areas and residential properties beyond, to the south by Alcovy Road and residential properties beyond, to the west by wooded areas and residential properties beyond. The general location of the site is shown on the attached Boring Location Plan (Figure 1).

The main purpose of the geotechnical exploration was to assess potential rock and partially weathered rock in various locations along proposed sewer alignments. Based on a provided site plan, the proposed sewer alignments traverse along Road A and Road B and are approximately 1800 feet long total. The boring locations and depths were provided by your Civil Engineer as shown on the attached Boring Location Plan. Inverts were not available for our review.

3.0 PURPOSE

The purpose of this Preliminary Geotechnical Exploration was to assess the general type and condition of the subsurface materials at the Project Site and to provide preliminary recommendations regarding grading, earthwork, quality control and other geotechnical related issues deemed pertinent to this project.

4.0 SCOPE

The scope of our Preliminary Geotechnical Exploration included the following items:

1. A visual reconnaissance of the site from a geotechnical standpoint;
2. Drilling ten (10) Standard Penetration Test (SPT) borings. The boring locations and depths were provided by your office;
3. Performing three (3) borehole infiltration tests;
4. Visual evaluation of the soil samples obtained during our field testing program for further identification and classification;
5. Analyzing the existing soil conditions with respect to the proposed construction; and
6. Preparing this report to document the results of our field-testing program, engineering analysis, and to provide our findings and recommendations.

5.0 SUBSURFACE CONDITIONS

Initially, a layer of topsoil was encountered in all borings. Under the topsoil, fill soils were encountered in all boring's depths ranging from approximately 2 to 7 feet. The fill soils encountered generally consisted of very loose to loose sand with varying amounts of minor constituents, trace mica, roots, and organics. Standard penetration test resistances (N-values) within the fill soils ranged from 0 to 6 blows per foot (bpf). Low consistency fill soils (N<5 bpf) were encountered in all borings except B-7.

Below the fill, typical residual soils of the Piedmont Physiographic Province of Georgia were encountered. The residual soils encountered generally consisted of very loose to dense sand with varying amounts of minor constituents, trace mica. N-values within the sand residual soils ranged from 4 to 35 bpf. Low consistency residual soils were encountered in borings B-4 and B-9 at depths ranging from approximately 2 to 5 feet.

Partially weathered rock (PWR) was encountered in borings B-7 and B-9 at depths of approximately 5.5 and 8.5 feet, respectively. Hard drilling condition, which may indicate PWR or a boulder, was encountered in boring B-8 at a depth of approximately 12.5 feet. PWR denotes residual material having an N-value of 100 bpf or greater. Auger refusal did not occur in any of the borings within the depths drilled. Auger refusal is the depth below which a boring cannot be advanced using a soil drilling auger. Auger refusal below residuum generally represent a seam of rock, a boulder, or top of massive bedrock.

Groundwater was generally not encountered at the time of drilling in any of the borings; however, we note that groundwater, which was possibly perched due to the rain the day before, was encountered in boring B-5 and three offset borings, which were performed for the infiltration test around boring B-5, at depths ranging from approximately 2.5 to 4 feet. Groundwater levels will fluctuate based on yearly and seasonal rainfall variations and may rise in the future. Groundwater can occur along the soil-rock interface. This site is also susceptible to the formation of shallower perched water levels during periods of wet weather.

Table 1: Summary of Subsurface Conditions

Boring No.	*Ground Surface Elevation (ft.)	Bottom of Fill Depth (ft.)	Top of Partially Weathered Rock/Difficult Excavation (ft.)	Refusal Depth (ft.)	Termination Depth (ft.)	Shallowest Groundwater Depth (ft.)
B-1	962	3	NE	NE	10	NE
B-2	949	3	NE	NE	5	NE
B-3	929	7	NE	NE	7	NE
B-4	928	2	NE	NE	6.5	NE
B-5	928	5	NE	NE	7	2.5 (possibly perched)
B-6	952	3	NE	NE	5	NE
B-7	962	3	5.5	NE	7	NE
B-8	970	3	12.5	NE	18	NE
B-9	972	3	8.5	NE	10	NE
B-10	968	6	NE	NE	8	NE

NE=Not Encountered

*Elevations interpolated from provided topographic plan and are very approximate

6.0 PRELIMINARY DISCUSSION AND RECOMMENDATIONS

The following preliminary recommendations are based on our understanding of the proposed construction, the data obtained from the soil test borings, a site reconnaissance, and our experience with subsurface conditions similar to those encountered at the project site.

This exploration included ten (10) borings and no grading information was available at this time of this study. Once site development plans have progressed more fully, United Consulting must be contacted to determine if our recommendations should be re-evaluated and/or revised, or if additional subsurface exploration should be performed.

6.1 Existing Fill

Fill soils were encountered in all borings to depths ranging from approximately 2 to 7 feet. The fill generally appeared to be debris-free and mostly low consistency (N<5 bpf). With any undocumented fill, it is possible that other areas of poor-quality fill, debris or other deleterious materials could be present intermediate of the boring locations.

The existing fill generally appears to be suitable for reuse as engineered fill. As mentioned above, because the fill is undocumented (no compaction test records), it would not be unusual to encounter localized areas of buried trash, debris or other deleterious materials intermediate of the boring locations that would not be suitable for reuse. In addition, some of the onsite soils will be sensitive to changes in moisture content. If grading takes place during a period of wet weather, it may not be feasible to dry them using conventional aeration. If that is the case, they will need to be removed and replaced with drier soils or dried using chemical additives such as lime or cement.

6.2 Caving Considerations

All excavations should be conducted in accordance with the Occupational Safety and Health Administration (OSHA) guidelines. Flattening of the excavation sidewalls and/or the use of bracing may be needed to maintain stability during construction.

6.3 Difficult Excavation

Partially weathered rock (PWR) was encountered in borings B-7 and B-9 at depths of approximately 5.5 and 8.5 feet, respectively. Hard drilling, which may indicate PWR or boulder, was encountered in boring B-8 at between the depths of approximately 12.5 and 13.5 feet. Auger refusal did not occur in any of the borings to the proposed depths. Difficult excavation conditions (blasting, the use of ram hoes, jack hammers, etc.) below the levels of PWR or hard drilling shown on the boring logs for B-7 through B-9 are expected. The remaining 7 borings did not encounter PWR or rock within the depths drilled. We note that shallower PWR or rock may be present between or away from the areas explored.

6.4 Groundwater Considerations

Groundwater was generally not encountered at the time of drilling in the borings; however, we note that groundwater, which was possibly perched due to the rain the day before, was encountered in boring B-5 and three offset borings, which were performed for the infiltration test around boring B-5, at depths ranging from approximately 2.5 to 4 feet. Perched groundwater-related difficulties may be encountered during construction, and the contractor should be prepared to manage perched water and groundwater if encountered.

6.5 Earthwork and Fill Placement

The soils encountered at the Site, if free of organics and other deleterious materials, are generally expected to be suitable for re-use as engineered fill. However, some of the soils at the site will be particularly susceptible to changes in moisture content. If these soils become wet during construction, it may not be practical to adequately dry these soils without the use of chemical additives such as lime or cement, and they may need to be removed and replaced with drier soils.

The Geotechnical Engineer must evaluate excavated soils to assess their suitability for reuse as engineered fill. Typical restrictions on suitable fill are no organics, plasticity index less than 30, and maximum particle size of four inches, with not more than 30 percent greater than 3/4-inch. These restrictions should also be applied to the imported borrow soils if needed.

Positive drainage should be maintained at all times to prevent saturation of exposed soils in case of sudden rains. Sealing the surface of disturbed soils with a smooth-drum roller will also improve runoff and reduce the potential for construction delays due to undercutting and/or stabilization of saturated soils. The degree of soil stability problems will also be dependent upon the precautions taken by the contractor to help protect these moisture sensitive soils.

Standard Proctor compaction tests (ASTM D 698) should be performed for each soil type used, to provide data necessary for quality assurance testing. The soil moisture content at the time of compaction should be within optimal moisture content limits, that will allow the required compaction to be obtained.

The fill should be placed in thin lifts that will allow for adequate compaction to be achieved and compacted. Maximum loose lift thicknesses should not exceed 8 inches. We recommend that fill be compacted to at least 98% of Standard Proctor (ASTM D 698) maximum dry density within two feet below pavement subgrade and at least 95% of the Standard Proctor maximum dry density elsewhere.

A Geotechnical Engineer on a full-time basis should observe grading operations. In-place density tests taken by that individual will assess the degree of compaction being obtained. The frequency of the testing should be determined by the Geotechnical Engineer.

6.6 Field Infiltration Testing

The infiltration test locations were shown on the provided plan which was overlaid onto Google Earth to create a KMZ file. The locations were located on site by using the KMZ file and a hand-held GPS unit. Due to the methods used, the boring locations should be considered approximate.

Possible perched water depths in Boring B-5 and in several nearby offset hand auger borings ranged from approximately 2.5 to 4 feet. As a result, the infiltration test at this location was performed at a depth of approximately 1 foot. Infiltration tests were performed at the proposed depths of approximately 7 and 6 feet in borings B-3 and B-4, respectively.

The infiltration tests were performed using an Aardvark Permeameter (Model 2840K2) in order to obtain automated hydraulic conductivity readings. The Aardvark is a constant-head permeameter, meaning that the depth of the water in the borehole does not change during the measurement period. The rate of water supplied corresponds to soil infiltration rate from the bottom and side surfaces of the borehole.

Preparation of the test holes consisted of drilling approximately 6-inch diameter boreholes to the proposed depths, scarifying the sides of the test holes, and lowering the Aardvark Permeameter into the boreholes.

Once steady state flow rates were established in the boreholes, the saturated hydraulic conductivity (K_{sat}) rates were calculated using the Reynolds and Elrick Solution method and converted into the final infiltration rate using a reduction factor as outlined in Appendix C of the City of Atlanta Stormwater Management Practices for Small Commercial Development. The reduction factor is determined by the following formula:

$$Rf = (2D1 - \Delta d)/DIA + 1$$

D1 = initial water depth (in)

Δd = average/final water level drop (in)

DIA = diameter of the percolation test hole (in)

Table 2 provides the result of the infiltration testing. It should be noted that the results are estimates of the infiltration rates at the locations and depths tested. Variations in soil conditions across the full extent of the proposed stormwater detention system may result in different infiltration rates at other locations. Changes in atmospheric conditions or site-specific conditions may also result in varied test results if additional tests are conducted at a later date.

Table 2 – Summary of Infiltration Rates

Boring Number	Depth (ft.)	Average Infiltration Rate	
		in/hr.	ft./day
B-3	7	.003	.006
B-4	6	0.16	0.33
B-5	1	0.42	0.85

6.7 Supplemental Geotechnical Exploration

After completion of the field exploration for this study, we were informed that the proposed sewer depths are up to 20 feet deep, especially near Alcovy Road. Supplemental geotechnical exploration to deeper depths is recommended if the sewer inverts are lower than the depths explored for this exploration.

7.0 LIMITATIONS

This report is for the exclusive use of **Macallan Capital, LLC** and the designers of the project described herein, and may only be applied to this specific project. Our conclusions and recommendations have been prepared using generally accepted standards of Geotechnical Engineering practice in the State of Georgia. No other warranty is expressed or implied. Our firm is not responsible for conclusions, opinions, or recommendations of others.

The right to rely upon this report and the data within may not be assigned without UNITED CONSULTING'S written permission.

The scope of this evaluation was limited to an evaluation of the load-carrying capabilities and stability of the subsoils. Oil, hazardous waste, radioactivity, irritants, pollutants, molds, or other dangerous substance and conditions were not the subject of this study. Their presence and/or absence are not implied or suggested by this report and should not be inferred.

Our conclusions and recommendations are based upon design information furnished to us, data obtained from the previously described exploration and testing program and our past experience. They do not reflect variations in subsurface conditions that may exist intermediate of our borings, and in unexplored areas of the site. Should such variations become apparent during construction, it will be necessary to re-evaluate our conclusions and recommendations based upon "on-site" observations of the conditions.

If the design or location of the project is changed, the recommendations contained herein must be considered invalid, unless our firm reviews the changes, and our recommendations are either verified or modified in writing. When design is complete, we should be given the opportunity to review the foundation plan, grading plan, and applicable portions of the specifications to confirm that they are consistent with the intent of our recommendations.

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APPENDIX

General Notes/Narrative of Drilling Operations
Figure 1 – Boring Location Plan
Exploration Procedures
SPT Boring Logs (10)

GENERAL NOTES

The soil classifications noted on the Boring Logs are visual classifications unless otherwise noted. Minor constituents of a soil sample are termed as follows:

Trace	0 - 10%
Some	11 - 35%
Suffix "y" or "ey"	36 - 49%

LEGEND



Split Spoon Sample obtained during Standard Penetration Testing



Relatively Undisturbed Shelby Tube Sample



Groundwater Level at Time of Boring Completion



Groundwater Level at 24 hours (or as noted) after Termination of Boring

w Natural Moisture Content

LL Liquid Limit

PL Plastic Limit Atterberg Limits

PI Plasticity Index

PF Percent Fines (Percent Passing #200 Sieve)

γ_d Dry Unit Weight (Pounds per Cubic Foot or PCF)

γ_m Moist or In-Situ Unit Weight (PCF)

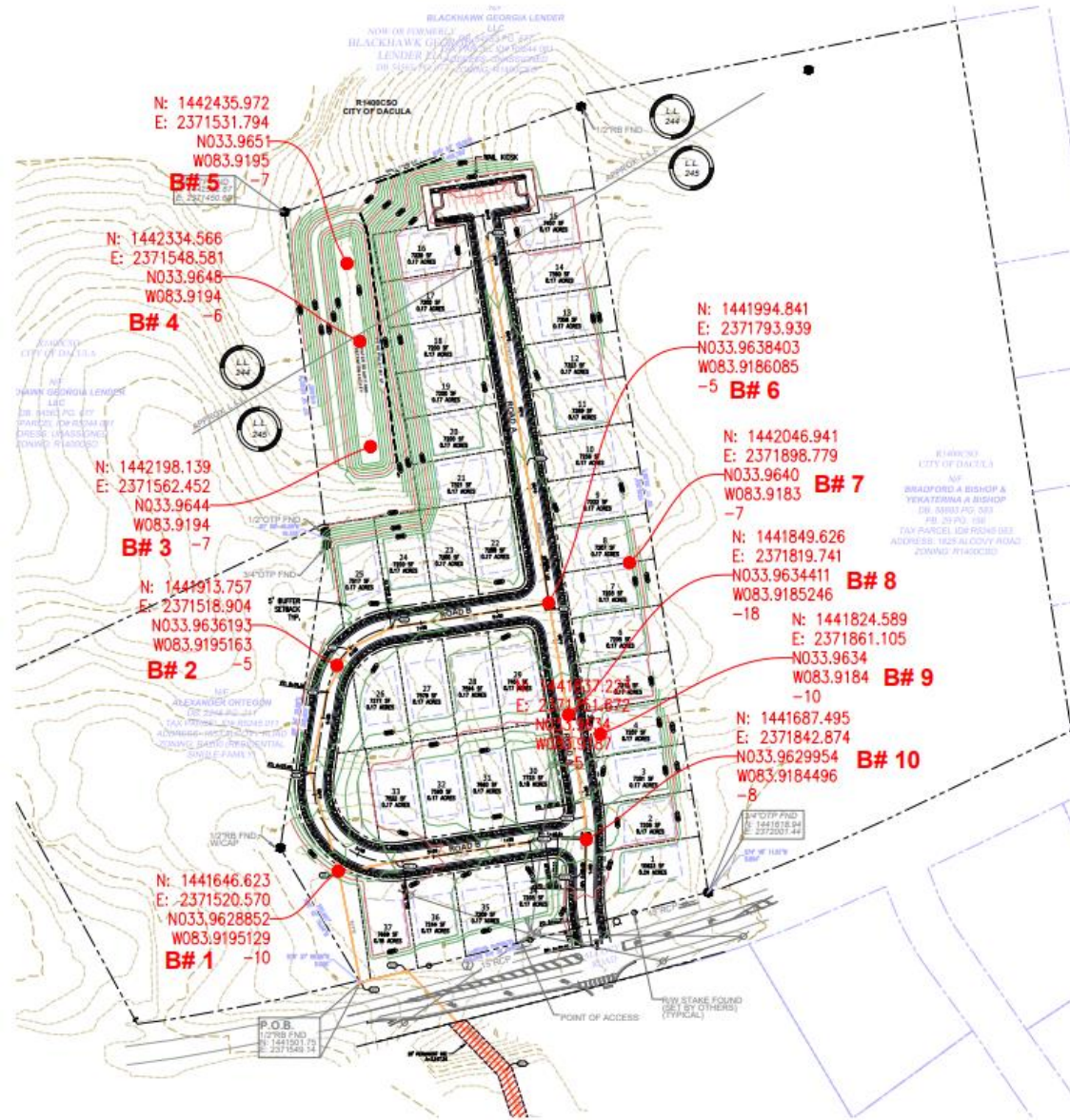
γ_{sat} Saturated Unit Weight (PCF)

BORING LOG DATA NARRATIVE OF DRILLING OPERATION

The test borings were made by mechanically advancing helical hollow stem augers into the ground. Samples were collected at regular intervals in each of the borings following established procedures for performing the Standard Penetration Test in accordance with ASTM Specification D 1586. Soil samples were obtained with a standard 1.4" I.D. x 2.0" O.D. split barrel sampler. The sampler is first seated 6" to penetrate any loose cuttings and then driven an additional foot with the blows required of a 140-pound hammer freely falling a distance of 30 inches. The number of blows required to drive the sampler the final foot is designated the "standard penetration resistance." The driving resistance, known as the "N" value, can be correlated with the relative density of granular soils and the consistency of cohesive deposits.

The following table describes soil consistency and relative densities based on standard penetration resistance values (N) determined by the Standard Penetration Test (SPT).

	<u>"N"</u>	<u>Consistency</u>
Clay and Silt	0-2	Very Soft
	3-4	Soft
	5-8	Firm
	9-15	Stiff
	16-30	Very Stiff
	Over 31	Hard
	<u>"N"</u>	<u>Relative Density</u>
Sand	0-4	Very Loose
	5-10	Loose
	11-19	Firm
	20-29	Medium Dense
	30-49	Dense
	50+	Very Dense



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Prepared:

YD

Checked:

MAK

Date:

4/5/2022

Scale:

NTS

Title:

Boring Location Plan

Project:

Alcovy SFD

Project No.

MACPR-22-GA-06097-01

Client:

Macallan Capital, LLC

FIG 1

EXPLORATION PROCEDURES

Ten (10) SPT borings (designated B-1 through B-10) were performed at the approximate locations indicated on the attached Boring Location Plan (Figure 1). The ground surface elevations at the boring locations were interpolated from the topographic survey. The SPT borings were performed in general accordance with ASTM D 1586. Soil samples obtained during testing were visually evaluated by the Project Engineer and classified according to the visual-manual procedure described in ASTM D 2488. A narrative of field operations is included in The Appendix.

The test locations shown on the Boring Location Plan and the ground surface elevations shown on the boring logs should, therefore, be considered approximate.



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625 Holcomb Bridge Rd.
Norcross, GA, 30071

BORING NUMBER B-01

PAGE 1 OF 1

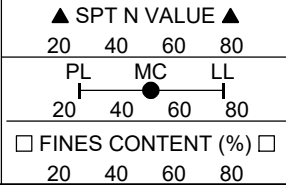
CLIENT Macallan Capital, LLC
PROJECT NUMBER MACPR-22-GA-06097-01
DATE STARTED 04/04/2022 **COMPLETED** 04/04/2022
DRILLING CONTRACTOR Geolab LLC
DRILLING METHOD 2-1/4" Hollow stem auger
LOGGED BY Foli Amaizo **CHECKED BY** Yung Dang
NOTES Automatic hammer, 90% efficiency

PROJECT NAME Alcovy SFD
PROJECT LOCATION 1563 Alcovy Dr, Lawrenceville, GA
GROUND ELEVATION 962 ft **HOLE SIZE** 6.25"
GROUND WATER LEVELS:
AT TIME OF DRILLING ---
AT END OF DRILLING ---
AFTER DRILLING ---

GEO TECH BH PLOTS INCHES REC - DF STD US LAB.GDT - 4/15/22 13:18 - H:\GINT DATABASE\PROJECTS\2022\MACPR-22-GA-06097-01 ALCOVY SFD.GPJ

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY - inch (RQD - inch.)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	▲ SPT N VALUE ▲					
									20	40	60	80		
0	960		Topsoil	SPT 1	18	2-1-3 (4)								
5	955		Sand; some silt, trace clay, loose; reddish brown (residuum)	SPT 2	18	3-3-4 (7)								
			Sand-silty; loose; tan brown	SPT 3	15	2-3-2 (5)								
10			Loose	SPT 4	18	2-3-3 (6)								

Boring terminated at 10.0 feet.





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BORING NUMBER B-02

PAGE 1 OF 1

CLIENT Macallan Capital, LLC

PROJECT NAME Alcovy SFD

PROJECT NUMBER MACPR-22-GA-06097-01

PROJECT LOCATION 1563 Alcovy Dr, Lawrenceville, GA

DATE STARTED 04/04/2022 COMPLETED 04/04/2022

GROUND ELEVATION 949 ft HOLE SIZE 6.25"

DRILLING CONTRACTOR Geolab LLC

GROUND WATER LEVELS:

DRILLING METHOD 2-1/4" Hollow stem auger

AT TIME OF DRILLING ---

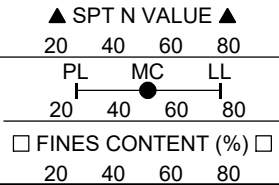
LOGGED BY Foli Amaizo CHECKED BY Yung Dang

AT END OF DRILLING ---

NOTES Automatic hammer, 90% efficiency

AFTER DRILLING ---

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY - inch (RQD - inch.)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	▲ SPT N VALUE ▲	
									20	40 60 80
0			Topsoil							
			Sand-clayey; some silt, very loose; brown (fill)	SPT 1	18	2-1-1 (2)				
	945		Sand; some silt, trace clay, loose; orange brown (residuum)	SPT 2	18	2-4-4 (8)				
5			Boring terminated at 5.0 feet.							



GEOTECH BH PLOTS INCHES REC - DF STD US LAB.GDT - 4/15/22 13:18 - H:\GINT DATABASE\PROJECTS\2022\MACPR-22-GA-06097-01\ALCOVY SFD.GPJ



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BORING NUMBER B-03

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CLIENT Macallan Capital, LLC

PROJECT NAME Alcovy SFD

PROJECT NUMBER MACPR-22-GA-06097-01

PROJECT LOCATION 1563 Alcovy Dr, Lawrenceville, GA

DATE STARTED 04/04/2022 COMPLETED 04/04/2022

GROUND ELEVATION 929 ft HOLE SIZE 6.25"

DRILLING CONTRACTOR Geolab LLC

GROUND WATER LEVELS:

DRILLING METHOD 2-1/4" Hollow stem auger

AT TIME OF DRILLING ---

LOGGED BY Foli Amaizo CHECKED BY Yung Dang

AT END OF DRILLING ---

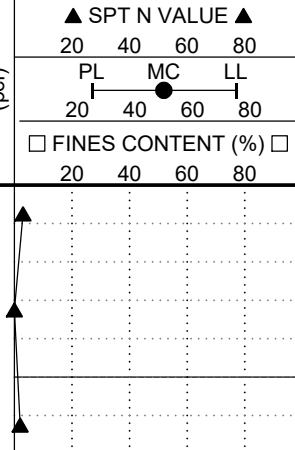
NOTES Automatic hammer, 90% efficiency

AFTER DRILLING ---

GEOTECH\BH PLOTS INCHES REC - DF STD US LAB.GDT - 4/15/22 13:18 - H:\GINT DATABASE\PROJECTS\2022\MACPR-22-GA-06097-01\ALCOVY SFD.GPJ

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY - inch (RQD - inch.)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	▲ SPT N VALUE ▲					
									20	40	60	80		
0			Topsoil	SPT 1	18	1-1-2 (3)								
			Sand-silty; trace clay, very loose; brown (fill)											
	925		Very loose	SPT 2	15	1-0-0 (0)								
5			Very loose	SPT 3	18	1-1-1 (2)								

Boring terminated at 7.0 feet.





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BORING NUMBER B-04

PAGE 1 OF 1

CLIENT Macallan Capital, LLC **PROJECT NAME** Alcovy SFD
PROJECT NUMBER MACPR-22-GA-06097-01 **PROJECT LOCATION** 1563 Alcovy Dr, Lawrenceville, GA
DATE STARTED 04/04/2022 **COMPLETED** 04/04/2022 **GROUND ELEVATION** 928 ft **HOLE SIZE** 6.25"
DRILLING CONTRACTOR Geolab LLC **GROUND WATER LEVELS:**
DRILLING METHOD 2-1/4" Hollow stem auger **AT TIME OF DRILLING** ---
LOGGED BY Foli Amaizo **CHECKED BY** Yung Dang **AT END OF DRILLING** ---
NOTES Automatic hammer, 90% efficiency **AFTER DRILLING** ---

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY - inch (RQD - inch.)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	▲ SPT N VALUE ▲			
									20	40	60	80
0			Topsoil	SPT 1	18	1-0-0 (0)						
	925		Sand-silty; trace clay, trace roots, trace gravel, very loose; brown (fill)	SPT 2	18	1-2-2 (4)						
5			Sand; some silt, some clay, very loose; orange brown (residuum)	SPT 3	18	4-4-4 (8)						
			Trace clay, trace mica, loose; light orange									

Boring terminated at 6.5 feet.

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Norcross, GA, 30071

BORING NUMBER B-05

PAGE 1 OF 1

CLIENT Macallan Capital, LLC

PROJECT NAME Alcovy SFD

PROJECT NUMBER MACPR-22-GA-06097-01

PROJECT LOCATION 1563 Alcovy Dr, Lawrenceville, GA

DATE STARTED 04/04/2022 COMPLETED 04/04/2022

GROUND ELEVATION 928 ft HOLE SIZE 6.25"

DRILLING CONTRACTOR Geolab LLC

GROUND WATER LEVELS:

DRILLING METHOD 2-1/4" Hollow stem auger

AT TIME OF DRILLING ---

LOGGED BY Foli Amaizo CHECKED BY Yung Dang

AT END OF DRILLING ---

NOTES Automatic hammer, 90% efficiency

▼ AFTER DRILLING 2.50 ft / Elev 925.50 ft possibly perched

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY - inch (RQD - inch.)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	▲ SPT N VALUE ▲					
									20	40	60	80		
0			Topsoil, trace organics											
			Sand-silty; trace clay, very loose; brown (fill)	SPT 1	18	0-0-0 (0)								
	925			SPT 2	18	3-1-3 (4)								
5			Sand-silty; trace clay, firm; orange brown (residuum)	SPT 3	18	3-4-8 (12)								

Boring terminated at 7.0 feet.

GEOTECH\BH PLOTS INCHES REC - DF STD US LAB.GDT - 4/15/22 13:18 - H:\GINT DATABASE\PROJECTS\2022\MACPR-22-GA-06097-01\ALCOVY SFD.GPJ



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BORING NUMBER B-06

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CLIENT Macallan Capital, LLC

PROJECT NAME Alcovy SFD

PROJECT NUMBER MACPR-22-GA-06097-01

PROJECT LOCATION 1563 Alcovy Dr, Lawrenceville, GA

DATE STARTED 04/04/2022 COMPLETED 04/04/2022

GROUND ELEVATION 952 ft HOLE SIZE 6.25"

DRILLING CONTRACTOR Geolab LLC

GROUND WATER LEVELS:

DRILLING METHOD 2-1/4" Hollow stem auger

AT TIME OF DRILLING ---

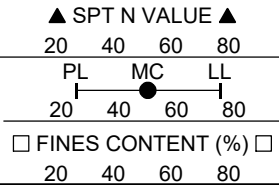
LOGGED BY Foli Amaizo CHECKED BY Yung Dang

AT END OF DRILLING ---

NOTES Automatic hammer, 90% efficiency

AFTER DRILLING ---

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY - inch (RQD - inch.)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	▲ SPT N VALUE ▲					
									20	40	60	80		
0			Topsoil											
	950		Sand-silty; trace clay, very loose; brown (fill)	SPT 1	18	1-0-0 (0)								
			Sand-silty; trace clay, trace gravel, firm; orange tan brown (residuum)	SPT 2	18	5-6-8 (14)								
5			Boring terminated at 5.0 feet.											



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BORING NUMBER B-07

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CLIENT Macallan Capital, LLC

PROJECT NAME Alcovy SFD

PROJECT NUMBER MACPR-22-GA-06097-01

PROJECT LOCATION 1563 Alcovy Dr, Lawrenceville, GA

DATE STARTED 04/04/2022 COMPLETED 04/04/2022

GROUND ELEVATION 962 ft HOLE SIZE 6.25"

DRILLING CONTRACTOR Geolab LLC

GROUND WATER LEVELS:

DRILLING METHOD 2-1/4" Hollow stem auger

AT TIME OF DRILLING ---

LOGGED BY Foli Amaizo CHECKED BY Yung Dang

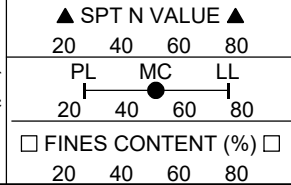
AT END OF DRILLING ---

NOTES Automatic hammer, 90% efficiency

AFTER DRILLING ---

GEOTECH\BH PLOTS INCHES REC - DF STD US LAB.GDT - 4/15/22 13:18 - H:\GINT DATABASE\PROJECTS\2022\MACPR-22-GA-06097-01 ALCOVY SFD.GPJ

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY - inch (RQD - inch.)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	▲ SPT N VALUE ▲	
									20	40 60 80
0										
	960		Topsoil	SPT 1	18	1-2-4 (6)				
			Sand-silty; trace clay, trace roots, loose to dense; brown (fill)							
			Trace roots, dense; gray brown (residuum)	SPT 2	18	10-18-17 (35)				
5			Partially weathered rock: sampled as sand-silty; trace gravel, trace clay, very dense; gray brown	SPT 3	8	50/2"				
	955									



Boring terminated at 7.0 feet.



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BORING NUMBER B-08

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CLIENT Macallan Capital, LLC

PROJECT NAME Alcovy SFD

PROJECT NUMBER MACPR-22-GA-06097-01

PROJECT LOCATION 1563 Alcovy Dr, Lawrenceville, GA

DATE STARTED 04/04/2022 COMPLETED 04/04/2022

GROUND ELEVATION 970 ft HOLE SIZE 6.25"

DRILLING CONTRACTOR Geolab LLC

GROUND WATER LEVELS:

DRILLING METHOD 2-1/4" Hollow stem auger

AT TIME OF DRILLING ---

LOGGED BY Foli Amaizo CHECKED BY Yung Dang

AT END OF DRILLING ---

NOTES Automatic hammer, 90% efficiency

AFTER DRILLING ---

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY - inch (RQD - inch.)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	▲ SPT N VALUE ▲			
									20	40	60	80
0	970		Topsoil	SPT 1	10	1-1-1 (2)						
5	965		Sand; some silt, trace clay, trace mica, firm; orange brown tan (residuum)	SPT 2	18	4-5-8 (13)						
			Sand-silty; trace mica, medium dense; tan gray	SPT 3	18	5-9-20 (29)						
10	960		Firm; tan orange gray	SPT 4	18	22-8-5 (13)						
			Hard drilling (possible boulder or PWR)									
15	955		Sand-silty; trace clay, loose; gray tan	SPT 5	18	20-5-5 (10)						
			Trace mica, firm; gray tan white	SPT 6	18	5-6-7 (13)						

Boring terminated at 18.0 feet.

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BORING NUMBER B-09

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CLIENT Macallan Capital, LLC

PROJECT NUMBER MACPR-22-GA-06097-01

DATE STARTED 04/04/2022 **COMPLETED** 04/04/2022

DRILLING CONTRACTOR Geolab LLC

DRILLING METHOD 2-1/4" Hollow stem auger

LOGGED BY Foli Amaizo **CHECKED BY** Yung Dang

NOTES Automatic hammer, 90% efficiency

PROJECT NAME Alcovy SFD

PROJECT LOCATION 1563 Alcovy Dr, Lawrenceville, GA

GROUND ELEVATION 972 ft **HOLE SIZE** 6.25"

GROUND WATER LEVELS:

AT TIME OF DRILLING ---

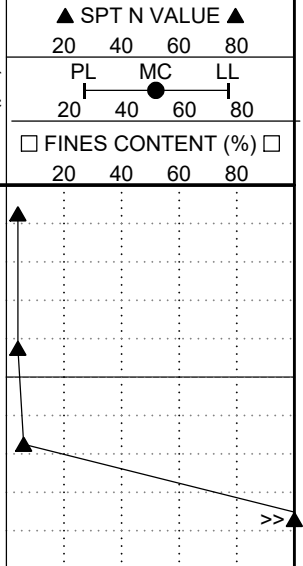
AT END OF DRILLING ---

AFTER DRILLING ---

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DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY - inch (RQD - inch.)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	▲ SPT N VALUE ▲	
									20	40
0			Topsoil							
	970		Sand; some silt, some clay, very loose; brown (fill)	SPT 1	18	3-2-2 (4)				
			Sand; some silt, some clay, very loose; light brown (residuum)	SPT 2	18	2-2-2 (4)				
5			Sand-silty; trace clay, loose; gray tan	SPT 3	18	3-2-4 (6)				
	965									
			Partially weathered rock: sampled as; very dense; white gray	SPT 4	8	50/5"				
10										

Boring terminated at 10.0 feet.





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BORING NUMBER B-10

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CLIENT Macallan Capital, LLC

PROJECT NAME Alcovy SFD

PROJECT NUMBER MACPR-22-GA-06097-01

PROJECT LOCATION 1563 Alcovy Dr, Lawrenceville, GA

DATE STARTED 04/04/2022 COMPLETED 04/04/2022

GROUND ELEVATION 968 ft HOLE SIZE 6.25"

DRILLING CONTRACTOR Geolab LLC

GROUND WATER LEVELS:

DRILLING METHOD 2-1/4" Hollow stem auger

AT TIME OF DRILLING ---

LOGGED BY Foli Amaizo CHECKED BY Yung Dang

AT END OF DRILLING ---

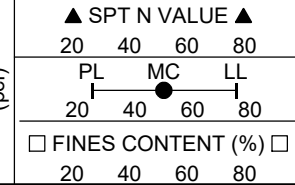
NOTES Automatic hammer, 90% efficiency

AFTER DRILLING ---

GEO TECH BH PLOTS INCHES REC - DF STD US LAB.GDT - 4/15/22 13:19 - H:\GINT DATABASE\PROJECTS\2022\MACPR-22-GA-06097-01 ALCOVY SFD.GPJ

DEPTH (ft)	ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY - inch (RQD - inch.)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	▲ SPT N VALUE ▲	
									20	40
0			Topsoil	SPT 1	18	1-1-1 (2)				
	965		Sand-silty; trace clay, trace roots, very loose; brown (fill)							
5			Loose	SPT 2	18	4-3-3 (6)				
	960		Sand-silty; trace clay, firm; brown (residuum)	SPT 3	18	5-7-11 (18)				

Boring terminated at 8.0 feet.



Important Information about This

Geotechnical-Engineering Report

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

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

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

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

Read the Full Report

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

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

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

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

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

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

As a general rule, *always* inform your geotechnical engineer of project changes—even minor ones—and request an

assessment of their impact. *Geotechnical engineers cannot accept responsibility or liability for problems that occur because their reports do not consider developments of which they were not informed.*

Subsurface Conditions Can Change

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

Most Geotechnical Findings Are Professional Opinions

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

A Report's Recommendations Are Not Final

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

A Geotechnical-Engineering Report Is Subject to Misinterpretation

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

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

Do Not Redraw the Engineer's Logs

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

Give Constructors a Complete Report and Guidance

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

Read Responsibility Provisions Closely

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

others recognize their own responsibilities and risks. *Read these provisions closely.* Ask questions. Your geotechnical engineer should respond fully and frankly.

Environmental Concerns Are Not Covered

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

Obtain Professional Assistance To Deal with Mold

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

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

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



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