

CARTER WATKINS ASSOCIATES

ARCHITECTS, INC.

DATE: January 9, 2024

TO: **ALL BIDDERS**

RE: **Jackson County Animal Shelter**

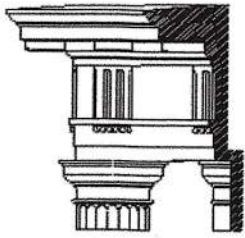
ADDENDUM #1

The following information provided in this Addendum shall supersede all information provided in the Construction Documents regarding the affected items. This Addendum shall become part of the Construction Documents for the above project and shall be acknowledged by each bidder on the bid form.

1. Please find attached sign-in sheet from the mandatory Pre-bid on January 3, 2024.
2. Please find the attached Geotechnical Report.
Bidders are to consider the findings for site preparation and foundations at the rear addition.
3. Please note that alternate PEMB manufacturers will be allowed. The warranty length will need to be noted on the bid for consideration.
4. Jackson County will waive permitting fees.
5. A new 2" water meter is to be furnished and installed by G.C.
6. New gutter guards are to be installed on the existing build and the new addition.
7. Disregard the note on A-402 calling for fencing and a 12'-0" gate in front of the existing roll-up door.
8. Underground conduit was provided previously in Phase 1 construction to the new automated gate location. Power is to be fed from electrical panels. The gate is to be remote operated (provide six remote openers), include an on-site keypad (verify the location on-site at exterior gate with the owner).
-Provide LiftMaster Heavy-Duty Industrial Sliding Gate Opener OR Equal.
9. There is no new brick wainscoting required in this project. All new exterior metal panels on are to match existing.
10. AWI certified providers are required for millwork. Provide premium WilsonArt Plastic Laminate cabinets.
11. No existing wall panels are to be removed.
12. There are no skylights in this building.
13. Please note that this project is Phase 2 of the Animal Shelter Construction. Any notes pertaining to Phase 1 are to be considered as existing conditions. Phase 2 notes are to be included in the base bid.
14. Clouded areas in MEP that note "NOT IN CONTRACT" are considered existing conditions from Phase 1 construction and are not to be included in the base bid.
15. The PA system is to be included in the AV allowance. Camera locations are shown on plans. Provide shop drawings for all AC and Security components.

16. In reference to the exterior shed/building to be removed, the owner will relocate the existing shed.
17. Trench drains in the rear addition are included for future kennel expansion. Kennels for this room are not included in this project (refer to equipment plan for kennels that are required in this project). All new sanitary lines are to be connected at rear of existing building.
18. Disregard the finish notes on sheet A-103. No painting to the existing areas is to be included in the base bid.
19. Include a door 119B type D for the closet in the Cat Intake room 119.
20. Disregard doors 123A, 124A, 125A, 126A, 127A, 127B, 128A, and 128B listed in the door schedule on sheet A-103.
21. On sheet A-204 disregard detail 4. Note that detail 6 is to be used for upper cabinet reference only, stainless steel tables with sinks were specified in place of the wall-mounted lower cabinets.
22. The existing water heater is to remain. Contractor to provide new hot water recirculating pump will be installed to supply the new additions.
23. Contractor to provide and stub-out gas piping shown on sheet G-1 in Phase 2 for the insulation of future equipment.
24. There is no new generator included in the Phase 2 base bid.
25. Wall type 1 shown on sheet A-104 should have water-resistant sheetrock with epoxy paint and 6" rubber base installed on the outside.
26. The new building addition windows are to match existing; field verify size and color of windows.
27. Note that the animals will not be relocated during construction and renovations. Contractor to provide and construct a temporary wall with dust barrier to separate animals and construction area.
28. Contractors and Subcontractors are allowed to contact the Animal Shelter directly for allowable times to visit the site prior to bidding.
29. All construction is to be performed during normal business hours. County will consider exceptions upon request.
30. Equipment "O" & "P" on Drawing A-106 Equipment Plan indicates the correct quantities required.
31. Rollup doors at new building addition are to match existing. Verify dimensions, color, and manufacturer.
32. All new building addition interior signage to be provided and match existing. Existing interior signage to remain.
33. Rooms that are to receive new Stonhard flooring are to also receive Stonhard base.
34. Provide Alternate Deduct (#1) for not replacing existing chain-link kennel gates with galvanized or stainless steel.
 - Provide Alternate Add (#2) cost per gate replacement option.

END OF ADDENDUM

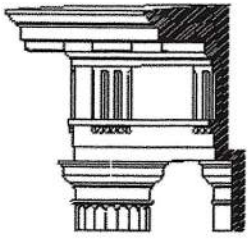


**CARTER WATKINS
ASSOCIATES**
ARCHITECTS,
INC.

**JACKSON COUNTY, GEORGIA
ANIMAL SHELTER | PHASE 2
RENOVATIONS ADDITIONS
PRE-BID SIGN-IN SHEET**

January 3, 2024, 11:00 A.M.

	A	B	C	D
1	COMPANY	ATTENDEE NAME	EMAIL	PHONE
2	Blue-Field Floors	MARA PERRY	MPERRY@BLUEFIELDFLOORS.COM	762-286-9927
3	PENCOR CONSTRUCTION	MATTHEW McDANIEL	MATTHEWM@PENCORCONSTRUCTION.COM	770.617.2966
4	Astra Group	Tim Mooney	Tmooney@astragroupinc.com	(7) 560-8283
5	AMO Construction	Gary Murphy	gmurphy@amcconstructionllc.com	770-262-6397
6	AMO Construction	Peter Prakes	pprakes@amcconstructionllc.com	770-616-5357
7	STEVE STILLWELL SUNBELT BUILDER	STEVE STILLWELL	ESTIMATING@SUNBELTBUILDERS.COM	678.371.8539
8	Bravo Painting	Chris Farris	Chris@bravopaintteam.com	404-426-0146
9	Alec Lubin Diversified Con	Alec Lubin	bids@bcofgeorgia.com	770-241-1485
10	Kourtney Jackson Bravo Fence		kja.kourtney@bravofence.com	770.628.8093
11	Chris Rucker/Noth GA outdoor	Cody Hills		678-865-650
12	Jose Espinosa/HouseLine	Jose Espinosa	hquality.solutions.llc@gmail.com	770 576 9060
13	AMARNATH PENCOR	AMARNATH	arajoghelcar@gmail.com	470-461-6903
14				
15				
16				
17				



CARTER WATKINS
ASSOCIATES
ARCHITECTS,
INC.

JACKSON COUNTY, GEORGIA
ANIMAL SHELTER | PHASE 2
RENOVATIONS ADDITIONS
PRE-BID SIGN-IN SHEET

January 3, 2024, 11:00 A.M.

	A	B	C	D
1	COMPANY	ATTENDEE NAME	EMAIL	PHONE
2	Doonee Construction Services	Bryan Vill	BVill@dooneeconstruction.com	706-274-6796
3	Jones Mechanical Contractors	AJ - Jones	JonesHvacInc@gmail.com	706-769-7741
4	Keith Hayes Const.	Trey Barnett	Trey@kwithhayesconstruction.com	706-367-9464
5	J&K Utility Services, LLC	Hunt Hayes	hunt@jandkutilities.com	706-870-0276
6	NetPlanner Systems	Erik Hall	erik.hall@netplanner.com	678-463-1131
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				



UNITED
CONSULTING

REPORT

For
Mr. Barry Vickery
Jackson County
Government

Geotechnical Exploration
Jackson County Animal Shelter
Addition
29 Galilee Church Road
Jefferson, Jackson County, Georgia

Project No.: JACCO-23-GA-07633-01



July 28, 2023

Mr. Barry Vickery
Capital Project Manager
Jackson County Government
67 Athens Street
Jefferson, GA 30549

Via Email: bvickery@jacksoncountygov.com


RE: Report of Geotechnical Exploration
Jackson County Animal Shelter Addition
29 Galilee Church Road
Jefferson, Jackson County, Georgia 30549
Project No.: JACCO-23-GA-07633-01

Dear Mr. Vickery:

United Consulting is pleased to submit this report of our 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, P.E.
Senior Geotechnical Engineer



Scott D. Smelter
Principal

YD/SDS/nj

unc-sps: Geotechnical Documents/JACCO-23-GA-07633-01- Geo.doc

TABLE OF CONTENTS

1.0 EXECUTIVE SUMMARY	4
2.0 PROJECT INFORMATION	5
3.0 PURPOSE	6
4.0 SCOPE	7
5.0 SOIL SURVEY DATA	8
6.0 SUBSURFACE CONDITIONS	9
7.0 DISCUSSION AND RECOMMENDATIONS	10
7.1 Low Consistency Residual Soils	10
7.2 Site Preparation	10
7.3 Caving Considerations	11
7.4 Difficult Excavation	11
7.5 Groundwater Considerations	11
7.6 Foundation Design and Construction	11
7.7 Ground Floor Slabs	12
7.8 Earthwork and Fill Placement	12
8.0 LIMITATIONS	14

APPENDIX

General Notes/Narrative of Drilling Operations
Figure 1– Boring Location Plan
Exploration Procedures
SPT Boring Logs (5)
Typical Benching Detail

1.0 EXECUTIVE SUMMARY

United Consulting has completed a Geotechnical Exploration at 29 Galilee Church Road in Jefferson, Jackson County, Georgia. Please refer to the text of the report for a more detailed discussion of the items summarized below.

1. Fill soils were not encountered in the five borings to the termination depths of approximately 15 feet. Residual soils encountered were generally in a soft to very stiff condition. Low consistency ($N \leq 5$ bpf) residuum were encountered in all borings at depths ranging from below the topsoil to approximately 12 feet. The low consistency soils will require removal and re-compaction or replacement where they are encountered at the planned subgrade or foundation bearing elevations. The soft soils encountered at the 3 to 5-foot level in boring B-2 will lead to differential settlements and should therefore be removed and re-compacted. We recommend the site to be further evaluated by proofrolling with a full-loaded tandem-axle dump truck at the time of construction.
2. Based on the boring results, it appears that most of the onsite soils, provided it is free of deleterious and organic materials, are generally suitable for reuse as engineered fill. The soils at the site will be particularly susceptible to changes in moisture content.
3. Partially weathered rock (PWR) was not encountered and auger refusal did not occur in the borings at the termination depths of approximately 15 feet. Difficult excavation conditions (ripping and/or blasting) associated with PWR and rock are not anticipated for the proposed construction.
4. Groundwater was not encountered during drilling in any of the borings to the termination depths of approximately 15 feet. Groundwater-related difficulties are generally not anticipated to be encountered during construction; however, the site soils are susceptible to the formation of shallower perched water levels during periods of wet weather. The contractor should be prepared to manage groundwater and perched water as needed.
5. If the site is prepared as recommended in this report, the proposed building addition can be supported by shallow foundations underlain by suitable bearing soils designed for a maximum net allowable bearing pressure of 1,500 psf. Because of the presence of low consistency soils, it is possible that other areas of low consistency soils could be encountered in foundation excavations and contingency funds should be included for remediation of such.
6. *Jackson County Animal Center, Jefferson, Georgia, Phase 2 – Bid Set*, prepared by Carter Watkins Associates Architects, Inc., dated June 22, 2023, was used for the basis of this report. If the site development plans are changed in the future, United Consulting should review such documents. The recommendations herein will need to be re-evaluated based on that review, and additional subsurface exploration could be needed to finalize our recommendations.

2.0 PROJECT INFORMATION

The Site is the existing Jackson County Animal Shelter building located at 29 Galilee Church Road in Jefferson, Jackson County, Georgia. The Site is bound to the north by Galilee Church Road and a commercial property beyond, to the east by CSX railroad and Athens Highway beyond, to the south and west by wooded areas and residential properties beyond. The general location of the Site is shown on the attached Boring Location Plan (Figure 1).

Based on the *Existing Conditions for Jackson County Animal Control Shelter*, prepared by Civil Solutions, Inc., dated May 16, 2023, and our site observations, a one-story building, a shed, and associated asphalt pavement driveway and parking lot currently occupy the Site. The existing building is 11,424 square feet and its finished floor elevation is 833.60 feet. Based on historical aerial images, the Site was developed sometime between 1993 and 2007.

Based on the *Grading and Drainage Plan for: Jackson County Animal Control Center*, prepared by Civil Solutions, Inc., dated May 16, 2023, the proposed development will consist of a 4600 square-foot addition to the south of the existing building, in the grass area. The proposed finished floor elevation will be the same as the existing building. Fills of approximately 1 foot will be required to reach the proposed finished floor elevation.

Based on structural plans entitled *Jackson County Animal Shelter*, prepared by Carter Watkins Associates Architects, Inc., dated May 5, 2021, the proposed construction also includes renovation of existing interior areas and construction of new exterior concrete pads. The new column footings for the building addition are 5 feet by 5 feet and 3 feet by 3 feet, with a design soil bearing pressure of 1500 pounds per square foot (psf).

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.

3.0 PURPOSE

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

4.0 SCOPE

The scope of our Geotechnical Exploration included the following items:

1. A visual reconnaissance of the site from a geotechnical standpoint;
2. Drilling five (5) Standard Penetration Test (SPT) borings;
3. Visual evaluation of the soil samples obtained during our field testing program for further identification and classification;
4. Analyzing the existing soil conditions with respect to the proposed construction; and
5. Preparing this report to document the results of our field-testing program, engineering analysis, and to provide our findings and recommendations.

5.0 SOIL SURVEY DATA

According to the Natural Resources Conservation Services (NRCS) Soil Survey of Jackson County, Georgia, the soils in the area of the Site are mapped as Cecil sandy loam, 2 to 6 percent slopes (CeB).

Typical soils of the CeB soils consist of sandy loam, sandy clay, and loam to the study depth of approximately 60 inches. The soils have moderately high to high hydraulic permeability ranging from 0.57 to 1.98 inches per hour. Depth to water table and restrictive feature are more than 80 inches. Linear extensibility rating is 1.4 percent, which is low.

Linear extensibility is used to determine the shrink-swell potential of the soils. The shrink-swell potential is low if the soil has a linear extensibility of less than 3 percent; moderate if 3 to 6 percent; high if 6 to 9 percent; and very high if more than 9 percent.

6.0 SUBSURFACE CONDITIONS

Initially, a layer of topsoil was encountered in the borings. Below the topsoil, typical residual soils of the Piedmont Physiographic Province of Georgia were encountered. The residuum was generally soft to very stiff sandy silt or very loose to loose silty sand with varying amounts of minor constituents including mica and rock fragments. N-values within the residuum ranged from 3 to 30 blows per foot (bpf).

Partially weathered rock (PWR) was not encountered and auger refusal did not occur in any of the borings at the termination depths of approximately 15 feet. PWR denotes residual material having an N-value of 100 bpf or greater. Auger refusal is a depth that the boring cannot be advanced with a soil drilling auger any further. Auger refusal below residuum generally represents a seam of rock, a boulder, or top of massive bedrock.

Groundwater was not encountered during drilling in any of the borings to termination depths of approximately 15 feet. Groundwater levels will fluctuate based on yearly and seasonal rainfall variations and may rise in the future. This site is also susceptible to the formation of shallower perched water levels during periods of wet weather.

7.0 DISCUSSION AND RECOMMENDATIONS

The following 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 five (5) SPT borings. The *Jackson County Animal Center, Jefferson, Georgia, Phase 2 – Bid Set*, prepared by Carter Watkins Associates Architects, Inc., dated June 22, 2023, was provided for our review. If the grading and structural plans are changed, United Consulting should review such documents to determine the extent of any additional exploration, or modifications to the recommendations in this report, that may be required.

7.1 Low Consistency Residual Soils

Low consistency ($N \leq 5$ bpf) residuum were encountered in all borings at various depths ranging from below the topsoil to approximately 12 feet. They were often encountered in the upper 2 feet. The soft soils encountered at the 3 to 5-foot level in boring B-2 will lead to differential settlements on the order of $\frac{1}{2}$ inch and should therefore be removed and re-compacted. The low consistency soils will also require removal and re-compaction or replacement where they are encountered at the planned subgrade or foundation bearing elevations. We recommend the site to be further evaluated by proofrolling with a full-loaded tandem-axle dump truck at the time of construction.

The existing soils generally appears to be suitable for reuse as engineered fill; however, the 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.

7.2 Site Preparation

The proposed addition area will generally be in the grass area to the rear of the existing building. As such, topsoil, vegetation, and trees should be removed from the area of the proposed construction. Removal of trees should include removal of their root ball, which may extend to several feet below grade. Existing underground utilities should be relocated to at least 10 feet outside the perimeter of the proposed building footprint. The abandoned lines should then be excavated and removed from the area of the proposed construction. All excavations should be subsequently backfilled with properly compacted engineered fill. We do not recommend active or non-active utility lines located below the area of the proposed structures be left in place. Any abandoned utility pipes, if left in place and outside of the proposed building footprint, should be filled-in under pressure with cement grout having a minimum 28-day compressive strength of 500 pounds per square inch (psi). This would prevent localized cave-in upon eventual deterioration and loss of structural integrity of the pipe. Also, septic tanks, septic fields, and associated underground structures, if present, should be properly removed. The excavated trenches and pits associated with the removal of the buried structures should be backfilled with engineered fill.

After lowering the site grade where planned and prior to placement of engineered fill or commencement of construction, areas to receive fill, foundations, slabs, including the areas of the proposed structures, should be proofrolled with a fully loaded tandem-axle dump truck. Proofrolling should be performed under

the observation of the Geotechnical Engineer or his representatives so that, areas, which exhibit “pumping” (wave type displacement) during proofrolling, may be treated by a method recommended by the Geotechnical Engineer. This method may consist of undercutting, and backfilling with suitable engineered fill, replacing with surge stone, and a layer of crusher run, or some other method that is deemed suitable.

As discussed above in report section 7.1, because of the presence of low consistency residual soils, greater than normal remediation of these materials should be expected during site preparation, and contingency funds should be included for such.

7.3 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.

7.4 Difficult Excavation

Partially weathered rock (PWR) was not encountered and auger refusal did not occur in all borings at the termination depths of approximately 15 feet. Difficult excavation conditions (ripping and/or blasting) associated with PWR and rock are not anticipated for the proposed construction. It is also important to note that depths to PWR and rock can vary over short horizontal distances in the Piedmont Physiographic Province, and PWR and rock could be encountered during construction at shallower depths intermediate of the boring locations for this study.

7.5 Groundwater Considerations

Groundwater was not encountered during drilling in any of the borings to termination depths of approximately 15 feet. Groundwater-related difficulties are generally not anticipated to be encountered during construction; however, the site soils are susceptible to the formation of shallower perched water levels during periods of wet weather. The contractor should be prepared to manage groundwater and perched water as needed.

7.6 Foundation Design and Construction

Following site preparation as recommended in report sections 7.1 and 7.2, the proposed building addition could be supported on a shallow foundation system. The shallow foundations may consist of shallow strip and/or isolated column footings supported within and underlain by suitable bearing soils. A maximum net allowable soil bearing pressure of 1,500 pounds per square foot (psf) is recommended for foundation design.

When excavating foundations which adjoin the existing building, care should be exercised to not undermine the existing building foundations. Any excavation below the existing building foundations may require temporary support of the existing foundations.

We recommend minimum footing dimensions of 20 inches for strip footings and 24 inches for square footings. Footings should bear at least 12 inches below outside finished grades for frost protection. The Geotechnical Engineer must evaluate each footing excavation prior to steel reinforcement or concrete placement. Conditions that are observed should be compared to the test boring data and design requirements. If unsuitable bearing material is encountered, it should be excavated and replaced or otherwise treated as recommended by the Geotechnical Engineer.

Surface water control should be maintained to prevent accumulation of water in footing excavations. Standing water in footing excavations should be removed promptly. Soil softened by the water should be removed, and the Geotechnical Engineer or his representative should reexamine the area.

7.7 Ground Floor Slabs

A slab-on-grade may be utilized for proposed building additions. We recommend a subgrade modulus of 120 pounds per cubic inch (pci) be used for slab design. It has been our experience that the floor slab subgrade is often disturbed by weather, foundation and utility line installation, and other construction activities between completion of grading and slab construction. For this reason, our Geotechnical Engineer should evaluate the subgrade immediately prior to placing the concrete. Areas judged by the Geotechnical Engineer to be unstable should be re-compacted or undercut and replaced with engineered fill compacted to at least 98 percent of its standard Proctor maximum dry density.

7.8 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 or floor slabs 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.

8.0 LIMITATIONS

This report is for the exclusive use of **Jackson County Government** 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.

UNITED CONSULTING

APPENDIX

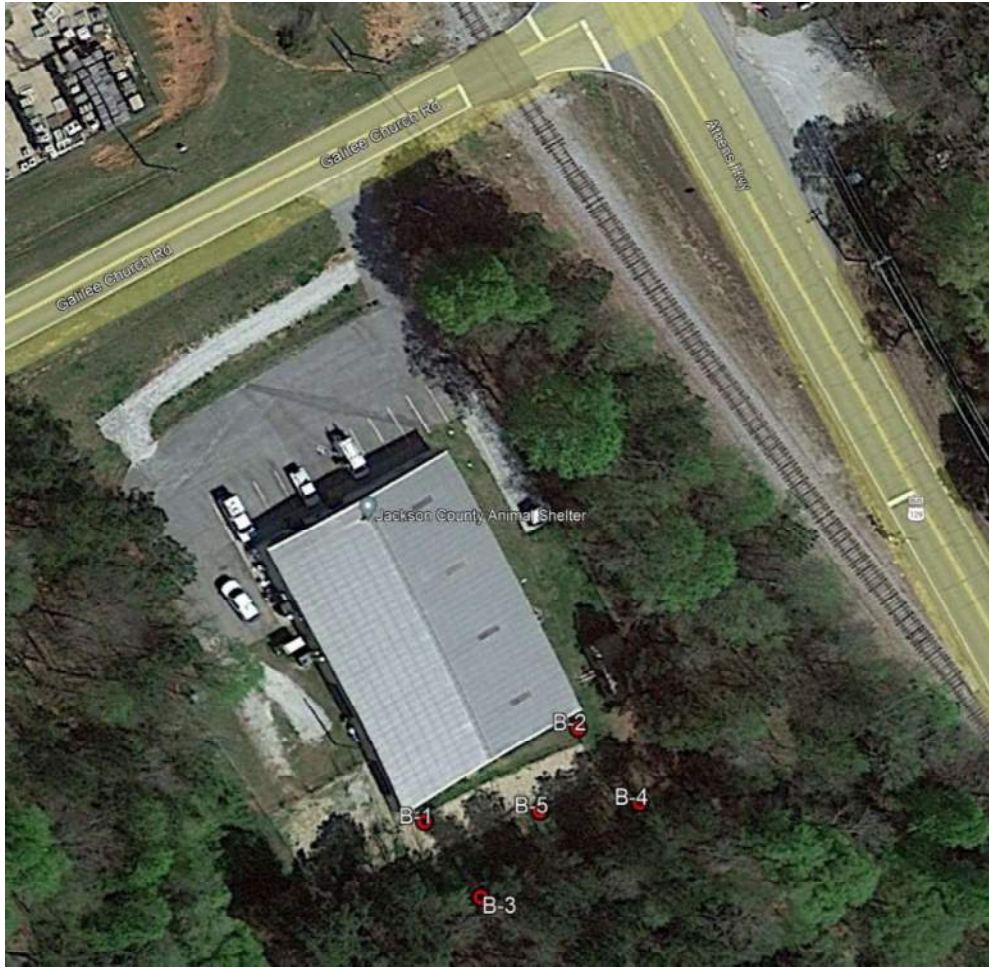
General Notes/Narrative of Drilling Operations

Figure 1 – Boring Location Plan

Exploration Procedures

SPT Boring Logs (5)

Typical Benching Detail



UNITED
CONSULTING



Prepared:	YD	Title:	Boring Location Plan
Checked:	SDS	Project:	Jackson County Animal Shelter Addition
Date:	7/25/23	Project No.:	JACCO-23-GA-07633-01
Scale:	NTS	Client:	Jackson County Government

FIG 1

EXPLORATION PROCEDURES

Five (5) SPT borings (designated B-1 through B-5) 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 be considered approximate.



United Consulting
625 Holcomb Bridge Rd.
Norcross, GA, 30071

BORING NUMBER B-01

CLIENT Jackson County Government

PROJECT NAME Jackson County Animal Shelter Addition

PROJECT NUMBER JACCO-23-GA-07633-01

PROJECT LOCATION 29 Galilee Church Rd, Jefferson, GA

DATE STARTED 07/15/2023 COMPLETED 07/15/2023

GROUND ELEVATION 833 ft HOLE SIZE 6.25"

DRILLING CONTRACTOR ArcOne

GROUND WATER LEVELS:

DRILLING METHOD 2-1/4" Hollow stem auger

AT TIME OF DRILLING --- not encountered

LOGGED BY Steven Edsall CHECKED BY Yung Dang

AT END OF DRILLING ---

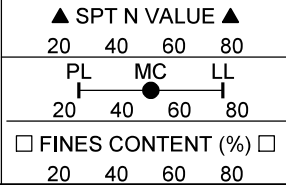
NOTES Geoprobe 7822DT Auto Hammer 90% Efficiency

AFTER DRILLING ---

GEOTECH BH PLOTS INCHES REC - DF STD US LAB.GDT - 7/25/23 18:17 - H:\GINT DATABASE\PROJECTS\2023\JACCO-23-GA-07633-01 JACKSON COUNTY ANIMAL SHELTER ADDITION.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	15	6-6-7 (13)				
	830		Silt-sandy; some mica, trace organics, stiff; reddish brown (residuum)							
5			Trace mica, firm; light orangeish brown	SPT 2	15	2-3-3 (6)				
	825		Firm	SPT 3	12	5-4-4 (8)				
10			Firm	SPT 4	15	4-3-2 (5)				
	820									
15			Stiff	SPT 5	18	4-6-6 (12)				

Boring terminated at 15.0 feet.





United Consulting
625 Holcomb Bridge Rd.
Norcross, GA, 30071

BORING NUMBER B-02

PAGE 1 OF 1

CLIENT Jackson County Government
PROJECT NUMBER JACCO-23-GA-07633-01
DATE STARTED 07/15/2023 COMPLETED 07/15/2023
DRILLING CONTRACTOR ArcOne
DRILLING METHOD 2-1/4" Hollow stem auger
LOGGED BY Steven Edsall CHECKED BY Yung Dang
NOTES Geoprobe 7822DT Auto Hammer 90% Efficiency

PROJECT NAME Jackson County Animal Shelter Addition
PROJECT LOCATION 29 Galilee Church Rd, Jefferson, GA
GROUND ELEVATION 833 ft HOLE SIZE 6.25"
GROUND WATER LEVELS:
AT TIME OF DRILLING --- not encountered
AT END OF DRILLING ---
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	12	3-4-5 (9)								
5	830		Silt; some sand, trace mica, trace organics, stiff; reddish brown (residuum)											
			Silt-sandy; trace mica, soft; tannish brown	SPT 2	15	10-2-2 (4)								
			Stiff	SPT 3	14	8-4-7 (11)								
10	825		Firm	SPT 4	15	5-5-2 (7)								
15	820		Very stiff	SPT 5	16	12-16-14 (30)								

Boring terminated at 15.0 feet.

GEO TECH BH PLOTS INCHES REC - DF STD US LAB.GDT - 7/25/23 18:17 - H:\GINT DATABASE\PROJECTS\2023\JACCO-23-GA-07633-01 JACKSON COUNTY ANIMAL SHELTER ADDITION.GPJ



United Consulting
625 Holcomb Bridge Rd.
Norcross, GA, 30071

BORING NUMBER B-03

PAGE 1 OF 1

CLIENT Jackson County Government
PROJECT NUMBER JACCO-23-GA-07633-01
DATE STARTED 07/15/2023 COMPLETED 07/15/2023
DRILLING CONTRACTOR ArcOne
DRILLING METHOD 2-1/4" Hollow stem auger
LOGGED BY Steven Edsall CHECKED BY Yung Dang
NOTES Geoprobe 7822DT Auto Hammer 90% Efficiency

PROJECT NAME Jackson County Animal Shelter Addition
PROJECT LOCATION 29 Galilee Church Rd, Jefferson, GA
GROUND ELEVATION 833 ft HOLE SIZE 6.25"
GROUND WATER LEVELS:
AT TIME OF DRILLING --- not encountered
AT END OF DRILLING ---
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	14	1-2-2 (4)								
5	830		Sand-silty; some mica, trace organics, very loose; light orangeish brown (residuum)	SPT 2	12	3-3-5 (8)								
			Trace rock fragments, loose	SPT 3	18	4-2-2 (4)								
	825		Trace mica, very loose	SPT 4	15	7-7-7 (14)								
10			Silt-sandy; trace mica, trace rock fragments, stiff; light orangeish brown	SPT 5	14	6-6-7 (13)								
15	820		Some mica, stiff											

Boring terminated at 15.0 feet.

GEO TECH BH PLOTS INCHES REC - DF STD US LAB.GDT - 7/25/23 18:18 - H:\GINT DATABASE\PROJECTS\2023\JACCO-23-GA-07633-01 JACKSON COUNTY ANIMAL SHELTER ADDITION.GPJ



United Consulting
625 Holcomb Bridge Rd.
Norcross, GA, 30071

BORING NUMBER B-04

PAGE 1 OF 1

CLIENT Jackson County Government
 PROJECT NUMBER JACCO-23-GA-07633-01
 DATE STARTED 07/15/2023 COMPLETED 07/15/2023
 DRILLING CONTRACTOR ArcOne
 DRILLING METHOD 2-1/4" Hollow stem auger
 LOGGED BY Steven Edsall CHECKED BY Yung Dang
 NOTES Geoprobe 7822DT Auto Hammer 90% Efficiency

PROJECT NAME Jackson County Animal Shelter Addition
 PROJECT LOCATION 29 Galilee Church Rd, Jefferson, GA
 GROUND ELEVATION 833 ft HOLE SIZE 6.25"
 GROUND WATER LEVELS:
 AT TIME OF DRILLING --- not encountered
 AT END OF DRILLING ---
 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
0			Topsoil	SPT 1	18	2-1-2 (3)				
5	830		Silt; some sand, trace mica, trace organics, soft; reddish brown (residuum)	SPT 2	15	12-4-4 (8)				
			Silt-sandy; trace mica, firm; tannish brown	SPT 3	8	10-25-3 (28)				
	825		Very stiff	SPT 4	15	11-6-7 (13)				
10			Stiff	SPT 5	16	15-3-4 (7)				
15	820		Firm							

Boring terminated at 15.0 feet.

GEO TECH BH PLOTS INCHES REC - DF STD US LAB.GDT - 7/25/23 18:18 - H:\GINT DATABASE\PROJECTS\2023\JACCO-23-GA-07633-01 JACKSON COUNTY ANIMAL SHELTER ADDITION.GPJ



United Consulting
625 Holcomb Bridge Rd.
Norcross, GA, 30071

BORING NUMBER B-05

PAGE 1 OF 1

CLIENT Jackson County Government

PROJECT NAME Jackson County Animal Shelter Addition

PROJECT NUMBER JACCO-23-GA-07633-01

PROJECT LOCATION 29 Galilee Church Rd, Jefferson, GA

DATE STARTED 07/15/2023 COMPLETED 07/15/2023

GROUND ELEVATION 833 ft HOLE SIZE 6.25"

DRILLING CONTRACTOR ArcOne

GROUND WATER LEVELS:

DRILLING METHOD 2-1/4" Hollow stem auger

AT TIME OF DRILLING --- not encountered

LOGGED BY Steven Edsall CHECKED BY Yung Dang

AT END OF DRILLING ---

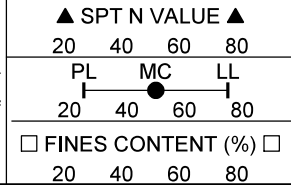
NOTES Geoprobe 7822DT Auto Hammer 90% Efficiency

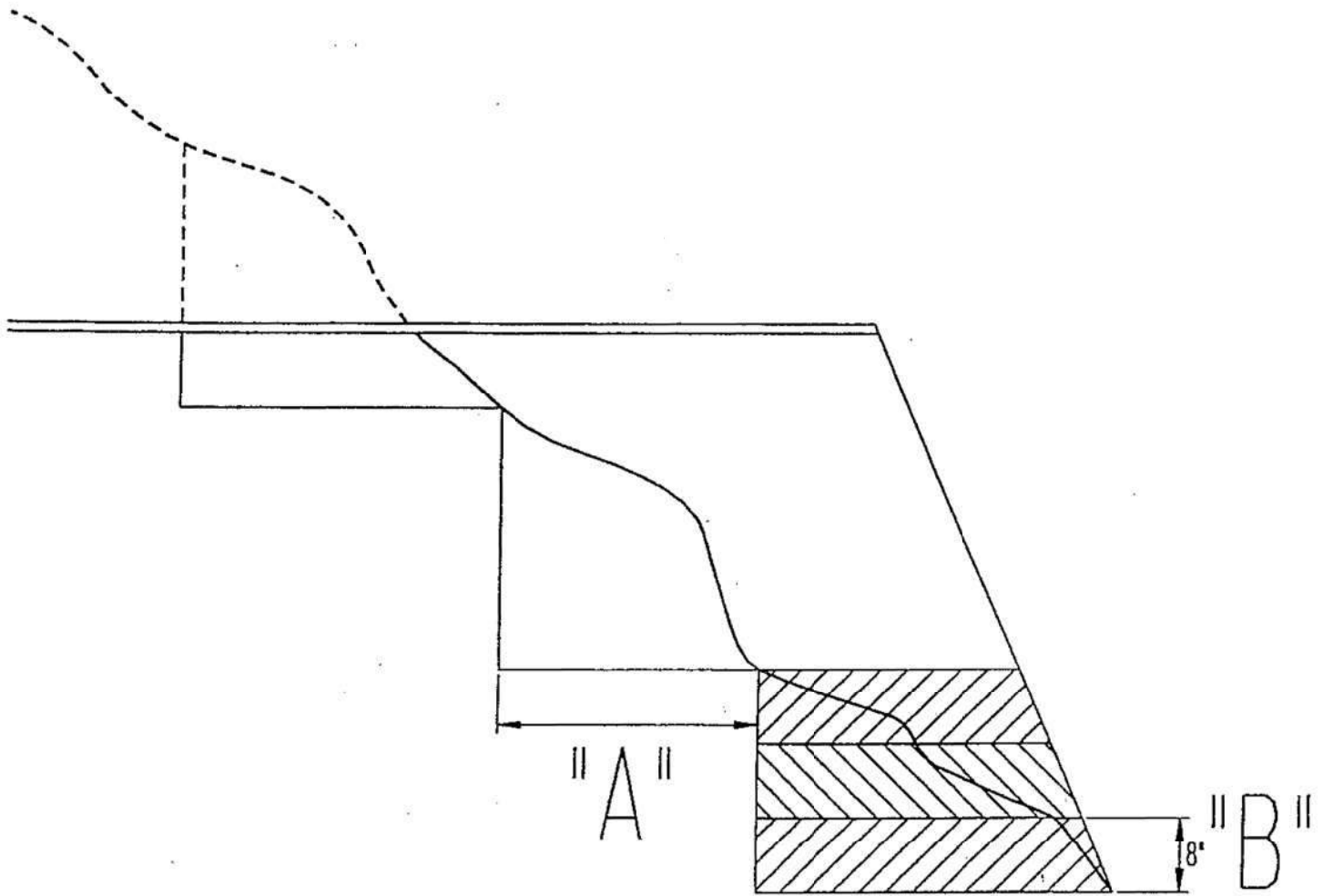
AFTER DRILLING ---

GEO TECH BH PLOTS INCHES REC - DF STD US LAB.GDT - 7/25/23 18:18 - H:\GINT DATABASE\PROJECTS\2023\JACCO-23-GA-07633-01 JACKSON COUNTY ANIMAL SHELTER ADDITION.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	14	2-2-2 (4)								
5	830		Silt; some sand, trace mica, trace organics, soft; reddish brown (residuum)	SPT 2	15	2-9-7 (16)								
			Silt-sandy; trace mica, very stiff; tannish brown	SPT 3	16	11-13-10 (23)								
			Very stiff	SPT 4	16	8-3-4 (7)								
10	825		Firm	SPT 5	15	8-11-7 (18)								
15	820		Very stiff											

Boring terminated at 15.0 feet.





1. THE ABOVE DIAGRAM ILLUSTRATES A TYPICAL BENCHING FOR PLACEMENT OF FILL ON A SLOPING SURFACE.
2. THE DIAGRAM SHOWS THAT BEFORE FILL IS PLACED, THE FIRST STEP IS CUT INTO THE SLOPE A MAXIMUM DISTANCE OF ABOUT 8 FEET 'A' (ABOUT $\frac{3}{4}$ THE WIDTH OF USUAL D-8 BULLDOZER BLADE). SUCCESSIVE LAYERS OF FILL ARE THEN PLACED. BEFORE FINAL LAYER IS PLACED, THE SECOND STEP IS CUT 8 FEET INTO THE SLOPE AND SUCCESSIVE LAYERS ARE AGAIN PLACED.
3. SELECT FILL MATERIAL SHOULD BE PLACED IN 8 INCH LIFTS AND COMPACTED TO THE SPECIFIED DENSITY ('B').

TYPICAL BENCHING DETAIL

NOT TO SCALE

2015/DETAILS/TYPBENCH.DGN



We're here for you

UNITED CONSULTING

625 Holcomb Bridge Road
 Norcross, Georgia 30071
 770-209-0029 Fax 582-2900
 www.unitedconsulting.com
 Copyright © United Consulting Group, Ltd.

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.



8811 Colesville Road/Suite G106, Silver Spring, MD 20910

Telephone: 301/565-2733 Facsimile: 301/589-2017

e-mail: info@geoprofessional.org www.geoprofessional.org

Copyright 2015 by Geoprofessional Business Association (GBA). Duplication, reproduction, or copying of this document, or its contents, in whole or in part, by any means whatsoever, is strictly prohibited, except with GBA's specific written permission. Excerpting, quoting, or otherwise extracting wording from this document is permitted only with the express written permission of GBA, and only for purposes of scholarly research or book review. Only members of GBA may use this document as a complement to or as an element of a geotechnical-engineering report. Any other firm, individual, or other entity that so uses this document without being a GBA member could be committing negligent or intentional (fraudulent) misrepresentation.