Exhibit AA.
Foster Site
Preliminary Geotechnical Engineering Report

Foster Site
Preliminary Geotechnical Engineering Report

ECS Southeast, LLP

Geotechnical Engineering Report

Foster Site

Crowley Rayne Highway
Acadia Parish, Louisiana

ECS Project Number 65-1434

October 4, 2023

October 4, 2023

Mr. Emile Lege
One Acadiana
804 E. St. Mary Blvd.
Lafayette, Louisiana 70503

ECS Project No. 65-1434

Reference: Preliminary Geotechnical Site Characterization Report
Foster Site
Crowley Rayne Highway
Acadia Parish, Louisiana

Dear Mr. Lege:

ECS Southeast, LLP (ECS) has completed the subsurface exploration, laboratory testing, and geotechnical engineering analyses for the Foster Site in Acadia Parish, LA. Our services were performed in general accordance with our Proposal No. 65-1497-P dated June 3rd, 2022. ***This report is not a comprehensive geotechnical engineering report but is solely intended to address specific preliminary issues posed in a June 2, 2022, document from CSRS relative to this site. It must be emphasized that additional borings and testing will be required prior to development of the site.*** This report presents our understanding of the geotechnical aspects of the project along with the results of the field exploration and laboratory testing conducted. The report also contains our findings and recommendations for design and construction.

It has been our pleasure to be of service to One Acadiana during the design phase of this project. We would appreciate the opportunity to remain involved during the continuation of the design phase, and we would like to provide our services during construction phase operations as well to verify the assumptions of subsurface conditions made for this report. Should you have any questions concerning the information contained in this report, or if we can be of further assistance to you, please contact us.

Respectfully,
ECS SOUTHEAST, LLP

Nathan Burke, E.I.
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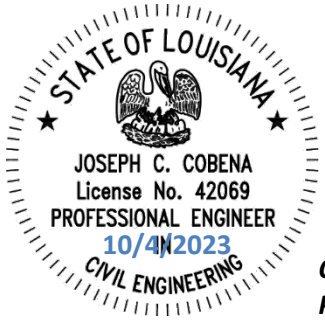

Oliver-Denzil S. Taylor, Ph.D., P.E., D.GE
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APPENDICES

EXECUTIVE SUMMARY

The following summarizes the main findings of the exploration, particularly those that may have a cost impact on the planned development. Further, our preliminary foundation recommendations are summarized. Information gleaned from the Executive Summary should not be utilized in lieu of reading the entire geotechnical report.

PROJECT UNDERSTANDING:

- Structure Information: Industrial development, 100,000 square foot building
- Considerations: Removal of topsoil and vegetation, fill heights, settlement.

SUBSURFACE CONDITIONS:

- Surface Material: Topsoil, Rice Fields
- Probable Fill: No fill material encountered.
- Natural Material: Brown and Gray Lean Clay (CL), Brown, Tan/Gray Fat Clay (CH), Brown Silty Clay with Sand (CL-ML)
- Swell Potential (PVR): Moderate, expansive clays encountered above the water table.
- Groundwater: Not encountered.

PRELIMINARY DESIGN & CONSTRUCTION RECOMMENDATIONS:

- Shallow Foundations
  - Spead Footings
- Deep Foundations
  - 14” Square Pre-Cast Concrete Pile

1.0 INTRODUCTION

The purpose of this study was to conduct a Preliminary Geotechnical Characterization Investigation for the site that would generally characterize the site's soil, rock, and groundwater conditions to evaluate whether geotechnical concerns were observed at the site. This document specifically addresses preliminary design issues posed in the June 2, 2022, document from CSRS.

Our services were provided in accordance with our Proposal No. 65-1497-P dated June 3, 2022, and authorized by Mr. Emile Lege with One Acadiana on June 23, 2023.

The preliminary recommendations developed for this report are based on project information provided by the client. This report contains the results of our subsurface exploration and geotechnical laboratory testing program, site characterization, engineering analyses, and preliminary recommendations.

In order to obtain the necessary geotechnical information required for evaluation of subsurface soil conditions, three (3) soil test borings were drilled in total. One (1) test boring extended to a depth of 100 feet, one (1) test boring extended to a depth of 50 feet, and one (1) test boring extended to a depth of 30 feet below existing site grades. A laboratory-testing program was also implemented to characterize the physical and geotechnical engineering properties of the subsurface soils.

This report contains the procedures and results of our subsurface exploration and laboratory testing programs, review of existing site conditions, engineering analyses, and recommendations for the design and construction of the project.

The report includes the following items.

- A brief review and description of our field and laboratory test procedures and the results of testing conducted.
- A review of surface topographical features and site conditions.
- A review of subsurface soil stratigraphy with pertinent available physical properties.
- A final copy of our preliminary soil test borings.
- Preliminary recommendations for site preparation.
- Preliminary recommendations for foundation types.

2.0 PROJECT INFORMATION

2.1 PROJECT LOCATION/CURRENT SITE USE/PAST SITE USE

The project is located on Crowley Rayne Highway in Crowley, Louisiana. The location is depicted in the Figure 2.1.1 shown below:

FIGURE 2.1.1: General Site Location Outlined in Red

The site is agricultural land currently being used for rice fields and crawfish ponds with an access road through the center of the property. The topography of the site is relatively flat with surface elevations ranging from +20 feet to +21 feet MSL. The elevations and topographic variations were estimated from Google Earth.

2.2 PROPOSED CONSTRUCTION

ECS understands that the Louisiana Economic Development (LED) Site Certification requires preliminary confirmation that the site is compatible with industrial development and that it could support the construction of a 'typical' manufacturing building encompassing 100,000 square feet and appurtenant on-site roadways and infrastructure. Detailed loadings were not provided to ECS at the time of this report. Soil augmentation that may be required for the construction of the foundations, buildings and roadways is addressed in this report.

3.0 FIELD EXPLORATION AND LABORATORY TESTING

The field exploration was planned with the objective of characterizing the project site in general geotechnical and geological terms and to evaluate subsequent field and laboratory data to assist in the determination of geotechnical recommendations consistent with the aforementioned CSRS criterion.

The subsurface conditions were explored by performing a total of three (3) soil test borings. One (1) test boring extended to a depth of 100 feet, one (1) test boring extended to a depth of 50 feet, and one (1) test boring extended to a depth of 30 feet below existing site grades. Each of the soil test borings was advanced successfully to its scheduled termination depth below existing site grades.

An ATV-mounted rig was utilized to drill the borings with dry auger and wet rotary techniques. The subsurface exploration was completed under the general supervision of an ECS representative.

The boring locations were selected by representatives of ECS based on the site plan provide by the client and identified in the field by ECS personnel using the supplied diagram and handheld GPS unit. The approximate as-drilled boring locations are shown on the Boring Location Diagram in Appendix A. The approximate ground surface elevations noted in this report were obtained from Google Earth.

3.1 SUBSURFACE CHARACTERIZATION

The subsurface conditions encountered were generally consistent with published geological mapping. The following sections provide generalized characterizations of the soil. Please refer to the boring logs in Appendix B for specific information.

Representative soil samples were obtained by means of auger sampling techniques. Field logs of the soils encountered in the borings were maintained by the drill crew. After recovery, each geotechnical soil sample was removed from the sampler and visually classified. Representative portions of each soil sample were then wrapped in plastic and transported to our laboratory for further visual examination and laboratory testing. After completion of the drilling operations, the boreholes were backfilled with grout to the existing ground surface. The following Table provides the generalized soil strata encountered.

Approximate Depth (ft)	Elevation [(1)] (ft, MSL)	Stratum No.	Soil Description[(2)]
0 – 0.5 ft	EL. + 20.0 to + 19.5	-	**TOPSOIL**
0.5 – 13.0 ft	EL. + 19.5 to + 7.0	I	**LEAN CLAY (CL)**, Stiff to Very Stiff, Brown and Gray
13.0 – 33.0 ft	EL. + 7.0 to - 13.0	II	**FAT CLAY (CH)**, Very Stiff, Brown, Tan and Gray
33.0 – 38.0 ft	EL. - 13.0 to - 8.0	III	**SILTY CLAY WITH SAND (CL-ML),** Firm, Brown
38.0 – 100.0 ft	EL. - 8.0 to - 80.0	IV	**LEAN CLAY (CL) or FAT CLAY (CH),** Stiff to Very Stiff, Brown, Tan and Gray

1 Please note that the ground surface elevations were or were not surveyed by a licensed surveyor; these elevations are approximate based on Google-Earth©.
2 Soil descriptions show approximate strata to 100’ for B-2 only. Strata in borings B-1 to B-3 vary, please see attached boring logs in Appendix B.

Please refer to the attached boring logs and laboratory data summary for this field exploration for a more detailed description of the subsurface conditions encountered in the borings as the stratification descriptions above are generalized for presentation purposes.

3.2 GROUNDWATER OBSERVATIONS

Groundwater levels were not observed in the borings during drilling operations. In wet rotary drilling operations, water is introduced into the borehole and the groundwater position cannot be determined during drilling operations.

The highest groundwater observations are normally encountered in the late winter or early spring, or following seasonal heavy rainfall events. Fluctuation in the location of the long-term water table may occur as a result of changes in precipitation, evaporation, surface water runoff and other factors not immediately apparent at the time of his investigation. Therefore, the groundwater

conditions at this site are expected to be significantly influenced by surface water runoff and rainfall.

3.3 LABORATORY TESTING

The laboratory testing was performed by ECS on selected samples obtained during our field exploration operations. Classification and index property tests were performed on representative soil samples obtained from the test borings in order to aid in classifying soils according to the Unified Soil Classification System and to quantify and correlate engineering properties. The soil samples were tested for moisture content (ASTM D2216), Atterberg Limits (ASTM D4318), and Unconfined Compressive Strength (ASTM D2166).

An experienced geotechnical professional visually classified each soil sample from the test borings on the basis of texture and plasticity in accordance with the Unified Soil Classification System (USCS) and ASTM D-2487 (Standard Practice for Classification for Engineering Purposes). After classification, the geotechnical professional grouped the various soil types into the major zones noted on the boring logs in Appendix B. The group symbols for each soil type are indicated in parentheses following the soil descriptions on the boring logs. The stratification lines designating the interfaces between earth materials on the boring logs are approximate; in situ, the transitions may be gradual.

The soil samples will be retained in our laboratory for a period of 60 days, after which, they will be discarded unless other instructions are received as to their disposition.

4.0 GEOTECHNICAL RECOMMENDATIONS

The following **preliminary recommendations** have been developed on the basis of the previously described project characteristics and subsurface conditions. These recommendations are preliminary in nature and are for planning purposes only as they are based on a very limited geotechnical exploration. They should not be used for design or construction. Design and construction recommendations for planned structures will require a thorough design-level geotechnical investigation and engineering analysis.

The proposed site is generally compatible with industrial development depending on the type and anticipated loads of the proposed structures. Due to the site's use of rice fields and crawfish ponds, some undercutting of unsuitable soils may be required. Also, we anticipate that more than 2 feet of fill may be required to reach the finished floor elevation of an industrial manufacturing building, and sizes of footings and allowable bearing pressures may be dependent on fill heights. The following Sections of this document present our general recommendations with regard to the proposed site.

4.1 SHALLOW FOUNDATIONS

Given that subgrades and structural fills are prepared properly, a typical lightly to moderately-loaded industrial structure should be able to be supported by conventional shallow spread footings. A net allowable soil bearing pressure on the order of 2,000 psf may be used for preliminary planning and budgeting purposes for footings bearing on compacted in-situ clay or on compacted select fill. Footings should extend at least 24 inches below grade in order to utilize this bearing pressure. The Table (below) provides estimated size for square footing dimensions based on assumed column loads as required by the CSRS document:

ESTIMATED SQUARE SHALLOW FOOTING SIZE Net Allowable Bearing Capacity = 2,000 psf F.S.=3		
Assumed Column Load (Kips)	**Spread Footing Plan Dimensions**	
	Depth (ft.)	**Width (ft.)**
25	2	4.0
50	2	5.0
100	2	7.5

These design parameters assume that positive drainage will be provided away from structures and with no excessive wetting or drying of soils adjacent to the foundations. Greater potential movements could occur with extreme wetting or drying of the soils due to ponding of water, plumbing leaks or lack of irrigation.

The net allowable soil bearing pressure refers to that pressure which may be transmitted to the foundation bearing soils in excess of the final minimum surrounding overburden pressure. The final footing and/or grade beam elevation should be evaluated by competent geotechnical engineering personnel to verify that the bearing soils are capable of supporting the recommended net allowable bearing pressure and suitable for foundation construction.

4.2 DEEP FOUNDATIONS

Typical considerations are provided below for deep foundations should a more heavily loaded structure be proposed for the subject site. *It should be reemphasized that these values provided should be used for planning and budgeting purposes and should be reevaluated once a specific design is developed for the site.*

The recommended pile length and the estimated corresponding allowable capacities for 14-inch square precast prestressed concrete (PPC) piles are presented in the following Table for use in feasibility studies, planning, and cost estimating purposes per the CSRS document:

PRELIMINARY ESTIMATED ALLOWABLE SINGLE PILE CAPACITIES (KIPS)		
Pile Length (feet)	**14-inch Square PPC Pile**	
	Compression (kips)	**Tension (kips)**
20	37	20
25	48	27
30	58	34
35	66	41

The estimated pile capacities, in the above Table, include a factor of safety of 2.0 in compression and 3.0 in tension and require that a static load test will be performed. If a static load test is not performed, ECS recommends using a factor of safety of 3.0 for compression to determine the allowable capacities. The recommended pile lengths are referenced from the existing ground surface at the time of drilling. The allowable capacity estimates provided in the Table are based on field and laboratory testing and assume proper design and installation. Please note that these estimated capacities do not account for negative skin friction effects that may reduce total capacity if fill is placed on site.

5.0 SITE CONSTRUCTION RECOMMENDATIONS

5.1 SITE PREPARATION

In a dry and undisturbed state, the near-surface soils should provide subgrade support for engineered fill placement and construction operations. However, when wet, this soil will degrade quickly with disturbance from contractor operations. Chemical stabilization of the in-situ soils with lime, lime kiln dust (LKD), or Portland cement may be necessary depending on seasonal conditions. Therefore, good site drainage should be maintained during earthwork operations, which can help maintain the integrity of the soil.

The surface of the site should be kept properly graded to promote drainage of the surface water away from the proposed building areas during the construction phase. We recommend that an attempt be made to enhance the natural drainage without interrupting its pattern.

The soils at the site are moisture and disturbance sensitive and contain fines which are considered moderately erodible. Therefore, the contractor should carefully plan his operation to minimize exposure of the subgrade to weather and construction equipment traffic and provide and maintain good site drainage during earthwork operations to help maintain the integrity of the surficial soils. All erosion and sedimentation shall be controlled in accordance with sound engineering practice and current jurisdictional requirements.

In preparing the site for construction, all loose, poorly compacted existing soils, vegetation, organic soil, existing pavements, foundations or utilities, existing fill material, or other unsuitable materials should be removed from all proposed building and paving areas, and any areas receiving new fill.

6.0 REPORT LIMITATIONS AND CLOSING

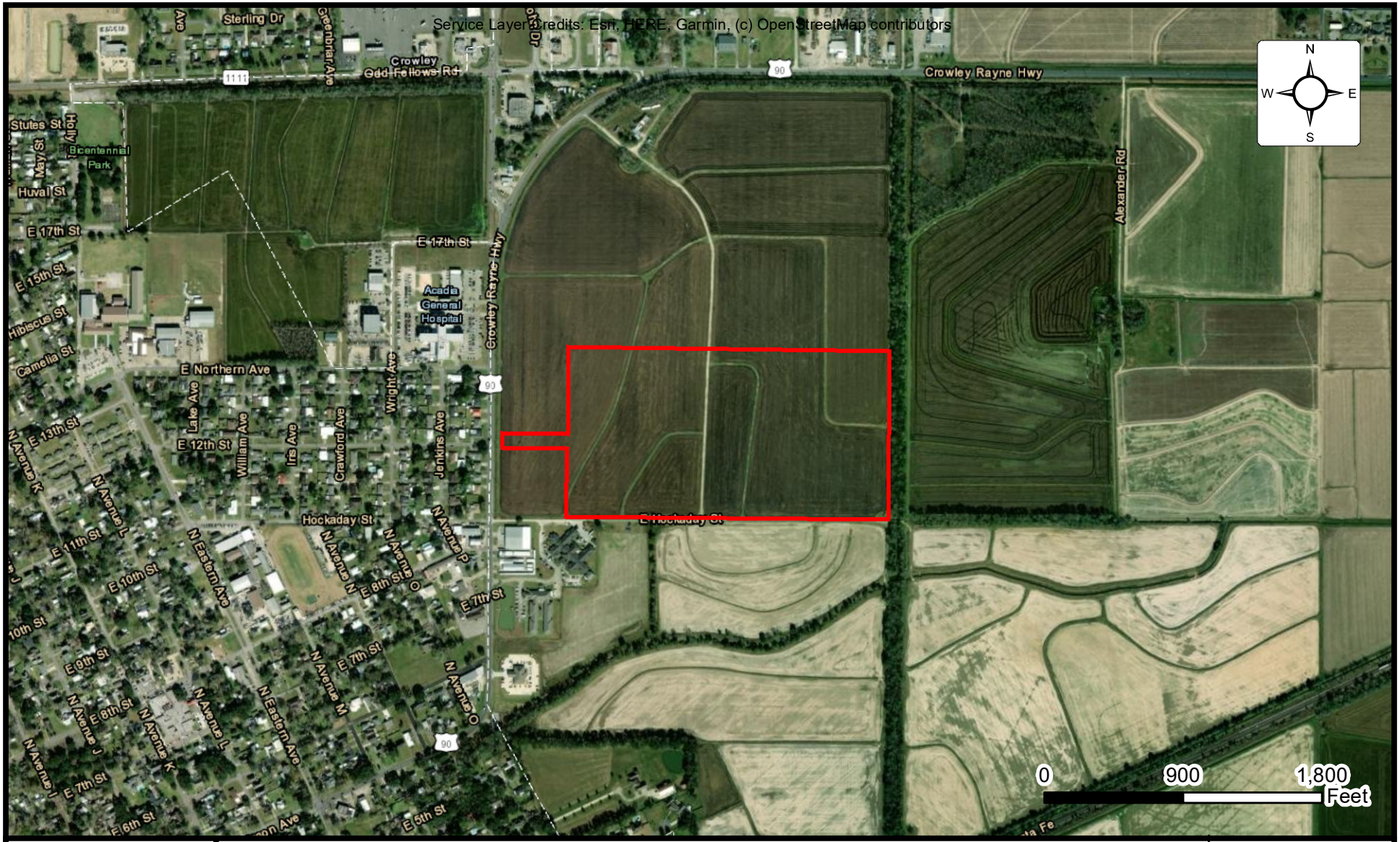
ECS has prepared this report of findings, evaluations, and *preliminary* recommendations to generally characterize the sites soil and groundwater conditions to evaluate whether geotechnical concerns were observed at the site.

The preliminary recommendations provided in this report are based on the data obtained from the limited field exploration and laboratory testing at the specified boring locations for the purpose of a general site characterization. The recommendations are not intended for use in final design or construction. Final design and construction recommendations for any structure proposed on the site will require a more detailed investigation and engineering analysis.

The description of the proposed site is based on information provided to ECS by the client. If any of this information is inaccurate, either due to our interpretation of the documents provided or site that may occur later, ECS should be contacted immediately in order that we can review the report in light of the changes and provide additional or alternate recommendations as may be required to reflect the proposed site.

Appendix A - Drawings and Reports

Site Location Diagram
Boring Location Diagram(s)



SITE LOCATION DIAGRAM
FOSTER SITE

CROWLEY RAYNE HWY, CROWLEY, LOUISIANA
ONEACADIANA

ENGINEER	JCC3
SCALE	AS NOTED
PROJECT NO.	65:1434
FIGURE	1 OF 1
DATE	10/3/2023

BORING LOCATION DIAGRAM
FOSTER SITE

CROWLEY RAYNE HWY, CROWLEY, LOUISIANA
ONEACADIANA

ENGINEER	JCC3
SCALE	AS NOTED
PROJECT NO.	65:1434
FIGURE	1 OF 1
DATE	8/31/2023

Appendix B – Field Operations

Reference Notes
Boring Logs

REFERENCE NOTES FOR BORING LOGS

ECS Southeast, LLP

CLIENT One Acadiana **PROJECT NAME** Foster Site

PROJECT NUMBER 65-1434

MATERIAL[1,2,3]


CH: FAT CLAY
high plasticity


CL: LEAN CLAY
low to medium plasticity


CL-ML: USCS Low Plasticity
Silty Clay

DRILLING SAMPLING SYMBOLS & ABBREVIATIONS

SS	Split Spoon Sampler	PM	Pressuremeter Test
ST	Shelby Tube Sampler	RD	Rock Bit Drilling
WS	Wash Sample	RC	Rock Core, NX, BX, AX
BS	Bulk Sample of Cuttings	REC	Rock Sample Recovery %
PA	Power Auger (no sample)	RQD	Rock Quality Designation %
HSA	Hollow Stem Auger		

PARTICLE SIZE IDENTIFICATION

DESIGNATION		PARTICLE SIZES
Boulders		12 inches (300 mm) or larger
Cobbles		3 inches to 12 inches (75 mm to 300 mm)
Gravel:	Coarse	3/4 inch to 3 inches (19 mm to 75 mm)
	Fine	4.75 mm to 19 mm (No. 4 sieve to 3/4 inch)
Sand:	Coarse	2.00 mm to 4.75 mm (No. 10 to No. 4 sieve)
	Medium	0.425 mm to 2.00 mm (No. 40 to No. 10 sieve)
	Fine	0.074 mm to 0.425 mm (No. 200 to No. 40 sieve)
Silt & Clay ("Fines")		<0.074 mm (smaller than a No. 200 sieve)

COHESIVE SILTS & CLAYS

UNCONFINED COMPRESSIVE STRENGTH, QP[4]	SPT[5] (BPF)	CONSISTENCY[7] (COHESIVE)
<0.25	<2	Very Soft
0.25 - <0.50	3 - 4	Soft
0.50 - <1.00	5 - 8	Firm
1.00 - <2.00	9 - 15	Stiff
2.00 - <4.00	16 - 30	Very Stiff
4.00 - 8.00	31 - 50	Hard
>8.00	>50	Very Hard

RELATIVE AMOUNT[7]	COARSE GRAINED (%)[8]	FINE GRAINED (%)[8]
Trace	≤ 5	≤ 5
With	10 - 20	10 - 25
Adjective *(ex: "Silty")*	25 - 45	30 - 45

GRAVELS, SANDS & NON-COHESIVE SILTS

SPT[5]	DENSITY
<5	Very Loose
5 - 10	Loose
11 - 30	Medium Dense
31 - 50	Dense
>50	Very Dense

WATER LEVELS[6]

- WL (First Encountered)
- WL (Completion)
- WL (Seasonal High Water)
- WL (Stabilized)

FILL AND ROCK

FILL | POSSIBLE FILL | PROBABLE FILL | ROCK

[1]Classifications and symbols per ASTM D 2488-17 (Visual-Manual Procedure) unless noted otherwise.

[2]To be consistent with general practice, "POORLY GRADED" has been removed from GP, GP-GM, GP-GC, SP, SP-SM, SP-SC soil types on the boring logs.

[3]Non-ASTM designations are included in soil descriptions and symbols along with ASTM symbol [Ex: (SM-FILL)].

[4]Typically estimated via pocket penetrometer or Torvane shear test and expressed in tons per square foot (tsf).

[5]Standard Penetration Test (SPT) refers to the number of hammer blows (blow count) of a 140 lb. hammer falling 30 inches on a 2 inch OD split spoon sampler required to drive the sampler 12 inches (ASTM D 1586). "N-value" is another term for "blow count" and is expressed in blows per foot (bpf). SPT correlations per 7.4.2 Method B and need to be corrected if using an auto hammer.

[6]The water levels are those levels actually measured in the borehole at the times indicated by the symbol. The measurements are relatively reliable when augering, without adding fluids, in granular soils. In clay and cohesive silts, the determination of water levels may require several days for the water level to stabilize. In such cases, additional methods of measurement are generally employed.

[7]Minor deviation from ASTM D 2488-17 Note 14.

[8]Percentages are estimated to the nearest 5% per ASTM D 2488-17.

BORING NO. B-1

LAT: 30.224351°
LONG: -92.357782°
SURFACE EL.: 21.0'

DEPTH, FT	STRATUM DESCRIPTION	STRATUM DEPTH, FT	UNIT DRY WT, PCF	PASSING NO. 200 SIEVE, %	WATER CONTENT, %	LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX (PI)
	Brown and tan lean clay, stiff (CL)				26			
	--- light gray and tan				29			
5	--- brown and tan, stiff				24			
	--- very stiff				28			
	--- light gray and tan, stiff				26			
10								
	Light gray and red fat clay, stiff (CH)	13.0	87		38	82	27	55
15								
	--- tan and light gray, very stiff							
20								
25								
30	Bottom Depth of Borehole = 30 Feet	30.0						
35								

SHEAR STRENGTH

□ Penetrometer ◇ Torvane △ Hand Vane — Unconfined ▼ Triaxial ● Miniature Vane ▲

KSF: 0.5 1.0 1.5 2.0 2.5

NOTES:

1. Terms and symbols defined on reference notes.

START DATE: August 1, 2023
COMPLETION DATE: August 1, 2023
TOTAL DEPTH: 30.0'
CAVED DEPTH: Not Applicable
DRY AUGER: Yes
WET ROTARY: Yes
BACKFILL: Yes
LOGGER: BS
DRILL RIG: ATV
HAMMER TYPE: Manual

Client: One Acadiana

LOG OF BORING NO. B-1

Project Name: Foster Site

Site Location: Crowley, Louisiana

Project No. 65-1434

PM/PE NB/JC

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BORING NO. B-2

LAT: 30.222905°
LONG: -92.360719°

SURFACE EL.: 20.0'

DEPTH, FT	STRATUM DESCRIPTION	STRATUM DEPTH, FT	UNIT DRY WT, PCF	PASSING NO. 200 SIEVE, %	WATER CONTENT, %	LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX (PI)
0	Brown lean clay, very stiff (CL)				20			
	Light gray fat clay, stiff (CH)	2.0	98		26	59	17	42
5	Light gray and tan lean clay, very stiff (CL)	4.0			21			
	--- tan, very stiff				22			
	--- brown				28			
10								
	Reddish brown and gray fat clay, very stiff (CH)	13.0						
15								
	--- tan and light gray							
20								
25								
30								
	Brown silty clay with sand, firm (CL-ML)	33.0	139		22	26	21	5
35								
	Tan and light gray fat clay, stiff (CH)	38.0						

SHEAR STRENGTH

□ Penetrometer ◇ Torvane △ Hand Vane — Unconfined ▼ Triaxial ● Miniature Vane ▲

KSF: 0.5 1.0 1.5 2.0 2.5

3.3 3.0 3.5

NOTES:

1. Terms and symbols defined on reference notes.

START DATE: August 2, 2023
COMPLETION DATE: August 2, 2023
TOTAL DEPTH: 100.0'
CAVED DEPTH: Not Applicable
DRY AUGER: Yes
WET ROTARY: Yes
BACKFILL: Yes
LOGGER: BS
DRILL RIG: ATV
HAMMER TYPE: Manual

Client: One Acadiana

LOG OF BORING NO. B-2

Project Name: Foster Site

Site Location: Crowley, Louisiana

Project No. 65-1434

PM/PE NB/JC

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BORING NO. B-2

LAT: 30.222905°
LONG: -92.360719°
SURFACE EL.: 20.0'

DEPTH, FT	WATER LEVEL SYMBOL	SAMPLES	BLOWS PER 6 INCHES	STRATUM DESCRIPTION	STRATUM DEPTH, FT	CLASSIFICATION: UNIT DRY WT, PCF	CLASSIFICATION: PASSING NO. 200 SIEVE, %	CLASSIFICATION: WATER CONTENT, %	CLASSIFICATION: LIQUID LIMIT	CLASSIFICATION: PLASTIC LIMIT	CLASSIFICATION: PLASTICITY INDEX (PI)
45				--- brown and tan							
50											
55											
60				--- black		63		59	92	27	65
65				--- brown							
70				--- very stiff							
75				Brown lean clay, stiff (CL)	73.0						

SHEAR STRENGTH

□ Penetrometer ▼ Unconfined
◇ Torvane ● Triaxial
△ Hand Vane ▲ Miniature Vane

KSF: 0.5 1.0 1.5 2.0 2.5

NOTES:

1. Terms and symbols defined on reference notes.

START DATE: August 2, 2023
COMPLETION DATE: August 2, 2023
TOTAL DEPTH: 100.0'
CAVED DEPTH: Not Applicable
DRY AUGER: Yes
WET ROTARY: Yes
BACKFILL: Yes
LOGGER: BS
DRILL RIG: ATV
HAMMER TYPE: Manual

Client: One Acadiana

LOG OF BORING NO. B-2

Project Name: Foster Site

Site Location: Crowley, Louisiana

Project No. 65-1434

PM/PE NB/JC

BORING NO. B-2

LAT: 30.222905°
LONG: -92.360719°
SURFACE EL.: 20.0'

DEPTH, FT	WATER LEVEL SYMBOL	SAMPLES	BLOWS PER 6 INCHES	STRATUM DESCRIPTION	STRATUM DEPTH, FT	CLASSIFICATION: UNIT DRY WT, PCF	CLASSIFICATION: PASSING NO. 200 SIEVE, %	CLASSIFICATION: WATER CONTENT, %	CLASSIFICATION: LIQUID LIMIT	CLASSIFICATION: PLASTIC LIMIT	CLASSIFICATION: PLASTICITY INDEX (PI)	SHEAR STRENGTH
85												
				Brown sandy fat clay, stiff (CH)	88.0							
90												
95				--- fat clay, very stiff								
100				Bottom Depth of Borehole = 100 Feet	100.0							
105												
110												
115												

SHEAR STRENGTH

□ Penetrometer ◇ Torvane △ Hand Vane
Unconfined ▼ Triaxial ● Miniature Vane ▲

KSF: 0.5 1.0 1.5 2.0 2.5

NOTES:

1. Terms and symbols defined on reference notes.

START DATE: August 2, 2023
COMPLETION DATE: August 2, 2023
TOTAL DEPTH: 100.0'
CAVED DEPTH: Not Applicable
DRY AUGER: Yes
WET ROTARY: Yes
BACKFILL: Yes
LOGGER: BS
DRILL RIG: ATV
HAMMER TYPE: Manual

Client: One Acadiana

LOG OF BORING NO. B-2

Project Name: Foster Site

Site Location: Crowley, Louisiana

Project No. 65-1434

PM/PE NB/JC

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BORING NO. B-3

LAT: 30.225724°
LONG: -92.354597°
SURFACE EL.: 20.0'

DEPTH, FT	STRATUM DESCRIPTION	STRATUM DEPTH, FT	UNIT DRY WT, PCF	PASSING NO. 200 SIEVE, %	WATER CONTENT, %	LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX (PI)
0	Brown lean clay, stiff (CL)				19			
	--- tan				22			
	Tan fat clay, very stiff (CH)	4.0			22			
	--- brown and light gray		100		24	57	19	38
	--- brown				22			
	--- light gray and tan							
	Light gray and tan lean clay, very stiff (CL)	18.0						
	Light gray and tan fat clay, stiff (CH)	33.0						
	--- firm							

SHEAR STRENGTH

□ Penetrometer ◇ Torvane △ Hand Vane — Unconfined ▼ Triaxial ● Miniature Vane ▲

KSF: 0.5 1.0 1.5 2.0 2.5

3.5 □ 3.0 ▼ 3.3 □ 3.5 □

NOTES:

1. Terms and symbols defined on reference notes.

START DATE: August 1, 2023
COMPLETION DATE: August 1, 2023
TOTAL DEPTH: 50.0'
CAVED DEPTH: Not Applicable
DRY AUGER: Yes
WET ROTARY: Yes
BACKFILL: Yes
LOGGER: BS
DRILL RIG: ATV
HAMMER TYPE: Manual

Client: One Acadiana

LOG OF BORING NO. B-3

Project Name: Foster Site

Site Location: Crowley, Louisiana

Project No. 65-1434

PM/PE NB/JC

BORING NO. B-3

LAT: 30.225724°
LONG: -92.354597°

SURFACE EL.: 20.0'

DEPTH, FT	WATER LEVEL SYMBOL	SAMPLES	BLOWS PER 6 INCHES	STRATUM DESCRIPTION	STRATUM DEPTH, FT
45				--- reddish brown and tan	
			4-5-4 (9)	--- stiff	
50				Bottom Depth of Borehole = 50 Feet	50.0
55					
60					
65					
70					
75					

CLASSIFICATION

UNIT DRY WT, PCF	PASSING NO. 200 SIEVE, %	WATER CONTENT, %	LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX (PI)

SHEAR STRENGTH

□ Penetrometer ◇ Torvane △ Hand Vane

Unconfined ▼ Triaxial ● Miniature Vane ▲

KSF

0.5 1.0 1.5 2.0 2.5

NOTES:

1. Terms and symbols defined on reference notes.

START DATE: August 1, 2023
COMPLETION DATE: August 1, 2023
TOTAL DEPTH: 50.0'
CAVED DEPTH: Not Applicable
DRY AUGER: Yes
WET ROTARY: Yes
BACKFILL: Yes
LOGGER: BS
DRILL RIG: ATV
HAMMER TYPE: Manual

Client: One Acadiana

LOG OF BORING NO. B-3

Project Name: Foster Site

Site Location: Crowley, Louisiana

Project No. 65-1434

PM/PE NB/JC

ECS_GEOTECH_LOG - TEMPLATE WITH LAB BLANK.GDT - 10/3/23 10:26 - C:\USERS\NBURKE\ONEDRIVE - ECS CORPORATE SERVICES\DESKTOP\65-1434.GPJ

Appendix C – Laboratory Testing

Laboratory Testing Summary

Soil Boring ID	Depth Interval (ft)	D2488	D2216	D2166/D2850		D4318			D422/D1140 /D6913	D2166/D2850					D4648	D2974	Comments
		Visual Description	Moisture (%)	Unit Weight (PCF)		Atterberg Limits			%<#200 Sieve	Shear Strength (KSF)	Remolded Strength (KSF)	Failure Strain (%)	Confining Pressure (PSI)	Failure Type	Mini Vane Shear Strength (KSF)	Organic Content (%)	
				Wet	Dry	LL	PL	PI									
B-1	0.0 - 2.0	Brown and tan lean clay with ferrous nodules and calcareous nodules (CL)	25.7														
B-1	2.0 - 4.0	Light gray and tan lean clay with ferrous nodules (CL)	29.3														
B-1	4.0 - 6.0	Brown and tan lean clay with ferrous nodules (CL)	23.9														
B-1	6.0 - 8.0	Brown and tan lean clay with ferrous nodules (CL)	27.5														
B-1	8.0 - 10.0	Light gray and tan lean clay with ferrous nodules (CL)	26.3														
B-1	13.0 - 15.0	Stiff light gray and red fat clay with calcareous nodules and ferrous nodules (CH)	37.9	119.5	86.7	82	27	55		1.869		6.2		AS(50)			

*The classification symbol and name are based on visual-manual procedures.

Multiple Shear = MS Vertical Shear = VS Angle Shear = AS
Slickensided = SLS Bulge = B Crumble = C

Technical Responsibility: [signature]

Title: Laboratory Manager

Date: 10.3.2023

Summary of Lab Results
Project No.: 65-1434

Foster Site
Crowley, Louisiana

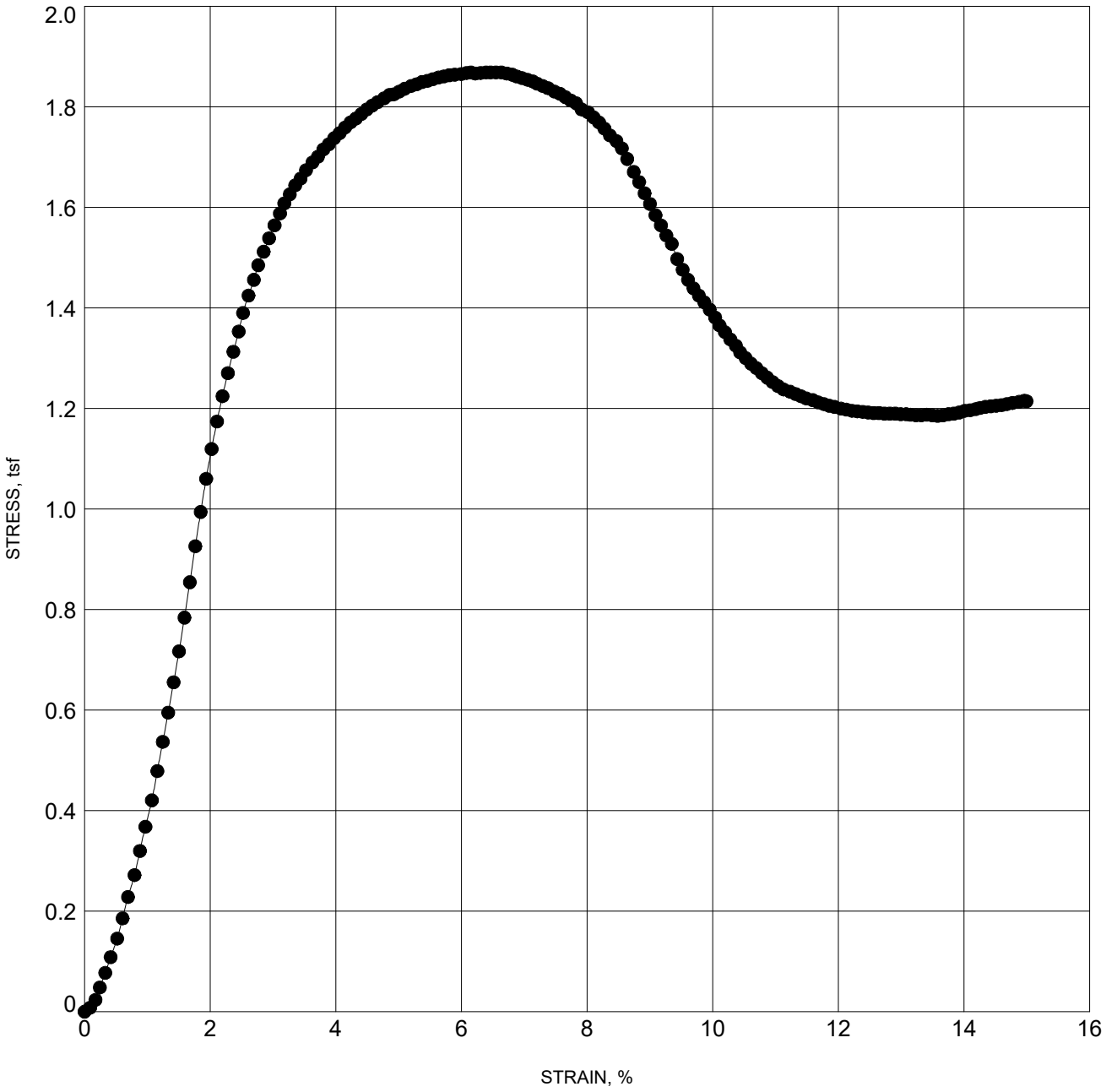
ECS Limited
11211 Industriplex Blvd. Ste. 300
Baton Rouge, LA 70809
Telephone: 225.224.2583

ECS Limited
11211 Industriplex Blvd. Ste. 300
Baton Rouge, LA 70809
Telephone: 225.224.2583

UNCONFINED COMPRESSION TEST

CLIENT One Acadiana **PROJECT NAME** Foster Site

PROJECT NUMBER 65-1434 **PROJECT LOCATION** Crowley, Louisiana



Boring ID	B-1	Depth(ft)	13.0 - 15.0		
Water Content, %	37.9	Specimen Diameter	2.864	LL =82	
Wet Density, pcf	119.5	Specimen Height	5.788	PL =27	
Dry Density, pcf	86.7	Height/diameter ratio	2.02	PL = 55	
Saturation, %	106.7	Failure Stress, tsf	1.869	%200=	
Void Ratio	0.97	Strain, %	6.2	Organic=Not Applicable	

Description: Stiff light gray and red fat clay with calcareous nodules and ferrous nodules (CH)

Tested By: DSW	Date Tested: 8/15/2023	Reviewed By: Wendy Allen	Date Reviewed: 8/22/2023

Soil Boring ID	Depth Interval (ft)	D2488	D2216	D2166/D2850		D4318			D422/D1140 /D6913	D2166/D2850					D4648	D2974	Comments
		Visual Description	Moisture (%)	Unit Weight (PCF)		Atterberg Limits			%<#200 Sieve	Shear Strength (KSF)	Remolded Strength (KSF)	Failure Strain (%)	Confining Pressure (PSI)	Failure Type	Mini Vane Shear Strength (KSF)	Organic Content (%)	
				Wet	Dry	LL	PL	PI									
B-2	0.0 - 2.0	Brown lean clay with ferrous nodules (CL)	19.7														
B-2	2.0 - 4.0	Stiff light gray fat clay with ferrous nodules (CH)	25.8	122.7	97.5	59	17	42		1.371		15.0		B			
B-2	4.0 - 6.0	Light gray and tan lean clay with ferrous nodules (CL)	20.7														
B-2	6.0 - 8.0	Tan lean clay with ferrous nodules and roots (CL)	21.5														
B-2	8.0 - 10.0	Brown lean clay with ferrous nodules (CL)	27.9														
B-2	33.0 - 35.0	Medium brown silty clay with sand (CL-ML)	22.5			26	21	5									
B-2	58.0 - 60.0	Stiff black fat clay with ferrous nodules and calcareous nodules (CH)	59.1	100.9	63.4	92	27	65		1.309		2.9		AS(50)			

*The classification symbol and name are based on visual-manual procedures.

Multiple Shear = MS Vertical Shear = VS Angle Shear = AS
Slickensided = SLS Bulge = B Crumble = C

Technical Responsibility: _____

Title: Laboratory Manager

Date: 10.3.2023

Summary of Lab Results
Project No.: 65-1434

Foster Site
Crowley, Louisiana

ECS Limited
11211 Industriplex Blvd. Ste. 300
Baton Rouge, LA 70809
Telephone: 225.224.2583

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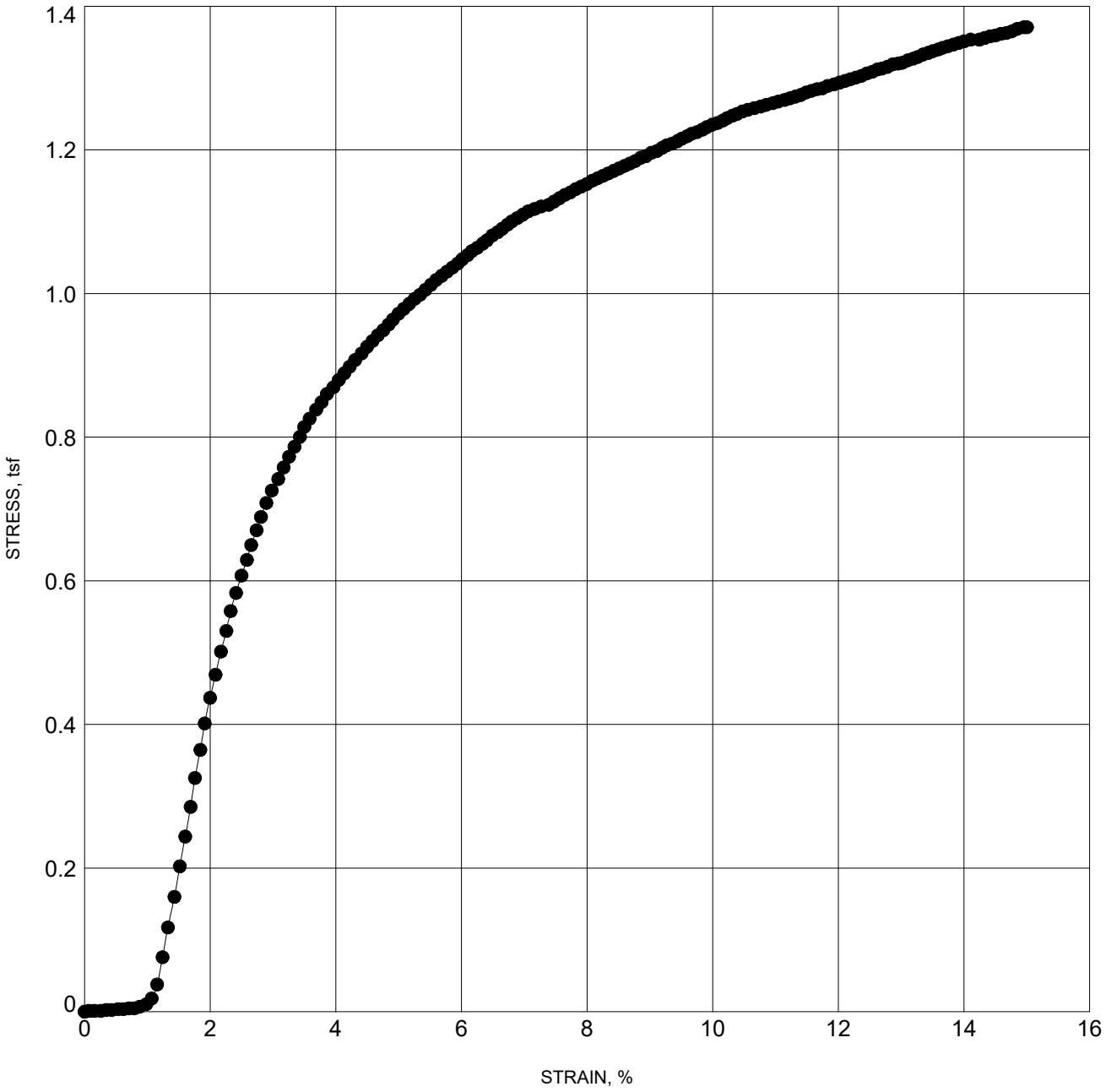
Telephone: 225.224.2583

UNCONFINED COMPRESSION TEST

CLIENT One Acadiana **PROJECT NAME** Foster Site

PROJECT NUMBER 65-1434 **PROJECT LOCATION** Crowley, Louisiana



Boring ID	B-2	Depth(ft)	2.0 - 4.0		
Water Content, %	25.8	Specimen Diameter	2.823	LL =59	
Wet Density, pcf	122.7	Specimen Height	5.803	PL =17	
Dry Density, pcf	97.5	Height/diameter ratio	2.06	PL = 42	
Saturation, %	93.9	Failure Stress, tsf	1.371	%200=	
Void Ratio	0.75	Strain, %	15.0	Organic=Not Applicable	

Description: Stiff light gray fat clay with ferrous nodules (CH)

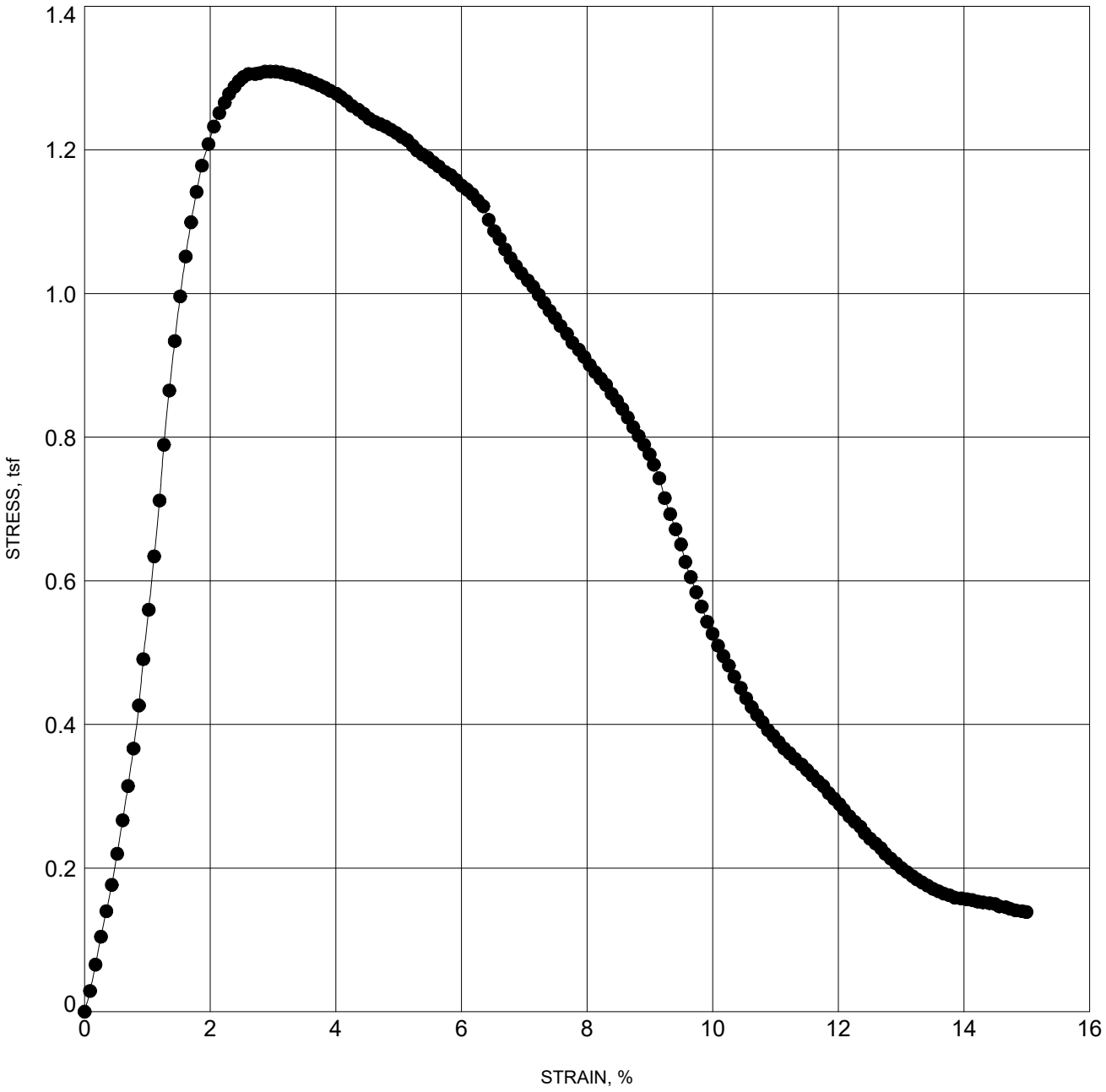
Tested By: DSW	Date Tested: 8/15/2023	Reviewed By: Wendy Allen	Date Reviewed: 8/22/2023

ECS Limited
11211 Industriplex Blvd. Ste. 300
Baton Rouge, LA 70809
Telephone: 225.224.2583

UNCONFINED COMPRESSION TEST

CLIENT One Acadiana **PROJECT NAME** Foster Site

PROJECT NUMBER 65-1434 **PROJECT LOCATION** Crowley, Louisiana



Boring ID	B-2	Depth(ft)	58.0 - 60.0		
Water Content, %	59.1	Specimen Diameter	2.873	LL =92	
Wet Density, pcf	100.9	Specimen Height	5.782	PL =27	
Dry Density, pcf	63.4	Height/diameter ratio	2.01	PL = 65	
Saturation, %	95.5	Failure Stress, tsf	1.309	%200=	
Void Ratio	1.70	Strain, %	2.9	Organic=Not Applicable	

Description: Stiff black fat clay with ferrous nodules and calcareous nodules (CH)

Tested By: DSW	Date Tested: 8/15/2023	Reviewed By: Wendy Allen	Date Reviewed: 8/22/2023

Soil Boring ID	Depth Interval (ft)	D2488	D2216	D2166/D2850		D4318			D422/D1140 /D6913	D2166/D2850					D4648	D2974	Comments
		Visual Description	Moisture (%)	Unit Weight (PCF)		Atterberg Limits			%<#200 Sieve	Shear Strength (KSF)	Remolded Strength (KSF)	Failure Strain (%)	Confining Pressure (PSI)	Failure Type	Mini Vane Shear Strength (KSF)	Organic Content (%)	
				Wet	Dry	LL	PL	PI									
B-3	0.0 - 2.0	Brown lean clay with ferrous nodules (CL)	18.6														
B-3	2.0 - 4.0	Tan lean clay with ferrous nodules (CL)	22.2														
B-3	4.0 - 6.0	Tan fat clay with calcareous nodules and ferrous nodules (CH)	21.9														
B-3	6.0 - 8.0	Very stiff brown and light gray fat clay with ferrous nodules (CH)	24.0	124.6	100.5	57	19	38		2.557		15.0		MS			
B-3	8.0 - 10.0	Brown fat clay with ferrous nodules and roots (CH)	22.5														

*The classification symbol and name are based on visual-manual procedures.

Multiple Shear = MS Vertical Shear = VS Angle Shear = AS
Slickensided = SLS Bulge = B Crumble = C

Technical Responsibility: _____

Title: Laboratory Manager

Date: 10.3.2023

Summary of Lab Results
Project No.: 65-1434

Foster Site
Crowley, Louisiana

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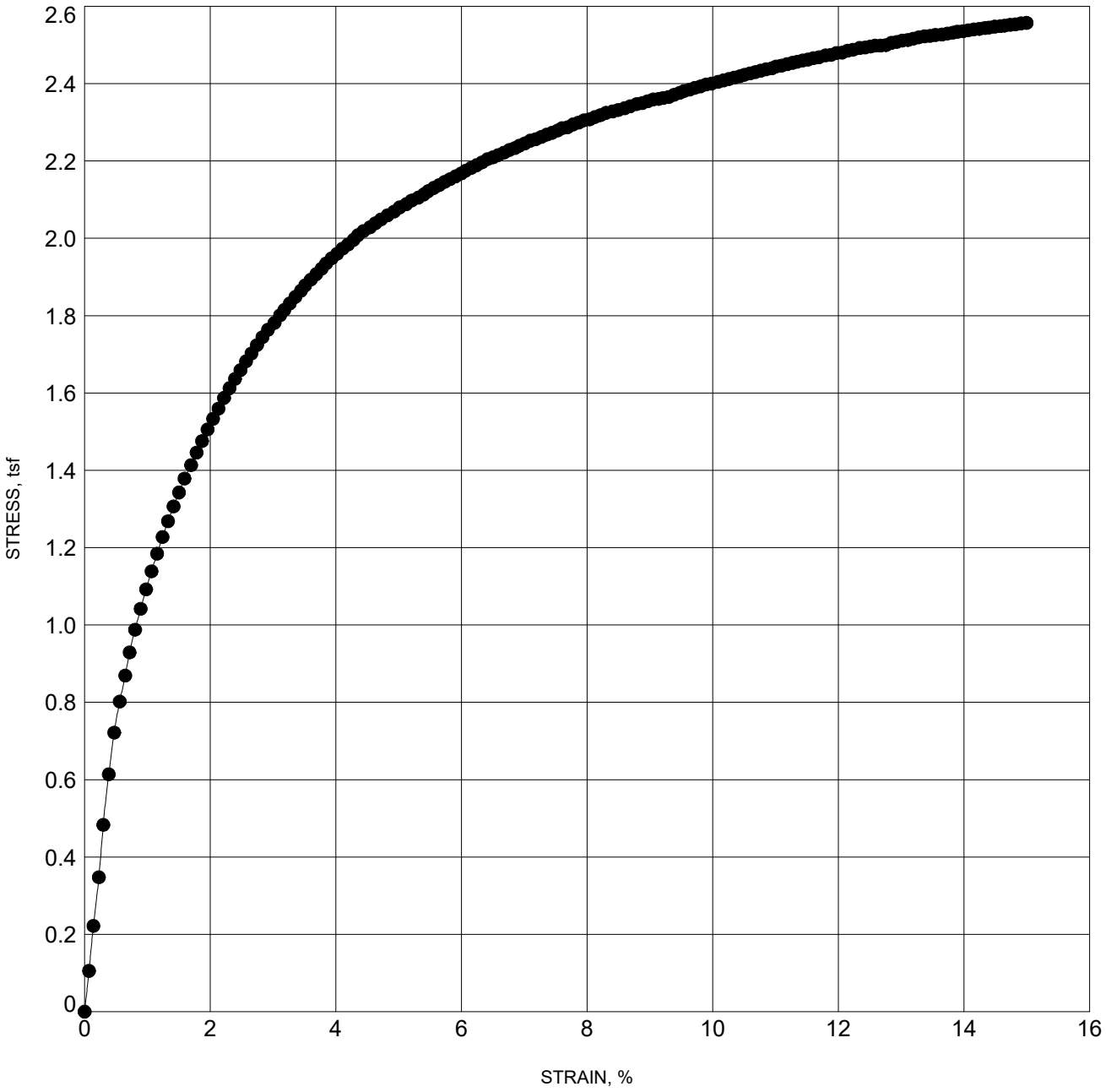
UNCONFINED COMPRESSION TEST

CLIENT One Acadiana **PROJECT NAME** Foster Site

PROJECT NUMBER 65-1434 **PROJECT LOCATION** Crowley, Louisiana



Boring ID	B-3	Depth(ft)	6.0 - 8.0		
Water Content, %	24.0	Specimen Diameter	2.765	LL =57	
Wet Density, pcf	124.6	Specimen Height	5.723	PL =19	
Dry Density, pcf	100.5	Height/diameter ratio	2.07	PL = 38	
Saturation, %	93.8	Failure Stress, tsf	2.557	%200=	
Void Ratio	0.70	Strain, %	15.0	Organic=Not Applicable	

Description: Very stiff brown and light gray fat clay with ferrous nodules (CH)

Tested By: DSW	Date Tested: 8/16/2023	Reviewed By: Wendy Allen	Date Reviewed: 8/22/2023

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.

The Geoprofessional Business Association (GBA) has prepared this advisory to help you – assumedly a client representative – interpret and apply this geotechnical-engineering report as effectively as possible. In that way, clients can benefit from a lowered exposure to the subsurface problems that, for decades, have been a principal cause of construction delays, cost overruns, claims, and disputes. If you have questions or want more information about any of the issues discussed below, contact your GBA-member geotechnical engineer. Active involvement in 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.

Geotechnical-Engineering 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 given civil engineer will not likely meet the needs of a civil-works constructor or even a different civil engineer. Because each geotechnical-engineering study is unique, each geotechnical-engineering report is unique, prepared *solely* for the client. *Those who rely on a geotechnical-engineering report prepared for a different client can be seriously misled*. No one except authorized client representatives 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 this Report in Full

Costly problems have occurred because those relying on a geotechnical-engineering report did not read it *in its entirety*. Do not rely on an executive summary. Do not read selected elements only. *Read this report in full.*

You Need to Inform Your Geotechnical Engineer about Change

Your geotechnical engineer considered unique, project-specific factors when designing the study behind this report and developing the confirmation-dependent recommendations the report conveys. A few typical factors include:

- the client's goals, objectives, budget, schedule, and risk-management preferences;
- the general nature of the structure involved, its size, configuration, and performance criteria;
- the structure's location and orientation on the site; and
- other planned or existing site improvements, such as retaining walls, access roads, parking lots, and underground utilities.

Typical changes that could erode the reliability of this report include those that affect:

- the site's size or shape;
- 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. *The geotechnical engineer who prepared this report cannot accept responsibility or liability for problems that arise because the geotechnical engineer was not informed about developments the engineer otherwise would have considered.*

This Report May Not Be Reliable

Do not rely on this report if your geotechnical engineer prepared it:

- for a different client;
- for a different project;
- for a different site (that may or may not include all or a portion of the original site); or
- before important events occurred at the site or adjacent to it; e.g., man-made events like construction or environmental remediation, or natural events like floods, droughts, earthquakes, or groundwater fluctuations.

Note, too, that it could be unwise to rely on a geotechnical-engineering report whose reliability may have been affected by the passage of time, because of factors like changed subsurface conditions; new or modified codes, standards, or regulations; or new techniques or tools. *If your geotechnical engineer has not indicated an "apply-by" date on the report, ask what it should be*, and, in general, *if you are the least bit uncertain* about the continued reliability of this report, contact your geotechnical engineer before applying it. A minor amount of additional testing or analysis – if any is required at all – could prevent major problems.

Most of the "Findings" Related in This Report Are Professional Opinions

Before construction begins, geotechnical engineers explore a site's subsurface through various sampling and testing procedures. *Geotechnical engineers can observe actual subsurface conditions only at those specific locations where sampling and testing were performed.* The data derived from that sampling and testing were reviewed by your geotechnical engineer, who then applied professional judgment to form opinions about subsurface conditions throughout the site. Actual sitewide-subsurface conditions may differ – maybe significantly – from those indicated in this report. Confront that risk by retaining your geotechnical engineer to serve on the design team from project start to project finish, so the individual can provide informed guidance quickly, whenever needed.

This Report's Recommendations Are Confirmation-Dependent

The recommendations included in this report – including any options or alternatives – are confirmation-dependent. In other words, *they are not final*, because the geotechnical engineer who developed them relied heavily on judgment and opinion to do so. Your geotechnical engineer can finalize the recommendations *only after observing actual subsurface conditions* revealed during construction. If through observation your geotechnical engineer confirms that the conditions assumed to exist actually do exist, the recommendations can be relied upon, assuming no other changes have occurred. *The geotechnical engineer who prepared this report cannot assume responsibility or liability for confirmation-dependent recommendations if you fail to retain that engineer to perform construction observation.*

This Report Could Be Misinterpreted

Other design professionals' misinterpretation of geotechnical-engineering reports has resulted in costly problems. Confront that risk by having your geotechnical engineer serve as a full-time member of the design team, to:

- confer with other design-team members,
- help develop specifications,
- review pertinent elements of other design professionals' plans and specifications, and
- be on hand quickly whenever geotechnical-engineering guidance is needed.

You should also confront the risk of constructors misinterpreting this report. Do so by retaining your geotechnical engineer to participate in prebid and preconstruction conferences and to perform construction observation.

Give Constructors a Complete Report and Guidance

Some owners and design professionals mistakenly believe they can shift unanticipated-subsurface-conditions liability to constructors by limiting the information they provide for bid preparation. To help prevent the costly, contentious problems this practice has caused, include the complete geotechnical-engineering report, along with any attachments or appendices, with your contract documents, *but be certain to note conspicuously that you've included the material for informational purposes only*. To avoid misunderstanding, you may also want to note that "informational purposes" means constructors have no right to rely on the interpretations, opinions, conclusions, or recommendations in the report, but they may rely on the factual data relative to the specific times, locations, and depths/elevations referenced. Be certain that constructors know they may learn about specific project requirements, including options selected from the report, *only* from the design drawings and specifications. Remind constructors that they may perform their own studies if they want to, and *be sure to allow enough time* to permit them to do so. Only then might you be in a position to give constructors the information available to you, while requiring them to at least share some of the financial responsibilities stemming from unanticipated conditions. Conducting prebid and preconstruction conferences can also be valuable in this respect.

Read Responsibility Provisions Closely

Some client representatives, design professionals, and constructors do not realize that geotechnical engineering is far less exact than other engineering disciplines. That lack of understanding has nurtured unrealistic expectations that have resulted in disappointments, delays, cost overruns, claims, and disputes. To confront that risk, geotechnical engineers commonly include 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.

Geoenvironmental Concerns Are Not Covered

The personnel, equipment, and techniques used to perform an environmental study – e.g., a "phase-one" or "phase-two" environmental site assessment – differ significantly from those used to perform a geotechnical-engineering 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 subsurface environmental problems have led to project failures.* If you have not yet obtained your own environmental information, ask your geotechnical consultant for risk-management guidance. As a general rule, *do not rely on an environmental report prepared for a different client, site, or project, or that is more than six months old.*

Obtain Professional Assistance to Deal with Moisture Infiltration and Mold

While your geotechnical engineer may have addressed groundwater, water infiltration, or similar issues in this report, none of the engineer's services were designed, conducted, or intended to prevent uncontrolled migration of moisture – including water vapor – from the soil through building slabs and walls and into the building interior, where it can cause mold growth and material-performance deficiencies. Accordingly, ***proper implementation of the geotechnical engineer's recommendations will not of itself be sufficient to prevent moisture infiltration.*** Confront the risk of moisture infiltration by including building-envelope or mold specialists on the design team. ***Geotechnical engineers are not building-envelope or mold specialists.***

GEOPROFESSIONAL BUSINESS ASSOCIATION

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