

August 14, 2014

Baton Rouge Area Chamber  
564 Laurel Street  
Baton Rouge, LA 70801

## Exhibit X. Schexnayder Site Preliminary Geotechnical Engineering Report

Attention : Jim A. Cavanaugh  
Site Development Director  
Email: jim@brac.org  
Phone: (225) 339-1163

Re: **Geotechnical Site Evaluation Report**  
**Schexnayder Site Evaluation**  
**Ascension Parish, Louisiana**  
**PSI Project No. 0193596**

Dear Mr. Cavanaugh:

Professional Service Industries, Inc. is pleased to submit this Geotechnical Site Evaluation Report for the Schexnayder project site. This report includes the results of field and laboratory testing, and information regarding the compatibility of this site with industrial development, suitability of soils for building foundations and on-site roadways, requirements of soil augmentation for construction of a typical 100,000 square feet (sf) industrial manufacturing building and depth of groundwater.

We appreciate the opportunity to perform this Geotechnical Site Evaluation Study. If you have any questions pertaining to this report, or if we may be of further service, please contact our office.

Respectfully submitted,

**PROFESSIONAL SERVICE INDUSTRIES, INC.**



Leslie C. Chandler, P.E.  
Project Engineer  
Geotechnical Services

Name: Leslie C. Chandler, P.E.  
Date: AUGUST 14, 2014  
License No.: 38292

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**GEOTECHNICAL SITE EVALUATION REPORT**

**SCHEXNAYDER SITE STUDY  
ASCENSION PARISH, LOUISIANA  
PSI PROJECT NO.: 0193596**

**PREPARED FOR**

**BATON ROUGE AREA CHAMBER  
564 LAUREL STREET  
BATON ROUGE, LA 70801**

**August 14, 2014**

**BY  
PROFESSIONAL SERVICE INDUSTRIES, INC.  
11950 INDUSTRIPLEX BLVD.  
BATON ROUGE, LOUISIANA 70809**

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## **PROJECT INFORMATION**

### **Project Authorization**

Professional Service Industries, Inc. (PSI) has completed a 'General Geotechnical Characterization' for the Schexnayder site, located in general vicinity northwest of Donaldsonville, Louisiana. Our services were provided in general accordance with PSI Proposal No. 193-1203634, dated July 3, 2014. Authorization to provide our services was provided by Mr. Iain Vasey (Executive Director Baton Rouge Area Chamber) who signed our Proposal on April 16, 2014.

### **Project Description**

The site for the requested geotechnical evaluation is approximately 1,000 acres in size and is located just east of Donaldsonville in Ascension Parish, Louisiana straddling LA 70 to the north and south. Primary objectives for this preliminary report are to provide information regarding the compatibility of this site with industrial development, suitability of soils for building foundations and on-site roadways, requirements of soil augmentation for construction of a typical 100,000 square feet (sf) industrial manufacturing building, and the depth of the free groundwater table.

This geotechnical site evaluation report will provide an initial baseline of the site subsurface conditions that will likely be encountered during future site development. However, as with any geotechnical investigation, particularly given the size of this project site and relatively limited number of borings performed, variations between borings may and should be expected to exist, and there remains a distinct possibility that other conditions may exist on site that were not encountered within the scope of this exploration.

The opinions and information to be presented in this report are estimates for preliminary consideration only, are based on limited geotechnical exploration, and are not to be used for final design and construction.

### **Purpose and Scope of Services**

The purposes of PSI's geotechnical services are to:

- Drill and sample six soil borings at the site, per the clients' request. Two borings were drilled and sampled to a depth of approximately 75 feet and four borings were drilled and sampled to a depth of approximately 25 feet below the existing grades;
- Evaluate subsurface soil conditions and groundwater depths at the project site;
- Perform limited laboratory testing on selected soil samples recovered from the project site; and,
- Provide information regarding the compatibility of this site with industrial development, suitability of soils for building foundations and on-site roadways, requirements of soil augmentation for construction of a typical 100,000 sf industrial manufacturing building and depth of groundwater.

The scope of services did not include an environmental assessment for determining the presence or absence of wetlands, or hazardous or toxic materials in the soil, surface water, groundwater, or air on or below, or around this site. Any statements in this report or on the boring logs regarding odors, colors, and unusual or suspicious items or conditions are strictly for informational purposes. Prior to development of this site, an environmental assessment is advisable.

Additionally, PSI did not provide any service to investigate or detect the presence of moisture, mold or other biological contaminants in or around any structure, or any service that was designed or intended to prevent or lower the risk of the occurrence or the amplification of the same. Client acknowledges that mold is ubiquitous to the environment with mold amplification occurring when building materials are impacted by moisture. Client further acknowledges that site conditions are outside of PSI's control, and that mold amplification will likely occur, or continue to occur, in the presence of moisture. As such, PSI cannot and shall not be held responsible for the occurrence or recurrence of mold amplification.

## **SITE AND SUBSURFACE CONDITIONS**

### **Site Location and Description**

The project site is located approximately one mile southeast of Donaldsonville, Louisiana, bounded generally by the Mississippi River to the north and undeveloped property to the east, south and west (as illustrated on the Site Vicinity Map provided on Figure No. 1 in the Appendix). The site was undeveloped and covered by grass and sugar cane fields at the time of PSI's field exploration, and the ground surface appeared to be topographically level. PSI's ATV-mounted drill rig was required in order to perform this field exploration due to soft surficial conditions.

### **Site Geology**

Based on the Geological Map of Louisiana (1984), the site is located within the Natural Levees Formation (Qnl) and Alluvium (Qal) along the southernmost portion. The Natural Levees geologic unit is characterized by gray and brown silt, silty clay, with some very fine sand. Per USGS, these deposits are encountered on past and present courses of major streams. Natural Levee deposits in the site vicinity are relatively weak and compressible in nature. Alluvium is characterized by gray to brownish gray clay and silty clay, with some sand and gravel locally.

### **Field Exploration**

The field exploration included mobilization to the site by a PSI drilling crew, drilling of the soil borings, and recovering soil samples. Borings B-1 and B-6 were drilled and sampled to a depth of approximately 75 feet below the existing grade. Borings B-2 through B-5 were drilled and sampled to a terminal depth of approximately 25 feet below existing grade (as illustrated in the Boring Location Plan on Figure No. 2 in the Appendix). Borings B-1 and B-6 were drilled utilizing wet-rotary drilling techniques, while Borings B-2 through B-5 were drilled and sampled utilizing hollow-stem augers. Drilling and sampling activities were performed in general accordance with referenced ASTM procedures or other accepted methods. The shallower soil borings (i.e., 25 feet deep) were backfilled with soil cuttings upon completion of drilling and groundwater observations while the deeper soil borings (i.e., 75 feet deep) were backfilled with a cement/bentonite grout mixture per LA DOTD requirements.

Undisturbed samples of cohesive soils were generally obtained using three-inch-diameter, thin-wall tube samplers (Shelby tube) in general accordance with the procedures for "Thin-Walled Tube Geotechnical Sampling of Soils" (ASTM D1587). These samples were extruded in the field with a hydraulic ram and were identified according to boring number and depth, wrapped in aluminum foil, placed in polyethylene plastic wrapping to protect against moisture loss and transported to the laboratory in containers to minimize disturbance.

### **Laboratory Testing**

Selected soil samples were tested in the laboratory to determine material properties for our evaluation. Visual classifications were performed in the laboratory. Physical testing included determination of moisture contents, Atterberg limits classification testing and unconfined compressive strength tests (to supplement the field pocket penetrometer testing). The laboratory testing was performed in general accordance with ASTM procedures. Samples not altered by laboratory testing will be retained for sixty (60) days from the date of this report and then be discarded.

### **Subsurface Conditions**

Boring B-1 disclosed about 7 feet of stiff to soft lean clay underlain by soft about 3 feet of soft fat clay. From a depth of approximately 10 feet to about 23 feet, soft to stiff lean clay was disclosed, which was underlain by approximately 35 feet of stiff to firm fat clay. Beneath the fat clay about 4 feet of firm lean clay and 6 feet of firm silt was disclosed overlying firm fat clay to boring termination depth of approximately 75 feet below grade.

Boring B-2 disclosed about 7 inches of crushed limestone aggregate underlain by about 4 feet of stiff to very soft lean clay followed by about 2 feet of very soft silt. Below the silt the boring disclosed soft to firm, fat clay to the boring termination depth of about 25 feet below existing grade.

Boring B-3 disclosed about 4 inches of crushed limestone aggregate underlain by about 8 feet of stiff to very soft lean clay followed by about 5 feet of soft fat clay. Below the fat clay the boring disclosed very soft lean clay overlying very soft to firm fat clay to the boring termination depth of about 25 feet below existing grade.

Borings B-4 and B-5 disclosed about 4 inches of crushed limestone aggregate underlain by about 25 feet of very stiff to soft fat clay to the boring termination depth of about 25 feet below existing grade.

Boring B-6 disclosed about 4 inches of crushed limestone aggregate overlying about 18 feet of firm to very soft lean clay underlain by about 5 feet of firm lean clay followed by about 10 feet of firm about 3 feet of soft fat clay. From a depth of approximately 33 feet to about 38 feet, firm silt was disclosed, which was underlain by soft to firm fat clay to boring termination depth of approximately 75 feet below grade.

The above subsurface description is generalized in nature to highlight the major subsurface stratification features and material characteristics. The boring logs included in the Appendix should be reviewed for specific information at the individual boring locations. These records include soil descriptions, stratifications, penetration resistances, locations of the samples, and laboratory test data. The stratifications shown on the boring logs represent the conditions only

at the actual boring locations. Variations may occur and should be expected between boring locations. The stratifications represent the approximate boundary between subsurface materials and the actual transition may be gradual.

### **Groundwater Information**

The free groundwater table was encountered as shown in the Table below:

Boring No.	Depth to Groundwater During Drilling (Feet)	Depth to Groundwater at End of Drilling (Feet)
B-1	5	4-1/2
B-2	5-1/2	5
B-3	14	6 @ 20 minutes
B-4	3-1/2	12 @ 1.5 hours
B-5	4-1/2	--
B-6	7	5

\*Boring was drilled using wet rotary drilling techniques; therefore the initial depth to groundwater was not measured in this boring.

\*\* Not measured due to drilling fluid used to drill soil boring and short project duration.

It should be noted that groundwater level fluctuations at this site may occur due to seasonal and climatic variations, the stage of the Mississippi River due to its relative close proximity to the project site, alteration of drainage patterns, land usage and ground cover. We recommend the Contractor determine the actual groundwater levels at the time any future construction activities begin.

### **Seismic Design Considerations**

The design of structures must consider dynamic forces resulting from seismic events. These forces are dependent upon the magnitude of the earthquake event as well as the properties of the soils that underlie the site. As part of the procedure to evaluate seismic forces, the evaluation of the Seismic Site Class, which categorizes the site based upon the characteristics of the subsurface profile within the upper 100 feet of the ground surface, is required. To define the Site Class for this project, we have interpreted the results of soil test borings drilled within the project site and estimated appropriate soil properties below the base of the borings to a depth of 100 feet as permitted by the International Building Code, 2012 edition. The estimated soil properties were based upon our experience with subsurface conditions in the general site area. Based upon our evaluation, the subsurface conditions within the site are consistent with the characteristics of a Site Class "E" as defined in Table 1613.5.2 of the building code.

## **EVALUATION AND DISCUSSIONS**

The type and depth of foundation suitable for a given structure primarily depends on several factors including the subsurface conditions, the function of the structure, the loads it may carry, the cost of the foundation and the criteria set by the Design Engineer with respect to vertical and differential movement which the structure can withstand without damage.

Based on the limited number of soil borings, field data and laboratory test results, the proposed site is generally feasible for industrial development. The subsurface soils explored are suitable for building foundations and site roadways after proper preparation. Fat clay soils with high shrink-swell potential (Plasticity indices ranging from 52 to 74) were encountered at the ground

surface in Borings B-4 through B-6. Despite the high groundwater table Potential Vertical Rise (PVR) should be further evaluated. PVR in portions of this site could be mitigated by undercutting the fat clay soils to a predetermined depth and replacing with moisture conditioned, properly compacted lean clay (CL) soils, or with the addition of chemical treatment such as lime mixing. On-site sources of engineered fill appear to be available as disclosed in Borings B-1 through B-3. Detailed column loads for a typical 100,000 sq. ft. industrial manufacturing building were not provided at the time of this study; however, the structural column loads are anticipated to be on the order of 60 to 100 kips, with wall loads on the order of 3.0 kips per lineal foot.

The choice of type of deep foundation should be based on the tolerance criteria for the performance of the structures and economics of construction. Driven piling or auger-cast-piles should be viable foundation types considering the subsurface and groundwater conditions encountered. Lightly-loaded equipment pads may be able to be supported on shallow spread footings, or mat foundations, as long as the PVR issues described above are mitigated. These foundations will be governed by the anticipated load and settlement tolerances.

As stated previously, PSI's opinions and information presented in this site evaluation report are provided for planning purposes and preliminary considerations only; they are based on a very limited geotechnical exploration, and are not to be used for final design and construction.

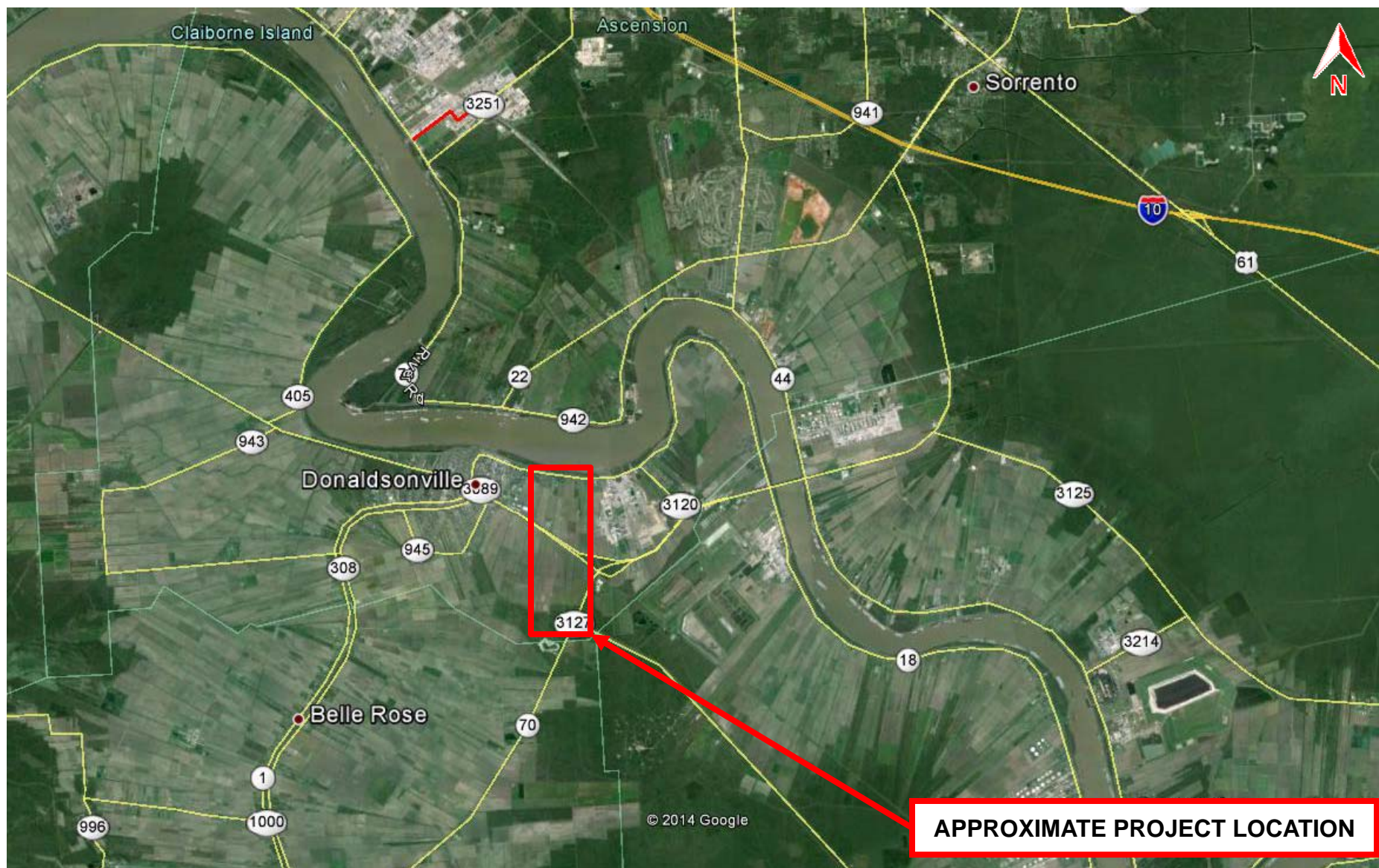
## **REPORT LIMITATIONS**

The preliminary information submitted in this report is based on the available subsurface data obtained by PSI at the time of our field exploration. PSI warrants that the preliminary findings contained herein have been made in accordance with generally accepted drilling procedures and visual soil classification methods in the local area. No other warranties are implied or expressed. This report has been prepared for the exclusive use of the Baton Rouge Area Chamber for the specific purpose of determining general subsurface information at the site of the referenced project. Upon authorization through a supplemental services agreement, PSI will be available to perform a thorough geotechnical study and provide complete and final recommendations.



## APPENDIX

## SITE VICINITY MAP



GEOTECHNICAL ENGINEERING SERVICES  
SCHEXNAYDER SITE STUDY  
ASCENSION PARISH, LOUISIANA

DATE: 08/2014

DRAWN: WV

CHKD: LC

**psi** Information  
To Build On  
Engineering • Consulting • Testing

FIGURE 2

PSI PROJECT NO.: 0193596-01



## BORING LOCATION PLAN



GEOTECHNICAL ENGINEERING SERVICES  
SCHEXNAYDER SITE STUDY  
ASCENSION PARISH, LOUISIANA

DATE: 08/2014

DRAWN: WV

CHKD: LC

**psi** Information  
To Build On  
Engineering • Consulting • Testing

FIGURE 2

PSI PROJECT NO.: 0193596-01

# LOG OF BORING B-1

## SCHEXNAYDER SITE STUDY

### ASCENSION PARISH, LOUISIANA

TYPE OF BORING: WET ROTARY

PSI Project No.: 0193596-01

DEPTH, FT.	SOIL TYPE	USCS SYMBOL	SAMPLES	LATITUDE: N 30° 5' 49.5" LONGITUDE: W 90° 58' 6.08"	N-BLOWS/FT.	MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	% PASSING No. 200 SIEVE	SHEAR STRENGTH (tsf)					SHEAR STRENGTH (tsf)				UNIT DRY WEIGHT (pcf)					
				BORING LOCATION PLAN: APPENDIX FIGURE NO. 2							SOIL DESCRIPTION					SHEAR STRENGTH (tsf)									
												0.0	0.5	1.0	1.5	2.0	HAND PEN (tsf)	UC (tsf)	TORVANE (tsf)	UU (tsf)					
		CL		Stiff to soft, brown lean CLAY w/ organics, and traces of ferrous nodules		25										1.00									
					26												0.75								
5					-becomes brown and gray		39										0.25	0.23			81				
					41												0.13								
		CH		Soft, gray fat CLAY w/ silt pockets		36	63	25	38							0.25	0.23			77					
10																									
		CL		Soft to stiff, gray lean CLAY w/ silt, and traces of fine sand																					
					37												0.13								
15																									
					40												0.63								
20																									
		CH		Stiff to firm, gray fat CLAY		49										0.50									
25																									
				-slickensided		53										0.50									
30																									
						46										0.63									
35																									
						42										0.25									
40																									
						51										0.63									
45																									
						43										0.50									
50																									

DEPTH OF BORING: 75 feet

DATE DRILLED: 7/24/14

GROUNDWATER DURING DRILLING (FT): 5

GROUNDWATER UPON COMPLETION (FT): 4.5

NOTES: The stratification lines represent approximate boundaries.

# LOG OF BORING B-1

## SCHEXNAYDER SITE STUDY

### ASCENSION PARISH, LOUISIANA

TYPE OF BORING: WET ROTARY

PSI Project No.: 0193596-01

DEPTH, FT.	SOIL TYPE	USCS SYMBOL	SAMPLES	LATITUDE: N 30° 5' 49.5" LONGITUDE: W 90° 58' 6.08"	SOIL DESCRIPTION	N-BLOWS/FT.	MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	% PASSING No. 200 SIEVE	SHEAR STRENGTH (tsf)					SHEAR STRENGTH (tsf)				UNIT DRY WEIGHT (pcf)	
				BORING LOCATION PLAN: APPENDIX FIGURE NO. 2								0.0 0.5 1.0 1.5 2.0					HAND PEN (tsf)	UC (tsf)	TORVANE (tsf)	UU (tsf)		
												○ HP   ● UC △ TV   ▲ UU										
55							50										0.50					
60		CL			Firm, gray lean CLAY w/ silt, and traces of roots		38										0.38					
65		ML			Firm, gray SILT w/ traces of clay, and fine sand		33										0.25					
70		CH			Firm, gray fat CLAY		46										0.50					
75					-w/ silt pockets		36										0.38					
					Boring terminated at 75 feet.																	
80																						
85																						
90																						
95																						
100																						

DEPTH OF BORING: 75 feet

DATE DRILLED: 7/24/14

NOTES: The stratification lines represent approximate boundaries.

# LOG OF BORING B-2

## SCHEXNAYDER SITE STUDY

### ASCENSION PARISH, LOUISIANA

TYPE OF BORING: HOLLOW STEM AUGER

PSI Project No.: 0193596-01

DEPTH, FT.	SOIL TYPE	USCS SYMBOL	SAMPLES	LATITUDE: N 30° 5' 37.9" LONGITUDE: W 90° 58' 15.8"	N-BLOWS/FT.	MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	% PASSING No. 200 SIEVE	SHEAR STRENGTH (tsf)					SHEAR STRENGTH (tsf)				UNIT DRY WEIGHT (pcf)	
				BORING LOCATION PLAN: APPENDIX FIGURE NO. 2							SOIL DESCRIPTION	SHEAR STRENGTH (tsf)					HAND PEN (tsf)	UC (tsf)	TORVANE (tsf)		UU (tsf)
												○ HP   ● UC △ TV   ▲ UU	0.0   0.5   1.0   1.5   2.0								
		CL		4-INCHES LIMESTONE Stiff to soft, brown lean CLAY w/ silt, fine sand, and ferrous nodules		33									0.75						
						30	34	26	8				△	●			0.50	0.20		91	
5		ML		Soft, tan and gray SILT w/ sand, clay pockets, and traces of roots		32							△					0.18			
		CH		Soft to firm, gray fat CLAY		48							○			0.25					
10						40							○	●		0.25	0.48			84	
				-w/ silt, and roots		34							△	△		0.13		0.25			
20						52							△					0.20			
				-slickensided		52								○		0.38					
25				Boring terminated at 25 feet.																	
30																					
35																					
40																					
45																					
50																					

DEPTH OF BORING: 25 feet

DATE DRILLED: 7/23/14

NOTES: The stratification lines represent approximate boundaries.

GROUNDWATER DURING DRILLING (FT): 5.5

GROUNDWATER UPON COMPLETION (FT): 5

# LOG OF BORING B-3

## SCHEXNAYDER SITE STUDY

### ASCENSION PARISH, LOUISIANA

TYPE OF BORING: HOLLOW STEM AUGER

PSI Project No.: 0193596-01

DEPTH, FT.	SOIL TYPE	USCS SYMBOL	SAMPLES	LATITUDE: N 30° 5' 24.7" LONGITUDE: W 90° 58' 18.5"	N-BLOWS/FT.	MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	% PASSING No. 200 SIEVE	SHEAR STRENGTH (tsf)		SHEAR STRENGTH (tsf)				UNIT DRY WEIGHT (pcf)
				BORING LOCATION PLAN: APPENDIX FIGURE NO. 2							HAND PEN (tsf)	UC (tsf)	TORVANE (tsf)	UU (tsf)			
				SOIL DESCRIPTION													
							LL	PL	PI		0.0 0.5 1.0 1.5 2.0						
		CL		4-INCHES LIMESTONE Stiff to very soft, brown lean CLAY		25							1.00				
						30							0.38				
5						38	44	24	20				0.38	0.35		83	
						38									0.25		
		CH		Soft, gray and tan fat CLAY		41								0.21	0.40		
10																	
		CL		Firm, gray lean CLAY w/ silt, and traces of fine sand		32							0.50				
15																	
		CH		Firm to stiff, gray fat CLAY w/ traces of calcareous nodules		55							0.25				
20																	
						31							0.75				
25				Boring terminated at 25 feet.													
30																	
35																	
40																	
45																	
50																	

DEPTH OF BORING: 25 feet

DATE DRILLED: 7/23/14

NOTES: The stratification lines represent approximate boundaries.

GROUNDWATER DURING DRILLING (FT): 14

GROUNDWATER UPON COMPLETION (FT): 6 @ 20 mins






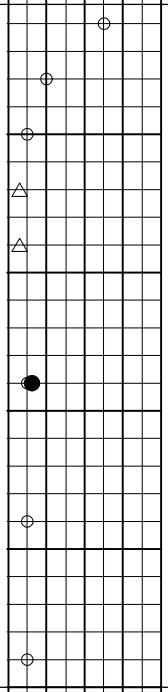
# LOG OF BORING B-4

## SCHEXNAYDER SITE STUDY

### ASCENSION PARISH, LOUISIANA

TYPE OF BORING: HOLLOW STEM AUGER

PSI Project No.: 0193596-01

DEPTH, FT.	SOIL TYPE	USCS SYMBOL	SAMPLES	LATITUDE: N 30° 5' 4.00" LONGITUDE: W 90° 58' 22.9"	N-BLOWS/FT.	MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	% PASSING No. 200 SIEVE	SHEAR STRENGTH (tsf)					UNIT DRY WEIGHT (pcf)		
				BORING LOCATION PLAN: APPENDIX FIGURE NO. 2							SOIL DESCRIPTION	SHEAR STRENGTH (tsf)						
												HAND PEN (tsf)	UC (tsf)	TORVANE (tsf)	UU (tsf)			
0.0 0.5 1.0 1.5 2.0																		
		CH		4-INCHES LIMESTONE		31	77	25	52									
				Very stiff to soft, brown fat CLAY w/ ferrous nodules, and gravel		35								1.25				
5				-becomes gray and brown w/ ferrous nodules		46								0.50				
				-becomes soft, gray		58								0.25			0.15	
10						85										0.15		
15						36								0.25	0.31			83
						60								0.25				
20				-slickensided		68												
25				Boring terminated at 25 feet.														
30																		
35																		
40																		
45																		
50																		

DEPTH OF BORING: 25 feet

DATE DRILLED: 7/23/14

NOTES: The stratification lines represent approximate boundaries.

GROUNDWATER DURING DRILLING (FT): 3.5

GROUNDWATER UPON COMPLETION (FT): 12 @ 1.5 hours



# LOG OF BORING B-5

## SCHEXNAYDER SITE STUDY

### ASCENSION PARISH, LOUISIANA

TYPE OF BORING: HOLLOW STEM AUGER

PSI Project No.: 0193596-01

DEPTH, FT.	SOIL TYPE	USCS SYMBOL	SAMPLES	LATITUDE: N 30° 4' 44.0" LONGITUDE: W 90° 58' 26.3"	SOIL DESCRIPTION	N-BLOWS/FT.	MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	% PASSING No. 200 SIEVE	SHEAR STRENGTH (tsf)					UNIT DRY WEIGHT (pcf)			
				BORING LOCATION PLAN: APPENDIX FIGURE NO. 2								SHEAR STRENGTH (tsf)								
												HAND PEN (tsf)	UC (tsf)	TORVANE (tsf)	UU (tsf)					
												0.0	0.5	1.0	1.5	2.0				
		CH			4-INCHES LIMESTONE		39	108	36	72				○		0.63				
					Stiff to soft, brown fat CLAY w/ ferrous nodules, and gravel		46						●		0.38	0.43			72	
5					-becomes brown and gray w/ ferrous nodules		51						○		0.25					
					-w/ traces of gravel		60						△		0.13		0.20			
					-becomes gray w/ ferrous nodules		73						△				0.18			
10																				
					-becomes stiff w/ lean clay and silt layer		37							○		0.63				
15																				
					-becomes soft w/ traces of ferrous nodules		69							○		0.25				
20																				
							75							△		0.13		0.15		
25					Boring terminated at 25 feet.															
30																				
35																				
40																				
45																				
50																				

DEPTH OF BORING: 25 feet

GROUNDWATER DURING DRILLING (FT): 4.5

DATE DRILLED: 7/23/14

NOTES: The stratification lines represent approximate boundaries.

# LOG OF BORING B-6

## SCHEXNAYDER SITE STUDY

### ASCENSION PARISH, LOUISIANA

TYPE OF BORING: WET ROTARY

PSI Project No.: 0193596-01

DEPTH, FT.	SOIL TYPE	USCS SYMBOL	SAMPLES	LATITUDE: N 30° 4' 31.0" LONGITUDE: W 90° 58' 22.3"	N-BLOWS/FT.	MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	% PASSING No. 200 SIEVE	SHEAR STRENGTH (tsf)					SHEAR STRENGTH (tsf)				UNIT DRY WEIGHT (pcf)	
				BORING LOCATION PLAN: APPENDIX FIGURE NO. 2							SOIL DESCRIPTION	SHEAR STRENGTH (tsf)					HAND PEN (tsf)	UC (tsf)	TORVANE (tsf)		UU (tsf)
												0.0	0.5	1.0	1.5	2.0					
		CH		<b>4-INCHES LIMESTONE</b> <b>Firm to soft, brown fat CLAY</b> w/ traces of ferrous nodules -becomes gray -w/ organics  -becomes firm		44						○ HP	● UC			0.50				68	
					55	103	29	74				● UC			0.25	0.20					
5					86							○ HP			0.13						
					55										0.25						
10					52							○ HP			0.38						
15				39							○ HP										
20		CL		<b>Firm, gray lean CLAY</b> w/ silt		28	34	23	11			● UC		0.25	0.30				95		
25		CH		<b>Firm, gray fat CLAY</b>		45						○ HP		0.25							
30				-slickensided		47						○ HP		0.38							
35		ML		<b>Firm, gray SILT</b> w/ fat clay pockets	2	43															
40		CH		<b>Soft to firm, gray fat CLAY</b> w/ silt partings		69						○ HP		0.13							
45				-w/ organics		90						○ HP		0.13							
50				-w/ lean clay layer		43						○ HP		0.25							

DEPTH OF BORING: 75 feet

DATE DRILLED: 7/24/14

GROUNDWATER DURING DRILLING (FT): 7

GROUNDWATER UPON COMPLETION (FT): 5

NOTES: The stratification lines represent approximate boundaries.













# LOG OF BORING B-6

## SCHEXNAYDER SITE STUDY

### ASCENSION PARISH, LOUISIANA

TYPE OF BORING: WET ROTARY

PSI Project No.: 0193596-01

DEPTH, FT.	SOIL TYPE	USCS SYMBOL	SAMPLES	LATITUDE: N 30° 4' 31.0" LONGITUDE: W 90° 58' 22.3"	SOIL DESCRIPTION	N-BLOWS/FT.	MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	% PASSING No. 200 SIEVE	SHEAR STRENGTH (tsf)					SHEAR STRENGTH (tsf)				UNIT DRY WEIGHT (pcf)
				BORING LOCATION PLAN: APPENDIX FIGURE NO. 2								HP	UC	TV	UU	HAND PEN (tsf)	UC (tsf)	TORVANE (tsf)	UU (tsf)		
								LL	PL	PI		0.0	0.5	1.0	1.5	2.0					
-55				-slickensided			48										0.50	0.32			71
-60							53										0.38				
-65				-w/ calcareous nodules			51										0.25				
-70				-becomes gray and tan w/ calcareous nodules			50										0.50				
-75				-becomes gray			54										0.38				
				Boring terminated at 75 feet.																	
-80																					
-85																					
-90																					
-95																					
-100																					

DEPTH OF BORING: 75 feet

DATE DRILLED: 7/24/14

NOTES: The stratification lines represent approximate boundaries.

CLIENT BATON ROUGE AREA CHAMBER

PROJECT NAME SCHEXNAYDER SITE STUDY

PROJECT LOCATION ASCENSION PARISH, LOUISIANA

## LITHOLOGIC SYMBOLS

### (Unified Soil Classification System)



CH: Fat Clay  
(CH)



CL: Lean Clay  
(CL)



LIMESTONE:  
Limestone



ML: Silt (ML)

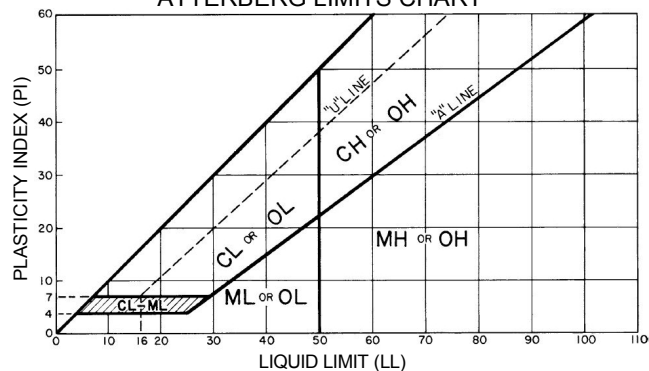
## CONSISTENCY OF COHESIVE SOILS

CONSISTENCY	SHEAR STRENGTH IN TONS/FT <sup>2</sup> (tsf)
VERY SOFT	0.0 TO 0.125
SOFT	0.125 TO 0.25
FIRM	0.25 TO 0.5
STIFF	0.5 TO 1.0
VERY STIFF	1.0 TO 2.0
HARD	>2.0 OR 2.0+

## RELATIVE DENSITY OF GRANULAR SOILS

CONSISTENCY	N-VALUE IN BLOWS/FOOT
VERY LOOSE	0-4
LOOSE	4-9
MEDIUM DENSE	10-29
DENSE	30-49
VERY DENSE	>50 OR 50+

## ATTERBERG LIMITS CHART



## SAMPLER SYMBOLS



Split Spoon



Shelby Tube

## ABBREVIATIONS

NP - NON PLASTIC  
UC - UNCONFINED COMPRESSION  
UU - UNCONSOLIDATED UNDRAINED TRIAXIAL  
TV - TORVANE  
W/ - WITH

▼ Water Level at Time of Drilling, or as Shown  
▽ Water Level at End of Drilling, or as Shown  
▼ Water Level After 24 Hours, or as Shown