Project No.: 03.14.859.054

Client: United States Army Corps of Engineers

Project: Beltway 8 PA Lab Testing
Contract No. DACW64-03-D-0008, Delivery Order No. 0054

Boring No.	Sample No.	Soil Description	USCS	Water Content (%)	Dry Density (pcf)	Liquid Limit	Plastic Limit	Plast. Index	Finer than #200 Sieve (%)	Uc/UU. Compr. (tsf)	Cell Press. (psi)	Failure Strain (%)	Failure Type
	7	Gray and tan FAT CLAY; traces of ferrous nodules	CH	29.4									
06-05													
	2	Gray and tan SANDY FAT CLAY; few ferrous and calcareous nodules	CH	16.8									
	4	Gray and tan FAT CLAY; sand seams, traces of ferrous nodules	CH	16.1									
	7	Tan and light gray FAT CLAY	CH	28.9	95.6	77	32	45	98.8				
	9	Gray and tan FAT CLAY; sand pockets, traces of ferrous and calcareous nodules	CH	35.5									
06-06													
	1	Gray and brown LEAN CLAY; traces of ferrous nodules	CL	15.8									
	2	Gray and tan LEAN CLAY with SAND; traces of ferrous nodules	CL	16.8		44	15	29	73.8				
	3	Gray and tan SANDY FAT CLAY; traces of ferrous nodules	CH	19.4									
	4	Tan and light gray FAT CLAY with SAND; few calcareous nodules	CH	16.9	113.4	60	18	42	72.6	3.30	13	14.4	Bulge
	5	Gray and tan FAT CLAY; few calcareous nodules and traces of ferrous nodules	CH	18.9									
	6	Gray and tan FAT CLAY; traces of ferrous nodules	CH	23.3		72	23	49	93.3				
06-07													
	2	Dark gray and brown SANDY LEAN CLAY; sand pockets and traces of ferrous nodules	CL	19.6	110.7	33	16	17	68.1	2.48	21	3.9	Vertical shear
	4	Gray and reddish-brown FAT CLAY; traces of ferrous and calcareous nodules	CH	20.1		54	18	36					
	6	Gray and tan FAT CLAY; few calcareous nodules and traces of ferrous nodules	CH	20.5		55	18	37					
06-08													
	2	Gray and tan SANDY FAT CLAY; traces of ferrous nodules	CH	22.9									
	3	Gray and tan SANDY FAT CLAY; traces of ferrous nodules	CH	14.8		62	18	44	65.5				
	4	Gray and reddish-brown FAT CLAY; vertical sand seams and traces of ferrous nodules	CH	13.0									
	5	Gray and tan FAT CLAY; traces of ferrous and calcareous nodules	CH	25.5									
	6	Gray and tan FAT CLAY; traces of ferrous and calcareous nodules	CH	23.6									
06-09													
	3	Gray FAT CLAY with SAND	CH	17.7	106.6	50	19	31	74.0				
	5	Gray and tan FAT CLAY; traces of ferrous nodules and few calcareous nodules	CH	22.0		58	18	40					
	7	Gray and tan FAT CLAY; traces of ferrous and calcareous nodules	CH	27.9		70	25	45					

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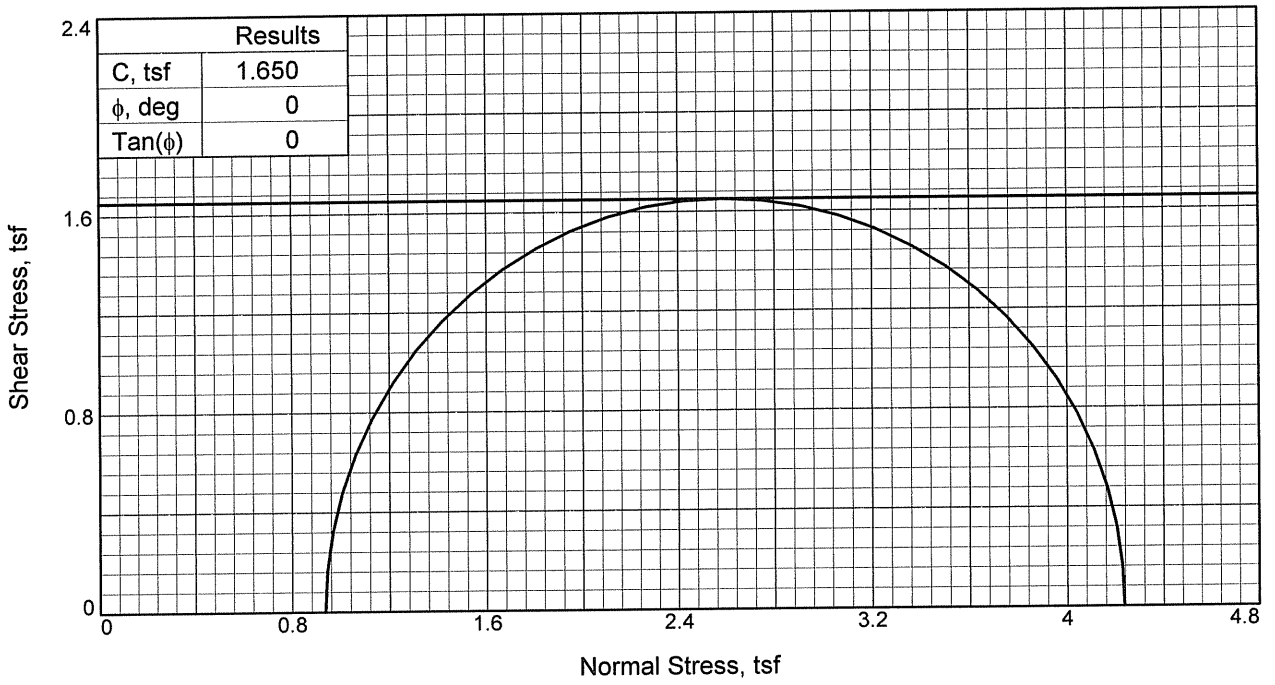

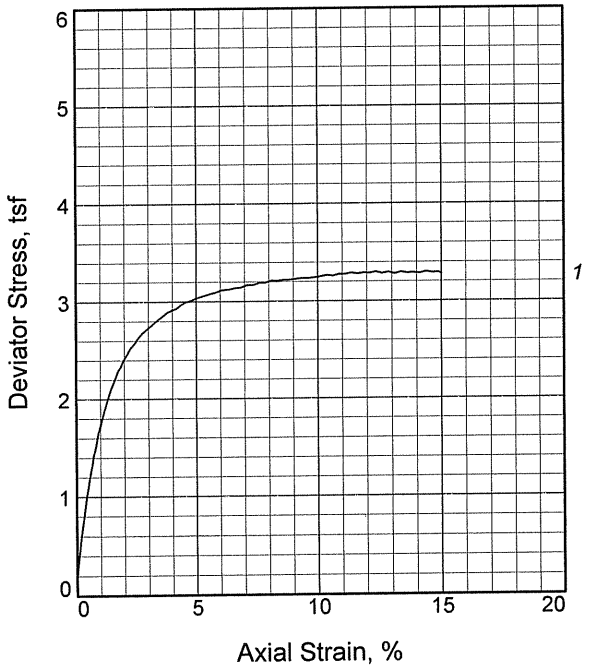

Sample No.		1
Initial	Water Content, %	16.9
	Dry Density, pcf	113.3
	Saturation, %	90.6
	Void Ratio	0.5146
	Diameter, in.	2.85
	Height, in.	5.91
At Test	Water Content, %	16.9
	Dry Density, pcf	113.3
	Saturation, %	90.6
	Void Ratio	0.5146
	Diameter, in.	2.85
	Height, in.	5.91
Strain rate, %/min.		1.00
Back Pressure, psi		0.00
Cell Pressure, psi		13.00
Fail. Stress, tsf		3.30
Strain, %		14.4
Ult. Stress, tsf		3.28
Strain, %		
σ_1 Failure, tsf		4.24
σ_3 Failure, tsf		0.94

Type of Test:
Unconsolidated Undrained

Sample Type: Undisturbed

Description: Tan and light gray FAT CLAY; few calcareous nodules

LL= 60 **PL=** 18 **PI=** 42

Assumed Specific Gravity= 2.75

Remarks:
Failure Type: Bulge
Test Method: ASTM D 2850

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Source of Sample: 06-06

Sample Number: 4

Proj. No.: 03.14.859.054 **Date Sampled:** 10/5/06

TRIAXIAL SHEAR TEST REPORT

Tolunay-Wong Engineers, Inc.