

LOG OF BORING B-2

Surfside Pedestrian Bridge and Shore Stabilization
Surfside, Texas

TYPE OF BORING: Wet Rotary

PSI Project No.: 286-373

BORING LOG HOUSTON - PSIHOUSTON.GDT - 12/21/10 10:21 - P:\286 REPORTS\286-373 SURF SIDE FOOTBRIDGE\286-373 BORING LOGS.GPJ

DEPTH, FT.	SOIL TYPE	USCS SYMBOL	SAMPLES	COORDINATE (X) OR EASTING: 300 COORDINATE (Y) OR NORTHING: 100 APPROXIMATE SURFACE ELEVATION: 10 feet LATITUDE: LONGITUDE:	N-BLOWS/FT.	% PASSING No. 200 SIEVE	LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	MOISTURE CONTENT (%)	SHEAR STRENGTH (tons/square foot)						UNIT WEIGHT (pcf)	
				SOIL DESCRIPTION							○ HP ● UC △ TV ▲ UU 0.0 0.5 1.0 1.5 2.0 2.5							
			LL								PL	PI						
				FILL: CLAYEY SAND LOOSE TO MEDIUM DENSE, BROWN - with organic material, 0 to 2 feet - with gravel and asphalt, 4 to 6 feet	17 12 15 8	32	28	12	16	19 16 22 17								
5																		
			▽															
		SM		SILTY SAND (SM) MEDIUM DENSE TO DENSE, LIGHT BROWN TO GRAY - gray, 13 to 20 feet - with seashells, 18 to 20 feet	14 39 35	11				23 23 22								
10																		
15																		
20																		
		CL		LEAN CLAY (CL) VERY SOFT, BROWN AND GRAY - WOH: weight of hammer	WOH	87	46	20	26	34								
25																		
		CH		FAT CLAY (CH) STIFF TO VERY STIFF, GRAY AND REDDISH BROWN - with calcareous nodules, 28 to 30 feet						23								
30																		
										31								
35																		
40										27								
45				- with calcareous nodules, 43 to 50 feet		98	65	14	51	28								
50										26								

DEPTH OF BORING: 60 FEET

INITIAL GROUND WATER: 8 FEET

DATE DRILLED: 10/22/10

FINAL GROUND WATER: CAVED AT 10 FEET

NOTES:

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DEPTH, FT.	SOIL TYPE	USCS SYMBOL	SAMPLES	SOIL DESCRIPTION	N-BLOWS/FT.	% PASSING No. 200 SIEVE	LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	MOISTURE CONTENT (%)	SHEAR STRENGTH (tons/square foot)						UNIT WEIGHT (pcf)
											○ HP ● UC △ TV ▲ UU						
				LL							PL	PI	0.0	0.5	1.0	1.5	
		CH	 	FAT CLAY (CH) STIFF TO VERY STIFF, REDDISH BROWN						22							107
55																	
										33							
60																	
65																	
70																	
75																	
80																	
85																	
90																	
95																	
100																	

DEPTH OF BORING: 60 FEET

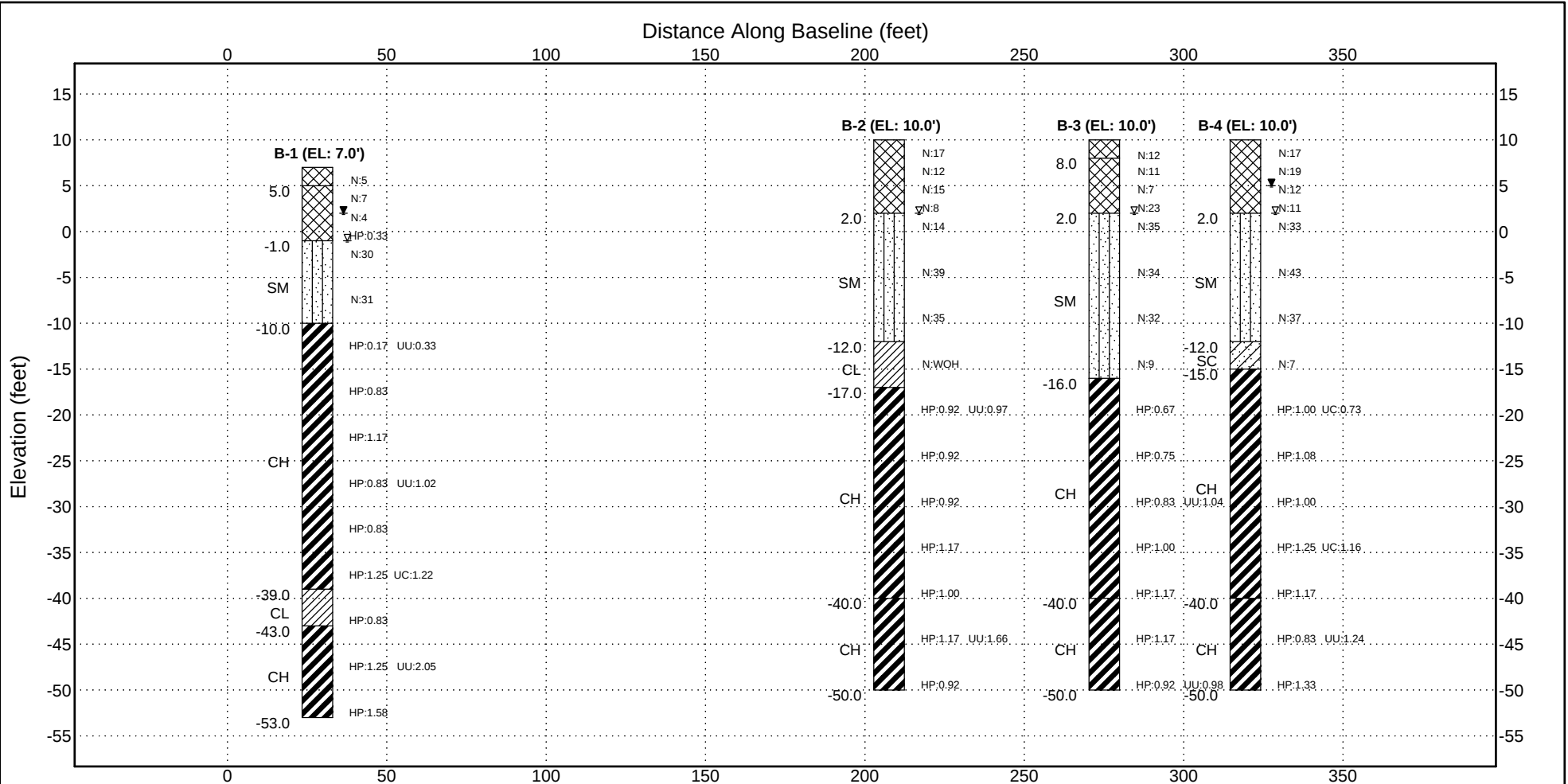
INITIAL GROUND WATER: 8 FEET

DATE DRILLED: 10/22/10

FINAL GROUND WATER: CAVED AT 10 FEET

NOTES:

FENCE, PSI - PSIHOUSTON.GDT - 12/21/10 10:25 - P:\286 REPORTS\286-373 SURSIDE FOOTBRIDGE\286-373 BORING LOGS.GPJ



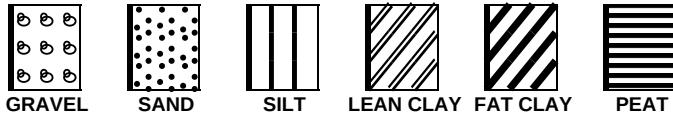
Stratifications shown are generalized and variations could occur in the field. The Hand Penetrometer (HP), Unconfined Compression (UC) values are shear strengths in tsf. N is blows per foot.

 Fill Material  Silty Sand (SM)  Fat Clay (CH)  Lean Clay (CL)  Clayey Sand (SC)

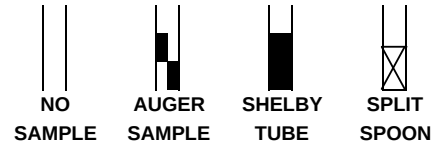
STRATUM	START	END	STRATUM DESCRIPTION	GENERALIZED SUBSURFACE PROFILE		
				Surfside Pedestrian Bridge and Shore Stabilization Surfside, Texas		
				PROJECT No.	DATE	PLATE
				286-373	Dec 2010	8

KEY TO TERMS AND SYMBOLS USED ON LOGS

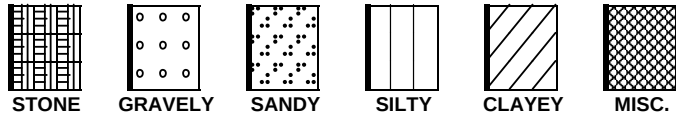
SOIL TYPE



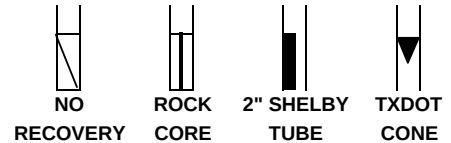
SAMPLER TYPE



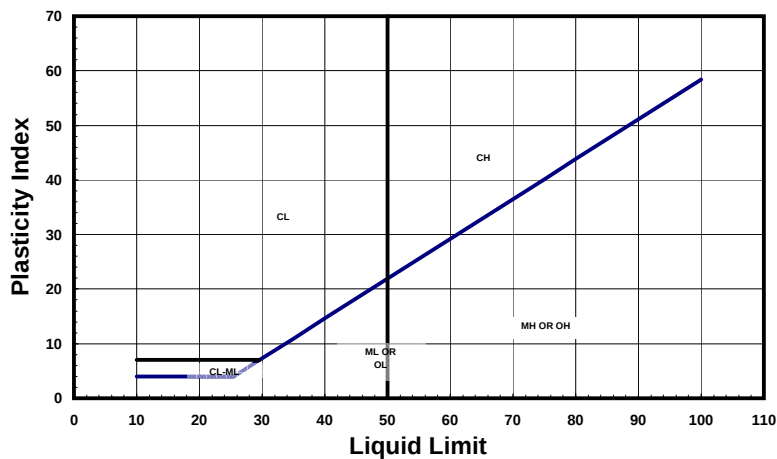
MODIFIERS



(SEE TEXT ON LOG)



UNIFIED SOIL CLASSIFICATION SYSTEM - ASTM D 2487



CONSISTENCY OF COHESIVE SOILS

CONSISTENCY	SHEAR STRENGTH IN TONS/FT ²
VERY SOFT	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 - GRANULAR SOILS

CONSISTENCY	N-VALUE (BLOWS/FOOT)
VERY LOOSE	0 TO 4
LOOSE	5 TO 9
MEDIUM DENSE	10 TO 29
DENSE	30 TO 50
VERY DENSE	> 50 OR 50+

DEGREE OF PLASTICITY OF COHESIVE SOILS

DEGREE OF PLASTICITY	PLASTICITY INDEX	SWELL POTENTIAL
NONE OR SLIGHT	0 TO 4	NONE
LOW	4 TO 20	LOW
MEDIUM	20 TO 30	MEDIUM
HIGH	30 TO 40	HIGH
VERY HIGH	> 40	VERY HIGH

MOISTURE CONDITION COHESIVE SOILS

DESCRIPTION	CONDITION
Absence of moisture, dusty, dry to touch	DRY
Damp but no visible water	MOIST
Visible free water	WET

CONSISTENCY OF COHESIVE SOILS AFTER TERZAGHI (1948)

CONSISTENCY	N-VALUE (BLOWS/FOOT)
VERY SOFT	< 2
SOFT	2 TO 4
FIRM	4 TO 8
STIFF	8 TO 15
VERY STIFF	15 TO 30
HARD	> 30

ABBREVIATIONS

HP - HAND PENETROMETER UC - UNCONFINED COMPRESSION TEST
TV - TORVANE UU - UNCONSOLIDATED UNDRAINED TRIAXIAL
MV - MINIATURE VANE CU - CONSOLIDATED UNDRAINED

NOTE: PLOT INDICATES SHEAR STRENGTH AS OBTAINED BY ABOVE TESTS

▽ FINAL GROUND WATER LEVEL
▽ INITIAL GROUND WATER LEVEL

CLASSIFICATION OF GRANULAR SOILS

U.S. STANDARD SIEVE SIZE(S)							
6"	3"	3/4"	4	10	40	200	
BOULDERS	COBBLES	GRAVEL		SAND			
		COARSE	FINE	COARSE	MEDIUM	FINE	
152	76.2	19.1	4.76	2.0	0.42	0.074	
							0.002
							CLAY

GRAIN SIZE IN MM



Geotechnical Consulting Services
Houston, Texas.