CORPS OF ENGINEERS
District Soils Laboratory
Galveston, Texas

Soil Laboratory Report No. 349
Plate 1

SWDN-C-62

Project Channel to Liberty — LABORATORY LOG — Sheet No. 1 of 4 Sheets

Hole No. 6D - 1 Station Moss Bluff Offset _____ Date _____

Symbol	Depth in Feet	Elev. in Feet	M.C. % Dry Wt.	U.D.W. lbs./Cu. Ft.	L.L.	P.I.	Bar. L.S.	Sieve Analysis Gr.	Sieve Analysis Sa.	Sieve Analysis Fines	Classification	Field Sample No.
	0.0											
			18.6	-	Non-Plastic		0.5	0	57	43	Gray, SANDY SILT, ML, Friable	Jar 1
			23.1	-	33	14	8.5	0	33	67	Gray to Rust, SANDY CLAY, CL, Plastic	Jar 2
	5.0		15.6	-	Not Obtainable		3.0	0	0-56 / 56	44	Tan, SANDY SILT, ML, Friable	Jar 3
	10.0		-	-	Non-Plastic		0.0	0	5-87 / 92	8	Tan, SAND, SP	Bag 1
	15.0											
			-	-	Non-Plastic		0.0	0	13-75 / 88	12	Tan, SILTY SAND, SM, Friable	Bag 2
	20.0											

CORPS OF ENGINEERS
District Soils Laboratory
Galveston, Texas

Soil Laboratory Report No. 349
Plate 2

SWDN-C-62

Project Channel to Liberty — LABORATORY LOG — Sheet No. 2 of 4 Sheets

Hole No. 6D - 1 Station Moss Bluff Offset _____ Date _____

Symbol	Depth in Feet	Elev. in Feet	M.C. % Dry Wt.	U.D.W. lbs./Cu. Ft.	L.L.	P.I.	Bar. L.S.	Sieve Analysis Gr.	Sieve Analysis Sa.	Sieve Analysis Fines	Classification	Field Sample No.
	20.0											
	25.0											Bag 2
			19.6	-	Non-Plastic		0.0	0	4-94 98	2	Firm, Disturbed	D.B. 1
			10.5	-	Non-Plastic		0.0	1	15-78 93	6	Tan, SAND, SP, Disturbed	D.B. 2
	30.0		21.8	107	43	29	16.0	2	9	89	Blue mottled Tan, CLAY, CL, Stiff	D.B. 3
	35.0		21.0	-	27	14	8.5	10	22	68	Gray, SANDY CLAY, CL, Plastic	Jar 4
			22.3	-	27	11	6.5	0	9	91	Gray to Tan, CLAY CL, Plastic	Jar 5
	40.0		19.7	-	25	3	2.0	0	18	82	Gray to Tan, SILT ML, Disturbed	D.B. 4

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District Soils Laboratory
Galveston, Texas

Soil Laboratory Report No. 349
Plate 3

SWDN-C-62

Project Channel to Liberty — LABORATORY LOG — Sheet No. 3 of 4 Sheets

Hole No. 6D - 1 Station Moss Bluff Offset _____ Date _____

Symbol	Depth in Feet	Elev. in Feet	SUMMARY OF TEST RESULTS: M.C. % Dry Wt.	U.D.W. lbs./Cu. Ft.	L.L.	P.I.	Bar. L.S.	Sieve Analysis: Gr.	Sa.	Fines	Classification	Field Sample No.
	40.0											
			24.6	100	56	40	21.0	0	1	99	Gray to Brown, CLAY, CH, Plastic to Stiff, Sand Pockets present	D.B. 5
	45.0		24.3	-	54	41	21.5	0	1	99	Gray to Tan, CLAY CH, Stiff	Jar 6
	50.0		19.3	-	54	39	20.5	0	3	97		Jar 7
	55.0		21.9	-	50	33	18.0	0	3	97	Tan, CLAY, CH, Stiff to Hard	Jar 8
	60.0											

CORPS OF ENGINEERS
District Soils Laboratory
Galveston, Texas

Soil Laboratory Report No. 349
Plate 4

SWDN-C-62

Project Channel to Liberty — LABORATORY LOG — Sheet No. 4 of 4 Sheets

Hole No. 6D - 1 Station Moss Bluff Offset _____ Date _____

Symbol	Depth in Feet	Elev. in Feet	SUMMARY OF TEST RESULTS								Classification	Field Sample No.
			M.C. % Dry Wt.	U.D.W. lbs./Cu. Ft.	L.L.	P.I.	Bar. L.S.	Sieve Analysis				
								Gr.	Sa.	Fines		
	60.0											
												Jar 8
	65.0											

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District Soils Laboratory
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Soil Laboratory Report No. 349
Plate 17

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Project Channel to Liberty — LABORATORY LOG — Sheet No. 1 of 6 Sheets

Hole No. 6D - 1 Station Moore's Bluff Offset _____ Date _____

Symbol	Depth In Feet	Elev. in Feet	SUMMARY OF TEST RESULTS: M.C. % Dry Wt.	U.D.W. lbs./Cu. Ft.	L.L.	P.I.	Bar. L.S.	Sieve Analysis: Gr.	Sa.	Fines	Classification	Field Sample No.
	0.0											
	5.0		17.5	-	52	37	19.5	0	8	92	Tan, CLAY, CH, Stiff	Jar 1
	10.0											
			21.5	-	40	24	14.0	0	8	92	Tan, CLAY, CL, Plastic to Stiff	Jar 2
	15.0											
			16.6	-	35	19	11.5	0	17	83	Gray to Tan, CLAY, CL, Plastic to Friable	Jar 3
	20.0											

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District Soils Laboratory
Galveston, Texas

Soil Laboratory Report No. 349
Plate 18

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LABORATORY LOG

Project Channel to Liberty — Sheet No. 2 of 6 Sheets

Hole No. 6D - 1 — Station Moore's Bluff — Offset — Date

Symbol	Depth in Feet	Elev. in Feet	M.C. % Dry Wt.	U.D.W. lbs./Cu. Ft.	L.L.	P.I.	Bar. L.S.	Sieve Analysis Gr	Sieve Analysis Sa.	Sieve Analysis Fines	Classification	Field Sample No.
	20.0											
	25.0										Gray to Tan, CLAY, CL, Plastic to Friable	Jar 3
	30.0		20.6	-	33	18	10.5	0	25	75	Gray to Tan, SANDY CLAY, CL, Soft	Jar 4
	35.0		25.2	-	66	41	21.5	0	3	97	Tan to Brown, Clay CH, Stiff	Jar 5
	40.0											

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Galveston, Texas

Soil Laboratory Report No. 349
Plate 19

SWDN-C-62

Project Channel to Liberty — LABORATORY LOG — Sheet No. 3 of 6 Sheets

Hole No. 6D - 1 Station Moore's Bluff Offset _____ Date _____

Symbol	Depth In Feet	Elev. in Feet	SUMMARY OF TEST RESULTS: M.C. % Dry Wt.	U.D.W. lbs./Cu. Ft.	L.L.	P.I.	Bar. L.S.	Sieve Analysis: Gr.	Sa.	Fines	Classification	Field Sample No.
	40.0											
												Jar 5
			21.2	-	40	23	13.5	0	3	97	Tan, CLAY, CL, Plastic	Jar 6
	45.0											
	50.0		16.8	-	31	11	7.0	0	11	89	Gra y to Tan, CLAY, CL, Friable	Jar 7
	55.0											
			24.4	-	74	52	25.0	0	2	98	Gray to Tan, CLAY, CH, Stiff	Jar 8
	60.0											

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District Soils Laboratory
Galveston, Texas

Soil Laboratory Report No. 349
Plate 20

SWDN-C-62

LABORATORY LOG

Project Channel to Liberty

Sheet No. 4 of 6 Sheets

Hole No. 6D - 1 Station Moore's Bluff Offset _____ Date _____

Symbol	Depth in Feet	Elev. in Feet	SUMMARY OF TEST RESULTS								Classification	Field Sample No.
			M.C. % Dry Wt.	U.D.W. lbs./Cu. Ft.	L.L.	P.I.	Bar. L.S.	Sieve Analysis Gr.	Sa.	Fines		
	60.0											
											Gray to Tan, CLAY, CH, Stiff	Jar 8
	65.0		22.4	-	57	43	22.0	0	2	98	Gray, CLAY, CH, Stiff to Hard	Jar 9
	70.0											
			27.9	-	71	52	25.0	0	10	90	Gray to Brown, CLAY, CH, Stiff	Jar 10
	75.0											
			23.7	-	44	34	18.5	0	14	86	Gray, CLAY, CL, Plastic	Jar 11
	80.0											

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Galveston, Texas

Soil Laboratory Report No. 349
Plate 21

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LABORATORY LOG

Project Channel to Liberty — Sheet No. 5 of 6 Sheets

Hole No. 6D - 1 — Station Moore's Bluff — Offset — Date

Symbol	Depth in Feet	Elev. in Feet	M.C. % Dry Wt.	U.D.W. lbs./Cu. Ft.	L.L.	P.I.	Bar. L.S.	Sieve Analysis Gr.	Sieve Analysis Sa.	Sieve Analysis Fines	Classification	Field Sample No.
	80.0											
												Jar 11
	85.0											
			24.6	-	46	33	18.0	0	3	97	Gray, CLAY, CL, Plastic	Jar 12
	90.0											
			25.0	-	46	31	17.0	0	2	98		Jar 13
	95.0											
			21.1	107	Non-Plastic		1.0	1	18	81	Firm	D.B. 1
											Gray, SILT, ML	
			22.0	-	Non-Plastic		1.0	0	15	85	Watery	Jar 14
	100.0											

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Plate 22

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Project Channel to Liberty — LABORATORY LOG — Sheet No. 6 of 6 Sheets

Hole No. 6D - 1 Station Moore's Bluff Offset _____ Date _____

Symbol	Depth in Feet	Elev. in Feet	M.C. % Dry Wt.	U.D.W. lbs./Cu. Ft.	L.L.	P.I.	Bar. L.S.	Sieve Analysis Gr.	Sieve Analysis Sa.	Sieve Analysis Fines	Classification	Field Sample No.
	100.0											
			19.3	109	Non-Plastic		1.5	0	14	86	Firm	D.B. 2
											Gray, SILT, ML	
			20.4	-	Non-Plastic		2.0	0	11	89		Jar 15
											Watery	
	105.0		20.2	111	Non-Plastic		1.5	0	13	87	Top 1.0' Firm	D.B. 3
			40.7	-	64	37	19.5	0	1	99	Light Gray to Blue, CLAY, CH, Plastic Bott.	
	110.0		23.2	-	45	31	17.0	0	11	89	Gray, CLAY, CL, Stiff	Jar 16
	115.0		28.1	-	64	43	22.0	0	3	97	Gray, CLAY, CH, Plastic to Stiff	Jar 17
	120.0											

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District Soils Laboratory
Galveston, Texas

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Project Channel to Liberty — LABORATORY LOG — Sheet No. 1 of 3 Sheets

Hole No. 6D - 1 Station Red Bluff Offset _____ Date _____

Symbol	Depth in Feet	Elev. in Feet	M.C. % Dry Wt.	U.D.W. lbs./Cu. Ft.	L.L.	P.I.	Bar. L.S.	Sieve Analysis Gr.	Sieve Analysis Sa.	Sieve Analysis Fines	Classification	Field Sample No.
	0.0											
	5.0		17.9	-	26	8	5.0	0	28-37 65	35	Rust, CLAYEY SAND, SC, Firm	Jar 1
	10.0		12.7	-	Non-Plastic		0.0	0	65-22 87	13	Tan, SILTY SAND, SM, Friable	Jar 2
	15.0											
	20.0											Bag 1

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LABORATORY LOG

Project Channel to Liberty — Sheet No. 2 of 3 Sheets

Hole No. 6D - 1 — Station Red Bluff — Offset — Date

Symbol	Depth In Feet	Elev. In Feet	M.C. % Dry Wt.	U.D.W. lbs./Cu. Ft.	L.L.	P.I.	Bar. L.S.	Sieve Analysis Gr.	Sieve Analysis Sa.	Sieve Analysis Fines	Classification	Field Sample No.
	20.0											
			12.1	-	Non-Plastic		0.0	0	26-68 / 94	6	Tan, SAND, SP, Firm, Slumped	D.B. 1
	25.0											
			-	-	Non-Plastic		0.0	0	3-91 / 94	6	Tan, SAND, SP, Friable	Bag 1
	30.0											
	35.0		14.8	118	22	5	3.0	13	13-58 / 71	16	Tan, SILTY SAND, SM, Firm	D.B. 2
			17.1	-	Non-Plastic		0.0	0	11-83 / 94	6	Tan, SAND, SP, Firm, Slumped Disturbed	D.B. 3
	40.0											

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Galveston, Texas

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LABORATORY LOG

Project Channel to Liberty — Sheet No. 3 of 3 Sheets

Hole No. 6D - 1 — Station Red Bluff — Offset — Date

Symbol	Depth in Feet	Elev. in Feet	M.C. % Dry Wt.	U.D.W. lbs./Cu. Ft.	L.L.	P.I.	Bar. L.S.	Sieve Analysis Gr.	Sieve Analysis Sa.	Sieve Analysis Fines	Classification	Field Sample No.
	40.0											
												D.B. 3
			20.6	-	Non-Plastic		0.0	0	91-5 / 96	4		Jar 4
	45.0										Tan, SAND, SP, Watery	
	50.0		23.6	-	Non-Plastic		0.0	0	90-7 / 97	3		Jar 5
	55.0											
	60.0											

CORPS OF ENGINEERS
District Soils Laboratory
Galveston, Texas

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Project Channel to Liberty — LABORATORY LOG — Sheet No. 1 of 5 Sheets

Hole No. 6D - 1 Station Kenefick Offset _____ Date _____

Symbol	Depth in Feet	Elev. in Feet	SUMMARY OF TEST RESULTS: M.C. % Dry Wt.	U.D.W. lbs./Cu. Ft.	L.L.	P.I.	Bar. L.S.	Sieve Analysis: Gr.	Sa.	Fines	Classification	Field Sample No.
	0.0											
	5.0		9.4	-	49	37	19.5	6	6	88	Gray, CLAY, CL	Jar 1
	10.0		31.2	-	85	59	27.0	0	1	99	Plastic to Stiff	Jar 2
	15.0										Gray to Tan, CLAY CH,	
	20.0		30.9	-	77	53	25.5	0	2	98	Stiff	Jar 3

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Project Channel to Liberty — LABORATORY LOG — Sheet No. 2 of 5 Sheets

Hole No. 6D - 1 Station Kenefick Offset _____ Date _____

Symbol	Depth in Feet	Elev. in Feet	SUMMARY OF TEST RESULTS: M.C. % Dry Wt.	U.D.W. lbs./Cu. Ft.	L.L.	P.I.	Bar. L.S.	Sieve Analysis: Gr.	Sa.	Fines	Classification	Field Sample No.
	20.0											
												Jar 3
			26.1	-	61	43	22.0	0	1	99	Tan, CLAY, CH, Plastic to Stiff	Jar 4
	25.0											
	30.0		16.6	-	27	16	9.5	0	12	88	Buff, CLAY, CL, Plastic	Jar 5
	35.0											
			28.1	-	73	41	21.5	0	1	99	Gray to Tan, CLAY CH, Stiff	Jar 6
	40.0											

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Project Channel to Liberty — LABORATORY LOG — Sheet No. 3 of 5 Sheets

Hole No. 6D - 1 Station Kenefick Offset _____ Date _____

Symbol	Depth in Feet	Elev. in Feet	SUMMARY OF TEST RESULTS: M.C. % Dry Wt.	U.D.W. lbs./Cu. Ft.	L.L.	P.I.	Bar. L.S.	Sieve Analysis: Gr.	Sa.	Fines	Classification	Field Sample No.
	40.0											
	45.0											Jar 6
	50.0		15.2	-	34	20	12.0	0	15	85	Gray, CLAY, CL, Stiff	Jar 7
	55.0		22.0	-	33	19	11.0	0	14	86	Gray to Tan, CLAY, CL, Plastic	Jar 8
	60.0		25.1	-	48	31	17.0	0	3	97	Tan, CLAY, CL, Plastic	Jar 9

CORPS OF ENGINEERS
District Soils Laboratory
Galveston, Texas

Soil Laboratory Report No. 349
Plate 34

SWDN-C-62

Project Channel to Liberty — LABORATORY LOG — Sheet No. 4 of 5 Sheets

Hole No. 6D - 1 Station Kenefick Offset _____ Date _____

Symbol	Depth in Feet	Elev. in Feet	SUMMARY OF TEST RESULTS: M.C. % Dry Wt.	U.D.W. lbs./Cu. Ft.	L.L.	P.I.	Bar. L.S.	Sieve Analysis: Gr.	Sa.	Fines	Classification	Field Sample No.
	60.0											
	65.0											Jar 9
	70.0		25.2	-	73	43	22.0	0	1	99	Tan to Gray, CLAY, CH, Plastic to Stiff	Jar 10
	75.0		28.7	-	77	46	23.0	0	1	99	Gray to Tan, CLAY, CH, Stiff	Jar 11
	80.0		25.0	-	31	17	10.0	0	14	86	Gray, CLAY, CL, Plastic	Jar 12

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District Soils Laboratory
Galveston, Texas

Soil Laboratory Report No. 349
Plate 35

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LABORATORY LOG

Project Channel to Liberty — Sheet No. 5 of 5 Sheets

Hole No. 6D - 1 — Station Kenefick — Offset — Date

Symbol	Depth in Feet	Elev. in Feet	M.C. % Dry Wt.	U.D.W. lbs./Cu. Ft.	L.L.	P.I.	Bar. L.S.	Sieve Analysis Gr.	Sieve Analysis Sa.	Sieve Analysis Fines	Classification	Field Sample No.
	80.0											
												Jar 12
	85.0		17.4	-	Non-Plastic		0.0	0	69-13 82	18	Tan, SILTY SAND, SM, Firm	Jar 13
			16.2	-	Non-Plastic		0.5	0	1-77 78	22	Gray, SILTY SAND, SM, Disturbed	D.B. 1
	90.0		22.4	-	Non-Plastic		0.0	0	81-9 90	10	Watery Tan, SILTY SAND, SM	Jar 14
			21.7	106	Non-Plastic		0.0	0	0-88 88	12	Firm	D.B. 2
	95.0										Tan, SILTY SAND, SM, Watery	Jar 14
	100.0											

Texas Highw[illegible]partment
Form 513 [illegible] 41-5m

Drilling Report and Log

Date November 30, 1949

County Chambers | Project No. 70-375 | Report No. 8
Control 508-2- | Highway No. 73 | Stream Crossing Trinity Channel

Station No. 1208+26.7 | Hole No. 6D-1 | Location Left / Right / Center -
Ground Elevation - 8.08 | Ground Water Elevation

Depth Below Ground From	To	FORMATION	Core Sample No.	Length of Core	Probable Specification Classification
0.0	2.0	Black waxy topsoil			Auger
2.0	4.0	Silty Clay	1		Denison
4.0	6.0	Silty Sand	2		Denison
6.0	8.0	Sand	3		Denison
8.0	10.0	Failed to get sample			
		At 11.0 - 12.0 Sand		27/135	Penetrometer
		Casing to 25.5			
25.5	26.3	Sandy Gray Clay	4		Denison
26.3	28.3	Sandy Tan & Gray Clay	5		Denison
28.3	30.3	Tan & Gray Clay	6		Denison
30.3	32.3	Tan & Gray Clay	7		Denison
32.3	34.3	Stiff Gray Clay	8		Denison
34.3	36.3	Sandy gray Clay	9		Denison
36.3	38.3	Stiff Tan & Gray Clay	10		Denison
38.3	40.3	Stiff Tan & Gray Clay	11		Denison
40.3	42.0	Stiff Tan Gray Clay	12		Denison
42.0	44.0	Grey Clay	13		Denison
44.0	46.0	Sandy Gray Clay	14		Denison
46.0	48.0	Sandy Gray Clay	15		Denison
		At 48.5 - 49.5 Gray Sand		37/255	Penetrometer
48.0	50.0	Gray Sand *	16		Denison

NOTE: The Probable Specification Classification depends on the type of project. Roadway Specifications classify excavation as Rock, Special or Common. Bridge Specifications classify excavation as Unclassified or as Common and Rock. Indicate above which classification appears to be applicable.

On Bridge Projects indicate material judged to be suitable for foundations, show characteristics, such as hard, firm or soft.

REMARKS:

* Sample taken at same depth as Penetration

The above information is based on my personal observations and may or may not represent conditions contiguous to the holes drilled.

Signature R. C. McCulley Jr. Insp
Title

S1850-741-5m