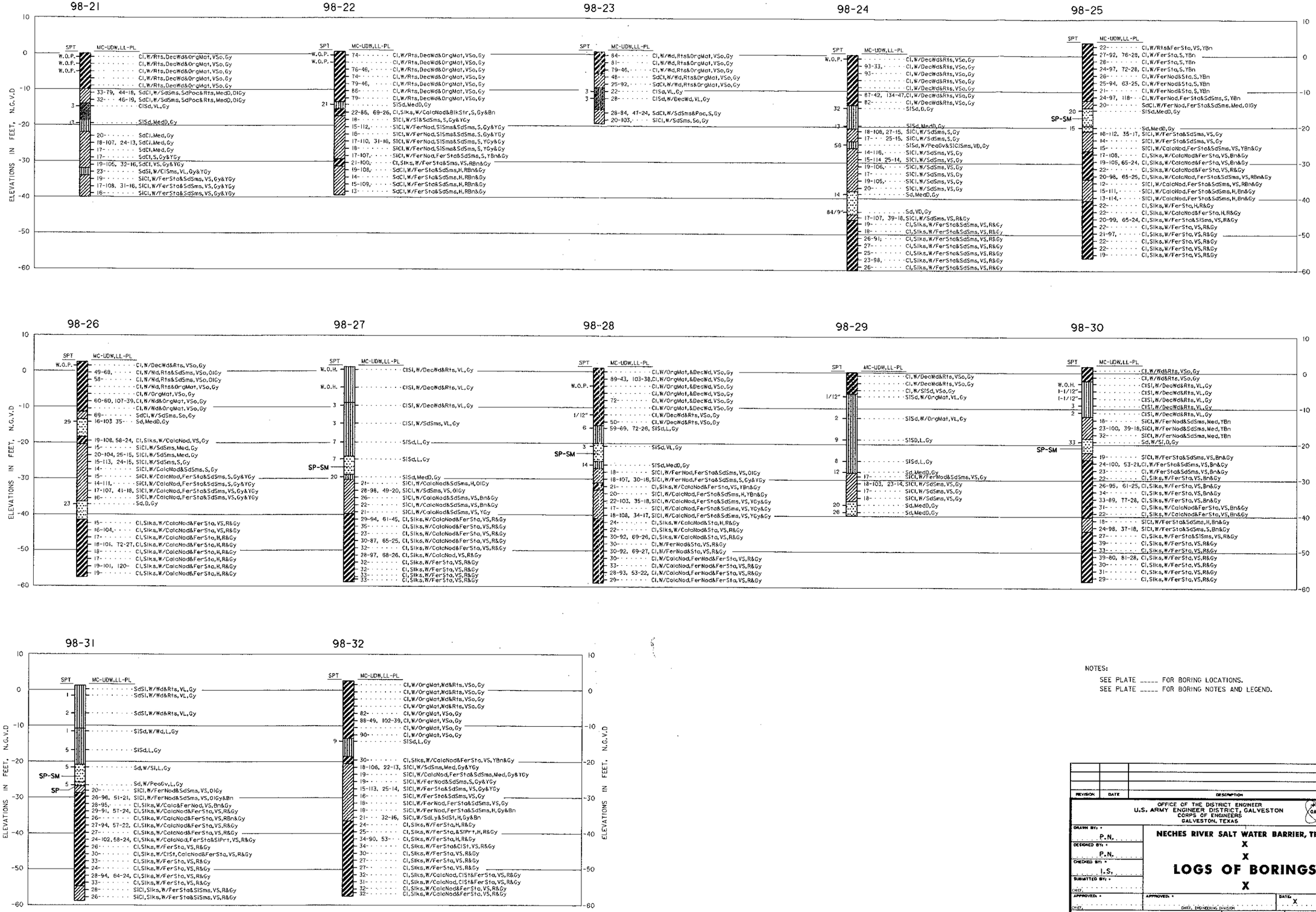
SUMMARY OF UNCONFINED COMPRESSION TEST RESULTS
NECHES RIVER SALT WATER BARRIER
BEAUMONT, TEXAS
TABLE-

BORING NO.	DEPTH (FT.)	DENSITY DATA Moisture Cont. %	DENSITY DATA Dry Wt (pcf)	MECHANICAL ANALYSIS Gvl.	MECHANICAL ANALYSIS Sand	MECHANICAL ANALYSIS Fine	ATTERBURG LIMITS L.L.	ATTERBURG LIMITS P.L.	% STRAIN @ MAX. STRESS	UNCON. COMP. STR (pcf)	CLASSIFICATION
98-21	24-26	18.2	106.6	0	18	82	24.0	13.0	3.9	630	Sandy Clay, Medium stiff, Gray
98-21	30-32	18.9	105.0	0	16	84	32.0	16.0	4.6	2090	Sandy Clay, Very stiff, Gray & yellowish gray
98-22	24-26	16.9	110.0	0	16	84	31.0	16.0	6	1980	Silty Clay, W / silt & sand seams,Very stiff, Gray & yellowish gray
98-23	16-18	27.9	84.9	0	14	86	47.0	24.0	4.3	1270	Silty Clay, W / sand seams & sand pockets, Stiff, Gray
98-24	10-12	41.7	77.8	0	1	99	134.0	47.0	3.6	90	Clay, W / decayed wood & roots, Very soft, Gray
98-24	28-30	14.7	114.1	0	8	92	25.0	14.0	10.5	2170	Silty Clay, W / sand seams, Very stiff, Gray
98-24	44.5-46	17.0	107.0	0	12	88	39.0	18.0	7.5	2000	Silty Clay, W / sand seams, Very stiff, Red & Gray
98-25	32-34	19.0	104.8	-	-	-	65.0	24.0	3.2	2220	Clay, W / calc nod & fer stains, slks, Very stiff, Brown & gray
98-25	40-42	15.3	111.4	-	-	-	-	-	3.4	3660	Clay, W / calc nod, fer stains, & sd sms, Very stiff, Reddish brown & gray
98-26	25-27	19.5	104.4	0	2	98	25.0	15.0	5	560	Silty Clay, W / sand seams, Medium stiff, Gray
98-26	35-37	16.8	106.6	0	7	93	41.0	18.0	4	2010	Silty Clay, W / sand seams, stiff, Gray
98-35	6.5-8	17.5	111.7	-	-	-	33.0	17.0	6.8	1370	Silty Clay, Stiff, Gray
98-40	14-16	76.4	43.9	-	-	-	-	-	2.1	70	Clay, W / decayed wood roots & organic material, Very soft, Gray
98-40	22-24	20.5	102.2	0	3	97	47.0	20.0	3.6	2030	Silty Clay, W / sand seams, Very stiff, Olive gray
98-40	32-34	25.5	94.5	-	-	-	-	-	3.3	2190	Clay, W / fer stains, slks,Very stiff, Reddish brown & gray
98-42	14-16	37.6	81.0	0	4	95	63.0	25.0	2.5	1060	Clay, W / fer nod & fer stains, Stiff,Yellowish brown



NOTES:

SEE PLATE _____ FOR BORING LOCATIONS.

SEE PLATE _____ FOR BORING NOTES AND LEGEND.

REVISION	DATE	DESCRIPTION	BY

OFFICE OF THE DISTRICT ENGINEER
U.S. ARMY ENGINEER DISTRICT, GALVESTON
CORPS OF ENGINEERS
GALVESTON, TEXAS

DRAWN BY: * P.N.
DESIGNED BY: * P.N.
CHECKED BY: * I.S.
SUBMITTED BY: *
CHIEF,
APPROVED: *
CHIEF,
APPROVED: *
CHIEF, ENGINEERING DIVISION
DATE: X
SPEC. DATE:

NECHES RIVER SALT WATER BARRIER, TEXAS
X
X
LOGS OF BORINGS
X

* AS REQUIRED BY ENGINEER CIRCULAR NO. 1110-1-8152 !

SCALE: AS SHOWN

Prepared under the direction of
Nicholas J. Buechler, Lt. Col. (P), C.E.,
District Engineer

DRAWING NUMBER X
SHEET X OF X FILE NO. X

EXHIBIT

DESIGN FILE: ¢DESIGN¢SPECIFICATION¢ CREATED BY: ¢USERNAME¢ ON: ¢¢DATE¢¢ AT: ¢TIME¢

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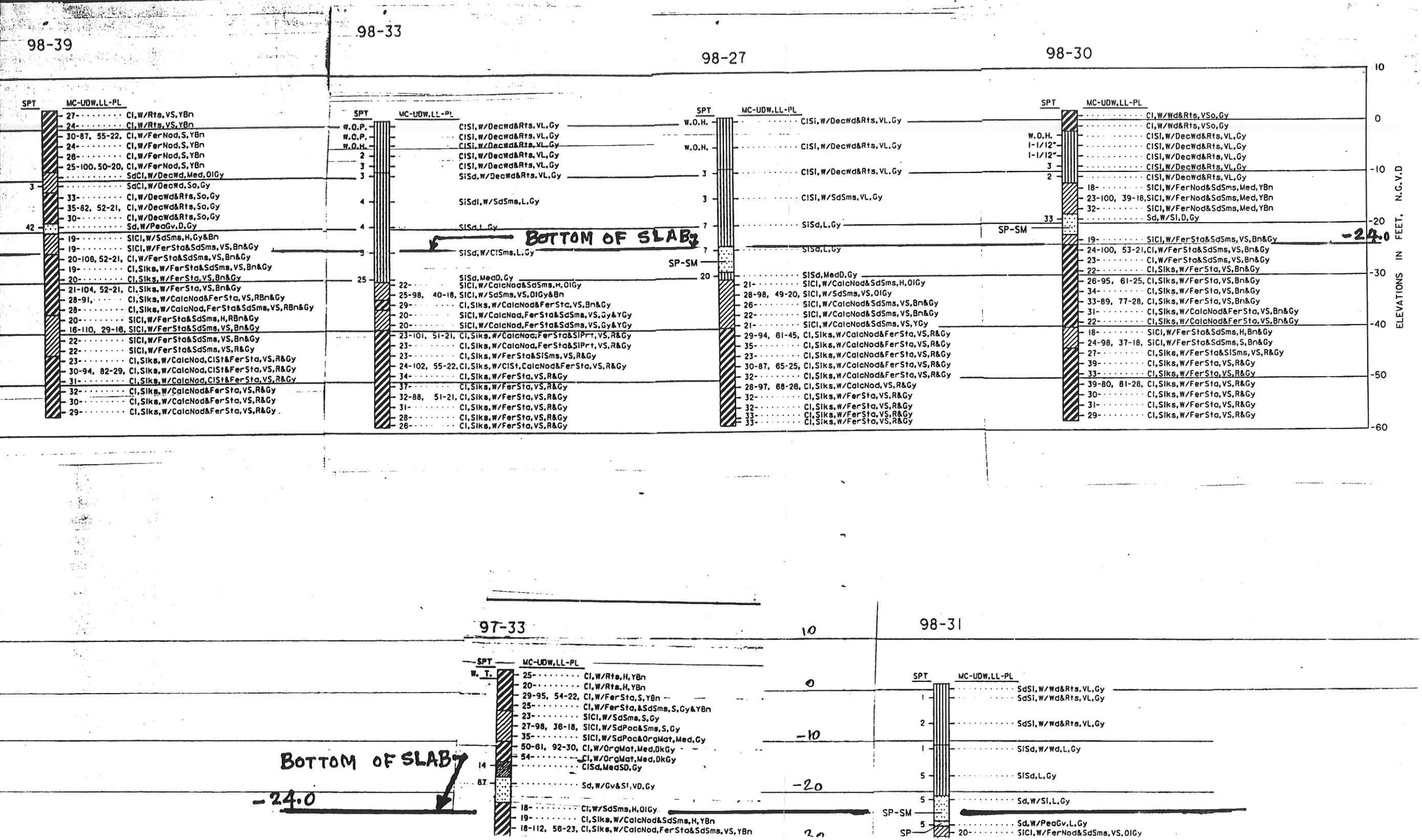

98-39
SPT
MC-UDW,LL-PL
27- Cl,W/Rts,VS,YBn
24- Cl,W/Rts,VS,YBn
30-87, 55-22, Cl,W/FerNod,S,YBn
24- Cl,W/FerNod,S,YBn
26- Cl,W/FerNod,S,YBn
25-100, 50-20, Cl,W/FerNod,S,YBn
SdCl,W/DecWd,Med,OlGy
3 SdCl,W/DecWd,So,Gy
33- Cl,W/DecWd&Rts,So,Gy
35-82, 52-21, Cl,W/DecWd&Rts,So,Gy
30- Cl,W/DecWd&Rts,So,Gy
42 Sd,W/PeaGv,D,Gy
19- SICl,W/SdSms,H,Gy&Bn
19- SICl,W/FerSta&SdSms,VS,Bn&Gy
20-106, 52-21, Cl,W/FerSta&SdSms,VS,Bn&Gy
19- Cl,Slks,W/FerSta&SdSms,VS,Bn&Gy
20- Cl,Slks,W/FerSta,VS,Bn&Gy
21-104, 52-21, Cl,Slks,W/FerSta,VS,Bn&Gy
28-91, Cl,Slks,W/CalcNod&FerSta,VS,RBn&Gy
28- Cl,Slks,W/CalcNod,FerSta&SdSms,VS,RBn&Gy
20- SICl,W/FerSta&SdSms,H,RBn&Gy
16-110, 29-16, SICl,W/FerSta&SdSms,VS,Bn&Gy
22- SICl,W/FerSta&SdSms,VS,Bn&Gy
22- SICl,W/FerSta&SdSms,VS,R&Gy
23- Cl,Slks,W/CalcNod,ClSt&FerSta,VS,R&Gy
30-94, 82-29, Cl,Slks,W/CalcNod,ClSt&FerSta,VS,R&Gy
31- Cl,Slks,W/CalcNod,ClSt&FerSta,VS,R&Gy
32- Cl,Slks,W/CalcNod&FerSta,VS,R&Gy
30- Cl,Slks,W/CalcNod&FerSta,VS,R&Gy
29- Cl,Slks,W/CalcNod&FerSta,VS,R&Gy
98-33
SPT
MC-UDW,LL-PL
W.O.P. ClSI,W/DecWd&Rts,VL,Gy
W.O.P. ClSI,W/DecWd&Rts,VL,Gy
W.O.H. ClSI,W/DecWd&Rts,VL,Gy
2 ClSI,W/DecWd&Rts,VL,Gy
3 ClSI,W/DecWd&Rts,VL,Gy
3 SiSd,W/DecWd&Rts,VL,Gy
4 SiSdI,W/SdSms,L,Gy
4 SiSd,L,Gy
BOTTOM OF SLAB
9 SiSd,W/ClSms,L,Gy
25 SiSd,MedD,Gy
22- SICl,W/CalcNod&SdSms,H,OlGy
25-98, 40-18, SICl,W/SdSms,VS,OlGy&Bn
29- Cl,Slks,W/CalcNod&FerSta,VS,Bn&Gy
20- SICl,W/CalcNod,FerSta&SdSms,VS,Gy&YGy
20- SICl,W/CalcNod,FerSta&SdSms,VS,Gy&YGy
23-101, 51-21, Cl,Slks,W/CalcNod,FerSta&SlPrt,VS,R&Gy
23- Cl,Slks,W/CalcNod,FerSta&SlPrt,VS,R&Gy
23- Cl,Slks,W/FerSta&SlSms,VS,R&Gy
24-102, 55-22, Cl,Slks,W/ClSt,CalcNod&FerSta,VS,R&Gy
34- Cl,Slks,W/FerSta,VS,R&Gy
37- Cl,Slks,W/FerSta,VS,R&Gy
32-88, 51-21, Cl,Slks,W/FerSta,VS,R&Gy
31- Cl,Slks,W/FerSta,VS,R&Gy
28- Cl,Slks,W/FerSta,VS,R&Gy
26- Cl,Slks,W/FerSta,VS,R&Gy
98-27
SPT
MC-UDW,LL-PL
W.O.H. ClSI,W/DecWd&Rts,VL,Gy
W.O.H. ClSI,W/DecWd&Rts,VL,Gy
3 ClSI,W/DecWd&Rts,VL,Gy
3 ClSI,W/SdSms,VL,Gy
7 SiSd,L,Gy
7 SiSd,L,Gy
SP-SM
20 SISd,MedD,Gy
21- SICl,W/CalcNod&SdSms,H,OlGy
28-98, 49-20, SICl,W/SdSms,VS,OlGy
26- SICl,W/CalcNod&SdSms,VS,Bn&Gy
22- SICl,W/CalcNod&SdSms,VS,Bn&Gy
21- SiCl,W/CalcNod&SdSms,VS,YGy
29-94, 61-45, Cl,Slks,W/CalcNod&FerSta,VS,R&Gy
35- Cl,Slks,W/CalcNod&FerSta,VS,R&Gy
23- Cl,Slks,W/CalcNod&FerSta,VS,R&Gy
30-87, 65-25, Cl,Slks,W/CalcNod&FerSta,VS,R&Gy
32- Cl,Slks,W/CalcNod&FerSta,VS,R&Gy
28-97, 68-26, Cl,Slks,W/CalcNod,VS,R&Gy
32- Cl,Slks,W/FerSta,VS,R&Gy
32- Cl,Slks,W/FerSta,VS,R&Gy
33- Cl,Slks,W/FerSta,VS,R&Gy
33- Cl,Slks,W/FerSta,VS,R&Gy
98-30
SPT
MC-UDW,LL-PL
Cl,W/Wd&Rts,VSo,Gy
Cl,W/Wd&Rts,VSo,Gy
W.O.H. ClSI,W/DecWd&Rts,VL,Gy
1-1/12" ClSI,W/DecWd&Rts,VL,Gy
1-1/12" ClSI,W/DecWd&Rts,VL,Gy
3 ClSI,W/DecWd&Rts,VL,Gy
2 ClSI,W/DecWd&Rts,VL,Gy
18- SICl,W/FerNod&SdSms,Med,YBn
23-100, 39-18, SICl,W/FerNod&SdSms,Med,YBn
32- SICl,W/FerNod&SdSms,Med,YBn
33 Sd,W/SI,D,Gy
SP-SM
19- SICl,W/FerSta&SdSms,VS,Bn&Gy
24-100, 53-21, Cl,W/FerSta&SdSms,VS,Bn&Gy
23- Cl,W/FerSta&SdSms,VS,Bn&Gy
22- Cl,Slks,W/FerSta,VS,Bn&Gy
26-95, 61-25, Cl,Slks,W/FerSta,VS,Bn&Gy
34- Cl,Slks,W/FerSta,VS,Bn&Gy
33-89, 77-28, Cl,Slks,W/FerSta,VS,Bn&Gy
31- Cl,Slks,W/CalcNod&FerSta,VS,Bn&Gy
22- Cl,Slks,W/CalcNod&FerSta,VS,Bn&Gy
18- SiCl,W/FerSta&SdSms,H,Bn&Gy
24-98, 37-18, SiCl,W/FerSta&SdSms,S,Bn&Gy
27- Cl,Slks,W/FerSta&SlSms,VS,R&Gy
39- Cl,Slks,W/FerSta,VS,R&Gy
33- Cl,Slks,W/FerSta,VS,R&Gy
39-80, 81-28, Cl,Slks,W/FerSta,VS,R&Gy
30- Cl,Slks,W/FerSta,VS,R&Gy
31- Cl,Slks,W/FerSta,VS,R&Gy
29- Cl,Slks,W/FerSta,VS,R&Gy
-24.0
10
0
-10
-20
-30
-40
-50
-60
ELEVATIONS IN FEET, N.G.V.D
97-33
SPT
MC-UDW,LL-PL
W. T.
25- Cl,W/Rts,H,YBn
20- Cl,W/Rts,H,YBn
29-95, 54-22, Cl,W/FerSta,S,YBn
25- Cl,W/FerSta,&SdSms,S,Gy&YBn
23- SICl,W/SdSms,S,Gy
27-98, 36-18, SICl,W/SdPoc&Sms,S,Gy
35- SICl,W/SdPoc&OrgMat,Med,Gy
50-61, 92-30, Cl,W/OrgMat,Med,DkGy
54- Cl,W/OrgMat,Med,DkGy
14 ClSd,MedSD,Gy
87 Sd,W/Gv&SI,VD,Gy
BOTTOM OF SLAB
-24.0
18- Cl,W/SdSms,H,OlGy
19- Cl,Slks,W/CalcNod&SdSms,H,YBn
18-112, 56-23, Cl,Slks,W/CalcNod,FerSta&SdSms,VS,YBn
10
0
-10
-20
98-31
SPT
MC-UDW,LL-PL
1 SdSI,W/Wd&Rts,VL,Gy
SdSi,W/Wd&Rts,VL,Gy
2 SdSI,W/Wd&Rts,VL,Gy
1 SiSd,W/Wd,L,Gy
5 SISd,L,Gy
5 Sd,W/SI,L,Gy
SP-SM
5 Sd,W/PeaGv,L,Gy
SP 20- SICl,W/FerNod&SdSms,VS,OlGy

HP 12x53 Batter 1H : 2V

Prepared by: Ishaq Syed 9 Oct. 1998

PILE CAPACITY TABLE

Elevation	Depth Below Top of Pile (Ft)	Capacity Mode	BORING Nos.					
			98-30	98-31		98-27	98-39	97-33
			Ultimate Pile Capacity in Tons					
-30	8	Compression	2.2	2		**4.1**		1.9
		Tension	0.6	0.6		**0.43**		0.48
-40	18	Compression	7.8	7.9		**13.71**		13.58
		Tension	3.6	3.7		**4.06**		4.28
-50	28	Compression	14.4	13.5		**14.93**		15.4
		Tension	8.3	7.4		**7.88**		8.76
-60	38	Compression	19.7	24.4		**20.23**		21.11
		Tension	12	12.2		**11.7**		12.91
-70	48	Compression	25.4	26.8		**25.8**		26.88
		Tension	16	17		**15.6**		17.06
-80	58	Compression	31	32.4		**30.8**		32.64
		Tension	20	21		**19.2**		21.21

ISHAQ SYED
Sept. 1998

Neches River Saltwater Barrier

TAINTER GATE STRUCTURE

Pile Capacity computations:

Borings 98-27, 98-33, 97-33 and 98-39 will be examined for soil parameters.

A) Similar soil conditions exist for boring No. 98-27 and 98-33, in the middle of structure foundation.

i.e.

El. -24 to -32 silty sand, L
-32 to -40 silty clay, Very stiff
-40 to -60 fat clay, slickensided, V/stiff

B) At both ends, the foundation soil consists of very stiff, slickensided fat clay with an intermediate layer of silty clay (V/S)

Pile capacity will be computed for both the above cases.

$\gamma_w = 63$ pcf (saltwater)

CASE A:

Elevation (NGVD)	Short term condition			Long Term Condition		
	γ_s (pcf)	c (psf)	ϕ	γ_s (pcf)	c (psf)	ϕ
-24 to -32	57	0	30		0	30
-32 To -40		2000	0		0	24

Long Term Condition

Pile in compression

Pile Tip @ -~~40~~ -32:

$$Q_{s1} = 1.75\left(\frac{0+47}{2}\times 8\tan(30\times 0.7)\right)\left[4.31\times 1.118\right]$$

$$= 4868.3 \text{ lbs.}$$

$$Q_{b_1} = \sigma_v' N_q A_t$$

$$= 8\times 47\times 21\times 1.16$$

$$376\times 21\times 1.16 = 9159.36 \text{ lbs.}$$

12.9"

13" A = 1.16

ultimate capacity: $Q_{s1} + Q_b = 4868.3 + 9159.36 = 14{,}027.66$ lbs

$= 7$ tons. compress

Pile Tip @ -40

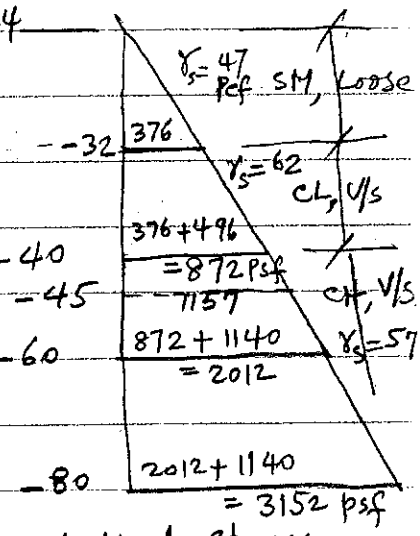
$$Q_{ult} = Q_{s1} + Q_{s2} + Q_{b_2}$$

$$= 4868.3 + 1.25\left(\frac{376+872}{2}\right)\tan(26\times 0.7)(4.31\times 1.118\times 8)$$

$$+ (872\times 18\times 1.16)$$

$$= 4868.3 + 9885.83 + 18207.36$$

$$32961.49 \text{ Lbs} = \underline{16.4 \text{ Tons}} \text{ (Comp)}$$



Pile Tip @ -45:

$$Q_{ult} = Q_{s1} + Q_{s2} + Q_{s3} + Q_{b3}$$

$$= 4868.3 + 9885.83$$

$$+ 1.25\left(\frac{872+872}{2}\right)\tan(17\times 0.7)(4.31\times 5\times 1.118)$$

$$+ (872\times 6\times 1.16) \quad (\sigma_v \text{ limited to } 16')$$

$$Q_{ult} = 4868.3 + 9885.8 + 5534.1 + 6069.1$$

$$= 26357.3 \text{ Lbs}$$

$$= \underline{13.17 \text{ Tons.}}$$

$D_c = 15B$

$= 15\times\frac{12.9}{12} = 16.125'$

$D@40 = (-40-(-24))$

$= \underline{16' < 16.125}$

ISHAQ SYED
27 August 1998

NECHES RIVER SALTWATER BARRIER
BEAUMONT, TEXAS

SOILS PARAMETERS FOR TAINTER GATE STRUCTURE

BORING No. 98-27

Layer No. 1, Elevation -20.0 to -32.0 NGVD: Silty sand, very loose to loose

	Short Term Shear Strength	Long Term Shear Strength
γ_{moist} = 110 pcf	$\phi = 30^o$	$\phi = 30^o$
$\gamma_{bouyant}$ = 47 pcf	c = 0 psf	c = 0 psf

Pile Design Parameters (See EM 1110-2-2906 for definitions)
$\delta = 0.9\ \phi$ for concrete, 0.8 for timber; $N_q = 21$; $K_c = 1.75$; $K_t = 0.6$

Layer No. 2, Elevation –32.0 to –40.0 NGVD: Silty Clay, V/stiff

	Short Term Shear Strength	Long Term Shear Strength
γ_{moist} = 125 pcf	$\phi = 0^o$	$\phi = 26^o$
$\gamma_{bouyant}$ = 62 pcf	c = 2,000 psf	c = 0 psf

Pile Design Parameters (See EM 1110-2-2906 for definitions)
$\delta = 0.9\ \phi$ for concrete, 0.8 for timber ; $N_q = 18$; $K_c = 1.25$; $K_t = 0.9$; $\alpha = 0.5$

Layer No. 3, Elevation -40.0 to -60.0 NGVD: Clay, V/stiff ,slikensided

	Short Term Shear Strength	Long Term Shear Strength
γ_{moist} = 120 pcf	$\phi = 0^o$	$\phi = 17^o$
$\gamma_{bouyant}$ = 57pcf	c = ~~2,000~~ 1800 psf	c = 0 psf

Pile Design Parameters (See EM 1110-2-2906 for definitions)
$\delta = 0.9\ \phi$ for concrete, 0.8 for timber ; $N_q = 6.0$; $K_c = 1.25$; $K_t = 0.9$; $\alpha = 0.5$

HP 12x53 Batter 1H : 2V (Adopted)

Prepared by: Ishaq Syed 9 Oct. 1998

PILE CAPACITY TABLE

Elevation	Depth Below Top of Pile (Ft)	Capacity Mode	BORING Nos.					
			98-30	98-31		98-27	98-39	97-33
			Ultimate Pile Capacity in Tons					
-30	8	Compression	2.2	2		**4.1**		1.9
		Tension	0.6	0.6		**0.43**		0.48
-40	18	Compression	7.8	7.9		**13.71**		13.58
		Tension	3.6	3.7		**4.06**		4.28
-50	28	Compression	14.4	13.5		**14.93**		15.4
		Tension	8.3	7.4		**7.88**		8.76
-60	38	Compression	19.7	24.4		**20.23**		21.11
		Tension	12	12.2		**11.7**		12.91
-70	48	Compression	25.4	26.8		**25.8**		26.88
		Tension	16	17		**15.6**		17.06
-80	58	Compression	31	32.4		**30.8**		32.64
		Tension	20	21		**19.2**		21.21

Boring No. 98-27

PILE CAPACITY **ENTER ALL RED VALUES**

Long Term Condition
HP 12x53
weight of Pile Not considered
Pile Batter 1H : 2V

If pile is round 0, if square 1	1	
Pile Diameter	12.045	inches, BUTT
	11.78	inches, TIP
Assume Pile Length	68	feet
Top Surface Elev	-24	feet
Batter	63.4	degrees
Water Elev.	2	
Unit weight of Pile	62.4	pcf

Dc = # * B	=	15
Critical Depth Elevation	=	-39
Tip Elevation	=	-85

	Stratum Number	Bouyant Density pcf	Strength Prop Delta Fric, Ang. phi*delt	Strata Cohesion psf	Adhesion Reduction Factor	Coef Ear Prs. Kc	Coef Ear. Prs. Kt	Terzaghi Nc	Terzaghi Nq	Bottom Elev. -24
Silt & sand	1	47	21	0	0	1.75	0.6	9	21	-25
	1	47	21	0	0	1.75	0.6	9	21	-26
	1	47	21	0	0	1.75	0.6	9	21	-27
	1	47	21	0	0	1.75	0.6	9	21	-28
	1	47	21	0	0	1.75	0.6	9	21	-29
	1	47	21	0	0	1.75	0.6	9	21	-30
	1	47	21	0	0	1.75	0.6	9	21	-31
	1	47	21	0	0	1.75	0.9	9	21	-32
Clay CL	2	62	18	0	0.5	1.25	0.9	9	18	-33
V/stiff	2	62	18	0	0.5	1.25	0.9	9	18	-34
	2	62	18	0	0.5	1.25	0.9	9	18	-35
	2	62	18	0	0.5	1.25	0.9	9	18	-36
	2	62	18	0	0.5	1.25	0.9	9	18	-37
	2	62	18	0	0.5	1.25	0.9	9	18	-38
	2	62	18	0	0.5	1.25	0.9	9	18	-39
	2	62	18	0	0.5	1.25	0.9	9	18	-40

Clay CH	3	57	13.3	0	0.5	1.25	0.9	9	7.5	-41
V/stiff	3	57	13.3	0	0.5	1.25	0.9	9	7.5	-42
	3	57	13.3	0	0.5	1.25	0.9	9	7.5	-43
	3	57	13.3	0	0.5	1.25	0.9	9	7.5	-44
	3	57	13.3	0	0.5	1.25	0.9	9	7.5	-45
	3	57	13.3	0	0.5	1.25	0.9	9	7.5	-46
	3	57	13.3	0	0.5	1.25	0.9	9	7.5	-47
	3	57	13.3	0	0.5	1.25	0.9	9	7.5	-48
	3	57	13.3	0	0.5	1.25	0.9	9	7.5	-49
	3	57	13.3	0	0.5	1.25	0.9	9	7.5	-50
	3	57	13.3	0	0.5	1.25	0.9	9	7.5	-51
	3	57	13.3	0	0.5	1.25	0.9	9	7.5	-52
	3	57	13.3	0	0.5	1.25	0.9	9	7.5	-53
	3	57	13.3	0	0.5	1.25	0.9	9	7.5	-54
	3	57	13.3	0	0.5	1.25	0.9	9	7.5	-55
	3	57	13.3	0	0.5	1.25	0.9	9	7.5	-56
	3	57	13.3	0	0.5	1.25	0.9	9	7.5	-57
	3	57	13.3	0	0.5	1.25	0.9	9	7.5	-58
	3	57	13.3	0	0.5	1.25	0.9	9	7.5	-59
	3	57	13.3	0	0.5	1.25	0.9	9	7.5	-60
	3	57	13.3	0	0.5	1.25	0.9	9	7.5	-61
	3	57	13.3	0	0.5	1.25	0.9	9	7.5	-62
	3	57	13.3	0	0.5	1.25	0.9	9	7.5	-63
	3	57	13.3	0	0.5	1.25	0.9	9	7.5	-64
	3	57	13.3	0	0.5	1.25	0.9	9	7.5	-65
	3	57	13.3	0	0.5	1.25	0.9	9	7.5	-66
	3	57	13.3	0	0.5	1.25	0.9	9	7.5	-67
	3	57	13.3	0	0.5	1.25	0.9	9	7.5	-68
	3	57	13.3	0	0.5	1.25	0.9	9	7.5	-69
	3	57	13.3	0	0.5	1.25	0.9	9	7.5	-70
	3	57	13.3	0	0.5	1.25	0.9	9	7.5	-71
	3	57	13.3	0	0.5	1.25	0.9	9	7.5	-72
	3	57	13.3	0	0.5	1.25	0.9	9	7.5	-73
	3	57	13.3	0	0.5	1.25	0.9	9	7.5	-74

Pile Capacity		Skin	Tip	Total
Compresion (lbs)	=	61160	5854	67014
Compresion (ton)	=	30.58	2.93	33.51
Tension (lbs)	=	42512		42512
Tension (ton)	=	21.26		21.26

Construction condition - Batter; 1H:2V

Weight of pile lbs	Dc Equiv. Bottom -24	Dist. From pile tip L	Average Pile Dia. inches	Pile Length in Sublayer	Total Surface in sub layer (ft^2)	Tip Area (ft^2)	Cohesionless Calculations: stress at bottom 0	stress for skin friction w/ Dc 0	avg-stress psf w/Dc	avg - su psf	comp. fs=kcsu	tension fs=ktSu
0	-25	60.5	12.02	1.12	4.48	0.96	47	47	23.5	9	16	5
0	-26	59.5	12.01	1.12	4.48	0.96	94	94	70.5	27	47	16
0	-27	58.5	12.01	1.12	4.48	0.96	141	141	117.5	45	79	27
0	-28	57.5	12.00	1.12	4.48	0.96	188	188	164.5	63	111	38
0	-29	56.5	12.00	1.12	4.47	0.96	235	235	211.5	81	142	49
0	-30	55.5	12.00	1.12	4.47	0.96	282	282	258.5	99	174	60
0	-31	54.5	11.99	1.12	4.47	0.96	329	329	305.5	117	205	70
0	-32	53.5	11.99	1.12	4.47	0.96	376	376	352.5	135	237	122
0	-33	52.5	11.98	1.12	4.47	0.96	438	438	407	132	165	119
0	-34	51.5	11.98	1.12	4.47	0.96	500	500	469	152	190	137
0	-35	50.5	11.98	1.12	4.46	0.96	562	562	531	173	216	155
0	-36	49.5	11.97	1.12	4.46	0.96	624	624	593	193	241	173
0	-37	48.5	11.97	1.12	4.46	0.96	686	686	655	213	266	192
0	-38	47.5	11.97	1.12	4.46	0.96	748	748	717	233	291	210
0	-39	46.5	11.96	1.12	4.46	0.96	810	810	779	253	316	228
0	-39	45.5	11.96	1.12	4.46	0.96	872	810	810	263	329	237

0	-39	44.5	11.95	1.12	4.46	0.96	929	810	810	191	239	172
0	-39	43.5	11.95	1.12	4.45	0.96	986	810	810	191	239	172
0	-39	42.5	11.95	1.12	4.45	0.96	1043	810	810	191	239	172
0	-39	41.5	11.94	1.12	4.45	0.96	1100	810	810	191	239	172
0	-39	40.5	11.94	1.12	4.45	0.96	1157	810	810	191	239	172
0	-39	39.5	11.93	1.12	4.45	0.96	1214	810	810	191	239	172
0	-39	38.5	11.93	1.12	4.45	0.96	1271	810	810	191	239	172
0	-39	37.5	11.93	1.12	4.45	0.96	1328	810	810	191	239	172
0	-39	36.5	11.92	1.12	4.44	0.96	1385	810	810	191	239	172
0	-39	35.5	11.92	1.12	4.44	0.96	1442	810	810	191	239	172
0	-39	34.5	11.91	1.12	4.44	0.96	1499	810	810	191	239	172
0	-39	33.5	11.91	1.12	4.44	0.96	1556	810	810	191	239	172
0	-39	32.5	11.91	1.12	4.44	0.96	1613	810	810	191	239	172
0	-39	31.5	11.90	1.12	4.44	0.96	1670	810	810	191	239	172
0	-39	30.5	11.90	1.12	4.44	0.96	1727	810	810	191	239	172
0	-39	29.5	11.89	1.12	4.43	0.96	1784	810	810	191	239	172
0	-39	28.5	11.89	1.12	4.43	0.96	1841	810	810	191	239	172
0	-39	27.5	11.89	1.12	4.43	0.96	1898	810	810	191	239	172
0	-39	26.5	11.88	1.12	4.43	0.96	1955	810	810	191	239	172
0	-39	25.5	11.88	1.12	4.43	0.96	2012	810	810	191	239	172
0	-39	24.5	11.88	1.12	4.43	0.96	2069	810	810	191	239	172
0	-39	23.5	11.87	1.12	4.43	0.96	2126	810	810	191	239	172
0	-39	22.5	11.87	1.12	4.42	0.96	2183	810	810	191	239	172
0	-39	21.5	11.86	1.12	4.42	0.96	2240	810	810	191	239	172
0	-39	20.5	11.86	1.12	4.42	0.96	2297	810	810	191	239	172
0	-39	19.5	11.86	1.12	4.42	0.96	2354	810	810	191	239	172
0	-39	18.5	11.85	1.12	4.42	0.96	2411	810	810	191	239	172
0	-39	17.5	11.85	1.12	4.42	0.96	2468	810	810	191	239	172
0	-39	16.5	11.84	1.12	4.42	0.96	2525	810	810	191	239	172
0	-39	15.5	11.84	1.12	4.41	0.96	2582	810	810	191	239	172
0	-39	14.5	11.84	1.12	4.41	0.96	2639	810	810	191	239	172
0	-39	13.5	11.83	1.12	4.41	0.96	2696	810	810	191	239	172
0	-39	12.5	11.83	1.12	4.41	0.96	2753	810	810	191	239	172
0	-39	11.5	11.82	1.12	4.41	0.96	2810	810	810	191	239	172

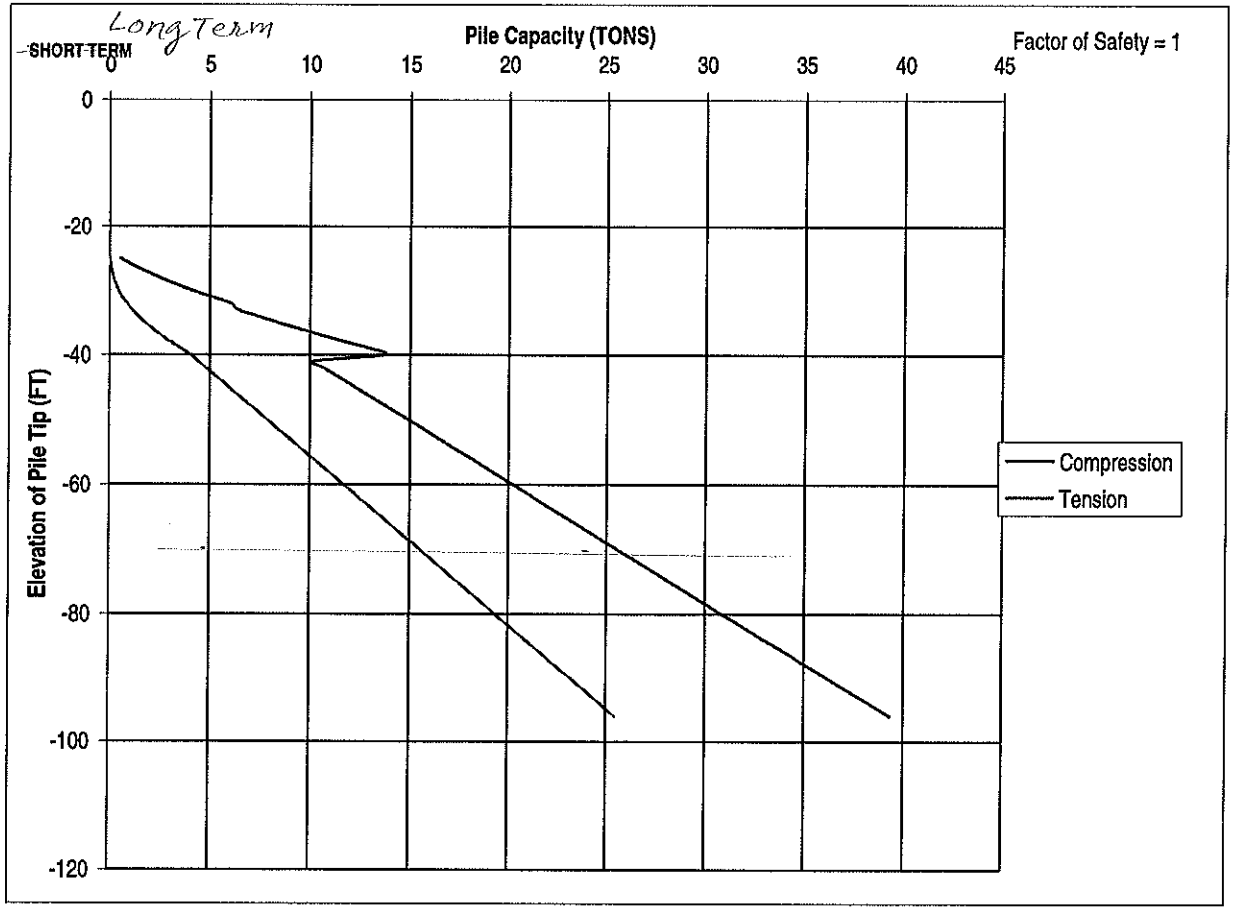
Pile Capacity		Skin	Tip	Pile Weight	Total
Compresion (lbs)	=	61160	5854.292	0	67014
Compresion (ton)	=	30.58	2.93	0.00	33.51
Tension (lbs)	=	42512		0	42512
Tension (ton)	=	21.26		0.00	21.26

		Cohesionless			Cohesive		End
Stratum Number	Bottom Elevation	Qskin Comp. lbs	Qskin Tension lbs	End Bearing lbs	Qskin lbs	End Bearing lbs	Bearing lbs
	-24						
1	-25	71	24	951.1417	0	0	0
1	-26	212	73	1902.283	0	0	0
1	-27	353	121	2853.425	0	0	0
1	-28	495	170	3804.567	0	0	0
1	-29	636	218	4755.709	0	0	0
1	-30	777	266	5706.85	0	0	0
1	-31	917	315	6657.992	0	0	0
1	-32	1058	544	7609.134	0	0	0
2	-33	739	532	7597.57	0	0	0
2	-34	851	613	8673.025	0	0	0
2	-35	963	693	9748.48	0	0	0
2	-36	1075	774	10823.94	0	0	0
2	-37	1187	855	11899.39	0	0	0
2	-38	1299	935	12974.85	0	0	0
2	-39	1411	1016	14050.3	0	0	0
2	-40	1466	1056	14050.3	0	0	0

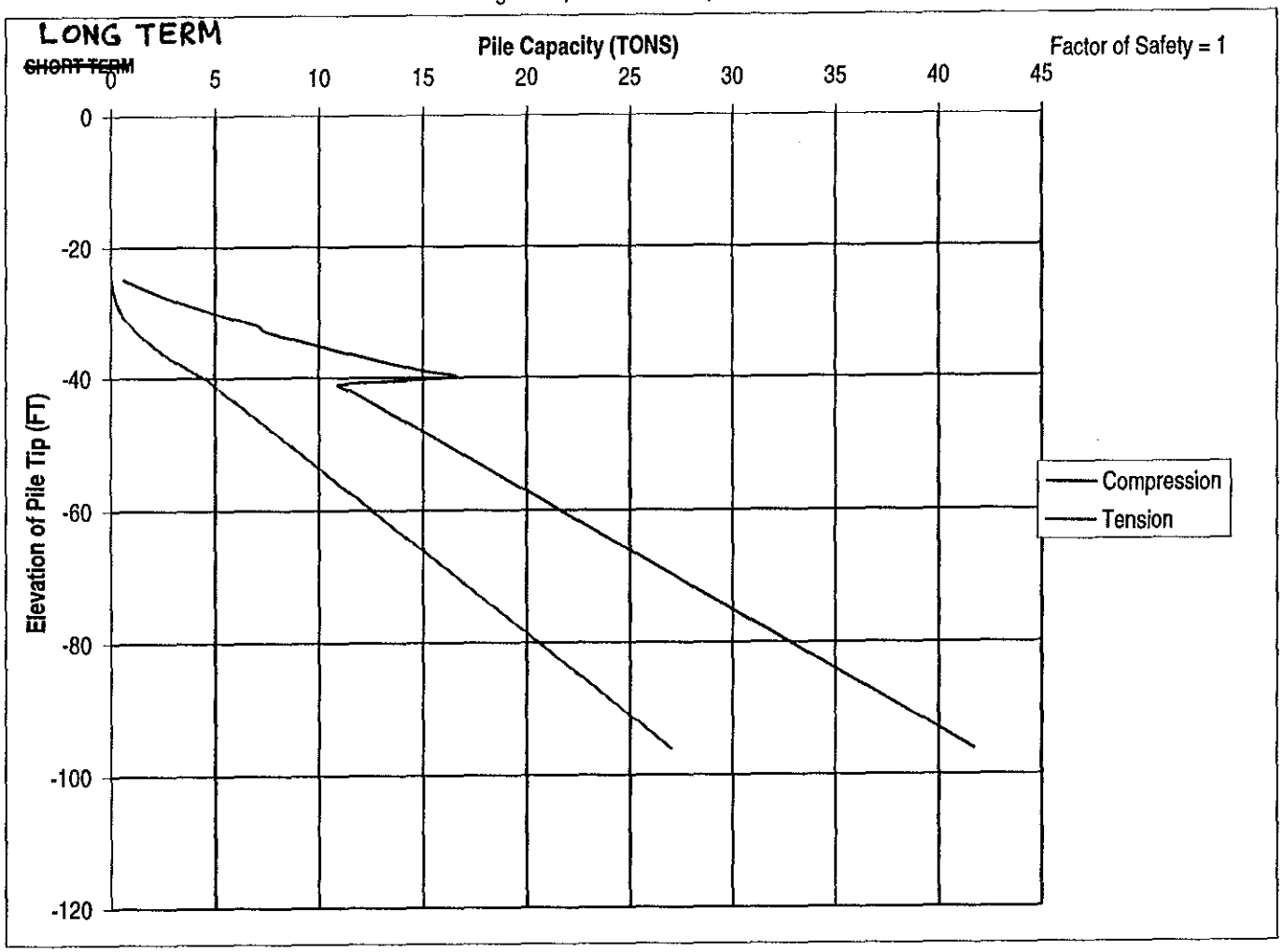
Pile Length	Capacity Comp	Tension	Pile tip Elev
	33.51	21.26	-85
1	0.510624	0.012018	-25
2	1.090963	0.047939	-26
3	1.741148	0.107806	-27
4	2.461179	0.191621	-28
5	2.460321	0.191327	-28
6	3.24995	0.299004	-29
7	4.109422	0.430627	-30
8	5.038736	0.586197	-31
9	6.037895	0.854957	-32
10	6.398984	1.117974	-33
11	7.358963	1.421069	-34
12	8.374403	1.764251	-35
13	9.445361	2.147525	-36
14	10.57188	2.570894	-37
15	10.56948	2.569801	-37
16	11.75142	3.033143	-38

3	-41	1067	768	5854.292	0	0	0	17	12.98897	3.536582	-39
3	-42	1066	768	5854.292	0	0	0	18	13.71676	4.060204	-40
3	-43	1066	767	5854.292	0	0	0	19	10.1499	4.442277	-41
3	-44	1066	767	5854.292	0	0	0	20	10.68107	4.824407	-42
3	-45	1065	767	5854.292	0	0	0	21	11.21227	5.206586	-43
3	-46	1065	767	5854.292	0	0	0	22	11.74349	5.588808	-44
3	-47	1064	766	5854.292	0	0	0	23	12.27473	5.971066	-45
3	-48	1064	766	5854.292	0	0	0	24	12.27151	5.969235	-45
3	-49	1064	766	5854.292	0	0	0	25	12.80266	6.351443	-46
3	-50	1063	766	5854.292	0	0	0	26	13.33384	6.733684	-47
3	-51	1063	765	5854.292	0	0	0	27	13.86504	7.115956	-48
3	-52	1063	765	5854.292	0	0	0	28	14.39626	7.498253	-49
3	-53	1062	765	5854.292	0	0	0	29	14.9275	7.880575	-50
3	-54	1062	765	5854.292	0	0	0	30	15.45875	8.262919	-51
3	-55	1062	764	5854.292	0	0	0	31	15.99001	8.645282	-52
3	-56	1061	764	5854.292	0	0	0	32	16.52128	9.027662	-53
3	-57	1061	764	5854.292	0	0	0	33	17.05257	9.410059	-54
3	-58	1061	764	5854.292	0	0	0	34	17.04888	9.407781	-54
3	-59	1060	763	5854.292	0	0	0	35	17.58012	9.790142	-55
3	-60	1060	763	5854.292	0	0	0	36	18.11136	10.17252	-56
3	-61	1060	763	5854.292	0	0	0	37	18.64262	10.55491	-57
3	-62	1059	763	5854.292	0	0	0	38	19.17389	10.93732	-58
3	-63	1059	762	5854.292	0	0	0	39	19.70517	11.31973	-59
3	-64	1059	762	5854.292	0	0	0	40	20.23645	11.70216	-60
3	-65	1058	762	5854.292	0	0	0	41	20.76775	12.0846	-61
3	-66	1058	762	5854.292	0	0	0	42	21.29905	12.46705	-62
3	-67	1058	761	5854.292	0	0	0	43	21.29516	12.46455	-62
3	-68	1057	761	5854.292	0	0	0	44	21.82642	12.84698	-63
3	-69	1057	761	5854.292	0	0	0	45	22.3577	13.22941	-64
3	-70	1056	761	5854.292	0	0	0	46	22.88898	13.61185	-65
3	-71	1056	760	5854.292	0	0	0	47	23.42027	13.9943	-66
3	-72	1056	760	5854.292	0	0	0	48	23.95157	14.37676	-67
3	-73	1055	760	5854.292	0	0	0	49	24.48287	14.75922	-68
3	-74	1055	760	5854.292	0	0	0	50	25.01418	15.1417	-69

HP 12x53, Batter 1H:2V



Boring 98-27, Pile Batter 1:2, HP 13x60



PILE CAPACITY **ENTER ALL RED VALUES**

If pile is round 0, if square 1	1
Pile Diameter	13 inches, BUTT
	12.9 inches, TIP
Assume Pile Length	55 feet
Top Surface Elev	-24 feet
Batter	63.4 degrees
Water Elev.	2
Unit weight of Pile	62.4 pcf

Dc = # * B	=	16

Critical Depth Elevation	=	-40
Tip Elevation	=	-73

Pile Capacity		Skin	Tip	Total
Compresion (lbs)	=	51659	6046	57705
Compresion (ton)	=	25.83	3.02	28.85
Tension (lbs)	=	35547		35547
Tension (ton)	=	17.77		17.77

Construction condition - Batter; 1H:2V

	Stratum Number	Bouyant Density pcf	Strength Prop Delta Fric, Ang. phi*delt	Strata Cohesion psf	Adhesion Reduction Factor	Coef Ear Prs. Kc	Coef Ear. Prs. Kt	Terzaghi Nc	Terzaghi Nq	Bottom Elev. -24	Weight of pile lbs	Dc Equiv. Bottom -24	Dist. From pile tip L	Average Pile Dia. inches	Pile Length in Sublayer	Total Surface in sub layer (ft^2)	Tip Area (ft^2)
Silt & sand	1	47	21	0	0	1.75	0.6	9	21	-25	0	-25	48.5	12.99	1.12	4.84	1.16
	1	47	21	0	0	1.75	0.6	9	21	-26	0	-26	47.5	12.99	1.12	4.84	1.16
	1	47	21	0	0	1.75	0.6	9	21	-27	0	-27	46.5	12.98	1.12	4.84	1.16
	1	47	21	0	0	1.75	0.6	9	21	-28	0	-28	45.5	12.98	1.12	4.84	1.16
	1	47	21	0	0	1.75	0.6	9	21	-29	0	-29	44.5	12.98	1.12	4.84	1.16
	1	47	21	0	0	1.75	0.6	9	21	-30	0	-30	43.5	12.98	1.12	4.84	1.16
	1	47	21	0	0	1.75	0.6	9	21	-31	0	-31	42.5	12.98	1.12	4.84	1.16
	1	47	21	0	0	1.75	0.9	9	21	-32	0	-32	41.5	12.98	1.12	4.84	1.16
Clay CL	2	62	18.2	0	0	1.25	0.9	9	18	-33	0	-33	40.5	12.97	1.12	4.84	1.16
V/stiff	2	62	18.2	0	0	1.25	0.9	9	18	-34	0	-34	39.5	12.97	1.12	4.84	1.16
	2	62	18.2	0	0	1.25	0.9	9	18	-35	0	-35	38.5	12.97	1.12	4.84	1.16
	2	62	18.2	0	0	1.25	0.9	9	18	-36	0	-36	37.5	12.97	1.12	4.83	1.16
	2	62	18.2	0	0	1.25	0.9	9	18	-37	0	-37	36.5	12.97	1.12	4.83	1.16
	2	62	18.2	0	0	1.25	0.9	9	18	-38	0	-38	35.5	12.96	1.12	4.83	1.16
	2	62	18.2	0	0	1.25	0.9	9	18	-39	0	-39	34.5	12.96	1.12	4.83	1.16
	2	62	18.2	0	0	1.25	0.9	9	18	-40	0	-40	33.5	12.96	1.12	4.83	1.16
Clay CH	3	57	12	0	0	1.25	0.9	9	6	-41	0	-40	32.5	12.96	1.12	4.83	1.16
V/stiff	3	57	12	0	0	1.25	0.9	9	6	-42	0	-40	31.5	12.96	1.12	4.83	1.16
	3	57	12	0	0	1.25	0.9	9	6	-43	0	-40	30.5	12.96	1.12	4.83	1.16
	3	57	12	0	0	1.25	0.9	9	6	-44	0	-40	29.5	12.95	1.12	4.83	1.16
	3	57	12	0	0	1.25	0.9	9	6	-45	0	-40	28.5	12.95	1.12	4.83	1.16
	3	57	12	0	0	1.25	0.9	9	6	-46	0	-40	27.5	12.95	1.12	4.83	1.16
	3	57	12	0	0	1.25	0.9	9	6	-47	0	-40	26.5	12.95	1.12	4.83	1.16
	3	57	12	0	0	1.25	0.9	9	6	-48	0	-40	25.5	12.95	1.12	4.83	1.16
	3	57	12	0	0	1.25	0.9	9	6	-49	0	-40	24.5	12.94	1.12	4.83	1.16
	3	57	12	0	0	1.25	0.9	9	6	-50	0	-40	23.5	12.94	1.12	4.82	1.16
	3	57	12	0	0	1.25	0.9	9	6	-51	0	-40	22.5	12.94	1.12	4.82	1.16
	3	57	12	0	0	1.25	0.9	9	6	-52	0	-40	21.5	12.94	1.12	4.82	1.16

3	57	12	0	0	1.25	0.9	9	6	-53	0	-40	20.5	12.94	1.12	4.82	1.16
3	57	12	0	0	1.25	0.9	9	6	-54	0	-40	19.5	12.94	1.12	4.82	1.16
3	57	12	0	0	1.25	0.9	9	6	-55	0	-40	18.5	12.93	1.12	4.82	1.16
3	57	12	0	0	1.25	0.9	9	6	-56	0	-40	17.5	12.93	1.12	4.82	1.16
3	57	12	0	0	1.25	0.9	9	6	-57	0	-40	16.5	12.93	1.12	4.82	1.16
3	57	12	0	0	1.25	0.9	9	6	-58	0	-40	15.5	12.93	1.12	4.82	1.16
3	57	12	0	0	1.25	0.9	9	6	-59	0	-40	14.5	12.93	1.12	4.82	1.16
3	57	12	0	0	1.25	0.9	9	6	-60	0	-40	13.5	12.92	1.12	4.82	1.16
3	57	12	0	0	1.25	0.9	9	6	-61	0	-40	12.5	12.92	1.12	4.82	1.16
3	57	12	0	0	1.25	0.9	9	6	-62	0	-40	11.5	12.92	1.12	4.82	1.16
3	57	12	0	0	1.25	0.9	9	6	-63	0	-40	10.5	12.92	1.12	4.82	1.16
3	57	12	0	0	1.25	0.9	9	6	-64	0	-40	9.5	12.92	1.12	4.82	1.16
3	57	12	0	0	1.25	0.9	9	6	-65	0	-40	8.5	12.92	1.12	4.81	1.16
3	57	12	0	0	1.25	0.9	9	6	-66	0	-40	7.5	12.91	1.12	4.81	1.16
3	57	12	0	0	1.25	0.9	9	6	-67	0	-40	6.5	12.91	1.12	4.81	1.16
3	57	12	0	0	1.25	0.9	9	6	-68	0	-40	5.5	12.91	1.12	4.81	1.16
3	57	12	0	0	1.25	0.9	9	6	-69	0	-40	4.5	12.91	1.12	4.81	1.16
3	57	12	0	0	1.25	0.9	9	6	-70	0	-40	3.5	12.91	1.12	4.81	1.16
3	57	12	0	0	1.25	0.9	9	6	-71	0	-40	2.5	12.90	1.12	4.81	1.16
3	57	12	0	0	1.25	0.9	9	6	-72	0	-40	1.5	12.90	1.12	4.81	1.16
3	57	12	0	0	1.25	0.9	9	6	-73	0	-40	0.5	12.90	1.12	4.81	1.16
3	57	12	0	0	1.25	0.9	9	6	-74	0	-40	-0.5	0.00	1.12	0.00	1.16
3	57	12	0	0	1.25	0.9	9	6	-75	0	-40	-1.5	0.00	1.12	0.00	1.16
3	57	12	0	0	1.25	0.9	9	6	-76	0	-40	-2.5	0.00	1.12	0.00	1.16
3	57	12	0	0	1.25	0.9	9	6	-77	0	-40	-3.5	0.00	1.12	0.00	1.16
3	57	12	0	0	1.25	0.9	9	6	-78	0	-40	-4.5	0.00	1.12	0.00	1.16
3	57	12	0	0	1.25	0.9	9	6	-79	0	-40	-5.5	0.00	1.12	0.00	1.16
3	57	12	0	0	1.25	0.9	9	6	-80	0	-40	-6.5	0.00	1.12	0.00	1.16
3	57	12	0	0	1.25	0.9	9	6	-81	0	-40	-7.5	0.00	1.12	0.00	1.16
3	57	12	0	0	1.25	0.9	9	6	-82	0	-40	-8.5	0.00	1.12	0.00	1.16
3	57	12	0	0	1.25	0.9	9	6	-83	0	-40	-9.5	0.00	1.12	0.00	1.16
3	57	12	0	0	1.25	0.9	9	6	-84	0	-40	-10.5	0.00	1.12	0.00	1.16
3	57	12	0	0	1.25	0.9	9	6	-85	0	-40	-11.5	0.00	1.12	0.00	1.16
3	57	12	0	0	1.25	0.9	9	6	-86	0	-40	-12.5	0.00	1.12	0.00	1.16
3	57	12	0	0	1.25	0.9	9	6	-87	0	-40	-13.5	0.00	1.12	0.00	1.16
3	57	12	0	0	1.25	0.9	9	6	-88	0	-40	-14.5	0.00	1.12	0.00	1.16
3	57	12	0	0	1.25	0.9	9	6	-89	0	-40	-15.5	0.00	1.12	0.00	1.16
3	57	12	0	0	1.25	0.9	9	6	-90	0	-40	-16.5	0.00	1.12	0.00	1.16
3	57	12	0	0	1.25	0.9	9	6	-91	0	-40	-17.5	0.00	1.12	0.00	1.16
3	57	12	0	0	1.25	0.9	9	6	-92	0	-40	-18.5	0.00	1.12	0.00	1.16
3	57	12	0	0	1.25	0.9	9	6	-93	0	-40	-19.5	0.00	1.12	0.00	1.16
3	57	12	0	0	1.25	0.9	9	6	-94	0	-40	-20.5	0.00	1.12	0.00	1.16
3	57	12	0	0	1.25	0.9	9	6	-95	0	-40	-21.5	0.00	1.12	0.00	1.16
3	57	12	0	0	1.25	0.9	9	6	-96	0	-40	-22.5	0.00	1.12	0.00	1.16
3	57	12	0	0	1.25	0.9	9	6	-97	0	-40	-23.5	0.00	1.12	0.00	1.16
3	57	12	0	0	1.25	0.9	9	6	-98	0	-40	-24.5	0.00	1.12	0.00	1.16
3	57	12	0	0	1.25	0.9	9	6	-99	0	-40	-25.5	0.00	1.12	0.00	1.16

Cohesionless Calculations:					
stress at bottom 0	stress for skin friction w/ Dc 0	avg-stress psf w/Dc	avg - su psf	comp. fs=kcsu	tension fs=ktSu
47	47	23.5	9	16	5
94	94	70.5	27	47	16
141	141	117.5	45	79	27
188	188	164.5	63	111	38
235	235	211.5	81	142	49
282	282	258.5	99	174	60
329	329	305.5	117	205	70
376	376	352.5	135	237	122
438	438	407	134	167	120
500	500	469	154	193	139
562	562	531	175	218	157
624	624	593	195	244	175
686	686	655	215	269	194
748	748	717	236	295	212
810	810	779	256	320	231
872	872	841	277	346	249
929	872	872	185	232	167
986	872	872	185	232	167
1043	872	872	185	232	167
1100	872	872	185	232	167
1157	872	872	185	232	167
1214	872	872	185	232	167
1271	872	872	185	232	167
1328	872	872	185	232	167
1385	872	872	185	232	167
1442	872	872	185	232	167
1499	872	872	185	232	167
1556	872	872	185	232	167

		Cohesionless			Cohesive		
Stratum Number	Bottom Elevation -24	Qskin Comp. lbs	Qskin Tension lbs	End Bearing lbs	Qskin lbs	End Bearing lbs	End Bearing lbs
1	-25	76	26	1140.602	0	0	0
1	-26	229	79	2281.204	0	0	0
1	-27	382	131	3421.806	0	0	0
1	-28	535	183	4562.408	0	0	0
1	-29	688	236	5703.009	0	0	0
1	-30	840	288	6843.611	0	0	0
1	-31	993	340	7984.213	0	0	0
1	-32	1145	589	9124.815	0	0	0
2	-33	809	582	9110.948	0	0	0
2	-34	932	671	10400.63	0	0	0
2	-35	1055	760	11690.3	0	0	0
2	-36	1178	848	12979.98	0	0	0
2	-37	1301	937	14269.66	0	0	0
2	-38	1424	1025	15559.34	0	0	0
2	-39	1547	1114	16849.01	0	0	0
2	-40	1670	1202	18138.69	0	0	0
3	-41	1119	806	6046.23	0	0	0
3	-42	1119	806	6046.23	0	0	0
3	-43	1119	806	6046.23	0	0	0
3	-44	1119	806	6046.23	0	0	0
3	-45	1119	805	6046.23	0	0	0
3	-46	1119	805	6046.23	0	0	0
3	-47	1118	805	6046.23	0	0	0
3	-48	1118	805	6046.23	0	0	0
3	-49	1118	805	6046.23	0	0	0
3	-50	1118	805	6046.23	0	0	0
3	-51	1118	805	6046.23	0	0	0
3	-52	1118	805	6046.23	0	0	0

1613	872	872	185	232	167	3	-53	1117	805	6046.23	0	0	0
1670	872	872	185	232	167	3	-54	1117	804	6046.23	0	0	0
1727	872	872	185	232	167	3	-55	1117	804	6046.23	0	0	0
1784	872	872	185	232	167	3	-56	1117	804	6046.23	0	0	0
1841	872	872	185	232	167	3	-57	1117	804	6046.23	0	0	0
1898	872	872	185	232	167	3	-58	1117	804	6046.23	0	0	0
1955	872	872	185	232	167	3	-59	1116	804	6046.23	0	0	0
2012	872	872	185	232	167	3	-60	1116	804	6046.23	0	0	0
2069	872	872	185	232	167	3	-61	1116	804	6046.23	0	0	0
2126	872	872	185	232	167	3	-62	1116	804	6046.23	0	0	0
2183	872	872	185	232	167	3	-63	1116	803	6046.23	0	0	0
2240	872	872	185	232	167	3	-64	1116	803	6046.23	0	0	0
2297	872	872	185	232	167	3	-65	1116	803	6046.23	0	0	0
2354	872	872	185	232	167	3	-66	1115	803	6046.23	0	0	0
2411	872	872	185	232	167	3	-67	1115	803	6046.23	0	0	0
2468	872	872	185	232	167	3	-68	1115	803	6046.23	0	0	0
2525	872	872	185	232	167	3	-69	1115	803	6046.23	0	0	0
2582	872	872	185	232	167	3	-70	1115	803	6046.23	0	0	0
2639	872	872	185	232	167	3	-71	1115	802	6046.23	0	0	0
2696	872	872	185	232	167	3	-72	1114	802	6046.23	0	0	0
2753	872	872	185	232	167	3	-73	1114	802	6046.23	0	0	6046.23
2810	872	872	185	232	167	3	-74	0	0	0	0	0	0
2867	872	872	185	232	167	3	-75	0	0	0	0	0	0
2924	872	872	185	232	167	3	-76	0	0	0	0	0	0
2981	872	872	185	232	167	3	-77	0	0	0	0	0	0
3038	872	872	185	232	167	3	-78	0	0	0	0	0	0
3095	872	872	185	232	167	3	-79	0	0	0	0	0	0
3152	872	872	185	232	167	3	-80	0	0	0	0	0	0
3209	872	872	185	232	167	3	-81	0	0	0	0	0	0
3266	872	872	185	232	167	3	-82	0	0	0	0	0	0
3323	872	872	185	232	167	3	-83	0	0	0	0	0	0
3380	872	872	185	232	167	3	-84	0	0	0	0	0	0
3437	872	872	185	232	167	3	-85	0	0	0	0	0	0
3494	872	872	185	232	167	3	-86	0	0	0	0	0	0
3551	872	872	185	232	167	3	-87	0	0	0	0	0	0
3608	872	872	185	232	167	3	-88	0	0	0	0	0	0
3665	872	872	185	232	167	3	-89	0	0	0	0	0	0
3722	872	872	185	232	167	3	-90	0	0	0	0	0	0
3779	872	872	185	232	167	3	-91	0	0	0	0	0	0
3836	872	872	185	232	167	3	-92	0	0	0	0	0	0
3893	872	872	185	232	167	3	-93	0	0	0	0	0	0
3950	872	872	185	232	167	3	-94	0	0	0	0	0	0
4007	872	872	185	232	167	3	-95	0	0	0	0	0	0
4064	872	872	185	232	167	3	-96	0	0	0	0	0	0
4121	872	872	185	232	167	3	-97	0	0	0	0	0	0
4178	872	872	185	232	167	3	-98	0	0	0	0	0	0
4235	872	872	185	232	167	3	-99	0	0	0	0	0	0

Pile Capacity		Skin	Tip	Pile Weight	Total
Compresion (lbs)	=	51659	6046.23	0	57705
Compresion (ton)	=	25.83	3.02	0.00	28.85
Tension (lbs)	=	35547		0	35547
Tension (ton)	=	17.77		0.00	17.77

Pile Length	Capacity Comp	Tension	Pile tip Elev
	28.85	17.77	-73
1	0.608407	0.013065	-25
2	1.292877	0.052209	-26
3	2.053461	0.117449	-27
4	2.890159	0.208785	-28
5	2.889835	0.208674	-28
6	3.802552	0.326073	-29
7	4.791381	0.469569	-30
8	5.856323	0.63916	-31
9	6.997377	0.932496	-32
10	7.394118	1.222716	-33
11	8.503937	1.557152	-34
12	9.675091	1.935808	-35
13	10.9076	2.358686	-36
14	12.20148	2.825787	-37
15	12.20058	2.825372	-37
16	13.55578	3.336649	-38
17	14.97237	3.892149	-39
18	16.45037	4.491873	-40
19	10.96337	4.894389	-41
20	11.5226	5.29692	-42
21	12.08184	5.699464	-43
22	12.64108	6.102017	-44
23	13.20031	6.504581	-45
24	13.19909	6.503885	-45
25	13.7583	6.906426	-46
26	14.3175	7.308976	-47
27	14.87671	7.711534	-48
28	15.43592	8.114099	-49

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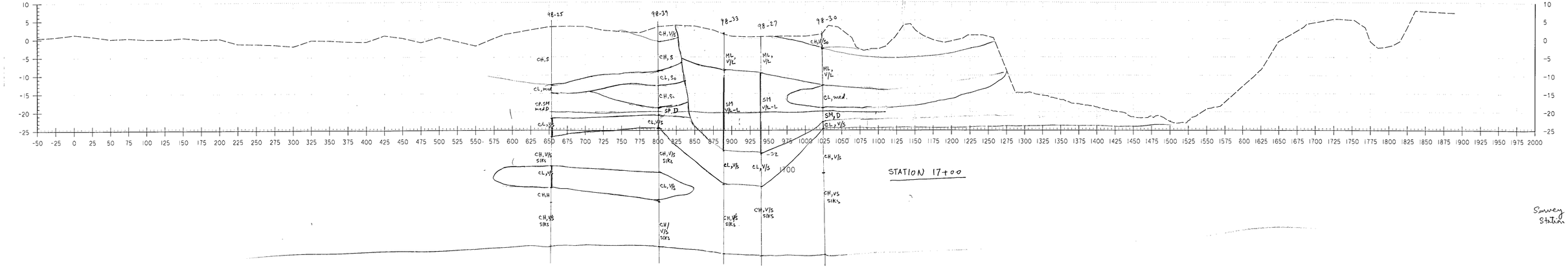

Survey Baseline
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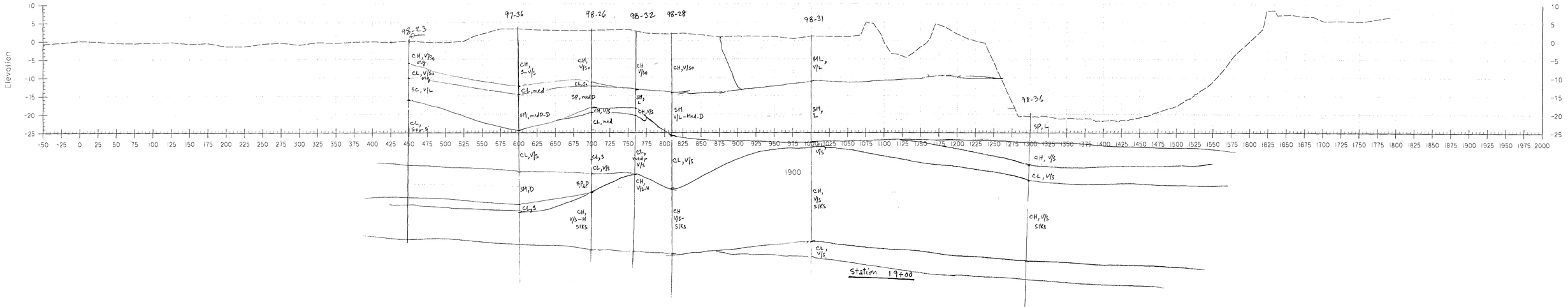

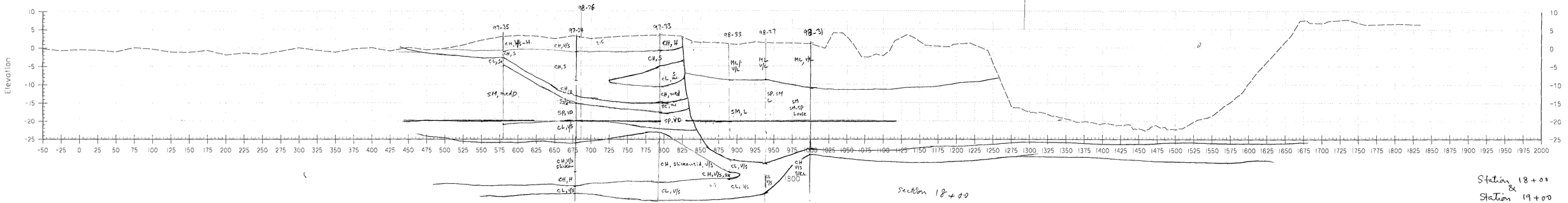

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