

Appendix A. Soil Exploration and Construction Records

KEYS CONCRETE INDUSTRIES
 11913 S.R. 54
 OCESSA, FL 33556
 USA
 727-372-1355

MIX ID : 1900067 TREMIE (17) CONCRETE MIX DESIGN 4000 PSI 02/22/00

CONTRACTOR : COASTAL CAISSON
 SOURCE OF CONCRETE : KEYS CONCRETE INDUSTRIES

WEIGHTS PER CUBIC YARD		[SATURATED, SURFACE-DRY]		YIELD, CU FT	
HOLMAN CEMENT CO.	TYPE I-S, LB	525		2.67	
MONEX RESOURCES, INC.	CLASS "P", LB	131		0.98	
RINKER MATERIALS, INC.	FDOT SAND, LB	1423		8.67	
FL. CRUSHED STONE CO.	#67 STONE, LB	1426		9.33	
WATER, GAL-US (LB)		36.0	(300)	4.81	
TOTAL AIR, %		2.0	+/- 1.5	0.54	

				TOTAL	
HRDA-84, W.R.GRACE	ASTM C-494, OZ	39.36		27.00	
DAREX AEA, W.R.GRACE	ASTM C-260, OZ	5.0			
WATER/CEMENT RATIO, LBS/LB		0.46			
SLUMP, IN		8.00			
CONCRETE UNIT WEIGHT, PCF		140.9			

SLUMP RANGE: 7.0" - 9.0"

PREPARED BY :

Terry L. Posner

TERRY L. POSNER, TECHNICAL SERVICES MGR.

Figure A-1. Site I and II concrete mix design (1 of 4).

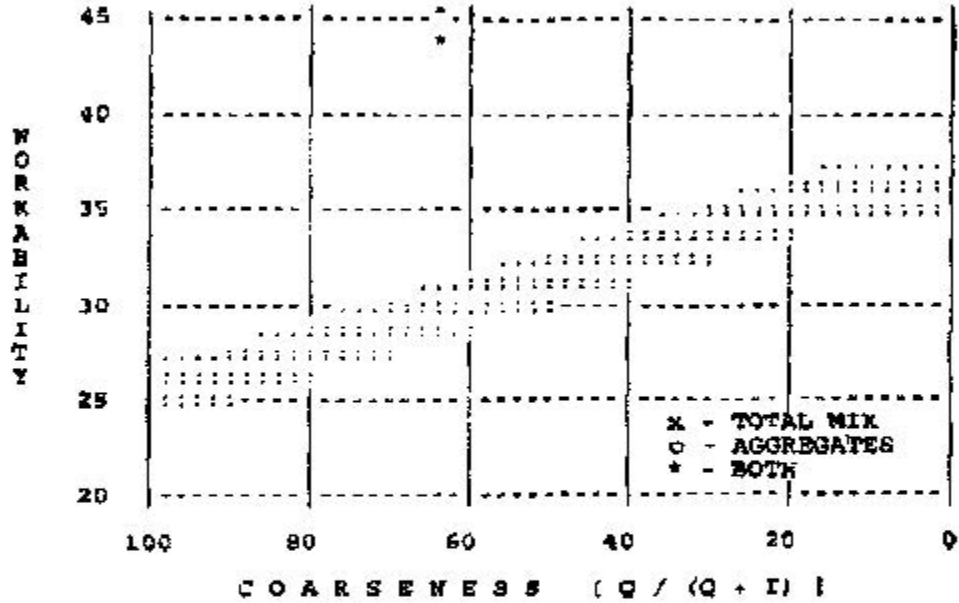
Appendix A. (continued)

MIX ID: 1900067 TREMIE

PSI: 4000 FBI
MIX ANALYSIS

02/22/00

MIX VOLUME, CU FT 27.00
COARSENESS (Q / (Q + I)) 63.3
WORKABILITY 49.2
W - ADJUST 51.7
PERCENT MORTAR 66.1
TOTAL FINENESS MODULUS 4.51



MATERIALS CHARACTERISTIC

	STONE	SAND
DENSITY, SP G	2.45	2.63
% PASSING 3/8 " SIEVE	38.0	100.0
% PASSING # 8 SIEVE	2.0	100.0
FINENESS MODULUS	6.57	2.30
PERCENT OF AGGREGATE	51.8	48.2
MINERAL ADMIXTURE DENSITY, SP G		2.15

NO SEVERE EXPOSURE

Figure A-2. Site I and II concrete mix design (2 of 4).

Appendix A. (continued)

MIX ID: 1900067 TREMIE PSI: 4000 PSI 02/22/00
 FULL GRADATION ANALYSIS

SIEVE	STONE	SAND	PASTE	TOTAL	AGGR
1-1/2"				100.0	100.0
1"	100.0			100.0	100.0
3/4"	99.0			99.7	99.5
1/2"	72.0			90.3	85.8
3/8"	36.0			78.6	67.9
# 4	4.0			66.8	50.2
# 8	2.0	100.0		66.1	49.2
# 16	-	95.0		63.8	45.8
# 30	-	54.0		50.7	26.0
# 50	-	19.0		39.4	9.2
# 100	-	2.0		34.0	1.0
# 200	-	-	100.0	33.3	-
# 325	-	-	95.5	31.9	-
Liquid	-	-	59.5	19.8	-

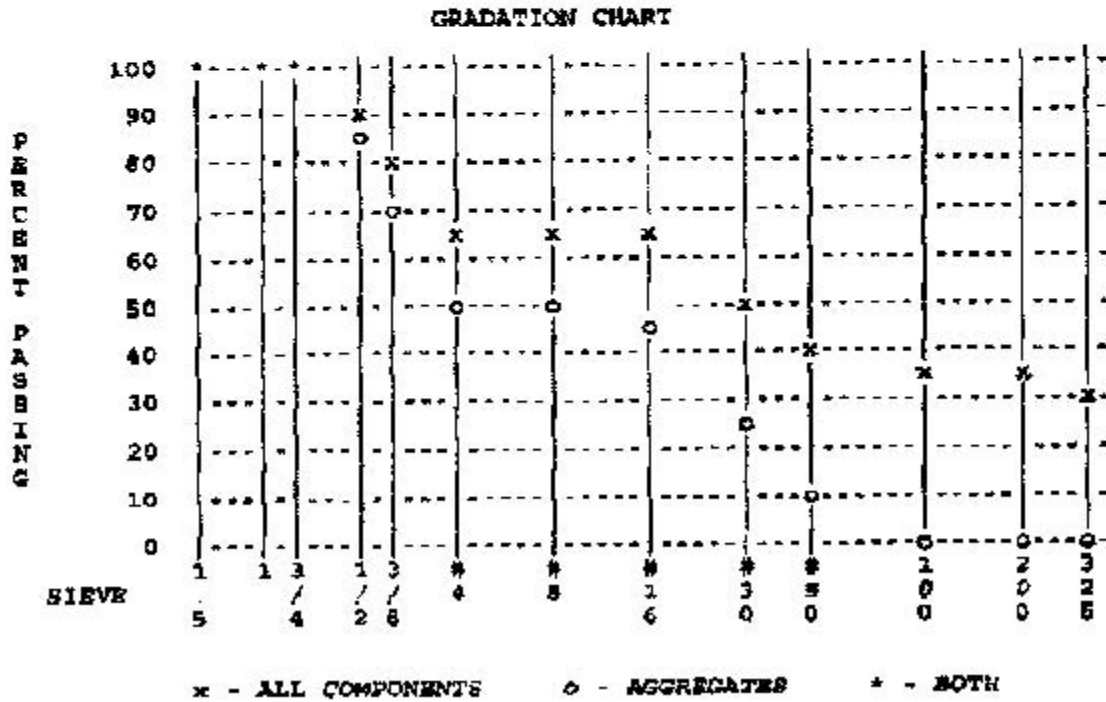


Figure A-3. Site I and II concrete mix design (3 of 4).

Appendix A. (continued)

MIX ID: 1900057 TREMIE PSI: 4000 PSI MATERIALS DISTRIBUTION 02/22/00

SIEVE	STONE	SAND	PASTE	TOTAL	AGGR
1-1/2 *				0.0	-
1 "	100.0			-	-
3/4 "	99.0			0.3	0.5
1/2 "	72.0			9.3	14.0
3/8 "	38.0			11.7	17.6
# 4	4.0			11.7	17.6
# 8	2.0	100.0		0.7	1.0
# 16	-	93.0		2.3	3.4
# 30	-	54.0		13.2	19.8
# 50	-	19.0		11.2	16.9
# 100	-	2.0		5.5	8.2
# 200	-	-	100.0	0.6	1.0
# 325	-	-	95.5	1.5	-
Liquid	-	-	59.5	12.0	-

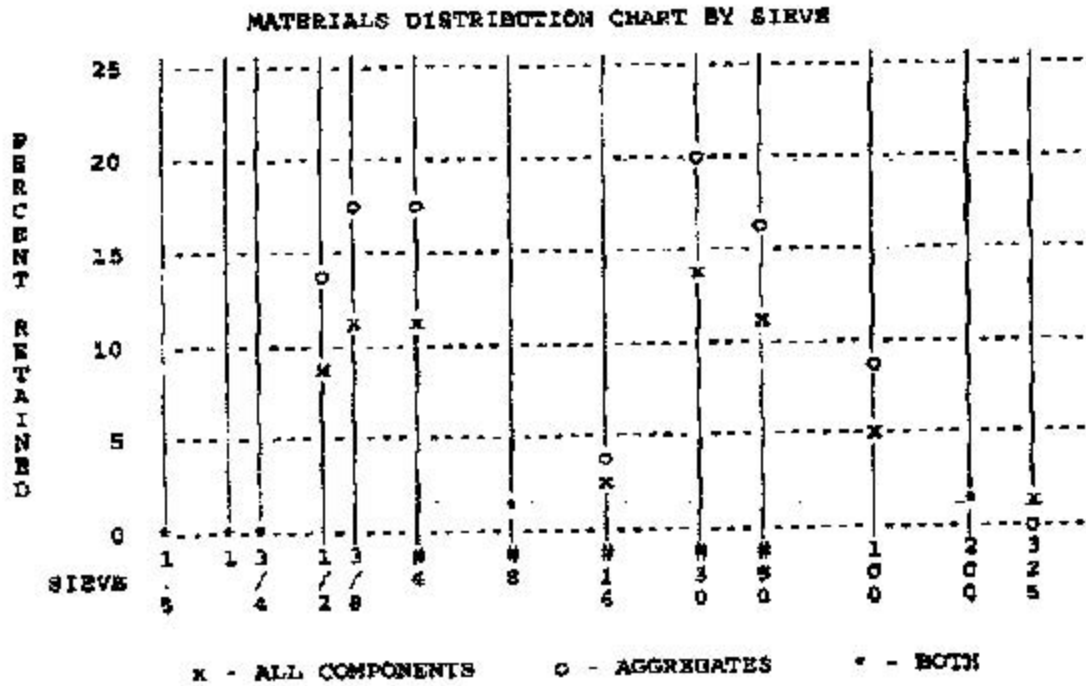


Figure A-4. Site I and II concrete mix design (4 of 4).

Appendix A. (continued)

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
FIELD BORING LOG

FORMATS-08-11
MATERIALS - 1004

Page 1 of Page 2

Project No. USF FF # 00579057 Boring No. B-1 Elevation _____ Type Equipment ONE 75
 Bridge No. 218 Station No. 11A Other 218 County Pinellas DATE 2/26/75
 ELEVATION BASED ON BENCH MARK _____
 Description SPT for post-grout research
 Drilled By Ken Mann/Shevill Logged By PA Chughlin Water Table Elevation _____ Type Hammer AUTO
 Water Table Started 5:00 PM Date/Time Completed 2/26/75 10:35 Boring No. _____
 Water Table Monitor Station N/A Other N/A Monitor GSE N/A Water Table Depth _____

(Metric/English) SAMPLE		SPT BLOWS	MATERIAL DESCRIPTION	SAMPLE			REMARKS
FROM	TO			NO.	W.	%	
0.0		8	Ben Sand, med.				
		10	dense, damp				
	1.5	14		1	13 1/2	75	
						NO sample taken due to repeated caving in of rubble layer	
	3.0			2			
	3.0	6	Dark brown Sand 7/51/it			STRATA CHANGED @ 3.0'	
		4	rocky, loose				
	4.5	3	wet (fill)	3	18	100	
	4.5	3	Med brown fine sand			STRATA CHANGED @ 4.5'	
		5	7/roots med. damp				
	6.0	8	wet	4	13 1/2	75	
	6.0	3	Gray sand 7/5 shell			STRATA CHANGED @ 6.0'	
		1	very loose, wet				
	7.5	1		5	9	50	
	7.5	2	SAME (loose)				
		2					
	9.0	3		6	6	33	
		3	SAME				
	10.5	3		7	6	33	
	10.5	3	Shall w/ls sand			STRATA CHANGED @ 10.5'	
		2	loose, wet				
	12.0	3		11	4 1/2	25	
	12.0	4	SAME				
		4				(50% Fluid loss 12.5 to 13.5')	
	13.5	6		9	13 1/2	75	
	13.5	2	SAME			Gray fine sand in Tip of spoon	
		2					
	15.0	8		11	13 1/2	75	
						regain 100% Fluid return @ 14'	

Figure A-5. Site I SPT boring log B-1 (1 of 2).

Appendix A. (continued)

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
FIELD BORING LOG

FORM ITS-26-1B
MATERIALS - 1098

Page 2 of Page 2

Project # 115F VP # PST BENT Boring # B-1 FOUND # N/A DEPTH N/A

(Metric/English) SAMPLE		SPT BLOWS	MATERIAL DESCRIPTION	SAMPLES			REMARKS
FROM	TO			NO.	BL.	%	
15.0		5	Gray Fine Sand				STRATA CHANGE in Top of Sample # 10
		6	med dense, med				
	16.5	4		12	12	100	
16.5		3	Gray med silty				STRATA CHANGE @ 16.5'
		4	sand, med, med				
	18.0	4		12	12	100	
							Terminated @ 18.0'

Figure A-6. Site I SPT boring log B-1 (2 of 2).

Appendix A. (continued)

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
FIELD BORING LOG

FORM 47-20-11
MATERIALS - 1070
Page 1 of Page 2

Project # <u>USF</u>		Type Equipment <u>CM 875</u>	
Boring # <u>TP Post Grant</u>		Country <u>Florida</u>	
Surface # <u>N/A</u>		DOTA # <u>23867</u>	
Other # <u>N/A</u>		Township _____	
ELEVATION BASED ON BENCH MARK		Range _____	
Description <u>TP Post Grant Research</u>		East Section _____	
Drilled By <u>William H. Smith</u>		Water Table Elevation _____	
Lagged By <u>William H. Smith</u>		Type Recorder <u>AUTO</u>	
Date/Time Started <u>5/16/00 1:30</u>		Boring Completion <u>5/16/00 2:00</u>	
Date/Time Completed <u>5/16/00 2:00</u>		Water Table Depth _____	
Water Table Meters: Surface <u>N/A</u>		Other <u>N/A</u>	
Monitor GSS # <u>N/A</u>		Water Table Depth _____	

DEPTH (Feet)	SAMPLE	SPT BLOWS	MATERIAL DESCRIPTION	SAMPLE			REMARKS
				NO.	IN.	%	
FROM	TO						
0.0		3	dk. brn Sand T/Silt				
		5	sm. rock, med dense				
1.5	1.5	12	dry (F11)	1	13 1/2	75	
		8	SPM E				
3.0	3.0	8		2	18	100	
		4	very dk. gray sand, loose, wet				STRATA CHANGE @ 3.0'
4.5	4.5	5		3	15 1/2	75	
		3	med brn fine sand w/ roots, med				STRATA CHANGE @ 4.5'
6.0	6.0	7	dk. brn, wet	4	15 1/2	75	
		4	SAME (as cont.)				
		2	Loose	5	13 1/2	75	
7.5	7.5	2	gray sand / shell				STRATA CHANGE @ 7.5'
		2	loose, wet				
9.0	9.0	2		6	6	33	
		3	SAME				
10.5	10.5	3		7	6	33	
		2	SAME				
12.0	12.0	2		8	6	33	
		3	shd w/ sand				STRATA CHANGE @ 12.0'
		2	loose, wet				
13.5	13.5	3		9	9	50	
		3	gray sand / shell				STRATA CHANGE @ 13.5'
		3	loose, wet				
15.0	15.0	4		10	6	33	

Figure A-7. Site I SPT boring log B-2 (1 of 2).

Appendix A. (continued)

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
FIELD BORING LOG

FORM 476-GR-13
MATERIALS-18W
Page 2 of Page 2

Project #: USF FF #: Post G-07 Boring #: B-2 Station #: M/A Cont: M/A

(Metric/English) SAMPLE	SPT BLOWS	MATERIAL DESCRIPTION	SAMPLE			REMARKS
			NO.	REC.		
FEED	TO			IN.	FT.	
15.0	4	Gray fine sand				DEPTH CHANGE @ 15.0'
	1	offm. Shell string				
	2	loam, wet	11	18	100	
16.5	1	Gray fine Silty sand, moist, wet				DEPTH CHANGE @ 16.5'
	1					
18.0	1		12	18	100	Terminated @ 18.0'

Figure A-8. Site I SPT boring log B-2 (2 of 2).

Appendix A. (continued)

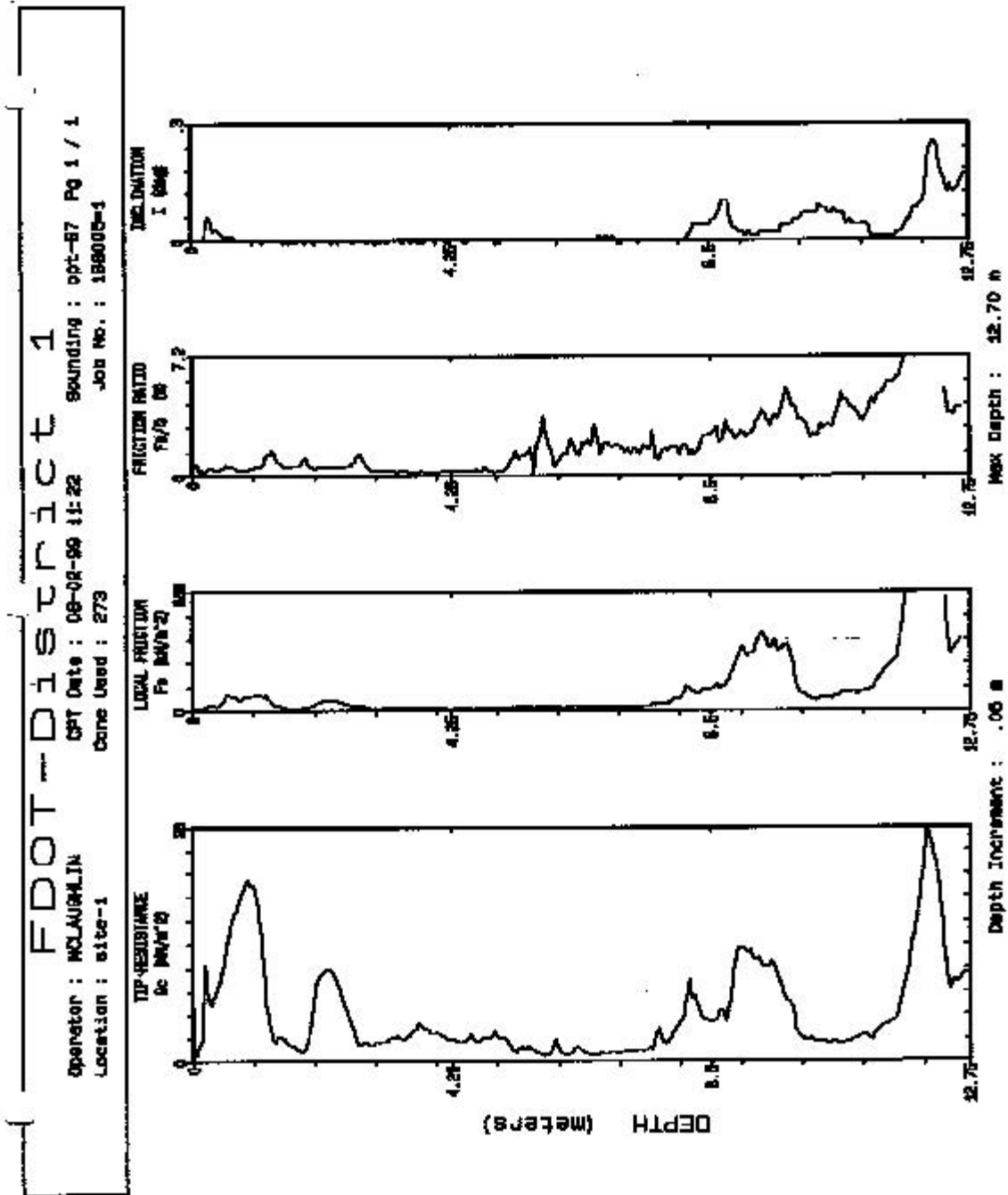


Figure A-9. Site I CPT sounding CPT-67.

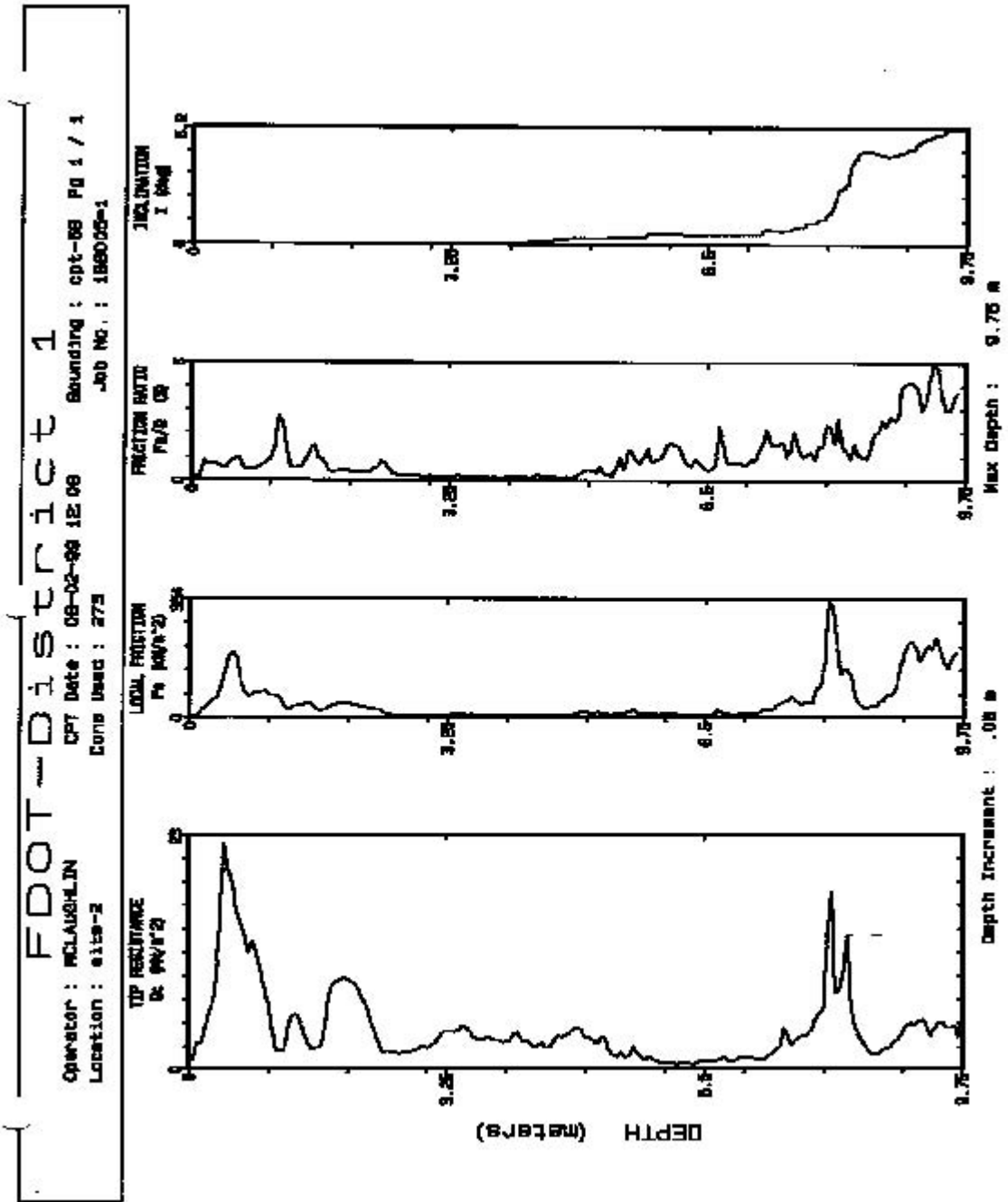


Figure A-10. Site I CPT sounding CPT-68.

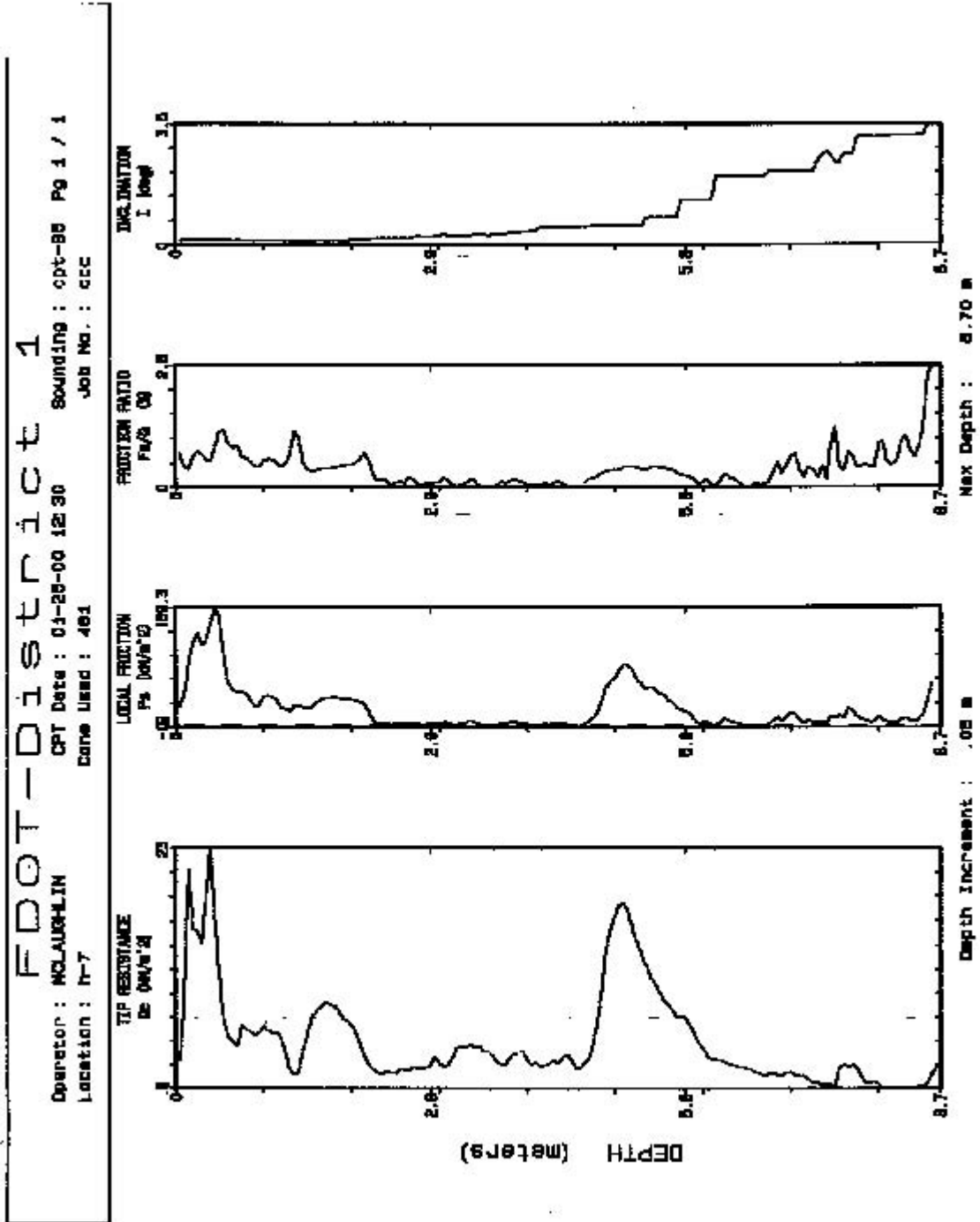


Figure A-11. Site I CPT sounding Control Shaft location.

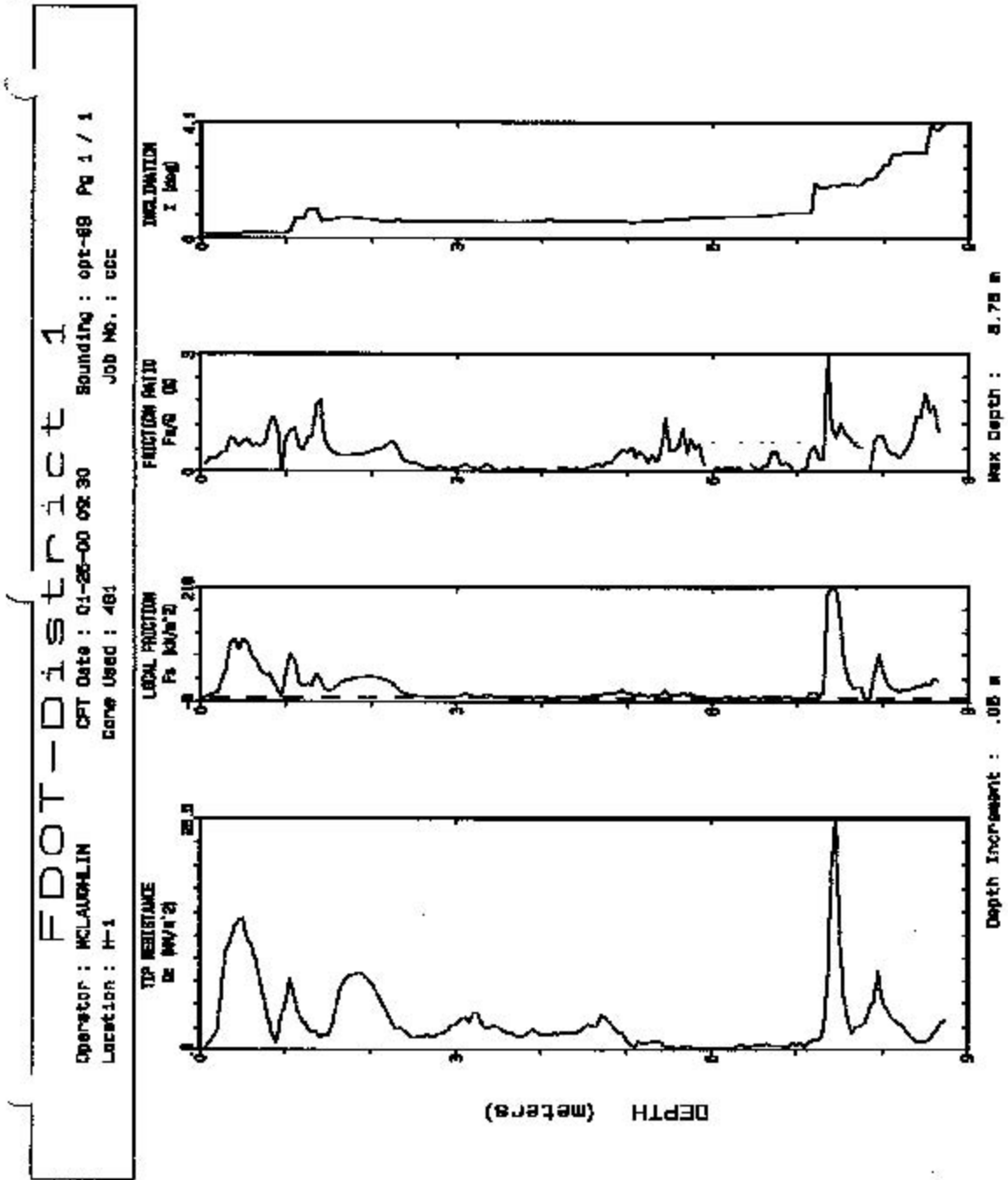


Figure A-12. Site I CPT sounding Flat-Jack 1 location.

Appendix A. (continued)

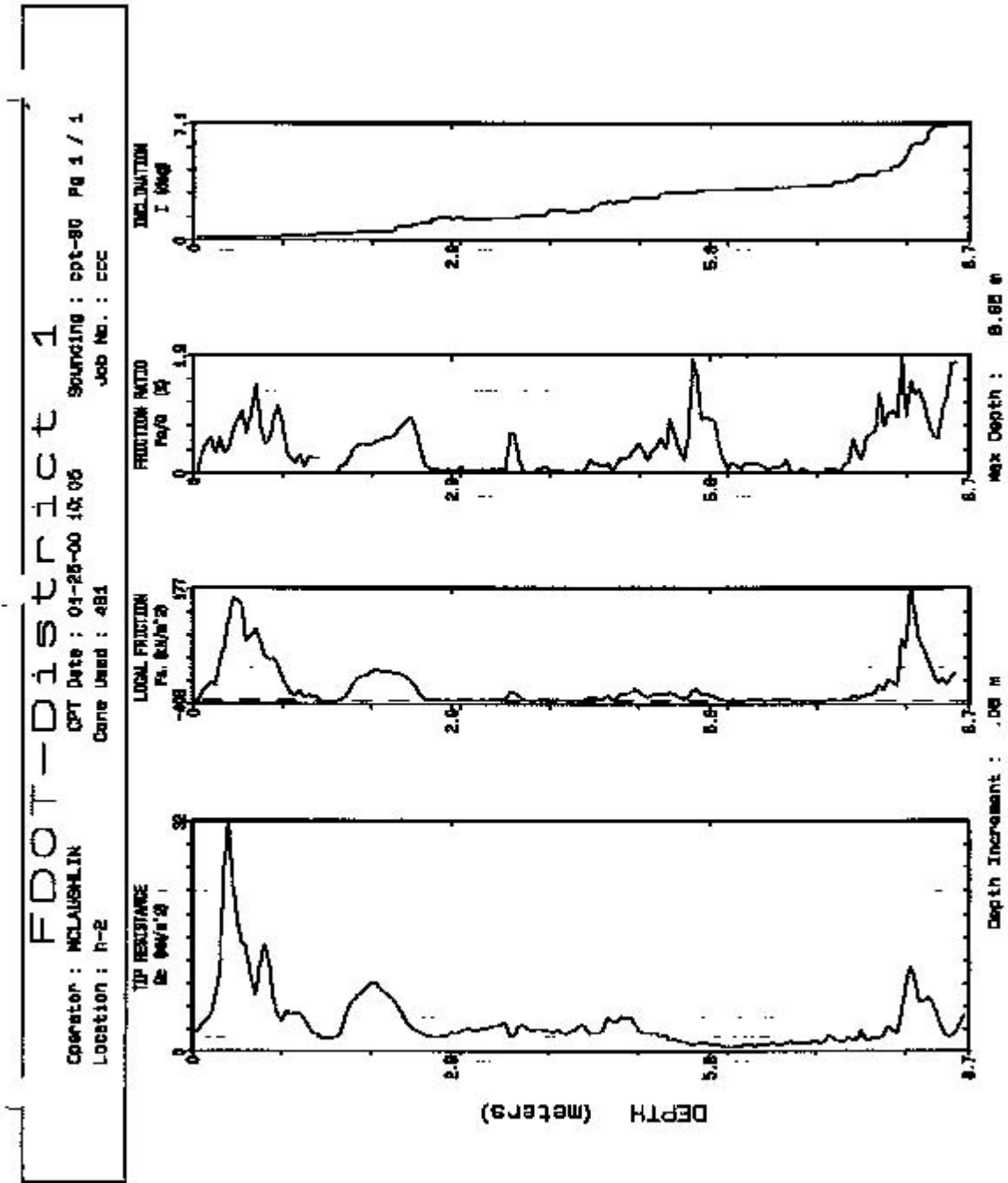


Figure A-13. Site I CPT sounding Flat-Jack 2 location.

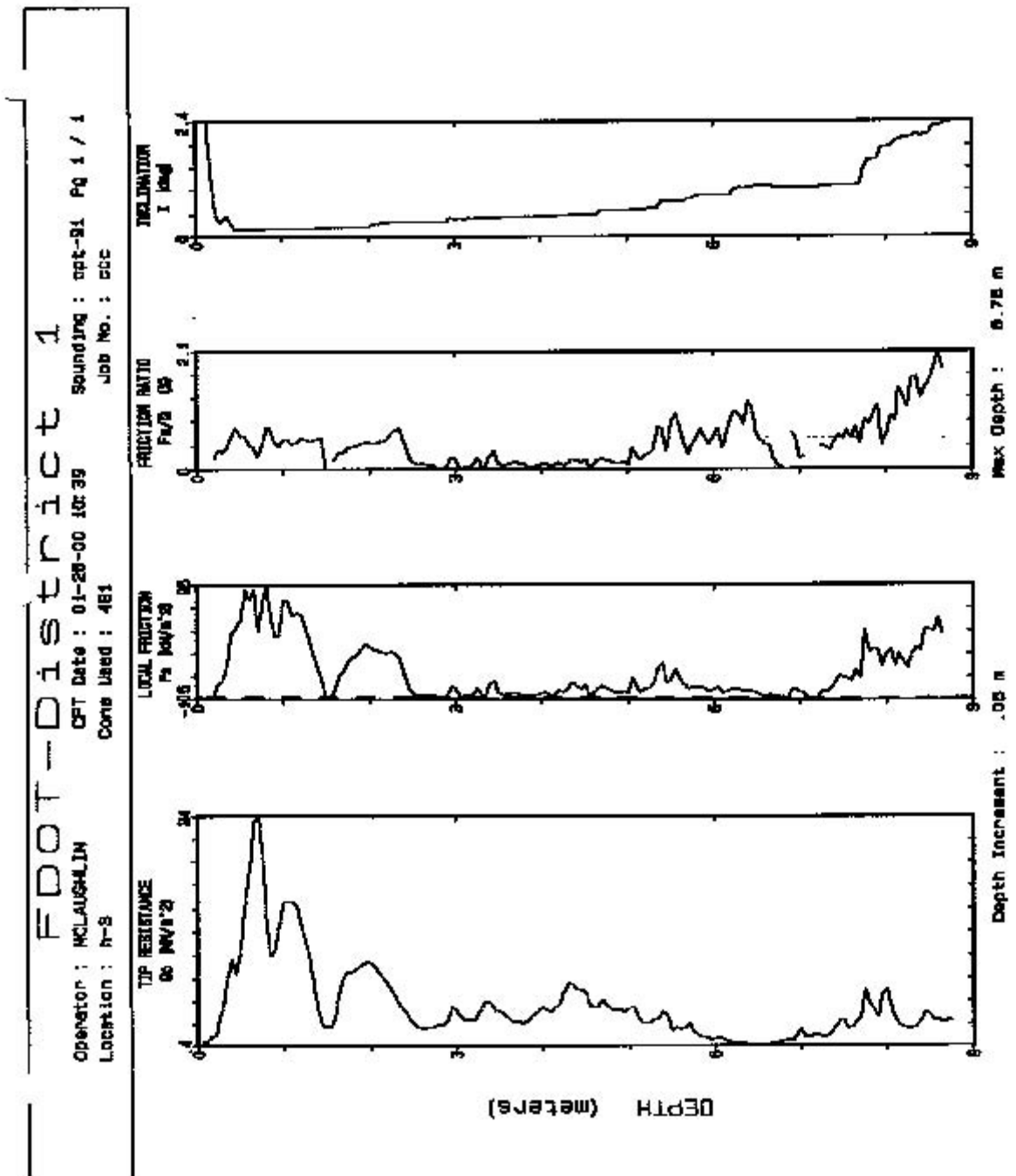


Figure A-14. Site I CPT sounding Sleeve-Port 1 location.

Appendix A. (continued)

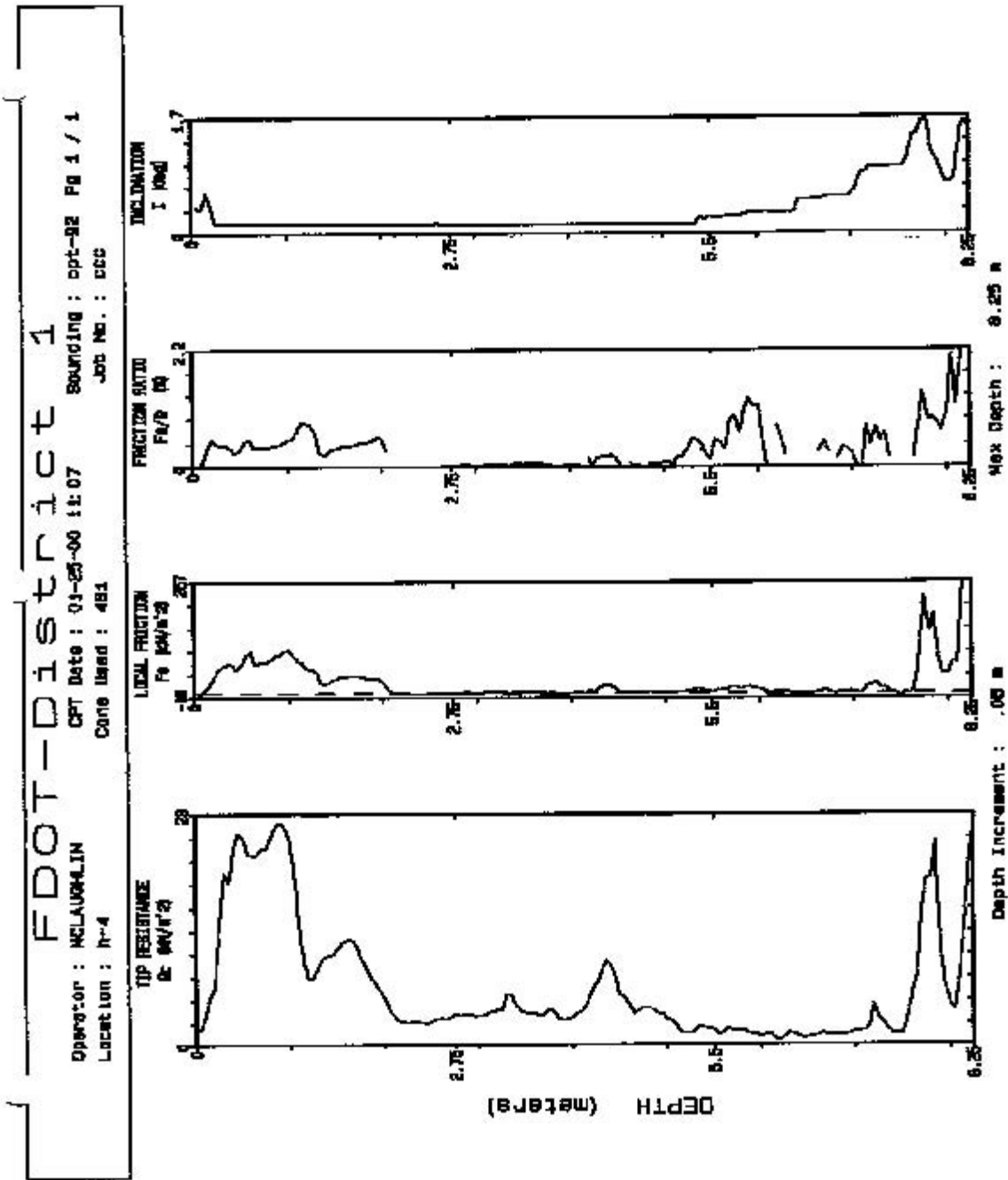
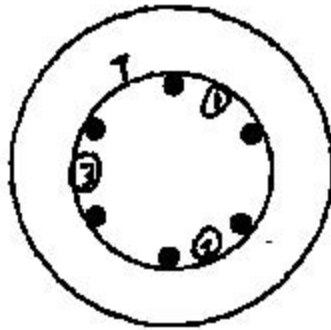


Figure A-15. Site I CPT sounding Sleeve-Port 2 location.

Appendix A. (continued)



SITE: I

Vert. Rebar ● SHAFT: CONTROL
 Tip Grout □ SOIL TYPE: SILTY SAND
 Strain Gage ○ LOCATION: CLEARWATER, FL
 Telltale T
 Skin Grout △
 (Site II only)

DIAMETER: 24"

CONSTRUCTION:

Date: 15 FEB 2000 (SLUMP 10.5")
 Drill Rig: TEXOMA 700 (COASTAL LAYERS CORP.)
 Excav. Method: POLYMER GUMMARY
 Excav. Tool: Auger w/ cont. fluted teeth

Top of Casing/Shaft	1.0 ft.
Top of Steel	0.5 ft.
Bot. of Casing	-1.0 ft.
Strain Gage	-3.5 ft.
Skin Grout Cen. (Site II Only)	ft.
Ground Water	-9.0 ft.
Skin Grout Cen. (Site II Only)	ft.
Strain Gage	-12.8 ft.
Bot. of Steel	-14.3 ft.
Shaft Tip	-14.3 ft.

WATER BURST (Sleeve-Port Only)

Date: _____
 Pump: _____
 Water Take: _____

TIP GROUT

Date: _____
 Pump: _____
 W/C Ratio: _____
 Grout Take: _____

SKIN GROUT (Site II Only)

Date: _____
 Pump: _____
 W/C Ratio: _____
 Grout Take: _____

LOAD TEST

Date: 23 MARCH 2000
 Method: 500 CON STATIC W/ HYD CAGE (420)

Figure A-16. Site I Control Shaft as-built.

Appendix A. (continued)

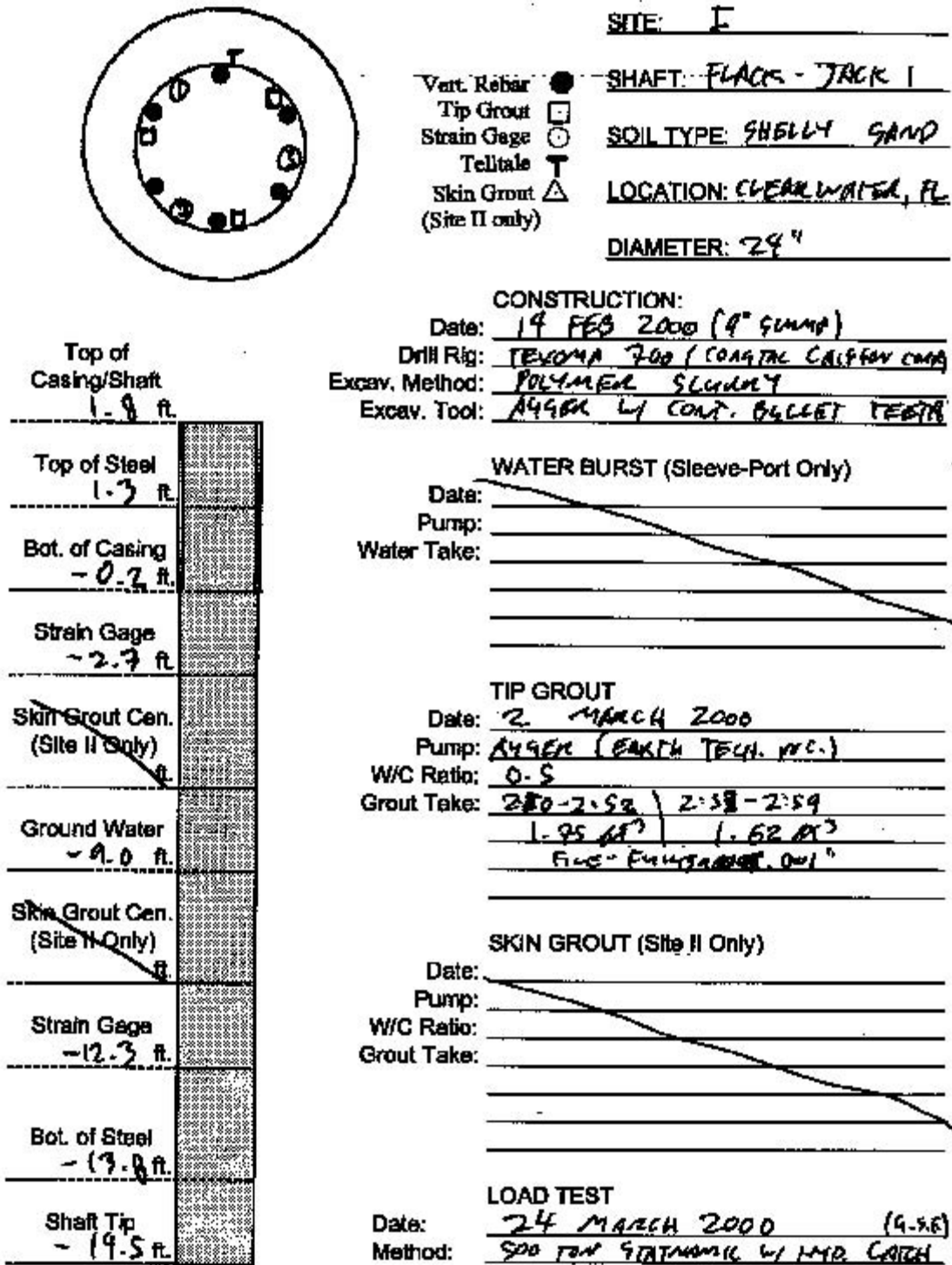


Figure A-17. Site I Flat-Jack 1 as-built.

Appendix A. (continued)

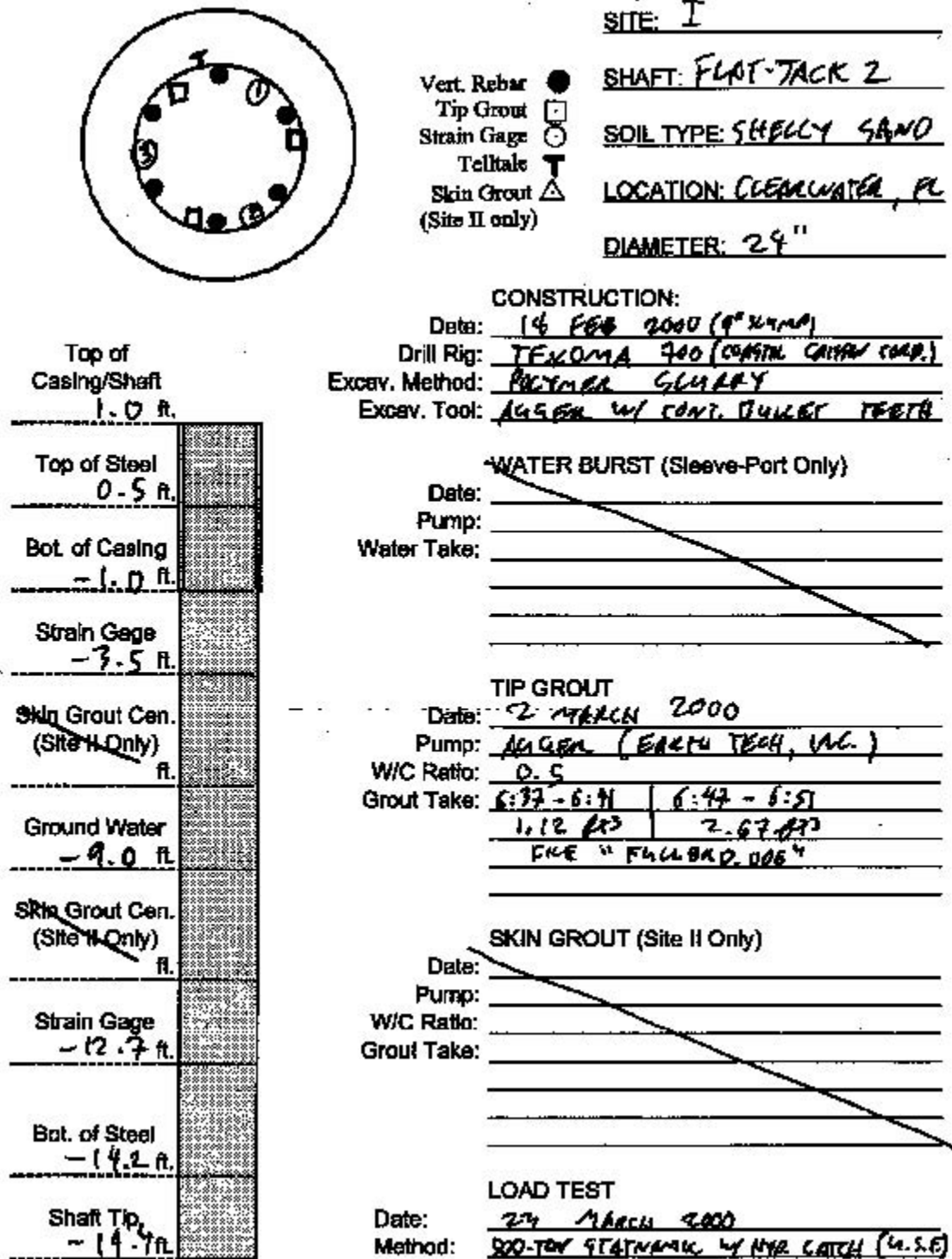


Figure A-18. Site I Flat-Jack 2 as-built.

Appendix A. (continued)

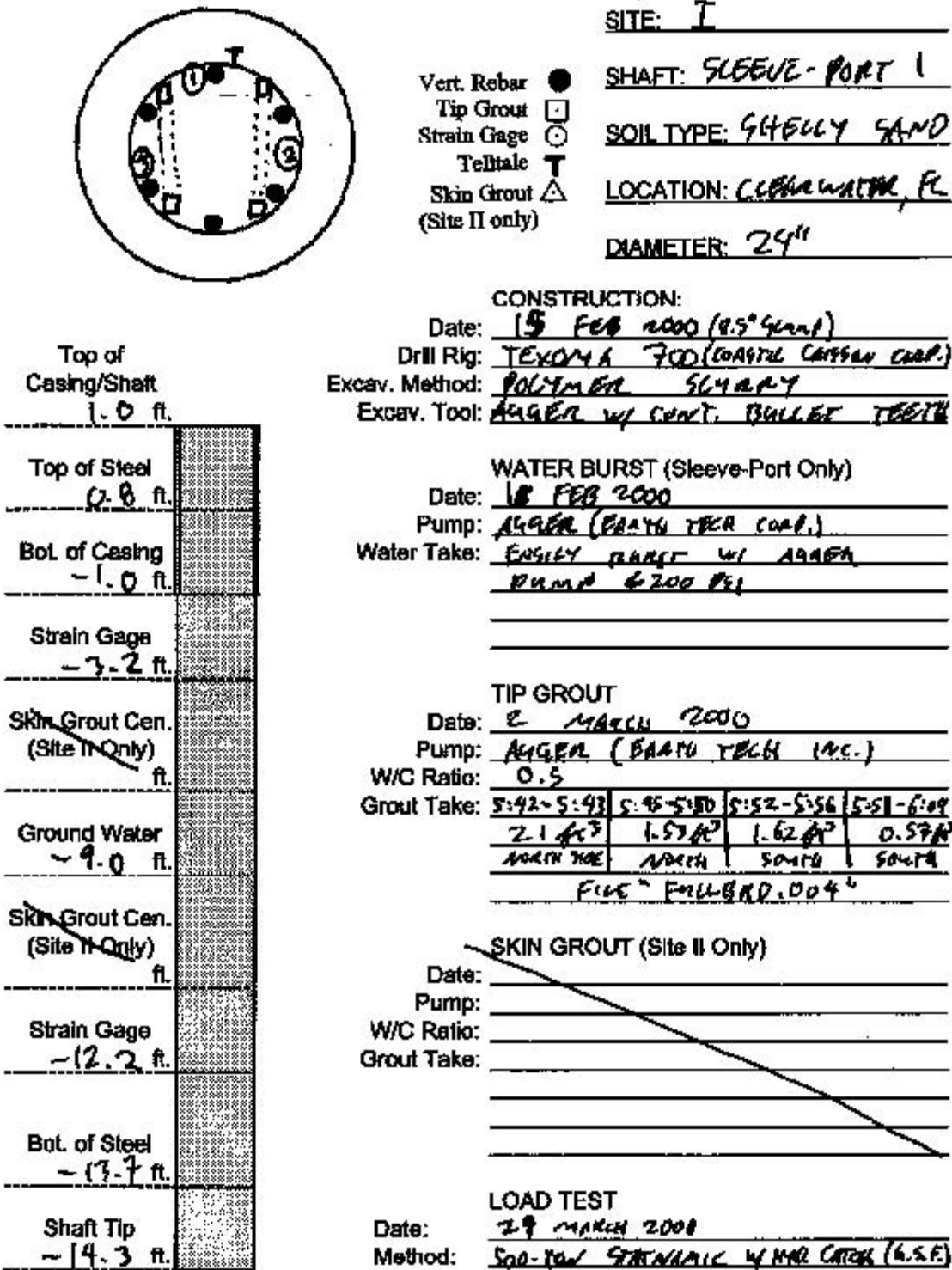


Figure A-19. Site I Sleeve-Port 1 as-built.

Appendix A. (continued)

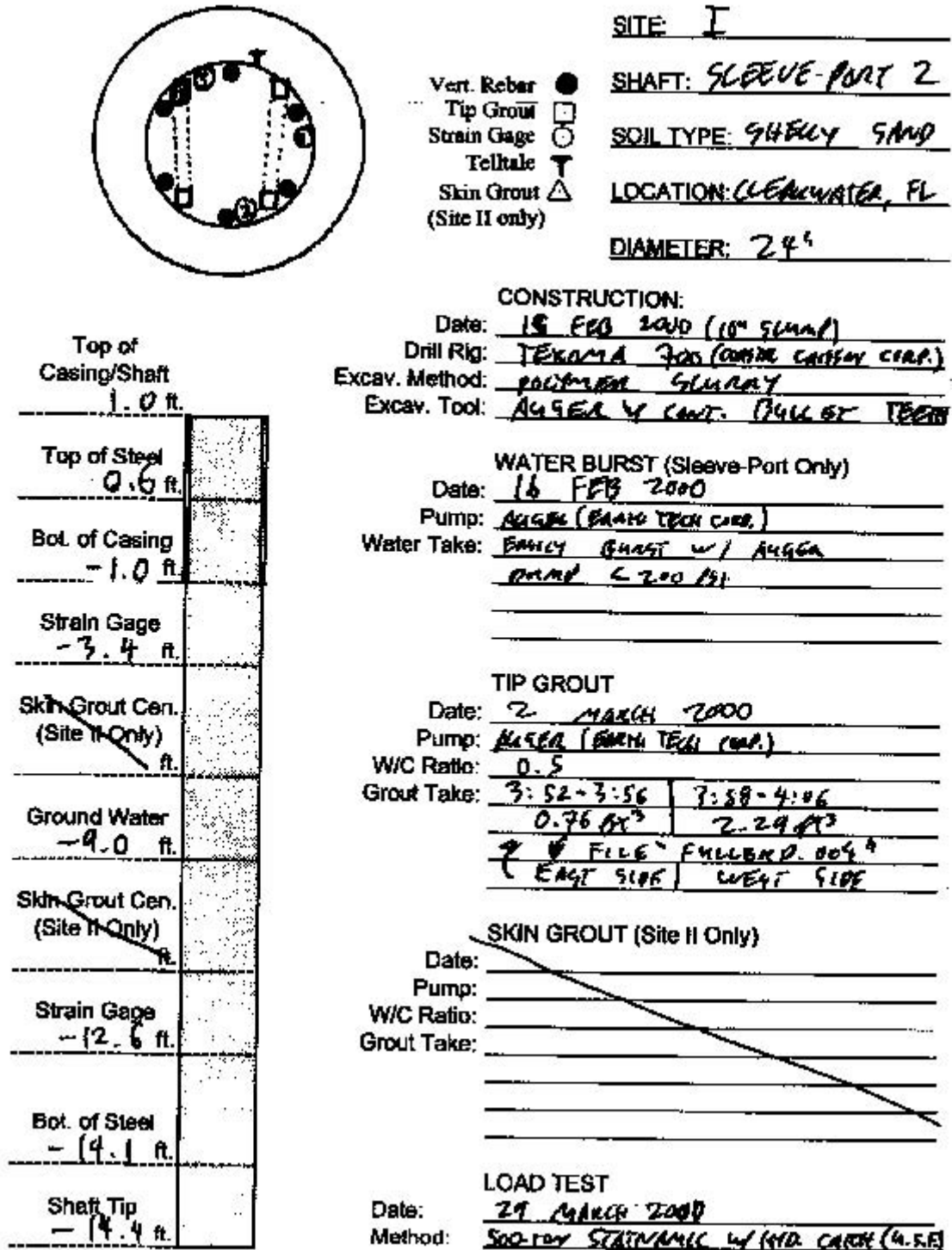


Figure A-20. Site I Sleeve-Port 2 as-built.

Appendix A. (continued)

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
FIELD BORING LOG

FORM 673-018-10
MATERIALS - 10/95

Page 1 of 2

Project #: USF TR POST GRANT Boring #: B-3 Elevation: _____ Type Equipment: CME 75
 Bridge #: N/A Station #: 0+10 Other: N/A County: Putnam D.O.T. #: 23867
 ELEVATION BASED ON KEYHOLE MARK Township: South Range: _____ Easting: _____
 Description: SPT for Post Grant research Water Table Elevation: _____ Type Hammer: Auto
 Drilled By: Ron Sturgis Logged By: PC Langston Boring Date: _____
 Date/Time Started: 07/20/05 Date/Time Completed: 07/20/05 3:45P Water Table Depth: _____
 Water Table Monitor Station: N/A Other: N/A Blower GWT: N/A

SAMPLE		DEPTH FEET	MATERIAL DESCRIPTION	SAMPLES			REMARKS
FROM	TO			NO.	IN.	IN.	
0.0						no ground sample taken due to rocks, trash	
	1.5			1			
1.5		8	dark brown sand 7/8" silt				
		5	med. med. dense				
	3.0	7	dry (F1)	2	13 1/2	75	
3.0		5	brn sand w/ roots			STRATA CHANGE @ 3.0'	
		8	med. dense, wet				
4.5		10		3	15 1/2	75	
4.5		3	med. brn sand, loose			STRATA CHANGE @ 4.5'	
		3	wet				
	6.0	4		4	17 1/2	75	
6.0		2	dk. brn fine sand			STRATA CHANGE @ 6.0'	
		2	loose, wet				
	7.5	2		5	18	100	
7.5		1	SAME				
		1					
	9.0	2		6	9	50	
9.0		1	med. brn sand			STRATA CHANGE @ 9.0'	
		1	very loose, wet				
10.5		1	SAME	7	17 1/2	75	
		0				(1st blow pushed tube 12")	
	12.0	1		8	7	50	
12.0		1	SAME			(weight of hammer pushed tube 12")	
		1					
	13.5	1		9	18	100	
13.5		0	med. brn sand 7/8" silt			STRATA CHANGE @ 13.5'	
		2	loose, wet				
	15.0	3		10	13 1/2	75	

Figure A-21. Site II SPT boring log B-3 (1 of 2).

Appendix A. (continued)

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
FIELD BORING LOG

FORM 675-206-15
MATERIALS - 10/91

Page 2 of Page 2

DEPTH (Feet)		SPT BLOWS	MATERIAL DESCRIPTION	SAMPLES			REMARKS
FROM	TO			NO.	IN.	%	
15.0		3	Grey coarse sand				STRENGTH CHANGE @ 15.0'
		3	loose, wet				
	16.5	4		11	13/16	75	
16.5		2	Grey coarse sand				STRENGTH CHANGE @ 16.5'
		3	1/2 silt, loose, wet				
	18.0	3		12	18	100	
							Terminated @ 18.0'

Figure A-22. Site II SPT boring log B-3 (2 of 2).

Appendix A. (continued)

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
FIELD BORING LOG

FORM 625-008-13
MATERIALS-1075

Page 1 of Page 2

Project # 125E SP # Post Grant Boring # B-4 Iteration: _____ Type Equipment: CRETS
 Bridge # N/A Station # N/A Offset: 0/0 County: Pinellas D.O.T.# 23867
 ELEVATION BASED ON BENCH MARK _____ Township: South Range: East Section: _____
 Description: SPT for Post Grant research Water Table Elevation: _____ Type Hammer: _____
 Drilled By: Karl P. Smith / Shugart Logged By: DeChanglin Boring type: _____
 Date/Time Started: 5/1/00 Date/Time Completed: 5/1/00 Monitor: OSI Water Table Depth: _____
 Water Table Elevation: Sea level N/A Order: N/A

DEPTH (English) SAMPLE		EFT BLOWS	DIATERSIAL DESCRIPTION	SAMPLES			REMARKS
FROM	TO			NO.	BL.	N	
0.0						no ground sample taken due to rocks & trash	
	1.5			1			
1.5		5	Dark brown Sand / silt iron med base, moist	2	18	100	
	3.0						
3.0		4					
		7	NO RECOVERY				
	4.5			3	0	0	
4.5		7	Dark Sand w/ rocks med dense, moist			STRATA CHANGE @ 4.5'	
		5					
	6.0			4	4 1/2	25	
6.0		2	SAME (very loose)				
		1					
	7.5			5	13 1/2	75	
7.5		4	NO RECOVERY				
		3					
	9.0			6	0	0	
9.0		4	med brown Sand very loose, moist			(weight of hammer pushed tube 12")	
		1					
	10.5			7	18	100	
10.5		1	SAME			(weight of hammer pushed tube 6")	
		1					
	12.0			8	18	100	
12.0		4	gray Sand r/silt very loose, moist			(weight of hammer pushed tube 12")	
		2				STRATA CHANGE @ 12.5'	
	13.5			9	13 1/2	75	
13.5		2	gray Sand, loose moist			(weight of rod pushed spoon 6")	
		3				STRATA CHANGE @ 13.5'	
	15.0			10	13 1/2	75	

Figure A-23. Site II SPT boring log B-4 (1 of 2).

Appendix A. (continued)

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
FIELD BORING LOG

FORM 476-478-13
MATERIALS - 1095

Page 2 of Page 2

Project # 115F TP & Post Grant Boring # B-4 Station # N/A Other: N/A

SAMPLE		DPT BLOWS	MATERIAL DESCRIPTION	SAMPLES			REMARKS
FROM	TO			NO.	IN.	%	
15.0		1	Gray Sand w/ seams of dk brown silty			SPENT CHANGED @ 15.0'	
		2					
	16.5	2	Sand, loose, wet	11	13 1/2	TK	
16.5		3	SAME (very loose)				
		1					
	18.0	1		12	9	50	
						Terminal @ 18.0'	

Figure A-24. Site II SPT boring log B-4 (2 of 2).

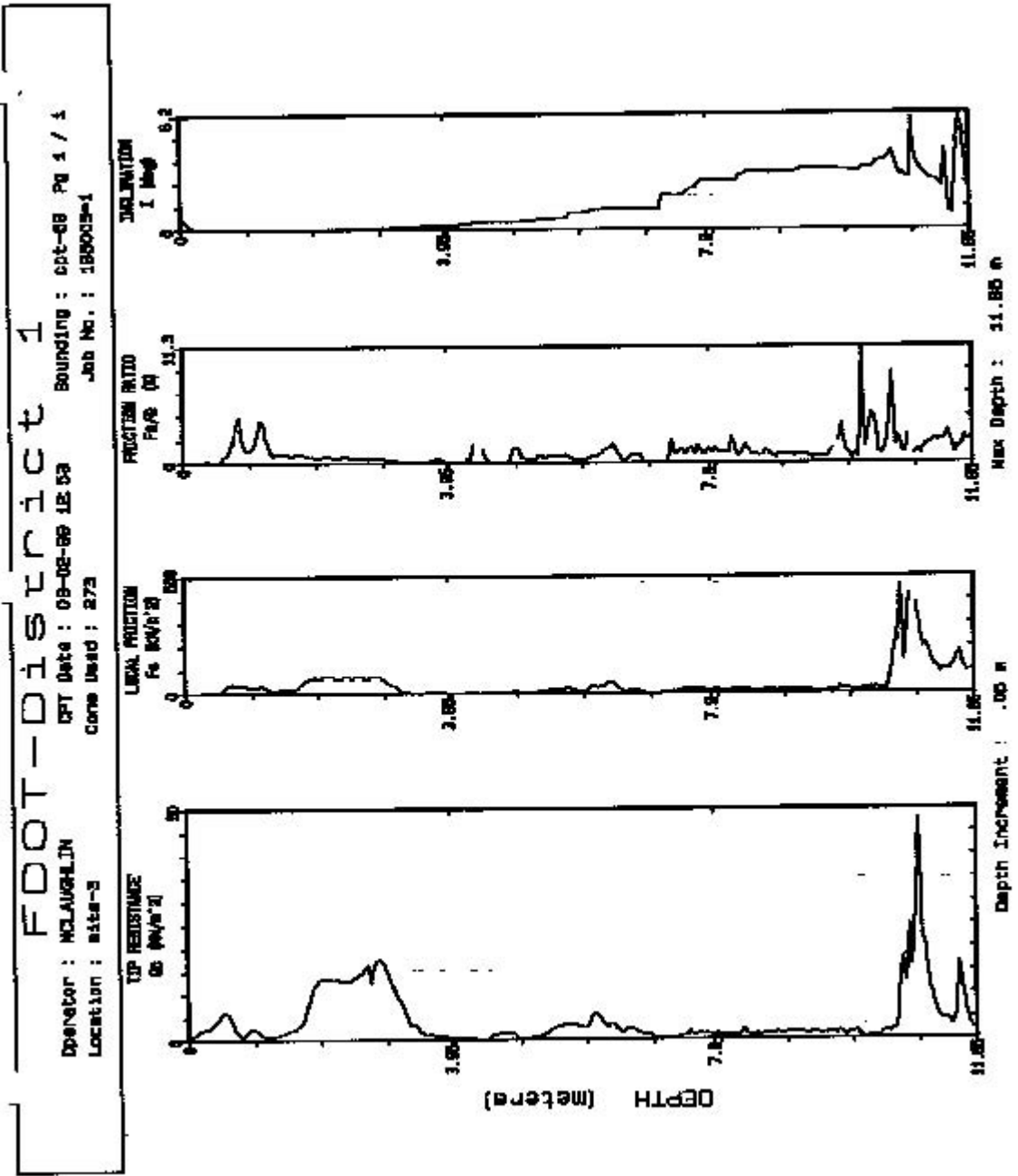


Figure A-25. Site II CPT sounding CPT-69.

Appendix A. (continued)

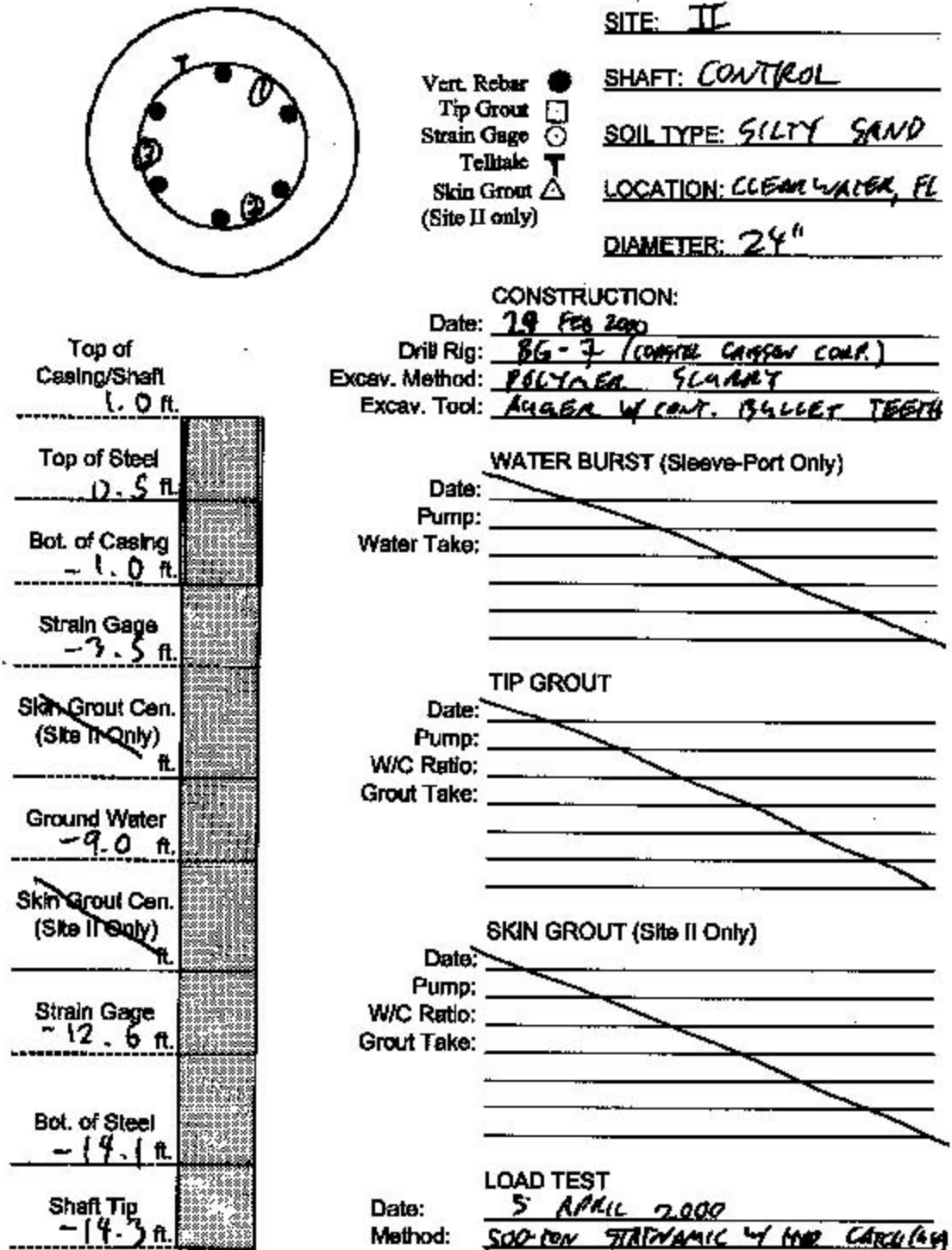


Figure A-26. Site II Control Shaft as-built.

Appendix A. (continued)

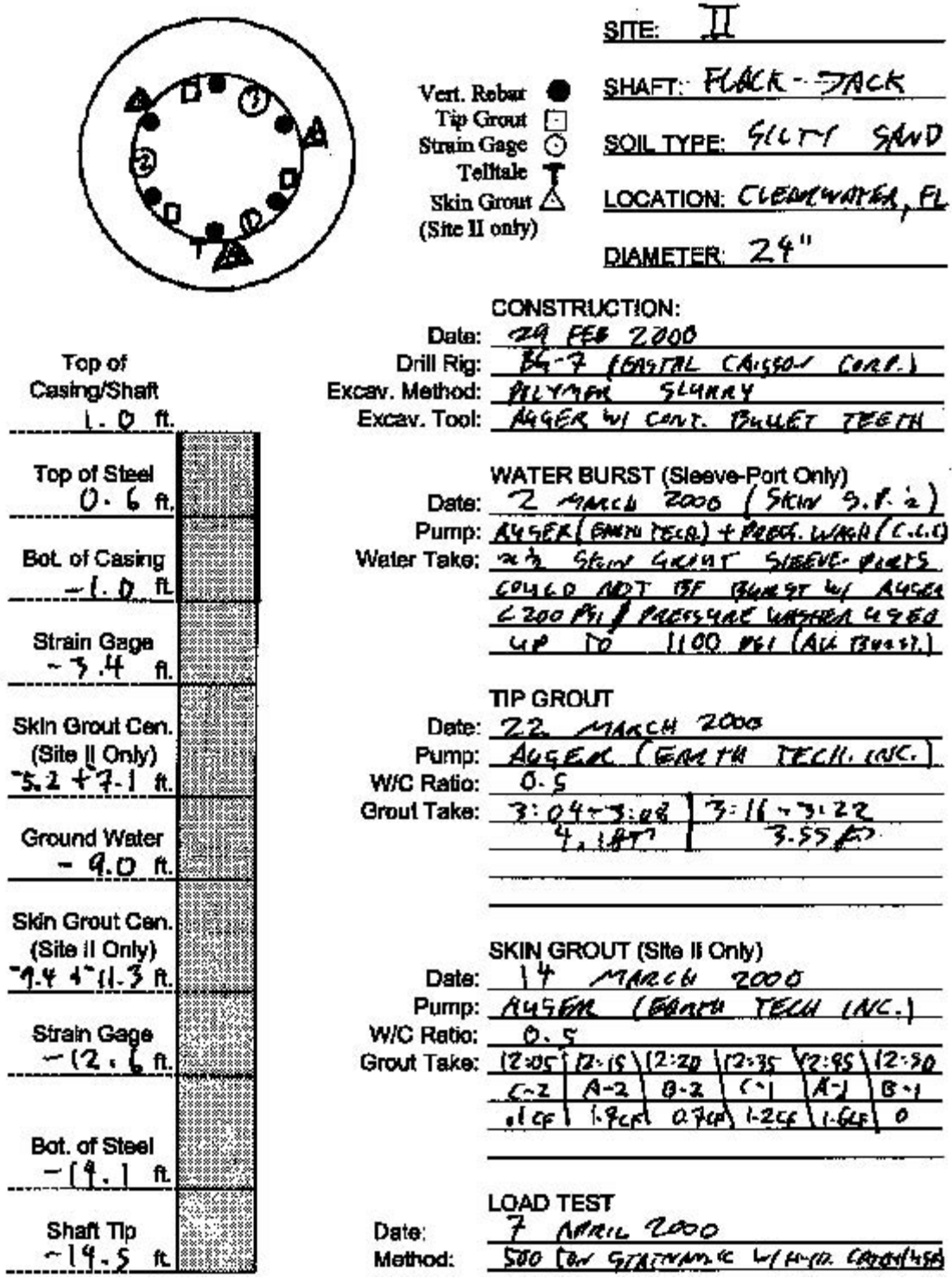


Figure A-27. Site II Flat-Jack as-built.

Appendix A. (continued)

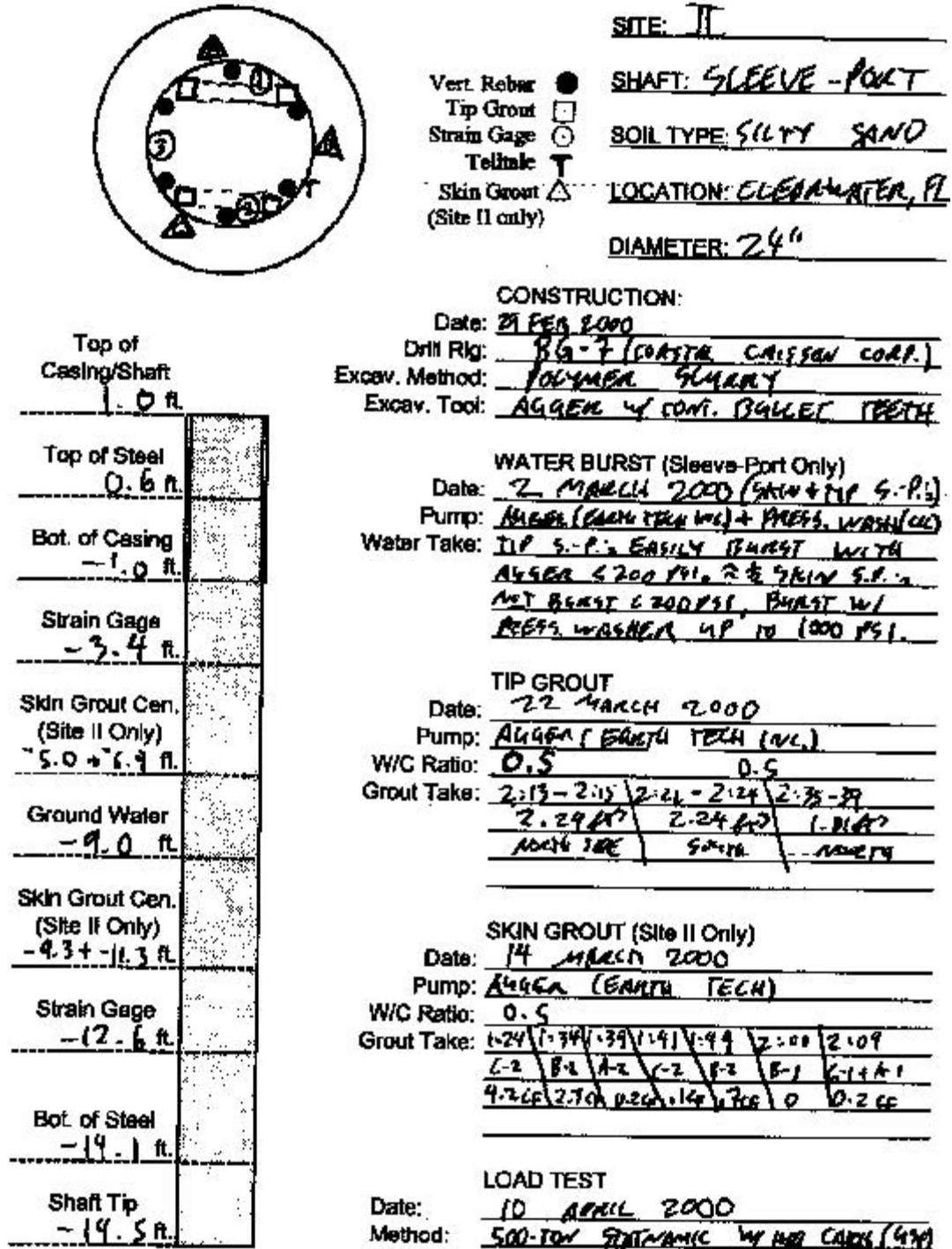


Figure A-28. Site II Sleeve-Port as-built.

Appendix A. (continued)

OF TRANSPORTATION
APPROVED

DATE JAN. 06, 1999

BY [Signature]

DISTRICT MATERIALS ENGR. CONCRETE MIX DESIGN

[Signature]
 ISSUED : C. ROBERTS
 REVIEWED : R. W. HALL
 DATE : 12/24/98
 MIX NO. : 04-M0434

M880434

CONCRETE SUPPLIER: TARMAC AMERICA INC
 ADDRESS: 11000 N.W. 311 WAY MEDLEY, FLORIDA 33178
 PLANT LOCATION: STUART
 EDOT ASSIGNED PLANT NO.: 89-245 TELEPHONE NO: 561/848-2594
 DATE: 12/23/98 PROJECT NO: 89040-3510

CLASS CONCRETE: IV DRILL SHAFT (28)

SOURCE OF MATERIALS

COARSE AGGREGATE:	PER 15000	GRADE:	57 S.G. (SSD) 12.430
FINE AGGREGATE :	E. D. JARNA	F.M.:	2.41 S.G. (SSD) 2.630
PIT NO. (COARSE) :	87-143	TYPE:	CRUSHED LIMESTONE
PIT NO. (FINE) :	05-143	TYPE:	SILICA SAND
CEMENT :	PER 15000 TARMAC (MIAMI)	SPEC:	ASHTO M-85 TYPE II
1 ST ENTR. ADMIX :	MOR-1-80 MASTER BUILDERS	SPEC:	ASHTO M-154
2 ND ADMIX :	POZOLITH 961 R MASTER BUILO	SPEC:	ASHTO M-194 TYPE D
3 RD ADMIX :	----	SPEC:	----
FLY ASH :	5 FINNCCEN (MIAMI) TARMAC	SPEC:	ASTM C-989

* BLAST FURNACE SLAG
 HOT WEATHER METRIC DESIGN MIX

CEMENT	kg:	100.00	SLUMP RANGE	:	175.00 TO 225.00	mm
COARSE AGG	kg:	529.00	AIR CONTENT	:	0.00 TO 6.00	%
FINE AGG	kg:	677.00	UNIT WEIGHT (WET)	:	2205.00	kg/m ³
AIR ENTR ADMIX	ML:	319.00	W/C RATIO (PLANT)	:	0.40	kg/kg
1 ST ADMIXTURE	ML:	1704.00	W/C RATIO (FIELD)	:	0.40	kg/kg
2 ND ADMIX	ML:	0.00	TREN YIELD	:	1.00	m ³
3 RD ADMIX	ML:	0.00				
WATER	L:	178.00				
WATER	kg:	178.00				
FLY ASH	kg:	211.00				

CC:
 D. M. E. 4 & 6
 TEST FILE

PRODUCER TEST DATA
 CHLORIDE CONT : 0.09 kg/m³
 SLUMP : 203.00 mm
 AIR CONTENT : 4.00 %
 TEMPERATURE : 37.00 DEG C
 COMPRESSIVE STRENGTH MPA
 28 -DAY- 46.60 -DAY-
 -DAY- -DAY-

Figure A-29. Site III concrete mix design (1 of 2).

Appendix A. (continued)

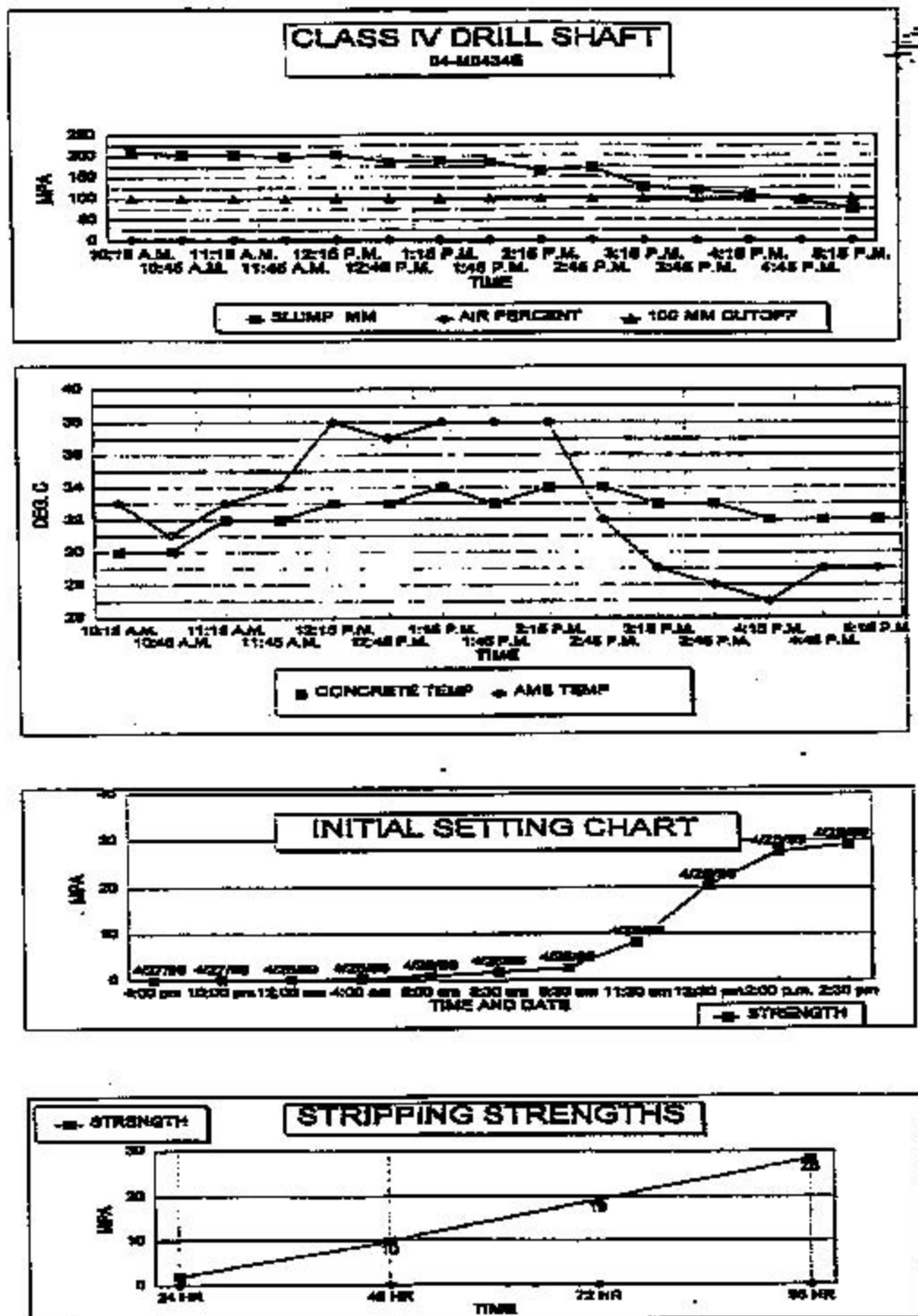


Figure A-30. Site III concrete mix design (2 of 2).

Appendix A. (continued)

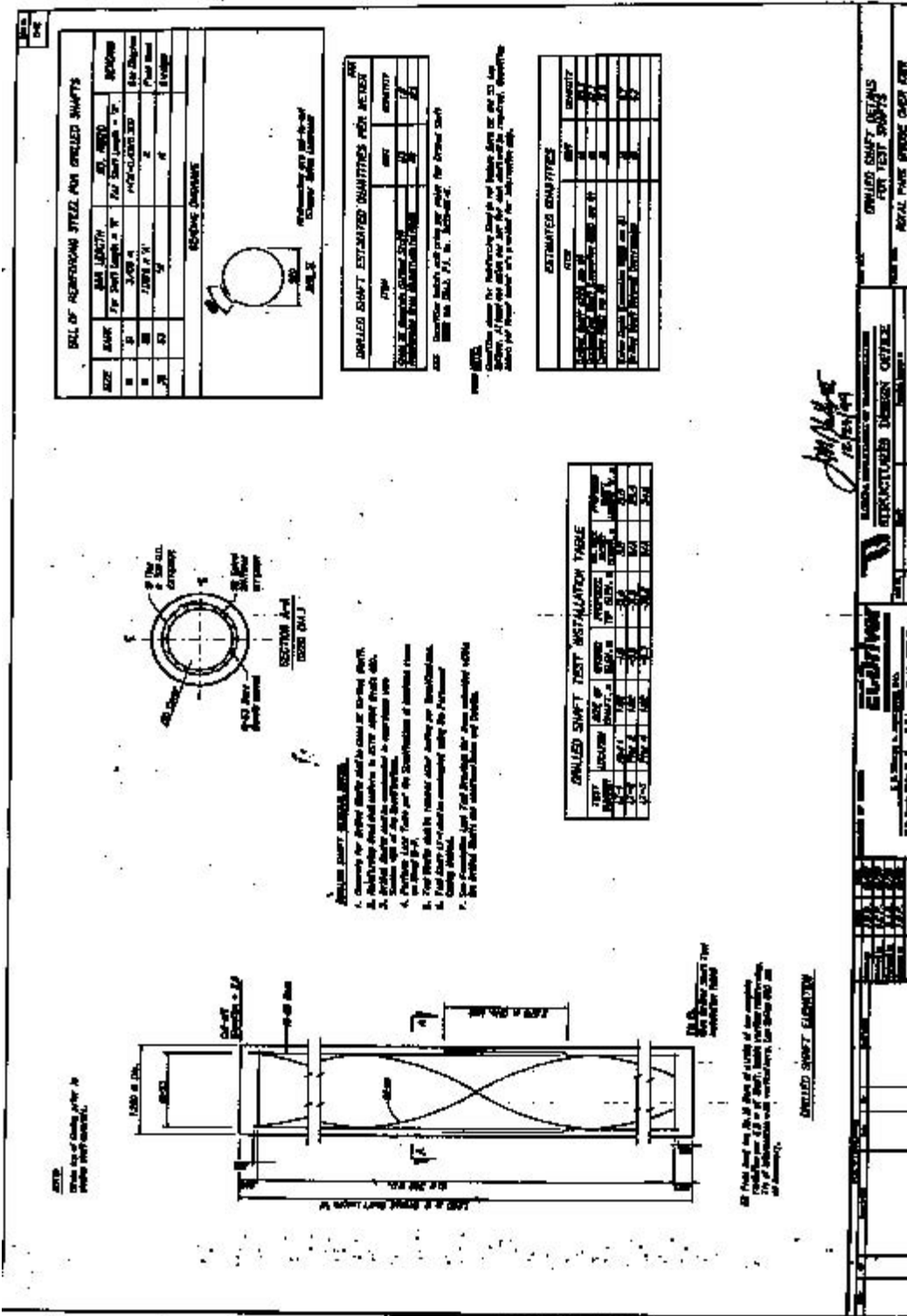


Figure A-31. Site III drilled shaft detail.

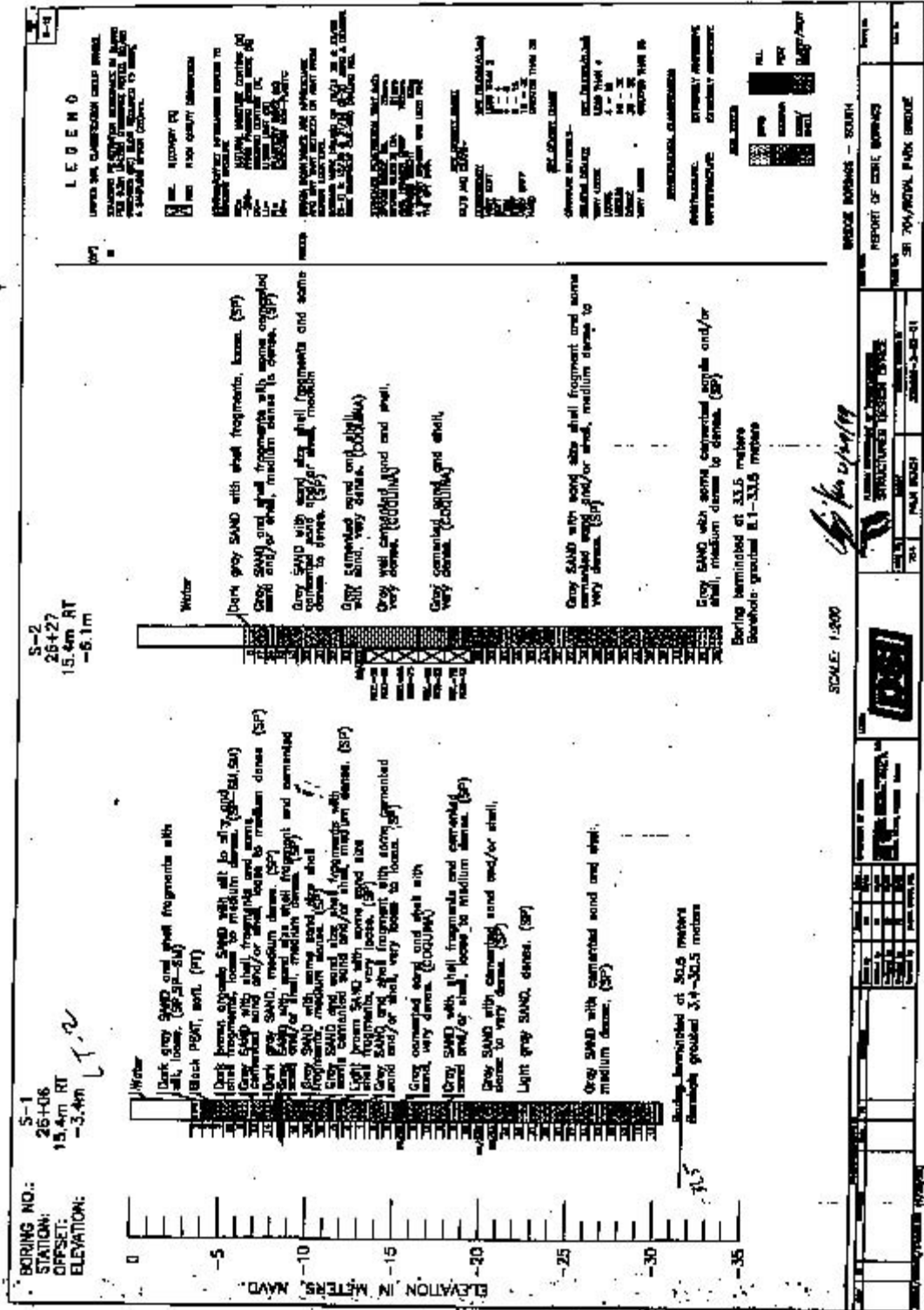


Figure A-32. Site III boring S-1 and S-2.

Appendix A. (continued)

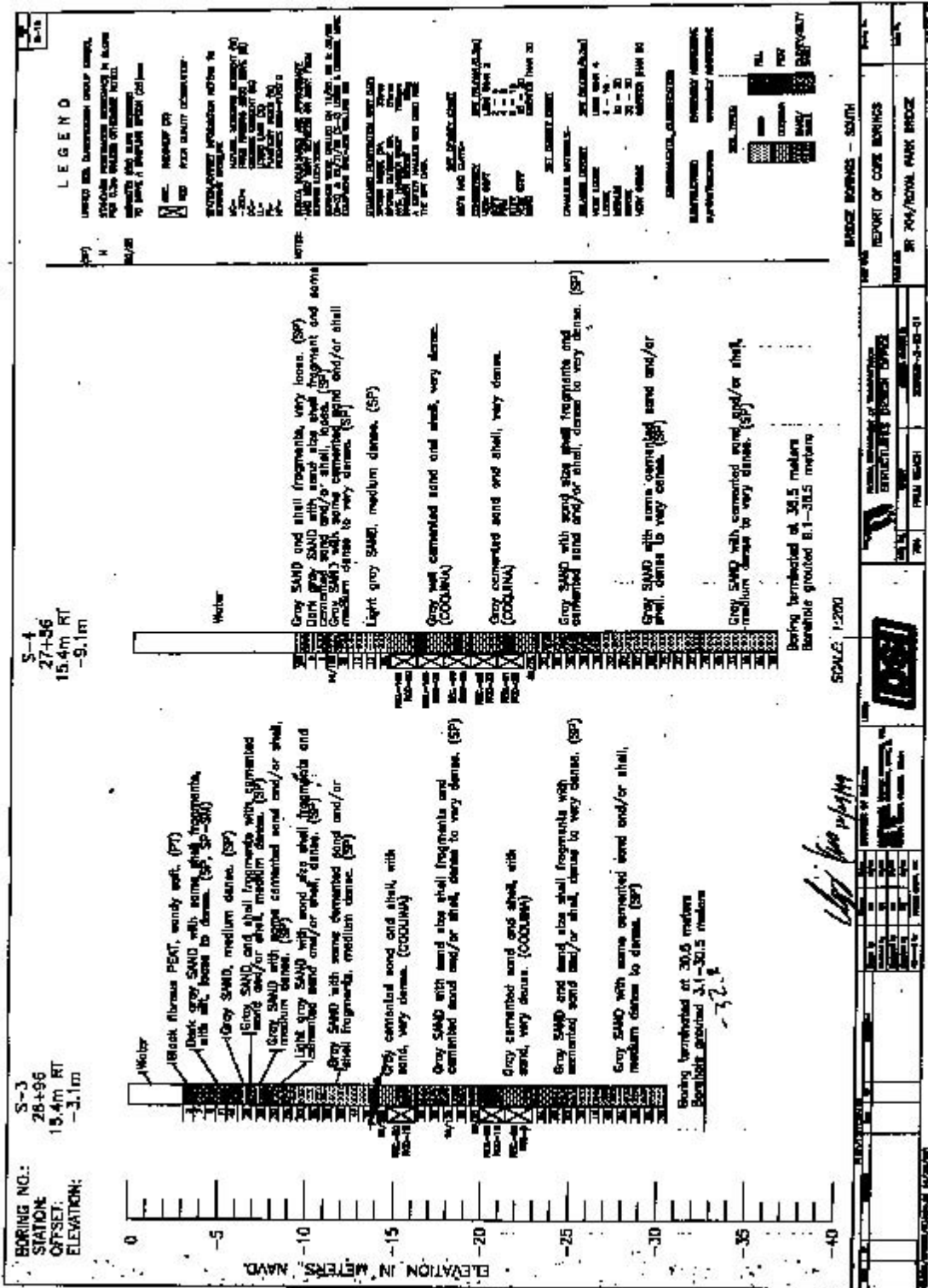


Figure A-33. Site III boring S-3 and S-4.

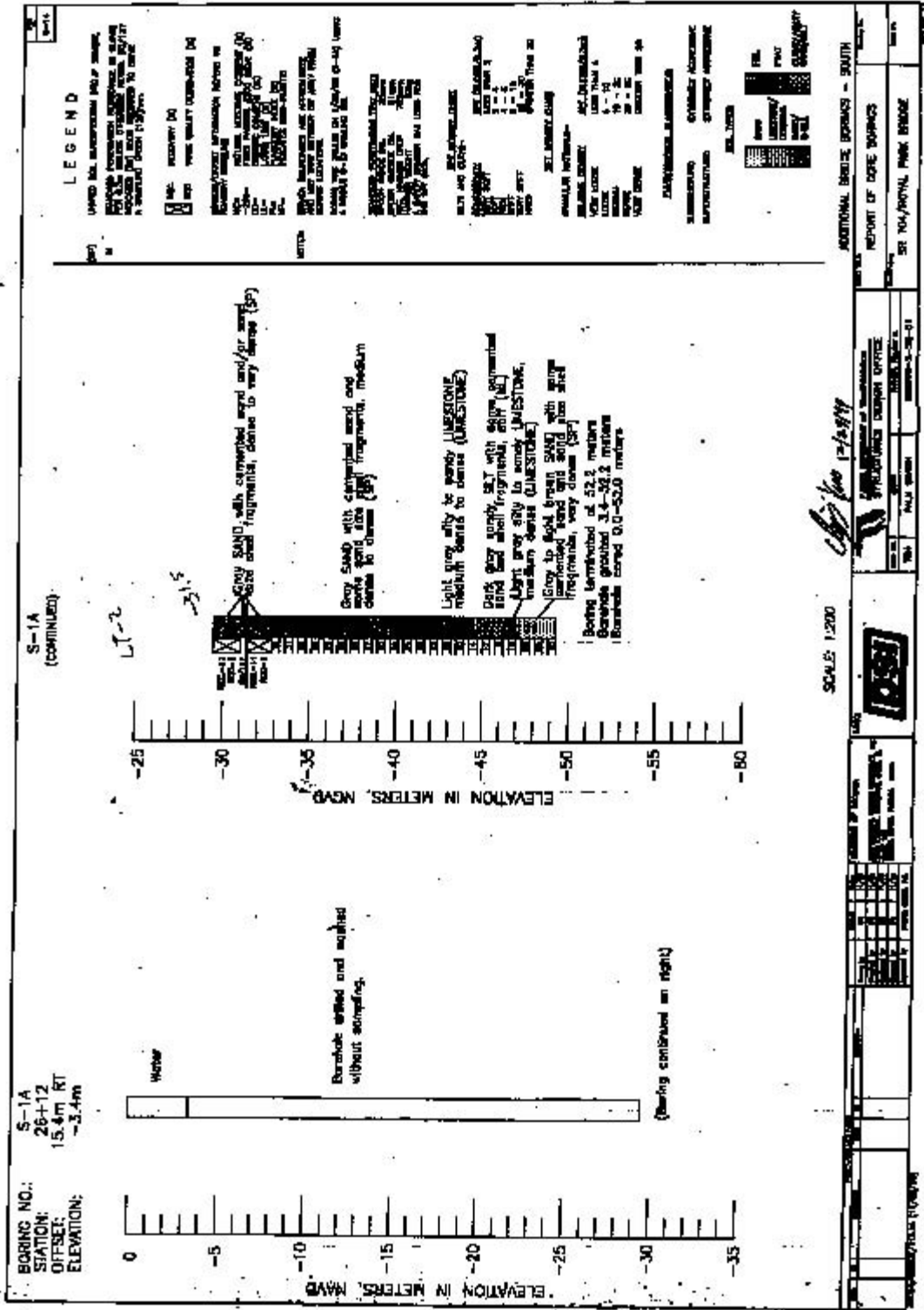


Figure A-34. Site III boring S1-A.

Appendix A. (continued)

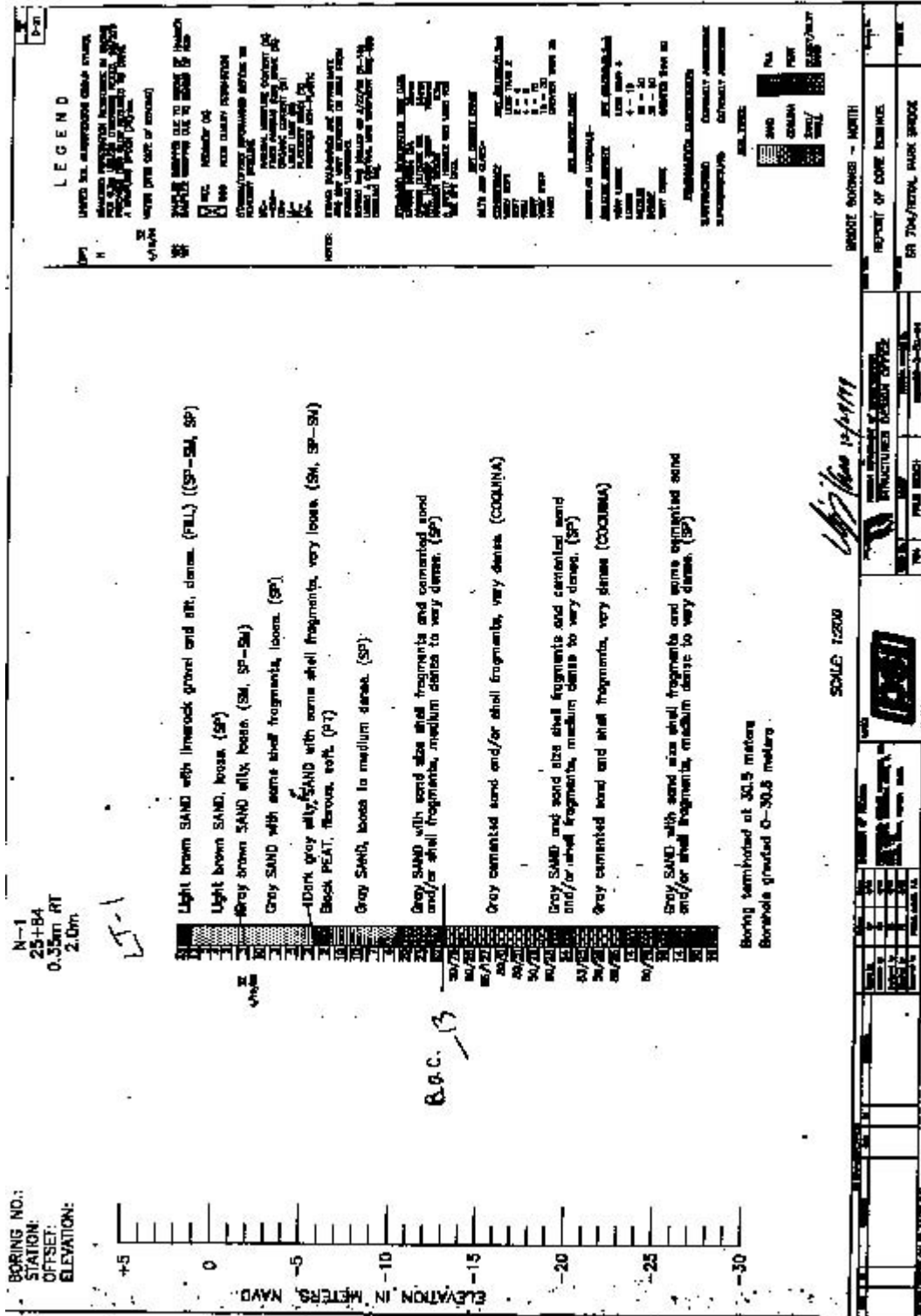


Figure A-35. Site III boring N-1.

Appendix A. (continued)

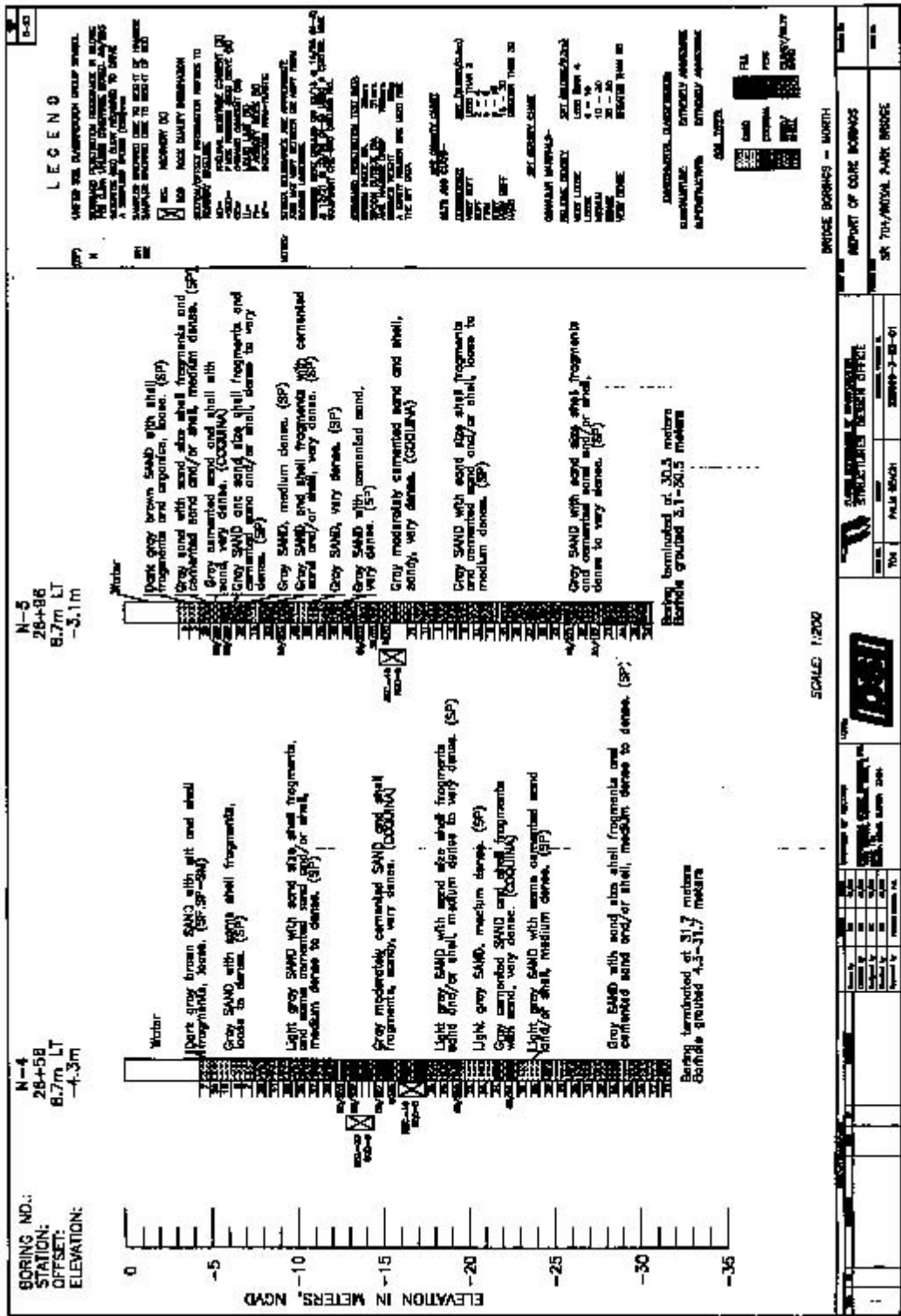


Figure A-37. Site III boring N-4 and N-5.

Appendix A. (continued)

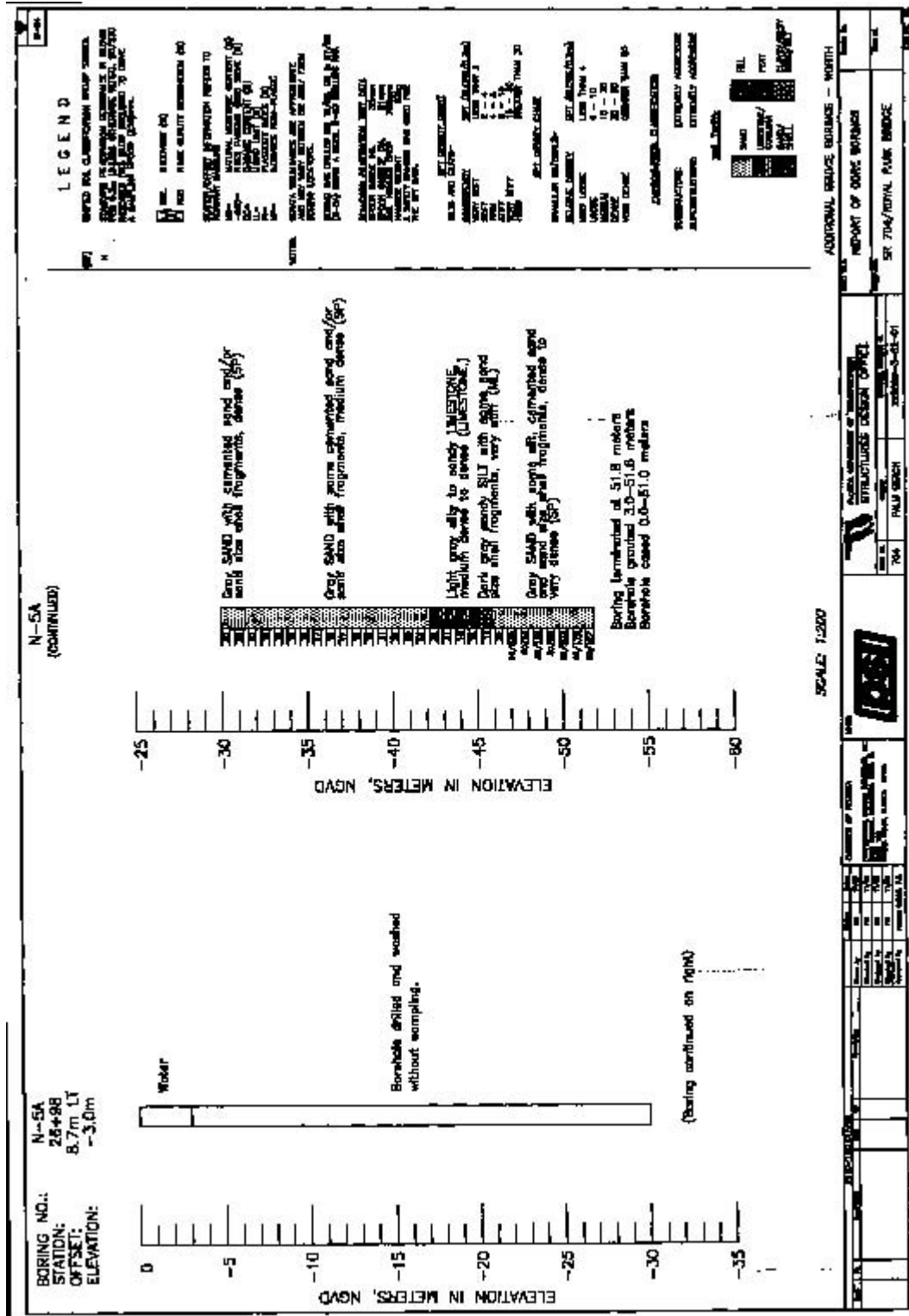


Figure A-38. Site III boring N-5A.

Appendix A. (continued)

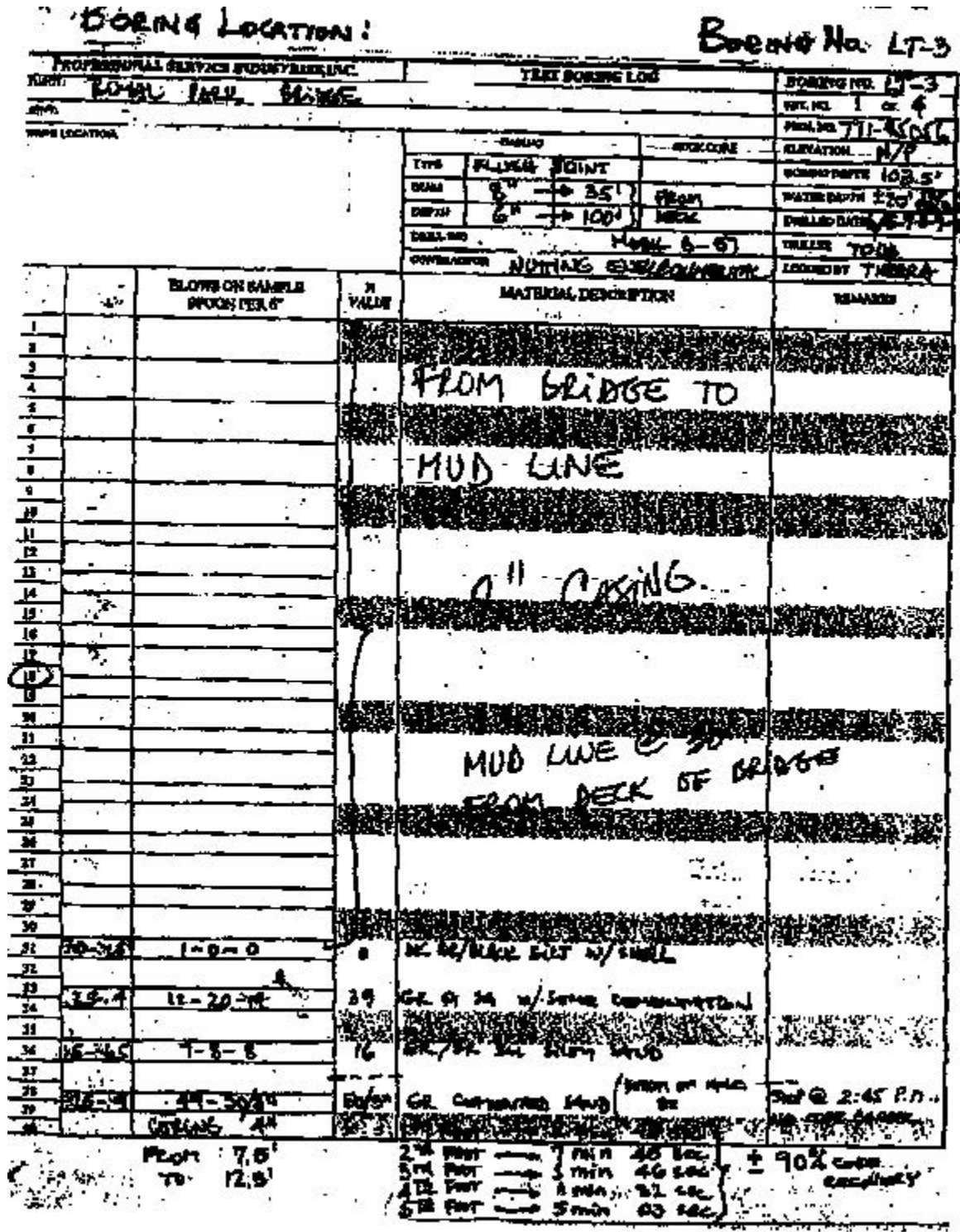


Figure A-39. Site II SPT boring log LT-3 location (1 of 4).

Appendix A. (continued)

Boring No. LT-3

PROFESSIONAL SERVICE INDUSTRIES INC.		TEST BORING LOG		BORING NO. LT-3	
PROJECT: ROYAL PARK BRIDGE				SHEET NO. 2 of 4	
DATE:				FIELD NO. 85076 5/	
DRILL LOCATION:		DEPTH		ELEVATION: N/A	
		TYPE: BLISS / OTHER		WELLING DEPTH: 102.5'	
		DIA: 8" / 36"		WATER DEPTH: 20' FROM SURFACE	
		DEPTH: 6" / 100'		DATE OF LOG: 1-11-1980	
		DRILLING: FLOOR 0-57		WIND: TBSS	
		CORROSION: NUTTING ENVIRONMENT		CORROSION: TERRA	
DEPTH FT	DEPTH ON SAMPLES FOOT/INCH	U VALUE	MATERIAL DESCRIPTION	REMARKS	
41	4" O CORING				
42	FROM 12.5 TO 17.5				
43					
44					
45					
46					
47					
48					
49	12.5-14	6-9-14			
50					
51	20-21.5	13-11-24			
52					
53	21.5-24	8-12-13			
54					
55					
56	25-26.5	0-11-12			
57					
58	27-28	14-10-30			
59					
60					
61	30-31.5	14-11-21			
62					
63	31.5-34	16-8-25			
64					
65					
66	34-35	50/4			
67	4" O CORING				
68	FROM 25' TO 40'				
69					
70					
71					
72	4" O CORING				
73	FROM 40' TO 45'				
74					
75					
76					
77	45-46	4-8-17			
78					
79					
80	47.5-49	14-4-7			

Figure A-40. Site III SPT boring log LT-3 location (2 of 4).

Appendix A. (continued)

Boring No. LT-3

PROFESSIONAL SERVICE ORGANIZATION, ETC.		TEST BORING LOG		BORING NO. LT-3	
PROJECT: ROAD, PARK BRIDGE				SHEET NO. 3 OF 4	
CLIENT:				FIELD NO. 2006	
BORING LOCATION:		DEPTH	BORE DIAM.	ELEVATION: NP	
		TYPE: FLEM. POINT		BORING DEPTH: 102.5'	
		DATE: 8-25-71	FROM: 2006	WATER DEPTH: 100.0'	
		DEPTH: 6'-100'	BY: [Signature]	WELL DEPTH: 102.5'	
		DRILLING: FIELD 6-57		DEPTH: 100'	
		CONTRACTOR: NOTING CONTRACTOR		LOGGED BY: [Signature]	
DEPTH FT.	LOGS OR SAMPLES STUCK PER 5'	N VALUE	MATERIAL DESCRIPTION	REMARKS	
1	15-2/1 FOOT				
2					
3					
4	W.O.B.	N.O.B.	NO RECOVERY		
5					
6	3-3-3				
7					
8					
9	3-2-3				
10					
11	45-10-5	16	GR. FINE COB. SAND		
12					
13	5-5-5	10	GR. FINE W/COMPACTED SAND FRAGS		
14					
15	10-12-14	26	CLAY		
16					
17	16-16-28	44	CLAY		
18					
19	15-41-27	64	CLAY		
20					
21	17-2-6	14	GR. FINE SAND TRACE CEMENTED SAND		
22					
23	30-21-10	31	GR. FINE W/COB. SAND FRAGS		
24					
25	16-21-28	49	GR. FINE SAND TRACE COB. SAND		
26					
27	50-41-38	79	GR. FINE SAND		
28					
29	21-26-24	17	GR. FINE SAND TRACE COB. SAND		
30					
31	15-14-16	30	GR. FINE W/AGGREGATES OF COB. SAND		
32					
33	20-8-4	17	GR. FINE SAND TRACE COB. SAND		
34					

Figure A-41. Site III SPT boring log LT-3 location (3 of 4).

Appendix A. (continued)

Boring No. LT-3

PROFESSIONAL SERVICE INDUSTRIES, INC.		TEST BORING LOG		BORING NO. LT-3	
PROJECT: ROYAL PARK BRIDGE				SHEET NO. 4 OF 4	
DATE:				DATE TESTED: 6-26-97	
SITE LOCATION:				ELEVATION: N.P.	
		TYPE: POST JOINT		BORING DEPTH: 103.5'	
		DEPTH: 8" → 35'		WATER DEPTH: 20' ABOVE	
		DEPTH: 6" → 100'		CHECKED DATE: 6-27-97	
		DRILLER: MRS. B-57		DRILLER: TDD	
		CONTRACTOR: DUMING INC.		LOCATION: TIER 4	
DEPTH FT.	ELEVATION ON SAMPLE SPOON FEET 5"	N VALUE	MATERIAL DESCRIPTION	REMARKS	
91	12-15-17				
92					
93	9-11-18	21	GR. M. S. w/ CEMENTED SAND		
94					
95	9-10-10				
96					
97					
98	11-12-15	25	SAME		
99					
100	5-8-10	18	SAME		
101					
102	15-20-13-18	33	SAME		
103					
104					
105					
106					
107					
108					
109					
110					
111					
112					
113					
114					
115					
116					
117					
118					
119					
120					

E.O.B. @ 103.5'

Figure A-42. Site III SPT boring log LT-3 location (4 of 4).

Appendix A. (continued)

CASSON LT-3
 STATION 26+97.6
ROYAL PARK BRIDGE

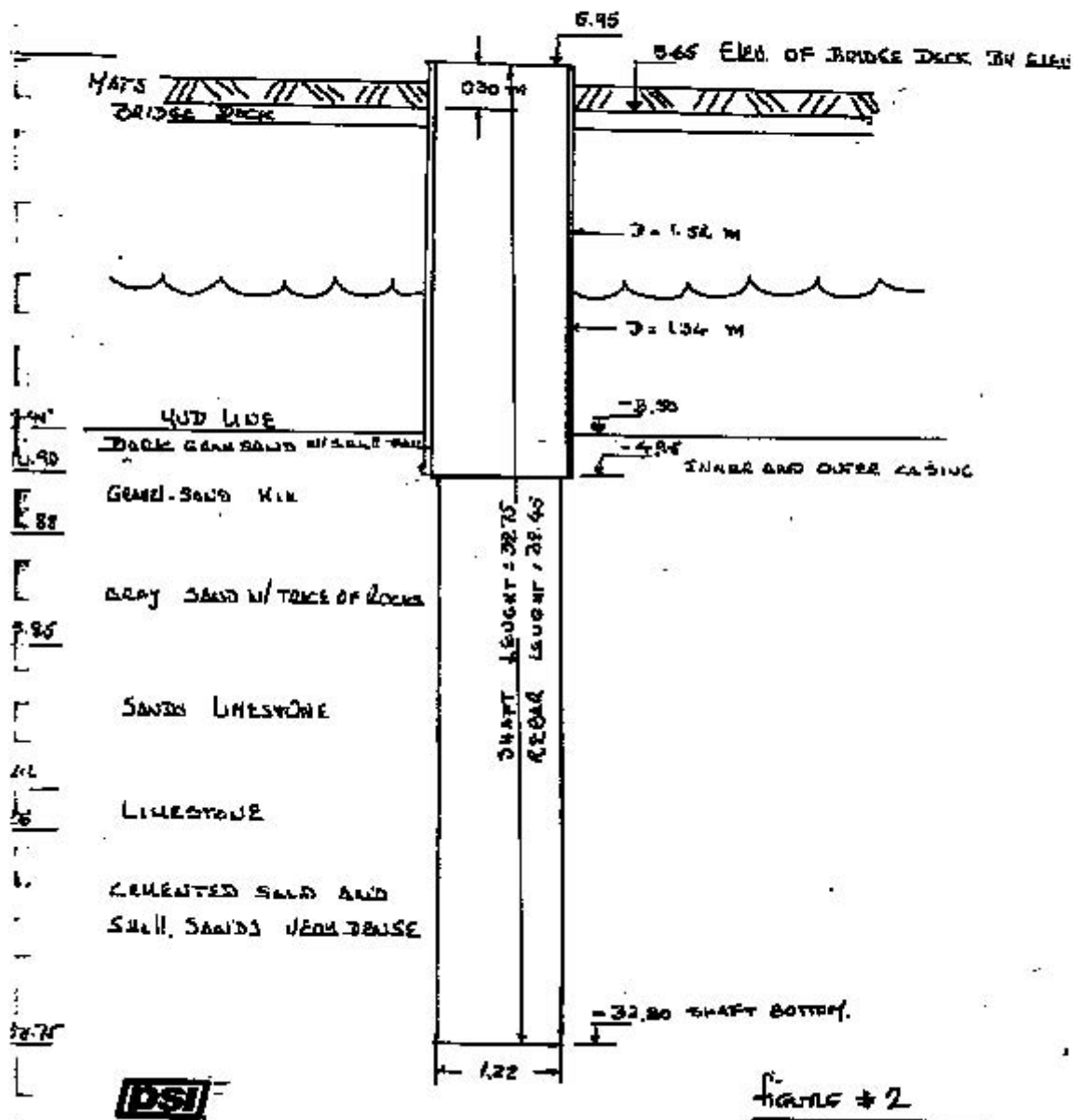


Figure A-43. Site III LT-3 as-built.

Appendix A. (continued)

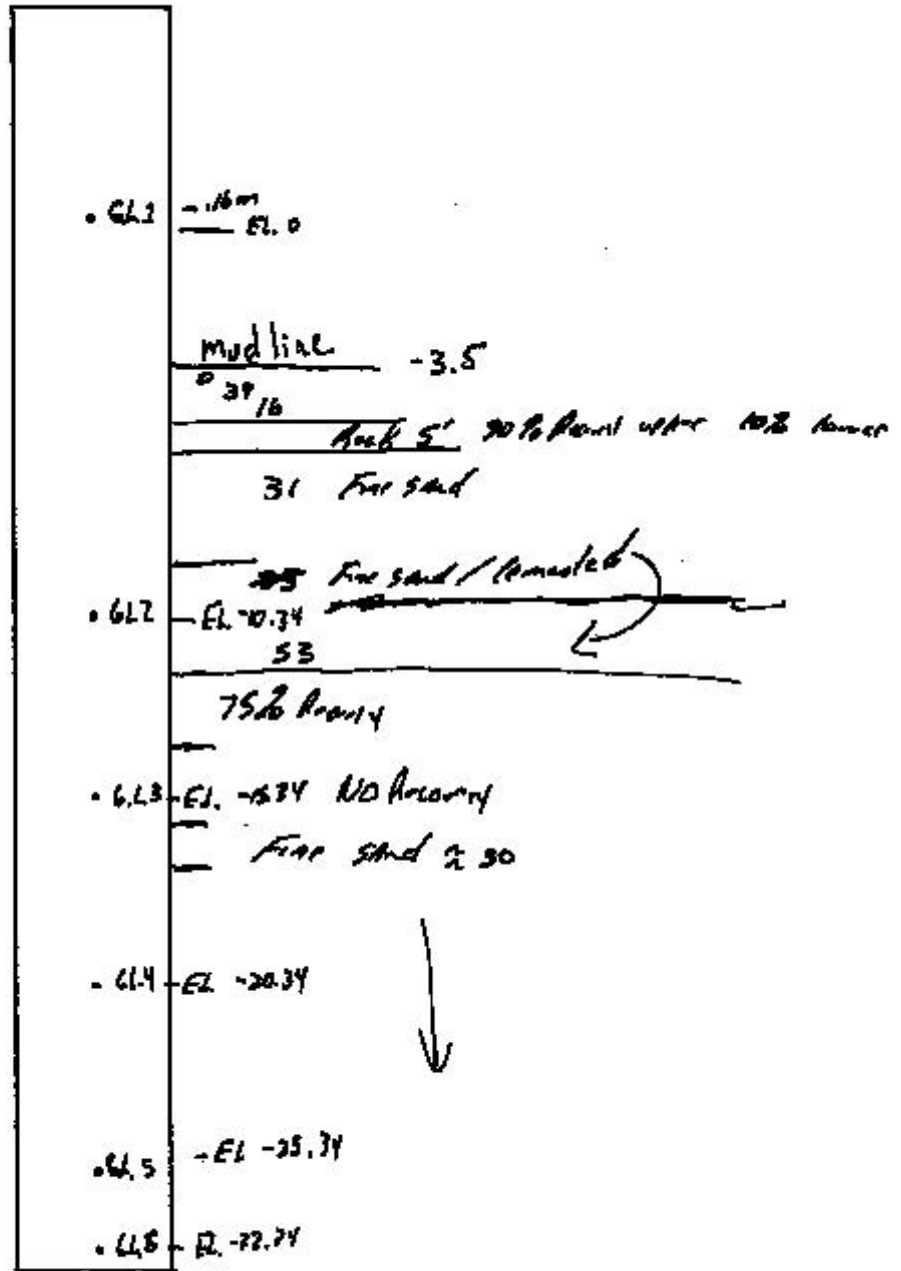


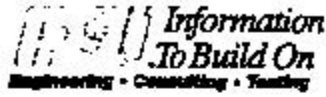
Figure A-44. Site III LT-3 strain gage locations.

Appendix A. (continued)

SECTION FIELD LOG		CAISSON / I. I.		AUGERCAST PILE	
NO. 1		TACK BINDER		PROJECT NO.	00054 - 8
GENERAL CONTRACTOR		PCL		FAMILY NO.	
SPECIAL CONTRACTOR		COMTEC		DATE	06/12/00
CAISSON/PILE NO.	LT-3	SUPERVISOR	TO 06/14/00		
DATE RECRUATION/DREIGHTING STARTING/ENDING	06/12/00	DATE FORCED	06/14/00		
ESTIMATED OVERBURDEN DEPTH	16	TOTAL VOLUME FORCED (cubic ft)	38.46		
HEIGHT OF SHAFF/PILE ABOVE GROUND, (ft)	6	THEORETICAL VOLUME (cubic ft)	42.01		
CAISSON/PILE TOTAL LENGTH	38.77m	CONST. FACTOR	1.17		
PENETRATION IN ROCK (ft)		NO. OF TEST SAMPLES MADE (cylinders, etc)	4		
CAISSON DIAMETER (in)	1.22 m	SIZE OF CONC. SAMPLE	3"X3" (1"X1") 3"X2"X2"		
ACTUAL PILE DIAMETER (in)	1.34	TRUCK PIPE DIAMETER (in)	2.54		
REINFORCING (ACTUAL BARS)					
VERTICAL	NO.	SIZE	TOTAL LENGTH		
	16	22	38.5 m		
HORIZONTAL	NO.	SIZE	SPECIAL STIFF BLADES (FIELD HEAD)		
	2	16	LENGTH ABOVE GROUND (ft)		
REINFORCING (ACTUAL BARS)					
NO.	SIZE	IN	IN	MARK MAY BE TOP OF THE CONC. CAP	
REINFORCING (ACTUAL BARS)					
NO. OF BARS	SIZE	IN			
NO. OF BARS	SIZE	IN			
NO. OF BARS	SIZE	IN			
NO. OF BARS	SIZE	IN			
REINFORCING SYSTEM					
VERTICAL BARS/BOLTS	NO. OF BARS	SIZE (in)	TOTAL LENGTH (ft)	Length above ground (ft)	
REINFORCEMENT THICKNESS (in)	TOP	BOTTOM	POST CIRCLA DIA.	IN	
CONCRETE PILE OR TOP					
PIEN SIZE	IN.	IN.	IN.	IN.	EXTENDED: (ft) IN. ABOVE GROUND
REINFORCEMENT					
VERTICAL NO.	SIZE	TEMP. NO.	SIZE		
TOP OF CAISSON					
SLICE GROUND SURFACE	DEPTH (ft)		SOIL DESCRIPTION		
	FROM	TO			
	- 9.4'	- 10.9'	DARK GRAY SAND WITH SMALL FRAGMENTS		
	- 10.9'	- 11.88'	GRAVEL - SAND MIXTURE		
	- 11.88'	- 15.25'	GRAY SAND WITH TRACE OF ROCK FT		
	- 15.25'	- 24.00'	SANDY LIMESTONE		
	- 24.00'	- 26.00'	LIMESTONE		
- 26.00'	- 32.71'	CRYSTALLINE SAND AND GRAVEL, VERY DENSE			
GROUNDWATER TABLE (ft)					
REMARKS					
CAISSON LT-3 AT STATION 26+86.00					
TESTER/INSPECTOR: LUIS PONCE					

Figure A-45. Site III LT-3 inspection log.

Appendix A. (continued)



REPORT OF FIELD INSPECTION OF CONCRETE

TESTED FOR: MR. ALEX CASO, P.E.
E.C. DRIVER AND ASSOCIATES
500 NORTH WESTSHORE BLVD
SUITE #700
TAMPA, FL 33609

PROJECT: MONITORING DRILLED SHAFT
CONST. FOR SEISMIC TEST

DATE: June 14, 2000

OUR REPORT NO: 772-00054-11

REVISION #1
PAGE 1 OF 2

FIELD DATA: Concrete was delivered by TAMMAC, mix number MB80434.

DEPTH	NO. OF SPREADS PLACED	CONCRETE TRUCK TICKET NUMBER	TIME TRUCK DEPARTED	TIME TRUCK UNLOADED	YARDS OF CONCRETE	WATER IN	AIR CONTENT, %	TEMPERATURE, °F	
								AIR	CONCRETE
		2242420	02:29 pm	---	10.0				
		2242421	02:46 pm	---	10.0				
		2242422	03:05 pm	07:55 pm	10.0				
		2242423	04:17 pm	05:15 pm	10.0	8 1/4	3.25	84	95
1		2242425	05:23 pm	05:23 pm	10.0	6	3.00	84	95
		2242426	05:42 pm	06:45 pm	10.0				
LOCATION:		CAISSON LT-3 STATION 26+85.00							
		REJECTED, OUT OF TIME							
		REJECTED, OUT OF TIME							
		REJECTED, OUT OF TIME							
		FROM -36.27 TO -31.70 METERS							
1		FROM -31.70 TO -27.43 METERS							
		FROM -27.43 TO -23.47 METERS							

IF APPLICABLE FROM STANDARD, USE THE OTHER SIDE FOR OTHER MIXTURES OR FOR OTHER SIZES. ALSO SHOWS CEMENT AND WATER CONTENTS AND AIR CONTENT. TEMPERATURES GIVEN ARE MEAN VALUES.

REMARKS: Observed the placement of 56.4 cubic yards of concrete.

EVERTHOUGHT TRUCK #094 WAS REJECTED, CONTRACTOR POURED 3.55 CUBIC METERS AT HIS OWN RISK

TECHNICIAN: L. BOUCE

TO: CLIENT (1),

Respectfully submitted,
Professional Service Industries, Inc.

Faruk Ghosh
Faruk Ghosh, P.E.
Florida #51377

THIS REPORT IS VALID ONLY FOR THE SITES AND MIXTURES TESTED AND SHOWN HEREIN. THE SIGNATURE OF THE SIGNED CONCRETE PLACEMENT REPORTS ARE NOT BE REPRODUCED, COPIED OR FULLY REPRODUCED BY PROFESSIONAL SERVICE INDUSTRIES, INC.

Professional Service Industries, Inc. • 7880 Central Inland Drive, N. Suite 120 • Palm Beach, FL 33404 • Phone 561-644-0404 • Fax 561-644-0404

Figure A-46. Site III LT-3 concrete log (1 of 3).

Appendix A. (continued)



REPORT OF FIELD INSPECTION OF CONCRETE

TESTED FOR: MR. ALEX CRABO, P.E.
E.C. DELIVER AND ASSOCIATES
500 NORTH WESTSHORE BLVD
SUITE #700
TAMPA, FL 33609

PROJECT: MONITORING DRILLED SHAFT
CONST. FOR SEISMIC TEST

DATE: June 14, 2000
OUR REPORT NO: 772-00054-11
REVISION #1
PAGE 2 OF 2

FIELD DATA: Concrete was delivered by TAMMAC, mix number M880434.

SET NO.	NO. OF SPECIMENS MADE	CONCRETE SUPPLIER TRUCK NUMBER	TIME TRUCK DEPARTED	TIME TRUCK ENDED	YARDS OF CONCRETE	SLUMP, IN	AIR CONTENT, %	TEMPERATURE, °F	
								AIR	CONCRETE
		2242427	05:59 pm	07:10 pm	10.0	8			
		2242428	06:12 pm	07:30 pm	10.0				
		2242429	06:30 pm	07:55 pm	10.0	10			
		2242430	06:51 pm	08:10 pm	10.0				
		2242431	07:06 pm	08:50 pm	10.0	8			
		2242432	07:50 pm	09:07 pm	10.0				

LOCATION: CAISSON LT-3 STATION 26+85.00

FROM -23.47 TO -18.59 METERS
FROM -18.59 TO -14.33 METERS
FROM -14.33 TO -10.36 METERS
FROM -10.36 TO -6.55 METERS
FROM -6.55 TO -2.74 METERS
FROM -2.74 TO 0 METERS

FIELD APPLICABLE DATA: WEIGHTS, WEIGHTS OF SPECIMENS, WEIGHTS OF SPECIMENS, COARSE AGGREGATE, SLUMP, DENSITY, AIR CONTENT, TEMPERATURE, SPECIMEN CURE

REMARKS: Observed the placement of 56.4 cubic yards of concrete.
LAST TRUCK #860 UNLOADED ONLY 4 CUBIC METERS AND TOP OF CAISSON WAS REACHED

TECHNICIAN: L. PONCE

cc: CLIENT (1)

Respectfully submitted,
Professional Service Industries, Inc.
Partin Church
Partin Church, P.E.
Florida #61277

SEE THAT RESULTS APPLY ONLY TO THE SPECIMENS SAMPLED AND MAY NOT BE REPRESENTATIVE OF THE ENTIRE CONCRETE PLACEMENT. REPORTS MAY NOT BE REPRODUCED, COPIED, IN FULL, OR PARTIALLY WITHOUT PERMISSION OF PROFESSIONAL SERVICE INDUSTRIES, INC.

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Figure A-47. Site III LT-3 concrete log (2 of 3).

Appendix A. (continued)

CAISSON LT-3
STATION 26+97.6
ROYAL PARK BRIDGE

CONCRETE QTY

D: 1.22
A: 1.17
H: 27.85
V: 32.58

D: 1.34
H: 10.7
A: 1.41
V: 15.45 m³

EACH M³: 0.85 M

EACH M³: 0.71 M

Vt: 48.03 m³

CONCRETE SURFACE ELEV.

TRUCK #	M THEORETICAL	M ACTUAL
3.5 m ³ 1	32.75	
	35.77	36.27
6.12 m ³ 2	30.56	31.70
" 3	25.36	27.43
" 4	20.16	23.43
" 5	14.95	18.59
" 6	9.72	14.33
" 7	5.57	10.30
" 8	1.28	6.55
" 9	—	2.74
4.77 m ³ 10	—	—

ACTUAL U: 56.46 m³

THEOR U: 48.03

GROUT FACTOR: 1.18

Figure A-48. Site III LT-3 concrete log (3 of 3).

Appendix A. (continued)



REPORT OF CONCRETE COMPRESSION TEST

TESTED FOR: MR. ALEX CASO, P.E.
 E.C. DRIVER AND ASSOCIATES
 500 NORTH WESTSHORE BLVD
 SUITE #700
 TAMPA, FL 33609

PROJECT: MONITORING DRILLED SHAFT
 CONST. FOR STATRAC TEST

DATE: June 14, 2000

OUR REPORT NO: 772-00054-12

REVISION #1

FIELD DATA:
 LOCATION OF PLACEMENT CROSSON LT-3 STATION 26+85.00
 FROM -31.70 TO -27.43

DATE PLACED: June 14, 2000

TIME: 06:15 pm

TEMP. IN: ---

AIR CONTENT, %: 3.00

AIR TEMPERATURE, °F: 28

CONCRETE TEMPERATURE, °F: 25

DATE RECEIVED IN LAB: June 15, 2000

FIELD DATA SUBMITTED BY: D.E.L. DORCE

MIX DATA SUBMITTED BY: TERRAC

SUPPLIER: TERRAC

DELIVERY TICKET NO/TRUCK NO: 2242425

MIX NUMBER AND PROPORTIONS: M88D434

CEMENT: ---

WATER: ---

FINE AGGREGATE: ---

COARSE AGGREGATE: ---

ADMIXTURE: ---

COMPRESSION TEST RESULTS

LABORATORY NUMBER	SPECIMEN IDENTIFICATION OR SET NO	TEST AGE (DAYS)	DATE OF TEST	TOTAL LOAD (LBS)	CYLINDER DIAMETER (IN)	CYLINDER AREA (SQ IN)	COMPRESSIVE STRENGTH (PSI)	TYPE OF BREAK
2	A	7	06/21/00	120000	6.00	28.27	4240	Columnar
2	B	28	07/12/00					
2	C	28	07/12/00					
2	D	R	HOLD					
REGISTRATION							5500	

REMARKS: Cylinders made by PSI representative. Cylinders picked up by PSI representative. Test results comply with applicable specifications.

Cylinders made by Architect's or Contractor's representative. Cylinders delivered to PSI laboratory. Test results do not comply with applicable specifications.

TECHNICIAN: I. DORCE

NO. CLIENT (1).

Respectfully submitted,
Barthelme
 Barthelemy, P.E.
 Florida #51277

THIS TEST REPORT APPLIES ONLY TO THE SPECIFIC SAMPLES TESTED AND MAY NOT BE REPRESENTATIVE OF THE ENTIRE CONCRETE PLACEMENT. REPORTS MAY NOT BE REPRODUCED, EXCEPT IN FULL, WITHOUT THE WRITTEN PERMISSION OF PROFESSIONAL SERVICE INDUSTRIES, INC.

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Figure A-49. Site III LT-3 concrete cylinder break strengths.

Appendix A. (continued)



INSPECTION REPORT

TESTED FOR: MR. ALEX CASO, P.E.
E.C. DRIVER AND ASSOCIATES
500 NORTH WESTSHORE BLVD
SUITE #700
TAMPA, FL 33609

PROJECT: MONITORING DRILLED SHAFT
CONST. FOR STATIC TEST

DATE: June 12, 2000

REVISION #2
OUR REPORT NO.: 772-00054-7

REMARKS: As requested, a PSI representative reported to the above referenced project to perform casing monitoring at location LT-3.

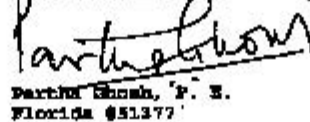
The following items were noted:

1. At 7:00 a.m. contractor started positioning the outer casing, 1.93 meters in diameter, at the shaft location.
2. At 8:30 a.m. contractor started to drive outer casing in with a vibratory hammer.
3. At 10:00 a.m. outer casing reached 1.45 meters below mudline (9.14 meters below bridge deck).
4. At 10:30 a.m. the inner casing was placed (1.34 diameter) to be driven to the same elevation as outer casing.
5. At 1:30 p.m. the inner casing installation was performed (10.90 meters below bridge deck or -4.95 BM elevation).
6. At 2:00 p.m. contractor began to pump out water inside casing prior to drilling operation.
7. At 3:00 p.m. shaft drilling began. PSI representative recorded soil description found from the shaft excavation.
8. At 7:00 p.m. drilling stopped at about depth 15.8 m and both casings' depths were about 9.14 meters below bridge deck.

Inspector: L. Ponce
Total Hours: 12.0

Respectfully submitted,

PROFESSIONAL SERVICE ENGINEERS, INC.



Paul H. Hinch, P. E.
Florida #51377

cc: CLIENT (3),

PROFESSIONAL SERVICE ENGINEERS, INC. IS A FULL SERVICE ENGINEERING FIRM. WE ARE A PROFESSIONAL SERVICE ENGINEERING FIRM.

Professional Service Engineers, Inc. • 7880 Central Industrial Drive N. • Suite 1200 • Tampa, Florida, FL 33614 • Phone: (813) 944-0444 • Fax: (813) 944-0474

Figure A-50. Site III LT-3 construction details (1 of 5).

Appendix A. (continued)



INSPECTION REPORT

CLIENT FOR: MR. ALEX CASO, P.E.
E.C. DRIVER AND ASSOCIATES
500 NORTH WESTSHORE BLVD
SUITE #700
TAMPA, FL 33609

PROJECT: MONITORING DRILLED SHAFT
CONST. FOR SEISMIC TEST

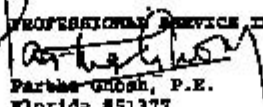
DATE: June 13, 2000

REVISION #3
OUR REPORT NO: 772-00054-S

REMARKS: As requested, a PSI representative reported to the above referenced project to perform caisson monitoring of LT-3 at station 26 +85.

1. Drilling started at a depth of 15.80 meters and the different soils that were encountered during shaft excavation were recorded in the inspection field log report.
2. Drilling activity advanced at a rate of 2.5 meters per hour, shaft length was proposed to be 38.75 meters (see attached Figure #2).
3. DOT representative were also at job site.
4. At 4:00 p.m. the depth of shaft excavation reached 36 meters.
5. On site, additional steel reinforcing was spliced to the original reinforcement cage in order to reach 38.75 meters (shaft length) required.
6. Also, grout bottom plate was attached at the bottom end of steel reinforcing.
7. At 4:30 p.m. total shaft length was reached (38.75 meters). Contractor checked the caisson diameter using a 1.22 meters core barrel.
8. The bottom of the caisson will be cleaned tomorrow morning, and concrete pour is scheduled for 1:00 p.m. tomorrow.

Inspector: L. Ponce
Total Hours: 9.0

Respectfully submitted,
PROFESSIONAL SERVICE INDUSTRIES, INC.

Parthe GOSH, P.E.
Florida #51377

cc: CLIENT (1),

THIS REPORT IS UNCLASSIFIED, EXCEPT IN PART, WITHOUT WRITTEN PERMISSION BY PROFESSIONAL SERVICE INDUSTRIES, INC.

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Figure A-51. Site III LT-3 construction details (2 of 5).



SAMPLE PICK UP FIELD REPORT

TESTED FOR:	MR. ALEX CASO, P.E. E.C. DRIVER AND ASSOCIATES 500 NORTH WESTSHORE BLVD SUITE #700 TAMPA, FL 33609	PROJECT:	MONITORING DRILLED SHAFT CONST. FOR SEISMIC TEST
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DATE:	June 13, 2000	REVISION #1
		OUR REPORT NO.: 772-00054-B

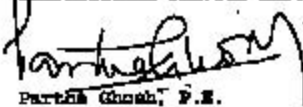
REMARKS:

As requested, a PSI representative reported to the above referenced project to pick-up cylinders that had been previously cast at location LT-1.

On this day, one (1) set of cylinders was picked up and transported back to our laboratory for compressive strength testing.

Inspector: L. Pounce
Total Hours: 1.0

Respectfully submitted,

PROFESSIONAL SERVICE INDUSTRIES, INC.

 Partha Ghosh, P.E.
 Florida #51377

cc: CLIENT (1),

Figure A-52. Site III LT-3 construction details (3 of 5).

Appendix A. (continued)



INSPECTION REPORT

TESTED FOR: MR. ALEX CASO, P.E.
 E.C. DRIVER AND ASSOCIATES
 500 NORTH WESTSHORE BLVD
 SUITE #700
 TAMPA, FL 33605

PROJECT: MONITORING DRILLED SHAFT
 COREY. FOR STATISMIC TEST

DATE: June 14, 2000

OUR REPORT NO.: 772-00054-10

REVISION #3

PAGE 1 OF 2

REMARKS: As requested, a PSI representative reported to the above referenced project to perform casing monitoring installation and concrete testing at location LT-3.

The following items were noted:

1. From 7:00 a.m. to 2:00 p.m. contractor cleaned the bottom of the shaft and also sieved the excavated mud in order to reuse the mud.

 Length of inner casing = 10.9 m
 Length of outer casing = 10.9 m
2. At 2:00 p.m. steel reinforcing was placed in the shaft hole and wires for testing purposes were also installed. This activity finished at 4:45 p.m. Tridle (0.25 meter) was installed to place concrete and was set up at 5:00 p.m.
3. At 3:00 p.m. concrete trucks arrived and were waiting to place the concrete.
4. At 4:00 p.m. contractor and D.O.T. crew were informed by PSI representative that two trucks were out of 90 minutes specifications.

 Contractor decided to pour at his own risk.
5. At 5:00 p.m. pouring started. At 5:15 p.m. the tridle experienced mechanical difficulties, so it was removed and cleaned. Contractor decided to send away the 3 concrete trucks that were at the site. Amount placed from first truck was 3.55 cubic meters.
6. At 5:00 p.m. the concrete pour re-started and finished at 9:30 p.m. Depth measures were taken after each truck. Sample for testing purpose was taken from truck #875 and ticket #2242425. Last truck placed 4 cubic meters in the casing. Total concrete placed was 56.48 cubic meters. Theoretical volume = 48.01 cubic meters. Grout factor = 1.17.

cc: CLIENT (1)

*WORKS SUBJECT TO REPRODUCTION, EXCEPT BY PERMITTED BY PROFESSIONAL SERVICE INDUSTRIES, INC.

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Figure A-53. Site III LT-3 construction details (4 of 5).

Appendix A. (continued)

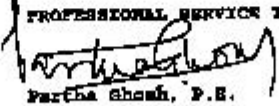
E.C. DELIVER AND ASSOCIATES
June 14, 2000
772-00334-10
PAGE 2 OF 2

All this information is included in attached inspection field report and field inspection of concrete.

Inspector: L. Poore
Total Hours: 14.0

Respectfully submitted,

PROFESSIONAL SERVICE ENGINEERS, INC.


Partha Ghosh, P.E.
Florida #51377

CO: CLIENT (1).


REPRINTS MAY BE MADE IN FULL OR PART WITHOUT WRITTEN PERMISSION BY PROFESSIONAL SERVICE ENGINEERS, INC.
1 4-88-007

Figure A-54. Site III LT-3 construction details (5 of 5).

Appendix A. (continued)

BORING LOCATION:

BORING No. LT-2

PROFESSIONAL SERVICE INDUSTRIES, INC.		TEST BORING LOG		BORING NO. LT-2	
PROJECT: ROYAL PARK BRIDGE				SRT. NO.	1' OF 4
CLIENT:				FILE NO.	711-22056
BORING LOCATION:		TYPE	FLUID POINT	ROCK CORE	ELEVATION
		DUR.	8" -> 40'		N/P
		DEPTH	6" -> 75'		BORING DEPTH
		DIA. (IN)	4.5" / 114.3mm		97.5'
		CONTRACTOR	NORTHGATE ENGINEERS		WATER DEPTH (FT) / (M)
					4/5/00
					DRILLER P. TYSON
					LOGGED BY TIERRA
DEPTH FT	BLOWS ON SAMPLE SPOON PER 5'	N VALUE	MATERIAL DESCRIPTION	REMARKS	
			0-27.5' CASING		
			MUD LINE @ 27.5'		
21.5-24	2-3-5	4	DC GR SILT & ORGANICS		
25-4'	2-2-3	5	GR FI SA		
5-6.5'	2-3-5	8	GR FI SA		
11.5-9'	2-4-4	8	GR FI SA		
10-11.5'	1-1-2	3	GR FI SA		
0.5-14	3-4-5	9	LT GR FI SA W/ SAND SIZED SMALL		

Figure A-55. Site II SPT boring log LT-2 location (1 of 4).

Appendix A. (continued)

Boring No. LT-2

PROFESSIONAL SERVICE INDUSTRIES, INC.		TEST BORING LOG		BORING NO. LT-2	
PROJECT: <u>RYAN PARK BRIDGE</u>				SHEET NO. 2 OF 4	
CURVE:				PROJ. NO. <u>85056 S/</u>	
BORING LOCATION:		CASE NO.		ELEVATION: <u>N/P</u>	
		ROCK CORE		BORING DEPTH: <u>47.5'</u>	
		TYPE: <u>FLUSH POINT</u>		WATER DEPTH: <u>FROM SURF</u>	
		LEAK: <u>8" → 40'</u>		INSTALL DATE: <u>6/02</u>	
		DEPTH: <u>6" → 75'</u>		DIRECTION: <u>TODD</u>	
		DILLING: <u>B-59 & MHC B-57</u>		COUNTRY: <u>TERRA</u>	
		CONTRACTOR: <u>NOTTING CONSTRUCTION</u>			
DEPTH FT.	INCHES IN SAMPLES BY CORRECTION	SPT VALUE	MATERIAL DESCRIPTION	REMARKS	
15-18.5	15-9-13				
16.8	WITH CASING				
17.5-19	8-10-15	25	LT GR F SAND		
20-21.5	16-21-70				
22.5-24	22-52-24		SAME		
25-26.5	WOM-1-1	2	SAME		
27.5-29	2-2-3	5	GR F SAND		
30-31.5	7-5-2	7	LT GR SANDY SAND		
32.5-34	3-3-3	6	GR CEMENTED SAND		
35-36.5	3-50/4"	50/4"	GR CEM. SAND FRAGMENTS		
38	CORING				
41	FLUSH 3/8" TO 41"				
38	INNER CASING				
41-42.5	6-6-4	10	GR F SAND W/CEM SAND FRAGMENTS.		
43.5-45	7-6-8				
46-47.5	7-10-9	19	SAME		
48.5-50	30-29-25				
51-52.5	34-20-17	37	SAME		
53.5-55	50 1/2"				

1st FOOT → 2 min 15 sec
 2nd FOOT → 1 min 6 sec
 3rd FOOT → 1 min 5 sec
 5th FOOT → 2 min 06 sec

+ 5% RECOVER

Figure A-56. Site III SPT boring log LT-2 location (2 of 4).

Appendix A. (continued)

BORING NO. LT-2

PROFESSIONAL SERVICE INDUSTRIES, INC.		TEST BORING LOG			BORING NO. LT-2	
PROJECT: ROYAL VAPOR BRIDGE					SHEET: 3 OF 4	
CLIENT:					PWA NO. 25076 3/7	
BORING LOCATION:		DEPTH		ELEVATION		
		TYPE: FLUSA POINT		NVP		
		DIAM: 8" → 40"		BORING DEPTH: 97.5'		
		DEPTH: 6" → 75'		WATER DEPTH: ± 17' FROM SURFACE		
		DUR LAM: METAL 2-59 & METAL 2-57		DRIILLED DATE: 10-2-03		
		CONTRACTOR: NOTHING SURROUNDING		DRIILLED BY: PT/SUN/TAB		
				LOCATION: TITERRA		
DEPTH FT.	DEPTH FT.	BLOWS OR SAMPLES SPOON FEEL 6"	SPT VALUE	MATERIAL DESCRIPTION	REMARKS	
0		4" CORING				
0.5		53.5 TO 58.5		3rd RUN → 3 min @ 200	NO RECOVERY	
0.5						
0.5						
0.5						
0.5	58.5-60	26-34-44	78	LT GR TO WHITE FI SA W/SOME CEM. SA		
0.5		TIP				
0.5	61-62.5	10-19-42				
0.5						
0.5	63.5-65	10-14-27	41	GR FI SA W/CEM SAND FRAGMENTS		
0.5						
0.5	66-67.5	3-7-12				
0.5						
0.5	68.5-70	9-10-12	22	GR FI SA W/CEM SA FRAGMENTS		
0.5						
0.5	71-72.5	12-15-11				
0.5						
0.5	73.5-75	5-8-13	21	SAME		
0.5						
0.5	76-77.5	10-12-16				
0.5						
0.5	78.5-80	6-7-10	17	SAME		
0.5						
0.5	81-82.5	6-6-8				
0.5						
0.5	83.5-85	16-17-14	31	SAME		
0.5						
0.5	84-87.5	14-14-13				
0.5						
0.5	88.5-90	15-12-12	24	SAME		
0.5						
0.5	91-92.5	14-15-16				

Figure A-57. Site III SPT boring log LT-2 location (3 of 4).

Appendix A. (continued)

Boring No. LT-2

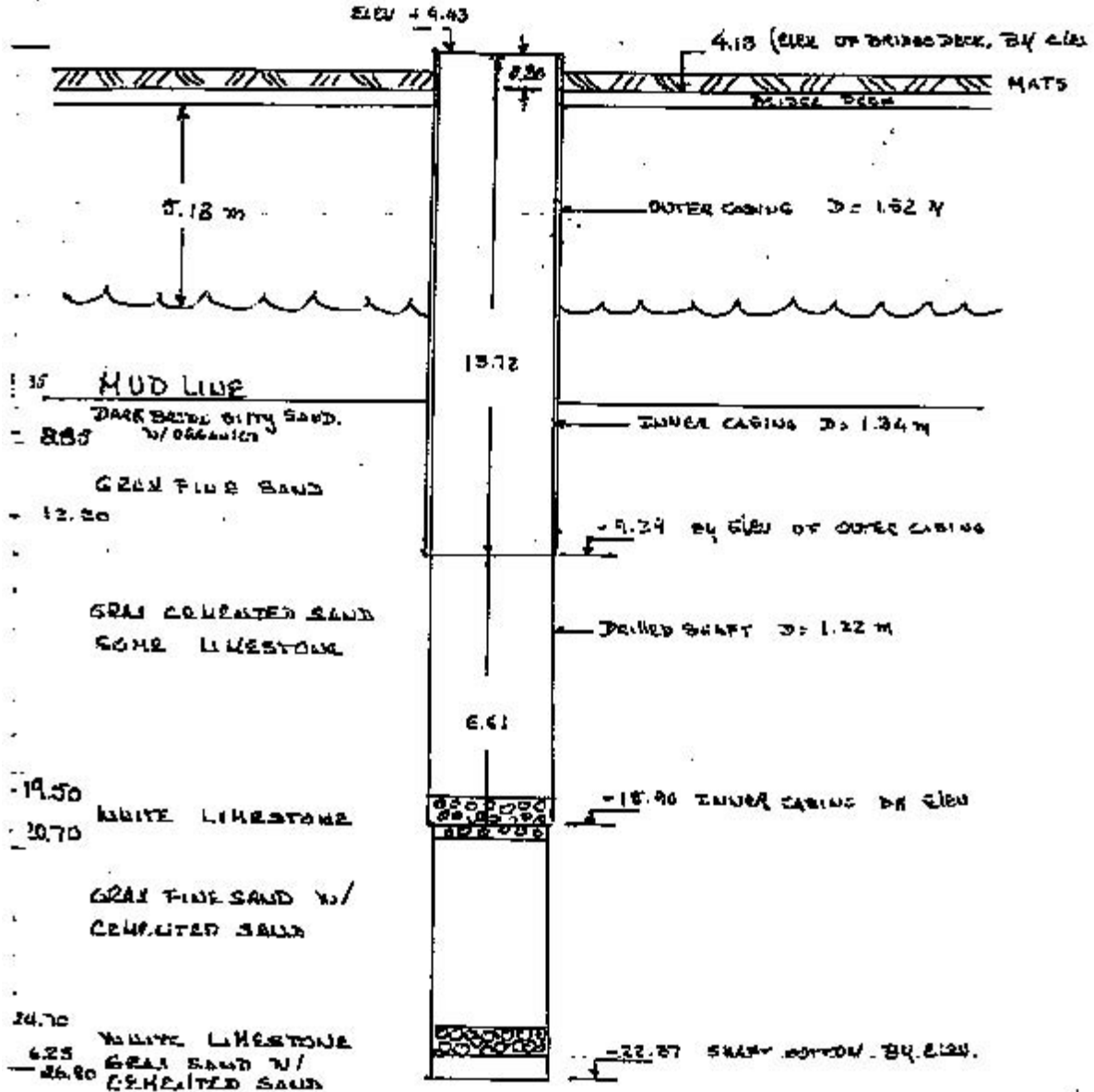
PROFESSIONAL SERVICE INDUSTRIES, INC.		TEST BORING LOG		BORING NO. LT-2	
PROJECT: <u>ROYAL PARK BRIDGE</u>				SITE NO. <u>A-A</u>	
CLIENT: <u>TERRA / PSE</u>				NO. NO. <u>E08E 97.5</u>	
BORING LOCATION		CASE NO.		ELEVATION <u>NP</u>	
		TYPE <u>FLUSH JOINT</u>		BORING DEPTH <u>97.5</u>	
		DIA. <u>8" → 40'</u>		FINISH DATE <u>17 FEB 1984</u>	
		DEPTH <u>6" → 75'</u>		DRILLED DATE <u>11-12-83</u>	
		DRILLER <u>ONE SS MODEL B-57</u>		CHUCKER <u>TOB</u>	
		CONTRACTOR <u>NOTING ENG.</u>		LOCATION OF <u>TERRA</u>	
SAMPLE NO.		MATERIAL DESCRIPTION		REMARKS	
DEPTH FT	BLOWN OR SAMPLE SPACING FT	BL VALUE			
0-1	15-13-25	26	GRAVELLY SAND		
1-1	12-15-20	27	GRAVELLY SAND		
2-1			GRAVELLY SAND		
3-1			GRAVELLY SAND		
4-1			GRAVELLY SAND		
5-1			GRAVELLY SAND		
6-1			GRAVELLY SAND		
7-1			GRAVELLY SAND		
8-1			GRAVELLY SAND		
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11-1			GRAVELLY SAND		
12-1			GRAVELLY SAND		
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98-1			GRAVELLY SAND		
99-1			GRAVELLY SAND		
100-1			GRAVELLY SAND		

Figure A-58. Site III SPT boring log LT-2 location (4 of 4).

Appendix A. (continued)

CLISSON LT-2
 STATION 26+02.900
ROYAL PARK BRIDGE

00054-13



NO: 36222

Figure A-59. Site III LT-2 as-built

July 20, 2000

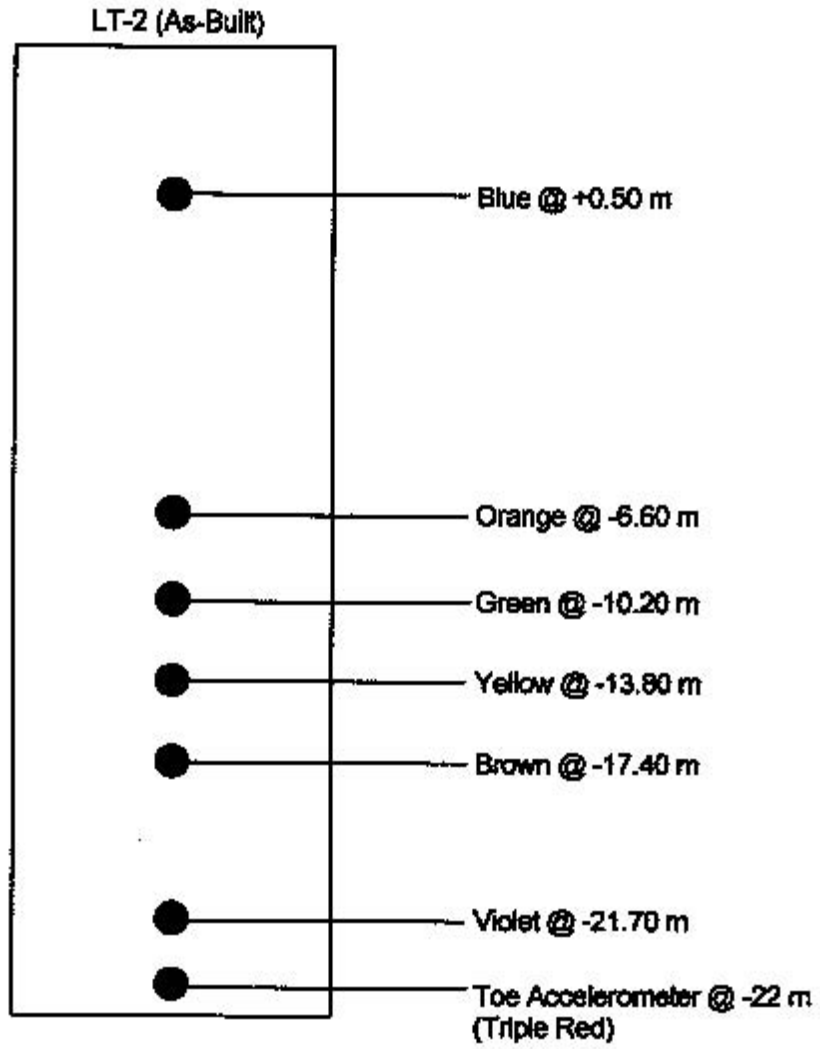


Figure A-60. Site III strain gage locations.

July 20, 2000

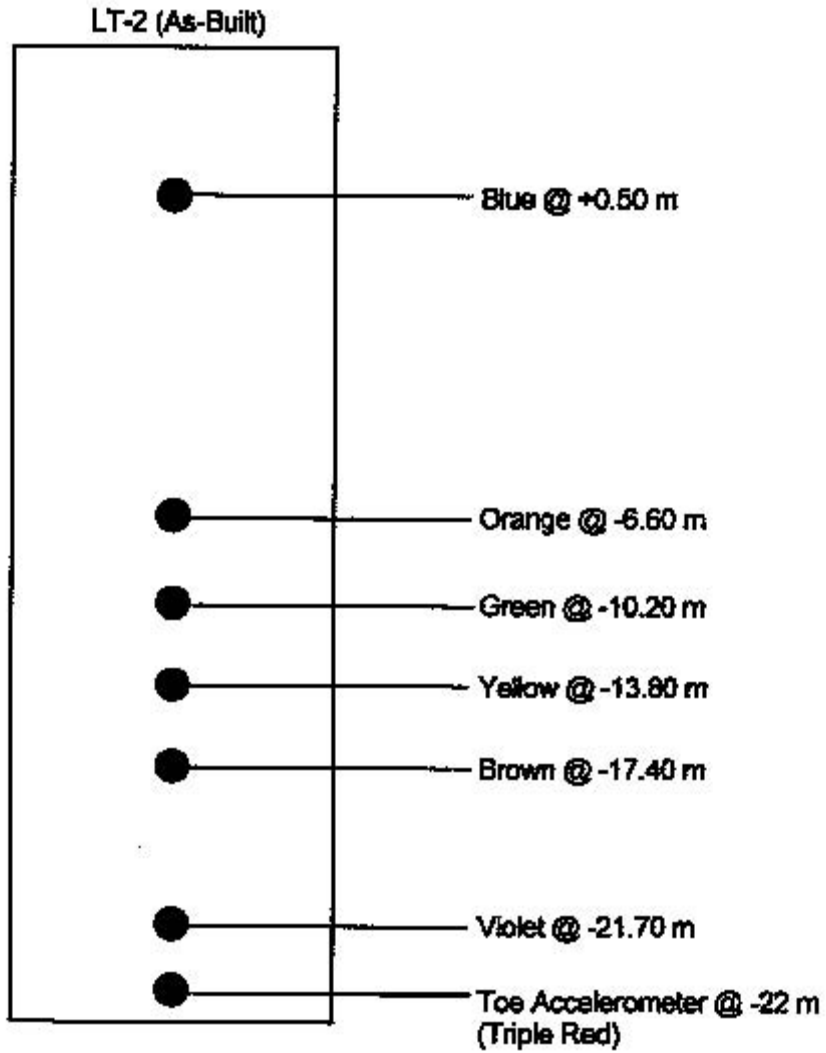


Figure A-61. Site III LT-2 strain gage locations.

Appendix A. (continued)

INSPECTION FIELD LOG		CAISSON /		AUGERCAST PILE	
PROJECT NAME	Royal Park Bridge			PROJECT No.	00007-13
GENERAL CONTRACTOR	DCL			PERMIT No.	
PILELINE CONTRACTOR	CRATRE			DATE	06/17/00
CAISSON/PILE No.				CONCRETE	
DATE RECAVATION/DRILLING STARTED/ENDED	06/17/00			DATE Poured	06/22/00
ESTIMATED EMBEDMENT DEPTH	26.65 ft			TOTAL VOLUME Poured (cu ft)	40.72
BRIEF OF SAMPLES/PILE NUMBER NUMBER, IN				THEORETICAL VOLUME (cu ft)	36.23
CAISSON/PILE TOTAL LENGTH	26.65 ft			DRIFT FACTOR	1.12
PERCENTAGE IN ROCK (%)				No. of TEST SAMPLES MADE (Cylinders, etc)	4
DESIGN DIAMETER (in)	1.22			SIZE OF CONC. SAMPLE	3" x 3" (3" x 3")
ACTUAL BOLD DIAMETER (in)	1.24			TRAFFIC PIPE DIAMETER (in)	0.25
REINFORCING (ACTUAL USED)					
VERTICAL	No.	SIZE	TOTAL LENGTH		
	16	32	26.47 ft	Special STIFFENED	
	3	16		LENGTH ABOVE GROUND SURFACE	
Horizontal	No.	SIZE	LENGTH ABOVE GROUND SURFACE		
			each way on top of the CONC. Caps		
TOP CONC. COVER (in)	No. OF BARS	SIZE	DISTANCE FROM TOP OF CONC. CAP		
	3	16	0.700 ft		
	No. OF BARS	SIZE			
	No. OF BARS	SIZE			
	No. OF BARS	SIZE			
	No. OF BARS	SIZE			
ANCHORING SYSTEM					
VERTICAL BARS/BOLTS	No. OF BARS	SIZE (in)	TOTAL LENGTH	LENGTH ABOVE GROUND	
TEMPLATE VERTICALS (in)	TOP	BOTTOM	BOLT CIRCLES DIA.		
POCKETE PLAT OR TOP	PIER SIZE	ft	in	ft	in
Y ANCHORING PILES	ANCHORMENT	VERTICAL No.	SIZE	TIE No.	SIZE

DEPTH (ft)	SOIL DESCRIPTION	
	FROM	TO
- 8.35	- 8.85	DARK BROWN Silty SAND w/CAVITIES
- 8.85	- 12.20	GRAY FINE SAND
- 12.20	- 19.70	GRAY COARSE SAND - w/ L. L. L. STONE
- 19.70	- 20.70	RED L. L. STONE (SOIL LAYER)
- 20.70	- 24.70	GRAY FINE SAND w/ COARSE SAND, TRAP
- 24.70	- 25.20	RED L. L. STONE (SOIL LAYER)
- 25.20	- 26.20	GRAY FINE SAND w/ COARSE SAND, TRAP

Technical/Inspector's Name: <i>J. E. FINE</i>	

Figure A-62. Site III LT-2 inspection log.

Appendix A. (continued)



REPORT OF FIELD INSPECTION OF CONCRETE

TESTED FOR: MR. ALEX CABO, P.E.
E.C. DRIVER AND ASSOCIATES
500 NORTH HESTERSON BLVD
SUITE #700
TAMPA, FL 33609

PROJECT: MONITORING DRILLED SHAFT
CONST. FOR SEISMIC TEST

DATE: June 22, 2000

REVISION #1
OUR REPORT NO.: 772-00054-16

PAGE 1 OF 2

FIELD DATA: Concrete was delivered by TARNAC, mix number M880434.

ACT NO.	NO. OF TRUCKS MADE	CONCRETE SUPPLIER TRUCK NUMBER	TRUCK DEPARTURE	TRUCK ARRIVAL	YARDS OF CONCRETE	SLUMP, IN	AIR CONTENT, %	TEMPERATURE, °F	
								AIR	CONCRETE
1	4	2242756	03:51 pm	05:10 pm	10.0	8 3/4	3.75	90	95
1		2242757	05:06 pm	05:45 pm	10.0	9		89	92
		2242758	05:23 pm	06:00 pm	10.0				
		2242759	05:29 pm	05:15 pm	10.0	9		88	91
		2242760	06:43 pm	06:30 pm	10.0				
		2242761	06:01 pm	07:00 pm	10.0	8 3/4		86	90

LOCATION: CAISSON LT-2

1	LT-2 FROM -26.80 TO -22.86
1	LT-2 FROM -22.86 TO -19.35
	LT-2 FROM -19.35 TO -15.03
	LT-2 FROM -15.03 TO -11.18
	LT-2 FROM -11.18 TO -7.07
	LT-2 FROM -7.07 TO -2.44

NOTE: AVAILABLE ASTM REQUIREMENTS, UNLESS OTHERWISE INDICATED, ARE: SPEC. FOR CONCRETE (ASTM C 39); AIR CONTENT (ASTM C 173); AND TEMPERATURE IN CONCRETE (ASTM C 1064)

REMARKS: Observed the placement of 36.7 cubic yards of concrete.

MIX 04-M0434

TECHNICIAN: L. POWCE

cc: CLIENT (1)

THIS REPORT IS VALID ONLY TO THE PROJECT AND SITE SPECIFICALLY IDENTIFIED AND MAY NOT BE VALID FOR OTHER PROJECTS OR SITES. REPORTS MAY NOT BE REPRODUCED, COPIED, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, WITHOUT THE WRITTEN PERMISSION OF PROFESSIONAL SERVICE INDUSTRIES, INC.

Respectfully submitted,
Professional Service Industries, Inc.

Parthna Ghosh
Parthna Ghosh, P.E.
Florida #51377

Professional Service Industries, Inc. • 7900 Central Industrial Drive, N. Suite 120 • Riverview, FL 33569 • Phone 261/844-8404 • Fax 261/844-8404

Figure A-63. Site III LT-2 concrete log (1 of 3).

Appendix A. (continued)



REPORT OF FIELD INSPECTION OF CONCRETE

TESTED FOR: MR. ALEX CASO, P.E.
 E.C. DRIVER AND ASSOCIATES
 500 NORTH WESTBORNE BLVD
 SUITE #700
 TAMPA, FL 33609

PROJECT: MONITORING DRILLED SHAFT
 CONST. FOR SEISMIC TEST

DATE: June 22, 2000

REVISION #1
 OUR REPORT NO.: 772-00654-15

PAGE 2 OF 2

FIELD DATA: Concrete was delivered by TARMAC, mix number M880434.

BATCH NO.	VOL OF CONCRETE PLACED	CONCRETE SUPPLIER TICKET NUMBER	TIME TRUCK DISPATCHED	TIME TRUCK UNLOADED	VOLUME OF CONCRETE	SLUMP, IN	AIR CONTENT, %	TEMPERATURE, °F	
								AIR	CONCRETE
		2242762	06:34 pm	---	10.0				

LOCATION: CRUISEWAY LT-2

LT-2 FROM -3.44 to 00

REMARKS: Observed the placement of 4.0 cubic yards of concrete.

TECHNICIAN: L. POMER

cc: CLIENT (1)

Respectfully submitted,
Parthiv Ghosh
 Partha Ghosh, P.E.
 Florida #51377

THIS REPORT IS VALID ONLY IF THE SIGNATURE IS PLACED IN THE SPACE PROVIDED FOR THE SIGNATURE OF THE REGISTERED PROFESSIONAL ENGINEER. IT IS VOID IF NOT SIGNED BY THE REGISTERED PROFESSIONAL ENGINEER.

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Figure A-64. Site III concrete log (2 of 3).

Appendix A. (continued)

00004-13

CONCRETE QTY

D = 1.22
 h = 6.47 m
 $\Delta = 1.17 \text{ m}^2$
 $V = 7.57 \text{ m}^3$

EACH $\text{m}^3 = 0.86 \text{ m hhd}$

D = 1.34 m
 h = 20.33 m
 $\Delta = 1.41 \text{ m}^2$
 $V = 28.67 \text{ m}^3$

EACH $\text{m}^3 = 0.71 \text{ m}$

CONCRETE SURFACE ELEV

TRUCK	H THEORETICAL	H ACTUAL
	- 26.80	
1	- 21.53	- 22.86
2	- 16.99	- 19.35
3	- 11.72	- 15.09
4	- 6.46	- 11.18
5	- 1.20	- 7.07
6	—	- 2.44
7		— (4 m^3)



NO: 06222

Figure A-65. Site III LT-2 concrete log (3 of 3).

Appendix A. (continued)



REPORT OF CONCRETE COMPRESSION TEST

TESTED FOR: MR. ALEX CASO, P.E.
 R.C. DRIVER AND ASSOCIATES
 500 WORTH WESTMORE BLVD
 SUITE #700
 TAMPA, FL 33609

PROJECT: MONITORING DRILLED SHAFT
 CONST. FOR STATISTIC TEST

DATE: June 23, 2000

REVISION #1
 OUR REPORT NO.: 772-00054-17

FIELD DATA:
 LOCATION OF PLACEMENT CAISSON LT-2
 LT-2 FROM -26.80 TO 22.86

DATE PLACED	June 23, 2000	SUPPLIER	TARMAC
TIME	04:40 pm	DELIVERY TICKET NO./TRUCK NO.	2242756
JUMP IN	30	MIX NUMBER AND PROPORTIONS	M880434
AIR CONTENT, %	3.75	CEMENT	---
AIR TEMPERATURE, °F	94	WATER	---
CONCRETE TEMPERATURE, °F	90	FINE AGGREGATE	---
DATE RECEIVED IN LAB	June 23, 2000	COARSE AGGREGATE	---
FIELD DATA SUBMITTED BY	PSI/L. PONCE	AD MIXTURE	---
LAB DATA SUBMITTED BY	TARMAC		

NOTE: APPLICABLE ASTM SPECIFICATIONS OR OTHERS REFERRED TO ARE: (1) ASTM C193-97, AIR CONTENT OF HYDRATED PORTLAND CEMENT CONCRETE; (2) ASTM C140-97, TEMPERATURE CORRECTION OF CONCRETE CYLINDERS; (3) ASTM C39-98, STANDARD TEST METHOD FOR COMPRESSIVE STRENGTH OF CEMENT CONCRETE CYLINDERS; (4) ASTM C128-98, METHOD OF MAKING AND CURE OF CONCRETE TEST SPECIMENS.

COMPRESSION TEST RESULTS

LABORATORY NUMBER	SPECIMEN IDENTIFICATION OR TEST NO.	TEST AGE (DAYS)	DATE OF TEST	TOTAL LOAD (LBS)	CYLINDER DIAMETER (IN.)	CYLINDER AREA (SQ. IN.)	COMPRESSIVE STRENGTH (PSI)	TYPE OF BREAK
3	A	7	06/29/00	240000	6.00	28.27	8490	Indeterminate
3	B	28	07/28/00					
3	C	28	07/28/00					
3	D	R	HOLD					
SPECIFICATIONS							28	5500

REMARKS: Cylinders made by PSI representative. Cylinders picked up by PSI representative. Test results comply with applicable specifications.

Cylinders made by Architect's or Contractor's representative. Cylinders delivered to PSI laboratory. Test results do not comply with applicable specifications.

TECHNICIAN: L. PONCE

cc: CLIENT (1).

Respectfully submitted,
 Professional Service Industries, Inc.
(Signature)
 Partha Ghosh, P.E.
 Florida #51377

NOTE: TEST RESULTS APPLY ONLY TO THE SPECIFIC SAMPLE TESTED AND MAY NOT BE REPRESENTATIVE OF THE ENTIRE CONCRETE PLACEMENT. REPORTS MAY NOT BE REPRODUCED, EXCEPT IN FULL, WITHOUT THE WRITTEN PERMISSION OF PROFESSIONAL SERVICE INDUSTRIES, INC.

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Figure A-66. Site III LT-2 concrete cylinder breaks.

Appendix A. (continued)



INSPECTION REPORT

TESTED FOR: MR. ALEX CASO, P.E.
K.C. DRIVER AND ASSOCIATES
500 NORTH WESTSHORE BLVD
SUITE #700
TAMPA, FL 33609

PROJECT: MONITORING DRILLED SHAFT
CONST. FOR SEISMIC TEST

DATE: June 15, 2000

REVISION #2
OUR REPORT NO: 772-00054-14

REMARKS: As requested, a PSI representative reported to the above referenced project to perform caisson monitoring at location LT-2.

The following items were noted:

1. At 7:00 outer casing (1.52 meters diameter) was placed on LT-2 caisson, at station No. 26 +08.90 and driven with a vibrator hammer to 12.42 meters below bridge deck (-9.29 BE elevation). Mudline is 8.05 below bridge deck.
2. At 12:00 p.m. inner casing (1.34 meters diameter) was placed on drilled shaft LT-2 and driven into the ground to same elevation as the outer casing.
3. Steel reinforcing cage was not ready and will not be ready until Saturday, therefore driller contractor will not drill the shaft until everything is ready.
4. Activities will re-start on Monday 19, 2000.

Inspector: L. Ponce
Total Hours: 10.0

Respectfully submitted,

PROFESSIONAL SERVICE INDUSTRIES, INC.

PARTHA GHOSH, P.E.
Florida #51377

cc: CLIENT (1).

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Figure A-67. Site III LT-2 construction details (1 of 6).

Appendix A. (continued)



INSPECTION REPORT

TESTED FOR: MR. ALEX CASO, P.E. PROJECT: MONITORING DRILLED SHAFT
E.C. DRIVER AND ASSOCIATES CORRET. FOR STATISGRIC TEST
500 NORTH WESTSHORE BLVD
SUITE #700
TAMPA, FL 33609

DATE: June 19, 2000 REVISION #1
OUR REPORT NO: 772-00054-13

REMARKS: As requested, a PSI representative reported to the above referenced project to perform caisson monitoring and steel inspection (for LT-2).

The following items were noted:

- 1. At 7: 00 a.m. shaft drilling began. Excavated soils classification were recorded in inspection field report.
- 2. Inspection of steel reinforcing was performed according to project #229893-1-52-01 Sheet D-12.
- 3. At 1:00 p.m. drilling was completed depth reached 26.80 meters.
- 4. At 4:00 p.m. contractor started to clean bottom of shaft and also sieved the excavated material in order to reuse the sand.
- 5. Concrete pour is scheduled for tomorrow at 1:00 p.m.

Technician: L. Ponce
Total Hours: 4.0

Respectfully submitted,

PROFESSIONAL SERVICE INDUSTRIES, INC.

Patrick Choak, P.E.
Florida #51277

CO: CLIENT (1).

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Figure A-68. Site III LT-2 construction details (2 of 6).

Appendix A. (continued)



INSPECTION REPORT

TESTED FOR: MR. ALEX CASO, P.E.
E.C. DRIVER AND ASSOCIATES
500 NORTH WESTSHORE BLVD
SUITE #700
TAMPA, FL 33609

PROJECT: MONITORING DRILLED SHAFT
CONST. FOR STATISIMIC TEST

DATE: June 20, 2000

REVISION #2
OUR REPORT NO.: 772-00054-20

REMARKS:

As requested, a PSI representative reported to the above referenced project to perform caisson monitoring at location LT-2.

The following items were noted:

1. At 7:00 a.m. subcontractor Coastal Caisson continued sieving excavated mud to reuse the mud.
2. At 11:00 a.m. mud was coming up from the mudline of the intracoastal waterways proximate to the drilled shaft excavation. Coastal Caisson decided to continue with its original schedule of the concrete placement at 3:00 p.m. in believing that the mud came up from a small hole at the bottom of the casing.
3. At 1:00 p.m. contractor stopped all work activities because the drilled shaft hole was caving in from below the casing bottom.
4. Roy with Coastal Caisson communicated to DOT and PSI representative that they have to use additional inner casing, an additional 8' into the ground in order to stop the caving in and seal the possible hole

on the drilled shaft walls below the existing casing bottom.

Rest of day Coastal Caisson welded additional casing to existing one.

Inspector: L. Ponce
Total Hours: 9.0

Respectfully submitted,

PROFESSIONAL SERVICE INDUSTRIES, INC.

Partha Ghosh, P.E.
Florida #51377

cc: CLIENT (1),

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Figure A-69. Site III LT-2 construction details (3 of 6).

Appendix A. (continued)



INSPECTION REPORT

TESTED FOR: MR. ALEX CASO, P.E.
E.C. DRIVER AND ASSOCIATES
500 NORTH WESTSHORE BLVD
SUITE #700
TAMPA, FL 33609

PROJECT: MONITORING DRILLED SHAFT
CONST. FOR STATIC TEST

DATE: June 21, 2000

REVISION #2
OUR REPORT NO: 772-00054-19

REMARKS:

As requested, a PSI representative reported to the above referenced project to perform casing monitoring at location LT-2.

The following items were noted:

1. At 7:00 a.m. contractor began to drive additional 8' inner casing in.
2. At 12:00 p.m. mud was still escaping from drilled shaft. Contractor decided to install 15' more of inner casing to stabilize the hole.
3. At 5:00 p.m. they received additional casing and was welded during the night to the existing one.

Inspector: L. Ponce
Total Hours: 8.0

Respectfully submitted,

PROFESSIONAL SERVICE INDUSTRIES, INC.

Partha Ghosh, P.E.
Florida #31377

cc: CLIENT (1).

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Figure A-70. Site III LT-2 construction details (4 of 6).

Appendix A. (continued)



DAILY FIELD REPORT

TESTED FOR: MR. ALAN CASO, P.E.
E.C. DRIVER AND ASSOCIATES
500 NORTH WESTSHORE BLVD
SUITE #700
TAMPA, FL 33609

PROJECT: MONITORING DRILLED SHAFT
CONSTR. FOR SEISMIC TEST

REVISION #3
OUR REPORT NO: 772-00054-15

DATE: JUNE 22, 2000

REMARKS:

As requested, a PSI representative reported to the above referenced project to perform caisson monitoring at location LT-2.

The following was noted:

- 7:00 a.m. Additional casing was welded overnight, and from 7:00 p.m. to 12:00 p.m. inner casing was pushed down up to -15.90 m elevation, and previous problems with cave-in and mud escape was solved.
Length of inner casing = 20.33 m
Length of outer casing = 13.72 m
- From 12:00 p.m. to 3:00 p.m. contractor cleaned up the bottom of shaft.
- At 3:00 p.m. steel reinforcing was placed in the shaft, and a 0.25 meter diameter Trimis was installed.
- At 4:30 p.m. concrete pouring began, four cylinders were cast and left in a cure box at the job site.
- At 8:00 p.m. concrete pouring was finished. Actual volume of concrete poured was 40.72 cubic yards. Theoretical volume = 36.22 cubic meters. Grout factor = 1.12.

Technician: L. Pounce
Total Hours: 13.0

Respectfully submitted,
PROFESSIONAL SERVICE INDUSTRIES, INC.
Parthiv Ghosh
Parthiv Ghosh, P.E.
Florida #51177

NO. CLIENT (1).

Figure A-71. Site III LT-2 construction details (5 of 6).

Appendix A. (continued)



SAMPLE PICK-UP FIELD REPORT

TESTED FOR:	MR. ALEX CASO, P.E. H.C. DRIVER AND ASSOCIATES 500 NORTH WENTWORTH BLVD SUITE #700 TAMPA, FL 33608	PROJECT:	MONITORING DRILLED SHAFT CONST. FOR SEISMIC TEST
DATE:	June 23, 2000	REVISION #1	OUR REPORT NO: 772-00054-1B

REMARKS:

As requested, a PSI representative reported to the above referenced project to pick-up cylinders that had been previously used.

On this day, one (1) set of cylinders was picked up and transported back to our laboratory for compressive strength testing.

Technician: L. Poore
Total Hours: 1.0

Respectfully submitted,

PROFESSIONAL SERVICE INDUSTRIES, INC.

Patricia Ghosh, P.E.
Florida 081277

ONE CLIENT (1),

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Figure A-72. Site III LT-2 construction details (6 of 6).

Appendix B. Grouting Data Reduction

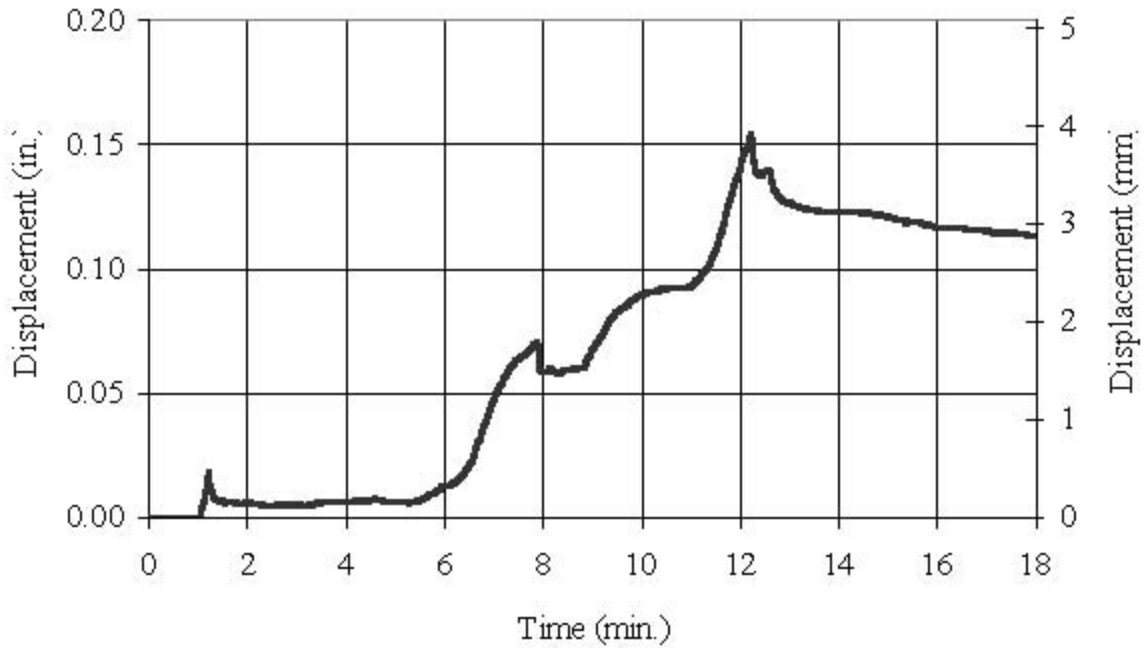


Figure B-1. Site I Flat-Jack 1 grouting displacement vs. time.

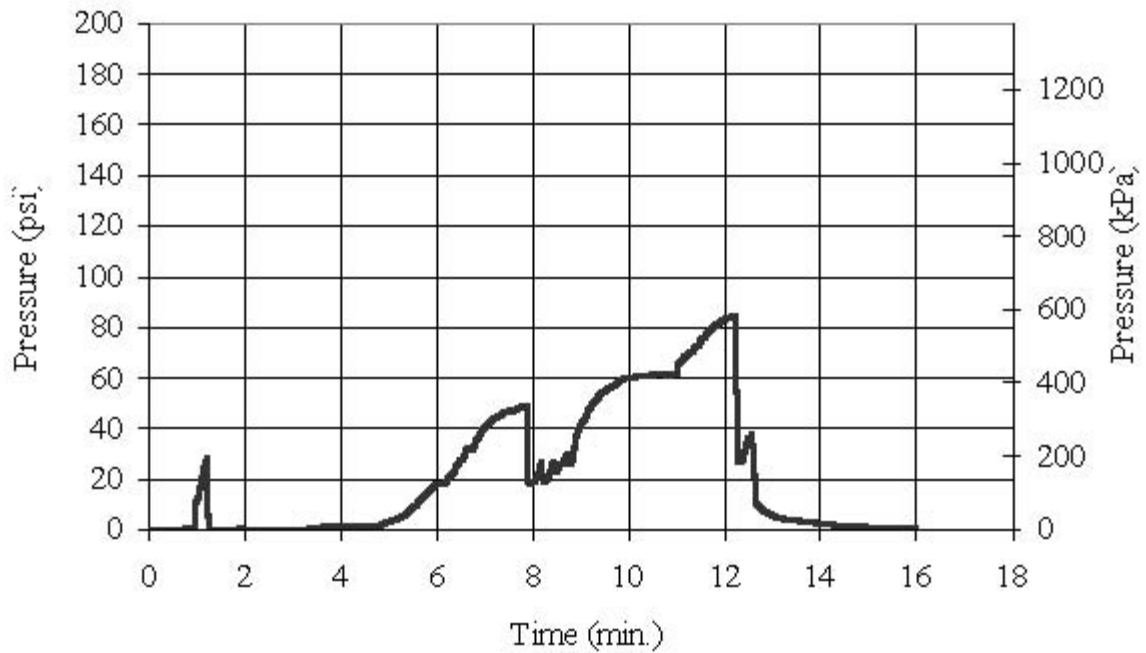


Figure B-2. Site I Flat-Jack 1 grouting pressure vs. time.

Appendix B. (continued)

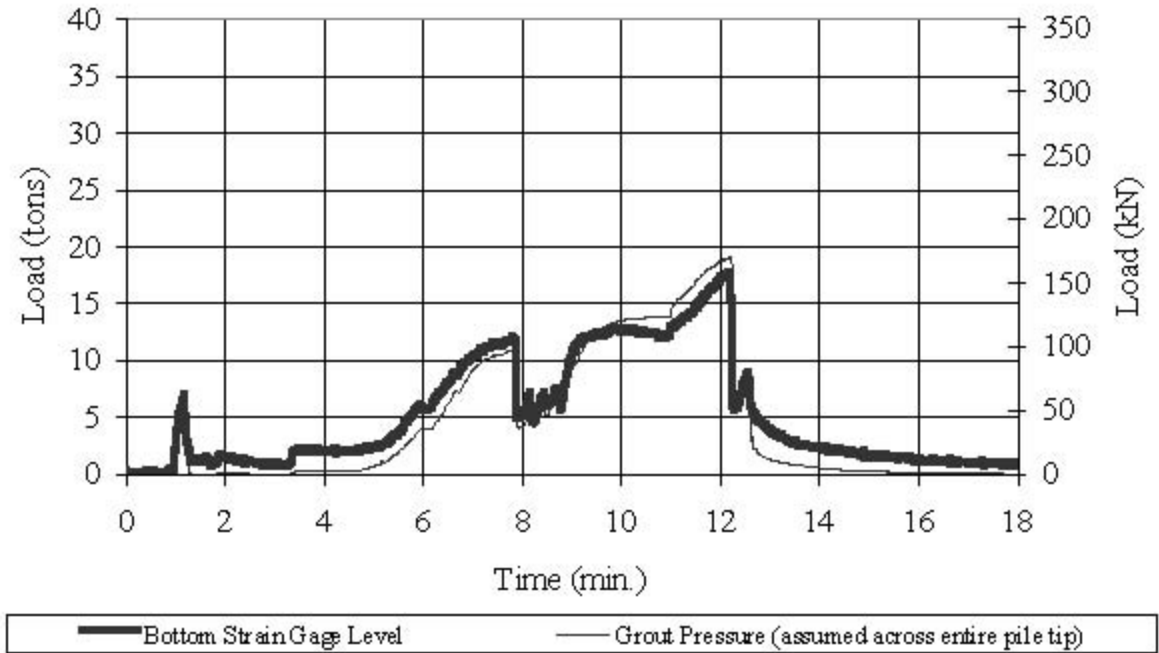


Figure B-3. Site I Flat-Jack 1 grouting load vs. displacement.

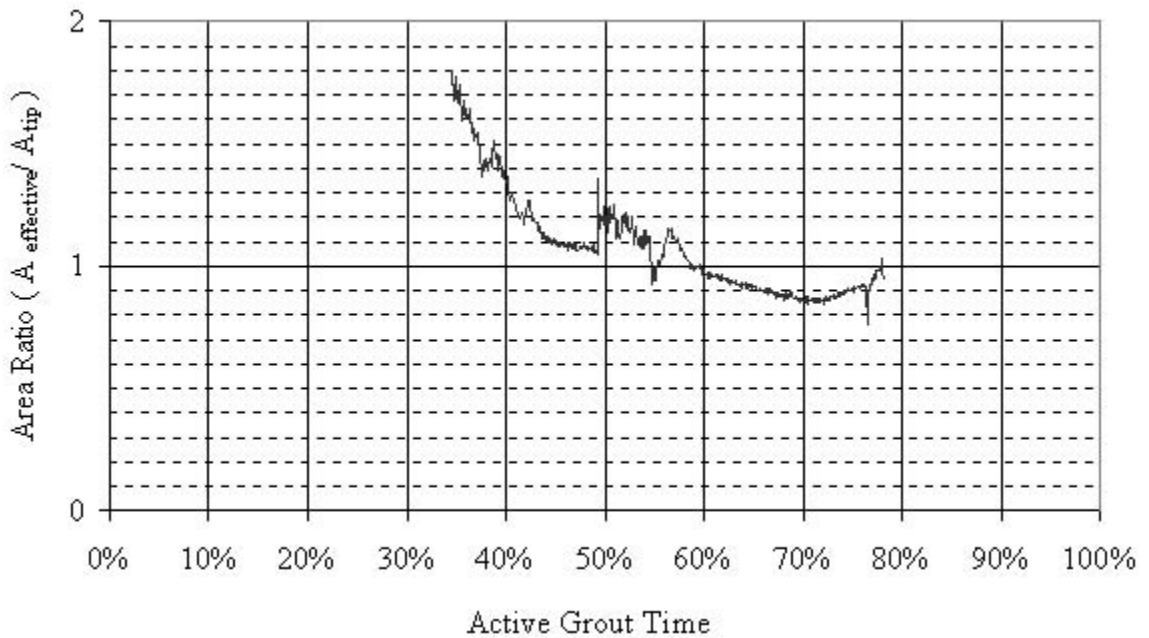


Figure B-4. Site I Flat-Jack 1 grouting area ratio vs. active grout time.

Appendix B. (continued)

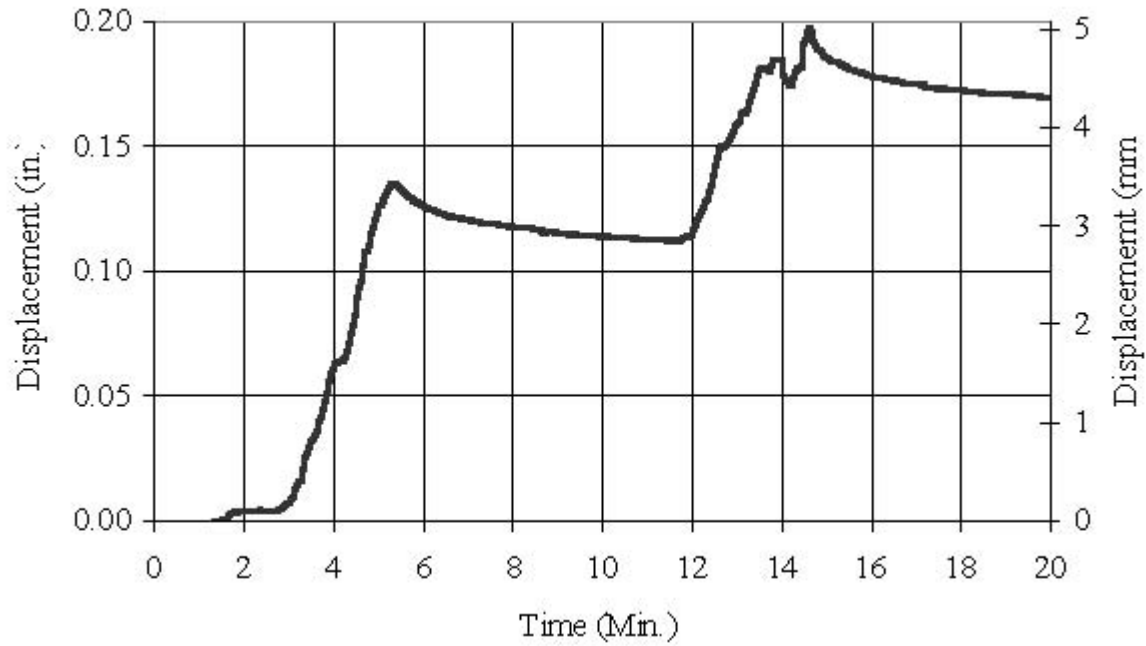


Figure B-5. Site I Flat-Jack 2 grouting displacement vs. time.

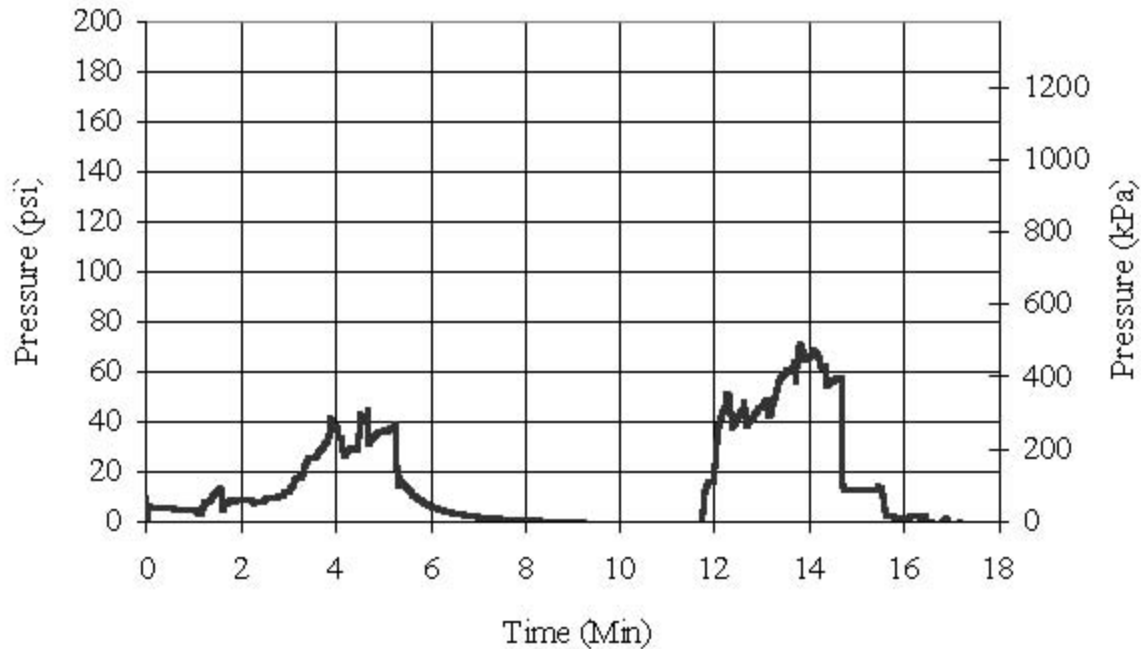


Figure B-6. Site I Flat-Jack 2 grouting pressure vs. time.

Appendix B. (continued)

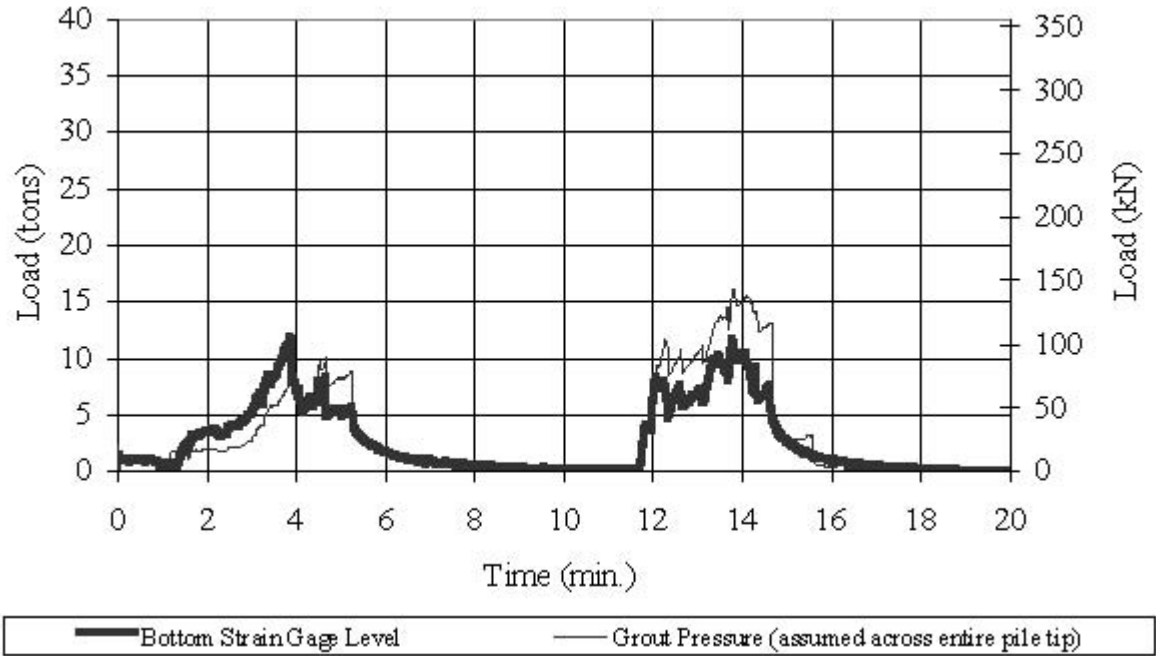


Figure B-7. Site I Flat-Jack 2 grouting load vs. time.

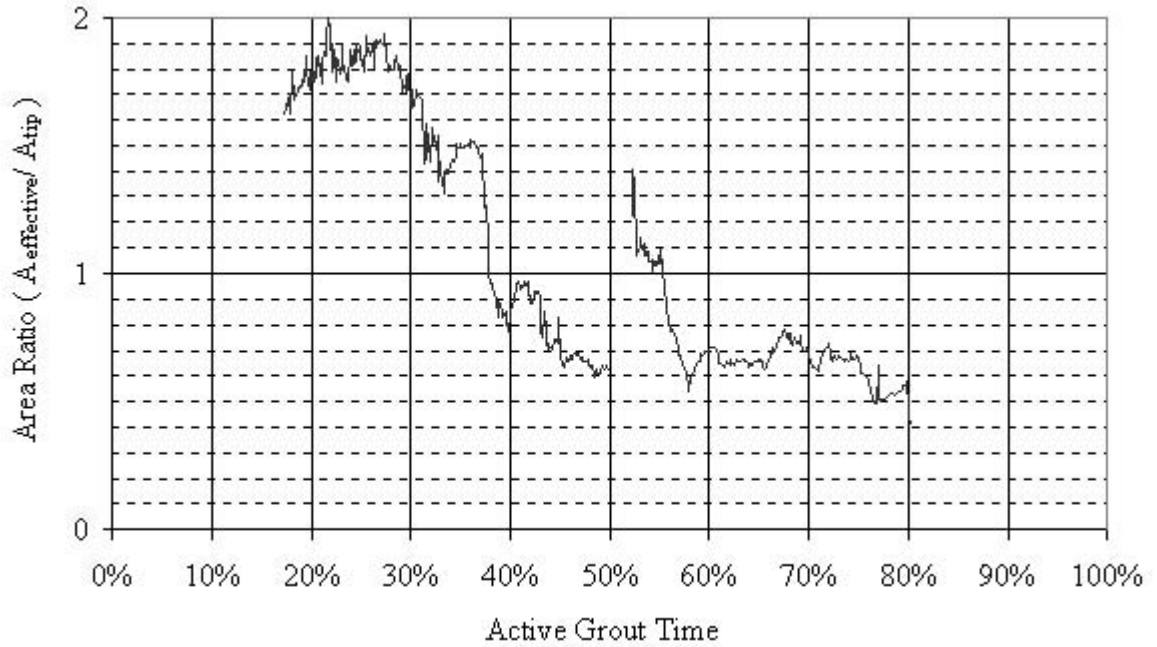


Figure B-8. Site I Flat-Jack 2 grouting area ratio vs. active grout time.

Appendix B. (continued)

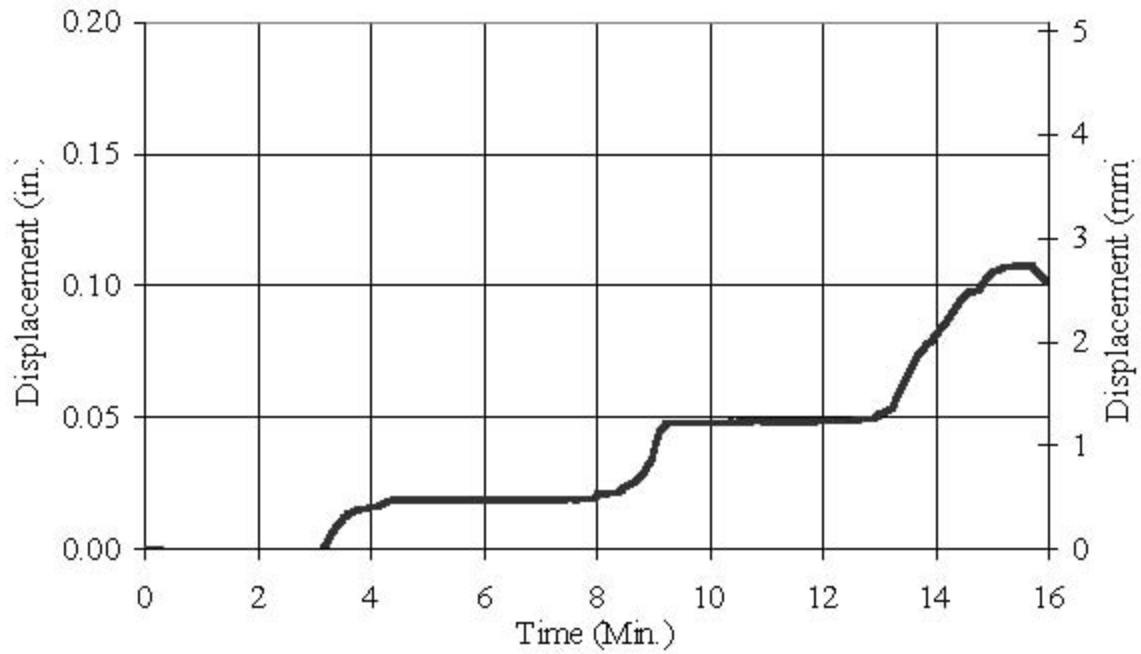


Figure B-9. Site I Sleeve-Port 1 grouting displacement vs. time.

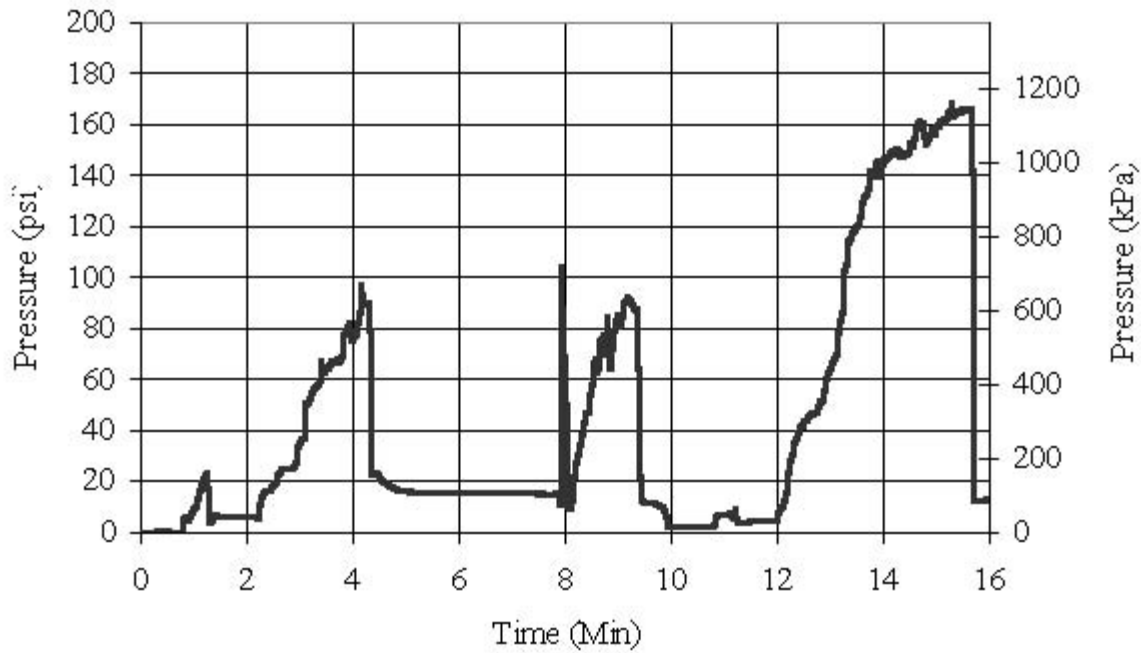


Figure B-10. Site I Sleeve-Port 1 grouting pressure vs. time.

Appendix B. (continued)

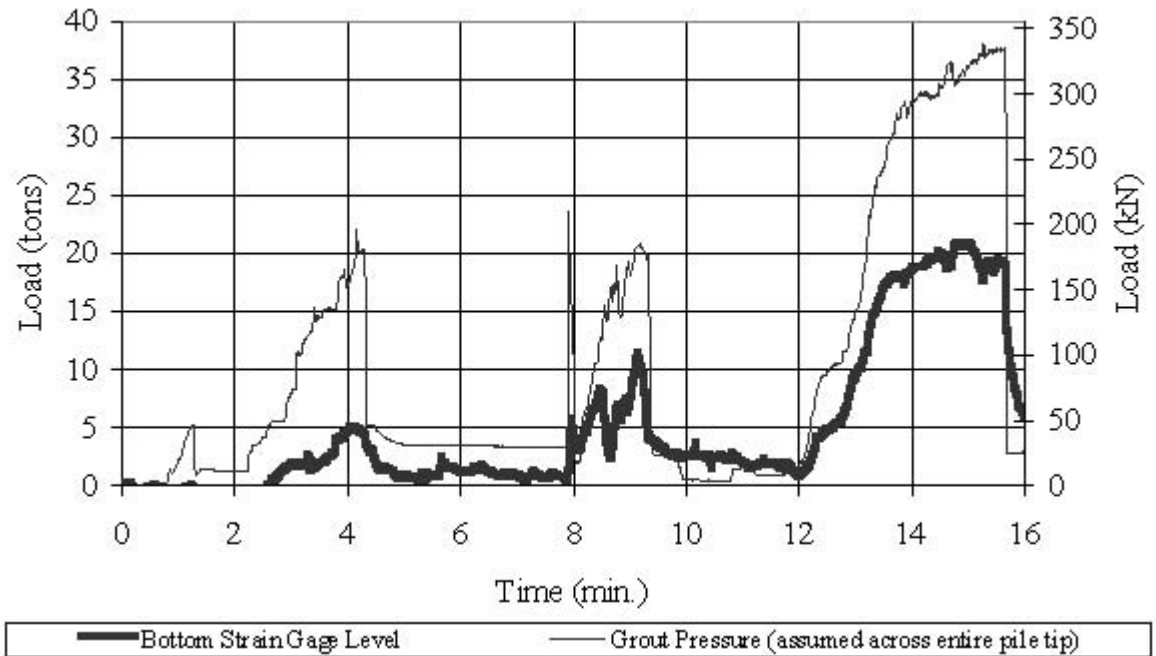


Figure B-11. Site I Sleeve-Port 1 grouting load vs. time.

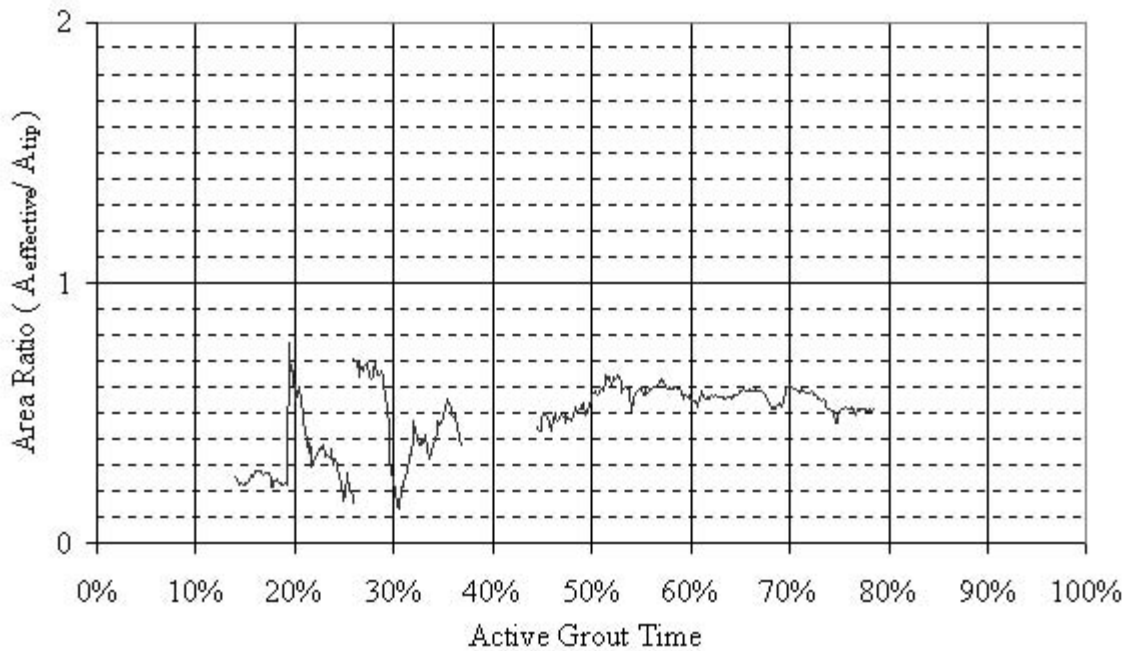


Figure B-12. Site I Sleeve-Port 1 grouting area ratio vs. active grout time.

Appendix B. (continued)

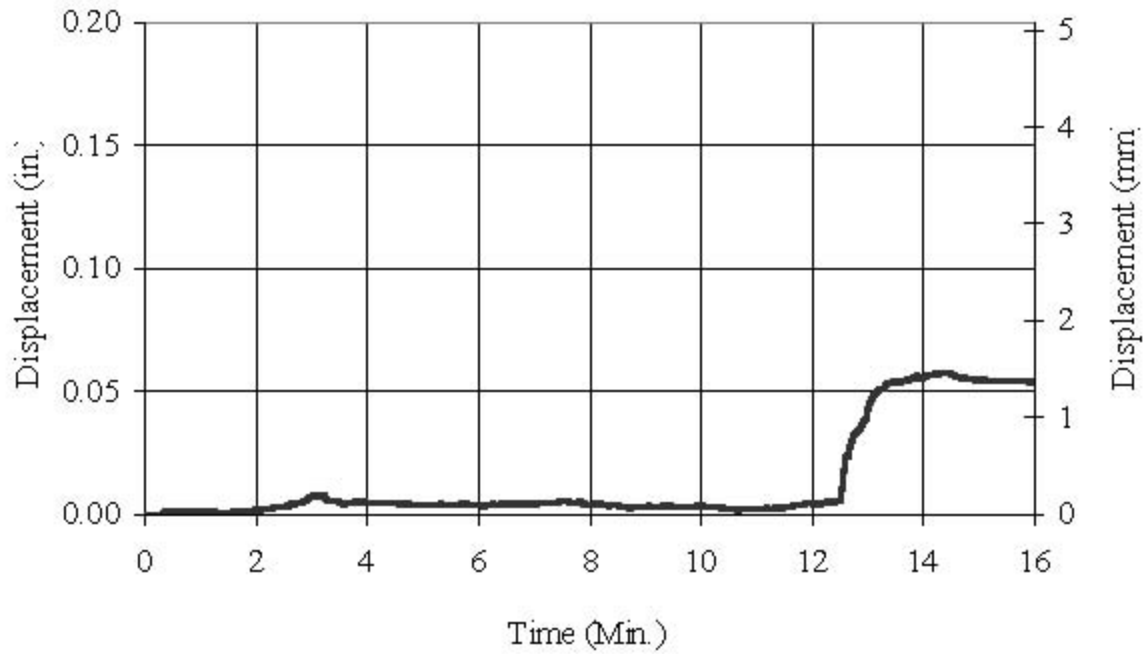


Figure B-13. Site I Sleeve-Port 2 grouting displacement vs. time.

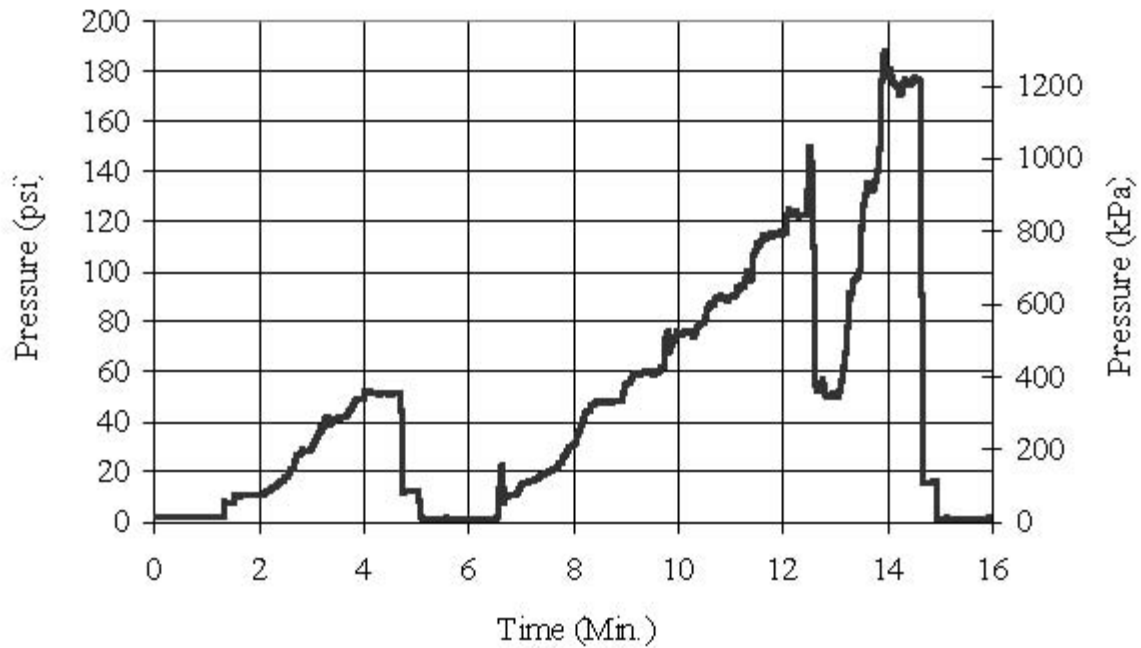


Figure B-14. Site I Sleeve-Port 2 grouting pressure vs. time.

Appendix B. (continued)

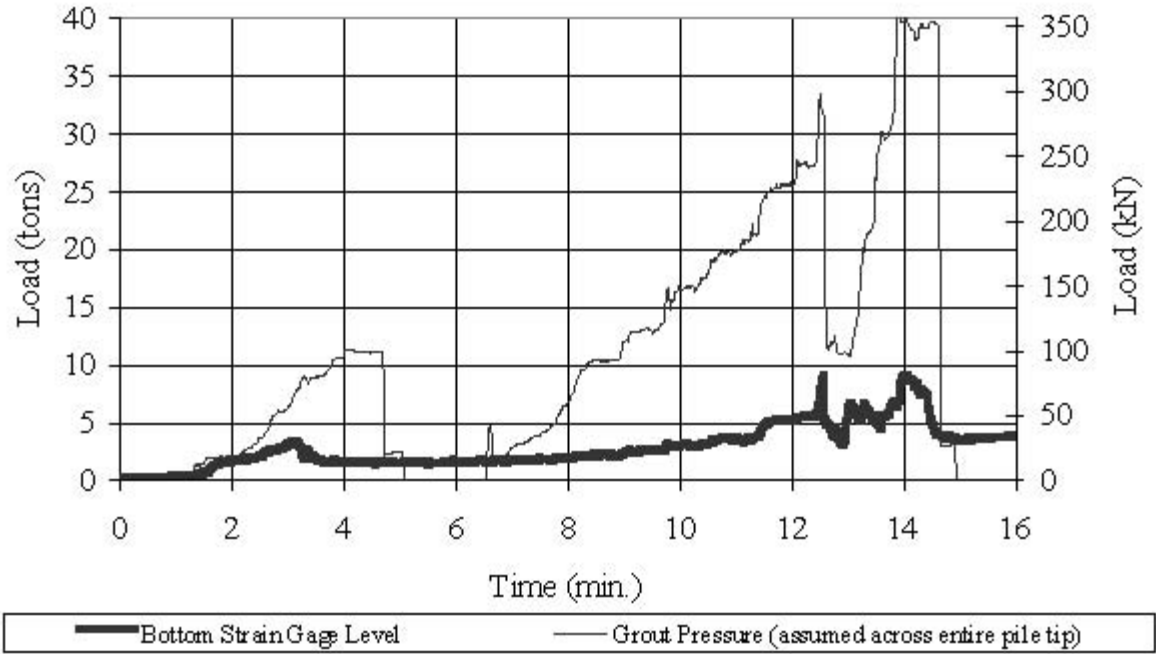


Figure B-15. Site I Sleeve-Port 2 grouting load vs. time.

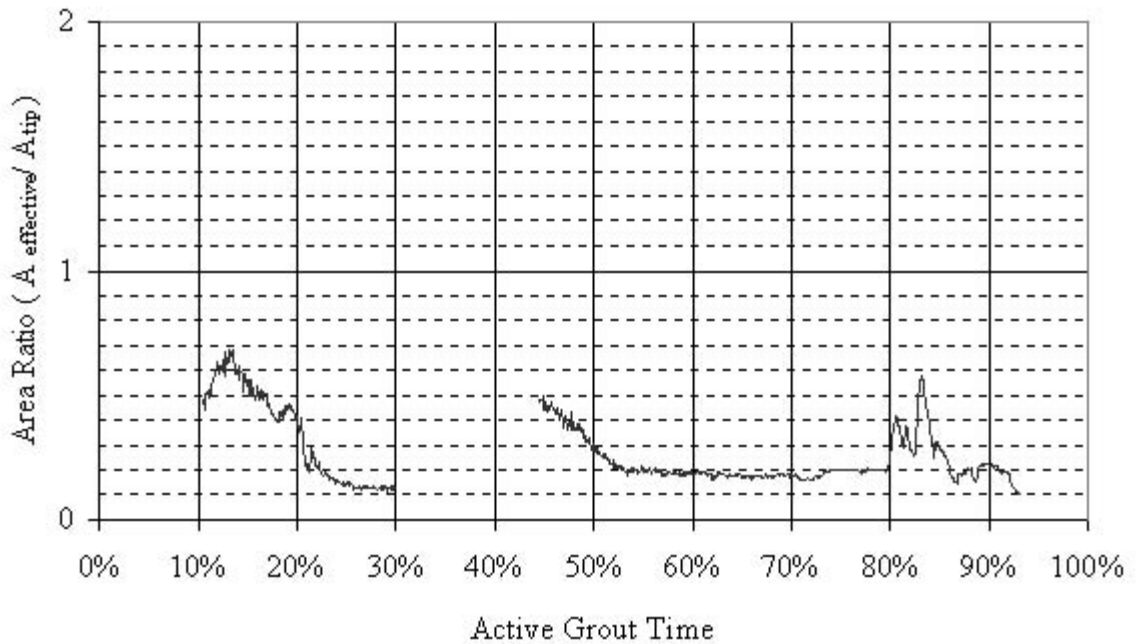


Figure B-16. Site I Sleeve-Port 2 grouting area ratio vs. active grout time.

Appendix B. (continued)

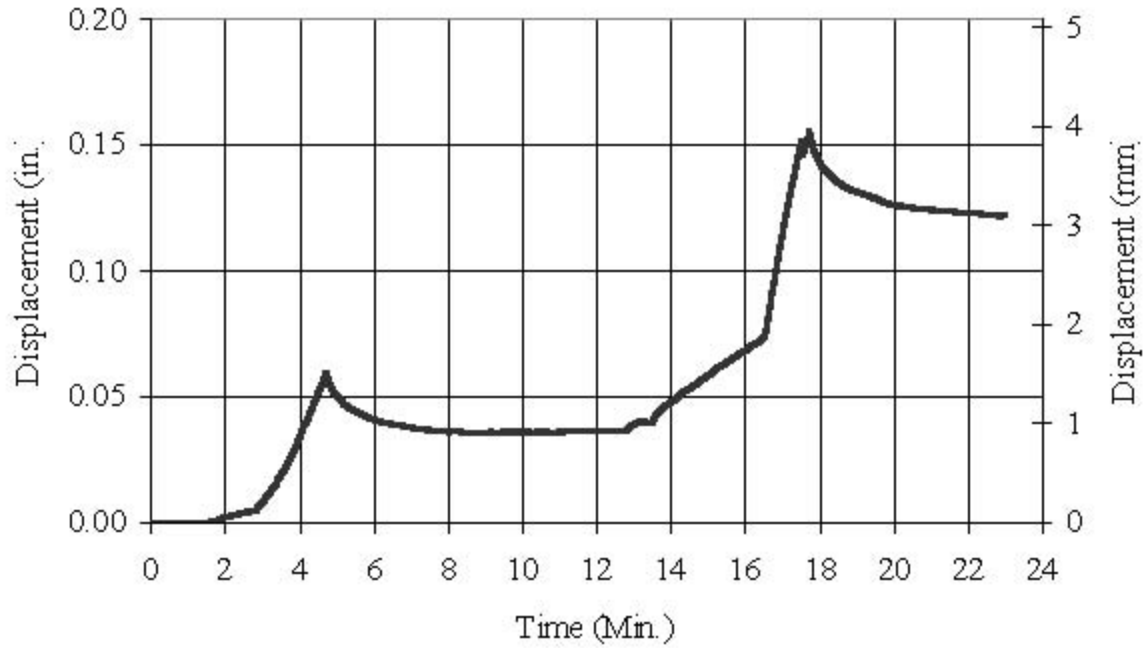


Figure B-17. Site II Flat-Jack grouting displacement vs. time.

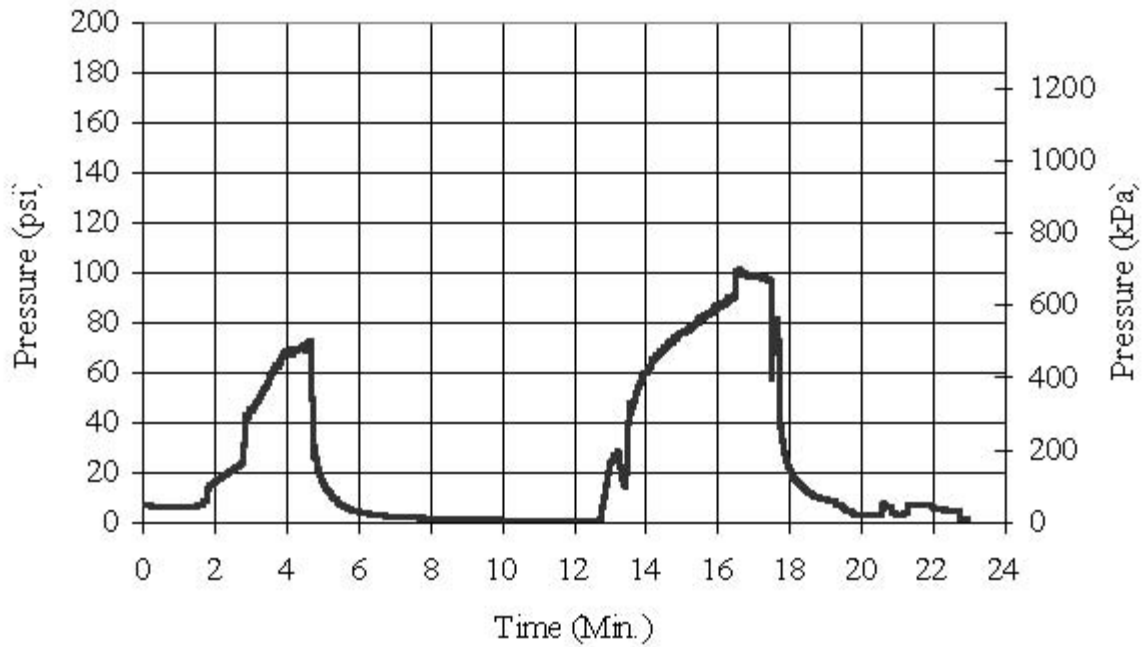


Figure B-18. Site II Flat-Jack grouting pressure vs. time.

Appendix B. (continued)

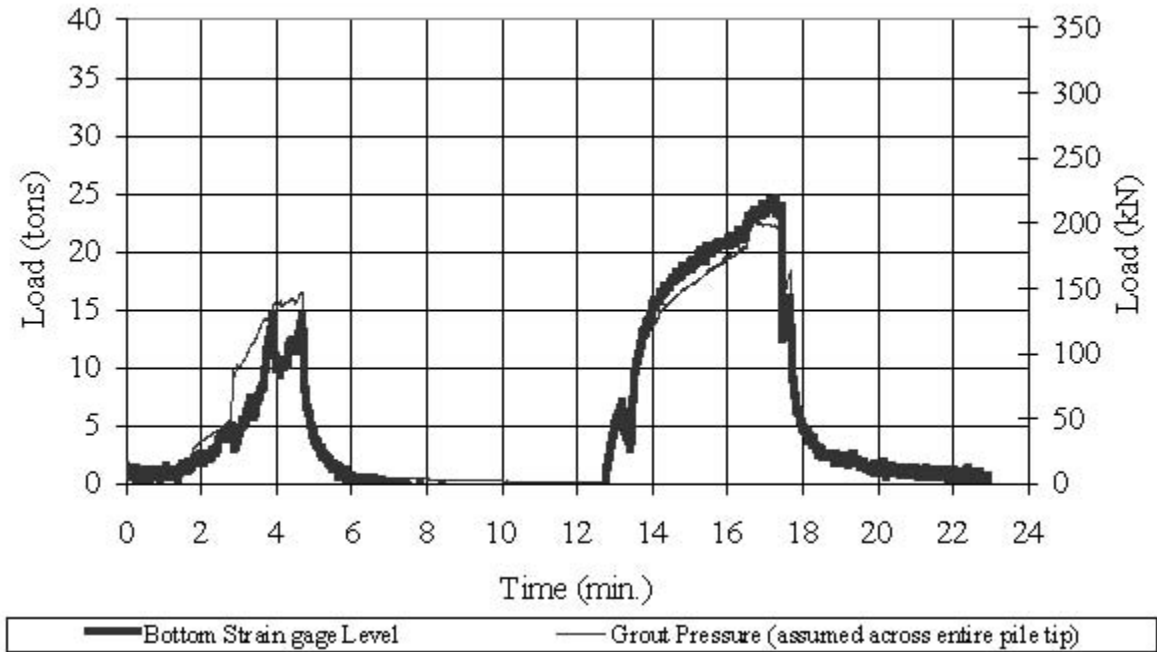


Figure B-19. Site II Flat-Jack grouting load vs. time.



Figure B-20. Site II Flat-Jack grouting area ratio vs. active grout time.

Appendix B. (continued)

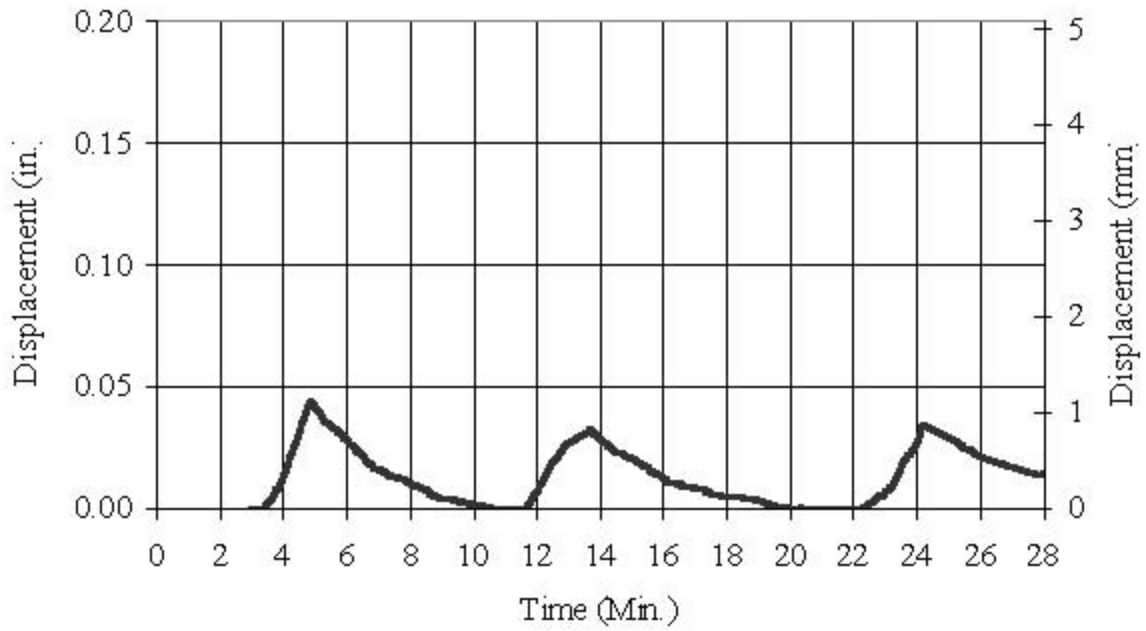


Figure B-21. Site II Sleeve-Port grouting displacement vs. time

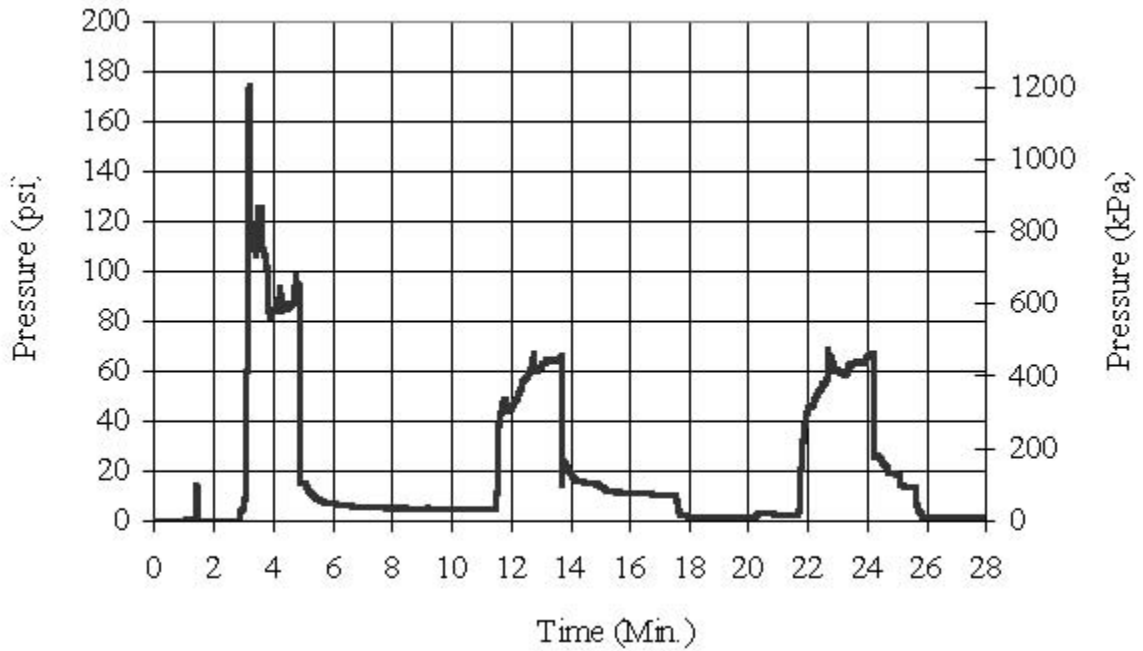


Figure B-22. Site II Sleeve-Port grouting pressure vs. time.

Appendix B. (continued)

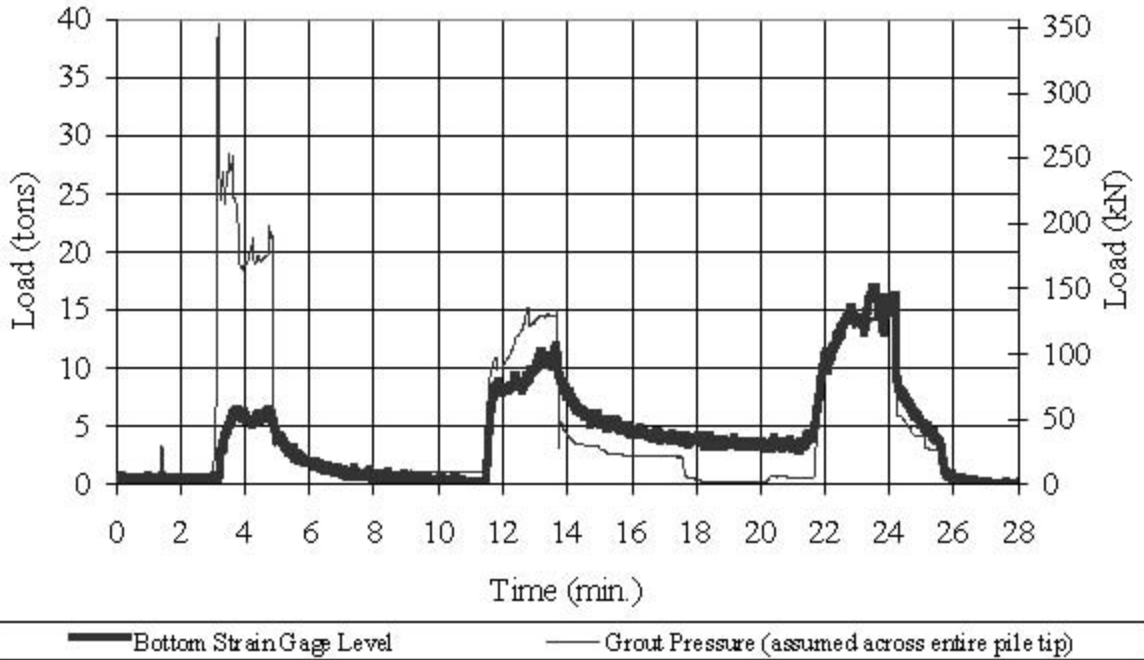


Figure B-23. Site II Sleeve-Port grouting Load vs. time.



Figure B-24. Site II Sleeve-Port grouting area ratio vs. active grout time.

Appendix B. (continued)

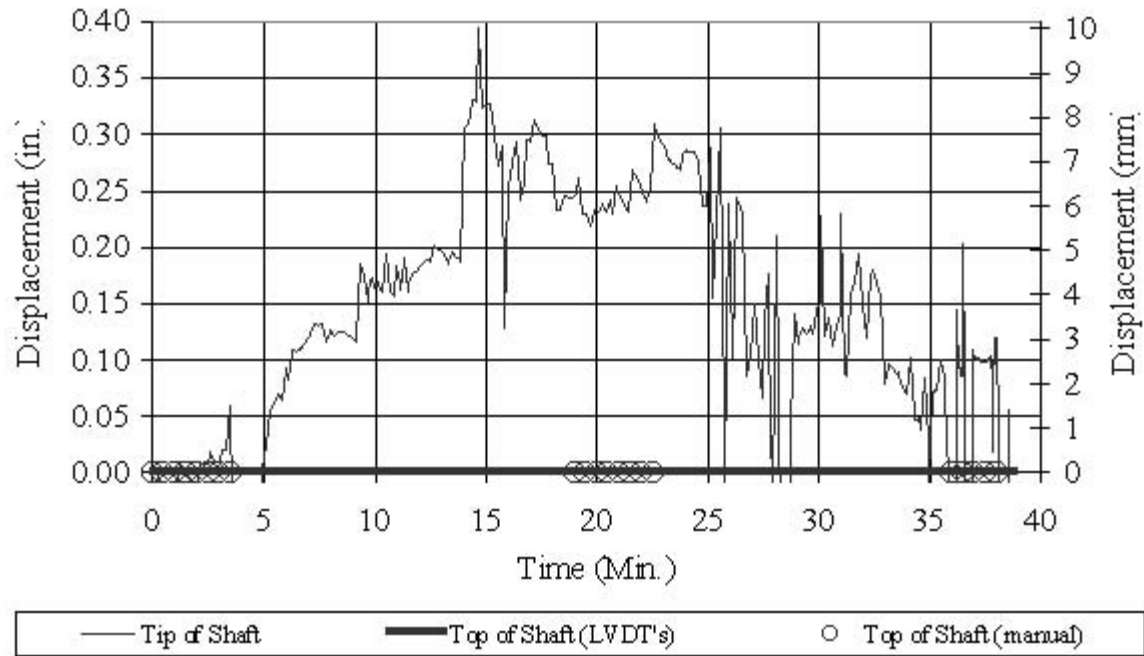


Figure B-25. Site III LT-3 grouting displacement vs. time.

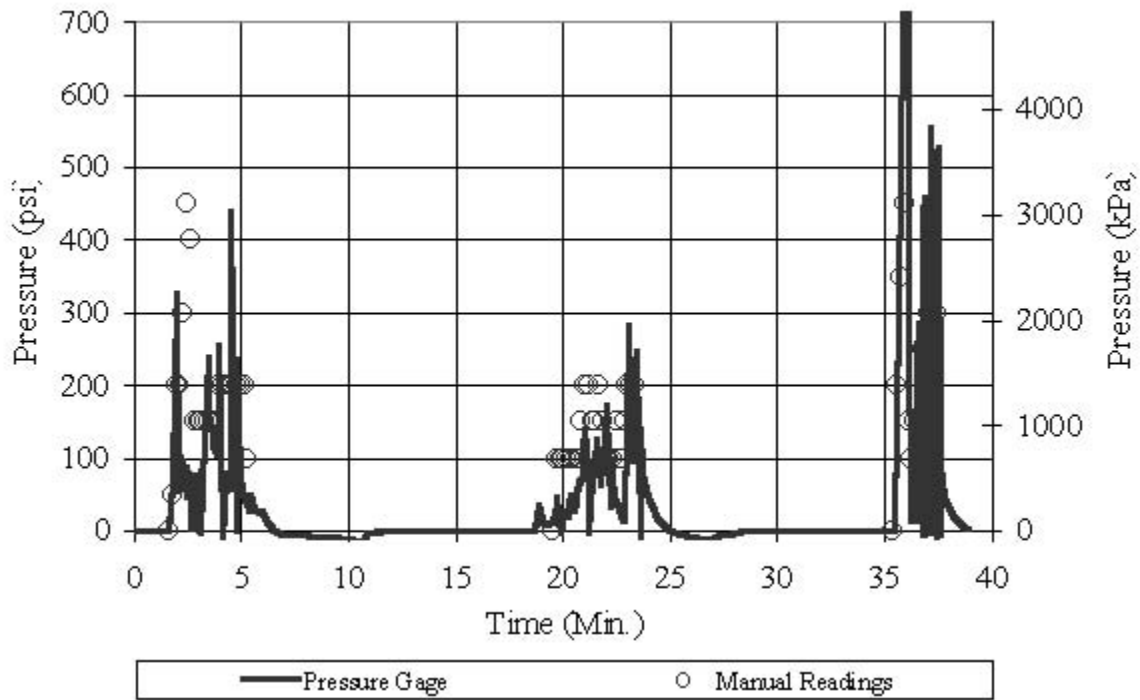


Figure B-26. Site III LT-3 grouting pressure vs. time.

Appendix B. (continued)

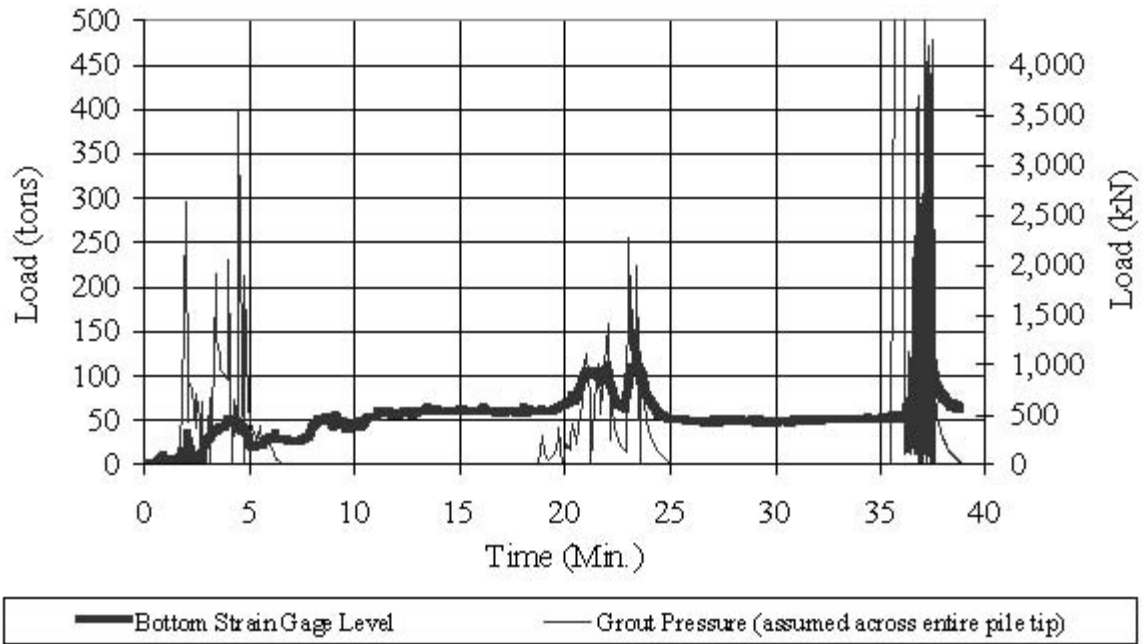


Figure B-27. Site III LT-3 grouting load vs. time.

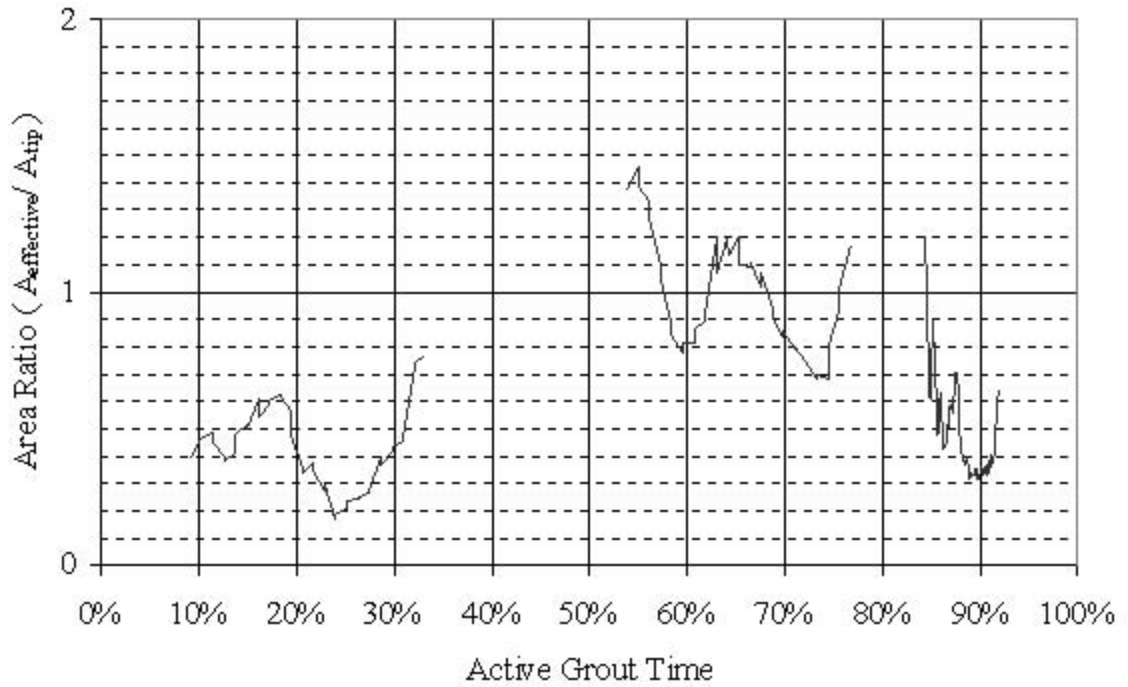


Figure B-28. Site III LT-3 grouting area ratio vs. active grout time.

Appendix B. (continued)

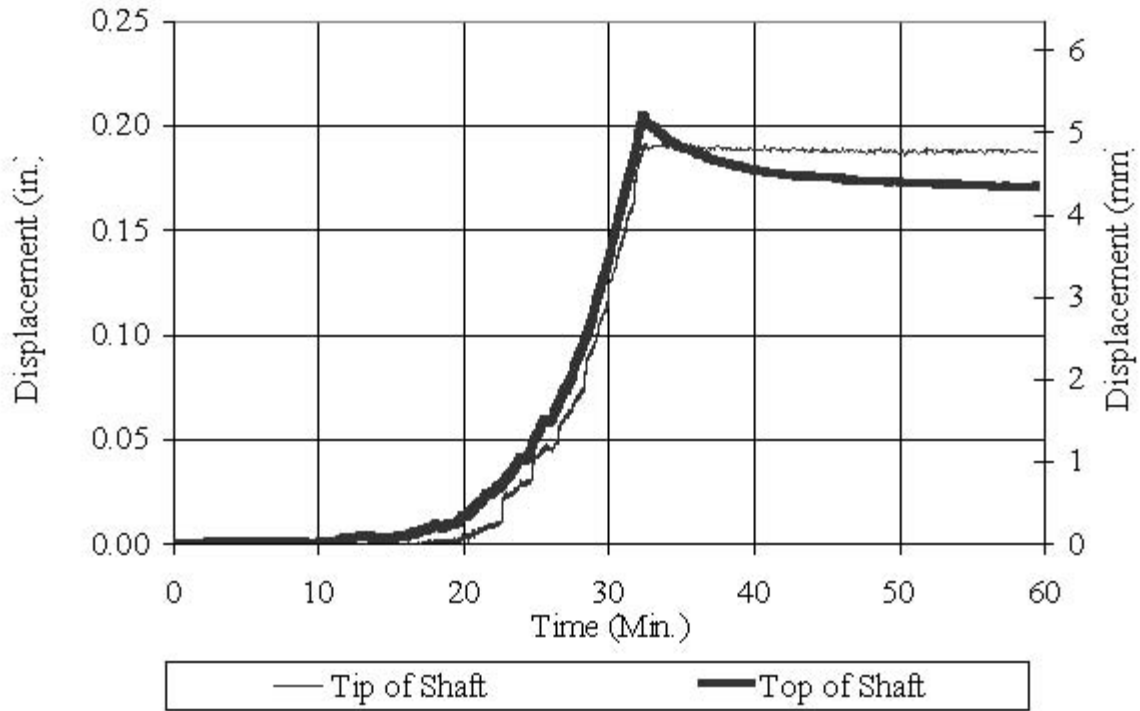


Figure B-29. Site III LT-2 grouting displacement vs. time.

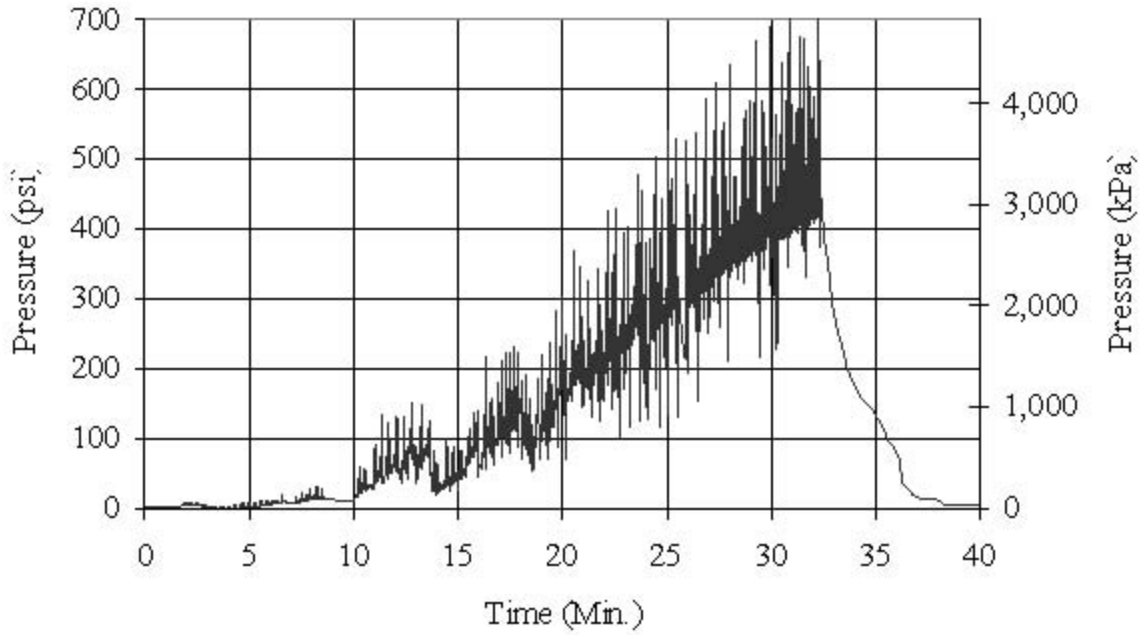


Figure B-30. Site III LT-2 grouting pressure vs. time.

Appendix B. (continued)

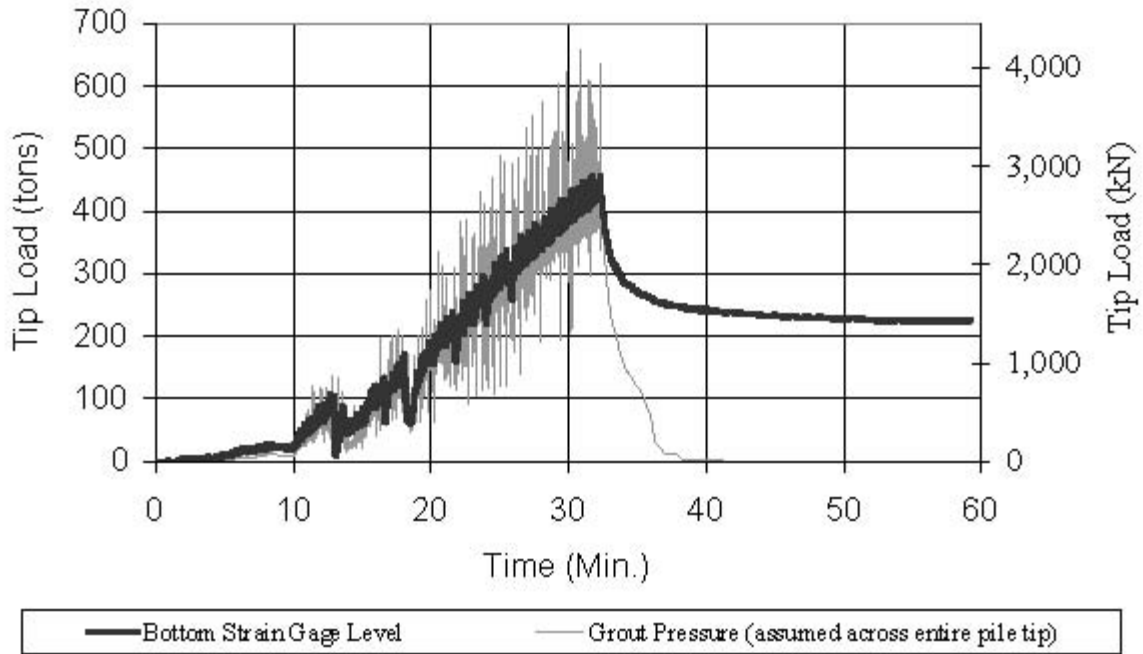


Figure B-31. Site III LT-2 grouting load vs. time.

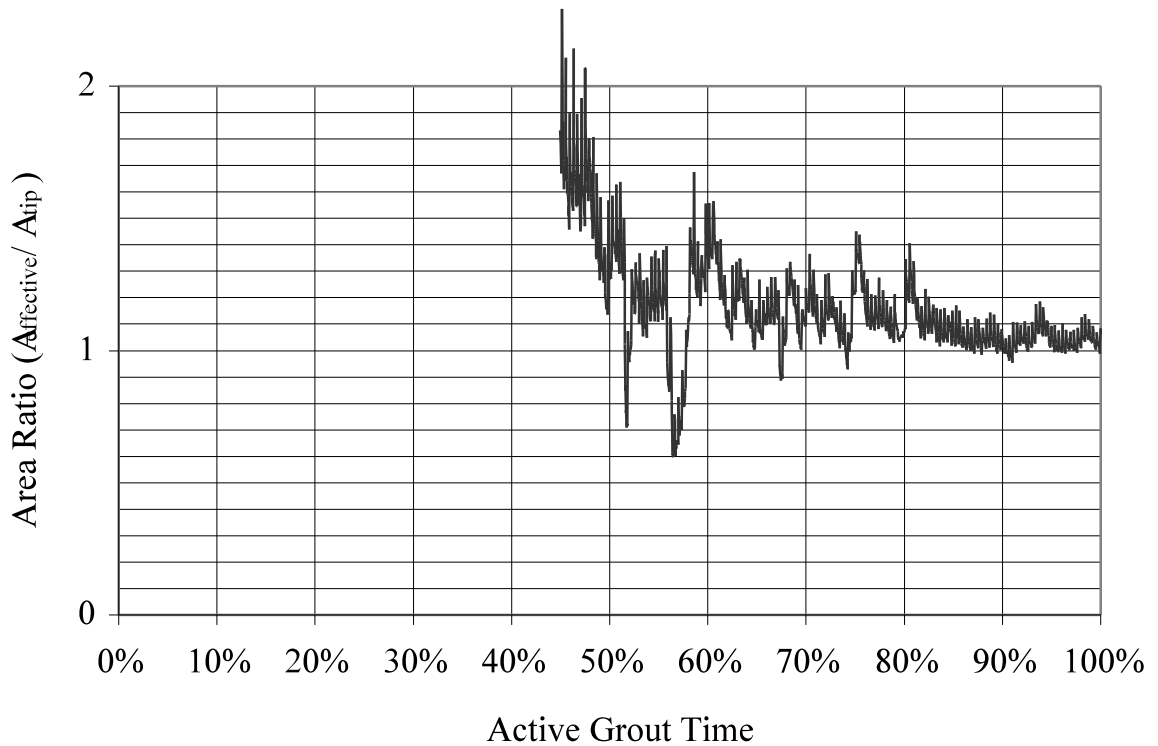


Figure B-32. Site III LT-2 grouting area ratio vs. active grout time.

Appendix C. Full-Scale Load Test Data Reduction

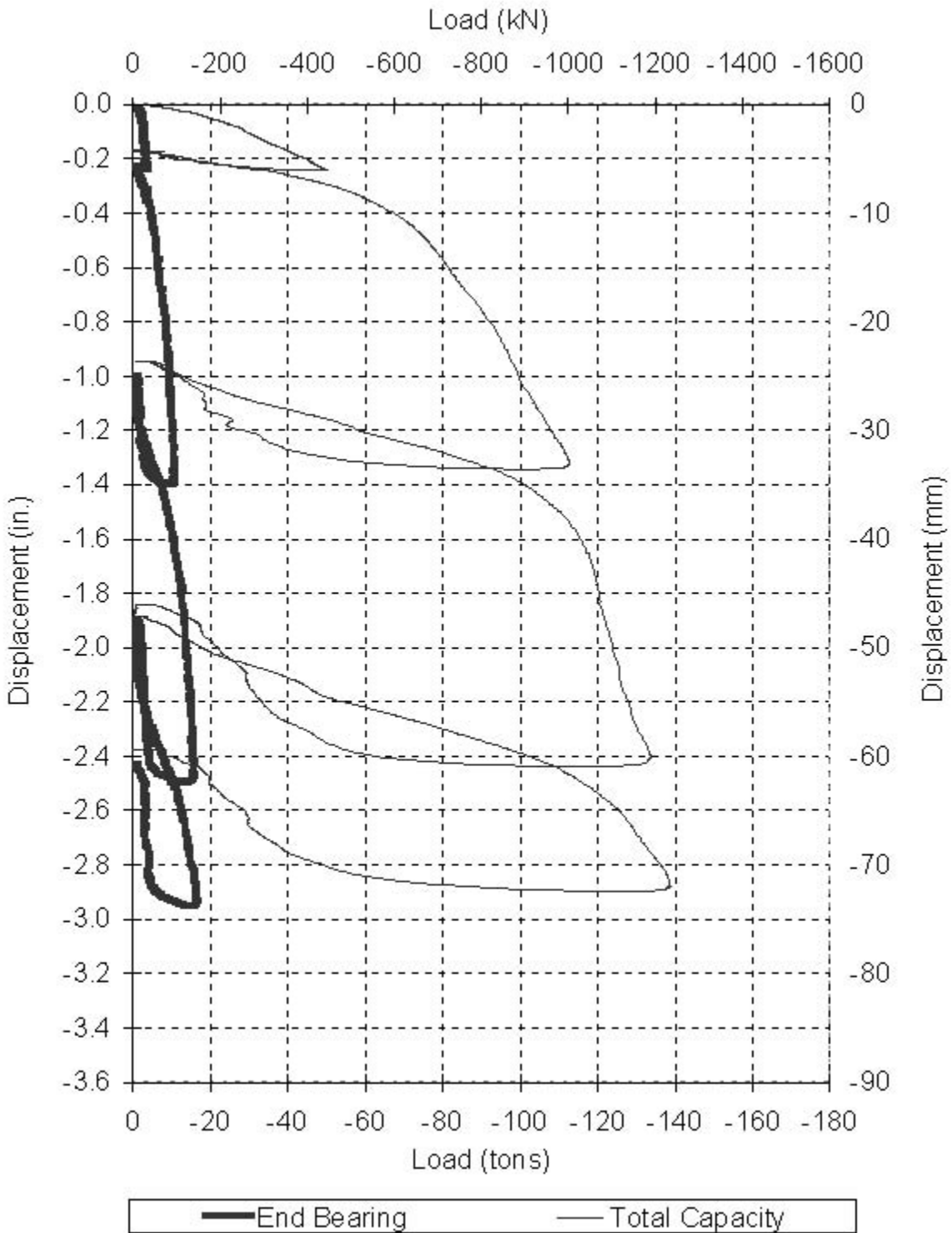


Figure C-1. Site I Control shaft load vs. displacement.

Appendix C. (continued)

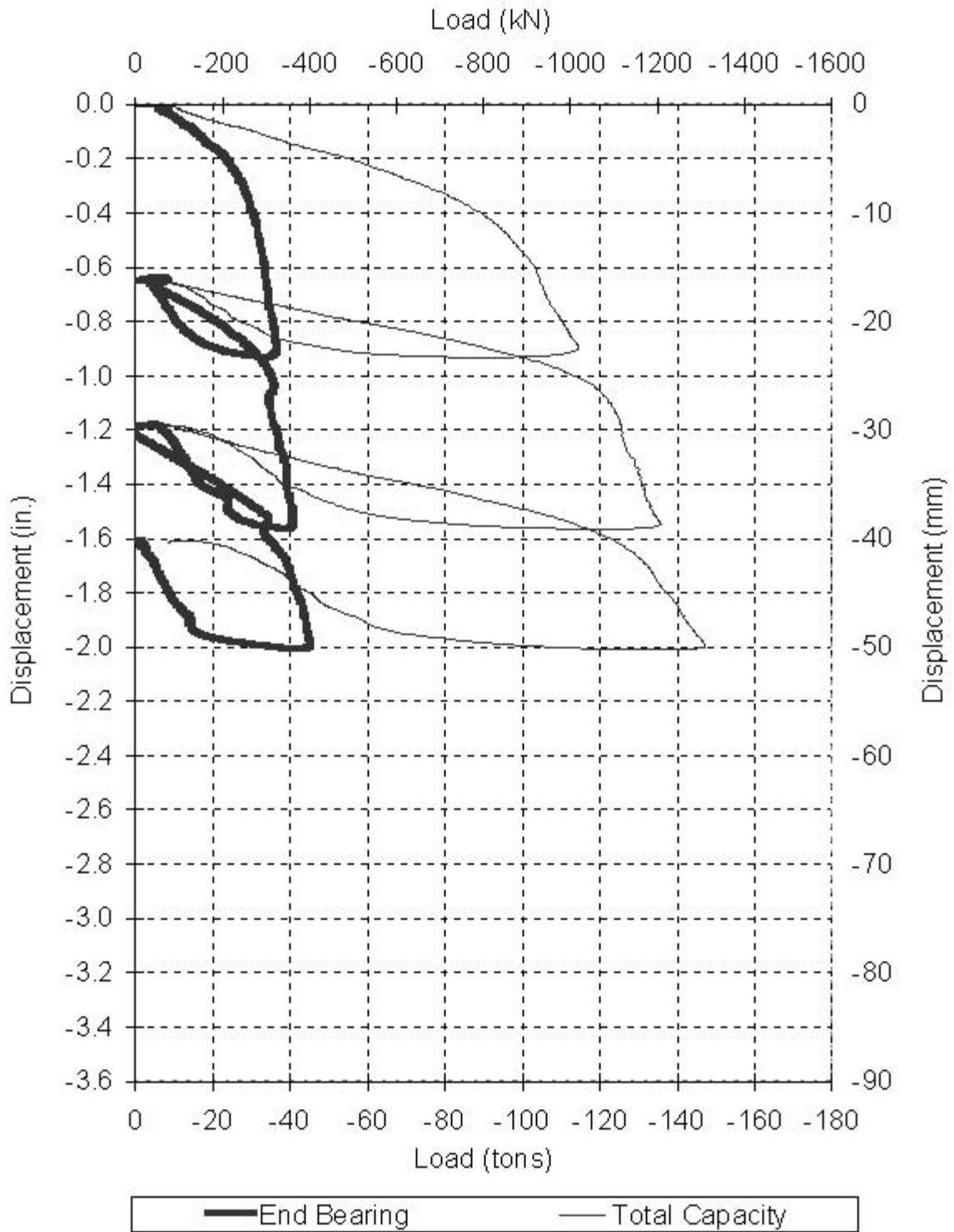


Figure C-2. Site I Flat-Jack 1 load vs. displacement.

Appendix C. (continued)

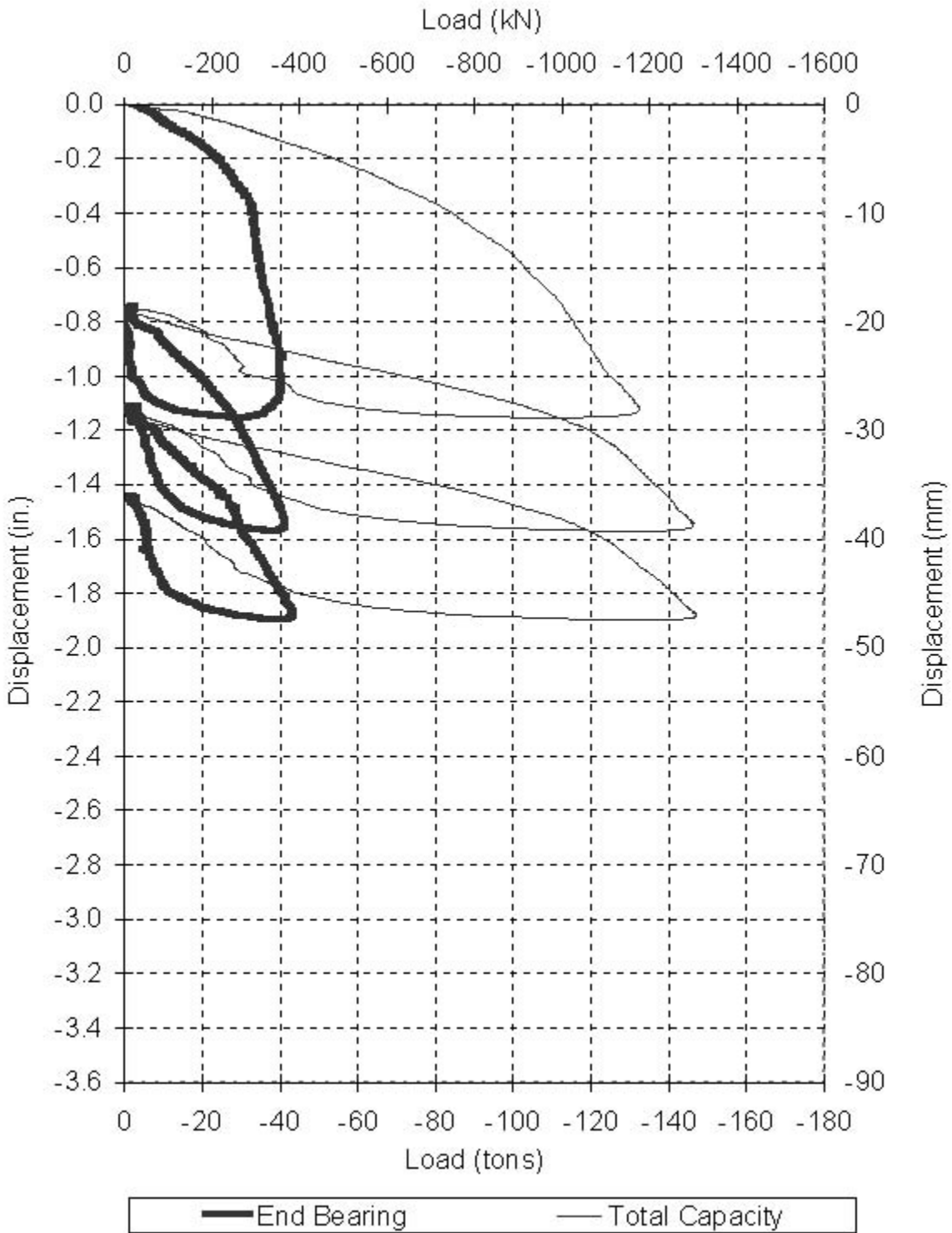


Figure C-3. Site I Flat-Jack 2 load vs. displacement.

Appendix C. (continued)

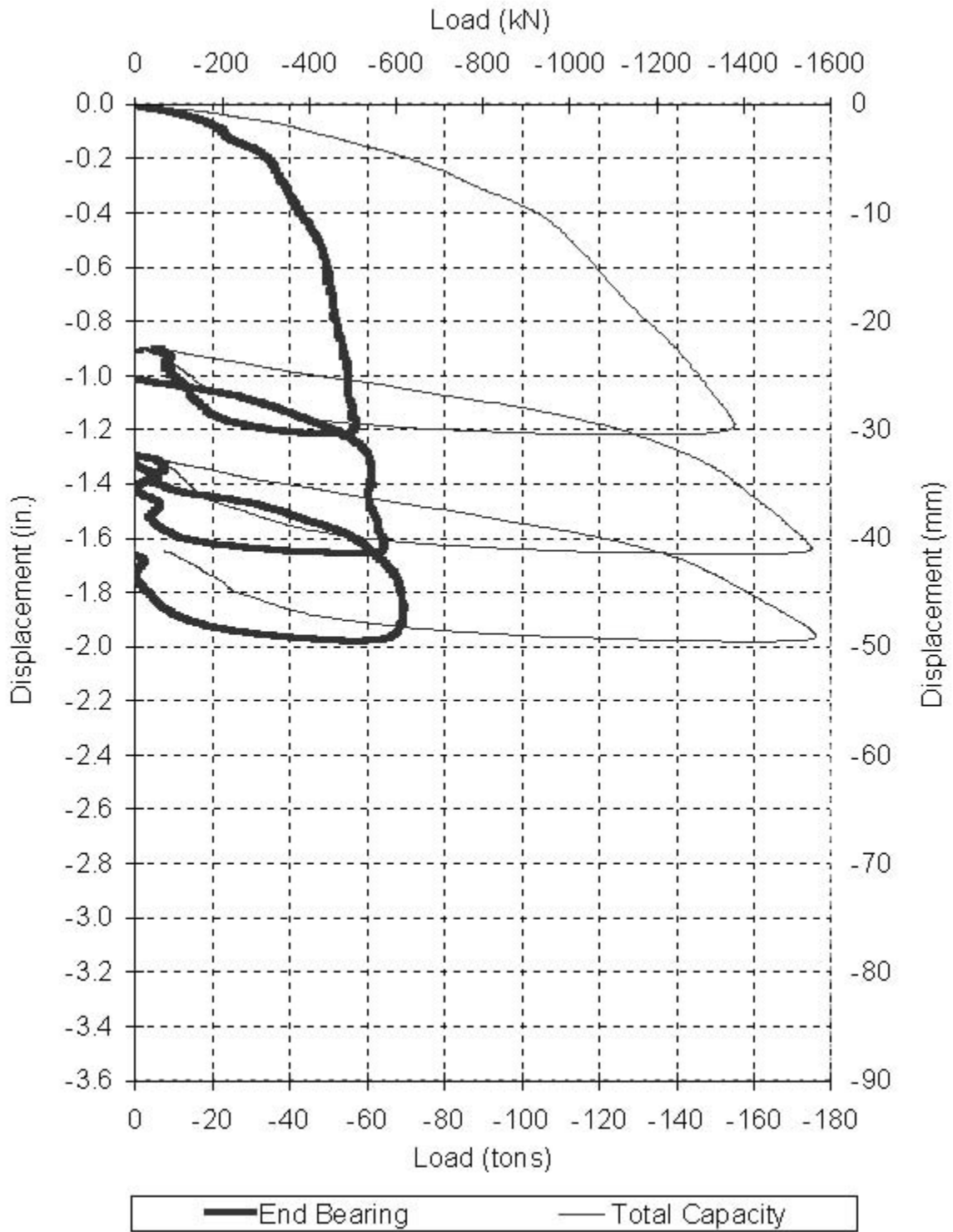


Figure C-4. Site I Sleeve-Port 1 load vs. displacement.

Appendix C. (continued)

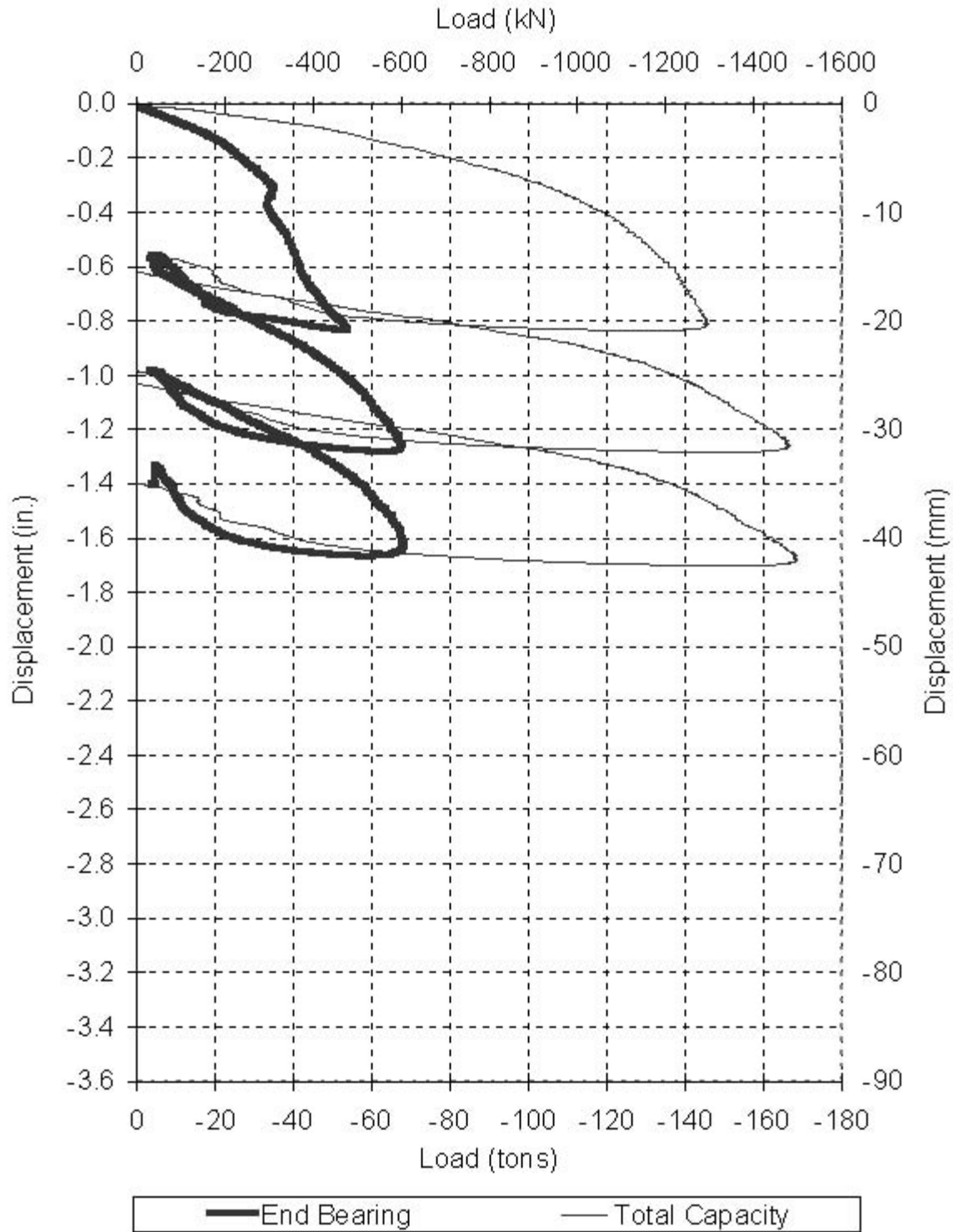


Figure C-5. Site I Sleeve-Port 2 load vs. displacement.

Appendix C. (continued)

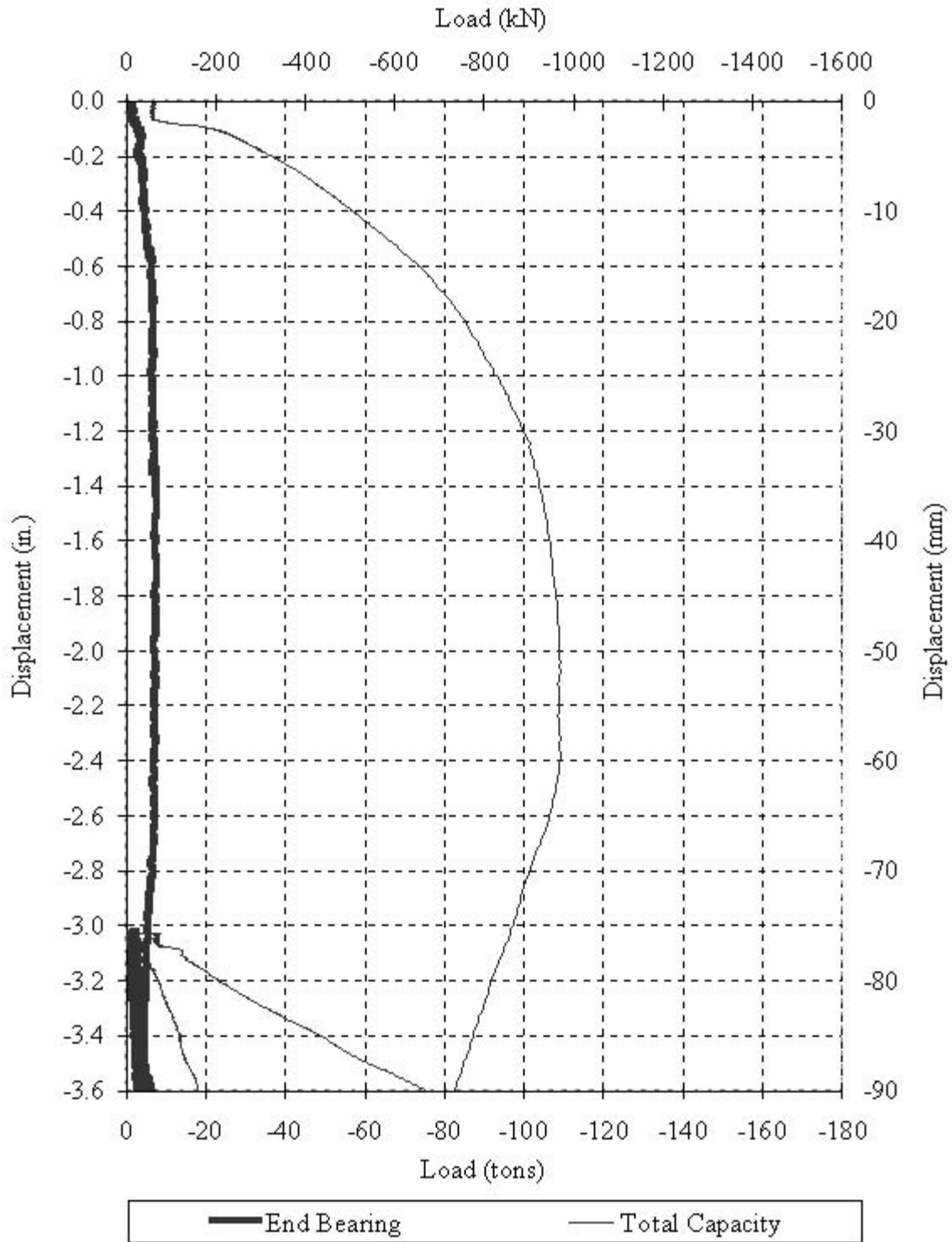


Figure C-6. Site II Control shaft load vs. displacement.

Appendix C. (continued)

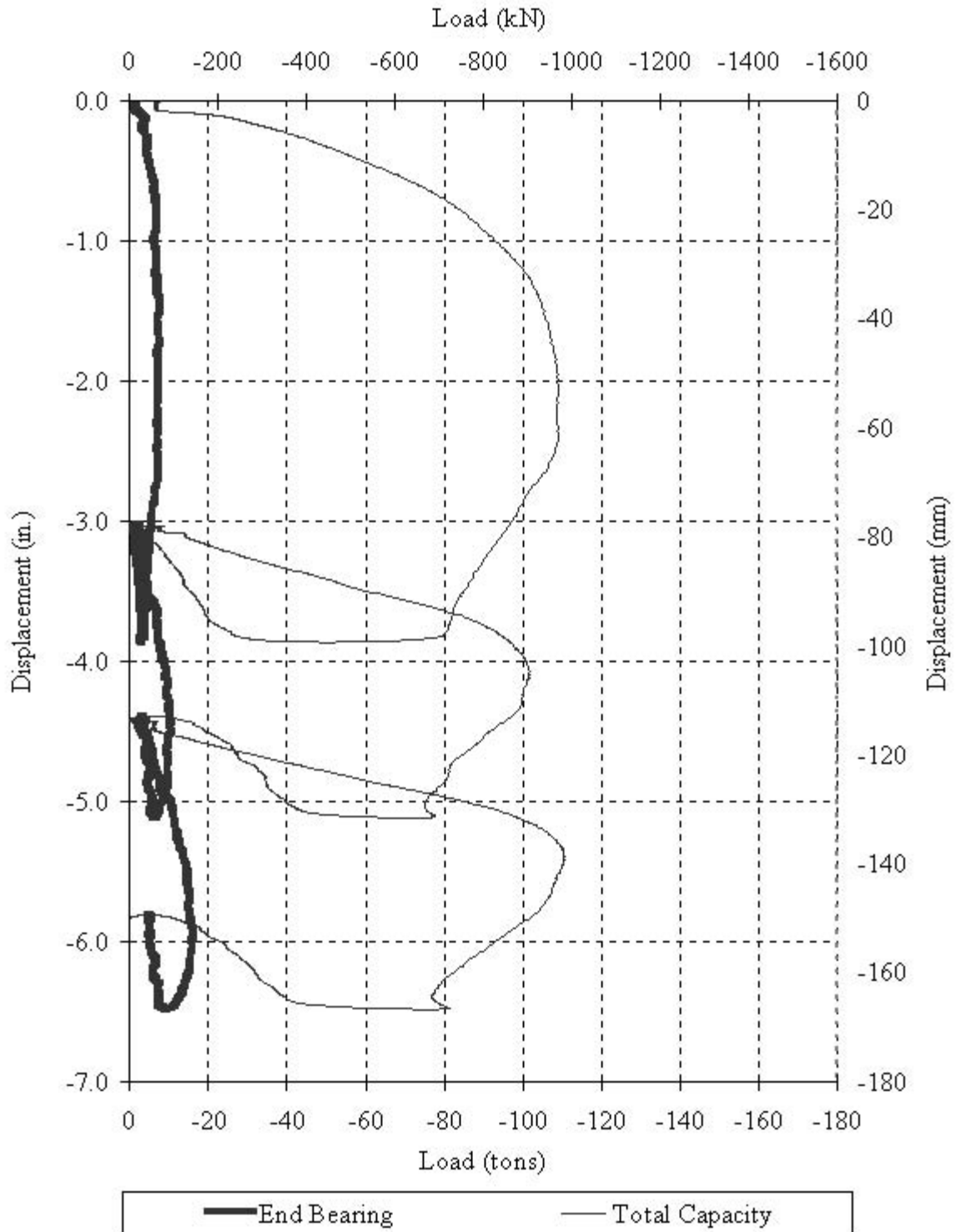


Figure C-7. Site II Control shaft load vs. deflection (large deflection scale).

Appendix C. (continued)

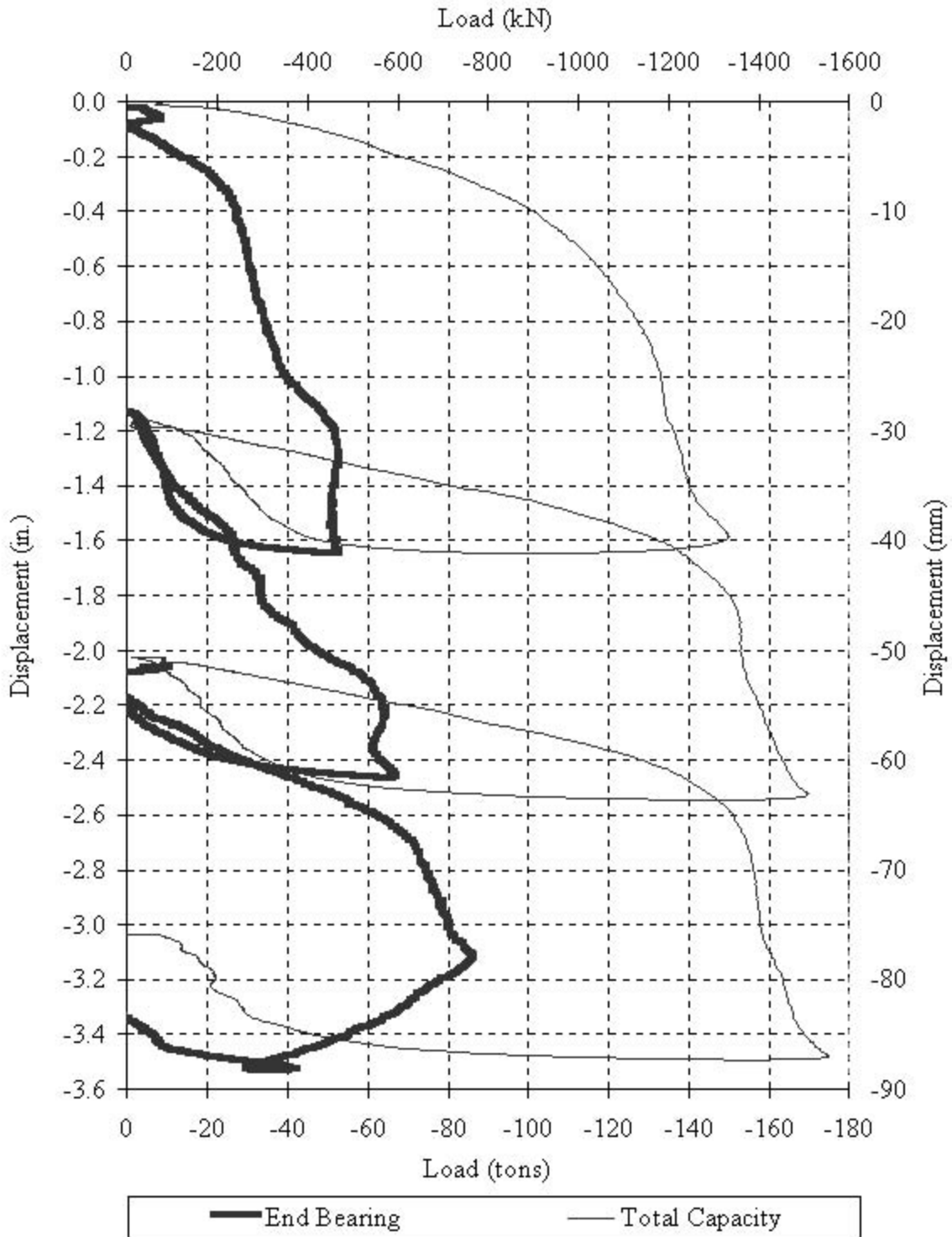


Figure C-8. Site II Flat-Jack load vs. deflection.

Appendix C. (continued)

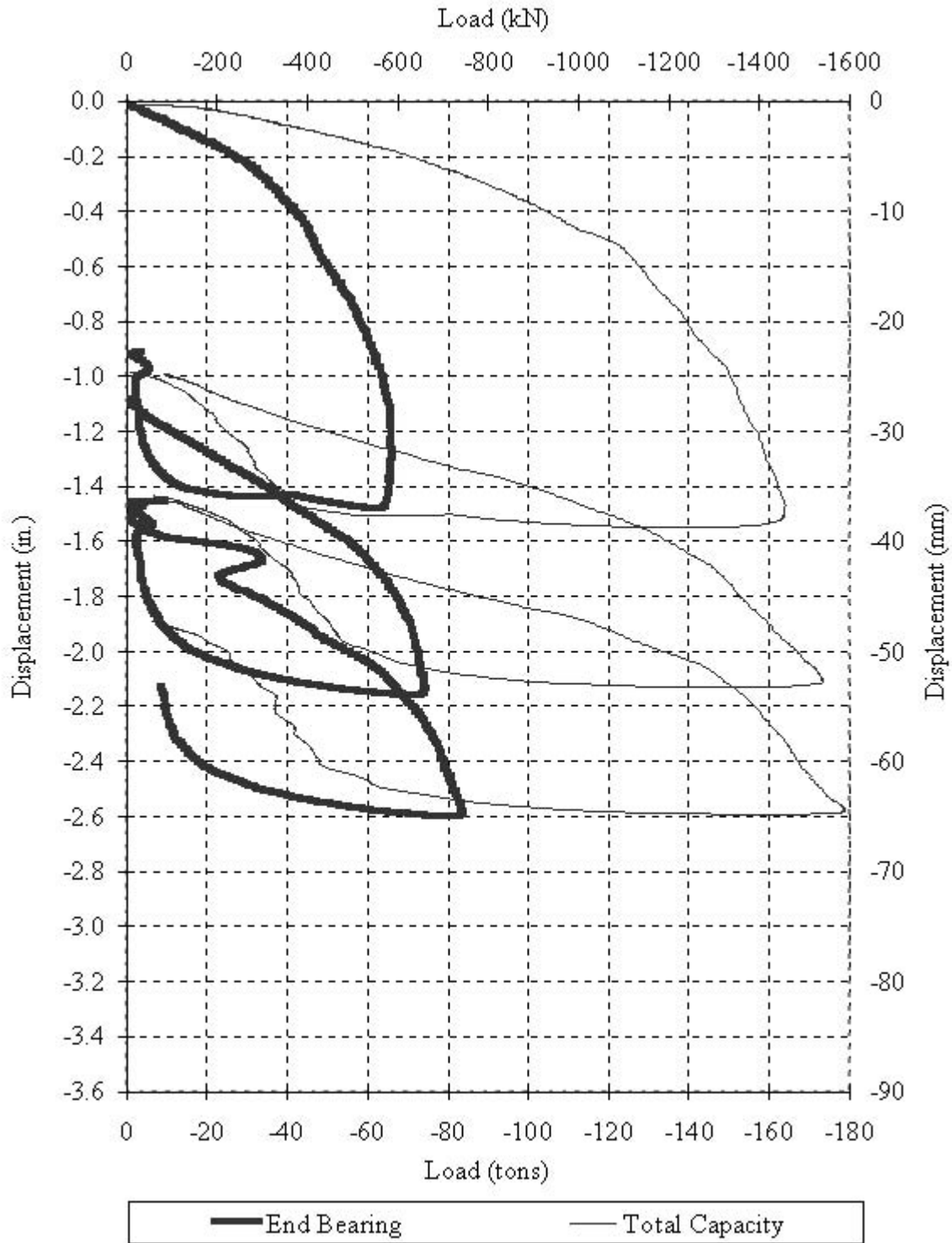


Figure C-9. Site II Sleeve-Port load vs. deflection.

Appendix C. (continued)

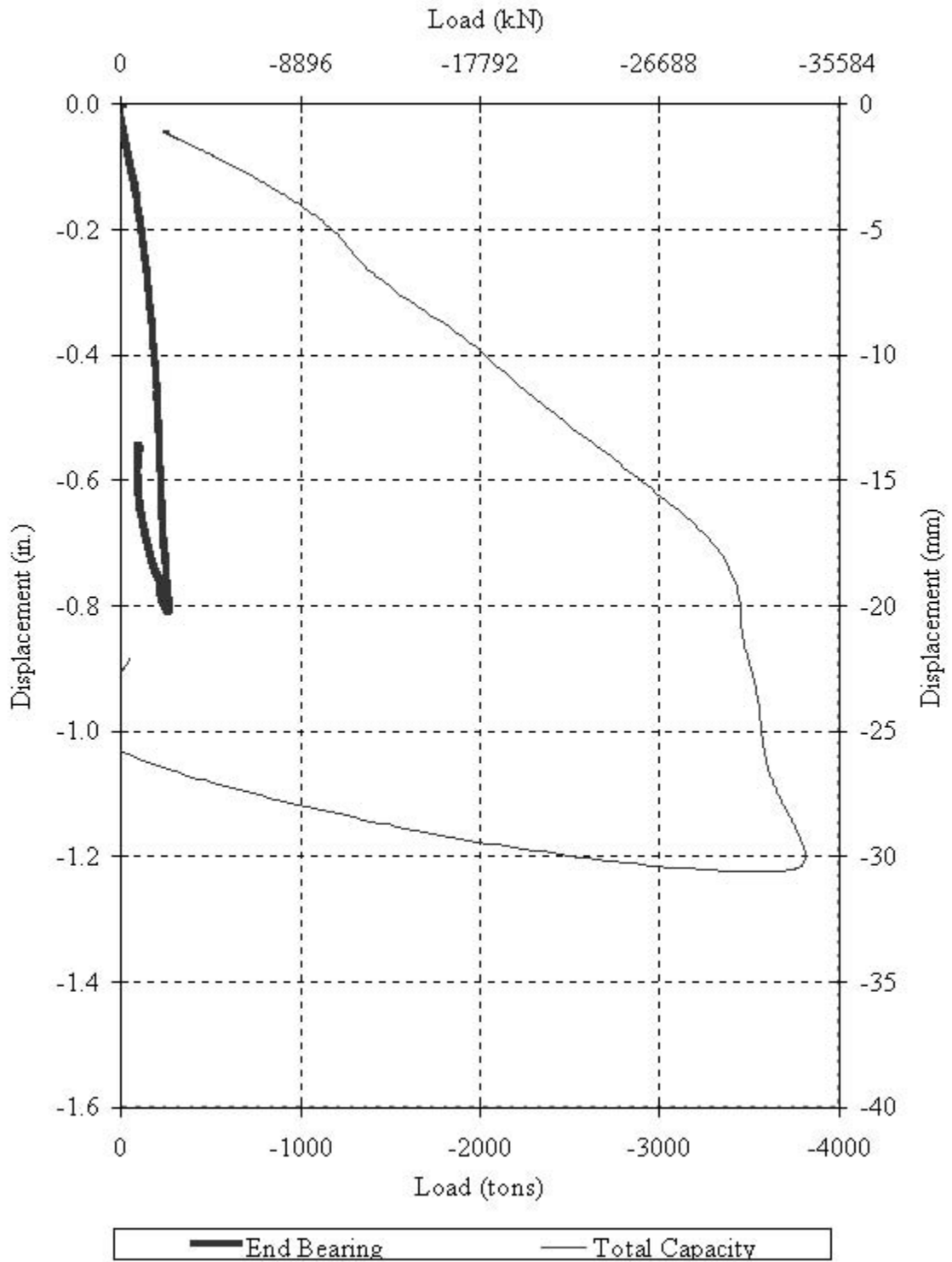


Figure C-10. Site III LT-3 cycle 1 load vs. displacement (control).

Appendix C. (continued)

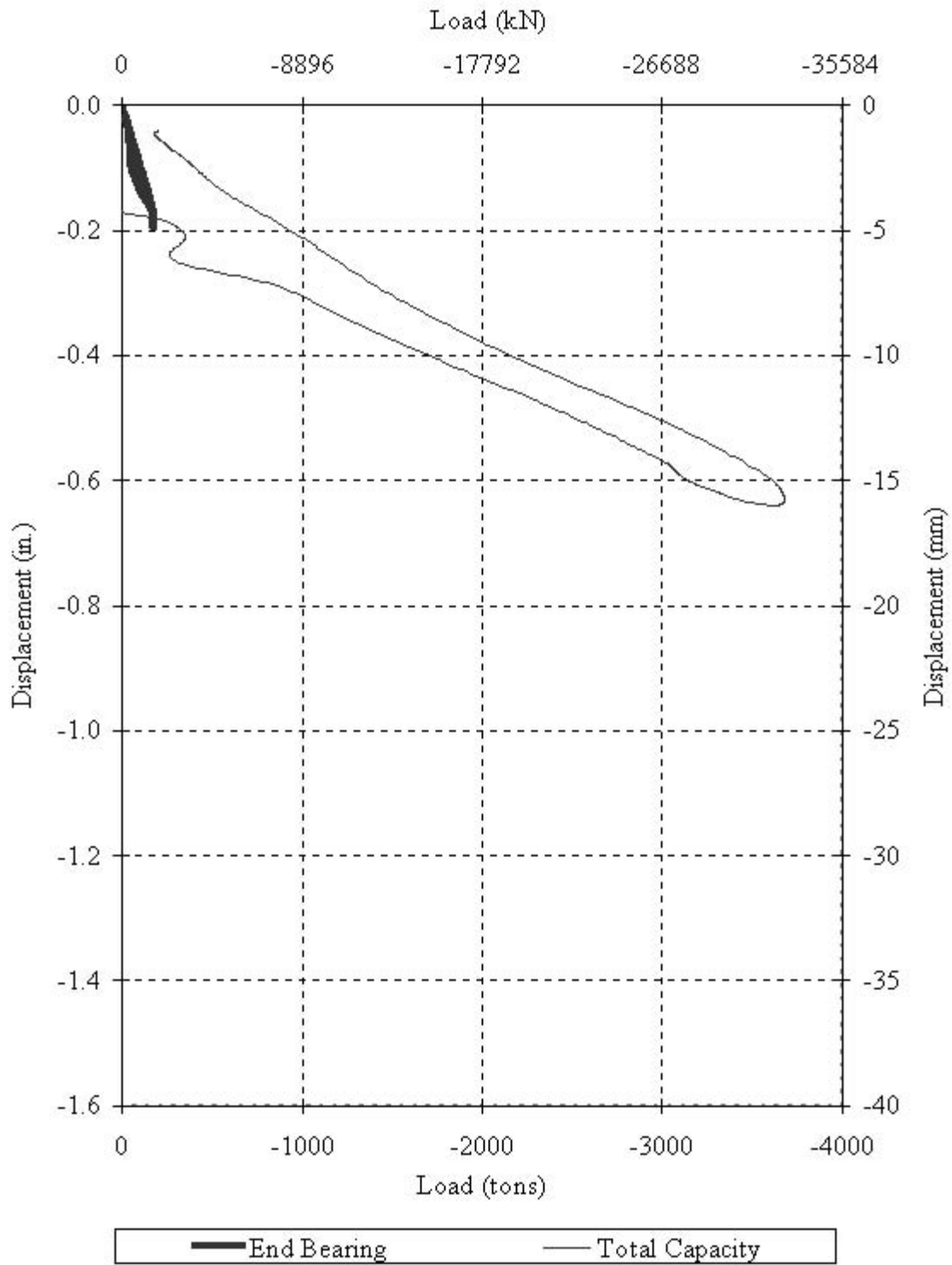


Figure C-11. Site III LT-3 cycle 2 (grouted).

Appendix C. (continued)

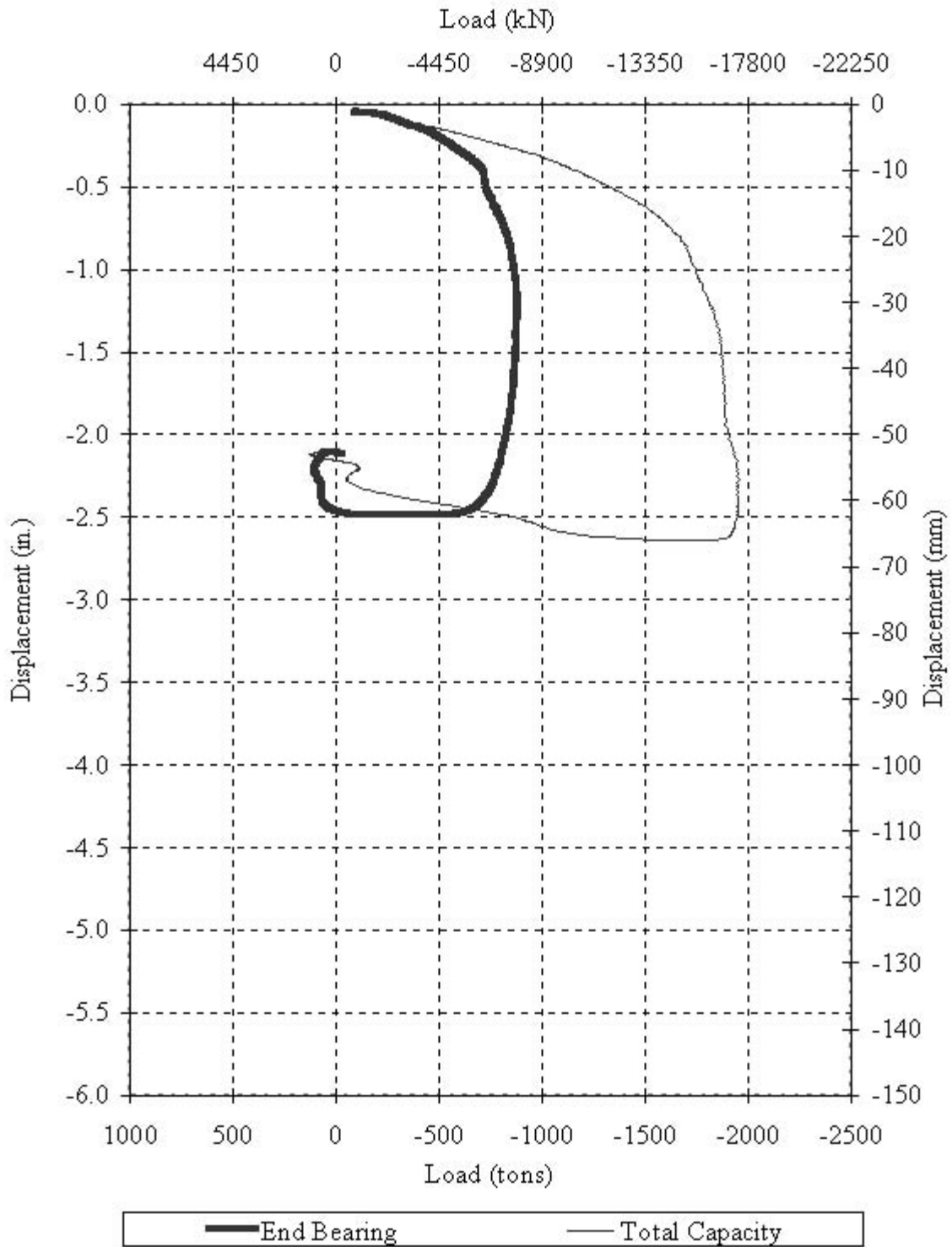


Figure C-12. Site III LT-2 cycle 1 (control).

Appendix C. (continued)

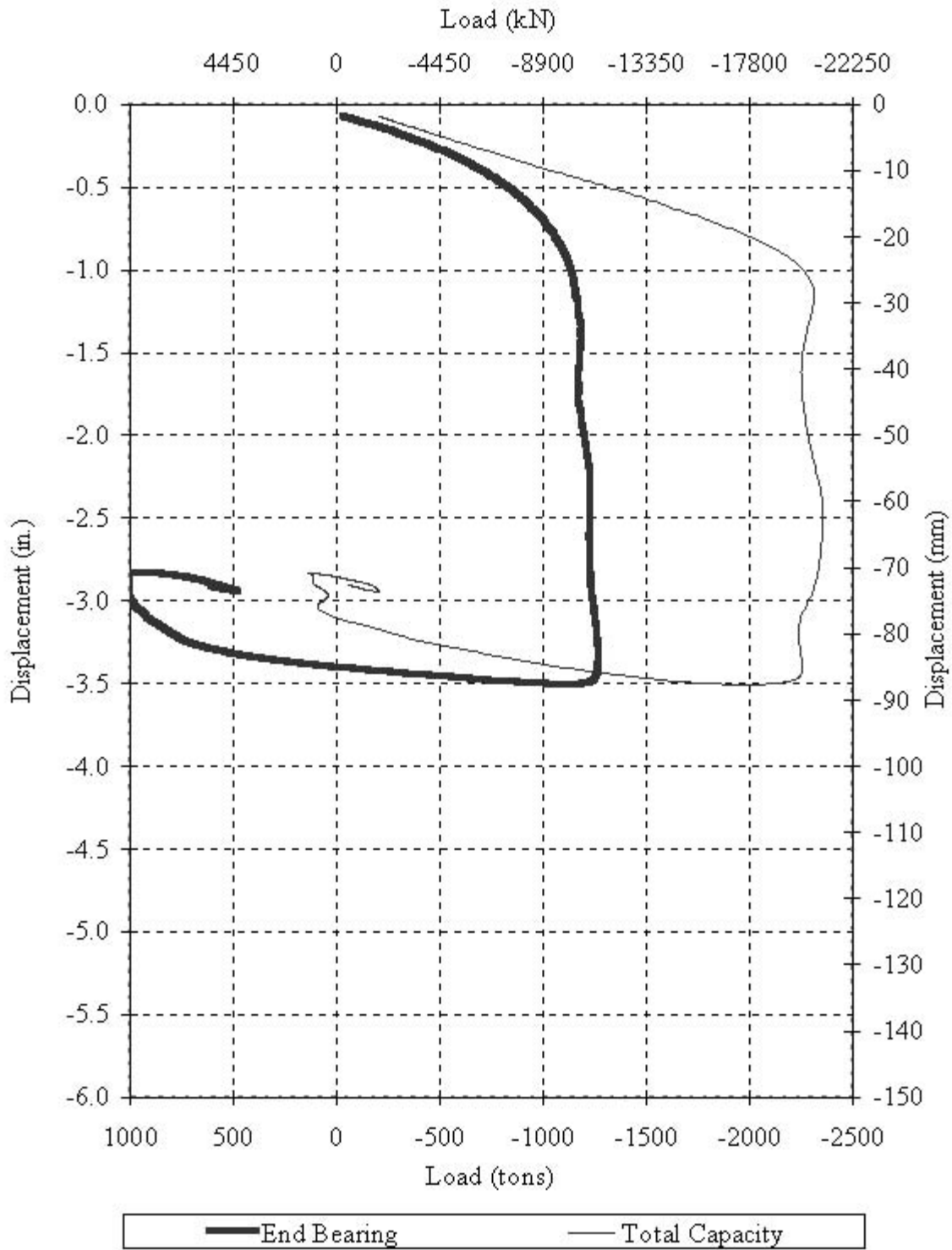


Figure C-13. Site III LT-2 cycle 2 (grouted).