

Appendix A. Soil Exploration and Construction Records

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

CONCRETE MIX DESIGN
MIX ID : 1900067 TREMB (17) 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
MONEY RESOURCES, INC.	CLASS "P", LB	131	0.98
RINKER MATERIALS, INC.	FOOT 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	27.00
HRDA-54, W.R.GRACE	ASTM C-494, OZ	39.36	
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 :

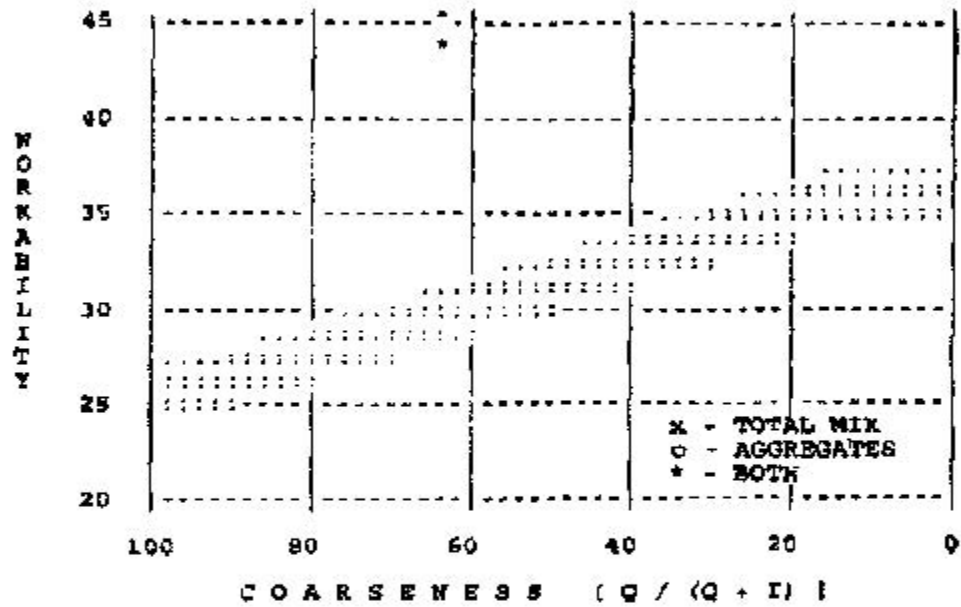
Terry L. Posner
TERRY L. POSNER, TECHNICAL SERVICES MGR.

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

Appendix A. (continued)

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

MIX VOLUME, CU YD 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 CHARACTERISTICS

	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"	30.0			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	-

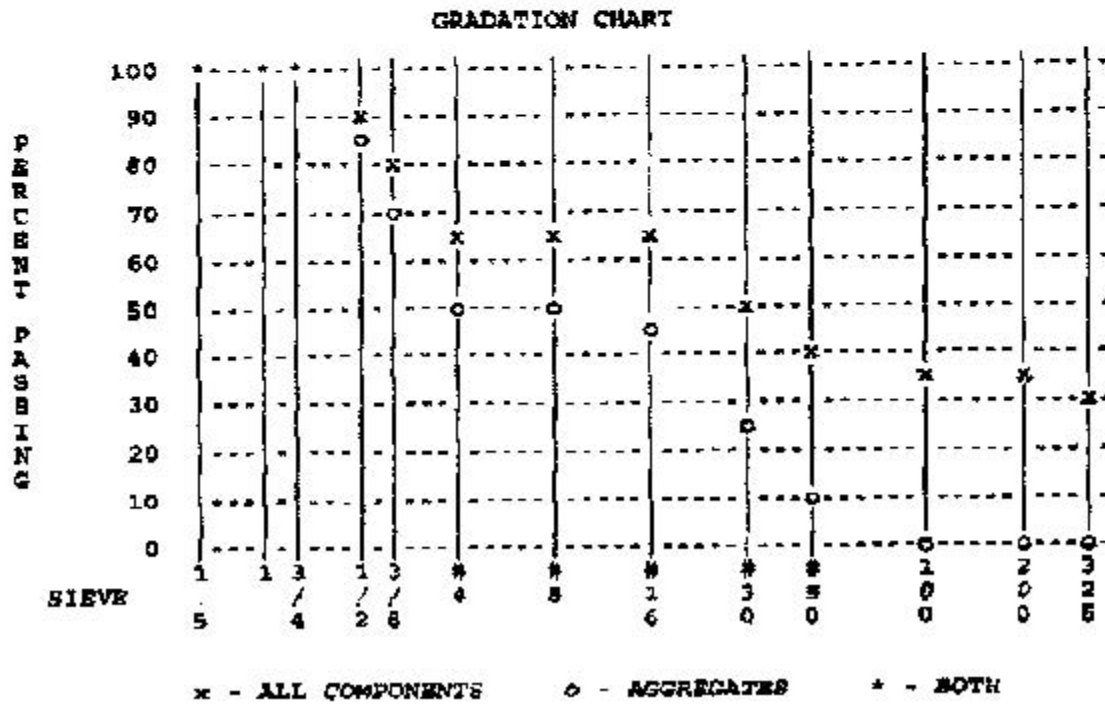


Figure A-3. Site I and II concrete mix design (3 of 4).

Appendix A. (continued)

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

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	-

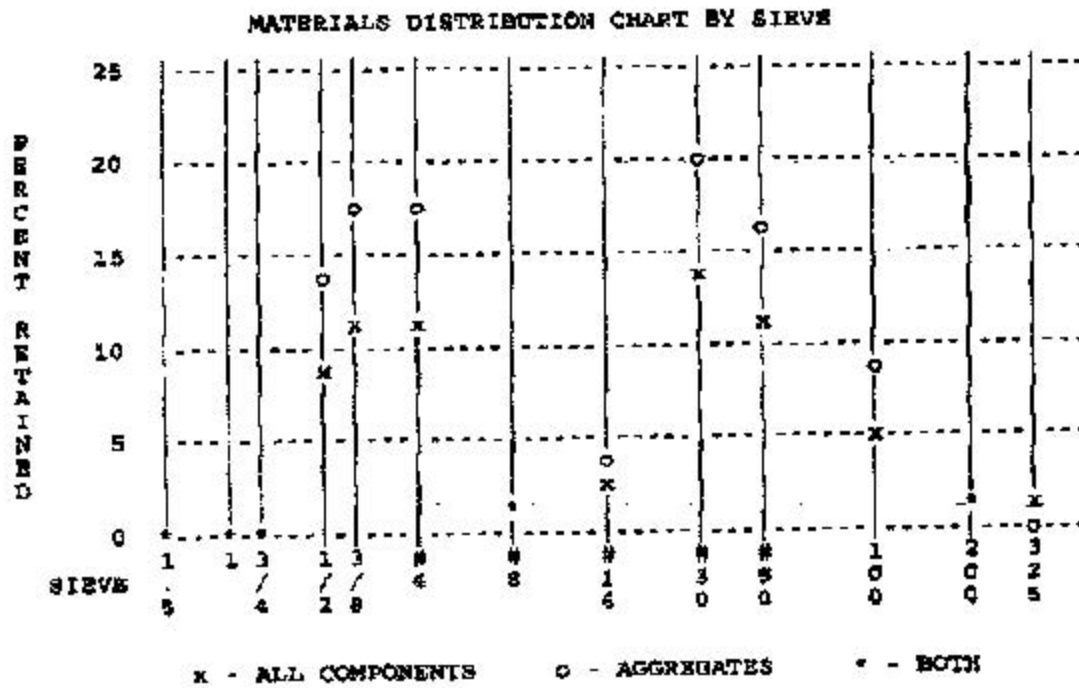


Figure A-4. Site I and II concrete mix design (4 of 4).

Appendix A. (continued)

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
FIELD BORING LOG

FORMATS-08-01
MATERIALS - 10-94
Page 1 of Page 2

Project No. 05F FF # 05F Boring No. B-1 Elevation Type Equipment ONE 75
 Bridge No. N/A Station No. N/A Office N/A County Pinellas DATE 28867
 ELEVATION BASED ON BENCH MARK
 Description SPT for post-grout research
 United By Kentham/Sheep Logged By PM Changlin Water Table Elevation Type Hammer AUTO
 Water Test Started: 5:00 P.M. Date/Time Completed: 10/15 Boring Water Table Depth
 Water Table Monitor Station N/A Office N/A Monitor GSE N/A Water Table Depth

(Metric/English) SAMPLE		SPT BLOWS	MATERIAL DESCRIPTION	SAMPLE			REMARKS
FROM	TO			NO.	IN	%	
0.0		8	Ben Sand, med.				
		10	dense, damp				
	1.5			1	13 1/4	75	
	3.0			2			
						NO sample taken due to repeated caving in of Rubble layer	
	3.0	5	Dark brown Sand T/Silt			STRENGTH CHANGE @ 3.0'	
		4	rocky, loose				
	4.5	3	wet (fill)	3	18	100	
	4.5	3	Med brown fine sand			STRENGTH CHANGE @ 4.5'	
		5	T/roots med. dense				
	6.0	8	wet	4	13 1/2	75	
	6.0	3	Gray sand, shell			STRENGTH CHANGE @ 6.0'	
		1	very loose, wet				
	7.5	1		5	9	50	
	7.5	2	SAME (loose)				
		2					
	7.0	3		6	6	33	
	9.0	3	SAME				
		3					
	10.5	3		7	6	33	
	10.5	3	Shell w/ sand			STRENGTH CHANGE @ 10.5'	
		2	loose, wet				
	12.0	3		8	4 1/2	25	
	12.0	4	SAME				
		4				(50% Fluid loss 12.5 to 13.5')	
	13.5	6		9	13 1/4	75	
	13.5	2	SAME			Gray fine sand in Tip of spoon	
		2					
	15.0	8		10	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)

[illegible]

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 475-22-12
MATERIALS - 1070
Page 1 of Page 2

Project # <u>USF</u>		Type <u>Post Grant</u>		Boring # <u>B-2</u>		Elevation <u></u>		Type Equipment <u>CM 875</u>	
Bridge # <u>N/A</u>		Section # <u>N/A</u>		Other <u>N/A</u>		County <u>Pinellas</u>		DOTA <u>23867</u>	
ELEVATION BASED ON BENCH MARK									
Description <u>SPRINT post grant research</u>									
Drilled By <u>Johnnie Johnson</u>				Logged By <u>Johnnie Johnson</u>				Water Table Elev. <u></u>	
Date/Time Started <u>5/14/00 1:30</u>				Date/Time Completed <u>5/14/00 2:00</u>				Type Recorder <u>AUTO</u>	
Water Table Location: Section <u>N/A</u>				Other <u>N/A</u>				Monitor GSS <u>N/A</u>	
								Water Table Depth <u></u>	

(Feet)(English) SAMPLE		SPT BLOWS	MATERIAL DESCRIPTION	SAMPLE			REMARKS
FROM	TO			NO.	IN.	%	
0.0		3	dk. brn Sand T/Silt				
		5	sm. rock, med dense				
	1.5	12	dry (H11)	1	13 1/2	75	
1.5		10	SPRINT				
		8					
	3.0	8		2	18	100	
3.0		2	very dk. gray				STRATA CHANGE @ 3.0'
		4	Sand, loose, wet				
	4.5	5		3	15 1/2	75	
4.5		1	med brn fine sand				STRATA CHANGE @ 4.5'
		3	w/ roots, med				
	6.0	7	clay, wet	1	15 1/2	75	
6.0		5	SAME (as 6.0)				
		4	Loose				
	7.5	2		5	13 1/2	75	
7.5		1	gray sand, shell				STRATA CHANGE @ 7.5'
		2	loose, wet				
	9.0	2		1	6	33	
9.0		3	SAME				
		3					
	10.5	3		1	6	33	
10.5		3	SAME				
		2					
	12.0	2		1	6	33	
12.0		3	shd w/ sand				STRATA CHANGE @ 12.0'
		2	loose, wet				
	13.5	3		1	9	50	
13.5		3	gray sand & shell				STRATA CHANGE @ 13.5'
		3	loose, wet				
	15.0	4		1	6	33	

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

Appendix A. (continued)

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

Appendix A. (continued)

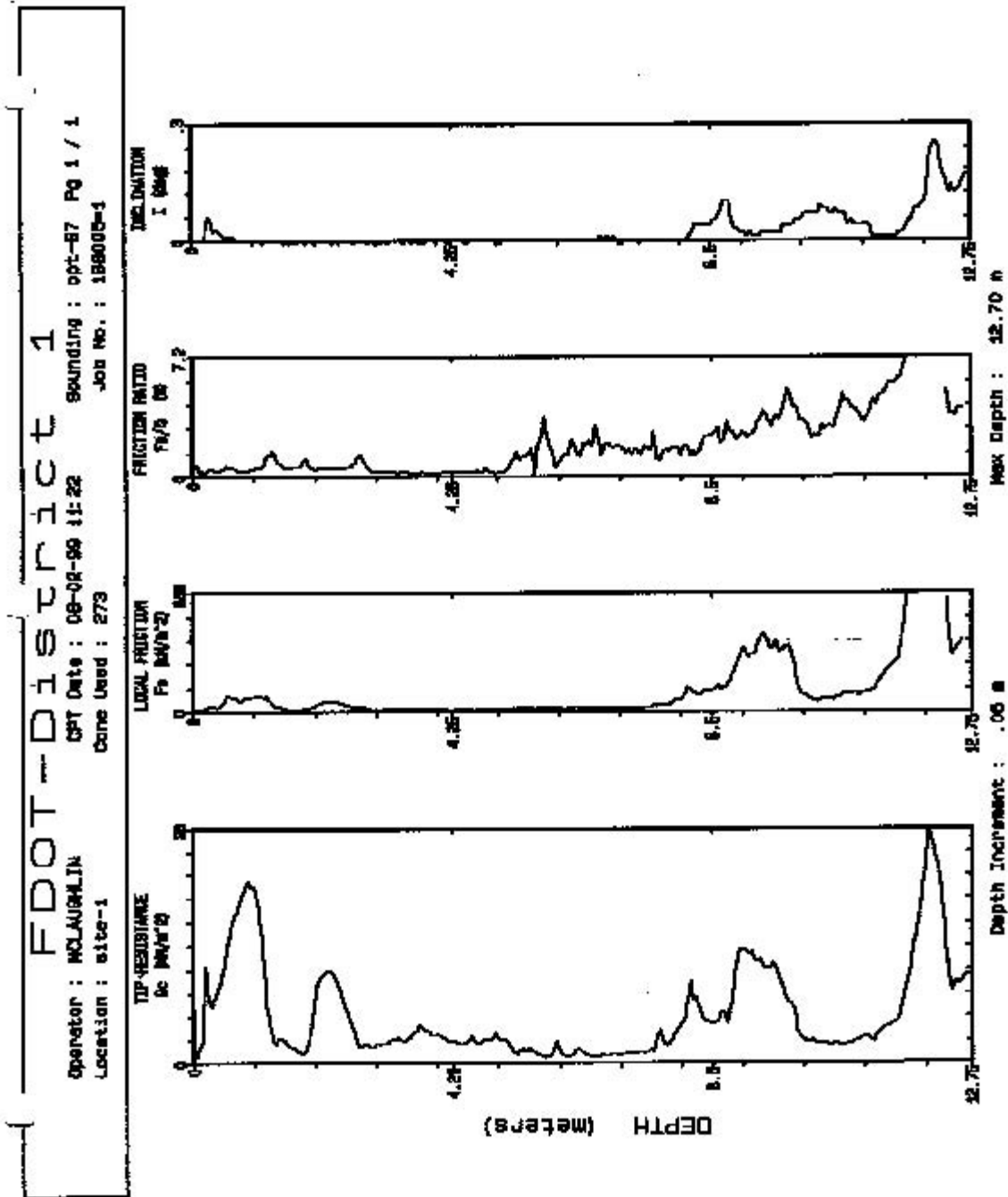


Figure A-9. Site I CPT sounding CPT-67.

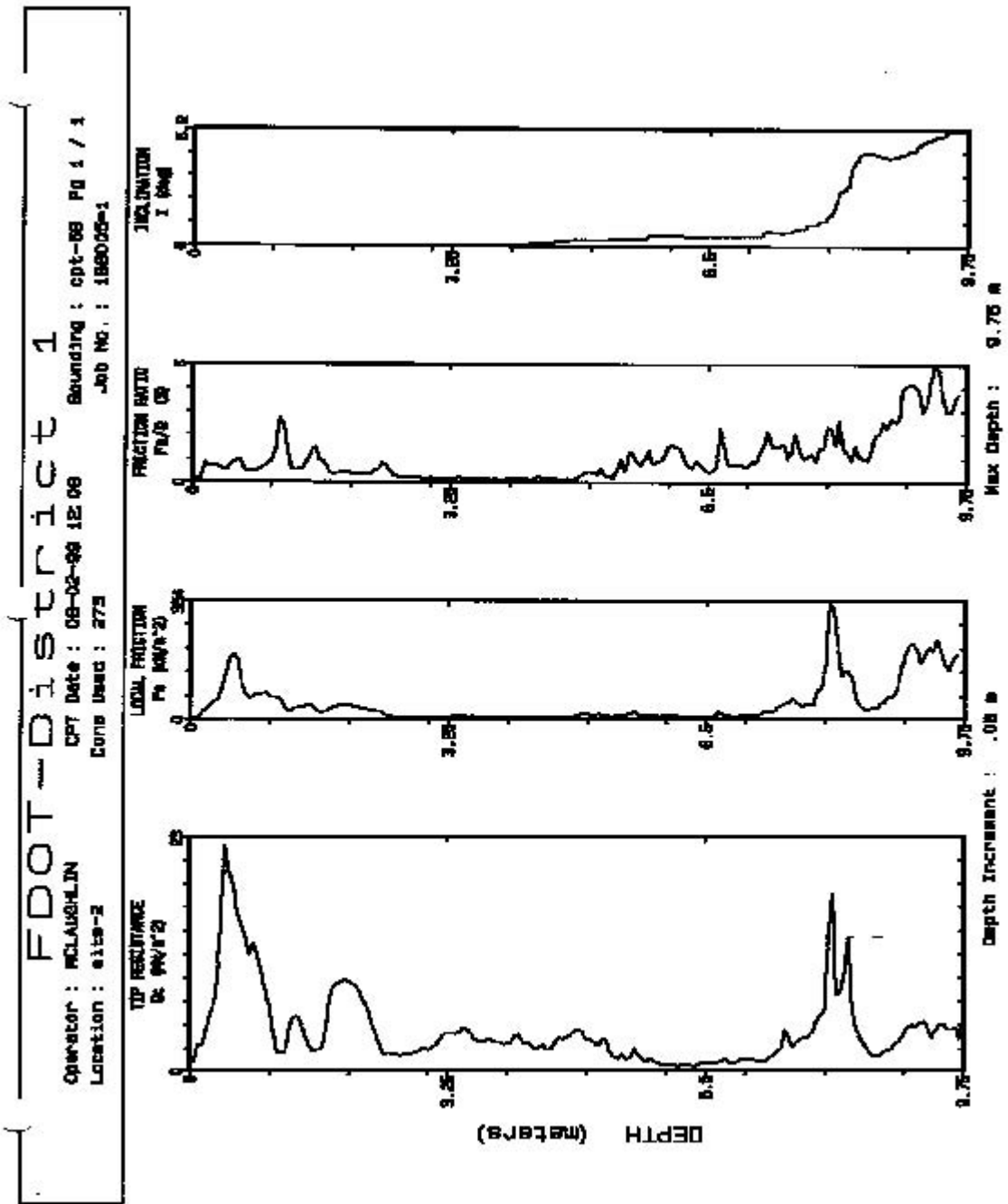


Figure A-10. Site I CPT sounding CPT-68.

Appendix A. (continued)

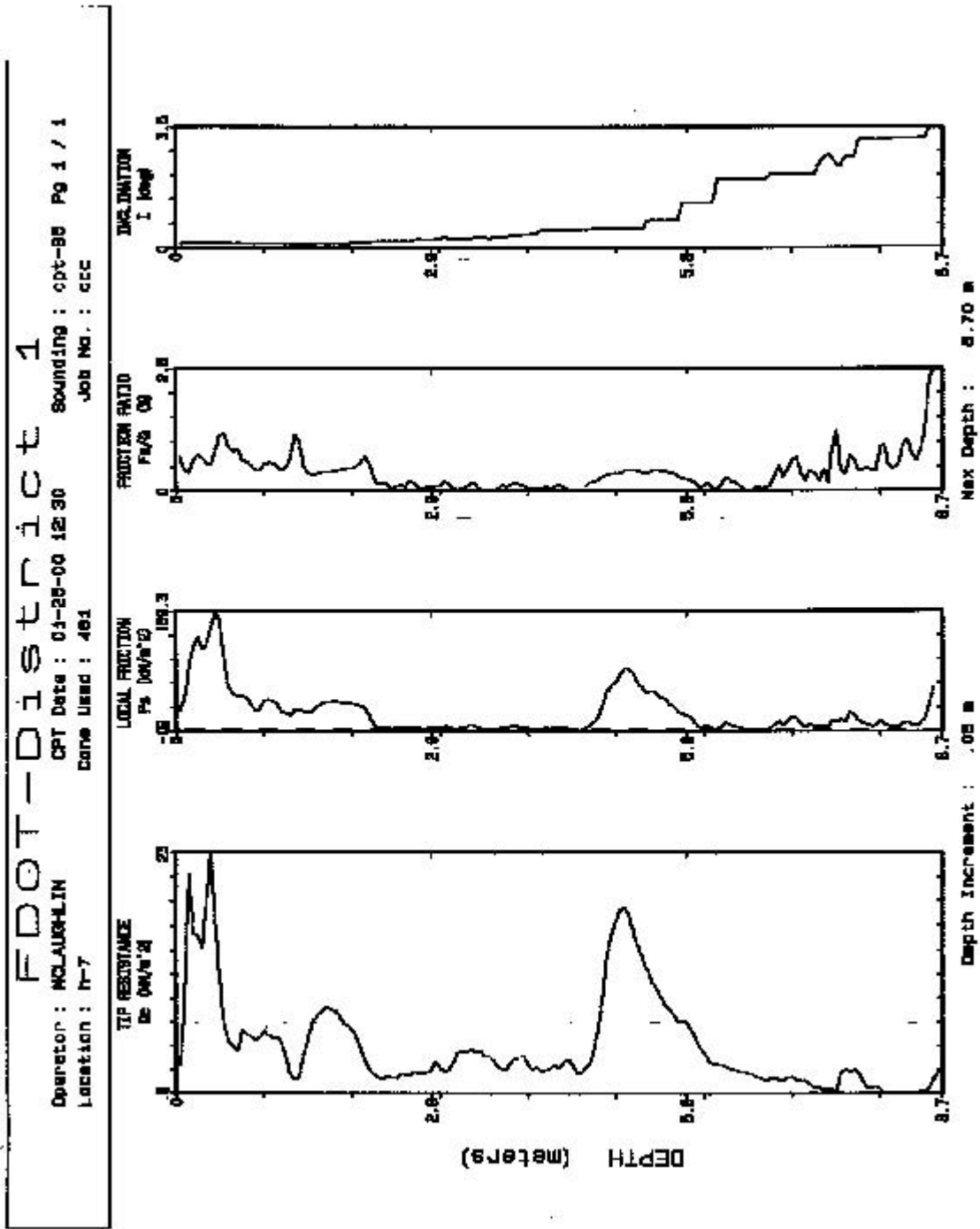


Figure A-11. Site I CPT sounding Control Shaft location.

Appendix A. (continued)

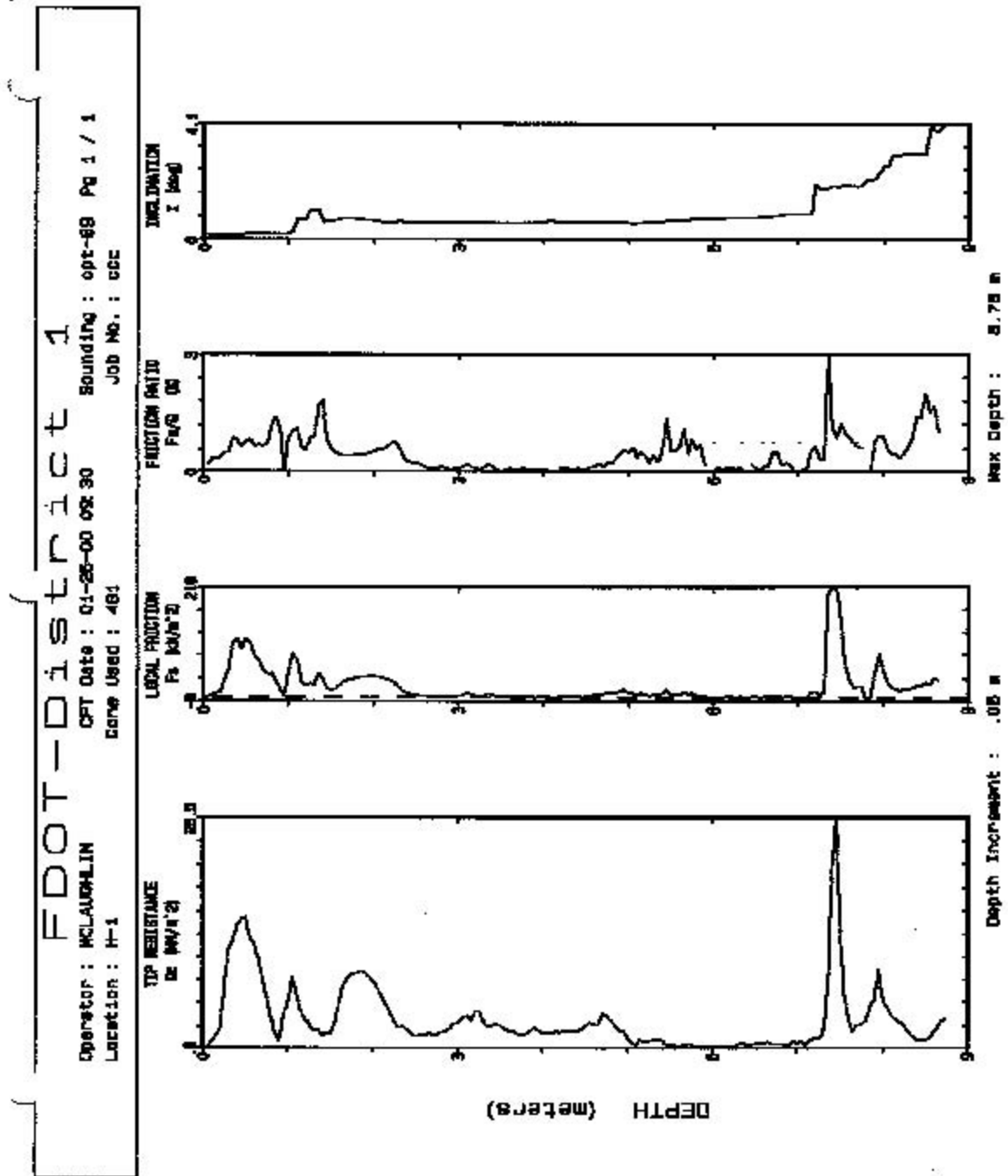


Figure A-12. Site I CPT sounding Flat-Jack 1 location.

Appendix A. (continued)

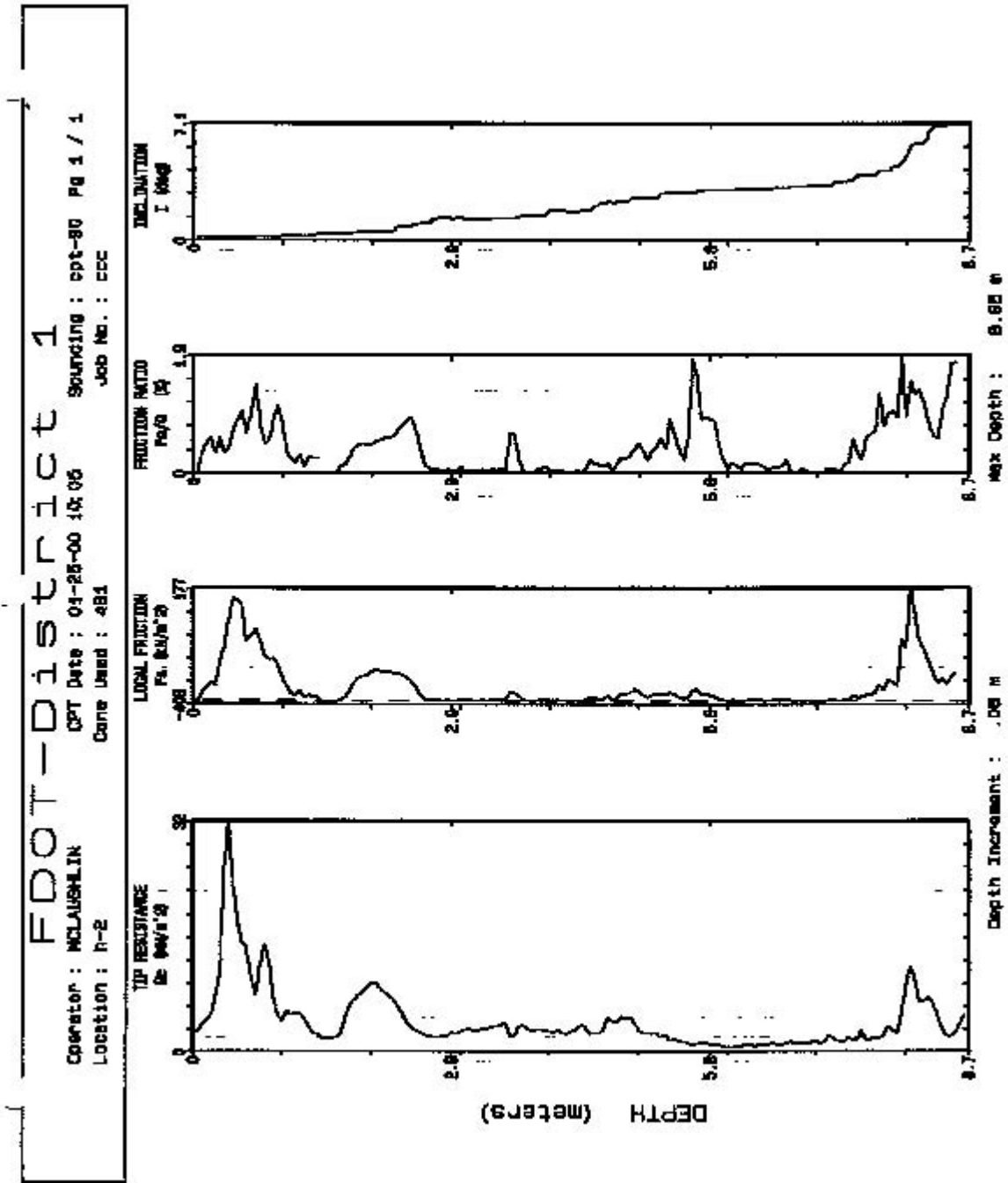


Figure A-13. Site I CPT sounding Flat-Jack 2 location.

Appendix A. (continued)

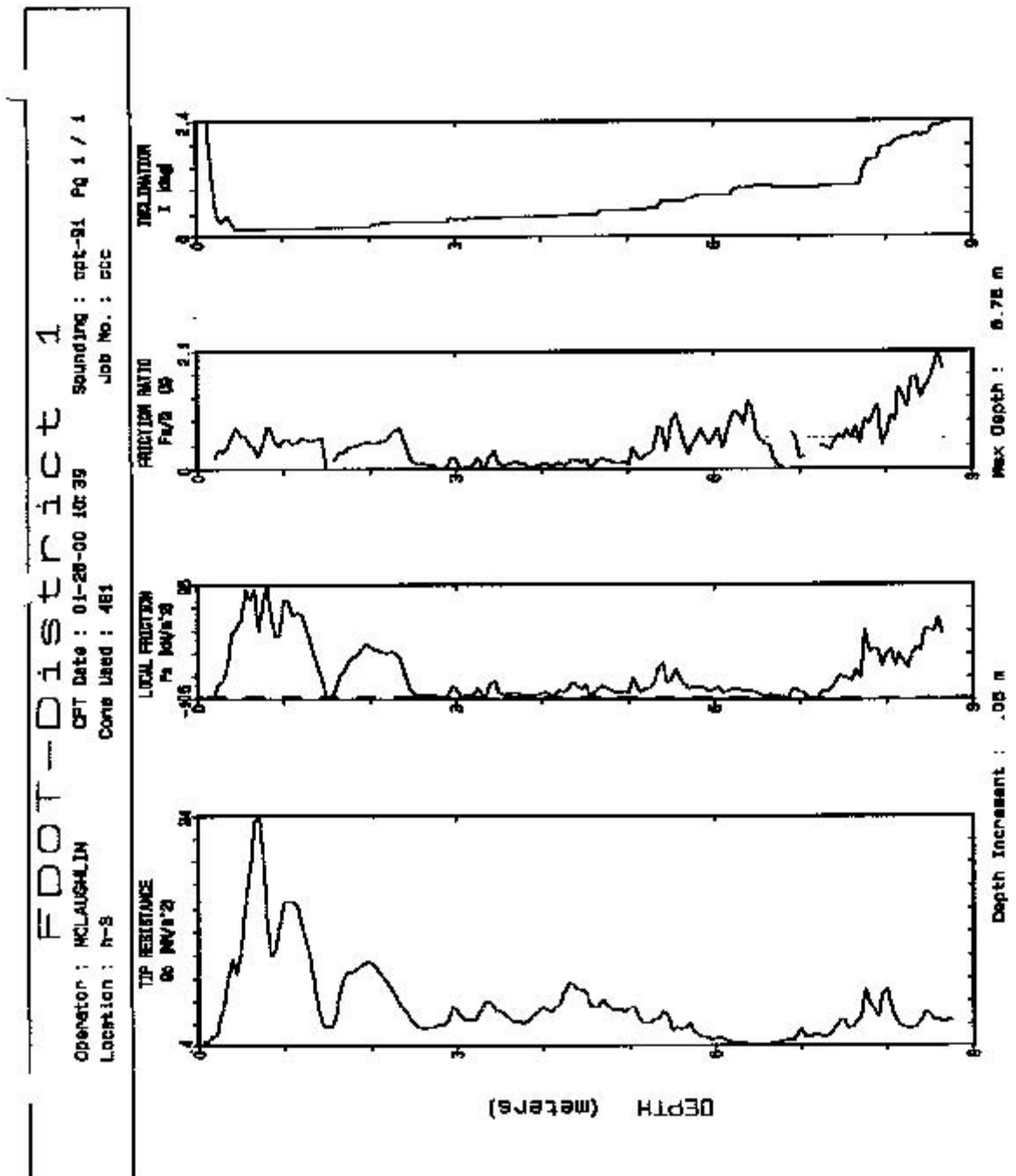


Figure A-14. Site I CPT sounding Sleeve-Port 1 location.

Appendix A. (continued)

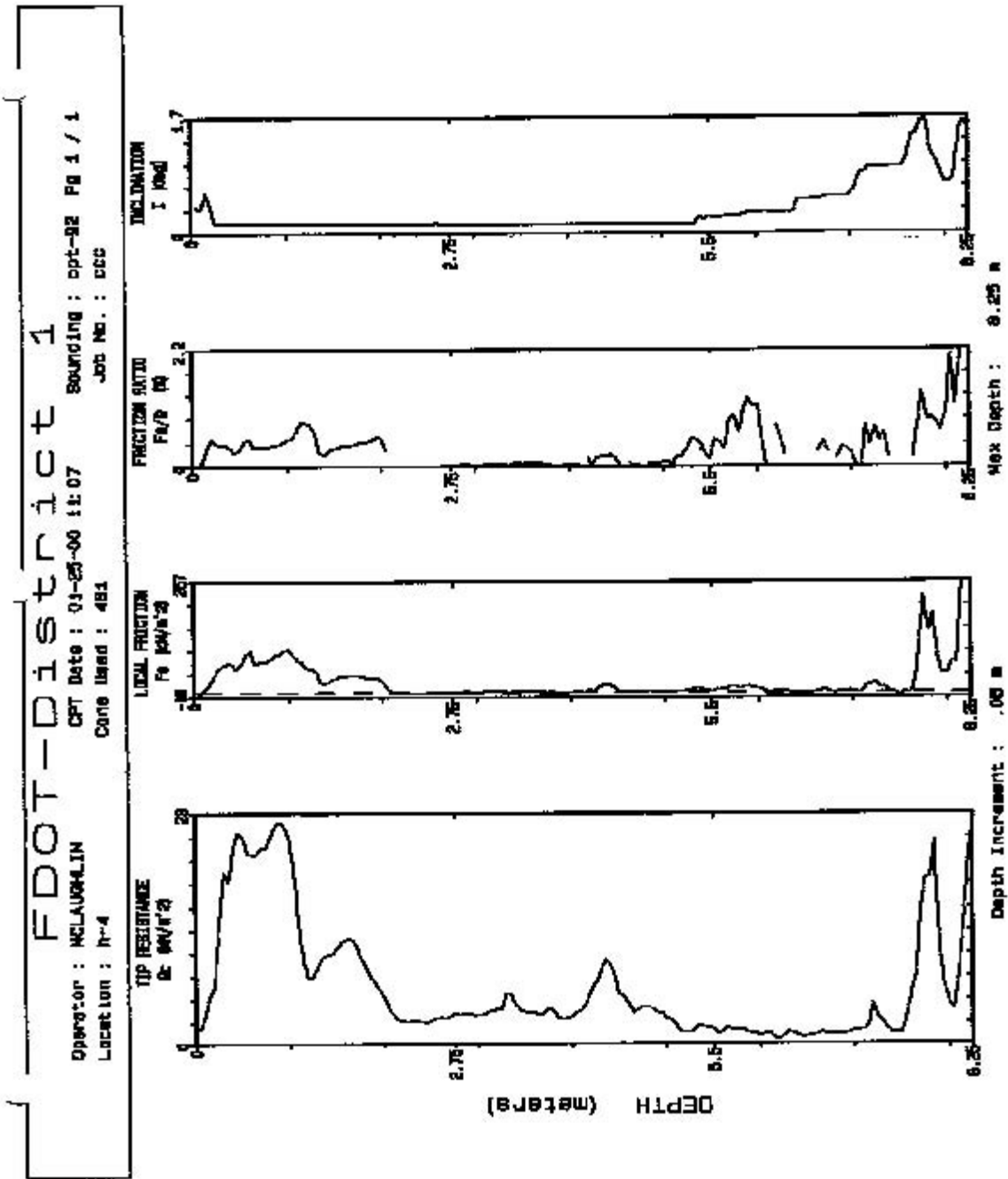


Figure A-15. Site I CPT sounding Sleeve-Port 2 location.

Appendix A. (continued)

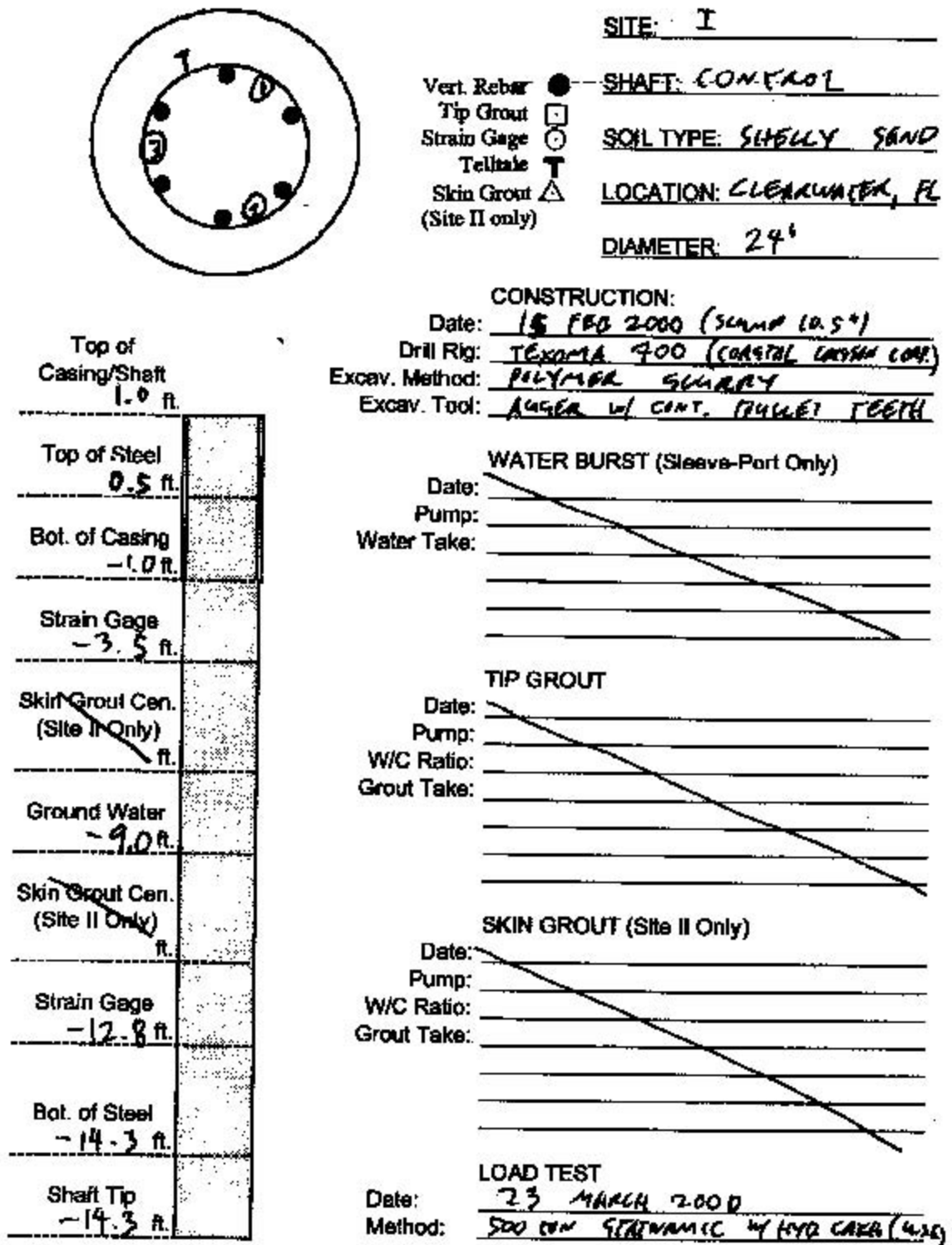


Figure A-16. Site I Control Shaft as-built.

Appendix A. (continued)

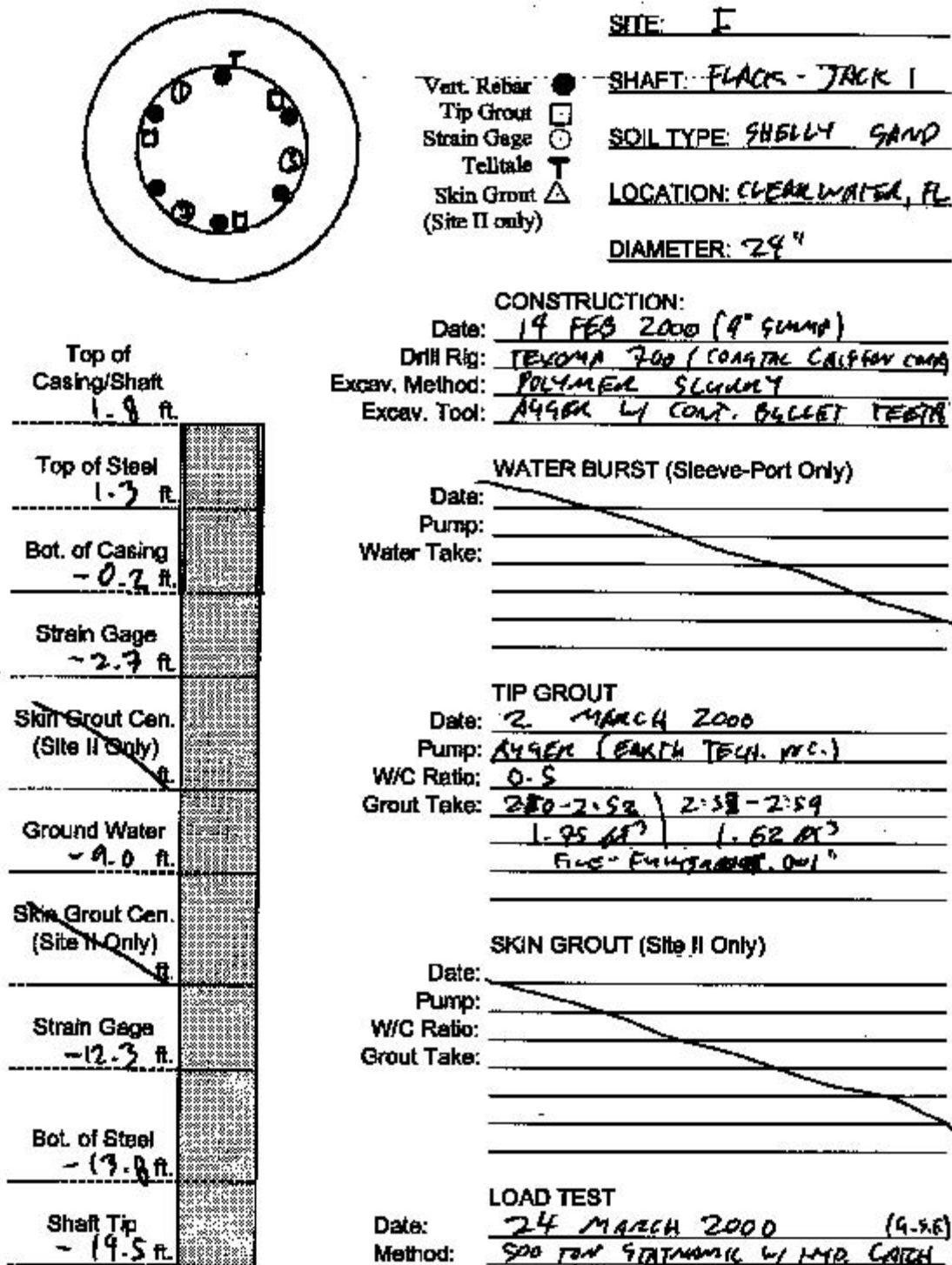


Figure A-17. Site I Flat-Jack 1 as-built.

Appendix A. (continued)

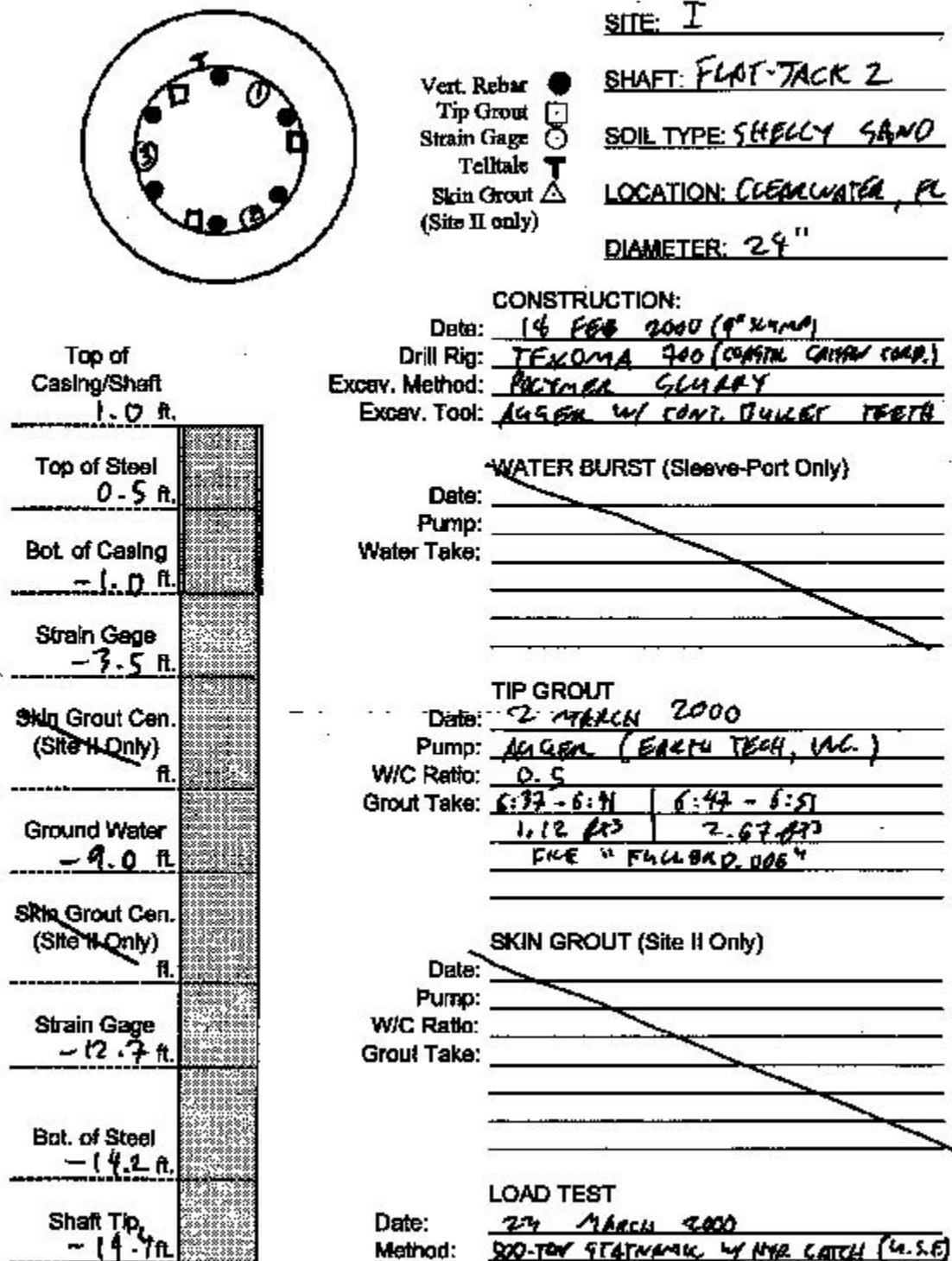


Figure A-18. Site I Flat-Jack 2 as-built.

Appendix A. (continued)

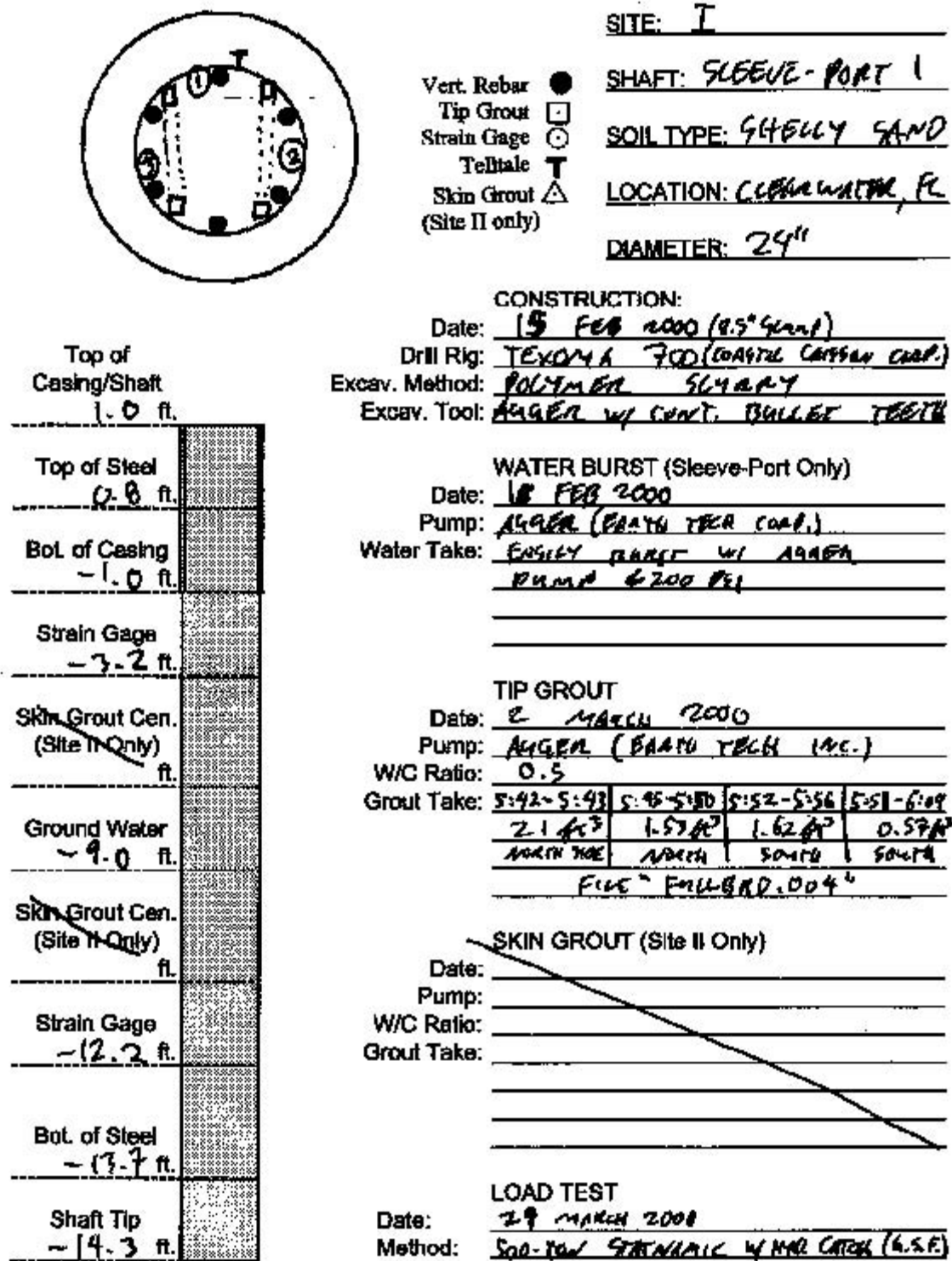


Figure A-19. Site I Sleeve-Port 1 as-built.

Appendix A. (continued)

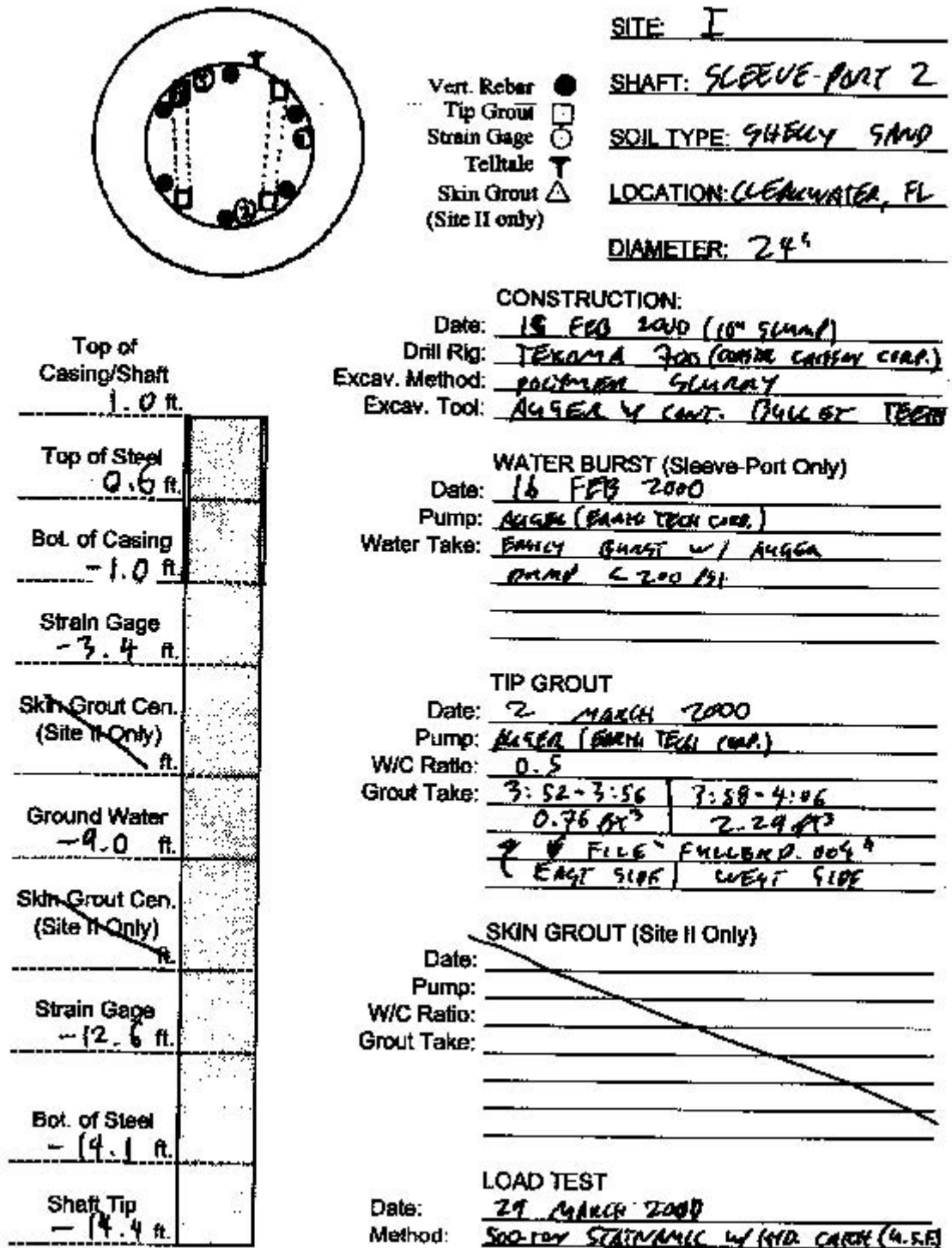


Figure A-20. Site I Sleeve-Port 2 as-built.

Appendix A. (continued)

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
FIELD BORING LOG

FORM 673-018-13
MATERIALS - 10/95
Page 1 of 2

Project # USF TR POST GRANT Boring # B-3 Elevation Type Equipment CWE 75
 Bridge # N/A Station # N/A Other N/A County Putnam D.O.T. # 23867
 ELEVATION BASED ON KEYSI MARSH Township South Range East Range
 Description: SPT for Post Grant research Water Table Elevation Type Recorder Auto
 Drilled By Sam H. Sturgis Logged By Sam H. Sturgis Boring
 Date/Time Started 6/26/00 11:00 Date/Time Completed 6/26/00 2:45
 Water Table Measured Section N/A Other N/A Monitor CWE Water Table Depth

SAMPLE		SPT BLOWS	MATERIAL DESCRIPTION	SAMPLE			REMARKS
FROM	TO			NO.	IN.	IN.	
0.0						no ground sample taken due to rocks, trash	
	1.5	8	dark brown Sand 7/16" silt	1			
1.5		5	med. dark, dense				
	3.0	7	dry (Filt)	2	13 1/2	75	
3.0		5	brn Sand w/ roots			STRATA CHANGE @ 3.0'	
	4.5	8	med. dark, wet				
	4.5	10		3	13 1/2	75	
4.5		3	med. brn Sand, loose			STRATA CHANGE @ 4.5'	
		3	wet				
	6.0	4		4	13 1/2	75	
6.0		2	dk brn fine Sand			STRATA CHANGE @ 6.0'	
		2	loose, wet				
	7.5	2		5	12	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		7	13 1/2	75	
10.5		1	SAME			(1st blow pushed tube 12")	
		0					
	12.0	1		8	7	50	
12.0		1	SAME			(weight of hammer pushed tube 12")	
		1					
	13.5	1		9	12	100	
13.5		0	med brn Sand 7/16"			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).

Page 2 of Page 2

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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 625-026-13
MATERIALS-1075
Page 1 of Page 2

Project # 125F SP # Post Grant Boring # B-4 Elevation: _____ Type Equipment: CR-25
 Bridge # N/A Station # N/A Offset: N/A County: Pinellas D.O.T. # 23867
 ELEVATION BASED ON BENCH MARK _____ Township: _____ Range: _____ East Section: _____
 Description: SPT for Post Grant research Water Table Elevation: _____ Type Hammer: _____
 Drilled By: Karl P. Smith / Shugart Logged By: McLaughlin Boring type: Standard Penetration Test
 Date/Time Started: 5/1/00 Date/Time Completed: 5/1/00 Monitor GSE: N/A Water Table Depth: _____
 Water Table Elevation: Station N/A Offset: N/A

SAMPLE		DEPTH FLOWS	MATERIAL DESCRIPTION	SAMPLES			REMARKS
FROM	TO			NO.	IN.	IN.	
0.0						no ground sample taken due to rocks & trash	
	1.5			1			
1.5		5	Dark brown Sand T/Silt				
		5	iron met base,				
	3.0	5	moist	2	18	100	
3.0		4					
		7	NO RECOVERY				
	4.5	11		3	0	0	
4.5		7	Dark Sand w/rocks				
		5	med. dense, moist				
	6.0	6		4	4 1/2	25	
6.0		2	same (very loose)				
		1					
	7.5	2		5	13 1/2	75	
7.5		4	NO RECOVERY				
		3					
	9.0	1		6	0	0	
9.0		4	med brown Sand				
		4	very loose, wet				
	10.5	1		7	18	100	
10.5		1	SAME				
		1					
	12.0	1		8	18	100	
12.0		4	gray Sand T/Silt				
		4	very loose, wet				
	13.5	2		9	13 1/2	75	
13.5		2	gray Sand, loose				
		2	wet				
	15.0	3		10	15 1/4	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**

Page 2 of Page 2

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

Appendix A. (continued)

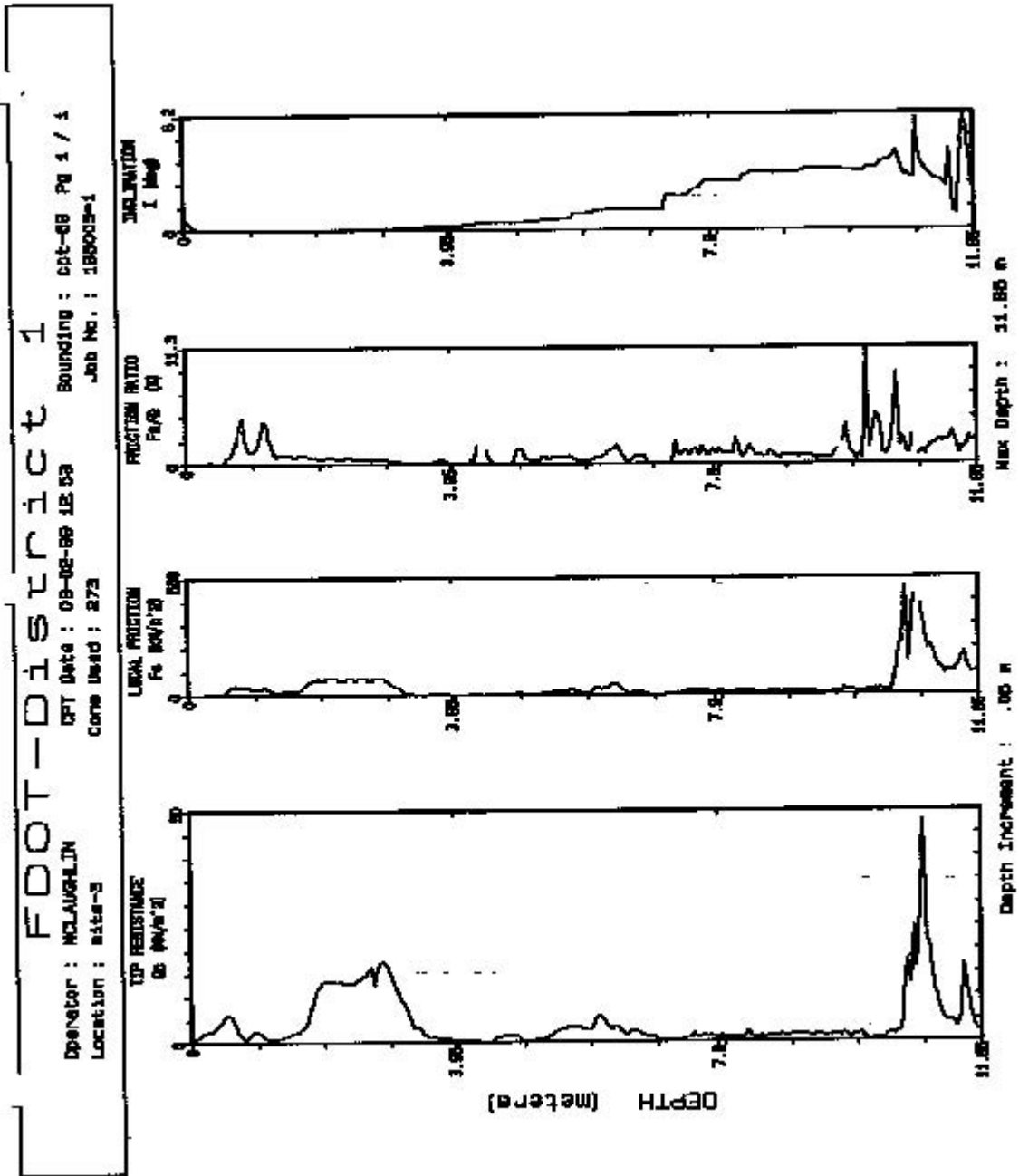


Figure A-25. Site II CPT sounding CPT-69.

Appendix A. (continued)

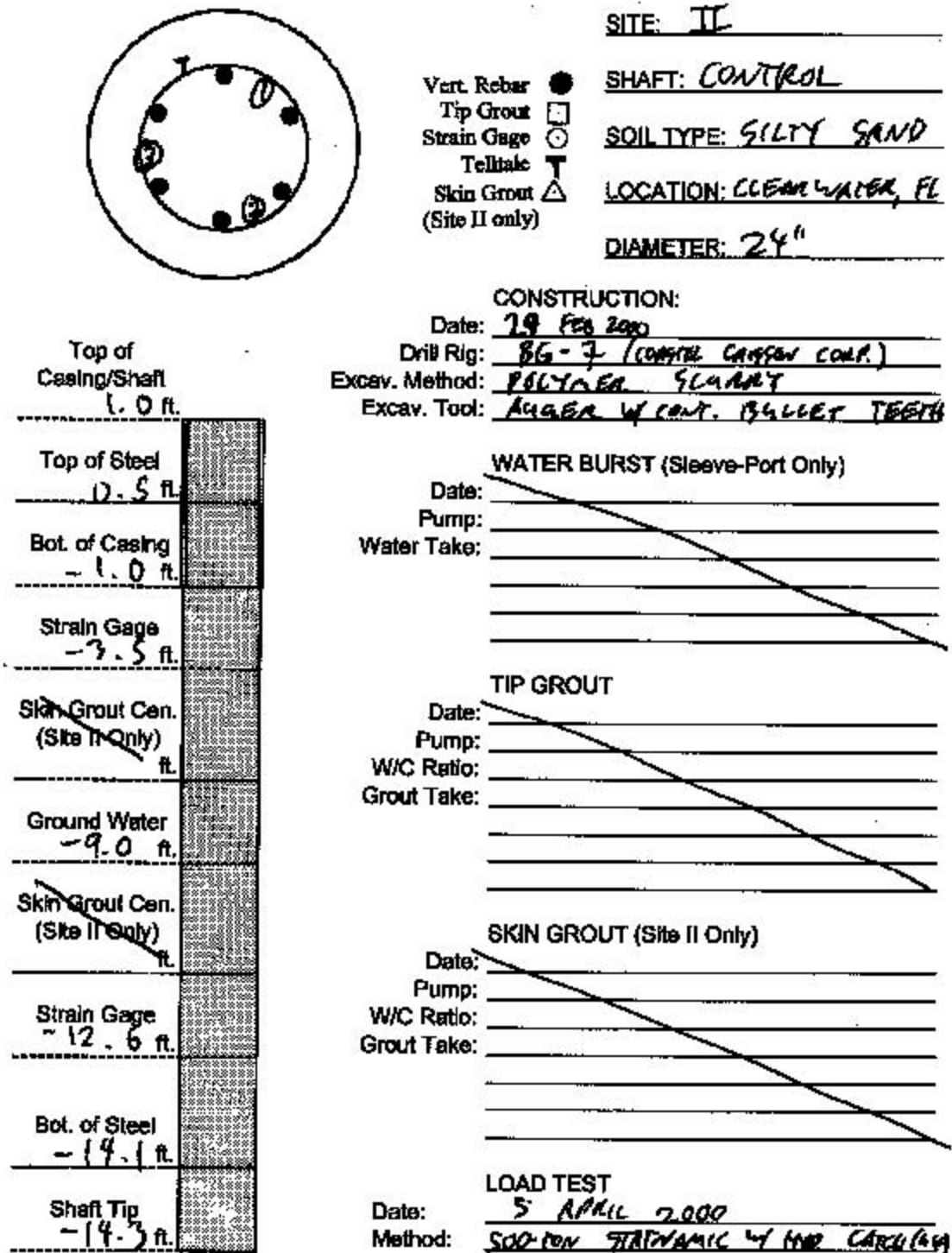


Figure A-26. Site II Control Shaft as-built.

Appendix A. (continued)

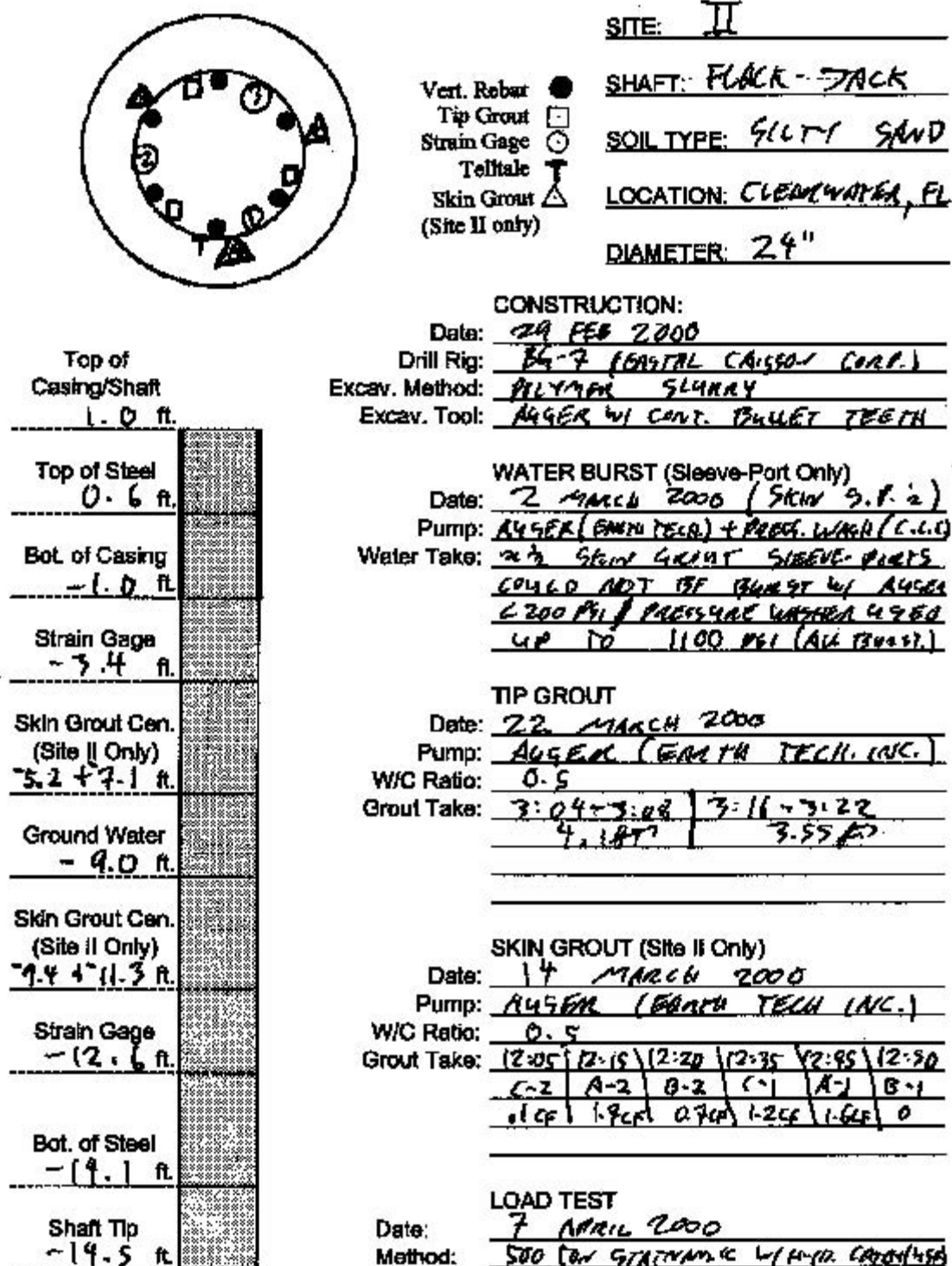


Figure A-27. Site II Flat-Jack as-built.

Appendix A. (continued)

SITE: II

Vert. Rebar
Tip Grout
Strain Gage
Telltale
Skin Grout
(Site 11 only)

SHAFT: SLEEVE - PORT

SOIL TYPE: SILTY SAND

LOCATION: ELEPHANTER, FL

DIAMETER: 24"

CONSTRUCTION:

Date: 21 Feb 2000

Drill Rig: BG-7 (COASTAL CRUISE CORP.)

Excav. Method: POLYMER GUNNY

Excav. Tool: AGGER w/ CONT. BULLETER TEETH

WATER BURST (Sleeve Port Only)

Date: 2 MARCH 2000 (Sat + 1st S.P.)

Pump: $\text{MAGNET (EACH 1000 LBS)} + \text{PRESS. WASH (C/L)}$

Water Take: 11P 5.-P. EASILY BURNST WITH

ALGON 4200 FBI, 2 1/2 5K12 S.F. 2

NOT BENEATH 200 PSI. BENEATH W/

PRESS. WASHED UP TO 1000 PSI.

TIP GROUT

Date: 22 MARCH 2000

Pump: AL45A (50074) TELH (NL)

W/C Ratio: 0.5 0.5

Grout Take: 2:13 - 2:15 2:24 - 2:24 2:35 - 2:37

2.29 ft	2.24 ft	1.11 ft
---------	---------	---------

NOCH 100	50000	NOCH
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SKIN GROUT (Site II Only)

Date: 14 March 2000

Pump: A445A (EARTH TECH)

W/C Ratio: 0.5

Grout Take: 1:24 1:34 1:39 1:41 1:44 2:00 2:09

C-2	B-2	A-2	C-2	B-2	B-1	C-1 + A-1
-----	-----	-----	-----	-----	-----	-----------

4.26	2.70	0.26	0.14	0.70	0	0.26
------	------	------	------	------	---	------

LOAD TEST

Date: 10 APRIL 2000

Method: 500-TON STATIC by 1400 CAPS (470)

Top of Casing/Shaft	1.0 ft.
Top of Steel	0.6 ft.
Bot. of Casing	-1.0 ft.
Strain Gage	-3.4 ft.
Skin Grout Cen. (Site II Only)	-5.0 + -6.9 ft.
Ground Water	-9.0 ft.
Skin Grout Cen. (Site II Only)	-9.3 + -11.3 ft.
Strain Gage	-12.6 ft.
Bot. of Steel	-19.1 ft.
Shaft Tip	-19.5 ft.

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

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
DATE: 12/23/98
TELEPHONE NO: 561/848-2594
PROJECT NO: 89040-3510

CLASS CONCRETE: IV DRILL SHAFT (28)

SOURCE OF MATERIALS

COARSE AGGREGATE:	PEN-15000	GRADE:	S7 S.G. (SSD): 2.430
FINE AGGREGATE :	E. D. JARNA	F.N.:	2.41 S.G. (SSD): 2.630
PIT NO. (COARSE) :	87-143	TYPE:	CRUSHED LIMESTONE
PIT NO. (FINE) :	05-143	TYPE:	SILICA SAND
CEMENT :	PEN-15000 TARMAC (MIAMI)	SPEC:	AASHTO M-85 TYPE II
1R ENTR. ADMIX :	MMA-1-80 MASTER BUILDERS	SPEC:	AASHTO M-154
1ST ADMIX :	POZZOLITH 961 R MASTER BUILD	SPEC:	AASHTO M-194 TYPE D
2ND ADMIX :	----	SPEC:	----
3RD ADMIX :	----	SPEC:	----
FLY ASH :	\$ FURNACE (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:	549.00	AIR CONTENT	:	0.00 TO 6.00	%
FINE AGG	kg:	677.00	UNIT WEIGHT (WET)	:	2205.00	kg/m3
AIR ENTR ADMIX	ml:	319.00	W/C RATIO (PLANT)	:	0.40	kg/kg
1ST ADMIXTURE	ml:	1704.00	W/C RATIO (FIELD)	:	0.40	kg/kg
2ND ADMIX	ml:	0.00	TREO YIELD	:	1.00	m3
3RD 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)

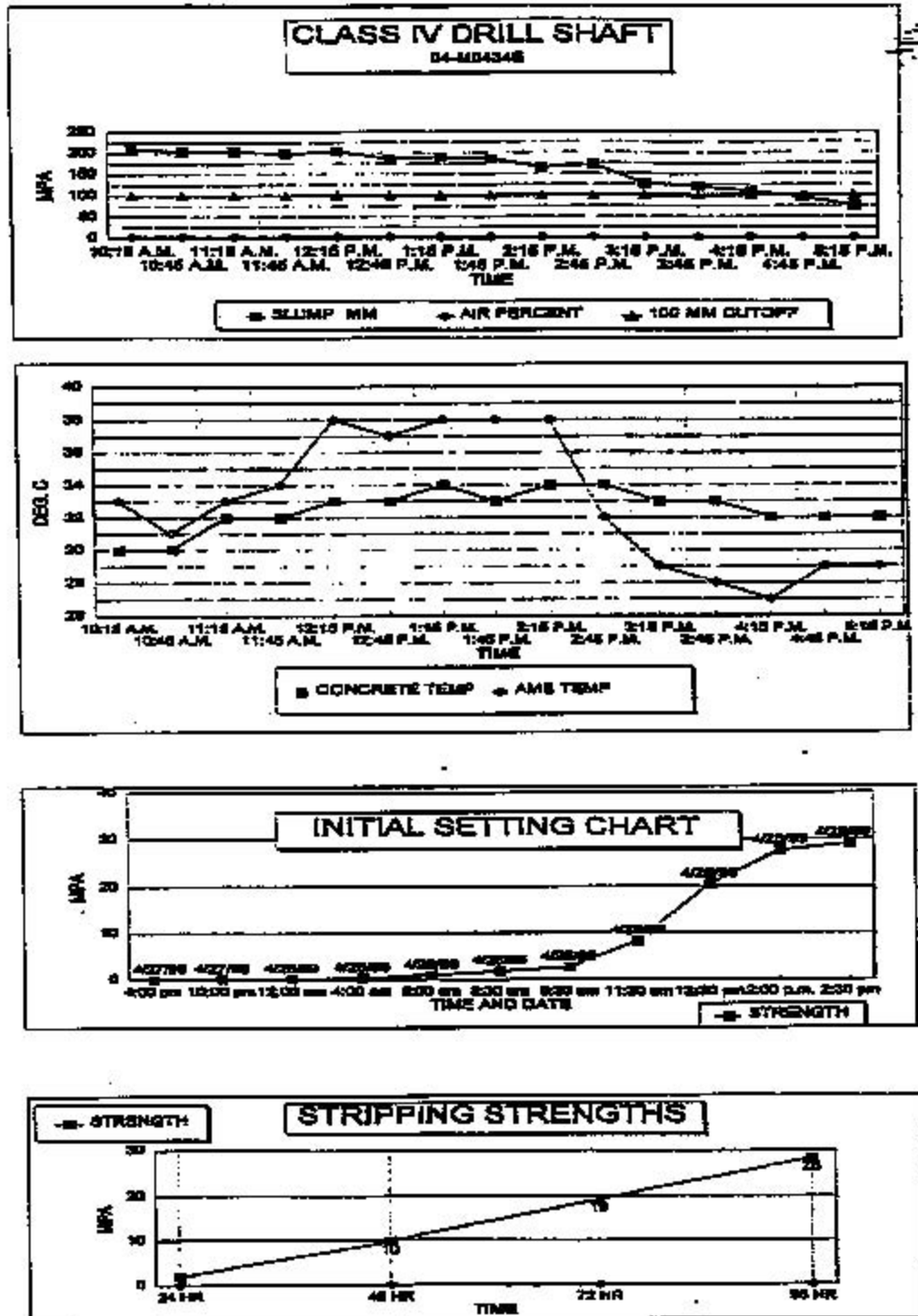


Figure A-30. Site III concrete mix design (2 of 2).

238

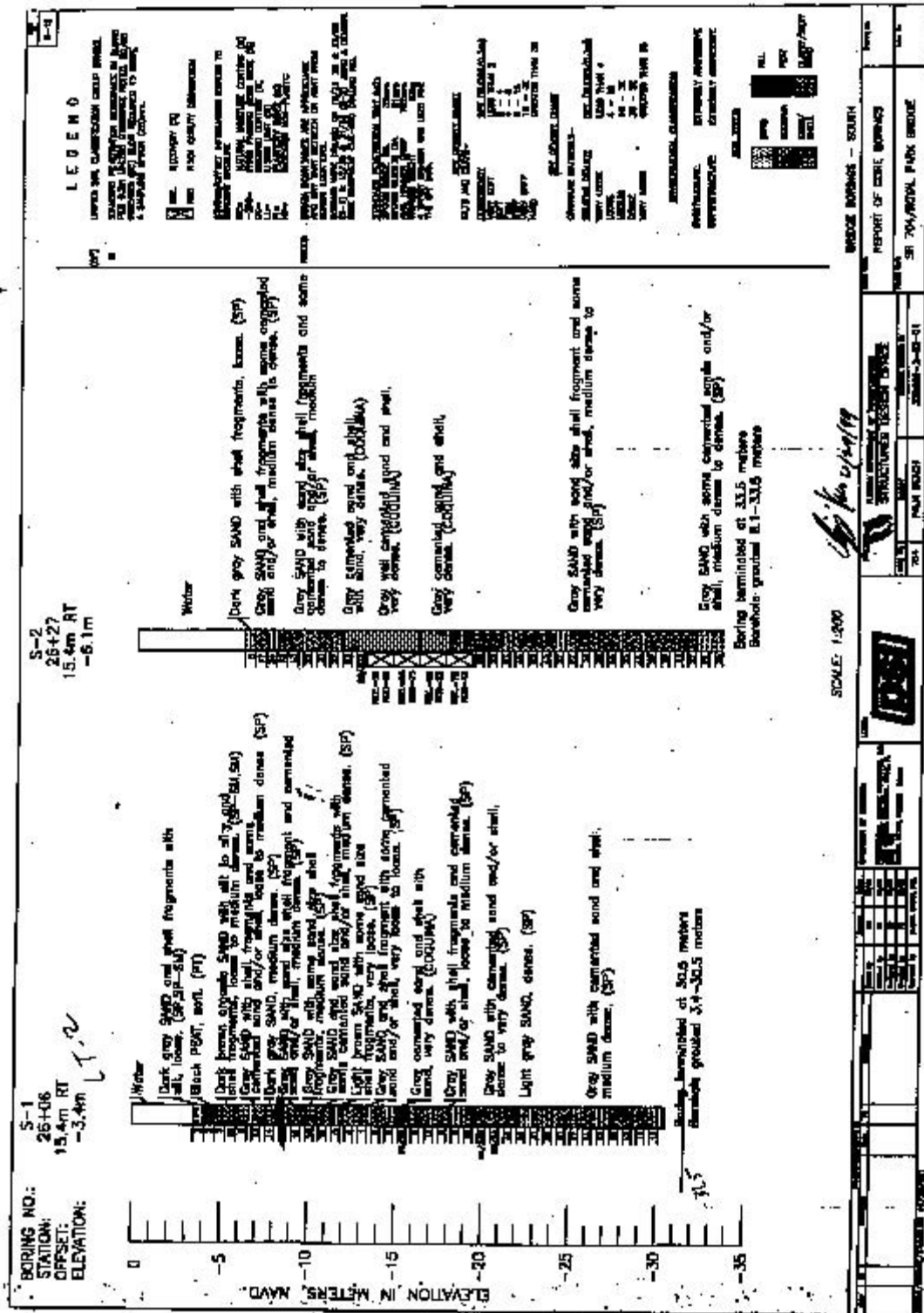


Figure A-32. Site III boring S-1 and S-2.

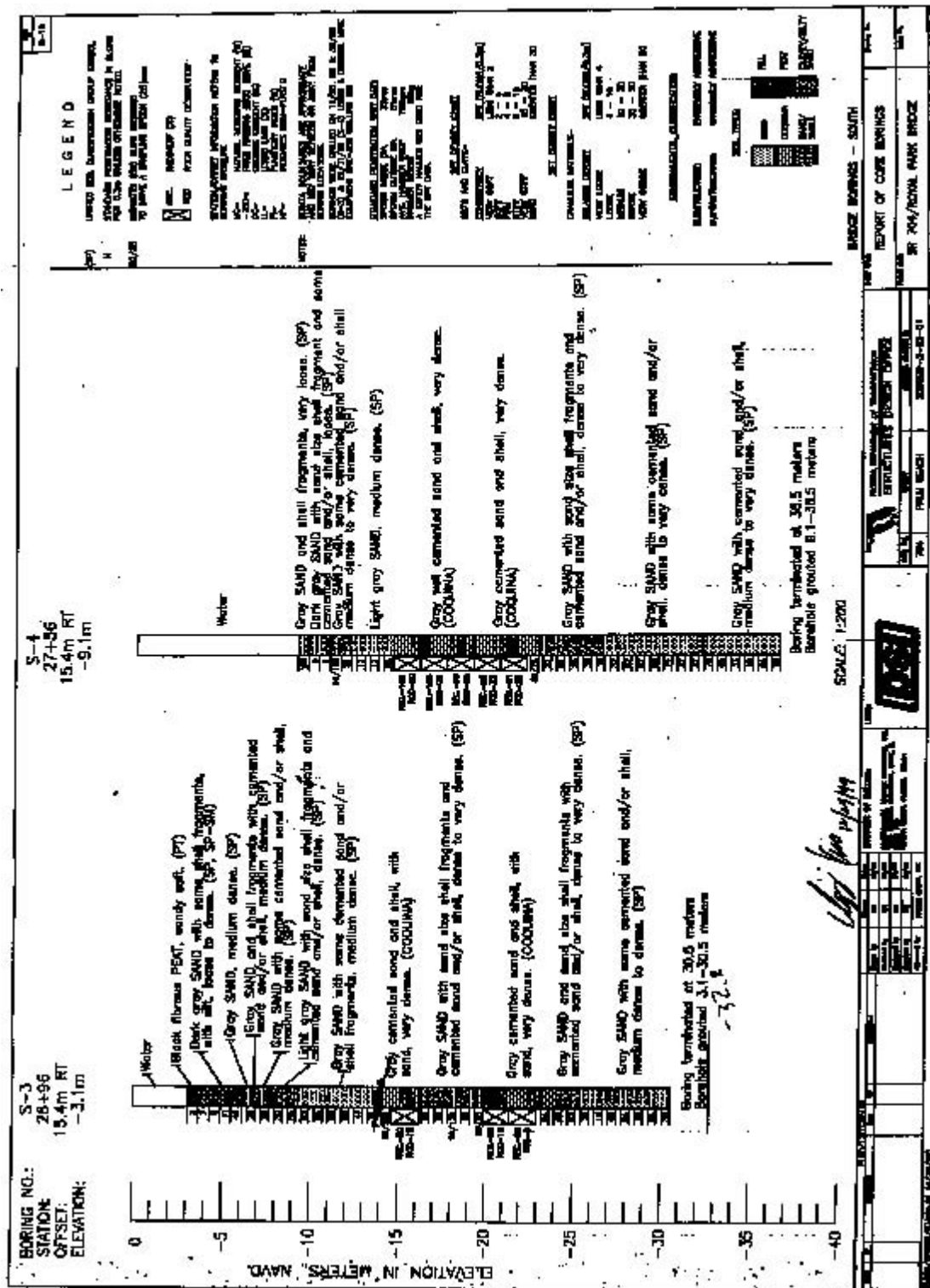


Figure A-33. Site III boring S-3 and S-4.



242

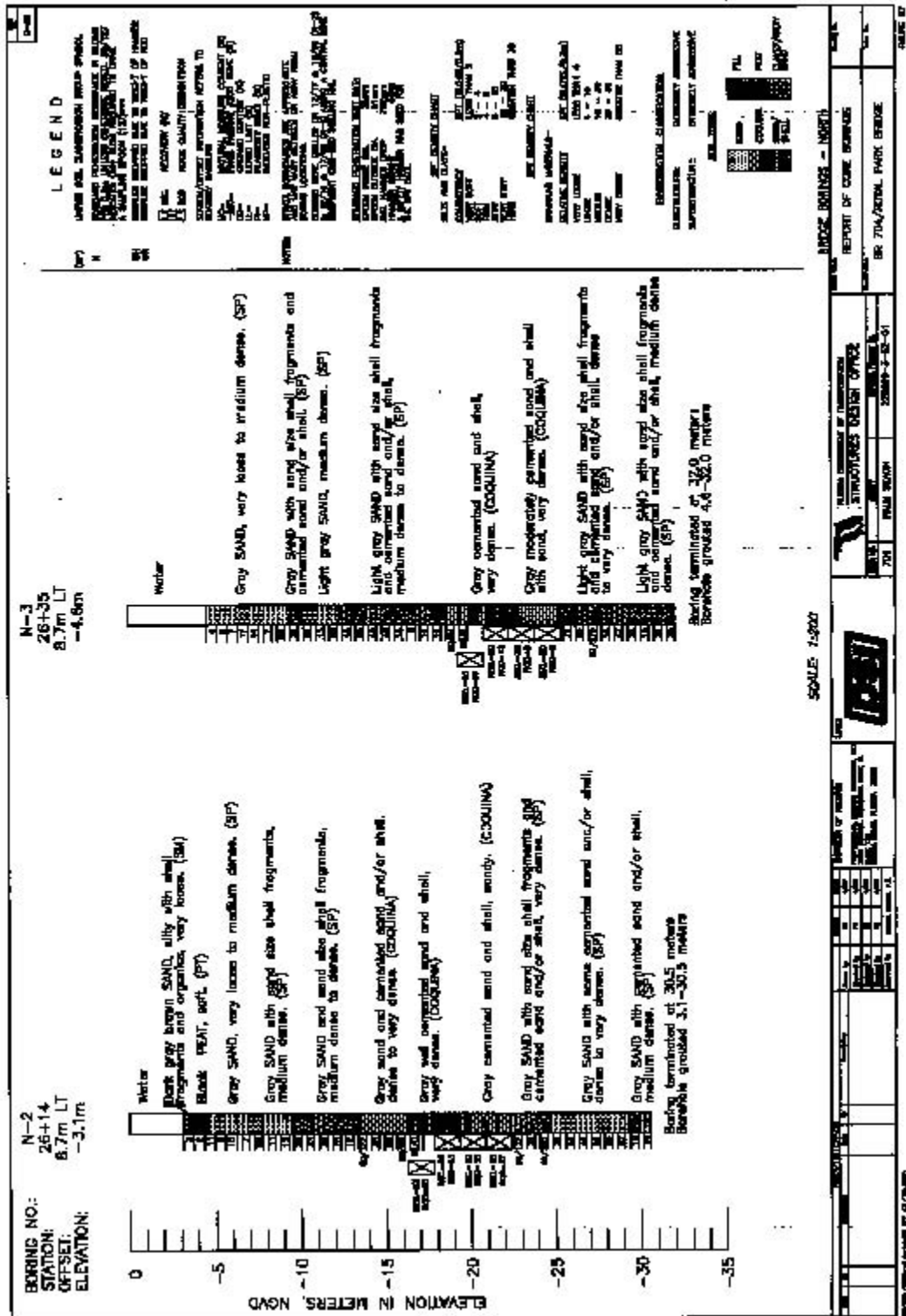
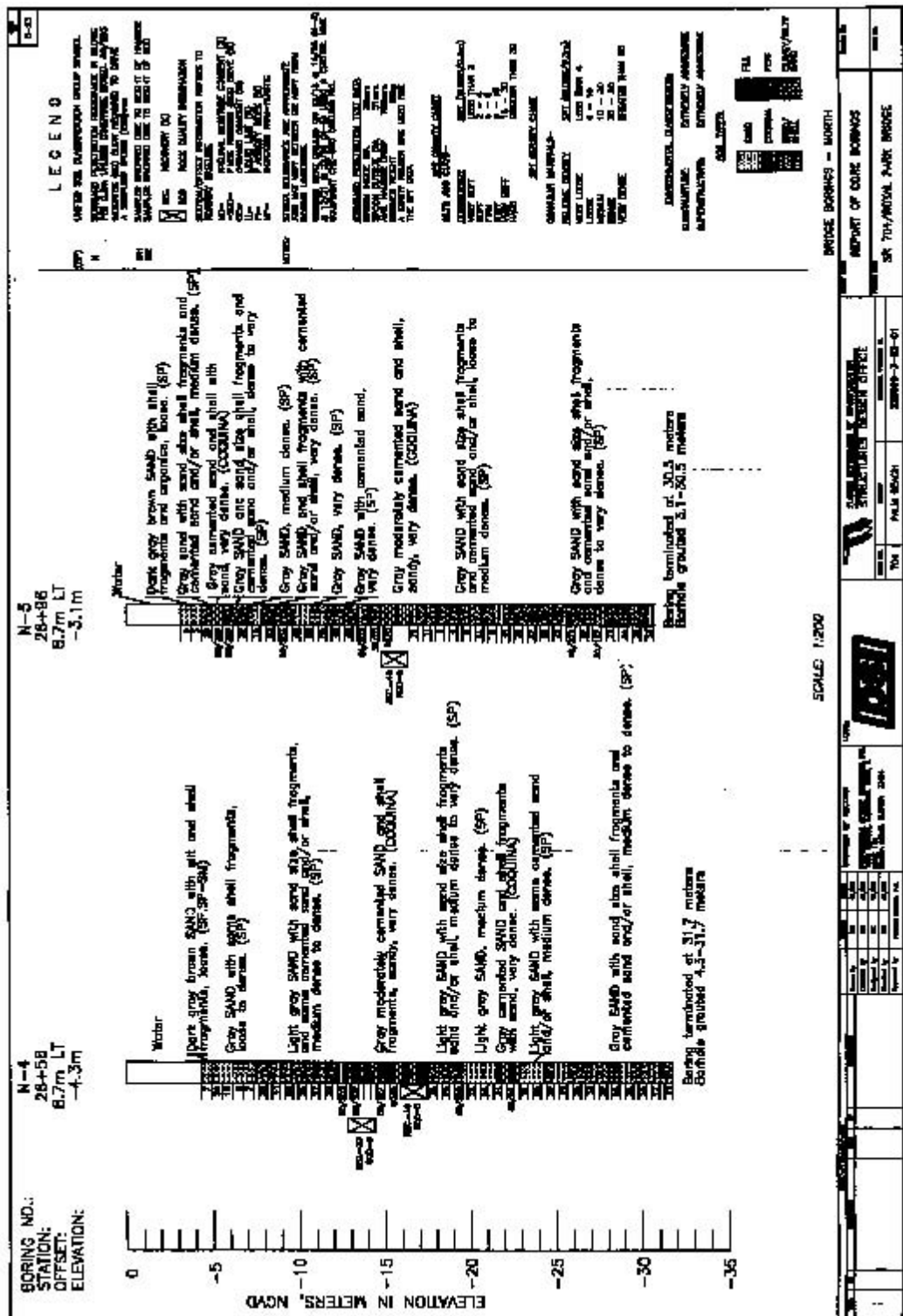


Figure A-36. Site III boring N-2 and N-3.



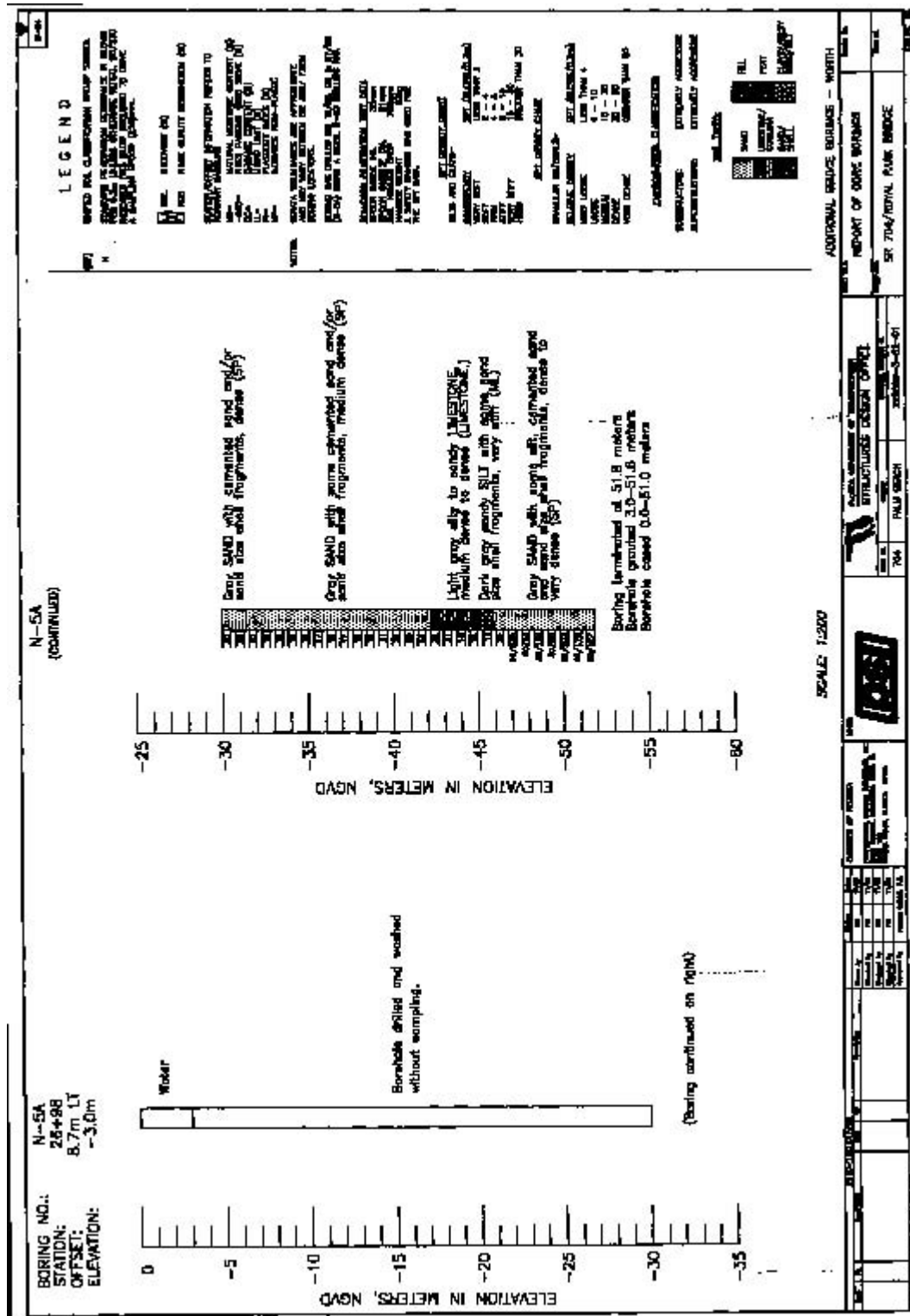


Figure A-38. Site III boring N-5A.

Appendix A. (continued)

BORING LOCATION: **Boeing No. LT-3**

PROFESSIONAL SERVICE INDUSTRIES, INC. **TEST BORING LOG**

CLIENT: **ROYAL LAY. MINE** **BORING NO.:** **LT-3**

DATE: **7-11-86** **WELL NO.:** **711-8606**

WELL LOCATION: **ELEVATION:** **N/A**

TYPE: **FLYER POINT** **DEPTH:** **102.5'**

DRILL NO.: **6-67** **WATER DEPTH:** **120'**

COMPLETION: **NOTHING** **PULLED DATE:** **5-7-87**

LOGGED BY: **T.M.B.**

	FEET	BLOWS ON SAMPLE SPONS PER 6"	N VALUE	MATERIAL DESCRIPTION	REMARKS
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31	10-34	1-0-0	8	GR. CLAYEY SILT W/SHALL	
32					
33	12-4	12-20-18	39	GR. CLAYEY SILT W/SHALL	
34					
35					
36	16-36	7-8-8	16	GR. CLAYEY SILT W/SHALL	
37					
38					
39	21-4	44-50-4	50/50	GR. CLAYEY SILT W/SHALL	
40					
41					
42					
43					
44					
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48					
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99					
100					

FROM BRIDGE TO MUD LINE

0" CASING

MUD LINE @ 30' FROM DECK OF BRIDGE

FROM 7.5' TO 12.5'

24 FEET --- 7 min 40 sec

34 FEET --- 3 min 40 sec

44 FEET --- 8 min 31 sec

54 FEET --- 5 min 03 sec

+ 90% COR. EXCESSIVE

LOG @ 2:45 P.M.

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	SHEET NO. 2 of 4			
PROJECT: ROYAL PARK BRIDGE						
DATE: 8-5-76						
DRAWN LOCATION:						
	CORING	ELEVATION	REMARKS			
DEPTH FT						
41	4" Ø CORING					
42	FROM 42.5 TO 47.5					
43						
44						
45						
46						
47						
48						
49	12.5-14	33	GR. FL. SAND, SAND, FINE, FINE			
50						
51	20-21.5	40	GR. FL. SAND, SAND, FINE, FINE			
52						
53	21.5-24	25	GR. FL. SAND, SAND, FINE, FINE			
54						
55	25-26.5	23	GR. FL. SAND, SAND, FINE, FINE			
56						
57	28-29	40	GR. FL. SAND, SAND, FINE, FINE			
58						
59	30-31.5	29	GR. FL. SAND, SAND, FINE, FINE			
60						
61	32-33	53	GR. FL. SAND, SAND, FINE, FINE			
62						
63	34-35	30	GR. FL. SAND, SAND, FINE, FINE			
64						
65	36-37	30	GR. FL. SAND, SAND, FINE, FINE			
66						
67	4" Ø CORING					
68	FROM 35' TO 40'					
69						
70						
71						
72	4" Ø CORING					
73	FROM 40' TO 45'					
74						
75						
76						
77	4-8-17	25	GR. FL. SAND			
78						
79	4-8-17					
80						

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

Appendix A. (continued)

Boring No. LT-3

PROFESSIONAL SERVICE INDUSTRIES, INC.			TEST BORING LOG		BORING NO. LT-3
PROJECT: RDM, PARK BRIDGE					WELL NO. 3 OF 4
CLIENT:					WELL NO. 3 OF 4
BORING LOCATION:					WELL NO. 3 OF 4
			TYPE	BORE HOLE	WELL NO. 3 OF 4
			DATE	BORE HOLE	WELL NO. 3 OF 4
			DEPTH	BORE HOLE	WELL NO. 3 OF 4
			CONTRACTOR	BORE HOLE	WELL NO. 3 OF 4
			MATERIAL DESCRIPTION		WELL NO. 3 OF 4
					WELL NO. 3 OF 4
1	50-51	15-2-1 FOOT			WELL NO. 3 OF 4
2					WELL NO. 3 OF 4
3					WELL NO. 3 OF 4
4	51-52	W.O.B.			WELL NO. 3 OF 4
5					WELL NO. 3 OF 4
6	52-53	3-3-3			WELL NO. 3 OF 4
7					WELL NO. 3 OF 4
8	53-54	3-2-3			WELL NO. 3 OF 4
9					WELL NO. 3 OF 4
10	54-55	45-10-5			WELL NO. 3 OF 4
11					WELL NO. 3 OF 4
12	55-56	5-5-5			WELL NO. 3 OF 4
13					WELL NO. 3 OF 4
14	56-57	10-12-14			WELL NO. 3 OF 4
15					WELL NO. 3 OF 4
16	57-58	16-16-18			WELL NO. 3 OF 4
17					WELL NO. 3 OF 4
18	58-59	15-41-27			WELL NO. 3 OF 4
19					WELL NO. 3 OF 4
20	59-60	17-2-6			WELL NO. 3 OF 4
21					WELL NO. 3 OF 4
22	60-61	30-21-10			WELL NO. 3 OF 4
23					WELL NO. 3 OF 4
24	61-62	16-21-28			WELL NO. 3 OF 4
25					WELL NO. 3 OF 4
26	62-63	50-41-38			WELL NO. 3 OF 4
27					WELL NO. 3 OF 4
28	63-64	21-26-24			WELL NO. 3 OF 4
29					WELL NO. 3 OF 4
30	64-65	15-14-16			WELL NO. 3 OF 4
31					WELL NO. 3 OF 4
32	65-66	20-8-4			WELL NO. 3 OF 4
33					WELL NO. 3 OF 4
34	66-67				WELL NO. 3 OF 4
35					WELL NO. 3 OF 4

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

Appendix A. (continued)

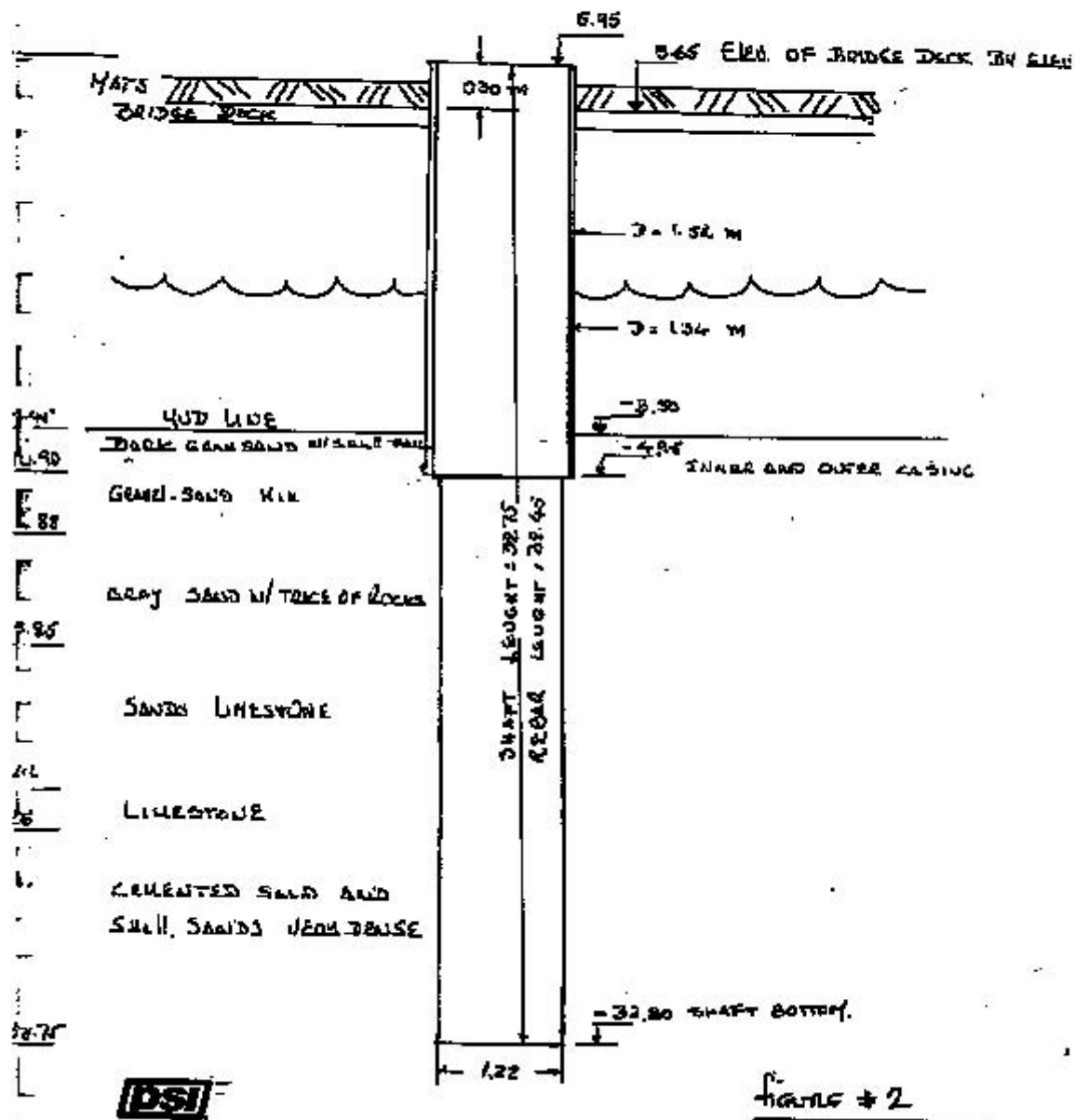
Boring No. LT-3

PROFESSIONAL SERVICE INDUSTRIES, INC.			TEST BORING LOG		BORING NO. LT-3	
PROJECT: ROYAL PARK BRIDGE					SHEET NO. 4 OF 4	
DATE: 6-1-87					DATE: 6-1-87	
SHEET NO. 4 OF 4					ELEVATION: N/A	
			TYPE: POST JOINT		BORING DEPTH: 103.5'	
			FROM: 8" TO 35"		TO: 6" TO 100"	
			MATERIAL: MASONRY		DATE: 6-1-87	
			CONTRACTOR: DUNING CO.		DRAWN: TDD	
			MATERIAL DESCRIPTION:		REMARKS	
1	0-9.5	12-15-17				
2						
3	9.5-14	9-11-18	21	GR. M. & W/CEMENTED SAND		
4	14-19	9-10-10				
5						
6	19-24	11-12-15	25	SAME		
7						
8	24-29	5-8-10	18	SAME		
9						
10	29-34	15-20-18	33	SAME		
11						
12						
13						
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E.O.B. @ 103.5'

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

CUSCO LT-3
STATION 26+97.6
ROYAL PARK BRIDGE



250

Appendix A. (continued)

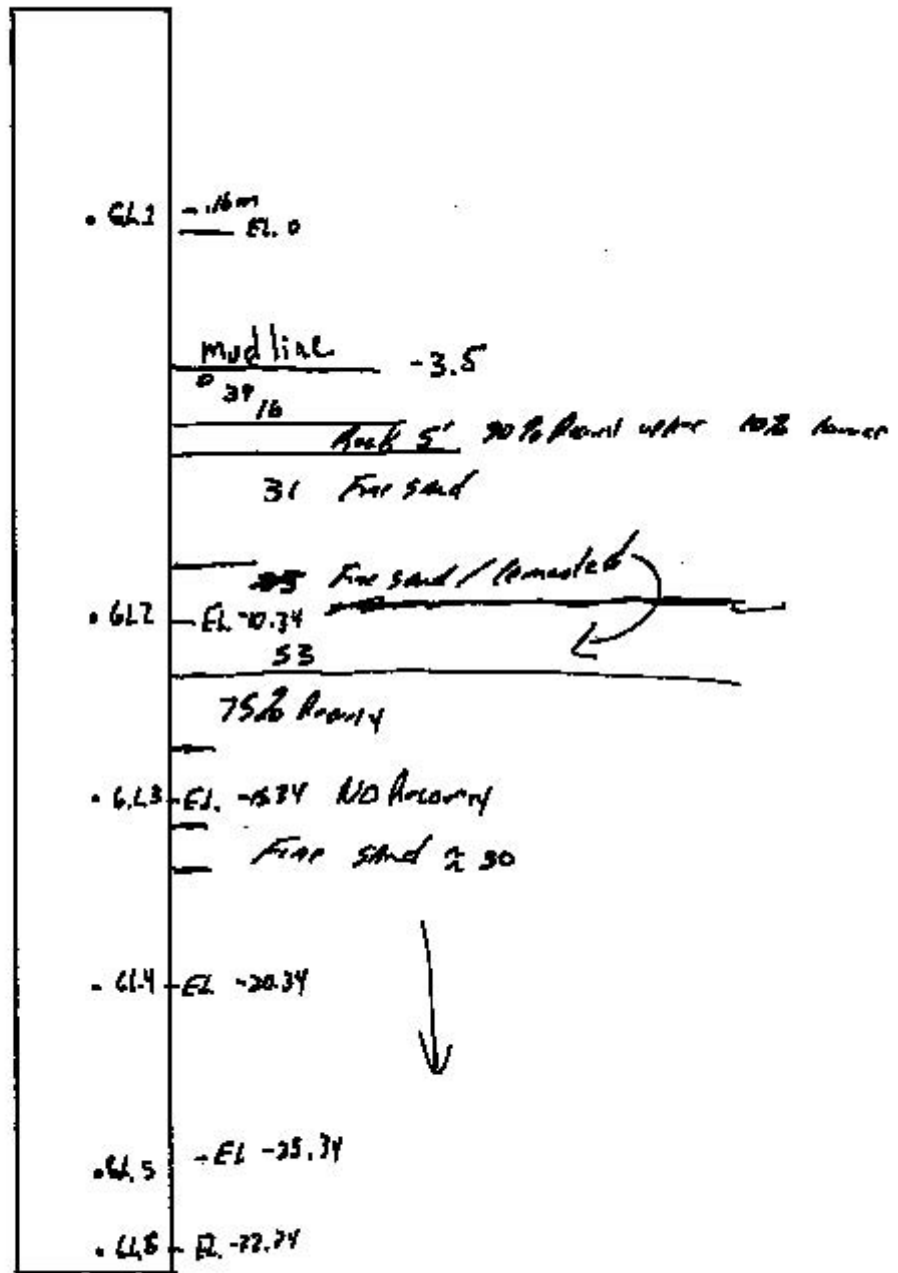


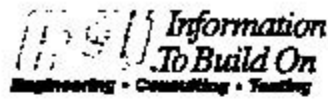
Figure A-44. Site III LT-3 strain gage locations.

Appendix A. (continued)

[illegible]

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 STATISTICAL TEST

DATE: June 14, 2000

REVISION #1
OUR REPORT NO: 772-08054-11

PAGE 1 OF 2

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

ITEM NO.	NO. OF SPICES PLACED	CONCRETE TRUCK TICKET NUMBER	TIME TRUCK DEPARTED	TIME TRUCK ARRIVED	YARDS OF CONCRETE	SLUMP 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
		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 26-25.00									
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, CURE OTHER THAN 28 DAYS: 28 DAYS. IF CURED 28 DAYS, 28 DAYS. IF CURED 28 DAYS, 28 DAYS. IF CURED 28 DAYS, 28 DAYS. IF CURED 28 DAYS, 28 DAYS.

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

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

TECHNICIAN: L. BORCH

CO: CLIENT (1),

Respectfully submitted,
Professional Service Industries, Inc.

Forrest A. Gosh, P.E.
Forrest A. Gosh, P.E.
Florida #51377

THIS TEST SHALL BE A COPY TO THE CLIENT AND A COPY TO THE PROJECT. IF THE CLIENT REQUESTS A COPY OF THE TEST REPORT, THE CLIENT SHALL BE RESPONSIBLE FOR THE COST OF THE REPORT. IF THE CLIENT REQUESTS A COPY OF THE TEST REPORT, THE CLIENT SHALL BE RESPONSIBLE FOR THE COST OF THE REPORT.

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

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

REVISION #1

PAGE 2 OF 2

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

KEY NO.	NO. OF SPECIMENS MADE	CONCRETE SUPPLIER TRUCK NUMBER	TIME TRUCK DEPARTED	TIME TRUCK ARRIVED	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	07:08 pm	08:30 pm	10.0	8			
		2242432	07:50 pm	09:07 pm	10.0				

FROM -23.47 TO -19.59 METERS

FROM -16.59 TO -14.33 METERS

FROM -14.33 TO -10.36 METERS

FROM -10.36 TO -5.55 METERS

FROM -6.35 TO -2.74 METERS

FROM -2.74 TO 5 METERS

[illegible]

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

LAST TRUCK #860 UNLOADED ONLY 4 CUBIC METERS AND TOP OF CAISSING WAS REACHED

TECHNICIAN: L. POWERS

```

    GC: CLIENT {1},

```

Respectfully submitted,
Professional Service Industries, Inc.

Parton Church, P.E.
Florida #W1277

TEST RESULTS APPLY ONLY TO THE SPECIFIC SAMPLES TESTED AND NOT THE PERFORMANCE OF THE ENTIRE CHEMICAL PLANT OR
 SYSTEM. MAY NOT BE USED FOR ANY OTHER PURPOSES, INCLUDING, BUT NOT LIMITED TO, THE PERFORMANCE OF THE PLANT OR SYSTEM, OR

Abstract

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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: 13.41 m³

EACH M³: 0.85 m

EACH M³: 0.71 m

V_T: 48.03 m³

CONCRETE SURFACE ELEV.

TRUCK #	M THEORETICAL	M ACTUAL
35 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 m ³ 10	—	—

ACTUAL V: 56.46 m³

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

PROJECT: MONITORING DRILLED SHAFT
CONST. FOR STATIMAC TEST

DATE: June 14, 2000

OUR REPORT NO: 772-00054-12

REVISION #1

FIELD DATA:
LOCATION OF PLACEMENT CRIBSON 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: DET'L. DORCE

LAB DATA SUBMITTED BY: TARMAC

SUPPLIER: TARMAC

DELIVERY TICKET NO/TRUCK NO: 2242425

MIX NUMBER AND PROPORTIONS: M880434

CEMENT: ---

WATER: ---

FINE AGGREGATE: ---

COARSE AGGREGATE: ---

ADDMIXTURE: ---

COMPRESSION TEST RESULTS

LABORATORY NUMBER	SPECIMEN IDENTIFICATION OR LIST NO	TEST AGE (DAYS)	DATE OF TEST	TOTAL LOAD (LBS)	CYLINDER DIAMETER (IN)	CYLINDER AREA (SQ IN)	COMPRESSION STRENGTH (PSI)	TYPE OF BREAK
2	A	7	06/21/00	120000	6.00	28.27	4240	Columbar
2	B	28	07/12/00					
2	C	28	07/12/00					
2	D	28	BOLD					
REMARKS:		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. DORCE

TO: CLIENT (1),

1. THE TEST RESULTS APPLY 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.

Respectfully submitted,
Professional Service Industries, Inc.
Barthelme
Barthelme, P.E.
Florida #51277

Professional Service Industries, Inc. • 7900 Central Industrial Drive, N., Suite 120 • Petersburg, FL 33704 • Phone 813/444-6424 • Fax 813/444-8474

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

Appendix A. (continued)



INSPECTION REPORT

TESTED FOR: MR. ALEX CASO, D.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
OUR REPORT NO.: 772-00054-7
REVISION #2

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

The following items were noted:

1. At 7:00 a.m. contractor started positioning the outer casing, 1.53 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 INDUSTRIES, INC.

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

cc: CLIENT (1),

NOTICE: ANY REVISIONS TO THIS REPORT MUST BE MADE BY PSI. WITHOUT WRITTEN PERMISSION OF PROFESSIONAL SERVICE INDUSTRIES, INC.

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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. DUT 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.

Partho Ghosh
Partho GHOSH, 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).

Appendix A. (continued)

[PSI] Information
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SAMPLE PICK UP FIELD REPORT

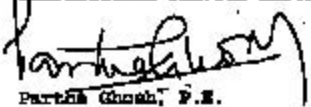
TESTED FOR: MR. ALAN CASO, P.E.
E.C. DRIVER AND ASSOCIATES
500 NORTH WESTSHORE BLVD
SUITE #700
TAMPA, FL 33609

PROJECT: MONITORING DRILLED SHAFT
CONST. FOR STATISMIC TEST

DATE: June 13, 2000

REVISION #1
OUR REPORT NO.: 772-00054-8

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. Ponce
Total Hours: 1.0

Respectfully submitted,
PROFESSIONAL SERVICE INDUSTRIES, INC.

Patricia Ghosh, P.E.
Florida #51377

cc: CLIENT (1),

THIS REPORT IS THE PROPERTY OF PSI. IT IS TO BE USED FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN. IT IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, WITHOUT THE WRITTEN PERMISSION OF PROFESSIONAL SERVICE INDUSTRIES, INC.

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

Appendix A. (continued)



INSPECTION REPORT

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

PROJECT: MONITORING DRILLED SHAFT
CONST. 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 casison 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. Trimble (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 trimble 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 #675 and ticket #2242425. Last truck placed 4 cubic meters in the casison. Total concrete placed was 56.48 cubic meters. Theoretical volume = 48.01 cubic meters. Grout factor = 1.17.

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

Appendix A. (continued)

E.C. DRIVER 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 INDUSTRIES, INC.

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

TO: CLIENT (1),

DSI
REPRODUCTION OF THIS DOCUMENT IS PROHIBITED WITHOUT WRITTEN PERMISSION BY PROFESSIONAL SERVICE INDUSTRIES, INC.
1 4-000-001

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

Appendix A. (continued)

BORING LOCATION: ROYAL PARK BRIDGE **BORING No. LT-2**

PROFESSIONAL SERVICE INDUSTRIES, INC.		TEST BORING LOG		BORING NO. LT-2	
PROJECT: <u>ROYAL PARK BRIDGE</u>				SHEET NO. 1 OF 4	
CLIENT:				FIELD NO. <u>TR-85056</u>	
BORING LOCATION:		CARTON		ELEVATION <u>N/P</u>	
		TYPE <u>FLUID</u>		SOLID DEPTH <u>97.5'</u>	
		DRAIN <u>8" - 40'</u>		WATER DEPTH <u>17' from top</u>	
		DEPTH <u>6" - 75'</u>		DRAINING DATE <u>4/5/90</u>	
		DRAINING <u>MODEL 0-57 / MODEL 0-59</u>		DRAINER <u>P. TYSON</u>	
		CONTRACTOR <u>NORTH GUYANA</u>		LOCATION <u>TIERRA</u>	
DEPTH FT	BLOWS ON SAMPLE SPOON PER 5'	N VALUE	MATERIAL DESCRIPTION		REMARKS
0-27.5'			CASING		
27.5-31'			MUD LINE @ 27.5'		
31-34'					
34-37'					
37-40'					
40-43'					
43-46'					
46-49'					
49-52'					
52-55'					
55-58'					
58-61'					
61-64'					
64-67'					
67-70'					
70-73'					
73-76'					
76-79'					
79-82'					
82-85'					
85-88'					
88-91'					
91-94'					
94-97'					
97-100'					
100-103'					
103-106'					
106-109'					
109-112'					
112-115'					
115-118'					
118-121'					
121-124'					
124-127'					
127-130'					
130-133'					
133-136'					
136-139'					
139-142'					
142-145'					
145-148'					
148-151'					
151-154'					
154-157'					
157-160'					
160-163'					
163-166'					
166-169'					
169-172'					
172-175'					
175-178'					
178-181'					
181-184'					
184-187'					
187-190'					
190-193'					
193-196'					
196-199'					
199-202'					
202-205'					
205-208'					
208-211'					
211-214'					
214-217'					
217-220'					
220-223'					
223-226'					
226-229'					
229-232'					
232-235'					
235-238'					
238-241'					
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247-250'					
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253-256'					
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259-262'					
262-265'					
265-268'					
268-271'					
271-274'					
274-277'					
277-280'					
280-283'					
283-286'					
286-289'					
289-292'					
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295-298'					
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319-322'					
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325-328'					
328-331'					
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334-337'					
337-340'					
340-343'					
343-346'					
346-349'					
349-352'					
352-355'					
355-358'					
358-361'					
361-364'					
364-367'					
367-370'					
370-373'					
373-376'					
376-379'					
379-382'					
382-385'					
385-388'					
388-391'					
391-394'					
394-397'					
397-400'					
400-403'					
403-406'					
406-409'					
409-412'					
412-415'					
415-418'					
418-421'					
421-424'					
424-427'					
427-430'					
430-433'					
433-436'					
436-439'					
439-442'					
442-445'					
445-448'					
448-451'					
451-454'					
454-457'					
457-460'					
460-463'					
463-466'					
466-469'					
469-472'					
472-475'					
475-478'					
478-481'					
481-484'					
484-487'					
487-490'					
490-493'					
493-496'					
496-499'					
499-502'					
502-505'					
505-508'					
508-511'					
511-514'					
514-517'					
517-520'					
520-523'					
523-526'					
526-529'					
529-532'					
532-535'					
535-538'					
538-541'					
541-544'					
544-547'					
547-550'					
550-553'					
553-556'					
556-559'					
559-562'					
562-565'					
565-568'					
568-571'					
571-574'					
574-577'					
577-580'					
580-583'					
583-586'					
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616-619'					
619-622'					
622-625'					
625-628'					
628-631'					
631-634'					
634-637'					
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640-643'					
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709-712'					
712-715'					
715-718'					
718-721'					
721-724'					
724-727'					
727-730'					
730-733'					
733-736'					
736-739'					
739-742'					
742-745'					
745-748'					
748-751'					
751-754'					
754-757'					
757-760'					
760-763'					
763-766'					
766-769'					
769-772'					
772-775'					
775-778'					
778-781'					
781-784'					
784-787'					
787-790'					
790-793'					
793-796'					
796-799'					
799-802'					
802-805'					
805-808'					
808-811'					
811-814'					
814-817'					
817-820'					
820-823'					
823-826'					
826-829'					
829-832'					
832-835'					
835-838'					
838-841'					
841-844'					

Appendix A. (continued)

Boring No. LT-2

PROFESSIONAL SERVICE INDUSTRIES, INC.				TEST BORING LOG		BORING NO. <u>LT-2</u>	
PROJECT: <u>RYAN PARK BRIDGE</u>						SIT. NO. <u>2</u> OF <u>4</u>	
CITY: <u></u>						PROJ. NO. <u>85056 S/</u>	
BORING LOCATION				CROWN		NAVIGATION	
				TYPE <u>FLUSH POINT</u>		<u>N/P</u>	
				LEAK <u>8" → 40'</u>		BORING DEPTH <u>97.5'</u>	
				DEPTH <u>6" → 75'</u>		WATER DEPTH <u>10' FROM SURF</u>	
				DUELL NO. <u>B-59 & MSHL B-57</u>		WELL DATE <u>6/82</u>	
				CONTRACTOR <u>AUSTIN ENGINEERING</u>		DIRECTION <u>TOWARD</u>	
				MATERIAL DESCRIPTION		LOCATION <u>TERRA</u>	
						REMARKS	
	DEPTH FT.	DI. OF IN. SAMPLE BY. OF IN. FT.	BT VALUE				
1	15-16.5	15-9-13					
2	16.5	W/CON CASING					
3	17.5-19	8-10-15	25	LT GR F. SA			
4	(20-21.5)	15-21-70					
5	22.5-24	22-52-24	10	SAME			
6	25-26.5	W/CON - 1-1	2	SAME			
7	27.5-29	2-2-3	5	GR F. SA			
8	30-31.5	7-5-2	7	LT GR SHELLY SAND			
9	32.5-34	3-3-3	6	GR CEMENTED SAND			
10	35-36.5	3-50/4"	50/4"	GR CEM. SAND FRAGMENTS			
11	37	CORING		1st FOOT → 2 min 15 sec			
12	41	FLY 3/4 TO 41'		2nd FOOT → 2 min 6 sec			
13	38	INNER CASING		3rd FOOT → 2 min 5 sec			
14	41-42.5	6-6-4	10	GR F. SA w/CON SAND FRAGMENTS.			
15	43.5-45	7-6-8					
16	46-47.5	7-10-9	19	SAME			
17	48.5-50	30-29-25					
18	51-52.5	34-20-17	37	SAME			
19	53.5-55	50 1/2"					

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

Appendix A. (continued)

BORING NO. LT-2

PROFESSIONAL SERVICE INDUSTRIAL INC.				TEST BORING LOG		BORING NO. LT-2
PROJECT: ROYAL VAPOR BRIDGE						INSTR. 3 OF 4
CLIENT:						WELL NO. 2506 3/7
BORING LOCATION:						ELEVATION: NVP
						BORING DEPTH: 97.5'
						WATER DEPTH: ± 17' FROM SURF
						DRILLED DATE: 8-2-2013
						DRILLER: PT/SON/TAB
						LOCATION: TIERRA
DEPTH FE.	DEPTH FT.	BLOWS OR SAMPLE SPACING FEEL 6"	SPT VALUE	MATERIAL DESCRIPTION		REMARKS
0-1		4" CORING				
1-5		53.5 TO 58.5		3rd RUN → 3 min or less		NO RECOVERY
5-7						
7-8						
8-9						
9-10						
10-11						
11-12						
12-13						
13-14						
14-15						
15-16						
16-17						
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95-96						
96-97						
97-98						
98-99						
99-100						

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

Boring No. LT-2

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

Appendix A. (continued)

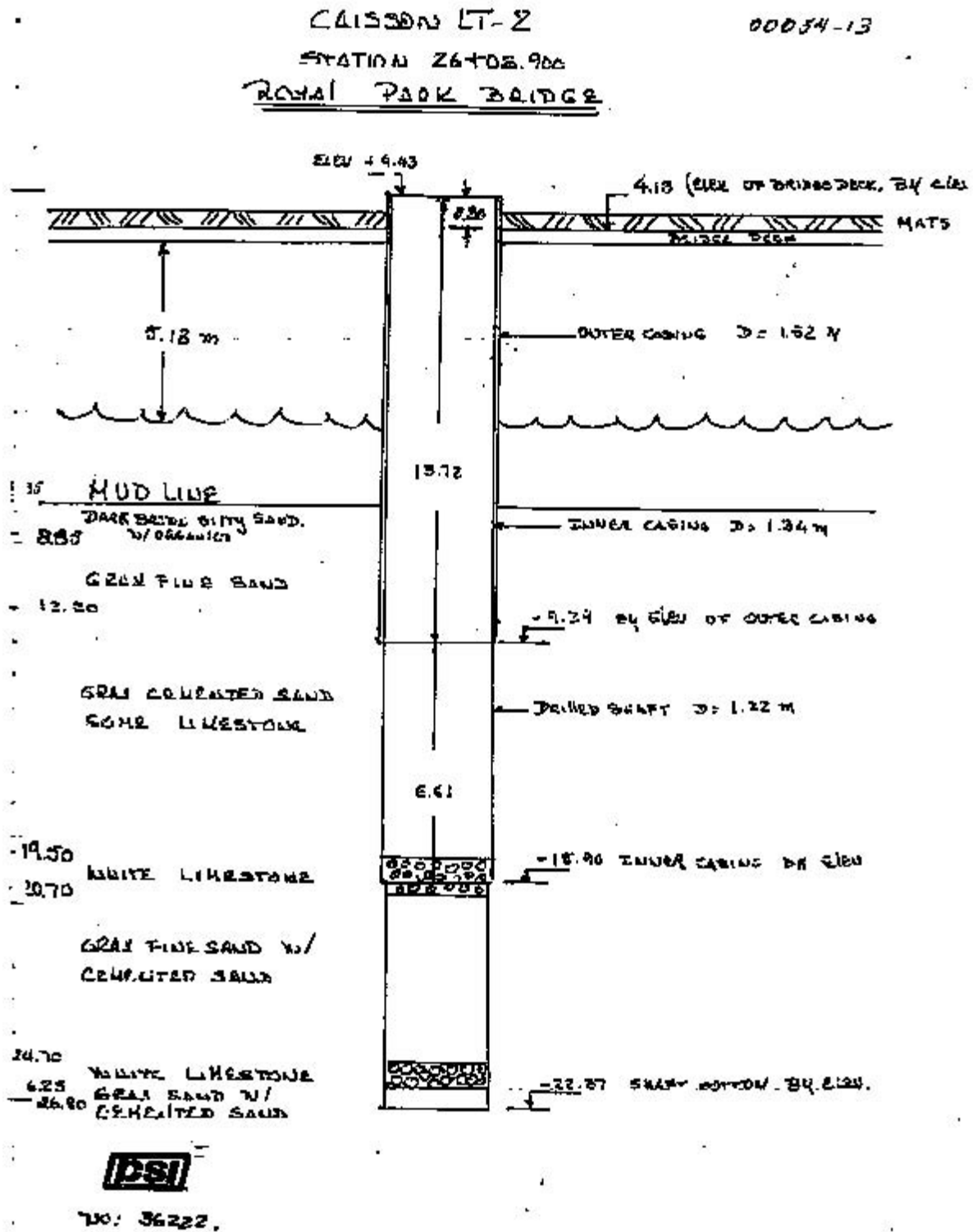


Figure A-59. Site III LT-2 as-built.

July 20, 2000

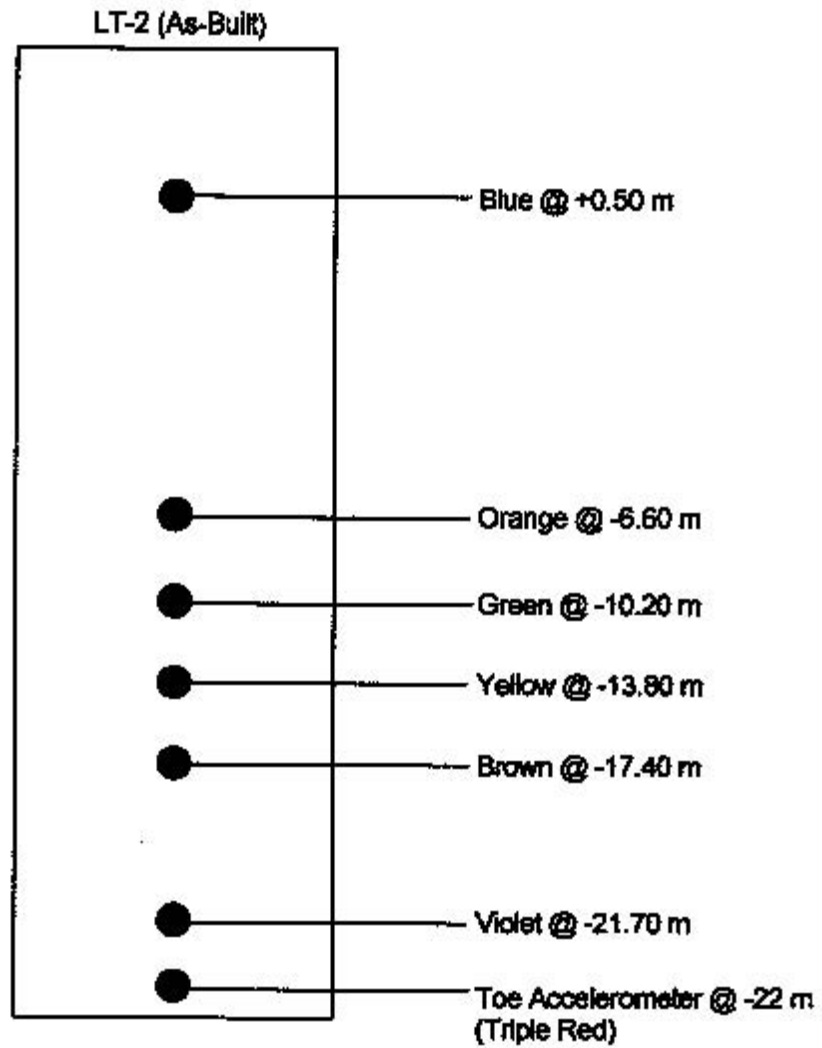


Figure A-60. Site III strain gage locations.

July 20, 2000

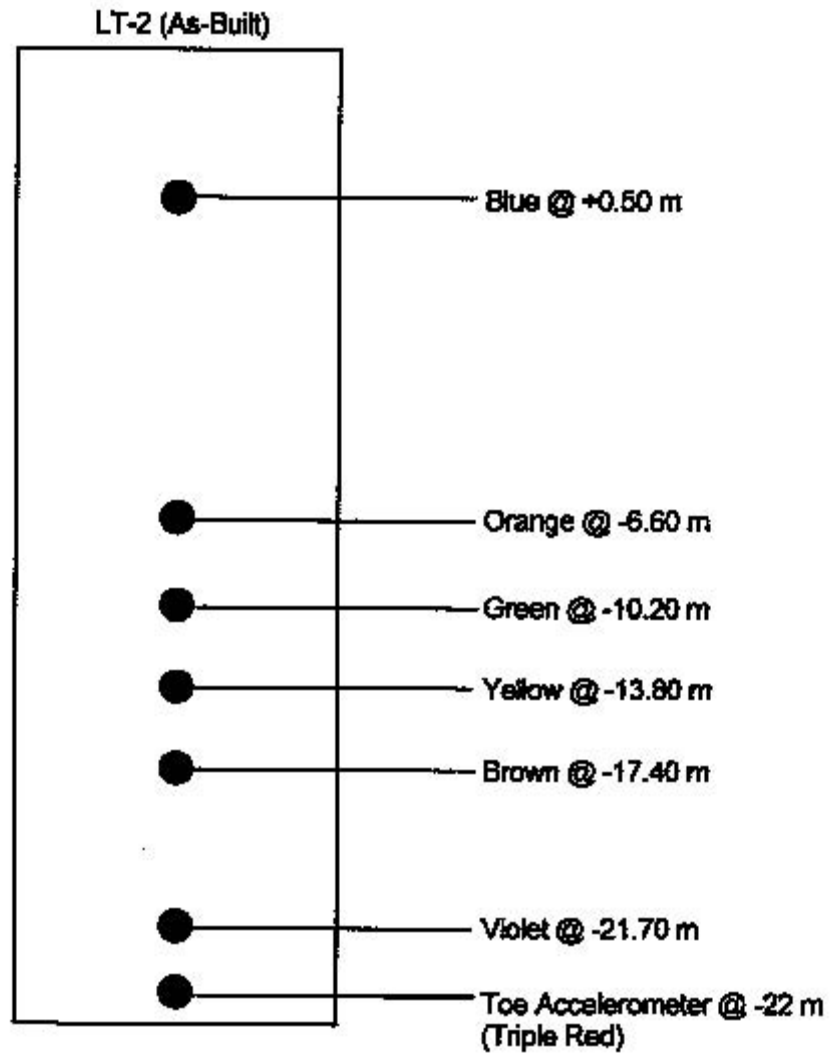


Figure A-61. Site III LT-2 strain gage locations.

Appendix A. (continued)

INSPECTION FIELD LOG				CAISSON /		AUGERCAST PILE																											
PROJECT NAME Royal Park Bridge				PROJECT NO. 00007-13																													
GENERAL CONTRACTOR DEL				PERMIT NO.																													
BRIDGE 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 yd) 40.72																													
BRIEF OF SAMPLE/PILE NUMBER NUMBER, IN				THEORETICAL VOLUME (cu yd) 36.23																													
CAISSON/PILE TOTAL LENGTH 26.65 ft				CONCRETE FACTOR 1.12																													
PENETRATION IN ROCK (ft)				NO. OF TEST SAMPLES MADE (cylinders, wedges) 4																													
DESIGN DIAMETER (in) 1.22				SIZE OF CONC. SAMPLE 3"x3" (5" dia)		3"x3"x3"																											
ACTUAL BOLD DIAMETER (in) 1.34				TYPICAL PIPE DIAMETER (in) 0.25																													
REINFORCING (ACTUAL USED)																																	
VERTICAL		No.	SIZE	TOTAL LENGTH																													
		16	32	26.47 ft																													
		3	16	SP-21 STIRRUPS																													
HORIZONTAL		No.	SIZE	LENGTH ABOVE REMAIN SURFACE																													
TOP CONC. COVER (in)		each way on top of the conc. caps																															
NO. OF BARS		SIZE	in																														
3		16	0.700 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	in	LENGTH ABOVE GROUND																										
HORIZONTAL BARS/BOLTS		TOP	BOTTOM	BOLT CIRCLES DIA.	in																												
FOOTING DIA OR TOP		CIRC DIA DIA	ft	in	ft	in	LENGTH ABOVE GROUND																										
T ADJACENT PILE		ENTRANCEMENT	VERTICAL No.	SIZE	TIE No.	SIZE																											
LINE GRADED SURFACE ↑ L2 ↑ ↑ L1 ↓ <table border="1"> <thead> <tr> <th colspan="2">DEPTH (ft)</th> <th rowspan="2">SOIL DESCRIPTION</th> </tr> <tr> <th>FROM</th> <th>TO</th> </tr> </thead> <tbody> <tr> <td>- 8.35</td> <td>- 8.85</td> <td>DARK BROWN Silty SAND w/CAVITIES</td> </tr> <tr> <td>- 8.85</td> <td>- 12.20</td> <td>GRAY FINE SAND</td> </tr> <tr> <td>- 12.20</td> <td>- 19.50</td> <td>GRAY COMPACTED SAND - w/4% L.I.E. STONE</td> </tr> <tr> <td>- 19.50</td> <td>- 20.70</td> <td>HIGH L.I.E. STONE (LOCAL LAYER)</td> </tr> <tr> <td>- 20.70</td> <td>- 24.70</td> <td>GRAY FINE SAND w/COMPACTED SAND, FINE</td> </tr> <tr> <td>- 24.70</td> <td>- 25.25</td> <td>2% L.I.E. STONE (LOCAL LAYER)</td> </tr> <tr> <td>- 25.25</td> <td>- 26.20</td> <td>GRAY FINE SAND w/COMPACTED SAND, FINE</td> </tr> </tbody> </table>								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	- 19.50	GRAY COMPACTED SAND - w/4% L.I.E. STONE	- 19.50	- 20.70	HIGH L.I.E. STONE (LOCAL LAYER)	- 20.70	- 24.70	GRAY FINE SAND w/COMPACTED SAND, FINE	- 24.70	- 25.25	2% L.I.E. STONE (LOCAL LAYER)	- 25.25	- 26.20	GRAY FINE SAND w/COMPACTED SAND, FINE
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	- 19.50	GRAY COMPACTED SAND - w/4% L.I.E. STONE																															
- 19.50	- 20.70	HIGH L.I.E. STONE (LOCAL LAYER)																															
- 20.70	- 24.70	GRAY FINE SAND w/COMPACTED SAND, FINE																															
- 24.70	- 25.25	2% L.I.E. STONE (LOCAL LAYER)																															
- 25.25	- 26.20	GRAY FINE SAND w/COMPACTED SAND, FINE																															
Technical/Inspector <i>[Signature]</i>																																	

Figure A-62. Site III LT-2 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 STATNOMIC TEST

DATE: June 22, 2000

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

PAGE 1 OF 2

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

SET NO.	NO. OF TESTS MADE	CONCRETE TRUCK NUMBER	TIME TRUCK DEPARTED	TIME TRUCK ARRIVED	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	05:22 pm	06:00 pm	10.0				
		2242759	05:29 pm	05:15 pm	10.0	9		88	91
		2242760	05:43 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, SHALL BE USED. SLUMP (INCHES); AIR CONTENT (PERCENT); TEMPERATURE (IN DEGREES FAHRENHEIT) OF CONCRETE.

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 FOR THE SPECIFIC SAMPLES TESTED AND MAY NOT BE VALID FOR OTHER SAMPLES OR OTHER PLACEMENTS.
REPORTS MAY NOT BE REPRODUCED, COPIED, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, WITHOUT PERMISSION BY PROFESSIONAL SERVICE INDUSTRIES, INC.

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

1A-0004-001 Professional Service Industries, Inc. • 7900 Central Industrial Drive, N. Suite 120 • Riverview, FL 33404 • Phone 813/944-8404 • Fax 813/944-8404

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

OUR REPORT NO.: 772-00054-15

REVISION #1

PAGE 2 OF 2

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

BATCH NO.	NO. OF CYCLES TESTED	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: CRUSION LT-2

LT-2 FROM -3.44 to 00

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

TECHNICIAN: L. POMER

CO: CLIENT (1),

WE HEREBY CERTIFY THAT THE INFORMATION CONTAINED HEREIN IS TRUE AND CORRECT TO THE BEST OF OUR KNOWLEDGE AND BELIEF.

Respectfully submitted,
Professional Service Industries, Inc.
Bartholomew
Bartholomew, P.E.
Florida #51377

Professional Service Industries, Inc. • 7300 Central Expressway, Suite 120 • Miami Beach, FL 33404 • Phone 305-444-8404 • Fax 305-444-8474

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

Appendix A. (continued)

00004-13

CONCRETE QTY

$$D = 1.22$$

$$h = 6.47 \text{ m}$$

$$\Delta = 1.17 \text{ m}^2$$

$$U = 7.57 \text{ m}^3$$

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

$$D = 1.34 \text{ m}$$

$$h = 20.33 \text{ m}$$

$$\Delta = 1.41 \text{ m}^2$$

$$U = 28.67 \text{ m}^3$$

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

CONCRETE SURFACE ELEV

TRUCK	H THEORETICAL	H ACTUAL
	- 26.80	
1	- 21.55	- 22.26
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)

PSI

NO: 06222

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

Information To Build On
Engineering • Consulting • Testing

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

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

LOCATION OF PLACEMENT CA1900N LT-2
LT-2 FROM -26.80 TO 22.86

SUPPLIER	TARGAC
DELIVERY TICKET NO./TRUCK NO.	3242756
MIX NUMBER AND PROPORTIONS	M880434
CEMENT	---
WATER	---
FINE AGGREGATE	---
COARSE AGGREGATE	---
AD MIXTURE	---

ASTM C618-10

SPECIFICATIONS

Test results comply with applicable standards.

**Total results do not comply with
regulation specifications.**

Respectfully submitted,
Professional Services Industries, Inc.
Partha Ghosh
Partha Ghosh, P.E.
Florida #51377

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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 STATOMIC 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
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.
E.C. DRIVER AND ASSOCIATES
500 NORTH WESTSHORE BLVD
SUITE #700
TAMPA, FL 33609

PROJECT: MONITORING DRILLED SHAFT
CONSTR. FOR STATISCANIC TEST

DATE: June 19, 2008

REVISION #3
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-S2-01 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.

Parth Ghosh, P.E.
Florida #51277

cc: 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 33607

PROJECT: MONITORING DRILLED SHAFT
CONST. FOR STATISMIC TEST

DATE: June 28, 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 2:00 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

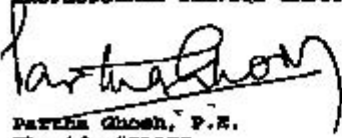
on the drilled shaft walls below the existing casing bottom.

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

Inspector: L. Ponon
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 caisson 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.

Parthiv Ghosh
Parthiv 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
CONST. FOR SEISMIC TEST

DATE: JUNE 22, 2000

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

REMARKS:

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

The following was noted:

1. 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
2. From 12:00 p.m. to 3:00 p.m. contractor cleaned up the bottom of shaft.
3. At 3:00 p.m. steel reinforcing was placed in the shaft, and a 0.25 meter diameter Trimis was installed.
4. At 4:30 p.m. concrete pouring began, four cylinders were cast and left in a cure box at the job site.
5. 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. Ponce
Total Hours: 13.0

Respectfully submitted,

PROFESSIONAL SERVICE INDUSTRIES, INC.

Parthiv Ghosh
Parthiv Ghosh, P.E.
Florida #51177

cc: CLIENT (1).

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

Appendix A. (continued)



Engineering • Consulting • Testing

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 33609	PROJECT: MONITORING DRILLED SHAFT CONST. FOR SEISMIC TEST
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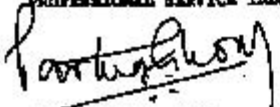
DATE: June 23, 2000	REVISION #1 OUR REPORT NO: 772-00054-1B
----------------------------	--

REMARKS:

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

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,

 Patricia Ghosh, P.E.
 Florida 001277

ONE CYLINDER (1),

PS&T HAS NOT BE REGISTERED, GROUPS IN FLA, WITH STATE DEPARTMENT OF PROFESSIONAL REGULATION, BOARD OF ENGINEERS, INC.

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

Appendix B. Grouting Data Reduction

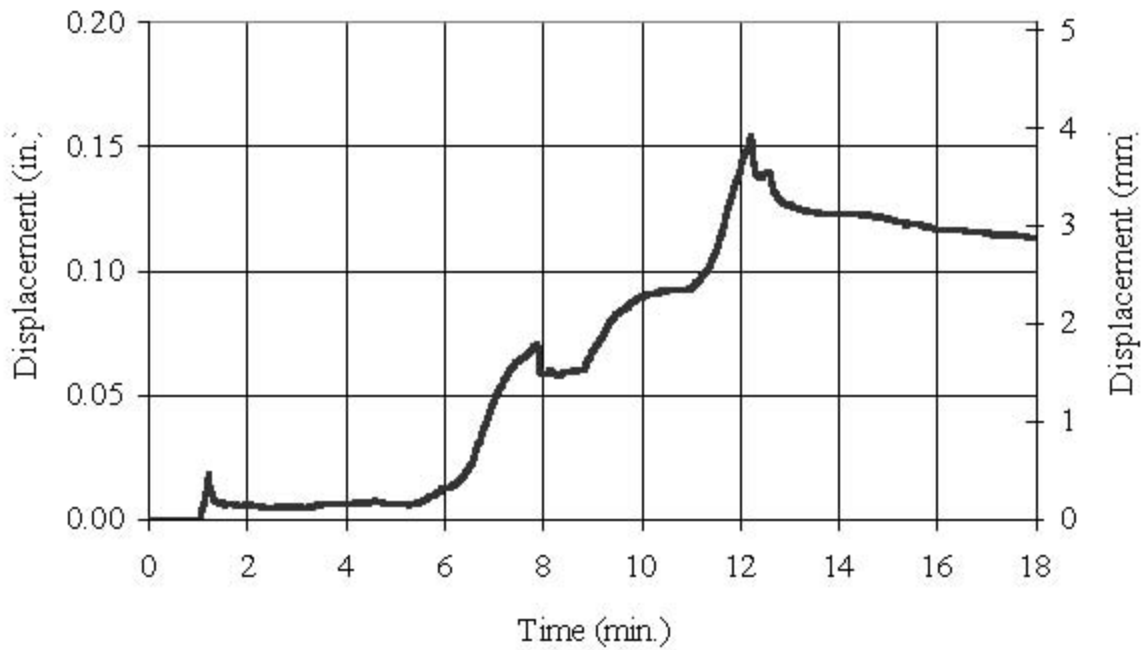


Figure B-1. Site I Flat-Jack 1 grouting displacement vs. time.

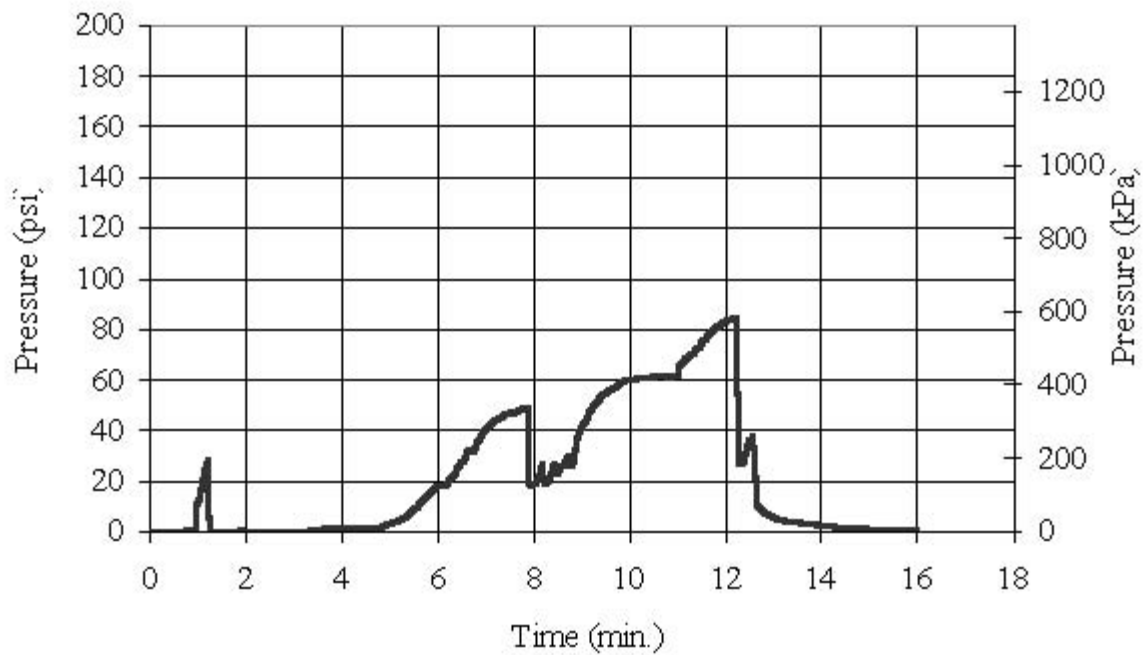


Figure B-2. Site I Flat-Jack 1 grouting pressure vs. time.

Appendix B. (continued)

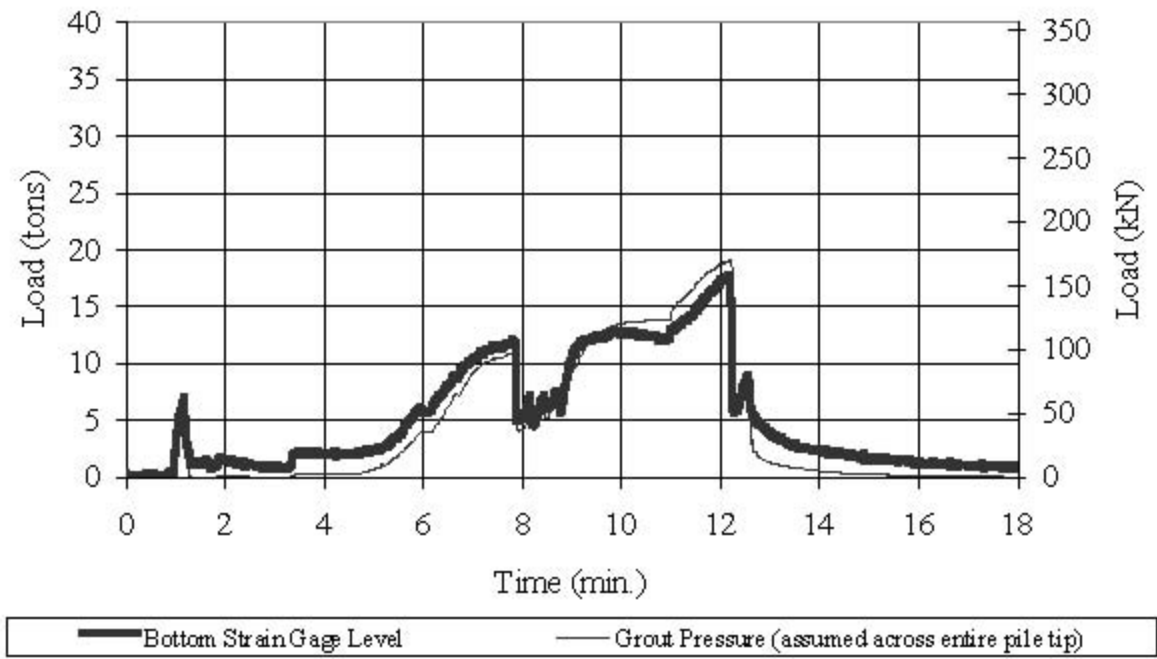


Figure B-3. Site I Flat-Jack 1 grouting load vs. displacement.

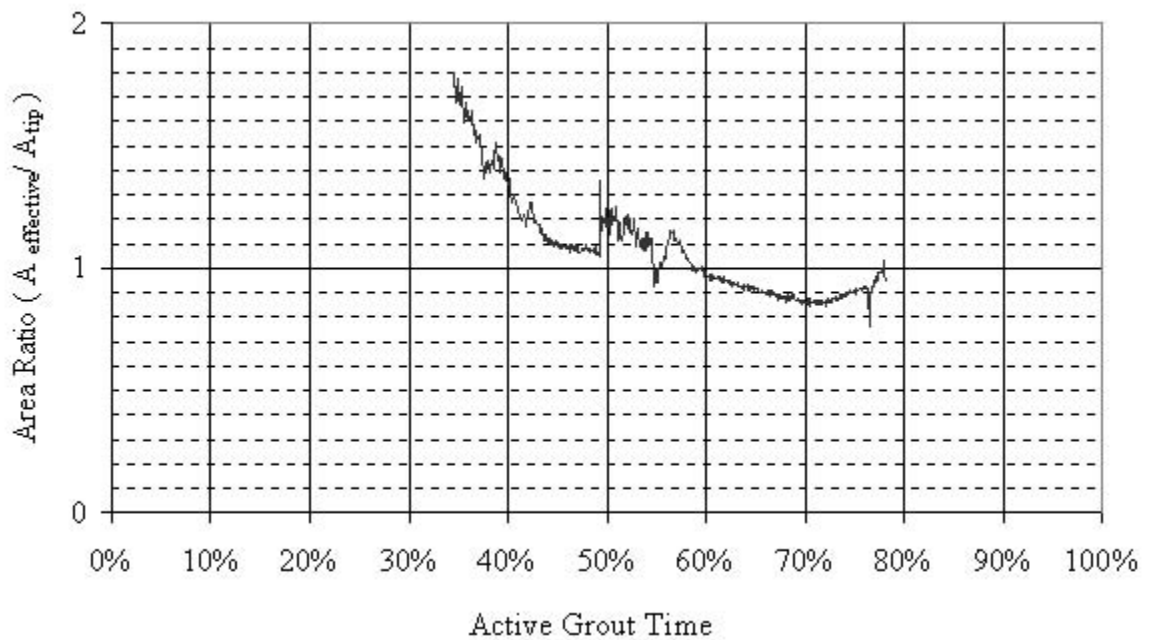


Figure B-4. Site I Flat-Jack 1 grouting area ratio vs. active grout time.

Appendix B. (continued)

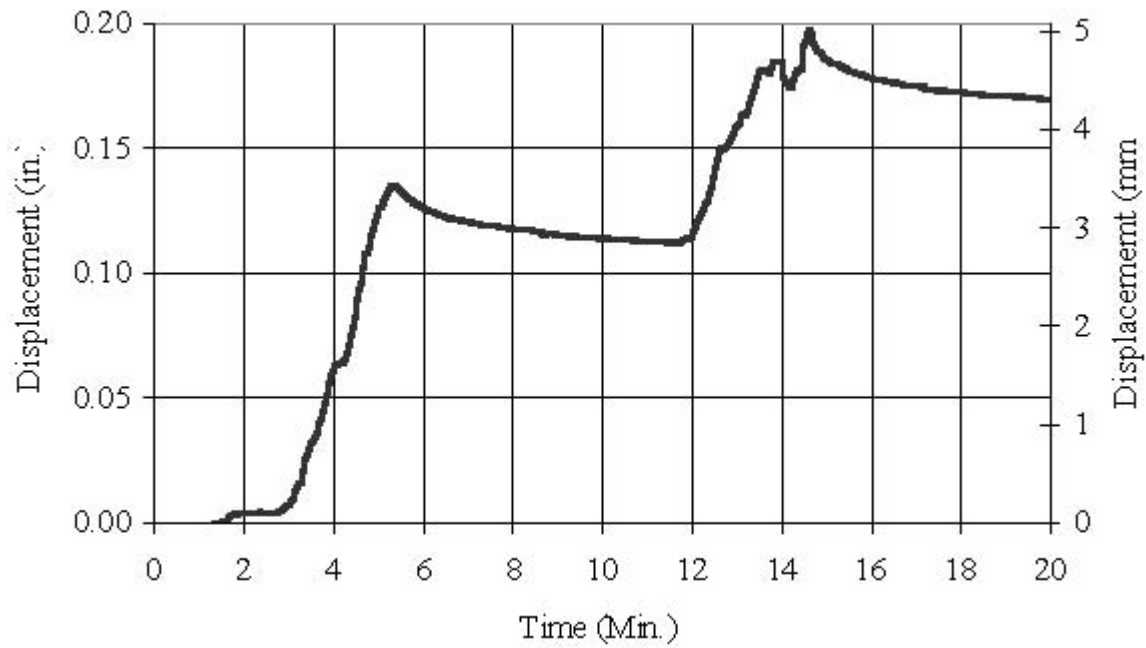


Figure B-5. Site I Flat-Jack 2 grouting displacement vs. time.

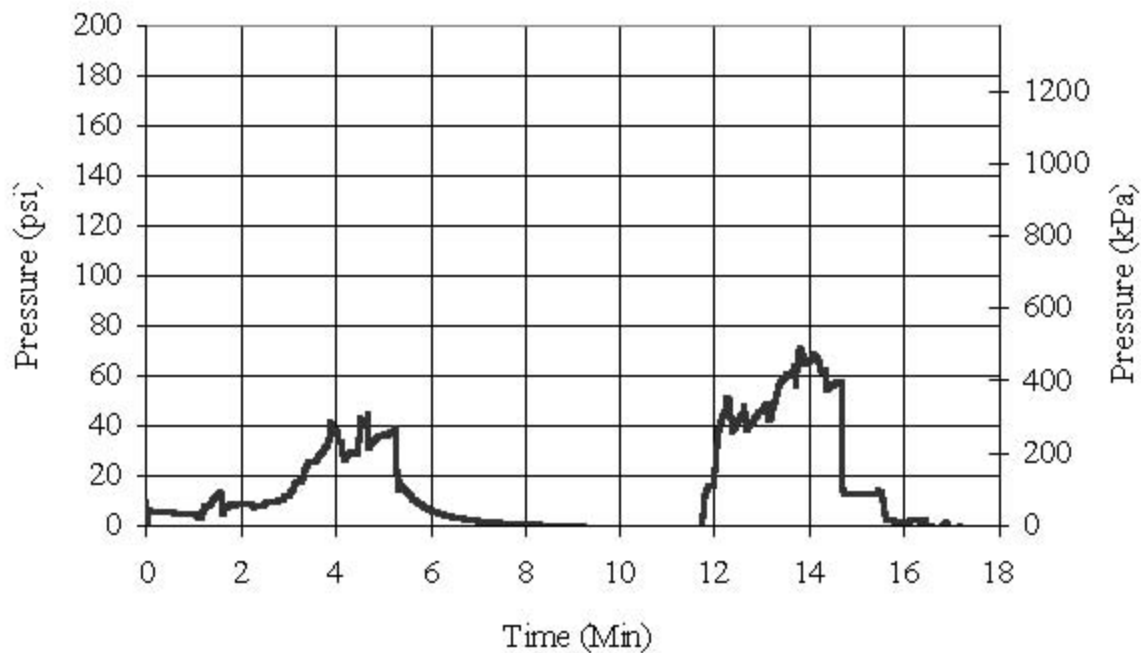


Figure B-6. Site I Flat-Jack 2 grouting pressure vs. time.

Appendix B. (continued)

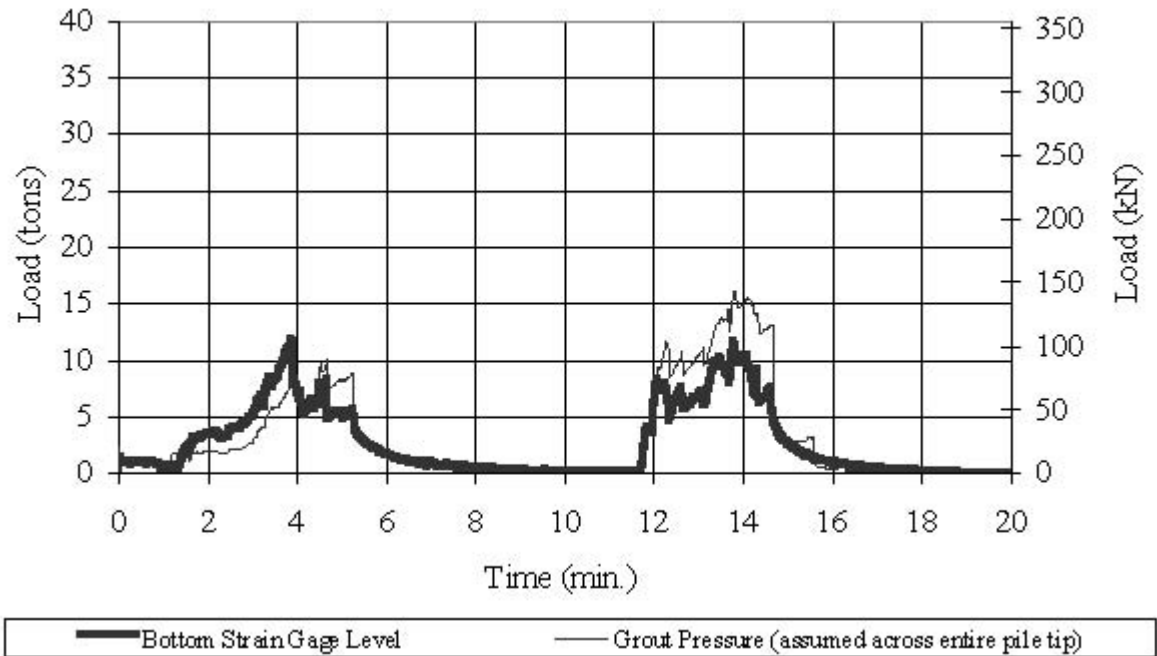


Figure B-7. Site I Flat-Jack 2 grouting load vs. time.

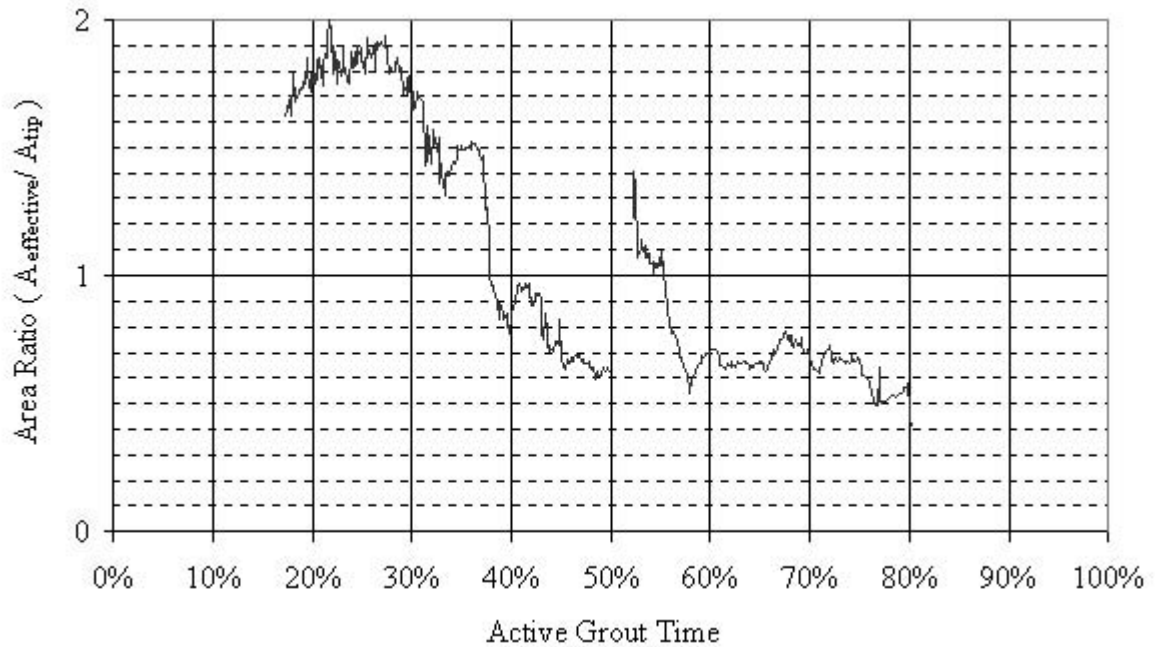


Figure B-8. Site I Flat-Jack 2 grouting area ratio vs. active grout time.

Appendix B. (continued)

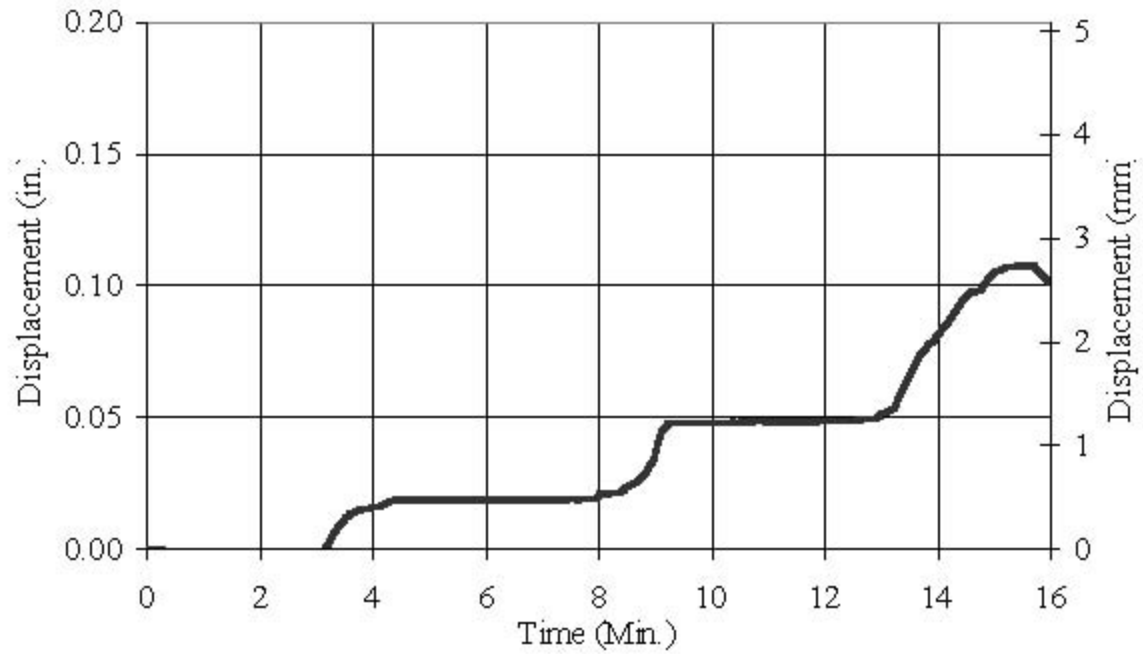


Figure B-9. Site I Sleeve-Port 1 grouting displacement vs. time.

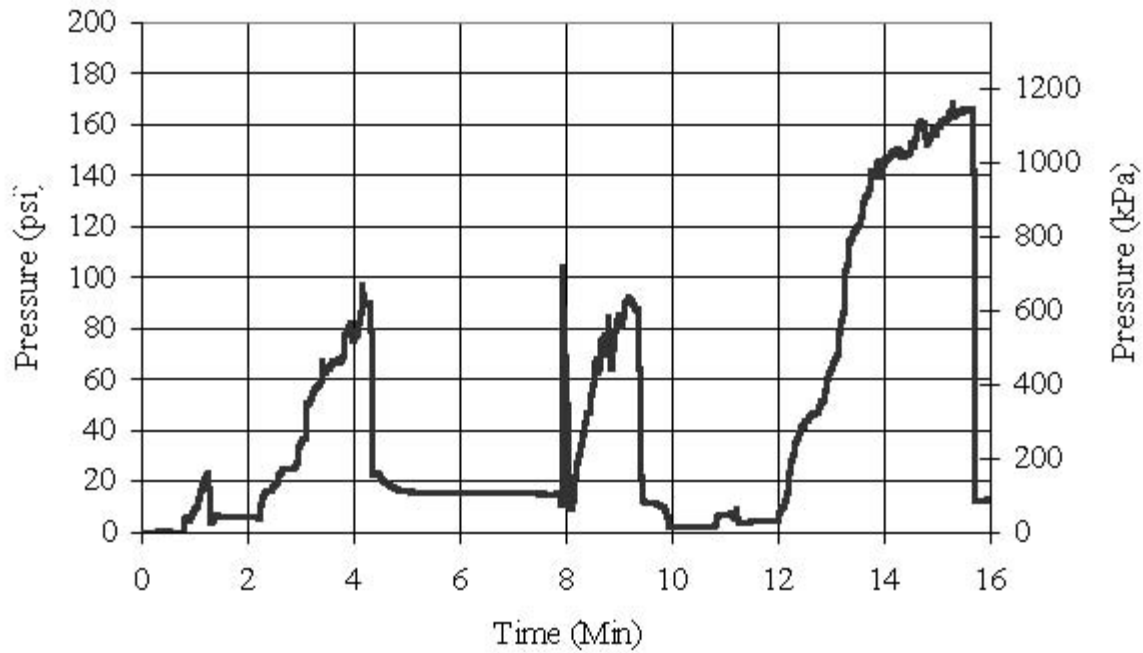


Figure B-10. Site I Sleeve-Port 1 grouting pressure vs. time.

Appendix B. (continued)

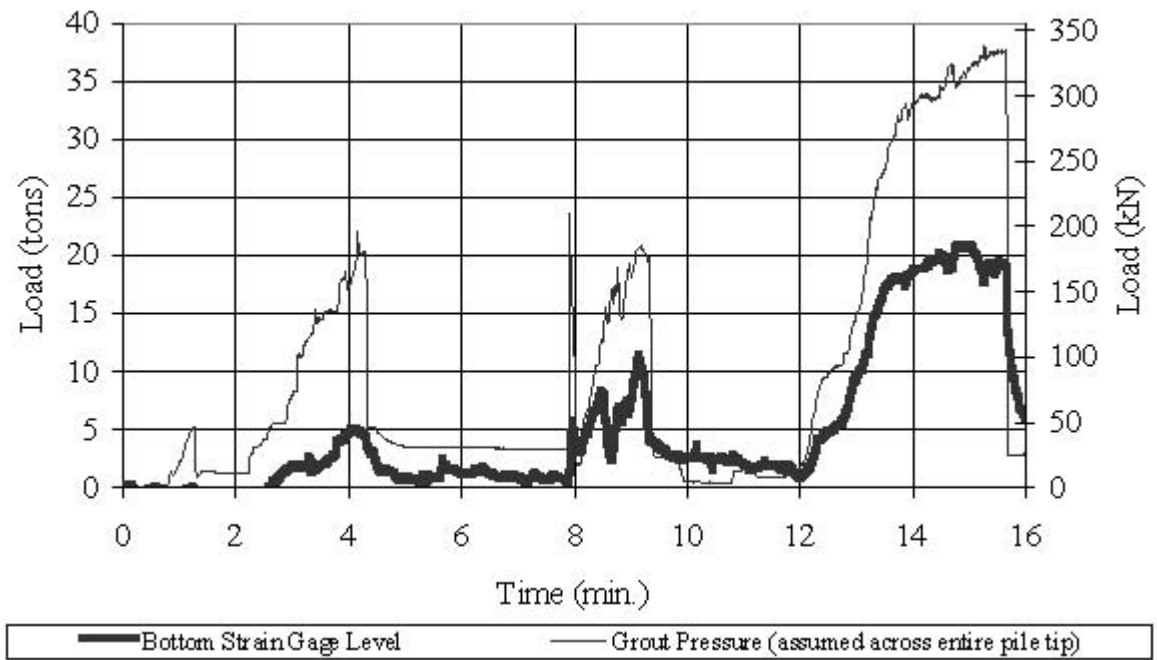


Figure B-11. Site I Sleeve-Port 1 grouting load vs. time.

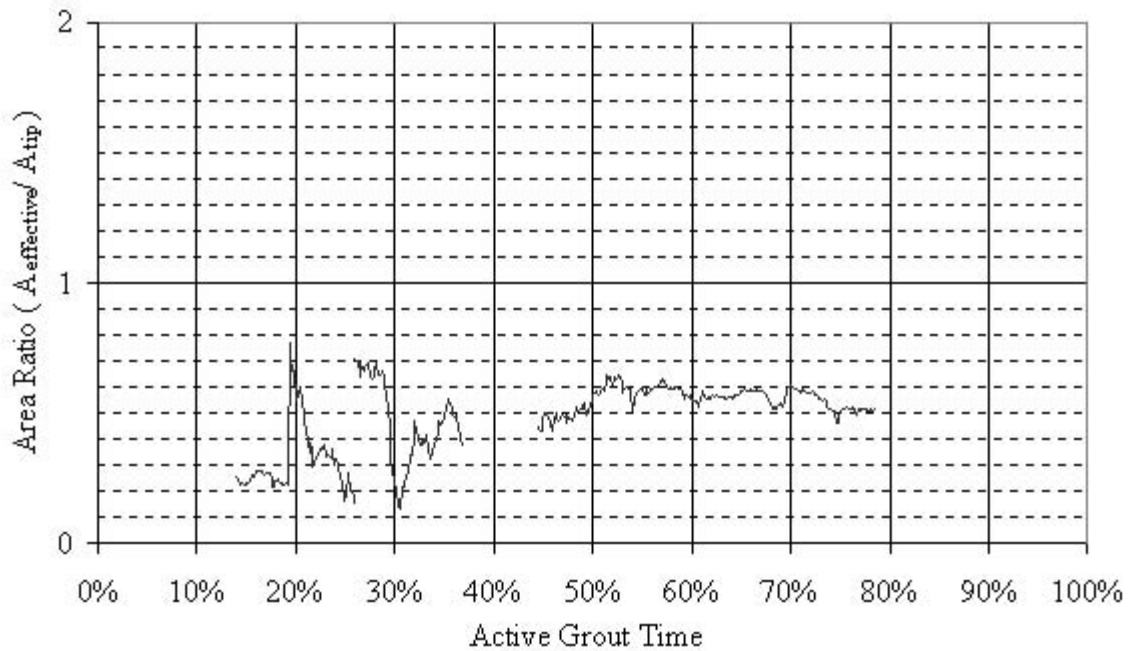


Figure B-12. Site I Sleeve-Port 1 grouting area ratio vs. active grout time.

Appendix B. (continued)

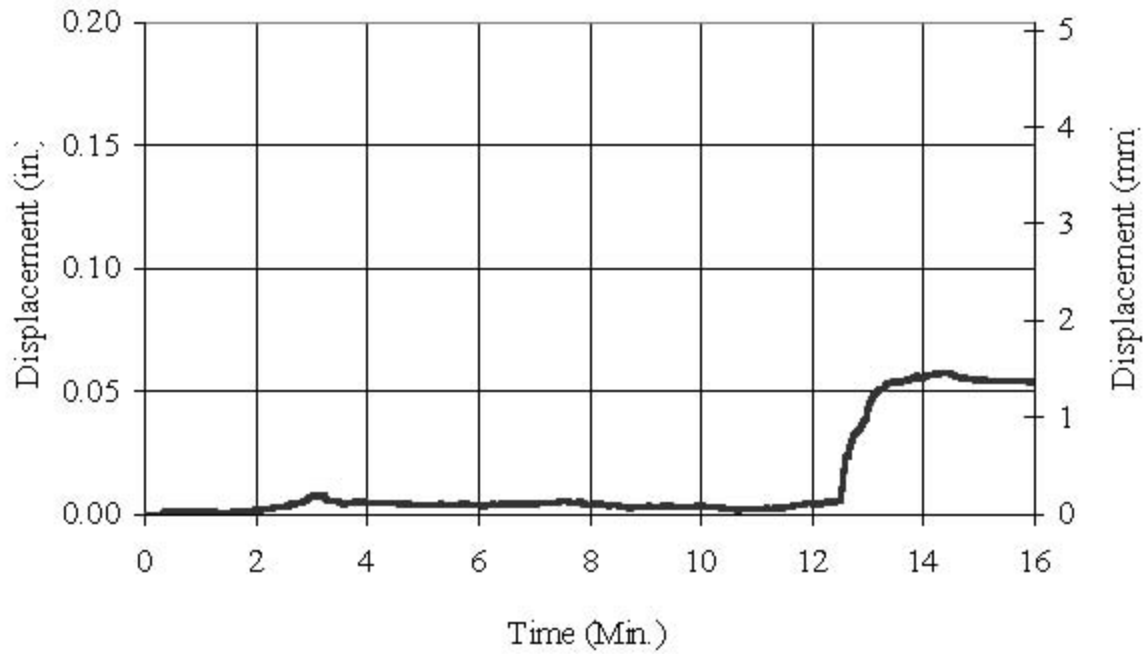


Figure B-13. Site I Sleeve-Port 2 grouting displacement vs. time.

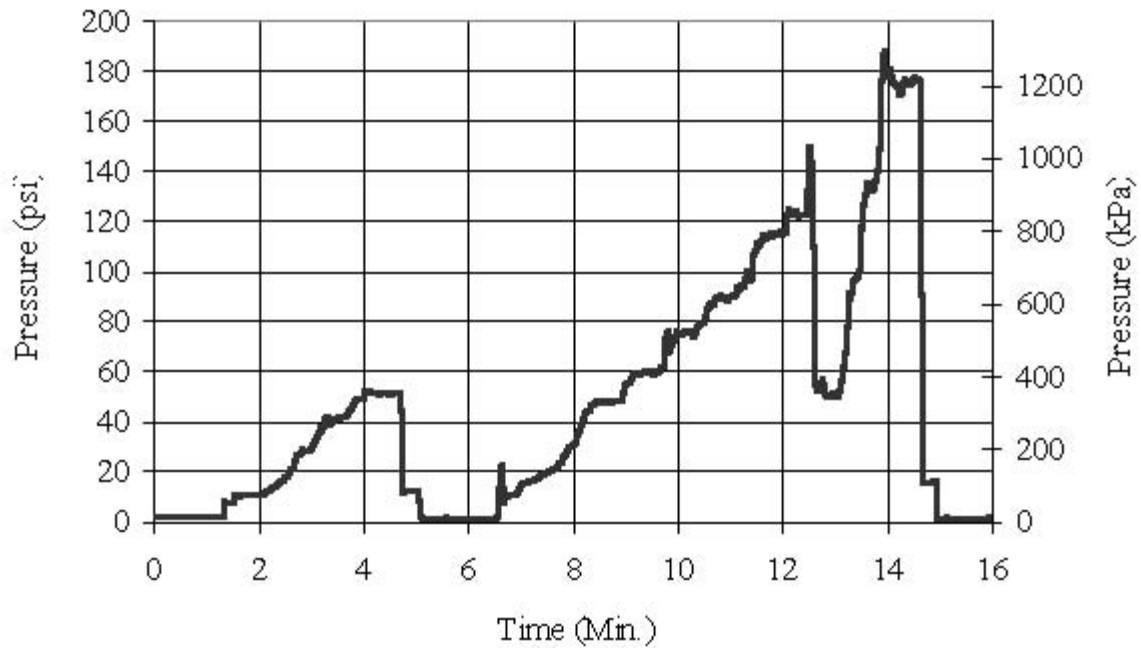


Figure B-14. Site I Sleeve-Port 2 grouting pressure vs. time.

Appendix B. (continued)

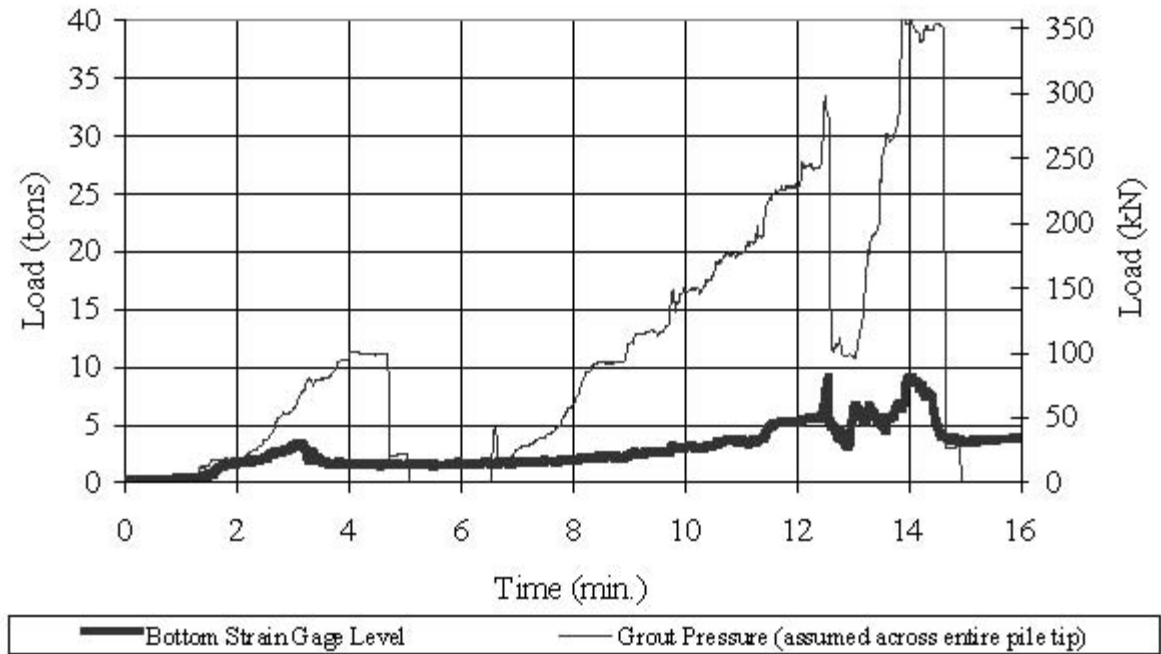


Figure B-15. Site I Sleeve-Port 2 grouting load vs. time.

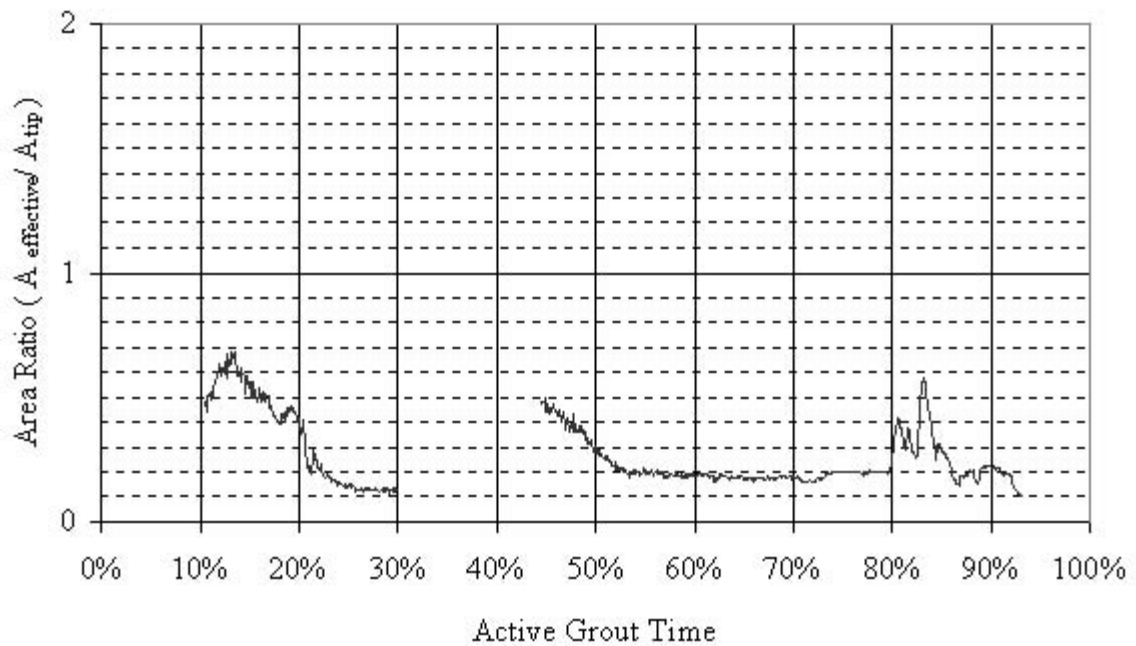


Figure B-16. Site I Sleeve-Port 2 grouting area ratio vs. active grout time.

Appendix B. (continued)

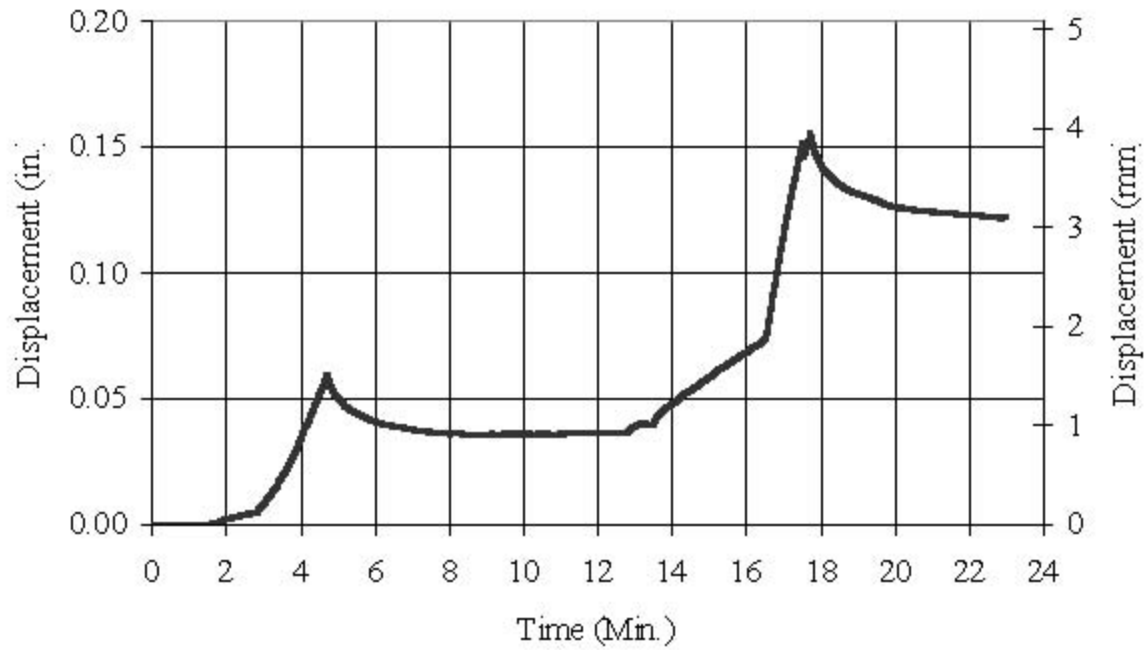


Figure B-17. Site II Flat-Jack grouting displacement vs. time.

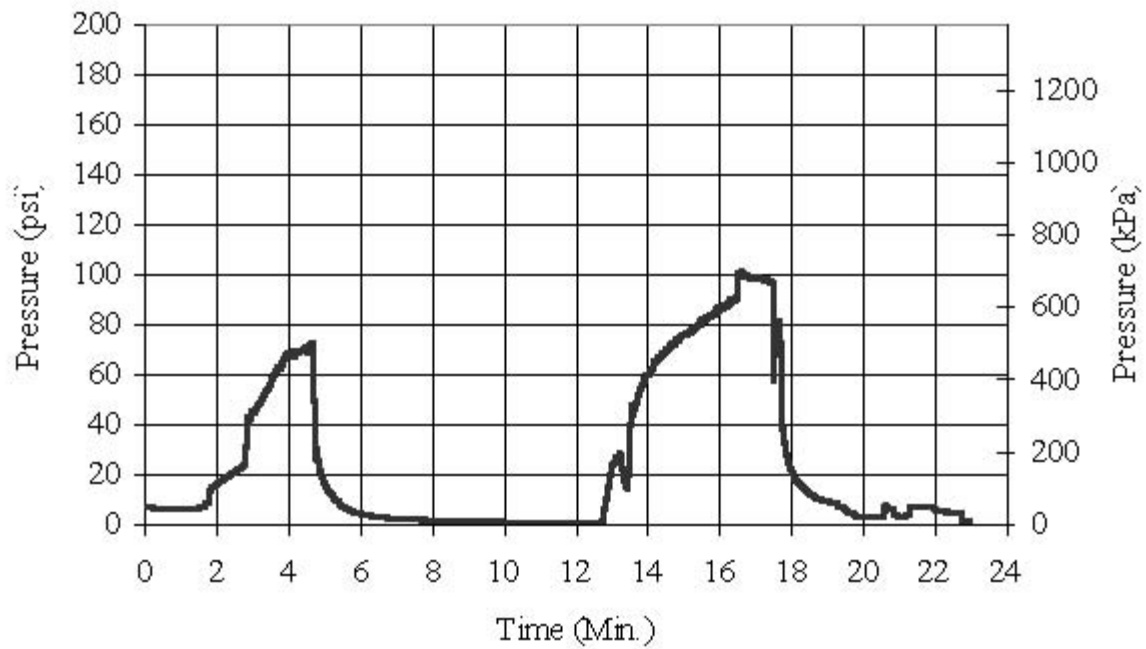


Figure B-18. Site II Flat-Jack grouting pressure vs. time.

Appendix B. (continued)

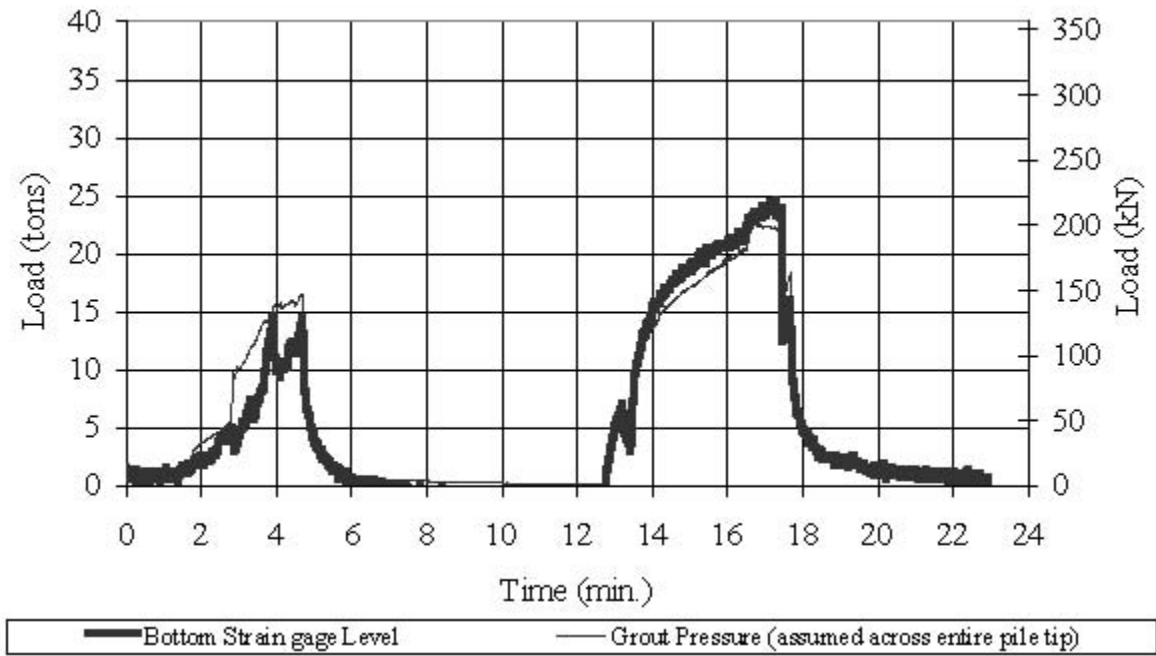


Figure B-19. Site II Flat-Jack grouting load vs. time.



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

Appendix B. (continued)

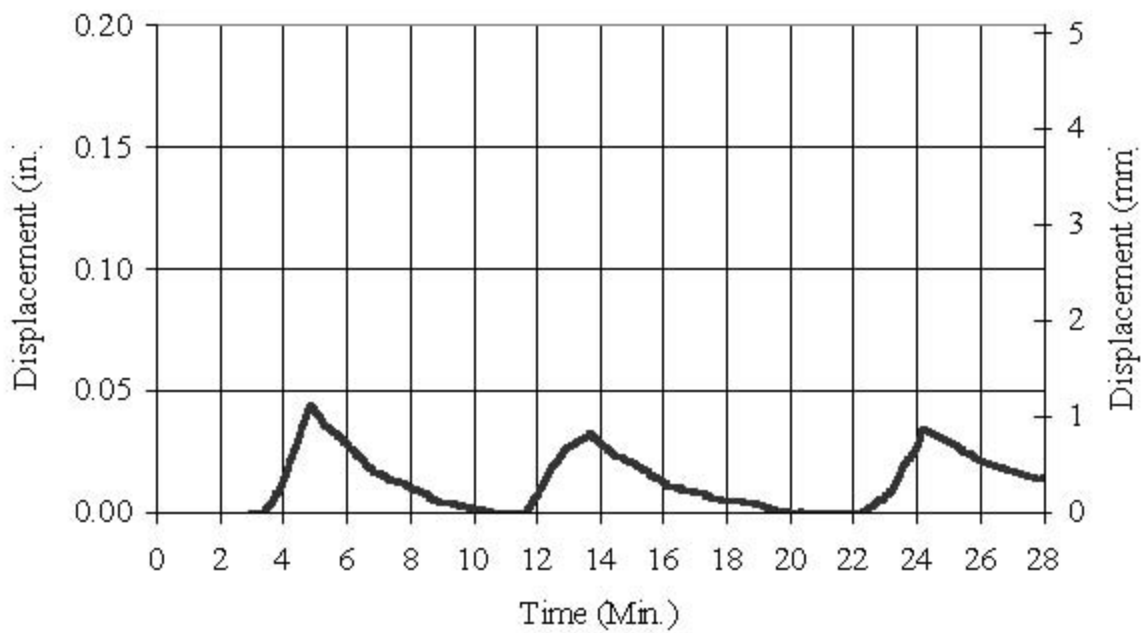


Figure B-21. Site II Sleeve-Port grouting displacement vs. time

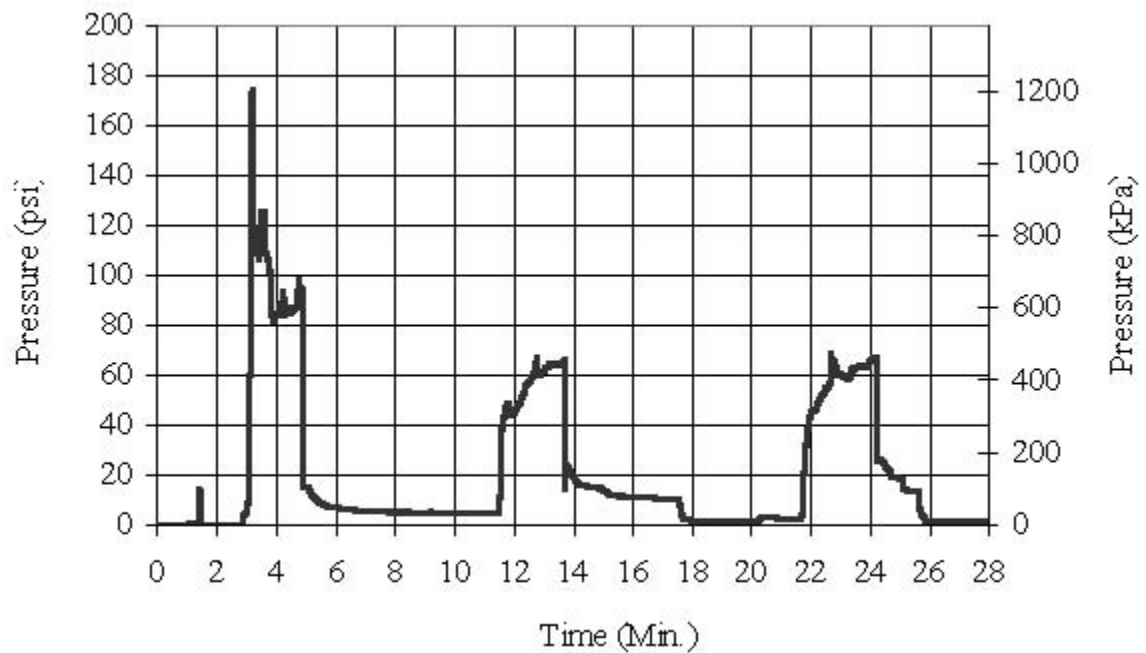


Figure B-22. Site II Sleeve-Port grouting pressure vs. time.

Appendix B. (continued)

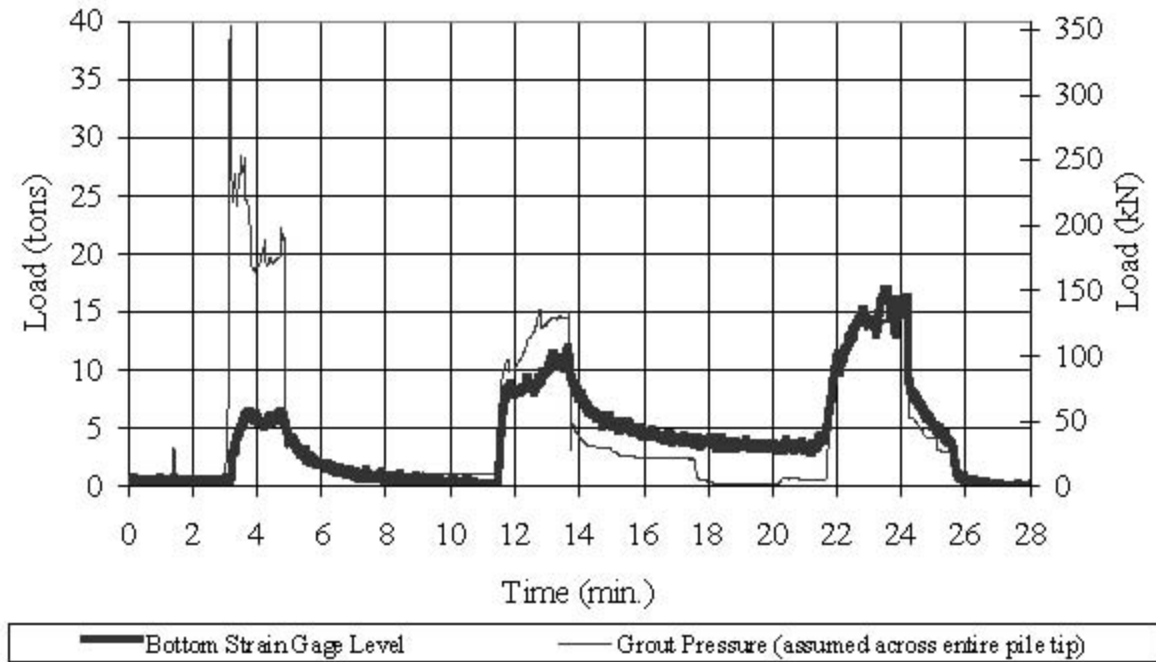


Figure B-23. Site II Sleeve-Port grouting Load vs. time.

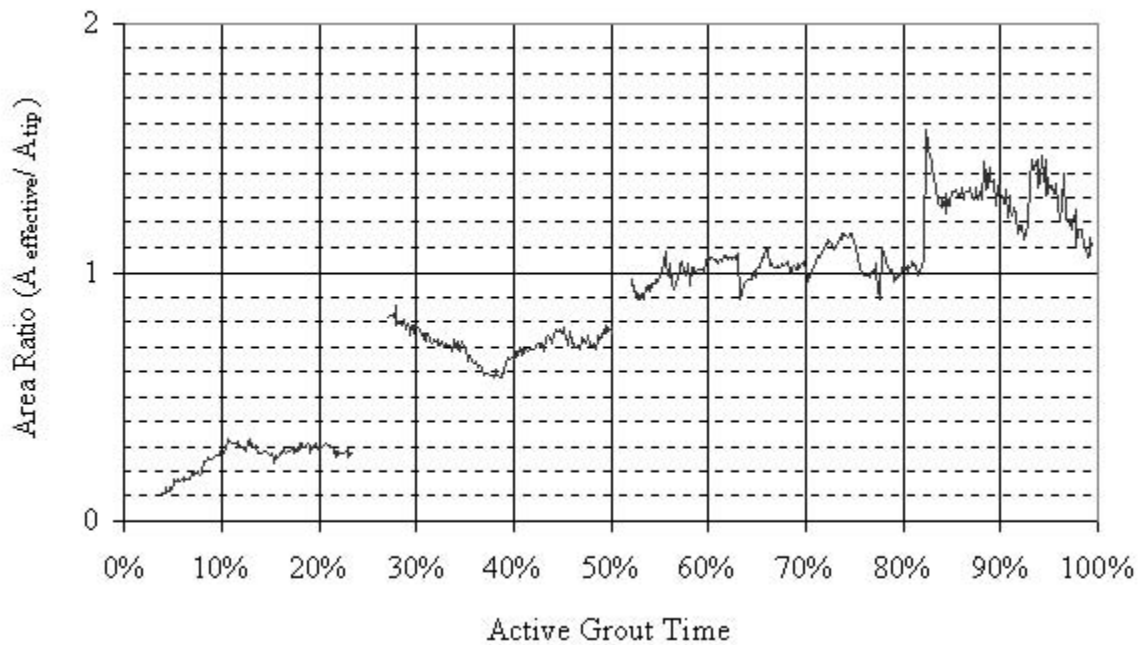


Figure B-24. Site II Sleeve-Port grouting area ratio vs. active grout time.

Appendix B. (continued)

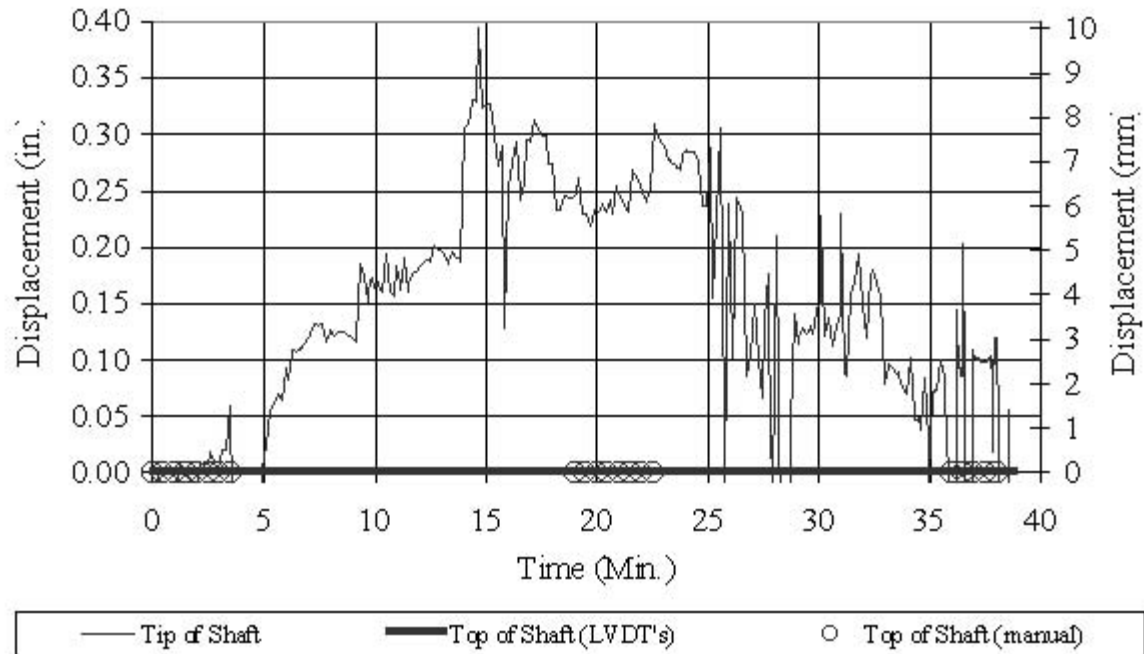


Figure B-25. Site III LT-3 grouting displacement vs. time.

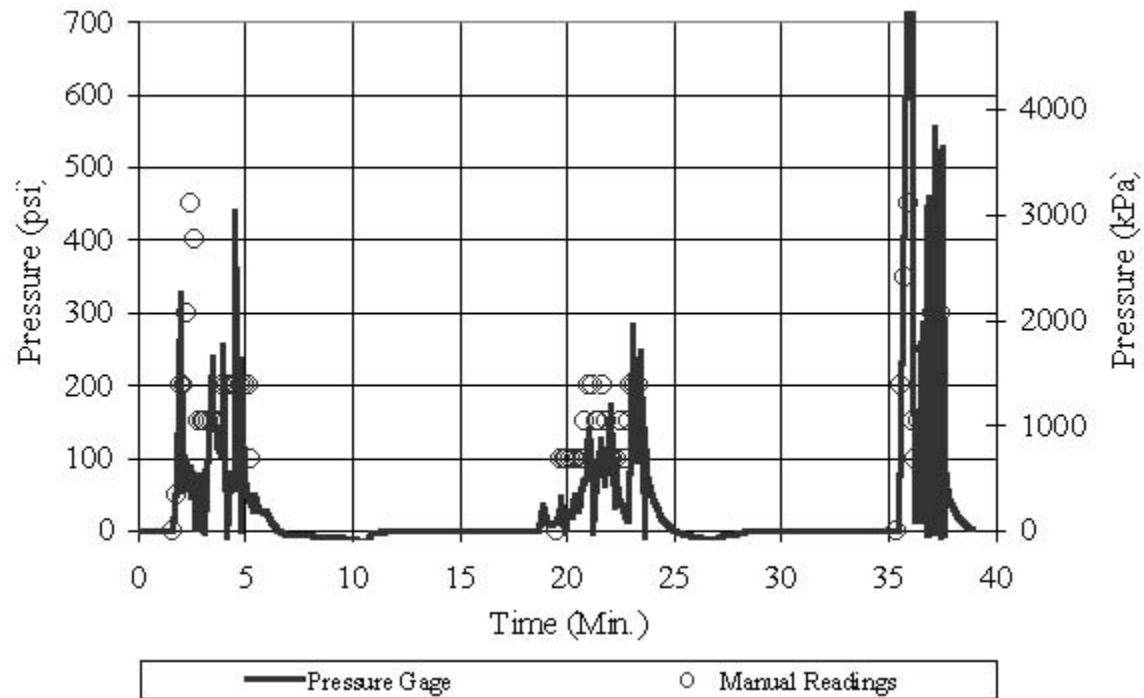


Figure B-26. Site III LT-3 grouting pressure vs. time.

Appendix B. (continued)

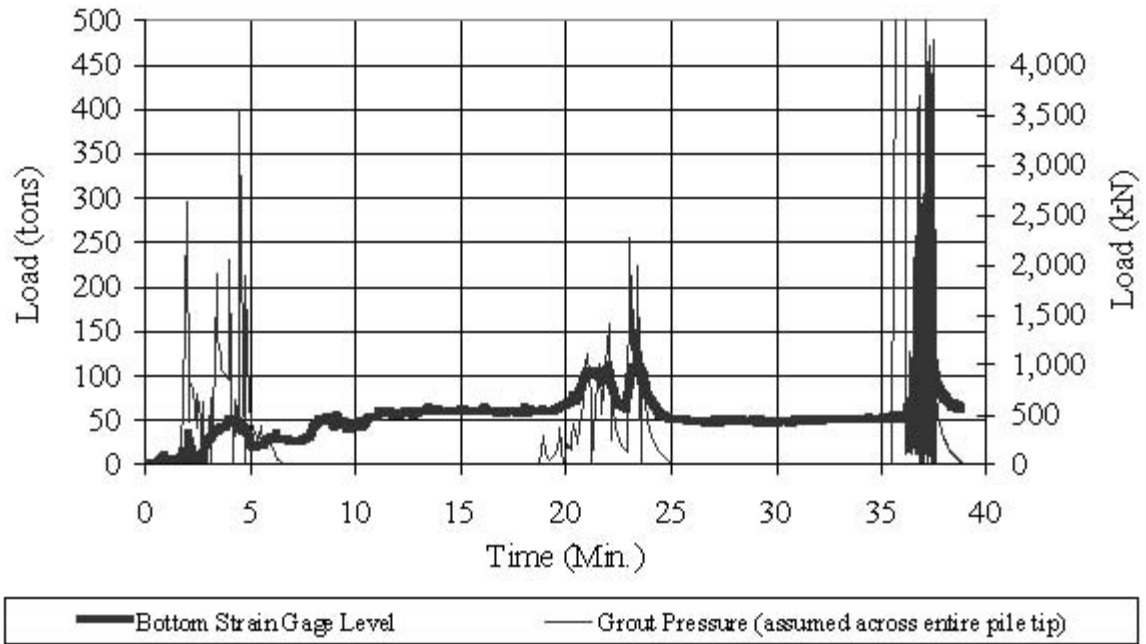


Figure B-27. Site III LT-3 grouting load vs. time.

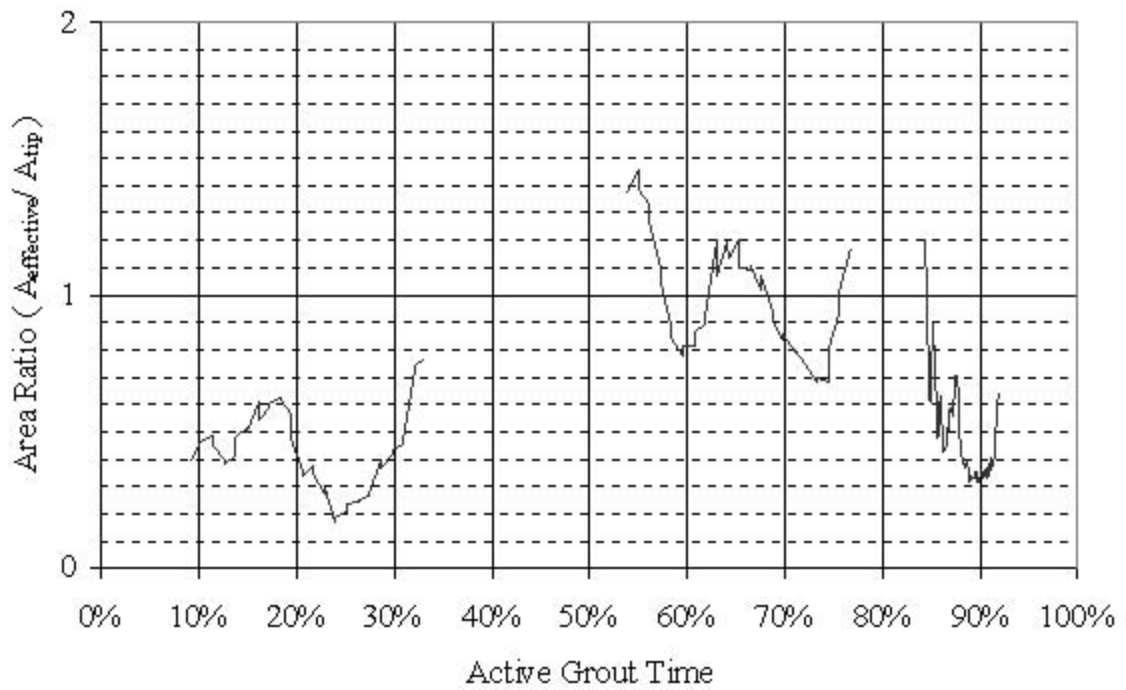


Figure B-28. Site III LT-3 grouting area ratio vs. active grout time.

Appendix B. (continued)

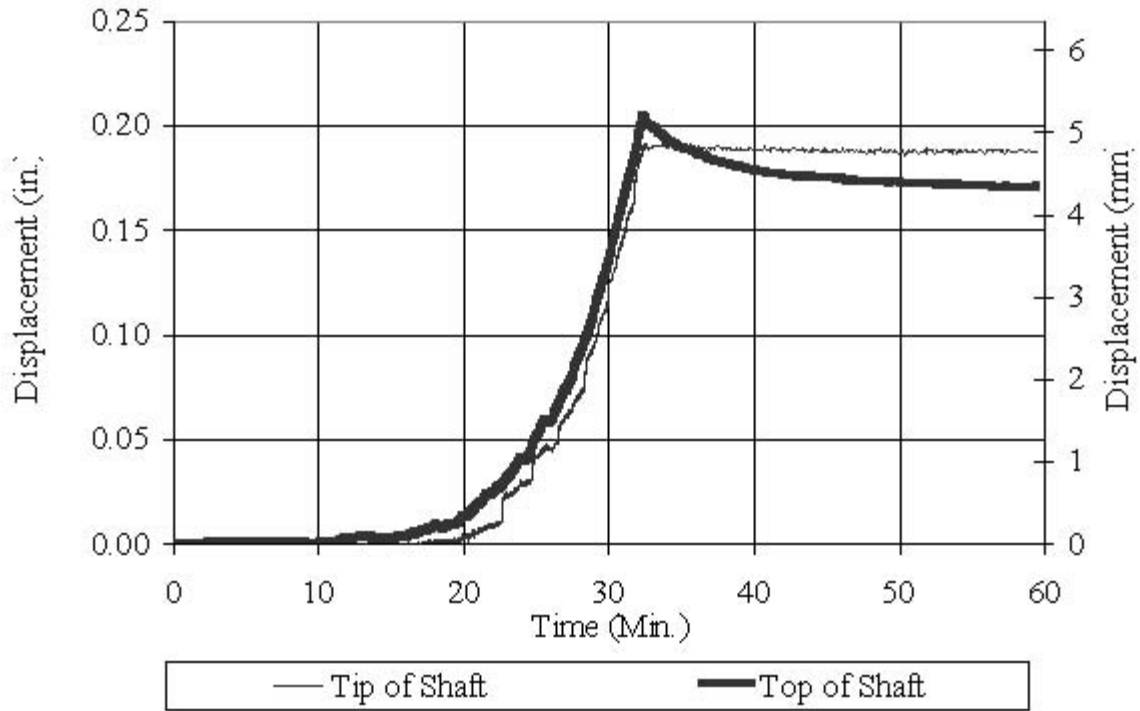


Figure B-29. Site III LT-2 grouting displacement vs. time.

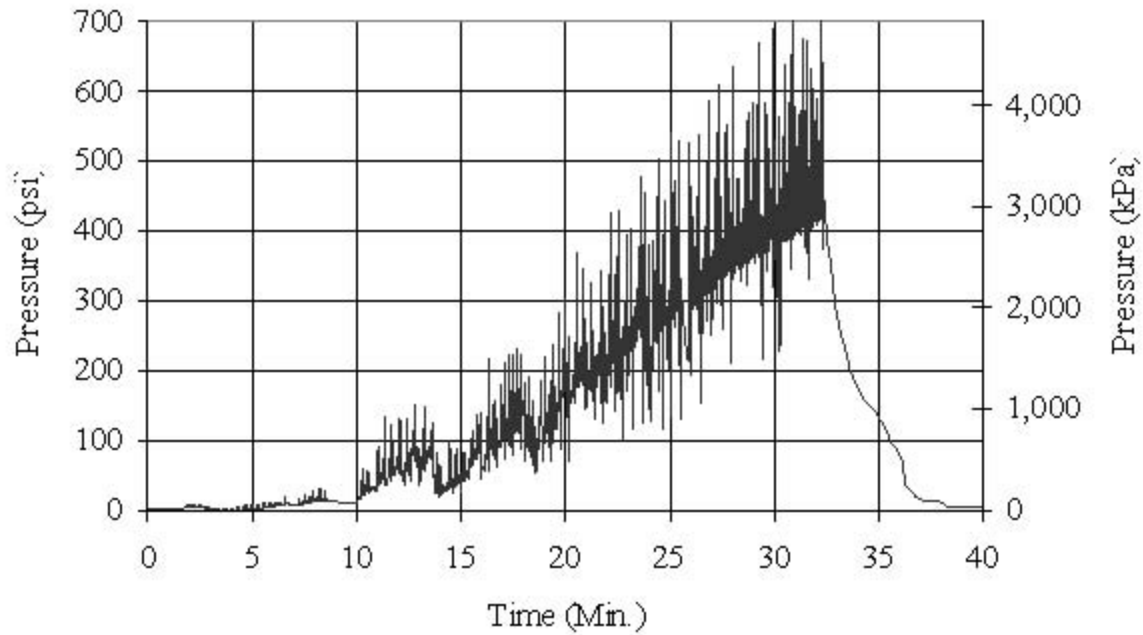


Figure B-30. Site III LT-2 grouting pressure vs. time.

Appendix B. (continued)

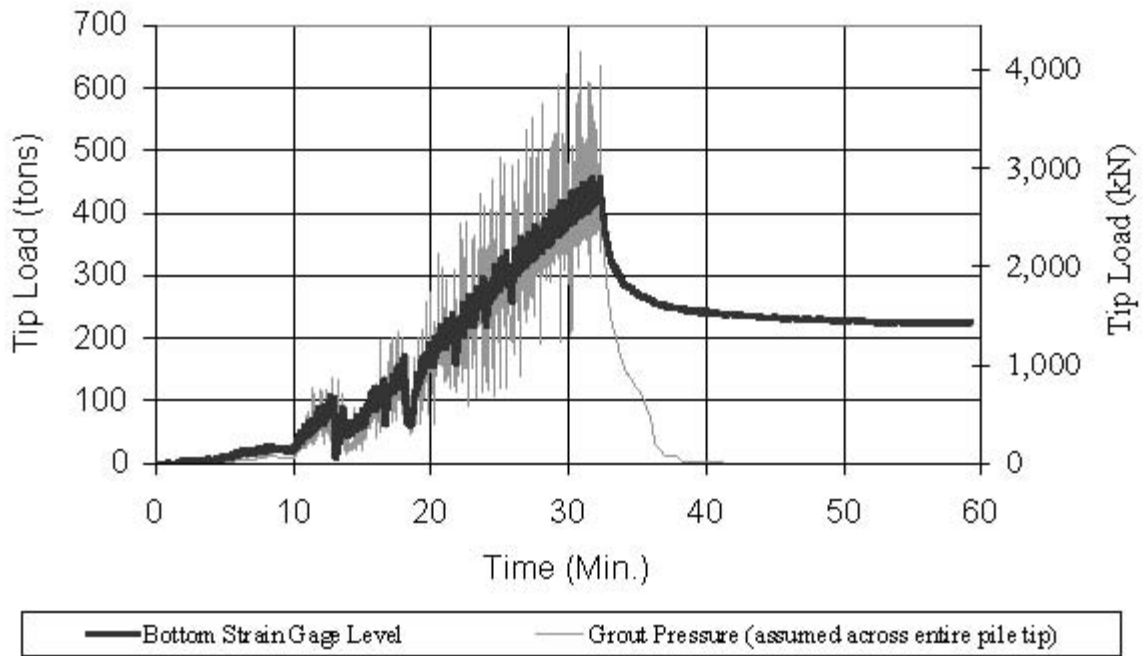


Figure B-31. Site III LT-2 grouting load vs. time.

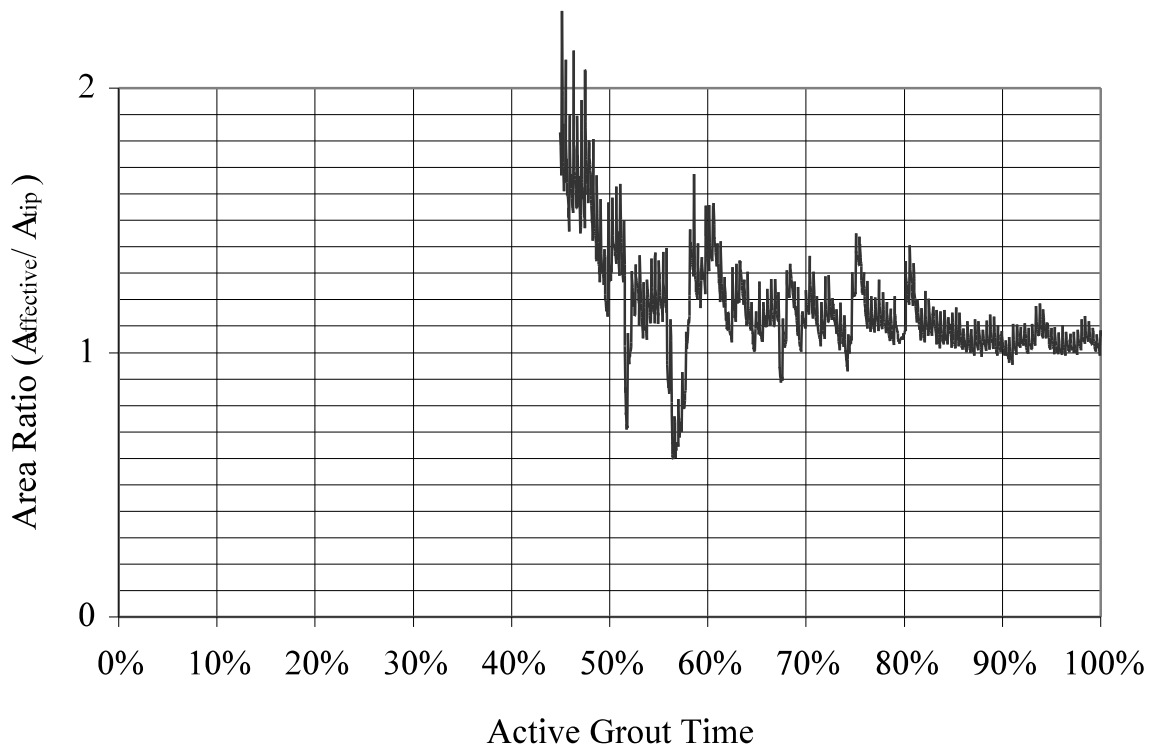


Figure B-32. Site III LT-2 grouting area ratio vs. active grout time.

Appendix C. Full-Scale Load Test Data Reduction

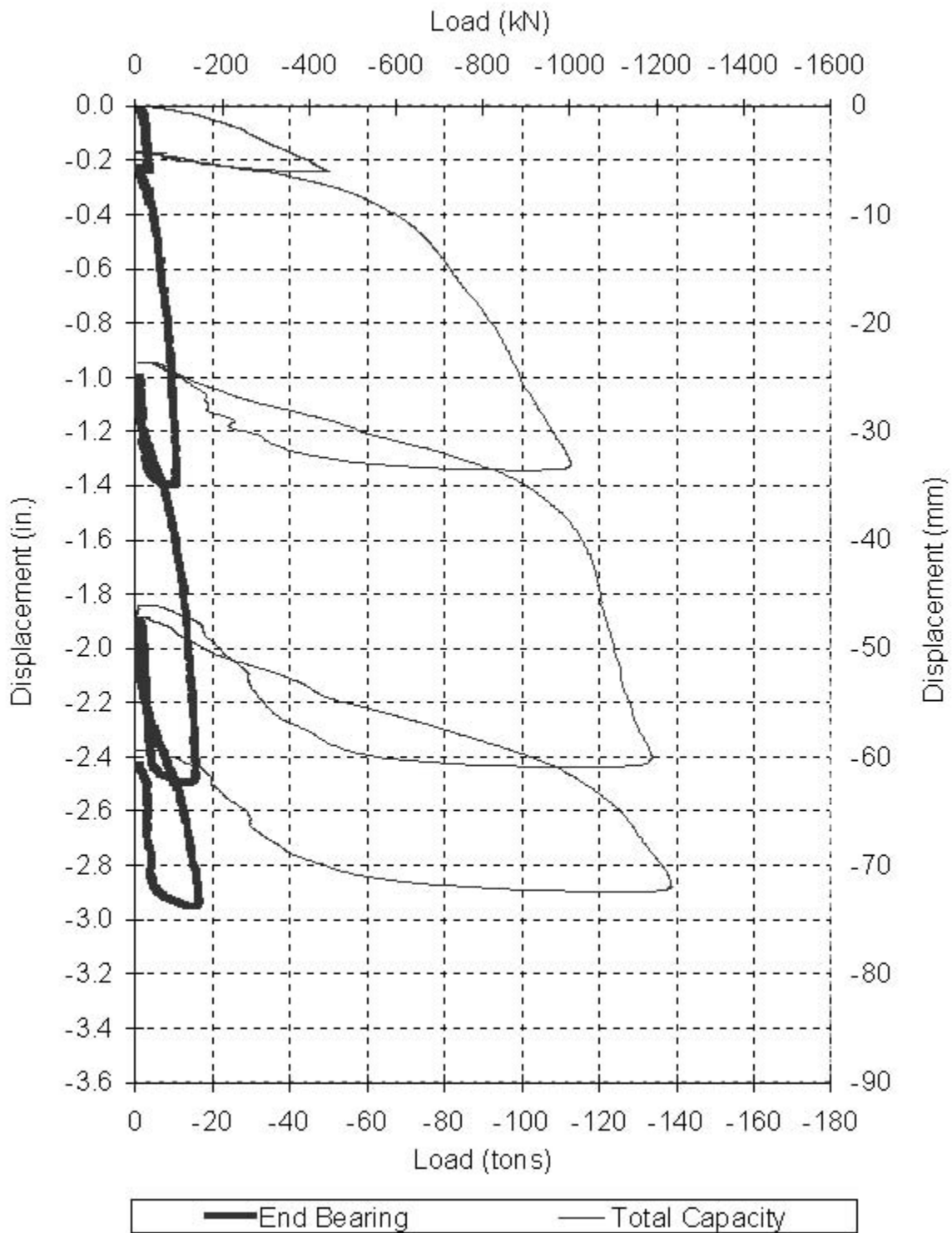


Figure C-1. Site I Control shaft load vs. displacement.

Appendix C. (continued)

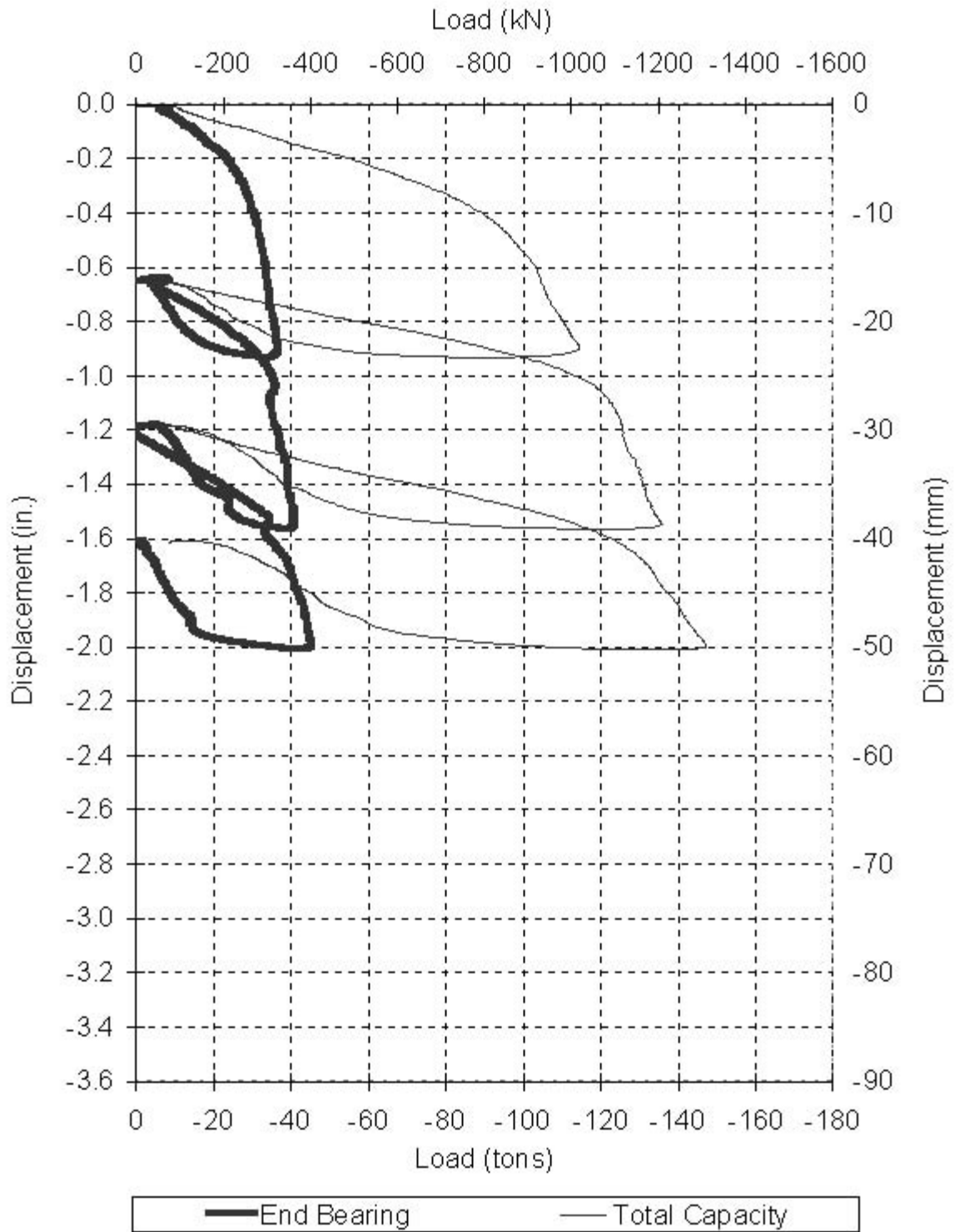


Figure C-2. Site I Flat-Jack 1 load vs. displacement.

Appendix C. (continued)

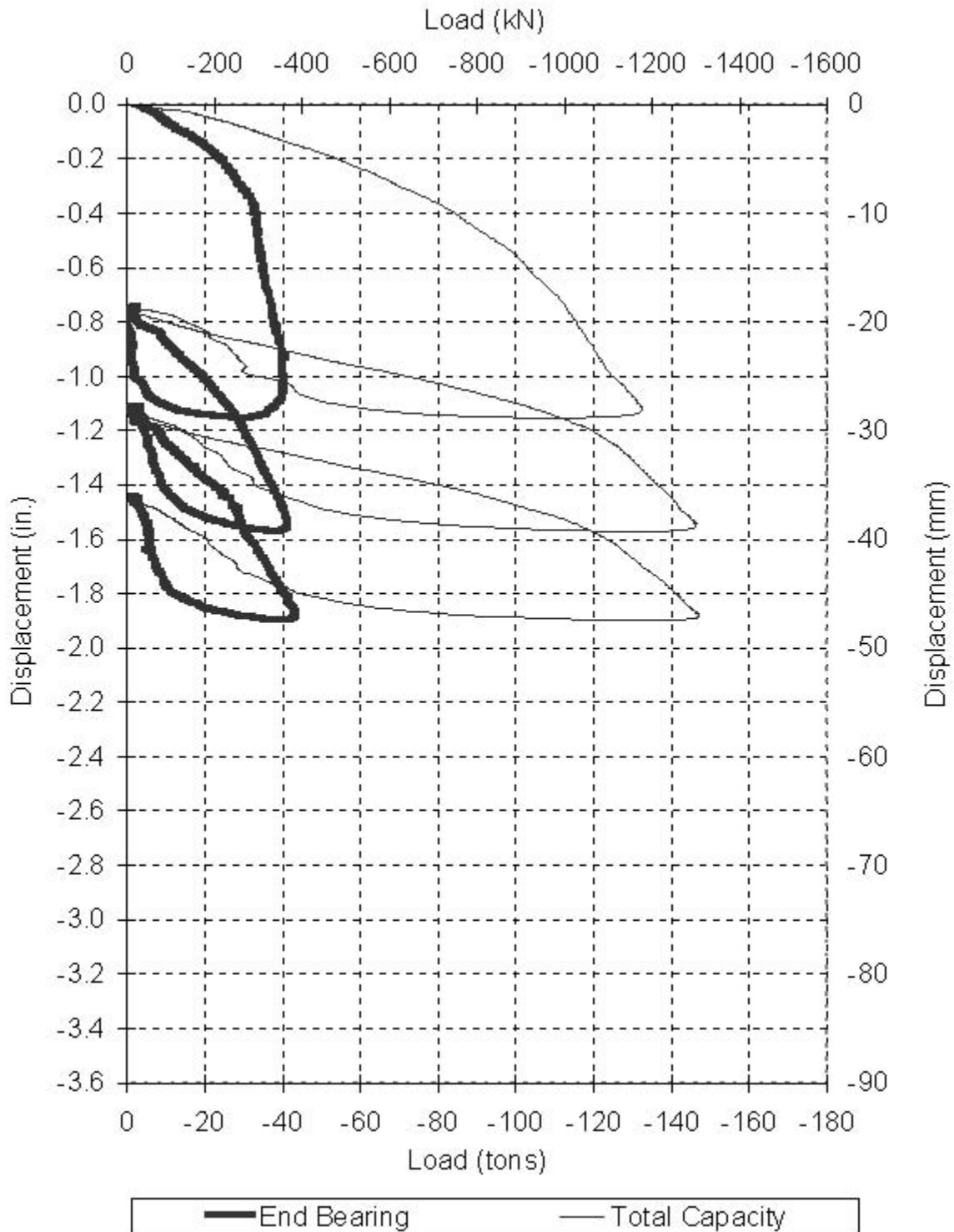


Figure C-3. Site I Flat-Jack 2 load vs. displacement.

Appendix C. (continued)

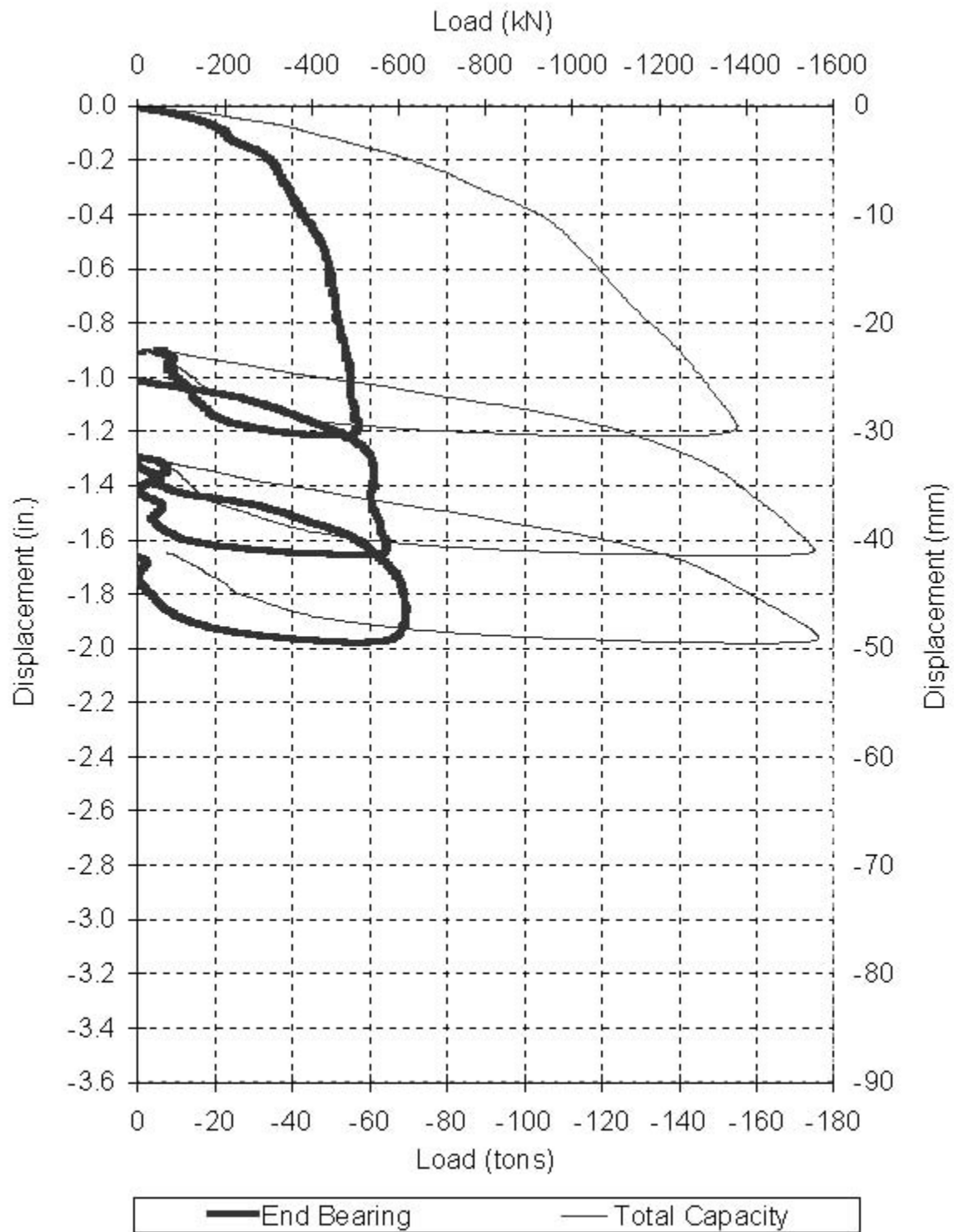


Figure C-4. Site I Sleeve-Port 1 load vs. displacement.

Appendix C. (continued)

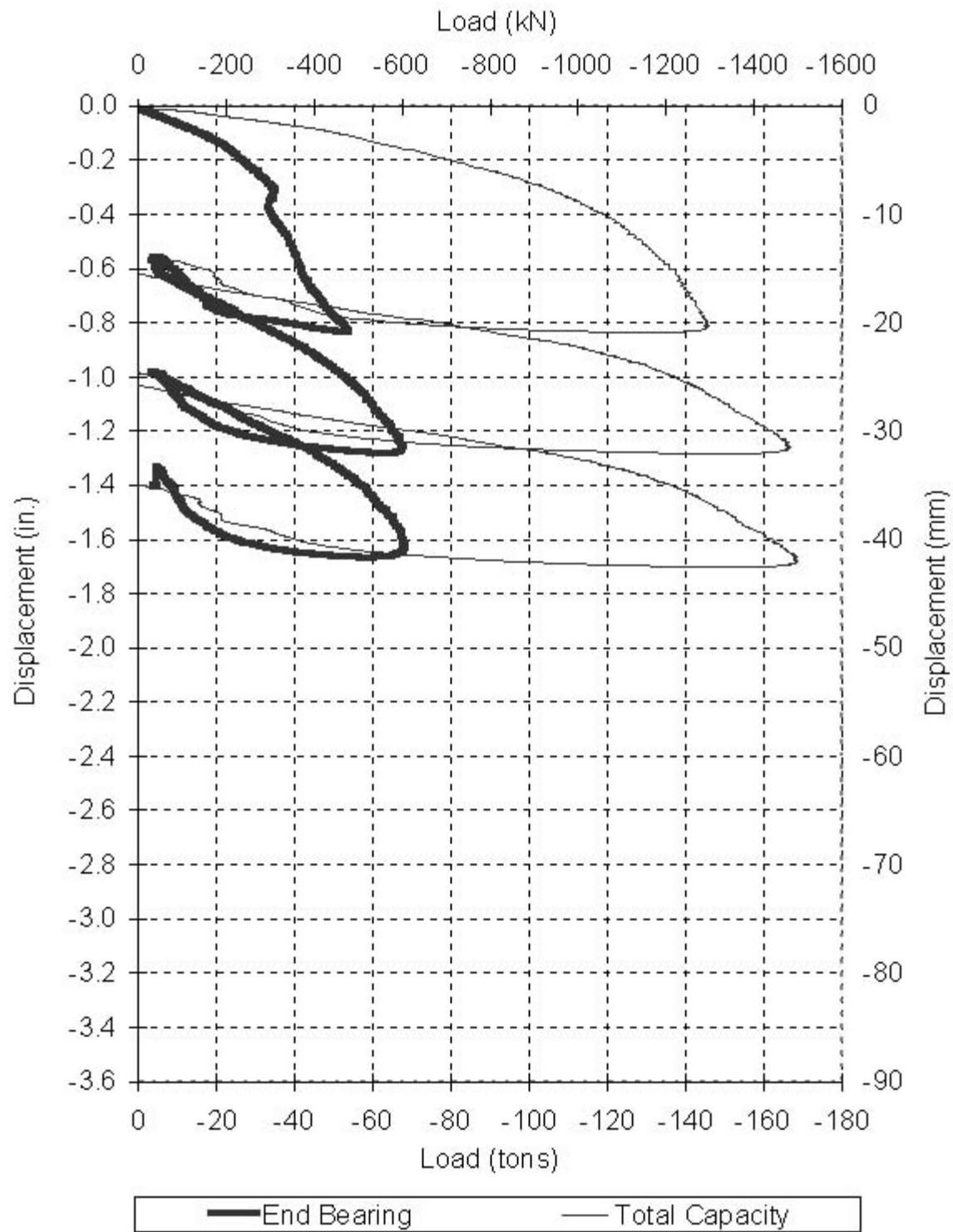


Figure C-5. Site I Sleeve-Port 2 load vs. displacement.

Appendix C. (continued)

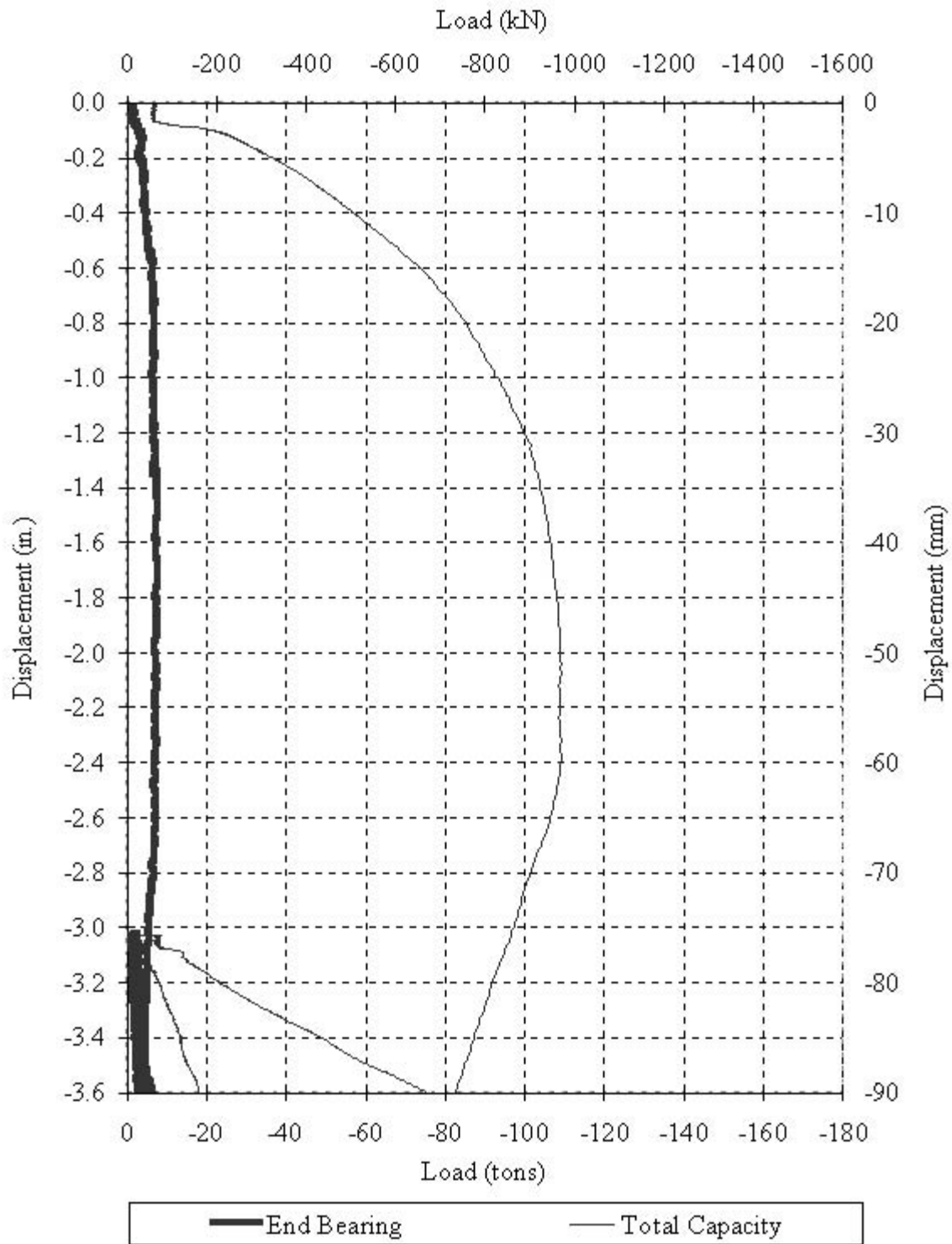


Figure C-6. Site II Control shaft load vs. displacement.

Appendix C. (continued)

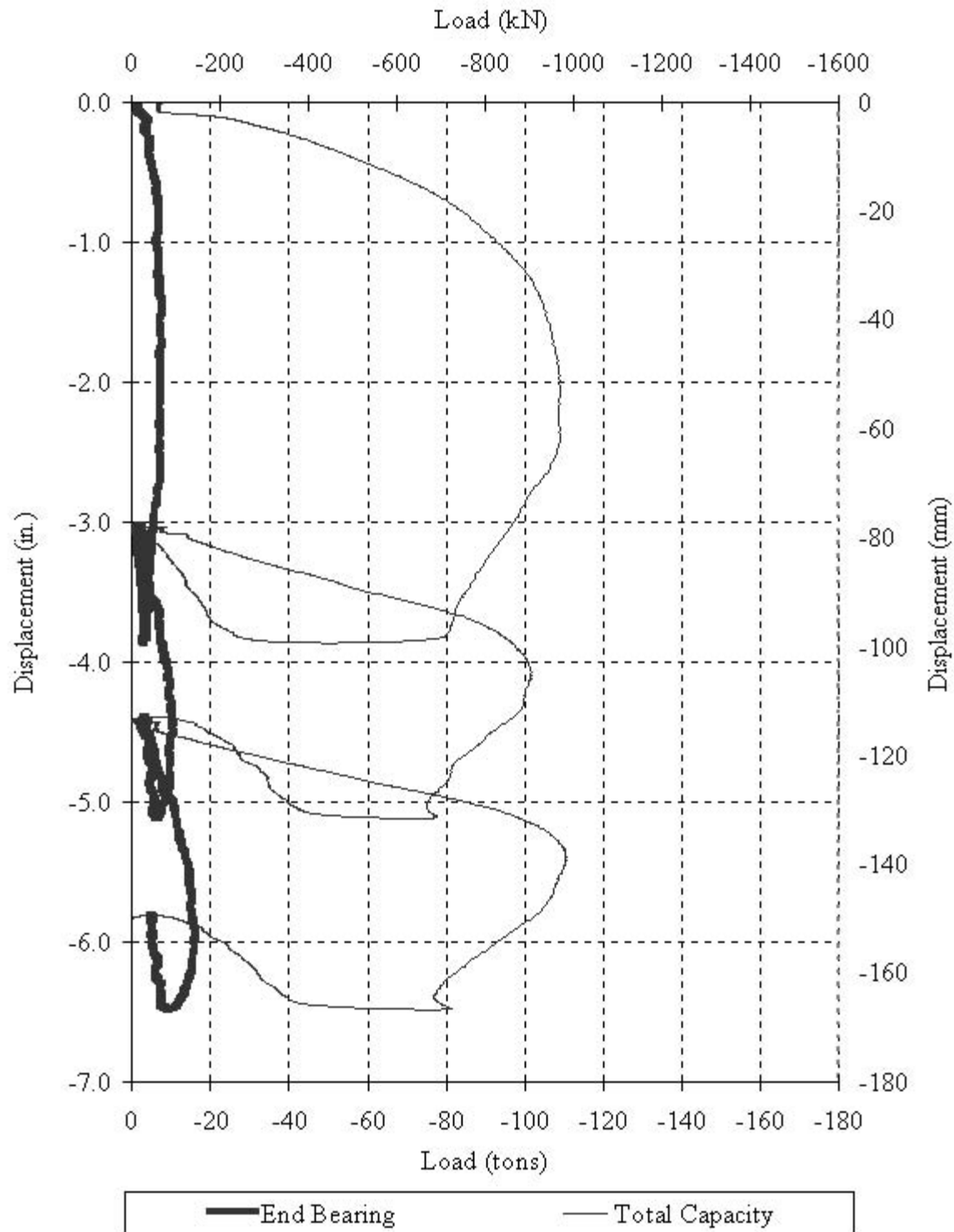


Figure C-7. Site II Control shaft load vs. deflection (large deflection scale).

Appendix C. (continued)

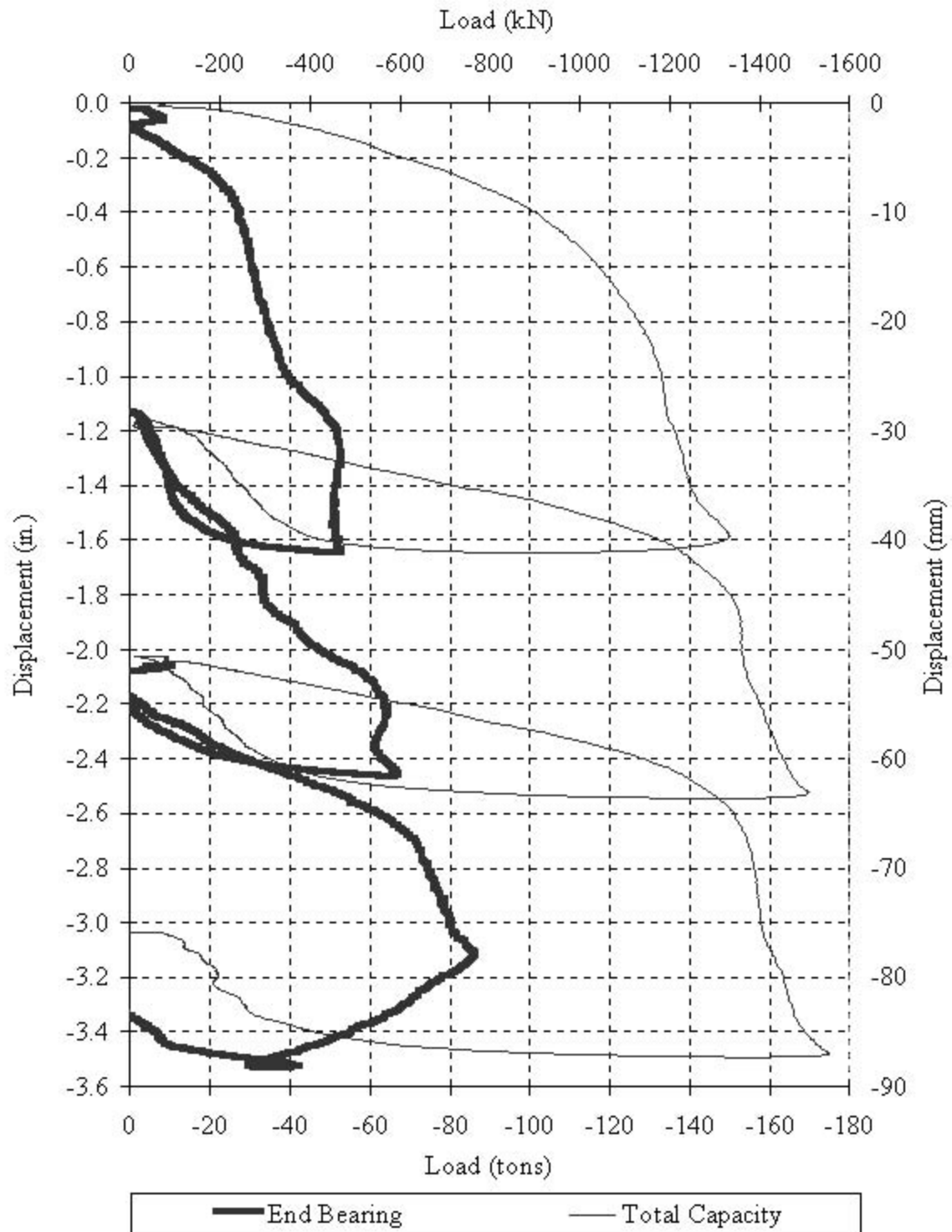


Figure C-8. Site II Flat-Jack load vs. deflection.

Appendix C. (continued)

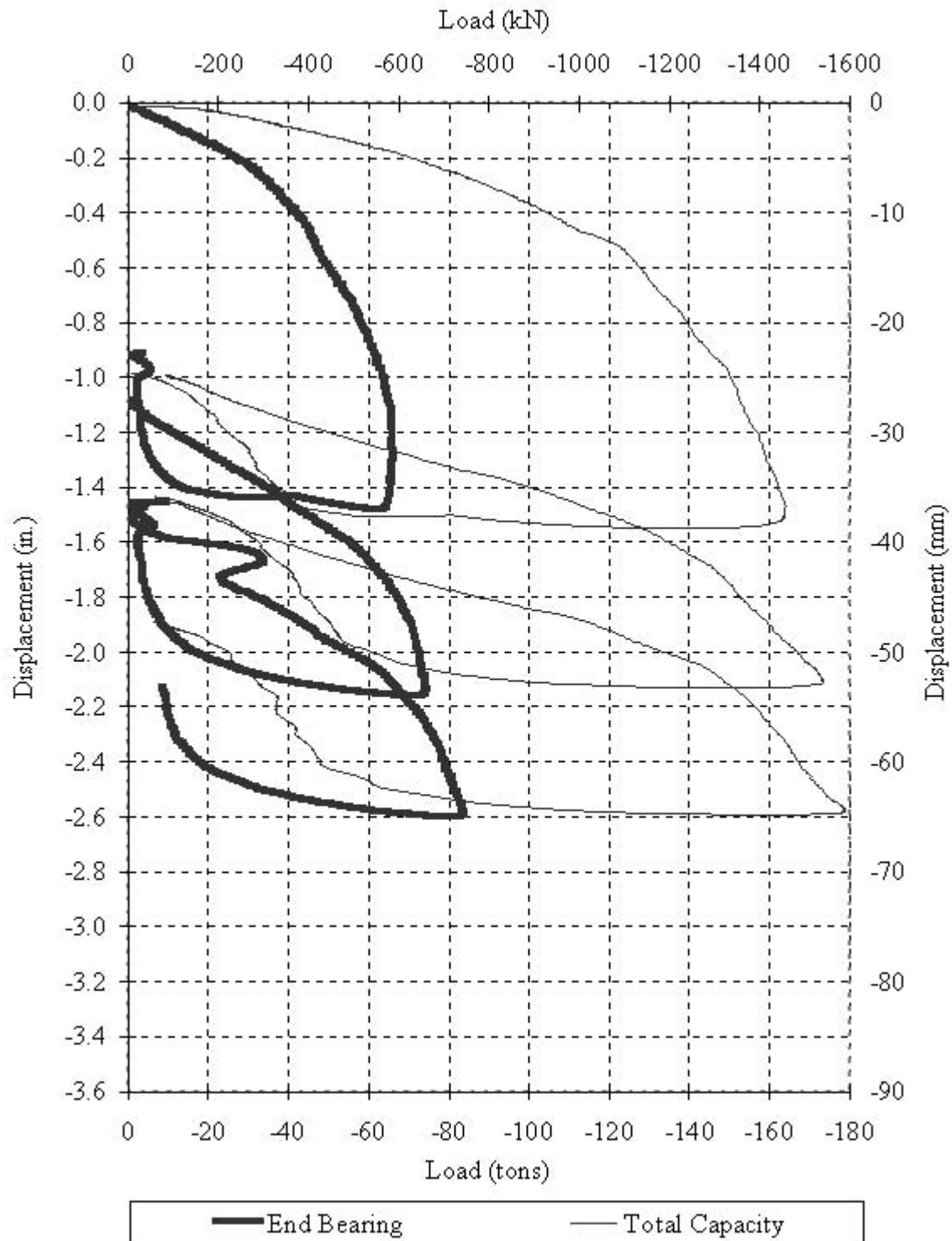


Figure C-9. Site II Sleeve-Port load vs. deflection.

Appendix C. (continued)

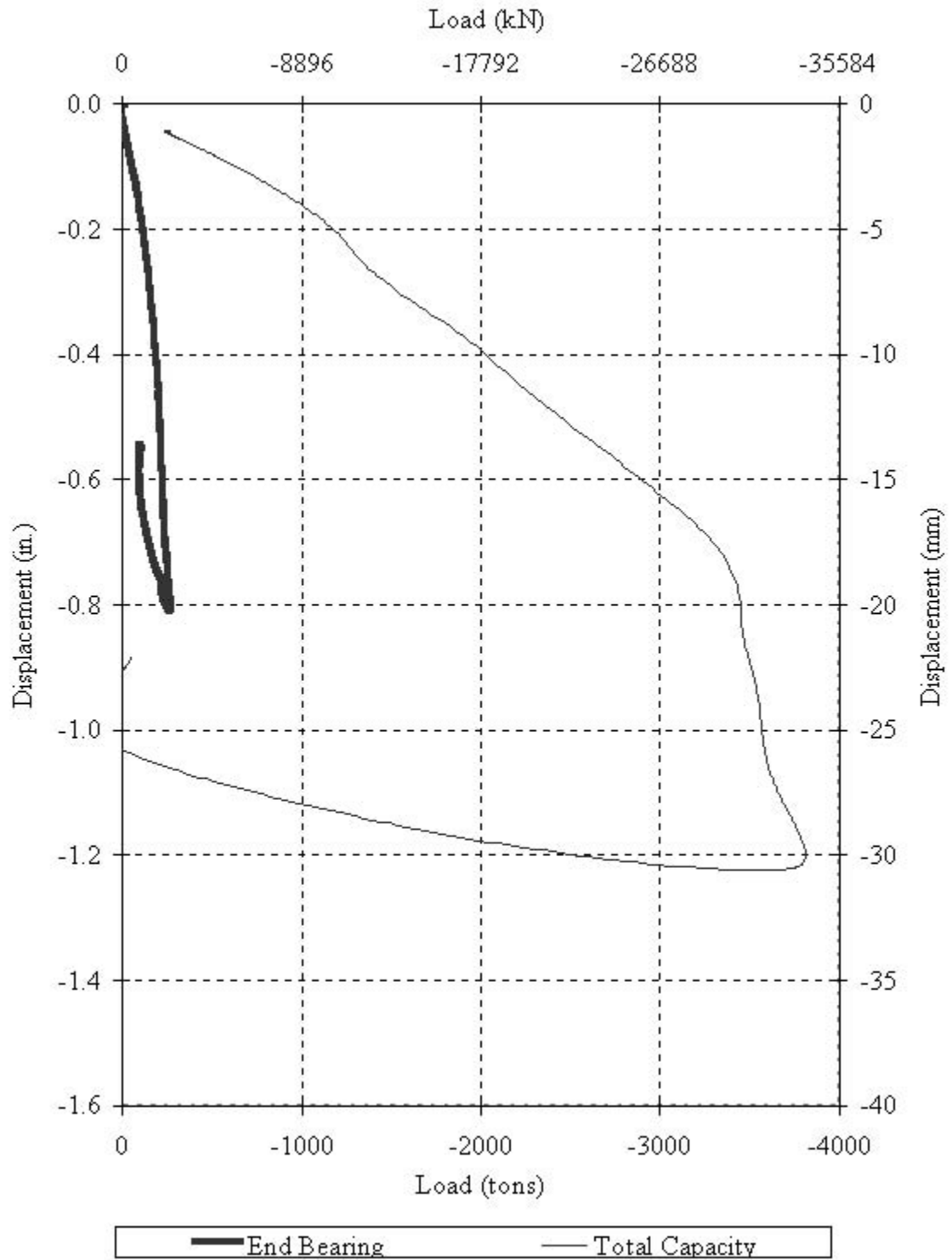


Figure C-10. Site III LT-3 cycle 1 load vs. displacement (control).

Appendix C. (continued)

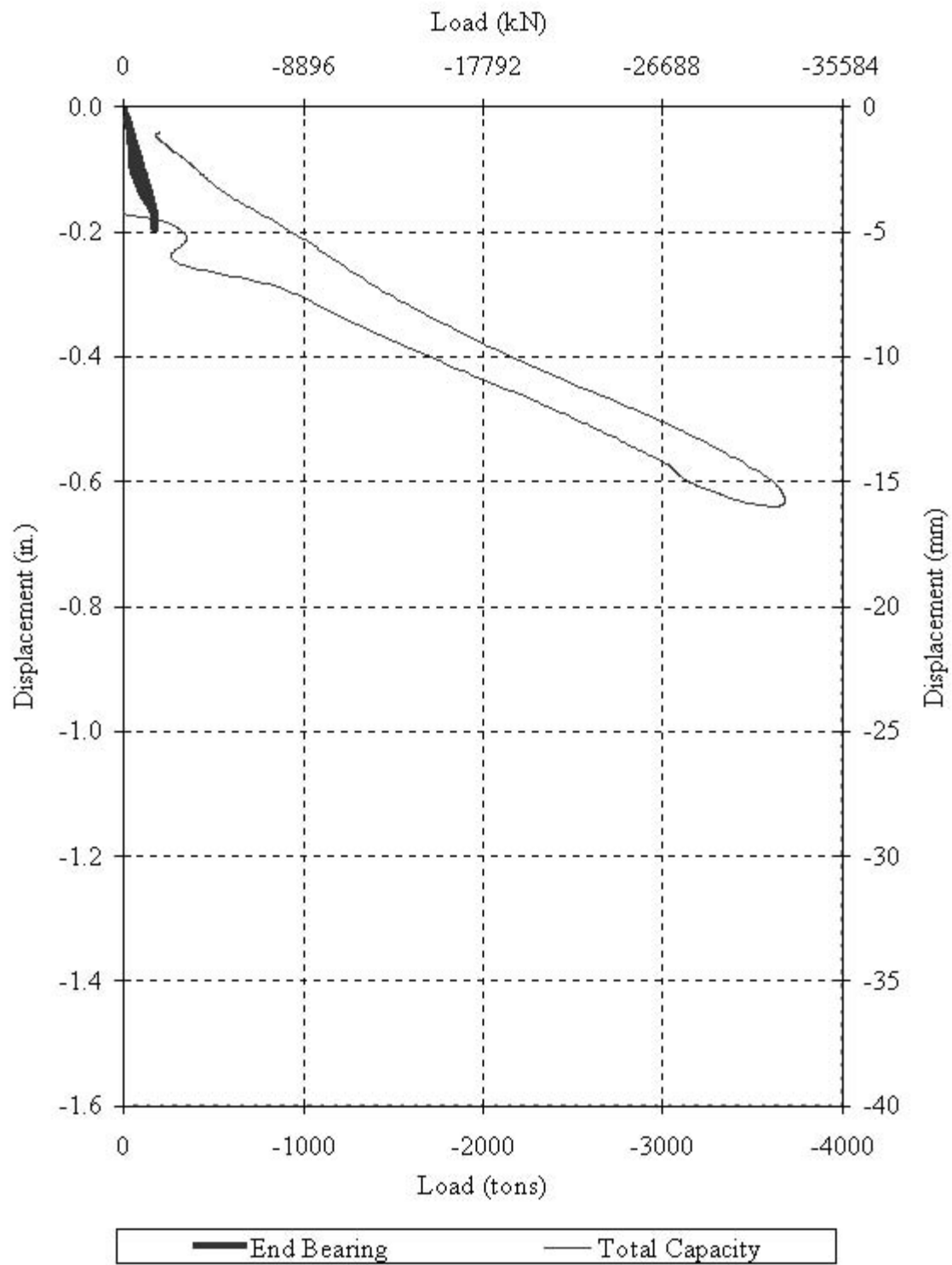


Figure C-11. Site III LT-3 cycle 2 (grouted).

Appendix C. (continued)

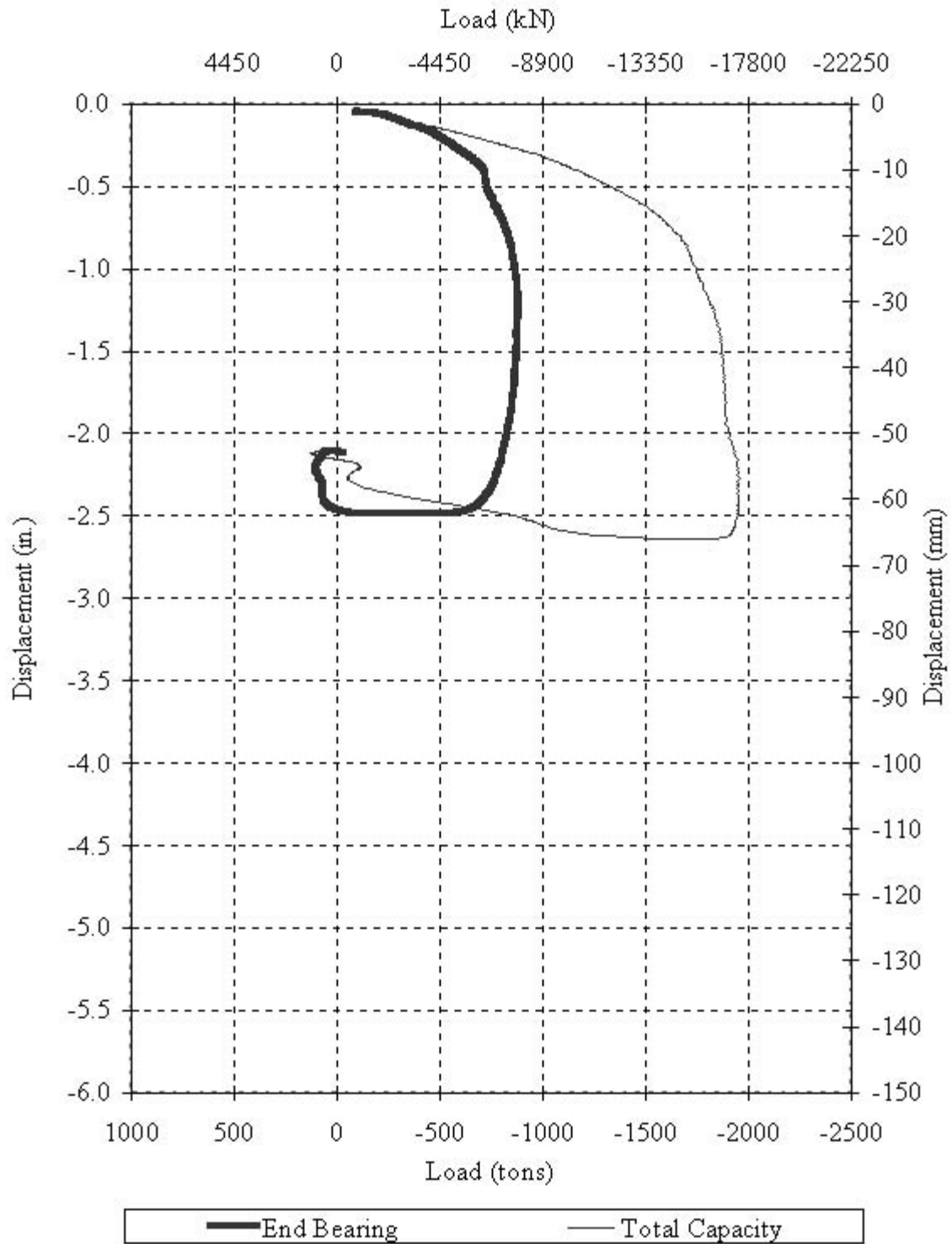


Figure C-12. Site III LT-2 cycle 1 (control).

Appendix C. (continued)

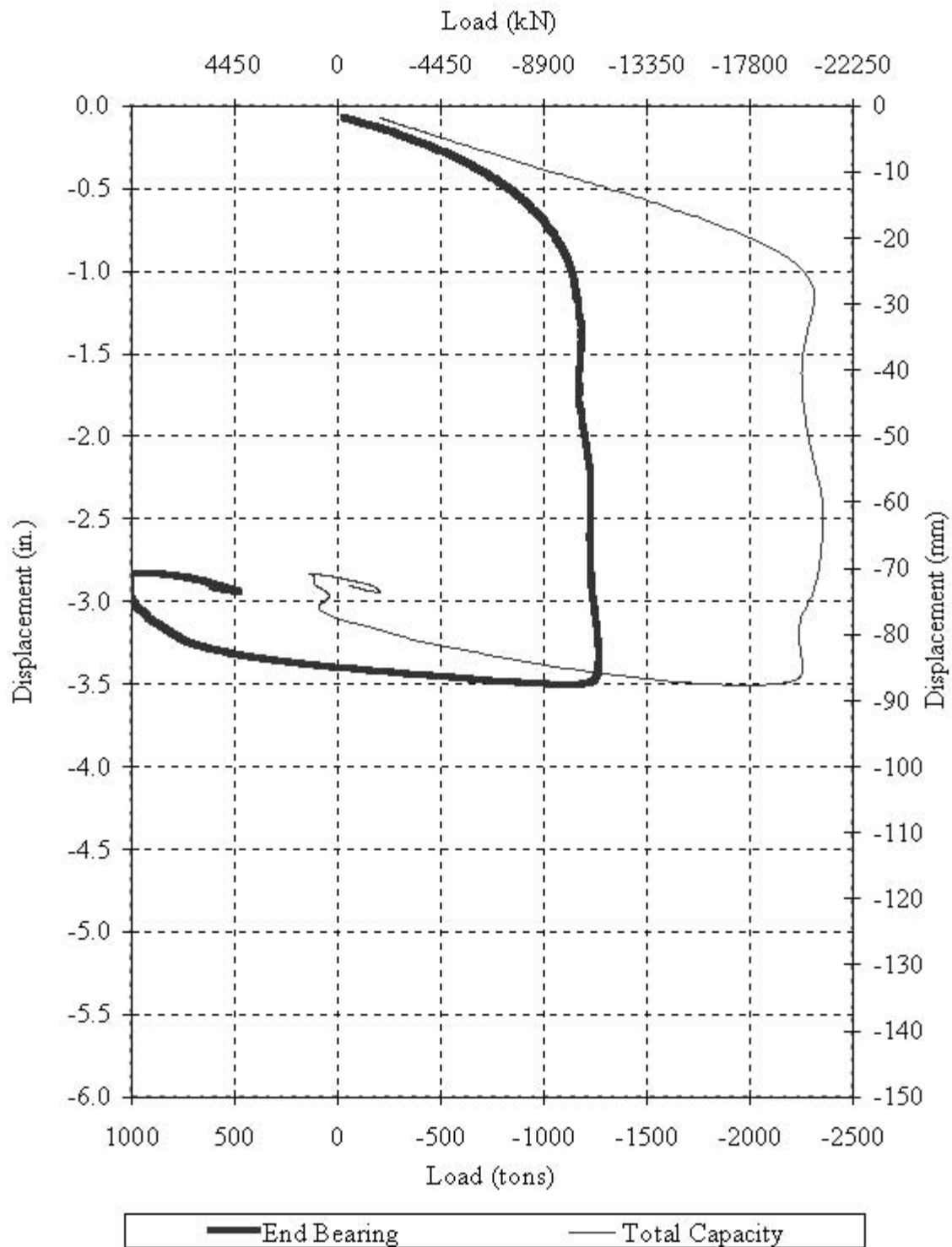


Figure C-13. Site III LT-2 cycle 2 (grouted).