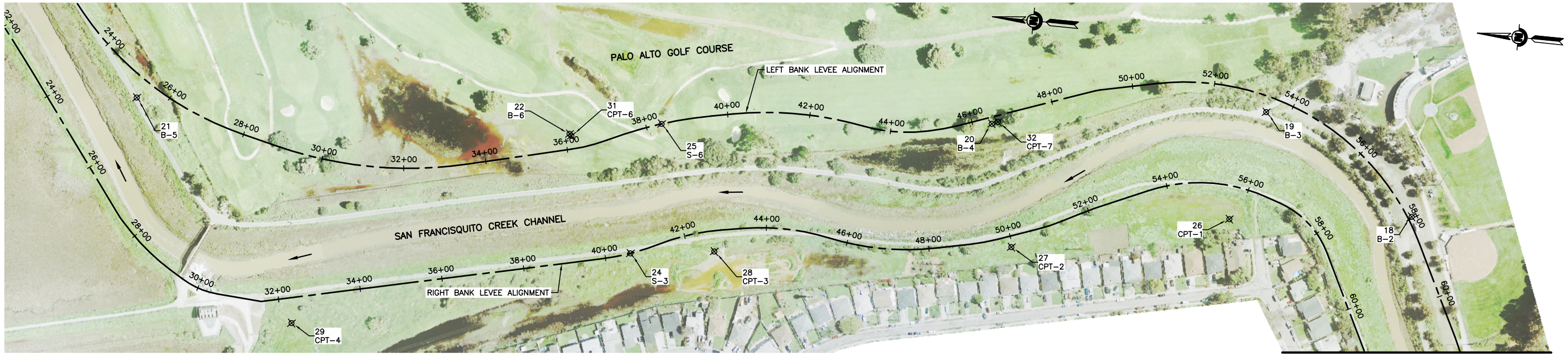


FOR CONTINUATION SEE THIS SHEET

BORING AND SOUNDING LOG PLAN

SCALE: 1"=100'

FOR CONTINUATION SEE THIS SHEET

BORING AND SOUDING LOG PLAN

SCALE: 1"=100'

BORING AND SOUNDING LOG LOCATION TABLE

NUM	EASTING	NORTHING	DESC	ALIGNMENT	STATION	OFFSET
17	73074195.74	23901996.53	B-1	RIGHT LEVEE	71+24.15	6.53'
18	73089291.13	23898418.19	B-2	LEFT LEVEE	57+96.25	-9.336'
19	73091904.88	23902937.04	B-3	LEFT LEVEE	53+42.74	37.783'
20	73090774.48	23910858.94	B-4	LEFT LEVEE	46+45.80	15.956'
21	73089067.08	23935724.36	B-5	LEFT LEVEE	25+36.24	46.163'
22	73089263.77	23923072.44	B-6	LEFT LEVEE	36+10.96	-37.397'
23	73074448.30	23901880.51	S-1	RIGHT LEVEE	71+03.00	-2.585'
24	73085976.73	23920962.89	S-3	RIGHT LEVEE	40+61.75	0'
25	73089818.20	23920433.67	S-6	LEFT LEVEE	38+37.66	0'
26	73088695.58	23903696.72	CPT-1	RIGHT LEVEE	55+71.48	80.127'
27	73087255.46	23909936.72	CPT-2	RIGHT LEVEE	49+96.17	26.797'
28	73086272.44	23918535.86	CPT-3	RIGHT LEVEE	42+67.43	50.143'
29	73082978.65	23930586.10	CPT-4	RIGHT LEVEE	32+24.09	61.174'
30	73082138.81	23898372.32	CPT-5	RIGHT LEVEE	63+89.91	7.5'
31	73089214.37	23923012.60	CPT-6	LEFT LEVEE	36+15.12	-32.174'
32	73090848.92	23910687.71	CPT-7	LEFT LEVEE	46+61.33	14.985'

REV	DESCRIPTION	DATE	APPR.
	PRELIMINARY 30% 08-03-2010		

REFERENCE INFORMATION AND NOTES
Date of Photography: March 4, 2010
Horizontal Datum:
California Coordinate System, Zone 3
North American Datum of 1983 (NAD83, NSR 2007)
Vertical Datum:
North American Vertical Datum of 1988 (NAVD88)
Ground Control Survey by: Towill, Inc.

Oakland • California GEI Consultants

DATE MM-DD-YY
DESIGN K. DE LAPP
DRAWN H. SUAREZ
CHECKED B. JOHNSON

ENGINEERING CERTIFICATION
REGISTERED PROFESSIONAL ENGINEER KEITH F. DE LAPP No. 48214 Exp. 6-30-12 CIVIL STATE OF CALIFORNIA
PROJECT ENGINEER DATE

SAN FRANCISQUITO CREEK JOINT POWERS AUTHORITY
ACCEPTED BY DISTRICT
PROJECT ENGINEER DATE

PROJECT NAME AND SHEET DESCRIPTION:
SAN FRANCISQUITO CREEK
FLOOD PROTECTION CAPITAL PROJECT
EAST BAYSHORE RD. TO S.F. BAY
BORING AND SOUNDING LOG LOCATION MAP

SCALE 1" = 100'
VERIFY SCALES 0 1"
BAR IS ONE INCH ON ORIGINAL DRAWING IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

PROJECT NUMBER 241-130806
SHEET CODE: B-101
PAGE NUMBER: 13 OF SHT#

DOCUMENT NUMBER: SFC_LP-B-1028-XXXXXXX

USERNAME: BillShad Tue 08 Jul 2008 09:32am
FILENAME: C:\pwworking\sac\d0171341\B-101

SOIL CLASSIFICATION CHART
UNIFIED SOIL CLASSIFICATION SYSTEM

GRAPHIC SYMBOL	LETTER	DESCRIPTION OF SYMBOLS USED IN BORING LOGS	MAJOR DIVISIONS		
	GW	WIDELY GRADED GRAVELS	CLEAN GRAVELS (LITTLE OR NO FINES)	GRAVELS MORE THAN HALF OF COARSE FRACTION IS LARGER THAN NO. 4 SIEVE	COARSE GRAIN SOILS MORE THAN HALF OF MATERIAL IS LARGER THAN NO. 200 SIEVE
	GP	NARROWLY GRADED GRAVELS			
	GM	SILTY GRAVELS	GRAVELS WITH FINES (APPRECIABLE AMOUNT OF FINES)		
	GC	CLAYEY GRAVELS			
	SW	WIDELY GRADED SANDS	CLEAN SANDS (LITTLE OR NO FINES)	SANDS MORE THAN HALF OF COARSE FRACTION IS SMALLER THAN NO. 4 SIEVE	
	SP	NARROWLY GRADED SANDS			
	SM	SILTY SANDS	SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES)		
	SC	CLAYEY SANDS			
	ML	SILTS	SILTS & CLAYS LIQUID LIMIT LESS THAN 50		FINE GRAIN SOILS MORE THAN HALF OF MATERIAL IS SMALLER THAN NO. 200 SIEVE
	CL	LEAN CLAYS			
	OL	ORGANIC SILTS/ORGANIC CLAYS			
	MH	ELASTIC SILTS	SILTS & CLAYS LIQUID LIMIT GREATER THAN 50		
	CH	FAT CLAYS			
	OH	ORGANIC CLAYS/ORGANIC SILTS			
	PT	PEATS	HIGHLY ORGANIC SOILS		

SOIL SAMPLER SYMBOLS

- MODIFIED CALIFORNIA SAMPLER
- SHELBY TUBE
- STANDARD PENETRATION SAMPLER

FIELD TEST

250 PSI = GAUGE PRESSURE TO ADVANCE THE SHELBY TUBE SAMPLER

NOTES

1. For driven sampler, sampling resistance is the number of hammer blows required to advance the sampler 12-inches, after an initial 6-inches seating penetration. Liners were not used in the SPT sampler.
2. Description of the hammer used to drive the samplers are presented in the text.
3. Description of the drilling method and bit used are presented in the logs.

SAN FRANCISQUITO CREEK FLOOD CONTROL PROJECT

Oakland California GEI Consultants

KEY TO BORING LOGS

Project 092850 | July 2010

Boring Location

NORTHING: ____ EASTING: ____ STATION: ____ OFFSET: ____
HORIZONTAL DATUM: NAD 83 STATION CENTERLINE: ____
VERTICAL DATUM: NAVD 88 GROUND SURFACE ELEVATION (FT): 15
LOCATION: ~25' N of Landside Toe, near end of Verbena Drive, East Palo Alto

BORING B-1
PAGE 1 of 2

Drilling Information

DATE START / END: 2/3/10 - 2/4/10 TOTAL DEPTH (FT): 53.5
CONTRACTOR: Pitcher Drilling Co. DRILLER: Eden LOGGED BY: M. Powers
EQUIPMENT: Truck Mounted Failing 1500 BORING METHOD: Solid Stem Auger/Mud Rotary
AUGER ID/OD: N/A / 5 in, 2.625 in CASING ID/OD: N/A / N/A
HAMMER TYPE: Automatic Hammer HAMMER WEIGHT (lbs): 140 HAMMER DROP (inch): 30
WATER LEVEL DEPTHS (ft): Water level not observed during rotary wash exploration
GENERAL NOTES:

ABBREVIATIONS: ID = Inside Diameter; OD = Outside Diameter; Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot; S = Split Spoon; DP = Direct Push Sample; U = Undistrubed Tube Sample; C = Rock Core; V = Field Vane Shear; SC = Sonic Core; WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; OVM = Organic Vapor Meter; Q_p = Pocket Penetrometer Strength; S_u = Pocket Torvane Shear Strength; F_v = Field Vane Shear Strength; NA, NM = Not Applicable, Not Measured

Elev. (ft)	Depth (ft)	Sample No.	Pen./ Rec. (in)	Blow Count or RQD	Field Test Data (ksf)	Sample Description & Classification	Moisture Content (%)	Dry Density (pcf)	Fines % -#200	LL	PI	Other Tests	Remarks
						Clayey GRAVEL (GC) mixed with concrete debris [FILL]							
	5	S1	18/16	5 3 3	Q_p=3.5	Sandy Silty CLAY (CL-ML); medium stiff; dark brown (10YR 3/3); moist; 70% low plasticity fines; 30% fine sand.							
10		S2	18/9	3 3 4	Q_p=2.5	Clayey SAND (SC); loose; dark brown (10YR 3/3); moist; trace organics (roots).			45				
	10	S3	18/11	2 4 4	Q_p=1.5								
5		S4	18/12	3 3 5		Poorly Graded Silty SAND (SM); loose; dark brown (10YR 3/3); wet; fine to medium sand; low plasticity fines.							
		S5	18/10	3 2 3					19				
0	15					Organics (wood) at 15.0', fine to coarse sand in cuttings from 15.0 to 16.5'.							
		S6	18/8	10 17 17		Well Graded SAND with Silt and Gravel (SW-SM); dense; dark olive gray (5Y 3/2); 75% fine to coarse sand; 15% fine gravel; 10% low plasticity fines. Coarse sand and fine gravel in cuttings from 18.0 to 20.5'.							
-5	20												
		S7	25/25	350 psi	Q_p=1.0 S_u=0.8	Sandy fat CLAY (CH); soft to medium stiff; dark greenish gray (GLEY1 4/1); high plasticity fines. Dark gray clay in cuttings from 20.5 to 21.0'.		70	59				
-10	25												
		S8	18/8	6 9 12		Well graded SAND with Silt and Gravel (SW-SM); meduim dense; dark greenish gray (GLEY1 4/1); 65% fine to coarse gravel; 20% fine to coarse sand; 15% low plasticity fines.							

Strata lines represent the approximate boundaries between soil types. Actual transitions may be gradual. Water level readings have been made at times stated. Water levels may be different at other times.

CLIENT: HDR Engineering, Inc.
PROJECT NAME: San Francisquito Flood Control Project
CITY/STATE: Palo Alto/East Palo Alto, California
GEI PROJECT NUMBER: 092850

GEI Consultants 180 Grand Ave Oakland Ca 94611 510-350-2900

GEOTECHNICAL BORING LOG 02 SF_CREEK_FLOOD_CONTROL.GPJ GEI DATA TEMPLATE GDT 7/2/10

Boring Location

NORTHING: ____ EASTING: ____ STATION: ____ OFFSET: ____
HORIZONTAL DATUM: NAD 83 STATION CENTERLINE: ____
VERTICAL DATUM: NAVD 88 GROUND SURFACE ELEVATION (FT): 15
LOCATION: ~25' N of Landside Toe, near end of Verbena Drive, East Palo Alto

BORING B-1
PAGE 2 of 2

Elev. (ft)	Depth (ft)	Sample No.	Pen./ Rec. (in)	Blow Count or RQD	Field Test Data (ksf)	Sample Description & Classification	Moisture Content (%)	Dry Density (pcf)	Fines % -#200	LL	PI	Other Tests	Remarks
		S9	18/9	10 10 17		55% fine to coarse gravel, 30% fine to coarse sand, 15% low plasticity fines from 31.0 to 42.0'.			8				
-20	35												
		S10	18/0	7 5 6		Clay with sand lens at 36.0'.							
		S11	18/9	15 14 15									
-25	40												
		S12	18/7	19 18 12		Poorly Graded SAND with Clay (SP-SC); medium dense to dense; olive (5Y 5/3); 90% medium to coarse sand; 10% low plasticity fines; trace fine gravel.							
-30	45												
		S13	18/11	8 10 13	Q_p=3.0 S_u=1.75	Fat CLAY (CH); stiff; olive (5Y 5/3); medium to high plasticity.	31	91				Q_c=2.92 ksf	
-35	50												
		S14	18/14	10 11 12	Q_p=3.0 S_u=1.75	Silty CLAY (CL-ML); stiff; olive (5Y 5/3) mottled with greenish gray (GLEY1 6/1); low to medium plasticity fines; less than 5% fine sand.							
-40	55					End of Boring at 53.5 feet							
-45	60												
-50	65												

Strata lines represent the approximate boundaries between soil types. Actual transitions may be gradual. Water level readings have been made at times stated. Water levels may be different at other times.

CLIENT: HDR Engineering, Inc.
PROJECT NAME: San Francisquito Flood Control Project
CITY/STATE: Palo Alto/East Palo Alto, California
GEI PROJECT NUMBER: 092850

GEI Consultants 180 Grand Ave Oakland Ca 94611 510-350-2900

GEOTECHNICAL BORING LOG 02 SF_CREEK_FLOOD_CONTROL.GPJ GEI DATA TEMPLATE GDT 7/2/10

USERNAME: BillShad Tue 08 Jul 2008 09:32am
FILENAME: C:\pwworking\sac\d0171341\B-102

DOCUMENT NUMBER: SFC_LP-B-1028-XXXXXXX

REV	DESCRIPTION	DATE	APPR.
	PRELIMINARY 30% 08-03-2010		

REFERENCE INFORMATION AND NOTES
Date of Photography: March 4, 2010
Horizontal Datum: California Coordinate System, Zone 3 North American Datum of 1983 (NAD83, NSR 2007)
Vertical Datum: North American Vertical Datum of 1988 (NAVD88)
Ground Control Survey by: Towill, Inc.

HDR Engineering, Inc.

DATE MM-DD-YY
DESIGN K. DE LAPP
DRAWN H. SUAREZ
CHECKED B. JOHNSON

ENGINEERING CERTIFICATION
REGISTERED PROFESSIONAL ENGINEER KEITH F. DE LAPP No. 48214 Exp. 6-30-12 CIVIL STATE OF CALIFORNIA
PROJECT ENGINEER DATE

SAN FRANCISQUITO CREEK JOINT POWERS AUTHORITY
ACCEPTED BY DISTRICT
PROJECT ENGINEER DATE

PROJECT NAME AND SHEET DESCRIPTION:
SAN FRANCISQUITO CREEK
FLOOD PROTECTION CAPITAL PROJECT
EAST BAYSHORE RD. TO S.F. BAY
BORING LOGS
B-1

SCALE: NOT TO SCALE
VERIFY SCALES: 0 1" BAR IS ONE INCH ON ORIGINAL DRAWING IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY
PROJECT NUMBER: 241-130806
SHEET CODE: B-102
PAGE NUMBER: 14 OF SHT#

Boring Location

NORTHING: ____ EASTING: ____ STATION: ____ OFFSET: ____
HORIZONTAL DATUM: NAD 83 STATION CENTERLINE: ____
VERTICAL DATUM: NAVD 88 GROUND SURFACE ELEVATION (FT): 13
LOCATION: ~25' S of Landside Toe, near Athletic Complex, Palo Alto

BORING **B-2** PAGE 1 of 2

Drilling Information

DATE START / END: 2/2/10 - 2/3/10 TOTAL DEPTH (FT): 48.5
CONTRACTOR: Pitcher Drilling Co. DRILLER: Eden LOGGED BY: M. Powers
EQUIPMENT: Truck Mounted Failing 1500 BORING METHOD: Solid Stem Auger/Mud Rotary
AUGER ID/OD: N/A / 5 in, 2.625 in CASING ID/OD: N/A / N/A
HAMMER TYPE: Automatic Hammer HAMMER WEIGHT (lbs): 140 HAMMER DROP (inch): 30
WATER LEVEL DEPTHS (ft): Water level not observed during rotary wash exploration
GENERAL NOTES:

ABBREVIATIONS: ID = Inside Diameter; OD = Outside Diameter; Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot; S = Split Spoon; DP = Direct Push Sample; U = Undistrubed Tube Sample; C = Rock Core; V = Field Vane Shear; SC = Sonic Core; WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; OVM = Organic Vapor Meter; Q_p = Pocket Penetrometer Strength; S_t = Pocket Torvane Shear Strength; F_v = Field Vane Shear Strength; NA, NM = Not Applicable, Not Measured

Elev. (ft)	Depth (ft)	Type	Sample No.	Pen./Rec. (in)	Blow Count or RQD	Field Test Data (ksf)	Sample Description & Classification	Moisture Content (%)	Dry Density (pcf)	Fines % <#200	LL	PI	Other Tests	Remarks
							Poorly Graded GRAVEL with Sand (GP); road base, compacted [FILL].							
			S1	12/12			Sandy Lean CLAY with Gravel (CL); hard; dark grayish brown; moist; 70% low plasticity fines, no dilatency, high toughness; 20% fine to coarse sand; 10% fine gravel [FILL].							
10			S2	18/14	10 11 11	Q_p=8.0								
	5						Fat CLAY (CL); stiff; black; 80% low plasticity fines; 20% fine sand; trace organics (wood debris); organic scent; glass shard recovered [FILL].							
			S3	18/10	4 5 7	Q_p=3.0								
							Obstructions/debris encountered from 7.0 to 13.0'.							
5			S4	18/8	8 4 3		Trace fine gravel from 8.0 to 13.0'.							
	10							53	56					
							Rubber pieces at 11.0'. ~7" diameter concrete chunk at 11.5'.							
0			S5	18/0	3 10 11		Lean CLAY (CL); stiff; greenish gray (GLEY1 6/1); 90% medium to high plasticity fines; 10% fine sand.							
	15		S6	18/12	3 5 6	Q_p=2.0 S_t=1.25	Wood debris in cuttings at 15.0'	28	95	48	32	Q_p=2.57 ksf		
-5														
							Poorly Graded SAND with Silt and Gravel (SP-SM); medium dense; olive brown (2.5Y 4/3); fine to coarse sand; fine to coarse gravel; no to low plasticity fines. Driller's Note: cuttings changed to sand and change in drill rate at 18.5'.							
	20		S7	18/11	10 10 12					8				
-10														
	25		S8	18/11	9 8 10									
-15							Silty CLAY with Sand (CL-ML); medium stiff to stiff; olive brown (2.5Y 4/3); 75% low plasticity fines, slow dilatency, medium toughness.							

Strata lines represent the approximate boundaries between soil types. Actual transitions may be gradual. Water level readings have been made at times stated. Water levels may be different at other times.

CLIENT: HDR Engineering, Inc.
PROJECT NAME: San Francisquito Flood Control Project
CITY/STATE: Palo Alto/East Palo Alto, California
GEI PROJECT NUMBER: 092850

GEI Consultants 180 Grand Ave Oakland Ca 94611 510-350-2900

Boring Location

NORTHING: ____ EASTING: ____ STATION: ____ OFFSET: ____
HORIZONTAL DATUM: NAD 83 STATION CENTERLINE: ____
VERTICAL DATUM: NAVD 88 GROUND SURFACE ELEVATION (FT): 13
LOCATION: ~25' S of Landside Toe, near Athletic Complex, Palo Alto

BORING **B-2** PAGE 2 of 2

Elev. (ft)	Depth (ft)	Type	Sample No.	Pen./Rec. (in)	Blow Count or RQD	Field Test Data (ksf)	Sample Description & Classification	Moisture Content (%)	Dry Density (pcf)	Fines % <#200	LL	PI	Other Tests	Remarks
			S9	18/15	5 6 7	Q_p=1.5 S_t=1.75	Driller's Note: cuttings change to clay and change in drill rate at 28.0'	27	96				Q_p=2.22 ksf	
-20			S10	30/30	175 psi 300 psi		INTERBEDDED LENSES OF SILTY CLAY AND SILT SAND FROM 28.0 TO 48.5'.							
							Silty SAND (SM); light olive brown (2.5Y 5/4); 75% fine sand; 25% no to low plasticity fines.							
	35		S11	18/15	3 4 8									
							Silty CLAY (CL-ML); light olive brown (2.5Y 5/4); 90% low to medium plasticity fines; 10% fine sand.							
-25							Silty SAND (SM); light olive brown (2.5Y 5/4); 75% fine sand; 25% no to low plasticity fines.							
	40		S12	18/15	4 7 22	S_t=0.8	Silty CLAY (CL-ML); medium stiff; light olive brown (2.5Y 5/4); 95% low to medium pasticity fines, slow dilatency; 5% fine sand.							
			S13	18/11	9 11 10		Silty SAND wth Gravel (SM); medium dense; olive brown (2.5Y 4/3); 55% fine to coarse sand; 25% no to low plasticity fines; 20% fine gravel.							
-30							Silty CLAY (CL-ML); medium stiff to stiff; light olive brown (2.5Y 5/4); 95% medium plasticity fines, slow dilatency; 5% fine sand.							
	45													
			S14	18/14	7 7 9	Q_p=1.0 S_t=1.0	with 15% fine sand from 47.0 to 47.6'.							
-35							SILT with Sand (ML); medium stiff to stiff; light olive brown (2.5Y 5/4); 85% no to low plasticity fines; 15% fine sand.							
	50						End of Boring at 48.5 feet							
-40														
-45	55													
-50	60													
-55	65													

Strata lines represent the approximate boundaries between soil types. Actual transitions may be gradual. Water level readings have been made at times stated. Water levels may be different at other times.

CLIENT: HDR Engineering, Inc.
PROJECT NAME: San Francisquito Flood Control Project
CITY/STATE: Palo Alto/East Palo Alto, California
GEI PROJECT NUMBER: 092850

GEI Consultants 180 Grand Ave Oakland Ca 94611 510-350-2900

Boring Location

NORTHING: ____ EASTING: ____ STATION: ____ OFFSET: ____
HORIZONTAL DATUM: NAD 83 STATION CENTERLINE: ____
VERTICAL DATUM: NAVD 88 GROUND SURFACE ELEVATION (FT): 15
LOCATION: On Levee Crown, near Baylands Trailhead by Athletic Complex Parking Lot, Palo Alto

BORING **B-3** PAGE 1 of 2

Drilling Information

DATE START / END: 2/3/10 TOTAL DEPTH (FT): 51.5
CONTRACTOR: Pitcher Drilling Co. DRILLER: Eden LOGGED BY: M. Powers
EQUIPMENT: Truck Mounted Failing 1500 BORING METHOD: Solid Stem Auger/Mud Rotary
AUGER ID/OD: N/A / 5 in, 2.625 in CASING ID/OD: N/A / N/A
HAMMER TYPE: Automatic Hammer HAMMER WEIGHT (lbs): 140 HAMMER DROP (inch): 30
WATER LEVEL DEPTHS (ft): Water level not observed during rotary wash exploration
GENERAL NOTES:

ABBREVIATIONS: ID = Inside Diameter; OD = Outside Diameter; Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot; S = Split Spoon; DP = Direct Push Sample; U = Undistrubed Tube Sample; C = Rock Core; V = Field Vane Shear; SC = Sonic Core; WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; OVM = Organic Vapor Meter; Q_p = Pocket Penetrometer Strength; S_t = Pocket Torvane Shear Strength; F_v = Field Vane Shear Strength; NA, NM = Not Applicable, Not Measured

Elev. (ft)	Depth (ft)	Type	Sample No.	Pen./Rec. (in)	Blow Count or RQD	Field Test Data (ksf)	Sample Description & Classification	Moisture Content (%)	Dry Density (pcf)	Fines % <#200	LL	PI	Other Tests	Remarks
			S1	6/6			Clayey GRAVEL with Sand (GC) dry; 65% fine gravel; 20% medium sand; 15% low plasticity fines; compacted [FILL].							
			S2	6/6			Gravelly CLAY (CL); very stiff; dark olive brown; moist; 60% low plasticity fines; 30% fine gravel; 10% sand [FILL].							
10	5		S3	18/15	9 9 12	Q_p=6.0	Plastic mesh debris at 4.0'.	15	114		35	16		
			S4	6/6			Sandy CLAY with Gravel (CL); dark olive brown; moist; 65% low plasticity fines; 25% medium to coarse sand; 10% fine gravel [FILL].							
			S5	18/17	7 8 12	Q_p=2.5 S_t=2.5	Lean CLAY (CL); very stiff; dark yellowish brown (10YR 4/4) mottled with olive gray and reddish brown; moist; low to medium plasticity fines [FILL].	24	99					
5	10		S6	12/12	200 psi 400 psi	Q_p=8.0	Sandy CLAY (CL); very stiff to hard; dark gray (2.5Y 4/1); 70% low plasticity fines; 30% fine to medium sand [FILL].							
			S7	18/11	15 15 12	Q_p=7.5	Clayey SAND (SC); medium dense; dark gray (2.5Y 4/1); 60% fine sand; 40% low plasticity fines [FILL].							
0	15		S8	30/30	150 psi 200 psi	Q_p=4.0 S_t=2.0	Fat CLAY/Elastic SILT (CH/MH); very stiff; dark gray (2.5Y 4/1); high plasticity fines.	43	77		71	35	Q_p=2.15 ksf	
-5	20		S9	18/10	4 7 10	Q_p=3.0 S_t=2.25	Color change to greenish gray (GLEY1 6/1) at 21.0'.	26	98				Q_p=3.14 ksf	
-10	25		S10	30/30	175 psi 225 psi	Q_p=1.0 S_t=1.0	Silty CLAY with Sand (CL-ML); medium stiff; yellowish brown (10YR 4/4); 75% low plastcity fines, slow dilatancy; 25% fine sand.							
			S11	18/14	3 4	Q_p=2.0	Lean CLAY with Sand (CL); medium stiff to stiff; dark							

Strata lines represent the approximate boundaries between soil types. Actual transitions may be gradual. Water level readings have been made at times stated. Water levels may be different at other times.

CLIENT: HDR Engineering, Inc.
PROJECT NAME: San Francisquito Flood Control Project
CITY/STATE: Palo Alto/East Palo Alto, California
GEI PROJECT NUMBER: 092850

GEI Consultants 180 Grand Ave Oakland Ca 94611 510-350-2900

GEOTECHNICAL BORING LOG 02 SF_CREEK_FLOOD_CONTROL.GPJ GEI DATA TEMPLATE GDT 7/21/10

USERNAME: BillShad Tue 08 Jul 2008 09:32am
FILENAME: C:\pwworking\sac\d0171341\B-103

DOCUMENT NUMBER: SFC_LP-B-1028-XXXXXXX

REV	DESCRIPTION	DATE	APPR.
	PRELIMINARY 30% 08-03-2010		

REFERENCE INFORMATION AND NOTES
Date of Photography: March 4, 2010
Horizontal Datum:
California Coordinate System, Zone 3
North American Datum of 1983 (NAD83, NSR 2007)
Vertical Datum:
North American Vertical Datum of 1988 (NAVD88)
Ground Control Survey by: Towill, Inc.

HDR Engineering, Inc.

DATE MM-DD-YY	ENGINEERING CERTIFICATION
DESIGN K. DE LAPP	REGISTERED PROFESSIONAL ENGINEER KEITH F. DE LAPP No. 48214 Exp. 6-30-12 CIVIL STATE OF CALIFORNIA
DRAWN H. SUAREZ	
CHECKED B. JOHNSON	PROJECT ENGINEER DATE

SAN FRANCISQUITO CREEK JOINT POWERS AUTHORITY

ACCEPTED BY DISTRICT
PROJECT ENGINEER DATE

PROJECT NAME AND SHEET DESCRIPTION:
SAN FRANCISQUITO CREEK
FLOOD PROTECTION CAPITAL PROJECT
EAST BAYSHORE RD. TO S.F. BAY
BORING LOGS
B-2, B-3

SCALE: NOT TO SCALE
VERIFY SCALES: 0 1" BAR IS ONE INCH ON ORIGINAL DRAWING IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

PROJECT NUMBER: 241-130806
SHEET CODE: B-103
PAGE NUMBER: 15 OF SHT#

Boring Location

NORTHING: ____ EASTING: ____ STATION: ____ OFFSET: ____
HORIZONTAL DATUM: NAD 83 STATION CENTERLINE: ____
VERTICAL DATUM: NAVD 88 GROUND SURFACE ELEVATION (FT): 15
LOCATION: On Levee Crown, near Baylands Trailhead by Athletic Complex Parking Lot, Palo Alto

BORING B-3
PAGE 2 of 2

Elev. (ft)	Depth (ft)	Type	Sample No.	Pen./Rec. (in)	Blow Count or RQD	Field Test Data (ksf)	Sample Description & Classification	Moisture Content (%)	Dry Density (pcf)	Fines % #200	LL	PI	Other Tests	Remarks
					5	S_u=1.2	yellowish brown; 75% low plasticity fines; 25% fine sand.							
-20	35		S12	18/12	10 9 12	Q_p=6.0 S_u=3.0	Sandy Lean CLAY (CL); dark yellowish brown; very stiff; 70% low plasticity fines; 30% fine to medium sand.	22	104					
							Poorly Graded SAND with Silt (SP-SM); dark brown; 95% fine to coarse sand; 5% no to low plasticity fines.							
-25	40		S13	18/16	10 3 6	Q_p=1.5	Sandy Lean CLAY (CL); dark yellowish brown; medium stiff; 55% low plasticity fines; 45% fine to coarse sand.	30	94					
							Driller's Note: drilling advanced quickly and sand in cuttings from 42.0 to 43.0'.							
-30	45		S14	18/18	WOH 7 10	Q_p=1.5 S_u=0.9	Silty CLAY (CL-ML); dark yellowish brown; medium stiff; 95% low plasticity fines; 5% fine sand.							
			S15	18/11	4 5 10		Silty SAND (SM); medium dense; dark yellowish brown; 70% fine sand; 30% low plasticity fines.							
-35	50		S16	18/12	10 11 12	Q_p=2.0 S_u=1.0 Q_p=1.5	Lean CLAY with Sand (CL); stiff; yellowish brown (10YR 5/4); 80% low plasticity fines, slow dilatency; 20% fine sand. 3-inch fat clay seam, medium stiff, medium to high plasticity fines at 50.0'							
							End of Boring at 51.5 feet							
-40	55													
-45	60													
-50	65													

Strata lines represent the approximate boundaries between soil types. Actual transitions may be gradual. Water level readings have been made at times stated. Water levels may be different at other times.

CLIENT: HDR Engineering, Inc.
PROJECT NAME: San Francisquito Flood Control Project
CITY/STATE: Palo Alto/East Palo Alto, California
GEI PROJECT NUMBER: 092850

GEI Consultants
180 Grand Ave
Oakland Ca 94611
510-350-2900

Boring Location

NORTHING: ____ EASTING: ____ STATION: ____ OFFSET: ____
HORIZONTAL DATUM: NAD 83 STATION CENTERLINE: ____
VERTICAL DATUM: NAVD 88 GROUND SURFACE ELEVATION (FT): 5
LOCATION: ~100' E of Landside Toe, on Golf Course, ~1800' S of Friendship Bridge, Palo Alto

BORING B-4
PAGE 1 of 2

Drilling Information

DATE START / END: 2/1/10 TOTAL DEPTH (FT): 48.5
CONTRACTOR: Pitcher Drilling Co. DRILLER: Eden LOGGED BY: M. Powers
EQUIPMENT: Fraste Multidrill XL BORING METHOD: Solid Stem Auger/Mud Rotary
AUGER ID/OD: N/A / 5 in, 2.625 in CASING ID/OD: N/A / N/A
HAMMER TYPE: Automatic Hammer HAMMER WEIGHT (lbs): 140 HAMMER DROP (inch): 30
WATER LEVEL DEPTHS (ft): Water level not recorded during rotary wash exploration
GENERAL NOTES: Fraste Moble Track Rig

ABBREVIATIONS: ID = Inside Diameter; OD = Outside Diameter; Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot; S = Split Spoon; DP = Direct Push Sample; U = Undistrubed Tube Sample; C = Rock Core; V = Field Vane Shear; SC = Sonic Core; WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; OVM = Organic Vapor Meter; Q_p = Pocket Penetrometer Strength; S_u = Pocket Torvane Shear Strength; F_v = Field Vane Shear Strength; NA, NM = Not Applicable, Not Measured

Elev. (ft)	Depth (ft)	Type	Sample No.	Pen./Rec. (in)	Blow Count or RQD	Field Test Data (ksf)	Sample Description & Classification	Moisture Content (%)	Dry Density (pcf)	Fines % #200	LL	PI	Other Tests	Remarks
							Golf Course Turf and Grass							
			S1	12/12			Clayey SAND (SC); olive gray (5Y 4/2); 60% fine to medium sand; 40% fines [FILL].							
			S2	30/30	0 psi 200 psi		Fat CLAY (CH); olive gray mottled with reddish brown; 95% high plasticity fines; 5% fine sand.							
0	5						Silty SAND (SM); olive gray; 80% fine sand; 20% no to low plasticity fines.	59	65				Q_p=0.39 ksf	
			S3	30/30	100 psi 300 psi	Q_p=2.0 S_u=0.7	Fat CLAY (CH); medium stiff; dark bluish gray (GLEY2 4/1); 95% high plasticity fines, low toughness fines; 5% fine sand.							
-5	10							36	84					
							Color change to bluish gray from 11.0' to 13.0'.							
			S4	18/12	4 4 5	Q_p=2.0 S_u=0.7	Lean CLAY (CL); stiff; light greenish gray (GLEY 2 7/1); medium plasticity, slow dilatancy fines; trace fine sand and gravel.							
-10	15													
			S5	30/28	300 psi 600 psi	Q_p=2.5 S_u=1.5	Color change to greenish gray (GLEY1 6/1) from 18.0' to 23.0'.							
-15	20							29	97	46	26		Q_p=1.18 ksf	
			S6	30/30	300 psi 500 psi	Q_p=2.0 S_u=1.0	Sandy Lean CLAY (CL); medium stiff to stiff; 65% medium plasticity, medium toughness, slow dilatancy fines; 35% fine to coarse sand; trace fine gravel.							
-20	25													
			S7	18/14	3 3 6	Q_p=2.0 S_u=1.0	Sandy Silty CLAY (CL); medium stiff to stiff; greenish gray with brownish yellow; 70% medium plasticity fines; 30% fine sand. Sand content increased to 40%							

Strata lines represent the approximate boundaries between soil types. Actual transitions may be gradual. Water level readings have been made at times stated. Water levels may be different at other times.

CLIENT: HDR Engineering, Inc.
PROJECT NAME: San Francisquito Flood Control Project
CITY/STATE: Palo Alto/East Palo Alto, California
GEI PROJECT NUMBER: 092850

GEI Consultants
180 Grand Ave
Oakland Ca 94611
510-350-2900

Boring Location

NORTHING: ____ EASTING: ____ STATION: ____ OFFSET: ____
HORIZONTAL DATUM: NAD 83 STATION CENTERLINE: ____
VERTICAL DATUM: NAVD 88 GROUND SURFACE ELEVATION (FT): 5
LOCATION: ~100' E of Landside Toe, on Golf Course, ~1800' S of Friendship Bridge, Palo Alto

BORING B-4
PAGE 2 of 2

Elev. (ft)	Depth (ft)	Type	Sample No.	Pen./Rec. (in)	Blow Count or RQD	Field Test Data (ksf)	Sample Description & Classification	Moisture Content (%)	Dry Density (pcf)	Fines % #200	LL	PI	Other Tests	Remarks
							in sample shoe.							
							Well Graded SAND with Silt and Gravel (SW-SM); medium dense; 70% medium to coarse sand; 20% fine gravel; 10% no to low plasticity fines. SAMPLE SHOE: Clayey SILT (ML); olive brown; 90% low plasticity fines; 10% fine sand. Interbedded coarse/fine grained layers from 34.5 to 35.5'.							
-30	35		S8	18/14	9 9 6									
							Lean CLAY (CL); stiff; dark greenish gray (GLEY2 4/1); medium plasticity, no to slow dilatancy, medium toughness.							
-35	40		S9	30/30	200 psi 550 psi	Q_p=4.0 S_u=1.75								
-40	45		S10	18/16	6 9 11	Q_p=2.5 S_u=1.0	Sandy Lean CLAY (CL); medium stiff to stiff; 70% medium plasticity fines; 30% fine to medium sand; trace fine gravel.							
			S11	18/12	7 7 9	Q_p=2.5 S_u=1.0	Lean CLAY (CL); stiff; greenish gray; 95% low plasticity, no dilatancy fines; 5% coarse sand; trace fine gravel.							
-45	50						End of Boring at 48.5 feet							
-50	55													
-55	60													
-60	65													

Strata lines represent the approximate boundaries between soil types. Actual transitions may be gradual. Water level readings have been made at times stated. Water levels may be different at other times.

CLIENT: HDR Engineering, Inc.
PROJECT NAME: San Francisquito Flood Control Project
CITY/STATE: Palo Alto/East Palo Alto, California
GEI PROJECT NUMBER: 092850

GEI Consultants
180 Grand Ave
Oakland Ca 94611
510-350-2900

GEOTECHNICAL BORING LOG 02 SF_CREEK_FLOOD_CONTROL.GPJ GEI DATA TEMPLATE.GDT 7/2/10

USERNAME: BillShad - Tue 08 Jul 2008 - 09:32am
FILENAME: C:\pwworking\sac\d0171341\B-104

DOCUMENT NUMBER: SFC_LP-B-1028-XXXXXXX

REV	DESCRIPTION	DATE	APPR.
	PRELIMINARY 30% 08-03-2010		

REFERENCE INFORMATION AND NOTES
Date of Photography: March 4, 2010
Horizontal Datum:
California Coordinate System, Zone 3
North American Datum of 1983 (NAD83, NSR 2007)
Vertical Datum:
North American Vertical Datum of 1988 (NAVD88)
Ground Control Survey by: Towill, Inc.

HDR Engineering, Inc.

DATE MM-DD-YY
DESIGN K. DE LAPP
DRAWN H. SUAREZ
CHECKED B. JOHNSON

ENGINEERING CERTIFICATION
REGISTERED PROFESSIONAL ENGINEER KEITH F. DE LAPP No. 48214 Exp. 6-30-12 CIVIL STATE OF CALIFORNIA
PROJECT ENGINEER DATE

SAN FRANCISQUITO CREEK JOINT POWERS AUTHORITY
ACCEPTED BY DISTRICT
PROJECT ENGINEER DATE

PROJECT NAME AND SHEET DESCRIPTION:
SAN FRANCISQUITO CREEK
FLOOD PROTECTION CAPITAL PROJECT
EAST BAYSHORE RD. TO S.F. BAY
BORING LOGS
B-3, B-4

SCALE: NOT TO SCALE
VERIFY SCALES: 0 1"
BAR IS ONE INCH ON ORIGINAL DRAWING IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

PROJECT NUMBER: 241-130806
SHEET CODE: B-104
PAGE NUMBER: 16 OF SHT#

Boring Location

NORTHING: ____ EASTING: ____ STATION: ____ OFFSET: ____
HORIZONTAL DATUM: NAD 83 STATION CENTERLINE: ____
VERTICAL DATUM: NAVD 88 GROUND SURFACE ELEVATION (FT): 14
LOCATION: On Levee Crown, ~300' E of Friership Bridge, Palo Alto

BORING B-5
PAGE 1 of 2

Drilling Information

DATE START / END: 2/8/10
CONTRACTOR: Pitcher Drilling Co. DRILLER: Will
EQUIPMENT: Fraste Multidrill XL Rubber Track
AUGER ID/OD: N/A / 5 in, 2.625 in CASING ID/OD: N/A / N/A
HAMMER TYPE: Automatic Hammer HAMMER WEIGHT (lbs): 140
WATER LEVEL DEPTHS (ft): Water level not observed during rotary wash exploration
GENERAL NOTES: Fraste Multidrill XL Rubber Track Rig

TOTAL DEPTH (FT): 51.5
LOGGED BY: T. Haynes
BORING METHOD: Solid Stem Auger/Mud Rotary
HAMMER DROP (inch): 30

ABBREVIATIONS: ID = Inside Diameter; OD = Outside Diameter; Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot; S = Split Spoon; DP = Direct Push Sample; U = Undistrubed Tube Sample; C = Rock Core; V = Field Vane Shear; SC = Sonic Core; WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; OVM = Organic Vapor Meter; Q_p = Pocket Penetrometer Strength; S_t = Pocket Torvane Shear Strength; F_v = Field Vane Shear Strength; NA, NM = Not Applicable, Not Measured

Elev. (ft)	Depth (ft)	Type	Sample No.	Pen./Rec. (in)	Blow Count or RQD	Field Test Data (ksf)	Sample Description & Classification	Moisture Content (%)	Dry Density (pcf)	Fines % -#200	LL	PI	Other Tests	Remarks
							Lean CLAY (CL); very stiff; very dark gray (10YR 3/1); moist; medium plasticity fines; fine to coarse gravel at ground surface [FILL].							
10	5		S1	18/12	4 4 7	Q_p=5.0 S_t=2.5		35	76				Q_u=2.60 ksf	
			S2	18/8	3 5 5		~2-inch sandy silt seam at 3.3'. trace fine sand from 3.5 to 7.0'.							
5	10		S3	18/14	3 3 4	Q_p=1.5 S_t=1.0	Sandy Lean CLAY (CL); dark grayish brown (10YR 4.2); moist; 70% low to medium plasticity fines; 30% fine sand [FILL]. Driller's Note: sand mixed with clay in cuttings at 7.0'.	45	71					
			S4	18/11	1 2 2		Lean CLAY (CL); medium stiff; dark gray (2.5Y 4/1) mottled with brown (7.5YR 4/3); moist; medium plasticity fines; trace organics (plant fibers) [FILL].							
0	15		S5	30/29	0 psi	S_t=0.5	Elastic Silt (MH); soft; very dark greenish gray (5G 3/1); moist to wet; medium to high plasticity fines.	86	51		96	52	S_u=0.58 ksf Consol	
-5	20		S6	30/30	240 psi	Q_p=3.5 S_t=2.25	Lean CLAY (CL); stiff to very stiff; dark greenish gray (10Y 4/1); moist; medium to high plasticity fines.	30	93					
-10	25		S7	18/14	5 6 8	Q_p=3.0 S_t=2.25	olive gray (5Y 5/2); medium plasticity fines.	25						
-15			S8	30/24	200 psi	Q_p=2.5 S_t=1.0	Color change to gray (5Y 5/1) mottled with strong brown (7.5YR 4/6); medium stiff to stiff from 28.0 to 31.0'.							

Strata lines represent the approximate boundaries between soil types. Actual transitions may be gradual. Water level readings have been made at times stated. Water levels may be different at other times.

CLIENT: HDR Engineering, Inc.
PROJECT NAME: San Francisquito Flood Control Project
CITY/STATE: Palo Alto/East Palo Alto, California
GEI PROJECT NUMBER: 092850

GEI Consultants 180 Grand Ave Oakland Ca 94611 510-350-2900

Boring Location

NORTHING: ____ EASTING: ____ STATION: ____ OFFSET: ____
HORIZONTAL DATUM: NAD 83 STATION CENTERLINE: ____
VERTICAL DATUM: NAVD 88 GROUND SURFACE ELEVATION (FT): 14
LOCATION: On Levee Crown, ~300' E of Friership Bridge, Palo Alto

BORING B-5
PAGE 2 of 2

Elev. (ft)	Depth (ft)	Type	Sample No.	Pen./Rec. (in)	Blow Count or RQD	Field Test Data (ksf)	Sample Description & Classification	Moisture Content (%)	Dry Density (pcf)	Fines % -#200	LL	PI	Other Tests	Remarks
								33	88					
-20			S9	18/14	22 23 24		Poorly Graded SAND with Gravel (SP); medium dense to dense; dark brown (10YR 3/3); moist to wet; 80% fine to coarse sand; 20% fine gravel. Driller's Note: loss of water in mud tub at 31.0'.							
	35		S10	18/6	2 4 13									
-25	40		S11	18/8	10 15 18		65% fine to coarse sand; 35% fine gravel from 40.0 to 45.0'.							
-30	45		S12	18/18	3 5 5		Lean CLAY (CL); stiff; yellowish brown (10YR 5/4); medium plasticity fines; trace fine sand.							
-35	50		S13	18/15	5 10 11	Q_p=2.0 S_t=1.2	Color change to dark greenish gray (10YR 4/1) from 50.0 to 51.5'.							
-40							End of Boring at 51.5 feet							
	55													
-45	60													
-50	65													

Strata lines represent the approximate boundaries between soil types. Actual transitions may be gradual. Water level readings have been made at times stated. Water levels may be different at other times.

CLIENT: HDR Engineering, Inc.
PROJECT NAME: San Francisquito Flood Control Project
CITY/STATE: Palo Alto/East Palo Alto, California
GEI PROJECT NUMBER: 092850

GEI Consultants 180 Grand Ave Oakland Ca 94611 510-350-2900

Boring Location

NORTHING: ____ EASTING: ____ STATION: ____ OFFSET: ____
HORIZONTAL DATUM: NAD 83 STATION CENTERLINE: ____
VERTICAL DATUM: NAVD 88 GROUND SURFACE ELEVATION (FT): 6
LOCATION: ~75' E of Landsde Toe, on Golf Course, ~850' S of Friendship Bridge, Palo Alto

BORING B-6
PAGE 1 of 2

Drilling Information

DATE START / END: 2/1/10 - 2/2/10
CONTRACTOR: Pitcher Drilling Co. DRILLER: Eden
EQUIPMENT: Fraste Multidrill XL
AUGER ID/OD: N/A / 5 in, 2.625 in CASING ID/OD: N/A / N/A
HAMMER TYPE: Automatic Hammer HAMMER WEIGHT (lbs): 140
WATER LEVEL DEPTHS (ft): Water level not recorded during rotary wash exploration
GENERAL NOTES: Fraste Mobile Track Rig

TOTAL DEPTH (FT): 48.5
LOGGED BY: M. Powers
BORING METHOD: Solid Stem Auger/Mud Rotary
HAMMER DROP (inch): 30

ABBREVIATIONS: ID = Inside Diameter; OD = Outside Diameter; Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot; S = Split Spoon; DP = Direct Push Sample; U = Undistrubed Tube Sample; C = Rock Core; V = Field Vane Shear; SC = Sonic Core; WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; OVM = Organic Vapor Meter; Q_p = Pocket Penetrometer Strength; S_t = Pocket Torvane Shear Strength; F_v = Field Vane Shear Strength; NA, NM = Not Applicable, Not Measured

Elev. (ft)	Depth (ft)	Type	Sample No.	Pen./Rec. (in)	Blow Count or RQD	Field Test Data (ksf)	Sample Description & Classification	Moisture Content (%)	Dry Density (pcf)	Fines % -#200	LL	PI	Other Tests	Remarks
							Grass turf; sandy subgrade.							
5			S1	12/12			Clayey SAND (SC); dark grayish brown (2.5Y 4/2); 70% fine to medium sand; 30% medium plasticity fines; trace organics (root fibers) [FILL].							
			S2	18/13	3 3 5	Q_p=2.0 S_t=0.75	Silty CLAY (CL); medium stiff; grayish brown (2.5Y 5/2); 95% medium plasticity fines; 5% fine sand.							
0	5		S3	30/30	175 psi	Q_p=0.5 S_t=0.4	Fat CLAY with Sand (CH); soft; dark greenish gray (GLEY2 4/1); 85% medium to high plasticity, medium dilatancy, low toughness fines; 15% fine sand; trace organics.	44	76				Q_u=0.83 ksf	
-5	10		S4	30/30	275 psi	Q_p=0.5 S_t=0.4	Fat CLAY (CH); soft; dark greenish gray; 95% high plasticity fines, slow dilatancy, low toughness fines; 5% fine sand; organic scent; shell fragments.	79	54		78	43	S_u=0.36 ksf Consol	
-10	15		S5	18/11	4 7 7	Q_p=3.0 S_t=1.25	Lean CLAY (CL); stiff; greenish gray (GLEY2 5/1) mottled with brownish yellow; 95% low to medium plasticity fines; 5% fine sand; with calcified nodules. Driller's Note: change in cuttings color at 14.0'.	31	91					
-15	20		S6	18/12	5 6 7	Q_p=3.5 S_t=1.25	Trace shell fragments at 20.0'.	23	104					
-20	25		S7	30/30	800 psi 900 psi	Q_p=5.5 S_t=1.25		26						

Strata lines represent the approximate boundaries between soil types. Actual transitions may be gradual. Water level readings have been made at times stated. Water levels may be different at other times.

CLIENT: HDR Engineering, Inc.
PROJECT NAME: San Francisquito Flood Control Project
CITY/STATE: Palo Alto/East Palo Alto, California
GEI PROJECT NUMBER: 092850

GEI Consultants 180 Grand Ave Oakland Ca 94611 510-350-2900

GEOTECHNICAL BORING LOG 02 SF_CREEK_FLOOD_CONTROL.GPJ GEI DATA TEMPLATE GDT 7/21/10

USERNAME: BillShad Tue 08 Jul 2008 09:32am
FILENAME: C:\pwworking\sac\d0171341\B-105

DOCUMENT NUMBER: SFC_LP-B-1028-XXXXXXX

REV	DESCRIPTION	DATE	APPR.
	PRELIMINARY 30% 08-03-2010		

REFERENCE INFORMATION AND NOTES
Date of Photography: March 4, 2010
Horizontal Datum: California Coordinate System, Zone 3 North American Datum of 1983 (NAD83, NSR 2007)
Vertical Datum: North American Vertical Datum of 1988 (NAVD88)
Ground Control Survey by: Towill, Inc.

HDR Engineering, Inc.

DATE MM-DD-YY
DESIGN K. DE LAPP
DRAWN H. SUAREZ
CHECKED B. JOHNSON

ENGINEERING CERTIFICATION
REGISTERED PROFESSIONAL ENGINEER KEITH F. DE LAPP No. 48214 Exp. 6-30-12 CIVIL STATE OF CALIFORNIA
PROJECT ENGINEER DATE

SAN FRANCISQUITO CREEK JOINT POWERS AUTHORITY
ACCEPTED BY DISTRICT
PROJECT ENGINEER DATE

PROJECT NAME AND SHEET DESCRIPTION:
SAN FRANCISQUITO CREEK
FLOOD PROTECTION CAPITAL PROJECT
EAST BAYSHORE RD. TO S.F. BAY
BORING LOGS
B-5, B-6

SCALE: NOT TO SCALE
VERIFY SCALES: 0 1" BAR IS ONE INCH ON ORIGINAL DRAWING IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY
PROJECT NUMBER: 241-130806
SHEET CODE: B-105
PAGE NUMBER: 17 OF SHT#

Boring Location

NORTHING: ____ EASTING: ____ STATION: ____ OFFSET: ____
HORIZONTAL DATUM: NAD 83 STATION CENTERLINE: ____
VERTICAL DATUM: NAVD 88 GROUND SURFACE ELEVATION (FT): 6
LOCATION: ~75' E of Landsde Toe, on Golf Course, ~850' S of Friendship Bridge, Palo Alto

BORING B-6
PAGE 2 of 2

Elev. (ft)	Depth (ft)	Type	Sample No.	Pen./ Rec. (in)	Blow Count or RQD	Field Test Data (ksf)	Sample Description & Classification	Moisture Content (%)	Dry Density (pcf)	Fines % <#200	LL	PI	Other Tests	Remarks
-25			S8	18/13	3 6 10	Q_p=2.5 S_v=0.625	Silty CLAY with Sand and Gravel (CL); medium sitff; 75% low to medium plasticity fines; 15% fine to coarse sand; 10% fine gravel.							
			S9	18/18	10 10 12		Silty SAND with Gravel (SM); medium dense; olive gray (5Y 4/2); 50% medium to coarse sand; 30% fine gravel; 20% no to low plasticity fines.							
-30	35													
			S10	18/11	8 8 6		Well Graded SAND with Silt and Gravel (SW-SM); medium dense; dark olive gray (5Y 3/2); 60% medium to coarse sand; 30% fine gravel; 10% no to low plasticity fines.							
-35	40													
			S11	18/3	4 5 9	Q_p=4.0 S_v=0.75	Lean CLAY with Sand (CL); medium stiff to stiff; greenish gray; 80% low to medium plasticity, slow dilatancy fines; 20% fine sand.							
-40	45													
			S12	18/12	5 6 8	Q_p=2.0 S_v=1.0	Silty CLAY (CL); medium stiff to stiff; greenish gray mottled with brownish yellow; 95% low to medium plasticity, slow dilatancy, medium toughness fines; 5% fine sand.							
-45	50						End of Boring at 48.5 feet							
-50	55													
-55	60													
-60	65													

Strata lines represent the approximate boundaries between soil types. Actual transitions may be gradual. Water level readings have been made at times stated. Water levels may be different at other times.

CLIENT: HDR Engineering, Inc.
PROJECT NAME: San Francisquito Flood Control Project
CITY/STATE: Palo Alto/East Palo Alto, California
GEI PROJECT NUMBER: 092850

GEI Consultants
180 Grand Ave
Oakland Ca 94611
510-350-2900

Boring Location

NORTHING: ____ EASTING: ____ STATION: ____ OFFSET: ____
HORIZONTAL DATUM: NAD 83 STATION CENTERLINE: ____
VERTICAL DATUM: NAVD 88 GROUND SURFACE ELEVATION (FT): 16
LOCATION: On Levee Crown, near end of Verbena Dr., East Palo Alto

BORING S-1
PAGE 1 of 1

Drilling Information

DATE START / END: 2/4/10
TOTAL DEPTH (FT): 16.0
CONTRACTOR: Pitcher Drilling Co. DRILLER: Eden
LOGGED BY: M. Powers
EQUIPMENT: Truck Mounted Failing 1500
BORING METHOD: Solid Stem Auger
AUGER ID/OD: N/A / 4 in CASING ID/OD: N/A / N/A
HAMMER TYPE: Automatic Hammer HAMMER WEIGHT (lbs): 140 HAMMER DROP (inch): 30
WATER LEVEL DEPTHS (ft): ▼12.5 2/4/2010 1:30 pm
GENERAL NOTES:

ABBREVIATIONS: ID = Inside Diameter; OD = Outside Diameter; Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot; S = Split Spoon; DP = Direct Push Sample; U = Undistrubed Tube Sample; C = Rock Core; V = Field Vane Shear; SC = Sonic Core; WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; OVM = Organic Vapor Meter; Q_p = Pocket Penetrometer Strength; S_v = Pocket Torvane Shear Strength; F_v = Field Vane Shear Strength; NA, NM = Not Applicable, Not Measured

Elev. (ft)	Depth (ft)	Type	Sample No.	Pen./ Rec. (in)	Blow Count or RQD	Field Test Data (ksf)	Sample Description & Classification	Moisture Content (%)	Dry Density (pcf)	Fines % <#200	LL	PI	Other Tests	Remarks
15							Clayey GRAVEL with Sand (GC); medium dense; dark yellowish brown (10YR 4/4); dry; 50% fine gravel; 30% low plasticity fines; 20% fine to medium sand; moist below 1.0' [FILL].							
			S1	12/12										
			S2	18/17	14 13 11									
	5						Clayey SAND (SC); dark yellowish brown (10YR 4/4); fine to medium sand; low plasticity fines; trace fine gravel [FILL].	12		41				
10			S3	12/12			Sandy Lean CLAY (CL); very stiff to hard; dark gray (5Y 4/1); 70% low plasticity fines; 30 % fine sand [FILL].							
			S4	18/15	11 14 15		~3-inch root at 8.5'. Trace fine gravel at 9.0'.							
	10													
5		▼	S5	12/12			Silty SAND (SM); loose; dark gray; moist to wet; 70% fine sand; 30% low plasticity fines.							
			S6	18/8	4 3 4									
	15		S7	12/12			Wet; medium sand at 15.0'.							
0							End of Boring at 16 feet							
	20													
-5														
	25													
-10														

Strata lines represent the approximate boundaries between soil types. Actual transitions may be gradual. Water level readings have been made at times stated. Water levels may be different at other times.

CLIENT: HDR Engineering, Inc.
PROJECT NAME: San Francisquito Flood Control Project
CITY/STATE: Palo Alto/East Palo Alto, California
GEI PROJECT NUMBER: 092850

GEI Consultants
180 Grand Ave
Oakland Ca 94611
510-350-2900

Boring Location

NORTHING: ____ EASTING: ____ STATION: ____ OFFSET: ____
HORIZONTAL DATUM: NAD 83 STATION CENTERLINE: ____
VERTICAL DATUM: NAVD 88 GROUND SURFACE ELEVATION (FT): 14
LOCATION: On Levee Crown, ~1300' S of Pump Station, East Palo Alto

BORING S-3
PAGE 1 of 1

Drilling Information

DATE START / END: 2/4/10
TOTAL DEPTH (FT): 15.5
CONTRACTOR: Pitcher Drilling Co. DRILLER: Eden
LOGGED BY: M. Powers
EQUIPMENT: Truck Mounted Failing 1500
BORING METHOD: Solid Stem Auger
AUGER ID/OD: N/A / 4 in CASING ID/OD: N/A / N/A
HAMMER TYPE: Automatic Hammer HAMMER WEIGHT (lbs): 140 HAMMER DROP (inch): 30
WATER LEVEL DEPTHS (ft): ▽11.0 2/4/2010 3:15 pm
GENERAL NOTES:

ABBREVIATIONS: ID = Inside Diameter; OD = Outside Diameter; Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot; S = Split Spoon; DP = Direct Push Sample; U = Undistrubed Tube Sample; C = Rock Core; V = Field Vane Shear; SC = Sonic Core; WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; OVM = Organic Vapor Meter; Q_p = Pocket Penetrometer Strength; S_v = Pocket Torvane Shear Strength; F_v = Field Vane Shear Strength; NA, NM = Not Applicable, Not Measured

Elev. (ft)	Depth (ft)	Type	Sample No.	Pen./ Rec. (in)	Blow Count or RQD	Field Test Data (ksf)	Sample Description & Classification	Moisture Content (%)	Dry Density (pcf)	Fines % <#200	LL	PI	Other Tests	Remarks
							Clayey GRAVEL (GC); dry.							
							Clayey SAND with Gravel (GC); yellowish brown; 60% fine to medium sand; 30% low plasticity fines; 10% fine gravel [FILL].							
			S1	12/12										
			S2	18/12	3 4 4	Q_p=1.5	Sandy Lean CLAY (CL); dark brown (10YR 3/3); moist; 70% low plasticity fines; 30% fine sand [FILL].							
10	5						SILT with Sand (ML); medium stiff; dark grayish brown (10YR 4/2) mottled with reddish brown (5YR 4/4); no to low plasticity fines; fine sand [FILL].	30	91	75				
			S3	12/12			Lean CLAY (CL); medium stiff; dark grayish brown (10YR 4/2) mottled with reddish brown (5YR 4/4); low plasticity fines [FILL].							
			S4	18/18	1 2 3	Q_p=1.0 S_v=0.8		33	86				Q_c=0.74 ksf	
5	10	▽	S5	12/12			Sandy Lean CLAY (CL); dark grayish brown (10YR 4/2); 70% low to medium plasticity fines; 30% fine sand [FILL].							
			S6	18/18	WOH WOH WOH	Q_p=1.0	Fat CLAY (CH); soft; dark gray; 95% medium to high plasticity fines; 5% fine sand.							
0	15		S7	30/30	100 psi 200 psi		Poorly Graded SAND with Silt (SP-SM); greenish gray (GLEY2 5/1) mottled with reddish brown (5YR 4/4); 95% fine sand; 5% low plasticity fines.							
							End of Boring at 15.5 feet							
-5	20													
-10	25													
-15														

Strata lines represent the approximate boundaries between soil types. Actual transitions may be gradual. Water level readings have been made at times stated. Water levels may be different at other times.

CLIENT: HDR Engineering, Inc.
PROJECT NAME: San Francisquito Flood Control Project
CITY/STATE: Palo Alto/East Palo Alto, California
GEI PROJECT NUMBER: 092850

GEI Consultants
180 Grand Ave
Oakland Ca 94611
510-350-2900

GEOTECHNICAL BORING LOG 02 SF_CREEK_FLOOD_CONTROL.GPJ GEI DATA TEMPLATE GDT 7/21/10

USERNAME: BillShad Tue 08 Jul 2008 09:32am
FILENAME: C:\pwworking\sac\d0171341\B-106

DOCUMENT NUMBER: SFC_LP-B-1028-XXXXXXX

REV	DESCRIPTION	DATE	APPR.
	PRELIMINARY 30% 08-03-2010		

REFERENCE INFORMATION AND NOTES
Date of Photography: March 4, 2010
Horizontal Datum:
California Coordinate System, Zone 3
North American Datum of 1983 (NAD83, NSR 2007)
Vertical Datum:
North American Vertical Datum of 1988 (NAVD88)
Ground Control Survey by: Towill, Inc.

HDR Engineering, Inc.

DATE MM-DD-YY
DESIGN K. DE LAPP
DRAWN H. SUAREZ
CHECKED B. JOHNSON

ENGINEERING CERTIFICATION
REGISTERED PROFESSIONAL ENGINEER KEITH F. DE LAPP No. 48214 Exp. 6-30-12 CIVIL STATE OF CALIFORNIA
PROJECT ENGINEER DATE

SAN FRANCISQUITO CREEK JOINT POWERS AUTHORITY
ACCEPTED BY DISTRICT
PROJECT ENGINEER DATE

PROJECT NAME AND SHEET DESCRIPTION:
SAN FRANCISQUITO CREEK
FLOOD PROTECTION CAPITAL PROJECT
EAST BAYSHORE RD. TO S.F. BAY
BORING LOGS
B-6, S-1, S-3

SCALE: NOT TO SCALE
VERIFY SCALES: 0 1"
BAR IS ONE INCH ON ORIGINAL DRAWING IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

PROJECT NUMBER: 241-130806
SHEET CODE: B-106
PAGE NUMBER: 18 OF SHT#

Boring Location

NORTHING: ____ EASTING: ____ STATION: ____ OFFSET: ____
HORIZONTAL DATUM: NAD 83 STATION CENTERLINE: ____
VERTICAL DATUM: NAVD 88 GROUND SURFACE ELEVATION (FT): 14
LOCATION: On Levee Crown, ~1100' S of Frienship Bridge, Palo Alto

BORING

S-6

PAGE 1 of 1

Drilling Information

DATE START / END: 2/8/10
TOTAL DEPTH (FT): 22.5
CONTRACTOR: Pitcher Drilling Co. DRILLER: Will
LOGGED BY: T. Haynes
EQUIPMENT: Fraste Multidrill XL Rubber Track
BORING METHOD: Solid Stem Auger
AUGER ID/OD: N/A / 4 in CASING ID/OD: N/A / N/A
HAMMER TYPE: Automatic Hammer HAMMER WEIGHT (lbs): 140
HAMMER DROP (inch): 30
WATER LEVEL DEPTHS (ft): ▼15.8 2/8/2010 4:30 pm
GENERAL NOTES: Fraste Multdrill XL Rubber Track Rig

ABBREVIATIONS:
ID = Inside Diameter; OD = Outside Diameter; Pen. = Penetration Length; Rec. = Recovery Length
bpf = Blows per Foot; mpf = Minute per Foot; S = Split Spoon; DP = Direct Push Sample
U = Undistrubed Tube Sample; C = Rock Core; V = Field Vane Shear; SC = Sonic Core
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; OVM = Organic Vapor Meter
Q_p = Pocket Penetrometer Strength; S_v = Pocket Torvane Shear Strength; F_v = Field Vane Shear Strength; NA, NM = Not Applicable, Not Measured

SAMPLE INFORMATION

Elev. (ft)	Depth (ft)	Type	Sample No.	Pen./ Rec. (in)	Blow Count or RQD	Field Test Data (ksf)	GRAPHIC LOG	Sample Description & Classification	Moisture Content (%)	Dry Density (pcf)	Fines % <#200	LL	PI	Other Tests	Remarks
			S1	6/6				Clayey GRAVEL with Sand (GC); dark grayish brown (10YR 4/2); dry; 60% fine to coarse gravel; 25% fine to coarse sand; 15% low plasticity fines [FILL].							
10			S2	18/12	6 12 12										
	5														
			S3	6/6				Lean CLAY with Sand (CL); medium stiff; very dark grayish brown (2.5Y 3/2); moist; 85% medium plasticity fines; 15% fine to medium sand [FILL].							
5			S4	18/18	6 6 8	Q_p=1.5		Clayey SAND (SC); very dark greenish gray (5GY 3/1); moist; fine sand; low to medium plasticity fines [FILL].			46				
	10														
0			S5	18/18	3 8 12			Poorly Graded SAND (SP) very dark greenish gray (5GY 3/1); moist; fine to coarse sand.							
	15														
-5			S6	18/12	2 2 3			Fat CLAY (CH); medium stiff; dark greenish gray (5GY 4/1); moist to wet; high plasticity fines.							
	20		S7	30/24	100 psi	S_v=0.7			75	54				Q_p=0.53 ksf	
-10								End of Boring at 22.5 feet							
	25														
-15															

Strata lines represent the approximate boundaries between soil types. Actual transitions may be gradual. Water level readings have been made at times stated. Water levels may be different at other times.

CLIENT: HDR Engineering, Inc.
PROJECT NAME: San Francisquito Flood Control Project
CITY/STATE: Palo Alto/East Palo Alto, California
GEI PROJECT NUMBER: 092850

GEI Consultants
180 Grand Ave
Oakland Ca 94611
510-350-2900

GEOTECHNICAL BORING LOG 02 SF_CREEK_FLOOD_CONTROL.GPJ GEI DATA TEMPLATE.GDT 7/21/10

USERNAME: BillShad Tue 08 Jul 2008 09:32am
FILENAME: C:\pwworking\sac\d0171341\B-107

DOCUMENT NUMBER: SFC_LP-B-1028-XXXXXXX

REV	DESCRIPTION	DATE	APPR.
	PRELIMINARY 30% 08-03-2010		

REFERENCE INFORMATION AND NOTES
Date of Photography: March 4, 2010
Horizontal Datum:
California Coordinate System, Zone 3
North American Datum of 1983 (NAD83, NSR 2007)
Vertical Datum:
North American Vertical Datum of 1988 (NAVD88)
Ground Control Survey by: Towill, Inc.

Oakland • California GEI Consultants

DATE MM-DD-YY
DESIGN K. DE LAPP
DRAWN H. SUAREZ
CHECKED B. JOHNSON

ENGINEERING CERTIFICATION
REGISTERED PROFESSIONAL ENGINEER KEITH F. DE LAPP No. 48214 Exp. 6-30-12 CIVIL STATE OF CALIFORNIA
PROJECT ENGINEER DATE

SAN FRANCISQUITO CREEK JOINT POWERS AUTHORITY
ACCEPTED BY DISTRICT
PROJECT ENGINEER DATE

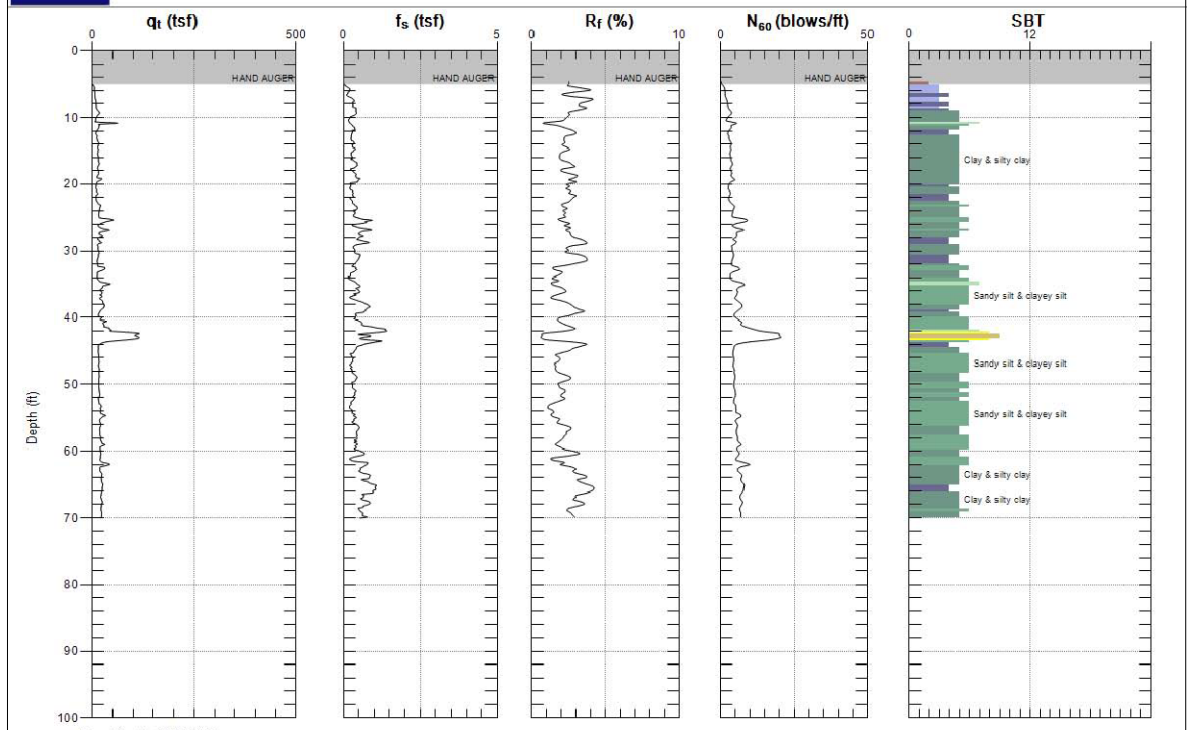
PROJECT NAME AND SHEET DESCRIPTION:
SAN FRANCISQUITO CREEK
FLOOD PROTECTION CAPITAL PROJECT
EAST BAYSHORE RD. TO S.F. BAY
BORING LOGS
S-6

SCALE: NOT TO SCALE
VERIFY SCALES: 0 1"
BAR IS ONE INCH ON ORIGINAL DRAWING IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

PROJECT NUMBER: 241-130806
SHEET CODE: B-107
PAGE NUMBER: 19 OF SHT#

GREGG GEI

Site: SAN FRANCISQUITO CREEK Engineer: M.POWERS
Sounding: CPT-01 Date: 2010-01-28 11:31

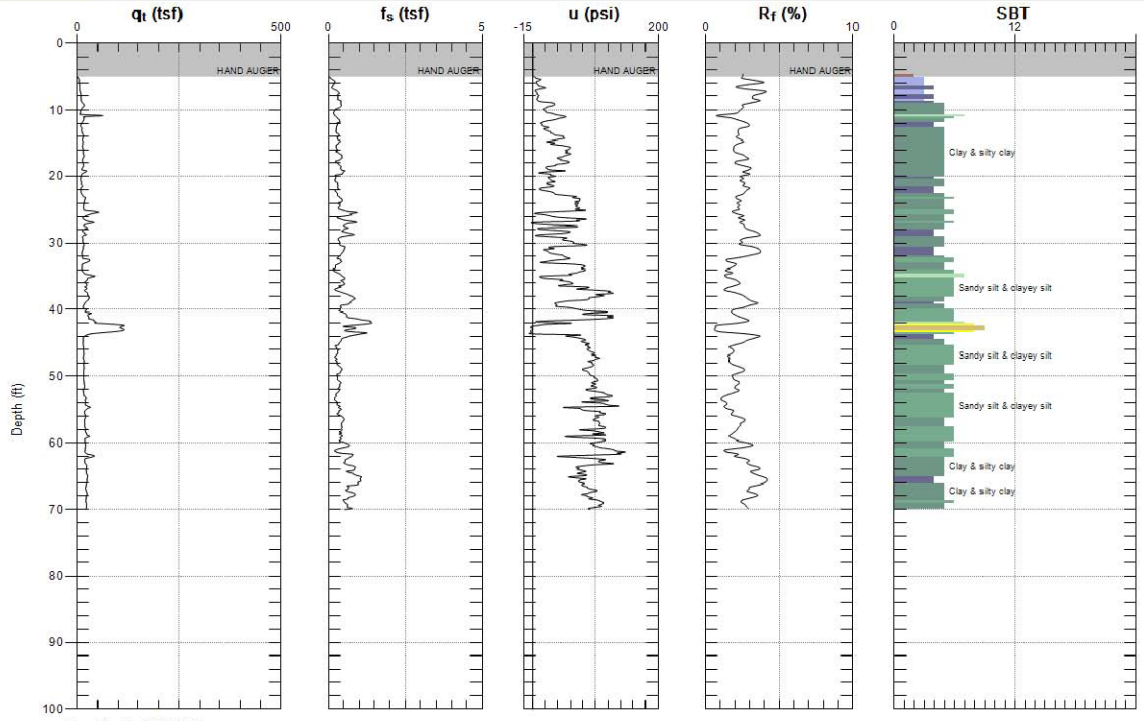


Max. Depth: 70.046 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

GREGG GEI

Site: SAN FRANCISQUITO CREEK Engineer: M.POWERS
Sounding: CPT-01 Date: 2010-01-28 11:31

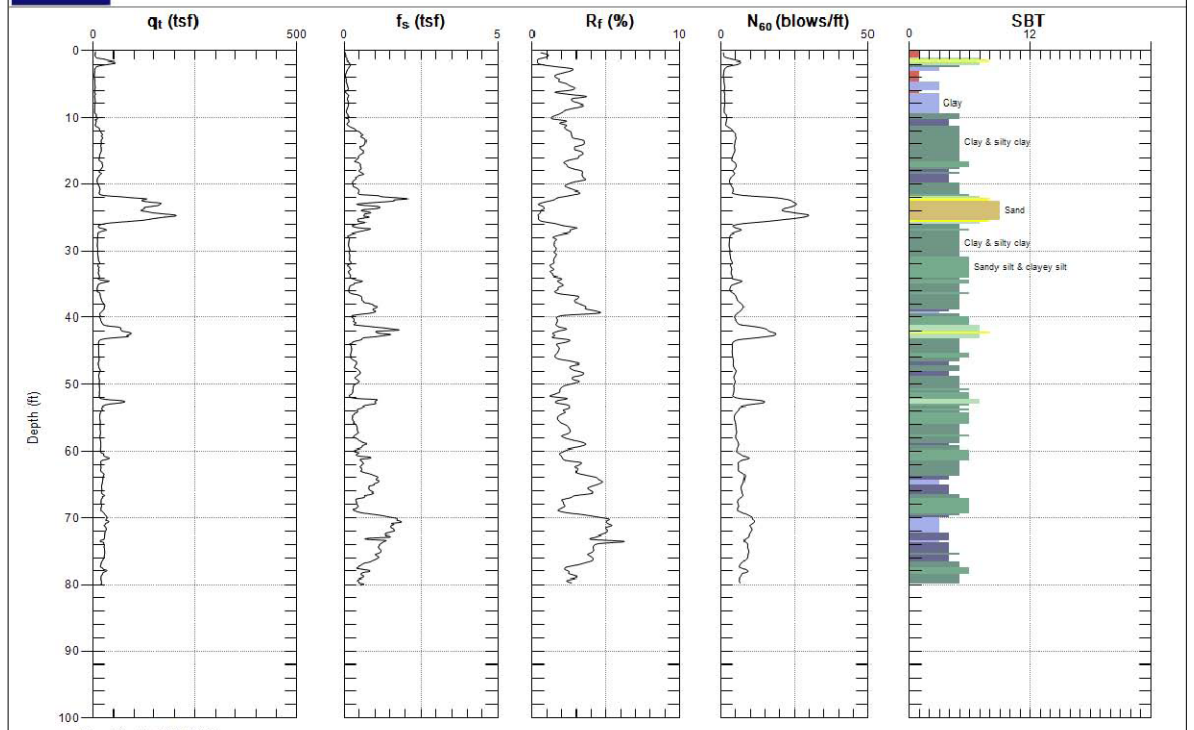


Max. Depth: 70.046 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

GREGG GEI

Site: SAN FRANCISQUITO CREEK Engineer: M.POWERS
Sounding: CPT-02 Date: 2010-01-28 12:41

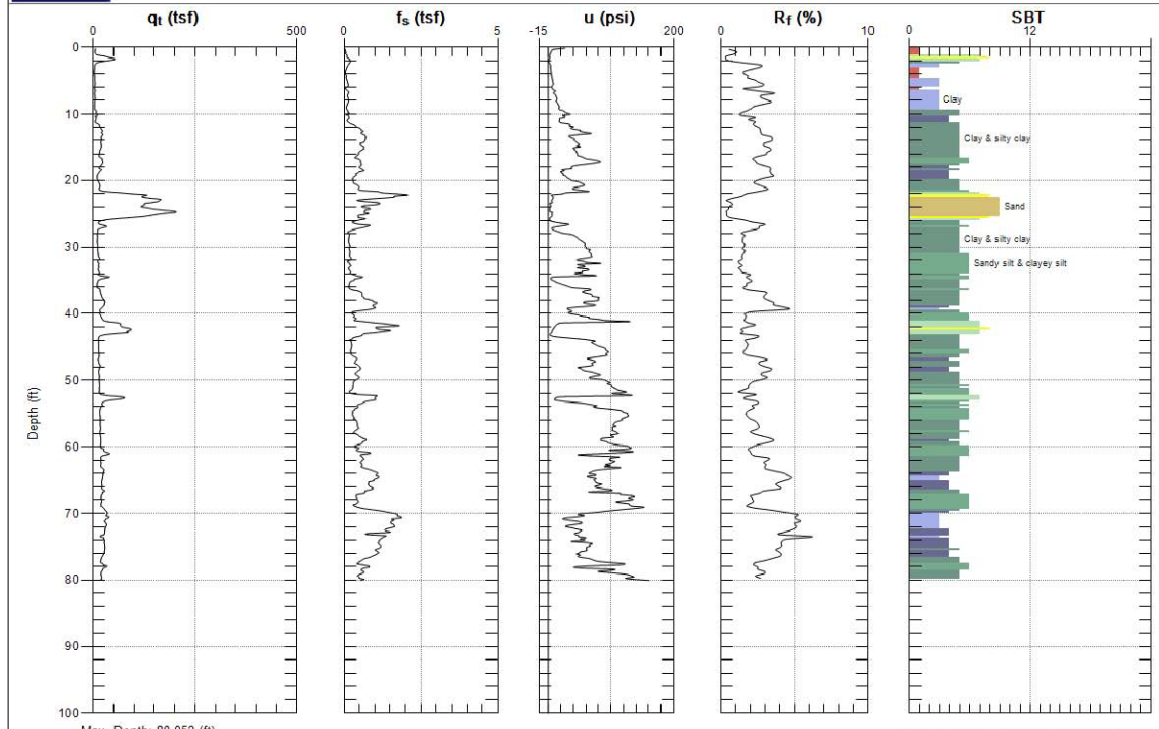


Max. Depth: 80.052 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

GREGG GEI

Site: SAN FRANCISQUITO CREEK Engineer: M.POWERS
Sounding: CPT-02 Date: 2010-01-28 12:41



Max. Depth: 80.052 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

REV	DESCRIPTION	DATE	APPR.
	PRELIMINARY 30% 08-03-2010		

REFERENCE INFORMATION AND NOTES
Date of Photography: March 4, 2010
Horizontal Datum:
California Coordinate System, Zone 3
North American Datum of 1983 (NAD83, NSR 2007)
Vertical Datum:
North American Vertical Datum of 1988 (NAVD88)
Ground Control Survey by: Towill, Inc.

HDR Engineering, Inc.

DATE MM-DD-YY
DESIGN K. DE LAPP
DRAWN H. SUAREZ
CHECKED B. JOHNSON

ENGINEERING CERTIFICATION
REGISTERED PROFESSIONAL ENGINEER KEITH F. DE LAPP No. 48214 Exp. 6-30-12 CIVIL STATE OF CALIFORNIA
PROJECT ENGINEER DATE

SAN FRANCISQUITO CREEK JOINT POWERS AUTHORITY
ACCEPTED BY DISTRICT
PROJECT ENGINEER DATE

PROJECT NAME AND SHEET DESCRIPTION:
SAN FRANCISQUITO CREEK
FLOOD PROTECTION CAPITAL PROJECT
EAST BAYSHORE RD. TO S.F. BAY
SOUNDING LOGS
CPT-01, CPT-02

SCALE: NOT TO SCALE
VERIFY SCALES: 0 1"
BAR IS ONE INCH ON ORIGINAL DRAWING IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

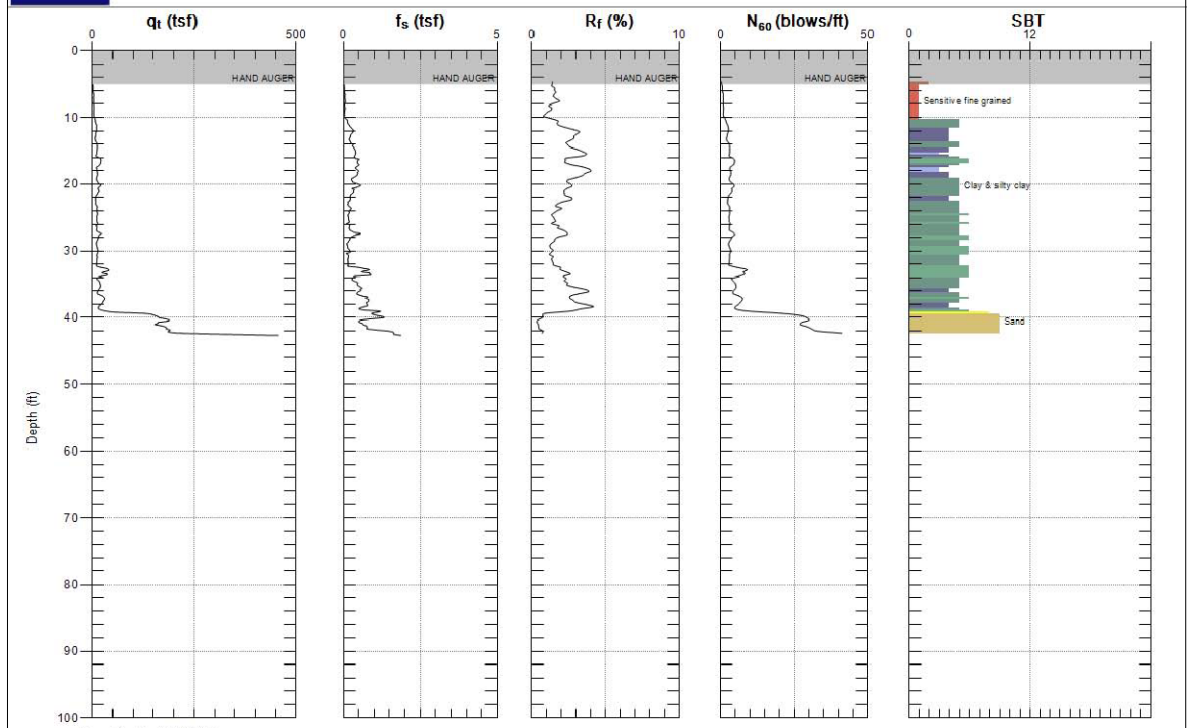
PROJECT NUMBER: 241-130806
SHEET CODE: B-108
PAGE NUMBER: 20 OF SHT#

DOCUMENT NUMBER: SFC_LP-B-1028-XXXXXXX

USERNAME: BillShad Tue 08 Jul 2008 09:32am
FILENAME: C:\pwworking\sac\d0171341\B-108

GREGG GEI

Site: SAN FRANCISQUITO CREEK Engineer: M.POWERS
Sounding: CPT-03 Date: 2010-01-28 10:17

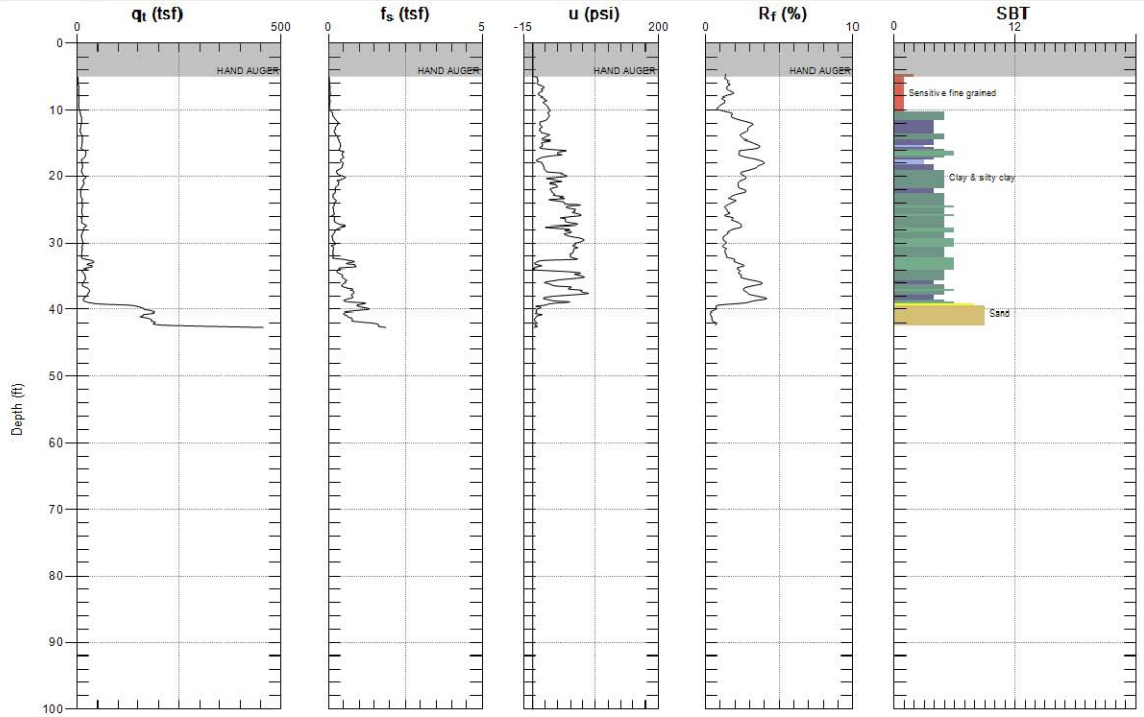


Max. Depth: 42.651 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

GREGG GEI

Site: SAN FRANCISQUITO CREEK Engineer: M.POWERS
Sounding: CPT-03 Date: 2010-01-28 10:17

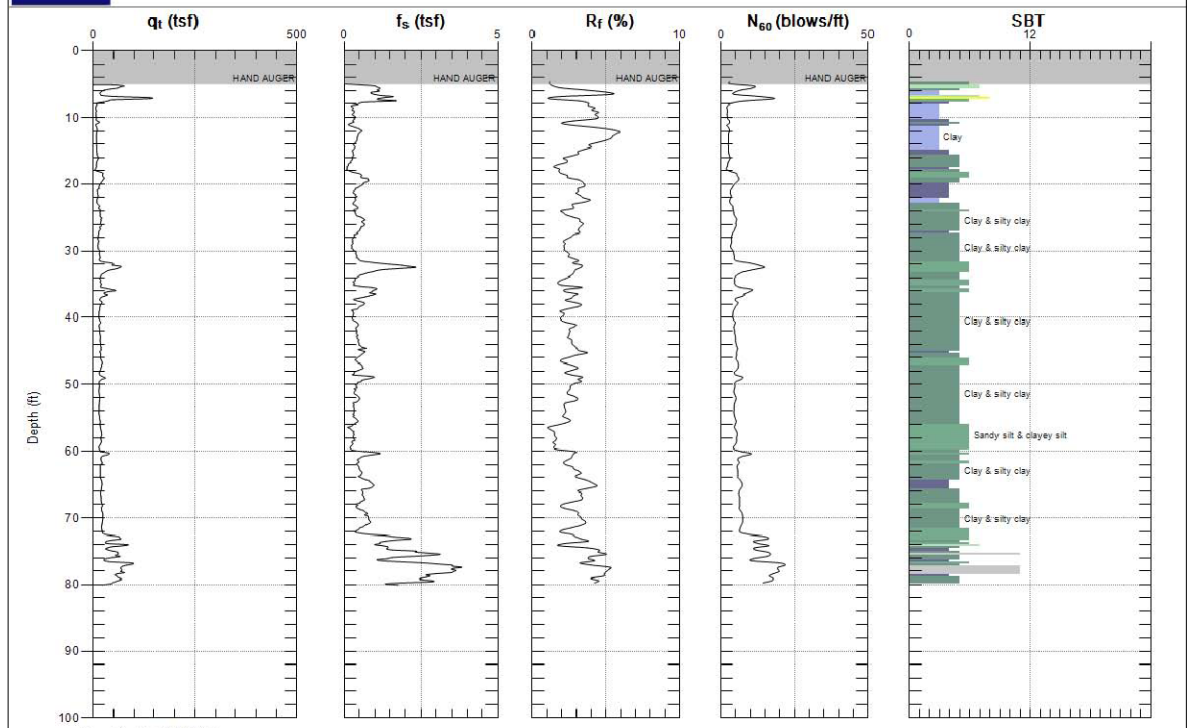


Max. Depth: 42.651 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

GREGG GEI

Site: SAN FRANCISQUITO CREEK Engineer: M.POWERS
Sounding: CPT-04 Date: 2010-01-28 08:10

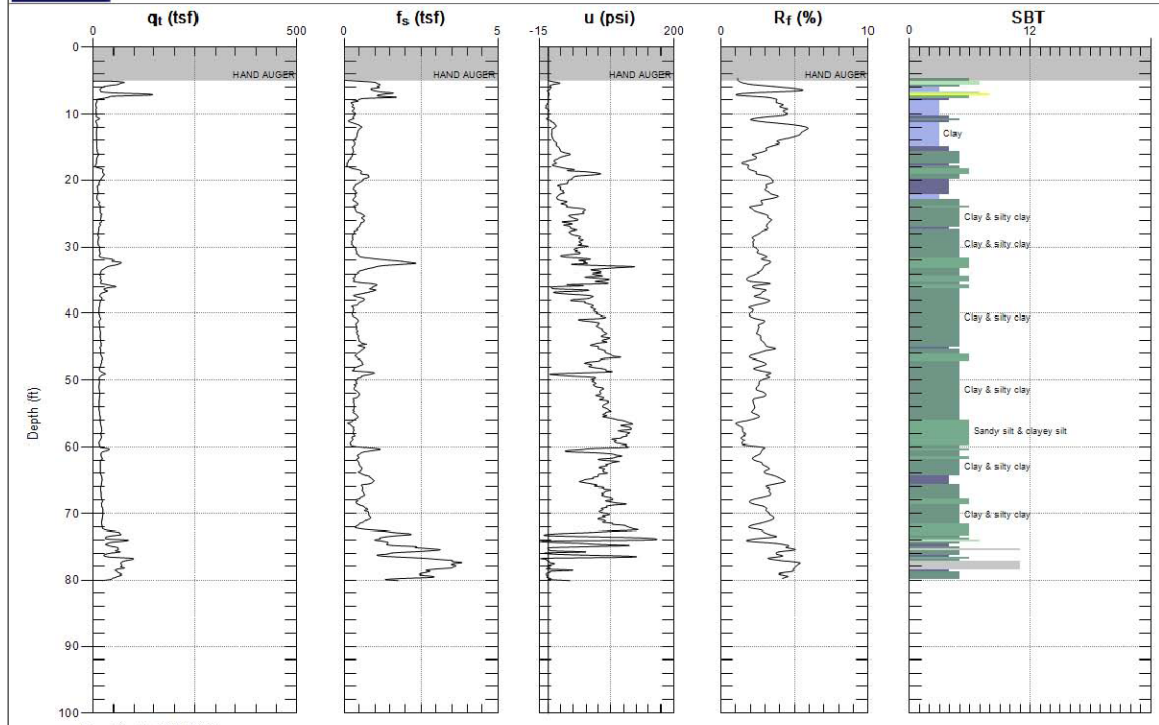


Max. Depth: 80.052 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

GREGG GEI

Site: SAN FRANCISQUITO CREEK Engineer: M.POWERS
Sounding: CPT-04 Date: 2010-01-28 08:10



Max. Depth: 80.052 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

REV	DESCRIPTION	DATE	APPR.
	PRELIMINARY 30% 08-03-2010		

REFERENCE INFORMATION AND NOTES
Date of Photography: March 4, 2010
Horizontal Datum:
California Coordinate System, Zone 3
North American Datum of 1983 (NAD83, NSR 2007)
Vertical Datum:
North American Vertical Datum of 1988 (NAVD88)
Ground Control Survey by: Towill, Inc.

HDR Engineering, Inc.

DATE MM-DD-YY
DESIGN K. DE LAPP
DRAWN H. SUAREZ
CHECKED B. JOHNSON

ENGINEERING CERTIFICATION
REGISTERED PROFESSIONAL ENGINEER KEITH F. DE LAPP No. 48214 Exp. 6-30-12 CIVIL STATE OF CALIFORNIA
PROJECT ENGINEER DATE

SAN FRANCISQUITO CREEK JOINT POWERS AUTHORITY
ACCEPTED BY DISTRICT
PROJECT ENGINEER DATE

PROJECT NAME AND SHEET DESCRIPTION:
SAN FRANCISQUITO CREEK
FLOOD PROTECTION CAPITAL PROJECT
EAST BAYSHORE RD. TO S.F. BAY
SOUNDING LOGS
CPT-03, CPT-04

SCALE: NOT TO SCALE
VERIFY SCALES: 0 1"
BAR IS ONE INCH ON ORIGINAL DRAWING IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

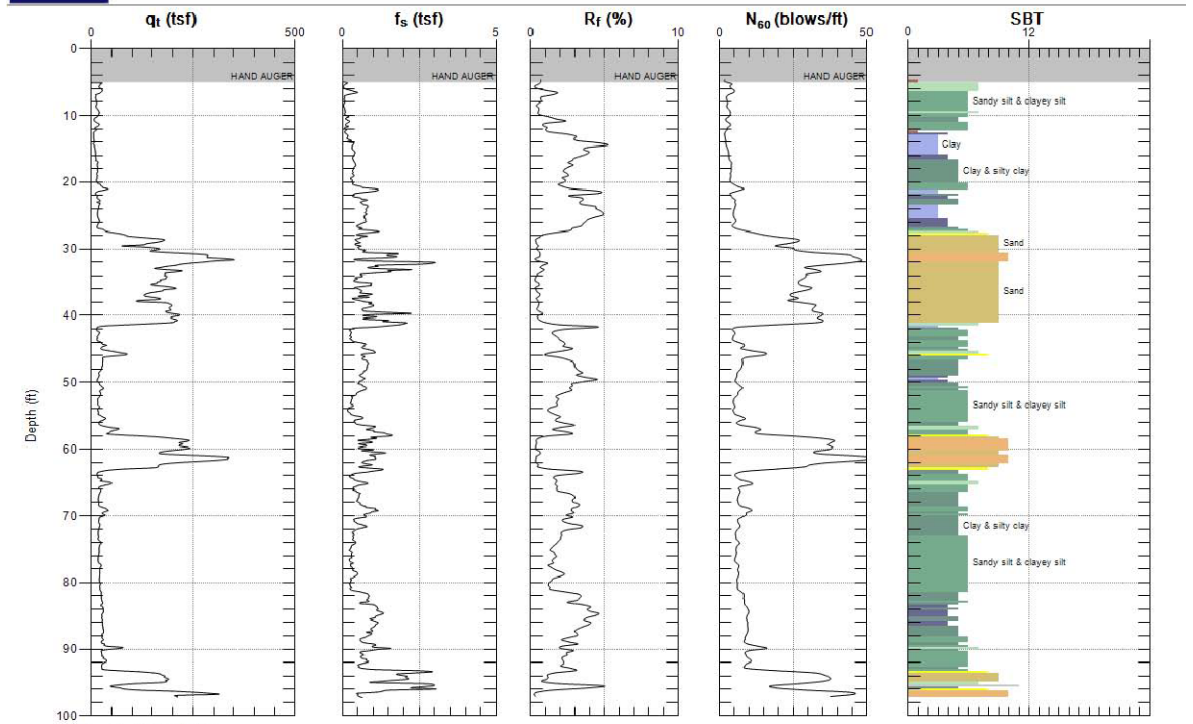
PROJECT NUMBER: 241-130806
SHEET CODE: B-109
PAGE NUMBER: 21 OF SHT#

DOCUMENT NUMBER: SFC_LP-B-1028-XXXXXXX

USERNAME: BillShad Tue 08 Jul 2008 09:32am
FILENAME: C:\pwworking\sac\d0171341\B-109

GREGG GEI

Site: SAN FRANCISQUITO CREEK Engineer: M.POWERS
Sounding: CPT-05 Date: 2010-01-28 02:13

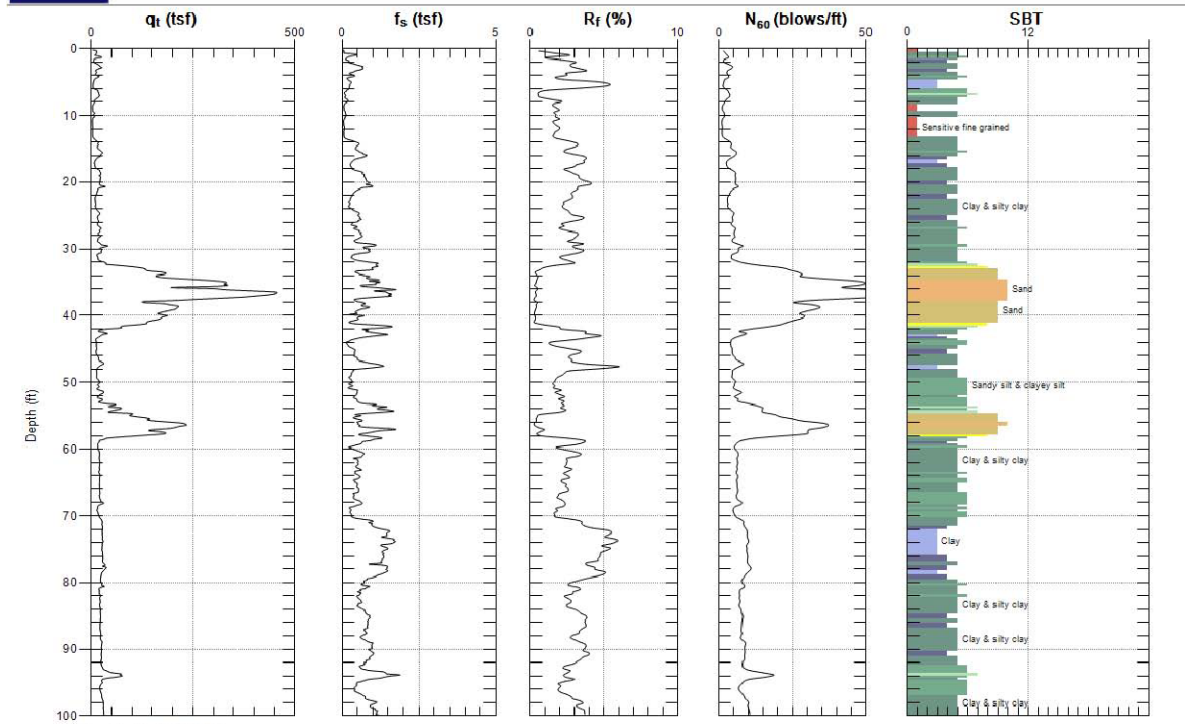


Max. Depth: 97.277 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

GREGG GEI

Site: SAN FRANCISQUITO CREEK Engineer: M.POWERS
Sounding: CPT-06 Date: 2010-01-29 10:04

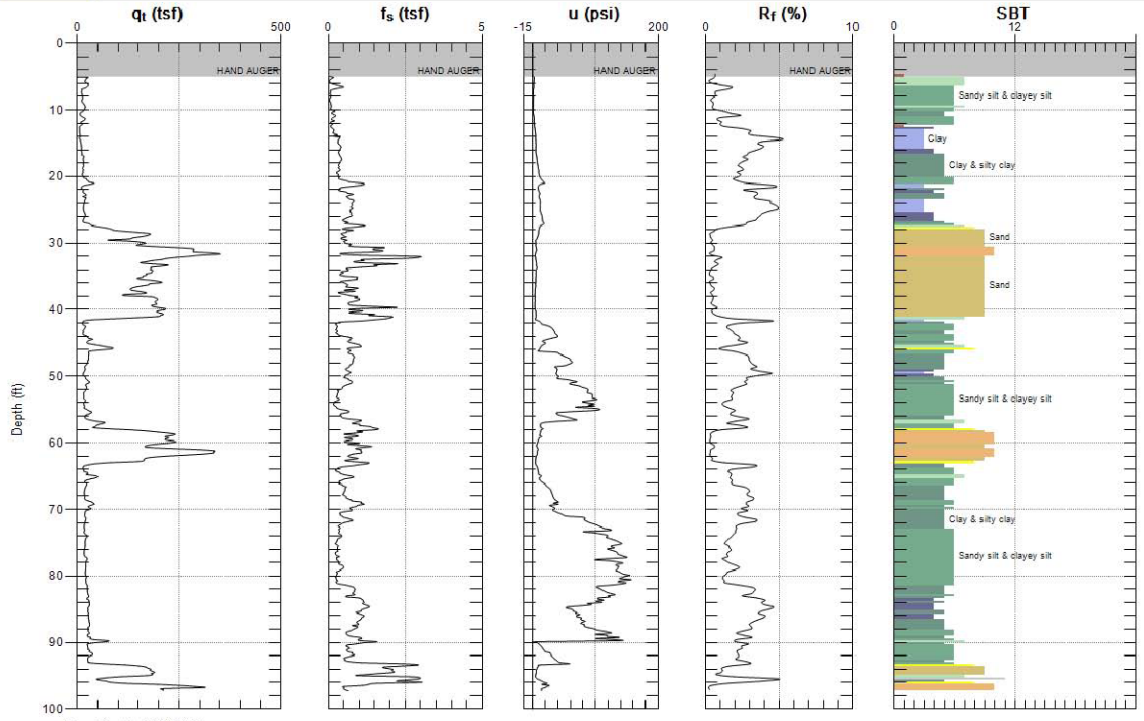


Max. Depth: 100.066 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

GREGG GEI

Site: SAN FRANCISQUITO CREEK Engineer: M.POWERS
Sounding: CPT-05 Date: 2010-01-28 02:13

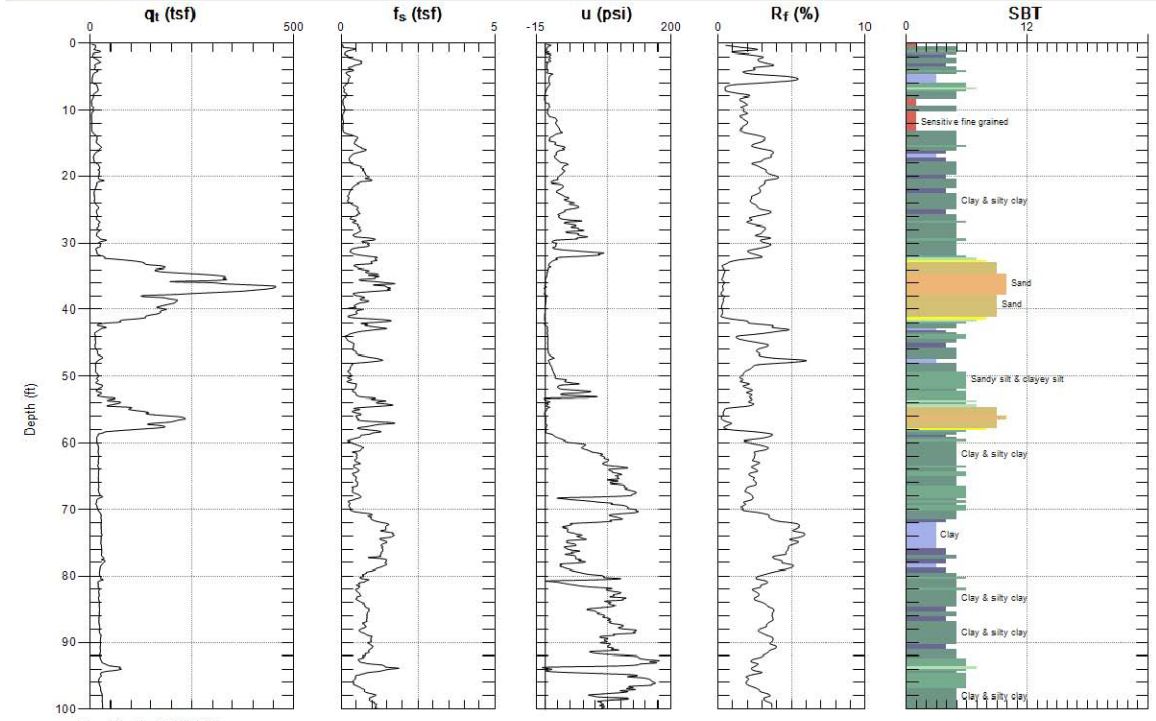


Max. Depth: 97.277 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

GREGG GEI

Site: SAN FRANCISQUITO CREEK Engineer: M.POWERS
Sounding: CPT-06 Date: 2010-01-29 10:04



Max. Depth: 100.066 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

REV	DESCRIPTION	DATE	APPR.
	PRELIMINARY 30% 08-03-2010		

REFERENCE INFORMATION AND NOTES
Date of Photography: March 4, 2010
Horizontal Datum:
California Coordinate System, Zone 3
North American Datum of 1983 (NAD83, NSR 2007)
Vertical Datum:
North American Vertical Datum of 1988 (NAVD88)
Ground Control Survey by: Towill, Inc.

HDR Engineering, Inc.

DATE MM-DD-YY
DESIGN K. DE LAPP
DRAWN H. SUAREZ
CHECKED B. JOHNSON

ENGINEERING CERTIFICATION
REGISTERED PROFESSIONAL ENGINEER KEITH F. DE LAPP No. 48214 Exp. 6-30-12 CIVIL STATE OF CALIFORNIA
PROJECT ENGINEER DATE

SAN FRANCISQUITO CREEK JOINT POWERS AUTHORITY
ACCEPTED BY DISTRICT
PROJECT ENGINEER DATE

PROJECT NAME AND SHEET DESCRIPTION:
SAN FRANCISQUITO CREEK
FLOOD PROTECTION CAPITAL PROJECT
EAST BAYSHORE RD. TO S.F. BAY
SOUNDING LOGS
CPT-05, CPT-06

SCALE: NOT TO SCALE
VERIFY SCALES: 0 1"
BAR IS ONE INCH ON ORIGINAL DRAWING IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

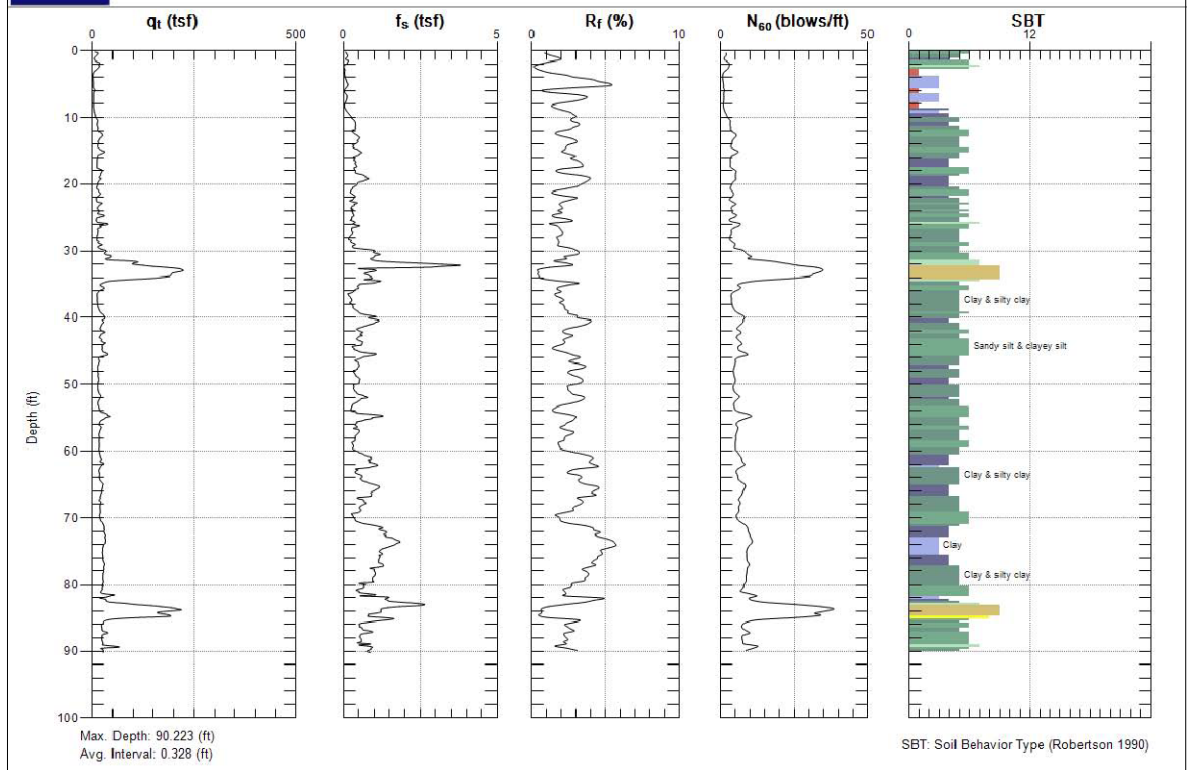
PROJECT NUMBER: 241-130806
SHEET CODE: B-110
PAGE NUMBER: 22 OF SHT#

DOCUMENT NUMBER: SFC_LP-B-1028-XXXXXXX

USERNAME: BillShad Tue 08 Jul 2008 09:32am
FILENAME: C:\pwworking\sac\d0171341\B-110

GREGG GEI

Site: SAN FRANCISQUITO CREEK Engineer: M.POWERS
Sounding: CPT-07 Date: 2010-01-29 08:16

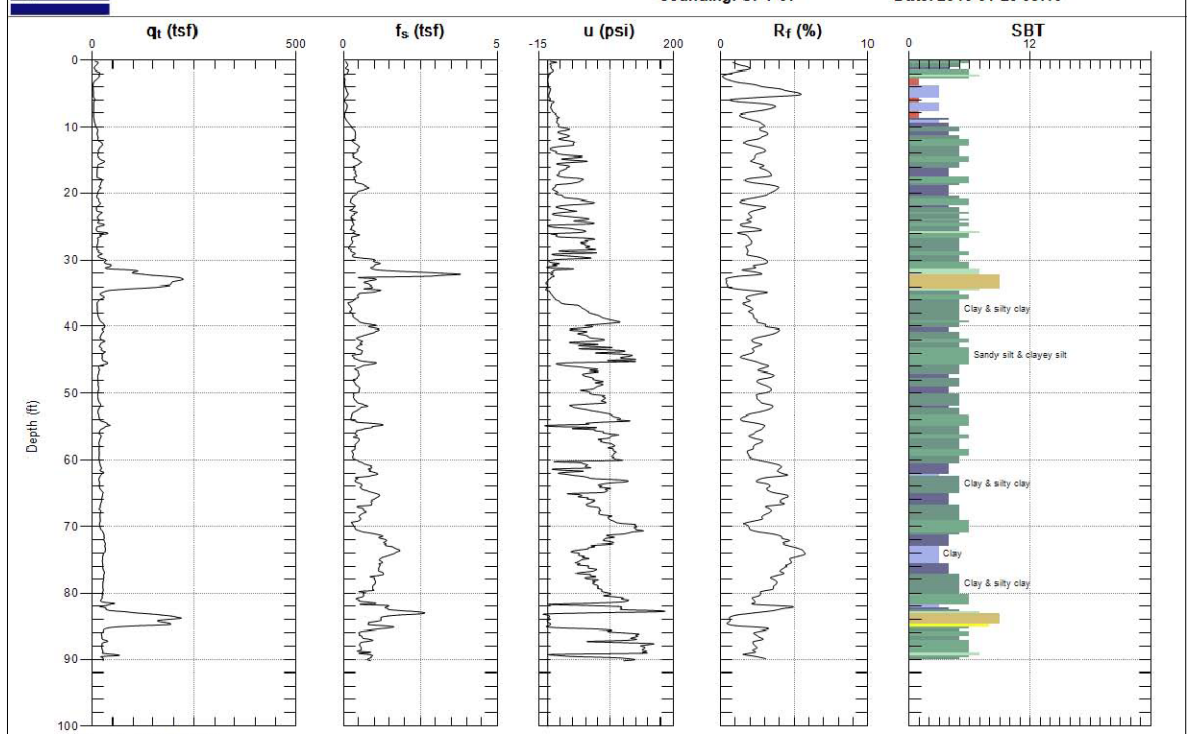


Max. Depth: 90.223 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

GREGG GEI

Site: SAN FRANCISQUITO CREEK Engineer: M.POWERS
Sounding: CPT-07 Date: 2010-01-29 08:16



Max. Depth: 90.223 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

USERNAME: BillShad Tue 08 Jul 2008 09:32am
FILENAME: C:\pwworking\sac\d0171341\B-111

DOCUMENT NUMBER: SFC_LP-B-1028-XXXXXXX

REV	DESCRIPTION	DATE	APPR.
	PRELIMINARY 30% 08-03-2010		

REFERENCE INFORMATION AND NOTES
Date of Photography: March 4, 2010
Horizontal Datum:
California Coordinate System, Zone 3
North American Datum of 1983 (NAD83, NSR 2007)
Vertical Datum:
North American Vertical Datum of 1988 (NAVD88)
Ground Control Survey by: Towill, Inc.

HDR Engineering, Inc.

DATE MM-DD-YY
DESIGN K. DE LAPP
DRAWN H. SUAREZ
CHECKED B. JOHNSON

ENGINEERING CERTIFICATION
REGISTERED PROFESSIONAL ENGINEER KEITH F. DE LAPP No. 48214 Exp. 6-30-12 CIVIL STATE OF CALIFORNIA
PROJECT ENGINEER DATE

SAN FRANCISQUITO CREEK JOINT POWERS AUTHORITY
ACCEPTED BY DISTRICT
PROJECT ENGINEER DATE

PROJECT NAME AND SHEET DESCRIPTION:
SAN FRANCISQUITO CREEK
FLOOD PROTECTION CAPITAL PROJECT
EAST BAYSHORE RD. TO S.F. BAY
SOUNDING LOGS
CPT-07

SCALE NOT TO SCALE
VERIFY SCALES 0 1"
BAR IS ONE INCH ON ORIGINAL DRAWING IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

PROJECT NUMBER 241-130806
SHEET CODE: B-111
PAGE NUMBER: 23 OF SHT#