

NOTES.

- Elevation indicates approximate ground surface at boring location. Elevations are based on the datum of Mean Lower Low Water.
- Soil classifications are in accordance with Military Standard 619B "Unified Soil Classification System" revised 12 June 1968.
- Field visual classifications and descriptions as described by the inspector are shown to the right of the log.
- Soil symbols shown on the LC Column are based on laboratory visual classification with test data on selected samples.
- For boring locations see sheet 8 for borings 7F-1 through 7F-8; sheet 42 for borings B-1 and B-2.
- Soil exploration, testing, and analysis performed by SF District, Corps of Engineers for borings 7F-1 through 7F-8. Soil exploration and identification for borings B-1 and B-2 performed by A/E.

LEGEND.

- γ_d = Dry density (pcf)
- W = Moisture content (%)
- LL = Liquid limit (%)
- PL = Plastic limit (%)
- LC = Laboratory classification
- Gr. 10 = 10% gravel.
- Sa. 20 = 20% sand.
- Fi. 70 = 70% fines.
- U = Undisturbed push-tube sample.



SYMBOL	DESCRIPTION	DATE	APPROVAL
REVISIONS			
MKI McCreey, Korbetsky International, Inc. U. S. ARMY ENGINEER DISTRICT, SAN FRANCISCO CORPS OF ENGINEERS SAN FRANCISCO, CALIFORNIA			
DRAWN BY: L.M.F. TRACED BY: I.K.M. CHECKED BY: HD SUBMITTED:	OAKLAND HARBOR CALIFORNIA FRUITVALE AVENUE HIGHWAY BRIDGE SOIL BORINGS I		
APPROVAL RECOMMENDED: ACT'G CHIEF, DESIGN BRANCH	APPROVED: CHIEF, ENGINEERING DIVISION	DATE: 71 JUN 21	
PREPARED UNDER THE DIRECTION OF CHARLES R. ROBERTS COLONEL, CE, DISTRICT ENGINEER		SCALE: NONE	DRAWING NUMBER 3 2 6 62

7F-6
11 DEC 70
ELEV. -12'

DEPTH	Yd	W	LL	PL	LC
5 ⁰					
10 ⁰		27			
13 ⁰					
19 ⁰	113	17	37	15	CL
21 ⁰		31			
21 ⁰	104	23	34	16	CL
29 ⁰					
31 ⁰	113	18		NP	SM
37 ⁰		18			
40 ⁰		23			
43 ⁰		26			
45 ⁰		20			
49 ⁰		28			
51 ⁰		21			
		22			
63 ⁰		18			
70 ⁰		15			
73 ⁰		21			
73 ⁰		11			
78 ⁰		16			
85 ⁰		21			
90 ⁰		19			

Bay Mud and Clay.

Sandy Clay, mottled tan and gray, moist, hard, fat; sand mostly coarse; some gravel to 1/2" max.

Clay, brown, moist, very stiff, fat.
Becomes grayish tan below 13⁰.

Sandy Clay, grayish tan, moist, very stiff; sand mostly coarse; some gravel.

Clay, mottled gray-rust, moist, very stiff, fat.

Sand, brown, wet, dense, fine. Gr. 13, Sa. 75, Fi. 12.

Clay, brown, moist, very stiff, fat.

Clay, mottled tan, moist, hard, fat; occasional sand lenses to 2".

Clay, tan, moist, hard.

Silty Clay, tan, moist, stiff.

Clay, tan, moist, hard.

(Silty Clay, tan, moist, stiff.

Clay, tan, moist, hard, fat.

Clayey Sand, tan, moist; sand poorly graded, fine and medium; some gravel.

Clay, tan, moist, hard, fat.

Clayey Gravelly Sand, tan, moist, dense; well graded to 1" max.

Clay, tan, moist, stiff, fat; trace of fine sand.

Sandy Clay, tan, moist, stiff; fine sand.

7F-3
7 DEC 70
ELEV. -28'

DEPTH	Yd	W	LL	PL	LC
3 ⁰					
9 ⁰	91	32	53	23	CH
13 ⁰		23			
15 ⁰	101	25	46	17	CL
16 ⁰					
17 ⁰	113	18	47	16	CL
21 ⁰					
22 ⁰	106	22	44	17	CL
26 ⁰	22				
27 ⁰	106	21	31	15	CL
30 ⁰					
30 ⁰	98	27	48	22	CL
43 ⁰					
43 ⁰	102	24	39	15	CL
47 ⁰					
48 ⁰	112	20	36	14	CL
51 ⁰					
51 ⁰	115	17			SP-SC
59 ⁰					
59 ⁰	97	27	40	17	CL
63 ⁰					
63 ⁰	110	18	27	15	CL
67 ⁰					
69 ⁰					
71 ⁰	105	20	29	16	CL
75 ⁰					
76 ⁰	26				
76 ⁰					

Sand, gray.

Clay, grayish tan with rust spots moist to wet, very stiff, fat.

Clay, tan with rust spots, wet, firm.

Clay, grayish tan, moist, very stiff to hard, fat.

Clay, brown, moist, very stiff, fat.

Clay, dark tan to light brown, moist, very stiff, fat; some pea gravel.

Clayey Sand, tan, moist, dense, well graded.

Clay, tan, moist, very stiff, fat.

Clayey Sand, tan, wet, dense, fine.

Sandy Silt, tan, wet, firm; fine sand. Sa. 30, Fi. 70.

Clay, tan, moist, very stiff, fat.

Sandy Clay, tan, moist, stiff; very fine sand.

Sandy Clay, tan, moist, very stiff, fat; trace of pea gravel.

Sandy Clay, tan, moist, stiff, fine sand.

Sandy Gravel, tan, wet, poorly graded; fine sand, medium gravel; trace of clay. Gr. 41, Sa. 52, Fi. 7.

Clay, brown, moist to wet, very stiff, fat.

Sandy Clay, brown, moist, very stiff; fine sand.

Some coarse sand and gravel to 3" max. below 67⁰.

Sandy Clay, brown, moist, hard; fine to medium sand; some fine gravel to 1/2" size.

Sandy Clay, brown, wet, stiff; very fine sand; some fine gravel to 1/2" size.

Sandy Clay, brown, moist, very stiff; very fine sand.

Clay, brown, moist, hard, fat.

7F-4
8 DEC 70
ELEV. -17'

DEPTH	Yd	W	LL	PL	LC
3 ⁰		24			
7 ⁰	101	25	41	17	CL
8 ⁰	105	23	30	21	CL
9 ⁰					
9 ⁰	91	32	53	24	CH
19 ⁰					
20 ⁰	25				
21 ⁰	26				
19 ⁰					
20 ⁰	100	25	44	16	CL
21 ⁰	107	21	36	17	CL
25 ⁰	17				
26 ⁰	14				
28 ⁰	108	21	43	15	CL
28 ⁰	108	21	43	16	CL
33 ⁰					
35 ⁰	14				
38 ⁰	25				
38 ⁰	101	25	45	19	CL
44 ⁰					
44 ⁰	112	19	36	15	CL
47 ⁰					
47 ⁰	21				
50 ⁰	105	22		NP	SM
51 ⁰					
57 ⁰					
57 ⁰	103	24	50	17	CL
63 ⁰					
63 ⁰	18				
66 ⁰					
66 ⁰	96	28	47	18	CL
72 ⁰					
72 ⁰			21		
75 ⁰					
77 ⁰					
80 ⁰	103	24	37	15	CL
82 ⁰					

Clay, tan, moist, stiff, fat.

Clay, gray, moist, hard, fat; trace of very fine sand.

Sandy Silt, gray, wet, soft; fine sand.

Clayey Sandy Gravel, brown, wet, dense.

Clay, mottled tan and gray, moist, very stiff, fat.

Silt, dark tan, moist, firm.

Silty Clay, grayish tan, moist, stiff.

Clay, mottled tan, very stiff, fat; trace of fine sand.

Sandy Clay, tan, moist, stiff; sand mostly fine with some coarse.

Gravelly Sandy Clay, tan, moist, hard; sand well graded; gravel to 1/2" max.

Clay, tan, moist, hard, fat; some pea gravel.

Sandy Clay, tan, moist, hard; very fine sand.

Clayey Sand, tan, wet, dense, well graded; some pea gravel.

Silty Clay, tan, moist, very stiff.

Clay, mottled tan, moist, hard, fat.

Silty Clay, tan, moist, stiff.

Clayey Sand, brown, wet, dense, fine.

Sandy Gravel, well graded to 1" max.

Silty Clay, tan, moist, stiff; trace of very fine sand.

Sandy Clay, tan, moist, stiff; sand, mostly fine with some coarse; trace of gravel to 1" max.

Clay, tan, moist, hard, fat; trace of fine sand.

Clay, brown, moist, hard, fat. Occasional gravel to 1/2" size below 75⁰.

Clay, brown, moist, very stiff, fat.

Clay, brown, moist, very stiff, fat.

7F-8
17 DEC 70
ELEV. +14'

DEPTH	Yd	W	LL	PL	LC
5 ⁰					
11 ⁰	107	22	32	15	CL
11 ⁰	114	19	27	18	SC
15 ⁰					
17 ⁰		20			
19 ⁰					
22 ⁰					
24 ⁰	106	22	61	15	CH
28 ⁰		15			
32 ⁰					
33 ⁰					
35 ⁰	108	19	43	21	SP-SC
35 ⁰	107	22	57	28	CH
42 ⁰					
47 ⁰					
47 ⁰		32			
52 ⁰					
52 ⁰		22			
58 ⁰					
58 ⁰					
64 ⁰		19			
66 ⁰					
74 ⁰					
74 ⁰		20			
79 ⁰					
79 ⁰		23			
84 ⁰					
84 ⁰		21			

Clayey Gravel (Fill), dark brown, medium dense, medium to coarse.

Silty Clay, tan, moist, stiff.

Sand, tan, moist, loose, very fine. Sa. 62, Fi. 38.

Below 15⁰, Clay, tan, stiff, interlayered with the sand.

Sand, brown, wet, loose, medium.

Sand, tan, moist, loose, fine; some clay in byers.

Gravel, tan-brown, wet, loose, medium.

Clayey Sand, tan, damp, dense, fine. Sa. 35, Fi. 65.

Sandy Clay, tan, damp, stiff; trace of fine gravel.

Clayey Sand, brown, damp, dense, medium; trace of fine gravel.

Gravel, dark brown, wet, loose, medium. Gr. 25, Sa. 65, Fi. 10.

Silty Clay, tan and light green, damp, very stiff.

Clayey Sand, light green, damp, dense, fine.

Clay, tan, damp, stiff to very stiff.

Silty Clay, tan, damp, stiff to very stiff.

Sand, tan, damp, loose, fine.

Clay, tan, damp, very stiff, fat.

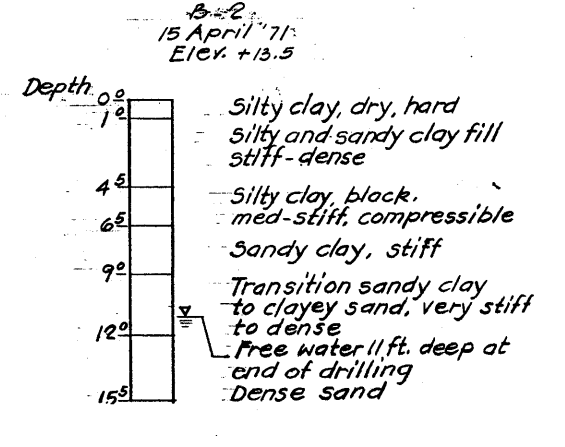
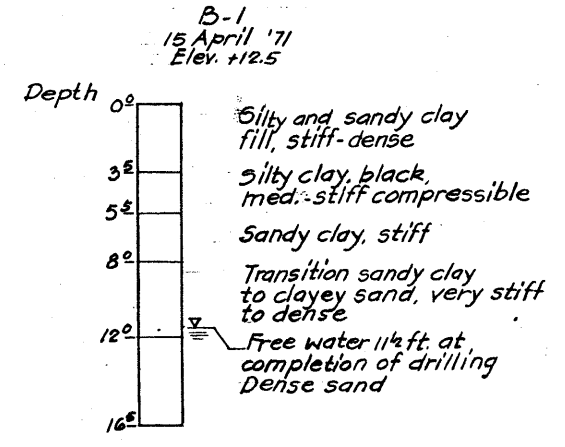
Some gravel below 64⁰.

Clay, tan, damp, very stiff, fat.

Clay, tan with rust stains, damp, hard, lean.

Clay, tan, damp, very stiff, lean.

NOTE:
See sheet 3 for notes.



SYMBOL	DESCRIPTION	DATE	APPROVAL
REVISIONS			
MKI McCREARY-KORETSKY INTERNATIONAL, INC. U. S. ARMY ENGINEER DISTRICT, SAN FRANCISCO CORPS OF ENGINEERS SAN FRANCISCO, CALIFORNIA			
DRAWN BY: LMF	OAKLAND HARBOR	CALIFORNIA	
TRACED BY: I.K.M.	FRUITVALE AVENUE HIGHWAY BRIDGE		
CHECKED BY: HD	SOIL BORINGS I		
SUBMITTED:			
APPROVAL RECOMMENDED: R. C. V. [Signature]	APPROVED: H. P. Kelly [Signature]	DATE: 21 JUN 71	
PREPARED UNDER THE DIRECTION OF CHARLES R. ROBERTS COLONEL, C.E. DISTRICT ENGINEER			
SCALE: None			DRAWING NUMBER
SHEET			4 2 6 62

