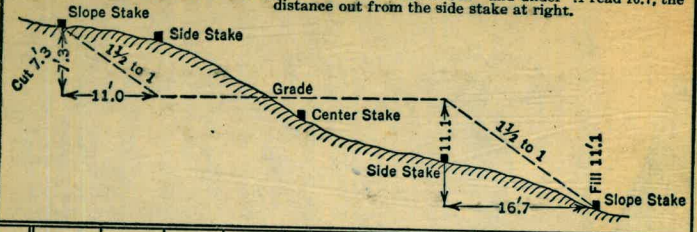
MISSION BAY

63

DISTANCES FROM SIDE STAKES FOR CROSS-SECTIONING

Roadway of any Width. Side Slopes 1½ to 1.

In the figure below: opposite 7 under "Cut or Fill" and under .3 read 11.0, the distance out from the side stake at left. Also, opposite 11 under "Cut or Fill" and under .1 read 16.7, the distance out from the side stake at right.



Cut or Fill	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	Cut or Fill
	Distance out from Side or Shoulder Stake										
0	0.0	0.2	0.3	0.5	0.6	0.8	0.9	1.1	1.2	1.4	0
1	1.5	1.7	1.8	2.0	2.1	2.3	2.4	2.6	2.7	2.9	1
2	3.0	3.2	3.3	3.5	3.6	3.8	3.9	4.1	4.2	4.4	2
3	4.5	4.7	4.8	5.0	5.1	5.3	5.4	5.6	5.7	5.9	3
4	6.0	6.2	6.3	6.5	6.6	6.8	6.9	7.1	7.2	7.4	4
5	7.5	7.7	7.8	8.0	8.1	8.3	8.4	8.6	8.7	8.9	5
6	9.0	9.2	9.3	9.5	9.6	9.8	9.9	10.1	10.2	10.4	6
7	10.5	10.7	10.8	11.0	11.1	11.3	11.4	11.6	11.7	11.9	7
8	12.0	12.2	12.3	12.5	12.6	12.8	12.9	13.1	13.2	13.4	8
9	13.5	13.7	13.8	14.0	14.1	14.3	14.4	14.6	14.7	14.9	9
10	15.0	15.2	15.3	15.5	15.6	15.8	15.9	16.1	16.2	16.4	10
11	16.5	16.7	16.8	17.0	17.1	17.3	17.4	17.6	17.7	17.9	11
12	18.0	18.2	18.3	18.5	18.6	18.8	18.9	19.1	19.2	19.4	12
13	19.5	19.7	19.8	20.0	20.1	20.3	20.4	20.6	20.7	20.9	13
14	21.0	21.2	21.3	21.5	21.6	21.8	21.9	22.1	22.2	22.4	14
15	22.5	22.7	22.8	23.0	23.1	23.3	23.4	23.6	23.7	23.9	15
16	24.0	24.2	24.3	24.5	24.6	24.8	24.9	25.1	25.2	25.4	16
17	25.5	25.7	25.8	26.0	26.1	26.3	26.4	26.6	26.7	26.9	17
18	27.0	27.2	27.3	27.5	27.6	27.8	27.9	28.1	28.2	28.4	18
19	28.5	28.7	28.8	29.0	29.1	29.3	29.4	29.6	29.7	29.9	19
20	30.0	30.2	30.3	30.5	30.6	30.8	30.9	31.1	31.2	31.4	20
21	31.5	31.7	31.8	32.0	32.1	32.3	32.4	32.6	32.7	32.9	21
22	33.0	33.2	33.3	33.5	33.6	33.8	33.9	34.1	34.2	34.4	22
23	34.5	34.7	34.8	35.0	35.1	35.3	35.4	35.6	35.7	35.9	23
24	36.0	36.2	36.3	36.5	36.6	36.8	36.9	37.1	37.2	37.4	24
25	37.5	37.7	37.8	38.0	38.1	38.3	38.4	38.6	38.7	38.9	25
26	39.0	39.2	39.3	39.5	39.6	39.8	39.9	40.1	40.2	40.4	26
27	40.5	40.7	40.8	41.0	41.1	41.3	41.4	41.6	41.7	41.9	27
28	42.0	42.2	42.3	42.5	42.6	42.8	42.9	43.1	43.2	43.4	28
29	43.5	43.7	43.8	44.0	44.1	44.3	44.4	44.6	44.7	44.9	29
30	45.0	45.2	45.3	45.5	45.6	45.8	45.9	46.1	46.2	46.4	30
31	46.5	46.7	46.8	47.0	47.1	47.3	47.4	47.6	47.7	47.9	31
32	48.0	48.2	48.3	48.5	48.6	48.8	48.9	49.1	49.2	49.4	32
33	49.5	49.7	49.8	50.0	50.1	50.3	50.4	50.6	50.7	50.9	33
34	51.0	51.2	51.3	51.5	51.6	51.8	51.9	52.1	52.2	52.4	34
35	52.5	52.7	52.8	53.0	53.1	53.3	53.4	53.6	53.7	53.9	35
36	54.0	54.2	54.3	54.5	54.6	54.8	54.9	55.1	55.2	55.4	36
37	55.5	55.7	55.8	56.0	56.1	56.3	56.4	56.6	56.7	56.9	37
38	57.0	57.2	57.3	57.5	57.6	57.8	57.9	58.1	58.2	58.4	38
39	58.5	58.7	58.8	59.0	59.1	59.3	59.4	59.6	59.7	59.9	39
40	60.0	60.2	60.3	60.5	60.6	60.8	60.9	61.1	61.2	61.4	40

KEUFFEL & ESSER CO., N. Y.

BK # 63

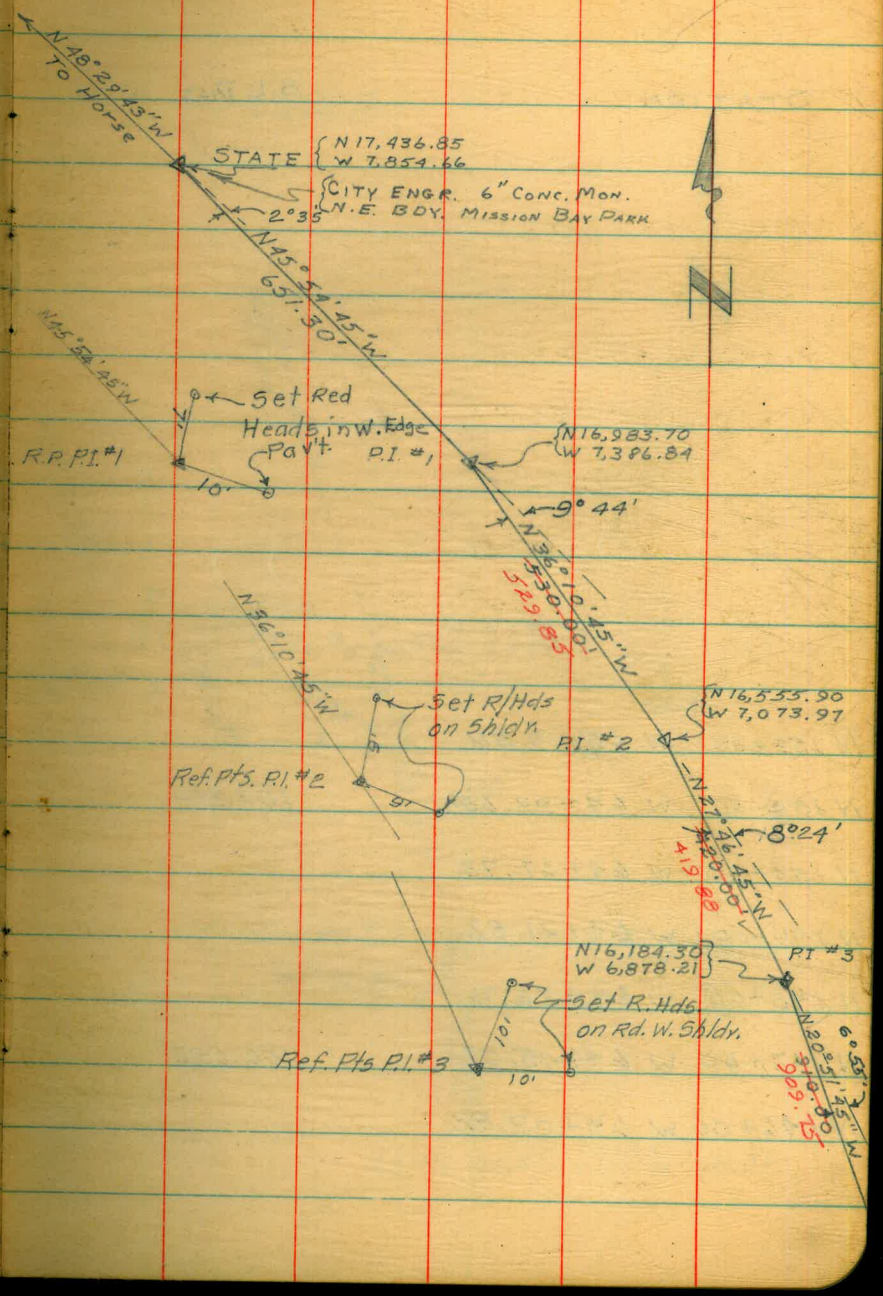
PAGE	INDEX	DATE
1-5	PROJ. 3.2 BASELINE ALONG WESTERLY SIDE HIGHWAY 101	12-12-50
6	CHECK ON LOCATION # OF MON "STATE" PROJ 3.1	12-14-50
8	CHECK LEVELS BOND TO STATE	1-15-51
9	LEVELS FOR DE ANZA BASELINE	1-16-51
10-11	BENCH LEVELS DE ANZA BASELINE	1-17-51
12	RE-SET SEE PG 63 REF PTS. △ "STATE" 6" CONC. MON	1-18-51
13-40	ORIGINAL X-SEC'S. JELLETT PT.	1-19- -51
41-45	Location of Culverts along 101 Hwy & 65084	1-25-51
46	SUBSURFACE TESTS DE ANZA PT.	
47	Profile along N. Top of Shoulder Park Boundary - 35'± SLY	4-26-51
48-50	Location of Topsoil Placed on DeAnza for Proj 65036	4-30-51
50-56	Final Soundings DeAnza & Vicinity Proj No 65036	5-13-52
57-61	Location - Pressure Sewer DeAnza Point & VICINITY	7-8-52
62	REF PTS. TO MON. MORENA	
63	RESET MON. STATE	10-17-52
64	LEVELS 8" SEWER	11-13-52
65-66	BDY. SURVEY MISSION BAY GOLF COURSE LEASE	7-1-54

MISSION BAY

PROJECT #65031 BASELINE

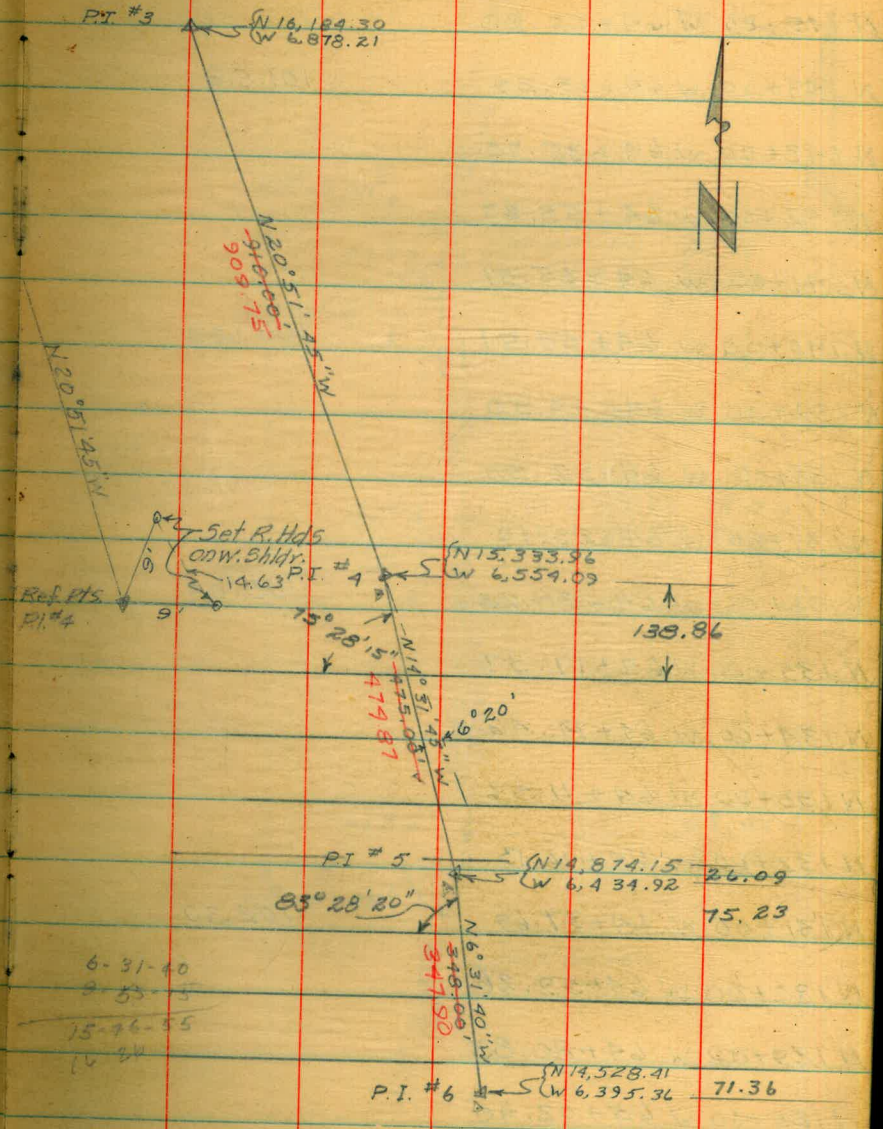
ALONG WLY. SIDE PACIFIC HI-WAY

Dec. 12, 1950

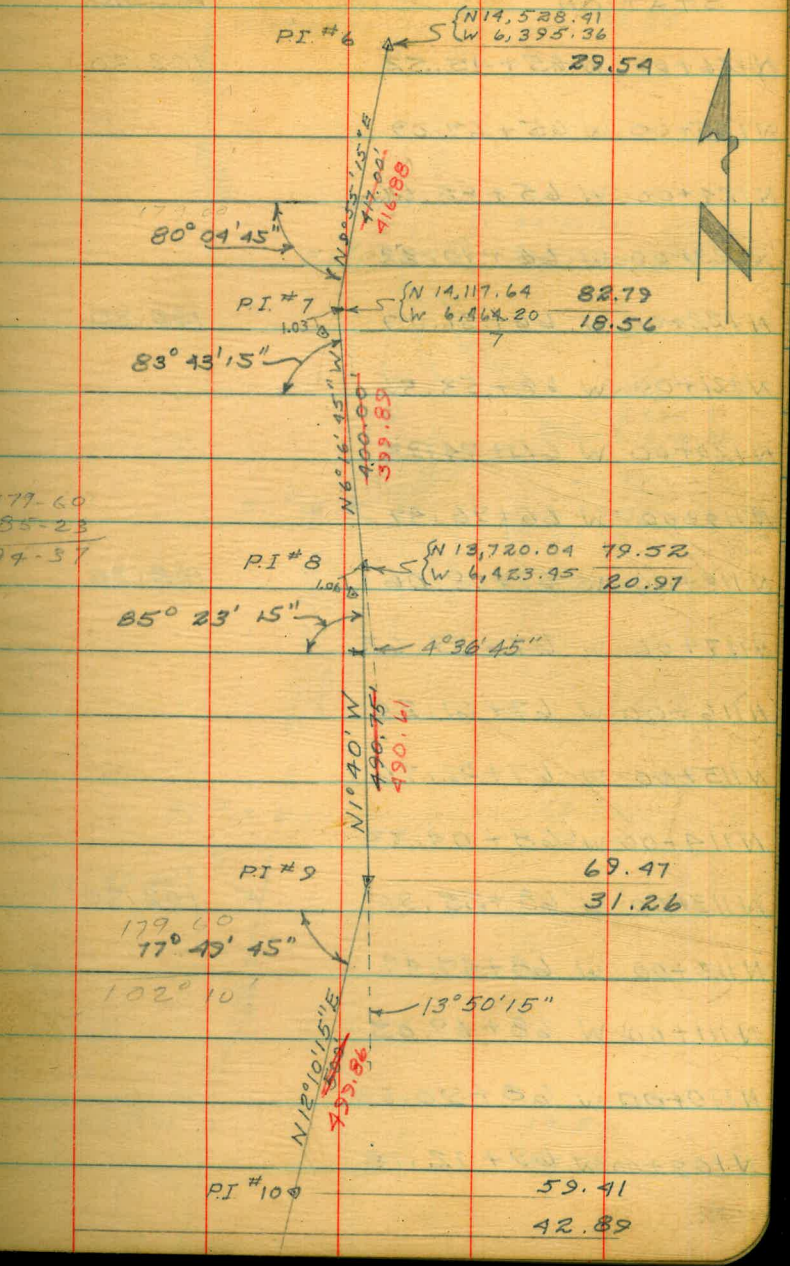


Dec. 12, 1950

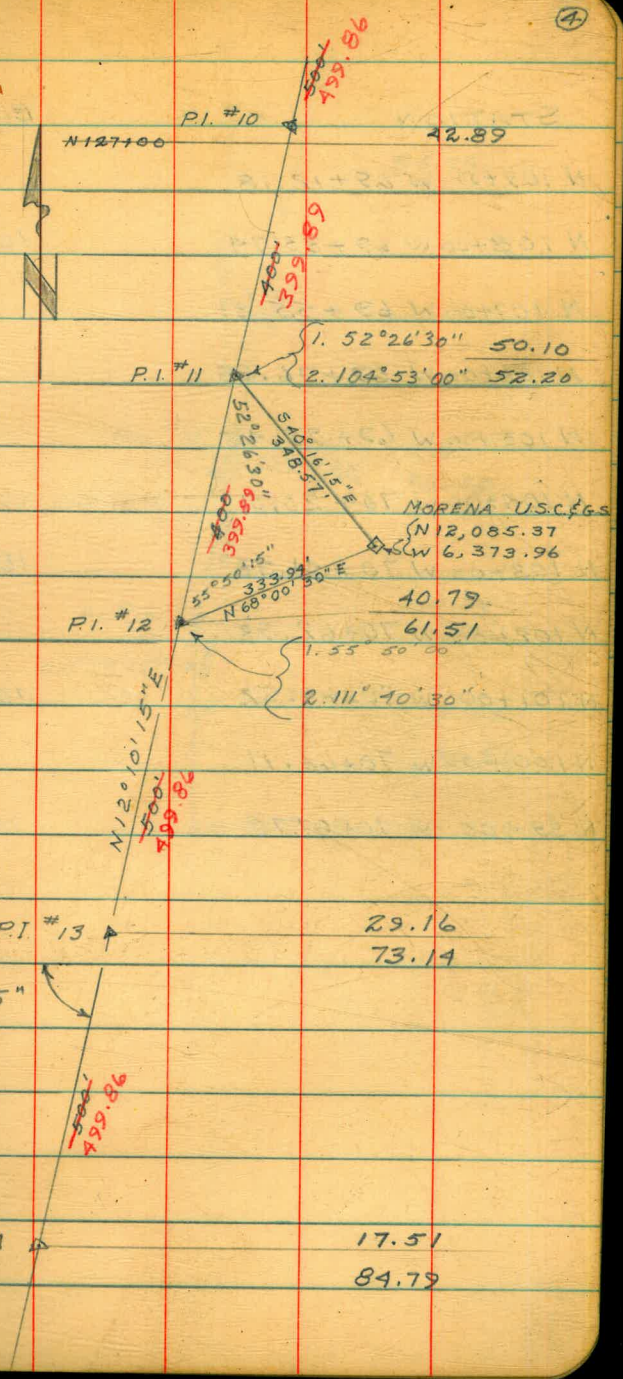
STATION		B.L. DIST.
N 152+00	W 65+19.56	
N 151+00	W 64+93.65	103.304
N 150+00	W 64+67.73	
N 149+00	W 64+41.82	
N 148+00	W 64+26.71	
N 147+00	W 64+15.26	100.652
N 146+00	W 64+03.82	



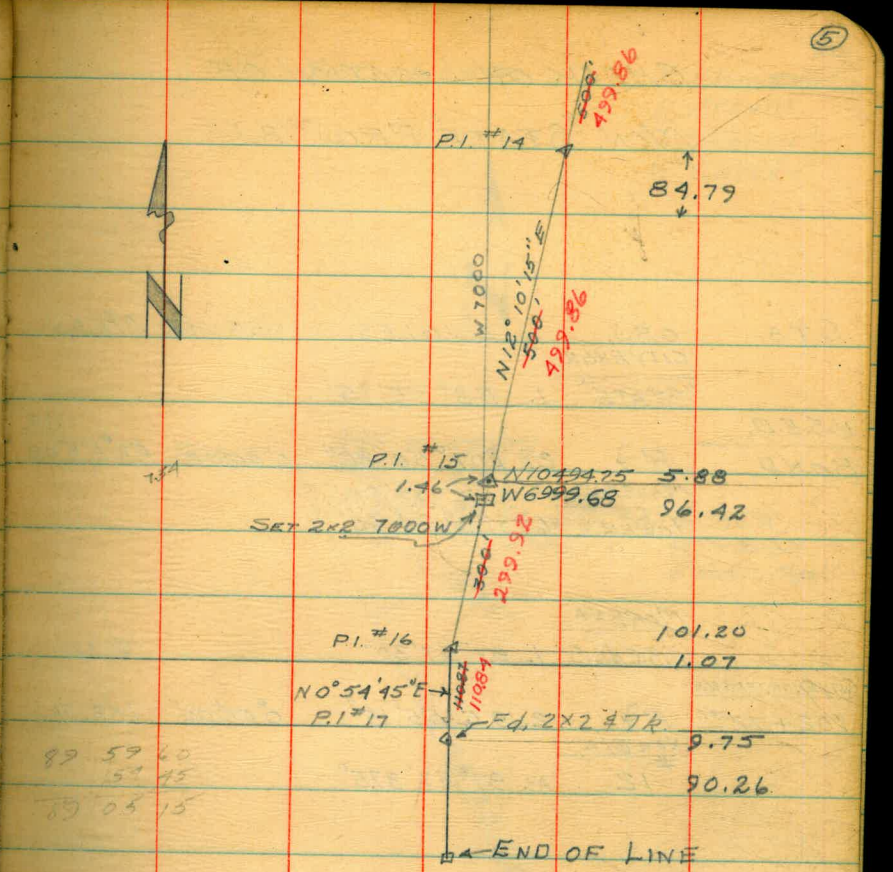
STATION		B.L. DIST
N 145+00	W 64+00.80	
N 144+00	W 64+18.29	101.518
N 143+00	W 64+35.78	
N 142+00	W 64+55.27	
N 141+00	W 64+65.51	
N 140+00	W 64+54.51	100.603
N 139+00	W 64+43.50	
N 138+00	W 64+32.50	
N 137+00	W 64+23.19	
N 136+00	W 64+20.28	100.04
N 135+00	W 64+17.37	
N 134+00	W 64+14.46	
N 133+00	W 64+11.56	
N 132+00	W 64+16.13	
N 131+00	W 64+37.69	102.30
N 130+00	W 64+59.26	
N 129+00	W 64+80.83	
N 128+00	W 65+02.40	
N 127+00	W 65+23.95	



STATION		B.L. DIST.
N126+00	W 65+45.52	102.30
N125+00	W 65+67.09	
N124+00	W 65+88.66	
N123+00	W 66+10.22	
N122+00	W 66+31.79	102.30
N121+00	W 66+53.36	
N120+00	W 66+74.93	
N119+00	W 66+96.49	
N118+00	W 67+18.06	102.30
N117+00	W 67+39.63	
N116+00	W 67+61.20	
N115+00	W 67+82.76	
N114+00	W 68+04.33	
N113+00	W 68+25.90	102.30
N112+00	W 68+47.47	
N111+00	W 68+69.03	
N110+00	W 68+90.60	
N109+00	W 69+12.18	



STATION		B.L. DIST.
N 109+00	W 69+12.18	
N 108+00	W 69+33.74	102.30
N 107+00	W 69+55.31	
N 106+00	W 69+76.88	
N 105+00	W 69+98.45	
N 104+00	W 70+20.01	
N 103+00	W 70+41.58	102.30
N 102+00	W 70+62.93	
N 101+00	W 70+64.52	100.01
N 100+00	W 70+66.11	
N 99+00	W 70+67.70	100.01



CHECK ON LOCATION OF MON. "STATE" PROJ # 3.1

Dec. 14, 1950

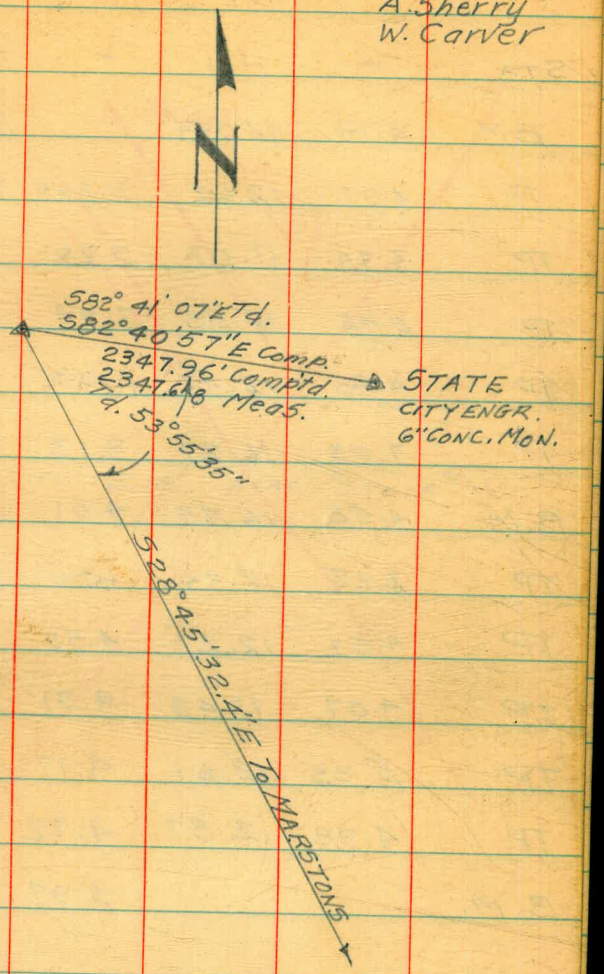
T. Stamper
H. Brown
A. Sherry
W. Carver

STA	OBJ.	ANGLES	VERNIER	MEAN
	CITY ENGR "STATE"	1. 53° 55' 15'		
U.S.E.D. BOND	R 7	2. 107° 50' 30"	0°00'00"	53°55'40.135"
	MARSTONS TOWER	6. 323° 34' 00" H. 33' 30" T.		
	MORENA U.S.C.&G.S	1. 97°57'30"		DIST.
CITY ENGR. TRAVERSE 102+72.70	R 7 NEW B/L # 12	2. 195° 55' 15"	0°00'00"	158.71
		AV. 97°57'37.5"		

96

2347.68
.55
2348.23

.27



LEVELS DE ANZA B/L

STA	+	H.I	−	ELEV.	
B.M.	4.14	12.944		8.804	"BOND"
TP	4.97	12.62	5.294	7.650	
TP	3.74	11.07	5.29	7.33	
TP	5.42	12.55	3.94	7.13	
TP	4.85	12.37	5.03	7.52	
TP	7.03	16.27	3.13	9.24	
B.M.	4.53	16.79	4.01	12.26	
TP	2.35	12.34	6.80	9.99	
TP	4.52	12.27	4.59	7.75	
TP	4.07	11.43	4.91	7.36	
TP	5.35	12.61	4.17	7.26	
TP	4.98	12.87	4.72	7.89	
B.M.			3.97	8.90	"BOND"

BRASS PLUG CITY B.M NEAR "STATE"

CHECK LEVELS "BOND"

"TO STATE"

STA	+	H.I.	−	ELEV.	
B.M.	4.634	13.438		8.804	
TP	5.735	12.739	6.434	7.004	
TP	4.175	11.472	5.442	7.297	
TP	5.985	12.867	4.590	6.882	
TP	4.951	12.238	5.580	7.287	
TP	5.726	16.230	1.734	10.504	
B.M.			4.230	12.000	BRASS PLUG MON.

T BROWN
SHERRY

1 – 15 – 51 (8)

"BOND"

CITY B.M. NEAR "STATE"

LEVELS FOR DE ANZA B/L

STA	+	H.I.	−	ELEV
B.M	4.880	16.880		12.000
T.P	4.325	16.963	4.242	12.638
TP	4.835	16.638	5.160	11.803
TP	5.231	16.189	5.680	10.958
TP	6.075	16.972	5.292	10.897
TP	6.255	17.963	5.264	11.708
TBM			4.862	13.101
TP	5.082	16.744	6.301	11.662
TP	5.720	16.561	5.903	10.841
TP	6.105	16.821	5.845	10.716
TP.	5.183	17.035	4.969	11.852
TP.	6.030	18.724	4.341	12.694
TP.			6.575	12.149

A BROWN
SHERRY

1-16-51

(9)

BRASS PLUG CITY B.M. NEAR "STATE"

P.I #4 WEST H.W 101 B/L

Jan. 17, 1951

U.S.C.&G.S. D-132 46' E. of ℄ of Wly Track ℄ 25' S. of ℄ of Jellett St. 6"X6" Conc. Mon.

BENCH LEVELS DeANZA B/L.

Sta	+	H.I.	-	Elev.
B.M.				20.682
	2.688	23.370		
TP.			7.630	15.740
136N	1.168	16.908	8.710	8.198
138N			7.720	9.188
TP.			7.100	9.808
	3.827	13.635		
140N			3.445	10.190
TP.			1.518	12.117
	6.780	18.897		
TP.			5.100	13.797
	3.791	17.588		
TP. P.I. #4			4.703	12.885
	5.109	17.994		
152N			5.081	12.913
151N			5.405	12.589
150N			4.725	13.269
149N			4.350	13.644
TP. P.I. #5			4.170	13.824

BENCH LEVELS CONTD.

Jan. 17, 1951

Sta	+	H.I	−	Elev.
TBM.				13.824
	5.212	19.036		
148 N			5.045	13.991
147 N			4.930	14.106
146 N			4.868	14.168
TP. P.I. #6			5.015	14.021
	2.490	16.511		
TP.			7.429	9.082
	5.602	14.684		
141 N			5.870	8.814
140 N			4.485	10.199
139 N			4.523	10.161
138 N			5.469	9.215

P.I. #5

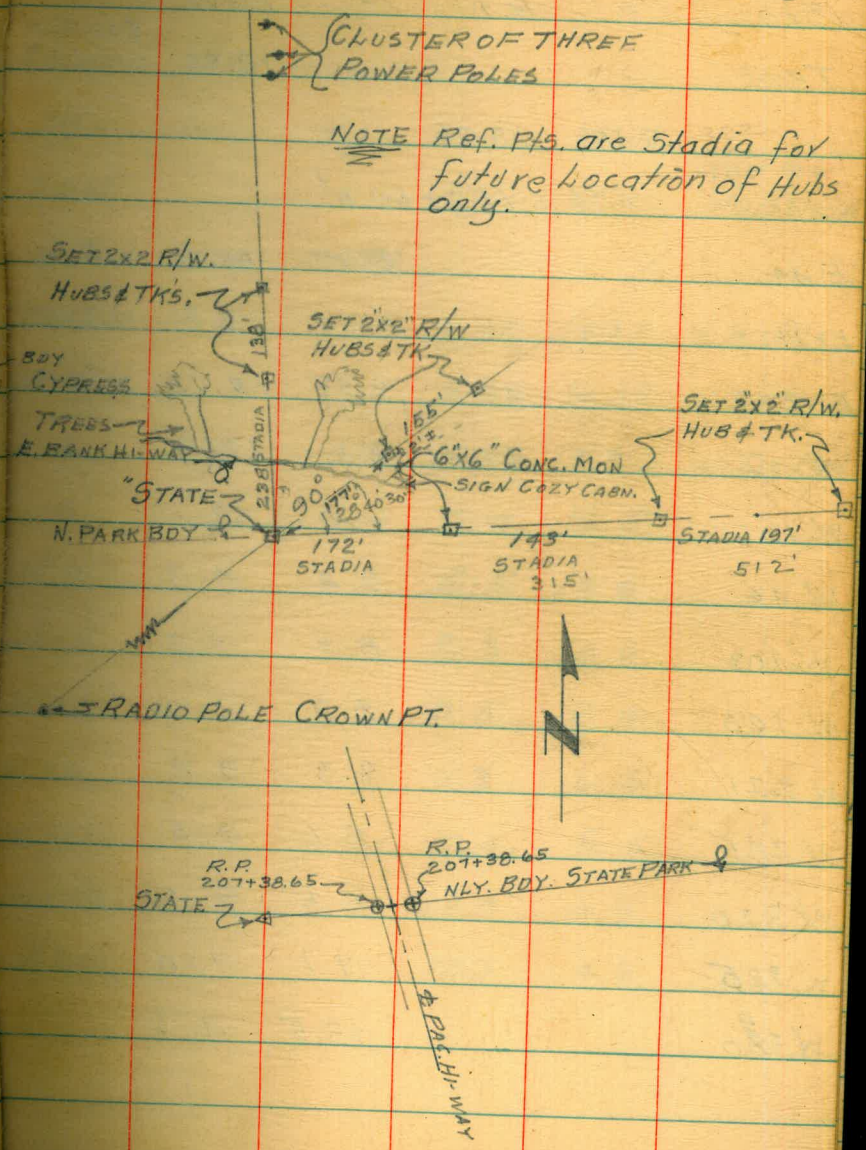
Jan. 18, 1951

T. Stamper
E. Watson
H. Brown
A. Sherry

REFERENCE POINTS TO MON "STATE" 6" CONC. MON. ON N'LY. BDY. MISSION BAY STATE PARK & W'LY. LINE OF PACIFIC HI-WAY

Sta.	+	H.I.	−	Elev.	
B.M.				12.00	CITY B.M. NEAR STATE TOP BRASS PLUG
	6.81	18.81			
B.M.			1.74	MKD 8.23 17.07 USC&GS	6"x6" CONC. MON. E. SIDE HI-WAY N.E. COR. YELLOW

NOTE! This Mon. Reset See Pg. 63



ORIGINAL
CROSS SECTIONS OF DREDGING
AREA JELLETT PT. PROJ Nº 64030

Jan. 19, 1951

PX J. Stampey
E. Watson
H. Brown
A. SHERRY

Sta	+	H.I.	−	Elev.	
TBM.				12.88	See P910 Top 2"x2" R.I.*
	5.18	18.06			
PX		Sta 152+00 N			
E 44			3.30	14.76	W. Profile
E 11			4.19	13 87	W. Top Pav.
E 8			4.93	13.13	W. Toe Pav
0			5.2	12 9	
W 10			6.0	12.1	
W 46			9.8	8,3	
W 103			8.9	9.2	
W 160			8.9	9,2	
W 221			8.3	9.8	
W 285			8.6	9,5	
W 320			8.5	9.6	
W 325			11.1	7.0	
W 330			13.5	4.6	

Sta. 151+00 N

Sta	+	H.I	−	Elev.	
TBM.				12.91	Top Hub Sta 152+00 N
	5.02	17.93			
E 45			2.86	15.07	W. Profile
E 13			3.83	14.10	W. Top Pav.
E 9			4.63	13.30	W. Toe Pav
0			5.4	12.5	
W 7			5.5	12.4	
W 15			7.3	10.6	
W 42			9.5	8.4	
W 46			11.3	6.6	
W 111			12.4	5.5	
W 173			13.0	4,9	
W 241			13.3	4,6	

PX

CROSS SECTIONS CONTD

Sta	+	H.I	-	Elev	
T.B.M.	5.58	18.17		12.59	TOP 2x2 151+00N
		Sta 150+00N			
E 44			2.90	15.27	W. Profile
E 11			3.84	14.33	W. Top Pav.
E 7			4.62	13.55	W. Toe
0			5.0	13.2	
W 13			5.1	13.1	
W 17			8.4	9.8	
W 34			9.8	8.4	
W 35			11.1	7.1	
W 64			12.8	5.2	

Jan. 19, 1951

PX

Sta. 149+00N

Sta	+	H.I	-	Elev.	
T.B.M.				13.27	Top Hub 150+00N
	5.37	18.64			
E 39			3.05	15.59	W. Profile
E 7			4.05	14.59	W. Top Pav.
E 5			4.90	13.74	W. Toe Pav.
0			5.2	13.4	
W 12			5.1	13.5	
W 31			12.1	6.5	
W 68			14.6	4.0	

PX

CROSS SECTIONS CONTD.

Sta 148+00N.

Sta	+	H.I	−	Elev	
T.B.M.				13.64	TOP HUB 149+00
	5.34	18.98			
E 44			3.14	15.84	W. Profile
E 12			4.04	14.94	W. Top Pav.
E 9			4.74	14.24	W. Toe Pav.
0			5.0	14.0	
W 10			4.9	14.1	
W 14			6.3	11.7	
W 22			12.5	5.5	
W 45			14.9	3.1	

Jan. 19, 1951

PX

Sta. 147+00N

Sta	+	H.I	−	Elev.	
TBM				13.99	TOP HUB 148+00N
	4.96	18.95			
E 50			2.97	15.98	W. Profile
E 18			3.93	15.02	W. Top Pav.
E 15			4.45	14.50	W Toe Pav.
0			5.0	14.0	
W 7			5.6	13.4	
W 13			11.4	7.6	
W 37			14.8	4.2	
W 75			15.5	13.5	

Pt

CROSS SECTIONS CONTD

Sta. 146+00 N

Sta	+	H.I.	−	Elev.	
T.B.M.				14.11	TOP HUB 147+00N
	5.27	19.38			
E 54			3.42	15.96	W. Profile
E 22			4.40	14.98	W. Top Pav.
E 19			4.91	14.47	W. Toe Pav.
0			5.3	14.1	
W 5			6.2	13.2	
W 14			13.3	6.1	
W 41			15.4	4.0	

Jan. 19, 1951

Sta. 145+00 N

Sta	+	H.I.	−	Elev.	
TBM.				14.17	TOP HUB 146+00N
	3.25	17.42			
E 63			1.78	15.64	W. Profile
E 30			2.74	14.68	W. Top Pav.
E 20			3.4	14.0	
E 17			2.7	14.7	
E 5			3.8	13.6	
0			5.2	12.2	
W 3			5.6	11.8	
W 8			11.2	6.2	
W 55			13.7	3.7	
TBM			8.03	9.39	TOP 2x2 Top Bank OPP. Sta. 144 N.

Pt (16)

PX

CROSS SECTIONS CONTD.

Jan. 22, 1951

Sta. 144+00N

℄ @ Pt. 30' E. of B/L.

Sta.	+	H.I.	−	Elev	
T.B.M.				9.39	See Pg 16
	7.33	16.72			
E 60			1.28	15.44	W. Profile
E 28			2.05	14.67	W. Top Pr
E 17			3.0	13.7	
E 13			2.6	14.1	
E 6			3.2	13.5	
E 2			4.8	11.9	
0			5.1	11.6	
W 18			7.0	9.7	
W 21			9.5	7.2	
W 30			10.9	5.8	
W 51			11.9	4.8	
TBM.	1.27	10.66		9.39	
W 90			7.3	3.4	
W 144			7.1	3.6	

PX

CROSS SECTIONS CONTD

Sta. 143+00 N

T@ Pt. 36' East of Baseline

Sta.	+	H.I.	−	Elev.	
TBM				9.39	Top 2x8 See P16
	6.52	15.91			
E 78			0.84	15.07	W. Profile
E 46			1.65	14.26	W. Top Pav.
E 37			2.5	13.4	
E 28			1.4	14.5	
E 21			1.7	14.2	
0			5.4	10.5	
W 24			6.8	9.1	
W 29			9.2	6.7	
W 36			10.2	5.7	
W 93			11.1	4.8	
W 128			10.8	5.1	
W 188			11.5	4.4	
W 212			12.1	3.8	
170' Rt.					Set Stk.

Jan. 22, 1951

PX

Sta. 142+00 N

Sta	+	H.I	−	Elev.	
T.B.M.				9.39	
	3.58	13.0 12.97			
0			3.9	9.1	
W 2			5.7	7.3	
W 18			7.4	5.6	
W 60			7.4	5.6	
W 63			8.6	4.4	
W 70			7.7	5.3	
W 107			8.1	4.9	
W 170			9.2	3.8	Set Stk.
E 22			3.1	9.9	Trees
T.B.M.	8.27	17.66		9.39	
E 52			6.8	10.9	
E 75 29.4			5.1	12.6	
E 82			4.2	13.5	
E 95			4.9	12.8	
E 104.5			3.84	13.82	W. Top Pav.
E 134.5			2.82	14.84	W. Profile

PT

CROSS SECTIONS CONTD

Sta 141+00 N

Sta	+	H.I	−	Elev	
T.B.M.				8.81	TOP 2x2 141+00N
	5.26	14.07 (14.1)			
E 57			2.7	11.4	
E 26 (33 90)			4.3	9.8	
0			5.3	8.8	
W 8			5.6	8.5	
W 11			6.8	7.3	
W 20			7.8	6.3	
W 40			7.7	6.4	
W 43			9.3	4.8	
W 47			7.6	6.5	
W 83			8.7	5.4	
W 108			8.5	5.6	
W 140			9.8	4.3	Set Stk.
E 90	9.35	18.16		8.81	
E 90			5.9	12.3	
E 106			4.7	13.5	
E 119			4.56	13.60	W.E. Pav.
E 153			3.61	14.55	W. Prof.

Jan 22, 1951

PX

Sta. 140+00 N

Sta	+	H.I	−	Elev.	
T.B.M.				10.20	TOP 2x2 140+00N
	5.10	15.30			
E 146			0.92	14.38	W. Prof.
E 106			2.00	13.30	W.E. Pav.
E 90			2.5	12.8	
E 43			4.3	11.0	
0			5.1	10.2	
W 21			6.1	9.2	
W 27			8.2	7.1	
W 67			9.3	6.0	
W 73			8.3	7.0	
W 102			9.5	5.8	
W 120			9.5	5.8	Set Stk.
W 144			11.1	4.2	
W 175			12.3	3.0	

PX

CROSS SECTIONS CONTD

Sta. 139+00 N.

Sta.	+	H.I.	−	Elev.	
TBM.				10.16	TOP 2X2 139+00N
	5.30	15.46 (15.3)			
E 30			4.5	11.0	
0			5.3	10.2	
W 25			6.3	9.2	
W 30			8.8	6.7	
W 68			8.6	6.9	
W 100			10.3	5.2	
W 120			10.3	5.2	
W 130			9.9	5.6	Set Stk.
W 155			12.0	3.5	
TBM.	8.28	18.44		10.16	
E 62			6.6	11.8	
E 82			5.0	13.4	
E 92 (93)			5.36	13.08	W.E. Pav.
137			4.33	14.11	W. Profile

Jan 22, 1951

PX

Sta 138+00 N

Sta	+	H.I	−	Elev	
TBM.				9.19	TOP 2X2 138+00N
	5.39	14.58			
E 122			0.74	13.84	W. Profile
E 76			1.87	12.71	W.E. Pav.
E 67			1.9	12.7	
E 34			3.2	11.4	
E 17			4.4	10.2	
0			5.5	9.1	
W 29			6.1	8.5	
W 39			7.7	6.9	
W 56			9.5	5.1	
W 93			10.3	4.3	
W 96			8.9	5.7	
W 112			9.7	6.9	
W 110					Set Stk.
W 127			11.0	3.6	

PX

CROSS SECTIONS CONTD

Sta. 137+00 N.

Sta.	+	H.I.	−	Elev.	
T.B.M.				8.20	TOP 2X2 136+00N
	5.94	14.14			
E108			0.69	13.45	W. Profile
E 63			1.74	12.40	W.E. Pav.
E 44			4.0	10.1	
0			5.1	9.0	
W 14			5.7	8.4	
W 15			6.6	7.5	
W 23			6.7	7.4	
W 24			7.4	6.7	
W 34			8.7	5.4	

Jan. 23, 1951

PX

Sta. 136+00 N

Sta	+	H.I.	−	Elev.	
TBM.				8.20	TOP 2X2 136+00N
	5.23	13.43			
E 98			0.11	13.32	W. Profile
E 56			1.26	12.17	W. Edge Pav.
E 47			2.0	11.4	
E 36			3.7	9.7	
0			5.3	8.1	
W 14			5.9	7.5	
W 23			7.8	5.6	
W					

PX

CROSS SECTIONS CONTD

Sta. 135+00 N

Sta	+	H.I	-	Elev.	
TBM.				8.20	TOP 2X2 136+00N
	5.88	14.08			
E 85			0.99	13.09	W. Profile
E 46			2.05	12.03	W. Edge Pav.
E 37			2.8	11.3	
E 23			5.1	9.0	
O			5.4	8.7	
W 12			5.6	8.5	
W 15			7.5	6.6	
W 25			8.5	5.6	
TP.			4.58	9.50	TOP 2X2 134+00N

Jan. 23, 1951

PX

Sta. 134+00 N

Sta.	+	H.I.	-	Elev.	
TBM				8.20	TOP 2X2 136+00 N
	6.56	14.76			
E 70			1.97	12.79	W. Profile
E 34			3.08	11.68	W. Edge Pav.
E 23			3.8	11 0	
E 13			5.4	9.4	
O			5.3	9.5	
W 27			6.1	8.7	
W 38			7.2	7.6	
W 42			9.3	5.5	
TP.			6.04	8.72	TOP 2X2 135+00N
TP.			5.44	9.32	TOP 2X2 133+00N
TP.			4.41	10.35	TOP 2X2 132+00N

O.K. ✓

PX

CROSS SECTIONS CONT'D.

Sta. 133+00 N

Sta.	+	H.I.	−	Elev.	
TBM.				9.50	Top 2x2 134+00N
	4.94	14.44			
E 54			1.92	12.52	W. Profile
E 19			2.94	11.50	W. Edge Pav.
E 4			4.4	10.0	
0			5.1	9.3	
W 8			6.2	8.2	
W 22			6.9	7.5	
W 26			8.3	6.1	
W 41			8.3	6.1	
W 53			9.0	5.4	

Jan. 23, 1951

PX

Sta. 132+00 N ✓

Sta.	+	H.I.	−	Elev.	
T.B.M.				9.32	Top 2x2 133+00N
	6.45	15.77			
E 42			3.47	12.30	W. Profile
E 9			4.55	11.22	W. Edge Pav.
0			5.4	10.4	
W 7			5.7	10.1	
W 13			7.5	8.3	
W 25			9.1	6.7	
W 82			9.2	6.6	
W 120			9.6	6.2	
W 168			11.2	4.6	
W 170					Set Stk. Top 2x2
TP			4.67	11.10	131+00N

CROSS SECTIONS CONT'D.

Sta. 131+00 N

Sta.	+	H.I.	−	Elev.	
TBM.				10.35	TOP 2X2 132+00N
	5.55	15.90			
E 45			3.87	12.03	W. Profile
E 12			4.83	11.07	W. Edge Pav.
0			4.8	11.1	
W 12			6.8	9.1	
W 56			8.4	7.5	
W 103			9.2	6.7	
W 118			9.9	6.0	
W 172			11.5	4.4	
W 170					Set Stk.
TP.			5.70	10.20	TOP 2X2 130+00N

Jan. 23, 1951

Sta. 130+00 N

Sta	+	H.I.	−	Elev.	
TBM.				10.35	TOP 2X2 132+00N
	5.08	15.43			
E 45			3.68	11.75	W. Profile
E 13			4.65	10.78	W. Edge Pav.
0			5.3	10.1	
W 21			6.1	9.3	
W 30			7.3	8.1	
W 48			7.6	7.8	
W 84			8.5	6.9	
W 115			10.2	5.2	
W 135			11.1	4.3	
W 140					Set Stk.
TP.			5.12	10.31	TOP 2X2 129+00N
TP.			5.00	10.43	TOP 2X2 128+00N

CROSS SECTIONS CONT'D.

Sta. 129+00 N

Sta	+	H.I	-	Elev.	
TBM.				10.20	TOP 2X2 130+00
	5.44	15.64			
E 46			3.96	11.68	W. Profile
E 14			4.67	10.97	W. Edge Par.
0			5.4	10.2	
W 11			6.0	9.6	
W 15			8.7	6.9	
W 31			9.5	6.1	
W 61			9.8	5.8	
W 99			11.6	4.0	
W 100					Set Sta

Jan. 23, 1951

Sta. 128+00 N

Sta	+	H.I.	-	Elev.	
TBM.				10.31	TOP 2X2 129+00N
	5.32	15.63			
E 46			3.70	11.93	W. Profile
E 13			4.41	11.22	W. Edge Par.
0			5.3	10.3	
W 10			6.2	9.4	
W 14			8.6	7.0	
W 37			10.3	5.3	11:10 A.M. Tideline
W					
TP.			5.34	10.29	TOP 2X2 127+00N

CROSS SECTIONS CONT'D.

Sta. 127+00 N

Sta.	+	H.I.	−	Elev.	
					TOP 2X2
TBM.				10.43	128+00N
	5.05	15.48			
E 45			3.32	12.16	W. Profile
E 13			4.11	11.37	W. Edge Pav.
0			5.2	10.3	
W 9			5.6	9.9	Top Stone Wall
W 14			9.7	5.8	Toe S. Wall
W 27			10.4	5.1	
					TOP 2X2
TP.			4.70	10.78	126+00N

Jan 23, 1951

Sta. 126+00N

Sta.	+	H.I.	−	Elev.	
					TOP 2X2
TBM				10.43	128+00N
	5.32	15.75			
E 46			3.37	12.38	W. Profile
E 13			4.37	11.38	W. Edge Pav.
0			5.3	10.4	
W 8			5.4	10.3	
W 18			8.8	7.0	
W 27			11.2	4.5	
					TOP 2X2
TP.			5.10	10.65	125+00N
					TOP 2X2
TP.			4.53	11.22	124+00N

CROSS SECTIONS CONT'D.

Sta. 125+00 N.

Sta.	+	H.I.	−	Elev.	
					TOP 2X2
TBM.				10.29	127+00N
	5.41	15.70			
E 46			3.08	12.62	W. Profile
E 13			4.10	11.60	W. Top Pav.
0			5.1	10.6	
W 9			4.7	11.0	
W 14			10.0	5.7	
W 35			12.4	3.3	

Jan 23, 1951

Sta. 124+00 N.

Sta.	+	H.I.	−	Elev.	
					TOP 2X2
TBM.				10.65	125+00 N
	5.47	16.12			
E 46			3.23	12.89	W. Profile
E 13			4.00	12.12	W. Edge Pav.
0			5.1	11.0	
W 7			4.9	11.2	
W 13			9.7	6.4	
W 36			12.9	3.2	
					TOP 2X2
TP.			4.34	11.78	123+00N

CROSS SECTIONS CONT'D.

Sta. 123+00 N

Sta.	+	H.I.	−	Elev.	
T.B.M.				11.22	TOP 2X2 124+00N
	5.54	16.76			
E 46			3.65	13.11	W. Profile
E 13			4.22	12.54	W. Edge Pav.
E 4			5.2	11.6	
0			5.0	11.8	
W 7			5.5	11.3	
W 14			10.3	6.5	
W 40			14.0	2.8	
TP.			4.74	12.02	TOP 2X2 122+00N

Jan. 23, 1951

Sta. 122+00 N

Sta	+	H.I	−	Elev	
TBM				11.78	TOP 2X2 123+00N
	5.37	17.15			
E 46			3.83	13.32	W. Profile
E 13			4.42	12.73	W. Edge Pav.
E 4			5.3	11.8	
0			5.2	12.0	
W 8			5.4	11.7	
W 14			11.2	6.0	
W 53			14.6	2.5	
TP.			5.18	11.97	TOP 2X2 121+00N

CROSS SECTIONS Contd.

Sta. 121+00 N

Sta	+	H.I	-	Elev.	
					TOP 2x2
TBM.				12.02	122+00N
/	4.98	17.00			
E 46			3.55	13.45	W. Profile
E 13			4.10	12.90	W. Edge Pav.
0			5.1	11.9	
W 8			5.1	11.9	
W 15			11.5	5.5	
W 40			14.3	2.7	
					TOP 2x2
TP.			4.89	12.11	120+00N

Jan. 23, 1951

Sta 120+00N

Sta	+	H.I	-	Elev	
					TOP 2x2
TBM				11.97	121+00N
	5.38	17.35			
E 45			3.79	13.56	W. Profile
E 12			4.38	12.97	W. Edge Pav.
0			5.2	12.1	
W 9			4.9	12.4	
W 15			12.2	5.1	
W 38			14.5	2.8	
					TOP 2x2
TP			5.36	11.99	119+00N

CROSS SECTIONS CONT'D.

Sta. 119+00N

Sta	+	H.I	−	Elev.	
TBM				12.11	TOP 2X2 120+00N
	5.21	17.32			
E45			3.83	13.49	W. Profile
E12			4.38	12.94	W. Edge Pav.
0			5.4	11.9	
W9			5.1	12.2	
W15			12.0	5.3	
W~~x~~39			14.5	2.8	
TP			5.65	11.67	TOP 2X2 118+00N

Jan. 23, 1951

Sta. 118+00N

Sta	+	H.I	−	Elev	
TBM.				11.99	TOP 2X2 119+00N
	4.82	16.81			
E45			3.53	13.28	W. Profile
E12			4.09	12.72	W. Edge Pav.
0			5.1	11.7	
W9			4.5	12.3	
W15			11.3	5.5	
W40			13.9	2.9	
TP.			5.16	11.65	TOP 2X2 117+00N

CROSS SECTIONS CONT'D

Sta 117+00 N

Sta	+	H.I.	−	Elev.	
TBM.				11.67	TOP 2X2 118+00N
	5.05	16.72			
E 45			3.67	13.05	W. Profile
E 12			4.28	12.44	W. Edge Pav.
0			5.2	11.5	
W 9			4.9	11.8	
W 14			11.1	5.6	
W 39			13.9	2.8	
TP.			5.51	11.21	TOP 2X2 116+00N

Jan 23, 1951

Sta. 116+00 N

Sta	+	H.I.	−	Elev.	
TBM.				11.65	TOP 2X2 117+00N
	4.84	16.49			
E 45			3.70	12.79	W. Profile
E 12			4.37	12.12	W. Edge Pav.
0			5.3	11.2	
W 9			4.7	11.8	
W 14			10.9	5.6	
W 42			13.5	3.0	
TP			5.38	11.11	TOP 2X2 115+00N

CROSS SECTIONS CONTD.

Sta. 115+00 N

Sta	+	H.I	-	Elev	
TBM				11.21	TOP 2X2 116+00N
	5.08	16.29			
E E 45			3.77	12.52	W. Profile
E E 12			4.28	12.01	W. Edge Pav.
0			5.2	11.1	
W 9			5.2	11.1	
W 14			10.7	5.6	
W 40			13.3	3.0	
TP.			5.52	10.77	TOP 2X2 114+00N

Jan 23, 1951

Sta. 114+00 N

Sta	+	H.I	-	Elev	
TBM.				11.11	TOP 2X2 115+00N
	4.91	16.02			
E 45			3.76	12.26	W. Profile
E 12			4.40	11.62	W. Edge Pav.
0			5.3	10.7	
W 9			4.9	11.1	
W 13			9.8	6.2	
W 37			12.2	3.8	
TP.			5.52	10.50	TOP 2X2 113+00N

CROSS SECTIONS CONT'D

Sta. 113+00 N.

Sta.	+	H.I.	−	Elev	
TBM.				10.77	TOP 2X2 114+00N
	4.93	15.70			
E 45			3.65	12.05	W. Profile
E 12			4.35	11.35	W. Edge Pav.
0			5.3	10.4	
W 9			4.9	10.8	
W 14			10.7	5.0	
W 32			12.5	3.2	
TP.			5.45	10.25	TOP 2X2 112+00

Jan. 23, 1951

Sta. 112+00N.

Sta	+	H.I.	−	Elev.	
TBM.				10.50	TOP 2X2 113+00N
	5.02	15.52			
E 45			3.73	11.79	W. Profile
E 12			4.34	11.18	W. Edge Pav.
0			5.3	10.2	
W 9			5.1	10.4	
W 14			10.5	5,0	
W 34			12.2	3.3	
TP.			5.44	10.08	TOP 2X2 111+00N

CROSS SECTIONS CONT'D.

Sta. 111+00 N.

Sta	+	H.I.	−	Elev.	
TBM				10.25	TOP 2X2 112+00N
	4.92	15.17			
E 45			3.60	11.57	W. Profile
E 12			4.20	10.97	W. Edge Pvmt
0			5.1	10.1	
W 9			4.9	10.3	
W 13			9.8	5.4	
W 39			11.9	3.3	
					TOP 2X2
TP.			5.32	9.85	110+00N

Jan. 23, 1951

Sta. 110+00 N

Sta.	+	H.I.	−	Elev.	
TBM.				10.08	TOP 2X2 111+00N
	5.07	15.15			
E 45 ~~44.5~~			3.74	11.41	W. Profile
E 12			4.25	10.90	W. Edge Pvmt
0			5.3	9.8	
W 9			5.0	10.2	
W 12			9.3	5.9	
W 49			11.8	3.4	
					TOP 2X2
TP.			5.18	9.97	109+00N

CROSS SECTIONS CONT'D.

Sta 109+00 N.

Sta	+	H.I	-	Elev.	
TBM.				9.85	ToP 2X2 110+00N
	5.37	15.22			
E 44			3.91	11.31	W. Profile
E 12			4.47	10.75	W. Edge Pav.
0			5.3	9.9	
W 10			5.2	10.0	
W 14			10.4	4.8	
W 30			11.6	3.6	
TP.			5.09	10.13	ToP 2X2 108+00N

Jan. 23, 1951

Sta. 108+00N

Sta	+	H.I	-	Elev.	
TBM.				9.97	ToP 2X2 109+00N
	5.42	15.39			
E 44			3.83	11.56	W. Profile
E 11			4.32	11.07	W. Edge Pav.
0			5.3	10.1	
W 10			4.8	10.6	
W 14			10.1	5.3	
W 33			12.1	3.3	
TP.			4.44	10.95	TOP 2X2 107+00N

CROSS SECTIONS CON'T

STA 107+00 N

STA	+	H.I.	−	ELEV	
TBM				10.13	2×2 HUB STA 108+00
	5.88	16.01			
E 15 44			4.11		PROFILE
E 11 10			4.41		EDGE
E 5			5.3		
0			5.1		
W 10			4.9		
W 16			9.7		
W 45			12.5		
TP			4.92	11.09	2×2 HUB STA 106

JAN 30, 1951

STA 106+00 N

STA	+	H.I.	−	ELEV	
TBM				10.35	2×2 HUB STA 107+00
	5.18	16.13			
E 14 43			3.95		PRO.
E 12 11			4.19		
E 7			4.8		
0			5.1		
W 3			5.2		
W 12			4.7		
W 14			8.3		
W 67			12.6		
TP			4.69	11.44	2×2 HUB STA 105

JAN 30, 1951

STA 104 + 00 N

STA	+	H.I.	−	ELEV	
TBM				11.44	2 x 2 HUB STA 105
	5.82	17.26			
E 45			4.52		
E 13			4.49		
0			5.4		
W 7			5.5		
W 10			8.0		
W 21			11.2		
W 45			13.6		
TP			5.17	12.09	2 x 2 HUB STA 103

STA 105 + 00 N

STA	+	H.I.	−	ELEV	
TBM				11.09	2 x 2 HUB STA 106
	5.52	16.61			
E 45			4.14		
E 12			4.25		
0			5.2		
W 5			4.9		
W 6			9.3		
W 38			12.9		
TP			4.75	11.86	2 x 2 HUB STA 104

STA 103+00 N

STA	+	H.I	−	ELEV.	
TBM				11.86	2×2 HUB STA 104
	5.39	17.25			
E 48			4.30		
E 17			3.85		
E 2			5.3		
0			5.2		
W 7			5.0		
W 10			6.4		
W 20			10.9		
W 60			13.5		
TP			4.38	12.87	2×2 HUB STA 102

JAN 30, 1951

STA 102+00 N

STA	+	H1	−	ELEV	
TBM				12.09	2×2 HUB STA 103
	6.06	18.15			
E 56			4.93		
E 24			4.57		
E 12			5.6		
0			5.4		
W 5			5.3		
W 12			10.7		
W 78			14.5		
TP			5.09	13.06	2×2 HUB STA 101

STA 101+00 N

STA	+	HI	−	ELEV	
TBM				12.87	
	5.37	18.24			
E 48			4.81		
E 17			4.41		
E 7			5.50		
E 6			5.2		
0			5.2		
W 4			5.4		
W 10			8.2		
W 19			11.3		
W 70			14.5		
TP			5.08	13.16	2×2 HUB STA 100

JAN 30, 1951

STA 100+00 N

STA	+	HI.	−	ELEV	
TBM				13.06	2×2 HUB STA 101
	5.21	18 27			
E 46			4.55		
E 14			4.20		
E 11			4.50		
E 8			4.0		
0			5.1		
W 14			8.3		
W 37 ~~20~~			10.4		
W 40			12.4		
W 72			14.5		
TP			8.68	9.59	2×2 HUB STA 99

JAN 30, 1951

STA 99+00

STA	+	H.I.	−	ELEV	
TBM				13.16	2x2 HUB STA 100
	2.04	15.20			
E 48			1.36		
E 16			1.14		
E 14			1.2		
E 6			4.5		
0			5.5		
W 10			6.5		
W 45			8.3		
W 99			8.7		
W 99			10.6		

LOCATION OF CULVERTS ALONG PACIFIC HI-WAY MISSION BAY PROJECT 65031

Jan 25, 1951 T. Stamper

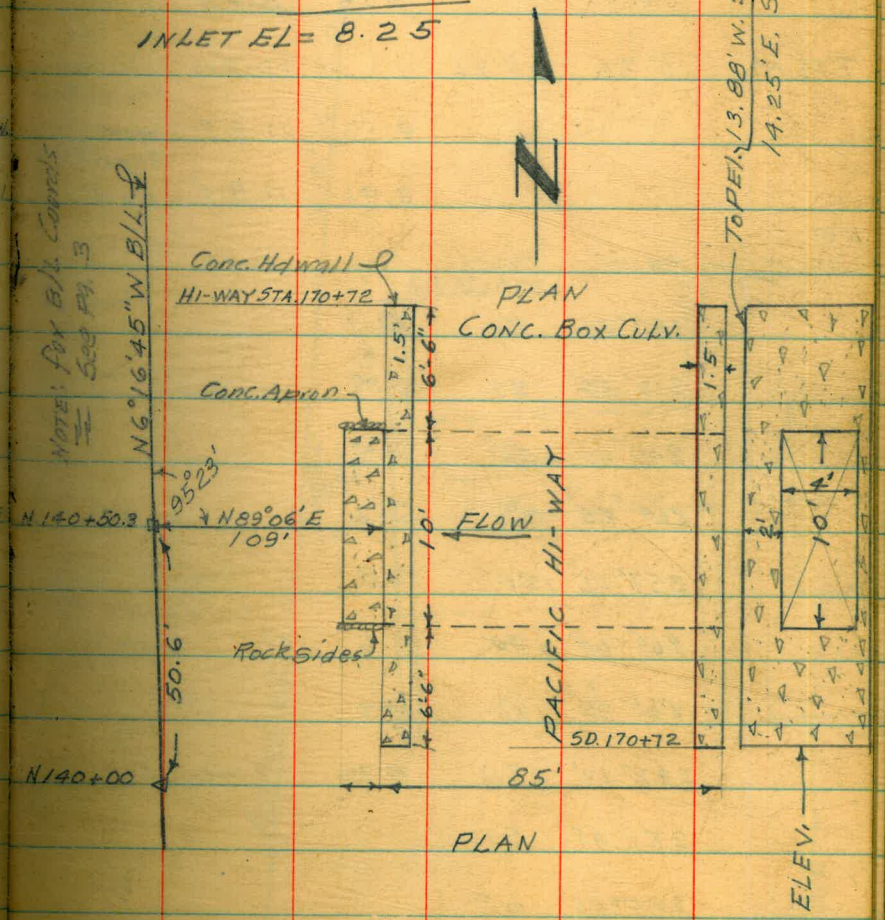
Sta	+	H.I.	−	Elev	
TBM.				10.20	140+00N
	2.53	12.73			
					W. Side
			4.88	7.85	F. Line
				13.88	TOP Hd. wall W.
TBM	⊼ @	Sta. 140+00		8.81	141+00N
	6.61	15.42			
					E SIDE
			6.91	8.51	F. LINE
					TOP
B.M.			1.09	14.33	Hd. WALL E.

Azim.	Dist.	Rod	Elev	
63° 35'	116	7.1		PROFILE
56° 20'	90	7.5		"
42° 40'	68	8.0		"
24° 55'	52	8.3		"
352° 55'	47	8.4		"
323° 25'	61	9.0		"
322° 00'	79	9.6		"

CONT'D PAGE 44

STATE HI-WAY B.M. TOP E. HD. WALL

MKD. ELV. 5.24
9.01
MLLW EL = 14.25
6.00
INLET EL = 8.25

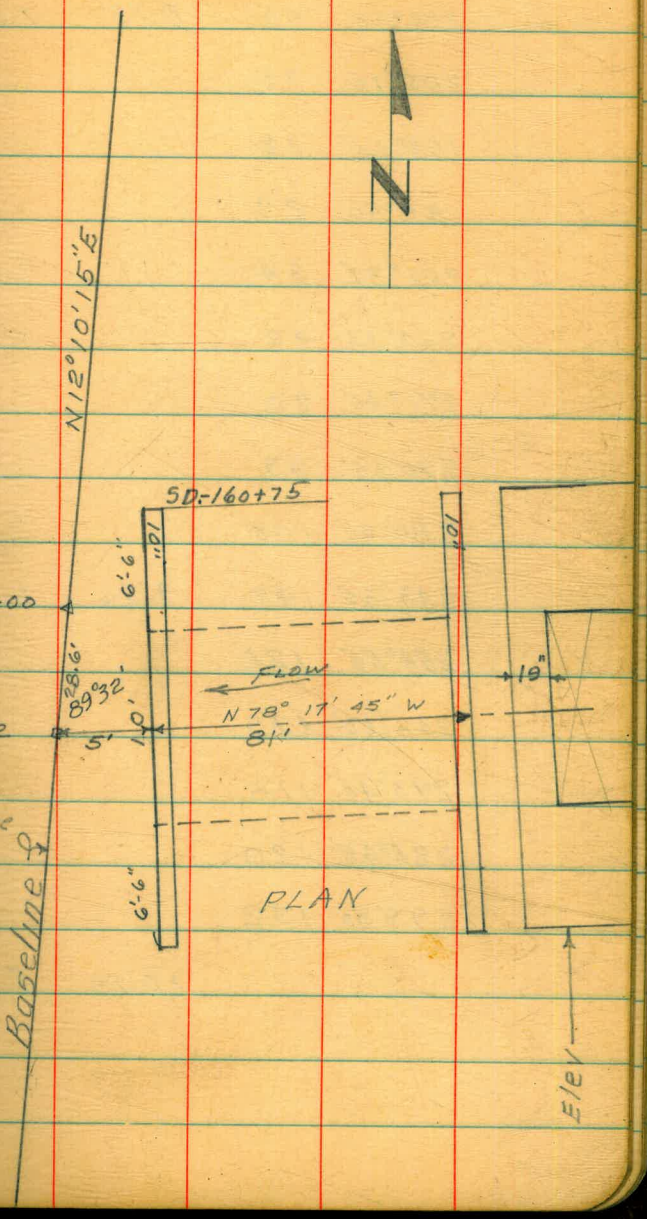


2 - 1 - 51

CULVERT LOCATIONS CONTD.

Sta	+	H.I.	−	Elev	
TBM				10.20	2x2 HUB STA 130+00N
	5.40	15.60			
			10.27	5.33	WEST SIDE F. LINE
			9.75	5.85	EAST SIDE F. LINE
TBM	5.36	15.76		10.20	2x2 Hub 130+00
			4.53	11.23	Top of H.W. West
			3.91	11.85	Top of H.W. East

TO STA 131+00N	AZIM	DIST	ROD	ELEV	
	183°35'	30'	8.7		PROFILE
	219°55'	37	9.4		"
	249°00'	50	9.4		"
	264°25'	83	9.2		"
	257°05'	120	9.8		"
	260°60'	150	10.6		"
	260°35'	181	11.3		"
	242°10'	130	8.76	7.00	7' CONTOUR
	251°45'	91			
	245°55'	69			



NOTE: for B/L Coord's See Pg. 3

2-1-51

H.I. = 15.76

AZIM	DIST	ROD	ELEV	
236°50	50	8.76	7.0	7' Contour
205°15	35			
193°05'	32			
189°50'	29			
221°30'	34			
260°35'	48			
271°45'	70			
270°35'	93			
280°00'	105			
243°35'	147	9.76	6.0	6' Contour
254°55	120			
258°50'	119			
273°45'	118			
285°45'	120			
299°35'	132			
		10.19	5.57	West End of Apron

2-1-51.

Con't From Page 41 X @ 140+00

H.I. = 15.42

Azim	Dist	Rod	Elev	
327°30'	105	10.5		PROFILE
334°45'	130	11.2		"
335° 10'	69	6.42	9.00	9' CONTOUR
356°45'	58			
27°25	63			
45°05'	80			
55°30'	100			
61°10'	117			
66°00	113			
60°55'	92			
46°25	62			
18°45'	40			
326°05'	41			
306°25'	50			
291°30'	30			
324°00'	79	8.42	7.00	7' CONTOUR
332°55'	58			
357°35'	47			

H.I. = 15.42

Azim.	Dist	Rod	Elev	
359°45'	44	8.42	7.00	7' Contour.
328°40'	51			
317°55	70			
322°15	91			

2-1-51

Cross Sections of Culvert near Sta 140+00 N

Sta 62+55 W

Sta	+	HI	−	Elev	
TBM				10.20	Sta 140+00
	8.03	18.23			
0+00			5.3	12.9	
N 0+40			5.9	12.3	
N 0+48			10.1	8.1	
N 0+57			10.1	8.1	
N 0+63			5.1	13.1	
N 0+87			5.2	13.0	
N 1+02			4.8	13.4	

Sta 62+75

TBM	7.48	17.68		10.20	Sta 140+00
N 1+04			5.4	12.3	
N 0+81			5.0	12.9	
N 0+63			6.2	11.7	
N 0+55			9.2	8.7	

Sta 62+75

(45)

Sta	+	HI	−	Elev	
N 0+40		17.68	9.1	8.8	
N 0+91			6.9	11.0	
N 0+25			5.2	12.7	
0+00			5.3	12.6	

Sta 63+00

T.B.M	5.42	15.62		10.20	Sta 140+00
0+00			5.2	10.4	
N 0+29			4.7	10.9	
N 0+38			6.0	9.6	
N 0+42			6.6	9.0	
N 0+43			8.3	7.3	
N 0+55			8.3	7.3	
N 0+60			6.2	9.4	
N 0+71			4.5	11.1	
N 0+90			5.0	10.6	

LOCATION OF SUBSURFACE EXPLORATION TEST HOLES BY SAN DIEGO TESTING LABORATORY

STA	+	H.I.	−	ELEV.
B.M.				12.00
	3.56	15.56		
HOLE #1			6.56	9.0
TP.			6.80	8.76
	5.07	13.83		
HOLE #2			4.93	8.7
TP.			4.10	9.73
	5.54	15.27		
HOLE #3			4.38	10.9
HOLE #4			5.30	10.0

Feb. 2, 1951

T. Stampey
E. Watson
A. Shorey
R. Shorey

TOP CONC. MON NEAR STATE

	ARC. SHEET LOCATION KENDAL TO HORSE	HORSE TO CHIMNEY
TOP GR. HOLE #1,	68° 55'	140° 55'
TOP GR.	74° 54'	138° 58'
↑ @ #4 HORSE RT.	113° 00' 12.5'	
	86° 08'	129° 49'

300'

PROFILE ALONG NORTHERLY TOP OF SHOULDER PARK BDY - 35' ± SLY.

STA	+	H.I	-	ELEV.	
B.M.	5.20	17.20		12.00	CITY B.M NEAR STATE
79+00 W			5.0	12.2	
80+00 W			5.8	11.4	
81+00 W			5.6	11.6	
82+00 W			5.4	11.8	
83+00 W			5.0	12.2	
84+00 W			4.8	12.4	
85+00 W			5.1	12.1	
86+00 W			5.7	11.5	
87+00 W			5.1	12.1	
88+00 W			4.0	13.2	
89+00 W			4.6	12.6	
90+00 W			5.4	11.8	
91+00 W			5.4	11.8	
92+00 W			5.5	11.7	
93+00 W			5.8	11.4	
94+00 W			6.0	11.2	

4-26-51 T. Stampe V
A. Sherry

RD LOCATION DE ANZA POINT

SLY RD ℄ = STA. 91+00 AV. WIDTH = 22'

E ℄ W. RD = 35' AV. WIDTH. AV. DIST TO SOUTH EDGE = 65'

LOCATION OF WLY EDGE OF TOPSOIL FROM N. PARK. BDY

L = 56°20' Lt. @ PT. 30' W. OF E. HI-WAY R.O.W. MON

4-30-51

E. Watson
A. Sherry

LOCATION OF TOPSOIL

AREA DE ANZA POINT π at "State"

City B.M. Near State

Sta.	Dist	Azim	Rod	Elev.
		H.I.		
B.M.	+5.25	17.25		12.00
1.		270°31'15"	Along Park Bdy.	
2.	54'	149°50'	5.0	12.3
3.	178'	175°10'	5.5	11.8
4	142'	179°38'	5.0	12.3
5	115'	199°43'	5.2	12.1
6	128'	203°45'	5.4	11.9
7	112'	239°20'	6.0	11.3
8	48'	238°51'	5.0	12.3
9	128'	257°45'	6.0	11.3
10	135'	243°49'	6.4	10.9
11	212'	253°34'	6.7	10.6
12	210'	262°08'	6.0	11.3
13	278'	264°08'	5.8	11.5
14	282'	257°29'	6.6	10.7
15	348'	259°45'	5.8	11.5
16	347'	265°04'	5.2	12.1

HI = 17.25
4-30-51

Sta.	Dist	Azim	Rod	Elev.
17	430'	266°01'	4.6	12.7
18	427'	261°08'	5.3	12.0
19	490'	262°02'	4.8	12.5
20	491'	266°30'	4.9	12.4
21	530'	266°58'	4.7	12.6
22	535'	261°33'	4.7	12.6
23	535'	259°29'	4.6	12.7
24	596'	259°51'	4.6	12.7
25	605'	262°41'	4.8	12.5
26	640'	264°46'	5.4	11.9
27	641'	267°36'	4.8	12.5
28	705'	267°52'	5.0	12.3
29	715'	265°01'	5.6	11.7
30	765'	264°57'	6.0	11.3
31	765'	268°04'	5.6	11.7
32	820'	268°16'	5.9	11.4
33	830'	266°15'	6.1	11.2
34	880'	266°28'	6.1	11.2

H.I = 17.25'

Sta	Dist	Azim	Rod	Elev.
35	885'	268°34'	5.3	12.0
36	945'	268°40'	4.8	12.5
37	945'	266°42'	5.2	12.1
38	1005'	266°57'	4.6	12.7
39	1010'	265°46'	4.4	12.9
40	366'	271°40'	5.9	11.4
41	256'	271°18'	5.1	12.2
42	200'	268°20'	6.0	11.3
43	208'	278°27'	5.4	11.9
44	244'	285°18'	5.1	12.2
45	212'	181°53'	5.4	11.9
46	290'	190°37'	5.7	11.6
47	386'	196°40'	6.8	10.5
48	460'	199°23'	7.2	10.1
49	546'	202°01'	6.8	10.5
50	630'	204°24'	5.8	11.5
51	680'	210°55'	6.2	11.1
52	735'	215°37'	6.4	10.9

H.I = 17.25

Sta	Dist.	Azim	Rod	Elev.	
53	805'	222°06'	6.3	11.0	
54	868'	225°55'	6.3	11.0	
55	935'	228°51'	6.6	10.7	
56	1045'	232°21'	7.4	9.9	
Sta 91+00 on 35' Offset from Baseline		268°55'			
Sta	+	H.I.	−	Elev.	
BM.				12.00	City BM at "State"
	4.44	16.44			
T.P.			3.62	12.82	
	4.38	17.20			
T.B.M.			4.73	12.47	Hub near Sta 91+00

4-30-51

Location of Top Soil

De Anza Point Cont'd.

π at Sta 91+00 35' offset B/L

Sta	Dist.	Azim	Rod	Elev	
BM	+4.62	HI=17.09		12.47	Hub near Sta 91+00
"State" 1		88°55'			
2	132'	101°54'	4.1	13.0	
3	128'	89°56'	4.4	12.7	
4	41'	92°40'	4.8	12.3	
5	52'	133°40'	5.1	12.0	
6	48'	151°06'	5.2	11.9	
7	58'	166°35'	5.7	11.4	
8 ℄ Road	62'	180°15'	5.4	11.7	
9	62'	191°37'	6.1	11.0	
10	48'	211°24'	6.1	11.0	
11	65'	244°55'	5.9	11.2	
12	55'	268°45'	5.8	11.3	
13	168'	268°49'	6.0	11.1	
14	168'	260°18'	6.0	11.1	
15	211'	177°04'	6.7	10.4	

HI=17.09

Sta	Dist	Azim	Rod	Elev
16	209'	180°08'	6.3	10.8
17	210'	183°47'	6.8	10.3
18	352'	182°27'	7.1	10.0
19	351'	180°21'	6.6	10.5
20	353'	178°28	7.1	10.0
21	530'	179°15'	7.8	9.3
22	532'	181°40'	7.5	9.6
23	650'	180°01'	6.0	11.1
24	655'	177°35'	6.0	11.1
25	682'	176°03'	6.6	10.5
26	682'	169°15'	7.0	10.1
27	685'	160°38'	7.8	9.3
28	715'	159°14'	7.7	9.4
29	705'	154°16'	7.8	9.3
30	670'	153°59'	6.9	10.2
31	702'	149°37'	6.7	10.4
32	745'	151°17'	7.6	9.5
33	735'	146°54'	7.1	10.0

5-12-52

FINAL SOUNDINGS PROJ

№ 65036 MISSION BAY.

END SECTION W12950

0+00 = N95+00 SOUND NORTH

DIST	Sound		DIST	Sound	PX
0+00				12.8	10.0
	4.0	-1.2	(2.8)	12.7	9.9
3:29	5.0	2.2		12.7	—
	4.4	1.6		12.8	10.0
(2.8)	6.5	3.7	2+00	12.8	—
50	11.3	8.5			
	13.4	10.6			
	13.5	10.7			
	12.8	10.0			
	12.5	9.7	50		
1+00	13.1	10.3			
	12.6	9.8			
	12.5	9.7			
	12.5	—			
	12.7	9.9			
50	12.7	—			

5-13-52

STA N96+00

0+00 = W13300 SOUND EAST

DIST	Sound	0.2 / 1.0 / 2.3	+1.7 / +0.9 / −0.4	DIST	Sound	PX
2+50					12.3	10.4
11:56	2.7		0.8		12.1	10.2
	2.7		—	50	12.1	—
(19)	7.0		5.1		12.1	—
	9.7		7.8		12.1	—
3+00	11.5		9.6	(19)	12.1	—
	12.2		10.3		12.4	10.5
	12.1		10.2	5+00	13.0	11.1
	11.8		9.9		13.5	11.6
	12.3		10.4		13.3	11.4
50	12.7		10.8		12.0	10.1
	12.5		10.6		10.7	8.8
	13.0		11.1	50	10.8	8.9
	13.0		—		11.0	9.1
11:58	12.6		10.7		10.8	8.9
4+00	12.6		—	12:00	10.8	—
	12.5		10.6		11.1	9.2
	12.4		10.5	6+00	11.1	—
					11.1	9.1
					11.9	9.8

5-13-52

STAN 97+00 PX

0+00 = W13300 SOUND EAST

DIST 1+30	Sound N.GV.		DIST	Sound	
2+50	0.6	+1.6		12.0	9.8
1209	2.4	-0.2		12.0	—
	5.3	3.1	50	12.0	—
	7.2	5.0	"	12.0	—
	12.0	9.8	"	12.0	—
3+00	11.7	9.5	(22)	12.2	10.0
"	11.0	8.8	"	12.3	10.1
"	10.4	8.2	5+00	12.3	—
(2.2)	11.2	9.0	"	12.3	—
	11.8	9.6		11.8	9.6
50	12.0	9.8	"	12.0	9.8
"	12.1	9.9	1213	12.4	10.2
1211	12.2	10.0	50	12.4	—
	12.4	10.2		12.7	10.5
	12.3	10.1			
4+00	12.3	10.1			
"	12.8	10.6			
"	12.4	10.2			

5-13-52

(52)

STAN 98+00 PX

0+00 = W13300 SOUND EAST

DIST	Sound		DIST	Sound	
2+50	1.0	+1.5		12.3	9.8
"	1.1	+1.4	"	12.1	9.6
"	2.3	+0.2	50	12.4	9.9
1226	8.5	-6.0	"	12.4	—
"	11.4	8.9	"	12.2	9.7
3+00	11.2	8.7	(25)	12.2	—
"	11.3	8.8	"	12.0	9.5
"	11.8	9.3	5+00	11.7	9.2
(2.5)	12.0	9.5	1229	11.7	—
"	12.0	—	"	12.2	9.7
50	12.1	9.6	"	12.5	10.0
"	12.3	9.8	"	12.8	10.3
"	12.3	—	50	13.0	10.5
"	12.4	9.9		13.1	10.6
"	12.4	—			
4+00	12.4	—			
1228	12.5	10.0			
"	12.4	9.9			

5-13-52

STA N 99+00 PX

0+00 = W 13300 SOUND EAST

Dist	Sound		Dist	Sound	
2+50	5.0	-2.4		13.1	10.5
12:40	5.1	2.5	12:42	13.1	—
	5.2	2.6	50	13.3	10.7
	10.2	7.6		12.8	10.2
	12.8	10.2		12.6	10.0
3+00	12.8	—	(26)	13.1	10.5
	13.0	10.4		13.3	10.7
(26)	13.1	10.5	5+00	13.7	11.1
	13.1	—		13.7	—
	13.2	10.6		14.0	11.4
50	13.2	—		14.0	—
	13.2	—	12:43	14.3	11.7
	13.2	—	50	14.1	11.5
	13.2	—			
	13.3	10.7			
4+00	13.5	10.9			
	13.2	10.6			
	13.2	—			

5-13-52 (53)

STA N 100+00 PX

0+00 = W 13300 SOUND EAST

Dist	Sound		Dist	Sound	
2+50	5.0	-2.1		12.6	9.7
1:05	5.0	—		12.6	—
	4.5	1.6	50	12.8	9.9
	11.8	8.9		13.2	10.3
	12.0	9.1	(2.9)	13.4	10.5
3+00	12.0	—	1:08	13.5	10.6
	11.4	8.5		13.7	10.8
(29)	13.0	10.1	5+00	13.7	—
	13.2	10.3		13.7	—
	13.0	10.1		13.5	10.6
50	12.8	9.9		13.6	10.7
	12.8	—		13.6	—
	12.7	9.8	50	13.5	10.6
	13.1	10.2			
1:07	13.2	10.3			
4+00	13.2	—			
	13.1	10.2			
	13.1	—			

5-12-52

END SECTION

STA W/2,980

0+00 = N95+00 SOUND NORTH

Dist	Sound		Dist	Sound	
0+00	?			11.0	8.3
	2.3	+0.4		11.4	8.7
3:12	2.5	+0.2		11.1	8.4
	2.4	+0.3	2+00	12.0	9.3
	4.2	-1.5	3:15	11.8	9.1
50	8.0	5.3		11.1	8.4
	11.0	8.3		11.1	8.4
(2.7)	12.2	9.5	(2.7)	11.4	8.7
	13.8	11.1	50	11.7	9.0
	13.6	10.9		12.0	9.3
1+00	13.0	10.3		12.1	9.4
	13.4	10.7		12.1	—
	13.0	10.3		12.2	9.5
	13.5	10.8	3+00	12.4	9.7
	11.8	9.1		12.4	—
50	12.6	9.9		13.0	10.3
	12.4	9.7		13.0	—

STA 12,980 CONTD NORTH

PX

Dist	Sound		Dist	Sound	
	13.1	10.4	3:20	12.4	—
50	13.3	10.6		12.1	9.4
3:17	13.5	10.8	50	11.6	8.9
	13.1	10.4		11.1	8.4
	13.3	10.6		11.0	8.3
	13.3	—		10.4	7.7
4+00	13.3	—		10.0	7.3
3:18	13.1	10.4	6+00	9.2	6.5 End
	13.4	10.7		10.0	7.3
(2.7)	13.5	10.8	(2.7)	10.8	8.1
	13.8	11.1		10.5	7.8
50	13.8	—		10.3	7.6
	13.8	—	50	10.3	—
	13.7	11.0	3:23	10.3	—
	13.7	—		11.0	8.3
	13.5	10.8		10.6	7.9
5+00	13.5	—		10.8	8.1
	12.8	10.1	7+00	11.5	8.8
	12.4	9.7			

5-12-52

END SECTION

STA W13000

0+00 = N95+00 SOUND NORTH

DIST	Sound		DIST	Sound	
0+10	2.6	+0.1		12.0	9.3
	2.4	+0.3		11.3	8.6
3:35	2.4	+0.3	2+00	12.1	9.4
	2.4	+0.3		11.8	9.1
50	3.5	-0.8	(2.7)	11.0	8.3
	7.0	4.3	3:39	11.4	8.7
(2.7)	9.5	6.8		11.5	8.8
	11.2	8.5	50	11.5	8.8
	12.0	9.3		11.3	8.6
1+00	13.0	10.3		10.8	8.1
	13.1	11.0		11.4	8.7
	13.3	10.8		12.0	9.3
	13.5	10.8	3+00	12.0	9.3
	13.1	10.4		12.0	9.3
50	12.1	9.4		12.0	9.3
	11.7	9.0		12.1	9.4
3:37	12.2	9.5		12.1	9.4

5-12-52

END SEC. CONTD

(55)

PX

DIST	Sound		DIST	Sound	
50	12.4	9.7		12.1	9.4
3:40	12.5	9.8	50	11.7	9.0
	13.1	10.4		11.2	8.5
	13.0	10.3	(2.7)	11.0	8.3
	13.0	10.3		10.2	7.5
4+00	13.2	10.5		7.0	4.3
	13.2	—	6+00	1.4	+0.7
(2.7)	13.3	10.6			
	13.1	10.4			
	13.1	—			
50	13.3	10.6			
	14.0	11.3			
	14.0	—			
	14.0	—			
	13.8	11.1			
5+00	13.4	10.7			
	13.4	—			
	13.5	10.8			
	13.0	10.3			

5-13-52

STA N 101+00 P.X.

0+00 = W 13300 SOUND EAST

Dist	Sound		Dist.	Sound	
2+50				13.0	9.9
				13.3	10.2
	N.G.		50	13.2	10.1
1:31	3.0	+0.1		13.2	—
	5.2	-2.1		13.4	10.3
3+00	7.5	4.4	(3.1)	13.4	—
	10.0	6.9		13.4	—
(3.1)	10.0	—	5+00	13.0	9.9
	10.7	7.6		1	
1:33	11.2	8.1		1	
50	11.2	—		1	
	11.2	—		1	
	11.7	8.6	50	1	
	12.0	8.9			
	12.0	—			
4+00	12.5	9.4			
	13.0	9.9			
	13.0	—			

8 July 52
Watson
Sisson
Sherry

LOCATION & PROFILE
PROPOSED PRESSURE SEWER
DEANZA POINT & VICINITY

Notes

1- Datum is U.S.C.&G.S. Mean Lower Low Water.

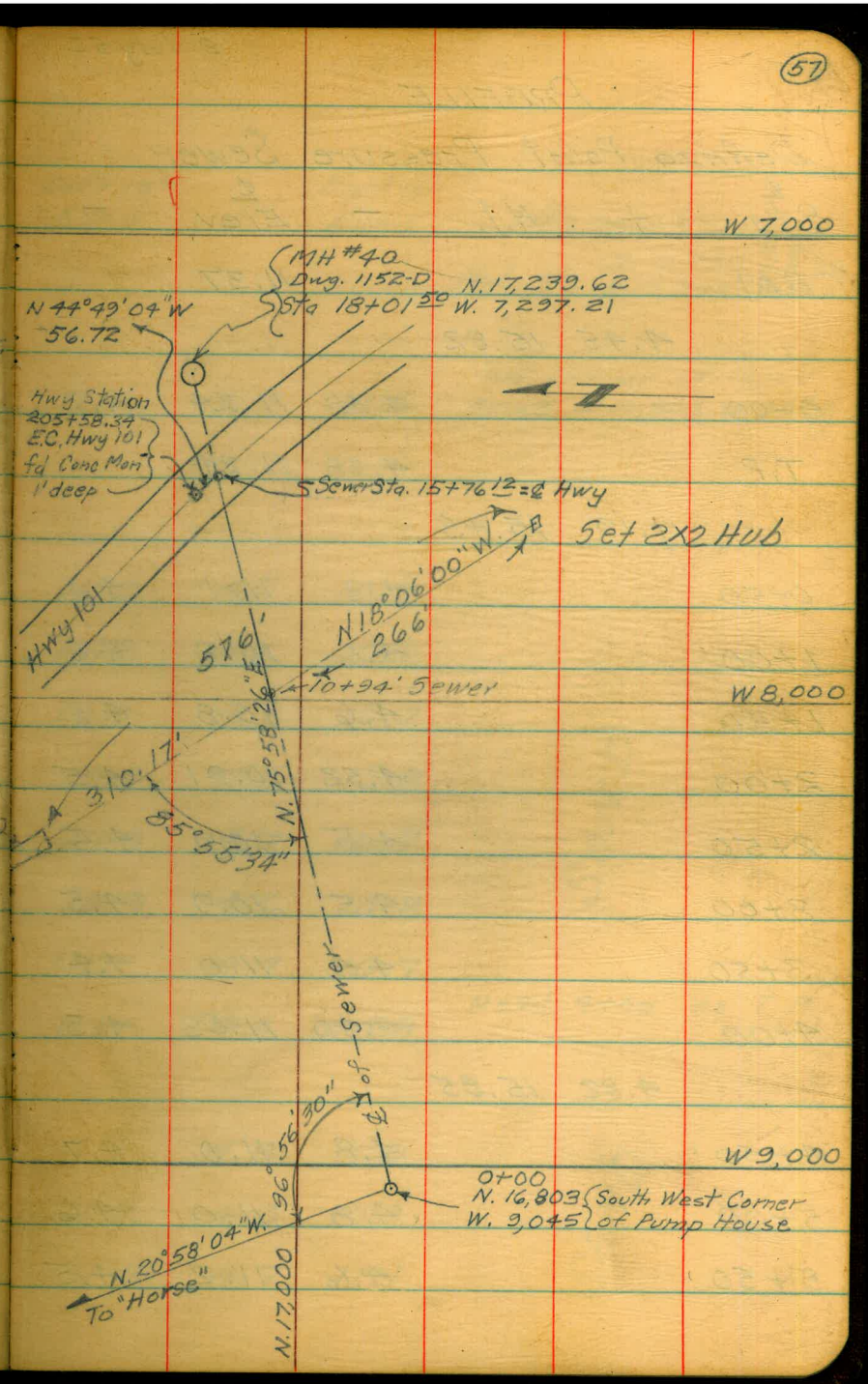
2- Origin of Coordinates is U.S.C.&G.S. Station "OLD TOWN".

3- Outs taken at 90° to ℄ except as noted

Sta	Object		Angle
	Horse	①	96° 57'
N 16,803 W 9,045	Rt ↓	②	193° 53'
	MH #40	Av.	96° 56' 30"
	MH 40	①	120° 48'
℄ Hwy 101	Lt ↓	②	241° 35'
	E.C. Hwy 101	Av	120 47' 30"

Horse
N 19,355.81
W 10,023.28

EXISTING 60" R.C.P.



8 July 52

PROFILE

DeAnza Point Pressure Sewer

℄ Sta	+	H.I.	−	℄ Elev.	−	Left 15' Elev.	−	Right 15' Elev.	Remarks
T.B.M.				11.37					Hub on N. 16,700 W. 9,200 M.B. F.B. 78 Page 3
	4.45	15.82							
0+00			4.58	11.24	4.7	11.1	5.0	10.8	S.W. Corner of Pump House N 16,803 W. 9,045
T.P.			4.58	11.24					
	4.19	15.43							
0+50			4.3	11.1	4.4	11.0	4.5	10.9	
1+00			4.6	10.8	4.6	10.8	4.8	10.6	
1+50			4.6	10.8	4.5	10.9	4.7	10.7	
2+00			4.52	10.91	4.5	10.9	4.6	10.8	SAND
2+50			4.5	10.9	4.5	10.9	4.7	10.7	
3+00			4.5	10.9	4.5	10.9	4.6	10.8	
3+50			4.4	11.0	4.4	11.0	4.7	10.7	
4+00			4.40	11.03	4.3	11.1	4.6	10.8	Used 4+00 as T.P.
	4.82	15.85							
4+50			4.8	11.0	4.7	11.1	4.8	11.0	
5+00			4.8	11.0	4.6	11.2	4.9	10.9	SAND
5+50			4.6	11.2	4.5	11.3	4.7	11.1	

Profile of DeAnza Pressure Sewer Cont'd.

℄ Sta	+	H.I.	−	℄ Elev.	−	Left 15' Elev.	−	Right 15' Elev.	Remarks
		15.85							
6+00			4.26	11.59	4.3	11.5	4.5	11.3	
6+50			4.4	11.4	4.3	11.5	4.3	11.5	SAND
7+00			4.4	11.4	4.5	11.3	4.5	11.3	
7+50			4.5	11.3	4.4	11.4	4.5	11.3	
8+00			4.33	11.52	4.3	11.5	4.4	11.4	Used 8+00 as T.P.
	5.43	16.95							
8+50			5.0	11.9	5.0	11.9	5.1	11.8	
9+00			5.1	11.8	5.1	11.8	5.2	11.7	
9+50			5.0	11.9	5.0	11.9	4.9	12.0	SAND
10+00			4.81	12.14	4.7	12.2	4.8	12.1	
10+28			4.4	12.5	4.8	12.1	4.3	12.6	Beg. of Area Covered with Top Soil
10+50			4.4	12.5	4.4	12.5	4.7	12.2	
11+00			4.5	12.4	4.5	12.4	4.8	12.1	
11+50			5.2	11.7	4.9	12.0	5.6	11.3	
12+00			5.85	11.10	5.7	11.2	5.9	11.0	Used 12+00 as T.P.
	5.56	16.66							
12+50			5.2	11.5	5.1	11.6	5.2	11.5	

Profile of DeAnza Pressure Sewer Contd.

℄ Sta.	+	H.I.	−	℄ Elev	−	Left 15' Elev.	−	Right 15' Elev.	Remarks
		16.66							
13+00			4.8	11.9	4.5	12.3	4.5	12.3	
13+50			4.6	12.1	4.7	12.0	4.9	11.8	
14+00			4.80	11.86	4.7	12.0	4.9	11.8	
14+50			4.7	12.0	4.4	12.3	5.0	11.7	
15+00			4.6	12.1	4.5	12.2	4.7	12.0	
15+25			4.5	12.2	4.4	12.3	4.4	12.3	Outs @ 90°
15+35			3.22	13.44	3.17	13.49	3.28	13.38	W. Edge of Pavement
			2.65	14.01	2.62	14.04	2.69	13.97	Gutter Line Medium Strip
			2.40	14.26	2.40	14.26	2.47	14.19	Top of Curb Medium Strip
15+76.12			2.35	14.31	2.28	14.38	2.42	14.24	℄ Hwy 101
			2.43	14.23	2.36	14.30	2.45	14.21	Top of Curb Medium Strip
			2.62	14.04	2.55	14.11	2.65	14.01	Gutter Line Medium Strip
T.P.			2.35	14.31					
	5.33	19.64							
16+17.59			5.56	14.08	5.56	14.08	5.62	14.02	E. Edge of Pavement
16+37			5.9	13.7	5.8	13.8	6.0	13.6	
16+45.30			4.7	14.9	4.5	15.1	4.5	15.1	

60
176
42.4

15' Out shots taken on Line Bearing N. 44° 49' W.

Profile DeAnza Point Pressure Sewer Cont'd

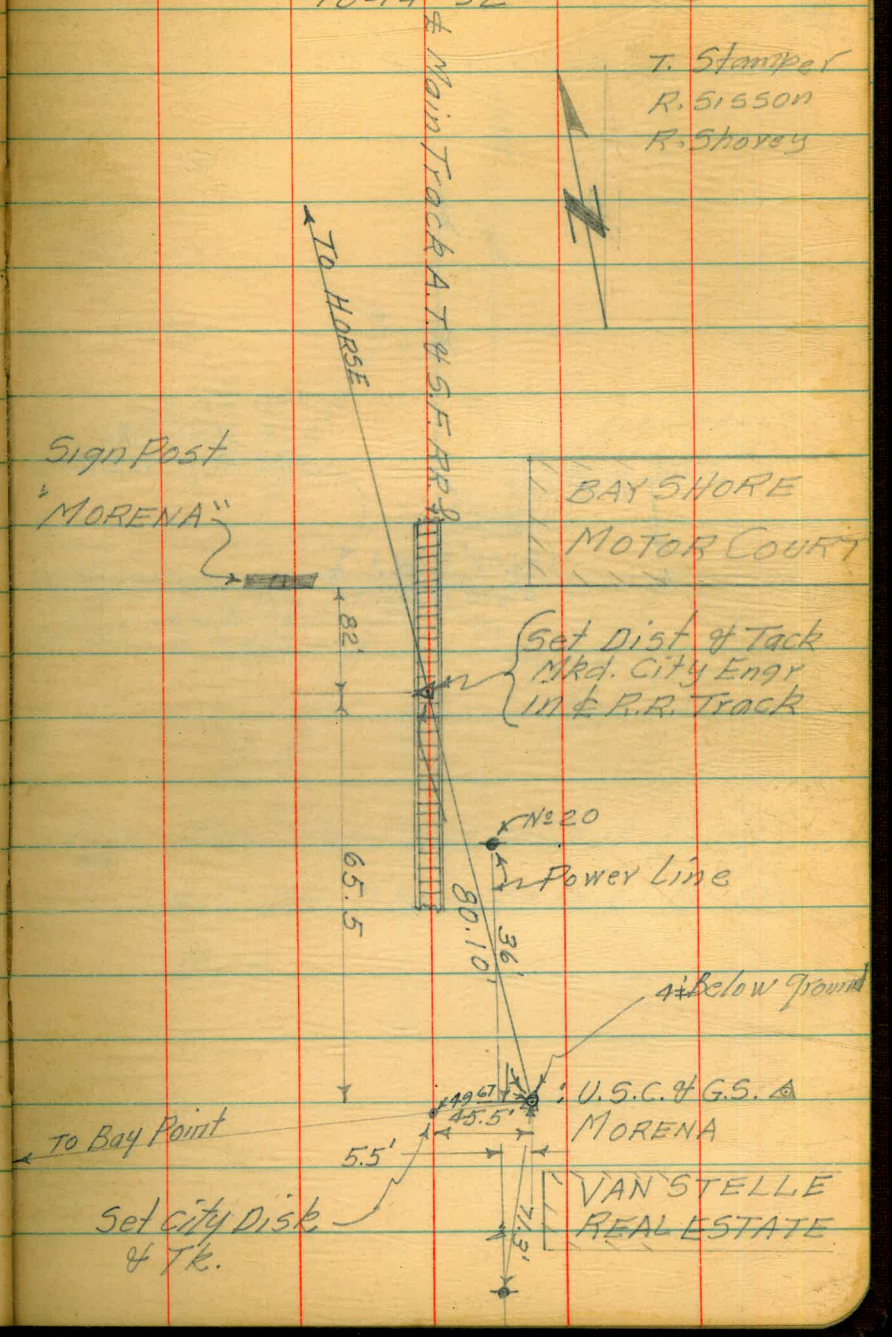
℄ Sta.	+	H.I.	−	℄ Elev	−	Left 15' Elev.	−	Right 15' Elev.	Remarks
		19.64							
16+50.80			7.8	11.8	7.4	12.2	7.7	11.9	
16+55			7.4	12.2	7.1	12.5	7.9	11.7	
16+60			5.0	14.6	5.1	14.5	5.1	14.5	
17+00			4.8	14.8	4.6	15.0	4.9	14.7	Outs @ 90°
T.P			4.66	14.98					Top of Hub Sta 17+00
	8.38	23.36							
17+50			7.2	16.2	6.5	16.9	7.7	15.7	
17+75			4.7	18.7	4.1	19.3	5.1	18.3	
17+99.50			2.5	20.9					
18+01.50			2.75	20.61					Top of M.H. Cover
18+01.50			11.56	11.80					Flow Line
T.P.			9.05	14.31					
	2.86	17.17							
B.M.			5.16	12.01					Conc Mon "State" Elev. 12.00

Outs taken on a Line Bearing N. 44°49'W.

REFERENCE POINTS TO U.S.C.&G.S. ⊙ MORENA

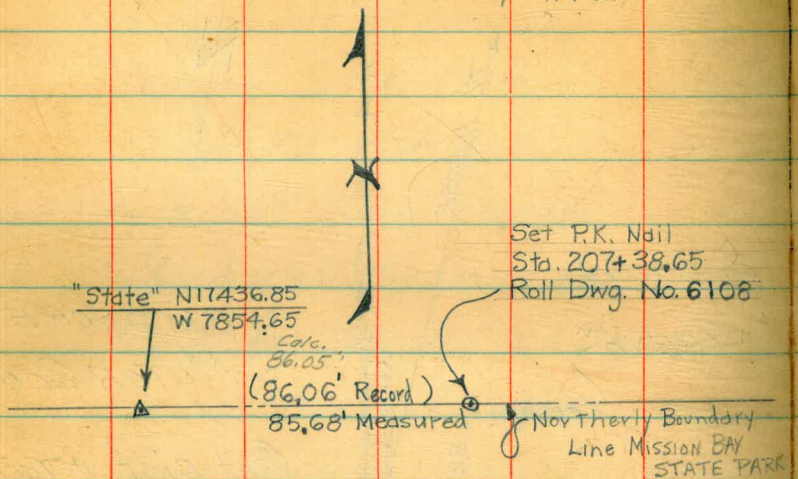
NOTE: This Monument is Approx. 3' below Ground Surface & is a ref. Pt. Set below original Monument which was destroyed in 1950 by Trunk line Sewer installation by City of San Diego

10-14-52



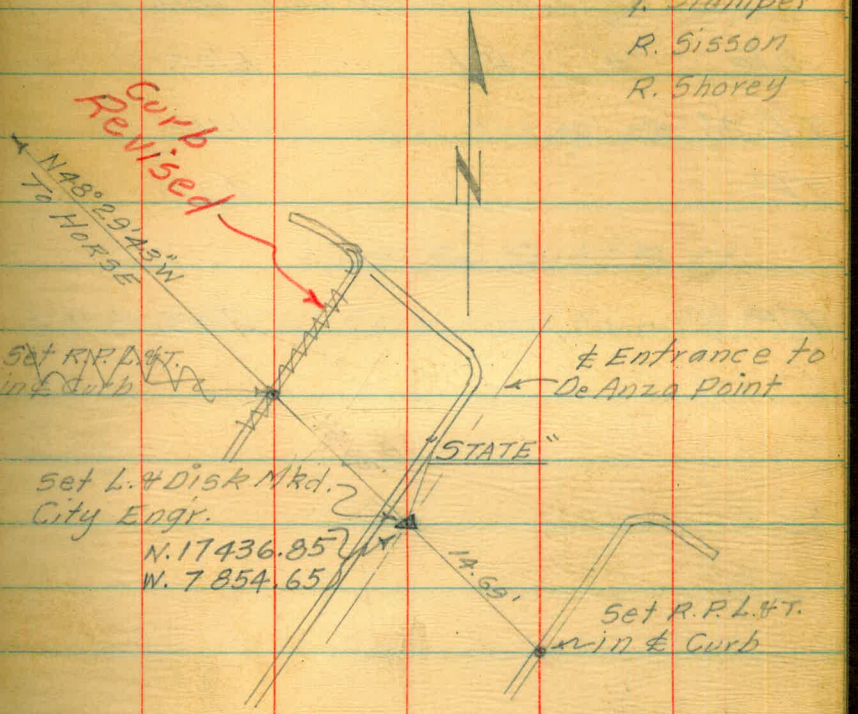
Monument "State" Reset & Reference Ties

D. Smith
by J.M. Tex



10-17-52

T. Stamper
R. Sisson
R. Shorey



NOTE: Mon. "State" was Re-set from Ref. Pts. Shown on Page 12. this Book.

LEVELS

TO 8" PROPOSED

PRESSURE SEWER DE ANZA ST.

Sta	+	H.I.	-	Elev.
T.B.M.				11.10
T.P.				7.10
T.P.				5.03

11-13-52

I. Stamper
R. Sisson
A- Sherry
R. Shorey

Top "2x2" Hub Sta. 12+00 See Pg. 59

NOTE: See Sketch Pg. 57

Top 2x2 @ 266' SELY From Sewer Sta 10+94

SURVEY OF MISSION BAY GOLF COURSE

LEASE BDY. W.O. 64010

Ref. Sewer Ep 2273 7-1-54
Grade Ord. "2235
Dwg 2560-D

Stamper
Allen
Sisson
Huffman

NOTE: See Pg. 66 for Curve Data

■ = Set "2x2" Redwood Hub & Disk

Set Random Line Stubs Aprox.
200' c-c

0+00 Sewer -2273 -2235
Fd. Hub & Disk B.C. Bond & Grand
16+20.45
Set Hub & Disk.
N75°30'18"E
Fd Hub & Disk & Dalton & Grand
22+33.42 Fd. Hub & Disk S.W. Cor Dalton & Grand
R = 1847.6'
Δ = 34°16'34"
L = 1105.30'
Δ = 13°24'03"
R = 510'
L = 133.32'
14+87.13
N20°44'55"E
66.70'
N22°10'24"E
1°25'29"
Fd. Hub & Disk
MISSION BAY
Radial R = 1847.6'
N13°31'39"W
N22°10'24"E
GOLF COURSE
5+53.72
Δ = 16°10'35" R = 515.17'
L = 553.72'
10+00
51+04.16"
Fd. 2x2 Hub & Disk
N. 324.82'
℄ T = 329.88
N. 315.46'

Fd. 2"x2" Hub & Disk Cor. Hi-Way 101 & Grand Ave
27+25.75
Fd. Hub & Disk 12+97.52 2273 & Grand 2235

NOTE: Sta's. Are not Connected on Sketch to Check New Alignment Revised 6-30-54

Revised 6-30-54
R = 2124.91'
Δ = 26°37'51"
L = 997.89'
987.65'

NOTE: See T. 25 To Mon. "State" Pg. 63

37+23.64
N. 41°11'45"W
580.26'
N. 48°48'15"E
42+96.94
Fd. L. & Disk
99.13'
N0°31'15"E
255.56'
(1308.09') N89°28'45"W
N'ly B'dy. Mission Bay State Park
M. 1304.80'
Fd. P.K. Nail & N. & S. Road
43+96.07
"STATE" N. 17436.85 W. 7854.65

BDY. SURVEY OF MISSION BAY

GOLF COURSE LEASE W.O. 64010

CURVE DATA

Sta.	Def. 4	Chord
18+00	2° 47' 02"	99.99'
17+00	1° 14' 00"	79.54'
4=34°16'34" R=1847.6'		
L=1105.30" d=0.9303276		
P.C.C.		
16+20.45	6° 42' 015"	33.33'
15+87.12	5° 01' 32"	"
15+53.79	3° 21' 01"	"
15+20.46	1° 40' 31"	33.33'
B.C. Rt.	4=13°24'03" R=570'	
14+87.13	L=133.32' d=3.015567	
933.41' Tan. N. 27°53'45" W		
E.C.		
5+53.72	30° 47' 30"	53.69'
5+00	27° 48' 16"	99.84'
4+00	22° 14' 37"	"
3+00	16° 40' 58"	"
2+00	11° 07' 18"	"
1+00	5° 33' 39"	99.84'
B.C. Lt.	4=61°35' L=553.72	
0+00	R=515.17' d=3.336516	

CURVE DATA

Sta.	Def. 4	Chord
P.C.C.		
27+25.75	17°08'17"	25.75'
27+00	16°44'20"	99.99'
26+00	15°11'18"	"
25+00	13°38'16"	"
24+00	12°05'14"	"
23+00	10°32'12"	"
22+00	8°59'10"	"
21+00	7°26'08"	"
20+00	5°53'06"	"
19+00	4°20'04"	99.99'

(See Sketch Pg. 65)

CURVE DATA

Sta	Def 4	Chord
6+97.53		
57+04.16 = 0+00 = Pt. of Beg.		
~~1368.79~~ 1368.69'	N. 89°28'45" W	
~~43+96.07~~ 99.13'	92.79 S. 0°31'15" W	
~~42+96.94~~ 93.66		
580.26' Tan. S 41°11'45" E		
E.C. ~~13.40~~		
37+~~23.64~~	13°18'55"	~~13.40~~ 23.64'
37+00	13°08'05" +13°00'00"	100.00'
36+00	11°47'12" 11°39'56"	"
35+00	10°26'18" 10°19'53"	"
34+00	9°05'25" 8°59'49"	"
33+00	7°44'31" 7°39'45"	"
32+00	6°23'38" 6°19'42"	"
31+00	5°02'44" 4°59'38"	"
30+00	3°41'51" 3°39'34"	"
29+00	2°20'57" 2°19'31"	100.00
28+00	1°00'04" 0°59'27"	74.25'
4 = 26°37'51" L= ~~997.89~~		987.65'
R = ~~2146.94~~ 2491	d = 0.8006+5 0.8089158	

Sta	Dist	Elev		H.I	BM
134+00	150'	5.7		14.65	9.5
✓133+00	190'	6.0		14.25	9.32 4.93
✓132+00	220'	5.9		15.36 9.46	10.35 5.07
next, 131+00	200'	5.9		15.70 9.8	11.10 4.60
130+00	170'	5.7		15.57 9.84	10.20 5.37
129+00					10.31
128+00					10.43
127+00					10.29
126+00					10.78
125+00					10.65
124+00					11.22
123+00					11.78
122+00					12.02
121+00					11.97
120+00					12.11

89-59 60
17-08-17
72-51-43
1-24-29
71-27-14 use.

12.00
5.3
17.3

12 59
5.76

52+00 H.I. = 18.35

16+75.6
34.9
16 60.0
42.21

16+25.6
10.7
453

16+25.6
20 ℄
550
1733.91
42.21
1776.12
49.47
1825.59
38.56
1864.15

35.85

Wedge 17+33.91
℄ 17+76.12
℄ edge 18+25.59
⊼ 18+67.15
MH 20+01.50

16+25.59
8
16+17.59

El. 20.682 USC&GS "D" 132.

El. 20.347 17.5' City of San Diego BM 46' E. of track 800' N of Sign Board at Morena & 25' S of Road Xing. & with 1' apart.

9.5
5.15
14.65
8.95
5.70

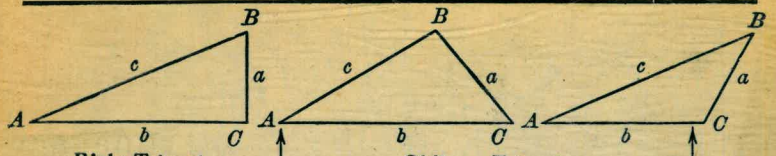
Sta AD+00 N.
W 64+54.51

N 6 45 W

8.8
2.76
11.56

179-60
94-04-30
85°-56'

TRIGONOMETRIC FORMULÆ



Right Triangle — Oblique Triangles

Solution of Right Triangles

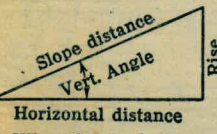
For Angle A. $\sin = \frac{a}{c}$, $\cos = \frac{b}{c}$, $\tan = \frac{a}{b}$, $\cot = \frac{b}{a}$, $\sec = \frac{c}{b}$, $\operatorname{cosec} = \frac{c}{a}$

Given	Required	
a, b	A, B, c	$\tan A = \frac{a}{b} = \cot B, c = \sqrt{a^2 + b^2} = a\sqrt{1 + \frac{b^2}{a^2}}$
a, c	A, B, b	$\sin A = \frac{a}{c} = \cos B, b = \sqrt{(c+a)(c-a)} = c\sqrt{1 - \frac{a^2}{c^2}}$
A, a	B, b, c	$B = 90° - A, b = a \cot A, c = \frac{a}{\sin A}$
A, b	B, a, c	$B = 90° - A, a = b \tan A, c = \frac{b}{\cos A}$
A, c	B, a, b	$B = 90° - A, a = c \sin A, b = c \cos A,$

Solution of Oblique Triangles

Given	Required	
A, B, a	b, c, C	$b = \frac{a \sin B}{\sin A}, C = 180° - (A + B), c = \frac{a \sin C}{\sin A}$
A, a, b	B, c, C	$\sin B = \frac{b \sin A}{a}, C = 180° - (A + B), c = \frac{a \sin C}{\sin A}$
a, b, C	A, B, c	$A + B = 180° - C, \tan \frac{1}{2}(A - B) = \frac{(a-b)\tan \frac{1}{2}(A+B)}{a+b}, c = \frac{a \sin C}{\sin A}$
a, b, c	A, B, C	$s = \frac{a+b+c}{2}, \sin \frac{1}{2}A = \sqrt{\frac{(s-b)(s-c)}{bc}}, \sin \frac{1}{2}B = \sqrt{\frac{(s-a)(s-c)}{ac}}, C = 180° - (A+B)$
a, b, c	Area	$s = \frac{a+b+c}{2}$, area $= \sqrt{s(s-a)(s-b)(s-c)}$
A, b, c	Area	area $= \frac{bc \sin A}{2}$
A, B, C, a	Area	area $= \frac{a^2 \sin B \sin C}{2 \sin A}$

REDUCTION TO HORIZONTAL



Horizontal distance = Slope distance multiplied by the cosine of the vertical angle. Thus: slope distance = 319.4 ft. Vert. angle = 5° 10′. From Table, Page IX. cos 5° 10′ = .9959. Horizontal distance = 319.4 × .9959 = 318.09 ft.

Horizontal distance also = Slope distance minus slope distance times (1—cosine of vertical angle) With the same figures as in the preceding example, the following result is obtained. Cosine 5° 10′ = .9959. 1—.9959 = .0041. 319.4 × .0041 = 1.31. 319.4—1.31 = 318.09 ft.

When the rise is known, the horizontal distance is approximately:—the slope distance less the square of the rise divided by twice the slope distance. Thus: rise = 14 ft., slope distance = 302.6 ft. Horizontal distance $= 302.6 - \frac{14 \times 14}{2 \times 302.6} = 302.6 - 0.32 = 302.28$ ft.