

DISTANCES FROM SIDE STAKES FOR CROSS-SECTIONING  
SLOPE 1 TO 1. ROADWAY OF ANY WIDTH

	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	
0	0.00	0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	0
1	1.00	1.10	1.20	1.30	1.40	1.50	1.60	1.70	1.80	1.90	1
2	2.00	2.10	2.20	2.30	2.40	2.50	2.60	2.70	2.80	2.90	2
3	3.00	3.10	3.20	3.30	3.40	3.50	3.60	3.70	3.80	3.90	3
4	4.00	4.10	4.20	4.30	4.40	4.50	4.60	4.70	4.80	4.90	4
5	5.00	5.10	5.20	5.30	5.40	5.50	5.60	5.70	5.80	5.90	5
6	6.00	6.10	6.20	6.30	6.40	6.50	6.60	6.70	6.80	6.90	6
7	7.00	7.10	7.20	7.30	7.40	7.50	7.60	7.70	7.80	7.90	7
8	8.00	8.10	8.20	8.30	8.40	8.50	8.60	8.70	8.80	8.90	8
9	9.00	9.10	9.20	9.30	9.40	9.50	9.60	9.70	9.80	9.90	9
10	10.00	10.10	10.20	10.30	10.40	10.50	10.60	10.70	10.80	10.90	10
11	11.00	11.10	11.20	11.30	11.40	11.50	11.60	11.70	11.80	11.90	11
12	12.00	12.10	12.20	12.30	12.40	12.50	12.60	12.70	12.80	12.90	12
13	13.00	13.10	13.20	13.30	13.40	13.50	13.60	13.70	13.80	13.90	13
14	14.00	14.10	14.20	14.30	14.40	14.50	14.60	14.70	14.80	14.90	14
15	15.00	15.10	15.20	15.30	15.40	15.50	15.60	15.70	15.80	15.90	15
16	16.00	16.10	16.20	16.30	16.40	16.50	16.60	16.70	16.80	16.90	16
17	17.00	17.10	17.20	17.30	17.40	17.50	17.60	17.70	17.80	17.90	17
18	18.00	18.10	18.20	18.30	18.40	18.50	18.60	18.70	18.80	18.90	18
19	19.00	19.10	19.20	19.30	19.40	19.50	19.60	19.70	19.80	19.90	19
20	20.00	20.10	20.20	20.30	20.40	20.50	20.60	20.70	20.80	20.90	20
21	21.00	21.10	21.20	21.30	21.40	21.50	21.60	21.70	21.80	21.90	21
22	22.00	22.10	22.20	22.30	22.40	22.50	22.60	22.70	22.80	22.90	22
23	23.00	23.10	23.20	23.30	23.40	23.50	23.60	23.70	23.80	23.90	23
24	24.00	24.10	24.20	24.30	24.40	24.50	24.60	24.70	24.80	24.90	24
25	25.00	25.10	25.20	25.30	25.40	25.50	25.60	25.70	25.80	25.90	25
26	26.00	26.10	26.20	26.30	26.40	26.50	26.60	26.70	26.80	26.90	26
27	27.00	27.10	27.20	27.30	27.40	27.50	27.60	27.70	27.80	27.90	27
28	28.00	28.10	28.20	28.30	28.40	28.50	28.60	28.70	28.80	28.90	28
29	29.00	29.10	29.20	29.30	29.40	29.50	29.60	29.70	29.80	29.90	29
30	30.00	30.10	30.20	30.30	30.40	30.50	30.60	30.70	30.80	30.90	30
31	31.00	31.10	31.20	31.30	31.40	31.50	31.60	31.70	31.80	31.90	31
32	32.00	32.10	32.20	32.30	32.40	32.50	32.60	32.70	32.80	32.90	32
33	33.00	33.10	33.20	33.30	33.40	33.50	33.60	33.70	33.80	33.90	33
34	34.00	34.10	34.20	34.30	34.40	34.50	34.60	34.70	34.80	34.90	34
35	35.00	35.10	35.20	35.30	35.40	35.50	35.60	35.70	35.80	35.90	35
36	36.00	36.10	36.20	36.30	36.40	36.50	36.60	36.70	36.80	36.90	36
37	37.00	37.10	37.20	37.30	37.40	37.50	37.60	37.70	37.80	37.90	37
38	38.00	38.10	38.20	38.30	38.40	38.50	38.60	38.70	38.80	38.90	38
39	39.00	39.10	39.20	39.30	39.40	39.50	39.60	39.70	39.80	39.90	39
40	40.00	40.10	40.20	40.30	40.40	40.50	40.60	40.70	40.80	40.90	40
41	41.00	41.10	41.20	41.30	41.40	41.50	41.60	41.70	41.80	41.90	41
42	42.00	42.10	42.20	42.30	42.40	42.50	42.60	42.70	42.80	42.90	42
43	43.00	43.10	43.20	43.30	43.40	43.50	43.60	43.70	43.80	43.90	43
44	44.00	44.10	44.20	44.30	44.40	44.50	44.60	44.70	44.80	44.90	44
45	45.00	45.10	45.20	45.30	45.40	45.50	45.60	45.70	45.80	45.90	45
46	46.00	46.10	46.20	46.30	46.40	46.50	46.60	46.70	46.80	46.90	46
47	47.00	47.10	47.20	47.30	47.40	47.50	47.60	47.70	47.80	47.90	47
48	48.00	48.10	48.20	48.30	48.40	48.50	48.60	48.70	48.80	48.90	48
49	49.00	49.10	49.20	49.30	49.40	49.50	49.60	49.70	49.80	49.90	49
50	50.00	50.10	50.20	50.30	50.40	50.50	50.60	50.70	50.80	50.90	50

Distance of slope stake from side or shoulder stake for any width roadway, slope 1 to 1. If ground is nearly level, the cut or fill at side stake is located by the double entry method in left column and top row. The number in body of table in same row and column gives distance from side stake to slope stake. If ground is not level estimate the difference in elevation between the side stake and slope stake, lower target by this amount if cut, elevate if fill. Add this amount to cut or fill and find distance in table. Set up rod at this point, and line of sight should cut target. If it does not make the slight adjustment necessary.

729

72781

480. Nor  
2.44 SO  
2.36

3.815 NOR  
1.475 SO  
2.34

6.28 NOR  
3.92  
2.36

MICROFILMED

JAN 14 1965



TABLE XIII—CORRECTIONS FOR TANGENTS AND EXTERNALS

These corrections are to be added to the approximate values, found by dividing the tangent, or external, for a 1° curve (Table VIII) by the degree of curve, in order to obtain the true tangents, or externals. Intermediate values may be obtained by interpolation.

FOR TANGENTS ADD

Central Angle	DEGREE OF CURVE													
	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°
10°	.03	.06	.09	.13	.16	.19	.22	.25	.28	.31	.34	.38	.42	.46
15°	.04	.10	.14	.19	.24	.29	.34	.39	.45	.51	.53	.58	.63	.68
20°	.06	.13	.19	.26	.32	.39	.45	.51	.58	.65	.72	.79	.84	.90
25°	.08	.16	.24	.33	.40	.49	.58	.67	.75	.83	.90	.99	1.06	1.14
30°	.10	.19	.29	.39	.49	.59	.69	.79	.89	.99	1.09	1.20	1.29	1.39
35°	.11	.22	.34	.47	.58	.69	.79	.81	.92	1.04	1.29	1.42	1.54	1.66
40°	.13	.26	.40	.53	.67	.80	.93	1.06	1.20	1.34	1.49	1.64	1.79	1.94
45°	.15	.30	.44	.60	.76	.91	1.06	1.21	1.37	1.52	1.70	1.87	2.04	2.21
50°	.17	.34	.51	.68	.85	1.02	1.19	1.36	1.54	1.72	1.91	2.10	2.29	2.48
55°	.19	.38	.57	.76	.95	1.14	1.32	1.52	1.72	1.92	2.14	2.35	2.56	2.77
60°	.21	.42	.63	.84	1.05	1.27	1.49	1.71	1.94	2.17	2.38	2.60	2.83	3.07
65°	.23	.46	.69	.93	1.16	1.40	1.64	1.88	2.13	2.38	2.63	2.88	3.13	3.39
70°	.25	.51	.76	1.02	1.28	1.54	1.80	2.06	2.33	2.60	2.88	3.16	3.44	3.72
75°	.27	.56	.83	1.12	1.40	1.69	1.98	2.27	2.57	2.87	3.16	3.47	3.78	4.09
80°	.30	.61	.91	1.22	1.53	1.84	2.15	2.46	2.78	3.10	3.44	3.78	4.12	4.46
85°	.33	.66	1.00	1.33	1.68	2.02	2.36	2.70	3.05	3.40	3.77	4.14	4.55	4.89
90°	.36	.72	1.09	1.45	1.83	2.20	2.57	2.94	3.32	3.70	4.10	4.50	4.91	5.32
95°	.39	.79	1.19	1.55	2.00	2.40	2.80	3.20	3.61	4.02	4.40	4.98	5.38	5.83
100°	.43	.86	1.30	1.74	2.18	2.62	3.06	3.50	3.95	4.40	4.88	5.37	5.85	6.34
110°	.51	1.03	1.56	2.08	2.61	3.14	3.67	4.21	4.76	5.31	5.86	6.43	7.01	7.60
120°	.62	1.25	1.93	2.52	3.16	3.81	4.45	5.11	5.77	6.44	7.12	7.80	8.50	9.22

FOR EXTERNALS ADD

Central Angle	DEGREE OF CURVE													
	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°
10°	.001	.003	.004	.006	.007	.008	.009	.011	.012	.014	.015	.017	.018	.020
15°	.003	.007	.010	.014	.018	.023	.027	.029	.032	.035	.039	.043	.047	.051
20°	.006	.011	.017	.022	.028	.034	.039	.045	.051	.057	.063	.070	.076	.083
25°	.009	.018	.027	.036	.046	.056	.065	.074	.083	.093	.106	.120	.127	.135
30°	.013	.025	.038	.051	.065	.078	.090	.103	.116	.129	.149	.170	.179	.188
35°	.018	.035	.054	.072	.086	.109	.131	.153	.175	.197	.213	.230	.247	.264
40°	.023	.046	.070	.093	.117	.141	.172	.203	.234	.265	.277	.290	.315	.341
45°	.030	.060	.093	.119	.153	.184	.216	.254	.289	.325	.351	.378	.411	.445
50°	.037	.075	.116	.151	.189	.227	.266	.305	.345	.384	.425	.467	.508	.550
55°	.046	.093	.142	.188	.236	.283	.332	.381	.420	.479	.530	.582	.641	.700
60°	.056	.112	.168	.225	.283	.340	.398	.457	.516	.575	.636	.697	.774	.851
65°	.067	.135	.204	.273	.343	.412	.483	.554	.625	.697	.771	.845	.922	1.01
70°	.080	.159	.240	.321	.403	.485	.568	.652	.735	.819	.906	.994	1.08	1.17
75°	.095	.182	.286	.383	.480	.578	.678	.777	.877	.977	1.07	1.18	1.29	1.39
80°	.110	.220	.332	.445	.558	.671	.787	.903	1.02	1.13	1.25	1.38	1.50	1.62
85°	.128	.259	.391	.524	.657	.790	.926	1.06	1.20	1.34	1.47	1.62	1.76	1.91
90°	.149	.299	.450	.603	.756	.910	1.07	1.22	1.38	1.54	1.70	1.87	2.03	2.20
95°	.174	.350	.522	.706	.885	1.06	1.25	1.43	1.62	1.80	1.99	2.18	2.38	2.58
100°	.200	.401	.604	.809	1.01	1.22	1.43	1.64	1.85	2.06	2.28	2.50	2.73	2.96
110°	.268	.536	.806	1.08	1.35	1.63	1.91	2.20	2.48	2.76	3.05	3.35	3.66	3.96
120°	.360	.721	1.08	1.45	1.82	2.19	2.57	2.95	3.33	3.72	4.11	4.50	4.91	5.32

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July 22 1949

BEATTY  
ROGERS  
WEST

4.75  
4.05

E PROFILE & CROSS-SECTIONS

PROPOSED PIPELINE MIDWAY DR. to PT LOMA RESERVOIR

B.M	7.66	10.66	02.997	Be P.N Culvert Hd. 11
			4.15	6.51
			3.51	7.15
			3.45	7.21
			4.17	6.49
			4.07	6.59
			3.87	6.79
0+00			3.67	6.99
+50			3.28	7.38
1+00			3.52	7.14
	Rim of Cleanout	Stump Sew	5.36	6.30
+50	Rim of Cleanout	" "	4.97	6.29
			3.94	6.72
2+00			4.28	6.38
			5.15	5.51
+50	Edge AC Pav.		5.05	5.61
+59			4.8	5.86
+56	Edge of cut		5.11	5.55
+63			4.7	6.0
3+00	(on oil sidewalk)		4.82	5.84
+50	" " "		4.62	6.04
4+00	" " "		4.74	5.92
+50	" " "		4.65	6.01
5+00	" " "		4.76	5.90
HP +50	3.70	09.29	5.07	05.59 ✓
6+00			3.83	5.46

REDUCTIONS CHECKED BY E.E. 8-3-49

- ① Rim of M.H. AV. East & RT (-2.5 Top 24") Bot. 24" Pipe El. 2.01
- ② " " VAL. West & RT (@ Val. 4.10 lower) Bot. 24" Pipe El. 2.05
- ③ " " AV. West & RT Air Val Box (full of dirt.)
- ④ " " East & LT @ Val. 3.75 lower) Bot. PIPE EL. 2.07
- ⑤ " " East & LT (@ Val. 4.35 lower) Bot. PIPE EL. 1.57
- ⑥ " " San Sew 24" TRUNK (Flow East) Inv. 14.8 lower = El. -08.0

Invert. Elev. -04.95 54" Conc Pipe @ Cleanout 27<sup>25</sup> LT 1+49.00  
 " " -05.5 " " " " 91.00 RT 1+82.50



7/22/29

3.

09.29

6+50		4.25	5.04	✓
7+00	on oil sidewalk	4.71	4.58	✓
+50		4.8	4.5	✓
8+00		5.1	4.2	✓
+50		5.4	3.9	✓
9+00		5.7	3.6	✓
+50		5.8	3.5	✓
10+00	4.34 07.59 ✓	6.04	03.25 ✓	✓
+50		4.5	3.1	✓
11+00		4.4	3.2	✓
+50		4.7	2.9	✓
12+00		5.0	2.6	✓
+50		5.1	2.5	✓
13+00		5.1	2.5	✓
+33 <sup>±</sup>	Inv. 12" RCP Side DR	8.88	71-1.29	5' RT Sta 13+33 <sup>±</sup>
+34 <sup>±</sup>	Top Curb	5.30	2.29	✓
+34 <sup>±</sup>	Gutter	6.36	1.23	✓
+50		5.88	1.71	✓
+51 <sup>±</sup>	E St	5.86	1.73	✓
+69 <sup>±</sup>	Gutter	6.39	1.20	✓
+69 <sup>±</sup>	Inv. 18" RCP Drain	9.98	-2.39	Intersect. at E PIPE.
+69 <sup>±</sup>	Inv. 12" " Side Dr	10.88	-3.29	5' RT Sta 13+69 <sup>±</sup>
+69 <sup>±</sup>	Inv. 18" Cross DR	10.90	-3.31	8' RT Sta 13+69 <sup>±</sup>

$$\begin{array}{r} 85 \\ 759 \\ \hline 119 \end{array}$$



7/22/09

3A

13+69<sup>2</sup> Top of curb 07.59 5.36 2.23 ✓  
 +78<sup>2</sup> Begin Bus platform oil part 5.40 2.19 ✓  
 14+00 5.21 2.38 ✓

Set TRN 5.33 07.66 ✓ 5.26 02.33 ✓  
 SW Cor. West End Curb Return CHAPMAN ST

+08 End Bus Platform oil part 5.27 2.39 ✓  
 +50 5.3 2.4 ✓

15+00 5.1 2.6 ✓

+50 5.0 2.7 ✓

16+00 4.9 2.8 ✓

+50 5.0 2.7 ✓

17+00 5.2 2.5 ✓

+50 4.4 3.3 ✓

L.

R.

53 62 6.5 6.3 5.2 5.29  
 23 16 13 10 7 1.8 \*

5.1 6.3 6.8 6.3 5.1  
 22 16 12 9 5.5 \*

5.0 6.1 7.0 6.2 4.9 5.8  
 24 17 13 9 5 \* 11 Edge of oil

4.7 5.5 7.3 5.6 4.7  
 25 19 12 8 5 \*

4.9 5.3 7.1 5.4 4.6  
 26 20 15 10 6 \*

4.9 5.7 7.3 4.6  
 26.7 21 15 5 \*

4.9 6.0 7.4 6.5 5.1  
 27.4 22 15 12 5.5 \*

4.9 6.4 4.1  
 28 14 5.0 \*



7/22/49

4.

18+00 07.66 4.3 3.4 ✓  
 SET TBM 6.99 09.02 ✓ 5.63 02.03 ✓ 17+97 ✓

6.56 7.6 7.5 5.6 6.3 4.3 4.6  
 28.6 26 20 15 10 4.5 4 11 edge of oil  
 NE Core Hdwall  
 15' RT. LT.  
 TOP Hdwall

# 24" Conc. Cross Culvert 9.70 -0.68 ✓  
 15' LT. Sta 18+055  
 +50 5.8 3.2 ✓

(Fall in Culv. 0.5%)  
 6.5 7.3 8.5 5.7  
 30 20 14.5 7.5 c

19+00 5.2 3.8 ✓

6.6 8.0 4.8  
 30.5 12.5 4 c

+50 5.1 3.9 ✓

6.5 7.0 7.8 4.7  
 30 18 12.5 7 c

20+00 4.9 4.1 ✓

6.7 6.9 7.8 6.3 4.5 4.4  
 29.5 19 13 9.5 2.3 c 9.5 edge oil

+50 4.4 4.6 ✓

6.6 6.9 7.5 6.5 4.0  
 31 20.5 15 13 4 c

21+00 4.1 4.9 ✓

6.8 7.2 6.5 3.6 4.7  
 31 18 11 4.4 c 9.6 edge of oil

+50 3.8 5.2 ✓

3.8 2.9  
 31 (6.1) 4.6  
 21.6 21.6 c

+778 Top Curb 3.35 5.67 ✓

12" Conc. Cross Drain  
 Top Hdwall

+778 Gutter 4.04 4.98 ✓

22+00 3.93 5.09 ✓



7/22/09

5

	09.02								
22+1180	Gutter	3.89	5.13						
22+1180	Tap of Curb	3.30	5.72						
Set TOM	4.27	09.97	3.32	05.70					
+43	on oil Part Bus Plat	4.12	5.85	O.K.	FB.				
22+50		4.3	5.7			4.7 30		4.4 5	5.1 9 Edge oil
23+00		4.9	5.1			5.2 30	4.5 17	4.6 6	5.1 9 " "
+50		4.8	5.2			8.6 31	5.4 24	4.6 7	5.3 9 " "
24+00		5.3	4.7			11.8 28	5.5 13	4.9 5	5.3 2
+50		5.6	4.4			11.3 19	5.2 6		
25+00		5.2	04.8			11.3 17.5	4.3 7.5	4.4 4.5	
+50		5.8	04.2			01.2 11.2 19	04.5 5.5 10	04.9 5.1 2	3.2 3.7 E 6.6 7.3 E.O. (Edge oil)
TP	0.06	07.45	2.58	07.99					

SW Cor. West  
Side Curb RT  
Adrian St.

Top 2" pipe



7-25-49

6.

26+00	07.45	3.6 3.12 6.80	03.9 4.33 0.65	✓ ✓ ✓	8.8 22	2.9 103	
+50		3.8	3.7	✓	90 28	39 18	
+60		4.0	3.5	✓	97 21	8.6 15.6	4.1 5
27+00		4.2	3.1	✓	98 21	8.2 13	4.4 6
+50		4.7	2.8	✓	98 20	8.6 13	4.7 6
							5.0 9. E.O. (Edge oil)
28+00		5.1	2.4	✓	10.4 20	9.1 12	5.0 6
+50		5.3	2.2	✓	10.6 19	9.2 12	4.9 5
29+00		5.6	1.9	✓	10.3 20	9.4 12	5.3 6
+50		5.5	2.0	✓	9.4 20	9.0 11	5.3 6
30+00		5.5	2.0	✓	10.1 21	9.1 12	5.6 5.3
④ Nail	3.28	05.37 ✓	5.36	02.09 ✓			



05.37  
 30+50 3.3 2.1 ✓ ✓ 8.2 7.0 2.6  
 21 15 6 C

31+00 (2 PT.) 3.4 2.0 ✓ ✓ 8.3 6.5 3.5 4.2  
 23 11.5 5 C 10.6 E.O.

NOTE  
 For Revised Profile  
 See page 27 This Book

+50 3.5 1.9  
 VOID

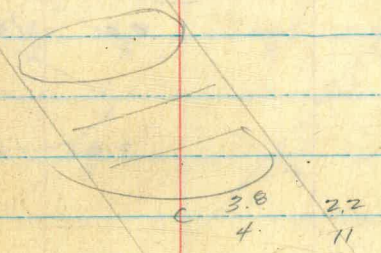
Edge Water  
 9.9 8.9 4.8  
 16 11 5 C

32+00 (2 PT.) 2.9 2.7 2.5 EE.  
 (Double) East 11.16 -5.79  
 Inlet/Inv. 4" Conc DRAIN West 11.06 -5.69  
 14.5 RT. 32+00

6.74 6.7  
 14.5 8.5  
 Top Conc  
 PIPE

+20 3.1 2.3 7.2 3.3 2.8 4.3  
 39 18 C 8 13 E.O.

+32 4.2 1.2  
 Outlet Inv. 4" Conc DRAIN (Double) West 12.18 -6.81  
 East 12.15 -6.78  
 +60 4.0 1.4  
 (2 PT.)  
 INVERT SOWET NH 10 RT. } 8.20  
 (Orig Align) 32+50.7 } (4.02 Rim) 0.7  
 33+00 4.7



+50 4.1 1.3 3.8 2.2  
 4 11

34+00 3.5 1.9 3.2 +1.0  
 4 5

+50 2.8 2.6 2.7 +2.0  
 5 8

VOID



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8.

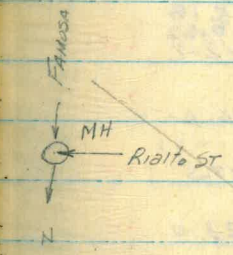
35+00	05.37	1.3	4.1
IP & Nail	10.58	14.68 ✓	1.27
+50		8.8	5.9
36+00		6.6	8.1
Rim of M.H	36+08 (10' LT)	6.97	7.71
+50		5.7	9.5
	INV. 8" Sewer (From Right Street)	13.07	
	INV. 12" Trunk Sewer	16.47	
		10.8 E.E.	
37+00		3.9	4.7
+50		1.0	13.7
+65		0.0	14.7
+71		2.6	12.1
38+00		2.9	11.8
+14.10 (4 PT)		3.2	11.5
IP (4 Nail)	5.37	16.88 ✓	3.17
+50		6.9	10.0

Lt.

Rt.

			1.1	+30
			7	10
		8.4	4.7	7.2
		7.5	11	17
		5.0	1.8	
		3	6	
		4.0	4.2	0.7
		10	1	4
		3.2	+0.2	+0.5
		4	1.5	10
		3.0	3.0	2.4
		12	5	3
			+0.5	+0.5
			2	10
		2.7		1.6
		13		10
		2.7		2.4
		10		3
		2.5		3.4
		10		10
				+0.6
				16

Street cut  
Begins 35+77  
Ends 36+29



Rt. X To  
Px Temp.



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9

		16.88			
35	39+00		8.7	8.2	✓
36	+50		8.5	8.4	✓
	Rim of MH	27' RT 39+45	8.50	8.38	✓
	Invert		15.3	1.58	✓
	40+00		7.3	9.6	✓
	Rim of M.H	92' LT 39+62	11.7	5.18	✓
	Invert		17.1	6.22	✓
37	+50		4.7	12.2	✓
R	TP Rock	12.38	28.99 ✓	0.27	16.61 ✓
					12.38
	41+00		11.5	17.5	✓
					298
					26.00
38	+50		6.0	23.0	✓
	42+00		1.7	27.3	✓
	TP (Rock)	12.00	40.91 ✓	0.08	28.91 ✓
					12
	+50		8.6	32.3	✓
	+90	Rim SEWER MH	3.51	37.40	✓
		Invert	16.80	24.11	✓
	43+00		3.5	37.4	✓
	TP	12.23	52.90 ✓	0.24	40.67 ✓
					12.23
	+50		10.7	42.2	✓
	44+00		6.2	46.7	✓
39	+50		2.9	50.0	✓
	SET TBM	12.45	63.64 ✓	1.71	51.19 ✓
					Nail in Tie Pole 20' LT 44+60
	45+00		10.7	52.9	✓
40	+50		7.7	55.9	✓
	46+00		4.6	59.0	✓
	+143	Rim Sew. MH	222' LT	63.65	✓
		Inv. El.	+0.01	56.75	✓
		Rim Sew. MH	179' RT	46.80	✓
		Inv. El.	28.24	32.20	35.20 EE



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10.

	63.64			
3 46+50		2.0	61.6	✓
IP	11.92	74.82 ✓	0.74	62.90 ✓
				x 07 NE Cor of Walk 19' PLT 1.92 STA 46+65
47+00		10.6	64.2	✓
+50		8.1	66.7	EE ✓
47+50		7.1	67.7	✓
48+00		6.0	68.8	✓
+50		4.4	70.4	✓
49+00		3.3	71.5	✓
+15		3.1	71.7	✓
+20		2.4	72.4	✓
+50		1.0	73.8	✓
+63		0.6	74.2	✓
+65		+1.0	75.8	✓
+67		+1.0	75.8	✓
IP (rock)	4.22	72.19 ✓	68.5	67.97 ✓
+83		4.7	67.5	✓
50+00		5.4	66.8	✓
+50		5.7	66.5	✓
51+00		7.0	65.2	✓



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11.

	72.19			
3 51+50		6.6	65.6	✓
5 52+00		5.3	66.9	✓
+23		4.2	68.0	✓
+50		7.4	64.8	✓
53+00		11.0	61.2	✓
+35		12.0	60.2	✓
			56.9 EE.	
+42		15.3	57.9	✓
TD	3.62	63.06	12.75	59.44 ✓
+50		5.0	58.1	✓
+55		5.0	58.1	✓
+65		8.0	55.1	✓
TD	0.69	52.67	11.08	51.98 ✓
54+00		9.8	42.9	✓
TD	0.11	40.43	12.35	40.32 ✓
+50		6.6	33.8	✓
TD	0.98	28.67	12.74	27.69 ✓
55+00		3.2	25.5	✓

62.3	612	60.8	50.1	50.9
9.9		11.4	21.1	21.3
15	c	8	22	30
60.9	60.2	60.1	44.2	44.2
11.2		12.1	22.0	22.0
8	8	2	28	25
60.4	56.9	44.2		
11.8		23.0		
12	c	23		
60.0	59.5	58.1	44.0	
3.0	3.5		19.0	
12	3	c	23	
60.2	59.4		43.7	
2.8	3.4		19.3	
27	6	c	24	
60.5	59.6		40.0	
2.5	3.4		23.0	
15	9	c	23	
52.4		37.2	36.5	
+6.0	0.3	15.5	16.2	
28	14	18	25	
0.0	4.0		10.2	
30	13	c	30	



		28.67			
3	55+11		4.7	24.0	✓
7	+22		7.2	21.5	✓
	+50		9.9	18.8	✓
	+80		13.1	15.6	✓
	56+00		13.2	15.5 EE. ✓ 15.7	
TP	1.21	17.71 ✓	12.17	16.50 ✓	
	+30		4.4	13.3	✓
	+42		4.4	13.3	✓
	+45		3.9	13.8	✓
	+50		5.2	12.5	✓
	57+00		7.4	10.3	✓
	+50		9.1	8.6	✓
	+75		9.4	8.3	✓
	+84		9.5	8.2	✓
	58+00		8.5	9.2	✓
	+08		8.4	9.3	✓
	+12		6.3	11.4	✓
TP	11.97	29.26 ✓	0.42	17.29 ✓ 11.47	
	+50		11.1	18.2	✓

3.3 4.3 9.0  
26 13 25

4.3 17.6  
26 33



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13

	29.26								
58+85		6.6	22.7	✓					
59+00		5.3	24.0	✓	+20	1.6	15.1		
+10		4.2	25.1	✓	26	13	39		
+20		4.4	24.9	✓					
+50		4.6	24.7	✓	+1.2		11.3		
+70		7.7	21.6	✓	26		30		
60+00		8.1	21.2	✓	+10		9.8	9.7	
+13		8.0	21.3	✓	26		13	26	
+42		5.9	23.4	✓					
+50		4.3	25.0	✓					
+59		3.5	25.8	✓					
+75		0.0	29.3	✓					
TP Rock	12.50	41.76	0.00	29.26					
				12.00					
61+00		8.6	33.2	✓	8.7		8.5	9.3	8.3
+10 <sup>54</sup>	(X PT)	7.4	34.4	✓	14		3	5	9
+50		2.3	39.5	✓					
TP Rock	13.04	54.62	0.16	41.60					
62+00		9.0	45.6	✓					
+13		7.4	47.2	✓					



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14.

54.64

62+15		8.0	46.6	✓
+50		6.4	48.2	✓
+66		6.1	48.5	✓
+67		5.5	49.1	✓
63+00		3.6	51.0	✓
SET T&M		4.68	49.96	✓
+50		0.1	54.5	✓
TP & NAIL	5.05	59.60	0.09	54.55
64+00		2.2	57.4	✓
+50		1.7	57.9	✓
65+00		3.2	56.4	✓
+50		7.0	52.6	✓
66+00		11.4	48.2	✓
+34	TOP CURB	12.44	47.16	✓
+35	GUTTER	13.17	46.43	✓
+50		13.58	46.02	✓
+55	RIM OF M.H. (Sew) 205 RT	15.1	44.50	✓
	INV. EL	20.2	39.40	✓
+75	GUTTER	13.80	45.80	✓
+77	TOP CURB	12.54	47.06	✓
67+00		12.1	47.5	✓

NAIL IN POLE  
25 RT 62+60

11.6

10

12.3 12.3 12.7

4.5 5.1 7.4

Conc Curb



67+50	59.60	9.8	49.8	✓	9.0 10	10.0 4.5	10.0 5.1	11.4 7.4	(Conc Curb)
68+00		6.2	53.4	✓	5.6 13	6.4 5	7.4 6		(Conc Curb)
P	11.66	67.38 ✓	3.88	55.72 ✓					
+50		9.4	58.0	✓	9.1 13	9.5 5	10.3 5		
+87 <sup>63</sup>	Begin side	6.18	61.20	✓		6.37 4.0	7.00 4.0		(Curb)
+90 <sup>13</sup>	2 PT	6.10	61.28	✓		6.22 2.5	6.74 2.5		(Curb)
+92 <sup>33</sup>	Top Curb	6.05	61.33	✓					
+92 <sup>33</sup>	Gutter	6.65	60.73	✓					
Rim of M.H.	20' RT 68+94.5	6.75	60.64	✓					EE.
Inv. EL		18.05	49.33	✓					
69+00		6.27	61.11	✓					
+21	4 Voltaire	5.58	61.80	✓					
Rim of M.H.	7 <sup>12</sup> LT 69+32.3	5.52	61.86	✓					
+50	TOP 10 WATER PIPE	10.50	56.88	✓					
		5.76	61.06	✓					
+60 <sup>24</sup>	2 PT	5.67	61.71	✓					
70+00		4.48	62.90	✓					
SET TBM		2.89	64.49	✓					Top E.I.
+50		2.78	64.60	✓					
71+00		1.03	66.35	✓					
11	10.55	77.31 ✓	0.62	66.76 ✓					
			10.55						



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8/10/48

Beatty  
Rogers  
Finney

16.

## E Profile Midway Drive - Mt Loma PL

77.31

71+50			9.11	68.20	✓	
72+00			7.37	69.94	✓	
+50			5.50	71.77	✓	
73+00			3.77	73.54	✓	
CK BM			2.54	74.77	✓	BRIDGE COR SE COR UTAH ST
+50			1.68	75.63	✓	
II	11.92	89.15 ✓	0.08	77.23	✓	
74+00			11.32	77.83	✓	
+325	Rim of M.H. 16 RT		10.06	79.09	✓	
	Invert. El.		13.96	75.79	✓	
+423	B.C.		7.35	79.80	✓	
+50			9.06	80.09	✓	
75+00			6.88	82.32	✓	
+780	Rim TELE MH 15E LT		2.08	87.07	✓	
	Top of DUCT.		14.25	74.90	✓	
+50			4.74	84.41	✓	
+96	Rim of Sew. MH 19S RT		5.34	83.81	✓	
	Invert. El.		10.12	79.01	✓	
76+00			2.48	86.67	✓	
P	12.62	101.23 ✓	0.50	88.61	✓	
+50			12.44	88.79	✓	BRIDGE COR TENNISON
CK BM			11.34	89.89	✓	
77+00			10.16	91.07	✓	
+50			7.95	93.28	✓	
78+00			5.76	95.47	✓	
+1509	P.R.C.		5.08	96.15	✓	
+50			3.50	97.73	✓	
+783	Rim of M.H. 138 RT		6.76	94.47	✓	
	Invert. El.		12.96	88.27	✓	
	Rim of M.H. 237 LT		+13.50	114.73	✓	
	Invert. El.		+7.70	108.93	✓	

Rim of M.H. 82' LT 74+32.5

+4.50

93.65

14.3

74.85

REDUCTIONS CHECKED BY J.E. 8-3-49

19.3

55

13.5



Aug. 11, 1949

17.

♀ PROFILE Midway Drive - Pt. Loma PL

	101.23			
79+00		1.36	99.87	✓
P	11.64	112.74	0.13	101.10
				Col Sidewalk 79+10 1/2' East
+50		10.56	102.18	✓
+83.8	Nor Rim MH	9.83	102.91	✓
	Invert	15.93	96.81	✓
80+00		8.37	104.37	✓
ck B.M		6.00	106.74 = 107.01	Be. Rd 55' low Alto 10'
+50		6.50	106.24	✓
81+00		4.75	107.99	✓
+50		2.97	109.77	✓
+62.5	Rim Sewer MH 145 RT	3.07	109.67	✓
82+00	Invert	9.10	103.64	✓
		1.23	111.51	✓
P	10.57	122.55	0.76	111.98
+50		9.54	113.01	✓
83+00		8.07	114.48	✓
	+37" Nor Rim N.H	7.73	114.82	✓
+50		7.15	115.40	✓
84+00		6.27	116.28	✓
ck B.M		5.68	116.87 = 116.85	SE COR AT 33' CORNER DE
+50		5.40	117.15	✓
85+00		4.42	118.13	✓
+08.5	132 RT Nor Rim NH	4.55	118.00	✓
	INVERT SEWER	11.60	110.95	✓
	322 RT Rim MH	+25.10	147.65	✓
	INVERT	+15.10	137.65	✓

79 + 83.8  
1/2 below Sta 6' down invert



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18.

♀ PROFILE Midway Dr - Pt Loma P.L.

		122.55		
85+50		3.66	118.89	✓
86+00		2.72	119.83	✓
+50		1.88	120.67	✓
87+00		0.87	121.68	✓
86+97.9	142° RT Nor Rim M.H.	1.10	121.45	✓
	Invert Sewer	8.60	113.95	✓
	842° LT Rim M.H.	+1.30	123.85	✓
	Invert of Sewer	7.30	115.25	✓
①	11.02	133.27	0.30	122.25 ✓
+50		10.74	122.53	✓
88+00		9.62	123.65	✓
ck BM		8.69	124.58	✓ = 128.63
				B.P. 5E Cap
+54.72 (B.C)		8.63	124.64	✓
89+00		7.51	125.76	✓
+22	132° RT Sew MH Rim	7.20	126.07	✓
	Invert	16.30	116.77	✓
+50		6.08	127.19	✓
90+00		4.72	128.55	✓
+50		3.30	129.97	✓
+80.19 (E.C)		2.42	130.85	✓
91+00		1.92	131.35	✓
+14	162° Nor Rim M.H.	1.79	131.48	✓
	Invert Sewer	9.20	124.07	✓
① Nail				
+50	12.73	145.51	0.49	132.78 ✓
92+00		10.97	134.54	✓
+49	162° RT Rim Sew MH	9.23	136.28	✓
	Invert Sewer	16.20	129.31	✓



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19

PROFILE MIDWAY DRIVE - Pt. Loma P.L.  
145.51

89	92+50		9.03	136.48 ✓	
8	93+00		7.08	138.43 ✓	
	+50		5.18	140.33 ✓	
8	94+00		3.24	142.27 ✓ ↑	
	+50		1.36	144.15 ✓ ✓	
TH	CK B.M.		2.15	143.36 ✓ <sup>50% Blue Clay</sup> <sub>✓ Nagara</sub>	
	+64.5	16° RT. Near Rim M.H.	1.02	144.49 ✓	
		Invert Sewer	6.72	138.79 ✓	
8	94	11.06	156.06 ✓	0.51	145.00 ✓
c	95+00		10.46	145.60 ✓	
	+50		9.07	146.99 ✓	
8	96+00		7.65	148.41 ✓	
	+50		6.19	149.87 ✓	
	+56	16° RT. Sewer M.H. RIND	6.30	149.76 ✓	
		Invert	11.70	144.36 ✓	
9	97+00		4.89	151.17 ✓	
	+50		3.38	152.68 ✓	
98+00			2.15	153.91 ✓	
	+48	SEWER M.H. 176' RT. RIND	+15.6	171.66 ✓	
		INVERT	+8.3	164.36 ✓	
	+50		1.31	154.75 ✓	
	+48	SEW. M.H. 16' Near Rim M.H.	6.41	154.65 ✓	
		RT. INVERT	9.30	155.58 ✓	
TH	99+00		8.08	163.56 ✓	
			0.58	155.48 ✓	
	CK B.M.		6.02	157.51 ✓ <sup>BR. P. NE</sup> <sub>Cap. NAGARA GASSET</sub>	

157.54 157.52

52



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20

♀ PROFILE - MIDWAY DRIVE - PT LOMA PL.  
163.58

8	99+50		7.29	156.07 ✓	
8	100+00		7.02	156.54 ✓	
	+40	SEW. MH. 16" RT. Rim	6.70	156.86 ✓	
	+50	Invert	12.40	149.16 ✓	
			6.26	157.10 ✓	
8	101+00		5.89	157.67 ✓	
	+50		5.39	158.17 ✓	
7	102+00		4.88	158.68 ✓	
	+05	SEW. MH. 16" RT. Rim	5.20	158.36 ✓	
	+50	Invert	12.50	151.06 ✓	
			4.30	159.26 ✓	
8	103+00		3.63	159.93 ✓	
	+50		3.45	160.11 ✓	
	104+00		2.57	160.99 ✓	
	+325	SEW. M.H. 16" RT. Rim	2.40	161.16 ✓	
	+50	Invert	9.70	153.86 ✓	
		9.11	170.57 ✓	2.10	161.46 ✓
	105+00		8.56	162.01 ✓	
	+50		8.03	162.54 ✓	
	106+00		7.44	163.13 ✓	
	+222	16" RT. Sewer Rim M.H.	7.51	163.06 ✓	
		Invert	13.10	157.47 ✓	
	+222	266" LT. Rim Sewer M.H.	+10.8	181.37 ✓	
	+50	Invert	+4.8	175.37 ✓	
			7.00	163.57 ✓	
	107+00		6.42	164.15 ✓	
	+50		5.89	164.68 ✓	
	108+00		5.11	165.46 ✓	



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21

4 PROFILE MIDWAY DRIVE - PT LONA PL  
170.57.

8	108+50		4.19	166.38 ✓
8	109+00		2.77	167.80 ✓
	+50		1.21	169.16 ✓
			<del>1.41</del>	<del>156.5</del> ✗
TP	110+00	12.39 182.55 ✓	50.41	170.16 ✓
	+025	15° RT. RIM SEW. M.H. Invert.	0.70	169.87 ✓
	+50		3.70	165.47 ✓
	+025	14½° LT. RIM. SEW. M.H. Invert.	11.44	171.11 ✓
	+75		+7.80	178.37 ✓
	+2.80		2.80	169.73 ✓
TP	111+00		9.97	172.58 ✓
	+50		8.33	174.22 ✓
	+92.8	15° RT. RIM Sewer M.H. Invert.	7.12	175.43 ✓
	112+00		12.50	170.05 ✓
	+50		6.52	176.03 ✓
	+50		3.92	178.63 ✓
	113+00		1.29	181.26 ✓
TP		12.51 194.93 ✓	0.13	182.42 ✓
	+825	22½° LT. RIM M.H. Invert.	7.60	187.23 ✓
	+50		13.20	181.73 ✓
	+825	15° RT. RIM M.H. Sewer	11.89	183.04 ✓
	114+00		14.01	183.92 ✓
			14.31	177.62 ✓
			10.41	184.52 ✓
OK BIN			7.37	187.56 ✓
	+50		8.58	186.35 ✓
	115+00		6.50	188.37 ✓
	+50		4.47	190.46 ✓
	+73.5	15° RT. RIM of SEWER M.H. Invert.	3.87	191.06 ✓
	116+00		10.87	184.06 ✓
	+50		2.95	191.98 ✓
	+50		2.01	192.92 ✓

BR. PIN.  
SW. COR.  
Del. Nat.  
= 187.53



8/11/29

22

E. PROFILE		MIDWAY DRIVE - Pt. LONA P.L.	
8	116+8790 B.C.	1.36	193.57 ✓
8	117+00	1.13	193.80 ✓
IP	7.98 202.82 ✓	0.09	194.84 ✓
8	+50	7.88	194.94 ✓
	<del>7.52</del> 18° RT Sewer	7.52	195.30 ✓
	+59.7 256+LT Not Dim. MH.	7.0	185.82 ✓
		7.30	195.52 ✓
		14.8	188.02 ✓
IP	CK BM	6.29	196.53 ✓
			196.50
	118+00	7.14	195.68 ✓
	+13.68 (E.C.)	7.01	195.81 ✓
	+50	6.77	196.05 ✓
	119+00	6.33	196.49 ✓
	+50	5.89	196.93 ✓
	+55 16° RT. RIM SEWER MH	5.0	196.82 ✓
	120+00	5.37	197.45 ✓
	+50	4.96	197.86 ✓
	121+00	4.48	198.34 ✓
	+50	4.00	198.82 ✓
	+94° RT. RIM SEWER MH	3.70	199.12 ✓
	122+00	3.60	199.22 ✓
		3.52	199.30 ✓
IP	on curb 6.35 206.60 ✓	2.57	200.25 ✓
	+50	6.85	199.75 ✓
	123+00	6.32	200.28 ✓



8-11-49

29

Profile Midway Drive - Pt. Loma P.L.  
206.60.

8	123+50		5.93	200.67 ✓
	+88 <sup>5</sup>	16" RT Rim Sewer MH Invert	5.50	201.10 ✓
8	124+00		11.50	195.10 ✓
	+34 <sup>3</sup>	16" RT Rim Sewer MH Invert	5.43	201.07 ✓
	+50		4.88	201.72 ✓
	+79 <sup>5</sup>	12" LT Rim of ANVA } Full of WATER	10.88	195.72 ✓
	+50		4.66	201.94 ✓
	+125+00	TOP PIPE	1.22	202.38 ✓
	+50		8.22	198.38 ✓
	+50		3.92	202.68 ✓
	+50		2.92	203.68 ✓
	126+00	<u>DELETED</u>	-2.31	204.29 ✓
	CK BM		4.98	201.62 ✓
	P		2.32	204.28 ✓
	BM	5.40	207.02	201.62 ✓
	125+55 <sup>72</sup>	X PT	3.23	203.79 ✓
	+78 <sup>2</sup>	Edge AC Pavt.	4.03	202.99 ✓
	126+00		3.5	203.5 ✓
	+50		58	201.2 ✓
	+80		9.1	197.9 ✓
	127+00		10.2	196.8 ✓
	+25		10.9	196.1 ✓
	P & Nail			
	127+50	0.21	194.26 ✓	12.97 194.05 ✓
	+52 <sup>70</sup>	X PT.	0.6	193.7 EE ✓
	+75		2.4	194.20 ✓
				191.9 ✓

Rim 0<sup>3</sup> lower  
4<sup>2</sup> low top pipe

BRP NE COR  
CHATSWOOD

August 23 1949



8/23/29

29

Profile Midway Drive Pt. Loma P.L.

194.26

128+00	6.4	187.9 ✓
+33	11.2	183.0 ✓
+75 <sup>07</sup> B.C.	13.5	180.7 ✓
129+00	14.4	179.8 ✓
Top of NUT 8" GV. B.O.	17.55	176.41 ✓
Bottom of B.O. Pipe	19.5	174.7 ✓
+25	14.4	179.8 ✓
+50	12.9	181.3 ✓
+75	11.0	183.2 ✓
130+00	8.1	186.1 ✓
+50	3.8	190.4 ✓
131+00	0.0	194.2 ✓
P	9.61	203.70 ✓
+50	6.9	196.8 ✓
132+00	5.5	198.2 ✓
+3480 E.C.	4.5	199.2 ✓
Top 18" Conc. Pipe (5' RT. E.C.)	8.85	194.85 ✓
SET TBM (RP. Hub. 45' RT.)	6.21	197.49 ✓
+50	3.8	199.9 ✓
133+00	2.7	201.0 ✓

10.3

14.2

3.9

5.3

3.65

17.85

4.35

3.5

8.85



8/23/49

25

## E PROFILE MIDWAY DRIVE - Pt Loma PL.

8-133+50		1.8	201.9 ✓
8-134+00		1.0	202.7 ✓
IP	8.61	212.31 ✓	0.00 203.70 ✓
+50		8.2	204.1 ✓
135+00		7.3	205.0 ✓
+50		6.5	205.8 ✓
136+00		5.9	206.4 ✓
+50		4.7	207.6 ✓
137+00		5.3	207.0 ✓
+50		3.2	209.1 ✓
IP	7.27	219.51 ✓	0.07 212.24 ✓
138+00		7.2	212.3 ✓
+10		6.5	213.0 ✓
+50		7.1	212.4 ✓
139+00		6.6	212.9 ✓
+50		7.0	212.5 ✓
140+00		7.1	212.4 ✓
+25		7.6	211.9 ✓
+50		6.5	213.0 ✓

8.8	9.6	5.6	5.1	5.0	5.4	5.0	6.0
18	12	5	7	9	11	17	24

3.5	4.2	2.8
6	1	5



8/23/09

26.

♀ PROFILE MIDWAY DRIVE PONT LOMA P.L.  
219.51

141+00	4.0	215.5 ✓	
+50	2.6	216.9 ✓	
142+00	2.4	217.1 ✓	
+50	1.0	218.5 ✓	
IP 113	230.09 ✓	0.55	218.96 ✓
+74.60	11.30	218.79 ✓	
Top 18" Conc. Pipe 5' RT.	15.50	214.59 ✓	
143+00	11.0	219.1 ✓	
+50	10.5	219.6 ✓	
+72.7 & PT.	9.65	220.44 ✓	
+90	9.0	221.1 ✓	
144+00	7.3	222.8 ✓	
+052 Top 16" C.I. Pipe.	8.64	221.45 ✓	
+24	2.6	227.5 ✓	
+26	3.4	226.7 ✓	9.04 5.00
+27	2.2	227.9 ✓	
+31.42 & PT.	1.9	228.2 ✓	10.32 3.29
IP (Top of Hub) 12.30	241.95 ✓	1.04	229.05 ✓
144+47.50	10.4	230.9 ✓	Ground
END OF PROPOSED R.L. AT ♀ 16" C.I. Pipeline	14.46	226.89	
Top 16" C.I. 8' RT.	13.61	227.74	



8/23/29

27

PROFILE MIDWAY DRIVE FT LOMA PL

241.35

SET TBM NE COR  
VALVE CHBR Right 9.05 232.30 ✓

TP 11.50 252.77 ✓ 0.08 241.27 ✓

CR BM. 198 250.79 ✓ = 250.82  
BR. P. SW COR Varona & Catalina

Revised Profile (see page 7)  
Continued from page 7

P 3.63 05.72 02.09

31+50 2.8 2.9 ✓

+68 4.0 1.7 ✓

+74 5.3 0.4 ✓

+79 4.5 1.2 ✓

32+00 3.6 2.1 ✓

+04 3.3 2.4 ✓

+20 3.5 2.2 ✓

+30 4.6 1.1 ✓

CONTINUED ON PAGE 28

+50 4.4 01.3

32+60 98 BK X PT

32+60 90 AH

33+00

4.5

VOID 09.6 = 00.7



Sept. 8 1949

28.

Midway Dr - Pt Loma P.L.  
 PROFILE & X-SECTIONS - Revised Alignment  
 Continued from page 27.

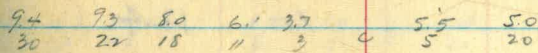
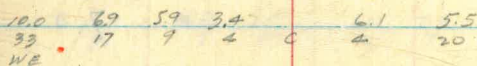
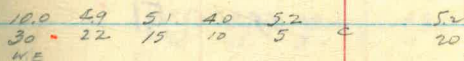
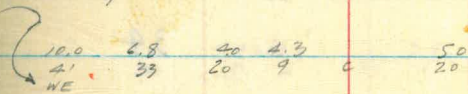
HP 4.28 06.27 02.09

32+35.65	X PT.	5.2	1.2 ✓
+40		5.3	1.1 ✓
+50		5.6	0.8 ✓
+54		5.6	0.8 ✓
SET TOM		7.74	-0.37 ✓
33+00		5.6	0.8 ✓
+15		4.8	1.6 ✓
+18		5.8	-0.6 ✓
+22		6.4	0.0 ✓
+26		6.1	0.3 ✓
+33		4.5	1.9 ✓
+40		3.9	2.5 ✓
+45		4.9	1.5 ✓
+50		4.3	2.1 ✓
+53		3.4	3.0 ✓
+63		3.7	2.7 ✓
+71		5.4	1.0 ✓
34+00		3.8	2.6 ✓

LEFT

Right

WE = Waters edge





8/8/49

29

Midway Drive — Pt. Loma P.L.  
 PROFILE & X-Sections — Revised Alignment  
 06.37.

					LEFT	RIGHT
34 +13		4.5	1.9 ✓			
9	+21	3.0	3.4 ✓			
	+50	3.0	3.4 ✓		9.6 30	9.4 15
					23 4	2.2 6
						2.3 20
35 +00		1.3	5.1 ✓			
21	P (Rock)	7.73	13.44	0.66	0.571	
	+50	6.4	7.0 ✓		9.5 30	9.3 15
					13 5	0.8 1
						2.3 8
						1.6 20
36 +00		5.0	8.4 ✓		16.1 30	15.8 18
						5.4 4.5
						6.8 6
						7.8 7
						6.8 20
	+50	3.8	9.6 ✓		16.1 30	15.7 18
						4.5 2.4
						5.5 1
						4.8 20
37 +00		2.2	11.2 ✓		16.5 40	12.2 23
						2.7 4
						3.8 1.5
						3.5 20
	+50	1.0	12.4 ✓		11.8 44	7.3 23
						2.5 1.3
						1.6 7
						2.3 4
						2.7 20
<del>37 +53 45 PK</del>					10.2 49	5.8 30
<del>37 +70 21 PK</del>	4.55	17.06	0.93	12.51 ✓		+10 18
						0.2 8
						1.0 5
						1.4 20
38 +00		5.0	12.06 ✓			
	R/W SEW. N.H. 4' 27" 38+03	5.00	12.10			
	+ 14' 10"	18.60	01.50			
	INV. 12" Sewer	5.6	11.5 ✓			
CR 71)		5.56	11.50 ✓ = 11.51			

Continued on page 8

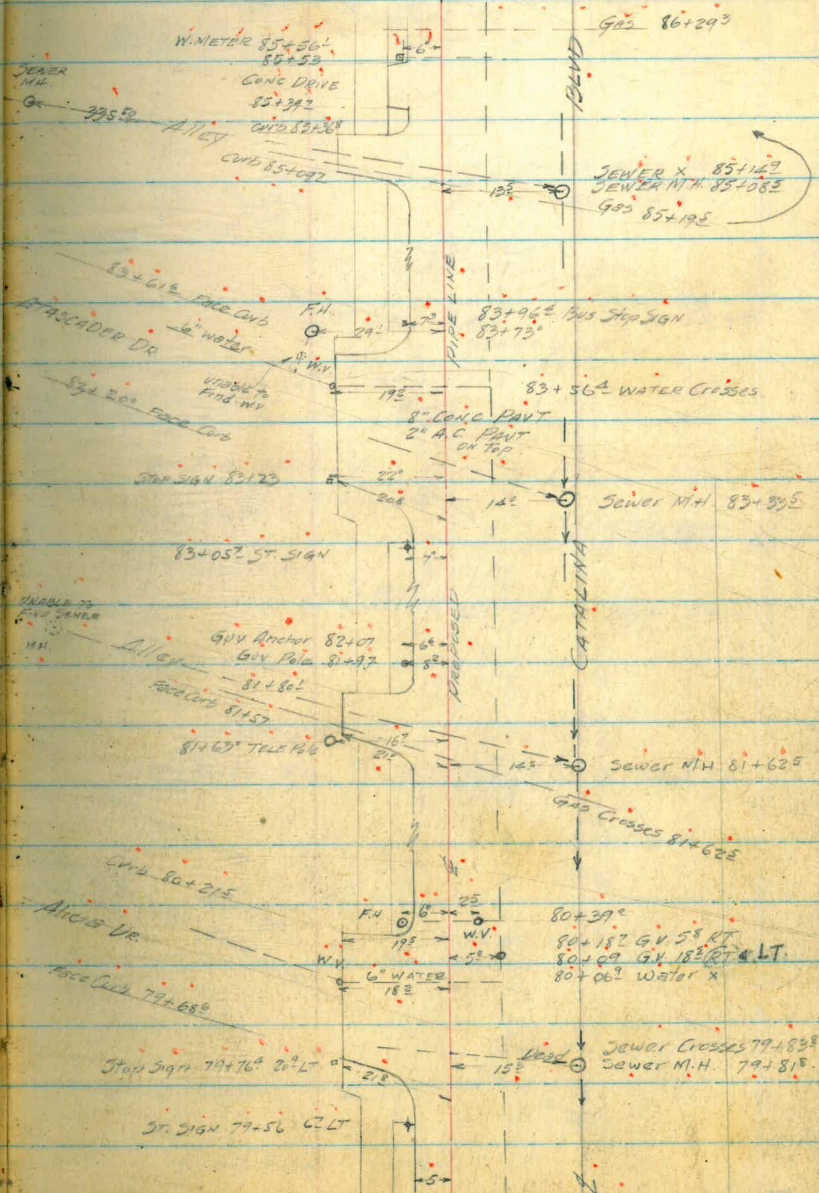
pg. 8



SEPT 20 1949  
BEATTY  
ROBERTS  
FINNEY

MIDWAY DRIVE - PT. LOMA PIPELINE  
(CONTINUED FROM BOOK 776 PAGE 14)

Note: -  
Showing as straight  
is actually parallel to E 5T  
which is on curvature.



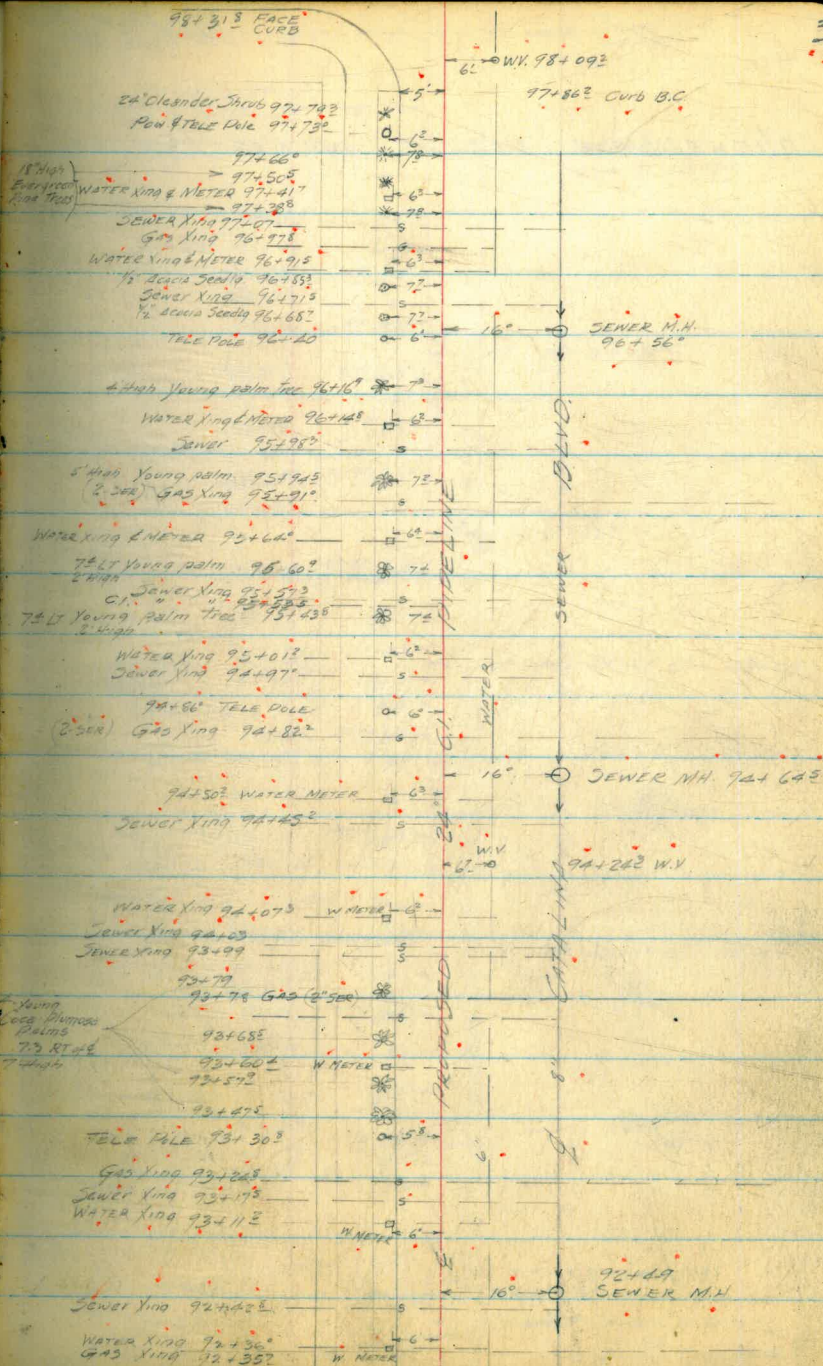






SEPT 20 1949

MIDWAY DRIVE C-2 PT LONG PIPE LINE



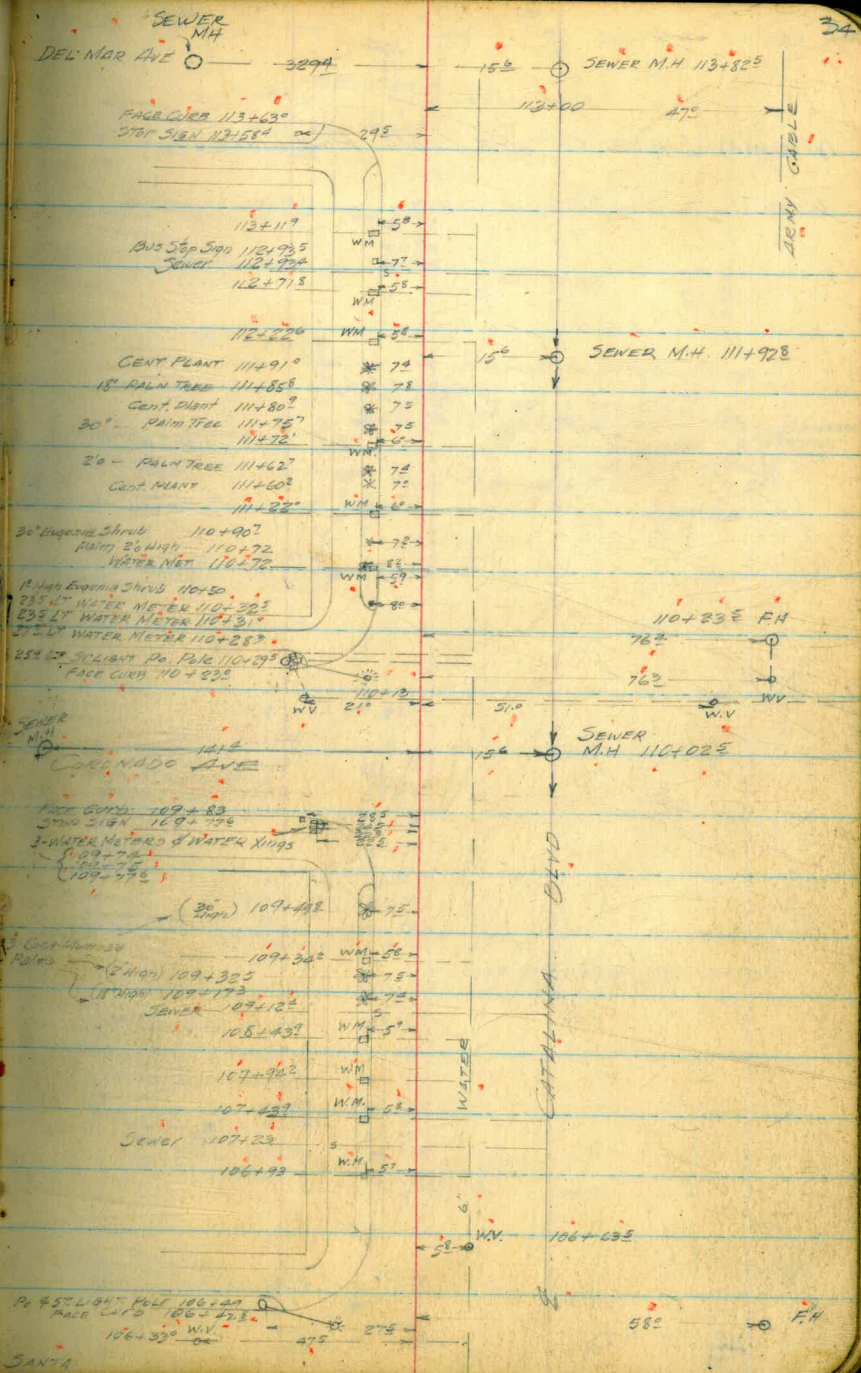






SEPT. 22 1939

MIDWAY DRIVE - PT. LOMA RES. PIPELINE





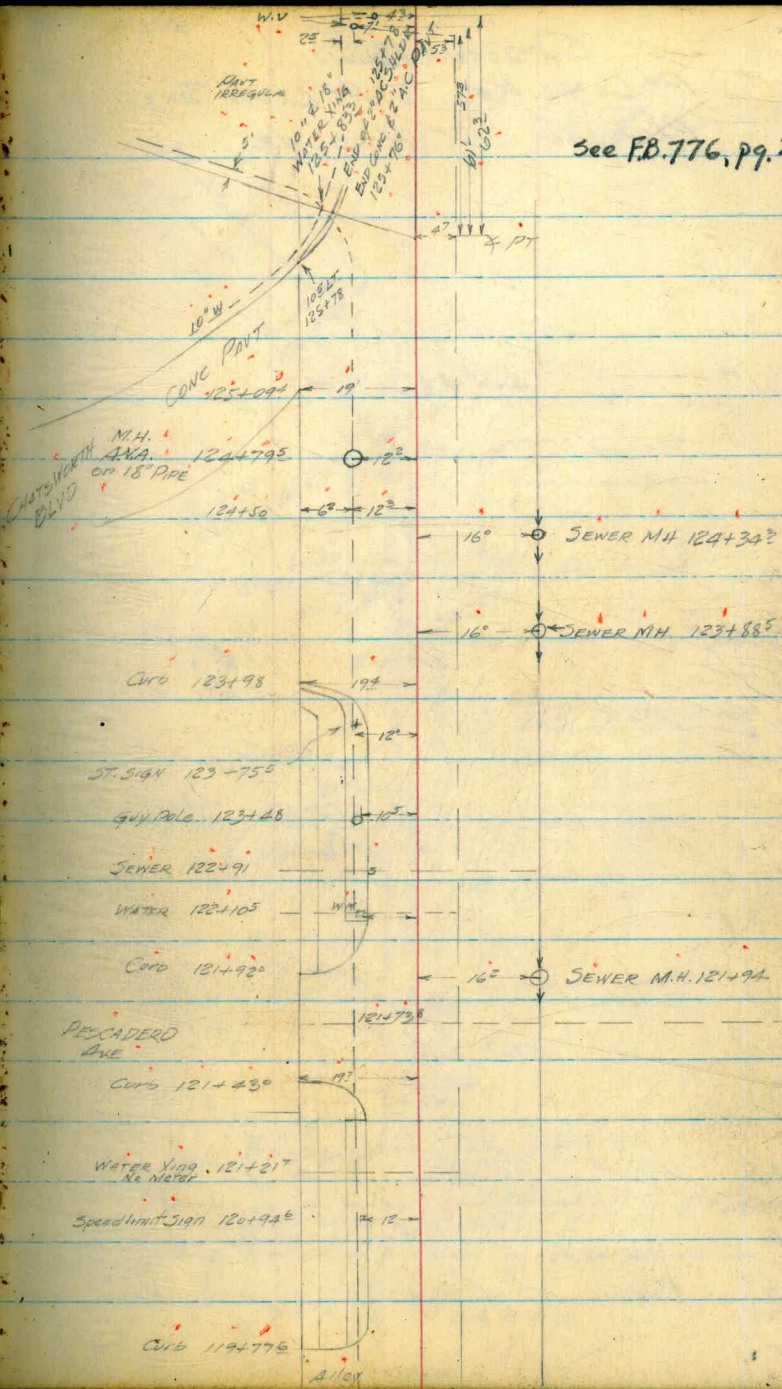




SEPT. 26 1949

36

See F.B. 776, pg. 21.





CATALINA BLVD  
 PT. LOMA RES TO PT. LOMA TANK  
 PROPOSED 12" PIPELINE

MAR. 12 1952

BEATTY  
 POWELL  
 REEGER

27

8+31.19

44° 48' 30" LT

205 208  
 209

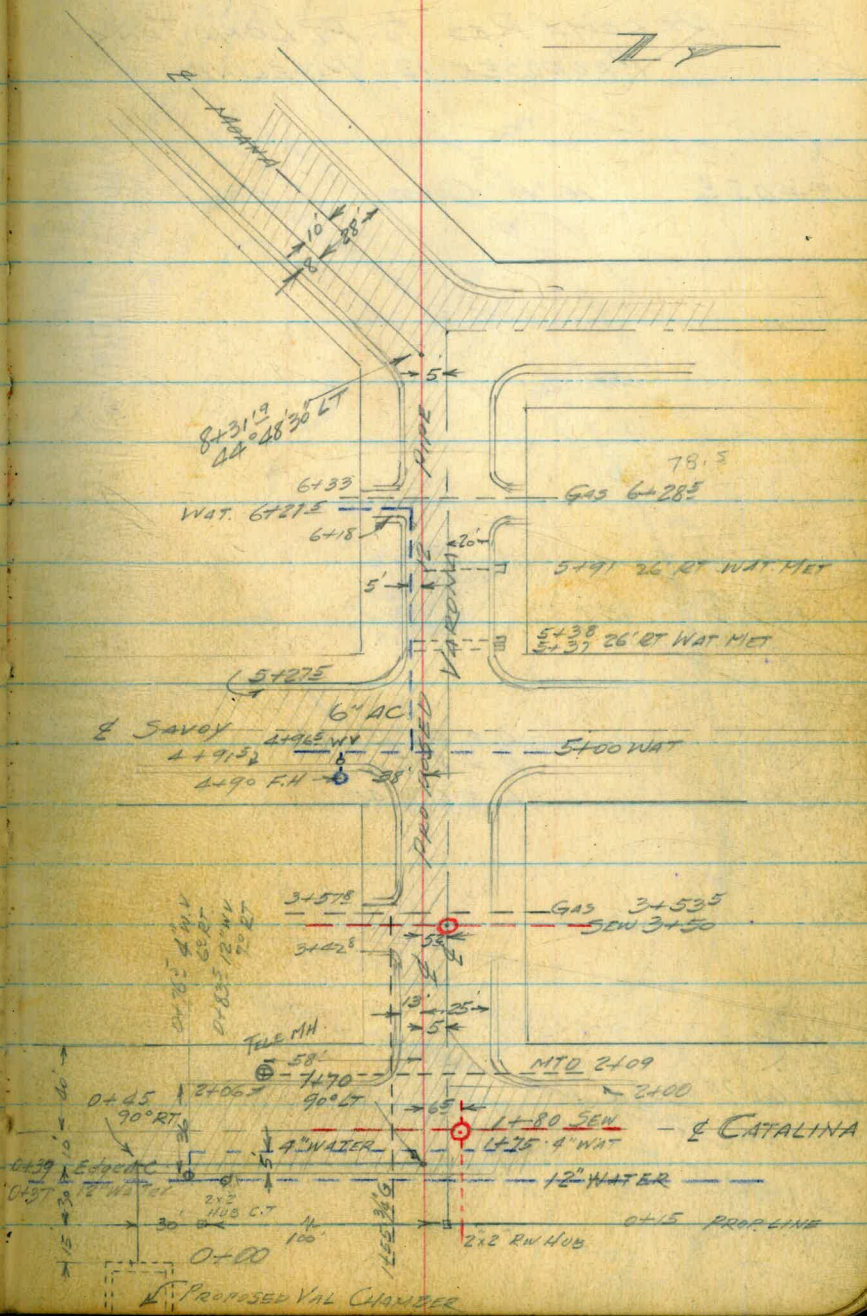
1+70

90° LT

0+45

90° RT

0+00 Begin at w. edge of proposed Val Chamber





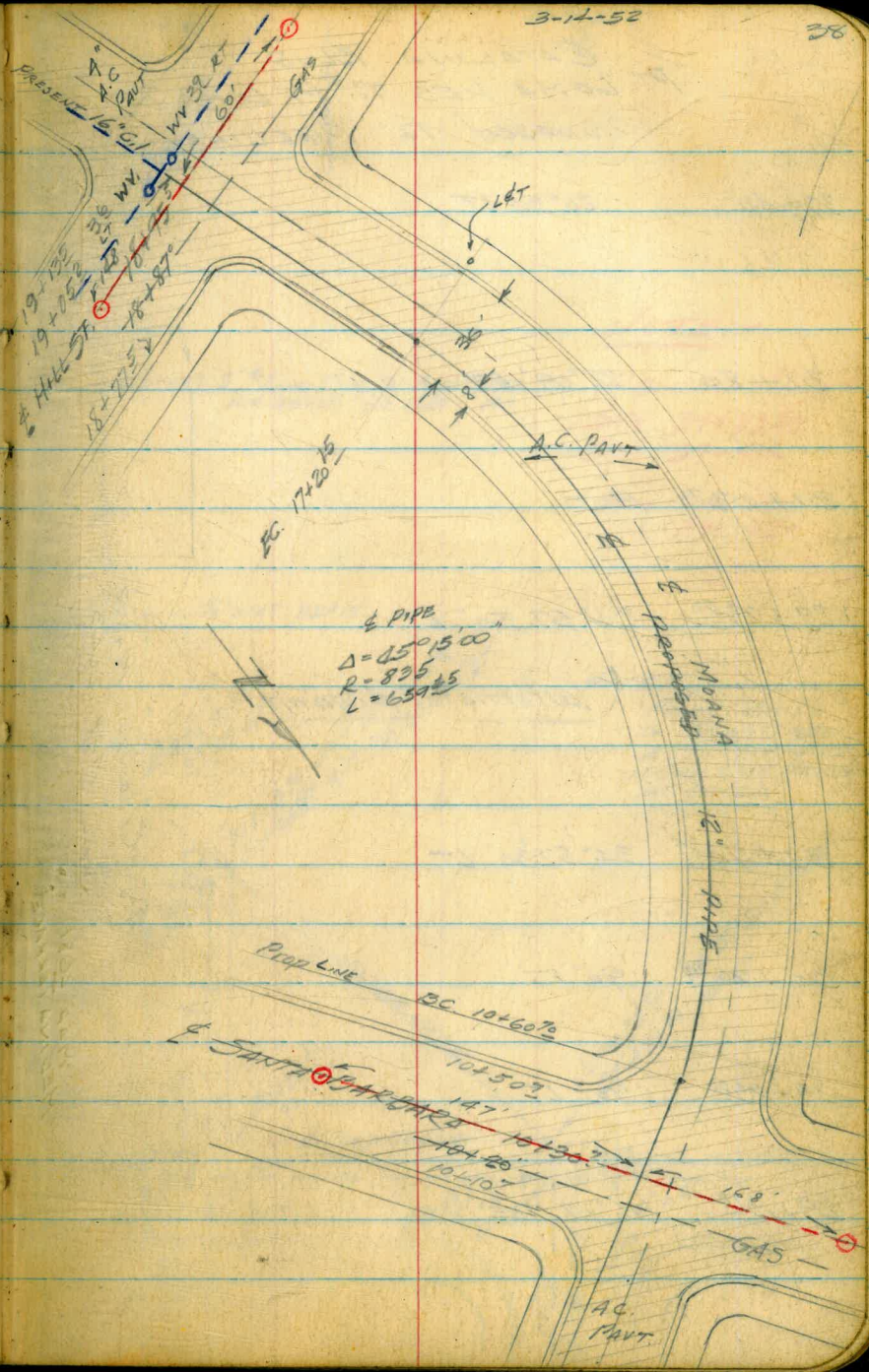
CATALINA BLVD  
 PT. LOMA RES TO PT. LOMA TANK  
 PROPOSED 12" PIPELINE

19+05.3 16"x8" CROSS.

17+20.15 E.C.

$\Delta = 45^{\circ}15'67''$   
 $R = 835.00$   
 $L = 659.45$

10+60.70 B.C.





CATALINA BLVD  
PT. LOMA RES TO PT. LOMA TANK  
Proposed 12" PIPELINE

3-17-52

39

37+60 20°30' LT

31+80 28°09' RT

31+03.76 POT

29+23.50 34°57'30" LT

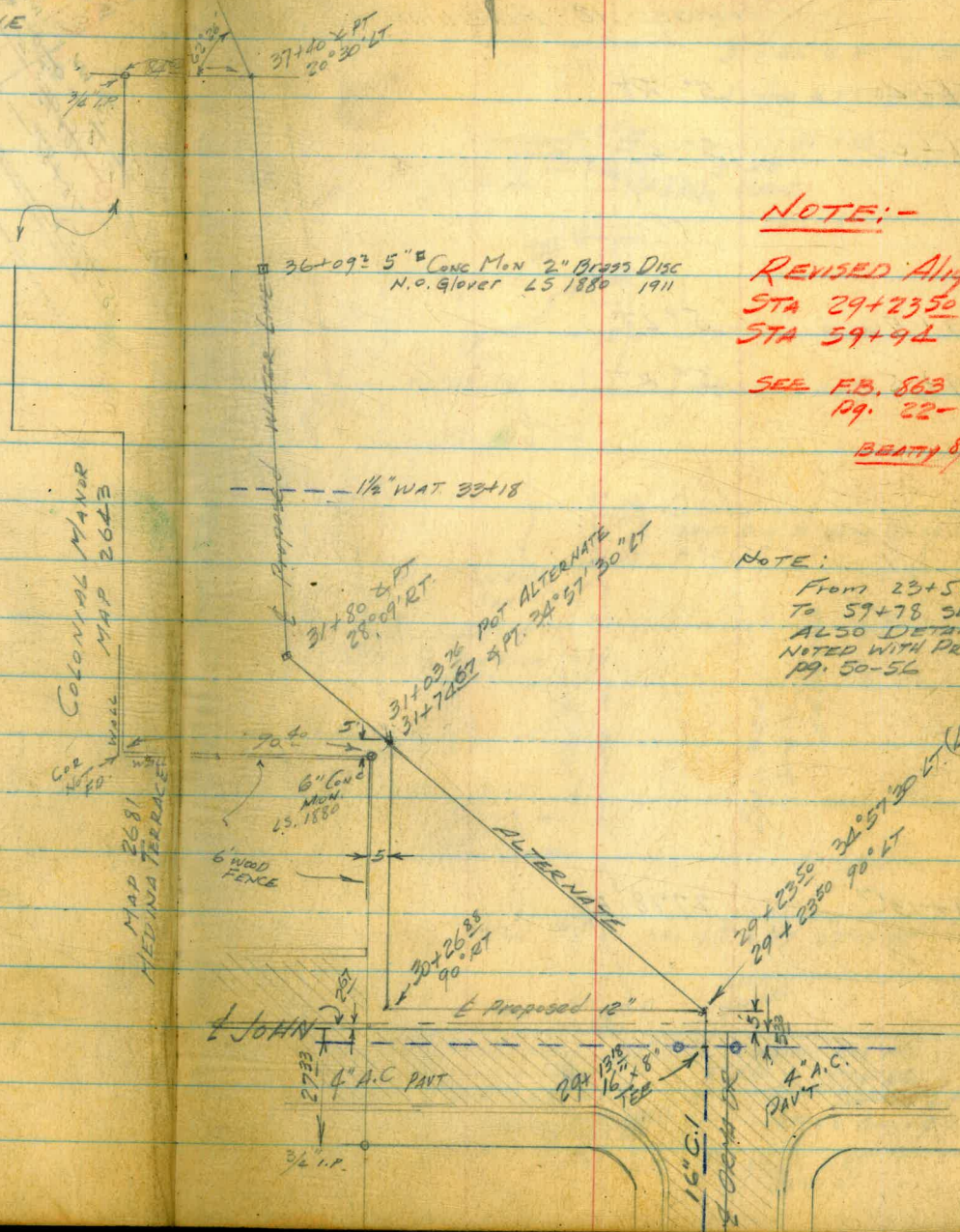
Alternate Alignment

31+74.67 34°57'30" LT

30+26.88 90° RT

29+23.50 90° LT

29+13.18 16" x 8 TEE



NOTE:-

REVISED ALIGNMENT  
STA 29+23.50  
STA 59+94

SEE FB. 863  
PP. 22-

BEATTY 8/1/52

NOTE:

From 23+50  
To 59+78 SEE  
ALSO DETAILS  
NOTED WITH PROFILE  
PP. 50-56

29+23.50 34°57'30" LT (ALT.)  
29+23.50 90° LT









CATALINA BLVD  
 PT. LOMA RES TO PT LOMA TANK  
 PROPOSED 12" WATER

66+13 X PT 87°41' RT.

65+71 X PT 15°35' RT

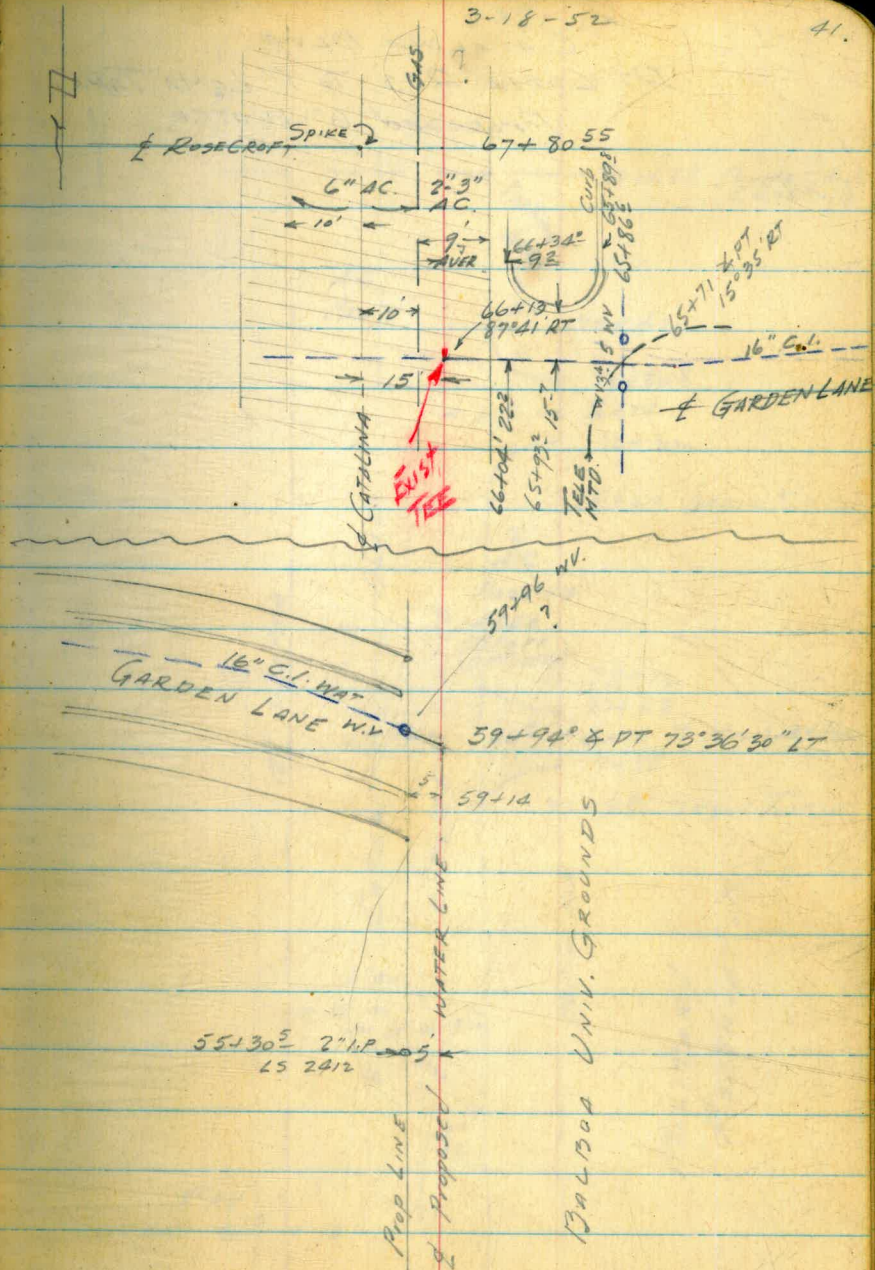
NOTE:  
 SEE PG. 865 PG. 14 FOR  
 ALIGNMENT REVISION  
 STA 65+71 TO TANK

59+94 X PT 73°36'30" LT.

15-40  
 82  
 03-16  
 78-37-30  
 65  
 107-37-30

3-18-52

41.



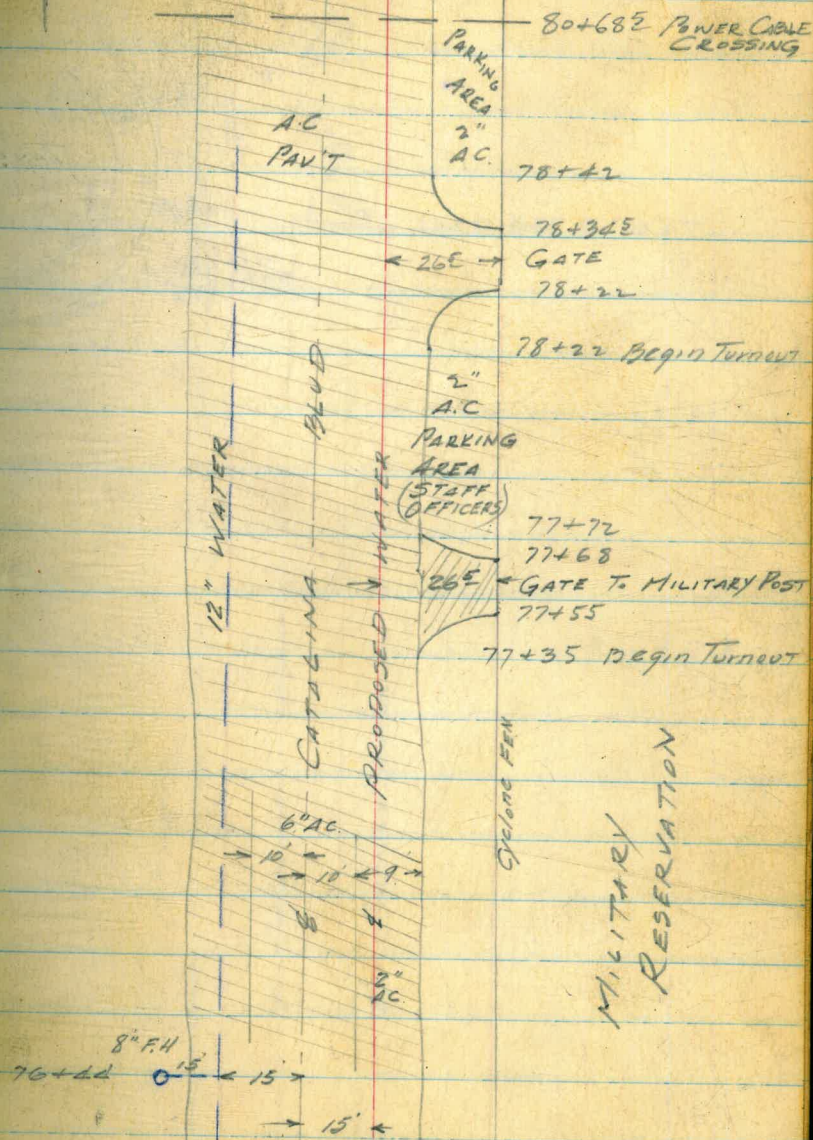
SEE NOTE PG. 39



CATALINA BLVD  
PT. LOMA RES TO PT. LOMA TANK  
Proposed 6" WATER

3/18/52

42

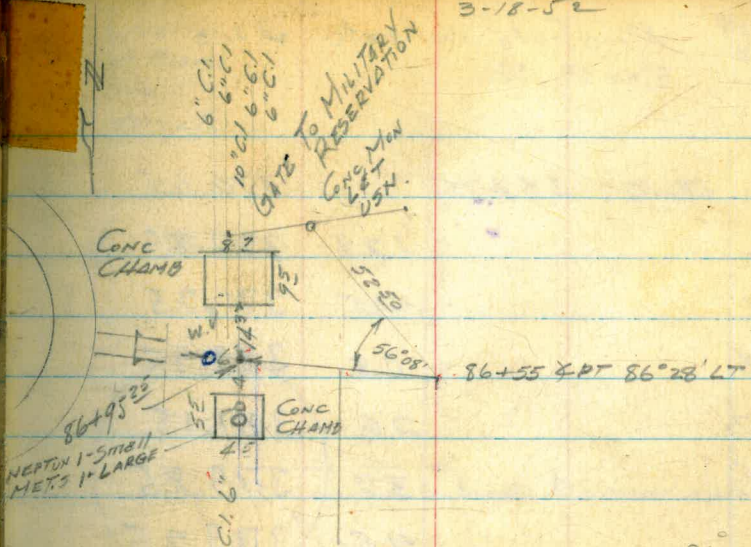




CATALINA BLVD  
 PT. LOMA RES TO PT LOMA TANK  
 Proposed 6" WATER

3-18-52

43



NEPTUN 1-SMALL  
 METS 1-LARGE

86-28  
 56°08  
 30-20

85+78

12" WATER

CATALINA - BLVD

Proposed WATER



Profile Waste Line

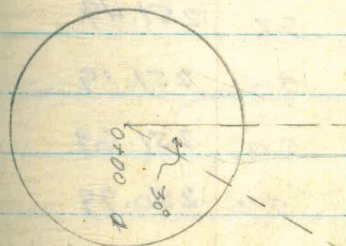
West  
Williams  
Kemp  
Varontakos

7-30-53

44

1	13.10	383.75	370.65
0+00		129	370.85
+54		105	371.25
+88		0.8	382.95
+97		2.6	381.15
1+01 <sup>2</sup>		3.9	379.85
1+13		4.5	379.25
1+17		3.8	379.95
+19		5.4	378.35
+26		4.8	378.95
		0.61	383.14 = 373.16

Tank



Catalina Blvd

Proposed Catalina Pl.

edge oil Catalina  
cone man on navy gate



Wendy  
3/21/52 B.S.P.

CATALINA BLVD  
PT. LOMA RES. TO PT. LOMA TANK  
& PROFILE

Mar 19, 1952  
BEATTY  
POWELL  
BERGER

45

B.M.	5.87	256.69 ✓	250.82
0+00		7.45	249.24
+15		6.30	250.39
+34		5.2	251.49
+39		5.5	251.19
+45	3 RT 90° RT	5.0	251.69
+76.5		5.7	250.99
		7.50	249.19
		6.37	250.32
1+00		6.3	250.39
+50		7.95	248.74
+70		8.55	248.14
+80	& Catalina	7.80	248.89
	Rim	7.94	248.75
	Inn	15.70	240.95
2+00		7.25	249.44
	Rim	5.26	251.43
	Top MTD	9.86	246.83
	Bot MTD	11.76	244.93
2+09		6.45	250.24

DP. SW Cor Varona & Catalina.

E. prop. line Catalina BLVD.

Edge A.C. part

4° GV. 6° RT. Top of val stem 0+76.5

12° GV. 7° RT. Top of Val. Stem 0+83.5

1+12.5 39' LT TELE MH

(Edge A.C. part 3' RT)

1+55.5 3/4" Gas Ser Xing

(" " " 35' RT)

SEW MH 65' RT 1+80

2+00 Face curb No. South

2+09 MTD Crossing

TELE MH 58' LT 2+09



3/19/52

46

CATALINA BLVD  
PT. LOMA RES. TO PT. LOMA TANK  
E PROFILE

256.69

2+50 2.65 254.04

P 13.35 269.89<sup>✓</sup> 0.15 256.54<sup>✓</sup>

3+00 10.9 258.99

+50 5.7 264.19

RIM 5.60 264.29

100. 12.13 257.76

P & NAIL 4+00 12.75 282.17<sup>✓</sup> 0.47 269.42<sup>✓</sup>

+50 7.55 274.62

5+00 4.25 277.92

CHIS II SW COR  
SET TOM2.75 279.42<sup>✓</sup>

+50 2.80 279.37

6+00 0.70 281.47

P 10.62 292.71<sup>✓</sup> 0.08 282.09<sup>✓</sup>

+50 9.15 283.56

7+00 6.90 285.81

+50 5.25 287.46

8+00 4.70 288.01

8+31.9 X PT 4.90 287.81

+50 5.25 287.46

9+00 7.05 285.66

6" SEW, MH. 5'2 RT 3+50

3+428 }  
3+532 Gas } curb line  
3+578 } Alley LT

4+915 Face Curb  
Sewy 5+275 Face curb

4+90 38' LT Fire Hydr  
4+965 38' LT W.V  
5+00 WAT Crossing

5+37 26' RT WAT MET  
5+38 26' RT " "  
5+91 26' RT " "

6+61 26' RT WAT MET  
6+62 " " "

Alley 50 6+68 Curbloc  
6+83 Curbline  
6+782 Gas Xing

6+192 WAT CROSSING

6+82 WAT MET 26' RT

6+86 " " "  
6+88 " " "  
6+90 " " "  
6+91 " " "



CATALINA BLVD  
 PT. LOMA RES TO PT. LOMA TANK  
 & PROFILE (ET AL)

3/19/50  
 Rain 10:45

47

		292.71		
9+50			8.55	284.16
10+00			10.00	282.71
CK BM	9.12	293.39 ✓	8.44	284.27 = 284.24
+10Z			11.00	282.39
+30Z			10.4	282.99
+50Z			10.73	282.66
+60Z (P.C. Prop Line)				
11+00			7.15	286.24
+50			3.25	290.14
P on curb			0.30	293.09 ✓
BM	3.95	288.22		284.27
				287.46
			RIM 0.76	277.96
			12V. 10.26	276.32
			RIM 11.90	266.67
			12V. 21.55	
CK BM			3.95	284.27 ✓
P	11.98	305.07 ✓		293.09
12+00			10.85	294.22
+50			6.90	298.17
13+00			2.95	302.12
P	3.36	308.26 ✓	0.17	304.90 ✓

BP NE Cor Santa Barbara & Moano

FACE CURB LINE

10+20 GAS XING

& Santa B & SEWER XING

FACE CURB LINE

8" SEN, M.H. 147' LT.

SEN M.H. 168' RT.



CATALINA BLVD.  
PT. LOMA RES. TO PT. LOMA TANK  
& PROFILE  
308.26

3/19/52

48.

13+50		2.65	305.61
14+00		1.15	307.11
+50		0.70	307.56
15+00		0.95	307.31
+50		2.30	305.96
16+00		4.15	304.11
+50		6.00	302.26
17+00		7.75	300.51
17+20 <sup>15</sup> EC		8.45	299.81
+50		9.50	298.76
18+00		11.20	297.06
D & NAIL +50	5.65 300.88	13.03	295.23
+77 <sup>5</sup>		6.50	297.38
87°		6.45	297.43
+95 <sup>5</sup>		6.35	297.53
19+00		6.30	297.58
+052 16"x6" Cross	Top Stem	7.43	293.45
	" "	7.81	293.07
+052		6.35	297.52
+132			

Face Curb line

18+87° Gas Xing.

& Hill St

W.V. 35 LT

W.V. 39 RT

Face of Curb line



3/19/52.

49

## CATALINA BLVD.

PT. LOMA RES. TO PT. LOMA TANK  
& PROFILE

300.88	rim	8.74	292.14
	Inv.	13.55	287.33
	rim	0.14	300.74
	Inv.	3.19	295.69

6" SEW, M.H. 60° RT 18+95.5

6" SEW, M.H. 148° LT 18+95.5 Inv. 505

TP	6.11	303.16	3.83	297.05
----	------	--------	------	--------

TP	5.55	301.16	7.55	295.61
----	------	--------	------	--------

29+13.18	16"x8" Cross	5.55	295.61	<del>296.3</del>
----------	--------------	------	--------	------------------

Top Stem	6.75	294.41
----------	------	--------

Top Stem	6.90	294.26
----------	------	--------

W.V. 38 RT

W.V. 38 LT

NOTE: -REVISED Alignment &  
Profile.

STA. 29+23.5 TO

STA. 29+94

SEE F.D. 863 pg 26-31

DATE 5/12/53

29+18.4		5.50	295.66
---------	--	------	--------

29+23.50	2 PT 90° LT	5.3	295.86
----------	-------------	-----	--------

+50		6.6	294.56
-----	--	-----	--------

30+00		9.7	291.46
-------	--	-----	--------

30+26.85	2 PT 90° RT	12.2	288.96
----------	-------------	------	--------

+40		12.6	288.56
-----	--	------	--------

+37.4		11.1	290.06
-------	--	------	--------

+50		9.5	291.66
-----	--	-----	--------

31+00		9.9	291.26
-------	--	-----	--------

+50		10.3	290.86
-----	--	------	--------

31+74.67	2 PT 34° 57' 30" LT	11.7	289.46
----------	---------------------	------	--------

= 31+037.6 Pot. on Alternate line

Top Curb 13.10

5

yard elev 13.10

5

" 13.4

5

" 12.3

5

35° LT Begin small Eugene Hdg



CATALINA BLVD.  
PT LOMA RES. TO PT LOMA TANK  
& PROFILE

Alternate Line	30.16		
29+235 (2 PT 36° 58' LT)	5.3	295.86	
+30	5.7	295.46	
+42	1.2	299.96	
+50	1.7	299.46	
30+00	4.0	297.16	
+50	7.6	293.56	
31+00	11.2	289.96	
TP 1.26 290.46 ✓	11.96	289.20 ✓	
+50	4.7	285.76	
+80 (2 PT 28° 09' RT)	6.5	283.96	
32+00	7.3	283.16	
+50	8.6	281.86	
33+00	10.3	280.16	
+18	10.4	280.06	
+50	10.1	280.36	
P top sta 7.69 288.73 ✓	9.42	281.04 ✓	
34+00	7.0	279.73	
+50	8.4	280.33	
35+00	7.4	281.33	

3/19/52

50

29+74 5' LT Acacia Clump

29+96 5' LT " "

30+12 16' LT " "

30+70 4' LT " "

6" Conc Max 45 1880

31+35 4' LT 3" Acacia

31+50 2' RT " Clump

NOTE: AVACADO'S  
AS SHOWN  
APPEAR TO HAVE  
BEEN ABANDONED  
AND IS MOSTLY  
REGROWTH.

32+75 9° RT " "

33+00 8" Avacado 12' LT.  
Half dead

33+18 1/2" Wet Xing

33+56 6' LT 8" Avacado

on & 36+09 12" AVACADO Dead  
Stump

36+38 { 2° LT Acacia Clump  
2° RT 10" AVACADO

36+91 { 3' LT 6" Avacado  
8' RT 10" "



CATALINA BLVD  
PT. LOMA RES. TO PT. LOMA TANK  
& PROFILE

	288.73		
35+39		6.1	282.63
+45		5.5	283.23
+50		5.4	283.33
36+00		4.4	284.33
TBM		3.76	284.97 ✓
+50		1.45	287.28
IP	11.90	0.42	300.21 ✓
37+00		9.3	290.91
+22		7.6	292.61
+40	RT	6.7	293.51
+50		6.5	293.71
+68		7.25	292.96
+70		7.45	292.76
+86		6.80	293.41
38+00		7.55	298.66
+01		7.40	292.81
+11		5.9	294.31
+50		4.9	295.31

3-19-52

51

35 +49 12' LT Acacia Clump  
35 +45 8' LT 7" Avocado

35 +73 6' LT 8" dead Avocado

36+02 4' LT 6" Avocado

on d 36+0920 5" Conc. HEN No. Glover  
2" Brass Disc. 1911

36+24 9' RT 3" WY Pine  
(western yellow)

36+49 10' LT 3" Acacia

36+70 11' LT 3" PINE

Edge A.C. Pavt

37+56 7' LT 3" Palm

LOMALAND ST.

Edge of A.C.

38+23E 50' LT W.V. & B.O

38+24 7' LT 24" Palm



CATALINA BLVD.  
PT. LOMA RES. TO PT. LOMA TANK  
E PROFILE

300.21

39+00		3.45	296.76
39+13.7' 4PT 27°20' RT		3.15	297.06
SET TBM 12.20	309.21 ✓	3.20	297.01 ✓
+50		10.3	298.91
40+00		7.0	302.21
+50		5.3	303.91
41+00		4.6	304.61
+50		4.6	304.61
+67		4.8	304.41
42+00		5.7	303.51
+30		5.7	303.51
+35		8.2	301.01

3/19/52

52

on 3/4" HP Prop. Cor 5' LT 39+13.7

shldr 7° LT 18.0 10.5  
yard elev → 17.7

39+49 1° ornamental shrub?

30+85 1° RT 10" Euc Tree

12.0 7.3  
10 4

13.1 5.9  
14 2

11.6 4.8  
10 1

11.8 5.5  
20 11

11.6 5.5  
15 4

11.6 6.3  
21 11

#C-812  
41+31 5° LT Po Pole

41+50 9° LT 12" NY PINE

RT  
41+69 5° 3-12" Dead Euc

41+90 11° LT 12" NY PINE

42+14 clump of pine



CATALINA BLVD  
PT LOMA RES. TO PT. LOMA TANK  
& PROFILE.

3-19-52

53

309.21

42+50		8.2	301.01
+72		8.8	300.41
+85		10.4	298.81
43+00		10.6	298.61
P	5.75	305.59	9.37 299.84
+42		6.5	299.09
+44		4.5	301.09
+50		4.6	300.99
44+00		5.3	300.29
+50		5.6	299.99
45+00		4.9	300.69
+23		4.3	301.29
+50		4.2	301.39
46+00		3.0	302.59
+49		2.3	303.29
+50		1.8	303.79
+52		1.0	304.59
P	11.17	316.74	0.02 305.57
47+00		10.4	306.34

12.1 98 92 84  
15 " 5 42

42+55 6' LT Euc. Tree

13.6 107  
16 13

43+46 12 RT 24" WY Pine

43+72 2° LT Small palm  
& high

44+08 4° LT Euc. Stump

44+18 12 RT 5" Euc

44+26 3° RT Euc Stump

yard elev

300  
19.9 5.4  
19 "

44+26 Begin Rustic picket FEN 5° LT

44+37 6" Euc 0° RT

44+59 4° RT 6" Euc

44+77 15 RT 3" Euc

45+02 End Rustic picket FEN  
5° LT

45+23 15 LT 14" Dead Euc

45+38 3° RT 12" " "

45+75 { Rustic picket FEN 5° LT  
8° 14" Dead Euc

46+24 E Edge 18" Pine ch

46+56 End rustic picket FEN 5° LT

yard elev

14.1 10.8  
" "

46+56 8° RT 18" PINE

47+31 5° LT 12" PINE

47+46 0° LT 12" PINE



CATALINA BLVD  
PT. LOMARES TO PT LOMA TANK  
& PROFILE  
316.74

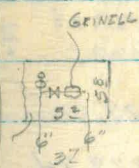
47+50		8.7	308.04
48+00		5.9	310.84
+50		2.0	314.74
P	9.55	326.29 ✓	0.0 316.74 ✓
49+00		8.4	317.89
+50	3 PT. 5° RT	6.0	320.29
+90	3 PT. 5° LT	4.6	321.69
50+00		4.3	321.99
+25		4.4	321.89
+27		9.4	316.89
		11.0	315.29
	Top of westerly 6" CI	9.43	316.86
	Top. 2" Galv Pipe	6.63	319.66
50+37		9.4	316.89
+38		6.0	320.29
+50		6.3	319.99
+56		6.3	319.99

RT

3-19-52

LT

54



1.4 9.2  
.18 1.0  
47+835  
47+95  
7.2 2.9  
.18 1.0

47+64	35° RT	12" PINE
47+82	0° LT	16" PINE
47+835	40° LT	50° RT } 18" Deep
47+95	23° LT	73° RT } Sand PLAY Box
48+04	05° LT	10" PINE
+27	WEDGE	10" PINE ON E
+41	4° RT	10" PINE
48+57	07° LT	10" PINE
48+73	5° LT	90° in 5° High FEN
49+00	2° RT	11" PINE
49+34	1° RT	10" W.V. PINE
49+48E	END FEN	5° LT
49+73	40° RT	10" W.V. PINE
49+87	7° RT	" "
50+11	30° RT	2" Riser Gas } 2" TO MET
50+18E	30° RT	1 1/2" Riser Gas } MET
50+25	7° LT	10" Pepper } W.V. TRAP
Conc floor of Val Chamber under construction		
50+29	47, 10	Reinf steel for Box
50+31E	2"	Galv Pipe, 90° Elbow } 10° RT
50+30E	6"	Riser Auto F.H. SPRK.
50+37	8° LT	End Conc Curb.
50+73	8° LT	End " "
50+64E	10° LT	42° LT, W.V. S



CATALINA BLVD  
PT LOMARES. TO PT LOMA TANK  
& PROFILE  
32629

50+69		6.4	319.89
+76		3.9	322.39
51+00	2 PT 5° LT	3.0	323.29
+40	2 PT 5° RT	2.8	323.49
+50		2.8	323.49
P (2 pt str)	7.15 331.28	2.16	324.13
52+00		6.4	324.88
+50		5.0	326.28
53+00		3.6	327.68
+50		2.0	329.28
P	13.33 341.14	3.47	327.81
+53		11.4	329.74
+60		9.8	331.34
54+00		8.1	333.04
+50		6.4	333.74 334.74
55+00		3.0	333.14 338.14
+50		1.3	339.84
P	7.65 347.00	1.79	339.35
+85		6.3	340.70

51+14 35° RT 20" W.V PINE  
+185 on d Acacia Clump  
+28 4° RT 16" Pine

51+63 53° LT 4" Conc BLK Wall  
+72 E Clump 1' d 2" Trees

52+03 20" W.V PINE E. Edge on d  
52+39 11° RT 28" PINE  
52+42 End Conc BLK Wall 53° LT

6 10' Rick of Fire Wood 1961

3/4" prop Cor. S'LT 53+20

160 Euc Stump 2' left  
53+96 2° E LT Acacia 2"

yard cleo 13.2 9/5 \*

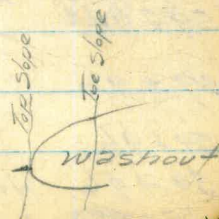
" " 12.0 7/5 \*

" " 10.2 8.2 3.2  
15 15 3 \*

" " 9.2 7.0 2.1  
16. 16 5 \*

3/4" IP S'LT 55+53

11.5 7.0  
5 4





CATALINA BLVD  
PT. LOMARES TO PT. LOMA TANK  
& PROFILE

3/21/52

56

56+00	347.00	5.9	341.10
+50		4.5	342.50
57+00		4.3	342.70
+50		4.3	342.70
58+00		4.8	342.20
+50		4.8	342.20
59+00		6.1	340.90
P <sup>Top</sup> 0.66	342.25	5.41	341.59
+14		2.3	339.95
58 <sup>20</sup> End of curb		2.6	339.65
59+94.2		3.9	338.35
59+96	Rim	4.48	337.77
59+96	Top Val Stem	6.75	335.50
59+96	NAT GRD	4.0	338.25
59+992	Edge 4" D.C. Pav	4.25	338.00

yard elev.	13.1	6.8
	18	5
	12.6	9.0
	14	13
	4.9	4
	12.0	7.8
	19	7
	5.1	8
	12.3	8.6
	18	13
	5.1	6
	vert	wall
	Rock Wall	

- 55+92 w. edge 12" 12" high Spanish bayonet plant on E
- 55+30.5 5' LT 2" HP Pipe on E
- 56+32 7' RT Acacia clump
- 56+56 1" LT 12" Euc
- 57+09 8' LT WY Pine 12"
- 57+15 2' RT WY Pine 10"
- 57+10 7.5' LT Begin Rock Rubble wall 12" High
- 57+56 12' RT Acacia clump
- 57+86 8' RT 10" WY Pine
- 57+97 5' LT End Rock Wall
- 57+97.5 5' LT Begin RW FENCE 4" High
- 58+43 - 2' RT 18" Euc
- 58+63 - East Edge 12" Euc on E
- 59+00 4' RT 14" Euc 6" High
- 59+27 5' LT End RW FEN
- 59+35 4' LT 12" Euc
- 59+38 6' LT 2" High Wood Run Fen
- 59+49 2' RT 8" Euc
- 59+63 5.5' LT End RW FENCE
- Face of curb 5' LT 59+14
- 59+78 5.5' RT 16" Dead PINE

SEE NOTE pg. 49



CATALINA BLVD  
& Profile (Cont'd)

3/21/52

57

	342.25		
Set TBM		3.78	338.47 ✓
P	0.23	329.35 ✓	13.13 329.12 ✓
P	0.07	316.06 ✓	13.36 315.99 ✓
P	6.25	309.90 ✓	12.41 303.65 ✓
65+86 <sup>0</sup>		7.10	302.80
" "	Top of Stem NW	9.30	300.60
" "	Top of Stem NW	9.40	300.50
66+00		6.95	302.95
66+13 <sup>00</sup> (2 PT 87°41' RT)		6.90	303.00
SET TBM	9.07	312.80 ✓	6.17 303.73 ✓
+50		9.35	303.45
67+00		8.55	304.25
+50		7.4	305.40
68+00		6.0	306.80
+50		4.55	308.25
69+00		2.70	310.10
+50		0.7	312.10
P	13.22	325.84 ✓	0.18 312.62 ✓
70+00		11.50	314.29

NAIL IN Pole END OF CURB South Side, GARDEN LANE

Top A.C. Pavt

65+89<sup>0</sup> Face of curb blind

WV 3<sup>4</sup> LT

65+93<sup>0</sup> 15<sup>2</sup> RT to curb

WV 5<sup>0</sup> RT

66+04<sup>0</sup> End curb ret  
22<sup>0</sup> RT

Chis II End of curb

66+32 9<sup>0</sup> RT End curb  
RET

Edge AC 6<sup>0</sup> RT

Edge AC 4<sup>0</sup> RT

" " 2<sup>0</sup> RT

" " 4<sup>0</sup> RT

" " 4<sup>0</sup> RT

" " 4<sup>5</sup> RT

" " 3<sup>0</sup> "

" " 4<sup>0</sup> RT



CATALINA BLVD  
PT. LOMARES, To PT. LOMA TANK  
E PROFILE

3/21/52

58

325.84

70+50		9.20	316.64	Edge AC 4° RT	
71+00		6.55	319.29	" " 4° RT	
+50		3.75	322.09	" " 3° RT	
72+00		0.85	324.99	" " 4° RT	
P	13.23	339.04	0.03	325.81	
+50		11.05	327.99	" " 5° RT	
73+00		8.05	330.99	" " 3° RT	
+50		5.05	333.99	" " 4° RT	
74+00		2.15	336.89	" " 3° RT	
P	13.10	352.00	0.14	338.90	
+50		12.0	340.00	" " 3° RT	
75+00		9.10	342.90	" " 3° RT	
+50		6.15	345.85	" " 3° RT	
76+00		3.15	348.85	" " 4° RT	
+50		0.35	351.65	4° RT	
P	11.44	363.16	0.28	351.72	76+44 30' LT 12" Tee " 43' LT 8" F.H. (Large)
77+00		8.80	354.36	" " 3° RT	
+50		6.40	356.76		77+35 Begin Driveway Turnout
78+00		3.90	359.26	" " 3° RT	77+55 26° RT GATE POST 77+68 26° RT 77+72 End Driveway Turnout



CATALINA BLVD  
 MT. LOMA RES TO PT LOMA TANK  
 & PROFILE

3/21/52

59

363.16

78+50		1.8	361.36
IP	10.00	373.12	0.04 363.12
79+00		9.80	363.32
+50		7.95	365.17
80+00		6.30	366.82
+50		4.35	368.77
+68.5		3.85	369.27
81+00		3.50	369.62
+50		2.85	370.27
82+00		1.60	371.52
+50		0.45	372.67
IP	10.54	383.56	0.10 373.02
83+00		9.85	373.71
+50		8.75	374.81
84+00		7.60	375.96
+50		6.35	377.21
85+00		5.15	378.41
+50		4.05	379.51
86+00		3.00	380.56

Parking Area RT

78+19 Begin Down Turnout  
 +22 GATE Post 20' RT  
 +34.5 " " 26.5  
 +42 End Driveway Turnout

80+68.5 Power Cable Xing

80+83 22.5 RT }  
 81+13.5 22.5 RT } MAIN GATE  
 US NAVAL  
 CIC. TANG  
 CENTER

81+19 Water Xing

81+48 5' RT Edge Storm  
 Inlet

82+100 35' RT Stub Pole

82+94 20' RT } GATE  
 83+15 20' RT }

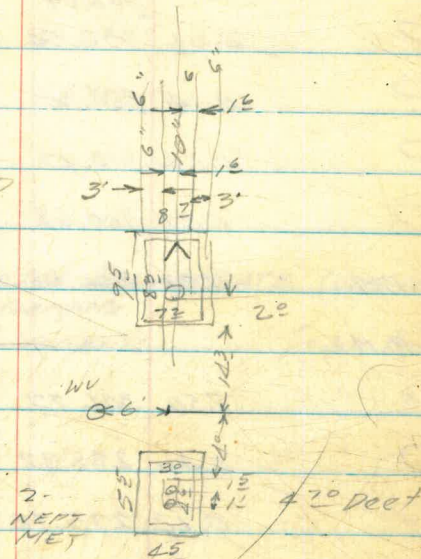


CATALINA BLVD  
&  
Profile (Cont'd)

3/21/52

	383.56		
86+50		1.90	381.66
+55 4 PT		1.76	381.80
+71		0.73	382.83
+90 <sup>3</sup>		1.32	382.24
86+95 <sup>25</sup>		1.50	382.06
+99 <sup>2</sup> Edge A.C		1.67	381.89
	Rim	1.58	381.98
	Top 6" C1	5.15	378.41
	Rim	1.28	382.28
	Top 10" C1	4.64	378.92
SET TBM.		0.20	383.16 ✓
TBM.	1.22	384.38	383.16
P	0.93	373.60 ✓	11.71 372.67 ✓
P	1.30	361.60 ✓	13.30 360.30 ✓
P	0.53	349.59 ✓	12.52 349.06 ✓
P	8.80	348.46 ✓	9.93 339.66 ✓
CK BM	3.36	348.09 ✓	3.73 344.73 = 358.47

Thicker A.C. ?



on L&T, Conc Mon center of GATE  
into Military Reservation

Mar. 24, 1952

Mon So End of Silvergate & Military Res  
(MUST BE ANOTHER Mon)



CATALINA BLVD  
 PT. LOMA RES. TO PT. LOMA TANK  
 & PROFILE & CHECK LEVELS

3-24-52

61.

		348.09				
P	0.33	336.54	11.88	336.21		
P	0.14	324.30	12.38	324.16		
P	0.04	310.97	13.37	310.93		
P	0.58	300.68	10.87	300.10		
CK BM	7.33	300.78	7.23	293.45 = 293.60	OP. 85' S of SL DUDLEY & SILVERGATE	(0.15 low)
CK BM			8.34	292.44 = 292.70	on East Curb of Silvergate	
P	7.50	301.77	6.51	294.27	OP SE Cor Charles & Silvergate	(0.26 low)
P	0.46	288.92	13.31	288.46		
P	0.12	275.72	13.32	275.60		
P	0.88	265.90	10.70	265.02		
P	0.47	253.66	12.71	253.19		
P	9.10	262.44	0.32	253.34		
P	2.76	261.73	3.47	258.97		
CK BM			10.85	250.88 = 250.82		



Lillian St  
 Gertrude to Viola

West  
 Powell  
 Kemp

25 June 52 62.

Sta	+	H.	-
	12.53	90.40	77.87
	4.69	94.93	0.16 90.24
	1.95	83.78	13.10 81.83
		4.08	+8.0 invert
0+00		7.6	76.2
+50		9.8	74.0
1+00		8.87	+6.80
		8.3	75.5
+50		4.9	78.9
2+00		2.3	81.5
+50		2.2	81.6
3+00		5.6	78.2
+50		5.00	+6.90 invert
		9.8	74.0
	1.81	73.36	12.23 71.55
4+00		4.0	69.4
+50		7.6	65.8
5+00		13.7	60.0
+25		14.4	59.0
5+23		14.15	+8.60 invert
			59.2
	10.94	85.97	0.33 73.03
	9.25	94.97	0.25 85.72
	4.21	89.77	9.41 85.56
		11.94	77.83 = 77.87

Bm NE BP Dorcas + Hilda

West rim MH 0-50

West rim MH 0+71

MH Dead end towards Gertrude

MH 5+23



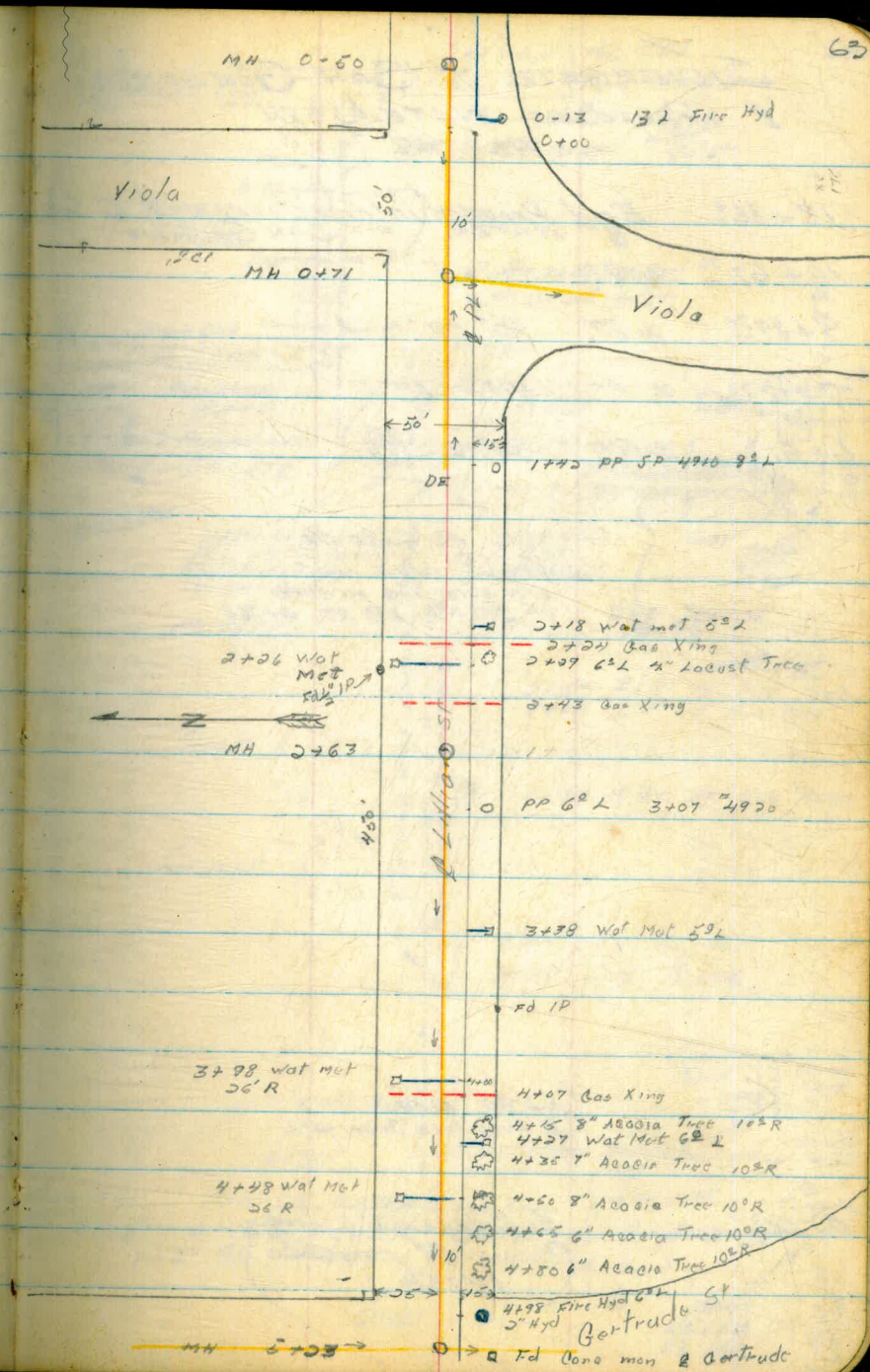
Lillian St (Dirt Street)  
Viola to Gertrude St

0+00

East Prop Line Viola

5+20

Gertrude St





SILVERGATE TO SAN GORGONIA  
 & PROPOSED WATER IN  
 PL 142?

- 12+86<sup>2</sup> End Proposed Intersection with 6" C  
 8" WATER on SAN GORGONIA
- 10+67<sup>70</sup> X PT 90° LT
- 9+89<sup>70</sup> X PT 90° RT
- 7+12<sup>70</sup> X PT 90° 12' RT
- 6+61<sup>3</sup> X PT 90° 12' LT

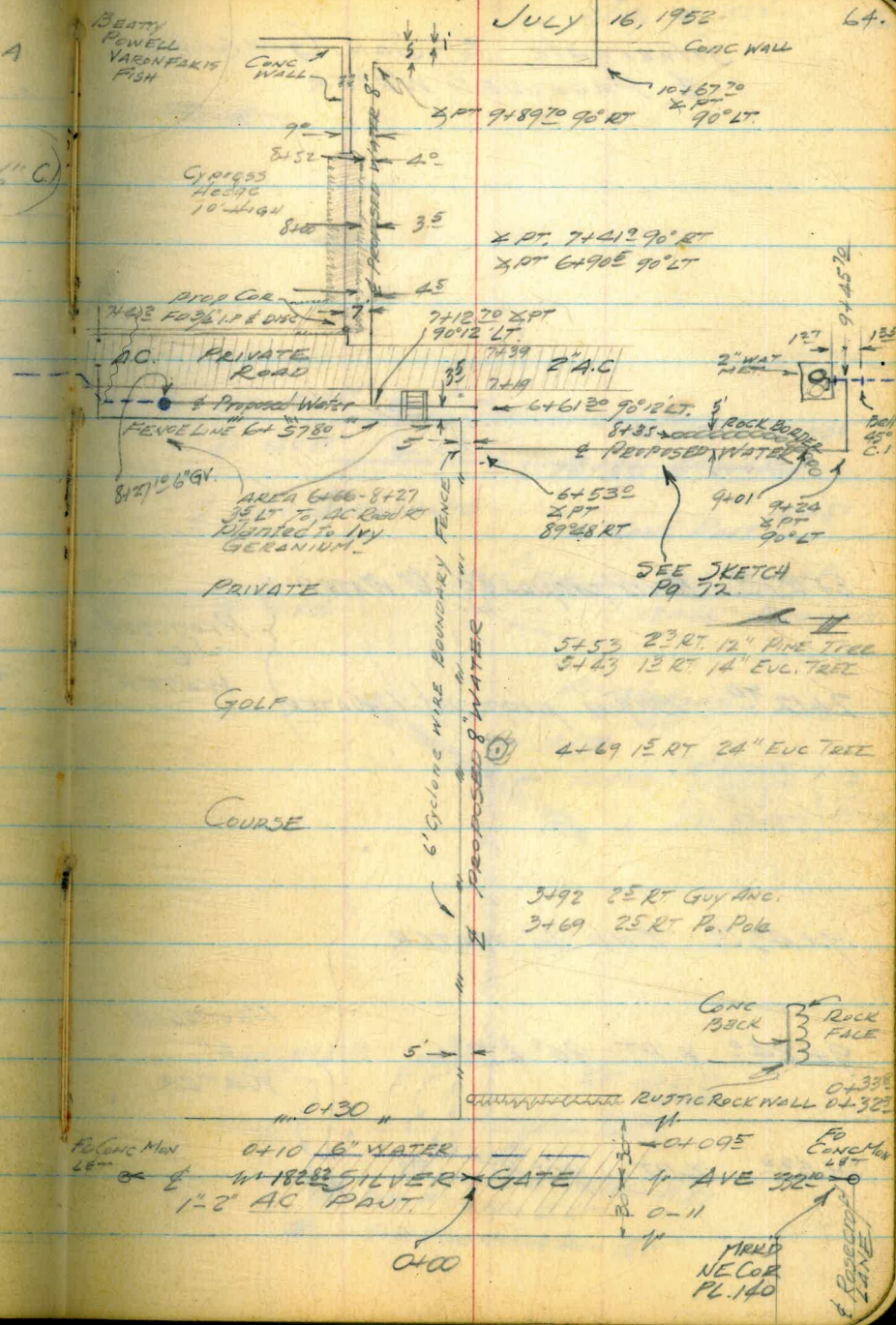
WIN AL GAGE DR  
 (6+66<sup>8</sup> prop. line)  
 CITY EIA TAG on CURB  
 OF STEPS, 620 RT, 6+76<sup>2</sup>

6+57<sup>80</sup>  
 6+50<sup>30</sup>  
 6+40<sup>30</sup>  
 6+33

(0+30 prop. line)  
 E. Prop. line Silvergate

0+00

& Silvergate Ave.  
 (Begin. 8" proposed  
 WATER)





Silvergate to San Geronimo  
& PROPOSED WATER

July 18, 1952

65

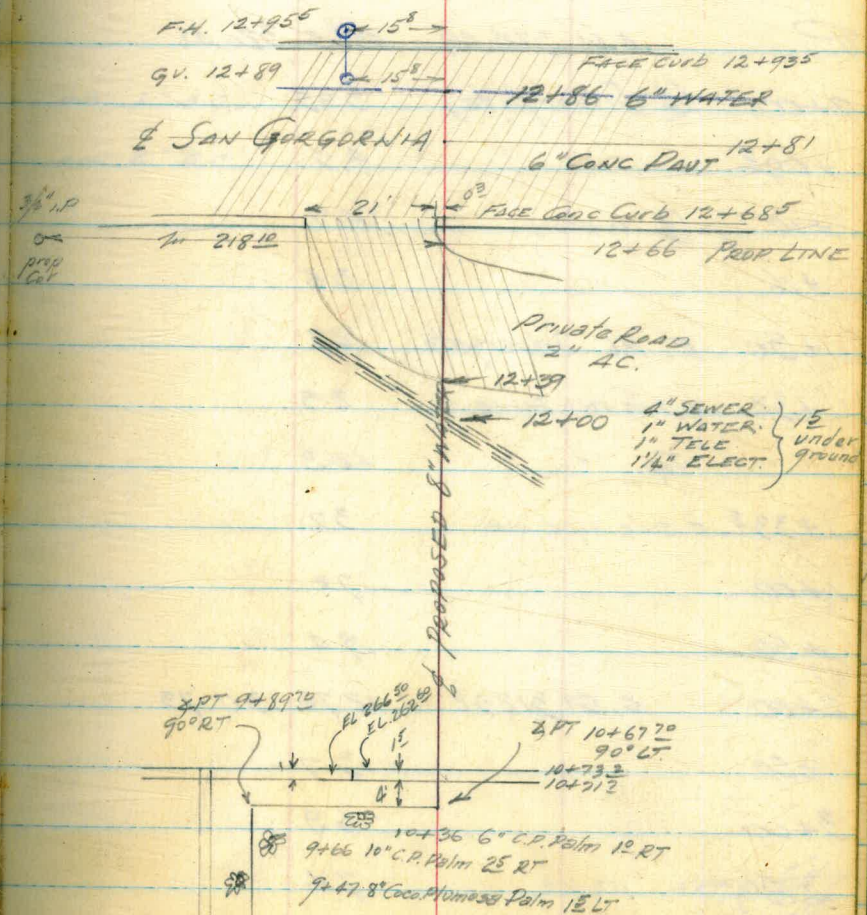
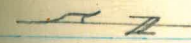
8+27<sup>10</sup> END proposed 6" WATER }  
 Proposed 6" WATER  
 7+12<sup>70</sup> BEGIN proposed 6" WATER }

9+45<sup>30</sup> END 6" WATER

9+24<sup>0</sup> XPT 90° LT

PROPOSED  
6"  
WATER

6+53<sup>0</sup> XPT 90° RT





E PROFILE PROPOSED WATER  
SILVERGATE TO SAN GORGONIO

7-23-52

66

BM.	1.07	292.67		293.60
IP	13.39	307.82	0.24	294.43
IP	13.12	320.53	0.41	307.41
SET TOP			9.52	311.01
IP	4.01	324.09	0.05	320.48
0+00	(E Silvergate)		3.95	
+09 <sup>5</sup>			4.5	
+10	(E water)		4.7	
+16			3.5	
+30	E. P.L. Silvergate		2.7	
+32	w. side rock fence		2.5	
	Top. " "		+0.3	
+33 <sup>8</sup>	E side rock wall		3.2	
1+00			7.0	
+50			9.4	
2+00	0.59	312.32	12.76	311.73
+50			3.7	
3+00			6.9	
+50			9.4	

BR. 85' So. P.L. Dudley & Silvergate on curb

on. Conc. man. Nor. 0+100

on. 1" A.C.

on. 2" A.C.

3+50 4' RT } 5' High  
RICK  
OF  
FIRE  
WOOD



2 PROFILE  
SILVER GATE - SAN GORGONIO

7-23-52

57.

	312.32		
4+00		12.3	
IP	1.85	301.88 <sup>1</sup>	12.29 300.03
+50		3.2	
5+00		4.9	
+50		6.7	
6+00		8.8	
6+53° X PT 90° RT		9.6	292.3
SET TBM		11.65	290.23
7+00		8.8	293.1
+50		8.5	293.4
IP	1.02	295.15 <sup>✓</sup>	7.75 292.13
+80		2.5	292.7
8+00		1.0	294.2
+23		3.6	291.6
+50		4.5	290.7
+81		5.6	289.6
9+00		6.2	288.95
+02		6.9	288.3
+05		7.2	288.0

285.1	285.5	293.0
16.8	16.2	8.9
16	12	10
		293.7
		8.6
		10
		292.65
		2.5
		10
		291.1
		2.1
		10
		290.5
		2.7
		5
		292.5
		5.7
		4
		289.5
		288.1
		7.1
		10
		285.0
		6
		287.7
		7.5
		8
		5

CROSS  
Rock Border 9+01



PROFILE  
SILVER GATE - SAN GORGONIO

	295.15 ✓		
9+10		8.3	286.9
+15		8.4	286.8
+20		7.8	287.9
+24	4 PT 90° LT	8.2	287.0
+27		10.6	284.6
+35		11.3	283.9
9+45.70		11.40	283.8
TBM	0.86	291.09	4.92 290.23
6+61.3	4 PT 90° LT	+0.7	
+66		0.0	
+75.9		0.89	
+79.9		0.86	
7+00		1.9	
+50		3.2	
8+00		4.6	
+27.10	at GV	5.6	
7+12.70	4 PT 90° RT	2.2	
+17		3.1	

7-23-52

68.

285.7

9.5  
5

286.1

9.1  
2

288.2

7.0  
5

Top 6" C.I. pipe

(END OF 6" C.I.  
ON TAVARA DRIVE  
PLACE)

	0.1	4.5	4.7	
	2	8	9	on AC
on Conc curb of steps	4.7			
	8			on AC.
on " " " "	2.7			
	8			on AC
	2.7	4.7		on AC
	4	7		
	4.8	5.2		on AC
	5	7		
	5.0	5.9		
	3	5		
(END of 6" C.I. on GAGE DRIVE)	5.7	6.3		
	3	6		

SPRINK  
WAT  
LINE  
35-6  
RT  
6+66  
8+27



± Profile  
SILVER GATE - SAN GORGONIO

7/23/52

69

	291.09		
7+19		4.70	
+39		5.1	
+50		5.5	
8+00		6.6	
+25		7.5	
+50		9.8	
P	0.00	278.26	12.83 278.26
9+00		3.7	
+50		11.2	
+63		12.7	
+66		13.0	
P	1.50	267.99	11.77 266.49
9+89 <sup>70</sup>	± PT	90° RT	4.2
10+00		4.3	
+36		4.4	
10+67 <sup>70</sup>	± PT	90° LT	4.9
+71 <sup>2</sup>		5.35	262.64
+73 <sup>2</sup>		5.45	
+73 <sup>2</sup>		9.6	

Edge 3" A.C. private road

Edge " A.C. " "

9+47 8" C.P. Palm 15° LT.

9+66 10" " " 23° RT.

NE Cor. End of Wall

10+36 6" C.P. Palm 1° RT.

on W. edge Conc. Wall

on E. " " "



Profile  
SILVER GATE - SAN GORGONIO

7-23-25

70.

	267.99			
10 +78		10.4		
+82		12.7		
IP	0.23 255.32	12.90	255.09	
+83		3.0		
11+00		10.5		
IP	0.39 243.54	12.17	243.15	
+85		6.4		
IP	0.10 231.04	12.60	230.94	
11+50		2.8		
+54		3.3		
IP	0.84 218.56	13.32	217.72	
+92		9.3		
IP	0.05 206.31	12.30	206.26	
+84		7.2		
IP	0.42 194.69	12.04	194.27	
+35		6.8		
+39		12.65		
+50		13.4		
IP	2.53 184.87	12.35	182.34	

0.0	3.0		4.1
4	3	c	6
8.0		c	11.2
			8
		c	7.1 10.3
			8 10
4.4	2.8		3.2 4.2 3.5
8	3	c	4 6 10

18" high pine tree  
11+05 LRT

4" SEW } 15'  
1" WAT } under  
Crosses @ 45° LT } ground

on A.C.  
on A.C.



g. Profile Cont'd.  
SILVERGATE - SAN GORGONIO

7-23-52

71

	184.87			
12+12		5.1		
+68		6.05		
+68		6.65		
+86	End proposed 8" water.	6.45		
P	0.65	172.66	12.86	172.01
P	0.03	159.94	12.75	159.91
P	1.50	148.35	13.09	146.85
P	0.18	140.71	7.82	140.53 ✓
P	12.75	153.31	0.15	140.56
P	13.42	166.26	0.47	152.84
P	13.32	179.55	0.03	166.23
	13.25	192.75	0.05	179.50
	12.74	205.44	0.05	192.70
	9.86	214.78	0.52	204.92
		2.52	212.26 =	212.21

on Edge A.C.

Top. curb

Gutter (Conc.)

on 6" Conc. part.

15 RT 12+66 Mail  
Box

on SEW DE Cap.

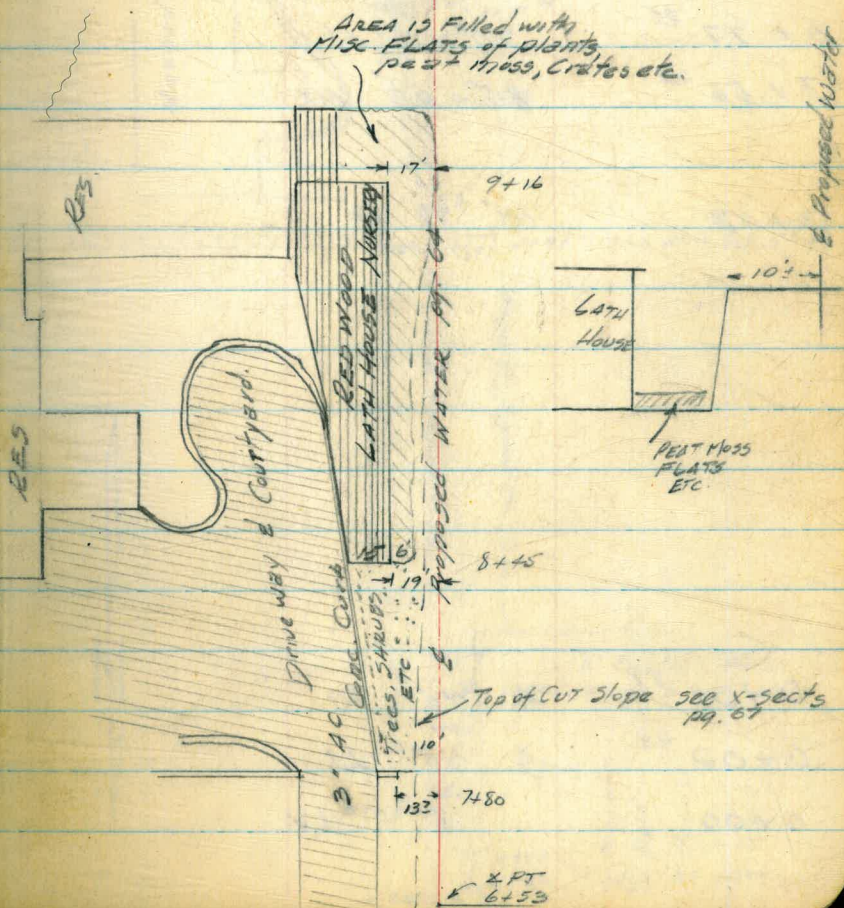
Unable to find B.M. B.P. SW Cor San Geronimo &  
La Crescentia  
Elev. 136.59

B.P. NW Cor La Crescentia & TAVARA PLACE



SKETCH OF  
HAZARD PROPERTY

72





R.E. Hazard Property  
Proposed P.L.

Rate?

73.

4+71 ±

4" Pipe

4+65

90° 00' LT

3+77 <sup>35</sup>

70° 00' LT

3+56 <sup>29</sup>

85° 00' RT

3+03

14° 41' LT

0+21 <sup>98</sup>

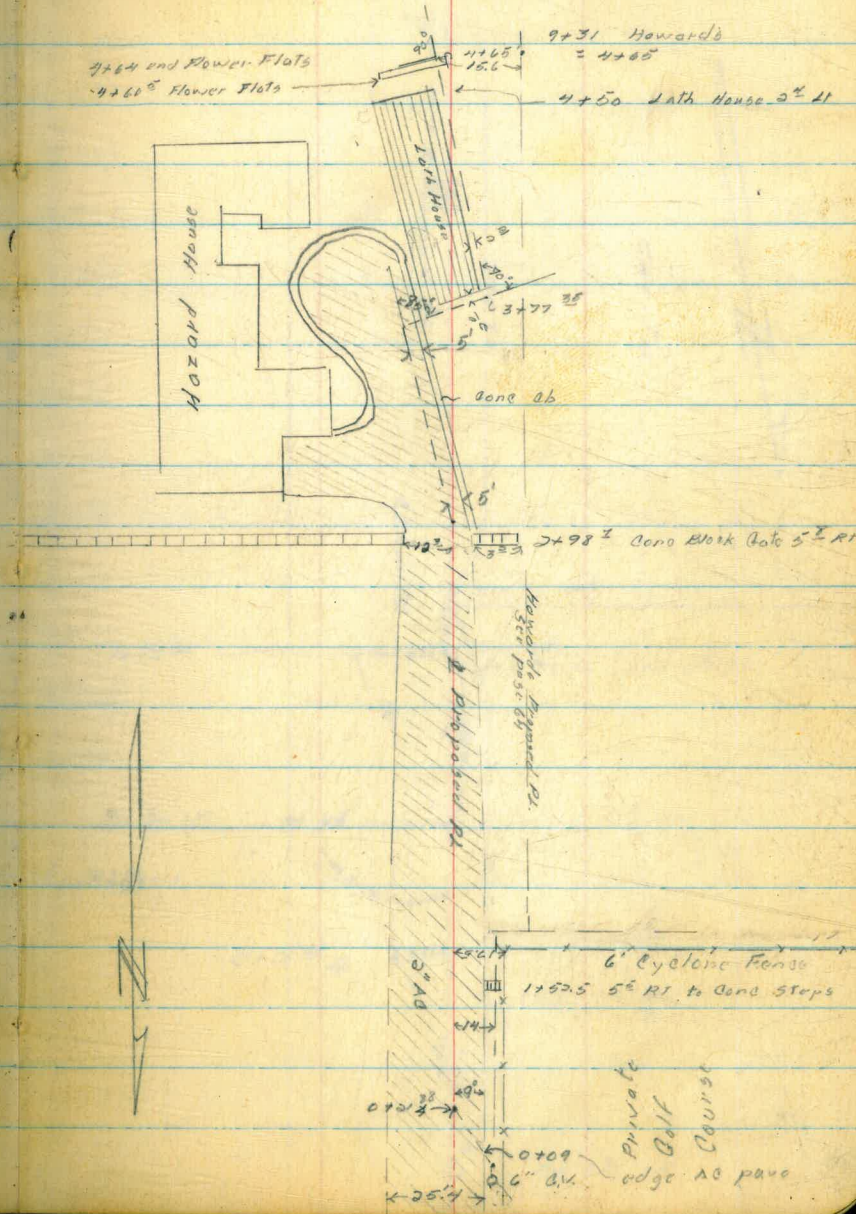
Δ 45° RT

0+02 <sup>20</sup>

Δ 45° LT

0+00

2 A.V.

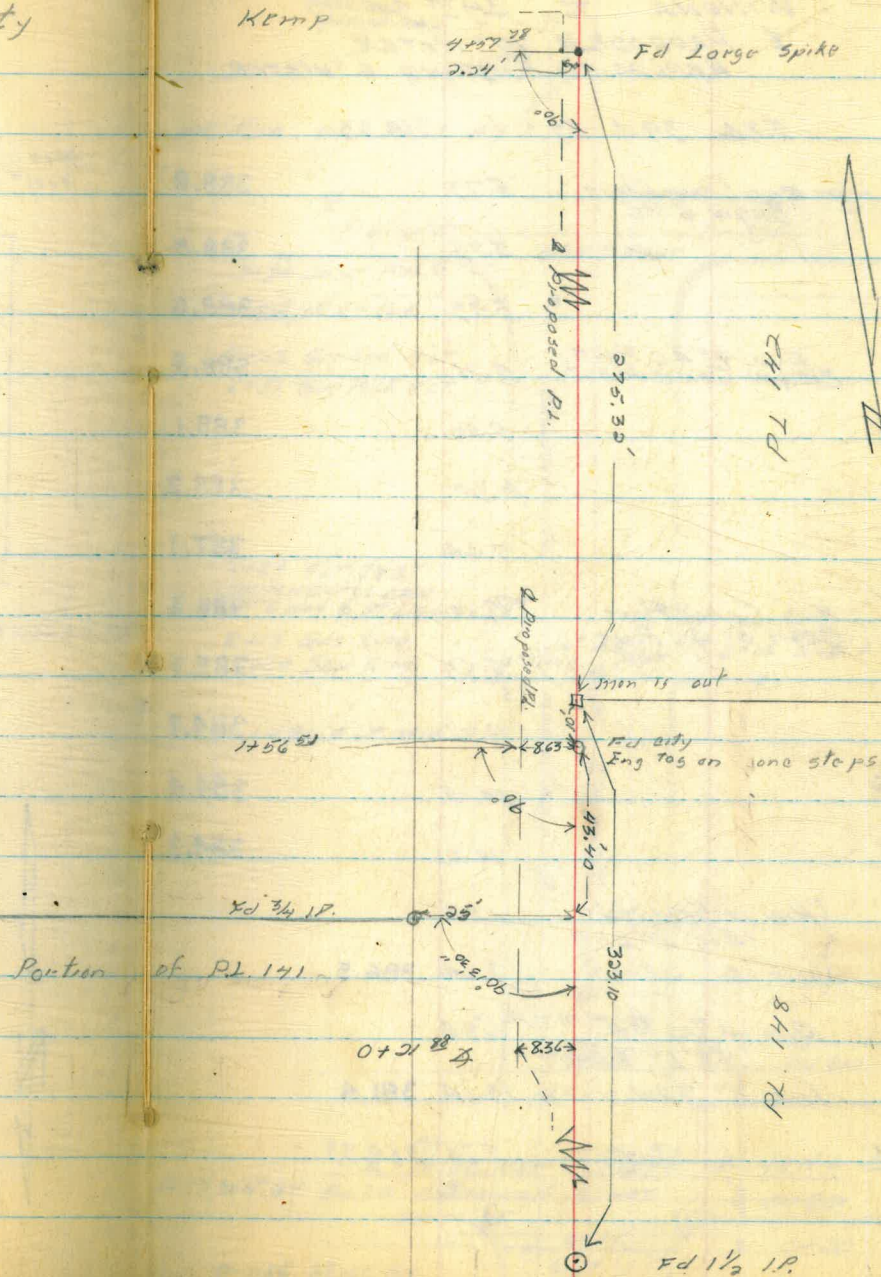




Ties to Pipe Line  
Thru Hazard Property

West  
Williams  
Kemp

74.





ADAMS AVE  
 WINDONA TO 49TH ST  
 & PROPOSED 10" WATER  
 REPLACING EXISTING 6" WATER

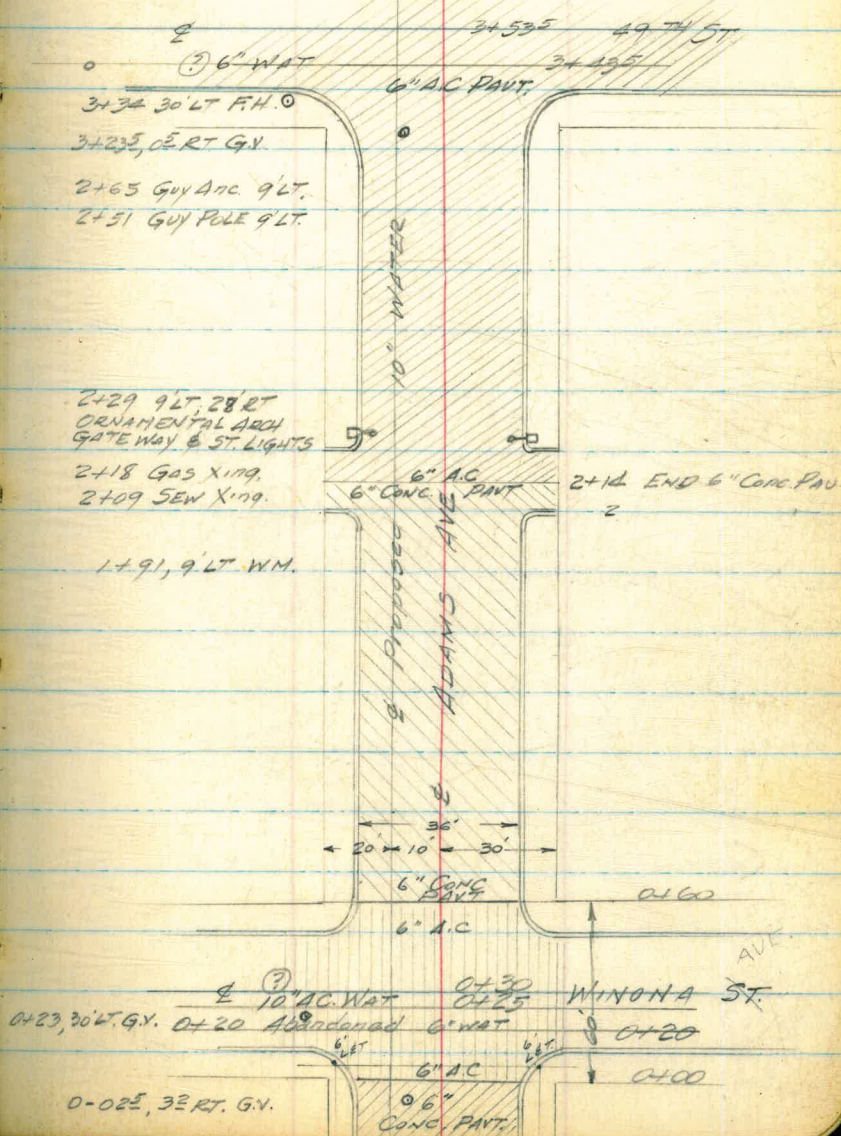
BM.	5.24	394.57	389.33
0+00	END CONC PAVT BEGIN 6" AC."	5.73	388.8
0+23		5.75	388.8
0+50		5.93	388.6
0+60	END 6" A.C. PAVT. BEGIN CONC. PAVT.	5.71	388.9
1+00		5.50	389.1
1+50		6.39	388.2
2+00		7.44	387.1
2+14	END CONC PAVT BEGIN 6" AC PAVT.	8.01	386.6
2+50		8.85	385.7
3+00		9.91	384.7
3+23.50		10.15	384.4
3+43.5		10.25	384.3
	{ Rim. of SEW MH 1278' RT 2409	1.84	
	{ INV 6" SEW.	8.04	386.5
	Rim. of SEW M.H. 152' LT. 2409	6.94	
	INV. 6" SEW.	13.14	381.4
CK BM.	5.24	389.33	

FEB. 8, 1954

BY  
 SHIRLEY  
 MARTELL  
 ALEXANDER

75

NE COR WINDONA & 49TH









WATER METERS  
IN ALLEY  
BETWEEN FAIRMOUNT # 431<sup>d</sup>  
FROM  
WIGHTMAN TO LANDIS.

BEATTY  
POWELL  
BERGER 3/20/52

77

	10.21	351.10		340.89							
BM	6.56	355.36	2.30	348.80	<del>349.15</del>						
5+97 - Nor Prop line LANDIS											
5+62 E			4.55	350.81	349.7	C/L	0				
5+62 W			2.60	350.76	349.7	C/O					
5+22 E			4.0	351.4	350.4	C/O	0				
IP	6.20	357.38	4.18	351.18	350.5						
5+11 W			6.47	350.91	<del>350.4</del>	<del>C/O</del>	1				C04
					350.6						
4+87 W			5.86	351.52	<del>350.4</del>	<del>C/L</del>	2				C09
					350.4						
4+73 E			5.85	351.53	350.5	<del>C/O</del>	1				C09
					350.7						
4+43 W			6.31	351.07	<del>350.6</del>	<del>C/O</del>	1				C04
					350.8						
4+23 E			5.61	351.77	<del>350.6</del>	<del>C/L</del>	2				C/O
					350.8						
3+97 W			5.07	352.31	<del>350.7</del>	<del>C/L</del>	1				C/O
					351.1						
3+52 E			4.25	353.13	<del>350.9</del>	<del>C/L</del>	2				C20
3+51 W			4.51	352.87	<del>351.9</del>	<del>C/O</del>	2				C20
3+17 W			4.75	352.63	<del>351.0</del>	<del>C/L</del>	1				C/O
					351.1						
3+12 E			4.61	352.77	<del>351.1</del>	<del>C/L</del>	1				C/O
					351.2						
2+61 W			4.71	352.67	<del>351.5</del>	<del>C/L</del>	1				C/L
					351.6						
2+47 E			4.25	353.13	<del>351.7</del>	<del>C/L</del>	1				C/O
					351.8						
2+14 W			4.20	353.18	<del>352.0</del>	<del>C/L</del>	2				C/O
					352.2						
1+84 W			3.82	353.56	<del>352.4</del>	<del>C/L</del>	2				C/O
					352.6						
1+59 E			3.54	353.84	<del>352.7</del>	<del>C/L</del>	1				C/O
					352.8						
1+39 E			3.40	354.0	<del>353.1</del>	<del>C/L</del>	2				C09
1+36 W			3.67	353.71	<del>352.9</del>	<del>C/O</del>	2				C05
1+32 W			3.60	353.78	<del>353.0</del>	<del>C/O</del>	2				C05
					353.1						
					353.3						



	357.38				
0+92 E	2.33	355.05	353.7 353.5	6+6	2 C14
0+85 W	3.05	354.33	353.8 353.6	6+7	2 C05
0+51 W	3.16	354.22	354.1 354.0	6+2	1 C02
0+00	= 3rd Pipeline Wightman				
P	2.08	355.30		6+40	

Profile Proposed PL  
Thru Hazard Prop

6) 24) 53

1.17	1.17	291.40		290.23	
0+00		5.90		285.5	
+02 <sup>80</sup> A		5.6		285.8	
+09		6.6		284.8	
+21 <sup>80</sup> A		6.1		285.3	
+50		5.8		285.6	
1+00		5.2		286.2	
+50		5.1		286.3	
2+00		5.2		286.2	
+50		5.3		286.1	
3+03 A		6.0		285.4	
+50		7.3		284.1	

J.B.M. Top North Side cone steps

↓ D.V.

6.6  
5' ± edge oil

edge oil

see page 68



		291.40			
0+9.3+56 <sup>24</sup>	6.15	290.13	7.42	283.98	
0+853+61 <sup>19</sup>			6.05	284.08	
0+5 +61 <sup>21</sup>			5.55	284.6	
0+00 3+77 <sup>35</sup>			4.9	285.2	
P 4+00			5.8	284.3	
6 +50			6.4	283.7	
7 +65	11.93	295.12	6.94	283.19	
+71			11.8	283.3	
1+1			4.93	290.19	
0+00					
+02					
+09					
+21					
+50					
1+00					
+5					
2+00					
+5					
3+03					
+50					

Bott of Ob  
 Top of Ob  
 $\frac{0.0}{5^{\circ} RT}$  Top Bank  
 $\frac{1.3}{4^{\circ} RT}$  Top Bank  
 $\frac{5.1}{8^{\circ} RT}$   
 $\frac{6.8}{10^{\circ} RT}$   
 $\frac{18.0}{10^{\circ} RT}$   $\frac{11.6}{10^{\circ} RT}$   
 290.23 TBM

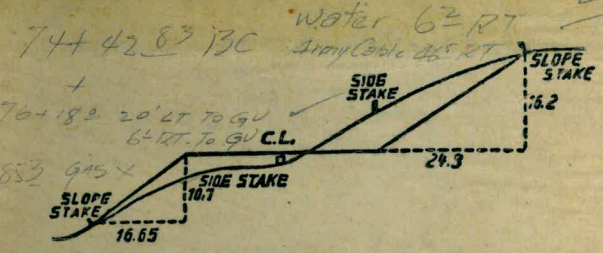


923  
9.07  
1.6

90.24  
4.57  
74.81  
9.23  
85.58

San Geronimo L. Crosta  
SWBP 136.59  
Tavaria  
NWBP 212.21

21  
25  
16



DISTANCES FROM SIDE STAKES FOR CROSS-SECTIONING.  
SLOPE 1 1/2 TO 1. ROADWAY OF ANY WIDTH.

	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	
0	0.00	0.15	0.30	0.45	0.60	0.75	0.90	1.05	1.20	1.35	0
1	1.50	1.65	1.80	1.95	2.10	2.25	2.40	2.55	2.70	2.85	1
2	3.00	3.15	3.30	3.45	3.60	3.75	3.90	4.05	4.20	4.35	2
3	4.50	4.65	4.80	4.95	5.10	5.25	5.40	5.55	5.70	5.85	3
4	6.00	6.15	6.30	6.45	6.60	6.75	6.90	7.05	7.20	7.35	4
5	7.50	7.65	7.80	7.95	8.10	8.25	8.40	8.55	8.70	8.85	5
6	9.00	9.15	9.30	9.45	9.60	9.75	9.90	10.05	10.20	10.35	6
7	10.50	10.65	10.80	10.95	11.10	11.25	11.40	11.55	11.70	11.85	7
8	12.00	12.15	12.30	12.45	12.60	12.75	12.90	13.05	13.20	13.35	8
9	13.50	13.65	13.80	13.95	14.10	14.25	14.40	14.55	14.70	14.85	9
10	15.00	15.15	15.30	15.45	15.60	15.75	15.90	16.05	16.20	16.35	10
11	16.50	16.65	16.80	16.95	17.10	17.25	17.40	17.55	17.70	17.85	11
12	18.00	18.15	18.30	18.45	18.60	18.75	18.90	19.05	19.20	19.35	12
13	19.50	19.65	19.80	19.95	20.10	20.25	20.40	20.55	20.70	20.85	13
14	21.00	21.15	21.30	21.45	21.60	21.75	21.90	22.05	22.20	22.35	14
15	22.50	22.65	22.80	22.95	23.10	23.25	23.40	23.55	23.70	23.85	15
16	24.00	24.15	24.30	24.45	24.60	24.75	24.90	25.05	25.20	25.35	16
17	25.50	25.65	25.80	25.95	26.10	26.25	26.40	26.55	26.70	26.85	17
18	27.00	27.15	27.30	27.45	27.60	27.75	27.90	28.05	28.20	28.35	18
19	28.50	28.65	28.80	28.95	29.10	29.25	29.40	29.55	29.70	29.85	19
20	30.00	30.15	30.30	30.45	30.60	30.75	30.90	31.05	31.20	31.35	20
21	31.50	31.65	31.80	31.95	32.10	32.25	32.40	32.55	32.70	32.85	21
22	33.00	33.15	33.30	33.45	33.60	33.75	33.90	34.05	34.20	34.35	22
23	34.50	34.65	34.80	34.95	35.10	35.25	35.40	35.55	35.70	35.85	23
24	36.00	36.15	36.30	36.45	36.60	36.75	36.90	37.05	37.20	37.35	24
25	37.50	37.65	37.80	37.95	38.10	38.25	38.40	38.55	38.70	38.85	25
26	39.00	39.15	39.30	39.45	39.60	39.75	39.90	40.05	40.20	40.35	26
27	40.50	40.65	40.80	40.95	41.10	41.25	41.40	41.55	41.70	41.85	27
28	42.00	42.15	42.30	42.45	42.60	42.75	42.90	43.05	43.20	43.35	28
29	43.50	43.65	43.80	43.95	44.10	44.25	44.40	44.55	44.70	44.85	29
30	45.00	45.15	45.30	45.45	45.60	45.75	45.90	46.05	46.20	46.35	30
31	46.50	46.65	46.80	46.95	47.10	47.25	47.40	47.55	47.70	47.85	31
32	48.00	48.15	48.30	48.45	48.60	48.75	48.90	49.05	49.20	49.35	32
33	49.50	49.65	49.80	49.95	50.10	50.25	50.40	50.55	50.70	50.85	33
34	51.00	51.15	51.30	51.45	51.60	51.75	51.90	52.05	52.20	52.35	34
35	52.50	52.65	52.80	52.95	53.10	53.25	53.40	53.55	53.70	53.85	35
36	54.00	54.15	54.30	54.45	54.60	54.75	54.90	55.05	55.20	55.35	36
37	55.50	55.65	55.80	55.95	56.10	56.25	56.40	56.55	56.70	56.85	37
38	57.00	57.15	57.30	57.45	57.60	57.75	57.90	58.05	58.20	58.35	38
39	58.50	58.65	58.80	58.95	59.10	59.25	59.40	59.55	59.70	59.85	39
40	60.00	60.15	60.30	60.45	60.60	60.75	60.90	61.05	61.20	61.35	40
41	61.50	61.65	61.80	61.95	62.10	62.25	62.40	62.55	62.70	62.85	41
42	63.00	63.15	63.30	63.45	63.60	63.75	63.90	64.05	64.20	64.35	42
43	64.50	64.65	64.80	64.95	65.10	65.25	65.40	65.55	65.70	65.85	43
44	66.00	66.15	66.30	66.45	66.60	66.75	66.90	67.05	67.20	67.35	44
45	67.50	67.65	67.80	67.95	68.10	68.25	68.40	68.55	68.70	68.85	45
46	69.00	69.15	69.30	69.45	69.60	69.75	69.90	70.05	70.20	70.35	46
47	70.50	70.65	70.80	70.95	71.10	71.25	71.40	71.55	71.70	71.85	47
48	72.00	72.15	72.30	72.45	72.60	72.75	72.90	73.05	73.20	73.35	48
49	73.50	73.65	73.80	73.95	74.10	74.25	74.40	74.55	74.70	74.85	49
50	75.00	75.15	75.30	75.45	75.60	75.75	75.90	76.05	76.20	76.35	50