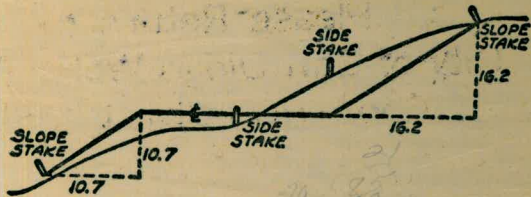


W

B71



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.

Please Return to
City of San Diego Water Dept.
Room 903 Civic Center

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	1.92	2.30	2.68	3.06	3.44	3.83	4.24	4.64	5.05	5.46
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	.038	.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	.266	.353	.440	.528	.617	.707	.797	.887	.977	1.07	1.18	1.29
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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- Plum St. Fenelon Co Carleton ✓ 1-6
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- Proposed Overcrossing Federal Blvd ✓
- alicé
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- AT Alvarado Freeway As built 39-41 ✓
- alicé

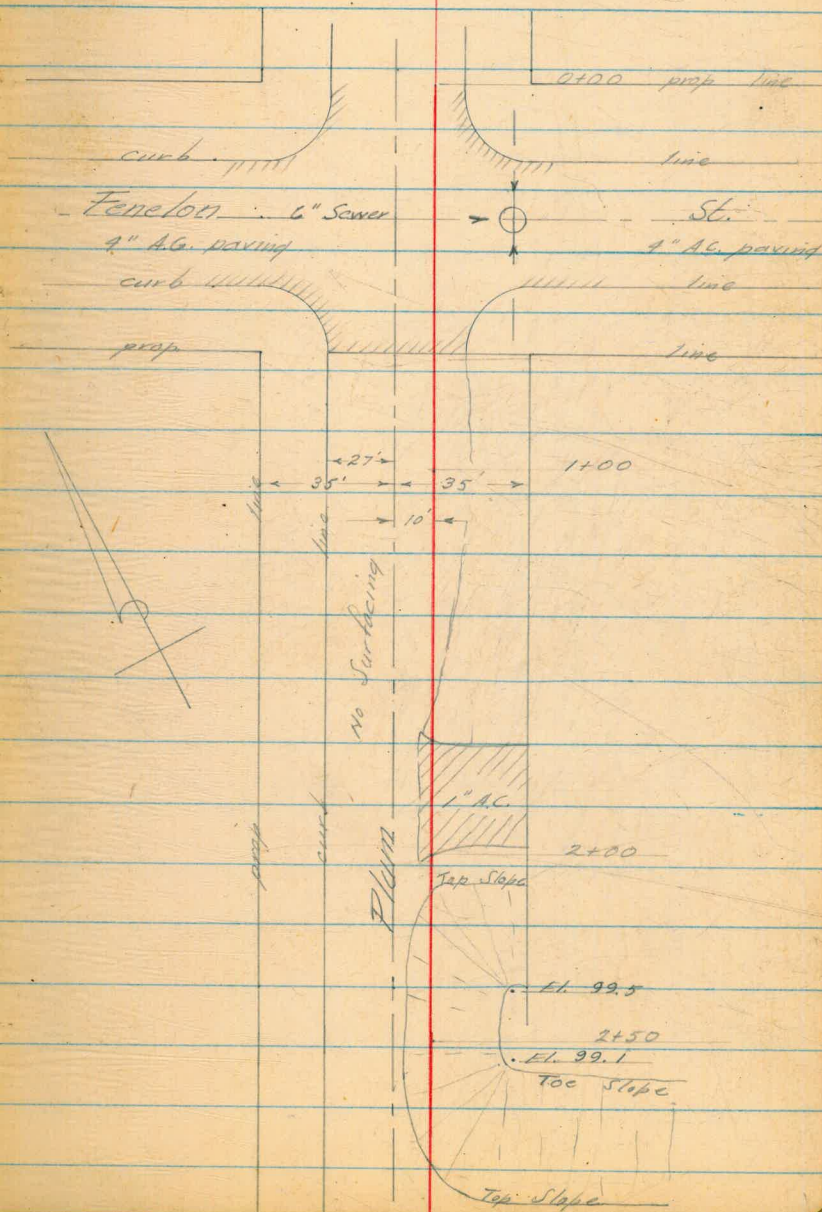
Profile of Proposed Water on Plum St
Fenelon St to Carleton St.

0+00 N/H of Fenelon St
 +20 curb line
 +36 Sewer M.H. 20' Lt.
 +53 curb line
 +70 S/H of Fenelon

1+70 No. edge 1" AC. drive
 2+00 Do. " " "
 +10 Top Slope

2+00 Top Slope

Went
 Kemp July 1 - 54
 Hatahan

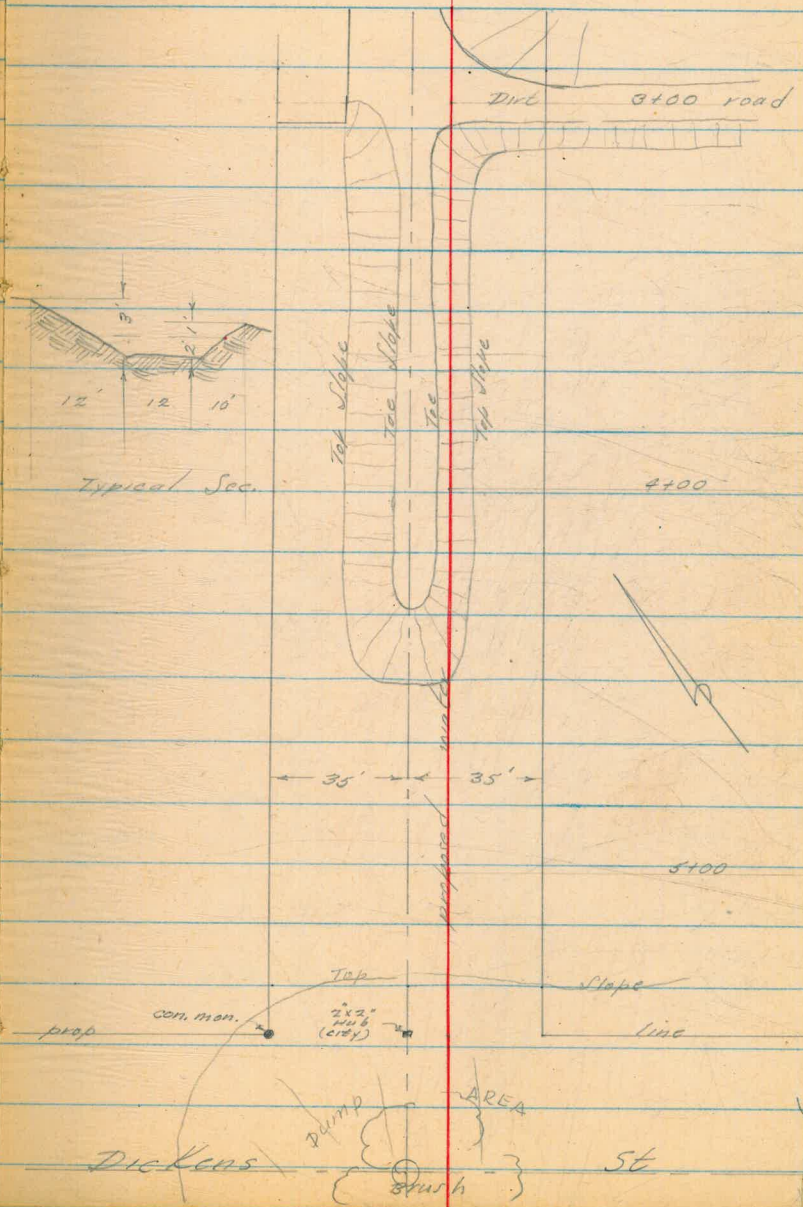


Profile Plum Conti

2+95 Nor edge 10' dirt road
 3+07 End of curb

4+50 end of cut

5+92 N/E of Dickens



Profile of Plum Cont.

5+42

N/L of Dickens

5+77

Sewer M.H. 10' R.L.

6+12

S/L of Dickens

6+27

Top Slope

8+12

N/L of Carleton

+23

Edge 4" AC. paving

+30"

curb line

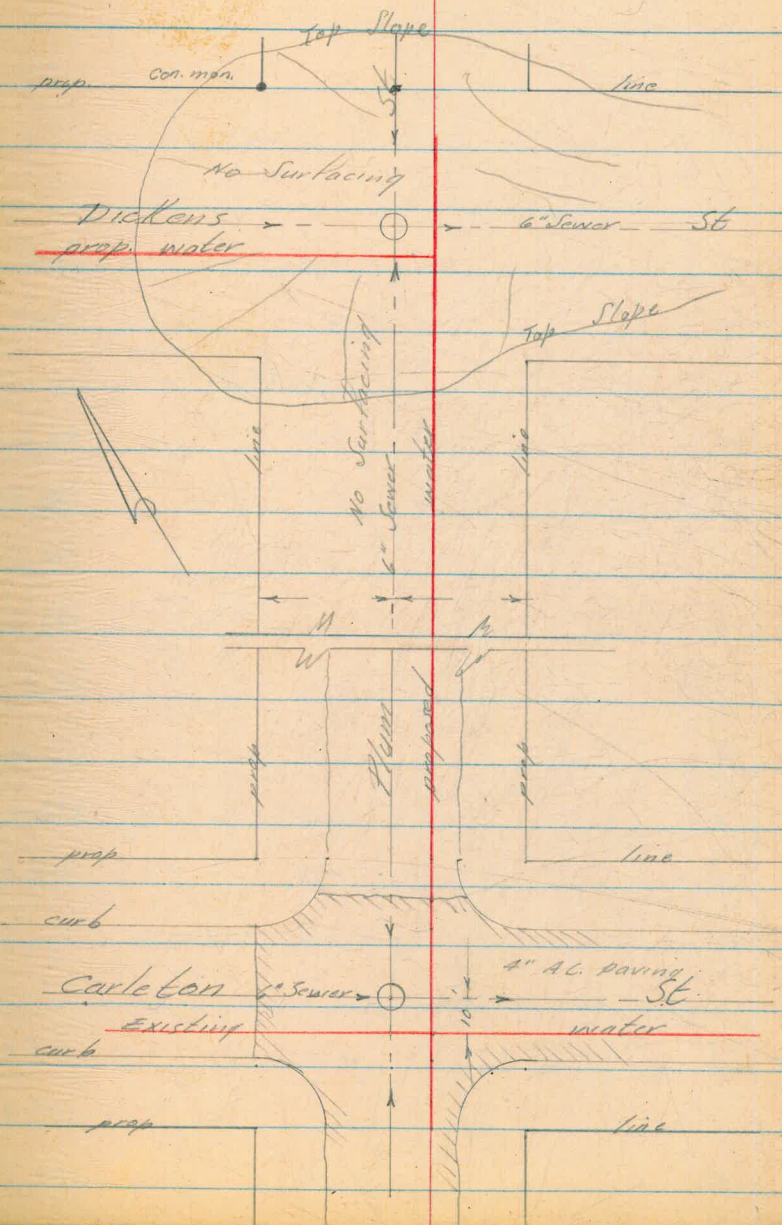
+47

Sewer M.H. 10' R.L.

+64

curb line

8+82



Profile Plum St Cont

92.64

NE. BR. Fenelon & Plum St.

13.05 105.69

0+00	8.7	97.0	N/E of Fenelon
+20	8.3	97.4	N curb
+36	8.90	96.79 saw 96.9	Sewer M.H., rim
+36	7.7	98.0	
+50	7.2	98.5	
+53	7.1	98.6	S curb
+70	6.5	99.2	Edge 4" A.G.
1+00	4.7	101.0	
+50	2.4	103.3	
+70	2.1	103.6	N. edge driveway
2+00	1.6	104.1	S. " "
T.P.	2.08	103.61	
9.87 113.98			
2+10	8.7	104.8	
+15	9.6	103.9	
+50	9.4	104.1	

Profile of Plum Cont.

113.48

2+70 7.5 106.0

+80 5.0 108.5

3+00 5.3 108.2

+07 4.9 108.6

T.P. 2.90 110.58

12.28 122.86

3+50 7.5 115.4

4+00 2.5 120.4

T.P. 0.29 122.57

7.73 130.30

+39 5.5 124.8

+50 4.9 125.4

+69 4.4 125.9

5+00 5.4 124.9

+50 10.7

T.P. 13.23 117.07

7.68 124.75

Profile of Plum Cont

	129.75	
G+00	10.4	114.4
T.P.	3.38	121.37
	13.34	134.74
+27	4.9	129.8
+50	2.2	
T.P.	4.50	130.21
	9.59	139.80
7+00	5.4	
+50	5.5	
B+00	5.9	
+23	7.0	
+30	7.0	
+47	6.23	
+50	6.6	
+64	8.8	
+82	6.9	
T.P.	5.82	137.98

Bottom of Dry Wash

Top Slope

Edge 4" A.C.
curb line

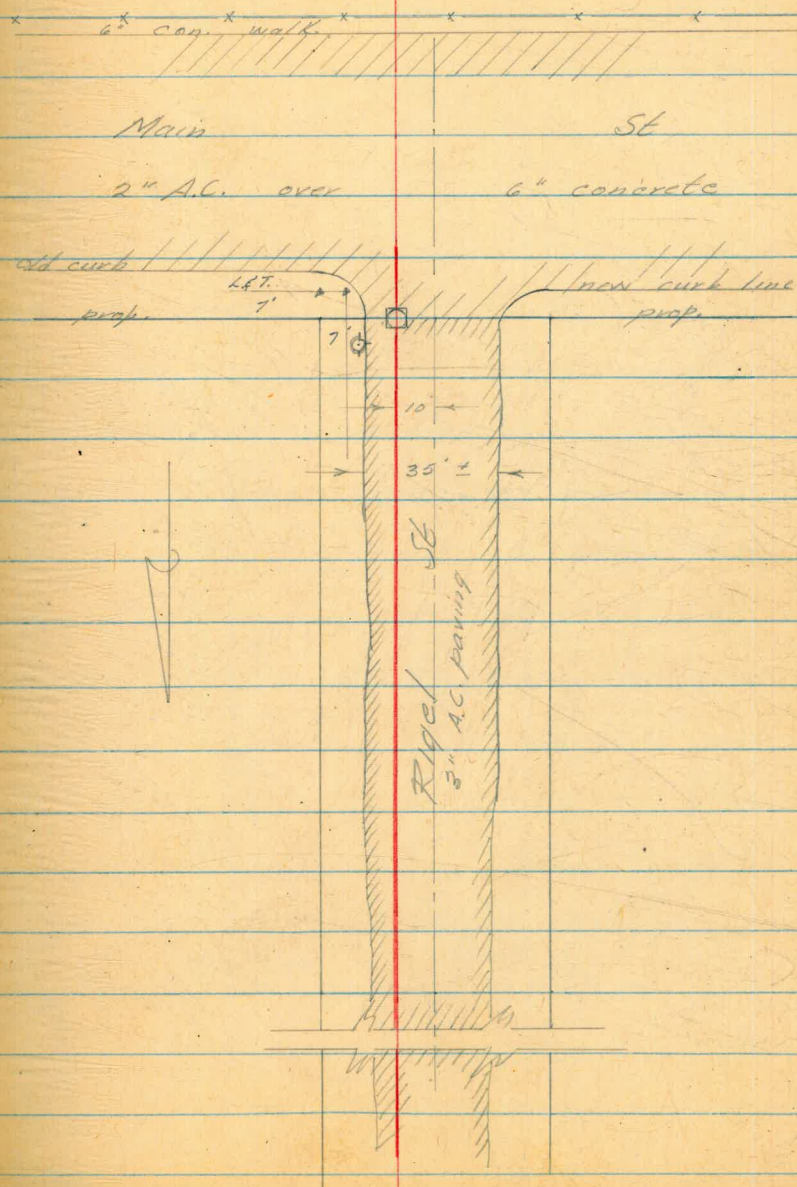
Sewer M.H. 5.9 to Flow

curb line

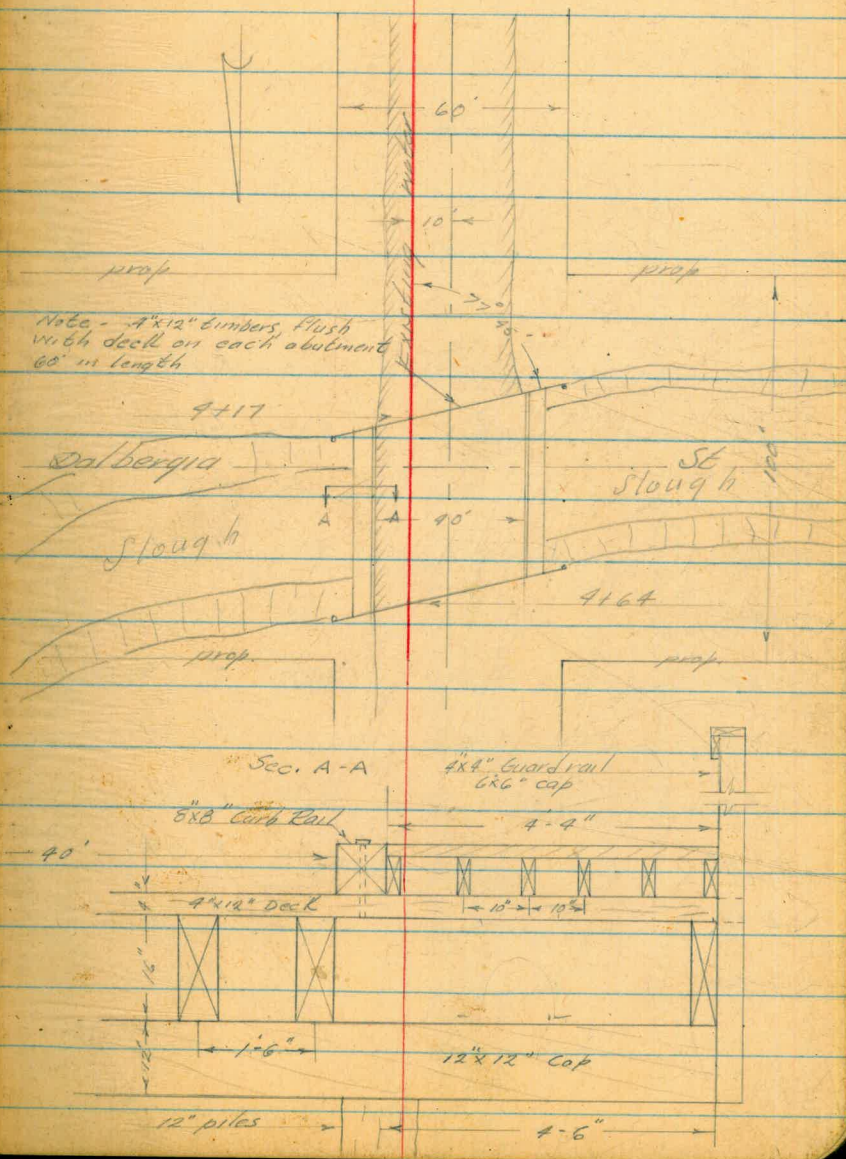
S.W. B.P. Corlelon = 134.09

Profile of Existing Water Main
Rigel St., Main to Dalbergia

0+00	Fence line Navy prop
+03	Top curb
+03	Gutter
+6.8	Old curb line
+73	New curb line
+80	No prop line of 5' x 5' Valve Box
+85	F.H. 10' RL



4+17 P1. Water and So. Abutment



Reduced by
R.E. Barber
7-22-54

N.E. 1st. Silva & Main

5.21

5.17 10.38 ✓

4.52 5.86 ✓

9.68 10.54 ✓

0+00	4.2	6.34
+03	4.3	6.24
+03	4.8	5.74
+30	4.2	6.34
+40	4.2	6.34
+63	4.4	6.14
+68	4.7	5.84
+73	4.6	5.94
+80	4.5	6.04
1+30	4.0	6.54
1+80	3.9	6.64
2+30	3.9	6.64
2+80	3.8	6.74

Fence line Navy prop.

con. walk, top curb

gutter

Old curb line to East, Main St.

New curb line West, Main St.

5x5' con Valve Box cut 8.0 to bottom

10.54 ✓

T.P.

3.94 6.60 ✓

3.80 10.90 ✓

3+30

3.7 6.70

3+80

4.1 6.30

4+17

4.2 6.20

4+30

4.3 6.10

4+64

4.5 5.90

4+80

4.7 5.70

5+30

6.0 4.40

5+80

5.9 4.50

T.P.

4.25 6.15 ✓

4.47 10.62 ✓

4.85 5.77 ✓

4.45 10.22 ✓

5.02 5.20 ✓

P.I. So. bridge abutment & existing water

P.I. No. " " " "

N/E of Dalbergia

NE. L&T Silva & Main

Rigel St

Main St to Dalbergia St

WEST
WILLIAMS T
ALEXANDER †

11

4/22/55 PARTLY CLOUDY

NE LIT Silva + Main St

(7) LIT NE Cor Main + Rigel St

	5.46	10.67		5.21	
	5.00	11.34	4.33	6.34	
0+21			5.3	6.0	-5.0
+29			5.1	6.2	2.2
+50			5.0	6.3	2.3
1+00	4.91	11.32	4.93	6.41	2.4
0+96 mE			5.2	6.1	6.5
1+19 mW			5.2	6.1	6.6
+50			4.6	6.7	2.6
2+00			4.6	6.7	2.8
+46 mW			4.8	6.5	6.8
+50			4.5	6.8	3.0
3+00			4.4	6.9	3.0
+50			4.6	6.7	3.0
+83 ²¹ X			4.8	6.5	3.4
A+00 ⁸³ X			5.3	6.0	3.9
+50			5.5	5.8	4.0
+78 ⁸¹ X			5.8	5.5	4.0
A+96 ⁸¹ Back			5.6	5.7	3.4
=4+86 ²¹ AH					

0/10

C 4²C 4²C 4²C 4²Fo ⁴Fo ⁵Fo ¹C 4 ¹C 3 ⁹C 3 ³Fo ⁸C 3 ⁸C 3 ⁹C 3 ⁷C 3 ¹C 2 ¹C 1 ⁸C 1 ⁵C 2 ³

45° Bend

45° Bend

45° Bend

45° Bend

RIGEL CONT.

12

11.32

5+00

2.0 5.3 2.2

C3 ¹

+07

6.1 5.2 -4.3

C9 ⁵

end of work

4.73 6.59 = 6.6

1+80 see page #9

Commercial St
29th St West 5Ks for Meters
0+00 West Prop Line 29th.
Meters Set 28th from 12011 L

468 76.73 72.05

473 73.15 8.31 68.42

0+18 MS 4.8 68.4 68.4

0+79 MN 4.5 68.7 68.8

0+87 MS 4.7 68.5 68.2

1+26 MS 4.9 68.3 68.0

2+31 MS 5.3 67.9 67.8

2+37 MN 5.1 68.1 68.4

2+74 MS 5.3 67.9 67.8

3+00 MS 5.2 68.0 67.6

3+29 MS 5.4 67.8 67.6

3+50 MN 5.4 67.8 68.0

4.64 71.98 5.81 67.34

3+94 MN 4.4 67.6 67.8

4+33 MS 5.7 66.3 66.8

5+62⁵ MS 5.4 66.6 66.5

6+62 MS 5.4 66.6 65.9

7+84 MS 6.3 65.7 65.5

8+97 MN 6.3 65.7 65.5

West 5147.5

Williams 5154 5+4

Varonakis

Kellhofer

11/7/55

13

5154 5+4 20 West

11/7/55 11/6/28

SWAP 29th + Imperial

CO⁰ 2873 29th St

FO¹ 2866

CO³ 2867

CO³ 2863

CO¹ 2843

FO³ 2946

CO¹ 2835

CO¹ 2831

CO² ✓ 2825

FO² ✓ 2826

FO³ 2812

FO² 2803

CO¹ #2 28th St

CO² 2765

CO² 104 Henley St

CO³ 2730

71.98

9+51 MS

7.4	64.6	65.0	FOI	2729
		67.55		
4.43	67.55	NY Lt T 28th Commercial		

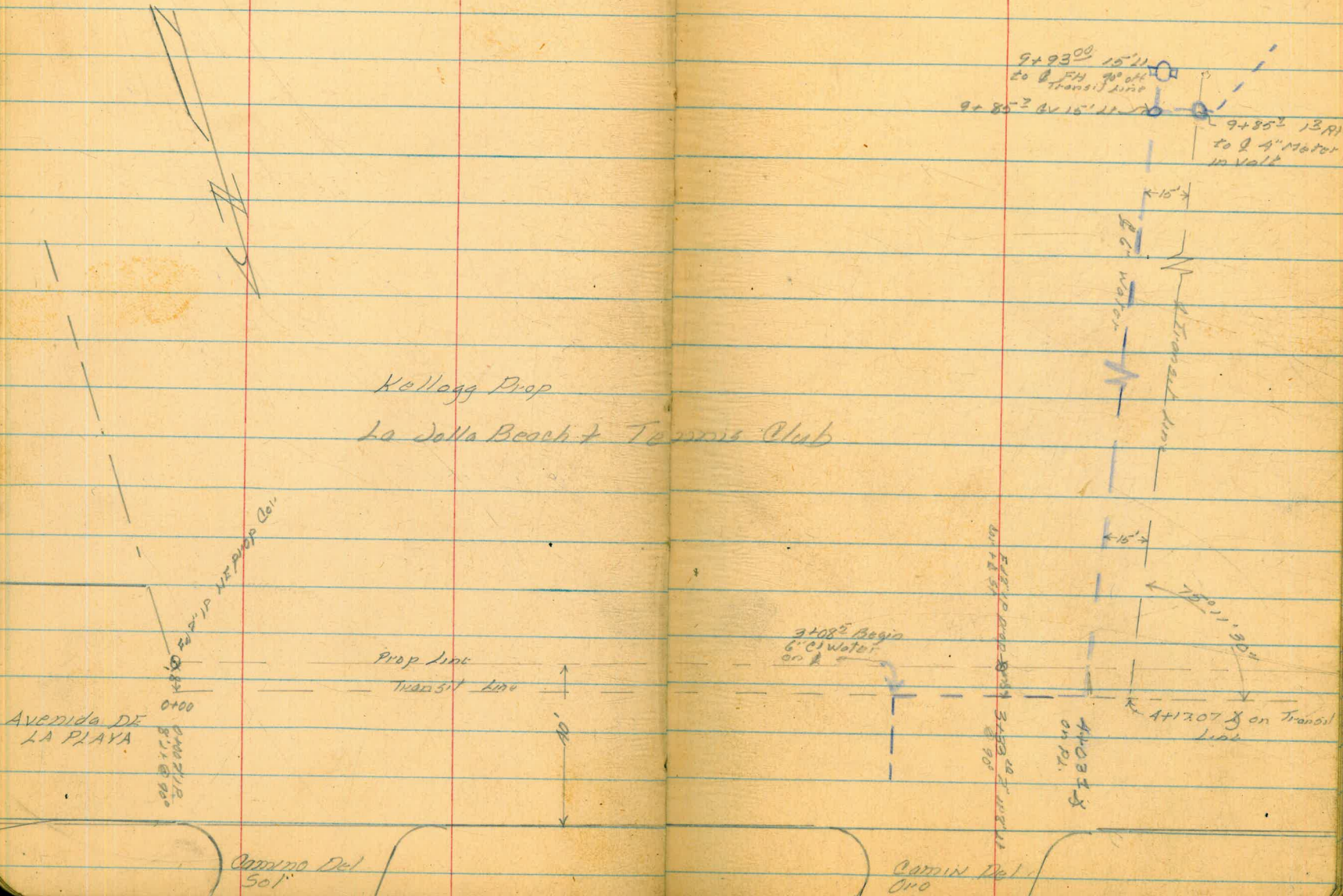
Location Survey for Water Main
in Kellogg Property, Avenida De
La Playa, Camino Del Oro

West
Williams
Varonakis
Kellhofer

11/8/55

313310
70.3
1,0340
8357
2,3310
4,7787
94852

15.



Kellogg Prop
La Jolla Beach & Tennis Club

9+93.00 15' 21" to 2" FH 4" on Transit line
9+85.2 2' 15" 11" 1/2" to 2" 4" Motor in Vault

15' 21" 13' 11" 15' 21" 13' 11"

15' 21"

15' 21"

15' 21"

15' 21"

15' 21"

15' 21"

15' 21"

15' 21"

EIGHTH AVE PENNSYLVANIA

To South End

Group 201

Preliminary Survey

Proposed R.L. 5' West of East Ob Line

4+48.3 CV + 00 end of existing PL

3+92.5 15° 49' 50" LL To CV end of Line

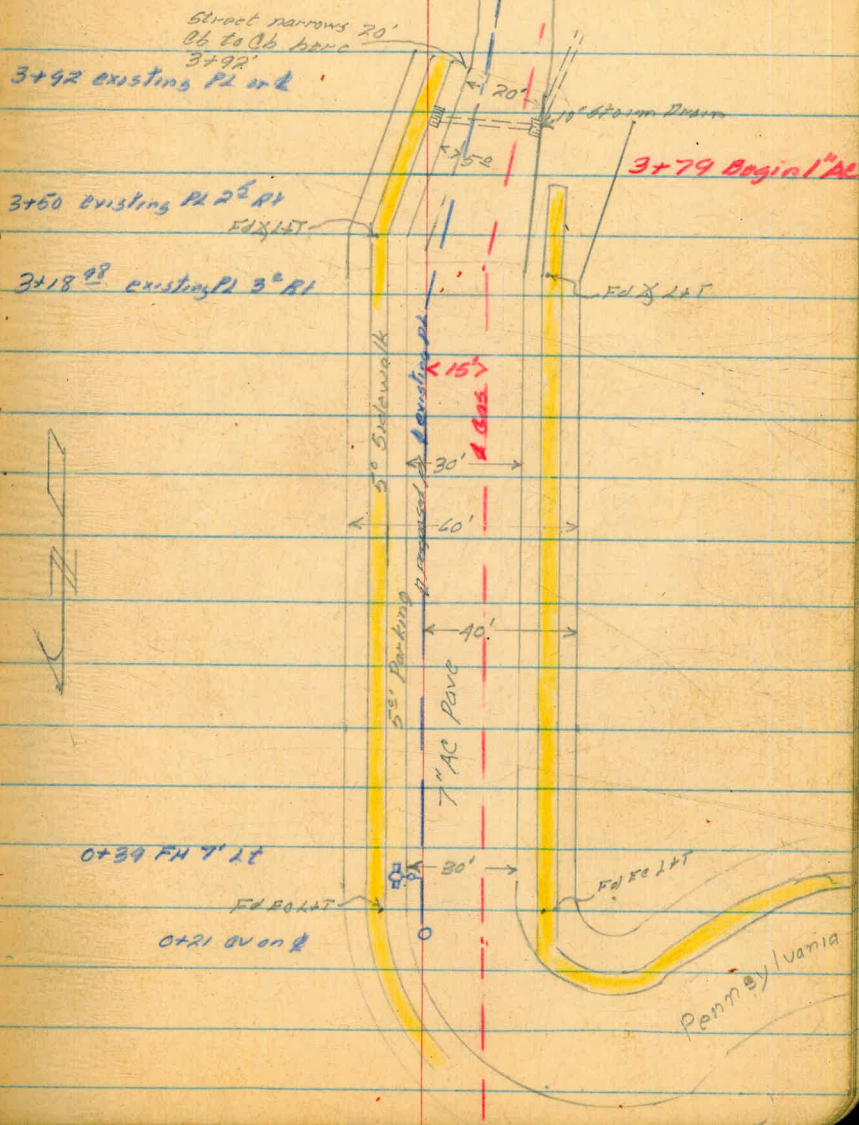
3+18.98 (19° 06' 00" RR) 26° 48' 40" RT (6) East Ob

0+30 POT FC Street Curve

West
Williams
Varon, Pokis
Kellhofer

16

4/20/54



	0.65	288.28	287.63
	1.37	279.42	10.23 278.05 = 278.04
	6.11	275.05	10.48 268.94
0+00		6.68	268.37
+08		7.33	267.72
+50		5.97	269.08
1+00		4.75	270.30
+50		4.17	270.88
2+00		4.22	270.83
+50		4.90	270.15
3+00		6.30	268.75
	1.76	270.44	6.37 268.68
3+18 ⁹⁸		2.54	267.90
+50		3.92	266.52
+80		5.31	265.10
+80		6.9	263.54
+94		8.0	262.44
+92		6.03	264.41
4+00		6.55	263.89

Reduced by
100, G.S.

(71)
BM HTA SE Cor 6th + Penn
BM HT(71) SE Cor. 7th + Penn

on Driveway NE Side of St

Gutter Line

5.6
5.2
6.9
2⁵ ft Top 10" Storm Drain

11' ft Top 10" Storm Drain

6.21
5.2 ft edge of Driveway

6.7
1.3

270.44

A+30 8.66 261.78

A+39^B 10.77 259.67

5.93 275.47 0.90 269.54

8.93 279.80 5.20 270.27

1.15 278.05 = 278.04

Reduced by
Leg. 6. J.

12" Lt end cone driveway

Top CV Cover

Water Meters

0+69 East 3679

0+93 West 3678

0+98 E 3675

1+44 W 3670

1+44E 3665

2+76 W 3650

2+08 E 3653

3+32 W 3640

2+50 E 3647

4+00 W 3632

2+86 E 3641 ← 2 Meters

1+48 3606

2+94 E

3+61 E 3631

4+98 E 3601

34th ST LAUREL TO MAPLE
Pelim Group 201

4 4+20²¹ Nly Cutter Line Maple

0+80 (See)
3+61⁵⁰ POJ 10' 11" to 3/4 IP Prop Car

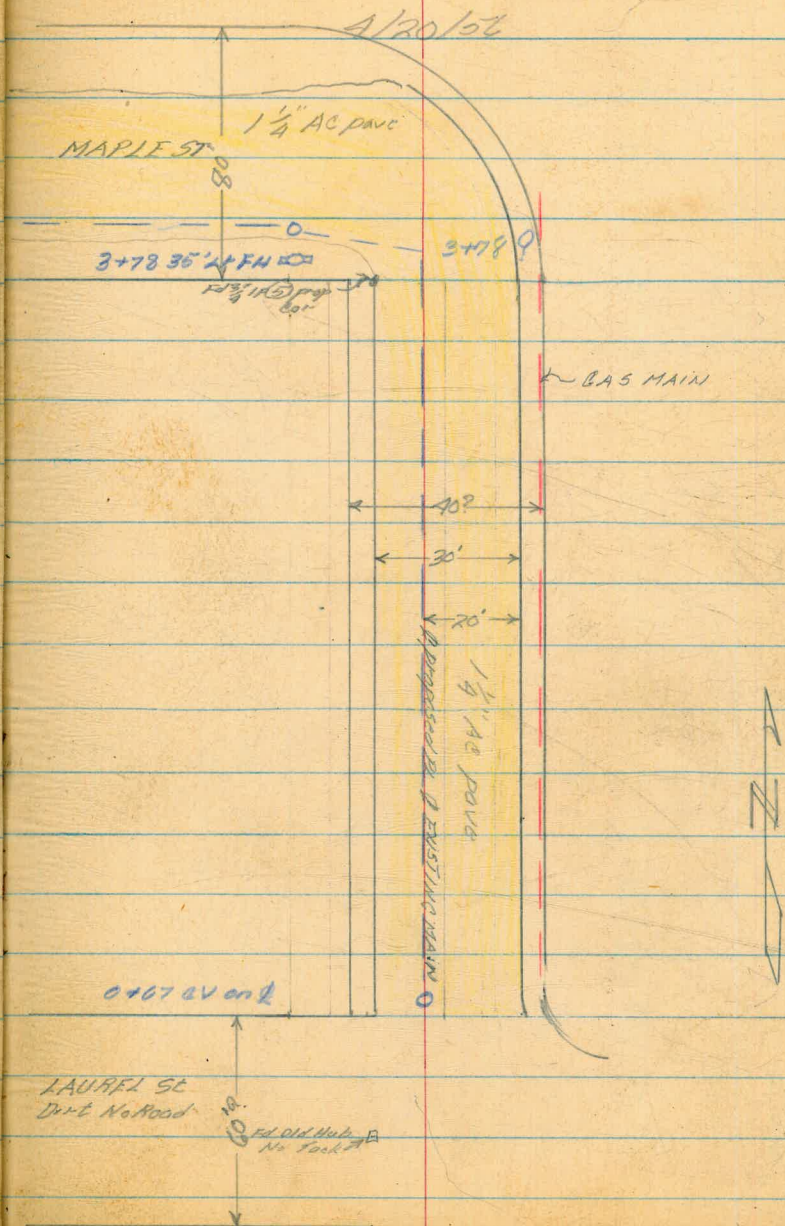
(SURVEY STA. 0+00 = STA 4+45 ON DRAWING)
See, to g.

4+65 (See) → Sly prop line Laurel St
0+00

West
Williams
Varonakis
Kellhofer

Clear + Warm

19



	2.16	290.91		288.45
	2.38	284.20	9.09	281.82
4+45 (See)	0+00		13.3	270.90
	+46 ³		12.12	272.08
	+50		11.95	272.25
3+45 (See)	1+00		11.04	273.16
	+50		10.07	274.13
2+45	2+00		9.02	275.18
	+50		7.99	276.21
1+45	3+00		6.95	277.25
	+50		6.01	278.19
0+45	4+00		5.11	279.09
0+25	+20 ^{2A}		4.91	279.29
	2.28	284.83	1.65	282.55
	8.12	292.92	0.03	284.80
			4.46	288.46 = 288.46

Reduced by
Log G.J.

BM SE L+Diso Terasita + Nutmeg

South prop line Laurel $\frac{13.4}{10' RL}$

Begin AC Pave

 $\frac{11.17}{10' RL}$ $\frac{9.24}{10' RL}$ $\frac{7.23}{10' RL}$ $\frac{5.34}{10' RL}$

Ely Cutter Line Maple

Top FH SW Cor Maple L391
Water Mts

0+91 Met West	2504	0+77 Met EAST	2503
1+38 Met "	2512	1+25 Met "	2509
1+86 Met "	2520	1+87 Met "	2515
2+36 Met "	2528	2+57 Met "	2523
2+85 Met "	2536	3+28 Met "	2531
		4+20 Met Ely	2539

NUTMEG ST Bancroft to Felton

UNIT

Pelims Group 201

2+87 1/2 POT LFT 18' RT

227
25
23

0+07 POT

0+00 Wly prop line Bancroft

West
Williams
Voronofakis
Kellwater.

18'

40'

4/20/56

See page 24
for Cont
Sketch 21

Water 3+95

33

3+690as

FD 3+90 FH 35' RL

3+30 water

8' Sewer

32

FD(20) LFT 2+87 1/2

5' Sidewalk

2' AC over 6" Cond pipe

A proposed Fl

26'

5' Sidewalk

80'

52'

A proposed Fl

25'

Bancroft St

0+97

0+51 Water

Abandoned 4" c.i.

8" Sewer

0+69 FH

0+30

Gas Xing

FELTON 0+07

Also -
16" c.i. Water
(Bancroft St.
Pipeline)
at 0+27

Profile Nutmeg

Rede'd
by
Rocky

6.05	300	13	294.08
0+00	8.66		291.3
		+3.5 To Flow	
0+39	7.85		292.15
+50	7.65		292.4
		+4.3 To Flow	
+86	6.74		293.26
1+00	6.46		293.6
+50	5.1		294.9
2+00	3.81		296.2
+50	3.15		296.9
3+00	4.47		295.5
		+2.7 To Flow	
+21	5.20		294.8
+50	6.00		294.0
4+00	8.31		291.7
+11	8.89		291.1
+50	TP0.88	288.86	12.15
			287.98
5+00	5.4		283.5
+50	10.1		278.8
6+00	13.2		275.7
		+16.5 To Top of pipe	
+27	14.7		274.16

BM NE BP Bancroft + Nutmeg

Wly prop line Bancroft to South

Top Nly Rim Sewer MH 25' RT

Top Sly Rim Sewer MH 13' LT

Top South Rim Sewer MH 14' LT

end AC pave

16' RT Top Grate Storm Drain

13.4
1.3

Read'd
by Rocky

6+94 48' 11" BV
7+00 EH 54' 44"

23

288.86

+5.4 to top of pipe

115
1350
1305

6+45

13.57 275.31

27' 4" Top Grate Storm Drain

6+50

13.7 275.2

6+58

13.4 275.5

Begin. AC Pave

7+00

12.48 276.4

7+15

12.06 276.8

BV 15' RL

598 293.25 1.59 281.27

487 288.38 288.45

BM SE Copper Disk Terasita + Nutmeg

288.86
12.48
276.38

282.27
6.06
276.21

NUTMEG BANCROFT TO FELTON

CONT

West
Williams
Voronakis
Kallhofen

24

4/23/56

7+11^E

end of work

7+02 E.H. 54'117

15' AC OVER 6" CORE
PAVING

7+11^E ON 15' RL

6+97 water

Felton St

6+74 Case

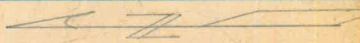
Felton St
No Road

Acoustics Pl

Nutmeg
Dist 54
A. Spangol Pl

20'

10'



TAFT ST FORWARD TO BIRD ROCK
Preliminary 201

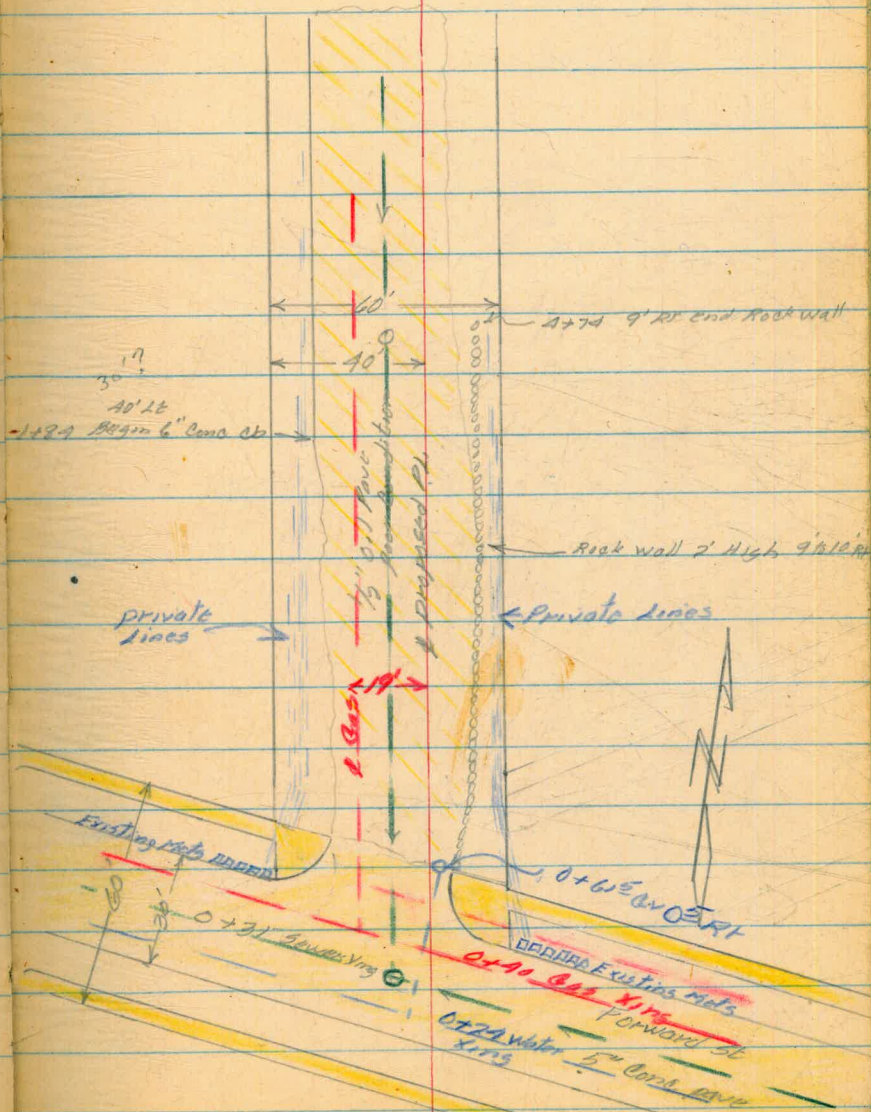
West
Williams
Varonakis
Kullbofer

75

1/23/56

5+19⁵⁵

End of Work



0+00

Sly prop line Forward St

Taft St
Profile

Rede'd
by Rocky

Midway Bellevue
NW 87 120.00

26

	7.78	145.27	137.49
0+00		2.2	143.1
+15		2.56	142.7
+15		3.21	142.1
+33		3.95	134.9
+50		4.65	140.6
+61.23		4.72	140.6
1+00		1.65	143.6

BM SE Top FH Forward + Bellevue

Sly prop line Forward

Top ab

Cutter Line

Lt.
10' Bl Top Fly Rim Sewer MH

end here begin oil pave

	12.27	157.51	0.03	145.24
+50		11.35		146.2
2+00		8.43		149.1
+50		5.92		151.6
3+00		3.22		154.3
+50		0.19		157.3

12.87 170.34 0.04 157.47

7.1 To Flow Line

+56		12.40	
4+00		10.20	160.1
+50		7.64	162.7
5+00		3.92	166.4

Top east Rim Sewer MH 10' Lt

170.34

5+49⁵⁵

+3.5

173.8

end of Work

1.25 158.39 13.20 157.14

1.28 147.17 12.50 145.89

9.66 137.51 = 137.49

1.19 138.68 137.49

2.13 129.41 11.40 127.28

9.36 120.05 = 120.00

NW RR B. Newbie + Midway

WILCOX ST Silvergate to 250' Wly
Pelim

Wesl
Williams
Varonfakis
Kellhofer

28

4/25/56

3+19³ EV on R

3+10²⁴ POT

2+57⁹¹ POT

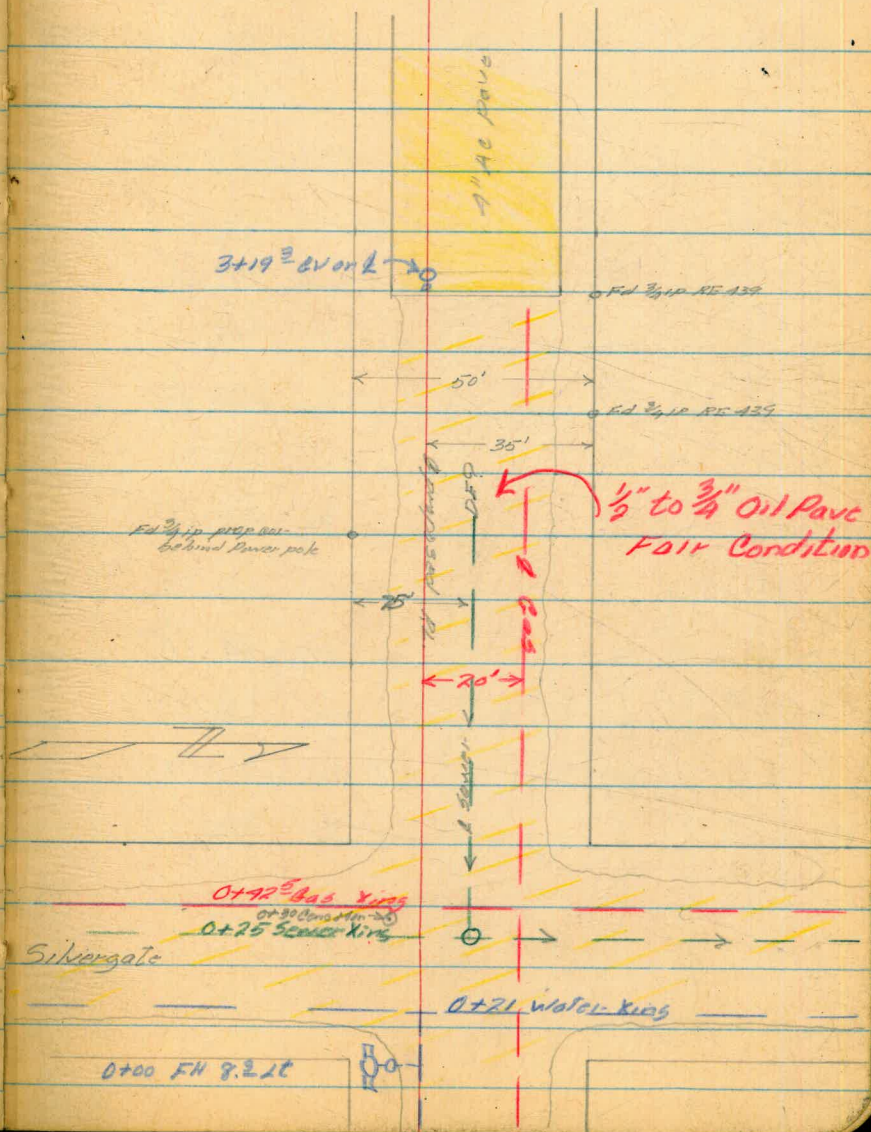
0+30 POT

809 LT FH Bend Man on old

Q of Silvergate

Silvergate

0+00 FH 8.2 LC



Wilcox St
R Profile

29

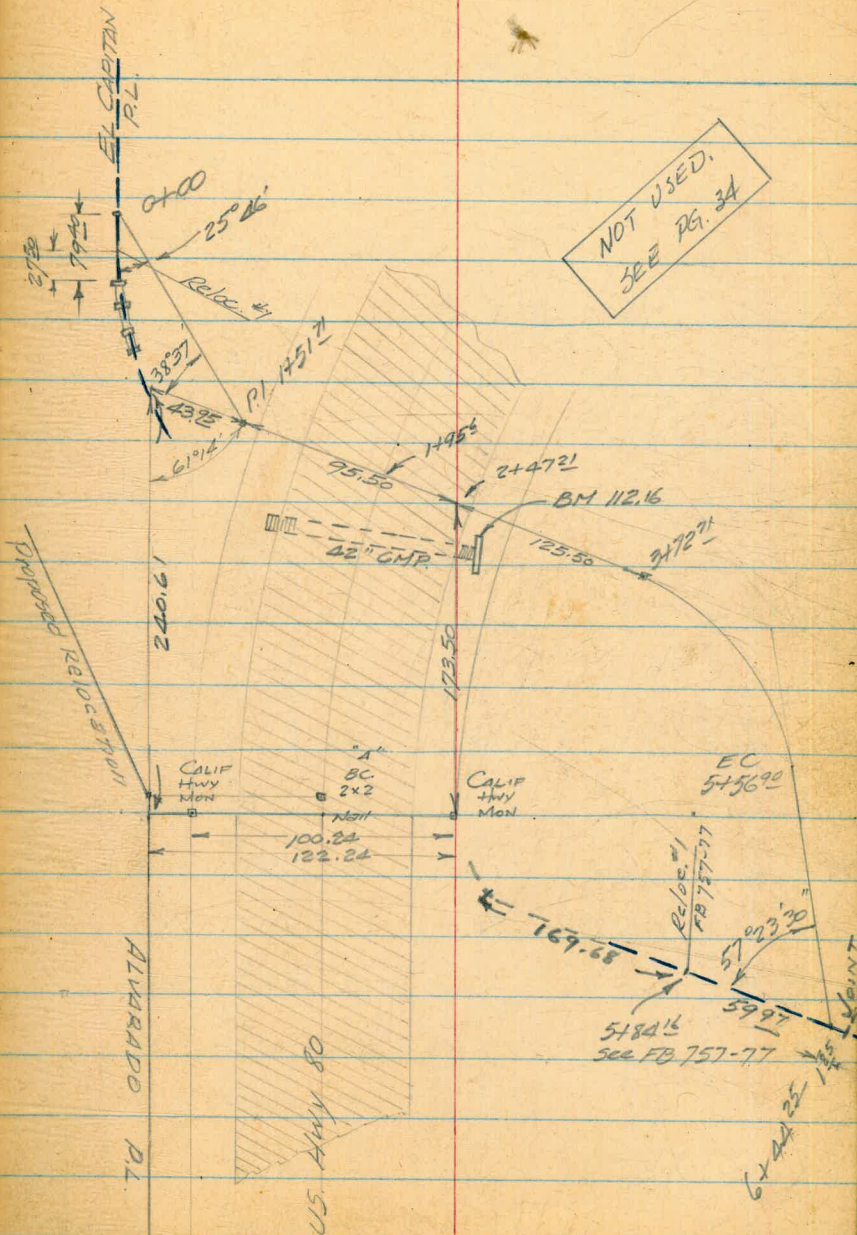
6.12	299.72	292.60		BM East Eb of Silvergate & Dudley St
		8.65	291.07 = 292.70	BP BP on East Eb Silvergate + Charles St
1.52	294.22	292.70		
8.38	293.28	9.32	284.90	TP Top FH SE Cor. Wilcox + Silvergate
0+00		11.46	281.82 + 7.9 to Flow	
0+25		10.32	282.96	Top South rim sewer MH 10' H
+50		10.18	283.10	
1+00		7.86	285.42	$\frac{7.9}{8' H}$ edge Oil
+50		4.36	288.92	$\frac{7.8}{22.5}$ edge Oil
2+00		2.88	290.40	$\frac{2.6}{7.2}$ edge Oil
+50		3.00	290.28	$\frac{3.7}{24.8}$ edge Oil
3+00		5.31	287.97	$\frac{5.3}{5' H}$ edge Oil
+12 ⁵		6.16	287.12	Begin AD pava + lbs improved st
10.36	295.11	8.53	284.75	
		2.39	292.72 = 292.70 BM	

EL CAPITAN P.L.
PROPOSED RELOCATION AT
ALVARADO FREEWAY

OCTOBER 1 1956
BEATTY WEST
KEMP WILLIAMS
SMITH PAULSON
OBRIEN

30

- 6+44.25 P.I. $57^{\circ}23'30''$ LT to E EL Cap. P.L.
Intersection with Original
EL CAPITAN P.L.
- 5+56.90 EC
 $\Delta = 52^{\circ}46''$ RT
 $R = 200$
 $T = 99.21$
 $L = 184.19$
 559.235 per ft.
- 3+72.71 BC
- 3+00 P.O.T.
- 2+86 90° RT 119° to Dam Well
- 2+54.30 90° RT 268 to E Inlet } 42" C.M.P.
1+68.93 90° RT. 6920 to E outlet }
- 1+57.71 P.I. $38^{\circ}37'$
 $39^{\circ}55'$ LT.
- 0+00 Intersection EL CAPITAN P.L.



EL CAPITAN RELOCATION
(CONT)

B.M.	1.76	113.92 ^v		112.16 ^v	BOLT IN CULVERT HEADWALL
TP			12.58	101.34 ^v	
	3.08	104.42 ^v			
TP			13.09	91.33 ^v	
	3.82	95.15 ^v			
0-02			7.6	87 ⁶	GROWN LINE
0+00			12.24	82 ⁹¹	TOP OF PIPE
0+10			6.2	89 ⁰	
0+14			7.2	88 ⁰	
0+20			5.0	90 ²	
0+26			3.9	91 ³	
TP	12.18	103.03 ^v	4.30	90.85 ^v	
0+38			5.2	107 ⁸	
0+50			2.4	100 ⁶	
TP	13.07	114.74 ^v	1.36	101.67 ^v	
0+85			8.5	106 ²	
1+00			7.2	107 ⁵	
1+31			4.6	110 ¹	
1+51 7' X PT			2.7	112 ⁰	
1+60			1.42	113 ³²	N. EDGE PAVEMENT

114.74 \checkmark 1+95^e1.61 113¹³

C PAVEMENT

2+00

1.60 113¹⁴

2+34

2.30 112⁴⁴

S. EDGE PAVEMENT

2+50

1.7 113⁰

P

10.73 123.91 \checkmark 1.56 113.18 \checkmark

2+83

12.2 111¹

3+00

10.8 113¹

3+16

9.4 114⁵

3+29

3.4 120⁵

3+36

3.0 123⁹

P

12.59 135.20 \checkmark 1.30 122.61 \checkmark

3+39

10.4 124⁸

3+50

6.0 129²

P

12.82 147.49 \checkmark 0.55 134.65 \checkmark 3+72²¹ B.C.9.2 136³

P

12.68 160.00 \checkmark 0.17 147.32 \checkmark

4+00

10.6 149⁴

P

13.15 172.70 \checkmark 0.45 159.55 \checkmark

4+25

11.1 161⁶

	172.70 ✓			
P	12.61 183.36 ✓	1.95	170.75 ✓	
4+50		2.0	174 ⁴	
P	12.77 195.09 ✓	1.00	182.32 ✓	
4+75		6.9	188 ²	
P	12.91 208.00 ✓	0.00	195.02 ✓	
5+00		7.3	200 ⁷	
5+25		0.3	207 ⁷	
P	11.39 218.99 ✓	0.40	207.60 ✓	
5+56 ⁹⁰ E.C.		4.8	213 ²	
6+00		3.4	214 ⁶	
6+33		3.8	214 ²	
6+36		5.8	212 ²	
6+44 ²⁵ P.1		7.63	211 ³⁶	TOP OF PIPE
6+44 ²⁵ P.1		7.01	211 ⁹⁸	INTERSECTION/RELOCATION LINE & EL CAPITAN LINE
P	0.99 206.73 ✓	13.25	205.74 ✓	1 ST LT TOP OF PIPE AT JOINT
		4.66	202.07 ✓ = 202.09 ✓	TOP OF PIPE - 2+01 - FB 757 P. 73
		5.13	201.65 ✓ = 201.64 ✓	P F.B. 757 P. 73
P	5.92 199.52 ✓	13.21	193.52 ✓	
		7.55	191.95 ✓ = 192.00 ✓	TOP PIPE STA 5+84 ¹⁶ F.B. 757 P. 79

EL CAPITAN Pipe Line
Relocation

West
Williams
Paulson

10/9/56

6+51.82 52°18' intersection with El Capitan line

5+75 POT set spike

5+29.81 EC
 $\Delta = 52^\circ 46'$
 $R = 200'$
 $L = 184.19$

Pipe Joints

39.40
Begin Trestle

29.7
27.5
25.5

EL CAPITAN
P.L.

0+00 Page 30

0+00

150' W

30°

20' SE

66°16'

225.5'

90°

US HWY 80

3+45.62 BC

2+56.5 90° RL Well 133 RL

2+50 POT

2+23.5 90° RL 42" CMP 25' RL

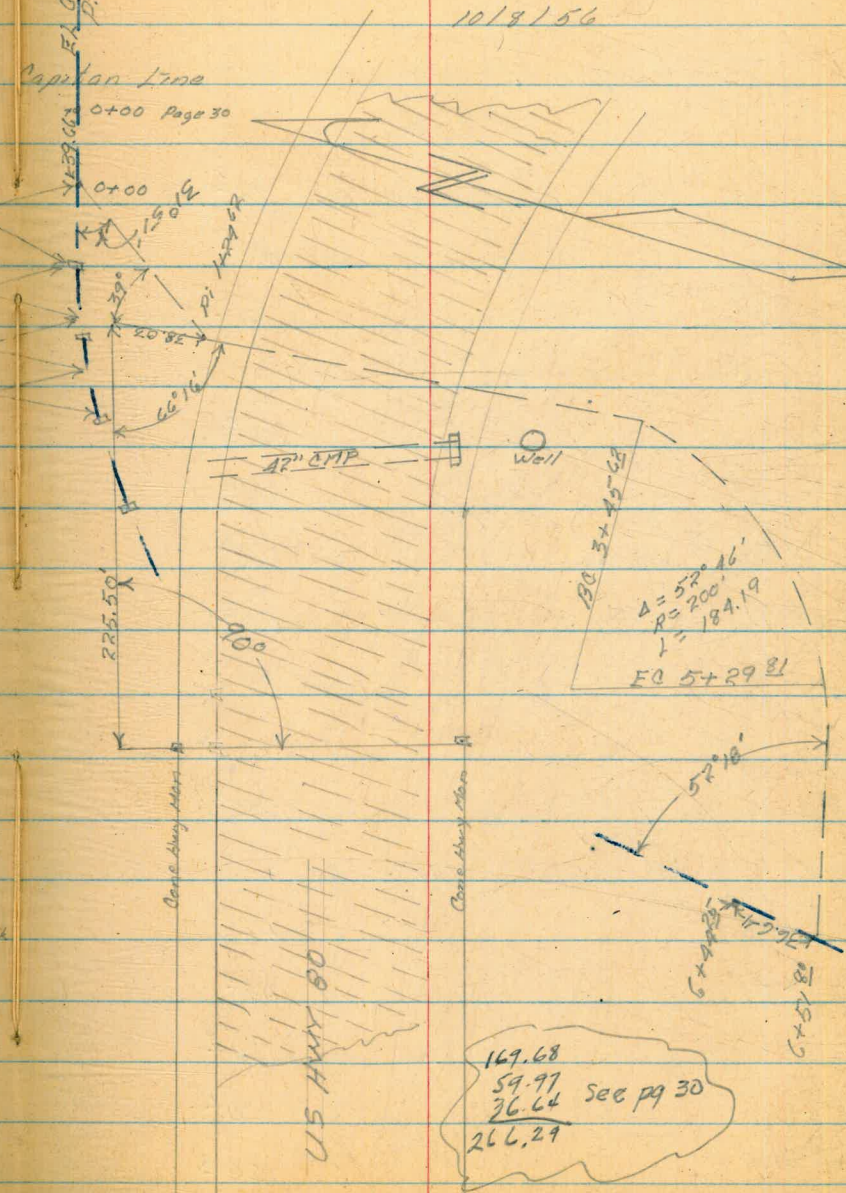
1+70.18 Nail in Freeway

1+40.20 90° RL End of 42" CMP 59.95 RL

1+29.62 PI 39°00'00" LL set 2"x2" RW Hubstack

0+00

El Capitan P.L.



169.68
59.97
26.64 Sec pg 30
266.29

EL CAPITAN PL.

Relocation Profile

West
Williams
Poulson

35

City Datum

10/8/56

1.89	114.00 ^v	112.16 ^v	Bolt in Culvert Head
2.23	103.09 ^v	100.86 ^v	
0+00		10.5 92 ⁶	Top Ground on El Capitan Line
+16		8.6 94 ⁵	
+37		2.1 101 ⁰	
TP	12.82 115.00 ^v	0.91 102.18 ^v	
+50		12.2 102 ⁸	
1+00		8.4 106 ⁶	
+24 ⁶² pi		4.5 110 ⁵	
+31		1.0 114 ⁰	Top of Road bank Nly Side Freeway
+36		1.37 113 ⁰³	Begin AC pave Nly " "
+70 ¹⁸		1.65 113 ³⁵	Start on 2 Freeway
2+06		2.51 112 ⁴⁹	End AC pave Sly Side Freeway
	13.29		
TP on BM Bolt	125.44 ^v	2.85 112.15 ^v	
+50		12.8 112 ⁶	
+86		11.3 114 ¹	
3+00		5.2 120 ²	
+06		5.3 120 ¹	
+11		1.6 123 ⁸	

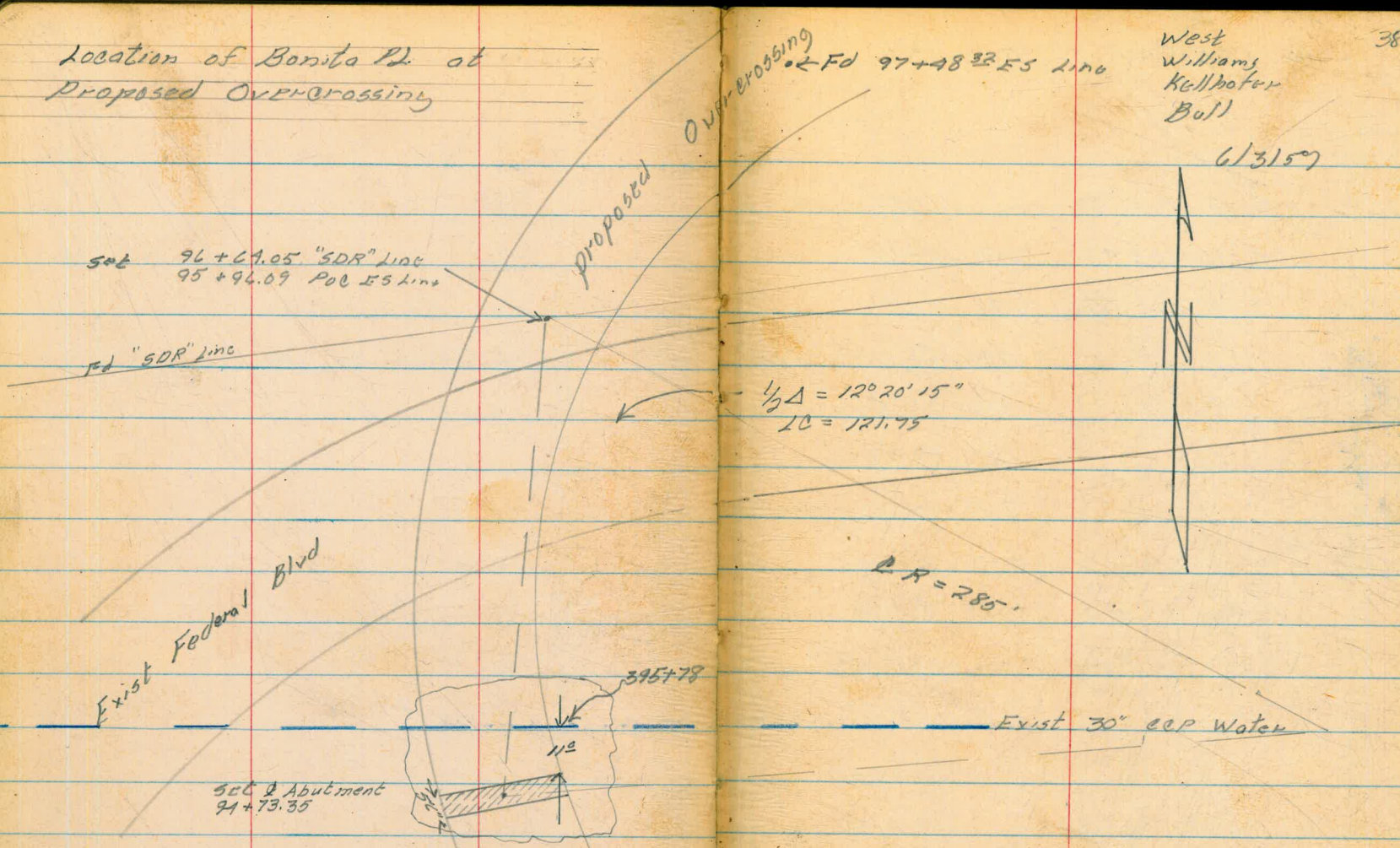
125.44[✓]12.97 138.27[✓] 0.14 125.30[✓]3+45⁶² BC 1.4 136⁹TP 13.14 151.11[✓] 0.30 137.97[✓]+75 3.2 147⁹TP 12.92 164.01[✓] 0.02 151.09[✓]4+00 4.4 159⁶TP 12.99 176.72[✓] 0.28 163.73[✓]+75 3.9 172⁸12.58 188.50[✓] 0.80 175.92[✓]+50 0.3 188²12.88 200.83[✓] 0.55 187.95[✓]+75 0.2 200⁶12.58 212.48[✓] 0.93 199.90[✓]5+00 1.3 211²11.88 224.19[✓] 0.17 212.31[✓]+29⁸¹ FC 6.4 217⁸+50 2.7 221⁵4.96 227.56[✓] 1.59 222.60[✓]6+00 3.1 224⁵

227.56^v

6+39

30 224⁶+51⁸⁰ piA.7 222⁹1.66 217.35^v 11.87 215.69^v5.98 211.37^v =211³⁶ / 6+44²⁵ old pi See page 33Top of Ground at intersection
of E1 Cap line

Location of Bonita Pl. at
Proposed Overcrossing



Proposed Overcrossing
← Fd 97+48³² ES line

West
Williams
Kellhofer
Bull

6/3/59

set 96+67.05 "SDR" line
95+96.09 POC ES line

Fd "SDR" line

$$\frac{1}{2}\Delta = 12^{\circ}20'15''$$

$$LO = 121.75$$

$$R = 285'$$

Exist Federal Blvd

Exist 30" c/cp Water

set of Abutment
21+73.35

B.M	5.42	57.39	57.97
	8.51	64.85	105 56.34
	8.67	72.54	0.99 63.97
395+78			- 7.81 64.73
			4.0
	0.42	60.19	1277 59.77
CK BM			8.24 51.95 = 51.97

BM BP NW Cor 35th + Federal

Top of 30" Pipe 395+78
Top of Ground

EL CAPITAN P.L. Relocation
Tie in as built

West
Williams
O'Brien
Courtney

39

1-2-58
2-1-58

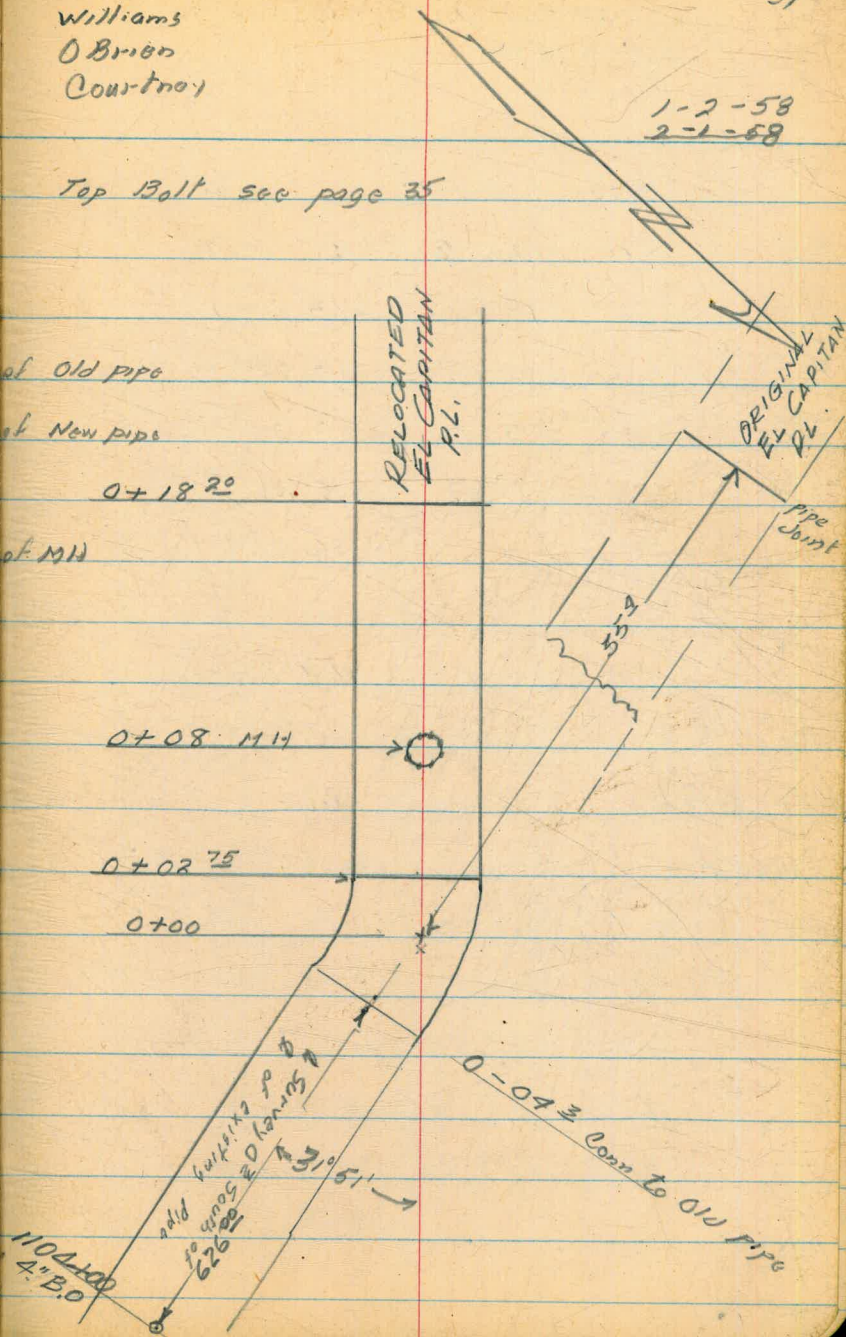
Top Bolt see page 35

4.04	116.20		112.16	
0.05	103.99	12.51	103.69	
3.10	95.44	11.40	92.34	
0-04 ³		7.22	88.22	Top of Old pipe
0-04 ³		7.03	88.41	Top of New pipe
0+02 ⁷⁵		6.29	89.15	
0+08		4.96	90.48	Top of MH
0+18 ²⁰		5.54	89.90	
12.54	106.50	1.98	93.96	
12.00	117.09	1.41	105.09	
		4.92	112.17 = 112.16	

P Top M.H	4.76	95.24	90.48	
B. 0+02 ⁷⁵		Top pipe	6.10	89.12 = 89.14
0+00	@ P.L.	" "	6.48	88.76
39 0-04 ³	Begin Reloc	" "	6.85	88.39 = 88.41
	= 1110+26°	EL CAPITAN P.L.		

CK

1104+00 4" B.O. EL CAPITAN P.L



EL CAPITAN PL. WEST END
CONNECTION.

WEST X
WILLIAMS
O'BRIEN
COURTNEY †

40

1-2-58

	13.22	164.10	150.88	City Datum
T.P.	13.10	176.80	0.40	163.70
T.P.	12.69	188.85	0.64	176.16
T.P.	13.12	201.64	0.33	188.52
T.P.	12.34	213.67	0.31	201.33
T.P.	12.00	225.02	0.65	213.02
		3.36	221.66	
		3.62	221.40	
6+57 ⁸¹ ±		3.57	221.45	
6+58 ⁸⁰		2.09		
6+67 ³		0.00	225.02	
	0.00	213.03	11.99	213.03
B	0.29	200.30	13.02	200.01
	0.37	187.86	12.81	187.49
3	0.75	175.28	13.33	174.53
	0.47	163.27	12.48	162.80
C		12.35	150.92 = 150.88	

Top 1 1/2" sp See EB 757 P 72

(Top of New cone pipe wly side of first joint
14' Ely of special

Top of New cone pipe East of special

Top of pipe Ø of special

Top of sly end of special connection to Old Pipe

Top of Old pipe = 231.14 = USGS Datum
- 3.08 Dia. pipe
228.06 Bottom pipe
= 228.0 on Rev. profile
at Sta 1117+29
✓

218.12

EL CAPITAN P.L.
WEST END CONNECTION
AS BUILT

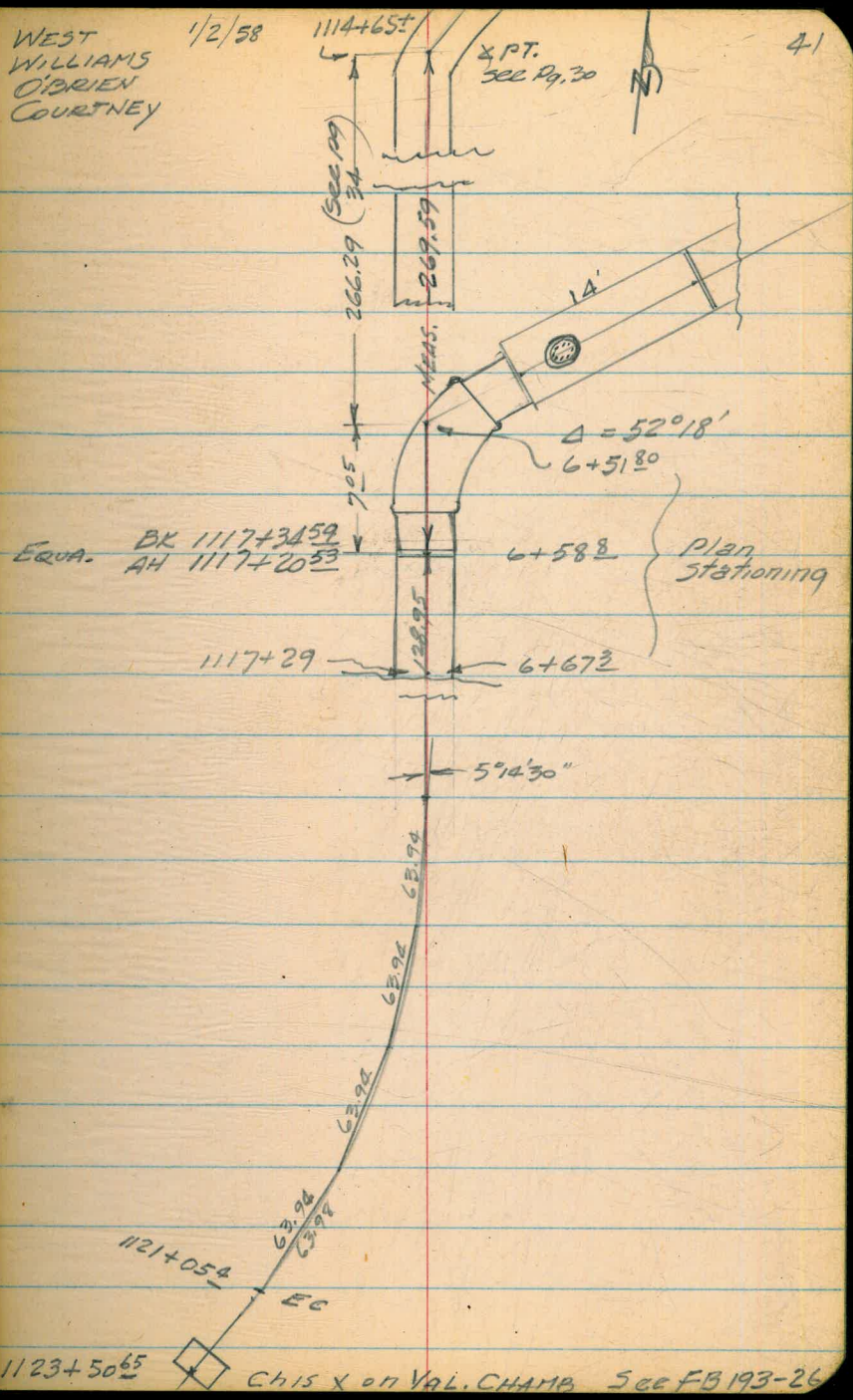
WEST
WILLIAMS
O'BRIEN
COURTNEY

1/2/58

1114+65.5

x P.T.
see Pp. 30

41



266.29
- 7.05

273.34
269.59

3.75

Please Return to
 City of San Diego Water Dept.
 Room 903 Civic Center

3376 Main St #7193
 8.95
 39.95 8' Royford

4.85
 0.95
 3.9

69.99
 95.68
 165.67

1209.35
 104.48

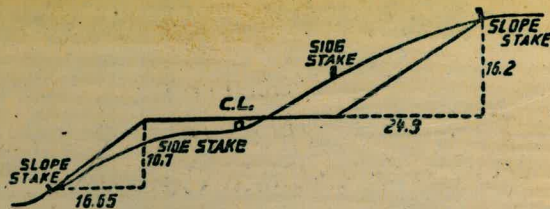
225
 145.87
 59.83

104' 48" 10

288.86
 13.55
 275.31

282.27
 7.13
 275.14

189.59 60
 104.48 30
 75.11 30
 000.00



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

THE NATIONAL BLANK BOOK COMPANY
 HOLYOKE MASSACHUSETTS
 NEW YORK CHICAGO BOSTON SAN FRANCISCO