

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	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 out 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 out, elevate if fill. Add this amount to out 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.

MICROFILMED

APR 14 1965

1170990 06830 1170990 06830

28/109  
120 34 30

DIRECTIONS FOR USE OF TABLES

TABLE NO. XIV

Distance of slope made from side or shoulder  
state for any width roadway, slope 1 1/2 to 1

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IMPROVED TABLES  
AND  
INFORMATION.

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TABLE NO. VIII

To find Tangent and External for curve of  
any other degree divide by degree of curve and  
add correction found in column of correction.  
Degree of curve with a given length is found  
by dividing tangent, for example, by 100  
to get tangent (or vice versa).  
The distance from a point on the tangent to  
the curve is given by the square of the tangent  
length divided by twice the radius.

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	.89	.99	1.04	1.20	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	2.40	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

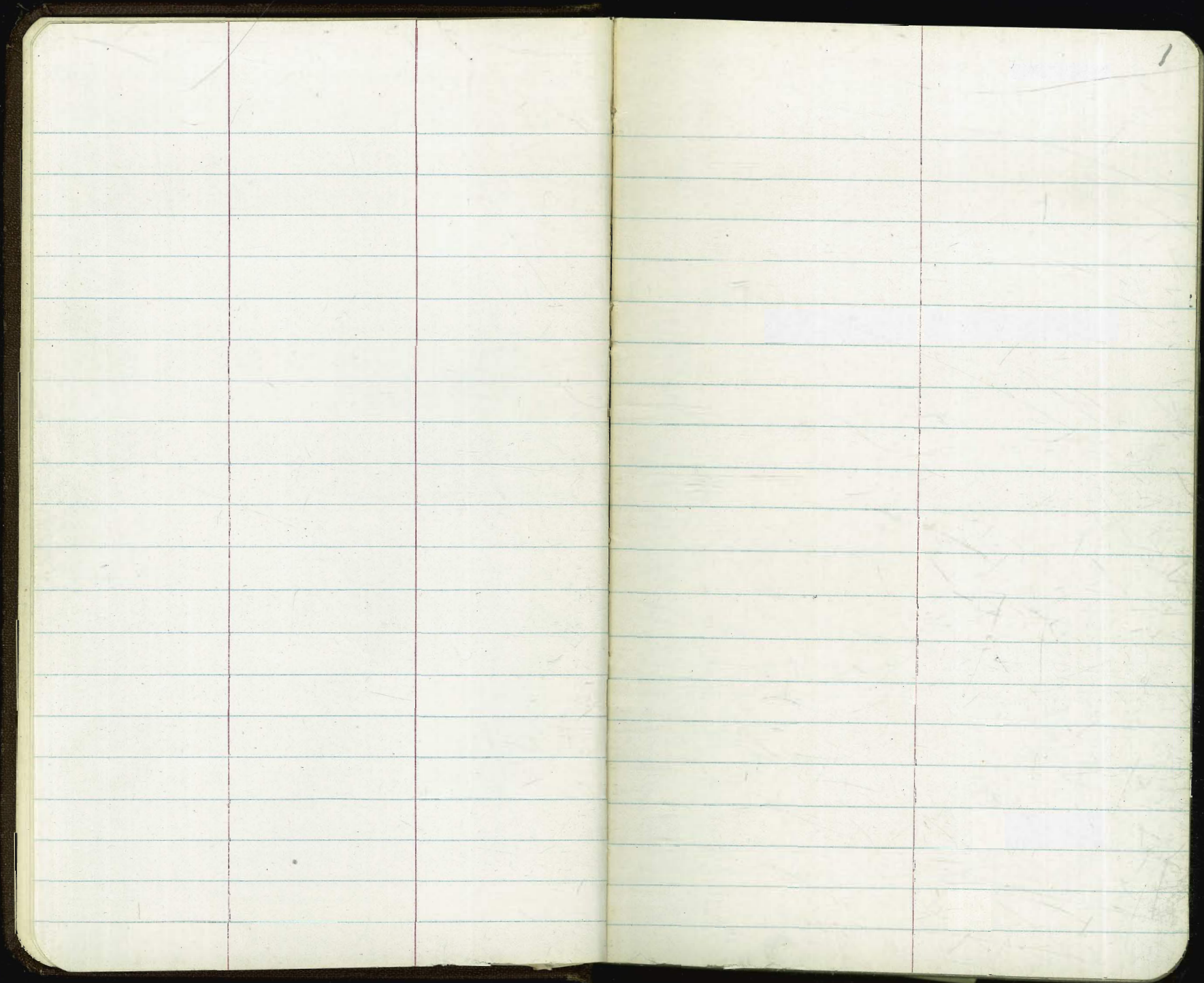
FOR EXTERNALS ADD

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	.032	.037	.043	.049	.054	.060	.065
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	.103	.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	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

g-285

Pages

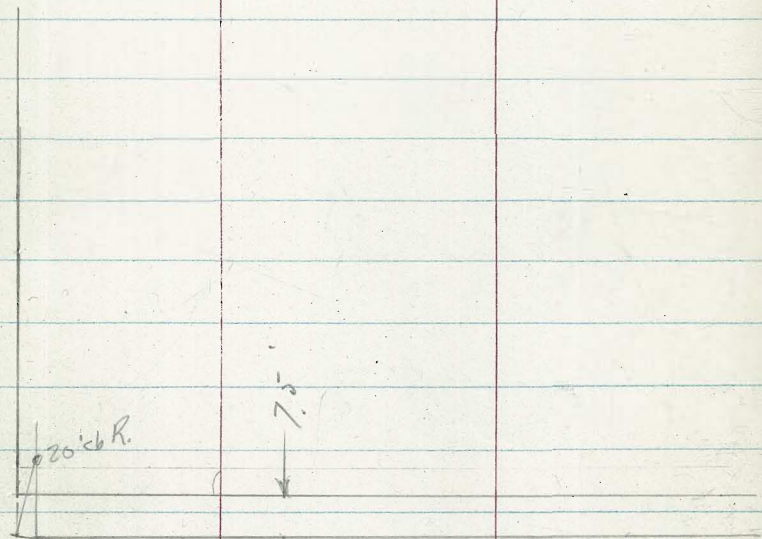
- ✓ Clayton & Hancock - curb & Paving grades & Stakes 5
- ✓ Evergreen & Macaulley - stake grades 9-11
- ✓ Junch. Box 3, Sewer Outfall Plant 12-17
- ✓ Highview Drive - curb grades 18
- ✓ Restake - Hancock & Clayton 19-22
- Sewer Outfall - Treatment Plant - Elevations 23
- ✓ Culvert Construction - 19 & 20th St 25
- ✓ Grades - Tustin St - Elephant to Macaulley 27-31
- ✓ Sew. Treatmt Plant - Constr Backflow Unit 32
- ✓ Grades Fairmount Ave, Hortons Purchase 36-49
- ✓ Eleva. n.w cor fence Treatment Plant in Harbor Drive 51
- ✓ Tarrey Pines Rd. Sewer Hillside Drive crossing 55
- Grades for C.F. Drain etc Sewage Treatment Plant 56-58
- Lowering Water grade across Ridge View 52



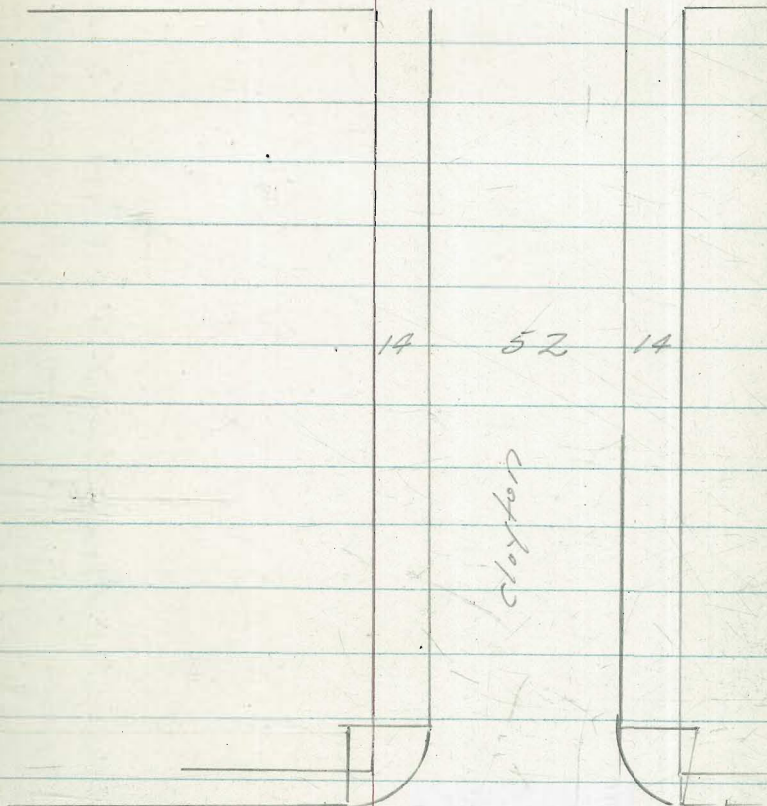
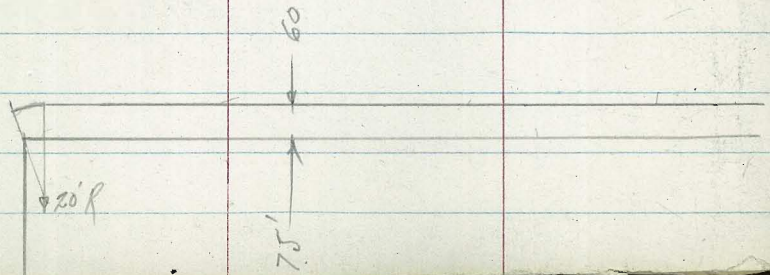
MOORE

St.

2



Harlock



Harlock



The image shows an open notebook with two facing pages. Both pages are cream-colored and feature light blue horizontal ruling. The notebook is bound in the center, and the dark cover is visible at the edges. The right page has the number '3' written in the top right corner. The pages are otherwise blank, with some faint smudges and a few small dark spots.

Grades -  
Clayton St. - Paving & Curbs

← 8.17 ← 8.17 →

Plan	NO	31721	Curb	Gut	℥	℥	Gut	cb.
Moore & Clayton								
Set B.M. SW 7' lock		48.57						
2+00 = S.L. line Moore Street.	Exist. cb	47.79	48.00	47.54	48.22	48.33	48.36	47.96
								Exist. cb 48.47
1+80	Exist. cb	46.22	46.30	45.53	46.24	46.37	46.39	45.98
								46.65
1+55	Resct	44.11	43.95		43.97	44.09	44.10	44.34
		43.95						
1+20	TP	40.65	40.80		40.79	40.90	40.90	41.10
		40.80						
0+85	Resct	37.06	37.65		37.61	37.71	37.76	37.86
		37.65						
0+50			34.50		34.43	34.52	34.50	34.62
0+12.5 = E.C. 20' cb. Ret.			31.13	30.46	31.03	31.09	31.04	31.15
0+00 = A. line Clayton			29.00	29.40	29.85	29.91	29.89	29.59
	2560 = B.M. CT. SW Cor.							

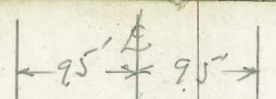
Note: This set of stakes laid by ~~...~~  
 Curbs Resct. See P-19

F016  
47.84  
48.00  
47.54  
48.22  
48.33  
48.36  
47.96  
48.50  
Exist. cb  
48.47  
F015  
40.65  
40.80  
40.79  
40.90  
40.90  
41.10  
F035  
37.50  
37.65  
37.61  
37.71  
37.76  
37.86  
F040  
34.10  
34.50  
30.46  
34.43  
34.52  
34.50  
34.62  
C005  
31.18  
31.13  
30.46  
31.03  
31.09  
31.04  
31.15  
Exist. cb  
31.26  
31.15  
30.78  
30.24  
30.78  
30.24

Noel & Hancock Plan 8260-L



HANCOCK ST. - PAVING & CURBS  
 from Clayton to Sutherland  
 Plan 8260-6 No. 31721



	Curb	Gut.	W	E	W	Gut.	Curb
1+95	F 0.29 27.86 27.85		28.06		28.35		C 0.85 29.53 28.68
1+70	F 0.26 27.67 27.93		28.16		28.45		C 0.68 29.47 28.79
1+65 = 2' Lateral	Sewer No. 2 27.57 24.10 = Invert						
1+45	C 0.60 28.52 28.02		28.25		28.55		C 1.01 29.30 28.89
1+20	C 0.60 28.70 28.10		28.35		28.65		C 0.76 29.76 29.00
0+95	C 0.57 28.75 28.18		28.44		28.75		C 1.17 30.27 29.10
0+70	F 0.04 28.23 28.27		28.54		28.85		C 1.19 30.40 29.21
0+45	Sewer Also 2' Lateral #3 C 2.95 28.67 24.72 = Invert		28.63		28.95		C 1.64 30.98 29.31
0+20	C 0.68 29.11 28.43		28.73		29.05		C 1.27 30.69 29.42
0+06 = F.C. 20' Ch Rad.	C 0.34 28.86 28.48	27.81	28.78	29.01	29.11	28.81	C 1.27 30.75 29.48
0+00 = Wby line Clayton	28.46	27.79		29.03		28.91	29.58

INVERTED  
 FEB 13 1952

Note: Curb stakes  
 Re set. See p. 19  
 (This set lost in grading)

Hancock St.

Cont. from P-5

← 9.5' → 9.5' →

Curb Gut ~~1/4~~ L ~~1/4~~ Gut CurbStakes for Parking  
Set to Subgrade  
= 0.5' below grades  
as shown.

3+00

27.38 26.71 27.57 27.79 27.89 27.67 28.34

C 0.37

28.71

2+94 = B.C. 20' cb. Rd.

chk.  
27.51  
27.52 26.85 27.69 27.90 27.95 27.60 28.27

C 0.37

28.64

2+70

27.60 27.78 28.05

C 0.65

29.02

28.37

2+45

27.68 27.87 28.15

C 0.77

29.24

28.47

2+20

27.72 = Exist. ch  
27.77 27.97 28.25

C 0.64

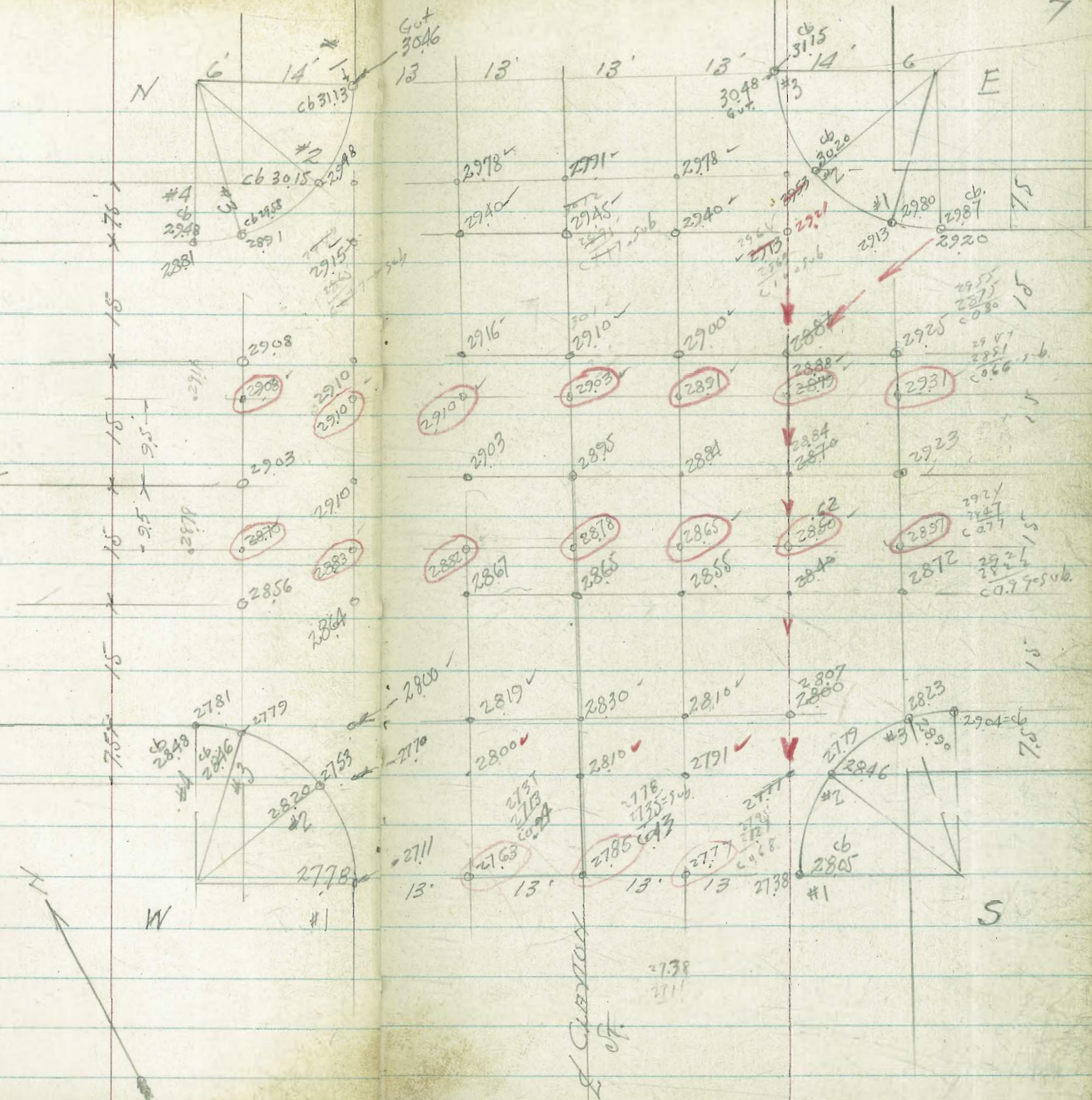
29.22

28.58

2+15 = Sewer (cut. #1)

C 3.66  
27.56  
23.90 = Invert

HANCOCK



CLAYTON

CLAYTON ST.

8

Grades - Curb Returns

Sketch P-7

Ret. "14"

C 027

28.05

27.78

#1

C 040

28.60

28.20

#2

C 021

28.67

28.46

#3

~~C 137~~

~~28.80~~

~~28.18~~

~~#4~~

Ret. # "N"

29.48

C 082

30.40 = stake

29.58

#3

C 005

31.18

31.13

#1

C 025

30.40

30.15

#2

C 119

30.77

29.58

#3

C 128

30.76

29.48

#4

Ret. "E"

C 129

31.09

29.80

#1

C 023

30.93

30.20

#2

31.20 = Eastch

31.15

#3

Ret. "S"

C 083

28.88

28.05

#1

C 037

28.83

28.46

#2

C 015

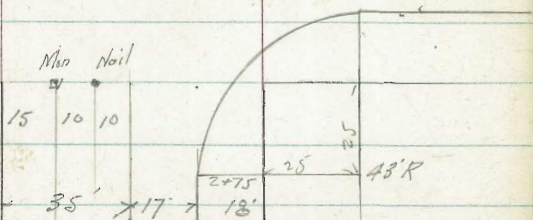
29.05

28.90

#3

EVERGREEN

ST.



18'

Hub #  
 Nail in Parings  
 MACHULAHY ST.

1+00

0+00

Rough Grades ~ Macaulay St.  
 on East Side  
 Plan 8892-h - 110 20819 Fl. Curb

Walker  
 Pope  
 Clark  
 Huffman  
 6-20-51

INDEXED  
 Law  
 FEB 13 1952

10

	Fl. stakes		Cuts (Fills)	Grade Fl. Prop.	Fl. stakes	Cuts Fills
⑥ = E.C. Return		28.11				
⑤	28.54	27.81	0.73			
④	27.91	27.50	0.41			
③ -	27.12	27.19	F007	27.37	27.81	0.44
②	26.86	26.88	F002			
①	26.66	26.57	0.09			
2+75 = B.C. 43' curb	26.25	26.26	F001	26.44	26.76	0.32
2+50	25.42	25.57	F015	25.75	25.77	0.02
2+25	24.84	24.88	F004	25.06	25.24	0.18
2+00	24.23	24.19	0.04	24.37	24.33	0.04
1+75	23.43	23.50	F007	23.68	24.22	0.54
1+50	22.73	22.82	F0.09	23.00	24.37	1.37
1+25	21.94	22.14	F0.20	22.39	23.32	0.93
1+00 = Reg. Grading & Curb.	21.25	21.46	F0.21	21.64	22.75	1.11
0+00 = M.I. line locust.		18.71			19.36	0.65

3+874  
 dth Top 4" C.I. Sewer  
 FB 2007-56  
 1799  
 1798

Evergreen St. Rough Grades  
on South Side

Between Macaulay & Dixie

Walker  
Pope Plan 8892-L No 20819  
Clark  
Huffman  
6-20-51

	El.	Elv. Curb.		Elv. Prop.	Elv. Stakes	Cuts & Fills
1+00	31.22	31.07	C015	31.25	29.69	F 1.56
0+80	30.20	29.84	C036	30.02	29.08	F 0.94
0+60	29.61	29.07	C054	29.25	28.88	F 0.37
0+25 = E.C. 43' curb R	28.69	28.11	C058	28.29	28.16	F 0.13

0+00 = Ely line Macaulay

2530 = B.M. SE Lovell  
= Evergreen





Additional Grades on Box #3

13

Walker  
Pope  
Clark  
Hoffman  
7-10-51

Elev.  
Stakes

Elev.  
Top Box

"I"

3.71

"A"

3.69

3.89

F020

"B"

3.58

"D"

3.56

3.89

F033

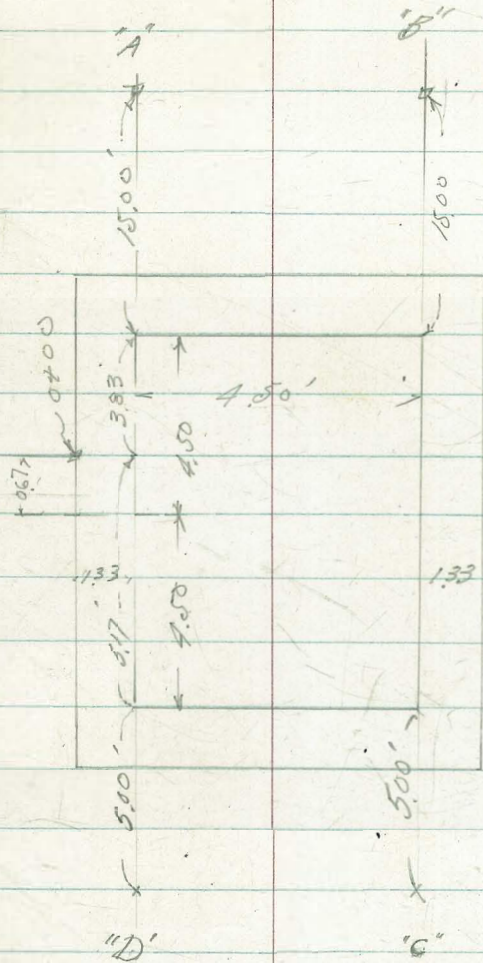
4.20 S.M. on "C"

P-12

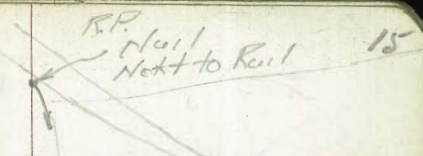
JUNCTION BOX NO 1  
Sewage Treatment Plant

54' outfall

	E.I. Ref. Pt.	E.I. Top Box	Cuts
"A"	2.33	2.14	C019
"B"	2.30	2.14	C016
"C"	8.98	2.14	F016
"D"	8.95	2.14	F019



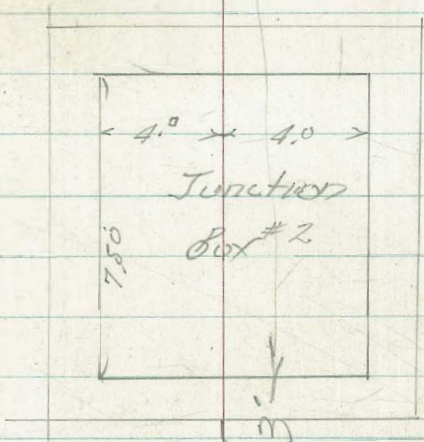
JUNCTION BOX NO 2  
AND VALVE BOX.



Exist. Pav.  
Elev. Top 8.7±

Elevation Top 60" Interceptor = -6.32

54"  
Elev. Invert.  
-9.40

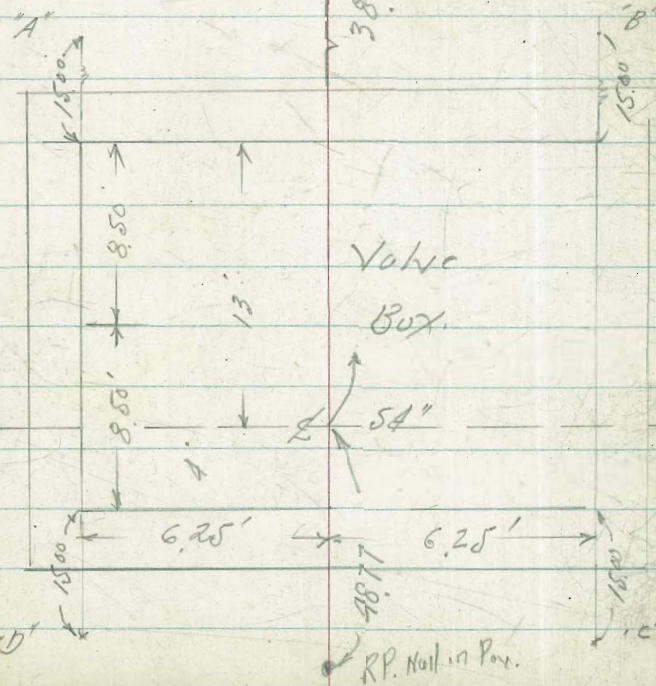


Invert at  
outside wall  
-9.20

Ref Mark  
Elev.

Elev. Top Box

Ref Mark	Elev.	Elev. Top Box	Notes
"A"	8.51	9.25	F074
"B"	8.67	9.25	F063
"C"	9.09	9.25	F016
"D"	9.19	9.25	F006
Direct Rod used			outfall
			54"



Walker  
Pop 9-17-51  
Valve Box Ref. Elev.

Temp. B.M.

Set Nails in Pit. on Timbers 1263 +1.00

4.63 13.63

9.50 = B.M.  
Checked Mark  
Fdn. Stake P-16

RP Nail in Pav.

## Grades 54" Outfall Sewer

Plan 1656-D

Station	El. Invert	Cuts	offsets
Cont. P-17	*		
2+56	5.38 - 11.70	17.08'	15' 11"
2+32	5.18 - 11.47	16.65'	"
2+0.8 TR	8.09 - 11.25	19.32'	"
1+84	9.23 - 11.03	20.26'	"
1+60	9.38 - 10.81	20.19'	"
1+36	9.37 - 10.58	19.95'	"
1+30.25 = Inside Wall Valve Box			
1+24 = Valve Box			
1+17.75 = Inside Wall Valve Box			
1+12	9.04 - 10.36	19.40'	"
0+88	8.94 - 10.14	19.08'	"
0+64	9.27 - 9.92	19.19'	"
0+40	8.74 - 9.69	18.43'	"
0+16	8.84 - 9.47	18.31'	"
0+0.0 = Junction outside Edge Box N.E. 1	8.76 - 9.32	18.08'	"
chk 1+00 FR 2043 30	8.80		
	9.00		

Treatment Plant

B.M. Chisled Sq. fdr. stuck

54" Outfall  
Cont. from P-16

	<sup>0.03</sup> 4.59 4.56	Invert. Elev.	Cuts	offsets
Chk Book 2073.33 5+00.38 $\frac{1}{2}$ Nail				
Junction Box #3 5+08.02 = Inside Edge		-14.03		
4+96.02	4.65	-13.22	18.57'	15' Lt.
4+72	4.74	-13.70	18.64'	"
4+48	4.85	-13.47	18.32'	"
4+24	5.55	-13.25	18.80'	"
4+00	5.48	-13.03	18.51'	"
3+76	5.50	-12.81	18.31'	"
3+52	5.55	-12.59	18.14'	"
3+28	5.26	-12.96	17.62'	"
3+04	5.46	-12.14	17.60'	"
2+80	5.26	-11.92	17.18'	"

# HIGHVIEW DRIVE

Curb Grades in Front lot 3  
-North Side

116 20007

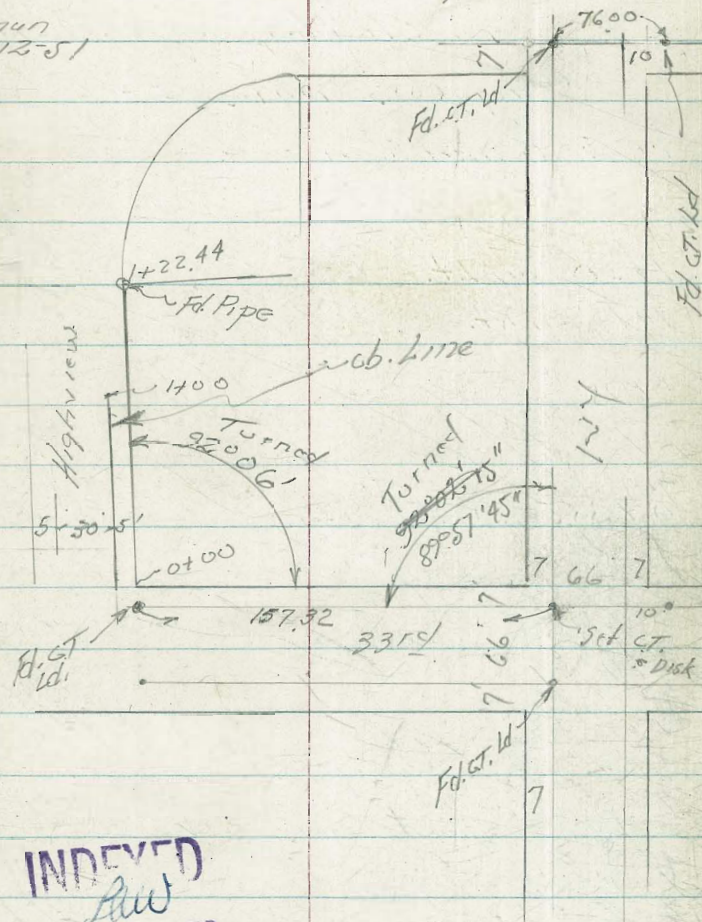
	File	Cuts	offsets
	Topcb.		
1+00.10	276.03	273.17	C 2.86 3' Back
0+80	275.62	272.84	"
0+60	274.92	272.38	"
0+40	273.46	271.56	"
0+20	271.50	270.53	"
0+00 = 116 3319		269.41	

269.41

Walker  
Fope  
clerk  
Huffman  
7-12-51

Bancroft

ST.



INDEXED  
AW  
FEB 13 1952

EX. - Top cb 116 3319 116 3319 Highview  
F.B. 1519-58

Hancock St. Curb Grades  
 Restaking  
 from Clayton to Sutherland  
 (orig. curb Grades F4-6)

1+25 = E. Water Meter on Rt.

1+20 on Lt.

1+19 on Rt.

0+95

0+88.5 = E. Water Meter  
 on Lt.

0+70

0+45 = S. Sewer Lat #3

0+40 = E. Water Meter on Lt.

0+20

0+06 = E.C. 20' cb R.

0+00 = 1/4 mi Clayton

Walker  
 Pope  
 Clark  
 Huffman  
 7-12-51

Lt.  
 Curb

INDEVER  
 Paw  
 FEB 13 1952

19

Rt.  
 Curb

C 0.20  
 29.18  
 28.98

F 0.30  
 27.80  
 28.10

C 0.34  
 29.34  
 29.00 = 1+19

F 0.23  
 27.95  
 28.18

C 0.36  
 29.40  
 29.10

C 0.18  
 28.38  
 28.20 = cb

28.20

F 0.24  
 28.03  
 28.27

C 0.62  
 29.83  
 29.21

C 3.96  
 28.68  
 24.72 = Invert

F 0.34

F 0.36  
 27.99  
 28.35

C 0.59  
 29.90  
 29.31

28.03 cb of  
 28.37 = Water  
 Meter

F 0.22  
 28.21  
 28.43

C 0.47  
 29.85  
 29.42

F 0.24  
 28.24 = stake  
 28.48

C 0.69  
 30.17 = stake  
 29.48 = cb

Water Meter → 29.68 = cb.  
 8.44' from E.C.  
 on cb Return

C 0.53  
 30.21

Hancock St. Curb.  
Re Staking

Lt. curb

Rt.  
Curb - F045

2+45

27.68

28.02  
28.47

2+20

27.72 = East b.  
27.77

F025  
28.53  
28.58

2+15 = Sewer lot #1

C 3.50  
27.40  
23.90 = Invert.

F031

2+10 = Water Meter on Lt.

27.49  
27.80 = 0

F017

1+95

F030  
27.55  
27.85

28.51  
28.68

1+70

F040  
27.53  
27.93

F010  
28.69  
28.79

1+65 = Sewer lot #2

C 3.24  
27.34  
24.10 = Invert

F046  
27.51  
27.97

1+60 = Water Meter on Lt.

C017  
29.00  
28.83 = Meter

1+59 = Water Meter on Rt.

F037  
27.65  
28.02

C003  
28.92  
28.89

1+45



Hancock Curbs  
Restaking

Lt  
curb

Rt.  
curb

3+00 = E. line Sutherland

def 8'43.4  
chd 5.15 = 3' from Cb.

2+94 = E.C. 20' Cb Ret on Rt

2+77 = E. Water Meter on Rt

2+70

27.38

27.52

27.60

F026

28.08

28.34

F008

28.26

28.54

→ Reset 3/15/11

F024

28.03

28.27

F039

27.88

28.27

→ Reset 3/15/11

F037

27.97

28.54

F045

27.92

28.37

Hancock curb  
Between Hursthy

Walker & Clayton

Pope  
Clark  
Kuffman  
7-12-51

2+94

C 1.11  
30.98 = Stake  
29.87 = Grade

2+75

C 0.53  
30.93 = Stake  
30.40 = Grade

2+50

F 0.06  
31.03 = Stake  
31.09 = Grade

0+00 = W. Line Hursthy St.

38.00 = Grade

54" Outfall Sewer

Location And Elevations  
on Exposed Pipes that  
Crosses Ditch. Purpose<sup>is</sup> for  
future Reference And To Compare  
Locations & Elevations With Plans

	Rods	Elev
4+88	Top Pipe = 12.76 13' Lk 24" Sewer	- 3.43
4+81.5	Top Conc slab = Int. Elec. Conduit 9.12	+ 0.21
4+41	C. Iron = Int 10" Water Top 8.50	0.83
4+237	Top 9.43 = Int 4" Iron Pipe Air line	- 0.10
4+193	on Top 7.15 = Int 3" Iron Pipe Return	2.18
4+18	= Int 6" Steam line 9.14	0.19
4+0.6!	on Top = Int 18" Conc pipe 10.25	- 0.92

0+00 = outside Edge Junction Box No 1 Plan — 71656-D

3.78 2.33 5.55

B.M. Elev. Cut Mark 16 ft. 4+28  
P-17

Walker  
Tape  
Clark  
Huffman  
7-30-51

23

INDEXED  
FEB 13 1952

# 54" Outfall

Location & Elevations

Exist. Exposed Pipes.

Conf from P-23

7-30-51

Rods Elev

4+96 P-17  
 Chk cut Mark 15' 4" 4.66 4.65  
 4.67

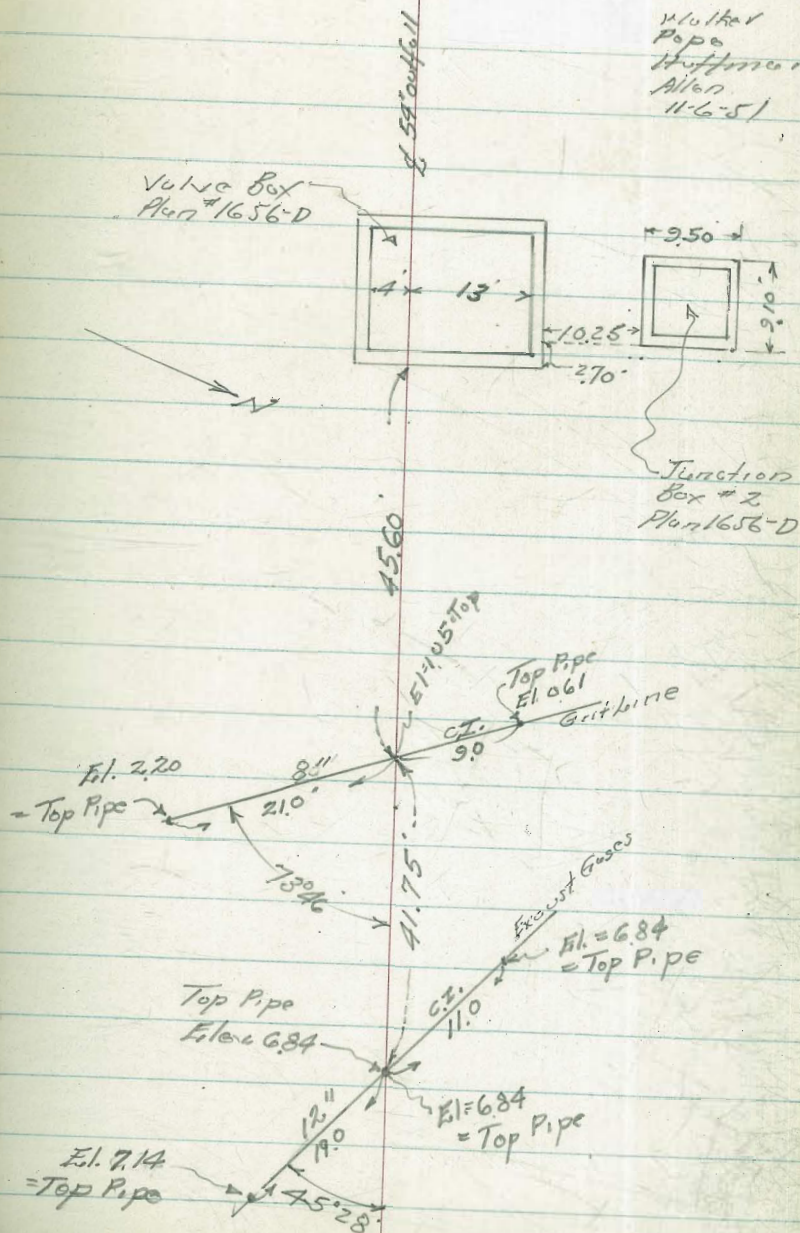
5+15.5 Int 42" Outfall Top Pipe = 20.10 -10.77

5+15.5 Int 24" outfall - Top = 16.80 -7.47  
 over 42" outfall

933

# Location Exposed Pipes 24 Crossing 54" Outfall - Treatment Plant

Walker  
 Pope  
 Hoffman  
 Allen  
 11-6-51



Culvert Construction

in 19th & 20th Sts.

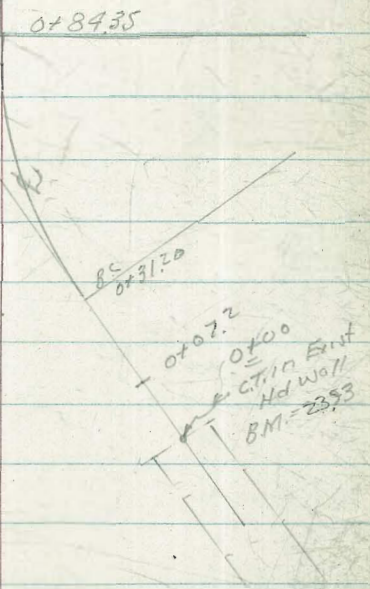
South of Commercial

Across Blk 67, Sherman's Add.

Walker  
Pope  
Clark  
Huffman  
8-10-51  
Plant 9041-L WD 20826

INDEXED  
JCU  
FEB 13 1952

Stations			Elev. stakes	Elev. Invert.	Cuts	offsets
3+25	T.P.	2412	27.92	22.83	5.09	
2+00			28.93	22.47	6.46	
1+75			27.00	22.10	4.90	622' nail in bath house
1+50			26.46	21.74	4.72	10' RT
1+25			26.59	21.37	5.22	12' RT
1+00			26.12	21.01	5.11	
0+84.35 = E.C.	d of A 17° 30'		26.35	20.78	5.57	
	2 chds = 57.15	455' 10" RT				
0+79.20	15° 48.33'		25.88	20.70	5.18	
	2 chds 1597'	1414' 10" RT				
0+63.20	10° 32.22'		24.67	20.47	4.20	
0+47.20	5° 16.11'		23.28	20.23	3.05	
0+31.20 = B.C. R.I.			24.16	20.00	4.16	
0+07.20			23.71	19.66	4.05	
0+00				19.55		
	2.1' 2d Ply. in Hd wall		23.93			



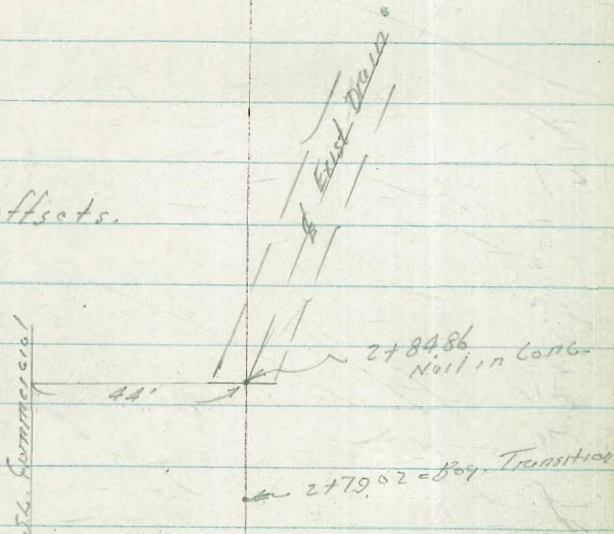
Culvert Const.

Cont. from P. 25

chk. Invert Box. <sup>002</sup>  
 Exst. 2435  
 2437

Elev. ELEV.  
 stakes Invert Cuts. offsets.

2+84.86 = <sup>Box.</sup> ~~End~~ Exst. Conc. Box.



2+79.02 = Box Transition. Box 2842 2362 4.80 10' RT

N ←

2+47.03 = EC 2486 2315 1.71 10' RT

Δ = 16° Turned.  
 SR = 39.5  
 L = 1103  
 T = 535'

2+36<sup>00</sup> = BC. RT 2790 2299 4.91 12' RT

Grades on Tustar St.  
 from Oliphant to Macaulay St.  
 Grades are only Temporary  
 for inspection by City Eng.  
 Pencil Grades - Profile #1384

140 250 20

Stations

1+22.83 = E.V.C. TP 118.81

1+02.83

0+82.83

0+62.83

0+42.83 = P.V.C. TP 110.38

0+12.83 = B.M.

0+00 S.W. Oliphant St.

Stakes on  
 Prop.  
 E. Line.  
 at  
 curb Elev.

27  
 Stakes on  
 W Prop.  
 at  
 Curb Grades

INDEXED  
 FEB 13 1952  
 H.W.

F 2.67 ✓  
 109.97  
 112.64

C 5.36 ✓  
 118.81  
 113.45

F 1.8 ✓  
 108.91  
 110.70

C 4.5 ✓  
 116.23  
 111.72

F 0.75 ✓  
 108.05  
 108.80

C 4.2 ✓  
 113.60  
 109.40

F 1.7 ✓  
 105.01  
 106.96

C 4.0 ✓  
 111.67  
 107.67

F 0.9 ✓  
 105.00  
 105.27

C 4.2 ✓  
 110.38  
 106.14

F 0.5 ✓  
 102.02  
 102.50

C 5.33 ✓  
 109.33  
 104.0

C 0.1  
 101.8 = Top wall  
 101.70

C 4.4  
 108.2  
 103.80

Tustin St. Cont.

Lt

17 28

Stakes  
on E. Prop.  
at curb Elev.

Stakes  
on W Prop.  
at C. Elev.

3+50

C 1.08 ✓  
140.23  
139.15

C 6.98 ✓  
146.63  
139.65

3+25

C 1.60 ✓  
137.84  
136.24

C 8.45 ✓  
145.22  
136.77

T.P. 13673

3+00

C 1.16 ✓  
134.49  
133.33

C 6.30 ✓  
140.18  
133.88

2+75

F 0.26 ✓  
130.16  
130.42

C 5.74 ✓  
136.73  
130.99

2+50

C 1.85 ✓  
129.35  
127.51

C 4.51 ✓  
132.67  
128.10

2+25

C 0.59 ✓  
125.14  
124.60

C 4.51 ✓  
129.72  
125.21

T.P. 12771

2+00

C 2.2 ✓  
123.82  
121.61

C 5.35 ✓  
127.71  
122.33

1+75

F 0.44 ✓  
118.30  
118.74

C 0.01 ✓  
123.48  
119.44

1+50

F 3.5 ✓  
112.72  
115.82

C 5.15 ✓  
122.21  
116.58



Tustin St. Cont.

NE Prop. Mar Macoutay  
 BM & Tustin = 145.56  
 FB1803-21

Stakes on  
 E. Prop.  
 at cb. Elev

Stakes  
 W. Prop.  
 at cb.  
 Elev

4+74.89

146.70

C 2.23

4+72.83

147.00

149.13  
 146.90

4+62.83

C 0.23  
 147.83  
 147.05

C 6.07  
 153.12  
 147.05

4+42.83

C 0.78  
 48.17  
 148.95

C 8.7  
 52.9  
 147.20

4+22.83

C 0.70  
 46.97  
 146.27

C 9.19  
 150.86  
 146.65

4+02.83

C 1.30  
 46.23  
 144.93

C 4.78  
 150.18  
 145.40

TP 145.21

3+82.83 P.V.C

C 0.88  
 143.83  
 142.95

C 4.87  
 148.32  
 143.45

Alphabet St. Grades  
from Testin  
To Capistrano  
Temporary, only for inspection  
by city Engr.

Pencil Grades

Cont. p. 31

1+00

0+80

0+60

0+40

0+20 = P.V.C.

0+08

0+00 = Esquina Capistrano

chk cb 0+00 Rt  
FB 1803-6

INDEXED  
Law  
APR 8 1952

Stakes on  
H Prop  
at cb. Elev.

F 1.6'  
121.75  
123.39

F 1.7'  
121.82  
123.56

F 0.9'  
121.29  
122.89

C 0.44'  
121.88  
121.44

C 2.68'  
121.85  
119.17

117.56

116.98

Stakes on  
S-Prop.  
at  
cb Elev.

C 1.67'  
125.86  
123.89

C 1.56'  
125.62  
124.06

C 2.1'  
125.45  
123.39

C 3.2'  
125.12  
121.94

C 4.7'  
124.32  
119.67

124.32  
118.06

116.93  
116.98

Elephant, Cont.

2+55

103.31

81  
103.5  
108.2  
104.70

2+47

C 0.5  
106.06  
105.56

C 2.12  
109.48  
106.06

2+27

TP 109.40

C 0.5  
109.40  
108.95

C 3.6  
113.05  
109.45

2+00

TP 118.19 Rock

C 0.1  
113.63  
113.53

C 3.7  
117.7  
114.03

1+80 = E.V.C

C 0.64  
117.28  
116.64

C 2.7  
119.32  
117.14

1+60

F 0.4  
118.79  
119.17

C 2.6  
122.27  
119.67

1+40

F 1.2  
119.9  
121.15

C 2.57  
124.22  
121.65

1+20

F 2.4  
120.15  
122.55

C 0.80  
123.85  
123.05

SEWAGE TREATMENT WORKS.

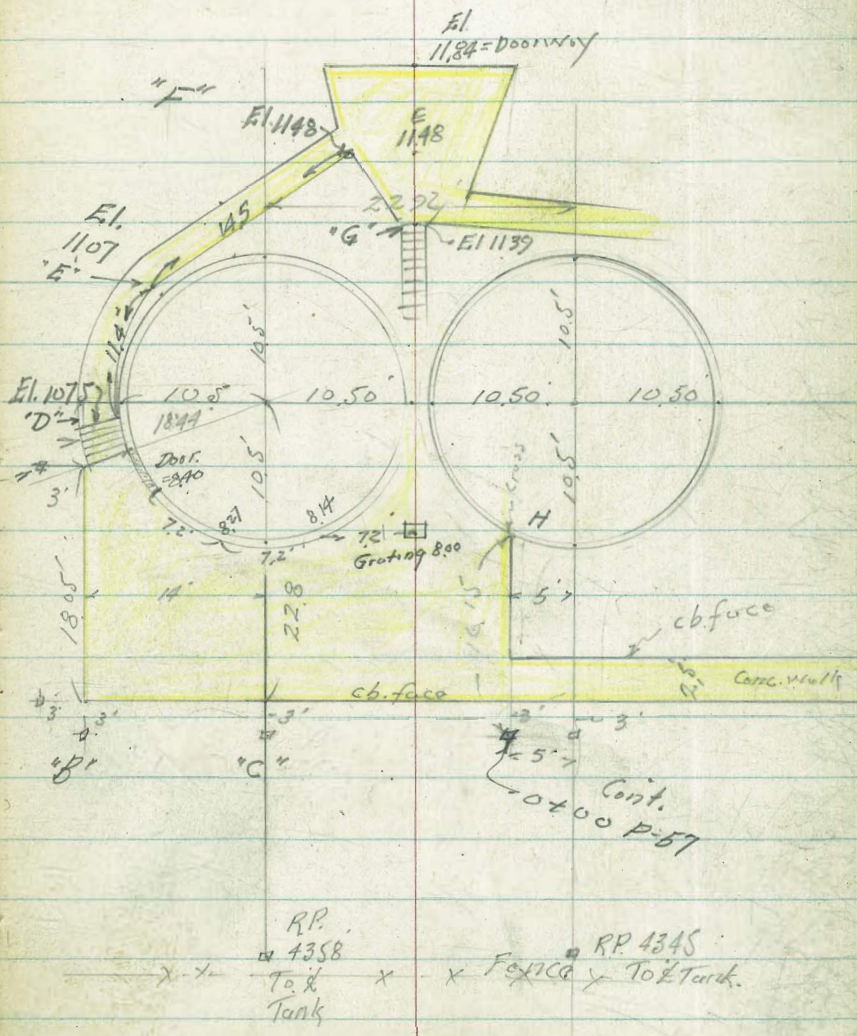
CONCRETE WORKS

FOR BACKFLOW PROTECTION UNIT.

Walker  
 Clark Plan 1762-D 140 20325  
 Hoffman  
 Pearson  
 8-23-51

INDEXED  
 FEB 13 1952

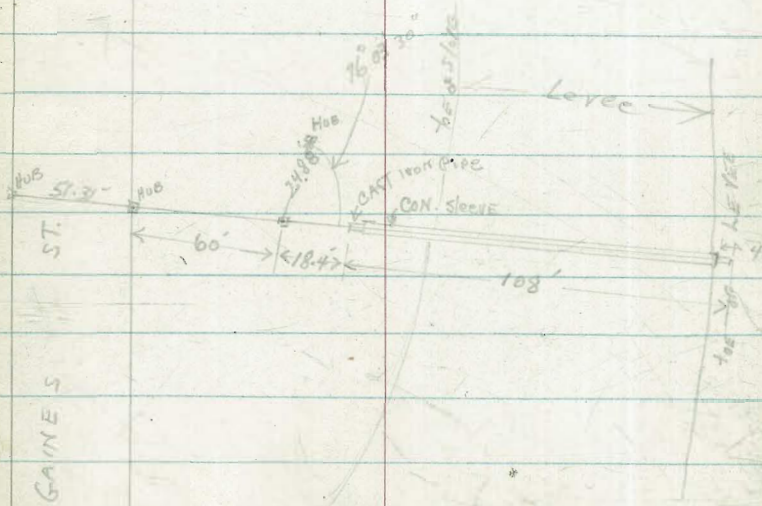
	El. Stakes	El. Walk	Cuts.
H	11.54	8.40	C 3.14
G	12.79	11.39	C 1.00 <small>Bottom stop on walk</small>
F	12.99	11.48	C 0.91
E	12.07	11.07	C 1.00 4.75 <small>"A"</small>
D	11.75	10.75	C 1.00
Doorway	8.41	8.41	
"A"	11.47	8.41	C 3.06
B	7.90	8.41	F 0.51
"C"	8.00	8.41	F 0.41
"H" Grating	11.54	8.00	C 3.54 <small>on Mark H invert</small>
1/2 Grating	11.54	6.00	C 5.54
B.M. Christed Square in stack Foundation		9.00	



Clark  
Hoffman  
Pierson

W.O. # 20863  
9-6-51

STAKES, Sewer X-ing, River Floodway



CLARK  
HUFFMAN  
PIERSON  
N.O. 20863  
9-6-51

STAKES SEWER X-ING SAN DIEGO RIVER FLOODWAY

0+64

12.29  
.39  
TRADE Rod 11.90 1' RT 9

0+54

12.29  
.379  
11.911 1' RT 9

0+44

12.29  
.364  
11.926 1' RT 9

0+34

12.29  
.35  
11.94 1' RT 9

0+24

12.29  
.335  
11.955 1' RT 9

0+14

12.29  
.32  
11.97 1' RT 9

0+04

Req. CON. SLEEVE

12.290  
.306  
11.98 1' RT 9

0+00

END of CAST IRON Pipe  
1" vert elev.

elev INVERT .30

12.29  
.30  
grade Rod 11.79 1' RT 9

0.68 = 12.29 H.F.

B.M. SPIKE in Pole; Elev 20.39 U.S.C. & G. 11.61' CITY DATUM

ALL STAKES SET TO GRADE

SEWER STAKES, XING River Floodway (cont)

1+08 END PIPE

1+04 END CONC. SLEEVE

0+94

0+84

0+74

E.II	0.68	
STAKE Rod	12.52	1' LEFT S.
g. Rod	11.84	

ALL STAKES TO GRADE	12.29	1' RT S.
	11.852	
	11.852	

ALL STAKES TO GRADE	12.29	1' RT S.
	11.87	
	11.87	

ALL STAKES TO GRADE	12.29	1' RT S.
	11.88	
	11.88 grade rd	

# GRADES - FAIRMOUNT AVE.

Lot 3, 4, 12 And 13 of Horton's Purchase

Plan 2089-L 140 20837

Walker  
Pope  
Huffman  
9-21-51

cont. P-37

238.50 BM FB 2157-8  
156 + CC 99  
50' Hub 30  
BM n 234830  
FB 2157-7

Ties P-37  
155+33.59  
P.C.C.  
155+33.59

154+86.64  
154+44.32  
154+29.66 = Back  
6.15' RD 40  
154+23.51 curb station  
RD 25'

$\Delta 39^{\circ}49'$   
cb R = 298.91  
T = 106.07  
L = 203.86

$\Delta 36^{\circ}$   
cb R = 200.13  
T = 65.03  
L = 126.75

INDEXED  
FEB 13 1952

$\Delta 60^{\circ}10'$   
R = 230.60  
T = 133.14  
L = 242.15

Old Aute

Chisled Cross  
in Conc. Pav.

use of Sta. in  
This Portion.

Curb Line

Roadway

to B.C.

Stations  
4570  
Hub & Disk  
Canyon

Chisled Cross in  
150 to 100  
150 to 150  
Chisled Cross in  
150 to 100

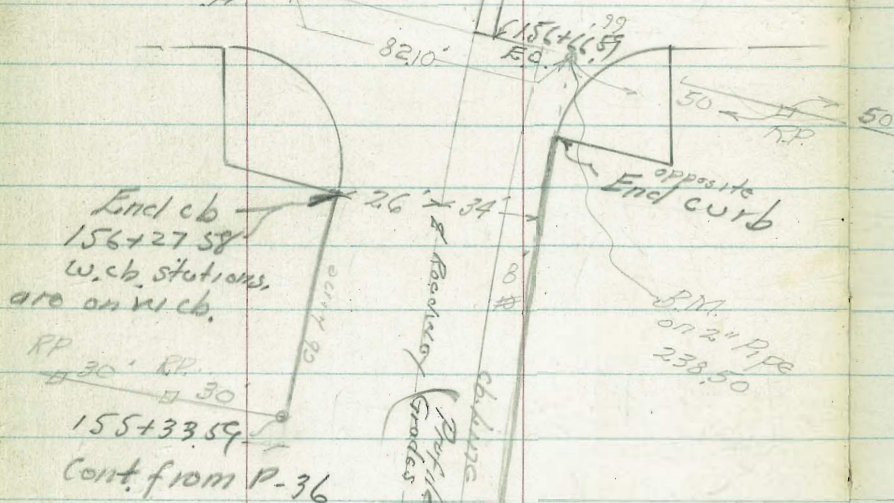
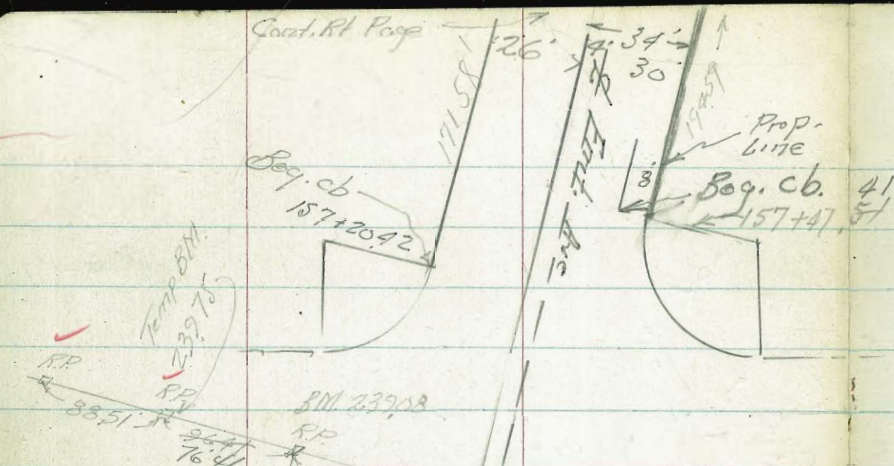


Cont. R1 Page

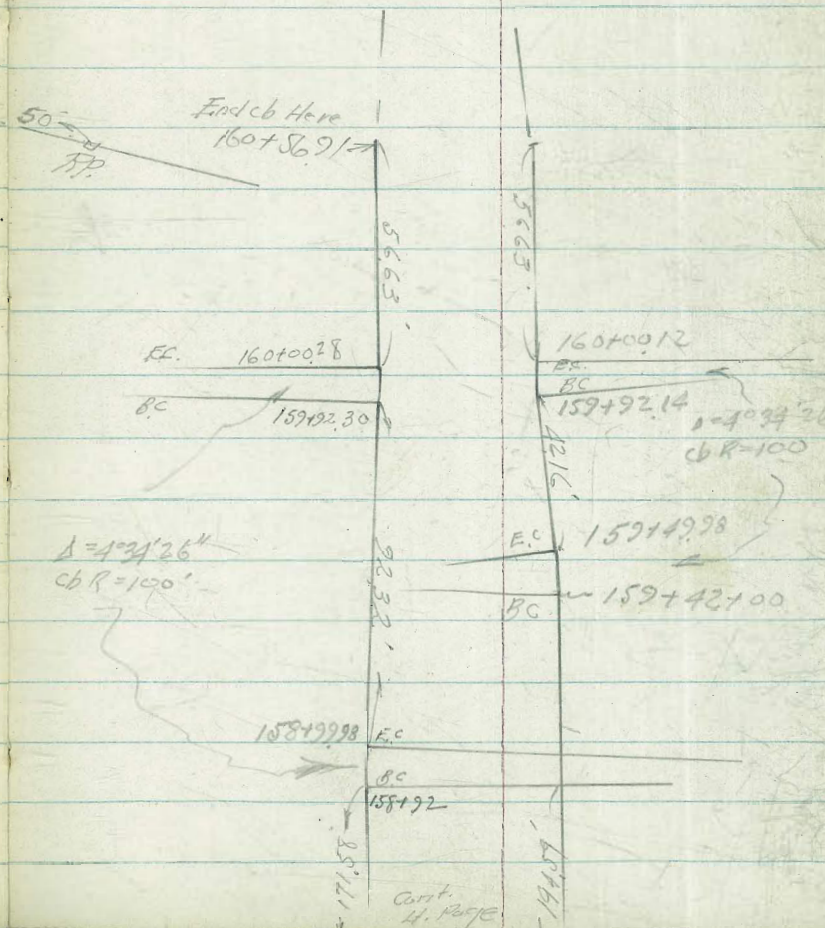
Fairmount Ave ~

37

Cont. from P-36



Cont. from P-36



Cont. 4. Page

Fairmount Ave - sketch P-36

Stations Lt Curb.	Def. Δ	Chds.	Lt. Curb Grade	L Def Δ	Lo Grades	Lt. Roadway Stations	Rt. curb. Def. Δ	Rt. curb Stations.	Rt. Curb Grades
					20				
		22.03 3/4 cb.	F0.31 ✓ 185.14		183.43 ✓	150 + 60	18' cut 3' to cb.		C 0.58 ✓ 183.03 182.45 ✓
		3 1/4 macb 177	185.45 ✓ 175.72 F 2.73	0° 32.74'	183.43 ✓	150 + 60			188.53 C 16.1
			F0.25 ✓ 184.62		182.97 ✓	150 + 55.61-80.			C 0.60 ✓ 182.65 182.05 ✓ 178.56 C 16.5
			184.87 ✓ 174.76 F 10.1 ✓		182.97 ✓	150 + 55.61-80.			
					181.32 ✓	150 + 40			180.55 ✓
			182.80 ✓		181.32 ✓	150 + 40			
			180.04		179.22	150 + 20			178.80 ✓
			177.45		177.11	150 + 00			177.00 ✓
			175.17 ✓		175.00 ✓	149 + 80 = Beg Project			175.17 ✓

F02153-5  
CHK cross + 1561 - 19302  
10' 154 100 + 155.002

564.010  
 130.10  
 152 + 97.76  
 To

Fairmount Ave - Cont from P-38

Lt. curb	Lt curb	Lt.	∠	∠	∠ Roadway	Rt.	Rt.	Rt.
Stations	Def A	Curb Grades	Def A	Grades	Stations	Curb def A	Curb Stations	Curb Grades
		<sup>Co. 47 ✓</sup> 134.99 194.52 191.92 F 2.6	10°29.06'	191.85 <sup>LT</sup> 1.18	151+40			<sup>Co. 30 ✓</sup> 190.82 190.52 210.55 C 20.0
		<sup>Co. 18 ✓</sup> 192.60 192.42 190.51 F 1.9 ✓	7°59.98'	182.75 <sup>LT</sup> 2.09 ✓	151+20			<sup>Co. 52 ✓</sup> 188.94 188.42 207.75 C 18.3
	1581.3' back		(1°47.24)		14.39'		1295' chd 3'4.06	
TP		<sup>Co. 48 ✓</sup> 190.99 190.91 186.51 F 4.4 ✓	6°12.72'	188.24 <sup>LT</sup> sub. 7.57 ✓	151+05.61			<sup>Co. 77 ✓</sup> 187.68 186.91 204.74 C 17.8
	2915' chd 3'4.06		(3°10.9)		25.60 chd		2305' chd 3'4.06	
TP 125.91		<sup>F 27 ✓</sup> 187.63 187.90 ✓ 179.07 F 8.8	3°01.82'	185.54 <sup>LT</sup> sub = 4.87 ✓	150+80.0			<sup>Co. 90 ✓</sup> 185.30 184.40 200.86 C 16.46 ✓

Return radial from 8

Cont from P-38

Cont from P-38

Fairmount Ave

Lt. curb Stations	Lt. curb. def. Δ	Lt. curb. Grades	∠ Def. Δ	∠ Grades	∠ Roadway Stations	Rt. curb. def. Δ	Rt. curb. Sta.	Rt. curb. Grades
		Co. 33 207.45 207.12 203.42 F 3.7	25° 23.54 2.29	204.45 67 03.78 1.41	205.19 T 152+60			Co. 34 03.46 203.12 21.15 C 21.0
		Co. 34 205.36 205.02 201.06 F 4.0	22° 54.6	202.35 67 01.68 3.51	152+40		TP. 221.39	Co. 34 01.36 201.02 21.79 C 20.31
		Co. 40 03.32 202.92 172.01 F 3.9	20° 25.38	200.25 67 99.59 5.61	152+20			Co. 50 199.42 198.92 18.62 C 19.7
		Co. 19 201.01 200.82 197.01 F 3.8	17° 56.3	198.15 67 Sub 197.49 7.71	152+00			Co. 65 97.47 196.82 12.61 C 19.8
		Co. 31 199.03 198.72 195.3 F 3.4	15° 27.22	196.05 67 195.39 9.81	151+80			Co. 37 195.00 194.72 215.13 C 20.4
TP. 174.23		Co. 41 197.03 196.62 93.62 F 3.0	12° 58.14	193.95 193.28 11.91	151+60		TP. 212.82	Co. 35 2.97 192.62 112.82 C 20.2

Stations radial from ∠



Fourmount Ave

Lt cb.	Lt cb.	Lt curb	∠	∠	∠ Relation	Rt. cb.	Rt. cb.	Rt. cb.
Station	Def A	Grade	Def A	Grade	Station	Def A	Station	Grades
PCC 155+33.59	0°00' Ahead 19°32.07	C 0.80 ✓ 223.18 C 0.51 ✓ C 0.81 ✓ 226.09 225.28			155+33.575 = 0.75' K. Island			
155+23.24	18°36.6	228.09 C 2.8 ✓	Sub	224.82 ✓ 21.67 24.15 ✓	155+30.64 PCC on Lt cb. 1°34.01			C 0.73 ✓ 5.03 224.30 34.08 C 9.78
TP 155+02.10	221.86 TP 16°38	C 0.16 ✓ 224.56 224.40 221.86 F 2.54		223.51 ✓ 22.84 ✓	155+00.9	0°30.5' Radial 13.753' from cb. chd. 13.64		C 0.33 ✓ 223.08 222.75 24.13 C 1.4
154+86.64 154+57.67	Equation 15°01.1	F 0.21 ✓ 223.59 223.80 229% 213.20 F 10.6		PCC 222.50 21.83	154+86.5 ✓ Ahead 154+44.32 Equation			C 0.28 ✓ 221.89 221.61 35.06 C 13.45
154+48.45	4°25.3	C 0.18 ✓ 3.68 223.50 213.7 F 10.81		222.06 ✓ 21.39 ✓	154+38.58	18°00' → E.C. cb. 154+23.51		C 0.37 ✓ 21.42 221.05 Not set
154+26.92	12°21.5	C 0.061 22.46 222.40 222.90 213.49 221.43 F 8.9 20.23		220.47 ✓ 21.67 19.80 ✓	154+18.58	15°31.42 154+06.19		C 0.04 ✓ 19.64 219.20 33.67 C 14.47
154+05.49	10°18.9	C 0.14 ✓ 21.24 221.10 211.0 215.00 211.0 F 6.1 6.1		218.73 ✓ 21.67 Sub = 219.06 ✓	153+78.58	12°58.5 153+88.39		F 0.01 ✓ 217.39 217.40 33.79 C 16.39

K. Island

13.64

# Fairmount Ave

L. cb Station	L. cb Def. A	L. cb. Grade	∠ Def A	∠ Road Way. Grades	∠ Road Way Station	Rt cb. Def A	Rt cb. Sta.	Rt. cb. Grades
					156+43 = 2' R 15' end 112			F 0.08 ✓ 9.53
156+48.85	3° 58.72	229.61 238.06 C 8.45		229.56 67 28.89 ✓	156+40.9	5° 29.75	Radial	229.61 37.39 C 8.73
156+28.2	3° 16'	229.19		229.14	156+20.9	4° 47.0	Radial	F 0.16 ✓ 9.03 229.19 37.44 C 8.25
156+27.58	3° 14.65 End cb	229.17 236.99 C 7.8		28.47 ✓				
156+07.55	2° 33.2	228.62 235.24 C 6.6 ✓		228.57	156+00.9	4° 04.25'	Radial	F 0.08 ✓ 8.54 228.62 37.03 C 8.4
155+86.9	1° 50.45	227.90 33.61 C 5.7 ✓		227.85	155+80.9	3° 21.5'	Radial	F 0.03 ✓ 7.87 227.90 236.35 C 8.45
155+66.25	1° 07.7	227.10 31.8 C 4.7 ✓		226.99	155+60.9	2° 38.75	Radial	C 0.19 ✓ 7.09 226.90 235.44 C 8.84
155+45.60	0° 24.95'	226.20 230.27 C 4.1 ✓		225.98	155+40.9	1° 56.00	Radial	C 0.55 ✓ 6.23 225.68 24.71 C 8.83

# Fairmount Ave

Lt. cb Sta	Lt. cb Def A	Lt. curb Grades	± Def A	± Grades	± Rd. wof Stations	Rt curb Def A	Station	Grades	
Checked out on starting BM			23571						
157+30		$\begin{array}{r} C 0.27 \\ 30.37 \\ 230.10 \\ 232.23 \\ \hline C 2.1 \end{array}$		$\begin{array}{r} 230.05 \\ 29.38 \\ \hline 230.05 \end{array}$	157+30		$\begin{array}{r} 230.10 \\ 232.14 \\ \hline C 2.0 \end{array}$		
	Beg. cb 157+20.42 P-37	$\begin{array}{r} 29.05 \\ 230.11 \\ 33.22 \\ \hline C 2.1 \end{array}$		$\begin{array}{r} 230.05 \\ 29.38 \\ \hline 230.05 \end{array}$	157+27=2R				
					<del>157+30.64</del>				
		230.12		$\begin{array}{r} 230.07 \\ 67 \\ \hline 29.40 \end{array}$	157+10		$\begin{array}{r} 230.12 \\ 231.31 \\ 28.8 \\ \hline C 2.018 \\ C 1.38 \end{array}$		
		$\begin{array}{r} 230.03 \\ 133 \\ \hline 28.70 \end{array}$		$\begin{array}{r} 229.98 \\ 67 \\ \hline 29.31 \end{array}$	156+80		$\begin{array}{r} 230.03 \\ 1.33 \\ \hline 28.70 = \text{sub.} \end{array}$		
156+66.99	Ahead Equation on Hcb. only.	$\begin{array}{r} C 1.16 \\ 229.94 = \text{cb.} \\ 1.33 \\ 28.61 \\ \hline C 2.0 \end{array}$		$\begin{array}{r} 229.89 \\ 67 \\ \hline 29.22 \end{array}$	Ahead 156+66.99 = FC	$6^{\circ} 27.5'$	Radial	$\begin{array}{r} 229.94 \\ 1.33 \\ \hline 28.61 = \text{sub.} \end{array}$	
156+75.29 = FC +76.25				$\begin{array}{r} 229.22 \\ 67 \\ \hline 29.22 \end{array}$	156+67.89	Equation			
					$\begin{array}{r} 229.85 \\ 67 \\ \hline 29.18 \end{array}$	back to = Sta 2 Roadway	$6^{\circ} 10.58'$	Radial	$\begin{array}{r} 229.90 \\ 28.39 \\ \hline C 2.70 \end{array}$
156+70.47 156+62.5	4.41.47	$\begin{array}{r} 229.90 \\ 38.71 \\ \hline C 2.88 \end{array}$			156+60.8				
			231.53						
			235.71				5.35.71		
B.M. on R.P. 42					156+43.69 = End of cb on Rt.			$\begin{array}{r} 229.64 \\ 2.57 \\ \hline 227.64 \end{array}$	
B.M.	Rough grades Direct Rod used		238.50		B.M. 2" Pipe	P-36			
								$\begin{array}{r} 229.64 \\ 2.70 \\ \hline 227.64 \end{array}$	

Stations  
 157+30  
 to  
 156+80



Lt  
cb

Grade

Station

Grades

158+34.25 = 0.75' R  
of Island.

TP. 236.16

C 0.05 ✓  
7.53  
227.48  
236.16  
C 8.7

227.43 ✓  
67  
267.6 ✓

158+30

C 0.24 ✓  
7.72  
227.48  
233.82  
C 6.34

F 0.39 ✓  
7.75  
228.34  
237.04  
C 8.7

228.29 ✓  
67  
27.62 ✓

158+10

C 0.29 ✓  
8.63  
228.34  
235.69  
C 7.35

F 0.40 ✓  
8.63  
229.03  
237.83  
C 8.8 ✓

228.98 ✓  
67  
28.31 ✓

157+90

F 0.30 ✓  
8.73  
229.03  
236.97  
C 7.9

C 0.23 ✓  
9.78  
229.55  
38.33  
C 8.8 ✓

229.50 ✓  
28.83 ✓

157+70

0.00 ✓  
9.55  
229.55  
238.1  
C 8.6

C 0.06 ✓  
9.97  
229.91  
238.84  
C 8.9

229.86 ✓  
67  
29.19 ✓

157+50

C 0.21 ✓  
30.12  
229.91  
238.68  
C 8.77

157+47.71 = eq. cb on Rt

C 0.08 ✓  
30.01  
229.93  
238.83  
C 8.9

Fairmount Ave

		Grade	Station	RT.	cb Grade
159+49.14	218.83			TP 218.55	
	C 0.20 ✓	219.54 ✓	159+42 BC. lt. on E cb.		F 0.08 ✓ 19.51 219.59 220.03 C 0.44
<sup>30.07</sup> 159+29.07	226.72 20.92 220.72 227.15 C 6.4 ✓	67			
159+10	C 0.16 ✓ 2.54 222.38 230.19 C 7.8 ✓	220.67 ✓ 20.00 ✓	159+30		F 0.26 ✓ 20.46 220.70 221.35 C 0.63
158+99.98	<sup>46</sup> 223.15 31.87 C 8.74	222.33 ✓ 67 21.66 ✓	159+10		F 0.27 ✓ 22.11 222.98 224.18 C 1.8
158+92	<sup>cb</sup> 224.31 223.77 232.77 C 9.0			TP 226.83	C 0.47 ✓ 24.38 223.91 226.83 C 2.9
		223.86 ✓ 67 23.19 ✓	158+90		
TP on left	C 0.10 ✓ 5.36 225.26 233.63 C 8.4	225.09 67 24.54 ✓	158+70		C 0.27 ✓ 5.53 225.26 227.48 C 4.2
	C 0.02 ✓ 6.47 226.45 234.26 C 8.5	226.40 ✓ 67 25.73 ✓	158+50		C 0.20 ✓ C 1.68 226.45 231.67 C 5.2

# Fairmount Ave

Lt ch Station	Rdway Grades	Rdway Station	Edge Post	Rt. Grades
	0.00 ✓ 206.46 214.16 C 7.7	206.41 2.95	Edge Post chk 1617.00 FB 2151.10	200.99 200.96 0.03 C 0.04 206.56 206.46 205.51 F 0.95
160+287	F 0.28 ✓ 9.63 209.91 216.81 6.96	209.76 209.86 209.62 F 0.24	160+284.3	C 0.04 ✓ 09.95 209.91 208.29 F 1.62 TR 209.76
160+00.29 = EC 159+99.29	F 0.57 ✓ 12.78 213.35 218.58 C 5.23	213.30 ✓ 217.01	160+00.12 = EC	C 0.15 ✓ cb E.C. 213.50 211.77 F 1.6
159+92.31 cb B.C.	F 0.61 ✓ 13.76 214.37 219.00 C 4.63	214.32 ✓ 18 13.25 F 0.19	159+92.14 B.C.	C 0.53 ✓ 14.20 214.37 213.10 F 1.2 cb B.C.
TR on track 70.21 159+62.1	F 0.20 ✓ 16.61 216.81 221.13 C 4.31	215.88 216.76 ✓ 67 16.09	159+70.04	C 0.47 ✓ 17.20 216.81 216.12 F 0.7 cb B.C.
50.14 159+42.14	C 0.09 ✓ 18.92 218.83 223.87 5.04	218.78 ✓ 67 18.11 ✓	159+49.98 = E.C. on Rt ch.	C 0.23 ✓ 19.06 218.83 not set cb E.C. =

Fairmount Ave

161 + 56,65 = End of Project.

161 + 0.65

Fairmount Ave  
Ties to Sub. Cor

Walker  
Pope  
Hoffman  
9-24-51

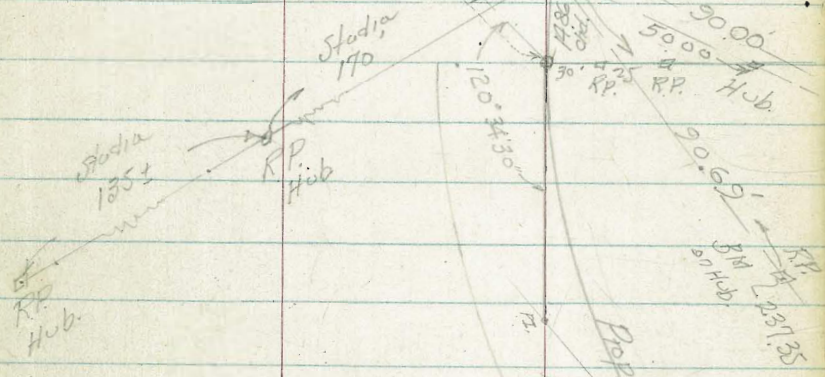
23571  
B.M.

1524629  
3M 23850  
2" Iron Pipe  
E.C.  
55' ± 56'  
R=770'

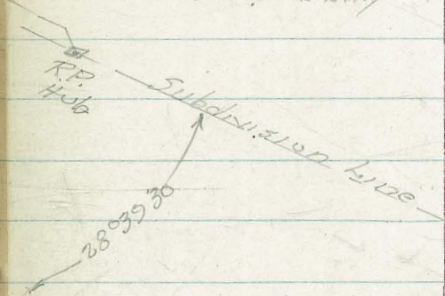
2" Iron Pipe  
Sub Cor.

Prop. R=770  
Δ=12°55'

P.C.C. 154186.64  
154144.32 - ERMWY



Ridgeview  
Sub.



Sight on Light Beacon

511  
Large Water Tank  
Eccentric Skyline



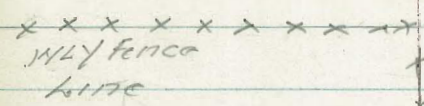
Sewage Treatment Plant

Elevations for Meter Vault  
at NWly Cor Plant Fence  
in Harbor Drive

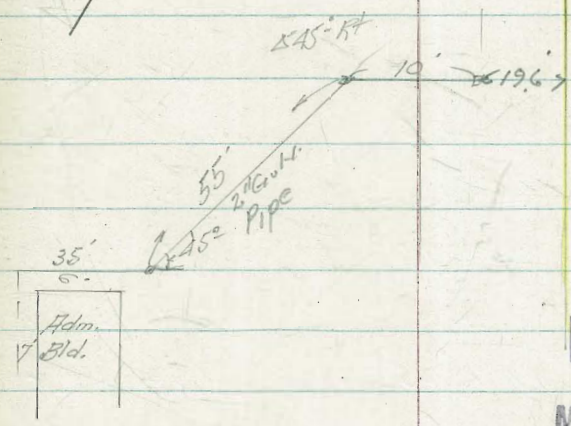
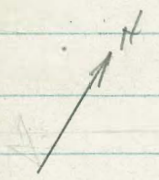
Walker,  
Pope  
Huffman  
10-4-51

NO 20325

Elev.			
Ref Nail in Pole	141	15.29	
Edge Facing	3.82	12.88	
TP 484	16.70	334	11.86
TP 630	15.20	162	8.90
452	13.52		9.00



Treatment Plant



INDEXED  
MAR 6 1952

B.M. Chisled Square in Stack P-16  
Fabr.

Fairmount Ave

Grades for Lowering 8" CI  
Water Main Across Ridge View

Walker

Pope

Huffman

10-25-51

Plan 9089-L NO 20837

Elev.  
invert  
8" Water  
Main

Cuts

offsets

INDEXED  
L.A.C.  
MAR 31 1952

157+50

229.46

225.7

3.8

157+10

229.83

225.9

3.9

= 156 + 66.79 ahead def'd

156 + 67.89 back 6' 27.5'

229.40

225.7

3.7

156 + 60 6' 12.5'

229.29

225.7

3.6

+ 40.9 5' 29.75 ch'd 189' 4" W

228.76

225.4

3.4

+ 20.9 4' 47.0 198'

228.34

225.0

3.4

156 + 00.9 4' 04.25

227.81

224.4

3.4

+ 80.9 3' 21.5

227.23

223.6

3.7

+ 60.9 2' 38.75

226.40

222.9

3.5

+ 40.9 1' 56.0

225.56

221.7

4.0

155 + 29.74 10' 34.07

+ 20.9 1' 13.25

224.90

220.4

4.5

155 + 00.9 0' 30.9

223.96

218.9

5.1

154 + 86.64

223.83

217.8

6.1

T.P.

227.09

Direct Elev. Rod used

225.71

B.M. R.P. P. 49



8" Water Main - Front Ave

		Elev. invert 8" Water Main	Cuts	offsets
chk				
159 +94 -End	213.6	209.9	3.7	4'4"
159 +42	219.63	215.4	4.2	"
T.R. on stub				
159 +10	221.89	218.2	3.7	"
+70	224.78	221.1	3.7	"
158 +30	226.92	223.2	3.7	"
157 +90	228.22	224.8	3.4	"

Fairmount Ave

Water Line Branch at

Ridge View

Walker & Party

10-25-51

Ridge View  
East Branch

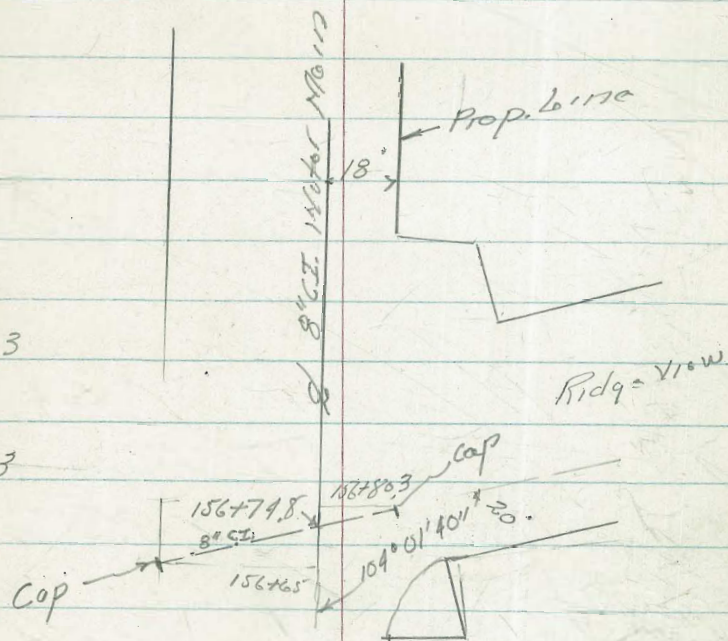
230.88 225.6

5.3

West end of Ridge View

229.76 225.5

4.3



TORREY PINES ROAD  
SEWER CROSSING Const. Grades  
on Hillside Drive

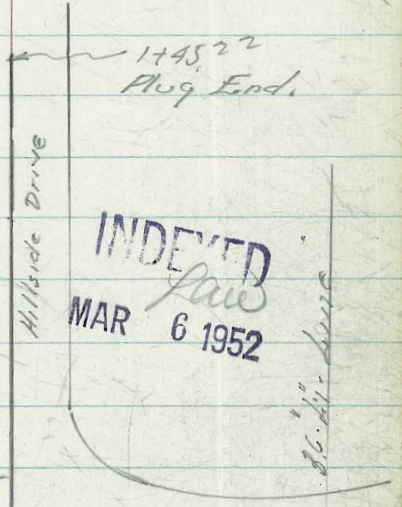
Crossing No. 1 Plan 1684-D 110 20798

Walker  
Pope  
Hoffmann  
Allen  
11-8-51

2+1920  
Fd. No. 1 F8 2016  
72

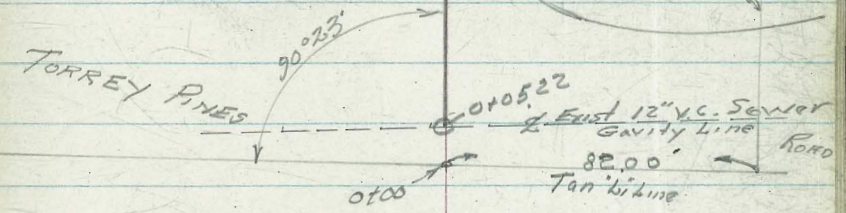
	Sta.	El. of Stakes	El. Invert.	Cuts	Offsets
chk & Per.	2.23	111.50	103.00		
1+45.22 = Plug End.	2.71	111.02	103.00	8.02	
1+15.22	6.19	107.54	98.32	9.22	
TP 8.10	113.73	105.63			
0+80.22	4.05	103.35	92.85	10.50	
0+45.22 = L.M.H. #1 Beg. Const.	8.13	99.27	87.40	11.87	
0+05.22 = East. Gravity Invert	9.44	97.96	85.40 84.40	12.56	
BTNEBR Viking & Torrey Pines Road	11.12	107.40	96.28		

Book Extended  
\$ 275



0+00 = 4" Venturi 4" line  
Tie line only

P.I. 10.1'



Viking way

Grades for 6" Cast Iron Drain

Treatment Plant.

(Location P-58)

Walker  
Pope  
Hoffman  
Nov. 1951

		Grating 8.00	
	P-32 → 4" 1154	Invert.	Cuts
1+54.5 = 2	Grating Drain	6.00	5.54
0+98 = Δ		837 5.60	2.77
0+49		838 5.25	3.13
TP		8.37	
0+00 = 2	Grating	836 4.90	3.46
		4.73	
		9.00	

INDEXED  
Law  
MAR 6 1952

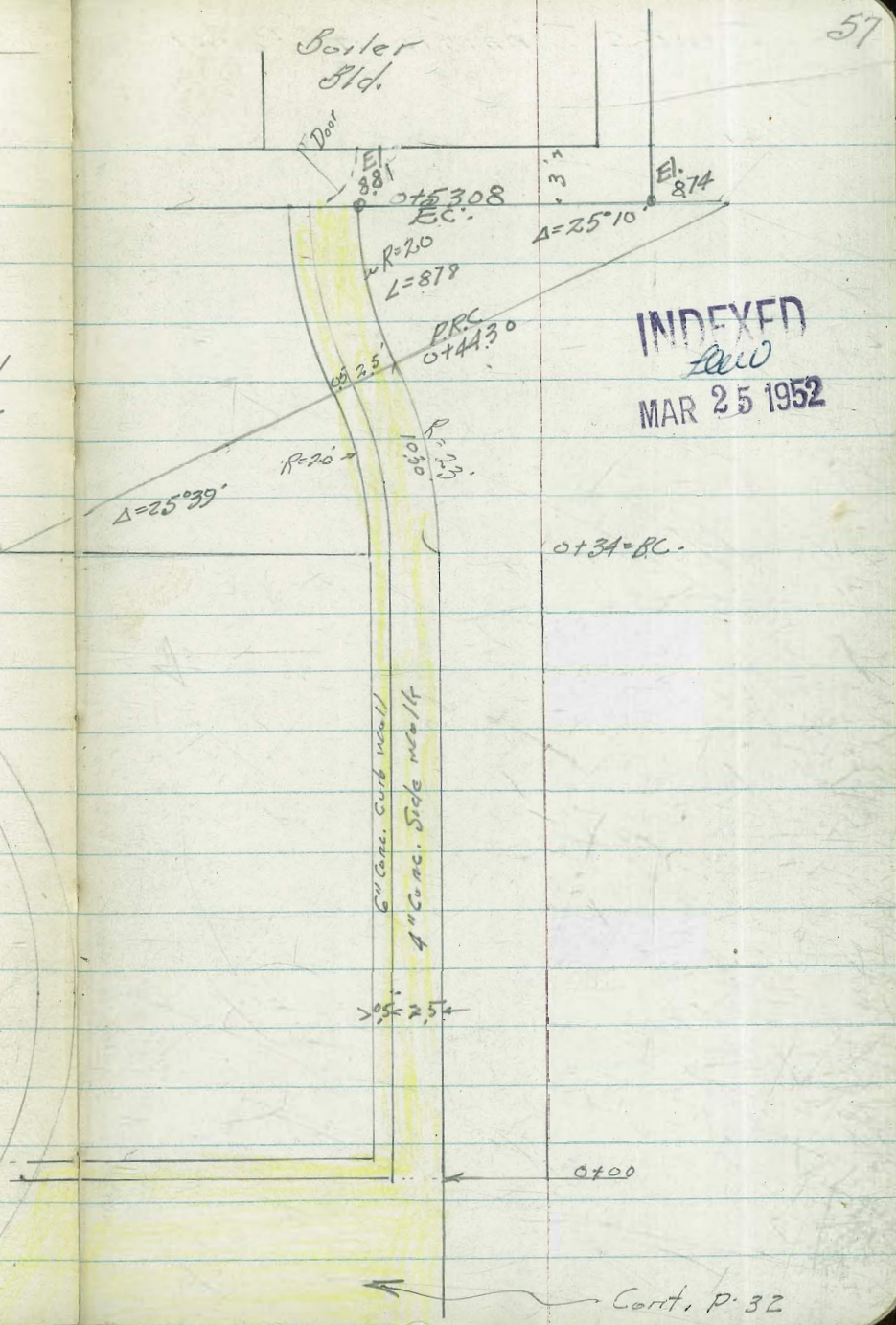
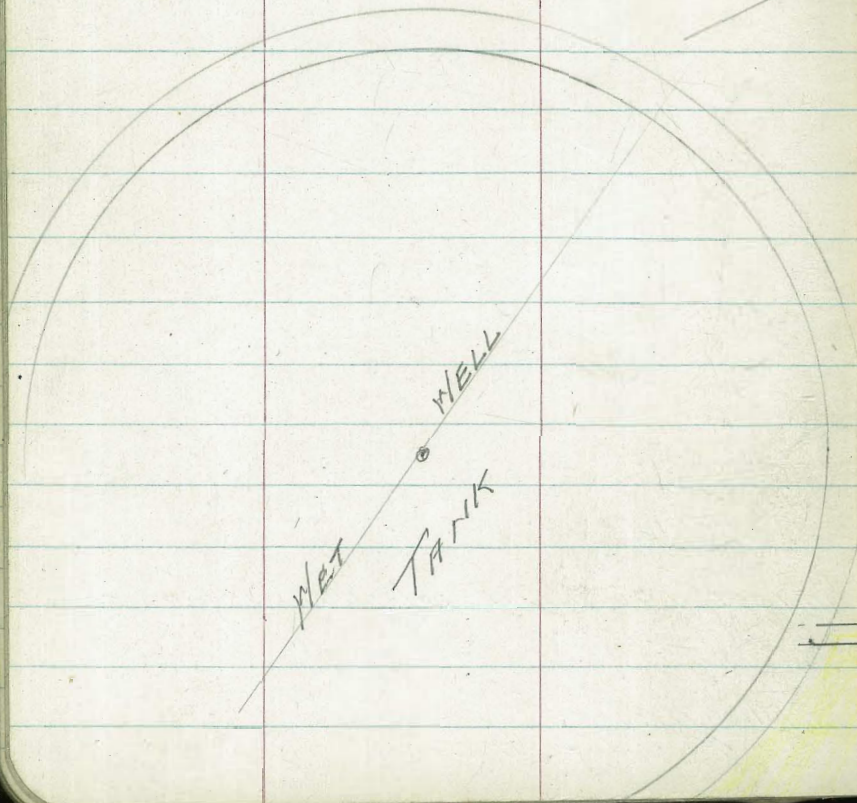
Invert 12" Drain Below Grating Inlet.

S.M. Chislad Square  
17 Foundation Stack

# Sewage Treatment Plant

## Grades Sidewalk


	Elev. Stakes	Elev. Walk	Cuts
0+53.08 = E.C.	8.80	8.81	F0.01
0+44.3 = PRC	8.74	8.73	C 0.21
0+34 = B.C.	8.69	8.63	C 0.06
0+00	8.01	8.41	F 0.40



SEWAGE TREATMENT PLANT

Melker  
Pope  
Huffman  
Nov. 1951

58


Grating Inlet  0+00

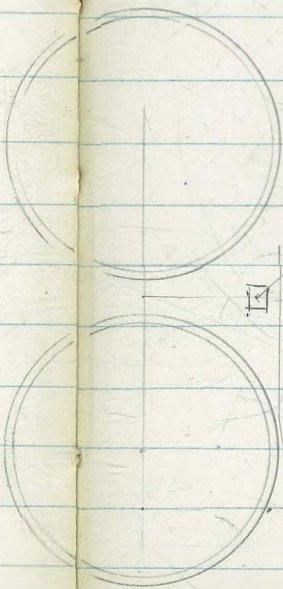
6" C.I. Drain

0+49

0+98  
 $\Delta$   
37°20'

6" C.I. Drain  
Grades  
p. 56

 1754.5  
= Grating.

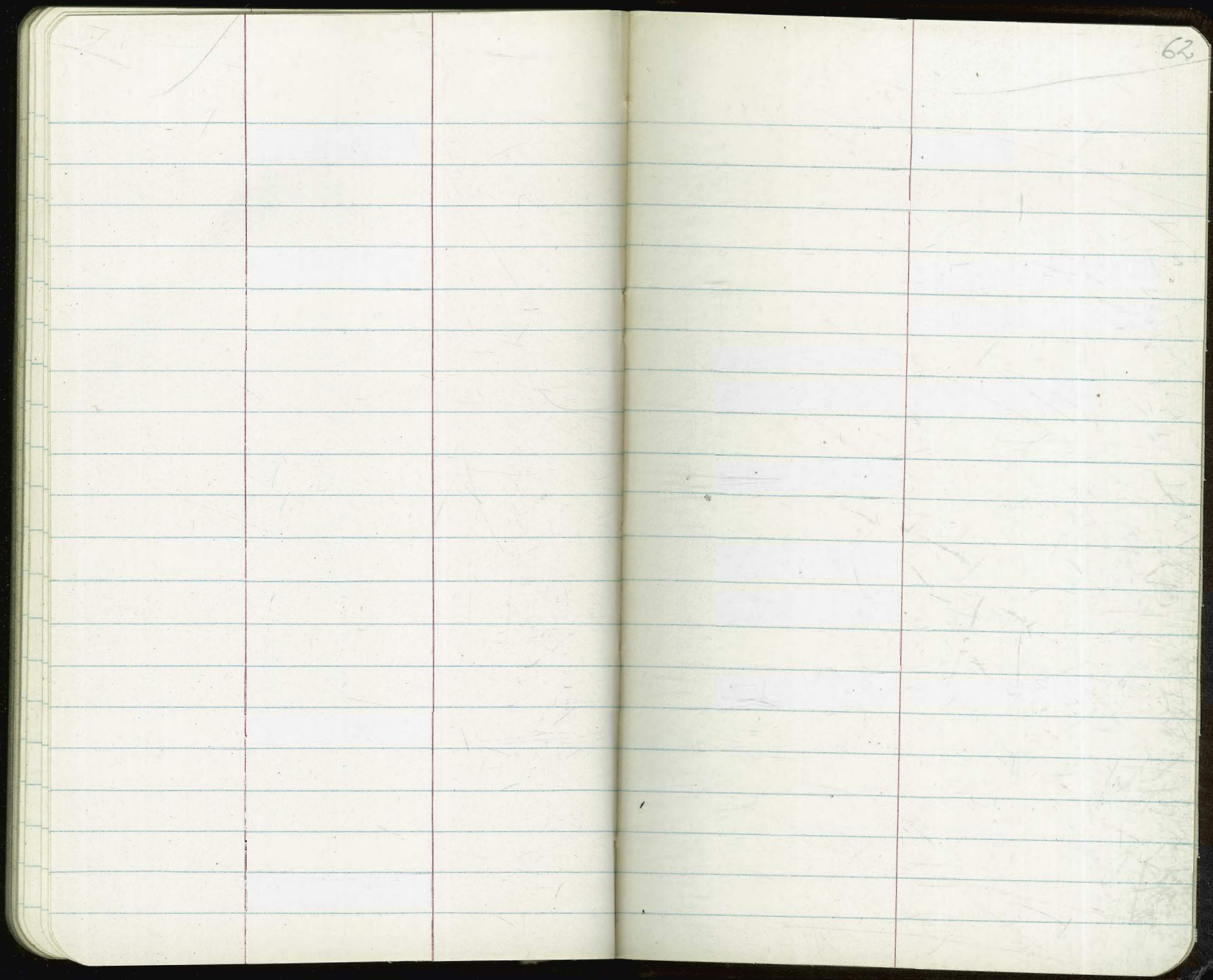




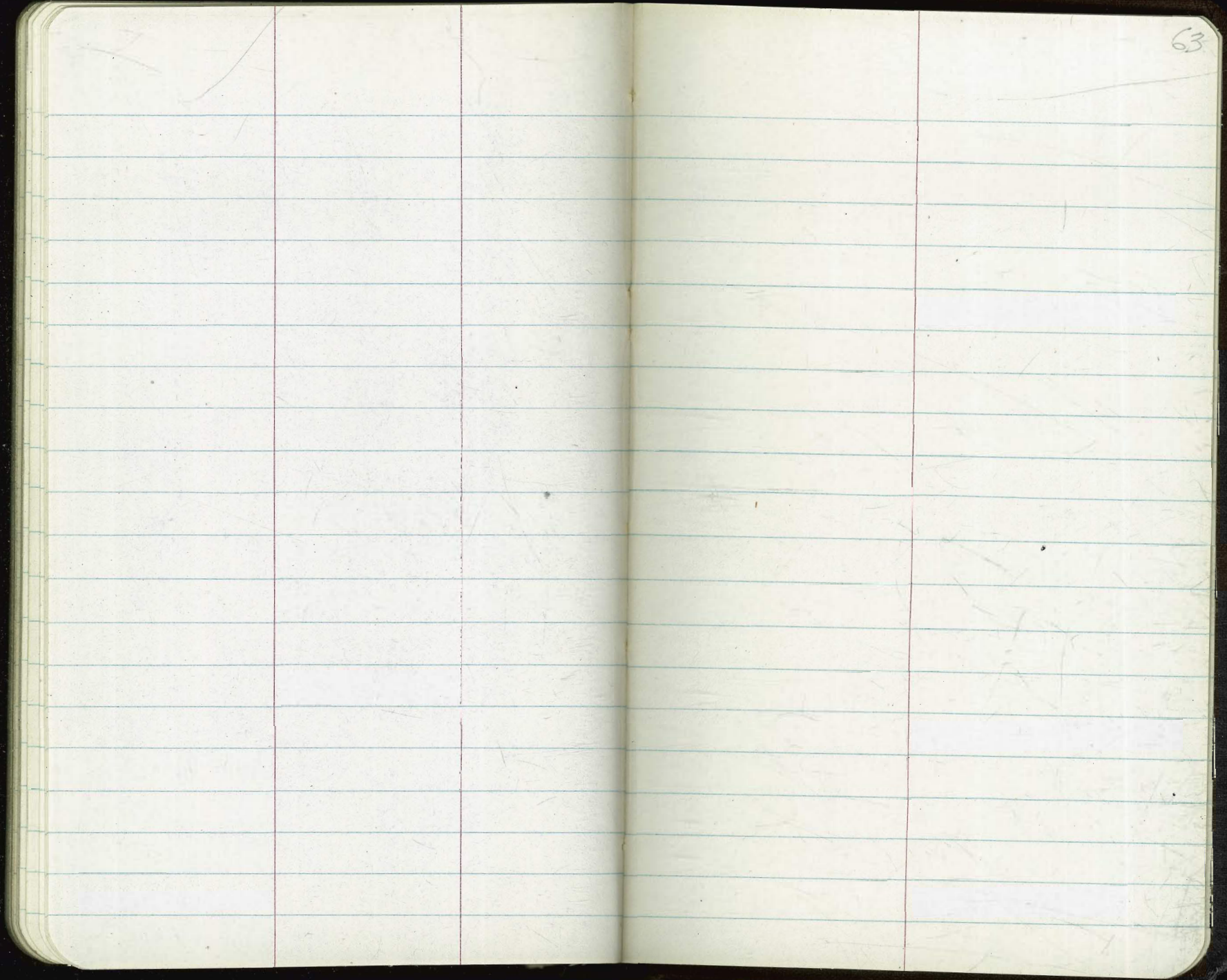


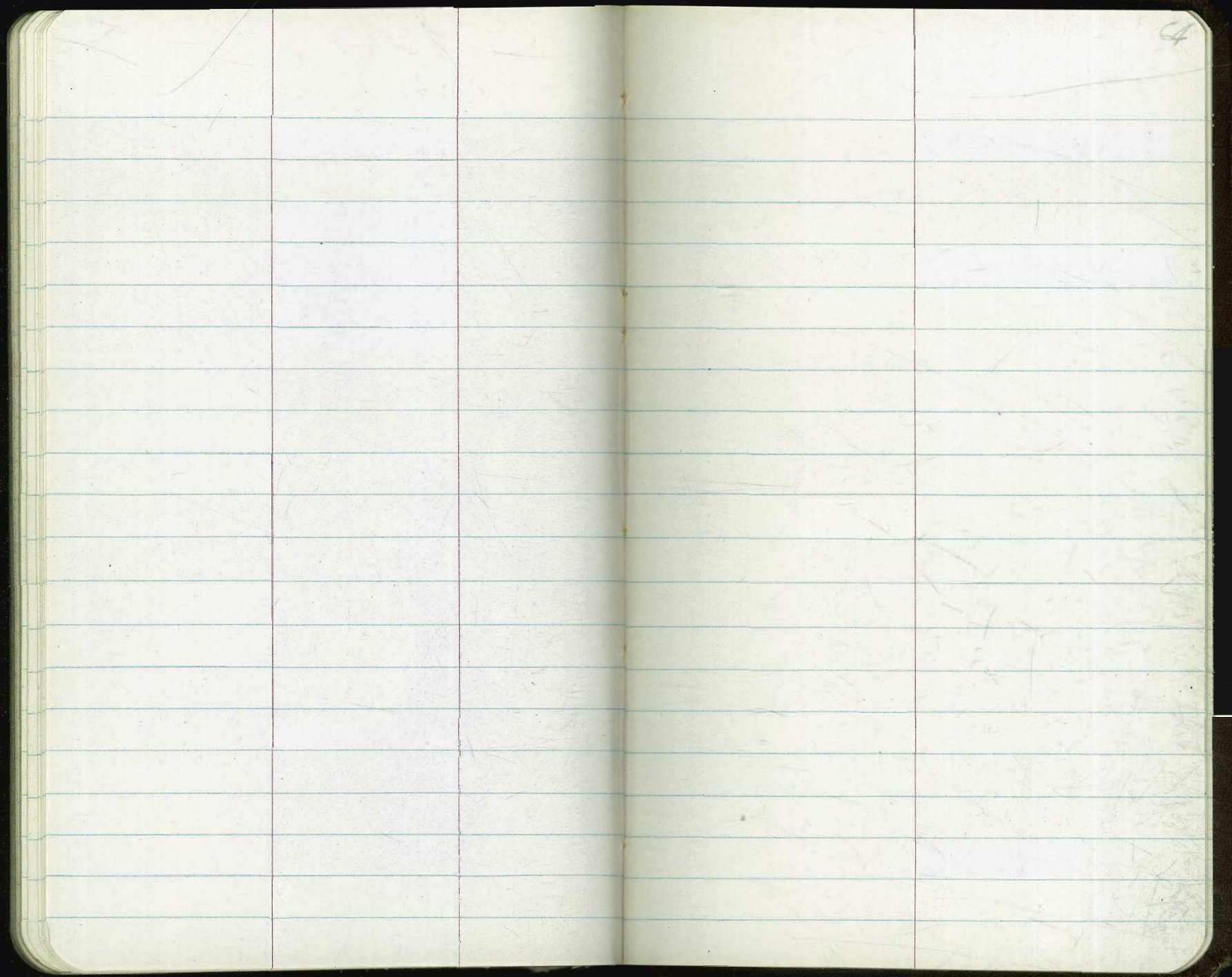






62









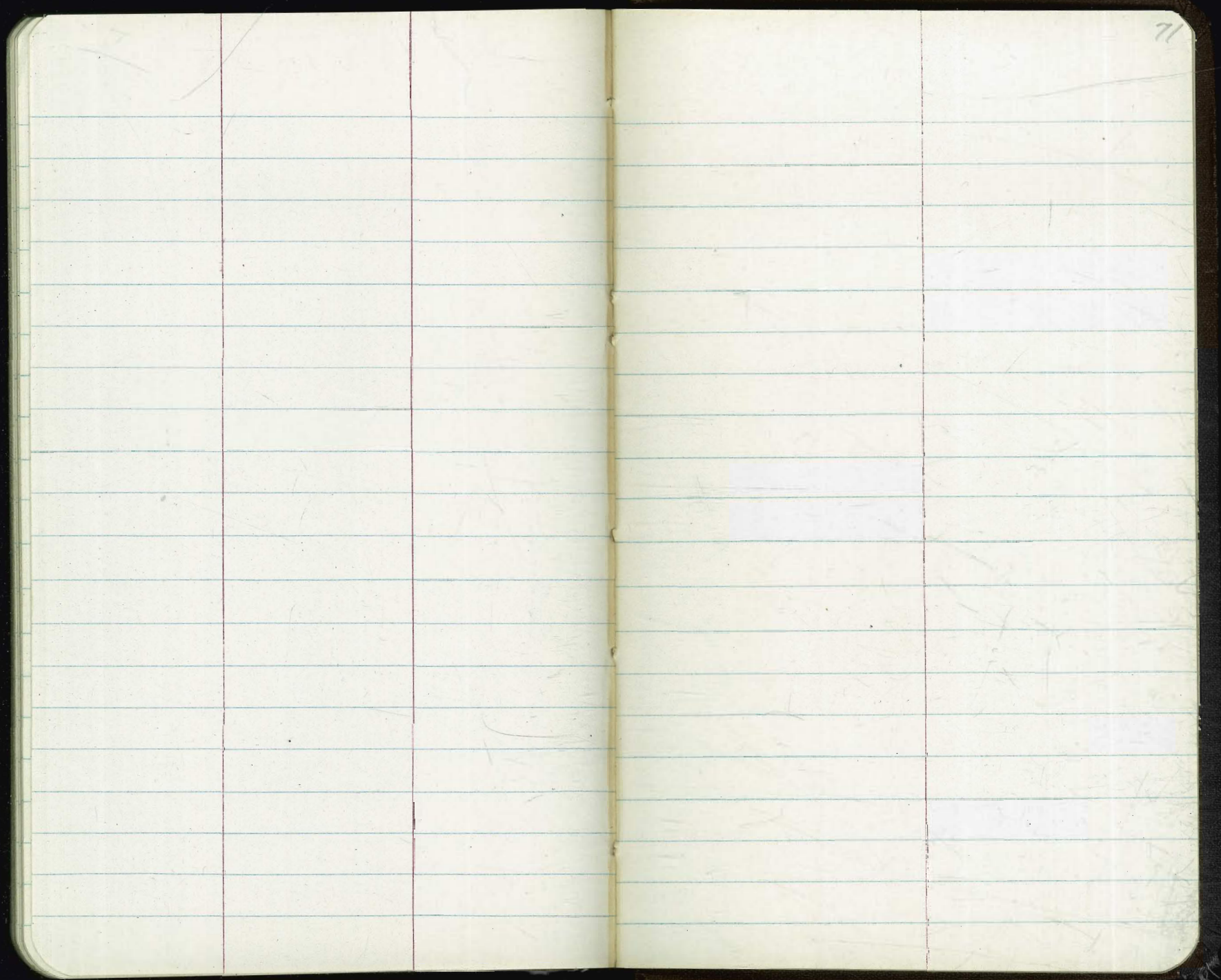












71







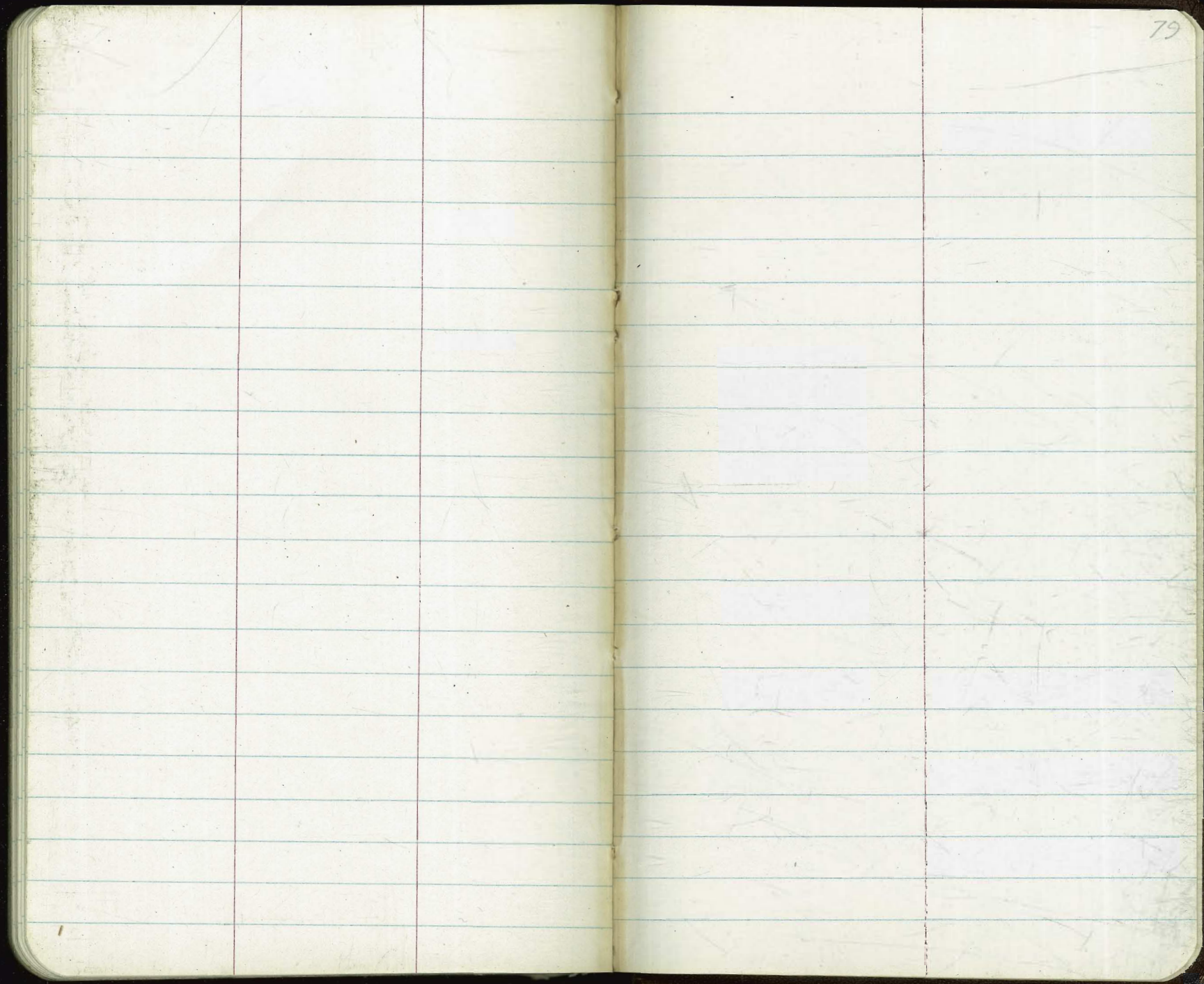












17851

8210

9641

1711  
1/21  
242

711  
242  
469

508.02  
133  
506.71

158.51  
63  
95.51

450  
133  
583

910  
77  
16.9

70  
158.67  
158.67

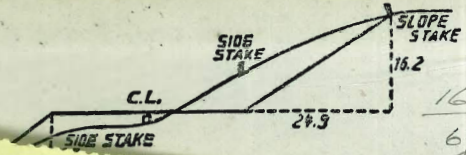
158.69  
95.17  
63.52

62.05  
57.05  
6

163.69  
101.75  
61.84

101.75  
61.84  
163.68

158.57  
158.56  
63.39  
45.19



160.32  
62.05  
45.08  
50.22  
57.32

$\frac{1}{2} = 5^\circ 28.8'$

$C = 153.00$  152.77

489.6 L' - Tan Dist.

$R = 800$

10-57-31  
5-28-45.5"

$0.9548623 \times 1600$   
 $= 152.778$

152.78'

$\times 1660 = 158.507$

0
1
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COMPANY  
CHUSETTS  
SAN FRANCISCO

$\frac{121}{121}$   
 $\frac{121}{121}$   
 $\frac{121}{121}$   
 $\frac{711}{242}$   
 $\frac{711}{469}$

$\frac{508.02}{133}$   
 $\frac{506.71}{133}$

$\frac{158.51}{63}$   
 $\frac{95.51}{63}$

$\frac{4.50}{133}$   
 $\frac{583}{133}$

$\frac{910}{77}$   
 $\frac{16.8}{77}$

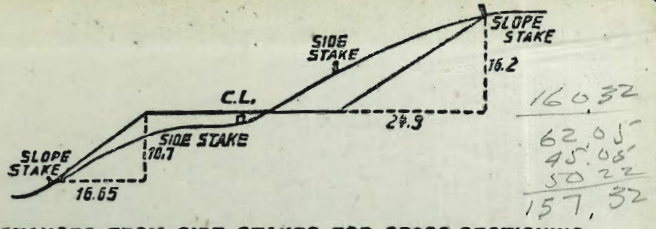
$\frac{62.05}{5.705}$   
 $\frac{6}{5.705}$

$\frac{70}{158.69}$   
 $\frac{158.69}{95.17}$   
 $\frac{63.51}{95.17}$

$\frac{163.69}{101.75}$   
 $\frac{61.44}{101.75}$

$\frac{101.75}{61.44}$   
 $\frac{163.68}{61.44}$

$\frac{158.57}{158.56}$   
 $\frac{63.39}{158.56}$   
 $\frac{45.19}{63.39}$



**DISTANCES FROM SIDE STAKES FOR CROSS-SECTIONING.**  
**SLOPE 1 1/4 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

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