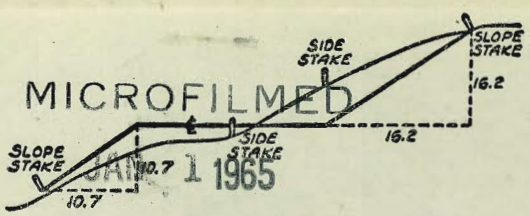
2211

STORM DRAINS

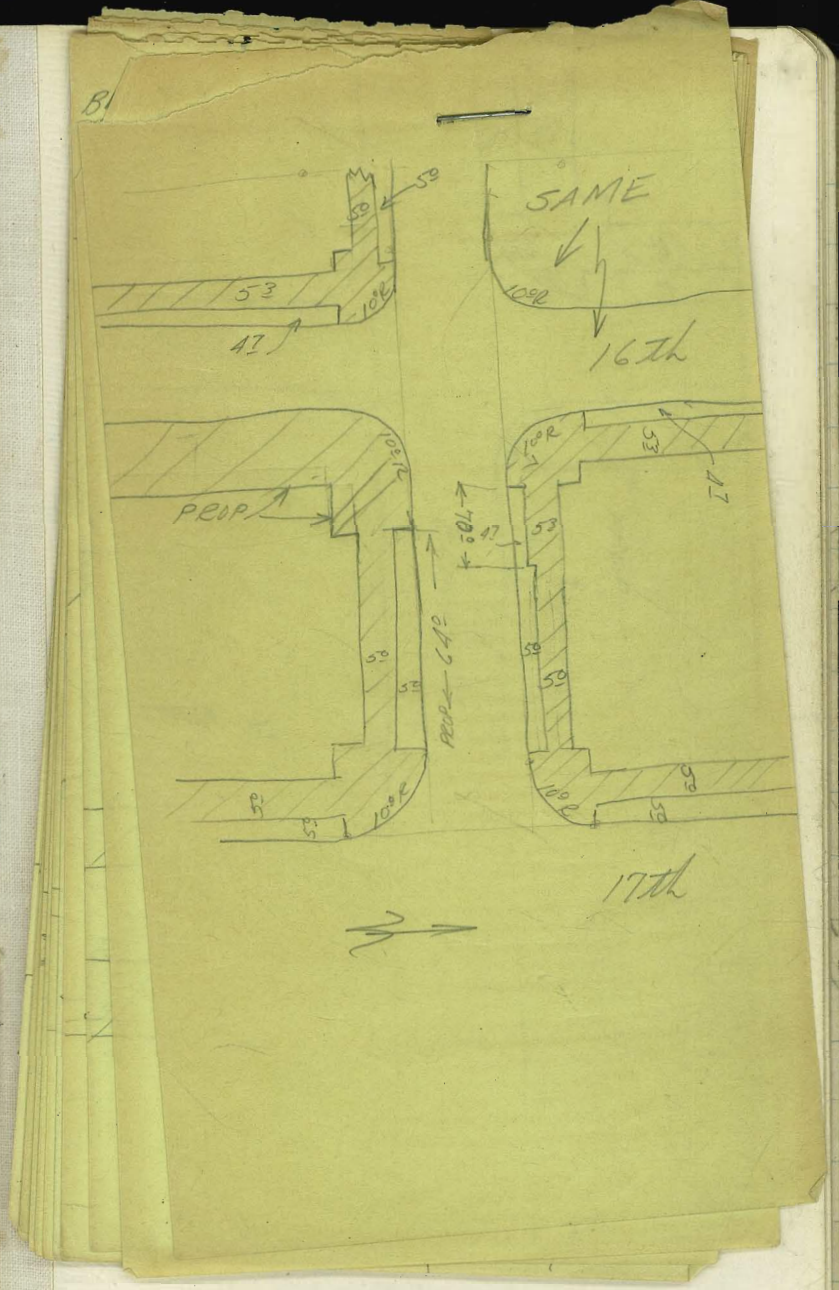


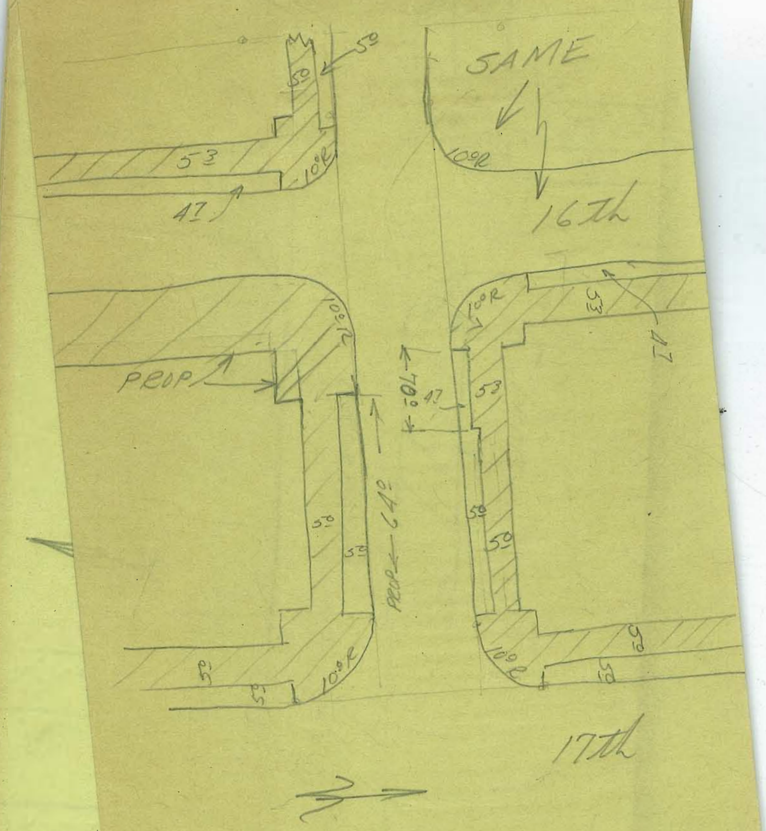
Distances from Side Stakes for Cross-Sectioning

Slope 1 to 1. Roadway of Any Width

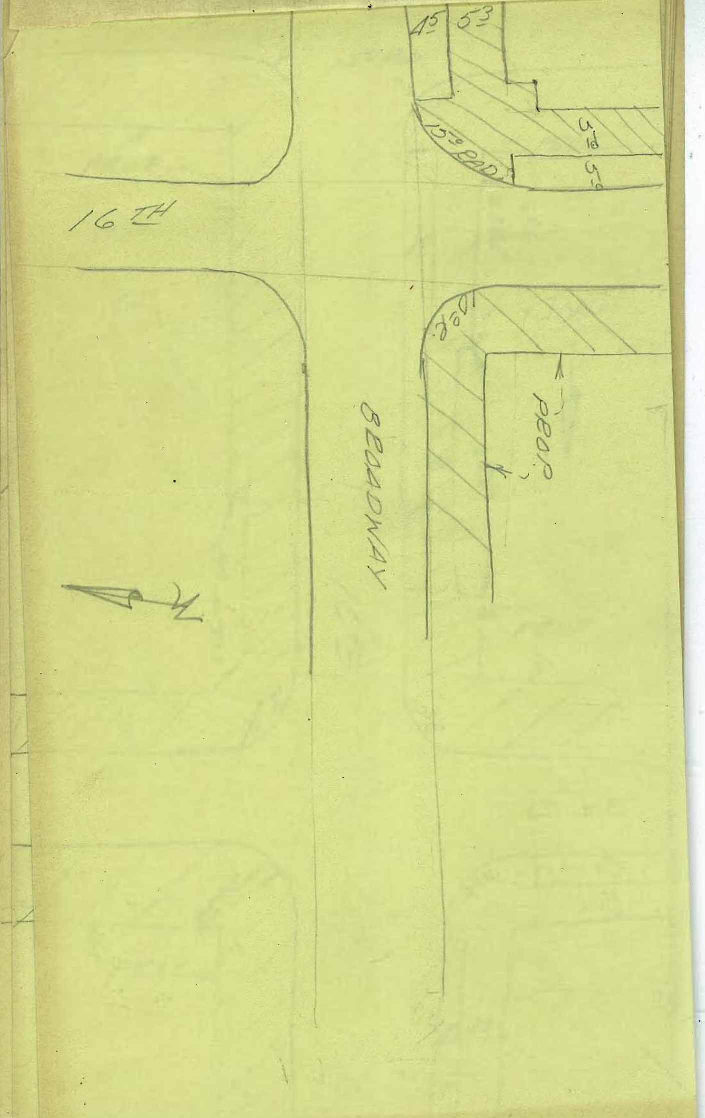
	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	
0	0.00	0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	0
1	1.00	1.10	1.20	1.30	1.40	1.50	1.60	1.70	1.80	1.90	1
2	2.00	2.10	2.20	2.30	2.40	2.50	2.60	2.70	2.80	2.90	2
3	3.00	3.10	3.20	3.30	3.40	3.50	3.60	3.70	3.80	3.90	3
4	4.00	4.10	4.20	4.30	4.40	4.50	4.60	4.70	4.80	4.90	4
5	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

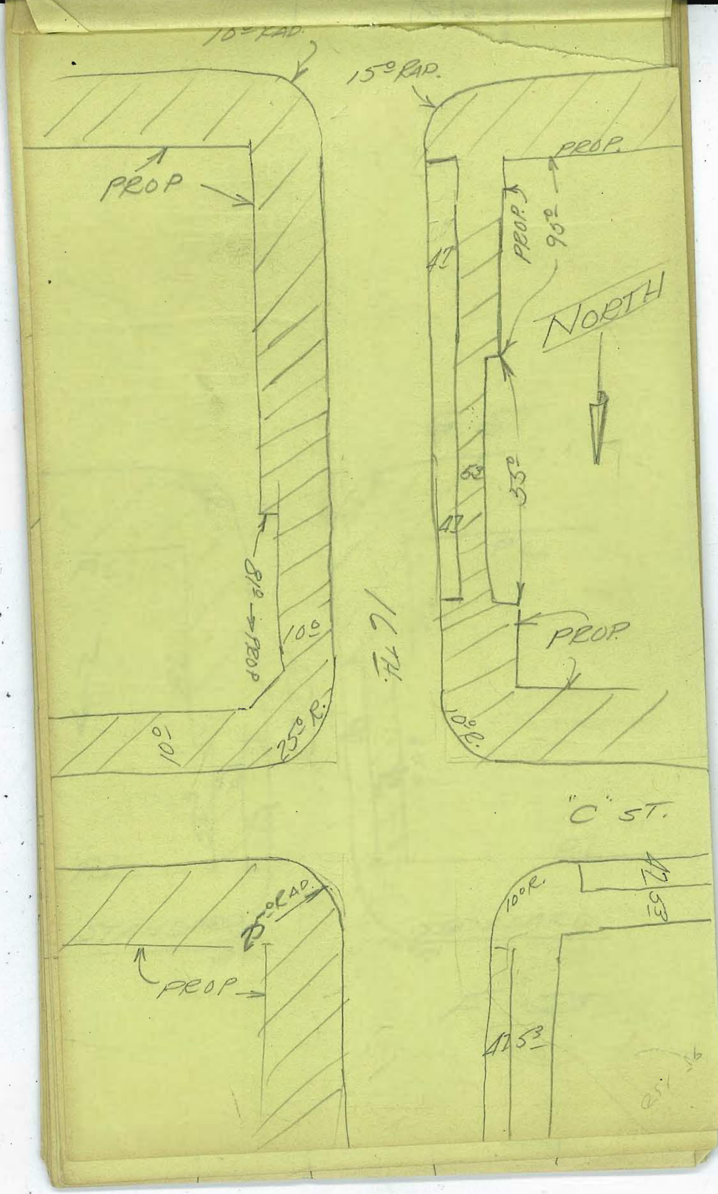
Distance of slope stake from side or shoulder stake for any width roadway, slope 1 to 1. If ground is nearly level, the cut or fill at side stake is located by the double entry method in left column and top row. The number in body of table in same row and column gives distance from side stake to slope 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.

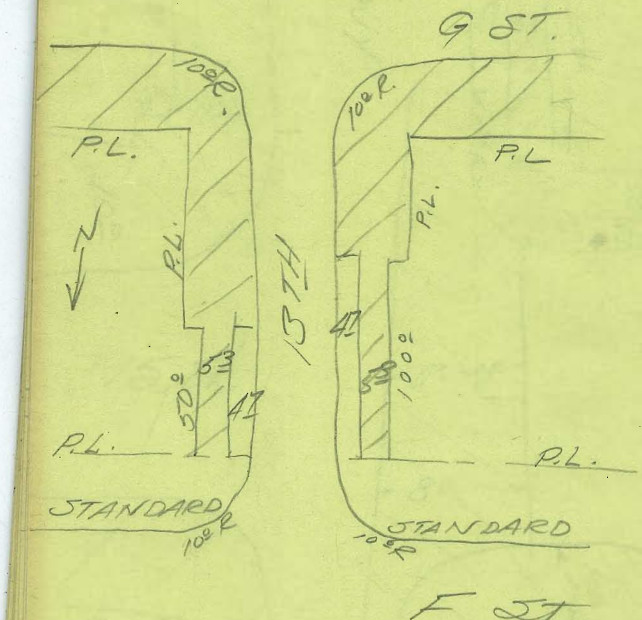


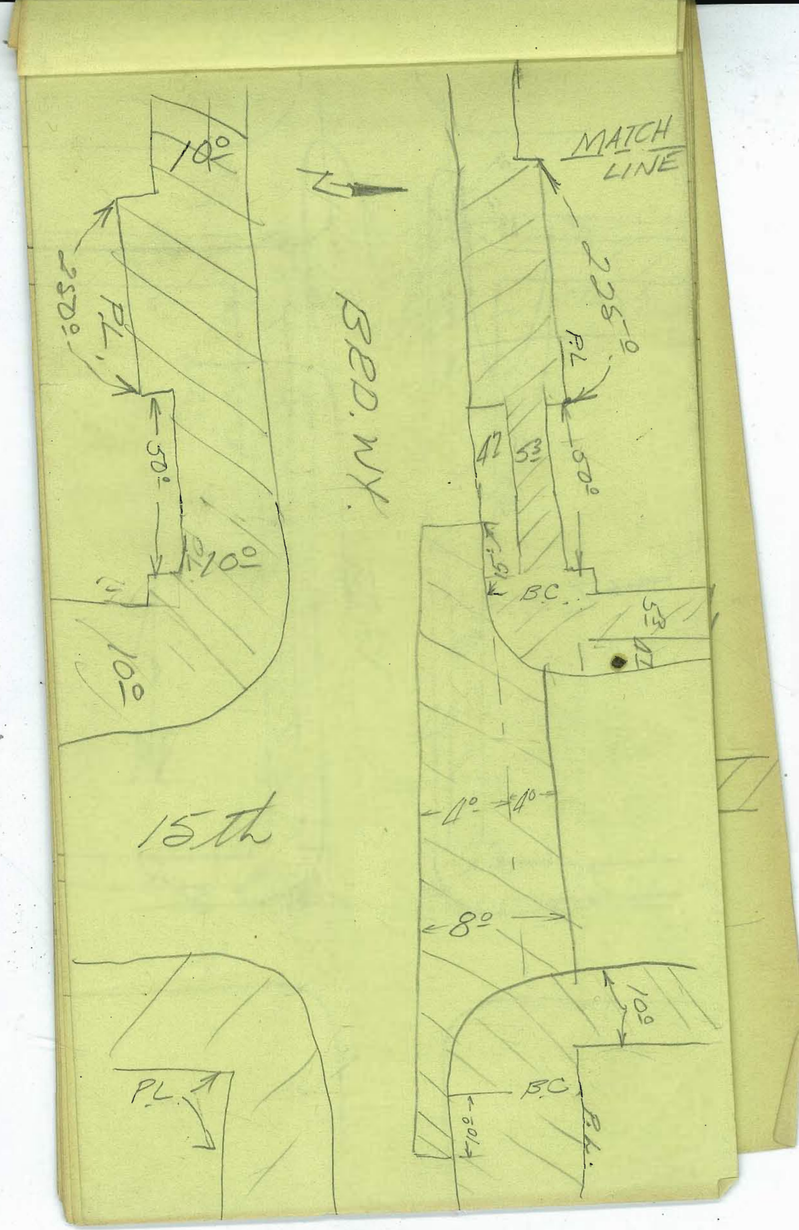


SAME
16th
17th
PROP

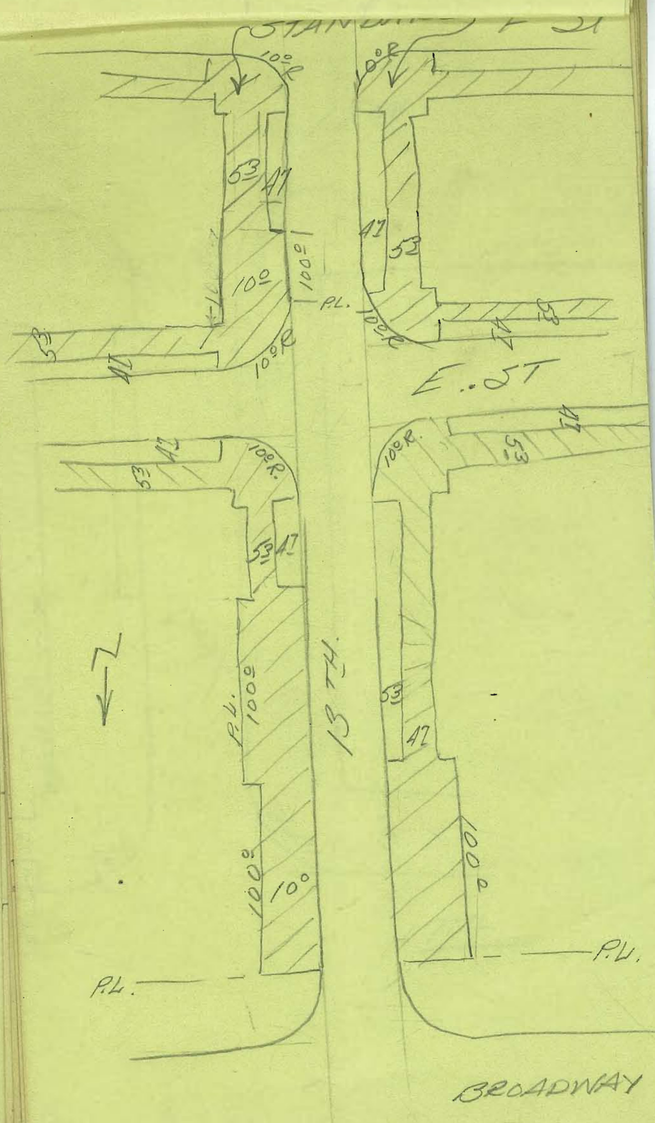

16TH
BROADWAY
PROP
N

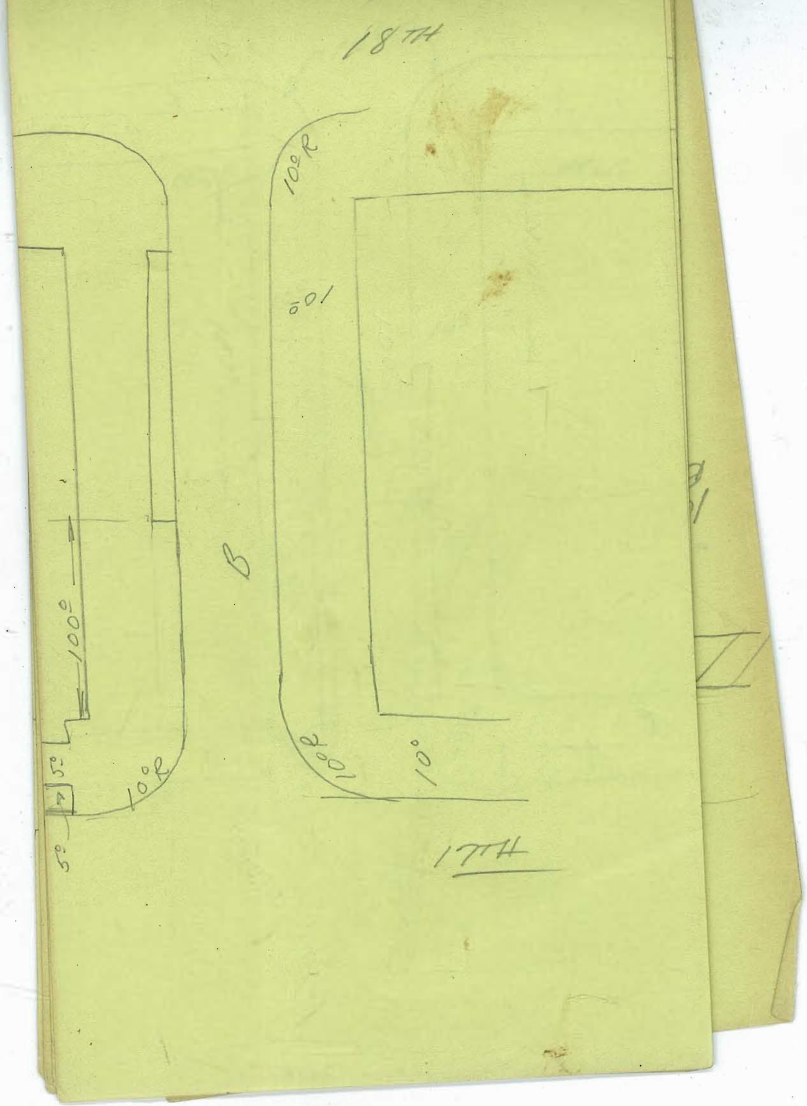

15° RAD.
PROP
PROP.
PROP.
95°
NORTH
55°
10°
PROP.
10° R.
25° R.
"C" ST.
PROP

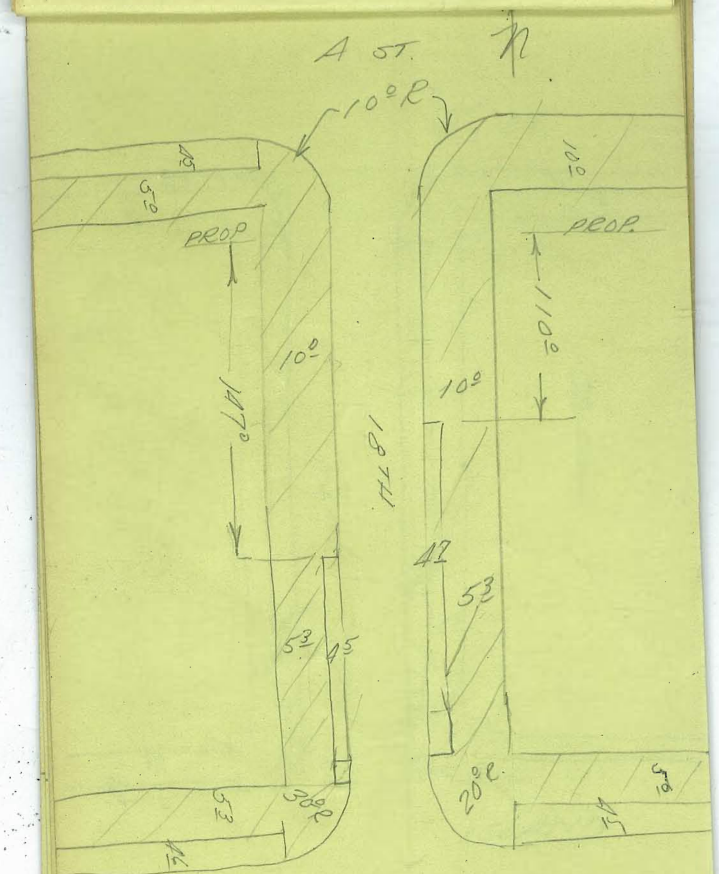

G ST.
10' R.
P.L.
P.L.
P.L.
P.L.
N
13TH
50'
53
47
47
53
100'
P.L.
P.L.
STANDARD
10' R
STANDARD
10' R
F ST.

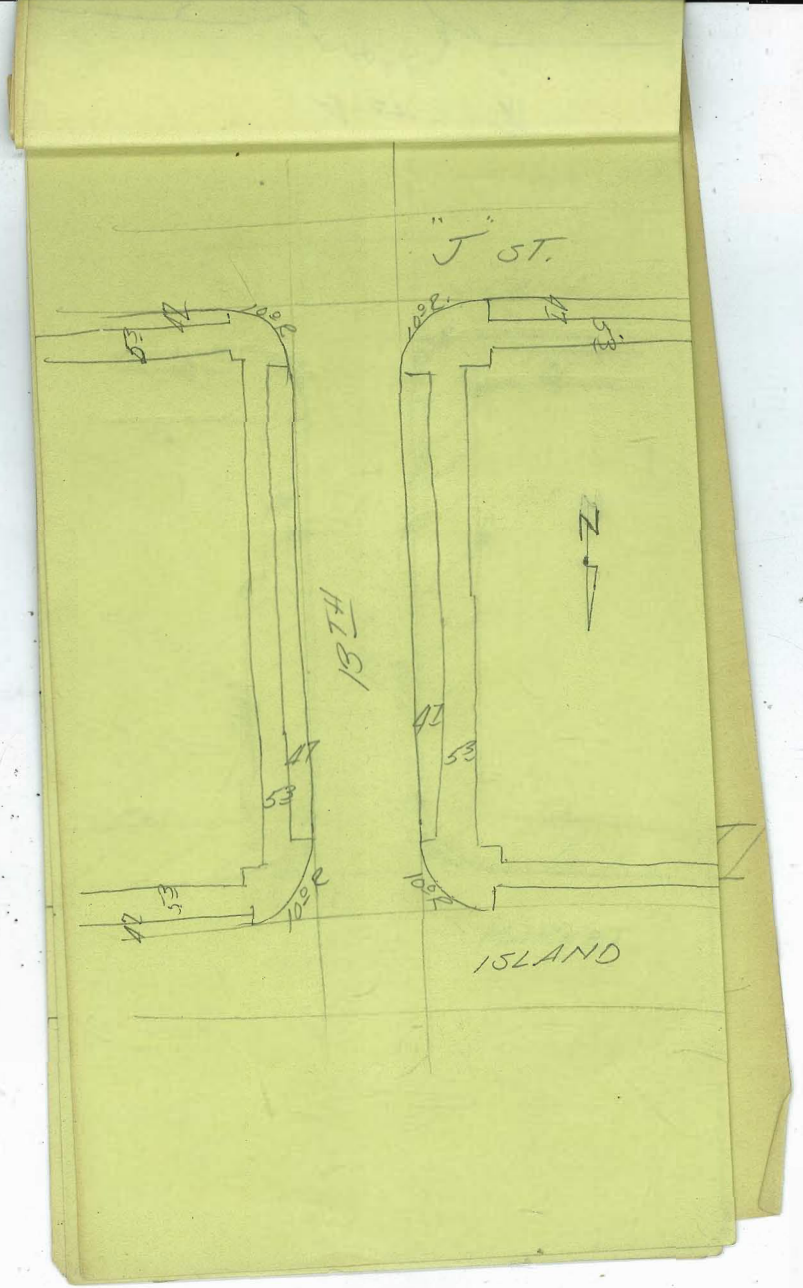

MATCH LINE
BED. WY.
15th
P.L.
B.C.
10°
50°
8°
4°
42
53

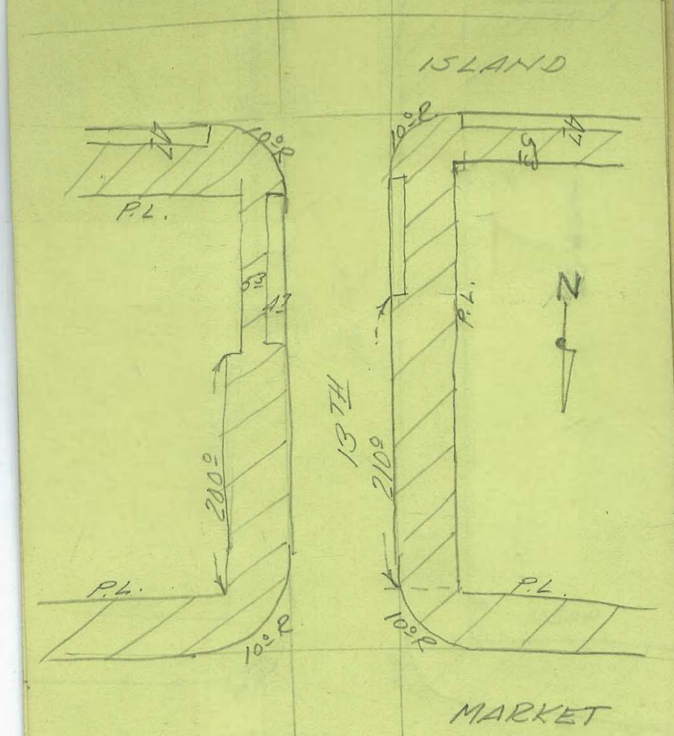
13TH
N

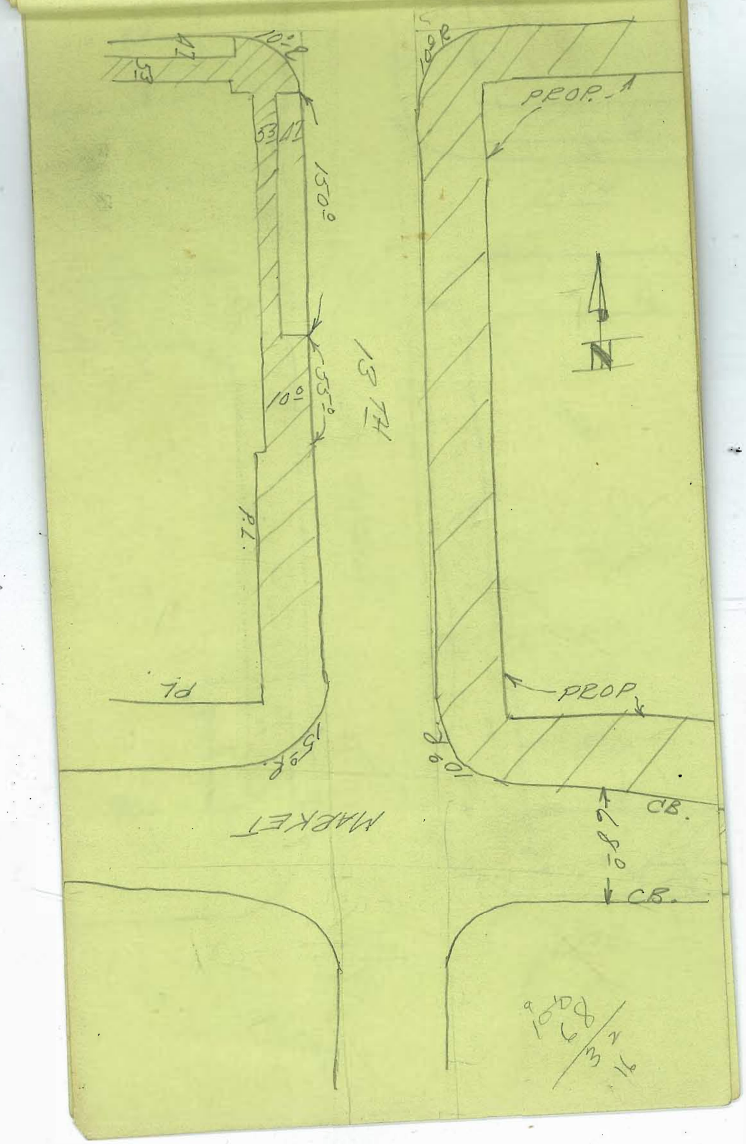

E. ST
13TH
BROADWAY
P.L.
10ºR
53
47
100º
10º

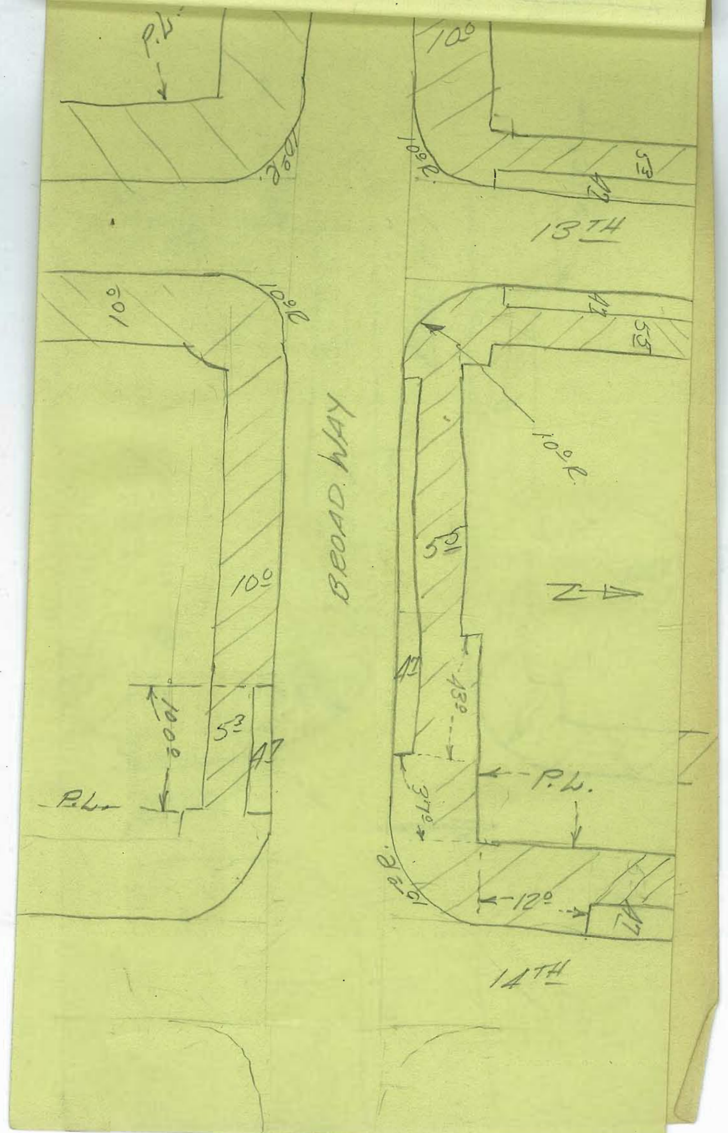

18TH
10'R
10'
B
100'
5'
5'
10'R
10'R
10'
17TH


A ST.
N
10º R
PROP.
PROP.
10º
10º
147º
110º
18TH
41
53
53
15
30º R
20º R


"J" ST.
15TH
ISLAND
N


ISLAND
10' R
10' R
P.L.
13TH
280'
210'
P.L.
P.L.
10' R
10' R
MARKET
N


PROP.
PROP
CB.
CB.
N
MARKET
P.L.
PL


P.L.
13TH
BROADWAY
10° R
N
P.L.
P.L.
14TH

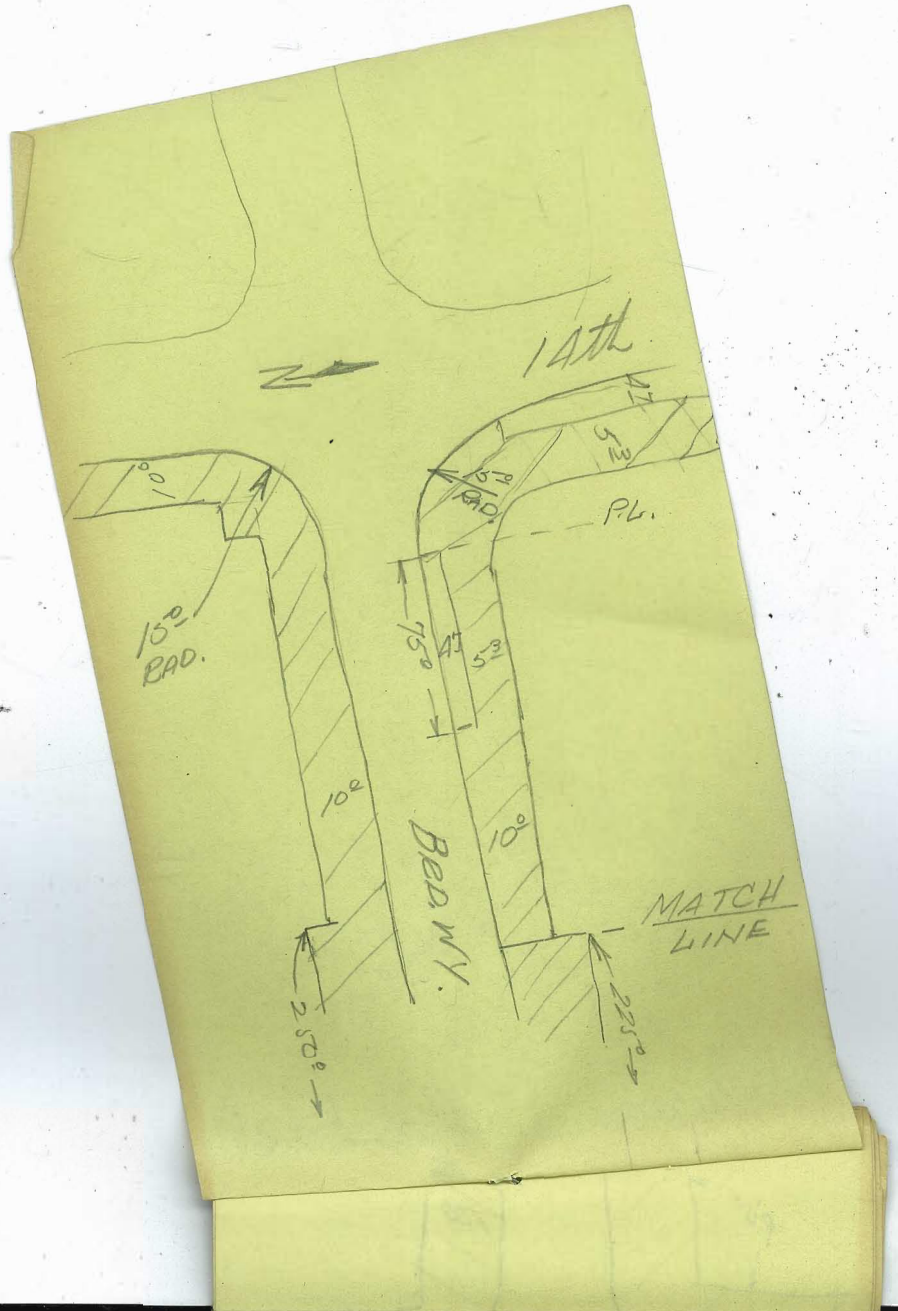

N
14th
5'-2"
5'-2"
RAD.
P.L.
10'-0"
15'-0"
RAD.
75'-0"
47'
5'-3"
10'-0"
BED. W'Y.
MATCH
LINE
250'-0"
225'-0"

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	.70	.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	.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	.711	.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	.985	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

Frankfort

Storm Drain Survey - Morena Blvd Pac. Hiway 1

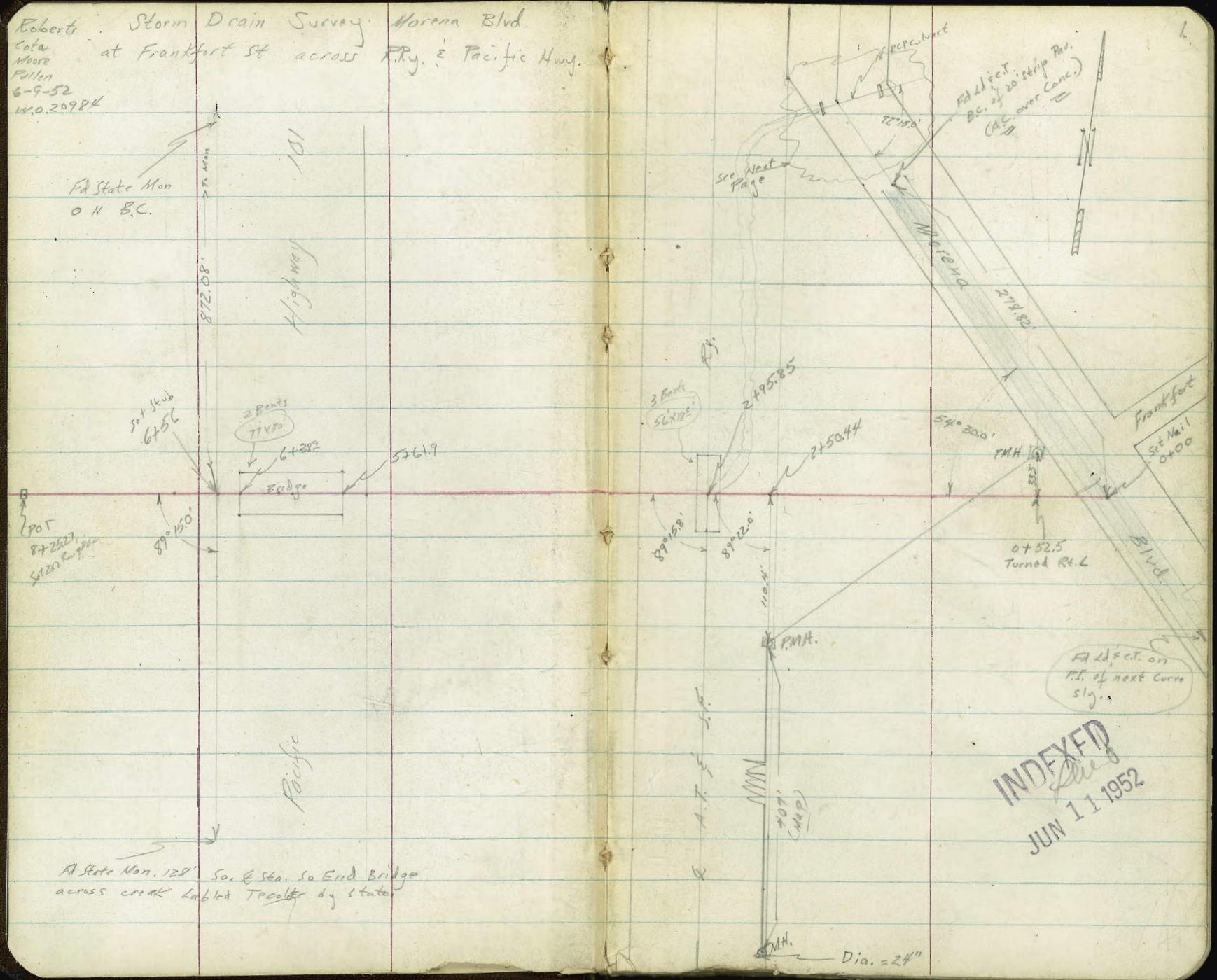
HAWTHORNE to

SURVEY EXIST. DRAINAGE FACILITIES: JUNIPER - EAST OF FERN 12

Proposed Drain across Brant's - N'ly Brooke 13-17

Roberts
Cota
Moore
Pullen
6-9-52
W.O. 2098K

Storm Drain Survey Morena Blvd. at Frankfort St across P.Ry. & Pacific Hwy.



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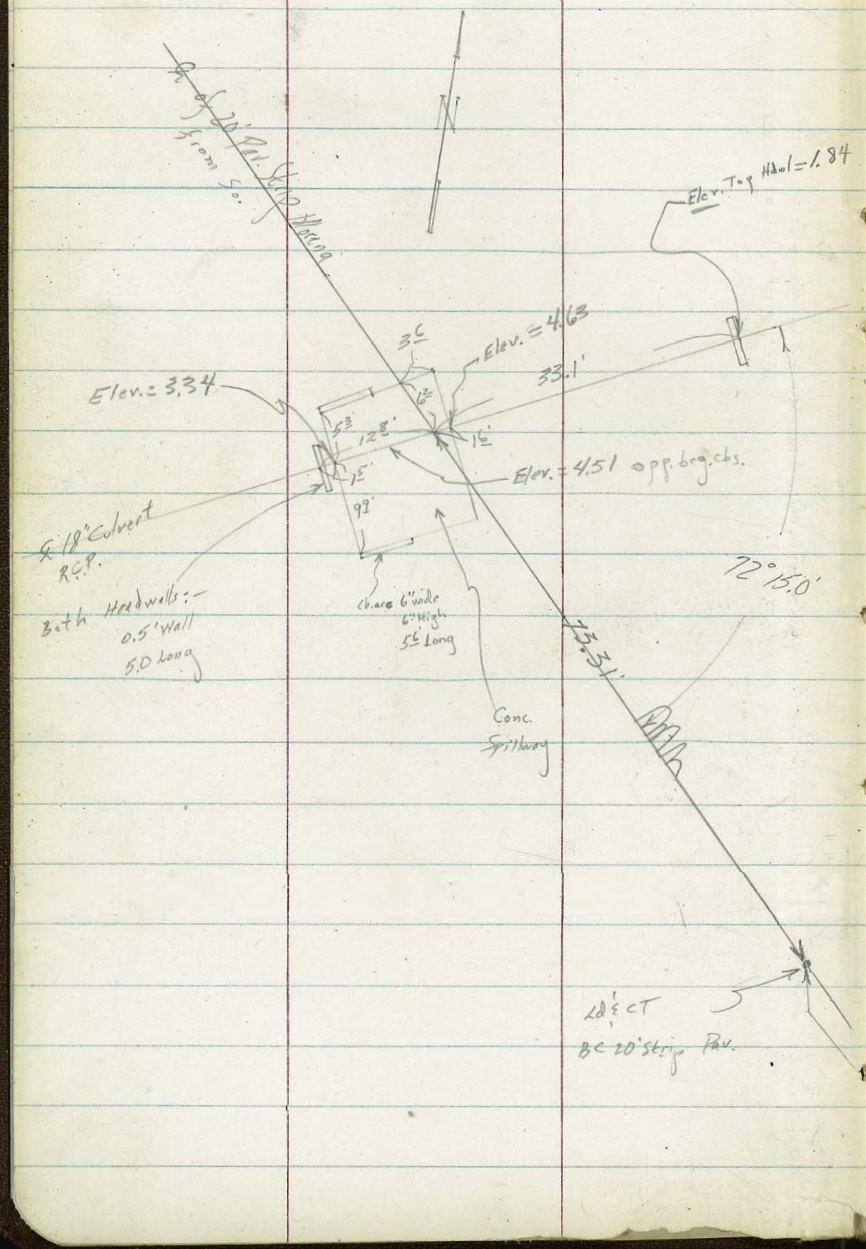


Cont'd From Page 2

		Lt						℄						Rt
0+68	40± Rt to S.E. Cor. Bldg (30'± X 61'±)													
0+52.5	33.3' Rt to center PMH (Sealed)					4.1 6.2 50	4.0 6.3 17	5.1 5.2			5.03 5.24 ← Good for Grd. 33± Top MH			
	Right angle Sections													
0+12±	Wly Edge Pav.					5.76 4.51 100	5.54 4.73 50	5.24 5.03	5.09 5.18 50	4.95 5.32 100				
0+00	℄ 20' Pav. Strip Morena Blvd.					6.04 4.23 100	5.81 4.46 50	5.55 4.72	5.38 4.89 50	5.25 5.02 100	-0.36 10.63 352.13 Inlet INVERT	-1.11 11.38 352.13 outlet INVERT		
											18" RCP Culvert			
0-12±	Ely Edge Pav. (AC over concrete)					5.81 4.46 100	5.56 4.71 50	5.38 4.89	5.15 5.12 50	5.04 5.23 100				
T.P.	4.72 10.27 ⊼✓ 6.39 5.55✓							10.27 ⊼✓						
0-25	X-Sects taken Parallel to Morena	7.2 4.7 300	6.3 5.6 250	5.9 6.0 200	5.6 6.3 150	5.4 6.5 100	4.8 7.1 50	4.9 7.0	4.6 7.3 50	4.5 7.4 100	4.2 7.7 150	4.1 7.8 200	3.8 8.1 250	
BM	1.90 11.94 ⊼ 10.04 BP. center & Ely headwall Bridge Tecolote Creek & Morena							11.94 ⊼✓						

Contd From Page 3

Lt ℄ Rt

2+68

2+50.44 110.4' ℄ 517.4' Lt to P.M.H. ℄ M.H. @ 89°22'

3.14 Elev. INVERT Outlet M.H.
3.09 Elev. INVERT M.H.
5.01 Elev. 110.4 to P.M.H. (Scaled)

2+00

1+50

T.P. 2.13 5.90 ✓ 6.50 3.77 ✓

1+14.5 22' Lt to Center P. Pole #C.4300

1+00

0+93.5 22.5' Rt to SW Cr. Bldg.

10.27 ✓

3.6 4.3 5.0 4.7 6.5 5.6 5.2 5.9
100 50 7 18 . 25 50 100

2.6 3.0 4.0 3.0 3.0
100 50 50 100

2.7 2.6 2.8 2.7 1.0
50 50 100 200

2.3 2.5 2.6 2.5
50 50 100

6.5 6.5 6.2
50 20

5.90 ✓

10.27 ✓

Cont'd From Page 4

Station					Lt			℄				Rt
4+00						3.6 / 4.4 / 50		3.3 / 4.7				3.0 / 5.0 / 50
3+84								3.3 / 4.7				
3+78								1.2 / 6.8				
3+20						0.5 / 7.5 / 50	1.2 / 6.8 / 5	0.9 / 8.9	0.1 / 7.9 / 15	1.3 / 6.7 / 21		1.3 / 6.7 / 50
3+04.9	W/ly Face Ry Bridge					4.9 / 3.1 / 28	3.2 / 4.7 / 17	1.5 / 9.5	1.5 / 9.5 / 10	4.5 / 3.4 / 22		5.0 / 3.0 / 28
T.P.	7.57	7.96 ⊼ ✓	5.51	0.39 ✓				7.96 ⊼ ✓				
2+86.6	Ely Face of Ry Bridge				4.7 / 1.2 / 28	4.0 / 1.9 / 20	1.5 / 7.4 / 5	1.5 / 7.4 Grd.	1.0 / +1.20 Bott. Bridge	1.5 / 7.4 / 10	4.4 / 1.5 / 22	1.6 / 1.3 / 28
	5.90 ⊼							5.90 ⊼ ✓				

Cont'd From Page 5

Station	Lt	℄	Rt
5+15		06/ 7.4	
5+00	84/ 5.6 50	78/ 5.6	78/ 5.6 50
4+86		73/ 5.7	
4+77		06/ 7.4	
4+50		12/ 6.8	
4+23		04/ 7.6	
4+17		19/ 6.1	
		/ 7.96 ⊼	

7.96 ⊼

Cont'd From Page 6

Sta.					Remarks	Lt	℄	Rt
9+00							.07 / 6.0	
8+00							.02 / 5.5	
7+00							.03 / 5.6	
6+38.9	Wly Face Hwy Bridge				(4' Top to Bottom)	1.1 / 6.43 / 15 conc	1.1 / 6.43 conc	1.1 / 6.43 / 15 conc
T.P.	0.44	5.32⊼	3.08	4.88 ✓	BP Eastside center Bridge		5.32⊼ ✓	
5+61.9	Ely Face Hwy Bridge					3.16 / 4.80 / 15 conc	0.88 / 8.84 Conc INVERT; 3.12 / 4.84 Butt. Bridge	3.14 / 4.82 / 15 conc
5+38							.02 / 8.2	
		7.96⊼					✓ 7.96⊼	

Cont'd. From Page 7

	Lt	℄	Rt.
16+00		6.4	-.1
15+00		6.7	-.0
14+00		6.1	-.0
13+00.		5.9	-.0
12+00		5.9	-.0
11+00		6.0	-.0
10+00		5.8	-.0

Redrod By O.R.L. 6-17-52

5.32 ↑

5.32 ↑

2/15

SURVEY FOR DRAIN EXTENSION SLY OF ROBINSON AT ALBERT

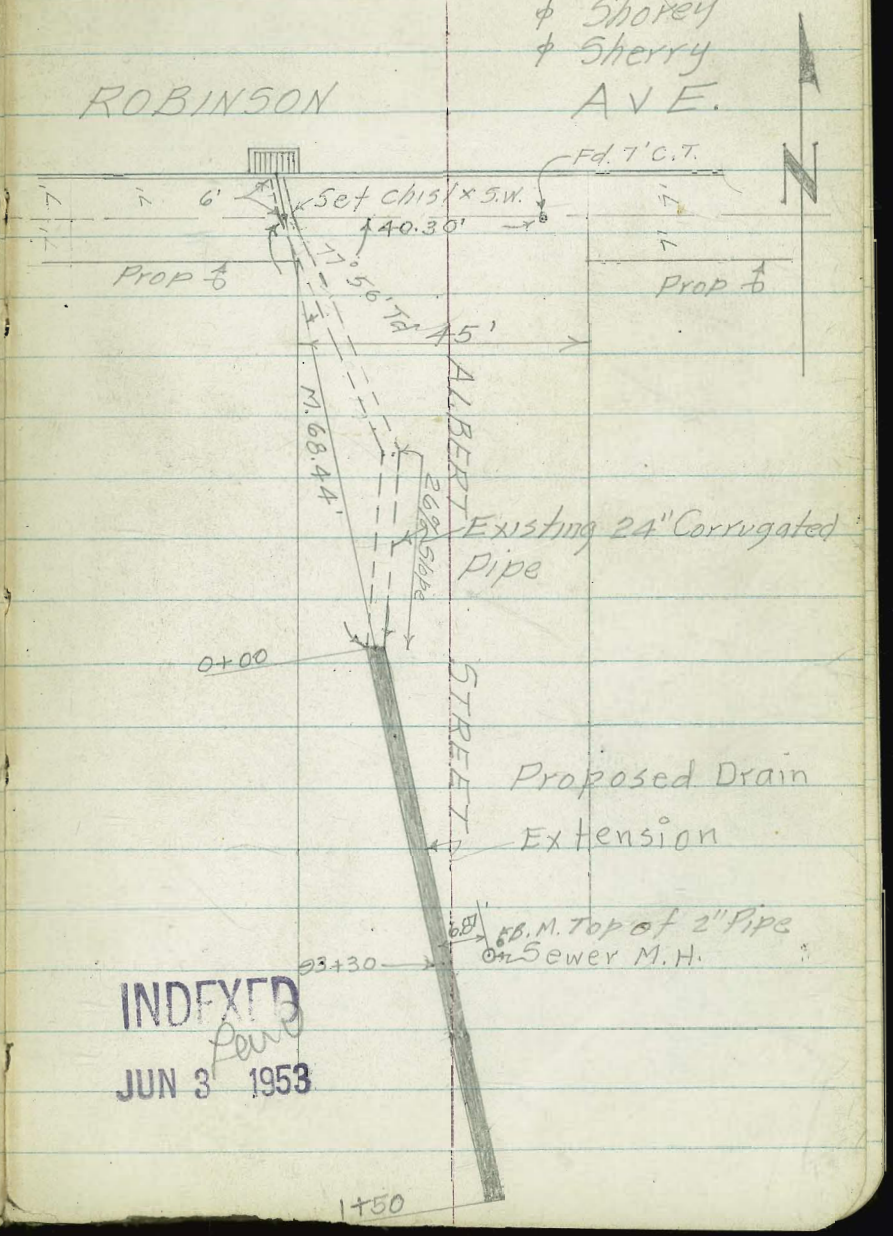
S.E. 7' Robinson & Richmond fd CT

Sta	Vert ∠	Slope	Horiz
	22°00'	73.81	68.44

(9)

W.O. 21060 2-18-53

Stamper
Huffman
Shokey
Sherry



7

CROSS SECTIONS FOR PROPOSED DRAIN EXTENSION ROBINSON AT ALBERT

Sta

T.P. 258.96
+83 7' Lt & 2' Eucalyptus Tree
+75

+50

+25

0+00

T.B.M. 258.96
T.P. 267.01
T.P. 274.39
T.P. 281.87
T.P 289.44
B.M. 294.05

10

2-18-53

East Lt. & Rt. West

NOTE: See Sketch Pg 9

Sections taken With a direct Reading Rod

259.9 258.3 257.2 257.1 258.1 261.6
12 4 2 0 8 20

265.6 264.5 261.3 259.5 258.6 258.8 260.0 261.1 261.5
17 13 6 0 1 3 5 10 20

267.4 265.5 264.4 262.4 261.7 262.4 263.0
13 10 6 3 0 10 20

F.L. 24" Corr.
267.4 264.9 261.57 263.6 263.6
12 8 0 10 20

Top of 2" Iron Pipe Opposite Sewer M.H. @ Sta 0+93.30
Top of Bottom Spike P.P. # P3725 (See Sketch)
With Plate on W. Side Pole.

S.W. B.P. Robinson & Richmond

2.6
4.6

2-18-53

CROSS SECTIONS FOR PROPOSED DRAIN EXTENSION ROBINSON AT ALBERT CONTD

Lt. EAST & Rt. WEST

Sta.		
B.M.	294.05 =	294.05 S.W. B.P. Robinson & Richmond
T.P.	288.82	
T.P.	280.14	
T.P.	271.70	
T.P.	263.60	Top 24" Corr. Pipe @ Outlet = Ground Level
+50		255.9 (20) 254.7 (12) 253.3 (0) 259.9 (17)
+38 Lt. 7' ⌀ 12" Tree		
+25		254.2 (7) 253.4 (6) 253.5 (3) 254.2 (2) 254.6 (0) 258.6 (14)
		257.8 (20) 256.7 (15)
1+00		257.0 (15) 254.7 (6) 256.4 (0) 258.7 (11) 260.7 (18)
0+93.30 ℄ SEWER MANHOLE		255.50 (6.9)
B.M.	255.50	W. Edge M.H. Rim (see Sketch)

Clark
Shephard
Bruner
ONeil

W.O. 21095
3-19-53

SURVEY OF EXIST. DRAINAGE FACILITIES:

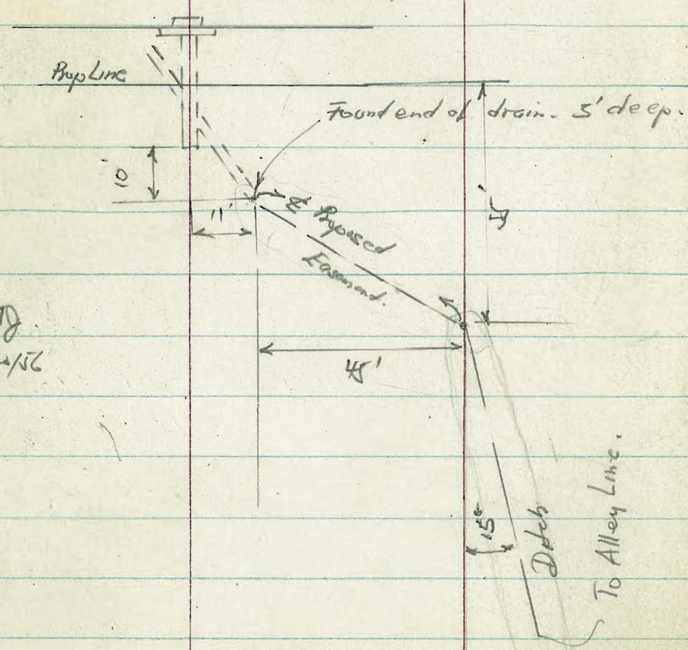
HAWTHORNE to JUNIPER, EAST OF FERN

Sketch not to SCALE.

Blue-Line ARROW INDICATES DIR. FLOW

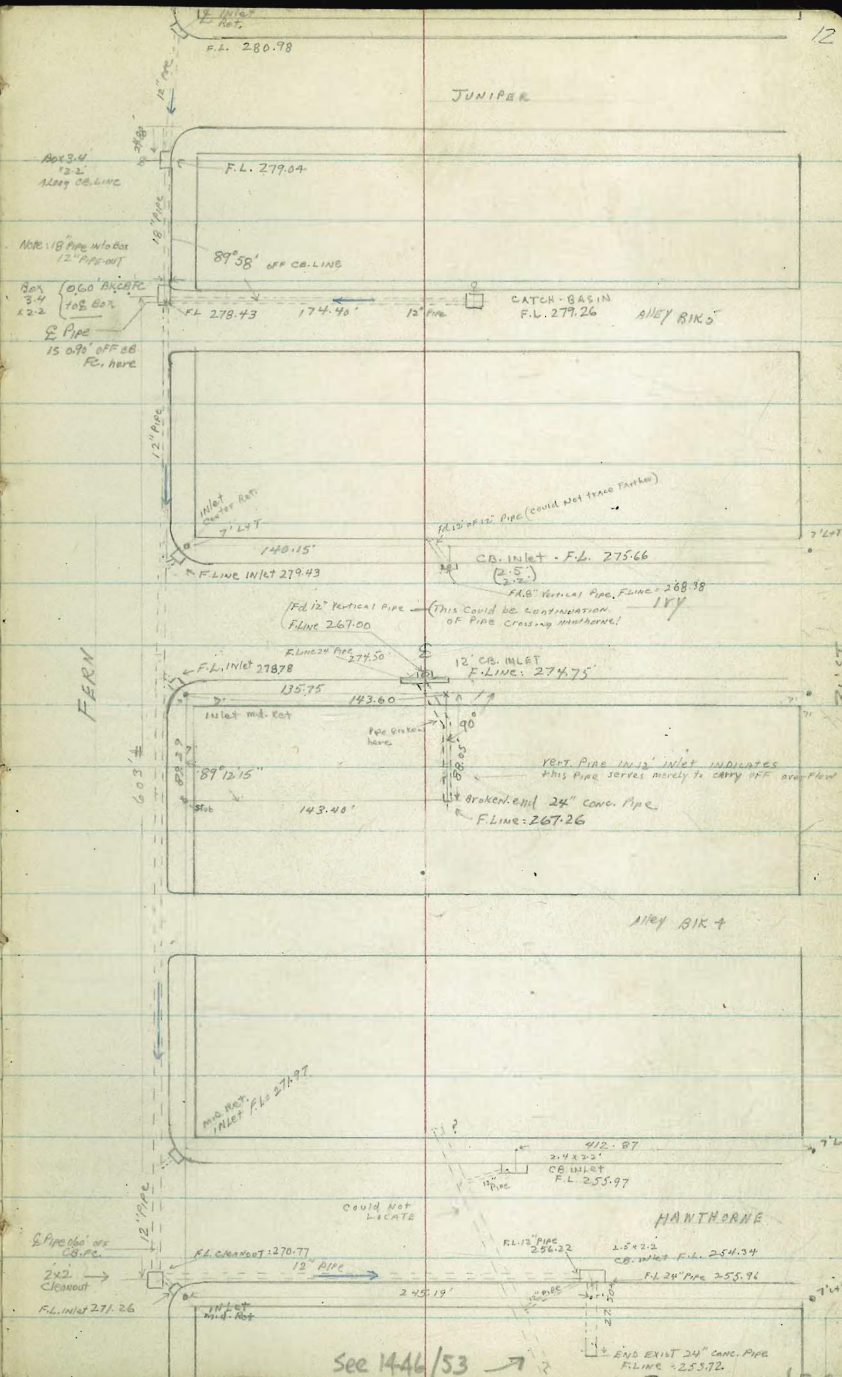
CHK: 284.03 - 284.01 = N.W.B.P FERN + IVY

Inlet - See Below - opposite.



℄ OTJ
12/21/56

B.M. DIR. ELEV. RDG: 277.04 = N.W.B.P HAWTHORNE + FERN

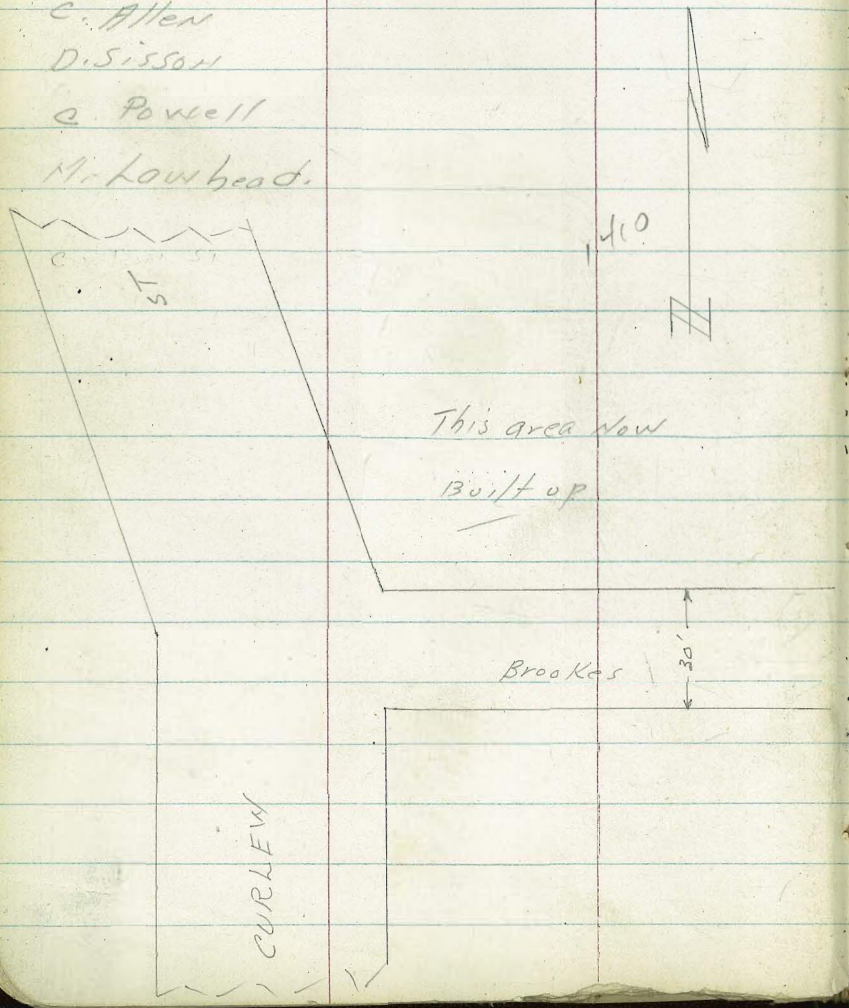


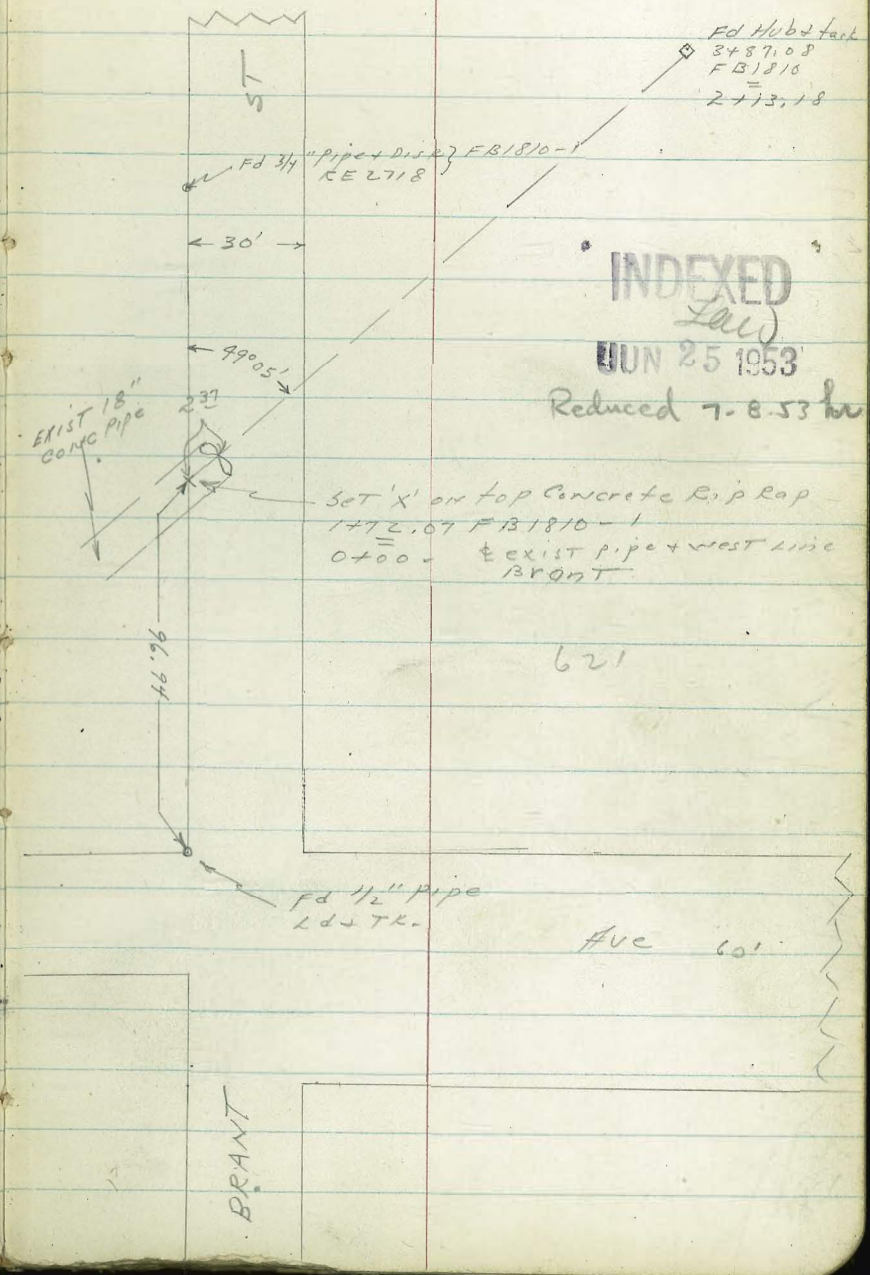
See 1446/53 →

See Opposite

Survey to extend Culvert east accross Brant street Nly of Brookes Ave

Ref 1810-1 VW0 # 21126
3393-B- 6-24-53
C. Allen
D. Sisson
C. Powell
Mr Lowhead.





INDEXED
Law
JUN 25 1953
Reduced 7-8.53 hr

Levels for extension of 18" Drain
Across Brant St.
See sketch page 13.

LT = Nly ℄ Proposed Drain Rt = Sly

0+16.5 Rt = ℄ Sewer Manhole			160.4	152.9	152.7	157.94	152.64	161.2
			4.8	12.3	12.5	7.22	12.52	4.0
			10	3		5 RWI	5 IE	15 ground
						SMH.		
Across Ridge Below See taken 90° to Foward Tangent also Bottom of excavation for entrance to pip.			158.1	162.1	152.1	151.94	152.0	155.6	164.2
0+02.4 = Flyend 18" Conc pipe Drain			7.1	3.1	13.1	13.22	13.2	9.6	1.0
			25	10	3	I.E. 18" Pipe ground same	3	5	25
Section along Ridge to Nly. Section taken on Diagonal Ring W line BRANT			162.0	161.1	155.8	155.1	157.0	163.1
0+00 'X' top Loose Rip Rap Headwall over pipe			3.2	4.1	9.4	10.1	8.2	2.1
			25	15	3		5	25
TP,	9.88	165.16	7.44	155.28		165.16 T		
BM	9.15	162.72		153.57	BP in east curb at Curbens opposite & Ostego Drive.			

Drain extension Brant. Nly
Brookes Ave

Station	Notes	Lt = Nly			℄ Drain		Rt = Sly
0+75		162.4 / 2^{8} / 31	158.9 / 6^{3} / 21	157.4 / 7^{8} / 8^{0} / ℄ Natural Drainage	159.6 / 5^{6}	161.8 / 3^{4} / 16	165.6 / $+0^{4}$ / 25
0+50		163.1 / 2^{1} / 35	159.2 / 6^{0} / 25	157.2 / 8^{0} / 12 / ℄ Natural Drainage Channel	158.7 / 6^{5}	158.6 / 6^{6} / 7	164.5 / 0^{7} / 25
0+48	Ely end excavation for entrance to pipe	159.0 / 6^{2} / 25 · 157.1 / 8^{1} / 15 / Top Nly Bank	154.5 / 10^{7} / 9^{0} / ℄ Bottom excav.	157.2 / 8^{0} / 5^{0} / Sly Top Bank	158.2 / 7^{0}	158.7 / 6^{5} / 8	164.5 / 0^{7} / 25
0+30	Top Sly Bank excavation		153.1 / 12^{1} / 4	156.8 / 8^{4}			
$0+28^{2}$	℄ proposed Drain intersects Sly Bank excavation			153.3 / 11^{9}			
$0+20^{3}$	℄ proposed Drain intersects Sewer			153.4 / 11^{8} / on Rough Conc			

Poured over pipe
Rough protective slab of Concrete
Line - Sewer Runs parallel to Brant

165.16 ⊼

Proposed Drain Brant Nly of Brookes Ave

LT = Nly ℄ Rt = Sly

Station	Notes				℄			
1+95 -				169.8 2^{6} 25	163.0 9^{4}	161.3 11^{2} 6 Natural Drainage	162.7 9^{2} 9	170.3 2^{1} 25
1+75 -	℄ proposed Drain intersects ℄ Natural Drainage	169.2 3^{2} 25	165.1 7^{3} 12	161.6 10^{8} 8	161.3 11^{2} ℄ Natural	161.8 10^{6} 4	163.8 8^{6} 10	171.1 1^{3} 25
1+50		168.5 3^{9} 25	163.7 8^{7} 10	160.1 12^{3} 5	160.3 12^{1}	160.2 12^{2} 5 ℄ Natural Drainage	160.6 11^{8} 10	167.3 5^{1} 25
1+25			166.7 5^{7} 25	164.0 8^{4} 10	159.6 12^{8}	159.5 12^{9} 8^{0} ℄ Natural Drainage	159.9 12^{5} 15	165.5 6^{9} 25
TP_2	12.29 172.35 5.10 160.06				172.35 ⊼			
1+00 -	℄ = ℄ bottom Natural Drainage		163.8 1^{4} 25	158.8 6^{4} 9	158.7 6^{5} Natural Drain	159.0 6^{2} 5	166.2 $+1^{0}$ 25	

165.16 ⊼

Levels for Proposed Drain across Brant St. N'ly Brookes Ave

				(153.57)
TP4 - Start. BM			9.55	153.58
TP3	3.81	163.13	13.03	159.32

Natural Drainage

2+43 - Proposed ℄ extended intersects ℄

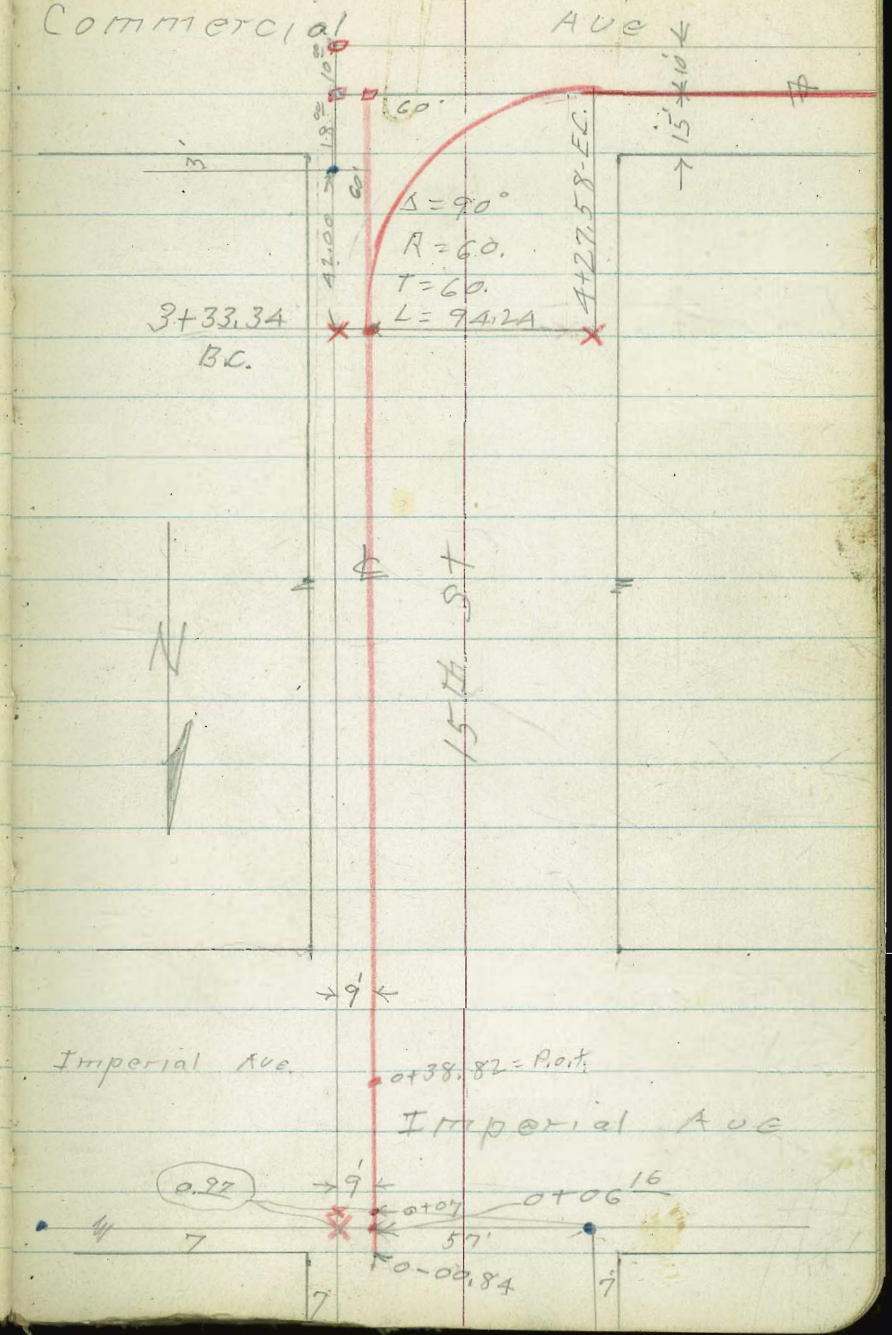
~~Natural Drainage~~

~~3+[illegible] - Proposed ℄ extended intersects ℄~~

2+13.18 Hub shown as 3+87.08 FB 1810-1

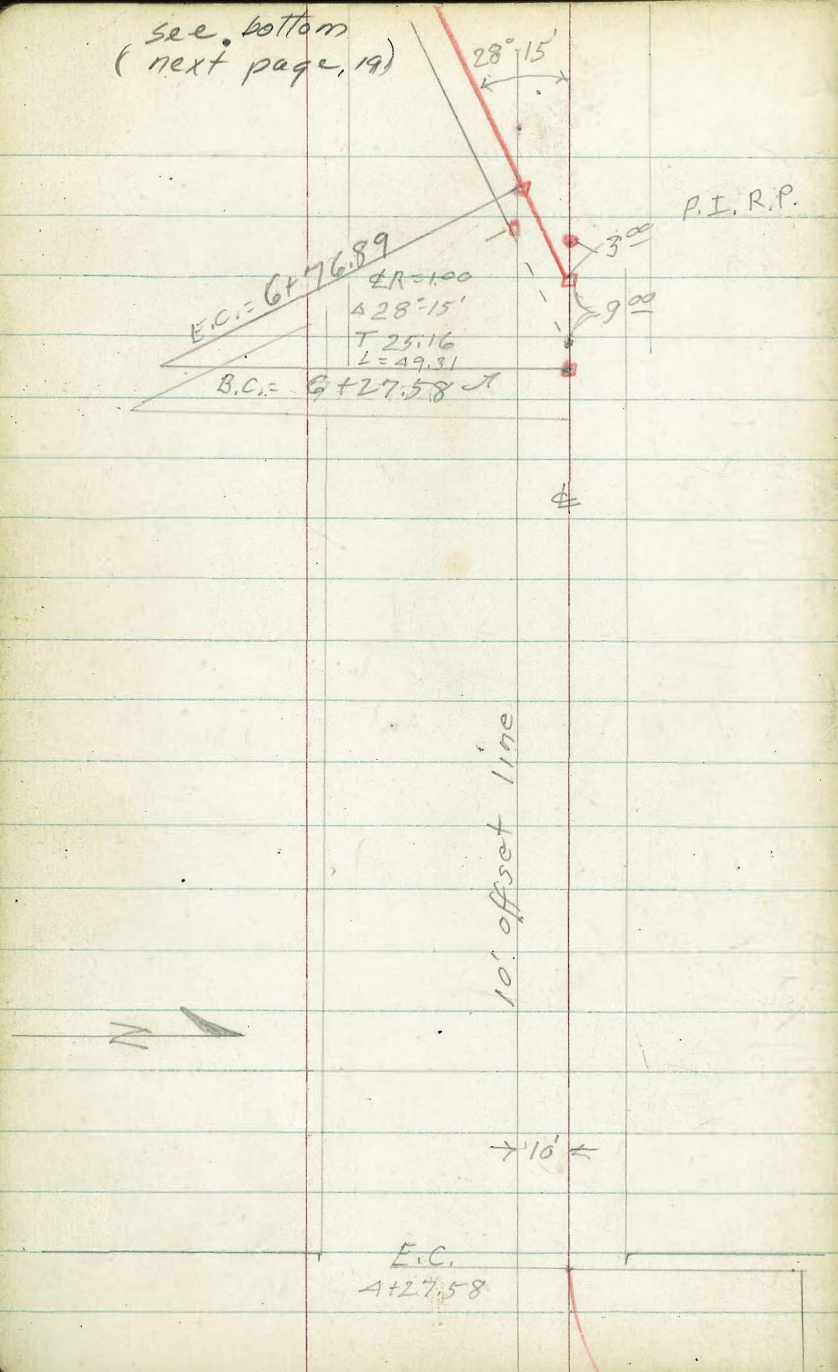
LT = N'ly		℄			Rt = S'ly
		164.0 / 8.4			
			162.9 / 9.5 / 18	168.3 / 4.1 / 20	170.8 / 1.6 / 25
171.6 / 0.8 / 20		167.29 / 5.06 / on Hub ground same	166.6 / 5.8 / 4.0 top bank	162.9 / 9.5 / 5.0	162.8 / 9.6 / 12.0 ℄ Natural

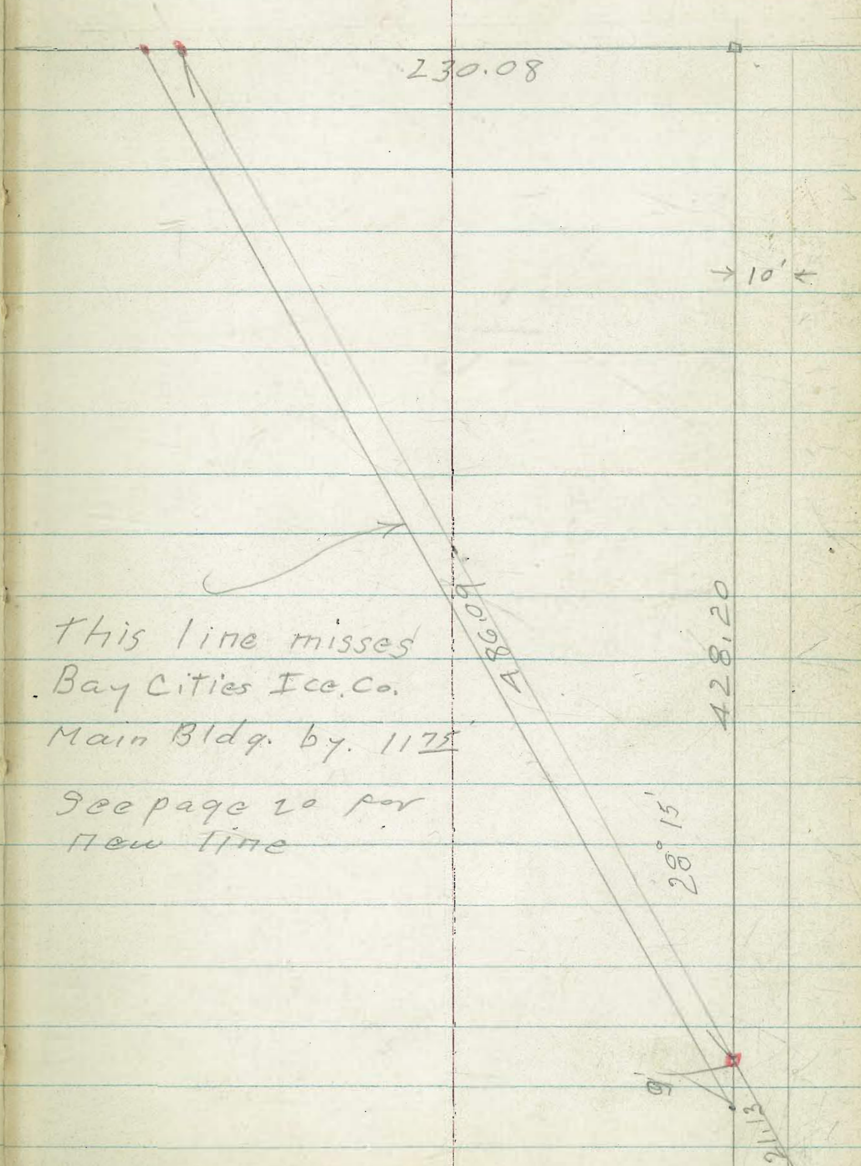
172.35 x



Nail set at 0+07 is on wrong E.+W. line
Nly 7' line = Sta 0+06 16

see. bottom
(next page, 19)

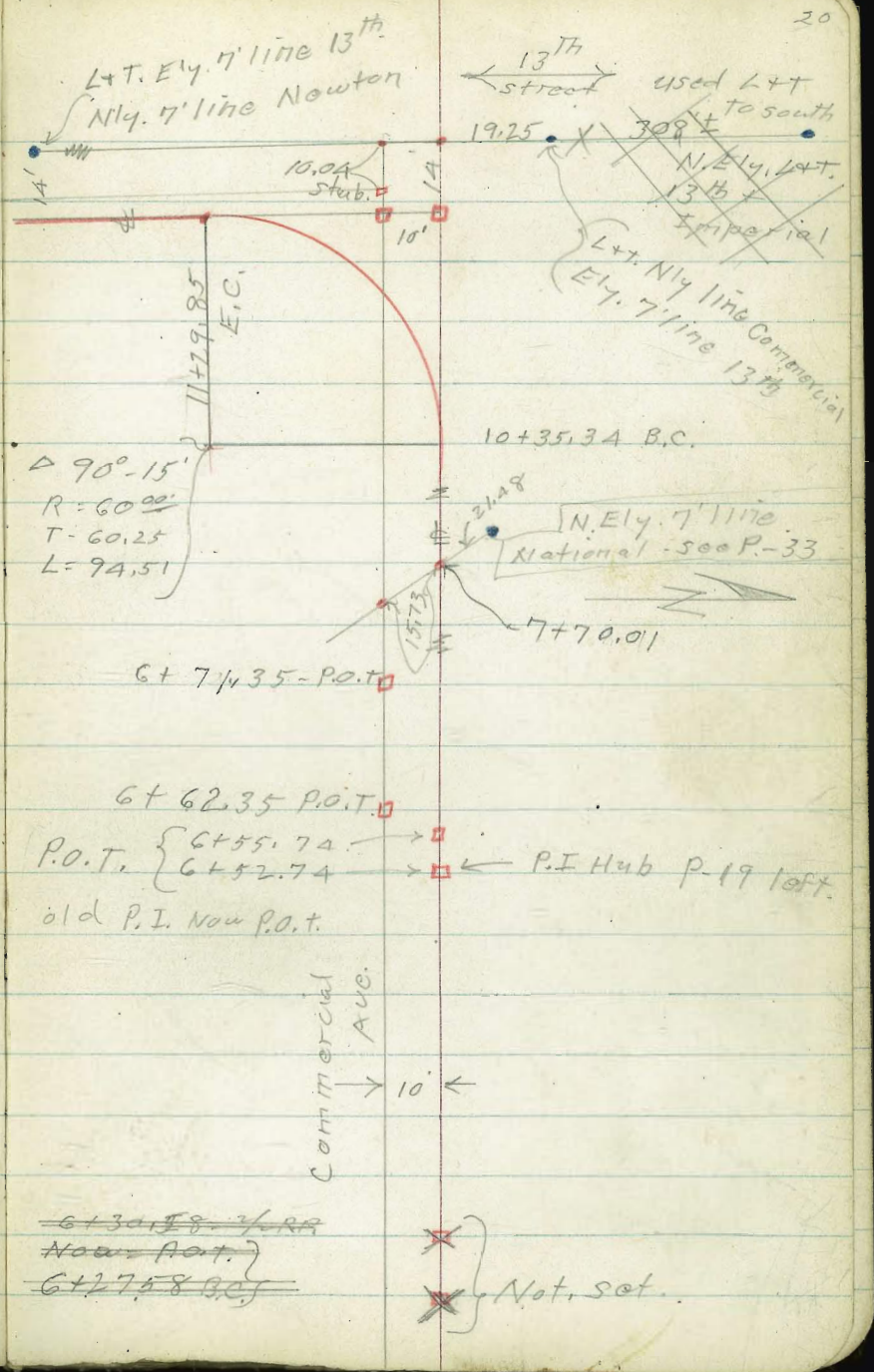


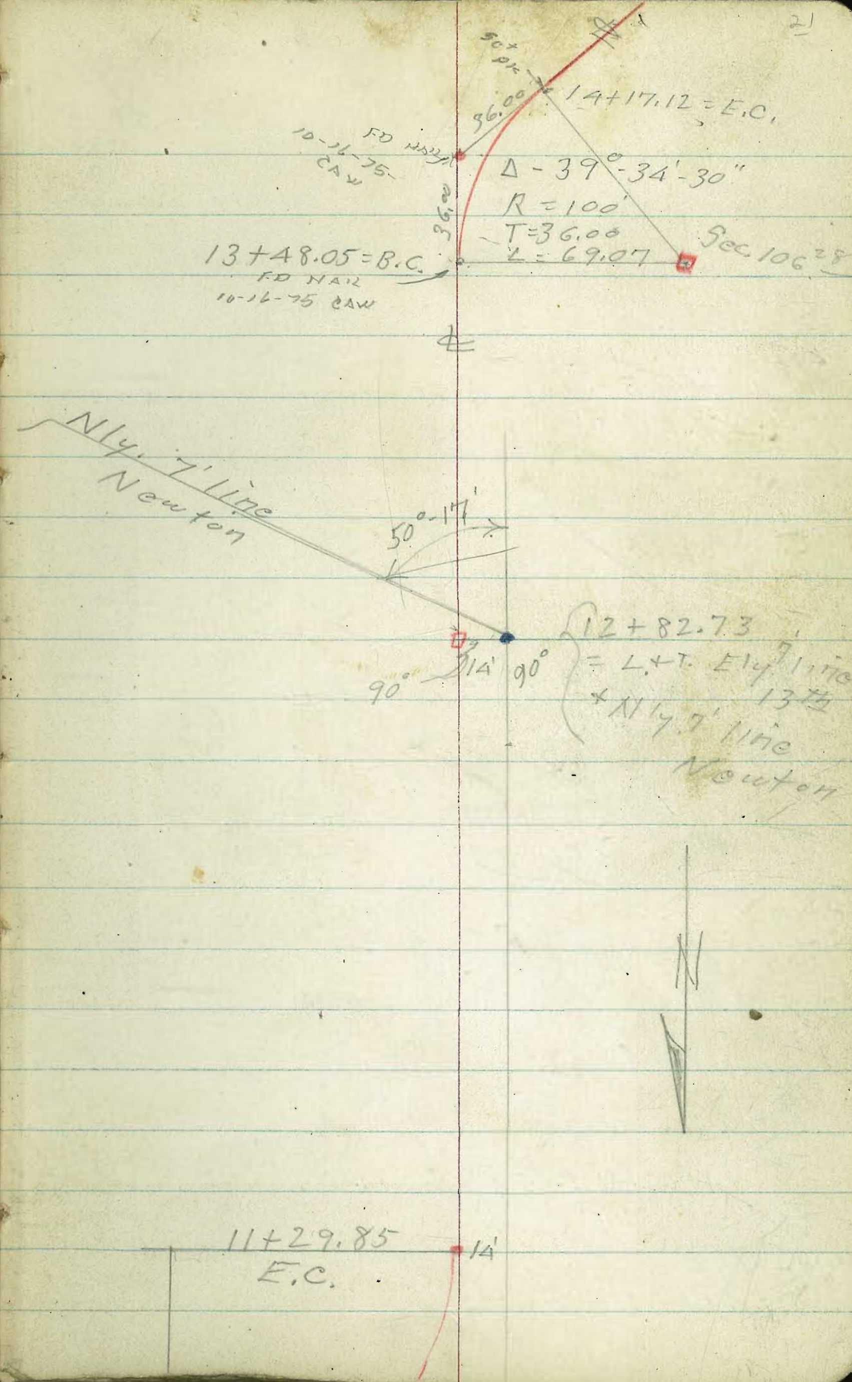


This line misses
Bay Cities Ice Co.
Main Bldg. by 117⁵

See page 20 for
new line

This line continued from 6+27.58 Page 19-left.




set pk
14+17.12 = E.C.
36.00
FD NAIL
10-16-75
CAW
Δ - 39°-34'-30"
R = 100'
T = 36.00
L = 69.07
Sec. 106-28
36.00
13+48.05 = B.C.
FD NAIL
10-16-75 CAW
℄
Nly. 7' line
Newton
50°-17'
12+82.73
= ℄ + T. Ely 7' line 13th
+ Nly. 7' line
Newton
90°
14'
90°
N
11+29.85
E.C.
14'

20+10.21
Nail in bridge deck Sly. side

Nail in Nly. side bridge deck 19+30.00 — 40' — 90° — #2 see Page 52

1A+62.41 P.O.T. — 40.00 — 90° — #1 (See P-50)
Nail in Sly side bridge deck

1A+48? - See Page 51
1A+17.12 = E.C.

Culvert seems to Δ 1°-30' ± to Lt

℄ 10'-5" x 5'-4" double box culvert

Existing box culvert

90° 40' 22+92.83
Gone Gone

22+87.83
= cross on head wall.

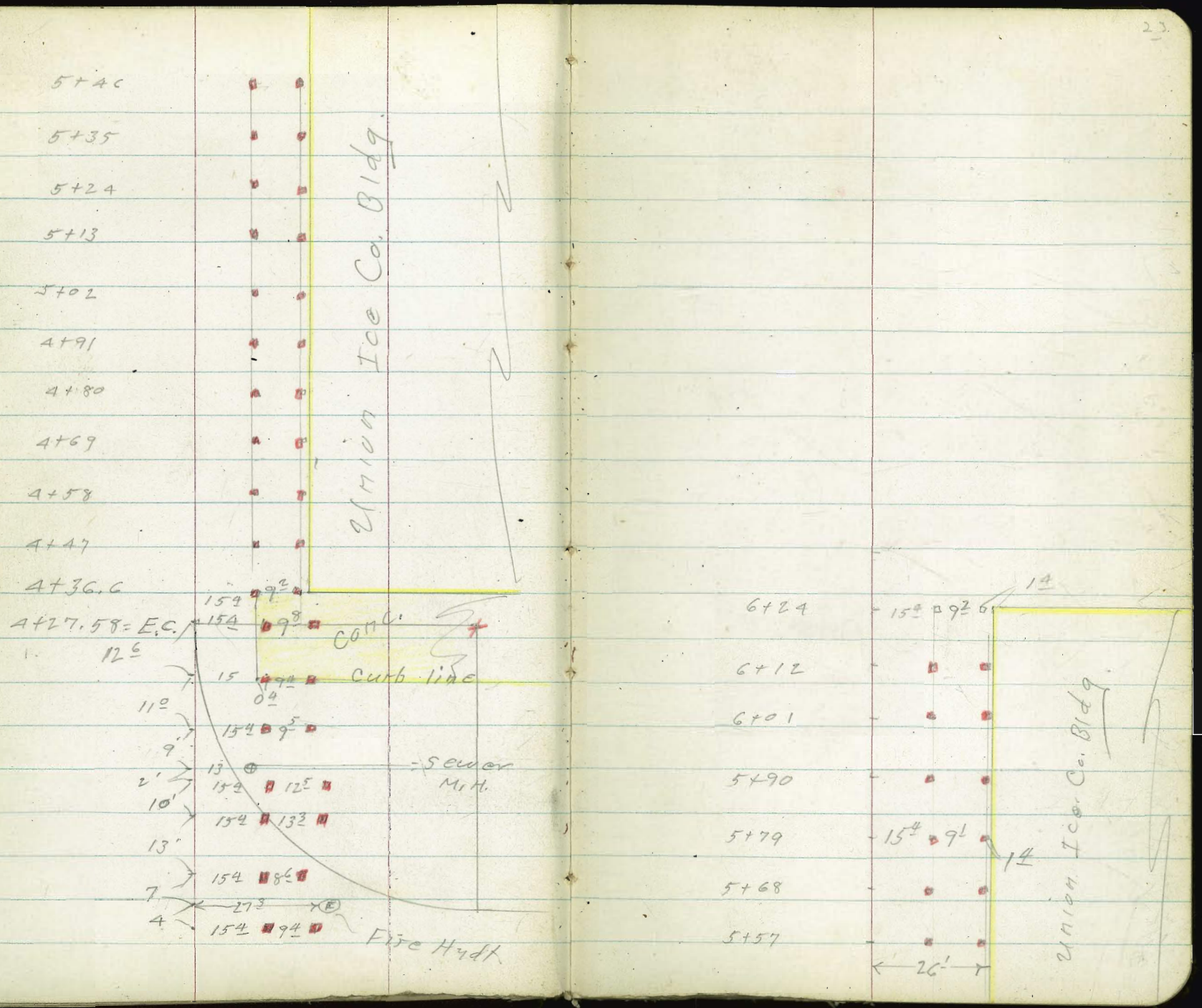
Δ - 74°-58'

Page 55
22+06 ± See

21+16 See P 54

See page 53.
20+39

20+10.21 — 40' — 90°


5+4c
5+35
5+24
5+13
5+02
4+91
4+80
4+69
4+58
4+47
4+36.6
4+27.58=E.C.
Union Ice Co. Bldg.
Con. Curb line
Sewer MH.
Fire Hydt
6+24
6+12
6+01
5+90
5+79
5+68
5+57
Union Ice Co. Bldg.
26'

Switzer Creek Drain

Imperial to Harbor Dr.

℄ Note: Elev. below city datum shown (-8.XX)

Elev. Reduced
Simonds 8/28/53

HI = 12.80

7' cross - 9' Lt. of 0+06.15 T.P.	4.42	12.80	5.10	8.38
℄ Imperial				

8.58 / 4.90 / 16 — 8.48 / 5.00 — 8.44 / 5.04 / 20

22' Lt. = E.C. 20' Rad. cl. Ret.
0+13.16 = Nly ob. line Imperial

8.53 / 4.95 / 22 / ob. E.C. — 7.85 / 5.63 / 22 / C — 7.68 / 5.80 / 16 — 8.24 / 5.24 — 8.38 / 5.10 / 15

8' Lt.
0+07.5± ctr. cb. inlet

8.33 / 5.15 / 8 / ob — 7.49 / 5.99 / 8 / Grate — 2.18 / 11.30 / 8 / I.E.

0-00.84 = Nly line Imperial

8.66 / 4.82 / 16 — 8.47 / 5.01 / 3 = / ob — 7.62 / 5.86 / 3 = / C — 8.11 / 5.37 — 8.41 / 5.07 / 2 — 8.60 / 4.88 / 15

0-06.84 = 2' Lt. = B.C. 20' Rad. cl. Ret.

8.168 / 4.18 / 16 — 8.53 / 4.95 / 2 / ob. — 7.98 / 5.50 / 2 / C — 8.16 / 5.32 — HI = 13.48 — 8.38 / 5.10 / 2 — 8.74 / 4.74 / 15

5.72	13.48	3.64	7.76	
8.40	11.40	—	3.00 ℄	N.E.B.P. Imperial + 13th

commercial gutter
1+77 2'Lt. = start roll out of

7.72 6.95 6.90 7.40
5.08 5.85 5.90 5.40
16 2 15
G

1+00

7.89 7.11 7.22 7.76
4.91 5.69 5.58 5.94
16 2 15
C

gutter
0+83 2'Lt. = start bottom of

8.03 7.16 7.29 7.89
4.77 5.64 5.51 4.91
16 2 15
G

width commercial gutter (conc.)
2'Lt. = start roll into Full
0+79 16 = Sly line Imperial

8.03 7.92 7.16 7.33 7.70 7.90
4.77 4.88 5.64 5.47 5.10 4.90
16 27 27 A 15
ol G

approx. ctr. ol. Rct.
0+70 5 -7 5 Lt. = Ctr. ol. Inlet.

7.99 0.60 7.14
4.81 12.20 5.66
7 5 7 5
ol I.E. Grate

22' Lt. = B.C. 20' Rad. ol. Rct.
0+65 16 = Sly. ol. line Imperial

8.22 7.72 7.39 7.75 7.90 7.99
4.58 5.08 5.41 5.05 4.90 4.81
22 22 16 2 15
ol G

12.80

Set B.M. on Rad. Cross, 3.89 — 7.44 ~~7.46~~

3+33.24 = B.C. Rt.

7.21	7.17	6.21	6.29	6.96	7.07	7.28
4.12	4.16	5.12	5.04	4.37	4.26	4.05
16	12	2	Mail	15	24	49
A.C.	conc.					

3+30 - 2' Lt. = ℄ 40' wide drive conc.

6.67	6.22
4.66	5.11
12	2
drive	C

3+00

7.33	7.31	7.07	6.37	6.40	7.07
4.0	4.02	4.26	4.96	4.93	4.26
16	12.5	2	2		15
	walk	cl	C		

2+91.5 27 Lt. = start 12' wide walk

T.P. 4.12 — 11.33 ~~11.35~~ — ~~5.59~~ 5.59 — ~~7.27~~ 7.23 7.21 ok

11.33

2+50

7.40	7.50	7.30	6.57	6.67	7.25
5.4	5.30	5.50	6.23	6.13	5.55
16	11.5	2	2		15
	walk	cl	C		

2+30.5 3.5 Lt. = pole # 5146364

1+78.5
- 11.5 Lt. = Ely. edge - walk
- 6.5 Lt. = start conc. walk
- 2' Lt. = start std. ol.

(walk in poor condition)

7.81	7.68	7.53	6.49
4.99	5.12	5.27	5.91
11.5	6.5	2	2
walk		cl	C

12.80 ✓

B.C. + 45' { 6.5 Lt. = end 5' wide walk
2' Lt. = end ch.
= end A.C. Pave.
= Nly. line Commercial
48' Rt. = end ch.
69' Rt. = end conc. platform back of ch

B.C. + 36.1 on old Pave.

B.C. + 36 = 24' Rt. = end built up pave.

T.P. 4.61 ~~11.59 / 11.61~~ 4.35 ~~6.98 / 7.00~~

B.C. + 18 2' Lt. = start std. ch.

B.C. + 14.4 = end conc. drive
6.5 Lt. = start 5' wide walk

because of trucks - rollers - piles of material - etc. in street.
Following notes are shown off N.S. tang. line.

4

7.03
4.56
69
S.W. Cor. Conc.

7.59	7.03	6.98	6.79	6.13	6.12	6.39	6.01	6.97
4.10	4.56	4.61	4.80	5.46	5.37	5.20	5.58	4.62
16	11.5 walk	6.5	2 ch	2 G		24	48 G	48 ch

7.39	7.04	6.82	6.15	6.28	6.67	6.31
4.12	4.55	4.77	5.44	5.31	4.92	5.28
16	11.5 walk	G 2	2 G		24	50

7.39	7.04	6.82	6.15	6.28	6.67	6.38
4.12	4.55	4.77	5.44	5.31	4.92	4.58
16	11.5 walk	2 G	2 G		24	50

11.59
~~11.61~~

6.86	6.24
4.47	5.09
2 ch	2 G

7.13	7.03	6.25
4.20	4.30	5.08
11.5 walk	6.5	2 G

11.33
~~12.80~~

A+27 $\frac{58}{}$ = E.C.

Continue regular stationing

B.C. +79 $\frac{7}{}$ = Sly. rail 2nd track

B.C. +74 $\frac{7}{}$ = Nly. rail 2nd track

B.C. +67

B.C. +56 $\frac{2}{}$ = Sly. rail 1st track

Rail elev. + Grd. Elev. are the same

B.C. +51 $\frac{2}{}$ = Nly Rail - 1st track

						7.10 4.49 15 Conc.
6.27 5.32 19 $\frac{7}{}$ on rails 2nd track	6.29 5.30 14 $\frac{7}{}$	5.19 6.4 7	5.49 6.1	6.16 5.43 38 on rails 1st track	6.15 5.44 8 $\frac{8}{}$	5.79 5.8 15 Grd.
	7.25 4.34 16		6.98 4.61	6.73 4.86 24		6.27 5.32 60 E.C. line
	7.23 4.36 16		7.04 4.55	6.69 4.90 24		6.29 5.30 60 E.C. line
	5.79 5.8 16		5.59 6.0	5.49 6.1 24		5.09 6.5 60 E.C. line
	7.09 4.50 16		6.77 4.82	6.59 5.00 24		6.16 5.43 60 E.C. line
	7.11 4.48 16		6.75 4.84	6.54 5.03 24		6.15 5.44 60 E.C. line
			11.59 ~~11.61~~			

℄

4.30	4.20	4.53	4.40	5.10
~~6.59~~	~~6.49~~	~~6.82~~	~~6.59~~	~~7.39~~
5.0	5.1	4.77	4.9	4.2
25	18	17 ℄ R	10	15

4.30	4.30	4.48	3.30	4.20	4.69	4.40	4.30	4.75
~~6.59~~	~~6.59~~	~~6.77~~	~~5.57~~	~~6.49~~	~~6.58~~	~~6.69~~	~~6.57~~	~~7.04~~
5.0	5.0	4.82	6.0	5.1	4.61	4.9	5.0	4.55
17	13	12 ℄ R + Grd	5		4 ℄ R. + Grd	5	9	9 ℄ R

6+00.

5.30	6.16	6.26
~~7.59~~	~~8.45~~	~~8.55~~
4.0	3.14	3.04
15 Grd	15	25

5+85 - 15' Rt = ℄ 10' wide walk conc.

5.20	5.30	5.51	5.20	4.43	5.10	5.30	
4.1	4.0	3.79	4.1	4.87	4.2	4.0	
25	19	18 ℄ R	18	9 ℄ R	10	15	

R = top of rail

5.40	5.51	5.40	4.30	5.10	5.30	5.47	5.30	5.10
3.9	3.79	3.9	5.0	4.2	4.0	3.83	4.0	4.2
14	13 ℄ R	13	6		4	4 ℄ R	5	9

5+00

9.30
~~9.32~~

11.59
~~11.61~~

T.P. 2.69 ~~9.32~~ 4.98 ~~6.63~~ 6.61

5.99	7.03
5.6	4.56
15 Grd	15 conc.

4+36 ℄ 15' Rt. = end platform conc.

7+30 — 25[5] Rt. = end conc. yard.

6+88 — 19[3] Rt. = edge of conc.
2[5] Lt. = line of fence.

paved.
6+63 — 15[6] Rt. = start conc. Junk yard
15[5] Rt. = end conc. loading dock

T.P. 4.76 — 9.55 / 9.57 — 4.51 — 4.79 / 4.81

loading dock.
6+25 — 15[4] Rt. = start 3' high conc.
2[5] Lt. = start 8' high Corr. iron fence

Levels for left side

See page 31

4.81 / 4.74 / 18[3] R — 4.55 / 5.0 / 19 — 4.85 / 4.7 / 25[5] end — 4.35 / 3.2 / 25[5] conc

4.45 / 5.1 — 4.45 / 5.1 / 13 — 4.80 / 4.75 / 13[4] R — 4.45 / 5.1 / 14. — 4.45 / 5.1 / 18

4.45 / 5.1 / 13 — 5.35 / 4.2 / 19 — 6.45 / 3.1 / 19[4] conc.

4.65 / 4.9 / 3 — 4.45 / 4.9 — 4.45 / 5.1 / 7 — 4.82 / 4.73 / 7[5] R — 4.45 / 5.1 / 8 — 4.35 / 5.2 / 12 — 4.81 / 4.74 / 12[5] R

9.55 / 9.57

8.75 / 0.8 / 15[5] dock — 6.45 / 3.1 / 15[5] conc. yard

4.00 / 5.3 / 25 — 3.90 / 5.4 / 19 — 4.16 / 5.14 / 18[1] R. — 4.00 / 5.3 / 18

4.40 / 4.9 / 10 — 5.00 / 4.3 / 15 — 8.70 / 0.6 / 15[4] top of dock

3.90 / 5.14 / 14 — 4.15 / 5.15 / 13[1] R & Gd. — 3.20 / 6.1 / 6 — 4.70 / 4.6 / 3 — 4.80 / 4.5 — 9.30 / 9.32

4.20 / 5.1 / 4 — 4.5 v / 4.78 / 4[2] R — 4.40 / 4.9 / 5 — 4.30 / 5.0 / 8 — 4.54 / 4.72 / 9[1] R

6+88 cont

T.P.	4.52	8.32 / ~~8.34~~	5.14	3.80 / 3.82
T.P.	4.14	8.94 / ~~8.96~~	4.75	4.50 / ~~4.82~~

7+59 = cross fence.

7+57 - 1.5 Lt. = Δ in fence.

7+50 2' Lt = line of fence

3.22 / 5.1 / 25 — 3.32 / 5.0 / 18 — 3.56 / 4.76 / 17.3 R

3.32 / 5.10 / 17 — 3.32 / 5.10 / 13 — 3.58 / 4.74 / 12.2 R — 3.52 / 4.8 / 12 — 2.92 / 5.14 / 4

8.32 / ~~8.34~~

4.92 / 4.163 / 27.2 R — 4.75 / 4.8 / 28 — 4.95 / 4.16 / 30

4.75 / 4.8 — 4.65 / 4.9 / 22 — 4.94 / 4.61 / 22.1 R — 4.55 / 5.0 / 23 — 4.55 / 5.0 / 27

4.55 / 5.10 / 24 — 4.91 / 4.64 / 24.2 R — 4.75 / 4.8 / 25 — 4.95 / 4.16 / 30

4.45 / 5.1 / 19 — 4.55 / 5.0 / 19 — 4.90 / 4.65 / 19.2 R — 4.55 / 5.10 / 20

9.55 / ~~9.57~~

Cont. P. 34

(See sketch - p33)

Rail + Grd Elev. the same taken on diagonal

7+59.04 = N. Ely line National start A.C. Pave.

7+30

top. Hydt. T.P. - 1 2.40 | 7.78 ~~7.80~~ | 2.94 | ~~5.38~~ 5.40

7+30

3.15 4.63 R 47 | 3.10 4.68 R 40

3.12 4.66 26 R | 3.09 4.69 18 R | 2.98 4.18 6 | 3.88 3.9 | 3.08 4.7 25

3.08 4.70 30 R + Grd

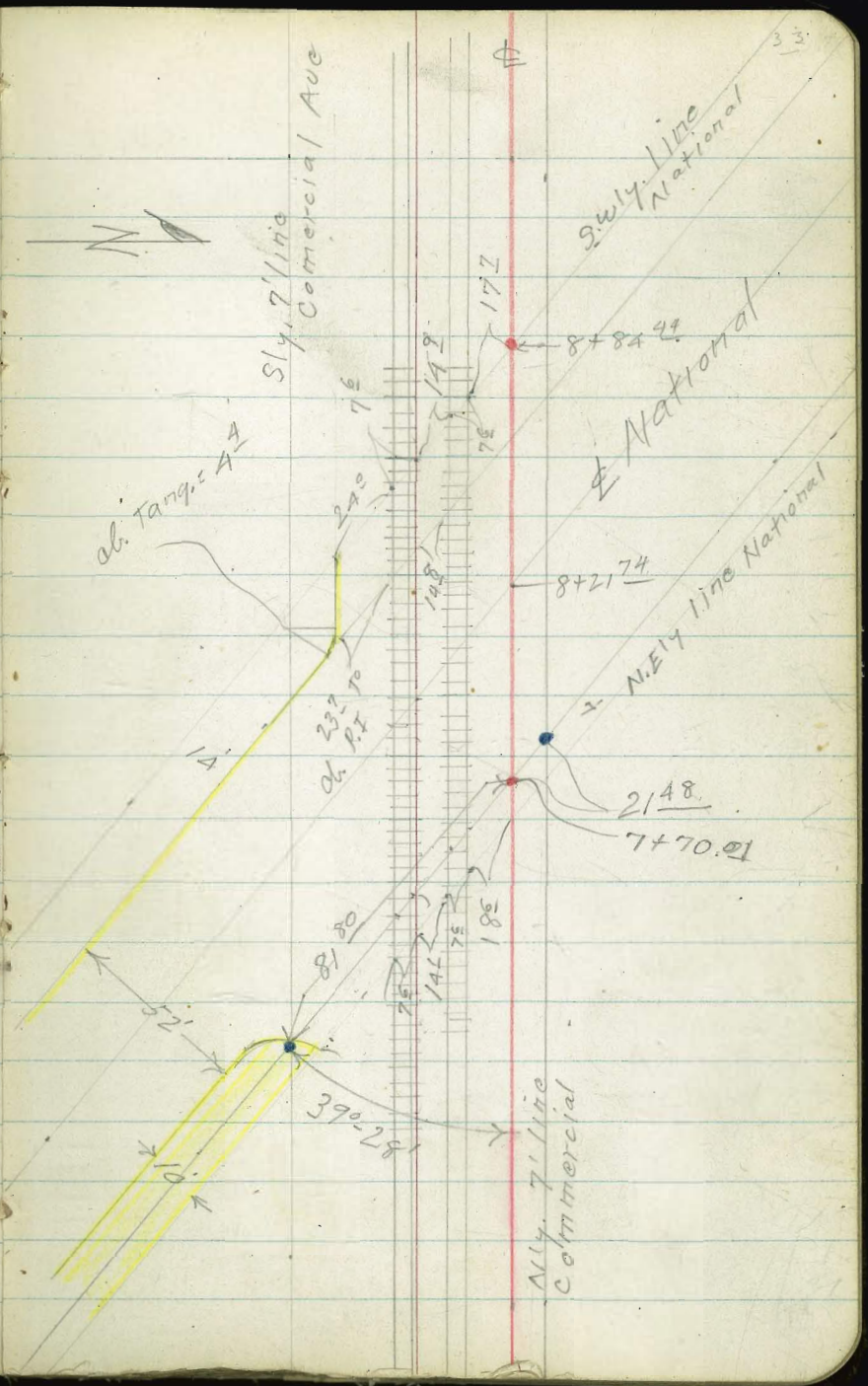
3.08 4.70 25 R. + Grd | 3.15 4.63 15 R + Grd | 3.16 4.62 11 R + Grd | 2.78 5.10 3 | 7.78 ~~7.80~~

3.22 5.1 24 | 3.22 5.1 18

3.15 5.17 17 R + Grd | 3.17 5.15 12 R + Grd | 2.82 5.15 4 | 4.32 4.0 3 | 8.32 ~~8.34~~ 8.34

National

7+70.01 = Intersect N. Ely. 7' line



9+72 15½ Lt. = Frog

9+11 } 10⁹ Lt. = switch point

stop shelter room.

9+03 - 10' Rt. = Sly Cor. 4'x8' bus

8+84 44 11½ Rt. = end cl
End A.C. Pave
S. Wly. line National

8+62 50 38' Rt. = B.C. 10° Rad. cl. Rot
S.Wly cl. line National

T.P. 4.86 ~~7.96~~ 7.94 4.70 3.10 3.08

8+21 74 ℄ National

3.19 2.84 2.74 3.21
4.75 5.1 52 4.73
30.2 30 25⁵ 25⁵
R Gud Gud R

2.74 3.20 2.74 3.20 3.04 3.74
5.12 4.74 5.12 4.74 4.9 4.2
15⁶ 15⁶ 10⁹ 10⁹ 15
Gud R Gud R

2.96 2.94 2.94 2.94 2.78 2.50 2.89 3.54
4.98 5.00 5.00 5.00 5.16 5.44 5.09 4.4
47⁸ 40⁵ 25³ 17⁷ 11½ 11½ 25
R R R R G cl.

2.94 2.40 2.90
5.00 5.50 5.04
38 38
~~7.96~~ 7.94 G cl.

2.93 2.95 3.02 3.06 3.15 3.27
4.85 4.83 4.76 4.72 4.63 4.51
47⁸ 40⁵ 25⁷ 18¹ 25
R R R R

~~7.80~~ 7.78

10+71 – 12' Rt. = deadman

10+66½ – 26½ Rt. = wly end sign board

10+66 – 9½' Rt. = deadman

10+53 – 15' Rt. = Ely. end sign board

10+35.34 } Sections radial to curve
B.C. = 10+35.34 } (Page 20) Sketch

T.P. – P.I. { 5.51 8.76 8.78 4.69 3.25 3.27 Hub

10+12 25½ Lt. = Frog

10+00

3.16 3.52 3.46 3.43 3.38
5.6 5.24 5.30 5.33 5.38
30½ 30½ 28½ 25½ 23½
End R R R R

3.36 3.65 3.26 3.62 2.96 3.66
5.4 5.11 5.5 5.14 5.8 5.1
15 15 10½ 10½ 8.76 15
End R End R 8.78

3.04 3.42 3.39 3.34 3.34
4.9 4.52 4.55 4.60 4.60
30½ 30½ 25½ 23½ 19½
End R R R R

3.57 3.14 3.54 3.14 2.94 3.24
4.37 4.8 4.40 4.8 5.0 4.7
15½ 15½ 10½ 10½ 15
R End R End

7.94
~~7.96~~

℄

3.66 3.72 3.80
5.10 5.04 4.96

E.P. R R ℄ Pave.

of rails.

A.C. Paved yard. South

10+98 9 } Cross rail

3.36 3.61 3.26 3.62 3.62 3.36 3.86
5.40 5.15 5.5 5.14 5.14 5.4 4.9
30 1 ℄
A.C. A.C. Grd R Grd Grd

3.26 3.67
5.5 5.09
℄ R
Grd

10+93 2 Cross rail

10+86 3 9' Lt. = switch point

10+85 30' Rt. = ~~Pole~~ # Guy pole.

10+79 4 Cross rail

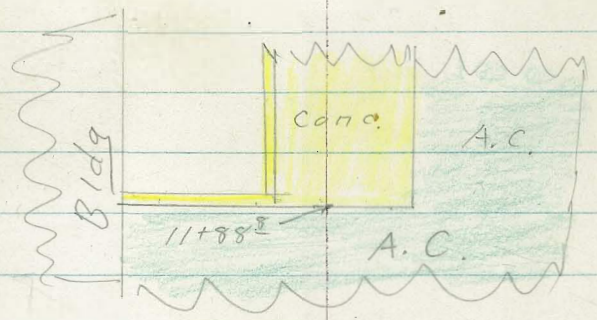
3.46 3.80
5.3 4.96
℄ R
Grd

3.58 3.58
5.18 5.18
241 235
R R

10+71 3 } Cross rail

3.16 3.56 3.56 3.78 3.83 3.46 3.56 3.54
5.16 5.20 5.20 4.98 4.93 5.3 5.2 5.2
182 183 179 5 5 Rail ℄ 15 20
Grd R R R Grd

8.76
~~8.78~~



4.14 3.91 3.79 3.53 3.42 3.31 2.82
4.15 4.38 4.50 4.76 4.87 4.98 5.47
20 20 4 4 7 20
top of wall A.C. top wall

End

3.94 3.65 3.49 3.41
4.35 4.64 4.80 4.88
20 7 20

8.29
~~8.31~~

3.64 3.69 3.64 3.64
5.12 5.07 5.12 5.12
20 7 20

3.57 3.63 3.76
5.19 5.13 5.00
30
A.C.

8.76
~~8.78~~

R. & A.C.

11+ 88[8] = end A.C East of prop. Line

11+50

T.P. E.C. Nail
4.60 ~~8.29~~ ~~8.31~~ 5.07 ~~3.69~~ ~~3.71~~
Loading dock + Bldg.

11+37 22[3] Lt. = N.Wly Cor. Ice Company

11+29[85] = E.C. Cor A.C. Pave.

11+10

4'Lt. } = start 4" wide 6" High Conc. wall.
4'Lt. } = ℄ 4" N.+S. 6" High Conc. wall
4'Lt. }
7'Rt. } start Conc. Pave.
7'Rt. = Ely edge A.C. Pave

12+80 — 7' Rt. = Δ in A.C. Pave.
~~12+36~~ = Cross rail

side track to Union oil co. yard.

12+75.2 = Cross rail

12+70 — 22.3 Lt. = end Ice Co. Bldg.
= ℄ F.+W. wire fence.

12+68.5 — 2' Lt. = start wire fence

12+68 — 4' Lt. = end conc. wall.

18.5 Lt. = Ely. pole } For 3 bank
12+62 — 15' Lt. = Wly. pole } Transformer Platform

12+61.5 = end conc. pave.

12+42.5 — 16.7 Rt. = dead man

12+35 = 6' Rt. = dead man

conc. curb, pole set in 4' diameter ring of

12+31 — 17.4 Rt. = 12" pole (gone)

12+20 — 21.5 Rt. = Ctr. 2.5 × 3.5 grate

12+13.2 — 5' Lt. = Fill pipe for tank.

12+11.6 — 5' Lt. = Ctr. gasoline pump, (on 4'×6' conc. base)

℄

2.79	2.88	2.87		3.07	
5.50	5.41	5.42		5.22	
20	7	R		R	
R	A.C.			20	
	2.84	2.89		3.06	
	5.45	5.40		5.23	
	20	R		R	
	R			20	
	3.48				
	4.81				
	4				
	Top				
3.49	3.52	3.28	3.17	2.99	2.94
4.16	4.77	5.01	5.12	5.30	5.35
20	4	4		7	20
	T.W. + Gut			A.C. + Conc	A.C.
3.99	3.62	3.39	3.34	3.22	2.19	2.18
4.3	4.67	4.90	4.95	5.07	6.10	6.11
20	4	4		7	20	21.5
	T.W. + Gut	pave				grate
			8.29			
			~~8.31~~			

33E Rt } = side track
19E Rt }
6' Rt. = edge pave.
13+82.58 = Mid Curve

13+69 on A.C.

T.P. 7.13 ~~9.88~~ 9.86 6.13 ~~2.75~~ 2.73 P.K. P.I. Nail

13+48.05 = B.C. Rt.

T.P. 6.13 ~~8.88~~ 8.86 5.56 ~~2.75~~ 2.73
P.I. - P.K. Nail

12+99 7 = Cross rail.

Rail + Pave Same Elev.

12+94 8 = cross rail — Side track to Union oil C.

4' Lt. = ℄ E+W. wire fence
12+89 - 4' Lt. = end wire fence

℄

39

2.28 / 7.58 / 50 — 2.11 / 7.75 / 33 — 2.86 / 7.00 — 3.02 / 6.84 / 6 / E.P. — 3.77 / 6.09 / 19E / R — 3.72 / 6.14 / 33E / R — 3.76 / 6.1 / 50

2.08 / 7.78 / 20 — 2.04 / 7.82 — 2.96 / 6.90 / 20
~~9.88~~ 9.86

1.72 / 7.14 / 25 — 2.01 / 6.85 / 15 — 2.32 / 6.54 — 2.44 / 6.42 / 15 — 2.51 / 6.35 / 25 — 3.08 / 5.78 / 46 / E.P.
~~8.88~~ 8.86

3.00 / 5.29 / 20 / R. / + E.P. — 3.11 / 5.18 / R — 3.24 / 5.05 / 20 / R

2.84 / 5.45 / 20 / R — 3.06 / 5.23 / R — 3.10 / 5.19 / 20 / R

2.69 / 5.6 / 25 — 2.98 / 5.31 / 6 / E.P. — 3.04 / 5.25 — 3.09 / 5.20 / 7 — 3.17 / 5.12 / 20
~~8.31~~ 8.29

19⁵ Lt. = start Conc. Ret. wall
South in fence

14+42 = 0.3 Lt. △ East in fence – 19⁵ Lt. = △

14+17 12 = E.C. 0.3 Lt. = line of fence.

looks like old scale pit.
22' E.+W. conc. rectangle

14+15 – 22' Rt. = S. Ely. cor. 11' N.+S. X

13+93 1 3' Rt } track rails
= Ely end side

13+88 2' Rt }

Pipe Posts - set in conc.
Also end fence on Sly line Newton.
link fence

13+86 5 – 5 7' Lt. = start 8' high chain

13+84 5 = end Pave

4.66 3.56 4.46
5.12 6.3 5.4
19⁵ 19⁵ 19⁵
T.W. B.W. Gnd

4.46 4.16 3.86
5.14 5.7 6.10
50 50

3.85
6.01
22
top of conc.

3.79
6.07
3
R. + G.l.

3.77
6.09
2
R + G.l.

3.00
6.86

9.86
~~9.88~~

14+83 – 20' Lt. = dead man for fence. Cor.
14+77 – 14' Rt. = ℄ 14" pile.
14+76 21' Rt. = 16" pole * Guy pole

14+73^{5} } 28' Lt. = Δ to south in fence + wall.
19^{5} Lt. = Δ east in fence + wall

14+65 = end bridge deck

14+59^{4} = cross rail

14+54^{7} Cross rail

14+48^{9} (See page 51)

14+48^{6} = start bridge deck

Note:- High tide will get under bridge data later (See page 50)

℄

4.76	4.66	2.86	4.16					
5.1±	5.2	7.0	5.7					
50	28	28	28					
	T.W.	B.W.	Grd.					
4.66	2.86	3.26	(−3.94)	(−4.24)	(−3.54)	4.66	4.86	
5.2	7.0	6.6	13.8	14.1	13.4	5.2	5.0	
19^{5}	19^{5}	19	15		13	20	50	
T.W.	B.W.							
4.96	4.66	4.66	4.66	4.66				
4.9±	5.2	5.2	5.2	5.2				
50	16		15	50				
	E. end deck		w. end deck					
	4.84	4.93	3.59					
50	5.02	4.93	5.27					
	20	R	50					
			R					
Gate locked	4.80	4.91	4.66					
50	5.06	4.95	5.20					
	20	R	50					
			R					
	4.56	4.66	4.66					
	5.3	5.2	5.2					
	15^{5}		15^{1}					
	E. end deck		w. end deck					
		9.86						
		9.88						

12" pile bulkhead pile 10' ± apart.

15+50 – 16' Lt. = start 3" plank ±

tough grout conc. slab
also = ± 9' long 6' wide

15+42 – 21' Lt. = outlet 2" drain

15+23 { 28' Lt. = line of wall
21' Lt. = dead man for guy pole
3" plank + 12" pile (approx 10' a part.)
14½ Rt. = start bulkhead

15+10 10' Rt. = outlet 8" od stave drain

14+91½ 14' Rt. = 12" pile

14+85 { no marking, can't lift up.
26' Lt. = 4x4 conc. cover to vault
14' Rt. = 12" pile

4.56 4.06
5.3± 5.8
50 29

2.46 2.36 1.26 (-3.04) (-4.14) (-3.84) (-3.54) 1.66 3.26 4.56 4.86
7.4 7.5 8.6 12.9 14 13.7 13.4 8.2 6.3 5.3 5.0
28 22 16 15 12 13 14 18 28 50
top top.

1.81
8.05
21
I.E. Pipe

4.86 4.36 2.56 4.86
5.0± 5.5 7.3 5.0
50 28 28 50
T.W B.C.O

3.06 2.76 (-3.54) (-3.84) (-3.24) 1.36 3.86 4.86
6.8 7.1 13.4 13.7 13.1 8½ 6.0 5.0
28 21 7 14 14⅓ 23 32
End top.

(-4.34) (-1.14) +0.86
14½ 11.0 9.0
10 10 10.5
End I.E. Intake

9.86
7.88

43

end.
add 7' wide porch on south

17+15± 14³ Rt.= end ~~Bldg.~~ shed.

17+00

3.47	2.57	1.27	(-3.23)	(-4.53)	(-4.63)	(-4.33)	2.47	3.55
3.3±	4.2	5.5	10.0	11.2	11.4	11.1	4.3	3.22
50	17	15± Top.	15	13		13	14 Top. + Gnd.	50

17+00 nail
T.P. 2.98 6.77 ~~6.79~~ 6.05 3.81 ~~3.83~~

6.77
~~6.79~~

end.
5' wide plank porch on north
Cor. Iron shed.

16+78± 14³ Rt.= start 21' wide

16+71 - 14' Rt. = ℄ 18" E+W. wood stave pipe drain
Paved strip.

16+44 - ~~46~~' Rt.= start ℄ 24' wide A.C.

5.06
4.8
14³ Floor level
(-1.64)
11.5
14
F.E.

4.16
5.7
~~4~~6
℄ A.C. strip

16+00

3.56	3.66	0.66	(-4.84)	(-4.44)	(-2.74)	1.36	2.96	3.66	4.16
6.3±	6.2	7.2	14.7	14.3	12.6	8.5	6.9	6.2	5.7
50	21	16	13		13	14 Top	15	25	50

continue fence.
15+90 = 28' Lt. = end conc. wall but
with anchor irons in it.

3.46	1.76	3.46
6.4	8.1	6.4
28	28	28
T.W.	B.W.	Gnd

15+58 27' Rt. = Ctr. 7'x8' Conc. platform

9.86
~~9.88~~

19+02 - 21' Lt. = ℄ 2⁵' Drain thru bulkhead
½ 40' Rt of 19+30
T.P. 4.45 ~~6.61~~ 6.59 4.63 ~~2.16~~ 2.14

(- 0.11)	(- 3.35)
6.7	9.94
25	21
ctr. 2⁷ diam grate	I.E.

~~6.61~~ 6.59

19+00 21' Rt. } 20⁵ Lt. } line of Bulkhead.

2.07	1.77	1.27	(-4.33)	(-3.23)	(-4.33)	1.17	1.87
4.7	5.0	5.5	11.1	10.0	11.1	5.6	4.9
50	30	20⁵ top.	20			21 top	50

21⁵ Rt also = start 1½" line from tank to south.
18+31 } 21⁵ Rt = ℄ 1½" line from tank
(Horizontal + on blocks)
steel pressure tank.
18+24 } - 37' Rt. = ℄ 2' diam - 10⁵' long

18+00 21' Rt. = line of bulkhead

2.77	2.07	1.27	(-2.93)	(-4.23)	(-4.23)	(-3.93)	(-2.43)	1.37	1.77
4.0±	4.7	5.5	9.7	11.0	11.0	10.7	9.2	5.4	5.0
50	23	20⁹ top	20	17		15	21	21 top.	50

17+94 } 23⁶ Lt. = ℄ 1½" pipe. Runs E+W. } From
23⁵ Lt. = start N.+S. 1½" pipe } tank
27⁷ Lt. = end chain link fence

17+32 - 46' Rt. = end 14' wide A.C. strip

3.47
3.3
46
A.C. ℄

21' Lt. = Δ to So in bulkhead.
15⁵ Lt. = Δ to east in bulkhead

3.37	2.97	2.17	3.47	3.27
3.4±	3.8	4.6	3.3	3.5
50	28	23	46 ℄ A.C.	50

17+28 } 21' Rt. = Δ south } in bulkhead
14' Rt. = Δ west }

1.27	(-1.13)	1.27	(-3.43)	(-4.53)	(-4.33)	2.37	(-0.03)	2.37
5.5	7.5	5.5	10.2	11.3	11.1	4.4	6.8	4.4
21 top	21 Grd to So.	15⁵ top. + Grd to. No.	15		13	14 top + Grd to No.	20 Grd to So	21 top + Grd to No.

~~6.79~~ 6.77

Station	Description					
19,+76^{4}	cross rail	2.45 4.14 50 R		2.58 4.01 R		2.42 4.17 50 R
19+71^{7}	cross rail	2.49 4.10 50 R		2.60 3.99 R		2.47 4.12 50 R
19+61^{4}	cross rail	2.75 3.84 50 R		2.75 3.84 R		2.59 4.00 50 R
19+56^{8}	Rail cross	2.76 3.83 50 R		2.75 3.84 R		2.59 4.00 50 R
19+48^{5}	cross rail	2.78 3.81 R	2.74 3.85 23^{5} Switch point	2.71 3.88 R		2.59 4.00 50 R
19+43^{8}	Cross rail	2.75 3.84 50 R	2.71 3.88 23^{5} Switch point	2.72 3.87 R		2.65 3.94 50 R
19+26^{5}	start piles (See P-52)					
19+23	= start bridge = cross 1½" pipeline 21.5 Rt. / 22.3 Lt. } = end N.+S. 1½" pipes	1.19 5.14 50	1.59 5.10 22.5 end of deck	1.79 4.8 on deck	1.59 5.10 22.4 End of deck	2.09 4.15 50
19+13^{6}	20^{7} Lt. = ℄ 18" drain thru bulkhead		(−2.01) 8.60 20^{7} ℄ 18" drain	6.59 ~~6.~~ 6.1		

High tide will be shown later (see p-52)
Ground is 0.4 below rail Elevs. underneath bridge

20+13

1.85 / 4.9 / 50 — 1.35 / 5.4 / 20± Top. — (-3.95) / 10.7 / 20 — (-5.25) / 12.0 — (-3.75) / 10.5 / 21 — 1.35 / 5.4 / 21 Top — 2.05 / 4.7 / 50

on deck of bridge

20+12[3] = leave bridge deck

1.85 / 4.9 / 50 — 1.95 / 4.8 / 21.7 end of bridge — 2.15 / 4.6 — 1.95 / 4.8 / 22.6 End of bridge — 2.05 / 4.7 / 50

T.P. 4.25 ~~6.77~~ 6.75 4.09 ~~2.52~~ 2.50 — ~~6.77~~ 6.75

20+06[4] cross rail

2.65 / 3.94 / 50 R — 2.69 / 3.90 R — 2.52 / 4.07 / 50 R

20+01[7] cross rail

2.64 / 3.95 / 50 R — 2.72 / 3.87 R — 2.46 / 4.13 / 50 R

+91[4] cross rail

2.84 / 3.75 / 50 R — 2.83 / 3.76 R — 2.76 / 3.83 / 50 R

c 86[7] cross rail

2.84 / 3.75 / 50 R — 2.84 / 3.75 R — 2.76 / 3.83 / 50 R

~~6.64~~ 6.59

21+81 - 38' Rt. = end bulkhead

(-3.55) (-3.65) (-4.75) (-5.95) (1.65) 1.45 1.75
10.3 10.4 11.5 12.7 8.4 5.3 5.0
50 22 20 20 32 50

21+74 21' Rt. = ∆ in bulkhead

(-1.35) (-1.85) (-4.95) (-5.95) (-1.65) 1.65 0.95 0.25
8.1 8.6 11.7 12.7 8.4 5.1 5.8 6.5
50 20 18 20 21 22 50
Top

(see plans - trunk sewer)

21+58 - 22' Rt. & 4' wide spillway

(-4.55) (-0.20)
11.30 6.95
22 22
Bottom Top of
Conc. wing walls

to be shown later
Tide is in - pile data
Side Harbor Drive bridge

21+16 = Nly. face of piles on Nly.

(-0.35) (-0.55) (-3.65) (-6.25) (-3.65) 1.55 1.45
7.1 7.3 10.4 13.0 10.4 5.2 5.3
50 21 18 21 21 50
Top

20+75

(-0.75) (-0.75) (-2.75) (-5.75) (-4.05) 1.25 2.55 2.75
7.5 7.5 9.5 12.5 10.8 5.5 4.2 4.0
50 22 20 20 20 32 50
Top

20+60 - 20' Lt. = end wooden bulkhead.

1.75 1.35 (-2.75) (-5.75) (-3.95) 1.25 2.55 2.75
5.0 5.4 9.5 12.5 10.7 5.5 4.2 4.0
50 20 20 20 20 32 50
Top. Top
+ Gd.

20+28 - 25' Lt. = pole No #. R.R. Co. wires

?

~~6.75~~
~~6.77~~

Ground 0.5 below rails

all on Δ - 74°-49' to east

22+17³ = Cross rail

22+16² cross rail

22+12² = cross rail

22+11¹ = cross rail

(see page 55)

bridge data later.

Tide in - will get under

22+04 = Nly edge bridge (on deck)

Taken on Δ 74°-49'

21+92

T.P. 454 ~~6.59~~ 6.57 4.72 ~~2.05~~ 2.03

2.35 4.22 50 R

2.41 4.16 R

2.35 4.22 30 switch point

2.31 4.26 50 R

2.35 4.22 50 R

2.37 4.20 39 Frog

2.40 4.17 R

2.35 4.22 30 switch point

2.36 4.21 50 R

2.37 4.20 40 Frog

2.49 4.08

2.39 4.18 30 switch point

2.31 4.26 50 R

2.39 4.18 50 R

2.44 4.13

2.39 4.18 30 switch point

1.87 4.7 50

1.47 5.1 42 end of bridge

74° 0.49'

1.67 5.0

1.87 4.7 30 End Bridge

1.67 4.9 50

(-1.53) 8.1 50

(-1.23) 7.8 25

(-5.83) 12.4 20

(+5.63) 12.2

(-2.63) 9.2 20

1.47 5.1 25

1.67 4.9 50

~~6.59~~ 6.57

22+92.83 = cross on head wall

culvert

22+92.4 = intake double 10" x 5.4' box

22+92 on Δ to east

22+52 - in ditch at 90° to ℄

22+45 = leave bridge Δ 74°-49'

22+38.1 = cross rail

22+33.1 = cross rail

2.43
4.14

2.43	(-6.37)	2.43	(-6.34)	2.43
4.14	12.94	4.14	12.93	4.14
26.9	5.7	top Hd wall	5.7	28.3
End of head wall	I.E. ℄ Box		I.E. ℄ Box	end of Head wall

1.57	2.47	(-2.23)	(-6.23)	(-6.43)	(-6.03)	(-1.23)	1.17
5.0	4.1	8.8	12.8	13.0	12.6	7.8	5.4
50	27	25	12		11	28	50

1.77	0.97	(-4.13)	(-6.03)	(-5.33)	(-3.63)	(-0.43)	(-0.43)	
4.8	5.6	10.7	12.6	11.9	10.2	7.0	7.0	
50	40	33	25		35	40	50	

1.87	1.37	1.17	1.27	1.57
4.7	5.2	5.4	5.3	5.0
50	31.5 end of bridge		39 end of bridge	50

2.43	2.40	2.35	
4.14	4.17	4.22	
50	R	50	
R		R	

2.47	2.42	2.40	
4.10	4.15	4.17	
50	R	50	
R		R	

6.57

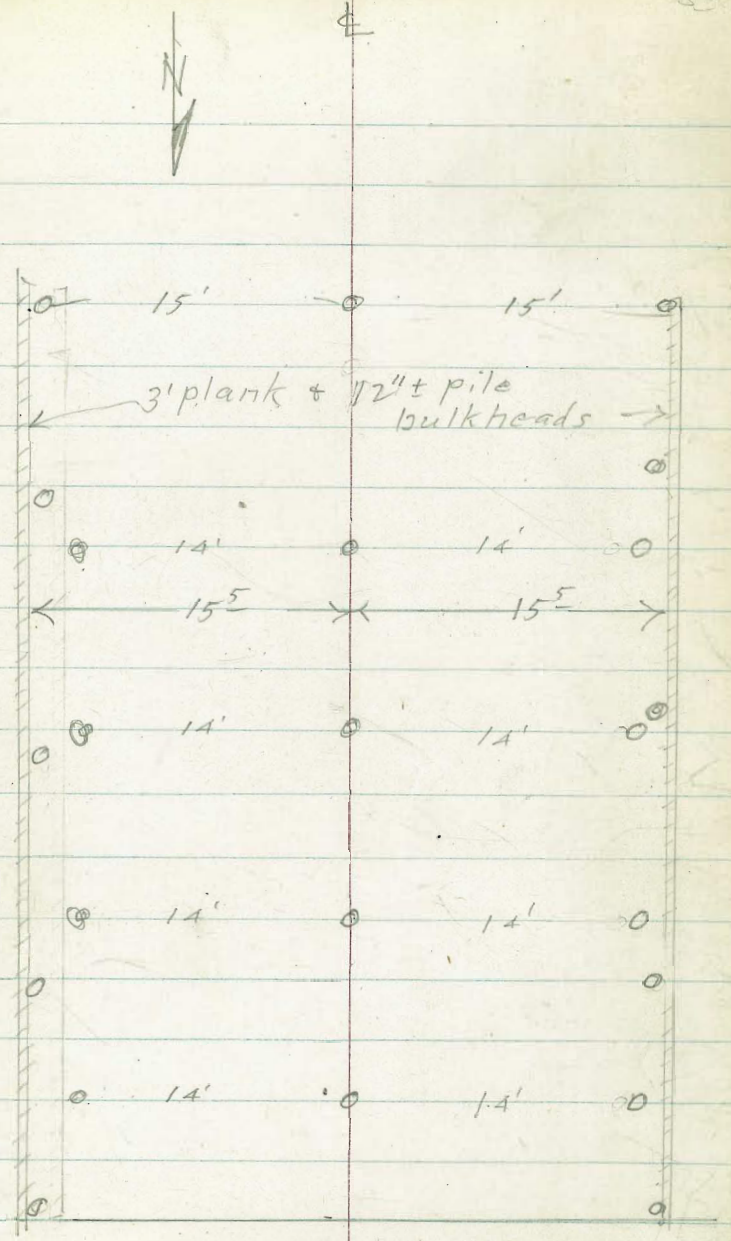
Bridge #1

Pile location El. = 2.10
Nail in s'ly side S.E'ly pile
O = denotes pile
distances are to ctr. of piles.

14+67 5/ End of bridge bulk head.

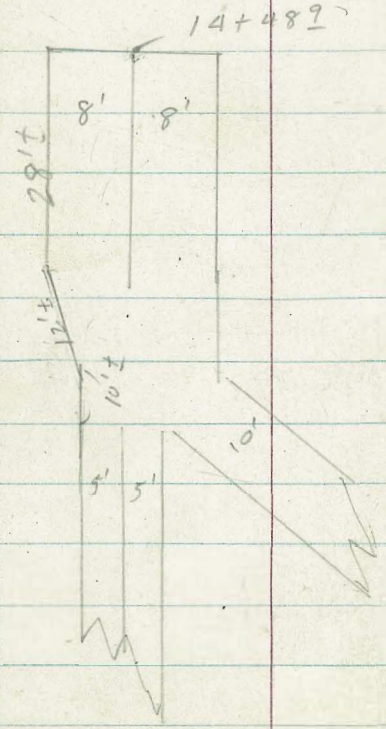
piles 12" to 15" in diam.
14+61 4/ Caps 12" high - 14" wide
Main Stringers { 16" high / 8" wide
14+57 E Braces 10" x 10" Horizontal at caps
Elev. bottom of stringers = 2.40
14+54 5/ Elev. bottom of braces = 1.1
These can be removed during construction
14+52

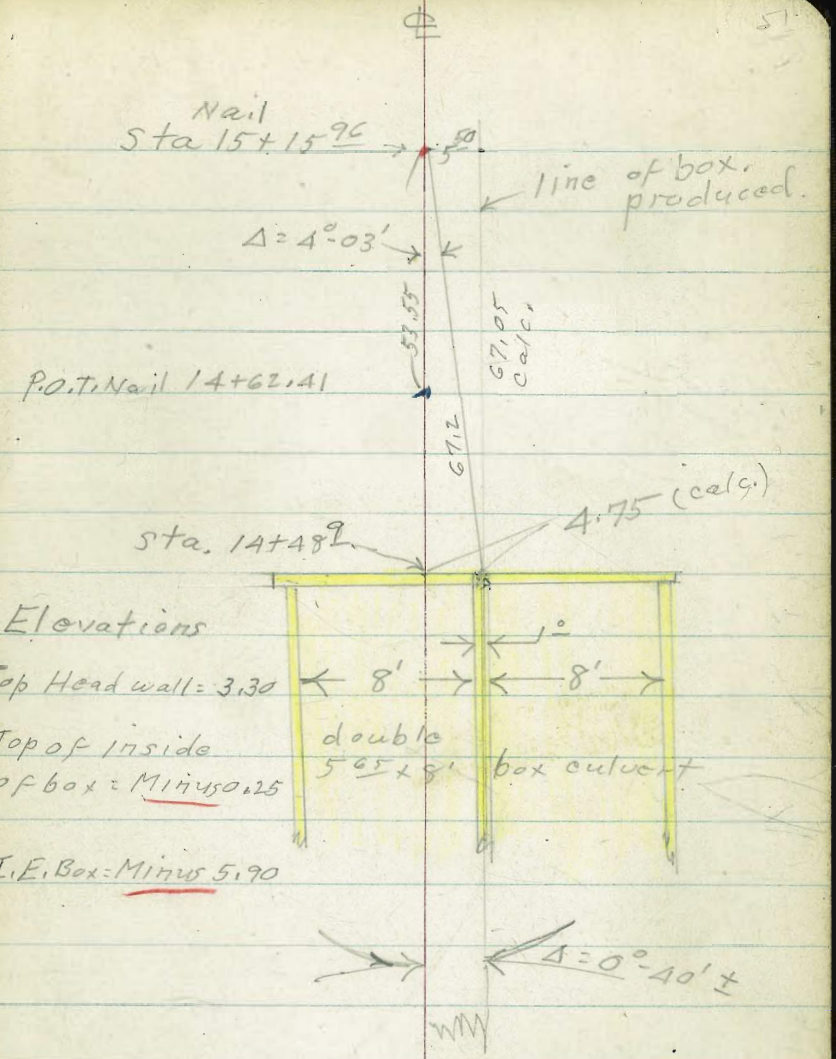
+Start bridge bulkhead
14+48 E start bridge deck
(From page 41)



End 5.65' x 8' double box culvert
Sta. 14+48.9 - see page 22 + 41

Below is guesstimation of existing culvert design.
Can not get into it even with hip boots at low tide.
CHH





Bridge #2 - See P-22 + P-45

Pile location

20+10.5

Piles - 14" to 16" in Diam.

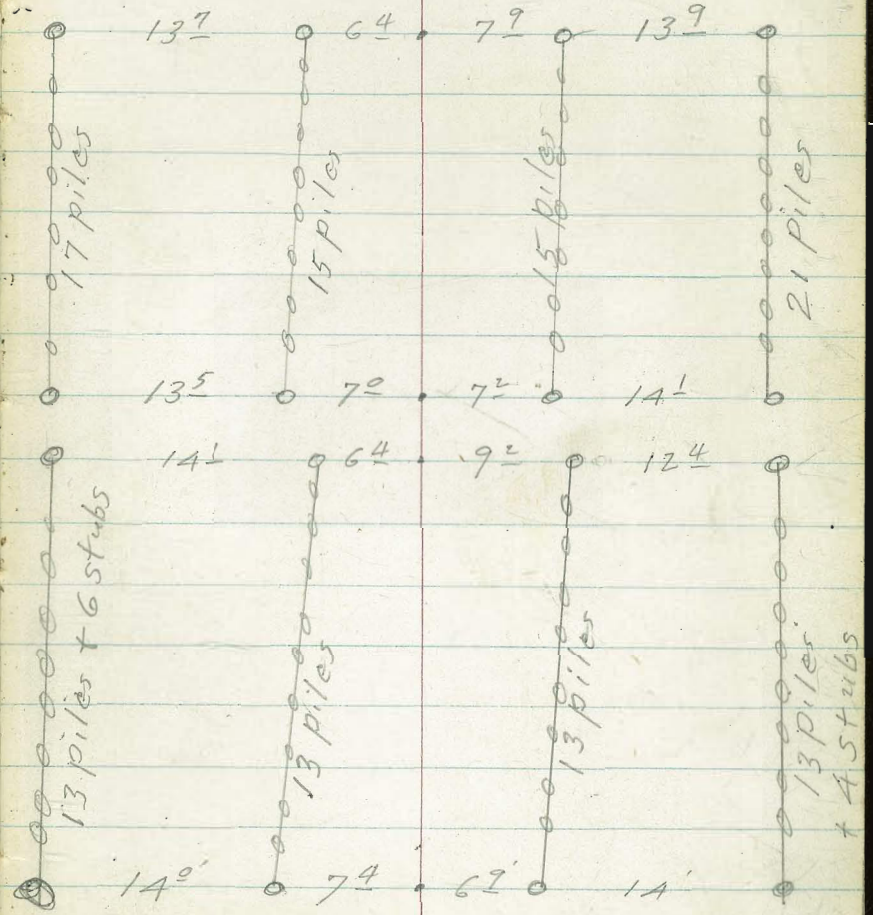
Elevation bottom of stringers = -0.4'

19+68.5

19+65.5

{Stringers 16" high
" vary in width
Caps 12" x 12"

19+26.5



20+39 – (From P-22)

℄

Pile stubs from old bridge
14" ± Diam.

20+62	o 7'	8' o
2+55	o 7'	7⅞ o
20+50	o 7'	7½ o
20+43⅝	o 7'	7⅝ o
20+39	o 7'	7½ o

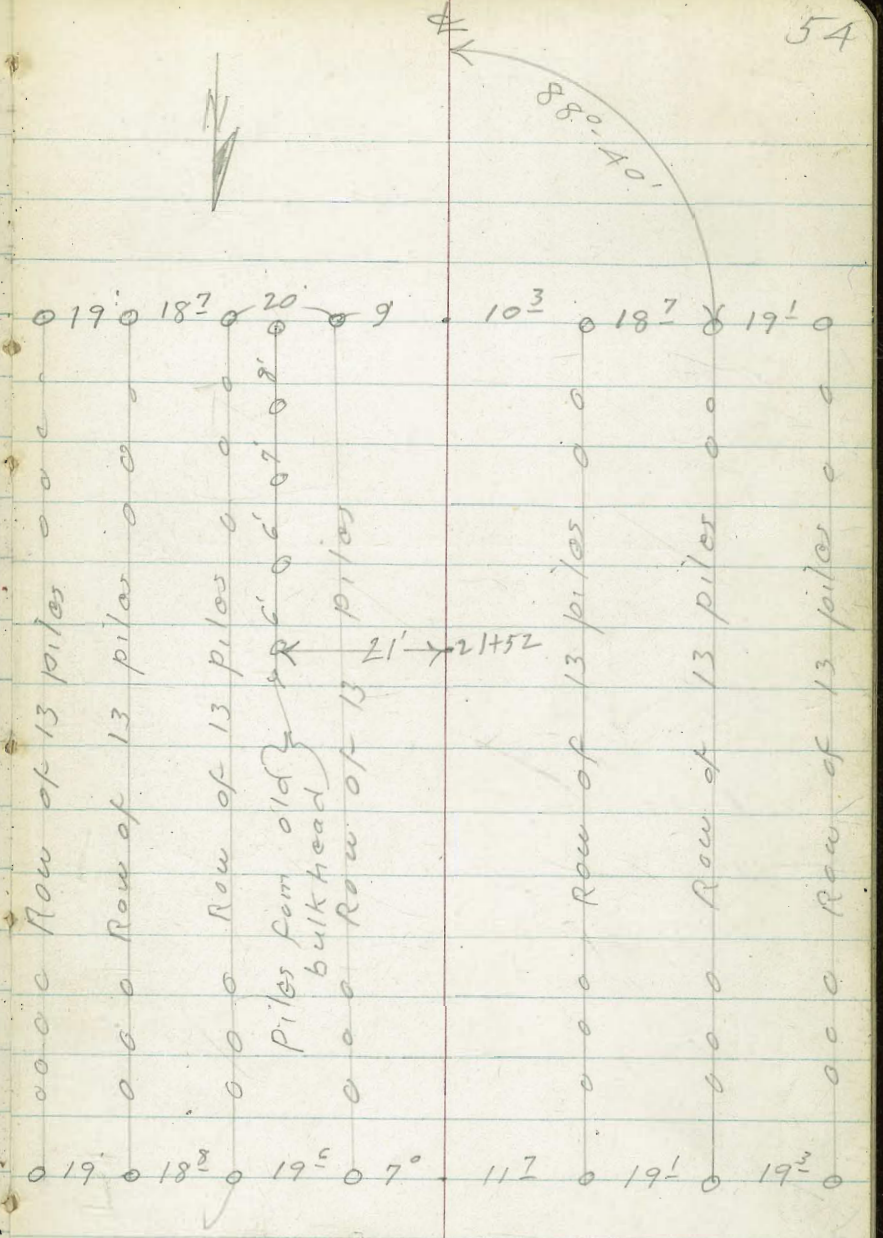
Bridge #3
Harbor Drive bridge
Pile location

From P 22+47

21+78

Each bent has 13 piles
14" to 16" in diam.

21+14.4



Bridge #4

See page 224 48

Stringers 16" ± High

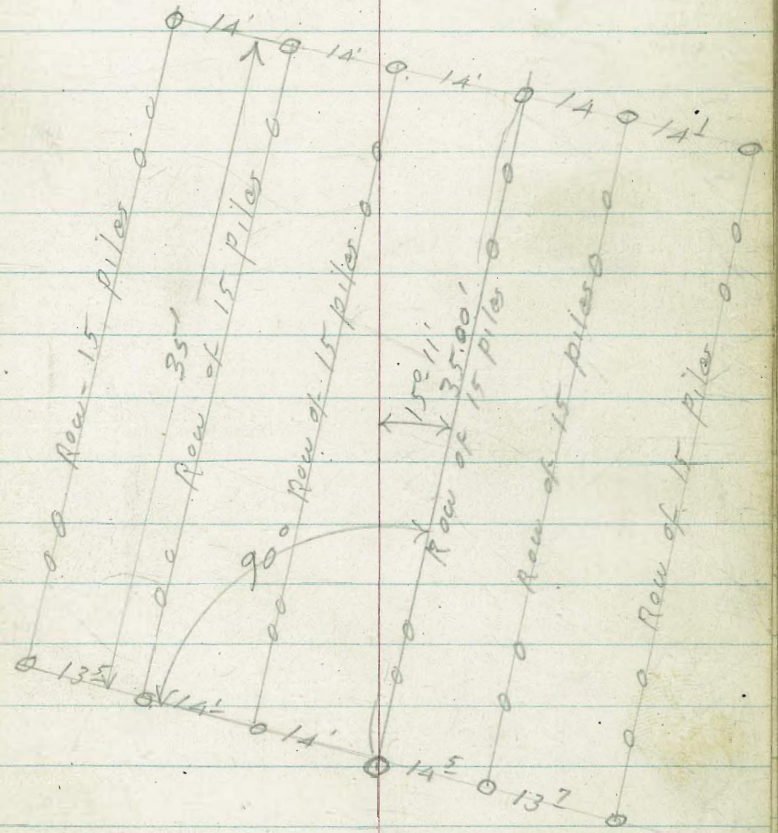
caps 15" High - 14" wide

Elev. bottom ~~Top~~ of cap ~~and bottom of stringer~~ = -1.2

{ EL. Top of cap + bottom of stringer = EL. + 0.2

Bent 35' long - 15 piles each

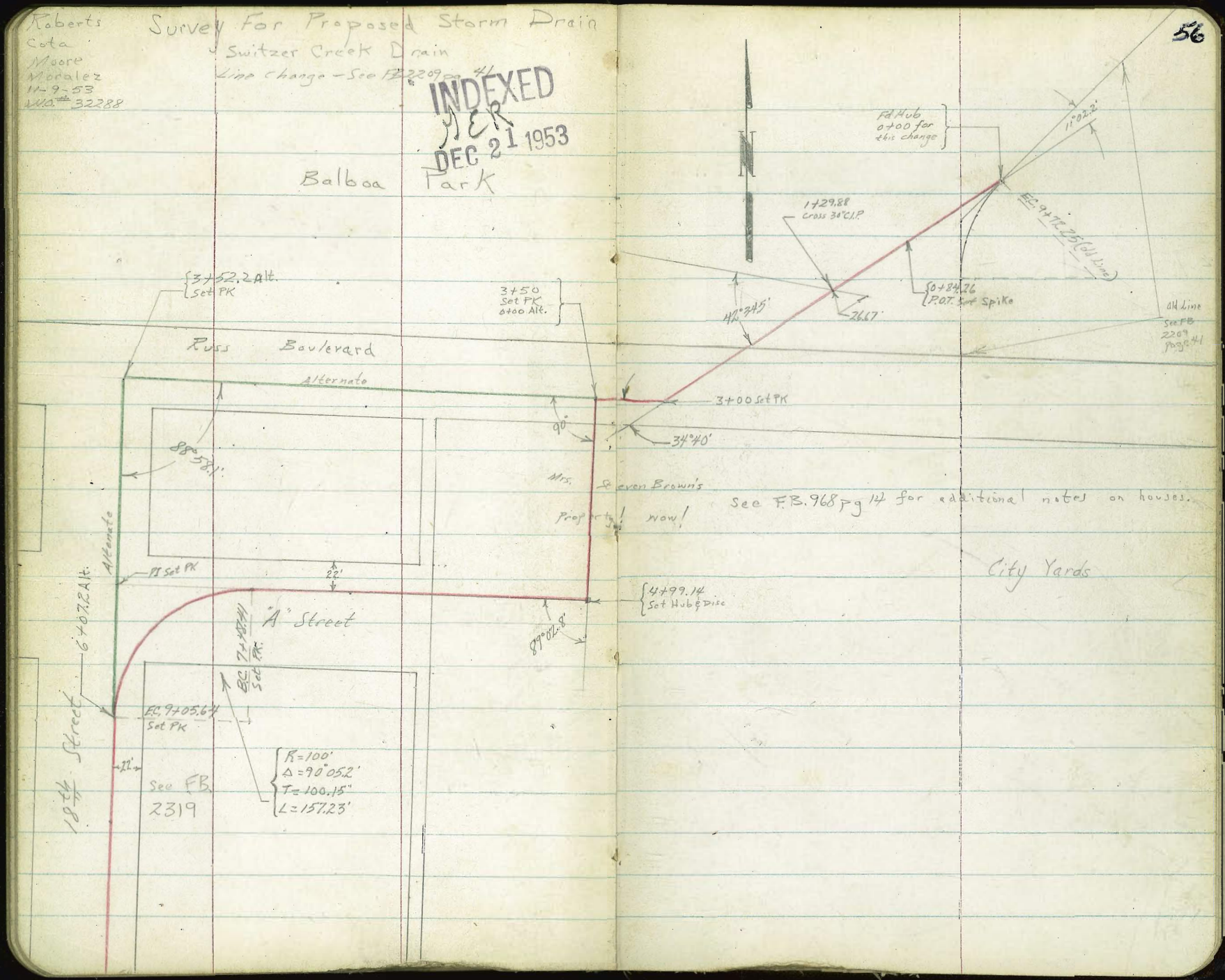
22+06.5 Δ 15°-11' to line of bent.

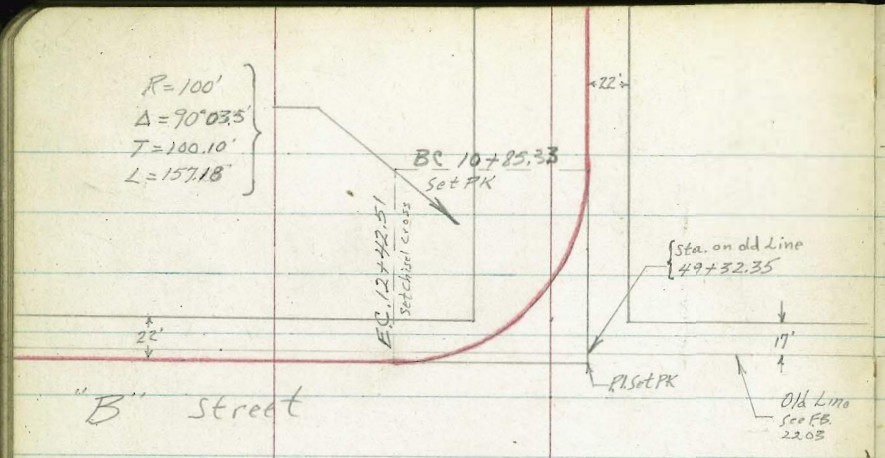


Roberts
Cota
Moore
Modalez
11-9-53
W.O. # 32288

Survey For Proposed Storm Drain
Switzer Creek Drain
Line change - See F.B. 2209 pg 41

Balboa Park





See FB 2319

19th Street

N

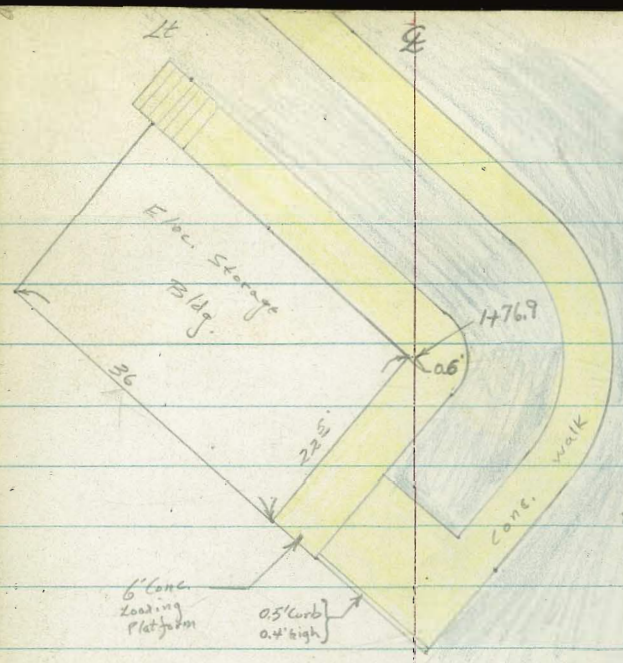
Cont'd From Page 57

			Lt	℄	Rt
			63.5	75.0	79.5
0+79	Top (Packing Yard Blacktopped)		18.0 27 Toe	2.9 Top	2.4 39 Toe — Higher
			63.1	75.7	79.4 — 80.0
0+69.7	5.5 Lt to center P. Pole # ?		18.7 22 Toe	6.2	2.8 11 Top — 1.9 32 Toe — Higher
0+57	Toe of Fill same elev. as ℄ 0+51				
0+60.7	38.3 ± Rt to 24" RCP Culvert. See 2209!				
	℄ wash on right ∠ from this ℄ sta. to sta. of Culvert. Right side on ∠ to ℄.		62.7	66.2	70.4 — 74.3 — 76.9 — 79.5 — 80.7
0+51		Lower Toe wet	19.0 28	15.9	11.7 12 — 7.6 26 — 5.0 31.5 rome — 2.4 31.5 rome — 1.2 36.8 rome
			62.4	65.6	71.4 — 81.5 — 92.4
0+35		Lower Toe wet	19.5 30	18.3	7.5 20 — 0.4 34 — +10.5 50 on Top
0+11.5	9.3 Lt to center 18" Evg. Tree				
0+00	= 9+72.25 FB 2209				Section in FB 2209 still Good
TBM 6.21	81.88 ℄	75.67	Top Switzer Dam at ℄ of old Line see FB 2209 page 51		81.88 ℄

Cont'd From Page 58

T.P.	4.73	84.17 ℄	2.44	79.44
1+42				
1+37	18	Lt to center P.Pole #C1415.		
1+31				
1+29.88	Cross Conc. I. Pipe. See 2209 for elev.			
1+00				

81.88 ℄



		℄			
17.9	3.4	2.8	2.0		higher
34 Toe	8 Top		38 Toe		
17.5	3.3	2.9	2.1		Higher
33 Toe	13 Top		40 Toe		
17.2	3.8	3.4	2.5		Higher
29 Toe	8 Top		43 Toe		

81.86 ℄

Contd From Page 59

	Lt		℄		Rt
2+61	70.2 6.0 40	78.6 5.6 16	79.8 4.3 Toe	80.5 +5.3 11	92.7 +8.5 20 Top
2+38.7	77.5 6.7 40	78.4 6.1 13	80.3 3.9 Top Access Road	80.2 +3.0 39 Toe	
2+34.5	77.8 6.8 40	78.7 5.5 Toe	83.6 0.6 14 Top Access Road	88.4 +11.2 42	
2+20	77.7 6.9 40	78.5 5.7	19.2 5.0 22 Toe	89.7 +5.5 42 Top Access Road	
2+00	82.2 2.0 278 cor. Bldg.	79.2 4.9 183 183 Top	78.8 5.5	79.2 5.0 24	79.4 4.8 41 Toe
1+76.9	82.3 1.9 0.6 cor. Bldg	82.3 1.9	82.2 2.0 5.4 Top	79.5 4.9 5.4	79.8 4.3 35 Toe
1+58.2	82.0 2.2 15 Bldg. cor.	82.0 2.2 7½ Top Road	78.6 5.6 7½	78.8 5.3	78.5 4.7 12	80.0 4.2 35 Toe	higher

84.17 ℄

84.17 ℄

Contd From Page 60

					Lt	℄	Rt
3+24.7	16½° Lt to NW Corner House						
3+13.5	11° Lt to center 18" Pepper tree						
3+00	∠ Section Rt. Angles to Forward Tan.				92.7 0.1 40	92.8 0 22 Top	87.7 5.7 10½ Toe
2+94.5	21³ Lt to NW Corner Garage ↙ 10⁸ X 15³ ↗				87.7 5.7		87.2 5.6 17 House
2+86.3	27° Lt to N.E. Corner Garage						
2+86.5	27½ Lt to corner Elec. Bldg.						
2+82.0	15² Lt to center MH				78.8 13.0 26 Toe	85.6 7.2 25 Top	76.8 16.39 15² Inv.
2+69.7	℄ Crosses fence on Cutbank edge				85.26 7.04 15² Rim	86.7 6.7	86.2 6.6 5 Toe
2+66.5					92.8 0 17 Top	92.51 0.3 40	
					78.8 14.0 25	79.31 13.5 7 Toe	85.4 7.4 Top
					92.8 0 15 Top Parking Lot	92.51 0.3 40	
T.P.	10.20	92.80 ↑	1.57	82.60 ↓		92.80 ↑	
		84.17 ↑					

Cont'd From Page 61

						Lt	℄	Rt
3+98.5	4 Lt to center 18" Pepper Tree							
3+89	10³ Rt to S.E. Corner House; 25¹ Lt to SW Corner House (Not Same House)							
3+71.5	3⁴ Rt to center 16" Pepper tree							
3+66.3	25³ Lt to NW Corner House (Not Same House)							
3+63.5	10⁸ Rt NE Corner House							
3+60.8	4² Rt to center 6" Pepper tree.							
T.P.	0.23	87.94 ⊼	5.09	87.71	N.E. Corner walk		87.94 ⊼	
3+50	∠ Sect. Rt to back tangent							
3+31.7	9.1 Lt to ℄ 2.2 Conc. Walk							
		92.80 ⊼					92.80 ⊼	

Right-page cross-section readings at 3+50:

87.9	88.1	88.3	93.2	93.0
4.9 / 10	4.7	4.5 / 105 Toe	+0.4 / 18 top	+0.2 / 40

Confd From Page 62

			Lt	℄	Rt
T.P.	2.52	78.10 ⊼	12.36	75.58	
4+91	41 Lt back edge 0.7' Retaining wall			75.27	
				12.67 conc	
4+61.5	42 ± Rt to SE Corner House				
4+58	31 ± Rt to center 24" Palm Tree				
			70L	70R	70Z
4+50			9.9 50	9.1	9.7 50
4+46.5	20 Lt to SW Corner House				
4+30.5	20 Lt to old NW corner of same House				
4+20.5	21 Lt to NW Corner House			From FB 968 you can see a 10' addition to this house	
4+19	43 Rt to NE Corner House				
			82N	82L	83L
4+00			5.8 50	3.7	4.8 50
		87.94 ⊼		87.94 ⊼	

Contd From Page 63

		Lt	℄	Rt
5+81	31.6 Rt to SE Corner House			
5+50			72.8 / 5.3 / 7	72.7 / 5.4 / Gut
5+28.8	0.3 Rt to center P. Pole # JP1910		73.20 / 4.82 / 1 Cb	73.3 / 4.8
5+11.3	0.5 Rt to Deadman			73.80 / 4.70 / 2 walk
5+10	18 Lt to center MH			73.56 / 4.54 / 7 walk
			69.12 / 8.98 / 18 INVERT	73.02 / 3.08 / 7 Top wall
4+99.14	℄ Rt Lt to Toward Tan.	73.2 / 4.4 / 15	73.25 / 4.35 / 0.9 Top CB Dict Same	72.8 / 4.3
4+71.1	{ 10.3 Lt to E. Edge 2.2 walk & its end Edge walk			72.82 / 4.28 walk
4+92.1	Edge walk			72.82 / 4.18 walk
		78.10 ⊼		78.10 ⊼

Cont'd From Page 64

				Lt			Rt
7+48.41 B.C.	See FB 2319						
				7.56 4.7 6	7.95 4.8	7.917 5.09 8 Gut	7.920 4.56 8 Cb
7+00				7.64 7.9 6	7.62 8.1	7.581 8.5 8	7.639 7.87 8 Cb
6+71.4	9.5 Rt to center T. Pole 3084 10H						
6+60				7.78 10.5 6	7.76 10.7	7.74 10.9 8 Gut	7.74 10.32 8 Cb
6+26.8	Begin Cb & walk on Rt			7.22 12.1 6	7.24 11.9	7.224 11.32 8 Cb & Gut	
T.P.	8.86	84.26 ✓ 2.70	75.40 ✓		84.26 ✓		
6+15.2	{ Cb Rt to Alley with T Rad. End Rt. Wall			7.22 5.8 7	7.25 5.6 1	7.26 5.14 Cb	7.314 4.96 7 Walk	7.408 3.22 7 Top Wall
6+10.8	31.5 Rt to SW Corner House							
6+00				7.251 5.6 7	7.24 5.7 1 Gut	7.266 5.14 1 Cb	7.0 5.1	7.3108 5.02 2 Walk	7.318 4.92 7 Walk	7.488 3.22 7 Top Wall
		78.18 ✓			78.10 ✓					

Cont'd From Page 65

Profile on Alternate

					℄
				85.2	
2+50					4.2
				84.2	
2+00					5.1
				85.2	
1+50					4.2
				86.8	
1+00					2.6
				87.8	
0+50					1.6
0+00 = 3+50					
T.P.	1329	89.35 ℄	8.20	76.06	89.35 ℄
		84.26 ℄			

Cont'd From Page 66

					CL
					95-66
5+00					7.93
					9121
4+50					8.38
					84-42
4+00					6.17
					9123'
3+52.2	L.				4.34
					4.7
3+27					3.9
T.P.	9.02	95.59 ℄ ✓	0.78	88.57 ✓	95.59 ℄ ✓
					8885
3+00					0.8
		89.35 ℄			89.35 ✓ ℄

Cont'd From Page 67

5+25 = 0100 for Survey in FB2319

8567

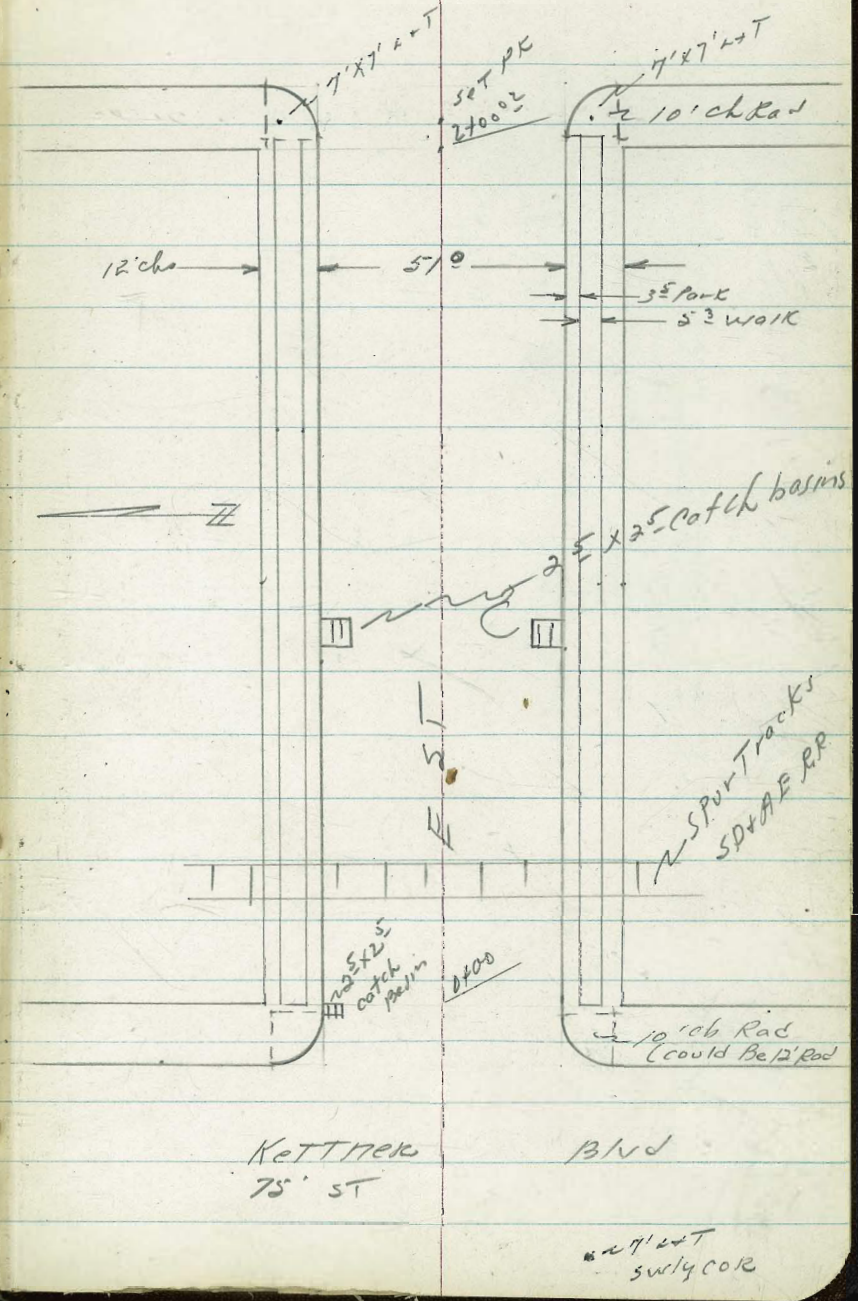
9.92 = check in FB2319

Rough X-sec of 'E' ST between Kettner Blvd & India ST - s/y curb 'E' ST out at present

C. Allen - 8-28-55

W.O. # 20006 -

See page 70 for Levels...



Levels on E ST between
Kettner + India ST.
See Sketch Page 69-

LT = Nly — ℄ — RT = Sly.

0+40 - 25^{5} LT = end Comm. Drive

0+32 — 8^{75} 29^{0} Sly of Walk; 8^{14} 25^{5} IN Drive Lip; 8^{57} (℄); 8^{08} 23^{5} E.P.; 8^{40} 29^{0} Nly edge Walk

0+10 - 25^{5} LT = begin Commercial drive

Note! E.P. = edge of Pavement as broken OUT by Pub Works

25.5 RT = begin Broken Curb to be Replaced
Broken OUT by City Pub. Works

0+00 = Ely Line Kettner Blvd — 8^{58} 29^{0} Sly of Walk; 8^{46} 25^{5} T.C.; 7^{66} 25^{5} gut; 8^{23} (℄); 7^{41} 25^{5} gut; 8^{00} 25^{5} T.C.; 8^{11} 29^{0} Nly of Walk

0-01 - 25^{5} LT = ℄ 2^{0} x 2^{5} inlet in gutter — 3^{8} 25^{5} Bottom Box; 7^{63} 25^{5} grate

0-02 - 25^{5} LT + RT = Curb Rad E.C.s — 8^{49} 25^{5} T.C. EC.; 7^{64} 25^{5} gut EC; 7^{37} 25^{5} gut EC; 8^{00} 25^{5} T.C. E.C.

0-12 = Ely Curb Line Kettner Blvd — 8^{49} 35^{5} T.C. Cb BC.; 7^{72} 35^{5} gut Cb BC; 7^{80} 25^{5}; 8^{02} (℄); 7^{45} 25^{5}; 7^{24} 35^{5} gut Cb BC; 8^{01} 35^{5} T.C. Cb BC

Direct elev. Rod - True elevs

B.M. 8^{98} SWBP India + E STs

Levels Cont
E.C. ST

also begin Drive on RT
pave by Pub. Works

$1+44 - 23^{5}$ RT = end Broken Curb +

$1+41 \cdot 25^{5}$ LT = begin drive

$1+40 - 27^{4}$ RT = ℄ 10" anchor Pole

6' in diameter
$1+23 - 7^{4}$ RT = ℄ Gas Company Vault

Catch Basins - Nly Box is over 4' deep

$1+10^{5}$ 25^{5} LT + RT = $2^{5} \times 2^{5}$

$0+75$

$0+52^{2}$ = Ely Rail Spur

be removed
$0+47^{5}$ = Wly Rail of Spur to

LT = Nly			℄ EST	RT = Sly		
	8^{37} 25^{5} GUT		8^{85}	8^{18} 23^{5} E.P.		8^{59} 29^{0} Nly of walk
				8^{67} 7^{4} Rim		
8^{63} 29^{0} Sly of walk	8^{50} 25^{5} T.C.	7^{96} 25^{5} grate	8^{73}	7^{94} 25^{5} grate	4^{99} 25^{5} IE Box	8^{35} 29^{0} Nly of walk
8^{68} 29^{0} Sly of walk	8^{39} 25^{5} in Drive gutter		8^{81}	8^{17} 23^{5} E.P.		8^{44} 29^{0} Nly of walk
8^{88} 29^{0} Sly edge walk	8^{83} 25^{5} Top of Rail + Top cb		8^{70}	8^{54} 23^{5} EP + Top Rail		8^{53} 29^{0} Nly edge walk
8^{94} 29^{0} Sly of walk	8^{89} 25^{5} Top Rail + Top cb.		8^{75} Top of Rail And A.C.	8^{59} 23^{5} Top Rail		8^{54} 29 Top walk Nly edge

Direct Rod

Levels E. ST Cont

$2+12^{02}$ = Wly Curb Line India ST

$2+00^{02}$ =

$1+70$ - 25^{5} LT = end drive

end driveway

$1+61$ - 25^{5} RT = begin Curb +

LT = Nly					℄ E ST	RT = Sly			
						8^{28} 85 GUT	8^{60} 85 T.C.		
10^{09} 85 T.C.	9^{65} 85 GUT	9^{42} 35^{5} T.C. BC	9^{09} 35^{5} GUT BC	8^{93} 25^{5}	9^{44}	8^{61} 25^{5}	8^{50} 35^{5} GUT BC	8^{96} 35^{5} T.C. BC	
9^{43} 29^{0} Sly of Walk	9^{37} 25^{5} T.C.	8^{86} 25^{5} GUT			9^{32}	8^{52} 25^{5} GUT	8^{95} 25^{5} T.C.	9^{05} 29^{0} Nly of Walk	
9^{20} 29^{0} Sly of Walk	8^{56} 25^{5} GUT in drive				8^{97}	8^{25} 25^{5} GUT	8^{64} 25^{5} T.C.	8^{71} 29^{0} Nly of Walk	

Direct Rod

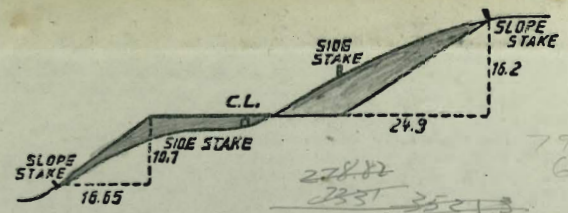
Ridgeview Acres
Bench Marks
For Topographic Work

Walker
Taylor
Hamilton
Meyer
G-18-57

73

T.P. #1			0.00	306.53	
TP #3	2.38	306.53	12.72	304.15	
TP #2	0.04	316.87	11.81	316.83	1" Iron Pipe NE. Lot Cor Residence W. side 4953 Lantana Dr
TP #4	0.43	328.14	9.69	327.71	
	4.59	337.40		332.81	N.W. B.P. Dwight & Euclid

84
17
67
48
115



DISTANCES FROM SIDE STAKES FOR CROSS-SECTIONING.

SLOPE 1½ 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	71.20	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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