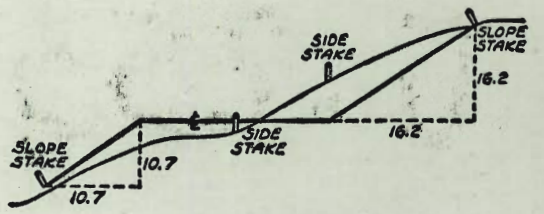


Distances from Side Stakes for Cross-Sectioning

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.

G-253

31.5
5 2
26.3

148+05
6+01.5
10 9.3 46
5 26
98 26

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

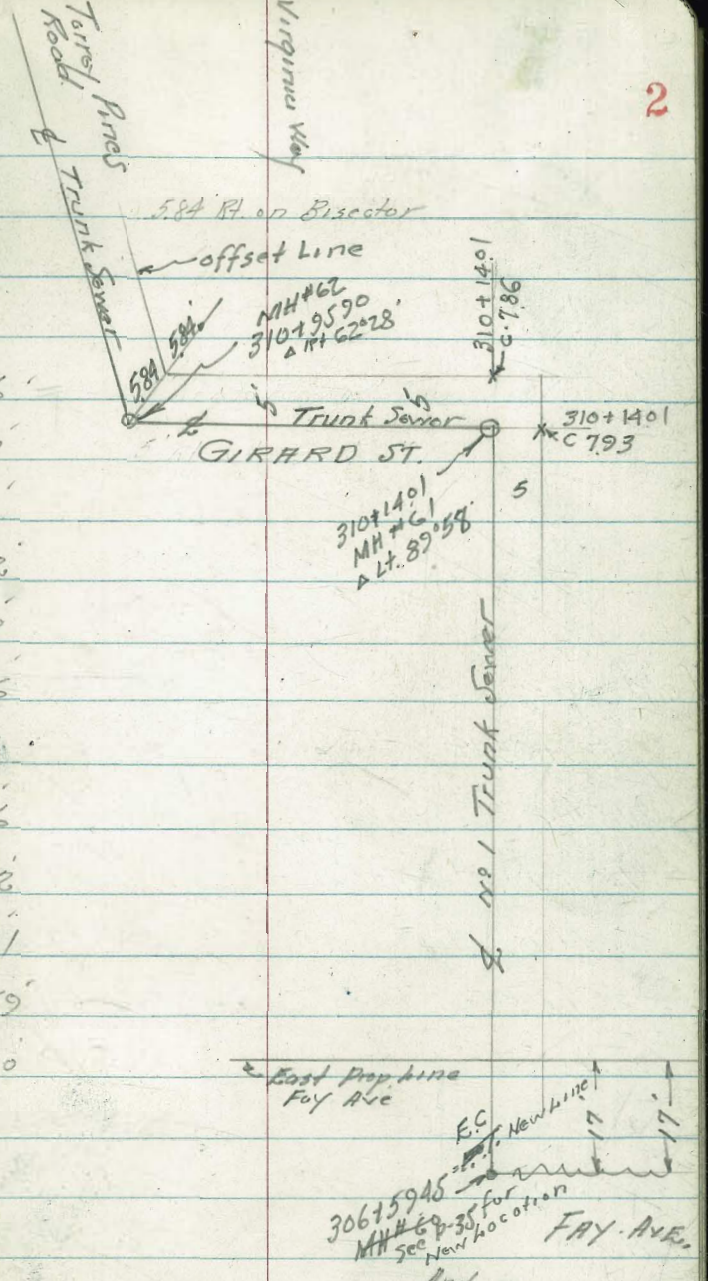
Central Angle	Degree of Curve													
	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°
10°	.001	.003	.004	.006	.007	.008	.009	.011	.012	.014	.015	.017	.018	.020
15°	.003	.007	.010	.014	.018	.023	.027	.029	.032	.035	.039	.043	.047	.051
20°	.006	.011	.017	.022	.028	.034	.038	.045	.051	.057	.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

INDEX

No 1 TRUNK SEWER GRADES

Plan 1279-D - Sheet #8

				El. Flowline	Cuts
Const. P. 3					
310+95.5 = △Rt 62°28 MH #62		9.60	93.95	88.04	5.91
310+54.75		8.82	94.73	87.94	6.79
BM. Stirling.					
TP	837 10355	4.87	95.18		
310+14.01 △Lt 89°58		4.35	95.70	87.84	7.86
310+14.01 = MH #61		4.28	95.77	87.84	7.93
309+80		4.19	95.86	87.76	8.10
309+45		5.35	94.70	87.68	7.02
309+10		6.07	93.98	87.60	6.38
308+75		6.28	93.77	87.51	6.26
308+40		6.47	93.58	87.43	6.15
308+05		6.05	94.00	87.34	6.66
307+70		5.97	94.08	87.26	6.82
307+35		6.07	93.98	87.17	6.81
307+00		6.37	93.68	87.09	6.59
306+62.45 = P.O.T. △Rt 89°57		7.35	92.70	87.00	5.70
306+52.45 = MH #60					
Const. P. 3	487 100.05			95.18	

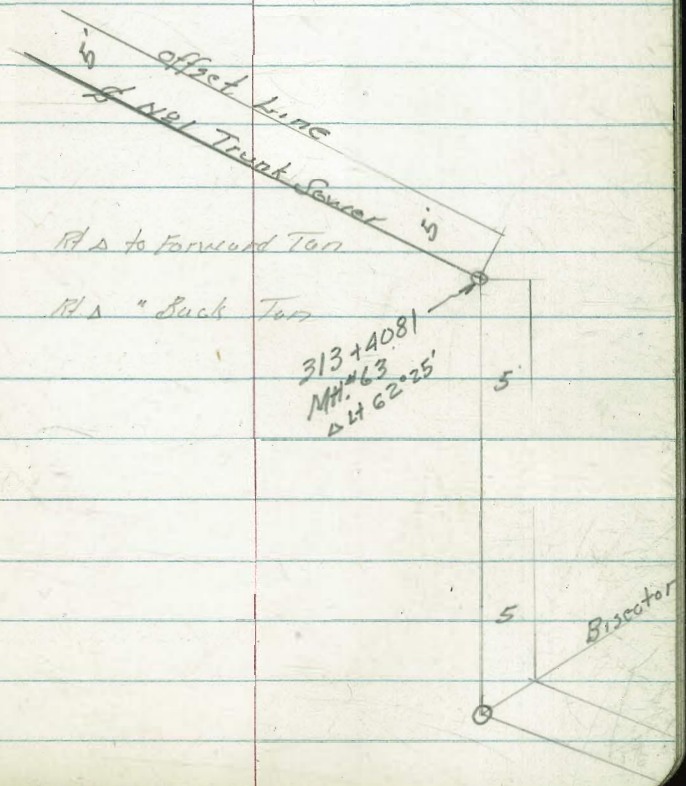


B.M. B.P. S.E. Virginia Way

Cont. P-11 ↑

			El. Flow Line	Cuts.	offsets
			0.01		
FB 1655-2		98 7.8			
chk 2+33.72	1.76	98.79			
313+83.14	3.27	100.28	93.07	7.21'	
313+40.81 MH#63 Δ LH 62°25'	4.04	99.51	92.94	6.57'	Rt Δ to Forward Tan
313+40.81 MH#63	4.26	99.29	92.94 .02	6.35'	Rt Δ " Back Tan
313+00	5.92 .03 H	97.63	92.12	5.49'	
312+65	7.22	96.33	91.42	4.91'	
312+30	8.04	95.51	90.72	4.79'	
311+95	8.66	94.89	90.02	4.87'	
311+60	8.98	94.57	89.32	5.25'	
311+25	9.36	94.19	88.62	5.57'	

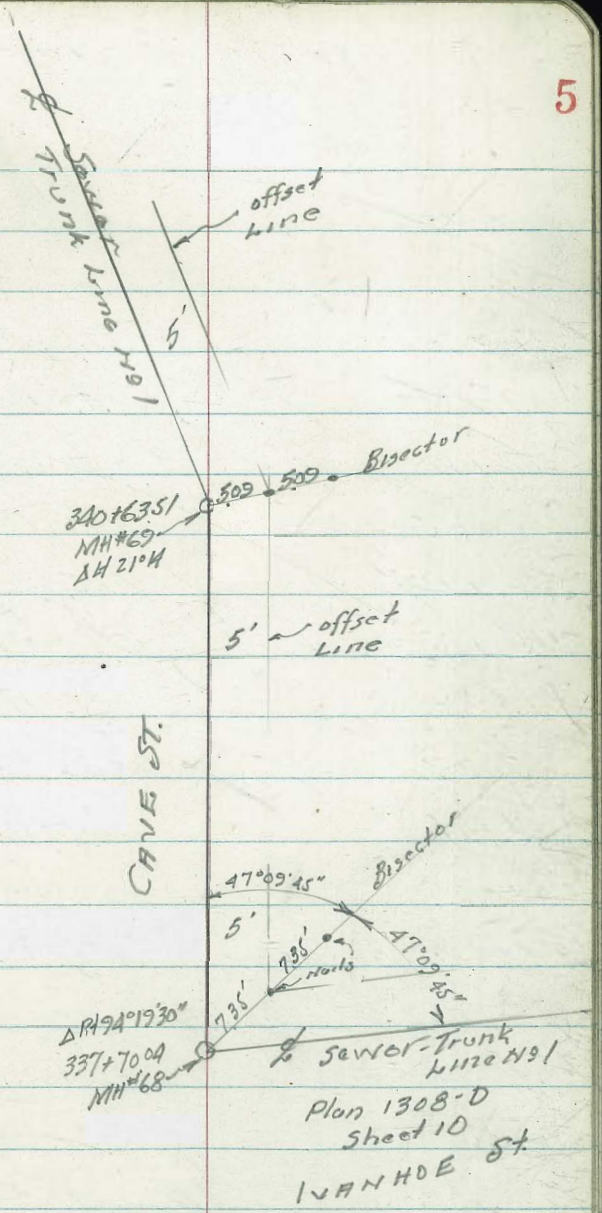
10355



No 1 TRUNK SEWER GRADES

Plan 1308-D

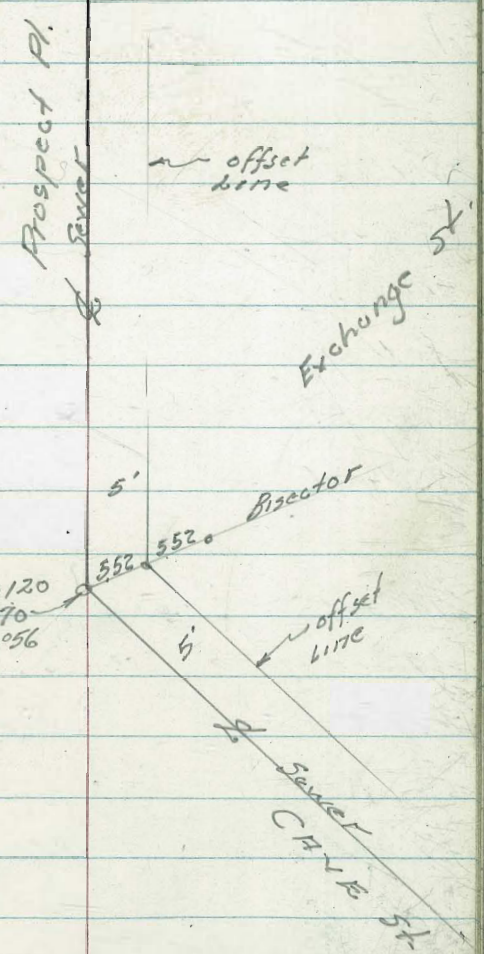
Cont. on P-6			Elev. Flow Line	Cuts
342+40	2.42	115.29	105.37	9.97
342+05	2.35	115.36	104.94	10.42
341+70	2.77	114.94	104.56	10.38
341+35	3.23	114.48	104.18	10.30
341+00	3.56	114.15	103.80	10.35
	Δ Lt. 21°14			
340+6351 = MH #69	4.09	113.62	103.40	10.22
340+45	4.45	113.26	103.21	10.05
340+10	5.22	112.49	102.83	9.66
339+75	5.97	111.74	102.45	9.29
339+40	6.62	111.09	102.07	9.02
339+05	7.30	110.41	101.69	8.72
338+70	7.99	109.72	101.31	8.41
338+35	8.58	109.13	100.93	8.20
338+00	9.40	108.31	100.55	7.76
	Δ Rt 94°19'30"			
337+70.04 = MH #68	9.46	108.25	100.23	8.02
	9.225	117.71	108.46	B.M. B.P. North Cor. Ivanhoe & Cave St.



No. 1 TRUNK SEWER GRADES.

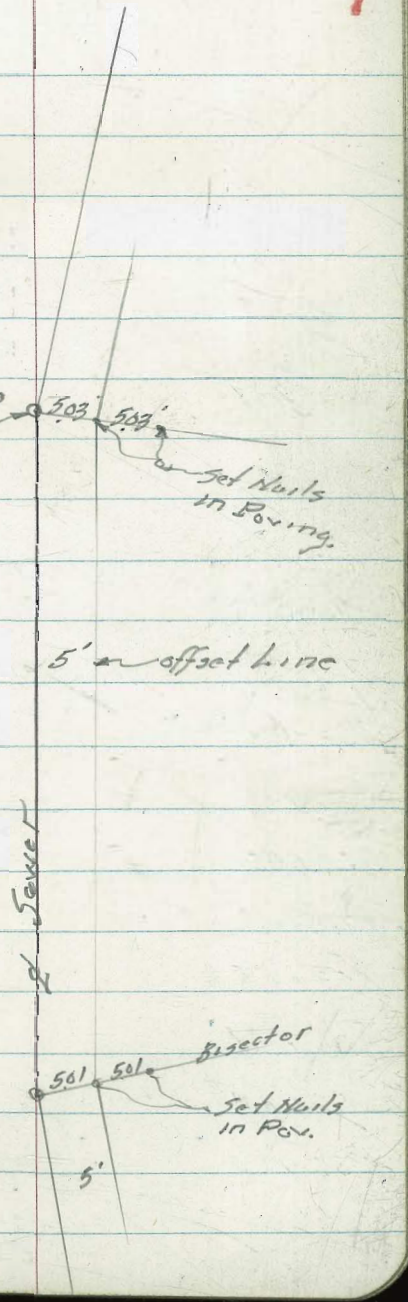
Cont. p. 7

T.P.	978	132.98	2.14	123.20	
347 +50			0.23	125.11	117.51	7.60
347 +15			1.59	123.75	116.46	7.29
346+80			2.99	122.35	115.41	6.94
346+45			4.33	121.01	114.36	6.65
346 +10			5.65	119.69	113.31	6.38
345 +75			6.96	118.38	112.26	6.12
345 +40			8.42	116.92	111.21	5.71
345 +05			9.86	115.48	110.16	5.32
344+70			10.19	115.15	109.11	6.04
344+35			10.71	114.63	108.06	6.57
344+0120=MH #70 △49°56'			11.36	113.98	107.05	6.93
T.P.	1066	125.34	3.03	114.68		
343 +80			3.79	113.92	106.83	7.09
343 +45			3.32	114.39	106.46	7.93
343+10			2.84	114.87	106.08	8.79
342+75			2.62	115.09	105.70	9.39
		117.71				



No 1 - Trunk Sewer - Grades

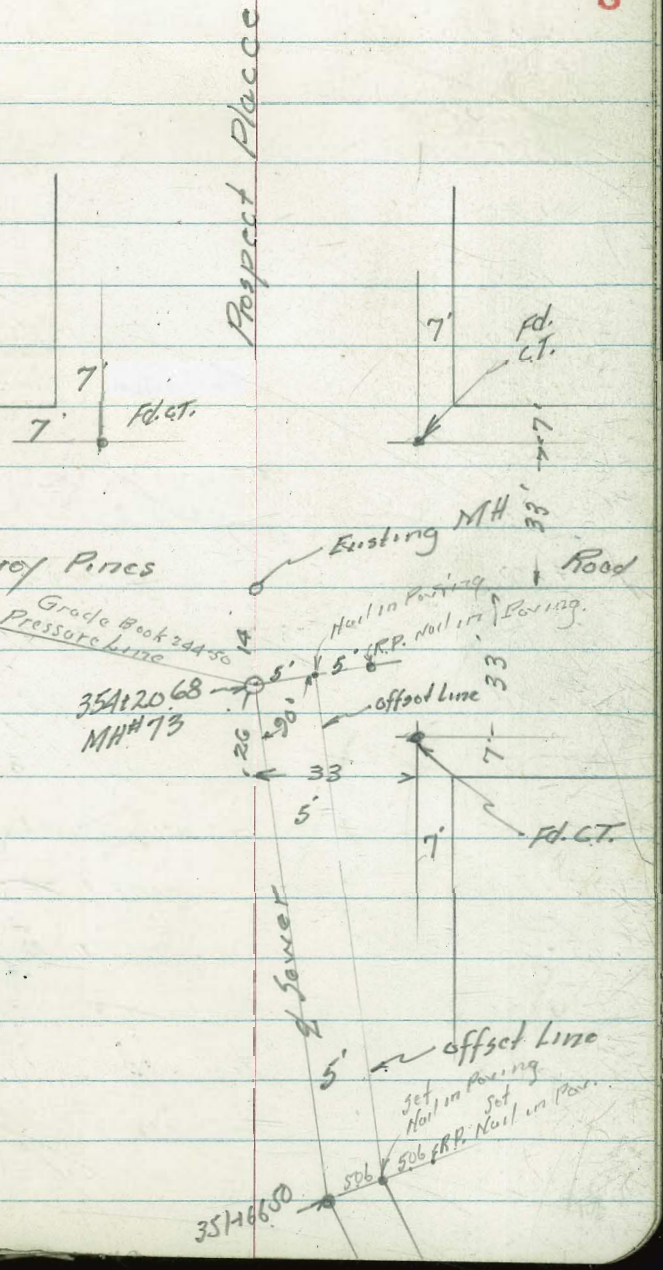
			S.I. Flow Line	Cuts. offsets.
Cont. P-8				
351+90	11.94	132.39 / ~~132.99~~	126.62	5.77 / 6.37
	12.56 (Corrected 194.33)	131.77 / 131.72		Chk S.E. B.P. Park Row & Prospect Pl.
Chk B.M. B.P.	12.49	194.28		
T.P.	11.9	131.79	on Conc. cb.	S.E. Cor. ~~Park Row~~ And ~~Prospect Place~~
351+66.50 = MH #72 Δ 11°53' Rt	1.92	131.06	124.81	6.25
351+49	2.51	130.47	124.55	5.92
351+14	3.60	129.38	124.02	5.36
350+79	3.87	129.11	123.50	5.61
350+44	3.78	129.20	122.97	6.23
350+09	3.71	129.27	122.45	6.82
349+74	3.82	129.16	121.92	7.24
349+39	4.00	128.98	121.40	7.58
349+04	4.34	128.64	120.87	7.77
348+69	4.88	128.10	120.35	7.75
348+34	5.44	127.54	119.82	7.72
348+20.42 = MH #71 Δ Rt 9°21'	5.66	127.32	119.62	7.70
347+85	6.58	126.40	118.56	7.84
Cont. from P. 6.	132.98			



Walker
Johnson
Pope
Kiley
2-1-49

No 1 - Trunk Sewer Grades

			Elev. Flow Line	Cuts
St. Park Row - Prospect Pl.			131.77	
Chk BM BP		807	131.77	
T.P	0.53 139.84	1271	139.31	
354+20.68 = MH #73		144	150.58	144.39	6.19
354+00		222	142.80	142.79	7.01
353+66		474	147.28	140.10	7.18
T.P	8.29 152.02 0.60		143.73		
			144.27		6.87
353+30		0.06	144.87	137.40	7.47
			141.23		6.52
352+95		3.10	141.83	134.71	7.12
			138.20		6.19
352+60		6.13	138.80	132.01	6.79
			135.32		6.00
352+25		9.01	135.92	129.32	6.60
	144.33				



La Jolla Trunk Sewer No 1
Construction Grades

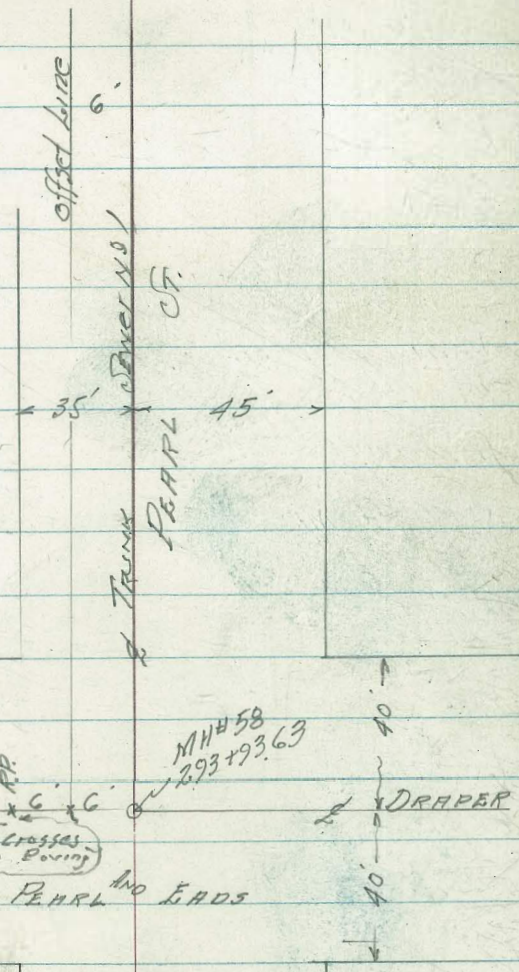
Walker
Johnson
Pope
Riley

2-1-49

			El. Stakes	El. Flow Line	Cuts
Cont. P-10					
T.P.	786	102.29	0.78	101.43	
298+55			0.32	101.89	85.06	16.83'
298+20			0.91	101.30	84.97	16.33'
297+85			1.50	100.71	84.89	15.82'
297+50			1.95	100.26	84.81	15.45'
297+15			2.76	99.45	84.72	14.73'
296+80			3.90	98.31	84.64	13.67'
296+45			4.99	97.22	84.55	12.67'
296+10			6.13	96.08	84.47	11.61'
295+75			7.25	94.96	84.39	10.57'
295+40			8.32	93.89	84.30	9.59'
295+05			9.51	92.70	84.22	8.48'
294+70			10.58	91.69	84.13	7.56'
294+35			11.61	90.60	84.05	6.55'
293+93.63=MH.#58			12.37	89.84	83.95	5.89'
	003	102.21		102.18		

B.M. B.P. in curb S.E. Pearl and Eads

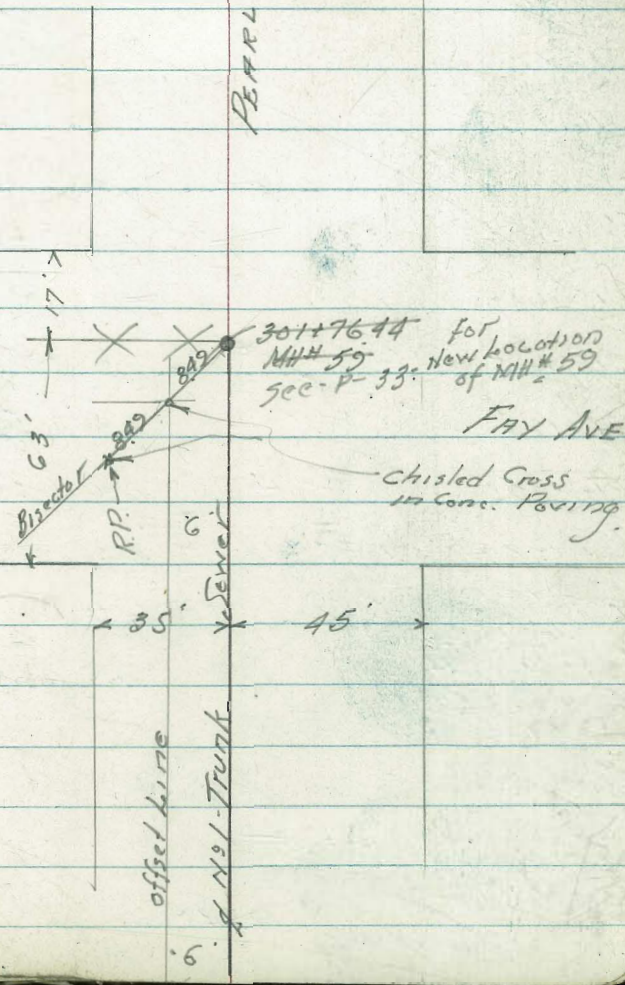
Cont. from P-32



LA JOLLA TRUNK SEWER No 1

Cont'd P-16

		El. Flow Line	Cuts
		001	
Pearl & Eads SE		102.18 ~~BM~~	
chk. starting BM	710	102.19	
		107.52	
chk 300+21.2	1.79	107.50	
Δ 90°00'44"			
~~301+76.44 MH#59~~	~~1.95~~	~~107.44~~ 85.83	~~21.61~~
301+35	2.08	107.21 85.73	21.48
Cont. P-33			
301+00	2.66	106.63 85.65	20.98
300+65	3.29	106.00 85.56	20.44
300+30	3.29	105.30 85.48	19.82
299+95	4.65	104.64 85.39	19.25
299+60	5.23	104.06 85.31	18.75
299+25	5.98	103.31 85.23	18.08
298+90	6.70	102.59 85.14	17.45
Cont. from P-9	10929		



2-2-49

No 1 - Trunk Sewer - Grades

in La Jolla

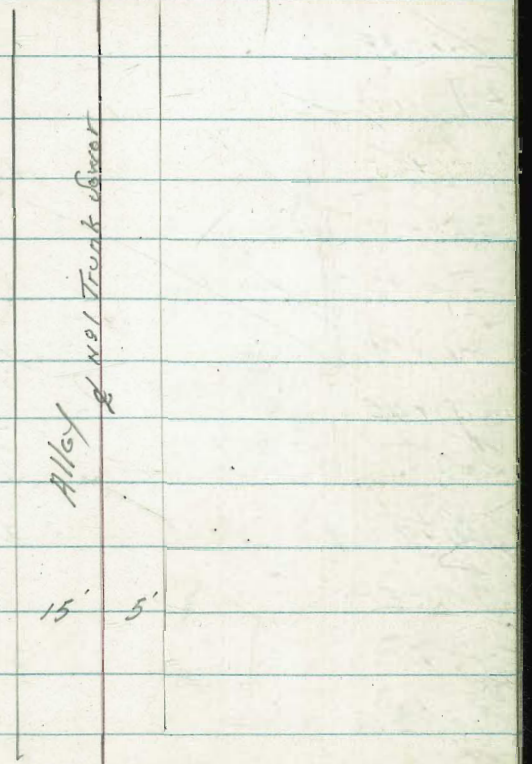
From Torrey Pines Road & Virginia-Way to Ivanhoe & Cave St.

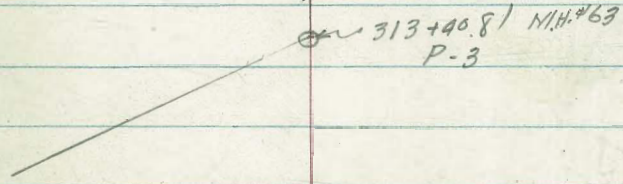
			Elev. Flowline	
Cont. P-12				
	.04 H			
317+15	4.45	108.95	94.06	14.89
	.04 H			
316+80	4.99	108.41	93.96	14.45
	.05 H			
316+45	5.79	107.61	93.85	13.76
	.04 H			
316+10	6.33	107.07	93.75	13.32
	.04 H			
315+75	6.71	106.69	93.64	13.05
	.05 H			
315+40	7.18	106.22	93.54	12.68
	.04 H			
315+05	7.87	105.53	93.43	12.10
	.04 H			
314+70	8.33	105.07	93.33	11.74
	.04 H			
314+35	9.76	103.64	93.22	10.42
T.P.	10.75 11340	1.03	102.45	
	.05 H			
314+00	1.89	101.59	93.12	8.47
Chk P-3	.05 H P-3 =	100.28		
313+83.14	3.22	100.26	93.07	

313+40.81 = MH #63 - P-3

Cont. P-3.

830 103.48 95.18

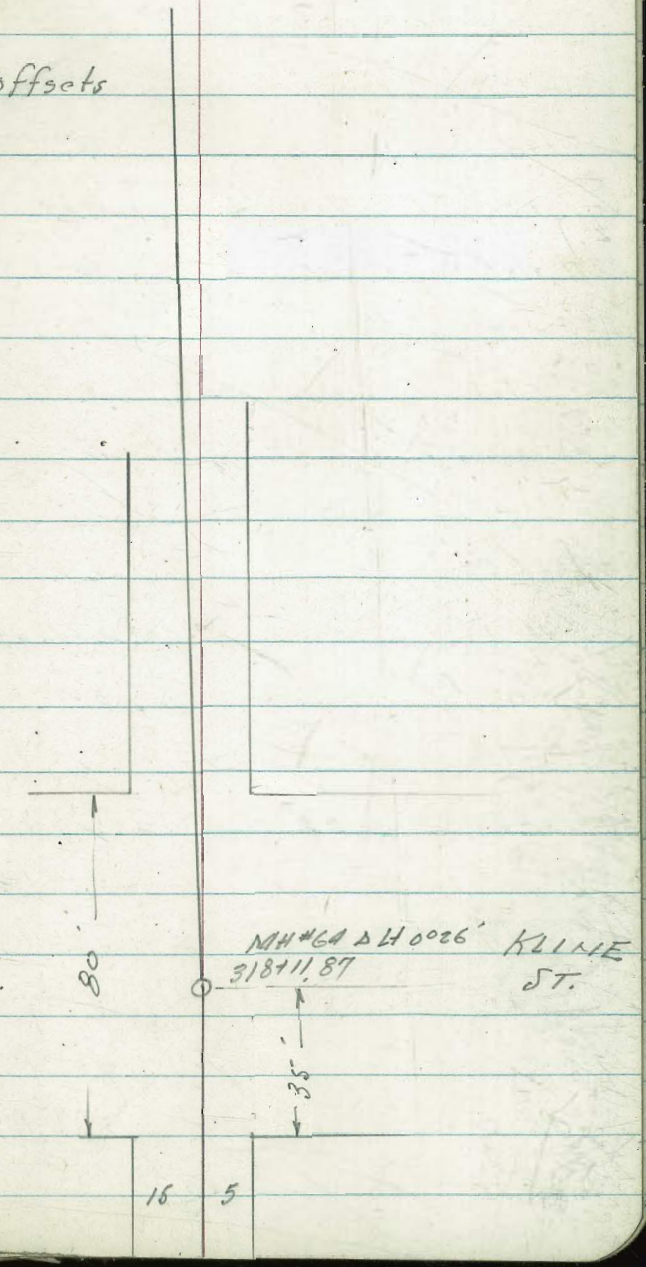




No 1 Trunk Sewer · Grades

				Elev. Flow Line	Cuts	offsets
Cont. P-13						
322+70		4.53	109.90	95.73	14.17	
322+35		4.40	110.03	95.62	14.41	
322+00		4.23	110.20	95.52	14.68	
321+65		4.10	110.33	95.41	14.92	
321+30		3.94	110.49	95.31	15.18	
320+95		3.74	110.69	95.20	15.49	
320+60		3.60	110.83	95.10	15.73	
320+25		3.66	110.77	94.99	15.78	
T.P.	3.97 11443	2.94	110.46			
319+90		2.71	110.69	94.89	15.84	
	.05H				15.80	
319+55		2.84	110.56	94.78	15.78	
	.04H					
319+20		2.89	110.51	94.68	15.83	
	.01H					
318+85		2.96	110.44	94.57	15.87	
	.03H					
318+50		3.06	110.34	94.47	15.87	
	.04H					
318+11.87 - M.H. #64		3.12	110.28	94.36	15.92	
	.04H					
317+85		3.02	110.38	94.27	16.11	
	.04H					
317+50		4.22	109.18	94.17	15.01	
	113.40					

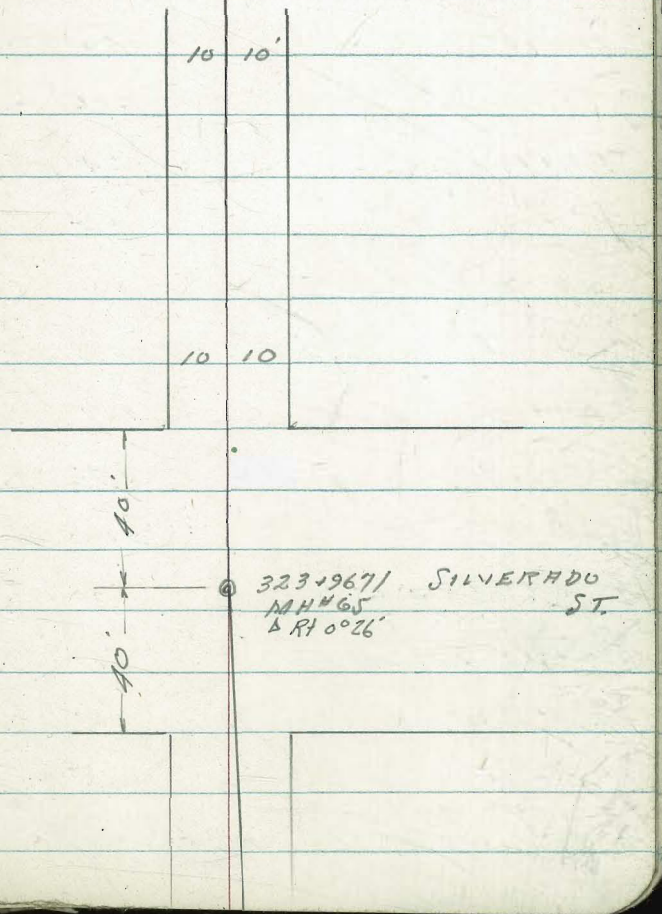
Δ Lt. 0°26'



No 1 - Trunk Sewer Grades

Cont. P-14

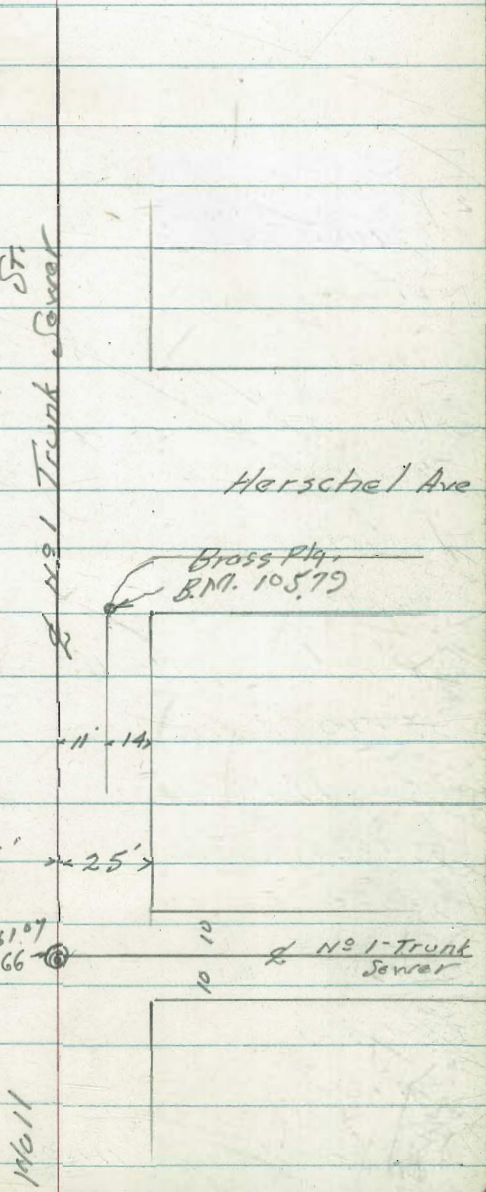
		Flow. F	El. Flow Line	Cuts
328+50	3.75	105.73	97.47	8.26
328+15	3.10	106.38	97.36	9.02
327+80	2.64	106.84	97.26	9.58
327+45	2.09	107.39	97.15	10.24
327+10	1.57	107.91	97.05	10.86
326+75	1.07	108.41	96.94	11.47
T.P. 0.56 109.48	5.51	108.92		
326+40	5.52	108.91	96.84	12.07
326+05	5.33	109.10	96.73	12.37
325+70	5.22	109.21	96.63	12.58
325+35	5.02	109.41	96.52	12.89
325+00	4.98	109.45	96.42	13.03
324+65	4.98	109.45	96.31	13.14
324+30	5.18	109.25	96.21	13.04
Δ Rt 0°26'				
323+9671 - MH #65	4.69	109.74	96.11	13.63
323+75	5.10	109.33	96.04	13.29
323+40	4.88	109.55	95.94	13.61
323+05	4.73	109.70	95.83	13.87
	11.43			



No 1 Trunk Sewer

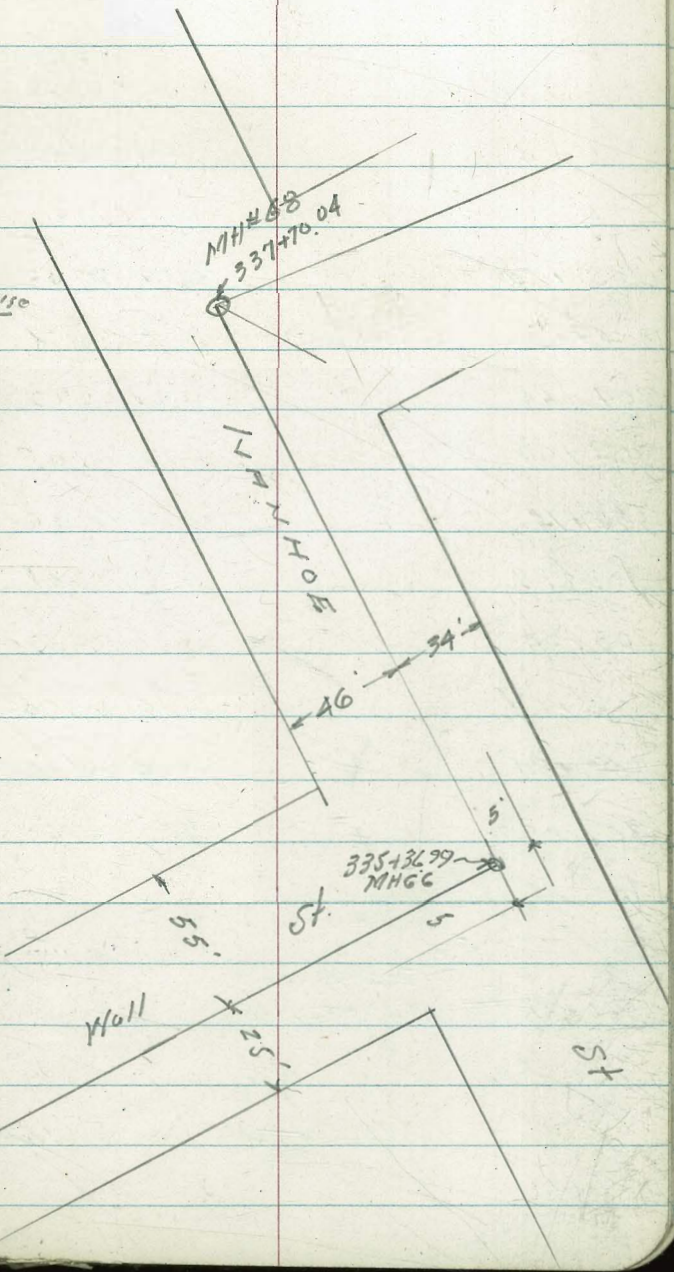
Cont. P.			Elev. Flow line	Cuts
333+85	4.55	107.83	99.07	8.76
333+50	4.79	107.59	98.97	8.62
333+15	5.18	107.20	98.86	8.34
332+80	5.40	106.98	98.76	8.22
332+45	5.71	106.67	98.65	8.02
332+10	6.06	106.32	98.55	7.77
331+75	6.47	105.91	98.44	7.47
331+40	6.29	106.14	98.34	7.80
S.W. Herschel & Hall		105.79 Plug		
Chk BM BR	6.86	105.82		
T.P.	C.97 112.38	4.07	105.41	
331+05	4.07	105.41	98.23	7.18
330+70	4.55	109.93	98.13	6.80
330+35	5.00	104.48	98.02	6.46
330+00	5.30	104.18	97.92	6.26
329+61.07 - MH "GG" △ Rt	5.69	103.79	97.80	5.99
329+20	4.69	104.79	97.68	7.11
328+85	4.21	105.27	97.57	7.70

10948



No 1 - Trunk Sewer - Grades

				Flow Line	Cuts
			.003		
North Cor Manhoe = Corcast.			108.46		
Chk BMBR		4.55	108.49		
337+70.04 MH#68 P.S		4.74	108.30	100.23	8.02 P.S use 8.07
337+45		4.60	108.44	100.15	8.29
337+10		4.32	108.72	100.05	8.67
336+75		4.14	108.90	99.94	8.96
336+40		4.07	108.97	99.84	9.13
336+05		3.97	109.07	99.73	9.34
T.P	3.71 113.04	3.05	109.33		
335+70		3.05	109.33	99.63	9.70
335+36.99 MH#66		2.86 ~~2.76~~	109.52 ~~109.62~~	99.53	9.99 10.09
335+36.99=MH#66		2.79	109.59	99.53	10.06
335+25		2.88	109.50	99.49	10.01
334+90		3.57	108.81	99.39	9.42
334+55		4.03	108.35	99.28	9.07
334+20		4.31	108.07	99.18	8.89
	112.38				



No 1 Trunk Sewer Grades

			El. Flow Line	Cuts.
305+84	313	95.19	86.80	8.39 ✓
305+49	214	96.18	86.72	9.46 ✓
T.P. 090 98.32	12.78	97.42		
305+14	12.77	97.43	86.64	10.79 ✓
304+79	11.46	98.74	86.55	12.19 ✓
304+44	10.21	99.99	86.47	13.52 ✓
304+09	9.15	101.05	86.38	14.67 ✓
303+74	7.94	102.26	86.30	15.96 ✓
303+39	6.83	103.37	86.22	17.15 ✓
303+04	5.70	104.50	86.13	18.37 ✓
302+69	4.46	105.74	86.05	19.69 ✓
302+34	3.34	106.86	85.96	20.90 ✓
301+99	2.60	107.60	85.88	21.72 ✓

Void - Line Change For See P-

Δ Lt 90°00'

301+76.49 - MH #59 P-10

Cont P-10

2.76 110.20 107.44 B.M. on Cut Mark 301+76.44 P-10

No 1 - Trunk Sewer - Grades

Cont P-2

			Elev. Flow Line	Cuts
chk				
306+62.45 P-2	5.62	92.70		
306+59.45 MH#60	5.79	92.53	86.99	5.54
306+19	4.27	94.05	86.89	7.16
	98.32			

Void

For line change see P-33-35

Walker
Johnson
Pope
Kelly
2-3-49

Check Levels No Trunk Sewer

298+55			7.93	101.90	ol
298+20			8.54	101.29	ol
297+85			9.12 ~~9.02~~	100.71 ~~100.81~~	100.71-.29 OK recheck
297+50			9.58	100.25	ol
T.P.	10.27	107.83	0.65	99.56	
297+15			0.77	99.44	ol
296+80			1.91	98.30	ol
296+45			3.00	97.21	ol
296+10			4.14	96.07	ol
295+75			5.24	94.97	ol
295+40			6.31	93.90	ol
295+05			7.50	92.71	ol
294+70			8.51	91.70	ol
294+35			9.61	90.60	OK
293+93.63			10.36	89.85	ol
T.P.	6.97	100.21	10.40	93.24	
	1.46	103.64		102.18	

Check Levels
No 1 Trunk Sewer

Cont. P. 20

304 +44			7.99	99.97 .02
304+09			6.92	101.04 .01
303+74			5.71	102.25 .01
303+39			4.61	103.35 .02
303+04			3.48	104.48 .02
302+69			2.23	105.73 .01
TP	1.84	107.96	3.71	106.12
302+34			2.98	106.85 .01
301+99			2.25	107.58 .02
301+76.44=MH			2.40	107.43 .01
301+35			2.63	107.20 .01
301+00			3.22	106.61 .02
300+65			3.84	105.99 .01
300+30			4.55	105.28 .02
299+95			5.21	104.62 .02
299+60			5.79	104.04 .02
299+25			6.54	103.29 .02
298+90			7.25	102.58 .01
		109.83		

Check Levels
No 1 Trunk Sewer

309+80		5.21	95.83	.03
309+45		6.36	94.68	.02
309+10		7.08	93.96	.02
308+75		7.29	93.75	.02
308+40		7.48	93.56	.02
TP	9.68 10104	6.47	9336	
308+05		5.83	94.00	v
307+70		5.76	94.07	.01
307+35		5.85	93.98	.02
307+00		6.16	93.67	.01
306+62.45		7.13	92.70	v
306+59.45 MH		7.31	92.52	.01
306+19		5.78	94.05	v
	4.63 9983	12.76	9520	
305+84		12.76	9520	.01
305+49		11.76	96.20	.02
305+14		10.54	97.42	.01
304+79		9.24	98.72	.02
	107.96			

Check Levels
No 1 Trunk Sewer

T.P.	11.98	115.62	1.94	103.64	
314+35			1.94	103.64	
314+00			3.99	101.59	
313+83.14			5.31	100.27	01
313+40.81	MH 63		6.09	99.49	02
313+40.81			6.31	99.27	02
313+00			7.98	97.60	03
312+65			9.27	96.31	02
T.P.	9.80	105.58	5.28	95.78	
312+30			5.58	95.48	03
311+95			6.19	94.87	02
311+60			6.52	94.54	03
311+25			6.89	94.17	02
Chk. B.M. Mtg. & Hors.	5.88	Corrected 101.06	5.88	95.18 95.16	
310+95.50	MH 62		7.12	93.92	03
310+54.75			6.35	94.69	04
310+14.01	MH 61		5.36	95.68	01
310+14.01			5.30	95.74	03
		101.04			

Ht. of Back Tree

Check Levels
No 1 Trunk Sewer

Cont. P-23				Low
320+25		4.78	110.73	.04
319+90		4.83	110.68	.01
319+55		4.94	110.57	.01
T.P.	5.08	5.19	110.43	
319+20		5.11	110.51	.01
318+85		5.19	110.43	.11
318+50		5.30	110.32	.11
318+11.87 MH.		5.35	110.27	.01
317+85		5.25	110.37	.01
317+50		6.45	109.17	
317+15		6.68	108.94	.01
316+80		7.22	108.40	.01
316+45		8.01	107.61	
316+10		8.55	107.07	
315+75		8.94	106.68	.01
315+40		9.39	106.23	.01
315+05		10.09	105.53	
314+70		10.55	105.07	.01
	11.62			

					Level
326+05			4.00	109.07	.03
325+70			3.90	109.17	.04
325+35			3.70	109.37	.04
325+00			3.65	109.42	.03
(324+65)					
T.P.	3.64	113.07	6.08	109.43	.02
324+65			6.08	109.43	.02
324+30			6.29	109.22	.03
323+96.71=MH #65			5.80	109.71	.03
323+75			6.23	109.28	.05
323+40			5.99	109.52	.03
323+05			5.85	109.66	.04
322+70			5.65	109.86	.04
322+35			5.52	109.99	.04
322+00			5.35	110.16	.04
321+65			5.22	110.29	.04
321+30			5.06	110.45	.04
320+95			4.86	110.65	.04
320+60			4.70	110.81	.04
		115.51			

Check Levels

No 1 Trunk Sewer

Cont. P-25

337+70.0 X		9.50	108.25
	9.29	11775	10846
337+70.04			
329+61.07		9.32	103.75 .05
329+20		8.33	104.74 .05
328+85		7.85	105.22 .05
328+50		7.38	105.69 .04
328+15		6.74	106.33 .05
327+80		6.27	106.80 .04
327+45		5.72	107.35 .04
327+10		5.20	107.87 .04
326+75		4.70	108.37 .04
326+40		4.19	108.88 .03
	113.07		

levels OK Checked — Not on tracks — would be about .04 below flow line as marked on M.S.

Check Levels
Trunk Sewer No 1

				Low
343+45		11.21	114.38	.01
T.P.	1073	125.59	2.89	114.86
343+10		2.89	114.86	.01
+75		2.67	115.08	.01
+40		2.46	115.29	"
342+05		2.40	115.35	.01
+70		2.82	114.93	.01
+35		3.28	114.47	"
341+00		3.61	114.14	.01
340+63.51=N114		4.15	113.60	.02
+45		4.51	113.24	.02
340+10		5.27	112.48	.01
+75		6.02	111.73	.01
+40		6.67	111.08	.01
339+05		7.35	110.40	.01
338+70		8.03	109.72	"
338+35		8.62	109.13	"
338+00		9.45	108.30	.01
	117.75			

Check Levels
Trunk Sewer No 1

349+04		537	128.63	01
+69		591	128.09	01
348+34		648	127.52	02
348+20 42 MH #71		670	127.30	02
347+85		761	126.39	01
T.P.	890 13400	049	125.10	
+50		049	125.10	01
347+15		185	123.74	01
+80		326	122.33	02
+45		460	120.99	02
346+10		591	119.68	01
+75		722	118.37	01
+40		868	116.91	01
345+05		1012	115.47	01
+70		1045	115.14	01
344+35		1096	114.63	
344+01.20 MH		1161	113.98	
343+80		1187	113.92	
	125.59			

Check Levels
Trunk Sewer No 1

Cont. P-28

~~T.P~~	~~0.21~~	~~144.26~~	~~.02~~
353+30	0.21	144.26	.01
352+95	3.24	141.23	✓
352+60	6.27	138.20	✓
352+25	9.15	135.32	✓
351+90	12.08	132.39	✓
Ch. S.B.P. Park Ave & Cove		131.77 = Record	
T.P	12.70 144.47	2.29 131.71	
351+66.50 MH	2.96	131.04	.07
+49	3.54	130.46	.01
351+19	4.63	129.37	.01
+79	4.98	129.10	.01
+94	4.81	129.19	.01
350+09	4.74	129.26	.01
+74	4.85	129.15	.01
349+35	5.03	128.97	.01

134.00
5

Check Levels
Trunk Sewer No 1

354+20.68		3.73	150.58	
354+00		4.51	149.80	
353+65		7.03	147.29	
T.P.	100X	15431	0.56	144.27
353+30			0.56	144.27
352+95			3.61	141.22
352+60			6.63	138.20
352+25			9.51	135.32
351+90			12.44	132.39
	1306	14483		131.77

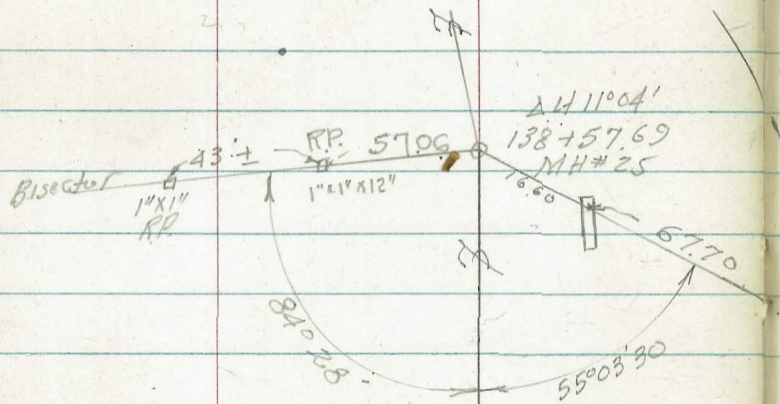
re checked OK

B.M. Point Cove

Walker
Johnson
Pope
Riley
2-8-49

TRUNK SEWER No 1

Tie out - References to ℄

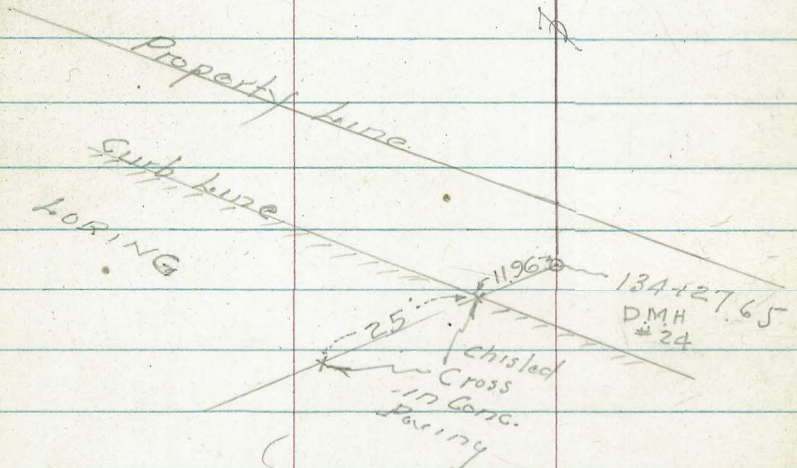


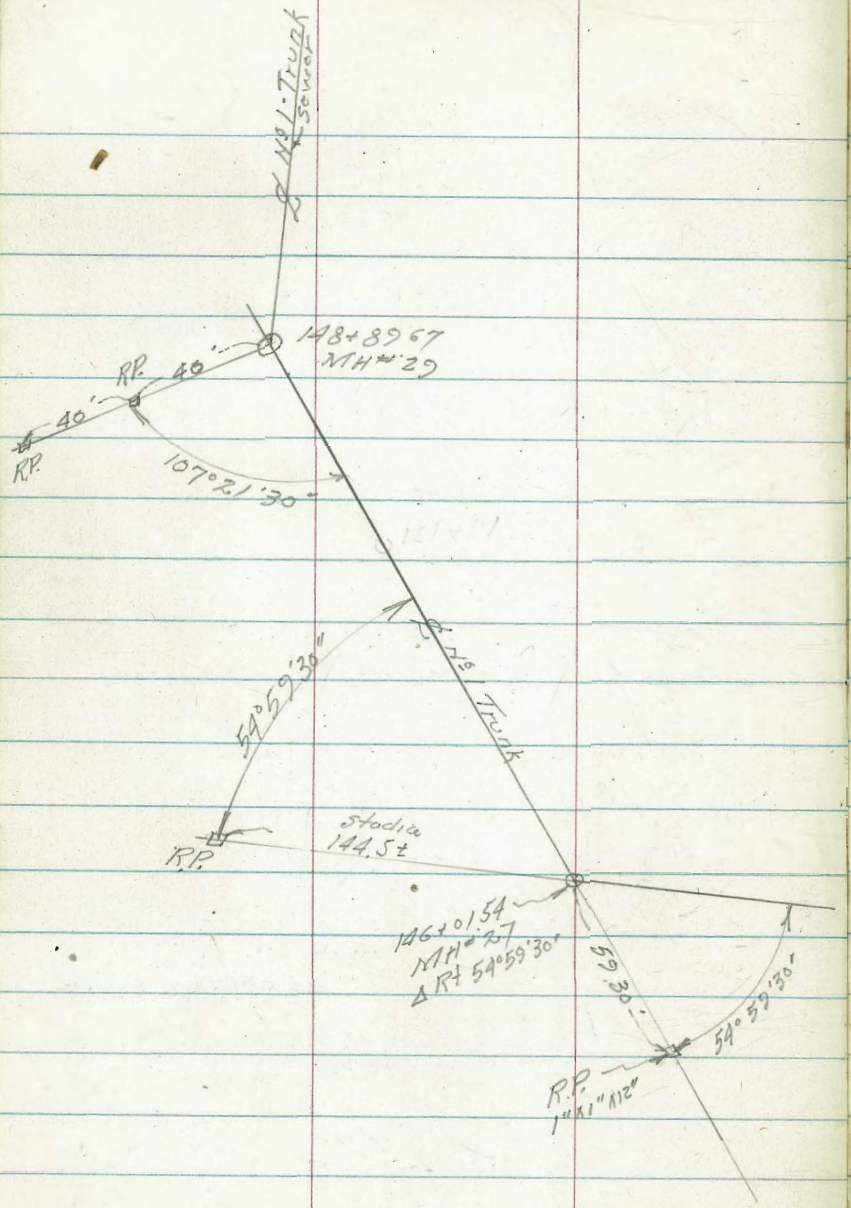
1½" Ø Pipe L.S. #220

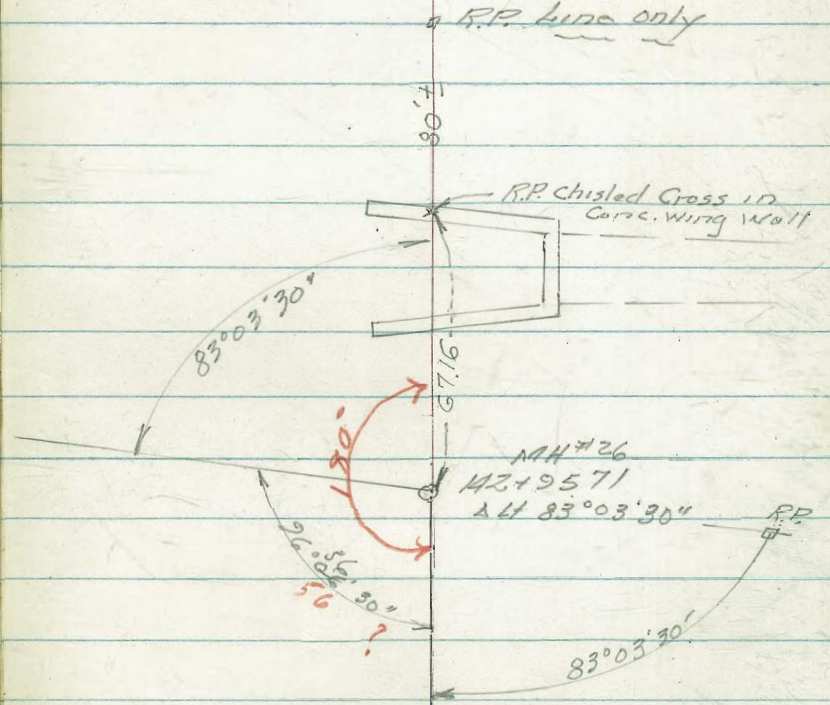
Prop line

opp 1st.

Prop. line




W&L Trunk Sewer
148+89.67
MH #29
R.P.
40'
40'
R.P.
107°21'30"
54°59'30"
W&L Trunk
Stadia
144.5±
R.P.
146+01.54
MH #27
Δ Rt 54°59'30"
54°59'30"
54°59'30"
R.P.
1"x1"x12"


R.P. Line only
80'±
R.P. Chisled Cross in Conc. Wing Wall
83°03'30"
67.16'
MH #26
142+95.71
Δ Lt 83°03'30"
R.P.
30'
27°56'30"
83°03'30"

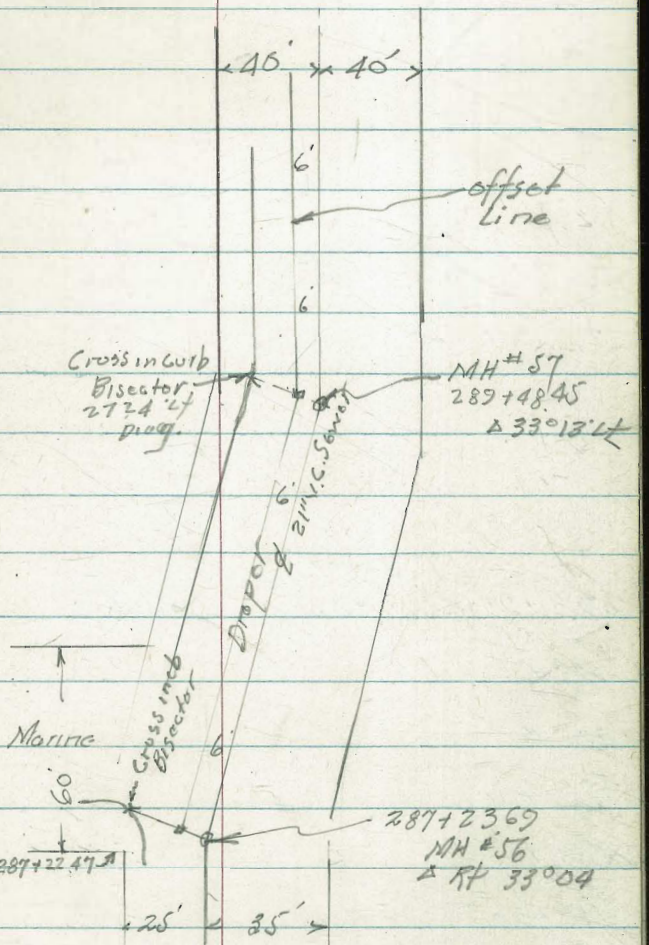
Walker
Johnson
Popo
2-14-49

No 1 Trunk Sewer - Grades

La Salle - Draper St.

Drawing 1278-1279-D

				El. Flow Line	Cuts
Cont. P-32					
T.P.	8,229	9762	10.06	95.33	
291+25			10.06	95.33	83.69	11.64
290+90			9	13	96.26	83.65	12.61
290+55			8	23	97.16	83.62	13.54
290+20			7	40	97.99	83.58	14.41
289+85			6	45	98.94	83.55	15.39
△ 33°13'4"							
289+48.45=MH #57			5	50	99.89	83.51	16.38
289+30			5	64	99.75	83.49	16.26
288+95			5	58	99.81	83.46	16.35
288+60			5	67	99.72	83.42	16.30
288+25			5	67	99.72	83.39	16.33
287+90			5	86	99.53	83.35	16.18
287+55			5	92	99.47	83.31	16.16
△ 33°04' Rt.							
287+23.69=MH #56			6	38	99.01	83.28	15.73
			6	31	99.08	B.M. #1	
T.P.		5.06	10.539	6.91	100.33		
		0.88	107.24		10640		

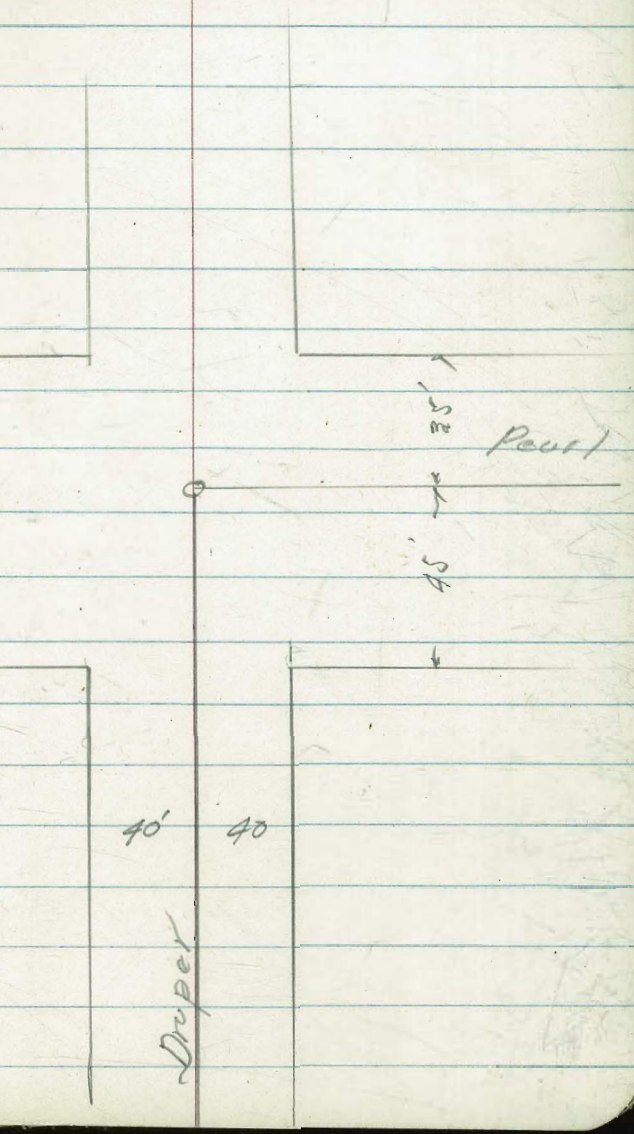


Set Temp B.M. S.W. 3' Tack x Disk Marine x Draper

B.M. S.W. B.P. Center and Draper

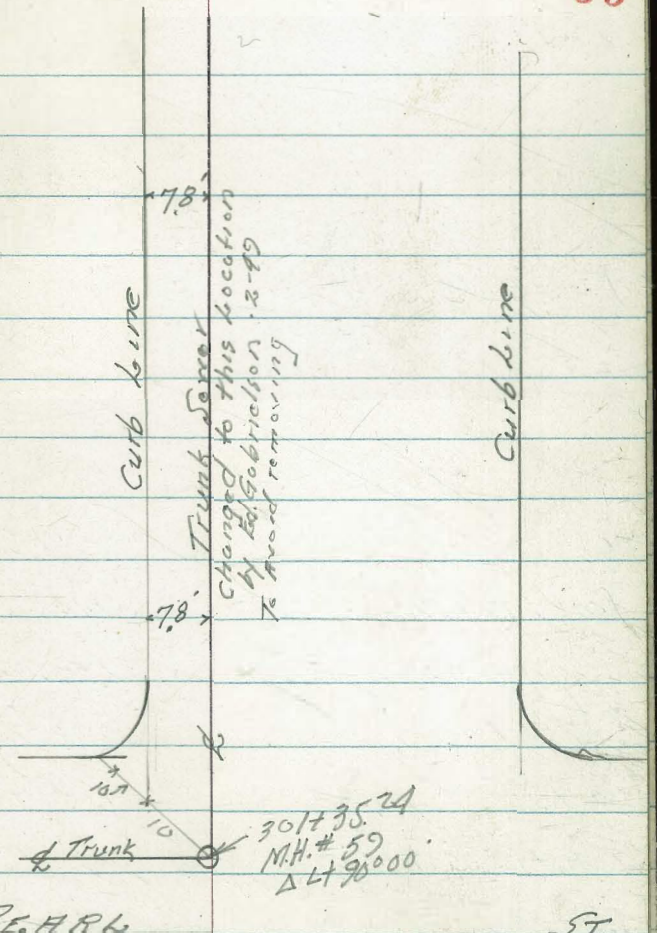
No Trunk Sewer - Grades

			El Flow Line	Cuts
Cont. P-9				
chk P-9	Δ 96°01' Rt.			
293+93.63 = MH # 58	7.78	89.84	83.95	5.89
293+70	7.52	90.10	83.93	6.17
293+35	7.28	90.34	83.90	6.44
293+00	6.55	91.07	83.86	7.21
292+65	5.73	91.89	83.83	8.06
292+30	4.84	92.78	83.79	8.99
291+95	4.02	93.60	83.76	9.84
291+60	3.18	94.44	83.72	10.72
	97.62			



Cont. P-35

305+~~33~~ 75			4.84	94.84	86.67	8.17
304+88			3.65	96.03	86.59	9.44
T.P.	3.22	99.68	12.78	96.46		
304+~~53~~ 25			11.29	97.20	86.50	10.70
304+18			11.19	98.00	86.42	11.58
303+~~83~~ 75			9.62	99.57	86.33	13.24
303+48			3.50	100.69	86.24	14.45
303+~~13~~ 65			7.38	101.81	86.16	15.65
302+78			6.24	102.95	86.07	16.88
302+~~43~~ 35			5.46	103.73	85.99	17.74
302+08			4.31	104.88	85.90	18.98
301+~~73~~ 65			2.86	106.33	85.82	20.51
301+35.24	△ 90°00' Lt.					
301+~~27~~ 24	MH #59		2.14	107.65	85.74	21.31



Cont. to P. 1-C

1.59 102.19 107.60

B.M. Cut Mark 301+99 - P. 16

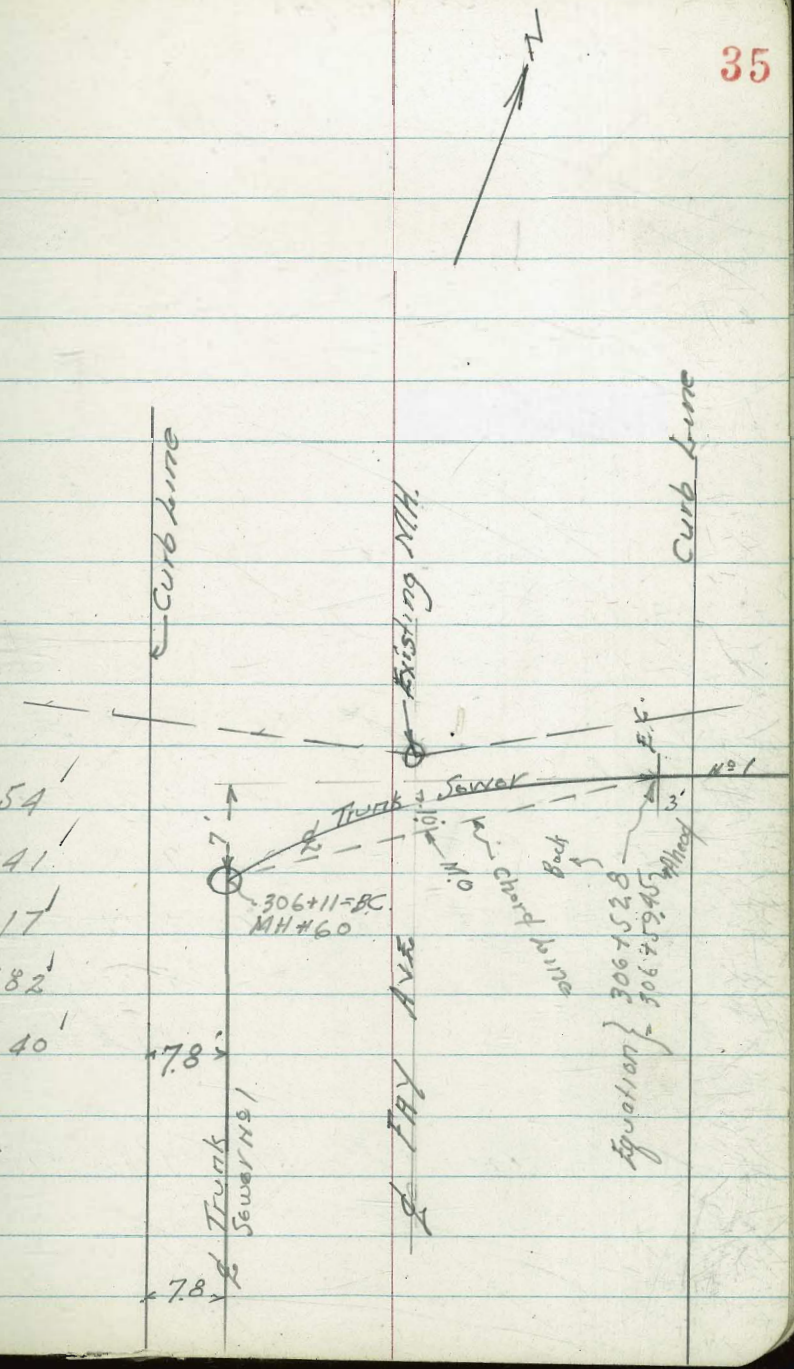
Cont. P. 35

			001 92.53		
Chk 306+59.95 P-17		7.14	92.54	86.99	
Water Main		2.50	90.18		
		6 ~~93~~	~~92~~. 75		
~~306+35~~		~~7.63~~	~~92. 05~~	~~86.74~~	~~5.11~~
~~306+10.25=MH~~	△Rt 89°57'	~~8.31~~	~~91. 37~~	~~86.88~~	~~4.49~~
~~306+10.25=MH~~		~~7.93~~	~~91. 75~~	~~86.88~~	~~4.87~~
305 + ~~85~~ 93		7.02	92. 66	86.84	5.82
305+58		6.52	93. 16	86.76	6.40
	97.68			~~86.65~~	

Void - See P. 35

Grades - For Change in Trunk Sewer.
Location on FAY AVE

Cont. P-2				
= 306+59.45 Equation 306+52.8				
306+46	3.98	92.51	86.97	5.54
306+30	4.15	92.34	86.93	5.41
306+11 = M.H. # 60	4.44	92.05	86.88	5.17
305+93		92.66	86.84	5.82
305+58		93.16	86.76	6.40
Cont from P-33				
	3.95	96.49	92.54	Cross 6'4 306+59.45 P-17



Walker
Johnson

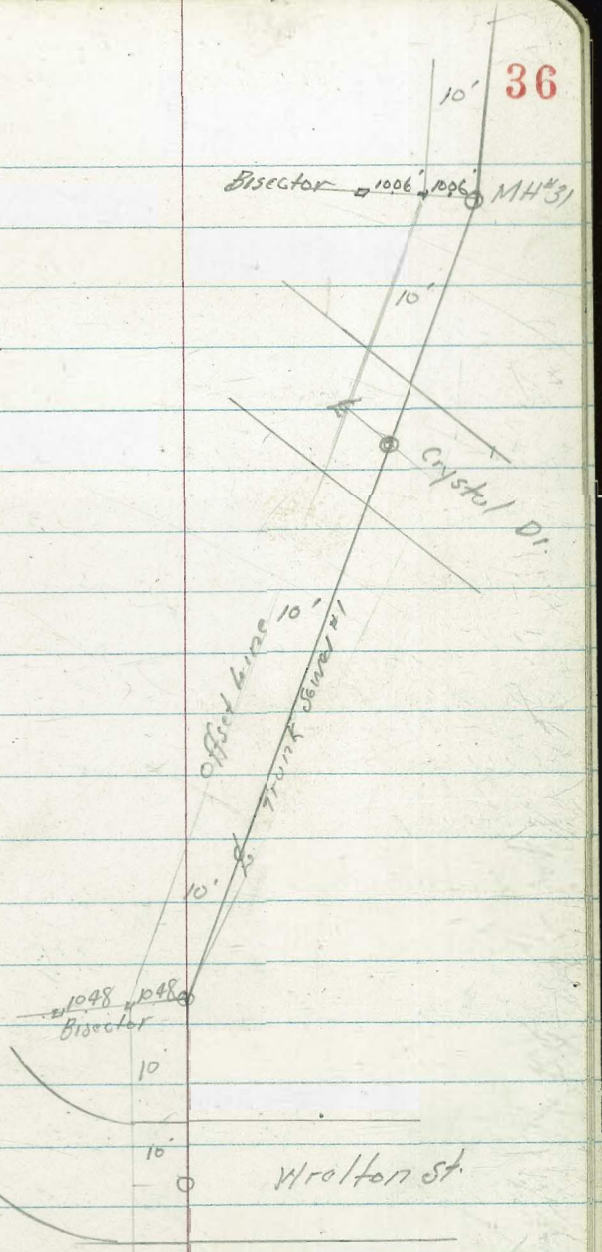
GRADES

LA JOLLA TRUNK SEWER No 1.

Cont. P-37

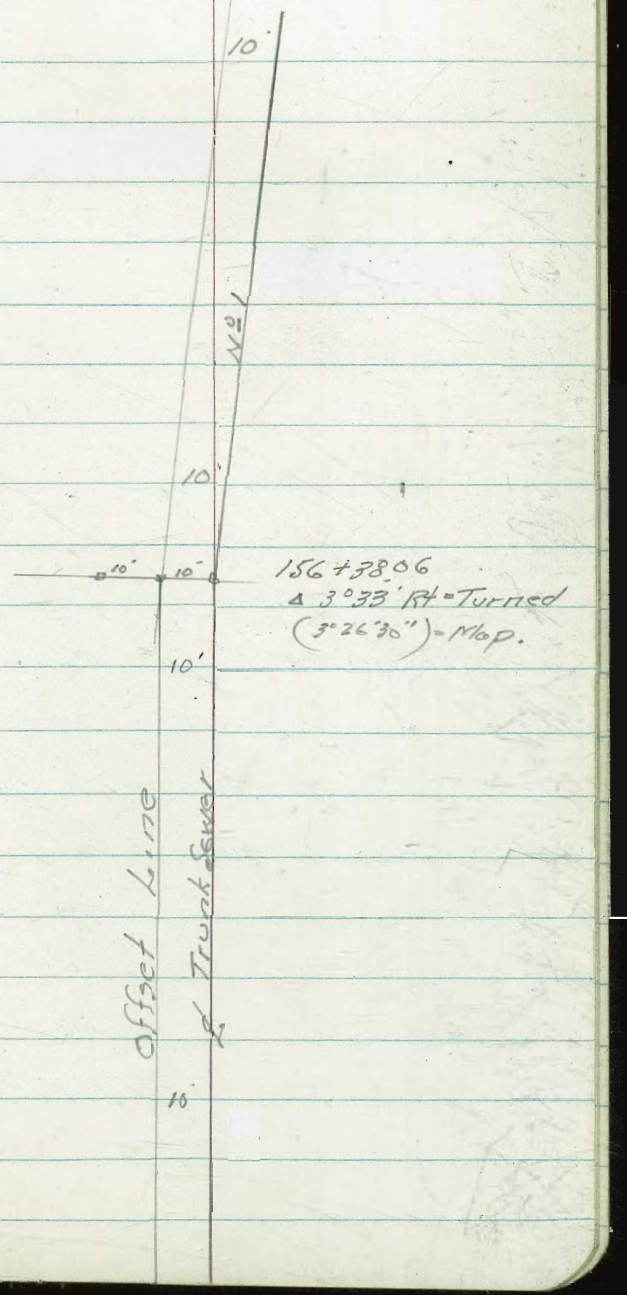
Δ Rt 12°12'				
153+35.68 = MH #31	527	70.56	52.36	18.20
153+00	562	70.21	52.27	17.94
152+65	611	69.72	52.17	17.55
152+30	630	69.53	52.09	17.44
℄ Crystal Drive = P.O.T.				
151+86.49 = ℄ MH #30	808	67.75	51.98	15.77
151+60	688	68.95	51.92	17.03
151+30	715	68.68	51.85	16.83
150+95	733	68.50	51.77	16.73
150+60	782	68.01	51.68	16.33
150+25	842	67.41	51.59	15.82
149+90	864	67.19	51.51	15.68
149+55	876	67.07	51.42	15.65
149+20	866	67.17	51.33	15.84
Δ Rt 34°43'				
148+89.67 MH #29	895	66.88	51.25	15.63
148+60	875	67.08	51.17	15.91
148+25	847	67.36	51.08	16.28
℄ Wrelton St P.O.T.				
= 147+91.90 = ℄ MH #28	871	67.12	51.00	16.12
TP	143	75.83	12.45	74.40
	0.32	86.85		86.53

#1
B.M. in Power Blk No 5178 Drawing No 12721D



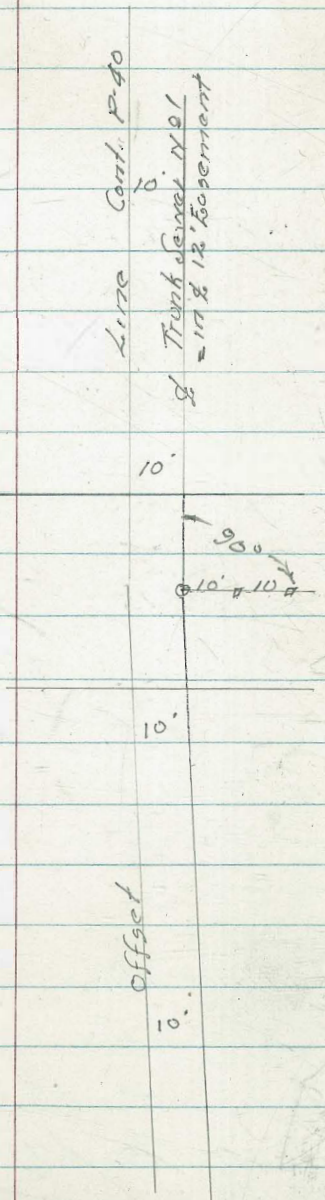
GRADES
LA JOLLA TRUNK SEWER NO 1

			Elev. Flow Line	
Cont. P. 38				
158+55	7.13	64.18	53.65	10.53
158+15	6.90	64.41	53.55	10.86
157+80	6.66	64.65	53.46	11.19
TP 623	71.31	7.63	65.08	
157+45	7.63	65.08	53.38	11.70
157+10	6.94	65.77	53.29	12.48
156+75	6.62	66.09	53.20	12.89
Δ 3°33 Rt = Turned				
156+38.06 ℄ MH #32	6.28	66.43	53.11	13.32
156+17.18	5.82	66.89	53.06	13.83
155+85.18	5.10	67.61	52.98	14.63
155+47.18	4.56	68.15	52.89	15.26
155+12.18	3.81	68.90	52.80	16.10
154+77.18	3.12	69.59	52.72	16.87
154+42.18	2.70	70.01	52.63	17.38
154+07.18	2.37	70.34	52.54	17.80
153+72.18	2.38	70.33	52.45	17.88
TP 215	72.71	5.27	70.56	
Cont. from P. 36	75.83			



GRADES
LA JOLLA TRUNK SEWER No 1

				001		
				86.53		
Check B.M. Pole P36			049	86.54		
TP	835	87.03	118	7868		
STP	875	7986	020	7111		
Check 0+80 Grd			686	64.45		
Check 0+40 Grd 244-36			527	66.04		
E Archer St — Cont. P. 40						
Δ Rt. 1949 Turned						
161+53 23 = E MH #33			963	61.68	54.40	7.28 ✓ 10' Lt.
161+21			930	62.01	54.31	7.70 ✓ 10' Lt.
160+95			908	62.23	54.24	7.99 ✓
160+60			912	62.19	54.16	8.03 ✓
160+25			904	62.27	54.07	8.20 ✓
159+90			942	61.89	53.98	7.91 ✓
159+55			913	62.18	53.90	8.28 ✓
159+20			828	63.03	53.81	9.22 ✓
158+85			801	63.30	53.72	9.58 ✓
		71.31				



Walker
Johnson
Pope
Crowford
2-23-99

La Jolla Trunk Sewer #1

Levels to Check BM's

Looking to Colima

				0.10	
				78.02 =	Drawing 1273-D
				0.14	
				77.98 =	BM Plan 7385-L
	SW BP Colima				
check	La Jolla Blvd		1.69	78.12	
T.P.	10.89	79.81	6.39	68.92	
T.P.	4.95	75.31	8.15	70.36	
T.P.	0.29	78.51	11.61	78.22	
				0.06	
				86.53 =	Drawing 1272-D
			3.24	86.59	
T.P.	5.18	89.83	0.86	84.65	
T.P.	9.87	85.51	1.07	75.64	
	4.48	76.71		72.23	BM NW BP Loring

Rechecked Johnson = ✓

Walker ✓

				0.08	
				86.53 =	Plan 1272-D
check	BM Pole #5178		3.51	86.61	
T.P.	5.46	90.12	1.55	84.66	
T.P.	9.80	86.21	0.62	76.41	
	4.80	77.03		72.23	BM NW BP Loring - Mission Blvd. Plan 1272-D

Cont. D-41			El. Flow Line	Cuts
166+80	334	65.28	55.71	9.57
166+45	426	64.36	55.62	8.74
166+10	488	63.74	55.53	8.21
165+80	475	63.87	55.46	8.41
165+40	538	63.24	55.36	7.88
165+05	592	62.70	55.27	7.43
164+70	651	62.11	55.19	6.92
164+35	687	61.75	55.10	6.65
164+00	675	61.87	55.01	6.86
163+65	681	61.81	54.93	6.88
163+30	689	61.73	54.84	6.89
162+95	625	61.67	54.75	6.92
162+60	680	61.82	54.67	7.15
162+25	691	61.71	54.58	7.13
161+90	699	61.63	54.49	7.14
	694	68.62	61.68	

BM 161+83.23 MH D-38

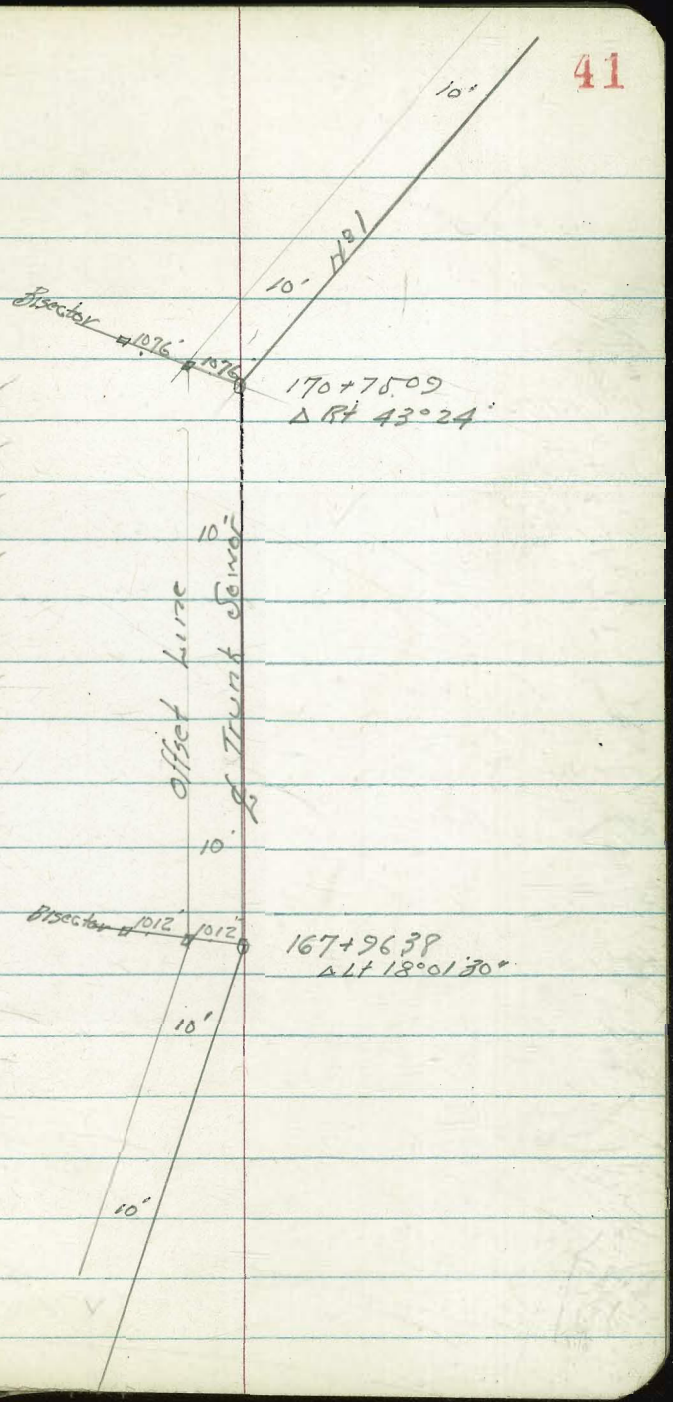
Offset Line
to Trunk Sewer No 1

La Jolla Trunk Sewer #1
Grades

Stations

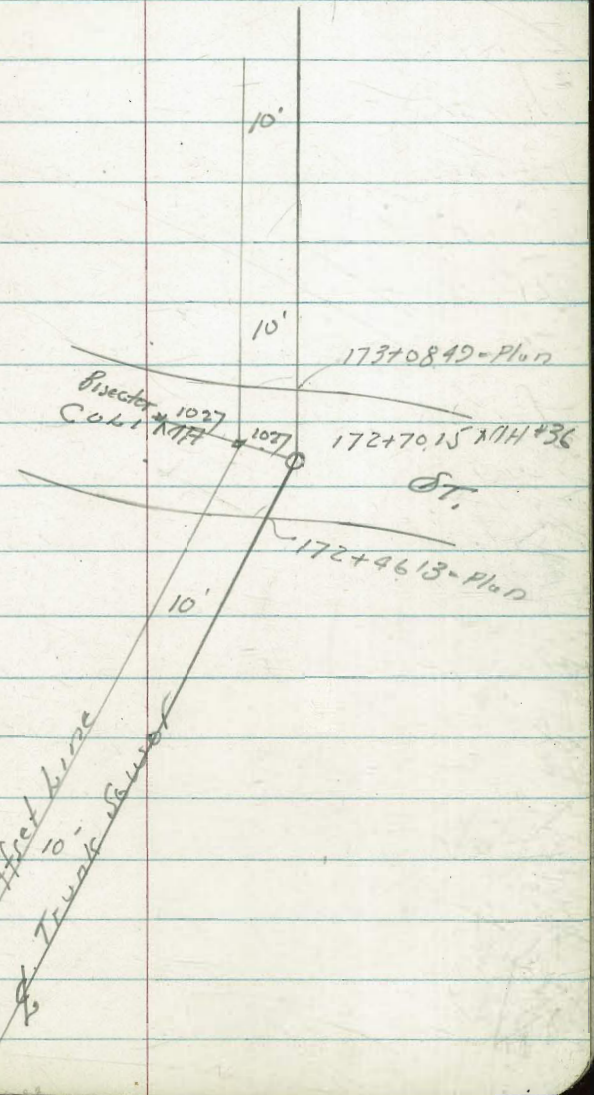
Cont. P-42

			Elev. Flow Line	Cuts
		0.05		
		78.02	Plan	
Check SW BP Colima & Lajolla Blvd	040	78.07		
Δ 43°24' Rt				
170+75.09 = MH #35	7.82	70.65	56.71	13.24 ✓
170+65	8.31	70.16	56.68	13.48 ✓
170+40	9.26	69.21	56.62	12.59 ✓
170+05	13.00	65.47	56.53	8.94 ✓
169+70	13.99	64.48	56.44	8.04 ✓
169+35	11.98	66.49	56.35	10.14 ✓
169+00	12.14	66.33	56.27	10.06 ✓
168+65	12.24	66.23	56.18	10.05 ✓
168+30	12.21	66.26	56.09	10.17 ✓
Δ 18°01'30" Lt				
167+96.38 = MH #34	11.87	66.60	56.01	10.59 ✓
+75	11.91	66.56	55.95	10.61 ✓
167+50	12.29	66.18	55.88	10.30 ✓
T.P. 12.67	78.47	2.82	65.80	
167+15	2.87	65.80	55.79	10.01 ✓
Cont. from P. 40	68.62			



Const. Grades - La Jolla Trunk Sewer

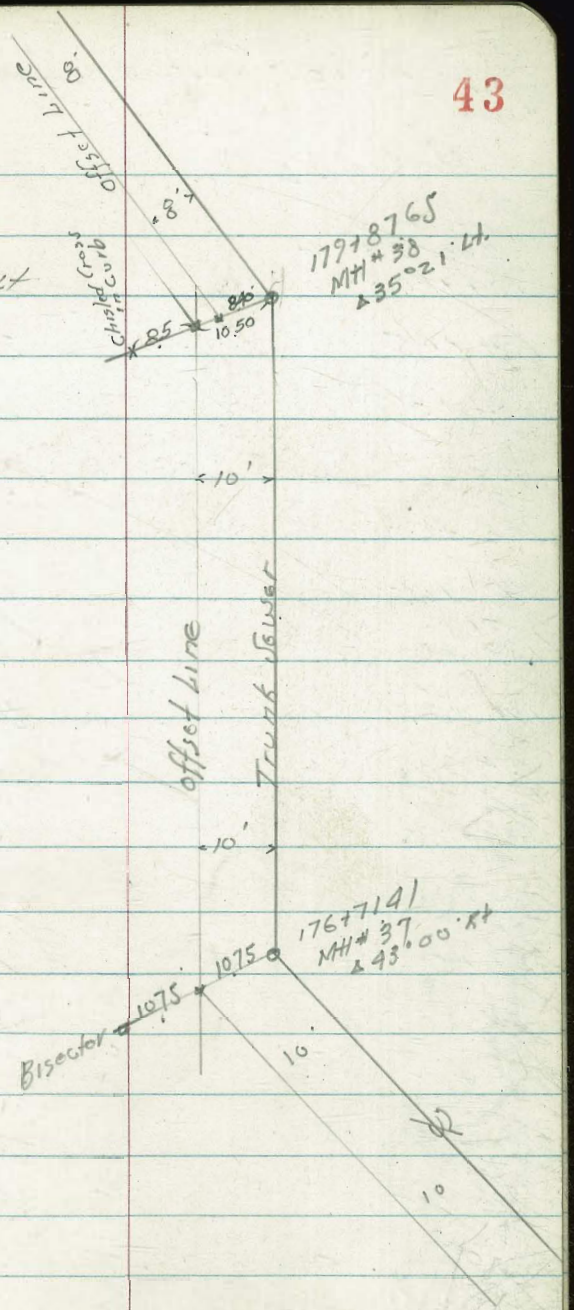
			El. Flow Line	Cuts
Cont. P. 43				
175+45	9.26	71.24	57.88'	13.36
175+10	8.09	72.41	57.80'	14.61
174+75	6.56	73.94	57.71	16.23
174+40	5.93	74.57	57.62	16.95
174+05	5.07	75.43	57.54	17.89
173+70	4.14	76.36	57.45	18.91
173+35	3.41	77.09	57.36	19.73
173+00 Δ 26°21'27"	2.77	77.73	57.28	20.45
172+70.15 = MH #36	2.67	77.83	57.20	20.63
172+50	2.63	77.87	57.15	20.72
172+15	3.15	77.35	57.06	20.29
171+80	4.20	76.30	56.97	19.33
171+45	5.66	74.84	56.89	17.95
171+10	6.70	73.80	56.80	17.00
Chk 170+75.09	9.86	~~70.64~~ 70.59		
2.43	80.50 ~~80.45~~	78.07 ~~78.02~~	Use	SW. 8D
Cont. from P. 41				



Const. Grades - La Jolla Trunk Sewer No 1

check S.W. B.P. California & Lajolla → 1.88 → 78.07
check SE. B.P. Midway & Lajolla → 71.87-00
→ 71.86
T.P. 8.09 79.70 79.95 3.20 74.87

Stations		Elev. Flow Line	Cuts	
Δ 35°21'30" Lt.				
179+87.65 } MH #38	3.14	71.92	58.99	12.93 10.50 Lt
179+87.65	3.11	71.95	58.99	12.96 8.40 Lt
179+70	3.86	71.20	58.95	12.25
179+45	3.44	71.62	58.87	12.75
179+10	4.20	70.86	58.79	12.07
178+75	5.79	69.27	58.70	10.57
178+40	7.95	67.11	58.62	8.49
178+05	9.99	65.07	58.53	6.54
177+70	11.63	63.41	58.45	4.96
177+35	10.96	64.10	58.36	5.74
177+00	10.61	64.45	58.27	6.18
Δ 43°00' Rt				
176+71.41=℄ MH #37	11.19	63.87	58.20	5.67
176+50	9.82	65.24	58.15	7.09
	75.06	67.51		
T.P. 7.55	75.07	67.46		
176+15	12.01	68.49	58.06	10.43
175+80	10.26	70.24	57.97	12.27
	80.50			
Cont. from P. 42	80.45			

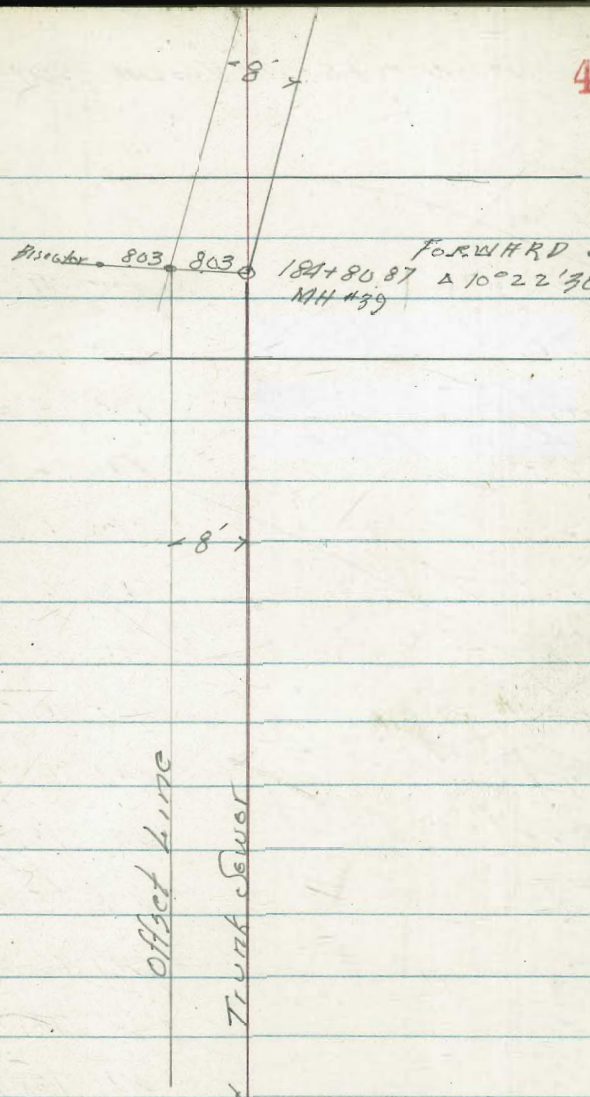


Walker
Johnson

GRADES — Const. La Jolla Trunk No 1

Stations			Elev. Flow Line	Cuts
Cont. P. 45 Δ 10°22'30" Rt				
184+80.87 = MH #39		5.94	74.85	60.22	14.63
184+65		5.99	74.80	60.17	14.63
184+35		5.40	75.39	60.09	15.30
T.P. 5.91	80.79	2.90	74.88		
184+00		2.25	75.53	60.00	15.53
183+65		1.66	76.12	59.91	16.21
183+30		1.81	75.97	59.83	16.14
182+95		1.81	75.97	59.75	16.22
182+60		3.41	74.37	59.66	14.71
182+25		3.86	73.92	59.57	14.35
181+90		3.79	73.99	59.49	14.50
181+55		2.24	75.54	59.41	16.13
181+20		2.65	75.13	59.32	15.81
180+85		3.79	73.99	59.23	14.76
180+50		4.41	73.37	59.15	14.22
180+15		5.27	72.51	59.06	13.45
	5.91	77.78	71.87		

BM SE BP Midway & La Jolla



Const. Grades - La Jolla Trunk Sewer

Stations			Elev. Flow Line	Cuts.
Cont				
190+40		4.35 77.58	61.62	15.96
190+05		4.90 77.03	61.53	15.50
189+75		4.99 76.94	61.45	15.49
189+35		5.41 76.52	61.35	15.17
189+00		5.59 76.34	61.25	15.09
188+65		5.68 76.25	61.16	15.09
T.P. 5.55	81.93	4.41 76.38		
188+30		4.25 76.54	61.08	15.46
187+95		4.47 76.32	60.99	15.33
187+55		4.70 76.09	60.89	15.20
187+25		4.95 75.84	60.82	15.02
186+90		4.77 76.02	60.74	15.28
186+55		4.65 76.14	60.65	15.49
186+20		4.61 76.18	60.56	15.62
185+85		4.87 75.92	60.48	15.44
185+50		5.11 75.68	60.39	15.29
185+15		5.12 75.67	60.30	15.37
	80.79			

Offset Line to La Jolla Trunk Sewer No. 1

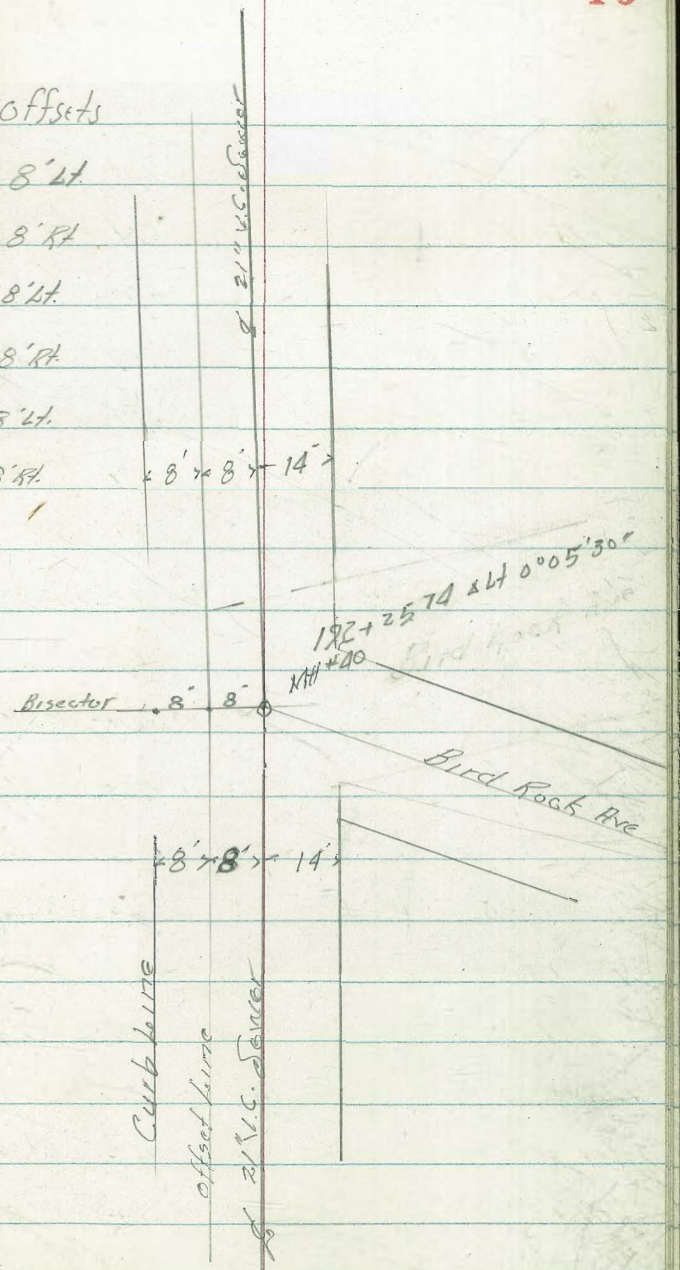
-8'

-8'

GRADES

LA JOLLA TRUNK SEWER No 1

			El Flow Line	Cuts	offsets
194+00		6.05 80.87	62.44	18.43	8' Lt.
194+00		5.31 81.61	62.44	19.17	8' Rt.
193+65		5.34 81.58	62.37	19.21	8' Lt.
193+65		4.57 82.35	62.37	19.98	8' Rt.
193+30		5.32 81.60	62.30	19.30	8' Lt.
193+30		5.11 81.81	62.30	19.51	8' Rt.
192+95		5.96 80.96	62.22	18.74	
192+60		6.43 80.49	62.15	18.34	
S.W. B.P. Bird Rock & La Jolla					
T.P. 7.80	86.92	6.32 79.12			
Δ Lt 0°05'30"					
192+25.74 = ℄ MH #40		6.20 79.24	62.08	17.16	
192+03		6.33 79.11	62.03	17.08	
191+80		6.30 79.14	61.97	17.17	
191+45		6.83 78.61	61.88	16.73	
S.W. B.P. Bird Rock & La Jolla					
T.P. 6.32	85.44	2.81 79.12			
191+10		3.63 78.30	61.79	16.51	
190+75		4.08 77.85	61.71	16.14	
	81.93				

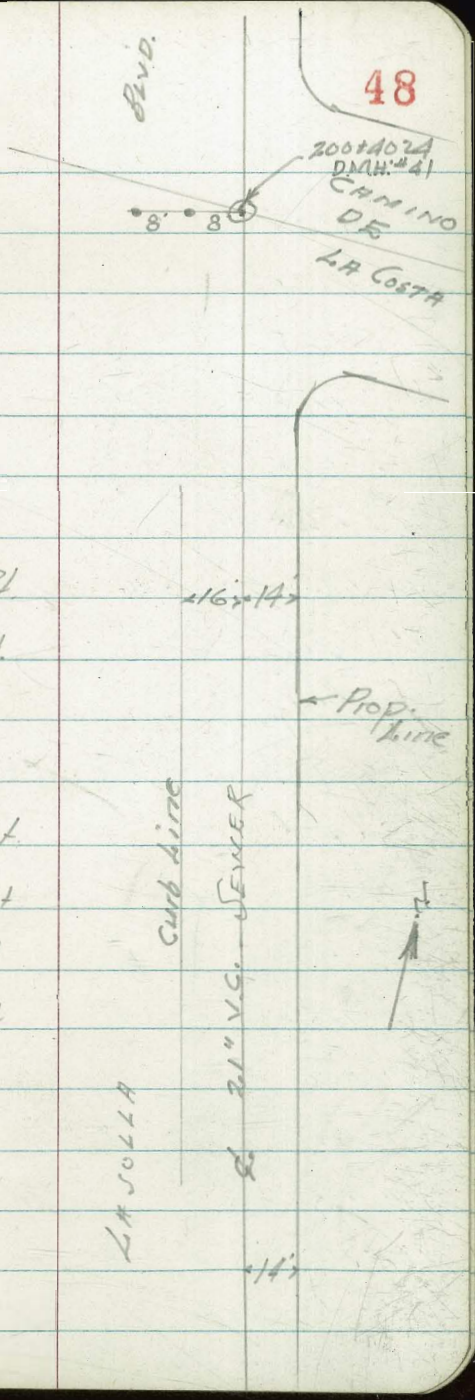


GRADES - LA JOLLA TRUNK SEWER

			75.89	El.	
Chk BM B.P. W/Co La Jolla			75.94	Flow Line	Cuts
~~T.P.~~ 125' S. Camino De La Costa		7.95			
196+80		5.51	78.38	63.03	15.35 8' Lt.
196+80		4.20	79.69	63.03	16.66 8' Rt
196+45		5.07	78.80	62.95	15.85 8' Lt.
196+45		4.07	79.82	62.95	16.87 8' Rt
T.P. 5.08	3389	8.11	78.81		
196+10		8.11	78.81	62.88	15.93 8' Lt.
196+10		7.34	79.58	62.88	16.70 8' Rt
195+75		7.83	79.09	62.81	16.28 8' Lt
195+75		6.84	80.08	62.81	17.27 8' Rt
195+40		7.32	79.54	62.73	16.81 8' Lt
195+40		6.57	80.35	62.73	17.62 8' Rt
195+05		6.46	80.46	62.66	17.80 8' Lt
195+05		5.51	81.41	62.66	18.75 8' Rt
194+70		6.72	80.20	62.59	17.61 8' Lt.
194+70		5.63	81.29	62.59	18.70 8' Rt
194+35		6.41	80.48	62.51	17.97 8' Lt
194+35		5.43	81.49	62.51	18.98 8' Rt
	8692				

GRADES - LA JOLLA TRUNK SEWER

	P.O.T.					
200+40.24 DMH #41		4.26	73.76	63.79	9.97	8'Lt.
200+20		3.99	74.03	63.75	10.28	8'Lt.
199+94		3.34	74.68	63.69	10.99	8'Lt
199+94		2.29	75.73	63.69	12.04	8'Rt
T.P. 294	7802	8.81	75.03			
199+60		8.73	75.16	63.62	11.54	8'Lt.
199+60		6.97	76.92	63.62	13.30	8'Rt.
199+25		7.14	76.75	63.55	13.20	8'Lt.
198+90		5.80	78.09	63.47	14.62	8'Lt
198+55		6.47	77.42	63.39	14.03	8'Lt
198+20		6.7	77.14	63.32	13.82	8'Lt.
198+20		5.59	78.30	63.32	14.98	8'Rt
197+85		6.10	77.79	63.25	14.54	8'Lt
197+85		4.97	78.92	63.25	15.67	8'Rt
197+50		6.14	77.75	63.17	14.58	8'Lt.
197+50		4.52	79.37	63.17	16.20	8'Rt
197+15		4.72	79.17	63.10	16.07	8'Lt
197+15		4.12	79.77	63.10	16.67	8'Rt
	8389					



GRADES - LA JOLLA TRUNK SEWER #1

			Elev. Flow Line	Cuts	
206+35	2.76	75.38	65.03	10.35	8' Lt.
206+35	1.27	76.87	65.03	11.84	8' Rt
206+00	1.87	76.27	64.26	11.31	8' Rt
205+65	3.86	74.28	64.88	9.40	8' Rt
205+30	3.95	74.19	64.81	9.38	8' Lt
204+95	3.86	74.28	64.74	9.54	
204+60	4.19	73.95	64.66	9.29	
204+25	4.52	73.62	64.59	9.03	
203+90	4.67	73.47	64.52	8.95	
203+55	5.20	72.94	64.44	8.50	8' Lt
TP 202	78.14	3.80	74.22		
203+20	4.04	73.98	64.37	9.61	8' Rt
202+85	4.55	73.47	64.30	9.17	"
202+50	5.00	73.02	64.22	8.80	"
202+15	4.98	73.04	64.15	8.89	"
201+80	4.95	73.07	64.08	8.99	"
201+45	4.56	73.47	64.00	9.47	"
201+10	2.85	75.17	63.93	11.24	"
200+75	3.21	74.81	63.86	10.95	8' Rt
	78.02				

Blvd.

16'+14'

← Prop. Line

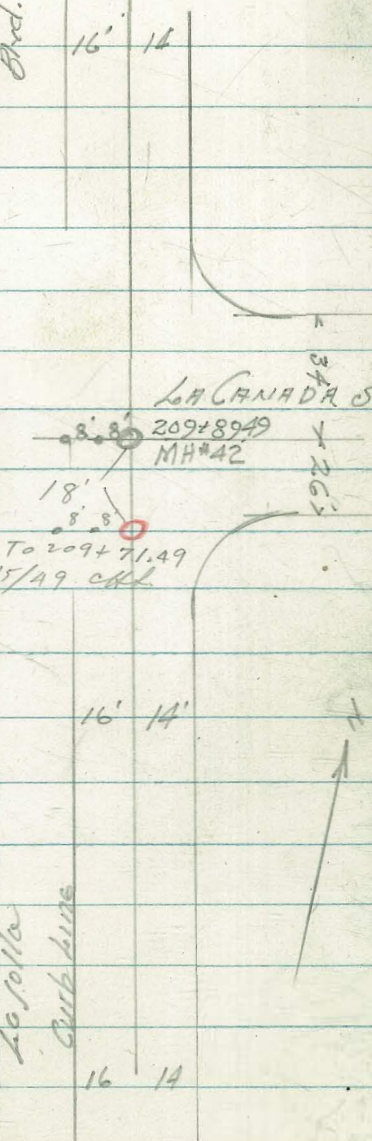
La Jolla Curb Line

21" V.C. Sewer

16'+14'

GRADES - LA JOLLA TRUNK SEWER #1

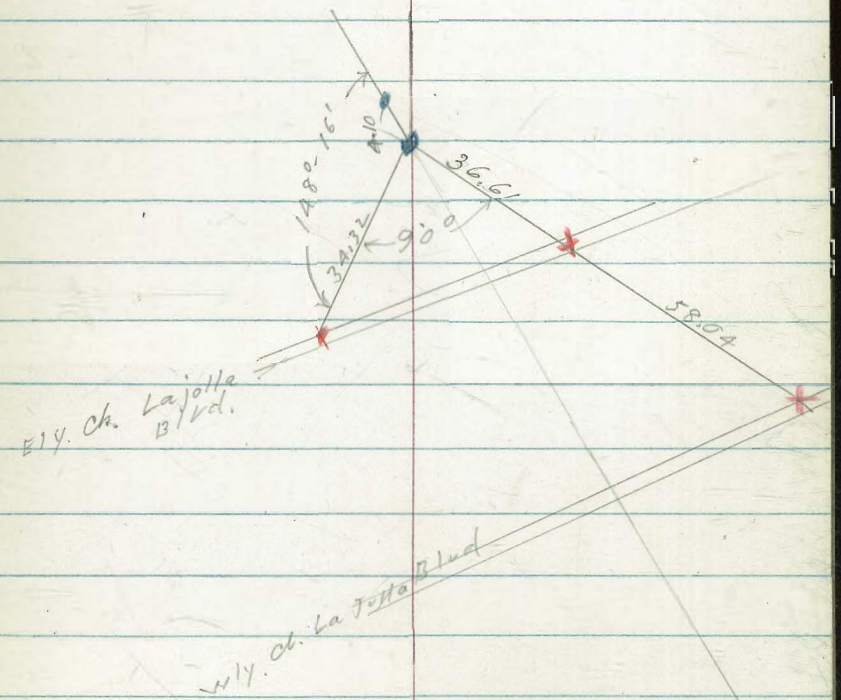
			El. Flow Line	Cuts	
(Set M.H. #42) N.E. B.P. (Below)		76.53			
		5.32			
		81.85 T			
cont. P.55					
209+71.49 = M.H. #42 (New Location)	5.45	76.40	65.75	C 10.65	
		.11			
La Jolla Blvd - La Canada	Plan = Moore =	76.42			
CHK BM N.E. BP	7.53	76.53			
209+89.49 = M.H. #42	7.54	76.52	65.79	10.73 ✓	
209+66.49	7.75	76.31	65.73	10.58 ✓	
209+43.49 = P.O.T.	7.25	76.81	65.68	11.13 ✓	
209+15	6.45	77.61	65.62	11.99 ✓	
208+80	6.83	77.23	65.54	11.69 ✓	
208+45	6.48	77.58	65.47	12.11 ✓	
208+10	6.86	77.20	65.40	11.80 ✓	8' Lt.
207+75	7.26	76.80	65.32	11.48 ✓	8' Lt.
207+40	5.29	78.07	65.25	12.82 ✓	8' Rt
207+05	6.49	77.57	65.18	12.39 ✓	8' Rt
206+70	6.79	77.27	65.10	12.17 ✓	8' Rt
TP 908	84.06	316	7498		
	78.14				



GRADES-LA JOLLA TRUNK SEWER #1

Tie out for Mon.

51



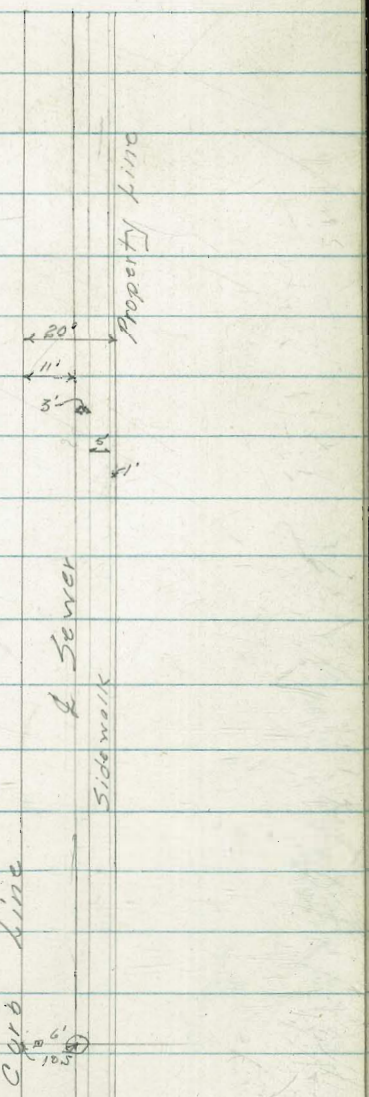
GRADES-LA JOLLA TRUNK SEWER #1

GRADES - LA JOLLA TRUNK SEWER #1

			0.01 / 78.52		
CK - NE. B.P. - Palomar & La Jolla -		5.80	78.51	Flow Line	Cuts
T.P.	3.58. 84.31	7.95	80.73		
232 + 14.00 - MH #96		5.53	83.15	68.01	15.14
232 + 05		5.35	83.33	68.00	15.33
+ 70		4.90	83.78	67.97	15.81
+ 35		4.66	84.02	67.93	16.09
231 + 00		4.74	83.94	67.90	16.04
+ 65		4.98	83.70	67.86	15.84
230 + 30		5.15	83.53	67.83	15.70
+ 95		5.29	83.39	67.79	15.60
+ 60		5.51	83.17	67.76	15.41
T.P.					
229 + 25	0.5.84 88.68	2.99	82.84	67.72	15.12
+ 90		3.37	82.46	67.69	14.77
+ 55		3.59	82.24	67.65	14.59
228 + 20		3.74	82.09	67.62	14.47
+ 85		3.97	81.86	67.58	14.28
+ 50		4.04	81.79	67.55	14.24
227 + 15		4.52	81.31	67.51	13.80
226 + 84.00 = MH #95		4.54	81.29	67.48	13.81
	6.27 85.83		79.56		

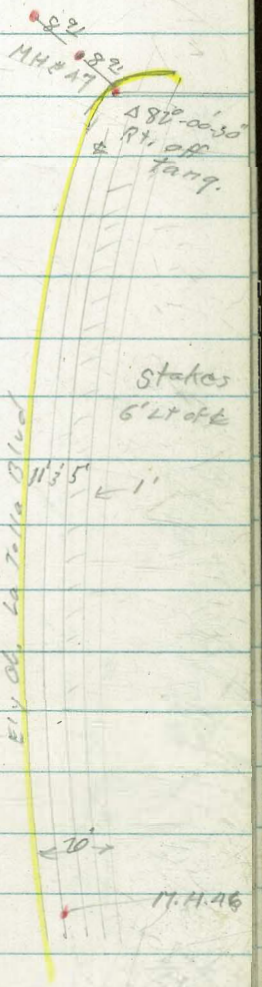
N.W. Corner Curb
B.P. Via Del Norte & La Jolla Blvd

From page 57



Grades La Jolla Trunk Sewer #1

			La Jolla & Palomar N.E.B.P. 78.52	237+50 11 M.H.#47	68.55 / 15.70 / 6.46 / C 9.24 of 8.91 R.P.
		84.25	5.90		
234+63 11 = E.C.		68.26	84.42	237+25	68.57
		15.79	3.16		15.73
		4.42	81.26		5.90
		C 11.57	6.56		C 9.83
T.P. #2	87.82		87.82		
234+25	68.22		7.61	+90	68.48
	19.60		80.21		15.77
	7.61		4.04		5.76
	C 11.99		84.25		C 10.01
+90		68.19	5.73		
		19.63	78.52	+55	68.44
		7.15	7.07		15.81
		C 12.48	85.59		5.65
					C 10.16
T.P. #1 +55	68.15			236+20	68.40
	19.67				15.85
	6.56				5.54
	C 13.11				C 10.31
233+20		68.12		+85	68.36
		19.70			15.89
		5.93			5.31
		C 13.77			C 10.58
+85	68.08			235+53 60 B.C.	68.33
	19.74				15.92
	5.40				5.18
	C 14.34				C 10.74
+50		68.05		235+30	68.31
		19.77			15.94
		4.98			5.03
		C 14.79			C 10.91
	87.82				
232+14 M.H.#46	68.01			234+95	68.29
	19.81				15.96
	4.66				4.76
	15.15				C 11.20
	C 15.14				
	0.01				
N.E.B.R. Palomar + La Jolla (P53)		78.52		84.25	



Grades La Jolla Trunk Sewer #1

1276-D

Palomar + Electric
239+82.0 MH #48 — 68.78

239.82.0
M.H. #48
Δ 78°-23'-47"

+60 — 68.76
16.83
3.10
C-13.73

239+25 — 68.72
16.87
3.88
C-12.99

+90 — 68.68
16.91
4.61
C-12.30

+55 — 68.65
16.94
5.31
C-11.63

238+20 — 68.61
16.98
6.06
C-10.92

237+85 — 68.58
17.01
6.75
C-10.26

85.59

Palomar (Conc. Pave.)

M.H. #47

Grades La Jolla Trunk Sewer #1

1275-D

Stakes 8' Lt. unless otherwise Noted.

NE B.P. La Jolla + Canada (P50)

			Nail - 8' Lt.
			215+85
			66.38 / 18.08 / 6.03 / C 12.05
212+70	66.07 / 16.56 / 4.32 / C 12.24	76.53 / 6.10 / 82.63 ⊼ / 3.65 / 78.98 / 5.48 / 84.46 ⊼ / 5.17 / 78.69 / 5.14 / 83.83 / 4.28 / 79.55 To Page 51	Cross - 8' Lt.
			215+50
			66.34 / 18.12 / 5.94 / C 12.18
212+35	66.03 / 16.60 / 4.20 / C 12.40	3rd B.P. on La Jolla	
			215+15
			66.31 / 18.15 / 5.25 / C 12.90
212+00	66.00 / 16.63 / 4.33 / C 12.30		
			214+80
			66.27 / 18.17 / 5.71 / C 12.48
211+65	65.96 / 16.67 / 4.19 / C 12.48		
			214+45
			66.24 / 18.22 / 5.83 / C 12.39
211+30	65.93 / 16.70 / 3.97 / C 12.73		
			84.46 ⊼
			214+10
			66.21 / 18.25 / 5.93 / C 12.32
210+95	65.89 / 16.74 / 4.98 / C 11.76		
			213+75 (T.P.)
			82.63 ⊼ / 66.17 / 16.46 / 3.65 / C 12.81
210+60	65.86 / 16.77 / 4.82 / C 11.95		
			213+40
			66.14 / 16.49 / 3.86 / C 12.63
N 8' Lt. 210+25	65.82 / 16.81 / 6.18 / C 10.63		
			213+05
			66.10 / 16.53 / 4.38 / C 12.15
82.63 ⊼			
209+89.49	65.79 / 16.84 / 6.10 / C 10.74 = C 10.73		

From P.50

P.50

0.10 %

8' Lt.

Grades LaJolla Trunk Sewer #1

1275-D + 1276-0

Δ - 8' Rt.
218+50
66.65
17.18
2.87
C - 14.31

218+15
66.61
17.22
4.29
C 12.93

A 83.183
217+80
66.58
17.25
3.66
C 13.59

Nail
217+45
66.54
17.92
5.90
C 12.02

Nail
217+10
66.51
17.95
5.76
C 12.19

0.10%

Nail
216+75
66.47
17.99
5.85
C 12.14

Nail
Mira Monte 29
216+43
M.H.#43
66.44
18.02
5.90
C 12.12

Tied out
8'+16' Left.
at 90°

Nail
216+20
66.42
18.04
5.94
C 12.10

84.46

221+65
66.96
16.97
4.47
C - 12.40

221+30
66.93
16.90
4.77
C 12.13

220+95
66.89
16.94
4.35
C 12.59

220+60
66.86
16.97
4.74
C 12.23

220+25
66.82
17.01
4.61
C 12.40

219+90
66.79
17.04
4.96
C 12.08

219+55
66.75
17.08
4.38
C 12.70

219+20
66.72
17.11
4.50
C 12.61

Δ - 8' Rt.
218+85
66.68
17.15
2.94
C 14.21

Grades La Jolla Trunk Sewer #1

1276D

N.W.B.P. La Jolla + Via Del Norte

P. 53 - 79.56 - 0.09
6.18 - 79.65

224+20

67.21
18.62
4.12
C 14.50

From P. 54
83.83
4.88
79.55
6.28
85.83

8' Rt.

223+85

67.18
18.65
4.30
C 14.35

223+50

67.14
18.69
4.46
C 14.23

MH# 44
Del Norte
223+14.55
Δ 1°-04'-34" Rt.

67.11
18.72
6.04
C 12.68

223+05

67.10
18.73
6.02
C 12.71

222+70

67.07
18.76
6.29
C 12.47

85.83
67.03
18.80
5.73
C 13.07

222+35

T.P. P55

83.83
67.00
16.83
4.28
C 12.55

222+00

Cont. P. 53

57

Grades 225+60 to 226+84 changed to meet constant error of bench line see previous bench checks.

P.O.C. M.H. #45
226+84.00

67.48
18.35
4.44
C 13.91 - C 13.81 P. 53.

226+49

67.52
18.31
4.95
C 13.36

9' Lt.
226+13.14
B.C. Rt. Δ 14°-25'-29"

67.47
18.36
5.04
C 13.32

9' Lt.

225+95

67.43
18.40
5.07
C 13.33

225+60

67.37
18.46
5.12
C 13.34

225+25

67.32
18.51
4.64
C 13.87

224+90

67.28
18.55
4.06
C 14.49

18' Rt.

224+55

67.25
18.58
3.98
C 14.60

83.83

M.H. 48 to
239+82.02 to

Staked According to Plan 12760-12770
offsets 6' Lt. of ℄.

T.P.	3.12	87.04	3.60	83.92
241+90		68.99		
		18.53		
		3.75		
		C- 14.78		
241+55			68.95	
			18.57	
			3.45	
			C- 15.12	
241+20		68.92		
		18.60		
		3.32		
		C- 15.28		
240+85			68.88	
			18.64	
			3.85	
			C- 14.79	
240+50		68.85		
		18.67		
		4.41		
		C- 14.26		
240+15			68.81	
			18.71	
			5.01	
			C- 13.70	
M.H.#48		68.78		Tied out.
239+82.02		18.74		7.74 + 15.48
Palomar + Electric		4.70		on split of Δ
Δ 78°-23' Lt.		C 14.04		
N.E.B.P. Palomar				
+ La Jolla.	9.00	87.52	—	78.52

0.10 ft

T.P.	3.02	84.07	5.99	81.05
245+05			69.30	
			17.74	
			5.87	
			C- 11.87	
244+70		69.27		
		17.77		
		5.66		
		C- 12.11		
244+35			69.23	
			17.81	
			5.42	
			C- 12.39	
244+00		69.20		
		17.84		
		5.08		
		C- 12.76		
243+65			69.16	
			17.88	
			4.87	
			C- 13.01	
243+30		69.13		
		17.91		
		4.59		
		C- 13.32		
242+95			69.09	
			17.95	
			4.34	
			C- 13.61	
242+60		69.06		
		17.98		
		4.07		
		C- 13.91		
242+25			69.02	
			18.02	
			3.76	
			C- 14.26	
				87.04

Tied 6' Lt.

Tied - 7.61 + 15.22 on split
Gravilla + Electric
M.H.# 49
247+54.09
Δ 75°-57' Rt.

69.55
14.52
8.35
C - 6.17

247+50

69.54
14.53
8.27
C - 6.26

247+15

69.50
14.57
8.01
C - 6.56

246+80

69.47
14.60
7.04
C - 7.56

Grade 0.10%

246+45

69.44
14.63
6.08
C - 8.55

246+10

69.41
14.66
5.18
C - 9.48

245+75

69.37
14.70
4.31
C - 10.39

245+40

69.34
14.73
3.38
C - 11.35

84.07

Tied - 5' Rt.

249+55

69.75
14.29
5.29
C - 9.00

249+20

69.72
14.32
5.12
C - 9.20

S.E. B.P. Tyrian
+ Gravilla

Tyrian + Δ 87-38' Lt.
Gravilla

M.H.# 50
249+12.72
Tied 8' + 16° Lt.
on split

80.38?
3.66
80.38

69.71
14.33
4.93
C - 9.50

248+85

69.68
14.36
5.56
C - 8.80

Grade 0.10%

248+50

69.64
14.40
6.21
C - 8.19

84.04 ?

248+15

69.61
14.43
6.99
C - 7.44

T.P.

7.97 84.04 8.00 - 76.07

247+80

69.57
14.50
7.86
C - 6.64

84.07

5' Rt.

252+70	70.06 9.62 4.48 C- 5.14		
252+35		70.02 9.66 4.48 C- 5.18	
252+00	69.99 9.69 3.50 C- 6.19		
251+65		69.95 9.73 3.16 C- 6.57	
T.P. 2.72	79.68	7.08 = 76.96	
251+30	69.92 14.12 7.08 C- 7.04		
0.10 ft			
250+95		69.88 14.16 6.72 C- 7.44	
250+60	69.85 14.19 6.37 C- 7.82		
250+25		69.81 14.23 6.09 C- 8.14	
249+90	69.78 14.26 5.58 C- 8.68		
	84.04		

5' Rt.

T.P. 6.99	81.71	4.96	74.72
			81.71 70.33 11.38 6.99 C 4.39
255+35	70.33 9.35 4.96 C- 4.39		
255+00		70.29 9.39 5.47 C- 3.92	
0.10 ft			
254+65	70.26 9.47 5.41 C 4.01		
254+30		70.22 9.46 5.65 C- 3.81	
Typical Box Air. St.			
M.H.#51 - 5'=10' Rt.			
253+96 1c			
Δ 0°-46' Lt	70.19 9.49 5.03 C- 4.46		
253+75		70.16 9.52 5.16 C- 4.36	
0.10 ft			
253+40	70.13 9.55 4.16 C- 5.39		
253+05		70.09 9.59 3.95 C- 5.64	
	79.68		

5' Rt

□
258+15
82.57
70.61
11.96
4.94
C- 7.02

70.61
11.10
4.08
C- 7.02

□
257+80
82.57*
70.57
12.00
4.94
C- 7.06

70.57
11.14
4.08
C- 7.06

□
257+45
82.57
70.54
12.03
5.34
C- 6.69

70.54
11.17
4.48
C- 6.69

257+10
82.57*
70.50
12.07
5.62
C- 6.45

70.50
11.21
4.76
C- 6.45

256+75
El. Stake
70.47
6.22
76.69
5.88
82.57*

70.47
11.24
5.02
C- 6.22

256+40
70.43
11.28
5.85
C- 5.73

256+05
70.40
11.31
6.21
C- 5.10

255+70
70.36
11.35
6.58
C- 4.77

81.71

260+95
70.88
12.70
4.45
C- 8.25

260+60
70.85
12.73
4.60
C- 8.13

260+25
70.81
12.77
4.80
C- 7.97

0.10 Ft

259+90
70.78
12.80
4.91
C- 7.89

259+55
70.74
12.84
5.09
C- 7.75

259+20
70.71
12.87
5.18
C- 7.69

T.P.
5'+10' Rt
La Jolla + Nautilus
M.H. #52
258+86.50
Δ 0°-48' Rt.

5.86 83.58 3.79 = 77.72

81.71*
70.68
11.03
3.99
C- 7.04

82.57
70.68
11.89
4.85
C- 7.04

258+50
70.64
11.07
3.89
C- 7.18

82.57*
70.64
11.93
4.75
C- 7.18

5' Rt.

T.P. 13.10 | 91.39 | 5.29 | 78.29

1.4% Grade

263+20 — 71.53 / 12.05 / 4.31 / C-7.74

Tie out 7° + 14½ on Sp 117
M.H. # 53
262+88.5°
Δ 89°-55' Rt.
La Jolla + Westbourne

71.09 / 12.49 / 5.35 / C-7.14

262+70 — 71.06 / 12.52 / 5.06 / C-7.46

0.10% Grade

262+35 — 71.03 / 12.55 / 4.55 / C-8.00

262+00 — 70.99 / 12.59 / 4.44 / C-8.15

261+65 — 70.96 / 12.62 / 4.35 / C-8.27

261+30 — 70.92 / 12.66 / 4.32 / C-8.34

83.58

(From 264+60 on) Tied 6' Rt.

266+35 — 75.94 / 19.31 / 5.41 / C-13.90

X-5' Rt of 264+25
73.00
9.86
82.86 EL.
12.39
95.25 T

266 — 75.45 / 19.80 / 6.57 / C-13.23

265+65 — 74.96 / 20.29 / 7.83 / C-12.46

265+30 — 74.47 / 20.78 / 8.98 / C-11.80

264+95 — 73.98 / 21.27 / 10.16 / C-11.11

95.25 T
264+60 — 73.49 / 21.76 / 11.39 / C-10.37

91.39 T
264+25 — 73.00 / 18.39 / 8.53 / C-9.86

91.39
T.P. 0.67
90.70
12.75
103.45
0.29
103.16
S.W.B.P.
Westbourne + Draper
(10316)

263+90 — 72.51 / 18.88 / 9.76 / C-9.12

263+55 — 72.02 / 19.37 / 10.95 / C-8.42

91.39

Westbourne

269+50

80.35
27.08
6.87
C 20.21

269+15

79.86
27.57
8.03
C 19.54

268+80

79.37
28.06
9.17
C 18.89

268+45

78.88
28.55
10.38
C 18.17

268+10

T.P.

107.43 ℄
78.39
29.04
11.60
C 17.44

1.4%

267+75

95.25 ℄
77.90
17.35
0.58
C 16.77

267+40

77.41
17.84
1.77
C 16.07

267+05

76.92
18.33
2.98
C 15.35

266+70

76.43
18.82
4.21
14.61

95.25

Draper

272+15

81.78
25.65
5.63
C 20.02

271+80

81.74
25.69
5.37
C 20.32

271+45

81.71
25.72
5.10
C 20.62

271+10

81.67
25.76
4.83
C 20.93

0.10%

270+75

81.64
25.79
4.16
C 21.63

847+16.94 on split
M.H. # 54
270+39.40

81.60
25.83
4.09
C 21.74

270+20

81.33
26.10
4.57
C 21.53

1.4%

269+85

80.84
26.59
5.62
C 20.97

95.25 ℄
0.39
94.86
12.57
107.43 ℄
4.28
103.15
S.W.B.A.
Westbourne
& Draper
107.43 ℄

Draper

Change offset.

275+30

82.09
23.97
4.11
C 19.86

274+95

82.06
24.00
5.06
C-18.94

274+60

82.02
24.04
5.98
C-18.06

274+25

81.99
24.07
6.17
C-17.90

273+90

0.10%

81.95
24.11
5.93
C-18.18

273+55

81.92
24.14
5.46
C-18.68

273+20

T.P.

107.43 ℄
81.85
25.58
6.15
C-19.43

272+85

106.06 ℄
81.88
24.18
5.17
C 19.01

106.06
81.85
24.21
4.78
C 19.43
for check
OK

272+50

81.81
25.62
5.69
C-19.93

107.43

M.H.# 55

278+47.02

82.41
30.87
3.64
C-27.23

278+10

82.37
30.91
4.11
C-26.80

277+75

82.33
30.95
4.90
C-26.05

277+40

82.30
30.98
5.64
C 25.34

277+05

0.10%

82.26
31.02
6.50
C 24.52

276+70

82.23
31.05
7.27
C 23.78

276+35

113.05
82.19
31.09
7.93
C-23.16

276+00

82.16
23.90
2.00
C-21.90

275+65

82.12
23.94
3.08
C 20.86

106.06

↓ 7.40 Rt. of ℄

107.43 ℄
6.10
101.33
4.73
106.06 ℄
1.64
104.42
S.W. pin + Lead. Rushville + Draper

+106.06
2.91
103.15
S.W. B.P. Waterloo + Draper.

S.W. L+Pin Rushville
104.42
8.86
113.28 ℄

T.P.
106.06 ℄
82.19
23.87
0.71
C 23.16

Draper St. — 6' Rt. of ℄

281+60
82.72
31.51
7.19
C-24.32

281+25
82.69
31.54
6.92
C-24.62

280+90
82.65
31.58
6.47
25.11

280+55
82.62
31.61
5.93
C-25.68

280+20
82.58
31.65
5.51
C-26.14

0.10 %

279+85
82.55
31.68
5.36
26.32

279+50
82.51
31.72
5.09
C-26.63

279+15
82.48
30.80
3.87
C-26.93

278+80
82.44
30.84
3.71
C-27.13

113.28

113.28
387
109.41
4.82
114.23
7.84
106.39
SW.B.P. Center + Draper = 106.40 (P.31)
1.50
108.90 ↗

114.23 ↗
82.51
31.72
5.09
C-26.63
- T.P.

T.P.

284+75
83.04
25.86
7.40
C-18.46

284+40
83.00
25.90
6.93
C-18.97

284+05
82.97
25.93
6.39
C-19.54

283+70
82.93
25.97
5.71
C-20.26

283+35
82.90
26.00
5.12
C-20.88

283 ~

0.10 %

G'Rt. start stub
108.90
282+65
82.83
26.07
3.37
C-22.70

282+30
114.23 ↗
82.79
31.44
8.10
C-23.34

82.79 For Check
26.11
2.76
C-23.35 ✓

282+95
82.76
31.47
7.57
C-23.90

108.90 ↗
7.40
101.50
3.48
104.98 ↗

83.00
25.90
6.93
C-18.97

82.93
25.97
5.71
C-20.26

82.86
26.04
4.31
C-21.73

Draper St.

B.M.#1 P.31 5.85 99.13 (99.08)

↓ stub set 6'N. at 90°

D.M.H. #56

287+23.69

℄ Nail set 6.25 off orig. 6' tie
(see page 31)

83.28
21.70
5.64
C-16.06

287+20 83.28
21.70
Not in

286+85 83.25
21.73
5.37
C-16.36

286+50 83.22
21.76
5.01
C-16.75

0.10 o/o

286+15 83.19
21.79
4.74
C-17.05

285+80 83.15
21.83
4.50
C-17.33

285+45 83.11
21.87
4.14
C-17.73

285+10 83.08
21.90
3.83
C-18.07

104.98

144+99.7 to 148+89.67
Special Joint M.H. 29

146+70

69.30 ℄
50.68
18.62
11.90
C- 6.72

0.25 ℄

146+35

50.60
18.70
7.97
C- 10.73

Sec. = 11.27
Tang. = 5.20
M.H. 27
146+01.54
Δ 54°-59'-30" Rt

50.52
18.78
4.69
C- 14.09

145+70

50.43
18.87
0.18
C 18.69

0.25 ℄

145+35

69.30 ℄
50.35
18.95
0.32
C- 18.63

Special Joint
144+99.7

63.62 ℄ x
50.27
12.35
12.35
Grade

63.62
50.27
13.35
12.35
C 1.00

B.M. # 1
P. 36
86.53
2.42
88.95
12.14
76.81
0.88
77.69
11.83
65.86
25
66.11
9.93
56.18
7.44
63.62
0.45
63.17
6.13
69.30
0.82
68.48
5.11
73.59

148+40

51.12

148+25

0.25 ℄

148+05

see page (P. 36) = C- 16.28
51.04

51.08
22.51
0.20
16.31
0.32

M.H. # 28
147+90.5
147+91.90
E Wrelton
(P. 36)

51.00
22.59
6.13
C- 16.46

147+75

50.94
22.65
6.11
C- 16.54

0.25 ℄

147+40

50.85
22.74
3.51
C 19.23

147+05

50.77
22.82
4.32
C 18.50

73.59

3.6 per grade stakes

M.H. 24 Special Joint (1272-D)

134+27.65 to 144+99?

N.W.B.P. Loring + Mission

136+00	48.03		72.23	138+10	48.56
	26.91		2.71		20.63
	11.43		74.94		4.81
	C-15.48		9.42		C-15.82
			65.52		
			3.67		
			69.19		
135+65		47.94		137+75	69.19
		27.00			
		10.10			
		C-16.90			
135+30	47.85			137+40 T.P.	48.38
	27.09				26.56
	10.18				9.42
	C-16.91				C-17.14
0.25				0.25	
134+95		47.76		137+05	
		27.18			
		10.23			
		C-16.75			
134+60	47.67			136+70	48.20
	27.27				26.74
	8.99				9.61
	C-18.28				C-17.13
134+27.65 Exist. D.M.H. #24		47.59	74.94	136+35	
		27.35	47.59		
		4.55	27.35		
		C-22.80	4.85		
			22.50		
			22.35		
	74.94		C 0.15		74.94

22.35

(1272-D)

69

139+85

48.99
20.20
5.43
C-14.77

139+50

48.90
20.29
4.90
C-15.39

139+15 0.25 ft

48.81
20.38
4.45
C-15.93

138+80

48.72
20.47
4.58
C-15.89

Tang. = 0.58
Sec. = 6.03
M.H. 25
138+57.62
Δ 11°-04'-Lt.

48.66
20.53
4.92
C-15.61

138+45

48.64
20.55
5.38
C-15.17

69.19

141+95

49.52
22.35
2.04
C 20.31

141+60

49.43
22.44
2.26
C-20.18

7187

T.P.
141+25

49.34
19.85
1.14
C-18.71

0.25 ft.
140+90

49.25
19.94
3.00
C-16.94

140+55

49.16
20.03
4.76
C-15.27

140+20

49.08
20.11
6.63
C-13.48

69.19

69.19 ✗
114
68.05
3.82
71.87

(1272-D)

61.39
50.27
11.12
11.09
C 0.03 — ok.

Check invert
144+94 (P67)

Special Joint
143+31 ℄

49.85
11.54
10.75
C-0.79

71.87 x
10.61
61.26
0.13
61.39

143+00

0.25-30

49.77
11.62
3.60
C-8.02

6139

T.P.

T 49.5.31
Sec. 8.02
142+95.71 M.H. 26
Δ 83°-03'-30" Lt.

49.76
22.11
10.61
C-11.50

142+65

49.69
22.18
3.24
C-18.94

142+30

49.60
22.27
2.60
C-19.67

71.87

X 61.39
2.68
58.71 = 67 15' Tie M.H. # 26 = Cross in culvert wing wall. (P.30)

Stations & grades to West face of piers

Pier #1
143+56 E

to

Pier #8
144+82 E

6' Lt.

INVERT. Pipe
10' Rt.

			EL. Base of Pier
144+10 E = #4	50.04	50.04 1.51 7.73 F 6.22	39.4 12.15 7.73 C-4.42
143+92 E = #3	50.00	50.00 1.55 6.06 F 4.51	42.0 9.55 6.06 C-3.49
143+74 E = #2	49.95	49.95 1.60 4.92 F 3.32	44.5 7.05 4.92 C-2.13
Pier #1 143+56 E	49.91	49.91 1.64 3.72 F 2.08	46.0 5.55 3.72 C-1.83

51.55 ✓

(D. 70)
Wing Wall
Cross 17

58.71
0.44
59.15
8.51
50.64
0.91
51.55 ✓

check
144+99 E = 59.15
50.27
8.88
8.84
C .04

143+31 E
check,
59.15
47.85
9.30
8.51
C 0.79 ✓

Piers

to 144+82.5

Stations & grades
to West face of piers

	Joint 0.03 High 6' Lt. } Met.	INVERT Pipe 10' Rt.	Pier Base 10' Rt.
144+99.2 Special Laid			
144+82.5 = #8	50.22	~~50.27~~ 50.25 1.30 4.27 F 2.97	39.4 12.15 4.27 C- 7.88
144+64.5 = #7	50.18	~~50.18~~ 50.20 1.35 7.32 F 5.97	39.4 12.15 7.32 C- 4.83
144+46.5 = #6	50.13	~~50.13~~ 50.14 1.41 6.91 F 5.50	37.0 14.55 6.91 C- 7.64
144+28.5 = #5	50.09	50.09 1.46 8.49 F 7.03	39.40 12.15 8.49 C- 3.66
	F 1.55		

75-51
37 55-30
127

59.30
33.12
26,18

232+14

982.02
237+50.11
231.91

982.02
37+50 11
23191

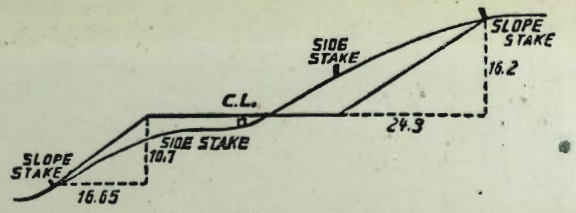
1,2678
G
7.6068

25.91
54.09
0000

289+48.145
72369
224 76

14.80
78 47

40
3.
120



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

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

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T. S. #1 — LORING ST TO LaJ. Shores

	21"	21"	24"
ΔMH #24	-25	430.04	
	25 - 26	438.02	
	26 - 27	35.99	168 c.i
	-27	101.84	
	27 - 28	188.96	
	28 - 29	99.17	
	29 - 30	295.16	
	30 - 31	150.85	
	32	302.38	
	33	515.17	
	34	643.15	
	35	278.71	
	36	195.06	58 15"VC
37		401.26	59 782.81
38		316.24	60 483.01
39		493.22	61 354.56
40		744.87	62 814.49
41		814.50	63 245.31
42	-	932.25	64 471.06
43	-	670.80	65 - 584.84
44		671.27	66 - 564.36
45		369.44	67 - 575.92
46		530.00	68 - 233.05
47		536.11	
48		231.91	4376
49		772.07	12"
50		158.63	69 293.47
51		483.38	70 - 337.69
XMH 51(A)2			71 - 419.22
52		490.40	72 - 346.08
53		402.00	73 - 254.18
54		750.90	1650
55		807.62	
56		876.67	
57		224.76	
58		445.18	
		18797.98	

1 X X/50