

EUGENE DIETZGEN CO.

DRAWING MATERIALS, MATHEMATICAL and
SURVEYING INSTRUMENTS

Chicago New York San Francisco New Orleans Pittsburg Toronto

Distances from Center of Roadway for Cross-Sectioning
Roadway 16 feet wide. Side Slopes 1 on 1.
For Single Track Embankment.

H	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	H
0	8.0	8.1	8.2	8.3	8.4	8.5	8.6	8.7	8.8	8.9	0
1	9.0	9.1	9.2	9.3	9.4	9.5	9.6	9.7	9.8	9.9	1
2	10.0	10.1	10.2	10.3	10.4	10.5	10.6	10.7	10.8	10.9	2
3	11.0	11.1	11.2	11.3	11.4	11.5	11.6	11.7	11.8	11.9	3
4	12.0	12.1	12.2	12.3	12.4	12.5	12.6	12.7	12.8	12.9	4
5	13.0	13.1	13.2	13.3	13.4	13.5	13.6	13.7	13.8	13.9	5
6	14.0	14.1	14.2	14.3	14.4	14.5	14.6	14.7	14.8	14.9	6
7	15.0	15.1	15.2	15.3	15.4	15.5	15.6	15.7	15.8	15.9	7
8	16.0	16.1	16.2	16.3	16.4	16.5	16.6	16.7	16.8	16.9	8
9	17.0	17.1	17.2	17.3	17.4	17.5	17.6	17.7	17.8	17.9	9
10	18.0	18.1	18.2	18.3	18.4	18.5	18.6	18.7	18.8	18.9	10
11	19.0	19.1	19.2	19.3	19.4	19.5	19.6	19.7	19.8	19.9	11
12	20.0	20.1	20.2	20.3	20.4	20.5	20.6	20.7	20.8	20.9	12
13	21.0	21.1	21.2	21.3	21.4	21.5	21.6	21.7	21.8	21.9	13
14	22.0	22.1	22.2	22.3	22.4	22.5	22.6	22.7	22.8	22.9	14
15	23.0	23.1	23.2	23.3	23.4	23.5	23.6	23.7	23.8	23.9	15
16	24.0	24.1	24.2	24.3	24.4	24.5	24.6	24.7	24.8	24.9	16
17	25.0	25.1	25.2	25.3	25.4	25.5	25.6	25.7	25.8	25.9	17
18	26.0	26.1	26.2	26.3	26.4	26.5	26.6	26.7	26.8	26.9	18
19	27.0	27.1	27.2	27.3	27.4	27.5	27.6	27.7	27.8	27.9	19
20	28.0	28.1	28.2	28.3	28.4	28.5	28.6	28.7	28.8	28.9	20
21	29.0	29.1	29.2	29.3	29.4	29.5	29.6	29.7	29.8	29.9	21
22	30.0	30.1	30.2	30.3	30.4	30.5	30.6	30.7	30.8	30.9	22
23	31.0	31.1	31.2	31.3	31.4	31.5	31.6	31.7	31.8	31.9	23
24	32.0	32.1	32.2	32.3	32.4	32.5	32.6	32.7	32.8	32.9	24
25	33.0	33.1	33.2	33.3	33.4	33.5	33.6	33.7	33.8	33.9	25
26	34.0	34.1	34.2	34.3	34.4	34.5	34.6	34.7	34.8	34.9	26
27	35.0	35.1	35.2	35.3	35.4	35.5	35.6	35.7	35.8	35.9	27
28	36.0	36.1	36.2	36.3	36.4	36.5	36.6	36.7	36.8	36.9	28
29	37.0	37.1	37.2	37.3	37.4	37.5	37.6	37.7	37.8	37.9	29
30	38.0	38.1	38.2	38.3	38.4	38.5	38.6	38.7	38.8	38.9	30
31	39.0	39.1	39.2	39.3	39.4	39.5	39.6	39.7	39.8	39.9	31
32	40.0	40.1	40.2	40.3	40.4	40.5	40.6	40.7	40.8	40.9	32
33	41.0	41.1	41.2	41.3	41.4	41.5	41.6	41.7	41.8	41.9	33
34	42.0	42.1	42.2	42.3	42.4	42.5	42.6	42.7	42.8	42.9	34
35	43.0	43.1	43.2	43.3	43.4	43.5	43.6	43.7	43.8	43.9	35
36	44.0	44.1	44.2	44.3	44.4	44.5	44.6	44.7	44.8	44.9	36
37	45.0	45.1	45.2	45.3	45.4	45.5	45.6	45.7	45.8	45.9	37
38	46.0	46.1	46.2	46.3	46.4	46.5	46.6	46.7	46.8	46.9	38
39	47.0	47.1	47.2	47.3	47.4	47.5	47.6	47.7	47.8	47.9	39
40	48.0	48.1	48.2	48.3	48.4	48.5	48.6	48.7	48.8	48.9	40

Example—If point is 22.6 ft. above grade, how far should it be from center line to be a slope stake point? Ans. from Table 30.6. For same slopes but other widths of roadbed, correct above figures by one-half difference in width of roadbed; thus in example above, for 20 ft. roadbed distance will be $30.6 + (20 - 16) \div 2$ or 2 ft. added to 30.6 = 32.6. For slopes of 1 on 1½ see inside of back cover.

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CITY ENGINEER

SE B.P. Ther + Morn
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P. 7-12 Paving Grades Strandway - S Line of
San Jose Place to S Line Santa Rita Place

Grades for Alley Block 164

Mission Beach N. Side S. Side

0700	4.80	4.80
0720 ^{Stk}	4.30	4.30
0765	2.60	2.60
1710 ^{Stk}	0.90	0.90
1722 ³⁰		0.21
1722 ⁸⁶	0.14	

Indexed

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N	10.14	S	7.07 81.5W
4.00	5.78	0700	3.731 ^{Stk}
10.14	4.42	10.14	10.80 ^{Top Sewer}
5.34		5.37	5.94 -
5.90 ^{Grade 5.90}		4.77 ^{Stk}	4.867P
0720		2.80	5.28 +
10.14		0720	10.14
5.50			5.37
4.64			4.77
4.30			4.20
70.34			10.47
0765		0765	6.48
6.48		6.48	3.71 -
2.80 -		2.77 ^{Stk}	2.60 ^{Elev Grade}
3.68 ^{Stk}		2.60	10.17
2.60 ^{Grade}		1710	6.48
71.08		6.48	5.39 -
		0.78 ^{Stk}	1.09 ^{Stk}
		0.90 ^{Elev Grade}	0.90 ^{Elev Grade}
		-0.12	70.19
		1722 ⁸⁶	6.48
		6.48	6.36
		6.37	6.30
		0.11	10.18 ✓

Sewer Laterals

#1 6.48	#2 6.98	- 6.40
4.42	5.84	- 1.10 #2
2.01	0.64	
- .80	1.10	
7.41	7.74	

7/8/41
Bliss
Summer 1941
G. Farrow

Grades for Paving San Jose
Place. Ocean Front Walk to 857
East of Bayside Lane

S N M

0700	6.50	6.30
0740	5.62	5.53
0780	4.75	4.75
0800	6.40	6.20
0820 BK	5.50	5.30
0855	3.92	3.72
0920	2.35	2.15
1400	1.92	1.72
1410	1.53	1.35
1420	1.19	1.02
1430	0.88	0.74
1440	0.62	0.50
1450 EVC	0.40	0.33
158 ¹² N		0.20
1612 S	0.17	

S Indexed

0780	11.86	11.86	11.86	11.86	11.86	11.86	11.86	11.86
7.4	5.22	5.22	5.22	5.22	5.22	5.22	5.22	5.22
7.72	6.62	6.62	6.62	6.62	6.62	6.62	6.62	6.62
7.75	5.62	5.62	5.62	5.62	5.62	5.62	5.62	5.62
-0.03	+1.00	+1.00	+1.00	+1.00	+1.00	+1.00	+1.00	+1.00
0700	11.86	11.86	11.86	11.86	11.86	11.86	11.86	11.86
5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36	5.36
6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50
6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50
0700	0720	0700	0720	0700	0720	0700	0720	0700
11.86	11.86	11.86	11.86	11.86	11.86	11.86	11.86	11.86
5.89	5.70	5.70	5.70	5.70	5.70	5.70	5.70	5.70
6.37	5.57	5.57	5.57	5.57	5.57	5.57	5.57	5.57
6.40	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50
-0.03	+0.07	+0.07	+0.07	+0.07	+0.07	+0.07	+0.07	+0.07
0755	0730	0730	1400	1410	1420	1430	1440	1450
11.86	7.04	7.04	7.04	7.04	7.04	7.04	7.04	7.04
5.92	3.89	3.89	3.89	3.89	3.89	3.89	3.89	3.89
9.92	3.35	3.35	3.35	3.35	3.35	3.35	3.35	3.35
5.92	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35
+1.00	+1.00	+1.00	+1.00	+1.00	+1.00	+1.00	+1.00	+1.00
1400	1410	1430	1440	1450	1450	1450	1450	1450
7.04	7.04	7.04	7.04	7.04	7.04	7.04	7.04	7.04
4.79	4.74	4.74	4.74	4.74	4.74	4.74	4.74	4.74
2.25	2.30	2.30	2.30	2.30	2.30	2.30	2.30	2.30
1.92	1.53	1.53	1.53	1.53	1.53	1.53	1.53	1.53
+0.33	+0.77	+0.77	+0.77	+0.77	+0.77	+0.77	+0.77	+0.77
1420	1430	1430	1440	1450	1450	1450	1450	1450
7.04	7.04	7.04	7.04	7.04	7.04	7.04	7.04	7.04
4.95	5.95	5.95	5.95	5.95	5.95	5.95	5.95	5.95
2.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
1.19	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
+0.80	+0.21	+0.21	+0.21	+0.21	+0.21	+0.21	+0.21	+0.21
1440	1450	1450	1450	1450	1450	1450	1450	1450
7.04	7.04	7.04	7.04	7.04	7.04	7.04	7.04	7.04
6.46	6.61	6.61	6.61	6.61	6.61	6.61	6.61	6.61
0.58	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43
0.62	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
-0.04	+0.03	+0.03	+0.03	+0.03	+0.03	+0.03	+0.03	+0.03
1461 ⁵²								
7.04								
6.86								
0.18 - paving								

	S	N
2.50		
0400	-0.26	-0.24
0721.69	-0.38	-0.34
0761.69	-0.61	-0.57
1401.69	-0.84	-0.80
1491.69	-1.07	-1.04
1781.69	-1.31	-1.27
1790 ¹⁵ k. 50	-1.37	-1.33
0400	-1.37	-1.33
072.5	-1.09	-1.06
0450	-0.81	-0.79
0485 ⁷³	-0.40	-0.40

0400		0721.69	0761.69	1701.69	1741.69	1781.69	1790 ¹⁵ k. 50
432	432	432	432	432	375	375	375
-34	-34	-34	-34	-80	-104	-133	-137
366	366	366	366	512 Graded	479	508 Graded	508
390	390	390	390	461	490	474	474
+1.00	+1.00	+1.00	+1.00	+0.51	-0.29	+0.21	+0.21
0700		1701.69	1741.69	1790 ¹⁵ N.W. 1/4 Bayside Lane	0400	0725	0750
432	432	432	432	375	375	375	375
-61	-61	-61	-61	133	133	133	133
2.93 Graded	2.93 Graded	2.93 Graded	2.93 Graded	5.08	5.08 Graded	5.08 Graded	5.08 Graded
416	416	416	416	4.81	4.81	4.81	4.81
5.00	5.00	5.00	5.00	4.81	4.81	4.81	4.81
-0.07	-0.07	-0.07	-0.07	+0.27	+0.27	+0.27	+0.27
0700		0700 East Bayside Lane	0750	0750	0750	0750	0750
375	375	375	375	375	375	375	375
-137	-137	-137	-137	-0.79	-0.79	-0.79	-0.79
5.12	5.12	5.12	5.12	4.54 Graded	4.54 Graded	4.54 Graded	4.54 Graded
4.83	4.83	4.83	4.83	4.32	4.32	4.32	4.32
+0.29	+0.29	+0.29	+0.29	+0.22	+0.22	+0.22	+0.22
0750		0750	0750	0750	0750	0750	0750
375	375	375	375	375	375	375	375
-0.81	-0.81	-0.81	-0.81	-0.79	-0.79	-0.79	-0.79
4.56	4.56	4.56	4.56	4.54 Graded	4.54 Graded	4.54 Graded	4.54 Graded
4.22	4.22	4.22	4.22	4.32	4.32	4.32	4.32
+0.34	+0.34	+0.34	+0.34	+0.22	+0.22	+0.22	+0.22
0400		0400	0400	0400	0400	0400	0400
340	340	340	340	340	340	340	340
-100	-100	-100	-100	-1.05 - ikr	-1.32	-1.32	-1.32
500	500	500	500	4.95	4.77	4.77	4.77
1790 ¹⁵		1790 ¹⁵	1790 ¹⁵	1790 ¹⁵	1790 ¹⁵	1790 ¹⁵	1790 ¹⁵
340	340	340	340	340	340	340	340
-100	-100	-100	-100	-1.05 - ikr	-1.32	-1.32	-1.32
500	500	500	500	4.95	4.77	4.77	4.77

Grades for Paving Strandway - Mission Beach
 from the South line of San Jose Place North
 to the South line of Santa Rita Place

		East Side Elev. Grade	West Side Elev. Grade
0400 N line San Jose place		6.20	6.30
0425		6.07	6.17
0450	S line Alley	5.93	6.03
0466	N line Alley	5.88	5.98
0491	S line Salinet	5.81	5.91
1116		5.73	5.83
1426	N line Salinet	5.70	5.80
1451		5.62	5.72
1776	S line Alley	5.55	5.65
1432	N " "	5.55	5.65
2717		5.62	5.72
2792	S line Sea Girt	5.70	5.80
2752	N " " "	5.70	5.80
2777		5.62	5.72
3402	S line Alley	5.55	5.65
3718	N " "	5.55	5.65
3743		5.63	5.73

Indexed

E			W		BM
0400	6.25	0450	0400	0425	SW San Jose
1134	1134	10.22	1134	1134	Placer
517	4.27	9.91	509	5.43	Sea Wall
6.17	7.07	5.81	6.25	5.91	7.08
6.20	6.07	5.93	6.30	6.17	7.26
-0.03	+1.00	-0.12	-0.05	-0.26	11.34 T
0466	0491	116	0450	0466	9.80
10.22	10.22	10.22	1134	10.22	65.4 T
324	383	386	480	4.55	368
6.88	6.34	6.34	6.54	5.97	10.22
5.88	5.81	5.73	6.03	5.88	4.32
+1.00	+0.58	+0.63	+0.51	-0.82	5.90 T
1726	1751	1776	0491	1716	12.6
10.22	10.22	10.83	10.22	10.22	10.22
4.53	3.60	4.35	4.54	4.59	9.40
5.69	6.62	5.88	5.68	5.63	5.82
5.70	5.62	5.55	5.91	5.83	5.80
-0.01	+1.00	+0.33	-0.23	-0.20	+0.02
1792	2417	2442	1751	1776	5.90 T
10.83	10.83	10.83	10.22	10.22	4.93
4.71	4.71	4.38	4.49	4.32	10.83
6.12	6.12	5.85	5.73	5.90	4.05
5.55	5.62	5.70	5.72	5.65	6.78 T
+0.57	+0.50	+0.15	+0.01	+0.25	4.15
2452	2477	3402	1792	2417	10.93
10.83	10.83	10.93	10.83	10.83	
4.13	4.21	5.26	4.71	4.86	
6.70	6.62	5.67	6.12	5.97	
5.70	5.62	5.55	5.65	5.72	
+1.00	+1.00	+0.12	+0.47	+0.25	
2792	2777	3402	2442	2452	
5.84	5.84	5.84	10.83	10.83	
5.80	5.80	5.80	4.33	4.03	
+0.04	+1.00		5.84	6.80	
			5.80	5.80	
			+0.04	+1.00	
3718	3743	2477	3402	3402	
10.93	10.93	10.83	10.83	10.83	
4.38	4.35	4.11	4.80	4.81	
6.55	6.58	6.72	6.03	6.03	
5.55	5.63	5.72	5.65	5.65	
+1.00	+0.95	+1.00	+0.38	+0.38	
			3718	3743	
			10.93	10.93	
			4.28	4.81	
			6.65	6.12	
			5.65	5.73	
			+1.00	+0.39	

	E	W
3768 So Line Sunset Ct.	5.70	5.80
3778 No. " " "	5.73	5.83
4703	5.87	5.97
4728 So Line Alley	6.00	6.10
4740 No. " "	6.00	6.10
4769	5.92	6.02
4799 Tangier Ct So Line	5.85	5.95
5704 " " No "	5.82	5.92
5729	5.75	5.85
5754 So Line Alley	5.68	5.78
5770 No. " "	5.63	5.73
5795	5.55	5.65
6720 So Line Taylor Ct	5.48	5.58
6730 No. " " "	5.45	5.55
6755	5.37	5.47
6780 So Line Alley	5.30	5.40
6796 No. " "	5.30	5.40
7721	5.43	5.53
7746 So Line Vanitie Ct	5.56	5.66
7756 No. " " "	5.61	5.71

	E	E	W	T
3768	3768	4703	3778	10.93
10.93	10.93	10.93	10.93	5.25-
5.26	5.29	4.06	4.85	4.91
5.87	5.69	6.87	6.08	5.68 TP
5.70	5.73	5.87	5.80	5.19
-0.04	-0.04	11.00	70.28	10.87
10.17			4703	5.25-
4728	4744	4769	4728	4.72
10.93	10.93	10.93	10.93	5.62 TP
3.93	4.57	4.12	4.22	3.83
7.00	6.36	6.81	6.71	4.97
6.00	6.00	5.92	5.97	10.59
+1.00	+0.36	+0.89	+0.74	6.10
4794	5704	5729	4744	+1.00
10.87	10.87	10.87	4769	5.87 TP
4.08	4.93	4.44	10.87	5.44 +
6.79	5.97	6.40	10.93	11.31 T
5.85	5.82	5.75	5.19	3.85
+0.94	+0.12	+0.68	5.74	7.02
5754	5770	5795	6.10	6.02
10.87	10.87	10.87	-0.36	+1.00
5.95	4.22	4.32	4.34	5.04
5.42	6.63	6.56	10.87	10.87
5.68	5.63	5.55	4.75	4.87
-0.26	11.00	11.00	6.12	6.00
6720	6730	6755	5.95	5.85
10.59	10.59	10.59	10.17	+0.15
5.08	4.94	4.72	5.70	5.75
5.51	5.65	5.87	10.87	10.87
5.48	5.45	5.37	4.09	5.19
+0.03	+0.20	+0.50	6.78	5.68
6780	6796	7721	5.78	5.65
10.59	10.59	10.59	11.00	5.73
5.20	4.99	4.66	+0.16	+0.03
5.39	5.60	5.93	6720	6730
5.30	5.20	5.43	6780	6796
+0.09	+0.30	+0.50	10.59	10.59
7746	7756	7781	4.90	4.94
10.59	10.59	10.59	5.69	6.15
4.48	3.98	4.78	5.58	5.55
6.11	6.61	5.81	+0.11	+0.60
5.56	5.61	5.40	5.87	5.87
+0.55	+1.20	+0.41	5.40	5.40
7746	7756	7781	+0.47	+1.00
10.59	10.59	10.59	5.81	5.87
4.48	3.98	4.78	5.40	5.40
6.11	6.61	5.81	7746	7756
5.56	5.61	5.40	10.59	11.31
+0.55	+1.20	+0.41	3.93	4.83
7746	7756	7781	6.66	6.42
10.59	10.59	10.59	5.66	5.71
4.48	3.98	4.78	+1.00	+0.71
6.11	6.61	5.81		
5.56	5.61	5.40		
+0.55	+1.20	+0.41		

7+81 5.74 5.84

8+06 So. Line Alley 5.87 5.97

8+22 No " " 5.93 6.03

8+47 6.11 6.21

8+72 So. Line San Rafael 6.30 6.40

E

7+81 8+06 8+22
11.31 11.31 11.31
44 412 5.45
6.90 7.17 5.86
574 5.87 5.93
+1.16 71.30 -0.07

8+47 8+72
11.31 11.31
420 5.04
7.11 6.27
6.11 6.30
+1.00 -0.03

W

7+81 8+06
11.31 8+06
4.58 4.71
6.73 11.31
5.84 4.34
+0.83 6.97

8+22 8+47
11.31 11.31
4.97 4.10
6.34 7.21
6.03 6.21
+0.31 71.00

8+72
11.31
4.71
6.60
6.40
+0.20

9

11.31
4.71
6.60 x P
4.33 +
10.93
3.81
7.12.8M
7.13.5M
0.01 San Rafael

Paving Grades Strandway Mission Beach from

	E	W
North Line San Rafael Place = 00		
0700	6.10	6.20
0725	5.65	5.75
0750 So Line alley	5.20	5.30
0766 N " "	5.10	5.20
0791	4.97	5.08
1716 So Line Venice Ct	4.85	4.95
1726 N " " "	4.80	4.90
1751	4.68	4.78
1776 So Line Alley	4.55	4.65
1792 N " "	4.48	4.58
2717	4.35	4.45
2742 So Line Verona Ct	4.23	4.33
2752 N " " "	4.18	4.28
2777	4.05	4.15
3702 So Line alley	3.93	4.03
3718 N " "	3.85	3.95
3743	3.73	3.83
3768 So Line Whiting Ct	3.60	3.70
3778 N " " "	3.55	3.65

E			W			055 Back	10
0700	0725	0750	0700	0725	0750	BM. San Raf	
11.63 ^x	11.63 ^x	10.13 ^T	11.63 ^T	11.63 ^T	10.13 ^T	San Rafael	
6.24	7.98	4.84	5.14	4.73	6.90	Place	
5.33	6.65	5.23	6.23 E. Christy	6.90	5.75	7.13	
6.10	5.65	5.20	6.20. cond	5.75	5.20	7.50 +	
-0.71	+1.00 ✓	+0.09	+0.29 ✓	+1.15 ✓		11.63 ^T	
0760	0791	1716	0750	0766	0791	5.30 -	
10.13	10.13	10.13	11.63 ^T	10.13 ^T	10.13 ^T	5.33 ^{T.P.}	
5.08	5.27	5.50	5.33	4.23	4.80 +	4.80 +	
5.05 E. Christy	4.86	4.63	6.30	5.90	10.13 ^T	5.00 -	
5.10. cond	4.97	4.85	5.30	5.20	4.73 ^{T.P.}	5.10 +	
-0.05 ✓	-0.11 ✓	-0.22 ✓	+1.00 ✓	+0.70 ✓	5.10 +	9.83 ^T	
1726	1751	1776	0791	1716	1751	5.10 +	
10.13	10.13	9.83 ^T	10.13	10.13	10.13	9.83 ^T	
5.05	4.45	4.06	4.25	4.28	5.15	5.51 -	
5.08	5.68	4.87	5.88	5.15	4.35	4.32 ^{T.P.}	
4.80	4.68	4.55	5.09	4.20 ✓	4.71 +	4.71 +	
+0.28 ✓	+1.00 ✓	+0.32 ✓	+0.80 ✓		0.03		
1792	2717	2742	1726 S. Back	1751	1792		
9.83	9.83	9.83	10.13	10.13	10.13		
5.22	4.98	4.60	5.05	5.98	5.98		
4.61	5.35	5.23	5.08	4.65	4.65		
4.48	4.35	4.23	4.90	4.78	4.78		
+0.13 ✓	+1.00 ✓	+1.00 ✓	+0.18 ✓	-0.13 ✓			
2752	2777	3702	1776	1792	2717		
9.83	9.83	9.83 ^T	10.13	9.83 ^T	9.83		
5.59	5.56	5.96	9.53	4.83	4.36		
4.29	4.27	3.87	5.60	5.00	5.47		
4.18	4.05	3.92	4.65	4.58	4.95		
+0.11 ✓	+0.22 ✓	-0.06 ✓	+0.15 ✓	+0.42 ✓	71.02!		
3718	3743	3768	2742	2752	2777		
9.03 ^T	9.03 ^T	9.03 ^T	9.83	9.83	9.83		
4.18	4.30	4.97	4.50	5.32	4.68		
4.85	4.73	4.06	5.33	4.51	5.15		
3.85	3.73	3.60	4.33	4.28	4.15		
71.00 ✓	71.00 ✓	+0.46 ✓	+1.00 ✓	+0.23 ✓	71.00		
3778	3793	3818	3762	3718	3743		
9.03	9.03	9.03	9.03 ^T	9.03	9.03		
5.32	4.30	4.97	4.58	4.77	4.20		
3.71	4.73	4.06	4.45	4.26	4.83		
3.55	3.73	3.60	4.03	3.95	3.83		
+0.16 ✓	+0.20 ✓	+0.46 ✓	+0.42 ✓	+0.31 ✓	+1.00		
3778	3793	3818	3768 S. Line	3778 N. Line			
9.03	9.03	9.03	9.03	9.03			
5.32	4.33	4.97	4.33	4.40			
3.71	4.70	4.06	4.70	4.65			
3.55	3.70	3.60	3.70	3.65			
+0.16 ✓	+0.20 ✓	+0.46 ✓	+1.00 ✓	+0.98 ✓			

			F	M
4403	✓	3.52 4.51 3.22 7.25	3.42	3.52
4428	So. Line alley	3.25 3.82 3.09	3.30	3.40
4444	N " "	3.95 3.82 3.13	3.30	3.40
4469 E		3.87 3.71 3.01	3.38	3.48
4495 G	So. Line Windmere Ct	3.80 3.98 3.18	3.45	3.55
5405 E	N " "	3.87 3.98 3.18	3.48	3.58
5430.9			3.55	3.65
5456 E	So. line alley		3.63	3.73
5472 E	N " "		3.63	3.73
5497 Z			3.56	3.66
6423	S. line farmstead		3.50	3.60
6433	N " " "		3.48	3.58
6458 B			3.42	3.52
6483 E	S. Line alley	3.34 7.25 3.34	3.35	3.45
6499 E	N " "	3.81 3.02 6.84	3.31	3.41
7425	✓	3.60 3.71 3.66	3.24	3.34
7450 ³⁸	S. line fork Ct		3.18	3.28
7460 ³⁸	N " " "	3.68 3.09 3.09	3.16	3.26
7485 ⁷⁵		3.75 3.07 3.09	3.09	3.19
8411 ¹²	S. line of Alley	3.81 3.41 3.40	3.03	3.13

	E		W	11
4403	4428	4444	4403	4428
9.03	9.03	9.03	9.03	9.03
553-	532	559	502	479
3.50	3.71	3.44	4.01	4.24
342	3.30	3.30	3.52	3.40
+0.08	+0.41		+0.49	+0.84
4469 E	4495 E	5405 E	4444	4469 E
8871	887	887	903	887
535	560	524-	527-	490
3.52	3.27	3.63	3.76	3.97
338	3.45	3.48	3.48	3.48
+0.14	-0.18	+0.15	+0.36	+0.49
5430 ²⁰	5456 ³⁰	5472 E	4495 E	5405 E
887	887	887	887	887
433	430	518	479	495
4.54	4.57	3.69	4.08	3.92
3.55	3.63	3.63	3.55	3.58
+0.39	+0.94	+0.06	+0.53	+0.34
5497 Z	6423	6433	5430 E	5456 E
8.81	881	881	887	887
436	475	442	399-	887
4.45	4.06	4.37	4.88	507
3.56	3.98	3.98	3.65	3.80
+0.89	+0.56	+0.89	+1.23	3.73
6458 E	6483 E	6499 E	5497 Z	6423
8.56	856	856	881	881
414	3.71	5.24	510	479
4.42	4.85	3.32	3.71	4.02
342	3.35	3.31	3.66	3.60
+1.00	+1.50	+0.01	+0.05	+0.42
7425	7450 ³⁸	7460 ³⁸	6458 B	6483 E
856	856	856	856	856
534	4.89	4.80	404	425
3.22	3.67	3.76	4.52	4.31
3.24	3.18	3.16	3.52	3.45
-0.02	+0.43	+0.60	+1.00	+0.86
7485 ⁷⁵	8411 ¹²		7425	7450 ³⁸
856	856		856	856
506	520		475	460
3.50	3.36		3.81	3.96
3.09	3.03		334	3.28
+0.41	+0.33		+0.47	+0.68
			7485 ⁷⁵	8411 ¹²
			856	868
			452-	405
			4.04	4.63
			3.19	3.13
			+0.85	+1.50

8427 ¹²	N. line of Alex	3.03	3.13
8452 ²²		3.13	3.23
8477 ²²	So. line Zanibar Ct	3.23	3.33
8487 ¹²	N " " "	3.27	3.37
9413 ²¹		3.37	3.47
9440 ¹⁰		3.47	3.57
9447 ²²	Bk	3.50	3.60
9466 ²²	S. line Santa Rita Place	3.40	3.80

E		W.	
8427 ¹²	8452 ²²	8427 ¹²	8452 ²²
868	868	868	868
556-	455-	516	553-
3.12	4.13	3.52	3.15
3.03	3.13	3.13	3.23
+0.09	+1.00	70.39	-0.08
8477 ²²	8487 ²²	8477 ²²	8487 ²²
868	868	868	868
445-	523-	500	478-
4.23	3.45	3.68	3.90
3.23	3.27	3.33	3.37
+1.00	+0.18	+0.35	+0.53
9413 ²¹	9440 ¹⁰	9413 ²¹	9440 ¹⁰
868	9.14	868	9.14
431	5.05	467	5.09
4.37	4.09	4.01	4.05
337	3.47	3.47	3.57
+1.00	+0.62	+0.54	+0.48
9447 ²² Bk	9466 ²²	9447 ²² Bk	9466 ²²
9.14	9.14	9.14	9.14
573	585	487	501
3.41	3.29	4.27	4.13
3.50	3.40	3.60	3.80
-0.09	-0.11	+0.67	+0.33

Diamond

St

83.51
6.08+
89.594
0.78
88.8170
11.77
100.58
0.18
100.4070
5.474
105.877

89.59
x
83.12 83.02 82.12
6.47 6.57 7.47
Grade 6.07
60.50 + 0.80

SE

89.59
x
88.31
1.28

89.59 89.59
x
88.11 87.12
1.98 2.42
Grade 1.97
+ 0.50

SW

St

Missouri

NE

100.58
x
90.39
10.19
Grade
9.93
+ 0.50

100.58 100.58
x
90.15 89.12
10.43 11.46
10.26
+ 0.50 + 0.50

NW

125.37

2270

129.35
x
123.37
5.98
9.19
+ 1.79

129.35 129.35
x
124.18 124.18
5.17 124.14
Grade 5.16
1.87
+ 3.29

126.20

125.08
x
129.35

NW
110.00

118.90
x
109.12
9.28
8.38
+ 0.90

118.90 118.90
x
109.12 109.12
8.38 8.28
9.08 5.00
+ 0.36 + 3.28

NE
111.00

LAW

St

SW
107.50

118.90
x
106.62
11.78
9.89
+ 1.89

118.90 118.90
x
107.52 107.52
10.88 11.78
14.50 7.98
+ 2.58 + 2.80

SE
108.50

NW
102.00

105.87
x
101.12
4.75
3.75
+ 1.00

105.87 105.87
x
102.02 102.12
3.85 3.75
Grade Grade

NE
103.00

Chalcedony

SW
100.00

105.87
x
99.12
6.75
Grade

105.87 105.87
x
100.03 100.44
5.84 5.73
Grade Grade

SE

101.00

Ct. Stakes on Newton Ave

+ Indexed
21

		Head Stake	Elev. Grade
0+00		0.0 1.3 F1.3	65.80
0+20	BM 7247 NWBP Keeler 43	0.8 2.0 F1.8	65.60
0+50	235 77.8 2.6 10.6	1.4 2.6 F1.2	64.90
1+00	64.2 1.3 65.7	0.5 1.8 F0.2	62.25
1+15	65.7 8.3 57.4	1.7 3.8 0.4	61.55
1+40	6.8 57.8	5.0 2.9 0.1	60.75
1+70	57.8	5.9 5.7 0.2	59.85
2+20		6.7 5.7 0.1	59.12
2+70		7.4 5.9 0.7	58.39
3+20		8.1 5.7 0.2	57.66
3+60		8.7 2.6 0.7	57.05
4+00 P.V.C.		9.3 7.1 0.2	56.48
4+20		9.8 7.7 0.7	56.00
4+40		10.9 8.3 0.6	54.93
4+60		11.5 7.9 0.7	53.37
4+80		11.5 7.6 0.9	51.30
5+00		9.1 7.9 0.3	48.75
5+20 E.V.C.		11.1 8.3 0.3	45.70
5+60		18.7 15.9 0.8	39.10

11/7/41

Cut Stakes for Server. 43rd + Hilltop

Elev. Stake Elev. Grade

BM	Dist	Elev. Stake	Elev. Grade	SWP. Pin
Glovers				93 rd + Hilltop
SV 43 rd	11.167	2.385	167.66	164.675

6+97 62

7+22 62

7+47 62

7+22 20

6+97 62

7+22 62

7+47 62

7+22 20

check BM.

5.41 170.08

164.67

0+00 3.28 160.80 157.32

0+50 7.30 162.70 157.53

1+00 4.23 165.85 157.75

1+14 93 M. 4.1 2.00 168.08 157.82

1+50 6.69 171.36 164.67 167.11 158.29

2+00 1.35 7.39 166.97 158.97

2+50 5.20 166.16 159.64

2+70 5.44 165.92 159.91

M.

Cut

Indexed
B

N. D.

Dist	RP	RP	RP
30	7	30	7

4.13

3.76

3.68

3.98

5.25

8.10

10.26

8.82

8.00

6.52

6.01

15

Grade stakes for alley Block 21 *Indexed*

Normal Hts. Between Cherokee & Mt. View

Drive North of Adams

	S	N	SE Cherokee	5th
	0720	0740	0720	385.78
	390.38	390.38	390.38	460
	3.19	374	2.90	390.38
	387.19	386.64	387.98	612
	385.65	385.94	385.61	389.26
	11.54	+0.70	+1.87	4057
0700 P.V.C.	384.98	385.03	385.88	389.31
			+1.11	308-
0720	385.61	385.65	390.38	379.23
			4.00	423
			386.38	383.467
			385.80	530-
			+0.58	378.167
0740	385.88	385.94	385.88	
			385.36	
			+0.52	
0760	385.80	385.90	1720	1755
			390.387	388.31
			6.12	485
			388.317	383.46
			373	383.20
			384.58	4026
			389.44	
			+0.14	
			1720	1740
			388.317	388.31
			4.56	485
			383.75	383.46
			383.90	383.20
			-0.25	4026
			2100	2100
			388.317	388.31
			5.80	758
			382.51	380.73
			383.50	380.62
			+0.11	378.90
			-0.10	-0.16
			2130	2150
			388.31	383.46
			5.30	6.08
			379.20	377.38
			+0.03	378.18
			-0.02	377.13
			2170	2170
			383.23	383.23
			5.71	6.30
			377.52	377.12
			377.93	376.40
			+0.09	+1.00
			3710	3780
			382.23	382.23
			6.29	5.11
			376.99	377.12
			376.70	376.02
			+0.29	+1.10
			3760	3780
			382.23	382.23
			4.79	5.75
			376.99	376.08
			376.70	375.50
			+0.29	+0.94
			3780	4100
			382.23	417.05
			4.89	5.11
			377.34	382.23
			376.30	7.30
			+1.04	374.93
			4120	4140
			382.23	382.23
			3.51	3.94
			375.72	379.29
			375.07	375.29
			+4.00	

W. Line N. of Alley

E. Line N. of Alley

on South opp. N.E. Cor. of Alley

497.05 N
+56.25

3/2/42

Cb. Grades South Side of Boston between

293 + 30 2

0700	W. W. M. of 3074	47.99
0750		47.79
0752	8	47.61
1400		47.583
1430	6	47.46
1450		47.38
2400		47.17

Indexed

0750	51.68	1730 ⁶	51.68	1450	51.68
	47.79		47.46		47.38
	3.89 ✓		4.12	Grade	4.30
1400	51.68		2400	51.68	
	47.58			47.17	
	4.10	Grade		4.51	

17

BM
SWBP
3074 Boston

4805
3.63
51.687

3/23/42

Wetherby St. Pump House at Consolidated

Grades on Pump House Wall Elev Grade

6.19 8.64

2.45

B.M. BP:
Santa Fe Ref
Wall End
Wetherby & Kurtz

~~3.64 5.00~~

4.01 4.63 -17.37

5.64 3.00 -20.00

+

Indexed
92

18

+22.00 Flow of Pressure Line

+23.00 " " Point Loma Inlet Senter

Bliss-Notes
Sommer Nyer
Beag - Red
3/23/4

Point Loma Server Grades from

Wetherby St Pump House West

Elev. 560 Elev. Grade

6.035 8.489

2.454

0+04⁶⁶ TP. 3.39 6.909 5.485 5.77 2.719 -20.00

0+25 -19.98

0+50 -19.957

0+75 20 RT 4.245 2.464 -19.935 +22.40

1+00 15 RT 4.65 2.059 -19.91 +21.97

1+25 4.81 1.899 -19.89 +21.79

1+50 5.91 0.799 -19.87 +20.67

1+71²³ BC 5.54 1.169 -19.85 +21.02

2+00 5.445 1.264 -19.82 +21.08

2+25 TP 5.39 6.004 6.095 0.614 -19.80 +20.41

2+50 5.01 0.894 -19.78 +20.77

2+75 5.025 0.979 -19.75 +20.73

3+00 4.98 1.024 -19.73 +20.75

3+25 4.78 1.224 -19.71 +20.93

3+50 4.84 1.164 -19.69 +20.85

3+63²⁰ TP 4.35 6.17 E.C. M.H. #55 4.78 1.224 -19.67 +20.89

4+00 4.76 1.41 -19.64 +21.05

+50 4.58 1.59 -19.60 +21.19

Note: Stakes are 20' RT of & unless otherwise noted

Cuts

Indexed
JB

Bhs
Som
De
31
0
T
07
07
14
14
14
14
27
27
27
27
37
37
37
T
37
4

7
6.17 40.177-

5700	12.21		4.95	1.72	-19.556	21.28
			1.06	5.11		24.62
150	20 H		4.45	5.05	-19.512	24.56
196.2 BC RP 1520 X in Toproll						
T.P.	404	7.19	3.07	3.10		
6400			6.80	6.34	-19.468	25.81

1/6/92

Grades Amusement Center

Mission Beach

5.90

Elev Sub
Grade

0+25	4.43	0.97	0.47	+0.50
0+50	5.00	0.40	0.52	-0.1
1+00	4.80	0.60	0.60	-0.0
1+50	4.70	0.70	0.69	-0.0
2+00	4.60	0.80	0.78	-0.0
2+50	4.55	0.85	0.84	-0.0
3+00	4.50	0.90	0.90	-0.0
4+25	5.45	1.10	1.10	-0.0
4+75	6.85	-0.30	1.20	-1.50
5+00	4.75	1.80	1.30	+0.5
5+50	4.65	1.90	1.40	+0.5
6+00	4.42	2.13	1.55	+0.6
6+50	3.85	2.70	1.70	1.00
6+75	3.80	2.75	1.77	1.00

Indexed
92

21

BM - -0.60

6.00

5.40T

2.32

3.08

5.40T

1.62

F.H. 3.77TP

2.78+

6.55

2.12

FH 4.43

6.55

2.78-

3.77

1.89

5.66

6.23

0.57

-0.60

6.03

5.431

6/6/40

Sewer Grades Rosecrans

+ Taylor

BM	196	10.97		9.01	Top FH Taylor & Williams Elev Grade
TP	4.48	9.67	5.78	5.19	
TP	5.51	9.18	6.00	3.67	
check BM			4.63	4.55	
Rim Floor			4.59	4.59	0.65
6'00 Grd			8.93	10.25	
TP	2.62	9.76	2.04	7.14	
0+46.50	Grd to Sewer		4.1	5.7	
" "	Top East Rail		3.75	6.01	
0+55	Grd		4.0		
" "	" stake		3.87	5.89	0.83
1+00	Grd &		4.0		
" "	stake		4.12	5.64	0.98
1+53	L Rt. Grd		4.3		
" "	stake		4.36	5.90	1.15
1+61	S Edge Paving		4.44		
1+75	Paving		4.25	5.51	1.23 ✓
" "	Grd pt		4.30	5.46	1.23
2+00	"		4.10	5.66	1.37
" "	Grade pt		4.13	5.63	1.31

0.33% Grade

Cuts

~~Indexed~~

3.94

5.06

4.66

4.25 ✓

4.28 ✓

4.23

4.35 ✓

4.32

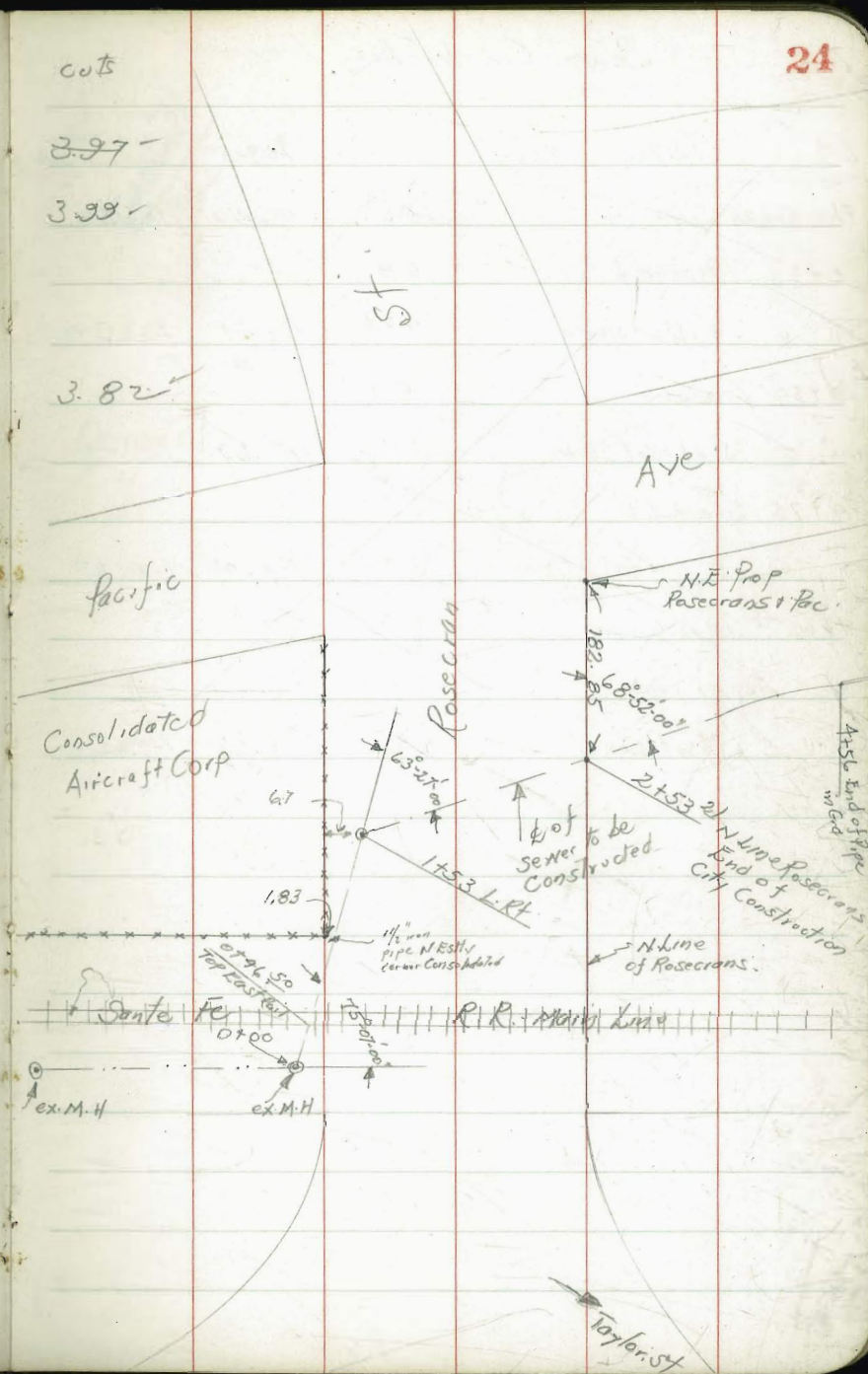
T
976

2+25	Paving	440	5.36	7.39
" "	Grd Pt	438	5.38	1.39
2+38E	N Edge Paving	465		
2+53.2'	Int. N Line Rosecrans	45		
" "	Grd Pt	446	5.30	1.48
4+56	end ex. pipe	7.61	2.15	

0.33% grade

cuts

24



Sewer Construction Linwood

BM					Rim of ex M.H. & Chalmers Sewer Line of State
0700	Ground	12.70	120.75	108.05	
	Flwy. Ent ex 6" pipe		142.5	106.50	106.50
0725	Ground		6.9		
"	"	8' offset stake	7.14	113.61	108.39
0750	Ground		5.2		
"	"	3' offset stake	5.46	115.29	110.28
0775	Ground		3.6		
"	"	3' offset stake	3.70	117.05	112.17
1702	M.H. Ground		1.4		
"	"	Top ex pipe	3.27		
"	"	5' offset stake	11.2	119.63	119.25

~~Indexed~~

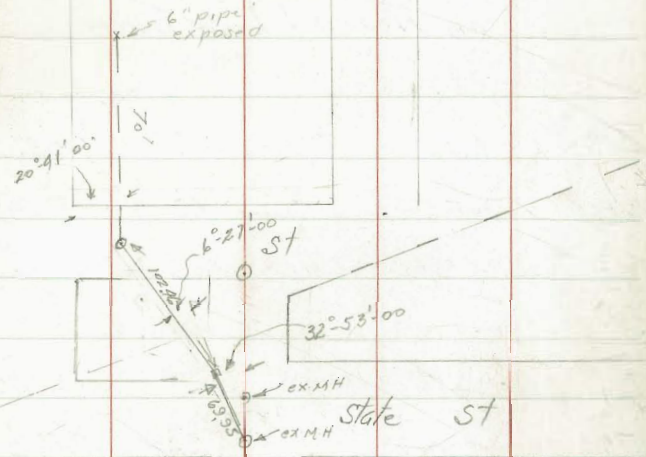
5.22

Linwood

5.01

4.88

5.38



Columbia

ST

State ST

6" 21'-00" ST

ex M.H.

ex M.H.

20° 41' 00"

6" pipe exposed

7.0'

1'-00"

32'-53'-00"

15'-24"

11'-09'-35"

Bliss
Beggs
W Moore
Stuber

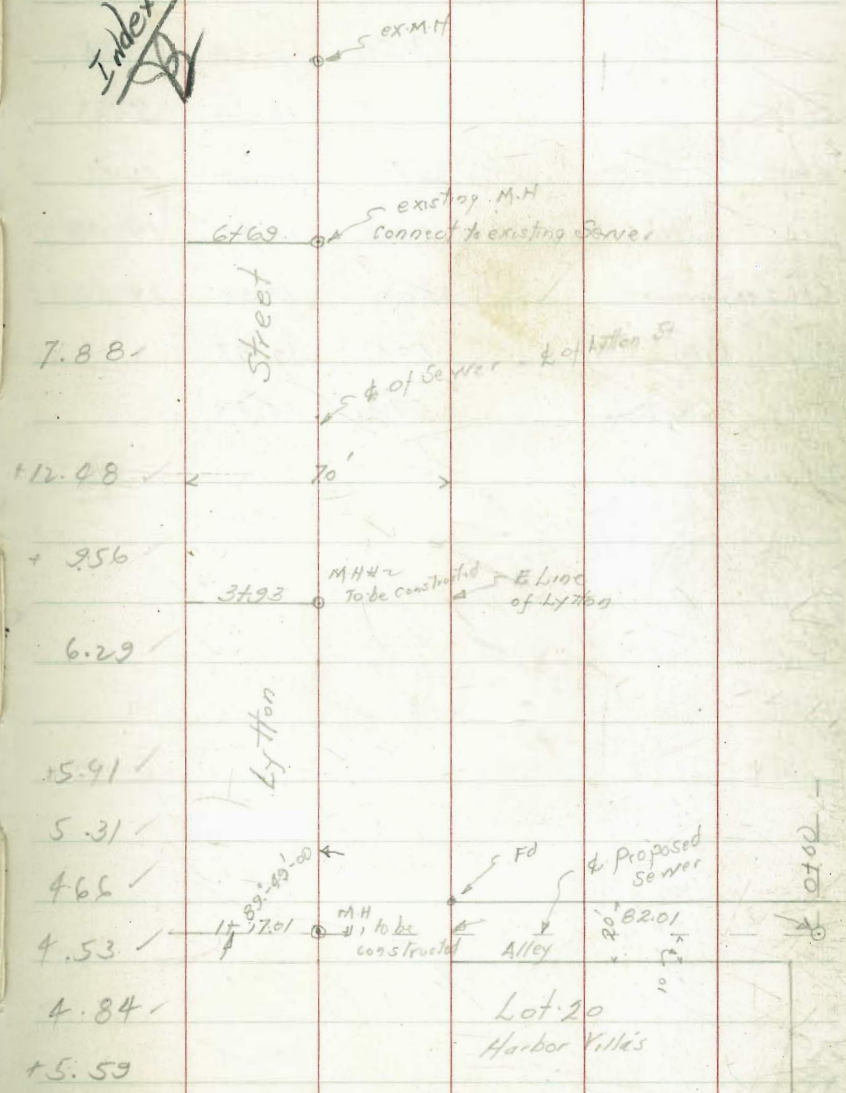
Sewer Construction & Preliminary
from Ex-Sewer on Lytton to M.H.
on New Pt Loma Sewer

117
25
9.68
1.00
7.88

~~Indexed~~

B.M. #21	6.59	7.64	1.05	
0700	Ground on	10.0	-2.36	
" "	Cut Stake 8' off		-11.50	
0725	Ground on	10.0	-2.4	
" "	Cut Stake 8' off	9.44	-1.80	-9.68
0730	Ground on	5.3	2.3	
" "	Cut Stake 8' off	3.02	4.62	-7.86
0775	Ground on	5.1	2.5	
" "	Cut Stake 8' off	4.12	3.52	-6.04
0792	Top of Gutter	4.42	2.76	
1717	Top of 6.50	4.85	3.29	-3.00
" "	Cut Stake 5' off	4.30	3.34	
1750		6.16	3.68	-2.23
2700		5.60	4.24	-1.07
2750		5.09	4.75	+0.09
3700		4.06	5.78	1.25
3750		2.59	7.25	2.41
3793	M.H. #2 11.58	20.58	0.84	9.00

B.P. Top of
Headgate Wall
Sec. 8-1817
2nd Circuit for
Pt Loma Sewer



70' x 20' B2.01

2058

4400 - out

4450	2.46	11.12	5.77	+ 5.35
5400	7.56	13.08	7.85	+ 5.23
5450	5.95	15.13	9.93	+ 5.20
6400	3.49	17.09	12.00	+ 5.09
+50	1.63	18.35	14.08	+ 4.87 ✓
6469 ex. Sewer	1.00	19.58	14.88	+ 4.70 ✓
" " Rim	1.01	13.57		
" " Flow Line	5.70	14.88		

173
347
570

27

check levels Lytton Sf. Server

BP. Headwall
Tide Gate
#2 on Pt. Loma
Server

BM	6.85	7.90		105
0125			9.70	-1.80
0150			³ 2.28	4.62
0175			4.38	3.52
1117 ^{of} MHW			4.55	3.35
1150	8.29	11.98	4.21	3.69
2100			7.72	4.26
2150			7.22	4.76
3100			6.19	5.79
3150			4.71	7.27
3190			2.96	9.02
4150	10.87	22.01	0.84	11.14
5100			8.92	13.09
150			6.87	15.14
6100			4.90	17.11
150			3.04	18.97
6169			2.43	19.58

~~Indexed~~

352
400
500
320
460

Bliss
Scribble
Begg
H/d/t

Sewer 42nd St. Gamma to 200 North

BM.	12.86	69.46		56.60		8 P. NW Top H. Wall Delta + Applied
TP.	12.23	81.18	0.51	68.95		
TP.	4.70	83.48	2.40	78.78		
Set BM			2.40	81.08		SW Top H. 42 nd Gamma.
Rising M.H. 3.81		88.56	4.73	78.73		
Floor New Const.				78.75	72.50	
Floor Line			20.31	68.25		
0+50			9.85	78.71	73.65	
0+50 Ground			9.9	78.7		
1+00			9.01	79.55	74.80	
" Ground			9.0	79.6		
1+50			6.32	82.24	75.95	
" " Ground			6.4	82.2		
1+75 Ground			5.1	83.5		
2+00			4.91	83.65	77.10	BAC
" " Ground			5.0	83.6		
2+60			4.2	84.4		
3			4.4	84.2		
4			4.9	83.7		
+60			5.0	83.6		

Indexed

Beta

cols

+4.25

+5.06

+4.75

+6.29

+6.55

Gamma

ex. M. H.
2. Alpha

29

id. 42
Pipe NW Prop Co.
R.E. 2718

Street

42nd

ex. M. H.
Gamma = 0+00

2+00 = k. Sewer

2+00. End of job to be
Constructed

ST

ST

8856

5400

45

89.1

5450

3.6

83.0

30

10/192

Grades for overflow line at
Disposal Plant.

12.32

0700 18.28 -5.96

0734 17.96 -5.64

12.32

0700 4.31 8.01^{0.50} -5.96

0731 4.22 8.10 -5.80

~~Intermed~~
PB

10.00 B.M.

9.52

14.52

7.03-

7.49 TP

4.83

12.32 - X

+13.97

+13.90

* 12/9/42
Bliss
Sommermyer
Bepp

Cb Return N.E. Corner El Cajon

+ Euclid +

353.18

0100 BC on El Cajon 5.45 347.73 347.80 F 0.07

+06.53 5.41 347.77 347.75 C 0.02

+13.06 5.62 347.56 347.70 F 0.14

+19.59 5.81 347.37 347.68 F 0.21

+26²⁰ EC on Euclid 5.50 347.68 347.69 00

~~Indexed~~
~~B~~

Ave

El Cajon

Euclid

BMSwap 347.20
E 368

350.88

40.8

346.84

6.30

353.18

see FB 1632

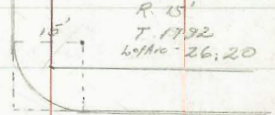
N.E. Cor. Page 97

Δ 100° 09' 00"

R 25'

T 17.92

Lat 26.20



Bld

Andrew Jackson School Grounds
Grades

Indexed

Aug 7-43
S. J. Hall
S. J. Hall
Hazard

Cross Sections
1693-15

		200' H	150' H	100' H	50' H	Baseline	50' S	100' S	150' S	
+50	1.09	77.44	77.00	76.57	76.13	75.70	75.26	74.83	74.50	7.03
1+0	1.39	377.14	76.70	376.27	75.83	375.40	74.96	374.53	374.20	7.33
+50	1.69	76.84	76.50	75.99	75.53	75.10	74.66	74.23	73.90	7.63
3+0	1.99	376.54	76.10	375.67	75.23	374.80	74.36	373.93	373.60	7.93
TP	1.04	378.83	6.94	374.81	0.2310 B					
+50	5.29	76.24	75.80	75.37	74.93	74.50	74.06	73.63	73.30	8.23
2+0	5.59	375.94	75.50	375.07	74.63	374.20	73.76	373.33	373.00	8.53
+50	5.89	75.64	75.20	74.77	74.33	73.90	73.46	73.03	72.70	8.83
1+0	6.19	375.34	74.90	374.47	74.04	373.60	73.16	372.73	372.40	9.13
0+25	6.64	374.89	74.40	374.05	73.58	373.15	72.71	372.28	371.95	9.58
0+10 = EA 5476										
BM	8.24	381.53	5.56	373.29	373.29	373.00	72.56	372.13	371.80	

Original Cross
0-25 Baseline
8-5476

381.53

	200'N	150'	100'N	50'N		50'S	100'S	140'S							
BM	499	381.75		376.73	50'N 02 Wall 8-87										
9+0		380.14	79.70	379.27	78.83	378.40	77.96	377.53	377.20 ^{5'}						
+50	^{1.69} 2.53 FO.84	79.84	^{2.12} 3.05 FO.78	79.40	^{2.51} 3.47 FO.91	78.97	^{3.22} 4.16 FO.14	78.53	76.36	378.10 ^{3.65} 4.20 FO.20	3.87	77.66	77.23 ^{4.30}	76.90	4.63
8+0	1.99	379.54	79.10	^{2.43} 3.80 FO.94	378.67	^{2.96} 3.80 FO.94	78.23	^{3.51} 4.32 FO.62	78.23	377.80 ^{3.25} 4.17 FO.72	4.17	77.36	376.93 ^{4.16}	376.60	4.93
+50	^{2.29}	79.24	^{2.73} 3.80 FO.30	78.80	^{3.16} 4.32 FO.30	78.37	^{3.81} 4.32 FO.30	77.93	76.36	77.50 ^{4.25} 4.25 FO.00	4.47	77.06	76.63 ^{4.90}	76.30	^{5.23} 5.76 FO.97
7+0	^{2.59}	378.94	^{3.03} 4.16 FO.46	78.50	^{3.46} 4.16 FO.46	378.07	^{4.16} 4.16 FO.46	77.63	76.76	377.20 ^{4.55} 4.55 FO.00	4.77	76.76	376.33 ^{5.20}	376.00	5.53
+50	^{2.89}	78.64	^{3.33} 4.16 FO.46	78.20	^{3.46} 4.16 FO.46	377.77	^{4.16} 4.16 FO.46	77.33	76.46	76.90 ^{4.85} 4.85 FO.00	5.07	76.46	76.03 ^{5.50}	75.70	^{5.83} 7.15 FO.32
6+0	^{3.19}	378.34	^{3.62} 4.16 FO.60	77.90	^{4.06} 4.16 FO.60	377.47	^{4.76} 4.16 FO.60	77.03	76.16	376.60 ^{5.15} 5.15 FO.00	5.37	76.16	375.73 ^{5.80}	375.40	6.13
+50	^{3.49}	78.04	^{3.93} 4.16 FO.60	77.60	^{4.06} 4.16 FO.60	77.17	^{5.02} 5.02 FO.00	76.73	75.86	76.30 ^{5.45} 5.45 FO.00	5.67	75.86	75.43 ^{6.10} 5.60 FO.50	75.10	^{6.43} 5.73 FO.70
5+0	^{3.79}	377.74	^{4.33} 4.16 FO.60	77.30	^{4.66} 4.16 FO.60	376.87	^{5.32} 5.32 FO.00	76.43	75.56	376.00 ^{5.75} 5.75 FO.00	5.97 6.50	75.56	375.13 ^{6.40}	374.80	6.73
		381.53										381.53			

Water Main Dalbergia St

Closest to Vorkost.
off set 4 S.E. of 2 Ditch

4+0			18.40	10.5 5.9 c4.6
+50			18.60	10.3 5.9 c4.6
3+0			18.80	10.1 5.2 c4.8
+50			14.00	9.9 4.5 c5.1
2+0			14.20	9.7 4.8 c4.9
+50			14.40	9.5 4.9 c4.6
1+0			14.60	9.3 4.9 c4.4
+50			14.80	9.1 5.1 c4.6
0+0	= E.L. Vorkost		15.00	8.9 5.9 c3.6
BM	5.89	23.88	17.99	51 Top C6 Dalbergia + Close #1564-97

~~Indexed~~
9/2

March 8-44

Sisson

Bliss

Osborne

35

6+60	= E.L. Vorkost		12.10	11.8 9.8 c2.8
6+0	= H.L. Vorkost		12.60	11.3 8.2 c3.7
+50			12.80	11.5 7.5 c3.5
5+0			13.00	10.9 2.6 c3.9
4+50			13.20	10.7 2.2 c4.3

Pacific Arc Sewer Const Witherly St
Pump House - East

+ -

Indexed
OB

43

7.57 10.02 2.45 Elev Grade

Set BM ^{TKLP} _{161m 20 3 Hwy}

3.26 6.76

129+50 5.13 4.89 -17.50 +22.39

129+00 6.39 3.63 -17.50 +21.13

123+50 12.23 -2.21 -17.26 +15.05

123+25 7.10 2.92 -16.89 +19.81

123+00 -16.52

122+75

122+50 -15.81

122+25

122+00 -13.60

121+75

121+60 -12.30

121+25 6.42 3.60 -11.28 +14.88

121+10 -10.85

+95.20

120+75

120+60 -9.78

BM	6.47	947		3.00	- cotton No. of Pump		
S Check BM			278	6.69			
122+50				$\frac{676}{007}$	settlement		
123+00			6.79	2.68	14.52	19.20	
123+50			7.64	1.83	17.26	19.09	
124+50			4.62	4.85			
79	5.34	8.02	6.79	2.68			
122+50			5.45	2.57	-15.31	17.88	

BM 4.03 19.86 15.83

TP 774 19.77 4.83 15.03

19.86 19.86 19.86

14.55 15.04 14.85

5.31 4.82 5.01

1413

1977 19.77

15.58 15.01

4.19 4.76

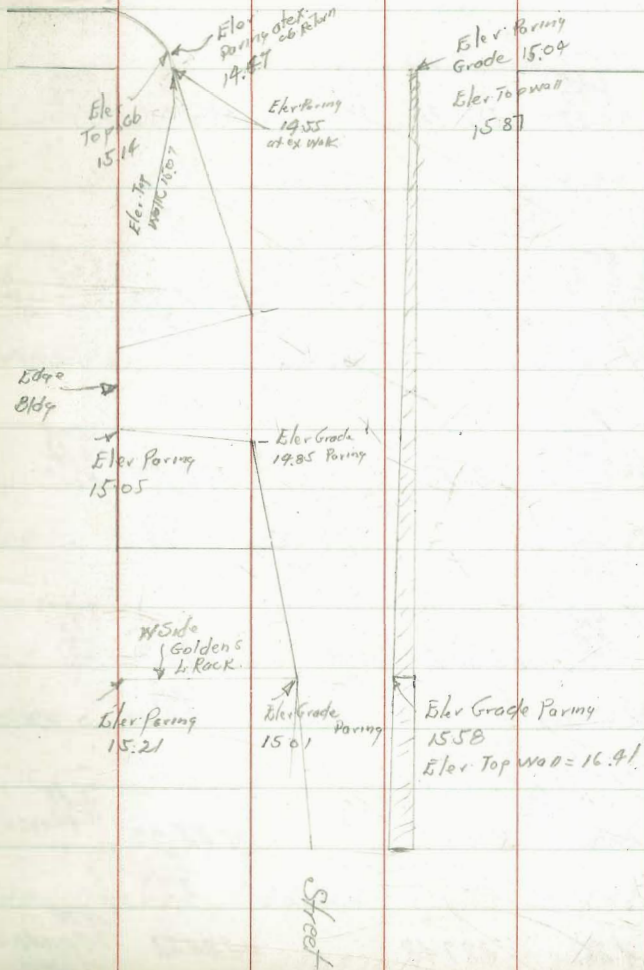
Spike in
pole S.E.
Noell & Kurtz
Set on Pac. Ave.
Survey Const
Sec F.D.

19.77 15.21 4.56

Noell

St.

Kurtz



Illinois St		North of Meade Hse	
Curb Grader		WCB	FCB
2+50	$\begin{matrix} 5.33 \\ 5.06 \\ \hline 00.27 \end{matrix}$	383.14	$\begin{matrix} 4.78 \\ 5.05 \\ \hline 00.87 \end{matrix}$ 383.69
TP	6.32	388.47	5.23 382.15
2+0	$\begin{matrix} 5.24 \\ 5.22 \\ \hline 00.52 \end{matrix}$	382.73	$\begin{matrix} 4.12 \\ 5.23 \\ \hline 01.21 \end{matrix}$ 382.86
1+50	$\begin{matrix} 6.15 \\ 5.57 \\ \hline 00.58 \end{matrix}$	382.32	$\begin{matrix} 4.45 \\ 5.45 \\ \hline 01.00 \end{matrix}$ 382.03
1+0	$\begin{matrix} 6.56 \\ 6.14 \\ \hline 00.44 \end{matrix}$	381.91	$\begin{matrix} 4.78 \\ 5.26 \\ \hline 01.17 \end{matrix}$ 382.70
0+60	$\begin{matrix} 6.89 \\ 6.70 \\ \hline 00.19 \end{matrix}$	381.58	$\begin{matrix} 5.05 \\ 6.24 \\ \hline 01.17 \end{matrix}$ 382.43
0+20 = Brk	$\begin{matrix} 5.30 \\ 5.20 \\ \hline 00.10 \end{matrix}$	381.25	$\begin{matrix} 5.21 \\ 6.13 \\ \hline 00.81 \end{matrix}$ 382.17
0+0 = 1/4 Meade	$\begin{matrix} 6.48 \\ 6.10 \\ \hline 00.38 \end{matrix}$	381.00	$\begin{matrix} 5.48 \\ 5.45 \\ \hline 00.03 \end{matrix}$ 382.00
BM	4.26	387.48	382.22 1/4 Meade + 1000

Dec. 30-42		S. 5500		Bl. St		Sagamermyer Road		H		F		46
14' Curbs		52' Roadway		Stakes offset 3' From		Face of Curb						
		4.53	382.02	NET Top Curb Meade + Illinois								
TP	4.28	386.55	6.70	381.77								
4+33.33	$\begin{matrix} 3.83 \\ 2.76 \\ \hline 00.87 \end{matrix}$	384.64	384.90	$\begin{matrix} 3.57 \\ 3.59 \\ \hline 00.48 \end{matrix}$								
4+0	$\begin{matrix} 4.10 \\ 3.52 \\ \hline 00.58 \end{matrix}$	384.37	384.68	$\begin{matrix} 3.79 \\ 3.66 \\ \hline 00.19 \end{matrix}$								
3+50	$\begin{matrix} 4.51 \\ 3.96 \\ \hline 00.55 \end{matrix}$	383.96	384.55	$\begin{matrix} 4.12 \\ 4.45 \\ \hline 00.31 \end{matrix}$								
3+0	$\begin{matrix} 4.91 \\ 4.63 \\ \hline 00.27 \end{matrix}$	383.55	384.02	$\begin{matrix} 4.45 \\ 5.00 \\ \hline 00.55 \end{matrix}$								
		388.47										

Indexed
B

H2usa St. Curb Gradat
Gains to Riley

M

Tiles 1600-78

August 4. 42

Sisson
Bliss
Osborn
Hazen

47

Indexed
12

				Stops on	
BM	1.21	30.65T		F	Nail Pole N.F. Col H2usa of Riley 1630-P78
2+92.5	SL Riley	27.73	$\frac{2.9}{2.6}$ 0.9	29.44	$\frac{2.6}{0.6}$ 2.0 on wall
2+53.5		27.23	$\frac{3.1}{4.6}$ F1.2	27.60	$\frac{3.0}{1.5}$ 0.5 on wall
2+12.5		26.93	$\frac{3.7}{5.7}$ F2.0	27.38	$\frac{3.3}{2.3}$ 0.0 on wall
1+72.5		27.02	$\frac{3.3}{3.6}$ F3.3	27.54	$\frac{3.1}{2.9}$ 0.2 state
1+33.5	P.V.C.	27.59	$\frac{3.1}{4.2}$ F1.1	28.06	$\frac{2.6}{2.0}$ 0.6
1+0		28.18	$\frac{2.5}{2.6}$ F0.1	28.64	$\frac{2.0}{1.7}$ 0.3
+50		29.09	$\frac{1.6}{1.1}$ 0.5	29.52	$\frac{1.1}{1.1}$ 0.0
TP	6.18	35.74	1.09	29.56	0.0 stops on wall
0+0	HL Gain	30.00	$\frac{5.7}{4.7}$ 0.1	30.40	$\frac{5.3}{5.0}$ 0.3
BM		6.30		29.44	Nail Pole H2usa of Riley 29.44

East Gutter Grades 47/55

Hilltop to 354 North

For 80' Street. 12 Curbs 0.67 Gutter
For 60' 5' 10' Cbs

4+0 188.10 4.01 ✓ 187.93 4.15 ✓ 385.078

+50 187.93 4.18 ✓ 187.76 4.31 ✓

2+0 187.25 4.36 ✓ 187.58 4.50 ✓

+50 187.58 4.53 ✓ 187.41 4.67 ✓

2+0 187.41 4.70 ✓ 187.24 4.84 ✓

+50 187.24 4.87 ✓ 187.07 5.01 ✓

1+0 187.07 5.04 ✓ 186.90 5.18 ✓ 385.078

+50 186.89 5.22 ✓ 186.72 5.36 ✓ 385.078

0+0 = Hilltop 186.72 5.39 ✓ 186.55 5.53 ✓ 385.078

BM 527 192.08 186.81 2.27 ✓ Hilltop 47/55

5.36 192.11 186.81

Indexed
98

April 7-44

510007

8145

056079C

43

+50 = P.V.C.	188.63	3.48 ✓	188.46	3.62 ✓ 385.078
5+0	188.45	3.66 ✓	188.28	3.80 ✓
4+50	188.27	3.84 ✓	188.10	3.98 ✓ 385.078
	192.08			
	192.11			

Collier & Co. Paving Grader
Mansfield to Mountain View Drive

M

→ 393.00	92.46	92.44	392.70
	92.59		
← 392.51			
→ 92.71		92.54	
← 392.04	92.75	92.61	392.70

394.00	92.55	92.53	394.00
--------	-------	-------	--------

Mansfield

St

April 18-44
Sisson
Bliss
Osborn

Indexed
92

Mountain View Drive

49

BM 391.37

390.96

391.42

392.02

392.19 91.70

92.20 392.77

92.24

92.28

92.28

392.16

Wilson Ave

92.20

92.23

92.27

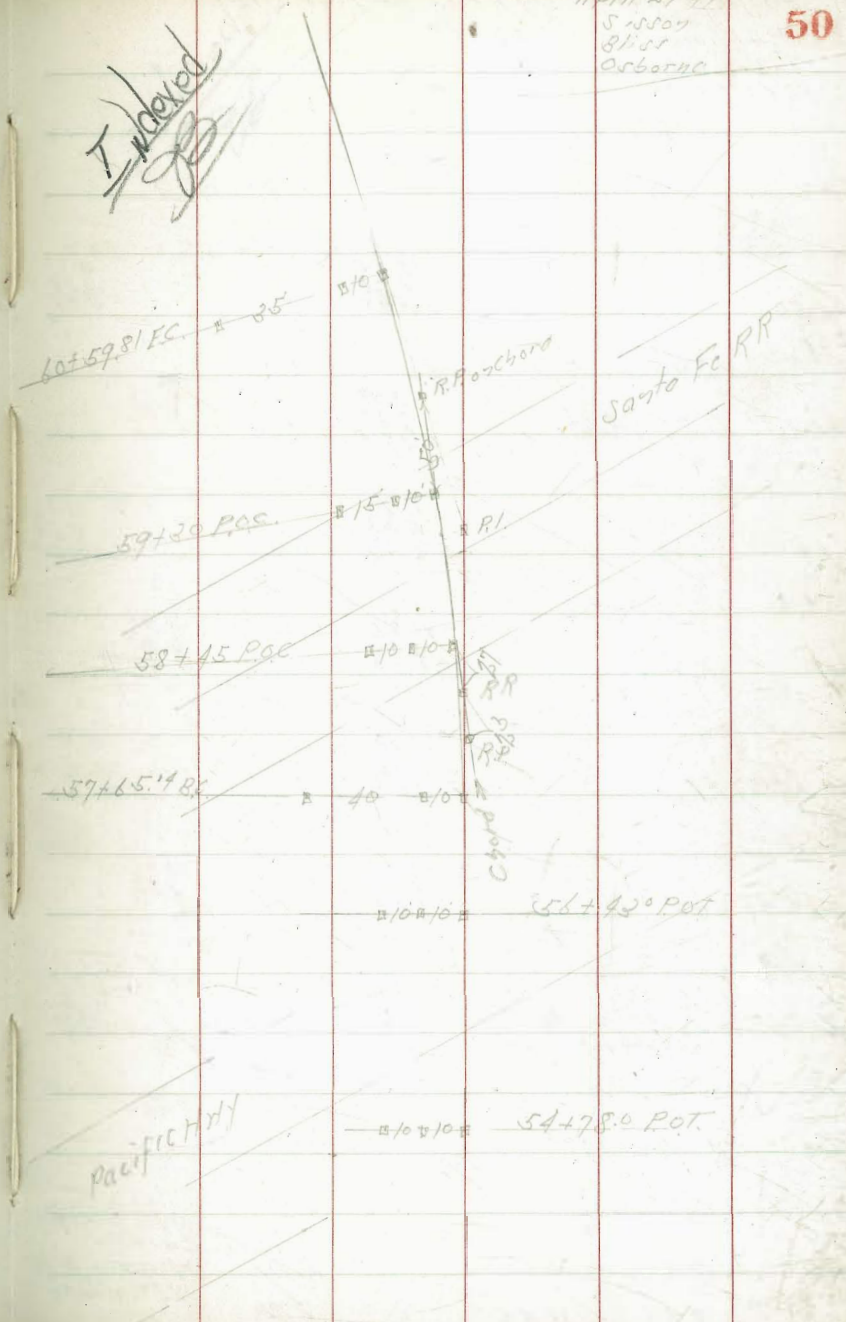
92.20 392.66

Dyke Pipe Line Grader For Tunnels
 Under Pacific Hwy + H.T. & S.F. RR
 Alignment 1643-53

For Check	9.08	5.11	09 FCHd 60+59.81 5.11
59+30 = E Portal Under Santa Fe	4'43.10	-0.35	14.87 11.32 03.86
		-0.66	Track
58+45 = W Portal Under Santa Fe	2°17'28"	-1.02	Track 15.70 12.33 28.96
58+0	9.20 5.2 3.67	-1.00	
57+65.14 B.C.	9.20 5.2 3.67	-1.00	
57+0	9.20 5.2 3.67	-1.00	
BM 2.75 8.20	5.15		07 Cut of 43 56+43 15.52 9.07 06.45
56+43 = E Portal Under Pacific Hwy	-1.00		
BM #8 8.03 14.52	6.49		3' North Pole 87' R + 59+70
	Page 567		
54+98 = W Portal Under Pacific Hwy	-1.22		9.45 1.58 7.87
BM #7 3.49 8.23	4.74		09 W 20 51' R + 54+60 16.23 57

April 29 44
 Sisson
 31' 00"
 Orborne

50



San Diego River Dyke Pipeline Graders

R.R. # Alignment # 1643-48

Stakes offset 10' pt. 0+0 to 43+30.18 92+52.70
43+53.70 to 10' pt.

340				-1.80	$\frac{9.76}{4.23}$ c 5.3
+50				-1.20	$\frac{12.65}{6.74}$ c 5.91
TP	2.90	7.96	5.40	3.06	$\frac{9.11}{2.25}$ c 5.91
3403.35	∠ 22° 54' 45"			-0.64	$\frac{13.09}{7.24}$ c 4.85
+50				0.00	$\frac{11.45}{6.33}$ c 5.13
140				0.60	$\frac{10.85}{5.85}$ c 5.80
0+54.57 R.C.				1.15	$\frac{10.30}{5.74}$ c 4.56
0+26.48 - R.C.				1.50	$\frac{9.95}{5.17}$ c 4.78
0+15.48 - ∠ 45° 00' pt.				1.61	$\frac{9.84}{4.99}$ c 4.95
0+0				1.80	8.36
RM #2	7.56	10.46		2.90	
"	8.35	11.45		2.90	

Indexed
OB

870				-3.00	$\frac{10.6}{4.8}$ c 6.0
+50	8' Out lot for Western Ave				$\frac{10.6}{4.8}$ c 5.8
TP	4.66	7.61	5.01	2.95	$\frac{10.96}{5.01}$ c 5.9
740					$\frac{10.96}{5.01}$ c 5.9
+50					$\frac{10.96}{5.01}$ c 5.9
640					$\frac{10.96}{4.99}$ c 6.0
+50					$\frac{10.96}{4.99}$ c 6.0
540					$\frac{10.96}{4.97}$ c 6.4
+50					$\frac{10.96}{4.97}$ c 6.2
440				-3.00	$\frac{10.96}{4.98}$ c 6.1
3450				-2.40	$\frac{10.96}{4.98}$ c 5.4

Nov 1 - 1944
Sisson
Bliss
Osborn

RPSX/RY/1
Culvert
Midway No. 1
N Point/Loma

7.96

+50				$\frac{106}{42}$ c6.4
12+0			0.300	$\frac{106}{43}$ c6.3
+50				$\frac{106}{42}$ c6.4
11+0				$\frac{106}{41}$ c6.5
+78.64	EC	3°16.37'		$\frac{106}{41}$ c6.5
+50		2°27.15'	level	$\frac{106}{42}$ c6.4
10+0		1°01.21'		$\frac{106}{41}$ c6.5
+64.89	BCRT			$\frac{106}{43}$ c6.3
9+0				$\frac{106}{42}$ c6.0
8+50			0.200	$\frac{106}{47}$ c5.9
		7.61		

+50									$\frac{110}{42}$ c6.8
17+0									$\frac{110}{43}$ c6.7
+50									$\frac{110}{43}$ c6.7
16+0									$\frac{110}{45}$ c6.5
+50									$\frac{110}{47}$ c6.3
15+0									$\frac{110}{45}$ c6.2
+50									$\frac{110}{47}$ c6.3
14+0									$\frac{110}{47}$ c6.3
+50									$\frac{110}{47}$ c6.3
TP	4.72	8.04	4.29	3.32					$\frac{106}{43}$ c6.3
12+0									0.300
		7.61							

+50					11.3 5.1 66.2
22+0					11.3 5.0 66.3
+50					11.3 4.7 66.6
21+0					11.3 4.7 66.6
+50					11.3 4.6 66.7
20+0					11.3 4.7 66.6
+50					11.3 4.9 66.6
19+0					11.3 4.8 66.5
TP	4.55	8.29	4.30	3.74	11.0 4.3 66.7
+50					11.0 4.6 66.4
18+0				3.00	
		8.04			

Level

+50									9.8 4.1 65.7
27+0									9.7 3.4 66.3
BM #2						3.91	-0.05	26.1	1.60 9.6 4.3 65.1
+50									-3.10 9.5 4.2 65.2
26+0									-0.00 9.5 4.2 65.1
+50									9.5 4.3 65.2
25+0									9.5 4.2 65.1
+50									9.5 4.3 65.2
TP	3.48	6.53	5.24	3.05					11.3 5.2 66.1
24+0									11.3 5.1 66.2
+50									11.3 5.1 66.2
+38									11.3 5.1 66.2
23+0									11.3 5.1 66.2
								5.00	11.3 5.1 66.2
						8.29			

8" oval with 28" gate
For KURTAN.

+50			$\frac{10.2}{4.8}$ c 5.7	hand	$\frac{10.6}{5.2}$ c 5.8
31+0			$\frac{10.2}{5.1}$ c 5.7	-4.00	$\frac{10.6}{5.2}$ c 5.9
+50			$\frac{10.1}{4.8}$ c 5.3	-3.90	$\frac{10.5}{4.8}$ c 5.7
TP	447	6.59	441	2.12	
30+0			$\frac{10.0}{4.1}$ c 5.9	-3.80	$\frac{10.3}{4.9}$ c 5.9
+50			$\frac{9.9}{4.9}$ c 5.0	-3.70	$\frac{10.2}{5.0}$ c 5.2
+2543	F.C.		$\frac{9.8}{4.4}$ c 5.4	-3.65	$\frac{10.2}{4.7}$ c 5.5
29+0	x		$\frac{9.8}{4.9}$ c 5.7	-3.60	$\frac{10.1}{4.8}$ c 5.3
BM #3	3.55	6.18		2.63	Spk Polc 16.5 ft of 26+87 46.10.56
+50			$\frac{9.7}{4.2}$ c 5.5	-3.50	$\frac{10.0}{4.5}$ c 5.5
28+0				-3.40	$\frac{9.9}{5.1}$ c 4.8
27+77.88	BC.RH			-3.36	$\frac{9.9}{5.1}$ c 4.8
		6.53			

					98	$\frac{10.5}{5.0}$ c 5.5
+50					-2.95	$\frac{10.5}{5.0}$ c 5.5
TP	6.05	7.51	5.13	1.46		0.0766 10.19 35.100
36+0			9.9		-3.07	$\frac{9.7}{5.1}$ c 4.6
+50					-3.18	$\frac{9.8}{5.2}$ c 5.1
35+0			10.1		-3.30	$\frac{9.9}{5.1}$ c 5.3
+75	Brk				-3.36	$\frac{9.8}{4.8}$ c 5.5
+50	x				-3.42	$\frac{10.3}{4.8}$ c 5.5
34+0	out	on (arc) 61	$\frac{10.4}{4.4}$ c 6.0		-3.53	10.1
+50	out		$\frac{10.5}{5.1}$ c 5.4		-3.65	10.2
33+0	out		$\frac{10.6}{4.8}$ c 5.8		-3.77	10.4
TP	5.56	6.84	4.90	1.28		
+50	Brk		$\frac{10.1}{4.9}$ c 5.2		-3.88	$\frac{10.5}{4.9}$ c 5.1
32+0		6.18			-4.00	$\frac{10.5}{5.2}$ c 5.0
		6.59				

41+0						10.1 47 C5.4
+50						10.1 47 5.4
40+25.54	FC	2° 00' 22"				10.1 48 C5.3
			(2)			
+90.52		1° 00' 11"	10.25 49 C5.3			10.1 48 C5.3
+55.57	BC RT		10.25 49.5 C5.3			10.1 47 C5.4
39+0			10.25 48.5 C5.6			10.1 46 C5.5
+50			10.25 49 C5.2			10.1 47 C5.4
TP 22	4.57	7.65	5.76	5.08		
38+0			9.4 48 C5.6	-2.60		10.1 45 C5.7
+50			9.6 47 C5.5	-2.72		10.1 46 C5.4
37+0			9.7 46 C5.1	-2.83		10.1 45 C5.4
		6.816				
		7.51				

+50						9.9 49 C5.0
45+0						10.1 46 C5.5
+50						10.1 47 C5.5
44+0						10.5 45.0 C5.6
+50						10.5 45.1
43+0						10.5 45.0
+52.70	FC					10.5 47 C5.8
+30.18	BC RT					10.5 49 C5.7
TP	5.17	7.88	4.80	2.71		10.1 48 C5.4
42+0						10.1 48 C5.4
41+50						10.1 47 C5.4
		7.87				

Mon 8/1 Pt
54+80
+74
96
43
65.3

56

53+0 $\frac{116}{81}$ 65.5

+50 $\frac{116}{59}$ 65.7

49+0 level $\frac{116}{51}$ 65.5

+50 $\frac{116}{59}$ 65.9

48+0 out -1.00

+89.24 F.C. -1.04 $\frac{116}{58}$ 65.8

B.M. #6 6.11 10.61 3.38 4.50 Mon Pt of Pt 4.49 $\frac{91}{34}$ 65.7

+35.93 B.C. Pt -1.26

47+0 $\frac{93}{36}$ 65.7 -1.40

+50 +1.00 $\frac{96}{38}$ 65.7 -1.60

46+0 $\frac{97}{41}$ 65.7 -1.80

7.83

B.M. #7 3.02 4.75

+14.35 F.C. -1.86

54+0 4.01 -2.00 $\frac{98}{44}$ 65.4

+50 -2.50 $\frac{102}{47}$ 65.6

TP 4.89 7.77 7.73 2.88

53+0 $\frac{131}{77}$ 65.4

+50 -2.50 $\frac{131}{73}$ 65.8

52+0 -2.00 $\frac{126}{62}$ 65.2

+50 -1.50 $\frac{121}{68}$ 65.3

51+0 -1.00 $\frac{116}{65}$ 65.5

+79.17 B.C. Pt $\frac{116}{59}$ 65.7

50+50 level $\frac{116}{59}$ 65.3

10.61

Dyke Pipe Line

TP	352	11.83	563	8.21	
+50					$\frac{11.4}{2.8}$ 8.6
63+0					$\frac{11.4}{2.8}$ 8.6
+50					$\frac{11.4}{2.8}$ 8.6
62+0					$\frac{11.4}{2.8}$ 8.6
+50					$\frac{11.4}{2.8}$ 8.6
61+0			0.50		$\frac{11.4}{2.8}$ 8.6
60+59.81 E.C.			+0.20		$\frac{11.6}{6.0}$ 5.3
60+0	1°42.8		0.00		$\frac{11.9}{2.5}$ 4.8
+50	3°08.6		-0.25	cut	
59+30	-E Portal		-0.35		12.3
BM #8	5.45	11.94	6.19		3 H=6 Pole 87 Rt. 59+70

Page 507

May 8-14
Sisson
81.55
Osborne

57

68+0

$\frac{11.3}{2.4}$
8.9

+50

$\frac{11.3}{2.4}$
8.9

67+08.87 E.C.

$\frac{11.3}{2.4}$
8.9

+65.85

$\frac{11.3}{2.4}$
8.9

122.81 B.C.H.

$\frac{11.3}{2.4}$
8.9

66+0

$\frac{11.3}{2.4}$
8.9

+50

$\frac{11.3}{2.4}$
8.9

65+0

$\frac{11.3}{2.4}$
8.9

+50

$\frac{11.3}{2.4}$
8.9

64+0 off set 10 ft

0.50

$\frac{11.3}{2.4}$
8.9

11.83

7210				3.83	18.7 7.4 c11.3
+50				2.83	19.7 8.9 c10.8
TP	10.65	22.56	0.55	x 11.91	10.6 0.6 c10.0
7240				1.83	11.0 2.5 c8.5
+50				1.50	11.3 5.9 c5.4
7140				1.16	11.6 1.9 c9.7
+50				0.83	12.0 5.4 c6.6
7040				0.50	12.0 2.3 c9.7
+50					11.3 5.1 c6.2
6940					12.0 2.3 c9.7
TP	5.96	12.26	5.12	6.90	11.3 5.1 c6.2
68450				0.50	11.83

For Sacking						
821 ^x 10	4.61	24.64		20.03	5.4	5.4
RM ^x 10			2.53	20.03	5.4	5.4
+ 52.78 Prod. For Sacking of Cross of C6. Corner				11.83	4.84	80.07
+ 47.84 = Exist Cross				11.83	4.84	80.07
RP 10 ^o RP Roof Nail 10 ^o 4 ^o Cross of 2 of 2						
+ 40.78 Δ 48.15 of 2						10.7 3.2 c7.5
+ 21.78 For Sacking 2 ^o Cross				11.83	9.15	10.7 3.2 c7.5
+ 20.95						
7640						
+ 50						10.7 3.2 c7.5
+ 41 Cross of Paving						
+ 25				11.83		11.2 4.0 c7.2
+ 6.41 Δ 35.36 of 18.47 of 2 RP 20 ^o W Prod. From East				9.50	14.59	12.0 4.9 c7.9
7540						12.2
+ 50						10.33 out
+ 25						15.7 4.9 c10.8
7440						6.33 out
+ 82						16.7 8.8 c7.9
73750						17.7 1.5 c16.2
				4.82		
						22.56

Dyke Pipeline

BM #7 3.99 8.73 4.74 Mon 84.81
53160

Track Grade -0.96

9.98
-1.25

BM #10 4.49 24.52 20.03 SW BP
50 River Bridge
Taylor St

Level For Telephone Conduit at Taylor

76+14.78 = Top Conduit Bottom 11.56 12.96

" 4.5' Lt 11.43

" 6.5' Lt 11.37

Levels For 8" Gasline at Taylor

76+0 Top Pav. Over 8" 5.03 18.49
Steel Gas line 5.30 Gas Co
Top 8" Gas line 13.19

May 23 44 59

Track Grade

BM #8 2.63 9.12 6.49 S. Nails Pole
82.81
59+70

59+46 Trench -0.27 Track 9.64
-0.52

59+32 -0.34 -0.59 9.71

59+20 n -0.35 9.47
5.80
0.87 Check

Grade Change Track 6-8.44

76+41 Cross on Pav 9.25 9.50 14.04
4.76
9.28

76+06.41 = Δ 9.50 14.04
5.09
8.95

20' W of 76+06.41 9.25 9.50 14.04
5.01
9.03
Prod. From Eon

BM #10 3.51 22.54 20.03 SW BP
50 River Br.
Taylor
For lock 3.18 23.21 20.03

Check Levels Pt Loma Sewer from
6+00 to 16+50

	2.96	3.30		Elev. Spoke
6+00				6.34
+25			2.17	7.13
+50			2.11	7.19
+75			1.70	7.60
7+00			1.37	7.93
+25			1.26	8.04
+50			1.15	8.15
+77.5 ⁵ EC			1.20	8.10
8+00			1.24	8.06
+50			1.45	7.85
9+00			1.91	7.39
+50			2.34	6.96
10+00	2.25	8.70	2.85	6.45
+50			2.67	6.03
11+00			3.11	5.59
+50			3.57	5.13
12+00			4.03	4.67
+50			4.78	3.92
13+00			5.27	3.43
+50			5.10	3.60

~~Indexed~~
~~BB~~

*
8.70

14+00			5.02	3.68
+50	4.58	7.93	5.35	3.35
15+00			5.18	2.75
+50			1.14	6.79
16+00			2.38	5.55
+50			5.14	2.79
BM. Check # 2			4.59	3.34

Paving Grades Alley Block 37 Pa. Sub. of Block H & J
 Terd Ha. Bot. Swift + 35 St. Orange to E/Cajon
 W L F

May 17 44
 Sisson
 81.00
 Osborne

150			378.97	5.46 2.22 c1.00 on Favel
2+0			378.77	5.11 2.86 c1.00 on Pd/c
150			378.57	5.86 5.22 c0.62
TP	5.23	38443	286	379.20
2+6			378.37	3.89 1.89 c2.00
150			378.17	3.99 3.66 c1.33
1+0		378.12	377.97	378.32 4.09 3.09 c1.00
170		377.96	377.80	378.13 4.26 3.23 c1.03
140		377.73	377.50	377.78 4.56 3.23 c1.33
0+0		377.38	377.00	377.22 8.42 4.24 c4.18
BM	6.13	382.06		375.93 NW. 8 P Orange + Swift
	5.81	381.74		375.93

Indexed

				42 Nov 28 44 Sisson 81.00 Osborne
6+0		378.03	380.03	4.33 4.30 on Pav
170		380.00	380.20	4.43 3.23 c1.20 on Pd/c
135		379.86	380.06	4.33 4.26 c0.73
5+0		379.72	379.57	379.92 4.51 4.28 c0.23
150		379.37		5.06 4.06 c1.00 on Favel
4+0		379.17		5.41 4.26 c1.15 on Pd/c
		384.43		

29th St. Curb & Gutter Grader West Side
Hartborn to Juniper

W Cb

W Gutter

W "

Indexed
B

June 5-1944

Sisson
8/155
0560' W "

62

W Gutter

W "

+50

262.65

+25

262.00

4.80

2+0

261.88

4.92

+75

262.15

1.65

261.77

5.63

262.61
4.19
4.25
F0.06

5+25

264.10

263.52

5.26

5+0

263.99

263.40

5.38

264.30

4.48

4+75

263.89

263.27

5.51

264.16

4.62

4.75
F0.13

4+50

263.78

263.15

5.63

264.01

4.77

4.95
F0.18

+50

262.07

4.73

261.65

5.15

262.47
4.33
4.36
F0.13

4+25

263.67

263.02

5.76

263.87

4.91

5.14
F0.23

+16.84

261.97

4.83

261.49

5.31

262.28
4.51
4.67
F0.10

4+0

262.90

5.88

263.73

5.05

1+0

261.96

4.84

261.42

5.38

262.21
4.59
4.59
F0.00

3+75

262.77

6.01

BM

4.84

266.80

261.96

Top Cb
1400

BM

3.73

268.78

265.05

SFBP
144 + 294

C6

Gutter

6+50

264.61

264.07

4.71 ✓

+25

263.97

4.81 ✓

6+0

263.87

4.91 ✓

+75

263.77

5.01 ✓

57.52

264.25

263.68

5.10 ✓

268.78 St. Ford

Crocker Drive Paving Grades M
 El Cajon Blvd to Catactin Dr.

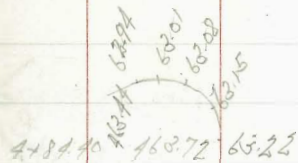
BM	3.65	469.31		465.66
TP	5.76	469	5.78	468.53

Indexed
 JB

NXBP
 El Cajon Blvd

June 10-44
 5:55 AM
 8:55 AM
 0560 AM

Catactin Dr.



410 464.35 63.85

150 464.65 64.15

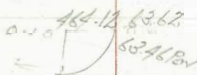
210 464.78 64.28

62.85 463.35 54.28.5

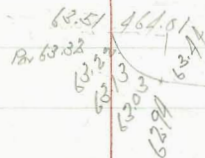
63.90 464.40

64.15 464.65

64.25 464.75



El Cajon Blvd.



Copeland Ave. Gutter Grade
Orange to El Cajon

BM 5.19

361.90

June 15-17
5:55 AM
8:15 AM
Osborne
H.H. BP
Orange
Copeland

~~Indexed~~
R

El Cajon

62.17
62.70

64.07
S.L. El Cajon

362.97 62.67 Par

Par 62.70 1/2 Drive

62.45 5+81=84 Drive

62.17
62.70

74c

0+0

61.89
61.79
61.10

361.90 61.55 Par

61.33
Par 61.28

361.63

61.50
-0.10

61.39
-0.11

61.28
road

61.53
61.23

Orange

74c

Palm St Grades Kettner to India

	H		S	
BM		536	99.14	H.F.B.P. Palm & India 99.30
1+995 - 44 India		97.53	97.81	
TP	8.38	102.50	0.25	94.12
+75		92.13	1.74 1.74 0.0 1.0	92.81
+54		88.51	5.86 5.86 0.0 1.0	
+50		87.74		87.82
				1.53 1.53 0.0 1.0
+25		82.84	11.53 11.53 0.0 1.0	82.83
TP	13.01	94.37	1.22	81.36
1+0		77.95	4.63 4.63 0.0 1.0	77.84
				4.74 4.74 0.0 1.0
+75		73.05	9.53 0.04	72.84
TP	12.83	82.58	0.47	69.75
+50		68.16	2.06 2.06 0.0 1.0	67.85
				2.37 2.37 0.0 35.8 R10/2
+25		63.26		62.86
0+0 F.L. Kettner		58.37		57.87
BM	12.73	70.22		57.49
				H.F.B.P. Palm & Kettner

July 10-14
S. 5502
8155
Osborne

66

Indexed
B

Macaulay St. Grader
 Chatsworth to Capistrano
 H.L. Stationing

see Page 72

M

1+0 123.58 $\begin{matrix} 11.0 \\ 10.8 \\ \hline 0.2 \end{matrix}$ 124.08 $\begin{matrix} 10.1 \\ 7.6 \\ \hline 2.5 \end{matrix}$

+50 124.06 $\begin{matrix} 10.5 \\ 11.0 \\ \hline 0.5 \end{matrix}$ 124.56 $\begin{matrix} 10.0 \\ 7.2 \\ \hline 2.8 \end{matrix}$

+30 H.F.V.C. 124.25 $\begin{matrix} 10.3 \\ 10.8 \\ \hline 0.5 \end{matrix}$ 124.75 $\begin{matrix} 9.8 \\ 8.0 \\ \hline 1.8 \end{matrix}$

+20.7 124.85 $\begin{matrix} 9.7 \\ 8.4 \\ \hline 1.3 \end{matrix}$

+17.5 124.25 $\begin{matrix} 10.3 \\ 10.6 \\ \hline 0.3 \end{matrix}$

0+0 = EL. Chatsworth 123.80 $\begin{matrix} 10.7 \\ 10.7 \\ \hline 0.0 \end{matrix}$ 125.85 $\begin{matrix} 8.7 \\ 8.6 \\ \hline 0.1 \end{matrix}$

BM 1.44 134.54 133.10 *Max 8 P
Narragansett
Chatsworth*

Sept. 14
 Sisson
 Bliss
 Osborn

~~Indexed~~

67

1+0 125.83 $\begin{matrix} 7.6 \\ 7.9 \\ \hline 0.3 \end{matrix}$ 126.33 $\begin{matrix} 7.1 \\ 8.0 \\ \hline 0.9 \end{matrix}$

+50 124.16 $\begin{matrix} 9.3 \\ 8.4 \\ \hline 0.9 \end{matrix}$ 124.66 $\begin{matrix} 8.8 \\ 8.9 \\ \hline 0.1 \end{matrix}$

TP 9.46 133.46 10.54 124.00

0+0 = EL. Mendota 122.50 $\begin{matrix} 12.0 \\ 11.5 \\ \hline 0.5 \end{matrix}$ 123.00 $\begin{matrix} 11.5 \\ 11.2 \\ \hline 0.3 \end{matrix}$

2 Mendota 122.90 $\begin{matrix} 11.6 \\ 12.0 \\ \hline 0.4 \end{matrix}$

+34.17 = H.L. Mendota 122.30 $\begin{matrix} 12.3 \\ 11.9 \\ \hline 0.4 \end{matrix}$ 122.80 $\begin{matrix} 11.7 \\ 10.5 \\ \hline 1.2 \end{matrix}$

2+0 122.62 $\begin{matrix} 11.9 \\ 9.9 \\ \hline 2.0 \end{matrix}$ 123.12 $\begin{matrix} 11.4 \\ 10.3 \\ \hline 1.1 \end{matrix}$

1+50 123.10 $\begin{matrix} 11.4 \\ 10.4 \\ \hline 1.0 \end{matrix}$ 123.60 $\begin{matrix} 10.9 \\ 9.0 \\ \hline 1.9 \end{matrix}$

134.54 T

FK Capistrano 132.00

132.50

+ 2512 - W.L. Capistrano 130.00

$$\begin{array}{r} 3.46 \\ 3.61 \\ \hline 70.15 \end{array}$$

130.50

$$\begin{array}{r} 3.0 \\ 1.8 \\ \hline 61.2 \end{array}$$

240

129.16

$$\begin{array}{r} 4.3 \\ 4.2 \\ \hline 60.7 \end{array}$$

129.66

$$\begin{array}{r} 5.8 \\ 5.3 \\ \hline 60.3 \end{array}$$

1450

127.50

$$\begin{array}{r} 6.0 \\ 5.8 \\ \hline 70.8 \end{array}$$

128.00

$$\begin{array}{r} 5.5 \\ 6.7 \\ \hline 71.2 \end{array}$$

133.46 11

Edna Place Paving Grades
37th St. to 38th St.

M

B.M.

5.43

374.20

36877

SE 8P
Edna Pl. &
Mt. View Dr.

Sept. 12, 44
S. W. 162
Bliss
Osborne

69

Indexed
92



378.3

Edna Place

Rated

383.0

369.81

69.15

69.25

689.95

69.25

59.8°

69.35

39

32

36

69.40

69.50

69.60

69.70

69.80

69.90

70.00

397.57

38th St Paving Grades

Stakes on St. Lots NEH

S.M.H.

Indexed
93

1+70.42 A

1+13 353.35
129
9.3
3.6

3+63 356.00
16.2
5.8
3.5

3+57.70 = Δ 356.70
9.6
5.5
2.1
0.70 old
Hub

3+20.9 360.30
6.0
2.4
3.6

2+90.9 362.70
3.6
1.4
2.2

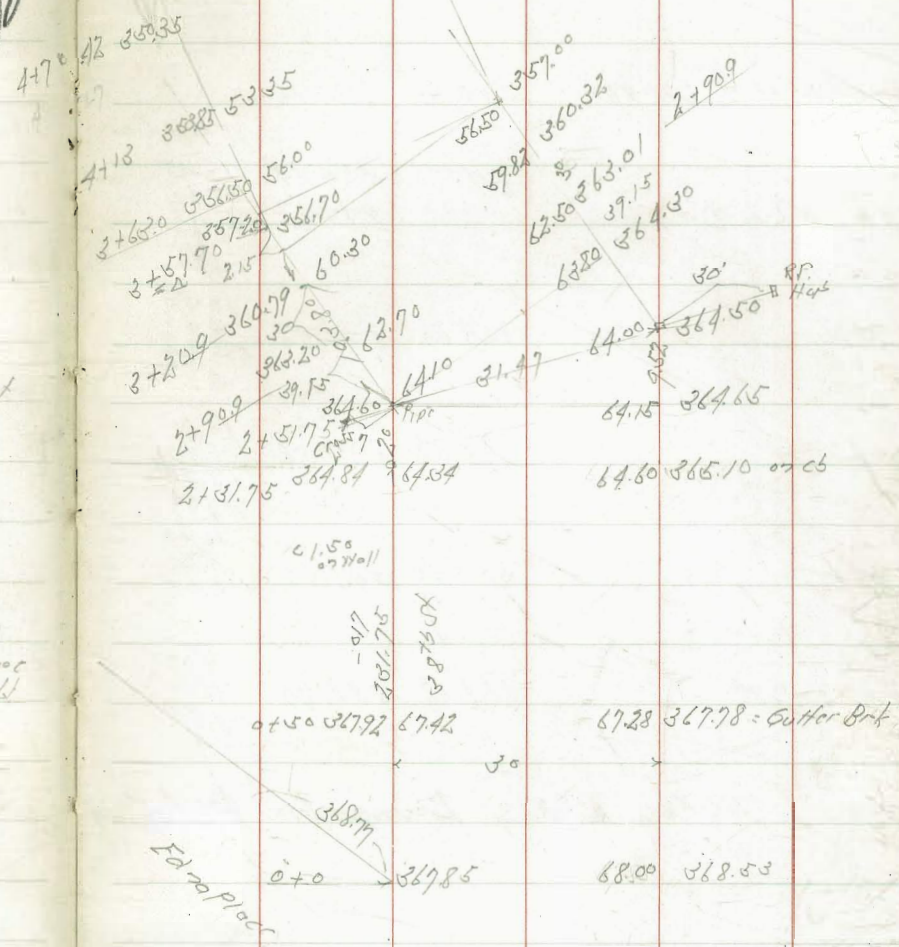
TP 2.00 366.26 7.98 364.26
0.9 Pipe
A 0.2

2+51.75 = X 364.10
7.6
7.2
0.10 0.20

2+31.75 = Brk 364.34
7.0
4.0
0.00 0.10 0.11

B.M. 2.97 371.74 368.77
S.F.R.P.
Edro Pl. &
Mt. View Dr.

Sept. 12-44
S. 11.50
8.14
0.56 0.01
70



Server Grader Alley Between Menlo + 49th

120 South of S.L. Dr 1964

9-18-44

S. 0004

Bliss

056000

	3.08	343.05	339.97	M.H.P.
BM	3.80	343.77	339.97	Dr 1964 + 47

Exit M.H. 2, Dr 1964	10.61	338.16		
----------------------	-------	--------	--	--

Flow Line

0+0 = S.L. Dr 1964	8.91	334.14	333.32	10.45 5.43 5.02 0.83 0.42°
--------------------	------	--------	--------	--

0+30		334.26	333.44	10.53 4.36 5.97 5.15
------	--	--------	--------	-------------------------------

0+60		334.38	333.56	10.21 5.00 5.26 4.37
------	--	--------	--------	-------------------------------

0+90		334.50	333.68	10.69 5.65 4.47
------	--	--------	--------	-----------------------

1+20 = D.L.		334.62	333.80	9.97 7.65 08.32
-------------	--	--------	--------	-----------------------

Alley, RLR 3, Bungalow Park Adm.

Indexed
92

Macadlay St. Grades
 Chatsworth to Capistrano
 H.L. Stationing

	H	Top Curbs	±	Rough Grades Page 67	±	Curb
1+0	16.0 9.4 0.6	123.58	9.37 10.8 Fol	9.8 10.8	123.73	124.08 9.5 8.7 0.6
+50	9.5 9.6 Fol	124.06	8.89 9.3 Fol	9.3 10.0	124.21	124.56 9.0 8.9 0.1
+80	9.3 9.3 0.0	124.25	8.70 9.1 Fol	9.1 9.8	124.40	124.75 8.8 8.6 0.2
+207						124.85 out
+17.5	9.3 9.4 Fol	124.25	8.55 9.0 Fol	9.0 9.7	124.52	125.00 8.5 8.3 0.2
0+0 = F.L. Chatsworth	9.7 9.7 0.0	123.80	8.25 8.7 Fol	8.7 9.7	124.85	125.85 9.7 9.6 0.1
B.M.	0.00	133.10				133.10
B.M.	0.44	133.54				133.10 N.M.P.P. for page sett + Chatsworth

0.50 Gutter

	H	Top Cb	±	S	W	72
670 = F.L. Mendota	9.1 9.1 0.0	122.50	10.75 8.9 2.9 0.0	122.65	123.00	8.6 0.1
						CB
						Sketch Page 75
						122.90
						CB
TP	8.44	131.57	10.41	123.12		0.07 2134.17 0.78 0.13
+34.17 = F.L. Mendota	11.2 10.8 0.4	122.30	10.65 11.1 0.5	122.45	122.80	10.7 10.5 0.2
2+13.4 = Cobblers						123.00 5.0 4.2 0.8
2+0	10.9 10.0 0.9	122.62	10.53 10.9 Fol	122.77	123.12	10.7 10.1 0.6
1+50	10.4 10.4 0.0	123.10 133.10 133.54	9.85 10.3 10.5 Fol	123.25	123.60	9.9 9.8 0.1

Maccawlayst

73

11

£

5

11

£

£

131.50

131.65

+2012 - 1/2
Capitron

1.6

1.3

00.5

130.00

295

1.4

1.6

130.15 For

£ +0

2.4

2.2

00.2

129.16

3.79

2.3

2.3

00

129.31

1+50

4.1

4.2

00.1

127.50

5.45

3.9

3.9

00

127.65

1+0

5.7

5.9

00.2

125.83

7.13

5.6

5.6

00

125.98

0+50

7.4

6.8

00.5

124.16

8.79

7.3

7.3

00

124.31

133.10

131.57

E.L. Capitron

133.00

133.15

Harragan St. Extension Chatsworth to Macaulay St.			
Sta.			
2+6734	8.2 8.3 Fo.1	125.98	126.48
2+3274	6.7 6.8 Fo.1	127.47	127.97
3-34.6			
1+9814 E.C.	5.18 5.2 0.0	128.95	129.45
C 24.575			
1+73.55	4.1 4.1 0.0	130.09	130.59
1+48.99	3.0 2.9 0.1	131.23	131.73
1+24.42	1.9 2.0 Fo.1	132.37	132.87
C 24.575			
C 23.05-344			
0+99.84 P.O.C.	0.07 1.5 Fo.8	133.50	134.00
BM	1.12	134.25	134.10
	1.17	134.27	134.10

0.17 Gutter

Indexed
92

N.W. BP
Chatsworth
Harragan St.

Sketch G 199 Page 1 Also Page 77 Hlg. 1557-Page 67			
4+44.73	10.0 out	124.20 = Gut.	125.37
3+32.02		C 24.56 For 28' RH	C 30.96 For 21' RH
4+11.71 = B.C.P.	11.0 10.5 0.07	123.78 = Gut.	123.99
3+80	11.7 11.7 0.0	122.53 = Gut.	123.20
3+60 = Cross = Gutter	11.8 11.8 0.02	122.40 = Gut.	122.80
3+40	11.5 11.2 0.3	122.71 = Gut.	123.20
3+20	out	123.87	124.01
3+09.84 = C 28.07 RH	10.0 10.4 Fo.4	124.21	
3+01.94 P.V.C.	9.7 9.7 0.0	124.50	124.64

Sept. 1971
S. J. J. J.
8/1/71
S. J. J. J.
74
R.T.C.S.

9.26 9.2
9.6
125.01 Fo.4

10.28 10.2
10.4
123.99 Fo.2

11.07 11.0
11.0
123.20 0.0

11.47 11.4
11.4
122.80 0.0

10.92 10.9
10.7
123.20 0.0

9.63 9.6
9.5
124.64 Co.1

134.27
134.22

610985.00	out	4.13	4.1	8.7
	130.00	130.14	130.50	2.3
		Fo.3		0.4

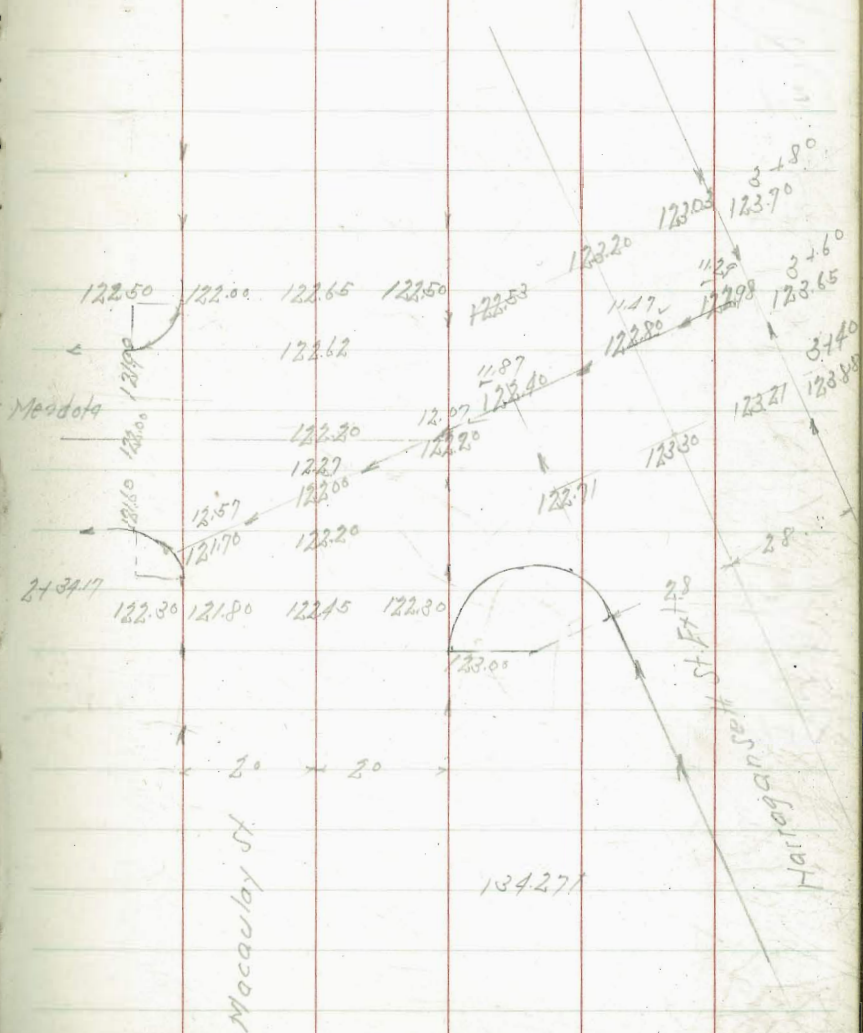
5176.82	out	5.1	5.1	4.8
	128.97	129.11	129.47	2.5
		6.6		0.3
		0.9		

5143.80	out	6.18	6.1	5.8
	129.95	128.09	128.45	2.5
		7.1		Fo.2
		1.0		

5110.78	out	7.21	7.2	6.8
	126.92	127.06	127.42	7.1
		Fo.9		Fo.3

4177.75	out	8.23	8.2	7.8
	125.90	126.04	126.40	2.1
		Fo.8		Fo.3

137.27
13422x



check levels Pt Loma Sewer

	494	6.16		1.22
4400			476	1.40
750			456	1.60
5400			443	1.73
750			1.05	5.11
79	430	7.41	3.05	3.11
6700			1.06	6.35

~~Indexed~~

Check Levels

Elev Grade

- +

6.4

429

380 PC

77

BM	5.44	7.89	2.45
Set BM		113	6.76
124750		300	4.89
124700		4.27	3.62
123750		10.11	-2.22
123725		4.98	2.91

4.9

120795⁷ 30. 380 4.09 -10.53 +14.62

Bliss Notes

Beeg T

Sanjour, N.J.

3/25/22

Check Levels - Point Loma Sewer

Witberdy St Pump House - West

4.40 6.85 2.45

0+04⁶⁶

0+25

0+50

0+75 4.39 2.46 19.935 22.395

1+00 4.80 2.05 19.91 21.96

1+25 4.95 1.90 19.89 21.79

1+50 6.05 0.80 19.87 20.67

1+71²³ B.C. 5.69 1.16 19.85 21.01

2+00 5.59 1.26 19.82 21.08

T.P. 4.48 5.64 5.69 1.16

2+25 5.04 0.60 19.80 20.40

2+50 4.66 0.98 19.78 20.76

2+75 4.67 0.97 19.75 20.72

3+00 4.63 1.01 19.73 20.74

3+25 4.43 1.21 19.71 20.92

3+50 4.48 1.16 19.69 20.85

3+69²⁰ EC.MH #65 4.42 1.22 19.67 20.89

cuts

Indexed
93

78

BM

2.954

4.40

6.854

5.69 -

1.164

4.481

25.644

600 25/41

Grades on East Side Thor St. North of
Main. Two Stakes on E Line Thor N. S. Sides of East West Alley

79

H Line	Slope	H Line #1/2	B.M. S.F. Main Thor
1438	1790 AVE	1760	7.05
2634-	401	953	7.33
864	10.37	9.85	14.38
	854	8.6	
	1.83	1.23	

~~Indexed~~
PB

90
140
230

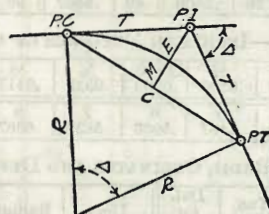
Sewer Laterals Block 21 Normal HTS

0700 E Line Cherokee	385.78 4.60	T 390.38
0490 Lateral #1	#1 390.38 + 4.47	6.12 - 385.26
2730 Lateral #2	385.91 slope 390.2 - elevation +5.69	4.05 + 388.31

#2
388.31
9.08 -
379.23
373.69
+5.54

DIETZGEN'S RAILROAD CURVE AND REDUCTION TABLES

Copyright, 1914, by Eugene Dietzgen Co., New York City



CURVE FORMULAS

Radius= $R = \frac{50}{\sin \frac{D}{2}}$ (1) Degree of Curve= D and $\sin \frac{D}{2} = \frac{50}{R}$ (2)

Tangent= $T = R \tan \frac{\Delta}{2}$ (3) Length of Curve= $L = 100 \frac{\Delta}{D}$ (4)

Middle ordinate= $M = R(1 - \cos \frac{\Delta}{2})$ (5) $= R \text{vers} \frac{\Delta}{2}$ (6)

External= $E = T \tan \frac{\Delta}{4} = R \div \cos \frac{\Delta}{2} - R$ (8) $= R \text{exsec} \frac{\Delta}{2}$ (9)

Long Chord= $C = 2 R \sin \frac{\Delta}{2}$ (10) $\Delta = \text{Central Angle}$

EXPLANATION AND USE OF TABLES

Stations.—Given P. I.—Sta. 161+60.35 to find Sta. of P. C. and P. T. $\Delta = 62^\circ 10'$ $D = 8^\circ 20'$. From Table IV for 1° curve $T = 3454.1$ and $\div 8\frac{1}{2} = 414.49$ ft. From Table V correction $= .36$ or $T = 414.85$ ft. P. C.—Sta. P.I.— $T = 157 + 45.50$. Also from (4) $L = 746.00$ and P. T.—Sta. P. C. + $L = 164 + 91.50$.

Offsets.—Tangent offsets vary (approximately) directly with D and with square of the distance. Thus tangent offset for Sta. 158 on above curve is 2.16 ft. found as follows. From Table III tangent offset for 100 ft. $= 7.27$ ft. Distance $= 158 - \text{Sta. P. C.} = 54.50$, hence offset $= 7.27 (54.50 \div 100)^2 = 2.16$ ft. Also square of any distance divided by twice the radius equals (approximately) the distance from tangent to curve. Thus $(54.50)^2 \div (2 \times 683.26) = 2.16$ ft.

Deflections.—Deflection angle $= \frac{1}{2} D$ for 100 ft., $\frac{1}{4} D$ for 50 ft., etc. For c ft. $= (\text{in minutes}) .3 \times C \times D^\circ$ or $= \text{defl. for 1 ft. from Table III} \times C$. For Sta. 158 of above curve $= .3 \times 54.5 \times 8\frac{1}{2} = 136.2'$ or $2^\circ 16.2'$, or $= 2.50 \times 54.5 = 136.2'$ from Table III. For Sta. 159 deflection angle $= 2^\circ 16.2' + 8^\circ 20' \div 2 = 6^\circ 26.2'$, etc.

Externals.—May be found in similar manner to tangents. Thus E for curve above is 91.37. For from Table IV for 1° curve $E = 960.6$ for $8^\circ 20' = 960.6 \div 8\frac{1}{2} = 91.27$ and from Table V correction $= .10$ or $E = 91.37$ ft. Or suppose $\Delta = 32^\circ$ and E is measured and found to be 42 ft. What is D ? From Table IV $E = 230.9$ and $\div 42 = 5.5$ or $D = 5^\circ 30'$.

164.675
 2.985
 167.660
 3.69
 164.08

BM # 9 S.E. 7th NSL 38th + Wightman 318.00
 " " 10 N.W. BP 38th + Univ 345.57
 " " 11 S.W. 7th K 38th + Polk 357.70
 " # 12 N.W. BP Orange 38th 368.08
 " # 13 N.W. 7th K Orange 369.99
 # 14 S.W. BP K/Cajon 37th 373.50

17 Rim M.H. opp 474.07 210.67

BM 200.50 S Rim M.H.

BM # 1 200.34 Cor M.H. + Wabart PC 600.00

DISTANCES FROM CENTER OF ROADWAY FOR
 CROSS-SECTIONING.

Roadway 16 feet wide. Side Slopes 1 on 1 1/2
 For Single Track Embankment.

H	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	H
0	8.0	8.2	8.3	8.5	8.6	8.8	8.9	9.1	9.2	9.4	0
1	9.5	9.7	9.8	10.0	10.1	10.3	10.4	10.6	10.7	10.9	1
2	11.0	11.2	11.3	11.5	11.6	11.8	11.9	12.1	12.2	12.4	2
3	12.5	12.7	12.8	13.0	13.1	13.3	13.4	13.6	13.7	13.9	3
4	14.0	14.2	14.3	14.5	14.6	14.8	14.9	15.1	15.2	15.4	4
5	15.5	15.7	15.8	16.0	16.1	16.3	16.4	16.6	16.7	16.9	5
6	17.0	17.2	17.3	17.5	17.6	17.8	17.9	18.1	18.2	18.4	6
7	18.5	18.7	18.8	19.0	19.1	19.3	19.4	19.6	19.7	19.9	7
8	20.0	20.2	20.3	20.5	20.6	20.8	20.9	21.1	21.2	21.4	8
9	21.5	21.7	21.8	22.0	22.1	22.3	22.4	22.6	22.7	22.9	9
10	23.0	23.2	23.3	23.5	23.6	23.8	23.9	24.1	24.2	24.4	10
11	24.5	24.7	24.8	25.0	25.1	25.3	25.4	25.6	25.7	25.9	11
12	26.0	26.2	26.3	26.5	26.6	26.8	26.9	27.1	27.2	27.4	12
13	27.5	27.7	27.8	28.0	28.1	28.3	28.4	28.6	28.7	28.9	13
14	29.0	29.2	29.3	29.5	29.6	29.8	29.9	30.1	30.2	30.4	14
15	30.5	30.7	30.8	31.0	31.1	31.3	31.4	31.6	31.7	31.9	15
16	32.0	32.2	32.3	32.5	32.6	32.8	32.9	33.1	33.2	33.4	16
17	33.5	33.7	33.8	34.0	34.1	34.3	34.4	34.6	34.7	34.9	17
18	35.0	35.2	35.3	35.5	35.6	35.8	35.9	36.1	36.2	36.4	18
19	36.5	36.7	36.8	37.0	37.1	37.3	37.4	37.6	37.7	37.9	19
20	38.0	38.2	38.3	38.5	38.6	38.8	38.9	39.1	39.2	39.4	20
21	39.5	39.7	39.8	40.0	40.1	40.3	40.4	40.6	40.7	40.9	21
22	41.0	41.2	41.3	41.5	41.6	41.8	41.9	42.1	42.2	42.4	22
23	42.5	42.7	42.8	43.0	43.1	43.3	43.4	43.6	43.7	43.9	23
24	44.0	44.2	44.3	44.5	44.6	44.8	44.9	45.1	45.2	45.4	24
25	45.5	45.7	45.8	46.0	46.1	46.3	46.4	46.6	46.7	46.9	25
26	47.0	47.2	47.3	47.5	47.6	47.8	47.9	48.1	48.2	48.4	26
27	48.5	48.7	48.8	49.0	49.1	49.3	49.4	49.6	49.7	49.9	27
28	50.0	50.2	50.3	50.5	50.6	50.8	50.9	51.1	51.2	51.4	28
29	51.5	51.7	51.8	52.0	52.1	52.3	52.4	52.6	52.7	52.9	29
30	53.0	53.2	53.3	53.5	53.6	53.8	53.9	54.1	54.2	54.4	30
31	54.5	54.7	54.8	55.0	55.1	55.3	55.4	55.6	55.7	55.9	31
32	56.0	56.2	56.3	56.5	56.6	56.8	56.9	57.1	57.2	57.4	32
33	57.5	57.7	57.8	58.0	58.1	58.3	58.4	58.6	58.7	58.9	33
34	59.0	59.2	59.3	59.5	59.6	59.8	59.9	60.1	60.2	60.4	34
35	60.5	60.7	60.8	61.0	61.1	61.3	61.4	61.6	61.7	61.9	35
36	62.0	62.2	62.3	62.5	62.6	62.8	62.9	63.1	63.2	63.4	36
37	63.5	63.7	63.8	64.0	64.1	64.3	64.4	64.6	64.7	64.9	37
38	65.0	65.2	65.3	65.5	65.6	65.8	65.9	66.1	66.2	66.4	38
39	66.5	66.7	66.8	67.0	67.1	67.3	67.4	67.6	67.7	67.9	39
40	68.0	68.2	68.3	68.5	68.6	68.8	68.9	69.1	69.2	69.4	40

Example—If point is 22.6 ft. above grade, how far should it be from center line to be a slope stake point? Ans. from Table 41.9. For same slopes but other widths of roadbed correct above figures by one-half difference in width of roadbed; thus in example above for 20 ft. roadbed distance will be 41.9 + (20 - 16) * 2 or 2 ft. added to 41.9 = 43.9. For slopes of 1 on 1 see inside of front cover.