

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.

14 43 15
29 26 30
44 09 45
14 43 15
58 53 60

453.73
4.37
458.10

MICROFILMED

APR 14 1965

TABLE II — Continued
TRIGONOMETRIC FORMULÆ (continued)

in any triangle:

Given a, b, C; to find c, B, A.

Use Law of Lines.

Given A, B, c; to find a, b, C.

Use Law of Lines.

Given a, b, c; to find A, B, C.

$$\text{Let } \frac{a+b+c}{2} = s, \sqrt{\frac{(s-a)(s-b)(s-c)}{s}} = r$$

$$\cos \frac{1}{2} A = \sqrt{\frac{s(s-a)}{bc}}$$

$$\tan \frac{1}{2} A = \frac{r}{s-a}$$

$$\tan \frac{1}{2} B = \frac{r}{s-b}$$

$$\tan \frac{1}{2} C = \frac{r}{s-c}$$

Area of a triangle:

$$\text{Area} = \frac{1}{2} ab \sin C$$

$$\text{Area} = \sqrt{s(s-a)(s-b)(s-c)}$$

PRISMOIDAL FORMULA.

$$\text{Vol.} = \frac{h}{6} (B+b+4M)$$

h = altitude; b, B = bases; M = midsection

TABLE III
INCHES AND FRACTIONS OF AN INCH IN DECIMALS OF A FOOT

	0	1	2	3	4	5	6	7	8	9	10	11	
1/16	.0052	.0885	.1719	.2552	.3385	.4219	.5052	.5885	.6719	.7552	.8385	.9219	1/8
1/8	.0104	.0938	.1771	.2604	.3438	.4271	.5104	.5938	.6771	.7604	.8438	.9271	1/4
3/16	.0156	.0990	.1823	.2656	.3490	.4323	.5156	.5990	.6823	.7656	.8490	.9323	1/2
1/4	.0208	.1042	.1875	.2708	.3542	.4375	.5208	.6042	.6875	.7708	.8542	.9375	3/4
5/16	.0260	.1094	.1927	.2760	.3594	.4427	.5260	.6094	.6927	.7760	.8594	.9427	7/8
3/8	.0313	.1146	.1979	.2813	.3646	.4479	.5313	.6146	.6979	.7813	.8646	.9479	1
7/16	.0365	.1198	.2031	.2865	.3698	.4531	.5365	.6198	.7031	.7865	.8698	.9531	1 1/8
1/2	.0417	.1250	.2083	.2917	.3750	.4583	.5417	.6250	.7083	.7917	.8750	.9583	1 1/4
9/16	.0469	.1302	.2135	.2969	.3803	.4635	.5469	.6302	.7135	.7969	.8802	.9635	1 1/2
5/8	.0521	.1354	.2188	.3021	.3854	.4688	.5521	.6354	.7188	.8021	.8854	.9688	1 3/4
11/16	.0573	.1406	.2240	.3073	.3906	.4740	.5573	.6406	.7240	.8073	.8906	.9740	2
3/4	.0625	.1458	.2292	.3125	.3958	.4792	.5625	.6458	.7292	.8125	.8958	.9792	2 1/4
13/16	.0677	.1510	.2344	.3177	.4010	.4844	.5677	.6510	.7344	.8177	.9010	.9844	2 1/2
7/8	.0729	.1563	.2396	.3229	.4063	.4896	.5729	.6563	.7396	.8229	.9063	.9896	2 3/4
15/16	.0781	.1615	.2448	.3281	.4115	.4948	.5781	.6615	.7448	.8281	.9115	.9948	3
1	.0833	.1667	.2500	.3333	.4167	.5000	.5833	.6667	.7500	.8333	.9167	1.000	
	0	1	2	3	4	5	6	7	8	9	10	11	

TABLE IV — RADII, ORDINATES AND DEFLECTIONS

Deg.	Radius	Mid. Ord.	Tan. Offset	Def. for 1 Foot	Deg.	Radius	Mid. Ord.	Tan. Offset	Def. for 1 Foot	
0°	10'	34377.5	.036	.145	0.05'	7°	819.02	1.528	6.105	2.10'
	20	17188.8	.073	.291	0.10	20'	781.84	1.600	6.395	2.20
	30	11459.2	.109	.436	0.15	30	764.49	1.637	6.540	2.25
	40	8594.42	.145	.582	0.20	40	747.89	1.673	6.685	2.30
	50	6875.55	.182	.727	0.25					
1		5729.65	.218	.873	0.30	8	716.78	1.746	6.976	2.40
	10	4911.15	.255	1.018	0.35	20	688.16	1.819	7.266	2.50
	20	4297.28	.291	1.164	0.40	30	674.69	1.855	7.411	2.55
	30	3819.83	.327	1.309	0.45	40	661.74	1.892	7.556	2.60
	40	3437.87	.364	1.454	0.50					
	50	3125.36	.400	1.600	0.55	9	637.28	1.965	7.846	2.70
2		2864.93	.436	1.745	0.60	20	614.56	2.037	8.136	2.80
	10	2644.58	.473	1.891	0.65	30	603.80	2.074	8.281	2.85
	20	2455.70	.509	2.036	0.70	40	593.42	2.110	8.426	2.90
	30	2292.01	.545	2.181	0.75					
	40	2148.79	.582	2.327	0.80	10	573.69	2.183	8.716	3.00
	50	2022.41	.618	2.472	0.85	30	546.44	2.292	9.150	3.15
3		1910.08	.655	2.618	0.90	30	521.67	2.402	9.585	3.30
	10	1809.57	.691	2.763	0.95	30	499.06	2.511	10.02	3.45
	20	1719.12	.727	2.908	1.00	30	478.34	2.620	10.45	3.60
	30	1637.28	.764	3.054	1.05	30	459.28	2.730	10.89	3.75
	40	1562.88	.800	3.199	1.10	30	441.68	2.839	11.32	3.90
	50	1494.95	.836	3.345	1.15	30	425.40	2.949	11.75	4.05
4		1432.69	.873	3.490	1.20	30	410.28	3.058	12.18	4.20
	10	1375.40	.909	3.635	1.25	30	396.20	3.168	12.62	4.35
	20	1322.53	.945	3.718	1.30					
	30	1273.57	.982	3.926	1.35	15	383.07	3.277	13.05	4.50
	40	1228.11	1.018	4.071	1.40	30	370.78	3.387	13.49	4.65
	50	1185.78	1.055	4.217	1.45	30	359.27	3.496	13.92	4.80
5		1146.28	1.091	4.362	1.50	30	348.45	3.606	14.35	4.95
	10	1109.33	1.127	4.507	1.55	30	338.27	3.716	14.78	5.10
	20	1074.68	1.164	4.653	1.60	30	319.62	3.935	15.64	5.40
	30	1042.14	1.200	4.798	1.65	30	302.94	4.155	16.51	5.70
	40	1011.51	1.237	4.943	1.70					
	50	982.64	1.273	5.088	1.75	20	287.94	4.374	17.37	6.00
6		955.37	1.309	5.234	1.80	20	274.37	4.594	18.22	6.30
	10	929.57	1.346	5.379	1.85	20	262.04	4.814	19.08	6.60
	20	905.13	1.382	5.524	1.90	20	250.79	5.035	19.94	6.90
	30	881.95	1.418	5.669	1.95	20	240.49	5.255	20.79	7.20
	40	859.92	1.455	5.814	2.00	25	231.01	5.476	21.64	7.50
						26	222.27	5.697	22.50	7.80
						27	214.18	5.918	23.35	8.10
						28	206.68	6.139	24.19	8.40
						29	199.70	6.360	25.04	8.70
						30	193.18	6.583	25.88	9.00

Note. Chord Deflection = 2 times tangent deflection.

16+43.87
15+53.23
90.64

TABLE IX
MIDDLE ORDINATES OF RAILS
Length of Rail (feet)

C o'	R Feet	30 Inch	28 Inch	26 Inch	24 Inch	22 Inch	20 Inch	C o'	R Feet	30 Inch	28 Inch	26 Inch	24 Inch	22 Inch	20 Inch
0-20	17189	.08	.07	.06	.05	.04	.03	8	716.8	1.88	1.64	1.42	1.20	1.01	.84
0-40	8594	.16	.14	.12	.10	.08	.07	9	637.3	2.12	1.84	1.60	1.35	1.14	.94
1-0	5730	.24	.20	.18	.15	.13	.10	10	573.7	2.36	2.05	1.78	1.50	1.27	1.04
1-20	4297	.31	.27	.23	.20	.17	.13	11	521.7	2.59	2.26	1.95	1.65	1.39	1.15
1-40	3438	.39	.34	.29	.25	.21	.17	12	478.3	3.83	2.47	2.15	1.81	1.54	1.26
2-0	2865	.47	.41	.35	.30	.25	.20	13	441.7	3.05	2.66	2.30	1.96	1.66	1.36
2-20	2456	.55	.48	.41	.35	.29	.23	14	410.3	3.30	2.87	2.48	2.10	1.78	1.46
2-40	2149	.63	.55	.47	.40	.33	.27	15	383.1	3.54	3.08	2.68	2.26	1.91	1.57
3-0	1910	.71	.62	.53	.45	.38	.31	16	359.3	3.76	3.28	2.83	2.40	2.04	1.67
3-20	1719	.78	.68	.59	.50	.42	.35	17	338.3	4.00	3.48	3.02	2.57	2.16	1.78
3-40	1563	.86	.75	.65	.55	.46	.38	18	319.6	4.21	3.67	3.18	2.70	2.28	1.87
4-0	1433	.94	.82	.71	.60	.50	.42	19	302.9	4.45	3.89	3.36	2.86	2.41	1.98
4-20	1323	1.02	.89	.77	.65	.55	.45	20	287.9	4.70	4.09	3.55	3.00	2.54	2.09
4-40	1228	1.10	.96	.83	.70	.59	.48	22	262.0	5.16	4.44	3.84	3.30	2.80	2.29
5	1146	1.18	1.03	.89	.75	.63	.52	24	240.5	5.64	4.92	4.20	3.59	3.04	2.50
6	955.3	1.41	1.23	1.06	.90	.76	.62	26	222.3	6.07	5.29	4.58	3.88	3.29	2.70
7	819.0	1.65	1.44	1.24	1.05	.89	.73								

TABLE X
SHORT RADIUS CURVES

Radius Feet	Chord Feet	Central Angle	Deflection Angle	Deflection for 1 Foot
35	10	16-26	8-13	49.3
45	10	12-46	6-23	38.3
50	15	17-16	8-38	34.5
60	15	14-22	7-11	28.8
75	15	11-30	5-45	23.0
100	20	11-30	5-45	17.3
120	20	9-34	4-47	14.3
150	20	7-39	3-49	11.5
190	25	7-32	3-46	9.15
200	25	7-10	3-35	8.6
225	25	6-25	3-12	7.7
240	25	5 58	2-59	7.2
250	25	5 44	2-52	6.9
275	25	5-12	2-36	6.2
288	50	9-58	4-59	6.0
300	50	9-32	4-46	5.7
350	50	8-12	4-06	4.9
376	50	7-40	3-50	4.6
400	50	7-10	3-35	4.3
410	50	7-00	3-30	4.2

To find length of curve divide angle from P. C. to P. T. by central angle of chord, and multiply by length of chord.

TABLE XI
INCLINED DISTANCE OF 100 FT. REDUCED TO HORIZONTAL.

Slope	Horizontal Distance	Correction	Rise	Slope	Horizontal Distance	Correction	Rise
0°00'	100.000	0.000	0.000	8°00'	99.027	0.973	0.139
15'	99.999	0.001	0.004	15'	98.965	1.035	0.143
30'	99.996	0.004	0.009	30'	98.902	1.098	0.148
45'	99.991	0.009	0.013	45'	98.836	1.164	0.152
1 00	99.985	0.015	0.017	9 00	98.769	1.231	0.156
15	99.976	0.024	0.022	15	98.700	1.300	0.161
30	99.966	0.034	0.026	30	98.629	1.371	0.165
45	99.953	0.047	0.031	45	98.556	1.444	0.169
2 00	99.939	0.061	0.035	10 00	98.481	1.519	0.174
15	99.923	0.077	0.039	15	98.404	1.596	0.178
30	99.905	0.095	0.044	30	98.325	1.675	0.182
45	99.885	0.115	0.048	45	98.245	1.755	0.187
3 00	99.863	0.137	0.052	11 00	98.163	1.837	0.191
15	99.839	0.161	0.057	15	98.079	1.921	0.195
30	99.813	0.187	0.061	30	97.992	2.008	0.199
45	99.786	0.214	0.065	45	97.905	2.095	0.204
4 00	99.756	0.244	0.070	12 00	97.815	2.185	0.208
15	99.725	0.275	0.074	15	97.723	2.277	0.212
30	99.692	0.308	0.078	30	97.630	2.370	0.216
45	99.657	0.343	0.083	45	97.534	2.466	0.221
5 00	99.619	0.381	0.087	13 00	97.437	2.563	0.225
15	99.580	0.420	0.092	15	97.338	2.662	0.229
30	99.540	0.460	0.096	30	97.237	2.763	0.233
45	99.497	0.503	0.100	45	97.134	2.866	0.238
6 00	99.452	0.548	0.105	14 00	97.030	2.970	0.242
15	99.406	0.594	0.109	15	96.923	3.077	0.246
30	99.357	0.643	0.113	30	96.815	3.185	0.250
45	99.307	0.693	0.118	45	96.705	3.295	0.255
7 00	99.255	0.745	0.122	15 00	96.593	3.407	0.259
15	99.200	0.800	0.126	15	96.479	3.521	0.263
30	99.144	0.856	0.131	30	96.363	3.637	0.267
45	99.087	0.913	0.135	45	96.246	3.754	0.271

For each foot take one one-hundredth of each reading.

TABLE XII
MINUTES IN DECIMALS OF A DEGREE.

0'30''	.00833	10'30''	.17500	20'30''	.34167	30'30''	.50833	40'30''	.67500	50'30''	.84167
1 00	.01667	11 00	.18333	21 00	.35000	31 00	.51667	41 00	.68333	51 00	.85000
30	.02500	30	.19167	30	.35833	30	.52500	30	.69167	30	.85833
2 00	.03333	12 00	.20000	22 00	.36667	32 00	.53333	42 00	.70000	52 00	.86667
30	.04167	30	.20833	30	.37500	30	.54167	30	.70833	30	.87500
3 00	.05000	13 00	.21667	23 00	.38333	33 00	.55000	43 00	.71667	53 00	.88333
30	.05833	30	.22500	30	.39167	30	.55833	30	.72500	30	.89167
4 00	.06667	14 00	.23333	24 00	.40000	34 00	.56667	44 00	.73333	54 00	.90000
30	.07500	30	.24167	30	.40833	30	.57500	30	.74167	30	.90833
5 00	.08333	15 00	.25000	25 00	.41667	35 00	.58333	45 00	.75000	55 00	.91667
30	.09167	30	.25833	30	.42500	30	.59167	30	.75833	30	.92500
6 00	.10000	16 00	.26667	26 00	.43333	36 00	.60000	46 00	.76667	56 00	.93333
30	.10833	30	.27500	30	.44167	30	.60833	30	.77500	30	.94167
7 00	.11667	17 00	.28333	27 00	.45000	37 00	.61667	47 00	.78333	57 00	.95000
30	.12500	30	.29167	30	.45833	30	.62500	30	.79167	30	.95833
8 00	.13333	18 00	.30000	28 00	.46667	38 00	.63333	48 00	.80000	58 00	.96667
30	.14167	30	.30833	30	.47500	30	.64167	30	.80833	30	.97500
9 00	.15000	19 00	.31667	29 00	.48333	39 00	.65000	49 00	.81667	59 00	.98333
30	.15833	30	.32500	30	.49167	30	.65833	30	.82500	30	.99167
10 00	.16667	20 00	.33333	30 00	.50000	40 00	.66667	50 00	.83333	60 00	1.00000

TABLE XIII—CORRECTIONS FOR TANGENTS AND EXTERNALS

These corrections are to be added to the approximate values, found by dividing the tangent, or external, for a 1° curve (Table VIII) by the degree of curve, in order to obtain the true tangents, or externals. Intermediate values may be obtained by interpolation.

FOR TANGENTS ADD

Central Angle	DEGREE OF CURVE													
	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°
10°	.03	.06	.09	.13	.16	.19	.22	.25	.28	.31	.34	.38	.42	.46
15°	.04	.10	.14	.19	.24	.29	.34	.39	.45	.51	.53	.58	.63	.68
20°	.06	.13	.19	.26	.32	.39	.45	.51	.58	.65	.72	.79	.84	.90
25°	.08	.16	.24	.33	.40	.49	.58	.67	.75	.83	.90	.99	1.06	1.14
30°	.10	.19	.29	.39	.49	.59	.69	.79	.89	.99	1.09	1.20	1.29	1.39
35°	.11	.22	.34	.47	.58	.69	.79	.81	.92	1.04	1.29	1.42	1.54	1.66
40°	.13	.26	.40	.53	.67	.80	.93	1.06	1.20	1.34	1.49	1.64	1.79	1.94
45°	.15	.30	.44	.60	.76	.91	1.06	1.21	1.37	1.52	1.70	1.87	2.04	2.21
50°	.17	.34	.51	.68	.85	1.02	1.19	1.36	1.54	1.72	1.91	2.10	2.29	2.48
55°	.19	.38	.57	.76	.95	1.14	1.32	1.52	1.72	1.92	2.14	2.35	2.56	2.77
60°	.21	.42	.63	.84	1.05	1.27	1.49	1.71	1.94	2.17	2.38	2.60	2.83	3.07
65°	.23	.46	.69	.93	1.16	1.40	1.64	1.88	2.13	2.38	2.63	2.88	3.13	3.39
70°	.25	.51	.76	1.02	1.28	1.54	1.80	2.06	2.33	2.60	2.88	3.16	3.44	3.72
75°	.27	.56	.83	1.12	1.40	1.69	1.98	2.27	2.57	2.87	3.16	3.47	3.78	4.09
80°	.30	.61	.91	1.22	1.53	1.84	2.15	2.46	2.78	3.10	3.44	3.78	4.12	4.46
85°	.33	.66	1.00	1.33	1.68	2.02	2.36	2.70	3.05	3.40	3.77	4.14	4.55	4.89
90°	.36	.72	1.09	1.45	1.83	2.20	2.57	2.94	3.32	3.70	4.10	4.50	4.91	5.32
95°	.39	.79	1.19	1.55	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	.266	.353	.440	.528	.617	.707	.797	.877	1.07	1.18	1.29	1.39
80°	.110	.220	.332	.445	.558	.671	.787	.903	1.02	1.13	1.25	1.38	1.50	1.62
85°	.128	.259	.391	.524	.657	.790	.926	1.06	1.20	1.34	1.47	1.62	1.76	1.91
90°	.149	.299	.450	.603	.756	.910	1.07	1.22	1.38	1.54	1.70	1.87	2.03	2.20
95°	.174	.350	.522	.706	.885	1.06	1.25	1.43	1.62	1.80	1.99	2.18	2.38	2.58
100°	.200	.401	.604	.809	1.01	1.22	1.43	1.64	1.85	2.06	2.28	2.50	2.73	2.96
110°	.268	.536	.806	1.08	1.35	1.63	1.91	2.20	2.48	2.76	3.05	3.35	3.66	3.96
120°	.360	.721	1.08	1.45	1.82	2.19	2.57	2.95	3.33	3.72	4.11	4.50	4.91	5.32

Improve, Montezuma Rd, College Ave to El Cajon Ave. et al 1-57

Alley bet Boundary & Nile, S. from Dwight 58
 " So 100' from Dwight - Boundary & Nile 60

Return Lt.

Reset Sept. 7, 51

E.C. 16+43.87

461.71
454.28
7.43
7.39
C-0.04

#1

461.71
454.30
7.41
7.45
F-0.04

#2

461.71
454.34
7.37
7.53
F-0.16

3.20 461.71

#3
461.71
454.39
7.32
7.48
F-0.16

#4
461.71
454.44
7.27
7.43
F-0.16

0.18	458.69	0.10	458.51	Top F.Hy. S.E. 63 rd Montezuma
8.94	458.61	1.68	449.65	
2.74	451.33	7.77	448.59	
6.53	456.36		449.83	NEBP College of Montezuma

W.O. 22007

Aug. 20/51

E.C. 15+50.96

454.34

#1
458.69
454.40
4.29
4.27
C-0.02

#2
458.69
454.45
4.29
3.98
C-0.26

#3
458.69
454.55 B.C.
4.14
3.97
C-0.17

Improve
Montezuma Road from
College Ave to El Cajon

Rt.

18°18'

18°18'

18°18'

Δ 5454.01
R=40
L=38.33

63rd St

Lt.

E.C. 16+43.87
454.28

Δ 5853.03"
R=35.18
L=36.16

14°43'15" II

14°43'15" II

#1
458.69
454.30
4.39
4.28
C-0.11

#2
458.69
454.34
4.35
4.20
C-0.15

#3
458.69
454.39
4.30
4.28
C-2.42

#4
B.C. 458.69
454.44
4.25
4.79
C-2.46

INDEXED

DEC. 4 1951

Cb.

G

1/4

E

1/4

G

Cb. 2

15+90

459.42
 +53.68
 5.74
 0.25
 5.99

4.97
 0.44
 5.41

459.05
 454.45
 4.60
 0.75
 5.35
 459.42
 454.45
 4.97
 0.25
 5.22

4.60
 0.94
 5.54
 4.97
 0.44
 5.41

453.68

458.69
 454.35
 4.34
 4.42
 F-0.12

15+81.21 (40' Lt)

+79.5 Exist. M.H.

458.64
 454.45
 4.19

15+60

459.42
 453.68
 5.74
 0.25
 5.99

4.97
 0.44
 5.41

459.05
 454.45
 4.60
 0.75
 5.35
 459.42
 454.45
 4.97
 0.25
 5.22

4.60
 0.94
 5.54

453.68

458.69
 454.35
 4.34
 4.20
 C-0.14

15+53.23 E
 (Begin job)

454.44

15+50.96 E.G.R4.

+30 (Lt)

0.54 459.05

459.42
 453.63
 5.79
 0.25
 6.04

458.51 Top F.H.
 S/E 63rd & Mont.

453.67

458.69
 454.34
 4.35
 4.20
 C-0.15

	Cb.	G.	1/4	£	1/4	G	Cb. 3
17+10	458.69 454.05 4.64 4.66 F-0.02	453.38	4.90 0.94 5.84	459.05 454.15 4.90 0.75 5.65	4.90 0.94 5.84	453.38	458.69 454.05 4.64 4.79 F-0.15
16+80	458.69 454.18 4.51 4.35 C-0.16	453.51	4.77 0.94 5.71	459.05 454.28 4.77 0.75 5.52	4.77 0.94 5.71	453.51	458.69 454.18 4.51 4.70 F-0.19
16+50	458.69 454.27 4.42 4.27 C-0.15	453.60	5.05 0.44 5.49	459.05 454.37 4.68 0.75 5.43 459.42 454.37 5.05 0.22 5.30	4.68 0.94 5.62 5.05 0.44 5.49	453.60	458.69 454.27 4.42 4.64 F-0.22
16+43.87 E.C.Lt.	458.69 454.28 4.41 4.27 C-0.14	459.42 453.61 5.81 0.25 6.06					
16+20		459.42 453.66 5.76 0.25 6.01	4.62 0.94 5.56 4.99 0.44 5.43	459.05 454.43 4.62 .75 5.37 459.42 454.43 4.99 0.22 5.24	4.62 0.94 5.56 4.99 0.44 5.43	453.66	458.69 454.33 4.36 4.66 F-0.30

	Ob.	G.	1/4	£	1/4	G	Ob.	4
+50	458.69 453.31 <u>5.38</u> <u>5.34</u> C-0.04		5.85 0.94 <u>6.79</u>	459.05 453.20 <u>5.85</u> <u>0.75</u> 6.60	5.85 0.94 <u>6.79</u>	459.05 452.43 <u>6.62</u> <u>0.75</u> 7.37	458.69 453.10 <u>5.59</u> <u>5.71</u> F-0.12	
+25	458.69 453.44 <u>5.25</u> <u>5.03</u> F0.22		5.66 Not set 0.94 <u>6.60</u>	459.05 453.39 <u>5.66</u> <u>0.75</u> 6.41	5.66 Not set 0.94 <u>6.60</u>		458.69 453.29 <u>5.40</u> <u>4.85</u> C-0.65	
18+00	458.69 453.56 <u>5.13</u> <u>5.32</u> F-0.21		5.46 0.94 <u>6.40</u>	459.05 453.59 <u>5.46</u> <u>0.75</u> 6.21	5.46 0.94 <u>6.40</u>	452.82	458.69 453.49 <u>5.20</u> <u>4.76</u> C-0.44	
17+70	458.69 453.71 <u>4.98</u> <u>4.98</u> 0.00	453.04	5.24 0.94 <u>6.18</u>	459.05 453.81 <u>5.24</u> <u>0.75</u> 5.99	5.24 0.94 <u>6.18</u>	453.04	458.69 453.71 <u>4.98</u> <u>4.74</u> C-0.24	
17+40	458.69 453.90 <u>4.79</u> <u>4.84</u> F 0.05	453.23	5.05 0.94 <u>5.99</u>	459.05 454.00 <u>5.05</u> <u>0.75</u> 5.80	5.05 0.94 <u>5.99</u>	453.23	458.69 453.90 <u>4.79</u> <u>4.67</u> C-0.12	

	Cl.	G	1/4	1/2	3/4	G	Cl. 5
+50	452.31	456.22 3.96 452.20	456.22 3.81 0.75 4.56	456.22 452.41	3.81 0.94 4.75		458.69 452.31 6.38 6.34 0-0.04
+30.76 (Ex.P.Lt)	458.69 452.91	452.91					
	5.78 5.77 0.01						
+25	458.69 452.93			452.61			458.69 452.51 6.18 6.06 0-0.12
	5.76 5.81 F-0.05						
4.35	456.22 459.05	7.18	451.87				
19+00	458.69 453.06		6.25 0.94 7.19	459.05 452.80	6.25 0.94 7.19	459.05 452.04	458.69 452.71 5.98 6.18 F-0.20
+80 Exist. M.H.	5.63 5.73 F0.10			6.25 0.75 7.00 458.64 452.96 5.68		7.01 0.75 7.76	
+75	458.69 453.19			453.00			458.69 452.90 5.79 5.87 F0.08
	5.50 5.53 F-0.03						

	cb	G	1/4	L	1/4	G	cb 6
+75				451.43			455.24 457.33 3.91 3.57 C-0.34
+50		456.22 4.78 (0.19) 451.44	456.22 451.63 4.59 0.75 5.34	456.22 451.63 4.59 0.75 5.34	4.59 0.94 5.53		455.24 451.53 3.71 3.47 C-0.24
+25							455.24 451.72 3.52 3.43 C-0.09
20+00		456.22 4.36 (0.19) 451.86	456.22 452.02 4.20 0.75 4.95	456.22 452.02 4.20 0.75 4.95	3.33 455.24 459.69 4.20 0.94 5.14	6.78	451.91 458.69 451.92 6.77 6.78 F-0.01
+75				452.21 Not set			458.69 452.12 6.57 6.74 F-0.17

Cp. Gut 1/4 ♀ 1/4 Gut. Cb. 7

22+00

$$\begin{array}{r} 456.22 \\ 5.87 \\ \hline 450.35 \end{array} \quad \begin{array}{r} 456.22 \\ 450.44 \\ \hline 5.78 \\ 0.75 \\ \hline 6.53 \end{array}$$

$$\begin{array}{r} 456.22 \\ 450.44 \\ \hline 5.78 \\ 0.75 \\ \hline 6.53 \end{array}$$

$$\begin{array}{r} 455.24 \\ 450.34 \\ \hline 4.90 \\ 4.89 \\ \hline C-0.01 \end{array}$$

+75

$$\begin{array}{r} 455.24 \\ 450.54 \\ \hline 4.70 \\ 4.69 \\ \hline C-0.01 \end{array}$$

+50

$$\begin{array}{r} 456.22 (54) \\ 5.32 \\ \hline 450.90 \end{array} \quad \begin{array}{r} 456.22 \\ 450.84 \\ \hline 5.38 \\ 0.75 \\ \hline 6.13 \end{array}$$

$$\begin{array}{r} 456.22 \\ 450.84 \\ \hline 5.38 \\ 0.75 \\ \hline 6.13 \end{array}$$

$$\begin{array}{r} 455.24 \\ 450.74 \\ \hline 4.50 \\ 4.41 \\ \hline C-0.09 \end{array}$$

+25

+20.6 Exist. M.H.

$$\begin{array}{r} 455.61 \\ 451.07 \\ \hline 4.54 \end{array}$$

$$\begin{array}{r} 455.24 \\ 450.94 \\ \hline 4.30 \\ 4.42 \\ \hline F-0.12 \end{array}$$

21+00

$$\begin{array}{r} 456.22 (54) \\ 4.95 \\ \hline 451.27 \end{array} \quad \begin{array}{r} 456.22 \\ 451.23 \\ \hline 4.99 \\ 0.75 \\ \hline 5.74 \end{array}$$

$$\begin{array}{r} 456.22 \\ 451.23 \\ \hline 4.99 \\ 0.75 \\ \hline 5.74 \end{array}$$

$$\begin{array}{r} 455.24 \\ 451.13 \\ \hline 4.11 \\ 4.03 \\ \hline C-0.08 \end{array}$$

+40 Lt.

455.24
449.67
5.57
6.31
F-0.74

Gut

1/4

2

1/4

Gut

Ob.

+25

455.24
449.36
5.88
6.06
F-0.18

End of Ex. Ob.
+02.67

455.24
450.00
5.24
5.28

23+00

456.22
6.70
449.52

456.22
449.66
6.56
0.75
7.31

456.22
449.66
6.56
0.75
7.31

6.56
0.94
7.50

455.24
449.56
5.68
5.78
F0.10

+75

455.24
449.75
5.49
5.64
F-0.15

+50

456.22
6.23 (0.00)
449.99

456.22
450.05
6.17
0.75
6.92

456.22
450.05
6.17
0.75
6.92

6.17
0.94
7.11

455.24
449.95
5.29
5.43
F-0.14

+25

455.24
450.15
5.09
5.21
F0.17

Cb. Grot 1/4

£ 1/4 Grot Cb

+50

452.47
~~448.69~~
3.78
3.95
F-0.17

4.49
0.94
5.43

452.96
~~448.47~~
4.49
0.75
5.24

4.49
0.94
5.43

452.47
~~448.37~~
4.10
4.37
F0.27

+25

452.47
~~448.91~~
3.56
3.77
F-0.21

452.47
~~448.57~~
3.90
4.22
F-0.32

24 +00

2.47 452.47
455.24
~~449.13~~
6.11
6.57
F-0.46

5.28 449.96 F. end Ex. Cb
450.00 Rec.

4.09
0.94
5.03

452.96
~~448.87~~
4.09
0.75
4.84

4.09
0.94
5.03

455.24
~~448.77~~
6.47
6.56
F-0.09

+75

455.24
~~449.36~~
5.88
6.49
F-0.61

455.24
~~448.97~~
6.27
6.24
C-0.03

4.44 452.96 7.70 448.52 R

456.22 3.46 452.76 TOP F.H. N/E Entries
& Annotations

456.22
~~449.26~~
6.96
0.75
7.71

6.96
0.94
7.90

455.24
~~449.16~~
6.08
6.12
F-0.04

+50

455.24
~~449.58~~
5.66
6.31
F-0.65

6.96
0.85
6.81

	Cb.	Gut	1/4	♀	1/4	Gut	Cb.	10
+75	452.47 447.58 4.89 5.18 F-0.29						452.47 447.38 5.09 5.12 F-0.03	
+50	452.47 447.80 4.67 4.87 F-0.20		3.93 0.94 4.87	451.61 447.68 3.93 3.93 0.75 4.68	3.93 0.94 4.87		452.47 447.58 4.89 5.14 F-0.25	
+25	452.47 448.02 4.45 4.93 F-0.48						452.47 447.78 4.69 5.05 F-0.36	
				3.25	451.61			
					452.96	4.60	448.36	Nail in file Lt. of Std. 25+50
25+00	452.47 448.25 4.22 4.67 F-0.45		4.88 0.94 5.82	452.96 448.08 4.88 0.75 5.63	4.88 0.94 5.82		452.47 447.98 4.49 4.61 F-0.12	
+75	452.47 448.47 4.00 4.45 F-0.45						452.47 448.17 4.30 4.47 F-0.17	

27+00
452.47
446.46
6.01
6.45
F-0.44

1/4
5.12
0.94
6.06

2
451.61
446.49
5.12
0.94
6.06
5.87

11
Cb.
452.47
446.39
6.08
6.00
C-0.08

+75
452.47
446.69
5.78
6.06
F-0.28

452.47
446.59
5.88
5.81
C-0.07

+50
452.47
446.91
5.56
6.10
F-0.54

4.72
0.94
5.66

451.61
446.89
4.72
0.94
5.66
5.47

452.47
446.79
5.68
5.71
F-0.03

+25
452.47
447.13
5.34
5.76
F-0.42

452.47
446.99
5.48
5.66
F-0.18

26+00
452.47
447.35
5.12
5.65
F-0.53

4.32
0.94
5.26

451.61
447.29
4.32
0.94
5.26
5.07

452.47
447.19
5.28
5.43
F-0.15

Cb.

1/4

4

1/4

12

Cb.

451.61

3.32

458.29 (458.26 Rec.)
Top F.H. Pt. 29+25

29+00 452.47
445.44
7.03
7.29
F-0.26

6.07
0.94
7.01

451.61 ^{5.34}
445.54 ^{6.09} 6.07
6.07 0.94
0.75 7.01
6.82

452.35
445.44
6.91

+60 452.47
445.48
6.99
6.94
C-0.05

6.03
0.94
6.97

451.61
445.58 6.03
6.03 ^{5.30} 0.94
0.75 ^{7.05} 6.97
6.78

450 452.35

447.85
452.47
445.48
6.99
6.61
C-0.28

28+20 452.47
445.61
6.86
6.90
F-0.04

5.90
0.94
6.84

451.61
445.71 5.90
5.90 0.94
0.75 6.84
6.65

452.47
445.61
6.86
6.54
C-0.32

+80 452.47
445.80
6.67
6.60
C-0.07

5.71
0.94
6.65

451.61
445.90 5.71
5.71 0.94
0.75 6.65
6.46

452.47
445.80
6.67
6.42
C-0.25

+40 452.47
446.08
6.39
6.60
F-0.21

5.43
0.94
6.37

451.61
446.18 5.43
5.43 0.94
0.75 6.37
6.18

452.47
446.08
6.39
6.37
C-0.02

+55 Lt. & Rt.

+45 Lt. & Rt.

+40 ✓

$$\begin{array}{r}
 451.35 \\
 445.47 \\
 \hline
 5.88 \\
 5.88 \\
 \hline
 0.00
 \end{array}$$

+35 Lt.

+25 Lt.

3.09

451.35

452.47

A.21

448.26 Top F. Hy - Rt. Sta. 29+25

445.57 -

$$\begin{array}{r}
 5.31 \\
 9.5 \\
 \hline
 2.18 \\
 6.06 \text{ Sub}
 \end{array}$$

$$\begin{array}{r}
 5.31 \\
 9.5 \\
 \hline
 6.25
 \end{array}$$

$$\begin{array}{r}
 452.35 \\
 445.47 \\
 \hline
 6.88
 \end{array}$$

Sept. 25-51

14

Z+1/1
Subgrada Rorct
Fritz

♀

1/4

1/4

BM 447.85

NE 2 1/2"
Murozuno
+ La Dorra

	451.35	
+60	446.04	450.88
	5.31	
	5.42	
	F-0.11	

	446.14	4.74
	4.74	5.68
	5.42	

	452.35
	446.04
	6.31
	6.08
	G-0.23

	451.35
30+20	445.77
	5.58
30+00 P.O.T.	5.56
	G-0.02

	445.87	5.94
	5.01	5.95
	5.78	

	452.35
	445.77
	6.58
	6.14
	G-0.44

	451.35
+80	445.53
	5.80
	6.06
	F-0.26

	445.68	5.20
	5.20	6.14
	5.95	

	452.35
	445.58
	6.77
	6.85
	F-0.08

+75 Rt.

+65 Rt.

450.887

+90 P.L. Lt. 447.34

447.46
3.42
3.11
78
4.17

3.42
3.24
4.32

452.35
447.36
4.99
5.21
F-0.22

+80 P.C.R. Lt. 447.25
452.45
5.20
5.95
F-0.25

+60 451.35
447.04
4.31
4.75
F-0.44

447.14
3.78
3.26
4.42

3.74
3.64
4.68

452.35
447.04
5.31
5.44
F-0.13

+40 451.35
446.81
4.54
4.69
F-0.15

446.91
3.97
3.26
4.73

3.97
3.84
4.91

452.35
446.81 5.26
5.54
5.76
F-0.22

31+00 451.35
446.39
4.86
5.33
F-0.37

446.49
4.87
4.75
5.14

4.39
94
5.33

452.35
446.39
5.96
6.29
F-0.33

2

15

	452.45	450.88A
33+10	<u>447.93</u>	<u>447.04</u>
	4.52	4.60
	4.56	4.64
	F-0.04	

	452.45	447.85
+89.88 P.C.R.	<u>447.90</u>	<u>451.05</u>
L.T.	4.55	
	4.62	
	F 0.07	

+80

✓ 447.98
2.90
2.95
3.85

2.90
2.95
3.85

452.35
<u>447.88</u>
4.47
4.64
F-0.17

+50 447.78

447.88
3.00
3.75
3.75

3.00
3.75
3.94

452.35
<u>447.78</u>
4.57
4.59
F-0.02

32 +20 447.59

447.69
3.19
3.75
5.94

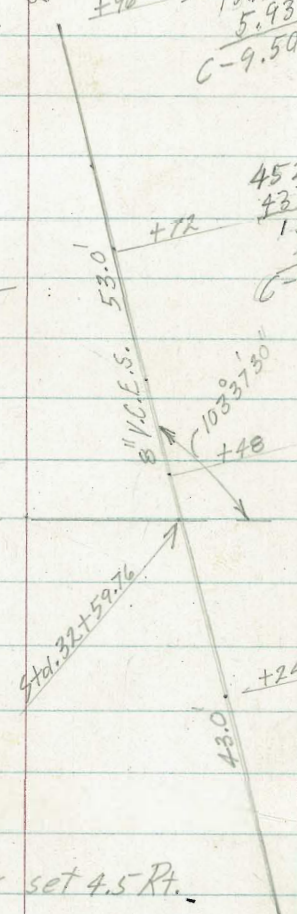
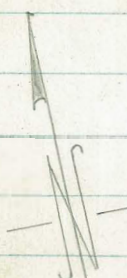
3.19
3.75
5.94

452.35
<u>447.59</u>
4.76
5.07
F-0.31

Garber
Shepherd
Bertolucci
FRITZ

Aug. 14, 51

La Dorna



452.57
437.14
15.43
5.93
C-9.50

452.57
437.41
15.16
5.61
C-9.55

452.57
437.47
15.10
5.09
C-10.01

452.57
437.64
14.93
5.35
C-9.58

452.57
437.81
14.76
5.11
C-9.65

Note - Stakes set 4.5 Ft.

472 452.57

447.85 T.B.M. NE
2x2
Montezuma &
La Dorna

La Dorna N/W Return

#1 452.45
447.35
5.10
5.69
F-0.59

#2 452.45
447.35
5.10
5.66
F-0.56

#3 452.45
447.26
5.19
5.61
F-0.42

La Dorna N/E Return

#1 452.45
447.86
4.59
4.84
F-0.25

#2 452.45
447.77
4.68
5.16
F-0.48

#3 452.45
447.68
4.77
5.44
F-0.67

4.60 452.45

447.85 N/E B.M.
2x2

Cacocin N/W Return

#1 452.45
 447.75
 4.70
 4.84
 F-0.14

#2 452.45
 448.00
 4.45
 4.19
 C-0.26

452.45
 3 448.11
 4.34
 2.58
 C-1.76

Cacocin S/W Return

#1 452.45
 448.05
 4.40
 4.90
 F-0.50

#2 452.45
 448.29
 4.16
 4.77
 F-0.61

+30

451.64X

451.05X

452.45
 +02.67 PCR Lt. 447.66
 4.79
 4.85
 F-0.06

34+00

452.45
 +70 447.80
 4.65
 4.77
 F-0.12

Rt.
+42.07 PCR

452.45
 33+40 447.90
 4.53
 4.64
 F-0.09

447.51

4.13 3.56
 78 722
 4.88

3.51

92
 4.48

447.41

447.74

3.28
 3.25
 4.65

3.90

94
 4.84

447.90

3.24
 3.25
 4.49

3.24

94
 4.68

448.00

3.66
 3.65
 4.27

3.66

94
 4.58

452.35

447.94
 4.41
 5.08
 F-0.67

Cb.

20

35+20

$$\begin{array}{r}
 452.01 \\
 \underline{446.31} \\
 5.70 \\
 \underline{5.48} \\
 C-0.22
 \end{array}$$

$$\begin{array}{r}
 451.647 \\
 \underline{998} \\
 441.66 \\
 \underline{290} \\
 441.56
 \end{array}$$

$$\begin{array}{r}
 446.41 \\
 \underline{4.64} \\
 \underline{25} \\
 5.39
 \end{array}$$

$$\begin{array}{r}
 464 \\
 \underline{97} \\
 5.58
 \end{array}$$

$$\begin{array}{r}
 452.01 \\
 \underline{446.31} \\
 5.70 \\
 \underline{5.71} \\
 F-0.01
 \end{array}$$

+90

$$\begin{array}{r}
 452.01 \\
 \underline{446.74} \\
 5.27 \\
 \underline{5.15} \\
 C-0.12
 \end{array}$$

95/05X

$$\begin{array}{r}
 446.84 \\
 \underline{4.31} \\
 \underline{25} \\
 4.96
 \end{array}$$

$$\begin{array}{r}
 4.31 \\
 \underline{94} \\
 5.15
 \end{array}$$

$$\begin{array}{r}
 452.01 \\
 \underline{446.74} \\
 5.27 \\
 \underline{5.38} \\
 F-0.11
 \end{array}$$

+84.93 PER Lt.

$$\begin{array}{r}
 452.01 \\
 \underline{446.83} \\
 5.18 \\
 \underline{5.15} \\
 C-0.03
 \end{array}$$

+60

$$\begin{array}{r}
 447.21 \\
 \underline{3.84} \\
 \underline{75} \\
 4.39
 \end{array}$$

$$\begin{array}{r}
 3.84 \\
 \underline{94} \\
 4.7
 \end{array}$$

$$\begin{array}{r}
 452.01 \\
 \underline{447.11} \\
 4.90 \\
 \underline{5.01} \\
 F-0.11
 \end{array}$$

+32.14 PER Rt.

$$\begin{array}{r}
 452.01 \\
 \underline{447.39} \\
 4.62 \\
 \underline{4.56} \\
 C-0.06
 \end{array}$$

Cb.

+70

446.13
 443.13 45/057
 3.00
 2.79
 C-0.21

442.23
 7.82
 7.82
 7.5
 8.57 ✓

7.82
 7.94
 8.70 ✓

446.13
 443.13
 3.00
 3.24
 F-0.24

+40

452.01
 443.90
 8.11
 7.68
 C-0.43

444.00
 7.05
 7.05
 7.80 ✓

7.05
 7.94
 7.92

452.01
 443.90
 8.11
 8.01
 C-0.10

36+10

452.01
 444.61
 7.40
 7.32
 C-0.08

441.71 ✓
 6.34
 6.34
 7.0 ✓

6.34
 7.28
 7.28 ✓

452.01
 444.61
 7.40
 7.46
 F-0.06

+80

452.01
 445.24
 6.77
 6.81
 F-0.04

445.34
 5.71
 5.71
 6.46 ✓

5.71
 6.4
 6.65 ✓

452.01
 445.24
 6.77
 6.72
 C-0.05

+50

452.01
 445.81
 6.20
 6.19
 C-0.01

445.91
 5.14
 5.14
 5.89 ✓

5.14
 6.4
 6.68 ✓

452.01
 445.81
 6.20
 6.05
 C-0.15

Cb.

+20 438.64

+40

451.05
863
442.42
1.74
444.16

38400 446.13
439.17
6.96
6.59
C-0.37

38400

446.13
+80 439.76
6.37
5.96
C-0.41

+60 446.13
440.40
5.73
5.32
C-0.41

+30 446.13
441.38
4.75
4.14
C-0.61

37400 446.13
442.28
3.85
3.80
C-0.05

22

Cb.
446.13
438.64

7.49 Not set

27
439.77 ✓
4.89
4.75
5.74
4.64
0.13

199
2.9
5.9 ✓

446.13
439.17
6.96
7.08
F-0.12

86
439.76 ✓
4.20
4.25
5.15
3.54
0.61

440
2.4
5.3 ✓

446.13
439.76
6.37
6.45
F-0.08

50
440.40
3.76
2.5
4.51
3.96
0.45

3.76
2.4
4.7 ✓

446.13
440.40
5.73
5.95
F-0.22

48
441.38
2.78
2.5
3.58
2.55
0.13

278
2.1
3.72

446.13
441.38
4.75
4.72
C-0.03

.38
442.28 ✓
1.88
1.88
7.5
2.63
1.23
0.90

188
2.4
2.82

446.13
442.28
3.85
3.83
C-0.02

	441.62	446.13	
40+40	436.61	436.61	444.16X
	5.00	9.52	
	9.74	9.18	
	F-4.74	C-0.34	

	446.13	
40+00	436.46	
	7.67	
	9.78	
	F 0.11	

	441.62	446.13	
+60	436.53	436.53	
	5.09	9.60	
	11.51	10.01	
	F-6.42	F 0.41	

	446.13	
39+20	436.84	
	9.29	
	10.44	
	F-1.15	

	441.62	446.13	
+80	437.39	437.39	
	4.23	8.74	
	11.84	9.46	
	F-7.61	F-0.72	
+40	446.13	F-0.72	
	438.16		
	7.97		
	8.24		
	F-0.27		

	441.62		
	436.71	7.85	
	4.91	7.75	7.45
	9.35	8.66	9.2
	4.44		8.29
	0.75	7.45	
	F-3.69	8.28	

	436.56	7.60	
	7.60	8.54	
	8.35		

	441.62		
	436.63	7.93	
	5.00	7.75	
	10.85	8.68	
	5.85	7.53	7.53
	.75	8.28	8.47
	F-5.10		

	436.94	7.22	
	7.22	8.16	
	7.92		

	441.62	6.67	6.67
	437.49	7.22	7.22
	4.13	7.07	
	5.14	7.82	
	1.00		
	F 0.25		
		438.26	5.94
		5.90	8.74
		7.25	8.81
		6.98	
		8.27	

	441.62	446.13	
	436.61	436.61	
	5.01	9.52	
	9.66	10.05	
	F-4.65	F 0.53	

	446.13	
	436.46	
	9.67	
	9.71	
	F-0.04	

	441.62	446.13	
	436.53	436.53	
	5.09	9.60	
	11.24	9.49	
	F-6.15	C-0.11	

	446.13	
	436.84	
	9.29	
	10.11	
	F-0.82	

	441.62	446.13	
	437.39	437.39	
	4.23	8.74	
	11.84	8.87	
	F-7.61	F-0.13	
		446.13	
		438.16	
		7.97	
		8.35	
		F 0.38	

Sept. 28, 51

Concr. Spun Conc. Pipe

Corru. Iron Pipe

Ref. #2

24

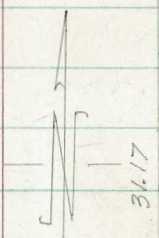
1+84 7.0

15.0

Wall

B-10.47
0.5

0+62.34
Inv. El. 431.84



0+46.75

20°

Sta. 991.20

0+31.16 Concr.

0+15.58

0+00
Inv. El. 432.46

Ref. #1

Sta. 40+00
Cb. Str. Rt.

436.42 El.
5.19
441.61 H.A.

Ref. #2

441.61
431.84
9.77
6.36
C-3.41

441.13
+62.34 431.84
9.29
6.74
C-2.53

441.13
+46.75 432.00
9.13
6.77
C-2.36

441.13
+31.16 432.15
8.98
7.10
C-1.88

441.13
+15.58 432.31
8.82
7.42
C-1.40

441.13
0+00 432.46
8.67
8.44
C-0.23

Cb. Str. Rt.
40+00

436.42
4.71
441.13

Ref. #1

441.61
432.46
9.15
5.47
C-3.68

+43.08 408.16
396.89
.27

+22.64 408.16
397.34
10.82
6.52
C-4.30

1+02.20 408.16
397.78
10.38
6.25
C-4.13

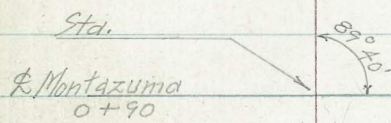
+81.76 408.16
398.22
9.94
5.95
C-3.99

+61.32 408.16
398.67
9.49
5.95
C-3.54

+40.88 408.16
399.11
9.05
5.32
C-3.73

+20.44 408.16
399.56
8.60
4.37
C-4.23

0+00 408.16
400.00
8.16
4.86
C-3.30



0+00 7.0

15.0

408.16
400.00
8.16
7.35
C-0.81

42+00 Cb. Gut.
 447.37
 439.25
 8.12
 8.01
 C-0.11

1/4 1/2 1/4
 441.44
 451.65 T.B.M.

439.25 ✓ 688
 6.88
 7.83
 7.83
 8.80
 CO.80

Gut. Cb.
 447.37
 439.25
 8.12
 7.67
 C-0.45

5.93 447.37
 0.49 452.14
 446.13
 +70 438.61
 7.52
 7.45
 C-0.07

10.70 441.44
 444.16
 7.52
 438.61 8.46
 9.01 7.50
 44623A C-0.56

438.71 ✓ 7.52
 7.52
 7.52
 8.46
 7.47
 7.47
 CO.80

446.13
 438.61
 7.52
 7.01
 C-0.51

+40 446.13
 437.98
 8.15
 8.10
 C-0.05

438.08 ✓ 8.15
 8.15
 8.15
 8.10

446.13
 437.98
 8.15
 7.81
 C-0.34

41+20

41+00 441.62 446.13
 437.27 437.27
 4.35 8.86
 7.34 9.01
 F-3.00 F-0.15

441.62
 437.37 ✓
 4.25 7.19
 7.23 7.25
 3.00 7.79
 0.75 7.75
 2.25 7.51

441.62 446.13
 437.27 437.27
 4.35 8.86
 6.58 9.04
 F-2.23 F-0.18

40+80 446.13
 436.99
 9.14
 9.02
 CO.12

437.09 ✓ 7.07
 7.07
 7.25
 7.82

446.13
 436.99
 9.14
 7.90
 F-0.76

	Cb.	Gut.		Gut.	Cb.
	447.37				447.37
+25	441.87		446.87	441.97	441.87
	5.50				5.50
	5.80				4.71
	C-0.50				C-0.79
	447.37				447.37
434.00	441.35		441.45 ✓	4.78	441.35
	6.02		4.78	9.7	6.02
	5.46		4.78	5.72	5.45
	C-0.56		5.53		C-0.57
	447.37				447.37
+75	440.82		440.92		440.82
	6.55				6.55
	5.93				5.93
	C-0.62				C-0.62
	447.37				447.37
+50	440.30		440.40 ✓	5.83	440.30
	7.07		5.83	9.7	7.07
	6.49		7.5	6.77	6.65
	C-0.58		6.58		C-0.42
			6.08		
			C-0.60		
	447.37				447.37
+25	439.77		439.87		439.77
	7.68				7.60
	7.21				7.12
	C-0.39				C-0.48

	Cb.	Gut.	1/4
+50	447.37 444.49 2.88 2.29 C-0.59		446.83T 6.67 5.96 5.96 .18 0.71 6.14 0.18 .75 6.89 ✓

		1/4	
+25	447.37 443.96 3.41 2.91 C-0.50		7.27 6.42 6.42 .21 0.85 6.63 0.21 .75 7.38 ✓

		1.23	452.88	451.65 TBM
44+00	447.37 443.44 3.93 3.33 C-0.60			7.00 .94 7.94

+75	447.37 442.92 4.45 3.97 C-0.48			
-----	---	--	--	--

+50	447.37 442.39 4.98 4.49 C-0.49			
-----	---	--	--	--

Cb. Gr.	1/4
♀	
452.92	6.71 5.90
445.09	5.90 0.20
7.83	0.81 6.10
8.48	0.75 6.85
F-0.65	
	444.40

452.92	
444.56	
8.36	
8.59	
F-0.23	

452.92	
444.24	♀
8.68	450.54
9.53	443.54
F-0.85	7.00
	.75
	7.75

443.02	
442.50 ✓	3.73
3.73	.94
4.78	A.57 ✓

Gut.	Cb.
34.40 Rt.	452.88
	444.49
	8.39
	2.20
	C-0.19

33.35 Rt.	452.88
	443.96
	8.92
	8.87
	C-0.05

447.37	
443.44	
3.93	
3.33	
C-0.58	
452.88	
443.44	
9.44	
9.34	
C-0.10	

447.37	
442.92	
4.45	
4.04	
C-0.41	
452.88	
442.92	
9.96	
10.03	
F-0.07	

447.37	
442.39	
4.98	
4.41	
C-0.57	

Cl. Gut.

1/4

see P.48

452.92
 +52.41 446.63
 B.C. 6.29
 6.04
 C-0.23

452.92
 +25 446.06
 452.76 6.86
 446.06 5.88
 6.70
 6.98 C-0.98
 F-0.28

452.92
 +5+00 445.54
 452.76 7.38
 445.54 6.86
 7.22
 7.19 C-0.52
 C-0.03

452.92
 +75 445.01
 7.91
 7.06
 C-0.85

5.12 4.40
 4.40 .18
 0.72 4.58
 0.18 0.75
 5.37

6.17 5.42
 5.42 .19
 0.75 5.61
 0.19 0.75
 6.36

1/4

Gut. Cl.

452.92 4.55 3.73
 447.23 3.73 0.20
 5.69 0.82 3.93
 5.38 0.20 0.75
 C-0.31 4.68
 446.54

452.92
 446.66
 6.26
 5.93
 C-0.33

452.92
 446.13 5.66 4.76
 6.79 4.76 0.22
 7.16 0.90 4.98
 F-0.37 0.72 0.75
 445.44 5.73

452.92
 445.61
 7.31
 7.63
 F-0.32

39.68 Rt.

38.60 Rt.

37.20 Rt.

35.80 Rt.

452.88
 446.64
 6.24
 6.21
 C-0.03

452.88
 446.06
 6.82
 6.70
 C-0.12

452.88
 445.53
 7.35
 7.36
 F-0.01

452.88
 445.01
 7.87
 7.77
 C-0.10

Slope stakes.

Lt.

Rt.

Lt.

Rt.

29

+25

456.39
~~447.85~~
 8.54
 7.0
~~C-1.5~~
 41.5

+50

456.39
~~446.86~~
 9.53
 9.1
~~C-0.4~~
 40.4

25+00

456.39
~~448.05~~
 8.34
 8.0
~~C-0.3~~
 40.3

+25

456.39
~~447.06~~
 9.33
 8.5
~~C-0.8~~
 40.8

+75

456.39
~~448.24~~
 8.15
 6.4
~~C-1.5~~
 41.7

26+00

456.39
~~447.26~~
 9.13
 9.1
~~C-0.0~~
 40.0

+50

456.39
~~448.44~~
 7.95
 7.0
~~C-1.0~~
 41.0

+75

456.39
~~447.45~~
 8.94
 7.6
~~C-1.3~~
 41.3

24+25

456.39
~~448.64~~
 7.75
 7.0
~~C-0.8~~
 40.8

+50

456.39
~~447.65~~
 8.74
 6.6
~~C-2.1~~
 42.1

6.43 456.39

449.96

Lt.

Rt.

+80

$$\begin{array}{r}
 456.39 \\
 445.87 \\
 \hline
 10.52 \\
 6.3 \\
 \hline
 C-7.2 \\
 \hline
 44.2
 \end{array}$$

+80

$$\begin{array}{r}
 450.58 \\
 445.65 \\
 \hline
 4.93 - \text{Not set.}
 \end{array}$$

30

+40

$$\begin{array}{r}
 456.39 \\
 446.15 \\
 \hline
 10.24 \\
 4.8 \\
 \hline
 C-5.44 \\
 \hline
 45.4
 \end{array}$$

+40

$$\begin{array}{r}
 450.58 - \text{Corrected H.I.} \\
 445.54 \\
 \hline
 5.04 \\
 5.0 \\
 \hline
 0.0 \\
 \hline
 40.0
 \end{array}$$

+25

$$\begin{array}{r}
 456.39 \\
 446.27 \\
 \hline
 10.12 \\
 9.1 \\
 \hline
 C-1.9 \\
 \hline
 41.0
 \end{array}$$

29+00

$$\begin{array}{r}
 450.64 \\
 445.51 \\
 \hline
 5.13 \\
 4.8 \\
 \hline
 C-0.3 \\
 \hline
 40.3
 \end{array}$$

27+00

$$\begin{array}{r}
 456.39 \\
 446.46 \\
 \hline
 9.93 \\
 9.0 \\
 \hline
 C-0.9 \\
 \hline
 40.9
 \end{array}$$

+40

$$\begin{array}{r}
 450.64 \\
 445.55 \\
 \hline
 5.09 \\
 4.9 \\
 \hline
 C-0.2 \\
 \hline
 40.2
 \end{array}$$

+75

$$\begin{array}{r}
 456.39 \\
 446.66 \\
 \hline
 9.73 \\
 9.2 \\
 \hline
 C-0.5 \\
 \hline
 40.5
 \end{array}$$

28+20

3.87 450.64

$$\begin{array}{r}
 9.62 \quad 446.77 \\
 456.39 \\
 445.68 \\
 \hline
 10.71 \\
 9.6 \\
 \hline
 C-1.1 \\
 \hline
 41.1
 \end{array}$$

	Lt.	Rt.		Lt.	Rt.	31
+80	445.24	445.24	+30	437.46 441.38 +3.92 3.2 <u>F-7.12</u> 50.7 (Ref. 5° Dist)	440.05 441.38 +1.33 8.3 <u>F-9.6</u> 54.4	
+50	445.81	445.81	37+00	442.28	442.28	
35+20	446.31	446.31	+70	443.13	443.13	
+90	446.74	446.74	30+40	443.90	443.90	
34+60			36+10	444.61	444.61	

	Lt.	Rt.		Lt.	Rt.
39+20	<u>405.46</u> <u>436.84</u> +31.38 <u>6.0</u> <u>F37.38</u> 96.1	<u>410.28</u> <u>436.84</u> +26.56 <u>9.9</u> <u>F-36.5</u> 94.8	41+20	<u>429.13</u> <u>437.60</u> +8.47 <u>3.8</u> <u>F-12.27</u> 58.4	<u>429.13</u> <u>437.60</u> +8.47 <u>4.0</u> <u>F12.47</u> 58.8
+80	<u>416.53</u> <u>437.39</u> +20.86 <u>8.2</u> <u>F-29.06</u> 83.56	<u>410.28</u> <u>437.39</u> +27.11 <u>6.8</u> <u>F-33.91</u> 90.8	+80	<u>420.08</u> <u>436.99</u> +16.91 <u>1.0</u> <u>F17.9</u> 66.8	<u>420.08</u> <u>439.99</u> +16.91 <u>1.1</u> <u>F-18.0</u> 67.0
38+40	<u>426.69</u> <u>438.16</u> +11.47 <u>11.1</u> <u>F-22.57</u> 73.9	<u>419.79</u> <u>438.16</u> +18.37 <u>9.3</u> <u>F-27.67</u> 81.6	+40	<u>420.08</u> <u>436.61</u> +16.53 <u>8.0</u> <u>F-24.5</u> 76.8	<u>420.08</u> <u>436.61</u> +16.53 <u>5.8</u> <u>F-22.3</u> 73.5
38+00	<u>426.69</u> <u>439.17</u> +12.48 <u>5.1</u> <u>F17.6</u> 66.4	<u>429.77</u> <u>439.17</u> +9.40 <u>10.3</u> <u>F-19.7</u> 69.6	40+00	<u>405.46</u> <u>436.46</u> +31.00 <u>7.6</u> <u>F38.6</u> 97.9	<u>412.34</u> <u>436.46</u> +24.12 <u>3.2</u> <u>F-27.3</u> 81.0
+60	<u>437.46</u> <u>440.40</u> +2.94 <u>9.1</u> <u>F-12.04</u> 58.0	<u>429.77</u> <u>440.40</u> +10.63 <u>2.8</u> <u>F-13.4</u> 60.1	+60	<u>405.46</u> <u>436.51</u> +31.07 <u>9.2</u> <u>F-40.27</u> 100.4	<u>412.34</u> <u>436.53</u> +24.19 <u>9.5</u> <u>F-33.69</u> 90.5

	Lt.	Rt.		Lt.	Rt.
+50	$\begin{array}{r} 456.69 \\ 442.39 \\ \hline 14.30 \\ 4.7 \\ \hline C-9.6 \\ \hline 49.6 \end{array}$	$\begin{array}{r} 456.69 \\ 442.39 \\ \hline 14.30 \\ 4.5 \\ \hline C-9.8 \\ \hline 49.8 \end{array}$			
43+00	$\begin{array}{r} 456.69 \\ 441.35 \\ \hline 15.34 \\ 5.0 \\ \hline C-10.3 \\ \hline 50.3 \end{array}$	$\begin{array}{r} 456.69 \\ 441.35 \\ \hline 15.34 \\ 5.8 \\ \hline C-9.5 \\ \hline 49.5 \end{array}$	B.C. +57.41	$\begin{array}{r} 456.69 \\ 446.64 \\ \hline 10.05 \\ 6.5 \\ \hline C-3.6 \\ \hline 43.6 \end{array}$	$\begin{array}{r} 456.69 \\ 446.64 \\ \hline 10.05 \\ 4.3 \\ \hline C-5.8 \\ \hline 45.8 \end{array}$
+50	$\begin{array}{r} 456.69 \\ 440.30 \\ \hline 16.39 \\ 7.3 \\ \hline C-9.1 \\ \hline 49.1 \end{array}$	$\begin{array}{r} 456.69 \\ 440.30 \\ \hline 16.39 \\ 9.4 \\ \hline C-7.0 \\ \hline 47.0 \end{array}$	45+00	$\begin{array}{r} 456.69 \\ 445.54 \\ \hline 11.15 \\ 5.2 \\ \hline C-5.9 \\ \hline 45.9 \end{array}$	$\begin{array}{r} 456.69 \\ 445.54 \\ \hline 11.15 \\ 4.0 \\ \hline C-7.1 \\ \hline 47.1 \end{array}$
42+00	$\begin{array}{r} 448.94 \\ 439.25 \\ \hline 9.7 \\ 7.3 \\ \hline C-2.4 \\ \hline 42.4 \end{array}$	$\begin{array}{r} 448.94 \\ 439.25 \\ \hline 9.71 \\ 8.3 \\ \hline C-1.4 \\ \hline 41.4 \end{array}$	+50	$\begin{array}{r} 456.69 \\ 444.49 \\ \hline 12.20 \\ 5.0 \\ \hline C-7.2 \\ \hline 47.2 \end{array}$	$\begin{array}{r} 456.69 \\ 444.49 \\ \hline 12.20 \\ 3.5 \\ \hline C-8.7 \\ \hline 48.7 \end{array}$
+40	$\begin{array}{r} 429.13 \\ 437.98 \\ \hline 78.85 \\ 1.3 \\ \hline F-10.15 \\ \hline 55.3 \end{array}$	$\begin{array}{r} 429.13 \\ 437.98 \\ \hline 78.85 \\ 0.3 \\ \hline F-9.5 \\ \hline 53.7 \end{array}$	44+00	$\begin{array}{r} 456.69 \\ 443.44 \\ \hline 13.25 \\ 4.8 \\ \hline C-8.45 \\ \hline 48.5 \end{array}$	$\begin{array}{r} 456.69 \\ 443.44 \\ \hline 13.25 \\ 3.6 \\ \hline C-9.65 \\ \hline 49.7 \end{array}$

Note: Elev's = Top Curb

Rt.
 457.12
 45+00 445.53
 11.59
 4.5
 C-7.1
 51.3

46+12.61

Rt.
 457.12
 447.90
 9.22
 4.5
 C-4.7
 RotW

457.12
 44+75 445.01
 12.11
 3.9
 C-8.2
 51.0

45+95.11

457.12
 447.53
 9.59
 4.7
 C-4.9
 51.9

47+05.83

457.12
 449.49
 7.63
 6.17
 C-1.46
 RotW

457.12
 44+50 444.49
 12.63
 4.0
 C-8.6
 50.0

45+77.61

457.12
 447.16
 9.96
 4.9
 C-5.1
 52.1

46+83.71

457.12
 449.43
 7.71
 5.53
 C-2.2
 RotW

457.12
 44+25 443.96
 13.16
 4.1
 C-9.1
 49.5

45+52.41

457.12
 446.58
 10.54
 4.8
 C-5.7
 52.4

46+58.85

457.12
 448.88
 8.24
 5.08
 C-3.2
 RotW

457.12
 44+00 443.44
 13.68
 O.K.

45+25

457.12
 446.06
 11.06
 4.6
 C-6.5
 52.1

46+33.99

457.12
 448.44
 8.68
 4.66
 C-4.0
 RotW

5.47

457.12

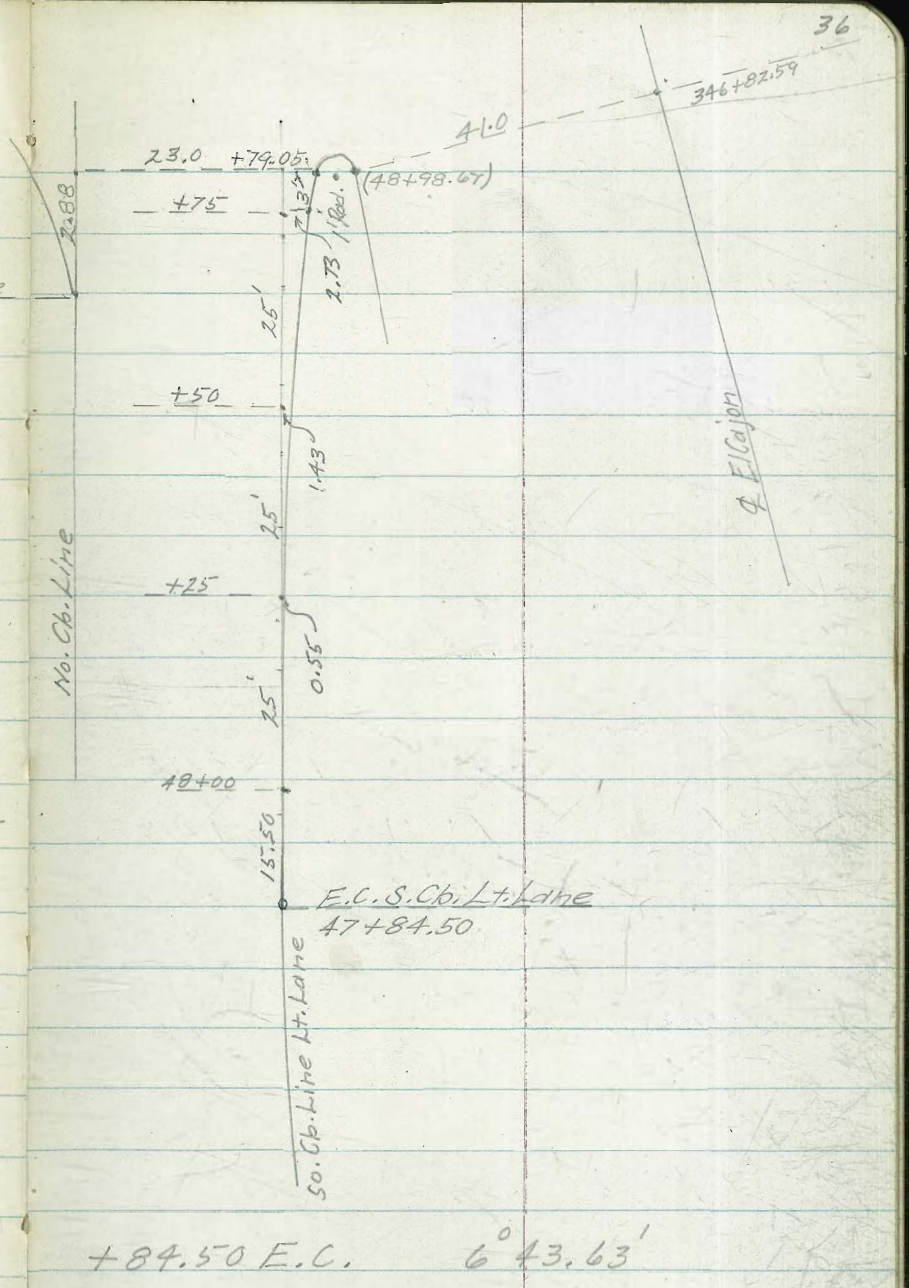
451.65 T.B.M.
P. Pole

No. Curb At. Lane

+50	4° 10.09'			
+25	3° 38.45'			
47+00	3° 06.80'	$\Delta 13^{\circ} 24' 14''$		
		$R = 1358.12$		
		$T = 160.19$		
+75	2° 35.16'	$L = 317.72$		
		Def ¹ .		
+50	2° 03.52'	$1' = 1.2657'$	+70.13 E.C.	6° 42.14'
		$25' = 31.6425'$		
+25	1° 31.88'		48+50	6° 16.66''
46+00	1° 00.23'		+25	5° 45.02'
+75	0° 28.59'		48+00	5° 13.37'
45+52.41 B.C.			+75	4° 41.73'

So. Curb Line Lt. Lane

+75	6° 27.11'	R=20
+50	5° 43.63'	No. Cb. Line 48+70.13
+25	5° 00.15'	Δ 13° 27' 15" R=988.39
47+00	4° 16.67'	T=116.58 L=232.09
+75	3° 33.20'	Def'ls. 1' = 1.7391
+50	2° 49.72'	25' = 43.4775
+25	2° 06.24'	
46+00	1° 26.76'	
+75	0° 39.29'	
45+52.41 B.C.		



+84.50 E.C. 6° 43.63'

North Curb Left Lane

	Pave. Gr.	Cb. Gr.
+50	448.01	452.92 448.68 4.24 3.77 C-0.47 452.76 448.65 7.08 4.68 FO.60 452.92 448.16 4.76 3.42 C-1.34 452.76 448.16 4.60 4.79 FO.19 452.92 447.63 5.29 4.13 C-1.16 452.76 447.63 5.13 5.47 F-0.34
+25	447.49	452.92 448.16 4.76 3.42 C-1.34 452.76 448.16 4.60 4.79 FO.19 452.92 447.63 5.29 4.13 C-1.16 452.76 447.63 5.13 5.47 F-0.34
46+00	446.96	452.92 447.63 5.29 4.13 C-1.16 452.76 447.63 5.13 5.47 F-0.34
+75	446.49	452.92 447.11 5.81 4.73 C-1.08 452.76 447.11 5.65 6.00 F-0.35
45+52.41 B.C.	445.97	452.76 446.63 6.13 6.43 FO.30
		451.65 T.B.M.

Pave. Gr.

+75 450.64

+50 450.11

+25 449.59

47+00 449.06

+75 448.54

Cb. Gr.

452.92
451.31 452.76
1.61 451.31
0.47 1.45
C-1.14 1.59
F-0.14

452.92
450.78 452.76
2.14 450.78
0.53 1.98
C-1.61 2.15
F-0.17

452.92
452.76 450.26
450.26 2.66
2.50 2.68
2.95
FO.45 F-0.02

452.92
452.76 449.73
449.73 3.19
3.03 3.36
3.86
F-0.83 F-0.17

452.92
449.21
452.76 3.71
449.21 3.80
3.55 F-0.09
4.21
F-0.66

Pave. Gr.

Cb. Gr.

South Curb Left Lane

Pave Gr.

Cb. Gr.

+50 448.76

452.92
449.26
3.66
3.81
F-0.15

48+70.13 B.C.

452.63

455.37
453.30
2.07
2.68
F-0.61

+25 448.26

3.04 2.29
2.29 .18
0.75 2.47
0.18 0.75
3.22

452.92
448.76
4.16
2.71
C-1.45

+50

452.21

455.37
452.88
2.49
2.45
C-0.04

46+00.53 447.73

452.92
448.23
4.69
3.01
C-1.68
3.20

+25

451.69

455.37
452.36
3.01
2.54
C-0.47
452.76
452.36
0.40
0.73

+75 4.09 447.21

3.43 3.43
0.66 0.16
0.16 3.59
0.75
4.34

452.92
447.71
5.21
3.89
C-1.37
2.27

48+00

451.16

F-0.33 455.37
451.83
3.54
2.27
C-1.27
452.76
451.83
0.93
0.90
C-0.03

45+52.41 B.C. 446.70

447.23

	Pave Gr.	Cb. Gr.	Pave Gr.	Cb. Gr.	40
	1/4		+78 B.C. 1/4 Rad.	453.11	455.87 453.61 1.76 1.94 F.O.18
+75	6.08 5.57 0.51 0.13	451.10 451.60 1.32 0.50 C-0.82	+75	453.03	455.37 453.53 1.84 1.94 F.O.10
	5.57 0.13 0.75 6.45				
+50		452.92 451.14 1.78 1.62 C-0.16	+50	452.56	455.37 453.06 2.31 2.68 F-0.37
+25	0.98 0.40 0.58 0.14	450.17 450.67 2.25 2.04 C-0.21	+25	452.08	455.37 452.58 2.79 2.75 C-0.04
	0.40 0.14 0.54 0.75 1.29			1/4 5.09 4.55 0.54 0.13	4.55 0.13 4.68 0.75 5.43
47+00		452.92 450.71 2.71 2.15 C-0.56	48+00	451.57	452.92 452.07 0.85 0.55 C-0.30
					55
+75	2.07 1.36 0.71 0.18	449.24 449.74 3.18 2.46 C-0.72	47+84.50 E.C.	451.26	452.92 451.76 1.16 0.56 C-0.60
	1.36 0.18 0.75 3.29				

North Curb Right Lane

	Pave. Gr.	Cb. Gr.	Pave. Gr	Cb. Gr.	41
+47.47	448.72	452.92 449.22 3.70 3.93 C-0.21	+65.69 B.C.5' Rad. 451.68	452.92 451.22	452.92 452.18 0.74 1.16 F-0.42 452.92 451.72 1.20 0.78 C-0.42
+25	448.26	452.92 448.76 4.16 2.48 C-1.68	+39.13	450.92	452.92 451.42 1.50 1.37 C-0.13
46+00.53	447.74	452.92 448.23 4.69 3.01 C-1.68 3.20	+25	450.53	452.92 451.03 1.89 1.45 C-0.44
+75	447.21	452.92 447.71 5.21 3.89 C-1.32 2.27	47+00	449.87	452.92 450.37 2.55 1.79 C-0.76
45+52.41 B.C.	446.73	447.23	+75	449.31	452.92 449.81 3.11 2.42 C-0.69

Pave. Gr.

Cb. Gr.

Pave. Gr.

Cb. Gr.

+64.68

453.03

455.37
453.53
1.84
3.07
F-1.23

+38.70

452.80

455.37
453.30
2.07
2.81
F-0.74

48+12.78

452.41

455.37
452.91
2.46
2.97
F-0.51

+86.93

451.95

455.37
452.45
2.92
2.79
C-0.13

+98.67

453.18

455.37
453.68
1.69
1.94
F-0.25

47+69.75
E.C. 5' Rdd

451.68

455.37
452.18
3.19
3.55
F-0.36

+90.74

453.13

455.37
453.63
1.74
1.96
F-0.22

Island "A"

43

#5 455.37
451.12
4.25
4.09
C-0.16

#10 455.37
449.61
5.76
4.16
C-1.60

#4 455.37
450.95
4.42
4.25
C-0.17

#9 455.37
450.27
5.10
4.33
C-0.77

#3 ^W455.37 ^S455.37
450.50 450.60
4.87 4.77
4.46 4.46
C-0.41 C-0.31

#8 455.37
451.00
4.37
3.67
C-0.70

#2 455.37
449.81
5.56
4.15
C-1.41

#7 455.37
451.42
3.95
3.91
C-0.04

#1 455.37
449.01
6.26
4.63
C-1.63

#6 455.37
451.29
4.08
4.04
C-0.04

NW Cb. Ret. Montazuma & Alice

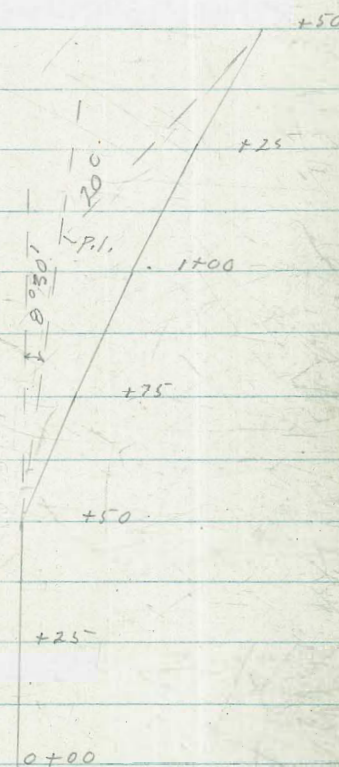
#3 455.37
453.39
1.98
2.60
F-0.62

#2 455.37
453.44
1.93
2.63
F-0.70

#1 455.37
453.44
1.93
2.52
F-0.59

Note - Cut marked for Inv.
(0.4 added to rod.)

	Profile Elevs.	Top of Pipe	
+50	9.0 448.05	457.05 446.00 11.05 8.54 2.51	
+25	8.2 448.85	457.05 446.06 10.99 8.39 2.60	
1+00	7.8 449.25	457.05 446.12 10.93 8.00 2.93	
+75	7.5 449.55	457.05 457.05 447.50 446.18 9.55 10.87 7.51 7.51 2.04 3.36	
+50	7.3 449.75	457.05 447.56 9.49 7.11 2.38	
+25	6.7 450.35	457.05 457.05 448.30 447.62 8.75 9.43 6.53 6.53 2.22 2.90	
Ground	5.3 451.75		
0+00 Top 4" Pipe	6.73 450.31	457.05 448.36 8.69 5.09 3.60	
5.40 457.05	451.65 TBM, P. Pole		



7000' Cb. Rad. connection El Cajon to Montezuma

+45.35	1° 24.94'	
3+12.81	1° 18.41'	
+92.27	1° 11.88'	Portion of Curve
+67.25	1° 05.72'	$\Delta 3^{\circ} 42' 16''$
+42.22	0° 59.57'	$R = 7000'$
2+17.19	0° 53.41'	$T = 226.37'$
+92.16	0° 47.26'	$L = 452.58'$
+67.04	0° 41.11'	Def'l. per ft. 0.246'
+42.11	0° 34.96'	
1+17.10	0° 28.80'	
+92.08	0° 22.65'	
+61.20	0° 15.05'	
+28.87	0° 07.10'	
0+00 B.C.		

Ref. 30.0 L & D @ 80 L. only

	Cb.	Slope
1+17.10		
+92.08	442.58 436.43 6.15 6.24 F=0.09	444.77 436.43 8.34 8.32 C=0.1 7.0
+66.20	442.58 435.64 6.94 7.48 F=0.54	444.77 435.64 9.13 9.50 F=0.37 7.6
+28.87	442.58 435.02 7.56 8.46 F=0.90	444.77 435.02 9.75 10.36 F=0.61 7.9
0+00	442.58 434.54 8.04 8.48 F=0.44	Note-Curb removed, B.M. transferred to Radius Pt. S/W Return Elev.= 453.45
0.60	442.58	12.20 441.98
2.53	454.18	451.65

	Cb.	Slope
	53.99 442.22 443.00 10.99 10.79 C=0.20	453.52 443.00 10.52 8.80 C=1.72 8.7
2+17.19		
+92.16	12.02 453.99 442.58 440.55 2.03 2.14 F=0.11	0.61 441.97 444.77 440.55 4.22 2.92 C=1.30 8.3
+67.09	8/15/51 Elev. transferred to SWBP 453.45 - Rad. Pt. 5.28 458.73 5.00 453.73 - SWBP	
+42.11	442.58 438.19 4.39 4.48 F=0.09	444.77 438.19 6.58 5.48 C=1.10 8.1

(453.70 SW BP El Cajon d 67¹⁴) Out

	Cb.	Slope
+69.60	453.99 448.99	(448.99)
+74.10	5.00 4.83 0.17	453.52 449.14
		4.38 2.89 C-7.49 9.75 RW

+45.35 PCC	453.99 448.09	453.52 448.09
	5.90 4.84 C-1.06	4.43 3.34 C-7.09 10.48 RW

3+18.81		
---------	--	--

+92.27	453.99 445.63	453.52 445.63
	8.36 8.42 F-0.06	7.99 5.62 C-2.37 9.4

+67.25		
--------	--	--

453.99 2.36 451.63 T.B.M 451.65

	Cb.	Slope	48
	452.88 +34.00 33.99	448.44	448.44
		4.44 4.45 F-0.04	

46+12.62	452.88 447.90	447.90	447.90
	4.98 5.03 F-0.05		

+95.11	452.88 447.53	447.53	
	5.35 5.09 C-0.26		

			1/4	
B.C. 120 Rad.	452.88	447.16	4.00	2.75
45+77.61	447.16	447.16	2.75	0.20
40.0 Rt. of k	5.72 5.56 C-0.16		1.25	2.95 0.75 3.70

45+52.41 B.C. See P. 28	452.88			
-------------------------	--------	--	--	--

PCC 49 Rad.	453.99			
+93.85	449.49	449.49		
Const. Curb	4.50 4.54			

Cb.

Slope

E.C. 49 Rad.
47+05.84453.52
449.49
4.03
3.81
C-0.22

449.49

+83.72

453.52
449.43
4.09
4.15
F0.06

449.43

+58.86

453.52
448.88
4.64
4.32
C-0.32

448.88

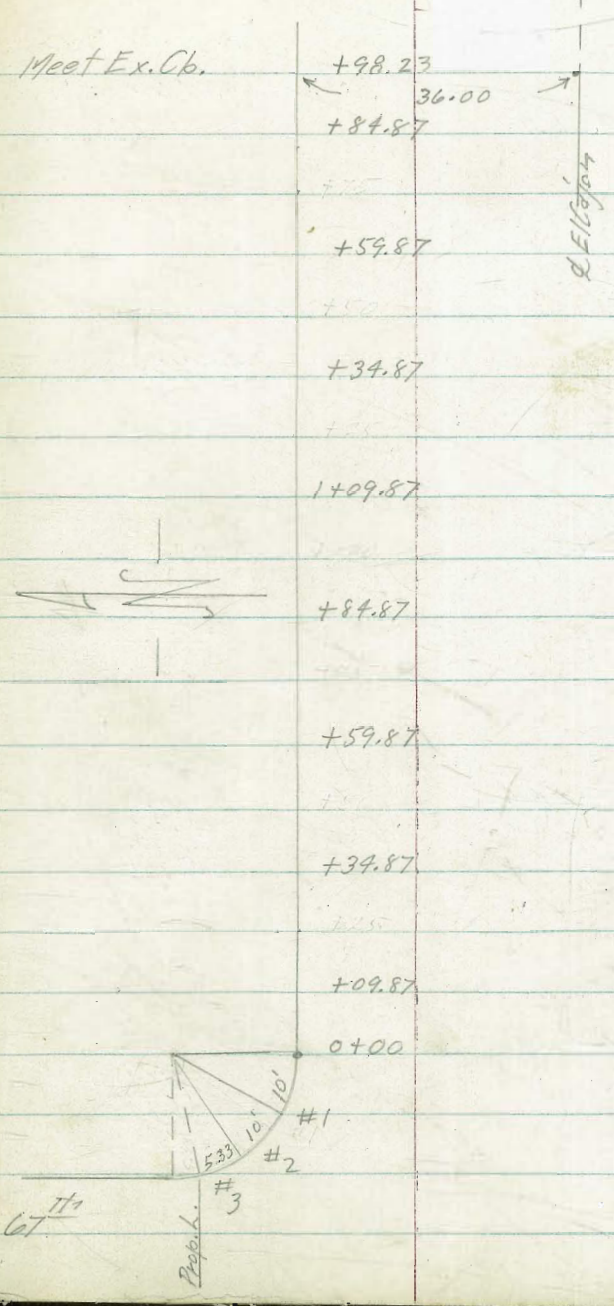
5.12

453.52

4.48

448.40

	Cb		slope
+09.87	457.69	459.95 454.56	459.93 454.69
		5.39 5.32	5.24 5.90
		C-0.07	F-0.16 7.25
0+00		459.95 454.42	459.93 454.42
		5.53 5.56	5.51 5.50
		F-0.03	0.01
#1		459.95 454.08	459.93 454.08
		5.87 5.70	5.85 5.71
		C-0.17	C-0.14 7.14
#2		459.95 453.77	459.93 453.77
		Not set	6.16 Not set
#3		459.95 453.61	459.93 453.61
		6.34 6.51	6.32 6.32
		F-0.17	0.00
6.23	459.93		Out-See P. 47 453.70 SWBP El Cajon @ 67 th



Cb.

Slope

+34.87 459.95
~~456.97~~
 3.98
 4.40
 F-0.42

459.93
~~455.97~~
 3.96
 4.30
 F-0.34
 7.5

1+09.87 459.95
~~455.95~~ 455.78
 4.17
 4.68
 F-0.51

459.93
~~455.95~~
 3.98
 4.67
 F-0.69
 8.0

+84.87 459.95
~~455.79~~ 455.52
 4.43
 4.56
 F-0.13

459.93
~~455.79~~
 4.14
 4.61
 F-0.47
 7.6

+59.87 459.95
~~455.66~~ 455.26
 4.69
 4.88
 F-0.19

459.93
~~455.66~~
 4.27
 4.92
 F-0.65
 8.0

+34.87 459.95
~~455.22~~ 454.96
 4.99
 5.08
 F-0.09

459.93
~~455.22~~
 4.71
 5.10
 F-0.39
 7.6

Cb.

Slope

57

+98.23 459.95
~~456.03~~ Ex. Cb.
 3.92
 3.97
 F-0.05

459.93
~~456.03~~
 3.90
 3.77
 C-0.13

+84.87 459.95
~~456.06~~
 3.89
 4.29
 F-0.40

459.93
~~456.06~~
 3.87
 3.92
 F-0.05
 7.1

1+59.87 459.95
~~456.01~~
 3.94
 4.27
 F-0.33

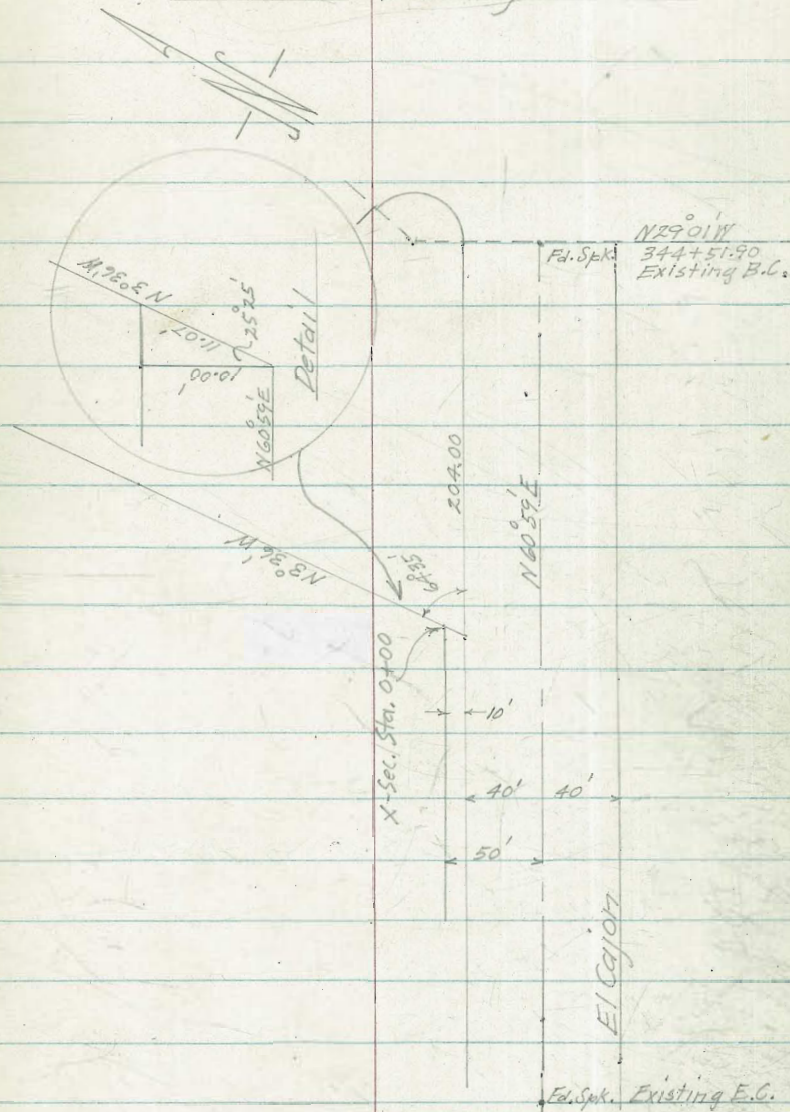
459.93
~~456.01~~
 3.92
 4.11
 F-0.19
 7.3

Garber
Shepard

Sept. 27, 51

La Mesa Colony - Lot "C" Map 2867 B
X-Sec. Driveway

52



X-Sec. Driveway-Restaurant See sketch Page 52

Lt. R Rt 53

1+00

453.1
1.0
40
452.8
1.3
20
452.9
1.2
452.0
2.1
20

+98 30^c Lt. 4^c Eucalyptus

+75 3^c Rt. 29" Dead Pepper Tree

452.8
1.3
40
452.7
1.4
20
452.7
1.4
451.9
2.2
20

+66

+50

+41 30^o Lt. 4" Evergreen Tree

452.40
1.67
40
452.51
1.56
20
452.42
1.65
9
452.4
1.7
451.3
2.8
20

+25

452.0
2.1
40
450.84
3.23
24
449.46
4.61
1.8
449.5
4.6
448.5
5.6
20

9+00

-02 44⁶ Lt. Flood Light 4" standard

447.8
6.3
40
446.49
7.58
19.5
445.61
8.46
445.12
8.95
6.8
445.0
9.1
12
444.0
10.1
14
444.0
10.1
18
442.7
11.4
20

0-06

447.0
7.1
40
445.97
8.10
19
444.61
9.46
443.5
10.6
9
442.2
11.9
11
442.9
11.2
20

0-12

445.5
8.6
40
444.31
9.76
17.3
444.12
9.95
7
443.4
10.7
443.5
12.3
3
442.8
11.3
20
443.20 3^o Offset
Cb. Str. 2442.22

Curb Change - S/W El Cajon & 67 th			Cb.	Cb.
S/E El Cajon & 67 th				
			458.18	458.18
			346 453.17	+50 455.69
			5.01	2.49
			4.79	2.87
			C-0.22	F-0.38
+23.13 E.C.	13° 56.053'	A 2752 Rt.	458.18	458.18
		R=1000 L	+50 452.59	348 455.29
349	13° 16.293'	T=248.09	5.59	2.89
		L=486.36	5.74	3.56
+50	11° 50.343'		F-0.15	F-0.67
348	10° 24.393'			
+50	8° 58.443'	A 2752 Rt.	458.18	458.18
		R=964 - Curb	345 451.85	+50 454.95
+25.05 (Rad. Pt.)	8° 15.552'	T=239.16	6.33	3.23
		L=468.86	6.70	3.86
347	7° 32.491'	(50' Ch. = 48.20)	F-0.37	F-0.63
+82.59	7° 02.564'			
+48.72 (Rad. Pt.)	6° 04.342'		458.18	458.18
			+50 451.07	347 +25.05 454.62
346	4° 40.592'		7.11	3.56
			7.67	4.37
+50	3° 14.642'		F-0.56	F-0.81
345	1° 48.692'			
+50	0° 22.742'		B.C.	B.C.
			344 + 36.77	458.18
344 + 36.77 B.C.				+48.72 453.74
				4.94
				4.64
				F-0.20
			4.73	458.18
				453.45 S/W
				Rad. Pt.

S/W Return

$\Delta = 88^{\circ} 54' 26''$

$R = 10$

T = 9.81	#1	458.18
L = 15.52	E.C.	<u>453.75</u>
		4.43
		<u>4.87</u>
		F = 0.44

S/E Return

$\Delta = 56^{\circ} 29' 55''$

$R = 20$

T = 10.75
L = 19.72

#1	458.18
	<u>454.52</u>
	3.66
	<u>4.52</u>
	F = 0.86

E.C.	458.18
+23.13	<u>456.08</u>
	2.10
	<u>2.44</u>
	F = 0.34

#2	458.18
	<u>454.36</u>
	3.82
	<u>4.57</u>
	F = 0.75

349	458.18
	<u>456.15</u>
	2.03
	<u>2.22</u>
	F = 0.19

Garber T 10-23-51
 Bruener Hot-Clear
 Bryson

Finish Grades

$\begin{array}{r} 458.10 \\ 452.80 \\ \hline 5.30 \end{array}$	$\begin{array}{r} 458.10 \\ 453.13 \\ \hline 4.97 \end{array}$	$\begin{array}{r} 458.10 \\ 452.92 \\ \hline 5.18 \end{array}$	$\begin{array}{r} 58.10 \\ 453.30 \\ \hline 4.80 \end{array}$
--	--	--	---

$\begin{array}{r} 458.10 \\ 452.10 \\ \hline 6.00 \end{array}$	$\begin{array}{r} 458.10 \\ 452.60 \\ \hline 5.50 \end{array}$	$\begin{array}{r} 458.10 \\ 452.30 \\ \hline 5.80 \end{array}$
--	--	--

$\begin{array}{r} 458.10 \\ 452.87 \\ \hline 5.23 \end{array}$	67 th	$\begin{array}{r} 458.10 \\ 453.09 \\ \hline 5.01 \end{array}$
--	------------------	--

4.37

458.10

SW BP 67th

453.73 El Cajon

452.10

452.60

452.30

452.80

452.87

19.0

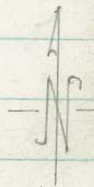
6.0

453.13

67th

452.92

453.09



El Cajon

Center Line Island - El Cajon of 67th

57

+50	11° 50.261'		
+25	11° 07.292'		
348+00	10° 24.320'		
+75	9° 41.348'		
+50	8° 58.379'	A = 27° 52'	
+25	8° 15.407'	R = 1000	
347+00	7° 32.438'	T = 284.09	
+75	6° 49.467'	L = 486.36	
+50	6° 06.497'		
+25	5° 23.526'		
346+00	4° 40.556'		
+75	3° 57.584'		
+50	3° 14.615'		
+38.46		2° 54.781	
+25	2° 31.644'		
345+00	1° 48.674'		
+80.31		1° 14.831	
+75	1° 05.703'		
+50	0° 22.733'		
344+36.77 B.C.			
		E.C. +23.13	13° 56.00'
		349+00	13° 16.202'
		+75	12° 33.232'

Garber
Shepard
Bruener
Bryson

Nov. 8, 51
Clear-Cool

W.O. 25020
Stake Dwight. Boundary
to Nile plus portion
of Alley.

Fd. Ld & TK

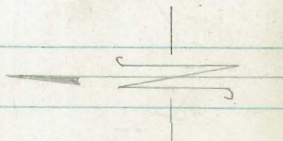
7'

2196.37

Nile

Ref. Drwg. Green Profile

No. 250
No. 2326
No. 2949



1+56.37

1+46.37

1+36.37

10' 10"

0+00

Fd. Ld & TK

0+00

1+00

5+00

INDEXED
Law
DEC. 4 1951

Dwight

40'

40'

7'

0+00

7'

Fd. Ld & TK

Fd. Ld & TK

St. Boundary

Dwight - Boundry to Nile

	Lt (North)	Rt (South)
1+36.32	329.27 322.47 6.80 4.02 C-2.78 1x1 10° BK Cb.	329.27 321.97 7.30 3.80 C-3.50 1x1 10° BK Cb.
+80	329.27 324.24 5.03 2.08 C-2.95 1x1 10° BK Cb.	329.27 323.74 5.53 2.18 C-3.35 1x1 10° BK Cb.
+60	329.27 324.76 4.51 1.87 C-2.64 1x1 9° BK Cb.	329.27 324.26 5.01 1.99 C-3.02 1x1 10° BK Cb.
+40	329.27 325.06 4.21 1.96 C-2.25 1x1 10° BK Cb.	329.27 324.56 4.71 2.19 C-2.52 1x1 10° BK Cb.
+20	329.27 325.14 4.13 2.01 C-2.12 1x1 10° BK Cb.	329.27 324.64 4.63 2.47 C-2.16 1x1 10° BK Cb.
0+00	329.27 324.92 4.35 4.31 C-0.04	329.27 324.38 4.89 4.87 C-0.02
12.22	329.27	NEBP 317.05 Dwight to Nile

	Lt. (North)	Rt. (South)
2+96.32	329.27 317.42 11.85 12.53 F-0.48 1x1 10° BK Cb.	329.27 316.52 12.75 12.43 C-0.32
2+49.64	329.27 318.91 10.36 1x1 11.94 10° BK Cb. F-1.58	329.27 318.14 11.13 11.83 F-0.70 1x1 10° BK Cb.
2+02.98	329.27 320.39 8.88 1x1 10.11 10° BK Cb. F-1.23	329.27 319.75 9.52 7.07 C-2.45 1x1 10° BK Cb.
1+56.32	329.27 321.87 7.40 5.47 C-1.93 1x1 10° BK Cb.	329.27 321.37 7.90 4.79 C-3.11 1x1 10° BK Cb.

Alley So. 100' from So. line Dwight
btw. Boundary & Nile

	Lt. (East)	Rt. (West)
1+00	329.27 323.70 5.57 5.10 C-6.47	Nail in fence 0.2 BK
+90	329.27 323.84 5.43 5.26 C-0.17	Mark on Conc. 0.5 in
+70	329.27 324.04 5.23 4.54 C-0.69	Nail in fence 0.5 in
+50	329.27 323.90 5.37 4.27 C-1.10	Nail in fence 0.4 in
+30	329.27 323.15 6.12 4.78 C-1.34	1X1 2°BK
+10	329.27 322.20 7.07 4.91 C-2.16	1X1 2°BK
0+00	329.27 321.60 7.67 4.82 C-2.78	1X1 2°BK

INDEXED
FILED
FEB 13 1952

Alley No. 500 from No. Line Dwight
btw. Boundary & Nile - City Hts. 60

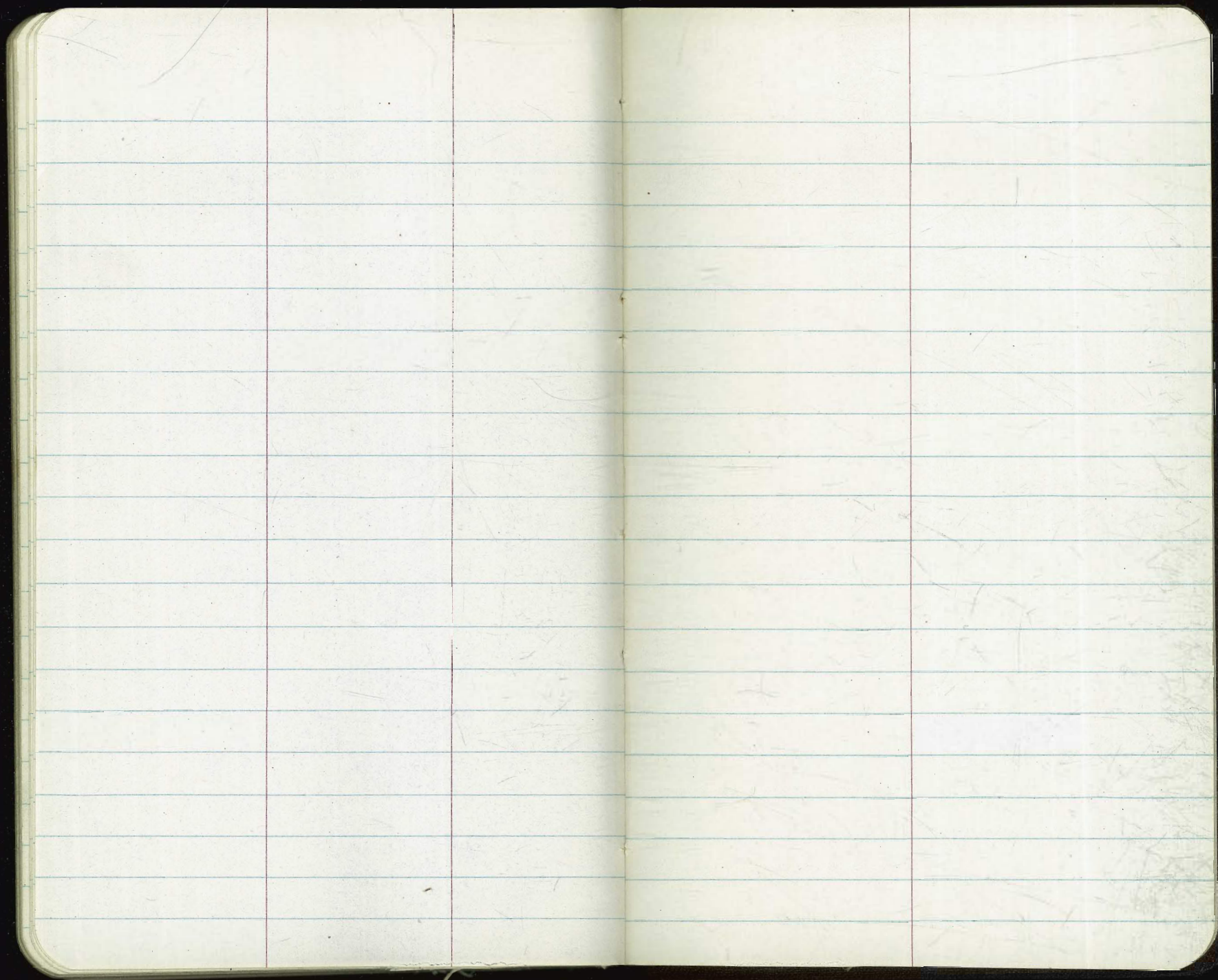
	Lt. (West)	Rt. (East)
+50	329.37 323.65 5.72 5.98 F-0.26	329.37 323.35 6.02 8.36 F-2.34 1X1 2°BK
2+00	329.37 323.90 5.97 7.87 F-1.90	329.37 323.10 6.27 9.23 F-2.96 1X1 2°BK
+50	329.37 323.15 6.22 7.18 F-0.96 1X1 2°BK	329.37 322.85 6.52 8.63 F-2.11 1X1 2°BK
1+00	329.37 322.90 6.47 5.43 C-1.04 1X1 2°BK	329.37 322.60 6.77 7.46 F-0.69 Nail in fence on line
+50	329.37 322.65 6.72 3.88 C-2.84 1X1 0.2 BK	329.37 322.35 7.02 6.49 C-0.53 1X1 1°BK
0+00	329.37 322.40 6.97 3.71 C-3.26 1X1 0.4 BK	329.37 322.10 7.27 5.61 C-1.66 1X1 2°BK
12.32	329.37	317.05 Dwight & Nile

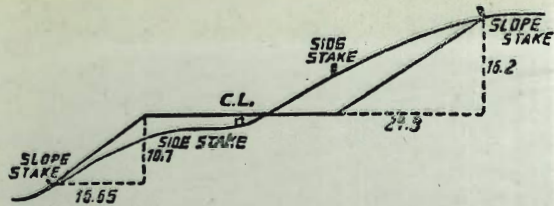
NEBP

	LT.	RT.
4 + 30	331.09 <u>325.76</u> 5.33 4.18 C-1.15	331.09 <u>325.46</u> 5.63 4.86 C-0.77 1X1 2°BK
+ 80	331.09 <u>324.76</u> 6.33 5.07 C-1.26	331.09 <u>324.46</u> 6.63 6.50 1X1 C-0.13 2°BK
+ 60	331.09 <u>324.52</u> 6.57 6.06 C-0.51	331.09 <u>324.22</u> 6.87 7.07 1X1 F 0.20 2°BK
+ 40	331.09 <u>324.24</u> 6.85 7.20 F 0.45	331.09 <u>323.94</u> 7.15 7.31 F 0.16
+ 20	331.09 <u>324.04</u> 7.05 7.97 F 0.92	331.09 <u>323.74</u> 7.35 7.44 F 0.09
3 + 00	331.09 <u>323.90</u> 7.19 7.70 F 0.51	331.09 <u>323.60</u> 7.69 8.03 F 0.36
	10.42 331.09 8.70	320.67

	LT.	RT.
		11.60 317.05 (317.05) ^{Rec.}
	4.92 328.65	7.36 323.73
5 + 00	331.09 <u>327.08</u> 4.01 3.46 C-0.55	331.09 <u>326.78</u> 4.31 3.71 C-0.60
4 + 80	331.09 <u>326.75</u> 4.34 3.28 C-1.06	331.09 <u>326.45</u> 4.64 4.18 C-0.46 1X1 2°BK

Nail in fence on line





DISTANCES FROM SIDE STAKES FOR CROSS-SECTIONING.

SLOPE 1 1/2 TO 1. ROADWAY OF ANY WIDTH.

	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	
0	0.00	0.15	0.30	0.45	0.60	0.75	0.90	1.05	1.20	1.35	0
1	1.50	1.65	1.80	1.95	2.10	2.25	2.40	2.55	2.70	2.85	1
2	3.00	3.15	3.30	3.45	3.60	3.75	3.90	4.05	4.20	4.35	2
3	4.50	4.65	4.80	4.95	5.10	5.25	5.40	5.55	5.70	5.85	3
4	6.00	6.15	6.30	6.45	6.60	6.75	6.90	7.05	7.20	7.35	4
5	7.50	7.65	7.80	7.95	8.10	8.25	8.40	8.55	8.70	8.85	5
6	9.00	9.15	9.30	9.45	9.60	9.75	9.90	10.05	10.20	10.35	6
7	10.50	10.65	10.80	10.95	11.10	11.25	11.40	11.55	11.70	11.85	7
8	12.00	12.15	12.30	12.45	12.60	12.75	12.90	13.05	13.20	13.35	8
9	13.50	13.65	13.80	13.95	14.10	14.25	14.40	14.55	14.70	14.85	9
10	15.00	15.15	15.30	15.45	15.60	15.75	15.90	16.05	16.20	16.35	10
11	16.50	16.65	16.80	16.95	17.10	17.25	17.40	17.55	17.70	17.85	11
12	18.00	18.15	18.30	18.45	18.60	18.75	18.90	19.05	19.20	19.35	12
13	19.50	19.65	19.80	19.95	20.10	20.25	20.40	20.55	20.70	20.85	13
14	21.00	21.15	21.30	21.45	21.60	21.75	21.90	22.05	22.20	22.35	14
15	22.50	22.65	22.80	22.95	23.10	23.25	23.40	23.55	23.70	23.85	15
16	24.00	24.15	24.30	24.45	24.60	24.75	24.90	25.05	25.20	25.35	16
17	25.50	25.65	25.80	25.95	26.10	26.25	26.40	26.55	26.70	26.85	17
18	27.00	27.15	27.30	27.45	27.60	27.75	27.90	28.05	28.20	28.35	18
19	28.50	28.65	28.80	28.95	29.10	29.25	29.40	29.55	29.70	29.85	19
20	30.00	30.15	30.30	30.45	30.60	30.75	30.90	31.05	31.20	31.35	20
21	31.50	31.65	31.80	31.95	32.10	32.25	32.40	32.55	32.70	32.85	21
22	33.00	33.15	33.30	33.45	33.60	33.75	33.90	34.05	34.20	34.35	22
23	34.50	34.65	34.80	34.95	35.10	35.25	35.40	35.55	35.70	35.85	23
24	36.00	36.15	36.30	36.45	36.60	36.75	36.90	37.05	37.20	37.35	24
25	37.50	37.65	37.80	37.95	38.10	38.25	38.40	38.55	38.70	38.85	25
26	39.00	39.15	39.30	39.45	39.60	39.75	39.90	40.05	40.20	40.35	26
27	40.50	40.65	40.80	40.95	41.10	41.25	41.40	41.55	41.70	41.85	27
28	42.00	42.15	42.30	42.45	42.60	42.75	42.90	43.05	43.20	43.35	28
29	43.50	43.65	43.80	43.95	44.10	44.25	44.40	44.55	44.70	44.85	29
30	45.00	45.15	45.30	45.45	45.60	45.75	45.90	46.05	46.20	46.35	30
31	46.50	46.65	46.80	46.95	47.10	47.25	47.40	47.55	47.70	47.85	31
32	48.00	48.15	48.30	48.45	48.60	48.75	48.90	49.05	49.20	49.35	32
33	49.50	49.65	49.80	49.95	50.10	50.25	50.40	50.55	50.70	50.85	33
34	51.00	51.15	51.30	51.45	51.60	51.75	51.90	52.05	52.20	52.35	34
35	52.50	52.65	52.80	52.95	53.10	53.25	53.40	53.55	53.70	53.85	35
36	54.00	54.15	54.30	54.45	54.60	54.75	54.90	55.05	55.20	55.35	36
37	55.50	55.65	55.80	55.95	56.10	56.25	56.40	56.55	56.70	56.85	37
38	57.00	57.15	57.30	57.45	57.60	57.75	57.90	58.05	58.20	58.35	38
39	58.50	58.65	58.80	58.95	59.10	59.25	59.40	59.55	59.70	59.85	39
40	60.00	60.15	60.30	60.45	60.60	60.75	60.90	61.05	61.20	61.35	40
41	61.50	61.65	61.80	61.95	62.10	62.25	62.40	62.55	62.70	62.85	41
42	63.00	63.15	63.30	63.45	63.60	63.75	63.90	64.05	64.20	64.35	42
43	64.50	64.65	64.80	64.95	65.10	65.25	65.40	65.55	65.70	65.85	43
44	66.00	66.15	66.30	66.45	66.60	66.75	66.90	67.05	67.20	67.35	44
45	67.50	67.65	67.80	67.95	68.10	68.25	68.40	68.55	68.70	68.85	45
46	69.00	69.15	69.30	69.45	69.60	69.75	69.90	70.05	70.20	70.35	46
47	70.50	70.65	70.80	70.95	71.10	71.25	71.40	71.55	71.70	71.85	47
48	72.00	72.15	72.30	72.45	72.60	72.75	72.90	73.05	73.20	73.35	48
49	73.50	73.65	73.80	73.95	74.10	74.25	74.40	74.55	74.70	74.85	49
50	75.00	75.15	75.30	75.45	75.60	75.75	75.90	76.05	76.20	76.35	50

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