

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.

MICROFILMED

APR 15 1965

DIRECTIONS FOR USE OF TABLES

TABLE No. XIV

Difference of slope scale from side of shoulder  
scale for any width roadway, as 10 to 1  
It should be noted that the scale is in feet

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IMPROVED TABLES  
AND  
INFORMATION

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TABLE No. VIII

To find Tangent and External Distance of  
any curve given by degree of curve and  
and distance from to center of curvature  
Degree of curve will be given by the  
by dividing tangent (or external distance) by  
given radius (or constant)  
The distance from a point on the tangent to  
the curve is very nearly equal to the tangent  
length divided by twice the radius

- 0
- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17
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- 50

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cut o  
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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	1.91
45°	.15	.30	.44	.60	.76	.91	1.06	1.21	1.37	1.52	1.70	1.87	2.04	2.24
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	.771	.845	.922	1.01
70°	.080	.159	.240	.321	.403	.485	.568	.652	.735	.819	.906	.994	1.08	1.17
75°	.095	.182	.286	.383	.480	.578	.678	.777	.877	.977	1.07	1.18	1.29	1.39
80°	.110	.220	.332	.445	.558	.671	.787	.903	1.02	1.13	1.25	1.38	1.50	1.62
85°	.128	.259	.391	.524	.657	.790	.926	1.06	1.20	1.34	1.47	1.62	1.76	1.91
90°	.149	.299	.450	.603	.756	.910	1.07	1.22	1.38	1.54	1.70	1.87	2.03	2.20
95°	.174	.350	.522	.706	.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

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Tourmaline - Bayard - Cass - States	1
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Robert  
Cota  
Moore  
P. Hillen  
W.D. 3784  
5-13-52

Grade Stakes Tourmaline  
Bayard to Cass

Curbs

8991 L

INDEXED

JUN 17 1953

1.

1720  
10322  
103.13  
C0.09

10257  
102.53  
C0.07

2780

→ 108.20 ←  
108.05  
F0.15

→ 107.49 ←  
107.40 ✓  
F0.09

1700 PK  
10268  
102.61  
C0.07

102.01  
101.96  
F0.05

2730

107.49  
107.38  
C0.11

106.70  
106.60  
F0.10

0790  
10238  
102.35  
C0.03

101.76  
101.75  
F0.01

2705

106.57  
106.54  
F0.03

106.02  
105.72  
C0.10

0765  
10177  
101.72  
C0.05

101.14  
101.09  
F0.03

1780 EVC

105.76  
105.59  
F0.17

105.13  
105.05  
F0.08

0740  
10108  
10097  
F0.11

101.14  
100.51  
F0.01

1760

104.95  
104.79  
F0.16

104.44  
104.35  
C0.09

0715 JEC  
Bayard  
10050  
100.45  
C0.05

9994  
97.90  
C0.07

1740

104.30  
104.26  
F0.04

103.74  
103.70  
C0.04

103.11  
102.09  
C0.02

F0.05

3781.37 W.L. Cass  
Eust

111.50

110.60  
110.62

3775.37 CBC

111.30  
111.11  
F 0.19

110.50  
110.21  
F 0.29

3755

110.63  
110.40  
F 0.23

109.84  
109.75  
F 0.09

3730

109.82  
109.78  
F 0.04

109.06  
108.83  
F 0.23

3705

109.19  
109.01  
F 0.18

108.27  
107.99  
F 0.28

Roberts  
 5-13-52  
 W.O. 3184

Grade Stakes Opal  
 Bayard to Cass  
 Curbs  
 89902

INDEXED  
 JUN 17 1953  
 Law  
 100.91  
 101.82  
 100.09  
 100.02  
 99.97  
 100.05

	97.65	97.11	3+15	100.54	99.58
1+40	97.49	96.84		100.35	99.52
	C 0.16	C 0.27	2+90	C 0.19	C 0.06
				100	
1+15	97.01	96.39		99.92	99.19
	96.96	96.37		99.87	99.08
	F 0.05	F 0.02	2+65	C 0.05	C 0.11
	96.71	96.08			
0+90	96.53	95.94		99.53	98.79
	C 0.18	C 0.14	2+40	99.39	98.63
				C 0.14	C 0.16
	96.06	95.51			
0+65	96.05	95.50			98.39
	C 0.01	C 0.01	2+15	98.92	98.18
				98.83	C 0.21
				F 0.09	
0+40	95.58	95.32			
	95.43	95.05		98.63	
	F 0.15	C 0.27	1+90	98.44	97.73
				C 0.19	97.67
					C 0.06
0+15 <sup>to curb</sup> Bayard	95.10	94.72			
	95.02	94.60		98.15	97.30
	F 0.08	C 0.12	1+65	97.96	97.29
				C 0.19	C 0.01

W.L. Cass  
3+82.58 First

102.15

101.10

101.12

B.C. Cobb  
3+76.58

102.12

102.00

C 0.12

101.01

101.10

F 0.09

3+65

101.80

101.78

C 0.02

100.87

100.78

F 0.13

3+40

101.44

101.30

C 0.14

100.52

100.42

C 0.10



Roberts  
Cota  
House

5-20-52  
no. 31784

Grade Stakes Tourmaline

Mission to Bayard

(Curbs)

2991L

index  
Law

JUN 17 1953

1+10

90.08  
8986  
F0.22

89.16  
8914  
F0.02

2+85

92.80  
→92.67←  
C0.13  
92.42  
92.30  
C0.12

9206  
→91.89←  
C0.17  
91.62  
91.50  
C0.12

0+85

89.71  
8939  
F0.32

89.77  
8866  
F0.11

2+35

92.05  
91.93  
C0.12

9113  
91.11  
C0.02

0+60

89.34  
8910  
F0.24

88.38  
8833  
F0.05

2+70

91.64  
91.56  
C0.08

9077  
90.72  
C0.05

0+35

88.97  
8881  
F0.16

87.99  
87.72  
F0.27

1+85

9132  
91.19  
C0.13

9045  
90.33  
C0.12

0+10 EC

88.60  
8844  
F0.16

87.60  
8744  
F0.16

1+60

90.86  
90.82  
C0.04

90.09  
89.94  
C0.15

0+00 <sup>East</sup>  
Mission Blvd

88.60  
8850

87.45  
8747

1+35

90.49  
90.45  
C0.04

89.55  
89.49  
F0.06

NE End Hub  
90.24

4760	9535 → 95.26 ← C 0.09	9481 → 94.62 ← C 0.19	67 08	98.36 → 98.23 ← C 0.13	→ 97.66 ← 97.60 F 0.06
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4733	9491 94.89 C 0.02	9423 9410 F 0.13	57 93	97.64 97.57 F 0.07	97.07 96.99 F 0.08
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4410	9459 94.52 C 0.07	9390 93.84 C 0.06	558 EVC	97.06 97.00 F 0.06	96.49 96.41 F 0.08
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3785	9429 94.15 C 0.14	9356 93.45 C 0.11	5738	96.61 96.59 F 0.02	96.04 95.83 F 0.21
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3760	9387 93.78 C 0.09	9315 93.06 C 0.09	5718	96.32 96.20 C 0.12	95.64 95.64 GRAVE
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3735	9351 93.41 C 0.10	9282 92.67 C 0.15	4498	95.95 95.84 C 0.11	95.33 95.27 C 0.06
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3710	9324 93.04 C 0.20	9240 92.28 C 0.12	4478 PVC	95.61 95.56 C 0.05	94.95 94.94 C 0.01
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SE Rad Hub  
100.81

6+43<sup>34</sup> CB BC  
Bayard

99.12  
99.05  
00.07

98.54  
98.47  
00.07

6+33

99.02  
98.81  
00.21

98.24  
98.11  
00.13

Roberts

Grade Stakes Bayard Street

5-21-52

Loring to Opal  
(Curb)

8992-L

9056

9127

9042

9071

C 0.14

C 0.56

1+04.6

9030

9005

89.68

89.89

C 0.62

C 0.16

0+79.6

8977

8923

88.94

89.09

C 0.83

C 0.16

0+57.6

8924

88.25

88.20

87.95

C 1.04

F 0.30

0+29.6

FL, East

Alley

St.

→ 91.89

→ 91.84

9128

9128

F 0.61

F 0.56

1442.47

Alley

Rad.

F 0.61

F 0.56

88.13

9136

87.60

91.31

C 0.53

C 0.05

0+09.6

FL, West

1434.35 P.C.

9172

9169

C 0.03

Edge Pav.

87.30

87.33

9176

9156

0+00

Loring

✓

1429.6

91.14

91.53

C 0.03

F 0.02

NE Rad Hub

97.16

Bayard to Opal

INDEXED

Law

JUN 17 1953

8

1461.47 Alley Rad. → 92.21 → 92.18  
91.75 91.75  
F 0.46 F 0.43

P.L. Alley Ret. 232 92.27  
91.88  
F 0.39

P.L. Alley Ret. 91.95  
91.92  
F 0.03

1452.35 Alley Rad.       
    

9355

9274

C 0.81

9268

9239

C 0.29

Alley

St.

92.83

92.88

91.97

91.97

F 0.36

F 0.31

Bayard cont'd  
april to Tourmaline

2+89.35 <sup>so</sup> bc OPal	93.74 → 93.46 ← C0.28	94.38 → 93.96 ← C0.42	0+50	96.21 → 95.75 ← C0.46	97.02 96.25 ← C0.77
----------------------------------	-----------------------------	-----------------------------	------	-----------------------------	---------------------------

2+64.35	93.46 93.25 C0.21	94.13 93.75 (93.75) C0.38	0+25	95.66 95.03 C0.63	96.35 95.53 C0.82
---------	-------------------------	---------------------------------	------	-------------------------	-------------------------

2+39.35	93.23 93.04 C0.19	93.95 93.54 C0.41	WE Red Hub 97.16 0+05 <sup>cb No</sup> ECOPal	95.08 94.45 C0.63	95.79 94.95 C0.84
---------	-------------------------	-------------------------	--	-------------------------	-------------------------

2+14.35 ER	93.03 92.83 C0.20	93.77 93.33 C0.44	#2	9 94.23 94.13 F0.10	95.11 94.90 C0.21
------------	-------------------------	-------------------------	----	------------------------------	-------------------------

1+94.35	92.82 92.62 C0.20	93.25 93.11 C0.14	#1	≡	95.00 94.80 F0.14
---------	-------------------------	-------------------------	----	---	-------------------------

1+74.35	92.28 92.20 F0.08	93.29 92.76 C0.53	#2	≡	94.51 94.40 C0.11
---------	-------------------------	-------------------------	----	---	-------------------------

1+71.35 Alley Red	≡	Alley st 92.68 92.65 92.45 92.45 F0.23 F0.20	#1 chert core	93.51 93.50 C0.01	94.59 94.20 C0.39
----------------------	---	---	---------------	-------------------------	-------------------------

1+4/98 Alley Rad

~~98.23~~  
~~98.22~~  
~~F0.01~~

Alley st  
98.67 98.65  
98.22 98.22  
F0.45 F0.43

2+59.95<sup>cb.</sup> BC  
To = normal line  
99.40  
→ 98.77  
C0.43

99.99  
99.47 ←  
C0.52

Alley PL. Ret.

98.23  
98.22  
F0.01

99.44  
98.73  
C0.71

2+55

99.34  
98.94  
C0.40

99.95  
99.44  
C0.51

Alley PL. Ret. chisel

97.93  
97.69  
F0.24

99.11  
98.43 <sup>conv.</sup>  
C0.68 Nail

2+30

99.09  
98.82  
C0.27

99.80  
99.32  
C0.48

Alley 1+22.99 Rad.

Alley st  
→ 97.87 97.80  
97.84 97.84  
F0.03 C0.04

Alley st  
98.37 98.30  
98.24 98.24  
F0.13 F0.06

2+05

98.79  
98.69  
C0.10

99.30  
99.19  
C0.11

1+20

97.77  
97.73  
C0.04

98.59  
98.23  
C0.36 ✓

1+80 EVC

98.57  
98.35  
F0.22

99.44  
99.07  
C0.37

1+00 PVC

97.33  
97.21  
C0.12

98.17  
97.71  
C0.46

1+60

98.41  
98.30  
F0.11

99.10  
98.91  
C0.19

0+75

96.84  
96.48  
C0.36

97.61  
96.98  
C0.63

→ 1+46.98 Alley Rad  
Alley st  
98.17 96.15  
94.38 96.38  
C0.21 C0.23

~~98.23~~  
~~98.22~~  
~~F0.01~~

Engard Cont'd  
Tourmaline to Sapphire

0+55	102.82 → 102.49 C 0.33	103.50 102.99 ← C 0.51	107.77 → 107.01 C 0.76	108.11 107.51 ← C 0.60
0+30	101.92 101.36 C 0.56	102.12 101.86 C 0.26	14204 Alley St Rad. 106.38 - 106.43 - 106.84 106.84 C 0.46 C 0.41	Alley St 106.97 - 106.93 - 107.20 107.30 C 0.42 C 0.37
(Rad SB Hub 100.80 *				
cb 0+05 BC Tourmaline	100.71 100.23 C 0.48	101.02 100.73 C 0.29	107.40 106.44 P.L. Alley Pet C 0.96	108.10 106.94 C 1.16
#2	99.75 99.39 F 0.36	100.50 100.43 C 0.07	107.01 105.76 P.L. Alley Pet C 1.25	106.61 106.26 C 0.35
#1	99.35 99.15 F 0.20	100.35 100.33 GRADE	1423.04 Alley St Rad. 105.70 - 105.57 - 105.99 105.99 C 0.29 C 0.42	Alley St 106.20 - 106.07 - 106.35 106.35 C 0.15 C 0.28
#2	98.81 98.75 C 0.06	99.82 99.70 C 0.12	105.45 104.75 1705 C 0.70	105.65 105.25 C 0.40
#1	98.92 98.78 F 0.14	99.64 99.55 C 0.09	0780 104.15 103.62 C 0.53	104.56 104.12 C 0.44

# 1 (Pl)	11439 → 113.50 C0.89				
SERAJb 113.94 sapphire				11968	12023
				118.97	119.52
				C0.71	C0.71
# 2 (Pl)	11 112.40 111.99 F0.41		1+05		
				11875	11920
				117.74	118.27
				C1.01	C0.93
# 1	112.28 111.88 F0.40	11 112.95 112.84 F0.11	0+80		
				11772	11822
				116.51	117.03
				C1.21	C1.19
2+60.9 <sup>cb</sup> BC sapphire	111.77 111.42 F0.35	112.60 112.27 C0.33	0+55		
				116.50	117.11
				115.28	115.79
				C1.22	C1.32
2+30	110.40 110.19 F0.21	110.93 110.90 C0.03	0+30		
				11540	11578
				114.05	114.55
				C1.35	C1.23
2+03	10936 109.27 C0.09	109.85 109.77 C0.08	0+05 <sup>cb</sup> BC sapphire		
				11457 ✓	11449
				113.65	114.10
				C0.92	C0.39
1+80	10853 108.14 C0.39	108.66 108.64 C0.02	#2		



Bayard Cont'd

1480

→ 122.66  
122.66  
GRADE

123.24 ←  
123.21  
F0.03

1455

121.86  
121.43  
C0.43

122.41  
122.00  
C0.41

1442.50 <sup>Alley</sup> Red

~~=====~~

<sup>Alley</sup> <sup>St</sup>  
→ 121.33 121.39  
121.84 121.84  
C0.51 C0.45

PL. <sup>Alley</sup> Ret

~~=====~~

122.35  
121.39  
C0.96

PL. <sup>Alley</sup> Ret

~~=====~~

121.21  
120.65  
C0.56

2+56 <sup>Exist.</sup> Turquoise 126.42  
126.48

127.04  
127.08

1430

120.57  
120.20  
C0.39

~~=====~~

2+30

125.12  
124.76  
F0.36

125.74  
125.34  
F0.40

1+23.50 <sup>Alley</sup> Red

~~=====~~

<sup>Alley</sup> <sup>St</sup>  
→ 120.59 120.40  
120.97 120.97  
C0.38 C0.52

2+05

123.89  
123.77  
F0.12

124.49  
124.43  
F0.06

Roberts  
Cota  
Moore  
Pullen  
6-4-52  
W.O. 20009

Grade/Stakes For Sewer

2st 17 L.P. Delano Tract

Kalmia Place  
4558B

F.B. 2205 pg 1

INDEXED  
Law  
JUN 17 1953

BRK.  
1+40 P.I.

252.07 X  
240.0  
12.07  
10.26  
C 1.81

1+115

252.07 X  
246.0  
6.07  
3.79  
C 2.28

BRK  
0+83 P.I.

264.45 X  
252.03  
12.42  
5.33  
C 7.09

2+24.64 <sup>MAK.</sup> Connection

213.93  
192.4 ?  
21.53

N.H.  
0+46.12 P.I.

264.45 X  
252.40  
12.05  
5.60  
C 6.45

BRK  
2+06.5 P.I.

213.93 X  
196.9  
17.03  
7.06  
C 7.97

0+23.03

264.45 X  
252.63  
11.82  
5.83  
C 5.99

1+84.34

226.40 X  
211.3  
15.1  
9.8  
15.3

BRK  
0+00 N.H.

252.86  
✓

1+62.17

239.18 X  
225.7  
13.48  
10.93  
C 2.55

Roberts  
Cota  
Moore  
Fuller  
7-15-52  
W.O. 20786

Grade Stakes Pressure  
Sewer Witherby Pump Sta

INDEXED  
LW  
JUN 17 1953

15

1809 D, 1810 D 561

-4.60

0+36 BRK

C 10.21

1734.35

590

-1.73

C 7.63

562

-4.83

0+34.17 EC

C 10.75

1708.59 PRC.

571

-2.00

C 7.71

562

-6.00

0+24 BRK

C 11.62

0+92.60 <sup>M.A.P.T.</sup>

569

-2.17

C 7.86

554

-6.44

0+16.50 BC

C 11.98

0+76.62 BC.

569

-2.33

C 8.02

553

-6.70

0+12 BRK

C 12.23

0+60 BRK.

564

-2.50

C 8.14

Pump House

0+00 Make Connection

-6.70

0+48 BRK

563

-3.20

C 8.83

0+

BM

5.71 Δ ECT 12' Tie out 847' line witherby E E Kurtz

				335
	620	<del>644</del>	4+36.91	-6.37
	-0.28	<del>-0.28</del>		C 9.72
2+73	C 6.48	C 6.72		

				548
	605	<del>606</del>	4+11.42	-4.46
	-0.53	<del>-0.53</del>		C 9.94
2+49	C 6.58	C 6.59		

				663
	529	<del>532</del>	3+85.93 BC	-2.55
	-0.78	<del>-0.78</del>		C 9.18
2+24.99 EC.	C 6.07	C 6.10		

				578
			END 45° Bend St.	-1.20
	569		3+67.73	C 6.98
	-0.92			
2+11.64 PRC.	C 6.61			

				9.64
			3+57.26 P.I. 90° Joint	6.80
	556			C 2.84
	-1.19		Begin 90° Bend St.	
1+85.87	C 6.75		3+49.76	

				IN	OUT
	595			955	955
	-1.46		2+98.26	→ 0.00	7.00 ←
	C 7.41		& Junct. Box		
1+60.11			L.R. 90°		
			(16.97 on split)	C 9.55	C 2.55

6±62 Make Connection

5734

342  
-886  
C 12.28

6+54.75 Begin 45° Jt.

297  
-9.80  
C 12.77

5710

344  
-867  
C 12.11

6+37.75 E.C.

327  
-9.67  
C 12.94

4786

340  
-849  
C 11.89

6+20.08 Mid. Pt.

327  
-9.53  
C 12.80

4+74.41 BRK

336  
-840  
C 11.76

6+02.41 BC

302  
-9.39  
C 12.41

4+62.41 EC ± BRK

336  
-810  
C 11.76

5782

311  
-9.23  
C 12.34

4+50.41 BRK

330  
-740  
C 10.70

5758

334  
-904  
C 12.38

Roberts  
Cota  
Pollen  
Perkins  
8-6-52  
W032037

Grade Stakes Felspar  
Damos to Everts  
Rough Grade & water

9258-L FB2142pg 21

3730 water on Rt

INDEXED  
LOW  
JUN 17 1953

Stak 42.72 18  
42.66  
GRADE

		39.84		44.83	43.00
0+80 <sup>Water on Rt</sup>		39.18	3+60	44.07	43.07
		C 0.6		C 0.7	F 0.1
	41.38			44.47	42.61
0+76 <sup>Water on Rt</sup>	40.04		3+10	43.38	42.38
	C 1.3			C 1.1	C 0.2
	40.96	39.53		44.32	42.57
0+60	39.90	38.90	2+60	42.68	41.68
	C 1.1	C 0.6		C 1.6	C 0.9
		39.17		43.40	41.95
0+30 <sup>water on Rt</sup>		38.49	2+10	41.99	40.99
		C 0.7		C 1.4	C 1.0
	39.21	38.21	1+60	42.47	41.04
0+10 <sup>cbrc</sup>				41.29	40.29
				C 1.2	C 0.7
	39.11	38.07		41.92	40.44
0+00 <sup>EL</sup> PAVES		38.04	1+10	40.60	39.60
				C 1.3	C 0.8

BM

3254 <sup>NWBT</sup> Garnet & Paves

Rate = .01387 per foot

4476 <sup>water</sup>  
on  
Rt

4397  
44.60  
F0.6

4460

46.09  
45.46  
C0.6

4402  
44.46  
F0.4

4430 <sup>water</sup>  
Rt

43.65  
44.05  
F0.4

4420 <sup>water</sup>  
on  
Lt

45.63  
44.91  
C0.7

4410

45.52  
44.77  
C0.7

4347  
43.77  
F0.3

4499.30 <sup>w.2.</sup> Emits

46.00 ✓

45.00

3480 <sup>Water</sup>  
in  
Rt

45.32  
44.35  
C1.0

4306  
43.35  
F0.3

4489.30 <sup>cb</sup> Bc

43.86

44.86

Roberts

Grade Stakes Fallspar

9-15-52

Dawas to Everett

cbi Stakes

9258-L

1435

4127  
40.95  
C 0.32

3997  
39.95  
C 0.02

2485

4333  
43.03  
C 0.30

4234  
42.03  
C 0.31

1410

4089  
40.60  
C 0.29

3972  
39.60  
C 0.12

2460

4301  
42.68  
C 0.33

4195  
41.68  
C 0.27

0485

4044  
40.25  
C 0.19

39.31  
39.25  
C 0.06

2435

4259  
42.34  
C 0.25

4166  
41.34  
C 0.32

0460

3997  
39.70  
C 0.07

3896  
38.90  
C 0.00

2410

4215  
41.79  
C 0.16

4133  
40.99  
C 0.34

0435

3977  
39.56  
C 0.21

3873  
38.56  
C 0.17

1485

4177  
41.64  
C 0.13

4085  
40.64  
C 0.21

0410 BC

3935  
39.21  
C 0.14

3823  
38.21  
C 0.02

1460

4151  
41.29  
C 0.22

4064  
40.29  
C 0.35



4435	Coincidence 4512 45.12 GRADE	4412 44.12 GRADE
------	---------------------------------------	------------------------

4410	4509 44.77 C 0.32	4433 43.77 C 0.56
------	-------------------------	-------------------------

3485	4468 44.42 C 0.26	4357 43.42 C 0.15
------	-------------------------	-------------------------

3460	4430 44.07 C 0.23	4344 43.07 C 0.37
------	-------------------------	-------------------------

3435	4381 43.73 C 0.08	4311 42.73 C 0.38	4594 45.86 C 0.08	4463 44.86 F 0.23
------	-------------------------	-------------------------	-------------------------	-------------------------

3410	4361 43.38 C 0.23	4292 42.38 C 0.54	4460	4554 45.46 C 0.08	4472 44.46 C 0.26
------	-------------------------	-------------------------	------	-------------------------	-------------------------

Roberts Witherby Pressure Sewer  
8-18-52 Grade Stakes

See page 15 also

22

35 <sup>1</sup> / <sub>2</sub> 36	3.53 -8.43 C 11.96	41 <sup>1</sup> / <sub>2</sub> 42	3.23 -8.67 C 12.30
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34 <sup>1</sup> / <sub>2</sub> 35	3.36 -8.35 C 11.71	40 <sup>1</sup> / <sub>2</sub> 41	3.32 -8.98 C 12.30
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33 <sup>1</sup> / <sub>2</sub> 34	3.81 -7.98 C 11.79	39 <sup>1</sup> / <sub>2</sub> 40	3.34 -8.89 C 12.23
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32 <sup>1</sup> / <sub>2</sub> 33	3.30 -7.25 C 10.55	38 <sup>1</sup> / <sub>2</sub> 39	3.41 -8.80 C 12.21
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31 <sup>1</sup> / <sub>2</sub> 32	3.63 -6.32 C 9.95	37 <sup>1</sup> / <sub>2</sub> 38	3.43 -8.61 C 12.04
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Pipe Joint 30 <sup>1</sup> / <sub>2</sub> 31	4.03 -5.39 C 9.42	36 <sup>1</sup> / <sub>2</sub> 37	3.43 -8.52 C 11.95
---	-------------------------	-----------------------------------	--------------------------

EM

5.71

47 1/2 48

330  
-9.59  
C 12.89

46 1/2 47

316  
-9.49  
C 12.65

45 1/2 46

302  
-9.39  
C 12.41

44 1/2 45

310  
-9.29  
C 12.39

43 1/2 44

312  
-9.25  
C 12.37

END Pipe 49

308  
-9.76  
C 12.84

42 1/2 43

324  
-9.16  
C 12.40

48 1/2 49

327  
-9.68  
C 12.95

Roberts Stake Sewer Block 179 Choates ADD.  
 Cota 9291-L  
 Fuller  
 Chipman  
 8-22-52 FB2269pg.1  
 W.O. 62258

INDEXED  
 JUN 17 1953

4+90

191.22x  
 172.31  
 18.91  
 5.55  
 C 13.36

2+00

168.87x  
 156.15  
 12.72  
 6.00  
 C 6.72

4+40

191.22x  
 171.96  
 19.26  
 7.08  
 C 12.18

T.P. 1177 168.87x 0.26 156.90

1+50

157.16x  
 147.95  
 9.21  
 0.26  
 C 8.95

3+90

191.22x  
 171.61  
 19.61  
 7.93  
 C 11.68

1+00

157.16x  
 139.75  
 17.41  
 6.60  
 C 10.81

3+40

191.22x  
 171.26  
 19.96  
 8.91  
 C 11.05

T.P. 1241 157.16x 0.41 144.15

0+50

145.16x  
 131.53  
 13.61  
 3.73  
 C 9.88

T.P. 1181 191.22x 1.34 179.41  
 2+90 MH #1

180.75x  
 170.91  
 9.84  
 2.37  
 C 7.47

0+00

Exist MH.

133.24  
 123.35  
 C 9.89 From Rim

2+50

180.75x  
 164.33  
 16.40  
 6.84  
 C 9.56

TBM

11.92 145.16x

Rim MH  
 133.24 FB2269pg.2

T.P. 12.61 180.75x 0.73 168.14

check

11.29 16 2.42 = 162.43 conc. Man

T.P. 0.37 173.71 11.68 173.34

T.P. 0.58 185.02 6.78 184.44

5794 MH#

191.22x  
173.04  
18.18  
330

1488

191.22x  
172.66  
19.56  
407

1549

5740

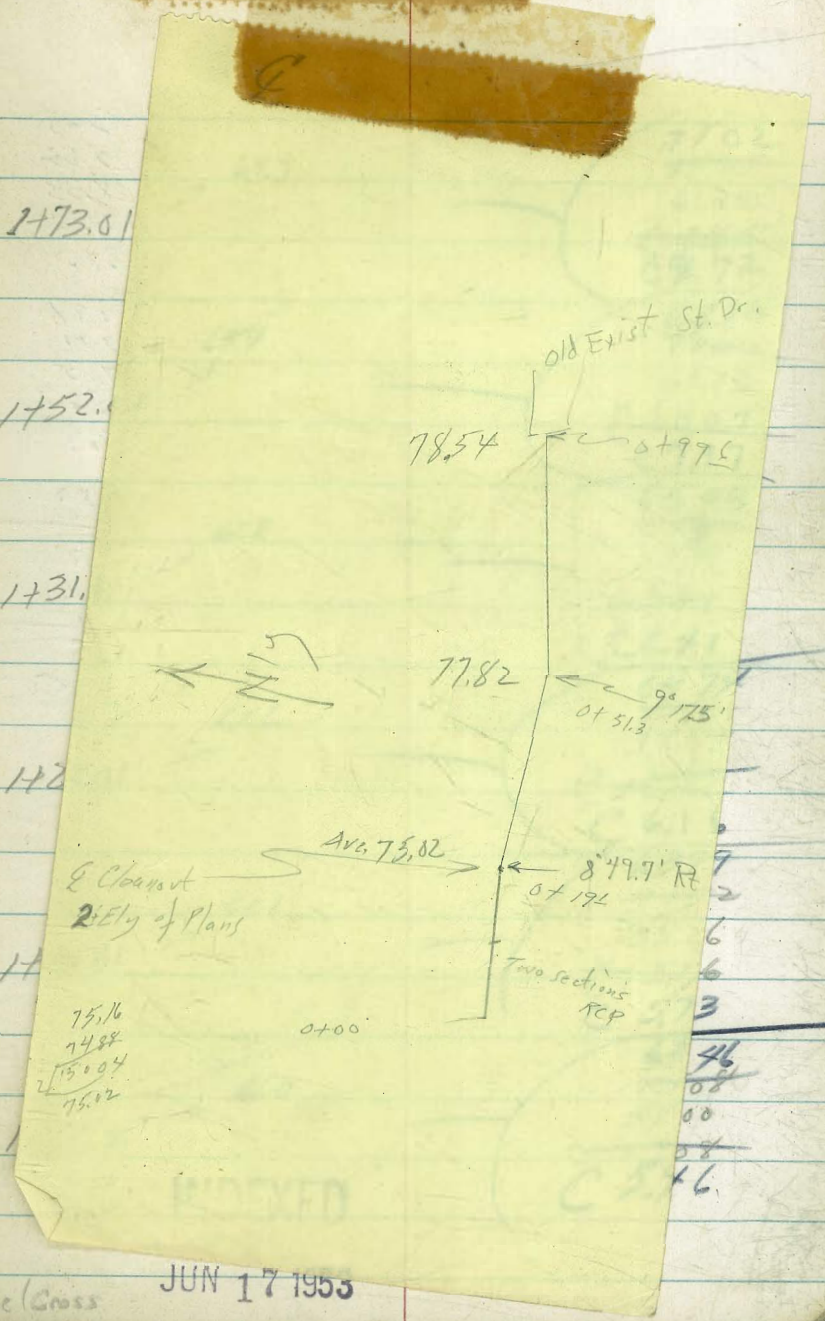
Roberts  
Cota  
Moore  
Pillon  
8-26-52  
W.O. 20504

Stake/Turquoise St. Drain

Station	Elevation	Notes	Other
0+83.01	60.6	(20' off Right) 62.07 76.44 51.42 C 19.02 C 4.65	1473.01
0+59.01	58.6	6070 7135 56.85 C 14.50 C 3.85	1452.01
0+39.01	56.8	5858 6124 56.24 C 10.00 C 2.34	1431.01
0+19.01	55.15	55.74 60.93 55.63 C 5.30 C 0.11	1420.01
0+00	54.53	54.90	1410.01
0-04.99	54.34	54.71	1400.01

END  
Exist  
Conc. Arch

END  
PIPE



B.M

54.53 0+00 chise Cross

JUN 17 1953

Roberts  
Cota  
Moore  
Pillon  
8-26-54  
W.O. 20504

Stake Turquoise St. Drain

Station	Grade	Notes	Offset	Grade	Station	Grade
0+83.01	60.6	(20' off Right) 62.07 <del>76.44</del> 57.42 C 19.02 C 4.65	1473.01	69.9		71.02 <del>65.25</del> 61.30 <del>3.95</del> C 9.72
0+59.01	58.6	60.70 <del>71.35</del> 56.85 C 14.50 C 3.85	1452.01	63.4		68.10 <del>70.20</del> 60.13 C 10.07 C 7.97
0+39.01	56.8	58.58 <del>66.24</del> 56.24 C 10.00 C 2.34	1431.01	61.8		65.43 <del>68.97</del> 58.96 <del>9.41</del> C 6.47
0+19.01	55.15	55.74 <del>60.93</del> 55.63 <del>55.30</del> C 0.11	1423.01	61.6		64.74 <del>71.11</del> 58.58 <del>10.33</del> C 6.16
0+00	54.53	54.90	1415.01	61.1		63.99 <del>71.52</del> 58.26 <del>13.26</del> C 5.73
0-04.99	54.34	54.71	1407.01	61.0		63.46 <del>71.08</del> 58.00 <del>13.04</del> C 5.46

INDEXED

JUN 17 1953

BM

54.53 0+00 chise/Cross

£

£

92.8  
2+99.01  
70.64  
C 12.84

8348  
~~7583~~  
68.33  
~~22.50~~  
C 15.15

85.0  
4+28.99

9075  
~~7725~~  
76.56  
C 14.19  
76.03  
~~23.72~~  
C 14.72

82.9  
2+78.01  
69.70  
C 12.14

8184  
~~7377~~  
67.15  
~~22.50~~  
C 14.69

83.1  
4+07.91

9284  
~~75.87~~  
75.58  
C 17.26  
74.78  
~~22.06~~  
C 18.06

74.1  
2+57.01  
68.75  
C 11.08

7983  
~~82.50~~  
65.98  
~~16.52~~  
C 13.85

3+86.83  
21.09  
Type "B" Cleanout

9200  
~~98.15~~  
INVERT  
73.53  
74.60  
C 17.40  
9200  
~~98.15~~  
T.O.P  
96.4  
C 18.47  
F 4.4

80.2 \*  
2+36.01  
67.81  
C 9.94

7775  
~~76.06~~  
64.81  
~~11.75~~  
C 12.94

3+68.46 EC  
308.50 RP

97.8  
73.77  
C 14.55  
8832  
~~77.77~~  
72.44  
~~14.53~~  
C 15.88

79.2  
2+15.01  
63.64  
C 12.26

7590  
~~72.05~~  
63.64  
~~11.41~~  
C 12.26

3+41.73 Midpoint

98.0  
72.56  
C 13.41  
8597  
~~77.03~~  
70.86  
~~26.97~~  
C 15.11

72.1 \*  
1+94.01  
62.47  
C 10.74

7321  
~~67.58~~  
62.47  
~~5.11~~  
C 10.74

3+15.01 BC  
308.50 RP

96.2  
71.36  
C 13.16  
8442  
~~71.52~~  
69.28  
~~26.77~~  
C 15.14



£

check

98.54 = 9854

NWBP Sapphire &amp; Mission

86.2

8954

78.53

covered

C 1101

9085

~~4246~~

7728

~~C 1558~~

C 1557

447.07 Make  
connection  
to  
Exst

86.3

77.54

C 1531

445.07

Roberts  
Cota  
Shepherd  
Moore  
9-9-52  
IND. 31886

Grade Stakes Alley Block 32  
Normal Heights

INDEXED  
Saw  
JUN 17 1953

9327-L

1+65	38972 388.96 C0.82	39009 389.16 C0.93	1+90	389.34 389.45 F0.11	389.88 389.57 C0.31
------	--------------------------	--------------------------	------	---------------------------	---------------------------

0+80 EYC	38933 388.78 C0.55	38940 389.06 C0.34	1+69 Lateral #1	389.45 PL. 385.00 Inv. C4.45	
----------	--------------------------	--------------------------	-----------------	------------------------------------	--

0+60	38872 388.56 C0.16	38941 388.86 C0.55	→ 1+65	38956 389.24 C0.32	389.45
------	--------------------------	--------------------------	--------	--------------------------	--------

0+40	38878 388.28 C0.50	38924 388.46 C0.78	Et. = at top of West Alley → 1+50	38970 389.15 C0.55	389.37
------	--------------------------	--------------------------	---	--------------------------	--------

0+20	38869 387.84 C0.85	38907 387.81 C1.19	1+30	38919 389.03 C0.16	38978 389.26 C0.52
------	--------------------------	--------------------------	------	--------------------------	--------------------------

PVC 0+00 32nd	38713 387.03	38922 387.17	1+11 Lateral #2	38932 PL. 385.00 Inv. C4.32	
------------------	-----------------	-----------------	-----------------	-----------------------------------	--

↑ East, West Alley ↑  
BM  
389.07 NEBP  
Adams, E. W. Mt. View Dr.

1+00 → 390.17  
389.81  
C 0.36

390.74  
389.77 ←  
C 0.97

3+30 389.68 390.26  
389.65 389.40  
C 0.03 C 0.86

0+75 390.74  
389.72  
C 1.02

390.40  
389.67  
C 0.73

3+05 389.85 389.95  
389.78 389.60  
C 0.07 C 0.35

0+50 390.16  
389.63  
C 0.53

390.59  
389.57  
C 1.02

2+80 FVC 389.90 390.00  
389.70 389.80  
F 0.20 C 0.26

0+25 390.00  
389.54  
C 0.46

389.82  
389.47  
C 0.35

2+60 389.92 390.10  
389.77 389.84  
F 0.15 C 0.26

0+00 389.89  
389.45  
C 0.44

389.56  
389.37  
C 0.19

2+40 PVC 390.44 390.02  
389.88 389.81  
C 0.56 C 0.21

↑ North & South Alley ↑

2+15 389.71 390.01  
389.66 389.69  
C 0.05 C 0.32

3+58.15 P.V. 389.50  
W. Mt. View

389.18  
389.06

2+60	39076 → 390.40 C0.36	39083 390.40 ← C0.43		
2+40 PVC	39069 390.32 C0.37	39083 390.32 C0.51	3+80	39274 391.92 C0.82 39225 391.92 C0.33
2+25	39037 390.26 C0.11	39049 390.26 C0.23	3+60	39268 391.50 C1.18 39194 391.50 C0.44
2+00	39046 390.17 C0.29	39110 390.17 C0.93	3+40	39187 391.19 C0.68 39151 391.19 C0.32
1+75	39060 390.08 C0.52	39112 390.07 C1.05	3+20	39206 390.93 C1.13 39160 390.93 C0.67
1+50	39054 389.99 C0.55	39128 389.97 C1.31	3+00	39141 390.71 C0.70 39228 390.71 C1.57
1+25	39043 389.90 C0.53	39013 389.87 C0.26	2+80	39091 390.53 C0.38 39095 390.53 C0.42

5+00	39431 393.50 C0.81	394.19 393.50 C0.69		
4+80	39487 393.75 C1.12	39406 393.75 C0.31		
4+60 PVC	39500 393.55 C1.45	39445 393.55 C0.90		
4+40	393.12 392.96 F0.16	3 393.12 393.02 F0.10	5+50.50 RL Collier	390.98 390.99
4+20.	393.47 392.69 C0.78	392.77 392.69 C0.08	5+40 EVC	392.44 391.65 C0.79 393.62 391.65 C1.97
4+00 EVC	392.64 392.26 C0.38	393.01 392.26 C0.75	5+20	393.74 392.80 C0.94 394.00 392.80 C1.20

Roberts  
Cota  
Moore  
9-16-52  
W.O. 20008

Grade/Stacks Wilson Ave.  
Landis St South on West Side

INDEXED  
*Low*  
JUN 17 1953

1+20  
327.62  
325.60  
C 2.02

1400  
328.85  
326.75  
C 2.10

0+80  
329.80  
327.90  
C 1.90

0+60  
C 1.66 ← 330.71  
329.05

0+40  
332.23  
330.20  
C 2.03

0+20  
332.07  
331.35  
C 0.72

0+00 South Line Landis  
332.50  
332.45

1+40

326.34  
324.60  
C 1.74

BM 335.25 NWBP 36th & Landis

Roberts  
 C. Sta  
 Moore  
 9-24.5v  
 W.D. 32012

Grade Stakes Along Blocks  
 206 E 207 Mission Beach

9319-L FB2161pg 5  
 0.25 0.09

1715.50 W. Line Mission BHP

INDEXED  
 JUN 17 1953

1400 109 306  
 0.85 0.85  
 C0.24 C 2.21

0775 253 335  
 2.10 2.03  
 C0.43 C 1.32

Ally 206

0769.85 Water Service on Lt

0750 486 444  
 3.25 3.26  
 C 1.61 C 1.24

0725 572 496  
 4.40 4.38  
 C 1.32 C 0.58

Ally 207

0753.33<sup>End</sup> Alley 620  
 600  
 C 0.20

6.10  
 5.57  
 F 0.53

0723 584  
 5.73  
 F 0.11

6.75  
 5.86  
 C 0.89

0700 East Line Strandway 5.55 5.55

BN 5740 chisel cross  
 @ Alley & Strandway

0700 W. Line Strandway 5.69

5.64

Roberts  
Cita  
Morre  
9-25-52  
W.O. 22068

Grade Stakes for Storm Drain  
Reservoirs from AT&SF R.R. East

INDEXED

JUN 17 1953  
5.40  
-2.19  
C 7.59

2+00 9731-L FB 2214 pg 3  
2303  
356  
C 8.59

4+00

1+50 519  
-3.23  
C 8.42

3+73.99 Clearcut # / Top 5.44  
C 0.44  
INVERT 5.44  
-2.29  
C 7.73

1+00 494  
-3.44  
C 8.38

3+74.49 EC

No Wood -2.30

0+59.19 EC 4.81  
-3.60  
C 8.41

3+34.78 Midpoint

No Wood -2.47

0+43.31 BC -3.67  
No Wood

2+95.08 BC

6.18  
-2.63  
C 8.81

EXIST Junction Box  
0+00 AT&SF R.R. 4.96  
-3.85  
C 8.81

2+50

5.72  
-2.82  
C 8.54

BM 5.34 South Chisel Cut  
Rim 114  
Juan F. Reservoirs



6750

521  
- 1.16  
C6.43

9750

575  
+ 0.09  
C5.66

6723.96 Clearout #2

498  
TOP → 4.80  
C0.18

498  
INVERT → -1.26  
C6.24

9700

593  
- 0.12  
C6.03

6700

557  
- 1.36  
C6.93

8750

518  
- 0.33  
C5.51

5750

547  
- 1.37  
C7.04

8700

500  
- 0.54  
C5.54

5700

538  
- 1.78  
C7.16

7750

497  
- 0.74  
C5.71

4750

527  
- 1.79  
C7.26

7700

492  
- 0.95  
C5.87

12+00

646  
1.33  
C 5.13

11+50

603  
1.08  
C 4.95

11+00

575  
0.83  
C 4.92

10+50

571  
0.58  
C 5.13

12+67.16 Make Conn. to Exist.

No Need  
1.66

10+00

555  
0.33  
C 5.22

12+55.69 EC

No Work  
1.61

9+72.57 Cleanout #3

555  
Top 5.40  
C 0.15555  
INVERT → 0.19  
C 5.36

12+28.20 BC

665  
1.47  
C 5.18

Roberts Grade Stakes Paradise Hills Sewers  
 Cota Potomac  
 Moore  
 W.D. 31677  
 9-28-52  
 16300

1750  
 16404  
 15457  
 C 9.47 3730

1" REVENUE  
 Law  
 JUN 17 1953

1720  
 16276  
 15326  
 C 9.50 3700

0790  
 16189  
 15794  
 C 9.95 2770

0760  
 16137  
 15063  
 C 10.74 2740

0730  
 16097  
 14931  
 C 11.66 2710

0700 (M) #1 Rachel  
 16103  
 14800  
 C 13.03 1780

BM  
 161.64 SEBP  
 Rachel & Potomac

88

146.09	146.80
141.17	141.17
<u>C 4.92</u>	<u>C 5.63</u>

141.17 Floor  
 13773  
 F. 1.24

143.71  
 141.17  
 C 2.54

Rachel

3  
 032

16280  
 16290

342.44  
 033  
 30  
 990

$$\begin{array}{r} 15959 \\ 14159 \text{ Inv.} \\ \hline C 11.95 \end{array}$$

$$\begin{array}{r} 15935 \\ 14909 \text{ Inv.} \\ \hline C 10.26 \end{array}$$

$$\begin{array}{r} 16478 \\ 15750 \\ \hline C 9.23 \end{array}$$

$$\begin{array}{r} 15950 \text{ Elev} \\ 15835 \\ \hline F 1.15 \end{array}$$

Potomac  
 Road  
 Top Water House  
 Reel & Potomac 161645EBP

$$\begin{array}{r} 146.09 \\ 141.17 \leftarrow \\ \hline C 4.92 \end{array}$$

$$\begin{array}{r} 146.80 \\ 141.17 \leftarrow \\ \hline C 5.63 \end{array}$$

$$\begin{array}{r} 141.17 \text{ floor} \\ 13993 \\ \hline F 1.24 \end{array}$$

$$\begin{array}{r} 142.71 \\ 141.17 \leftarrow \\ \hline C 2.54 \end{array}$$

NE SE  
 Pump House  
 NW SW

Reel  

$$\begin{array}{r} 3 \\ 032 \\ \hline 342.44 \end{array}$$

$$\begin{array}{r} 023 \\ 20 \\ \hline 990 \end{array}$$

1628D  
 1629D

Roberts  
Cota  
Moore  
W.O. 31677  
9-28-52

Grade Stakes Paradise Hills Sewers  
Potomac  
Rachael to Rancho (Pg 38 thru 42)  
16300

1450

IMPROVED  
Law  
JUN 17 1953

16404  
154.57  
C 9.47

3730

174.97  
162.45  
C 12.52

1420

16276  
153.26  
C 9.50

3700

173.48  
161.14  
C 12.34

0790

16189  
151.94  
C 9.95

2770

171.76  
159.83  
C 11.93

0760

16137  
150.63  
C 10.74

2740

169.75  
158.51  
C 11.24

0730

16097  
149.31  
C 11.66

2710

167.53  
157.20  
C 10.33

0700 MH (\*) Rachael

16103  
148.00  
C 13.03

1780

165.64  
155.88  
C 9.76

BM

161.64 SEBP  
Rachael & Potomac

5410

17703  
164.18  
C 12.85

Flint ridge  
7402.91 MH #16

17392  
165.15 ✓  
C 8.77

4480

17772  
164.03  
C 13.69

6460

17357  
164.93  
C 8.64

4450

17813  
163.88  
C 14.25

6430

17393  
164.78  
C 9.15

4420

17816  
163.73  
C 14.43

6400

17457  
164.63  
C 9.94

3490

17773  
163.58  
C 14.15

5470

17539  
164.48  
C 10.91

3451.55 MH #15

17608  
163.39  
C 12.69

5440

17620  
164.33  
C 11.87

8+80

↑  
11.9%18235  
173.10  
C 9.2510+60. ↑  
0.4%198.85 ✓  
190.09  
C 8.76

8+62.9 | MH 17

3.7%

↓

18091  
171.07  
C 9.84Morningside  
10+21.46 MH 1819767 ✓  
189.94  
C 7.73

11.9%

↓

8+20

17816  
169.48  
C 8.68

10+00

19627 ✓  
187.38  
C 8.89

7+90

17660  
168.37  
C 8.23

9+70

192.91 ✓  
183.81  
C 9.10

7+60

17525  
167.26  
C 7.99

9+40

18894 ✓  
180.24  
C 8.70

7+30

17431  
166.15  
C 8.16

9+10

18546  
176.67  
C 8.73

12+40

20394 ✓  
190.81  
C 13.13

14+20

20702  
191.53  
C 15.49

12+10

20314 ✓  
190.69  
C 12.45

13+90

20634  
191.41  
C 14.93

↑  
0.4%

11+80

20231 ✓  
190.57  
C 11.74

Reo Drive  
13+64.83 DMH 19

20628  
196.00  
C 10.28  
20628 ↑  
191.31 ↓

↓  
0.4%

11+50

20144 ✓  
190.45  
C 10.99

13+30

20603 ✓  
191.17  
C 14.86

11+20

20662 ✓  
190.33  
C 10.29

13+06

20565 ✓  
191.05  
C 14.60

10+90

19976 ✓  
190.21  
C 9.55

12+70

20477 ✓  
190.93  
C 13.84



206.91

SWBP. Reo Dr. & Potomac

Rancho Drive

42

Potomac to Albemarle (pg 42 to 44)

203.49 SWBP Rancho Dr. & Potomac

16400

20422  
192.25  
C 11.97

17480

20476  
195.85  
C 8.91

15470

20507  
192.13  
C 12.94

17450

INDEXED

JUN 17 1953

20367  
194.83  
C 8.84

15440

20606  
192.01  
C 14.05

17420

20261  
193.81  
C 8.80

↑  
3.49

15410

20699  
191.89  
C 15.10

Rancho Drive, Potomac  
1648464 M420

20220  
192.61  
C 9.59

0.49

↓

14480

20756  
191.77  
C 15.79

16460

20257  
192.99  
C 10.08

14450

20748  
191.65  
C 15.83

16430

20345  
192.37  
C 11.08

19490

212.43  
→ 202.79  
C 9.44

TP 21170

19460

211.33  
201.97  
C 9.36

21+70

219.72  
205.88  
C 13.84

19430

210.19  
200.95  
C 9.24

21+40

218.56  
205.73  
C 12.83

19400

209.07  
199.93  
C 9.14

21+10

217.11  
205.58  
C 11.53

18470

207.97  
198.91  
C 9.06

20+80

215.79  
205.43  
C 10.36

0.507% ~~0.49%~~

Schuyler

18440

206.94  
197.89  
C 9.05

20+58.44 MH 78

215.02  
205.32  
C 9.70

3.4%  
↓

18410

205.85  
196.87  
C 8.98

20+20

213.56  
204.01  
C 9.55

Albemarle  
Rancho Dr. East (pg #4 to #40)

44

23+80

216.91  
→ 206.93  
C 9.98

215.46  
209.66  
C 5.80

23+50

217.90  
206.78  
C 11.12

25+60

216.23  
209.15  
C 7.08

23+20

218.98  
206.63  
C 12.35

25+30

216.75  
208.64  
C 8.11

22+90

219.89  
206.48  
C 13.41

25+00

216.85  
208.13  
C 8.72

22+60

220.47  
206.33  
C 14.14

24+70

216.71  
207.62  
C 9.09

22+30

220.73  
206.18  
C 14.55

24+40

↑  
1.7%

Albemarle & Rancho

216.47  
207.10  
C 9.37

22+00

220.51  
206.03  
C 14.48

24+09.3 MM 26

0.50720.49%

(Dist. from Schuyler to Albemarle)  
does not check plans.

BM Albemarle & Rancho

215.52 = 215.46 SWBP

27+70

21997  
218.23  
C 6.74

23898  
231.35  
C 7.63

27+40

21857  
212.72  
C 5.85

29+50

23487  
227.63  
C 7.24

27+10

21720  
212.21  
C 4.99

29+20

23086  
223.91  
C 6.95

26+80

21590  
211.70  
C 4.20

28+90

22717  
220.19  
C 6.98

26+50

21469  
211.19  
C 3.50

28+60

22403  
216.47  
C 7.56

26+20

21420  
210.68  
C 3.52

28+30

↑  
12.4%

22227  
213.90  
C 8.37

25+90

21465  
210.17  
C 4.48

28+09.3 MH 27

↓  
1.7%

247.68 SWBP Sea Breeze & Albemarle  
247.57

31+09.3 DE.

0.4%  
↓  
c 12.63 from Huntington Park

246.83  
234.06  
C 12.77

30+70

246.53  
233.90  
C 12.63

30+40

246.06  
233.78  
C 12.28

30+10

244.82  
233.66  
C 11.16

29+80

↑  
0.4%

242.41  
233.54  
C 8.87

29+67.3 MH 28

12.4%  
↓

241.07  
233.49  
C 7.58

Rancho Drive

76

Potomac North to D.E.

2+30 DE

216.61  
207.53  
C 9.08

2+05

214.29  
205.13  
C 8.96

1+70

210.00  
202.49  
C 7.51

1+35

207.75  
199.55  
C 8.20

1+00 MH 77

204.60  
196.61  
C 7.99

0+70

202.54  
195.41  
C 7.13

0+35

201.12  
194.01  
C 7.11

0+00 MH 70 Rancho &  
Potomac

(See Page 42)

192.61  
C 9.59

Roberts  
Moore  
Pillon  
10-9-52  
W.P. 3137

Grade Staker Alley Bk. #4 City Heights  
Between Marlborough & 41st  
From University to Polk

INDEXED

JUN 17 1953

	9328-L					
0+90 EVC	35230 0.5BK 352.21 C 0.09	35320 + 352.17 0.21 BK C 1.03	2+00	Nail 0.8 BK	35217 350.50 C 1.67	35182 350.45 + C 1.37 BK
0+70	35395 + 352.69 0.29 IN C 1.26	35277 352.66 + C 0.11 0.3BK	1+80	Nail 0.82 BK	35208 350.40 C 1.68	35160 350.35 + C 1.27 BK
0+50	35435 + 353.03 0.04 BK C 1.32	35402 353.02 + C 1.00 0.12 BK	1+70	Nail 0.73 BK	35201 350.39 C 1.62	35145 350.30 + C 1.15 BK
0+30	35435 + 353.23 0.04 BK C 1.12	35414 353.23 + C 0.91 0.05 BK	1+60	Nail 0.65 BK	35195 350.46 C 1.49	35229 350.37 + C 1.92 BK
0+10	35396 + 353.30 on Line C 0.66	35433 353.30 + C 1.03 Line	1+40 PVC	+ 3BK	35128 350.85 C 0.43	35213 + 350.76 0.76 BK C 1.37
0+00	N.L. Univ. 353.32 353.35	353.29 353.37	1+15	+ 3BK	35153 351.51 E 0.02	35315 + 351.46 0.55 BK C 1.69
RM		354.00 SWBP 41st & Univ.				

2780 EVC

35173  
351.41  
3BK C 0.32

35263 +  
351.41 0.86  
C 1.22 BK

4460

Nail 1.23  
BK  
35571  
355.29  
C 0.48

3  
✓ 355.29 2' BK  
355.10  
F 0.19

2760

35125  
351.09  
3BK C 0.16

35207 +  
351.09 0.87  
C 0.99 BK

4430

35465  
354.63  
F 0.02

35495  
354.65  
C 0.30 3BK

2740

35092  
350.83  
3BK C 0.09

35174  
350.82 +  
C 0.92 0.06 BK

4400

Nail 1.47  
BK  
35498  
354.00  
C 0.98

35417  
354.00  
C 0.17 3BK

2739 Water Lot

5BK

3770

3BK

35393  
353.35  
C 0.58

35332  
353.35  
F 0.03 3BK

2734 Sewer Lot

5BK

35168  
FL  
396.00  
C 5.08

3740

3BK

35305  
352.70  
C 0.35

35362 Nail  
352.70 1.55  
C 0.92 BK

2720

Nail 0.04  
BK

35171  
350.63  
C 1.08

35176 +  
350.61 0.15  
C 1.14 BK

3710

Nail 3.18  
BK

35283  
352.06  
C 0.77

35284 +  
352.06 1.5  
C 0.72 BK

6200 SL  
POLK356.81  
356.75

357.02

5780

Nail  
0.05  
BK357.97  
356.97  
C 1.00358.12  
357.10 2BK  
C 1.02

5760

Nail  
0.30  
BK357.79  
357.00  
C 0.79357.50  
357.05  
C 0.45 2BK

5740

Nail  
0.30  
BK357.47  
356.87  
C 0.60357.07 +  
356.89 0.30  
C 0.18 BK

5720 PVC

+  
4BK356.87  
356.59  
C 0.28356.72  
356.59  
C 0.16 2BK

4790

3BK

356.27  
355.94  
C 0.33356.00  
355.94  
C 0.06 2BK



Robert  
Moore  
Pikin  
W628905  
10-15-52

Grade Stakes Park Blvd.  
at S.D. High School

9587L FB2113 & 2114

INDEXED  
Paid  
JUN 17 1953

2+68	Begin cutter Island	Rab. → 124.45 Pa. → 123.24 F 1.21	4400	130.85 12901 F 1.84	130.41 12949 F 0.92
2+64.43		124.38 123.88 C 0.50	3+75	129.63 12854 F 1.09	129.20 12805 F 1.15
2+39.43		123.01 122.70 C 0.31	3+50	128.42 12720 F 1.22	127.99 12688 F 1.11
2+11 2+109.61	Inlet	121.75 121.69 actual	3+25	127.21 12604 F 1.17	126.78 12558 F 1.20
2+00 1+78.61	Inlet	121.29 121.20 actual	3+00	126.00 12463 F 1.37	125.57 12470 F 0.87
1+160	Begin cutb on Pase	119.62 119.60 C 0.02	2+89.43	125.49 12436 F 1.13	125.06 12482 F 0.24

BM

105.47 NW 1/4  
AS 1/2 & 12 1/2

5775	→ 139.33 138.88 F 0.45	→ 138.88 137.95 F 0.93	7750	→ 147.82 146.99 F 0.83	→ 147.35 147.21 F 0.14
5750	138.12 137.77 F 0.35	137.67 136.97 F 0.70	7725	146.60 145.93 F 0.67	146.14 146.04 F 0.10
5725	136.91 136.69 F 0.22	137.15 136.46 F 0.69	7700	145.39 144.79 F 0.60	144.93 144.69 F 0.24
5700	135 135.70 135.48 F 0.22	135.82 135.25 F 0.57	6775	144.18 143.64 F 0.54	143.72 143.44 F 0.28
4775	134.48 134.09 F 0.39	134.64 134.04 F 0.60	6750	142.97 142.53 F 0.44	142.51 141.97 F 0.54
4750	133.27 132.63 F 0.64	133.17 132.83 F 0.34	6725	141.75 141.31 F 0.44	141.30 140.79 F 0.51
4725	132.06 131.24 F 0.82	131.62 131.59 F 0.03	6700	140.54 139.95 F 0.59	140.09 139.35 F 0.74

9+25

→ 155.97  
155.52  
F 0.45

9+0.59EC

154.83  
154.48  
F 0.35

8+75

Grade  
Pipes

153.40  
153.26  
F 0.14

10+50 END  
CURB

162.47  
162.07  
F 0.40

8+50

152.19  
152.07  
F 0.12

10+25

161.15  
160.89  
F 0.27

8+25

150.98  
150.94  
F 0.04

10+00

159.85  
159.69  
F 0.16

8+00

150.28  
149.59  
F 0.69

149.77  
149.57  
F 0.20

9+75

158.56  
158.41  
F 0.15

7+75

149.07  
148.30  
F 0.74

148.56  
148.26  
F 0.20

9+50

157.26  
156.89  
F 0.37

Roberts  
Cota  
Moore  
Palm  
WA 31677  
11-1-52

Grade Stakes Sewer Schuyler  
Rancho to Sea Breeze

1630 D

4+20

~~223.44~~  
→ 215.82 ←  
C 7.32

21215  
206.37  
C 5.78

INDEXED

JUN 17 1953

1+75

3+85

221.10  
213.62  
C 7.48

21250  
206.16  
C 6.34

1+40

3+50

21967  
211.41  
C 8.26

21341  
205.95  
C 7.46

1+05

3+15

21743  
209.21  
C 8.22

21417  
205.74  
C 8.43

0+70

2+80 MH 79

↑ 6.3%

↓ 0.6%

21525  
207.00  
C 8.25

21476  
205.53  
C 9.23

0+35

2+45

21354  
206.79  
C 6.75

0.6% ↑

21502  
205.32  
C 9.70

0+00 MH 78

2+10

21273  
206.58  
C 6.15

6+30

23721  
→ 229.05 ←  
C 8.16

6+20 MH 80

↑  
6.3%  
↓23654  
228.42  
C 8.12

8+20 DE

248.94  
241.02  
C 7.92

5+95

23485  
226.85  
C 8.00

8+05 DE

248.16  
240.08  
C 8.08

5+60

23249  
224.64  
C 7.85

7+70

246.30  
237.87  
C 8.43

5+25

23008  
222.44  
C 7.64

7+35

244.28  
235.67  
C 8.61

4+90

22778  
220.23  
C 7.55

7+00

241.99  
233.46  
C 8.53

4+55

22547  
218.03  
C 7.44

6+65

239.59  
231.26  
C 8.33

Roberts  
Cota  
Moore  
Zillen  
no. 31677  
11-1-52

Grade Stakes Potomac Sewer

Rancho to Sea Breeze

INDEXED

JUN 17 1953

216.15  
→ 208.15 ←  
C 8.00

4+20

20588  
197.09

C 6.79

3+85

214.68  
206.86  
C 7.82

1+75

20463  
197.79

C 6.84

3+50

213.20  
205.56  
C 7.64

1+40

20369  
196.50

C 7.19

3+15

211.70  
204.27  
C 7.43

1+05

20292  
195.20

C 7.72

2+80

210.23  
202.97  
C 7.26

0+70

20177  
193.91

C 7.86

2+45 MH 21

3.72

20876  
201.68  
C 7.08

0+35

192.61  
C 9.59

2+10

20729  
200.38  
C 6.91

0+00 MH 20

↑ 3.7%

6+70

236 54  
→ 229.50 ←  
C 7.04

6+35

232 74  
225.79  
C 6.95

8+85

25839  
250.95  
C 7.44

6+00

228 91  
222.08  
C 6.83

8+50

25538  
247.91  
C 7.47

5+65

225 20  
218.37  
C 6.83

8+4.61 NH23

8.72

10.62

25222  
244.83  
C 7.39

5+30

221 47  
214.66  
C 6.81

7+75

24810  
240.63  
C 7.47

4+94.61 NH22

↑ 10.6%  
↓ 3.7%

219 20  
210.91  
C 8.29

7+40

24425  
236.92  
C 7.33

4+55

217 57  
209.45  
C 8.12

7+05

240 40  
233.21  
C 7.19

268.14 SWBP SeaFreeze  
Potomac

9454.61 DE

↓ 87%

26411  
25701  
C 7.10

9420

26128  
25400  
C 7.28



Roberts  
Cota  
Moore  
Pillon  
11-1-50  
NO. 31677

Gridded Stakes Sewer Allegheny

Rachael to Sea Breeze

INDEXED

58

JUN 17 1953

1+00 NH. 4

2.47 ↓

189.07  
→ 180.40 ←  
C 8.67

1+75

183.62  
175.00  
C 8.62

3+85

188.75  
180.04  
C 8.71

1+40

182.79  
174.16  
C 8.63

3+50

187.98  
179.20  
C 8.78

1+05

181.83  
173.32  
C 8.51

3+15

187.05  
178.36  
C 8.69

0+70

181.07  
172.48  
C 8.59

2+80

186.09  
177.52  
C 8.57

0+35

180.26  
171.64  
C 8.62

2+45

185.29  
176.68  
C 8.61

0+00 NH. 3

2.47 ↓

170.80

2+10

184.47  
175.84  
C 8.63

Allegheny and Rachael

180.25 SEBP

6+30

19458  
→ 185.92 ←  
C 8.66

8+70

59  
200.30  
→ 191.68 ←  
C 8.62

5+95

19374  
185.08  
C 8.66

8+35

19941  
190.84  
C 8.57

5+60

19302  
184.24  
C 8.78

8+00 M.H. 5

2.4% ↑

19848  
190.00  
C 8.48

5+25

19268  
183.40  
C 8.68

7+70

199.75  
189.28  
C 8.47

4+90

19126  
182.56  
C 8.70

7+35

19688  
188.44  
C 8.44

4+55

19038  
181.72  
C 8.66

7+00

19616  
187.60  
C 8.56

4+20

18957  
180.88  
C 8.69

6+65

19550  
186.76  
C 8.74

11+15

207.41  
→ 197.56 ←  
C 9.85

13+50

222.09  
→ 204.89  
C 17.20

221.90  
→ 204.89 ←  
C 17.01

10+80

206.26  
196.72  
C 9.54

13+15

220.63  
203.77  
C 16.86

220.05  
203.77  
C 16.28

10+45

205.10  
195.88  
C 9.22

12+80

217.94  
202.65  
C 15.29

217.50  
202.65  
C 14.85

10+10

204.02  
195.04  
C 8.98

12+45

215.16  
201.53  
C 13.63

214.38  
201.53  
C 12.85

9+75

202.93  
194.20  
C 8.73

12+10

211.82  
200.41  
C 11.41

210.90  
200.41  
C 10.49

9+40

202.06  
193.36  
C 8.70

11+75

208.99  
199.29 OK  
C 9.70

9+05

201.17  
192.52  
C 8.65

11+38.5 | M.H.6 ↑ 3.2%

208.05  
198.12  
C 9.93 ↓ 2.4%

223.10

2216

SEEP Rancho, Allgeburg

15+95

221 77  
→ 207.82 ←  
C 13.95

18+35

218.35  
210.43  
C 7.92

61

15+60

222 69  
207.67  
C 15.02

18+00

217.78  
209.45  
C 8.33

15+25

223 60  
207.52  
C 16.08

17+65.02 N.H. 8

217.57  
208.47  
C 9.10  
↑ 2.8% ↓ 0.4%

14+90

225 12  
207.37  
C 17.75224 03  
207.37  
C 16.66

17+35

217.75  
208.39  
C 9.36

14+55

225 29  
207.23  
C 18.06224 12  
207.23  
C 16.89

17+00

218.31  
208.25  
C 10.06

14+18.51 N.H. #7

224 84  
207.08  
C 17.76223 86  
207.08  
C 16.78

16+65

219.49  
208.10  
C 11.30

13+85

222 91  
206.01  
C 16.90223 08  
206.01  
C 17.07

16+30

220 51  
207.96  
C 12.55

20+80

→ 226.83  
217.29  
C 9.54

23+25

62  
254.53  
→ 245.41  
C 9.12

20+45

224.81  
216.31  
C 8.50

22+90

250.05  
241.00  
C 9.05

20+10

222.93  
215.33  
C 7.60

22+55

245.54  
236.59  
C 8.95

19+75

221.45  
214.35  
C 7.10

22+20

240.93  
232.18  
C 8.75

19+40

220.54  
213.37  
C 7.17

21+85

236.31  
227.77  
C 8.54

19+05

219.80  
212.39  
C 7.41

21+50

231.80  
223.36  
C 8.44

19+70

219.04  
211.41  
C 7.63

21+08.02 MGA #9

12.6%

↑  
228.40  
218.07  
2.8% ↓ C 10.33

274.56 SWBP SeaBreeze & Allegory

274.49

25+63.02 DE

273.11  
→ 258.93 ←  
C 14.18

25+35

272.15  
258.81  
C 13.34

25+00

270.48  
258.67  
C 11.81

24+65

268.23  
258.53  
C 9.70

24+28.02 MK #10

0.4% ↑  
12.6% ↓

265.40  
258.38  
C 7.02

23+95

262.41  
254.23  
C 8.18

23+60

258.75  
249.82  
C 8.93

					335.69 65 624
3+30	336.68 335.50 C 1.18	335.78 335.20 C 0.58	4180	337.19 335.95 C 1.24	335.65 335.51 F 0.14
3+70 PVC	336.84 335.70 C 1.14	335.40 335.14 F 0.26	4160 PVC	337.04 335.80 C 1.24	335.50 335.43 F 0.07
2+85	336.99 336.02 C 0.97	335.72 335.06 F 0.66	4125	337.10 335.65 C 1.45	335.35 334.83 F 0.52
2+60	337.04 336.34 C 0.70	336.04 335.70 F 0.34	3+90 PVC	337.68 335.50 C 2.18	335.20 334.84 F 0.36
2+35	338.66 336.66 C 2.00	336.36 335.26 F 1.10	3+70	337.85 335.43 C 2.42	335.13 334.74 F 0.39
2+10 PVC	339.62 336.99 C 2.63	336.73 336.69 C 0.04	3+60.32 Storm Drain		
1+90	337.77 337.25 C 0.52	336.95 336.08 F 0.87	3+50	337.58 335.70 C 2.18	336.55 335.70 C 1.45

INVERT

6700.23 EVC  
S.L. Lardis

341.20  
341.12

341.20  
341.02

331.12  
330.34  
C 0.78

1443 Ch. Fall Chamoune

5480

340.87  
339.90  
C 0.97

3  
339.60  
339.56  
F0.04

1705

331.42  
330.65  
C 0.77

5460

340.70  
338.70  
C 2.00

-  
338.40  
338.11  
F 0.29

0770

331.06  
330.94  
C 0.12

5440

338.71  
337.70  
C 1.01

337.54  
337.40  
C 0.14

0736.75 BK

332.44  
331.21  
C 1.23

5420

338.84  
338.90  
C 1.94

336.84  
336.60  
C 0.24

0700

336.66  
G.GATE  
334.87  
C 1.79

336.66  
INVERT  
332.00  
C 4.66

5400

338.04  
336.30  
C 1.74

336.00  
335.95  
F 0.05



Roberts Grade Stakes Culvert  
Cota Friars Road East Hwy. 395  
Moore  
Fellen

67

INDEXED  
Law  
JUN 17 1953

W.O. 20715  
11-6-52

8467-A-L

North

36.45  
27.24  
9.21  
6.82  
C 2.39

41

South

36.45  
26.76  
9.69  
9.33  
C 0.36

~~11.13 37.76~~

N.G. 26.63 In. 72" RCP see page 63 FB 2021

~~34.81~~ Mail in Pole Gons

TBM

7.50 36.45

28.95 30" In. Inlet

37.16  
30.39  
2.57

Roberts  
Cota  
Moore  
Fuller  
11-11-52

Grade Stakes Sewer Bolivar  
Rachael to Roo

68

1+75

17517  
166.79  
C 8.38

4+25

INDEXED  
Law  
JUN 17 1953

182.76  
175.34  
C 7.42

1+40

17437  
165.74  
C 8.63

3+90

181.16  
173.94  
C 7.22

1+05

17360  
164.69  
C 8.91

3+55

179.65  
172.54  
C 7.11

0+70

17287  
163.64  
C 9.23

3+25 N.H. 11

3% ↓

↑ 4%

170.62  
171.14  
C 7.48

0+35

172.14  
162.59  
C 9.55

2+80

177.57  
169.94  
C 7.63

0400 N.H. 2 Rachael & Bolivar

3% ↑

161.54

2+45

176.78  
168.89  
C 7.89

180.25 SEBP  
Rachael & Alkington

2+10

176.05  
167.84  
C 8.21

Anteilge  
6+73.26 M.H. 1/2 4% ↓ 0.62 ↑  
→ 191.77  
185.27  
C 6.50

7+10

69  
192.88  
186.69  
C 6.19

6+35

191.14  
183.74  
C 7.40

8+75

192.76  
186.48  
C 6.28

6+00

190.33  
182.34  
C 7.99

8+40

192.69  
186.27  
C 6.42

5+65

189.10  
180.94  
C 8.16

8+05

192.59  
186.06  
C 6.53

5+30

187.50  
179.54  
C 7.96

7+70

192.45  
185.85  
C 6.60

4+95

186.09  
178.14  
C 7.95

7+35

192.18  
185.64  
C 6.54

4+60

184.41  
176.74  
C 7.67

7+00

191.99  
185.43  
C 6.56

11+55

19928  
→ 188.16  
C 11.12

13+45.63 DE

19842  
→ 189.30  
C 9.12

11+20

19734  
187.95  
C 9.39

13+30

19943  
189.21  
C 10.22

6 10+85

19553  
187.74  
C 7.79

12+95

20180  
189.00  
C 12.80

2 10+50

19427  
187.53  
C 6.74

12+60

20370  
188.79  
C 14.91

3 10+15

19356  
187.32  
C 6.24

Reo  
12+45.65 MH/14

↕ 0.6%

20429  
188.70  
C 15.59

4 9+80

19323  
187.11  
C 6.12

12+25

20355  
188.58  
C 14.97

4 9+48.26 MH13

↕ 0.6%

19310  
186.92  
C 6.18

11+90

20178  
188.37  
C 13.41

Grade Stakes Sewer Rev  
Potomac South

71

11-11-52

3+50 DE

21925  
→ 209.80  
C 9.45

INDEXED  
Law  
JUN 17 1953

1+50

21202  
20230  
C 9.72

3+20

21841  
208.84  
C 9.57  
9.57

1+20

21090  
201.04  
C 9.86

2+90

21748  
207.89  
C 9.60

0+80

20973  
198.78  
C 9.95

2+60 MH. 81

↓ 4.2%

3.2%

↑ 21631  
206.92  
C 9.39

0+60

20860  
198.52  
C 10.08

2+40 MH. 81

21557  
206.08  
C 9.49

0+30

20729  
197.26  
C 10.03

2+10

21440  
204.82  
C 9.58

0+00 MH 19

↑ 4.2%

196.00

1+80

→ 21319  
203.56  
C 9.63

Grade Stake Sewer Morningside  
Potomac South

11-11-52

~~11-11-52~~

INDEXED

JUN 17 1953

211.73  
204.98  
C 6.75

1+75

20760  
19781  
C 9.79

4+10 PE

211.39  
204.42  
C 6.97

3+70

1+40

20600  
19624  
C 9.76

210.97  
203.93  
C 7.04

3+35

1+05

20398  
194.66  
C 9.32

3+00 MH 82

4.5%

1.4%

210.55  
203.44  
C 7.11

0+70

20147  
193.09  
C 8.38

210.29  
202.54  
C 7.75

2+80

0+35

19891  
191.51  
C 7.40

209.75  
200.96  
C 8.79

2+45

0+00 MH 18

↑ 4.5%

189.94

208.85  
199.39  
C 9.46

2+10

Grade Stakes Sewer Flintridge  
Potomac South

11-11-52

1+75

180.11  
173.37  
C 6.74

1+40

178.53  
171.73  
C 6.80

1+05

177.01  
170.08  
C 6.93

0+70

175.50  
168.44  
C 7.06

2+90 DE

185.30  
178.78  
C 6.52

0+35

174.22  
166.79  
C 7.43

2+45

183.34  
176.66  
C 6.68

0+00 M.H. 16

↑ 4.7%

165.15

2+00 M.H. 74

↕ 4.7%

181.28  
174.55  
C 6.73

INDEXED  
*Law*  
JUN 17 1958

Roberts  
Cote  
Moore  
Fuller

Grade Stakes Sewer Radnor St.  
Potomac to Bolivar to Allegheny

74

INDEXED

JUN. 17 1959

12.7-52

1475

160.81  
155.00  
C 5.81

3+71

172.82  
162.52  
C 10.30

1440

157.69  
153.60  
C 4.09

3+36.2 NH #2 Bolivar ↓ 4.2

↑ 28.2 171.74  
161.54  
C 10.20

1405

155.58  
152.20  
C 3.38

3+15

171.01  
160.60  
C 10.41

0+70

156.29  
150.80  
C 5.49

2+80

169.44  
159.20  
C 10.24

0+35

159.87  
149.40  
C 10.47

2+45

167.00  
157.80  
C 9.20

0+00 NH.1 Potomac

148.00  
Existing

2+10

163.72  
156.40  
C 7.32

BM

161.64 SEBP  
Potomac & Radnor



5+81  
17813  
168.40  
C 9.73

5+46  
17717  
167.42  
C 9.75

5+11  
17622  
166.44  
C 9.78

4+76  
17528  
165.46  
C 9.82

4+41  
17438  
164.48  
C 9.90

4+06  
17356  
163.50  
C 10.06

6+66.55 NH 3 Allegheny

6+51

6+16

17975  
170.80  
C 8.95

17973  
170.36  
C 9.37

17900  
169.38  
C 9.62

Roberts  
Cota  
Moore  
Pollen  
W.O.?  
12-8-52

Curt Grades for Construction of  
Planter Boxes West Side Idaho between  
El Cajon & Howard.

76

INDEXED  
JUN 17 1953

1+25

375.13

1+00

375.32

0+75

375.51

0+50

375.69

0+25

375.88

0+00

So. Line  
El Cajon

376.07

At corner post on curve, road for 2' cut

2+35  $\frac{1}{2}$  END OF NEW  
Reservoir

374.30

2+25

374.38

2+00

374.57

1+75

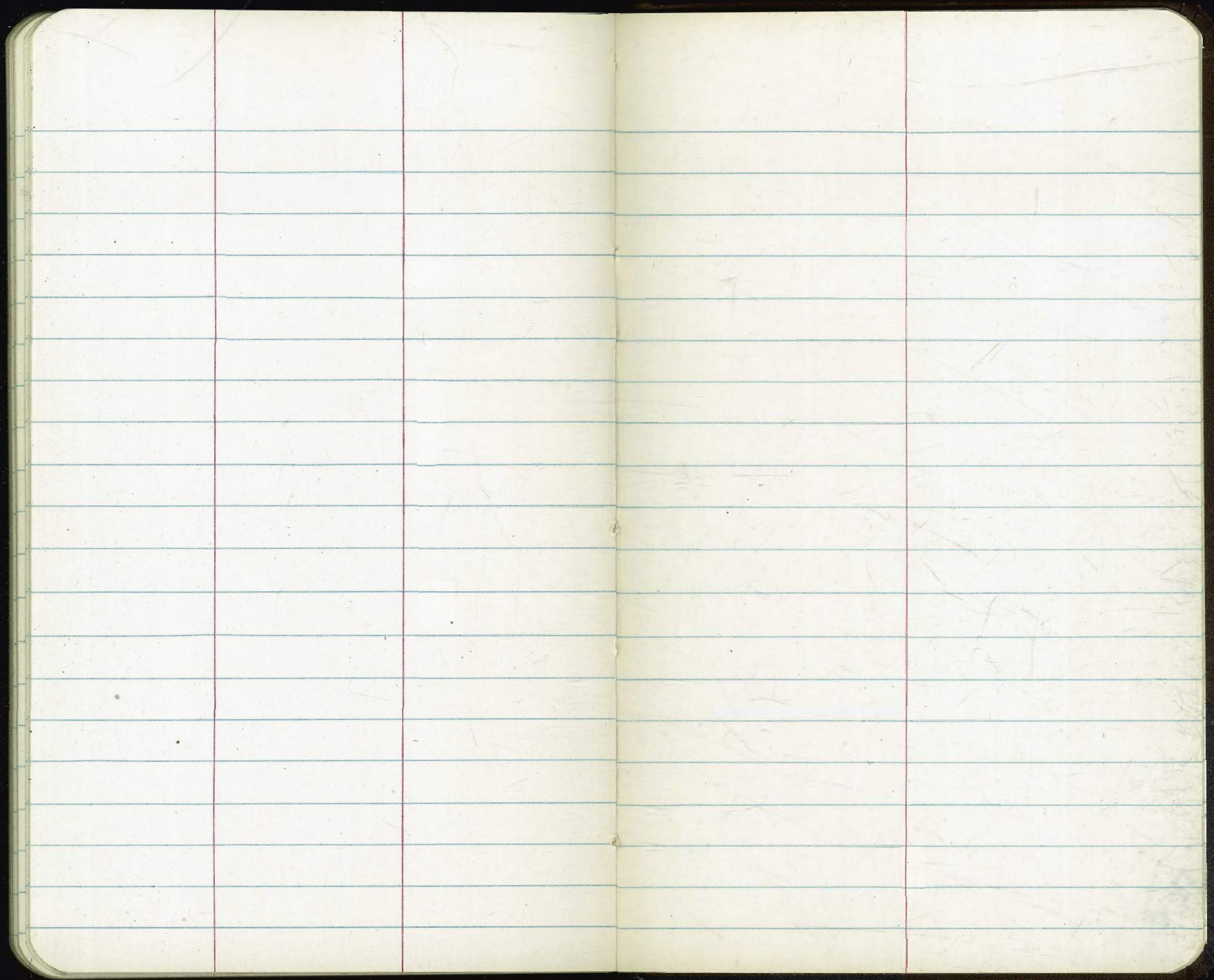
374.75

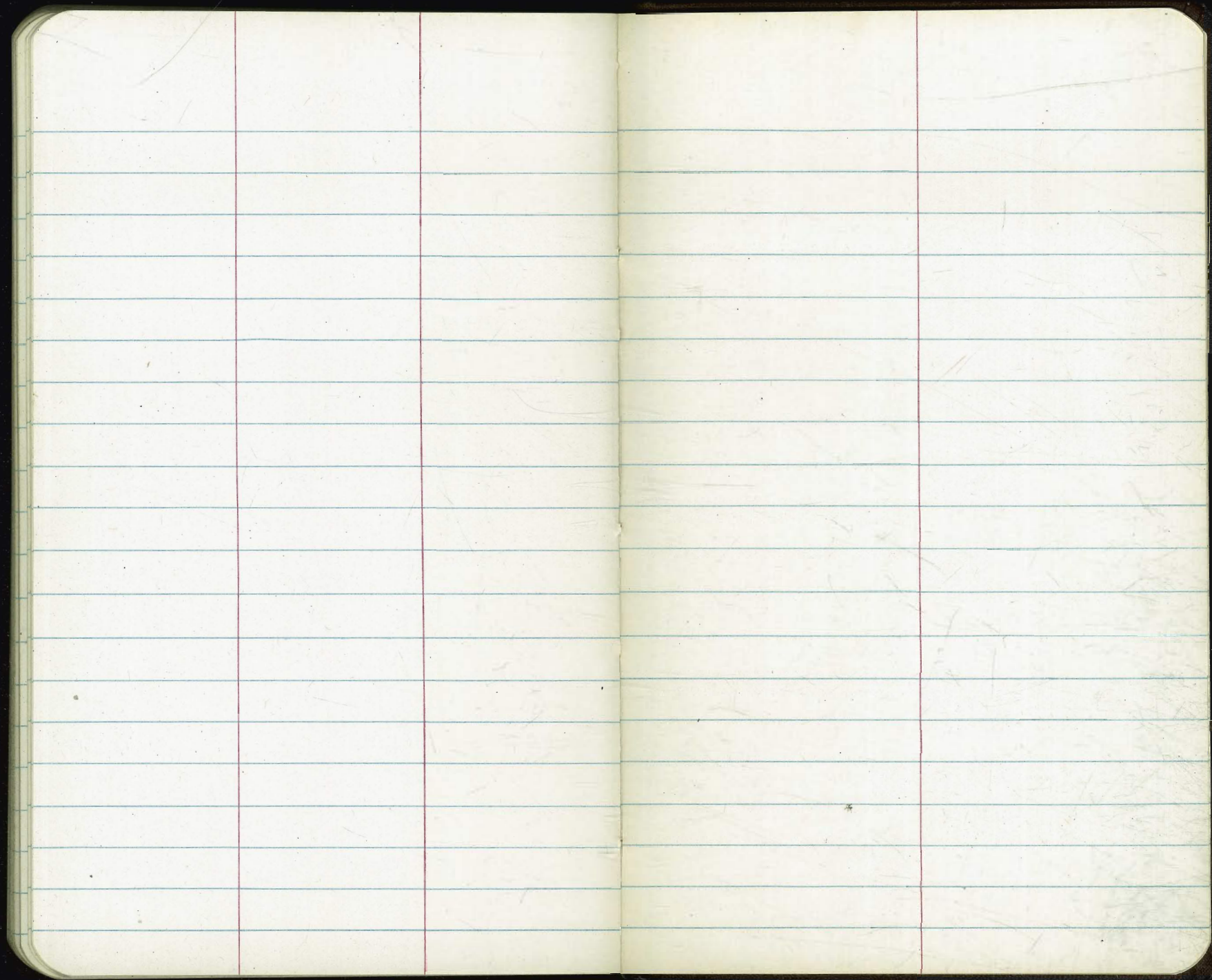
1+50

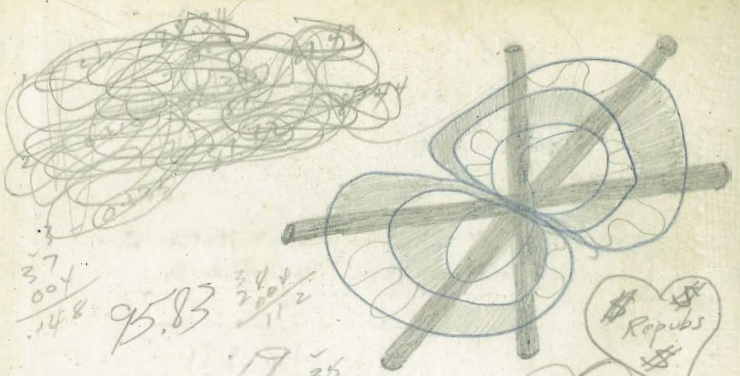
374.94

BM

569.96 SEEP  
Idaho & Polk



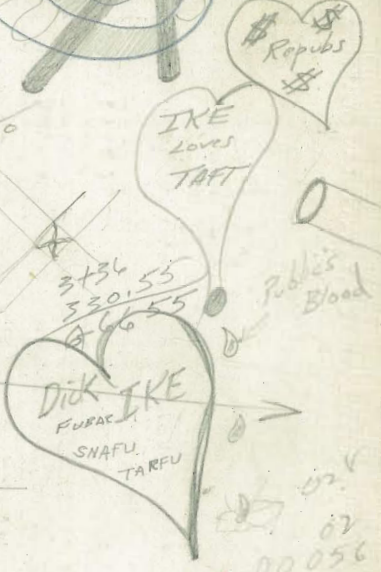




37  
001  
148  
95.83  
304  
112

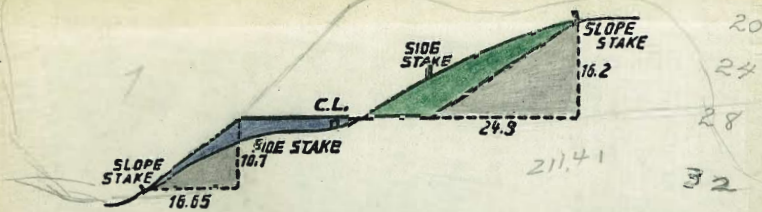
390.82 NE  
391.37 SW

35  
028  
280  
70  
98.33 2.50  
325.60  
676  
1.16  
5.50



019  
989  
551  
148  
265  
3  
21.5  
181  
656

800  
100  
21  
126  
35  
630  
78  
504  
5.292



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

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