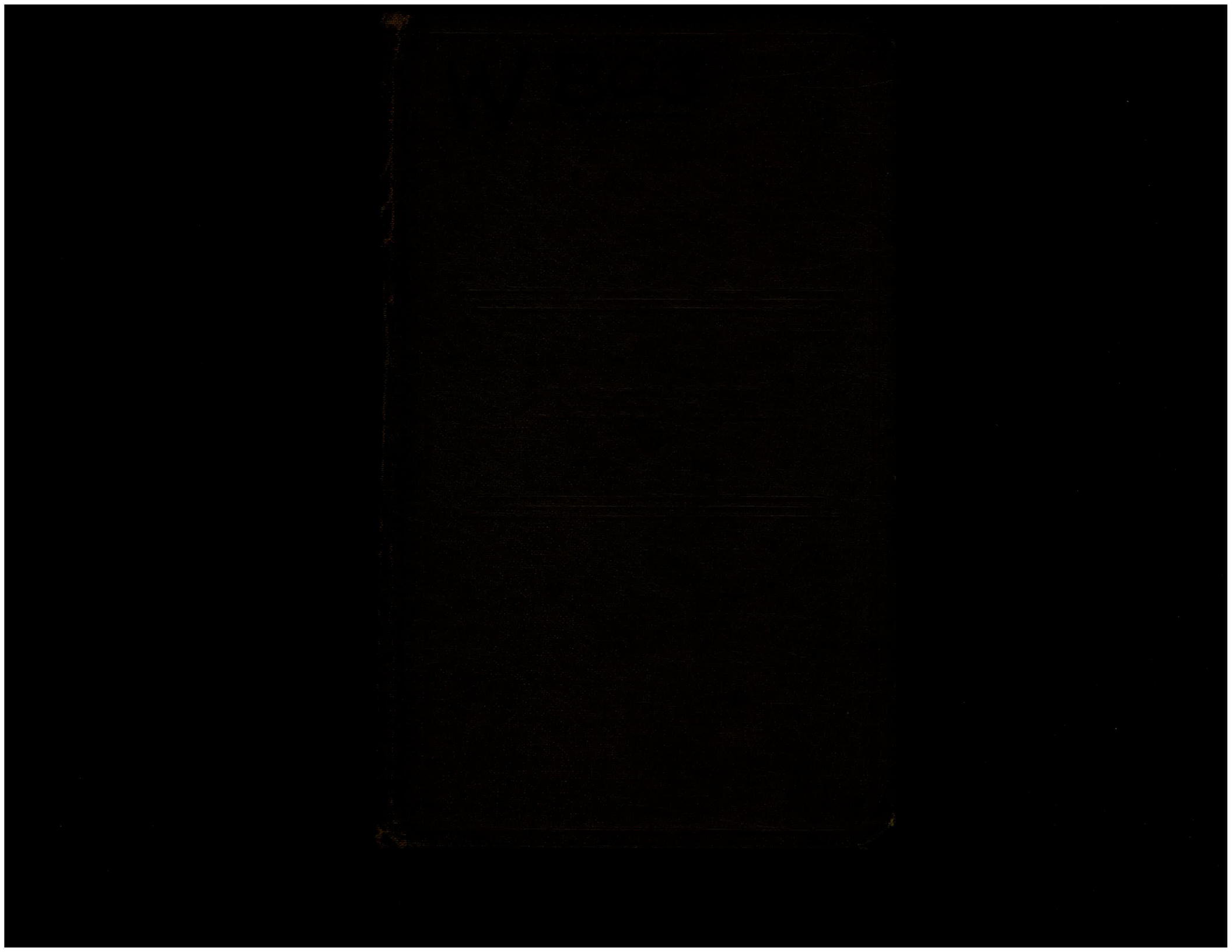
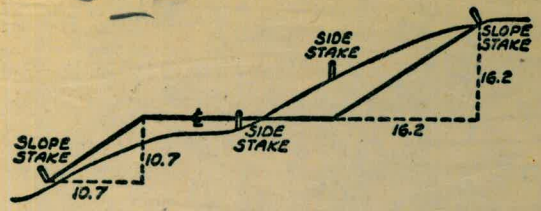


803



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.

803/798

782

TABLE XIII—CORRECTIONS FOR TANGENTS AND EXTERNALS

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

FOR TANGENTS ADD

Central Angle	Degree of Curve													
	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°
10°	03	.06	09	13	16	19	.22	.25	.28	.31	34	38	42	.46
15°	04	10	14	19	24	.29	.34	.39	45	.51	.53	58	.63	.68
20°	06	.13	19	26	.32	.39	.45	.51	.58	.65	.72	79	.84	.90
25°	.08	16	24	.33	40	49	.58	67	.75	.83	90	.99	1.06	1.14
30°	10	19	.29	39	49	.59	.69	79	.89	.99	1.09	1.20	1.29	1.39
35°	11	22	.34	47	.58	.69	.70	.81	.92	1.04	1.29	1.42	1.54	1.66
40°	13	.26	.40	.53	.67	.80	.93	1.06	1.20	1.34	1.49	1.64	1.79	1.94
45°	15	.30	44	60	76	91	1.06	1.21	1.37	1.52	1.70	1.87	2.04	2.21
50°	17	.34	.51	.68	.85	1.02	1.19	1.36	1.54	1.72	1.91	2.10	2.29	2.48
55°	19	.38	.57	76	.95	1.14	1.32	1.52	1.72	1.92	2.14	2.35	2.56	2.77
60°	.21	42	.63	.84	1.05	1.27	1.49	1.71	1.94	2.17	2.38	2.60	2.83	3.07
65°	23	46	.69	.93	1.16	1 40	1.64	1.88	2.13	2.38	2.63	2.88	3.13	3.39
70°	25	.51	76	1.02	1.28	1.54	1.80	2.06	2.33	2.60	2.88	3.16	3.44	3.72
75°	.27	.56	.83	1.12	1.40	1.69	1.98	2.27	2.57	2.87	3.16	3.47	3.78	4.09
80°	30	.61	91	1.22	1.53	1.84	2.15	2.46	2 78	3.10	3.44	3.78	4.12	4.46
85°	33	66	1.00	1.33	1.68	2.02	2.36	2 70	3.05	3.40	3.77	4.14	4.55	4 89
90°	36	.72	1.09	1.45	1.83	2.20	2.57	2.94	3.32	3.70	4 10	4.50	4.91	5.32
95°	39	79	1.19	1.55	2.00	2.40	2.80	3.20	3.61	4.02	4.40	4.98	5.38	5.83
100°	43	.86	1.30	1.74	2.18	2.62	3.06	3.50	3.95	4.40	4.88	5.37	5.85	6.34
110°	51	1.03	1.56	2.08	2.61	3.14	3.67	4.21	4 76	5.31	5 86	6.43	7 01	7 60
120°	62	1.25	1 93	2.52	3.16	3.81	4 45	5.11	5.77	6 44	7 12	7.80	8.50	9 22

FOR EXTERNALS ADD

Central Angle	Degree of Curve													
	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°
10°	.001	.003	.004	.006	.007	.008	.009	.011	.012	.014	.015	.017	.018	.020
15°	.003	.007	.010	.014	.018	.023	.027	.029	.032	.035	.039	.043	.047	.051
20°	.006	.011	.017	.022	.028	.034	.038	.045	.051	.057	.063	.070	.076	.083
25°	.009	.018	.027	036	.046	.056	.065	.074	.083	.093	.106	120	127	135
30°	.013	.025	.038	.051	.065	.078	.090	.103	.116	.129	.149	.170	.179	.188
35°	.018	.035	.054	.072	.086	.109	.131	.153	.175	.197	.213	.230	.247	.264
40°	.023	.046	.070	.093	.117	.141	.172	.203	.234	.265	.277	.290	.315	.341.
45°	.030	.060	.093	.119	.153	.184	.216	.254	.289	.325	.351	.378	.411	.445
50°	.037	.075	.116	.151	.189	.227	.266	.305	.345	.384	.425	.467	.508	.550
55°	.046	.093	.142	.188	.236	.283	.332	.381	.420	.479	.530	.582	.641	.700
60°	.056	.112	.168	.225	.283	.340	.398	.457	.516	.575	.636	.697	.774	.851
65°	.067	.135	.204	.273	.343	.412	.483	.554	.625	.697	.711	.845	.922	1.01
70°	.080	.159	.240	.321	.403	.485	.568	.652	.735	.819	.906	.994	1.08	1.17
75°	.095	.182	.286	.383	.480	.578	.678	.777	.877	.977	1.07	1.18	1.29	1.39
80°	.110	.220	.332	.445	.558	.671	.787	.903	1.02	1.13	1.25	1.38	1.50	1.62
85°	.128	.259	.391	.524	.657	.790	.926	1.06	1.20	1.34	1.47	1.62	1.76	1.91
90°	.149	.299	.450	.603	.756	.910	1.07	1.22	1.38	1.54	1.70	1.87	2.03	2.20
95°	.174	.350	.522	.706	.985	1.06	1.25	1.43	1.62	1.80	1.99	2.18	2.38	2.58
100°	.200	.401	.604	.809	1.01	1.22	1.43	1.64	1.85	2.06	2.28	2.50	2.73	2.96
110°	.268	.536	.806	1.08	1.35	1.63	1.91	2.20	2.48	2.76	3.05	3.35	3.66	3.96
120°	.360	.721	1.08	1.45	1.82	2.19	2.57	2.95	3.33	3.72	4.11	4.50	4.91	5.32

INDEX

GRADES FOR METERS TOURMALINE ST. 1

GRADES FOR METERS SAPPHIRE ST. 2-3

GRADES FOR 6" MAIN FED. BLVD 33rd-34th ST 4.

" " " " PICKWICK " " 5.

GRADES FOR LOWERING 16" Haines THOMAS to REED 6.

" " 6" MAIN PLUM ST. FENELON-Garrison 7.

" " " Armada Ter. Quail trough Rogers 8

" " METERS in Alley Dwight & LANDIS Boundary & NILE 9-10

RELOCATION Pac. Beach P.L. in Kurtz St. NOELL SUTHERLAND 11

BASE LINE LOCATION — ALVARADO SLUDGE BASINS 12

X-SECTS of BASE LINE " " " 13-54

Alignment for Sludge Line to Sludge Basins 55-56

L. Profile " " " " " 57-60

Aug 29 1950
BEATTY
KING
LEONARD
WEST

GRADES FOR METERS - Tourmaline { CASS DAWES C.T. NW COR SAPPHIRE & CASS

BM.	1.16	125.32		124.16	
TP (Top FH SE Cor. Tour.)	5.65	119.67	11.30	114.02	
CK SE Curb			8.85	110.82	= 110.8
0+00 = 7' OFFSET					
0+37 NOR = 23' from ℄			6.1	113.6	112.5 C/L
1+16 So.			6.8	112.9	112.4 C 0.5
1+33 NOR			5.1	114.6	113.6 C/0
1+52 NOR			4.7	115.0	113.8 C/1
1+72 Nor			4.5	115.2	114.0 C/2
1+93 So			5.2	114.5	113.2 C/2
2+23 Nor			3.2	116.5	113.6 C 0.2
2+31 So			4.4	115.3	113.8 C/5
2+69 Nor			2.2	117.5	115.2 C 2.3
2+93 So			3.7	116.0	114.6 C/4
3+15 Nor			1.6	118.1	115.8 C 2.3
3+47 So			4.2	115.5	115.2 C 0.3
3+96 So			3.5	116.2	116.2 C/2
4+56 So			1.0	118.7	117.4 C/3
5+04. So = 24.2 from ℄			0.0	119.6	118.4 C/2

SEPT. 11 1950
BEATTY
LEONARD

BAYARD
CASS

GRADES FOR METERS – SAPPHIRE ST

BM	0.69	124.85	124.16	SAME AS PAGE 1.	
0+00 = E. PROP. LINE BAYARD ST					
0+34 So.		10.55	114.3	113.8	C 0.5
0+84 So.		9.35	115.5	114.6	C 0.9
0+89 Nor		7.64	117.2	115.2	C 2.0
1+19 Nor		7.4	117.5	115.6	C 1.9
1+40 So.		8.45	116.4	115.5	C 0.9
1+75 So		7.7	117.2	116.1	C 1.1
1+95 Nor.		5.9	119.0	117.1	C 1.9
2+08 So		7.0	117.9	117.0	C 0.9
2+32 Nor.		5.26	119.6	118.4	C 1.2
2+46 So.		5.8	119.1	118.2	C 0.9
2+54 So.		5.6	119.3	118.5	C 0.8
2+61 Nor		3.54	121.3	119.4	C 1.9
CK B.M.		0.69	124.16		

SEPT. 11 1950

GRADES FOR METERS - SAPPHIRE ST CASS DAWES

BM	7.19	131.35	124.16	SAME AS PAGE 1.
0+00 = E. Prop line CASS ST				
0+35 Nor		5.43	125.9	123.7 C 2.2
1+06 Nor.		6.20	125.2	124.2 C 1.0
2+07 Nor		4.63	126.7	125.1 C 1.6
2+34 So		5.35	126.0	124.3 C 1.7
2+54 Nor		3.6	127.8	125.4 C 2.4
2+75 So		4.8	126.6	124.6 C 2.0
3+03 So		4.45	126.9	124.8 C 2.1
3+56 So		4.20	127.2	125.3 C 1.9
3+63 Nor		2.30	129.1	126.3 C 2.8
4+15 So		4.45	126.9	125.8 C 1.1
4+85 So		4.54	126.8	126.3 C 0.5
4+97 Nor		2.4	129.0	127.4 C 1.6
ck. BM		7.19	124.16	

Sept. 13, 1950
Beatty
Leonard

6" Dist Main - Federal Blvd. 33rd to 34th

BM	10.00	71.71		61.71	BP NE Cor Federal & 34th
6+60	(6" Tee)		10.26	61.5	61.5 C37
	Exist.	Curb SE Cor	8.98	62.73	678
6+00			9.0	62.7	62.7 C45
+50			3.5	68.2	65.2 C75
IP 5+00	12.76	84.36	0.11	71.60	69.0 C71
+50			9.2	75.2	73.0 C67
4+00			6.3	78.1	76.7 C59
3+50			2.5	81.9	80.6 C58
IP Rock	11.15	95.49	0.02	84.34	
	Pipe Placed - Graded by City Engr's.				
2+00		Top C.I. Pipe	7.5	88.0 = 90.4	
1+93.8			3.5	92.0	90.0 90.6 C65
+50			2.9	92.6	90.0 91.8 C71
+20			3.1	92.4	90.0 92.1 C69
1+00			3.4	92.1	90.0 92.0 C66
+50	④ = 14.5o	E St.	3.9	91.6	90.0 91.0 C61
IP +30	⑤ E.H.	27.5 So. E St.	2.97	92.52	90.3 C22
0+00	(6" GV) =	10' E E 33rd St.	4.3	91.2	89.9 C57

SEPT. 13 1950
BEATTY
LEONARD

6" DIST MAIN - PICKWICK ST. 33 to 34th

TP	10.95	103.47		92.52	
0+00			9.84	93.6	93.9 C42
+30	(5) F.H = 27.5' So. of St		8.45	95.0	94.2 C68
+50			8.6	94.9	94.7 C47
1+00			6.97	96.5	96.0 C50
+50			5.1	98.4	97.5 C54
2+00	(2 Meters)		3.8	99.7	95.7 C55
+50			3.8	99.7	98.6 98.9 C56
3+00			4.4	99.1	98.0 C56
+50			6.65	96.8	95.8 C55
+71			7.6	95.9	94.4 C60
					STK C43 (4)
TP	0.68	92.20	11.95	91.52	
TP	0:08	79.66	12.66	79.58	
TP	4.60	71.70	12.56	67.10	
CK BM			10.01	61.69 - 61.71	

Pipe in place.
Grades by City Eng'rs.

89.9
91.0

SEPT. 22, 1950
BEATTY
LEONARD

HAINES
Thomas Ave to Reed Ave

GRADES FOR LOWERING 16" MAIN

TBM.	8.12	58.91		50.79		
			10.74	48.17	= 47.98	
Top 16" C.			7.65	51.26		
" " "			7.41	51.50		
" " "			7.44	51.47		
" " "			7.40	51.51		
" " "			7.60	51.31		
	ⓐ = 22' E E St.					
0+00	= Nor Prop. Line Thomas Ave.	2.5	56.4	52.6	C 85	
+20		2.8	56.1	52.4	C 84	
+80		3.4	55.5	52.1	C 81	
1+30		4.8	54.1	51.4	C 74	
+80		6.3	52.6	50.6	C 69	
2+30		6.9	52.0	49.8	C 69	
+80		8.0	50.9	48.9	C 67	
3+30		8.9	50.0	48.1	C 66	
3+50	= Nor Prop Line Reed Ave	9.5	48.4	47.8	C 53	
3+90	= ℄ Reed Ave	10.1	47.8	47.3		
		14.60	44.31			

Rim Tele M.H. Reed & Thomas
NION NE COR Reed & Haines

52.65

C 78

46.90
44.31
2.6

FIN GRD

52.14 F.G. @ Prop. Line

52.45 F.G. @ 15' So. N

52.7 F.G. @ Prop. L

52.97 FIN Grd 10' N Nor Prop
51.3

.67
2.5
1.5
4.67

W.O. 2-870-5

Oct 2 1950
Beatty
Leonard

6" Main Plum St., Fenelon To Garrison

B.M.	9.79	102.43		92.64		
0+00	(4) = 14' So. of St. at Nor. Prop. Line Fenelon		7.04	95.4 In Excav Hole	97.00 92.5	C 29
0+50			6.35	96.1	96.4	C 42
1+00			8.36	94.1	94.3	C 43
1+50			11.85	90.6	90.2	C 49
TP	8.78	99.36	11.85	90.58		
2+00	= So. Prop. Line Garrison		13.3	86.1 Edge Pavt	86.0	C 48
2+23	Line only Conn. To Main		13.6	85.8	on pavt.	
Ck B.M.	8.41	102.52	5.25	94.11		
			9.88	92.64 = 92.64		

October 5 1950
Beatty
Leonard
Baker

6" Main in Armada Terrace { Qualtrough to Rogers St. RL 174.

BM	0.59	205.88		205.29			Nail in Pole SW Cor San Fernado & Rogers
TP	0.60	193.45	13.03	192.85			
TP	0.16	181.00	12.61	180.84			
TP	0.16	169.51	11.65	169.35			
TP	1.08	159.59	11.00	158.51			
CK Curb			3.45	156.14	= 152.4		Trencher @ 0-15 Elev ditch 152.0
0+00			3.6	156.0	152.4 147.9	C 8½	150.4 C 5½
+25	B.C		6.8	152.8	152.4 147.9	C 4 9	
+50			14.1	145.5	152.4 147.9	F 2 4	
+75			8.76	150.8	152.4 147.9	C 2 9	
1+00			12.0	147.6	152.6 148.1	F 0 5	
+09.6	E.C.		11.95	147.6	159.7 148.2	F 0 6	
+25			11.4	148.2	153.0 148.3	F 0 3	
+46.70	℄ PP	39°04' RT	9.4	150.2	153.7 127.2	C 1 9	
+67.70			3.4	156.2	154.1 149.6	C 6 6	
1+88.70	So. Prop. Line Rogers St		3.6	156.0	159.7 159.4	C 5 6	
CK Curb			3.51	156.08	= 155.98		

22-824-62

OCT. 6 1950
BEATTY
LEONARD
BAKER

GRADES FOR EXIST. METERS

Dwight Landis

ALLEY - Between Boundary & NILE

BM.	2.36.	331.40	329.04		BP NE. Cor Boundary & Landis.
0+00 = Prop. Line Nor Landis.					
0+28.5	West	4.4	327.0	326.8	CO 2
0+44	West	4.3	327.1	326.7	CO 4
0+47.5	West	4.0	327.4	326.7	CO 7
0+47.5	East	4.7	326.7	326.5	CO 2
0+72	West	4.5	326.9	326.6	CO 3
0+72	East	4.8	326.6	326.4	CO 2
0+75	East	4.95	326.45	326.4	CO 1
0+88.5	West	4.6	326.8	326.6	CO 2
1+01	East	5.2	326.2	326.3	FO 1
1+35	West	4.7	326.7	326.5	CO 2
1+47.5	East	5.1	326.3	326.2	CO 1
1+79	East	5.0	326.4	326.0	CO 4
1+81	East	5.0	326.4	326.0	CO 4
P	4.37	330.59	5.18	326.22	
1+77.5	West	4.0	326.6	326.4	CO 2
2+23	West	3.8	326.8	326.2	CO 6
2+33.5	East	4.2	326.4	325.9	CO 5
2+69.5	West	3.8	326.8	326.1	CO 7

GRADES FOR METER (Cont'd)

		330.59			
2+835 East			4.7	325.9	325.6 CO3
3+18 West			4.4	326.2	325.5 CO7
3+235 East			5.3	325.3	325.0 CO3
3+61 West			5.9	324.7	324.3 CO4
3+68 East			6.4	324.2	323.7 CO5
3+99 East			8.4	322.2	322.5 FO3
4+335 West			9.1	321.5	321.3 CO2
4+46 East			10.4	320.2	320.3 FO1
4+76 West			11.1	319.5	319.3 CO2
4+825 East			11.7	318.9	318.6 CO3
H	2.91	322.29	11.21	319.38	
5+335 West			6.1	316.2	317.7 F15
5+58 East			5.9	316.4	317.2 F08
5+695 West			5.95	316.34	317.6 F13
D	9.61	331.83	0.07	322.22	
~~R~~ CK BM.			2.87	329.01 =	329.04

OCTOBER 9-50

BEATTY
LEONARD
BAKER

RELOCATION of PACIFIC BEACH PIPELINE
VICINITY of KURTZ ST. - SUTHERLAND TO NOEL

30+77.74 POT (lot's in Southerly 7' offset line NOELL ST)

29+18.94 PI 3°16' LT.

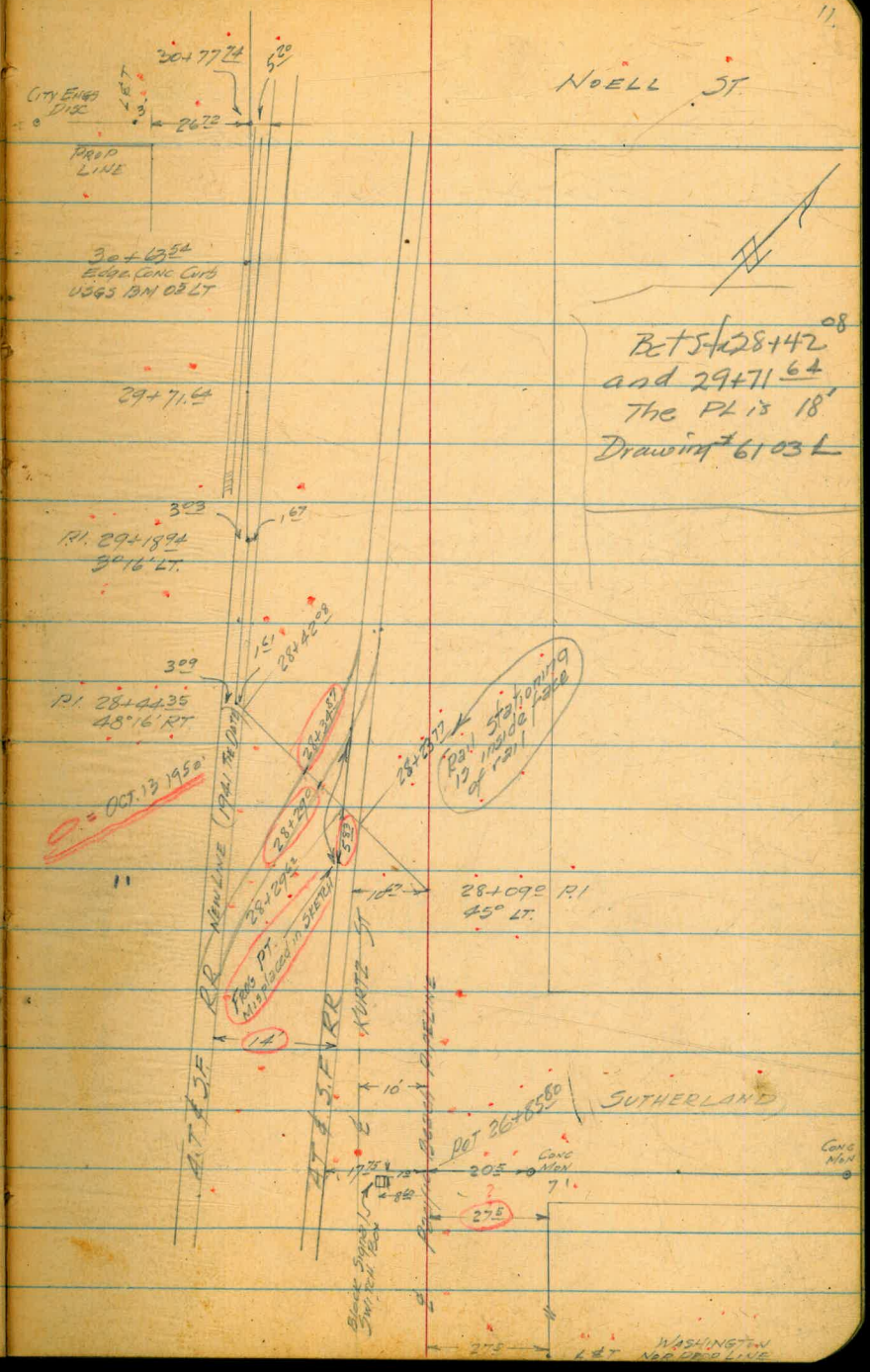
28+44.35 PI 48°16' RT

28+09° PI 45° LT

26+85.80 POT lot's in Southerly 7' offset line Sutherland St.

See Pacific Beach Pipeline PLANS.
BK 565 pg 6.
BK 572 pg 21.

NOELL ST.

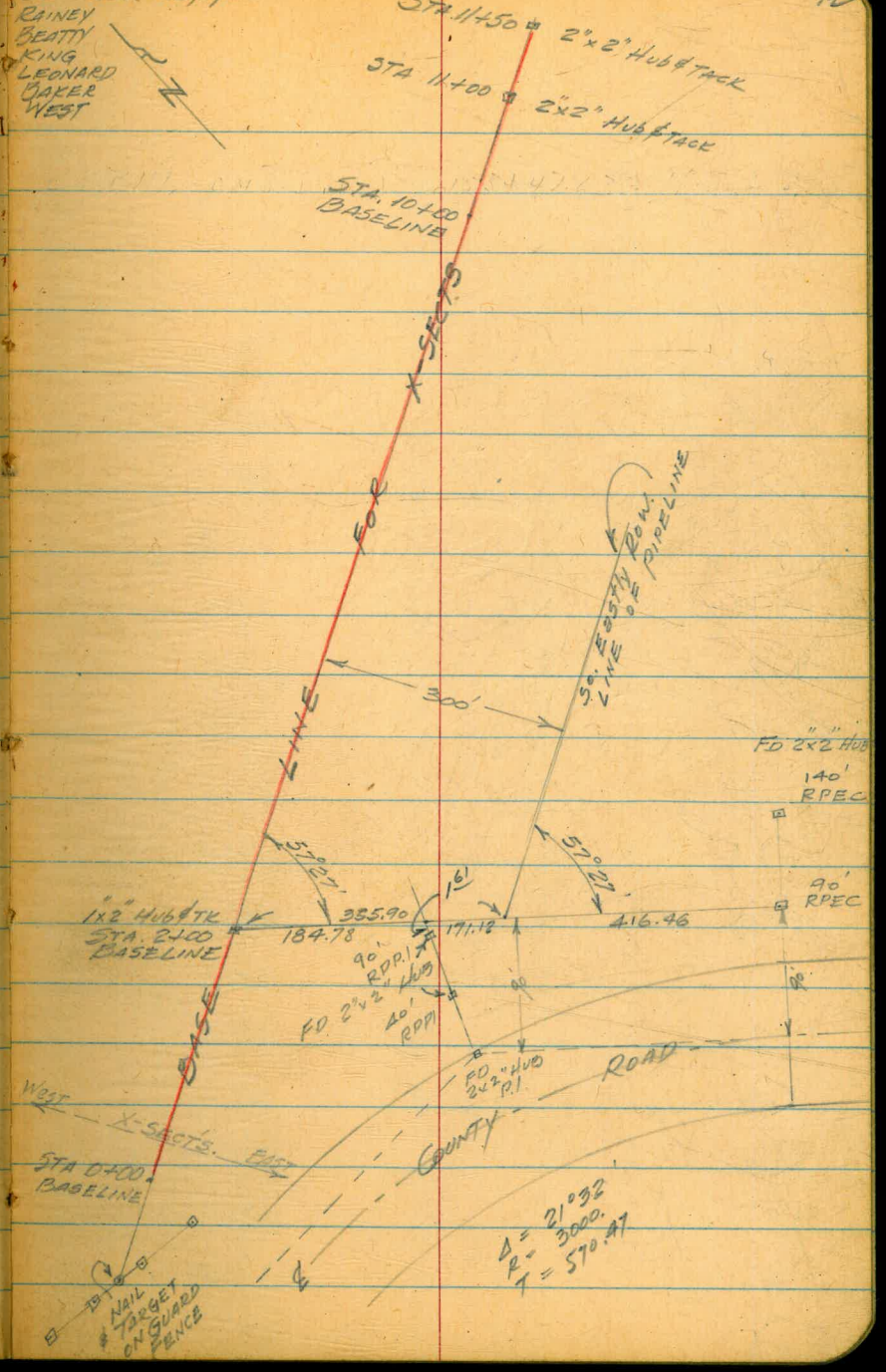


BET Sta 28+42.08 and 29+71.64
The PL is 18'
Drawing #6103 L

ALVARADO SLUDGE BASINS

LOCATION OF BASE LINE FOR CROSS-SECTIONS FOR SLUDGE BASINS IN ALVARADO CANYON

OCTOBER 25, 1950
RAINEY
BEATTY
KING
LEONARD
BAKER
WEST



X-Sects.
Murray Sludge Dam & Basins

B.M.	2.17	363.62 ~~361.72~~		~~359.55~~ ~~(365.67)~~	361.45 367.57
			14.8		348.7
0+00			13.8	349.8	
25 W			12.7	350.9	
50' W			12.2	351.4	
75 W			11.8	351.8	
100' W			11.0	352.6	
125' W			9.7	353.9	
150' W			7.6	356.0	
175 W			3.2	360.4	
0+25 ℄			13.0	350.6	
25 W			12.1	351.5	
50 W			12.4	351.2	
75 W			12.0	351.6	
100 W			11.4	349.2	
125 W			10.4	353.2	
150 W			8.6	355.0	
175 W			6.1	357.5	

Kings West 10-30-50

West = Left Base Line
East = Rt. " "

City Datum
U.S.G.S. Co. R.P. 90' off 153+47[63] P.L.
CORRECTED 11/14/50 H Beatty

F.L. No. End 60" State Hghwy Culvert.

X-Sects: Murray Sludge Dam

King A West

10-30-50

~~361.77~~
363.62

0+50 ℄	12.1	351.5
25' W	12.2	351.4
50' W	11.3	352.3
100' W	11.1	352.5
125' W	10.7	352.9
150' W	10.4	353.2
175' W	9.5	354.1
200' W	6.3	357.3
0+75 ℄	12.6	351.0
25' E	11.1	352.5
50' E	10.5	353.1
0+75 - 25' W	10.7	352.9
50' W	10.7	352.9
75' W	10.5	353.1
100' W	10.1	353.5
125' W	10.1	353.5
150' W	10.2	353.4
175' W	8.2	355.4

X-Sects - Murray Sludge Basins

King X West 10-30-52

~~36172~~
363.62

1+00 ℄		13.1	350.5
~~25~~ 16' E		13.0	350.6
25' E		11.4	352.2
50' E		9.9	353.7
75' E		9.2	354.4
1+00 - 52 W		11.3	352.3
25' W		10.2	353.4
50' W		10.3	353.3
75' W		10.1	353.5
100' W		9.7	353.9
125' W		8.0	355.6
150' W		8.5	355.1
175 W		2.1	361.5
1+25 ℄		12.0	351.6
21' E		12.4	351.2
25' E		9.5	354.1
50 E		9.7	353.9
75 E		9.5	354.1
100' E		8.2	355.4

X-Sects Murray Sludge Basins

King St 10-30-52
West

~~364.72~~
363.62

~~175~~ -13 W	13.0	350.6
25 W	10.2	353.4
50 W	9.5	354.1
75 W	9.4	354.2
100 W	9.2	354.4
125 W	10.0	353.6
150 W	9.0	354.6
175 W	1.6	362.0
1+50 ℄	10.9	352.7
6' E	12.0	351.6
15' E	11.8	351.8
25' E	9.3	354.3
50 E	9.5	354.1
54' E	10.5	353.1
75 E	8.6	355.0
100 E	8.4	355.2
~~1+50~~ 12 W	11.8	351.8
25' W	12.6	351.0
33 W	12.4	351.2

		~~361.72~~ 363.62		
37 W				
1+50 ~~50 W~~			9.5	354.1
50 W			9.2	354.4
75 W			9.2	355.4
100 W			8.4	355.2
125 W			9.0	354.6
150 W			9.2	354.4
159 W			9.0	354.6
175 W			6.0	357.6
200 W			1.6	362.0
C.K. B.M.	4.07	~~365.52~~ ~~363.62~~	2.16	~~361.46~~ ~~359.55~~ ~~361.45~~ ~~359.55~~
1+75 E			13.6	351.9
10 E			10.7	354.8
25 E			10.2	355.3
50 E			11.4	354.1
75 E			11.2	354.3
100 E			10.3	355.2
125 E			9.7	355.8
1+75 - 10 W			11.9	353.6

Stadia Rod 15' W 3+00

X-Sects. Murray Sludge Basins

King T West

11-1-30.

~~343+47~~
365.52

1475.25'W	13.2	352.3
50'W	13.1	352.4
63'W	10.4	355.1
75'W	10.0	355.5
100'W	10.2	355.3
125'W	10.1	355.4
150'W	11.5	354.0
175W	8.0	357.5
200'W	4.1	361.4
2+00-℄	11.0	354.5
25'E	10.1	355.4
50E	10.4	355.1
75E	11.6	353.9
100'E	10.7	354.8
125'E	9.7	355.8
150E	8.7	356.8
2+00-6'W	12.2	353.3
25'W	11.9	353.6
50'W	12.4	353.1

X-Sects. Murray Sludge Basins

King X West 11-1-50

	~~363.62~~ 365.52		
2+10 75' W		12.6	352.9
100' W		10.2	355.3
125' W		9.5	356.0
138 W ~~138 W~~		11.3	354.2
150' W		9.6	355.9
175' W		6.9	358.6
200' W		3.0	362.5
2+25 ℄		9.8	355.7
25' E		9.7	355.8
50' E		9.7	355.8
75' E		9.8	355.7
100' E		9.1	356.4
125' E		8.6	356.9
150' E		8.1	357.4
175' E		6.8	358.7
2+25 - 9 W		10.0	355.5
14 W		11.3	354.2
25 W		11.2	354.3
50 W		11.8	353.7
70 W		10.8	354.7

X-Sects. Murray Sludge Basins

11-1-50
King & West

~~363.62~~
365.52

2	75 W	10.8	354.7
	100 W	9.6	355.9
	125 W	10.3	355.2
	150 W	9.0	356.5
	175 W	7.0	358.5
	190 W	5.0	360.5
	200 W	2.9	362.6
2	2+50 BL	9.3	356.2
	25 E	9.3	356.2
	50 E	9.3	356.2
	75 E	8.8	356.7
	100 E	8.2	357.3
	125 E	7.5	358.0
	150 E	6.5	359.0
	175 E	5.9	359.6
2	200 E	5.4	360.1
	2+50 W 25 W	9.6	355.9
	50 W	10.5	355.0
	75	12.3	353.2
	85 W	10.2	355.3

X-Sects. Murray Sludge Basins

King St West 11-1-52

21

~~363.62~~
365.52

100 W		10.2	355.3
125 W		10.5	355.0
150 W		9.5	356.0
175 W		7.5	358.0
2+75 BL ℄		9.1	356.4
25 E		9.0	356.5
50 E		8.7	356.8
75 E		8.0	357.5
100 E		7.3	358.2
125 E		6.7	358.8
150 E		5.6	359.9
175 E		4.7	360.8
200 E		4.4	361.1
2+75 -10' W		10.0	355.5
25' W		8.5	357.0
50' W		9.7	355.8
60' W		11.4	354.1
75 W		12.0	353.5
85 W		10.4	355.1

X-Sects. Murray Sludge Basin

King 11-1-50
West

~~343.42~~
365.52

2+75	100 W	9.5	356.0
	125 W	9.4	356.1
	150 W	9.9	355.6
	175 W	7.6	357.9
	200 W	4.4	361.1
3+00	℄	9.7	355.8
	25 E	8.2	357.3
	50 E	7.8	357.7
	75 E	6.9	358.6
	100 E	6.6	358.9
	125 E	5.5	360.0
	150 E	4.4	361.1
	175 E	4.0	361.5
	200 E	3.7	361.8
	225 E	3.9	361.6
3+00	25 W	7.6	358.9
	50 W	8.8	356.7
	58 W	11.2	355.3
	75 W	9.5	356.0

X-Sects. Murray Sludge Basins

King 11-1-50
West

~~363.62~~
365.52

100 W	9.5	356.0
110 W	8.7	356.8
125 W	9.0	356.5
150 W	9.0	356.5
175 W	8.2	357.3
200 W	4.3	361.2
3+25 ℄	8.6	356.9
25' W	7.6	357.9
50' W	9.4	356.1
75' W	10.7	354.8
90' W	9.4	356.1
100' W	8.6	356.9
125' W	9.1	356.4
150' W	9.0	356.5
175' W	~~7.5~~ 8.4	358.0
198' W ~~200 W~~	~~6.1~~ 7.1	359.4
200' W	4.2	361.3
3+25 - 10' E	7.2	358.3
25' E	7.2	358.3

X-Sects. Murray Sludge Basins

Kings West 11-1-50

			~~363.62~~ 365.52		
3+25	50E			7.0	358.5
	75E			6.5	359.0
	100E			6.0	359.5
	125E			4.5	361.0
	150E			3.1	362.4
	175E			3.2	362.3
	200E			3.1	362.4
	225E			3.3	362.2
ck. B.M.				4.06	~~361.46~~ 361.45 ~~359.56~~ - ~~359.50~~
3+50 ℄					
BM		15.95	377.40		361.45
0+00	200W			3.3	374.1
0+25	200W			7.6	369.8
0+75	200W			13.7	363.7
1+00	200W			14.8	362.6
TP		14.10	389.25	2.25	375.15
0+00	225W			3.0	386.3
0+25	225W			5.3	384.0
0+50	225W			9.0	380.3

See page #13

Stadia board -25' 84-3+50

Nov. 14, 1950
BEATTY
LEONARD

11/14/50

X-Sect's Murray Sludge Basins

	389.25		
0+75 225W		12.0	377.3
1+00 225W		15.6	373.7
" 250W		3.2	386.1
1+25 225W		16.4	372.9
" 250W		5.5	383.8
1+50 225W		16.6	372.7
" 250W		7.0	382.3
1+75 225W		16.7	372.6
250W		8.0	381.3
2+00 225W		17.1	372.2
2+00 250W		9.1	380.2
2+25 225W		17.2	372.1
" 250W		9.8	379.5
2+50 225W		17.7	371.6
250W		10.2	379.1
2+75 225W		18.2	371.1
250W		9.9	379.4
3+00 225W		18.4	370.9
250W		10.1	379.2

11/14/50

X-Sects Murray Sludge Basins

389.25

3+25	225W	18.6	370.7
"	250W	10.0	379.3
3+50	225W	18.0	371.3
"	250W	10.0	379.3
3+75	225W	18.0	371.3
3+75	250W	9.0	380.3
4+00	225W	15.7	373.6
4+00	250W	7.5	381.8
4+25	225W	16.1	373.2
4+25	250W	7.9	381.4
4+37	225W } WASH	16.9	372.4
4+37	250W	8.7	380.6
4+50	225W	14.5	374.8
"	250W	6.5	382.8
4+75	225W	12.8	376.5
"	250W	3.9	385.4
5+00	225W	12.4	376.9
"	250W	4.2	385.1

11/14/50

X-Sects Murray Sludge Basins

	389.25	
5+25 225W	13.0	376.3
5+25 250W	3.7	385.6
5+50 218W	13.8	385.5
" 225W	10.5	378.8
" 250W	2.2	387.1
5+75 200W	16.1	373.2
" 225W	9.6	379.7
" 250W	1.0	388.3
6+00 175W	16.7	372.6
" 200W	13.0	376.3
" 225W	6.7	382.6
" 250W	+0.5	389.8
6+25 175W	14.1	375.2
200W	9.5	379.8
225W	3.1	386.2
6+50 163W	13.7	375.6
175W	11.8	377.5
200W	6.5	382.8
225W	0.2	389.1
6+75 1/2W	15.7	373.6

11/14/50

X-Sect's Murray Sludge Basins

6+75 150W	389.25	15.1	374.2
6+75 155W		14.7	374.6
" 157W		12.7	376.6
" 175W		9.7	379.6
" 200W		4.0	385.3
" 225W		+2.5	391.8
7+00 137W		13.8	375.5
" 148W		13.9	375.4
" 150W		13.5	375.8
" 154W		11.5	377.8
" 175W		8.1	381.2
" 200W		2.2	387.1
7+25-125W		14.0	375.3
133W Edge Road		12.1	377.2
142W		12.7	376.6
150W		11.2	378.1
153W		9.7	379.6
175W		6.7	382.6
" 200W		1.8	387.5
7+50 100W		16.4	372.9
125W		11.1	378.2
133W Edge Road		9.7	379.6

11/14/50

X-Sect's Murray Sludge Basins

389.25

7+50	146W		10.5	378.8
"	150W		9.5	379.8
"	155W		8.6	380.7
"	175W		5.8	383.5
"	200W		2.5	386.8
7+75	100W		15.1	374.2
"	125W		11.1	378.2
"	141W	Edge road	9.1	380.2
"	150W		9.2	380.1
"	165W		7.0	382.3
"	175W		6.4	382.9
"	200W		3.6	385.7
TP		2.20 376.25	15.20	374.05
7+75	75W		6.2	370.1
"	50W		10.9	365.4
"	43W		13.7	362.6
"	32W	E CREEK	14.8	361.5
"	25W		14.3	362.0

11/14/50

X-Sects Murray Sludge Basins

376.25

7+75	℄	13.5	362.8
"	25 E	12.0	364.3
"	50 E	12.7	363.6
"	75 E	8.8	367.5
"	100 E	6.6	369.7
"	125 E	4.2	372.1
"	150 E	2.2	374.1
"	175 E	1.2	375.1
"	200 E	0.0	376.3
"	225 E	+1.9	378.2
7+50	225 E	+0.3	376.6
"	200 E	1.0	375.3
"	175 E	2.6	373.7
"	150 E	3.4	372.9
"	125 E	5.4	370.9
"	100 E	7.1	369.2
"	75 E	9.4	366.9
"	69 E	9.8	366.5
7+50	61 E	12.6	363.7

X-Sects Murray Sludge Basins

		376.25		
7+50	50E		13.1	363.2
"	25E		12.3	364.0
"	℄		13.2	363.1
"	25'W		14.7	361.6
"	30'W		15.1	361.2
"	50W		13.9	362.4
7+50	75'W		7.0	369.3
7+25	100W		5.4	370.9
"	75'W		10.3	366.0
"	50'W		14.4	361.9
"	40'W		15.4	360.9
"	25'W		14.2	362.1
"	℄		13.2	363.1
"	25E		12.8	363.5
"	50E		13.5	362.8
"	63'E		13.0	363.3
"	75'E		10.8	365.5
"	100'E		7.4	368.9
7+25	125'E		6.2	370.1

11/14/50

X-Sects Murray Sludge Basins

376.25

7+25	150E	4.2	372.1
"	175E	3.2	373.1
"	200E	1.3	375.0
7+25	225E	0.7	375.6
7+00	225E	+0.2	376.5
"	200E	2.9	373.4
"	175E	4.0	372.3
"	150E	5.2	371.1
"	125E	6.6	369.7
"	110E	6.3	370.0
"	100'E	7.2	369.1
"	75E	11.4	364.9
"	63'E	13.6	362.7
"	50E	13.6	362.7
"	25E	13.2	363.1
7+00	℄	13.7	362.6
"	19'W	14.1	362.2
"	25'W	15.1	361.2
"	50'W ℄ Creek	15.6	360.7
"	55'W	14.8	361.5

X-Sect's Murray Sludge Basins

376.25

7+00	65W		12.8	363.5
"	75W		12.0	364.3
"	100W		8.3	368.0
7+00	125W		4.3	372.0
6+75	125W		7.1	369.2
"	100W		10.2	366.1
"	75W		13.0	363.3
"	60W		14.1	362.2
"	50W	℄ Creek	15.8	360.5
"	25W	" "	15.7	360.6
	19W		14.5	361.8
6+75	℄		14.0	362.3
"	25E		13.6	362.7
"	50E		14.0	362.3
"	64E		13.6	362.7
"	75E		11.9	364.4
"	100E		9.9	366.4
"	125E		7.6	368.7
"	150E		5.1	371.2

X-Sects Murray Sludge Basin

376-25

6+75	175E	4.8	371.5
"	200E	1.5	374.8
"	225E	1.8	374.5
6+50	225E	2.6	373.7
"	200E	4.0	372.3
"	175E	5.0	371.3
"	150E	7.2	369.1
"	125E	8.3	368.0
"	100E	10.6	365.7
"	75E	12.2	364.1
"	63E	13.6	362.7
"	50E	14.1	362.2
"	25E	14.3	362.0
6+50	℄	14.5	361.8
"	20W	15.7	360.6
"	25W	15.9	360.4
"	50W	℄ creek 16.1	360.2
"	57W	15.4	360.9
"	59W	14.4	361.9

X-Sects Murray Sludge Basins

	376.25		
6+50	75W	13.4	362.9
"	100W	12.5	363.8
"	125W	9.4	366.9
"	149W Edge road	3.0	373.3
"	160W	2.6	373.7
6+25	168W	2.3	374.0
"	164W	4.3	372.0
"	155W	4.6	371.7
"	150W	6.3	370.0
"	125W	11.6	364.7
"	117W	13.0	363.3
"	100W	13.6	362.7
"	75W	13.9	362.4
"	61W	14.4	361.9
"	50W	16.0	360.3
"	43W ℄ Creek	16.3	360.0
"	25W	16.2	360.1
"	11W	16.2	360.1
6+25	℄	15.0	361.3
"	25E	14.5	361.8

11/14/50

X-Sects Murray Sludge Basins

376.25

6+25	50E	14.2	362.1
"	64E	13.7	362.6
"	75E	11.3	365.0
"	100E	11.4	364.9
"	125E	9.0	367.3
"	150E	8.4	367.9
"	175E	5.0	371.3
"	200E	4.7	371.6
"	225E	3.5	372.8
6+00	225E	3.00	373.3
"	200E	6.00	370.3
"	175E	6.6	369.7
"	150E	9.1	367.2
"	125E	10.1	366.2
"	100E	11.8	364.5
"	75E	13.2	363.1
"	67E	14.2	362.1
"	50E	14.6	361.7
"	25E	14.7	361.5
"	6E	15.5	360.8

11/14/50

X-Sect Murray Sludge Basins

		376.25		
6+00	℄		16.4	359.9
"	6'W	℄ Creek	17.1	359.2
"	15'W		16.1	360.2
"	25'W		16.3	360.0
"	37'W	℄ Creek	16.9	359.4
"	50'W		16.4	359.9
"	60'W		14.8	361.5
"	75'W		14.7	361.6
"	100'W		14.3	362.0
"	125'W		13.4	362.9
"	134'W		12.9	363.4
"	150'W		9.3	367.0
"	159'W	Edge road	6.5	369.8
"	170'W		6.1	370.2
CK BM		14.80 376.25	14.80	361.45
TP		5.05 365.75	15.55	360.70
CK BM			4.30	361.45

(Flagging Direct)

157 S
298 E = ROD

Nov. 16 1950
Beatty
Welker
N.T
Ø

X-Sect's Murray Sludge Basins

DM	4.45	365.90		361.45
5475	179W		+3.5	369.4
"	175W		+1.2	367.1
"	161W		+0.2	366.1
"	150W		3.0	362.9
"	125W		3.7	362.2
"	100W		4.5	361.4
"	75W		4.3	361.6
"	50W		6.2	359.7
"	25W		6.8	359.1
"	Ø		6.2	359.5
"	4E		6.8	359.1
"	11E		4.6	361.3
"	25E		4.9	361.0
"	50E		4.1	361.8
"	75E		3.4	362.5
P	9.10	371.30	3.70	362.20
"	90E		6.2	365.1
"	100E		5.9	365.4

11/16/50

X-Sects Murray Sludge Basins

371.30

5+75	125 E	6.1	365.2
"	150 E	5.0	366.3
"	175 E	1.9	369.4
"	200 E	1.9	369.4
"	225 E	0.3	371.0
5+50	225 E	1.7	369.6
"	200 E	1.9	369.4
"	175 E	3.3	368.0
"	150 E	4.1	367.2
"	125 E	6.4	364.9
"	100 E	6.7	364.6
"	75 E	9.3	362.0
"	50 E	9.5	361.8
"	25 E	10.8	360.5
"	15 E	11.4	359.9
"	8 E ℄ Creek	12.6	358.7
"	℄	11.5	359.8
"	16' W	11.7	359.6
"	25 W	12.7	358.6

11/16/50

X-Sects Murray Sludge Basins

371.30

5+50	50 W	11.6	359.7
"	55 W	10.3	361.0
"	75 W	9.6	361.7
"	100 W	9.7	361.6
"	125 W	9.9	361.4
"	150 W	8.3	363.0
"	175 W	6.8	364.5
"	181 W	3.5	367.8
"	200 W	+3.0	374.3
5+25	200 W	1.5	369.8
"	181 W	5.5	365.8
"	175 W	8.7	362.6
"	150 W	10.3	361.0
"	125 W	10.5	360.8
"	100 W	10.8	360.5
"	96 W	9.4	361.9
"	75 W	10.2	361.1
"	50 W	11.0	360.3
"	43 W	13.3	358.0

11/16/50

X-Sects Murray Sludge Basins

371.30

5+25	35'W	14.0	357.3
"	30'W	13.7	357.6
"	25'W	13.1	358.2
"	Ø	12.8	358.5
"	15'E	12.7	358.6
"	25'E	10.7	360.6
"	50'E	9.8	361.5
"	75'E	9.9	361.4
"	85'E	9.4	361.9
"	100'E	7.6	363.7
"	125'E	6.3	365.0
"	150'E	5.0	366.3
"	175'E	4.4	366.9
"	200'E	2.2	369.1
"	225'E	2.7	368.6
5+00	225'E	2.0	369.3
"	200'E	3.8	367.5
"	175'E	4.4	366.9
"	150'E	5.7	365.6

11/16/50

X-SECT'S MURRAY SLUDGE BASINS

371.30

5+00	100'E		6.3	365.0
"	75'E		8.0	363.3
"	50'E		10.1	361.2
"	25'E		10.7	360.6
"	15'E		11.8	359.5
"	8'E	℄ Creek	13.4	357.9
"	℄		12.3	359.0
"	9'W		11.7	359.6
"	14'W		13.7	357.6
"	25'W		14.0	357.3
"	40'W		13.6	357.7
"	50'W		11.5	359.8
"	75'W		10.7	360.6
"	100'W		10.1	361.2
"	125'W		11.2	360.1
"	150'W		11.2	360.1
"	171'W		10.6	360.7
"	175'W		8.1	363.2
"	200'W		1.2	370.1

11/16/50

X-Sects Murray Sludge Basins

371.30

4+75	200 W	2.1	369.2
"	175' W	10.7	360.6
"	150' W	11.8	359.5
"	125' W	11.7	359.6
"	100' W	11.2	360.1
"	75' W	11.1	360.2
"	50' W	12.1	359.2
"	38' W	14.5	356.8
"	25' W	14.6	356.7
"	Ø	12.9	358.4
"	10' E	13.0	358.3
"	16' E	11.6	359.7
"	25' E	10.9	360.4
"	50' E	10.1	361.2
"	75' E	10.1	361.2
"	90' E	10.2	361.1
"	100' E	8.9	362.4
"	125' E	7.2	364.1
"	150' E	6.0	365.3

11/16/50

X-Sects Murray Sludge Basins

371.30

4+75	175 E	5.0	366.3
"	200 E	5.1	366.2
"	225 E	4.6	366.7
4+50	225 E	5.3	366.0
"	200 E	5.3	366.0
"	175 E	5.5	365.8
"	150 E	6.6	364.7
"	125 E	7.8	363.5
"	100 E	9.6	361.7
"	75 E	10.4	360.9
"	50 E	9.8	361.5
"	25 E	11.3	360.0
"	15 E	11.6	359.7
"	10 E	13.5	357.8
"	℄	13.9	357.4
"	25 W	12.9	356.4
"	40 W	℄ Creek 15.2	356.1
"	50 W	12.7	358.6
"	75 W	12.1	359.2

X-Sects Murray Sludge Basins

371.30

4+50	100'W	11.2	360.1
"	125'W	12.1	359.2
"	150'W	12.2	359.1
"	175'W	11.3	360.0
"	200W	4.8	366.5
"	212W	0.0	371.3
4+25	200W	6.5	364.8
"	175'W	13.0	358.3
"	150W	12.9	358.4
"	125W	13.0	358.3
"	100W	12.6	358.7
"	75'W	12.7	358.6
"	50'W	14.0	357.3
	35'W	15.8	355.5
	25'W	14.6	356.7
	5'W	14.1	357.2
	℄	12.9	358.4
	25'E	11.2	360.1
	50'E	10.9	360.4

11/16/50

X-Sects Murray Sludge Basins

371.30

4+25'	75'E	10.8	360.5
"	100'E	9.6	361.7
"	125'E	8.4	362.9
"	150'E	7.2	364.1
"	175'E	6.4	364.9
"	200'E	5.8	365.5
"	225'E	5.6	365.7
4+00	225E	6.6	364.7
"	200'E	6.6	364.7
"	175'E	7.1	364.2
"	150'E	7.7	363.6
"	125'E	8.9	362.4
"	100E	9.9	361.4
"	75'E	10.2	361.1
	50'E	11.5	359.8
	25'E	11.7	359.6
	℄	12.6	358.7
	25'N	13.5	357.8
	32'N	15.7	355.6

X-Sects Murray Sludge Basins

371.30

4+00	50' W.	15.9	355.4
"	60' W.	13.8	357.5
"	75' W	13.3	358.0
"	100' W	13.4	357.9
"	125' W	13.5	357.8
"	150 W	13.1	358.2
"	175' W	13.4	357.9
"	200' W	7.2	364.1
3+75	200' W	8.7	363.6
"	175 W	13.4	357.9
"	150 W	13.7	357.6
"	125' W	14.2	357.1
"	100' W	13.5	357.8
"	75' W	14.1	357.2
"	65' W	15.6	355.7
"	50' W	16.4	354.9
"	44 W	16.2	355.1
"	35' W	14.2	357.1
"	25' W	14.1	357.2

11/16/50

X-Sects Murray Sludge Basins

371.30

3+75	℄	12.3	359.0
"	25'E	12.4	358.9
"	50'E	11.6	359.7
"	75'E	10.9	360.4
"	100'E	10.1	361.2
"	125'E	9.1	362.2
"	150'E	8.1	363.2
"	175'E	7.6	363.7
"	200'E	7.2	364.1
"	225'E	7.7	363.6
3+50	225'E	8.3	363.0
"	200'E	8.1	363.2
"	175'E	8.0	363 3
"	150'E	8.3	363.0
"	125'E	9.4	361.9
"	100'E	10.9	360.4
"	75'E	11.3	360.0
"	50 E	12.0	359.3
"	25'E	12.6	358.7

11/16/50

X-Sects - Murray Sludge Basins

		371.30		
3+50	℄		13.1	358.2
"	18'W		12.2	359.1
"	25'W		12.8	358.5
"	50'W		16.0	355.3
"	60'W	℄ Creek	17.0	354.3
"	75'W		16.0	355.3
"	100'W		13.8	357.5
"	125'W		14.8	356.5
"	150'W		14.6	356.7
"	175'W		14.0	357.3
"	200'W		9.6	361.7
2+50	200'W		7.7	363.6
1+25	200'W		8.8	362.5
CK BM	2.35	363.80	9.80	361.50 = 361.45
0+50	50'W		11.6	
"	75'W		11.8	
"	100'W		11.4	
CK BM			2.35	361.45

Notes Reduced Pg 13-49 11-17-50 RAM

Nov 24 1950

Nov. 24 1950
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Welker

X-Sects Murray Sludge Basins

3	BM	1592	377.37		361.45
	4+50	250'E		11.3	366.1
"	4+75	250'E		10.4	367.0
"	5+00	250 E		9.6	367.8
"	5+25	250 E		7.8	369.6
	5+50	250'E		6.5	370.9
	5+75	250'E		5.0	372.4
	6+00	250E		2.7	374.7
"	6+25	250'E		1.7	375.7
"	6+50	250'E		2.1	375.3
"					
	TP	2.10	379.10	0.37	377.00
2	8+00	225E		+0.1	379.2
1	"	200E		1.6	377.5
C	"	175'E		3.2	375.9
C	"	150E		4.2	374.9
	"	125 E		5.9	373.2
	"	100'E		9.7	369.4
C	"	75'E		11.8	367.3
	"	50'E		14.8	364.3

X-Sect's Murray Sludge Basins

379.10

8+00	25'E		14.7	364.4
8+00	℄		15.9	363.2
"	25'W	Creek	16.4	362.7
"	40'W		15.9	363.2
"	50'W		13.0	366.1
"	75'W		7.8	371.3
"	100'W		5.1	374.0
"	125'W		1.1	378.0
"	150'W		+1	380.2
5+00	100'E		13.0 ~~16.0~~	~~363.1~~ 365.1
"	125'E		14.4	364.7
"	150 E		13.7	365.4
8+25	200 E		0.4	378.7
"	175 E		2.0	377.1
"	150 E		4.1	375.0
"	125'E		5.6	373.5
"	100'E		8.3	370.8

11/24/50

X-Sects Murray Sludge Basins

379.10

8+25	75'E	11.5	367.6
"	50'E	14.1	365.0
"	25'E	14.8	364.3
"	℄	16.0	363.1
"	25'W	15.7	363.4
"	50'W	12.0	367.1
"	75'W	7.6	371.5
"	100'W	5.2	373.9
8+50	100W	4.2	374.9
"	75'W	7.8	371.3
"	50'W	11.2	367.9
"	25'W	14.9	364.2
"	℄	15.2	363.9
"	25'E	14.9	364.2
"	50'E	12.6	366.5
"	75'E	10.4	368.7
"	100'E	8.3	370.8
"	125'E	5.1	374.0
"	150'E	3.1	376.0

X-Sects Murray Sludge Basins

379.10

8+75	125 E	4.1	375.0
"	100 E	6.4	372.7
"	75 E	10.0	369.1
"	50 E	11.8	367.3
"	25 E	14.9	364.2
"	℄	14.2	364.9
9+00	100 W	5.6	373.5
"	75 W	9.4	369.7
"	50 W	12.2	366.9
"	25 W	13.3	365.8
"	℄	13.9	365.2
"	5 E	Creek 14.6	364.5
"	17 E	14.6	364.5
"	25 E	13.6	365.5
	50 E	10.6	368.5
	75 E	9.2	369.9
	100 E	4.5	374.6
	125 E	2.6	376.5

X-Sects Murray Sludge Basins

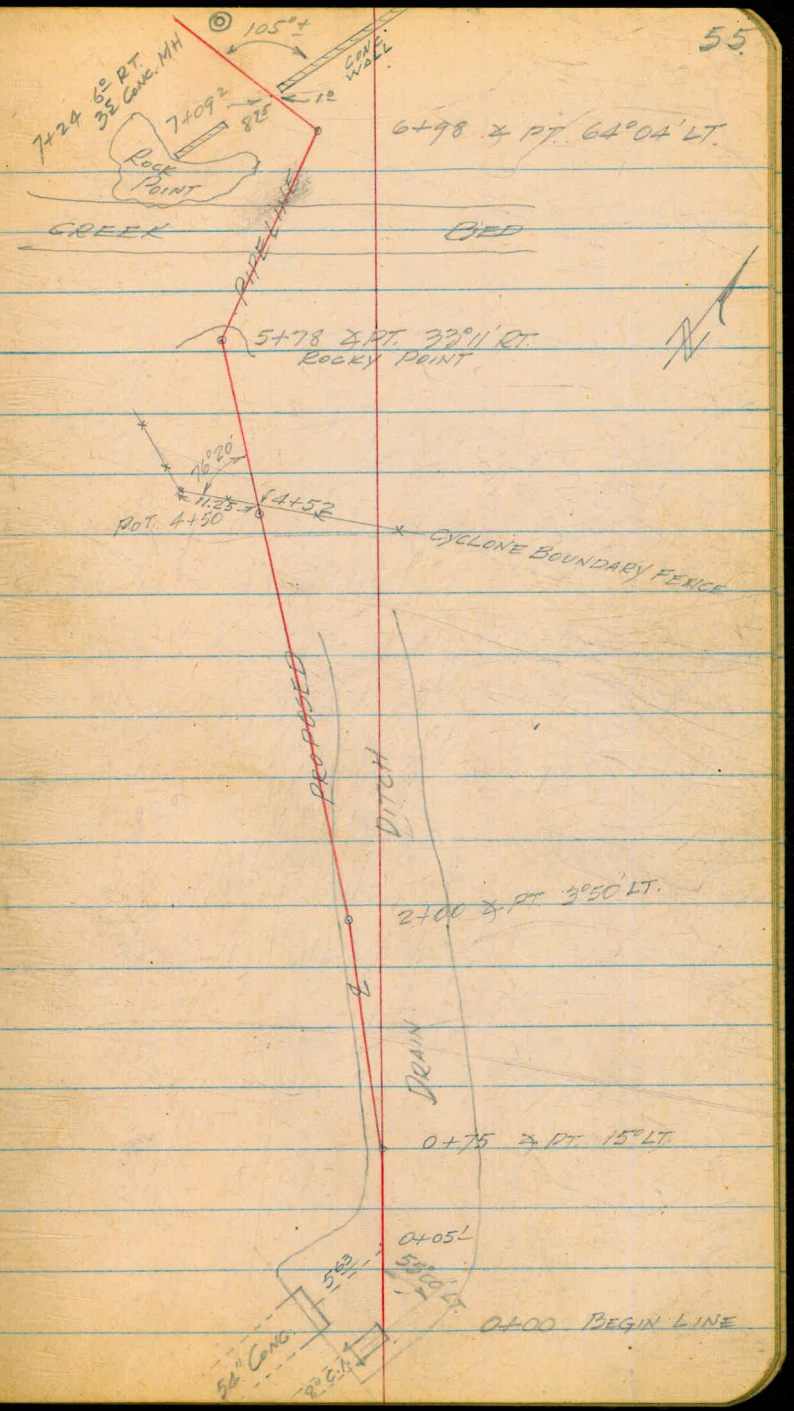
		379.10		
9+50	100 E		2.3	376.8
"	75' E		6.1	373.0
"	50' E		8.3	370.8
"	30' E	Rock outcrop	9.6	369.5
"	25' E		12.1	367.0
"	℄		13.3	365.8
"	25' W		11.6	367.5
"	50' W		10.4	368.7
"	75' W		8.3	370.8
"	100' W		6.6	362.5
10+00	100' W	Rock Outcrop	3.3	375.8
"	75' W	" "	7.1	372.0
"	50' W		11.1	368.0
	25' W		12.4	366.7
	℄	Creek	13.4	365.7
	25' E		11.0	368.1
	50' E		8.6	370.5
	75' E		4.6	374.5
	100' E		2.1	377.0
"			7.75	371.35
CK BM	0.40	371.75	10.35	361.40 - 361.45

Checked & Reduced pg. 49-54 12-1-50 RAM

Abandoned - See F.B. 782 pg. 27 Nov. 21, 1950
RM. 12-27-50
BEATTY LEONARD WELKER

PRELIM. ALIGNMENT FOR
SLUDGE LINE FROM 8" C.I.
OUTLET TO PROPOSED SLUDGE BASIN

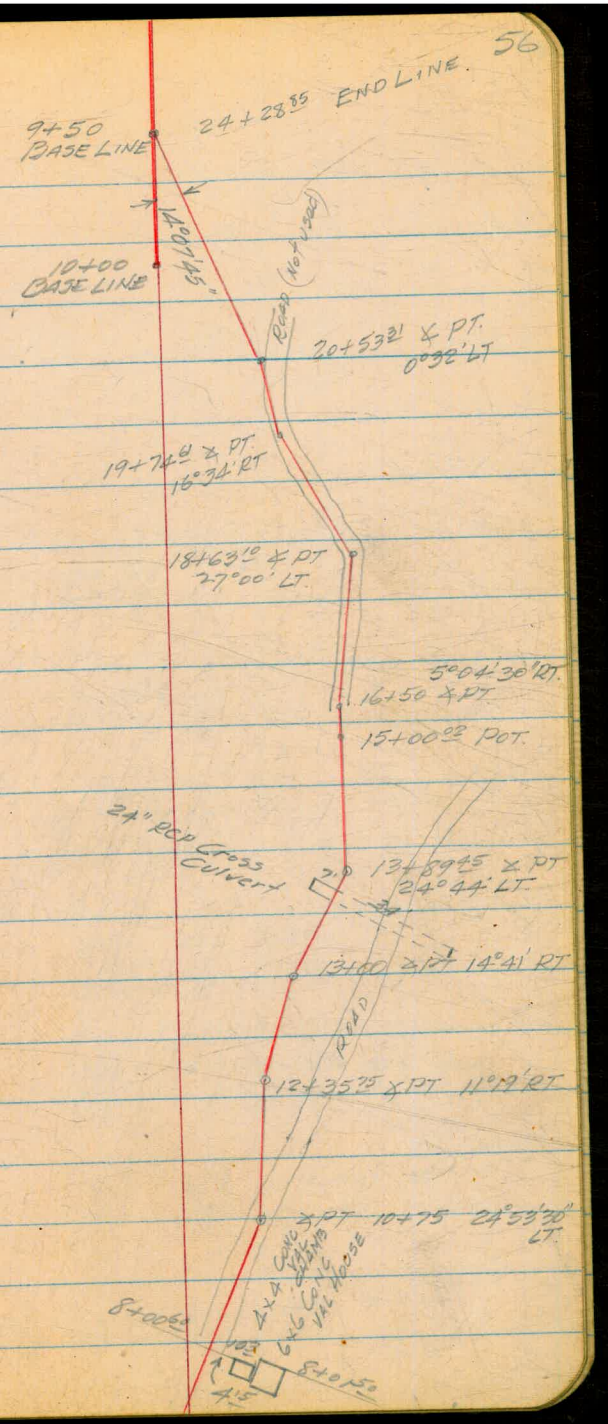
6+98	℄ PT.	64°04' LT.
5+78	℄ PT.	33°11' RT.
4+50	POT.	
2+00	℄ PT.	3°50' LT.
0+75	℄ PT.	15° LT.
0+00	BEGINNING OF LINE	
	℄ PT.	55° LT.



Nov. 23 1950
BEATTY
WELKER

PRELIM. ALIGNMT FOR SLUDGE LINE

24+28.85	= 9+50 BASE LINE	14°07'45"
20+53.21	℄ PT.	0°32' LT.
19+74.61	℄ PT.	16°34' RT.
18+63.10	℄ PT.	27°00' LT.
16+50	℄ PT.	5°04'30" RT.
15+00.02	POT.	
13+89.45	℄ PT.	24°44' LT.
13+00	℄ PT.	14°41' RT.
12+35.75	℄ PT.	11°19' RT.
10+75	℄ PT.	24°53'30" LT.



Nov. 24 1950
Beatty
Welker

℄ Profile
Sludge Line — To Sludge Basins

BM.	0.16	536.55		536.39
H	0.74	525.08	12.21	524.34
	Top 8" C.I.		9.40	515.68
0+00	Bottom 8" C.I.		10.15	514.93
0+00			10.0	515.1
0+05'			11.0	514.1
0+05'	5.63 Lt To Invert 54" Conc Pipe		10.65	514.43
+25			12.1	513.0
+50			13.2	511.9
+50				
+61			13.7	511.4
+61				
+75			13.0	512.1
+75				
H Rock	0.91	512.73	13.26	511.82
+88			+0.2	512.9
1+00			1.8	510.9
1+50			10.5	502.2
H Rock	0.13	499.90	12.96	499.77

520.9 514.4 514.4 513.1 513.0
4.2 10.7 10.7 12.0
2 2 1 1 ℄

515.9 513.3 511.9 511.9
9.2 11.8 13.2 ℄
3 1 1

517.5 515.3 512.0 511.4
7.6 9.8 13.1 13.7
5 3 1.5 ℄

515.1 512.1 509.5
10.0 13.0 15.6
4 ℄ 3

513.2 512.9 509.7 509.6 508.6 508.6
+05 3.0 3.1 4.1 4.1
5 ℄ 4 8 8 12

℄ Drain Ditch

510.9 510.9 510.7 507.7 506.7
1.8 1.8 2.0 5.0 6.0
5 ℄ 4 6 10

502.2 501.9 500.2
10.5 10.8 12.5
0 1.4 20

℄ PROFILE — SLUDGE LINE

499.90

2+00			6.4	493.5
H ROCK	0.74	487.96	12.68	487.22
+50			2.6	485.4
3+00			11.5	476.5
+12			12.8	475.2
+22			12.4	475.6
H ROCK	4.40	479.21	13.15	474.81
+25			5.7	473.5
+50			7.4	471.8
3+83				
3+94				
3+95.85		℄ Top 4" TRANS PIPE		
4+00			10.5	468.7
4+07.5				
CL BM			3.21	476.00 = 476.06
+15			11.3	467.9
+44			10.8	468.4

21' RT TO Edge of drain ditch

485.4 486.1 484.6
2.6 1.9 3.4
8 14 14

DRAINAGE CHANNEL UNDEFINED

475.7 475.2 475.0 475.9
12.3 12.8 13.0 12.1
10 8 10 20

472.2
7.00
12. ℄

Top 4" TRANS PIPE

470.5
8.70
3. ℄

468.7 468.1 467.3 467.0 468.1
11.1 11.9 12.2 11.1
7 8 12 20

468.86
10.85
7.2

Top 4" Trans pipe

NW. Cor
Highest VAL CHAMBER

11/27/50

℄ PROFILE — SLUDGE LINE

		479.21		
4+50			11.2	468.0
+52			11.9	467.3
P Rock	1.06	467.03	13.24	465.97
+70			7.4	459.6
+80			9.7	457.3
5+00			11.0	456.0
+03			11.0	456.0
+05			13.2	453.8
P Rock	2.92	457.04	12.91	454.12
+08			4.4	452.6
+13			4.3	452.7
+16			3.8	453.2
+20			4.0	453.0
+30			3.2	453.8
5+50			9.3	447.7
+72			12.2	444.8
+78° P.I.			11.8	445.2
+795			12.4	444.6
+84			19.0	438.0

456.0 453.2 452.6
13.8 14.4
℄ 3 10

℄ 16" LW.LG.W. Dist

446.2 444.0 445.5 445.2 444.9 442.7
Rt. ✗ Fwd Tang 10.8 12.0 11.5 12.1 14.3
4 3 2 ℄ 25 3
Rock Nose

℄ PROFILE - SLUDGE LINE

457.04

5+91			21.3	435.7
+95			25.2	431.8
6+00			26.8	430.2
+06			29.8	427.2
+08			31.1	425.9
+08			33.3	423.7
+12	℄ Creek		34.3	422.7
+18			33.1	423.9
+28			30.0	427.0
P	3.70	447.55	13.19	443.85
+47			23.8	423.8
+47			17.6	430.0
+50±			8.3	439.3
+60			5.3	442.3
P	12.16	459.52	0.19	447.36
+80			5.5	454.0
+83			5.2	454.3
+98	P.I.		4.5	455.0
7+00			4.4	455.1

+09~ ℄ 12" Splash / Diversion Wall 1° RT

NW Cor low wall

455.1 454.8
4.70
0.5
Top Conc.

105°± RT. 9.75 opening

℄ PROFILE — SLUDGE LINE

		459.52		
7+25			4.1	455.4
CK BM.			0.32	459.20 = 459.27
+50			5.1	454.4
+70			6.2	453.3
8+00			8.6	450.9
+25			8.6	450.9
+50			9.7	449.8
9+00			10.5	449.0
+50			11.3	448.2
10+00			11.4	448.1
+50			10.8	448.7
TP	6.25	455.63	10.14	449.38
10+75			6.5	449.1
11+00			6.4	449.2
+20			6.2	449.4
+50			10.1	445.5
+75			11.9	443.7
12+00		(Slide rock)	9.4	446.2
+24		"	7.2	448.4

7+24 6' FT. RT. to 3^{5} MH

Top Conc MH.

$8+00^{60}$ 4^{15} RT. SW COR 4' x 4' CONC VAL CHAM

$8+01^{50}$ 10^{30} — 1^{2} TO CONC VAL HOUSE 6'x6'

8+25 7^{0} RT ℄ 18" MH

14' RT. TO ROCK CUT

Left	℄	Right	Note
	448.2	448.9 / 10.6 / 8.	
	448.1	449.1 / 10.4 / 7.	
447.4 / 12.1 / 17.	448.7	449.8 / 9.7 / 9	
448.0 / 7.6 / 15.	449.1	449.3 / 6.3 / 3.	RT X BK TANG
448.7 / 6.9 / 6	449.2	450.0 / 5.6 / 13	
	445.5	450.8 / 4.8 / 11.	Edge road fill
	446.2	451.6 / 4.0 / 8.5	

11/28/50

℄ PROFILE — SLUDGE LINE

		435.63		
12+35.75 P.I.	(Slide rock)	7.5	448.1	(Split of ℄)
+50		6.8	448.8	
+87		9.9	445.7	
+91		12.0	443.6	
+96		9.4	446.2	
13+00		9.5	446.1	
+30		10.2	445.4	
+35	(End Slide rock)	11.1	444.5	
+38		13.8	441.8	
+42		12.4	443.2	
+50		12.7	442.9	
P.I. Rock	2.82	448.58	9.87	445.76
+51.3		5.6	443.0	
+62		5.4	443.2	
13+68.95 ℄ PT		4.3	444.3	
14+00	(Begin Slide rock)	6.2	442.4	
+28		6.0	440.6	
+50		6.6	442.0	
+75		6.5	442.1	
+78		8.6	440.0	

448.1	451.4	4.2	Edge RD
		5.0	
448.8	451.6	4.0	"
		6.0	
446.1	448.6	7.0	"
		5.0	
Nov. 29 1950			
BEATTY			
LEONARD			
WELKER			
442.9	447.4	8.2	Edge R.D.
		9.0	
	438.33		440.62
Invert ℄	10.25		7.96
24" RCP. Culv.	7.		34
			447.3
RT ℄ FWD Pan	444.3		1.3 Edge rd
			5.0
442.4	446.6	2.0	Edge road
		6	
442.0	447.8	0.8	Edge of
		7.	road

11/29/50
BEATTY
LEONARD
WELKER

℄ PROFILE - SLUDGE LINE

	448.58		
14+82	(Sliderock)	7.0	441.6
+87	"	6.4	442.2
15+00	"	5.8	442.8
+05	"	5.2	443.4
+10 ℄ PT.	"	2.8	445.8
+15	"	4.5	444.1
+22	"	2.6	446.0
+27	"	1.3	447.3
+40	"	1.3	447.3
+50	"	2.4	446.2
+90	"	5.5	443.1
+96	"	4.3	444.3
16+00	"	4.6	444.0
+27	"	6.1	442.5
+50 ℄ PT	(End Sliderock)	9.7	438.9
+68		11.0	437.6
17+00		11.4	437.2
+50		12.9	435.7
H ON Rock	2.21 438.08	12.71	435.87

442.8 450.3 +1.7 " Shldr of road

436.8 11.8 8 (Rock Nose) 443.4 5.2 8 444.1 4.5 3. 445.8 x 453.3 +4.7 12 "

446.2 456.7 +8.1 15 "

444.0 461.0 +12.4? 20.? (Est.) "

437.2 11.4 15 437.2 437.4 11.2 8 441.2 7.4 13 460.6 +12"? 30'? "

very old road bed Not used 1 Shldr of road

434.1 14.5 15 436.1 12.5 10 435.5 13.1 6 435.7 c 436.0 12.6 2 439.7 8.9 2

11/29/50

℄ Profile – Sludge Line

	438.08		
17+75		3.9	434.2
18+00		5.0	433.1
+25		6.1	432.0
+50		7.9	430.2
+63.0 ℄ PT		8.2	429.9
+81		10.6	427.5
19+00		10.8	427.3
+50		12.2	425.9
P.T.	1.97	427.42	12.63	425.45
19+24.61 ℄ PT			3.6	423.8
20+00			4.3	423.1
+25			5.0	422.4
+50			4.8	422.6
+53.31 ℄ PT			4.5	422.9
+65			7.1	420.3
+89			8.2	419.2
+90			10.2	417.2
21+00			12.3	415.1
P	0.33	415.33	12.42	415.00

433.1 433.1 433.3 437.3
5.0 4.8 0.8
9 2 4

old road bed NOT USED

425.7 430.0 430.2 430.7
12.4 8.1 7.4
10 2 20

Rt & Bk Tang

427.4 429.9 429.9 430.1
10.7 8.7 8.0
5 4 14

429.1 428.2 427.5 424.5
12.0 9.2 13.6
11 2 8

427.1 427.3 427.8
11.0 10.2
4 5

425.6 425.9 426.2
12.5 11.9
8 2

Rt & Bk Tan

423.8 423.8 424.0
3.6 3.4
3 5

422.7 423.1 423.6
4.7 3.8
3 7

422.7 422.6 423.1
4.7 4.3
4 10

Edge road

415.1 410.1
5.0
24

Edge of old road bed

℄ Profile - Sludge Line

		415.33			
21+08			1.4	413.9	
+25			4.7	410.6	Rock outcrop
+50			11.7	413.6	
℄ Rock		0.15	402.83	12.65	402.68
22+00			9.4	393.4	
+20			12.8	390.0	
℄ Rock		0.13	390.26	12.70	390.13
+40			3.2	387.1	
+50			5.0	385.3	
+57			6.3	384.0	
+59			7.4	382.9	
+69			8.9	381.4	Rock outcrop
+72			9.8	380.5	
℄ Rock		0.51	377.81	12.96	377.30
23+00			2.3	375.5	
+06			3.3	374.5	
+10			4.7	373.1	
+13			4.8	373.0	Rock outcrop
+15			6.2	371.6	

11/29/50

℄ PROFILE — Sludge Line

377.81

23+30	8.1	369.7
+50	9.3	368.5
+80	11.2	366.6
+93	11.2	366.6
+94.5	9.4	368.4
24+00	10.7	367.1
+02	11.4	366.4
+11	11.9	365.9
24+28.85	12.1	365.7

= 9+50 BASE LINE

SET TBM. 247 371.89 8.39 369.42

10.67 361.22 -361.45

Boulder } 10' wide
" }

in water Nor. edge of creek bed

on BASE LINE RP HUB 11+00

County BM on RPDI. 90' out
See pg. 13

Checked & Reduced pg. 57-66 11-30-50 RM.

Profile (4') Sludge Line & ℄
Alvarado Filter Plant

King Baker 12-12-50

B.M.	1.05	537.44			536.39	East end of Dam
T.P.	0.86	525.21	13.09	524.35		
0+00			10.24	514.97	515.0	F.L. Pipe
0+40			7.0	518.2	514.75	℄ 3.5
℄			7.3	517.9		
0+50			5.3	519.9	514.5	5.4
℄			6.4	518.8		
1+00			8.0	517.2	514.25	2.7
℄			10.0	515.2		
1+50			8.7	516.5	514.0	2.5
℄			10.5	514.7		See page 69
2+00			9.8	515.4	513.75	1.7
℄			11.8			
2+50			10.3	514.9	513.5	1.4
℄			11.8			
3+00			11.2	514.0	513.25	.7
℄			12.5			
T.P.	2.40	~~515.18~~ 514.18	12.43	512.78		

Profile (4) of Alvarado Sludge Line Filter Plant

515.18
~~514.18~~

King
Baker

12-12-50

3+50		1.6	513.6	513.0
℄		2.8		
4+00		1.4	513.8	512.75
℄		2.7		
4+50		1.4	513.8	512.5
℄		2.6		
5+00		1.7	513.5	512.25
℄		3.4		
5+50		2.8	512.4	512.0
℄		4.0		
6+00		2.2	513.0	511.75
℄		4.2		
6+50		1.8	513.4	511.5
℄		3.9		
7+00		1.9	513.3	511.25
℄		4.2		
7+50		3.85	511.4	511.0
℄		5.6	509.6	
T.P.		3.85	511.33	

Ginney 7+50

Profile (4) Sludge Line

12-13-50
King
Baker

	2.31	515.09			512.78
2+00			+ 0.4	515.5	513.75
℄			1.6	513.5	
2+50			0.1	515.0	513.5
℄			1.7	513.4	
3+00			1.2	513.9	513.25
℄			2.3	512.8	
3+50			1.3	513.8	513.0
℄			2.5	512.6	
4+00			1.2	513.9	512.75
℄			2.3	512.8	
4+50			0.9	514.2	512.5
℄			2.2	512.9	
5+00			2.6	512.5	512.25
℄			3.3	511.8	
5+50			1.7	513.4	512.0
℄			3.6	511.5	
6+00			1.5	513.6	511.75
℄			3.5	511.6	

T.P - Page 67

C 1.8

C 1.5

C 0.7

C 0.8

C 1.2

C 1.7

C 0.3

C 1.4

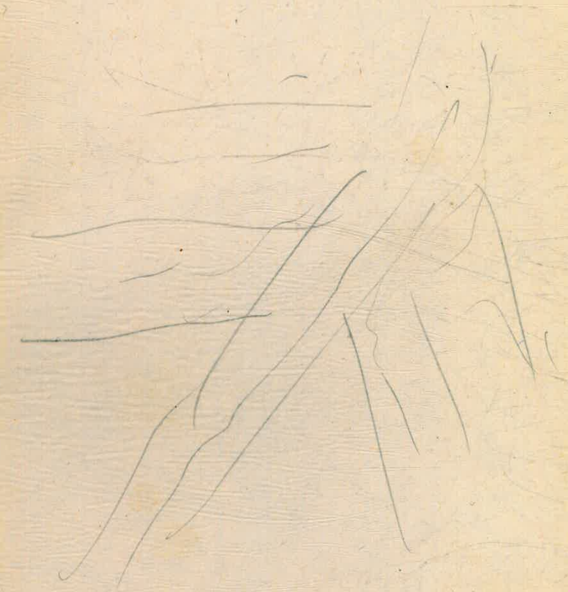
C 1.9

	515.09				
6+50		1.1	514.0	511.5	C 2.5
℄		2.5	512.6		
7+00		1.8	513.3	511.2	C 2.1
℄		3.1	512.0		
7+50		3.3	511.8	511.0	C 0.8
℄		4.7	510.4		
CK. old ginney		3.80	511.29		

Continued BK 782-Page 31

X-Sects 782

2.5
.7
.5
3.7
.7
4.4



.35
.45
.25
.35
.20
.25
.30
.35
.40
.30
3.20

53 lin ft
.32 wide
2.55 deep

0°23'Lt
1+50

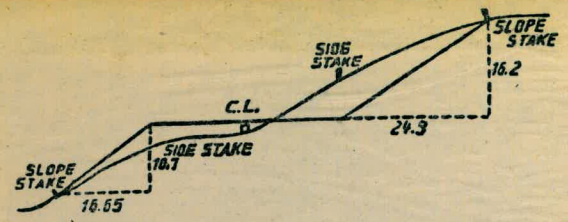
20
2.2
2.4
3.5
2.7
2.8
15.3
2.55
.32
510
765
.8160

51. lin ft
33. width
2.8 deep

53
2446
4080
4328

45.67
612
5555

.43¢ per ft



DISTANCES FROM SIDE STAKES FOR CROSS-SECTIONING.

SLOPE 1½ TO 1. ROADWAY OF ANY WIDTH.

	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	
0	0.00	0.15	0.30	0.45	0.60	0.75	0.90	1.05	1.20	1.35	0
1	1.50	1.65	1.80	1.95	2.10	2.25	2.40	2.55	2.70	2.85	1
2	3.00	3.15	3.30	3.45	3.60	3.75	3.90	4.05	4.20	4.35	2
3	4.50	4.65	4.80	4.95	5.10	5.25	5.40	5.55	5.70	5.85	3
4	6.00	6.15	6.30	6.45	6.60	6.75	6.90	7.05	7.20	7.35	4
5	7.50	7.65	7.80	7.95	8.10	8.25	8.40	8.55	8.70	8.85	5
6	9.00	9.15	9.30	9.45	9.60	9.75	9.90	10.05	10.20	10.35	6
7	10.50	10.65	10.80	10.95	11.10	11.25	11.40	11.55	11.70	11.85	7
8	12.00	12.15	12.30	12.45	12.60	12.75	12.90	13.05	13.20	13.35	8
9	13.50	13.65	13.80	13.95	14.10	14.25	14.40	14.55	14.70	14.85	9
10	15.00	15.15	15.30	15.45	15.60	15.75	15.90	16.05	16.20	16.35	10
11	16.50	16.65	16.80	16.95	17.10	17.25	17.40	17.55	17.70	17.85	11
12	18.00	18.15	18.30	18.45	18.60	18.75	18.90	19.05	19.20	19.35	12
13	19.50	19.65	19.80	19.95	20.10	20.25	20.40	20.55	20.70	20.85	13
14	21.00	21.15	21.30	21.45	21.60	21.75	21.90	22.05	22.20	22.35	14
15	22.50	22.65	22.80	22.95	23.10	23.25	23.40	23.55	23.70	23.85	15
16	24.00	24.15	24.30	24.45	24.60	24.75	24.90	25.05	25.20	25.35	16
17	25.50	25.65	25.80	25.95	26.10	26.25	26.40	26.55	26.70	26.85	17
18	27.00	27.15	27.30	27.45	27.60	27.75	27.90	28.05	28.20	28.35	18
19	28.50	28.65	28.80	28.95	29.10	29.25	29.40	29.55	29.70	29.85	19
20	30.00	30.15	30.30	30.45	30.60	30.75	30.90	31.05	31.20	31.35	20
21	31.50	31.65	31.80	31.95	32.10	32.25	32.40	32.55	32.70	32.85	21
22	33.00	33.15	33.30	33.45	33.60	33.75	33.90	34.05	34.20	34.35	22
23	34.50	34.65	34.80	34.95	35.10	35.25	35.40	35.55	35.70	35.85	23
24	36.00	36.15	36.30	36.45	36.60	36.75	36.90	37.05	37.20	37.35	24
25	37.50	37.65	37.80	37.95	38.10	38.25	38.40	38.55	38.70	38.85	25
26	39.00	39.15	39.30	39.45	39.60	39.75	39.90	40.05	40.20	40.35	26
27	40.50	40.65	40.80	40.95	41.10	41.25	41.40	41.55	41.70	41.85	27
28	42.00	42.15	42.30	42.45	42.60	42.75	42.90	43.05	43.20	43.35	28
29	43.50	43.65	43.80	43.95	44.10	44.25	44.40	44.55	44.70	44.85	29
30	45.00	45.15	45.30	45.45	45.60	45.75	45.90	46.05	46.20	46.35	30
31	46.50	46.65	46.80	46.95	47.10	47.25	47.40	47.55	47.70	47.85	31
32	48.00	48.15	48.30	48.45	48.60	48.75	48.90	49.05	49.20	49.35	32
33	49.50	49.65	49.80	49.95	50.10	50.25	50.40	50.55	50.70	50.85	33
34	51.00	51.15	51.30	51.45	51.60	51.75	51.90	52.05	52.20	52.35	34
35	52.50	52.65	52.80	52.95	53.10	53.25	53.40	53.55	53.70	53.85	35
36	54.00	54.15	54.30	54.45	54.60	54.75	54.90	55.05	55.20	55.35	36
37	55.50	55.65	55.80	55.95	56.10	56.25	56.40	56.55	56.70	56.85	37
38	57.00	57.15	57.30	57.45	57.60	57.75	57.90	58.05	58.20	58.35	38
39	58.50	58.65	58.80	58.95	59.10	59.25	59.40	59.55	59.70	59.85	39
40	60.00	60.15	60.30	60.45	60.60	60.75	60.90	61.05	61.20	61.35	40
41	61.50	61.65	61.80	61.95	62.10	62.25	62.40	62.55	62.70	62.85	41
42	63.00	63.15	63.30	63.45	63.60	63.75	63.90	64.05	64.20	64.35	42
43	64.50	64.65	64.80	64.95	65.10	65.25	65.40	65.55	65.70	65.85	43
44	66.00	66.15	66.30	66.45	66.60	66.75	66.90	67.05	67.20	67.35	44
45	67.50	67.65	67.80	67.95	68.10	68.25	68.40	68.55	68.70	68.85	45
46	69.00	69.15	69.30	69.45	69.60	69.75	69.90	70.05	70.20	70.35	46
47	70.50	70.65	70.80	70.95	71.10	71.20	71.40	71.55	71.70	71.85	47
48	72.00	72.15	72.30	72.45	72.60	72.75	72.90	73.05	73.20	73.35	48
49	73.50	73.65	73.80	73.95	74.10	74.25	74.40	74.55	74.70	74.85	49
50	75.00	75.15	75.30	75.45	75.60	75.75	75.90	76.05	76.20	76.35	50

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