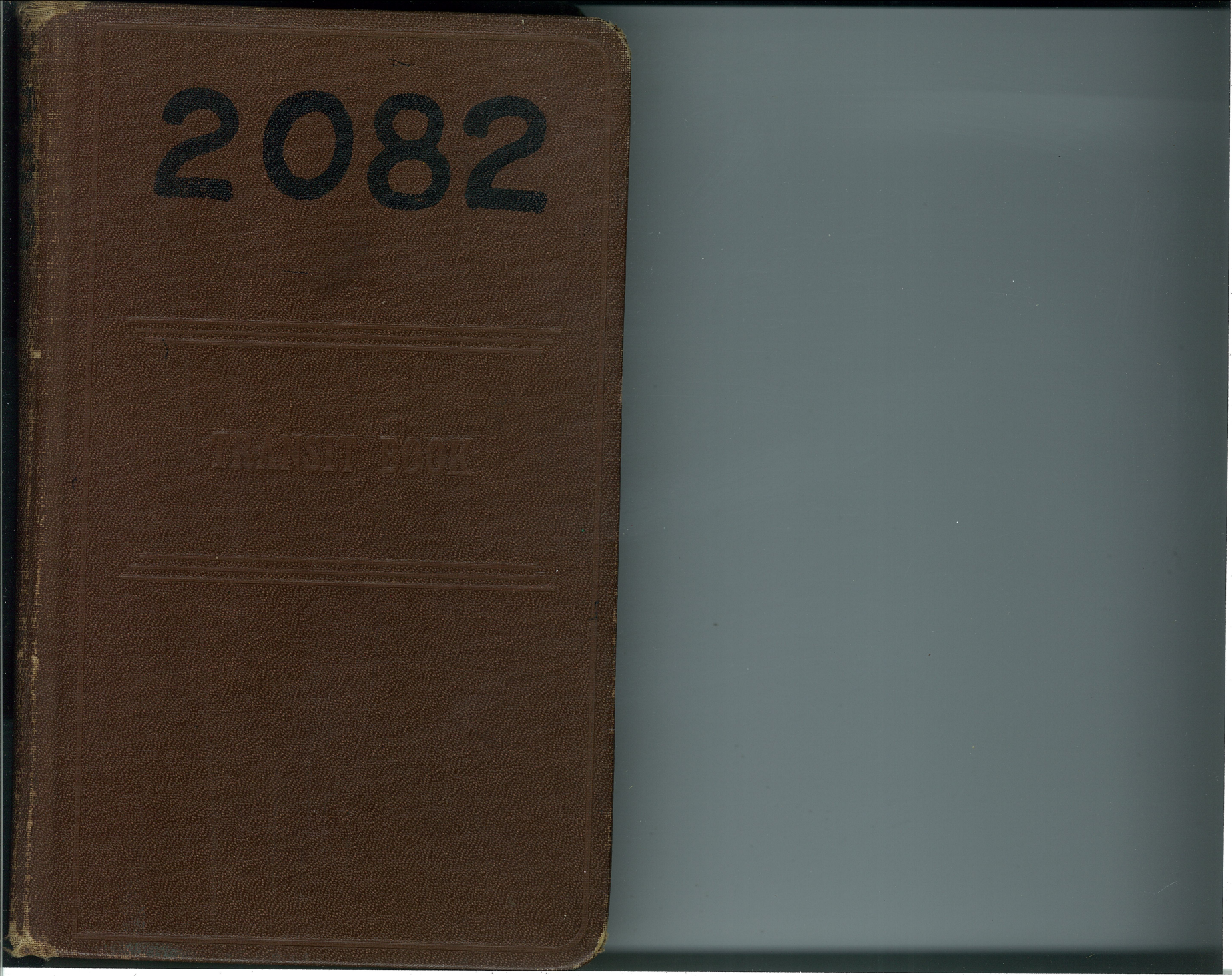
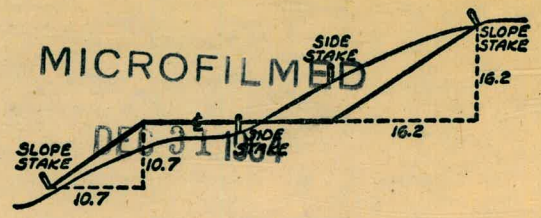

2082



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.

42 76
6 64
36 72

42 38
6 64
36 34

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to page #574
except page #30

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

1

1-3

X Section Tooley - W.L. Paradise on So. to E.L. Para. on North

X - Section - Paradise - Tooley to Mallard 4

" " Alley Blk 32. Fairmount Add. 20-28

Paradise Hills - Survey Storm Drain 29-41

Pro Sewer, Paradise Hills, Blk 14 - 42-57

X Sec Pumphouse - Potomac St. 52

Winchester - X Sec. 59

Ext. Drain - 32d. St. of Thorn 67

3-6-50

Moore
Begg
Sherman
Crawford

Sketch, F.B. 1859-Lo

W.O. 25920

X-Section Tooley - Paradise to South
To Paradise to North.

REDUCED 3-7-50
P.V.S.

Station	L		℄		Rt	
1+00		359.1 / 4.9 / 30	358.0 / 6.0	358.1 / 5.9 / 10	357.9 / 6.1 / 30	
0+50		360.3 / 3.7 / 30	360.2 / 3.8	360.4 / 3.6 / 10	360.0 / 4.0 / 30	
0+00 = E. Line Paradise To South	362.2 / 1.8 / 50	362.1 / 1.9 / 30	361.7 / 2.3	361.6 / 2.4 / 10	361.6 / 2.4 / 30	361.9 / 2.1 / 50

BM. 2" Pipe 1.95 464.01 VC2.06
Δ Pt. NE Tooley
at Paradise
1859-51

464.01

x Sect Tooley From E.L Paradise to South to W.L. Paradise to North

Station		Lt	Lt	℄	Rt	Rt	Rt	Rt
2+45		435.1 28.9/30		433.7 30.3		433.2 30.8/10	432.8 31.2/30	432.2 31.8/40
2+25	E.L. Paradise to North	439.3 24.7/30	439.4 24.6/20	438.1 25.9		437.4 26.6/10	436.7 27.3/30	435.8 28.2/40
1+95	= ℄ Paradise To North	446.6 17.4/30		443.8 20.2		443.3 20.7/10	441.7 22.3/30	440.4 23.6/40
1+65	= W. Line Paradise to North	453.3 10.7/30	452.8 11.2/6	451.1 12.9		450.3 13.7/10	448.6 15.4/30	447.9 16.1/50
1+45		455.6 8.4/30		454.5 9.5	454.7 9.3/4	453.6 10.4/10	451.9 12.1/30	451.2 12.8/50

464.01

464.01

SKETCH - 1859 - 62

X Sect Paradise - Tooley To Mallard

REDUCED 3-7-50
P.V.S.

	LT			℄	RT			
1+00	456.7	456.7	455.5	455.4	454.0	452.5	449.4	447.6	442.8
	3.5 / 30	3.5 / 28	4.7 / 21	4.8 / 12	6.2	7.7 / 10	10.8 / 24	12.6 / 30	17.4 / 45
0+65	455.8	454.0	454.2		452.8	449.0	442.8	440.0	
	4.4 / 30	6.2 / 20	6.8 / 10		7.9	11.2 / 10	17.4 / 30	20.2 / 45	
0+40	454.2	452.7	452.6		448.7	446.0	441.4	438.6	
	6.0 / 30	7.5 / 20	7.6 / 12		11.5	14.2 / 10	18.8 / 30	21.6 / 45	
0+00 = N.L. TOOLEY	453.2	452.0	447.7		446.5	444.3	438.7	435.9	
	7.0 / 30	8.2 / 13	12.5 / 5		13.7	15.9 / 10	21.5 / 30	24.3 / 45	
TP 8.07	460.23	11.85	452.16		460.23				
TP "									
	464.01				464.01				

Station	LT			℄	RT			
2+60			457^{3} 2.9/30	456^{4} 3.8	456^{3} 3.9/5	457^{0} 3.2/10	458^{2} 2.0/21	457^{1} 3.1/30
2+20		457^{1} 2.5/30	456^{9} 3.3/10	457^{0} 3.0	457^{1} 3.1/10	457^{1} 3.1/20	455^{1} 4.5/30	
1+80	458^{0} 2.2/30	457^{3} 2.9/23	457^{4} 2.8/12	456^{8} 3.4	455^{6} 4.6/10	453^{4} 6.8/30	451^{5} 8.7/40	
1+65	457^{9} 2.3/30	457^{0} 3.2/23	457^{1} 3.1/11	457^{1} 2.4	456^{6} 3.6/10	452^{1} 7.1/30	449^{3} 10.9/45	
1+45	458^{0} 2.2/30	456^{1} 3.5/23	456^{0} 3.4/12	456^{0} 4.2	455^{5} 4.7/10	452^{1} 7.5/30	449^{2} 11.0/45	

460.23

460.23

LT ℄ RT

4+50

432.0	435.2	443.1	447.2	447.5	448.9	450.1
18.1	15.7	7.8	3.7	3.4	2.0	0.8
40	30		10	22	24	30

4+20

439.7	443.2	450.9	450.7	450.5	452.1	452.6
11.2	7.7	0.0	-0.2	0.4	+1.2	+1.7
40	30		10	21	23	30

4+20

TP 0.20 450.94 9.49 450.74

450.94 min

3+90

449.0	451.6	452.4	453.1	453.0	454.3	454.1
11.2	8.6	7.8	7.1	7.2	5.9	6.1
30	20		10	21	23	30

453.5	454.8	454.9	455.3	455.5
6.7	5.4	5.3	4.9	4.7
30		10	23	30

3+50

3+00

456.1	456.2	456.2	456.2
4.1	4.0	4.0	4.0
30		10	30

460.23

460.23

6+05				
5+80				
5				
T.P.	0.05	425.66	12.90	425.61
5+50				
T.P.	0.18	438.51	12.61	438.33
5+00				
		450.94		

LT & RT

405 8/	410 0/	415 7/	418 5/	424 0/
19.9	15.7	10.0	7.2	1.7
50	30		10	30

412 4/	419 1/	421 5/	423 1/	426 1/
13.3	6.6	4.2	2.6	+0.4
50	30		10	30

425.66

417 4/	420 3/	426 5/	429 6/	433 8/
21.1	18.2	12.0	8.9	4.7
50	30		10	30

438.51

425 3/	427 2/	434 1/	436 6/	443 5/	443 5/
25.6	23.7	16.8	14.3	7.4	7.4
45	30		10	23	30

450.94

T.P.	0.94	390.77	12.79	389.83
7+20				
T.P.	0.42	402.62	12.45	402.20
6+90				
6+50				
T.P.	2.00	414.65	13.01	412.65
		425.66		

LT & RT.

390.77

380	383	391	394	399
22.4	18.9	10.9	7.8	3.1
50	30		10	30

402.62

384	388	398	402	406
30.2	26.1	16.2	11.8	8.2
50	30		10	30

395	400	406	410	413.8
19.7	14.5	8.5	4.7	1.9
50	30		10	30

414.65

425.66

Lt ℄ Rt

9+00

356	359	364	365	369
21.7	19.3	14.3	12.7	9.2
	30		10	30

8+50

360	364	369	372	376
17.9	14.6	9.3	6.2	2.2
50	30		10	30

TP 0.59 378.57 12.79 377.98

378.57

8+00

366	369	377	379	384
24.1	21.1	13.7	11.7	5.9
50	30		10	30

7+50

374	377	384	387	393
16.3	13.3	6.3	3.3	+3.1
50	30		10	30

390.77

390.77

LT & RT.

			345 4	346 4	349 4	351 1	352 9
10+50			8.9 / 40	7.9 / 30	4.9	3.2 / 10	1.4 / 30
T.P.	0.60	354.31	12.75	353.71			
				354.31			
			350 4	350 9	354 0	355 1	357 9
10+00			16.1 / 40	15.6 / 30	12.5	11.4 / 10	8.6 / 30
			353 3	355 1	359 9	360 9	363 3
9+50			13.2 / 45	11.4 / 30	6.6	5.6 / 10	3.2 / 30
TP	0.70	366.46	12.81	365.76			
				366.46			
		378.57		378.57			

12+40

12+10

11+71.80 = Intersection W.L. Swamp
E.L. Paradise

T.P. 3.77 345.50 12.58 341.73

11+50

11+00

354.31

LT ℄ RT

340.8 342.3 342.9 342.7
4.7 3.2 3.1 2.8
30 10 30

340.2 341.3 341.9 342.1
4.8 4.2 3.6 2.8
30 10 30

340.5 342.1 342.7 344.0
5.2 3.1 2.8 1.5
30 10 30

345.50

340.6 341.5 344.1 344.8 345.3
13.7 12.8 10.2 9.5 9.0
40 30 10 30

342.3 343.0 345.6 347.0 348.5
12.0 11.3 8.7 7.3 5.8
40 30 10 30

354.31

LT & Rt.

Check to BM. Rt.
Mon. P.O.T. 80'± W.
OF PARADISE ON
MALLARD - 1859.60

7.15 338.35
0.02

Note. Swan St. bladed since X Section.

13+12 52 This section parallel with Mallard.

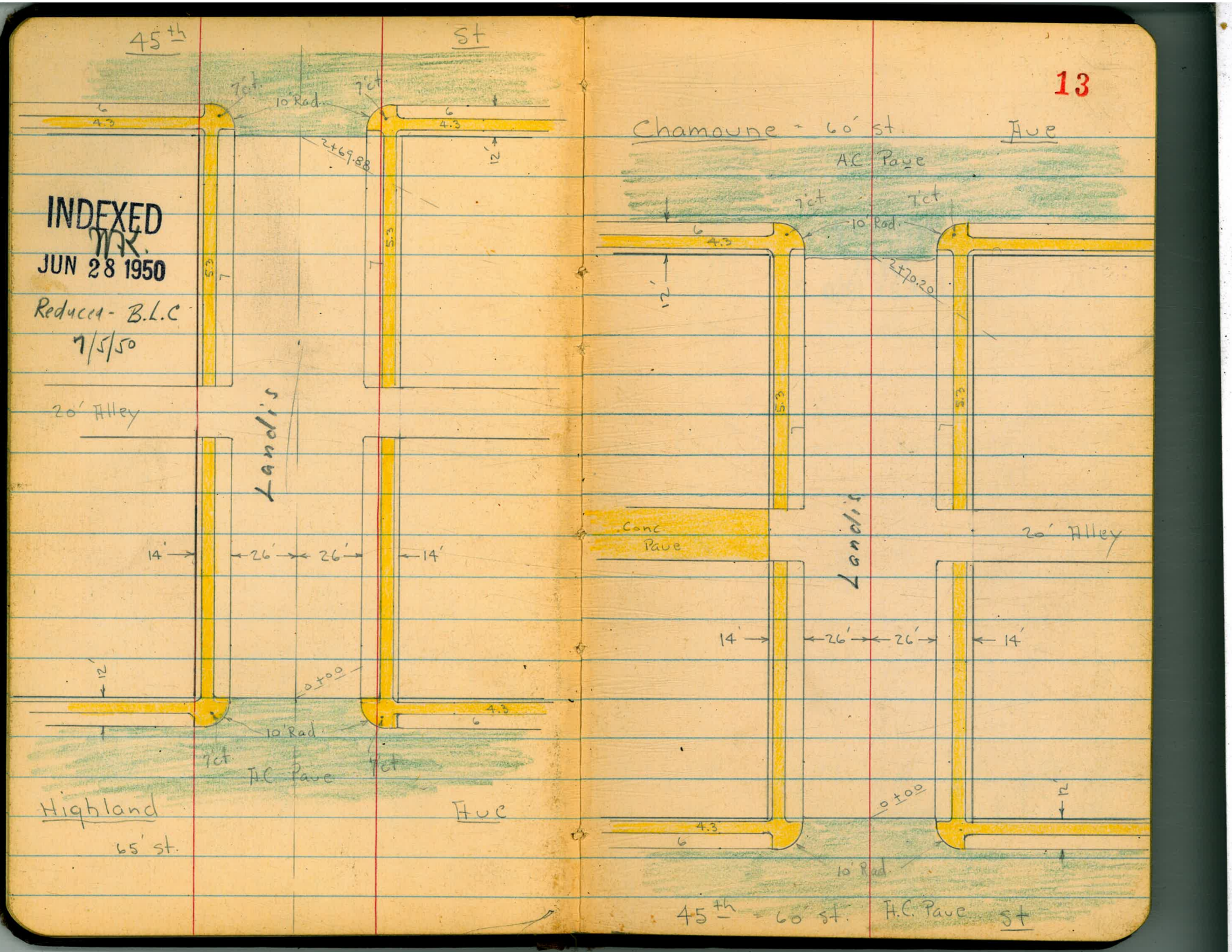
340 5/	342 1/	341 2/	341 6/	341 8	342 2/	343 2/	343 2/
5.0	2.8	4.3	3.9	3.7	3.3	2.3	2.3
22.10	7.1	7		10	30	32	40.06

340 8/	341 7/	341 6/	343 3
4.7	3.8	3.9	2.2
30		10	30

12+86 20

345.50

345.50



X-Sect. Landis - Highland to Chamoune

4577

W.O. 31426

6-27-50
Osborne
Hardin
~~Hatch~~
Shepard.

Lt. = N. ℄ Rt. = S.

Soil Sample taken - 75' E. of E.L. 45th

0+20

352.34	351.6	352.1	352.2	352.0	351.5	352.20
4.44	5.2	4.7	4.6	4.8	5.3	4.58
Top	25.8 gut	13		13	25.9 gut	Top

Reduced - B.L.C. 7/5/50

0+00 = Edge of A.C. Pave = E.L. Highland

353.01	352.42	352.81	352.89	352.72	352.33	352.80
3.77	4.36	3.97	3.89	4.06	4.45	3.98
Top	25.9 gut	13		13	25.8 gut	Top

℄ of Returns (from Prop. to Prop)

N.E. Ret: 352.70 / 4.08 gut; 353.16 / 3.62 Top

S.E. Ret: 352.53 / 4.25 gut; 352.98 / 3.80 Top

0-12 = E. cb.

353.52	353.19	352.64	352.78	353.04	353.13	352.97	352.69	352.37	352.95	351.93
3.26	3.59	4.14	4.00	3.74	3.65	3.81	4.09	4.41	3.83	4.85
90 gut. in Dr.	40 Top	40 gut	26	13		13	26	40 gut.	40 Top	90 gut. in Dr.

0-22

353.05	353.14	353.17	353.32	353.23	353.06	352.12
3.73	3.64	3.61	3.45	3.55	3.72	4.09
90	40	26		26	40	90

0-32.5 = ℄ Highland

353.42	353.56	353.52	353.45	353.38	356.38	353.16
3.36	3.22	3.26	3.33	3.40	3.40	3.62
90	40	26		26	40	90

B.M. 3.19 356.78 353.59 - N.W. 7' c.t. Highland + Landis 356.78

Landis

Lt ℄ Rt

1+85

1+80 = ℄ 9' Conc. Dr. on Lt.

1+45 = E.L. Alley

T.P. 4.11 351.98 8.91 347.87 ✓

1+25 - W.L. 20' Alley.

0+90 = on 10' Conc. Dr. on Lt.

0+50 - on 10' Conc. Dr. on Lt.

Lt			℄			Rt
346.14	345.5	345.8	346.0	345.9	345.55	346.09
5.84	6.5	6.2	6.0	6.1	6.6	5.89
Top	25.8 gut	13		13	25.8 gut	Top
346.45	345.96					
5.83	6.02					
32.9 walk	25.8 gut in Dr.					
347.96	347.67	347.0	347.4	347.5	347.6	347.2	347.54	347.59
4.02	4.31	5.0	4.6	4.5	4.4	4.8	4.44	4.09
39.9 Top-end Ref + Dirt	Top 2' Rad	26 gut	13		13	26 gut	Top 2' Rad	40 Top end Ref. + Dirt
			351.98					
348.73	348.59	348.9	348.2	348.4	348.3	348.1	348.42	348.74
8.05	8.19	8.9	8.6	8.4	8.5	8.7	8.36	8.04
40 Top end-Ref + Dirt	Top 2' Rad.	26 gut	13		13	26 gut	Top 2' Rad.	39.8 Top end Ref.
349.95	349.44	349.3	349.3	349.4	349.2	349.0	348.61
6.83	7.34	7.5	7.5	7.4	7.6	7.8	7.17
32.9 walk	25.8 Dr.	25.8 gut	13		13	25.8 gut.	Top
351.43	350.62	350.5	351.0	350.8	350.3	351.15
5.34	5.96	6.0	5.8	6.0	6.5	5.63
32.9 walk.	25.7 gut. in Dr.	13		13	25.7 gut.	Top
			356.78			

Landis

℄ of Returns

48' E. = E. cb.

30' E = ℄

12' E. = W. cb.

℄ of Returns

T.P. 4.19 347.15 9.02 342.96 = N.W. BRP - 45th

2+69.88 = W.L. 45th ± edge of A.C. pave.

12+25 = 3' E of ℄ of 8' Conc Dr on Rt.

Lt. ℄ Rt.

N.E. Ret 5.31 4.56

342.73 342.19 342.57 342.80 342.99 342.37

4.42 4.96 4.58 5.18 5.16 4.78

90 90 40 40 26 13

Top gut. Top gut.

342.27 342.73 342.36 342.64

3.88 4.42 4.79 4.51

90 40 26 13

Cross gut.

343.25 342.63 342.95 342.48 342.42 342.75

3.90 4.52 4.20 4.67 4.73 4.40

90 90 40 40 26 13

Top gut. Top gut.

342.50 343.01

N.W. Ret. 4.65 4.14

gut. Top

S.E. Ret. 5.31 4.70

gut. Top

342.46 342.19 341.94 341.93 342.46 342.29 342.85

4.69 4.96 5.21 5.18 4.66 4.86 4.30

13 26 40 40 90 90

gut. Top gut. Top.

342.79 342.58 342.35 342.69 343.37

4.36 4.57 4.80 4.46 2.78

13 26 40 90

Cross gut.

342.96 342.75 342.42 342.45 342.92 342.77 343.30

4.19 4.40 4.73 4.70 4.23 4.38 3.85

13 26 40 40 90 90

gut Top gut Top

342.43 342.94

S.W. Ret. 4.72 4.21

gut. Top

347.15

342.89 342.52 342.90 343.15 343.02 342.53 342.89

9.09 9.46 9.08 8.80 8.96 9.43 9.09

Top 25.9 13 13 25.9 Top

gut. gut.

344.62 344.36 344.2 344.4 344.3 344.03 344.69

7.36 8.2 7.8 7.6 7.7 7.95 7.29

Top 26 13 13 25.7 32.8

gut. gut walk

on Dr.

351.98

Landis

17

Lt. | ℄ | Rt.

1+25 = W.L. 20' Alley – Conc. Pave on N.

1+19 = ± 7' Conc. Dr. on Rt.

0+90

0+83 = Ely. of Dr.

0+68 = WLy. of Conc. Dr. on Lt

0+61 = ℄ 8' Conc. Dr. on Rt.

0+55

0+20

60' E. = F.L. 45 ±th = 0+00 ahead = edge of H.C. Pave

341.90	341.54	341.45	341.2	341.3	341.6	341.3	340.6	341.30	341.55	341.61	340.5
5.25	5.61	5.50	6.0	5.9	5.6	5.9	6.4	5.85	5.7	5.84	6.7
40	40	Top	26	13		13	25.8		40	40	60
Top	gut	2' Rad.	gut.				gut.		gut	Top	
end	Conc.									end Ret	
Ret	Pave.										
							340.78	Top		341.70	
							6.37	2' Rad.		5.45	
							28.8			32.9	
							Dr.			walk	
	341.83		341.3	341.4	341.7	341.4		341.0			341.65
	5.32		5.9	5.8	5.5	5.8		6.2			5.47
	Top		25.9	13		13		25.9			Top
			gut.					gut.			
342.11		341.33									
5.04	342.22	5.82	341.35								
33		25.8									
walk	4.93	Dr.	5.77								
	33		25.8					341.29		342.01	
	walk		Dr.					5.86		5.14	
								25.8		33	
								Dr.		walk	
342.08		341.2	341.6	341.9		341.7		341.3		341.93	
5.07		6.0	5.6	5.3		5.5		5.9		5.22	
Top		25.8	13			13		25.9		Top	
		gut.						gut.			
342.65		341.4	341.9	342.0		341.8		341.4		342.22	
4.90		5.8	5.3	5.2		5.4		5.8		4.93	
Top		25.8	13			13		25.9		Top	
		gut.						gut.			
342.39		341.73	342.26	342.38		342.05		341.70		342.40	
4.76		5.42	4.89	4.77		5.07		5.45		4.75	
Top		25.8	13	347.15'		13		25.8		Top	
		gut.						gut.			

Landis

℄ of Returns

Rough - about 1' W. of W.L.

2+70.20 = W.L. Chamoune = edge of pave is

2+50

2+15

T.P. 4.32 345.54 5.93 341.22 ✓

1+80

1+45 = E.L.

1+35 = ± Alley

N.W. Ret. 340.28 Lt. 5.26 gut 340.67 Lt. 4.67 Top

℄ 345.54

S.W. Ret. 339.70 Rt. 5.84 gut 340.32 Rt. 5.22 Top

340.53 4.67 Top 340.25 5.26 26 Gut 340.21 5.33 13 340.19 5.35 340.05 5.46 13 339.81 5.73 25.9 Gut 340.39 5.1 Top

340.96 4.58 Top 340.0 5.5 26.1 Gut 340.5 5.0 13 340.4 4.9 340.3 5.2 13 339.8 5.7 25.8 Gut 340.53 5.01 Top

341.19 4.35 Top 340.3 5.2 26.1 Gut 340.5 4.7 13 341.0 4.5 340.7 4.8 13 340.0 5.5 25.8 Gut 340.64 4.70 Top

341.35 5.77 Top 340.6 6.6 26 Gut 341.1 6.1 13 341.4 5.8 341.0 6.2 13 340.4 6.8 25.9 Gut 341.06 6.09 Top

341.68 5.27 40 Top 341.54 5.61 40 Gut 341.53 5.62 Top 2' Rad. Gut 340.8 6.4 26 Conc. 341.3 5.9 13 341.6 5.6 341.2 6.0 13 340.8 6.4 26 Gut 341.23 5.92 Top 2' Rad. 341.4 5.8 40.1 Gut 341.52 5.63 40.1 Top 339.1 8.1 60

341.4 5.54 60 341.37 5.78 40 edge Pave. 340.9 6.3 26 341.3 5.9 13 341.6 5.6 347.15 341.3 5.9 13 340.8 6.4 26 341.1 6.1 33 340.5 6.4 40 339.0 8.2 60

Landis

T.P.	9.01	355.45	1.87	353.58
T.P.	6.26	347.19	0.75	346.44

Chamoune + Landis
Check B.M. - N.W.B.P. 4.61 340.93 - 341.00

Note: Landis Togs to N. at E.L.
20' E. - ℄ - end.

12' E. - W.cb. - Cross cut.

353.58 = starting B.M.

Lt. ℄ Rt.

341.42	341.19	340.79	340.36	340.14	340.05	340.04	339.88	339.52	337.85
4.12	4.35	4.75	5.18	5.40	5.49	5.50	5.66	6.02	7.69
90	55	40	26	13		13	26	40	90

341.44	340.82	340.96	340.35	340.15	340.09	339.92	339.92	339.74	339.59	340.29	337.87	338.43
4.10	4.72	4.58	5.19	5.39	5.48	5.62	5.62	5.80	5.98	5.25	7.67	7.11
90	90	40	40	26	13		13	26	40	40	90	90
Top	cut.	Top	cut.						cut.	Top	cut.	Top

345.54

Alley Blk. 39 - Fairmount Add,
X-Sec. for grade Establishment.

Sommermeyer
Johnson
Allen

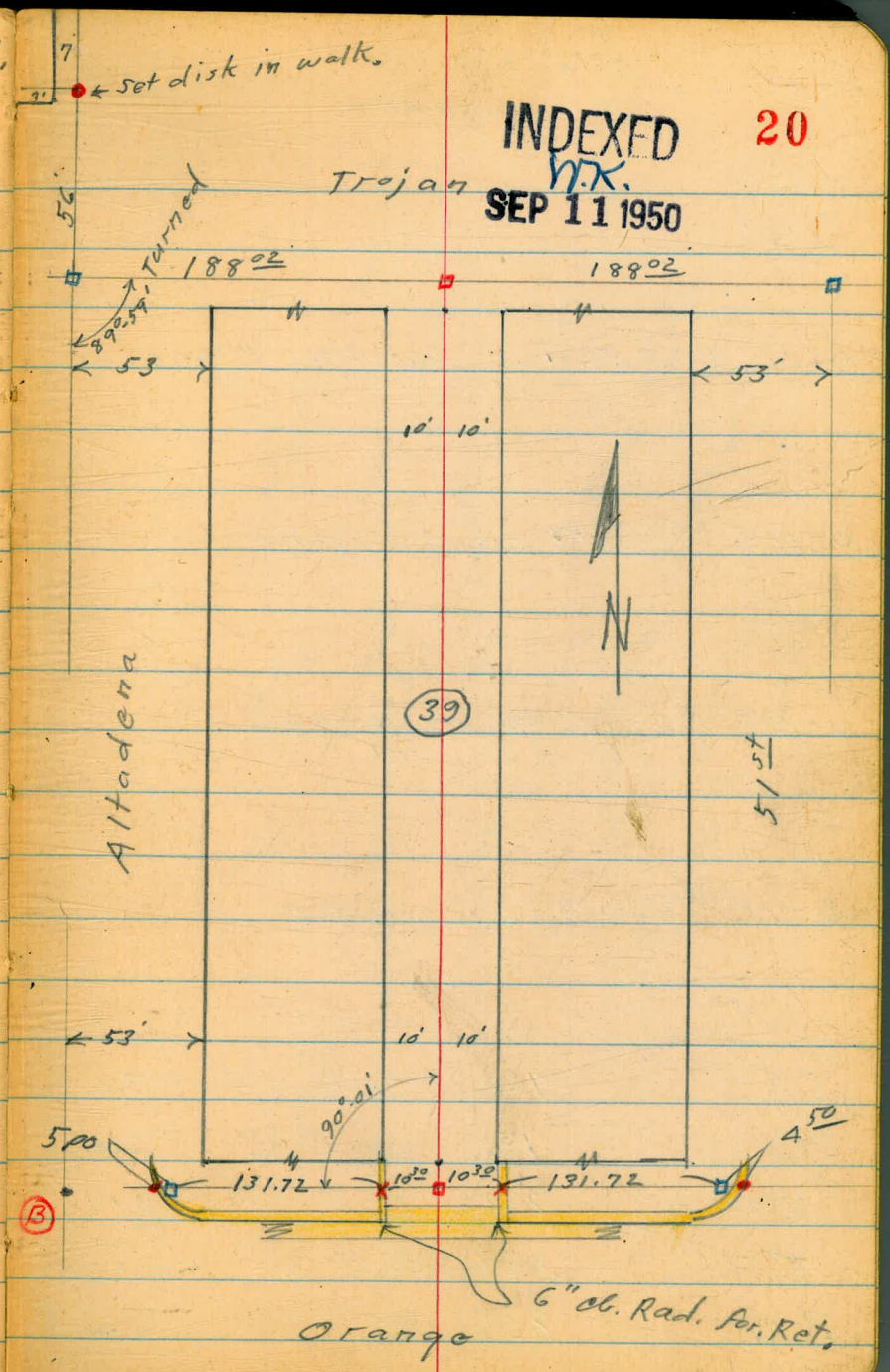
9-7-50
W.O. 25020

□ : Fd. ½ hub + C.T. T.P. book # 23
● : set disk in conc.
□ : set ½ hub + tack
• : Nail
Ⓑ : set brass plug in curb for B.M.
N.W. Orange + Altadena

No soil sample taken.

Reduced by P. Hom
9-29-50

20



Alley Blk 39
Fairmount Add.

Lt | ℄ | Rt

0+00 8 = End of Existing Curbs

313.36 312.8 312.5 313.5 313.95
4 28 4 8 5 1 4 1 3 69
Cb dirt dirt Cb
10 10

0-12 5 : North edge Gutter

313.27 312.55 312.72 313.05 313.95
4 37 5 09 4 92 4 59 3 69
Cb G G Cb
10 10

0-15 = North Curb on Orange

312.18 313.07 312.42 313.31 312.58 312.90 314.37 314.62 315.46
5 46 4 57 5 22 4 33 5 26 4 74 3 72 3 02 2 18
G Cb G Cb G Cb G Cb
35 10 10 35

0-18 5 = South Edge Gutter

312.47 312.71 312.89 313.22 314.84
5 22 4 23 4 75 4 42 2 80
35 10 10 35

317.64 ✓

T.P.	4 23	317 64 ✓	9 64	312 71	N.W. B.P. Altadena & Orange
T.P.	1 50	322 35	8 88	320 85	S.E. B.P. 50th & Orange
T.P.	2 29	329 73	7 79	327 44	
T.P.	1 61	335 23	1 61	333 62	CK-Sw. B.P. 49th & Orange
B.M.	2 28	335 23		332 25	S.E. B.P. 49th & Orange

Alley Blk 39
Fairmount Add

1+12 = Cor. House 12.3 Rt

T.P. 8.98 321.32 5.29 312.35

1+00

0+65

0+50

0+38 = ℄ M.H 1.0 Right

0+20

Note: Probably best location for Catch basin in Alley.
See Drainage Plans this Area for further data.

Lt. ℄ Rt.

312.51
88.2
12.3
Floor of House

321.33 ✓

314.7	314.3	310.6	310.1	310.3	310.5
2.9	3.3	7.0	7.5	7.3	7.1
45	22	10		10	30

315.3	315.7	309.3	309.0	309.0
2.3	1.9	8.3	8.6	8.6
40	22	9		10

308.7	308.6	308.2
8.9	9.0	9.4
10		10

309.39
8.25
Rim of M.H.

306.4	307.0	307.6	307.9	307.5
11.2	10.6	10.0	9.7	10.1
25	10		10	25

317.64

Alley Blk. 39
Fairmount Add.

	Lt.	℄	Rt.
1+88.5 ℄ of 11' conc. drive	9.7 left		
1+83 = End Block Wall	9.7 Left		
1+70 = Cor. House	13.3 Lt		
1+69 = 9.9 Lt	5.5 Wall		
1+57 = Cor House	13.3 Lt		
1+50			
1+44 = Cor House	12.0 Rt		
1+40 = Cor House	8.8 Rt.		
1+24 = Cor House	8.7 Rt.		

317.69 317.33 316.92
3.64 4.00 4.41
22.4 Floor 20 Ramp 9.7
316.06 316.5
5.27 4.8
Footing dirt
9.7
318.09
3.24
13.3 Floor
315.51 316.1
5.82 5.2
Footing dirt
9.9
318.09
3.24
13.3
Floor
315.0 314.2 313.8
6.3 7.1 7.5
10 10

313.56
7.77
12.0
Floor
313.38
7.95
8.8
Floor
313.67
7.66
8.7

22.133 Floor House

3+50

3+09 = ℄ Single Garage 18.7 Lt dirt Floor

3+00

T.P. 13.11 334.32 0.12 321.21

2+50

2+39 = Cor House 12.4 Lt

2+19 = Cor. House 12.4 Lt.

2+00 = End 5.5 BIK Wall 9.9 Lt

1+93 = 5.5 BIK Wall 9.7 Lt.

Lt. ℄ Rt.

332.5 332.0 331.2
1.8 2.3 3.1
10 10

326.4
7.2
18.7

325.3 324.9 324.6 324.6 324.6
9.0 9.4 9.7 9.7 9.7
30 10 10 50

334.32 ✓

318.9 318.9 318.8
2.4 2.4 2.5
10 10

330.15
1.18
Floor
12.4

319.89
1.44
Floor
12.4

317.3 316.66 317.2 316.43 316.1 315.3
4.0 4.67 4.1 4.2 5.2 6.0
20 footing 9.9 dirt 10 35

316.55 316.9
4.78 4.9
footing 9.7 dirt

321.33

Lt. ℄ Rt.

4+55 = 9 Lt ℄ 4' walk

4+50

4+28 = 11 Rt End shed

4+00

3+85 = 9 Rt shed dirt floor

3+83 = 14 Lt ℄ Single Garage dirt floor

T.P. 12 346.71 0.31 334.01

341.16 340.41
5.5 walk 6.3 dirt
9.1 340.4 340.0 339.9 339.6 338.2
6.3 6.2 6.8 7.1 8.5
35 10 10 35

338.3
8.4
338.0 337.6 337.3 11.0 336.8
8.2 9.1 9.4 9.9
30 10 9.7

336.0
10.1
9.4

336.2
10.5
14.5

346.71
334.32

Lt. ℄ Rt.

5+26 = Start Garage 17.8 Rt

345.36 345.61
1.35 1.10
16.5 17.8
Apron Floor

5+05 = ℄ 4' Walk 13.1 Lt

343.28
3.43
13.1
Walk

5+03 = End Garage & Wash Shed - 11.3 Lt

343.85 342.56 343.1
8.5 9.5 3.6
Floor Footing dirt
11.3

5+00

343.1 342.7 342.8 340.0
3.6 4.0 3.9 6.7
10 10 35

4+76 = Start of Combination Garage & Wash Shed - 11.4 Lt.

342.13 341.06 341.5
4.58 3.65 5.2
Floor Footing dirt
17.4

4+71 = ℄ Single Garage 12' Lt. dirt floor

341.1
5.6
12.0

4+61 = ℄ Single Garage 12' Lt Conc. Floor

341.10
5.61
12.0
Floor

346.71

	Lt.	℄	Rt.
6+07.27 = South 7' line Trojan ℄ Alley		on Hub 352.11 6.62	
6+00	352.7 6.0 35	352.0 6.7 10	351.5 7.2 351.3 7.4 10 349.5 9.2 20 348.6 10.1 40
5+83 = 10.4 Lt. End Apron of double Garage	350.99 7.24 291 Floor	350.13 8.60 10.4 Apron	
5+66 = 10.3 Lt Apron of double Garage Floor 29.1	350.94 7.79 29.1 Floor	348.98 9.75 10.3 Apron	
T.P.	17.67 358.73 T	0.61 346.10	358.73 T
5+50	346.69 0.02 10	0.04 346.67	0.05 346.66 10
5+49 = End double Garage	17.7		345.69 1.02 17.7 Floor
	346.7' T		

					Lt.	℄	Rt.
				0.06			
				376.14			
Check B.M.			2.79	376.22	N.W.B.P. Trojan 5' 50th West		
T.P	8.26	379.01	0.46	378.75	on disk 7' Line Altadena		
T.P.	12.69	371.21	0.21	358.52	3' the back of N.P.L. Trojan		
					357.6	355.7	354.2
6+30					1.1	3.0	4.5
					30		40
					358.7	355.2	354.1
6+15					0.0	3.5	4.6
					30	20	10

353.5	353.2	353.9
5.2	5.5	4.8
	10	40

358.73

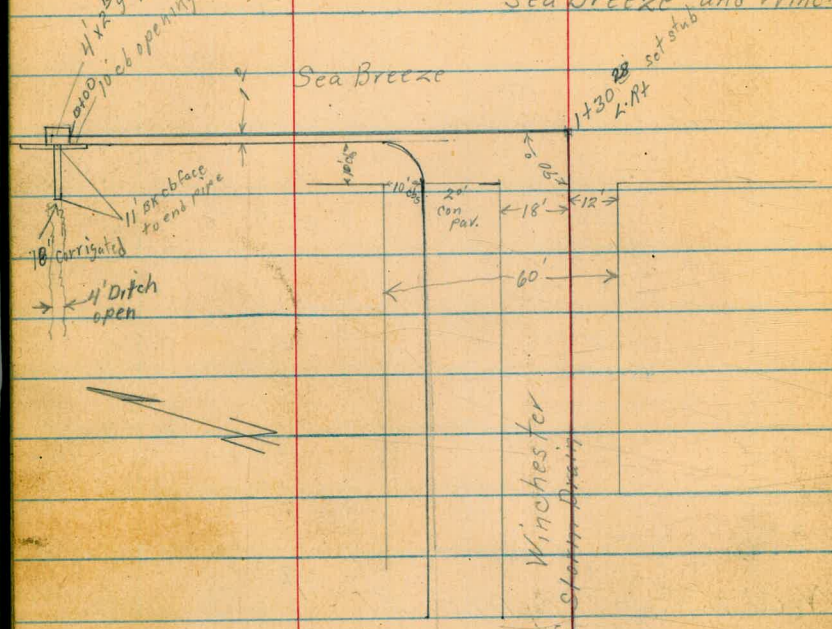
D. Smith
G. Pope
R. Sission

1-11-50

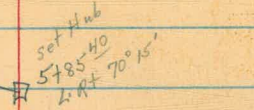
Survey Proposed Storm Drain Paradise Hills WO# 20530

29

Sea Breeze and Winchester BIK 26 + 20



Levels P-31-41



Fd Pipe 3/4 RE 5794 8+10

Proposed Storm Drain

Fd Pipe 3/4 RE 5794 12+75 = SLy Line Cumberland

Lot 7 BIK 20 set Hub 15+66 30 End

14 BIK 20

Lot Line Approximately

15 BIK 20

Levels - Proposed Storm Drain

Paradise Hills

Blks. 26 - 30

Location on P. 29

Lt = East ℄ Rt = West

1+30.28 L. Rt

245.3 (14) 245.8 (2) 246.68 (11 Stub)

0+91.5 N&B Line Winchester on west.

245.6 (60) 244.2 (39) 244.3 (14) 243.2 243.7 (11 Gut) 244.19 (11 cb)

0+81.5 BC cb on west

244.0 (60) 244.3 (39) 243.5 (14) 242.2 242.2 (1 Gut) 243.57 (1 cb)

0+50

242.3 (39) 241.2 (14) 240.5 240.5 (1 Gut) 241.53 (1 cb)

0+25

242.0 (39) 240.1 (14) 239.6 239.4 (1 Gut) 239.79 (1 cb drive in)

0+00 South inside edge inlet Box.

241.8 (39) 240.0 (14) 239.63 cb 238.20 grate 236.72 FL 239.8 (11 Ground) 236.34 (11 FL outlet)

BM 244.12 NW head Plug Sea Breeze & Winchester (Not in Record)

Paradise Hills - Storm Drain

Station			Lt = South	℄	Rt = North		
2+75			235^{2} 12	235^{1}	233^{5} 15	232^{20} 18 pav	
2+50			236^{4} 12	236^{7}	236^{5} 15	235^{39} 18 pav	
TP		238^{56}					
2+25			241^{4} 12	239^{9}	239^{4} 16	238^{25} 18 pav.	
2+00			243^{17} 12 drive end.	243^{4}	241^{5} 16	240^{84} 18 pav.	
1+75			245^{3} 12	244^{4}	243^{5} 15	242^{69} 18 pav.	
$1+41^{28}$ 18° Rt Begin south edge con paving			247^{3} 12	246^{6}	245^{9} 5	245^{4} 16	244^{33} 18 pav

Paradise Hills - Storm Drain

Lt = South & Rt = North

4+50

4+43 4.5 Lt = ℄ Elec. Pole #88637

224² 225⁰ 225 31/18 pav.

4+25

224 1/12 225⁰ 225 5/10 225 89/18 pav

4+00

224 6/12 225⁰ 225 7/10 226 15/18 pav.

3+75

225 5/12 225 9/8 226 49/18 pav.

3+50

225 6/12 226 4/5 226 2 227 13/18 pav.

3+25

225⁰/12 228 1 228 46/18 pav.

TP 2 229 20

3+00

231 6/12 230 2 231 1/15 230 55/18 pav.

Paradise Hills - Storm Drain

Lt. & Rt.

6+00 to West

2150 25 | 2151 12 | 2185 | 21568 18 Pav.

5+92 to West

2156 25 | 2159 12 | 2160 | 21618 18

5+85.4 = P.O.T. for Sec. to West

2188 12 | 21754 Hob. | 2171 10 | 21649 18 Pav.

5+85 5.5' Lt. = ℄ Elec Pole J.P 89537

5+80

2194 12 | 2187 | 21778 11 | 21683 18 Pav.

5+50

22006 12 Lawn | 2204 | 2195 13 | 21886 18 Pav.

5+00

4+65 4' Lt. = ℄ Pole Anchor.

TP 2

22467 22 Drive | 22189 15 Drive | 22266 7 Toe Conc. Drive | 2229 | 22217 13 | 22220 18 Conc. Pav.

22466

4+53 6' Lt & 2+72.5 gas valve box 2" pipe crosses line 90°

22309 Top 2" Gas Pipe 6

22446 Top box 6

Paradise Hills - Storm Drain

Sections from 5+85.40 to North Cont. P-36

Last Sec. to West.
Sec. Parallel to Rea Dr.

7+34.15 = East edge Rea Ave.	214.81 50 Pav.	214.23 25 Pav.	215.26 12 Pav.	215.43 Pav.	215.83 18 Pav.	216.10 38.5 Pav.	216.31 50 Pav.
7+00 to West		214.1 25	213.8 12	214.0		214.09 Pav.	
6+75 to West		214.0 25 Lawn	213.8 12	213.9		213.89 18 Pav.	
6+40 = ℄ Conc. Drive		214.24 17 Drive	213.84 11 Toe Drive	214.0		214.16 18 Pav.	
6+25		214.0 25	214.0 12	214.4		214.63 18 Pav.	
T.P. on ℄ Hub 5+85.40	217.58						

Paradise Hills - Storm Drain

	Lt.			Rt.	
7+52	214.4 20	214.7 4	215.2	215.0 7	216.1 20
7+40 8+07 = End 5' Chain Wire Fence 3.3' Lt. 7+47 = Beg. 5' Chain Wire Fence 3' Lt. 7+47 = End 3.5' Picket Fence 3' Rt 6+90 = Beg. 3.5' Picket Fence 4' Rt	214.0 20	214.6 6	216.5	216.8 5 Yard Lawn	217.7 20 Lawn
7+00 Elec. 6+88 = Pole # 88405 1.0' Lt. 6+65 .9' Lt. Pole Anchor. 6+45 Sec Rds to Line	214.5 15	214.6 5	216.3	217.3 5	218.0 20
	215.1 20	215.6 6	218.0	218.4 10	218.8 25
6+25.7 Cont.	215.15 125 Gut.	215.74 125 Ck.	214.42 100 Gut.	215.02 100 Cb.	218.48 50 Gut.	219.09 50 Cb
Sec. Parallel to Winchester. 6+25.7 = N. Gut. Winchester	214.08 75 Gut.	214.70 75 Cb.	214.14 50 Gut.	214.73 50 Cb.	214.60 25 Gut.	215.22 25 Cb	215.52 0 Gut.	216.12 0 Cb.	217.29 32 Gut.	217.90 32 Cb
6+04.6 = Sec. Parallel to Winchester on SLY edge Conc. Pav.	214.57 125	213.94 100	213.94 75	214.13 50	214.98 25	216.16		218.53 38		219.35 50

Paradise Hills Storm Drain

Lt. ℄ Rt.

9+87 = End 3.5' Picket Fence ~~4.5' Rt.~~ 5.2' Rt.
9+87 = End 4' Chain Wire Fence 6' Lt.

212.27	210.3	210.2	210.2	212.74
6	6		5	5.2
Top Wall	Ground		Ground.	Top Wall

9+28

	212.26	212.2	212.2	213.04
	6'		4	4.5
	on Wall			Wall

9+27.5 0.7' Lt. = ℄ Elec. Pole # 88403

9+28 = Beg. 3.5' Picket Fence 4.5' Rt. set 8" Conc. Wall

9+27 = Beg 4' Chain Wire Fence 6' Lt. set in Conc. Wall Base

TP 212.20

9+27 = End 4' Chain Wire Fence on 3.0' Rt

9+00	214.0	212.9	212.9	212.8	213.0
	20	5		5	20

8+67 = End 4' Chicken Wire Fence on 3.6' Lt

8+50	213.9	214.1	214.1	214.0	214.5
	20	4		5	20

8+09 0.7' Lt. = ℄ Elec. Pole # 88404

8+07 = Beg 4' Chicken Wire Fence on 3.3' Lt

8+07 = Beg 4' Chain Wire Fence on 3.3' Rt

8+00	214.1	214.6	214.7	214.7	215.0
	20	4		7	20

Paradise Hills - Storm Drain

~~12~~

12+00

Elec.
11+50 = Pole 07' Lt. # 88401

T.P. 2060.1

= Beg. 10" Conc. Base for Fence on Rt. = 0.5' Rt.

11+50 = End 4' Wire Fence on Lt.

11+10

5.9' Lt.
11+07 = Beg. 4' Wire Fence Posts set in Conc.

11+00

10+47 = End Fences Rt & Lt 58' Lt 54' Rt

10+47 = ℄ Elec Pole # 88402 09' Lt

= Beg 4' Wire Fence 5.2' Rt Posts set in Conc.

9+87.2 = Beg 10" Conc Tile Wall with 4' Chain Wire @ Fence

Lt.	℄	Rt.
2053 20	2052 6	2054
2055.2 0.5 Wall	2054 20	2056 6
2062 20	2065 6	2063 5
2090 20	2093 6	2067
2104.2 58 Top Wall	2090 5	2084
2104.2 6 Top Wall		

2065 9	2070 15		
2061 5	2074 15		
2063 5	2077 20		
2065 5	2067 20		
2083 5	2080 15		

Paradise Hills - Storm Drain

	Lt.	℄	Rt.
13+85	201.7 20	202.9	203.6 20
13+50	202.9 20	204.0	205.0 20
13+27.6 = N Gut.	203.34 25 Cb.	202.78 25 Gut.	204.14 Gut.	204.76 0 Cb.	205.43 25 Gut.	206.02 25 Cb.
13+06.5 = ℄ Pav.	203.58 25 Pav.	205.01 Pav.	206.28 25 Pav.
12+85.5 = South Cb. Line Cumberland. Conc. Pav Roadway	203.48 25 Gut.	204.08 25 Cb.	205.39 Cb.	204.79 0 Gut.	206.57 25 Cb.	205.97 25 Gut.
12+82 = ℄ Elec. Pole 87996 3.5' Rt.						
All Sections in this St. Parallel to Some.						
12+75 = SLY Line Cumberland	204.8 20	205.3 10	205.9	206.1 10	206.6 20	
12+29 = End 10" Conc. Base For Fence on Rt.	205.1	205.4 6	205.5	205.42 0.5 Wall	206.1 5.6 S 1/4 Cor Hous

Paradise Hills - Storm Drain

	Lt.	℄	Rt.
15+87	1959 20	1960 12	1944 10 Ditch
	1946 ℄ Ditch	1961 3	1970 10
15+50	1970 20	1976 10	1970
= Beg. 3' Picket Fence 6.5' Rt			
15+06 = End chain wire Fence 6.5' Rt	1960 2 ℄ Ditch	1967 6	1970 10
15+00	1988 20	1992	1971 2 Ditch
T.P. 20137	1971 4 Ditch	1976 6.4	1976 15
14+46.5 = Beg. 4' chain wire Fence 6.4' Rt	2006 20	2014	2001 3
14+40	1976 4 ℄ Ditch	1976 6 Ditch	1988 8
	1990 20		
14+25	2009 20	2016	1996 13
	1976 17 Ditch.	1985 25	
14+32.5 2.2' Rt = ℄ Edca. Pole J.P. 88589	2016 20	2025 2	2021
13+93	2003 7	2004 20	

Paradise Hills - Storm Drain

— Levels —

Location P-29

Lt. | ℄ | Rt.

0.10 = diff.

FB. 2096-28 → 194.89 ✓

Chk. BM. S.W. B.P. Cumberland & Rco 194.99 our

18+66.3 = End of Line

1937 194.5 195.71 1962 197.6
15 Ditch on Hub. 6 14

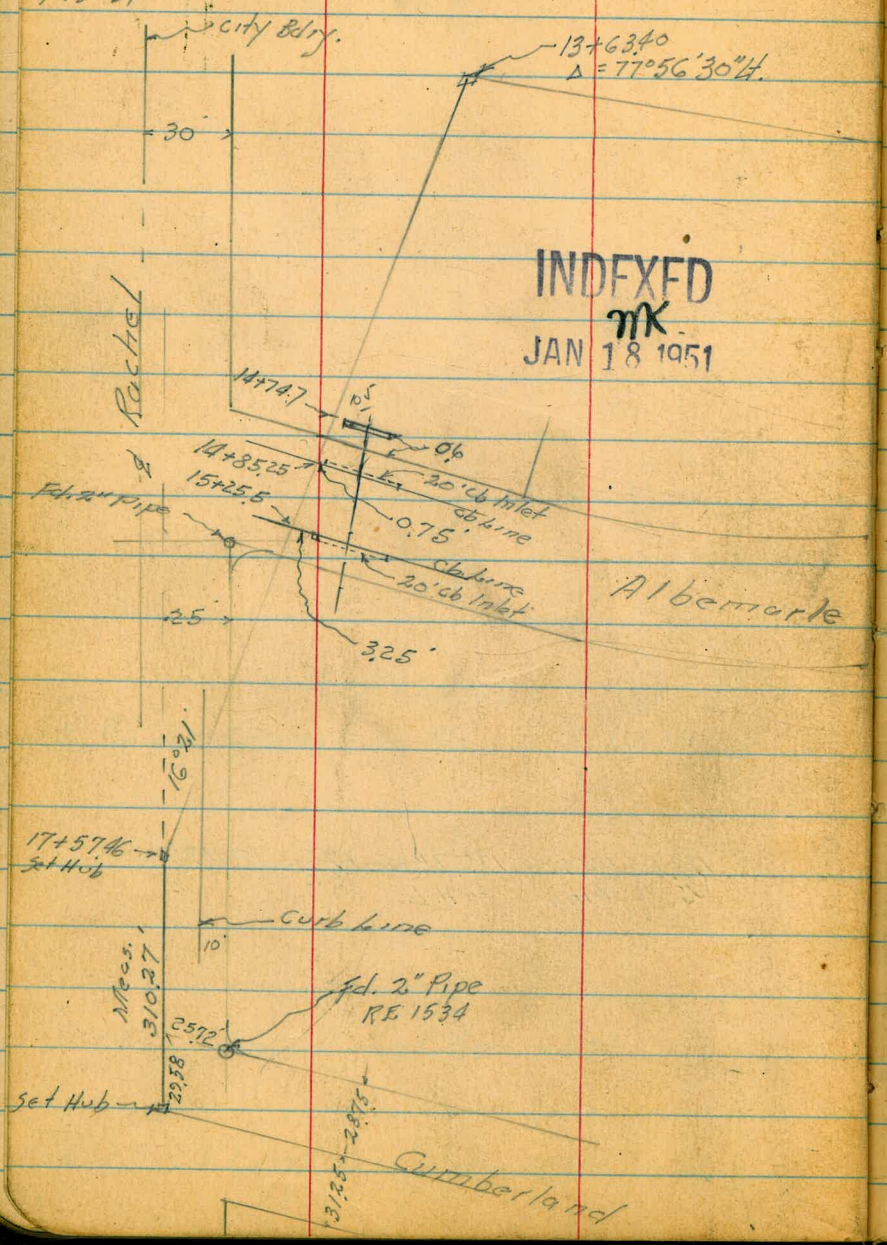
15+66 - End 3' Picket Fence 6.6' Rt

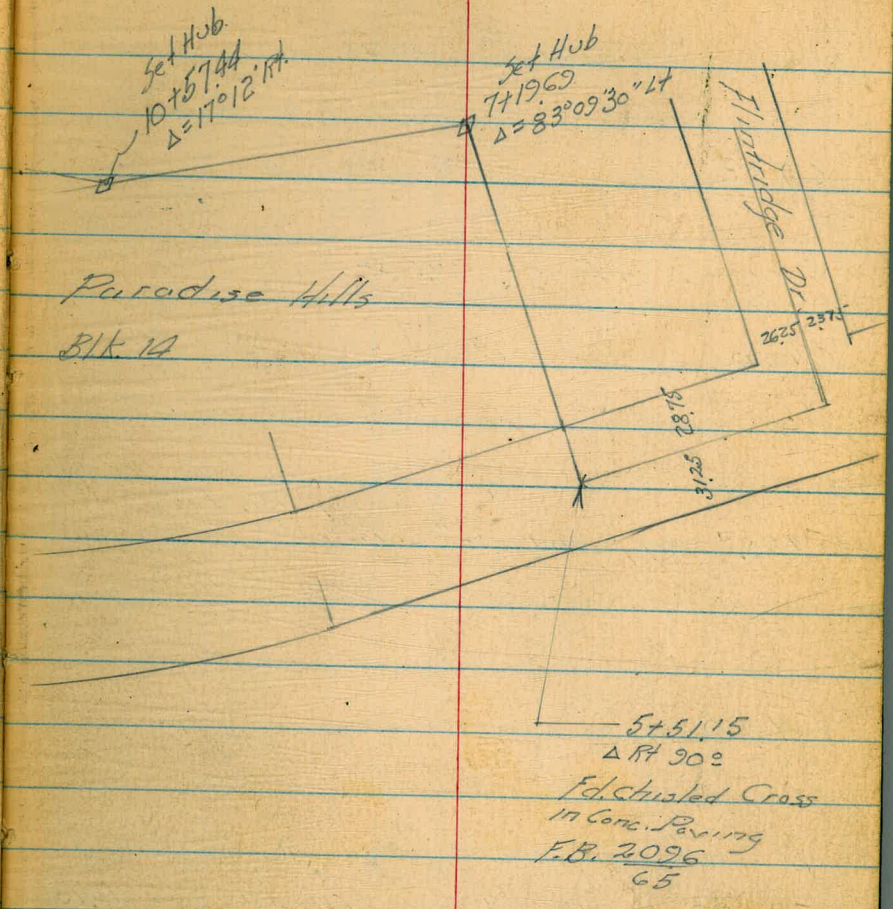
15+65 2.1' Rt-℄ Elec. Pole 477670-H

Location Proposed Sewer

Walker Pope Division 1-15-51

Blk-14 - Paradise Hills W.O. 31667





F.B. 2096
65

Prelim. - Sewer Blk-14
Paradise Hills

Location P-42

Lt. ℄

6+25
172.5: 4.2 / 50 Yard lawn; 172.0: 4.7 / 40 at Fence; 164.8: 11.9 / 22; 165.5: 11.2 / 9; 162.7: 14.0 / 5 Ditch; 162.3: 14.4 / ℄ Ditch

6+15 = Δ in Fence 28.5' Lt.

6+00
172.0: 4.7 / 42 at House; 171.5: 5.2 / 28.5 at Fence; 164.0: 12.7 / 16 Ditch W edge; 163.7: 13.0 / 8 Ditch E edge; 165.0: 11.7

5+90.7 = opp end 36" Culvert. Corrug. Iron Pipe
172.0: 4.7 / 42 E side House; 171.5: 5.2 / 28.5 at Fence; 163.57: 13.09 / 19 Invert 36" Pipe; 166.8: 9.9

5+80
172.3: 4.4 / 42.3 Yard Lawn; 171.8: 4.9 / 28.5 at Fence; 171.7: 5.0 / 18.8; 172.1: 4.6

5+69.9 North Gut.
172.38: 4.28 / 85 cb.; 171.68: 4.98 / 50 Gut.; 172.04: 4.62 / 40 cb.; 171.23: 5.43 / 40 Gut.; 171.85: 4.81 / 28.8 cb.; 170.86: 5.80 / 28.8 Gut. West cb Inlet.; 163.93: 12.73 / 18.8 Flow Invert; 171.82: 4.84 / 18.8 cb.; 170.80: 5.86 / 18.8 Gut. ℄ Inlet Grating.; 171.90: 4.76 / 8.8 cb.; 170.92: 5.74 / 8.8 Gut. East end cb Inlet.; 172.36: 4.30 / 0 cb.; 171.52: 5.14 Gut.

5+51.15 Δ Rt 90°
172.29: 4.37 / 50; 171.93: 4.73 / 40; 171.94: 4.72 / 30; 171.76: 4.90 / 20; 172.19: 4.47 / 8.8; 172.53: 4.13

176.66 ✓

4.13 176.66 ✓ 172.53 ✓

B.M. on Chisled Cross in Conc. Pav.
5+51.15 F.B. 2096-75

Blk-14 - Paradise Hills

7+41

7+33

7+19.69 Δ Lt. 83°09'30"

7+00

6+90

6+73

6+50

T.P. 5.90 169.31✓ 130.5 163.61✓

176.66✓

141.5 160.8 158.6
8.0 8.7 10.9
25 10

157.7
9.8

164.81
4.70
on Hub

163.4 141.3 159.6 158.9 159.6
7.1 8.2 9.9 10.6 9.9
50 16 13 7 N. edge Ditch
W edge Ditch

163.5 141.4 159.1
6.0 8.1 10.4
50 8 Ditch
Bank

166.3 164.1 163.0 161.9
3.2 5.4 6.5 7.6
50 46 38

172.4 164.1 163.1
+2.9 5.4 6.9
50 34

169.51✓

176.66

Blk 14 - Paradise Hills

Lt. 2

T.P. 4.65 162.18 ✓ 11.78 157.53 ✓

9+00

8+65

8+15

7+90

7+50

7+48

169.51 ✓

	168.4	164.3	160.2	159.9	154.8
	1.1	5.2	9.2	9.6	14.7
	50	17		27	65

	173.7	168.3	165.1	160.4	159.1	152.1
	+4.2	1.2	4.4	9.1	10.1	12.8
	50	15		16	24	65
						℄ Ditch

	174.2	167.8	165.4	162.1
	+4.7	1.7	4.1	7.4
	50	32	16	

	168.7	165.4	161.7	160.6
	1.2	4.1	7.8	8.9
	50	35	14	

	162.2	160.8	159.9
	7.3	8.7	9.6
	35	7	

158.8
10.7
℄ Ditch.
169.51 ✓

Blk-14 - Paradise Hills

10+15

151.2
11.0
Ditch
Edge

10+00

157.6 155.0
4.6 7.2
50 45

154.0 151.1 151.6 154.2 154.9
8.2 11.1 10.6 8.0 7.3
14 13 7 5
Ditch Ditch

9+94

155.5
6.7

9+92

151.6
10.6

9+82

151.6
10.6
2 Ditch

9+77

155.0
7.2

9+50

158.2 156.7 155.7 155.6 156.0 153.1
4.0 5.5 6.5 6.6 6.2 9.1
50 35 15 35 4.0
2 Ditch

162.18

162.18 ✓

Blk. 14 - Paradise Hills

11+00

10+88

10+72

10+57.44 Δ 17°12' Rt

10+50

10+30

10+25

162.18

152.8
9.4
50

152.0 151.0 149.8 149.9 153.3
10.2 11.2 12.4 12.3 8.9
25 23 20 13
S. edge Ditch N edge Ditch

151.9
10.3

150.1
12.1
℄
Ditch

151.39
10.79
on ℄

155.8 152.8 152.7 150.4
6.4 9.4 9.5 11.8
50 8 15
℄ Ditch

152.3
9.9

150.8
11.4
W. edge
Ditch
162.18

Blk - 14 Paradise Hills

48

13+00

12+50

12+43

12+35

T.P. 4.77 153.91 ✓ 13.04 149.14 ✓

12+00

11+50 150.3 11.9 50

162.18 ✓

149.4 4.5 50

148.1 5.8 15

147.0 6.9 15

146.3 7.6

146.0 7.9 6 ℄ Ditch

147.3 6.6 20

148.2 5.7 50

148.4 5.5 45 Bank

147.0 6.9 32 Ditch

146.9 7.0 10 Ditch

146.8 7.1 ditch

148.4 5.5 7 Bank

146.6 7.3 Ditch

149.0 4.9

153.91 ✓

148.7 13.5 50

147.4 14.8 49 ℄ Ditch

149.2 13.0 39

151.6 10.6

150.2 12.0 42

148.6 13.6 39 Ditch

148.6 13.6 36 Ditch

151.6 10.6 32

153.3 8.9

162.18 ✓

Blk 14 - Paradise Hills

14+85.25 · N curb Albemarle section on curb

148.21 / 5.70 / 107 / cb — 147.24 / 6.67 / 107 / Gut. — 148.01 / 5.90 / 107 / cb — 147.01 / 6.90 / Grating 107 — 141.56 / 12.35 / 10.7 / Invert — 147.03 / 6.88 / 0 / Gut. — 147.94 / 5.97 / 0 / cb — 147.81 / 6.10 / 14 / Gut. — 148.53 / 5.38 / 14 / cb — 148.90 / 5.01 / 30 / Gut. — 149.52 / 4.39 / 30 / cb

Hd. Wall and Section Parallel

14+74.7 opp N. end Hd. Wall ⊥ To Curb Line

149.8 / 4.1 / 50 — 147.7 / 6.2 / 35 — 146.40 / 7.51 / 16.5 / Top Hd. Wall — 141.84 / 12.07 / 10.5 / Invert 36" Corrg. Iron culvert — 146.40 / 7.51 / 4.5 / Top W end Hd. Wall — 147.2 / 6.7 — 150.7 / 3.2 / 6

14+50

151.5 / 2.4 / 50 — 144.7 / 9.2 / 33 — 142.6 / 11.3 / 24 / ℄ Ditch — 146.9 / 7.0 / 4 / Toe Slope — 148.3 / 5.6 — 151.9 / 2.0 / 8 — 151.9 / 2.0 / 15

14+00

143.7 / 10.2 / 25 / ℄ Ditch — 146.0 / 7.9 / 3 / Toe Slope — 147.7 / 6.2 — 149.9 / 4.0 / 6 / Slope Side — 151.7 / 2.2 / 10 / Slope Side

13+63.40 △ Lt. 77°56'30"

145.91 / 8.00 / on Hub — 147.3 / 6.6 / 5 / Toe Slope — 150.2 / 3.7 / 10 / Side of slope

13+50

143.6 / 10.3 / Ditch ℄ — 144.5 / 9.4 / 28 / Ditch ℄ — 145.5 / 8.4 / ℄ Ditch — 145.7 / 8.2 / 20 / ℄ Ditch

13+20

148.5 / 5.4 / 50 — 146.9 / 7.0 / 30 — 146.7 / 7.2

153.91 ✓

15+75

15+53

0.55 151.03 ✓ 150.48 = BM

0.01

FB. 1696-80 → 150.48

344 150.47 ✓

Chk SE.BP. Rachel & Albemarle

at Rt Δ to our Line

15+42 opp end of 36" Corrg. Iron Pipe

Sec.

15+30 Parallel to curb

15+25.5 Sec on S. curb

15+05.4 Sec Along ℄ Paving.

153.91 ✓

141.7

2.3

144.0

7.0

151.03 ✓

140.65 146.7

13.26. 7.2

14.4

Invert

148.6 147.7 148.1 149.2

5.3 6.0 5.8 4.7

30 13 25

148.27 147.18 148.05 140.78 147.03 147.93 147.10 147.31 148.20 148.15 149.38

5.62 6.73. 5.86 13.13 6.88 5.96 6.81 6.60 5.71 5.16 4.53

23.25 23.25. 13.75 13.25 13.25 3.25 3.25 Gut. 5.0 30 30

Cb. Gut. Cb. Invert. Grating cb. Gut. cb. Gut. cb

Eend Inlet Inlet W. end

148.44 147.96 148.01 149.37

5.47 5.95 5.90 Pav. 4.54

30 17 153.91 ✓ 25

Pav. Pav. Pav.

Lt. | Lt.

17+57.46 — 11.57 — 139.46

See on Ecurb

17+03.50 = Ecurb Rushel

	138.96	139.95	135.33	139.92	138.89	138.99	139.98	139.24	140.07
	1207	1108	1570	1111	1314	1204	1105	1177	1096
	34.5	34.5	24.5	24.5	24.5	14.5	14.5	0	Cb
	Gut. S. end Cb inlet	Cb	Invert 36" Corrug Pipe	Cb. Grating		Gut. N end inlet	Cb	Gut.	

17+00 — 10.6 — 140.4

16+75 — 10.1 — 140.9

16+58 — 9.7 — 141.3

16+25 — 10.0 — 141.0

16+00 — 10.3 — 140.7

151.03 ✓

REDUCED - 1-25-51, HEK.

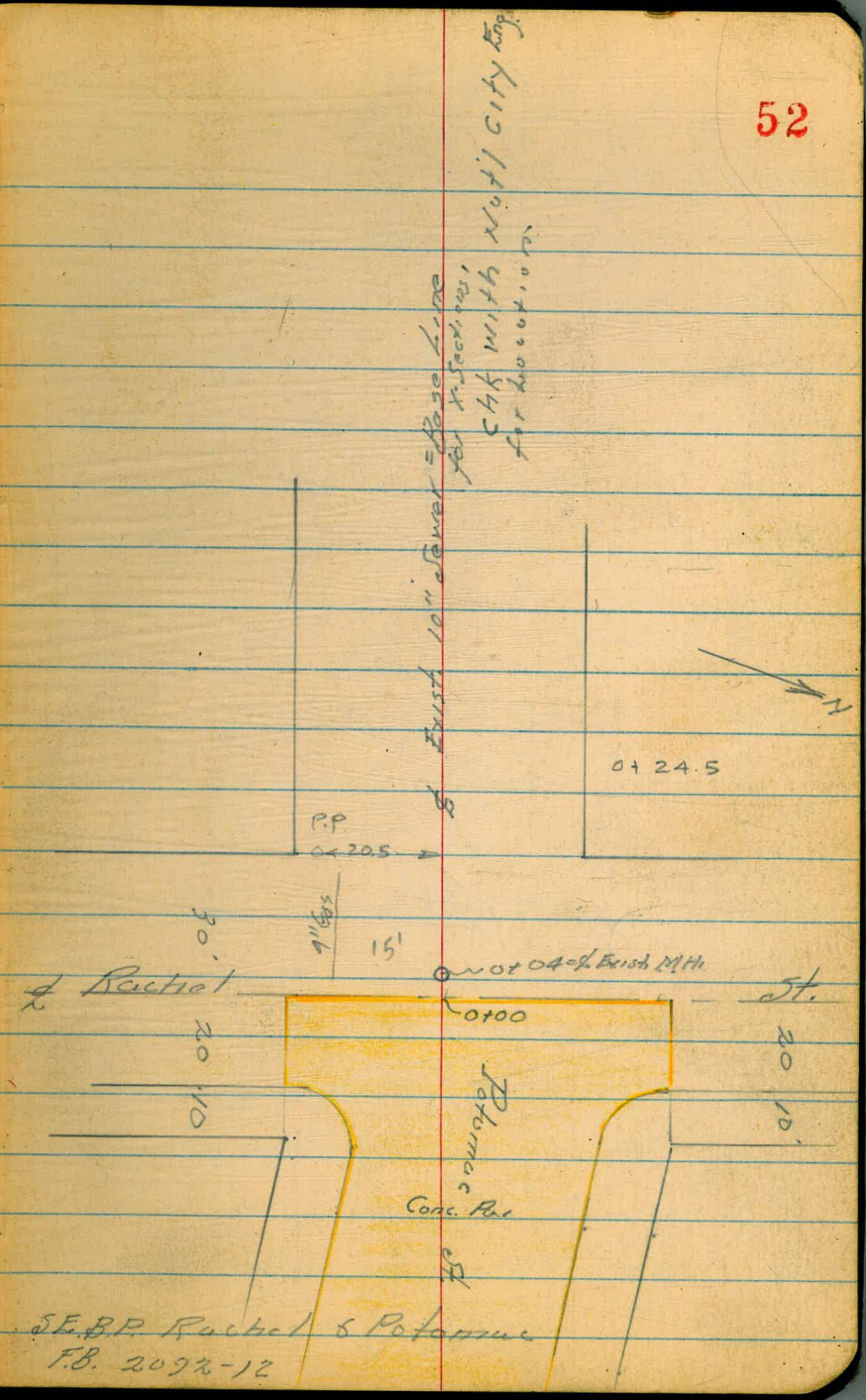
Cross sections for Proposed Pump House

Walker
Pope
R. Sission
1-17-51

West end Potomac Street

in Paradise Hills WO 31667

370 165.34 ✓ 161.64 ✓



Potomac Court

	Lt.		℄			Rt.	
0+75	160.8 4.5 30	153.5 118 18	153.31 1203 14 Edge Pav.	153.44 11.90	153.26 12.08 4 Edge Pav.	153.3 12.0 10	148.0 17.0 20	158.2 15.1 30
0+50	162.6 10.3 30	159.8 5.5 .22	156.27 9.07 15 Pav. Edge	156.50 8.84 Pav	156.52 8.82 4 Edge Pav.	156.5 8.8 17	151.7 13.6 30	
0+30	164.2 1.1 30	158.92 6.42 15 Pav. Edge	159.18 6.16 Pav.	157.26 8.08 5 Edge Pav.	157.0 6.3 16	160.1 5.2 25	157.3 8.0 30	
0+20	162.3 3.0 30	160.44 4.90 Pav	160.01 5.33 15 Pav	160.33 5.01 Pav.	160.39 4.95 7 Edge Pav.	160.4 4.9 30		
0+10	161.48 3.86 30 Oil	161.21 4.13 25 Oil	161.05 4.29 15 Pav.	161.05 4.29 Pav.	160.68 4.66 11 Pav	159.9 5.4 30		
0+04 = ℄ Exist. MH			161.22 4.12 Rim					
0+00	162.01 3.33 30 Oil Road	161.66 3.68 20 End Conc. Pav.	161.31 4.03 Pav.	161.20 4.14 8 Pav.		159.91 5.43 30 Pav.		

165.34 π Dm 52

165.34 ✓

Potomac Cont. from P-53

Lt. ℄ Rt.

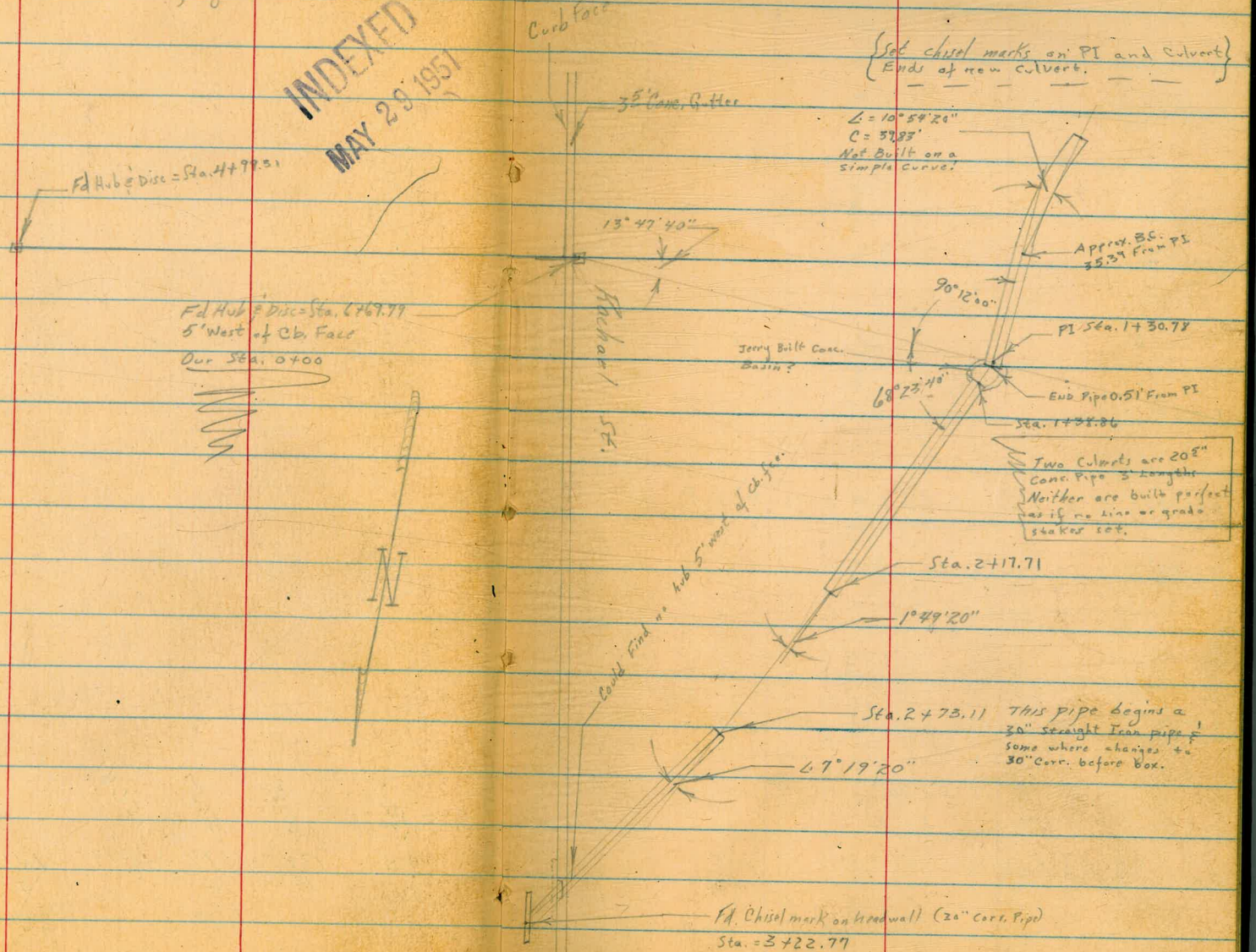
	156.1	151.5	151.57	151.41	151.21	150.8	146.8	147.1
1+00	9.2	13.8	13.77	13.93	14.13	16.5	18.5	18.2
	30	19	14		4	11	20	30
			Edge Pav.		Edge Pav.			

163.34 ✓

Roberts
Cota
Moore
Pullen
5-17-51
W.O. 20530

Location of Culverts in National City West of Rachael & North of Cumberland

See FB 1796 page 62



Cont'd From Page 55

		Lt	℄	Rt
			1852	
0+82			5.4	
			1352	
0+52			5.3	
			1442	
0+50			2.6	
0+49	Railroad tie barbed wire fence JP to Rachael		1435	
0+24			1.1	
			1434	
0+22			1.5	
			1435	
0+00	Fd. Hub & City Disc		1.1	
				144.59 K
BM	1.06 144.59 K	143.53 Hub & Disc	Sta. 6469.79 FB 1796 pg 69	Our Sta. 0+00

Cont'd From Page 56

1451 Dirt Cover

1438.86 Begin Culvert

END OF CULVERT (South End) (75.22 From PI)

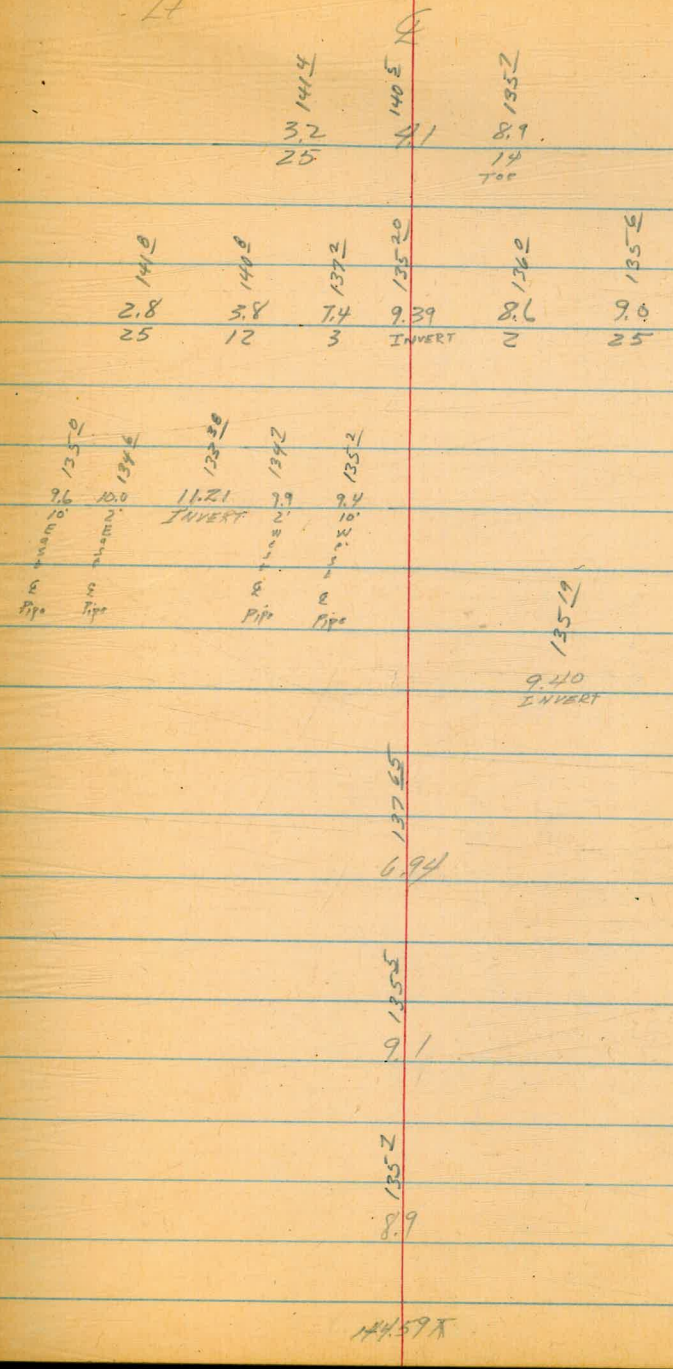
END OF CULVERT 0.51' North of PI (North End)

1+30.78 Dirt Cover Top

1+23 Edge of Dirt Cover over Culvert

0+89

14459A



Cont'd From Page 57

check 106 143.53 = 143.53

2+73.11 Begin Culvert

2+44

2+17.71 End Culvert

2+11 Dirt Cover

144597

Lt ℄ Rt

Lt	℄	Rt
139.2		
4.7		
20		
139.6		
6.0		
2		
	134.64	
	9.95	
	INVERT	
139.7		
4.9		
4		
139.7		
4.9		
1		
139.8		
4.8		
25		
139.3		
5.3		
15		
139.0		
6.6		
3		
	136.54	
	8.1	
139.0		
6.6		
3		
139.4		
6.2		
15		
139.6		
5.0		
20		
139.3		
5.3		
20		
139.8		
6.8		
2		
	135.48	
	9.11	
	INVERT	
139.4		
6.2		
2		
139.7		
4.9		
8		
139.8		
4.7		
25		
140.1		
4.6		
16		
140.1		
4.6		
5		
	139.2	
	4.7	
139.8		
4.8		
25		

144597

Roberts
Moore
Pillon
5-28-51
W.O.

X-Section Winchester
Rancho Dr. to Reo Dr.

	Lt.			℄			Rt
0+50	220.7	222.3	223.0	222.29	221.75	222.37	222.1	221.2
	5.9	4.3	3.6	1.31	1.85	1.23	1.5	5.4
	40	30	22		20 Gut	20 cb	30	56
0+11 opposite EC Curb Ret.						224.32	224.96	
						2.28	1.64	
						20 Gut	20 cb	
0+00 West Line Rancho (Levels on Line ℙ ℄ Rancho)	222.7	223.8	224.6	225.32	224.60	225.23	225.1	224.1
	3.9	2.8	2.0	1.28	2.00	1.37	1.5	2.5
	50	+31±	25	Edge Pav.	+22 Gut	22 cb	+31±	50
℄ Curb Return						224.72	225.35	
						1.28	1.25	
						Gut	cb	
West Curb Line Rancho	222.2	223.8	224.9	225.62	225.06	224.65	225.30	222.69	223.28
	3.4	2.8	1.7	0.98	1.54	1.95	1.30	3.91	3.32
	48	31±	23	Edge Pav.	±21	35± EC Gut	35± cb	100 Gut	100 cb
℄ Rancho Drive	223.5	224.3		225.08	225.39	225.28	224.80	223.45
	3.1	2.3		0.92	1.21	1.32	1.80	3.15
	48	+31±		Edge Pav.	± 21 cb Line	+31± P.L.	50	100

Set Hub & Disc N.W. Cor Rancho & Winchester replaced N.E. Cor. Hub no tack (Hub had been disturbed) with Hub & Disc FROM Hub & C.T. N.W. Corner Sea Breeze & Winchester AND Hub & C.T. N.E. Corner Reo & Winchester

BM 8.64 226.60 ✓ 217.96 NW BP

Winchester & Reo 226.60 ✓

Cont'd From Page 59

Station	Remarks	Lt	℄	Rt
2+40⁰	B.C. Set Hub, ℄ Disc North Line	213.8 (12.8; 50); 213.8 (12.8; 30)	213.86 (12.74; Pav Edge)	214.17 (12.43; 20 Gut); 214.79 (11.81; 20 Cb); 214.3 (12.3; 30); 214.0 (12.6; 50)
2+00		214.2 (12.4; 50); 214.1 (12.5; 30)	214.00 (12.60; Pav Edge)	214.10 (12.50; 20 Gut); 214.70 (11.90; 20 Cb); 214.5 (12.1; 30); 214.4 (12.2; 50)
1+88⁵	Lt ℄ Single Garage	214.38 (12.22; 34¹ Floor); 213.87 (12.73; 29² Apron)		
1+45		215.3 (11.3; 50); 215.8 (10.8; 30)	216.08 (10.52; Edge Pav.)	215.71 (10.89; 20 Gut); 216.32 (10.28; 20 Cb.); 217.6 (9.0; 30); 218.3 (8.3; 35); 218.6 (8.0; 50)
1+36⁵	23⁵ Lt to Center P.Pole # JP 89537			
1+35		215.6 (11.0; 63); 218.3 (8.3; 30); 219.0 (7.6; 27)	216.61 (9.99; Pav Edge)	216.22 (10.38; 20 Gut); 216.82 (9.78; 20 Cb); 217.9 (8.7; 30); 218.7 (7.9; 50)
1+00		220.4 (6.2; 50); 220.5 (6.1; 30); 220.5 (6.1; 20)	218.87 (7.73; Edge Pav.)	218.50 (8.10; 20 Gut); 219.11 (7.49; 20 Cb); 219.3 (7.3; 30); 219.4 (7.2; 50)
0+53³	℄ 6² Conc. Drive	220.81 (5.79; 49 Floor); 220.64 (5.96; 41 BRK); 221.82 (4.78; 34 BRK); 222.61 (3.99; 25⁵ Edge)		

226.60 ⩚

226.60 ⩚ ✓

Cont'd From Page 60

	Lt		℄				Rt	
East Curb Line Reo (No Curb to South)	214.30	215.18	215.76	216.04	216.18	216.75	218.09	218.72
	12.30	11.42	10.84	10.56	10.42	9.85	8.51	7.8[illegible]
	70	±31.5	Pav. Edge	20.8	26.1 Gut	26.1 Cb	100 Gut	100 Cb
2+86.2 E. Line Reo Drive	214.7	215.3	215.41	215.84	216.46	216.9		
	11.9	11.3	11.19	10.76	10.14	9.7		
	50	±31.5	Pave Edge	20.8 Gut	20.8 Cb	±31.5		

226.60 HI

226.60 HI

Storm Drain Survey — Paradise Hills
Winchester, Rea. Dr. & Roanoke

See Page 29

1+63.5 W. Edge Pav.

1+48.5 E. Edge Pav.

49.08' to N.E. Cor. Hub
1+43.57 Set Hub E. Line Rea. L.T. = 18°57'30"

1+00

0+50

0+00 = 5+85.40 Fd. Hub & CT
Δ to Fd Stub Sta. 1+30.28

226.60 ft ✓

From Page 61

2+
215.87
10.73
215.35
11.25
215.11
11.49
213.8
12.8
213.0
12.6
212.5
9.1

Cont'd From Page 62

					Lt	℄	Rt
4+00						209.9	
					7.0	7.02	209.91
						℄ Pav. Edge	
3+50						211.6	
					5.3	5.31	211.62
						℄ Pav. Edge	
3+00						212.9	
					7.0	3.70	213.23
						℄ Pav. Edge	
2+50						214.6	
					2.4	2.01	214.92
						℄ Pav. Edge	
2+00						216.5	
					0.4	0.32	216.61
						℄ Pav. Edge	
TP	0.25	216.93 ℄	9.92	216.68		216.93 ℄	
						216.7	
1+91.12	Set Hub & Tack 2' East of East Edge of West Pav Strip					9.9	
	L. Lt = ~~89°55'00"~~ 90°55'00" CRL						
	226.60 ℄					226.60 ℄	

Cont'd From Page 63

Lt	℄	Rt
	202.8	
	14.1	
206.0	206.0	203.1
10.9 / 10	10.9	13.8 / 10
	207.3	
	9.6	
	207.18	
	9.75	
	207.40	
	9.53	
	207.4	
	9.5	
208.3		208.35
	8.6	8.58
	1	2 Par. Edge
216.93		216.93

5+45

5+25

5+00

4+97.1 W. Edge of W. Strip

4+82.1 E. Edge of W. Strip

~~L. Rt. = 90° 00' 00"~~

4+80.13 Set Hub & Disc On North Line Roanoke produced From Hub & CT N.W. Cor. Seabreeze & Roanoke thru Hub & CT N.E. Cor. Rec & Roanoke. 51.25' to Hub N.E. Cor. Roanoke & Rec
109° 52' 00" = L. From N. Line Roanoke to our line

4+50

216.93

Cont'd From Page 64

				Lt		Rt
7+00				195.3		191.8
				9.5		13.0 / 6
6+80				193.0		
				11.8		
6+50				195.9		198.5
				8.9		6.3 / 10
6+30				200.3		200.3
				4.5		4.5 / 10
6+20.96 Set Hub & Disc L.Lt = 73°00'00" into Ravine				200.8		
				4.0		
6+00				201.1		198.7
				3.7		6.1 / 10
T.P.	0.64	204.80 ✓	12.81	204.12 ✓		
		Z 16.93 ✓				

201.2 / 3.6 / 10

Z 204.80 ✓

Cont'd From Page 65

				Lt	℄	Rt
Check		1.25	217.99 ✓ = 217.96 ✓			
T.P.	14.45	219.24 ✓ 0.01	204.79 ✓			
7+62.05 Set Stub & Nail	Ravine L. Rt Approx 32°			194.2 10.6 10	189.2 15.6	192.0 12.8 10
7+40					189.4 15.4	
	204.80 ⊼ ✓				204.80 ⊼ ✓	

Roberts
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11-29-51
W.O. 20937

Survey to Extend Storm Drain
Block 5, Frary Hts

See FB 1692 Page 36.

67

					Lt	℄	Rt
					274.3	270.3	271.6
0+75					7.3	11.3	10.0
					10		10
					270.9	272.00	271.0	272.0
0+50					10.7	9.6	10.6	9.6
					10		5	5
					273.6	272.0	273.0
0+25					8.0	9.6	8.6
					10		10
						272.34	
0+00	End Existing 42" Conc. Pipe					9.26	
						INVERT	
T.P.	0.59	281.60 ✓	12.76	281.01 ✓		281.60 ✓	
T.P.	0.49	293.77 ✓	12.98	293.28 ✓			
T.P.	0.11	306.26 ✓	9.85	306.15 ✓			
	(Just Produced Line of Existing 42" Storm Drain See page 36 FB 1692)						
T.P.	1.23	316.00 ✓	11.61	314.77 ✓			
BM	7.40	326.38 ✓		318.98 NW BP	31" ℄ Thorn		

Contd From Page 67

check			3.18	318.97 = 318.98
T.P.	11.45	322.15	0.05	310.70
T.P.	13.02	310.75	0.66	297.73
TP	12.88	298.39	0.52	285.51
T.P.	12.62	286.03	0.29	273.41
			13.77	259.93 INVERT
T.P.	1.12	273.70	11.26	272.58
T.P.	1.73	283.84	12.66	282.11
T.P.	8.16	294.77	0.18	286.61
T.P.	12.24	286.79	1.31	274.55
			12.54	263.32 INVERT
TP	3.94	275.86	9.85	271.92
T.P.	0.76	281.77	0.59	281.01

1+00 Eucalyptus Tree on ℄

281.60 ℄

Lt ℄ Rt

Reduced by ORL 12-19-61

Starting BM

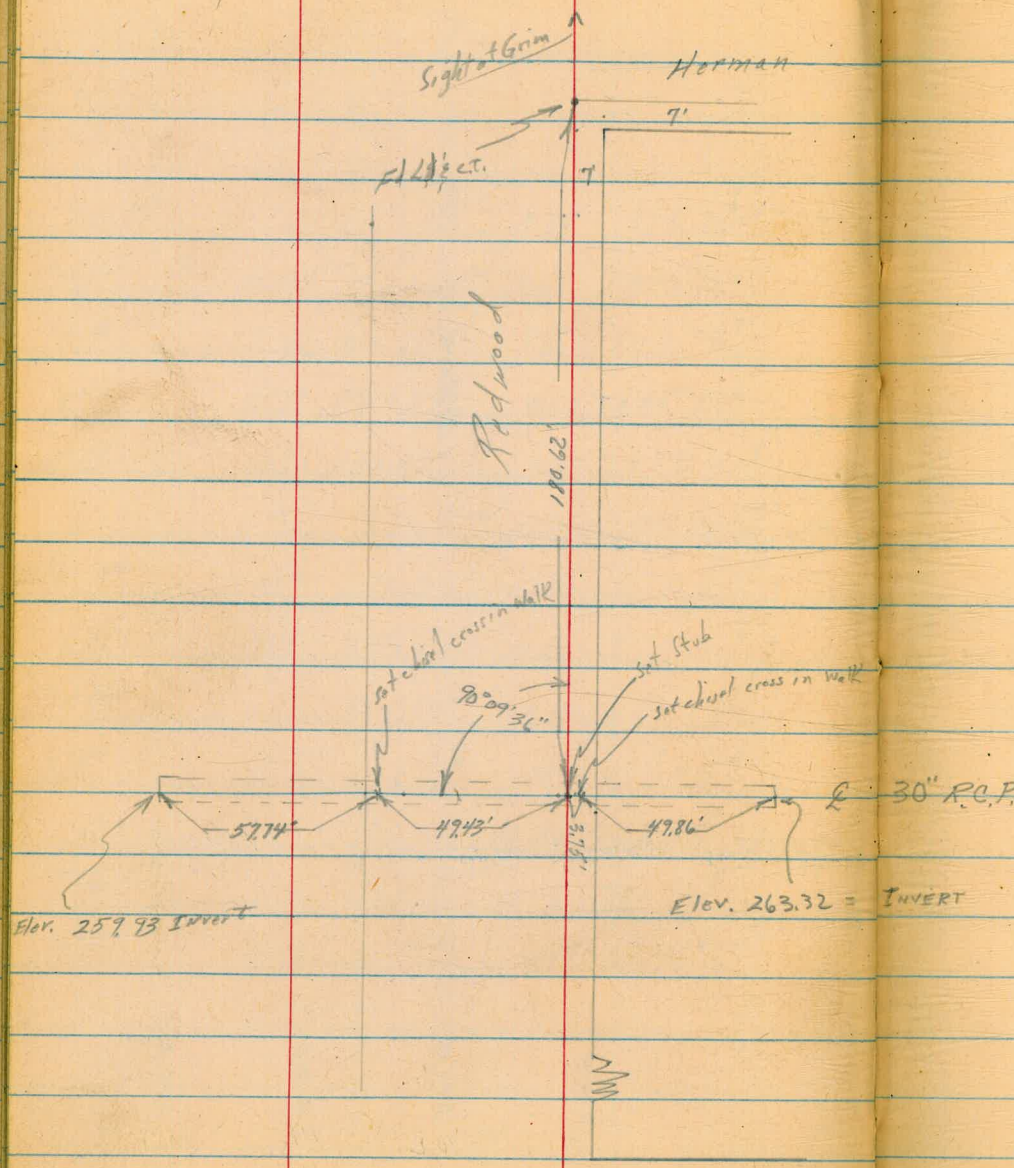
Sly End Culvert under Redwood

Nly End Culvert under Redwood See Next Page

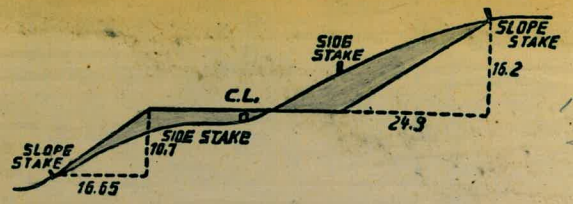
274.9	271.4	270.0	270.9
6.7 / 10	10.2	11.6 / 10	10.7 / 20

281.60 ℄

Cont'd From Page 68



32 nd
11



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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