

1144

DIETZGEN  
 TRADE MARK

---

ENGINEERS'  
FIELD BOOK

No. 404

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EUGENE DIETZGEN CO.

DRAWING MATERIALS, MATHEMATICAL and SURVEYING INSTRUMENTS

Chicago New York San Francisco New Orleans Pittsburg Toronto

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

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

Example—If point is 22.8 ft. above grade, how far should it be from center line to be a slope stake point? Ans. from Table 30.6. For same slopes but other widths of roadbed, correct above figures by one-half difference in width of roadbed; thus in example above, for 20 ft. roadbed distance will be  $30.6 + (20 - 16) \div 2$  or 2 ft. added to 30.6 = 32.6. For slopes of 1 on 1 1/2 see inside of back cover.

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Dietzgen Co.

1144



Series Levels B Alley  
Between Sapphire and Turquoise  
From E. Faugel to E. Allison

186.99 & Ford Form 1143 Page 24

TP	269	174.56	13.12	171.87
29+29.5	E. Faugel		10.1	164.5
29+00			11.1	163.5
+90			11.0	163.6
+85			11.1	163.0
+50			12.9	161.7
TP	0.71	161.92	12.85	161.71
28+00			1.7	160.2
+50			3.0	158.9
27+00			4.8	157.1
+50			6.3	155.6
26+00			7.9	154.0
+50			10.0	151.9
+20			10.8	151.1
25+00			11.9	150.0
TP	1.31	150.98	12.75	149.17
+50			1.8	148.7
24+00			3.3	147.2
+49.5	E. Everts		4.8	145.7
23+00			6.5	144.0
+50			8.7	141.8
22+0			10.3	140.2
+50			11.8	138.7
21+00			13.2	137.3
TP	1.52	139.19	12.81	137.67

on Top  
21+00

139.19

20+50			3.4	135.8
20+00			4.1	135.1
+50			5.0	134.2
19+00			6.0	133.2
+50			5.6	133.6
18+00			5.6	133.6
+69.5	E. Everts		6.9	133.2
+50			5.8	133.3
+45			6.6	132.6
+40			6.1	133.1
17+00			6.0	133.2
+50			5.2	134.0
16+00			5.2	133.8
TP	2.71	136.99	4.61	132.55
+50			3.1	133.7
15+00			3.3	133.5
+30			4.4	132.4
14+00			3.8	133.0
+60			2.7	134.1
+50			3.4	133.4
+40			2.7	133.9
13+00			3.8	133.0
+50			5.2	131.6
+10			6.6	130.2
+26			7.4	129.4

09.50  
11.00

7.50  
1.00

7.50  
1.00

12-9-25



		126.79		
12100			7.4	129.4
+89.5	to Cass Topwing		7.43	129.86
+76			8.3	128.5
+65			7.1	129.4
+50			8.9	127.9
11+00			9.2	127.6
+50			10.5	126.3
10+00			11.6	125.2
TP	205	126.09	12.75	124.04
+50			2.9	123.2
+15			3.6	122.5
+18			3.2	122.9
9+00			3.3	122.8
+70			3.8	122.3
+65			4.4	121.7
+45			4.8	121.3
+43			4.1	122.0
8+00			4.2	121.9
+50.7	to Bayard		5.2	120.9
+38			6.1	120.0
+30			6.5	120.6
7+00			6.6	119.5
+50			7.2	118.9
6+00			8.8	117.3
+50			9.9	116.2

1195 Feed  
Chicken House

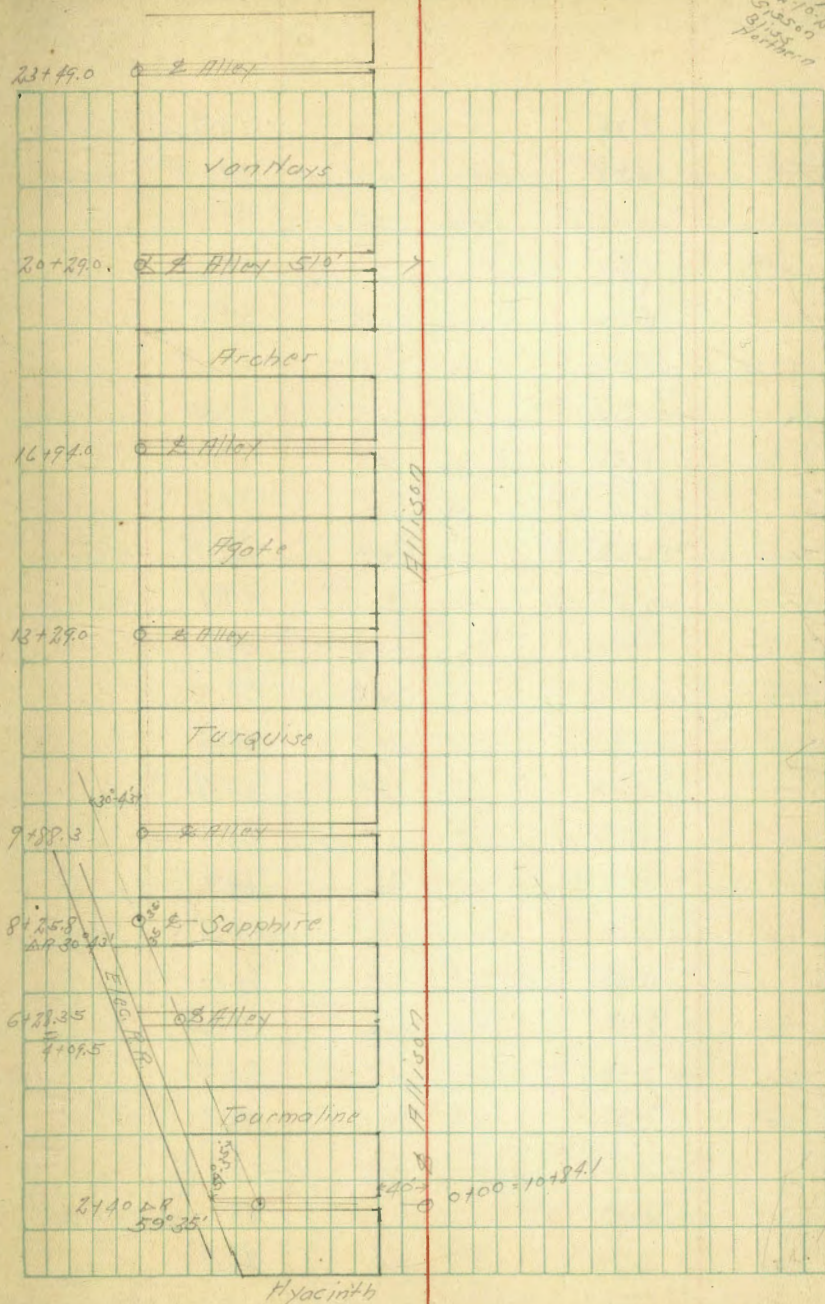
6737 Feed  
Chicken House

		126.09		
5+00			11.3	114.8
TP	1155	114.80	12.84	113.25
+50			1.8	113.0
4+00			2.4	112.4
+50			3.2	111.6
3+00			3.9	110.9
+50			4.6	110.2
2+00			5.6	109.2
+50			7.4	107.4
1+00			8.6	106.2
+66			9.6	105.2
+41			10.6	104.2
+20			13.7	100.9
TP	409	107.45	11.39	103.41
0+00	to Hillis		11.65	95.80
	17+52			95.25



Server Levels to Alley Between Tourmaline & Hyacinth  
 From E. Allison 240' west Then North & west to Allison  
 To E. Alley North Van Hays

BM	0.37	95.20	94.83	520' stat 14+20' E Allison Alley Set. To corner of Bldg. Support	
TP	3.47	8717	11.50	53.70 ✓	
0+0	E. Allison And Alley Between = 10+84' Tourmaline & Hyacinth		3.47	83.70	on slab
+45			7.9	79.3	
+54			7.4	79.8	
+85			8.3	78.9	
1+00			7.2	80.0	
+17			10.9	76.3	
+60			10.7	76.5	
2+00			9.1	78.1	
+40	AP 59°35'		8.91	78.26	on slab
+55			9.0	78.2	
+67			7.3	79.9	
+90			7.7	79.5	
3+00			8.5	78.7	
+13			10.8	76.4	
+25			12.2	75.0	
+45			12.8	74.4	
+55			12.0	75.2	
185			6.7	80.5	
4+00			6.0	81.2	
+50			5.0	82.2	
5+00			3.9	83.3	
+50			3.8	84.0	
+75			3.0	84.2	





		87.17			
5+80			2.5	83.7	
TP	0.32	74.48 ✓	13.01	74.16 ✓	on Top Sta. 610
6+00			0.8	73.7	
+10			6.3	68.2	
+20			10.0	64.5	
+28.35	2 Alley		11.94	62.54	on stub
+31			12.5	62.0	
+34			14.5	60.0	
+38			14.1	60.1	
+56			14.9	60.1	on Ground McClure's Hill
+78			19.6	54.9	Bottom 60.04
+85			15.0	59.5	
+93			14.1	59.9	
7+00			14.1	59.9	
+73			12.7	61.8	
+42			6.4	67.1	
+50			5.4	69.1	
+66			4.2	70.3	
TP	11.84	85.58 ✓	0.76	73.72 ✓	
+70			10.4	75.2	
+83			8.8	76.8	
8+00			2.1	83.5	
TP	11.80	96.68 ✓	0.70	84.88 ✓	
+85.8	29.30+13		10.57	86.11	on stub
+50			9.8	86.9	

4

		96.68			
9+00			8.7	88.0	
+50			7.7	89.0	
+88.3	2 Alley		7.18	89.50 ✓	on stub
10+00			7.0	89.7	
+50			6.0	90.7	
11+00			4.4	92.3	
+18			3.1	93.6	
+24			3.8	92.8	
+30			8.8	87.9	
+45	2. Forgeuse		8.55	88.13	Top Pairing
+67			9.0	87.7	
+73			2.3	94.4	
12+00			2.1	94.6	
30 ft			2.16	94.52	on Conc. Mon H. Turquist
+50			1.5	95.2	
13+00			1.6	95.1	
TP	+89.2 21/10 1154	106.99 ✓	1.23	95.45 ✓	on stub
+50			11.0	96.0	
14+00			10.4	96.6	
+50			9.9	97.1	
15+00			8.0	99.0	
+0.5			8.5	98.5	
+20			7.5	99.5	
+38			7.9	99.1	
+50			7.0	99.8	



		106.99			
15+80			5.2	101.8	
+81			5.1	101.4	
+87			8.7	98.3	
+90			9.5	97.5	
+93			8.1	98.6	
16+00			5.9	101.1	
+50			1.1	102.6	
+75			3.8	103.2	
+94.0	E Alley		2.59	104.42	on stub
17+00			2.3	104.7	
TP	10.99	117.51 ✓	0.47	106.52 ✓	
+50			10.3	107.2	
18+00			8.3	109.2	
+50			7.0	110.5	
+60			6.0	111.5	
+75			6.6	110.9	
+80			5.8	111.7	
19+00			6.2	111.3	
+18			5.6	111.9	
+22			6.1	111.4	
+37			5.6	111.9	
+50			4.7	112.8	
20+00			2.6	114.9	
+29.0	E Alley		1.29	116.22	on stub
TP	11.28	128.39 ✓	0.40	117.11 ✓	

		128.39			
20+50			11.2	117.2	
21+00			9.0	119.4	
+50			6.8	121.6	
22+00			5.0	123.4	
+15			3.9	124.5	
+50			2.6	125.8	
23+00			1.7	126.7	
+2.0			1.8	126.6	
+2.5			1.1	127.3	
TP	3.81	131.45 ✓	0.75	129.14 ✓	
+49.0	E Alley		3.30	129.15	on stub



SEWER Levels & Flows  
Between Forquise and Sorboth  
From S. Allison to 51st West

BN	8.52	98.02		89.50	on 5/ab 71PP3
0+00	= 51st & Allison = 91.83		8.52	89.50	
+50			7.1	90.9	
+100			5.3	92.7	
+150			3.4	94.6	
+185			2.7	95.3	
+191			2.9	94.1	
2+00			7.4	90.6	
+10			11.0	87.0	
+15			26.3	71.7	
+25			26.5	71.5	
+35			24.6	73.4	
+50			23.0	75.0	
+57			19.8	78.2	
+85			3.3	94.7	
+95			0.6	97.4	
3+00			0.1	97.6	
TP	8.90	106.44	0.48	97.54	
+10			9.6	96.8	
+45			9.8	97.2	
+50			10.3	96.1	
+62			14.2	92.2	
+76			16.8	89.6	
+90			18.2	88.2	
+95			18.0	88.4	

106.44

4+00	16.0	90.4	
+08	14.8	91.6	
+35	3.9	102.5	
+50	3.0	103.4	
+71	2.4	104.0	
+95	2.8	97.6	
5+00	10.5	95.9	
+10	S. Allison = 17.52	95.80	on 4/ab



Section Levels & Alky  
 Between Sapphire and Tourmaline  
 From E. Allison to 4095 West

B.M.	110	9593 ✓	9483	on stub 14+201 E. Allison
0+00	111.500		94.83	on stub
-150			94.3	
2+00			93.2	
+50			92.0	
2+100			90.1	
+50			89.6	
3+00			87.0	
+33			86.2	
TP	0.44	83.42 ✓	82.98 ✓	
TP	0.80	78.42 ✓	77.62 ✓	
+76			69.2	
4+00			64.0	
+09.5 - 6+28.35			62.57	on stub



Server Levels 2 Alley  
Between Archer and Van Nuys  
From S. N. & Allison To

BM	1198	128.70		116.22	on stud 201296 Alley
0+00	-20+27		1198	116.22	
+50			111	117.1	
1+00			9.5	118.7	
+50			8.4	119.8	
2+00			5.2	123.0	
+18			4.5	123.7	
+19			6.5	121.7	
+25			6.6	121.6	
+30			4.1	124.1	
+60			3.7	124.5	
3+00			2.1	126.1	
TP	1171	139.62	0.29	127.91	
+50			11.3	128.3	
4+00			9.1	130.5	
+50			9.1	132.6	
5+00			5.6	134.0	
+10	S. Allison = 22+927		5.8	134.44	on stud
+50			3.8	135.8	
6+00			2.9	136.7	100% R 26
+50			2.6	137.0	
7+00			2.2	137.4	
+50			1.2	138.4	
TP	1271	151.55	0.28	139.34	
+78			1.20	134.6	

12/18/75  
6

7+87				13.8	137.8	
+85				11.9	139.6	
8+00				12.3	139.2	
+50				11.2	140.3	
9+00				9.0	142.5	
+50				7.3	144.2	
10+00				5.4	146.1	100% R 10.5
+50				2.9	149.5	
11+00				1.9	150.5	
TP	874	159.89		0.40	151.15	
+50				8.2	151.7	
12+00				7.1	152.8	
+13				6.7	153.2	
+20				11.6	148.3	
+25				12.2	147.7	
+30				13.8	146.1	
+35				11.3	148.6	
+39				9.1	150.8	
+40				5.4	152.5	
13+00				3.8	156.1	100% R 9.5
+50				2.9	157.0	
14+00				2.8	157.1	
+50				1.9	158.0	
15+00				0.8	159.1	
TP	1288	172.23		0.54	159.35	



Senior Levels Bailey  
North Van Nays From 510th & Allison to 99th & Cass

9

Station	Grade	17223	17223	17223
15+50			10.9	161.3
16+00			9.7	162.5
+2.5			9.7	162.5
+4.5			11.3	160.9
+4.7			12.5	159.7
+5.5			13.1	159.1
+6.5			12.4	159.8
+7.8			13.3	158.9
+8.0			10.1	162.1
+8.8			4.7	167.5
+9.5 E. Cass			1.4	170.8
TP	12.90	184.66 ✓	0.97	171.76 ✓
17+5.5			11.1	173.6
18+0.0			10.7	174.0
+2.0			10.8	173.9
+3.5			9.7	175.0
+5.0			9.7	175.0
19+0.0			9.9	174.8
+5.0			9.5	175.2
+8.5			10.0	174.7
20+0.0			9.0	175.7
+4.5			6.9	177.8
BM			7.32	177.34
TP	9.59	198.65 ✓	0.60	184.06 ✓
21+0.0 End			2.7	191.0

Toe Slope  
Rock in Foundation  
House SE of

Station	Grade	193.65	193.65	193.65
TP	6.60	198.24	1.71	191.24
16+0.0 - 99th & Cass			3.2	195.3
+5.0			11.7	186.8
TP	0.90	186.28	13.00	185.28
15+0.0			5.2	180.5
+6.5			9.5	176.2
+5.0			9.5	176.8
14+0.0			10.9	175.4
BM			10.77	175.51
+5.8			10.4	175.9
+5.2			15.4	170.9
+4.5			10.5	175.8
+4.2			9.7	176.6
13+0.0			10.8	175.5
+5.0			11.6	174.7
TP	0.92	174.21	12.19	173.29
12+0.0			1.6	173.1
+5.0			4.3	170.4
11+0.0			7.4	167.3
+5.0			10.2	164.5
10+0.0			12.9	161.8
TP	0.17	162.3	12.75	162.0
+5.0			5.1	157.0
9+0.0			7.9	154.2
+5.0			8.5	153.6

Toe Slope

on S Property  
13+00

on Top of 11+00



Server Levels & Sapphire St.  
From S Sapphire to 221 West

10

		162.03		
8+00			7.0	155.1
+50			6.3	153.8
7+00			5.7	156.4
+50			5.9	156.2
6+00			7.7	154.9
+50			8.8	153.3
+10	§ Allison		10.31	157.82 on slab
5+00			10.8	151.3
+50			12.7	149.4
TP	o.i.o.	149.32 <sup>4</sup>	12.81	149.32
4+00			2.8	146.5
+73			4.5	144.9
+49			10.0	139.4
+47			11.8	137.6
+40			12.8	136.6
+35			12.4	137.0
+30			7.5	141.9
3+00			7.2	142.2
+50			8.3	141.1
2+00			11.8	137.6
+50			12.9	136.5
TP	133	132.68	12.57	132.65
1+00			5.6	132.6
+50			8.0	130.2
0+0	221.49 - 510' N 221.150		10.01	128.17 on slab

128.15

		10.28	105.07		94.83	on slab 1970.2 Allison Sapphire St Sapphire St
8+00	- Allison			51	100.0	
+50				5.8	99.3	
1+00				6.8	98.3	
+50				8.2	96.9	
2+00				9.7	95.4	
+71				10.7	94.3	Edge



Server Levels & Files  
Between Sapphire and Turquoise  
From 5100 B Allison to 446 Y B Allison

BM	3.66	93.16	89.50	0.0 stub 94.88.3
0700		8.66	89.50	
+50		4.9	88.3	
1100		6.2	87.0	
+27		6.4	86.8	
736		11.4	81.8	

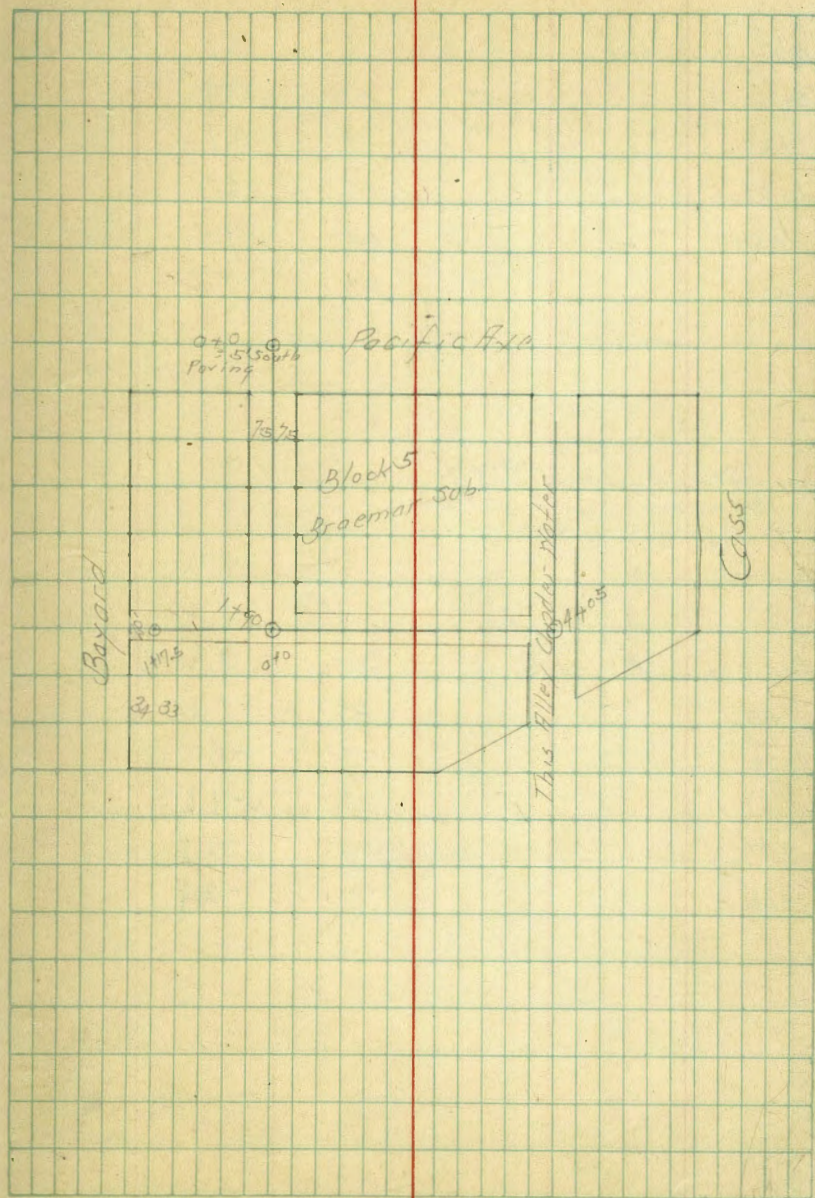


Server Levels & AMY  
Block 5 Braemar Sub

BM	1.51	6.13	4.6	SE Top Hyd Ref. at Spout
0+0 = 56 S. Pacific	5.38	0.75	on stub	
+0.5	4.0	2.1		
+50	4.3	1.8		
1+00	4.4	1.7		
+150	4.6	1.5		
+90 A. E. N. Alley	4.98	1.15	on stub	
2+00	5.0	1.1		
+150	5.9	0.2		
3+00	7.1	-0.0		
+18	6.8	-0.7		
+25 Edge Water	8.2	-2.1		

East N. Alley N. H. S. Alley  
6.13

0+0 = 1490	4.98	1.15
+25	5.1	1.0
+50	4.2	1.9
+75	4.7	1.4
1+00	4.2	1.9
+17.5 = Opp. Lot 33434	4.3	1.8





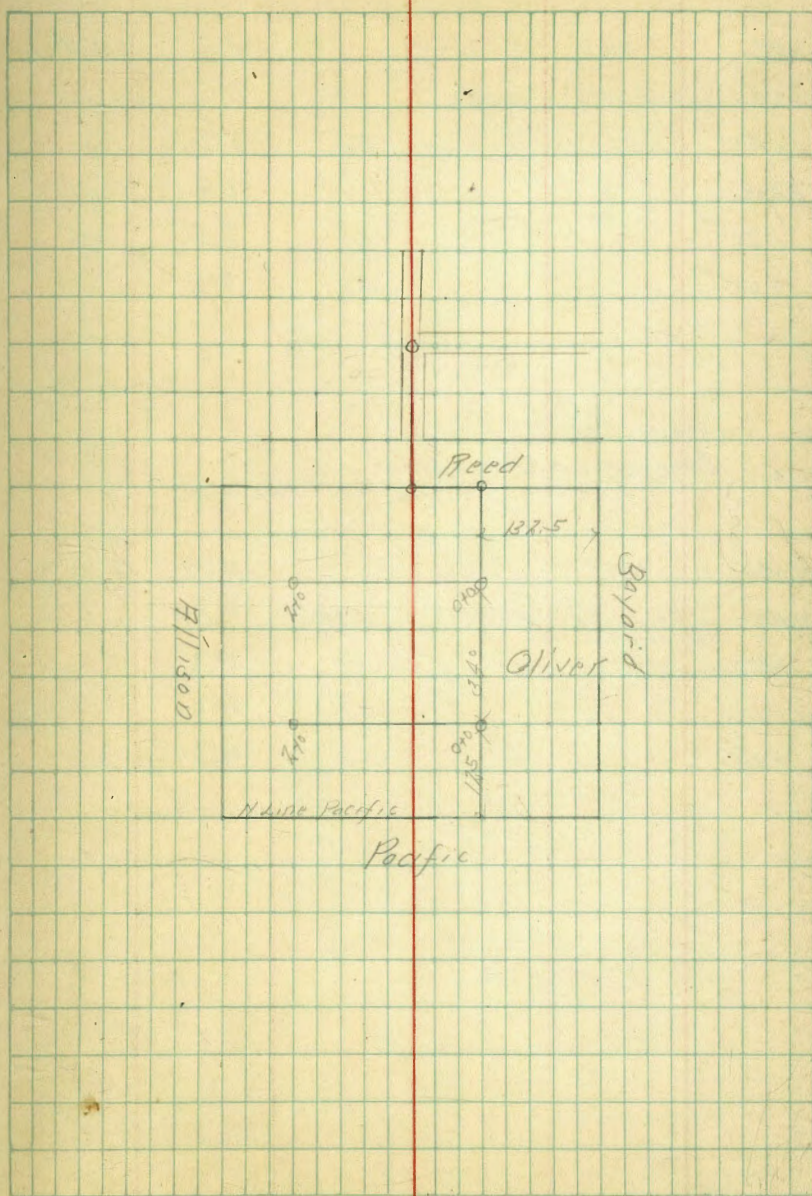
Sewer Levels & Flies  
Between Pacific and Oliver  
West Bayard

BM	0.33	4.95	4.62
0+00 =		1.0	0.9
+50		4.8	0.1
1+00		5.6	-0.7
+50		6.4	-1.5
2+00		6.9	-1.8

SE Tapped  
Pacific & Oliver

Sewer Levels & Flies  
Between Oliver and Reed  
West Bayard

	4.95		
0+00 =		3.7	1.2
+50		4.8	0.1
1+00		5.7	-0.8
+45		6.5	-1.6
+50		7.0	-2.1
2+00		7.8	-2.9





Senior Level 8, Alley

Between Reed and Thomas

From 2 NYS Alley West Allison to 135' East

BM	4.47	7.64	3.17
0+00 = 10+127 Western Interceptor	4.47		3.17
+50	5.4		2.2
1+00	6.1		1.5
+80	6.1		1.5
+35	5.4		2.2

095406  
10+127  
Western Interceptor

Senior Level 9, Alley

Between Thomas and Grand

From 2 NYS Alley West Allison to 135' East

BM	4.99	9.166	4.67
0+00 = 14+189 2 NYS Alley on Western Interceptor	4.99		4.67
+50	5.4		4.3
1+00	5.6		4.1
+35	5.4		4.3

095406  
14+189  
Western Interceptor



Cross Section Alley Block 6 Frary Hgts  
 Between Herman and 31st St.  
 From S.L.T. born to H.L. Red Wood

15' wide

BM	1294	370.20	307.21	SE TOP Hgts Thoro 432
TP	839	377.71	0.38	319.82
		0.10 - S.L.T. born		
E	Top Curb		5.95	
	Gutter Top Pavim		6.16	
Ø	" "		6.49	
	Gutter		6.49	
H	Top Curb		6.38	Wire Fence 1.7 in Alley
		10' S		
H			4.9	
+4			4.8	
+5			5.0	
Ø			4.9	
+4			4.8	
+6			4.4	
F			4.4	
		75' S		
F			4.9	
Ø			4.9	
+3			4.9	
+4			4.7	
H			4.8	Wire Fence 1.6 in Alley
		50' S		
H			5.3	
+3			5.2	
+5			5.4	

1.51 57  
 5.15 56  
 8.15 55  
 Northern

	377.81	
E		5.3
F		5.2
	75' S	
F		5.5
Ø		5.4
H		5.6
	160' S	
H		5.6
Ø		5.5
F		5.6
	117' S	
	-10.5 Garage Conc Floor	5.19
	-6.5 Conc Apron	6.08
E		6.1
Ø		6.0
H		5.8
	141' S	
	-6.7 Garage Dirt Floor	6.5
H		6.5
Ø		6.4
F		6.4
	175' S	
F		6.7
Ø		6.7
H		6.6

76' S Second Wire  
 Fence  
 No 10' in Alley  
 84' S 3rd W.L.  
 Garage Dirt Floor  
 5.1

108' S 1st W.L.  
 12' Eave  
 10' in Alley

154' S 500K  
 Garage Conc Floor  
 10.5 F.F.H.  
 6.49

194' S  
 12' W.L.  
 Garage Dirt Floor  
 7.0



	328.21	
	200's	
N	74	
E	73	
F	72	
	218's	
-7.5 Garage Conc Floor	749	
E	77	
E	77	
N	76	
	240's	
N	77	228's on N
E	79	N. End Bicken Moor 210' N. 1/8" Elev. Conc Floor
F	78	247's on N
1.5 Garage Dirt Floor	78	S. End Chickadee 0.6 in. Floor
	258's	
-2.5 Garage Dirt Floor	78	
E	78	279's on E
E	81	N. End Stone Hill 0.6 in. Floor
N	80	299's on E
	300's	S. End Stone Hill
N	91	
E	89	
7.2	87	
F	86	

	312's	
E	93	Fence 0.5 in. Floor
E	92	
N	93	
7.9 Garage	925	331's on E. N. H.
TR	0.43 318.66	998 312.83 980
	340's	
N	0.7	
E	0.6	
F	0.2	Fence 0.5 in. Floor
	357's	
-8 Garage Dirt Floor	0.9	
E	0.9	
E	0.9	
7.3	1.2	
N Conc Road	1.00	
7.5 Garage Conc Floor	1.03	
	375's	
N	1.5	
E	1.5	
7.3	1.3	
F	0.5	
	400's	
F	2.2	
E	2.3	
N	2.2	



		318.66	
		412'S	
-2	Garage	25	
N		26	
E		28	
F		29	420'S Garage 9.5 E E Lined 3.5
		450'S	
			451'S 0.5' End N. End Face 0.8' 10.8' 1/2'
F		47	
E		47	
N		45	
		475'S	
N		61	
E		62	
F		62	So. End Face 0.7' 10.5' 1/2'
		487'S	
-6	Garage Conc Floor	65.7	
F	Gas H. Floor	69.1	499'S Garage 7.8' 10.5' 1/2'
E		72	71
N		73	
		500'S	
N		78	
E		81	
+6		78	
F		75	
		517'	

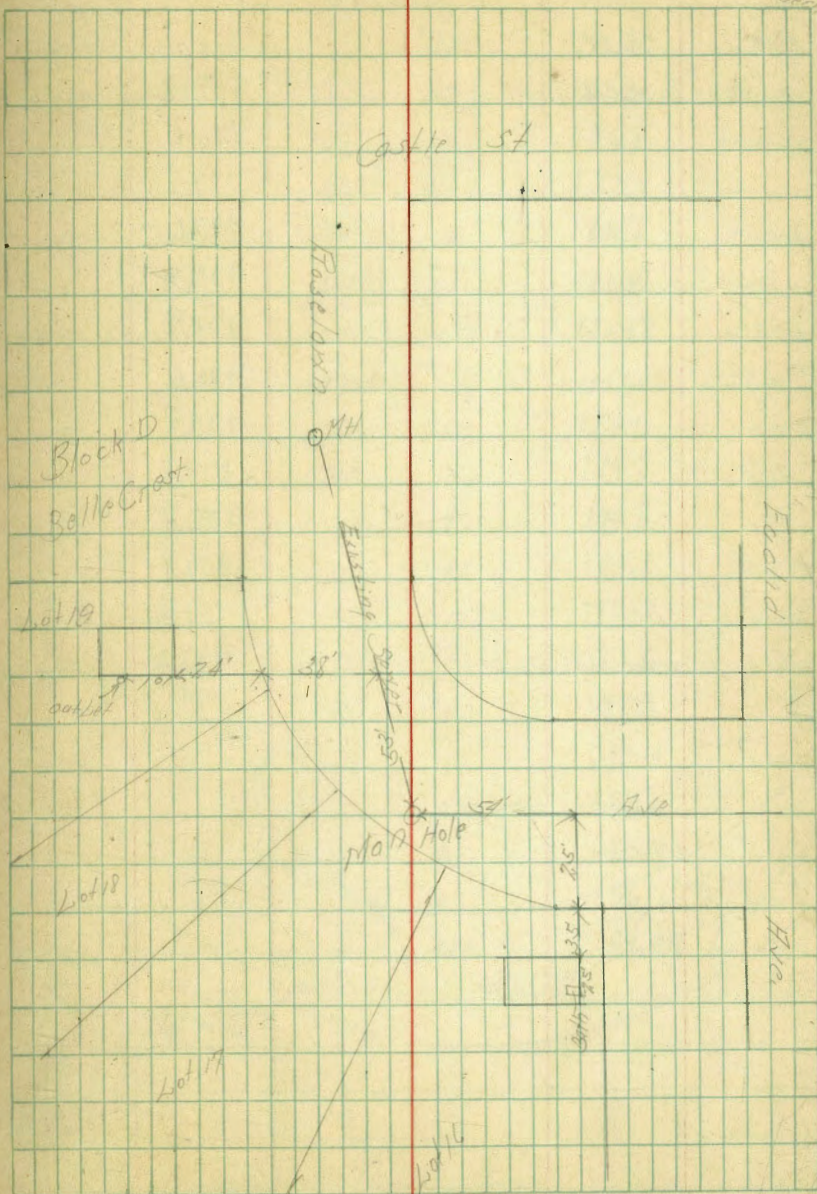
		318.66	
E		84	
N		84	
+4		9.3	
E		9.3	
N		9.3	
		485 Garage Conc Floor	9.14
TP	1.32	310.66	7.32
		550'S	309.34
N		29	
E		29	
F		27	
		575'S	
F		39	
+1		40	
+3		48	
E		47	
+5		48	
N		43	
		590'S	
N		63	
+3		72	
E		68	
+6		69	
F		46	
		598'S = 1/2 Redwood	
E Top Curb		9.06	
E		8.5	
N Top Curb		8.82	



Levels on House Floors  
Lots 16 and 19 Block D Belle Crest.

BM	7.36	342.37	340.01	Pipe 519 Foslarin & Castle
TP	4.81	338.15	9.03	333.34
Floor House Lot 19		4.60		333.55
Top Sid. on Out Lot Pipe		5.95		332.20
Ground at Pipe		8.1		330.0
Ground Front House		5.5		332.7
Top Man Hole		5.69		332.46
Flat Side M.H.		7.78		330.87
Floor House Lot 16		5.38		332.97
Ground Front House		6.90		331.3

18  
1-5-26  
515507  
Bliss  
Northern

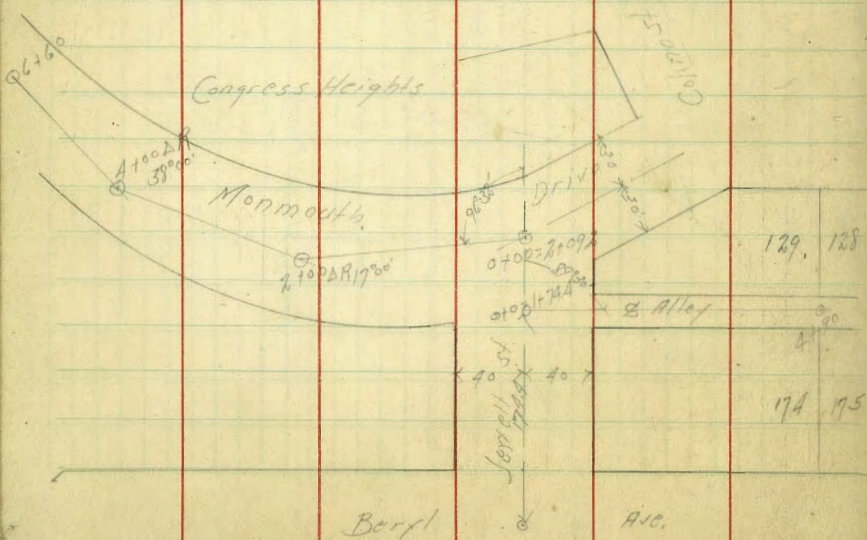




Section Levels 2, 7/1/14  
 Between Beryl Ave and Collingwood Dr  
 From S. Jewell to Opposite Lot 128+129

B.M.	11.28	188.66	177.18	1174+
0+00	14.744	S. Jewell	177.18	
+0.5			176.6	
+1.0			177.5	
+1.50			177.6	
+2.00			178.2	
+2.50			178.4	
+3.00			176.5	
+3.50			179.8	
+4.0			174.1	
+4.50			176.5	
+5.00			177.3	
+5.50			181.8	
+6.00	deposited	128+129	185.0	

2.23.26  
 Survey  
 Beryl  
 Highway  
 on stub



Section Levels Monmouth Drive  
 Congress Heights

		188.46 Bl. Ford		
2+00	2109.8	S. Jewell	8.14	180.32 on stub
+1.5		Monmouth Drive	6.2	182.3
+2.0			5.7	182.8
+2.5			5.7	182.8
+3.00			6.8	181.7
+3.50			7.1	181.4
2+100	Δ R 17° 00'		1.88	183.58 on stub
7P	13.05	199.79	1.70	186.71
+4.50			12.2	187.6
3+00			10.0	189.8
+4.20			9.3	190.5
+4.50			9.8	190.0
4+00	Δ R 58° 00'		13.23	186.56 on stub
+4.50			12.2	187.6
5+00			8.8	191.0
+4.25			6.4	193.4
+4.50			6.0	193.8
+4.70			3.9	195.9
6+00			3.6	196.2
+6.0			1.85	194.94 on stub

129, 128  
 174, 175



Topography La Playa And Segdolo St V

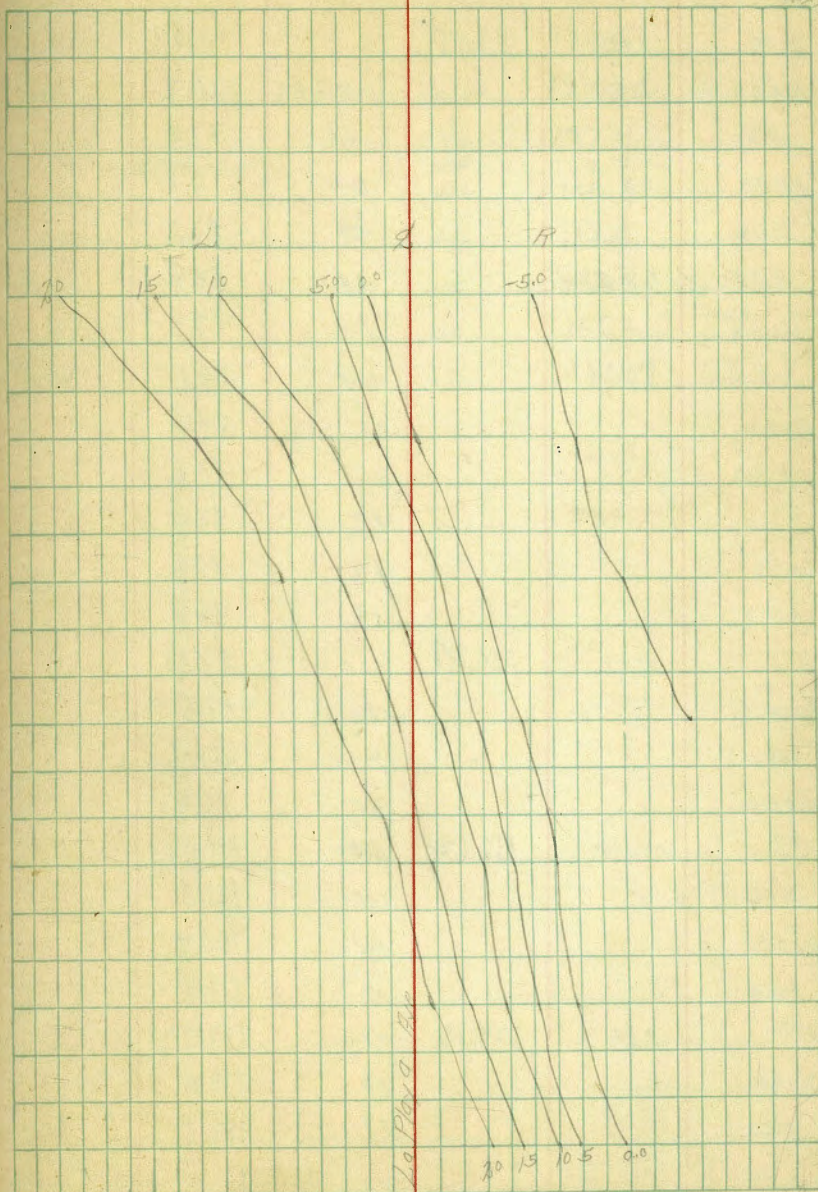
For Location See 1139 Page 108

Left

%

Right

2705	Δ (5277)	20.0 20.0	15.0 53.0	10.0 30.5	5.0 10.0	0.0 8.0	-5.0 27.0
2795		20.2 15.0	20.0 45.5	15.0 26.5	10.0 11.0	5.0 7.5	0.0 36.0
2785		20.4 47.0	20.0 27.5	15.0 15.0	10.0 6.0	5.0 6.5	0.0 14.5
2775		21.0 30.0	20.0 16.0	15.0 2.5	10.0 6.5	5.0 14.5	0.0 23.5
2765		21.4 20.0	20.0 2.0	15.0 2.0	10.0 15.0	5.0 21.5	0.0 30.5
2757		21.9 20.0	21.2 10.0	20.0 2.0	15.0 12.0	10.0 18.0	5.0 27.0
2740		21.8 15.0	21.6 2.0	20.0 15.5	15.0 23.2	10.0 30.7	5.0 38.0





Section Levels & Parallels

From E. Alley Behind 17 Diamond Emerald To 1040 North

on July 17, 1900  
2. One of the  
at 2.000000

B.M.	10.62	87.55		76.93
0+00			12.4	75.2
+50			10.5	77.1
1+00			8.5	79.1
+50			5.9	81.7
+75			4.4	83.2
+82			4.3	83.3
+85			3.5	84.1
2+00			3.2	84.4
+30			3.0	84.6
+60			3.7	83.9
3+00			3.7	83.9
+50			1.8	85.8
TP	12.97	100.48	0.04	87.51
4+00			12.0	89.5
+50			9.1	91.4
5+00			4.5	96.0
TP	12.55	112.62	0.41	100.07
+50			11.6	101.0
6+00			9.2	105.4
+50			1.1	111.5
TP	12.29	124.70	0.21	112.41
7+00			8.7	116.0
+50			4.8	119.9
+75			3.2	121.5

3-1-21  
Sisson  
Bliss  
Northwest

8+00			1.2	123.5
TP	10.85	135.21	0.34	124.136
+50			7.8	127.4
+75			5.5	129.7
9+00			4.3	130.9
+50			3.2	132.0
10+00			1.5	133.7
+40			0.0	135.2
B.M.			3.12	132.08

50' E Flank No.  
a. l. s. 124.26  
Hail's Post  
St. Car. House



Senior Levels E. Alley  
 Between Beryl and Millbar  
 From E. Everts to E. Lograbam

B.M.	9.66	113.87		104.21	107.16
0+0 = 28770 E. Everts			9.3	104.21	107.16
+50			8.3	105.6	
1+00			7.6	106.3	
+50			7.0	106.9	
2+00			5.8	108.1	
+50			5.0	108.9	
3+00			4.4	109.5	
+50			4.0	109.9	
4+00			2.8	111.1	
+50			1.0	112.9	
TP	11.95	124.59	1.23	112.64	
5+00			9.2	115.4	
+50			8.1	116.5	
+80			7.6	117.0	
6+00			7.6	117.0	
+50			6.8	117.8	
7+00			6.0	118.6	
+50			5.3	119.3	
8+00			4.4	120.2	
+50			3.9	120.7	
9+00			3.7	120.9	
+50			3.1	121.5	
10+00			3.1	121.5	
+50			3.1	121.5	

117 Prop 106  
 Everts + Alley  
 107-109/102

	124.59				
11+00			3.3	121.3	
+50			3.0	121.6	
+60			3.1	121.5	
12+00			3.4	121.2	
TP	5.15	127.40	3.34	122.25	
+50			5.7	121.7	
13+00			5.3	122.1	
+80			6.6	120.8	
+40			6.3	121.1	
+60			5.1	122.3	
14+00			5.0	122.4	
+50			4.5	122.9	
15+00			4.5	122.9	
+50			5.2	122.2	
16+00			4.7	122.7	
+50			4.5	122.9	
17+00			3.9	123.5	
+88			3.9	123.5	
+67			6.7	120.7	
+40			5.2	122.2	
+45			3.7	123.7	
18+00			2.6	125.2	
+50			0.5	126.9	
TP	11.52	138.81	0.16	127.88	
19+00			8.0	130.8	

3.15.26  
 3.15.26  
 3.15.26  
 3.15.26



Senior Lewis & FWH  
Between Milbur and Loring  
From E. Everts to E. Haines  
151.50

		138.81		
19+60			5.8	133.0
20+15			2.9	135.9
+75			1.6	137.2
21+00			1.4	137.4
TP	128.5	151.11 ✓	0.555	138.21 ✓
+50			1.28	138.3
22+00			8.6	142.5
+50			6.5	144.6
23+00			1.3	149.8
+20	\$ Ingham		0.3	150.8
TP	48.5	151.50 ✓	4.46	146.65 ✓

18+00			13.00	128.5
TP	2.20	141.99 ✓	12.41	139.09 ✓
+40	\$ Hoidal		5.7	136.3
17+00			6.5	135.5
+50			9.1	134.9
+20			6.4	135.6
+20			9.1	132.9
+12			6.0	136.0
16+00			6.6	135.4
+15			6.8	135.2
15+00			4.5	137.5
+85			4.6	137.4
+75			7.5	134.5
+60			7.9	134.1
+40			8.4	133.6
+32			4.5	137.5
14+00			3.6	138.4
+50			3.2	138.8
13+00			3.2	139.8
+50			3.3	138.7
12+00			4.2	137.8
+60			4.4	137.6
11+00			5.1	136.9
TP	0.22	138.14 ✓	4.07	137.22 ✓
+50			2.0	136.1



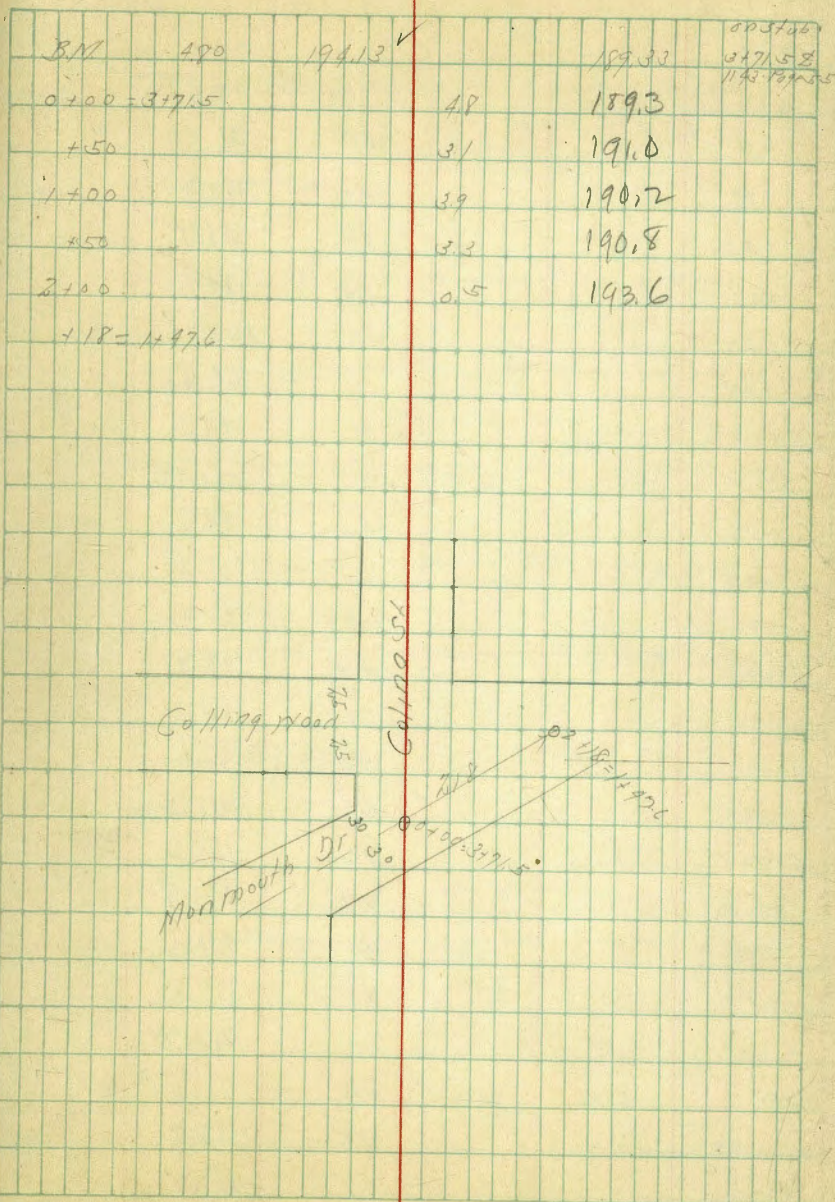
Sewer Levels Monmouth Dr + Callings wood Dr.  
Congress Heights

24  
3-15-26

13814

10+00			2.3	135.8
+50			2.4	135.5
9+00			2.8	135.3
+50			2.9	135.2
8+00			3.5	134.6
+70			4.4	133.7
+10			3.5	134.6
7+00			4.5	133.6
+50			6.0	132.1
6+00			6.7	131.4
+50			7.0	131.1
+50			7.8	130.3
5+00			9.2	128.9
+50			11.4	126.7
4+00			13.1	124.5
TP	0.83	126.30 <sup>✓</sup>	12.67	125.47 <sup>✓</sup>
+50			3.1	123.2
3+00			3.7	122.6
+50			4.1	122.2
2+00			5.2	121.1
+50			6.3	120.0
1+00			7.1	119.2
+50			7.9	118.4
0+00 = 73420 2.11111			9.5	116.8
TP	0.13	113.59 <sup>✓</sup>	18.81	113.46 <sup>✓</sup>
BM			9.38	104.21 <sup>✓</sup>

N21 P. 100 110



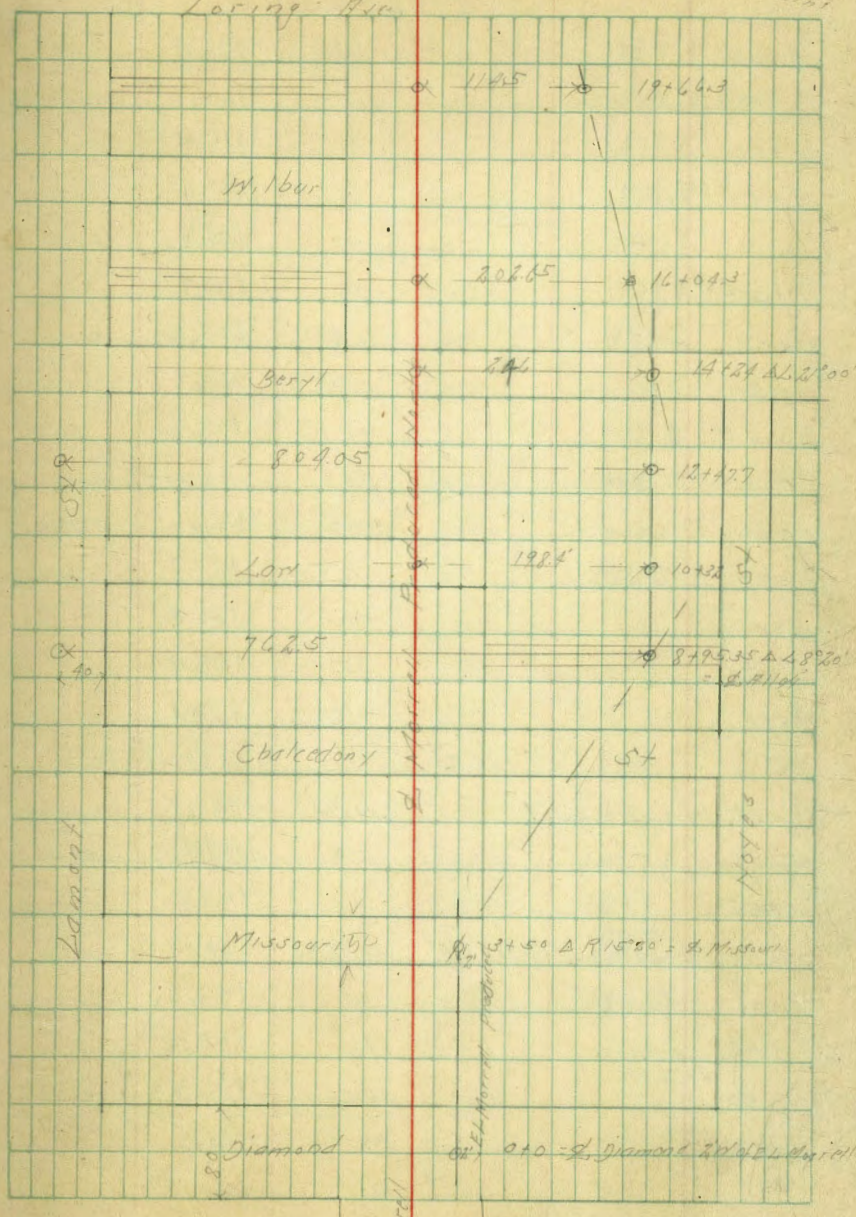


SOWER Levels  
 Between Lamont + Noyes  
 From S. Diamond to S. Alley N. of Wilbur

B.M.	10.65	101.69 ✓	91.04	S. Alley 3rd Emission Diamond S. Marcell
0+0	- S. Diamond SW of S. L. Marcell	6.20	95.5	
+21		5.0	96.7	
+32		4.0	97.7	
+50		3.0	98.7	
1+00		3.4	99.3	
+50		1.6	100.1	
+75		1.3	100.4	
2+00		2.7	99.0	
TP	11.67	113.19 ✓	0.17	101.52 ✓
+50			13.6	99.6
3+00			12.0	101.2
+50	Δ P 15.20		10.98	102.21 0.050
4+00			9.5	103.7
+50			8.0	105.2
5+00			7.2	106.0
+50			6.0	107.2
6+00			4.6	108.6
+50			3.7	109.5
+85			3.0	110.2
+95			2.0	112.2
7+00			1.0	112.2
TP	12.73	125.18 ✓	0.74	112.45 ✓
+50			1.65	112.7
8+00			11.6	113.6

25  
 417.76  
 5.500  
 91.5  
 10.69  
 101.69

Loring Hill



Marcell



		125.13		
8+50			10.2	115.0
+95.35	$\Delta \angle 8^{\circ} 20'$		991	115.27 ✓ on slab
9+00			98	115.4
+50			82	117.0
10+00			64	118.8
+50			46	120.6
11+00			3.2	122.0
+50			1.9	123.3
12+00			0.0	125.2
TP	13.10	137.89 ✓	0.39	124.79 ✓
+20			10.3	127.6
+50			9.0	128.9
13+00			7.0	130.9
+50			4.5	133.4
14+00			0.8	137.1
TP	11.70	149.40 ✓	0.17	137.70 ✓
+2.1	= 2+462.9 on slab		10.63	138.77 on slab
15+00			5.3	144.1
+50			0.6	148.8
TP	13.03	161.67 ✓	0.76	148.64 ✓
16+00			8.7	153.0
+0.3	$\Delta$ Alley = 2+102.65		8.50	153.2 ✓ on slab
+50			5.0	156.7
17+00			0.2	161.5
TP	12.92	174.30 ✓	0.89	161.98 ✓

		174.30		
17+50			7.2	167.1
+85			4.0	170.3
18+00			0.3	171.0
+10			0.5	170.8
+30	Bottom Mast		0.2	171.1
+50	" "		0.5	171.8
+60			0.5	173.8
TP	12.28	186.51 ✓	0.67	173.63 ✓
18+00			8.5	178.0
+50			0.6	182.9
TP	10.50	196.13 ✓	0.88	185.63 ✓
+6.3	$\Delta$ Alley = 1+11.5		9.46	186.67
Sector L. 2. 2. 2. & Alley Between Hilbert Loring From E. Marshall 114.5 East ✓				
196.63				
0+00	= 2+100 E. Mast II		3.92	192.71 on slab 196.33 1123-45
+50			5.0	191.1
+65			5.7	190.4
1+00			8.9	187.2
+1.45	= 19+66.3		9.16	186.67



Sorted Levels 2 Alley  
Between Beryl + Milbur  
From 2. Marcell 20265 East

0+0	3.14	17+50 2. Marcell 17307	169.67
+50	5.7		167.4
+100	11.9		161.2
TP	270	16289	160.19
+53	8.3		154.6
+90	10.9		152.0
2+00	9.9		153.0
+20265 16+09.2	9.63		153.26

Sorted Levels 2 Beryl  
From 2. Marcell 246 E

BM	2.38	15196	149.58	on stub 15175
0+0	2.38	15125 2. Marcell	149.6	
+50	4.8		147.2	
+100	7.6		144.4	
+50	5.1		146.9	
+65	5.5		146.5	
+80	6.9		145.1	
2+00	11.0		141.0	
+20	13.0		139.0	
+46 = 14+24	13.10		138.86	on stub

Sorted Levels 2 Alley Produced  
Between Beryl + Lort  
From 2. Lament 8045 E

BM	2.37	14114	132.77	on stub 14104 2. Beryl
9+045			122.8	on stub
+15+177			123.8	
7+40			127.8	
7+00			130.0	
+50			136.7	
6+00			135.6	
+80 2. Marcell			136.3	
+50			136.9	
5+00			138.8	
TP	11.62	15265	141.02	
+50			142.0	
4+00			143.6	3+25 E 2. Beryl Christophers
+80			143.8	
3+00			146.6	
+40			148.6	
+735			149.6	
2+00			150.7	
TP	14.4	15502	150.62	
+50			150.1	
1+00			150.5	
+90			152.0	
+45			152.1	
+33 <sup>eye</sup> Tap Walk			151.43	
+21 Tap Walk			151.25	
0+0 - 2. Lament			151.0	



Sewer Levels & Alley Producers  
Between Law & Chalcedony  
From E. Lamont 9605 E  
155.08 ✓

TP	101	143.05 <sup>60</sup>	1303	142.05 ✓
0+0 - E. Lamont			8.9	134.2
+20			9.6	133.5
Top Curb			870	134.4
+33 Top Conc Walk			833	134.73
+38			8.1	135.0
+42			6.0	137.1
+65			5.9	137.2
1+00			7.5	135.6
750			9.8	133.3
2+00			12.6	130.5
TP	200	132.59 <sup>60</sup>	1246	130.59 <sup>60</sup>
+50			3.4	124.2
3+00			4.0	128.6
+50			4.3	128.3
4+00			4.9	127.7
+50			4.5	128.1
5+00			4.0	128.6
+50			4.5	128.1
780 E. Marcell			6.9	125.7
6+00			10.7	121.9
TP	191	121.59 <sup>60</sup>	1291	119.68 <sup>9</sup>
727			5.5	116.1
7+00			6.5	115.1
+30			5.9	115.7
+62.5 - 849.535			6.35	115.7 <sup>5</sup>

09514

Sewer Levels & Larr St  
From E. Marcell to 340 E ✓

88  
4.2.41

BM	1156	126.83 ✓		115.27	005403 84952504870
0+0 - E. Marcell/Larr			53.5	121.48	00 5406
+25			6.7	120.1	
+60			7.4	119.4	
+94			9.0	117.8	
1+00			8.5	118.3	
+50			5.5	121.3	
175			5.1	121.7	
798.4 - 10435.00 Bank Line Set 170' An Lamont's Corner			7.7	119.66	00 5406
2+00			7.2	119.6	
+15			7.8	119.0	
+20			6.8	120.0	
+36			7.5	119.3	
+37 80' Ham Marsh			10.3	114.5	
+3.7			11.2	115.6	
+4.7			8.0	118.8	
+150			6.9	119.9	
+75			4.8	122.0	
3+00			1.1	125.7	
TP	1165	137.48 ✓	0.50	121.30 ✓	
+18			8.2	129.3	
+25			5.0	132.5	
+40			0.0	137.5	

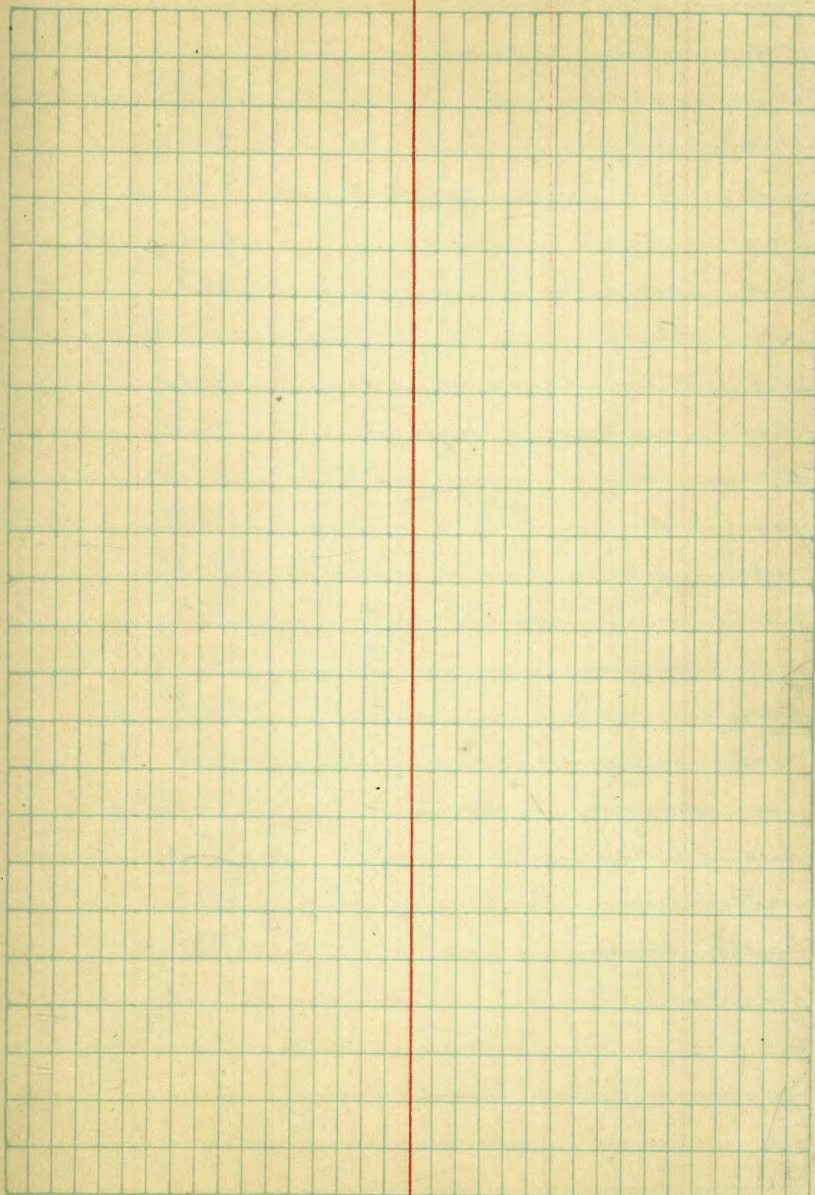


South Levels in Missouri  
 From E. L. Merrill to E. Lament ✓

BM	1253	114.74 ✓	102.21
0+0	34.35	12.5	102.2
+25		12.2	102.5
+50		11.0	103.7
+75		9.1	105.6
1+00		6.7	108.0
+50		4.1	110.6
2+00		3.0	111.7
+50		2.5	112.2
3+00		2.1	112.6
+40		2.2	112.5
+60		3.4	111.3
4+00		3.0	111.7
+40		0.8	113.9
TP	9.1	122.60 ✓	113.49 ✓
+60		8.4	114.2
5+00		6.1	116.5
+25		4.9	117.7
+50		5.0	117.6
+75		6.3	116.3
+93		6.2	116.4
6+00		7.1	115.5
+18	E. Lament	6.6	116.0

00 540 3150  
 217 15.20  
 E. L. Merrill

50' 5  
 70 107.7









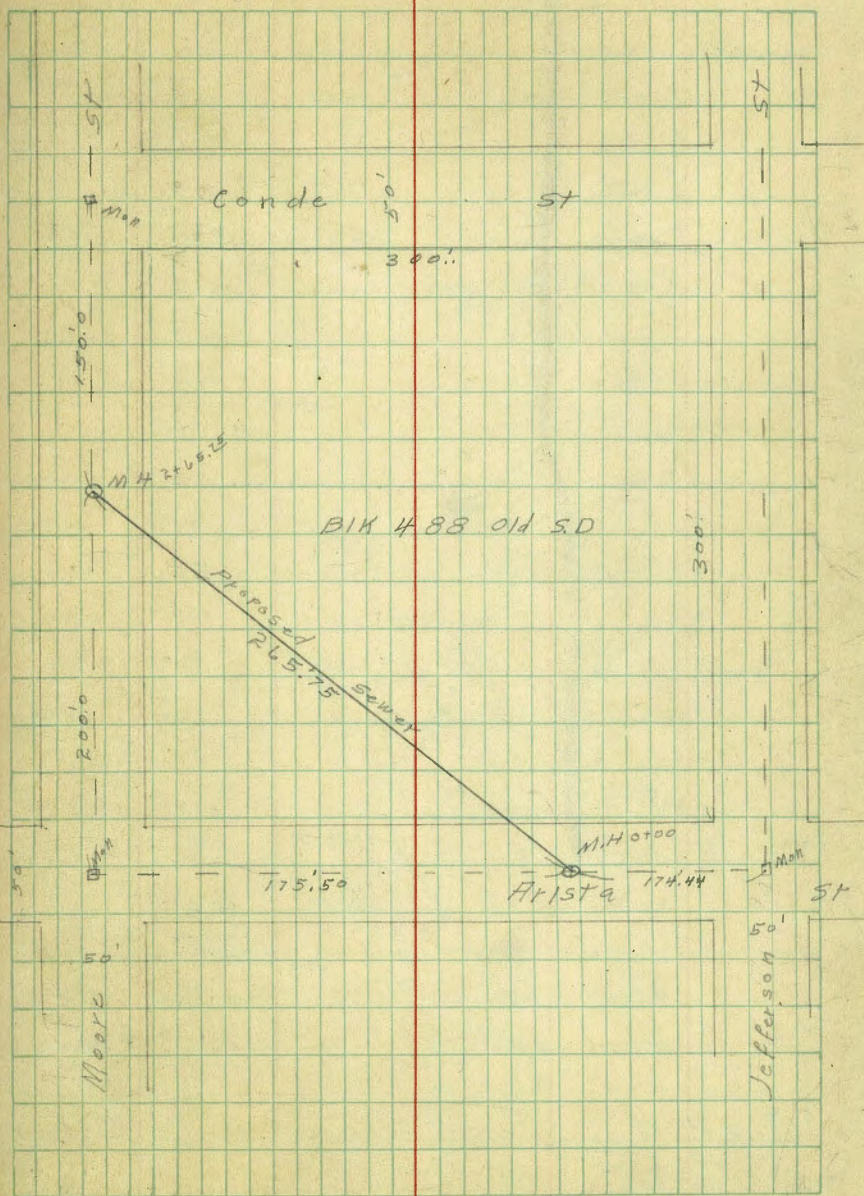




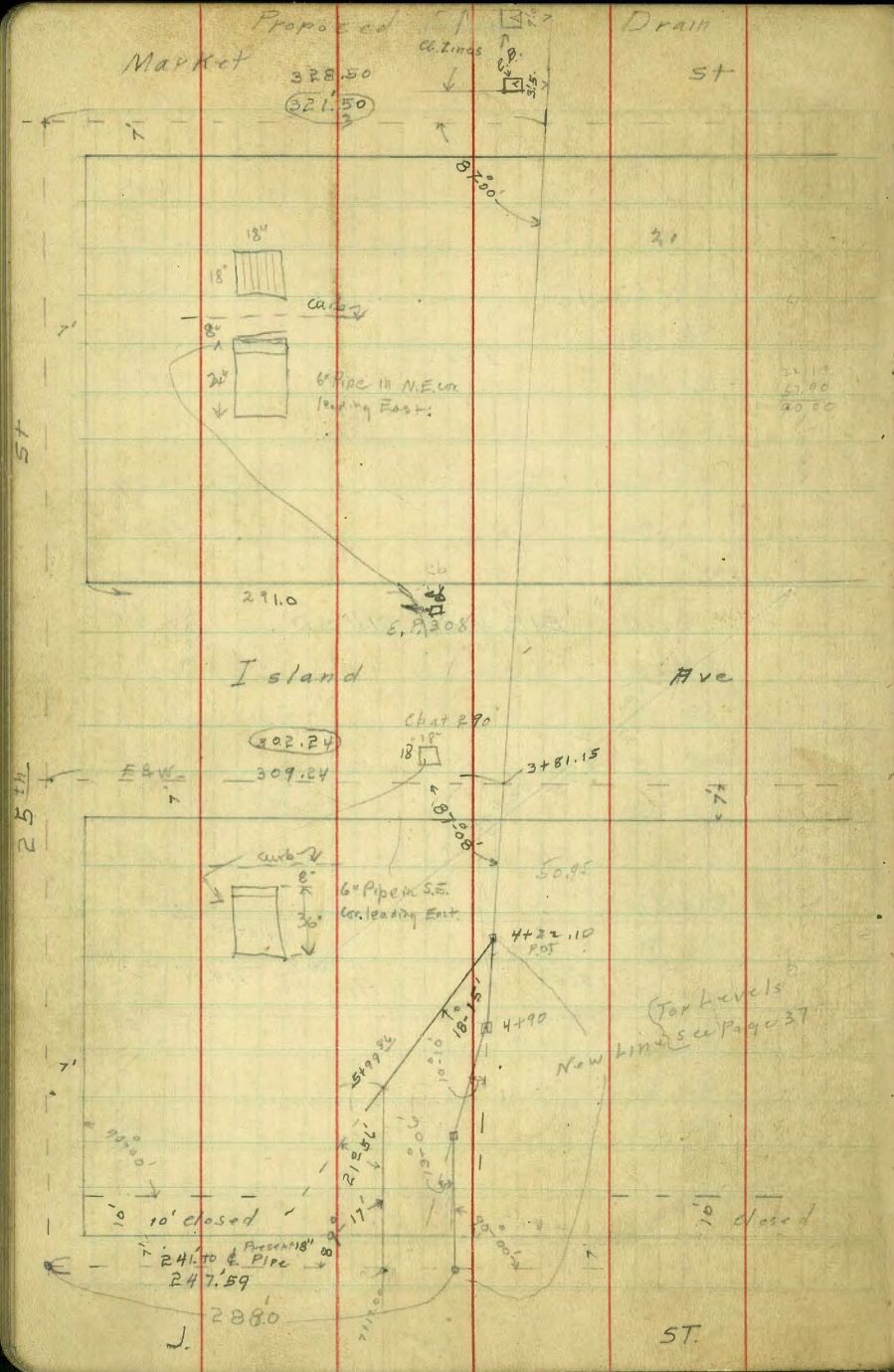
Sewer Levels  
BIK 488 old S.D.

6/22/26  
miller

B.M.	1.41	29.14	27.73	W. Moore AT 4 St Cross
T.P.	4.15	32.56	0.73	28.41
T.P.	1.95	29.70	4.81	27.15 St. Mon Car Moore & Arista
T.P.	6.56	23.34	12.92	16.78
00: M.H. 14 Arista St			9.4	13.94
+25			9.5	13.84
+35			8.2	15.12
+47			7.8	15.54
+60			5.5	17.84
+80			4.5	18.84
+100			2.5	20.84
+30			2.3	21.04
+42 E. edge shack			2.1	21.24
+55 W edge shack			2.0	21.34
+60			2.0	21.34
+76 E edge shack			3.0	20.34
T.P.	3.63	21.99	4.94	18.36
+98 W edge shack			2.9	19.09
2+16			3.6	18.39
2+29			5.0	16.99
2+37			5.4	16.59
2+45			6.6	15.39
2+85.75 M.H. 14 Moore St			9.5	12.49







Proposed Drain  
S. Line Market to N. Line J St  
For additional level bet 25<sup>th</sup> & 26<sup>th</sup>  
See Page 37

6-24-26 mill 33

B.M.	0.41	157.39	156.98	N.W. Markers 25 <sup>th</sup>
T.P.	0.04	144.51	12.92	144.47
321.50 P.O.T. of 25 <sup>th</sup> ST				
0+5.0			5.2	139.8
T.P.	0.96	132.91	5.3	139.2
T.P.	0.44	120.70		
0+47			4.6	116.1
0+52.75			7.1	113.6 Top wall
0+52.75 outlet 24" C.C. Pipe under Market St			10.45	110.25 Flow Line
0+60			10.9	109.8
0+86			10.3	110.4
0+87			9.6	111.1
1+50			10.7	110.0
1+54			10.0	110.7
1+62			10.0	110.7
1+65			11.3	109.4
1+69			12.0	108.7
1+90			12.9	107.8
T.P.	2.64	110.81	12.53	108.17
2+50			4.5	106.3
2+66.55 P.O.T. Hub			4.90	105.9
3+00			5.6	105.2
3+21.15 I. St			5.80	105.0 cont el
+23			6.5	104.3 gutter
+59			6.8	104.0

Top Levels  
See Page 37

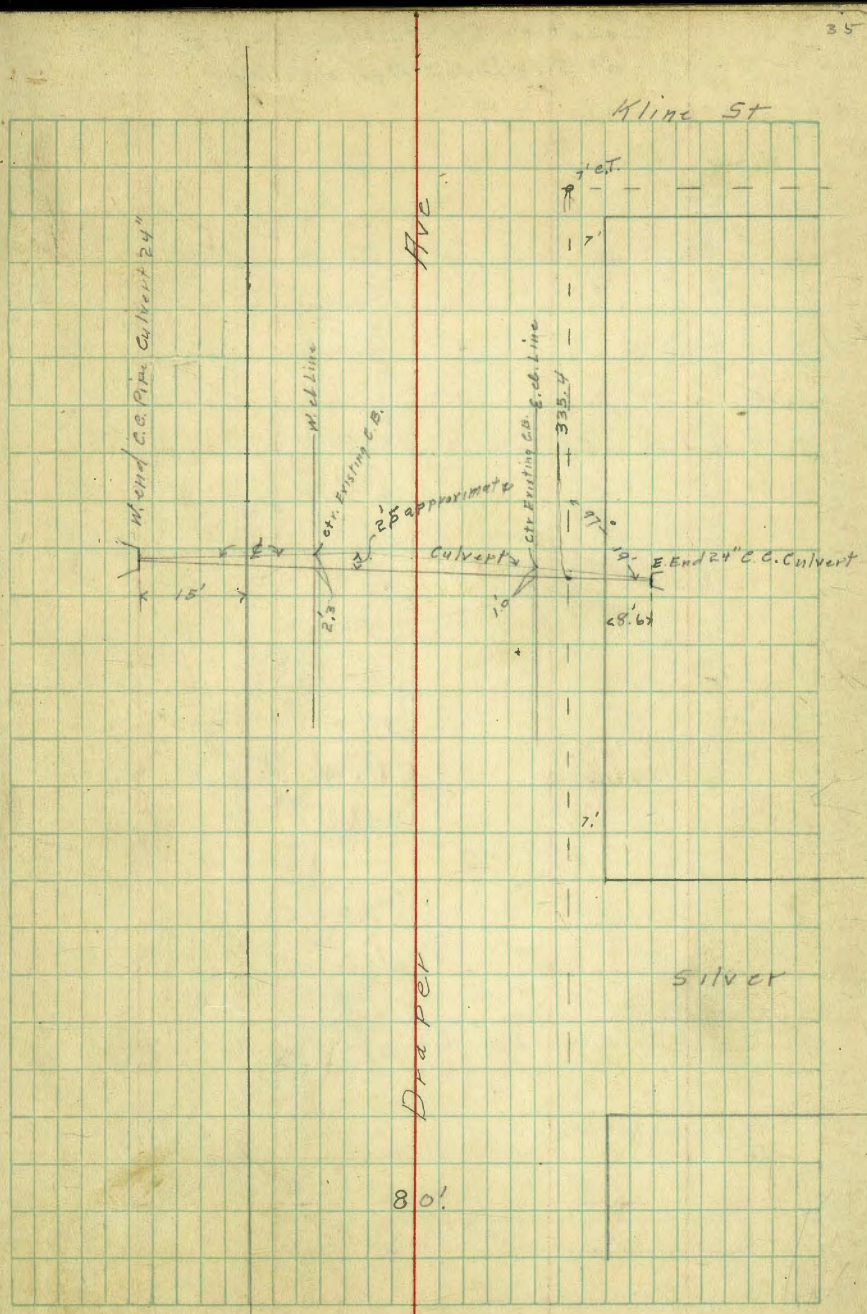






Location of Existing C.C. Culvert  
Crossing Draper A bet Kline & Silver

BM.	609	96.08	75.99	Kline & 38 Fay
T.P.	1.04	86.92	10.20	85.88
T.P.	1.51	<u>75.29</u>	13.14	73.78
25' E of E. line Draper			12.3	63.0
8.6 " " " " = E. end Pipe 24"			11.33	<u>63.96</u> Flow line
" " " " "			4.0	71.3
C. cb "			3.80	71.5 end d
E gutter "			4.8	70.5
ϕ "			4.2	71.1
W. cb "			4.9	70.4
W. line "			4.7	70.6
10' wd " " "			14.6	60.7
15' D. " " " " = W. end Pipe 24"			15.75	59.54 Flow line
40' " " " " "			16.0	59.3







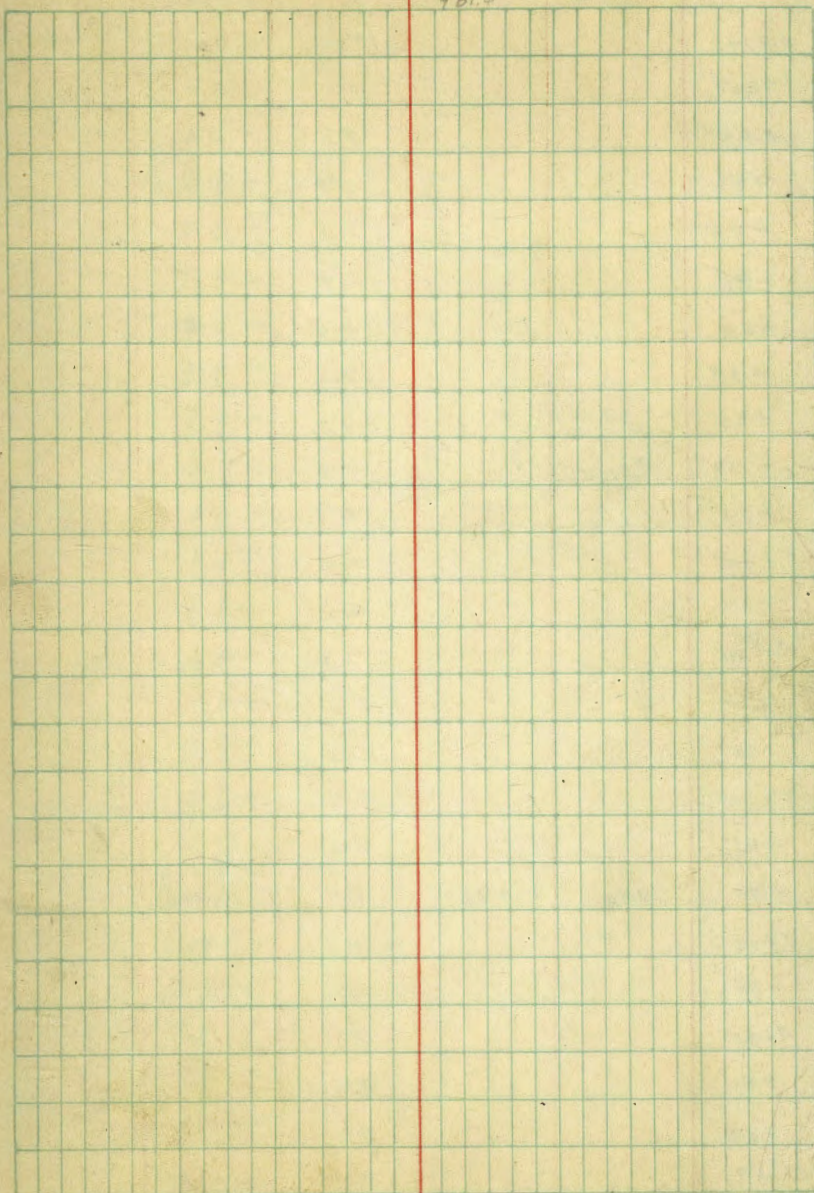


Proposed Drain  
Market 15 J  
8'0" x 25"

8/20/26  
mull

Wgs Δ					
4+32.10 POT	1.94	103.15	101.21	on Hub	
+47		3.8	99.4		
4+90 Δ 10°-10' R	4.99		98.16	on Hub	
5+28		5.8	97.4		
+35		6.2	97.0		
+40		5.4	97.8		
+47		5.6	97.6		
4+59.7 Δ 13°-06' L 560 103.34	5.41		97.74	on Hub	
5+90		5.7	97.6		
6+17.4 N side Garage	5.8		97.5		
6+33 S M "	6.3		97.0		
6+58 emp drive	7.3		96.0		
6+85 " "	7.3		96.0		
7+05	5.0		98.3		
7+07.60 NW 7' W side of 1st	5.15		98.19	on N side of 1st	

57.2  
39.2  
117.4  
98.2  
701.6



See page 33

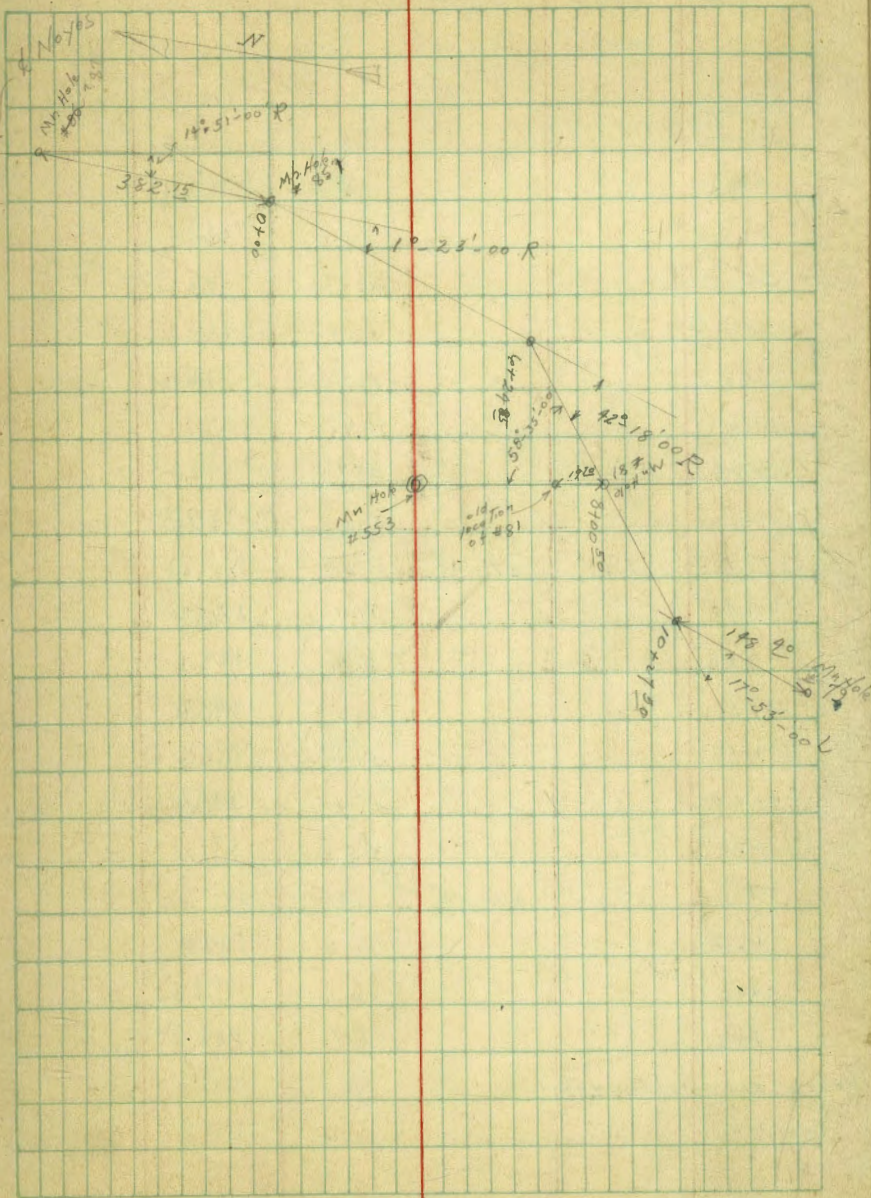


Relocation of and Levels for  
 Eastern Interceptor Pacific Beach Sewer from Mn. Hole  
 # 85 to Mn. Hole # 80  
 8 M. SW Prop. H. H.  
 Oliver's Notes

	2.39	3.67	4.1	5.61
0+00			- 7.9	- 4.9
+25			7.1	- 3.4
+45			8.3	- 4.6
+50			7.4	- 3.1
+75			7.3	- 3.6
+95			7.4	- 3.7
1+00			7.7	- 4.0
+07			7.2	- 3.5
+25			7.2	- 3.5
+50			7.3	- 3.6
+75			7.3	- 3.6
2+00			7.8	- 4.1
+07			7.2	- 3.5
+25			7.3	- 3.6
+50			7.3	- 3.6
+75			7.3	- 3.6
3+00			7.3	- 3.6
+25			7.3	- 3.6
TP	8.10	+ 4.36	7.41	- 3.74 <del>28.26</del>
3+50			- 8.1	- 3.7
+75			8.1	- 3.7
4+00			8.1	- 3.7
+25			8.1	- 3.7
+50			8.1	- 3.7
+75			8.4	- 4.0

Cont. on  
 Page 41.

NE 855  
 5/1/53

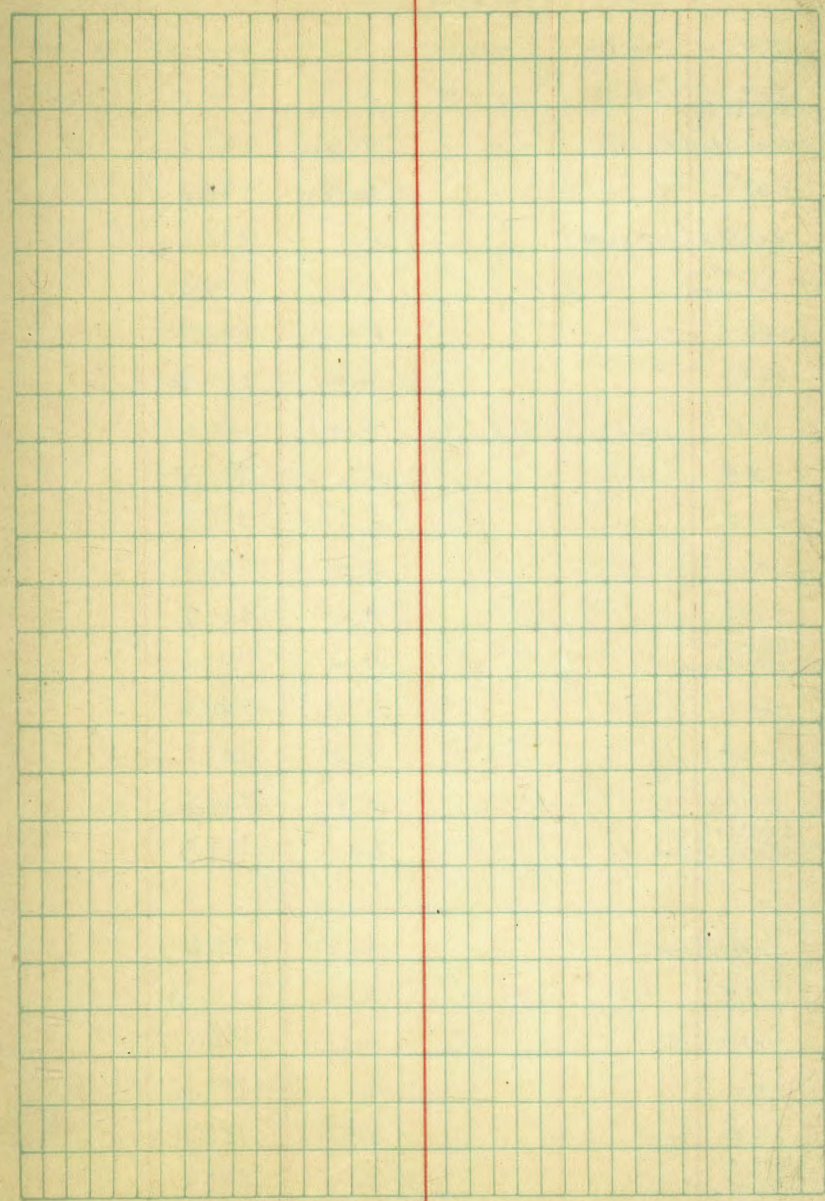




Sewer Levels of F.W.E.L. EN E side 11-24-26  
From Beryl to Malden

SPR. P. 1.50  
L. 1.00

B.M.	13.30	155.41		140.11
T.P.	13.13	168.18	0.36	155.05
T.P.	12.37	178.37	2.14	166.00
80' wide			15.5	162.9
+18' N			15.0	163.4
+25' N			14.0	164.4
+41' N in Beryl			13.2	165.2
+50			11.8	166.6
+90			8.2	170.2
+100			7.7	170.7
+30			5.7	172.7
+50			3.1	175.3
T.P.	13.05	191.33	0.09	178.24
+100			11.1	180.2
+50			8.2	183.1
+100			4.3	185.0
+45			5.0	186.3
+100			2.4	188.9
+20			0.5	190.8
T.P.	13.32	204.35	0.30	191.02
+65			12.0	192.4
+100			10.1	194.3
+50			6.9	197.5
+85.4 = 2 lines Malden 45' wide			4.1	200.3
+108.1			2.6	201.9





Sewer Levels & Malden  
 & Kendall & Collingwood Drive

11-24-26  
 Miller

204.35 Page 29

T.P.	12.07	216.35	0.09	204.26
T.P.	8.17	222.48	2.04	214.31
00-4 Malden 50' W of Whine Kendall			1.4	221.1
+30' C			2.5	220.0
+50' E-W line Kendall			2.9	215.6
01 75' E- W of Malden & Kendall			4.0	218.5
+100			6.4	215.7
+25			10.3	212.2
T.P.	0.04	209.42	13.10	209.38
+50			0.6	208.8
+75			2.6	206.8
+100			5.0	204.4
+25			6.6	202.8
2+80 = E Kendall & Collingwood			11.4	198.0
3+00			10.5	198.9
+20			9.5	199.9
+40			9.9	199.5
3+55 = 75' W of & Collingwood & Kendall			10.7	198.7
00- E Kendall S. Line Collingwood			12.4	196.6
T.P.	0.31	196.73	13.00	196.92
0+50			1.6	195.1
+100			4.2	192.5
+30			7.0	189.7
1+64 = E Kendall & Allg. W. of Beryl			10.0	186.7

196.73

40

2+00			10.0	186.7
+25			11.3	185.4
2+65			13.8	182.9
T.P.	0.04	184.05	12.72	184.01
T.P.	0.79	173.94	10.90	173.15
T.P.			7.94	146.00 Page 39



+ 4.36

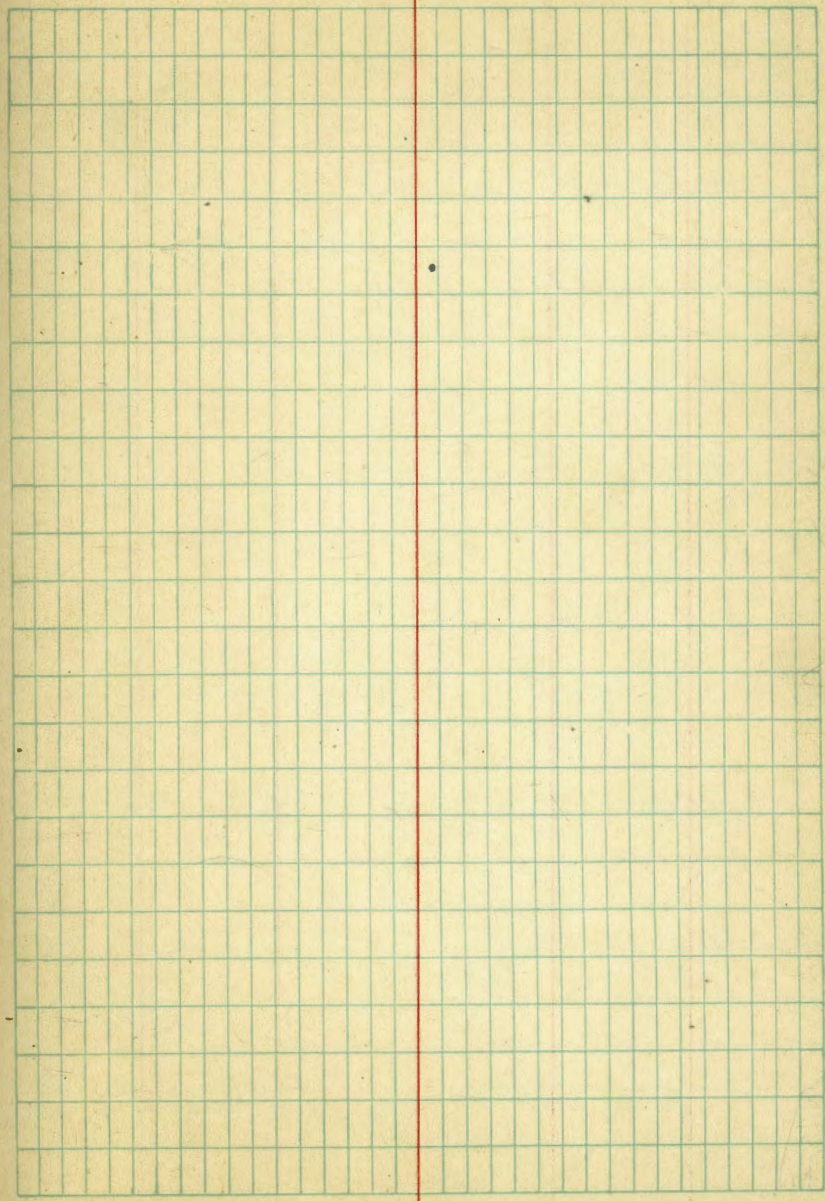
4+79		- 8.4	- 4.0
+ 83		9.9	- 5.5
+ 86		8.1	- 3.7
5+00		8.3	- 3.9
+ 25		8.3	- 3.9
+ 39		8.0	- 3.6
+ 40		6.8	- 2.4
+ 50		6.2	- 1.8
+ 75		5.2	- 0.8
6+00		6.2	- 1.8
+ 10		6.7	- 2.3
+ 24 <sup>85</sup>	Δ M.H.	6.0	- 1.6
+ 50		9.7	- 0.3
+ 75		5.2	- 0.8
+ 95		5.1	- 0.7
7+00		6.5	- 2.1
T.P.	3.39 + 4.26	3.99	+ 0.87
7+05		- 8.2	+ 3.9
+ 25		8.3	- 4.0
+ 50		8.4	- 4.1
+ 75		8.4	- 4.1
8+00 <sup>50</sup>	M.H.	8.5	- 4.2
+ 25		8.7	- 4.4
+ 50		8.8	- 4.5
+ 75		8.6	- 4.3



+ 4.26

9+00		- 8.7	- 4.4
+ 10		8.6	- 4.3
+ 25		8.9	- 4.6
+ 35		8.5	- 4.2
+ 50		8.4	- 4.1
+ 75		9.2	- 4.9
+ 90		7.2	- 4.9
10+00		9.0	- 4.7
10+27 <sup>50</sup>	M.H.	7.0	- 2.7
		0.83	+ 3.43 ✓

BM. Sta. 18+94





Cross Section of Alley Block 68 Park Villas  
 Bet. N. Pershing Ave + Villa Terrace 15' side  
 From right to L. ends

BM	090	339.30	338.40	SE 8P Londis + Pershing
				N.L. Londis
E	Top Carb	10.86		
L		11.7		
N	Top Carb	12.19		
TP	6.47	336.13	9.64	329.66
		10'N		
N		6.1		
L		6.6		
+4		6.3		
+5		4.8		
E		4.5		
		25'N		
E		4.0		
+8		5.1		47'N E. Carb Floor So. Pershing 1.55
L		5.3		
N		5.6		
		57'N		
N		5.9		
L		5.5		
+2		5.3		
+4		4.8		
E		4.1		
		25'N		
E		3.6		
+2		3.9		

+5		4.7		
L		4.9		
N		5.0		
		100'N		
N		5.0		
L		4.7		
+2		4.8		
+4		4.7		
E		3.4		
		140'N		
-6	Garage Conc Floor	2.50		
E		3.6		
L		4.3		
N		4.5		
+3.5	Carb Floor	4.56		
+4.5	Garage Conc Floor	4.46		
		160'N		
N		3.8		
L		3.9		
+3		3.9		
+5		3.6		
E		3.4		193'N Garage H.L. 2.5 3.11
		200'N		
E		2.8		
+3		3.1		



L

32

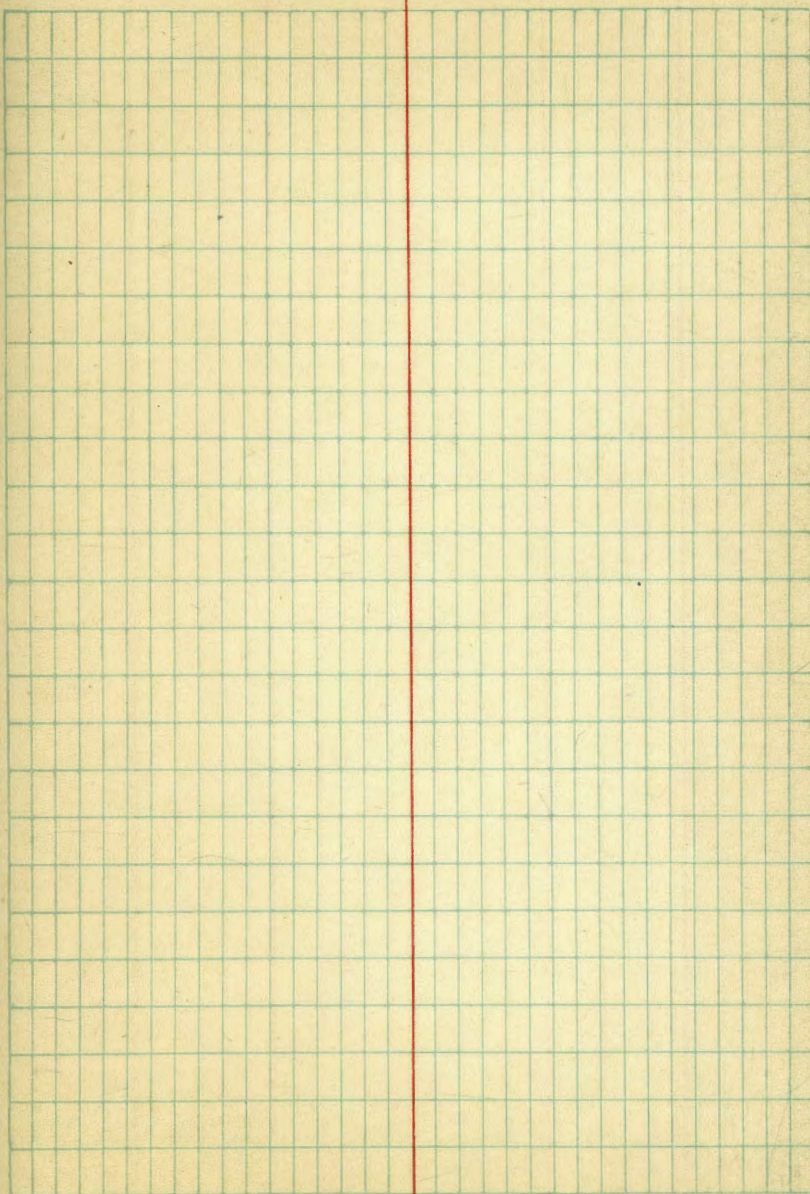
H

30

TP

231

Nail Pole  
E. S. d. h. t. a.





Cross Section of Dell Monte No.

From De Foe to Ebers

30' wide  
20' Cbs.  
10' gks

75.83

at NL Ebers

75.8

N	46	71.2
CB	45	71.3
+5	47	71.1
1/4	39	71.9
+5	49	70.9
2	43	71.5
1/4	42	71.6
CB	48	71.0
+5	53	70.5
+10	48	71.0
S	45	71.3

25' H

S	55	70.3
+14	59	69.9
+18	65	69.3
CB	60	69.8
+5	55	70.3
1/4	57	70.1
2	58	70.0
1/4	57	70.1
CB	61	69.7
+12	65	69.3
N	62	69.6

50' H

75.83

75.8

N	82	67.6
+13	80	67.8
CB	83	67.5
+6	87	67.1
1/4	74	68.4
2	70	68.8
1/4	69	68.7
+5	71	68.7
+6	74	68.4
CB	72	68.5
+5	69	68.9
S	65	69.3
75' H		
S	48	69.0
+10	71	68.2
CB	85	67.3
+3	83	67.5
+7	90	66.8
+5	81	67.7
1/4	80	67.8
2	81	67.7
+5	83	67.5
+7	88	66.0
1/4	88	66.0
+5	89	65.9

12-15-76  
5:35 PM  
Bliss  
Northham



	75.P3	75.8
CB	9.9	65.9
+3	9.2	66.6
N	9.8	66.0

	100.YX	
N	11.2	64.6
+1P	10.5	65.3
CB	11.2	64.6
1/4	11.2	64.6
+5	11.2	64.6
2	9.6	66.2
1/4	9.3	66.5
+5	10.1	65.7
CB	9.3	66.5
+10	9.6	66.2
S	6.4	69.4

	125.YX	
S	7.8	68.0
+10	10.8	65.0
CB	11.5	64.3
+5	10.6	65.2
1/4	12.0	63.8
+5	11.2	64.6
2	11.1	64.7
+5	13.7	62.1
1/4	13.7	62.1
+5	11.7	64.1

	75.P3	75.8
CB	11.5	64.3
N	12.1	63.7
	150.YX	
N	12.3	62.5
+10	12.9	62.9
CB	14.3	61.5
+5	15.0	60.8
1/4	14.8	61.0
2	14.6	61.2
+8	12.3	63.5
1/4	11.9	63.9
CB	12.0	63.8
+10	11.8	64.0
S	9.9	66.1
	175.YX	
S	12.1	63.7
+5	12.5	63.3
+10	14.4	61.4
CB	14.5	61.3
1/4	14.5	61.3
2	14.3	61.5
+3	14.1	61.7
+6	15.6	60.2
1/4	15.6	60.2
+5	15.0	60.8
CB	14.4	61.4
N	15.0	60.8



	7583			
TP	2.60	66.32	12.11	63.72
		200.14		<u>66.3</u>
N			6.7	59.6
+10			7.2	59.1
CB			6.8	59.5
+2			8.2	58.1
1/4			8.2	58.1
2			8.1	58.2
1/4			7.9	58.4
+2			7.9	58.4
+8			6.4	59.9
CB			6.9	59.4
+13			4.7	61.6
+18			4.4	61.9
5			1.3	65.0
		225.14		
5			3.6	62.7
+1			6.3	60.0
+10			7.7	58.6
+12			8.9	57.6
+15			8.6	57.7
+16			8.0	58.3
CB			8.3	58.0
+6			9.0	57.3
1/4			9.8	56.5
+2			8.4	57.9
2			8.3	58.0

	66.32	66.3
1	11.1	55.2
+3	11.5	54.8
+6	11.4	54.9
CB	10.3	56.0
+5	8.9	57.4
N	7.8	58.5
	250.14	
N	9.3	57.0
+10	10.0	56.3
+15	9.4	56.9
CB	10.1	56.2
+2	12.1	54.4
1/4	11.7	54.6
+2	9.7	56.6
+5	9.8	56.5
2	11.4	55.9
+2	10.3	56.0
+5	11.5	54.8
1/4	10.0	56.3
+5	10.3	56.0
+8	10.8	55.5
CB	10.9	55.4
+5	10.8	55.5
+6	9.4	56.9
+18	7.5	58.8
5	5.0	61.3



66.38

300Y

66.3

S		79	58.4
+10		13.6	52.7
+17		15.1	51.2
CB		15.0	51.3
+5		13.9	52.4
1/4		14.0	52.3
+3		15.1	51.2
+7		14.8	51.5
Z		14.0	52.3
+3		14.0	52.3
+7		13.5	52.8
1/4		13.7	52.6
+2		13.7	52.6
1/2, +5		14.8	51.5
CB		15.4	50.9
+2		14.5	51.8
+10		13.8	52.5
N		12.0	54.3
TP	258	56.45	53.87
	325Y		<u>56.5</u>
N		8.9	53.6
+4		5.3	51.2
+12		5.3	51.2
+15		6.0	50.5
CB		5.7	50.8
1/2		6.2	50.3

56.45

56.5

+8		6.5	50.0
Z		5.7	50.7
1/4		6.3	50.2
+6		6.1	50.4
+7		6.2	49.7
CB		7.0	49.5
+10		6.1	50.4
+15		5.0	51.5
S		1.7	54.8
	350Y		
S		3.6	52.9
+7		7.2	48.7
CB		7.5	49.0
1/4		7.3	49.2
Z		7.0	49.5
1/4		6.9	49.6
+2		1.4	50.1
+7		7.2	49.3
CB		6.5	50.0
1/8		6.5	50.0
N		5.5	51.0
	400Y		
N		8.5	48.0
+4		9.2	47.3
CB		9.2	47.3
+5		9.2	47.3



	56.45	56.5
1/4		46.7
2		46.9
+5	9.8	46.4
+8	9.6	46.9
1/4	9.6	46.9
CB	9.7	46.8
S	9.4	46.1

	45.071	
S	11.3	45.2
+4	12.1	44.4
CB	12.0	44.5
1/4	12.0	44.5
+5	12.1	44.4
+6	12.4	44.1
2	12.5	44.0
+3	12.1	44.4
1/4	12.0	44.5
CB	11.9	44.6
+13	12.2	44.3
N	11.9	44.6
TP	0.66    45.54	44.88

	50.17	45.5
N	3.6	41.9
+5	3.2	42.3
CB	3.6	41.9
1/4	3.7	41.8

	45.54	45.5
+5	3.2	42.3
+9	2.5	42.0
2	4.3	41.2
5	3.6	41.9
1/4	3.6	41.9
CB	3.6	41.9
S	3.1	42.4

	52.571	
S	4.2	41.3
+8	4.1	41.4
+15	3.2	42.3
CB	3.4	42.1
1/4	4.8	40.7
2	4.3	41.2
+5	4.8	40.7
+8	4.8	40.7
1/4	5.2	40.3
+7	4.6	40.9
CB	3.7	41.8
N	4.5	41.0

	55.071	
N	5.4	40.1
+10	5.0	40.5
CB	5.2	40.3
+8	6.2	39.3
1/4	6.0	39.5



	45.54	45.5
26	51	40.4
2	51	40.4
+2	61	39.4
1/4	59	39.6
CB	49	40.6
+5	37	41.8
+15	50	40.5
S	50	40.5

57.54

S	49	40.6
+5	39	41.6
+13	36	41.9
+16	38	41.7
CB	44	41.1
1/4	63	39.2
+3	70	38.5
2	48	38.7
+7	68	38.7
1/4	73	38.2
+2	66	38.9
+7	60	38.5
CB	60	39.5
+13	62	39.3
1/4	67	38.8
N	76	37.9

59.04

	45.54	45.5
+12	69	38.6
CB	72	38.3
+5	71	38.4
+8	80	37.5
1/4	80	37.5
+4	80	37.5
+6	71	38.4
2	73	38.2
+1	83	37.2
+2	84	37.1
+5	77	37.8
1/4	69	38.6
+3	66	38.9
CB	45	41.0
+2	40	41.5
+16	37	41.8
+15	47	40.8
S	54	40.1
600' = E.L. DEFOG		
S	60	39.5
+5	54	40.1
+10	49	40.6
+15	55	40.0
CB	51	39.9
+6	50	39.7



45.54

45.5

74	7.5	38.0
76	8.0	37.5
77	8.8	36.7
2	8.4	37.1
73	7.3	38.2
+6	7.5	38.0
74	8.5	37.0
+4	8.6	36.9
CB	7.3	38.2
+11	7.0	38.5
+15	8.1	37.4
N	8.2	37.3
	6.1577	
N	10.0	35.5
CB	9.1	36.1
74	9.3	36.2
2	9.3	36.2
74	9.3	36.2
CB	9.1	36.4
S	8.8	36.7
211	8.48	37.06

SF Del Works  
+ Defile  
37.05

III

TABLE IV.—TANGENTS AND EXTERNALS TO A 1° CURVE.

Central Angle	Tangent	External	Central Angle	Tangent	External	Central Angle	Tangent	External
1°	50.00	.22	11°	551.70	26.50	21°	1061.9	97.87
10'	58.34	.30	10'	560.11	27.31	10'	1070.6	99.16
20	66.67	.39	20	568.53	28.14	20	1079.2	100.75
30	75.01	.49	30	576.95	28.97	30	1087.8	102.35
40	83.34	.61	40	585.36	29.82	40	1096.4	103.97
50	91.68	.73	50	593.79	30.68	50	1105.1	105.60
2	100.01	.87	12	602.21	31.56	22	1113.7	107.24
10	108.35	1.02	10	610.64	32.45	10	1122.4	108.90
20	116.68	1.19	20	619.07	33.35	20	1131.0	110.57
30	125.02	1.36	30	627.50	34.26	30	1139.7	112.25
40	133.36	1.55	40	635.93	35.18	40	1148.4	113.95
50	141.70	1.75	50	644.37	36.12	50	1157.0	115.66
3	150.04	1.96	13	652.81	37.07	23	1165.7	117.38
10	158.38	2.19	10	661.25	38.03	10	1174.4	119.12
20	166.72	2.43	20	669.70	39.01	20	1183.1	120.87
30	175.06	2.67	30	678.15	39.99	30	1191.8	122.63
40	183.40	2.93	40	686.60	40.99	40	1200.5	124.41
50	191.74	3.21	50	695.06	42.00	50	1209.2	126.20
4	200.08	3.49	14	703.51	43.08	24	1217.9	128.00
10	208.43	3.79	10	711.97	44.07	10	1226.6	129.82
20	216.77	4.10	20	720.44	45.12	20	1235.3	131.65
30	225.12	4.42	30	728.90	46.18	30	1244.0	133.50
40	233.47	4.76	40	737.37	47.25	40	1252.8	135.35
50	241.81	5.10	50	745.85	48.34	50	1261.5	137.23
5	250.16	5.46	15	754.32	49.44	25	1270.2	139.11
10	258.51	5.83	10	762.80	50.55	10	1279.0	141.01
20	266.86	6.21	20	771.29	51.68	20	1287.7	142.93
30	275.21	6.61	30	779.77	52.89	30	1296.5	144.85
40	283.57	7.01	40	788.26	53.97	40	1305.3	146.79
50	291.92	7.43	50	796.75	55.13	50	1314.0	148.75
6	300.28	7.86	16	805.25	56.31	26	1322.8	150.71
10	308.64	8.31	10	813.75	57.50	10	1331.6	152.69
20	316.99	8.76	20	822.25	58.70	20	1340.4	154.69
30	325.35	9.23	30	830.76	59.91	30	1349.2	156.70
40	333.71	9.71	40	839.27	61.14	40	1358.0	158.72
50	342.08	10.20	50	847.78	62.38	50	1366.8	160.76
7	350.44	10.71	17	856.30	63.63	27	1375.6	162.81
10	358.81	11.22	10	864.82	64.90	10	1384.4	164.86
20	367.17	11.75	20	873.35	66.18	20	1393.2	166.95
30	375.54	12.29	30	881.88	67.47	30	1402.0	169.04
40	383.91	12.85	40	890.41	68.77	40	1410.9	171.15
50	392.28	13.41	50	898.95	70.09	50	1419.7	173.27
8	400.66	13.99	18	907.49	71.42	28	1428.6	175.41
10	409.03	14.58	10	916.03	72.76	10	1437.4	177.55
20	417.41	15.18	20	924.58	74.12	20	1446.3	179.72
30	425.79	15.80	30	933.13	75.49	30	1455.1	181.89
40	434.17	16.43	40	941.69	76.86	40	1464.0	184.08
50	442.55	17.07	50	950.25	78.26	50	1472.9	186.29
9	450.93	17.72	19	958.81	79.67	29	1481.8	188.51
10	459.32	18.38	10	967.38	81.09	10	1490.7	190.74
20	467.71	19.06	20	975.96	82.53	20	1499.6	192.99
30	476.10	19.75	30	984.53	83.97	30	1508.5	195.25
40	484.49	20.45	40	993.12	85.43	40	1517.4	197.53
50	492.88	21.16	50	1001.7	86.90	50	1526.3	199.82
10	501.28	21.89	20	1010.3	88.39	30	1535.3	202.12
10	509.68	22.62	10	1018.9	89.89	10	1544.2	204.44
20	518.08	23.38	20	1027.5	91.40	20	1553.1	206.77
30	526.48	24.14	30	1036.1	92.92	30	1562.1	209.12
40	534.89	24.91	40	1044.7	94.46	40	1571.0	211.48
50	543.29	25.70	50	1053.3	96.01	50	1580.0	213.86



1-23-00  
2-26-00

27.73  
1.41  
29.14  
0.73  
28.41  
4.15  
32.56  
4.81  
27.75

74  
25.86  
99.86

N Curve I 105.0  
103.9  
2 | 208.9  
104.5

32.10  
97.90  
32.00

32.10  
97.90  
100.00

52.75  
47.25

30.00  
266.55  
33.45

DISTANCES FROM CENTER OF ROADWAY FOR CROSS-SECTIONING.

5.7  
10.05  
7.5

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

H	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	H
0	8.0	8.2	8.3	8.5	8.6	8.8	8.9	9.1	9.2	9.4	0
1	9.5	9.7	9.8	10.0	10.1	10.3	10.4	10.6	10.7	10.9	1
2	11.0	11.2	11.3	11.5	11.6	11.8	11.9	12.1	12.2	12.4	2
3	12.5	12.7	12.8	13.0	13.1	13.3	13.4	13.6	13.7	13.9	3
4	14.0	14.2	14.3	14.5	14.6	14.8	14.9	15.1	15.2	15.4	4
5	15.5	15.7	15.8	16.0	16.1	16.3	16.4	16.6	16.7	16.9	5
6	17.0	17.2	17.3	17.5	17.6	17.8	17.9	18.1	18.2	18.4	6
7	18.5	18.7	18.8	19.0	19.1	19.3	19.4	19.6	19.7	19.9	7
8	20.0	20.2	20.3	20.5	20.6	20.8	20.9	21.1	21.2	21.4	8
9	21.5	21.7	21.8	22.0	22.1	22.3	22.4	22.6	22.7	22.9	9
10	23.0	23.2	23.3	23.5	23.6	23.8	23.9	24.1	24.2	24.4	10
11	24.5	24.7	24.8	25.0	25.1	25.3	25.4	25.6	25.7	25.9	11
12	26.0	25.2	26.3	26.5	26.6	26.8	26.9	27.1	27.2	27.4	12
13	27.5	27.7	27.8	28.0	28.1	28.3	28.4	28.6	28.7	28.9	13
14	29.0	29.2	29.3	29.5	29.6	29.8	29.9	30.1	30.2	30.4	14
15	30.5	30.7	30.8	31.0	31.1	31.3	31.4	31.6	31.7	31.9	15
16	32.0	32.2	32.3	32.5	32.6	32.8	32.9	33.1	33.2	33.4	16
17	33.5	33.7	33.8	34.0	34.1	34.3	34.4	34.6	34.7	34.9	17
18	35.0	35.2	35.3	35.5	35.6	35.8	35.9	36.1	36.2	36.4	18
19	36.5	36.7	36.8	37.0	37.1	37.3	37.4	37.6	37.7	37.9	19
20	38.0	38.2	38.3	38.5	38.6	38.8	38.9	39.1	39.2	39.4	20
21	39.5	39.7	39.8	40.0	40.1	40.3	40.4	40.6	40.7	40.9	21
22	41.0	41.2	41.3	41.5	41.6	41.8	41.9	42.1	42.2	42.4	22
23	42.5	42.7	42.8	43.0	43.1	43.3	43.4	43.6	43.7	43.9	23
24	44.0	44.2	44.3	44.5	44.6	44.8	44.9	45.1	45.2	45.4	24
25	45.5	45.7	45.8	46.0	46.1	46.3	46.4	46.6	46.7	46.9	25
26	47.0	47.2	47.3	47.5	47.6	47.8	47.9	48.1	48.2	48.4	26
27	48.5	48.7	48.8	49.0	49.1	49.3	49.4	49.6	49.7	49.9	27
28	50.0	50.2	50.3	50.5	50.6	50.8	50.9	51.1	51.2	51.4	28
29	51.5	51.7	51.8	52.0	52.1	52.3	52.4	52.6	52.7	52.9	29
30	53.0	53.2	53.3	53.5	53.6	53.8	53.9	54.1	54.2	54.4	30
31	54.5	54.7	54.8	55.0	55.1	55.3	55.4	55.6	55.7	55.9	31
32	56.0	56.2	56.3	56.5	56.6	56.8	56.9	57.1	57.2	57.4	32
33	57.5	57.7	57.8	58.0	58.1	58.3	58.4	58.6	58.7	58.9	33
34	59.0	59.2	59.3	59.5	59.6	59.8	59.9	60.1	60.2	60.4	34
35	60.5	60.7	60.8	61.0	61.1	61.3	61.4	61.6	61.7	61.9	35
36	62.0	62.2	62.3	62.5	62.6	62.8	62.9	63.1	63.2	63.4	36
37	63.5	63.7	63.8	64.0	64.1	64.3	64.4	64.6	64.7	64.9	37
38	65.0	65.2	65.3	65.5	65.6	65.8	65.9	66.1	66.2	66.4	38
39	66.5	66.7	66.8	67.0	67.1	67.3	67.4	67.6	67.7	67.9	39
40	68.0	68.2	68.3	68.5	68.6	68.8	68.9	69.1	69.2	69.4	40

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

Made in Germany.