

# 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 22.6 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  $1\frac{1}{2}$  see inside of back cover.

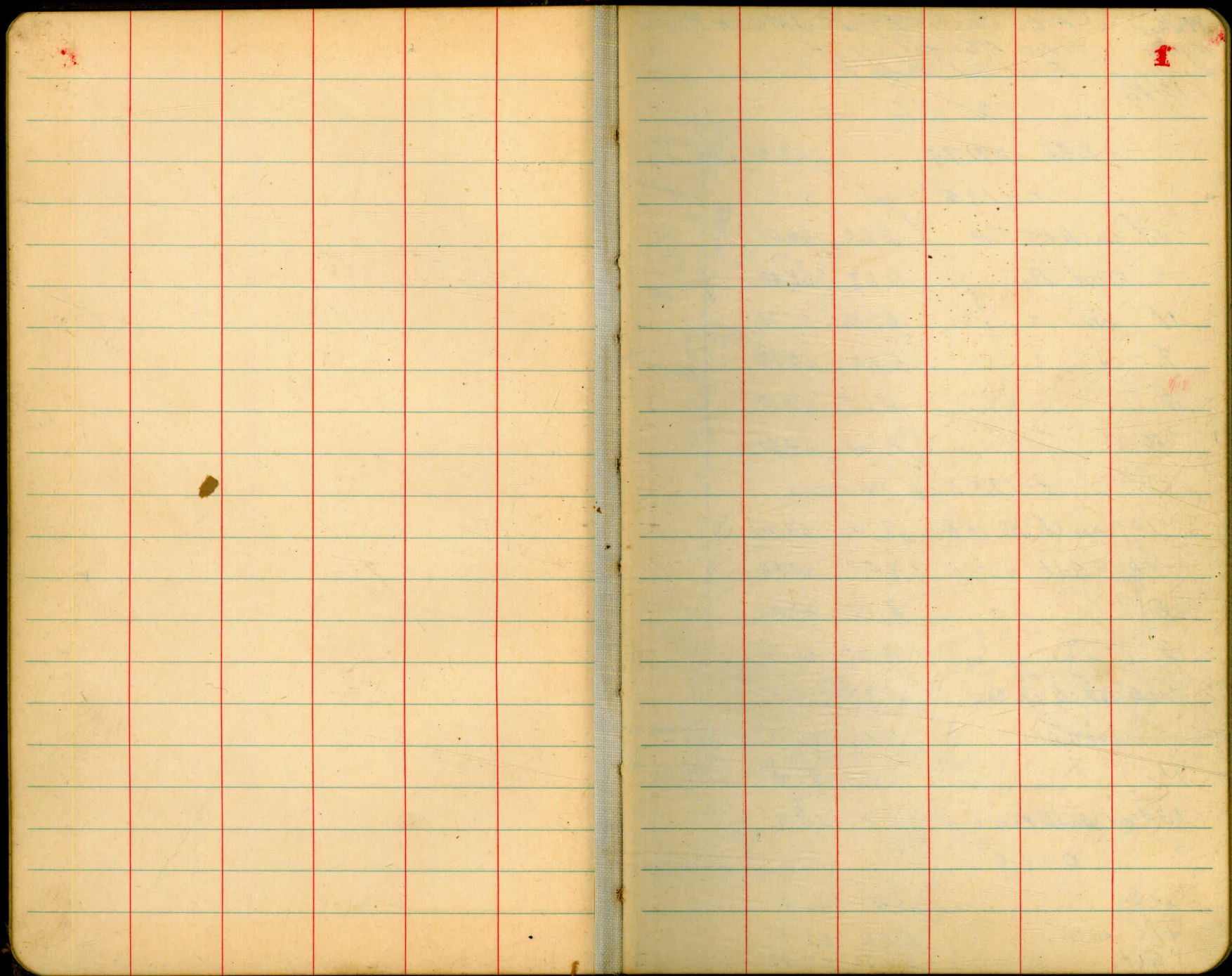
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# 1701

## CITY ENGINEER'S OFFICE

This Field Book is manufactured of a High  
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RESISTING SURFACE, and is sewed with  
Bing Special Enamel Waterproof thread.

Made in U. S. A.



Walker  
Hurd  
Hurd  
1-12-46

CROSS SECTION - PLUMOSA WAY -  
from Randolph St.  
East and North to Dead end

25' wide

2.44 271.75

269.31

S.V.P.P.  
Polymatto  
Plumosa

0-18.5

-4.7' on cb. P.C. 5'R 5.68 66.01

" " Gut. Pav. 6.27 65.48

N on " 5.98 65.77

2 " " 5.22 66.53

S 4.65 67.10

+10 " " 4.24 67.51

0-12' = E. cb. Plumosa

-10 on cb. B.C. 10'R 3.74 68.01

-10 " Gut " " 4.43 67.32

S 4.72 67.03

2 " Pav. 5.20 66.55

+11.5' at cb on Gut 5.83 65.92

" on cb. 5.28 66.47

N 5.4 66.4

+3.4 at both Fence 5.4 66.4

0-5.6'

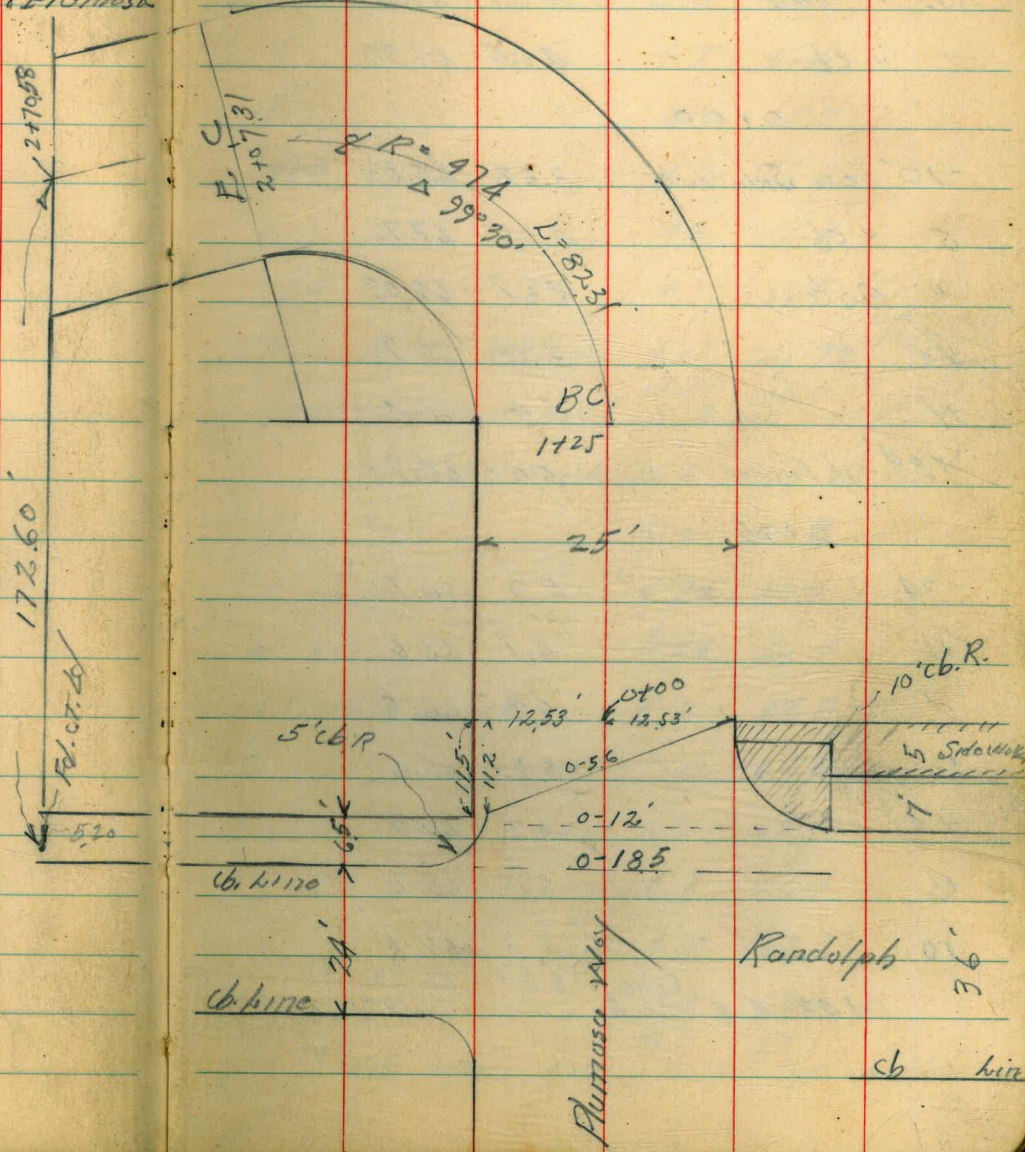
N 5.4 66.4

+1' on cb. 5.28 66.47

Gut. 5.83 65.92

Indexed  
O.S.R.

2



Plumosa - May  
X-Sections

271.75

271.75

8

L on Pav	5.02	66.73	
Sl. " Gut	4.67	67.08	
" " cb	4.05	67.70	
	0+00		
-10' on Sidewalk	3.52	68.23	
S " cb	4.05	67.70	
" Gut	4.67	67.08	
L	5.0	66.7	
N	5.4	66.4	
+3.4 at fence	5.0	66.7	
	0+25		
-3.4	5.0	66.7	
N	5.1	66.6	
L	5.3	66.5	
S	5.2	66.6	
+3	4.9	66.8	
+6	3.5	68.2	
10	3.3	68.4	
	5.46	66.29	1.7' back Nord
0+43 = 8' slab			on N 0.7' back

-10	3.8	67.9	
-6	4.0	67.7	
-3	5.6	66.1	
S	5.7	66.0	
L	5.8	65.9	
+10	5.7	66.0	
N	4.9	66.8	
+3.4	4.9	66.8	
TP	5.12	272.84	4.03 267.72
			3.81 67.0
0+26 = 2.4' Conc. Walk			on South 13.8' back
			0+57 = 4' Granite Block Steps on N
S	6.0	66.8	
-1' on Top step	5.94	66.9	
N " "	6.44	66.4	
+1 on Ground	7.0	65.8	
L	7.0	65.8	
S	6.9	65.9	
+3	6.7	66.1	
+6	5.2	67.6	
+10	5.0	67.8	
	5.7	67.1	
0+60 = Beg. Cobble Walk			on N 0.4' inst.

SE Top of  
Plumosa  
+ Randolph

272.84

1400

-147 on 38' Conc. Walk	3.93	68.91
-70	4.6	68.2
-4	4.9	67.9
-2	7.3	65.5
S	7.4	65.4
L	7.7	65.1
+11.6 = Bottom Conc. step	7.8	65.0
N on Conc. step	7.34	65.5
1' West on Cobble Wall	6.0	66.8
+3	6.15	66.69
+10	6.2	66.6
	6.0	66.8
1406 Cobble Wall on N	0.8	in st
1+25 = BC. Lt.	Curve in 3 Parts	
-10	6.5	66.3
N on Cobble wall	6.5	66.3
+0.3 = Base Wall	8.3	69.5
L	8.3	64.5
S	7.8	65.0
+5	5.4	67.4
10	5.0	67.8

272.84

4

1+32 = Beg. Conc. Walk on South		
L +11.5 = N. edge Walk	7.54	65.30
+14.5 = S " "	7.30	65.54
1+45		
L +19 on N edge Above Walk	6.33	66.51
1+52.44 = Part 1		
-1' on Broken Conc. Walk	8.7	64.4
S	8.7	64.1
+3	9.1	63.7
L	9.2	63.6
N = Base Cobble Wall	9.4	63.4
+0.5 Top " "	6.9	65.9
+10	6.9	65.9
	9.48	63.36
1+64 = E 35' Conc. Walk on Rt	1.9	in st
.04' rd of Rd. line on "	2.23	63.61
		Bottom of steps
1+68.6 = Beg. 2' Picket Fence on Rt	1.9	in st
1+78 = Δ in Above Fence	3.7	in st
1+68.6 Conc. steps on Lt.	1.7	in st
Top steps.	7.54	65.30
on Ground at steps	10.3	62.5
1+79 = N end steps	10.2	62.6
		on step.

27284

T.P. 2.69 264.64 10.89 261.95

1+79.88 = Part 2

-10 +0.2 64.8

Lts. on Wall +0.8 65.4

Lts. Base " 2.8 61.8

L 2.7 61.9

S 2.1 62.5

+1' = Δ in Fence

+5 2.0 62.6

1+99' 9.5 Rt. of L = 14" Euc. Tree

2+07.31 = E.C. - End of 2' Fence - 14 in. Δ

-5 7.0 57.6

Rt. 4.9 59.7

+3 = L 16" Euc. Tree

+2 4.1 60.5

L 4.4 60.2

Lts. at Base Cobble Wall 4.6 60.0

+0.6 on " " 1.0 63.6

+5 0.8 63.8

264.64

5

2+30 = L Garage on Rt. 3.4' inst. Wood Floor

on Conc. Wall 56.3 59.01

" Wood Floor 56.3 59.01

2+20 = L 12" Euc. Tree on Rt. 3.2' inst.

2+35 = End Cobble Wall on Lt.

-1.0 on Wall 2.2 62.4

-0.2 Top " 6.7 59.9

L 6.1 58.5

+8.4 = Floor = Conc. Wall Garage 5.4 59.00

Conc. Floor = 6.98 57.66 Now used as Apt.

2+42 = L Garage on W 1.7' Back

Lt. 7.1 57.5

L 6.4 58.2

+9 6.3 58.3

Rt 8.2 56.4

+10 15.2 49.4 slope Capt. →

Conc. Floor 6.96 57.68 Now used as Apt.

2+54 = L Garage on Lt.

2+62 = L Garage on Lt. 1.7' Back

-10 19.0 45.6

Rt 11.8 52.8

+7.5 7.0 57.6

L 7.0 57.6

26464

Lt.		7.3	57.3	
+0.6	Toe Conc. Approx	7.12	57.52	
+1.7	= Garage Floor	7.00	57.6	Now Used #1 Apt
	2+70.58 = End St.			
-5		4.7	59.9	
Lt.		7.5	57.1	
Lt.		7.0	57.6	
+5		7.9	56.7	
Rt.		12.8	51.8	
+10		19.8	44.8	Slope Cont. -7
	2+75			
-10		20.6	44.0	Slope Cont.
Rt.		16.7	47.9	
Lt.		12.0	52.6	
+2		7.1	57.5	
Lt.		7.3	57.3	
+5		6.3	58.3	
	2+93			
-5'		6.6	58.0	
Lt.		8.5	56.1	
+3		8.8	55.8	

26464

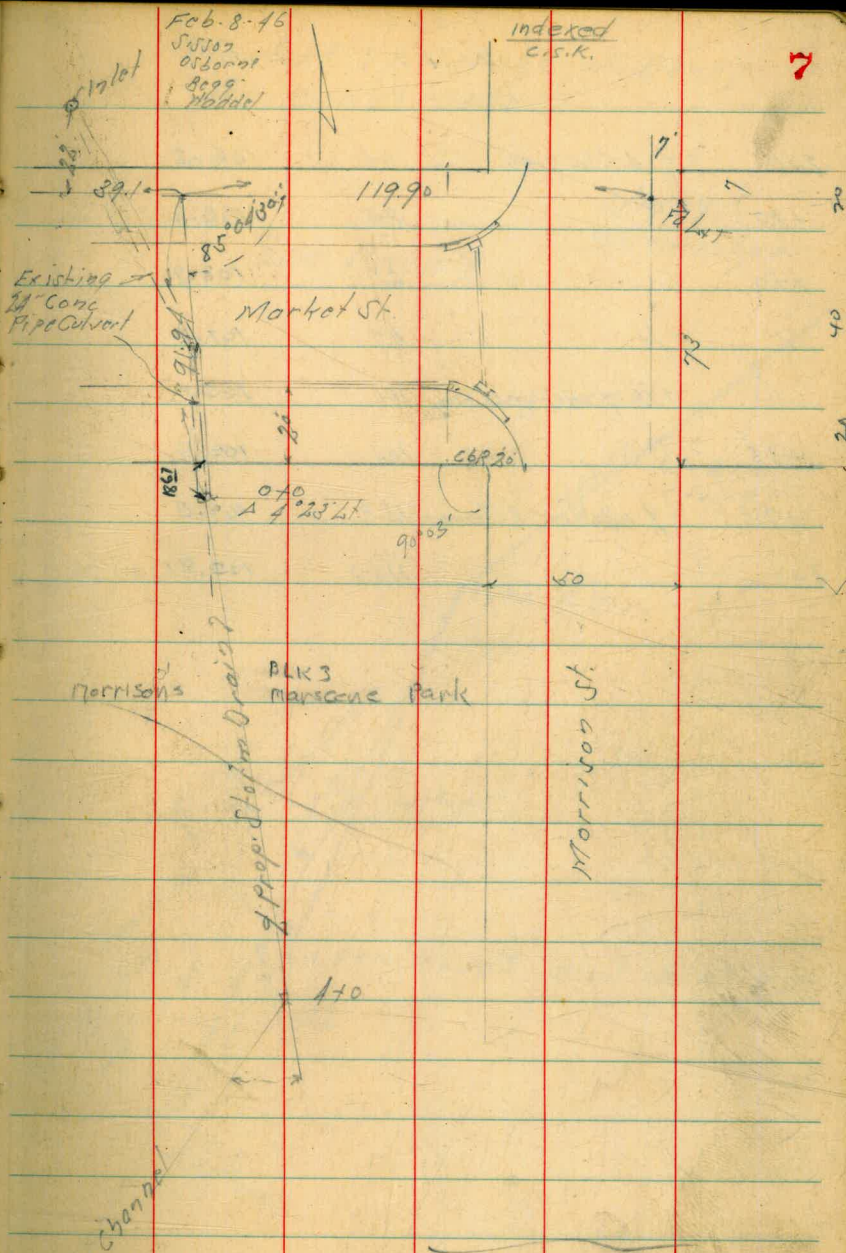
6

Lt.		13.4	51.2	
Rt.		20.7	43.9	
+10		24.4	40.2	
+25		31.0	33.6	Slope Cont.
	3+10			
-25		30.0	34.6	Slope Cont.
-12		21.5	43.1	
Rt.		13.6	51.0	
+70		10.3	54.3	
Lt.		9.5	55.1	
+8		9.7	64.9	
Lt.		7.3	57.3	
+5		5.3	59.3	
	2+41 = 8" Euc. Tree 9' Rt of L			
	2+52 = 6" " " 11.8' " "			
	2+65 " 5" " " 7.7' " "			
T.P.	8.27 271.35	1.56	263.08	
chk starting BM		2.03	269.32	
			269.31	
			0.01	



Proposed Storm Drain  
South of Market West of Morrison St.

BM	0.22	125.61	125.59	N.W. CP Market + 1st St
1st Ex. 24" Conc. Pipe	11.55	119.06		Flow Line
0+0 = Sly 24" Conc. Pipe Cul.	12.83	112.78		Flow Line
TP	3.00	117.04	114.04	
+10 = Fly Bottom 4' Ditch	4.7	112.3		
+12	2.8	119.2		
+50	2.6	119.4		
" 9' Rt. Fly Top Ditch	3.0	119.0		
" 10' Rt. Fly Bottom 2' Ditch	5.0	112.0		
+88	3.6	113.4		
" 17' Rt. = Fly Top Ditch	3.7	113.3		
" 18' Rt. = Fly Bot. Ditch	5.3	111.7		
1+28	5.1	111.9		
" 8' Rt. = Sly + Bottom 7' Ditch	5.2	111.8		
+50 = Sly Water Way	5.6	111.4		
2+0	5.6	111.4		
" 12' Lt. of Water Way	6.8	110.2		
+50	6.2	110.7		
" 8' Lt. = 2' Water Way	8.0	109.0		
2+0 = 2' Bottom 6' Channel	9.7	107.3		



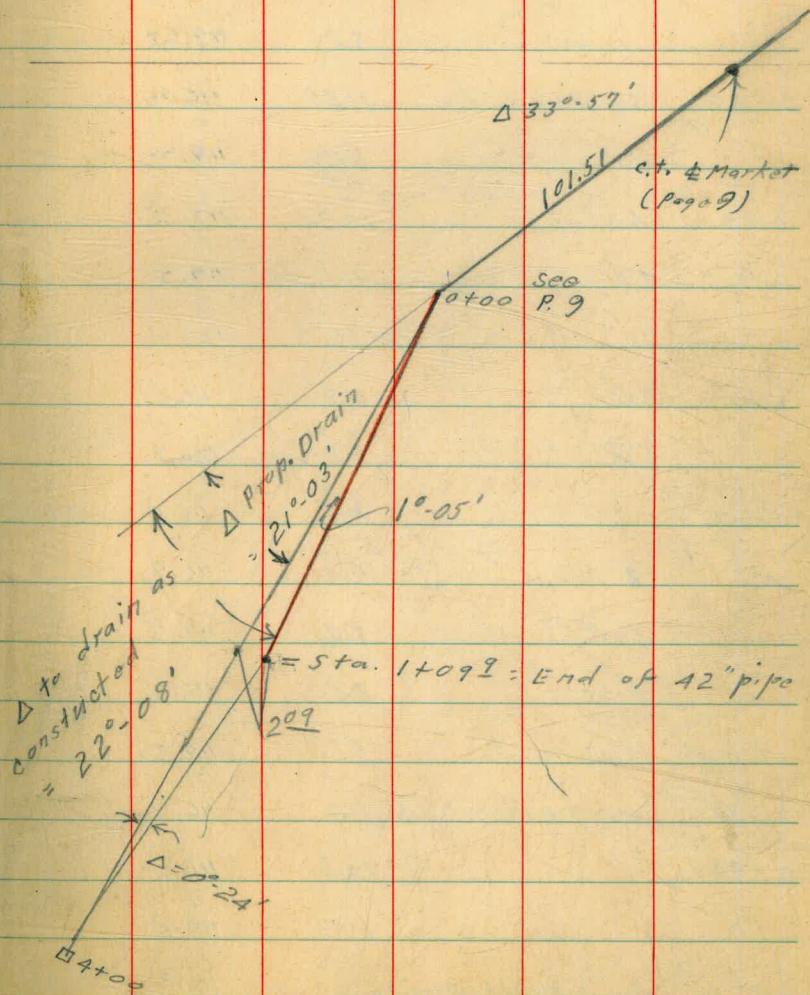
Roll. 4372. MKT St Imp

Station	Description	Value 1	Value 2
2+16	8' 4" Channel	105	106.5
+23		85	108.5
+30		81	108.9
"	9' Lt	97	107.3
"	12' Lt = 7' + Bottom 6' Channel	116	105.9
+85		101	106.9
+95	7' + Bottom 28' Channel	122	109.8
+10		1163	105.91 on Stub

Market St. West of Danby 8  
As constructed

See Page 9

3/10/47  
Sommermeier

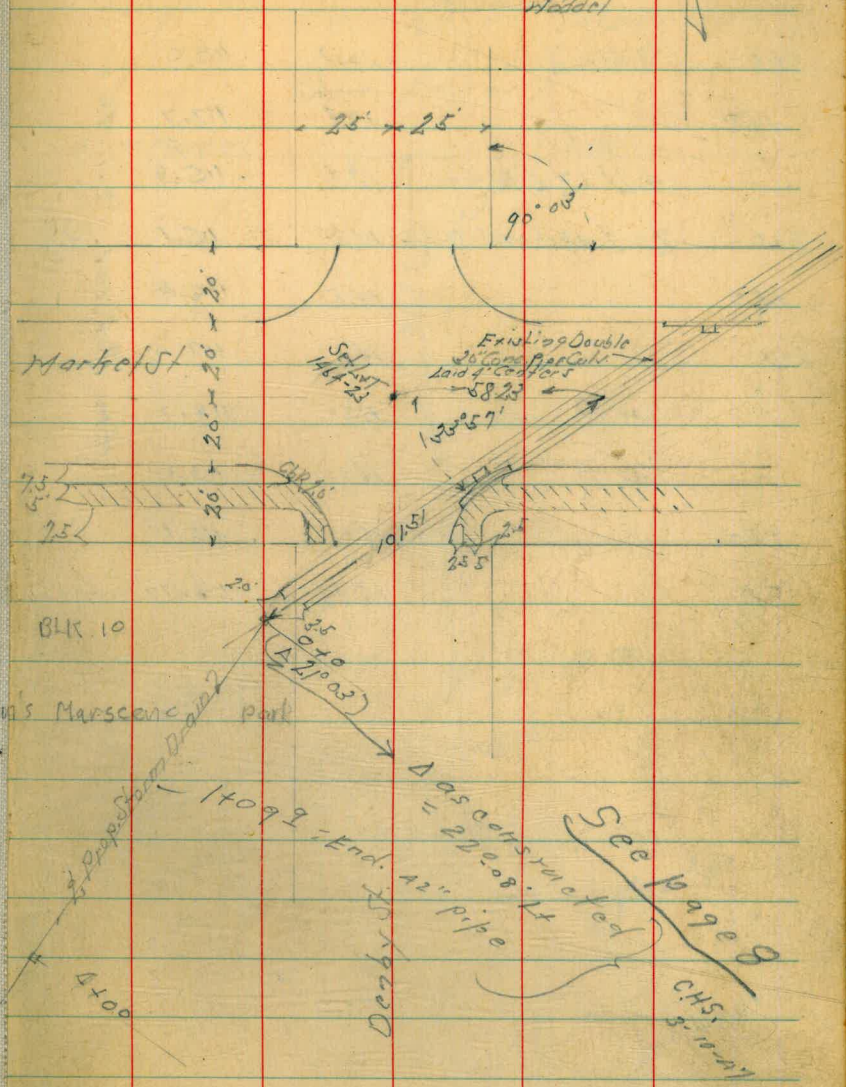


Proposed Storm Drain  
South of Market St West of Denby St

Indexed  
c.s.K.

Feb. 8-46  
S. J. 007  
2360-21  
899  
Waddel

B.M.	0.76	128.30	127.54	5' 8" P Market + 13"
0-60	= S.F.C. 6" lat Market + Denby	10.53	117.77	Bottom of Pipe
0-35	= Sly East 40" Pipe	11.42	116.88	Flow Line
"	" " " "	8.63	119.67	Top Pipe
0-20	= Sly West 36" Pipe	11.40	116.90	Flow Line
"	" " " "	8.59	119.71	Top Pipe
0+0	= 2 1/2' 03" 1/1	10.95	117.35	0 2' Stub
"	3' 1/2' 03"	11.1	117.2	
"	7' " " "	7.1	121.2	
"	5' 1/2' " "	11.0	117.3	
"	7' 1/2' " "	8.2	120.1	
0+50		11.4	116.9	Murriso's
"	2' R1	11.1	116.9	
"	3' R1	8.8	119.5	
"	4' 1/2'	11.5	116.8	
"	5' 1/2'	8.8	119.5	
0+80	= 1 1/4' + Bottom Ditch	11.7	116.6	
0+83		10.3	118.0	
1+0		10.0	118.3	
"	3' 1/2' = 1 1/4' + Bottom Ditch	2.0	116.3	
"	6' 1/2' " "	12.1	116.2	

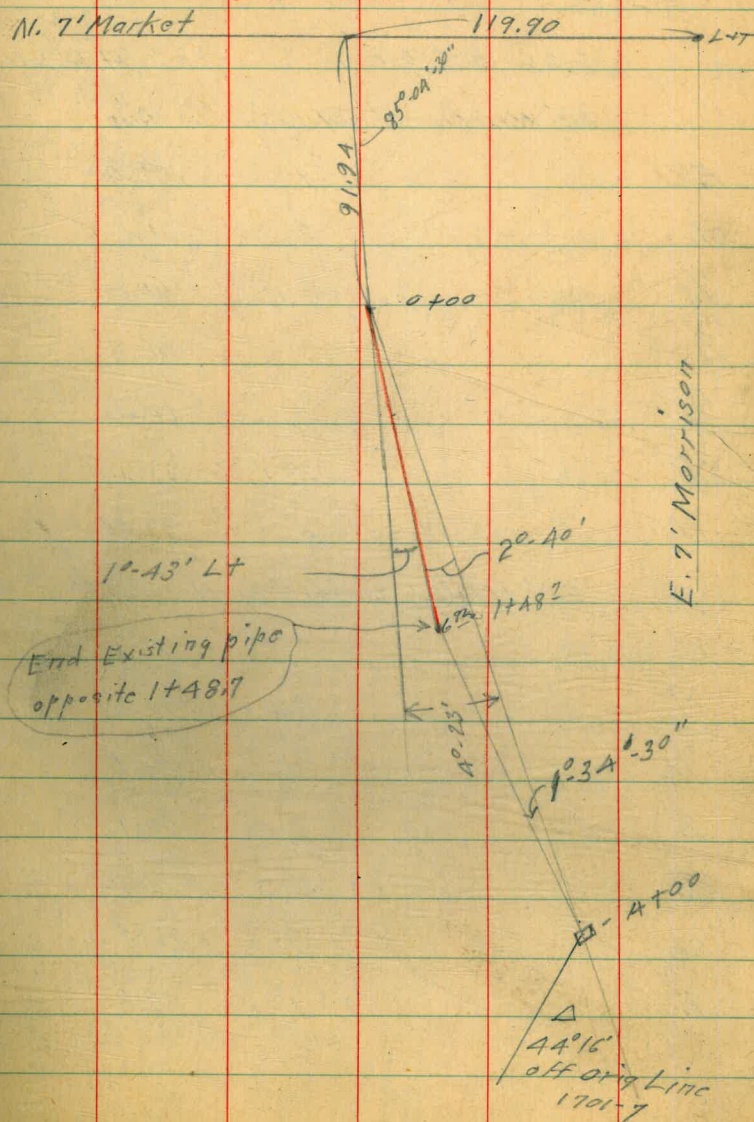


		128.30		
140	8' Lt 1/2	10.3	118.0	
150		10.6	117.7	
"	4' Lt = 2' 6" Ditch	12.4	115.9	
240	2 = 2' 1/2 Bottom 6" Ditch	13.2	115.1	
150		13.5	114.8	
340		14.3	114.0	
"	10' Lt	15.6	114.7	
"	10' Rt	14.7	113.6	
150		15.2	113.1	
410		15.33	112.97	at stub

Notes Reduced. 2-11-26

Drain as constructed 10  
So. of Market. W. of Morrison

See page 7



Walter  
Henderson  
Hunley  
Bugg  
2-19-46

CROSS SECTION 36<sup>th</sup> St. 80' Wide  
from Myrtle Ave  
to Bellingham St.

See sketch p-16

NW 8<sup>th</sup>  
Myrtle + 36<sup>th</sup>  
E. 1644-16

0.66 303.60

302.94

30' North of S.E. Myrtle Ave

E 1.6 02.0

cb 2.2 01.4

1/4 2.6 01.0

2 2.8 00.8

1/4 3.2 00.4

cb 3.7 99.9

1/4 4.2 99.4

20' North of S.E. Myrtle

1/4 4.5 99.1

cb 4.4 99.2

1/4 3.6 300.0

2 3.5 00.1

1/4 2.9 00.7

cb 2.3 01.3

E 1.8 01.8

30360

11

10' N of S.E. Myrtle

E 1.6 02.0

cb 2.0 01.6

1/4 3.0 00.6

2 3.6 300.0

1/4 4.2 99.4

cb 4.8 98.8

1/4 5.1 98.5

0+00 = S.E. Myrtle

RT to SW cor.  
36<sup>th</sup> St

-10 9.0 94.6

1/4 9.2 94.4

cb 7.0 96.6

1/4 9.0 94.6

2 6.7 96.9

1/4 3.3 00.3

cb 2.3 01.3

E 2.3 01.3

+10 1.9 01.7

0+15

-10' 2.8 00.8

E 2.5 01.1

RE

30360

36th St.

cb.	2.7	00.9
+10	2.9	00.7
'14	4.7	98.9
+10	7.1	96.5
ℓ	11.0	92.6
+5	14.4	89.2
'14	13.7	89.9
+8	11.1	92.5
cb.	10.2	93.4
W	11.8	91.8
+20	11.7	91.9
0+30		
-20	12.4	91.2
W	13.3	90.3
+5	16.0	87.6
cb.	13.9	89.7
+2	16.9	86.7
+11	17.4	86.2
'14	13.1	90.5
ℓ	9.6	94.0
+7	8.0	95.6

30360

36th Street

12

'14	4.8	98.8
+4	8.1	00.5
cb.	1.9	01.7
E	1.6	02.0
+10	2.7	00.9
0+55		
-10	3.6	300.0
-3	3.0	00.6
E	2.1	01.5
cb.	5.5	98.1
+8	10.2	93.4
'14	11.7	91.9
ℓ	16.4	87.2
'14	19.5	84.1
+5 in ditch	21.4	82.2
cb.	19.4	84.2
+3	19.4	84.2
+6	16.6	87.0
W	13.9	89.7
+20	9.8	93.8

SE

20360

36th Street

0+75

20'		9.0	94.6
W		12.2	91.4
cb		16.0	87.6
+9'		19.0	84.6
1/4		20.7	82.9
+3		21.7	81.9
+5 in ditch		23.7	79.9
+9 " "		23.7	79.9
E		19.7	83.9
1/4		14.0	89.6
cb		8.0	95.6
E		4.7	98.9
+10		4.5	99.1
	1+00		
-20		6.5	97.1
E		9.7	93.9
TP	115 293.39	11.36	292.24
cb		5.9	87.5
1/4		8.7	84.7
+8		11.8	81.6
E		14.4	79.0

29339

36th St.

18

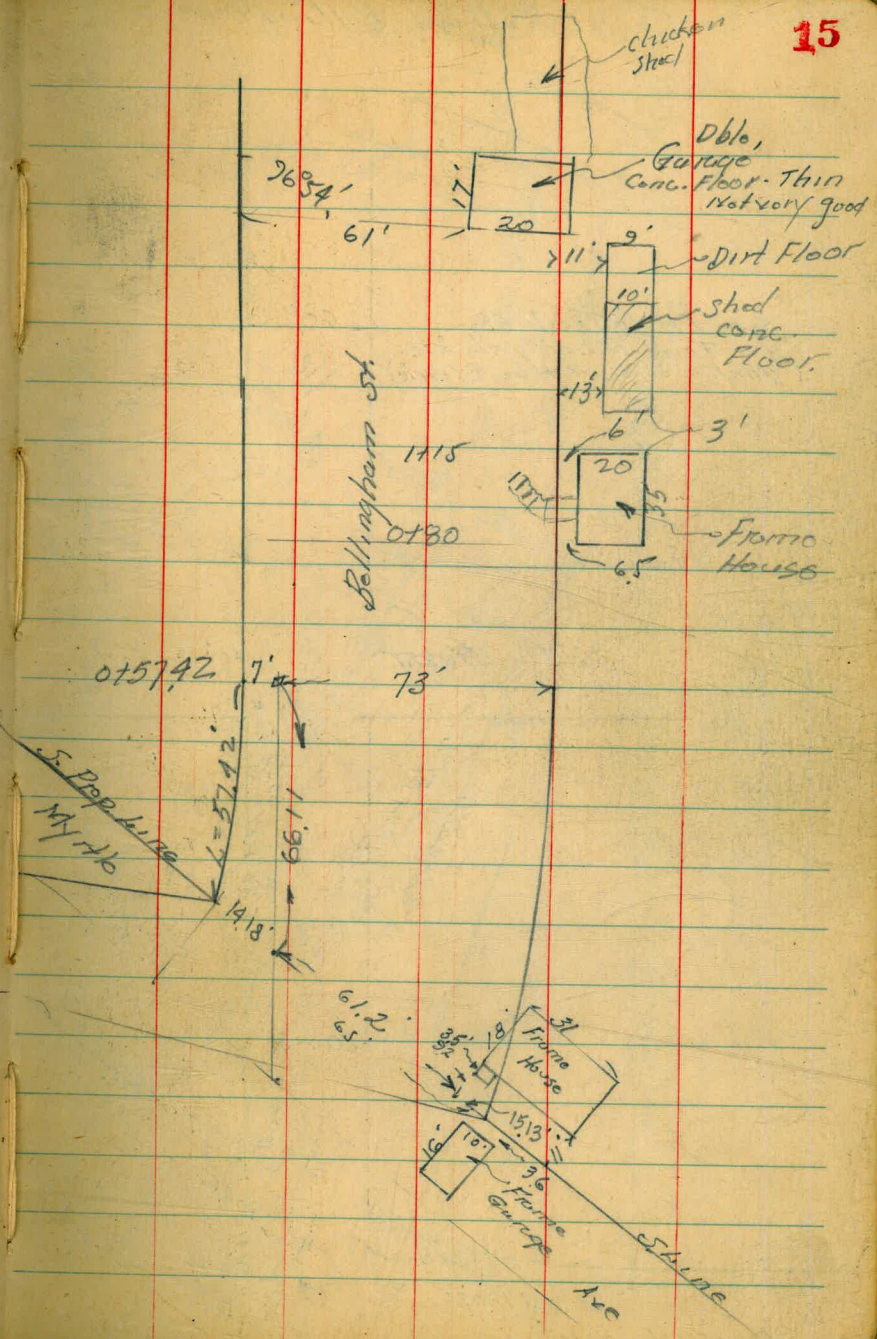
E +5 = E Ditch		15.3	78.1
1/4		9.6	83.8
cb		5.0	88.4
+7		3.3	90.1
W		1.1	92.3
+20		+2.0	95.4
	1+25		
-20		+2.4	95.8
W		0.0	93.4
cb		3.2	90.2
1/4		6.4	87.0
+10		2.8	83.6
E		12.3	81.1
+7 = W edge ditch		16.5	76.9
1/4 = E ditch		16.4	77.0
cb		10.8	82.6
E		9.9	83.5
+20		2.0	91.4
	1+50		
-30		1.8	91.6
-5 in ditch		18.3	75.1

	29339	36th St.
E in ditch	18.3	75.1
+5 " "	18.3	75.1
cb.	13.0	80.4
1/4	9.7	83.7
1/2	7.0	86.4
1/4	4.0	89.4
cb.	0.9	92.5
W	+1.1	94.5
+15	+2.8	96.2
	2+00	
-15	+5.0	98.4
W	+2.7	96.1
cb.	+0.2	93.6
1/4	3.2	90.2
1/2	7.3	86.1
1/4	12.2	81.2
cb.	18.5	74.9
+2 in ditch	19.5	73.9
+11 " "	21.1	72.3
E " "	21.1	72.3
+20	13.1	80.3
+30'	9.9	83.5

	29339	
	2+30	
-40	17.1	76.3
-25 in ditch	22.0	71.4
E " " Wedge	21.6	71.8
cb.	14.4	79.0
1/4	9.7	83.7
1/2	6.3	87.1
1/4	1.9	91.5
cb.	+1.4	94.8
W	+4.1	97.5
+15	+5.8	99.2
	2+55	
-15	+6.4	99.8
W	+5.2	98.6
cb.	+3.2	96.6
1/4	+1.1	94.5
1/2	1.4	92.0
1/4	4.8	88.6
cb.	9.2	84.2
E	14.0	79.4
+19	23.0	70.4
-12 1/2	23.4	70.0



+27	10 Ditch	26.0	67.4
+30		22.7	70.7
+37		23.0	70.4
+50		17.7	75.7
2+81.79			
-45	in Ditch	27.0	66.4
26		17.1	76.3
E		8.5	84.9
cb		4.4	89.0
TP	12.15 302.53	30.1	270.38
1/4		10.4	92.1
2		8.4	94.1
1/4		6.7	95.8
cb		5.5	97.0
VI. on Conc Man		4.08	298.45
Section on Curve N. of Bellingham			
W		4.08	98.45 ✓
cb		5.1	97.4
1/4		6.7	95.8
2		8.5	94.0
1/4		10.0	92.5
cb		12.0	90.5
E		14.0	88.5





Walker  
Heldin  
Hunley  
Boyd  
2-19-46

CROSS SECTION - BELLINGHAM ST.  
80' Wide  
from Myrtle Ave to 36th St.  
Sketch P-16

309.09

17

				±13	16.2	92.9
				+16-W	23.2	85.9
				+20	27.0	82.1
	6.15	309.09	302.94			
					0+28.71	Radial
				-20	27.0	82.1
				W	23.2	85.9
F		36	05.5			
+8		5.0	04.1	+25	16.7	92.4
+21		5.3	03.8	±	12.5	96.6
+35		8.1	01.0	+10	2.1	00.0
+45.25 = E		11.0	98.1	+28	8.9	00.2
± +60		14.3	94.8	+29	5.5	03.6
" +45.75 = W		21.2	87.9	E	4.7	04.4
W +5		22.9	86.2	+10	3.8	05.3
+15		25.3	83.8			
					0+57.42 = E.C.	
N.E. Car House		23.3	85.8	-10	4.0	05.1
S.E. " 1		23.3	85.8	E	5.1	04.0
	0+00					
				+7' on Conc. Mort.	6.08	03.01
E		3.6	05.5	+10	6.0	03.1
+16		5.4	03.7	+23	9.3	99.8
+22		6.5	02.6	+30	12.9	96.2
+40				±	14.9	96.2
= ±		7.6	01.5	+3	13.0	96.1

B.M. NW 1/4  
36th Myrtle  
P-17

309.09 Bellingham Street

L +6	157	93.4
+30 = 10" Pepper Tree	20.8	88.3
W	237	85.4
+20	273	81.8
0+80		
6.5" W. W.L. = NE Cor House	254	83.7
1+00		
-6.5	264	82.7
W on Brick Terrace	286	83.5
+8	240	85.1
+20 = W edge Dirt Drive	182	90.9
L	17.6	91.5
+3 = E " " "	13.3	95.8
+15	8.9	00.2
+18	9.0	00.1
+32	58	03.3
E	5.1	04.0
+10	4.3	04.8
1+25		
-10	48	04.3
E	53	03.8

L +11	6.2	02.9
+20	2.3	99.8
+30	10.3	98.8
+39	12.9	96.2
L = E edge Dirt Drive	20.0	89.1
+35 W " " "	20.8	88.3
+39	21.0	88.1
W	273	81.3
+13 Conc. Floor.	28.3	80.8
1+50		
-13 Sand Conc. Floor	28.3	80.8
-5	280	81.1
-4 = W edge Dirt Drive	22.1	87.0
W	21.9	87.2
+34 E " " "	21.7	87.4
L	15.3	93.8
+5	11.2	97.9
+16	9.0	00.1
+20	8.8	00.3
+29	6.0	03.1
L	4.9	04.2
+10	4.5	04.6

1+75 309.09 Bellingham Street

-10		4.7	04.4
E		5.3	03.8
+11		6.3	02.8
+23		8.9	00.2
L		14.9	94.2
+8		17.0	92.1
+11		19.0	90.1
+12 = E. edge Dirt Drive		23.4	85.7
+21		23.4	85.7
+31	conc. Flank	24.4	84.7
W	" "	24.4	84.7
+11	at shed	28.0	81.1
	2+00		
-20	Slope Cont. for 75'	33.4	75.7
W = W edge Chicken Pen		25.0	84.1
+13		24.5	84.6
+14		21.3	87.8
+20		21.3	87.8
+24		19.8	89.3
L		14.8	94.3
+18		8.7	00.4

309.09

E+30		6.5	02.6
E		5.6	03.5
+10		4.8	04.3
T.P.	2.67 304.95	6.81	302.28
	EL. Stations		
	2+36.48 - B.C. Lt.		
-10		1.7	03.3
E.L.		1.8	03.2
+17		3.6	01.4
L		10.5	94.5
+24		17.2	87.8
+26		19.4	85.6
W		22.6	82.4
+10		27.6	82.4
+11		27.0	78.0
+20	Slope Cont. for 75'	31.0	74.0
	2+70.87		
	Curve in 4 Parts		
-20	W edge Chicken Pen	29.0	82.0
W	" " shed	29.0	82.0
+1		21.5	83.5
+10		21.0	84.0
+11		18.6	86.4

19

EL. Stations

304.95 Bellingham

L		11.5	93.5
+25		4.1	00.9
E		2.8	02.2
+10		2.2	02.8
	3+05.27		
-10		3.0	01.4
E		3.6	01.4
+11.55	PZ. 7.0' line on Coric Mon	4.58	00.37
+21		6.1	98.9
L		11.8	93.2
+35		21.8	83.2
+36		22.6	82.4
W+28'		28.8	76.2
	3+39.66		
-25		22.7	75.3
W		22.6	82.4
+20		17.8	87.2
L		11.1	93.9
+15		6.6	98.4
F		4.6	00.4
+10		5.1	99.9

304.95

20

	3+74.05	Redise/ thrs. NW 36th	
N. ch <sup>on</sup> Mon		6.53	298.42
			298.45 P-15
+22			0.03
+22		6.0	99.0
L		9.6	95.4
+20		16.1	88.9
W		22.4	82.6
+30		30.6	74.4
	3+99.29	EL station	
-35		30.2	74.8
SW		20.1	84.9
+20		14.4	90.6
L		9.4	95.6
+10		7.8	97.2
NE		8.2	96.8
	4+24.53		
NE		11.0	94.0
+20		9.7	95.3
L		10.4	94.6
+20		13.5	91.5
SW		17.7	87.3
+35		28.9	76.7

304.95 Bellington

T.P. 1.38 224.35 11.98 292.97  
 N.E. line Stationers  
 446832 Radial thru N.E. Cor 36th

-20 12.7 81.6

SW 2.4 84.9

+20 5.7 88.6

E 4.3 90.0

+20 4.5 89.8

N.E. Cor 36th 5.6 88.7

or E. line 36th = Diag. Section

N.E. 5.6 88.7

+22 5.6 88.7

+44.1  
= E 6.1 88.2

+22 7.1 87.2

S.E. Cor 36th 2.4 84.9

+15 11.3 83.0

510.303 Radial thru S.E. Cor 36th

S.E. 2.4 84.9

+20 8.0 86.3

E 8.2 86.1

+20 9.4 84.4

N.E. 10.9 83.4

+20 14.0 80.3

21

294.35

T.P. 8.56 301.99 0.92 293.43

chk calc Mon P.15 3.57 298.42

298.45

0.03

Walker  
Harden  
Hunley  
2-20-46

CROSS SECTION INTERSECTION

UPAS & RICHMOND ST.

H. I.

903 289.07

280.04 & Richmond St.

N.Y. B.P. Upas & Richmond 5.13 283.94

SEC A

W cb Produced 5.8 283.27

+3 on Pav. 6.31 282.76

'4 " " 6.01 283.06

2 5.90 283.17

'4 = E edge Pav. 5.98 283.09

+7 5.9 283.17

E cb Produced 5.0 284.07

+5 4.3 284.77

SEC B

-5 4.3 284.77

E cb 5.4 283.67

+5 = E. edge Pav. 5.69 283.38

'4 on Pav. 5.76 283.31

2 " " 5.84 283.23

'4 5.94 283.13

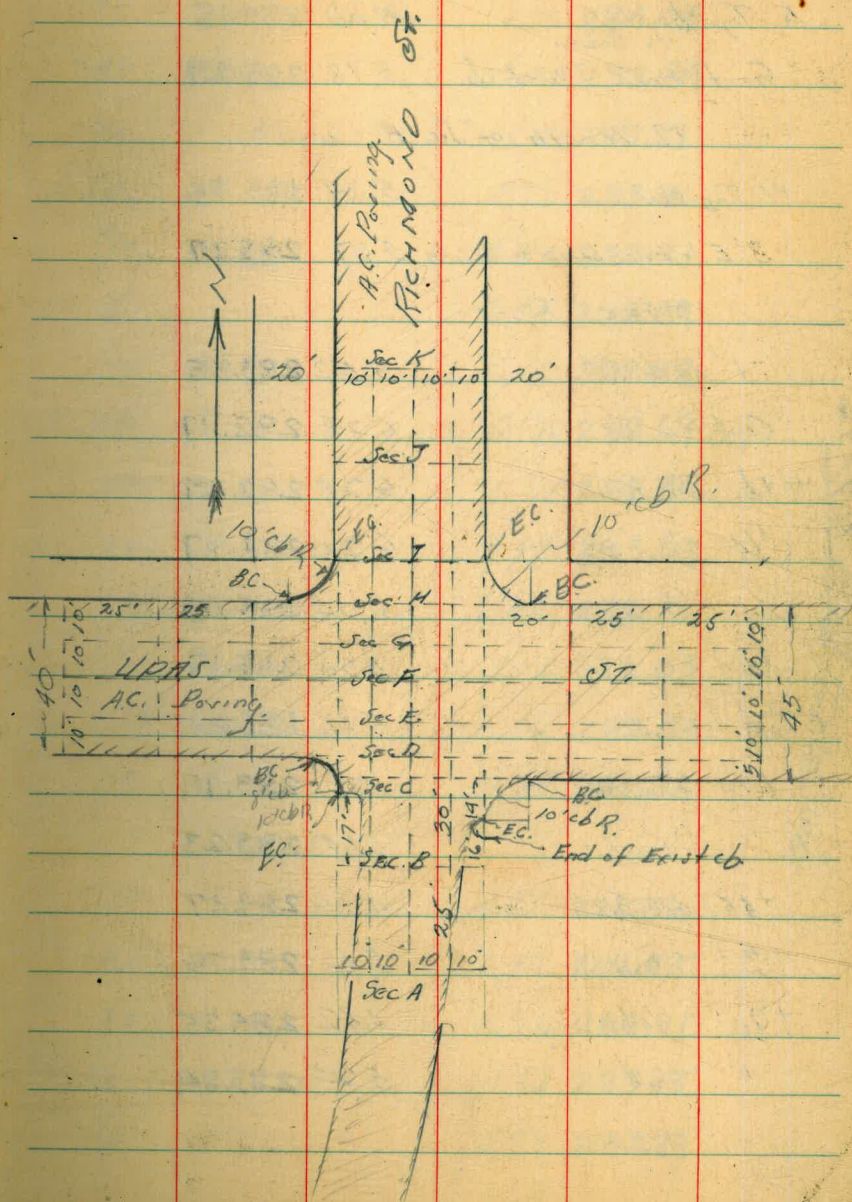
+4' W edge Pav. 6.09 282.98

W cb. 5.4 283.67

B.M. B.P.  
S.E. Myrtle  
& Richmond

Indexed  
c. s. k.

22



m. m. 4/9/46



16' North of Sec. B on E

E Top cb. 4.89 284.18

" Gut. Pair = 3' W of cb. 5.78 283.29

17' North of Sec. B on W

W Top cb. 5.29 283.83

3' E = Pair strip to South 5.97 283.10

SEC. C =

-1' on cb Ret. 5.52 283.55

Gut. 6.28 282.79

W/Cb. on Pav. 6.28 282.79

'14 " " 6.20 282.87

'40 " " 6.04 283.03

'14 " " 5.90 283.17

E. Cb. Gut. 5.86 283.21

+20 on cb. 5.16 283.91

" " Gut. 5.84 283.23

+45 on cb. 4.80 284.27

" " Gut. 5.48 283.59

+70 " cb. 4.52 284.55

" " Gut. 5.23 283.84

SEC. D

-70' = 70' E Cb on Pav. 4.99 284.08

-45 on Pav. 5.23 283.84

-20 " " 5.56 283.51

E. Cb. 5.76 283.31

'10 " " 5.86 283.21

'8 " " 6.08 282.99

'14 " " 6.19 282.88

W cb. 6.38 282.69

+20 Gut. 6.77 282.30

+20 cb 6.03 283.04

+45 on cb. 6.26 282.81

" " Gut. 7.02 282.05

+70' on cb. 6.53 282.59

" " Gut. 7.26 281.81

SEC. E

-70 " " 6.75 282.32

-45 " " 6.52 282.55

-20 " " 6.26 282.81

W cb. 5.94 283.13

'14 " " 5.78 283.29

m m 4/9/46

m m 4/9/46

28907 Upas & Richmond

Lo	5.58	283.49
'14	5.44	283.63
E. cb.	5.28	283.79
+20'	5.03	284.04
+45	4.69	284.38
+70'	4.44	284.63
SEC F		
-70	4.15	284.92
-45	4.39	284.68
-20	4.63	284.44
E. cb.	4.92	284.15
'14	5.10	283.97
Lo	5.26	283.81
'14	5.44	283.63
W. cb.	5.58	283.49
+20'	5.87	283.20
+45	6.18	282.89
+70'	6.45	282.62
SEC G		
-70	6.37	282.70
-45	6.09	282.98

m.m. 4/19/44

-25	5.78	283.29
W. cb.	5.56	283.51
'14	5.47	283.60
Lo	5.20	283.87
2' N- $\frac{1}{2}$ MH. on Rim	5.17	283.90
'14	5.07	284.00
E. cb.	4.94	284.13
+20'	4.64	284.43
+45	4.40	284.67
+70	4.17	284.90
SEC H.		
-70' on cb.	3.76	285.31
" " Gut.	4.43	284.64
-45 "	4.68	284.39
" cb.	3.95	285.12
-20' "	4.14	284.93
" Gut.	4.82	284.25
E. cb.	5.03	284.04
'14	5.18	283.89
Lo	5.35	283.72
'14	5.97	283.60

m.m. 4/19/44

28907 Upos + Richmond

Wcb, Gut.	5.69	283.38
+20 "	5.87	283.20
+20 on cb	5.14	283.93
+45 " "	5.40	283.67
" " Gut.	6.10	282.97
+70' " "	6.37	282.70
" " cb	5.64	283.43

SEC. I = N6 Upos

Wcb.	5.17	283.90
"Gut.	5.78	283.29
1/4	5.38	283.69
2/3	5.13	283.94
1/4	5.02	284.05
Gut.	5.00	284.07
E. Cb.	4.28	284.79

SEC. J

E. Cb.	4.62	284.95
Gut.	5.37	283.70
1/4	5.33	283.74
2/3	5.40	283.67
1/4	5.70	283.37
Gut.	6.15	282.92
Wcb.	5.48	283.59

m.m. 9/9/46

SEC K

Wcb	5.82	283.25
Gut.	6.53	282.59
1/4	6.06	283.01
2/3	5.77	283.30
1/4	5.62	283.45
Gut.	5.70	283.37
E. Cb.	4.96	284.11
chk starting BM.	9.03	280.04

Essex Returns P-31

m.m. 9/9/46

Walker  
Hardin  
Hinley  
Begg  
2-20-46

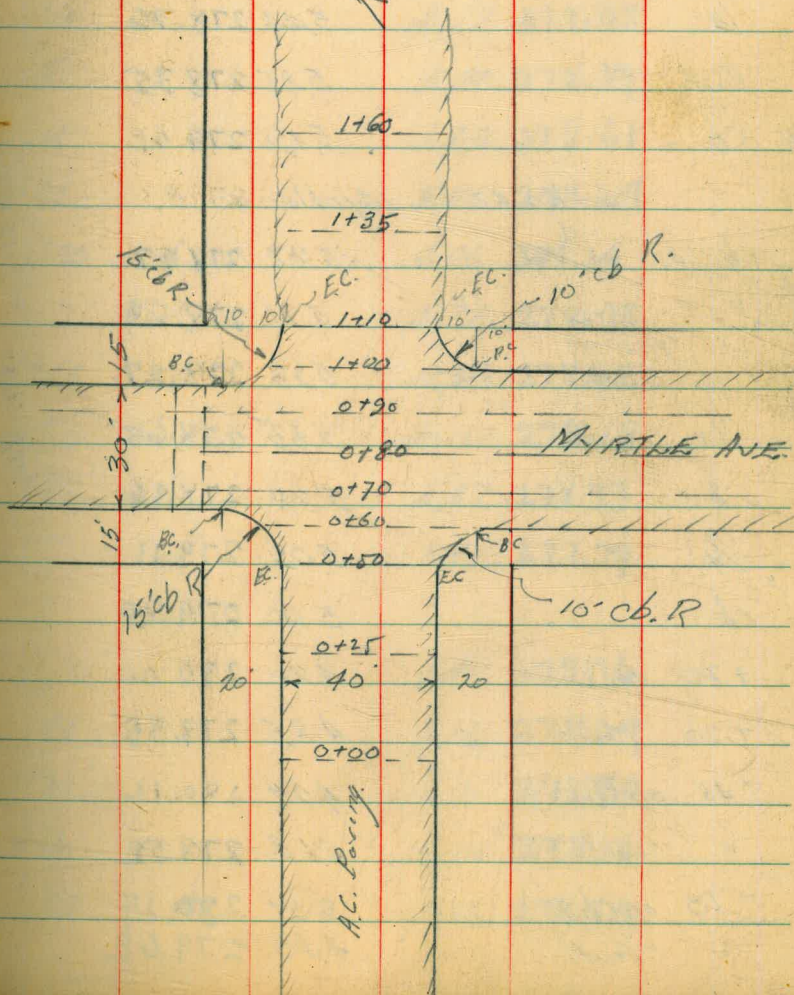
CROSS SECTION - INTERSECTION  
MYRTLE AND RICHMOND ST

Indexed  
C.S.K.

26

		B.M.
	4.16	284.20
	0+00	280.04
Exc.	3.60	280.60
Gut	4.22	279.98
1/4	4.17	280.03
1/2 on Rim NH	4.27	279.93
1/4	4.68	279.52
Gut.	5.12	279.08
cb.	4.44	279.76
	0+25	
cb.	4.80	279.90
Gut.	5.49	278.71
1/4	5.06	279.19
1/2	4.74	279.96
1/4	4.60	279.60
Gut.	4.56	279.64
cb.	3.86	280.34

7 1/2' 1/4' wall



RICHMOND ST.

MYRTLE AVE.

A.C. Parry

284.20

0+50

F cb.	4.19	280.01
Gut	4.90	279.30
1/4	4.90	279.30
1/2	5.06	279.14
1/4	5.44	278.76
Gut.	5.85	278.35
K cb.	5.19	279.01
0+60 = S cb Myrtle on E		
cb-4 on Ret.	5.23	278.97
4.5 " " Gut	5.91	278.29
Wcb Gut.	5.93	278.27
1/4	5.55	278.65
1/2	5.29	278.96
1/4	5.09	279.11
cb	5.00	279.20
+20 on cb	4.20	280.00
+20 "Gut.	4.85	279.35
+45 on cb	4.04	280.16
" "Gut.	4.68	279.52
+70 on cb	3.91	280.29
" "Gut.	4.58	279.62

7/3/65 - W. U. L.

284.20

0+65 = cb line on W

cb-70	4.49	279.71
cb-45	4.64	279.56
"-20	4.85	279.35
Ecb.	5.03	279.17
1/4	5.17	279.03
1/2	5.31	278.89
1/4	5.59	278.61
Wcb	5.96	278.29
+20 on cb.	5.06	279.14
" "Gut.	5.77	278.43
+45 on cb	5.58	278.62
" "Gut.	6.02	278.18
+70 "cb	5.87	278.33
" "Gut.	6.41	277.79
0+70		
-70	6.44	277.76
-45	6.16	278.09
-20	5.90	278.30
Wcb.	6.04	278.16
1/4	5.66	278.54

27

7/3/65 - W. U. L.

0+70 284.20

L	5.38	278.82
E 1/4	5.22	278.98
E cb.	5.04	279.16
+20'	4.82	279.38
+45'	4.62	279.58
+70'	4.44	279.76

0+80

-70'	4.56	279.69
-45'	4.71	279.99
-20'	4.91	279.29

E cb	5.19	279.01
1/4	5.35	278.85
2/4	5.53	278.67
3/4	5.82	278.38
W cb.	6.19	278.01
+20'	5.92	278.28
+45'	6.22	277.98
+70'	6.62	277.58

0+90

-70'	7.32	276.88
-42'	6.88	277.32

284.20

-20	6.98	277.72
W cb	6.55	277.65
W 1/4	6.18	277.02
2/4	5.82	278.37
E 1/4	5.63	278.57
E cb.	5.48	278.82
+20	5.29	278.91
+45	5.13	279.67
+70	4.94	279.26

0+95

-70'	5.15	279.05
-45'	5.32	278.88
-20'	5.56	278.64
E cb.	5.68	278.52
E 1/4	5.84	278.36
2/4	6.06	278.14
W 1/4	6.41	277.79
cb.	6.82	277.38
+20 on cb	6.15	278.05
" " Gut	6.68	277.52
+45 on cb	6.74	277.46
" " Gut	7.26	276.94
7.10	277.10	
470 on cb	7.65	276.55
" Gut		

284.20 - W cb.

284.20 - W cb.

Wcb-4 on cb Ret.	6.08	278.12
" " "Cut Inlet.	7.08	277.12
Wcb: Pav.	7.01	277.19
W 1/4	6.59	277.61
2	6.26	277.99
E 1/4	6.00	278.20
E cb.	5.86	278.39
+20 on cb.	5.17	279.03
" "Cut.	5.84	278.36
+45' on cb.	4.99	279.21
" "Cut.	5.58	278.62
+70' on cb.	4.72	279.98
" "Cut.	5.32	278.88
1+10 = N.L. = Exd. Exist. Cb.		
E cb.	5.14	279.06
Cut.	5.71	278.99
E 1/4	5.90	278.30
2	6.07	278.13
1/4	6.52	277.68
Cut	6.91	277.29
cb.	6.02	278.18

m m 4/10/16

cb-4	6.1	278.10
" -2' on Rolled Asphalt cb	6.20	277.00
v/cb " " "	6.69	277.51
Cut	7.08	277.12
W 1/4	6.68	277.52
2	6.19	278.01
E 1/4	6.06	278.14
+8	6.05	278.15
+9	5.98	278.22
cb. on Rolled Asphalt cb	5.60	278.60
+2'	5.35	278.85
+9 on "Walk	5.34	278.86
1+35		
-1'	5.96	278.29
-2'	6.10	278.10
E cb.	6.58	277.62
+1	6.84	277.36
E 1/4	6.69	277.51
2	6.72	277.48
W 1/4	7.08	277.12
+9	7.57	276.63
W cb.	7.36	276.89
+2'	6.82	277.38

m m 4/10/16

1735 28420 Myrtle & Richmond

W Cb+4 6.7 277.50

1760

Wcb-4 7.7 276.50

-2' 7.79 276.41

cb. 8.12 276.08

+1 8.22 275.98

1/4 7.96 276.24

2/4 7.58 276.62

E 1/4 7.70 276.50

+9 7.92 276.28

cb. 7.47 276.73

+2 7.22 276.98

+4 7.1 277.10

NE Return L=15.7' 3 Parts

on cb. = PC. 5.24 278.96

" Gut. 5.86 278.34

① on Gut. 5.86 278.39

② " Gut. 5.88 278.32

EC. " 5.71 278.19

cb. 5.14 279.06

30

NW Ret. L=23.7' 3 Parts

EC. on Cb. 6.02 278.18

" " Gut. 6.91 277.29

① " 7.05 277.15

② " 7.10 277.10

3 PC. on Gut. 6.78 277.42

" " cb. 6.06 278.14

SW Ret. L=23.7' 3 Parts

BC on cb. 5.13 279.05

" " Gut. 5.80 278.40

① " " 5.89 278.31

② " " 5.88 278.32

③ EC " 5.85 278.35

" on Cb. 5.19 279.01

SE Ret L=15.7' 3 Parts

EC. on cb. 4.19 280.01

" " Gut. 4.90 279.30

① " 4.90 279.30

② " 4.88 279.32

③ BC Gut. 4.86 279.34

" cb. 4.22 279.98

M.M. 4/11/46

M.M. 4/11/46



Walter  
2-21-46

Levels on Returns  
Lipos & Richmond Cont. from P-25  
Sketch P-22

JMN  
Lipos  
& Richmond

	6.32	290.26	283.94
NE Ret L=15.7 3 Parts			
BC. on cb.	5.41	284.85	
" Gut.	6.06	284.20	
① "	6.09	284.17	
② "	6.13	284.13	
③ E.G. Gut	6.16	284.10	
" on cb.	5.44	284.82	
N14 Ret L=15.7 3 Parts			
E.G. on cb	6.35	283.91	
" " Gut.	6.25	283.31	
① "	6.28	283.28	
② "	6.21	283.35	
③ = BC "	6.27	283.29	
" cb.	6.30	283.96	
S14 Ret			
BC. on cb.	7.12	283.14	
" " Gut.	7.81	282.45	
①	7.60	282.66	
②	7.40	282.86	
③ = E.G. on cb.	6.40	283.96	
" " Gut.	7.06	283.20	

m.m. 4/11/46

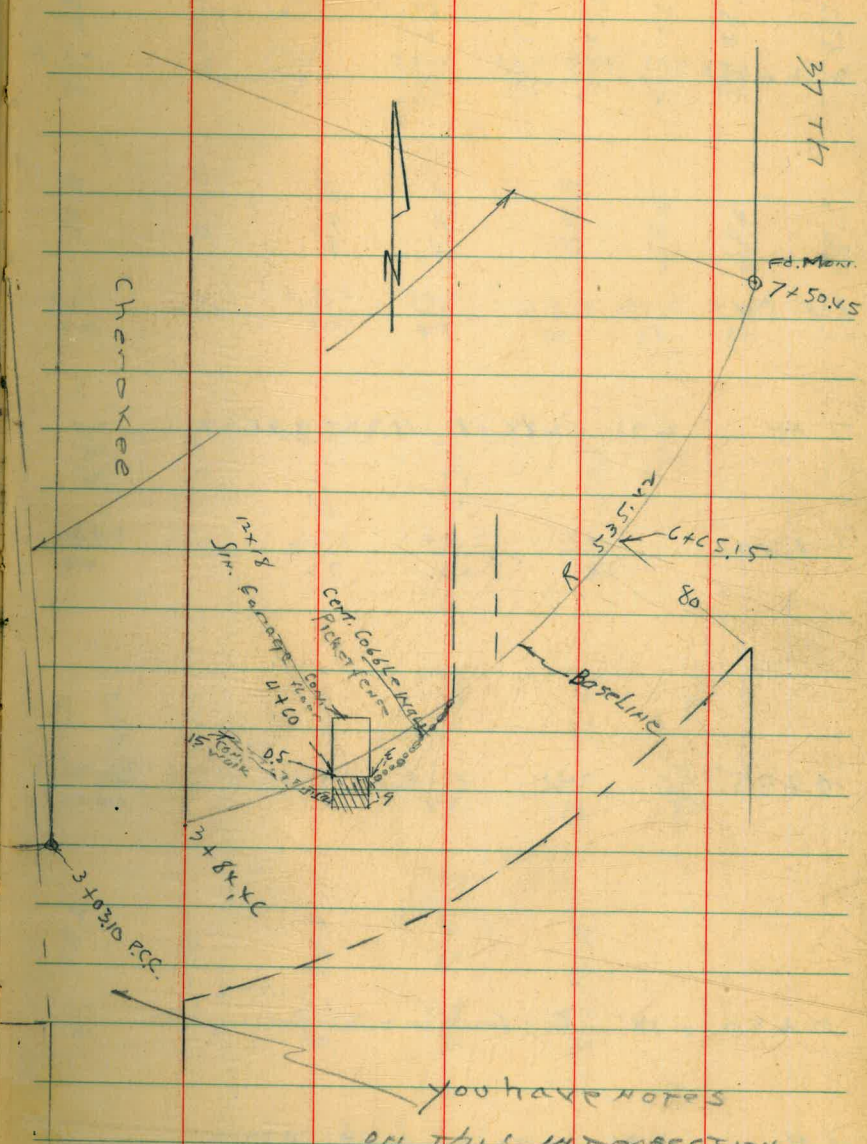
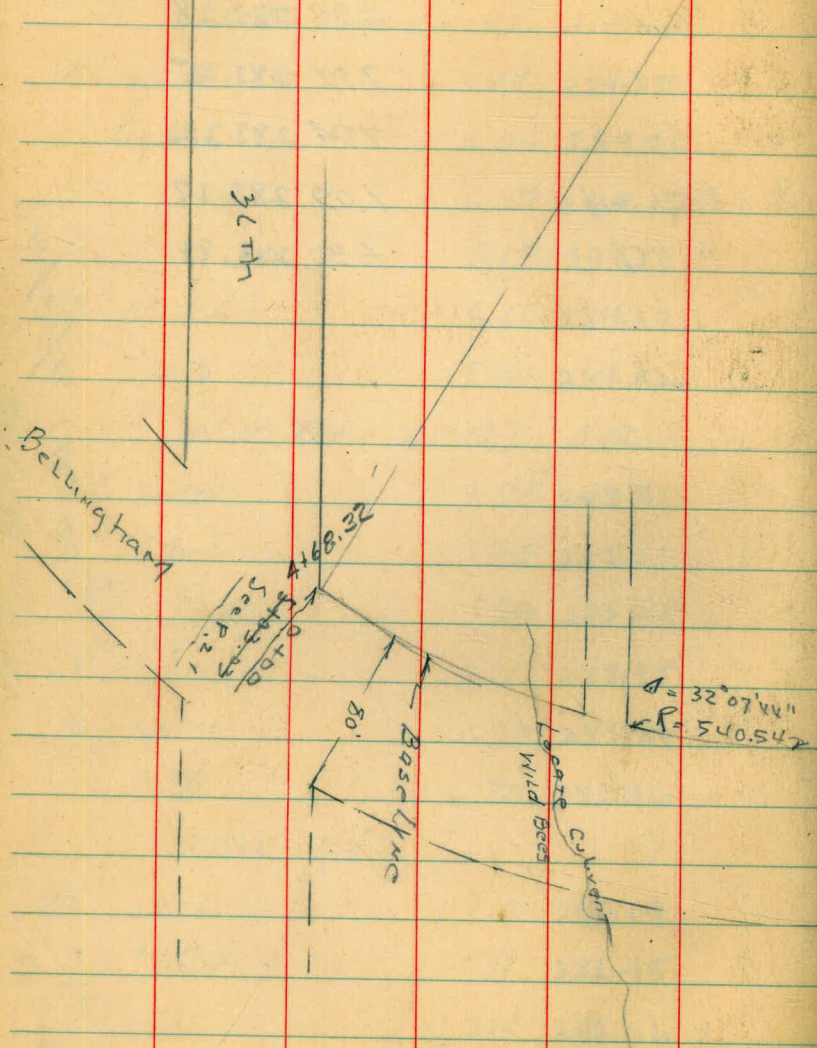
SE Return L=15.7 3 Parts

E.G. on cb	6.16	284.10
" " Gut.	6.28	283.28
① "	7.01	283.25
② "	7.04	283.22
③ BC. on Gut	7.09	283.17
" " cb.	6.39	283.87

m.m. 4/11/46

Cross Section of Bellingham.

220000 36TH to 37TH  
 Sommers Meyer  
 8099  
 4-25-46



you have notes  
 on this intersection

Bellingham

LT

2 + 00

1 + 50

T.P.

2.91    284.18    11.37    281.27

634

1 + 10

$\frac{29.2}{40}$

0 + 95

$\frac{33.1}{40}$

0 + 50 = 50' S Ely from N E Cor Bellingham

36744

T.P.    3.51    292.68    10.49    289.13

NW Cor.

36744

Bellingham P.15

1.17    299.62

298.45

N.6.  
Baseline

$\frac{286.2}{10}$

$\frac{17}{17}$

$\frac{13.1}{18}$

$\frac{20.4}{40}$

$\frac{22.4}{52}$

$\frac{34.4}{80}$

$\frac{39.5}{90}$

$\frac{39.9}{110}$

$\frac{34.5}{125}$

33

49.7

77.8

67.0

56.0

52.1

50.3

54.6

61.4

66.6

$\frac{17.2}{25}$

17.2

$\frac{28.2}{20}$

$\frac{32.1}{27}$

$\frac{23.9}{40}$

$\frac{32.6}{52}$

$\frac{22.8}{80}$

$\frac{17.6}{100}$

574

568

284.18

63.1

78.9

$\frac{35.2}{10}$

35.8

$\frac{38.1}{25}$

$\frac{29.5}{40}$

$\frac{13.7}{80}$

$\frac{35.2}{32}$

57.5

61.1

66.3

76.6

79.1

$\frac{31.5}{23}$

35.7

$\frac{26.3}{50}$

$\frac{16.0}{70}$

$\frac{13.5}{80}$

78.8

788

84.9

86.8

86.8

$\frac{74.2}{10}$

138

$\frac{7.7}{40}$

$\frac{5.8}{70}$

$\frac{1.4}{80}$

292.68

4

3 + 84, xc = Radial with NE Cor  
Cherokee +  
Bellingham

3108.10

2 + 75

T.P. 12.20 295.55 0.83 283.35

2 + 50

2 + 15

284.18

91.7	89.2	87.1	85.4	82.2	81.4	80.0
3.8	$\frac{1.7}{20}$	$\frac{3.4}{40}$	$\frac{10.1}{62}$	$\frac{13.3}{75}$	$\frac{14.1}{80}$	$\frac{15.5}{100}$

89.3	87.7	86.4	85.7	80.5	80.2
12	$\frac{2.8}{20}$	$\frac{2.1}{40}$	$\frac{9.8}{55}$	$\frac{15.0}{80}$	$\frac{15.3}{90}$

87.9	87.5	86.3	84.6	82.1	75.9	69.8
76	$\frac{3.0}{10}$	$\frac{3.7}{19}$	$\frac{10.9}{40}$	$\frac{13.4}{68}$	$\frac{19.0}{80}$	$\frac{25.7}{100}$

88.9	88.3	86.2	82.3	61.1	52.4	40.1	39.6
$\frac{4.2}{10}$	+ 4.1	$\frac{1.0}{31}$	$\frac{1.9}{40}$	$\frac{23.1}{80}$	$\frac{31.8}{101}$	$\frac{44.1}{133}$	$\frac{44.6}{100}$

86.9	87.1	87.1	79.3	72.0	62.6	51.1	43.7	42.7	44.7
$\frac{2.7}{10}$	+ 2.9	$\frac{2.9}{2}$	$\frac{4.9}{12}$	$\frac{12.2}{40}$	$\frac{21.0}{60}$	$\frac{33.1}{80}$	$\frac{40.5}{93}$	$\frac{41.5}{115}$	$\frac{39.5}{132}$

284.18

Bellingham

L+

Nb.

Rt.

35

6 + 00

98.3	94.1	89.8	87.8
2.0	$\frac{6.2}{40}$	$\frac{10.5}{80}$	$\frac{12.5}{95}$

5 + 50

96.8	92.3	88.0	85.7
3.5	$\frac{8.0}{40}$	$\frac{12.3}{80}$	$\frac{1x.1}{100}$

5 + 00

95.7	95.6	94.5	93.0	91.0	90.6	88.8	86.3	84.8
4.1	$\frac{5.7}{40}$	$\frac{5.8}{70}$	$\frac{7.3}{80}$	$\frac{9.3}{30}$	$\frac{9.7}{40}$	$\frac{11.5}{55}$	$\frac{14.0}{80}$	$\frac{15.5}{100}$

J.P.  
Order  
Book

13.10    300.28    8.37    287.18    287.18  
0.00

x + 00

95.32	95.32	93.92	89.1	86.2	83.9	83.3	80.7
0.23	$\frac{3.3}{33}$	$\frac{1.3}{113}$	$\frac{6.1}{40}$	$\frac{9.2}{67}$	$\frac{11.1}{75}$	$\frac{12.2}{80}$	$\frac{14.8}{100}$

x + 50

295.55

94.0	91.7	88.4	86.0	83.5	82.5	80.4
1.5	$\frac{3.8}{20}$	$\frac{7.1}{40}$	$\frac{9.5}{66}$	$\frac{12.0}{73}$	$\frac{13.0}{80}$	$\frac{15.1}{100}$

295.55

7 + 50 x 5 EC, you have

7 + 00

6 + 65.5

6 + 50

300.28

3.9  
76.4  
9.1  
40  
91.2

1.7  
98.6

5.5  
94.8

7.8  
92.5

11.2  
80  
89.1

12.5  
90  
87.8

1.9  
98.9

5.5  
94.8

10.0  
80  
90.3

10.8  
85  
89.5

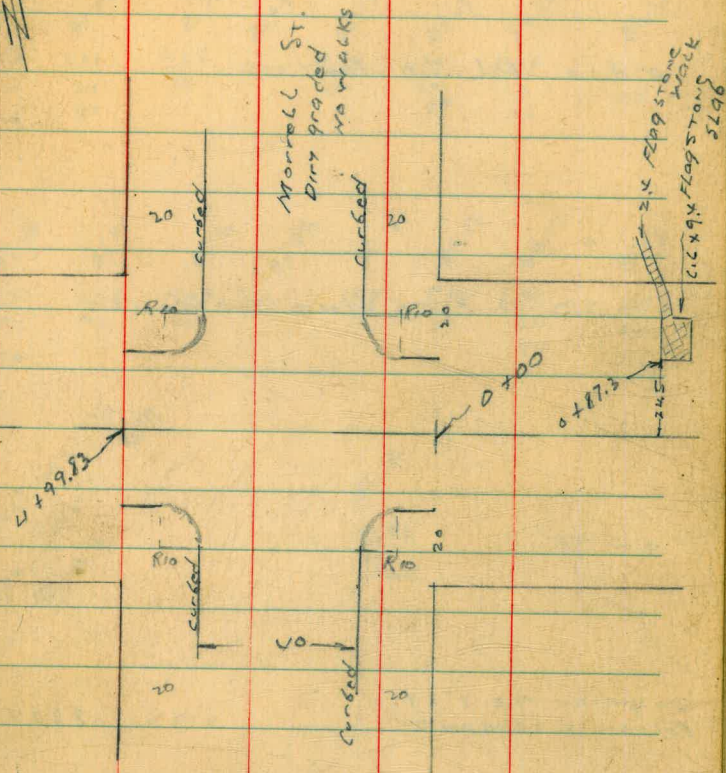
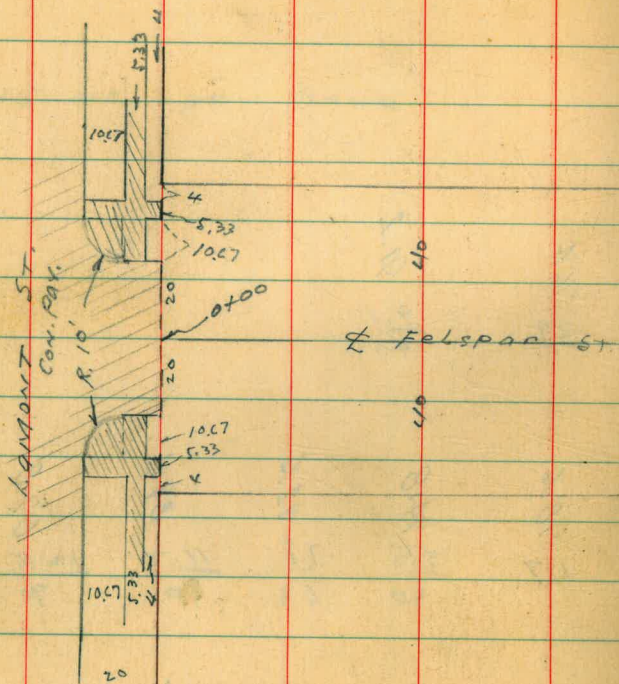
300.28

xsec of Felspar St. 80' wide  
20' curbs

Lamont to Noyes

For Water Line grades

C. Moore  
Sommer Meyer  
W. Moore  
899  
5-28-46



Notes Reduced 6-3-46 wherry-

87

x sec Felspar

0 x 50

0 + 00 F.L. LAMONT

0 - 20 = E. C6. Line LAMONT

0 - 30

SET BM. ON N.E. 7' CT.  
Felspar + LAMONT

2.33 88.04 ✓

I.P. 1226 90.37 0.86 78.11

B.M. SW. C.P.  
GANNETT + LAMONT ST. 13.14 78.97 65.83

38

85.7	85.1	84.4	84.3	84.0	83.9	84.2	83.1
4.7	5.3	6.0	6.1	6.4	6.5	6.7	7.2
40	20	14	11	10	14	16	20

87.9	87.83	87.06	86.72	86.98	86.17	84.27	84.89	85.2
2.5	2.54	3.31	3.65	4.29	4.20	6.10	5.48	5.2
40	20	20	10	10	10	20	20	40
	06	97				97	06	

88.01	87.20	86.70	86.30	85.84	85.18	84.53	84.02	84.16
2.30	2.97	3.58	4.07	4.53	5.19	5.84	6.35	5.61
40	40	20	10	10	10	20	40	40
06	97						97	06

NOTE: Elevations 15  
Low per Correct 8.17  
See p 48.

85.54  
4.83  
10  
Pav.

90.37



TP 4.28 83.61 11.04 79.33

2 + 50

2 + 00

1 + 50

1 + 00

0 + 94.5 £ do. Conn. Ribbons 2' wide  
6.5 overall

90.37

←	£	→
80.2	80.0	79.2
10.2	10.4	11.2
40	22	18
79.3	78.9	79.2
11.1	11.5	11.2
	10	20
		40
		78.0

81.0	80.7	79.8	79.9	79.6	80.0	79.0
9.4	9.7	10.6	10.5	10.8	10.4	11.4
40	21	18		10	18	40

82.7	82.0	81.6	81.2	80.7	80.7	80.9	80.3
7.7	8.4	8.8	9.2	9.7	9.7	9.5	10.1
40	20	17		10	14	25	40

82.7	82.5	82.8	82.4	82.1	82.5	81.4
6.7	6.9	7.6	8.0	8.3	7.9	9.0
40	20	17		10	20	40

84.79	84.35	83.90
5.58	6.02	6.97
49.3	40	19.6
gar.		
con.		
fl.		

90.37

4700

79.5	78.8	79.6	77.3	77.0	76.6	77.8	77.5
$\frac{4.1}{40}$	$\frac{4.8}{28}$	$\frac{5.0}{18}$	6.3	$\frac{5.6}{10}$	$\frac{7.0}{17}$	$\frac{5.8}{26}$	$\frac{5.1}{40}$

3775

80.7	79.7	78.3	77.7	77.3	77.2	78.5	77.9
$\frac{2.9}{40}$	$\frac{3.9}{25}$	$\frac{5.3}{20}$	5.9	$\frac{5.3}{10}$	$\frac{5.4}{15}$	$\frac{5.1}{25}$	$\frac{5.7}{40}$

3750

80.7	79.7	78.6	78.0	77.9	77.7	78.4	78.1
$\frac{2.9}{40}$	$\frac{3.9}{27}$	$\frac{5.0}{17}$	5.6	$\frac{5.7}{10}$	$\frac{5.9}{17}$	$\frac{5.2}{23}$	$\frac{5.5}{40}$

3702 &amp; 3' Con. walk

80.52	80.19
$\frac{3.09}{50}$	$\frac{3.42}{40.4}$

3700

80.0	78.9	78.9	78.4	78.3	77.4
$\frac{3.6}{40}$	$\frac{4.7}{20}$	4.7	$\frac{5.2}{10}$	$\frac{5.3}{20}$	$\frac{5.2}{40}$

83.6183.61

4 + 75

4 + 50

4 + 30

4 + 22 E 7' Com. drive

4 + 06 E 7' Com. drive

83.61

70.4	75.6	74.0	74.2	73.9	73.8	75.4	75.0
$\frac{7.2}{40}$	$\frac{8.0}{23}$	$\frac{9.6}{17}$	$\frac{9.4}{10}$	$\frac{9.7}{19}$	$\frac{9.8}{22}$	$\frac{8.2}{22}$	$\frac{8.6}{40}$

78.1	76.9	75.8	75.9	75.6	75.1	76.7	76.1
$\frac{5.5}{40}$	$\frac{6.7}{20}$	$\frac{7.8}{17}$	$\frac{7.7}{10}$	$\frac{8.0}{17}$	$\frac{8.5}{22}$	$\frac{6.9}{22}$	$\frac{7.5}{40}$

78.5	77.9	76.8	76.7	76.3	76.0	77.3	76.7
$\frac{5.1}{40}$	$\frac{5.7}{25}$	$\frac{6.8}{17}$	$\frac{6.9}{10}$	$\frac{7.3}{17}$	$\frac{7.6}{23}$	$\frac{6.3}{23}$	$\frac{6.9}{40}$

78.94	78.70
$\frac{4.67}{50}$	$\frac{4.91}{40}$

79.62	79.38
$\frac{3.99}{50}$	$\frac{4.23}{39.8}$

83.61

0 + 00 = E.L. Marrell St.

E cb Line Marrell

E Marrell

W cb Line Marrell

4 + 99.83 = W.L. Marrell St = 80' wide  
20' Curbs

8361

NOTE: Elevations  
Low per  
See P. 48  
Correct B.M. -

72.8	72.19	71.2	71.1	70.8	70.7	70.88	70.7
10.8	11.42	12.4	12.5	12.8	12.9	12.73	12.9
40	20	20	20	10	20	20	40
	cb	97			97	cb	
	end					end	

72.39	71.8	71.2	71.1	70.8	70.6	70.3	70.95
11.22	11.8	12.4	12.5	12.8	13.0	13.3	12.83
40	40	20	20	10	20	40	40
cb	97					97	cb

73.2	72.6	72.1	71.8	71.6	71.1
10.4	11.0	11.5	11.8	12.0	12.5
40	20		10	20	40

72.4	73.39	72.0	71.6	71.5	71.3	71.16	70.9
11.2	10.22	11.5	12.0	12.1	12.3	11.85	12.7
40	40	20	20	10	20	40	40
97	cb					cb	97

73.9	73.40	72.5	72.5	72.0	71.8	71.98	71.9
9.7	10.21	11.1	11.1	11.6	11.8	11.65	11.7
40	20	20	20	10	20	20	40
	cb	97			97	cb	
	end					end	

8361

42

Felspar

1400

0 + 87.3 = W. edge Flagstone, Level, E + W  
52.06T.P. 720 78.35 507 7115

0 + 50

0 + 39 E do. Conn. Rib. do. 2' wide  
7' excavation

0 + 25

T.P. 498 76.22 12.37 71.24

83.61

43

12.7	12.0	11.3	11.2	10.8	10.5	69.7	68.9
$\frac{5.6}{40}$	$\frac{6.23}{25}$	$\frac{7.0}{20}$	7.1	$\frac{7.5}{10}$	$\frac{7.8}{20}$	$\frac{8.6}{25}$	$\frac{9.4}{40}$

12.89	12.67	12.49	12.17
$\frac{5.46}{40.7}$	$\frac{5.68}{33.9}$	$\frac{5.86}{26.5}$	$\frac{6.23}{24.5}$

E. edge  
Flagstone  
walk

78.35

12.7	12.0	11.4	10.9	10.7	10.7	69.0	68.1
$\frac{3.5}{40}$	$\frac{4.12}{28}$	$\frac{5.0}{20}$	5.3	$\frac{5.5}{10}$	$\frac{5.5}{20}$	$\frac{7.2}{20}$	$\frac{8.1}{40}$

12.31	12.84	12.42
$\frac{1.91}{60}$	$\frac{3.28}{40}$	$\frac{3.80}{27}$

Sim. gran.  
con.

12.8	12.3	11.3	11.0	10.7	10.7	69.8	69.7
$\frac{3.4}{40}$	$\frac{3.9}{27}$	$\frac{4.9}{20}$	5.2	$\frac{5.5}{10}$	$\frac{5.5}{20}$	$\frac{6.4}{25}$	$\frac{6.5}{40}$

76.22

Felspar

2 + 00

1 + 77.5  $\Phi$  2' Con. Walk with 1 step down

1 + 59  $\Phi$  do. con. Rib. dr. 2' Rib.  
7' overall

1 + 45  $\Phi$  6' Con. drive

1 + 22  $\Phi$  3' Con. walk

78.35

44

72.7	72.3	71.8	71.6	71.2	71.2	72.6	73.1	72.5
5.6	6.0	6.5	6.7	7.1	7.1	5.7	5.2	5.8
40	25	20		10	15	17	25	40

73.6	72.5	72.8	72.0	71.6	71.1	71.0	72.9	73.6	73.1
4.74	4.90	5.48	6.3	6.7	7.2	7.3	5.4	4.7	5.2
40	199	18.8	18		10	15	17	25	40
Tap Walk	Tap Walk	Tap Walk	Tap Walk	Tap Walk	Tap Walk	Tap Walk	Tap Walk	Tap Walk	Tap Walk

74.6	73.70
4.29	4.65
50	40
dr.	dr.

74.02	73.87	73.7	73.0	71.8	71.5	70.9	70.9	72.7	72.1
4.32	4.48	4.6	5.3	6.5	6.8	7.4	7.4	6.1	6.2
44	42.7	40	30	18		10	16	17	40
drive	drive	drive							

74.03	73.90	73.62
4.32	4.45	4.73
50	42	41.3

78.35

Felspar

2 + 90.5  $\Phi$  de con. Rib. Dr. 2' Rib. 6.6' average

24.66 Lt 73.57 72.54  
 133 1.70 242 245  
 595 504 40 383  
 900 dr dr dr

2 + 50

19.2 72.6 72.0 71.7 71.3 71.9 71.9  
 2.8 34 4.0 4.3 4.7 4.1 4.3  
 40 24 19 10 13 10

2 + 47

73.0 72.6 72.2 71.7 71.3 71.5 71.5 69.7 68.4  
 30 34 3.8 4.3 4.7 4.5 4.5 6.3 7.0  
 40 24 19 10 10 10 21 26 40

2 + 40  $\Phi$  de con. Ribbon Dr. 2' wide 6.6' average

193  
 595  
 900  
 fl.

72.56 73.10 72.71  
 243 289 328  
 503 40 24  
 dr dr dr

2 + 30

72.8 72.4 71.9 71.7 71.9 71.3 69.7 69.4  
 3.2 3.6 4.1 4.3 4.6 4.7 6.3 6.6  
 40 24 20 10 20 20 26 40

T.P. 325 75.99 501 72.74

75.99

78.35

Felspar

41 + 00

L+	69.5	68.8	68.7	R+	68.1
10.3	6.5	7.2	7.3	6.5	7.9
5.7	20	10	25	40	

3 + 54

71.1	70.6	70.3	70.2	70.4	69.7
4.9	5.4	5.7	5.8	5.6	6.3
40	20	10	15	40	

3 + 50

71.2	70.6	70.4	70.4	70.4	70.9	71.5	71.2
4.8	5.4	5.6	5.6	5.6	5.7	6.5	4.8
40	20	10	13	15	23	40	

3 + 25

71.3	71.4	71.7	71.6	71.3	71.3	72.0	71.5
3.7	3.6	4.3	4.4	4.7	4.7	4.0	4.5
40	27	15	10	12	13	40	40

3 + 00

73.7	73.2	72.2	71.8	71.5	72.2	71.7
2.3	2.8	3.8	4.2	4.5	3.8	4.3
40	23	17	10	13	40	

75.99

75.99



W 66 + 5

L7	E	R
66.8	66.4	64.9
9.2	9.6	11.1
40	20	40
	65.7	65.5
	10.3	10.5
		10

W 66 Noyes

68.0	67.5	65.9	65.6	65.4	66.4	65.7
8.0	8.5	10.1	10.4	10.4	9.6	10.3
40	16	10	10	10	25	40

4 + 99.83 W.L. Noyes St. = 80' wide  
20' Curbs

68.5	68.0	67.2	67.0	66.8	67.0	66.8
7.5	8.0	8.8	9.0	9.2	9.0	9.2
40	16	6		10	23	40

4 + 75

68.8	68.4	67.9	67.7	67.5	67.2	67.0
7.2	7.6	8.1	8.3	8.5	8.8	9.0
40	20	13		10	25	40

4 + 50

69.6	68.8	68.3	68.2	67.9	67.7	67.4
6.4	7.2	7.7	7.8	8.1	8.3	8.6
40	17	13		10	25	40

75.99

75.99

Folsom

check to BM S.E. Top F.H.  
 Dismantled + Noyes 2.14 91.24  $\frac{51330N}{91.39}$   
 $= 0.15$

T.P. 8.89 93.38 160 84.49

T.P. <sup>ON</sup> B.M. 8.66 86.09 0.47 77.43  
 NW corner  
 Emerald  
 Noyes

Set B.M. B.P. 0.47 77.43 77.58 = Corrected C-15-46

T.P. 7.95 77.90 6.04 69.95

E.L. Noyes St.

E 66 Noyes

£ Noyes +10

£ Noyes St.

NOTE: Elevations .15 Low  
 For correct R.M. -  
 see above -

75.99

Corrected C-15-46

66.4 65.4 65.3 65.1 64.8 64.9  
 $\frac{9.6}{40}$   $\frac{10.5}{20}$  10.7  $\frac{10.9}{10}$   $\frac{11.2}{20}$   $\frac{11.1}{40}$

66.5 66.0 66.0 66.0 65.9 65.4  
 $\frac{9.5}{40}$   $\frac{10.0}{20}$  10.0  $\frac{10.0}{10}$   $\frac{10.1}{20}$   $\frac{10.6}{40}$

66.9 66.5 66.0 65.7 65.5 65.3  
 $\frac{9.1}{40}$   $\frac{9.5}{20}$  10.0  $\frac{10.3}{10}$   $\frac{10.5}{20}$   $\frac{10.7}{40}$

67.3 66.8 66.3 66.1 65.5  
 $\frac{8.7}{40}$   $\frac{9.2}{20}$  9.7  $\frac{9.9}{10}$   $\frac{10.5}{40}$

75.99

5 Moore curb levels on  
 Emerald St. = 80' wide  
 20 curbs  
 5-29-46, LAMONT to Noyes St.

For water line grades

Returns + Pav. same as at

LAMONT + Felspar

Note! E.L. LAMONT to E.L. Marrell = dirt Roadway

E.L. Marrell to W.L. Noyes diked "

0 + 50

99.38	98.4	98.5	98.5	98.1	97.8	98.38
3.37	4.3	4.2	4.2	4.6	4.9	4.37
20	20	10	10	10	20	20
-6						06

0 + 100 = E.L. LAMONT St  
 Edge Con. Pav.

100.05 99.90	99.39 99.24	99.22 99.20 99.05	98.71	98.50 98.35	99.10 98.95
2.85	3.51	3.53	3.70	4.04	4.40
20	20	10	10	20	20
06	07			07	06

S.E. 7' C.T.  
 LAMONT +  
 Emerald 3.76 102.75 98.99 ✓

check to SW BP 2.14 105.76 105.95  
 S.E.  
 T.P. 7' C.T. 4.91 107.90 1.11 98.99 ✓  
 N.E. 7' C.T. 12.36 100.40 88.04  
 P. 38

106.03 in  
 B.M. Book

LAMONT + DIAMOND  
 LAMONT + EMERALD  
 LAMONT + FELSPAR

102.75

1 + 95

1 + 58

1 + 48

1 + 00

102.75

97.52  
97.14

56.3  
20  
06

96.0

67  
20  
06

96.2

65  
10  
06

96.1

66  
10  
06

95.6

71  
10  
06

95.4

73  
20  
06

96.24  
96.09

66  
20  
06

97.97

41.78  
20  
06

96.7

60  
20  
06

97.0

57  
10  
06

96.7

69  
10  
06

96.3

64  
10  
06

96.1

66  
20  
06

97.02

57.3  
20  
06

98.29  
97.53

44.6  
20  
06

97.0

57  
20  
06

97.2

55  
10  
06

97.0

57  
10  
06

96.6

61  
10  
06

96.1

66  
20  
06

97.33

54.2  
20  
06

98.40

43.5  
20  
06

97.2

55  
20  
06

97.5

52  
10  
06

97.2

55  
10  
06

96.8

59  
10  
06

96.3

64  
20  
06

97.42

53.3  
20  
06

99.04  
98.89

38.6  
20  
06

98.1

46  
20  
06

97.8

49  
10  
06

97.8

49  
10  
06

97.4

53  
10  
06

96.8

59  
20  
06

98.07  
97.92  
98.45

48.3  
20  
06

102.75

4 + 50

4 + 00

3 + 50

T.P. 275 94.66 10.84 91.91

3 + 00

2 + 50

102.75

88.88	87.3	87.5	87.4	86.7	86.5	87.21
$\frac{2.18}{20}$	$\frac{7.4}{20}$	$\frac{7.2}{10}$	73	$\frac{80}{10}$	$\frac{8.2}{20}$	$\frac{7.45}{20}$
cb						cb

90.18	89.2	89.4	89.3	88.7	88.1	88.90
$\frac{4.48}{20}$	$\frac{5.5}{20}$	$\frac{5.3}{10}$	54	$\frac{6.0}{10}$	$\frac{6.6}{20}$	$\frac{5.76}{20}$
cb						cb

91.85	91.0	90.9	90.9	90.2	89.9	90.68
$\frac{2.81}{20}$	$\frac{3.7}{20}$	$\frac{3.8}{10}$	38	$\frac{4.5}{10}$	$\frac{4.8}{20}$	$\frac{3.98}{20}$
cb						cb

93.60	92.6	92.5	92.5	91.9	91.7	92.40
$\frac{9.15}{20}$	$\frac{10.1}{20}$	$\frac{10.2}{10}$	10.2	$\frac{10.8}{10}$	$\frac{11.0}{20}$	$\frac{10.35}{20}$
cb						cb

95.28	94.1	94.3	94.2	93.8	93.4	94.17
$\frac{7.47}{20}$	$\frac{8.6}{20}$	$\frac{8.4}{10}$	8.5	$\frac{8.9}{10}$	$\frac{9.3}{20}$	$\frac{8.58}{20}$
cb						cb

102.75

0 + 00 = E.L. Marcell St,  
Beg. of L. Pav.

E c/b Marcell

E Marcell

W c/b Marcell

5 + 00 ± = W.L. Marcell = 80' wide  
20' c/b.  
8" curb Returns  
Same as on  
Felspar +  
Marcell  
No walks

94.00

NOTE Elevations 15' Low  
Per Contract B.M. 7  
See P. 48

85.95 85.80	84.9	84.7	84.5	84.3	84.0	84.51 84.36
8.80 20 c/b	9.8 20	10.0 10	10.2 10	10.4 10	10.7 20	10.30 20 c/b

86.00	85.4	85.1	85.0	84.7	84.5	84.1	83.4	84.31
8.00 40 c/b	9.3 40	9.6 20	9.7 10	10.0 10	10.2 10	10.5 20	11.3 40	10.35 40 c/b

86.4	85.7	85.3	84.8	84.3
8.3 40	9.0 20	9.4 10	9.9 20	10.4 40

86.79	86.1	85.6	85.4	85.2	84.9	84.7	84.3	85.25
7.87 40 c/b	8.0 40	9.1 20	9.3 10	9.5 10	9.8 10	10.0 20	10.4 40	9.41 40 c/b

86.98 86.83	85.8	85.7	85.7	85.3	85.0	85.58 85.43
7.83 20 c/b	8.9 20	9.0 10	9.0 10	9.4 10	9.7 20	9.23 20 c/b

94.00

2 + 50

2 + 00

1 + 50

1 + 00

T.P. 238 86.21 10.83 83.83

0 + 50

94.66

L7      R7  
81.50    80.5    80.5    80.5    80.0    79.6    80.15

$\frac{4.71}{20}$      $\frac{5.7}{20}$      $\frac{5.7}{10}$     5.7     $\frac{6.7}{10}$      $\frac{4.6}{20}$      $\frac{6.6}{20}$   
c6

82.34    81.2    81.4    81.2    80.8    80.4    81.09

$\frac{3.87}{20}$      $\frac{5.0}{20}$      $\frac{4.8}{10}$     5.0     $\frac{5.4}{10}$      $\frac{5.8}{20}$      $\frac{5.12}{20}$   
c6

83.29    82.4    82.3    82.1    81.6    81.2    81.85

$\frac{2.92}{20}$      $\frac{3.8}{20}$      $\frac{3.9}{10}$     4.1     $\frac{4.6}{10}$      $\frac{5.0}{20}$      $\frac{4.36}{20}$   
c6

84.06    83.1    83.2    83.0    82.4    82.0    82.58

$\frac{2.15}{20}$      $\frac{3.1}{20}$      $\frac{3.0}{10}$     3.2     $\frac{3.8}{10}$      $\frac{4.2}{20}$      $\frac{3.63}{20}$   
c6

84.88    84.1    84.0    83.9    83.5    83.1    83.52

$\frac{9.78}{20}$      $\frac{10.6}{20}$      $\frac{10.7}{10}$     10.8     $\frac{11.2}{10}$      $\frac{11.6}{20}$      $\frac{11.14}{20}$   
c6

94.66

Check to NWBP Emerald and Noyes 8.79 77.42 P. 78 77.43  
0.01

5 + 00 ± W.L. Noyes = end 8" Curbs

4 + 50

4 + 00

3 + 50

3 + 00

86.21

54

77.50 77.35	76.4	76.3	76.0	75.5	75.1	76.11 75.96
8.86	9.8	9.9	10.2	10.7	11.1	10.25
20	20	10		10	20	20
06						06

78.16	77.4	77.3	77.0	76.6	76.1	76.82
8.05	8.8	8.9	9.2	9.6	10.1	9.39
20	20	10		10	20	20
06						06

78.99	78.3	78.3	78.0	77.5	77.0	77.68
7.22	7.9	7.9	8.2	8.7	9.2	8.53
20	20	10		10	20	20
06						06

79.85	78.9	78.9	78.7	78.1	77.8	78.43
6.30	7.3	7.3	7.5	8.1	8.2	7.78
20	20	10		10	20	20
06						06

80.69	79.8	79.6	79.4	79.0	78.4	79.26
5.52	6.2	6.0	6.8	7.2	7.8	6.95
20	20	10		10	20	20
06						06

86.21



Walker  
Hendricks  
Hurley  
Carey  
6-19-46

CURB AND GUTTER ELEVATIONS  
EAST SIDE 8TH AVE.  
FROM K- TO L-ST.

Indexed  
e.s.k.

55

1723

0+25

B.M. N.Y. BR  
K- + 8th

2.24 17.23 14.99

Note: location of Existing RR Track from Esb.

0+00 - Shine K St.

E. cb. 3.38 13.85 ✓

Grotting 3.41 13.82 ✓

Floor 4.71 12.52 ✓

5.6 Rt on Rail 3.61 13.62 ✓

" " Pav 3.34 13.89 ✓

W Rail 3.37 13.86 ✓

0+03

cb. 3.54 13.69 ✓

Gut. 4.80 12.43 ✓

2' Rt 4.85 12.38 ✓

5.6 Rt. Rail 3.69 13.54 ✓

0+10

cb 3.72 13.51 ✓

Gut 4.87 12.36 ✓

2.5 Rt 4.34 12.89 ✓

5.6 Rt 3.84 13.39 ✓

cb. 3.91 13.32 ✓

Gut. 4.81 12.42 ✓

2.5 Rt. 4.57 12.66 ✓

5.6 Rt E Rail 4.17 13.06 ✓

W " 4.16 13.07 ✓

0+46

cb. 4.09 13.14 ✓

Gut. 4.93 12.30 ✓

Track covered

0+75

cb. 4.60 12.63 ✓

Gut. 5.27 11.96 ✓

2' Rt 5.24 11.99 ✓

5.6 Rt E Rail 4.93 12.30 ✓

W " 4.89 12.34 ✓

1+00

no cb.  
Gut 5.44 11.79 ✓

2' Rt. 5.39 11.84 ✓

5.6 " E Rail 5.13 12.10 ✓

W " 5.10 12.13 ✓

1723

1+19 = E Drive

Gut.	570	11.53	✓
2' Rt.	507	11.56	✓
56' Rt. E Rail	532	11.91	✓
W "	529	11.94	✓

1+27

E cb.	532	11.91	✓
-------	-----	-------	---

1+39 = E 20' Drive

Gut.	592	11.31	✓
4' Rt.	581	11.42	✓
56' Rt. E Rail	556	11.67	✓
W "	599	11.94	✓

1+50

E cb.	562	11.61	✓
Gut.	606	11.17	✓
4' Rt.	592	11.31	✓
61" E Rail	574	11.49	✓
" W "	568	11.55	✓

1+59.9 E 7' Drive

Gut.	620	11.03	✓
------	-----	-------	---

1723

1+75 = E 19 Drive

Gut.	646	10.77	✓
2' Rt.	644	10.79	✓
5' Rt.	622	11.01	✓
76' Rt. E Rail	616	11.07	✓
W "	613	11.10	✓

1+85

E cb.	625	10.98	✓
Gut.	672	10.51	✓
2' Rt.	666	10.57	✓
5' Rt.	645	10.78	✓
85' Rt. E Rail	637	10.86	✓
W "	635	10.88	✓

2+00

E cb.	637	10.86	✓
Gut.	697	10.26	✓
2' Rt.	687	10.36	✓
7' Rt.	664	10.59	✓
105' Rt. on E Rail	668	10.55	✓
" W "	661	10.62	✓

1723

TP 471 14.96 ✓ 6.98 10.25 ✓

2+22 N end Drive

Cb 441 10.55 ✓

Gut. 499 9.97 ✓

2' RT. 494 10.02 ✓

11.5" 461 10.35 ✓

13.9' RT = E Rail 470 10.26 ✓

W " 470 10.26 ✓

E Drive (Blocked)

2+41 = S end Drive

Cb 466 10.30 ✓

Gut. 543 9.53 ✓

2.3' RT 521 9.75 ✓

15' RT. 490 10.06 ✓

17.2' RT E Rail 495 10.01 ✓

W " 496 10.00 ✓

2+75

Cb 522 9.74 ✓

Gut 573 9.23 ✓

10' RT. 551 9.45 ✓

12' RT 538 9.58 ✓

21.6' RT = E Rail 545 9.51 ✓

W " 552 9.44 ✓

1996

57

2+95 = N end Inlet

Cb 546 9.50 ✓

Gut Flow 610 8.86 ✓

7' RT. 563 9.33 ✓

15' RT. 563 9.33 ✓

21' RT 571 9.25 ✓

23.2' RT E Rail 579 9.17 ✓

W " 585 9.11 ✓

3+005 ± = N.L. L-st

Cb 546 9.50 ✓

Grating 550 9.46 ✓

Flow 665 8.31 ✓

3' RT 553 9.43 ✓

15' RT. 564 9.32 ✓

21' RT. 576 9.20 ✓

23.3' RT E Rail 585 9.11 ✓

W " 551 9.45 ✓

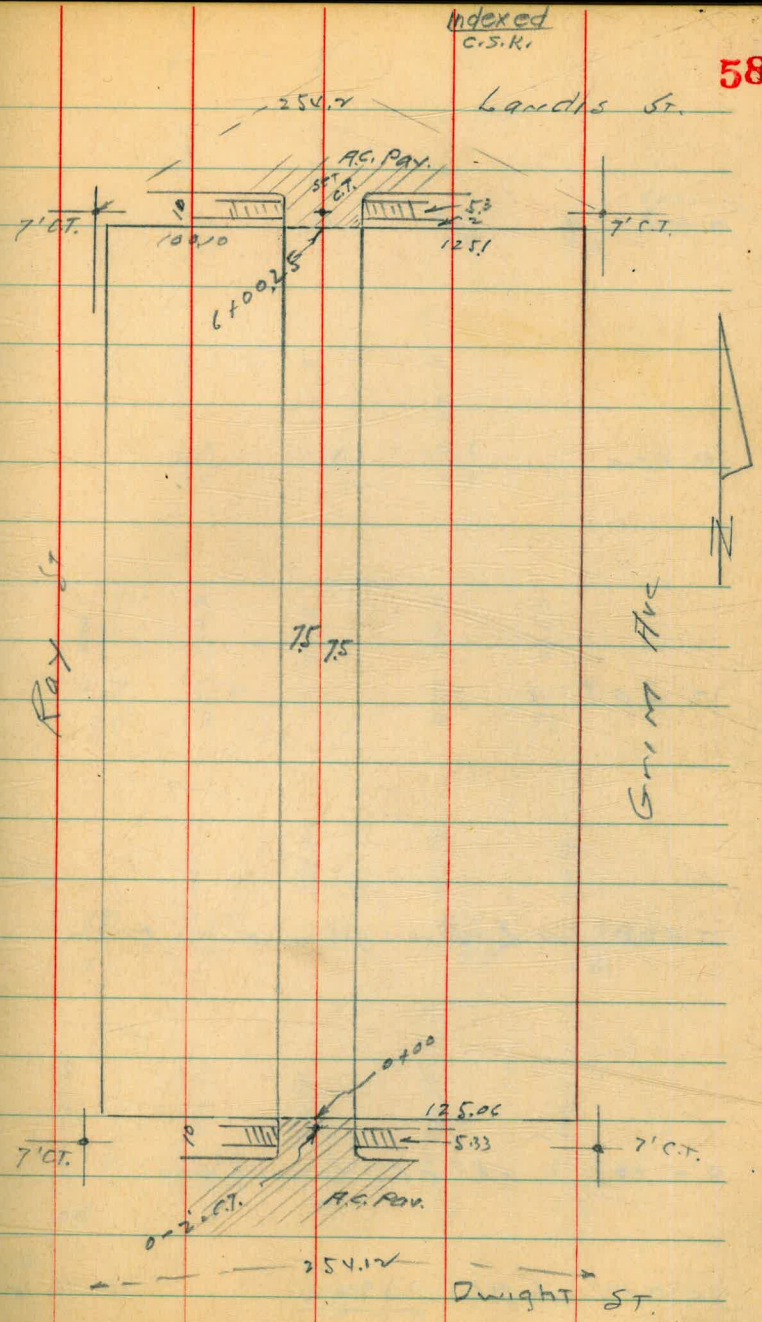
TP 6.07 18.23 ✓ 210 12.86 ✓

Cb. Starting 8M. 3.94 14.99 ✓

Xsec BLK H. McFadden + Buxton  
" " 23 Park Villas

Rush Survey

C. Moore  
Beag  
Allen  
7-1-46.  
Also Semmermeyer



0 + 47

0 + 20

0 + 05

0 + 00 N.B. Dwight edge pav.

0 - 10 N.C. Dwight

NEBP 6.96 339.42

332.40 Dwight Ray 4

W LT R E

336.2 336.2 336.3  
3.2 3.4 2.1  
7.5 7.5 7.5

Lattice  
89. fence  
76

336.0 335.8 335.8  
3.4 3.1 2.1  
7.5 7.5 7.5

334.7 334.2 334.2 334.5 335.3  
4.7 5.2 5.2 4.1 4.1  
7.5 7.5 7.5 7.5 7.5

333.54 333.41 333.47 333.79 333.98  
5.88 5.95 5.95 5.63 5.59  
c6 7.5 7.5 7.5 c6

333.29 332.86 332.95 332.99 332.43  
6.13 6.56 6.47 6.43 5.99  
c6 7.5 7.5 7.5 c6

339.42

LT      ♀      R

1+25

342.48

336.9

337.0

337.0

337.0

337.0

$\frac{5.6}{30}$

Fence  
 $\frac{7.6}{7.5}$

$\frac{5.5}{7.5}$

5.5

$\frac{5.5}{7.5}$

Fence  
 $\frac{7.6}{7.5}$

$\frac{5.5}{30}$

T.P. 5.49 342.48 2.43 336.99

1+11 900. W. entrance

1+08 7.8. Lt Bd. fence

SE Cor

337.2

337.0

336.9

336.7

$\frac{2.2}{9.5}$

$\frac{7.5}{7.5}$

2.4

$\frac{2.5}{7.5}$

Fence  
 $\frac{7.6}{7.5}$

$\frac{2.7}{30}$

0+91 ♀ 2' Cor. walk

$\frac{2.0}{8}$   
337.03

336.7

336.9

337.0

336.9

336.6

0+75

$\frac{2.7}{30}$

$\frac{2.5}{7.5}$

2.4

$\frac{2.5}{7.5}$

$\frac{2.8}{30}$

0+74 6.1 LT to P.P. NE Cor. Can. Bq. fence  
7.8 Lt.

339.42

336.2

Fence  
7.6

0+58 S.E. Cor. Can. S. entrance

$\frac{3.2}{8}$  dirt

339.42

339.42

2+52 7.5 Lt: End picket fence

2+40

2+26 6<sup>1</sup> Lt: 12' P. pole.

2+18 7.5 Lt. & ? Floor gar.

2+00

1+67 ctr. 20' shed on latt.

342.48

Lt

€

Rt

61

338.2

$\frac{4.3}{30}$

338.0

$\frac{4.5}{7.5}$

337.8

4.7

337.8

$\frac{4.7}{7.5}$

337.6

$\frac{4.9}{30}$

Fence  
7.8

337.88

4.60

Bottom door 7.5

337.2

$\frac{5.3}{30}$

Fence  
7.8

337.6

$\frac{4.7}{7.5}$

337.3

5.2

337.3

$\frac{5.2}{7.5}$

Fence  
7.8

337.2

$\frac{5.3}{30}$

337.2

$\frac{5.3}{7.5}$

shed  
7.5

337.1

5.4

337.3

$\frac{5.2}{7.5}$

Fence  
7.5

337.3

$\frac{5.2}{30}$

342.48

3+26 = 50 End 2E Conc Walk

3+24 6' Lt: Ctr. 12" P. pole

3+15 78 Lt. = NE. Cor. Frame Bldg.

3+00

2+96 8' Rt = 2E Brick walk

2+74 8' Rt = S.E. Cor Frame Bldg

342.48

Lt

¢

Rt

62

338.31

$\frac{4.17}{7.8}$

338.4

338.32

338.2

338.0

Bldg.  
 $\frac{4.1}{7.7}$

$\frac{4.1}{7.5}$

$\frac{4.16}{M.H. Ring}$

$\frac{4.3}{7.5}$

Fence  
 $\frac{4.5}{7.9}$

$\frac{4.5}{30}$

337.278

338.07

$\frac{4.41}{8.9}$

337.8

338.1

338.2

338.2

338.0

$\frac{4.7}{30}$

8' S.E. Cor  
Frame  
Bldg.

$\frac{4.9}{7.5}$

4.7

$\frac{4.3}{7.5}$

Fence  
 $\frac{4.5}{7.8}$

$\frac{4.5}{30}$

342.48



4+00 7.9 Lt: N.E. Cor. Fr. Bldg  
12' Wide

3+95 7<sup>2</sup> Rt = 6 2<sup>d</sup> conc. walk

3+76 7<sup>2</sup> Lt: End slot fence  
S.E. Cor. Stucco Car. W. Ent.  
12' Wide

3+45 8<sup>d</sup> Rt = 4 2<sup>d</sup> conc. walk

3+42 7<sup>1</sup> Lt: start slot Fence

3+38 7<sup>8</sup> Lt: N. End Conc walk 2<sup>5</sup> Wide

342.48

338.3		338.5		338.3		338.1		338.2
4.2	start slot Fence	4.0	4.2	4.4	Fence	4.3		
30	7.9	7.5		7.5	7.6	30		

338.26								
4.22					Fence			
7.7					7.7			
walk								

338.2		338.0		338.0		338.1		338.2
4.3		4.5	4.5	4.4	Fence	4.3		
30		7.5		7.5	7.7	25		

337.73								
4.75								
8 <sup>d</sup> on walk								

338.3		338.5		338.1		338.0		337.8
4.15		4.2	4.4	4.5	Fence	4.7		
7.8		7.5		7.5	8 <sup>d</sup>	30		
on walk								

342.48

4+92 7<sup>8</sup> Lt =  $\phi$  3<sup>2</sup> cone walk

4+76 6<sup>5</sup> Lt = ctr. 12" P. pole

4+65

4+41 7<sup>1</sup> Lt =  $\phi$  3<sup>2</sup> cone walk

4+26

T.Pi 5.28  $\frac{343.70}{342.48}$  4.06 338.42

Lt.  
West

$\phi$

Lt  
East

339.47  
4.23  
7.8  
on walk

338.6

$\frac{5.1}{30}$

$\frac{Fence}{7.5}$

338.7

$\frac{5.0}{7.5}$

338.9

4.8

338.7

$\frac{5.0}{7.5}$

$\frac{Fence}{7.5}$

338.6

$\frac{5.1}{30}$

338.60

$\frac{5.10}{7.7}$   
on walk

338.2

$\frac{5.5}{30}$

$\frac{Fence}{7.5}$

338.4

$\frac{5.3}{7.5}$

338.4

5.3

338.5

$\frac{5.2}{7.5}$

$\frac{Fence}{7.5}$

338.5

$\frac{5.2}{30}$

343.70

6+96E 7E Rt. = End Fence

5+94E = 7.9 Lt = N.E. Cor. Stucco Gar.  
No. Ent.

5+77 7.8 Lt = End Fence also S.E. Cor.  
Stucco Gar. N. Ent.

5+62

5+26

5+00

343.70

LT

¢

RT

65

346.2

346.3

346.4

$\frac{3.5}{7.5}$

3.4

Fence  
 $\frac{7.5}{7.5}$

$\frac{3.3}{7.5}$

340.2

346.3

346.0

346.0

346.0

$\frac{3.5}{30}$

$\frac{3.4}{7.5}$

3.7 Fence  
 $\frac{7.3}{7.3}$

$\frac{3.7}{7.5}$

$\frac{3.7}{30}$

339.7

339.7

339.7

339.7

339.6

$\frac{4.0}{30}$

Fence  
 $\frac{7.6}{7.5}$

$\frac{4.0}{7.5}$

4.0 Fence  
 $\frac{7.3}{7.3}$

$\frac{4.0}{7.5}$

$\frac{4.1}{30}$

339.7

339.7

339.5

339.1

339.0

$\frac{4.0}{30}$

$\frac{4.0}{7.5}$

Fence  
 $\frac{7.5}{7.5}$

4.2 Fence  
 $\frac{7.5}{7.5}$

$\frac{4.6}{7.5}$

$\frac{4.7}{30}$

339.6

339.7

339.4

339.0

338.9

$\frac{4.2}{30}$

$\frac{4.0}{7.5}$

Fence  
 $\frac{7.3}{7.3}$

4.3

$\frac{4.7}{7.5}$

Fence  
 $\frac{7.7}{7.7}$

$\frac{4.8}{30}$

343.70



Walker Cross Section Opal St.  
 Handicks  
 Allen  
 7-23-46 from Cass St. to Downes St.

70' wide  
 15' cbs 10' 1/4"

	12.27	92.92		80.65	814.5417 Tack Wilbur Cass Grid 143 40
T.P.	8.94	101.48	0.38	92.54	5/8" 7' tack Opal Cass
T.P.	7.38	108.30	0.56	100.92	

0-40' = 1/2 Cass St.

-5'		546		102.84
NL + 15				
= cb		6.00		102.30
1/4		6.33		101.97
1/4		6.61		101.69
1/4		6.89		101.41
cb.		7.15		101.15
SL + 5' = opp cb BC		7.82		100.48

0-24'

SL-5'		8.04		100.26
SL + 15				
= cb		7.50		100.80
1/4		7.20		101.10
1/4		6.86		101.44
1/4		6.57		101.73
cb.		6.31		101.99
NL + 15		5.71		102.59

indexed

c.s.k.

7-25-46 - Notes Reduced -  
 rberry - -

67

Downes

St.

Fd. Conc. Man-  
 7'  
 Fd. Iron Pipe  
 & Disk

Opal St.

512.31'



Cass

St.

10830

Opal St.

0-14

N-5	Gut. at cb. BC	6.04	102.26
"	on cb "	5.35	102.95
cb		6.66	101.64
1/4		6.26	101.34
2		7.27	101.03
1/4		7.59	100.91
cb.		7.84	100.86
SL+5	= cb BC. Gut.	8.43	99.87
"	" on cb.	7.76	100.54
	0 + 00.7		
SL.		7.53	100.77
+4'	on edge walk	7.21	101.09
+9 "	" "	7.19	101.11
cb.		7.15	101.15
Gut	on Pav.	7.66	100.64
1/4	" "	7.30	101.00
2	" "	6.88	101.42
1/4	" "	6.60	101.70
Gut		6.49	101.81
cb		5.86	102.42

10830

cb + 6'	on edge walk	5.72	102.58
+9 "	" "	5.51	102.79
N.L.		5.2	103.1
	N.E. Ret. cb Length = 265'		
BC. on Opal			
+8.9'	on cb	5.95	102.35
"	" Gut.	6.48	101.82
+17.8	" "	6.36	101.94
"	" cb.	5.82	102.48
	S.E. Ret. cb L = 264		
BC. on Opal			
+8.8'	on cb.	7.36	100.94
"	" Gut.	7.85	100.45
+17.6	" "	8.16	100.14
"	" cb.	7.59	100.71
	0 + 50		
-5		7.3	101.0
SL.		7.1	101.2
cb.		6.5	101.8
+2		6.5	101.8
+3		7.1	101.2
+4		6.7	101.6
1/2		6.3	102.0

108.30

Opal St

N 1/4	62	102.1
+5	6A	101.9
cb	54	102.9
N	52	103.1
+5'	5.0	103.3
1+00		
-5'	4.6	103.7
N	49	103.4
cb.	55	102.8
+2	53	103.0
+3	61	102.2
1/4	60	102.3
2	57	102.6
1/4	61	102.2
+8	66	101.7
+9	59	102.4
cb	59	102.4
S	65	101.8
+5	66	101.7

1+27 = 2' Conc. Walk on N 13.4' in st

N.L. on Walk	4.21	104.09
+134 on end Walk	480	103.50

108.30

3' Ribbons

07' 69  
Back

1+39.5 = Beg. Conc. Drive on South		
SL + 0.7' on Conc. Dr	5.89	102.41
+10 " " "	6.30	102.00
1+47.5 = E edge Dr		
SL - 10' on Dr.	6.28	102.02
SL - 0.7' " "	5.88	102.42

1+50

-5	6.1	102.2
SL	5.6	102.7
cb	54	102.9
+4	54	102.9
+7	57	102.6
1/2	56	102.7
2	50	103.3
1/4	52	103.1
+5	57	102.6
+7	47	103.6
cb	47	103.6
N	3.9	104.4
+5	4.0	104.3

10830

2+00

-5	2.6	105.7
N	2.8	105.5
cb.	3.3	105.5
+5	3.5	105.3
+7	4.2	104.1
1/4	4.0	104.3
2	4.0	104.3
1/4	4.7	103.6
+2	4.2	104.1
cb.	4.4	103.9
5	5.1	103.2
+5	5.2	103.1

2+50

-5'	3.8	104.5
5	3.7	104.6
cb	3.2	105.1
+7	3.1	105.2
1/4	3.7	104.6
2	2.9	105.4
1/4	3.1	105.2

10830

70

1/4+5'	3.3	105.0
+8	1.7	106.6
cb	1.8	106.5
1/4	2.0	106.3
+5	2.2	106.1

2.784.6 = 2' Correc. Walk on South <sup>147' in st</sup>

5.6 on Walk	1.72	106.58
+1.97 " "	1.65	106.65
T.R. 11.43 117.95	1.78	106.52
3+00		

.5	10.3	107.6
1/4	10.3	107.6
cb	10.4	107.5
+3	10.3	107.6
+5	11.3	106.6
1/4	11.0	106.9
2	10.9	107.2
1/4	11.7	106.2
+2	11.6	106.3
+9	10.8	107.1
cb.	10.8	107.1
5	10.7	107.2
+5	10.8	107.1



117.95

Opal St.

3750

-5	9.5	108.4
5	9.3	108.6
cb.	8.9	109.0
+7	9.0	108.9
+9	9.7	108.2
'4	9.7	108.2
2	9.0	108.9
'4	9.0	108.9
+3	9.0	108.9
cb	8.6	109.3
N	7.7	110.2
+5'	7.5	110.4

4700

-5'	6.7	111.2
N	6.8	111.1
cb.	7.8	110.1
+3	8.1	109.8
'4	7.7	110.2
2	7.8	110.1
+8	8.4	109.5
'4	7.6	110.3

117.95

71

5cb.	7.6	110.3
5	8.2	109.7
+5	8.2	109.7

4750

-5	6.7	111.2
5L	6.7	111.2
cb.	6.4	111.5
'4	6.3	111.6
+1	6.7	111.2
2	6.4	111.5
'4	6.2	111.7
+5	6.3	111.6
+7	5.9	112.0
cb	5.8	112.1
N	5.1	112.8
+5	5.1	112.8

4798.31-11/6. Downes

-5	3.9	114.0
N	4.0	113.9
cb.	4.7	113.2
+4	4.5	113.4
+6	4.9	113.0

117.95

Opal St.

N 1/4

4.6

113.3

E

4.6

113.3

+9

5.0

112.9

1/4

4.7

113.2

Cb

4.7

113.2

5.6

5.0

112.9

S.L. on Pipe

5.01

112.94

+5

5.0

112.9

TP

0.61

106.15

12.41

105.54

TP

0.34

93.86

12.63

93.52

Chk. starting BM.

13.21

80.65 ✓

72

Cross Section Alley Block 4  
Washington Heights.  
Levels next page

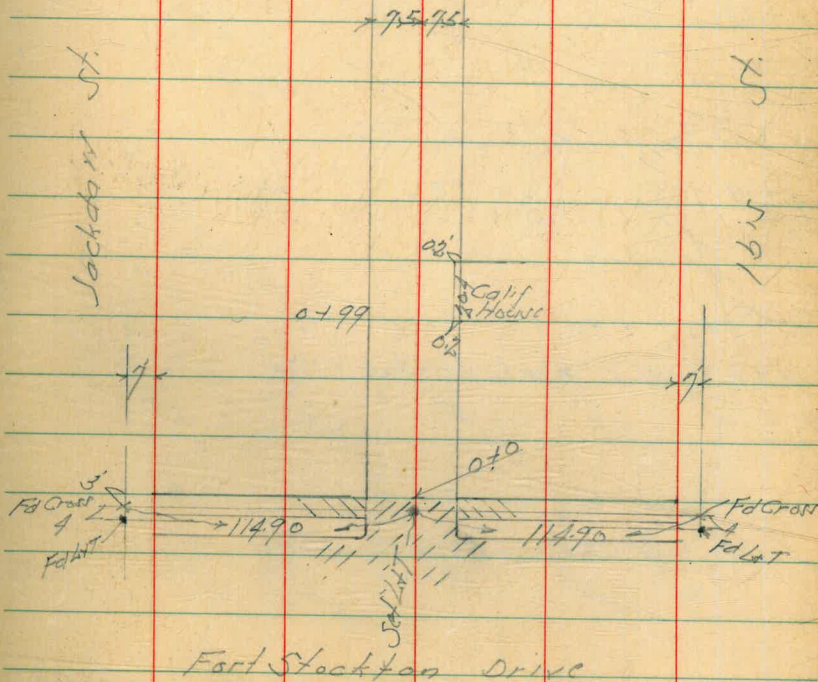
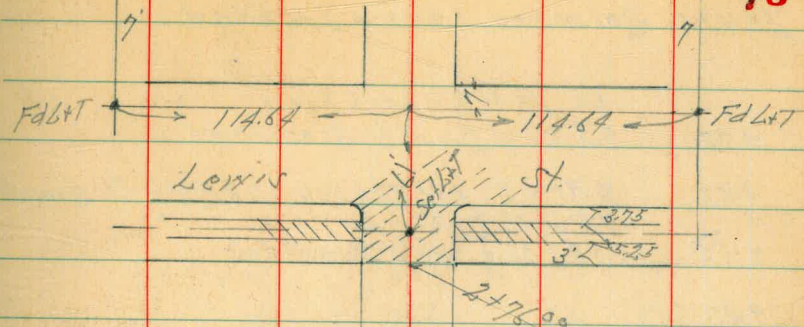
Indexed  
C.S.K

Sept 18-46

S. 5509  
McCoy  
Woodhol  
H. 1007

N.O. 24

FOR FRANK WHERRY  
G.W.E.



Cross Section Alley Block A  
 Washington Hts From Fort Stockton to  
 Lewis Between 16th + Jackson

+72 8.1 H of  $\frac{1}{2}$  = Lot 6 Fence  
 7.2 R of  $\frac{1}{2}$  = Nly Board Fence  
 +32 7.1 R of  $\frac{1}{2}$  = Ely TC/ Pole 7.2 R of  $\frac{1}{2}$  = Sly Board Fence  
 7.5 Lt of  $\frac{1}{2}$  = Sly  $\frac{1}{2}$   
 +50 6.9 Lt of  $\frac{1}{2}$  = Nly Power Pole  
 +47

Notes Reduced - 9-19-46  
 wheny -

+32

+19

0+0 = N-L Fort Stockton Drive

0-10 = N-CB Line Fort Stockton

BM 6.10 276.62

270.52  
 NW 8P  
 Fort Stockton  
 + Jackson

L:W

Z

R: E

74

272.3  
 4.0  
 7.5  
 272.3  
 4.0  
 272.3  
 4.0  
 7.5  
 272.26  
 4.06  
 7.9  
 25' Door  
 on Conc

272.35  
 4.27  
 10.3 = Ely Conc  
 Walk

272.51  
 4.05  
 7.5  
 10.2 = Nly Conc  
 Walk  
 272.1  
 4.5  
 7.5  
 271.9  
 4.7  
 271.8  
 4.8  
 7.5  
 271.45  
 5.17  
 7.9  
 on Conc  
 Footing

271.87  
 4.75  
 7.4 = CB  
 271.65  
 4.97  
 7.4 = Gutter  
 271.21  
 5.4  
 on Pav.  
 271.64  
 5.08  
 7.5 = Gutter  
 271.6  
 4.93  
 7.5 = CB

271.58  
 5.04  
 8.5 = CB  
 271.11  
 5.57  
 8.5 = Gutter  
 271.02  
 5.10  
 on Pav.  
 271.00  
 5.62  
 8 = Gutter  
 271.29  
 5.13  
 8 = CB

276.62

+40 8.4 Lt of  $\frac{1}{2}$  = Sly 6 lb Fence

+33

+29

+15 8.2 Lt of  $\frac{1}{2}$  = 11 1/2 Waves Wire Fence

TP 5.15 277.90 3.87 272.75

+10

8.1 Lt of  $\frac{1}{2}$  = Sly Waves Wire Fence

+96

6.5 Rt of  $\frac{1}{2}$  = Sly 2 1/2 HRS Beard Fence

+95

+89

0795

276.62

Lt.

L

Rt.

272.62

5.28

11 1/2 Waves  
Conc Floor

273.1

48  
13.5 - 1/2 Waves  
Dirt Floor

277.90

272.8

6.8  
7.5

272.7

4.39

272.3

1.9  
7.5

272.60

4.0  
11.4 - 1 1/2 Waves  
Conc Floor

273.08

6.54  
7.05 - 1 1/2 Waves  
Conc Floor

272.4

4.1  
7.5

272.6

4.0

272.6

4.0  
7.5

272.62

4.0  
11.3 - 1 1/2 Waves  
Conc Floor

276.62

+06 8.4 Lt of 1/2 = Sly Wire Fence

270

+93 7.2 Rt of 1/2 = Sly Labb Fence & Sly Collif House

+85 7.3 Rt of 1/2 = Sly Labb Fence

8.5 Rt of 1/2 = Sly Board Fence

+81

+57 8.5 Rt of 1/2 = Sly Board Fence

+53

+50 8.5 Lt of 1/2 = Sly Labb Fence

+48

+43 7.2 Lt of 1/2 = Sly Power Pot

+41 6.5 Rt of 1/2 = Sly Tail Pak

277.90

Lt

1/2

Rt

273.1

1.8  
17.5

273.1

4.8

273.1

4.8  
7.5

273.28

4.5

11.2 = Sly Board Floor

273.14

4.78

10.9 = Sly Board Floor

273.05

4.83

10.9 = Sly Board Floor

273.1

4.8

7.5

272.9

5.0

272.8

5.1

7.5

272.8

5.1

10.9 = Sly Board Floor

277.90

+84 = Break in Paving Grade

+79 8.3 Rt of  $\frac{1}{2}$  = 2 x 11/2 2' Hedge  
2+76.00 = S.L. Lewis

TP 4.07 275.22 6.75 271.15

+73 8.4 Lt of  $\frac{1}{2}$  = 11/4 Wire Fence & 11/4 4' Hedge  
7.5 Lt of  $\frac{1}{2}$  = 11/4 Paper Pole

+55

+53 8.1 Rt of  $\frac{1}{2}$  = 8 1/2 x  $\frac{1}{2}$  2' Hedge

+52 5.9 Rt of  $\frac{1}{2}$  = Fly Tail Pole

+51 7.1 Rt of  $\frac{1}{2}$  = 11/4 Frame Garage N Entrance

+44 7.4 Lt of  $\frac{1}{2}$  = 8 1/2 Wire Fence & 2 1/4 4' Wide Hedge

+35

+31 7.2 Rt of  $\frac{1}{2}$  = 8 1/2 Frame Garage N Entrance

+29 7.1 Rt of  $\frac{1}{2}$  = 11/4 Calif House

+24 7.5 Lt of  $\frac{1}{2}$  = 11/4 Wire Fence

2+14

277.90

Lt.	Rt.	Rt.
270.71	269.90	270.46
4.51 17.6 = 64 Pay	5.32	1.76 7.3 = Pay
270.46	270.90	270.38
1.26 7.6	4.32 7.5 = Gutter	4.84
		270.54
		4.68 7.3 = Gutter
		270.58
		4.68 7.3 = 0.6
		275.22
271.9	271.7	271.6
6.0 7.5	6.2	6.3 7.5
		6.33 9.2 = 11/4 Gate Dixie
272.5	272.2	272.2
5.4 7.5	5.7	5.7 7.2 = Bldg
		273.75
		4.15 7.3 = 7 Door Calif House on Floor

BM

3.84 267.89

FWBP  
LCHMST  
HARK  
267.97

IP

7.13 271.73 10.62 264.60

2488

= SC6 LINE LCHMST

275.22

270.66

269.92

269.71

269.55

4.56

5.30

5.51

5.67

7.5 = C6

7.5 = PAVING

7.7 = PAVING  
1.7 DRIVE

275.22

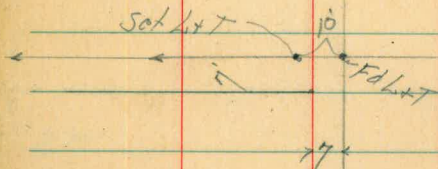


Tie Points Ocean View Blvd & 33rd St

Plotted T.R.S. 350 M<sup>2</sup> Q.

" " 335  
" " 333

Ocean View Blvd



75 posts

Indexed  
c.s.k.

Plotted T.R.S. 85 M<sup>2</sup> Q.

Dec. 11-46  
S. 5507  
McCoy  
Waddell  
#1100  
M.O. 210

79

Island



File

75 posts

BM 5.315 46765

41.45

N.E. BP  
Island 4/7/5

BM Soliton

5.315

41.45

N.E. BP  
Island 4/7/5  
1/10/112  
Island

Tic Points 957 + 1575 St.  
 Ra Set SE. 7' 4 + 0

Dec. 11-96  
 S. 8805  
 McCoy  
 H. H. H. H.  
 K. H. H.

Indexed  
 C.S.K.

957

Sch. Lead + Die

Fd L + T

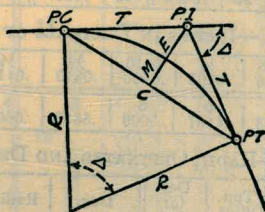
1575 St

Fd b + T

Marked st

# DIETZGEN'S RAILROAD CURVE AND REDUCTION TABLES

Copyright, 1914, by Eugene Dietzgen Co., New York City



## CURVE FORMULAS

- Radius  $= R = \frac{50}{\sin \frac{D}{2}} (1)$  Degree of Curve  $= D$  and  $\sin \frac{D}{2} = \frac{50}{R} (2)$
- Tangent  $= T = R \tan \frac{\Delta}{2} (3)$  Length of Curve  $= L = 100 \frac{\Delta}{D} (4)$
- Middle ordinate  $= M = R(1 - \cos \frac{\Delta}{2}) (5) = R \text{vers} \frac{\Delta}{2} (6)$
- External  $= E = T \tan \frac{\Delta}{4} (7) = R \div \cos \frac{\Delta}{2} - R (8) = R \text{exsec} \frac{\Delta}{2} (9)$
- Long Chord  $= C = 2 R \sin \frac{\Delta}{2} (10)$   $\Delta =$  Central Angle

## EXPLANATION AND USE OF TABLES

**Stations.**—Given P. I. = Sta. 161 + 60.35 to find Sta. of P. C. and P. T.  $\Delta = 62^\circ 10'$   $D = 8^\circ 20'$ . From Table IV for  $1^\circ$  curve  $T = 3454.1$  and  $\div 8\frac{1}{3} = 414.49$  ft. From Table V correction = .36 or  $T = 414.85$  ft. P. C. = Sta. P. I.  $- T = 157 + 45.50$ . Also from (4)  $L = 746.00$  and P. T. = Sta. P. C.  $+ L = 164 + 91.50$ .

**Offsets.**—Tangent offsets vary (approximately) directly with  $D$  and with square of the distance. Thus tangent offset for Sta. 158 on above curve is 2.16 ft. found as follows. From Table III tangent offset for 100 ft. = 7.27 ft. Distance = 158 — Sta. P. C. = 54.50, hence offset =  $7.27 (54.50 \div 100)^2 = 2.16$  ft. Also square of any distance divided by twice the radius equals (approximately) the distance from tangent to curve. Thus  $(54.50)^2 \div (2 \times 688.26) = 2.16$  ft.

**Deflections.**—Deflection angle =  $\frac{1}{2} D$  for 100 ft.,  $\frac{1}{4} D$  for 50 ft., etc. For  $c$  ft. = (in minutes)  $.3 \times C \times D^2$  or = defl. for 1 ft. from Table III  $\times C$ . For Sta. 158 of above curve =  $.3 \times 54.5 \times 8\frac{1}{3} = 136.2'$  or  $2^\circ 16.2'$ , or =  $2.50 \times 54.5 = 136.2'$  from Table III. For Sta. 159 deflection angle =  $2^\circ 16.2' + 8^\circ 20' \div 2 = 6^\circ 26.2'$ , etc.

**Externals.**—May be found in similar manner to tangents. Thus  $E$  for curve above is 115.37. For from Table IV for  $1^\circ$  curve  $E = 960.6$  for  $8^\circ 20' = 960.6 \div 8\frac{1}{3} = 115.27$  and from Table V correction = .10 or  $E = 115.37$  ft. Or suppose  $\Delta = 32^\circ$  and  $E$  is measured and found to be 42 ft. What is  $D$ ? From Table IV  $E = 230.9$  and  $\div 42 = 5.5$  or  $D = 5^\circ 30'$ .

767.  
 76  
 443

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RELATIVE SURFACE

125  
88  
37

263  
125  
138

572  
86  
5-06  
177.02  
59.27  
118.79

127  
108  
19

95

DISTANCES FROM CENTER OF ROADWAY FOR  
CROSS-SECTIONING.

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	26.2	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) ÷ 2 or 2 ft. added to 41.9 = 43.9. For slopes of 1 on 1 see inside of front cover.