1659

DIETZGEN

ENGINEERS'

FIELD BOOK

No. 403F

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

MICROFILMED
1963 1964

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)÷2 or 2 ft. added to 30.6 =32.6. For slopes of 1 on 1½ see inside of back cover.

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CITY ENGINEER'S OFFICE

This Field Book is manufactured of a High Grade 50% Rag Paper having a WATER RESISTING SURFACE, and is sewed with Bing Special Enamel Waterproof thread.

Made in U. S. A.

INDEX

Walker
Osborne
Huzarc
9-17-43

Cross Section Iowa ~~Ave~~ St.

from Kenwood to Merlin
10'cbs 7.5' 1/4S To N.L. Brooklyn

	9.95	171.66		161.71
	12.75	181.47	2.94	168.72
	13.00	194.17	0.30	181.17
	13.03	206.90	0.30	193.87

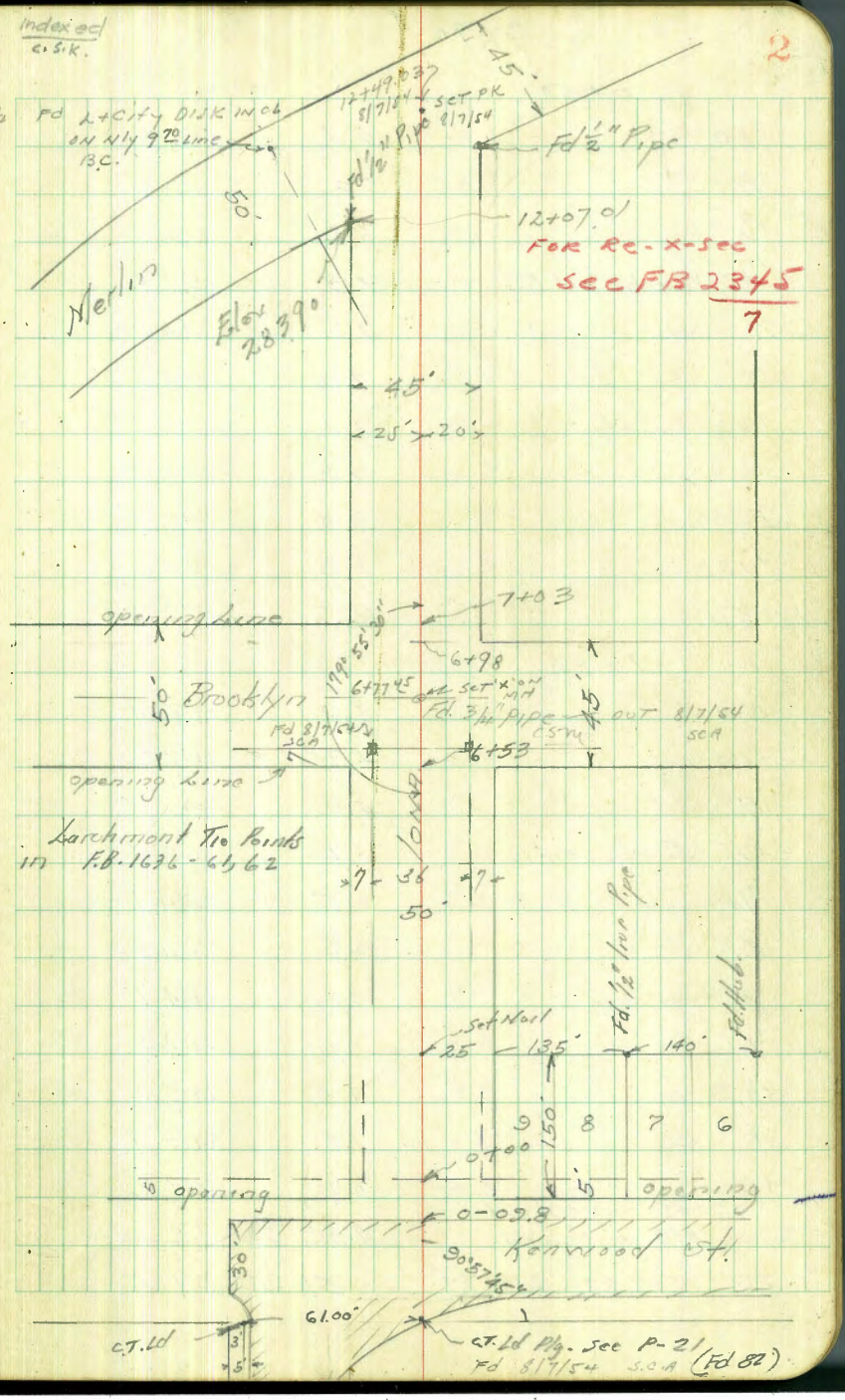
0-09.8=Wedge Existing Paving.

-10	on Pav.	10.64	196.26
W	on Pav.	10.81	196.09
cb.	" "	10.94	195.96
1/4	" "	11.09	195.81
℄	" "	11.18	195.72
1/4	" "	11.33	195.57
cb.	" "	11.50	195.40
E	" "	11.81	195.09
+10	" "	12.39	194.51
	0+00=opening line		
-10		12.0	194.9
E		11.5	195.4
cb		10.8	196.1
1/4		10.9	196.0
℄		10.6	196.3
1/4		10.7	196.2
+1.5=Wedge on Pav.		10.6	196.3
cb.		9.9	197.0
W		9.7	197.2

✓ 0+45=℄ Tel Pole on W 1' in St.

Notes Reduced 9-20-43
Profile C.S.M.

indexed
c.s.k.



0+50		
-10	5.4	201.5
W	5.4	201.5
cb.	6.2	200.7
1/4 = W edge oil Pav.	7.3	199.6
L on " "	7.2	199.7
1/2	7.2	199.7
+L "E edge" "	7.1	199.8
cb.	7.2	199.7
E	8.0	198.9
+10	8.8	198.1
+50	10.5	196.4
1+00		
-50	7.0	199.9
-10	4.7	202.2
E	4.0	202.9
cb = E edge oil Pav	3.1	203.8
1/4 on " "	2.5	204.4
L " " "	2.6	204.3
1/4 = W edge " "	2.8	204.1
+1	2.0	204.9
cb.	1.5	205.4
W	1.0	205.9
+10	0.7	206.6
0+45 on west side		
Temp BM Nail in Pole	4.36	202.54 ←
T.P. 12.82 219.21	0.51	206.39

1+50		
-10	8.1	211.1
W	8.9	210.3
cb.	10.0	209.2
+6	10.3	208.9
1/4 = W edge oil Pav	11.1	208.1
L " "	10.9	208.3
1/2 " "	11.0	208.2
cb. E " " "	11.2	208.0
E	11.3	207.9
+10	12.1	207.1
+50	14.7	204.5
2+00		
-50	9.2	210.0
-10	8.1	211.1
E	7.6	211.6
cb. = E edge oil Pav.	7.4	211.8
1/4 " " "	7.0	212.2
L " " "	6.9	212.3
1/2 = W edge oil Pav	7.1	212.1
+2	6.2	213.0
cb.	5.9	213.3
W	5.5	213.7
+10	5.0	214.2

(Should be 207.54)

21921

2+50		
-10	1.5	217.7
W	2.2	217.0
cb.	2.9	216.3
+6	3.2	216.0
1/4 = W edge 01 Rev	3.9	215.3
℄ on 01 Rev.	3.4	215.8
1/4 " " "	3.2	216.0
cb. E edge " "	3.8	215.4
E	4.0	215.2
+10	3.6	215.6
+50	3.7	215.5
2+52 = ℄ 3' Conc. Walk on E.	3.38	215.83 = 0.1' Back ✓
2+84 ℄ 6.6 " Drive " "	1.26	217.95 = 0.1 in st ✓
T.P. 12.77 231.94 ✓	0.54	219.17
2+95 = Beg. 6" Conc. Wall on E.	12.93	219.01 = 0.1 in st ✓
2+85 = ℄ 6.7' Wide Conc. Drive on W	12.04	219.90 = 0.6 " " ✓
2+97 = ℄ 14" Tel Pole on W 6.6' in st. ✓		
3+00		
-10	12.4	219.5
-0.1 on Wall	12.62	219.32
E	13.1	218.8
cb. - E edge 01 Rev	12.9	219.0
1/4 " "	12.6	219.3
℄ " "	12.5	219.4
1/4 W " " "	12.8	219.1

231.94 Iona St.

1/4+2'	12.2	219.7
cb.	11.7	220.2
W	11.1	220.8
+10	10.1	221.7
3+35 = ℄ Conc. Drive on W 6.5' 0.5 Back ✓		
W - 0.5 on Drive	8.03	223.91 ✓
W - 25.5 " " at Garage	6.44	225.50 ✓
E on Con Drive	10.10	221.84 Slight Grade Back to Garage
3+45 End 6" Wall on E	9.31	222.63 on Drive ✓
3+45 = Beg. 4" Wall	9.31	222.63 " " ✓
3+50		
-10	6.1	225.8
W	6.9	225.0
cb.	8.2	223.7
1/4 = W edge 01 Rev	8.8	223.1
℄ on " "	8.7	223.2
1/4 " " "	8.9	223.0
+6 E edge " "	9.2	222.7
cb.	8.9	223.0
E	9.1	222.8
E on 4" Wall	8.97	222.97
+10	8.8	223.1
3+57 = ℄ 6.5' Conc. Drive on W 0.2' Back		
W+0.2'	6.27	225.67 ✓
+34' on Drive at garage	2.63	229.31 ✓
3+63 = ℄ 3' Con Walk on E	8.00	223.94 = 0.4 in st. ✓

23194

3+80.7 = S edge Conc Drive	6.51	225.43	on East 0.5' Back ✓
3+89.3 = N " " "	6.01	225.93	" " ✓
4+01.5 = N end 4" Conc. Wall	4.66	227.28	on East ✓
4+03 = ℄ 3' Conc. Walk	4.62	227.28	0.1' in ft. ✓
4+04.5 = Beginning 4" Conc Wall	3.85	228.09	Steps up here on East ✓
3+87 = ℄ 3' Conc. Walk	4.58	227.36	17' in ft. ✓
" on Walk at W Line	2.64	229.30	✓
4+10 = ℄ 6.8' Conc Drive	0.64	231.30	on West 2' Back ✓
" 12' W.W.L. on "	0.00	231.94	✓
3+90 65' E E.L.	7.4	227.5	✓
4+00			
-65	6.5	225.4	
-10	5.2	226.7	
E	4.8	227.1	
cb.	4.2	227.7	
+3 = E edge Pav	4.1	227.8	
½ on "	3.6	228.3	
℄ " "	3.3	228.6	
¼ W " "	3.2	228.7	
cb.	2.1	229.8	
W	1.5	230.4	
+10	1.0	230.9	
This is Same Elev as 4" Conc. Wall			
4+31.6 = S. edge Con Drive on E	1.40	230.54	0.1' Back ✓
4+40.4 = N " " " "	0.87	231.07	" " ✓
4+36 = ℄ Drive 20' E E.Line	2.76		= Breaks
T.P. 12.69	243.91 ✓	0.72	231.22
4+40.4 = Step up in 4" Wall	11.88	232.03	on E. ✓
4+45 = N end " "	11.82	232.09	" " ✓

243.91 Iona St.

4+29 = ℄ 3' Conc. Walk on W.	10.12	233.79 = 1.5' Back
✓ 4+46 = ℄ 16" Tel. Pole on W 9' in St.		0.6' Back
4+67 = ℄ 6.8' Conc. Drive	7.69	236.22 on W at Gutter
" " " " "	5.03	238.88 = 34.6' Back ✓
4+50		
-10	8.2	235.7
W	8.7	235.2
+10	8.6	235.3
¼	9.6	234.3
+2 = W edge Pav.	10.0	233.9
½ on "	10.1	233.8
¾	10.4	233.5
+3 E " "	10.6	233.3
cb.	10.7	233.2
E	10.6	233.3
+10	10.4	233.5
4+64 = ℄ 3' Conc. Walk	9.26	234.65 + 0.4' in ft on E. ✓
4+84 = ℄ 7' Conc. Drive on E	7.86	236.05 = 0.9' Back ✓
" 4.9' E E.L. on "	11.49	232.42 = Bk. in Drive ✓
4+95 50' E E.L.	10.4	233.5 ✓
4+88 = ℄ 3' Conc. Walk on W	4.47	239.44 = 1.7' Back ✓
5+00		
-10	6.4	237.5
E	5.9	238.0
cb.	5.2	238.7
+2 = E edge Pav	5.3	238.6
¼	4.9	239.0

℄ on o/l Pov		4.8	239.1
+6 "W " "		5.0	238.9
1/4		5.0	238.9
W cb.		4.0	239.9
W		3.2	240.7
+10		2.7	241.2
5+04.5=℄ South Ribbon	9.8' in St. on West	3.02	240.89 2' Wide Conc. Drive
+07=℄ N "	9.8' in St. "	2.88	241.03 2' Wide "
5+04.5 on Ribbon at Line		2.45	241.46 ✓
5+07 " " " "		2.35	241.56 ✓
" " " 10' Back		1.88	242.03 ✓
5+04 " " 10' "		1.93	241.98 ✓
5+04 ℄ 3' Conc. Walk on E		5.52	238.39=0.8' Back ✓
5+36=℄ 7' Conc. Drive on E		2.51	241.40=1' Back at Garage ✓
" " " " "		4.83	239.08=3.4' Back ✓
5+47=℄ 14" Tel Pole on W 10.5' in St			✓
5+45 60' EEL.		7.6	236.3 ✓
5+63 ℄ 3' Conc. Walk on E.		0.19	243.72 0.9' Back ✓
T.P. 1273 256.13		0.51	243.40
5+50			
-10		10.6	245.5
W		11.0	245.1
cb.		11.4	244.7
+5		11.9	244.2
1/4 = W edge Pov.		12.7	243.4
℄ on Pov.		12.5	243.6

1/4	12.9	243.2
+5 on E edge Pov	13.2	242.9
cb.	13.2	242.9
E	13.2	242.9
+10	13.3	242.8
5+83=℄ 7' Conc. Drive on E	10.9 ℄	245.21=1' Back ✓
" 50' E EL. on "	16.25	238.88=Brook ✓
5+87'=℄ 2' Conc. Ribbon Drive	7.69	248.44=0.7' Back ✓
" 10.7' W W.L.	6.87	249.26 ✓
5+91=℄ N Ribbon 10.7' Back	7.63	248.50 ✓
" " " 0.7' "	6.81	249.32 ✓
6+00		
-65	15.9	240.2
E-10'	10.7	245.4
E.	9.9	246.2
cb.	8.9	247.2
+2	8.7	247.4
+4 = E edge Pov	9.2	246.9
1/4 on "	8.8	247.3
℄ " "	8.5	247.6
1/4 = W " "	8.6	247.5
+5	7.4	248.7
cb.	7.1	249.0
W	6.2	249.9
+10	4.7	251.4
Top Conc. Wall	1.78	254.35 Temp B.M. NE Brooklyn & Iona

25613

6+20 = 3' Conc. Walk on ℄	4.39	251.74	0.5 Back ✓
6+53 = ℄ opening line Brooklyn			
W	2.8	253.3	
cb.	3.6	252.5	
¼ = W edge Por.	4.6	251.5	
℄ on "	4.8	251.8	
¼ on "	5.2	250.9	
+3 E edge "	5.3	250.8	
cb	5.4	250.7	
E.	6.3	249.8	
6+73 = 8 cb.			
E.	5.6	250.5	
cb.	4.7	251.4	
+3 on Por. E edge	4.7	251.4	
¼	4.5	251.6	
℄	4.1	252.0	
¼	3.7	252.4	
+3 " " W "	3.5	252.6	
cb.	3.1	253.0	
W	2.4	253.7	
6+79.5 = S ¼			
W on Por.	1.6	254.5	
cb " "	2.4	253.7	
¼ " "	3.0	253.1	
℄ " "	3.5	252.6	
¼ " "	4.0	252.1	

25613 Iona 37. 7

cb. on Por.	4.6	251.5
E. " "	5.3	250.8
6+78 = ℄ Brooklyn		
E on Por.	4.9	251.2
cb. " "	4.0	252.1
¼ " "	3.0	253.1
℄ " "	3.0	253.1
¼ " "	2.5	253.6
cb. " "	2.1	254.0
W " "	1.5	254.6
6+85.5 = N ¼		
W on Por.	1.5	254.6
cb. " "	2.0	254.1
¼ " "	2.3	253.8
℄ " "	2.6	253.5
¼ " "	3.0	253.1
cb. " "	3.6	252.5
E. " " = E edge (Super)	4.9	251.2
6+93 = N cb		
E	4.3	251.8
cb. on Por.	3.5	252.6
¼ " "	2.6	253.5
℄ " "	2.2	253.9
¼ " "	1.8	254.3
+3 W edge "	1.7	254.4
cb.	0.7	255.4
W	0.3	255.8

25613

T.P.	12.25	266.60	1.78	354.35
6+97 = ℄ 12" Elec. & Tel Pole on W 11.5' in st.				✓
7+03 = W.L. Brooklyn on West 10' cb's on W				
			6" " " E	
W			7.5	259.1
+7			10.5	256.1
cb.			10.6	256.0
+2			10.6	256.0
+4			11.6	255.0
¼ = W edge of Pav.			11.6	255.0
℄			11.9	254.7
¼			12.6	254.0
cb.			13.1	253.5
E.			13.2	253.4
+1' on Wall			12.25	254.35 ✓
7+26 = End of Abbco Wall			11.24	255.34 1' Back ✓
7+32 = ℄ 28' Conc. Walk on E			10.94	255.66 = 0.5' ✓
7+50				
-10' at house			12.0	256.6
E			9.4	257.2
+5' = cb.			9.2	257.4
¼ = E edge Pav			9.0	257.6
℄ on "			8.8	257.8
¼ " W "			8.8	257.8
+2			9.6	258.0
+4			7.9	258.7
cb.			7.8	258.8
+2			7.7	258.9
W			5.2	261.4
+10			4.7	261.9

266.60

7+57 = S edge Conc. Drive	8.14	✓	257.46
7+74 = N " " "	6.75	✓	259.85 = 17.7' in st
7+65 = ℄ Abbco Drive	7.40	✓	259.20 = 17.2' st
" W.L. on "	4.46	✓	261.14
" W.L. +1' = Bk	4.17	✓	262.43 = 6.7' wide of this Pav. in Drive
" +24	2.47	✓	264.13 at Garage
7+76 = ℄ 4' Conc Walk on E	6.63	✓	259.97 = 9.6' in st
" on walk at E Line	7.58	✓	259.02
8+02 = S edge Conc Drive	4.43	✓	262.17 19.4' in st on walk
+08.5 = ℄ Drive	3.92		262.68
+15 = N edge Conc. Drive	3.44	✓	263.16
8+08.5 = ℄ Drive 9.5' Lt of ℄	3.85		262.75
" " on W.L.	1.65	✓	264.95 6.7' Wide
" " 21' W W.L.	0.32	✓	266.28
7+98 = Bgn Ret. Wall on W	0.6' in st		4" Wall
" on Wall	1.82	✓	264.78
" " Ground at Wall	2.7	✓	263.9
8+00			
-10'	1.4		265.2
W	1.82		264.78
+1	2.1		264.5
cb.	3.3		263.3
+5	3.8		262.8
¼ = W edge Pav.	4.6		262.0
℄	4.5		262.1
¼ = E " " "	4.8		261.8
cb.	4.8		261.8
E	5.6		261.0

7+73 = Beg. Plastered Hollow Wall on E 0.7' Back			
" Base Wall		7.7	258.9
" on "		1.10	265.50
8+06 = N end Base Wall 0.7' Back			
on Wall		0.74	265.86
Base "		4.3	262.3
8+10 60' E.EL.		7.3	259.3
8+50			
-10		1.2	265.4
E		0.9	265.7
+5 cb.		0.7	265.9
1/4 = E edge Pav.		0.8	265.8
℄ on "		0.8	265.8
W 1/4 = W edge "		0.9	265.7
+6		0.5	266.1
T.P	12.97	279.18	0.39 266.21
8+61 = ℄ 16" Euc Tree on E 7' in st.			
8+50 Cont.			
W cb.		12.5	266.7
W		11.7	267.5
+10		10.9	268.3 6.8 in st
8+91.5 = ℄ South 2' Conc Ribbon		10.35	268.83 = Drive way
+96.5 = ℄ " " " "		10.19	268.99 = " " for 28' more
8+96.5 on W.L.		10.03	269.15 Uniform Grade
8+91.5 " "		10.12	269.06
9+00 = ℄ 18" E.Euc. Tolo on W 8' in st.			

9+00

-10	9.1	270.1
W	9.4	269.8
cb.	9.7	269.5
1/8	10.1	269.1
+3 = W edge Out Pav	10.5	268.7
℄	10.3	268.9
1/4 = E " " "	10.6	268.6
cb.	10.2	269.0
E	10.1	269.1
+50	12.2	267.0
9+03 = Beginning Hollow (Plastered) Wall on E 1' Back		
on Wall	5.77	273.41
Base "	10.1	269.1
9+15 = ℄ 12" Euc Tree on E 8' in st.		
+35 " 18" " " " " 8' " "		
9+25 = ℄ 3' Conc. Walk on West.	8.01	271.17 = 7.5' in st.
" " " " on Line	7.91	271.27
9+36.5 = ℄ 2' Conc. Ribbon Drive	7.71	271.47 = 7.5 in st.
+41.5 = ℄ " " "	7.66	271.52 = 7.5 " st.
9+50		
-10	7.5	271.7
W	7.5	271.7
cb.	7.5	271.7
1/8	7.8	271.4
+3 = W edge Out Pav	8.0	271.2
℄	8.2	271.0

¼	8.3	270.9
cb.	8.3	270.9
E.	8.3	270.9
+10	8.3	270.9
(9+03 = S end)		
9+52 = N end Plastered wall		1' Back
on wall	5.8	273.4 ✓
" Ground	8.0	271.2 ✓
9+85.5 = ℄ 2' South Ribbon Drive	5.83	273.35 = 8.3 inst. ✓
9+90.5 = ℄ 2' Conc " "	5.74	273.44 " "
9+85.5 = ℄ Ribbon at Line	5.82	273.36 ✓
9+90.5 " " " "	5.74	273.44 ✓
10+00		
-10	6.0	273.2
E.	5.6	273.6
cb.	5.8	273.4
¼	6.0	273.2
2' = E edge Pav.	6.2	273.0
℄	6.0	273.2
¼ = W " "	6.0	273.2
cb.	5.9	273.3
W	5.7	273.5
+10	5.6	273.6
10+50		
-10	3.1	276.1
W	3.9	275.3
cb.	4.0	275.2
¼ on W edge of Pav.	3.7	275.5

℄	3.3	275.9
¼ = E	3.4	275.8
cb.	3.0	276.2
E.	2.8	276.4
+10	3.0	276.2
+60	4.0	275.2
10+72 = ℄ 10" Elec Pole on W 4' in St. ✓		
TP 11.35 290.00 ✓	0.53	278.65
11+00		
+60	12.0	278.0
E.	10.4	279.6
cb.	10.4	279.6
¼ = E edge of Pav.	11.0	279.0
℄	11.0	279.0
¼ W " "	11.2	278.8
cb.	11.2	278.8
W	11.2	278.8
+10	10.9	279.1 on East
Plastered Gate Post		
11+11 = ℄ 4'x4' Base	1.6' in St. = W edge Post	✓
on Ground	9.8	280.2 ✓
" Post.	2.8	287.2 ✓
11+35 = ℄ 4'x4' Plastered Gate Post on E	West edge 1.7' inst	
on Ground	8.3	281.7 ✓
" Post.	1.3	288.7 ✓

290.00

11+32 = S edge Conc. Drive on West side	8.65	281.35 + 9.7 in st. ✓
" " of Iona	8.45	281.55 ✓
" W " " "	8.35	281.65 ✓
" " " " 9.7 in st.	8.45	281.55 ✓
11+26.5 = ℄ 1.4'x1.4' Guide Post on West. East edge 0.4' in st.		
on Conc. Base	8.46	281.54 ✓
" Top Post	3.41 (5.05)	286.59 ✓
11+37.5 = ℄ 1.4'x1.4' Guide Post on West. E edge 0.4 in st.		
" Top Conc. Base	8.40	281.60 ✓
" Top of Post	3.35	286.65 ✓
11+38 = S end 5" Conc. Wall on West.	3.2' in st.	✓
" on "	7.63	282.37 ✓
" " Ground	8.1	281.9 ✓
11+96 = W end 5" wall on wall	5.46	284.54 on W 3.2' in st. ✓
" on Ground	5.7	284.3 ✓

11+50

-10	8.0	282.0
W	7.7	281.3
cb	7.4	282.6
1/4 = W edge of Pav.	7.1	282.9
℄	7.3	282.7
1/4	7.6	282.4
+2 = E " "	7.7	282.3
cb.	7.0	283.0
E	6.9	283.1
+10	7.2	282.8

290.00 Iona St. 11

12+07.01 = Rt. Δ to SW Cor 1/2 Iron Pipe

-10	3.9	286.1
E.	4.2	285.8
cb	4.2	285.8
+5' E edge Pav.	4.9	285.1
1/4 " "	4.9	285.1
℄ on " "	4.8	285.2
1/4 " W edge of Pav.	5.0	285.0
cb.	5.4	284.6
W on 1/2 Iron Pipe	6.10	283.90
Diag. Section = 58.5' on Rt.		
W	6.10	283.90
cb.	5.5	284.5
1/4	5.1	284.9
℄	4.6	285.4
1/4	4.6	285.4
cb	4.6	285.4
+1	3.0	287.0
E on 1/2" Iron	3.06	286.94 1/2" Pipe SW Meridian
T.P. 6.58 290.48	6.10	283.90
chk SE. B.P. 60th & Bach	8.44	282.04
FB 1369-P-64		282.13
		0.09 diff.

Jck - R + OK GBH

Moore
9-28-54

Xsec. 591A 50' wide
Kenwood to Brooklyn

Tied & made new Point
9-30-54

+50

+50

+00

T.P. 12.80 224.37 0.33 211.57

0+50

0+25

0+00 = New M.L. Kenwood

Spike Pole NW Cor Jona and Kenwood 9.3C 211.90 709.54 ft

Correction p. 3 WOS 709.54 and

indexed
C.S.K.

LT ℄ RT

12

222.0	221.0	221.0	222.7	222.2	222.8	221.9	222.4	222.6
3.4 / 30	3.4 / 25	3.4 / 19	1.7 / 13	2.2 / 11	2.1	2.5 / 14	2.0 / 12	1.8 / 25

217.8	218.0	218.3	219.4	218.8	219.0	218.9	219.4	219.3
6.6 / 30	6.4 / 25	6.1 / 19	5.0 / 15	5.6 / 12	5.4	5.5 / 14	5.0 / 17	5.1 / 25

215.3	215.7	215.9	215.3	215.6	215.1	215.7	215.7
9.1 / 30	8.7 / 25	8.5 / 15	9.1 / 13	8.8	9.3 / 14	8.7 / 17	8.7 / 25

211.2	211.2	212.0	211.6	211.8	211.4	211.9	211.7
13.7 / 30	13.7 / 25	12.4 / 17	12.8 / 11	12.6	13.0 / 14	12.5 / 17	12.7 / 25

℄ 224.37

208.9	209.1	208.8	208.7	208.3	208.6	208.2	208.2
3.0 / 25	2.8 / 15	3.1 / 13	3.4	3.5 / 13	3.3 / 20	3.7 / 25	3.7 / 30

	207.4	207.4	207.4	207.1	207.4	205.5	205.5	205.5
	4.5 / 25	4.5 / 13	4.5	4.8 / 13	4.5 / 15	6.4 / 22	6.4 / 25	5.4 / 30

207.9	206.2	206.4	205.7	206.3	206.3
4.9 / 25	5.7 / 13	5.5	6.5 / 13	5.6 / 15	10.6 / 25

℄ 211.90

Corrected S&H.

Used on Xsec 0 of Kenwood
F.B. 163C - 64

F.B. 1636-71

59 th

check to Pipe SE 59th Brooklyn	1.94	256.30	256.30	0.00
6+53 S.L. Brooklyn F.B. 1636 pg 61-62				
6 +00				
T.P.	8.40	258.24	0.20	249.84
+50				
5				
+50				
T.P.	12.96	250.04	0.04	237.08
"				
+50				
3+00				
T.P.	12.98	237.12	0.23	224.14
		224.37		

13

LT. ℄ RT

253.7	254.8	255.2	255.1	255.6	256.3	
4.5 / 25	3.4 / 13	3.0	3.1 / 14	2.6 / 17	1.94 / 25	Pipe 6+53
249.1	249.4	250.3	249.9	250.4	250.2	250.6	250.6	251.3
9.1 / 30	8.8 / 25	7.9 / 13	8.3 / 11	7.8	8.0 / 13	7.6 / 15	7.6 / 21	5.9 / 25

258.24

245.0	245.2	246.2	245.8	246.1	245.9	246.5	246.6	247.0
5.0 / 30	4.8 / 25	3.8 / 13	4.7 / 11	3.9	4.1 / 14	3.5 / 17	3.4 / 23	3.0 / 25
240.0	240.2	240.8	241.7	241.4	241.8	241.9	242.5	242.7	243.6
10.0 / 30	9.8 / 25	9.5 / 21	8.3 / 14	8.6 / 12	8.4	8.1 / 13	7.5 / 15	7.3 / 23	6.4 / 25
236.0	236.0	236.4	237.3	237.2	237.5	237.6	238.2	238.2	239.0
14.0 / 30	14.0 / 25	13.6 / 20	12.7 / 13	12.8 / 11	12.5	12.4 / 13	11.8 / 15	11.8 / 23	11.0 / 25

250.04

232.1	232.2	232.4	233.4	233.1	233.5	233.6	233.9	233.9
5.0 / 30	4.9 / 25	4.7 / 19	3.7 / 13	4.0 / 11	3.6	3.6 / 14	3.2 / 17	3.2 / 25
227.2	227.4	227.5	229.5	229.2	229.5	229.2	229.6	229.6
9.9 / 30	9.7 / 25	9.6 / 20	7.7 / 14	7.9 / 11	7.6	7.9 / 14	7.5 / 17	7.5 / 25
224.1	224.2	224.3	225.9	225.6	225.2	225.1	225.1	225.8
13.9 / 30	12.9 / 25	12.8 / 18	11.2 / 13	11.5 / 14	14.5	12.0 / 15	11.4 / 17	11.3 / 25

237.12

Xsec Merlin Drive 50' wide

Kenwood to 60x6 St

Redr Plotted Profile Grs. 9-30-43

1+00

0+75

0+50

0+40

0+30

0+20

0+05.78 = New N.K. Kenwood F.B. 1436-64

0+0 = B.C. Rt. 44 Hub

B.C. Hub on Kenwood and Merlin 219.55 217.55 1436-64

11.69 = 9.24 = 217.55 = Correction

Indexed C.S.K.

	Lt. 222.1	223.2	PR 223.4	223.6	Rt. 223.7
1+30	6.5 / 25	6.0 / 15	5.8	5.6 / 15	5.5 / 25
	223.0	223.9	223.8	223.7	221.6	221.6
	5.7 / 25	5.3 / 15	5.K	5.5 / 20	7.6 / 25	7.6 / 30
	224.0	224.5	224.0	223.1	220.6	220.2	219.8
	5.7 / 25	4.7 / 15	5.2	5.5 / 12	8.6 / 20	9.0 / 25	9.4 / 30
+	223.2	224.9	224.2	223.9	219.6	218.5
	6.0 / 25	4.8 / 18	5.0	5.3 / 12	9.6 / 25	10.7 / 30
	221.9	223.3	223.5	224.0	223.8	222.1	218.5
	7.3 / 25	5.9 / 13	4.7	5.2 / 12	5.4 / 20	7.1 / 25	10.7 / 32
	220.5	221.4	220.1	219.7	220.1	221.2	220.8	217.7
	8.7 / 25	7.8 / 15	9.1 / 10	9.5	9.1 / 10	8.0 / 15	8.4 / 25	11.5 / 37
	218.3	218.9	218.3	218.2	216.5
	10.9 / 25	10.3 / 15	10.9	11.0 / 13	10.7 / 25
	216.8	217.6	218.0	217.7	217.5
	12.4 / 25	11.6 / 12	11.2	11.5 / 12	11.7 / 25

229.24

Merlin

	Lt.	℄	Rt.
5	238.3	239.7	241.2	241.7	242.0
	3.5 / 25	2.1 / 15	0.6	0.1 / 15	± 0.2 / 25
+ 50	236.0	237.7	239.3	240.1	240.4
	5.8 / 25	4.1 / 15	2.5	1.7 / 15	1.4 / 25
℄	234.6	236.1	237.6	238.6	239.0
	7.2 / 25	5.7 / 15	4.2	3.2 / 15	2.8 / 25
+ 50	233.9	235.1	237.0	238.3	238.7
	7.9 / 25	6.7 / 15	4.8	3.5 / 15	3.1 / 25
3 POC 2×2 Hub on ℄ Merlin	234.2	235.2	236.9	236.8	236.7
	7.2 / 25	6.6 / 15	5.3	5.0 / 15	5.1 / 25
2 + 50	230.8	231.7	232.5	232.8	232.8
	11.0 / 25	10.1 / 15	9.3	9.0 / 15	9.0 / 25
T.P. 12.83 241.81 0.26 228.98			241.81		
2 + 00	227.1	227.9	228.9	228.8	228.7
	2.1 / 25	1.3 / 15	0.8	0.4 / 15	0.5 / 25
1 + 70	225.3	225.8	226.1	226.3	226.4
	3.9 / 25	3.4 / 10	3.1	2.7 / 15	2.8 / 25
229.24			229.24		

Merlin

8

7+50

7+31

check to B.M. Merlin
FB. 1636 on E Hub Brooklyn 11.9N N5357 253.59
7+04.0 Int. of E Brooklyn FB. 1636

T.P. 12.30 N6549 0.83 253.19

+77 Sec. on line Brooklyn

+50

6

5+50

T.P. 12.39 N5407 0.18 241.63
241.81

257.4 Lt	258.6	℄ 259.3	259.5 Rt	259.4
8.1 / 25	6.9 / 15	6.2	6.0 / 15	6.1 / 25

255.2	256.0	256.8	257.9	256.4
10.7 / 25	9.5 / 15	8.7	8.6 / 15	9.1 / 25

Line of Brooklyn

253.7	254.6	255.4	256.0	256.2
11.8 / 27	10.9 / 15	10.1	9.5 / 15	9.3 / 27

Sec. on line Brooklyn

252.8	253.6	254.1	254.6	254.6
12.7 / 27	11.9 / 15	11.4	10.9 / 15	10.9 / 27

265.49

251.8	252.3	252.9	253.1	253.1
2.7 / 27	1.7 / 15	1.1	0.9 / 15	0.9 / 27 approx

250.7	251.0	251.0	251.0	250.9
3.3 / 25	3.0 / 15	3.0	3.0 / 15	3.1 / 25

246.6	247.1	247.4	247.4	247.2
7.4 / 25	6.9 / 15	6.6	6.6 / 15	6.8 / 25

241.8	243.0	244.2	244.8	244.8
12.5N / 25	11.0 / 15	9.8	9.2N / 15	9.2 / 25

254.0N

Merkins

+50						
1+						
10+7.4N	P.C.C. ~~x~~ on Hub					
+40						
10	P.O.C. Hub					
T.P.	10.47	2740N	1.9E	2635.5		
+50						
9						
8+50						
	NLS+9					

L 7 2 197

2638	2645	2664	2685	2700	2708
10.2	8.5	7.6	7.5	4.0	3.2
30	25	15		15	25
2626	2631	2656	2667	2684	2692
11.4	10.9	8.4	7.3	5.6	4.8
30	25	15		15	25
2620	2626	2638	2659	2680	2686
12.0	11.4	10.2	8.08	6.0	5.2
30	25	15	Hub	13	25
2611	2617	2632	2650	2660	2665
12.9	12.3	10.8	9.0	8.0	7.5
30	25	15		15	25
	2617	2628	2642	2653	2660
	12.3	11.2	9.8	8.7	8.0
	25	15		15	25

2740N

2607	2617	2629	2641	2649
4.8	3.8	2.6	1.4	0.6
25	15		15	25
2594	2605	2622	2637	2638
6.1	5.0	3.3	1.8	1.7
25	15		15	25
2580	2589	2603	2617	2618
7.5	6.6	5N	3.0	3.7
25	15		15	25

2654.9

Merlon

Lt. Ø Rt

13 + 93.99 E.C.

+50

+30

13

+75

+50

+30

T.P. 11.49 284.99 0.5N 273.50

IN

274.0N

2783 2791 2801 2820 2827 2833

6.7/30 5.9/25 4.3/15 3.0? Hub 2.3/10 Fence 21.8 1.7/25

2768 2774 2787 2804 2809 2811

8.1/30 7.6/25 6.3/15 4.6 4.1/12 Fence 13.7 3.9/25

2772 2780 2795 2804 2803 2803

7.8/30 7.0/25 5.5/15 4.6 4.7/12 4.7/25

2778 2785 2794 2798 2791 2787 2787

7.8/30 6.5/25 5.6/21 5.7/13 5.9 6.3/12 Fence 6.3/25

2784 2768 2776 2784 2784 2779 2777

10.6/30 8.1/25 7.4/20 6.6/10 6.5 7.1/10 7.3/25

2716 2723 2745 2766 2771 2769

13.5/30 12.7/25 9.7/10 8.4 7.9/10 Fence 17.5 8.1/25

2689 2698 2722 2738 2754 2756

16.1/30 15.2/25 13.8/15 11.2 9.6/15 9.4/25

284.99

2666 2676 2696 2718 2730 2737

7.4/30 6.4/25 4.4/15 2.2 1.0/15 0.3/24.7 Fence

274.0N

Merlin

17

+50

T.P. C.C. = 92.60 3.61 = 85.98

1C

+50

+5

14 + 73 90°

14 + 48.4 E line Sec. 90°

T.P. C.C. = 89.59 1.86 = 83.13

14 + 18.7 Sec 90°

= 84.99

283.2	283.8	LT 284.7	285.3	RT 285.8	287.1	289.8	290.2	
9.4 / 30	8.8 / 25	7.9 / 17	7.3 / 13	6.8	5.5 / 2	2.8 / 15	2.4 / 20	Fence

281.3	282.1	284.4	285.6	286.1	287.3	287.7	289.3	
11.3 / 30	10.5 / 25	8.7 / 17	7.0 / 7	6.5	6.3 / 6	4.9 / 9	3.3 / 20	Fence

= 84.99

280.8	281.9	284.4	285.2	285.7	286.0	287.3	288.8	
8.8 / 30	7.7 / 25	5.4 / 17	4.6 / 8	3.9	3.6 / 1	2.3 / 5	0.8 / 20	Fence

281.3	282.3	283.5	284.5	285.1	285.4	286.6	288.4	
8.3 / 30	7.3 / 25	6.1 / 14	5.1 / 9	4.5	4.2 / 5	3.0 / 7	1.2 / 17	against Bldg.

282.0	282.4	283.6	284.6	284.8	284.9	285.9	287.7	
7.6 / 30	7.2 / 25	6.0 / 14	5.0 / 9	4.8	4.7 / 4	3.7 / 5	1.9 / 20	

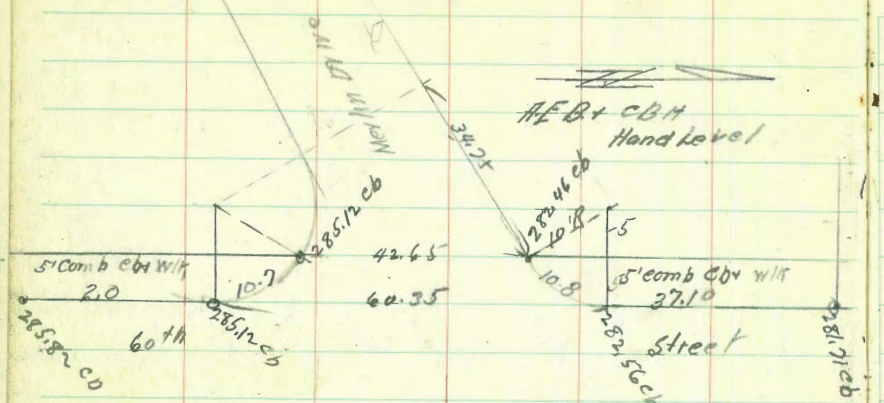
281.4	281.9	283.6	284.7	284.8	285.2	286.2	287.2	
8.1 / 30	7.7 / 25	6.0 / 9	4.9 / 5	4.8	4.4 / 9	3.4 / 11	2.4 / 20	South = old line

280.8	281.5	282.4	283.8	284.9	285.2	285.4	
8.8 / 30	8.1 / 25	7.2 / 15	5.8	4.7 / 6	4.4 / 15	4.2 / 25	

= 84.99

279.7	280.4	281.5	282.6	284.0	284.8	
5.3 / 30	4.6 / 25	3.5 / 15	2.4	1.0 / 15	0.2 / 25	

Meeker Dr.



S.E. 60th

check to BM BP and Back 10.56 = 282.04 = 282.04

18+14.08 = w.l. 60th Sec. and Line 60th
" edge Pav.

17+95

17+91

17+50

17+09

29+60

Lt ℄ Rt

P. 11

282.46	281.58	283.13	284.28	285.12
10.1	14.0	9.47	8.3	7.48
191	181	pav	23.7	23.7
86	gut.		gut	Cb.

282.3	283.0	283.4	285.7	288.1	288.4
10.3	9.6	9.x	6.9	4.5	4.x
25	17		3	12	20 Fence

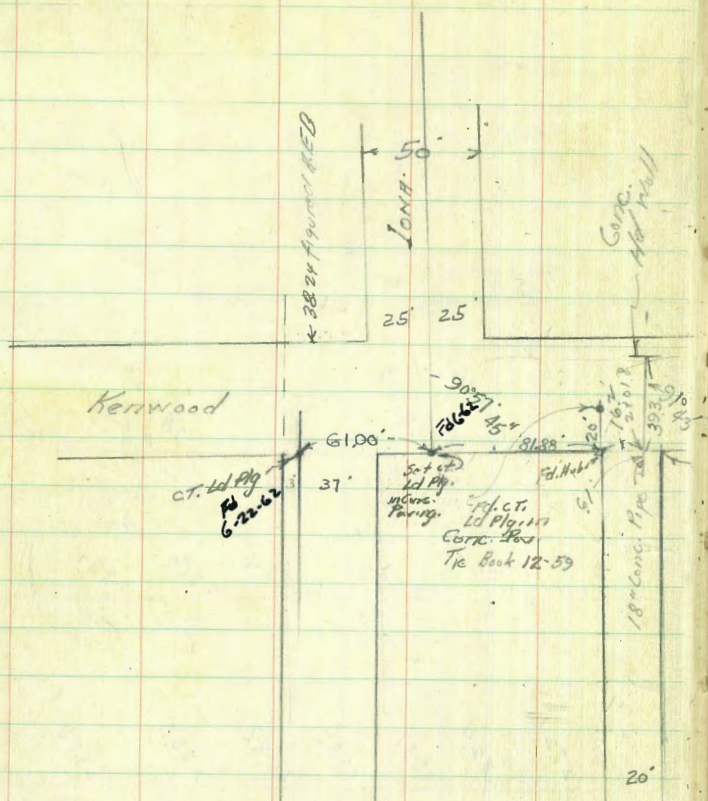
282.1	282.4	283.1	283.5	285.7	288.8	288.8
10.5	10.2	9.5	9.1	6.9	3.8	3.8
30	25	18	2		13	20 Fence

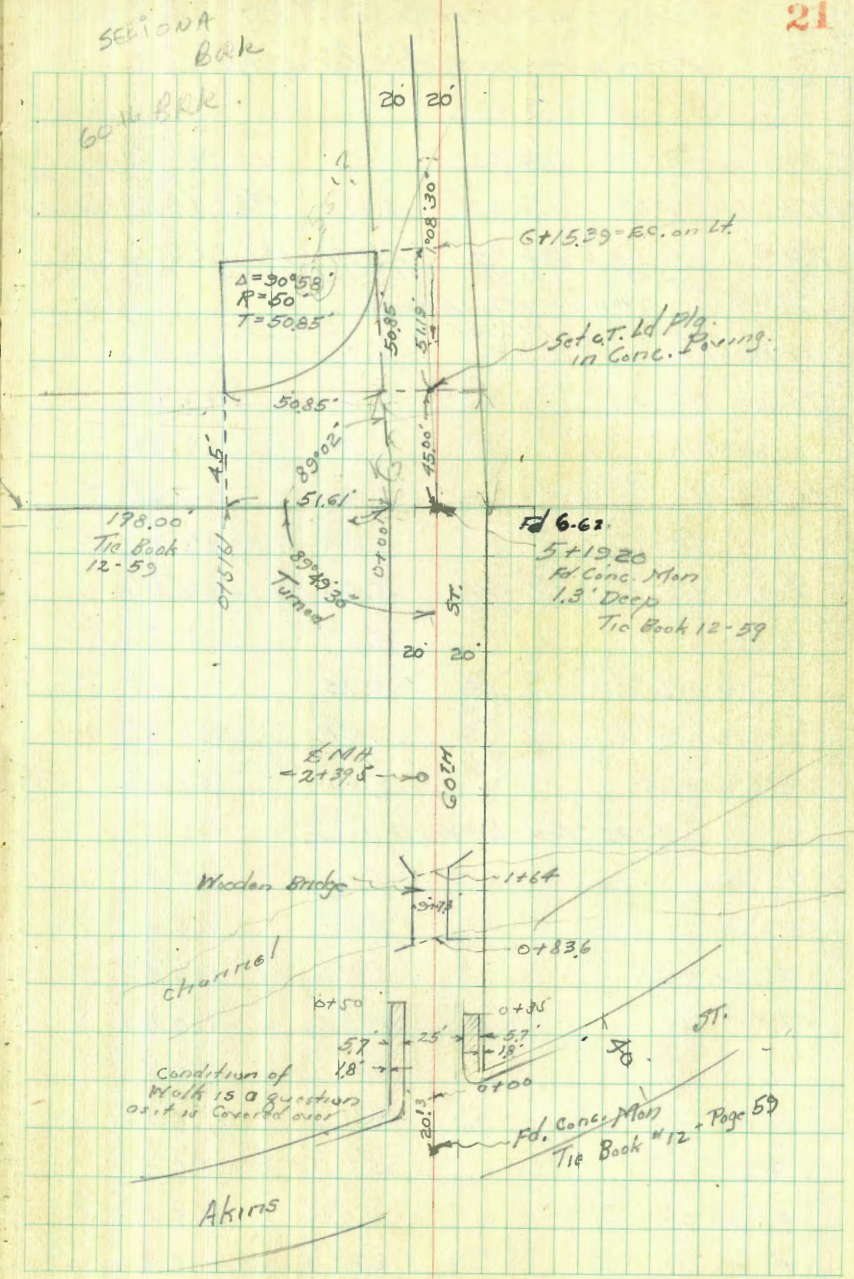
282.3	282.9	283.8	284.2	285.4	286.6	289.2	290.0
10.3	9.7	8.8	8.4	7.2	6.0	3.4	2.6
30	25	19	6	4		10	20 Fence

283.8	283.8	284.4	285.1	285.4	286.8	289.7	290.2
9.3	9.8	8.x	7.5	7.9	5.8	2.9	2.4
30	25	19	16	2		13	20 Fence

29+60

Cross Section 60½ St.





0°45'30"
131.15

Walker
Osborne
Hyzer
Hollis
10-6-43

Cross Section 60th St. 40' Wide 5' cbs. T.S. 14's

From Akins to Brooklyn

Sketch P-21

	2.08	204.62		202.54	Nail in Pole NW Iowa & Kenwood. P.3 Ld+ CT. & 60th
T.P.	0.37	196.32	8.67	195.95	NL. Kenwood St
T.P.	0.91	184.28	12.95	183.37	
T.P.	4.07	175.38	12.97	171.31	Nail in Pole NW. 60th & Akins
	0+00 = NL. Akins. 175.38 π				
W -10			7.0	168.4	
W			6.3	169.1	
cb on walks.			6.50	168.88	✓
+0.7 " cb			6.50	168.88	✓
¼			5.4	170.0	
℄			5.4	170.0	
¼			5.1	170.3	
+5 on cb.			5.74	169.64	✓
E on Walk			5.61	169.77	✓
+10 on Walk			5.40	169.98	

Reduced & Plotted Profile # 2817 10-14-43 CBH

0+35 = End cb + Walk on E. ✓

-10		9.1	166.3	
E		5.8	169.6	
cb. on walk		5.91	169.47	
+1.8 " cb.		5.91	169.47	✓
¼		4.9	170.5	
℄		4.9	170.5	
¼		5.1	170.3	
+5 on cb.		6.17	169.21	✓
W		6.2	169.2	
+10		6.6	168.8	

Indexed c. S.K.

175.38

0+50 = End Walk & cb on West

-10		5.8	169.6
W		5.9	169.5
cb. on walk		6.10	169.28 ✓
+0.7 on cb.		6.10	169.28 ✓
¼		4.9	170.5
℄		4.8	170.6
¼		4.9	170.5
cb.		8.2	167.2
+10		8.2	167.2
0+75			
-10 on channel Bank		0.5	174.9
E		2.7	172.7
cb.		3.6	171.8
¼		4.1	171.3
℄		4.4	171.0
¼		4.4	171.0
cb.		8.7	166.7
W		8.4	167.0
+10		7.1	168.3
0+83.6 - South end Bridge ✓			
0+95			
-10		7.8	167.6
W		7.1	168.3
cb.		7.0	168.4
¼ on Dirt under Bridge		8.3	167.1
" " Bridge Decking		4.03	171.35 ✓
℄ " " "		4.03	171.35 ✓

℄ on Bridge	3.97	171.41 ✓
cb	5.8	169.6
E	6.4	169.0
+10	7.5	167.9
1+10		
25 in channel	11.4	164.0
E	10.8	164.6
cb.	10.6	164.8
℄ on Dirt	8.1	167.3
" " Bridge	3.37	172.01 ✓
℄ " "	3.39	171.99 ✓
¼ " "	3.33	172.05 ✓
¼ " Dirt	11.0	164.4
W/cb.	12.3	163.1
W	12.3	163.1
+25 in channel	12.7	162.7
1+20		
-25 in channel	12.9	162.5
W " "	12.9	162.5
cb. " "	12.9	162.5
¼ " "	12.6	162.8
℄ " "	12.6	162.8
¼ " "	12.6	162.8
cb. " "	12.6	162.8
E " "	12.1	163.3
+25 " "	11.9	163.5

1+50

-25	10.8	164.6
E	11.4	164.0
cb.	11.7	163.7
¼	11.8	163.6
℄	11.8	163.6
¼	12.0	163.4
cb	12.2	163.2
W	11.5	163.9
+10	10.2	165.2
1+60		
-10	5.9	169.5
W	6.4	169.0
cb.	6.7	168.7
¼ on Dirt	8.3	167.1
" " Bridge Deck	1.17	174.21 ✓
℄ " " "	1.16	174.22 ✓
¼ " " "	1.38	174.00
" Ground	11.0	164.4
cb.	8.7	166.7
E	8.2	167.2
+10	8.9	166.5
1+64=℄ North end Bridge	1.13 Deck	174.25 ✓
1+80		
-10' on ch. Bank	4.3	171.1
E " " "	2.3	173.1
cb " "	2.4	173.0

175.38

1/4		0.3	175.1
℄		0.3	175.1
1/4		0.2	175.2
cb.		2.2	173.2
W		4.0	171.4
+7		7.7	167.7
+25		8.5	166.9
T.P.	12.72 187.85	0.25	175.13
	1+95		
-15		20.2	167.7
-7 Toe slope		17.7	169.2
W		14.7	173.2
cb		13.0	174.9
+4		11.8	176.1
1/2		11.8	176.1
℄		11.9	176.0
1/4		12.0	175.9
cb.		15.4	172.5
E		18.6	169.3
+6		12.8	168.1
+15		19.8	168.1
	2+15		
-15		19.8	168.1
E		18.0	169.9
cb.		14.5	173.4
1/4		11.5	176.4

60 TH

187.85

℄	11.0	176.9
1/4	10.9	177.0
cb.	11.2	176.7
W	11.0	176.9
+10	9.9	178.0
2+38.5=℄ MH 35'Lt of ℄	9.17	178.68 on Tim
2+33		
-10	8.5	179.4
W	9.1	178.8
cb.	10.3	177.6
1/2	9.9	178.0
℄	9.9	178.0
+6	10.3	177.6
1/4	9.9	178.0
cb.	10.3	177.6
E	12.2	175.7
+6	14.2	173.7
+15	14.9	173.0
2+50		
-15	13.6	174.3
E -5	10.0	177.9
E	9.1	178.8
cb.	8.2	179.7
1/4	8.6	179.3
+1	9.1	178.8

60TH St.

187.85

℄	8.6	179.3
1/4	8.6	179.3
+3	8.8	179.1
+6	8.4	179.5
cb.	8.0	179.9
W	3.6	183.3
+2	0.0	187.9
+10	0.0	187.9

✓ 2+67 = ℄ Elec Pole 17'Lt of ℄ 60th

3+00

-10'	0.6	187.3
-2	0.4	187.5
W	1.6	186.3
cb.	4.4	183.5
1/4	4.0	183.9
℄	4.0	183.9
1/4	4.2	183.7
cb.	6.1	181.8
E	8.3	179.6
+7	11.6	176.3
+15	11.9	176.0

3+20 = ℄ 35' Wooden Foot Bridge on Rt. ✓

-43 on East end Bridge	6.6	181.3
E+2' = West " " ✓	6.8	181.1
+12 = Top step	3.0	184.9
℄	2.3	185.6

187.85

3+25

-15' in channel	10.9	177.0
-4	8.8	179.1
E.	7.0	180.9
cb.	4.7	183.2
1/4	2.3	185.6
℄	1.9	186.0
1/4	1.7	186.2
cb.	1.7	186.2
W	0.6	187.3
+10	+0.3	188.2
T.P.	9.28 196.26	0.87 186.98

3+50

-10	8.0	188.3
W	8.6	187.7
cb.	9.3	187.0
1/4	8.9	187.4
℄	8.6	187.7
1/4	9.8	187.0
+1	8.0	188.3
cb.	9.5	186.8
E	12.1	184.2
+17 = Toe slope = Wt edge Channel	18.4	177.9

3+75

-34' = Toe slope - Wt " "	181	178.2
-2'	7.6	188.7

E.	7.6	188.7
cb.	6.8	189.5
¼	8.1	188.2
℄	7.6	188.7
¼	8.1	188.2
cb.	8.0	188.3
W	7.6	188.7
+10	7.8	188.5
4+00		
-10	7.2	189.1
W	7.2	189.1
cb.	7.4	188.9
¼	7.5	188.8
℄	7.1	189.2
¼	7.2	189.1
cb.	6.2	190.1
E.	6.4	189.9
+10	6.9	189.4
4+43 = ℄ 16" Pepper Tree 12' Lt of ℄		
4+50		
-10	5.8	190.5
E.	5.9	190.4
cb.	5.6	190.7
¼	5.8	190.5
℄	5.8	190.5
¼	5.8	190.5

cb.	5.9	190.4
W	6.1	190.2
+10	6.4	189.9
4+76 = ℄ 16" Pepper Tree 13' Lt. of ℄		
4+96 " 24" " " " " "		
5+00		
+10	5.1	191.2
W	5.0	191.3
cb.	4.9	191.4
¼	4.2	192.1
E.	3.8	192.5
¼	3.8	192.5
cb.	4.3	192.0
E.	4.3	192.0
+10	4.4	191.9
5+18 = ℄ Elec. Pole 12' Lt of ℄		
T.P. 8.48	204.44 0.30	195.96 Lg/s C.T. Con.T. & 60th NLI Kenwood
	204.93 corrected	195.95 P-22
5+19.26 = ℄ Kenwood		
-10	12.5	191.9
E.	12.0	192.4
cb.	11.6	192.8
¼	11.2	193.2
℄	11.0	193.4
¼	11.1	193.3
cb.	11.5	192.9
W	11.7	192.7

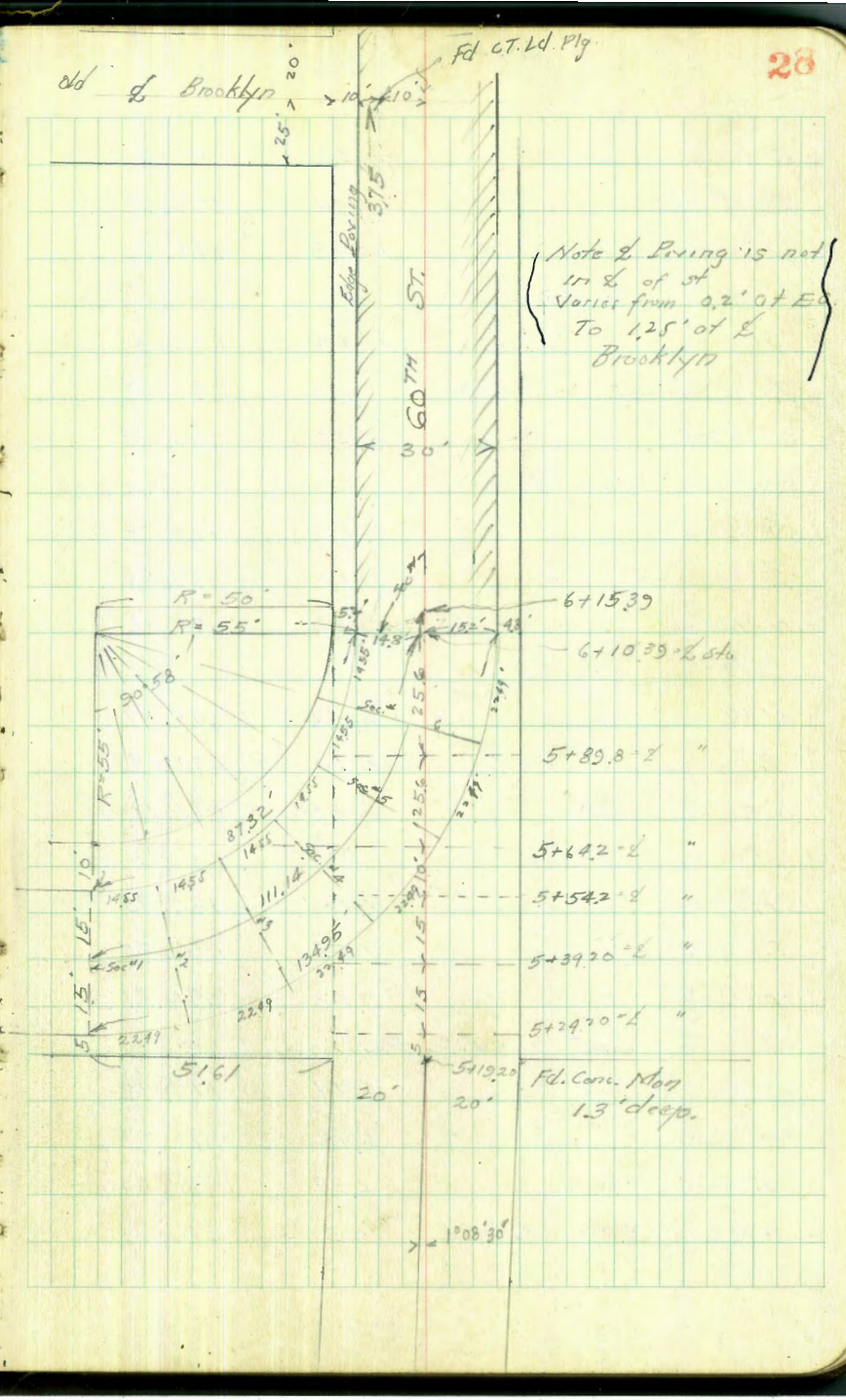
5+24.20		
W	10.6	193.8
cb.	10.8	193.6
¼	10.5	193.9
℄	10.6	193.8
¼	10.9	193.5
cb	10.9	193.5
E	11.3	193.1
+10	11.7	192.7
5+39.20		
-10	10.7	193.7
E.	10.1	194.3
cb.	10.2	194.2
¼	9.8	194.6
℄	9.7	194.7
¼	9.4	195.0
cb.	9.5	194.9
W	9.6	194.8
+4 on edge Pav.	9.70	194.73
5+54.2		
W on Pav	9.26	195.17
cb " "	9.08	195.35
¼ " "	8.91	195.52
+12 " edge Pav.	891	195.52
℄	8.9	195.5
¼	9.2	195.2

cb	9.0	195.4
E	9.5	194.9
+10	9.7	194.7
5+64.2		
-10	9.9	194.5
E	9.0	195.4
cb.	8.3	196.1
¼	8.6	195.8
+5 on edge Pav.	847	195.96
℄ " Pav.	8.99	195.94
¼ " "	8.67	195.76
cb " "	8.80	195.54
W " "	9.09	195.34
5+89.8		
-10	8.1	196.3
W	8.2	196.2
+1.5 on W edge Pav.	8.05	196.38
cb. " Pav	7.91	196.49
¼ " "	7.78	196.65
℄ " "	7.57	196.86
¼ " "	7.39	197.04
+5.5 edge "	7.40	197.03
cb.	7.1	197.3
E	7.4	197.0
+10	8.5	195.9

20443

6+15.39 = ℄E

-10	6.0	198.4
E.	5.8	198.6
cb. on Pav.	6.07	198.46
1/4 " "	6.00	198.43
℄ " "	6.14	198.29
1/4 " "	6.26	198.17
cb. " "	6.37	198.06
W	6.8	197.6
+10	6.2	198.2
6+50		
-10	2.6	201.8
-2	2.2	202.2
W	3.7	200.7
cb. on Pav.	4.13	200.30
1/4 " "	4.09	200.34
℄ " "	4.03	200 40
1/4 " "	3.90	200.53
cb. " "	3.84	200.59 Kenwood
E.	3.1	201.3
+10	2.2	202.2
6+60 = ℄ Elec. Pole		
Sec N.1		
N	11.26	193.17
℄	11.14	193.29
S	11.19	193.24



20443

	Sec #2			
S			10.46	193.97
C			10.54	193.89
N			10.73	193.70
	Sec #3			
N			10.12	194.31
C			9.90	194.53
S			9.86	194.57
	Sec #4			
SE			9.10	195.33
C			9.17	195.26
NW			9.40	195.03
	Sec #5			
NW			8.54	195.89
C			8.40	196.03
SE			8.30	196.13
	Sec 6			
SE			7.48	196.95
C			7.56	196.87
NW			7.62	196.81
	Sec #7 = E.C. Paving			
W			6.71	197.72
C			6.48	197.95
E			6.39	198.04
T.P.	13.00	216.92	051	203.92

21692

7+00

-10	9.7		207.2
-3	10.3		206.6
E.	11.5		205.4
cb. on Pav.	12.72		204.20
1/4 " "	12.61		204.31
C. " "	12.55		204.37
1/4 " "	12.63		204.29
cb. " "	12.75		204.17
W	12.7		204.2
+2	12.5		204.4
+5	11.2		205.7
+10	11.5		205.4
	10.91	206.01 = 2' wide	
7+12.6 "8" Conc. Ribbon		on W 0.7' Back	✓
7+17.6 " "	10.68	206.24 " "	✓
		on W	
7+43.6 E. 3' Conc. Walk	8.82	208.10 0.7 Back	✓

7+50

-10	8.3		208.6
W	8.5		208.4
cb. on Pav.	8.79		208.13
1/4 " "	8.68		208.24
C. " "	8.58		208.34
1/4 " "	8.62		208.30
cb. " "	8.80		208.12
E. " "	7.5		209.4
+10	6.3		210.6

7+60 = ℄ Elec 16" Pole 16.3' Lt. of ℄		
7+63 = ℄ 2' Conc. Ribbon on W	7.03	209.89 1' Back
7+68 = " " " " "	6.85	210.07 "
7+73.5 = ℄ M# on Rim	6.77	210.15
7+89.5 = ℄ 3' Conc Walk on W	5.17	211.75 0.7' Back
7+63 = South end Cobble Wall on E		1.3' Backs.
Base at Ground	6.5	210.4
on Top Wall	3.4	213.5 Top 1.8 Back
8+00 = N end Above Cobble Wall		1.3' Back
-1.8 on Wall	2.6	214.3
-1.3 Top "	4.1	212.8
E	4.1	212.8
cb. on Pav	4.60	212.32
1/4 " "	4.50	212.42
℄ " "	4.54	212.38
1/4 " "	4.63	212.29
cb " "	4.78	212.14
W on Lawn	4.4	212.5
+10 " "	4.3	212.6
8+02.7 = ℄ 2' Conc. Ribbon on E	3.88	213.06 0.2' Back
+07.7 = " " " "	3.49	213.43 "
8+15.5 = ℄ 2' Conc. Ribbon = W	2.84	214.09 on Lawn
8+20.5 " " " "	2.69	214.23 "
8+40 = ℄ 3' Conc. Walk on W	1.31	215.61 0.3' Back
8+50		
-10 on Lawn	0.4	216.5
W " "		

cb. on Pav.	0.93		215.99
1/4 " "	0.82		216.10
℄ " "	0.81		216.11
1/4 " "	0.80		216.12
cb. " "	0.95		215.97
F.	0.2		216.7
+8	+0.9		217.8
+10	+1.3		218.2
T.P. 12.76 229.47	0.21	216.71	
8+65.5 = ℄ 2' Conc. Ribbon on W	11.83	217.64	0.5' Back
8+70.5 " " " " "	11.52	217.95	"
8+75			
-10	10.4		219.1
E-3	10.6		218.9
E.	11.1		218.4
cb. on Pav	11.80		217.67
1/4 " "	11.63		217.84
℄ " "	11.67		217.80
1/4 " "	11.62		217.85
W/cb " "	11.68		217.79
W on Lawn	11.3		218.2
+10 " "	11.1		218.4
8+89.6 = ℄ 3' Conc. Walk on West	10.23	219.24	0.8' Back
9+00			
-10 on Lawn	9.6		219.9
W " "	9.9		219.6

cb. on Pov	10.08	219.39
¼ " "	10.04	219.43
℄ " "	9.98	219.49
¼ " "	10.07	219.40
cb " "	10.24	219.23
E	9.6	219.9
+10	9.4	220.1
✓ 9+08 = ℄ 12" Elec. Pole 16.2' Lt of ℄		on W. ✓
9+11.3 = South edge Conc Drive	8.84	220.63 1'2 Back
9+18.3 = " " " "	8.56	220.91 " ✓
9+27 = ℄ 3' Conc Walk on W	8.12	221.35 1.2' Back ✓
9+25		
-10	7.2	222.3
-4	7.4	222.1
E	7.8	221.7
cb. on Pov.	8.77	220.70
¼ " "	8.54	220.93
℄ " "	8.45	221.02
¼ " "	8.53	220.94
cb. " "	8.63	220.84
W	83	2212
+10	8.1	2214
9+50		
-10 on Lawn	6.8	222.7
W " "	7.1	2224
cb. on Pov.	7.24	222.23

¼ on Pov.	7.13	222.34
℄ " "	7.04	222.43
¼ " "	7.05	222.42
cb. " "	7.29	222.18
E	6.2	223.3
+10	6.0	223.5
✓ 9+52 = ℄ 4" Accacia on E	1' Back	
✓ +68 " " " " "	on Line	
✓ +75 " " " " "	" "	
9+65.4 = ℄ 2' Conc Ribbon on W	6.33	223.14 ✓ on Line
9+70.4 " " " " "	6.26	223.21 ✓ on Line
9+75		
-10	5.0	224.5
E	5.2	224.3
cb on Pov.	6.03	223.44
¼ " "	583	223.64
℄ " "	579	223.68
¼ " "	590	223.57
cb " "	599	223.48
W on Lawn	5.7	223.8
+10 " "	5.4	224.1 on W ✓
9+90 = ℄ 3' Conc. Walk	463	22484 02' in ℄
10+00		
-10 on Lawn	4.1	225.4
W " "	4.2	225.3
cb. " Pov	4.84	224.63

W ¼ on Parr.	4.69	224.78
℄ " "	4.62	224.85
¼ " "	4.67	224.80
cb " "	4.88	224.59
E	3.6	225.9
+10	3.7	225.8
10+08.1 = ℄ MH on Rim	4.3	225.2 ✓
✓ 10+10 = ℄ 12" Elec. Blo on W	16.4' Lt of ℄	
✓ 10+03 = South edge Hedge on E on Lawn		
✓ 10+18 = N " " " " " "	1.93	227.54 ✓
10+24 = ℄ 8' Conc. Drives on E	6.8' Back.	
10+32 = ℄ 3.8' " Walk on	1.67	227.80 1' Back ✓

10+25

-10.	1.96	227.51
E-6.8	1.93	227.54
E	3.0	226.5
cb. on Parr.	3.83	225.64
¼ " "	3.67	225.80
℄ " "	3.66	225.81
¼ " "	3.76	225.71
cb. " "	3.85	225.62
W on Lawn	3.4	226.1
+10 " "	3.2	226.3
10+47.7 = ℄ 2' Conc. Ribbon on W	2.58	226.89 0.4 in st. ✓
+52.7 " " " " "	2.63	226.84 " ✓

10+50

-10	2.7	226.8
W	2.6	226.9
cb on Parr.	2.83	226.64
¼ " "	2.76	226.71
℄ " "	2.68	226.79
¼ " "	2.67	226.80
cb " "	2.77	226.70
E	1.2	228.3
+10	0.9	228.6
✓ 10+33 = South edge Eugenia Hedge on E on Lawn		
✓ 11+07 = N edge " " " " " "		
10+65.2 = ℄ 2' Ribbon on W	1.84	227.63 1.4' Back ✓
+70 " " " " " "	1.77	227.70 ✓

10+75

-10	0.2	229.3
E	0.3	229.2
cb on Parr.	1.70	227.77
¼ " "	1.61	227.86
℄ " "	1.62	227.85
¼ " "	1.67	227.80
cb " "	1.77	227.70
W	1.7	227.8
+10	1.8	228.2
✓ 10+73 to 11+09 = 3' Picket Fence on West on Lawn		

T.P.	10.34	239.04	0.77	228.70 ✓
10+93 = 3' Conc. Walk on W			10.36	228.68 on line
-10 on Lawn			9.9	229.1
W " "			10.2	228.8
cb. on Pav.			10.26	228.78
℄ " "			10.18	228.86
℄ " "			10.10	228.94 ✓
¼ " "			10.11	228.93
cb. " "			10.24	228.80
E			9.2	229.8
+10			8.9	230.1
✓ 11+07.5 = ℄ 10" Elec. Pole			16' Lt ℄	
11+18 = ℄ 3' Conc. Walk on W			9.20	230.27 1.5' Back
on C.T.L.d 10' west of Curb			4.60	234.87 on ℄ Brooklyn
Chk. ℄ Brooklyn on W est edge Pav.			4.68	234.36 = 234.35 F81636-68
11+33				
-10			7.3	231.7
E			8.2	230.8
cb. on Pav.			8.77	230.27
¼ " "			8.60	230.47
℄ " "			8.54	230.50
¼ " "			8.67	230.37
cb " "			8.81	230.23
W			8.66	230.38
+10 on Lawn			8.2	230.8

11+50.6 = ℄ 2' Conc. Ribbon	7.68	231.36	on W ✓ 0.6' Back
+53.6 " " " "	7.53	231.51	" ✓
11+50			
-10 on Drive	7.36	231.68	
W	7.7	231.3	
cb. " Pav.	8.13	230.91	
¼ " "	8.00	231.04	
℄ " "	7.92	231.12	
¼ " "	7.98	231.06	
cb. " "	8.13	230.91	
E	8.0	231.0	
+5	6.4	232.6	
+10	6.4	232.6	
11+72 = ℄ 2' Conc. Ribbon	6.66	232.38	on W ✓ 0.3' Back
+77 " " " "	6.48	232.56	" ✓
12+01 = ℄ 3' Conc. Walk	5.68	233.36	on W ✓ 0.5' Back
12+00			
-10	5.5	233.5	
E	6.0	233.0	
cb. on Pav.	6.23	232.81	
¼ " "	6.10	232.94	
℄ " "	6.03	233.01	
¼ " "	6.14	232.90	
cb. " "	6.24	232.80	
W	5.8	233.2	
+10 on Walk	5.31	233.73	

12+02 = ℄ Fire Hydt. on E 17.5' Rt of ℄ ✓

12+20.5 = ℄ Eloc. Blo 15.7 Lt. of ℄ ✓

12+16.9 = S.L. Brooklyn on W

W		5.1	233.9
cb.	on Pav.	5.62	233.42
½	" "	5.47	233.57
℄	" "	5.37	233.67
½	" "	5.46	233.58
cb	" "	5.59	233.45
E		5.8	233.2

12+21.9

E		5.6	233.4
cb	on Pav.	5.41	233.63
¼	" "	5.28	233.76
℄	" "	5.19	233.85
½	" "	5.34	233.70
cb.	" "	5.45	233.59
W		5.0	234.0

12+41.9 = ℄ Brooklyn on W

W	on old Pav	4.28	234.76
cb.	on Conc. Pav.	4.68	234.36
¼	" "	4.55	234.49
℄	" " - Rim WH.	4.42	234.62 ✓
¼	" "	4.45	234.59
cb	" "	4.58	234.46
E		4.7	234.3

12+61.9

E		3.7	235.3
cb.	on Pav.	3.85	235.19
½	" "	3.68	235.36
℄	" "	3.63	235.41
½	" "	3.76	235.28
cb.	" "	3.85	235.19
W		2.5	236.5

12+72.9 = Break in Grade of Pavings

W		1.4	237.6
cb.	on Pav.	3.27	235.77
½	" "	3.18	235.86
℄	" "	3.10	235.94
½	" "	3.06	235.98
cb.	" "	3.21	235.83
E		2.7	236.3
cb	W edge Conc Pav. on old ℄ Brooklyn	4.68	234.36

234.35 - FB 1636-28
0.01

Walker
Osborne
Hegard
Martin
10-7-23

Cross Section Kenwood = 45' Wide
From W.L. 60th to W.L. Tona
5' cbs on South
7.5' " S
10' cbs on N

	2.57 198.52		195.95
	0+00 = SW cor on W.L. 60th	Sec. on line diag.?	
S		5.7	192.8
cb.		4.8	193.7
1/4		4.2	194.3
℄		3.7	194.8
+1.8	on S edge Pav.	3.67	194.85
℄	on "	3.46	195.06
1/4	" "	3.29	195.23
cb.		3.16	195.36
	0+51.61 = E.C. Pav.		
-10		3.6	194.9
N		4.0	194.5
+10 = cb	on Pav.	5.35	193.17
1/4	" "	5.29	193.23
℄	" "	5.23	193.29
1/4	" "	5.20	193.32
cb.	" "	5.29	193.23
S		5.1	193.4
+4		7.1	191.4
+10		7.6	190.9
	1+00		
-10		8.1	190.4
-5		7.9	190.6
S		5.9	192.6

198.62

Indexed
C.S.K.

S+5 = cb. on Pavmg.	6.38	192.14
cb. +7.5 = 1/4 " "	6.28	192.24
℄ " "	6.29	192.23
1/4 " "	6.30	192.22
cb.	6.44	192.08
+10 = NL.	5.0	193.52
+10	4.6	193.9
1+50		
-10	5.0	193.5
N	5.5	193.0
+10 = cb on Pav.	7.02	191.50
1/4 " "	6.86	191.66
℄ " "	6.77	191.75
1/4 " "	6.85	191.67
cb " "	7.00	191.52
S	7.0	191.5
+5	8.3	190.2
+10	8.8	189.7
1+90		
-10	8.2	190.3
S	6.9	191.6
cb. on Pav.	7.23	191.29
1/4 " "	7.18	191.34
℄ " "	7.19	191.33
1/4 " "	7.26	191.26
cb.	7.35	191.17
+4	8.2	190.3
N	5.2	193.3
+10	5.1	193.4

2+01.8 = ℄ 18" Conc. Culvert on Diag over Culvert

-10	5.0	193.5
N	6.2	192.3
+3.5 on Conc. Block	7.8	190.7
+4	9.7	188.8
+5.7' on Flow 18" Pipe	10.34	188.18
" Hdwall	7.12	191.40
cb. on Pav.	7.35	191.17
1/4 " "	7.25	191.27
℄ " "	7.11	191.41
1/4 " "	7.14	191.38
cb " "	7.25	191.27
S	7.8	190.7
+5	7.9	190.6
+6.1 = ℄ 18" Culvert	5.5 / 13.00	186.97 / 185.52
+10 in Ditch	10.9	187.6
+50 " "	12.4	186.1
+100' " "	13.4	185.1

2 + 15

-10	8.2	190.3
S	6.8	191.7
℄ cb	6.86	191.66
1/4	6.80	191.72
℄	6.84	191.68
1/4	6.95	191.57
cb.	7.04	191.48
N	5.4	193.1
+10	4.8	193.7

2+50

-10	3.8	194.7
N	4.0	194.5
cb. on Pav.	4.94	193.58
1/4 " "	4.95	193.57
℄ " "	4.96	193.56
1/4 " "	5.07	193.47
cb.	5.22	193.32
S	5.2	193.3
+10	7.8	190.7

2+73.88 = PC. cb. Rot on South

-10	6.1	192.4
S on S. edge Walk	3.91	194.61
cb. on cb.	3.87	194.65
Gut. on Conc. Pav.	4.36	194.16
1/4 on " " "	3.97	194.55
℄ " " "	3.60	194.92
1/4 " " "	3.49	195.03
cb.	3.46	195.06
N	3.3	195.2
+10	2.9	195.6

2+79.88

N	2.7	195.8
cb. on Pav	3.24	195.18
1/4 " "	3.29	195.23
℄	3.38	195.14

	2479.88	1985.2	
S 1/4 on Pav.		3.85	194.67
cb.		4.29	194.23
~~to S'~~ on cb.		3.79	194.73
S		3.80	194.72
	2+99.88 = ℄ Iona on N diag. sec		
S on Pav.		4.39	194.13
cb " "		4.01	194.51
1/4 " "		3.49	195.03
℄ " "		2.99	195.33
1/4 " "		2.85	195.67
cb. " "		2.77	195.75
+10=N on oil Pav.		2.22	196.30
	3+19.88		
N		1.5	197.0
cb. on Pav.		2.47	196.01
1/4 " "		2.54	195.98
℄ " "		2.70	195.82
1/4 " "		3.12	195.40
cb " "		3.52	195.00
S " "		3.80	194.72
+20 " Pav. at cb.		5.03	195.49
" on cb		4.51	
T.P. 8.66	201.35	5.83	192.69
	3+28.88 = cb line on South Iona		
-50' on cb.		8.84	192.51
" " Gut		9.46	191.89
S on Pav.		6.40	194.95

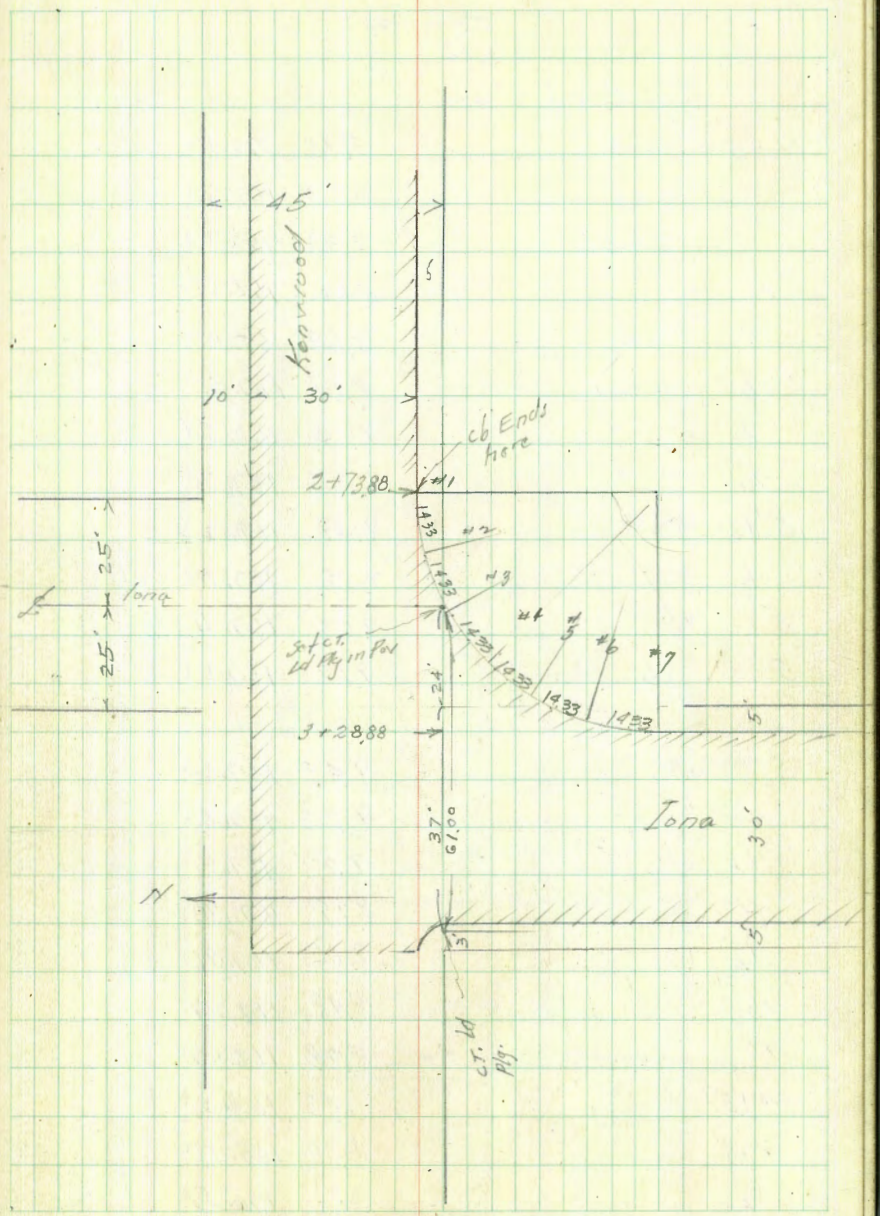
	2013.5		
cb on Pav.		6.18	195.17
1/4 " "		5.82	195.53
℄ " "		5.42	195.93
1/4 " "		5.26	196.09
cb		5.19	196.16
N		4.1	197.3
	3+43.88 = ℄ Iona on South		
N		3.7	197.6
cb. on Pav.		4.89	196.46
1/4 " "		5.06	196.29
℄ " "		5.25	196.10
1/4 " "		5.54	195.81
cb " "		5.84	195.51
S " "		6.04	195.31
+25 " "		7.43	193.92
+50 " "		9.12	192.13
	3+58.89 = N cb Iona on S		
-50 on cb		8.91	192.42
" " Gut. on con Pav		9.34	192.01
-25 on "		7.52	193.83
S " " " " "		6.05	195.30
" on cb. " " "		5.37	195.98
cb. " Conc. Pav		5.81	195.54
1/4 " " "		5.18	195.87
℄ " " "		5.12	196.23
1/4 " " "		4.88	196.47
cb. " " "		4.61	196.74
N		3.0	198.35

201.35 Kenwood (NL 10m A 26)

3+63.88 = End Por. on Kenwood

N			1.7	199.7
cb. on Por			4.52	196.83
1/4 " "			4.76	196.59
℄ " "			5.06	196.29
1/4 " "			5.43	195.92
Gut " "			5.76	195.59
cb. on cb.			5.16	196.19
S on Walk			5.37	195.98
SE Return Kenwood & Iona				
#1 on cb.			6.70	194.65
" " Gut			7.19	194.16
#2 on cb.			6.56	194.79
" " Gut			7.12	194.23
#3 on cb			6.75	194.60
" " Gut.			7.32	194.03
#4 on cb			7.01	194.34
" " Gut.			7.55	193.80
#5 " cb			7.46	193.89
#5 " Gut			7.99	193.36
#6 " cb.			8.07	193.28
#6 " Gut			8.60	192.75
#7 = E.C. on cb			8.85	192.50
#7 on Gut.			9.46	191.89
I.P.	0.76	189.11	1.97	188.38
T.P.	0.64	176.72	13.06	176.08

π Cont. p. 39



Walker
Osborne
Hazard
Hardin
10-7-43

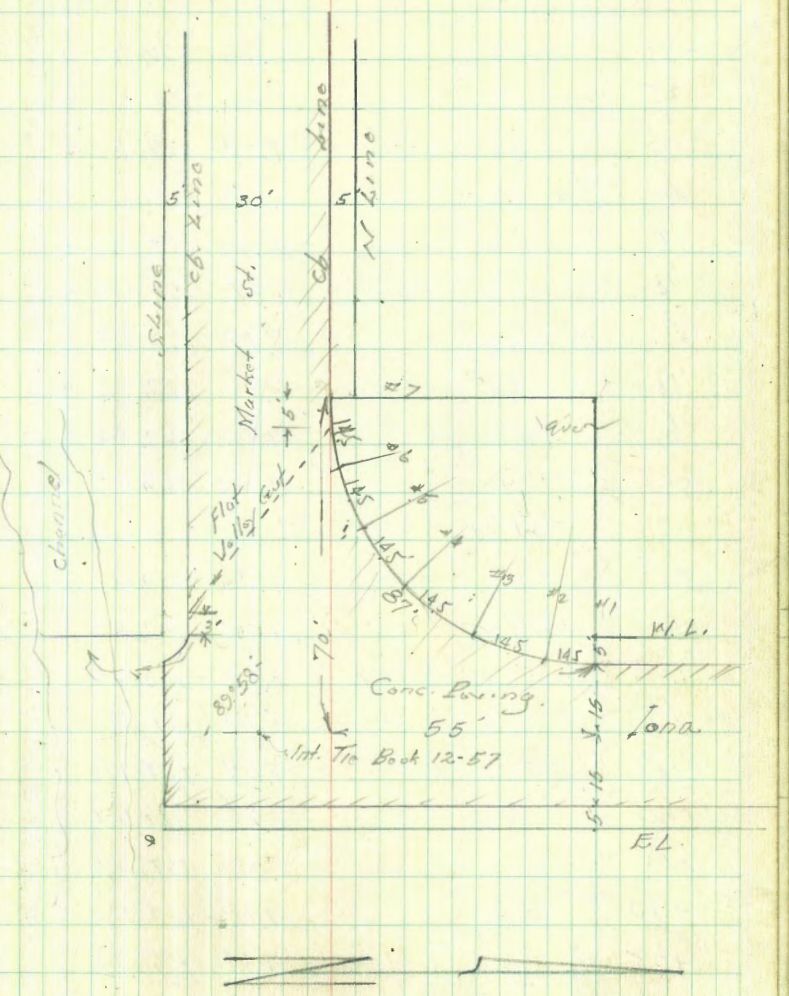
Curb and Paving Levels
Intersection Market & Iona Sts.

Indexed
C. S. K.

π from P. 38
176.72

E cb. Iona

N - 50	on Gut.	5.75	170.97
- 25	" cb.	6.97	169.75
	" " Gut.	7.39	169.33
N	on cb.	8.20	168.52
	" " Gut.	8.69	168.03
cb.	on Gut.	8.87	167.85
1/4	" "	9.14	167.58
℄	" "	9.36	167.36
S 1/4	" "	9.49	167.23
cb.	" "	9.58	167.14
S	" "	9.61	167.11
S	" cb.	9.17	167.55
	E 1/4		
S	on Par	9.43	167.29
cb	" "	9.33	167.39
1/4		9.21	167.51
℄		8.99	167.73
1/4		8.76	167.96
cb.		8.48	168.24
N		8.23	168.49
+15		7.43	169.29
+25		6.90	169.82
+40		6.21	170.51



176.72 — Intersection — Market & Iona

N +50			5.58	
	℄ Iona			
-50			5.57	171.15
-35			6.62	170.16
-25			7.08	169.64
-10			7.61	169.11
N			8.00	168.72
cb.			8.26	168.46
1/4			8.99	168.23
℄ on Rim MH.			8.78	167.94
S 1/4			8.96	167.76
cb.			9.16	167.56
S			9.24	167.48
	W 1/4			
S			9.36	167.36
cb.			9.24	167.44
1/4			8.99	167.73
℄			8.74	167.98
1/4			8.57	167.15
cb.			8.28	168.44
N			8.08	168.64
+10			7.78	168.94
+25			7.35	169.37
+35			6.81	169.91
+50			5.75	170.97
T.P.	3.26	173.98	6.60	170.12

S ~~Top Hyd~~ SE Top Hyd Market & Iona

173.38

W cb. Iona

-50 on Gut at B.C. Rot.	2.62	170.76
" " cb " " "	2.03	171.35
-25	4.29	169.09
N	4.97	168.41
cb.	5.14	168.24
1/4	5.39	167.99
℄	5.54	167.84
1/4	5.81	167.57
cb.	6.10	167.28
S Gut	6.21	167.17
S on cb. E.S. 5' Rod Rot	5.54	167.84
W ℄ Iona		
S on edge Walk	5.50	167.88
S on Top cb B.C.	5.50	167.88
" " Gut at "	6.12	167.26
S 1/4	5.91	167.47
℄	5.68	167.70
N 1/4	5.48	167.90
W cb.	5.25	168.13
N	5.16	168.22
+28.6 Gut at cb Rot	4.28	169.10
20' W WL Iona		
+3.8 on Gut at cb. Rot	5.66	167.72
N	5.68	167.70
cb.	5.76	167.62

17338

N 1/4	5.86	167.52
℄	5.99	167.39
S 1/4	6.10	167.28
S Gut.	6.11	167.27
S cb. on cb.	5.45	167.93
S.L. on walk	5.44	167.94
45' West of W.L. Iona		
SL. on Walk	5.38	168.00
S cb. on cb.	5.39	167.99
S Gut.	6.00	167.38
S 1/4	5.86	167.52
℄	5.88	167.50
1/4	5.96	167.42
Gut.	5.98	167.40
cb.	5.33	168.05
N walk	5.32	168.06
50' W		
N	5.32	168.06
cb.	5.32	168.06
Gut	5.96	167.42
1/4	5.88	167.50
℄	5.79	167.59
1/4	5.82	167.56
Gut.	6.00	167.38
Cb. on cb.	5.38	168.00
S " walk	5.38	168.00

17338

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NW Return Iona x Market

#1 on cb.	2.03	171.35
" " Gut	2.61	170.77
#2 on cb.	3.19	170.19
" " Gut	3.80	169.58
#3 " cb	4.18	169.20
" " Gut	4.66	168.72
#4 " cb.	4.71	168.67
" " Gut.	5.25	168.13
#5 on cb.	5.10	168.28
" " Gut.	5.74	167.64
#6 " cb	5.36	168.02
" " Gut	5.93	167.45
#7 " cb.	5.32	168.06
" "	5.96	167.42
TP. 1.73 169.90	5.21	168.17
chk. 8 M. NE Imp. & Market	8.15	161.75
		161.71
		0.04 Error.

Page 2

Walker
Hazard
Hardin
Beggs
5-19-44

Cross Section Alley Blk. 35
Fairmount Add. Map #1035
Between Estrella & 49th
from Trojan to Orange Ave

F.B. 1599 65

S.E. B.P. Trojan & Estrella	5.69	353.91	348.22

0 - 12 = South cb Line Trojan

E.L. on Cut Mark for Paving	5.35	348.56
W.L. " " " " "	5.86	348.05
0+10		
W.L. on Cut Mark P.C. Alley Rt.	5.68	348 23
E.L. " " " " " "	5.19	348 72
0+00		
E.L. on cb	4.28	349 63
" " Cut Mark for Paving	4.91	349.00
℄	4.8	349 1
W.L. " " " " "	4.94	348 97
" " cb.	4.84	349 07
0+25		
W	2.9	351 0
℄	3.9	350 0
E	3.8	350 1
+5	3.7	350 2
0+40		
E-5	3.4	350 5
E	3.8	350 1
℄	3.8	350 1
W.L.	4.0	349 9
Top at Garage Entrance	4.0	349.9.

Reduced & Plotted 5/23-44 C.B.H.

Indexed C.S.K.

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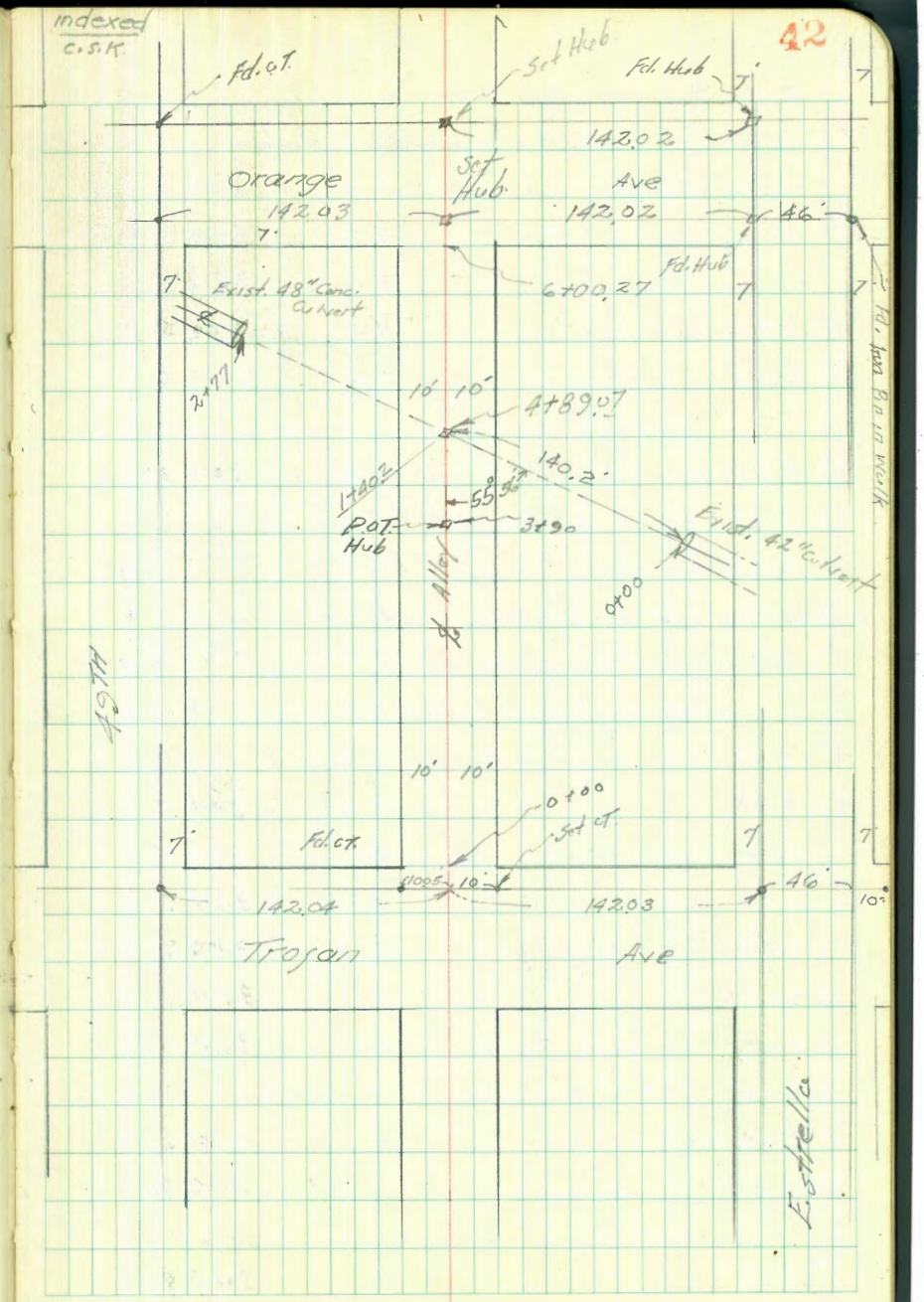


Alley Blk 35 - Fmt. Add.

35391

0+51 = N edge 3 Car Garage on W, dirt Floor 4' Back

-4 at Garage	3.8	350.1
W	3.8	350.1
℄	3.8	350.1
+9.5 of Fence	3.5	350.4
E +5	3.6	350.3
Ref. ℄ 2 —	4.2 —	349.7 4' Back

0+79 = S and Above 3 Car Garage

Apparent Proposed Floor	= 3.96	349.95
	4.67 —	349.24
0+82 = ℄ 2.5' Conc. Walk on W on Line		
0+87 = ℄ 2' " "	4.54 —	349.37 on W 2.5' Back
(which side) 0+84 = ℄ 14" Elec Pole ℄ = 0.5' in Alley	4.48 —	349.43

0+95 = ℄ Garage on W. Conc. Floor 5' Back

0+51 to 1+00 Wood Fence on E 0.5 in Alley

1+00

-5	4.6	349.3
E.L.	4.6	349.3
+1	4.8	349.1
℄	5.1	349.8
WL	4.8	349.1
+2 on Conc. Apron	4.86	349.05

1+05 = ℄ Garage on W Conc. Floor 5' Back

W-5 on Conc Floor	4.70	349.21
W-2 " " Apron	4.97	348.94

1+15 = ℄ Garage on W 5.0' Back.

W-5 on Conc. Floor.	5.08	348.83
W-3 " " Apron.	5.33	348.58

35391

Note: The Last three Garages on West are under the same Apartment House but with different Floor Elev. for each Garage

1+04 = ℄ 24" Euc. Tree on E ℄ Tree on E.L.

1+22.5 = ℄ 3' Conc. Walk on W 2' Back.

W-2 on Walk.	5.37	348.54
W-5 " "	5.12	348.79

1+30 = ℄ Garage on W Conc. Floor

WL +0.5	5.32	348.59
+1.2 on Conc. Floor	5.40	348.51
℄	5.7	348.2
E	5.4	348.5
+1.5 at House	5.4	348.5

Conc. Floor

1+35 to 1+61.5 = 3' Car Garage on E 1' Back

E-4' on Floor Garage	5.39	348.52
E-1' " " " "	5.38	348.53

1+36 = ℄ 18" Euc. Tree on W 0.5 in Alley. ℄ Tree

1+50

-1' on Floor Garage	5.38	348.53
E	5.7	348.2
℄	5.9	348.0
W	5.9	348.0
+5	6.0	347.9

on W

1+76 = ℄ 24" Euc Tree 0.5' in Alley. 347.98

Parallel

1+73 = N edge Conc. Walk on E 1' Back to Alley 5.93 — 347.89

1+83 = S " " " " 6.02 — "

353.91 Alley Blk 35 Fairmount Add 1' Back.

1+85=℄ Conc. Porch 5.66 = 348.25 on E

1+99=℄ 24" Elec Tree on W 1.0' in Alley.

2+00

-5	6.3	347.6
W	6.3	347.6
℄	6.5	347.4
E	6.5	347.4
+5	6.5	347.4

2+01=℄ Elec Pole on W 0.5 in Alley

6.7 — 347.2

2+44=℄ Garage on W. dirt Floor, 1' Back

2+50

E-50	7.4	346.5
E-5	7.1	346.8
E	7.0	346.9
℄	6.9	347.0
W	6.6	347.3

on ℄ Floor Garage on E 2+60

TP 3.02 350.16 6.77 347.14

2+61=℄ Dble. Garage on E. Conc. Floor

E-2' on Conc. Floor	2.87	347.29
E-1.5 " Toe Apron	3.02	347.14

2+69=℄ 2' Pepper Tree on W 1' Back=℄ Tree

2+83=℄ Elec. Pole on W ℄ Pole on W/L.

2+85

-5	3.2	347.0
W	3.0	347.2
℄	3.4	346.8
E	3.6	346.6
+50	4.3	345.9
+90	5.1	345.1

350.16 44

2+97 to 3+10=7' Lath Fence on E. 1' in Alley.

4.0 — 346.2

3+15-℄ Garage on E. 1.1' in Alley dirt Floor

3+25

E+1' of Fence	4.2	346.0
℄	4.6	345.6
W	4.3	345.9
7.10	4.3	345.9

1' in Alley 2' in Alley

3+20 to 3+48=Shed & Fence on East

3+55 to 3+74=Room of Cottage on East 2.2' in Alley

3+60

W-10	5.9	344.3
W	5.4	344.8
℄	5.0	345.2
18' at Fence	4.7	345.5

3+75

E. at Tag in House	5.1	345.1
℄	5.7	344.5
W	6.5	343.7
+10	7.1	343.1

3+90

-10	8.7	342.5
W	8.0	342.2
℄ on Hub P.O.T.	7.21	343.0
E	7.3	342.9
+10	7.1	343.1

3+98=℄ Elec. Pole on W. ℄ on W/L.

Alley Blk, 35

350.16

4+05

-10		7.5	342.7
E		8.0	342.2
L		10.7	339.5
W		11.7	338.5
+15		12.9	337.3
T.P.	1.81 340.62	11.35	338.81

4+20

-25		8.0	332.6
W		6.4	334.2
L		5.5	335.1
+87 at shed		4.0	336.6

→1.9' in Alley ✱ on Line

4+10 to 4+39 - Small Shed on E.

4+35

E-15		6.8	333.8
E		8.8	331.8
L		10.2	330.4
W		11.0	329.6
+30		12.6	328.0

4+50

-35		13.3	327.3
W		14.2	326.4
L		14.0	326.6
E		13.7	327.4
+20		11.0	329.6

340.62

4+60

-30		13.7	326.9
E		15.0	325.6
L		15.2	325.4
W		14.9	325.7
+40		13.7	326.9

4+89.1

-40		14.0	326.6
-30		14.6	326.0
W		15.1	325.5
L		15.4	325.2
E		15.8	324.8
+40		16.7	323.9
5+00 = 6 MH		13.96	326.66

5+15

-40		16.5	324.1
E		16.0	324.6
L		15.7	324.9
W		14.3	326.3
+30		8.8	331.8

5+30

-30		4.1	336.5
W		9.5	331.1
L		11.5	329.1
E		12.3	328.3
+30		15.4	325.2
+40		16.4	323.2

340.62 Alley Blk. 35 Fairmount Add.

5+45

-30	12.3	328.3
E.	8.8	331.8
℄	7.1	333.5
W	5.5	335.1
+20	2.3	338.3

Sketch P-92

Profile Levels Between Ends Fast Culverts

0+00	on Flow 42" Conc. Pipe	14.1	326.5
+50		12.9	327.7
12' N ℄ Drainage Ditch		13.2	327.4
1+00		14.1	326.5
℄ Alley = 1+40.2		15.4	325.2
2+00		16.4	324.2
+77 = beginning 48" Pipe		18.6+	322.0
T.P.	10.26 342.07	1.81	338.81

5+70

-15	7.9	341.2
W	9.4	339.7
℄	10.5	338.6
E	12.0	337.1
+30	16.4	332.7

5+85

-20	12.4	336.7
E.	9.6	339.5
℄	7.8	341.3
W	6.9	342.2
+10	4.1	345.0

349.07

5+95

-10	4.4	344.7
W	4.8	344.3
℄	5.4	343.7
E.	7.0	342.1
+15	10.0	339.1

6+00 27 = N℄ Orange.

-10	7.1	342.0
E	6.2	342.9
℄	5.9	343.2
W	5.4	343.7

from Grd. Book 210-40

Elevations of Proposed cb & Gutter N line Orange

Flo. proposed Top cb.	342.95
" " " Paving	342.85
W℄ " " "	343.20
" " " cb.	343.81
Chk. S.E. B.P. Orange	0.63 348.44

Estrella

348.45 = BM FB. 1599 6.5
0.01

Walker
Hugord
Hardin
Boggs
6-9-44

Cross Section Arista St. - from N.L.Y. Line Jefferson St. to S.L.Y. Line - Moore St.

50' Wide
10' Cbs.
7.5' 1/4s

S.E. B.P. Lofella & Arista

	0.28	35.76		35.48
T.P.	0.89	27.37	9.28	26.48

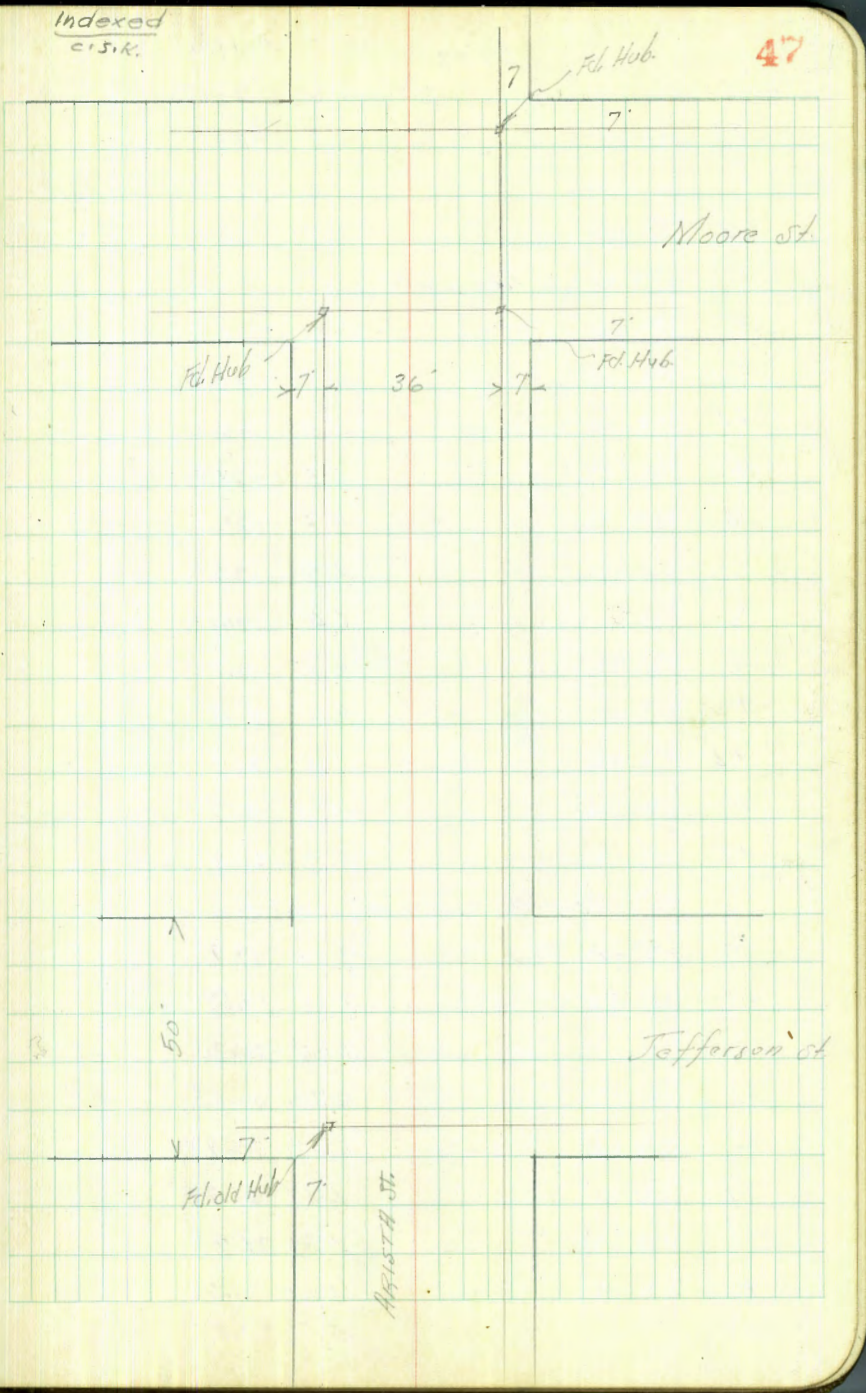
10' Cbs.
7.5' 1/4s

N.L.Y. Line Jefferson

E. - Lt.	0.5	26.9
+9	2.2	25.2
cb.	2.8	24.6
+3	4.4	23.0
1/4	4.2	23.2
℄	4.2	23.2
1/4	4.8	22.6
cb.	5.5	21.9
+4	4.3	23.1
W - Rt.	4.0	23.4
N.L.Y. cb.		
W-5	4.9	22.5
W	4.6	22.8
+6	5.3	22.1
cb.	6.3	21.1
1/4	5.7	21.7
℄	5.1	22.3
1/4	5.0	22.4
+5	5.2	22.2
cb.	4.4	23.0

Reduced by SDB
Plotted on Profile #49
C.S. # 6-9-44

Indexed
C.S.K.



47

27.37 Arista

cb+2	3.6	23.8
+3	1.7	25.7
E.	1.2	26.2
+5	1.0	26.4

NW¼ Sec. Jefferson

-5	2.2	25.2
E	2.1	25.3
+4	4.3	23.1
cb.	5.5	21.9
¼	5.8	21.6
¿	5.9	21.5
¼	6.4	21.0
cb.	6.7	20.7
+2	6.6	20.8
+4	5.5	21.9
W	5.5	21.9
+5	5.9	21.4

¼+3 = NW edge oil Pavement

-5 on oil Pav	7.38	19.99
W " "	7.98	19.39
cb. " "	7.07	20.30
¼ " "	6.72	20.65
¿ " "	6.43	20.94
¼ " "	6.16	21.21
cb. " "	5.89	21.48
E.	5.65	21.72
+5	5.56	21.81

27.37

¿ Jefferson

-5 on oil Pav.	5.46	21.91
E " " "	5.55	21.82
cb. " " "	5.82	21.55
¼ " " "	6.08	21.29
¿ on Rim NW	6.33	21.04
¼ on Pav.	6.70	20.67
cb. " "	7.03	20.34
W " "	7.38	19.78
+5 " "	7.68	19.49

SW ¼

-5 on Pav.	7.76	19.67
W	7.44	19.93
cb.	7.00	20.37
¼	6.70	20.67
¿	6.39	21.00
¼	6.10	21.27
cb.	5.79	21.58
E.	5.47	21.90
+5	5.31	22.03

SW cb - Approx Edge Pav.

-5	5.25	22.12
E.	5.42	21.95
cb.	5.76	21.61
¼	6.05	21.32
¿	6.49	20.88

WLY ½ on Dox.	6.91	20.46
cb. " "	7.18	20.19
W " "	7.38	19.99
+5 " "	7.56	19.81
SLY cb +5'		
-10	9.0	18.4
W	8.6	18.8
cb.	8.4	19.0
½	8.0	19.4
E.	7.8	19.6
½	7.2	20.2
cb.	7.3	20.1
E	6.6	20.8
+0.5 3'SCb=Pole Elec. ✓		
+10	6.1	21.3
SLY Line Jefferson = 0+00		
-10	6.7	20.7
E.	7.6	19.8
cb.	7.8	19.6
½	8.0	19.4
℄	8.3	19.1
½	8.6	18.8
cb.	9.2	18.2
W	9.1	18.3
+10	9.5	17.9

0+25

-10	12.1	15.3
W	11.6	15.8
cb.	11.1	16.3
½	11.0	16.4
℄	10.8	16.6
½	10.5	16.9
cb.	9.9	17.5
E.	9.0	18.4
+9 on Conc. Walk ✓	8.18	19.19

In Front of Porch

0+50

-9 on Conc. Walk ✓	8.89	18.48
E.	10.2	17.2
cb.	10.8	17.6
½	11.3	16.1
℄	11.5	15.9
½	11.6	15.8
cb.	11.6	15.8
W	12.5	14.9
+10	13.1	14.3

0+75

-10	14.0	13.4
W	12.3	14.6
cb.	12.0	15.4
½	12.2	15.2
E.	11.9	15.5

2737 Arista 07

℄		11.7	15.2
cb.		11.2	16.2
E		10.5	16.9
+9' on Conc. Walk ✓		9.28	18 09
	1+00		
-10		10.8	16.6
E.		11.2	16.2
cb.		11.9	15.5
℄		12.2	15.2
℄		12.3	15.1
℄		12.5	14.9
cb		12.8	14.6
W		13.5	13.9
+10		14.6	12.8
	1+25		
-10		13.9	13.5
W		13.5	13.9
cb.		12.8	14.6
℄		12.8	14.6
℄		12.5	14.9
℄		12.3	15.1
cb.		12.2	15.2
E		11.9	15.5
+10		11.1	16.3
	1+50		
-10		11.6	15.8

2737

E		12.1	15.3
cb.		12.3	15.1
℄		12.2	15.2
℄		12.3	15.1
℄		12.4	15.0
cb.		12.6	14.8
W		13.7	13.7
+10		14.7	12.7
	1+75		
-10		12.2	15.2
℄		11.2	16.2
cb.		11.8	15.6
℄		11.6	15.8
℄		11.6	15.8
℄		11.9	15.5
cb.		11.6	15.8
E		10.7	16.7
+10 ✓		10.2	17.2
1+52 = Elec. Pole on E 6' in ft			
1+47 = Tel. ↓ " " W 5' in ft			
	2+00		
-10		7.6	19.8
E		7.9	19.5
℄		7.9	19.5
+7		9.1	18.3
cb		9.3	18.1

27.37

½		10.2	17.2
℄		9.9	17.4
½		9.7	17.7
+5		9.6	12 8
cb.		8.1	19.3
W		8.4	19.0
+10		8.3	19.1
	2+25		
-10		4.2	23.2
W		4.0	23.4
cb.		4.7	22.7
+3		6.9	20.5
¼		7.0	20.4
℄		7.0	20.4
¼		7.2	20.2
cb		7.3	20.1
+3		6.3	21.1
E.		4.8	22.6
+10		4.8	22.6
	2+50		
-10		2.7	24.7
E		2.2	25.2
+3		3.5	23.9
cb.		3.6	23.6
+3		1.5	22.9
¼		4.4	23.0

27.37

℄		4.3	23.1
½		4.2	23.2
+5		4.2	23.2
cb.		2.3	25.1
W		2.0	25.4
+10		2.0	25.4
TP	7.70 .32.52	2.55	24.82
	2+75		
-10		5.3	27.2
W		5.5	27.0
cb.		5.7	26 8
+2		6.8	25.7
½		7.0	25.5
℄		7.2	25.3
½		7.3	25.2
cb.		7.1	25.4
+2		7.1	25.4
+3		6.5	26.0
E.		6.8	25.7
+10		6.1	26.4
	3+00 = N.A.Y. Moore	50' wide 10 cbs	7.5' ½
E.		4.6	27.9
+8		4.7	27.8
cb.		5.4	27.1
½		5.7	26 8
℄		5.5	27.0

½		5.3	27.2
cb.		5.2	27.3
℄		4.5	28.0
W		4.8	27.7
	NLY cb. Moore St		
W		5.1	27.4
cb.		5.0	27.5
½		5.0	27.5
℄		5.0	27.5
½		5.2	27.3
cb		5.3	27.2
E.		5.2	27.3
	NLY ½ Moore		
E.		4.9	27.6
cb.		4.9	27.6
½		4.9	27.6
℄		4.9	27.6
½		4.9	27.6
cb.		5.0	27.5
W		5.3	27.2
	℄ Moore		
W		5.4	27.1
cb.		5.1	27.2
½		4.8	27.2
℄	on Rim Mk.	4.53	27.99
½		4.6	27.9

cb		4.6	27.9
E		4.7	27.8
	SLY ½ Moore St		
E.		4.5	28.0
cb.		4.6	27.9
½		4.6	27.9
℄		4.8	27.7
½		5.0	27.5
cb.		5.2	27.3
W		5.7	26.8
	SLY cb. Moore		
W		5.9	27.1
cb.		5.2	27.3
½		4.9	27.6
℄		4.9	27.6
½		4.8	27.7
cb		4.7	27.8
E		4.9	28.1
	SLY Lime Mine		
E.		4.1	28.4
cb.		4.6	27.9
¼		5.1	27.4
℄		5.3	27.2
½		5.2	27.3
cb		5.4	27.1
W		5.8	26.7
cb4 B.M. Large Spkin Blk SW Moore & Aristo		4.75	27.77
Cont. P-53			27.65
			0.12 diff.

32,52 Arista St.

2+42 = Pole on W 8' in st

TP	7.69	28.47	11.74	20.78	
TP	9.66	36.25	1.88	26.59	Lafetta & Arista SE.
Chk. Starting & NI.			0.76	35.49	
				35.48	
				0.01	

Walker
Hogard
Hardin
Boggs 6-9-40

Cross Section Alley Blk. 79
Between K-8 & L-Street
from 29th to 30th Street

	3.29	82.76	79.47 S.E. BP K-29th
	E. cb. 29th		
-10 Gut		4.89	77.87
" cb.		4.36	78.40
N Gut.		4.93	77.83
" cb.		4.46	78.30
L Gut		4.95	77.81
S "		5.06	77.70
" cb.		4.65	78.11
+15 Gut		5.21	77.55
" cb.		4.78	77.98
0+00 = E.L. 29th			
S +02 = cb.		4.35	78.41
S Gut		4.50	78.26
L Pav.		4.76	78.00
+9.8 Gut		4.39	78.37
" Top cb.		4.21	78.55
0+10			
-5		4.1	78.7
N		4.4	78.4
+4		5.0	77.8
L		5.2	77.6
S		5.1	77.7
+2 at House		5.0	77.8

Reduced & Plotted 6-10-1940

Blk. 6, Reeds Central Add.
& Blk 79, Powers Sub. Indexed C.S.K.

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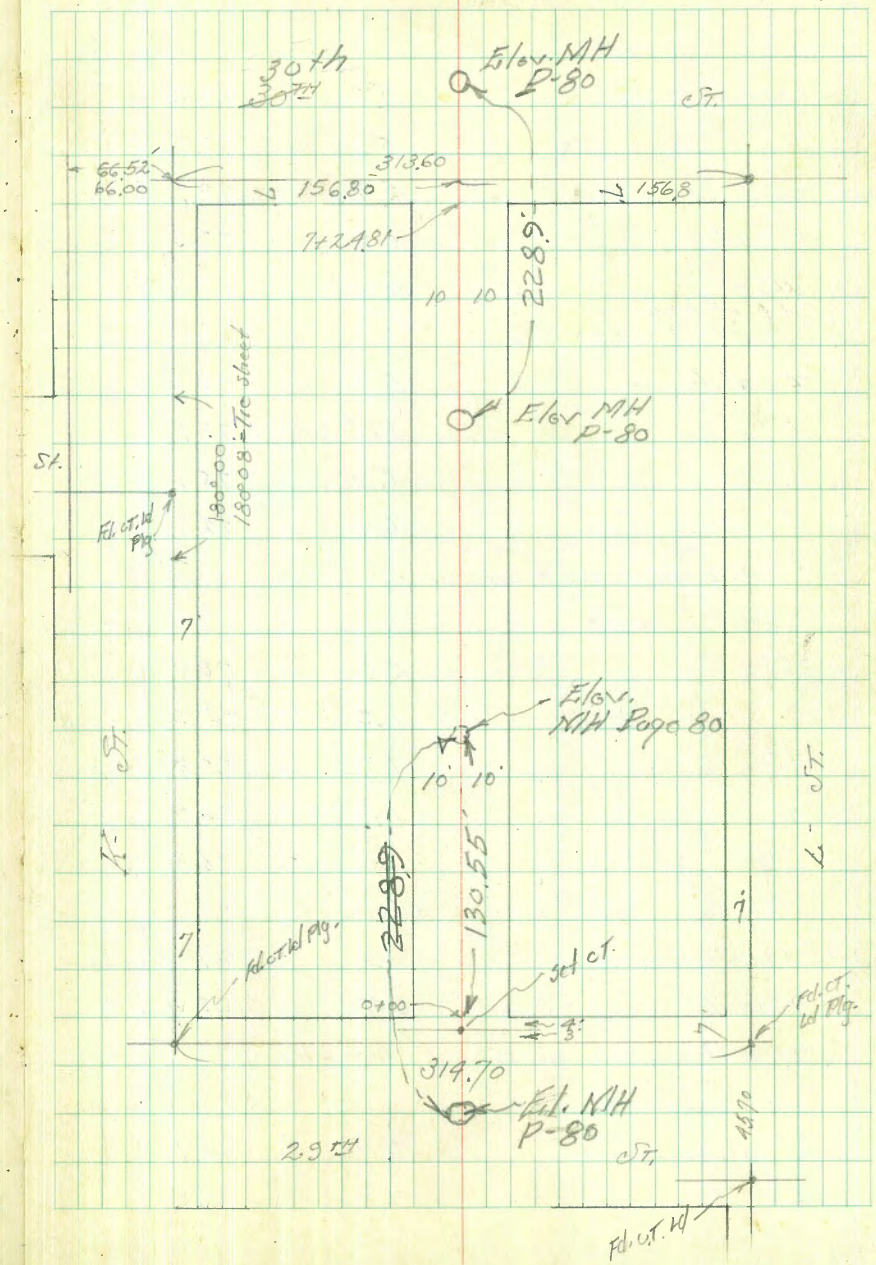


8276

0+25

-2 of house	5.3	77.5
S	5.3	77.5
℄	5.7	77.1
+7	5.5	77.3
N	5.0	77.8
+4 of house	5.0	77.8

0+50

-4 of house	5.7	77.1
N	5.7	77.1
℄	6.2	76.6
S	6.0	76.8 (Wire fence)

To 1+00 = End fence
0+62 = Beginning fence on N 0.4 in Alley

1+00

-5	6.5	76.3
S	6.2	76.6
+4	6.9	75.9
℄	6.8	76.0
+6	6.5	76.3
N	6.2	76.6
1+12 = ℄ Garage on N	6.8	76.0 (0.7 Back, Dirt Floor)
1+13 = ℄ " " S	6.44	76.32 (0.3 Back, Wood ")
1+18 = Elec. Pole on S	1' in Alley	

1+50

S of Garage	7.7	75.1
℄	7.8	75.0

8276

+6	7.8	75.0
N	7.4	75.4
	7.8	75.0
1+56 = ℄ Garage on S	0.5 Back dirt Floor	
	7.9	74.9
1+67 = " " " "	0.2' Back " "	
	8.2	74.6
1+79 = ℄ Garage on South		" " 1.1' Back
1+86 " " " "	8.3	74.5
1+95 " " " "	8.3	74.5
2+05 " " " "	8.3	74.5
2+16 " " " "	8.3	74.5

2+00

-5	8.2	74.6
N	8.2	74.6
+4	8.4	74.4
℄	8.4	74.4
S	8.3	74.5
2+24 = Elec. Pole on South 1.5 in Alley		
	8.6	74.2
2+31 = ℄ Garage on N dirt Floor 0.8' Back		

2+50

S	8.5	74.3
+3	8.8	74.0
℄	9.0	73.8
+6	8.9	73.9
N	8.4	74.4
+5	8.4	74.4

Cont. P. 56

82.76

T.P.	4.92	78.21	9.47	73.29

2+84 = ℄ Garage on S. Conc. Floor.

✓ S - 4.7 on Floor		4.81	73.90
✓ S - 0.2 " Toe Apron.		4.44	73.77
3+00			
N		4.9	73.3
℄		5.0	73.2
+6		5.0	73.2
S		4.7	73.5 (Dirt Floor)
		4.7	73.5

3+02 = ℄ Garage on South 0.5 in Alley

✓ 3+25 = Elec. Pole on South 2' in Alley

✓ 2+65 to 3+35 = Fence on N (on Line 2+65) (3+35 on Alley)

Ref = 5.1 73.1

✓ 3+44 = Garage on N. 8.7' Back Dirt Floor

3+50

S		5.4	72.8
+4		5.7	72.5
℄		5.6	72.6
N		5.5	72.7
+10		5.3	72.9
		5.4	72.8

✓ 3+52 = Garage on South 0.5 in Alley Dirt Floor

✓ 3+58 to 3+93 = 6' Wood Fence on South 3+58 0.5 in Alley 3+93 on Line

✓ 3+97 = Garage on South 6.0 72.2 Dirt Floor

Floor = 5.3 72.9

✓ 3+99.5 to 4+17.2 = Cottage on North 1.2' in Alley

4+00

N		6.0	72.2
℄		6.1	72.1

78.21

S		6.1	72.1

✓ 4+25 = Pole on S 1.2' in Alley

6.2 72.0

✓ 4+18 = Garage Shed on S 4.7' Back

✓ 4+17 & 4+50 = Sheds on N (0.7' in Alley at 4+17, 0.6' in Alley at 4+50)

4+50

T.P.	4.90	76.94	6.17	72.04
-25			5.6	71.3
S			5.0	71.9
℄			4.8	72.1
N			4.7	72.2

✓ 4+50 to 4+75 = Wood Fence on N 0.6' in Alley

5+00

S	5.4	71.5
N	5.1	71.8
℄	4.7	72.2
+7	5.0	71.9
S	5.3	71.6
+25	5.1	71.8
	5.10	71.84

✓ 5+16 = ℄ Garage on N Conc. Floor 0.6' in Alley

✓ 5+41.8 = Pole on S 2' in Alley

5+50

-25	5.7	71.2
S	5.4	71.5
℄	5.2	71.7
N	5.2	71.7
+10	5.1	71.8

76.24

5+75 to 6+03 = Wood Fence on South 0.6 in Alley

6+04 to 6+21 = Dble Garage on South 0.6 in Alley Conc. Floor

W end Garage		4.66	72.28
E " "		4.71	72.23
6+26 = Elec. Pole on South 2' in Alley.		4.7	72.2
6+31 = Garage on South, dirt floor .4 in Alley			
6+45 = E. to 4' Conc. Strip on N 19' Back.			
T.P.	4.09	76.26	4.77	72.17
19' N on Slab.			4.57	71.69
36 " " "			4.49	71.77
6+50				
-20			4.6	71.7
N			4.5	71.8
℄			4.0	72.3
S			4.0	72.3
7+00				
S			4.0	72.3
℄			4.1	72.2
N			4.2	72.1
+10			4.1	72.2
+15			4.3	72.0
7+19 = Tel Pole on N 1' in Alley.				
7+20				
N			4.0	72.3
73			5.1	71.2
℄			4.8	71.5
+6			4.8	71.5

76.26

+8	4.3	72.0
South	4.3	72.0
7+24.81 = W.L. 30th		
S.L. + 0.37 = cb.	4.78	71.48
Gut.	4.89	71.37
℄	5.24	71.02
+9.63 cb. Gut	4.96	71.30
on cb.	4.85	71.41
7+34.81 = W. cb. 30th		
N cb.	5.09	71.17
Gut.	5.36	70.70
℄	5.48	70.78
S Gut.	5.40	70.86
S cb.	4.94	71.32
Chk. SE. BP 30th +4	2.28	74.04 ~~73.98~~

73.98
0.06 diff.

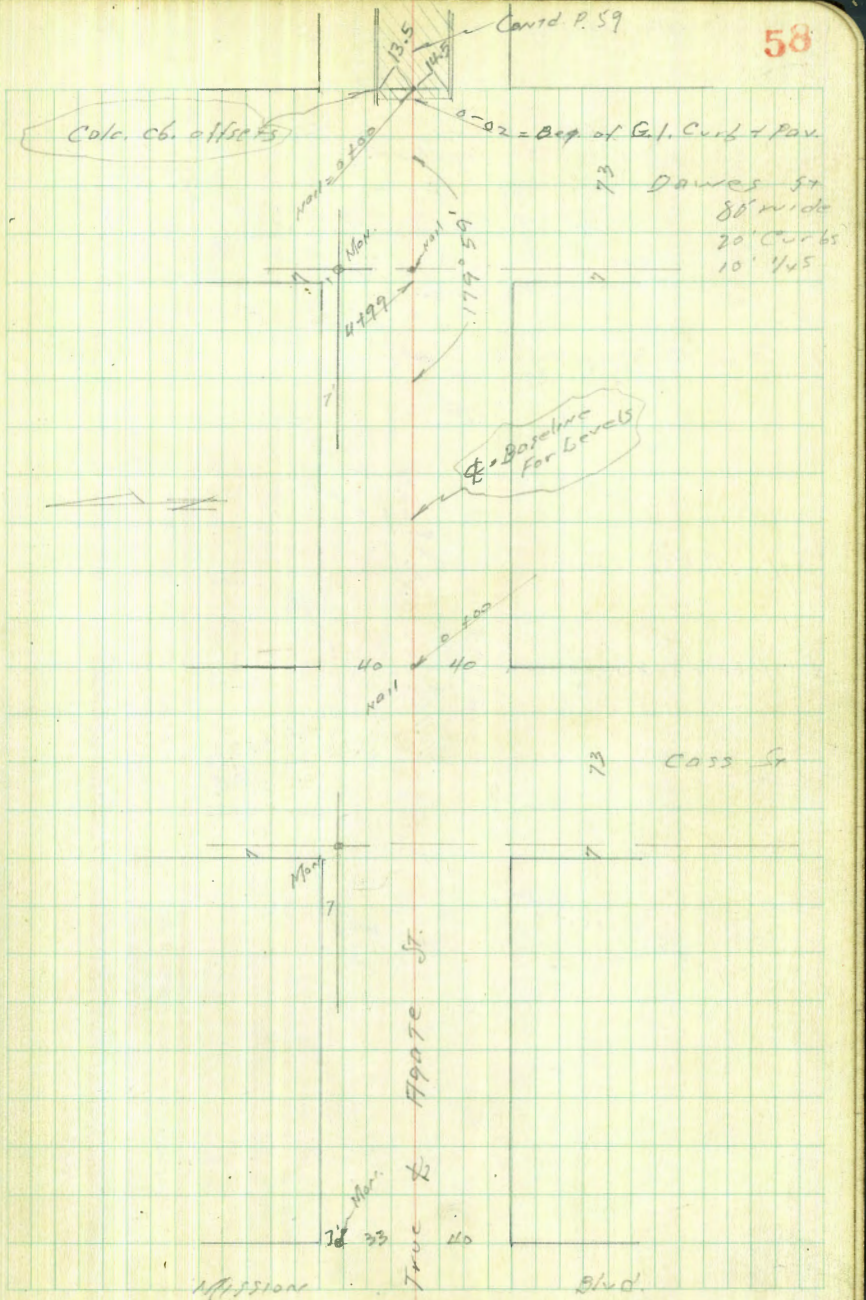
Record C.O.H.

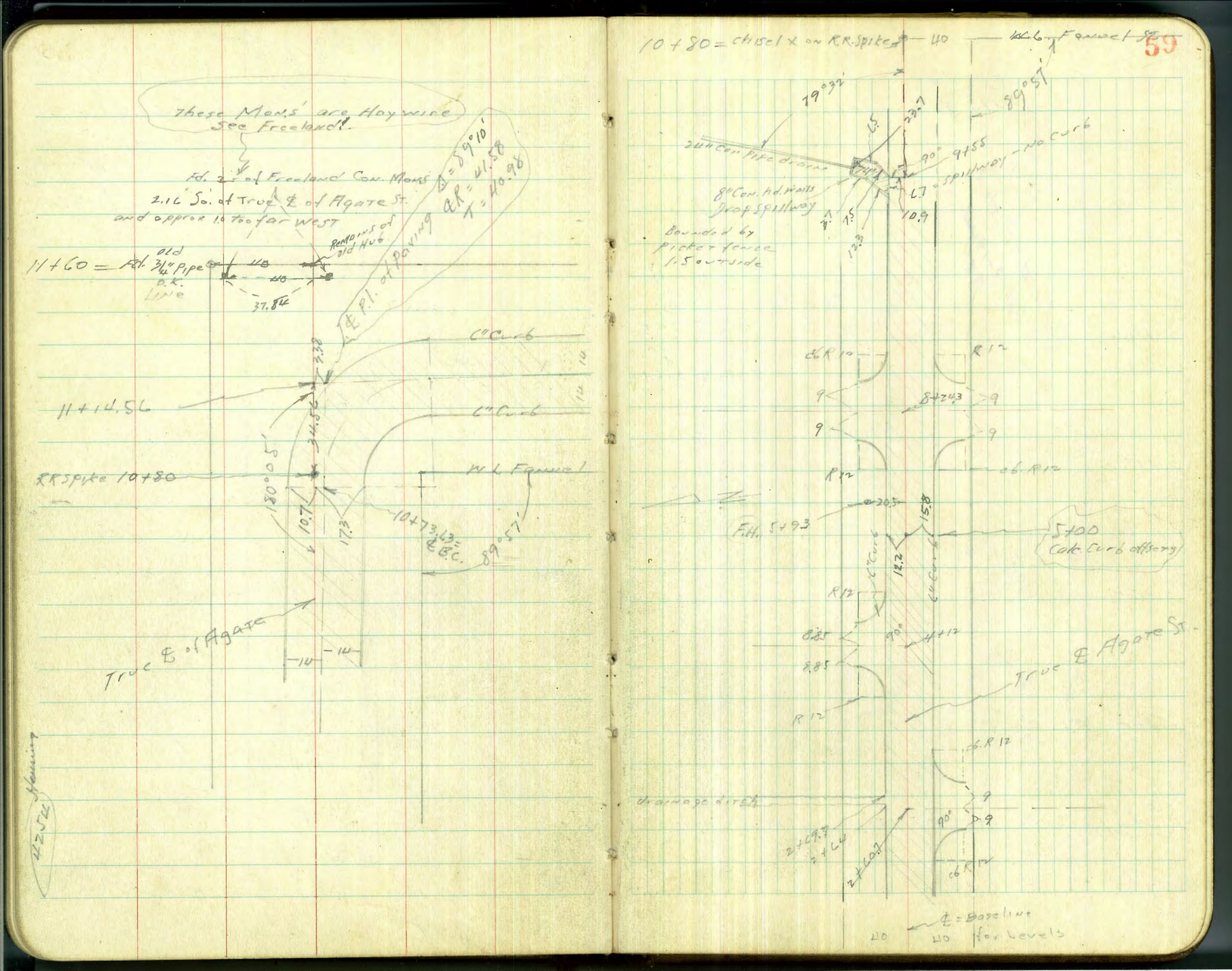
C. Moore
Schlatter Meyer
W. Moore
9-12-44.

Indexed
C.S.K.

1 Sec of Agate St. - 80' wide 20' curbs
Coss to Farwell

Note! See Level notes
for Sta. of G.I. Walks etc.




These Mons' are Haywire
See Freeland's
Fd. ¾" of Freeland Con. Mons
2.1C So. of True ℄ of Agate St.
and approx 1.0 too far West
Δ = 89°10'
dR = 41.58
T = 40.98
11+60 = Fd. old ¾" Pipe
P.K. Line
Remains of old Hub
40
40
37.8℄
℄ P.I. of parking
C° Curb
11+14.5C
C" Curb
W.L. Fence
RR Spike 10+80
180.00'
10.7
17.3
10+73.43 P.C.C.
89°57'
True ℄ of Agate
14
14
47.52 Planning
10+80 = chisel X on R.R. Spike
40
Fd. Nail
79°32'
89°57'
23.7
24" Con. Pipe drain
90° 9155
℄
8" Con. hd. walls Drop Spillway
L.7 = spillway - no curb
7.5
7.5
10.9
12.3
Bounded by picket fence 1.5 outside
R 12
8+24.3
9
9
9
9
R 12
06 R 12
F.H. 5+93
20.5
15.8
18.2
5+00 Calc. curb offset
C" Curb
C" Curb
R 12
8.85
90°
11+12
8.85
True ℄ Agate St.
R 12
06 R 17
9
9
90°
9
drainage ditch
2+79.7
2+44
2+10.7
06 R 12
℄ = Baseline for Levels
40
40

Lt = N. True ℄ Agate Baseline Rt = S.

X sec. on Agate St.
Cass Ely to Fanuel

Reduced & Plotted Sept 19-1944 C.B.H.

1+07

0+96

158.28
1.45
40
℄ do. 2' Rt 6. Dr.

Note!
Calc. offsets to G.I. Curbs from Sketch of True ℄ at Agate

0+88

0+50

0+00 E.L. Cass

153.77
5.96
40.6
℄ 2' do. x 6. Dr. 7' wide

150.06 | 156.8 | 156.0 | 155.7 | 155.0 | 155.1 | 153.6
2.67 | 2.9 | 3.7 | 4.0 | 4.7 | 4.6 | 6.1
22.x | 20 | 14 | | 15 | 20 | 40

6.8 wide

157.69
℄ 2.5 walk 2.0x
39.8

157.4 | 156.4 | 156.2 | 155.3 | 154.8 | 154.1 | 154.7 | 154.6 | 153.1
2.3 | 3.3 | 3.5 | 4.4 | 4.9 | 5.6 | 5.0 | 5.1 | 6.6
40 | 20 | 17 | 15 | | 15 | 17 | 20 | 40

152.6 | 155.5 | 155.3 | 154.4 | 154.2 | 153.3 | 154.1 | 153.9 | 152.4
3.1 | 4.2 | 4.4 | 5.3 | 5.5 | 6.4 | 5.6 | 5.8 | 7.3
40 | 20 | 17 | 15 | | 14 | 17 | 20 | 40

T.P. Set B.M. NW 7' Con. Mon.	5.43	159.73	10.1x	154.50	Cass & Agate
SW 7' Con. Mon.	1.56	164.6x		163.06	Cass & Archer

159.73

3+35

3+00

T.P. 3.00 157.98 4.75 154.98

2+50

2+35 ℄ giunto con D7

2+00

1+50

159.73

Lt Tree ℄ Rt

156.1	154.4	155.4	154.8	154.8	154.2	154.7	154.1	153.5
1.9	3.6	2.6	3.2	3.2	3.8	3.3	3.9	4.5
40	20	15	13		17	14	21	40

156.5	155.6	155.7	155.0	154.9	154.5	155.1	154.3	153.8
1.5	2.4	2.3	2.0	3.1	3.5	2.9	3.7	4.2
40	20	15	14		13	15	20	40

157.98

157.1	155.9	155.2	155.0	154.8	155.3	154.4	153.7
2.6	3.8	4.5	4.7	4.9	4.4	5.3	6.0
40	20	13		13	15	20	40

157.44	157.28
2.29	2.45
40	37.2 cmd

157.3	156.4	155.9	155.5	155.2	154.9	155.3	154.7	153.9
2.4	3.3	3.8	4.2	4.5	4.8	4.4	5.0	5.8
40	20	19	14		14	16	20	40

159.7	158.8	157.8	157.7	155.4	156.0	155.4	158.1	154.0
2.0	2.9	3.4	4.0	4.3	4.7	4.3	4.6	5.7
40	22	20	14		13	15	20	40

159.73

W c6

NW. 7' Cor. Mon.
Set BM. Agate + Dawes 5.03 152.35

4+99 W.L. Dawes = { 80 wide / 20' Curbs / 10' 1/4's

4+70

4+35

4+00

3+70

157.98

L7 & 18 62

152.4	151.8	151.1	150.6	149.4	150.0	150.0	
5.6 / 40	4.7 / 20	5.9 / 17	7.4	8.6 / 20	8.0 / 13	8.0 / 40	
152.9	152.2	152.0	151.4	151.4	150.4	151.1	151.4	150.3
5.1 / 40	5.8 / 20	6.0 / 15	6.6 / 13	6.6	7.6 / 13	6.9 / 15	6.6 / 20	7.7 / 40
153.8	152.9	152.8	152.2	152.3	151.4	152.1	151.8	150.7
4.2 / 40	5.1 / 20	5.2 / 14	5.8 / 13	5.7	6.6 / 13	5.9 / 14	6.4 / 20	7.7 / 40
154.8	154.0	153.8	153.0	153.1	152.6	152.4	151.8	
3.2 / 40	4.0 / 20	4.2 / 14	5.0 / 13	4.9	5.4 / 13	5.6 / 20	6.2 / 40	
156.1	155.6	154.3	153.9	154.0	153.3	153.9	153.2	152.4
1.9 / 40	2.4 / 20	3.7 / 15	4.1 / 14	4.0	4.7 / 13	4.1 / 14	4.8 / 20	5.6 / 40
156.0	155.6	155.3	154.6	154.6	154.0	154.4	153.6	152.7
2.0 / 40	2.4 / 20	2.7 / 15	3.4 / 14	3.4	4.0 / 13	3.6 / 14	4.4 / 20	5.3 / 40

157.98

0+00 = E.L. Dawes

E c6 +18 Beg. G.I. curbs + Black Pav.

E c6

E 1/4

E Dawes

W c6 +4

15798

Lt ℄ Rt

1523	1511.2	1500.81	1500.29	1506.5	1500.98	1500.84	1504	1503	1496
5.7	6.8	7.17	7.69	7.33	7.62	7.14	7.6	7.7	8.4
40	20	C6	9T		9T	C6	1C	20	40

1500.81	1502.25	1500.42	1503.32	1500.83
7.17	7.73	7.36	7.66	7.15
13.5	13.5		14.5	14.5
C6	9T		9T	C6

1524	1513	1504	1505	1498	1495
5.6	6.7	7.6	7.5	8.7	8.5
40	20	13		20	40

1519	1509	1500	1493	1488
6.1	7.1	8.0	8.7	9.7
40	20		20	40

1522	1515	1507	1500	1492
5.8	6.5	7.3	8.0	8.8
40	20		20	40

1517	1511	1506	1495	1488
6.3	6.9	7.4	8.5	9.2
40	20		20	40

15798

1+80 ℄ 8' con. drive

1+50 ℄ 3' Con walk

1+32 ℄ 3' Con. walk

T.P. 1296 166.51 4.43 153.55

1+00

0+71 ℄ 3' Con walk = Beg. of G.I. 3' walks

Note! All Housing walks
Join G.I. Curbs

0+50

157.98

LT 155.89 ℄ RT
10.2
40.8

155.45
11.0
40.8

1550 1540 153.99 153.55 153.97 153.44 153.96 153.3 153.1
11.5 17.5 12.5 12.96 12.54 13.07 12.55 13.2 14.4
40 20 C6 9T 9T C6 20 40

153.50 152.90 153.50 153.45 152.85 151.58
13.01 13.61 13.01 13.06 13.66 14.93
9T C6 +2.5 +2.6 40

166.51
153.6 152.6 152.65 152.22 152.71 153.23 152.72 152.2 150.9
4.4 5.4 5.33 5.76 5.27 5.75 5.26 5.8 7.1
40 20 C6 9T C6 20 40

152.09 151.59 152.11 152.09 151.45 150.16
5.95 6.39 5.87 5.89 6.93 7.82
9T C6 +2.5 +2.6 40

152.6 151.7 151.69 151.14 151.59 151.17 151.67 151.1 150.8 149.8
5.4 6.3 6.29 6.86 6.41 6.84 6.31 6.9 7.7 8.2
40 20 C6 9T C6 15 20 40

157.98

	Lt	℄	Rt
1+49.7	158.8 7.7 40	158.0 8.5 20	157.64 8.87 C6 end
1+67	℄ ditch on Lt.		
1+00	157.5 9.0 40	157.0 9.5 20	156.89 9.6 9T
1+85	158.5 8.0 40	157.8 8.7 20	157.42 9.09 C6 end
1+51.7			
1+39.7	157.6 8.9 40	157.8 9.7 20	156.60 9.91 C6
1+96	156.0 10.5 40	155.1 11.4 20	154.8 11.33 C6

	Lt	℄	Rt
1+49.7	157.00 9.51 9T	157.40 9.11	157.63 8.88 C6 end E.C.
1+67	156.89 9.6 9T	157.30 9.21	
1+00	157.19 9.7 9T	157.19 9.3	156.44 10.07 C6 EC.
1+85			
1+51.7	156.03 10.48 9T	156.40 10.11	155.92 10.59 9T
1+39.7	154.59 11.92 9T	155.08 11.43	154.56 11.95 9T
1+96			

	Lt	℄	Rt
1+49.7	156.53 9.98 C6 B.C.	155.59 10.6 20	154.6 11.9 40
1+67	155.13 11.38 C6	155.1 11.4 +2.5	154.53 11.98 +2.5
1+00	153.45 13.06 40		
1+85			
1+51.7			
1+39.7			
1+96			

℄ 3' con walk on Rt

166.51

166.51

T.P.	10.77	17v.85	4.43	16v.08
3+78		℄ 3' walk on LT		
3+38		3' walk on LT		
3+33.5		3' walk on RT		
4+99		℄ 3' walk on LT		
4+81.7		c6 B.C. on RT		
4+74		℄ 3' Con. walk on LT.		

166.51

LT ℄ RT

66

162.64	161.44	160.84	161.29	160.68	161.27	161.1	160.1
3.87	5.07	5.67	5.2v	5.83	5.24	5.4	6.4
40	c6	9		9T	c6	20	40

161.22	160.05	159.44	159.81
5.19	6.46	7.07	6.70
40	c6	9T	

159.66	159.03	159.70	158.66
6.85	7.48	6.81	7.85
	9T	c6	40

159.18	158.61	158.02	158.40	157.93	158.61	158.2	157.1
6.83	7.90	8.49	8.11	8.58	7.90	8.3	9.4
40	c6	9T		9T	c6	20	40

157.83	157.35	158.04	157.8	156.6
8.68	9.16	8.47	8.7	9.9
	9T	c6	20	40

159.06	157.77	157.12	157.55
7.45	8.74	9.39	8.96
40	c6	9T	

166.51

		Lt.	℄	Rt.
4+44	3' Conc walk on Lt	165.25	164.02	163.50	164.03
		7.60	8.83	9.35	8.82
		40	CB	9T	
4+30.85		164.8	164.2	163.60	162.99	163.47	162.93	163.47	163.3	162.2
		8.1	8.7	9.25	10.0	9.38	9.92	9.38	9.6	10.7
		40	20	CB	9T		9T	CB	20	40
				B.C.						
4+20.85		164.16								
		8.09								
		CB end								
		EC								
4+03.15		162.95								
		9.90								
		CB end								
		EC								
						162.03	161.41	162.00	160.85	
						10.87	11.44	10.85	12.00	
							9T	CB	40	
3+98	3' Conc. walk on Rt									
		163.3	162.4	161.80	161.33	161.79	161.17	161.75	161.5	160.6
		9.5	10.5	11.05	11.52	11.06	11.68	11.10	11.4	12.3
		40	20	CB	9T		9T	CB	20	40
				B.C.						
3+91.15										
	17+.85						17+.85			

6+91 ℄ 3' Con. walks Rt. & Lt.

6+30 ℄ 3' Con wk. Rt. & Lt.

T.R. 12.59 184.8r 0.6r 172.23

6+00

5+50 3' Con. walk Rt & Lt.

5+00

4+61 3' wk, on Rt.

17r.85

	Lt	℄	Rt
	179.67	177.14	176.56
	5.15	7.68	8.26
	40	C6	9T
	176.96	174.56	177.15
	7.86	8.26	7.67
		9T	C6
	175.54		
	9.58		
	40		
	175.52	173.77	173.26
	9.30	11.05	11.56
	40	C6	9T
	173.70	173.26	173.79
	11.17	11.56	11.03
		9T	C6
	172.56		
	12.26		
	40		
		184.8r	
	173.8	173.0	172.14
	+0.9	+0.1	0.71
	40	20	C6
	171.55	172.05	171.64
	1.30	0.80	1.71
	9T		9T
	172.18	172.0	171.2
	0.67	0.9	1.7
	C6	20	40
	171.08	170.71	169.36
	1.77	2.14	3.49
	40	30	C6
	168.93	169.33	168.84
	3.92r	3.5r	4.01
	9T		9T
	169.40	168.15	
	3.45	4.70	
	C6	40	
	168.2	167.3	166.75
	4.7	5.6	6.10
	40	20	C6
	166.19	166.69	166.22
	6.66	6.16	6.63
	9T		9T
	166.83	166.5	165.4
	6.0r	6.4	7.5
	C6	20	40
			164.81
			8.0r
	164.31	164.89	163.60
	8.5r	7.96	9.25
	9T	C6	40
			172.85

8+33.3

8+15.3

~~8+03.3~~

T.P. 17.36 193.90 3.28 181.54

7+50 ℄ 3' Conc. walk on Rt.

7+54 ℄ 3' Conc. walk on Lt.

7+44

184.8 ~

Lt ℄ Rt

183.51
10.33
C6 end EC.

183.06
10.84
C6 end EC

182.51
11.39
C6 end EC

182.06
11.84
C6 end EC

184.6	182.5	181.88	181.30	181.58	181.07	181.54	181.4	179.7
9.3	11.4	12.02	12.60	12.34	12.83	12.36	12.5	14.2
40	20	C6	97		97	C6	20	40
		BC.				BC.		

193.90

179.98	179.56	180.18	177.86
4.84	5.26	4.64	6.96
	97	C6	40

182.85	181.28	180.11	179.54	179.92
1.97	3.54	4.71	5.28	4.90
40	25	C6	97	

182.4	180.3	179.73	179.15	179.45	179.06	179.73	179.3	177.5
2.4	4.5	5.09	5.67	5.37	5.76	5.09	5.5	7.3
40	20	C6	97		97	C6	20	40

184.8 ~

9+55 on Line of 24" drain 79°32' Lt

9+55 Sec. at 90°

9+48.3

9+46 3' Con steps + wk on Lt

8+94 3' Con. walks Rt + Lt

8+45.3

193.90

Lt ℄ Rt

191.27	187.97	186.04	185.98
2.63	5.93	7.86	7.92
23.7	23.7	23.7	
Top Hd. wl.	F.L. 24" Pipe	Spillway Bot.	

	186.32	185.59	185.98
E edge Spillway	7.58 C6	8.31 9T	7.92

	186.05	185.41	185.79
W. edge Spillway	7.85 C6	8.49 9T	8.11

191.38	189.29	185.88	185.99	185.36	185.73	185.34	185.90	185.7	184.3
2.5V	4.51	8.02	7.91	8.54	8.17	8.56	8.00	8.2	9.4
40	19	14	C6	9T		9T	C6	20	40
	Top steps	Bot. steps							

185.62	185.29	184.72	184.37	183.84	184.41	183.82	184.39	182.74
8.28	8.61	9.18	9.53	10.06	9.49	10.08	9.51	11.1 C
21.5	15.5	15.5	C6	9T		9T	C6	40
Step up								

184.2	184.7	183.09	182.50	182.94	182.48	182.95	182.9	181.5
7.5	9.7	10.81	11.40	10.96	11.42	10.95	11.0	12.4
40	20	C6	9T		9T	C6	20	40
		B.C.				B.C.		

193.90

	188.64	186.20
	5.26	7.70
	40	21.5

10+73.63 = B.C. of G.1. C6. and Pav.

10+50

10+27 3' Steps + walk on Lt.

10+15 3' Con. WK on Rt.

T.P. 770 198.56 3.04 190.86

10+00

9+57 3' Conc. on Rt.

193.90

Lt			℄		Rt				
196.5									
2.1									
40									
194.7	193.5	193.1	189.50	188.95	189.34	189.00	189.61	189.6	188.3
2.9	5.1	5.5	9.0C	9.C1	9.22	9.5C	8.95	9.0	10.3
33	20	18	C6	9T		9T	C6	20	40
193.30									
5.2C									
40									
194.8	191.9	188.86	188.43	188.91	188.29	188.86	188.8	187.3	
8.8	6.7	9.70	10.13	9.65	10.27	9.70	9.8	11.3	
40	20	C6	9T		9T	C6	20	40	
192.38	191.18	190.21	188.38	188.23	187.70	188.17			
C.12	C.78	8.35	10.18	10.33	10.2C	10.39			
29.C	29.5	17	15	C6	9T				
Step up		Top Step	Bot Step						
				187.80	187.14	187.80	185.72		
				10.7C	11.42	10.7C	12.8X		
					9T	C6	40		
191.5	190.3	187.50	186.94	198.5C					
1.4	3.C	C.40	C.9C	C.57	7.11	C.45	C.C	8.X	
40	20	C6	9T		9T	C6	20	40	
				186.04	185.64	186.21	184.60		
				7.8C	8.2C	7.C9	9.30		
					9T	C6	40		
				193.90					

Over for Level on G.L. C6 + Par

11+60 E.L. Fanuel

11+32

11+20 ℄ Fanuel

11+00 on w.c6 Line Fanuel

10+80 = W.L. Fanuel St.

198.56

198.6
0.0
40

Lr ℄ Pr

208.9 206.0 202.8 198.6 195.0
+10.3 +7.4 +4.2 0.0 3.6
40 20 20 40

204.3 201.1 197.3 194.6 191.3
+5.7 +2.5 1.3 4.0 7.3
40 20 20 40

201.7 198.6 194.2 189.32 188.86 188.75 188.20
+3.1 0.0 4.4 9.24 9.70 9.81 10.36
40 20 14 14.1 20 40
C6 97

196.0 195.1 189.72 189.28 189.36 189.27 188.46 188.97 188.8
2.6 3.5 8.84 9.28 9.20 9.29 10.10 9.59 9.8
20 15 C6 97 20 37.5 37.5 40
3.8 3.8 97. C6

197.1 194.1 193.6 189.54 189.02 189.42 189.10 189.68 189.7 188.6
1.5 4.5 5.0 9.07 9.57 9.44 9.46 8.88 8.9 10.0
40 20 17 10.4 10.3 97 C6 20 40
C6 97. 18.4 18.3

198.56

Levels on G.I. c6 + Pav.
as Constructed

check to RR Spike E Agate	9.14	189.44	189.39
B.M.			0.03

W.L. Fannel

Part - 3 = E.C.

Part N

Part 1

Curve in 3 eq. parts
See Sketch P 59

10 + 73.63 = B.C. RT

198.54

Lt	Gr. G.I. Pav.	Rt
188.31	187.63	188.13
10.35	10.93	10.43
1x	1x	
c6	9T	
		187.94
		10.64
		9T
		1x
		188.43
		10.13
		c6
		1x

189.29	188.82	189.10	188.86	189.32
9.77	9.74	9.40	9.70	9.24
1x	1x		1x	1x
c6	9T		9T	c6

189.71	189.33	189.55	189.11	189.72
8.85	9.73	9.01	9.45	8.84
1x	1x		1x	1x
c6	9T		9T	c6

189.50	188.95	189.42	189.00	189.61
9.06	9.61	9.14	9.56	8.95
1x	9T		1x	1x
c6	1x		9T	c6

198.56

Lot 7, P.L. 1783

Levels on Line 15' Wly of Pueblo Line,
400' N. of w.l. Mission Blvd.
Betw. Agate & Turquoise

Reduced + Plotted 22 Sept 29 - AK

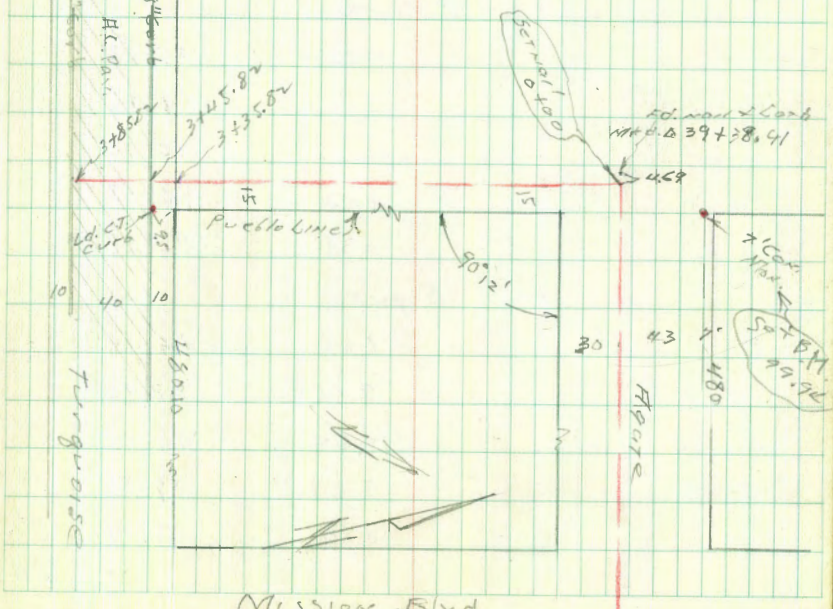
				5.7' archer
BM. Con. Mon.	0.50	113.78		113.28 EL: Mission Blvd
T.P.	0.74	112.85	11.67	112.11
T.P.	2.94	102.86	12.81	99.94 on 7' Con. Mon. w. end Agate
0+00			11.0	98.9
+08			11.5	98.4
+10			5.1	97.8
+12			4.5	98.4
+50			5.9	97.0
+85			6.8	96.1
1			6.8	96.1
+50			7.2	95.7
+60			7.6	95.3
+75			7.0	95.9
2			7.8	95.1
+50			8.1	94.8
3			9.0	93.9
+35			9.0	93.9
T.P.	3.64	93.61	12.89	89.97
+36			5.5	88.1

Levels on Pav. at Turquoise P.75

Indexed C.S.K.

74

C. Moore
Soil Information
W. E.M.
B-795
9-2-22-44



3+45.8 N curb Turquoise

℄	6.04	87.57
50 W	8.99	84.62
100 W	12.09	81.52
50 E	2.96	90.65
100 E	0.09	93.52

3+45.8 N gutter

℄	6.71	86.90
50 W	9.69	83.92
100 W	12.80	80.81
50 E	3.69	89.92
100 E	0.87	92.74

3+65.8 N Turquoise

℄	6.73	87.48
50 W	9.14	84.47
100 W	12.18	80.43
50 E	3.08	90.53
100 E	0.38	98.23

3+85.8 S gut

℄	6.66	86.95
50 W	9.66	83.95
100 W	12.64	80.97
50 E	3.67	89.94
100 E	0.82	92.79

3+85.8 S curb Turquoise

℄	5.96	87.65
50 W	9.00	84.61
100 W	11.93	81.68
50 E	2.97	90.64
100 E	0.09	93.52

T.P.	11.97	10.5+73	0.35	93.26
T.P.	11.19	11.5+65	0.77	10x.46
T.P.	10.40	12.5+73	0.82	11x.83
Check to Starting BM.			1.96	123.28
				00.1

Indexed
C.S.K.

Levels on W. side 6th St.

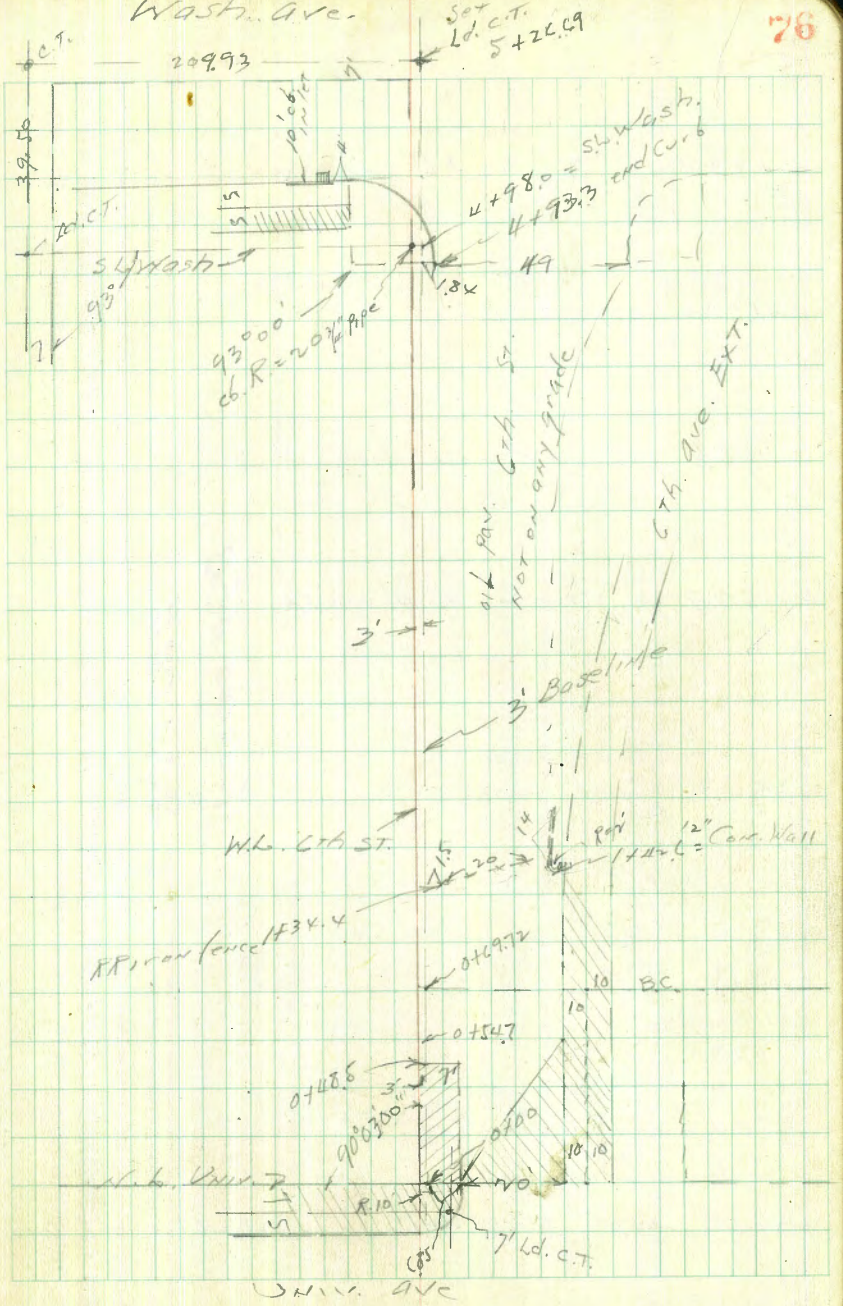
Univ. to Wash.

To Estab. grade of proposed Sdwk. next to New Bldg. on W. side 6th St.

Curb stakes set 2' back curb for 6' Contr. Curb & walk

Sta. 1+05.5 to 3+07

Sdwk Bk. B-5-p.49 CSM 11-30-44



0+89.7 3' LT P.P. east edge

0+69.7 ± opp. ℄ B.C.

0+65.6 ℄ 14' Conc. drive

0+56.9 = Ctr. end 4' walk

0+54.7 end walk

Reduced 1"=5'
Sketch 6 of 11
Peter Popyk 1972

0+48.5

0+00 N.L. Univ. Ave.

N.W.B.P. 2.05 285.97 283.87 Gbl Univ.

LT 3' Baseline RT 77.

281.35 / 4.57 / 1

280.72 / 5.20 / 7 / 011

281.08 / 4.84 / ℄ C.T. / 37

283.44 / 2.97 / 10

281.40 / 4.57 / 0.8

281.80 / 4.07

282.10 / 3.87 / 3

281.73 / 4.09 / 1

281.37 / 4.55 / 7 = 97.4 ct

282.28 / 3.64 / 3

282.10 / 3.87 / 1

281.56 / 4.36 / 7 ← ct + gr.

281.97 / 3.95 / 27

283.9 / 4.0 / 3

282.89 / 4.03

283.98 / 1.94 / 6.85 / ct

282.93 / 2.99 / 4.85 / 97.

285.97

T.P 5.85 = 85.99 6.48 = 79.44

V + 33.5

2 + 78.7 = 3.5 Lt. ft. 8" drain outlet from Bldg. 6.44 = 279.48

V + 00

1 + 84.4

1 + 56

1 + 42.6

1 + 35.8

1 + 10.9 = SE Cor New Bldg

= 85.9 =

LT 8' Baseline RT 78

279.44

Top Bot. Step Conc. 5.6 wide 6.58 / 2.5

2791 6.8 / 10

2793 6.6 / 18 Rim

2791 6.8 / 3

2789 7.0 / 10

2788 7.0 / 24 Rim

Top Bot. Step Conc. 5.6 wide 279.56 6.36 / 2.4

2791 6.8 / 3

2788 7.1 / 10

2786 7.3 / 23 Ctr. Pav. end 12" wall

2790 6.9

2789 7.0

2787 7.14 / 10

2771 8.8 / 25.8

2763 9.4 / 30 Wt. edge 20' Pav.

279.64 6.78 / 2.5

Top Bot. Conc. 5.5 wide Step

278.7 7.1 / 7

2769 9.0 / 29.4 = Wedge 20' Pav.

279.4 6.5 / 3.5

278.9 7.0 / 7

278.66 7.26 / 27.7 Wedge 20' Pav.

= 85.9 =

E.C. Curb on Top curb 3.84 = 281.45
E.C. Return West gutter 4.47 280.82 Note /

4+93.3 = end State Rot. } approx E.C.
4+93.3 = end State Rot }

4+77 ~~~ LT to E edge P. Pole

4+59.~ ℄ of 19.4 Ramped Drive IN to Parking Lot

4+15.3 Beg. Ret Wall 1.4 Wide 0.C IN ST.

4+14.6 3.5 LT. = F.L. 4" drain outlet 4.61 280.68

4+13.6 NE Corn Bldg. (Bowling alley)

4+00

3+50

~ P. Poles on either side 48 LT.

3+13.3 ℄ 12.5 out Strip Drive, Bow Bldg.

3+04.~ E. edge pole 1.7 LT

~+8~.3

~85.~9

Gr. Return same as 3' Baseline

79

280.87 4.4~ 26.37
280.73 4.5~ 50.77 97
284.37 3.9~ 50.77 E.C.

282.40 7.89 3.~
281.8 3.5 3.~

281.49 3.20 1.8~
280.85 4.4~ 1.8~
280.85 4.4~ 4 15
270.24 4.55 -

Top Wall
gr. Bot Wall

Top gut. edge 97.

281.8 2.5 15 0.6
280.5 4.8 2.8
284.3 5.0
280.4 4.9 7
280.6 4.7 20
280.6 4.7 35 edge out

283.04 2.23 2.4
280.56 4.73 2.3 Bot wall
Top Wall

280.3 4.8 33
280.4 4.9
280.3 5.0 7
280.3 5.0 20
280.1 5.~ 35 edge out

280.4 4.9 3
280.3 5.0 7
280.0 2.3 3~ edge out

280.0 5.3 3
279.9 5.~ 7
279.2 5.C 30 edge out

281.~ 280.~ 4.1 4
284.3 5.00 3
279.8 5.5
279.5 5.8 3
279.6 5.7 10
279.5 5.8 28 edge out

279.65 5.4 2.5
279.2 6.1
279.3 6.0 7
279.4 5.9 27 edge out 194 ~.

Top Bot. Conc Strip 5.C wide

~85.~9

~~285.09~~

TP	6.99	~~286.05~~	(w)	~~279.06~~
check to orig. BM		~~7.19~~	~~283.86~~	~~283.87~~

LEVELS - Existing Sewer MH.

In Alley Blk 79 - Sketch Page 54 B.M. SE Cb Rear Alley P-57

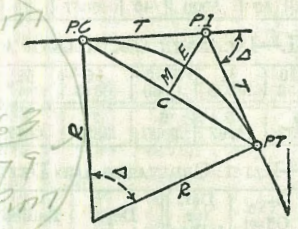
	5.56	76.88		71.32
chk Top Cb S				
℄ 30th on Rim MH			5.40	71.48
" Flow "			8.80	68.08
T.P.	5.46	76.94	5.40	71.48
228.9' West of ℄ 30th = MH			5.0	71.94 Ground
" " " " " on Rim			6.13	70.81 Rim
" " " " " Flow			8.33	68.61 Flow
TP	5.89	77.37	5.46	71.48
chk. SE B.P. ℄ - 6 30th			3.41	73.96
Page 57				73.98
				0.02

0+00 = E.L. 29th 4.18 83.65 79.47 B.M. SE B.P. K-℄ 29th P-54

1+30.55 - ℄ MH Rim			8.18	75.47
" Flow MH			13.49	70.16
0-10 chk S Top Cb P-54			5.55	78.10
				78.11
				0.01
0-30 Rim MH ℄ 29th			4.86	78.79
" Flow " "			11.02	72.63

DIETZGEN'S RAILROAD CURVE AND REDUCTION TABLES

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



~~75.47 Rim~~ ~~5.95~~ ~~81.42 T~~ ~~8.79~~ ~~26.3~~ ~~72.63~~ ~~78.79~~ ~~Rim~~ ~~Flow~~

~~142.51~~ ~~61~~ ~~81.42~~

CURVE FORMULAS

Radius = $R = \frac{50}{\sin. D/2}$ (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) = Rvers $\frac{\Delta}{2}$ (6)

External = $E = T \tan \frac{\Delta}{4}$ (7) = $R \div \cos. \frac{\Delta}{2}$ − R (8) = $R \operatorname{exsec} \frac{\Delta}{2}$ (9)

Long Chord = C = 2 R sin. $\frac{\Delta}{2}$ (10) △ = Central Angle

EXPLANATION AND USE OF TABLES

Stations.—Given P. I. = Sta. 161+60.35 to find Sta. of P. C. and P. T. △ = 62° 10′ D = 8° 20′. From Table IV for 1° curve T = 3454.1 and ÷ 8⅓ = 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 = ½ D for 100 ft., ¼ D for 50 ft., etc. For c ft. = (in minutes) .3 x C x D° or = defl. for 1 ft. from Table III x C. For Sta. 158 of above curve = .3 x 54.5 x 8⅓ = 136.2′ or 2° 16.2′, or = 2.50 x 54.5 = 136.2′ from Table III. For Sta. 159 deflection angle = 2° 16.2′ + 8° 20′ ÷ 2 = 6° 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° curve E = 960.6 for 8° 20′ = 960.6 ÷ 8⅓ = 115.27 and from Table V correction = .10 or E = 115.37 ft. Or suppose △ = 32° and E is measured and found to be 42 ft. What is D? From Table IV E = 230.9 and ÷ 42 = 5.5 or D = 5° 30′.

Table I.—Minutes in Decimals of a Degree.

1′	.0167	11′	.1833	21′	.3500	31′	.5167	41′	.6833	51′	.8500
2	.0333	12	.2000	22	.3667	32	.5333	42	.7000	52	.8667
3	.0500	13	.2167	23	.3833	33	.5500	43	.7167	53	.8833
4	.0667	14	.2333	24	.4000	34	.5667	44	.7333	54	.9000
5	.0833	15	.2500	25	.4167	35	.5833	45	.7500	55	.9167
6	.1000	16	.2667	26	.4333	36	.6000	46	.7667	56	.9333
7	.1167	17	.2833	27	.4500	37	.6167	47	.7833	57	.9500
8	.1333	18	.3000	28	.4667	38	.6333	48	.8000	58	.9667
9	.1500	19	.3167	29	.4833	39	.6500	49	.8167	59	.9833
10	.1667	20	.3333	30	.5000	40	.6667	50	.8333	60	1.0000

Table II.—Inches in Decimals of a Foot.

1–16	3–32	⅛	3–16	¼	5–16	⅜	½	⅝	¾	⅞
.0052	.0078	.0104	.0156	.0208	.0260	.0313	.0417	.0521	.0625	.0729

1	2	3	4	5	6	7	8	9	10	11
.0833	.1667	.2500	.3333	.4167	.5000	.5833	.6667	.7500	.8333	.9167

Table III.—Radii, Ordinates and Deflections.

Deg.	Radius	Mid. Ord.	Tan. Offset	Def. for 1 Foot	Deg.	Radius	Mid. Ord.	Tan Offset	Def. for 1 Foot
0° 10′	34377.5	.036	.145	0.05′	7°	819.02	1.523	6.105	2.10′
20	17188.8	.073	.291	0.10	20′	781.84	1.600	6.395	2.20
30	11459.2	.109	.436	0.15	30	764.49	1.637	6.540	2.25
40	8594.42	.145	.582	0.20	40	747.89	1.673	6.685	2.30
50	6875.55	.182	.727	0.25	8	716.78	1.746	6.976	2.40
1	5729.65	.218	.873	0.30	20	688.16	1.819	7.266	2.50
10	4911.15	.255	1.018	0.35	30	674.69	1.855	7.411	2.55
20	4297.28	.291	1.164	0.40	40	661.74	1.892	7.556	2.60
30	3819.83	.327	1.309	0.45					
40	3437.87	.364	1.454	0.50	9	637.28	1.965	7.846	2.70
50	3125.36	.400	1.600	0.55	20	614.56	2.037	8.136	2.80
					30	603.80	2.074	8.281	2.85
2	2864.93	.436	1.745	0.60	40	593.42	2.110	8.426	2.90
10	2644.58	.473	1.891	0.65					
20	2455.70	.509	2.036	0.70	10	573.69	2.183	8.716	3.00
30	2292.01	.545	2.181	0.75	30	546.44	2.292	9.150	3.15
40	2148.79	.582	2.327	0.80	11	521.67	2.402	9.585	3.30
50	2022.41	.618	2.472	0.85	30	499.06	2.511	10.02	3.45
					12	478.34	2.620	10.45	3.60
3	1910.08	.655	2.618	0.90	30	459.28	2.730	10.89	3.75
10	1809.57	.691	2.763	0.95	13	441.68	2.839	11.32	3.90
20	1719.12	.727	2.908	1.00	30	425.40	2.949	11.75	4.05
30	1637.28	.764	3.054	1.05	14	410.28	3.058	12.18	4.20
40	1562.88	.800	3.199	1.10	30	396.20	3.168	12.62	4.35
50	1494.95	.836	3.345	1.15					
					15	383.07	3.277	13.05	4.50
4	1432.69	.873	3.490	1.20	30	370.78	3.387	13.49	4.65
10	1375.40	.909	3.635	1.25	16	359.27	3.496	13.92	4.80
20	1322.53	.945	3.718	1.30	30	348.45	3.606	14.35	4.95
30	1273.57	.982	3.926	1.35	17	338.27	3.716	14.78	5.10
40	1228.11	1.018	4.071	1.40	18	319.62	3.935	15.64	5.40
50	1185.78	1.055	4.217	1.45	19	302.94	4.155	16.51	5.70
5	1146.28	1.091	4.362	1.50	20	287.94	4.374	17.37	6.00
10	1109.33	1.127	4.507	1.55	21	274.37	4.594	18.22	6.30
20	1074.68	1.164	4.653	1.60	22	262.04	4.814	19.08	6.60
30	1042.14	1.200	4.798	1.65	23	250.79	5.035	19.94	6.90
40	1011.51	1.237	4.943	1.70	24	240.49	5.255	20.79	7.20
50	982.64	1.273	5.088	1.75					
					25	231.01	5.476	21.64	7.50
6	955.37	1.309	5.234	1.80	26	222.27	5.697	22.50	7.80
10	929.57	1.346	5.379	1.85	27	214.18	5.918	23.35	8.10
20	905.13	1.382	5.524	1.90	28	206.68	6.139	24.19	8.40
30	881.95	1.418	5.669	1.95	29	199.70	6.360	25.04	8.70
40	859.92	1.455	5.814	2.00	30	193.18	6.583	25.88	9.00

Note. Chord Deflection=2 times tangent deflection.

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	97.57
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	43.03	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

Table IV.—Tangents and Externals to a 1° Curve.

Central Angle	Tangent	External	Central Angle	Tangent	External	Central Angle	Tangent	External
31°	1589.0	216.3	**41°**	2142.2	387.4	**51°**	2732.9	618.4
10′	1598.0	218.7	10′	2151.7	390.7	10′	2743.1	622.8
20	1606.9	221.1	20	2161.2	394.1	20	2753.4	627.2
30	1615.9	223.5	30	2170.8	397.4	30	2763.7	631.7
40	1624.9	226.0	40	2180.3	400.8	40	2773.9	636.2
50	1633.9	228.4	50	2189.9	404.2	50	2784.2	640.7
32	1643.0	230.9	**42**	2199.4	407.6	**52**	2794.5	645.2
10	1652.0	233.4	10	2209.0	411.1	10	2804.9	649.7
20	1661.0	235.9	20	2218.6	414.5	20	2815.2	654.3
30	1670.0	238.4	30	2228.1	418.0	30	2825.6	658.8
40	1679.1	241.0	40	2237.7	421.4	40	2835.9	663.4
50	1688.1	243.5	50	2247.3	425.0	50	2846.3	668.0
33	1697.2	246.1	**43**	2257.0	428.5	**53**	2856.7	672.7
10	1706.3	248.7	10	2266.6	432.0	10	2867.1	677.3
20	1715.3	251.3	20	2276.2	435.6	20	2877.5	682.0
30	1724.4	253.9	30	2285.9	439.2	30	2888.0	686.7
40	1733.5	256.5	40	2295.6	442.8	40	2898.4	691.4
50	1742.6	259.1	50	2305.2	446.4	50	2908.9	696.1
34	1751.7	261.8	**44**	2314.9	450.0	**54**	2919.4	700.9
10	1760.8	264.5	10	2324.6	453.6	10	2929.9	705.7
20	1770.0	267.2	20	2334.3	457.3	20	2940.4	710.5
30	1779.1	269.9	30	2344.1	461.0	30	2951.0	715.3
40	1788.2	272.6	40	2353.8	464.6	40	2961.5	720.1
50	1797.4	275.3	50	2363.5	468.4	50	2972.1	725.0
35	1806.6	278.1	**45**	2373.3	472.1	**55**	2982.7	729.9
10	1815.7	280.8	10	2383.1	475.8	10	2993.3	734.8
20	1824.9	283.6	20	2392.8	479.6	20	3003.9	739.7
30	1834.1	286.4	30	2402.6	483.3	30	3014.5	744.6
40	1843.3	289.2	40	2412.4	487.2	40	3025.2	749.6
50	1852.5	292.0	50	2422.3	491.0	50	3035.8	754.6
36	1861.7	294.9	**46**	2432.1	494.8	**56**	3046.5	759.6
10	1870.9	297.7	10	2441.9	498.7	10	3057.2	764.6
20	1880.1	300.6	20	2451.8	502.5	20	3067.9	769.7
30	1889.4	303.5	30	2461.7	506.4	30	3078.7	774.7
40	1898.6	306.4	40	2471.5	510.3	40	3089.4	779.8
50	1907.9	309.3	50	2481.4	514.3	50	3100.2	784.9
37	1917.1	312.2	**47**	2491.3	518.2	**57**	3110.9	790.1
10	1926.4	315.2	10	2501.2	522.2	10	3121.7	795.2
20	1935.7	318.1	20	2511.2	526.1	20	3132.6	800.4
30	1945.0	321.1	30	2521.1	530.1	30	3143.4	805.6
40	1954.3	324.1	40	2531.1	534.2	40	3154.2	810.9
50	1963.6	327.1	50	2541.0	538.2	50	3165.1	816.1
38	1972.9	330.2	**48**	2551.0	542.2	**58**	3176.0	821.4
10	1982.2	333.2	10	2561.0	546.3	10	3186.9	826.7
20	1991.5	336.3	20	2571.0	550.4	20	3197.8	832.0
30	2000.9	339.3	30	2581.0	554.5	30	3208.8	837.3
40	2010.2	342.4	40	2591.0	558.6	40	3219.7	842.7
50	2019.6	345.5	50	2601.1	562.8	50	3230.7	848.1
39	2029.0	348.6	**49**	2611.2	566.9	**59**	3241.7	853.5
10	2038.4	351.8	10	2621.2	571.1	10	3252.7	858.9
20	2047.8	354.9	20	2631.3	575.3	20	3263.7	864.3
30	2057.2	358.1	30	2641.4	579.5	30	3274.8	869.8
40	2066.6	361.3	40	2651.5	583.8	40	3285.8	875.3
50	2076.0	364.5	50	2661.6	588.0	50	3296.9	880.8
40	2085.4	367.7	**50**	2671.8	592.3	**60**	3308.0	886.4
10	2094.9	371.0	10	2681.9	596.6	10	3319.1	892.0
20	2104.3	374.2	20	2692.1	600.9	20	3330.3	897.5
30	2113.8	377.5	30	2702.3	605.3	30	3341.4	903.2
40	2123.3	380.8	40	2712.5	609.6	40	3352.6	908.8
50	2132.7	384.1	50	2722.7	614.0	50	3363.8	914.5

Table IV.—Tangents and Externals to a 1° Curve.

Central Angle	Tangent	External	Central Angle	Tangent	External	Central Angle	Tangent	External
61°	3375.0	920.2	**71°**	4086.9	1308.2	**81°**	4893.6	1805.3
10′	3386.3	925.9	10′	4099.5	1315.6	10′	4908.0	1814.7
20	3397.5	931.6	20	4112.1	1322.9	20	4922.5	1824.1
30	3408.8	937.3	30	4124.8	1330.3	30	4937.0	1833.6
40	3420.1	943.1	40	4137.4	1337.7	40	4951.5	1843.1
50	3431.4	948.9	50	4150.1	1345.1	50	4966.1	1852.6
62	3442.7	954.8	**72**	4162.8	1352.6	**82**	4980.7	1862.2
10	3454.1	960.6	10	4175.6	1360.1	10	4995.4	1871.8
20	3465.4	966.5	20	4188.5	1367.6	20	5010.0	1881.5
30	3476.8	972.4	30	4201.2	1375.2	30	5024.8	1891.2
40	3488.3	978.3	40	4214.0	1382.8	40	5039.5	1900.9
50	3499.7	984.3	50	4226.8	1390.4	50	5054.3	1910.7
63	3511.1	990.2	**73**	4239.7	1398.0	**83**	5069.2	1920.5
10	3522.6	996.2	10	4252.6	1405.7	10	5084.0	1930.4
20	3534.1	1002.3	20	4265.6	1413.5	20	5099.0	1940.3
30	3545.6	1008.3	30	4278.5	1421.2	30	5113.9	1950.3
40	3557.2	1014.4	40	4291.5	1429.0	40	5128.9	1960.2
50	3568.7	1020.5	50	4304.6	1436.8	50	5143.9	1970.3
64	3580.3	1026.6	**74**	4317.6	1444.6	**84**	5159.0	1980.4
10	3591.9	1032.8	10	4330.7	1452.5	10	5174.1	1990.5
20	3603.5	1039.0	20	4343.8	1460.4	20	5189.3	2000.6
30	3615.1	1045.2	30	4356.9	1468.4	30	5204.4	2010.8
40	3626.8	1051.4	40	4370.1	1476.4	40	5219.7	2021.1
50	3638.5	1057.7	50	4383.3	1484.4	50	5234.9	2031.4
65	3650.2	1063.9	**75**	4396.5	1492.4	**85**	5250.3	2041.7
10	3661.9	1070.2	10	4409.8	1500.5	10	5265.6	2052.1
20	3673.7	1076.6	20	4423.1	1508.6	20	5281.0	2062.5
30	3685.4	1082.9	30	4436.4	1516.7	30	5296.4	2073.0
40	3697.2	1089.3	40	4449.7	1524.9	40	5311.9	2083.5
50	3709.0	1095.7	50	4463.1	1533.1	50	5327.4	2094.1
66	3720.9	1102.2	**76**	4476.5	1541.4	**86**	5343.0	2104.7
10	3732.7	1108.6	10	4489.9	1549.7	10	5358.6	2115.3
20	3744.6	1115.1	20	4503.4	1558.0	20	5374.2	2126.0
30	3756.5	1121.7	30	4516.9	1566.3	30	5389.9	2136.7
40	3768.5	1128.2	40	4530.4	1574.7	40	5405.6	2147.5
50	3780.4	1134.8	50	4544.0	1583.1	50	5421.4	2158.4
67	3792.4	1141.4	**77**	4557.6	1591.6	**87**	5437.2	2169.2
10	3804.4	1148.0	10	4571.2	1600.1	10	5453.1	2180.2
20	3816.4	1154.7	20	4584.8	1608.6	20	5469.0	2191.1
30	3828.4	1161.3	30	4598.5	1617.1	30	5484.9	2202.2
40	3840.5	1168.1	40	4612.2	1625.7	40	5500.9	2213.2
50	3852.6	1174.8	50	4626.0	1634.4	50	5517.0	2224.3
68	3864.7	1181.6	**78**	4639.8	1643.0	**88**	5533.1	2235.5
10	3876.8	1188.4	10	4653.6	1651.7	10	5549.2	2246.7
20	3889.0	1195.2	20	4667.4	1660.5	20	5565.4	2258.0
30	3901.2	1202.0	30	4681.3	1669.2	30	5581.6	2269.3
40	3913.4	1208.9	40	4695.2	1678.1	40	5597.8	2280.6
50	3925.6	1215.8	50	4709.2	1686.9	50	5614.2	2292.0
69	3937.9	1222.7	**79**	4723.2	1695.8	**89**	5630.5	2303.5
10	3950.2	1229.7	10	4737.2	1704.7	10	5646.9	2315.0
20	3962.5	1236.7	20	4751.2	1713.7	20	5663.4	2326.6
30	3974.8	1243.7	30	4765.3	1722.7	30	5679.9	2338.2
40	3987.2	1250.8	40	4779.4	1731.7	40	5696.4	2349.8
50	3999.5	1257.9	50	4793.6	1740.8	50	5713.0	2361.5
70	4011.9	1265.0	**80**	4807.7	1749.9	**90**	5729.7	2373.3
10	4024.4	1272.1	10	4822.0	1759.0	10	5746.3	2385.1
20	4036.8	1279.3	20	4836.2	1768.2	20	5763.1	2397.0
30	4049.3	1286.5	30	4850.5	1777.4	30	5779.9	2408.9
40	4061.8	1293.6	40	4864.8	1786.7	40	5796.7	2420.9
50	4074.4	1300.9	50	4879.2	1796.0	50	5813.6	2432.9

TABLE VI.—CORRECTIONS FOR SUB-CHORDS AND LONG CHORDS.

FOR SUB-CHORDS ADD										Excess of arc per 100 ft.	LONG CHORDS				
D	10	20	30	40	50	60	70	80	90		D	200	300	400	500
4°	.00	.00	.01	.01	.01	.01	.01	.01	.00	.02	1	199.99	299.97	399.92	499.85
6	.00	.01	.01	.02	.02	.02	.02	.01	.01	.05	2	199.97	299.88	399.70	499.39
8	.01	.02	.02	.03	.03	.03	.03	.02	.01	.08	3	199.93	299.73	399.32	498.63
10	.01	.02	.03	.04	.05	.05	.05	.04	.02	.13	4	199.88	299.51	398.78	497.57
12	.02	.04	.05	.06	.07	.07	.07	.05	.03	.18	5	199.81	299.24	398.10	496.20
14	.02	.05	.07	.08	.09	.10	.09	.07	.04	.25	6	199.73	298.90	397.26	494.53
16	.03	.06	.09	.11	.12	.12	.12	.09	.05	.33	7	199.63	298.51	396.28	492.57
18	.04	.08	.11	.14	.15	.16	.15	.12	.07	.41	8	199.51	298.05	395.14	490.31
20	.05	.10	.14	.17	.19	.20	.18	.15	.09	.51	9	199.38	297.54	393.86	487.75
22	.06	.12	.17	.21	.23	.24	.22	.18	.10	.62	10	199.24	296.96	392.42	484.90
24	.07	.14	.20	.25	.28	.28	.26	.21	.12	.74	12	198.90	295.63	389.12	478.34
26	.09	.17	.24	.29	.32	.33	.31	.25	.15	.86	14	198.51	294.06	385.22	470.65
28	.10	.19	.27	.34	.37	.38	.36	.29	.17	1.00	16	198.05	292.25	380.76	461.86
30	.11	.22	.31	.39	.43	.44	.41	.33	.19	1.15	18	197.54	290.21	375.74	452.02
32	.13	.25	.36	.44	.49	.50	.47	.38	.22	1.31	20	196.96	287.94	370.17	441.15
34	.15	.28	.40	.50	.55	.57	.53	.43	.25	1.48	22	196.32	285.44	364.06	429.30
36	.17	.32	.45	.56	.62	.64	.59	.48	.28	1.66	24	195.63	282.71	357.43	416.53
38	.18	.36	.51	.62	.70	.71	.66	.53	.31	1.86	26	194.87	279.76	350.30	402.89
40	.21	.40	.56	.69	.77	.79	.73	.59	.35	2.06	28	194.06	276.59	342.69	388.43
42	.23	.44	.62	.76	.85	.87	.81	.65	.38	2.28	30	193.18	273.20	334.61	373.20
44	.25	.48	.68	.84	.94	.96	.89	.72	.42	2.50	32	192.25	269.61	326.08	357.28
46	.27	.52	.75	.92	1.02	1.05	.98	.78	.46	2.74	34	191.26	265.81	317.12	340.73
48	.30	.57	.81	1.00	1.12	1.14	1.06	.86	.50	2.99	36	190.21	261.80	307.77	323.61
50	.32	.62	.89	1.09	1.21	1.24	1.15	.93	.55	3.24	38	189.10	257.60	298.03	305.99
52	.35	.67	.96	1.18	1.31	1.35	1.25	1.01	.59	3.52	40	187.94	253.21	287.94	287.94
54	.38	.73	1.04	1.28	1.42	1.46	1.35	1.09	.64	3.80	42	186.72	248.63	277.51	269.54
56	.41	.78	1.12	1.38	1.53	1.57	1.46	1.17	.69	4.09	44	185.44	243.87	266.78	250.85
58	.44	.84	1.20	1.48	1.65	1.69	1.57	1.26	.74	4.40	46	184.10	239.93	255.78	231.95
60	.47	.91	1.29	1.59	1.76	1.81	1.68	1.35	.80	4.72	48	182.71	233.83	244.51	212.92

NOTE.—When a chord of less than 100 ft. is used the corrections given in the above table should be added to the nominal length of chord to get the length which should be used in order that the 100 ft. points will check with those obtained by using the standard 100 ft. chord. Thus in locating a 14° curve by 25 ft. chords measure 25'.06 for each chord. Long chords are useful in passing obstacles.

TABLE VII.—MIDDLE ORDINATES FOR RAILS IN FEET.

Deg. of Curve	LENGTH OF RAILS							Deg. of Curve	LENGTH OF RAILS.						
	32	30	28	26	24	22	20		32	30	28	26	24	22	20
1°	.022	.020	.016	.013	.011	.009	.008	16°	.356	.313	.273	.236	.200	.170	.139
2	.045	.038	.034	.029	.025	.021	.017	17	.378	.333	.290	.252	.213	.180	.148
3	.067	.058	.051	.044	.037	.031	.026	18	.400	.351	.306	.265	.225	.190	.156
4	.089	.079	.069	.060	.050	.042	.035	19	.423	.371	.324	.280	.238	.201	.165
5	.112	.099	.086	.074	.063	.053	.044	20	.445	.392	.341	.296	.250	.212	.174
6	.134	.117	.102	.088	.076	.064	.052	21	.466	.410	.357	.309	.262	.222	.182
7	.156	.137	.120	.104	.088	.074	.061	22	.487	.430	.375	.325	.275	.233	.191
8	.179	.158	.137	.119	.100	.085	.070	23	.509	.450	.390	.338	.287	.243	.199
9	.201	.175	.153	.133	.112	.095	.078	24	.531	.469	.408	.354	.299	.253	.208
10	.223	.196	.171	.148	.125	.106	.087	25	.552	.486	.424	.367	.311	.263	.216
11	.245	.216	.188	.163	.139	.117	.096	26	.573	.506	.441	.382	.323	.274	.225
12	.268	.236	.206	.179	.151	.128	.105	27	.594	.524	.457	.396	.335	.284	.233
13	.290	.254	.222	.192	.163	.138	.113	28	.618	.545	.475	.411	.348	.294	.242
14	.312	.275	.239	.207	.175	.148	.122	29	.638	.564	.491	.424	.361	.303	.250
15	.334	.295	.257	.223	.188	.159	.131	30	.660	.583	.508	.438	.374	.313	.259

SLOPE REDUCTIONS.

When distances are measured on a slope they may be reduced to the equivalent horizontal distance by the following approximate rule:—subtract from the slope distance the square of the rise divided by twice the slope distance. Thus for a slope distance of 250.3 ft. and a rise of 15 ft. correction=$15^2 \div 2 \times 250.3$=.45 (by slide rule) or horizontal distance=250.3—.45=249.85. When vertical angle=V. A. is measured horizontal distance=slope distance—slope distance (1—Cos. V. A.). Thus for slope distance of 248.7 ft. and V. A. of 4° 20′ from Table VIII Cos=.99714 and correction=1—.99714=.00286 per foot or total of .286× 2½ (near enough)=.57 and horizontal distance=248.7—.57=248.13 ft.

TRIGONOMETRICAL FORMULAS.

See fig. (a).

sin. $A=\frac{a}{c}$

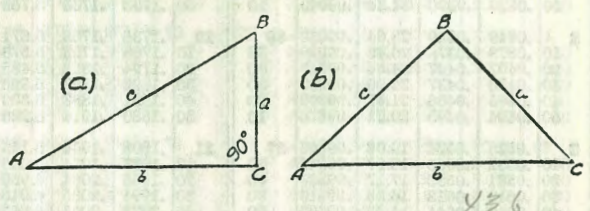
cos. $A=\frac{b}{c}$

tan. $A=\frac{a}{b}$

cot. $A=\frac{b}{a}$

sec. $A=\frac{c}{b}$

cosec. $A=\frac{c}{a}$



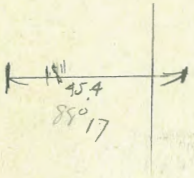
FORMULA FOR SOLVING TRIANGLES.

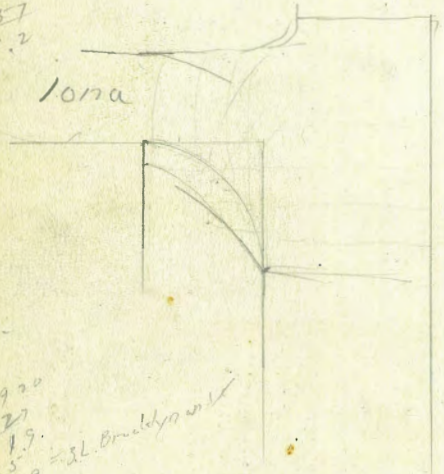
Given	Sought.	Right triangles. See fig. (a).
a, c	A, B, b	$\sin. A=\frac{a}{c}$, $\cos. B=\frac{a}{c}$, $b=\sqrt{(c+a)(c-a)}$
a, b	A, B, c	$\tan. A=\frac{a}{b}$, $\cot. B=\frac{a}{b}$, $c=\sqrt{a^2+b^2}$.
A, a	B, b, c	$B=90°-A$, $b=a \cot. A$, $c=\frac{a}{\sin. A}$.
A, b	B, a, c	$B=90°-A$, $a=b \tan. A$, $c=\frac{b}{\cos. A}$.
A, c	B, a, b	$B=90°-A$, $a=c \sin. A$, $b=c \cos. A$
Given	Sought.	Oblique triangles. See fig. (b).
A, B, a	b	$b=\frac{a \sin. B}{\sin. A}$
A, a, b	B	$\sin. B=\frac{b \sin. A}{a}$
a, b, C	$A-B$	$\tan. \frac{1}{2}(A-B)=\frac{(a-b) \tan. \frac{1}{2}(A+B)}{a+b}$
c, b, c	A	If $s=\frac{1}{2}(a+b+c)$, $\sin. \frac{1}{2}A=\sqrt{\frac{(s-b)(s-c)}{b\,c}}$, $\cos. \frac{1}{2}A=\sqrt{\frac{s(s-a)}{b\,c}}$, $\tan. \frac{1}{2}A=\sqrt{\frac{(s-b)(s-c)}{s(s-a)}}$, $\sin. A=\frac{2\sqrt{(s-a)(s-b)(s-c)\,s}}{b\,c}$
A, B, C, a	area	$\text{area}=\frac{a^2 \sin. B \sin. C}{2 \sin. A}$
A, b, c	area	$\text{area}=\frac{1}{2} b\,c \sin. A$
a, b, c	area	$s=\frac{1}{2}(a+b+c)$, $\text{area}=\sqrt{s(s-a)(s-b)(s-c)}$

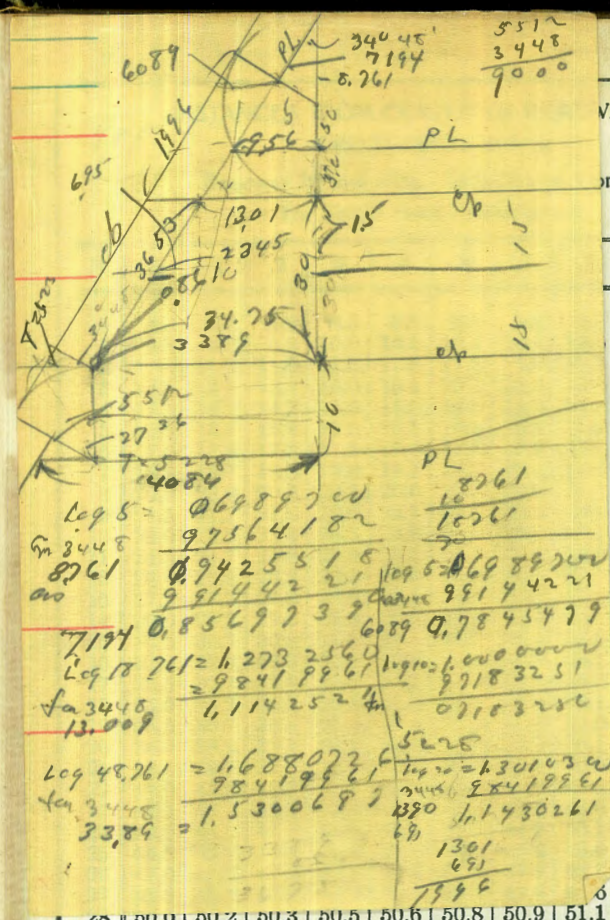
5789 21
3.2 3.2
5-18641

939
25
9365

131.99







...WAY FOR

...on 1½

	.8	.9	H
	9.2	9.4	0
	10.7	10.9	1
	12.2	12.4	2
	13.7	13.9	3
	15.2	15.4	4
	16.7	16.9	5
	18.2	18.4	6
	19.7	19.9	7
	21.2	21.4	8
	22.7	22.9	9
	24.2	24.4	10
	25.7	25.9	11
	27.2	27.4	12
	28.7	28.9	13
	30.2	30.4	14
	31.7	31.9	15
	33.2	33.4	16
	34.7	34.9	17
	36.2	36.4	18
	37.7	37.9	19
	39.2	39.4	20
	40.7	40.9	21
	42.2	42.4	22
	43.7	43.9	23
	45.2	45.4	24
	46.7	46.9	25
	48.2	48.4	26
	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.

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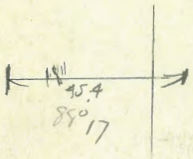

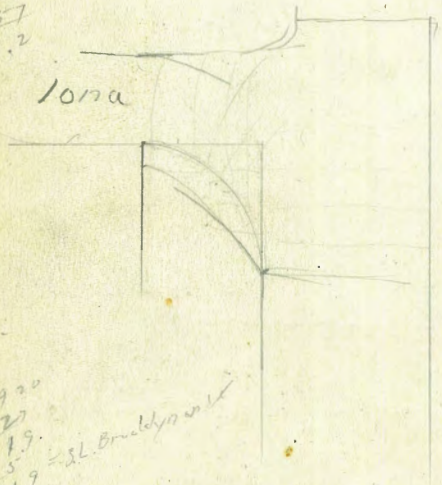

ANCES FROM CENTER OF ROADWAY FOR CROSS-SECTIONING.

Roadway 16 feet wide. Side Slopes 1 on 1½

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
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33	57.5	57.7	57.8	58.0	58.1	58.3	58.4	58.6	58.7	58.9	33
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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
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