

1107

FIELD BOOK

361

KEUFFEL & ESSER CO.

DRAWING MATERIALS

AND

SURVEYING INSTRUMENTS.

NEW YORK.

CHICAGO. ST. LOUIS. SAN FRANCISCO. MONTREAL.

Tables for Excavations and Embankments.

DISTANCES FROM CENTER OF ROADWAY FOR CROSS-SECTIONING.
ROADWAY 18 FEET WIDE. SIDE SLOPES 1 TO 1.
FOR SINGLE TRACK EXCAVATION.

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MICROFILMED

REF 2 1984

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

Calculated by Julien A. Hall, M. Am. Soc. C. E.

FOR KEITH'S RAILROAD CURVE TABLES SEE END OF BOOK.

N.W. BP
N.W. ~

Pennsylv. + Wash 285.36
Hillcrest + Wash 287.96

Cross Section of Fir St
Between 5th + 6th

80' wide
14' Sidewalks
10/12/23

Moore
willow
show
no
cut

4.88

162.88

158.00

Sta
NW 5th + Fir

EL. 5th = 0+00

NL	4.7	158.18	✓
Cone Curb	4.93	157.95	✓
+1	5.2	157.68	
1/4	5.4	157.48	
c	5.7	157.18	
1/4	6.4	156.48	
+12	7.2	155.68	
Cone Curb	6.65	156.23	✓
SL	6.4	156.48	✓
0+30			
SL	5.7	157.18	✓
SL	6.1	156.78	✓
1/4	6.2	156.68	
c	5.2	157.68	
1/4	4.9	157.98	
SL	4.8	158.08	✓
NL	4.1	158.78	✓
0+60			
NL	3.8	159.08	✓
SL	4.3	158.58	✓
1/4	4.6	158.28	
c	5.1	157.78	
1/4	5.7	157.18	

162.88

SL	5.6	157.28	✓
SL	6.4	156.48	✓
+32	24.0	138.88	
+45	26.0	136.88	
0+65			
-45	25.9	136.98	
-32	24.1	138.78	
SL	8.0	154.88	✓
+8	5.3	157.58	
SL	5.4	157.48	✓
1/4	5.5	157.38	
c	5.0	157.88	
1/4	4.5	158.38	
SL	4.2	158.68	✓
NL	3.4	159.48	✓
0+95			
NL	3.6	159.28	✓
SL	3.8	159.08	✓
1/4	4.1	158.78	
c	4.6	158.28	
1/4	4.9	157.98	
SL	5.0	157.88	✓
+3	4.0	158.88	
+12	4.6	158.28	
SL	6.3	156.58	✓

Back line of Stone Bllog

162.88

+25	22.0	140.88	
+40	23.9	138.98	
1+10			
-40	23.3	139.58	
-25	21.2	141.68	
SL	8.9	153.98	✓
+5	2.4	158.48	
+11	3.5	159.38	
ct	4.5	158.38	✓
1/2	4.4	158.48	
c	4.4	158.48	
1/4	3.8	159.08	
ct	2.9	159.98	✓
NL	2.3	160.58	✓
1+30			
NL	0.6	162.58	✓
ct	2.0	160.88	✓
+8	3.3	159.58	
1/4	3.6	159.28	
c	4.0	158.88	
1/4	4.0	158.88	
+11	4.5	158.38	
ct	3.2	159.68	✓
+9	3.3	159.58	
SL	5.2	157.68	✓
+22	19.4	143.48	

2

162.88

+34	20.1	140.78	
1+50			
-20	9.5	153.38	
SL	3.7	159.18	✓
+3	2.7	160.18	
ct	2.8	160.08	✓
+1	3.7	159.18	
1/4	3.5	159.38	
c	3.1	159.78	
1/4	3.1	159.78	
ct	1.2	161.68	✓
NL	0.3	162.58	✓
1+63 with 6th			
NL	+0.6	162.28	✓
Comp Curv	0.14	162.74	✓
+22	1.5	161.38	
1/4	1.5	161.38	
c	1.8	161.08	
1/4	2.6	160.28	
+12	2.7	160.18	
Comp Curv	1.84	161.04	✓
SL	20.1	160.78	✓

11/21/23

Gregory CROSS SECTION OF
MARKET ST
FROM OLD CITY BOUNDARY

80' wide

3

963

14351

133.88

Main 170'
N of Market

OLD CITY BOUNDARY

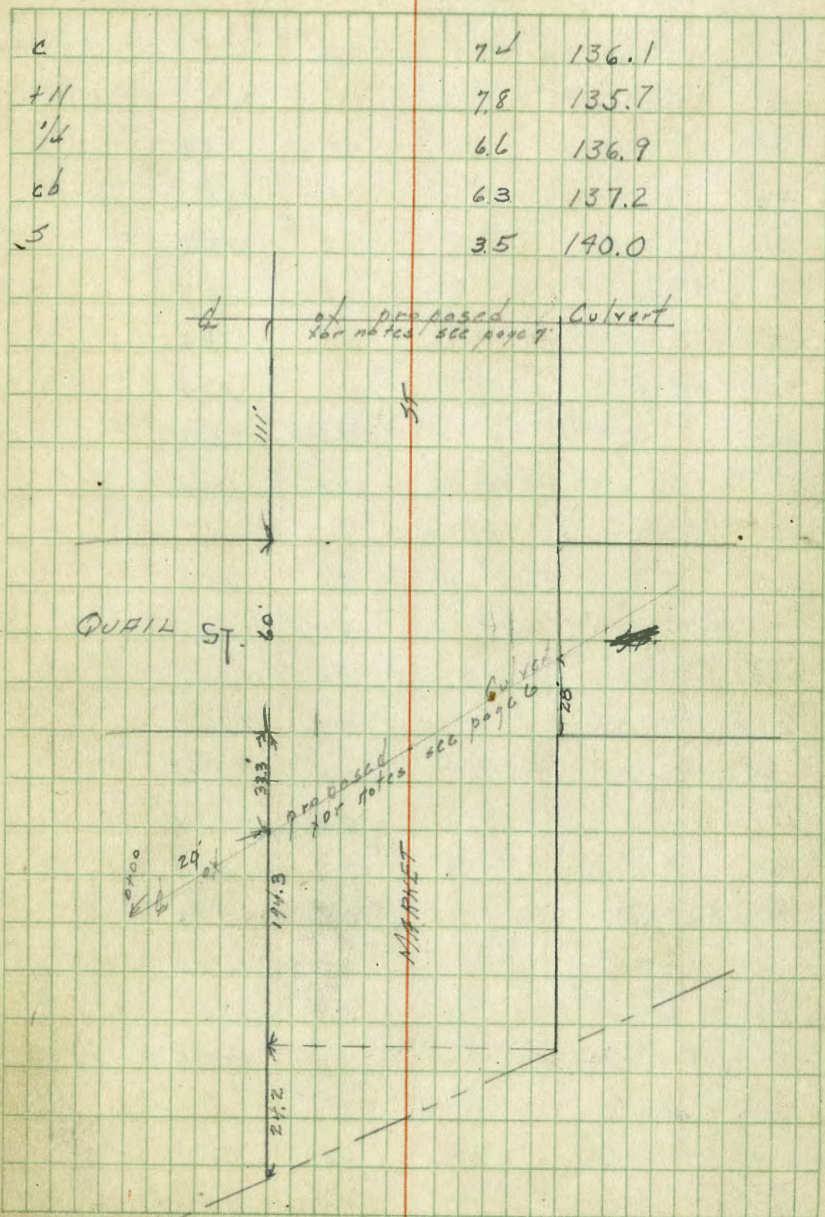
N	3.7	139.8
cb	2.7	140.8
1/4	3.2	140.3
c	3.5	140.0
+1/2	4.0	139.5
1/4	3.1	140.4
cb	3.8	139.7
S	3.4	140.1

Section A

S	3.4	140.1
cb	4.1	139.4
1/4	4.3	139.2
+2	4.9	138.6
c	4.7	138.8
1/4	4.2	138.3
cb	5.4	138.1
N	6.7	136.8
+5	7.0	136.5

30' E. of Sect A

-5	10.0	133.5
N	9.5	134.0
cb	8.1	135.4
1/4	7.5	136.0



143.51

55' E

S		77	135.8
cb		8.4	135.1
1/4		9.7	133.8
+2		10.8	132.7
C		10.2	133.3
1/4		10.2	133.3
cb		10.1	133.4
N		11.1	132.4
+5		11.5	132.0
T.P.	0.53	131.74	12.30 131.21

100' E

-5		5.9	125.8
N		6.0	125.7
+10		5.0	126.7
cb		3.7	128.0
1/4		3.0	128.7
+6		3.8	127.9
C		3.7	128.0
+11		4.6	127.1
1/4		3.2	128.5
cb		1.8	129.9
S		1.1	130.6

135' E

S		6.2	125.5
cb		6.4	125.3

131.74

MARKET 11

1/4		7.4	124.3
+1		8.7	123.0
C		8.0	123.7
1/4 +10		8.2	123.5
1/4		7.5	124.2
cb		9.2	122.5
A		11.5	120.2
+10		11.8	119.9

165' E

-10		14.2	117.5
N		14.4	117.3
cb		13.2	118.5
1/4		10.9	120.8
C		11.2	120.5
+12		11.0	120.7
1/4		10.5	121.2
cb		9.0	122.7
S		8.8	122.9

194.3' E = WL Quail st 60' wide

TP	270	122.83	11.61	120.13
-5			4.8	118.0
S			4.9	117.9
cb			4.8	118.0
1/4			3.9	118.9
C			3.9	118.9

$\frac{1}{4}$ +8	3.4	119.4
$\frac{1}{4}$	5.7	117.1
+5	6.3	116.5
cb	6.0	116.8
N	5.0	117.8
+5	4.6	118.2
	W. cb	
-5	3.9	118.9
N	4.5	118.3
cb	5.3	117.5
+2	4.5	118.3
$\frac{1}{4}$	4.1	118.7
c	4.1	118.7
$\frac{1}{4}$	4.6	118.2
cb	5.7	117.1
5	6.8	116.0
+5	6.6	116.2
	W. $\frac{1}{4}$	
-10	7.9	114.9
5	7.3	115.5
cb	7.1	115.7
+4	9.6	113.2
+9	5.7	117.1
$\frac{1}{4}$	4.5	118.3
c	4.4	118.4
$\frac{1}{4}$	4.1	118.7

cb	3.5	119.3
N	3.0	119.8
	center	
N	2.5	120.3
cb	3.3	119.5
$\frac{1}{4}$	4.0	118.8
c	4.5	118.3
$\frac{1}{4}$	4.9	117.9
+8	6.4	116.4
cb	7.2	115.6
+9	8.4	114.4
5	10.2	112.6
+10	9.1	113.7
	E. $\frac{1}{4}$	
-10	10.1	112.7
5	9.2	113.6
cb	8.1	114.7
+9	7.4	115.4
$\frac{1}{4}$	5.0	117.8
c	4.6	118.2
$\frac{1}{4}$	4.3	118.5
cb	3.7	119.1
N	3.0	119.8

E. Curb

N	2.2	120.6
cb	33	119.5
1/4	41	118.7
c	46	118.2
1/4	52	117.6
+7	8.6	114.2
cb	8.9	113.9
S	9.4	113.4
+13	10.7	112.1

5' E. of E.Cb

-10	9.1	113.7
S	10.5	112.3
cb	9.1	113.7
+8	6.3	116.5
1/4	5.0	117.8
c	4.6	118.2

E.L. Quail St

-10	6.8	116.0
S	7.3	115.5
cb	6.6	116.2
1/4	4.8	118.0
c	4.5	118.3
+6	4.4	118.4
1/4	2.6	120.2
cb	1.9	120.9

	1.1	121.7
24" pipe Notes on Culvert W. of Quail St shown on page 3		
0+00	53	117.5
0+20 = N.L. Market	61	116.7
+30	61	116.7
+53	52	117.6
+60	35	119.3
+83	41	118.7
+95	64	116.4
1+05.0	72	115.6
1+06.0	97	113.1
1+16 ± = S.L. Market.	10.0	112.8
1+36	10.3	112.5
9' E. of E.L. Quail		
N	0.6	122.2
cb	1.4	121.4
1/4	1.8	121.0
+3	5.7	119.1
c	4.6	118.2
+11	4.8	118.0
1/4	4.0	118.8
cb	4.8	118.0
S	5.6	117.2
+5	5.7	117.1

40' E

-5	58	117.0
S	53	117.5
cb	47	118.1
1/4	51	117.7
C	47	118.1
+7	46	118.2
1/4	33	119.5
cb	25	120.3
N	15	121.3

70' E

N	40	118.8
cb	44	118.4
1/4	51	117.7
C	55	117.3
1/4	59	116.9
cb	67	116.1
S	73	115.5
+5	77	115.1

100' E

-10	100	112.8
S	94	113.4
cb	85	114.3
1/4	73	115.5
+5	61	116.7
C	55	117.3

+9	52	117.6
1/4	63	116.5
cb	61	116.7
N	55	117.3
+5	53	117.5

111' E

put 18" pipe on this sect.

-10	62	116.6
N	62	116.6
cb	65	116.3
1/4	70	115.8
+4	51	117.7
C	52	117.6
+9	58	117.0
1/4	72	115.6
cb	86	114.2
S	92	113.6
+10	96	113.2

140' E

-5	77	115.1
S	75	115.3
cb	66	116.2
1/4	56	117.2
+4	47	118.1
C	47	118.1
+10	44	118.4

122.83

+12	53	117.5
1/4	53	117.5
cb	56	117.2
N	59	116.9
+10	52	117.6

165'E

-5	37	119.1		
N	40	118.8		
cb	43	118.5		
1/4	35	119.3		
C	36	119.2		
+10	34	119.4		
1/4	42	118.6		
cb	45	118.3		
S	47	118.1		
+5	46	118.2		
TP	13.00	155.23	0.60	122.23

200'E

S	12.0	123.2
cb	126	122.6
1/4	139	121.3
C	144	120.8
1/4	139	121.3
cb	143	120.9
N	132	122.0

MARKET

8

230'E

N	10.9	124.3
cb	11.5	123.7
1/4	12.2	123.0
C	12.5	122.7
+6	12.8	122.4
1/4	11.4	123.8
+4	10.5	124.7
cb	10.0	125.2
S	9.4	125.8
265'E = W.L. 40' x 60' wide		
S	8.1	127.1
cb	8.0	127.2
1/4	8.2	127.0
+2	8.2	127.0
+4	10.6	124.6
C	10.1	125.1
+8	10.1	125.1
1/4	9.4	125.8
cb	8.9	126.3
+6	8.9	126.3
N	7.6	127.6
W. cb		
N	7.5	127.7
cb	8.0	127.2
1/4	8.9	126.3

+5	9.5	125.7
c	9.4	125.8
+8	10.0	125.2
+11	7.5	127.7
1/4	7.5	127.7
cb	7.7	127.5
s	7.6	127.6
	W 1/4	
s	7.7	127.5
cb	7.2	128.0
1/4	6.9	128.3
+2	6.9	128.3
+5	9.3	125.9
c	8.7	126.5
+8	8.8	126.4
1/4	8.0	127.2
cb	7.3	127.9
N	6.6	128.6
	center 40th	
N	6.1	129.1
cb	7.1	128.1
1/4	7.7	127.5
c	8.1	127.1
+9	8.7	126.5
+12	6.4	128.8
1/4	6.4	128.8

cb	6.4	128.8
s	7.1	128.1
	E 1/4	
s	6.8	128.4
cb	6.3	128.9
1/4	6.0	129.2
+4	8.2	127.0
c	7.6	127.6
1/4	7.6	127.6
cb	6.5	128.7
N	5.9	129.3
	E. Curb	
N	5.0	130.2
cb	5.4	129.8
1/4	5.8	129.4
+4	7.2	128.0
c	7.2	128.0
+10	7.7	127.5
1/4	5.4	129.8
cb	5.8	129.4
s	6.5	128.7
	E. L. 40th	
s	6.2	129.0
cb	5.2	130.0
1/4	5.0	130.2

+3	7.1	128.1
c	7.0	128.2
+9	6.7	128.5
1/4	5.4	129.8
+4	5.2	130.0
cb	4.7	130.5
N	4.7	130.5

30' E

N = inside yard	3.2	132.0
cb	3.2	132.0
+11	3.1	132.1
1/4	4.3	130.9
+6	5.6	129.6
c	5.8	129.4
+9	6.1	129.1
1/4	4.2	131.0
cb	4.4	130.8
s	4.8	130.4

60' E

s	3.7	131.5
cb	2.7	132.5
1/4	3.3	131.9
+4	4.9	130.3
c	4.5	130.7
+8	4.7	130.5
1/4	3.5	131.7

+3	2.8	132.4
cb	2.6	132.6
N	2.4	132.8
100' E		
N	2.8	132.4
cb	3.0	132.2
1/4	3.6	131.6
c	3.5	131.7
1/4	4.1	131.1
cb	4.4	130.8
s	4.6	130.6
125' E		
+5	5.8	129.4
s	5.7	129.5
cb	5.3	129.9
1/4	4.4	130.8
+6	3.1	132.1
c	3.0	132.2
1/4	3.0	132.2
cb	3.0	132.2
N	2.9	132.3
155' E		
N	1.5	133.7
cb	1.7	133.5
1/4	2.0	133.2

135.23

c	2.3	132.9
1/4	2.5	132.7
+6	2.4	132.8
cb	2.7	132.5
S	3.7	131.5
+5	3.7	131.5

180' E

-5	3.9	131.3
S	4.0	131.2
cb	3.6	131.6
1/4	2.9	132.3
+6	1.8	133.4
C	1.6	133.6
1/4	1.5	133.7
cb	1.2	134.0
N	0.8	134.4
T.P.	5.50	139.86
	0.87	134.36

200' E

N	4.3	135.6
cb	4.7	135.2
1/4	5.3	134.6
c	5.6	134.3
N +8	5.8	134.1
1/4	6.5	133.4
cb	6.4	133.5
S	5.9	134.0

MARKET.

11

225' E

S	6.8	133.1
cb	6.2	133.7
1/4	5.5	134.4
+3	4.8	135.1
c	4.6	135.3
1/4	4.3	135.6
cb	3.7	136.2
N	3.3	136.6

250' E

N	0.8	139.1
+10	1.0	138.9
cb	1.6	138.3
1/4	2.2	137.7
+4	3.4	136.5
c	3.8	136.1
+10	3.8	136.1
1/4	3.4	136.5
cb	4.4	135.5
S	6.0	133.9
+5	6.3	133.6

265' E = W.L. RAYOR ST 60' wide

S	4.5	135.4
cb	5.3	136.6
1/4	2.3	137.6
+2	2.3	137.6

139.86

+3	3.5	136.4
c	3.3	136.6
+10	3.0	136.9
1/4	2.0	137.9
cb	0.8	139.1
+7	0.0	139.9
N	0.3	139.6

W cb

N	1.2	138.7
cb	1.6	138.3
1/4	2.8	137.1
c	3.0	136.9
+9	3.1	136.8
1/4	2.0	137.9
cb	3.0	136.9
S	3.8	136.1

W 1/4

S	4.0	135.9
cb	3.5	136.4
1/4	2.8	137.1
+3	3.2	136.7
c	3.2	136.7
1/4	2.8	137.1
cb	2.6	137.3
N	2.1	137.8

MARKET.

12

center

N	22	137.7
cb	25	137.4
1/4	32	136.7
c	36	136.3
1/4	37	136.2
cb	42	135.7
S	43	135.6

E 1/4

S	49	135.0
cb	44	135.5
1/4	41	135.8
c	40	135.9
1/4	34	136.5
cb	33	136.6
N	29	137.0

E Curb

N	38	136.1
cb	41	135.8
1/4	38	136.1
c	43	135.6
1/4	47	135.2
cb	43	135.6
S	50	134.9

E. L. RAYON ST.

-5	5.8	134.1
S	5.5	134.4
cb	5.3	134.6
1/4	5.2	134.7
C	4.7	135.2
1/4	4.7	135.2
cb	4.7	135.2
N	4.5	135.4

30° E

N	5.3	134.6
cb	6.5	133.4
1/4	6.1	133.8
C	5.8	134.1
1/4	5.7	134.2
cb	5.8	134.1
S	6.5	133.4
+5	6.5	133.4

60° E

S	7.2	132.7
cb	6.7	133.2
1/4	6.0	133.9
+2	6.0	133.9
+4	6.9	133.0
C	6.9	133.0
1/4	7.0	132.9

cb	7.4	132.5
N	6.4	133.5
	80° E	
N	8.2	131.7
cb	8.1	131.8
1/4	7.9	132.0
C	7.9	132.0
+10	8.0	131.9
1/4	6.4	133.5
cb + 12	6.6	133.3
cb	7.4	132.5
S	7.9	132.0
	85° E	
S	8.0	131.9
cb	7.9	132.0
1/4	8.2	131.7
C	8.2	131.7
	107° E	
S	8.3	131.6
cb	9.3	130.6
1/4	9.4	130.5
C	9.2	130.7
48	9.0	130.9
1/4	7.6	132.4
cb	6.5	133.1

139.86

N	9.1	130.8
+5	9.2	130.7
125' E		
-5	10.3	129.6
N	10.6	129.3
cb	10.9	129.0
1/4	10.8	129.1
c	10.6	129.3
1/4	10.7	129.2
cb	11.2	128.7
S	10.9	129.0
+5	10.4	129.5
165' E		
-5	12.7	127.2
S	12.7	127.2
cb	12.8	127.1
1/4	12.1	127.8
c	11.8	128.1
1/4	12.3	127.6
cb	12.0	127.9
N	11.7	128.2
+5	11.4	128.5
200' N		
N	12.0	127.9
cb	12.4	127.5
1/4	12.6	127.3

MARKET

14

c	13.0	126.9
1/4	12.9	127.0
cb	12.9	127.0
S	13.5	126.4
+5	13.7	126.2
TP	200	129.27
235' E		
S	2.7	126.6
cb	3.8	125.5
1/4	4.3	125.0
c	3.6	125.7
+5	3.9	125.4
1/4	3.2	126.1
cb	2.4	126.9
N	1.3	128.0
250' E		
N	2.0	127.3
cb	2.7	126.6
1/4	3.7	125.6
+7	4.5	124.8
c	4.2	125.1
1/4	4.7	124.6
cb	4.7	124.6
S	4.3	125.0

129.27

265° E = W.L. 41st St (30 wide)

S	42	125.1
cb	51	124.2
1/4	52	124.1
C	45	124.8
+6	46	124.7
1/4	39	125.4
cb	30	126.3
N	24	126.9

10° E = curb

N	26	126.7
cb	32	126.1
+7	40	125.3
1/4	48	124.5
C	48	124.5
1/4	52	124.1
+7	58	123.5
cb	56	123.7
S	41	125.2

20° E = 1/4

S	45	124.8
cb	62	123.1
1/4	58	123.5
C	49	124.4
+6	48	124.5
1/4	42	125.1

MARKET.

15

cb	34	125.9
N	27	126.6

E = 30° E = E.L. 41st St = W.L. of Lot # 37

N	27	126.6
cb	29	126.4
1/4	34	125.9
+7	51	124.2
C	49	124.4
1/4	59	123.4
cb	66	122.7
S	57	123.6

15° E

S	76	121.7
cb	74	121.9
1/4	64	122.9
C	52	124.1
1/4	48	124.5
cb	40	125.3
N	38	125.5

45° E

N	61	123.2
cb	63	123.0
1/4	67	122.6
C	63	123.0
1/4	75	121.8

129.27

cb	7.9	121.4
S	8.7	120.6
+5	9.0	120.3
75'E		
-5	9.8	119.5
S	9.1	120.2
cb	8.4	120.9
1/4	9.3	120.0
C	8.0	121.3
1/4	7.6	121.7
cb	6.8	122.5
N	7.0	122.3
100'E		
N	8.6	120.7
cb	8.6	120.7
1/4	9.1	120.2
C	9.1	120.2
+2	9.8	119.5
1/6	10.4	118.9
cb	11.0	118.3
S	11.5	117.8
+5	11.9	117.4
125'E		
-5	12.8	116.5
S	12.6	116.7
cb	11.9	117.4

MARKET

16

1/4		11.5	117.8
+11		11.3	118.0
C		9.7	119.6
1/4		9.8	119.5
cb		9.7	119.6
N		10.2	119.1
T.P.	4.19 12245	11.01	118.26
145'E			
-5		6.5	116.0
N		6.5	116.0
cb		5.7	116.8
1/4		5.3	117.2
C		4.8	117.7
+1		5.4	117.1
1/4		5.9	116.6
cb		6.5	116.0
S		5.3	117.2
150'E			
S		5.6	116.9
cb		7.0	115.5
1/4		6.5	116.0
+12		5.9	116.6
C		5.1	117.4
1/4		5.8	116.7
cb		6.5	116.0
+6		6.9	115.6

122.45

N	8.3	114.2
+5	8.1	114.4
160' E		
-5	6.7	115.8
N	7.0	115.5
+7	7.3	115.2
cb	8.6	113.9
1/4	7.0	115.5
c	6.4	116.1
+1	7.0	115.5
1/4	7.4	115.1
cb	7.6	114.9
S	7.3	115.2
+10	7.2	115.3
180' E		
-10	8.4	114.1
S	8.4	114.1
cb	8.3	114.2
1/4	7.8	114.7
c	8.0	114.5
+1	9.0	113.5
1/4	7.6	114.9
cb	7.1	115.4
N	6.5	116.0
+5	6.2	116.3

MARKET

17

200' E

-5	4.5	118.0
N	4.8	117.7
cb	5.5	117.0
1/4	6.5	116.0
c	6.5	116.0
+1	7.4	115.1
1/4	7.6	114.9
cb	8.5	114.0
+10	9.9	112.6
S	8.7	113.8
+10	8.8	113.7

203' E

-10	8.8	113.7
-3	8.9	113.6
S	9.7	112.8
+4	9.1	113.4
cb	8.3	114.2
1/4	7.1	115.4
12	7.2	115.3
c	6.4	116.1

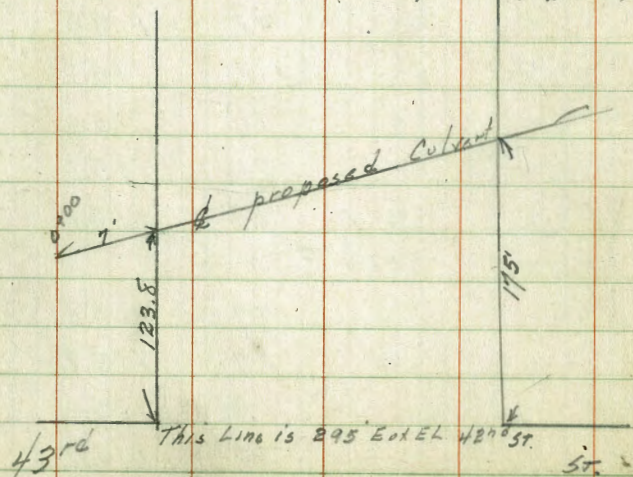
220' E

-10	8.7	113.8
S	7.7	114.8
cb	6.9	115.6
1/4	6.3	116.2

+11	59	116.6
C	51	117.4
1/4	44	118.1
cb	30	119.5
N	24	120.1

Notes on Box Culvert Located ²⁰⁰ below

0+00	84	114.1	= bottom Draw
+07 - N.L. Market	74	115.1	
+25	85	114.0	
+50	88	113.7	
+78	95	113.0	
+90	86	113.9	
+102 ±	93	113.2	
+12	101	112.4	
+14	102	112.3	
TR	2.30	123.93	092 121.53 ^{mail in fence post}



240' E

N	21	121.7
cb	31	120.7
1/4	43	119.5
C	54	118.4
+2	64	117.4
1/4	73	116.5
cb	82	115.6
5	92	114.6
+15	97	114.1

267' E

-10	82	115.6
5	94	114.4
+6	82	115.6
cb	78	116.0
1/4	71	116.7
C	63	117.5
+1	54	118.4
1/4	50	118.8
cb	37	120.1
N	28	121.0

273' E

N	32	120.6
cb	41	119.7
1/4	53	118.5
+11	56	118.2

c	6.4	117.4
+4	7.7	116.1
1/4	8.5	115.3
cb	8.9	114.9
S	8.1	115.7
+10	8.4	115.4
	279 E	
-10	8.1	115.7
S	7.7	116.1
cb	7.4	116.4
1/4	7.5	116.3
c	8.2	115.6
+8	7.8	116.0
1/4	6.5	117.3
cb	4.5	119.3
N	3.7	120.1
	282 E	
N	3.9	119.9
cb	4.7	119.1
1/4	5.6	118.2
+4	7.7	116.1
+7	7.7	116.1
+9	5.8	118.0
c	6.2	117.6
1/4	7.4	116.4
cb	7.1	116.7

5	7.6	116.2
+10	8.1	115.7
	300 E	
-10	7.3	116.5
S	7.2	116.6
cb	7.3	116.5
1/4	6.6	117.2
c	6.2	117.6
41	5.6	118.2
+11	5.6	118.2
1/4	7.0	116.8
+4	7.0	116.8
+6	5.6	118.2
cb	5.2	118.6
N	4.6	119.2
	317 E	
-5	4.5	119.3
N	4.7	119.1
cb	5.4	118.4
1/4	5.6	118.2
c	5.6	118.2
1/4	5.0	118.8
cb	5.5	118.3
S	6.1	117.7
+10	5.9	117.9

330' E

-5	38	120.0
S	43	119.5
cb	42	119.6
1/4	37	120.1
C	43	119.5
1/4	50	118.8
cb	54	118.4
N	48	119.0
+5	45	119.3

Convert not necessary here 353' E
if 1/2 is not over 1"

-5	49	118.9
N	49	118.9
cb	36	120.2
1/4	31	120.7
+12	25	121.3
C	32	120.6
1/4	31	120.7
cb	23	121.5
S	15	122.3
T.P.	11.91	13544
		0.30
		123.53

375' E

S	10.5	124.9
cb	11.0	124.4
1/4	11.4	124.0
C	12.5	122.9

1/4	13.8	121.6
cb	14.7	120.7
N	15.1	120.3
+5	15.3	120.1

400' E

-5	13.2	122.2
N	13.0	122.4
cb	12.9	122.5
+11	12.3	123.1
1/4	11.7	123.7
C	9.7	125.7
1/4	9.9	125.5
cb	9.0	126.4
S	8.3	127.1

430' E

S	5.8	130.1
cb	7.3	128.1
1/4	8.5	126.9
C	8.5	126.9
1/4	9.7	125.7
cb	10.4	125.0
N	11.3	124.1
+5	11.7	123.7

455' E

-5	11.2	124.2
N	10.8	124.6
cb	9.6	125.8
1/4	8.9	126.5
C	7.7	127.7
1/4	6.6	128.8
cb	5.8	129.6
S	4.9	130.5

483' E

S	3.9	131.5
cb	4.4	131.0
1/4	5.3	130.1
C	6.0	129.4
+1	5.6	129.8
1/4	7.0	128.4
cb	8.6	126.8
N	10.6	124.8
+5	10.9	124.5

505' E

-5	9.9	125.5
N	9.6	125.8
cb	8.7	126.7
1/4	7.4	128.0
C	6.7	128.7
1/4	5.8	129.6

cb	4.7	130.7
S	4.3	131.1

547' E

S	3.3	132.1
cb	4.0	131.4
1/4	4.4	131.0
C	4.5	130.9
1/4	5.3	130.1
cb	6.1	129.3
N	7.0	128.4
+5	7.3	128.1

575' E

N	6.5	128.9
cb	5.8	129.6
1/4	5.4	130.0
C	4.7	130.7
+1	5.2	130.2
1/4	4.6	130.8
cb	4.1	131.3
S	2.8	132.6

600' E

S	2.6	132.8
cb	3.0	132.4
1/4	3.1	132.3
4 12	3.7	131.7

135.44

c	3.4	132.0
1/4	4.1	131.3
cb	4.6	130.8
N	5.0	130.4
+5	5.2	130.2

635' E

-5	4.7	130.7
N	4.4	131.0
cb	3.4	132.0
1/4	2.7	132.7
c	2.0	133.4
1/4	1.4	134.0
cb	1.4	134.0
S	1.9	133.5

660' E

S	1.7	133.7
cb	1.8	133.6
1/4	2.0	133.4
c	1.9	133.5
1/4	2.1	133.3
cb	2.7	132.7
N	3.6	131.8
+5	4.0	131.4

690' E

-5	5.2	130.2
N	5.1	130.3

MARKET

22

cb	4.7	130.7
1/4	4.0	131.4
c	3.2	132.2
+5	3.0	132.4
1/4	1.8	133.6
cb	1.1	134.3
S	1.2	134.2

780' E

S	2.2	133.2
cb	2.5	132.9
1/4	2.7	132.7
c	3.1	132.3
1/4	3.6	131.8
cb	4.1	131.3
N	3.9	131.5
+5	3.7	131.7

785

N	2.5	132.9
cb	3.5	132.9
1/4	3.4	132.0
c	2.4	133.0
1/4	2.3	133.1
cb	2.0	133.4
S	1.8	133.6

765'E

S	0.4	135.0
cb	1.2	134.2
1/4	1.0	134.4
C	1.8	133.6
1/4	2.9	132.5
cb	3.0	132.4
N	3.1	132.3

790'E

N	2.8	132.6
cb	2.7	132.7
1/4	2.7	132.7
C	2.2	133.2
1/4	1.8	133.6
cb	1.7	133.7
S	1.3	134.1

820'E

S	2.1	133.3
cb	1.5	133.9
1/4	1.4	134.0
C	2.2	133.2
1/4	2.4	133.0
cb	2.4	133.0
N	2.5	132.9

860'E

N	2.8	132.6
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cb		2.7	132.7	
1/4		2.2	133.2	
+5		1.5	133.9	
C		1.4	134.0	
+5		2.3	133.1	
1/4		2.7	132.7	
cb		3.7	131.7	
S		4.1	131.3	
T.P.	077	133.94	227	133.17
		900'E		
S		4.1	129.8	
cb		3.9	130.0	
1/4		3.3	130.6	
C		2.4	131.5	
1/4		2.4	131.5	
cb		1.0	132.9	
N		0.1	133.8	
		935'E		
N		1.6	132.3	
cb		2.2	131.7	
1/4		2.4	131.5	
C		1.7	132.2	
1/4		2.3	131.6	
cb		2.1	131.8	
S		3.2	130.7	

975' E

S	4.0	129.9
cb	3.5	130.4
1/4	3.1	130.8
c	2.2	131.7
1/4	2.0	131.9
cb	0.9	133.0
N	0.0	133.9

1000' E

N	0.3	133.6
cb	1.0	132.9
1/4	1.8	132.1
c	1.5	132.4
1/4	2.4	131.5
cb	3.2	130.7
S	3.7	130.2

1035' E

S	3.8	130.1
cb	3.1	130.8
1/4	2.8	132.1
c	1.0	132.9
1/4	1.8	132.1
cb	1.7	132.2
N	1.4	132.5

1055' E

N	1.4	132.5
---	-----	-------

cb	1.8	132.1
1/4	2.1	131.8
c	1.8	132.1
1/4	2.6	131.3
cb	3.6	130.3
S	5.6	128.3
+7	7.2	126.7

1075' E

-10	8.7	125.2
S	7.2	126.7
cb	5.4	128.5
1/4	4.0	129.9
c	3.5	130.4
+8	6.5	127.4
+9	5.7	128.2
+11	2.9	131.0
1/4	2.8	131.1
cb	2.3	131.6
N	1.6	132.3

1090' E

N	1.6	132.3
cb	2.6	131.3
1/4	4.5	129.4
+9	6.7	127.2
c	7.6	126.3

1/4	8.0	125.9
+5	6.7	127.2
cb	7.9	126.0
S	9.3	124.6
+10	10.2	123.7

1100'E

-10	11.4	122.5
S	10.5	123.4
cb	9.1	124.8
1/2	9.3	124.6
+9	8.8	125.1
C	5.7	128.2
1/4	4.1	129.8
cb	2.6	131.3
N	1.5	132.4

1110'E

N	1.8	132.1
cb	3.3	130.6
1/4	5.2	128.7
C	6.2	127.7
1/4	9.3	124.6
cb	11.2	122.7
S	11.9	122.0
+15	13.2	120.7
T.P.	9.86	131.02
		12.98
		126.16

1130'E

-20	12.8	118.2
-17	13.0	118.0
-13	14.0	117.0
S	11.3	119.7
cb	8.7	122.3
1/4	7.2	123.8
C	5.5	125.5
+1	4.7	126.3
1/4	3.6	127.4
cb	1.8	129.2
N	+0.2	131.2

1141'E

N	0.9	130.1
cb	3.0	128.0
1/4	4.8	126.2
+12	5.6	125.4
C	6.4	124.6
1/4	7.9	123.1
cb	9.9	121.1
+5	11.0	120.0
S = bottom wash	14.1	116.9
+7	12.7	118.3
+20	12.7	118.3

1150'E

-20	123	118.7
S	12.4	118.6
+6	14.1	116.9
cb	11.3	119.7
+8	9.5	121.5
1/4	8.6	122.4
+5	8.3	122.7
C	6.8	124.2
1/4	5.8	125.2
cb	4.1	126.9
N	2.0	129.0

1175'E

N	4.3	126.7
cb	7.4	123.6
1/4	9.2	121.8
C	11.2	119.8
+3	13.2	117.8
+10	13.8	117.2
1/4	12.5	118.5
+3	12.0	119.0
cb	12.0	119.0
S	11.7	119.3
+15	11.3	119.7

1192'E

-15	10.6	120.4
-----	------	-------

S	11.1	119.9
cb	11.2	119.8
1/4	11.7	119.3
+6	11.8	119.2
C	13.5	117.5
+5	12.4	118.6
+10	9.8	121.2
1/4	9.4	121.6
cb	8.5	122.5
N	6.7	124.3

1204'E

N	7.5	123.5
cb	9.3	121.7
1/4	10.5	120.5
+5	13.4	117.6
C	11.6	119.4
1/4	11.0	120.0
cb	10.6	120.4
S	10.6	120.4
+10	10.3	120.7

1235'E

-10	9.1	121.9
S	9.1	121.9
cb	8.9	122.1
1/4	9.5	121.5

c	9.7	121.3
+12	10.4	120.6
1/4	12.6	118.4
+9	12.4	118.6
cb	10.7	120.3
N	9.5	121.5
+7	8.5	122.5

1258'E

-10	9.5	121.5
N	10.1	120.9
+5	12.2	118.8
cb	12.1	118.9
+1	9.6	121.4
1/4	8.4	122.6
c	8.0	123.0
1/2	8.2	122.8
cb	7.5	123.5
S	7.0	124.0
+10	6.6	124.4

1269'E

-10	5.6	125.4
S	6.0	125.0
cb	6.9	124.1
1/4	2.7	123.3
c	7.4	123.6
1/4	8.0	123.0

cb	8.8	122.2
+7	9.6	121.4
N	12.2	118.8
+5	12.4	118.6
+12	12.4	118.6
+15	9.4	121.6

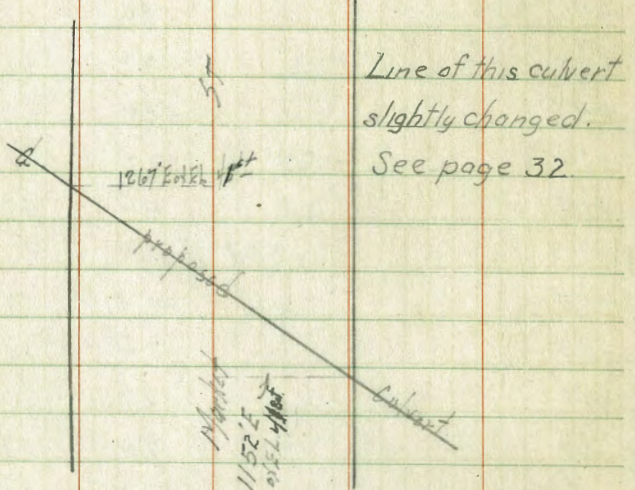
1289'E

-20	10.9	120.1
-15	12.4	118.6
N	7.8	123.2
cb	7.0	124.0
1/4	6.5	124.5
c	6.3	124.7
1/4	6.1	124.9
cb	5.4	125.6
S	4.8	126.2
+5	4.5	126.5

Notes on a culvert at Sta 1192'E on d.
see next page for location

0+00	11.9	119.1
+25 = H.L. Market	12.4	118.6
+50	12.1	118.9
+70	13.0	118.0
+90	11.6	119.4
+130	12.0	119.0
+65	12.5	118.5

+90	14.0	117.0
+20	14.2	116.8



	1297' E	
S	3.0	128.0
+5	2.6	128.4
cb	2.7	128.3
1/4	2.8	128.2
C	2.8	128.2
1/4	3.1	127.9
cb	3.5	127.5
N	4.1	126.9
	1320' E	
-5/ N	5.4	125.6
	5.0	126.0
cb	3.5	127.5
1/4	2.8	128.2

C	2.3	128.7
1/4	1.6	129.4
cb	1.1	129.9
S	0.2	130.8
4th BM 60.5.15 to 1839'E	388	127.14 = 23
	1335' E	
S	0.5	130.5
cb	1.3	129.7
1/4	1.7	129.3
C	2.0	129.0
1/4	2.3	128.7
cb	3.3	127.7
+10	4.1	126.9
+11	5.7	125.3
N	6.0	125.0
+5	5.2	125.8
	1355' E	= P.L.
N	0.2	130.8
+3	5.2	125.8
+8	5.8	125.2
+10	3.2	127.8
cb	2.8	128.2
1/4	2.0	129.0
C	1.9	129.1
1/4	2.8	128.2

cb		25	128.5
+10		20	129.0
S		+1.1	132.1
T.P.	1017	138.79	2.40
		1365.6 = W. End of	128.62
			once upon a time Graded Jt = 0+00
S		9.8	129.0
+3		11.1	127.7
cb		11.1	127.7
1/4		11.0	127.8
C		10.5	128.3
1/4		10.5	128.3
cb		11.1	127.7
+1		12.8	126.0
+9		12.8	126.0
N		7.0	131.8
	10° E		
N		8.8	130.0
+3		10.8	128.0
cb		11.4	127.4
+1		12.7	126.1
+8		12.8	126.0
+9		11.6	127.2
1/4		11.6	127.2
C		11.3	127.5
1/4		11.1	127.7
cb		11.1	127.7

S		10.9	127.9
	35° E		
S		9.1	129.7
+2		10.6	128.2
cb		10.6	128.2
1/4		10.7	128.1
C		10.6	128.2
1/4		10.8	128.0
cb		10.8	128.0
+10		10.4	128.4
N		8.1	130.7
	100° E		
N		6.7	132.1
+4		9.2	129.6
cb		9.7	129.1
+1		10.2	128.6
1/4		9.6	129.2
C		9.2	129.6
1/4		9.5	129.3
+12		9.8	129.0
cb		9.4	129.4
+13		9.2	129.6
S		8.7	130.1
	200° E		
S		7.0	131.8

cb	7.5	131.3
+1	8.3	130.5
$\frac{1}{4}$	7.5	131.3
c	7.2	131.6
$\frac{1}{4}$	7.5	131.3
+12	8.5	130.3
cb	7.6	131.2
+12	7.0	131.8
N	6.1	132.7

300' E

N	5.0	133.8
cb	5.3	133.5
+1	6.1	132.7
$\frac{1}{2}$	5.4	133.4
c	5.0	133.8
$\frac{1}{4}$	5.4	133.4
+12	5.8	133.0
cb	5.2	133.6
S	4.9	133.9

400' E

S	2.9	135.9
cb	3.2	135.6
+1	3.7	135.1
$\frac{1}{4}$	3.5	135.3
c	3.2	135.6
$\frac{1}{4}$	3.5	135.3

+12	4.0	134.8
cb	3.2	135.6
N	3.0	135.8
	500' E	
N	0.8	138.0
cb	1.0	137.8
+1	1.8	137.0
$\frac{1}{4}$	1.2	137.6
c	1.0	137.8
$\frac{1}{4}$	1.3	137.5
+12	1.2	137.6
cb	1.0	137.8
S	0.7	138.1
TP	13.06 151.48	0.37 138.42

600' E =

S	11.9	139.6
cb	12.0	139.5
+1	12.5	139.0
$\frac{1}{4}$	12.1	139.4
c	11.8	139.7
$\frac{1}{4}$	12.0	139.5
+12	12.8	138.7
cb	12.0	139.5
N	11.8	139.7

614'E

N	11.4	140.1
cb	11.7	139.8
+1	12.3	139.2
1/4	11.8	139.7
C	11.5	140.0
1/4	11.8	139.7
+12	12.1	139.4
cb	11.5	140.0
S	11.5	140.0

627'E

S	11.2	140.3
cb	11.3	140.2
+1	11.8	139.7
1/4	11.5	140.0
C	11.2	140.3
1/4	11.6	139.9
+12	12.1	139.4
cb	11.3	140.2
N	11.2	140.3

640'E

N	10.9	140.6
cb	11.2	140.3
+1	11.8	139.7
1/4	11.4	140.1
C	10.9	140.6

1/4	11.2	140.3
+12	11.6	139.9
cb	11.2	140.3
S	11.0	140.5

653'E

S	10.7	140.8
cb	11.0	140.5
+1	11.1	140.4
1/4	11.0	140.5
C	10.8	140.7
+6	11.8	139.7
1/4	11.8	139.7
cb	11.7	139.8
N	11.3	140.2

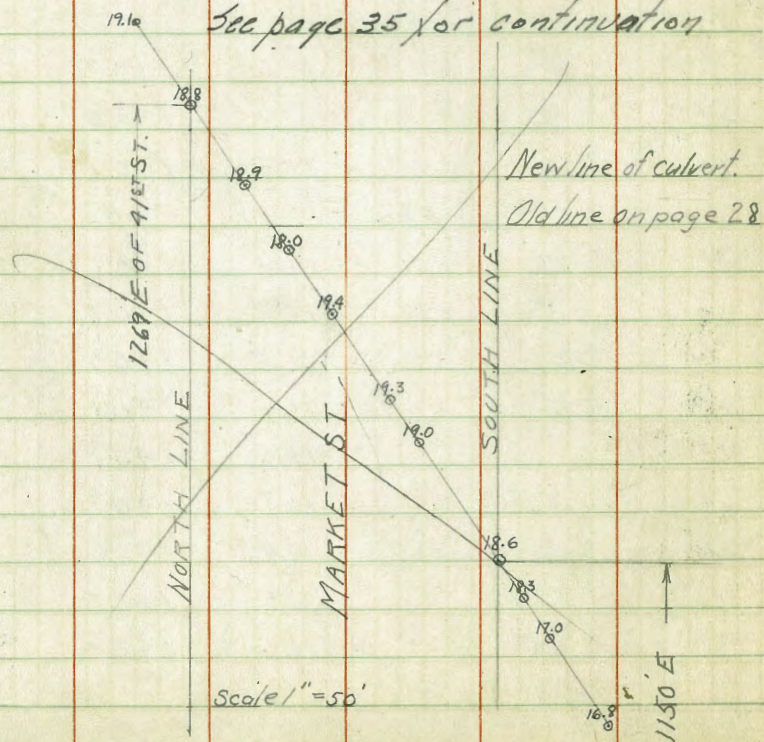
666'E

N	11.4	140.1
cb	11.4	140.1
1/4	11.5	140.0
+9	11.4	140.1
C	11.4	140.1
1/4	10.8	140.7
+12	10.9	140.6
cb	10.8	140.7
S	10.6	140.9

E 680 E

S	11.1	140.4
+3	10.2	141.3
cb	10.4	141.1
+1	10.6	140.9
1/4	10.5	141.0
C	10.2	141.3
+4	11.1	140.4
1/4	11.2	140.3
cb	11.2	140.3
N	10.8	140.7

See page 35 for continuation



11/22/23

Gregory, C. ROSS SECTION OF

45th St
from N.E. Market to S.L. Hilltop Dr.
80' wide 14' CBS

33

15148 from page 32
for section of N.E. Market see pages 30-32
43' N. of -

E	10.5
cb	11.1
1/4	11.3
C	11.5
1/4	12.3
cb	12.8
W	13.3
+5	13.3
-5	13.3
W	13.1
cb	12.8
1/4	12.8
C	11.5
1/4	11.2
cb	10.7
E	9.1
E	10.4
cb	10.6
1/4	10.9
C	10.7
1/4	12.0

see page 40
for notes

20' N

42' N

cb	12.3
W	12.8
+5	13.0
-5	12.4
W	12.1
cb	11.5
1/4	9.9
C	9.3
1/4	10.1
cb	10.2
E	9.7
E	8.7
cb	9.5
1/4	9.6
C	10.0
1/4	10.9
cb	11.3
W	11.8
+5	11.9
-5	10.2
W	9.6
cb	8.4

70' N

100' N

125' N

15148

1/4	92
+2	96
0	96
1/4	93
cb	91
E	85

147' N

E	66
cb	81
1/4	87
c	84
1/4	90
cb	91
W	97
+5	100

170' N

-5	87
W	83
cb	83
1/4	86
c	77
1/4	77
cb	77
E	73

200' N

E	64
---	----

45+03T

34

cb	65
1/4	70
c	72
1/4	80
cb	78
W	81
+5	85

245' N

-5	67
W	65
cb	63
1/4	60
c	53
1/4	53
cb	54
E	48

300' N

E	26
cb	26
1/4	33
c	35
1/4	46
cb	53
W	55
+5	56

T.P.	610	15425	333	148.15	T.P. Poppey
		700' E			
N			12.8	141.5	
db			13.1	141.2	
4			13.4	140.9	
+10			13.2	141.1	
c			12.1	142.2	
4			12.5	141.8	
+12			12.8	141.5	
db			12.2	142.1	
S			11.9	142.4	
		740 E			
S			11.1	143.2	
db			11.4	142.9	
+01			12.1	142.2	
4			11.7	142.6	
c			11.3	143.0	
4			12.6	141.7	
db			12.6	141.7	
N			11.8	142.5	
		760 E			
N			11.4	142.9	
db			11.1	143.2	
4			11.1	143.2	
c			10.7	143.6	
4			11.2	143.1	

+12		11.6	142.7
db		10.8	143.5
+12		10.6	143.7
S		11.1	143.2
+07		13.1	141.2
	800' E		
S		9.8	144.5
db		10.1	144.2
+02		10.8	143.5
4		10.2	144.1
c		9.9	144.4
+04		11.1	143.2
4		11.2	143.1
db		11.1	143.2
X1		10.8	143.5
	850' E		
N		8.9	145.5
db		9.1	145.2
4		9.6	144.7
+11		9.4	144.9
c		8.6	145.7
4		9.0	145.3
+12		9.3	145.0
db		8.9	145.4
S		8.8	145.5

154.25

900' E

S	7.4	146.9
cb	7.5	146.8
ty	7.6	146.7
c	7.3	147.0
rod	7.9	146.4
ty	8.0	146.3
cb	7.0	147.3
N	6.1	148.2

938' E

N	3.6	150.7
cb	5.2	149.1
ty	6.3	148.0
c	6.4	147.9
ty	6.8	147.5
cb	6.8	147.5
S	6.4	147.9

960' E

S	6.0	148.3
cb	6.4	147.9
ty	6.4	147.9
c	6.0	148.3
+07	5.1	149.2
ty	5.0	149.3
cb	4.7	149.6
N	4.4	149.9

MARKET 26

1013' E

N	0.1	154.2
cb	0.8	153.5
ty	2.4	151.9
+07	2.6	151.7
+09	4.4	149.9
c	4.9	149.4
ty	5.5	148.8
cb	5.3	149.0
+12	4.9	149.4
S	4.1	150.2

1040' E

S	2.8	151.5
+04	4.3	150.0
cb	4.6	149.7
+01	5.1	149.2
ty	4.7	149.6
c	4.0	150.3
+02	3.5	150.8
+05	1.2	153.1
ty	1.2	153.1
cb	1.2	153.1
N	1.1	153.2

TP 885 162.70 0.40 153.85

1073' E

N	5.1	157.6
cb	6.0	156.7

4	7.4	155.3
+11	7.7	155.0
c	11.3	151.4
4	12.7	150.0
+12	13.1	149.6
cb	12.4	150.3
+12	12.0	150.7
S	10.9	151.9
1100' E		
S	9.4	153.3
+02	11.4	151.3
cb	12.0	150.7
+01	12.8	149.9
4	12.6	150.1
c	10.3	152.4
+01	9.3	153.4
+04	5.5	157.2
4	5.6	156.9
cb	6.3	156.4
N	6.3	156.4
1123' E		
N	5.1	157.6
cb	5.4	157.3
4	4.5	158.2
+08	4.3	158.4
c	9.5	153.2

4	11.8	150.9
cb	12.3	150.4
+04	11.1	151.6
+10	10.7	152.0
S	8.1	154.6
1152' E		
S	7.5	155.2
+05	9.9	152.8
cb	10.7	152.0
+01	11.8	150.9
4	10.5	152.2
+11	9.7	153.0
c	8.6	154.1
+05	4.9	157.8
4	4.8	157.9
cb	5.0	157.7
N	5.1	157.6
1200' E		
N	2.7	160.0
cb	3.5	159.2
4	3.3	159.4
+09	3.0	159.7
c	7.6	155.1
+06	9.2	153.5
4	9.5	153.2
+12	10.5	152.2

16270

cb	9.6	153.1
+ 11	8.9	153.8
S	6.3	156.4
1245.63 E = wL 45th goiwide 1466		
S	5.4	157.3
+04	7.9	154.8
cb	8.4	154.3
+02	9.2	153.5
4	8.6	154.1
+11	7.7	155.0
C	6.7	156.0
+05	3.4	158.3
4	3.3	159.4
cb	3.2	159.5
N	3.5	159.2
w curb		
N	3.2	159.5
cb	2.7	160.0
4	3.1	159.6
+08	3.3	159.4
C	6.2	156.5
+03	7.4	155.3
4	8.1	154.6
+11	9.2	153.5
cb	8.2	154.5
+11	7.8	154.9

16270

MARKET 38

S	5.8	156.9
w 4		
S	5.9	156.8
+04	7.6	155.1
cb	7.7	155.0
for	8.8	153.9
4	8.0	154.7
C	6.8	155.9
+05	3.4	159.3
4	2.7	160.0
cb	2.1	160.6
N	3.0	159.7
C		
N	3.3	159.4
cb	2.7	160.0
4	3.2	159.5
+09	4.0	158.7
C	6.4	156.3
+02	7.0	155.7
4	8.0	154.7
+11	8.8	153.9
cb	7.5	155.2
+12	7.2	155.5
S	5.7	157.0
E 4		
S	6.2	156.5

162.70

+01	7.2	155.5
cb	7.5	155.2
+02	8.5	154.2
4	7.6	155.1
c	7.0	155.7
+03	5.3	157.4
4	4.8	157.9
cb	4.8	157.9
N	4.8	157.9
E of		
N	5.4	157.3
cb	5.3	157.4
4	6.0	156.7
c	7.3	155.4
4	7.2	155.5
+11	8.0	154.7
cb	7.4	155.3
+12	7.1	155.6
S	6.2	156.5
4' E of Ect		
S	6.1	156.6
+02	7.1	155.6
cb	7.3	155.4
+02	8.0	154.7
4	7.2	155.5
c	6.8	155.9

162.70

MARKET 39

4	7.0	155.7
cb	7.4	155.3
N	6.4	156.3
EL		
4	6.8	155.9
cb	7.2	155.5 <i>graded cb. to east</i>
+01	7.6	155.1
4	7.0	155.7
c	6.6	156.1
4	6.9	155.8
+11	7.6	155.1
cb	7.0	155.7
+11	6.8	155.9
S	5.6	157.1
50' E		
S curb	6.4	156.3
100' E		
✓ ✓	5.3	157.4
N curb	5.1	157.6
✓ ✓	50' E	
	6.1	156.6
T.P. on #446	7.15	155.55

Notes - Otay Water
Pipe runs entire
length of street
w. of center

X Section of
45th St.

80' wide
1st class

12.62 169.19 155.55 ϕ H₂O 46th

N.L. Market = 0100

W	9.9	159.3	✓
cb	9.7	159.5	
1/4	9.5	159.7	
C	9.7	159.5	✓
1/4	11.2	158.0	
cb	11.8	157.4	
10d	12.2	157.0	
E	13.2	155.9	✓
4' N			
E	11.8	157.2	✓
cb	10.9	158.3	
1/4	10.8	158.4	
C	9.7	159.5	✓
1/4	10.1	159.1	
cb	10.1	159.1	
W	10.4	158.8	✓
40' N			
W	8.8	160.4	✓
cb	8.6	160.6	
1/4	9.7	159.5	
C	10.1	159.1	✓
1/4	11.1	158.1	
cb	11.6	157.6	
1/4	12.1	157.1	✓

169.19

45th 40

65' N

E	11.1	158.1	✓
cb	11.3	157.9	
1/4	10.8	158.4	
C	9.7	159.5	✓
1/4	12.2	157.0	
cb	9.9	159.3	
W	9.5	159.4	✓
100' N			
W	9.9	159.3	✓
cb	9.7	159.5	
1/4	9.6	159.6	
C	9.2	160.0	✓
1/4	9.9	159.3	
cb	10.8	158.4	
E	11.4	157.8	✓
140' N			
E	9.9	159.3	✓
cb	8.6	160.6	
1/4	8.0	161.2	
C	8.2	161.0	✓
1/4	9.0	160.2	
cb	9.5	159.7	
W	9.6	159.6	✓
180' N			
W	9.0	160.2	✓
cb	8.4	160.8	

16919

4	8.1	161.1	
C	7.7	161.5	✓
4	8.1	161.1	
tos	8.2	161.0	
cb	8.0	161.2	
E	7.7	161.5	✓
200' N			
E	8.0	161.2	✓
cb	7.8	161.4	
1/4	6.6	162.6	
tos	6.0	163.2	
C	6.2	163.0	✓
4	7.8	161.4	
cb	8.3	160.9	
w	8.5	160.7	✓
250' N			
w	7.5	161.7	✓
cb	7.3	161.9	
1/4	7.1	162.1	
C	6.9	162.3	✓
1/4	7.0	162.2	
cb	7.6	161.6	
E	7.2	162.0	✓
300' N			
E	5.9	163.3	✓
cb	5.7	163.5	✓

16919

4577

41

4	6.1	163.1	
C	5.7	163.5	✓
4	6.1	163.1	
cb	6.6	162.6	
w	6.7	162.5	✓
345' N			
w	5.3	163.9	✓
cb	4.2	165.0	
1/4	4.5	164.7	
C	4.2	165.0	✓
1/4	4.7	164.5	
cb	4.5	164.7	
E	4.5	164.7	✓
375' N			
E	3.8	165.4	✓
cb	4.0	165.2	
1/4	4.3	164.9	
C	4.1	165.1	✓
1/4	4.8	164.4	
cb	5.3	163.9	
w	5.7	163.5	✓
400' N			
w	5.6	163.6	✓
cb	5.0	164.2	
1/4	3.6	165.6	
C	2.3	166.9	✓

16919

4	2.6	166.6	
cb	3.4	165.8	
E	3.0	166.2	✓
460' N			
E	0.9	168.3	✓
cb	1.6	167.6	
4	2.2	167.0	
c	2.6	166.6	✓
4	3.4	165.8	
cb	4.1	165.1	
W	4.6	164.6	✓
500' N			
W	2.8	166.4	✓
cb	2.8	166.4	
4	2.2	167.0	
+0.6	4.4	164.8	
4" Air Valve 4" Above pipe Elv. on Iron Water Main from Otay			
c	2.1	167.1	✓
4	2.2	167.0	
cb	1.2	168.0	
E	0.6	168.6	✓
550' N			
E	3.7	165.5	✓
cb	4.1	165.1	
4	3.9	165.3	
c	3.8	165.4	✓
4	4.2	165.0	✓

16919

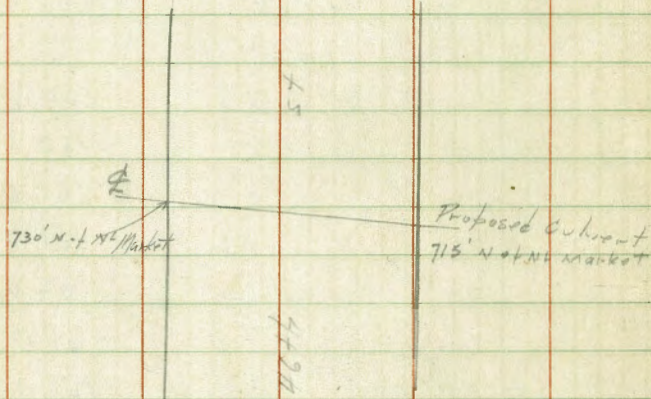
4579 42

cb	4.4	164.8	
W	4.0	165.2	✓
600' N			
4	6.5	162.7	✓
cb	6.8	162.4	
4	6.4	162.8	
c	6.1	163.1	✓
4	5.6	163.6	
cb	5.9	163.3	
E	6.2	163.0	✓
650' N			
E	8.4	160.8	✓
cb	8.4	160.8	
4	8.2	161.0	
c	7.5	161.7	✓
4	7.2	162.0	
cb	8.0	161.2	
W	8.1	161.1	✓
700' N			
W	10.9	158.3	✓
cb	10.6	158.6	
4	9.9	159.3	
c	9.9	159.3	✓
4	9.9	159.3	
cb	9.5	159.7	
E	9.4	159.8	✓

169.19

745' N

E		9.1	159.1 ✓	
cb		10.0	159.2	
4		10.3	158.9	
C		9.8	159.4 ✓	
4		10.0	159.2	
cb		11.4	157.8	
W		11.7	157.5 ✓	
T.P.	1257	171.39	10.37	158.8



-10		11.7	159.7
E		11.7	159.7
E + 20		11.6	159.8
E + 40		12.7	158.7
+ 90 WL		13.6	157.8
1+00		13.8	157.6

171.39

790' N

45+7

43

W		19.3	158.1 ✓
cb		12.5	158.9
4		11.3	160.1
C		10.8	160.6 ✓
4		11.7	159.7
cb		11.1	160.3
E		10.3	161.1 ✓
		820' N	
E		9.3	162.1 ✓
cb		8.9	162.5
4		9.9	161.5
C		11.0	160.4 ✓
4		11.9	159.5
cb		12.2	159.2
W		12.1	159.3 ✓
		860' N	
W		11.1	160.3 ✓
cb		11.0	160.4
4		10.6	160.8
C		9.9	161.5 ✓
4		9.6	161.8
cb		8.6	162.8
E		7.2	164.2 ✓
		872' N	
E		7.9	163.5 ✓
cb		8.4	163.0

171.39

Ly	9.1	162.3	
c	9.4	162.0	✓
Ly	9.8	161.6	
cb	10.5	160.9	
too Pepper Trees 18" diam at base	10.6	160.8	
w	10.7	160.7	✓
910' N			
w	10.1	161.3	✓
cb	9.1	162.3	
Ly	8.8	162.6	
c	8.4	163.0	✓
Ly	8.4	163.0	
cb	6.5	164.9	
E	5.8	165.6	✓
955' N			
E	6.7	164.7	✓
cb	6.9	164.5	
Ly	7.3	164.1	
c	7.2	164.2	✓
Ly	7.7	163.7	
cb	7.9	163.5	
w	8.4	163.0	✓
985' N			
w	7.4	164.0	✓
cb	6.9	164.5	
Ly	6.2	165.2	

171.39

457

44

E	6.0	165.4	✓
Ly	5.1	166.3	
cb	4.7	166.7	
E	4.4	167.0	✓
Note: Between sta 900' N and P.L. there are 14 small olive trees to be removed and 2 small Pepper trees			
1030' N			
E	4.2	167.2	✓
cb	4.2	167.2	
Ly	4.6	166.8	
c	4.7	166.7	✓
Ly	5.1	166.3	
cb	6.1	165.3	
w	7.0	164.4	✓
1060' N			
w	5.9	165.5	✓
cb	5.2	166.2	
Ly	5.1	166.3	
c	4.6	166.8	✓
Ly	3.7	167.7	
cb	3.1	168.3	
E	3.7	167.7	✓
1100' N			
E	3.5	167.9	✓
cb	4.1	167.3	
Ly	4.5	166.9	

17139

c	3.9	167.5 ✓
+10	3.5	167.9
4	5.0	166.4
cb	5.4	166.0
w	6.2	165.2 ✓

1145' N

w	7.4	164.0 ✓
cb	6.6	164.8
1/2	6.0	165.4
+02	7.1	164.3
+05	4.2	167.2
c	3.8	167.6 ✓
4	3.7	167.7
cb	1.6	169.8
E	1.4	170.0 ✓

1170' N

E	2.3	169.1 ✓
cb	3.4	168.0
4	4.0	167.4
c	4.8	166.6 ✓
+10	4.8	166.6
4	6.4	165.0
cb	7.2	164.2
w	7.8	163.6 ✓

1200' N

w	8.1	163.3 ✓
---	-----	---------

17139

45+7

45-

cb	7.3	164.1
1/2	7.0	164.4
+03	5.6	165.8
c	5.4	166.0 ✓
4	4.4	167.0
cb	3.8	167.6
E	2.8	168.6 ✓

1215' N

E	1.6	169.8 ✓
cb	3.8	167.6
4	4.9	166.5
c	4.4	167.0 ✓
4	6.9	164.5
4	7.4	164.0
w	8.1	163.3 ✓

1250' N

w	8.2	163.2 ✓
cb	7.8	163.6
4	7.0	164.4
c	6.5	164.9 ✓
4	6.3	165.1
cb	4.9	166.5
E	4.0	167.4 ✓

1280' N = PL

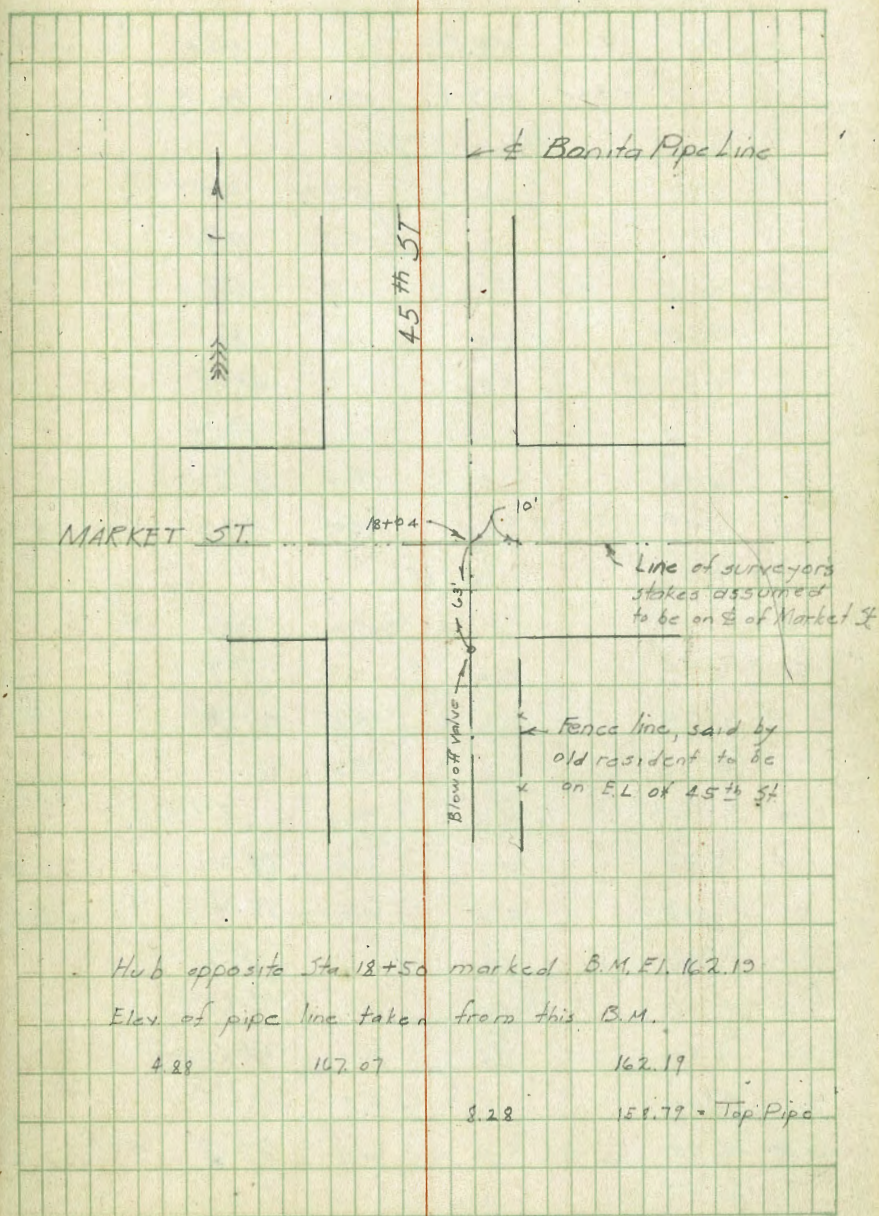
E	4.5	166.9 ✓
cb	5.3	166.1

17139

1/4	6.2	165.2	
c	7.7	163.7	✓
1/4	8.7	162.7	
cb	9.6	161.8	
w	11.0	160.4	✓
	1310' N =	N.L. ^{Hilltop Drive}	
w	12.4	159.0	✓
cb	10.9	160.5	
1/4	10.2	161.2	
c	7.5	163.9	✓
1/4	6.3	165.1	
cb	6.4	165.0	
E	5.3	166.1	✓
T.P. Nails in fence post N.E. Corner 6' E of center	5.53	165.86	

Tolman
6-12-817

46



12/6/23

Gregory CROSS SECTION OF
DATE 5T
From W.L. Kettner Blvd
To E.L. California

80' wide
14' cbs

BPSW
Date Indig

032 42.991 42.47

002 30.21 1260 30.19

W.L. Kettner

N	00	30.4
cb	0.4	29.8
1/4	-1.1	29.1
c	1.4	28.8
1/4	1.7	28.5
cb	1.8	28.4
S	2.4	27.8
+5	2.9	27.3 ✓

6' W

-5	3.5	26.7 ✓
S	2.8	27.4
+12	2.5	27.7
cb	3.5	26.7
+4	2.0	28.2
1/4	1.9	28.3
c	1.8	28.4
1/4	1.5	28.7
cb	1.1	29.1
+2	2.0	28.2
N	1.8	28.4
+5	0.9	29.3 ✓

47

45' W

+5	20	28.7 ✓
N	24	27.8
+5	33	26.9
cb	26	27.6
1/4	26	27.6
c	28	27.4
1/4	29	27.3
+9	33	26.9
cb	51	25.1
+3	36	26.6
S	38	26.4
+5	44	25.8 ✓

60' W

-5	63	23.9 ✓
S	60	24.2
+11	60	24.2
cb	69	23.3
+4	54	24.8
1/4	52	25.0
c	49	25.3
1/4	50	25.2
+11	46	25.6
cb	57	24.5
+11	58	24.4
N	46	25.6
+5	44	25.8 ✓

100' W

-5	7.4	77.8	✓
N	8.0	77.7	
+11	8.1	77.1	
cb	7.0	73.7	
1/4	7.0	73.7	
c	7.1	73.1	
1/4	7.2	73.0	
+9	7.9	74.3	
cb	9.0	71.7	
+3	8.2	77.0	
S	8.4	71.8	
+5	8.8	71.4	✓

150' W

-5	11.6	18.6	✓
S	11.5	18.7	
+12	11.4	18.8	
cb	12.1	18.1	
1/4	10.1	20.1	
c	9.9	20.3	
1/4	10.2	19.8	
cb	10.5	19.7	
+9	10.8	19.4	
N	10.3	19.9	
+5	10.1	20.1	✓

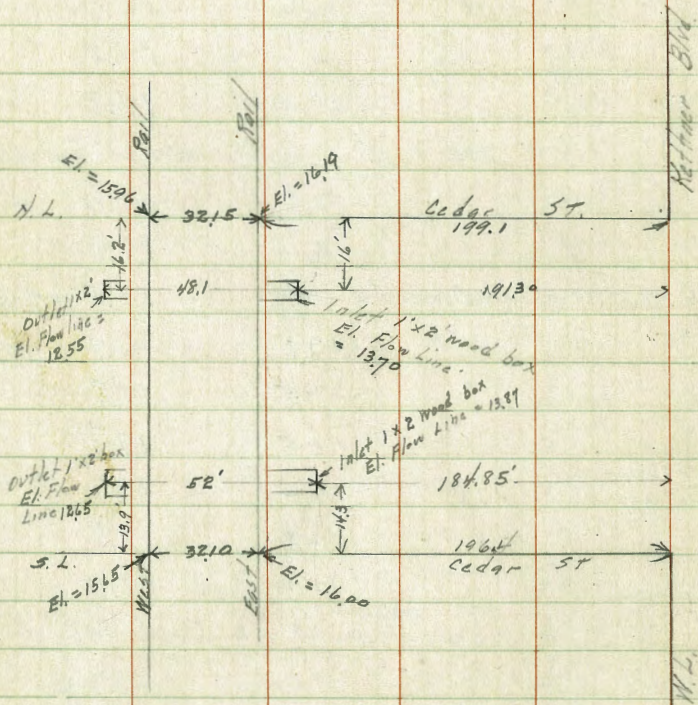
200' W

-5	12.0	18.7	✓
N	12.2	18.0	
cb	12.0	18.7	
1/4	12.4	17.8	
c	12.6	17.6	
1/4	13.2	17.0	
+10	14.2	16.0	
cb	13.2	17.0	
S	12.9	17.3	
210.7' W = Section across End of Col.			
S	13.2	17.0	
+12	13.4	16.8	
cb + 1.6 = center of 1'x2' wood box	14.7	15.5 = flow line	
+5	13.8	16.4	
1/4	12.5	17.7	
c	12.5	17.7	
1/4	12.5	17.7	
cb	12.3	17.9	
N	12.2	18.0	
235' on North } = East Rail 224.4' on South }			
N on rail	12.95	17.26	
S - -	13.14	17.07	
TP.	12.17	18.04	

12/6/23 Gregor/Culvert + Track Notes
on Cedar and Cal.

394 21.98

1804 TP on
last page



2.03
130

183
19

183

2.03
130
1910

57
16
73
56.8
62.8
102

49

Xsec of Cedar St 80' wide 14' etc
from EL 6th To 50' East

	1307	137.18	124.11	MARK SW 6th & Cedar
		EL 6th		
S		10.1	127.1	
old curb		10.19	127.0	
New ✓		12.13	125.05	
S gutter		12.57	124.61	
1/4		11.3	126.9	
C		10.5	126.7	
1/4		10.5	126.7	
New curb not for oldest yardage		10.11	127.07	
		8.26	128.92	
N		8.7	128.5	
		3' E		
N		7.3	129.9	
cb		7.8	129.4	
+01		8.9	128.3	
1/4		9.9	127.3	
C		10.1	127.1	
1/4		10.8	126.4	
+12		10.8	126.4	
A		9.6	127.6	
S		9.5	127.7	
		2.5' E		
S		6.4	130.8	
+04		5.9	131.3	

Cedar 50

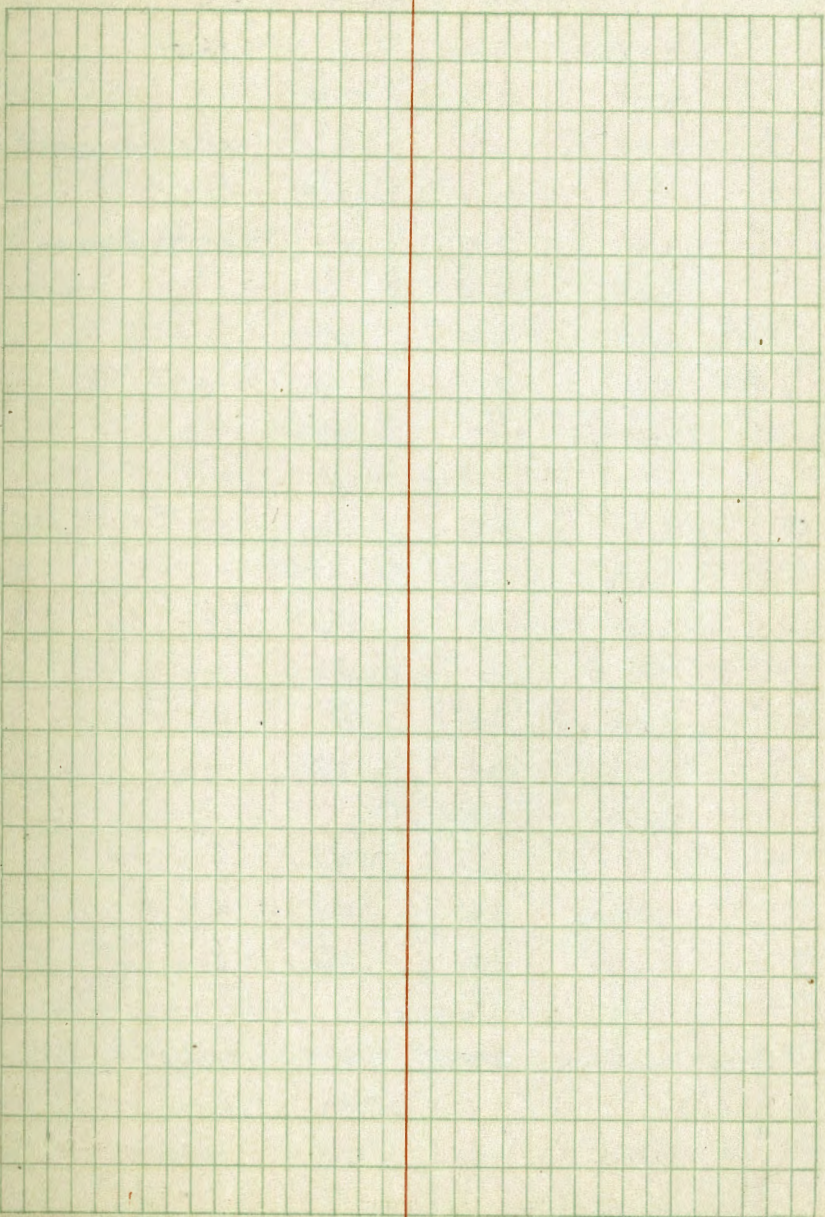
cb	6.1	131.1
+01	6.6	130.6
1/4	7.2	130.0
C	7.2	130.0
1/4	6.9	130.3
+12	5.9	131.3
cb	4.7	132.5
N	4.3	132.9
	50' E	
N	0.8	136.4
cb (Cement)	1.02	136.16
+01	2.2	135.0
1/4	3.4	133.8
C	3.6	133.6
1/4	3.3	133.9
+12	2.7	134.5
cb (Cement)	2.12	135.06
+10	1.9	135.3
S	3.5	133.7
TP 12.63	149.74	0.07 137.11
	100' E	
S. of Cement	6.85	142.89
+01	7.6	142.1
1/4	7.3	142.4
C	7.4	142.3
1/4	7.4	142.3

149.74

cedar

51

+12	7.0	142.7
at cement	6.40	143.2



1/3/24 Gregory X section of Alley 20' wide
 BLK 275 S.D. Land + Town
 bet Maulman + Harrison
 from Evans to Jamison

52

	950	9601	86.51
		E.L. EVANS	
S		4.85	91.16 on cement ret.
C		4.9	91.1
N		4.27	91.74 on cement ret.
		20' E	
N		3.1	92.9
+6		4.5	91.5
C		4.8	91.2
+7		4.7	91.3
S		4.4	91.6
		50' E	
S		4.3	91.7
C		4.6	91.4
+5		4.6	91.4
N		3.6	92.4
		95' E	
N		3.7	92.3
C		3.5	92.5
S		3.4	92.6
		105' E	
S = center garage (cement)		4.17	93.84
C		3.0	93.0
N		3.1	92.9

		125' E	
N		1.7	94.3
C		2.0	94.0
S		1.6	94.4
		145' E	
S = garage dirt		0.0	96.0
+0.5		0.3	95.7
C		0.6	95.4
N		0.2	95.8
TP	1045 10592	0.54	95.47
		180' E	
N		7.2	98.7
C		7.8	98.1
S		7.8	98.1
		200' E	
S		6.8	99.1
C		6.8	99.1
N		6.5	99.4
		242' E	
N		5.3	100.6
C		5.6	100.3
S = edge cement apron		4.80	101.12
+1.6 = front garage		4.6	101.3
		260' E	
C = Man hole		5.02	100.90

	268'E		
S	4.7	101.2	
C	4.9	101.0	
N = front garage (dirt)	4.9	101.0	
	274'E		
S = garage (dirt)	4.1	101.8	
	292'E		
N	4.7	101.2	
C	4.6	101.3	
+4	4.4	101.5	
S = center garage (cement)	3.64	102.28	
	300'E		
C = Manhole	4.4	101.5	
	317'E		
S = center garage (dirt)	4.0	101.9	
C	4.5	101.4	
N	4.6	101.3	
	330'E		
N = garage (dirt)	4.9	101.0	
	340'E		
N	4.7	101.2	
C	4.9	101.0	
S	4.1	101.8	
	370'E		
S	4.8	101.1	
C	5.6	100.3	

N	5.6	100.3	
	390'E = door of house		
-4 = house floor	5.07	100.85	
N ground	6.1	99.8	
	400'E		
N	6.1	99.8	
C	6.4	99.5	
S	5.6	100.3	
	423'E		
S = garage (dirt)	6.2	99.7	
C	6.8	99.1	
N	6.8	99.1	
	460'E		
N	7.9	98.0	
C	7.5	98.4	
S	7.2	98.7	
	497'E		
S	7.6	98.3	
+4	8.1	97.8	
C	8.2	97.7	
N = garage (dirt)	8.6	97.3	
	540'E		
N	8.6	97.3	
C	8.6	97.3	
+5	8.6	97.3	

S	8.0	97.9
580' E		
S	8.3	97.6
C	10.0	95.9
+5	9.8	96.1
N	9.2	96.7

596' E

N	10.4	95.5
+3	12.2	93.7
C	12.0	93.9
+6	11.3	94.6
S	9.2	96.7

600' E = W. L. Sampson

S on cement return	12.70	93.22
C	12.7	93.2
N on cement return	12.80	93.12

1/19/24 Gregory / CROSS SECTION OF 80' wide
 JUNIPER ST 14' cbs
 EL Bancroft to W.L 33rd. BP. 5E
 1.41 295.28 293.87 Bancroft + Jun

E.L. Bancroft

S	1.6	93.7
+7.5 = outside edge walk	1.75	93.53
cb	2.3	93.0
+1	2.9	92.4
1/4	2.3	92.0
C	1.8	93.5
+2	1.6	93.2
+5	0.7	94.6
1/4	0.6	94.7
cb	0.8	94.5
N	1.0	94.3

30' E

N	2.5	92.8
cb	2.2	93.1
1/4	1.9	93.4
+8	1.8	93.5
+11	3.1	92.2
C	3.5	91.8
1/4	4.5	90.8
+12	5.0	90.3
cb	4.5	90.8
+6.5 = outside edge walk	4.25	91.03
S	4.0	91.3

295.28

60 E

S	6.6	88.7
+6.5 = outside edge walk	6.76	88.52
cb	7.0	88.3
+1	7.5	87.8
1/4	7.1	88.2
C	5.9	89.4
+2	5.6	89.7
+5	3.9	91.4
1/4	3.9	91.4
cb	4.3	91.0
N	4.8	90.5

95 E

N	8.7	86.6
cb	8.8	86.5
1/4	8.1	87.2
+8	7.5	87.8
C	9.7	85.6
+1	10.1	85.2
1/4	10.2	85.1
+12	10.8	84.5
cb	10.3	85.0
+6.5 = outside edge walk	9.80	85.5
S	9.6	85.7

98' E

S	9.9	85.4
cb	10.4	84.9
+1	11.0	84.3
1/4	10.5	84.8
C	10.4	84.9
+5	10.3	85.0
1/4	9.1	86.2
cb	9.1	86.2
N	9.1	86.2

101.0' E

N	11.5	83.8
cb	11.3	84.0
1/4	10.9	84.4
C	10.6	84.7
1/4	10.8	84.5
+12	11.2	84.1
cb	10.6	84.7
S	10.2	85.1

125' E

S	12.4	82.9
+7.5 = outside edge walk	12.65	82.63
cb	13.2	82.1
1/4	12.9	82.4
C	12.4	82.9
1/4	11.8	83.5

295.28

cb	11.7	83.5
+5	12.5	82.8
N on lawn	12.7	82.6
T.P.	1.15	883.53
	12.90	882.38

135' E

N on lawn	1.7	81.8
cb	1.8	81.7
1/4	0.9	82.6
C	1.4	82.1
1/4	2.1	81.4
cb	2.1	81.4
+6.5 = outside edge walk	1.85	81.68
S	1.6	81.9

170' E

S	4.9	78.6
+7.5 outside edge walk	5.18	78.41
cb	5.4	78.1
1/4	5.2	78.3
C	4.4	79.1
1/4	4.1	79.4
cb	4.1	79.4
N on lawn	4.1	79.4

200' E = WL 33rd ST

N on lawn	6.5	77.0
cb	6.4	77.1

282.13

$\frac{1}{4}$	6.2	22.3
c	6.7	26.8
$\frac{1}{4}$	7.5	26.0
cb	7.6	25.9
+6.5 = outside edge walk	7.55	25.98
3	7.4	26.1

57

Sewer Grades
Benesch Ave 33^d to 35th
cuts 6' N of sewer

4/29/24
100000
nu nu nu
33^d + Broadway

	2.12	108.67		106.55	
0+10 DE				92.00	16.67
+50				91.72	16.95
1				91.36	17.31
+50				91.01	17.66
2				90.65	18.02
+50				90.30	18.37
3	on stub T.P. 0.11	97.86	1092	97.75	89.93
+60 MH				89.50	8.36
4				84.25	13.61
+40 B.K. T.P. 0.5	85.81	12.90	84.96	79.00	5.96
5				76.10	9.71
+50				73.68	12.13
6	TP on stub M.H. 0.38	78.19	8.00	77.81	71.00
+50				69.63	8.56
7				68.12	10.07
+50				66.60	11.59
8				65.09	13.10
+50				63.57	14.62
9				62.06	16.13
+35 M.H.				61.00	17.19
+60				60.22	17.97
10	TP on stub 0.29	65.85	12.63	65.56	58.97
+50				57.42	8.43
11				55.86	9.99

12.66	C 4.01
12.11	C 4.84
10.30	C 6.51
8.50	C 9.16
8.10	C 9.92
8.93	C 9.44
10.92	C 7.82
3.90	C 4.86
7.52	C 6.09
1.24	C 4.72
3.79	C 5.92
5.87	C 6.26
8.00	C 6.81
2.09	C 6.47
4.73	C 5.34
6.79	C 4.80
8.62	C 4.48
9.71	C 4.91
10.54	C 5.59
11.33	C 5.86
11.80	C 6.17
12.63	C 6.59
1.86	C 6.57
3.05	C 6.94

65.85

11+60 Brk	54.00	11.85
12	50.96	14.89
+50	47.15	18.70
+65 Existing M.H	46.00	
✓ Sewer Elv	44.00	21.85

59

4.61 07.24

1116 C 3.73

1274 C 5.56

1337
853
2190
✓ .05 ✓ OK

3/87 ↓ Moore

Grades Alley Bk 1
Blair's Highland Fldd

	13.28	315.34	1.95	302.06	Redwood 4 30.4
	4.20	317.64		313.39	SW 37
	504	311.01	11.65	305.97	
	476	309.48	6.29	304.72	
		W		E	
St. Redwood		307.29		306.72	
+40 Bk	4.82 3.12 +1.70	312.80		312.80	2.54 1.07 +1.47
+50 ✓	4.44 +1.0	313.20		313.20	4.44 3.24 +1.20
+70 ✓	4.22 +1.0	313.40		312.40	4.22 3.02 +1.20
	4.72 +1.0	312.90		313.0	4.62 3.42 +1.20
	5.22 +1.0	312.40		312.60	5.02 3.82 +1.20
	6.22 +1.0	311.60	✓	311.80	6.15
	6.82 +1.0	310.80		311.0	6.62 5.42 +1.20
	7.82 +1.0	310.10		310.30	7.32 6.12 +1.20
	8.82 +1.0	309.40		309.60	8.02 6.82 +1.20
	9.82 +1.0	308.20		308.40	9.22 8.02 +1.20
	10.82 +1.0	307.00		307.20	10.42 9.22 +1.20
	11.82 +1.0	306.40		306.60	11.42 10.22 +1.20
	12.82 +1.0	305.80	✓	306.00	12.20
	13.82 +1.0	305.25		305.50	13.08 11.88 +1.20
	14.82 +1.0	304.70		305.00	14.08 12.88 +1.20
NL Pains 1	5.72 +1.0	303.78		303.72	5.76 4.56 +1.20

KEITH'S RAILROAD CURVE TABLES.

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HOW TO USE KEITH'S TABLES.

EXAMPLE.

Wanted a Curve with an Ext. of about 12 ft. Angle
of Intersection or I. P. = $23^{\circ} 20'$ to the R. at Station
542+72.

Ext. in Tab. IV opposite $23^{\circ} 20' = 120.87$
 $120.87 \div 12 = 10.07$. Say a 10° Curve.

Tan. in Tab. IV opp. $23^{\circ} 20' = 1183.1$
 $1183.1 \div 10 = 118.31$.

Tab. V correction for A. $23^{\circ} 20'$ for a 10° Cur. = 0.16
 $118.31 + 0.16 = 118.47 =$ corrected Tangent.

(If corrected Ext. is required find in same way)
Ang. $23^{\circ} 20' = 23.33^{\circ} \div 10 = 2.3333 =$ L. C.

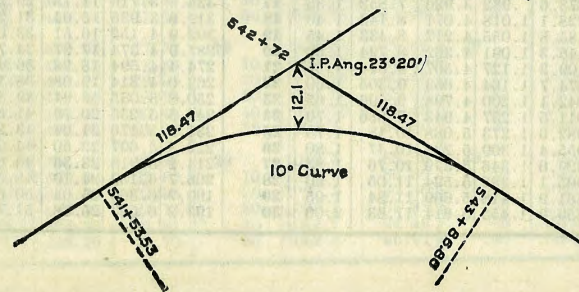
$2^{\circ} 19\frac{1}{2}' =$ def. for sta.	542	I. P. = sta.	542+72
$4^{\circ} 49\frac{1}{2}' =$ " " "	+50	Tan. =	1.18.47
$7^{\circ} 19\frac{1}{2}' =$ " " "	543	B. C. = sta.	541+53.53
$9^{\circ} 49\frac{1}{2}' =$ " " "	+50	L. C. =	2.33.33
$11^{\circ} 40' =$ " " "	543+	E. C. = Sta.	543+86.86
	86.86		

$100 - 53.53 = 46.47 \times 3' (\text{def. for 1 ft. of } 10^{\circ} \text{ Cur.}) = 139.41' =$
 $2^{\circ} 19\frac{1}{2}' =$ def. for sta. 542.

Def. for 50 ft. = $2^{\circ} 30'$ for a 10° Curve.

Def. for 36.86 ft. = $1^{\circ} 50\frac{1}{2}'$ for a 10° Curve.

(These tables are published in Field Books of
KEUFFEL & ESSER CO., New York, N. Y.)



1197
117
1314

Natural Tangents.

Deg.	0'	10'	20'	30'	40'	50'	Deg.	0'	10'	20'	30'	40'	50'	Deg.	
0	0000	0029	0058	0087	0116	0145	89	40	8391	8441	8491	8541	8591	8642	49
1	0175	0204	0233	0262	0291	0320	88	41	8693	8744	8796	8847	8899	8952	48
2	0349	0378	0407	0437	0466	0495	87	42	9004	9057	9110	9163	9217	9271	47
3	0524	0553	0582	0612	0641	0670	86	43	9325	9380	9435	9490	9545	9601	46
4	0699	0729	0758	0787	0816	0846	85	44	9657	9713	9770	9827	9884	9942	45
5	0875	0904	0934	0963	0992	1022	84	45	1.0000	1.0058	1.0117	1.0176	1.0235	1.0295	44
6	1051	1080	1110	1139	1169	1198	83	46	1.0355	1.0416	1.0477	1.0533	1.0599	1.0661	43
7	1228	1257	1287	1317	1346	1376	82	47	1.0724	1.0786	1.0850	1.0913	1.0977	1.1041	42
8	1405	1435	1465	1495	1524	1554	81	48	1.1106	1.1171	1.1237	1.1303	1.1369	1.1436	41
9	1584	1614	1644	1673	1703	1733	80	49	1.1504	1.1571	1.1640	1.1708	1.1778	1.1847	40
10	1763	1793	1823	1853	1883	1914	79	50	1.1918	1.1988	1.2059	1.2131	1.2203	1.2276	39
11	1944	1974	2004	2035	2065	2095	78	51	1.2349	1.2423	1.2497	1.2572	1.2647	1.2723	38
12	2126	2156	2186	2217	2247	2278	77	52	1.2799	1.2876	1.2954	1.3032	1.3111	1.3190	37
13	2309	2339	2370	2401	2432	2462	76	53	1.3270	1.3351	1.3432	1.3514	1.3597	1.3680	36
14	2493	2524	2555	2586	2617	2648	75	54	1.3764	1.3848	1.3934	1.4019	1.4106	1.4193	35
15	2679	2711	2742	2773	2805	2836	74	55	1.4281	1.4370	1.4460	1.4550	1.4641	1.4733	34
16	2867	2899	2931	2962	2994	3026	73	56	1.4826	1.4919	1.5013	1.5108	1.5204	1.5301	33
17	3057	3089	3121	3153	3185	3217	72	57	1.5399	1.5497	1.5597	1.5697	1.5798	1.5900	32
18	3249	3281	3314	3346	3378	3411	71	58	1.6003	1.6107	1.6212	1.6319	1.6426	1.6534	31
19	3443	3476	3508	3541	3574	3607	70	59	1.6643	1.6753	1.6864	1.6977	1.7090	1.7205	30
20	3640	3673	3706	3739	3772	3805	69	60	1.7321	1.7437	1.7556	1.7675	1.7797	1.7917	29
21	3839	3872	3906	3939	3973	4006	68	61	1.8040	1.8165	1.8291	1.8418	1.8546	1.8676	28
22	4040	4074	4108	4142	4176	4210	67	62	1.8807	1.8940	1.9074	1.9210	1.9347	1.9486	27
23	4245	4279	4314	4348	4383	4417	66	63	1.9626	1.9768	1.9912	2.0057	2.0204	2.0353	26
24	4452	4487	4522	4557	4592	4628	65	64	2.0503	2.0655	2.0809	2.0965	2.1123	2.1283	25
25	4663	4699	4734	4770	4806	4841	64	65	2.1445	2.1609	2.1775	2.1943	2.2113	2.2286	24
26	4877	4913	4950	4986	5022	5059	63	66	2.2460	2.2637	2.2817	2.2998	2.3183	2.3369	23
27	5095	5132	5169	5206	5243	5280	62	67	2.3559	2.3750	2.3945	2.4142	2.4342	2.4545	22
28	5317	5354	5392	5430	5467	5505	61	68	2.4751	2.4960	2.5172	2.5386	2.5605	2.5826	21
29	5543	5581	5619	5658	5696	5735	60	69	2.6051	2.6279	2.6511	2.6746	2.6985	2.7228	20
30	5774	5812	5851	5890	5930	5969	59	70	2.7475	2.7725	2.7980	2.8239	2.8502	2.8770	19
31	6009	6048	6088	6128	6168	6208	58	71	2.9042	2.9319	2.9600	2.9887	3.0178	3.0475	18
32	6249	6289	6330	6371	6412	6453	57	72	3.0777	3.1084	3.1397	3.1716	3.2041	3.2371	17
33	6494	6536	6577	6619	6661	6703	56	73	3.2799	3.3052	3.3402	3.3759	3.4124	3.4495	16
34	6745	6787	6830	6873	6916	6959	55	74	3.4874	3.5261	3.5656	3.6059	3.6470	3.6891	15
35	7002	7046	7089	7133	7177	7221	54	75	3.7321	3.7760	3.8208	3.8657	3.9136	3.9617	14
36	7265	7310	7355	7400	7445	7490	53	76	4.0108	4.0611	4.1126	4.1653	4.2193	4.2747	13
37	7530	7581	7627	7673	7720	7766	52	77	4.3315	4.3897	4.4494	4.5107	4.5736	4.6382	12
38	7813	7866	7907	7954	8002	8050	51	78	4.7046	4.7729	4.8430	4.9152	4.9894	5.0658	11
39	8098	8146	8195	8243	8292	8342	50	79	5.1446	5.2257	5.3093	5.3955	5.4845	5.5764	10
Deg.	60'	50'	40'	30'	20'	10'	Deg.	60'	50'	40'	30'	20'	10'	Deg.	

Deg.	0'	10'	20'	30'	40'	50'	Deg.
80	5.6713	5.7694	5.8708	5.9758	6.0844	6.1970	9
81	6.3138	6.4348	6.5606	6.6912	6.8269	6.9682	8
82	7.1154	7.2687	7.4287	7.5958	7.7704	7.9530	7
83	8.1443	8.3450	8.5555	8.7769	9.0098	9.2553	6
84	9.5144	9.7882	10.078	10.385	10.711	11.059	5
85	11.430	11.826	12.250	12.706	13.197	13.727	4
86	14.300	14.924	15.605	16.350	17.169	18.075	3
87	19.081	20.206	21.470	22.903	24.542	26.432	2
88	28.636	31.242	34.308	38.189	42.904	49.104	1
89	57.290	68.750	85.940	114.588	171.885	343.77	0
Deg.	60'	50'	40'	30'	20'	10'	Deg.

Natural Cotangents.

142.15
 114.8
 159.63
 27.0
 136.63
 12.67
 169.20
 113.60
 155.56

1030

5
 0
 35
 60
 65
 95
 110
 130
 150
 163

30
 60
 95
 125
 135
 170

194.3
 12.1
 60
 26.1
 60
 26.1
 60
 26.1
 30
 12.1

17
 31416
 1366

2.1
 31416
 7.5

2.1
 31416
 7.5
 78.12
 15.70
 94.20
 75.1

142
 288
 144
 1728

1725
 942
 924
 1800
 1725
 942
 924
 1800

162.47
 7.15
 155.32

1-62.70
 7.15
 155.55
 13.64
 169.19
 10.27
 158.92
 12.27
 171.19

715
 730

12.26
 1.32
 13.64

44

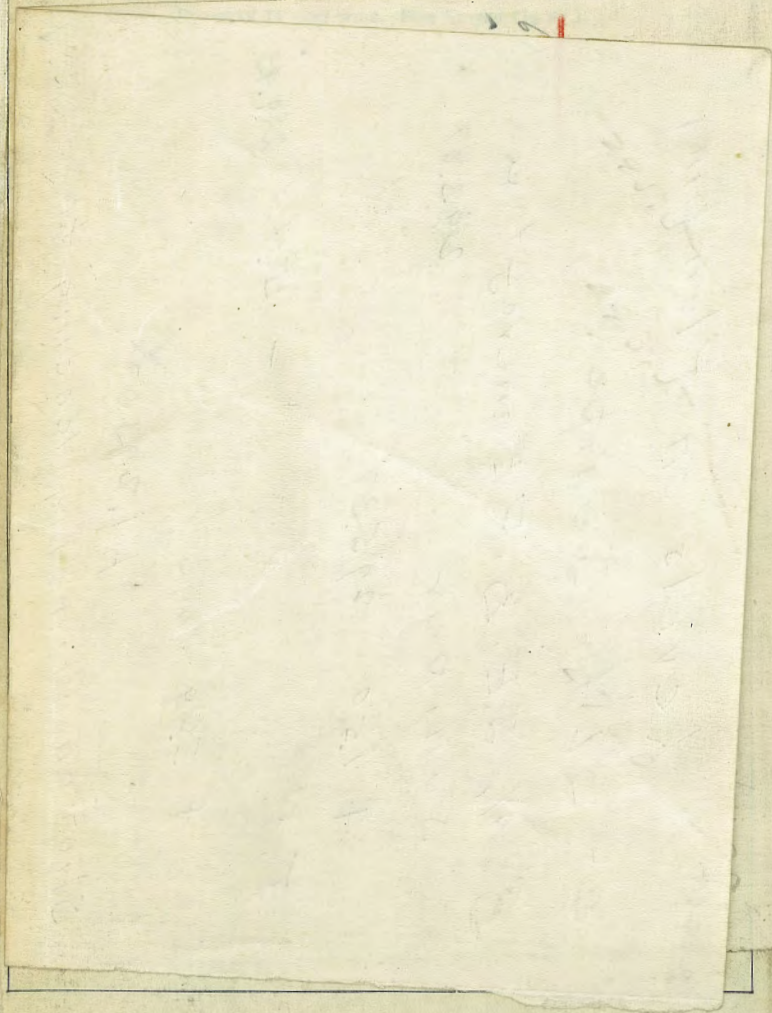
171.27
 500
 165.86

132.6
 54.6
 126.60

25.27
 12.14
 12.14
 126.1
 41.5
 132.6

35.27
 12.14
 13.156

DISTANCES FROM CENTER OF ROADWAY FOR CROSS-SECTIONING



148.15
114.8
159.63
5.70
156.53
12.67
169.20
113.64
155.56

5
35
60
65
75
110

1030

132.6
54.6
1266

25.07
12.11
132.60
40.5
10
128.41
1326

25.07
12.11
132.60
40.5
10
35.27
12.11
131.56

DISTANCES FROM CENTER OF ROADWAY FOR CROSS-SECTIONING

30
60
95
125
135
170

31.476
36.0

3-29-29 Levels on Plumbing

at 3246 Juniper

B. M. S.E. B.P. Bancroft +

Juniper 293.87

+ 150 295.37

T.P.

- 5.44 289.93

+ 369

A.I. 293.62

Shot on Plumbing leading to

Septic tank - 5.60

288.02

B. M. S.E. B.P. Bancroft and

Juniper

293.87

+ 5.16

A.I. 299.03

Flowline sewer at M.H. Juniper and

Bancroft

- 14.84

284.19

100' Feet along curb from

Juniper to West side of House