

1235

PASTY

FIELD BOOK

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No. 385 to pp 60 7/16/30 AH.

No lines to page 80 7/16/30 AH

Russ.	from WL 11 to WL 16 th	Pages	1-11
Sutter.	.. Pringle St. South		12-15
Details of	12 th -13 th & ctc. for Russ St		16-21

28th from National to Colton 22-30

Colton. from 28th + 30th Sts 30-37

Alley Blk 16 Gardners Add Bet. 14th-15th C 38

37th St. El Cajon to Madison Ave. 39-45

(X sec N-S & E-W Alley

Blk 129 Univ. Hts. 46-51

X sec Iowa Meade - El Cajon 52-55

X sec. Alley Blk 3 Frary Hts 56-59

Cooper Ave. from Boundary to H.P. 60-80

B.M. NWBB 12th + A 105.47

T.P. 2.67 108.09 105.47

T.P. 0.77 97.08 11.73 96.36

T.P. 12.68 84.40

McHugh
Flood
Rauner
11/10/28

X section of Russ St from
W.L. 11th to W.L. 16th

60' wide 10' cbs 10' gts.

BM See preceding page

T.P. 11.99 96.39 12.68 84.40

W.L. 11th

N.L. 14.7 81.7

cb 14.8 81.6

‡ 14.9 81.5

£ 14.2 82.2

‡ 14.2 82.2

cb 15.0 81.4

SL 14.8 81.6

Curb

Top of cb 14.04 82.35

But on pavement 14.33 82.06

cb 13.9 82.5

‡ 13.8 82.6

£ 13.9 82.5

‡ 13.8 82.6

cb 14.1 82.3

N.L. 14.4 82.0

Quarter

N.L. 13.0 83.4

cb 13.6 82.8

‡ 13.6 82.8

£ 13.6 82.8

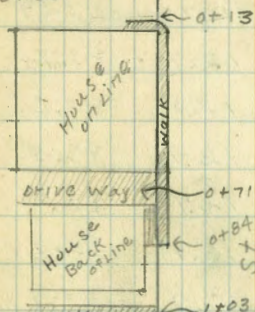
‡ 13.3 83.1

11th

Paved

108.25

60'



WALK

WALK

108.77

12th

11th St.

No improvements

12th

1

96.39

cb	13.1	83.3
SL on paving	13.56	82.83
Center		
SL on paving	12.70	83.69
cb	12.7	83.7
$\frac{1}{4}$	12.8	83.6
$\frac{1}{2}$	12.9	83.5
$\frac{3}{4}$	12.9	83.5
cb	13.1	83.3
NL	13.0	83.4
Quarter		
NL	12.8	83.6
cb	12.6	83.8
$\frac{1}{4}$	12.6	83.8
$\frac{1}{2}$	12.4	84.0
$\frac{3}{4}$	12.4	84.0
cb	12.2	84.2
SL on pavement	12.21	84.18
Curb		
SL		
Gut on pavement	12.16	84.23
SL		
TOP. of cb	11.32	85.07
cb	11.4	85.0
$\frac{1}{4}$	10.6	85.8
$\frac{1}{2}$	10.3	86.1
$\frac{3}{4}$	10.0	86.4

96.39

2

cb	10.0	86.4
NL	10.1	86.3
0+00 = E.L. 11 th St		
NL	8.1	88.3
cb	8.3	88.1
$\frac{1}{4}$	8.4	88.0
$\frac{1}{2}$	8.6	87.8
$\frac{3}{4}$	9.0	87.4
cb	9.0	87.4
SL	9.6	86.8
0+13 = Beginning of walk 2.5' in Street		
SL on walk	7.13	89.26
cb	6.8	89.6
$\frac{1}{4}$	7.2	89.2
$\frac{1}{2}$	6.7	89.7
$\frac{3}{4}$	6.3	90.1
cb	5.9	90.5
NL	6.3	90.1
0+50		
NL	0.4	96.0
cb	0.3	96.1
$\frac{1}{4}$	1.3	95.1
$\frac{1}{2}$	1.5	95.1
$\frac{3}{4}$	2.3	94.1
cb	2.7	93.7
SL on walk	3.49	92.9

96.39

T.P.	12.44	108.29	0.54	95.85
0+71	= E Drive on South			
S.L.	on concrete	13.48	94.81	
+84	= End of Walk on South			
S.L.		13.08	95.21	
+93				
S.L.		11.9	96.4	
cb		10.6	97.7	
$\frac{1}{4}$		10.0	98.3	
$\frac{1}{4}$		9.3	99.0	
$\frac{1}{4}$		8.0	100.3	
cb		7.5	100.8	
N.L.		6.0	102.3	
1+03				
N.L.		4.3	104.0	
cb		5.4	102.9	
$\frac{1}{4}$		6.4	101.9	
$\frac{1}{4}$		6.6	101.7	
$\frac{1}{4}$		5.7	102.6	
cb		7.4	100.9	
S.L. on Concrete Walk		10.61	97.68	
T.P.	11.17	118.41	1.05	107.24
1+52				
S.L.		13.3	105.1	
cb		13.0	105.4	

118.41

$\frac{1}{4}$		12.3	106.1
$\frac{1}{4}$		12.6	105.8
$\frac{1}{4}$		11.3	107.1
cb		10.1	108.3
N.L.		7.9	110.5
T.P.	10.20	122.07	6.54
2+00	= W.L. 12 th		
N.L.		8.9	113.2
cb		9.6	112.5
$\frac{1}{4}$		9.9	112.2
$\frac{1}{4}$		10.3	111.8
$\frac{1}{4}$		10.6	111.5
cb		11.4	110.7
S.L.		12.0	110.1
Edge of Paving = W.Cb			
S.L.		12.41	109.68
cb		11.79	110.28
$\frac{1}{4}$		11.18	110.89
$\frac{1}{4}$		10.56	111.51
$\frac{1}{4}$		10.04	112.03
cb		9.38	112.69
N.L.		8.82	113.25

134.79

140.70

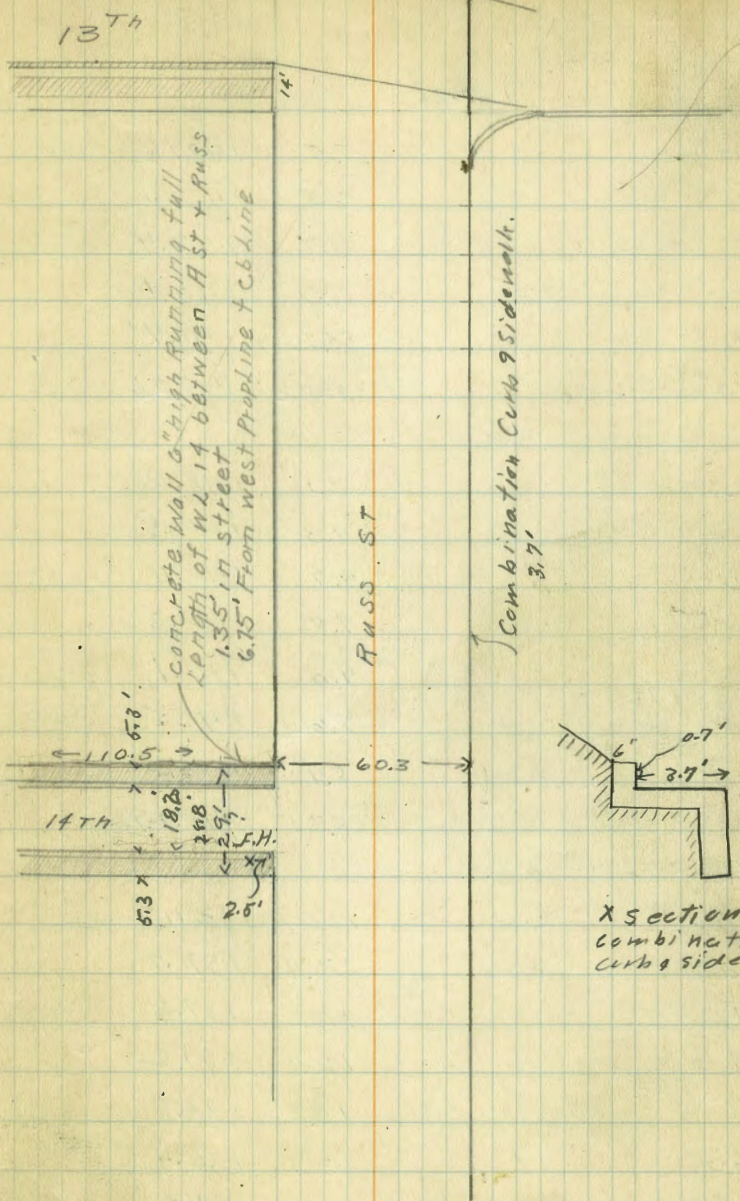
SL	10.5	124.29
cb	11.60	123.19
Gut	11.7	123.1
$\frac{1}{4}$	11.2	123.6
$\frac{1}{4}$	10.8	124.0
$\frac{1}{4}$	10.6	124.2
Gut	10.6	124.2
cb	9.80	124.99
2+00 = WL	13 TH	
NL	6.0	128.8
$\frac{1}{4}$	6.5	128.3
$\frac{1}{4}$	6.5	128.3
$\frac{1}{4}$	6.8	128.0
Gut	7.4	127.4
cb	7.22	127.57
SL	7.1	127.7
Curb		
SL on pavement	7.58	127.21
cb	7.1	127.7
$\frac{1}{4}$	6.6	128.2
$\frac{1}{4}$	6.3	128.5
$\frac{1}{4}$	6.3	128.5
Gut	6.1	128.7
T.P.	9.50	140.70
3.59		131.20

W. Edge of Paving Strip crossing intersection

NL on paving	8.50	132.2
$\frac{1}{4}$	9.16	131.64
$\frac{1}{4}$	9.79	130.91
$\frac{1}{4}$	10.31	130.39
cb	10.95	129.75
SL	12.25	128.45
E. Edge of Paving Strip		
SL on paving	12.03	128.67
cb	10.86	129.84
$\frac{1}{4}$	10.00	130.70
$\frac{1}{4}$	9.17	130.51
$\frac{1}{4}$	8.28	132.42
NL	7.56	133.14
0+46 3036		
Top of cb	5.72	134.98
Gut	6.8	133.9
$\frac{1}{4}$	7.2	133.5
$\frac{1}{4}$	7.6	133.1
$\frac{1}{4}$	7.9	132.8
cb	8.3	132.4
+2	7.6	133.1
SL	6.5	134.2
1+00		
SL	3.1	137.6
+18	4.5	136.2

140.70

cb		5.4	135.3
$\frac{1}{4}$		4.9	135.8
$\frac{1}{2}$		4.7	136.0
$\frac{3}{4}$		4.1	136.6
Gut		3.9	136.8
N cb		3.19	137.51
T.P.	10.70 150.08	1.32	139.38
1+50			
N cb		9.74	140.34
Gut		10.4	139.7
$\frac{1}{4}$		10.7	139.4
$\frac{1}{2}$		10.5	139.6
$\frac{3}{4}$		11.3	138.8
cb		11.6	138.5
SL		9.5	140.6
2+00 = W.L. 14 th St.			
SL End of walk		5.59	144.49
cb		8.5	141.6
$\frac{1}{4}$		8.4	141.7
$\frac{1}{2}$		8.0	142.1
$\frac{3}{4}$		8.1	142.0
Gut		7.9	142.2
N cb		7.07	143.01
0+00 = EL 14 th			
cb		6.66	143.42



150.08

Gut	7.5	142.6
$\frac{1}{4}$	7.5	142.6
$\frac{1}{4}$	7.7	142.4
$\frac{1}{4}$	8.0	142.1
cb	8.2	141.9
SL End of walk	4.82	145.26
0+50		
SL	2.1	145.0
+8	9.3	140.8
cb	9.7	140.4
$\frac{1}{4}$	9.8	140.3
$\frac{1}{4}$	9.0	141.1
$\frac{1}{4}$	8.6	141.5
Gut	8.9	141.2
cb	8.31	141.77
0+93		
N CB	11.61	138.47
Gut	12.4	137.7
$\frac{1}{4}$	12.3	137.8
$\frac{1}{4}$	12.9	137.2
$\frac{1}{4}$	13.2	136.9
cb	13.7	136.4
+12	13.1	139.0
SL	3.0	147.1
T.P.	0.84	138.16
	12.76	137.32

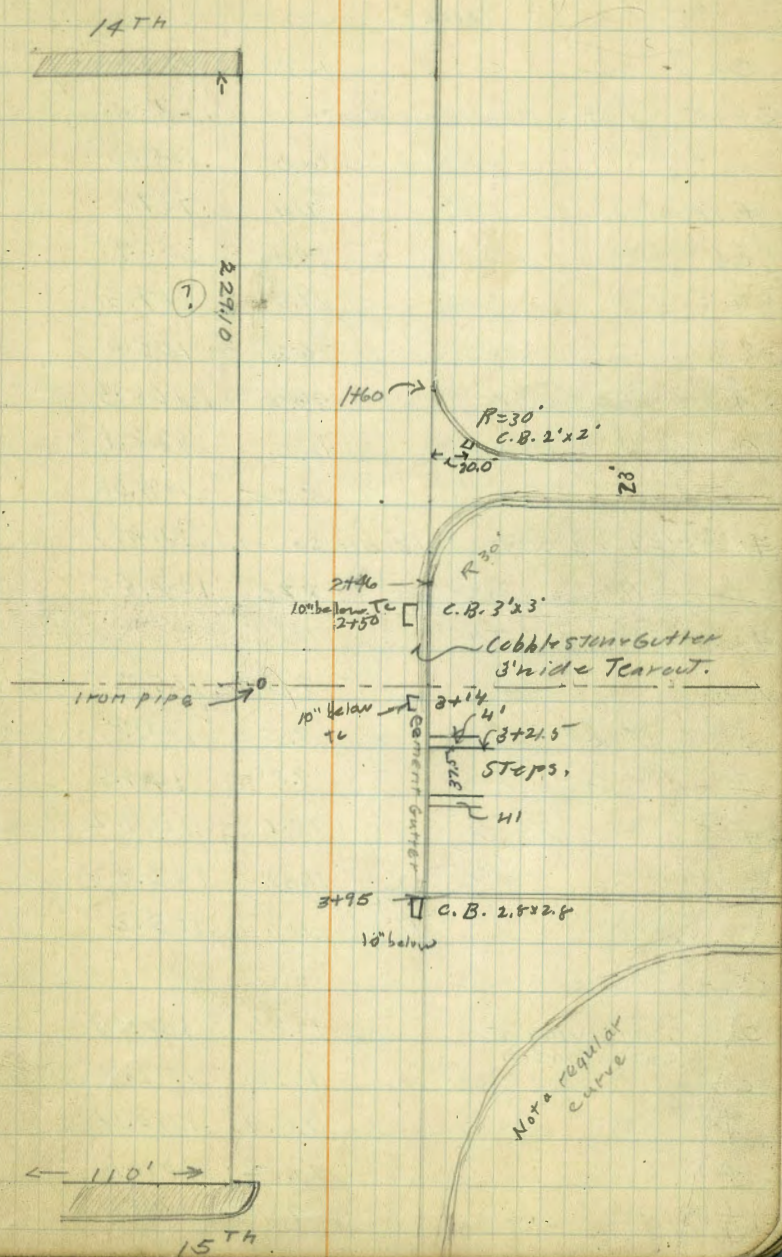
138.16

1+50		
SL	3.8	134.4
+5	6.2	132.0
cb	7.2	131.0
$\frac{1}{4}$	7.2	131.0
$\frac{1}{4}$	6.9	131.8
$\frac{1}{4}$	6.3	131.9
Gut	6.0	132.2
cb	5.40	132.76
2+00		
NL in Road way = cement steps on south	8.9	129.3
$\frac{1}{4}$	10.0	128.2
$\frac{1}{4}$	10.4	127.8
$\frac{1}{4}$	11.3	126.9
cb	11.6	126.6
+15 = Edge of steps	10.4	127.8
SL	7.6	130.6
T.P.	1.31	126.43
	13.04	125.12
2+50 =		
SL = Catch Basin on North & walk on south		
SL	4.0	122.4
+5 on walk	3.76	122.67
+16	4.4	122.0

See page 19
for section
at PC (1+60)

7

Cb	126.43	5.5	120.9
Gut $\frac{1}{4}$		4.7	121.7
$\frac{1}{4}$ $\frac{1}{4}$		4.0	122.4
$\frac{1}{4}$ $\frac{1}{4}$		3.9	124.5
$\frac{1}{4}$ Gut. on C.B. Grating		4.35	122.08
Cb Cb		3.38	123.05
SL 3+00			
O+N Cb.		8.40	118.03
SL Gut		9.41	117.02
+ $\frac{1}{4}$		9.2	117.2
Cb $\frac{1}{4}$		9.1	117.3
$\frac{1}{4}$ $\frac{1}{4}$		9.6	116.8
$\frac{1}{4}$ Cb		10.2	116.2
$\frac{1}{4}$ +3		9.1	117.3
Bu SL		8.7	117.7
Cb 3+14 = Catch Basin			
O+9 on Grating		10.53	115.90
Cb T.P. 0.65 114.31		12.77	113.66
Gut 3+50			
$\frac{1}{4}$ N Cb		1.78	112.53
$\frac{1}{4}$ Gut		2.0	112.3
$\frac{1}{4}$ $\frac{1}{4}$		1.8	112.5
Cb $\frac{1}{4}$		1.9	112.4
+1 $\frac{1}{4}$		2.5	111.8
SL Cb		3.3	113.0
T.P. +3		1.7	112.6



114.31

SL	1.3	113.0
3+95 = Catch Basin on North		
SL	6.0	108.3
+15	6.4	107.9
cb	7.4	106.9
$\frac{1}{4}$	7.0	107.3
$\frac{1}{4}$	6.3	108.0
$\frac{1}{4}$	6.0	108.3
Gut on Grating	6.2	108.1
N. cb	5.25	109.06
4+25 = 2 cement walk on south	?(4+25)	
SL+6' (6' in street)	8.76	105.55
4+51 ²² = N.L. 15 th		
N.L.	9.0	105.3
$\frac{1}{4}$	9.5	104.8
$\frac{1}{4}$	9.8	104.5
$\frac{1}{4}$	10.1	104.2
cb	11.38	102.93
SL	11.1	103.2
Curb		
SL on paving at Catch Basin	12.86	101.45
cb	11.9	102.4
$\frac{1}{4}$	10.9	103.4
$\frac{1}{4}$	10.2	104.1
$\frac{1}{4}$	9.9	104.4

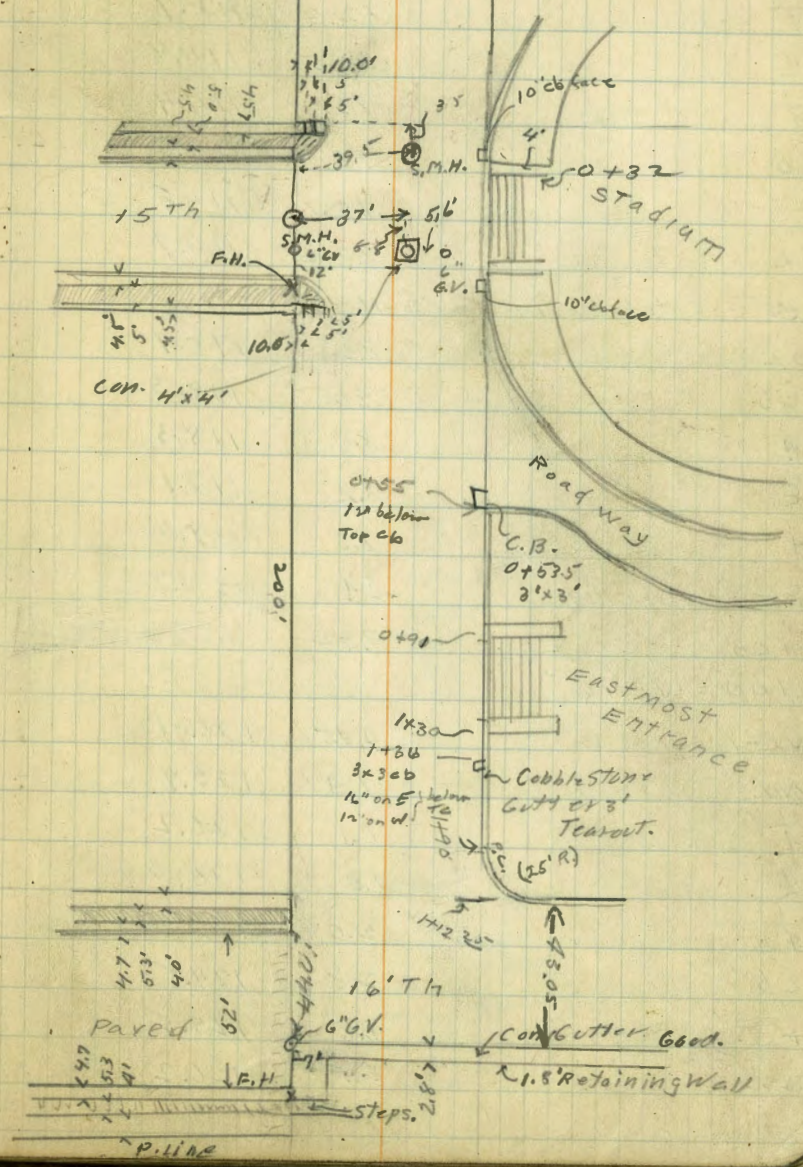
See page 20
for location of M.H.'s
in 15th st intersection

N.L. 114.31 9.5 104.8

Quarter		
N.L.	10.0	104.3
$\frac{1}{4}$	10.1	104.2
$\frac{1}{4}$	10.5	103.8
$\frac{1}{4}$	10.9	103.4
cb	11.3	103.0
SL on paving	12.32	101.99
Center = E of main Entrance to Stadium on N		
SL on paving on M.H.	12.00	102.3
cb	11.2	103.1
$\frac{1}{4}$	10.9	103.4
$\frac{1}{4}$	10.5	103.8
$\frac{1}{4}$	10.2	104.1
N.L. on step	9.65	104.66
Quarter		
N.L. cb	9.21	105.10
Gut	9.95	104.36
$\frac{1}{4}$	10.1	104.2
$\frac{1}{4}$	10.4	103.9
$\frac{1}{4}$	10.8	103.5
cb	11.3	103.0
SL on paving	12.32	101.99
Curb		
SL on paving	12.91	101.40

114-31

cb		11.4	102.9
$\frac{1}{4}$		10.7	103.6
$\frac{1}{2}$		10.0	104.3
$\frac{3}{4}$		9.7	104.6
Gut		9.4	104.9
+1 Top of cb		8.74	105.57
0+00 = EL 15 TH			
NL-5 Top of cb		8.05	106.26
NL		8.6	105.7
$\frac{1}{4}$		9.0	105.3
$\frac{1}{2}$		9.4	104.9
$\frac{3}{4}$		10.3	104.0
cb		10.9	103.4
SL		11.4	102.4
0+55 = catch Basin on North			
SL		4.5	109.8
+17		4.7	109.6
cb		5.5	108.8
$\frac{1}{4}$		5.2	109.1
$\frac{1}{2}$		4.6	109.7
$\frac{3}{4}$		4.4	109.9
Gut on Grating of C.B.		4.7	109.6
cb (N)		3.62	110.69
T.P.	13.03	177.26	0.08
1+00			114.23



N cb	127.26	12.40	114.86
Gut		12.7	114.6
1/4		12.6	114.7
1/2		12.5	114.8
3/4		12.9	114.4
cb		13.8	113.5
+5		12.7	114.5
SL		12.6	114.7

T.P.	0.59	115.50	12.35	114.91
TP	12.38	127.29	0.59	114.91
T.P.	11.71	138.33	0.67	126.62
TP	10.59	148.69	0.23	138.10
T.P.			11.21	137.48
B.M. N.W.B.P. 14 th + AST.				137.47
				.01

135 = catch Basin on North

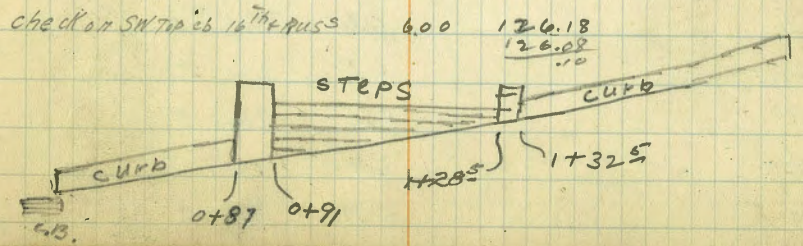
SL	8.6	118.7
cb	9.0	118.3
1/4	8.8	118.5
1/2	8.2	119.1
3/4	8.3	119.0
Gut on Grating	8.4	118.9
N cb	7.32	119.94
2+00 = WL 16 th		
NL-1 = Top of cb	0.45	126.81
NL	1.4	125.9
1/4	1.1	126.2
1/2	1.3	126.0
3/4	2.0	125.3
cb	2.8	124.5
+5	1.8	125.5
SL	1.1	126.2

Continued on Page 16.

Levels on N. cb between 15 & 16th

B.M. Page 10 to cb by catch basin at 55 110.69

T.P.	10.56	121.25
0+87 on curb	6.91	114.3
0+91 on STOP	6.96	114.4
0+93.7 " "	6.96	114.2
1+285 " "	2.87	118.4
1+325 on curb	1.56	119.7
check on cb. 1+35 (on grating)	2.51	118.99
T.P.	11.53	132.18
1+575 on cb.	9.74	122.5
1+90 = P.C.	6.00	126.2
2+00 (on curve)	4.77	127.4



X section Sutter Pringle
St South

street 48' wide,
9.6' cb on East
31' Roadway
9' cb on west

B.M. Top of Hydrant Torrance & Pringle 237.27

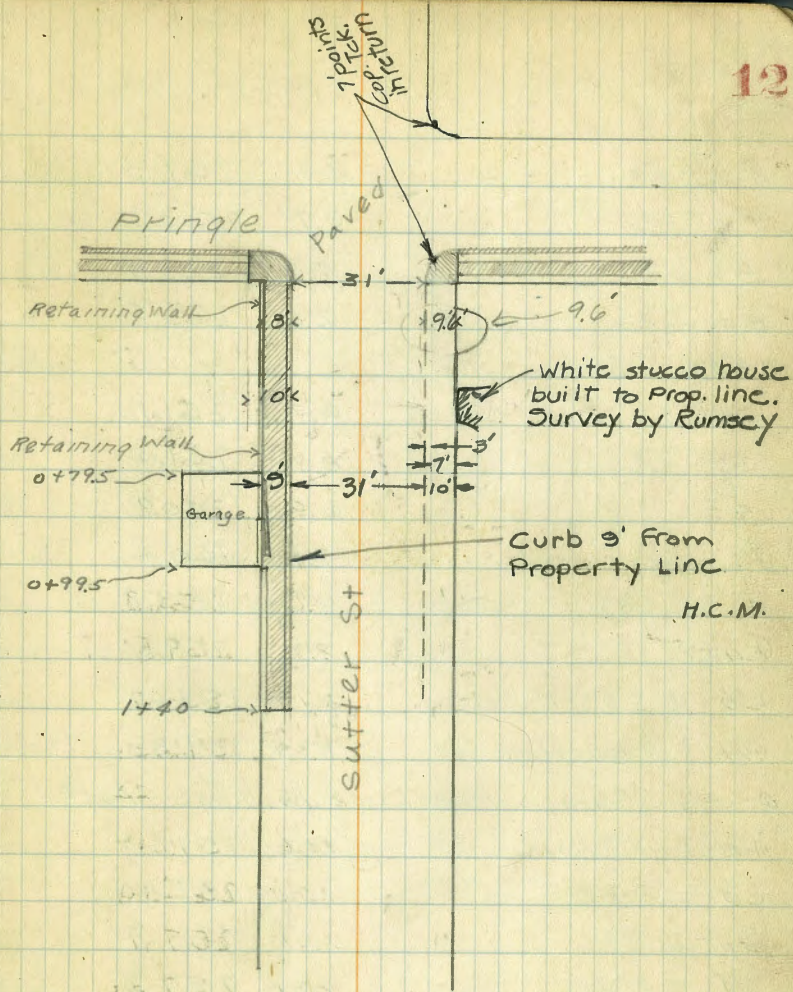
T.P. 12.76 250.03 ✓

T.P. 12.20 262.19 ✓ 004 249.99 ✓

T.P. 6.06 267.84 ✓ 041 261.78 ✓

0+00 = Edge of Pringle St paving

EL.	1.6	266.2
cb	1.95	265.89
Gut	2.43	265.41
$\frac{1}{4}$	2.33	265.51
$\frac{1}{2}$	2.30	265.54
$\frac{3}{4}$	2.66	265.18
Gut.	3.23	264.61
cb	2.79	265.05
W.L. on walk	2.75	265.09
0+28		
W.L. on walk	6.95	261.39
cb	6.61	261.23
Gut	6.8	261.0
$\frac{1}{4}$	6.5	261.3
$\frac{1}{2}$	6.1	261.7
$\frac{3}{4}$	5.4	262.4



cb	4.9	262.9
+2	3.9	263.9
+7	4.0	263.8
EL	2.3	265.5
0+40		
EL	6.7	261.1
cb	6.8	261.0
$\frac{1}{4}$	6.9	260.9
¢	7.4	260.4
$\frac{1}{4}$	8.0	259.8
Gut	8.3	259.5
cb	8.17	259.67
WL on walk	8.04	259.80
0+54 = Garage under large dwelling on East		
WL on walk	10.01	257.83
cb	10.04	257.80
Gut	10.1	257.7
$\frac{1}{4}$	10.1	257.7
¢	9.6	258.2
$\frac{1}{4}$	8.7	259.1
cb	8.6	259.2
EL on Apron	8.85	258.99
+1 = Edge of Building	8.65	259.19
0+69		
EL	9.9	257.9

cb	10.2	257.6	
$\frac{1}{4}$	10.8	257.0	
¢	11.4	256.4	
$\frac{1}{4}$	12.2	255.6	
Gut	12.3	255.5	
cb	12.10	255.74	
WL on walk	11.98	255.86	
T.P. 225	257.51	12.58	255.26
0+90 = ¢ Garage on West + N. End of dwelling on East			
WL = Door of garage	3.52	253.99	
+4 on walk	4.52	252.99	
cb	4.60	252.91	
Gut	4.6	252.9	
$\frac{1}{4}$	4.5	253.0	
¢	4.2	253.3	
$\frac{1}{4}$	3.9	253.6	
cb	3.9	253.6	
EL	3.6	253.9	
1+25 = Garage on East			
EL -4 = Garage door	8.3	249.2	
EL	8.1	249.4	
cb	8.8	248.7	
$\frac{1}{4}$	8.8	248.7	
¢	9.0	248.5	
$\frac{1}{4}$	9.5	248.0	

Gut	9.40	248.11
cb	9.37	248.14
WL on dirt	8.8	248.7
1+40 = End of walk on West		
WL on dirt	10.3	247.2
+2	11.0	246.5
cb	11.27	246.24
Gut	11.3	246.2
$\frac{1}{4}$	11.3	246.2
$\frac{1}{4}$	10.6	246.9
$\frac{1}{4}$	10.1	247.4
cb	9.5	248.0
EL	10.0	247.5
1+50		
EL+5	13.2	244.3
EL	11.7	245.8
+7	11.0	246.5
cb	9.9	247.6
$\frac{1}{4}$	10.5	247.0
$\frac{1}{4}$	11.6	245.9
$\frac{1}{4}$	12.3	245.2
cb	12.7	244.8
WL	11.4	246.1
1+66		
WL	13.7	243.8

cb	14.2	243.3
$\frac{1}{4}$	14.4	243.1
$\frac{1}{4}$	13.4	244.1
$\frac{1}{4}$	15.4	242.1
cb	18.3	239.2
EL	20.2	237.3
+10	24.1	233.4
1+85		
EL-10	40.0	217.5
EL	30.6	226.9
cb	27.8	229.7
$\frac{1}{4}$	23.8	233.7
$\frac{1}{4}$	17.4	240.1
$\frac{1}{4}$	17.0	240.5
cb	22.4	235.1
WL	16.2	241.3
2+00		
WL-5	23.8	233.7
WL	22.2	229.3
+4	29.0	228.5
cb		
$\frac{1}{4}$	23.0	234.5
$\frac{1}{4}$	25.8	231.7
$\frac{1}{4}$	30.5	227.0
cb	33.0	224.5

EL		35.4	222.1
+10		39.6	217.9
T.P	12.57	267.83	225 255.26
T.P	0.90	262.22	6.01 261.82
T.P	00.00	250.02	12.20 250.02
T.P		12.71	237.31
			<u>237.27</u>
			.04

Grades to Mr. Foster for construction of SW.4 Curb
 On Pringle

1.69	267.58	12.09	255.49	75' South
1.40	256.89	11.82	245.07	150' South

267.58
<u>255.49</u>
12.09
256.89
<u>245.07</u>
11.82
2.
<u>9.82</u>

Detail of 12st intersection

Levels on curved strip of paving
 Starting on East 7' line of 12th ending
 78.65' from P.T. at 0+85 on School curb.
 Readings taken every 8.7' on curve unless otherwise
 noted Paving 4" thick

B.M. Station 0+85 = P.T. on School Line 120.71

T.P. 342 124.13 120.71

Check on End of Return S.E. Russ + 12 }
 124.13 } 124.13
 11.59 }
 112.54 = .06

Top of cb	11.75	112.38
Gut	12.30	111.83
0+03 ⁸⁰ = Edge of Gut	11.78	112.35
0+08 ⁷⁰	11.40	112.73
0+17 ⁴⁰	10.82	113.31
0+25 ¹⁰	10.25	113.88
0+33 ²⁰	9.72	114.41
0+42 ⁵⁰	9.44	114.69
0+51 ²⁰	8.94	115.29
0+59 ⁹⁰	8.41	115.72
0+68 ⁶⁰	7.95	116.18
0+77 ³⁰	7.74	116.39
0+84 ²⁰ = edge of gutter	7.74	116.39
Gutter	8.01	116.12
Top of cb on North	7.45	116.68

(cb broken down somewhat)

Levels taken on East edge of
7 $\frac{1}{2}$ " sidewalk bordering on edge of
pavement

South Tp cb	11.60	1175
Gut	12.13	
+03 ¹⁵ edge of Gutter	11.61	
+07 ⁷⁵	11.21	
+15 ⁵⁰	10.55	
+23 ⁷⁵	10.00	
+31 ⁰⁰	9.48	
+38 ⁷⁵	9.07	
+46 ⁵⁰	8.61	
+54 ²⁵	8.20	
+62	7.95	116.18
+69 ⁷⁵	7.80	
+74 = edge of Gutter on N.	7.73	116.40
Gutter	7.96	116.17
(Top cb = 77.95)	7.39	116.74

Levels from P.C. at station 0+89 on N. cb to

East edge of cross walk on cb x Gutter		
P.C. 0+89) cb	3.42	
Gut	4.0	
0+10 cb	4.14	
0+10 Gut	4.9	
0+19 ⁵ on curve = Catch basin against cb		
Concrete Box of basin	5.77	

F.L. of catch Basin	7.59
0+20 cb	4.93
0+20 Gut	5.7
0+30 cb	5.70
0+30 Gut	6.5
0+40 cb	6.39
0+40 Gut	7.1
0+50 ⁴⁰ = beginning of Concrete cutter	
0+50 cb	6.84
0+50 Gut	7.44
0+50 cb + 34' = Edge of Gutter	7.24

Levels on East Rail of Cart track from
S.L. Russ North 102' to End of Pavement

0+00	12.82
+12	12.29
+22	11.82
+32	11.34
+42	10.85
+52	10.36
+62	9.88
+72	9.38
+82	8.86
+92	8.35
+102	7.83

Detail of 13th St intersection

LEVELS on North West School Return from
P.C. on Russ St 120' to intersection of paving
+ curb

0+00 = cb p.c. 13' west of W.L. 13th St produced

B.M. = S.W Return 13+ Russ 127.57
T.P. 13.27 140.74 127.57

0+00 Top cb 12.43

0+00 Gut 13.43

{ 0+18⁵ = catch basin agens^t cb.

{ Top of grading 12.26

0+19 cb 11.20

0+19 Gut 12.3

0+36 cb 9.95

+36 Gut 11.0

+60 cb 8.20

+60 Gut 9.2

+84 cb 6.55

+84 Gut 7.30

1+08 cb 4.85

4+08 Gut 5.3

1+20 = intersection of Pavement + cb

1+20 cb 3.95

1+20 Paving 4.38

Levels from intersection of cb

+ paving on East side of school drive

South 40+79⁶⁵ = P.C. 0+97⁶⁵ = E.C.

0+00 cb 0.79

+00 Gut 1.30

0+55 cb 3.98

+55 Gut 4.9

0+79⁶⁵ (=P.C.) cb 5.41

79⁶⁵ Gut 6.3

{ 0+90¹⁵ = catch basin agens^t cb.

{ Top of Grating 6.90

0+97⁶⁵ cb = PT 5.85

+97⁶⁵ Gut = PT 6.8

LEVELS across 13th paving on south line

Russ St Roadway 52' 13' gts. 140.7

East TOP cb 11.45 129.3

Gut 12.19 128.5

4 12.17

4 = W. edge paving crossing Russ 12.35

4 12.91

Gut 13.68 127.1

W. TOP cb 13.28 127.4

{ S.L. Russ +163 East edge = intersection of cb

{ + paving on East side of school drive

{ cb 0.80

{ Gut 1.33

X Section of Strip parking crossing
Russ St at 13th Width varies
0+00 = $\frac{1}{2}$ 13th + SL Russ

0+26 ⁶		
W edge	10.78	129.9
+12 ³	10.86	
0+29 ⁷ = E. edge	11.17	128.5
0+53 ²		
E. edge	9.06	
+12 ³	9.11	
+25 ⁵ = W edge	9.22	130.1
0+79 ⁸		
W edge	7.60	
+13 ⁵	7.33	
+27 ¹ = East Edge	7.10	
1+06 ⁴		
East edge	4.96	
+19 ⁶	5.40	
+29 ⁶ = W. edge	5.97	
1+20 = intersection on west		
W edge cb	3.95	
W edge Gut	4.37	
+15 ⁵	3.33	
+31 = E. edge	3.13	

Section taken at 1+60
See page 7

B.M. (N cb) 93' E of EL 14th St.
T.P. 0.95 139.42 ✓ 138.47

1+60

N. cb	7.55	131.87
Gut	8.3	131.1
$\frac{1}{4}$	8.4	131.0
2	8.5	130.9
$\frac{1}{4}$	9.1	130.3
cb	9.7	129.7
+3	9.0	130.4
+12	8.6	130.8
S.L.	2.2	137.2 ✓

ELEV. of catch Basin (Between 14th + 15th)
Station 1+60 + 39.5 around return
Top of Grating 10.13

Location of M.H.S. in 15th St
intersection

{ W.L. 15th + 2.7' East

{ 39.7 North of line of 15th St paving

B.M. = SW Return 15th + Russ Top cb

T.P. 4.86 107.79 102.93

Top M.H. cover 3.42 104.37

W.L. 15th St + 48.5'

Edge paving S.L. Russ + 37.3

Set in concrete block 3.5 x 3.9

Gate valve

Top of Valve 6.96 100.83

Top of cover 4.11 103.64

{ W.L. 15th St + 24'

{ Against N. c. b. = (2' Pipe)

Top of cover 3.49 104.30

X section Intersection
16th + Russ St.

B.M. = 1st T.P. on Pagell 114.91

T.P. 12.67 127.58 114.91

T.P. 8.41 134.78 ✓ 1.21 126.37

W.L. 16th

SL 8.7 126.1

+15 9.2 125.6

cb 10.2 124.6

$\frac{1}{4}$ 9.5 125.3

$\frac{1}{4}$ 8.8 126.0

$\frac{1}{4}$ 8.5 126.3

NL 8.6 126.2

CUTB

NL 6.6 128.2

$\frac{1}{4}$ 7.0 127.8

$\frac{1}{4}$ 7.5 127.3

$\frac{1}{4}$ 8.2 126.6

cb 8.9 125.9

{ Top cb 8.70 126.08

{ Gutter 9.42 125.36

Quarter

SL on paving 8.80 125.98

cb 7.9 126.9

$\frac{1}{4}$ 7.3 127.5

$\frac{1}{4}$ 6.7 128.1

134.78

$\frac{1}{4}$		6.1	128.7
NL		5.4	129.4
Center			
NL		5.2	129.6
$\frac{1}{4}$		5.8	129.0
$\frac{1}{2}$		6.4	128.4
$\frac{1}{4}$		6.9	127.9
cb		7.4	127.4
SL	on paving	8.29	126.54
Quarter			
SL	" "	7.81	126.97
cb		7.0	127.8
$\frac{1}{4}$		6.6	128.2
$\frac{1}{2}$		6.3	128.5
$\frac{1}{4}$		5.7	129.1
NL		5.0	129.8
Gutter			
NL		4.87	129.91
$\frac{1}{4}$		5.39	129.39
$\frac{1}{2}$		5.90	128.88
$\frac{1}{4}$		6.28	128.50
cb		6.74	128.04
SL		7.58	127.20

Section in bottom of
concrete gutter.

28th St

X Sec 28th National to Colton
40' Roadway 10' gts.
0+00 = SL National

B.M. NWBR National +28' 59.03

T.P. 0.47 59.50

0+00 on paving

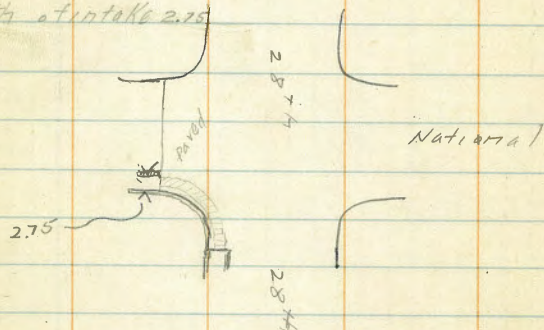
W cb 1.60 57.90

Gut 1.96 57.54

 $\frac{1}{4}$ 1.70 57.80 $\frac{1}{2}$ 1.60 57.90 $\frac{3}{4}$ 1.69 57.81

Gutter runs around SE. return under pavement

width of intake 2.75



East Gutter 2.72 56.78

E cb + pavement level 1.46 58.04

0+09

E cb 1.59 57.91

Gut 2.3 57.2

 $\frac{1}{4}$ 1.9 57.6 $\frac{1}{2}$ 1.9 57.6 $\frac{3}{4}$ 2.1 57.4

59.50

22

Cut 2.6 56.9

W cb 1.82 57.68

0+11 = start of drive to Gas Station on East

Gutter on drive 2.26 57.24

0+57 = End of drive to Gas Station on East

Gut on drive 3.43 56.07

0+59

W cb 2.92 56.58

Gut 3.6 55.9

 $\frac{1}{4}$ 3.7 55.8 $\frac{1}{2}$ 3.4 56.1 $\frac{3}{4}$ 3.3 56.2

Gut 3.6 55.9

E cb 2.92 56.58

0+86 = $\frac{1}{2}$ concrete drive on East

Gut on drive 4.18 55.32

1+00

E cb 3.85 55.65

Gut 4.4 55.1

 $\frac{1}{4}$ 4.2 55.3 $\frac{1}{2}$ 4.2 55.3 $\frac{3}{4}$ 4.5 55.0

Gut 4.3 55.2

cb 3.84 55.66

1+40 = N.L. Alley

W.L. on Alley cb 4.56 54.94

5950

Cb on Return	480	5470
Gut	52	543
$\frac{1}{4}$	54	541
2	51	544
$\frac{1}{4}$	51	544
Gut	50	545
cb on return	470	5480
EL on Alley cb	454	5496
1+60 = SL Alley		
EL on Alley cb	5.15	5435
cb on Alley return	5.36	5414
Gut	58	537
$\frac{1}{4}$	56	539
2	56	539
$\frac{1}{4}$	59	536
Gut	57	538
cb on Alley return	528	5422
WL on Alley cb	501	5449
2+00		
Web	622	5328
Gut	67	528
$\frac{1}{4}$	67	528
2	64	531
$\frac{1}{4}$	65	530
Gut	67	528
E cb	624	5326

5950

23

2+50		
E cb	7.38	5212
Gut	8.0	51.5
$\frac{1}{4}$	7.5	52.0
2	7.5	52.0
$\frac{1}{4}$	7.8	51.7
Gut	8.0	51.5
Web	7.33	52.17
3+00 = NL Newton (intersection is paved)		
Web	8.55	509.5
Gut	9.04	494.6
$\frac{1}{4}$	8.66	508.4
2	8.45	510.5
$\frac{1}{4}$	8.64	508.6
Gut	9.10	504.0
E cb	8.54	509.6
⁰⁺⁰⁰ SL Newton (39.7 wide)		
E cb	9.52	499.8
Gut	10.27	492.3
$\frac{1}{4}$	9.75	497.5
2	9.49	500.1
$\frac{1}{4}$	9.57	499.3
Gut	10.03	494.7
Web	9.55	499.5
TP 046	19.35	10.61
0+50 (39.85 wide)		48.89

4935

Wcb	1.00	48.35
Gut	1.9	47.4
$\frac{1}{4}$	1.3	48.1
$\frac{1}{4}$	1.2	48.2
$\frac{1}{4}$	1.1	48.3
Gut	1.5	47.9
Ecb	0.89	48.51
} 0+67 = $\frac{1}{4}$ con. drive on East (9.7 wide)		
Gut on drive	1.93	47.42
} 1+00 (39.85 wide)		
Ecb	2.24	47.11
Gut	2.8	46.6
$\frac{1}{4}$	2.7	46.7
$\frac{1}{4}$	2.6	46.8
$\frac{1}{4}$	2.8	46.6
Gut	3.4	46.0
Wcb	2.62	46.73
} 1+40 ³⁰ = N.L. Alley		
Wcb on Alley cb	3.56	45.89
cb on " Return	3.21	45.54
Gut	4.4	45.0
$\frac{1}{4}$	4.2	45.2
$\frac{1}{4}$	3.9	45.5
$\frac{1}{4}$	3.9	45.5
Gut	3.8	45.6
Ecb on Return	3.18	46.17
EL on Alley cb	3.18	

4935

24

} 1+60 ³⁰ = S.L. Alley		
EL on Alley cb	3.96	45.39
cb on Return	4.24	45.11
Gut	4.6	44.8
$\frac{1}{4}$	5.2	44.2
$\frac{1}{4}$	4.7	44.7
$\frac{1}{4}$	4.9	44.5
Gut	5.1	44.3
Wcb on Return	4.59	44.76
Wcb on Alley cb	4.30	45.05
} 2+00 (39.9 wide)		
Wcb	5.76	43.59
Gut	6.2	43.2
$\frac{1}{4}$	6.2	43.2
$\frac{1}{4}$	5.8	43.6
$\frac{1}{4}$	5.8	43.6
Gut	6.1	43.3
Ecb	5.59	43.76
} 2+35 = $\frac{1}{4}$ con. drive on West (9' wide)		
Gut on drive	7.32	42.03
} 2+50 (39.9 wide)		
Ecb	7.27	42.08
Gut	8.2	41.2
$\frac{1}{4}$	7.4	42.0
$\frac{1}{4}$	7.3	42.1
$\frac{1}{4}$	7.6	41.8

Gut	7.8	41.6
Wcb	7.32	42.03
3+00 = NL Boston	(39.9' wide)	(80' wide)
Wcb	8.89	40.46
Gut	9.3	40.1
$\frac{1}{4}$	8.9	40.5
$\frac{1}{4}$	8.6	40.8
$\frac{1}{4}$	8.6	40.8
Gut	9.0	40.4
Ecb	8.90	40.45
CurRB		
EL on cb	8.90	40.45
EL Gut	9.2	40.2
cb	9.3	40.1
$\frac{1}{4}$	9.0	40.4
$\frac{1}{4}$	9.0	40.4
$\frac{1}{4}$	9.3	40.1
cb	9.7	39.7
WL Gut	9.4	40.0
WL on cb	8.93	40.42
Quarter		
WL	9.6	39.8
cb	9.8	39.6
$\frac{1}{4}$	9.6	39.8
$\frac{1}{4}$	9.3	40.1
$\frac{1}{4}$	9.4	40.0

cb	9.4	40.0
EL	9.2	40.2
Center		
EL	9.5	39.9
cb	9.7	39.7
$\frac{1}{4}$	9.8	39.6
$\frac{1}{4}$	9.5	39.9
$\frac{1}{4}$	9.7	39.7
cb	10.1	39.3
WL	9.9	39.5
Quarter		
WL	10.5	38.9
cb	10.5	38.9
$\frac{1}{4}$	10.1	39.3
$\frac{1}{4}$	10.0	39.4
$\frac{1}{4}$	10.2	39.2
cb	10.0	39.4
EL	9.9	39.5
Curb		
EL	10.2	39.2
cb	10.1	39.3
$\frac{1}{4}$	10.6	38.8
$\frac{1}{4}$	10.3	39.1
$\frac{1}{4}$	10.3	39.1
cb	11.2	38.2
WL on Gut	10.5	38.9
WL on cb	10.42	38.93

49.35

0+00 = SL	Boston		
Wcb		10.42	38.93
Gut		11.8	37.6
$\frac{1}{4}$		10.7	38.7
$\frac{1}{4}$		10.8	38.6
$\frac{1}{4}$		10.7	38.7
Gut		10.5	38.9
Ecb		10.50	38.85
0+50	(40' wide)		
Ecb		12.37	36.98
Gut		12.7	36.7
$\frac{1}{4}$		12.9	36.5
$\frac{1}{4}$		12.6	36.8
$\frac{1}{4}$		12.7	36.7
Gut		13.1	36.3
Wcb		12.28	37.07
T.P.	0.85	36.87 37.07	13.33 36.22
1+00			
Wcb		1.94	34.93
Gut		3.1	33.8
$\frac{1}{4}$		2.5	34.4
$\frac{1}{4}$		2.2	34.7
$\frac{1}{4}$		2.7	34.2
Gut		2.3	34.6
Ecb		2.15	34.72
1+40 ²⁰	= NL ALLEY		

36.87

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EL on Alley cb	3.67	33.20
cb on Return	3.67	33.20
Gut	3.7	33.2
+5	4.6	32.3
$\frac{1}{4}$	3.9	33.0
$\frac{1}{4}$	3.6	33.3
$\frac{1}{4}$	3.9	33.0
Gut	4.3	32.6
cb on Return	3.95	33.42
WL on Alley cb	3.23	33.64

28⁷⁴

ALLEY

1+60 SL ALLEY		
WL on Alley cb	4.18	32.69
cb on Return	4.50	32.37
Gut	4.9	32.0
+5	5.9	31.0
$\frac{1}{4}$	5.0	31.9
$\frac{1}{4}$	4.6	32.3

Boston

3687

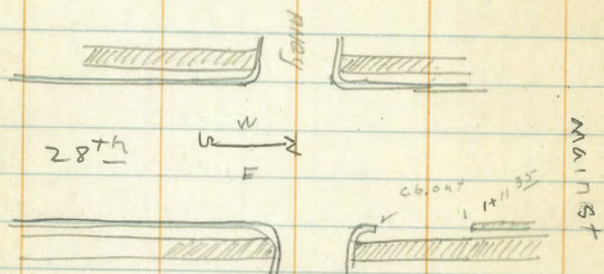
+	4.7	32.2
+5	5.4	31.5
cb (on dirt)	4.9	32.0
EL " "	4.3	32.6
1+68 ^E = start of curb & walk on East		
Ecb	4.87	32.00
2+00		
E cb	6.03	308.4
Gut	6.6	30.3
$\frac{1}{4}$	6.4	30.5
$\frac{1}{4}$	6.1	30.8
$\frac{1}{4}$	6.3	30.6
Gut	7.0	29.9
Wcb	5.83	31.04
2+50 (40' wide)		
Wcb	7.98	28.89
Gut	8.8	28.1
$\frac{1}{4}$	8.6	28.3
$\frac{1}{4}$	8.0	28.9
$\frac{1}{4}$	8.1	28.8
Gut	8.1	28.8
Ecb	7.81	29.06
3+00 = NL Main St		
Ecb	9.64	27.23
Gut	10.1	26.8
$\frac{1}{4}$	9.8	27.1

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$\frac{1}{4}$	9.9	27.0
$\frac{1}{4}$	10.4	26.5
Gut	10.1	26.8
Wcb	9.68	27.19
0+00 = SL Main St		
Wcb	11.64	25.23
Gut	12.7	24.2
$\frac{1}{4}$	12.6	24.3
$\frac{1}{4}$	12.0	24.9
$\frac{1}{4}$	11.8	25.1
Gut	12.5	24.4
Ecb	11.65	25.22
T.P. 0.23	24.53 24.73	24.30 24.50
12.57		
0+50		
Ecb	1.80	22.73
Gut	2.6	21.9
$\frac{1}{4}$	1.8	22.7
$\frac{1}{4}$	1.6	22.9
$\frac{1}{4}$	2.1	22.4
Gut	2.6	21.9
Wcb	1.69	22.84
1+00		
Wcb	4.31	20.22
Gut	5.2	19.3
$\frac{1}{4}$	4.9	19.6
$\frac{1}{4}$	4.4	20.1

$\frac{1}{4}$	4.4	20.1
Gut	4.8	19.7
E cb	4.32	20.21
(1+11 ³⁵ = End of cb on East Walk continues		
cb	4.79	19.74



1+40 th = NL Alley		
E.L. on Alley cb	6.05	18.48
cb on Return	6.12	18.41
Gut	6.7	17.8
$\frac{1}{4}$	6.5	18.0
$\frac{1}{4}$	6.4	18.1
$\frac{1}{4}$	6.8	17.7
Gut	7.5	17.0
cb on Return	6.20	18.33
NL on Alley cb	5.96	18.57
1+60 th = SL Alley		
NL on Alley cb	7.06	17.47
cb on Return	7.29	17.24
Gut	7.9	16.6
$\frac{1}{4}$	7.8	16.7

$\frac{1}{4}$	7.6	16.9
$\frac{1}{4}$	7.7	16.8
Gut	7.9	16.6
cb on Return	7.34	17.19
E.L. (cb covered)	7.0	17.5
2+00		
E cb	9.28	15.25
Gut	11.2	13.3
+2	11.1	13.4
+3	10.2	14.3
$\frac{1}{4}$	9.8	14.7
$\frac{1}{4}$	9.7	14.8
$\frac{1}{4}$	10.1	14.4
Gut	11.2	13.3
W cb	9.36	15.17
2+50		
W cb	11.78	12.75
Gut	13.0	11.5
$\frac{1}{4}$	12.4	12.1
$\frac{1}{4}$	11.8	12.7
$\frac{1}{4}$	11.9	12.6
+7	12.4	12.1
+8	13.3	11.2
Gut	12.7	11.8
E cb	11.74	12.79
T.R	4.55	16.60
	^{1.10}	^{.85}
	12.68	12.05

1640

3+00	NL Colton	
Ecb	6.13	10.27
Gut	6.1	10.3
+3	5.3	11.1
$\frac{1}{4}$	5.4	11.0
$\frac{1}{4}$	5.9	10.5
$\frac{1}{4}$	6.0	10.4
wcb	6.12	10.28
Curb		
WL (on cb)	6.16	10.24
WL on Gut	6.2	10.2
cb	6.5	9.9
$\frac{1}{4}$	6.5	9.9
$\frac{1}{4}$	6.2	10.2
$\frac{1}{4}$	6.1	10.3
Cb	5.8	10.6
+5	5.9	10.5
+6	6.8	9.6
EL (Gut)	6.8	9.6
EL (cb)	6.16	10.24
Quarter		
EL	6.6	9.8
cb	6.1	10.3
$\frac{1}{4}$	6.6	9.8
$\frac{1}{4}$	6.7	9.7
$\frac{1}{4}$	6.5	9.9

28 $\frac{1}{4}$ 1640
St.

29

cb	6.6	9.8
WL	6.3	10.1
Center		
WL	6.6	9.8
cb	7.0	9.4
$\frac{1}{4}$	6.8	9.6
$\frac{1}{4}$	6.8	9.6
$\frac{1}{4}$	7.0	9.4
cb	6.5	9.9
EL	6.6	9.8
Quarter		
EL	7.0	9.4
cb	7.1	9.3
$\frac{1}{4}$	7.4	9.0
$\frac{1}{4}$	6.9	9.5
$\frac{1}{4}$	6.9	9.5
cb	6.7	9.7
WL	6.7	9.7
Curb		
	NO RETURNS ON SE + SW	
WL	6.9	9.5
cb	7.0	9.4
$\frac{1}{4}$	7.1	9.3
$\frac{1}{4}$	7.2	9.2
$\frac{1}{4}$	7.4	9.0
cb	7.3	9.1
EL	7.3	9.1

16.40

20th St.

S.L. Colton

EL	6.8	9.6
cb	7.3	9.1
$\frac{1}{4}$	7.3	9.1
$\frac{1}{2}$	7.3	9.1
$\frac{3}{4}$	7.3	9.1
cb	7.4	9.0
NL	7.4	9.0
T.P.	9.86	11.53

2139

2159

4.87

11.53

11.73

on Fire plug
SE. Colton 28th

x Sec Colton 28th 30'

80' wide 14 cbs 1.3' gts

0+00 = EL 28th

T continued from preceding work

0+00		
SL	12.0	9.4
cb	12.6	8.8
$\frac{1}{4}$	12.0	9.4
$\frac{1}{2}$	11.6	9.8
$\frac{3}{4}$	11.7	9.7
N. Gut	11.6	9.8
N. cb	11.7	10.22
NL	10.8	10.6
0+50		
NL	8.6	12.8
cb	9.4	12.0
$\frac{1}{4}$	11.3	10.1

Plotted - 3/21/28
R.B.H.

21.39

Colton -

30

EL	11.8	9.6
$\frac{1}{4}$	11.3	10.1
cb	12.2	9.2
SL	13.5	7.9
1+00		
SL	13.8	07.6
cb	12.6	8.8
$\frac{1}{4}$	12.0	9.4
$\frac{1}{2}$	11.7	9.7
$\frac{3}{4}$	10.8	10.6
cb	10.1	11.3
NL	7.0	14.4
1+28		
NL	6.6	14.8
+5	9.3	12.1
cb	10.2	11.2
$\frac{1}{4}$	10.4	11.4
$\frac{1}{2}$	11.4	10.0
$\frac{3}{4}$	12.0	9.4
cb	12.4	9.0
+4	12.6	8.8
+6	14.4	7.0
SL	14.2	07.2
1+62		
SL	14.8	06.6
cb	14.2	7.2

2139

Cotton

1/4			13.7	7.7
2			13.1	8.3
1/4			11.3	10.1
+1			9.3	12.1
+7			6.4	15.0
cb			5.4	16.0
T.P.	12.73	25.01 25.21	9.11	12.48
+11			0.8	24.2
NL			0.8	24.2
1+73				
NL			2.5	22.5
cb			3.5	21.5
+3			4.1	20.9
1/4			11.5	14.5
2			14.8	10.2
1/4			19.7	5.3
cb			18.6	6.4
SL			18.4	6.6
2+00				
SL			19.0	6.0
cb			19.8	5.2
1/4			19.7	5.3
2			17.2	7.8
1/4			12.4	12.6
+7			11.4	13.6
+8			9.7	15.3

2501

31

cb			9.7	15.3
NL			8.6	16.4
2+35				
NL			14.5	10.5
cb			15.6	9.4
1/4			16.5	8.5
2			17.4	7.6
1/4			18.0	7.0
cb			19.0	6.0
SL			19.7	5.3
2+67				
SL			18.9	6.1
cb			17.5	7.5
1/4			16.4	8.6
2			14.5	10.5
1/4			14.0	11.0
cb			13.5	11.5
NL			13.0	12.0
3+00				
NL			5.3	20.7
cb			6.0	19.0
1/4			7.3	17.7
2			7.8	17.2
+5			9.3	15.7
+6			13.2	11.8
1/4			15.1	9.9

2501

+2	152	9.8
+3	182	6.8
cb	187	6.3
SL	193	5.7
3+18		
SL	17.1	7.9
cb	152	9.8
+6	13.6	11.4
+11	2.8	22.2
$\frac{1}{4}$	2.8	22.2
Q	3.0	22.0
$\frac{1}{4}$	3.2	21.8
cb	1.9	23.1
NL	0.8	24.2
T.P.	598	2308
	2906	2328
	2926	1.93
3+50		
NL	3.4	25.7
cb	4.3	24.8
$\frac{1}{4}$	4.3	24.8
Q	4.7	24.4
+10	3.3	25.8
$\frac{1}{4}$	3.3	25.8
cb	5.1	23.0
+1	9.9	19.2
+9	12.7	16.4
SL	18.7	11.4

2906

4+00		
SL	185	10.6
+7	6.6	22.5
cb	4.5	24.6
$\frac{1}{4}$	1.9	27.2
Q	2.8	27.3
$\frac{1}{4}$	2.1	27.0
cb	2.9	26.7
NL	2.0	27.1
4+50		
NL	2.7	26.4
cb	3.3	25.8
$\frac{1}{4}$	3.4	25.7
Q	4.5	24.6
$\frac{1}{4}$	6.1	23.0
cb	8.1	21.0
+7	10.1	19.0
+9	16.5	12.6
SL	19.1	10.0
4+60		
SL	21.1	08.0
+9	17.6	11.5
+10	13.5	15.6
cb	11.9	17.2
$\frac{1}{4}$	8.9	20.2
Q	6.8	22.3

32

2906

$\frac{1}{4}$	5.3	23.8
+5	3.9	25.2
cb	3.7	25.4
NL	3.0	26.1
4+86		
NL	3.5	25.6
cb	4.4	24.7
+8	4.5	24.6
$\frac{1}{4}$	7.3	21.8
±	10.7	18.4
+7	12.0	17.1
$\frac{1}{4}$	15.7	13.4
+5	17.4	11.7
+6	20.0	9.1
cb	22.2	6.9
SL	33.9	05.2
5+05		
SL	21.9	07.2
cb	17.2	11.9
+6	16.9	12.2
+9	12.0	17.1
$\frac{1}{4}$	11.7	17.4
±	10.2	18.9
$\frac{1}{4}$	8.0	21.1
+5	5.0	24.1
cb	4.6	24.5

2906

NL =	3068	3.5	25.6	33
T.P	7.56	3088	5.94	23.12
5+20				23.32
NL			5.1	25.6
cb			6.3	24.4
$\frac{1}{4}$			7.2	23.5
±			8.3	22.4
$\frac{1}{4}$			11.0	19.7
cb			12.4	18.3
+10			16.1	14.6
+11			20.4	10.3
SL			21.7	09.0
5+70				
SL -10 (on flat)			26.7	04.5
SL			20.0	10.7
+5			15.3	15.0
cb			12.7	18.0
$\frac{1}{4}$			9.0	21.7
±			8.0	22.7
$\frac{1}{4}$			7.7	23.0
cb			9.3	21.4
NL			7.9	22.8
6+00 = NL 29 th (60' wide)				
NL			9.6	21.1
cb			10.2	20.5
+5			11.3	19.4

30.68

$\frac{1}{4}$	139	16.8
$\frac{1}{4}$	15.6	15.1
$\frac{1}{4}$	15.5	15.2
cb	14.6	14.1
+11	19.3	11.4
SL	22.3	08.4
+10	26.5 (on flat)	4.2
Curb		
SL-10 (on flat)	26.5	4.2
SL	25.7	05.0
+3	22.1	8.6
cb	21.0	9.7
$\frac{1}{4}$	19.7	11.0
$\frac{1}{4}$	18.2	12.5
$\frac{1}{4}$	15.5	15.2
cb	10.9	20.3
NL	10.2	20.5
Quarter		
NL	10.1	20.6
cb	11.4	19.3
$\frac{1}{4}$	15.0	15.7
$\frac{1}{4}$	18.0	11.7
$\frac{1}{4}$	20.6	10.1
cb	24.0	6.7
SL (on flat)	25.8	04.9

30.68

122
30
10

34

Center

SL (on flat)	25.4	05.3
cb	24.2	6.5
$\frac{1}{4}$	22.0	8.7
$\frac{1}{4}$	20.0	10.6
$\frac{1}{4}$	17.0	16.7
cb	11.7	19.0
NL	11.2	19.5
Quarter		
NL	11.4	19.3
cb	11.8	18.9
$\frac{1}{4}$	14.7	16.0
+10	19.0	11.7
$\frac{1}{4}$	20.4	10.3
$\frac{1}{4}$	23.2	7.5
cb	24.2	6.5
SL (on flat)	25.2	05.5
Curb		
SL (on flat)	25.5	05.2
cb	24.5	6.2
$\frac{1}{4}$	23.3	7.4
$\frac{1}{4}$	21.4	09.3
$\frac{1}{4}$	16.3	14.4
cb	12.1	18.6
NL	11.4	19.3

30,68

0700 = EL 29th

NL	11.8	18.9
cb	12.8	17.9
$\frac{1}{4}$	18.8	11.9
$\frac{1}{4}$	21.4	09.3
$\frac{1}{4}$	23.8	6.9
cb	25.1	5.6
S.L. (on flat)	25.1	05.6
0730		
SL (on flat)	25.6	05.1
cb	22.8	7.9
$\frac{1}{4}$	21.8	8.9
$\frac{1}{4}$	21.4	09.3
$\frac{1}{4}$	19.5	11.2
cb	15.3	15.4
NL	15.3	15.4
0745		
NL	13.8	16.9
cb	13.1	17.6
$\frac{1}{4}$	12.6	18.1
$\frac{1}{4}$	12.6	18.1
$\frac{1}{4}$	11.4	18.3
+2	10.5	20.2
cb	10.5	20.2
+2	13.0	15.7
S.L.	22.6	08.1

30,68

35

+10 (on flat)

26.8	3.9
+05	
SL-5	22.2
SL	15.3
+3	11.0
cb	6.3
$\frac{1}{4}$	4.7
$\frac{1}{4}$	4.9
$\frac{1}{4}$	5.2
cb	6.2
NL	6.4
24.3	
+20	
NL	3.6
cb	3.1
$\frac{1}{4}$	2.8
$\frac{1}{4}$	2.7
$\frac{1}{4}$	2.6
cb	2.8
27.9	
S.L. (going down)	10.5
20.2	
+55	
SL	3.5
cb	2.3
$\frac{1}{4}$	2.8
$\frac{1}{4}$	2.1
$\frac{1}{4}$	1.8
cb	1.6
27.2	
28.4	
27.9	
28.6	
28.9	
29.1	

3068

NL	1.0	29.7
2+00		
NL	0.5	30.2
cb	1.1	29.6
$\frac{1}{4}$	1.2	29.5
$\frac{1}{4}$	1.7	29.0
$\frac{1}{4}$	2.2	28.7
cb	2.9	27.8
SL	3.6	27.1
2+32		
SL	8.4	22.3
cb	7.1	23.6
$\frac{1}{4}$	5.8	24.9
$\frac{1}{4}$	4.5	26.2
$\frac{1}{4}$	3.3	27.4
cb	2.2	28.5
NL	0.8	29.9
2+60		
NL	2.7	28.0
cb	4.4	26.3
$\frac{1}{4}$	5.8	24.9
$\frac{1}{4}$	7.8	22.9
$\frac{1}{4}$	10.0	20.7
cb	12.0	18.7
SL	14.3	16.4
T.P.	8.20	19.06
	27.26	19.26
	27.46	11.62

27.26

Colton

36

3+00		
SL	2.09	06.4
cb	17.6	9.7
$\frac{1}{4}$	14.5	12.8
$\frac{1}{4}$	10.9	16.4
$\frac{1}{4}$	7.0	20.3
cb	4.6	22.7
NL	2.0	25.3
3+30		
NL	3.9	23.4
cb	7.0	20.3
$\frac{1}{4}$	11.2	16.1
$\frac{1}{4}$	15.4	11.9
$\frac{1}{4}$	18.3	9.0
cb	21.0	6.3
SL	24.0	03.3
+1.5	2.85	
T.P.	1.95	15.73
		15.93
3+55		12.98
SL	17.2	14.28
cb	14.1	14.48
$\frac{1}{4}$	12.2	
$\frac{1}{4}$	10.0	
$\frac{1}{4}$	7.7	
cb	5.3	
NL	2.1	

15.73

4+00				
NL		12.7	03.0	
cb		15.0	00.7	
$\frac{1}{4}$		16.1	-00.4	
$\frac{1}{2}$		16.5	-00.8	
$\frac{3}{4}$		17.0	-1.3	
cb		17.3	-1.6	
SL		17.2	-1.5	
4+35				
SL		9.4	06.3	
cb		10.6	5.1	
$\frac{1}{4}$		13.7	2.0	
$\frac{1}{2}$		14.5	01.2	
$\frac{3}{4}$		14.9	0.8	
cb		15.3	0.4	
NL		15.0	00.7	
T.P.	12.26	27.90	15.64	15.84
		28.10	0.09	
4+80				
NL		13.2	14.7	
cb		12.0	15.9	
$\frac{1}{4}$		11.0	16.9	
$\frac{1}{2}$		9.1	18.8	
$\frac{3}{4}$		7.7	20.2	
cb		6.5	21.4	
SL		5.0	22.9	
5+25				

Colton

27.90

SL		2.8	25.1	37
cb		1.3	26.6	
$\frac{1}{4}$		0.0	27.9	
$\frac{1}{2}$	0.6		27.3	
$\frac{3}{4}$	1.0			
cb	0.1			
NL		1.0	26.9	
5+50				
NL		3.5	24.4	
cb		3.0	24.9	
$\frac{1}{4}$		3.2	24.7	
$\frac{1}{2}$		2.4	25.5	
$\frac{3}{4}$		3.6	24.3	
cb		5.8	22.1	
SL		7.9	20.0	
T.P.	1.61	26.16	24.55	
		26.36	24.75	
6+00 = NL 30 th		3.35		
SL		13.7	12.5	
cb		13.2	13.0	
$\frac{1}{4}$		11.8	14.4	
$\frac{1}{2}$		10.4	15.8	
$\frac{3}{4}$		9.6	16.6	
cb		8.6	17.6	
NL		7.7	18.5	
T.P.	12.64	38.48	25.84	
		38.68	26.04	
T.P.	8.60	45.00	36.40	
		45.20	36.60	

T.P. 42.35
2.65 ~~42.55~~

(Main 30)
BM SE in Bolt Top Hyd 42.32

Hyd. Hd. → Hydrant probably moved in grading
at Main St.

Blk-16- Gardner's Add Melough

20' wide
X SEC Alley Between 14 & 15 13 roadway + C 38

0+00 = W.L. 15TH

B.M. S.W. B.P. 15 + C 76.98
T.P. 0.56 77.54

0+00
N cb 9.21 68.33
Gut 9.38 68.16
E 10.44 67.10
Gut 10.95 66.59
S cb 10.74 66.80

Platted
5-30-1928
G.B.H.

0+17 west end of retaining walls on N & South

S.L. + 0.4 on wall 6.06 71.48
S.L. + 0.4 on ground 6.4 71.1
E 7.1 70.4
N.L. 5.0 72.5
+ 0.2 on wall 4.39 73.15

Yardage 5/14/28
T.S.H.

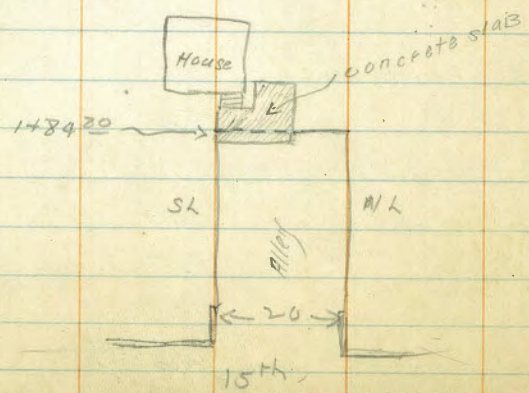
0+32
N.L. 4.3 73.2
E 5.4 72.1
E + 9.3 = Fence (no good) 5.4 72.1
S.L. 5.6 71.9

0+73 = double garage on North (dirt floors)

S.L. 5.0 72.5
E 4.5 73.0
N.L. 4.0 73.5
+ 0.2 Garage doors 4.0 73.5

7754

T.P.	5.40	78.33	4.61	72.93
0+96 =	±	garage on North	(dirt floor)	
N.L.		4.5		73.8
1+16 =	±	garage on South	(dirt floor)	
N.L.		4.4		73.9
±		5.1		73.2
±+9.6		(garage door)	5.3	73.0
1+63				
S.L.		5.3		73.0
±		5.2		73.1
±+9.6 =		(Shed)	4.3	74.0
1+84 ²⁰		End of Alley		
(S.L.		on cement walk	5.06	73.27
±		" " "	4.90	73.43
±+9.7		Shed on North	4.7	73.6
T.P.	5.46	78.55	5.24	78.09
T.P.			1.56	76.99
		BM		76.98
				.01



Madison Ave
39

X Sec 37 th E/CaJora + Mission		
0+00 =	N x E/CaJora	
B.M.	S.W. B.P. E/CaJora	373.50
T.P.	920	382.70
0+00	on pavement (55.6 wide)	373.50
Ecb		7.37
Gut		7.86
±		7.47
±		7.26
±		7.38
Gut		7.75
Web		7.13
0+50	(55.7 wide)	
Web		6.70
Gut		7.4
±		6.8
±		6.7
±		7.0
Gut		7.5
Ecb		7.01
0+77 =	± drive on West	
Gut		6.85
1+00	(55.6 wide)	
Ecb		6.59
Gut		7.3
±		6.6

Plotted 5-21-1928
C.B.H.

38270

♀	6.2	376.5
$\frac{1}{4}$	6.3	376.4
Gut	6.9	375.8
Wcb	6.13	376.57
Cb out from 1+31 ⁴⁰ to Alley Return on East		
1+42 ¹⁰ = SL Alley (55.6 wide)		
WL on Alley cb	5.31	377.39
cb on Return	5.64	377.06
Gut	6.4	376.3
$\frac{1}{4}$	5.9	376.8
♀	5.9	376.8
$\frac{1}{4}$	6.2	376.5
Gut	6.6	376.1
cb on Return	6.12	376.58
EL on Alley cb	6.05	376.65
1+57 ¹⁰ = NL Alley		
EL on Alley cb	5.80	376.90
cb on Return	6.02	376.68
Gut	6.4	376.3
$\frac{1}{4}$	6.2	376.5
♀	5.7	377.0
$\frac{1}{4}$	5.9	376.8
Gut	6.2	376.5
cb on Return	5.52	377.18
WL on Alley cb	5.10	377.60
2+00	(55.45 wide)	

Wcb	5.12	377.58
Gut	6.0	376.7
$\frac{1}{4}$	5.3	377.4
♀	5.3	377.4
$\frac{1}{4}$	5.7	377.0
Gut	6.6	376.1
Gb	5.71	376.99
2+27 = ♀ drive on East		
Gut on drive	5.95	376.75
2+50 (55.55 wide)		
Ecb	5.14	377.56
Gut	5.9	376.8
$\frac{1}{4}$	5.3	377.4
♀	4.7	378.0
$\frac{1}{4}$	4.9	377.8
Gut	5.4	377.3
Wcb	4.61	378.09
3+00 (55.60 wide)		
Wcb	4.01	378.69
Gut	4.8	377.9
$\frac{1}{4}$	4.4	378.3
♀	4.4	378.3
$\frac{1}{4}$	4.8	377.9
Gut	5.4	377.3
EL	4.78	377.92
3+55 = ♀ drive on West		

38270

40

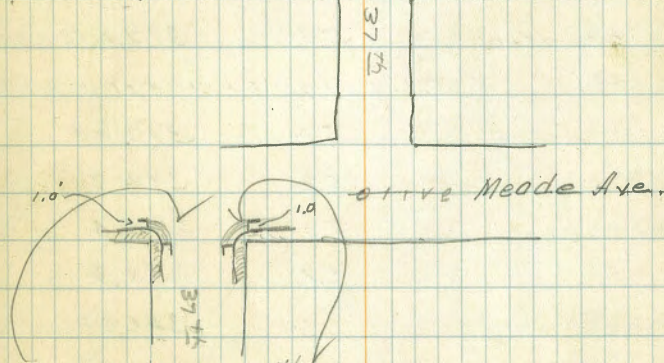
382.70

Ecb	4.36	378.34
Gut	5.1	377.6
$\frac{1}{4}$	4.4	378.3
ϕ	3.9	378.8
$\frac{1}{4}$	3.9	378.8
Gut (on drive)	3.83	378.87
4+10 = ϕ drive on East		
Wcb	2.77	379.93
Gut	3.7	379.0
$\frac{1}{4}$	3.1	379.6
ϕ	3.4	379.3
$\frac{1}{4}$	3.7	379.0
Gut (on drive)	4.43	378.27
4+65 = ϕ drive on West (55.5 wide)		
Ecb	3.30	379.40
Gut	4.0	378.7
$\frac{1}{4}$	3.3	379.4
ϕ	2.9	379.8
$\frac{1}{4}$	2.6	380.1
Gut (on drive)	2.67	380.03
(5+11 = ϕ drive on East		
Gut on drive	3.19	379.51
5+47 = ϕ drive on West (55.5 wide)		
Gut (on drive)	2.02	380.68
$\frac{1}{4}$	2.0	380.7
ϕ	2.0	380.7

382.70

41

$\frac{1}{4}$	2.5	380.2
Gut	3.4	379.3
Ecb	2.63	380.07
6+07 ²⁰ = SL Olive (55.2 wide)		
Ecb	2.08	380.62
Gut	2.4	380.3
$\frac{1}{4}$	2.0	380.7
ϕ	1.5	381.2
$\frac{1}{4}$	1.4	381.3
Gut	1.1	381.6
Wcb	0.65	382.05
T.P.	4.05	385.92
	1.33	381.87



NL Olive 37th on NE + NW returns culvert goes around return.

E. Olive St End of 6" pipe (Flange)	6.61	378.81
W Olive St " " " "	6.18	379.24
0+00 = NL Olive ^{Meade} (35.7 wide)		
Ecb	5.53	379.89
FL pipe	6.53	378.89

385.42

$\frac{1}{4}$	5.6	379.8
$\frac{1}{4}$	5.3	380.1
$\frac{1}{4}$	5.3	380.1
FL pipe	6.6	379.26
W cb	5.18	379.24 380.24
0+57 (35.7 wide) = $\frac{1}{4}$ drive on East		
W cb	4.97	380.45
Gut	5.8	379.6
$\frac{1}{4}$	5.3	380.1
$\frac{1}{4}$	5.3	380.1
$\frac{1}{4}$	5.4	380.0
Gut (on drive)	5.94	379.48
1+09 (35.7 wide) ($\frac{1}{4}$ drive on E & W)		
E Gut (on drive)	5.74	379.68
$\frac{1}{4}$	5.2	380.2
$\frac{1}{4}$	5.0	380.4
$\frac{1}{4}$	5.2	380.2
Gut (on drive)	5.34	380.08
1+50 (35.6 wide)		
W cb	4.77	380.65
Gut	5.4	380.0
$\frac{1}{4}$	5.0	380.4
$\frac{1}{4}$	4.8	380.6
$\frac{1}{4}$	5.1	380.3
Gut	5.6	379.8

385.42

E cb	5.08	380.34	42
1+95 (35.65 wide) = ($\frac{1}{4}$ drive on East)			
E Gut (on drive)	5.39	380.03	
$\frac{1}{4}$	5.0	380.4	
$\frac{1}{4}$	4.7	380.7	
$\frac{1}{4}$	4.9	380.5	
Gut	5.2	380.2	
W cb	4.55	380.87	
2+08 $\frac{1}{4}$ drive on West			
Gut (on drive)	5.00	380.40	
Curb broken out on East from 2+13 ⁴⁰ to 2+34			
2+50 (35.6 wide)			
W cb	4.30	381.12	
Gut	5.1	380.3	
$\frac{1}{4}$	4.7	380.7	
$\frac{1}{4}$	4.5	380.9	
$\frac{1}{4}$	4.8	380.6	
Gut	5.4	380.0	
E cb	4.90	380.52	
3+11 ⁴⁰ = $\frac{1}{4}$ drive on West			
E cb	4.66	380.76	
Gut	5.2	380.2	
$\frac{1}{4}$	4.7	380.7	
$\frac{1}{4}$	4.3	381.1	
$\frac{1}{4}$	4.5	380.9	
Gut (on drive)	4.79	380.63	

T.P.	6.42	387.46	4.38	381.04
3+55	£ drive on East	(35.5 wide)		
Wcb		6.10		381.36
Gut		6.8		380.7
$\frac{1}{4}$		6.3		381.2
£		6.2		381.3
$\frac{1}{4}$		6.6		380.9
E Gut (on drive)		7.04		380.42
{ 4+05 = £ drive on East				
{ Gut (on drive)		7.00		380.50
4+39	£ drive on East			
Gut (on drive)		6.66		380.80
4+50	(35.5 wide) = £ drive on West			
Ecb		6.18		381.28
Gut		6.8		380.7
$\frac{1}{4}$		6.2		381.3
£		5.0		382.5
$\frac{1}{4}$		6.0		381.5
Gut (on drive)		6.34		381.12
{ 4+73 = £ drive on East				
{ Gut on drive		6.60		380.86
5+00	(35.6 wide)			
Wcb		5.61		381.85
Gut		6.2		381.3
$\frac{1}{4}$		6.0		381.5

£		5.8		381.7
$\frac{1}{4}$		6.1		381.4
Gut		6.5		381.0
Ecb		6.02		381.44
5+50 = £ drive on East (35.5 wide)				
E Gut		6.25		381.21
$\frac{1}{4}$		5.9		381.6
£		5.6		381.9
$\frac{1}{4}$		5.9		381.6
Gut		6.0		381.5
Wcb		5.52		381.94
6+01 = SL Monroe (35.5 wide)				
Wcb		5.42		382.04
Gut		5.76		381.70
$\frac{1}{4}$		5.6		381.9
£		5.4		382.1
$\frac{1}{4}$		5.6		381.9
Gut		6.1		381.4
Ecb		5.72		381.74
Curb				
EL (on cb)		5.78		381.68
EL (Gut)		6.3		381.2
cb		5.8		381.7
$\frac{1}{4}$		5.4		382.1
£		5.3		382.2
$\frac{1}{4}$		5.4		382.1

387.46

cb	5.6	381.9
WL (on gut)	5.8	381.7
WL (on cb)	5.30	382.16
Quarter		
WL	5.2	382.3
cb	5.2	382.3
$\frac{1}{4}$	5.2	382.3
$\frac{1}{4}$	5.2	382.3
$\frac{1}{4}$	5.3	382.2
cb	5.6	381.9
EL	5.9	381.6
Center		
EL	5.7	381.8
cb	5.5	382.0
$\frac{1}{4}$	5.3	382.2
$\frac{1}{4}$	5.3	382.2
$\frac{1}{4}$	5.2	382.3
cb	5.1	382.4
WL	5.1	382.4
Quarter		
WL	5.1	382.4
cb	5.1	382.4
$\frac{1}{4}$	5.1	382.4
$\frac{1}{4}$	5.1	382.4
$\frac{1}{4}$	5.2	382.3
cb	5.4	382.1
EL	5.8	381.7

387.46

44

Curb		
6" Drain crosses 37 th on N curbline Mantoe		
EL on cb	5.63	381.83
EL on Flowline pipe	6.40	381.06
cb	5.7	381.8
$\frac{1}{4}$	5.4	382.1
$\frac{1}{4}$	5.3	382.2
$\frac{1}{4}$	5.2	382.3
cb	5.3	382.2
WL on FL pipe	6.29	381.17
WL (on cb)	5.37	382.09
0+00 = NL MANTOE (35.6 wide)		
Wcb	5.39	382.07
Gut	5.6	381.9
$\frac{1}{4}$	5.5	382.0
$\frac{1}{4}$	5.4	382.1
$\frac{1}{4}$	5.7	381.8
Gut	6.1	381.4
E cb	6.67	380.79
0+44 $\frac{1}{4}$ drive on west		
E cb	5.89	381.57
Gut	6.3	381.2
$\frac{1}{4}$	6.0	381.5
$\frac{1}{4}$	5.5	382.0
$\frac{1}{4}$	5.6	381.9
Gut on drive	6.06	381.40

387.46

1+00	(35.7 wide)		
W cb	5.77	381.69	
Gut	6.2	381.3	
$\frac{1}{4}$	6.0	381.5	
$\frac{1}{4}$	5.8	381.7	
$\frac{1}{4}$	6.1	381.4	
Gut	6.6	380.9	
E cb	6.04	381.42	
1+50			
E cb	6.23	381.23	
Gut	6.8	380.7	
$\frac{1}{4}$	6.4	381.1	
$\frac{1}{4}$	6.0	381.5	
$\frac{1}{4}$	6.3	381.2	
Gut	6.5	381.0	
W cb	5.93	381.53	
2+00	(35.6 wide)		
W cb	6.14	381.32	
Gut	6.6	380.9	
$\frac{1}{4}$	6.3	381.2	
$\frac{1}{4}$	6.1	381.4	
$\frac{1}{4}$	6.5	381.0	
Gut	7.0	380.5	
E. cb	6.46	381.00	
2+50			
E cb	6.52	380.94	

387.46

45

Gut	7.1	380.4	
$\frac{1}{4}$	6.7	380.8	
$\frac{1}{4}$	6.3	381.2	
$\frac{1}{4}$	6.3	381.2	
Gut	6.8	380.7	
W. cb	6.31	381.15	
3+00	(35.6 wide)		
W cb	6.52	380.94	
Gut	7.20	380.3	
$\frac{1}{4}$	6.6	380.9	
$\frac{1}{4}$	6.5	381.0	
$\frac{1}{4}$	6.9	380.6	
Gut	7.3	380.2	
E cb	6.92	380.54	
3+45 (E curv line) = SL station	Madison Ave. Mission Drive (sec. taken on diag)		
E cb	6.95	380.51	
Gut	7.4	380.1	
$\frac{1}{4}$	6.9	380.6	
$\frac{1}{4}$	6.8	380.7	
$\frac{1}{4}$	7.0	380.5	
Gut	7.2	380.3	
W cb (station 359)	6.72	380.74	
T.P.	0.69	386.77	
	B.M. Chertree MORTUARY SEBP	386.68	
		.09	

0+00 = W.L. Alabama.

D.P.E.
93.93

Sta	+	H.I.	-	ELCV
B.M.	2.89	309.46 402.89		306.57 298.94
T.P.	1.31	300.25 323.68	10.52	314.37
			2.26	298.0
			2.85	297.4
cb			1.22	299.0
cb			2.03	298.2
0+00 cb N.L.			1.24	299.0
N.L.			1.4	298.9
+2			1.4	298.9
+5			1.9	298.4
±			1.8	298.5
+8			1.9	298.4
+8.5			2.5	297.8
S.L.			2.9	297.4
cb. S.L.			1.88	298.4
0+10 S.L.			2.8	297.5
±			2.5	297.8
+7			2.2	298.1
N.L.			2.0	298.3
0+25 N.L.			3.1	297.2
±			3.5	296.8
S.L.			3.7	296.6
0+50 S.L.			5.3	295.0
±			5.2	295.1
N.L.			4.8	295.5

X Section E-W Alley Block 129 Univ Hts.

Apr 26-28
Leudon

46

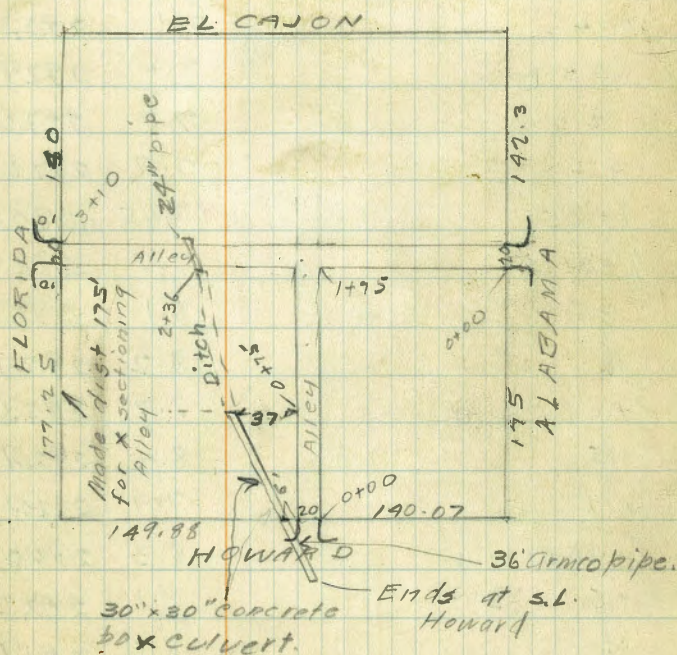
E.B.N.E. Elcajon & Alabama.

Gutter grade N end N ret.

" " S " S "

top of curb w end N ret.

" " " W " S "



stg.	+	H.I.	-	El.
		300.25		
0+75	N.L.		6.1	294.2
	±		6.2	294.1
	S.L.		6.3	294.0
0+80			6.74	293.5
1+00	S.L.		7.2	293.1
	±		7.1	293.2
	N.L.		7.1	293.2
1+25	N.L.		7.4	292.9
	±		7.7	292.6
	S.L.		7.7	292.6
1+25			7.65	292.6
1+31	S.L.		7.9	292.4
	+5		8.1	292.2
	±		8.2	292.1
	+2		7.7	292.6
	+5		8.2	292.1
	N.L.		7.9	292.4
1+40.00	N.L.		8.3	292.0
	+5		8.1	292.2
	±		8.6	291.7
	+6		8.7	291.6
	S.L.		8.3	292.0

bottom of Vekt. in Fdn. of houses side

top sill Garage S. side

Sta.	+	H.I.	-	Elev.
		300.20		
1+50.07	S.L.		8.6	291.7
	+6		9.0	291.3
	☒		8.9	291.4
	N.L.		8.5	291.8
1+60.07	N.L.		8.7	291.6
	☒		9.0	291.3
	S.L.		9.1	291.2
1+80	S.L.		8.9	291.4
	☒		9.0	291.3
	N.L.		9.0	291.3
2+00	N.L.		9.0	291.3
	☒		8.9	291.4
	S.L.		9.1	291.2
2+25	S.L.		9.0	291.3
	☒		8.7	291.6
	N.L.		8.7	291.6
2+28	N.L.		8.5	291.8
	☒		8.8	291.5
	+8		9.0	291.3
	S.L.		9.4	290.9
2+36	S.L.		10.6	289.7
	+3		9.1	291.2
	☒		8.7	291.6
	+5		8.8	291.5
	R.L.		8.4	291.9

Location Notes
E-W Alley.

48

Sta.	+	H.I.	-	E.I.
		6.64	298.54	291.90
10+32	E end 2 car garage	19.7' N	Conc. floor	
		1.64		298.9
0+99	W end same garage	20.0 N		
		1.90		296.6
0+72.5	E end of house	15' S.		
		3.64		294.9
1+15	W end of same house	15' S.		
		3.65		294.9
0+93	☒ single garage	7' N	earth floor	
		4.9		293.6
1+18	E end 2 car garage	1.4' S	earth floor	
		6.3		292.7
1+38	W end same garage	1.2' S		
		6.4		292.1
1+51	E end of 4 car garage	5.8' N	earth floor	
		6.4		292.1
1+82	W end same garage	6.4' N		
		6.6		291.9
	Bottom of culvert	S End.		

Sta		H.I.	E.I.
		300.25	
2+50	N.L	7.6	292.7
	Φ	8.5	291.8
	S.L.	8.6	291.7
2+60	S.L.	8.6	291.7
	Φ	8.2	292.1
	N.L	8.5	291.8
2+75	N.L	6.8	293.5
	+3	6.9	293.4
	+6	7.9	292.4
	Φ	7.9	292.4
	S.L	8.1	292.2
3+00	S.L.	6.6	293.7
	Φ	6.7	293.6
	+5	6.6	293.7
	N.L	6.1	294.2
3+10	cb	5.05	295.2
	N.L	5.3	295.0
	+5	5.6	294.7
	Φ	5.8	294.5
	S.L	5.6	294.7
	cb	5.50	294.8
		5.65	294.6
		5.05	295.2
T.P.		8.35	291.90

Location Notes E-W Alley.

49

Sta H.I. - E.I.

298.59

1+60 E end 3 car garage 0.4' in alley
on South. earth floor.

7.2 291.3

0+84 W end same garage on S.L

7.0 291.5

Location Note N & S Alley

T.P. 4.24 296.14 291.90

1+44 S end of corner garage 1.4' E.
earth floor 4.0 292.1

1+22 N end 2 car garage 2' E. earth floor

5.8 290.3

1+01 S end same garage 1.9' E

6.0 290.1

← top N curb at E.L. Florida st.

0+47 Φ Single garage 0.2' in Alley
on W. side 5.41 290.7

← top S curb at E.L. Florida.

top curb E. end S return

" E. " N "

0+00 = N.L. Howard.

Sta	+ H.I.	- E.L.
T.P.	3.99	295.89
		4.92
		291.0
		5.28
		290.6
cb w.l.		5.22
		290.9
W.L.		5.20
		290.9
±		5.3
		290.6
E.L.		5.1
		290.8
cb		4.76
		291.1
0+16 E.L.		5.6
		290.3
±		4.9
		291.0
W.L.		5.2
		290.7
0+25 w.l.		5.2
		290.7
+2		4.6
		291.3
±		4.8
		291.1
E.L.		5.3
		290.6
0+50 E.L.		5.0
		290.9
±		4.7
		291.2
W.L.		5.2
		290.7
0+50		5.19
		290.7
0+75 w.l.		5.1
		290.8
±		4.7
		291.2
E.L.		5.4
		290.5
0+91 E.L.		5.6
		290.3
±		5.5
		290.4
W.L.		5.3
		290.6

X Sections N-S Alley Block 129
UNIV. HTS.

50

curb N. End of E. return.

" " " " W. "

top W curb

top E curb

cement floor Garage w. side

Sta	+	H.I.	-	E.L.
		295.89		
1+00 W.L.			5.0	290.9
⊕			5.1	290.8
E.L.			5.8	290.1
1+21.5 E.L.			5.1	290.8
⊕			4.8	291.1
W.L.			4.4	291.5
1+25 W.L.			4.4	291.5
⊕			4.7	291.2
E.L.			4.5	291.4
1+50 E.L.			4.0	291.9
⊕			4.2	291.7
W.L.			4.0	291.9
1+75 W.L.			4.6	291.3
⊕			4.2	291.7
E.L.			4.0	291.9
B.M.			5.34	290.6
T.P.	2.80	294.70	3.99	291.90
			2.71	286.99
T.P.	11.88	303.78		291.90
T.P.	5.45	309.15	0.09	303.70
B.M.			2.60	307.55

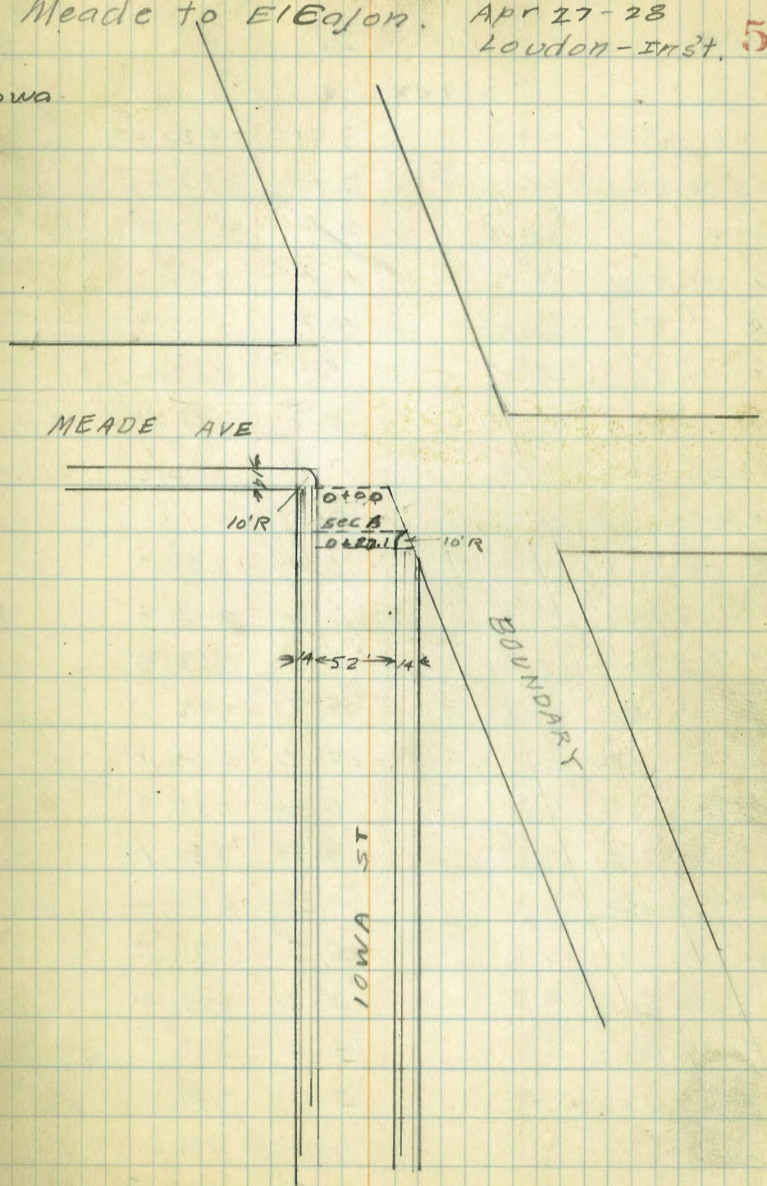
C.B. N.W. Florida & Howard.

Flow Line N End of 30" x 30" conc. box.

→ Nail in tel. pole.

X Sections Iowa St From
 Meade to E/Eagon. Apr 27-28
 Loudon-Inst. 52

Sta	+	H.I.	-	E.I.	
B.M	3.81	387.08		383.22	N.W. Meade & Iowa
0+00	cb		4.50	382.53	
Gut.			5.2	381.8	
+10			5.2	381.8	
1/4			4.9	382.1	
⊕			4.4	382.6	
+7			4.2	382.8	
1/4			4.4	382.6	
cb			4.4	382.6	Int. w. Boundary
+2			4.2	382.8	of S.W. Meade
Sec. A	cb		3.96	383.07	E. end Ret
E.L. Boundary			4.4	382.6	
cb (Ground)			4.5	382.5	
1/4			4.5	382.5	
+4			4.3	382.7	
⊕			4.6	382.6	
1/4			5.2	381.8	
Gut.			5.5	381.5	
w. cb			4.67	382.36	
0+27.1	cb (w)		4.68	382.35	
Gut.			5.6	381.4	
1/4			5.2	381.8	
⊕			4.7	382.3	
1/4			4.5	382.5	
Gut			4.6	382.4	



Cont Fr. P52

Sta.	+	H.I	-	E.I
		387.03		
0+27.1 E.cb.		3.91		383.12
0+50 E.cb		3.97		383.06
Gut.		4.9		382.1
1/4		4.8		382.2
⊕		4.7		382.3
1/4		5.4		381.6
Gut.		5.7		381.3
w.cb.		4.81		382.22
1+00 w.cb		5.19		381.84
Gut.		6.1		380.9
1/4		5.6		381.4
+7		5.0		382.0
⊕		4.9		382.1
1/4		5.0		382.0
Gut.		5.4		381.9
E.cb		4.39		382.64
1+50 E.cb		4.61		382.42
Gut.		5.5		381.5
1/4		5.2		381.8
⊕		5.3		381.7
+6		5.4		381.6
1/4		6.0		381.0
Gut.		6.5		380.5
w.cb		5.46		381.57

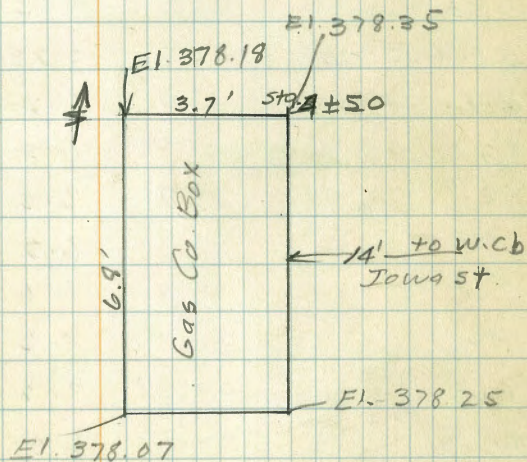
Sta.	+	H.I	-	E.I
		387.03		
2+00 w.cb		5.74		381.29
Gut.		6.7		380.3
1/4		6.4		380.8
+7		5.8		381.2
⊕		5.6		381.4
1/4		5.7		381.3
Gut.		6.0		381.0
E.cb		4.97		382.06
2+50 E.cb		5.28		381.75
Gut.		6.0		381.0
1/4		5.9		381.1
⊕		5.8		381.2
+6		5.9		381.1
1/4		6.3		380.7
+5		6.7		380.3
Gut.		6.7		380.3
w.cb.		6.17		380.86
3+00 w.cb.		6.49		380.54
Gut.		7.4		377.6
+7		7.2		379.8
1/4		6.7		380.3
⊕		6.0		381.0
1/4		6.1		380.9
Gut.		6.5		380.5

Cont Fr P. 53

54

Sta.	+	H.I.	-	E.I.
		387.03		
3+00	E.cb.	5.55		381.48
3+50	E.cb.	5.87		381.16
	Gut.	6.7		380.3
	1/4	6.5		380.5
	±	6.4		380.6
	+8	6.7		380.3
	1/4	7.1		379.9
	+7	7.6		379.4
	Gut.	7.6		379.4
w.cb.	2.90	383.14	6.79	380.34
A+50	(Brix) w.cb.	3.27		379.87
	Gut.	4.2		378.9
	+6	4.3		378.8
	1/4	3.7		379.4
	+9	3.2		379.9
	±	3.2		379.9
	1/4	3.2		379.9
	Gut.	3.4		379.7
	E.cb.	2.27		380.87
4+50	E.cb.	3.81		379.33
	Gut.	4.4		378.7
	+8	4.6		378.5
	1/4	4.5		378.6
	±	4.5		378.6

Sta.	+	H.I.	-	E.I.	
		383.14			
A+50	1/4			5.1	
	Gut			5.5	
	w.cb.			9.71	378.4
	M.H. sta 4+55			4.52	



Cont Fr. P. 54.

Sta	+	H.I.	-	EI
		383.14		
4+60	w.cb		5.07	378.1
	Gut		5.9	377.2
	1/4		5.3	377.8
	+4		5.0	378.1
	£		4.8	378.3
	1/4		4.8	378.3
	+3		5.0	378.1
	Gut		4.6	378.5
	E.cb		4.05	379.09
5+00	E.cb.		5.28	377.86
	Gut.		6.2	376.9
	1/4		6.2	376.9
	£		6.2	376.9
	+9		6.3	376.8
	1/4		6.6	376.5
	+7		7.2	376.9
	Gut		7.2	376.9
	w.cb		6.31	376.85
5+50	w.cb		7.74	375.40
	Gut.		8.6	374.5
	+7.		8.5	374.6
	1/4		8.1	375.0
	£		7.7	375.4
	1/4		7.6	375.5

3 hr.

P

55

Sta	+	H.I.	-	EI
		383.14		
	Gut.		7.7	375.4
	E.cb.		6.80	376.34
	+5+94 E.cb		8.10	375.04
	Gut		8.9	374.2
	1/4		8.5	374.6
	£		8.6	374.5
	1/4		8.7	374.4
	Gut.		9.5	373.6
	w.cb		9.09	374.05
	6+00 w.cb.		9.24	373.90
	Gut		9.75	373.39
	1/4		9.17	373.97
	£		8.72	374.42
	1/4		8.78	374.36
	Gut.		8.99	374.15
	E.cb.		8.26	374.88
	T.P.	4.38	386.11	1.41
	B.M			2.90
				381.73
				383.21

Sta 6+00 = N.L. El Cajon

Section 6+00 taken on pavement.

Ground, 6+00 same as pavement.

Curb out - on both sides Tawa St
From Sta 5+50 to Sta. 5+60

0+00 = S.L. Upas St.

Stg	+	H.I	-	EI	
B M	8.76	108.76		100	(Assumed)
T.P.	5.72	113.11	1.37	107.39	
T.P.	5.25	111.39	6.97	106.14	
Cb			5.70	105.7	
Gut.			6.09	105.3	
±			5.91	105.5	
Gut. w.l.			5.62	105.8	
Cb			5.15	106.2	
0+00 Cb W.L.			5.07	106.3	
Pav.			5.49	106.1	
± Pav.			5.76	105.6	
E.L Pav			5.76	105.6	
Cb E.L.			5.49	105.9	
0+00 EL (Ground)			5.5	105.9	324.9
±			5.7	105.7	324.7
W.L.			5.2	106.2	325.2
0+03 W.L.			4.9	106.5	325.5
±			5.3	106.1	325.1
+3			5.5	105.9	324.9
E.L			5.2	106.2	325.2
0+25 E.L			5.3	106.1	325.1
±			5.4	106.0	325.0
+4			5.4	106.0	325.0
W.L			5.0	106.4	325.4

X Section's Alley Block 3

Frory HTS

Apr 27-28 56
Louden-Inst

C.P. N.W. Thorn & 31st

518.98

100.00

218.98

Constant
to raise each
elevation

E. return

E. return

E. return

Gutter on 3 cblines Upas

W. ret

W. ret.

Plotted

5/2/28

T.G.H.

5/17/28

T.G.H.

218.98

106.3

325.28

See Book 1242 P 44

For Notes on garages etc.

cont

Sta	+	H.I	-	E.I
		111.39		
0+50 W.L.			5.0	106.9 325.4
+4			5.4	106.9 325.8
±			5.3	106.1 325.1
E.L.			5.4	106.0 325.0
0+75 E.L.			5.4	106.0 325.0
+4			5.4	106.0 325.0
±			5.2	106.2 325.2
+3.5			5.5	105.9 324.9
W.L.			4.9	106.5 325.5
T.P.	5.75	112.63	4.51	106.88 325.88
1+00 W.L.			5.5	107.1 326.1
+4			6.0	106.6 325.6
±			5.9	106.7 325.7
E.L.			6.0	106.6 325.6
1+25 E.L.			5.8	106.8 325.8
+4			6.2	106.4 325.4
±			5.9	106.7 325.7
W.L.			5.5	107.1 326.1
1+50 W.L.			4.9	107.7 326.7
+5			5.7	106.9 325.9
±			5.8	106.8 325.8
E.L.			6.1	106.5 325.9
FLOOR			6.35	106.3 325.3

Sta	+	H.I	-	E.I
		112.63		
1+75 W.L.			4.6	108.0 327.0
±			5.4	107.2 326.2
+3			5.8	106.8 325.8
E.L.			6.0	106.6 325.6
Gar. floor sta 1+85			5.75	106.9 325.9
1+85 E.L.			5.6	107.0 326.0
±			5.4	107.2 326.2
+2.5			5.2	107.4 326.4
W.L.			4.2	108.4 274
2+00 W.L.			4.4	108.2 272
±			4.8	107.8 268
E.L. (Gar. floor)			5.5	107.1 261
2+25 E.L.			4.9	107.7 267
±			4.9	107.7 267
W.L.			4.7	107.9 269
2+50 W.L.			4.3	108.3 273
+4			4.4	108.2 272
+4.5			4.9	107.7 267
+6			4.6	108.0 270
±			4.6	108.0 270
E.L.			4.9	107.7 267
Garage floor sta 1+62 E. side.				

57

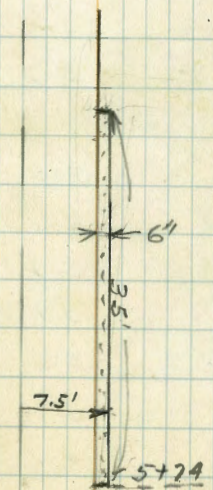
Sta	+	H.I	-	E.I.
		112.63		
2+75 E.L.			4.9	107.7 326.7
±			4.9	107.7 26.7
+3			5.2	107.4 26.4
W.L			4.7	107.9 26.9
3+00 W.L			4.7	107.9 26.9
±			4.5	108.1 27.1
W.L			4.7	107.9 26.9
3+25 E.L			4.9	107.7 26.7
±			4.8	107.8 26.8
W.L			4.8	107.8 26.8
(Gar. floor sta 3+20 w. side)			4.53	108.1 27.1
3+50 W.L			4.9	107.7 26.7
±			5.1	107.5 26.5
E.L			5.1	107.5 26.5
3+75 E.L			5.1	107.5 26.5
±			5.1	107.5 26.5
W.L			5.1	107.5 26.5
4+00 W.L			5.5	107.1 26.1
±			5.0	107.6 26.6
E.L			5.3	107.3 26.3
4+25 E.L			5.4	107.2 26.2
±			5.4	107.2 26.2
W.L			5.7	106.9 25.9

Sta	+	H.I	-	E.I.
		112.63		
4+50 W.L			5.5	107.1 26.1
±			5.6	107.0 26.0
E.L			5.9	106.7 25.7
4+75 E.L			5.9	106.7 25.7
±			5.8	106.8 25.8
W.L			5.8	106.8 25.8
Gar. floor sta 4+25 w. side.			5.25	107.4 26.4
5+00 W.L			6.1	106.5 25.5
±			6.2	106.4 25.4
E.L			6.3	106.3 25.3
Gar floor sta 5+10 E side			6.13	106.50 25.5
5+25 E.L			6.3	106.3 25.3
±			6.2	106.4 25.4
W.L			6.2	106.4 25.4
5+50 W.L			6.6	106.0 25.0
±			6.4	106.2 25.2
E.L			6.5	106.1 25.1
Curbing at 5+50 E Side			6.36	106.27 25.27

103-70
218.98
322.68

Sta	+	H.I	-	EI	
T.P	3.06	109.33		106.27	
N End. exist. ch E. side.			2.96	106.4	
S. " " " "			3.21	106.1	
5+75 E.L			3.6	105.7	3247
⊕			3.6	105.7	3247
W.L			3.7	105.6	3246
5+91 W.L			4.1	105.2	3242
+S			4.7	104.6	3236
⊕			4.4	104.9	3239
E.L			4.7	104.6	3236
5+98.5 E.L			5.9	103.4	3224
⊕			6.1	103.2	3222
W.L			6.0	103.3	3223
5+98.5 cb (W)			5.94	103.39	3224
Pav. W.L			6.10	103.23	3222
Pav. ⊕			6.22	103.1	3221
Pav E.L			5.89	103.44	3224
cb E			5.63	103.70	
Curb. E ret.			5.94	103.39	
Gut. E. ret.			5.66	102.69	
Gut. Ncb line Thorn & Alley			6.77	102.56	
Gut W ret.			6.89	102.44	
cb W ret.			6.14	103.79	
B.M Beginning			9.33	100.00	

5+98.5 = N. Line Thorn St.



Sketch of Existing Curb
In Alley Block 3

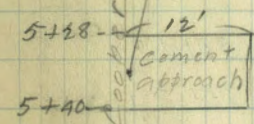
Cooper Ave.

Sta	H.I	—	El.
0+61	304.30		308.69
T.P.	H.59	304.81	4.08 300.22
0+00			
S.L		4.3	300.5
cb	to exist	cb	4.56 300.25
cut.		5.17	299.64
S 1/4		5.18	299.63
E		5.24	299.57
N 1/2		5.61	299.20
NGUT.		6.09	298.73
Ncb top exist.	cb	5.50	299.31
N.L		5.2	299.6
0+02			
N.L		3.5	301.3
+		3.6	301.2
Ncb		5.2	299.6
+2		5.7	299.1
N 1/4		5.3	299.5
E		5.1	299.7
S 1/4		5.0	299.8
+8		4.9	299.9
S cb		3.5	301.3
S.L		3.3	301.5
0+15			
S.L		3.2	301.6

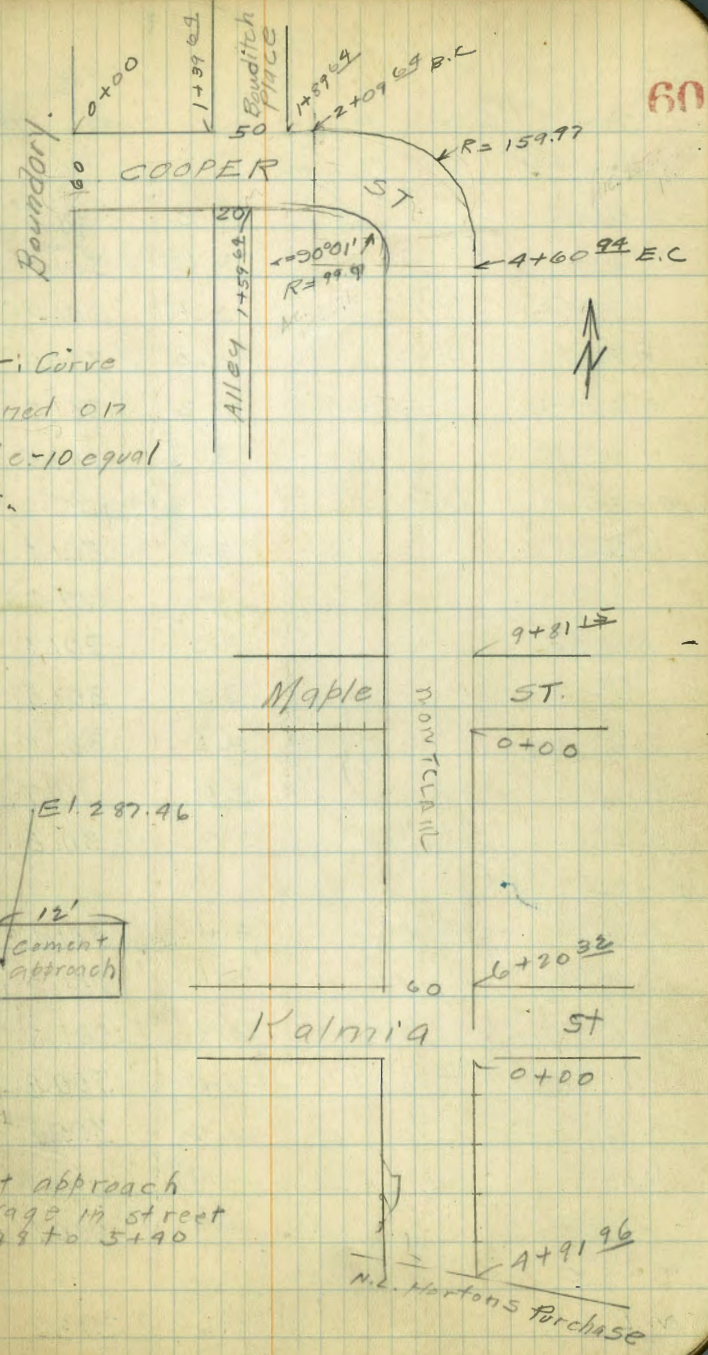
Plotted 5-11-28
C.B. Hough
Garage Figure 5/25/28
75H

B.P. NE
Thru 2 Nils.

Note: Curve
stationed on
outside - 10 equal
parts.



Cement approach
to Garage in street
Fr 5+28 to 5+40



60

Cooper Ave

304.81

61

Sta	+	H.L.	-	El.
0+15	✓	304.81		
Scb			3.3	301.5
S 1/4			3.6	301.2
±			3.6	301.2
N 1/4			4.0	300.8
Ncb			3.3	301.5
N.L			3.3	301.5
0+36	↓			
N.L			3.4	301.4
Ncb			3.4	301.4
N 1/4			3.5	301.3
±			3.3	301.5
S 1/4			3.1	301.7
Scb			3.1	301.7
S.L			3.0	301.8
0+75	↓			
S.L			3.4	301.4
Scb			3.6	301.2
S 1/4			3.8	301.0
±			4.0	300.8
N 1/4			4.2	300.6
Ncb			4.4	300.4
N.L			4.7	300.1
3+25	↓			
N.L			6.6	298.2

Sta	+	H.L.	-	El.
3+25	✓			
Ncb			6.6	298.2
N 1/4			6.3	298.5
±			6.0	298.8
S 1/4			6.0	298.8
Scb			5.4	299.4
S.L			5.4	299.4
1+3969	W.L. Alley ↓			
S.L			5.6	299.2
Scb			6.3	298.5
S 1/4			6.5	298.3
±			6.6	298.2
N 1/4			6.9	297.9
Ncb			7.2	297.6
N.L			7.7	297.1
1+5969	E.L. Alley ↓			
N.L			8.3	296.5
Ncb			8.0	296.8
N 1/4			7.7	297.1
±			7.5	297.3
S 1/4			7.3	297.5
Scb			6.9	297.9
S.L			6.6	298.2

Cooper Ave

62

Sta	+ ↓	H.I	-	E.L.
1+89.62	↓ Bowlitch Pl.	304.81		
S.L			7.5	297.3
Scb			8.0	296.8
S'4			8.5	296.3
±			8.9	295.9
N'4			9.0	295.8
Ncb			9.4	295.4
N.L			10.0	294.8
T.P.	2.41	296.57	10.65	294.16
2+0962	B.C ↓	E distr for each Part 20.42		
15'N			3.2	293.4
N.L			2.6	294.0
Ncb			2.1	294.5
N'4			1.6	295.0
±			1.4	295.2
S'4			1.1	295.5
Scb			0.7	295.9
S.L			0.3	296.3
2+3477	↓ 1st			
S.L			1.0	295.6
Scb			1.4	295.2
S'4			1.9	294.7
±			2.0	294.6
N'4			2.5	294.1
Ncb			2.9	293.7

Sta	+ ↓	H.I	-	E.L.
2+3422		296.57		
N.L			3.6	293.0
15'N			4.7	291.9
2+59 ^I	20 ^d		6.8	289.8
15'N			6.8	289.8
N.L			5.0	291.6
Ncb			4.0	292.6
N'4			3.3	293.3
±			3.0	293.6
S'4			2.6	294.0
Scb			1.8	294.8
S.L			1.4	295.2
15'S			0.9	295.7
2+850 ^B	↓ 3rd			
15'S			1.2	295.4
S.L			1.7	294.9
Scb			2.3	294.3
+6			2.9	293.7
+7			3.5	293.1
S'4			3.5	293.1
±			3.7	292.9
N'4			4.3	292.3
Ncb			6.1	290.5
N.L			6.9	289.7
15'N			9.5	287.1

Cooper Ave

sta	H.I	-	EI
3+10 ⁴⁶	296.57		
15' N. = 15' E.	9.8		286.8
N.L = E.L	9.1		287.5
N.c.b	8.8		287.8
+4	8.3		288.3
+7	6.6		290.0
E'4	5.9		290.7
±	4.7		291.9
W'4	4.2		292.4
+5	4.1		292.5
+9	2.9		293.7
W.c.b	2.8		293.8
W.L	2.1		294.5
15' W.	1.5		295.1
floor house 3+15. 15' E.	8.97		287.60 ✓
3+35 ²⁹			
15' W	1.8		294.8
W.L	2.4		294.2
W.c.b	3.0		293.6
+4	5.2		291.4
W'4	5.1		291.5
±	5.7		290.9
+2	5.8		290.8
E'4	7.9		288.7
+3	9.1		287.5

296.57

63

sta	H.I	-	EI
3+35.29			
E'4 +5	10.3		286.3
E.c.b	11.1		285.5
E.L	11.6		285.0
at 3+40 2' E. Garage floor (earth)	11.7		284.9 ✓
15' E.	15.7		280.9
3+60 ⁴²			
15' E	17.7		278.9
E.L	13.3		283.3
E.c.b	11.4		285.2
+5	10.7		285.9
E'4	8.8		287.8
+2	8.3		288.3
±	7.3		289.3
W'4	6.9		289.7
+6	6.7		289.9
+8	4.5		292.1
W.c.b	3.9		292.7
W.L	3.2		293.4
15' W	2.0		294.6
3+85 ⁵⁵			
15' W	2.4		294.2
W.L	3.4		293.2 ✓
W.c.b	5.5		291.1
+2	5.8		290.8

Cooper Ave
296.57

Sta	H.I.	E.I.
3+85E		
Web + 3	7.6	2890
W/A	7.8	288.8
±	8.2	288.4
E 1/4	10.7	285.9
Ecb	12.6	284.0
E.L	14.7	281.9
15' E	18.2	278.4
20' E	20.3	276.3
30' E	24.3	272.3
4+10 ⁵⁸ ↓ 8¹		
31' E	26.9	269.7
25' E	22.5	274.1
17' E	20.6	276.0
15' E	17.8	278.8
E.L	15.0	281.6
+2	14.9	281.7
+3	14.0	282.6
Ecb	12.7	283.9
E 1/4	10.8	285.8
±	8.2	288.4
W/A	8.1	288.5
+7	7.7	288.9
Web	6.1	290.5
W.L	4.3	292.3

11.9
87
200

11.9
15

10.6
11.9
225

12.9
1.6
11.3
1.3
24.3

296.57

64

Sta	H.I.	E.I.
4+10 ⁵⁸		
15' W	2.2	294.4
4+35 ⁸¹ ↓ 9 th		
15' W	2.4	294.2
W.L	4.5	292.1
Web	6.0	290.6
+3	7.8	288.8
W/A	8.2	288.4
±	8.3	288.3
+5	9.7	286.9
E 1/4	10.8	285.8
Ecb	12.3	284.3
E.L	14.5	282.1
15' E	18.2	278.4
20' E	20.8	275.8
30' E	26.8	269.8
4+47 ↓		
30' E	24.2	272.4
15' E	17.8	278.8
E.L	14.5	282.1
Ecb	12.4	284.2
E 1/4	10.7	285.9
+5	10.1	286.5
±	8.1	288.5
W/A	8.2	288.4

Cooper Ave

296.57

H.I

Sta	+	H.I	-	E.I
4+47				
w/a +7		7.9		288.7
w cb		5.7		290.9
w L		4.4		292.2
15' w		2.7		293.9
A+60 ⁹⁴ E.C. ✓				
15' W.		2.8		293.7
w. L		4.3		292.3
w cb		5.4		291.2
+1		5.8		290.8
+3		8.0		288.6
w/a		8.1		288.5
±		8.0		288.6
+5		10.0		286.6
E 1/4		10.8		285.8
E cb		12.4		284.2
+5		13.3		283.3
E.L		14.6		282.0
10'E		19.6		277.0
15'E.		22.0		274.6
30'E		28.2		268.4
4+86 ✓				
30'E.		38.9		257.7
15' E		30.0		266.6
E.L		22.0		274.6

296.57

H.I

Sta	+	H.I	-	E.I
4+86				
Ecb		15.6		281.0
±.7		11.1		285.5
E 1/4		10.9		285.7
±		8.4		288.2
w/a		7.8		288.8
+7		7.6		289.0
wcb		5.9		290.7
+4		5.1		291.5
w.L		4.0		292.6
15' W.		2.6		294.0
5+00				
15' W		2.3		294.3
w.L top		3.5'		293.1
w.L		3.9		292.7
wcb		5.4		291.2
+4		5.9		290.7
+6		7.4		289.2
w/a		7.6		289.0
±		8.3		288.3
E 1/4		10.0		286.6
+8		11.5		285.1
Ecb.		12.1		284.5
E.L		17.9		278.7
15' E.		26.4		270.2

$$\begin{array}{r} 26.1 \\ 3.4 \\ 22.7 \\ 10.2 \\ \hline 38.9 \end{array}$$

$$\begin{array}{r} 22.7 \\ 7.3 \\ \hline 30.0 \end{array}$$

65

12.6
18.3
32.3

Cooper Ave

12.3
2.7
9.6
10.2
20.5

76

66

Sta	+	H. 1	-	E 1				
5+00		296.57			5+27		298.20	
18'E				24.6	272.0			
30'E				32.3	264.3	E 1/4	10.0	288.2
5+10	✓					+6	10.6	287.6
30'E				27.0	269.6	+8	11.9	286.3
15'E				26.6	270.0	E cb	12.3	285.9
E.L.			17.7	17.7	278.9	E.L	13.8	284.4
E.cb			12.2	12.2	284.4	25'E	17.6	280.6
E 1/4			9.5	9.5	287.1	25'E (vert drop)	20.5	277.7
±			8.1		288.5	30'E	21.6	276.6
W 1/4			7.8		288.8	± of Gar. floor 3'E.		
+6			7.2		289.4	± of Gar. appr at 5+28	10.74	287.4L ✓
Wcb			5.5		291.1	5+41 ✓		
W.L.			3.8		292.8	15'E	12.7	285.5
Walk	adj. to w.L at 5+10		3.32		293.25 ✓	E.L	12.0	286.2
15'W			2.3		294.3	E.cb	10.8	287.4
T.P.	7.10	298.20 ✓	5.47	291.10		E 1/4	9.6	288.6
5+27	↓					±	8.5	289.7
15'W			3.7	294.5		W 1/4	8.7	289.5
W.L			4.9	293.3		+7	6.7	291.5
W.cb			6.5	291.7		Wcb	6.1	292.1
+4			7.3	290.9		W.L	4.6	293.6
+6			8.5	289.7		15'W	3.8	294.4
W 1/4			8.6	289.6		5+53		
±			9.3	288.9		15'W	3.5	294.7
						Walk on w.L at 5+54	4.32	293.88 ✓

Cooper Ave

67

Sta	H.I	E.I
	298.20	
W.L	4.3	293.9
Wcb	5.6	292.6
W ¹ / ₄	7.1	291.1
±	7.9	290.3
E ¹ / ₄	8.7	289.3
Ecb	10.5	287.7
E.L	11.9	286.3
15'E	13.5	284.7
5+71 ↓		
15'E	12.5	285.7
floor house 40'E	13.44	284.76 ✓
Walk at 5+68 E.L	10.55	287.65 ✓
E.L	10.4	287.8
Ecb	9.2	289.0
E ¹ / ₄	8.4	289.8
±	7.2	291.0
W ¹ / ₄	6.3	292.9
Wcb	5.3	292.9
W.L	4.3	293.9
15'	3.4	294.8
Walks at 5+89 W.L	3.78	294.42 ✓
6+00 ↓		
15'W	3.3	294.9
W.L	4.0	294.2

Sta	H.I	E.I
6+00	298.20	
Wcb	4.7	293.5
W ¹ / ₄	5.5	292.7
±	6.6	291.6
E ¹ / ₄	7.8	290.4
Ecb	8.5	289.7
E.L	9.6	288.6
15'E	11.2	287.0
6+30 ↓		
15'E	10.3	287.9
E.L	9.2	289.0
Ecb	8.1	290.1
E ¹ / ₄	7.3	290.9
±	6.2	292.0
W ¹ / ₄	5.7	292.5
Wcb	4.8	293.4
W.L	4.3	293.9
Walk 1'W	3.87	294.33 ✓
15'W	3.6	294.6
6+62 ↓		
15'W	3.7	294.5
W.L	4.2	294.0
Wcb	5.0	293.2
+5	5.4	292.8
+5.5	5.8	292.4

Cooper Ave

Sta	+	H.I.	-	EL.
6+62		298.20		
W 1/4			6.0	292.2
±			6.6	291.6
E 1/4			7.4	290.8
Ecb			8.0	290.2
E.L			8.7	289.5
15'E			9.8	288.4
6+69	↓			
15'E			9.2	289.0
E.L			8.7	289.5
E.CB			8.4	289.8
E 1/4			7.7	290.5
±			6.6	291.6
W 1/4			6.0	292.2
+5			5.7	292.5
+8			4.7	293.5
Wcb			4.8	293.4
W.L			4.5	293.7
Walk 4' W			4.02	294.18 ✓
15' W			3.9	294.3
Walk at 6+77 E.L			8.62	289.58 ✓
floor house at 6+77 17'E			7.94	290.26 ✓
7+00				
15' W			4.1	294.1
W.L			4.8	293.4

Sta	+	H.I.	-	EL.
7+00		298.20		
Wcb			5.3	292.9
+2			5.4	292.8
+4			5.9	292.3
W 1/4			6.0	292.2
±			6.6	291.6
E 1/4			7.6	290.6
Ecb			8.3	289.9
E.L			8.9	289.3
15'E			9.9	288.3
Driveway (cement)			8.94	289.26 ✓
Cement Walk at 7+22 E.L			9.11	289.09 ✓
floor house at 7+22			8.61	289.59 ✓
7+50	↓			
15'E			10.8	287.3
E.L			9.2	289.0
Ecb			8.8	289.4
+5			8.5	289.7
+8			8.0	290.2
E 1/4			7.8	290.4
±			6.9	291.3
W 1/4			6.4	291.8
+5			6.3	291.9
+7			5.8	292.4
Wcb			5.6	292.6

Cooper Ave

Sta	+	H.I	-	El.
7+50		296.20		
W.L			5.2	293.0
15' W.			4.7	293.5
7+75	↓			
15' W			4.8	293.4
W.L			5.5	292.7
Wcb			5.9	292.3
+3			6.2	292.0
+5			6.6	291.6
W'A			6.8	291.4
⊥			7.5	290.7
E 1/4			8.2	290.0
Ecb			9.0	289.2
E.L			9.6	288.6
15' E.			10.9	287.3
8+00	↓			
15' E.			10.5	287.7
E.L			9.8	288.4
Ecb			9.0	289.2
E 1/4			8.4	289.8
⊥			7.4	290.8
W'A			6.9	291.3
Wcb			6.4	291.8
W.L			5.4	292.8
15' W			5.0	293.2

Sta	+	H.I	-	El.
		299.20		
(Cement)				
Walk at 7+84 W.L			5.37	292.83 ✓
8+50	X			
15' W.			5.8	292.4
W.L			6.2	292.0
Wcb			6.5	291.7
+4			7.2	291.0
W'A			7.4	290.8
⊥			8.1	290.1
E 1/4			9.0	289.2
Ecb			9.2	289.0
E.L.			10.3	287.9
T.P. Walk at 8+41 E.L.		4.95	292.97	10.18, 288.02 ✓
floorhouse 19' E sta 8+50			2.86	290.11 ✓
15' E.			5.9	287.0
8+80	↓			
15' E.			6.8	286.1
E.L			5.6	287.3
Ecb			4.6	288.3
E 1/4			4.2	288.7
+6			3.4	289.5
⊥			2.9	290.0
W'A			2.3	290.6
Wcb			1.8	291.1
W.L			1.5	291.4

Cooper Ave

292.97

Sta	+	H.I.	-	E.I.
8+80				
15' W			1.0	291.9
9+00 ↓				
15' W			1.4	291.5
W.L			1.8	291.1
W cb			2.3	290.6
W'A			2.9	290.0
±			3.9	289.0
E'A			5.3	287.6
E cb			6.0	286.9
E.L			7.0	285.9
15' E.			8.2	284.7
9+15 ↓				
15' E			9.4	283.5
E.L			8.6	284.3
E cb			7.1	285.8
E'A			6.1	286.8
+4			5.1	287.8
±			4.7	288.2
W'A			3.5	289.4
W cb			2.8	290.1
W.L			2.2	290.7
15' W			1.9	291.0
9+30 ↓				
15' W			2.2	290.7

292.97

70

Sta	+	H.I.	-	E.I.
9+30				
W.L			2.7	290.2
W cb			3.1	289.8
W'A			4.2	288.7
±			5.7	287.2
E'A			7.6	285.3
E cb			9.0	283.9
E.L			10.3	282.6
15' E.			11.9	281.0
9+45 ↓				
15' E			14.3	278.6
E.L			13.1	279.8
E cb			11.0	281.9
E'A			8.5	284.4
±			6.8	286.1
W'A			4.6	288.3
W cb			3.5	289.4
W.L			3.0	289.9
15' W			2.6	290.3
9+60 ↓				
15' W			3.8	289.1
W.L			3.7	289.2
W cb			4.4	288.5
W'A			5.5	286.4
+3			7.0	285.9
±			8.4	284.5

$\begin{array}{r} 23.6 \\ 9.6 \\ \hline 14.0 \end{array}$

$\begin{array}{r} 13.2 \\ 25.8 \\ 1.8 \\ \hline 23.2 \\ 1.7 \\ \hline 14.7 \end{array}$

$\begin{array}{r} 29.2 \\ 11.1 \\ \hline 34.3 \end{array}$

$\begin{array}{r} 12.1 \\ 23.2 \\ \hline 36.3 \end{array}$

$\begin{array}{r} 23.2 \\ 7.8 \\ \hline 31.0 \end{array}$

Cooper Ave
292.97

9+60	-21		
5 1/4		10.8	282.1
+3		12.4	280.5
Ecb		14.2	278.7
+4		16.6	276.3
E.L		20.6	272.3
16'E		30.5	262.4
23'E		34.8	258.1
33'E		39.4	253.5
43'E		40.4	252.5
9+65 ↓	-16		
43'E		40.2	252.7
33'E		39.0	253.9
23'E		37.6	255.3
E.L		23.0	269.9
Ecb		16.3	276.6
E 1/4		13.8	279.1
⊕		10.6	282.3
+3		9.8	283.1
W 1/4		8.0	284.9
Wcb		7.0	285.9
+7		6.3	286.6
W.L		5.2	287.7
15' W		4.8	288.1

$\begin{array}{r} 2417 \\ 4.0 \\ \hline 16.3 \\ 6.7 \\ \hline 21.0 \end{array}$

$\begin{array}{r} 31.8 \\ 1.3 \\ \hline 34.6 \end{array}$

$\begin{array}{r} 13 \\ 11.7 \\ \hline 24.3 \end{array}$

$\begin{array}{r} 24.3 \\ 15.1 \\ \hline 39.4 \end{array}$

$\begin{array}{r} 24 \\ 1.3 \\ \hline 37.4 \end{array}$

71

5+92.97 + H1 - E1
292.97

9+76 ↓			
15' W		11.7	281.2
W.L		12.7	280.2
Wcb		12.0	280.9
W 1/4		13.0	279.9
⊕		14.3	278.6
E 1/4		17.3	275.6
Ecb		20.2	272.7
EL		27.6	265.3
20'E		37.2	255.7
35'E		35.5	257.4
9+81.5 ↓		37.3	
35'E		34.3	258.6
25'E		34.0	258.9
10'E		36.3	256.6
E.L		31.0	261.9
E.Cb		24.4	268.5
E 1/4		21.8	271.1
⊕		18.1	274.8
W 1/4		16.7	276.2
Wcb		16.4	276.5
W.L		16.3	276.6
20' W		14.2	278.7
B.M. Nail in pole s.w		5.65	287.32

Crab & Maple

Cooper Ave

72

Sta	+	H.I.	-	El.
	415	291.47		287.32
0+00	✓			
15'W'			2.6	288.9
W.L.			4.1	287.4
W.c.b			5.7	285.8
+5			5.5	286.0
W'/4			6.0	285.5
+5			5.8	285.7
±			6.5	285.0
E'/4			7.2	284.3
E.c.b			8.0	283.5
E.L.			8.9	282.6
15'E			9.9	281.6
0+03	↓		9.	
15'E			9.3	282.2
E.L.			8.4	283.1
E.c.b			7.7	283.8
E'/4			6.9	284.6
±			6.0	285.5
W'/4			5.6	285.9
+6			5.5	286.0
W.c.b			4.7	286.8
+7			2.9	288.6
W.L.			2.9	288.6

Sta	+	H.I.	-	El.
0+23	↓	291.47		
15'W			2.5	289.0
W.L.			2.5	289.0
W.c.b			2.7	288.8
+4			2.9	288.6
+7			4.2	287.3
W'/4			4.7	286.8
±			5.3	286.2
E'/4			5.4	286.1
E.c.b			6.0	285.5
E.L.			6.3	285.2
15'E			7.2	284.3
0+50	↓			
15'E			6.2	285.3
E.L.			5.5	286.0
E.c.b			5.0	286.5
E'/4			4.7	286.8
±			4.0	287.5
W'/4			3.5	288.0
W.c.b			2.9	288.6
W.L.			2.4	289.1
15'W			2.4	289.1
1+00	↓			
15'W			3.4	288.1
W.L.			3.3	288.2

Cooper Ave -

291.47

73

1+00	291.47		
wcb	3.5	288.0	
w/4	3.7	287.8	
♀	4.2	287.3	
E 1/4	4.7	286.8	
Ecb	5.0	286.5	
E.L	5.5	286.0	
15' E	5.9	285.6	
1+50 ↓			
15' E	6.7	284.8	
E.L	6.2	285.3	
Ecb	5.7	285.8	
E 1/4	5.4	286.1	
♀	4.9	286.6	
+9.	4.6	286.9	
w/4	4.6	286.9	
+7	4.6	286.9	
wcb	4.7	286.8	
w.l	4.8	286.7	
15' w	5.1	286.4	
2+00 ↓			
15' w	6.9	284.6	
w.l	6.2	285.3	
wcb	6.0	285.5	
w/4	5.7	285.8	

2+00			
♀	6.0	285.5	
+7	6.1	285.4	
E 1/4	6.4	285.1	
Ecb	6.5	285.0	
E.L	6.9	284.6	
15' E	7.5	284.0	
2+50 ↓			
15' E	8.7	282.9	
E.L	8.3	283.2	
Ecb	8.0	283.5	
E 1/4	8.0	283.5	
♀	7.7	283.9	
w/4	7.1	284.4	
wcb	7.2	284.3	
w.l	7.5	284.0	
15' w	8.2	283.3	
3+00			
15' w	11.0	280.5	
w.l	9.5	282.0	
wcb	9.1	282.4	
w/4	9.4	282.1	
♀	9.5	282.0	
E 1/4	9.6	281.9	
Ecb	9.4	282.1	

Cooper Ave

291.47

Sta	+	H.I.	-	E.I.
3+00				
E.L			9.6	281.9
15'E.			9.7	281.8
3+22 ↓				
15'E			10.3	281.2
E.L			10.4	281.1
Ecb			10.5	281.0
E'A			10.8	280.7
±			10.8	280.7
W'A			10.9	280.6
+3			10.9	280.8
Wcb			11.0	280.5
W.L			11.3	280.2
12'W			11.7	279.8
12'W. floor house at 3+35			10.60	280.87 ✓
3+53 ↓				
15'W			13.5	278.0
W.L			13.8	277.7
Wcb			13.7	277.8
+7			13.4	278.1
W'A			13.5	278.0
±			12.8	278.7
E'A			12.6	278.9
+5			12.1	279.4
Ecb			12.0	279.5

Sta	+	H.I.	-	E.I.
3+58		291.47		
E.L			11.6	279.9
15'E			11.3	280.2
T.P	0.61	279.14	12.94	278.53
4+00 ↓				
E.L			0.5	278.6
Ecb			0.1	279.0
+6			1.3	277.8
E'A			1.8	277.3
±			2.0	277.1
W'A			2.4	276.7
Wcb			3.0	276.1
W.L			3.9	275.2
Garage 6.5'W earth floor			4.6	274.5 ✓
house at 4+18 7'W			4.06	275.08 ✓
4+40 ↓				
15'W			8.0	271.1
W.L			5.9	273.2
Wcb			4.7	274.4
+5			4.2	274.9
W'A			3.7	275.4
±			3.1	276.0
E'A			2.8	276.3
+7			2.1	277.0
Ecb			1.9	277.2

Cooper Ave

279.14

Sta	+	H.I.	-	E.I.
4+40				
E.L.			1.4	277.7
4+80	↓			
E.L.			2.0	277.1
Ecb			2.6	276.5
+2			2.8	276.3
E 1/4			3.6	275.5
±			3.8	275.3
W 1/4			4.6	274.5
Wcb			5.8	273.3
W.L.			7.3	271.8
20'W			10.4	268.7
5+00	↓			
20'W			11.2	267.9
W.L.			8.0	271.1
Wcb			6.6	273.5
W 1/4			5.1	274.0
+6			4.7	274.4
±			4.5	274.6
+5			4.2	274.9
E 1/4			3.9	275.2
+7			3.3	275.8
Ecb			3.1	276.0
E.L.			2.7	276.4
15'E			2.6	276.5

279.14

Sta	+	H.I.	-	E.I.	75
5+50	↓				
10'E			4.5	274.6	
E.L.			5.0	274.1	
+7			5.2	273.9	
Ecb			5.4	273.7	
E 1/4			6.2	272.9	
+2			6.1	273.0	
±			6.7	272.4	
W 1/4			7.3	271.8	
+5			7.7	271.4	
Wcb			8.5	270.6	
W.L.			10.3	268.8	
20'W			14.0	265.1	
6+00	↓				
20'W			16.4	262.7	
W.L.			14.0	265.1	
Wcb			12.4	266.7	
+6			11.3	267.8	
W 1/4			10.9	268.2	
±			9.7	269.4	
+6			9.0	270.1	
E 1/4			8.9	270.2	
Ecb			7.9	271.2	
E.L.			7.3	271.8	
15'E			6.2	272.9	

Cooper Ave

Sta	+	H.I.	-	E.I.
6+20 ³²	= N.L. Kalmia	279.14		
15'E		6.8		272.3
10'E		7.0		272.1
E.L		7.8		271.3
Ecb		8.6		270.5
+6		9.0		270.1
E/A		9.8		269.3
+5		10.0		269.1
±		10.7		268.4
W/A		12.4		266.7
+3		12.7		266.4
Web		14.0		265.1
W.L		16.0		263.1
20'W		19.6		260.5

Intersection Coopers Kalmia

T.P 0.44 271.45 8.13 271.01

Ncb line Kalmia

20'W		15.6		255.9
W.L.		9.0		262.5
Web		6.7		264.8
+5		5.3		266.2
W/A		4.6		266.9
±		3.2		268.3
E/A		2.2		269.3
Ecb		1.0		270.5

271.45

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Sta	+	H.I.	-	E.I.
Ncb line Kalmia				
E.L		0.4		271.1
10'E		+0.6		272.1
N/A line Kalmia				
10'E		+0.6		272.1
E.L		0.4		271.1
+5		0.6		270.9
Ecb		1.0		270.5
E/A		2.1		269.4
+6		2.8		268.7
±		3.4		268.1
W/A		5.2		266.3
Web		6.7		264.8
W.L		9.2		262.3
20'W		15.2		256.3

± Kalmia

20'W		14.2		257.3
W.L.		9.5		262.0
Web		7.5		264.0
+7		5.6		265.9
W/A		5.4		266.1
+5		4.7		266.8
+9		3.7		267.8
±		3.9		267.6
+4		2.9		268.6

Cooper Ave

271.45

♀ Kalmia		
E 1/4	2.2	269.3
Ecb	1.0	270.5
E.L.	0.3	271.2
10'E	+0.5	272.0
S 1/4 Kalmia		
8'E	+0.1	271.6
E.L.	0.5	271.0
Ecb	1.3	270.2
F 1/4	2.3	269.2
+7	3.4	268.1
♀	4.2	267.3
+2	4.0	267.5
W 1/4	5.8	265.7
Wcb	7.6	263.9
W.L.	9.5	261.8
20'W	13.8	257.7
Subline Kalmia ↓		
20'W	13.8	257.7
W.L.	10.0	261.5
Wcb	7.7	263.8
+5	6.8	264.7
W 1/4	6.2	265.3
+8	4.5	267.0
♀	4.7	266.8

271.45

Subline Kalmia		
♀+3	3.7	267.8
E 1/4	2.7	268.8
Ecb	1.5	270.0
E.L.	0.6	270.9
7'E	0.1	271.4
0+00 = S.L. Kalmia ↓		
5'E	0.4	271.1
E.L.	0.8	270.7
Ecb	1.8	269.7
E 1/4	3.1	268.4
+7	4.0	267.5
♀	5.2	265.3
+2	4.9	266.6
W 1/4	6.6	264.9
+5	7.0	264.5
Wcb	8.3	263.2
W.L.	10.1	261.4
20'W	13.8	257.7
0+25 ↓		
20'W	14.2	257.3
W.L.	10.5	261.0
Wcb	9.3	262.2
+8	7.6	263.7
W 1/4	7.7	263.8

Cooper Ave.

$$\begin{array}{r} 12.5 \\ 15.4 \\ \hline 27.9 \end{array}$$

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			Sta -	+	H - I	-	E I
0+25	271.45		1+00		271.45		
w/2+8		6.1	265.4	30' W		28.1	243.4
±		6.3	265.2	22' W		25.5	246.0
+4		5.3	266.2	W.L		17.7	253.8
E 1/4		4.3	267.2	wcb		14.4	257.1
+9		3.0	268.5	w/4		11.6	259.9
Ecb		3.0	268.5	+3		10.6	260.9
E.L		2.0	269.5	±		9.1	262.4
5'E		1.3	270.2	+7		8.9	262.7
0+69 ↓				E 1/4		8.2	263.3
10'E		2.5	269.0	+7		6.9	264.6
E.L.		3.9	267.6	Ecb.		6.7	264.8
+9		4.4	267.1	E.L.		5.1	265.4
Ecb		4.6	266.9	10'E		4.0	267.5
+4		5.9	264.6	1+25 ✓			
E 1/4		6.6	264.9	5'E		4.4	267.1
+5		7.4	264.1	E.L.		5.0	266.5
+8		8.0	263.5	Ecb		6.5	265.0
±		7.9	263.6	E 1/4		8.2	263.3
w/4		9.7	261.8	+6		9.0	262.5
wcb		11.4	260.1	±		9.8	261.7
W.L		13.2	258.3	+5		10.9	260.6
9'W		14.7	256.8	w/4		11.3	260.2
20'W		18.0	253.5	wcb		13.3	258.2
				w.L		16.2	255.3

Cooper Ave

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Sta	+	H.I.	-	E.I.
1+25		271.45		
13' W			19.5	252.0
30' W			25.5	246.0
1+50	↓			
30' W			19.7	251.8
W.L.			13.6	257.9
Wcb			12.1	259.4
W'4			10.9	260.6
+W			10.7	260.8
+8			9.7	261.8
±			9.6	261.9
E'4			8.2	263.3
Ecb			6.6	264.9
E.L.			5.3	266.2
8'E			4.6	266.9
1+75	↓		5.1	266.4
10'E			5.7	265.8
E.L.			6.7	264.8
Ecb			8.2	263.3
E'4			9.4	262.1
±			10.6	261.9
W'4			11.2	260.3
+5			12.0	259.5
Wcb			13.6	257.9
W.L.				

1+75		271.45		
15' W			16.0	255.5
30' W			18.6	252.9
2+00	↓			
30' W			18.6	252.9
15' W			15.8	255.7
W.L.			13.3	258.2
Wcb			12.1	259.4
W'4			10.8	260.7
±			9.6	261.9
E'4			8.8	262.6
Ecb			7.9	263.6
E.L.			7.5	264.0
15'E			6.5	265.0
2+25	↓			
15'E			8.9	262.6
E.L.			9.0	262.5
Ecb			9.4	262.1
E'4			9.8	261.7
±			10.2	261.3
W'4			11.2	260.3
Wcb			12.2	259.3
W.L.			13.9	257.6
25' W			17.5	254.0
T.P.			10.67	260.78

Cooper Ave

Sta	+	H.I	-	E.I.
2+50	0.01	260.79		260.78
15' W			5.6	255.2
W.L			3.2	257.6
W.C.B			2.0	258.8
W'1/4			1.0	259.8
¢			0.5	260.3
E'1/4			0.2	260.6
E.C.B			0.0	260.8
E.L			+0.2	261.0
15' E.			+0.1	260.9
2+75				
15' E			0.8	260.0
E.L.			0.8	260.0
E.C.B			1.0	259.8
E'1/4			1.1	259.7
¢			1.3	259.5
W'1/4			1.7	259.1
W.C.B			2.6	258.2
W.L			3.6	257.2
15' W			6.0	254.8
3+00				
15' W			6.7	254.1
W.L			4.0	256.8
W.C.B			3.3	257.5
W'1/4			2.7	258.1

Continued in Book 1242 P. 46.

DIRECTIONS FOR USE OF TABLES

TABLE No. 1.

Distance of slope stake from side or shoulder stake for any width roadway, slope 1/2 to 1. If ground is nearly level, the cut or fill at side stake is located by the double entry method in left column and top row. The number in body of table in same row and column gives distance from side stake to slope stake. If ground is not

IMPROVED TABLES

AND INFORMATION

To find Tangent and External for curve of any other degree, divide by degree of curve and add correction found in column of corrections. Degree of curve with a given I may be found by dividing tangent (or external), opposite I by given tangent (or external). The distance from a point on the tangent to the curve is very nearly the square of the tangent length divided by twice the radius.

DIRECTIONS FOR USE OF TABLES

TABLE No. 1.

Distance of slope stake from side or shoulder stake for any width roadway, slope $1\frac{1}{2}$ to 1. If ground is nearly level, the cut or fill at side stake is located by the double entry method in left column and top row. The number in body of table in same row and column gives distance from side stake to slope stake. If ground is not level estimate the difference in elevation between the side stake and slope stake, lower target by this amount if cut, elevate if fill. Add this amount to cut or fill and find distance in table. Set up rod at this point, and line of sight should cut target. If it does not make the slight adjustment necessary.

TABLE No. 9.

To find Tangent and External for curve of any other degree, divide by degree of curve and add correction found in column of corrections.

Degree of curve with a given I may be found by dividing tangent, (or external), opposite I by given tangent, (or external).

The distance from a point on the tangent to the curve is very nearly the square of the tangent length divided by twice the radius.

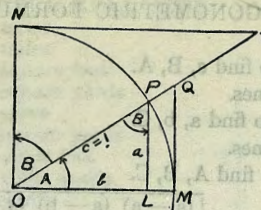


TABLE II

TRIGONOMETRIC FORMULÆ.

$$\angle A = \angle MOP \quad \angle B = \angle PON = \angle OPL$$

$$R = OB = c = 1$$

$$\sin A = \frac{a}{c} = \frac{a}{1} = a = \cos B = LP$$

$$\cos A = \frac{b}{c} = \frac{b}{1} = b = \sin B = OL$$

$$\tan A = \frac{a}{b} = \frac{MQ}{OM} = \frac{MQ}{1} = MQ = \cot B = MQ$$

$$\cot A = \frac{NT}{ON} = \frac{NT}{1} = NT = \tan B = NT$$

$$\sec A = \frac{OQ}{OM} = \frac{OQ}{1} = OQ = \csc B = OQ$$

$$\csc A = \frac{OT}{ON} = \frac{OT}{1} = OT = \sec B = OT$$

$$\text{vers } A = \frac{LM}{OP} = LM = \text{covers } B \#$$

$$\text{covers } A = \frac{OP - LP}{OP} = OP - LP = \text{vers } B$$

$$\text{exsec } A = PQ = \text{coexsec } B$$

$$\text{coexsec } A = PT = \text{exsec } B$$

$$\sin \frac{1}{2} A = \sqrt{\frac{1 - \cos A}{2}} \quad \cos \frac{1}{2} A = \sqrt{\frac{1 + \cos A}{2}}$$

$$\sin 2A = 2 \sin A \cos A \quad \cos 2A = \cos^2 A - \sin^2 A$$

$$\text{Law of Lines} \quad \frac{\sin A}{a} = \frac{\sin B}{b} = \frac{\sin C}{c}$$

$$\text{Law of Cosines} \quad c^2 = a^2 + b^2 - 2ab \cos C$$

$$\text{Law of Tangents} \quad \frac{a+b}{a-b} = \frac{\tan \frac{1}{2}(A+B)}{\tan \frac{1}{2}(A-B)}$$

TABLE II—Continued
TRIGONOMETRIC FORMULAE (continued)

In any triangle:

Given a, b, C; to find c, B, A.

Use Law of Lines.

Given A, B, c; to find a, b, C.

Use Law of Lines.

Given a, b, c; to find A, B, C.

$$\text{Let } \frac{a+b+c}{2} = s, \sqrt{\frac{(s-a)(s-b)(s-c)}{s}} = r$$

$$\cos \frac{1}{2} A = \sqrt{\frac{s(s-a)}{bc}}$$

$$\tan \frac{1}{2} A = \frac{r}{s-a}$$

$$\tan \frac{1}{2} B = \frac{r}{s-b}$$

$$\tan \frac{1}{2} C = \frac{r}{s-c}$$

Area of a triangle:

$$\text{Area} = \frac{1}{2} ab \sin C$$

$$\text{Area} = \sqrt{s(s-a)(s-b)(s-c)}$$

PRISMOIDAL FORMULA.

$$\text{Vol.} = \frac{h}{6} (B+b+4M)$$

h = altitude; b, B = bases; M = midsection

TABLE III
INCHES AND FRACTIONS OF AN INCH IN DECIMALS OF A FOOT

	0	1	2	3	4	5	6	7	8	9	10	11	
$\frac{1}{16}$	.0052	.0885	.1719	.2552	.3385	.4219	.5052	.5885	.6719	.7552	.8385	.9219	$\frac{1}{16}$
$\frac{1}{8}$	.0104	.0938	.1771	.2604	.3438	.4271	.5104	.5938	.6771	.7604	.8438	.9271	$\frac{1}{8}$
$\frac{3}{16}$	.0156	.0990	.1823	.2656	.3490	.4323	.5156	.5990	.6823	.7656	.8490	.9323	$\frac{3}{16}$
$\frac{1}{4}$	.0208	.1042	.1875	.2708	.3542	.4375	.5208	.6042	.6875	.7708	.8542	.9375	$\frac{1}{4}$
$\frac{5}{16}$	.0260	.1094	.1927	.2760	.3594	.4427	.5260	.6094	.6927	.7760	.8594	.9427	$\frac{5}{16}$
$\frac{3}{8}$	.0313	.1146	.1979	.2813	.3646	.4479	.5313	.6146	.6979	.7813	.8646	.9479	$\frac{3}{8}$
$\frac{7}{16}$	.0365	.1198	.2031	.2865	.3698	.4531	.5365	.6198	.7031	.7865	.8698	.9531	$\frac{7}{16}$
$\frac{1}{2}$	.0417	.1250	.2083	.2917	.3750	.4583	.5417	.6250	.7083	.7917	.8750	.9583	$\frac{1}{2}$
$\frac{9}{16}$	.0469	.1302	.2135	.2969	.3803	.4635	.5469	.6302	.7135	.7969	.8802	.9635	$\frac{9}{16}$
$\frac{5}{8}$	.0521	.1354	.2188	.3021	.3854	.4688	.5521	.6354	.7188	.8021	.8854	.9688	$\frac{5}{8}$
$\frac{11}{16}$	.0573	.1406	.2240	.3073	.3906	.4740	.5573	.6406	.7240	.8073	.8906	.9740	$\frac{11}{16}$
$\frac{3}{4}$	.0625	.1458	.2292	.3125	.3958	.4792	.5625	.6458	.7292	.8125	.8958	.9792	$\frac{3}{4}$
$\frac{13}{16}$	.0677	.1510	.2344	.3177	.4010	.4844	.5677	.6510	.7344	.8177	.9010	.9844	$\frac{13}{16}$
$\frac{7}{8}$	.0729	.1563	.2396	.3229	.4063	.4896	.5729	.6563	.7396	.8229	.9063	.9896	$\frac{7}{8}$
$\frac{15}{16}$	.0781	.1615	.2448	.3281	.4115	.4948	.5781	.6615	.7448	.8281	.9115	.9948	$\frac{15}{16}$
1	.0833	.1667	.2500	.3333	.4167	.5000	.5833	.6667	.7500	.8333	.9167	1.0000	1
	0	1	2	3	4	5	6	7	8	9	10	11	

TABLE IV

USEFUL RELATIONS.

Lineal feet	×.00019	= miles
Lineal yards	×.0006	= miles
Square inches	×.007	= square feet
Square feet	×.111	= square yards
Square yards	×.0002067	= acres
Acres	×4840	= square yards
Cubic inches	×.00058	= cubic feet
Cubic feet	×.03704	= cubic yards
Links	×.22	= yards
Links	×.66	= feet
Feet	×1.5	= links
360° = 21600' = 1296000"		
Radius = arc of 57.2957790°		
Arc of 1° (radius = 1) = .017453292		
Arc of 1' (radius = 1) = .000290888		
Arc of 1" (radius = 1) = .000004848		

$$\pi = 3.141592654 \quad \sqrt{\frac{1}{4}} = 0.564190$$

$$\frac{\pi}{4} = 0.785398163 \quad \sqrt[3]{\frac{6}{\pi}} = 1.240700982$$

$$\frac{\pi}{6} = 0.523598776 \quad \pi^2 = 9.869604401$$

$$\sqrt{\frac{4}{\pi}} = 1.128379167 \quad \frac{1}{\pi^2} = 0.101321184$$

$$\frac{\pi}{6} = 0.523598776 \quad \sqrt{\pi} = 1.772453851$$

$$\frac{4\pi}{3} = 4.188790205 \quad \frac{1}{\pi} = 0.3183099$$

Curvature of Earth's surface = about 0.7 feet in 1 mile

Curvature in feet = 0.667 (Dist. in miles)²

Difference between arc and chord length, 0.05 feet in 11 $\frac{1}{2}$ miles

$$\text{Probable error of a single observation} = 0.6754 \sqrt{\frac{\sum v^2}{n-1}}$$

Error in chaining of 0.01 feet in 100 feet:

Due to—

1. Length of tape error of 0.01 feet
2. Alignment. One end 1.4 feet out of line
3. Sag of tape at centre of 0.61 feet.
4. Temperature difference of 15°
5. Difference of pull of 15 lbs.

STADIA REDUCTION FORMULÆ.

Horizontal Distance = R - R sin² a + C cos a

Vertical Distance = R $\frac{1}{2}$ sin 2 a + C sin a

R = Reading × $\frac{\text{distance from Object glass to cross hairs}}{\text{distance between cross hairs}}$

C = distance from Object glass to cross hairs + distance from Object glass to center of instrument.

a = angle of elevation for mid Reading

10 NW 72.94
12 NW 105.97
SPK SW 84.91

257.61
245.07
903 ENGINEERING DEPARTMENT,
CITY OF SAN DIEGO,
CALIFORNIA.

35070
27117

78930
72312

66180
63273

29070

13.873
75
69365
97111
10.40475

265.89
10.40
255.49

271 200
123
77
196
4062
236.62
14
222.62
229.10
451.72

246
100
146

229.10
90
139.10

185

4135.7

120.71
342

124.13

1159

112.54

12" cb face from 16 to cb at 17vt