

← A4 →

← LETTER →

1913

FRANK BEADLE ROAD
BROWNSBURG SEWER
STEPHENSON ROAD
LEWIS PHILLIPS BRIDGE
NORTH 25th / E 7th / DE WIS / KS.
ANY NORTH / E 7th / DE WIS / KS.

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.

"Copyright, 1895, by Keuffel & Esser Co."

	0	.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.

1913

530
M

41

5 x 7 x 100
12 x 27
3

36) 500
360
40
944

112
14
448
112
92
1568
20
24
16
92
32
144
1472

106
26
32

4800
9750
10500
1250

10654
7997
2657

4) $\begin{array}{r} 5326 \\ 1331.5 \\ \hline 2663 \end{array}$

$\begin{array}{r} 6661 \\ 5-326 \\ \hline 1335 \end{array}$

$\begin{array}{r} 7997 \\ 6661 \\ \hline 1336 \end{array}$

$\begin{array}{r} 7997 \\ \hline 1333 \end{array}$

$\begin{array}{r} 7997 \\ 1333 \\ \hline 0669 \end{array}$

$\begin{array}{r} 0669 \\ 13.36 \\ \hline 20.05 \end{array}$

Frank Beadle Road

1915

SW cor Sec 21

Sta

cor post N E 24.3'

0

" NW 27.4'

Cor W SW⁴ Sec 21

Sta

13+34

Hickory 16 S 60 W .61 ch

Fl²⁴ S 25 W 1.05 ch

33+30

Catalpa 3 S 80 E 53.4 ch

Apple tree 16 S 45 W .54 ch

NW cor Sec 21 53+26

3 rods 14 ft 9" north school house

End post S 15° E 1.00 ch

" S 17 W 1.37 ch

2

66 + 61

Cent W SW⁴ Sec 16

between 2 in fut.

W. 23 ch east 24 ch

106 + 521

S W cor Sec 9

Pig hickory 9 N 82 E 36

Cedar 3' N 45 W 33

3

79 + 97

W² mi Sec 16

Cement post N 50 W 21 ft

B wall 10 S 90 W 82 ft

100 x 14 = 1400

4

Adjustment

4		4.36	
1		3.95	
1		5.00	
		33	
		<u>5.35</u>	
	13.80	9.09	
		4.71	
		7.70	
		5.00	
0			
0			
0 + 7 to 19		3.73	
		10.07	
		58.80	8.70
1		5.30	5.10
2		8.20	8.50
3		5.60	5.30
4		8.20	8.70
5		5.60	5.10
6		8.40	8.60
7		5.40	5.20
4	598	<u>14.38</u>	8.83
5			8.98
			5.55
			5.40
			9.23
			5.15
			10.06
			9.42
			4.32
			4.96
			8.63
			7.79
			5.75
			5.67
			9.57
			4.81

1007

5

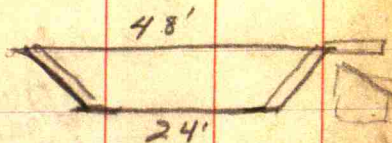
471

5.36

$$\begin{array}{r} 4.30 \\ 3.75 \\ \hline 8.05 \end{array}$$

Stout Road

12' flat top



wall — Boyd Home

80.0

228

Boyd's van door

6				
8		1438	8.42	8.38
8	5.28	1370	5.96	6.00
9			8.28	10.70
10			5.42	3.00
				11.40
			2.30	
11			8.70	9.15
12			5.00	4.55
13			8.65	9.20
13	5.40	1402	5.08	4.10
14			9.27	9.52
15			4.75	4.50
16			9.32	9.72
17			4.70	4.30
18			9.48	9.93
19			4.54	4.09
19			9.58	9.92
19			4.44	4.10
19			9.92	10.12
19			4.10	3.90
19	5.40	1472	9.32	10.12
			4.70	3.90

1st bridge floor

11.40 above water

— bridge floor

14 ft floor 4' to E fence

10' to west fence from center

0
0

		10.22		
19+60		4.50		
		Stake Pen dte		
20	14.72	10.07	10.23	8.14
		4.65	4.49	6.55
21		10.16	10.31	7.60
		4.56	4.41	7.12
22		9.84	10.42	8.02
		4.88	4.30	6.74
23		9.99	10.32	8.21
		4.73	4.40	6.54
24		9.77	10.12	8.62
		4.95	4.60	6.10
24	5.20	<hr/>		
	14.97	9.57	9.97	8.55
25		5.40	5.00	6.41
26		9.14	10.01	8.72
		5.83	4.96	6.25
26+65		9.55	10.27	
27		5.42	4.70	
28		9.59	10.75	
		5.38	4.22	
29			11.67	
			3.36	
29	11.00	<hr/>		
	22.67	12.07		
		10.60		
30		14.47	14.62	
		8.20	8.05	
30+80		16.22		
		6.95		
31		17.37	16.47	
		5.30	6.20	
31+20		11.67		
		5.00		
31+40		18.07		
		4.60		

Home west end 9

2 gate east side

1st gate west

2nd gate east

4th gate west

	22.67	8 th ea	
		18.52	18.62
32		4.15	4.15
		17.77	17.27
33		4.90	5.40
		16.47	
33 + 40		6.20	
		17.37	
33 + 60		5.30	15.57
		15.47	
34		7.20	7.10
		14.17	14.67
35		8.50	8.00
		13.97	14.52
36		8.70	8.15
		15.07	14.92
37		7.60	7.75
37	464	19.71	
		15.31	16.41
38		4.40	4.30
		15.56	15.71
39		4.15	4.00
		15.31	15.81
40		6.40	3.90
	14.56	13.56	15.37
41		5.15	4.34
		15.16	16.01
42		4.55	3.70
42	642 + 20		
42	7.50	22.66	
		12.46	
42 + 20		10.20	
		10.96	
42 + 20		11.70	

fuel 4.50

gas and
yubi can

bridge floor
20' fuel + of

water line
bottle

		Stole	Cur
43	2266	13.73	16.36
44		6.93	6.30
45		16.76	16.46
45 + 0		5.90	6.20
46		16.96	17.66
47		5.70	5.00
48		17.46	
49	900	3.20	
50		17.61	18.16
51		5.03	4.50
52		17.96	18.51
53		4.70	4.15
54		18.46	19.26
55		4.20	3.40
56		17.46	19.76
57		3.20	2.90
58		19.46	
59	900	9.00	
60		20.16	20.41
61		8.30	8.05
62		20.86	21.26
63		7.60	7.20
64		22.54	22.51
65		5.92	5.93
66		23.86	23.98
67		4.60	4.48
68		25.91	25.78
69		2.53	2.68
70	9.30	28.76	28.91
71		5.45	5.30
72		31.81	30.41
73		2.40	3.70

Reader gate cart.

Renters gate cart.

	Station	Ch	date
57	3421	29.38	28.79
		4.83	5.42
		28.61	
57 +10		5.60	
		28.61	
57 +80		5.60	
		28.31	
58 +10		5.90	
		28.51	28.56
58		5.70	5.65
		28.66	28.81
59		5.55	5.40
		28.21	29.81
60		6.00	4.90
		28.41	29.41
61		5.80	4.80
61	790 3631	29.21	30.01
62		7.10	6.30
		30.01	
62		6.30	
		30.28	30.61
63		6.03	5.70
64		31.55	31.95
		4.76	4.96
		31.11	31.61
65		5.20	4.70
		31.36	31.81
66		4.95	4.50
		32.61	32.26
67		3.70	4.05
			32.81
68			3.50
68	H93 37.74	33.21	H53

Scotts gate bar
 " " yd
 " " field

Bender gate out

	Sta	Cur	
69	33.84	33.80	
70	37.74	4.44	
70+0	33.08	33.24	
71	4.66	4.50	
72	32.39		
73	5.33		
74	32.69	33.50	
75	5.05	4.24	
76	33.54	33.99	
77	4.20	3.73	
78	34.14	34.94	
79	3.60	2.80	
80	34.91	35.74	
81	2.83	2.50	
82	7.10	42.01	
83	34.92	35.61	
84	7.09	6.40	
85	35.51	35.76	
86	6.50	6.25	
87	35.61	36.08	
88	36.40	5.93	
89	37.01	36.89	
90	5.00	5.12	
91	38.21	37.46	
92	3.80	4.53	
93	31.21		
94	10.80		
95		38.61	
96		4.40	ditch
97	39.67	38.51	33.91
98	2.50	3.50	2.10
99	39.11	38.01	35.01
100	2.90	3.00	7.00

gas cart

ditch cart

	4m	5m	6m
83	42.01	36.31	38.36
83	62 > 42.56	37.26	38.06
84		5.30	4.50
85		37.46	38.06
86		5.10	4.50
87		37.31	37.86
87		5.25	4.70
88		36.36	37.98
88		6.20	4.58
89		34.91	35.16
89	+ 95	7.65	7.40
90		37.06	38.06
90		5.50	4.50
91		37.36	38.06
91		5.20	4.50
92		37.01	38.16
92		5.55	4.40
92	7.35	44.36	37.66
93		6.70	5.82
93		38.06	38.86
94		6.30	5.30
94		39.41	39.46
95		4.95	4.48
95		37.41	37.46
95		6.95	6.70
95		40.36	40.21
95		4.00	4.15
95		41.24	41.21
95		3.12	3.15

24' sewer
 15" sewer
 10" H level end

detail west end

		Sta	Ca
96		42.26	42.06
97 +	44.36	210	230
97		42.26	42.21
98		210	210
98		42.21	
98		210	
98	59.2	42.86	1.58
98	48.81	43.16	
99		56.3	
99		44.31	43.98
100		4.50	4.83
100		46.31	45.91
100	9.85	250	290
100	56.16	48.46	49.76
101		7.70	6.40
102		51.31	51.41
102		4.95	4.65
102		51.34	51.93
103		4.82	4.23
103		51.91	52.41
104		4.27	3.75
104		52.41	52.96
104		7.75	7.20
105		53.01	53.36
105		3.15	2.50
105	5.70	58.71	53.21
106		52.57	55.0
106		6.20	
107		54.21	53.81
107		4.50	4.90

gate cart

22

		Stu	e
108	58.71	54.71	54.26
		4.00	4.45
109		54.41	53.96
		4.30	4.75
110		53.81	54.11
		4.90	4.60
111		54.06	54.21
		4.65	4.50
112		56.56	55.46
		2.15	3.25
113		56.71	55.61
		2.00	3.10
113	230 59.01	53.91	54.31
114		5.10	4.70
		53.31	53.89
115		5.70	5.13
		53.51	53.83
116		5.50	5.18
		53.93	53.91
117		5.08	5.10
		53.71	53.71
118		5.50	5.30
		53.36	53.68
119		5.65	5.53
			53.71
120			7.30
			52.71
119	+355		6.30

23

15" pipe

24

Brownsburg

W

5.25

Σ

4.54

.71

4.94

.71

5.65

4.60

10.68

4.04

10.30

$$\begin{array}{r} 10.30 \\ 4.04 \\ \hline 6.26 \end{array}$$

3.98

2.98

Sewer

460

608

10.68

cut W

both W

cut E

both E

8 branches

3 inlets

10.68

38

10.30

608

409

10.17

.372

609

417

25

26

Stephenson

Sta	BS	HI	I.S.	elev
SO	6	6		0
E	7.6	6		1.1
Rod	5.8	6		- .2
	5.3			
	4.95			

BM end Benbow walk

Road

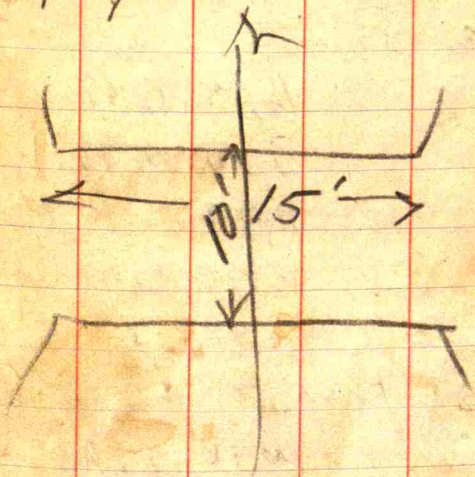
27

Sta	BS	HI	I.S.	elev
0		6.00		6.00 .00
0+15 E				7.50 - 1.50 12.74
1				5.80 .20
2				5.30 .70
3				4.95 1.05
4				4.21 1.79
5				3.19 2.81
6				2.51 3.49
7				1.80 4.20
8				1.25 4.75
8	8.30	13.05		
9				7.56 5.49
9+50				6.75 6.30
10				6.82 6.23
11				6.27 6.78
12				5.15 7.90

Sta	+	H I	PS	Elw
13	13.05	3.62	9.43	
14		5.39	7.66	
14 + 90		10.30	2.75	draw
B.M. at bottom		7.31	5.74	
	9.46 ←	75.20		
15		8.35	6.85	
16		7.82	7.38	
17		6.79	8.41	
18		4.63	10.57	
19		1.42	13.78	
19	8.84	22.62		
20		6.70	15.92	
21		4.90	17.72	
22		4.65	17.97	
23		4.80	17.82	
24				
24		4.72	17.90	
25		4.45	18.17	

15280

bottom to
top of old about



8

30	Sta 138	H.I. 7. S. Elev.
26	22.62	4.29 18.33
26	11.21	29.54
27		10.48 19.06
28		9.18 20.36
28+80		6.99 22.55
29		6.56 22.98
29		3.57 25.97
30	2.37	
30		2.40 27.14
30	4.72	31.86
30+50		3.00 28.86
30+95		4.38 27.48
31		6.15 25.71
31+80 on E. side		10.21 21.65
32		7.05 24.81
33		4.84 27.02
34		3.96 27.90
35		4.14 27.72

64
 162
 32
 384
 64
 10.56
 858
 1914
 726
 2640

27 5280
 2640
 1650
 4290

52 31
 162
 26
 312
 092
 1858

5280
 380
 5610

44
 162
 22
 268
 44
 726

Boots dine
 " front gate

5280
 2640
 330
 250
 330
 580

Bartholomew's front gate
 " farm lot 122 ft
 from c. of road
 35' A of level land drains thru here
 11 ft of 15 in sewer thru here +
 (over flow)

32

Sta	B.S.	H.I.	7.S.	Ele
36		31.86	4.26	27.60
36	5.13	32.73		
37		4.70	28.03	
38		4.24	28.49	
38+30		4.42	28.31	
39		4.76	27.97	
39+90		8.16	24.57	
40		5.15	27.58	
41		4.13	28.60	
42		1.48	31.25	
42	6.55	37.80		
43		5.11	32.80	
44		4.80	33.00	
45		4.34	33.26	
46		4.60	33.20	
47		4.02	33.78	
48		3.40	34.40	

33

McComacks drive way.

E. side of sewer. 30 in. iron pipe. 18 ft long. 40A. drain thru here.

Sta	B.S.	H.I	I.S	El
49		37.80	2.62	35.18
49	6.35	41.53		
50			3.20	36.33
31			4.94	36.39
52			3.22	36.31
53			5.09	36.44
54			4.32	37.21
55			3.11	38.42
35	3.01		3.09	38.44
56			1.22	40.31
56	6.18	46.49		
57			4.26	42.23
58			4.70	41.79
59			4.52	41.97
60			3.83	42.66
61			2.66	43.83
61	4.91	48.74		

Mitchello gate

36

Sta B.S. H.I.F.S. Ele

61+5 48.74 48.0 43.94

62 4.83 43.91

63 5.48 43.26

63+30 7.89 40.85

64 5.01 43.73

65 3.59 45.15

66 2.14 46.60

67 1.64 47.10

67 6.95 54.05

68 6.16 47.89

69 4.27 49.78

70 3.10 48.95

71 3.24 48.81

31+20 7.50 46.55

72 4.95 49.10

73 4.20 49.85

73 7.70 57.55

74 6.84 50.71

75 5.64 51.91

37

Allen's gate.

Exit, 12 in iron pipe 18 ft long

old box 12" dia

Sta	B.S.	H.I	I.S.	Elc.
75+30		57.55	457	52.98
76			394	53.61
77			254	55.01
78			369	53.86
78	6.75	60.61		
79			686	53.75
80			650	54.11
81			570	54.91
82			380	56.81
83			142	59.19
83	8.36	67.55		
84			490	62.65
84			421	63.34
85			446	63.09
86			468	62.87
86	+20 E.		392	61.63
87			470	62.85
88			442	63.18

Rhea's. Side walk

Figg's Gate

40

Sta	B.S.	I.F.S.	Elk,
89		67.55	4.10 63.45
89	6.38	69.93	
90		5.85	63.98
91		5.45	64.38
92		4.59	65.24
93		3.02	66.81
94		4.91	64.92
94	2.61	67.53	
95		3.80	63.73
96		5.08	62.45
B.M		4.80	62.73
96		4.89	62.64
97		5.95	61.58
		5.70	61.83
98		6.80	60.73
99		8.00	59.53
99	1.85	61.38	

41

Post south of gate
 Gate
 Gate - Madley's

← A4 →

← LETTER →

42

Sta.	B.S.	HI	F.S.	Ele
100	61.38	2.85	58.53	
101		3.49	57.89	
102		4.44	56.94	
103		3.28	56.10	
104		5.96	55.43	
105		6.31	55.07	
106		6.26	55.12	

43

44

2 + 50

10 + 25

10 + 65

14 + 98

15 + 33

21 + 7

45

Pen

Ave E

S 1^{1/2} Poplar St.

N " " "

S 1^{1/2} Mill St

N " " "

S 1^{1/2} Summer Street

46

	W	cen	E
B.M.	104.87	5.50	99.37
0		6.00	98.87
1		8.35	101.52
2	99.67	99.27	99.27
	5.20	5.60	5.60
3	98.27	98.47	97.57
	6.60	6.40	7.30
4	96.62	97.47	96.37
	8.25	7.40	8.50
5	95.72	96.07	95.47
	9.75	8.50	9.40
6	93.87	94.67	93.77
	11.00	10.20	11.10
6	26.5		
7	96.52	93.32	93.67
		3.20	2.85
			3.50
8		92.07	88.62
		4.45	7.90
9			84.72
			11.80
9	84.57		
	-1.5		
9	79.92	82.32	82.47
	4.65	7.25	2.10
9+20		76.67	
		7.90	
		75.77	
		8.50	
		78.37	
		6.20	

47

W header S
 Intersect Perry Hunt Road

Marshall gate est 2.50

Semicircular arch radius 3' 19' long
 footing east end 12' from C.L.
 water mark
 Bunker

	84.57	Ce	W
10		79.07	
		5.50	
		78.67	
		5.90	
11		80.07	79.17
		4.50	5.40
12		81.67	80.47
		2.90	4.10
13		82.07	81.67
		2.50	2.90
14			83.77
14	7.00		7.50
	70.77	83.77	
14		7.00	
15		86.67	87.07
		4.10	3.70
16		88.67	88.47
		2.10	2.30
17		86.57	85.87
		4.20	4.90
18		87.27	82.27
		9.50	8.50
18 + 75		80.07	
		10.70	
19		80.17	79.47
		10.60	11.00
20		80.77	79.57
		10.00	11.20
21		83.07	82.27
		7.70	8.50
		83.17	
		7.60	

Poplar St E end

3.30 hr

brandy plum

with cream

50

E side Main St from Slim
School property 9 59'

— + 9

W side Pearl St from E
side walk on Main St east
5.74' to Corporate line

— + 18

W side McKinley St north
of bank

E side McKinley St between
bank and Minnesota

Minnesota St from McKinley
to Corporate line

— + 12

51

LETTER

North Salem sidewalks

52

N Main St

0 Walk Stakes

0 2.15 1.20

1 3.80 2.47

2 5.45 2.95

3 7.25 5.25

4 9.10 7.90

5 10.70 9.90

6 12.50 11.15

6 130 ←

7 4.70 3.00

8 6.45 5.80

9 8.55 6.95

9 135 ←

10 5.20 3.82

11 7.45 6.00

12 9.80 8.50

12 185 ←

13 5.20 4.40

+ .95

11

+ 1.73

21 -

+ 2.56

30 -

+ 2.00

24 -

+ 1.20

14 -

+ .80

9 ✓

+ 1.35

16 -

+ 1.70

20 -

+ .75

9 ✓

+ 1.60

19 ✓

+ 1.38

16 -

+ 1.45

17 ✓

+ 1.30

15 ✓

+ .80

10

53

54

	Walk	Stake
14	6.55	5.15
15	6.30	6.90
16	5.90	6.20
17	5.00	5.60
17	8.60	
18	5.10	5.40
19	2.25	2.97
19+9		2.75

55

+ 1.40	17
+ .60	7
+ 30	3
+ 60	7
+ 1.30	3
+ 72	9
South walk	

56 north Salem sidewalks

Pearl St

8+18	12.30	1.02	11.28	11.28
8		2.40	9.90	10.90
7		3.90	8.40	9.45
6+373		4.00	8.30	
6+25		4.30	8.00	1
6+125		4.90	7.40	7.75
6		5.20	7.10	8.10
5		6.55	5.75	6.75
4		8.40	3.90	5.40
3		10.00	2.30	4.05
2		10.53	1.75	2.70
1		11.70	.60	1.35
0		12.30	.00	00

8.36) 11.28 (1.35
8.36
 2920
 2508
4120
 4180

End Ke fumes wall

Curve

"
"
"

1.35
1.35
 2.70
1.35
 4.05
1.35
 5.40
1.35
 6.75
1.35
 8.10
1.35
 9.45
1.35
 10.80

Abutment

N. Salem walks

58

0

Minnesota St

6.10

Walk stake

1

5.65 5.50 +15

2

4.95 4.80 +15

3

4.75 4.50 +25

4

4.65 4.50 +15

5

4.50 4.80 +60

4.20

end of walk west

59

NW Cor Minn + West St

60

		Road	Stake
8118	12.40	.70	120
8		1.85	260
7		3.60	409
			420
			4.45
			5.10
6		5.00	5.40
5		6.80	6.70
4		8.70	8.60
3		10.10	10.20
2		11.15	10.75
1		11.70	11.90
0		12.20	12.40

$$\begin{array}{r} 235 \\ 20 \\ \hline 3 \overline{) 215} \\ 70 \end{array}$$

$$\begin{array}{r} 1175 \\ 235 \\ \hline 5.36 \overline{) 9.40} \quad 1.75 \\ 536 \\ \hline 4040 \\ 3752 \\ \hline 2880 \end{array}$$

61

	Stake	Road	Walk	
walk		11.75	11.75	
	9.85	10.60	11.10	+ 15"
————	8.36	8.85	9.35	+ 12"
curve	8.25		8.92	+ 8"
"	8.00		8.48	+ 6"
"	7.35		8.04	+ 8"
————	7.05	7.45	7.60	+ 6
	5.45	5.65	5.85	+ 1
	3.85	3.75	4.10	+ 3
	2.25	2.35	2.85	+ 1
	1.70	1.30	1.65	- 1/2
	.55	.75	.95	+ 5
	9.35	60.20	25	+ 3"

$$\begin{array}{r} 235 \\ 175 \\ \hline 410 \\ 175 \\ \hline 585 \\ 175 \\ \hline 760 \\ 175 \\ \hline 935 \end{array}$$

$$\begin{array}{r} 5.5 \\ 12 \\ \hline 660 \end{array}$$

A.W. Hurin

W² in sec 11 26+72
 sta 4 8A level
 29+60 2" below road
 53 12' 30' across west road
 54⁺²⁰ 20A very level land
 2' in pipe cut
 2' border 20' long in
 55+70 20" vitrified pipes
 20A very level waterway 30"
 61+80 20A very level 20"
 vitrified waterway 30"
 66 draws no culvert
 5A level 12" waterway?
 71+45 old 12" border pit
 15' long 30" waterway 10A
 long narrow

Road.

Maple 10 S 40 W 24'
 Box alder 14" S 55 E 22.5'
 0 to 2+50 Fugle
 3+31 Flung
 4+38 30
 5+32
 6+21 Carey Carter
 7+8 Walter Carter
 7+35 Street Barber
 15+60 Rt way land
 15+88 " cut
 16+55 N rail
 16+78 S rail
 17+6 Rt way cut
 17+96 Rt way west
 19+75 Street Barber
 21 SW Carter

64

141	35,20
16	66
846	21,150
141	21,150
225	623,2650

W² m' See 80+14

SW Cor See 106+88

For 8² mi 22-15-1E →

65

21+76	Fraser
22+75	Hick
23+34	Rum E
23+80	"
24+73	William
26+72	Met Taylor W Rum E
28+28	Rum E
53+42	SW Cor See 11

map. 20 S 30° E 52

" 24 S 50° E 49.5

Corners fork N 45° E 20

Oak end fork E 1575

N E Cor house ~~150~~ 46S corner to gate fork 72
S 60° W

66

A. W. Harim Row

SW Cor Sec 16⁰+30

To complete

N line Hydra Rulliff
 N line Everett Wears
 S line Martha & Walter
 S line Frank Jennif
 S " Clifford Jennif
 S line Chas. Kocher
 S line Cemetery 54+90
 lot line west of road

NW Cor map 6 S 35° W 26.7

On brick 9m S 30° E 33.7

SW cor line S 45° E 23.3

" S 45° E 23.3

67

Cor fut S 45° E 22

Cor fut S 45° W 21.5

flatt found 154+80

about sta 153+77 east

about 125+36 east

about 116+78 east

about sta 120+25 west

" " 93+51 west

" " 64+97 east

29+60 10 A very level
 for entrance see sta 82

sta 53

sta 92

sta 99

" 107

" 117

123

154

68

L. lat end of center 81

$$\begin{array}{r} 1600 \\ 720 \\ \hline 880 \end{array}$$

$$\begin{array}{r} 10.46 \\ 880 \\ \hline 6 \overline{) 1.66} \\ 128 \end{array}$$

$$\begin{array}{r} 880 \\ 660 \\ \hline 220 \end{array}$$

$$\begin{array}{r} 100 \times 14 \times 250 \\ \hline 93 \end{array}$$

$$\begin{array}{r} 250 \\ 1000 \\ \hline 100000 \\ 250 \\ \hline 3 \overline{) 350.000} \\ 117000 \\ 58 \end{array}$$

$$\begin{array}{r} 1611 \\ 1446 \\ \hline 165 \end{array}$$

$$\begin{array}{r} 1611 \\ 5.63 \\ \hline 1046 \\ 1.57 \\ \hline 8.89 \end{array}$$

4.85

8.89 in 600'

$$\begin{array}{r} 1220 \\ 380 \\ \hline 1600 \\ 10.70 \\ \hline 3.30 \end{array}$$

$$\begin{array}{r} 10.46 \\ 5.30 \\ \hline 8 \overline{) 15.16} \\ 1.64 \end{array}$$

1892 69

$$\begin{array}{r} 915 \\ 600 \\ \hline 315 \\ 15 \\ \hline 1.575 \end{array}$$

1545

889

6.56

$$\begin{array}{r} 1600 \\ 940 \\ \hline 660 \end{array}$$

$$\begin{array}{r} 10.46 \\ 6.60 \\ \hline 7 \overline{) 13.86} \\ 55 \end{array}$$

70

$$\begin{array}{r} 5.50 \\ 5.65 \\ \hline 11.15 \\ 6.00 \\ \hline 5.15 \end{array}$$

$$\begin{array}{r} 6 \\ 3.10 \\ \hline 11.10 \\ 4.60 \\ \hline 6.50 \end{array}$$

$$\begin{array}{r} 11.10 \\ 4.90 \\ \hline 6.20 \end{array}$$

$$\frac{100 \times 5 \times 14 \times 125}{12} = 7000$$

$$\begin{array}{r} 12 \overline{) 875000} \\ \underline{240000} \\ 635000 \\ \underline{600000} \\ 35000 \\ \underline{36000} \\ 37 \end{array}$$

71

$$\begin{array}{r} 13.53 \\ 6.25 \\ \hline 19.78 \quad \# I \\ 13.69 \\ \hline 6.09 \end{array}$$

$$\begin{array}{r} 1978 \\ 3.83 \\ \hline 5.93 \\ 5.89 \\ 5.85 \\ 5.0 \\ \hline 5.35 \end{array}$$

$$\begin{array}{r} 585 \\ 457 \\ \hline 1.28 \end{array}$$

23

$$\begin{array}{r} .28 \\ .16 \\ \hline 1.68 \\ 28 \\ \hline .0448 \end{array}$$

51

$$\begin{array}{r} 589 \\ 50 \\ \hline 539 \end{array}$$

Stat.	B.S	H.I	W.	Gen	E.
8		60.24	6.80	5.80	6.50
		<u>53.44</u>	<u>54.44</u>	<u>53.74</u>	
9			7.70	6.35	7.10
		<u>52.54</u>	<u>53.89</u>	<u>53.14</u>	
10			7.71	6.30	7.20
		<u>52.53</u>	<u>53.94</u>	<u>53.04</u>	
11			8.04	7.20	7.00
x	1.91	54.95	52.20	53.04	53.24
12			4.40	3.40	3.80
		<u>50.55</u>	<u>51.55</u>	<u>51.15</u>	
13			5.20	3.60	4.80
		<u>49.75</u>	<u>51.35</u>	<u>50.65</u>	
14			5.80	5.70	6.20
		<u>49.15</u>	<u>49.25</u>	<u>48.75</u>	
15			9.90	9.00	9.60
		<u>45.65</u>	<u>45.95</u>	<u>45.35</u>	
16			10.50	10.20	11.60
		<u>44.45</u>	<u>44.75</u>	<u>43.35</u>	

53.87

53.19

53.17

53.04

51.08

50.68

49.05

45.46

44.18

1.04
1.24
20
37248
.83

54.95
1.91
53.04
720
60.24

78

Stat	B.S.	H.I.	W.	Cor.	E.
B.M. 6				10.96	
π	1.25	45.74		<u>44.49</u>	<u>44.49</u>
17			3.00	2.00	3.00
		<u>42.74</u>	<u>43.74</u>	<u>42.74</u>	43.07
18			4.20	4.10	4.20
		<u>41.54</u>	<u>41.64</u>	<u>41.54</u>	41.57
19			9.50	9.70	10.20
		<u>36.24</u>	<u>36.04</u>	<u>35.54</u>	35.94
π	2.16	38.20			
20			7.50	6.40	6.90
		<u>30.70</u>	<u>31.80</u>	<u>31.30</u>	31.26
20+60			7.20		
		<u>31.00</u>			
21			8.20	6.30	7.70
		<u>30.00</u>	<u>31.90</u>	<u>30.50</u>	30.80
21+50			4.27		
		<u>33.93</u>			
22			2.97		
		<u>35.23</u>			

79

N. rail, N. track

38.20	
<u>2.16</u>	
36.04	35.23
<u>9.70</u>	<u>2.97</u>
45.74	38.20

45.74
<u>1.25</u>
44.49
<u>10.46</u>
54.95

of
Top sill across shop door

Top W parapet bridge

Stat.	B.S.	H.I.	V.V.	Can.	E.
π	12.32	47.55		11.20	14.08
				<u>36.35</u>	<u>39.5</u>
23				6.30	5.40
				<u>41.25</u>	<u>46.5</u>
					41.31
\odot				3.13	
π	9.41	53.83		<u>44.42</u>	
24				8.00	6.90
				<u>45.83</u>	<u>46.93</u>
					45.83
					46.19
25				5.00	4.90
				<u>48.83</u>	<u>48.93</u>
					47.93
					48.56
26				4.30	4.20
				<u>49.53</u>	<u>49.63</u>
					48.73
					49.29
27				4.90	4.20
				<u>48.93</u>	<u>49.63</u>
					49.2
					49.24
28				\odot 4.43	
				<u>49.40</u>	
π	3.68	53.08			
28	49.48	360		3.70	

40
48
38
2126
42

47.55
12.32
35.23

55
335
2.23
3613
204

53.83
9.41
44.42
3.13
47.55

53.08
3.68
49.40
4.43
53.83

4938

Stat	B.S.	H.L.	W.	Can	F
29	53.08		5.60	4.50	5.50
			<u>47.48</u>	<u>48.58</u>	<u>47.58</u>
					47.88
30			6.00	4.80	6.00
			<u>47.08</u>	<u>48.28</u>	<u>47.18</u>
					47.45
31			6.10	4.70	6.10
			<u>46.98</u>	<u>48.38</u>	<u>46.98</u>
					47.44
32			5.60	4.60	5.50
			<u>47.48</u>	<u>48.48</u>	<u>47.58</u>
					47.84
33			5.70	4.60	5.90
			<u>47.38</u>	<u>48.48</u>	<u>47.18</u>
					47.68
34			5.50	4.66	5.50
			<u>47.58</u>	<u>48.42</u>	<u>47.58</u>
					47.86
π	5.71	54.13			
35			5.80	5.30	5.60
			<u>48.33</u>	<u>48.83</u>	<u>48.53</u>
					48.56
36			5.60	4.90	5.70
			<u>48.53</u>	<u>49.23</u>	<u>48.13</u>
					48.73

54.13
 5.71

 48.42
 4.66

 53.08

84

Stat.	B.S.	H.I.	W.	Can.	E
37		54.13	5.90	4.60	5.80
		<u>48.23</u>	<u>49.53</u>	<u>48.33</u>	48.69
38			5.70	4.80	6.10
		<u>48.43</u>	<u>49.33</u>	<u>48.13</u>	48.59
39			5.70	4.50	6.00
		<u>48.43</u>	<u>49.63</u>	<u>48.13</u>	48.73
40			4.50	4.09	4.80
		<u>49.63</u>	<u>50.04</u>	<u>49.33</u>	49.66
π	3.64	53.68			
41			4.40	4.00	4.90
		<u>49.28</u>	<u>49.68</u>	<u>48.78</u>	49.24
42			5.30	4.50	5.80
		<u>48.38</u>	<u>49.18</u>	<u>47.88</u>	48.48
43			5.50	4.80	5.50
		<u>48.18</u>	<u>48.88</u>	<u>48.18</u>	48.41
4.4			6.20	5.50	6.70
		<u>47.48</u>	<u>48.18</u>	<u>46.98</u>	47.54

85

53.68
<u>3.64</u>
50.04
<u>4.09</u>
54.13

86

Stat.	B.S.	H.I.	W.	Con.	E.
45		53.68	7.30	5.20	7.60
		<u>46.38</u>	<u>47.78</u>	<u>46.08</u>	46.74
46			7.50	6.20	7.70
		<u>46.18</u>	<u>47.48</u>	<u>45.98</u>	46.34
47			7.70	6.51	7.90
		<u>45.78</u>	<u>47.17</u>	<u>45.78</u>	<u>47.17</u>
π	4.10	51.27			
48			5.00	4.10	5.00
		<u>46.27</u>	<u>47.17</u>	<u>46.27</u>	46.57
49			5.30	4.30	4.70
		<u>45.97</u>	<u>46.97</u>	<u>46.57</u>	46.50
50			6.20	5.80	6.30
		<u>45.07</u>	<u>45.47</u>	<u>44.97</u>	45.17
51			7.30	6.60	6.70
		<u>43.97</u>	<u>44.67</u>	<u>44.57</u>	43.73
52			8.80	8.70	9.20
		<u>42.47</u>	<u>42.57</u>	<u>42.07</u>	42.37

87

$$\begin{array}{r} 98 \\ 248 \\ \underline{118} \\ 3)464 \\ \underline{155} \end{array}$$

$$\begin{array}{r} 98 \\ 78 \\ \underline{217} \\ 3)393 \\ \underline{131} \\ 42 \\ \underline{46.31} \end{array}$$

$$\begin{array}{r} 51.27 \\ \underline{4.10} \\ 47.17 \\ \underline{6.51} \\ 53.68 \end{array}$$

$$\begin{array}{r} 170 \\ 51 \\ \underline{190} \\ 3)411 \\ \underline{137} \end{array}$$

88

Stat.	B.S.	H.I.	W.	Cor.	E.
53		51.27	10.80	10.05	10.50
			<u>40.47</u>	<u>41.22</u>	<u>40.77</u>
					40.82
B.M. O			<u>9.86</u>		
π	5.50	46.91	41.41		
54			<u>6.30</u>	5.60	7.00
			<u>40.61</u>	<u>41.31</u>	<u>39.91</u>
					40.61
54+20			<u>9.00</u>		
			37.91		
55			<u>5.70</u>	5.00	5.60
			<u>41.21</u>	<u>41.91</u>	<u>41.31</u>
					41.47
55+60			<u>6.90</u>		
			40.01		
56			<u>5.90</u>	9.90	6.70
			<u>41.51</u>	<u>42.01</u>	<u>40.21</u>
					41.24
57			<u>4.50</u>	4.00	4.70
			<u>42.41</u>	<u>42.91</u>	<u>42.21</u>
					42.57
58			<u>2.90</u>	2.96	3.60
			<u>44.01</u>	<u>43.95</u>	<u>43.31</u>
					43.75
π	3.63	47.64			

89

Top N.E. wit. rock

Bottom sewer W. end.

46.91 " " " "

5.50

41.41

9.86

51.27

47.64

3.63

43.95

2.96

46.91

Stat.	B.S.	H.I.	W.	Con.	E.	
59		47.64	<u>3.80</u>	<u>3.80</u>	<u>4.40</u>	43.64
			43.84	43.84	43.24	
60			<u>5.20</u>	<u>4.70</u>	<u>5.20</u>	42.60
			42.44	42.94	42.44	
61			<u>6.20</u>	<u>5.00</u>	<u>5.80</u>	41.97
			41.44	42.64	41.84	
61+80			<u>7.30</u>			
			40.34			
62			<u>6.00</u>	<u>5.40</u>	<u>6.30</u>	41.74
			41.64	42.24	41.34	
63			<u>5.80</u>	<u>5.00</u>	<u>5.90</u>	42.07
			41.84	42.64	41.74	
64			<u>5.40</u>	<u>4.70</u>	<u>5.60</u>	42.40
			42.24	42.94	42.04	
65			<u>5.40</u>	<u>4.72</u>	<u>5.60</u>	42.40
			42.24	42.92	42.04	
π	6.56	49.48				
66			<u>7.30</u>	<u>6.60</u>	<u>8.00</u>	42.18
			42.18	42.88	41.98	

w. end Colvert

49.48
<u>6.36</u>
42.92
<u>4.72</u>
47.64

92

Stat.	B.S.	I.I.	W.	Con.	E	
67		49.48	<u>6.90</u>	<u>6.10</u>	<u>7.50</u>	42.64
			42.58	43.38	41.98	
6.8			<u>6.00</u>	<u>5.60</u>	<u>6.40</u>	43.48
			43.48	43.88	43.08	
69			<u>9.50</u>	<u>9.40</u>	<u>9.50</u>	45.01
			44.98	45.08	44.98	
70			<u>3.90</u>	<u>3.60</u>	<u>4.00</u>	45.64
			43.58	45.88	45.48	
71			<u>6.90</u>	<u>5.90</u>	<u>7.20</u>	43.14
			42.58	43.58	42.28	
71+50			<u>8.00</u>			
			41.48			
72			<u>6.70</u>	<u>5.94</u>	<u>6.80</u>	43.10
			43.08	43.54	42.68	
\bar{A}	3.10	46.64				
73			<u>4.20</u>	<u>3.60</u>	<u>9.60</u>	42.50
			42.44	43.04	42.04	
74			<u>5.10</u>	<u>4.30</u>	<u>5.50</u>	41.67
			41.54	42.34	41.14	

93

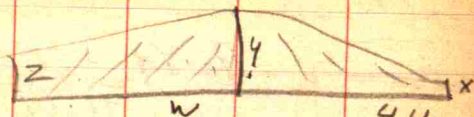
W. end culvert

$$\begin{array}{r} 46.64 \\ 3.10 \\ \hline 49.54 \\ 5.94 \\ \hline 49.48 \end{array}$$

94

Stat.	B.S.	H.I.	W.	Cor.	E
75		46.64	<u>6.00</u>	<u>1.80</u>	<u>5.90</u>
			40.64	41.84	40.74
76			<u>6.20</u>	<u>5.00</u>	<u>5.90</u>
			40.44	41.64	40.74
77			<u>6.70</u>	<u>5.90</u>	<u>7.20</u>
			39.94	40.74	39.44
77+70			<u>8.40</u>		
			38.24	0	
78			<u>7.20</u>	<u>6.20</u>	<u>8.10</u>
			39.44	40.44	38.54
π	8.50	48.94			
79			<u>7.90</u>	<u>7.10</u>	<u>8.60</u>
			41.04	41.54	40.34
80			<u>6.80</u>	<u>6.60</u>	<u>6.80</u>
			42.14	42.34	42.14
81			<u>5.70</u>	<u>5.50</u>	<u>5.80</u>
			43.24	43.44	43.14
82			<u>5.80</u>	<u>5.30</u>	<u>5.30</u>
			43.14	43.64	43.64

95



$$\frac{w(y+z)}{2}$$

$$\frac{w(x+y)}{2}$$

$$\begin{array}{r} 44 \\ 164 \\ 164 \\ 74 \\ \hline 4446 \\ 4112 \end{array}$$

w.end

$$\frac{wy}{4} + \frac{wz}{4} + \frac{wy}{4} + \frac{wy}{4}$$

$$\frac{w}{4}(y+z+x+y)$$

$$\frac{w}{4}(z+x+2y)$$

$$\begin{array}{r} 48.94 \\ 850 \\ \hline 40.44 \\ 6.20 \\ \hline 46.64 \end{array}$$

Stal	B.S.	H.L.	W.	Con	E
83		48.94	<u>7.20</u>	<u>6.20</u>	<u>7.10</u>
			41.74	42.74	41.80
84			<u>8.30</u>	<u>7.70</u>	<u>8.30</u>
			40.64	41.24	40.64
85			<u>9.10</u>	<u>8.50</u>	<u>9.50</u>
			39.84	40.44	39.44
86			<u>9.70</u>	<u>9.08</u>	<u>10.20</u>
			39.24	39.86	38.74
π	1.60	41.46			
87			<u>3.00</u>	<u>2.50</u>	<u>3.50</u>
			38.46	38.96	37.96
88			<u>4.00</u>	<u>3.60</u>	<u>4.50</u>
			37.46	37.86	36.96
89			<u>5.00</u>	<u>4.40</u>	<u>5.40</u>
			36.46	37.06	36.06
90			<u>5.90</u>	<u>5.30</u>	<u>6.10</u>
			35.56	36.16	35.36

41.46
1.60
39.86
9.08
48.94

98

Stat. B.S. H.I. W. Cen. E

91	41.46	6.50	6.00	6.90	
		<u>34.96</u>	<u>35.96</u>	<u>34.5</u>	34.99

92		6.90	6.30	7.10	
		<u>34.56</u>	<u>35.16</u>	<u>34.3</u>	34.69

93		7.00	6.30	7.50	
		<u>34.46</u>	<u>35.16</u>	<u>33.66</u>	34.36

94		7.20	6.70	7.40	
		<u>34.26</u>	<u>34.76</u>	<u>34.06</u>	34.36

7	1.32	36.08			
---	------	-------	--	--	--

95		3.40	2.50	3.30	
		<u>32.68</u>	<u>33.58</u>	<u>32.78</u>	33.01

96		4.60	3.60	4.70	
		<u>31.48</u>	<u>32.48</u>	<u>31.38</u>	31.78

97		5.40	4.40	5.40	
		<u>30.68</u>	<u>31.68</u>	<u>30.28</u>	30.88

98		6.00	5.30	6.50	
		<u>30.08</u>	<u>30.78</u>	<u>29.58</u>	30.14

99

56
<u>116</u>
116
<u>36</u>
4324
<u>34.81</u>

36.08
<u>1.32</u>
34.76
<u>6.70</u>
41.46

100

Stat.	B.S.	H.I.	W.	Con	E.
99		36.08	6.20	5.50	6.90
		<u>29.88</u>	<u>30.58</u>	<u>29.18</u>	29.58
100			6.50	5.70	7.30
		<u>29.58</u>	<u>30.38</u>	<u>28.78</u>	29.58
101			7.50	6.42	7.80
		<u>28.58</u>	<u>29.66</u>	<u>28.28</u>	28.54
π	2.96	32.62			
102			4.60	3.80	5.10
		<u>28.02</u>	<u>28.82</u>	<u>27.5</u>	28.12
103			5.10	4.30	5.50
		<u>27.52</u>	<u>28.32</u>	<u>27.1</u>	27.65
104			5.60	4.60	6.10
		<u>27.02</u>	<u>28.02</u>	<u>26.5</u>	27.15
105			6.00	5.30	6.40
		<u>26.62</u>	<u>27.32</u>	<u>26.22</u>	26.72
106			6.50	5.50	6.70
		<u>26.12</u>	<u>27.12</u>	<u>25.92</u>	26.38

101

32.62
<u>2.96</u>
29.66
<u>6.42</u>
36.08

102

Stat.

B.S.

H.I.

W.

Cor.

E.

107

32.62

6.60

6.50

6.80

26.02

26.12

25.82

25.98

B.M. \odot

1.76

7

1.44

32.30

31.86

Top concrete post to Walton's
field. Noon

108

6.50

5.50

7.60

25.80

26.80

24.70

25.74

109

6.20

5.60

7.70

26.18

26.70

24.60

25.80

32.30

1.44

30.86

1.76

110

5.60

5.70

7.80

26.70

27.00

24.50

26.06

32.62

26.65

2.28

24.37

7.93

32.30

111

5.90

5.70

8.00

26.40

26.60

24.80

25.76

112

6.90

6.70

8.90

25.40

25.60

23.90

24.96

113

8.30

7.93

9.20

24.00

24.87

23.10

23.82

T

2.28

26.65

104

Stet.	B.S.	H.I.	W.	Gen	E	
114		26.65	3.60	3.10	4.30	22.98

<u>23.05</u>	<u>23.55</u>	<u>22.35</u>
--------------	--------------	--------------

115

<u>4.90</u>	<u>4.20</u>	<u>5.20</u>
<u>22.25</u>	<u>22.45</u>	<u>21.45</u>

22.00

116

<u>5.00</u>	<u>4.80</u>	<u>6.80</u>
<u>21.65</u>	<u>21.85</u>	<u>19.85</u>

21.11

117

<u>5.60</u>	<u>5.00</u>	<u>6.50</u>
<u>21.05</u>	<u>21.65</u>	<u>20.15</u>

20.95

118

<u>5.90</u>	<u>5.70</u>	<u>7.20</u>
<u>20.75</u>	<u>20.95</u>	<u>19.45</u>

20.38

119

<u>6.60</u>	<u>6.40</u>	<u>6.10</u>
<u>20.05</u>	<u>20.25</u>	<u>20.55</u>

20.28

120

<u>8.20</u>	<u>7.92</u>	<u>9.00</u>
<u>18.45</u>	<u>18.73</u>	<u>17.65</u>

18.27

π

2.23 20.96

121

<u>3.80</u>	<u>3.30</u>	<u>4.50</u>
<u>17.16</u>	<u>17.66</u>	<u>16.46</u>

17.09

105

20.96
<u>2.23</u>
18.73
<u>17.92</u>
26.65

106

Stat.	B.S.	H.I.	V.I.	Con.	E.	
122		<u>20.96</u>	<u>4.50</u>	<u>4.20</u>	<u>5.50</u>	14.22
			16.46	16.76	15.46	
123			<u>5.10</u>	<u>4.50</u>	<u>4.70</u>	15.19
			15.86	16.46	16.26	
124			<u>6.20</u>	<u>5.20</u>	<u>5.60</u>	15.29
			14.76	15.76	15.36	
125			<u>7.90</u>	<u>6.50</u>	<u>6.80</u>	13.89
			13.06	14.46	14.16	
126			<u>8.90</u>	<u>7.80</u>	<u>8.60</u>	12.52
			12.06	13.16	12.36	
127			<u>10.80</u>	<u>9.56</u>	<u>10.00</u>	10.84
			10.16	11.40	10.96	
π	2.60	14.00				
128			<u>6.70</u>	<u>4.80</u>	<u>5.30</u>	8.40
			7.30	9.20	8.70	
129			<u>9.50</u>	<u>8.00</u>	<u>9.00</u>	5.16
			4.50	6.00	5.00	

107

<u>14.00</u>
<u>2.60</u>
11.40
<u>9.56</u>
20.96
76
175
175
<u>136</u>
4362
<u>140</u>
14
<u>15.40</u>

108

Stat.	B.S.	H.I.	W.	Con	E.	
130.			<u>12.00</u> 200	<u>10.80</u> 1.20	<u>11.60</u> 2.40	186
131		1400 V	<u>14.00</u> 20	<u>11.60</u> 2.40	<u>13.50</u> .50	96
			<u>12.35</u> 1.65			
B.M.			<u>10.34</u> 3.64			
132			<u>14.00</u> 20	<u>11.60</u> 2.40	<u>13.90</u> .60	1.00
133			<u>11.70</u> 2.80	<u>10.70</u> 3.30	<u>11.70</u> 2.90	2.63
134			<u>9.80</u> 4.20	<u>7.70</u> 6.30	<u>8.00</u> 6.00	5.50
135			<u>4.90</u> 9.60	<u>3.70</u> 10.30	<u>4.20</u> 9.80	9.90
136			<u>2.20</u> 11.80	<u>1.20</u> 12.80	<u>1.80</u> 12.20	12.26
137			<u>2.00</u> 12.00	<u>1.05</u> 12.95	<u>2.00</u> 12.19	12.31

109

Bridge floor N.W. corner
Top N. end W. parapet.

110

Stat. B.S. H.I. W. Cor. E

π 3.08 16.03 4

136

<u>4.50</u>	<u>3.30</u>	<u>4.20</u>	
11.53	12.73	11.83	12.03

137

<u>3.30</u>	<u>3.50</u>	<u>4.30</u>	
12.73	12.53	11.73	11.99

140

<u>5.20</u>	<u>5.50</u>	<u>6.00</u>	
10.23	10.53	10.43	10.29

141

<u>7.00</u>	<u>6.00</u>	<u>7.00</u>	
9.03	10.03	9.03	9.36

141 + 30

<u>8.70</u>			
7.33			

W. end culvert

142

<u>7.20</u>	<u>6.00</u>	<u>6.50</u>	
8.83	10.03	9.23	9.36

143

<u>6.90</u>	<u>6.00</u>	<u>6.60</u>	
9.13	10.03	9.43	9.53

10.18

5.82

16.00

144

<u>7.30</u>	<u>5.85</u>	<u>6.90</u>	
8.73	10.18	9.13	9.34

π 582 16.00.

111

12.95

30.8

16.03

Stat.	B.S.	H.I.	W.	CON.	E
145		1600	<u>7.20</u> 8.90	<u>6.10</u> 9.90	<u>6.90</u> 9.10 9.24
146			<u>7.30</u> 8.70	<u>6.40</u> 9.60	<u>7.50</u> 8.50 8.93
146+50			<u>9.30</u> 8.70		
147			<u>7.30</u> 8.70	<u>6.20</u> 9.80	<u>7.70</u> 8.30 8.93
148			<u>6.00</u> 10.00	<u>5.10</u> 10.90	<u>6.20</u> 9.80 10.23
149			<u>5.40</u> 10.60	<u>4.20</u> 11.80	<u>5.40</u> 10.60 11.00
150			<u>5.30</u> 10.70	<u>3.70</u> 12.30	<u>5.20</u> 10.80 11.24
151			<u>5.00</u> 11.00	<u>3.50</u> 12.50	<u>4.80</u> 11.20 11.56
152			<u>5.50</u> 10.50	0 <u>4.29</u> 11.71	<u>5.50</u> 11.50 10.90
T	2.30	14.01			

W. end Sewer

11.71
2.30
 14.01

114

Stat.	B.S.	H.L.	W.	Can.	E.
153		14.01	$\frac{2.70}{11.31}$	$\frac{3.90}{10.11}$	$\frac{3.90}{10.11}$ 10.50
154			$\frac{4.40}{9.61}$	$\frac{3.40}{10.61}$	$\frac{4.70}{9.31}$ 9.84
155			$\frac{5.20}{8.91}$	$\frac{4.20}{9.81}$	$\frac{3.20}{8.81}$ 9.14
156			$\frac{6.00}{8.01}$	$\frac{4.60}{9.41}$	$\frac{5.80}{8.21}$ 8.54
157			$\frac{6.10}{7.91}$	$\frac{4.70}{9.31}$	$\frac{6.00}{8.01}$ 8.41
158			$\frac{6.00}{8.01}$	$\frac{5.10}{8.91}$	$\frac{5.90}{8.11}$ 8.34
159			$\frac{6.40}{7.61}$	$\frac{5.50}{8.51}$	$\frac{6.50}{7.51}$ 7.87
160			$\frac{6.50}{7.57}$	$\frac{5.80}{8.21}$	$\frac{6.70}{7.31}$ 7.67
			$\frac{5.80}{8.21}$		

115

$$\begin{array}{r} 91 \\ 231 \\ 101 \\ \hline 3)423 \\ 144 \end{array}$$

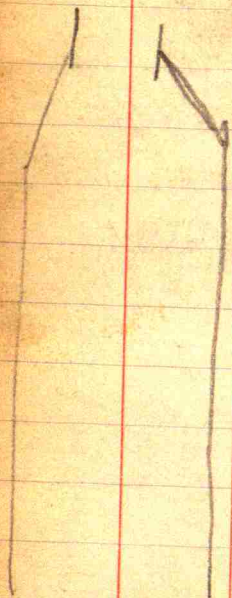
$$\begin{array}{r} 91 \\ 231 \\ 231 \\ 101 \\ \hline 4)654 \\ 163 \\ 7 \\ \hline 863 \\ 41 \\ \hline 24 \end{array}$$

center of road at end

116

13.7 S
10.3 H

15 32.2
4 19
1.9 13.2
10.3
8.7



17.31 17.31
13.50 13.23
3.81 4.06

17.31 17.31
12.82 12.47
4.49 4.84

17.31
12.64
4.67

1400
331
17.31 H I
370
13.61

0+20	13.50	3.81	+
0+40	13.23	4.06	+
0+60	13.03	4.28	+
+80	12.82	4.49	+
1	12.64	4.67	+
1+20	12.47	4.84	+
+40	12.33	4.98	+
+60	12.20	5.11	+
+80	12.09	5.22	+
2	12.00	5.31	+
2+20	12.01	5.30	+
2+40	12.04	5.27	+
2+60	12.09	5.22	+
2+80	12.16	5.15	+
3	12.25	5.06	+

117

118

H I 17.31

3 + 20	12.86	4.95	X
40	12.49	4.82	X
60	12.64	4.67	X
80	12.81	4.50	X
4	13.00	4.31	X
20	13.19	4.12	X
40	13.37	3.94	X
60	13.53	3.78	X
80	13.69	3.62	X
5	13.85	3.46	X

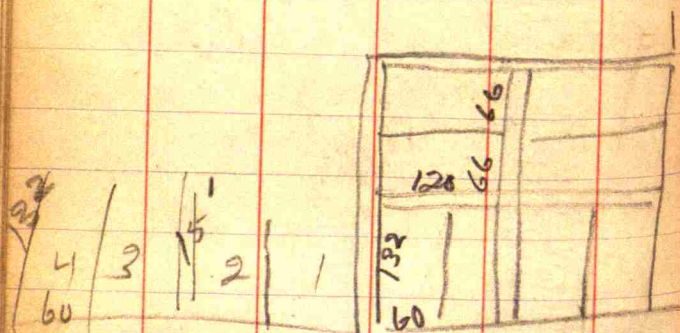
119

MVCm Sec 32 T/P 15-1
 R-2W Worth 15-1-7° E 20
 poles 30" S 60W 20"

$$\begin{array}{r}
 12 \times 1200 \\
 \hline
 2 \times 27 \\
 9 \overline{) 24000} \\
 \underline{266} \\
 66 \\
 \underline{332} \\
 330
 \end{array}$$

$$\begin{array}{r}
 330 \\
 \underline{90} \\
 \# 297.00 \\
 270 \\
 \underline{324} \\
 891
 \end{array}
 \qquad
 \begin{array}{r}
 540 \\
 \underline{60} \\
 32400
 \end{array}$$

120

$$\begin{array}{r} 1325 \\ 450 \\ \hline 1775 \end{array} \quad \begin{array}{r} - 1350 \\ - 1377 \end{array}$$


Alley 15' wide

Suppose alley on edge
15' wide, buy the ground
15' making front of 30'
wide

121

$$\begin{array}{r} 4.25 \\ 3.98 \end{array}$$

$$2250 \overline{) 12000} \quad (5)$$

$$\underline{11250}$$

$$120 \overline{) 4500} \quad \begin{array}{r} 237 \\ 18 \end{array}$$

$$\underline{360}$$

$$900$$

$$12400 \overline{) 4960}$$

$$\underline{4960}$$

$$858$$

122

77 + 70 40 A long + narrow
18" diameter evidently small

141 8 A very level
no pipe ? waterway 24"

146 + 50 16" boiler pipe 15"
long 25-A level

123

124

Adjustment

6.00

East cost

6.33

W cost

$$\begin{array}{r} 4.83 \\ 33 \\ \hline 4.52 \end{array}$$

125

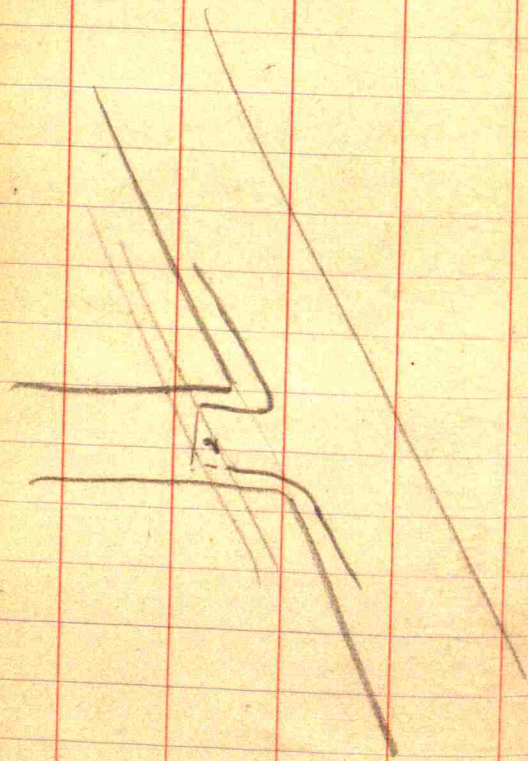
126

Elm alley to W side of walk 144.8'

Elm road to Elm Side walk on Hill St 407.4

408.9

143 ft north of old hedge stone



Lewis Phillips

Direction S 25° E

Stadia

Length

0	5	9.35	
	10	6.00	
E	15	4.90	
102		5.51	
204		5.75	
306		5.60	
408		5.60	
510		5.60	
600		3.35	
B.M.		4.40	
W	33'	4.45	
100'	75	5.70	
123.5			25.42
200'		1.05	
11.50			36.17
300		5.15	

Bridge

H I 13.80

4.00

4.45

7.80

8.90

8.30

8.05

8.20

8.20

8.80

10.45

9.40

Splice in road of elm tree
8.35 south of bridge site

13.10

24.37

31.02

130

400	5.00
500	4.60
600	4.30
700	3.80
800	-1.20

On Phillips Rd
40' start of 9' waterway

H1 36.17

131

31.17
31.57
31.87
32.87
36.37

132

$$\begin{array}{r} 58 \\ \underline{2} \\ 116 \\ 33 \\ \hline 63 \end{array}$$

$$\begin{array}{r} 240 \\ \underline{53\frac{1}{3}} \end{array}$$

$$\begin{array}{r} 720 \\ 1200 \\ \underline{80} \end{array}$$

$$160 \overline{) 12800} \quad \text{L8}$$

$$\underline{1280}$$
 $53\frac{1}{3} : 116$
 $160 : 348 = x : 29.265$

$$\begin{array}{r} 29.265 \\ 13454 \\ \hline 15.811 \end{array}$$

133

$$29 \overline{) 29.265} \quad \text{L1.01}$$

$$\underline{29}$$

$$026$$

$$\begin{array}{r} 29.265 \\ \underline{160} \end{array}$$

$$\begin{array}{r} 175590 \\ \underline{29265} \end{array}$$

$$348 \overline{) 468240} \quad \text{L13.454}$$

$$\underline{348}$$

$$1202$$

$$\underline{1044}$$

$$1580$$

$$\underline{1392}$$

$$1880$$

$$\underline{1740}$$

$$1400$$

$$53.816$$

150

151

1.01
1895

1895
1876
1857
1838
1819
37
5.9
69
85

152

$$\begin{array}{r} .0085 \\ 4 \\ \hline 0340 \end{array}$$

0085

$$\begin{array}{r} 16 \\ \hline 310 \end{array}$$

85

1360

.0085

36

$$\begin{array}{r} 510 \\ \hline 255 \end{array}$$

3060

.0085

64

$$\begin{array}{r} 340 \\ \hline 040 \end{array}$$

$$\begin{array}{r} 510 \\ \hline 57440 \end{array}$$

0085

9

$$\begin{array}{r} 6765 \\ \hline 9 \end{array}$$

.0085

23

$$\begin{array}{r} 425 \\ \hline 140 \end{array}$$

$$\begin{array}{r} 2125 \\ \hline 140 \end{array}$$

.0085

99

$$\begin{array}{r} 765 \\ \hline 49 \end{array}$$

$$\begin{array}{r} 340 \\ \hline 4165 \end{array}$$

.0085

81

6885

85

$$\begin{array}{r} 680 \\ \hline 85 \end{array}$$

$$\begin{array}{r} 6885 \\ \hline 85 \end{array}$$

153

1200

+ 1

1220

+ 3

1230

+ 7

1240

+ 13

1250

+ 21

1260

+ 30

1270

+ 41

1280

+ 54

1290

+ 69

1300

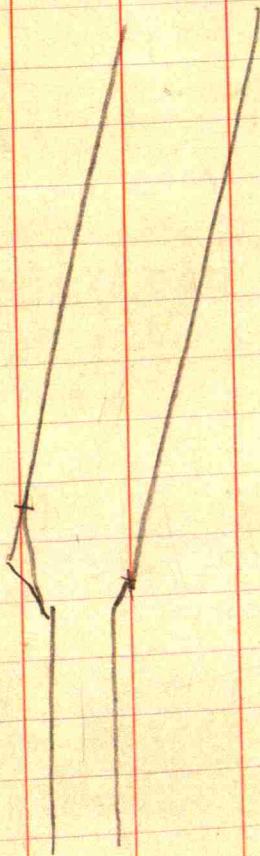
+ 85

← A4 →

← LETTER →

154

155



158

How much for use of these

Yours are welcome to it

DISTANCES FROM CENTER OF ROADWAY FOR CROSS-SECTIONING.

ROADWAY 14 FEET WIDE. SIDE SLOPES 1 $\frac{1}{2}$ TO 1.

FOR SINGLE TRACK EMBANKMENT.

	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	
0	7.0	7.2	7.3	7.5	7.6	7.8	7.9	8.1	8.2	8.4	0
1	8.5	8.7	8.8	9.0	9.1	9.3	9.4	9.6	9.7	9.9	1
2	10.0	10.2	10.3	10.5	10.6	10.8	10.9	11.1	11.2	11.4	2
3	11.5	11.7	11.8	12.0	12.1	12.3	12.4	12.6	12.7	12.9	3
4	13.0	13.2	13.3	13.5	13.6	13.8	13.9	14.1	14.2	14.4	4
5	14.5	14.7	14.8	15.0	15.1	15.3	15.4	15.6	15.7	15.9	5
6	16.0	16.2	16.3	16.5	16.6	16.8	16.9	17.1	17.2	17.4	6
7	17.5	17.7	17.8	18.0	18.1	18.3	18.4	18.6	18.7	18.9	7
8	19.0	19.2	19.3	19.5	19.6	19.8	19.9	20.1	20.2	20.4	8
9	20.5	20.7	20.8	21.0	21.1	21.3	21.4	21.6	21.7	21.9	9
10	22.0	22.2	22.3	22.5	22.6	22.8	22.9	23.1	23.2	23.4	10
11	23.5	23.7	23.8	24.0	24.1	24.3	24.4	24.6	24.7	24.9	11
12	25.0	25.2	25.3	25.5	25.6	25.8	25.9	26.1	26.2	26.4	12
13	26.5	26.7	26.8	27.0	27.1	27.3	27.4	27.6	27.7	27.9	13
14	28.0	28.2	28.3	28.5	28.6	28.8	28.9	29.1	29.2	29.4	14
15	29.5	29.7	29.8	30.0	30.1	30.3	30.4	30.6	30.7	30.9	15
16	31.0	31.2	31.3	31.5	31.6	31.8	31.9	32.1	32.2	32.4	16
17	32.5	32.7	32.8	33.0	33.1	33.3	33.4	33.6	33.7	33.9	17
18	34.0	34.2	34.3	34.5	34.6	34.8	34.9	35.1	35.2	35.4	18
19	35.5	35.7	35.8	36.0	36.1	36.3	36.4	36.6	36.7	36.9	19
20	37.0	37.2	37.3	37.5	37.6	37.8	37.9	38.1	38.2	38.4	20
21	38.5	38.7	38.8	39.0	39.1	39.3	39.4	39.6	39.7	39.9	21
22	40.0	40.2	40.3	40.5	40.6	40.8	40.9	41.1	41.2	41.4	22
23	41.5	41.7	41.8	42.0	42.1	42.3	42.4	42.6	42.7	42.9	23
24	43.0	43.2	43.3	43.5	43.6	43.8	43.9	44.1	44.2	44.4	24
25	44.5	44.7	44.8	45.0	45.1	45.3	45.4	45.6	45.7	45.9	25
26	46.0	46.2	46.3	46.5	46.6	46.8	46.9	47.1	47.2	47.4	26
27	47.5	47.7	47.8	48.0	48.1	48.3	48.4	48.6	48.7	48.9	27
28	49.0	49.2	49.3	49.5	49.6	49.8	49.9	50.1	50.2	50.4	28
29	50.5	50.7	50.8	51.0	51.1	51.3	51.4	51.6	51.7	51.9	29
30	52.0	52.2	52.3	52.5	52.6	52.8	52.9	53.1	53.2	53.4	30
31	53.5	53.7	53.8	54.0	54.1	54.3	54.4	54.6	54.7	54.9	31
32	55.0	55.2	55.3	55.5	55.6	55.8	55.9	56.1	56.2	56.4	32
33	56.5	56.7	56.8	57.0	57.1	57.3	57.4	57.6	57.7	57.9	33
34	58.0	58.2	58.3	58.5	58.6	58.8	58.9	59.1	59.2	59.4	34
35	59.5	59.7	59.8	60.0	60.1	60.3	60.4	60.6	60.7	60.9	35
36	61.0	61.2	61.3	61.5	61.6	61.8	61.9	62.1	62.2	62.4	36

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

MADE IN GERMANY.