

SCOTLAND STATION EASTERLY

PETITION 537 COPY

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Downings Cors West  
to X-Roads .6 Miles  
Munson Twp.

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LEVEL BOOK

373

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66

# KEUFFEL & ESSER CO.

DRAWING MATERIALS

AND

SURVEYING INSTRUMENTS.

NEW YORK.

CHICAGO.

SAN FRANCISCO.

ST. LOUIS.

## 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.

PLEASE RETURN TO  
**GEAUGA COUNTY ENGINEER**

	0	.1	2	3	4	5	6	7	8	.9	
	<b>COURT HOUSE</b>										
	<b>CHARDON, O.</b>										
	<b>PHONE 250-X</b>										
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

Copy

Scotland Station

Easterly No. 537

Geauga

County

Ohio

F. A. Fiedler

R. L. H.

Assistant

Res. Engr.

C.H. 44 & CH. 18 Also  
 Downing's Cor's West to X Roads  
 .6 Mi.  
 Munson Twp.

66

Index

B.Ms. Pages 4 + 8

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Grades " 38-48

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Downings Cors West to

X Roads .69 Mi. Transit Notes 52

Same Profile & Level Notes 59

2

3

Bench M. East from Chesterland P.O.

Sta	B.S. +	H.I	F.S. -	Elev.
	0.36	1217.24		1216.88
T.P.	10.50	1227.32	0.42	1216.82
B.M.			3.26	1224.06
T.P.	1.22	1226.68	1.86	1225.46
T.P.	4.84	1219.04	12.48	1214.20
B.M.			1.39	1217.65
T.P.	1.50	1207.71	12.83	1206.21
T.P.	1.43	1196.72	12.42	1195.29
B.M.			5.86	1190.86
T.P.	1.21	1186.12	11.81	1184.91
T.P.	0.05	1174.71	11.46	1174.66
B.M.			1.92	1172.79
T.P.	2.96	1165.14	12.53	1162.18
B.M.			0.74	1164.10
T.P.	1.75	1156.51	10.38	1154.76

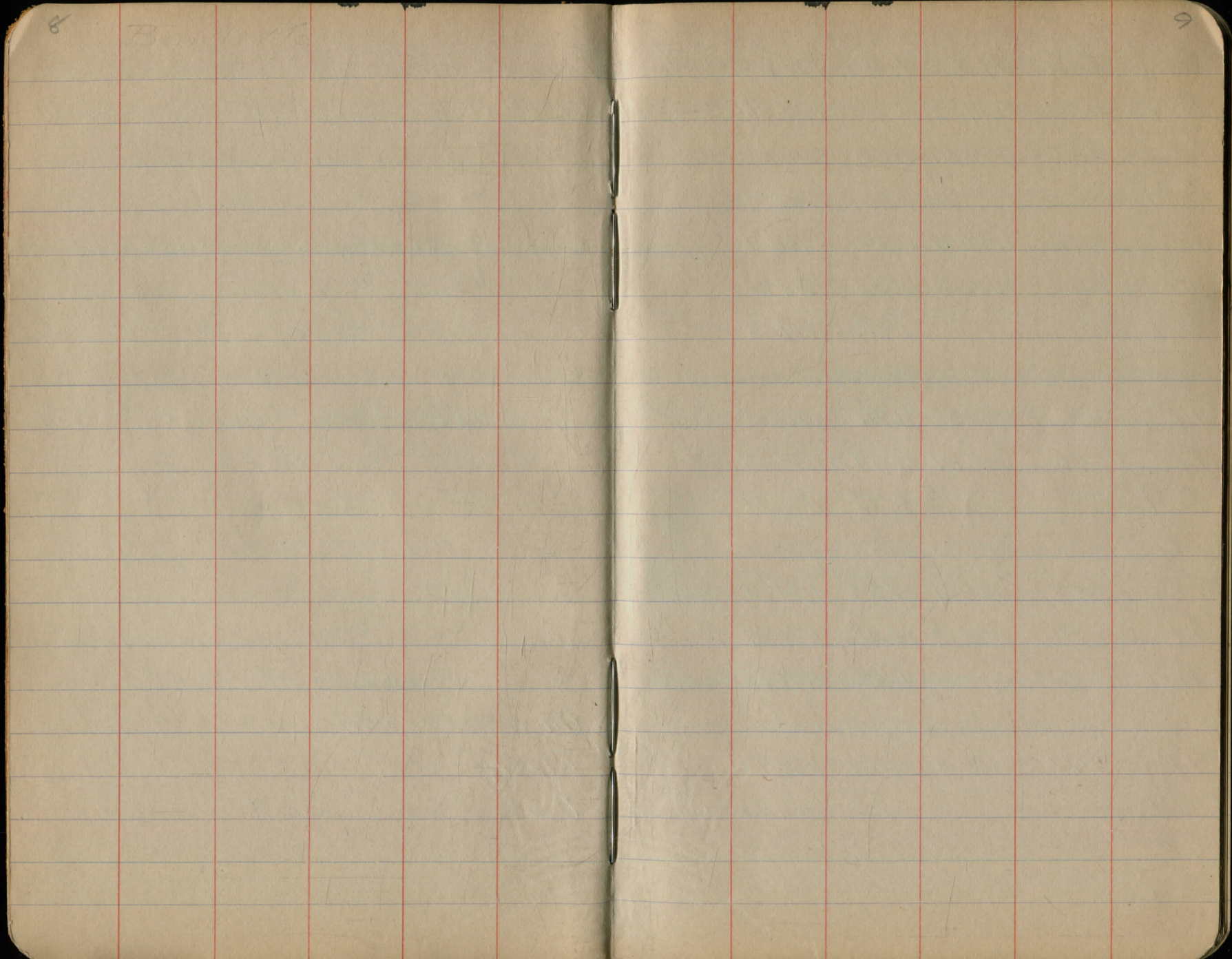
U.S.G.B.M. Bronze tablet on foundation  
of C.H. Cottrell + Son's Store.  
On stone  
+ On S.W. corner first step <sup>house</sup> Dr. C.F. Gilmore  
On stone  
" " <sup>house</sup>  
On base N.E. corner board F.W. Sheldon  
On stone  
" "  
On root 18" Hickory 300' West of  
F.W. Sheldon's house  
On stone  
" "  
On base N.E. corner board to  
Bay Window Ray Sheldon's house  
On N.W. corner N. Parapet of Pulvert  
Top of East stone hitching post  
F.W. Heath's  
On stone

Sta	B.S. +	H.I.	F.S. -	Elev
		1156.51		
T.P.	10.82	1158.51	8.82	1147.69
T.P.	8.16	1166.01	0.66	1157.85
B.M.			3.09	1162.92
T.P.	11.31	1174.49	2.83	1163.18
B.M.			1.88	1172.61
T.P.	4.70	1173.01	6.18	1168.31
B.M.			0.46	1172.55
T.P.	2.05	1164.64	10.42	1162.59
T.P.	1.38	1156.77	9.25	1155.39
T.P.	1.26	1146.90	11.13	1145.64
B.M.			5.61	1141.29
T.P.	4.42	1141.25	9.77	1137.13
			1.46	1140.09
T.P.	1.27	1137.82	5.00	1136.55
T.P.	1.04	1128.48	10.38	1127.44
B.M.			5.42	1123.06

On N.W. corner North Parapet of Culvert  
 On stone  
 On root of 24" Maple front of E.D. Tennant's  
 On stone  
 On root of 24" Maple front of N.L. Hoyay's  
 On stone  
 On base N.E. corner board of porch  
 Grant Bond's house  
 On stone  
 " "  
 " "  
 On base N.E. corner board of  
 Naher + Mill's store.  
 On water trough  
 Elev. East Rail at Road Xing.  
 On hatch of Road  
 " stone north side road  
 + On N.W. corner door sill School House

8

9



Sta	B.S.	H.I	F.S	Elev.
B.M	0.64	1217.52		1216.88
T.P.	9.64	1226.50	0.66	1216.86
B.M			2.46	1224.04
T.P.	3.48	1229.59	0.39	1226.11
T.P.	2.15	1219.41	12.33	1217.26
B.M			1.78	1219.63
T.P	1.36	1209.51	11.26	1208.15
T.P	0.20	1196.87	12.84	1196.67
B.M,			5.99	1190.83
T.P	0.20	1184.24	12.83	1184.04
T.P.	2.30	1174.13	12.41	1171.83
B.M,			1.32	1172.81
T.P.	2.22	1166.01	10.34	1163.79
B.M,			1.58	1164.43
T.P.	4.12	1162.35	7.78	1158.23

Check Levels from Chester "X Roads to School House Scotland. U.S.G.S. Chester X Roads Foundry Store. On stone North side Road. + On door step (stone) N.W. cor. Dr. Gillmore On stone N. side Road " " " " " On north side N.E. cornice board. A. W. Sheldon's House. Stone south side road. " " " Tack on root 18" hickory South side of Road 300 West A.W. Sheldon's. Stone On N.E. cornice board of Bay Window Ray Sheldon's House On south parapet culvert. On stone hitching post A.W. Heath (east one) " " South Road

Sta.	B.S.	H.I.	F.S.	Elev.
		116235		
T.P.	5.41	1166.11	1.65	1160.70
B.M.			3.16	1162.95
T.P.	10.11	1174.48	1.74	1164.37
B.M.			1.84	1172.64
T.P.	8.71	1173.45	9.74	1164.74
B.M.			0.89	1172.56
T.P.	1.24	1164.43	10.26	1163.19
T.P.	1.79	1153.28	12.94	1151.49
T.P.	4.11	1144.63	12.76	1140.52
B.M.			3.35	1141.28
			4.53	1140.10
T.P.	1.33	1136.45	9.51	1135.12
T.P.	3.32	1128.67	11.10	1125.35
B.M.			5.65	1123.02

On stone

Tack in root of 24" maple front of  
E.D. Tenney's House.

Stone south side road.

On root 24" maple front of  
N.L. Hoovey's House.

Stone  $\frac{1}{2}$  of Road.

Base of N.E. cornice board to porch  
Grant Bond's House.

Stone in driveway Bond's

"  $\frac{1}{2}$  Road

" East side driveway to Mill

Base N.E. cornice board Nehr + Mill's

Store Scotland Station

Elev. East Rail O + E. R.R. at X'ing.

Stone

+ on N.W. corner door sill to School  
House.

13

14

8/9

## X. Sections

0

1

2

3

4

5

6

7

8

9

Lt.

E

Rt.

On C + E. Electric R.R.

$$\begin{array}{r} -3.0 -4.2 -3.0 -2.4 0.0 +0.3 +0.2 +2.3 -2.7 \\ \hline 30.0 26.0 24.0 15.6 0.0 1.8 8.8 17.8 3.0 \end{array}$$

$$\begin{array}{r} -7.0 -2.3 -3.4 -2.0 -1.0 0.0 -0.3 +0.4 \text{ Store per cent} \\ \hline 30.0 21.0 14 10.4 7.0 0.0 19.0 25.0 30.0 \end{array}$$

$$\begin{array}{r} +0.9 -1.0 -1.3 -0.5 0.0 -0.3 -1.4 +0.4 +2.0 \\ \hline 30.0 17.0 12.0 9.0 0.0 6.0 12.0 19.0 30.0 \end{array}$$

$$\begin{array}{r} +3.2 +0.3 -1.1 -0.6 0.0 -0.8 -1.9 -0.6 +1.0 +0.8 \\ \hline 30 18 13.0 11.7 0.0 10.0 13.0 15.0 19.0 30.0 \end{array}$$

$$\begin{array}{r} +5.3 +4.2 -1.6 -0.4 -0.1 0.0 -0.3 -0.8 -1.4 +1.2 +1.4 \\ \hline 30.0 25.4 12.0 10.3 7.4 0.0 7.0 11.0 15.0 19.0 30.0 \end{array}$$

$$\begin{array}{r} +5.2 +3.0 +1.6 -1.3 0.0 0.0 -0.3 -0.9 -1.7 +1.2 +0.4 \\ \hline 30.0 23.0 17.0 11.3 8.0 0.0 8.0 12.5 13.8 19.0 30.0 \end{array}$$

$$\begin{array}{r} -2.2 -1.7 -0.9 -1.7 -0.7 0.0 -0.2 -0.8 0.0 +3.1 \\ \hline 25.0 16.0 14.0 11.0 8.0 0.0 13.0 15.0 18.0 30.0 \end{array}$$

$$\begin{array}{r} +2.2 +0.6 -0.8 -0.2 0.0 -0.7 -2.3 -0.9 -3.3 \\ \hline 25.0 19.0 17.0 15.5 0.0 7.0 9.0 10.0 25.0 \end{array}$$

$$\begin{array}{r} +0.3 -0.3 -0.8 -0.3 0.0 +1.4 +1.7 \\ \hline 25.0 18.0 16.0 14.0 0.0 14.0 25.0 \end{array}$$

15  
079

10

	Lt	±	Rt.
	0.0	-0.6	-1.5
	-0.8	0.0	-0.6
	-1.4	+0.2	+2.5
	25.0	19.0	16.3
	13.0	0.0	8.0
	9.0	13.0	25.0

11

	+1.8	+0.8	+1.2
	+0.2	0.0	-0.3
	+0.3	+0.3	+0.7
	25.0	18.0	16.1
	12.0	0.0	7.5
	10.0	11.0	25.0

12

	-0.3	-0.4	-1.1
	-0.4	0.0	-0.1
	-0.4	-2.2	-0.3
	+0.8		
	25.0	14.0	12.0
	10.0	0.0	10.0
	13.0	17.0	19.1
	25.0		

13

	+0.3	+0.1	-0.5
	-0.2	0.0	-0.5
	-0.9	-1.6	-1.2
	-1.2	-1.2	-1.2
	25.0	20.0	15.0
	11.0	0.0	8.0
	11.0	12.6	13.0
	25.0		

14

	-0.7	-0.7	-0.7
	-0.2	-1.0	-1.2
	-1.2	-1.9	
	25.0	20.0	15.0
	10.0	0.0	9.0
	12.0	15.0	25.0

15

	0.0	-0.7	-1.1
	-0.7	-0.3	-0.7
	-1.0	-0.3	-0.3
	25.0	17.6	15.0
	13.0	9.0	0.0
	8.0	11.0	15.0
	25.0		

16

	+1.8	+1.2	-0.3
	-0.7	-0.7	-0.2
	-1.0	-1.6	-0.6
	+0.4		
	25.0	22.0	18.0
	12.0	9.0	0.0
	7.0	10.0	12.0
	16.0	25.0	

+44 Summit

	-1.1	-1.6	-1.1
	-0.5	-0.3	-0.1
	-0.9	-1.4	-0.8
	-0.1	-0.1	-0.1
	25.0	14.0	12.0
	10.0	7.0	0.0
	6.0	11.0	12.5
	14.0	25.0	

17

	-1.0	-0.7	-1.1
	-0.4	+0.1	-0.3
	-0.7	+0.3	+0.6
	25.0	16.0	13.1
	11.0	7.0	0.0
	6.6	11.0	17.0
	25.0		

18

	+0.4	-0.2	-0.9
	-0.2	0.0	0.0
	-0.6	-0.9	+1.3
	+2.1		
	25.0	17.8	10.0
	15.0	9.0	0.0
	6.0	9.0	9.5
	2.0	25.0	

16

079

19

20

21

22

23

24

25 Summit

26

27

28

L.T.

E

R.T.

$$\begin{array}{r} +1.4 -0.6 -1.6 -0.6 +0.100 -0.1 -0.5 -1.4 +1.7 +2.7 \\ 25.0 19.0 14.4 13.0 7.4 00 5.0 7.0 9.6 18.0 25.0 \end{array}$$

$$\begin{array}{r} -1.1 -0.8 -0.6 -0.1 -0.200 -0.1 -0.2 -0.7 -0.7 -0.7 \\ 25.0 20.0 13.0 10.6 10.0 00 6.0 8.6 10.2 17.0 25.0 \end{array}$$

$$\begin{array}{r} -1.6 -1.7 -0.9 -1.4 -0.300 -0.2 -0.8 -2.0 -2.6 -3.0 \\ 25.0 18.0 14.0 12.0 9.0 00 6.0 10.0 13.0 18.0 25.0 \end{array}$$

$$\begin{array}{r} +1.5 -0.0 -1.5 -0.6 -0.300 -0.1 -0.6 -1.4 0.0 +0.4 \\ 25.0 20.0 15.4 13.0 11.0 00 8.1 10.0 12.0 23.0 25.0 \end{array}$$

$$\begin{array}{r} +1.2 +0.7 -0.9 -1.1 -0.700 -0.6 -1.4 -0.2 +0.2 +0.4 \\ 25.0 20.0 16.0 14.0 12.0 00 9.0 12.9 15.1 23.0 25.0 \end{array}$$

$$\begin{array}{r} -0.4 0.0 -1.2 +0.2 +0.5 +0.300 -0.1 0.0 +0.1 -0.3 \\ 25.0 16.0 13.0 11.0 7.0 5.0 00 4.0 10.0 17.0 25.0 \end{array}$$

$$\begin{array}{r} +3.0 +2.0 +0.2 0.0 +0.300 -0.5 -0.8 +1.4 +1.7 +1.6 \\ 25.0 18.0 15.0 11.7 9.0 00 9.3 10.5 17.0 23.0 25.0 \end{array}$$

$$\begin{array}{r} +2.3 +2.0 -0.1 -1.0 -0.200 -0.3 -0.9 -0.1 +1.4 +2.1 \\ 25.0 21.0 13.5 11.4 9.0 00 6.0 9.0 10.8 14.0 25.0 \end{array}$$

$$\begin{array}{r} +2.3 +2.0 -0.1 -1.0 -0.200 -1.4 -1.5 +1.6 +6.6 +6.7 \\ 25.0 21.0 13.5 11.4 9.0 00 5.7 7.0 11.7 23.0 25.0 \end{array}$$

$$\begin{array}{r} -0.4 -0.3 +0.1 -0.6 0.0 0.0 -0.1 -0.6 -0.3 -1.1 -1.7 \\ 25.0 22.0 15.0 12.6 10.8 00 6.4 8.6 10.0 19.0 25.0 \end{array}$$

17

049

29

30

31

32

33

34

35

36

37

38

Lt.

E

Rt.

$$\frac{-1.7}{25.0} \frac{-1.2}{18.1} \frac{-0.2}{14.1} \frac{-0.1000}{10.000} \frac{-0.2}{7.0} \frac{-0.6}{11.8} \frac{-1.4}{13.9} \frac{-0.8}{25.0}$$

$$\frac{+0.9}{25.0} \frac{-0.6}{19.0} \frac{-0.5}{17.1} \frac{-0.8}{14.8} \frac{-0.3000}{12.000} \frac{-0.4}{6.7} \frac{-0.9}{13.5} \frac{-0.6}{16.5} \frac{-0.5}{25.0}$$

$$\frac{+2.8}{25.0} \frac{+2.0}{20.0} \frac{+0.6}{17.1} \frac{-1.2}{13.4} \frac{-0.3000}{11.000} \frac{-0.2}{10.0} \frac{-0.9}{12.5} \frac{0.0}{14.0} \frac{+1.4}{21.0} \frac{+1.2}{25.0}$$

$$\frac{+1.5}{25.0} \frac{+0.7}{19.9} \frac{-0.5}{15.0} \frac{-1.4}{12.6} \frac{-0.5000}{10.600} \frac{-0.5}{12.7} \frac{-1.5}{14.1} \frac{-0.6}{16.2} \frac{+0.5}{21.0} \frac{+0.5}{25.0}$$

$$\frac{+1.7}{25.0} \frac{+1.0}{17.0} \frac{0.0}{12.7} \frac{-0.9}{10.8} \frac{-0.3000}{9.000} \frac{-0.4}{11.0} \frac{-1.4}{14.0} \frac{-0.5}{15.5} \frac{0.0}{13.7} \frac{+0.1}{25.0}$$

$$\frac{+1.0}{25.0} \frac{+0.4}{19.0} \frac{-0.7000}{12.000} \frac{-0.5}{11.0} \frac{-1.7}{14.0} \frac{-1.6}{19.0} \frac{-1.6}{25.0}$$

$$\frac{-2.3}{25.0} \frac{-2.2}{19.9} \frac{-3.0}{19.0} \frac{-0.2000}{10.000} \frac{-0.2}{10.0} \frac{-2.4}{4.0} \frac{-3.5}{17.7} \frac{-5.0}{18.9} \frac{-2.7}{22}$$

$$\frac{+0.5}{25.0} \frac{-0.4}{15.0} \frac{-1.5}{14.6} \frac{-1.2}{12.8} \frac{-0.3000}{11.000} \frac{-0.2}{8.0} \frac{-0.9}{10.4} \frac{-0.8}{12.4} \frac{+0.6}{14.0} \frac{+1.0}{25.0}$$

$$\frac{+0.2}{24.0} \frac{+0.3}{9.0} \frac{-1.6}{16.5} \frac{-1.2}{14.5} \frac{-0.7+0.2000}{13.210.100} \frac{-0.1}{6.0} \frac{+0.1}{12.0} \frac{-0.3}{14.0} \frac{-1.0}{15.8} \frac{-0.2}{17.9}$$

$$\frac{0.0}{17.0} \frac{-0.7}{15.0} \frac{-0.5}{13.0} \frac{-1.0}{11.6} \frac{-1.1}{9.0} \frac{-0.2000}{7.500} \frac{-0.2}{10.6} \frac{-1.0}{13.1} \frac{-0.8}{15.0} \frac{-1.3}{16.9} \frac{0.0}{19.0} \frac{+0.1}{25.0}$$



10

Sta

49

LT.			RT.
+1.1	+0.8	+0.5	-0.6
-1.6	-0.5	0.0	-0.7
-0.4	-0.6	+0.2	+1.0
25.0	20.2	15.0	11.6
9.0	7.5	0.0	13.3
15.0	17.0		
			21.0
			25.0

50

LT.				RT.
+2.3	+2.2	+1.6	-0.7	-1.2
-0.5	0.0	-0.4	-0.3	-0.8
+0.5	+2.0			
25.0	20.0	15.4	11.3	8.8
7.0	0.0	12.9	14.0	15.5
				17.4
				21.4

51

LT.					RT.
+1.0	+1.1	+1.0	-0.7	-0.3	0.0
-0.1	-0.4	-1.0	+0.1	+1.5	
25.0	19.3	12.8	8.5	7.0	0.0
14.6	17.0	18.5	21.0	25.0	

52

LT.					RT.
-1.0	-0.4	-0.7	-0.5	0.0	-0.2
-0.2	-0.5	-1.0	+0.5	+1.8	
25.0	15.0	9.0	7.0	0.0	13.0
15.2	18.0	21.0	25.0		

53

LT.						RT.
+0.6	+0.4	+0.2	-0.7	-0.4	0.0	-0.3
-0.3	-0.9	-0.2	+0.5	+0.9		
25.0	22.0	12.0	9.0	8.0	0.0	15.5
16.9	13.9	22.0	25.0			

54

LT.							RT.
+1.2	+0.8	+0.2	-1.0	-0.2	0.0	-0.4	-0.9
0.0	+0.2	+0.5					
25.0	18.4	15.0	12.7	10.4	0.0	14.0	15.7
18.0	24.0	25.0					

55

LT.								RT.
+1.1	+1.0	-0.4	-0.5	0.0	-0.3	0.0	-0.5	-0.7
-0.3	+0.7	+0.5						
25.0	16.0	12.3	9.6	8.5	8.0	0.0	12.0	13.9
16.5	20.0	25.0						

56

LT.									RT.
+3.0	+2.4	+2.3	-0.1	-0.8	-0.3	0.0	-0.1	-0.9	-0.1
+0.5	+0.2								
25.0	20.0	15.0	11.4	9.3	8.0	0.0	11.7	13.6	15.3
19.0	21.7								

57

LT.										RT.
-0.8	-0.8	-0.7	-0.4	-0.9	-0.2	0.0	-0.2	-1.1	-0.4	-0.3
25.0	23.8	19.1	15.0	13.3	12.0	0.0	11.7	13.0	15.0	20.0
25.0										

58

LT.									RT.
X Road	-2.5	-0.5	+0.7	0.0	-1.5	-2.2	X Road		
25.0	20.0	9.0	0.0	13.5	25.0				



21

Sta.

68 10

69 11

70 12

71 13

72 14

73 15

74 16

75 17

76 18

77 19

Lt.

E

Rt.

$$\begin{array}{r} -0.9 \\ \hline 25.0 \end{array}$$

20	-1.9	-1.4	-0.7	0.0	+0.5	0.0	-0.3	-1.6	-1.7	-2.1	-1.6	-1.0
240	22.1	21.1	19.0	16.0	7.0	0.0	5.0	7.4	9.4	10.2	11.4	12.4

$$\begin{array}{r} +1.0 \\ \hline 25.0 \end{array}$$

10.7	+0.5	+0.6	+0.5	+0.3	+0.4	0.0	-0.7	-1.2	-1.4	+1.4	+1.6	
231	13.9	14.7	13.2	11.6	5.0	0.0	4.1	6.0	3.2	12.8	16.2	

$$\begin{array}{r} -2.1 \\ \hline 25.0 \end{array}$$

-2.1	-1.9	-1.1	-0.2	+0.3	0.0	-0.2	-1.1	-1.6	-1.2	-1.6	-2.4	
25.0	22.3	20.0	16.2	7.1	0.0	4.0	6.2	8.1	9.6	15.5	20.0	

$$\begin{array}{r} +0.6 \\ \hline 25.0 \end{array}$$

-1.8	-2.1	-2.5	-1.2	-0.3	+0.6	0.0	-0.5	-1.1	-0.5	-0.9	-0.5	
25	24.3	22.6	19.7	17.0	6.0	0.0	7.1	9.2	11.0	14.0	13.0	

$$\begin{array}{r} -1.2 \\ \hline 25.0 \end{array}$$

-1.2	-2.4	-1.3	-1.7	-0.5	+0.2	0.0	-0.4	-0.9	-1.1	-0.7	-0.8	
27.5	25.0	24.5	22.0	19.0	5.0	0.0	3.1	9.0	10.8	13.0	15.6	

$$\begin{array}{r} -0.7 \\ \hline 25.0 \end{array}$$

-0.7	-0.3	-0.6	0.0	+0.2	0.0	-0.3	-0.9	-0.9	-1.0	-2.2	-1.6	
25.0	19.1	17.0	13.9	4.0	0.0	10.0	12.4	14.0	19.0	21.2	23.0	

$$\begin{array}{r} +2.3 \\ \hline 25.0 \end{array}$$

+2.3	+1.5	+0.9	+0.4	-0.4	+0.1	0.0	-0.5	+0.1	+0.7	+0.6		
25.0	23.0	20.0	17.8	15.6	4.0	0.0	10.0	11.9	16.0	25.0		

$$\begin{array}{r} +2.3 \\ \hline 25.0 \end{array}$$

+2.3	+1.4	+0.6	-0.2	0.0	0.0	-0.2	+0.2	+0.6	+0.7	+1.0		
25.0	20.8	17.0	15.5	14.1	0.0	10.0	13.0	16.6	21.3	25.0		

$$\begin{array}{r} -0.1 \\ \hline 25.0 \end{array}$$

-0.1	+0.4	-0.6	-0.2	0.0	-0.5	-1.2	-0.4	+0.4	+0.1			
25.0	20.0	14.5	12.1	0.0	9.0	13.0	15.5	16.9	21.1			

$$\begin{array}{r} +1.1 \\ \hline 25.0 \end{array}$$

+1.1	0.0	-0.7	-0.4	0.0	-0.7	-1.4	+0.4	0.0	+0.3			
25.0	14.9	12.0	10.0	0.0	10.4	13.2	16.5	21.0	25.0			

22

Sta

78 20

$$\begin{array}{cccccccccccc} +0.5 & +0.7 & -0.6 & -0.500 & -0.7 & -1.1 & +0.5 & 0.0 & +0.4 \\ 25.0 & 20.0 & 15.0 & 10.0 & 10.0 & 13.3 & 16.6 & 20.6 & 25.0 \end{array}$$

79 21

$$\begin{array}{cccccccccccc} & & & & & & -1.0 & -1.0 \\ & & & & & & \frac{-2.0}{25.0} & \frac{-1.0}{25.0} \\ -0.5 & -1.3 & -1.6 & -1.5 & -1.8 & -0.600 & -0.5 & -1.2 & -1.5 & -1.2 & -1.3 \\ 25.0 & 13.2 & 19.1 & 16.5 & 13.3 & 10.500 & 6.0 & 12.2 & 14.2 & 15.5 & 13.4 \end{array}$$

80 22

$$\begin{array}{cccccccccccc} & & & & & & -1.0 & -0.9 \\ & & & & & & \frac{-1.0}{20.5} & \frac{-0.9}{25.0} \\ +0.1 & -0.6 & -1.4 & -1.3 & -0.2 & -0.300 & -0.7 & -1.4 & -1.2 & -0.8 & -0.8 & -1.3 \\ 25.0 & 20.0 & 18.7 & 16.5 & 14.0 & 12.000 & 3.0 & 10.2 & 12.0 & 14.2 & 17.5 & 19.0 \end{array}$$

81 23

$$\begin{array}{cccccccccccc} & & & & & & -0.3 \\ & & & & & & \frac{-0.3}{25.0} \\ -0.2 & -0.3 & -1.0 & -1.2 & -1.1 & -0.200 & -0.8 & -1.2 & -1.5 & -1.1 & -0.4 & -0.3 \\ 25.0 & 21.3 & 19.7 & 15.6 & 14.5 & 10.800 & 9.5 & 9.3 & 11.1 & 13.7 & 15.5 & 23.0 \end{array}$$

82 24

$$\begin{array}{cccccccccccc} -0.7 & -0.8 & -0.7 & -0.500 & -0.6 & -1.5 & -1.0 & -1.3 & -1.5 \\ 25.0 & 22.0 & 17.3 & 15.200 & 7.9 & 14.2 & 11.5 & 16.8 & 25.0 \end{array}$$

83 25

$$\begin{array}{cccccccccccc} & & & & & & -2.0 \\ & & & & & & \frac{-2.0}{25.0} \\ -0.5 & -0.9 & -1.5 & -0.800 & -0.7 & -1.3 & -0.9 & -0.1 & -1.6 \\ 25.0 & 14.0 & 11.8 & 10.000 & 3.3 & 10.3 & 14.4 & 16.6 & 18.6 \end{array}$$

84 26

$$\begin{array}{cccccccccccc} +0.6 & -0.3 & -0.6 & -0.7 & -1.6 & -0.300 & -0.4 & -1.2 & -0.7 & -0.6 & -0.2 & -0.1 \\ 25.0 & 20.6 & 18.0 & 12.6 & 11.2 & 7.500 & 7.5 & 10.3 & 13.0 & 13.0 & 20.5 & 25.0 \end{array}$$

85 27

$$\begin{array}{cccccccccccc} & & & & & & +0.6 & +0.6 & +0.8 \\ & & & & & & \frac{+0.6}{15.8} & \frac{+0.6}{20.0} & \frac{+0.8}{25.0} \\ +0.1 & -0.2 & -0.4 & -0.6 & -1.0 & -0.300 & -0.7 & -0.4 & -0.9 & -0.7 & -0.6 \\ 25.0 & 21.0 & 16.5 & 12.8 & 11.0 & 7.300 & 5.9 & 8.2 & 10.7 & 12.0 & 14.0 \end{array}$$

86 28

$$\begin{array}{cccccccccccc} & & & & & & +1.6 \\ & & & & & & \frac{+1.6}{25.0} \\ +0.9 & +0.6 & -0.3 & 0.000 & 0.0 & -0.4 & -0.5 & +0.7 & +1.1 \\ 25.0 & 18.3 & 17.8 & 0.0 & 5.7 & 12.0 & 14.0 & 15.8 & 17.6 \end{array}$$

87 29

$$\begin{array}{cccccccccccc} +1.7 & +0.7 & 0.0 & -0.8 & -0.400 & -0.2 & -1.0 & +0.8 & +1.0 & +1.3 \\ 25.0 & 17.3 & 11.1 & 9.7 & 7.700 & 3.7 & 15.0 & 13.2 & 22.0 & 25.0 \end{array}$$

23

Sta

88 30

89 31

90 32

91 33

92 34

93 35

94 36

95 37

96 38

97 39

Lt.

£

Rt.

+1.9  
25.0+1.2 +0.4 -0.1 -0.6 -0.3 0.0 -0.3 -0.7 0.0 +0.2 +0.1  
15.3 13.6 11.5 10.0 8.0 0.0 12.4 14.5 16.4 18.1 19.7-0.1  
25.0+0.7 +0.0 0.0 +1.7 -1.3 -0.5 0.0 -0.5  
25.0 20.0 15.0 12.0 11.0 7.4 0.0 25.0+1.0 +1.1 +0.9 -0.7 -1.0 -0.1 0.0 -1.1 -0.9 +0.8 +0.7  
25.0 23.2 19.8 16.5 15.1 12.5 0.0 1.6 20.7 23.4 24.0+1.9  
25.0+1.1 +2.1 +0.2 -0.9 -0.5 0.0 -0.4 -0.2 -0.1 +0.9 +2.1  
20.2 18.0 15.2 12.5 10.4 0.0 15.5 18.4 21.2 23.5 25.0+1.1 +1.1  
25.0 29.0+1.5 +2.2 +1.2 0.0 -0.9 -0.3 0.0 +0.8 0.0 -0.6 +0.6 +0.7  
25.0 20.1 16.9 13.8 11.3 8.0 0.0 11.0 16.0 17.7 20.4 23.7+1.5  
25.0+1.5 +1.1 +0.4 +0.1 -0.6 0.0 0.0 +0.1 -0.6 +1.1 +1.0 +1.3  
20.4 17.0 14.7 10.9 8.5 6.0 0.0 13.5 15.6 18.5 21.5 25.0+2.9  
27.0+1.2 +1.6  
22.0 25.0+1.5 -0.1 -0.6 -0.8 -1.4 -0.3 0.0 -0.6 -1.1 -0.8 -0.4 +0.2 +0.6  
20.5 17.4 14.4 11.8 10.5 7.0 0.0 8.0 11.1 16.4 19.9 23.0 25.0-1.4 -0.9 -1.5 -0.7 -0.2 0.0 -0.1 +0.1 +0.2 -0.2 -1.3 -1.2  
25.0 15.0 13.0 10.0 7.0 0.0 7.9 10.9 12.9 14.0 16.2 19.0+1.5 +3.5  
22.0 25.0+0.6 -0.5 -1.6 -2.0 -1.4 +0.0 0.0 +0.1 -1.2 -2.5 -2.2 -2.1  
20.0 18.0 15.8 14.0 12.9 8.0 0.0 7.1 10.0 14.0 17.0 19.0-2.6 -2.4  
23.7 25.0+5.3  
25.0+3.9 +3.0 +2.3 +1.4 +0.3 0.0 -0.2 -0.3 +0.9 +1.8 +1.8  
22.4 20.3 17.6 15.7 11.7 0.0 10.1 11.9 14.3 16.7 20.9+2.0 +1.3  
23.0 22.0

2A

Sta

+30

98 A0

99 A1

100 A2

101 A3

102 A4

103 A5

104 A6

105 A7

106 A8

Lt

E

Rt

+3.8	+2.6	+1.8	+0.500	+0.3	+0.9	+1.6	+1.7
25.0	21.1	18.0	9.300	4.0	13.4	21.7	25.0

+5.0							
25.0							

+4.0	-0.2	-0.1	+0.3	+0.500	+0.1	-0.3	+0.1	+2.1	+3.5
25.0	17.2	16.3	15.0	13.200	6.4	8.2	9.9	15.0	22.0

-3.5							
25.0							

-2.0	-1.4	-1.2	-0.6	-0.100	-0.1	-1.3	-1.2	-2.2
20.4	13.4	9.3	8.4	5.300	13.5	16.4	21.7	25.0

+1.4			
25.0			

0.0	-0.4	-1.1	0.0	+0.5	+1.1
0.0	5.9	8.3	9.6	16.0	22.0

+3.2	+3.6
21.5	25.0

-3.3	-2.5	+0.5	-0.1	0.000	0.0	-0.5	+0.9	+1.9	+2.9
25.0	20.3	16.5	14.0	10.900	6.1	7.8	10.0	12.4	15.0

25

Sta

107 A7

$$\begin{array}{r} +0.4 -0.2 -0.6 0.0 00 \\ 25.0 14.6 13.3 11.3 00 \end{array}$$

$$\begin{array}{r} -0.2 \\ 25.0 \end{array}$$

108 50

$$\begin{array}{r} -0.2 -0.4 -0.9 -0.4 00 \\ 25.0 15.5 14.2 12.1 00 \end{array}$$

$$\begin{array}{r} +0.2 +0.5 -0.2 +0.1 \\ 18.4 20.0 21.9 25.0 \end{array}$$

109 51

$$\begin{array}{r} +1.3 +0.3 +0.3 -0.6 -1.2 -0.6 00 \\ 25.0 20.0 16.9 14.3 12.9 11.0 00 \end{array}$$

$$\begin{array}{r} -0.3 -0.8 -0.2 -0.9 +0.7 \\ 3.2 10.2 11.2 14.0 15.4 \end{array}$$

110 52

$$\begin{array}{r} +1.7 +1.9 +0.9 -0.1 -0.7 -0.2 00 \\ 25.0 22.4 18.5 14.2 12.3 6.7 00 \end{array}$$

$$\begin{array}{r} -0.2 -0.8 0.0 +0.4 -0.2 -0.9 \\ 10.5 13.0 13.8 11.5 20.0 21.5 \end{array}$$

111 53

$$\begin{array}{r} +1.9 +0.1 -0.7 -1.5 -0.8 -0.1 00 \\ 19.4 13.7 11.5 10.4 6.1 00 \end{array}$$

$$\begin{array}{r} -0.5 -0.4 -2.0 -2.3 -3.3 -4.0 \\ 10.9 14.6 16.0 18.7 22.3 25.0 \end{array}$$

112 5A

$$\begin{array}{r} +1.6 +1.0 +1.5 +0.7 -0.2 +0.2 00 \\ 25.0 21.6 16.6 12.4 10.0 3.4 00 \end{array}$$

$$\begin{array}{r} -0.4 -0.9 +0.1 +0.6 +0.9 +0.8 \\ 11.3 13.6 14.1 19.9 23.0 25.0 \end{array}$$

113 55

$$\begin{array}{r} +1.4 +2.7 +2.1 -0.8 -0.6 -0.3 00 \\ 25.0 20.0 16.1 12.0 10.6 9.0 00 \end{array}$$

$$\begin{array}{r} +1.2 \\ 25.0 \\ -0.2 -0.5 +1.8 +1.9 +1.2 \\ 10.8 12.4 15.7 18.7 20.0 \end{array}$$

114 56

$$\begin{array}{r} +2.0 +1.3 +0.7 -1.1 -0.9 -0.3 00 \\ 25.0 22.4 19.6 13.9 14.2 10.4 00 \end{array}$$

$$\begin{array}{r} -2.5 \\ 25.0 \\ -0.6 -1.0 -0.8 -0.9 -2.2 \\ 5.3 12.0 13.0 15.5 19.6 \end{array}$$

115 57

$$\begin{array}{r} +1.1 +0.6 -0.5 -1.3 -0.3 +0.2 00 \\ 25.0 21.7 16.5 15.3 12.2 4.5 00 \end{array}$$

$$\begin{array}{r} -0.5 -2.2 -2.5 -4.5 -5.4 \\ 6.0 10.0 12.9 18.8 25.0 \end{array}$$

116 58

$$\begin{array}{r} +1.0 +0.1 -0.8 -1.4 -0.9 00 \\ 25.0 18.4 14.4 14.0 11.1 00 \end{array}$$

$$\begin{array}{r} -3.8 \\ 25.0 \\ -0.8 -1.3 -1.9 -2.0 -2.8 -3.0 \\ 3.0 12.0 13.3 15.8 17.2 20.3 \end{array}$$

26

Sta

11759

+1.0 +0.4 -0.4 -1.3 -0.5 0.0 -0.7 -1.3 -0.9 -1.7  
25.0 17.0 12.4 11.3 8.5 0.0 10.0 12.6 17.3 25.0

-0.8  
25.0

11860

+1.7 +1.2 -0.3 -0.7 -0.5 0.0 -0.5 -0.8 -0.1 -0.1 -0.6  
25.0 21.0 11.4 10.3 8.4 0.0 12.0 13.1 15.0 13.0 19.0

-0.3  
25.0

11961

-0.2 -0.2 -0.4 -0.7 -0.3 0.0 -0.5 -1.1 -0.2 +0.1 -0.4  
25.0 22.0 13.3 12.0 9.0 0.0 10.6 13.5 15.4 19.7 20.7

+1.9  
25.0

12062

+0.3 +0.4 +0.2 -0.4 +1.0 0.0 -0.5 -1.1 -0.5 +0.2 +0.6  
25.0 13.0 15.3 13.3 11.3 0.0 11.0 12.6 14.3 16.9 19.4

12163

+3.1 +3.0 +2.2 +1.7 +0.7 +0.2 0.0 +0.1 -0.1 +0.9 +2.2 +3.3  
23.0 23.0 13.6 15.1 13.6 10.3 0.0 11.9 14.0 16.5 20.2 25.0

-0.3  
25.0

12264

+2.1 +2.0 +0.4 -0.2 -0.6 0.0 0.0 -0.4 -0.9 -0.2 -0.2 -0.2  
25.0 22.5 19.0 15.3 13.0 10.9 0.0 11.5 14.0 16.0 19.6 23.0

6

12365

-0.7 -1.2 -0.6 -0.5 -1.0 -1.4 0.0 -0.2 -0.6 -1.8 -1.3 -2.1  
23.0 21.0 20.1 13.0 14.0 12.0 0.0 10.0 12.4 13.0 20.0 25.0

12466

-0.6 -1.0 -1.2 -1.7 -0.1 0.0 -0.4 -1.2 -1.3 -0.8 -1.2  
25.0 16.7 14.6 12.4 9.0 0.0 9.0 11.5 14.0 20.0 25.0

12567

+0.6 -0.3 -1.1 0.0 0.0 -0.1 -1.4 -1.7 -0.3 -0.2  
25.0 16.0 13.5 10.8 0.0 8.0 13.0 14.5 20.0 25.0

+

+1.4 +1.4 +0.4 0.0 -0.1  
25.0 22.0 13.5 0.0 25.0



W & Levels sta. 0 to sta 124+

Sta	B.S.±	H I	F.S.	Elev.
	337	1144	65	1141.28
0			4.8	1139.8
1			7.1	1137.5
2			6.2	1138.4
3 T.P.	10.10	1152	21	2.54 1142.11
4			5.5	1146.7
5 T.P.	10.65	1161	18	1.68 1150.53
6			6.0	1155.1
7 T.P.	7.41	1166	80	1.79 1159.39
8			6.2	1160.4
9			5.1	1161.7
10			3.0	1163.8
T.P. stone	7.94	1173	61	1.13 1165.67
11			7.7	1166.9
12			4.6	1169.0
13			4.4	1169.2
14			4.8	1168.8
15			4.2	1169.4

B.M. on base N.E. cornice board  
to Nehr + Mills Store.

29

Sta. B5 H I F.S. Elev.

16 1173 61 2.3 1171.3

+45 1.8 1172.8

17 T.P. 4.23 1174 59 3.25 1170.36

B.M. 1.94 1173.5

On root of tree front Hoovey's

18 T.P. 1.93 1167 52 9.00 1165.59

19 5.4 1162.1

20 8.8 1158.7

21 9.2 1158.3

22 8.65 1158.9

T.P. stone 4.79 1162 91 9.40 1158.12

23 4.3 1158.6

24 4.9 1158.0

25 S. 3.7 1159.2

26 6.8 1156.1

27 T.P. 1.94 1152 37 12.48 1150.43

28 6.3 1146.1

29 7.1 1145.3

30 5.0 1147.0

30

Sta	B.S.	H. I	F.S	Elev.
T.P. stone	10.80	1160	61	2.56 1149.81
31			7.8	1152.8
32			4.4	1156.2
33 T.P.	6.00	1165	10	1.51 1159.10
Levels from 52 to 33				
	5.65	1229	71	1224.06
52			3.6	1226.1
51			4.1	1225.6
50			7.9	1221.8
49 T.P.	1.74	1219	98	11.47 1218.24
48			6.4	1214.6
47			10.2	1210.8
T.P. stone	2.01	1211	85	10.14 1209.84
46			7.8	1204.0
45 T.P.	1.20	1200	25	12.80 1199.05
44			6.3	1193.9
43			12.1	1188.1
T.P. stone	1.83	1192	10	9.98 1190.27

B.M. + on stone doorstep to  
 ↑  
 Dr. Gilmore's house

3)

Sta.	B.S.	H. I.	F.S.	Elev.
42		1192 10	8.7	1183.4
T.P. stone	1.81	1182 66	11.25	1180.8
41			3.8	1178.8
40			7.2	1175.4
39	1.11	1174 12	9.65	1173.01
38			3.2	1170.9
37			5.6	1168.5
36			10.9	1163.2
35			11.4	1162.7
T.P. culvert	1.56	1165 45	10.23	1163.89
34			4.6	1160.8
			8.95	1164.50

## Levels from 52 to End.

S.P.	5.63	1229 69		1224.06
53			7.3	1222.4
54			10.3	1219.4
55			12.5	1217.2
T. P. stone	0.24	1218 79	11.14	1218.55
56			5.4	1213.4

B.M. + on doorstep Dr. Gilmore's

32

Sta.	B.S.	H. I.	F.S.	Elev.
57		1218 79	7.9	1210.9
58			8.0	1210.8
59			5.3	1213.5
T.P.	1.51	1218 39		1216.88
60 T.P.	5.33	1222 71	1.01	1217.38
61 St.			3.6	1219.1
62			3.4	1219.3
63			4.6	1218.1
64			6.9	1215.8
65			9.1	1213.6
66			10.8	1211.9
67 T.P.	4.49	1215 90	11.30	1211.41
68			5.0	1210.9
69			6.6	1209.3
70			7.6	1208.3
71			7.5	1208.4
72			6.4	1209.5
73			5.2	1210.7

Sta.	B.S.	H.	I.	F.S.	Elev.
74		1215	90	3.2	1212.7
T.P. Stone	8.28			0.72	1215.8
75				7.1	1216.4
76				3.7	1219.8
+15 <sup>25</sup>				3.6	1219.8
B.M.				1.72	1221.7
					B.M. on maple tree
77				5.0	1218.5
78				7.3	1216.1
79				8.1	1215.4
80				8.6	1214.8
81				7.7	1215.7
82				7.7	1215.7
83				6.7	1216.8
84				5.8	1216.7
85 T.P.	8.68	1227	80	4.34	1219.12
86				7.6	1220.2
87				5.8	1222.0
88				3.4	1222.4

3A

Sta	B.S.	H. I.	F.S.	Elev.
89 T.P.	4.77	1231	88	0.69 1227.11
B.M.				1.81 1230.07
+73 <sup>I</sup> S.				4.4 1227.5
90				5.4 1226.5
91				9.2 1222.7
T.P.	1.19	1221	14	11.93 1219.95
92				3.1 1218.0
93				9.4 1212.7
T.P. stone	0.51	1209	86	11.79 1209.35
94				5.2 1204.7
95				9.3 1200.7
96				11.0 1198.8
97				11.1 1198.7
+25 <sup>S</sup>				9.91 1200.0
T.P. I.P.	9.57	1210	06	9.37 1200.49
T.P.	3.24	1209	79	1206.55
	3.24	1209	79	
T.P. stone	1.02	1201	25	9.56 1200.75

Sta.	B.S.	H	I	F.S.	Elev.
98		1201	25	7.6	1194.6
99 T.P.	6.70	1196	57	11.38	1189.87
100				7.3	1189.3
101				6.9	1189.7
102				5.5	1191.1
103				3.1	1193.5
104 T.P.	1228	1208	33	0.52	1196.05
105				9.0	1199.33
106				3.3	1205.0
T.P. store	6.72	1214	02	1.03	1207.30
107 St.				4.6	1209.4
108				5.4	1209.6
109				6.0	1208.0
110				8.6	1206.4
111				9.0	1205.0
112				9.0	1205.0
113 T.P.	1.20	1203	10	12.12	1201.9
114				3.6	1199.5

36

Sta.	B.S.	H. I.	F.S.	Elev.
115		1203 10	44	1199.7
116			46	1198.5
117			51	1198.0
118			70	1196.1
119			81	1194.7
120			104	1192.7
T.P.	148	1192 28	1230	1190.80
121			35	1188.8
122			63	1186.0
123			80	1184.3
124			88	1183.5
125			99	1182.3
+77 <sup>2</sup>	6.47	1186 35	1240	1179.88
			3.99	1182.36

B.M.

Elev. 300 Non X Road.

1	4.8
2	4.4
3	2.4

37

38

## Sta. Grade Elevations

0	-1.5%	1139 8
1	X 1.5% V.C. 200'	1138 3
1+50		1138 17
2		1139 45
3		1143 36
4	+3.91%	1147 27
5	X 3.91% V.C. 400'	1151 18
5+50		1153 07
6		1154 83
6+50		1156 5
7	X 1.8% V.C. 200'	1157 95
7+50		1159 36
8		1160 54
8+50		1160 8
9	X 1.8% V.C. 200'	1162 6
10		1164 4
11		1166 2
11+50		1167 05
12	X 1.5% V.C. 200'	1167 67

39

Sta		Grade
12+50		1168 40
13	+0.89%	1168 89
14		1169 78
15		1170 67
16		1171 29
16+50	V.C. 200' X	1170 92
17		1170 23
18	-3.73%	1166 86
19		1163 43
19+50		1161 91
20	V.C. 200' X	1160 76
20+50		1159 99
21	-0.4%	1159 6
22		1159 2
23		1158 8
23+50		1158 09
24		1157 96
24+50		1157 21
25	V.C. 200' X	1156 23

Sta		Grade
25+50	-3.14	1155 24
26		1154 42
26+50		1153 18
27		1151 72
28	V.C. 200'	1148 92
28+50	X	1148 4
29		1148 59
30	+2.48%	1150 72
31		1153 20
32		1155 68
33		1158 16
34		1160 64
35		1163 12
36		1165 60
37		1168 08
38		1170 56
39		1173 04
40		1175 09
40+50	X	1177 46

A1

Sta.	Grade
41	1179 55
42	1184 51
43	1189 84
44	1195 07
45	1200 2
46	1205 43
47	1210 76
47+50	1213 23
48	1215 4
48+50	1217 28
49	1218 86
50	1221 72
51	1224 23
51+50	1224 65
52	1224 39
53	1222 19
54	1219 64
55	1217 09
56	1214 55

X  
5.232%

V.C 200'

X  
+2.86%

V.C 200'

AV

Sta.		Grade
57	-2.54	1212 27
57+50	X	1211 8
58		1211 93
59	+2.00%	1213 82
60		1215 88
61		1217 94
61+50	X	1218 73
62	X	1219 035
62+50		1218 86
63	-1.8%	1218 2
64		1216 4
65		1214 6
66		1212 8
66+50		1212 0
67	X	1211 3
67+50		1210 9
68	-0.4%	1210 6
69		1210 2
70		1209 8

A3

Sta	Grade
71	1209 4
71+50	1209 38
72	1209 72
72+50	1211 30
73	1211 50
74	1214 0
74+50	1215 14
75	1216 06
75+50	1216 76
76	1217 25
76+50	1216 51
77	1217 56
77+50	1217 39
78	1217 0
79	1216 0
79+50	1215 61
80	1215 44
80+50	1215 48
81	1215 75

V.C. 200'

X

+ 2.5 %

V.C. 400'

X

- 1.0 %

V.C. 200'

X

+ 0.75 %

11

Sta		Grade
82		1216 50
83		1217 25
83+50		1217 70
84	X	1218 27
84+50		1218 98
85	+1.82%	1219 82
86		1221 64
87	0%	1223 46
88		1225 28
89		1226 72
89+50	X	1226 43
90		1225 38
91	-1.46%	1221 31
92		1216 85
93		1212 39
94		1207 93
95		1203 46
95+50		1201 60
96	X	1200 45

45

Sta	Grade
96+50	1200 02
97	1200 33
97+50	1200 50
98	1197 67
98+50	1194 76
99	1192 67
99+50	1191 42
100	1191 00
101	1191 15
101+50	1191 6
102	1192 35
103	1194 6
103+50	1195 9
104	1197 4
104+50	1199 1
105	1201 0
106	1205 08
107	1207 70
107+50	1208 69

V.L. 100'

V.L. 200'

V.L. 205'

V.L. 200'

V.L. 200'

+1.33%  
 X  
 -6.66%  
 X  
 0.0%  
 X  
 +2.4%  
 X  
 +4.0%  
 X  
 +3.5%

16

Sta	Grade
108	1208 72
109	1208 06
110	1206 76
111	1205 47
112	1204 18
113	1202 89
114	1201 60
115	1200 30
115+50	1199 62
116	1198 87
116+50	1198 07
117	1197 2
118	1195 4
119	1193 6
120	1191 8
120+50	1189 05
121	1189 8
121+50	1188 7
122	1187 5

-1.29%

 1  
 1  
 200'  
 X  
 -1.8%

 1  
 1  
 200'  
 X  
 -12.5%

47

Sta		Grade
122+50		1186 32
123	x	1185 29
123+50		1184 40
124	x	1183 67
125		1182 23
+77 <sup>9</sup>		1181 78

46

## YARDAGE SCOTLAND

Sta	Co. Yds
0	
1	
2	
3	
4	
5	
6	889
7	2889
8	4407
9	4666
10	5036
11	6236
12	8514
13	10310
14	10496
15	10496
16	10755
17	11718

## STATION EASTERLY

Sta	Co. Yds	Sta	Co. Yds.
18	11914	36	26168
19	12081	37	26242
20	"	38	27563
21	"	39	28505
22	12174	40	28986
23	12341	41	29501
24	13193	42	29834
25	15741	43	30167
26	20223	44	30760
27	22037	45	31353
28	"	46	31575
29	"	47	32038
30	"	48	32594
31	22222	49	33020
32	22891	50	34113
33	24613	51	36603
34	26168	52	39677
35	"	53	41732

Sta	Co yds	Sta	Co yds
54	4267 6	73 15	56154 v x
55	4343 5	74 16	5632 1 v x
56	4346 3	75 17	5637 7 v
57	"	76 18	5932 1 v
058	"	77 19	6224 7 v
159	✓ 4366 7	78 20	6263 9
260	✓ 4548 2 x	79 21	"
361	✓ 4826 0 x	80 22	"
462	✓ 5024 1 x	81 23	"
563	✓ 5133 3 x	82 24	"
664	✓ 5214 8 x	83 25	"
765	✓ 5262 9 x	84 26	"
866	✓ 5272 2 x	85 27	"
967	✓ 5305 2 x	86 28	"
1068	✓ 5420 0 x	87 29	6273 2 x
1169	15518 9 x	88 30	6295 4 x
1270	✓ 5550 4 x	89 31	6393 6 x
1371	✓ 5556 0 x	90 32	6582 5 x
1472	✓ 5578 2 x	91 33	6856 6 x

Sta	Co. yds.	Sta	Co. yds
92 34	7169 6 x	111 53	8330 6 v
93 35	7404 8	112 54	8424 6 v
94 36	7428 5 v	113 55	8502 1 v
95 37	" "	114 56	8533 6 v
96 38	" "	115 57	8537 3 x
97 39	7454 4 x	116 58	8541 0 x
98 40	7467 4 v	117 59	8592 2 x
99 41	" ✓	118 60	8741 2 x
100 42	7480 4 x	119 61	8924 5
101 43	7497 1 +	120 62	9122 6
102 44	7504 5 +	121 63	9197 6
103 45	7510 1 v	122 64	9218 0
104 46	7515 7 +	123 65	"
105 47	7537 9 +	124 66	9222 8
106 48	7650 9 +	125 67	9285 7
107 49	7898 8 -	+77 2	9290 1
108 50	8145 1 +		
109 51	8277 4 +		
110 52	8308 4 +		

5

Downing's Cors West

Sta. Align. Angle Bearing & Hubs

7

6

5

4

3

2

1

Note: Stakes set 20' L. of  $\phi$

N 87 W

0+0

Int. X Roads

0-52

Edge Gravel Pav. Ch-Munson Rd

68.05 Spike

44.90

Nail in E side of Walnut

11" dia. 18" Maple

Chardon-Munson Road Sta. 92+60

.69 Mi To 1st X Roads

Long Grad

9-15-2/  
clear  
Cool

Topo Notes

12

0 7+50

12

0 4+85

Glancy

Downing

12

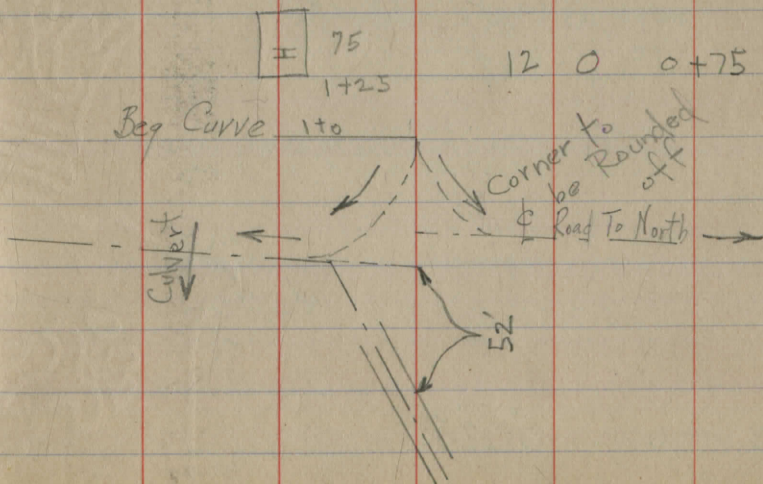
0 2+88

75  
1+25

12

0 0+75

Begin Curve 1+0



+ 17.5 40°-09'R

Tack  
to E Side  
22.2560  
25

Spike

Shed  
Keel  
Mark on  
Cor. Fin.  
Strip

14

13

12

11

10

9

8

+ 43 40 0°-22'R

Tacks in N S  
30° Maple

24.25

20.00

Spike

14+95

35

S

16 → 0 14+04

Downing

0 11+75

12 0 9+60  
9+90 PL

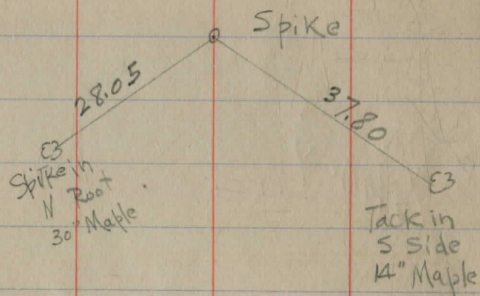
7+55 PL

Presley

23

22

21

+64.5  $\Delta$  0°-15' L

20

19

18

17

16

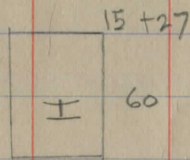
15

Long  
Graw9-15-21  
9-16-21Clear  
CoolB.D. Presley  
Jones

---

 PL 21+80 PL
 

---

12.5 20+60  
0

14 → 17+55

x

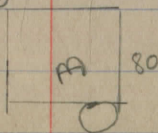
x

0 16+12

x

x

14+10



17 x

15+10

33

32

31

30

29

28

27

26

25

24

16' - 12' Sec  
CIP.

+60

8'	8'
=	=
=	=
=	=

H	26+80
Conc.	20
50	

Jim Uher

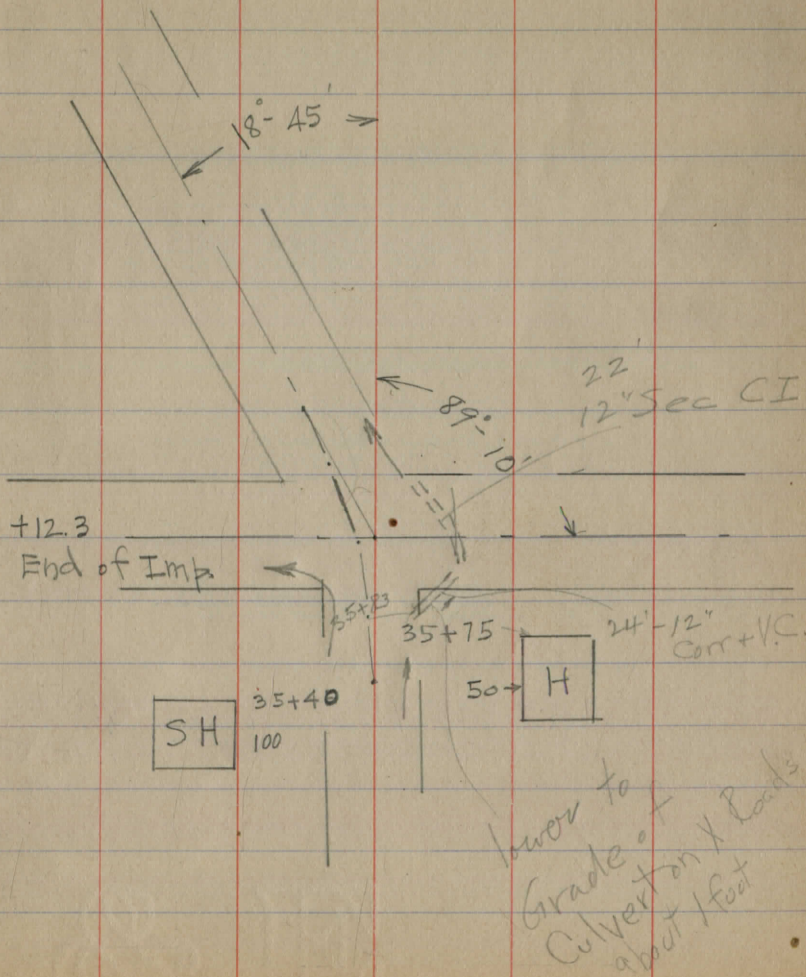
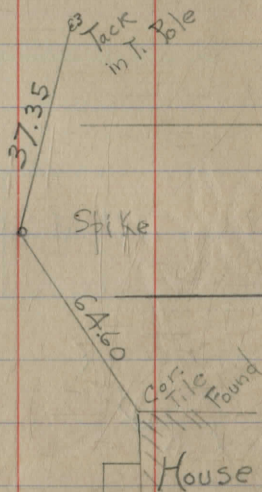
Jim Noya

13' → 22+80

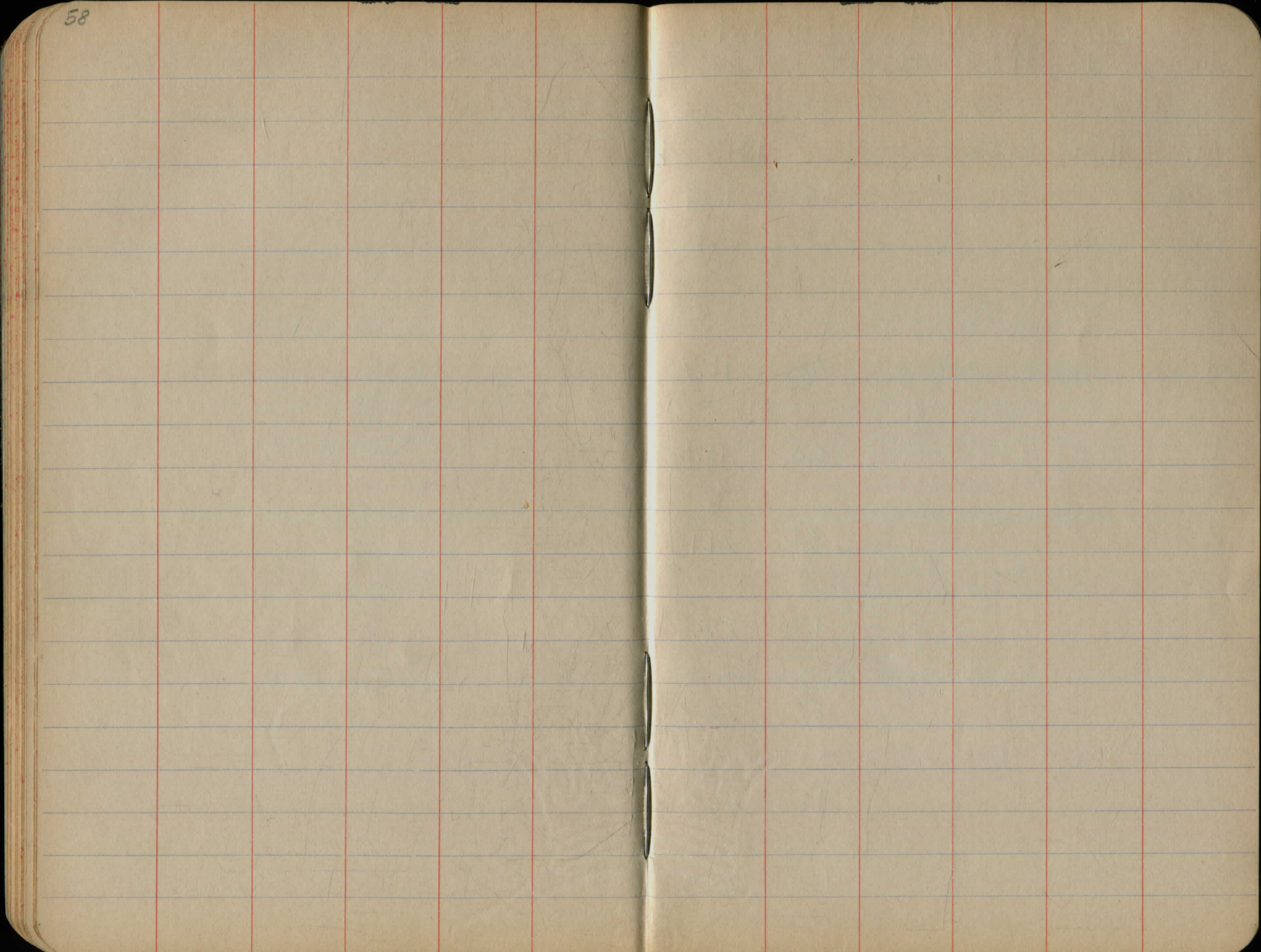
Note: stakes set 20' L of  $\angle$

+12.3 A.P.I.  $18^{\circ}-45'$   
 36 (Not set)  
 +65  
 +17  
 35 (Not set)  
 +70 P.C.  
 34

T=142  
 E=11.7







59 Sta	Downings +	Cons HI	West. -	Munson -	Twp. Elev.
B.M.	11.28	24.52			1313.24
0-60				11.6	12.9
0+0				8.8	15.7
1				6.0	18.5
2				3.4	21.1
3				1.7	22.8
4				1.7	22.8
5				1.5	23.0
6				1.0	23.5

9/16/21

Long  
Graw

Remarks

[20' L Sta 93+60  
 #8 in Ch-Munson Road W Root 30" Maple  
 ± Pk. (92+60 Scales 1350.2 ± Ch-M. Rd.)  
 Left ± Right

 $\frac{8.2}{40}$  $\frac{8.8}{50}$  $\frac{9.1}{50}$  $\frac{10.8}{100}$

60

24.52

7

0.6 23.9

T.P.

0.40 24.22 0.70

23.82

8

2.3 21.9

 $\frac{20}{20}$     $\frac{26}{10}$     $\frac{33}{9}$     $\frac{23}{11}$     $\frac{34}{11}$     $\frac{27}{12}$     $\frac{16}{20}$ 

9

5.5 18.7

 $\frac{41}{20}$     $\frac{44}{13}$     $\frac{51}{10}$     $\frac{64}{9}$     $\frac{55}{11}$     $\frac{65}{11}$     $\frac{55}{12}$     $\frac{40}{20}$ 

10

7.7 16.5

 $\frac{72}{20}$     $\frac{80}{11}$     $\frac{87}{10}$     $\frac{77}{10}$     $\frac{87}{10}$     $\frac{77}{20}$ 

11

9.7 14.5

12

11.4 12.8

T.P.

1.10 13.77 11.55

12.67

13

1.9 11.9

14

2.2 11.6

61

13.77

+ 40

3.2 10.6

+ 70

4.3 09.5

15

5.9 07.9

B.M.

0.74 1313.03

T.P.

3.19 1304.57 12.39 1301.38

16

3.6 01.0

17

9.7 94.9

T.P.

0.27 1292.35 12.49 1292.08

18

2.1 90.3

$$\frac{2.5}{14-20} \quad \frac{4.0}{7} \quad \frac{4.3}{15} \quad \frac{3.3}{15} \quad \frac{2.3}{20}$$

$$\frac{2.7}{20} \quad \frac{3.1}{9} \quad \frac{6.3}{5} \quad \frac{5.9}{11} \quad \frac{6.4}{16} \quad \frac{3.7}{16} \quad \frac{3.4}{20}$$

Sp. In W Root 30" Maple 22' L 14+80

$$\frac{+1.0}{25} \quad \frac{0.3}{20} \quad \frac{2.3}{11} \quad \frac{4.0}{9} \quad \frac{3.6}{12} \quad \frac{4.4}{12} \quad \frac{2.5}{15} \quad \frac{F}{16} \quad \frac{2.0}{20}$$

$$\frac{2.9}{25} \quad \frac{3.9}{20} \quad \frac{5.0}{14} \quad \frac{10.9}{7} \quad \frac{9.7}{11} \quad \frac{10.4}{11} \quad \frac{8.4}{13} \quad \frac{F}{14} \quad \frac{8.6}{20}$$

92.35

19 4.4 88.0

+90 8" Tile under Road 5.5 86.9

20 5.5 86.9

+64 3.6 88.8

21 1.3 91.1

+15 1.1 91.3

22 4.3 88.1

23 9.8 82.6

T.P. 0.16 81.59 10.92 81.43

24 3.9 77.7

$$\frac{10.5}{70} \quad \frac{9.4}{45} \quad \frac{7.4}{20} \quad \frac{6.7}{11} \quad \frac{6.0}{9} \quad \underline{5.5} \quad \frac{5.4}{8} \quad \frac{7.1}{14} \quad \frac{7.1}{20} \quad \frac{7.8}{45} \quad \frac{7.6}{65} \quad \frac{9.75}{FL}$$

$$+ \frac{0.5}{25} \quad \frac{0.5}{20} \quad \frac{2.8}{11} \quad \frac{4.6}{9} \quad \underline{3.6} \quad \frac{4.3}{10} \quad \frac{1.1}{16} \quad \frac{1.0}{20} \quad \frac{0.5}{25}$$

$$\frac{+1.8}{30} \quad \frac{+0.8}{20} \quad \frac{0.8}{11} \quad \frac{1.9}{9} \quad \underline{1.1} \quad \frac{2.1}{10} \quad \frac{0.6}{15} \quad \frac{0.5}{20}$$

$$\frac{2.9}{20} \quad \frac{2.9}{15} \quad \frac{5.2}{9} \quad \underline{4.3} \quad \frac{5.4}{6} \quad \frac{2.7}{14} \quad \frac{2.5}{20}$$

$$\frac{7.5}{20} \quad \frac{7.8}{17} \quad \frac{10.8}{11} \quad \underline{9.8} \quad \frac{10.8}{9} \quad \frac{7.4}{14-20}$$

Sec. Same as 23

63

81.59

25

6.8 74.8

level

26

10.5 71.1

 $\frac{9.5}{20}$  $\frac{11.5}{7}$  $\frac{10.5}{7}$ 

T.P.

0.67 69.90 12.36 69.23

B.M.

0.79 1269.11

Sp. in old Stump 25' L 27+35

27

3.4 66.5

 $\frac{1.2}{20}$  $\frac{2.9}{10}$  $\frac{4.4}{8}$  $\frac{3.4}{8}$ 

28

6.6 63.3

level

29

8.8 61.1

+60

Culvert

9.4 60.5

 $\frac{11.4}{F.L.}$  $\frac{10.2}{8}$  $\frac{9.4}{8}$  $\frac{9.6}{8}$  $\frac{11.25}{F.L.}$ 

5870

30

10.1 59.8

31

12.0 57.9

64

69.90

T.P 0.02 58.09 11.83 58.07

32 2.0 56.1

33 3.2 54.9

34 4.5 53.6

35 5.9 52.2

36 7.0 51.1

+12 End 7.4 50.7

37+12 9.2 48.9

38+12 9.9 48.2

B.M 4.49 4.49 1253.60

Sp. in T. Pole .25' R 35+50

 $\frac{7.2}{100}$  $\frac{7.6}{35}$ ~~7.4~~ $\frac{6.4}{50}$  $\frac{6.3}{75}$

















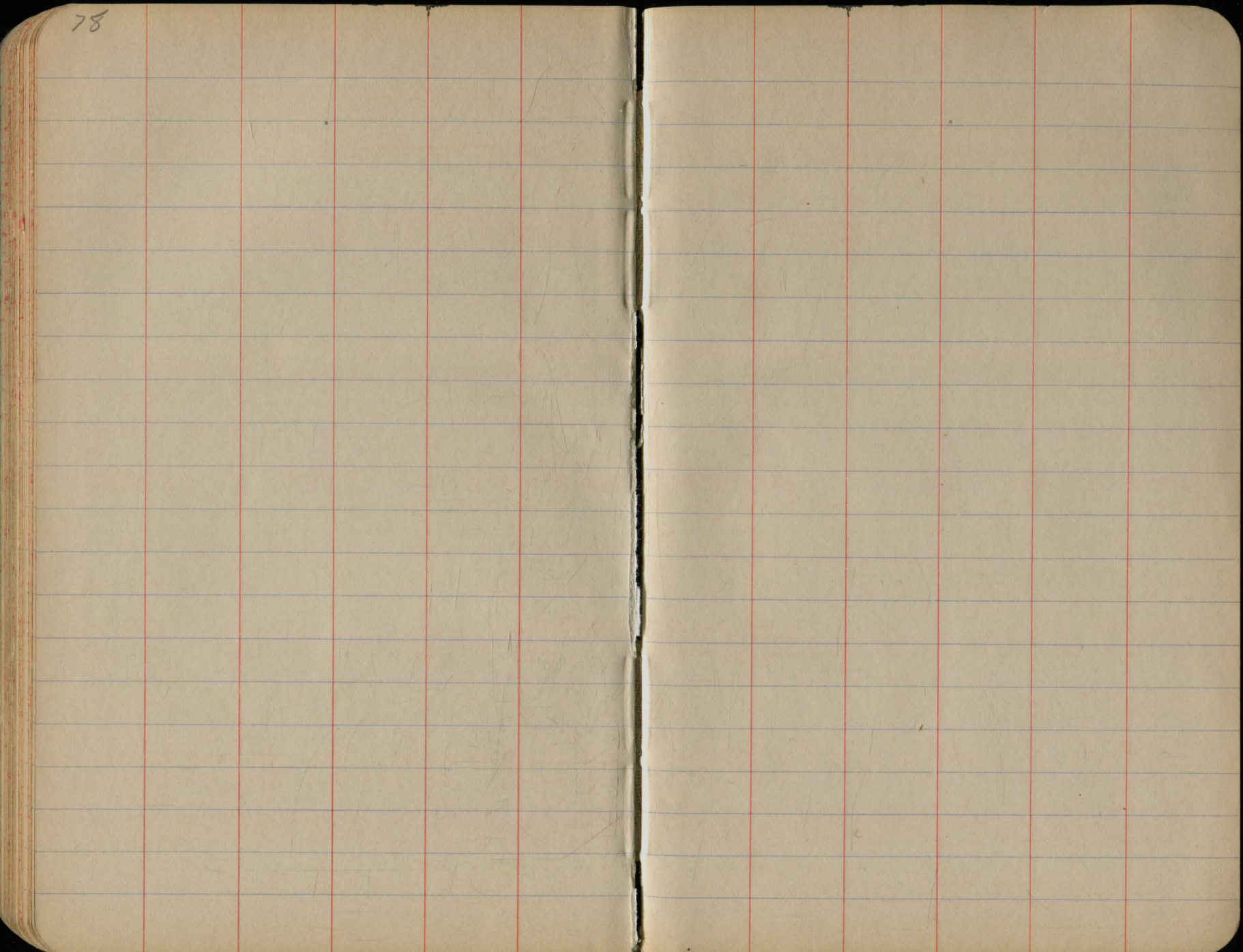










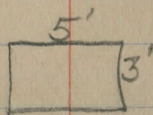








82 Bridge on Road  
W. of Hamden Ctr.  
(Wooden Hill road)  
[About 1/2 mile W. of Ctr.]



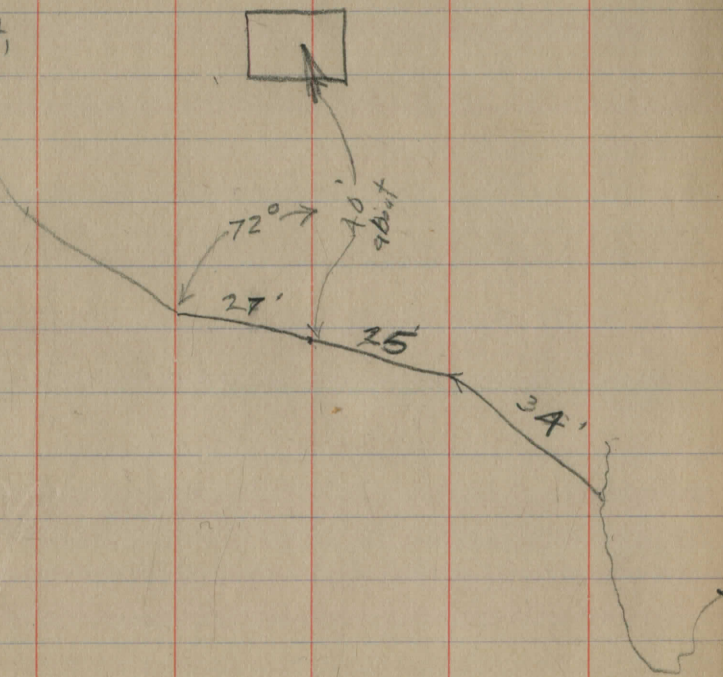
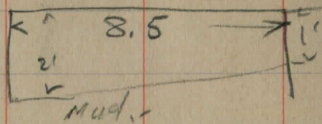
Rod  
readings Diff.

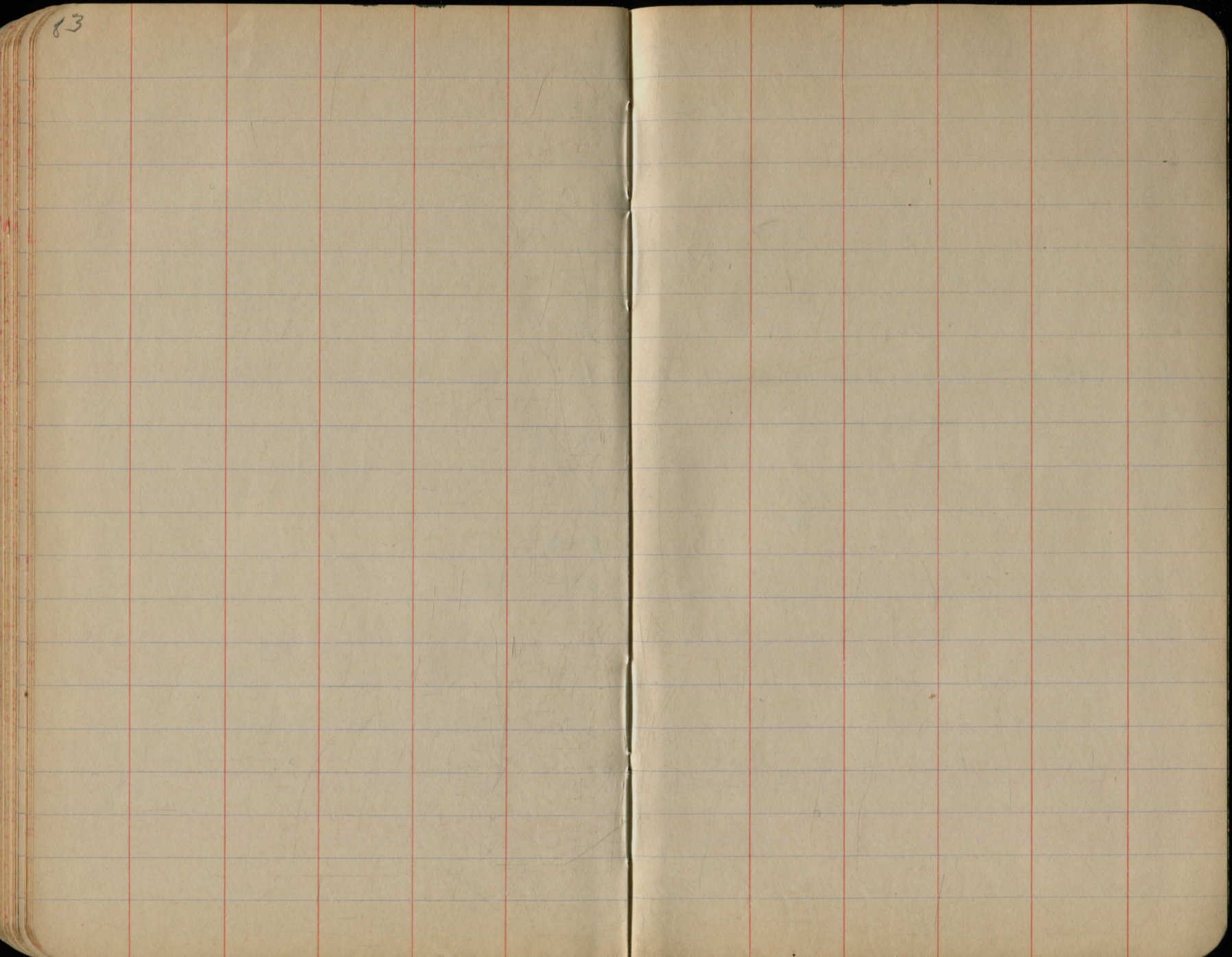
9.2	-4.5	165' Rt.
7.7	-3.0	65' Rt.
6.7	-2.0	60' Rt.
5.9	-1.2	25' Rt
5.7	-1.0	15' "
6.5	-1.8	13' "
5.7	-1.0	11'
4.7	0.0	2
5.1	-0.4	7' Lt.
6.2	-1.5	10'
5.5	-0.8	12-25
5.1	-0.4	60'
6.5	-1.8	70'
3.8	+0.9	
6.9	-2.2	

old Brq. floor

" Crk. bottom at brq.

in channel  
in channel  
bank





84  
7-17-21  
Slope stakes on Palmer's Hill S. of Chagrin G. Rd

B.M. # 1260 22,60 10.00

0 at Cully.

1+25  $\frac{3.6}{3.6}$  6.1 16.5

1+50  $\frac{3.6}{12.5}$  3.6 19.0

T.P. 6.90 29.33 0.17 22.43  
21.5

1+75  $\frac{2.8}{21.7}$  7.8 21.5  
14.8

T.P. 9.48 38.81 0.00 29.33

2+25  $\frac{12.3}{10.7}$  12.3 26.5  
28.6

T.P. 12.53 44.07 7.27 31.54

2+75  $\frac{12.9}{8.6}$  12.9 31.2  
24.6

3+25  $\frac{8.7}{4.0}$  8.7 35.4  
19.3

3+75  $\frac{5.7}{3.5}$  5.7 38.4  
15.9

4+25  $\frac{3.6}{3.6}$  3.6 40.5  
12.9

~~4+75~~

1+50

1+75

2+25

2+75

3+25

3+75

4+25

## sections on Palmers Hill

4-1921

(From which figure Exc-)

$$\begin{array}{r} 3.8 \\ 15 \end{array} \quad \begin{array}{r} 3.2 \\ 8 \end{array} \quad \begin{array}{r} 4.8 \\ 3.5 \end{array} \quad \begin{array}{r} 4.3 \\ 2 \end{array} \quad \begin{array}{r} 4.3 \\ 0.0 \end{array} \quad \checkmark$$

$$\begin{array}{r} 6.0 \\ 1.5 \end{array} \quad \begin{array}{r} 5.8 \\ 9 \end{array} \quad \begin{array}{r} 8.7 \\ 4.3 \end{array} \quad \begin{array}{r} 8.2 \\ 2 \end{array} \quad \begin{array}{r} 8.2 \\ 0.0 \end{array} \quad \checkmark$$

$$\begin{array}{r} 1.4 \\ 28.5 \end{array} \quad \begin{array}{r} 0.9 \\ 22.8 \end{array} \quad \begin{array}{r} 12.3 \\ 6 \end{array} \quad \begin{array}{r} 12.3 \\ 0.0 \end{array} \quad \checkmark$$

$$\begin{array}{r} 12.4 \\ 30 \end{array} \quad \begin{array}{r} 4.6 \\ 17 \end{array} \quad \begin{array}{r} 13.0 \\ 7.4 \end{array} \quad \begin{array}{r} 12.6 \\ 0.0 \end{array} \quad \checkmark$$

$$\begin{array}{r} 4.2 \\ 25 \end{array} \quad \begin{array}{r} 9.9 \\ 15 \end{array} \quad \begin{array}{r} 9.5 \\ 6 \end{array} \quad \begin{array}{r} 8.7 \\ 4 \end{array} \quad \begin{array}{r} 8.7 \\ 0.0 \end{array}$$

$$\begin{array}{r} 3.3 \\ 2.0 \end{array} \quad \begin{array}{r} 3.5 \\ 13 \end{array} \quad \begin{array}{r} 6.9 \\ 7 \end{array} \quad \begin{array}{r} 5.6 \\ 0.0 \end{array}$$

$$\begin{array}{r} 3.0 \\ 1.6 \end{array} \quad \begin{array}{r} 3.2 \\ 13 \end{array} \quad \begin{array}{r} 4.7 \\ 10 \end{array} \quad \begin{array}{r} 5.0 \\ 9 \end{array} \quad \begin{array}{r} 4.0 \\ 0.0 \end{array}$$



PLEASE RETURN TO  
GEAUGA COUNTY ENGINEER

COURT HOUSE

DISTANCES FROM CENTER OF ROADWAY FOR CROSS-SECTIONING.

ROADWAY 12 FEET WIDE. SINE SLOPE 1% TO 1.

CHARDON, O.  
PHONE 250-X

	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.

