

CONSTRUCTION NOTES
WHITE BEAR ROAD
CO. PROJ. 23-52



ENGINEERS
FIELD BOOK
No. 403

7/13/23
Const. Notes
7 23-52

EUGENE DIETZGEN CO.

DRAWING MATERIALS, MATHEMATICAL and
SURVEYING INSTRUMENTS

Chicago New York San Francisco New Orleans Pittsburg Toronto

Distances from Center of Roadway for Cross-Sectioning
Roadway 16 feet wide. Side Slopes 1 on 1.
For Single Track Embankment.

ft	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	ft
0	8.0	8.1	8.2	8.3	8.4	8.5	8.6	8.7	8.8	8.9	0
1	9.0	9.1	9.2	9.3	9.4	9.5	9.6	9.7	9.8	9.9	1
2	10.0	10.1	10.2	10.3	10.4	10.5	10.6	10.7	10.8	10.9	2
3	11.0	11.1	11.2	11.3	11.4	11.5	11.6	11.7	11.8	11.9	3
4	12.0	12.1	12.2	12.3	12.4	12.5	12.6	12.7	12.8	12.9	4
5	13.0	13.1	13.2	13.3	13.4	13.5	13.6	13.7	13.8	13.9	5
6	14.0	14.1	14.2	14.3	14.4	14.5	14.6	14.7	14.8	14.9	6
7	15.0	15.1	15.2	15.3	15.4	15.5	15.6	15.7	15.8	15.9	7
8	16.0	16.1	16.2	16.3	16.4	16.5	16.6	16.7	16.8	16.9	8
9	17.0	17.1	17.2	17.3	17.4	17.5	17.6	17.7	17.8	17.9	9
10	18.0	18.1	18.2	18.3	18.4	18.5	18.6	18.7	18.8	18.9	10
11	19.0	19.1	19.2	19.3	19.4	19.5	19.6	19.7	19.8	19.9	11
12	20.0	20.1	20.2	20.3	20.4	20.5	20.6	20.7	20.8	20.9	12
13	21.0	21.1	21.2	21.3	21.4	21.5	21.6	21.7	21.8	21.9	13
14	22.0	22.1	22.2	22.3	22.4	22.5	22.6	22.7	22.8	22.9	14
15	23.0	23.1	23.2	23.3	23.4	23.5	23.6	23.7	23.8	23.9	15
16	24.0	24.1	24.2	24.3	24.4	24.5	24.6	24.7	24.8	24.9	16
17	25.0	25.1	25.2	25.3	25.4	25.5	25.6	25.7	25.8	25.9	17
18	26.0	26.1	26.2	26.3	26.4	26.5	26.6	26.7	26.8	26.9	18
19	27.0	27.1	27.2	27.3	27.4	27.5	27.6	27.7	27.8	27.9	19
20	28.0	28.1	28.2	28.3	28.4	28.5	28.6	28.7	28.8	28.9	20
21	29.0	29.1	29.2	29.3	29.4	29.5	29.6	29.7	29.8	29.9	21
22	30.0	30.1	30.2	30.3	30.4	30.5	30.6	30.7	30.8	30.9	22
23	31.0	31.1	31.2	31.3	31.4	31.5	31.6	31.7	31.8	31.9	23
24	32.0	32.1	32.2	32.3	32.4	32.5	32.6	32.7	32.8	32.9	24
25	33.0	33.1	33.2	33.3	33.4	33.5	33.6	33.7	33.8	33.9	25
26	34.0	34.1	34.2	34.3	34.4	34.5	34.6	34.7	34.8	34.9	26
27	35.0	35.1	35.2	35.3	35.4	35.5	35.6	35.7	35.8	35.9	27
28	36.0	36.1	36.2	36.3	36.4	36.5	36.6	36.7	36.8	36.9	28
29	37.0	37.1	37.2	37.3	37.4	37.5	37.6	37.7	37.8	37.9	29
30	38.0	38.1	38.2	38.3	38.4	38.5	38.6	38.7	38.8	38.9	30
31	39.0	39.1	39.2	39.3	39.4	39.5	39.6	39.7	39.8	39.9	31
32	40.0	40.1	40.2	40.3	40.4	40.5	40.6	40.7	40.8	40.9	32
33	41.0	41.1	41.2	41.3	41.4	41.5	41.6	41.7	41.8	41.9	33
34	42.0	42.1	42.2	42.3	42.4	42.5	42.6	42.7	42.8	42.9	34
35	43.0	43.1	43.2	43.3	43.4	43.5	43.6	43.7	43.8	43.9	35
36	44.0	44.1	44.2	44.3	44.4	44.5	44.6	44.7	44.8	44.9	36
37	45.0	45.1	45.2	45.3	45.4	45.5	45.6	45.7	45.8	45.9	37
38	46.0	46.1	46.2	46.3	46.4	46.5	46.6	46.7	46.8	46.9	38
39	47.0	47.1	47.2	47.3	47.4	47.5	47.6	47.7	47.8	47.9	39
40	48.0	48.1	48.2	48.3	48.4	48.5	48.6	48.7	48.8	48.9	40

Example—If point is 22.6 ft. above grade, how far should it be from center line to be a slope stake point? Ans. from Table 30.6. For same slopes but other widths of roadbed, correct above figures by one-half difference in width of roadbed; thus in example above, for 20 ft. roadbed distance will be $30.6 + (20 - 16) \div 2$ or 2 ft. added to $30.6 = 32.6$. For slopes of 1 on 1½ see inside of back cover.

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138 2161
PROJ. 23-52

Mon. Co. Rd. E 53

End Topog.

down NE 1.9 T.P.

T.P. 30.8 36.1

T.P. 38.5
T.P. 35.6 41.1 Gulp

69.6 69.7
Gulp Pole T.P.

35.6 F.P.

77.4 T.P.

69.2 69.6 T.P.

Gulp
T.P. 21.9 57.9 T.P.

Station Point L & R

Calc. Bearing Mag. Bearing

N00°-16'W N3°-30'W

272+19.2 P.I. ("F")

N00°-16'W ✓ N3°-30'W

245+88 Mont. P.I. 0-02 ✓

227+00 P.O.T.

N-00-14'W ✓

219+54.8 P.I. Mont. 0-16 ✓

N3°-30'W

N00-02'E ✓

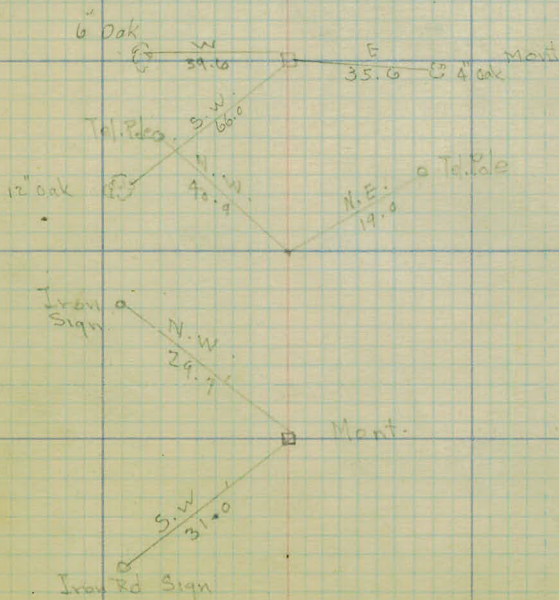
213+50 P.O.T.

3-2-23

(1)

45 ft

Mont.



Station Point L $\frac{L}{R}$ Calc Bear. Mag. Bear

N 74° 30' E

N 77° 44' E ✓

284 + 12.03 P.T. ✓

264

39° 00'

+ 50

37° 48'

263

32° 48'

282 + 55.2 P.1

Δ 78° R

C 20°

50 S. Chords

+ 50

27° 48'

S.T. 233.17 ✓

282

22° 48'

L.C. 390 ✓

+ 50

17° 48'

281

12° 48'

+ 50

7° 48'

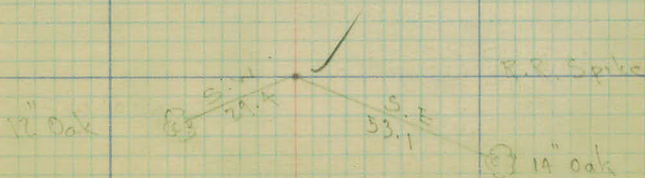
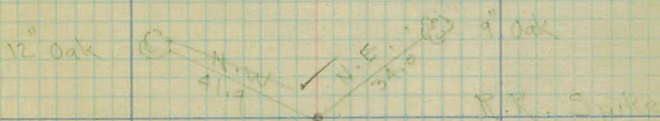
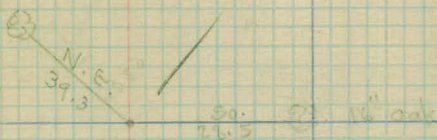
280 + 22.03 P.C. ✓

2° 48'

N 00° 16' W N 3° 20' ✓

3-2-73

(2)



Station Point L & R

Calc Bear Mag.

N 7°-24'E ✓

N 4°-30'E

✓
292+92.30 P.T.

+50

35°-00'

292

30°-56'

Δ 70°-20' Lt,

+50

25°-56'

C 20° ✓

L.C. 351.66

291+43.5 P.I

S.T. 202.86

291

20°-56'

50 S. Chords

+50

15°-56'

290

10°-56'

+50

5°-56'

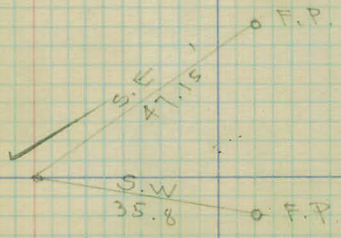
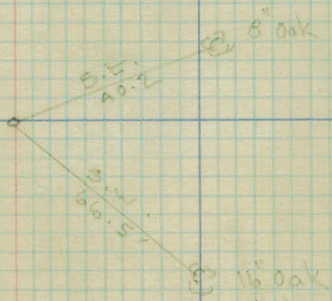
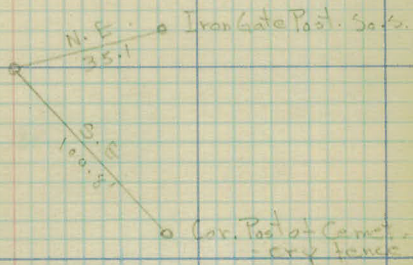
✓
289+40.6A P.C. 0°-56'

N 77°-44'E ✓

N 74°-30'E

3-5-23

(3)



Station	Point	L	E	R	Calc Devi	M B
						N35°-00W
						N39°-38W

301+58.66 ✓ P.T.

+50	20°-31'
301	20°-05'
+50	17°-35'
300	15°-05'

299+63 P.I.

Δ 41°-02' Lt.
 C 10° ✓
 S.T. 214.67 ✓
 L.C. 410.33 ✓
 50' S. Chords

+50	12°-35'
299	10°-05'
+50	7°-35'
298	5°-05'
+50	2°-35'
297+48.33 ✓ P.C.	0°-05'

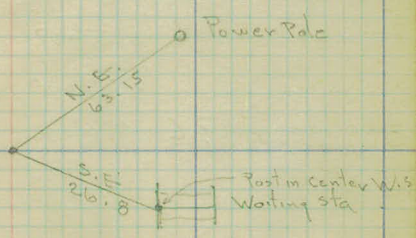
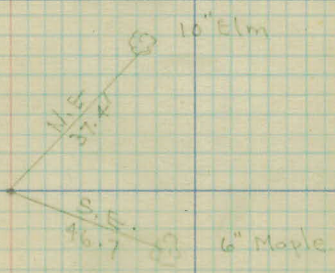
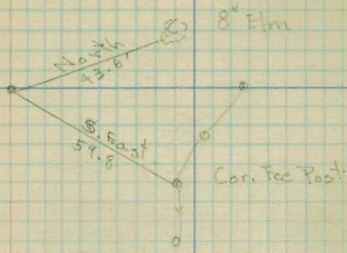
~~To 'A' Line - Page 60~~

295+05

N4°-30'E ✓
 N7°-24'E

3-6-23

4



Station Point L & R Calc Bear Day Bear

N57°-44'W N56°-30'W

315+54.38 Mont^{P.O.T.}

Center of Sect. 23

311+38.12 P.T.

Δ 24°-06' L

C. 10°

311 12°-03'

S.T. 122.48

+50 10°-09'

L.C. 241

310+19.6 P.I.

S.C. 50

310 7°-39'

+50 5°-09'

309 2°-39'

308+97.12 F.C. 0°-09'

315 54.38

310 19.66

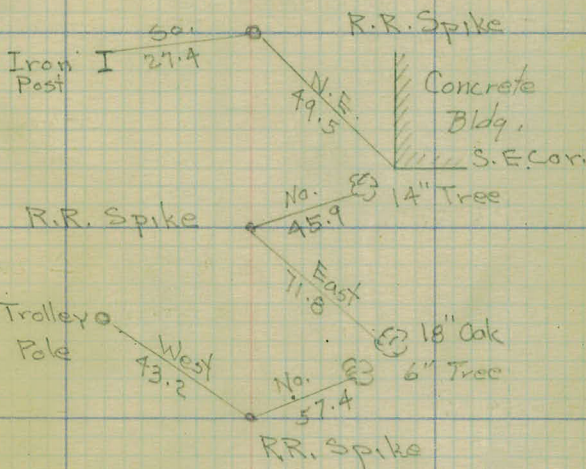
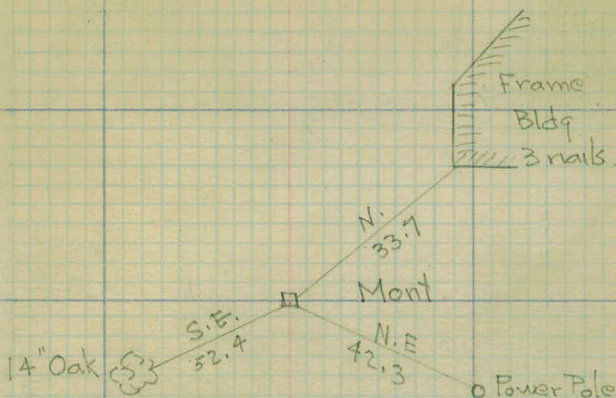
534.78

N36°-00'W

N33°-38'W

3-6-23

5



Station Point L & R

Calc Bear. Mag Bear

N14°-59'W N19°-30'W

320 + 83.35 P.T.

320

7°-22'

Δ 14°-45'

319 + 00 P.I.

C 4°-0' R

319

5°-42'

L.C. 368.75 ✓

318

3°-42'

S.T. 185.40 ✓

100' Chds

317 + 14.6 P.C.

1°-42'

N29°-44'W N34°-30'W

317 + 04.38 P.T.

317

14°-0'

Δ 28° Rt.

+50

13°-41'

C 14°

S.T. 107.26 ✓

316 + 06.64 P.I.

L.C. 200' ✓

S.C. 50'

316

10°-11'

+50 ✓

6°-41'

315 + 04.38 P.C.

3°-11'

N56°-30'W

316 06.64

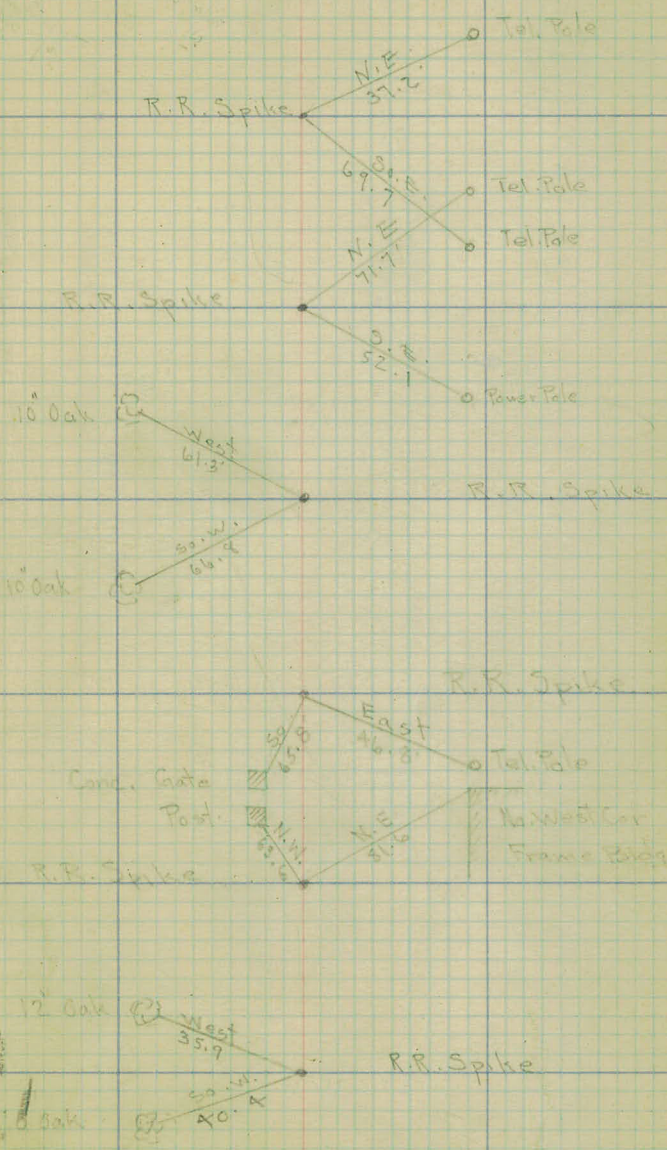
N57°-44'W ✓

315 04.38

5226

3-7-23

(6)



Station Point L & R

3-8-23
Calc. Mag.
Bearing

5130 P.O.T. (on Austin's Survey) Lake Ave

$N1^{\circ}-35'$ ~~W~~ $N1^{\circ}-0'W$

✓

324 + 56.67 P.T. = 1+39.1 on Austin's Survey

324

$8^{\circ}-17'$

323 + 14.6

P.I.

$\Delta 16^{\circ}-34'$ R.

323

$6^{\circ}-35'$

$C 6^{\circ}-0'$

S.T. 139.10 ✓

322

$3^{\circ}-35'$

L.C. 276.17 ✓

321 + 80.5 ✓ P.C.

$0^{\circ}-35'$

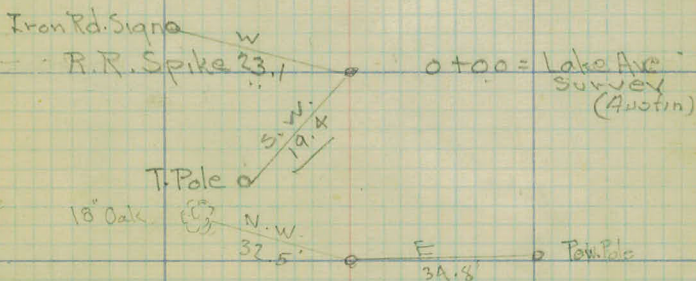
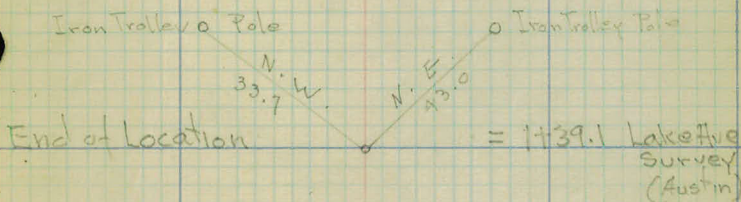
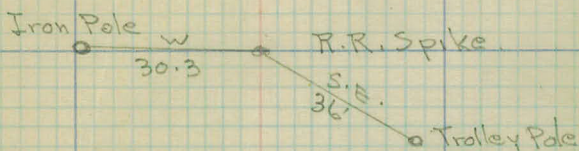
321 + 54.7 on A line

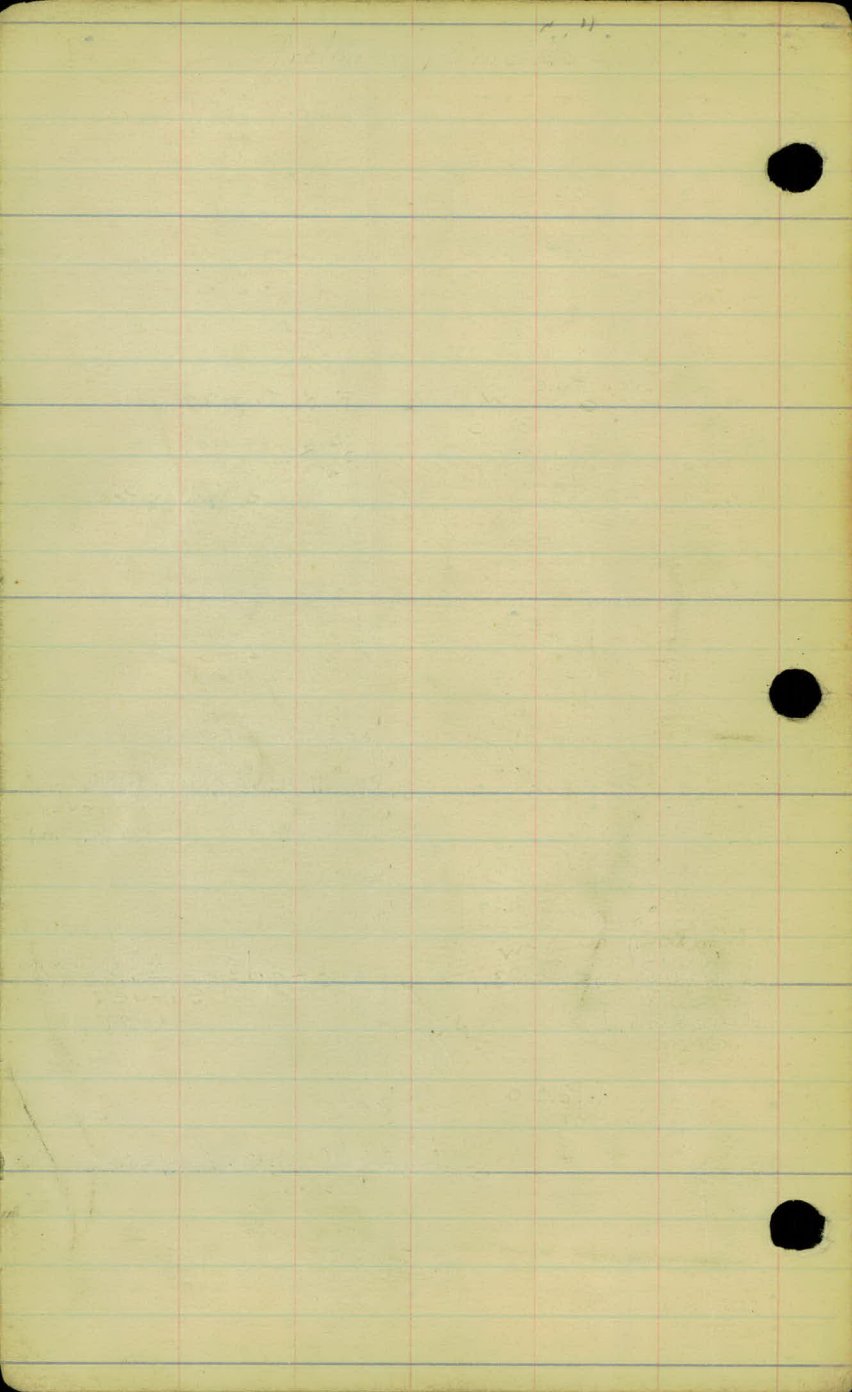
} Equation.

Note.

✓
 $N14^{\circ}-59'W$ $N19^{\circ}-30'W$

R.J.W.
5-20-24





Check Levels

Job. N^o-1.

White Bear Road.



Check levels from B.M. spikes in T.P.
 at 169 + 50 to Carpenter
 + W. B. Ave

B.M. 5.80 257.32 251.52
 BM 4.45 4.45 252.87

8.49 264.75 1.06 256.26
 3.11 260.57 7.29 257.46

B.M. 0.97 259.60
 4.84 260.92 4.49 256.08

5.33 255.59
 2.95 255.28 8.59 252.33

2.53 251.84 5.97 249.31

B.M. 2.44 249.00 5.28 246.56
 2.49 247.88 3.61 245.39

B.M. 3.37 243.05 8.20 239.68
 2.53 237.65 7.93 235.12

B.M. 2.1 234.82 4.93 232.72
 6.23 236.15 4.90 229.92

B.M. 6.33 229.82
 4 240.77 6.33 234.44

46.88 68.58 21.90
 46.88

21.90 265

10,03

R.R. Sp in T.P. R 169+55
R.R. spike 15" Oak S.E. Cor. Int. Cty Rd D+WB, Ave

Spike in T.P - R 158+40

Sp. in T.P R. 151+00

Spike in T.P. R. 139+75

Sp in T.P L 127+35

In T.P S.W. Cor. Int. Maple St

Sp. T.P R 97+75

	B.S	F.S	H.I.	
B.M	10.04	239.86		229.82
B.M	11.46	248.86	2.46	237.40
	5.31	252.87	1.30	247.56
B.M	1.35	249.96	4.26	248.61
	2.01	240.30	11.67	238.29
	4.74	234.47	10.57	229.73
B.M			4.34	4.34 230.13
	4.00	234.29	4.18	230.29
B.M	6.97	236.96	4.30	229.99
	2.80	233.86	5.96	5.96 231.00
B.M	2.97	230.44	6.33	1.33 229.47
	0.34	219.88	10.90	219.54
	6.87	221.45	5.30	214.58
B.M				6.08 215.37
	10.87	232.16	0.16	221.29
	11.88	243.79	0.25	231.91
	10.92	254.67	0.04	243.75
	10.17	264.66	0.18	254.49
	10.76	275.23	0.19	264.47
	7.69	282.53	0.39	274.84
B.M				3.04 279.49
	7.96	286.81	3.68	278.85
	0.37	274.98	12.20	274.61
	0.22	264.30	10.90	264.08
	0.59	253.89	11.00	253.30
	4.29	251.15	7.03	246.86
			4.34	4.34 246.81

134.58
 117.59
 16.99
 211

246.81
 229.82
 16.99

Sp. in T.P. R 97+75

✓ ✓ R 87+40

169
80
89
52
37

Sp. in T.P. L 80+25

✓ ✓ R 67+33

✓ ✓ R 60+75

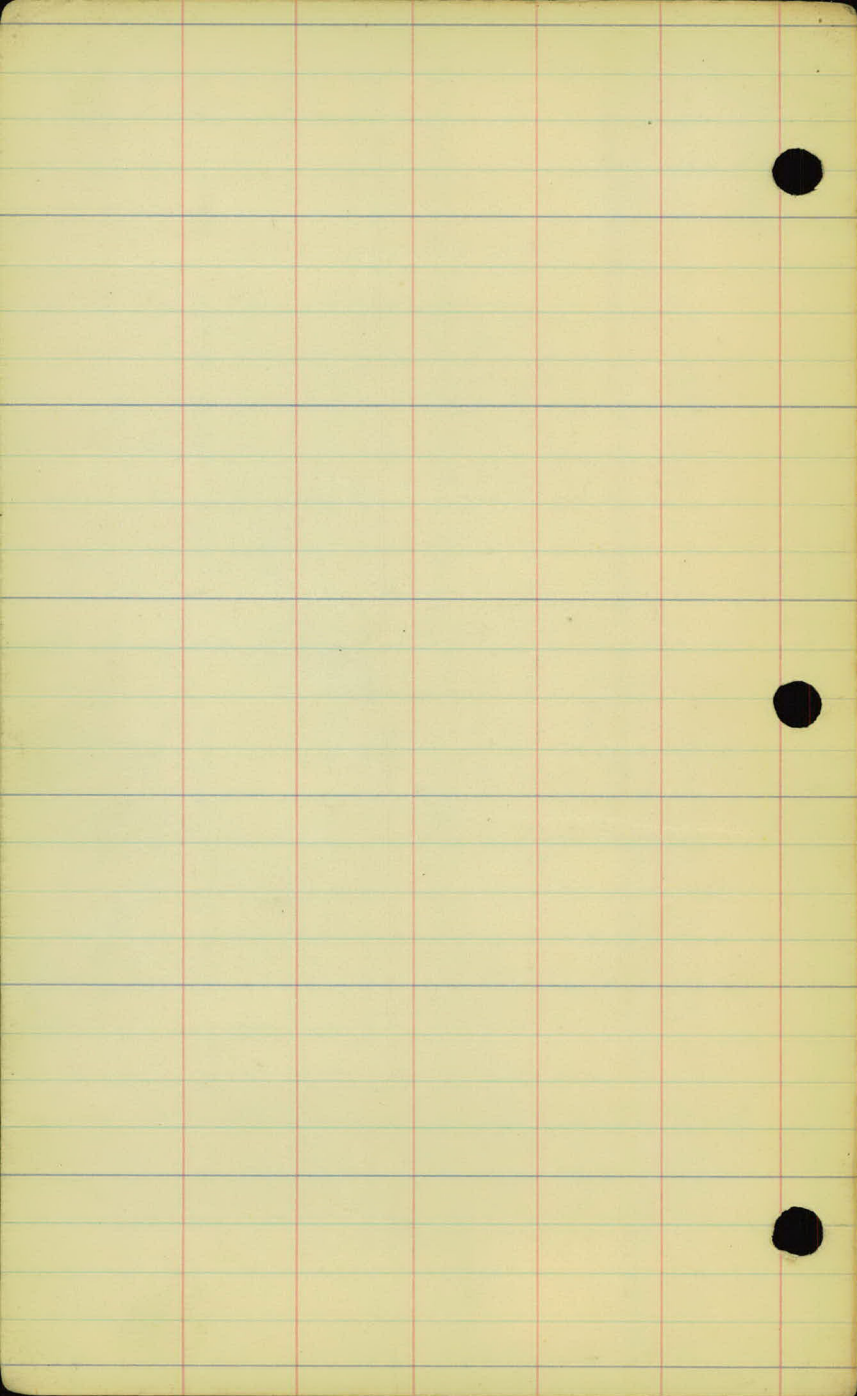
In T.P. S.W. Cor Int. Cty Rd. B

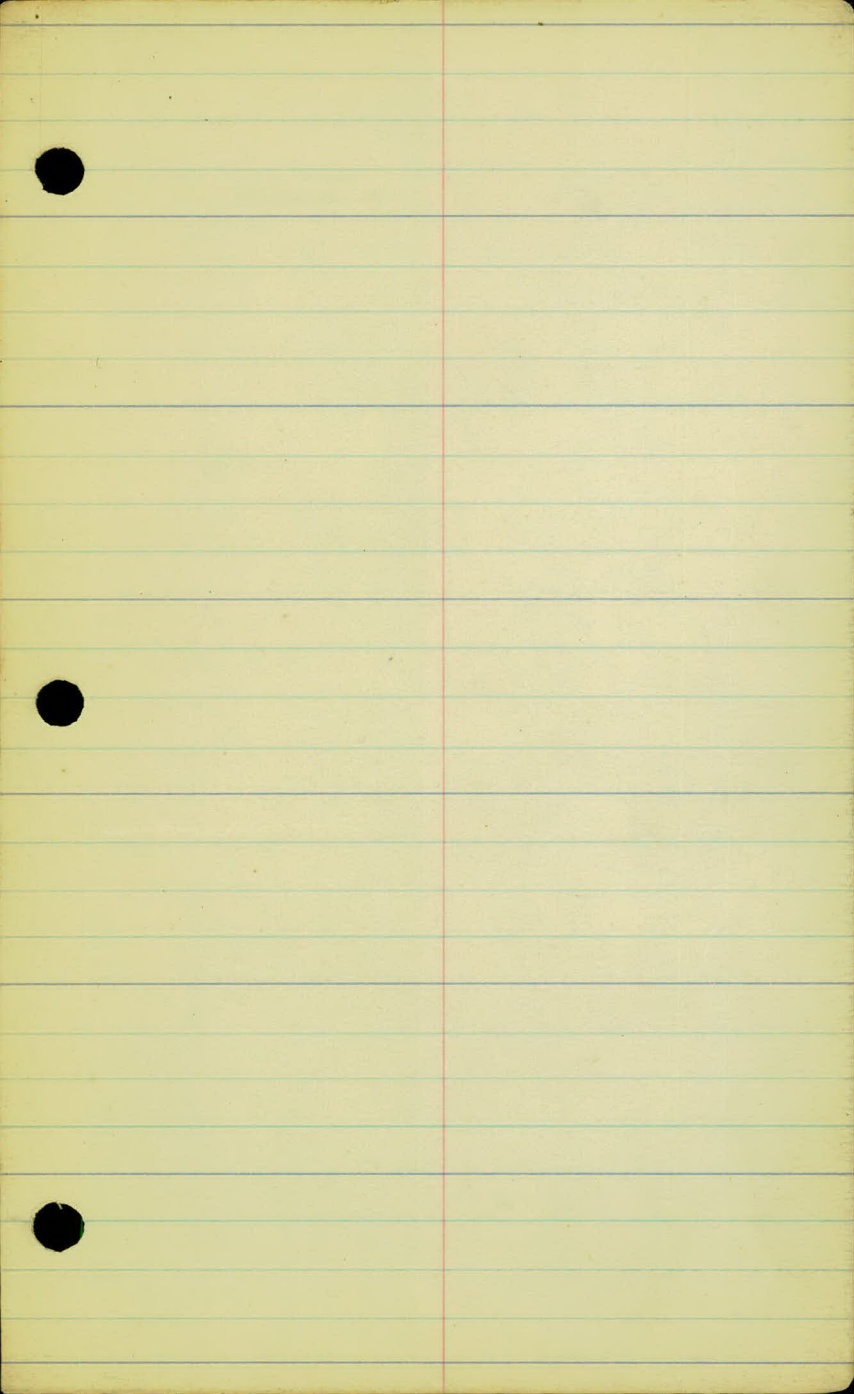
Nail in T.P. L 42+15

Nail in T.P. S.W. Cor Int. Cty Rd. #2 (Poor Farm)

Note: - Error of .10 ft in add. makes
~~check~~ check El. at Larpenteur B.M.
246.71 instead of 246.81

BM - Sp. T.P. NE Cor Int - Larpenteur + W.B. Ave.





B.M. 279.62 Nail T.P. SW Cor Int.
Cty Rd. A₂ (Poor Farm)

B.M. 215.41 Nail T.P. L 42+15

✓ 227.53 ✓ ✓ S.W. Cor Int. Cty Rd B

✓ 230.06 R.R. Spike T.P. L 60+75
229.99
.07

✓ 230.22 ✓ ✓ R 67+33
13
9

✓ 248.67 ✓ L 80+25

✓ 237.44 ✓ R 87+40

✓ 229.86 ✓ R 97+75

✓ 232.76 ✓ S.W. Cor. Int. Maple St.

✓ 239.71 ✓ L 127+35

White Bear Road Job

Check Levels.

From B.M. R.R. Spike in T.P.-R
Sta. 169+40 to B.M.-Nail in T.P.
S.E. Cor. Int. St. Paul + D Hy + Lake Ave.
(End of Job)

2/28/23 F.S

B.M

4.67	256.19		(251.52) 251.42
7.90	259.45	4.64	251.55
1.36	254.09	6.72	252.73
2.53	246.13	10.49	243.60
7.29	251.03	2.39	243.74
7.16	255.94	2.25	248.78

B.M

1.67	253.06	4.55	251.39 251.29
7.45	254.54	5.97	247.09
12.15	265.16	1.53	253.01

B.M

4.31	267.92	1.55	263.61
0.78	264.05	4.65	263.27
2.35	257.80	8.60	255.45

B.M

9.04	258.92	7.92	249.88 249.78
6.11	262.28	2.75	256.17
5.83	265.02	3.09	259.19

B.M

2.03	263.91	3.14	261.88 261.78
1.23	259.15	5.99	257.92
7.14	257.84	8.45	250.70

B.M

5.08	259.78	3.14	254.70 254.60
0.11	248.76	11.13	248.65

B.M

9.67		5.47	243.29 243.19
		10.44	
		9.19	
		8.23	

205

Feb 28 '23

Note:- Check levels run from
 BM-Nail T.P. - R 169+40 to B.M Nail
 T.P. - S.W. Cor. Int. Lake Ave +
 St. Paul Duluth Hy

2/28/23

(8)

R.R. Spike in T.P. R 169+40

Tierney - level

Persons - rod

Nail in T.P. R 197+60

Nail in T.P. R 211+50

Nail in T.P. L 224+45

Nail in T.P. R-240+00
R-240+00

Nail in T.P. R 255+45

Nail in T.P. R 264+00

2/28/23^S H.I. F.S. Check levels cont'd.
 Mar. 1, '23

				243.19
B.M	5.84	249.13		243.29
	6.63	252.27	3.49	245.64
	4.29	252.33	4.23	248.04
B.M	5.96	252.68	5.61	246.72 246.62
	3.45	252.57	3.56	249.12
	0.35	243.17	9.75	242.82
	3.84	238.19	8.82	234.35
	4.90	238.58	4.51	233.68
B.M	4.75	239.04	4.29 ^{44.26}	234.29 234.19
	5.09	238.98	5.15	233.89
	4.94	240.69	3.23	235.75
B.M			4.89	235.80
			corrected El.	235.70

Note: Given El. for This B.M from previous survey was 237.18. Failed to check it by 148' ∴ ran check levels from own B.M at R169+40 to B.M at Sta. 0+00 (Larp. + W.B. Ave) Checked .07' to own levels. Then checked own El. on B.M at Lake Ave + St. P. + D Hy when carrying \pm levels. checked .03' ∴ El. OK.

2/28/23

Note: - B.M. El. corrected for 0.10' error
found in level notes. See level book.

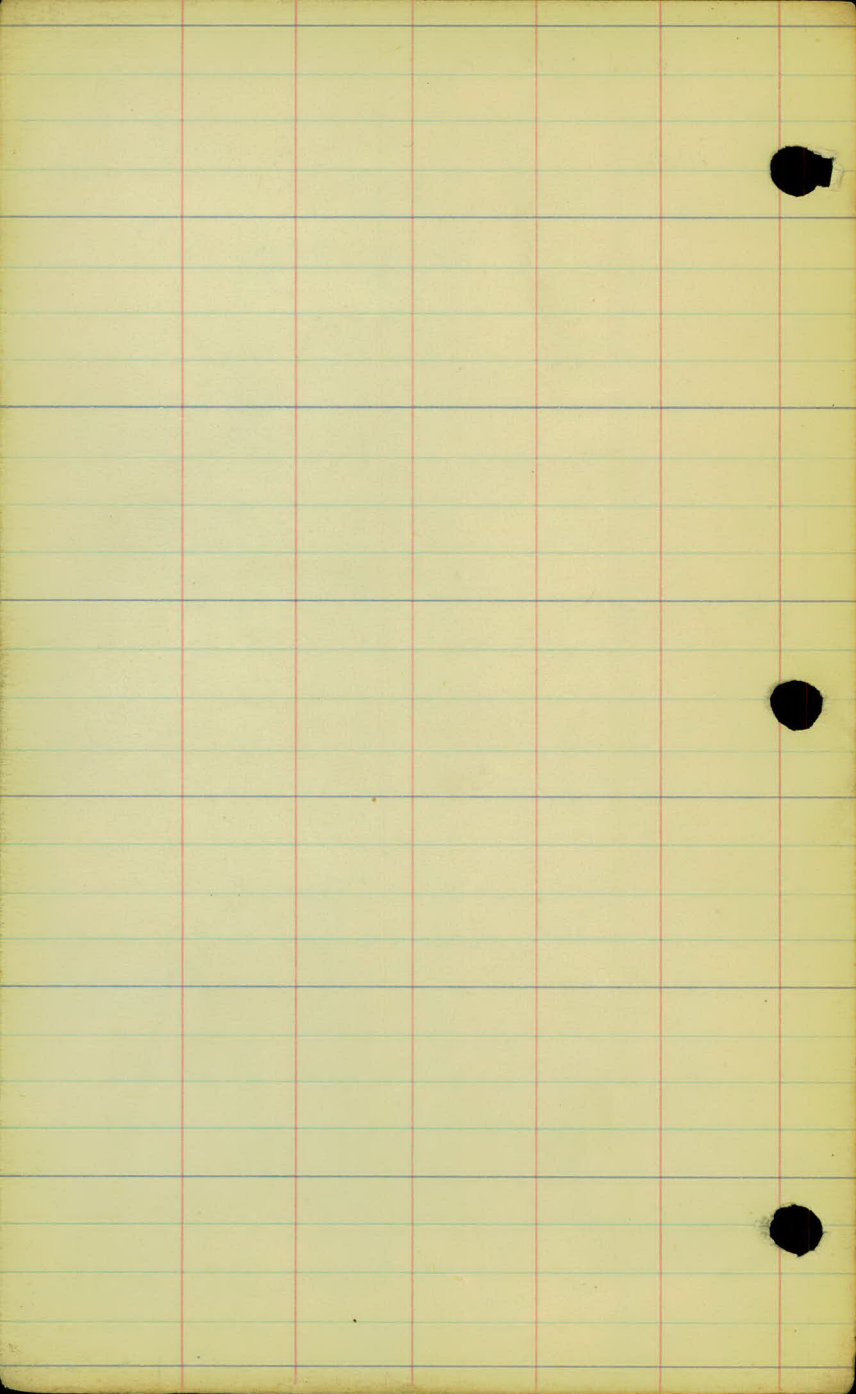
(9)

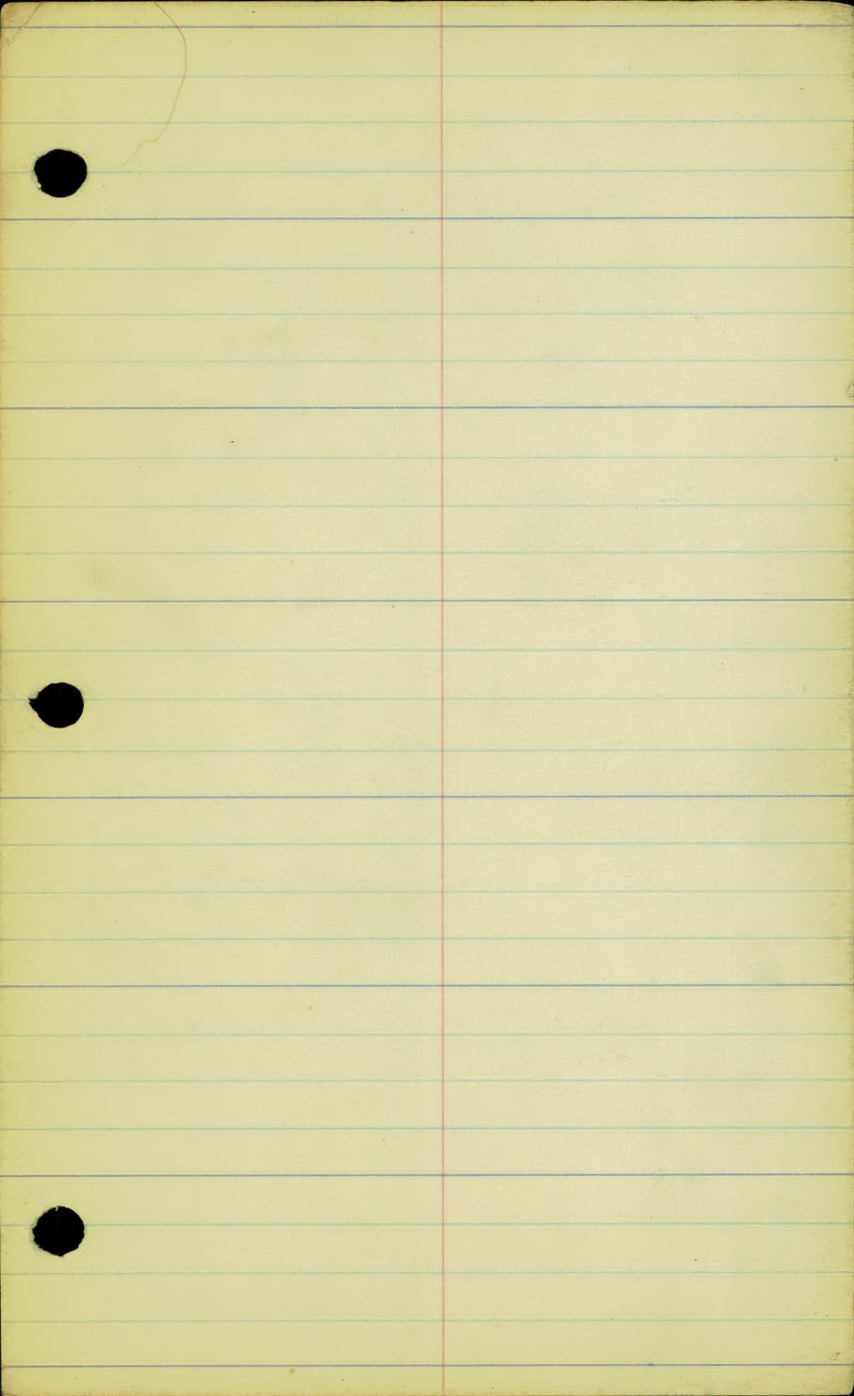
Nail in T.P. on Right. (Beg. cut)

Nail in Tel. Pole on left (near cottage pk. farm)

Nail in Tel pole on left (Mt. Gansok - ^{Near} St. Ry T.P. 131)

B.M. Nail in T.P. S.W. Cor. Int. St. P + D Hy
+ Lake Ave.





166 252.4

+32⁵ ϕ Co. Rd 'D'

165 253.3

+80 Need 40' - 18" Col. Drains Left.

164 254.8

163 257.0

162 258.5

161 259.7

+65⁶ 259.7

160 259.7

+50 259.3

159 258.8

+50 258.2

158 +00 257.7

$$\frac{-3.7}{33} \frac{-1.8}{25} \frac{-1.5}{19} \frac{-2.3}{16} \frac{-2.0}{12} \frac{-0.4}{8} \quad \frac{-0.4}{17} \frac{-1.1}{20} \frac{-1.2}{22} \frac{-1.3}{26} \frac{+0.3}{33} \frac{+1.3}{40}$$

$$\frac{-6.5}{150} \frac{-5.0}{100} \frac{-3.8}{50} \quad \frac{+1.2}{50} \quad \frac{+2.3}{100} \quad \frac{+4.5}{150}$$

$$\frac{-5.6}{33} \frac{-3.3}{23} \frac{-2.9}{19} \frac{-3.4}{15} \frac{-0.7}{9} \quad \frac{-0.2}{10} \frac{-1.5}{21} \frac{-1.3}{24} \frac{-0.6}{28} \frac{-0.5}{33}$$

$$\frac{-3.6}{33} \frac{-2.1}{27} \frac{-1.5}{24} \frac{-0.4}{14} \quad \frac{00}{13} \frac{-0.2}{15} \frac{-2.2}{17} \frac{-2.5}{19} \frac{-1.5}{21} \frac{-1.4}{24} \frac{-0.8}{33}$$

$$\frac{-3.5}{33} \frac{-2.0}{27} \frac{-1.1}{20} \frac{-0.6}{13} \quad \frac{-0.2}{10} \frac{-0.6}{12} \frac{-1.3}{17} \frac{-0.4}{22} \frac{+1.0}{33}$$

$$\frac{+2.5}{33} \frac{+2.2}{31} \frac{+0.3}{23} \frac{-0.6}{18} \frac{-0.3}{11} \quad \frac{00}{6} \frac{-0.4}{13} \frac{+2.8}{18} \frac{+1.0}{23}$$

$$\frac{+2.4}{33} \frac{+1.9}{24} \frac{-0.7}{19} \frac{-0.2}{14} \quad \frac{-0.2}{6} \frac{-2.0}{10} \frac{-2.5}{20} \quad \frac{+2.0}{33}$$

$$\frac{-3.6}{36} \frac{-2.0}{33} \frac{+0.3}{24} \frac{-0.3}{20} \frac{-0.2}{14} \quad \frac{-0.3}{6} \frac{-0.5}{9} \frac{00}{11} \frac{+1.3}{15} \frac{+5.0}{30} \frac{+10.0}{40}$$

$$\frac{-6.6}{40} \frac{-4.6}{33} \frac{-0.6}{30} \frac{00}{25} \frac{-0.9}{20} \frac{-0.4}{16} \quad \frac{-0.4}{8} \frac{-0.6}{11} \frac{+1.0}{15} \frac{+2.3}{17} \frac{+4.0}{35} \frac{+9.0}{40}$$

$$\frac{-1.6}{33} \frac{+0.8}{28} \frac{+1.0}{21} \frac{00}{17} \frac{00}{14} \quad \frac{00}{9} \frac{-0.5}{14} \frac{+0.1}{17} \frac{+2.6}{20} \frac{+3.5}{33} \frac{+3.5}{42}$$

$$\frac{+4.0}{33} \frac{+2.8}{30} \frac{+1.7}{24} \frac{+1.4}{20} \frac{00}{9} \quad \frac{-0.2}{9} \frac{-1.7}{15} \frac{-0.3}{19} \frac{-0.7}{22} \frac{+2.0}{29} \frac{+10.5}{33}$$

$$\frac{+1.5}{40} \frac{+1.0}{33} \frac{+0.7}{27} \frac{-0.8}{21} \frac{-0.2}{18} \frac{-0.3}{13} \quad \frac{-0.4}{11} \frac{-1.2}{16} \frac{-1.8}{22} \frac{-0.2}{29} \frac{+0.6}{33}$$

$$\frac{-1.9}{33} \frac{-0.4}{27} \frac{+0.5}{22} \frac{-0.3}{12} \quad \frac{-0.2}{11} \frac{-0.6}{17} \frac{-0.5}{22} \frac{+0.6}{29} \frac{+1.1}{33}$$

176 252.6

+50 252.4

175 252.2

+50 252.1

174 251.7

+65 Need 20' Culv. Priv. Dr. PTL

+50 251.8

173 251.7

+85 Need 25' Culv. Priv. Drive R

172 251.4

171 251.6

170 251.9

169 252.1

168 252.6

161+00 252.7

$$+4.3/33 +4.6/23 +1.8/20 -2.0/15 -0.2/10$$

$$0.0/15 -1.1/19 -1.0/27 -2.1/33 -0.9/35 +1.0/37$$

$$+4.5/33 +4.2/23 +2.0/19 -0.5/16 -0.2/10$$

$$-0.2/10 0.0/15 -0.8/21 -1.6/26 +1.0/27 +1.8/34$$

$$+4.5/33 +3.5/20 +1.0/18 -2.5/13 -2.0/10 +0.1/4$$

$$-0.5/15 -1.0/20 -1.0/24 +1.5/29 +1.5/33$$

$$+3.8/33 +3.5/24 +1.7/22 -1.0/17 -1.5/12 -0.8/7$$

$$0.0/10 -0.8/14 -1.5/20 -1.0/24 +2.0/30 +2.0/33$$

$$+3.3/33 +3.1/30 +1.0/27 -2.0/21 +0.5/15 0.0/10$$

$$0.0/8 -0.5/13 -0.3/21 +0.4/33$$

$$+2.9/33 +2.8/27 -0.3/21 -1.0/17 0.0/11$$

$$\times -0.3/10 -0.4/18 +0.5/26 +0.5/33$$

$$+4.0/33 +3.5/21 +0.2/24 -2.0/20 -1.3/14 0.0/10$$

$$0.0/8 -1.1/14 -0.9/17 -0.3/23 +0.3/33$$

$$+0.6/33 -0.4/24 -1.4/22 -1.4/16 -0.1/12$$

$$-0.3/9 -4.5/17 -6.0/21 -7.2/33$$

$$-1.1/33 -1.4/24 -2.3/20 -2.3/17 0.0/12$$

$$0.0/11 -3.0/15 -4.5/21 -6.0/35$$

$$+0.4/33 -0.6/22 -1.8/18 -1.6/14 -0.2/12$$

$$+0.2/9 -1.0/5 -1.6/19 -0.6/25 -1.0/33$$

$$-0.4/33 -0.3/22 -0.8/19 -1.0/13 -0.2/9$$

$$0.0/14 -1.0/20 -0.7/23 -0.6/26 -1.4/37$$

$$+1.2/33 +1.2/23 -0.5/14 -0.9/13 +0.4/11$$

$$0.0/8 -0.3/12 -0.6/16 -0.7/20 +0.6/27 +1.8/30 +2.0/33$$

$$-1.0/33 0.0/30 0.0/20 -0.6/17 -1.5/13 -0.7/11$$

$$-0.2/9 -0.6/15 -0.9/18 -0.4/20 +0.2/23 +1.8/33$$

3-1-23

187 244.5

186 243.0

185 241.6

184 241.2

+30 Need 45' under Rd.

183 241.0

182 241.2

181 242.7

180 244.5

@00 Need 45' Culv under Rd

179 246.1

178 248.7

+50 250.0

177 251.1

176+50 251.9

$$+\frac{0.5}{33} + \frac{0.5}{30} + \frac{1.8}{21} \frac{0.0}{19} - \frac{0.8}{16} \frac{0.0}{11}$$

$$\frac{0.0}{10} - \frac{0.2}{12} + \frac{1.5}{16} + \frac{1.7}{33}$$

$$+\frac{2.5}{33} - \frac{1.6}{23} \frac{0.0}{14} \frac{0.0}{6}$$

$$-\frac{0.9}{4} - \frac{1.5}{8} - \frac{1.5}{11} \frac{0.0}{14} - \frac{1.0}{17} - \frac{1.8}{33}$$

$$+\frac{3.0}{45} + \frac{2.2}{33} - \frac{1.3}{29} - \frac{1.8}{25} \frac{0.0}{18} \frac{0.0}{8}$$

$$-\frac{0.5}{3} - \frac{3.5}{11} - \frac{4.2}{17} - \frac{8.0}{33}$$

$$+\frac{2.7}{33} + \frac{3.0}{27} \frac{0.0}{21} - \frac{0.2}{15}$$

$$-\frac{0.2}{8} - \frac{5.0}{18} - \frac{1.5}{26} - \frac{8.5}{33}$$

$$-\frac{4.0}{33} - \frac{3.3}{28} - \frac{2.0}{14} - \frac{0.4}{9}$$

$$+\frac{0.1}{9} \frac{0.0}{14} - \frac{1.0}{25} - \frac{8.2}{33} - \frac{8.5}{\text{Lake}}$$

$$-\frac{1.8}{33} - \frac{1.2}{22} - \frac{1.2}{16} - \frac{1.7}{9} \frac{0.0}{5}$$

$$+\frac{0.3}{9} \frac{0.0}{17} - \frac{1.3}{26} - \frac{1.4}{33}$$

$$+\frac{4.0}{33} + \frac{4.6}{24} + \frac{4.2}{17} + \frac{2.0}{14} \frac{0.0}{10} \frac{0.0}{5}$$

$$+\frac{0.6}{21} - \frac{0.7}{30} - \frac{1.0}{33} \frac{0.0}{43}$$

$$-\frac{0.5}{33} + \frac{0.8}{17} - \frac{0.6}{15} - \frac{0.6}{13} + \frac{0.2}{11}$$

$$-\frac{0.2}{14} - \frac{1.0}{19} - \frac{1.2}{22} - \frac{1.8}{27} - \frac{3.0}{33}$$

$$-\frac{1.0}{45} - \frac{2.6}{33} - \frac{3.3}{28} - \frac{2.3}{18} \frac{0.0}{14}$$

$$+\frac{0.1}{8} - \frac{1.0}{20} - \frac{11.0}{33} - \frac{18.5}{\text{Lake}}$$

$$\frac{0.0}{33} \frac{0.0}{31} - \frac{0.8}{25} - \frac{1.0}{20} \frac{0.0}{17}$$

$$-\frac{0.3}{7} - \frac{2.6}{19} - \frac{6.0}{23} - \frac{9.5}{33}$$

$$+\frac{1.3}{33} + \frac{1.8}{21} - \frac{1.0}{23} - \frac{1.0}{20} - \frac{0.5}{15} \frac{0.0}{11}$$

$$-\frac{0.4}{7} - \frac{1.0}{12} - \frac{1.0}{17} - \frac{0.5}{23} - \frac{0.7}{33}$$

$$+\frac{3.0}{33} + \frac{3.0}{27} - \frac{1.8}{23} - \frac{0.8}{16} \frac{0.0}{11}$$

$$-\frac{0.2}{9} - \frac{1.5}{15} - \frac{2.5}{22} - \frac{1.0}{31} + \frac{1.0}{33} + \frac{1.5}{35}$$

$$+\frac{3.0}{33} + \frac{3.1}{22} - \frac{1.4}{16} - \frac{0.8}{12} \frac{0.0}{6}$$

$$-\frac{0.1}{14} - \frac{0.6}{20} - \frac{1.7}{24} - \frac{1.8}{30} - \frac{1.9}{33} + \frac{0.5}{37}$$

3-1-23

200	248.1
199	249.3
198	250.1
197	250.9
196	251.4
195	251.6
194	251.0
193	250.0
192	249.1
191	248.4
190	247.4
189	246.2
188	245.5

$$-\frac{3.4}{33} \quad -\frac{3.0}{27} \quad -\frac{2.5}{21} \quad -\frac{0.4}{14} \quad -\frac{0.2}{9} \quad -\frac{1.6}{18} \quad -\frac{1.8}{33}$$

$$-\frac{1.6}{33} \quad -\frac{1.1}{21} \quad -\frac{0.9}{19} \quad -\frac{0.7}{14} \quad -\frac{0.3}{10} \quad -\frac{0.4}{13} \quad \frac{0.0}{21} \quad +\frac{1.8}{33}$$

$$-\frac{1.1}{33} \quad -\frac{0.6}{22} \quad -\frac{0.4}{15} \quad \frac{0.0}{10} \quad +\frac{0.2}{15} \quad +\frac{0.6}{33}$$

$$-\frac{2.2}{33} \quad -\frac{1.3}{19} \quad -\frac{0.4}{15} \quad \frac{0.0}{10} \quad -\frac{0.4}{18} \quad -\frac{1.2}{23} \quad -\frac{1.5}{33}$$

$$+\frac{0.2}{33} \quad -\frac{1.4}{28} \quad -\frac{1.6}{14} \quad \frac{0.0}{12} \quad \frac{0.0}{10} \quad -\frac{0.4}{16} \quad -\frac{0.6}{33}$$

$$-\frac{0.2}{33} \quad -\frac{1.2}{20} \quad -\frac{0.2}{14} \quad \frac{0.0}{10} \quad -\frac{0.6}{14} \quad -\frac{0.8}{21} \quad -\frac{1.6}{33}$$

$$-\frac{1.0}{33} \quad -\frac{0.3}{17} \quad -\frac{0.2}{14} \quad -\frac{0.1}{10} \quad -\frac{1.2}{17} \quad -\frac{1.6}{21} \quad -\frac{2.4}{33}$$

$$-\frac{0.2}{33} \quad -\frac{0.8}{19} \quad -\frac{0.3}{12} \quad -\frac{0.2}{10} \quad -\frac{1.4}{16} \quad -\frac{0.9}{16} \quad -\frac{1.2}{33}$$

$$-\frac{0.5}{50} \quad -\frac{1.4}{33} \quad -\frac{1.5}{25} \quad -\frac{0.6}{16} \quad -\frac{0.3}{8} \quad -\frac{2.0}{15} \quad -\frac{1.4}{21} \quad -\frac{2.3}{33}$$

$$-\frac{3.0}{50} \quad -\frac{3.0}{33} \quad -\frac{2.3}{27} \quad -\frac{0.6}{16} \quad -\frac{0.2}{8} \quad -\frac{0.8}{11} \quad -\frac{0.6}{15} \quad +\frac{2.2}{21} \quad +\frac{2.8}{33}$$

$$-\frac{3.4}{33} \quad -\frac{2.7}{30} \quad -\frac{1.6}{23} \quad -\frac{0.7}{17} \quad -\frac{0.3}{8} \quad -\frac{0.5}{11} \quad -\frac{0.4}{14} \quad +\frac{1.2}{20} \quad +\frac{4.0}{31} \quad +\frac{4.2}{33}$$

$$-\frac{3.2}{50} \quad -\frac{1.7}{33} \quad \frac{0.0}{17} \quad -\frac{0.5}{13} \quad -\frac{0.2}{8} \quad -\frac{0.5}{12} \quad -\frac{0.4}{14} \quad +\frac{1.0}{17} \quad +\frac{1.3}{33}$$

$$-\frac{3.5}{33} \quad -\frac{3.0}{21} \quad -\frac{0.4}{11} \quad \frac{0.0}{11} \quad -\frac{0.5}{16} \quad -\frac{0.5}{17} \quad +\frac{1.3}{20} \quad +\frac{2.1}{33}$$

3-1-23

213 260.2

212 258.5

211 256.6

210 255.1

209 253.3

+50 Need 25' Cdv. L. Priv. Drive

208 251.5

207 250.0

206 249.0

205 247.7

+30 Need 40' Cdv. under Rd

20A 247.4

203 246.8

202 246.7

201 247.3

$$\begin{array}{cccccc}
 +3.3 & +3.6 & -0.1 & -2.5 & -1.0 & 0.0 \\
 \frac{33}{33} & \frac{30}{30} & \frac{26}{26} & \frac{14}{14} & \frac{13}{13} & \frac{10}{10} \\
 +3.2 & & & & &
 \end{array}
 \quad
 \begin{array}{cccccc}
 0.0 & -0.6 & -0.8 & -1.5 & +4.1 & +3.8 \\
 \frac{16}{16} & \frac{17}{17} & \frac{20}{20} & \frac{23}{23} & \frac{25}{25} & \frac{33}{33} \\
 & & & & & 15
 \end{array}$$

$$\begin{array}{cccccc}
 +8.6 & +6.2 & +0.2 & +0.2 & -0.7 & \\
 \frac{33}{33} & \frac{29}{29} & \frac{21}{21} & \frac{14}{14} & \frac{10}{10} & \\
 0.0 & +0.5 & -0.3 & +7.6 & +9.2 & \\
 \frac{8}{8} & \frac{14}{14} & \frac{20}{20} & \frac{29}{29} & \frac{33}{33} &
 \end{array}$$

$$\begin{array}{cccccc}
 +7.0 & +5.5 & -0.6 & -0.8 & -0.1 & \\
 \frac{33}{33} & \frac{28}{28} & \frac{18}{18} & \frac{18}{18} & \frac{6}{6} & \\
 -0.5 & -1.0 & 0.0 & +6.0 & +6.0 & \\
 \frac{11}{11} & \frac{16}{16} & \frac{20}{20} & \frac{30}{30} & \frac{35}{35} &
 \end{array}$$

$$\begin{array}{cccccc}
 +4.6 & +0.8 & -0.1 & -0.1 & & \\
 \frac{33}{33} & \frac{23}{23} & \frac{16}{16} & \frac{11}{11} & & \\
 +0.1 & -0.2 & +0.3 & +0.6 & +1.5 & +2.9 \\
 \frac{8}{8} & \frac{12}{12} & \frac{16}{16} & \frac{20}{20} & \frac{28}{28} & \frac{33}{33}
 \end{array}$$

$$\begin{array}{cccccc}
 -1.0 & -2.1 & -1.0 & -0.2 & & \\
 \frac{33}{33} & \frac{23}{23} & \frac{16}{16} & \frac{11}{11} & & \\
 0.0 & -1.5 & -2.2 & -2.6 & & \\
 \frac{10}{10} & \frac{14}{14} & \frac{21}{21} & \frac{33}{33} & &
 \end{array}$$

$$\begin{array}{cccccc}
 -3.5 & -2.4 & 0.0 & & & \\
 \frac{33}{33} & \frac{20}{20} & \frac{12}{12} & & & \\
 -0.3 & -0.6 & -3.0 & -4.1 & -4.6 & \\
 \frac{10}{10} & \frac{12}{12} & \frac{16}{16} & \frac{26}{26} & \frac{33}{33} & \\
 -0.4 & -3.2 & -3.5 & & & \\
 \frac{10}{10} & \frac{22}{22} & \frac{33}{33} & & &
 \end{array}$$

$$\begin{array}{cccccc}
 +1.3 & -1.0 & -2.5 & -1.4 & -0.2 & \\
 \frac{33}{33} & \frac{30}{30} & \frac{24}{24} & \frac{17}{17} & \frac{12}{12} & \\
 -0.3 & -1.8 & -1.9 & -2.0 & +3.0 & \\
 \frac{10}{10} & \frac{14}{14} & \frac{20}{20} & \frac{24}{24} & \frac{33}{33} &
 \end{array}$$

$$\begin{array}{cccccc}
 -0.8 & -1.4 & -2.3 & -2.2 & -0.4 & \\
 \frac{33}{33} & \frac{28}{28} & \frac{24}{24} & \frac{18}{18} & \frac{12}{12} & \\
 -0.2 & -2.3 & -3.0 & -3.0 & & \\
 \frac{10}{10} & \frac{16}{16} & \frac{21}{21} & \frac{33}{33} & &
 \end{array}$$

$$\begin{array}{cccccc}
 -1.3 & -2.3 & -1.5 & -0.2 & & \\
 \frac{33}{33} & \frac{23}{23} & \frac{19}{19} & \frac{13}{13} & & \\
 -0.1 & -2.3 & -3.5 & -1.9 & & \\
 \frac{9}{9} & \frac{16}{16} & \frac{24}{24} & \frac{33}{33} & &
 \end{array}$$

$$\begin{array}{cccccc}
 -2.8 & -2.6 & -2.6 & -0.6 & & \\
 \frac{33}{33} & \frac{26}{26} & \frac{21}{21} & \frac{13}{13} & & \\
 +0.1 & -1.2 & -1.1 & 0.0 & & \\
 \frac{11}{11} & \frac{16}{16} & \frac{22}{22} & \frac{33}{33} & &
 \end{array}$$

$$\begin{array}{cccccc}
 -0.7 & -0.4 & -1.6 & -1.6 & -0.2 & \\
 \frac{33}{33} & \frac{24}{24} & \frac{22}{22} & \frac{17}{17} & \frac{13}{13} & \\
 +0.1 & -0.4 & -1.1 & -0.8 & +0.4 & \\
 \frac{10}{10} & \frac{14}{14} & \frac{19}{19} & \frac{21}{21} & \frac{33}{33} &
 \end{array}$$

$$\begin{array}{cccccc}
 -2.0 & -1.0 & -1.7 & -1.5 & -0.5 & \\
 \frac{33}{33} & \frac{24}{24} & \frac{21}{21} & \frac{18}{18} & \frac{14}{14} & \\
 0.0 & -0.6 & -0.6 & 0.0 & & \\
 \frac{10}{10} & \frac{13}{13} & \frac{20}{20} & \frac{33}{33} & &
 \end{array}$$

3-1-23

225 252.5

224 252.3

- 223 252.4

+ 25 40. Cvb. as equalizer under Rd.

222 252.6

221 253.0

220 254.1

219+548 $\frac{255.1}{\pm}$ Co. Rd. E.

219 255.3

218 256.9

217 258.5

216 259.4

215 260.3

214 260.2

$$-\frac{0.5}{33} \quad -\frac{2.2}{26} \quad -\frac{2.6}{20} \quad -\frac{1.2}{15} \quad -\frac{0.3}{10}$$

$$-\frac{0.2}{9} \quad -\frac{0.7}{13} \quad -\frac{1.3}{15} \quad -\frac{2.0}{22} \quad -\frac{0.6}{29} \quad +\frac{0.8}{33}$$

$$-\frac{1.0}{33} \quad -\frac{3.8}{23} \quad -\frac{3.7}{19} \quad -\frac{1.0}{14} \quad -\frac{0.5}{11}$$

$$-\frac{0.14}{9} \quad -\frac{0.9}{13} \quad -\frac{3.0}{16} \quad -\frac{2.8}{22} \quad -\frac{1.4}{31} \quad +\frac{1.0}{33}$$

$$-\frac{5.7}{33} \quad -\frac{4.6}{19} \quad -\frac{1.2}{14} \quad -\frac{0.6}{10}$$

$$-\frac{0.2}{9} \quad -\frac{0.8}{13} \quad -\frac{4.2}{18} \quad -\frac{5.0}{24} \quad -\frac{4.9}{33}$$

$$-\frac{5.4}{33} \quad -\frac{4.7}{19} \quad -\frac{1.0}{13} \quad -\frac{0.3}{9}$$

$$-\frac{0.2}{10} \quad -\frac{0.6}{13} \quad -\frac{2.7}{17} \quad -\frac{3.0}{23} \quad -\frac{5.5}{30} \quad -\frac{5.0}{33}$$

$$-\frac{3.2}{32} \quad -\frac{3.4}{24} \quad -\frac{3.6}{19} \quad -\frac{1.0}{13} \quad -\frac{0.4}{10}$$

$$-\frac{0.3}{10} \quad -\frac{2.1}{16} \quad -\frac{2.5}{23} \quad -\frac{3.6}{33} \quad -\frac{0.4}{37}$$

$$-\frac{1.2}{33} \quad -\frac{3.3}{28} \quad -\frac{3.1}{23} \quad -\frac{2.3}{17} \quad -\frac{0.4}{13} \quad -\frac{0.1}{10}$$

$$\frac{00}{18} \quad -\frac{0.6}{17} \quad -\frac{0.8}{22} \quad -\frac{1.2}{30} \quad -\frac{1.2}{33}$$

$$-\frac{1.4}{150} \quad -\frac{1.3}{100} \quad -\frac{0.6}{50}$$

$$-\frac{0.3}{50} \quad +\frac{0.5}{100} \quad +\frac{0.4}{150}$$

$$-\frac{0.6}{33} \quad -\frac{0.7}{25} \quad -\frac{0.4}{16} \quad \frac{00}{11}$$

$$\frac{00}{11} \quad -\frac{0.6}{22} \quad +\frac{0.4}{26} \quad +\frac{0.2}{33}$$

$$-\frac{1.8}{33} \quad -\frac{2.0}{25} \quad -\frac{1.2}{22} \quad -\frac{1.0}{17} \quad -\frac{0.4}{12}$$

$$-\frac{0.2}{10} \quad -\frac{0.6}{14} \quad -\frac{1.0}{22} \quad -\frac{0.6}{33}$$

$$-\frac{1.4}{50} \quad -\frac{0.4}{33} \quad -\frac{0.6}{18} \quad -\frac{0.4}{14} \quad -\frac{0.2}{10}$$

$$\frac{00}{10} \quad -\frac{0.4}{15} \quad \frac{00}{20} \quad +\frac{0.6}{33}$$

$$+\frac{1.4}{33} \quad +\frac{1.7}{19} \quad -\frac{0.6}{13} \quad -\frac{0.5}{9}$$

$$\frac{00}{10} \quad \frac{00}{12} \quad +\frac{0.2}{15} \quad +\frac{0.7}{19} \quad +\frac{1.6}{22} \quad +\frac{2.6}{33}$$

$$+\frac{1.3}{33} \quad +\frac{1.4}{22} \quad \frac{00}{18} \quad -\frac{1.5}{16} \quad -\frac{0.5}{12}$$

$$-\frac{0.3}{9} \quad \frac{00}{10} \quad -\frac{0.1}{16} \quad \frac{00}{20} \quad +\frac{0.8}{21} \quad +\frac{2.7}{24}$$

$$+\frac{1.1}{50} \quad +\frac{1.5}{33} \quad +\frac{2.0}{13} \quad \frac{00}{19} \quad -\frac{0.5}{12} \quad \frac{00}{8}$$

$$-\frac{0.2}{12} \quad \frac{00}{16} \quad +\frac{0.4}{25} \quad +\frac{2.5}{33}$$

3-2-23

238 260.5

237 260.1

236 259.5

235 259.1

234 258.0

233 257.6

232 257.2

231 256.4

230 256.2

+60 Need 20 Gals F&L Priv. Drives

229 255.9

228 255.0

227 254.1

226 253.4

$\frac{-2.0}{33}$

$$\frac{+2.6}{33} \quad \frac{+2.4}{30} \quad \frac{0.0}{22} \quad \frac{-0.7}{18} \quad \frac{-0.5}{14}$$

$$\frac{-0.4}{6} \quad \frac{-0.4}{8} \quad \frac{-0.6}{10} \quad \frac{-1.3}{11} \quad \frac{-1.3}{13} \quad \frac{-0.4}{14} \quad \frac{-1.3}{23}$$

$$\frac{-1.2}{33} \quad \frac{-1.5}{24} \quad \frac{-1.4}{18} \quad \frac{-0.4}{18} \quad \frac{-0.3}{13}$$

$$\frac{-0.2}{11} \quad \frac{-1.2}{13} \quad \frac{-1.4}{24} \quad \frac{-0.8}{33} \quad \frac{-0.3}{50}$$

$$\frac{+1.0}{50} \quad \frac{+1.6}{33} \quad \frac{+0.6}{24} \quad \frac{-0.6}{24} \quad \frac{-0.3}{17} \quad \frac{-0.2}{13}$$

$$\frac{-0.4}{10} \quad \frac{-0.6}{12} \quad \frac{-0.6}{23} \quad \frac{+1.3}{26} \quad \frac{+1.6}{33}$$

$$\frac{+1.1}{33} \quad \frac{+1.3}{30} \quad \frac{+1.0}{26} \quad \frac{-1.0}{22} \quad \frac{-1.0}{17} \quad \frac{-0.3}{12}$$

$$\frac{-0.4}{11} \quad \frac{-0.7}{13} \quad \frac{-0.4}{16} \quad \frac{+0.6}{20} \quad \frac{+0.5}{28} \quad \frac{0.0}{33}$$

$$\frac{-1.6}{33} \quad \frac{-1.2}{27} \quad \frac{-2.6}{23} \quad \frac{-2.6}{18} \quad \frac{-0.5}{14} \quad \frac{-0.9}{11}$$

$$\frac{-0.2}{9} \quad \frac{-0.6}{12} \quad \frac{-1.4}{15} \quad \frac{-2.5}{27} \quad \frac{-2.5}{33}$$

$$\frac{-2.0}{33} \quad \frac{-1.0}{28} \quad \frac{-2.0}{26} \quad \frac{-2.0}{20} \quad \frac{-1.8}{16} \quad \frac{0.0}{12}$$

$$\frac{-0.6}{12} \quad \frac{-1.0}{13} \quad \frac{-1.0}{15} \quad \frac{-0.4}{16} \quad \frac{+0.3}{28} \quad \frac{+0.1}{33}$$

$$\frac{+0.2}{33} \quad \frac{-0.1}{26} \quad \frac{-2.0}{23} \quad \frac{-1.6}{17} \quad \frac{-0.3}{14}$$

$$\frac{-0.3}{9} \quad \frac{-0.4}{12} \quad \frac{-1.0}{13} \quad \frac{+0.1}{14} \quad \frac{+0.2}{19} \quad \frac{-0.3}{30} \quad \frac{-0.3}{33}$$

$$\frac{+0.5}{50} \quad \frac{-0.6}{33} \quad \frac{-0.6}{28} \quad \frac{-3.0}{25} \quad \frac{-2.2}{16} \quad \frac{-0.4}{13}$$

$$\frac{-0.5}{12} \quad \frac{-1.2}{13} \quad \frac{-0.8}{15} \quad \frac{0.0}{19} \quad \frac{+0.2}{26} \quad \frac{+0.5}{33}$$

$$\frac{-1.6}{33} \quad \frac{-1.4}{26} \quad \frac{-1.6}{24} \quad \frac{-1.7}{19} \quad \frac{-1.3}{16} \quad \frac{-0.3}{14}$$

$$\frac{-0.3}{10} \quad \frac{-1.0}{12} \quad \frac{-0.6}{28} \quad \frac{-0.2}{33}$$

$$\frac{-1.8}{50} \quad \frac{-1.2}{33} \quad \frac{-1.1}{19} \quad \frac{-0.6}{12}$$

$$\frac{-0.3}{9} \quad \frac{-0.4}{13} \quad \frac{+1.4}{18} \quad \frac{+1.8}{28} \quad \frac{+1.6}{33}$$

$$\frac{-1.1}{50} \quad \frac{-1.3}{33} \quad \frac{-1.0}{26} \quad \frac{0.0}{13}$$

$$\frac{-0.3}{8} \quad \frac{-0.7}{13} \quad \frac{+2.7}{18} \quad \frac{+3.2}{28} \quad \frac{+3.1}{33}$$

$$\frac{+0.3}{50} \quad \frac{-0.5}{33} \quad \frac{-1.1}{27} \quad \frac{-1.4}{21} \quad \frac{-0.7}{14}$$

$$\frac{0.0}{6} \quad \frac{-0.1}{10} \quad \frac{+1.0}{13} \quad \frac{+2.2}{16} \quad \frac{+1.3}{19} \quad \frac{+5.0}{26} \quad \frac{+4.0}{33}$$

$$\frac{+1.0}{55} \quad \frac{-0.3}{33} \quad \frac{-1.2}{23} \quad \frac{-0.6}{17} \quad \frac{-0.3}{11}$$

$$\frac{-0.3}{13} \quad \frac{-0.8}{16} \quad \frac{-0.5}{22} \quad \frac{+1.3}{28} \quad \frac{+3.2}{33}$$

3-2-23

251	250.7
250	251.2
249	252.9
+ 80	Priv Dr. L. 20' Culv. Need.
248	254.6
247	256.1
246	257.7
245	258.4
244	258.6
243	258.9
242	259.3
241	260.3
240	260.5
239	260.5

$$\frac{-7.0}{33} \quad \frac{-6.6}{28} \quad \frac{-5.2}{22} \quad \frac{-0.6}{16} \quad \frac{-0.3}{13} \quad \frac{-0.6}{8} \quad \frac{-2.1}{12} \quad \frac{-13.4}{26} \quad \frac{-14.2}{37} \quad \frac{-16.0}{50}$$

$$\frac{-7.5}{50} \quad \frac{-7.0}{33} \quad \frac{-6.0}{28} \quad \frac{-4.2}{22} \quad \frac{-0.5}{15} \quad \frac{-0.7}{7} \quad \frac{-1.6}{10} \quad \frac{-14.5}{31} \quad \frac{-16.5}{40}$$

$$\frac{+1.8}{33} \quad \frac{-0.5}{27} \quad \frac{-1.7}{20} \quad \frac{-0.4}{16} \quad \frac{-0.4}{6} \quad \frac{-0.2}{9} \quad \frac{-3.0}{15} \quad \frac{-4.5}{21} \quad \frac{-4.0}{18} \quad \frac{-3.6}{33}$$

$$\frac{+0.7}{33} \quad \frac{-0.6}{28} \quad \frac{-0.6}{23} \quad \frac{-0.2}{17} \quad \frac{-0.3}{9} \quad \frac{-1.3}{13} \quad \frac{-2.1}{18} \quad \frac{-2.4}{24} \quad \frac{-1.1}{33} \quad \frac{-0.3}{50}$$

$$\frac{0.0}{33} \quad \frac{-0.3}{26} \quad \frac{-1.2}{22} \quad \frac{-0.3}{19} \quad \frac{0.0}{14} \quad \frac{-0.1}{8} \quad \frac{-0.1}{14} \quad \frac{-1.3}{24} \quad \frac{-1.5}{33}$$

$$\frac{-0.7}{50} \quad \frac{-0.2}{33} \quad \frac{-0.3}{13} \quad \frac{0.0}{7} \quad \frac{-0.6}{12} \quad \frac{-1.1}{19} \quad \frac{-1.3}{33}$$

$$\frac{+0.3}{33} \quad \frac{+0.2}{31} \quad \frac{-2.9}{29} \quad \frac{-2.5}{22} \quad \frac{-0.5}{18} \quad \frac{-0.6}{16} \quad \frac{-1.4}{13} \quad \frac{-2.0}{24} \quad \frac{-2.2}{28} \quad \frac{-3.0}{33}$$

$$\frac{-2.7}{38} \quad \frac{-3.4}{33} \quad \frac{-3.8}{26} \quad \frac{-2.8}{19} \quad \frac{-0.6}{16} \quad \frac{-0.2}{12} \quad \frac{-0.7}{9} \quad \frac{-1.3}{12} \quad \frac{-1.4}{21} \quad \frac{0.0}{24} \quad \frac{-1.7}{29} \quad \frac{-1.9}{33}$$

$$\frac{-5.5}{50} \quad \frac{-5.5}{33} \quad \frac{-4.2}{29} \quad \frac{-2.1}{25} \quad \frac{-1.6}{19} \quad \frac{-0.4}{13} \quad \frac{-0.3}{8} \quad \frac{-0.7}{12} \quad \frac{-1.3}{14} \quad \frac{-2.3}{21} \quad \frac{-1.0}{26} \quad \frac{+1.0}{29} \quad \frac{+0.7}{33}$$

$$\frac{-3.8}{33} \quad \frac{-3.6}{30} \quad \frac{-2.0}{27} \quad \frac{-1.4}{20} \quad \frac{-0.8}{12} \quad \frac{-0.6}{13} \quad \frac{-0.3}{8} \quad \frac{-0.8}{11} \quad \frac{-1.6}{13} \quad \frac{-2.0}{17} \quad \frac{-2.7}{21} \quad \frac{-0.3}{26} \quad \frac{0.0}{33}$$

$$\frac{+0.3}{33} \quad \frac{0.0}{29} \quad \frac{-0.8}{25} \quad \frac{-0.6}{16} \quad \frac{-0.3}{11} \quad \frac{-0.6}{12} \quad \frac{-1.0}{16} \quad \frac{-0.8}{22} \quad \frac{-0.6}{28} \quad \frac{-0.8}{33}$$

$$\frac{+2.0}{33} \quad \frac{+2.0}{30} \quad \frac{-1.4}{27} \quad \frac{-1.8}{24} \quad \frac{-0.8}{16} \quad \frac{-0.4}{11} \quad \frac{-0.4}{10} \quad \frac{-0.4}{13} \quad \frac{-1.8}{19} \quad \frac{-2.0}{23} \quad \frac{0.0}{26} \quad \frac{-0.7}{33}$$

$$\frac{+2.5}{33} \quad \frac{+1.4}{30} \quad \frac{+1.1}{27} \quad \frac{+0.8}{19} \quad \frac{-0.5}{17} \quad \frac{-0.3}{11} \quad \frac{-0.6}{7} \quad \frac{-0.7}{10} \quad \frac{-0.7}{14} \quad \frac{+0.6}{14} \quad \frac{0.0}{28} \quad \frac{-0.4}{33}$$

3-2-23

+27 · Old 12" vit. Culv. under Rd. 49 Drains left. Place 18'-50'

262	243.9
261	245.1
260	246.9
259	249.0
258	250.7
257	251.9
256	253.1
255	253.8
+50	253.5
254	253.2
253	252.3
+50	251.6
252	251.0

$-\frac{12.0}{45} - \frac{11.5}{33} - \frac{11.0}{28} - \frac{0.5}{11} - \frac{0.5}{10} - \frac{1.0}{13} - \frac{5.8}{21} - \frac{6.0}{26} - \frac{7.2}{33}$

$-\frac{2.8}{33} - \frac{3.2}{28} - \frac{3.7}{25} - \frac{3.0}{16} - \frac{0.4}{12} - \frac{0.8}{10} - \frac{1.4}{13} - \frac{3.2}{17} - \frac{4.2}{24} - \frac{3.8}{28} - \frac{3.9}{33}$

$+\frac{0.5}{33} + \frac{0.6}{26} - \frac{1.5}{24} - \frac{1.7}{19} - \frac{0.4}{9} - \frac{0.4}{10} - \frac{1.0}{16} - \frac{1.1}{21} - \frac{0.3}{26} - \frac{0.6}{28} + \frac{0.8}{33}$

$-\frac{2.9}{33} - \frac{2.1}{26} - \frac{1.8}{21} - \frac{0.8}{13} - \frac{0.2}{10} - \frac{1.0}{15} - \frac{1.2}{23} - \frac{0.0}{28} - \frac{0.2}{33}$

$-\frac{2.7}{33} - \frac{2.0}{26} - \frac{0.8}{24} - \frac{0.6}{14} - \frac{0.0}{6} - \frac{0.5}{11} - \frac{0.5}{15} - \frac{0.6}{20} + \frac{0.3}{26} + \frac{4.1}{33-40}$

$+\frac{1.3}{33} + \frac{1.2}{28} + \frac{0.8}{23} - \frac{0.0}{18} - \frac{0.5}{10} - \frac{0.3}{7} - \frac{0.8}{18} - \frac{0.0}{26} + \frac{1.3}{30} + \frac{1.4}{33} + \frac{1.9}{45}$

$+\frac{0.8}{33} + \frac{1.6}{28} + \frac{1.0}{26} - \frac{0.0}{23} - \frac{0.8}{15} - \frac{0.0}{8} - \frac{0.7}{17} - \frac{0.0}{23} + \frac{0.8}{28} + \frac{3.3}{33} + \frac{5.0}{38}$

$+\frac{6.5}{37} - \frac{0.0}{27} - \frac{0.5}{21} - \frac{0.5}{12} - \frac{0.6}{10} - \frac{0.0}{14} + \frac{1.0}{21} + \frac{3.8}{28} + \frac{10.5}{37-45}$

$+\frac{7.0}{38} + \frac{1.5}{28} - \frac{0.5}{22} - \frac{0.3}{14} - \frac{0.0}{8} - \frac{0.5}{10} - \frac{0.0}{11} + \frac{0.8}{18} + \frac{2.0}{24} + \frac{11.5}{41} + \frac{10.2}{50}$

$+\frac{6.0}{45-37} + \frac{3.8}{33} - \frac{0.5}{30} - \frac{1.5}{24} - \frac{0.8}{16} - \frac{0.0}{10} - \frac{0.7}{10} - \frac{0.0}{20} + \frac{1.3}{26} + \frac{9.0}{36} + \frac{8.5}{45}$

$-\frac{7.0}{50} - \frac{5.0}{33} - \frac{9.4}{30} - \frac{3.0}{23} - \frac{1.7}{18} - \frac{0.7}{14} - \frac{0.2}{8} - \frac{1.0}{14} - \frac{1.1}{19} - \frac{0.4}{26} + \frac{3.5}{33} + \frac{5.0}{50}$

$-\frac{12.0}{50} - \frac{10.5}{33} - \frac{9.8}{30} - \frac{8.0}{26} - \frac{1.0}{15} - \frac{0.2}{8} - \frac{0.7}{13} - \frac{3.5}{18} - \frac{5.5}{25} - \frac{5.0}{30} - \frac{4.6}{33}$

$-\frac{10.5}{50} - \frac{9.3}{33} - \frac{9.0}{30} - \frac{0.5}{14} - \frac{0.4}{8} - \frac{0.7}{12} - \frac{5.0}{16} - \frac{10.1}{30} - \frac{10.6}{33} - 50$

3-2-23

119.2	247.3 E of Ash St.
272	246.9
271	246.5
270	246.0
+30	Priv. Drive R. 25' Culv.
269	245.7
268	244.9
267	244.6
266	244.5
265	244.2
264	243.4
263	243.2

$$\frac{-1.4}{100} \quad \frac{-0.5}{50} \quad \frac{00}{50} \quad \frac{-0.4}{100}$$

$$\frac{+0.7}{33} \quad \frac{+1.0}{19} \quad \frac{-0.2}{15} \quad \frac{-0.3}{10} \quad \frac{-0.2}{10} \quad \frac{-0.3}{15} \quad \frac{+0.2}{18} \quad \frac{00}{26} \quad \frac{00}{33}$$

$$\frac{+0.8}{33} \quad \frac{+0.2}{27} \quad \frac{+0.3}{21} \quad \frac{-0.4}{16} \quad \frac{00}{13} \quad \frac{-0.5}{12} \quad \frac{-1.0}{14} \quad \frac{-0.4}{18} \quad \frac{00}{21} \quad \frac{00}{33}$$

$$\frac{-1.4}{40-33} \quad \frac{-1.8}{23} \quad \frac{-2.5}{18} \quad \frac{-0.5}{13} \quad \frac{-0.1}{8} \quad \frac{-0.8}{12} \quad \frac{-2.4}{15} \quad \frac{-2.5}{19} \quad \frac{-2.2}{24} \quad \frac{-2.0}{33}$$

$$\frac{-1.8}{33} \quad \frac{-1.8}{28} \quad \frac{-2.3}{20} \quad \frac{-2.1}{18} \quad \frac{-0.7}{14} \quad \frac{-0.3}{9} \quad \frac{-0.8}{12} \quad \frac{-1.9}{15} \quad \frac{-1.8}{20} \quad \frac{-1.4}{23} \quad \frac{-1.2}{33}$$

$$\frac{+1.0}{44-33} \quad \frac{+0.7}{28} \quad \frac{+0.8}{23} \quad \frac{-0.6}{16} \quad \frac{-0.3}{10} \quad \frac{-0.2}{9} \quad \frac{-1.0}{13} \quad \frac{-0.4}{14} \quad \frac{-0.3}{20} \quad \frac{00}{33-50}$$

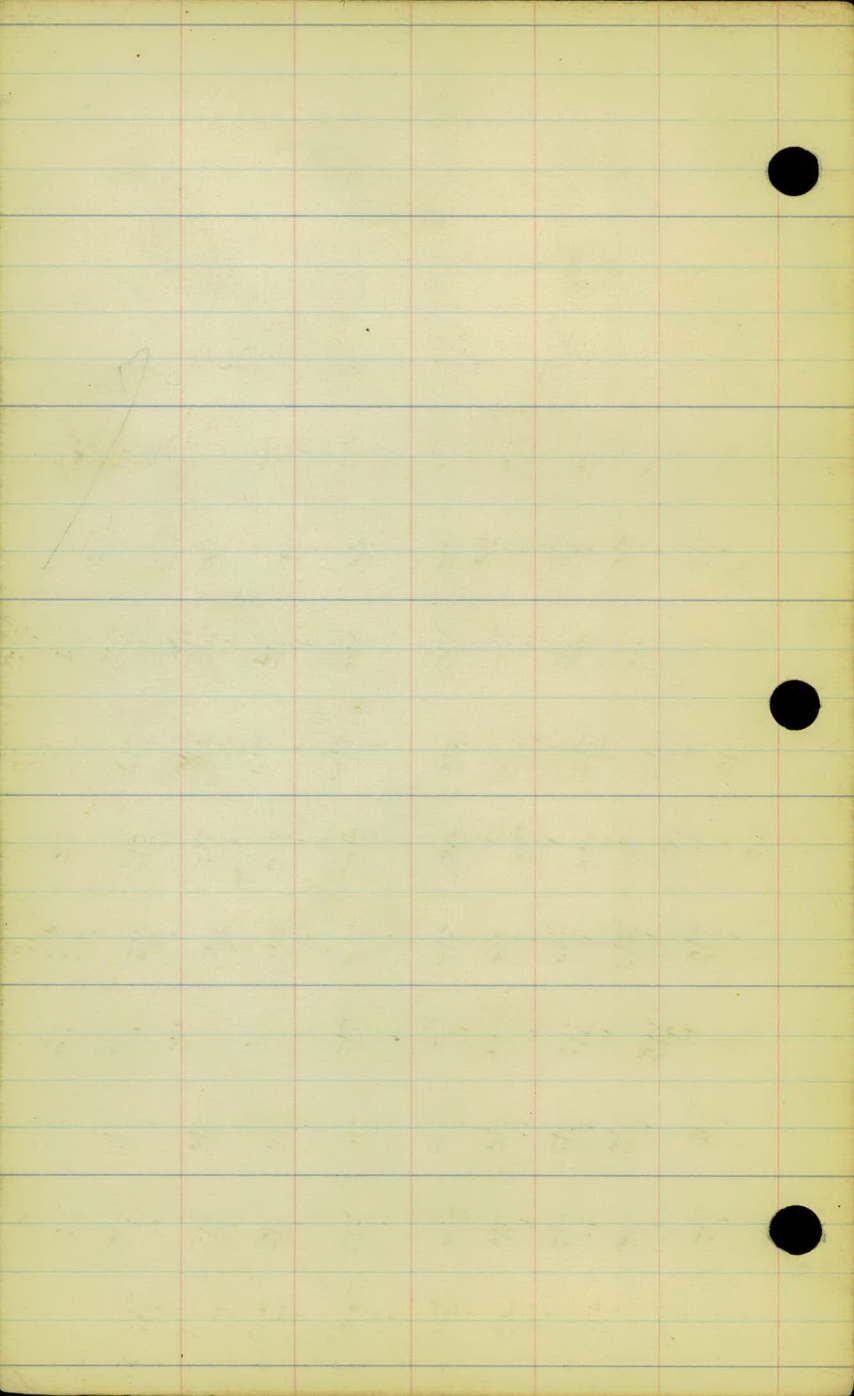
$$\frac{+2.0}{33} \quad \frac{+1.8}{21} \quad \frac{-0.5}{16} \quad \frac{-0.4}{14} \quad \frac{-0.3}{11} \quad \frac{-0.4}{8} \quad \frac{-0.5}{15} \quad \frac{00}{17} \quad \frac{+0.6}{21} \quad \frac{+0.4}{33-50}$$

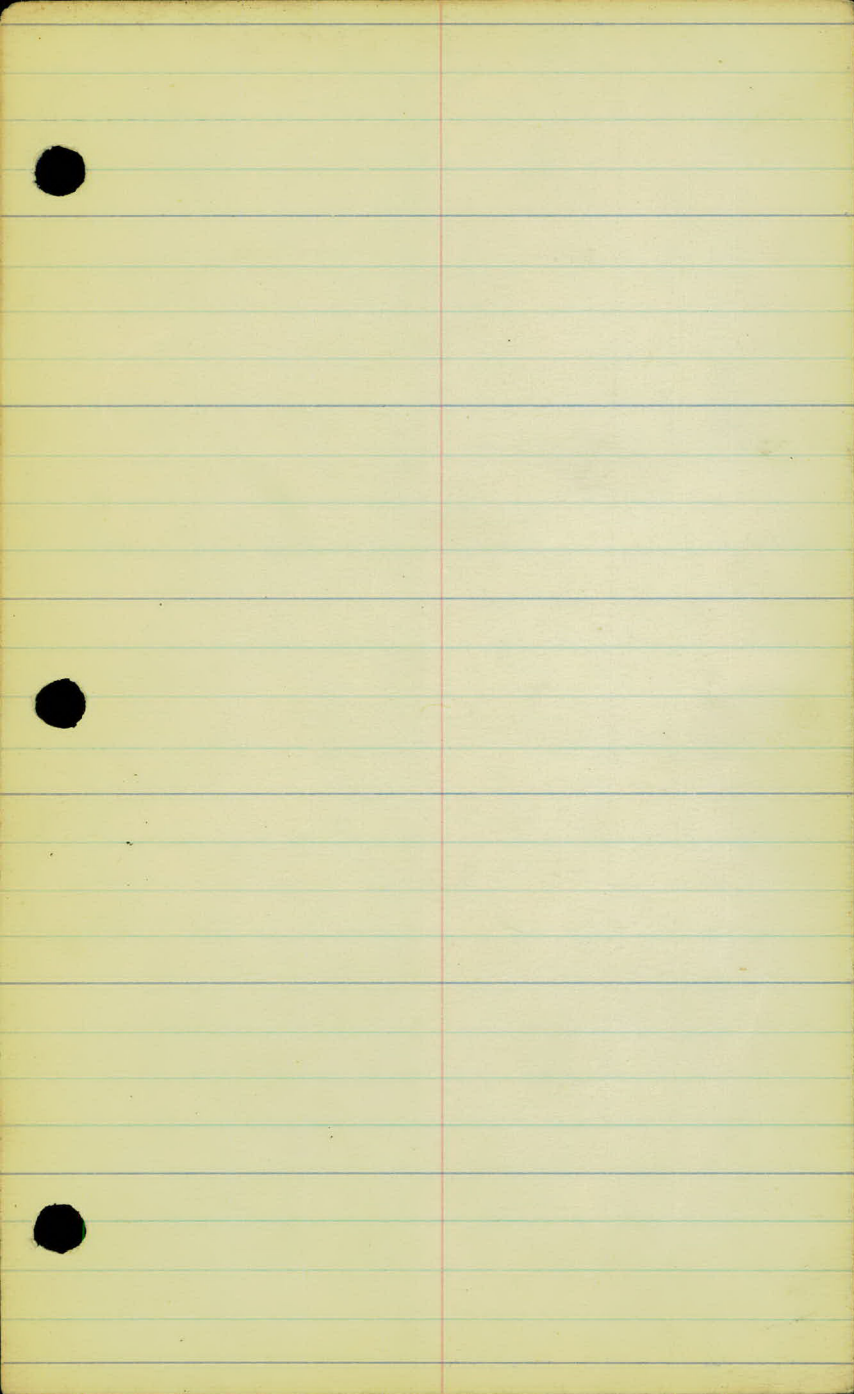
$$\frac{+3.0}{33} \quad \frac{+2.0}{21} \quad \frac{-0.9}{16} \quad \frac{-0.2}{11} \quad \frac{-0.5}{11} \quad \frac{-0.8}{13} \quad \frac{-0.4}{15} \quad \frac{+1.0}{18} \quad \frac{+1.5}{33}$$

$$\frac{+3.5}{33} \quad \frac{+3.0}{23} \quad \frac{+1.8}{21} \quad \frac{-0.2}{16} \quad \frac{-0.4}{11} \quad \frac{-0.4}{7} \quad \frac{-1.0}{12} \quad \frac{-0.6}{16} \quad \frac{+2.6}{21} \quad \frac{+2.9}{33}$$

$$\frac{+1.0}{33} \quad \frac{+1.0}{23} \quad \frac{-1.2}{20} \quad \frac{-1.0}{14} \quad \frac{00}{8} \quad \frac{-0.5}{10} \quad \frac{-1.0}{13} \quad \frac{-1.0}{17} \quad \frac{+2.8}{24} \quad \frac{+2.8}{33-45}$$

$$\frac{-10.0}{50} \quad \frac{-9.0}{33} \quad \frac{-7.8}{26} \quad \frac{-0.5}{13} \quad \frac{-0.4}{12} \quad \frac{-5.0}{20} \quad \frac{-5.4}{25} \quad \frac{-6.5}{33} \quad \frac{-7.0}{45}$$





Mar 6 - 23
X sections

Tierney - recorder
Parsons - hand level
Galvin - Rod

282 246.7 ✓

+50 245.4 ✓

281 247.5 ✓

+50 247.8 ✓

280 248.1 ✓

279 247.9 ✓

278 248.0 ✓

277 248.0 ✓

276 248.2 ✓

275 248.0

274 247.8

273 247.4

272 + 19²

E. Fish St.

C.R.

+0.5 / -0.5 / -2 / 00
45 / 30 / 24 / 19

2.0

C.R.

00 / +1.0 / +2.0 / 00 / +1.5
41 / 35 / 23 / 14 / 7 / 6

2.0

C.R.

-1.5 / -1.5 / -2.2 / -0.7 / 00 / -0.2 / -2.0 / -2.5 / -0.3 / -0.5 / -0.5
33 / 29 / 25 / 18 / 8 / 4 / 12 / 16 / 19 / 26 / 33

-1.0 / -1.5 / -1.7 / 0.9 / -0.2 / -2.2 / -2.3 / -1.9
35 / 22 / 17 / 11 / 13 / 20 / 33 / 35

-1.5 / -1.2 / -2.1 / -0.6 / -0.5 / -2.5 / -2.5 / -1.9
33 / 19 / 14 / 9 / 12 / 23 / 34 / 36

-1.1 / -1.3 / -1.9 / -0.9 / -0.3 / -2.0 / -2.3 / -0.6 / -0.9
33 / 19 / 14 / 9 / 12 / 21 / 22 / 29 / 33

-1.0 / -2.0 / -2.0 / -0.5 / -0.5 / -2.2 / -2.2 / -1.0
33 / 19 / 15 / 8 / 12 / 23 / 28 / 33

-1.0 / -1.5 / -2.0 / -1.0 / -1.0 / -2.3 / -2.5 / -1.7 / -1.7
33 / 18 / 14 / 13 / 14 / 21 / 22 / 32 / 33

-0.8 / -1.5 / -1.7 / -0.7 / -0.5 / -1.0 / -1.5 / -1.0 / -1.4 / -1.3
33 / 19 / 14 / 15 / 12 / 16 / 18 / 21 / 23 / 33

-1.0 / -0.9 / -0.9 / -0.2 / -0.3 / -0.5 / 00
33 / 17 / 12 / 12 / 19 / 23 / 33

+0.8 / +1.4 / +0.5 / -0.5 / -0.3 / -0.5 / 00 / +0.7
33 / 20 / 16 / 11 / 14 / 20 / 25 / 33

00 / 00 / -0.3 / -0.2 / -0.4 / -0.4 / +0.5 / +0.5 / 1.0
33 / 19 / 16 / 11 / 14 / 20 / 23 / 33

+60 243.0 ✓

+50 243.8 ✓

291 243.2 ✓

+50 244.5 ✓

290 246.1 ✓

289 248.0 ✓

288 248.9 ✓

287 249.1 ✓

286 249.0 ✓

285 248.5 ✓

284 248.2 ✓

+50 248.0 ✓

283 247.0 ✓

+50 246.8 ✓

-4.5	-4.0	-0.1	-2.1	-1.2
33	23	13	24	37

C.R.

-4.5	-3.5	-0.5	-0.6	-2.0	-1.5	-2.0	-3.5
33	20	12	14	21	33	45	50

C.R.

+0.2	+0.5	-0.5	-0.1	00	00
33	30	13	12	25	35

C.R.

01	+0.3	00	-0.1	-2.0	-1.5
33	10	12	22	30	35

+1.0	+1.0	-1.0	-0.4	-0.4	-2.0	-3.0	-2.0
33	28	17	12	12	21	22	33

-1.2	-1.2	-1.6	-0.6	-0.4	-0.5	-0.5
33	28	21	14	12	20	33

-1.1	-0.1	-0.5	-0.5	-0.2	+3.0
26	18	15	12	17	33

-2.8	-2.4	+0.2	-0.5	-0.5	-1.5	-2.0	+4.5	+4.5
33	31	20	15	12	16	17	35	33

-1.2	-2.0	-0.9	-0.3	-0.5	+1.2
27	23	18	8	15	33

-3.0	-3.1	-3.1	-0.6	-0.5	-2.5	-2.5	-1.5
33	25	19	9	11	18	25	34

-3.8	-3.8	-3.6	-0.5	-0.8	-2.5	-2.8
33	36	21	12	12	19	33

C.R.

-2.0	-2.0	-0.8	+0.2	-1.3	-1.0	-0.5	-1.0
33	27	23	10	10	16	28	33

CR

00	+1.0	00	00	-0.5	-0.5
38	26	10	14	24	33

CR

+0.5	00	00
45	14	33

299 233.4 ✓

+50 233.3 ✓

298 233.5 ✓

+84 233.6 ✓

297 233.5 ✓

~~296 234.1~~

296 234.1 ✓

~~To "A" Line Page 66~~

295 235.1 ✓

294 236.3 ✓

+50 237.1 ✓

293 238.0 ✓

+50 239.3 ✓

292 240.8 ✓

+75 241.4 ✓

(Est. Ry)

-1.0	-1.5	-3.0	-2.0	-0.5	-0.6	-1.5	+0.5
45	37	29	18	10	11	19	34

(Est. Ry)

-1.1	-1.5	-0.7	-0.4	-0.1	-1.0	-0.5	+1.0
45	35	28	14	9	22	29	33

(Est. Ry)

-3.5	-0.2	00	-1.1	-2.0
42	29	10	25	35

Lo

-4.3	-4.0	-2.0	00	-0.7	-2.5
45	33	12	5	21	35

-4.0	-2.2	-0.5	-0.2	-0.5	-1.0
36	16	9	10	23	33

-4.5	-3.0	-0.4	-0.5	-2.0	-3.9	-2.0
23	16	9	11	21	28	33

-4.5	-3.0	-0.4	-0.4	-4.2	-4.0
33	16	9	11	30	33

-5.0	-3.5	-2.6	-0.9	00	-0.5	-1.9	-4.0	-4.5
33	27	17	12	10	10	16	27	35

C.R.

-5.0	-3.1	-1.0	00	00	-0.4	-1.5	-2.0	-1.5
33	16	8	5	6	13	19	26	35

C.R.

-7.4	-7.0	-4.0	-3.2	00	00	-0.5	-0.5	-0.5
33	29	22	14	2	10	19	30	33

C.R.

-3.0	-1.9	+0.5	00	+0.5	-1.1
33	15	19	25	34	23

C.R.

-2.8	-2.5	-0.7	-0.1	00	00
33	24	13	9	22	33

C.R.

-4.0	-2.9	-0.7	00	-0.7	00
33	20	11	18	23	35

C.R.

-2.0	-2.4	-0.2	00	-0.6	00
33	16	8	21	24	36

3-6-23

- 306 233.8 ✓

305 233.7 ✓

304 233.7 ✓

303 233.4 ✓

302 233.4 ✓

+50 233.5 ✓

301 233.5 ✓

300 233.6 ✓

+50 233.6 ✓

$\begin{array}{r} \text{€ SPR} \\ -1.0 \\ \hline 35 \end{array}$
 $\begin{array}{r} -0.5 \\ \hline 28 \end{array}$
 $\begin{array}{r} -1.5 \\ \hline 24 \end{array}$
 $\begin{array}{r} -0.6 \\ \hline 22 \end{array}$
 $\begin{array}{r} 0.0 \\ \hline 9 \end{array}$
 $\begin{array}{r} -0.5 \\ \hline 5 \end{array}$
 $\begin{array}{r} +1.5 \\ \hline 26 \end{array}$
 $\begin{array}{r} +3.5 \\ \hline 33 \end{array}$

€R

$\begin{array}{r} -1.2 \\ \hline 33 \end{array}$
 $\begin{array}{r} +0.2 \\ \hline 7 \end{array}$
 $\begin{array}{r} +0.4 \\ \hline 4 \end{array}$
 $\begin{array}{r} -2.2 \\ \hline 9 \end{array}$
 $\begin{array}{r} -1.0 \\ \hline 13 \end{array}$
 $\begin{array}{r} -0.6 \\ \hline 18 \end{array}$
 $\begin{array}{r} +5.0 \\ \hline 27 \end{array}$
 $\begin{array}{r} +5.0 \\ \hline 33 \end{array}$

$\begin{array}{r} -4.0 \\ \hline 32 \end{array}$
 $\begin{array}{r} -2.2 \\ \hline 23 \end{array}$
 $\begin{array}{r} -1.6 \\ \hline 18 \end{array}$
 $\begin{array}{r} -0.6 \\ \hline 12 \end{array}$
 $\begin{array}{r} -0.6 \\ \hline 10 \end{array}$
 $\begin{array}{r} -2.5 \\ \hline 16 \end{array}$
 $\begin{array}{r} -1.2 \\ \hline 22 \end{array}$
 $\begin{array}{r} +1.2 \\ \hline 28 \end{array}$
 $\begin{array}{r} +2.0 \\ \hline 35 \end{array}$

$\begin{array}{r} -5.0 \\ \hline 33 \end{array}$
 $\begin{array}{r} -4.0 \\ \hline 21 \end{array}$
 $\begin{array}{r} -0.0 \\ \hline 8 \end{array}$
 $\begin{array}{r} -0.5 \\ \hline 14 \end{array}$
 $\begin{array}{r} -2.0 \\ \hline 22 \end{array}$
 $\begin{array}{r} -0.5 \\ \hline 32 \end{array}$

€R.

$\begin{array}{r} -5.0 \\ \hline 35 \end{array}$
 $\begin{array}{r} -3.0 \\ \hline 13 \end{array}$
 $\begin{array}{r} -0.2 \\ \hline 5 \end{array}$
 $\begin{array}{r} +0.4 \\ \hline 8 \end{array}$
 $\begin{array}{r} -0.4 \\ \hline 21 \end{array}$
 $\begin{array}{r} -1.0 \\ \hline 25 \end{array}$
 $\begin{array}{r} -1.5 \\ \hline 33 \end{array}$

€R.

$\begin{array}{r} -4.0 \\ \hline 33 \end{array}$
 $\begin{array}{r} -3.6 \\ \hline 24 \end{array}$
 $\begin{array}{r} -3.2 \\ \hline 15 \end{array}$
 $\begin{array}{r} -0.6 \\ \hline 5 \end{array}$
 $\begin{array}{r} +0.3 \\ \hline 8 \end{array}$
 $\begin{array}{r} +0.3 \\ \hline 20 \end{array}$
 $\begin{array}{r} -1.0 \\ \hline 24 \end{array}$
 $\begin{array}{r} -1.4 \\ \hline 35 \end{array}$

$\begin{array}{r} -4.0 \\ \hline 45 \end{array}$
 $\begin{array}{r} -4.0 \\ \hline 27 \end{array}$
 $\begin{array}{r} -2.4 \\ \hline 15 \end{array}$
 $\begin{array}{r} -0.3 \\ \hline 8 \end{array}$
 $\begin{array}{r} -0.3 \\ \hline 15 \end{array}$
 $\begin{array}{r} -1.6 \\ \hline 22 \end{array}$
 $\begin{array}{r} -1.0 \\ \hline 33 \end{array}$

$\begin{array}{r} -4.1 \\ \hline 45 \end{array}$
 $\begin{array}{r} -4.1 \\ \hline 27 \end{array}$
 $\begin{array}{r} -3.5 \\ \hline 20 \end{array}$
 $\begin{array}{r} -1.0 \\ \hline 10 \end{array}$
 $\begin{array}{r} -0.5 \\ \hline 13 \end{array}$
 $\begin{array}{r} -2.0 \\ \hline 18 \end{array}$
 $\begin{array}{r} -1.5 \\ \hline 26 \end{array}$
 $\begin{array}{r} 0.0 \\ \hline 33 \end{array}$

$\begin{array}{r} -4.2 \\ \hline 43 \end{array}$
 $\begin{array}{r} -4.2 \\ \hline 33 \end{array}$
 $\begin{array}{r} -2.8 \\ \hline 18 \end{array}$
 $\begin{array}{r} -1.0 \\ \hline 12 \end{array}$
 $\begin{array}{r} -1.0 \\ \hline 11 \end{array}$
 $\begin{array}{r} -2.5 \\ \hline 18 \end{array}$
 $\begin{array}{r} +0.5 \\ \hline 33 \end{array}$

NO LINECROSS SECTIONS sheet # of

Station

Elev.

FRT } 3/7/23
R.P. }
M.G. }

314 233.8 ✓

313 233.9 ✓

312 234.0 ✓

+ 5 ← ^{for plus} (see Topog) ←

311 234.1 ✓

+ 69 (see transit notes) ✓ 234.2 Intersection St. (Lake Shore Inn)
on right. ^{front of}

+ 50 234.3 ✓

310 234.3 ✓

309 233.9 ✓

308 234.0 ✓

307 233.9 ✓

£ Ry			
-1.4	-0.7	-0.5	-1.0
33	16	15	24

Fence

Ry £					
-1.5	-1.5	-0.5	-0.8	-1.2	-1.0
36	24	10	18	20	33

Ramaley Bldg

£ Ry						
-1.0	-1.0	-1.5	-0.2	-1.0	-0.7	-0.3
35	27	15	10	13	22	33

Ramaley Bldg

Ramaley Bldg Vks Bldg

Ditto 371 on L ←

-1.0	-1.0
12	33

£ Ry					
-0.5	-0.5	-0.5	-0.6	-0.5	-1.0
46	39	17	10	12	33

£ Ry				
-1.5	-1.0	-1.5	-1.0	-1.5
49	39	31	19	33

£ Ry								
-1.5	-1.0	-2.0	-3.2	-1.0	0.0	-0.6	-0.5	
49	37	29	21	13	3	18	33	

St. Ry £										
-1.5	-1.5	-4.0	-4.0	-1.9	-0.8	-3.5	-1.7	-1.2	-0.5	-0.5
52	43	36	30	19	8	12	18	25	32	39

St. Ry £										
-1.0	-1.0	-3.5	-2.2	-0.7	-0.1	-0.7	-2.0	-1.2	+0.2	0.0
45	37	28	23	13	3	9	14	19	29	35

£ St. Ry										
-1.2	-1.5	-2.5	-0.5	0.0	-0.8	-2.4	-1.2	+3.0	+3.0	
36	28	24	15	5	7	11	18	29	39	

£ St. Ry										
-1.0	-0.8	-1.3	-0.5	+0.3	-0.4	-2.3	-1.8	+6.0	+6.0	2.0
32	24	20	18	7	3	9	15	27	27	

Mar. 8-'23

236.1 ✓ X sections taken with wye level
+56.67 End of line To Page 47
other Book

324 235.7 ✓

236.1 ✓
+50 Int. St. P. & D. Hy (see Transit Notes for plus)
on left.

323 235.9 ✓

322 235.7 ✓

321 235.8 ✓

320 235.8 ✓
Tierney - level & recorder
Parsons - chain

235.7 ✓
319 Galvin - chain & rod

318 235.2 ✓

317 234.7 ✓

316 234.3 ✓

+50 234.1 ✓

315 234.1 ✓

314 +50 233.9 ✓

L A E

R

(25)

edge sidewalk +0.2 / 18 -0.4 / 20 -0.2 / 23 +0.1 / 23 -0.6 / 35 -0.4 / 46 +0.5 / 60

(Curb) +0.2 -0.5 -0.3 / 19 / 19 / 11 0.0 / 20 +0.1 / 22 +0.4 / 22 -0.2 / 34 9.5 / 47 11.5 / 55

-0.6 / 100 -0.9 / 35 -1.1 / 31 -3.8 / 43 -6.9 / 60

00 / 33 00 / 31 -0.1 / 21 -0.8 / 15 -0.5 / 10 -0.5 / 21 -0.1 / 21 -1.1 / 31 -3.9 / 41 -6.7 / 60

hedge -0.5 / 33 -0.8 / 24 +0.1 / 10 -0.3 / 9 -0.1 / 10 -0.5 / 22 -0.2 / 22 -1.4 / 33 -7.1 / 54

hedge -0.5 / 33 -0.5 / 24 -0.1 / 12 -0.3 / 9 -0.7 / 19 -0.6 / 19 -1.9 / 30 -7.1 / 48

hedge -0.2 / 33 -0.2 / 21 00 / 10 0.0 / 9 -0.8 / 22 -0.7 / 22.3 -1.5 / 28 -1.7 / 35 -7.2 / 50

hedge -0.9 / 33 -0.9 / 25 -0.7 / 12 -0.8 / 19 -0.6 / 19 -1.5 / 29 -2.5 / 36

hedge -1.2 / 33 -1.2 / 28 -0.9 / 15 -1.1 / 15 -0.7 / 16 -0.3 / 18 -1.3 / 27 -3.0 / 35

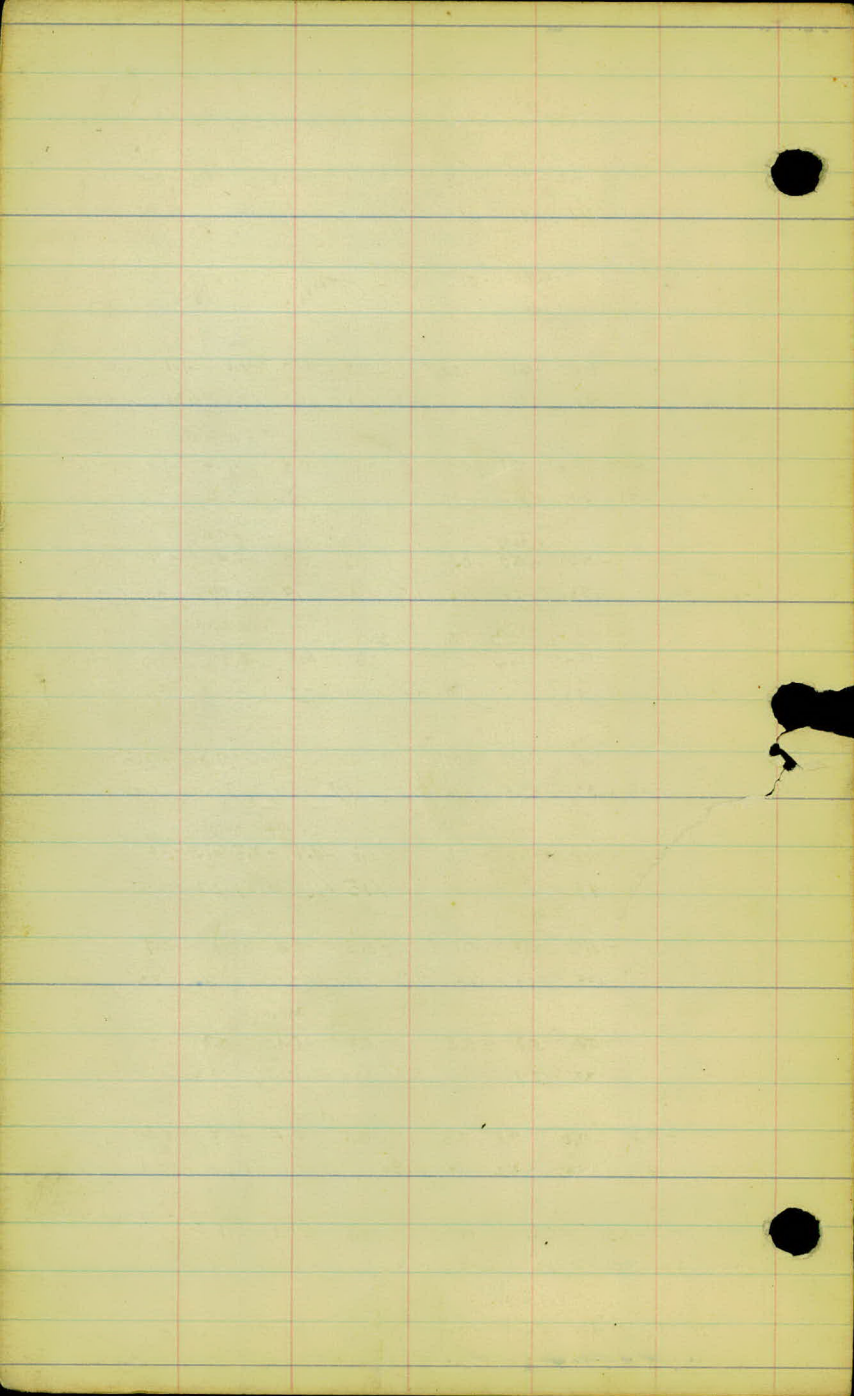
hedge -1.0 / 33 -0.7 / 24 -0.7 / 12 4.7 / 16 -0.5 / 20 0.0 / 29 -0.9 / 33

-0.7 / 33 -0.7 / 24 -0.5 / 11 5.1 / 13 -0.3 / 17 1/2 -0.8 / 33

+0.5 / 33 +0.5 / 30 -0.1 / 22 -0.3 / 14 5.3 / 11 -0.2 / 16 -0.3 / 20 -1.2 / 29 Fence

00 / 33 -1.4 / 30 -0.3 / 21 +0.2 / 12 0.0 / 2 1/2 5.3 / 2 1/2 -0.3 / 6 -0.1 / 6 -1.2 / 21 Fence

-2.5 / 33 -1.3 / 27 +0.1 / 16 +0.1 / 10 -0.2 / 5 5.5 / 11 -0.3 / 11 -1.0 / 27 Fence



⊕ Elevations White Bear Road

Stations 15.8-163

173-324+56⁶²

Note:- These Elevations checked against B.M.
Elevations established when fly levels
were run from B.M. at 169+50 to
B.M. at W.B. Rd + St. Paul + D. Hy.

Mar. 5, 1923

Continuation of levels on W. B. Road

B.M.	5.28	264.78		259.50
158			7.1	57.7
+50			6.6	58.2
159			6.0	58.8
+50			5.5	59.3
160			5.1	59.7
161			5.1	59.7
162			6.3	58.5
163			7.8	57.0

B.M. 5.28 259.50 ✓

Note: Sta. 158-163. omitted in Level notes due to loss of stakes in clearing away snow. Stakes replaced.

B.M.	5.19	256.61		251.42
173			4.9	51.7
+50			4.8	51.8
174			4.9	51.7
+50			4.5	52.1
175			4.4	52.2
+50			4.2	52.4
176			4.0	52.6
	1.13	253.78	3.96	252.85 ✓
+50			1.9	51.9
177			2.7	51.1
+50			3.8	50.0
178			5.1	48.7
+50			6.5	47.3

5.19
3.96
1.23

3.96

1.23

20.5

3/5/23

Tierney - Wera
Persons - Rod

(26)

R.R. Sp. in T.P. R 158+40

Note:- All Elev. following
corrected for .10 ft. error found
in notes by Connors. See level
book.

Sp. in T.P. R 158+40

Sp. in T.P. R 169+50

3/5/23

253.78

179			7.7	46.1
180			9.3	44.5
	1.86	245.71	9.93	243.85
181			3.0	42.7
182			4.5	41.2
183			4.7	41.0
B.M			6.27	239.44
184			4.5	41.2
185			4.1	41.6
186			2.7	43.0

8.73 252.31 2.13 243.58

187			7.8	44.5
188			6.8	45.5
189			6.1	46.2
190			4.9	47.4
191			3.9	48.4
192			3.2	49.1
193			2.3	50.0

5.96 256.42 1.85 250.46

194			5.4	51.0
195			4.8	51.6
196			5.0	51.4
197			5.5	50.9

B.M.			5.15	251.27
198			6.3	50.1
199			9.1	49.3

2.64 251.90 7.16 249.26

2107
 17.68
 3.39
 20.29

252.65
 249.26
 3.39

21.07

3/5/23

F.T.?
R.P.}

(27)

Sp in T.P R 183+75

Sp T.P R 197+66

3/5/23

251.90

200			3.8	48.1 ✓
201			4.6	47.3 ✓
202			5.2	46.7 ✓
203			5.1	46.8 ✓
204			4.5	47.4 ✓
205			4.2	47.7 ✓
	8.75	256.91	3.74	248.16

206			7.9	49.0 ✓
207			6.9	50.0 ✓
208			5.4	51.5 ✓
209			3.6	53.3 ✓
210			1.8	55.1 ✓
211			0.3	56.6 ✓
	9.42	265.23	1.10	255.81 ✓

212			6.7	58.5
213			5.0	60.2 ✓
214			5.0	60.2 ✓
215			4.9	60.3 ✓
216			5.8	59.4 ✓
217			6.7	58.5 ✓
	2.13	268.69	6.67	258.56 ✓

218			3.8	56.9 ✓
219			5.4	55.3 ✓
+ 50	(Transit Note)		5.6	55.1 ✓
220			6.6	54.1 ✓

B.M	20.81		11.51	
221	11.51		7.77	252.92 ✓
	9.36		7.7	53.0 ✓

252.56
249.20
3.36

3/5/23

(28)

F.T. }
R.P. }

Int. - Cty Rd E

sp. in T.P. R 220+15

3/5/23

260.69

222

8.1

52.6

4.93 257.55 ✓ 8.07

252.62

223

5.2

52.4

224

5.3

52.3

B.M

7.75

249.80 ✓

225

5.1

52.5 ✓

226

4.2

53.4 ✓

227

3.5

54.1 ✓

228

2.6

55.0 ✓

229

1.7

55.9 ✓

6.21 262.09 ✓ 1.67

255.88 ✓

230

5.9

56.2 ✓

231

5.7

56.4 ✓

232

4.9

57.2 ✓

233

4.5

57.6 ✓

234

4.1

58.0 ✓

235

3.0

59.1 ✓

236

2.6

59.5 ✓

5.66 265.48 2.27

239.82 ✓

237

5.4

60.1 ✓

238

5.0

60.5 ✓

239

5.0

60.5 ✓

240

5.0

60.5 ✓

B.M

13.27
12.61
1.26

12.01
259.82
258.56
1.26

28.5

3.72

261.76 ✓

241

5.2

60.3 ✓

242

6.2

59.3 ✓

3/5/23

(29)

F.T. }
R.P. }

Nail in T.P L 224 + 45 (3rd pole h after Int. City Rd E)

Nail in T.P R 240 + 00 (Opposite end grove)
Marked B.M.

3/5/23

265.48

243 6.6 58.9 ✓

3.21 261.95 ✓ 6.74 258.74 ✓

244 3.4 58.6 ✓

245 3.6 58.4 ✓

+87 4.14 57.8 ✓

246 4.3 57.7 ✓

247 5.9 56.1 ✓

248 7.4 54.6 ✓

249 9.1 52.9 ✓

5.49 257.49 ✓ 9.95 252.00 ✓

250 6.3 51.2 ✓

251 6.8 50.7 ✓

252 6.5 51.0 ✓

+50 5.9 51.6 ✓

253 5.2 52.3 ✓

254 4.3 53.2 ✓

+50 4.0 53.5 ✓

255 3.7 53.8 ✓

B.M 2.89 254.60 ✓

256 4.4 53.1 ✓

257 5.6 51.9 ✓

1.55 253.43 ✓ 5.61 251.88 ✓

258 2.7 50.7 ✓

259 4.4 49.0 ✓

260 6.5 46.9 ✓

261 8.3 45.1 ✓

14.36

22.80
14.36
7.74

22.80

254.92 ✓
251.88 ✓
251.88 ✓

3/5/23

30

FT }
R.P. }

2.0

Top Monument

Nail in T.P. R 2.55 + 45 (End of cut)

3/5/23

253.43

262			9.5	43.9 ✓
263			10.2	43.2 ✓

5.81	249.38 ✓	9.86		243.57 ✓
------	----------	------	--	----------

B.M			6.18	243.20 ✓
-----	--	--	------	----------

264			6.0	43.4 ✓
-----	--	--	-----	--------

265			5.2	44.2 ✓
-----	--	--	-----	--------

266			4.9	44.5 ✓
-----	--	--	-----	--------

267			4.8	44.6 ✓
-----	--	--	-----	--------

268			4.5	44.9 ✓
-----	--	--	-----	--------

269			3.7	45.7 ✓
-----	--	--	-----	--------

270			3.4	46.0 ✓
-----	--	--	-----	--------

271			2.9	46.5 ✓
-----	--	--	-----	--------

	①			
5.48	252.07 ✓	2.79		246.59 ✓

272			5.2	46.9 ✓
-----	--	--	-----	--------

+ 2.5 (See Transit Notes)			4.8	47.3 ✓
---------------------------	--	--	-----	--------

273			4.7	47.4 ✓
-----	--	--	-----	--------

274			4.3	47.8 ✓
-----	--	--	-----	--------

B.M			3.52	16.17
				248.55 ✓

12.84

$$\begin{array}{r} 16.17 \\ 12.84 \\ \hline 3.33 \end{array}$$

27.5 ✓

$$\begin{array}{r} 251.87 \\ 248.55 \\ \hline 3.32 \end{array}$$

375/23

(31)

F.T.?

R.P. }

Spike in T.P. R 264+00 (Beg. of cut)

Top Monument at Int. Ash st.

Sp. in T.P. R 274+00

Mar. 6 - 23

Tierney - Level
Person - Rod

B.M	4.22	252.77 [✓]		248.55 ¹
275			4.8	48.0 [✓]
276			4.6	48.2 [✓]
277			4.8	48.0 [✓]
278			4.8	48.0 [✓]
279			4.9	47.9 [✓]
280			4.7	48.1 [✓]

4.96 252.78[✓] 5.03 247.74[✓]

+50			4.9	47.8 [✓]
B.M			6.08	246.62 [✓]
281			5.2	47.5 [✓]
+50			7.3	45.4 [✓]
282			6.0	46.7 [✓]
+50			5.9	46.8 [✓]
283			5.7	47.0 [✓]
+50			4.7	48.0 [✓]
284			4.5	48.2 [✓]
285			4.2	48.5 [✓]
286			3.7	49.0 [✓]

3.49 252.13[✓] 4.06 248.64[✓]

287			3.0	49.1 [✓]
B.M			1.49	250.64 [✓]
288			3.2	48.9 [✓]
289			4.1	48.0 [✓]
+50			5.1	47.0 [✓]

218
209
.09

248.64
248.55
.09

218
209
.09

3/6/23

(32)

Sp. in T.P.

R 274+00

Nail in T.P. L 280+65

R.R. Sp. in T.P.

287+35

3/6/23

252.13

290		6.0	46.1 ✓
+50		7.6	44.5 ✓
291		8.9	43.2 ✓
+50		8.3	43.8 ✓
+60		9.1	43.0 ✓
+75		10.7	41.4 ✓
292		11.3	40.8 ✓
B.M	10.36		241.77 ✓

$$\begin{array}{r} 10.36 \\ 349 \\ \hline 6.87 \end{array}$$

ggs

$$\begin{array}{r} 248.64 \\ 241.87 \\ \hline 6.87 \end{array}$$

3/6/23

(33)

RR. Sp. in Electric Light Pole R 291786

Mar. 7, '23

Tierney - Level
Persons - Rod

292	B.M	0.42	242.19		241.77	
292+50				2.9	39.3	
293				4.2	38.0	
+50				5.1	37.1	
294				5.9	36.3	
295	✓			7.1	35.1	
296				8.1	34.1	
297				8.7	33.5	
		4.73	238.54	8.38	233.81	
+84				4.9	33.6	
298				5.02	33.52	
+50				5.2	33.3	
299				5.1	33.4	
+50				4.9	33.6	
300				4.9	33.6	
+50				4.8	33.7	
301				5.0	33.5	
+50				5.0	33.5	
302				5.1	33.4	
303				5.1	33.4	
304				4.8	33.7	
305				4.8	33.7	
306				4.7	33.8	
B.M		5.16	239.31	4.39	234.15	
307		5.15		12.77 5.15 7.62	5.4	33.9
3.08				241.77 234.65 7.12	5.3	34.0

~~To "A" Line Page 63~~

3/7/23

(3A)

Spike in Elec. Light Pole R 291+80

T.P. on S rail St. Ry Xing \therefore = El. S rail

Also El. N Rail

St. Ry Xing

Nail in T.P. L 306+75

3/7/23
239.31

309				5.4	33.9 ✓
+50				5.2	34.1 ✓
310				5.0	34.3 ✓
+50				5.0	34.3 ✓
311				5.2	34.1 ✓
B.M.	5.22	239.00	5.53		233.78 ✓

516

5.53
516
.37

234.15
233.78
.37

J.P.S.

3/7/23

(35)

Sp. in T, P. R. 312 + 85

1

29.2

5.1

+ 99

8.23

Mar 2-23

Tierney - level
Persons - Rod

B.M	5.22	239.00			233.78
312				5.0	34.0 ✓
313				5.1	33.9 ✓
314				5.2	33.8 ✓
+50				5.1	33.9 ✓
				5.26	33.74 ✓
				4.88	34.12 ✓
315				4.9	34.1 ✓
+50				4.9	34.1 ✓
316				4.7	34.3 ✓
+50				4.6	34.4 ✓
317				4.3	34.7 ✓
318				3.8	35.2 ✓
+50				3.5	35.5 ✓
319				3.3	35.7 ✓
	5.33	240.42	3.91		235.09 ✓
320				4.6	35.8 ✓
321				4.6	35.8 ✓
322				4.7	35.7 ✓
+50				4.8	35.6 ✓
323				4.5	35.9 ✓
+50				4.3	36.1 ✓
324				4.7	35.7 ✓
+50				4.3	36.1 ✓
+56.67 = 1+39.1 on Austin's				4.3	36.1 ✓

Survey

B.M 10.55 2.16 1.87 2.1 4.75 2.34

235.10
233.78
1.32
235.67 ✓
4-10-23

3/8/23

(36)

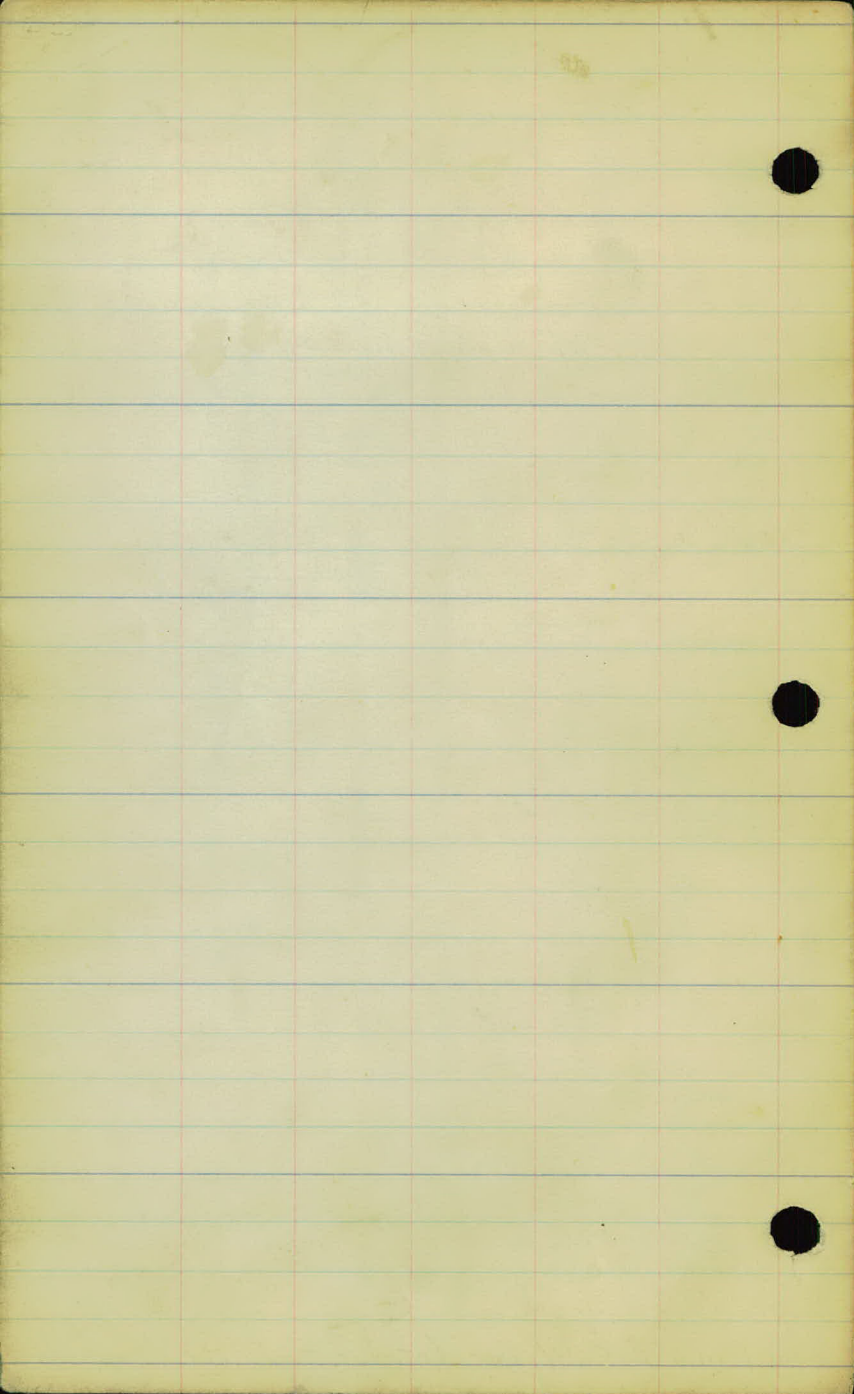
Sp. in T.P R 312 + 85

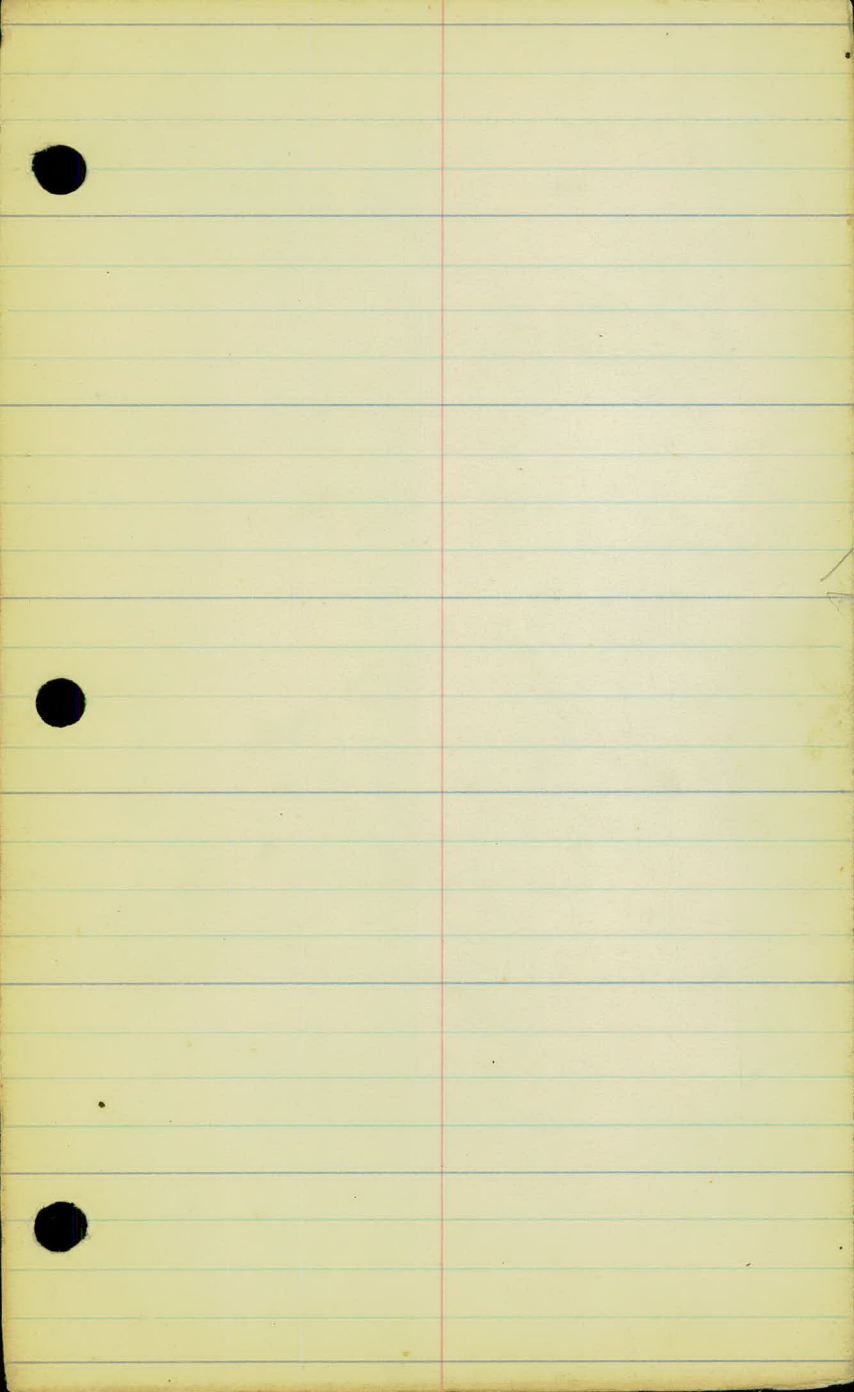
Elev. E rail St. Ry Xing
✓ W ✓ ✓ ✓

4.75

End Job

Nail in T.P S.W Cor. Int. St. P + D Hy. + Lake Ave ✓





± Levels - 300' back from 0+00
on W.B. Ave.

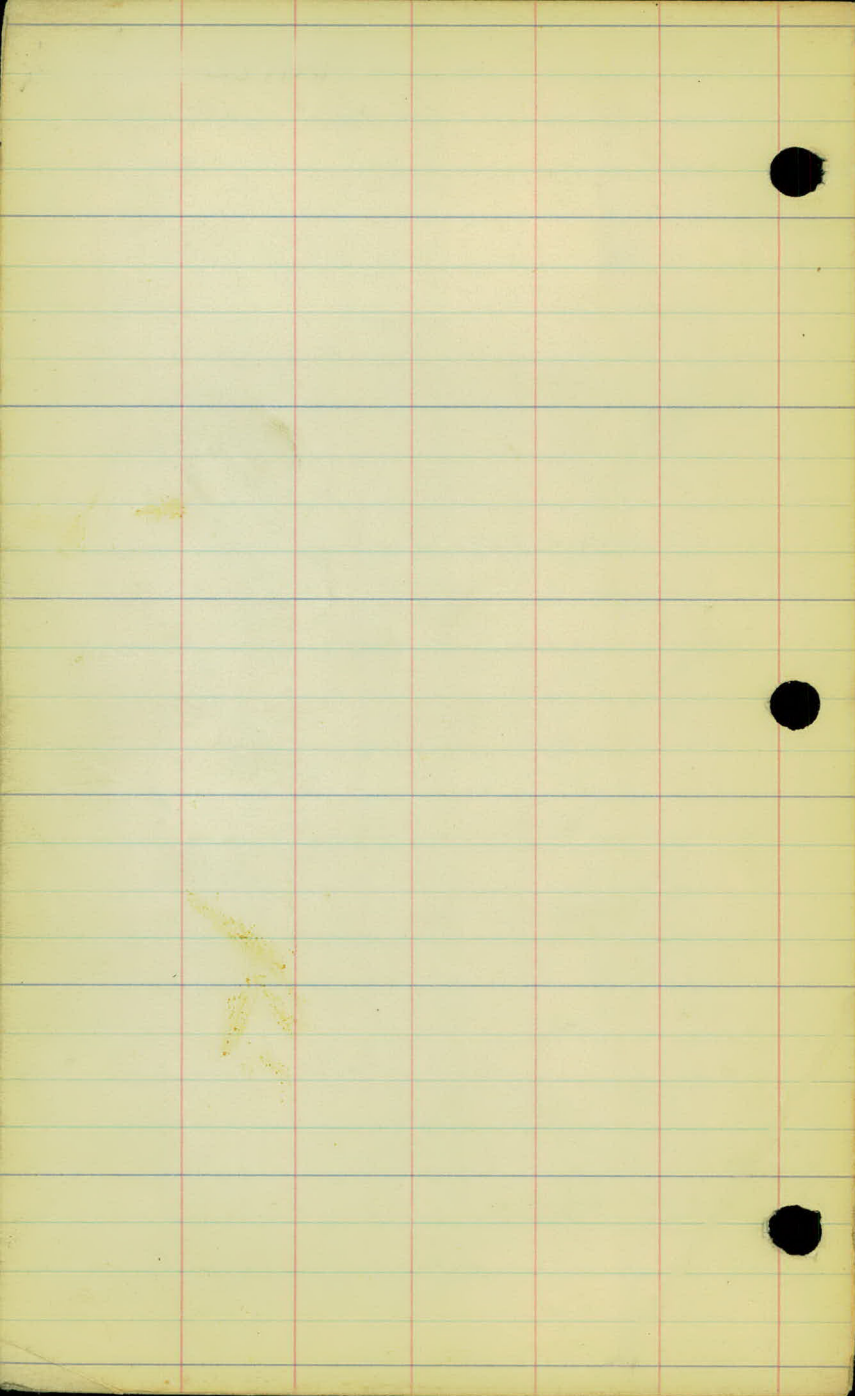
B.M.	4.18	250.97		246.79
0+00			5.0	46.0
-37			5.6	45.4
-50			5.8	45.2
-100			6.3	44.7
-150			6.7	44.3
-200			7.1	43.9
-250			7.6	43.4
-300			7.6	43.4
B.M.		4.18		246.79

0+00 X section on ± Larp R+L

Spin T.P. N.E. Cor. Int. W.B. Ave & Larp.

Edge Paving

$\frac{1.0}{200}$ $\frac{3.6}{100}$ 5.0 $\frac{4.2}{100}$ $\frac{3.3}{200}$



@+75 Drive

willow brush
@+16-13 R T. Pole
@+60-55 R Lake
End Lake R

185

18A @+22-21 fence

@+14-20 R 4" wil.
15

@+73-18 R T.P.
18 wires

183 @+22-21 4" wil.

Cult. field

@+22-48 R Lake

@+25-24 4" willow

@+55-20 R willow 4"

@+24-20 R Pole

182 @+22-21 fence

@+20-70 R Lake

+4-27 R Ice Cor.

181 @+22-21 fence

@+20-20 R fence
Small Oak 4ft 70 R

+20-20 R T. Pole

180 @+22-21 fence

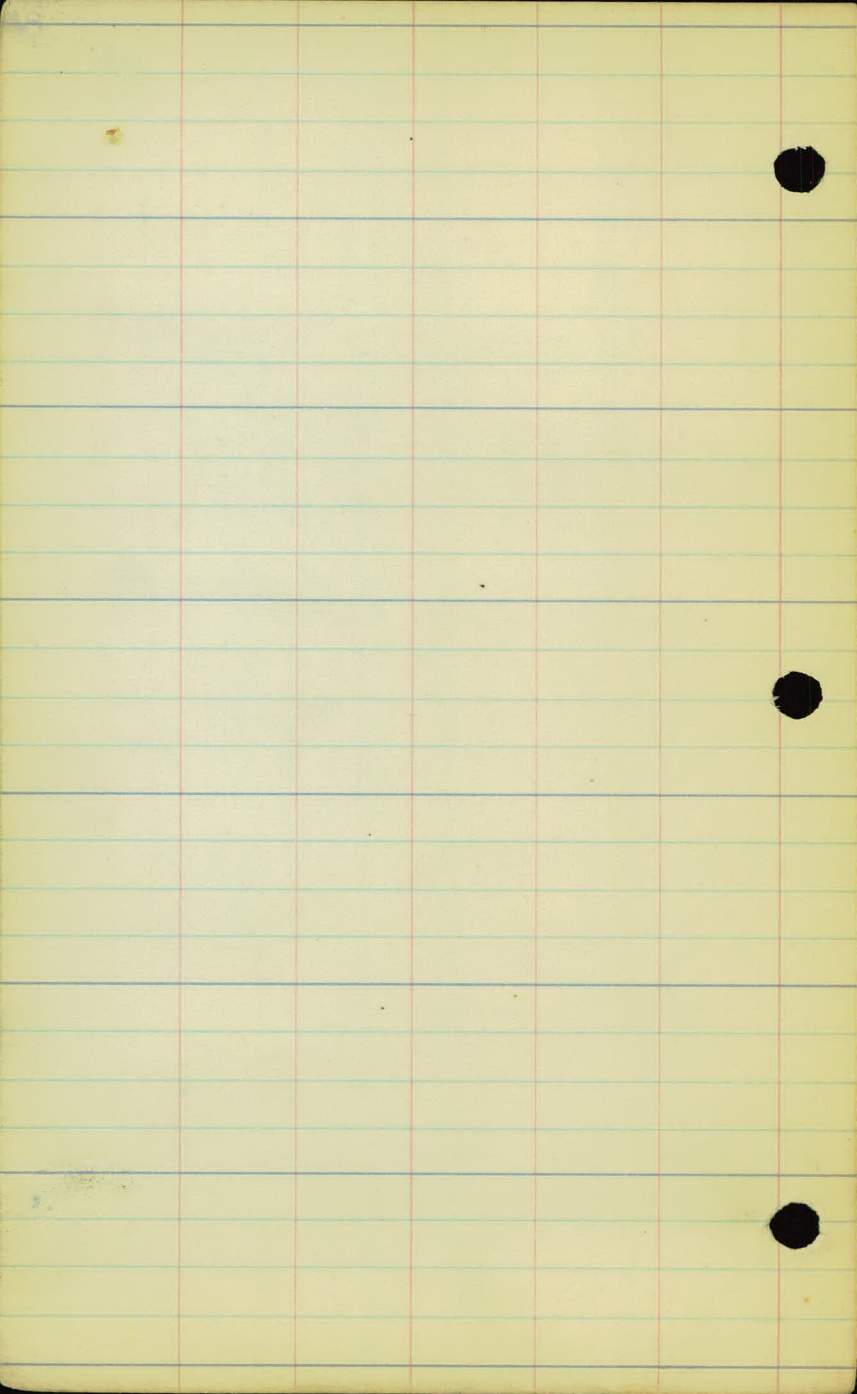
@+20-22 R fence
200-80 Lake

Cult. field

Lake

179
+80

@+20-44 R Lake



191

o x x x @ +64 - 24' R Fence
o @ +62 - 20' R Pole

190

o @ +25 - 23' R 4" oak

189

o @ +25 - 20' R Pole

188

Cult. field

o @ +10 - 27' R 5-6" oak
o @ +24 - 18' R Pole

187

Cult.

o @ 00 - 30' R 8" Paper

@ +50 - 28' end fence

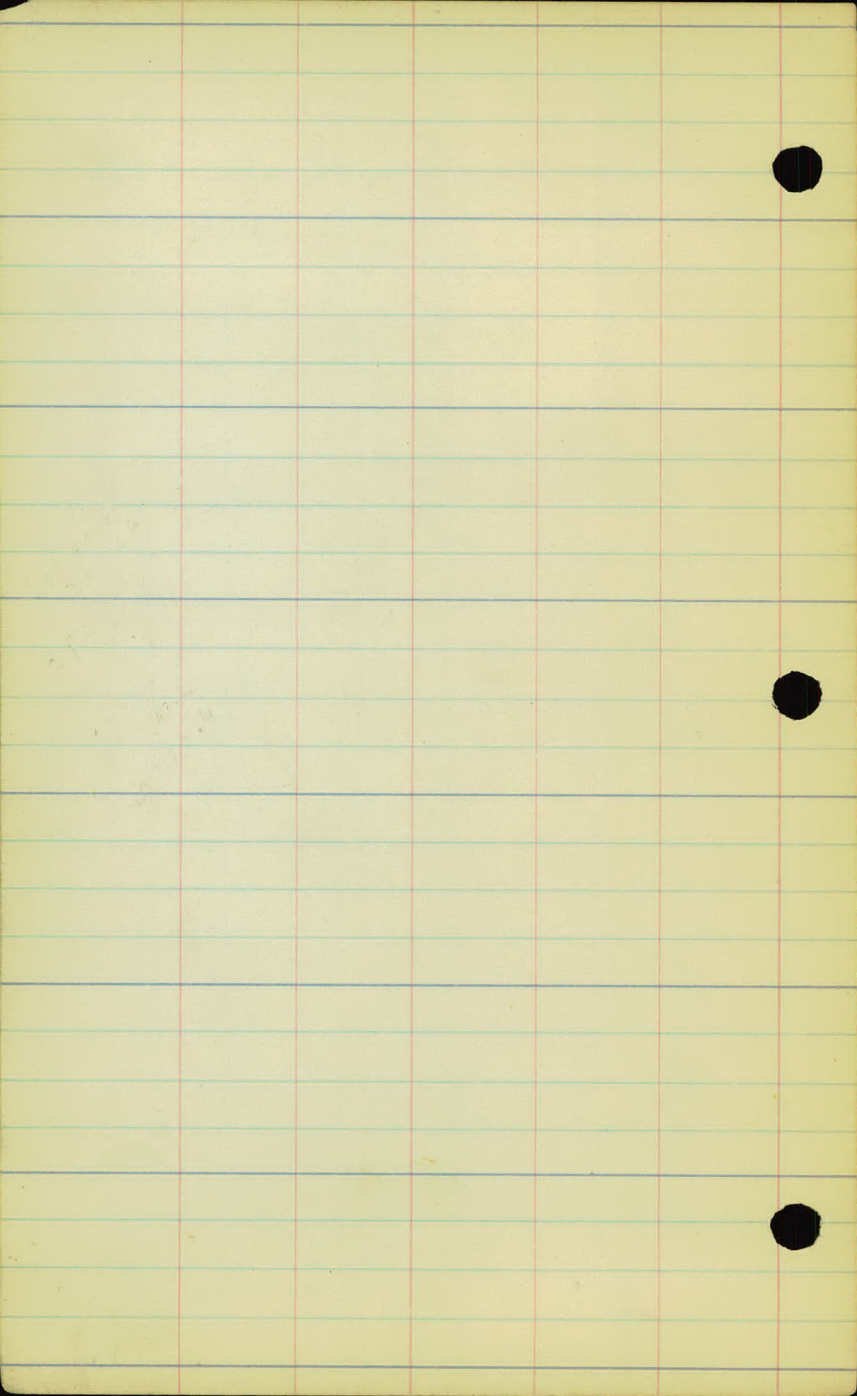
o @ +50 - 16' R Pole

186

Cult. field

o
o
o Oak brush

185



R.C. Line

L

A

R

(39)

@+16-35 L 6" Tree

@+17-27 L 14" Tree

@ 15-32 L fence

x

x

x

x

x

x

x

x

x

x

x

x

x

x

x

x

Cult. field

196

@+45-30 L Tree

@+45-30 L fence

x

x

x

x

x

x

x

x

x

x

x

@+50-19 R Pole

191

Cult. field

196

@+29-18 R Pole

Cult. field

@+14-22 L fence

@+14-21 L Tree

x

x

x

x

x

x

x

@+22-16 R Pole

195

194

@+45- 16 R 2 R Poles
@+43- 18 R Mail Box

@+14-35 L Tee Cor

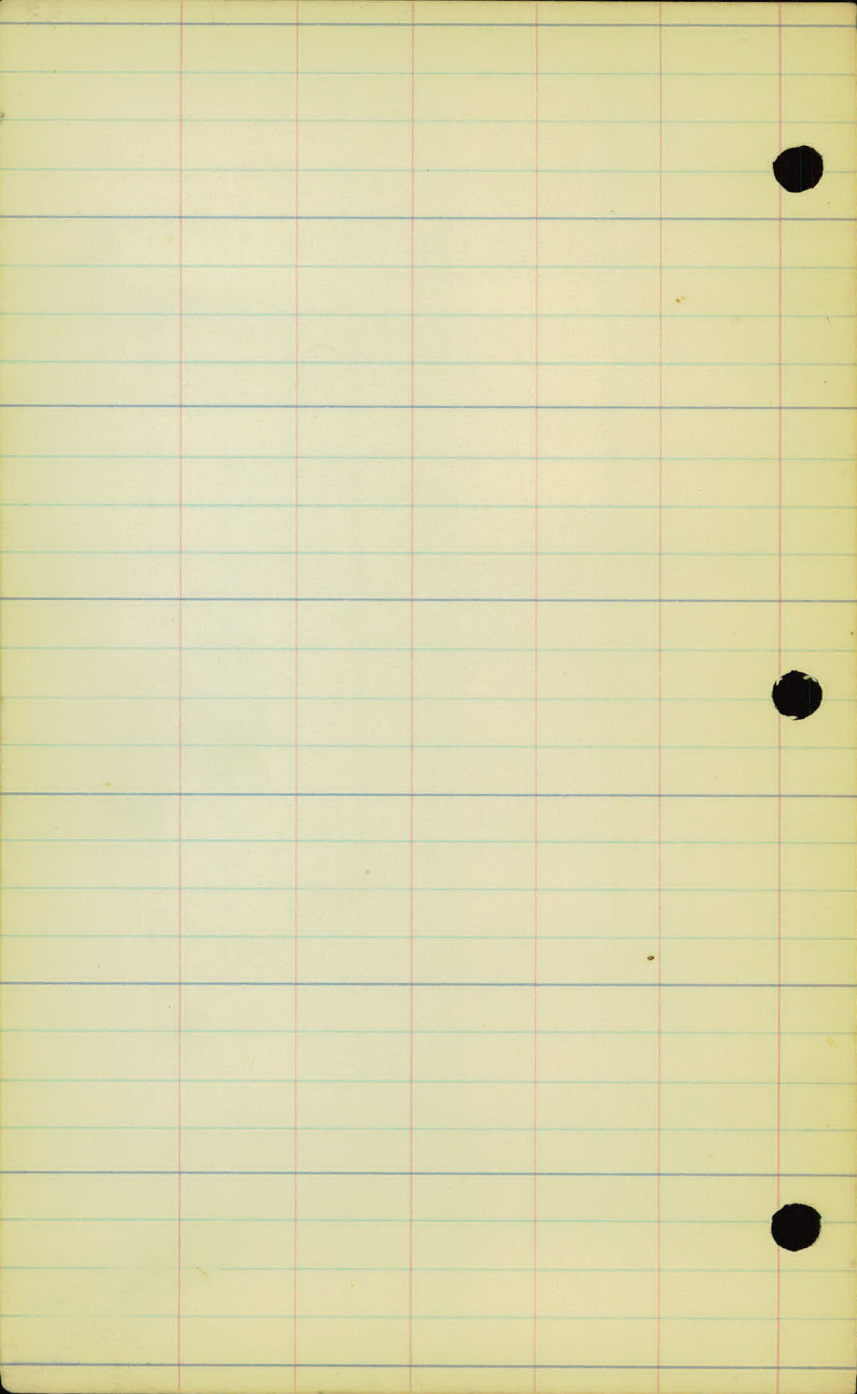
193

Cult. field

Cult. field

192

@+05-17 R Pole



o

@+15-21' R Pole

@+25-28' L 3-40 oak
204

@+80-28' L 2-40 oak

@+30-29' L 3-60 oak

209

@+60-34' L fence
@+29-26' L 60 oak

@+21-28' L - 3-9 oak

202

@+60-27' L - 80 oak

201 @+05-24' L 10 oak
@+00-24' L fence

260

@+20-28' L 10 oak
@+11-31' L 10 oak
@+10-24' L fence

199

@+60-26' L 10 oak

Cult. field

198

o

@+27-19' R Pole

Cult. field

o

@+92-21' R Pole

o

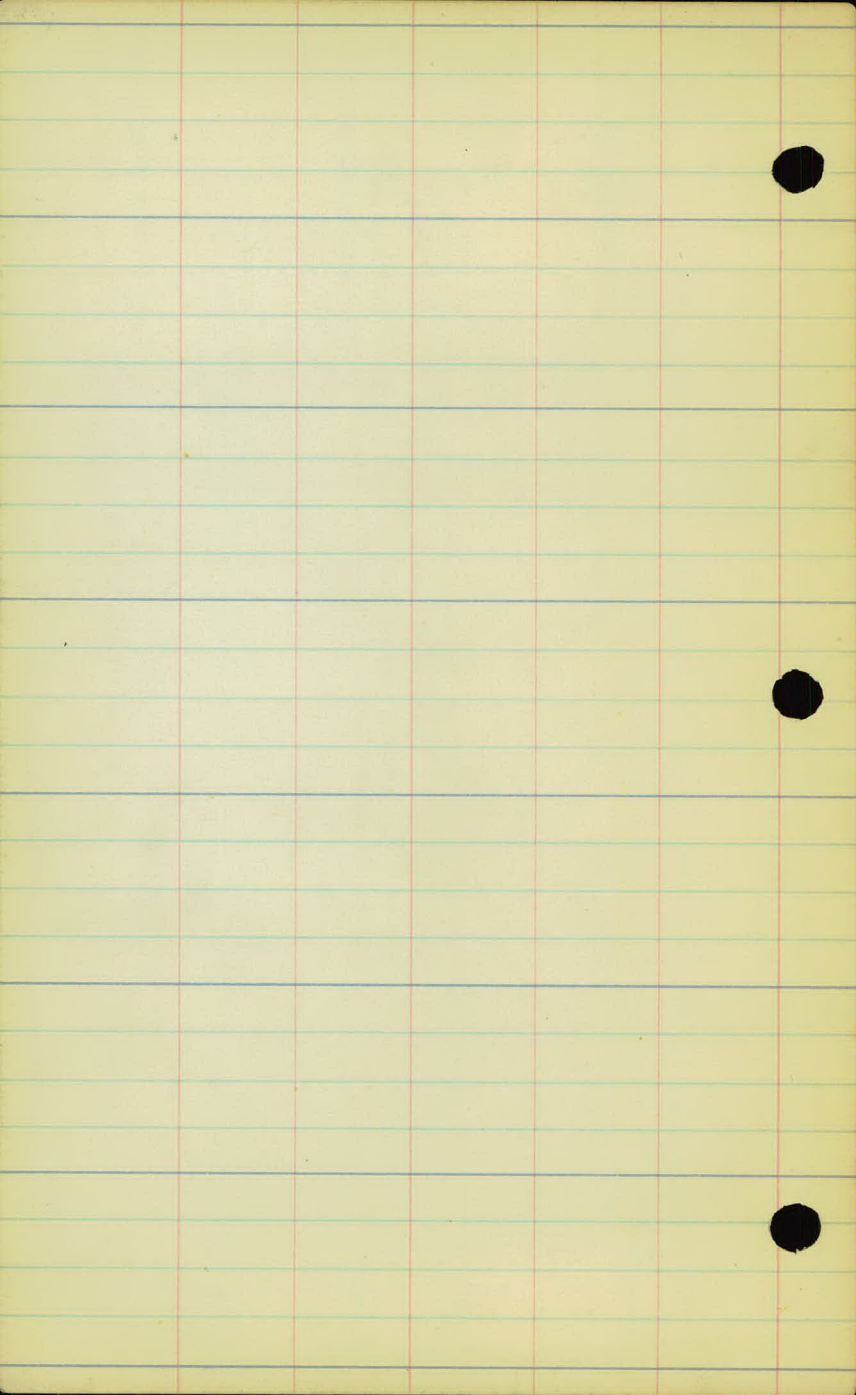
@+45-15' R Pole

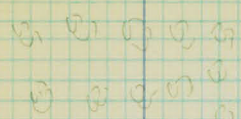
Cult. field

o

@+05-21' R Pole

*





210



Farm Yard
 @+50-115
 Trees Al

Draw

209 @+09-35 L fence Cor

@+63-30 L Mail Box
 @+60 24 L Fce Cor
 @+45-4 P.W. Drive
 @+28-34 L fence Cor

208

@+95-22
 16 L 6" Tree

@+22-33 L Fce Cor

207

206 @00-35 L fence

Cult. field

205

204

@+33-24 R Pole

Cult. field

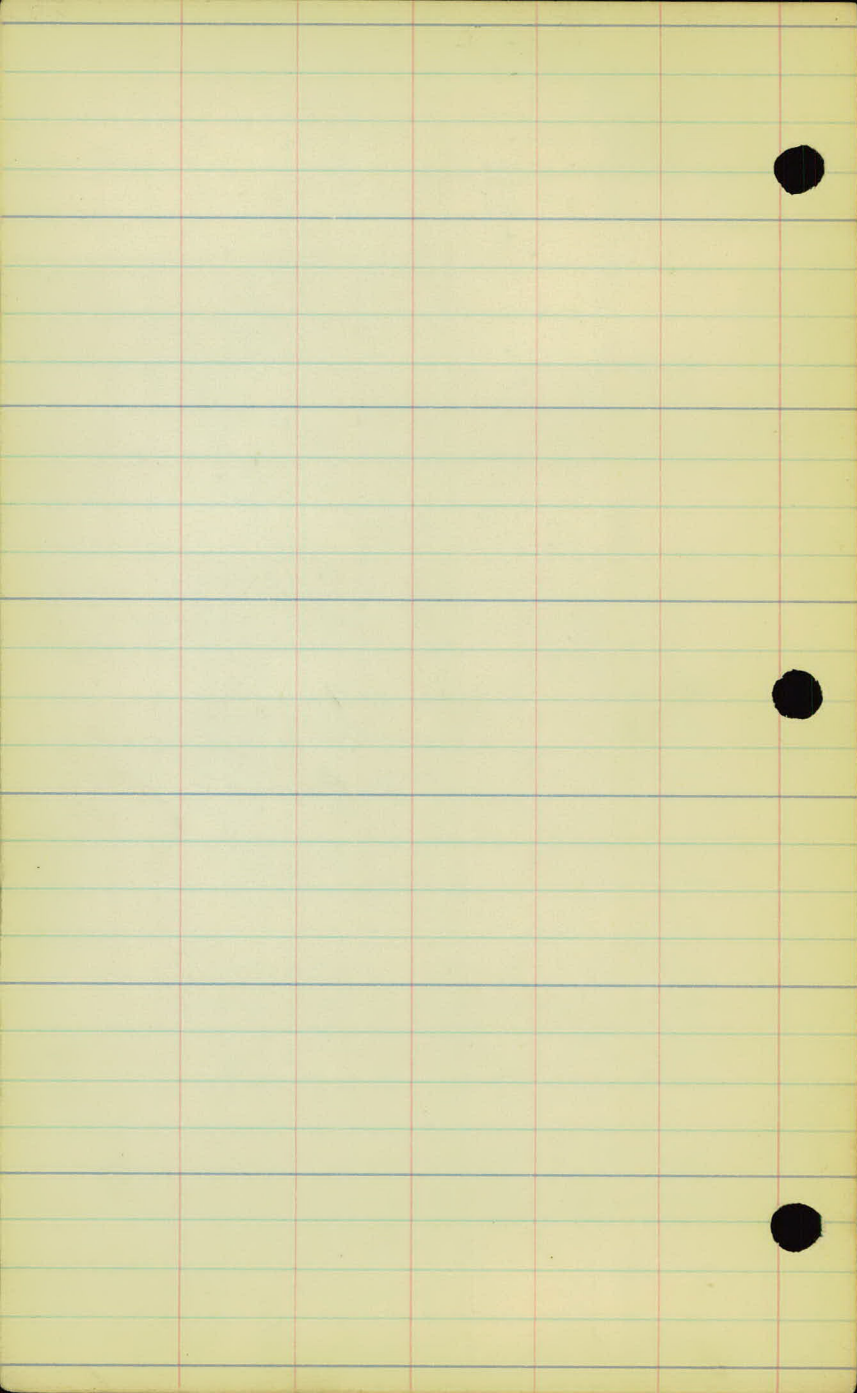
@+9A-23 R Pole
18 wires

Cult. field

@+53-21 R Pole

@+11-22 R Pole

Cult. field



216

oo @+98-18X23 R 2 Poles

@+50-22 L Pole
2 wire

o

215

o @+50-21 R Pole

Cult. field

214

@+59-23 L Pole
1 wire

o

213

+ @+70-20 R Iron Schlact. sign.

o @+96-22 R Pole

Cult. field

212

@+69-21 L Pole

o

o

@+50-22 R Pole

211

Cult. field

210

3-3-23

@+31-24 L T.P. ○

222

○ @+12-16 R A" Box Fl.

○ @+11-16 R A" Box Fl.

○ @+60-10 R T.P.

221

@+59-22 L T.P.
4 wire ○

○ @+13-20 R T.P.
22 wires

220

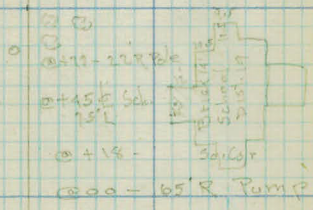
@+76-19 L Iron'd Sign ○

@+82-34 R Rec Cor
w.w.

@+26-22 L T.Pole ○
@+11-19 L Iron Pole Sum ○
@+22-33 L T.Pole ○

17
219+27-36 R 1/2" Elm
219+23-26 R 1/4" Elm

219



218

@+36-41 Pole ○
field

○ @+38-22 R Pole

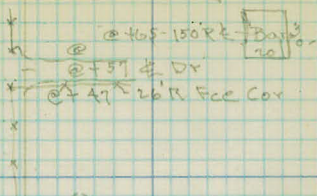
217

C&H

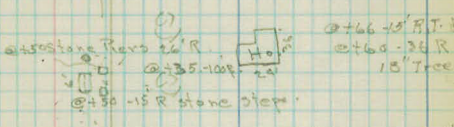
C&H

3-3-23

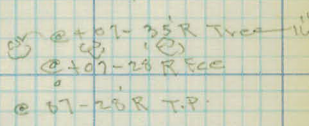
L # R



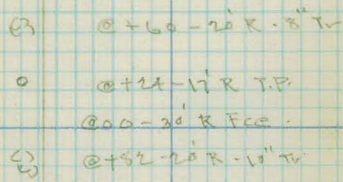
229 @+22-21 L T.P.



228 @+65-25 L T.P.



227 @+39-19 L Schod Syn
@+15-26 L T.P.

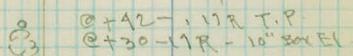


226 @+55-16 R T.P.

225 @+46-25 L T.P.

@+05-31 R Fce

224 Cult. field



223

@+10-35 R Fce
@+03-18 L T.P.

Cult. field

3-3-23

@+44-35' L 10" oak



Q100

@+41-28' R 4" oak
@+45-17' R 6" oak

236

@+75-27' L T.P.
A wire



@+71-15' R T.P.
22 wires

235



@+61-22' R - 4" oak



@+36-22' R 10" oak
@+31-15' R T.P.

234 @+44-28' L T.P.



field

233

@+32-21' R - End fence

@+40-15' R T.P.

@+47-28' L T.P.



field

232

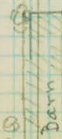
@+12-27' R R.F. ad Barn
@+00-150' R

field

@+50-15' R T.P.

231

@+62-27' L T.P.



@+80-22' R - 6" Tr

Tarm Yard

@+40-25' R - 14 Tr
@+14-25' R 12 Tr
@+07-15' R T.P.

230

coll.

@+03-21' R Cor. Barn

3-3-23

@+91-23 R - 2-3" oak

@+69-35 L - 4" oak
@+56-29 L - 10" oak

@+26-34 L - 10" oak

2A3

@+46-34 L - 10" oak
@+63-32 L - 2-10" oak
@+40-32 L - 8" oak
@+36-21 L T.P.
@+22-28 L - 10" oak

2A2

@+53-24 L - 8" oak
@+58-32 L - 10" oak

2A1

@+06-32 L - 8" oak
@+36-24 L - 6" oak
@+62-26 L T.P.
Cult. field

2A0

5-10" oak - 34 L
@+60 end Timber
Timber

239

@+93-23 R T.P.
Oak
Tree Line

238

@+45-35 L - 8" oak
@+33-25 L T.P.

237

@+75-15 L - T.P.
@+57-26 R - 4" oak
@+23-7 L - 4" oak
@+13-25 R - 4" oak

@+37-16 R T.P.

@+63-25 R - 24" oak
Cult. field

@+95-16 R T.P.

@+92-25 R - 3" oak
@+62-28 R - 3" oak
@+61-16 R T.P.

@+11-15 R T.P.

3-3-23



@+70-35 L 11" oak

@00-35 L Fee.

250 @+69-37 L 12" oak

@+61-27 L 12" oak

@+75-22 L T.P.

@+77-36 L oak

@+56-36 L 8" oak

@+40-34 L 12" oak

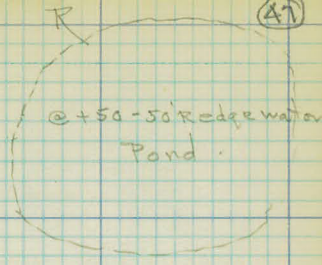
@+17-31 L 4" oak

No. 250 L Fee Co. @+45

@+93-24 L 10" oak

@+84 - 4" drive

@+78-24 L 8" oak



@+62-14 R T.P.

2A9

@+40-15 R T.P.

2A8

@+90-20 L T.P.
4 wire

2A7

@+90-20 L T.P.

Co. H. field

@+00-14 R T.P.

Co. H. field

2A6

@+92-26 L T.P.
@+88-40 L 3-4" oak

@+62-33 L 8" oak

@+30-33 L 10" oak

@+81-31 R Fee

@+59-15 R T.P.
22 w.

@+22-16 L 6" oak

2A5

@+16-31 L 6" oak

@+93-31 L 16" oak

@+48-18 R 6" oak

Co. H.

Co. H.

2A4

@+05-21 L T.P.

@+16-15 L T.P.

3-3-23

Frame Bldg
150 L
@ +157

@ +15-26 L - 12 oak

251 @ +00 - 35 L Fec. w.w.
@ +46 - 23 L T.P.
@ +98 - 38 L - 8" oak
@ +70 - 33 L - 12 oak
@ +54 - 31 L - 10 oak

@ +56 - 14 R T.P.

@ +23 - 36 L - 10 oak

256

field

@ +70 - 21 R - 3 Tr

@ +43 - 21 L T.P.

@ +15 - 18 R T.P.

255

Cult.

Cult. field

@ +50 - 41 L Fec. w.w.

25A

@ +07 - 18 R T.P. mure

@ +55 - 24 L T.P.

253

@ +43 - 35 L - 10 oak

@ +21 - 18 R 3-3 oak

field

@ +67 - 15 R T.P.

field

252 @ +04 - 34 L 12 oak

@ +15 - 20 L T.P.

Cult.

Cult.

@ +15 - 35 L Fec. Cor

251

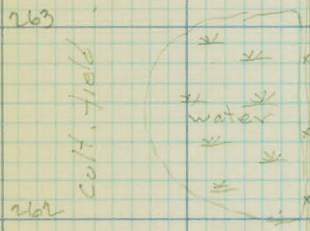
@ +17 - 15 R - T.P.

3-3-23

@+19-30' L - 10" oak B

264 @00-35' L Fee
@+63-25' L - 16" oak
@+64-21' L T.P.

@+16-14' R T.P.
@+67-8' Dr. 30
@+60-200' Ho. 12 Ho.



@+55-15' R T.P.
Cult. field

@+24-23' L T.P. 20
261 @00-35' L Fee w/w.
@+61-35' L - 12" oak
@+25-34' L 10" oak
260 @+05-34' L - 7" Tr.

@+11-15' R T.P.

@+66-21' L - T.P.
@+64-35' L - 12" oak
@+29-36' L Fee Cor
259 @+10-31' L 12" oak

@+10-14' R T.P.

@+66-74' L Iron Rd sign
@+66-30' L - 10" oak
@+31-24' L T.P.
@+24-33' L 10" oak
258

@+25-14' R T.P.

Cult. field

3-3-23

@+30-25 L 10" oak

271

@+81-20 L T.P.
Aw.

@+36-37 L - End Fc
@+36-27 L 10" oak

270

@+11-34 L 6" oak

@+67-35 L 16" oak

@+23-35 L 10" oak
@+20-20 L T.P.

269

@+88-35 L 8" oak
@+90-35 L Fcc Cor.

@+30-33 L 8" oak

268

@+55-34 L 10" oak
@+46-21 L T.P.

@+24-34 L 8" oak

267

@+22-33 L 16" oak

@+29-4 Dr. L.
@+20-36 L 18" oak

266

Ho. 32x20
@+83-100 L Ho. Cor.
@+41-4 Dr. L.

@+64-35 Fcc Cor.
@+51-23 L T.P.
@+44-36 L 12" oak

265

@00-38 L Fcc

field

@+04-18 L T.P.

@+98-30 R 10" oak

Calc.

@+23-30 R 9" oak

@+74-30 R 18" oak
@+58-18 R T.P.

@+42-34 R 5" oak
@+34 Dr. L.

@+10-30 R 10" oak

@+45-250 R 30x20 Car Barn
30x20

@+28-28 R 10" oak
@+16-19 R 8" oak
@+13-17 R T.P.

Ho 30x20

@+90-110 R Ho. Cor. 30x20
@+55-34 R 18" oak

@+67-32 R 10" oak

@+71-17 R T.P.
22w.

Calc. field

@+31-12+11 R 2 T.P.

3-8-23

@+33-36 L - 2" Oak

277 @ 00-39 L Fcc w

@+45-36 L 12" oak

@+55-19 T.P. Pole x

@+33-34 L - 12" oak

276 @+15-24 L P. Pole x

@+40-39 L Fcc w

@+39-36 L 2-12" Oak

@+18-19 L - T.P.

275

Cult. field

@+16-26 L - 2" Oak

@+03-23 L Pole

274

@+20-16 L T.P.

@+34-26 L 12" oak

273

@+15-15 L 6" oak

@+48-33 L Fcc w

w.w @+46-24 L I.Spn

@+03-44 L - T.P.

@+03-30 L 12" oak

@+03-24 L Pole

272 @+02-19 L T.P. 300

Cult. field

271

@+43-24 R 10" oak

@+09-31 R 14" oak

@ 00-29 R Fcc

@+30-18 R 18" oak

@+40-16 R Pole

@+30-30 R 16" oak

@

x

@+75-33 L - 10" oak

@+65-31 L 20" oak

@+50-24 L Fcc

@+18-17 L - T.P.

@+16-31 L - 12" oak

@

x

x

x

x

x

x

@

x

x

x

x

x

x

x

x

x

x

x

@+66-19 R T.P.

@+60-34 L 10" oak

@+50-31 Fcc

@+41-31 R Fcc Cor. w.w.

@+50-10 R Pole

@+46-13 to R 6 Mail Bx

@+19.2 E Ash St

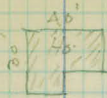
Cult. field

Cult. field

3-8-13

242 to
locations measured from tangent @

@+86-308L 111
Hq. Cor.



@+50-60L
Cor. Ho.

283

Farm Yard

- @+26-16L-14 oak
- @+70-200L 4 Barns
- @+65-17L-14 oak
- @+59-11L Mail Box + 211
- @+55-30L Fcc + 4 Gate
- @+37-16L Pow. Pole
- @+26-23L-12 oak
- @+08-22L Cur Pole
- @00-29L Fcc Cor.
- @00-16L Pow. Pole

Largest Produce

12 x 16

- @+95-29R 3.W. Cor Cor.
- @+30-24R Fcc Cor.
- @+75-26R-16 oak
- @+72-26R Cur Pole

282

Apple Orchard

- @+50-20L 2 oak
- @+14-51L Fcc Cor.
- @+00-41L Fcc
- @+43-36L 10 oak
- @+85-11L T. Pole

Note: Needs 20' x 20' x 20' x 20' x 20' x 20'

- @00-10 Fcc
- @+42-20R T. Pole
- @+42-31R 16 oak
- @+69-2 x Fcc
- @+45-11R Fcc
- @+41-7R-16 oak

281

- @+32-24L-16 oak
- @+30-14L Pow. Pole
- @+11-29L-14 oak
- @00-25L Fcc
- @+30-26L 14 oak
- @+15-38L Fcc Cor.

- @+00-70R-24 oak
- @+84-19R T. Pole
- Cult. + 1 oak
- @+53-33R-18 oak

280

- @+45-31L-16 oak
- @+41-17L T. Pole
- @+21-34L-10 oak

- @+05-35R 16 oak
- @00-34R Fcc
- @+42-25R-13 oak
- @+42-19R T. Pole
- @+38-33R-16 oak

279

- @+62-30L 16 oak
- @+51-29L-8 oak
- @+30-38L Fcc
- @+29-32L 11 oak
- @+21-22L Pow. Pole
- @+08-24L 8 oak

- @+14-31R-8 oak
- @00-24R-16 oak
- @00-20R Fcc
- @+50-31R Fcc Cor

278

- @00-19L T. Pole
- Wire
- @+40-36L-20 oak

- @+37-26R 20 oak
- @00-16R T. Pole 22 mm

Cult field

277

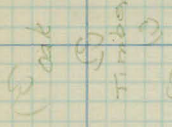
3-8-23

Measurement on Alight sta.

3 3 3

@+32A-20 L T Pole

257



@+24-21 L Fcc Cor End w/w. Bq. B

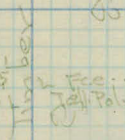
256

@+21-19 L T Pole ch wire

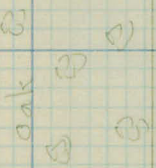


255

@+50-25 ch Fcc w/w
@+50-18 L T Pole



254



-P.T.

@+13-27 R 16 oak

Cult field

@+400-30 R Fcc w/w
@+39-28 R 12 oak

@+101-15 L Cor 40'

P.T. 284 12.03

@+39-14 L T Pole
@+10-23 Fcc

@+51-21 L Fcc Cor
@+10-22 L Fcc

@+69-13 L T Pole
22 wire

@+170-11 R T Pole Swire
@+90-36 R Fcc

@+59-14 R Pow. Pole

Cult. field

@+42-43 R Front Gate

Measure of
10' 10' 10' 10'

252

@+00 P.I.

P.I. 252+53 = @+00

3-8-23

End Chaining from P.I.

292792.30

291 43.5

146.8



293. @+93-8L 160ft

- @+95-5 L T. Pole
- @+97 Drive Need Culv.
- @+100-12 L Fce.
- @+91-8 L T. Pole

@+93-19 R X sign Iron Cemetery

- @+15-25 R T. Pole
- @+15-21 R Iron Fce.
- @+93-20-27 R Pow. Pole
- @+10-07 R S.W. Cor. Corner Intersection
- @+93-37 Pow Pole
- @+91-40 Grv Pole
- @+93-37 R T. Pole

@+48-3 L Mail Bx On Tangent

@+45-46 R End fce P.I.

- @+10-12 L Grv Pole
- @+10-46 L Fce
- @+10-49 L T. Pole

P.I. @+43.5-0+00 @+30 Drive N 25 Culv.

291

- @+14-27 L Fce
- @+14-25 L T. Pole

- @+06-11 Fce
- @+95-130 R N.W. Cor. Ho.
- @+59-14 R Pow. Pole

290

- @+14-27 Fce
- @+14-25 T. Pole

- @+21-13 R T. Pole
- @+15-16 R Grv Pole
- @+15-16 R Fce

289

@+73-14 L T. Pole

@+45-17 R Pow. Pole

- @+71-24 R Bermites w/x
- @+54-24 R 12 Oak
- @+54-17 R T. Pole
- @+43-4 Drive Need Culv.

288

@+00-25 Fce Barb. Av.

@+13-15 R Mail Bx

- @+99-100 R
- Lot. Ho. N.W.

287

3-8-23

Measured from \pm Curve

299 298+93-15 L Fcc Cov
 @+63-14 L Trolley Pole
 @+59-32 L & Car. Trk
 @+59-21 L R. W. Fcc Cov
 @+58-11 L T. Pole

294

297 @+21-16 L T.P.
 @00-100' edge Lake

296

Goose

@+68-11 L T. Pole

295 @00-100' edge Lake
 Lake

@+70-21 L Gut Br

294 @+21-7 L T. Pole
 Cemetery

@00-33' L Fcc
 @+24-36 L 3-6" oak
 @+59-14 R Pole Cable
 @+41-40 R Fcc Cov
 @+41-36 R Iron Rd Sign
 @+39-21 R Iron Rd Sign
 @+32-2 R. Rd to East
 @+02-36 R Pow. Pole
 298-00 - 35 R - T.P.
 @+43-41 R Gut Pole
 @+43-2 at R & K St. Car. Track

@+22-12 R - Xing Sign
 @+34-22 R - waiting St
 @+27-14 R - Trolley Pole
 @+27-14 R T.P.
 @+15-27 R. P. W. Fcc
 @+10-30 R Gut Drive
 @+16-24 R Fcc Cov

@+44-14 R Pow. Pole
 @+10-16 R T. Pole
 @00-21 R Fcc

@00-15 R Fcc

@+67-16 R Pow. Pole
 @+58-16 R T. Pole
 @+52-16 R End Iron Fcc
 Begin W. W.

Cemetery

2-28-23

3-9-23

10000

+ 10000

10000

+ 10000

10000

10000

10000

10000

10000

10000

+ 10000

10000

+ 10000

10000

7

@+68-22' L Trol. Pole
 @+68-21' L Fcc
 @+65-30' L T & T. Pole
 @+31-18' L Pow. Pole
 @+30-21' L Fcc

305

@+67-21' L Trol. Pole
 @+67-17' L Fcc

30A

@+93-21' L Pow. Pole

@+50-37' L Trolley Pole
 @+50-26' L R.O.W. Fcc

303

@+60-36' Fcc. Row
 @+53-26' L Pow. Pole

301

@+92-4' L Iron Workings Sign

@+36-4' L T. Pole
 @+00-54' L R.O.W. Fcc
 @+98-50' L Pow. Pole

301

@+45-16' L - T. Pole

@+40-26' L Fcc
 @+39-23' L Pow. Pole

299

@+44-10' R T. Pole
 @+00-16' R Pole
 @+91-25' R 10" Tree
 Oak Timber

@+30-20' R T. Pole

@+84-23' R Pole
 @+87-26' R T. Pole

@+63-27' R Pole

Barn
 @+65-42' R 10" Tree
 @+58-38' R Pole

@+49-66' R S.W. Cor. Barn
 @+14-37' R Fcc Cox

@+59-20' R Pole Cable

@+94-23' R Guy Pole
 @+51-24' R Cam. Sign
 @+59-21' R Fcc
 @+59-16' R - Pole Cable

Measured off ϕ Curve.

@ +61 - 17' L Warm Sign Iron +

312

@ +72 - 19' L Trol. Pole
@ +70 - 37' L # Trks
@ +33 - 13' L Pole
@ +30 - 12' L R.o.w. Fee

311

@ +90 - 46' L # Car Trks
@ +86 - 27' L # Waiting Sta
@ +51 - 18' L Trol. Pole
@ +50 - 21' L R.o.w. Fee

310

@ +37 - 13' L Pow. Pole
@ +37 - 19' L Fee

309

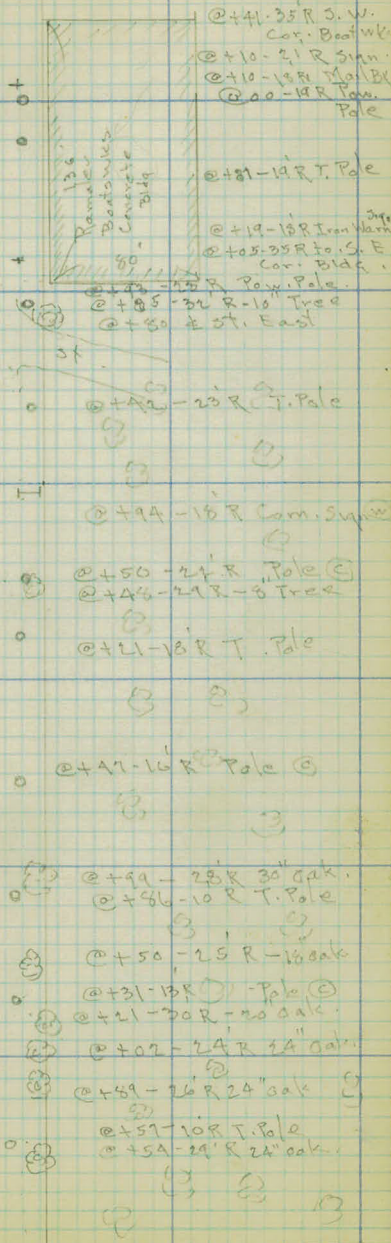
@ +09 - 32' L Trol. Pole
@ +05 - 17' L Pow. Pole
@ 00 - 36' L # Trks
@ 00 - 19' L R.o.w. Fee

308

307

@ +90 - 21' L R.o.w. Fee
@ +82 - 19' L Trol. Pole
@ +14 - 19' L Pow. Pole

306



3-9-23

Measured off ϕ of Curve

3-9-23

Measured on ϕ of Curve.

Measured off ϕ of Curve.

@ +16 - 18 L Iron Tral. Pole
@ +14 - 18 L Pow. Pole
@ +10 - 25 L - 24 Tree
@ +10 - 18 L Pow. Pole
@ +00 - 14.5 L to Curve

324

@ +
@ +70 - 49 L and curb
@ +47 - 4 Road

@ +56.62 - 25.55 R +
+ Trk.

@ 00 - 25 R + Trk
@ +48 - 33 R Iron Tral. Pole
@ +72 - 32 R Sign
@ +66 - 32 R Iron Rd Sign
@ +61 - 34 R T. Pole
@ +56 - 22 R Pow. Pole
@ +54 - 32 R Warning.

323

@ +15 - 34 L Iron Rd Sign
@ 00 - 30 L Hedge
@ 00 - 14 L Pow. Pole
@ +95 - 20 L 4' Tree
@ +75 - 15 L Iron Tral. Pole
@ +63 - 17 L 4' Tree
@ +56 - 14 L Tral. Pole

@ 20 - 24 R + Trks

@ +78 - 37 R Iron Tral. Pole
@ +69 - 36 R T. Pole
@ +62 - 35 R Pow. Pole

322

@ +20 - 25 L 3' Oak
@ +00 - 22 L Hedge

@ 00 - 24 R + Trk

@ +80 - 35 R Pow. Pole

321

@ +31 - 8 L Tral. Pole
@ +24 - 13 L 3' Tree

@ +31 - 38 R Tral. Pole

@ 00 - 24 R + Trk

@ +78 - 8 L Pole R
@ +61 - 16 L 6" Tree

@ +96 - 35 R P. + T. Pole

320

@ +25 - 9 L 1 Tral. Pole
210 + 00 - 24 L Hedge
219 + 95 - 14 L 20 Tree
@ +81 - 14 L 2 Tree
@ +57 - 10 L Tral. Pole
@ +53 - 15 L 24 Tree
@ +50 - 20 L Gate Post
@ +41 - 14 L Gate Post
@ +41 - 11 L Pow. Pole
@ +39 - 16 L 2' Tree
@ +12 - 12 L Tral. Pole
@ +07 - 11 L 3 Tree
@ +05 - 20 L 14 Tree
@ 00 - 25 L Hedge
@ +93 - 24 L 10 Tree

@ +23 - 38 R - Tral. Pole

@ +14 - 32 R Pow. Pole

@ 00 - 24 R + Trk

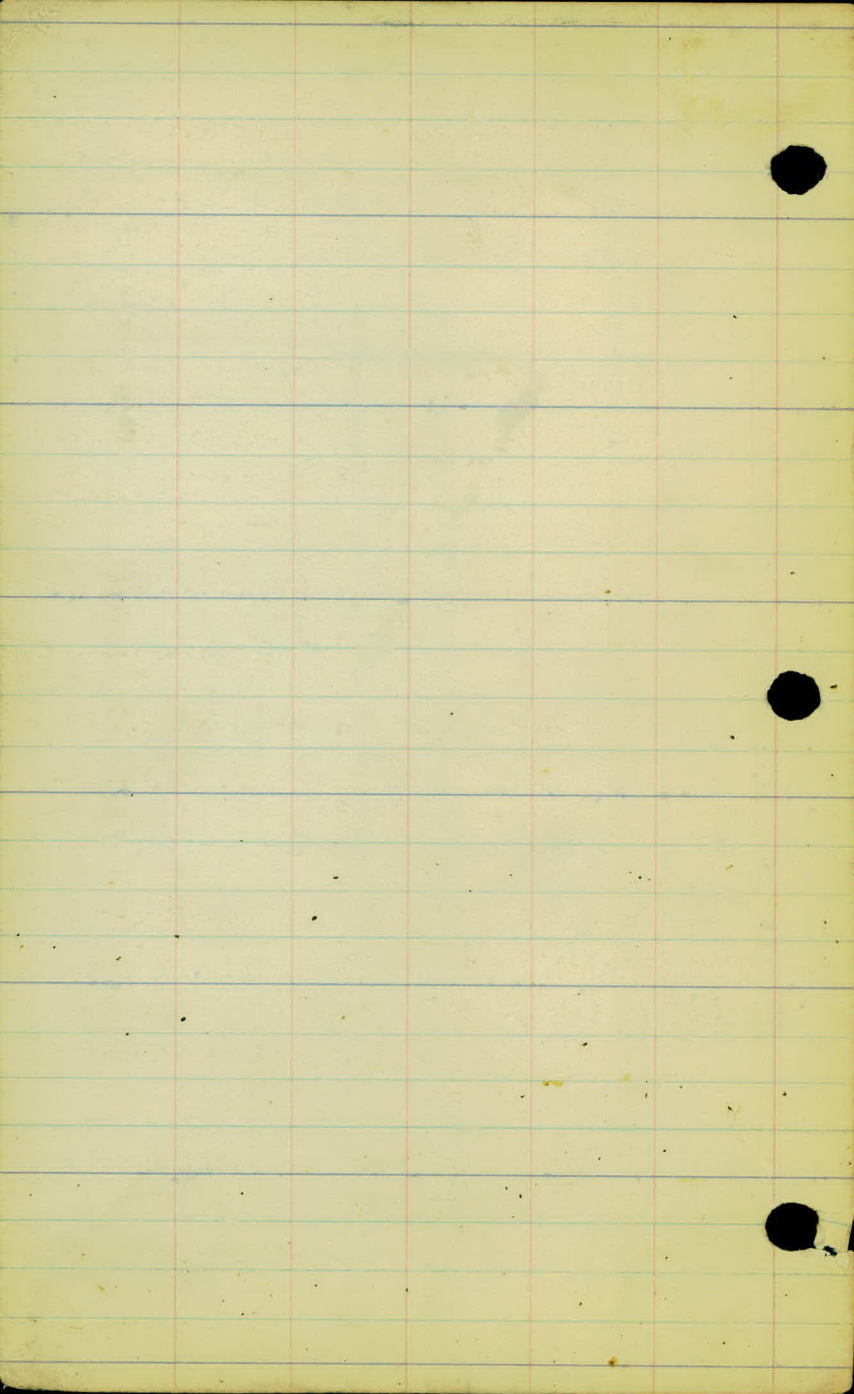
@ +55 - 30 R Tral. Pole

319

@ +12 - 40 R Tral. Pole

@ 00 - 21 R + Trks

316



WHITE BEAR TRD.

LINE A^()

White Bear Rd
 Prelim. Line 'A'

Sta. Point Left Right Calc. Mag
 Bear

N27°-40'W

93
 299+58.45 P.T.

+50

17°-32'

Δ 35°-04' L

299

17°-05'

C 10°

+50

14°-35'

S.T. 181.24

298

12°-05'

L.C. 350.1

297+89.50 P.I.

50' C

+50

9°-35'

297

7°-05'

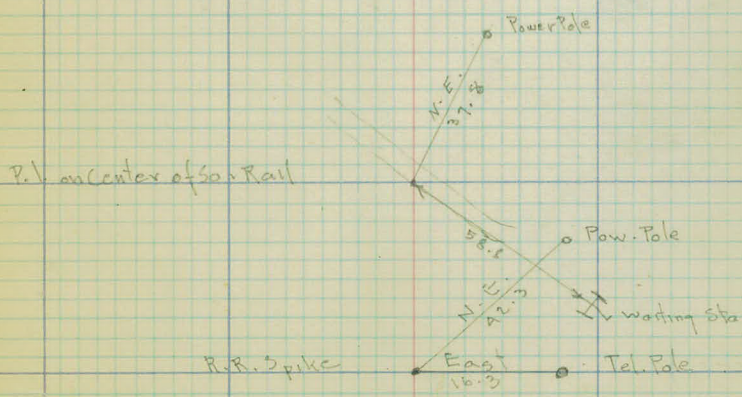
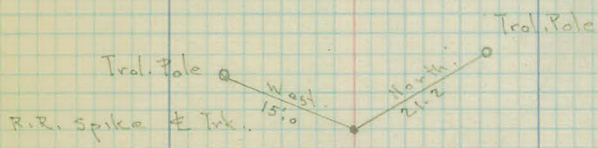
+50 26

4°-35'

296+08.35 P.C.

2°-05'

N7°-24' E



Station Point L & R Calc. Mag.

N29°-41'W

316+56.40²⁷ P.T. = 317+01.38 Orig. Line Δ 23°-26'
 = 316+04.64 P.I. on Orig. Line C 12°-0'
 315+60.2 P.I. = 8°-21' S.T. 99.21 ✓
 314+60.9 ✓ P.C. = 5°-21' L.C. 195.41 ✓
 2°-21' 50'C 28

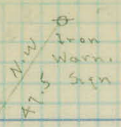
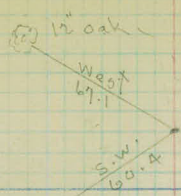
N58°-30'W

N53°-07'W ✓

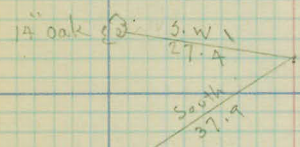
311+66.48 ✓ P.T. 1
 311 12°-43' Δ 25°-27' L
 310 11°-24' C 4°
 309 9°-24' S.T. 323.52 ✓
 309+53.75 P.I. L.C. 636.23 ✓
 50'C

308 7°-24'
 307 5°-24'
 306 3°-24' ✓
 305+30.23 P.C. 1°-24'

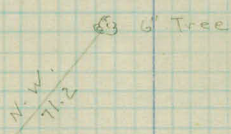
N29°-40'W



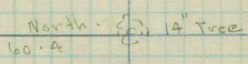
= 316 + 0 + 64 = P.L. Orig. Line
10" oak



8" oak



R.R. Spike



Trail Pole



Paw. Pole

R.R. Spike

"Line A"
White Bear Rd.

3-23-22

317+01.38

P.C. - on Orig. Line

"F" Line

(62)

White Bear Rd. Sub

Sta. 296 + 08³⁵ to

± Levels

3/15/23

B.M.

A-Line

226.14

± Levels A-Line on
W.B. Road Job

B.M	1.13	242.90 ✓		241.77 ✓
	4.52	238.57 ✓	2.25	234.05 ✓
296+08 ³⁵			4.5	34.1
+50			4.8	33.8
297			5.6	33.0
+50			7.5	31.1
298			8.7	29.9
+50			6.4	32.2
299			5.6	33.0
+50			5.6	33.0
300			5.6	33.0
	5.42	238.48 ✓	5.51	233.06 ✓
301			5.6	32.9
302			5.6	32.9
303			5.6	32.9
304			5.5	33.0
305			5.6	32.9
	5.87	238.78 ✓	5.57	232.91 ✓
306			5.8	33.0
307	11.07		5.8	33.0
308			5.8	33.0
309			5.7	33.1
310			5.8	33.0
311			5.9	32.9

3/15/23

Tierney - Tave
Persons - rod

(63)

Sp. in El. Light pole R 291+80

B.C. + beginning "H" Line

3/15/23

238.78

5.76 238.66 ✓ 5.88

✓
232.90

3/2

5.7 33.0

B.M

4.90 233.76 ✓

313

5.7 33.0

314

4.6 34.1

B.M

4.90

233.76 ✓

J.S.

11.63

10.78

10.78
— .85

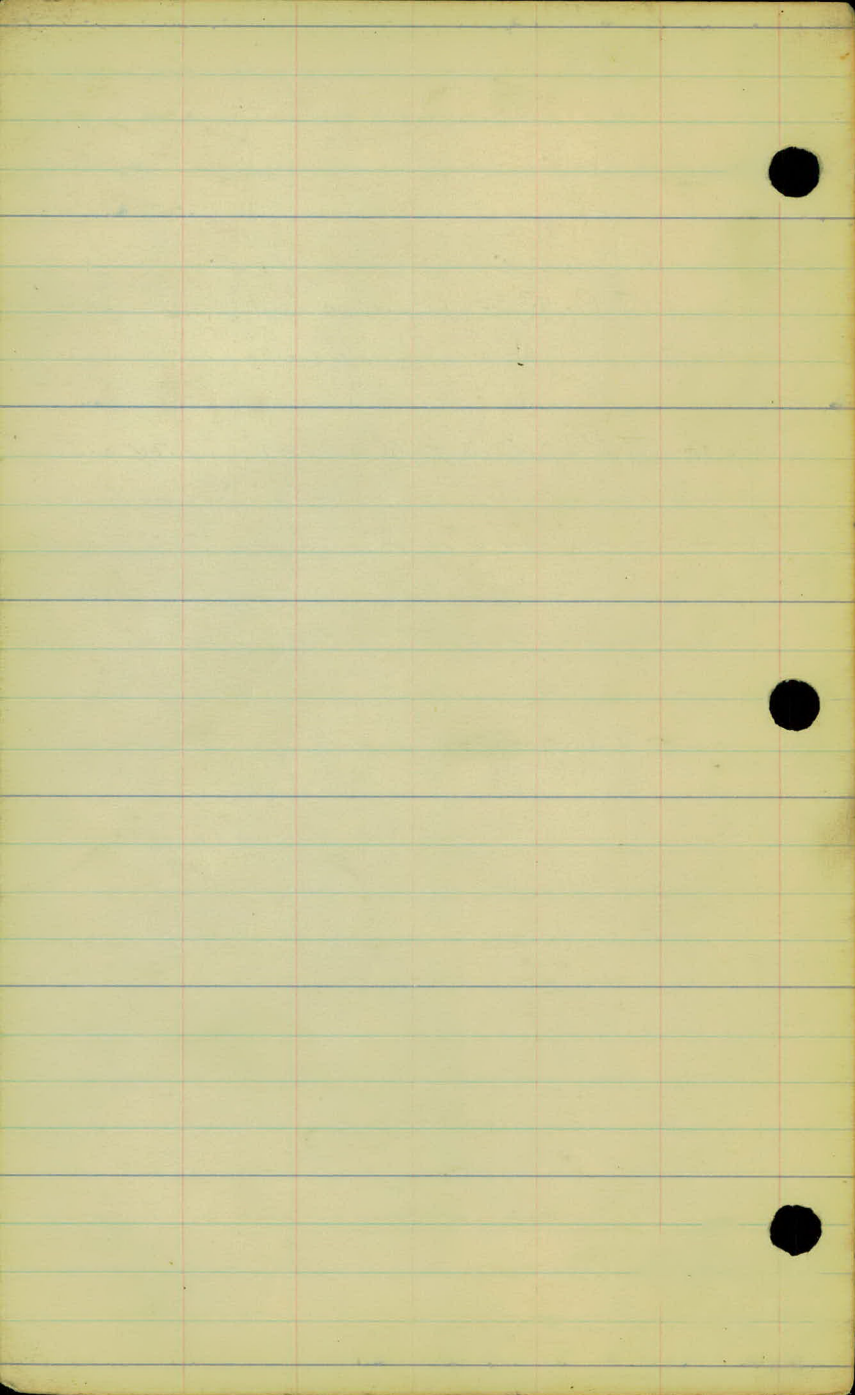
233.76
232.91
— .85

3/15/23

(69)

Sp. in T.P. R 313+00 on Old Line

Sp in T.P. R 313+00 on Old Line.



X Sections

"A" Line (White Bear Rd. Job.)

3/15/23

Cross Sections
"A" Line (W.B. Road)

H.T. }
D.P. }
J.C. }

305 23.29

304 33.0

303 32.9

[300+90] 32.9 Box Culv. in Place 3'x3'-25'

302 32.9

301 32.9

300 33.0 On Ry &

299 33.0

+50 32.2

298 29.9

+50 31.1

297 233.0

296+00 ⁽³⁵⁾26 23.4.1 Beginning "A" Line

±Rd
 2.6 -5.2/-4.2 -1.2/0.0 0.0/0.0 -1.0/0.0 +0.6/+0.6
 /33 /17 /10 /6 /7 /12 /17 /31 /33

2.2 -6.0/-4.0 -1.0/0.0 -0.3/-2.8 -1.0/-1.0 0.0/0.0
 /35 /18 /11 /6 /8 /14 /9 /29 /33

2.0 -6.4/-4.5 -1.0/0.0 -0.6/-3.7 -2.0/-2.0
 /36 /11 /7 /8 /17 /33

2.0 -6.0/-4.1 -1.0/0.0 -4.1/-4.1 -4.5/-4.5
 /33 /12 /9 /8 /12 /33

2.0 -6.4/-4.5 -1.1/0.0 -0.7/-4.1 -4.2/-4.2
 /35 /16 /9 /8 /16 /33

2.0 -6.0/-4.7 -1.0/0.0 -0.8/-4.0 -4.5/-4.5
 /33 /17 /9 /8 /17 /33

2.0 -5.6/-4.1 -0.7/0.0 -0.7/-4.1 -4.1/-4.1
 /33 /15 /8 /7 /17 /33

±Ry
 2.0 -5.5/-5.5 -3.5/-0.6 -0.1/-0.5 -2.8/-2.0 -2.0/-2.0
 /33 /20 /11 /5 /4 /11 /17 /33

±Ry
 2.0 -6.0/-4.0 -3.0/0.0 +0.7/+0.5 +0.2/-1.0 -0.7/0.0 0.0/0.0
 /40 /25 /9 /2 /10 /18 /24 /27 /33

±Ry ±Road
 2.0 -1.5/-0.7 -0.5/0.0 +0.5/+3.5 +3.2/+3.0 +3.0/+3.0
 /33 /17 /8 /7 /19 /25 /36

±R.
 2.0 -2.0/-2.6 -2.1/0.0 +1.3/+1.5 +1.0/+1.1 +1.1/+1.8
 /38 /21 /14 /3 /11 /20 /28 /31 /35

±R
 Level -4.0/-2.2 -2.3/0.0 +0.4/0.0 0.0/0.0 -1.2/-1.2
 /28 /12 /7 /10 /18 /27 /34

F/lat -6.0/-5.0 -4.2/-3.0 -0.5/-0.5 -0.5/-0.5 -3.2/-3.1
 /40 /32 /21 /14 /5 /10 /21 /33

GOOSE LAKE.

3/15/23

(67)

314 234.1

313 33.0

312 33.0

311 232.9

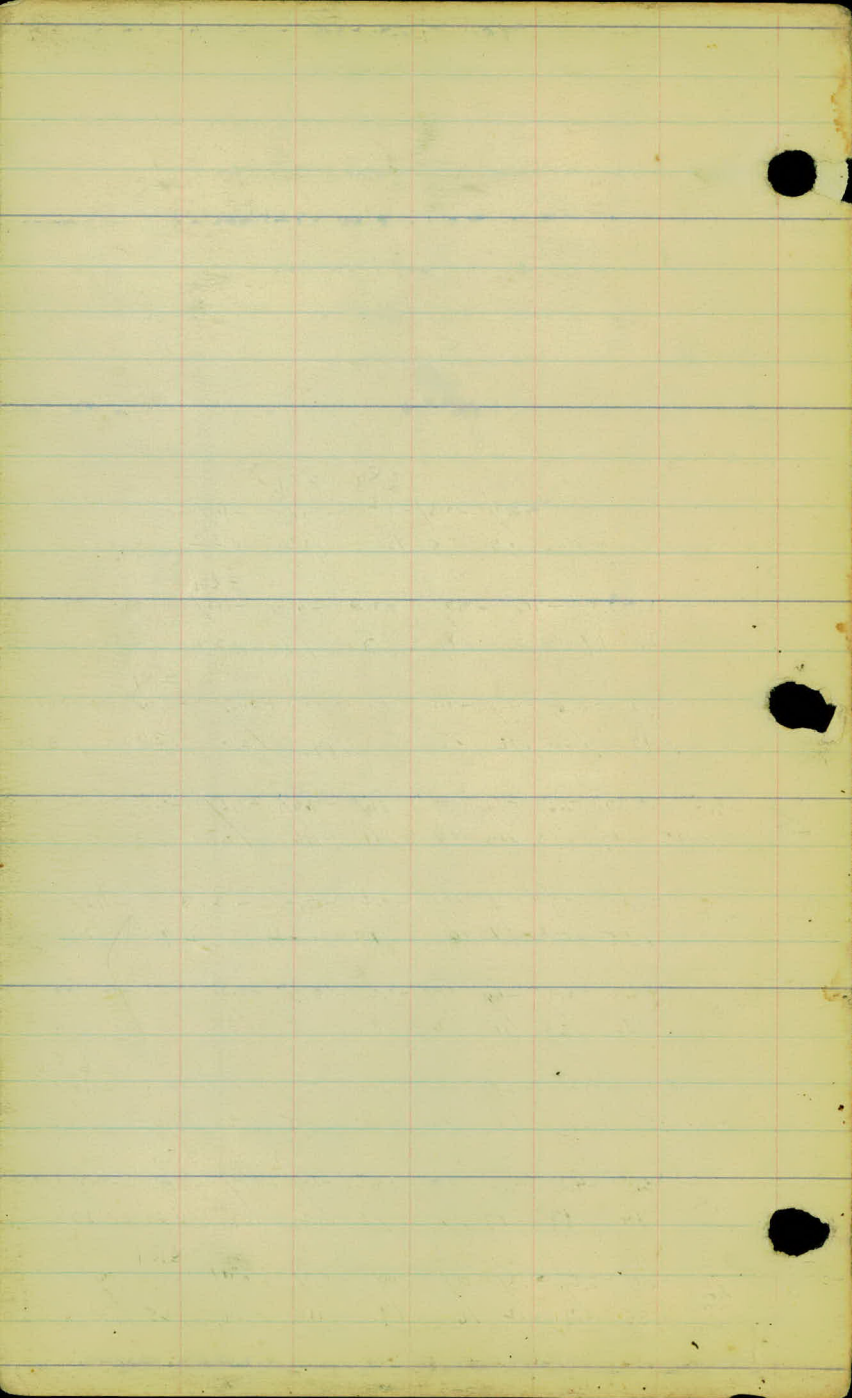
310 233.0

309 233.1

308 233.0

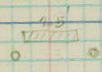
307 233.0

306 233.0



301

@00 - 4 Trk.
@+93 - 4 Wood Box Cub.
@+94 - 13 L Trd. Pole



@00 - 95 R # old Rd
@+95 - 29 R Trd. Pole

290

@00 - 50 edge Lake

@00 - 30 R View. Fee

@+72 - 9 L Trd. Pole

@+79 - 20 R Trd. Pole

@+58 - 09 # Trk.

299

@00 - 70 edge Lake

@00 - 60 R # old Rd
@00 - 4 R # Trk.

@+72 - 00 Cox. Row. Fee
@+72 - 1 L Pole

@+50 - 10 R # Trk.

298

@00 - 65 edge Lake

@00 - 24 R # Car. Trk.
@00 - 31 R # old Trk.

Goose Lake

@+13 - 31 Trd. Pole
@00 - 90 to edge

located from Curve

@00 - 10 R # old Rd

296408.35

3-23-23

New Brighton Rd

- | | | | |
|-----|------------------------|--|------------------------|
| 307 | @+46-15 L whistle Post | | @00-9 R Row. Fee |
| | @00-9 L T. & Ks. | | @00-22 R & Rd. |
| | @+53-26 L Tral. Pole | | @+53-10 R Tral. Pole |
| 306 | @00-9 L Tral. 2.31 | | @00-10 R Row. Fee |
| | @+39-14 L Tral. Pole | | @00-22 R & old Rd |
| | | | @+39-11 R Tral. Pole |
| 305 | @00-90 L edge Lake | | @+25-14 R whistle Post |
| | | | @+50-26 R Row. Fee |
| | @+25-11 L Tral. Pole | | @+25-20 R Tral. Pole |
| 304 | @00-00 L edge Lake | | @00-57 R to & old Rd |
| | Goose | | |
| | @+19-4 L Tral. Pole | | @+14-20 R Tral. Pole |
| 303 | @00-4 L Tral. | | @00-30 R Row. Fee |
| | Lake | | |
| | @+03-7 L Tral. Pole | | @+03-21 R Tral. Pole |
| 302 | @00-00 L edge Lake | | @00-30 R Row. Fee |
| | | | @00-16 R & old Rd |
| 301 | | | |

3-23-23

W. B. R. d.

313

@+41-9' R Tral. Pole

@+43-13' R end Fce
@+32-9' R Row. Pole
@+42-11' R Iron Warn Sign
@00-17' R Fce
@00-30' R ± Road

312

@00-4' Trk

@+21-21' Tral. Pole

@+31-13' R
@+27-11' R Tral. Pole

311

@00-90' L edge Lake
Goose @00-2.5' L Trk

@00-36' R - 4' Rd
@00-25' R - R.o.W. Fce
@+35-11' R Iron Sign Post

Lake

310

@+11-23' L Tral. Pole
@+08-20' L Stop Sign
@00-3' L ± Trk

@+11-11' R Tral. Pole
@00-45' R ± Rd
@00-26' R Fce

309

@00-100' L edge Lake
@+99-23' L Tral. Pole

@00-45' R ± Rd
@00-26' R R.o.W. Fce
@+91-15' R Tral. Pole

Goose

308

@00-100' L edge Lake
@00-47' L Trk

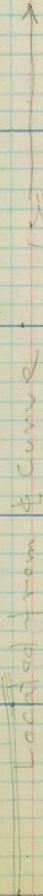
@00-32' R ± Rd

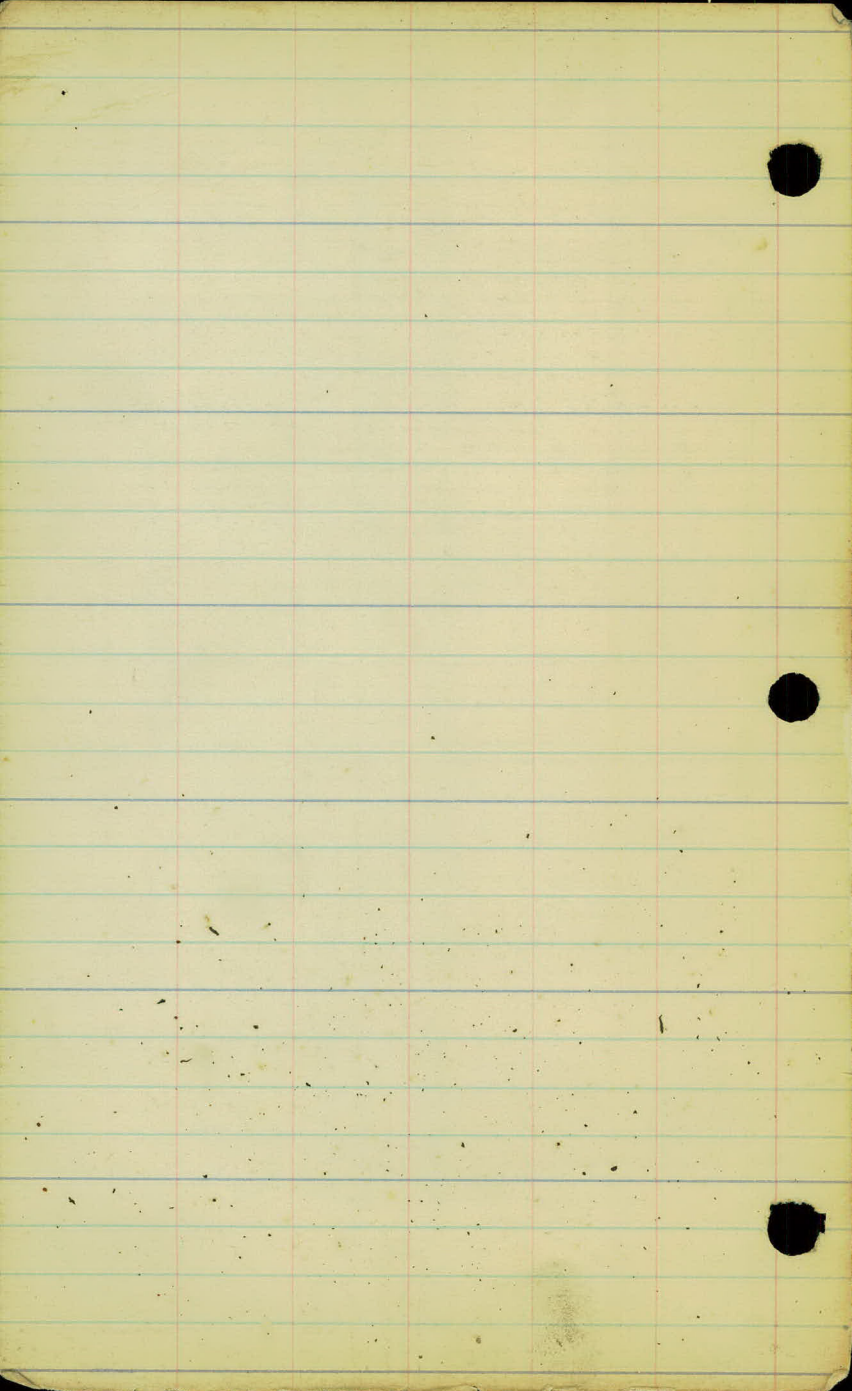
@+11-21' L Tral. Pole

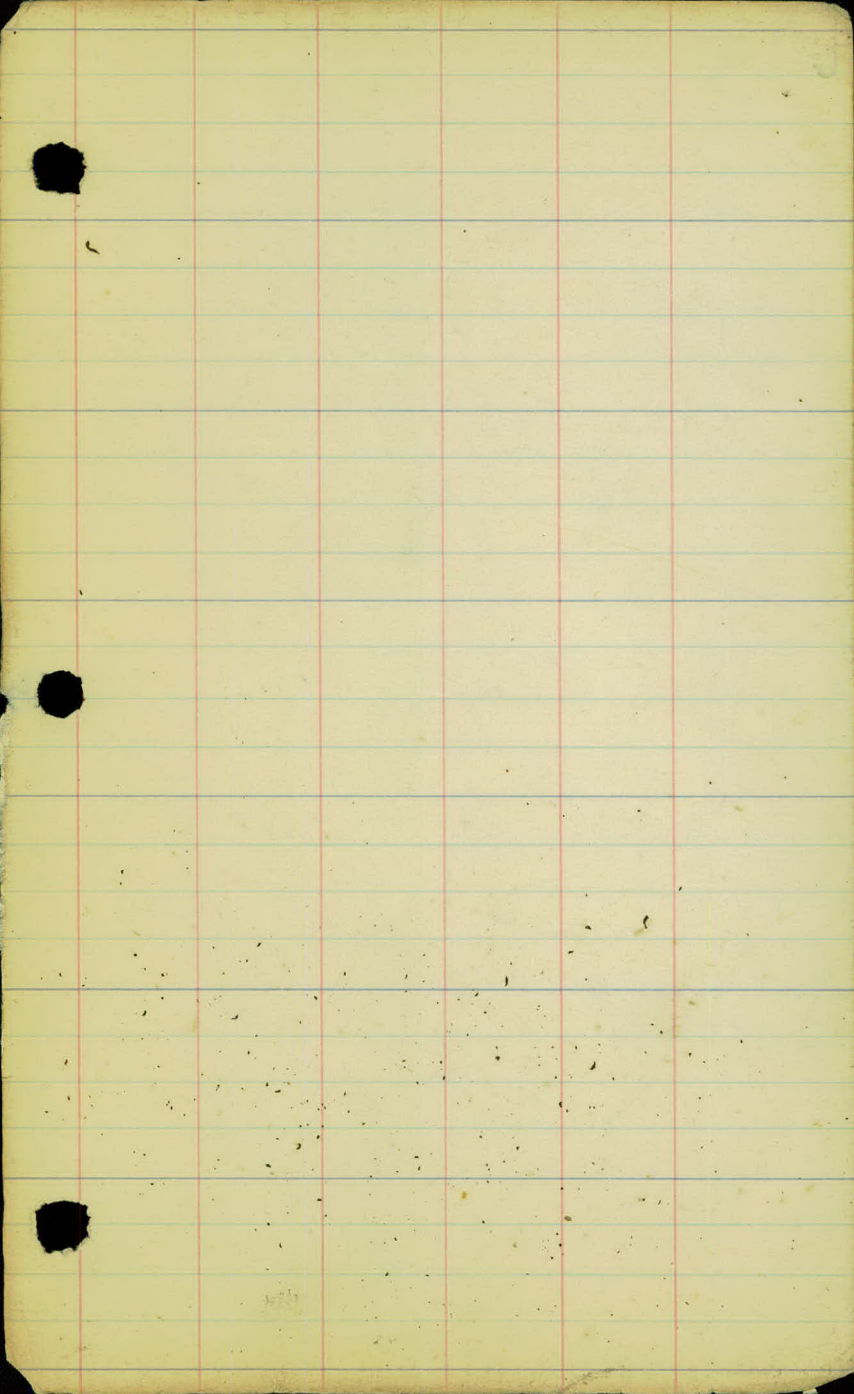
@+15-16' R Row Fce
@+17-11' R Tral. Pole

Lake

307







White Bear Rd.

@ Co. Rd. D. Need 100' - 18" Culv. at intersect

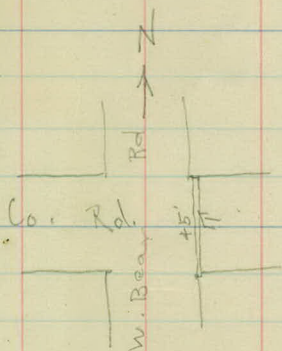
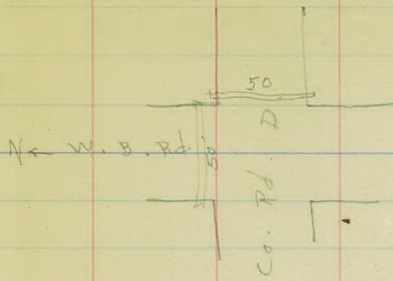
183+00 - Need 55' - 18" Culv. to drain side
ditch hole on Left
into Lake on Right
Could not find old Culvert

203+50 - Need 40' - 18" culv. under Rd to
drain path hole on Right
side to low place
on Left.

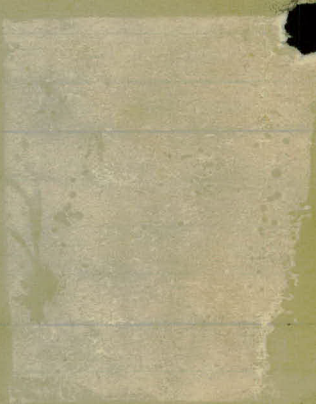
@ Co. Rd. E. - Need 45' - 18" Culv. under
Co. Rd. E. on
Right side

262+24 - old Culvert (see Xsect) ~~was~~
Replace with 50' - 18" Culv.

284+10 - Put in 40' - 18" -
Cov. Culv. to drain
Right side into Goose
Lake on left



1900
700 484.35
100 2.25
100 4
200



DISTANCES FROM CENTER OF ROADWAY FOR
CROSS-SECTIONING.

Roadway 16 feet wide. Side Slopes 1 on 1½.
For Single Track Embankment.

H	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	II
0	8.0	8.2	8.3	8.5	8.6	8.8	8.9	9.1	9.2	9.4	0
1	9.5	9.7	9.8	10.0	10.1	10.3	10.4	10.6	10.7	10.9	1
2	11.0	11.2	11.3	11.5	11.6	11.8	11.9	12.1	12.2	12.4	2
3	12.5	12.7	12.8	13.0	13.1	13.3	13.4	13.6	13.7	13.9	3
4	14.0	14.2	14.3	14.5	14.6	14.8	14.9	15.1	15.2	15.4	4
5	15.5	15.7	15.8	16.0	16.1	16.3	16.4	16.6	16.7	16.9	5
6	17.0	17.2	17.3	17.5	17.6	17.8	17.9	18.1	18.2	18.4	6
7	18.5	18.7	18.8	19.0	19.1	19.3	19.4	19.6	19.7	19.9	7
8	20.0	20.2	20.3	20.5	20.6	20.8	20.9	21.1	21.2	21.4	8
9	21.5	21.7	21.8	22.0	22.1	22.3	22.4	22.6	22.7	22.9	9
10	23.0	23.2	23.3	23.5	23.6	23.8	23.9	24.1	24.2	24.4	10
11	24.5	24.7	24.8	25.0	25.1	25.3	25.4	25.6	25.7	25.9	11
12	26.0	26.2	26.3	26.5	26.6	26.8	26.9	27.1	27.2	27.4	12
13	27.5	27.7	27.8	28.0	28.1	28.3	28.4	28.6	28.7	28.9	13
14	29.0	29.2	29.3	29.5	29.6	29.8	29.9	30.1	30.2	30.4	14
15	30.5	30.7	30.8	31.0	31.1	31.3	31.4	31.6	31.7	31.9	15
16	32.0	32.2	32.3	32.5	32.6	32.8	32.9	33.1	33.2	33.4	16
17	33.5	33.7	33.8	34.0	34.1	34.3	34.4	34.6	34.7	34.9	17
18	35.0	35.2	35.3	35.5	35.6	35.8	35.9	36.1	36.2	36.4	18
19	36.5	36.7	36.8	37.0	37.1	37.3	37.4	37.6	37.7	37.9	19
20	38.0	38.2	38.3	38.5	38.6	38.8	38.9	39.1	39.2	39.4	20
21	39.5	39.7	39.8	40.0	40.1	40.3	40.4	40.6	40.7	40.9	21
22	41.0	41.2	41.3	41.5	41.6	41.8	41.9	42.1	42.2	42.4	22
23	42.5	42.7	42.8	43.0	43.1	43.3	43.4	43.6	43.7	43.9	23
24	44.0	44.2	44.3	44.5	44.6	44.8	44.9	45.1	45.2	45.4	24
25	45.5	45.7	45.8	46.0	46.1	46.3	46.4	46.6	46.7	46.9	25
26	47.0	47.2	47.3	47.5	47.6	47.8	47.9	48.1	48.2	48.4	26
27	48.5	48.7	48.8	49.0	49.1	49.3	49.4	49.6	49.7	49.9	27
28	50.0	50.2	50.3	50.5	50.6	50.8	50.9	51.1	51.2	51.4	28
29	51.5	51.7	51.8	52.0	52.1	52.3	52.4	52.6	52.7	52.9	29
30	53.0	53.2	53.3	53.5	53.6	53.8	53.9	54.1	54.2	54.4	30
31	54.5	54.7	54.8	55.0	55.1	55.3	55.4	55.6	55.7	55.9	31
32	56.0	56.2	56.3	56.5	56.6	56.8	56.9	57.1	57.2	57.4	32
33	57.5	57.7	57.8	58.0	58.1	58.3	58.4	58.6	58.7	58.9	33
34	59.0	59.2	59.3	59.5	59.6	59.8	59.9	60.1	60.2	60.4	34
35	60.5	60.7	60.8	61.0	61.1	61.3	61.4	61.6	61.7	61.9	35
36	62.0	62.2	62.3	62.5	62.6	62.8	62.9	63.1	63.2	63.4	36
37	63.5	63.7	63.8	64.0	64.1	64.3	64.4	64.6	64.7	64.9	37
38	65.0	65.2	65.3	65.5	65.6	65.8	65.9	66.1	66.2	66.4	38
39	66.5	66.7	66.8	67.0	67.1	67.3	67.4	67.6	67.7	67.9	39
40	68.0	68.2	68.3	68.5	68.6	68.8	68.9	69.1	69.2	69.4	40

Example—If point is 22.6 ft. above grade, how far should it be from center line to be a slope stake point? Ans. from Table 41.9. For same slopes but other widths of roadbed correct above figures by one-half difference in width of roadbed; thus in example above for 20 ft. roadbed distance will be $41.9 + (20 - 16) \div 2$ or 2 ft. added to 41.9 = 43.9. For slopes of 1 on 1 see inside of front cover.