

Book #76-Dr. #8

OFFICE OF COUNTY ENGINEER
RAMSEY CO. MINN.

Lake Imp. Survey

SALVATION ARMY - SILVER LAKE

From..... To.....

Road Acc't. No.

Date Filed 1933

File.....

Transit Line Notes.

Proposed pipe line from Mpls.
Reservoir To Silver Lake.

Δ Left Δ Right

16+34⁰³ Δ P.T.

45°30'

12+87⁷⁷ P.O.T.

5+93⁵⁴ Δ P.T.

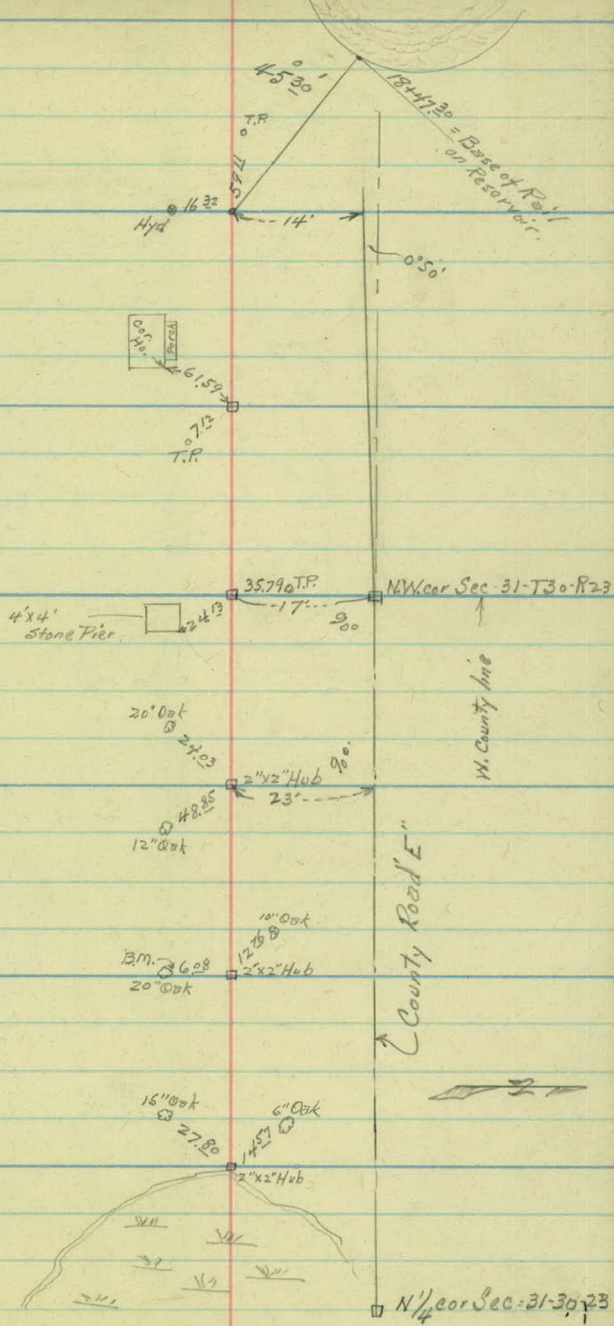
0°15"

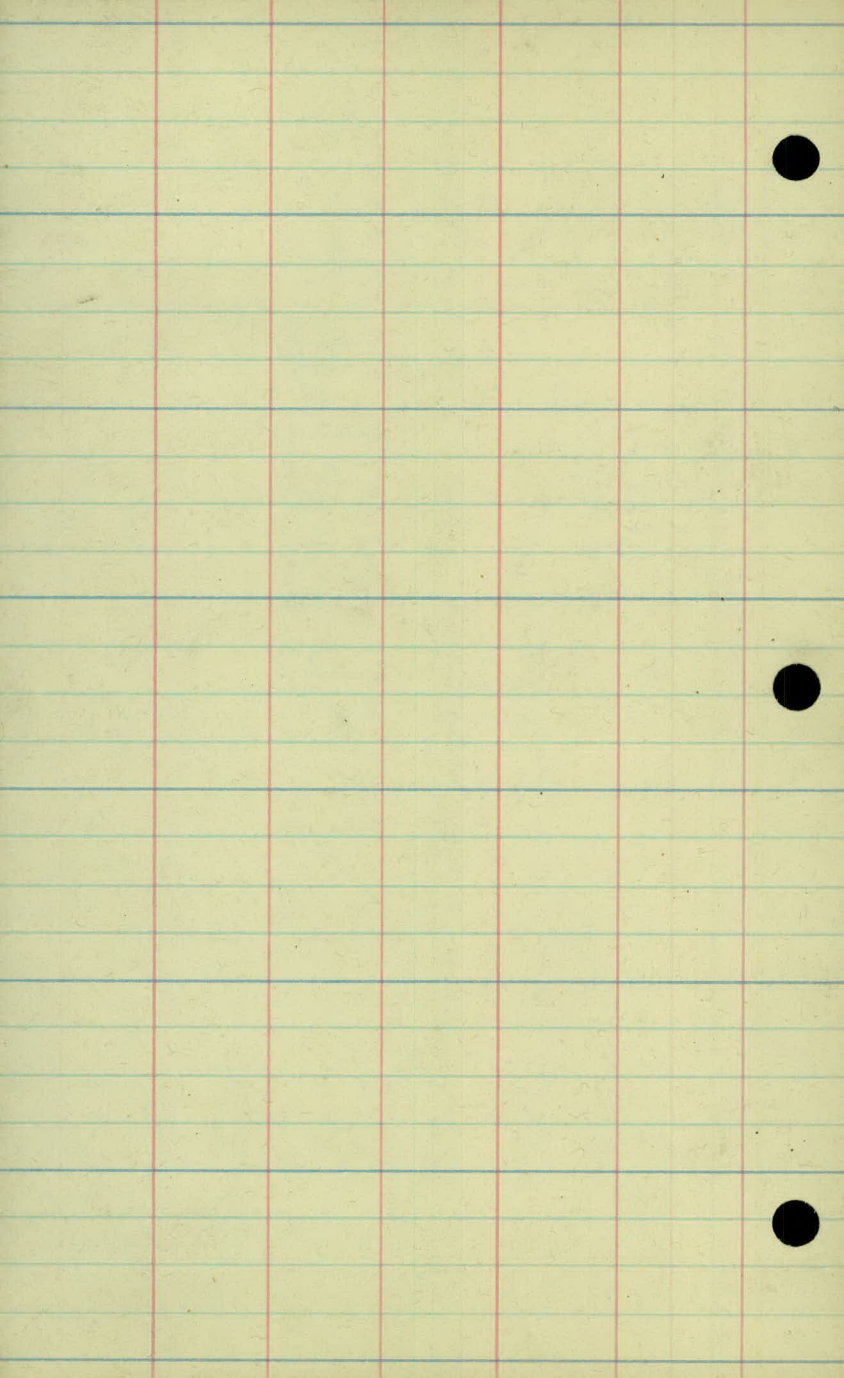
2+87¹⁰ Δ P.T. 69°00'

1+35²⁴ Δ P.T.

22°00'

0+00 Hub





Elev for Proposed pipe line
Mpls Reservoir To Silver Lake.

Sta.	+	H.I.	✓	-	Elev
B.M.	1.01	46.63	✓		45.62
T.P.	0.28	34.78	✓	12.13	34.50
B.M.				13.05	21.73
0+00					16.8
+50			✓		25.9
T.P.	12.39	46.89	✓	0.28	34.50
1+00					36.4
+35	Δ P.H.				43.4
+50			✓		45.5
B.M.	11.60	57.22	✓	1.27	45.62
+66					48.4
+73					50.4
+82	Δ Drive				51.9
+96					51.9
2+00			✓		53.7
T.P.	12.76	67.93	✓	2.05	55.17
+50					57.8
+87 ¹⁰	Δ P.H.				62.0
3			✓		62.5
T.P.	12.95	80.22	✓	0.66	67.27
↙					63.4
3+56					65.7
4					68.0
+50					70.4

4-24-33

Wind, 56F

LEFT.

L

RIGHT

Spk in 15" Oak 20" L4 0+15

18.0

8.9

10.5

3.5

1.4

8.8

6.8

5.3

5.3

3.5

10.1

5.9

5.4

± Rht.

 $\frac{5.2}{1.4}$ $\frac{5.2}{10}$ $\frac{6.4}{8}$ $\frac{6.4}{6}$ $\frac{5.4}{5}$

4.5

 $\frac{3.0}{8}$ $\frac{2.5}{21}$ $\frac{10.9}{15}$ $\frac{10.9}{11}$ $\frac{13.4}{6}$

14.5

 $\frac{14.3}{3}$ $\frac{13.2}{5}$

± Rht.

 $\frac{12.6}{19}$ $\frac{5.9}{16}$ $\frac{5.9}{11}$ $\frac{10.3}{5}$

12.2

 $\frac{10.9}{5}$ $\frac{10.3}{17}$ $\frac{6.2}{17}$ $\frac{6.2}{13}$ $\frac{8.5}{7}$

9.8

 $\frac{9.6}{2}$ $\frac{8.6}{4}$ $\frac{8.2}{17}$

H.I. ✓
8022

5
T.P. 10.47 ✓ 87.19 ✓ 3.50 ✓ 76.72 72.3
+50 74.4

+93 77.1

6 ± Pr. Dr. Lt. 77.9

+10 77.7

7 80.3

+50 81.9

8 83.5

BM 3.61 83.58 ✓ 83.57

+50 84.2

9 85.2

T.P. 13.03 ✓ 99.12 ✓ 1.10 ✓ 86.09

+50 86.7

10 88.3

+50 89.9

11 91.8

+50 93.5

12 95.4

12 670 ✓ 10351 231 ✓ 96.81

12

Lt Lt Rt.

$$\frac{0.8}{17} \quad \frac{0.8}{14} \quad \frac{6.0}{6} \quad 7.9 \quad \frac{7.5}{2} \quad \frac{6.4}{4} \quad \overset{x}{\frac{6.0}{16}}$$

$$\frac{5.2}{17} \quad \frac{5.2}{14} \quad \frac{11.5}{5} \quad 12.8 \quad \frac{12.8}{1} \quad \frac{11.8}{4} \quad \overset{x}{\frac{11.1}{17}}$$

$$\frac{5.4}{18} \quad \frac{5.4}{14} \quad \frac{7.8}{10} \quad \frac{9.6}{6} \quad \frac{10.7}{4} \quad 10.1 \quad \frac{9.9}{3} \quad \overset{x}{\frac{9.3}{17}}$$

$$\frac{8.7}{20} \quad \frac{9.1}{10} \quad 9.3 \quad \overset{x}{\frac{9.2}{17}}$$

$$\frac{5.5}{17} \quad \frac{5.5}{11} \quad \frac{8.2}{9} \quad \frac{9.4}{5} \quad 9.5 \quad \overset{x}{\frac{8.9}{16}}$$

$$\frac{5.4}{13} \quad \frac{4.4}{6} \quad \frac{7.2}{2} \quad 6.9 \quad \frac{6.3}{2} \quad \overset{x}{\frac{5.9}{14}}$$

5.3

3.7

Spt in P.P. Rt 7+35

3.0

2.0

X = ~~L~~ Travel
Road

$$\frac{7.6}{16} \quad \frac{6.8}{8} \quad \frac{10.8}{1} \quad 12.4 \quad 10.8 \quad \frac{10.4}{1} \quad \overset{x}{\frac{9.8}{15}}$$

$$\frac{4.6}{20} \quad \frac{4.6}{5} \quad \frac{9.2}{7.3} \quad \frac{6.7}{2} \quad \overset{x}{\frac{6.3}{16}}$$

$$\frac{5.6}{3.7} \quad \frac{3.3}{2} \quad \overset{x}{\frac{3.0}{16}}$$

$$\frac{3.4}{2.2} \quad \frac{3.8}{8}$$

✓
103.51

+50

97.4

13

97.5

+50

97.0

14

95.9

+50

95.6

15

95.4

+50

94.9

16

94.6

+12

94.4

+20

94.7

+34 Δ Pt.

94.8

+53

94.9

+57

94.2

17

92.5

+50

90.7

18

90.1

+18

91.0

+31

✓ 99.4

B.M. @ Base of Rail 3.49 100.02

Left

~~L~~

RIGHT

x

$\frac{20}{20}$ $\frac{21}{18}$ $\frac{59}{2}$

61 $\frac{59}{15}$

60

6.5

7.6

7.9

8.1

8.6

8.9

9.1

8.8

8.7

8.6

9.3

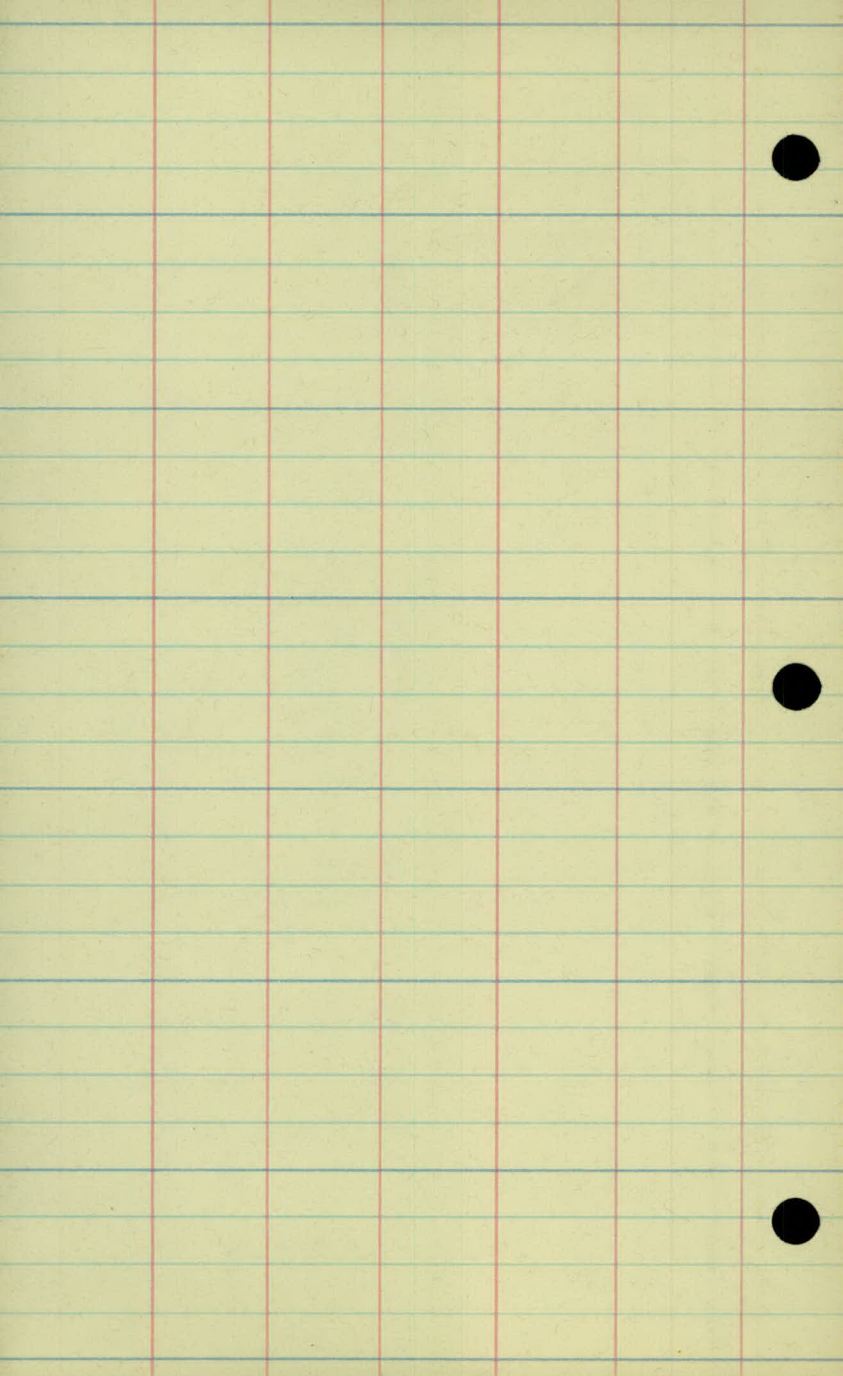
11.0

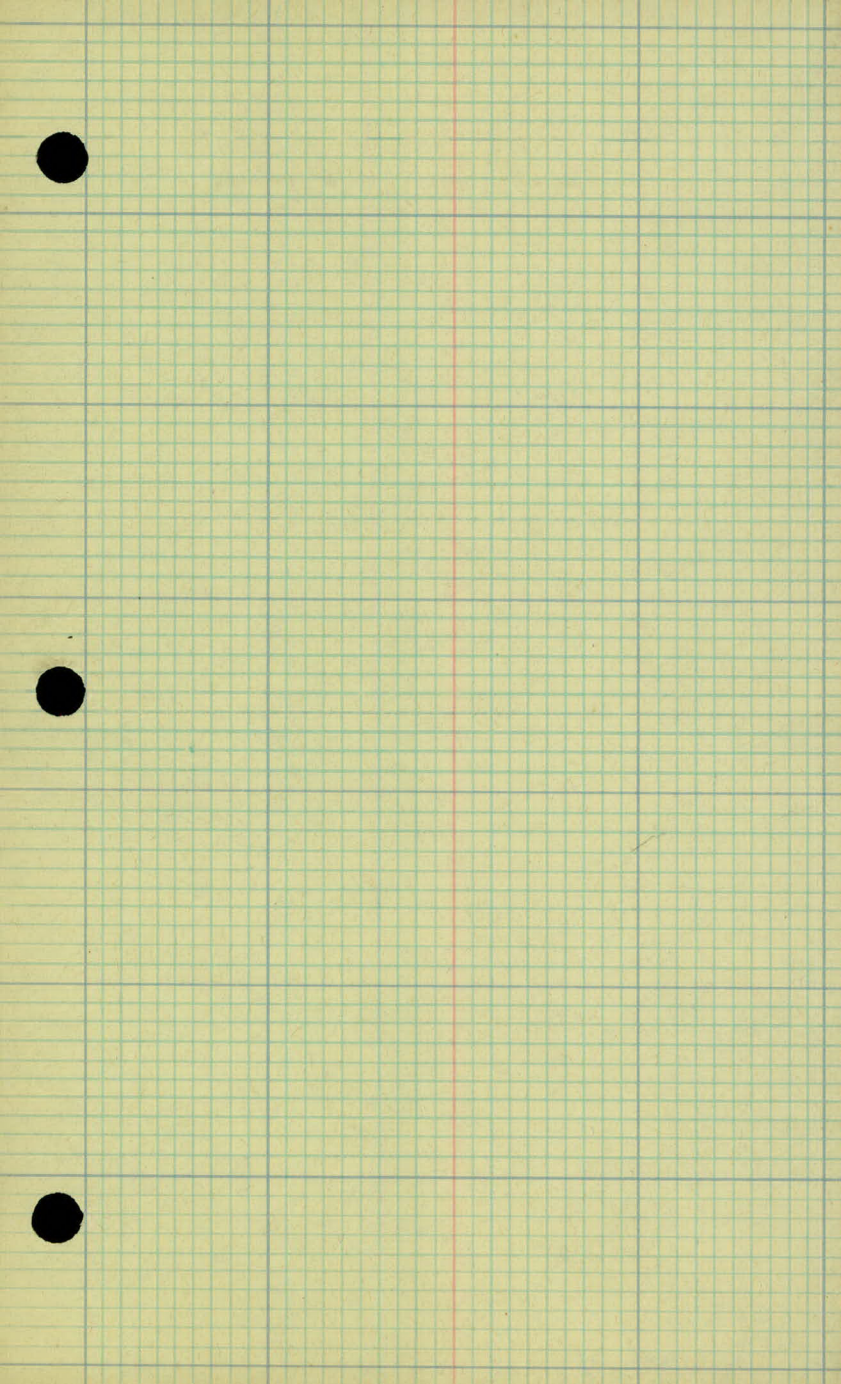
12.8

13.4

12.5

4.1





6

5

4

3

2

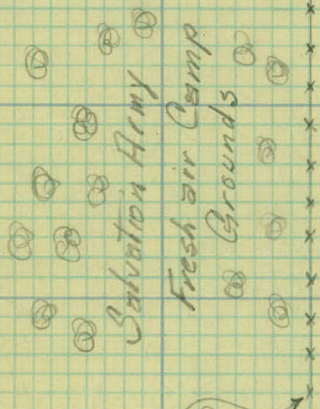
1

0+00

2 St. Ivesco →
 +54 Cor Ho 94' 34.2' 15' 8' Plotted.

+02 Pr. Dr.

+78 Ctr of 4x4 Stone Pier 16 ft.



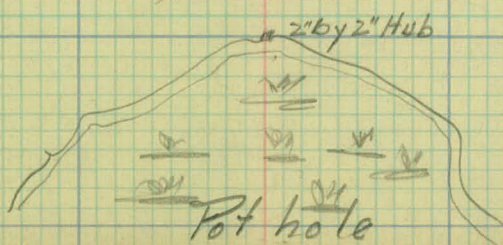
Salvation Army Ground

Wooder Area.

Wooder Area

+72 Int. F.

+81 & Driveway



13

12

11

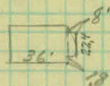
10

9

8

7

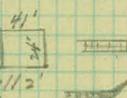
+23 Cor. Ho. 49'
1st. Fr.



+61 Pr. Rd. 1st.

Empty lots
Plotted.

+51 Ctr. 5' Comp. Wk. 17
+41 Cor. Ho. 46 1st. Stucco
+31 End Radius of wall 2'
+27 Ctr. 1' Stone wall 7.3



+93 Cor. Ho. 41'
1st. Fr.



Plotted.

18

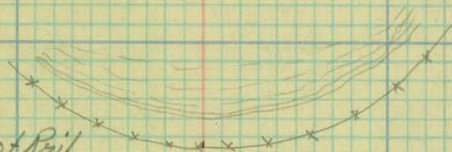
17

16

15

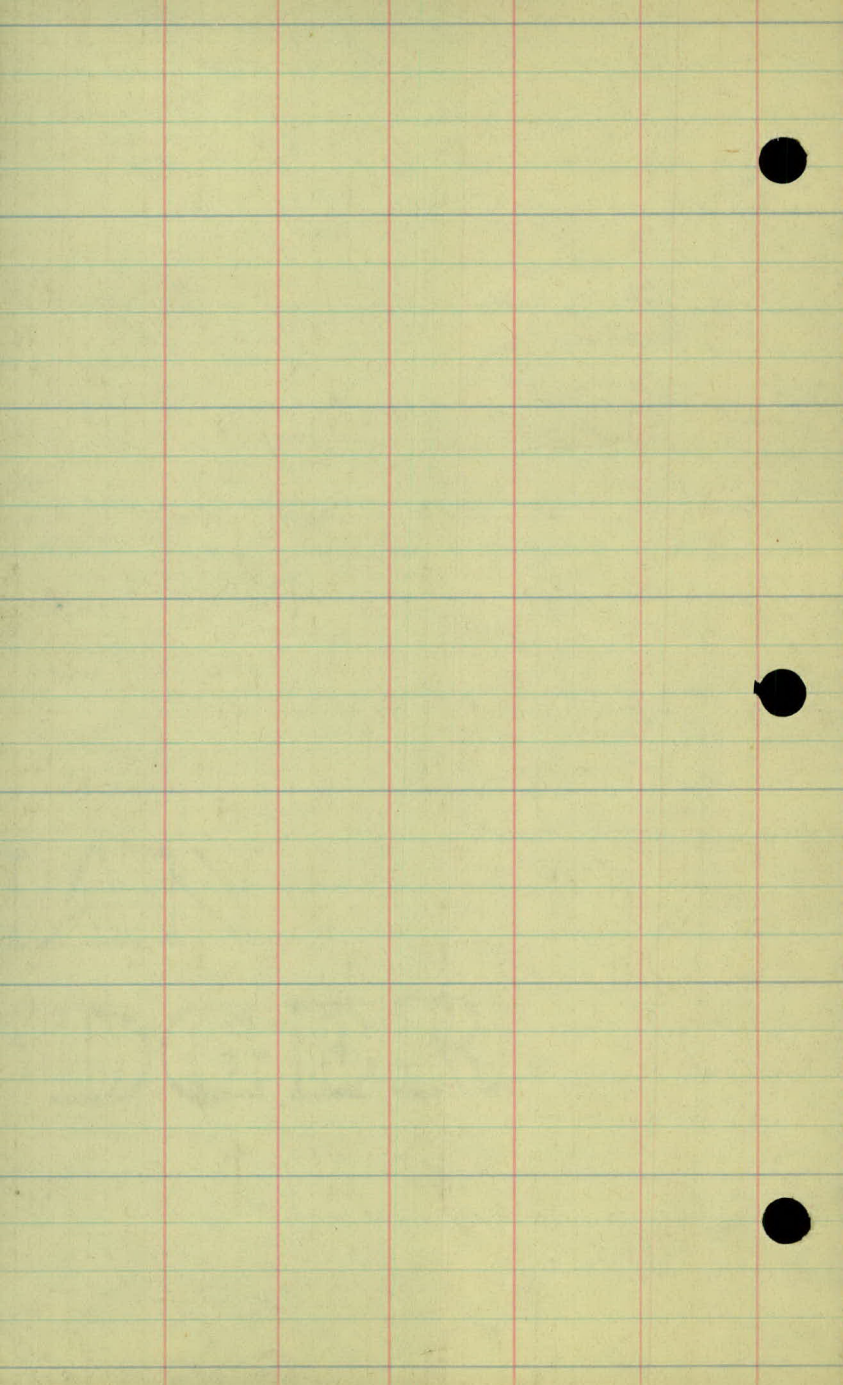
14

+47.30 Base of Rail
on Reservoir



+40 Rd Lt.

Plotted yards



"B" Line

Sta.

Anght Ang. Pt

$16+87^{17} = 16+75^{18}$ "A" line. Ang. $45^{\circ}29'$

$12+70$ P.O.T.

$6+17^{83}$ Ang Pt.

$1^{\circ}15'$ Rt

$3+24$

70° Lt.

$2+00 =$ Pt of Beg. "B" Line

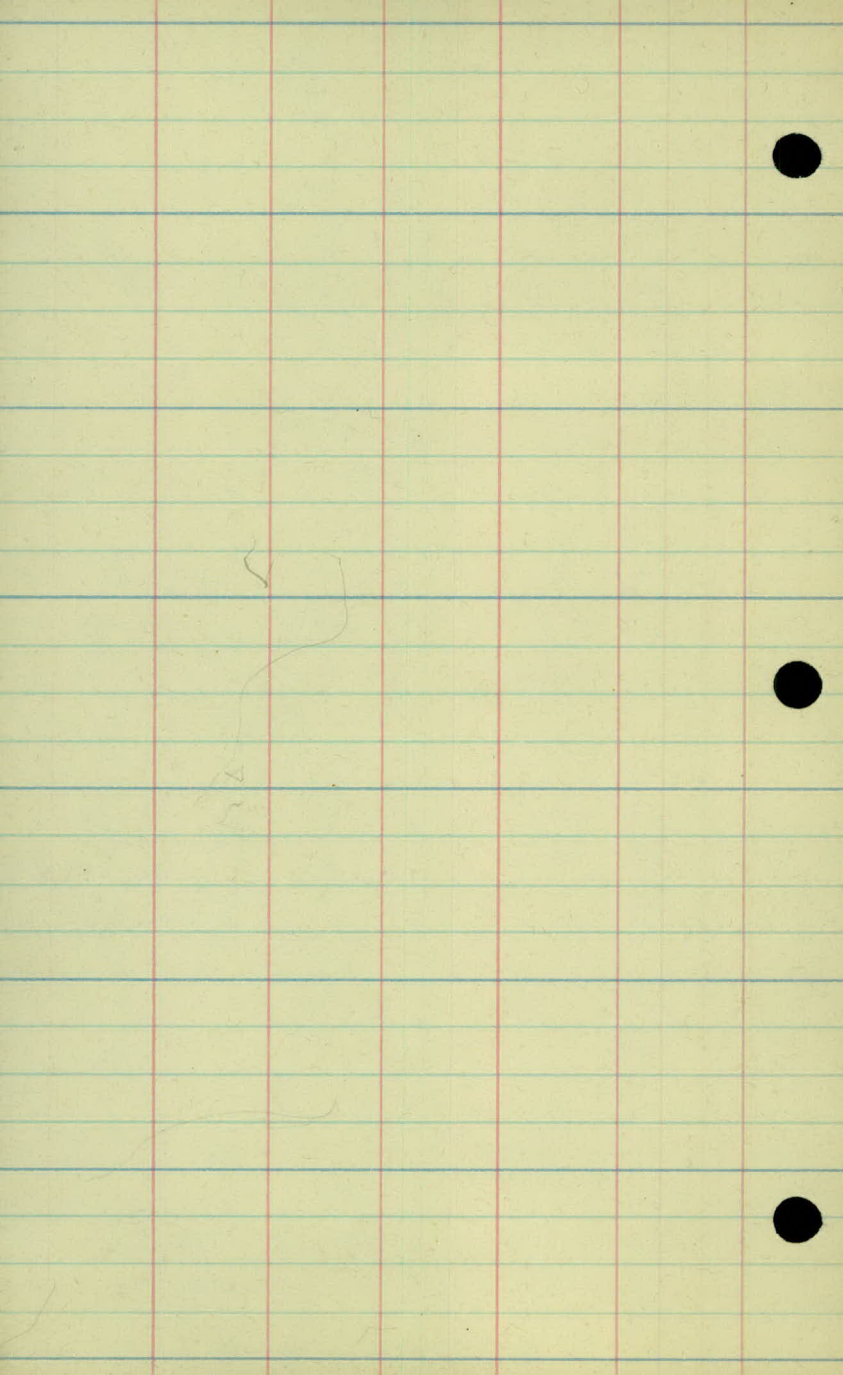
Mpls.
Reservoir.

T.P. 39.52
45° 29' 12"
2" x 2" Hub
64.34
Top Hyd.

6" T.P. 56.02
Ment. 12.41
6.37 P.P.

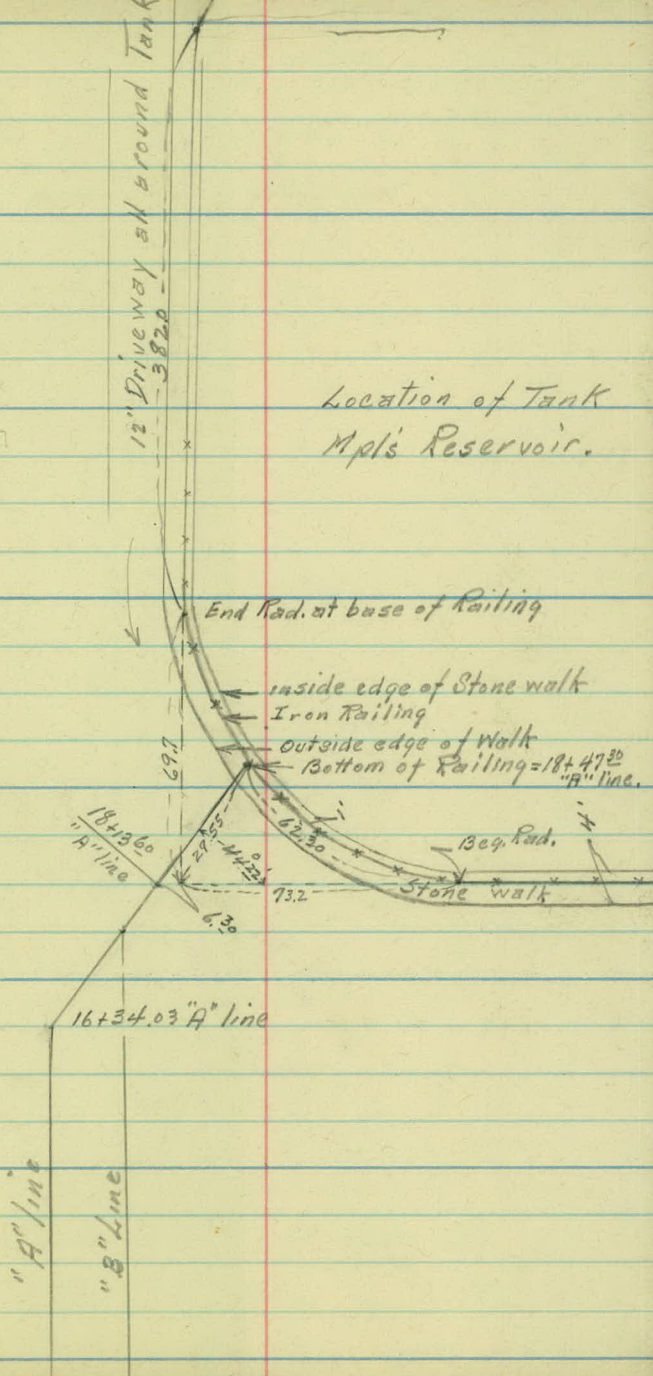
70°
23.52
3+24
2469
P.P.
8" Ost

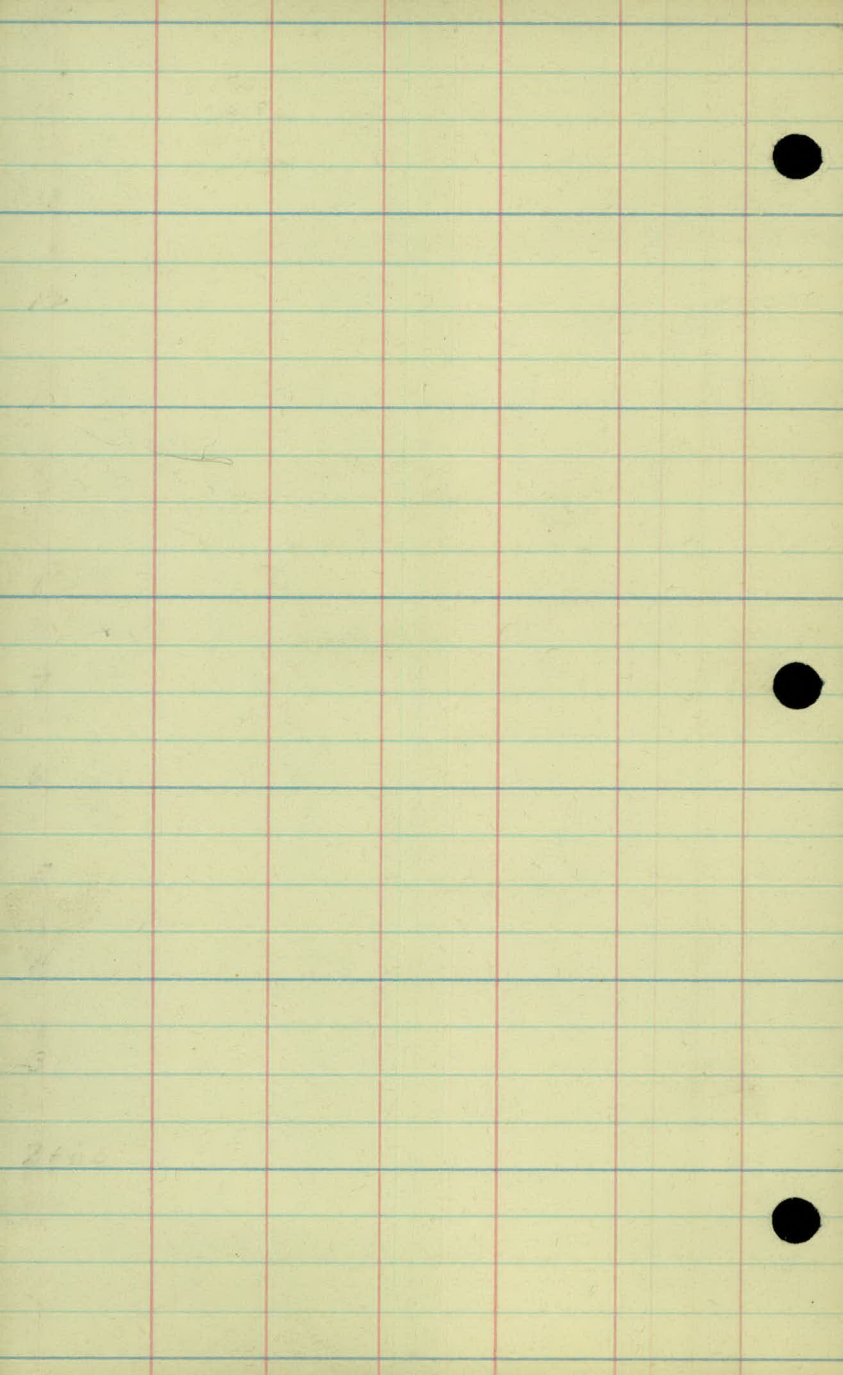
2+00



12" Driveway all around Tank

Location of Tank
Mpls Reservoir.





16+38 P.P. 6.5

15+45 P.P. 7'

13+93 P.P. 6'

12+53 P.P. 6'

11+00 P.P. 5.6

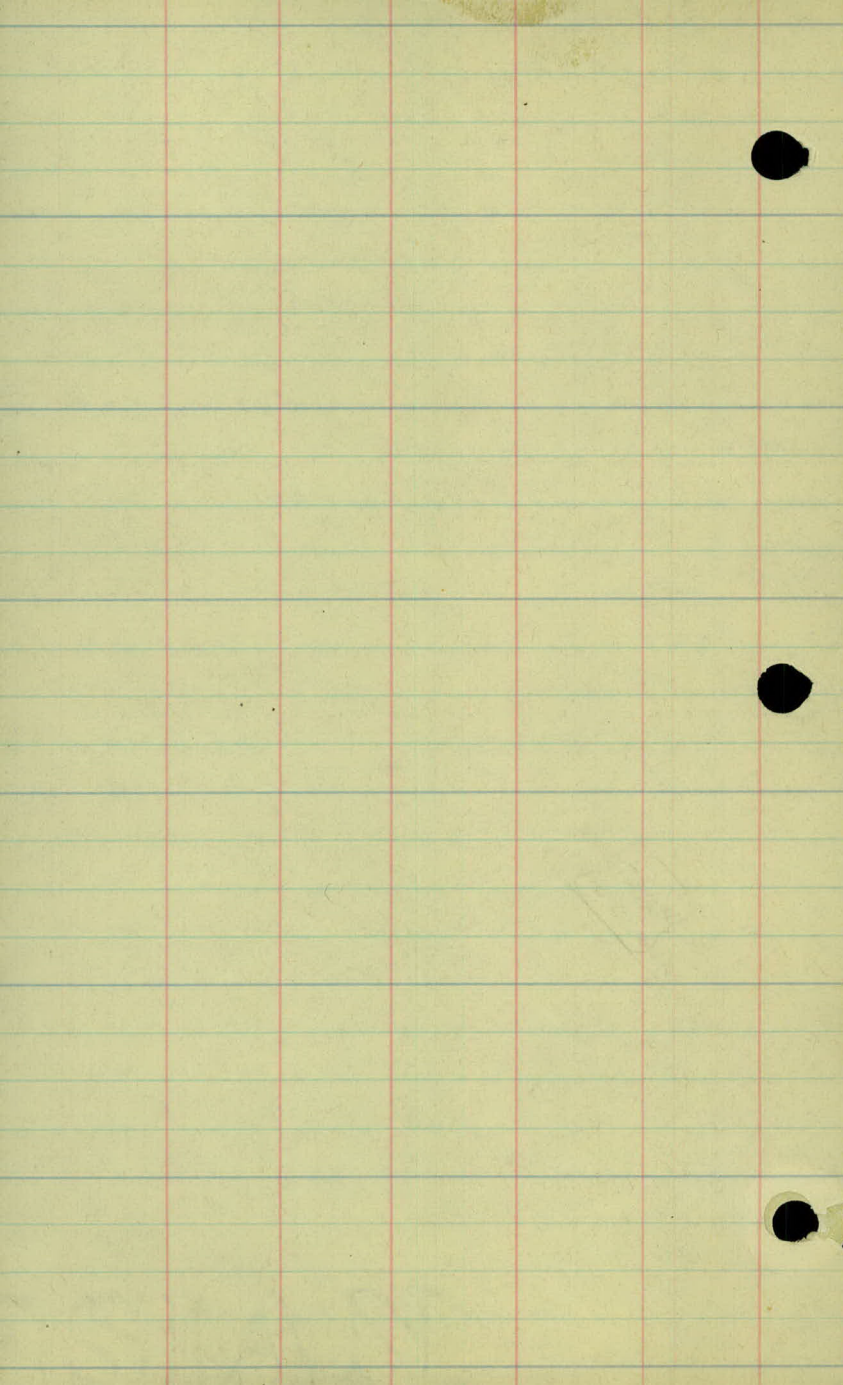
9+53 P.P. 5.5

7+63 P.P. 6.4

6+18-P.P. 7'

4+78 End Tile Dr
8" Tile 2' Rk

4+57 P.P. 4.5



£ Levels

Sta.	+	H.I.	-	Rod	Elev.
B.M.	345	10345 ✓			100.00
16+87.19	Ang Point			9.6	93.85
16+50				8.2	95.25
16+00				8.8	94.65
15+50				8.7	94.75
15+00				8.4	95.05
14+50				7.8	95.65
14+00				6.9	96.55
13+50				6.2	97.25
13+00				5.4	98.05
12+70				6.3	97.15
12+50				7.0	96.45
12+00				8.7	94.75
11+50				10.3	93.15
11+00				12.2	91.25
T.P.	0.49	92.18 ✓	11.76		91.69 ✓
10+50				2.7	89.48
10+00				4.5	87.68
9+50				5.9	86.28
9+00				7.4	84.78
8+50				8.0	84.18
8+00				8.6	83.58
			8.66		83.52 ✓
7+50				9.4	82.78
7+00				12.30	79.88
T.P.	0.73	80.37 ✓	12.54		79.64 ✓
6+50				1.4	78.97

on Reservoir. Assumed.

Sta.	+	HI	-	Rod	Elev
		80.37			
6+00				3.6	76.77
5+50				5.8	74.57
5+00				7.2	73.17
4+78	= inv. Side drain			9.5	70.87
4+50				9.6	70.77
4+00				12.20	68.17
3+50				14.2	66.17
3+24	Ang. Pt.			16.0	64.137
	= ± Road			15.3	65.07