

Dr. 8- BK. 109

OFFICE OF COUNTY ENGINEER
RAMSEY CO. MINN.

Culvert Survey

ARCADE ST. & LABORE RD.

From To

Road Acc't. No.

Date Filed 1936

File D. 8 B. 109

Arcoade & Labors
Culvert Relay.

W. A. Barker
H-14-36

11+13.0 1ton Mon.

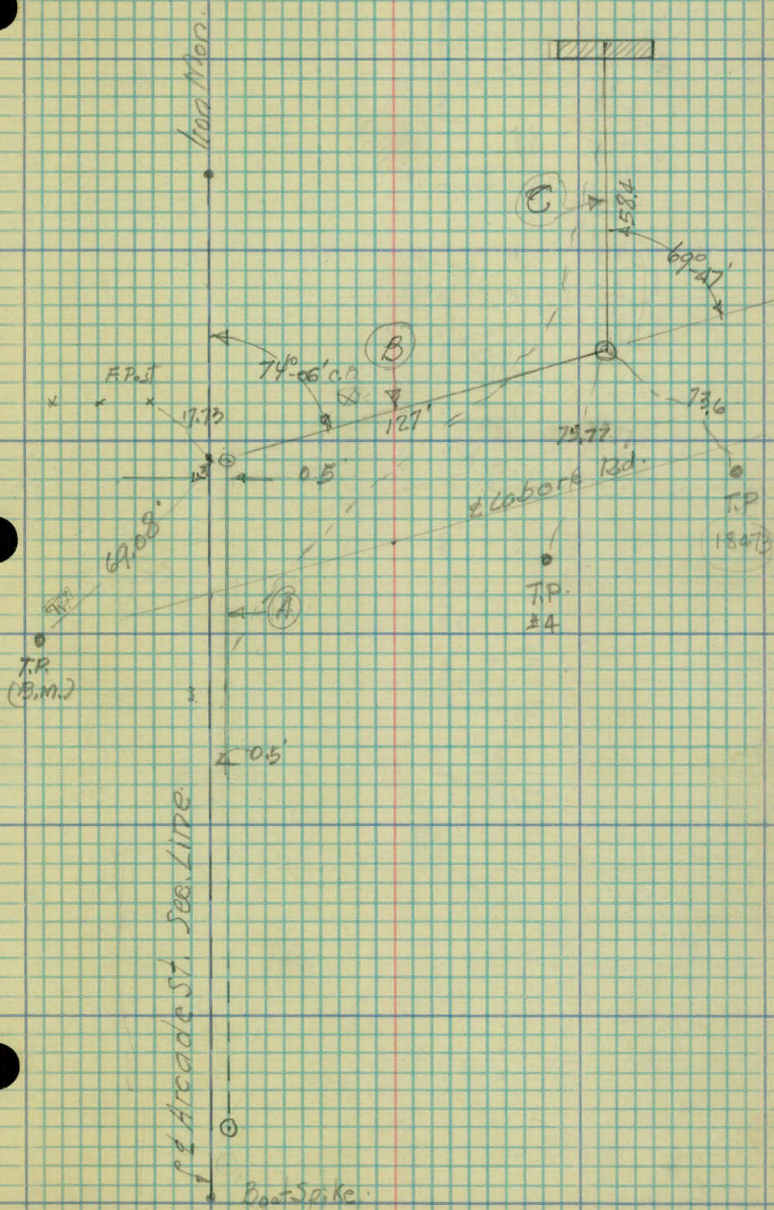
10+96 - 2 M.H. 0.5' Rt.

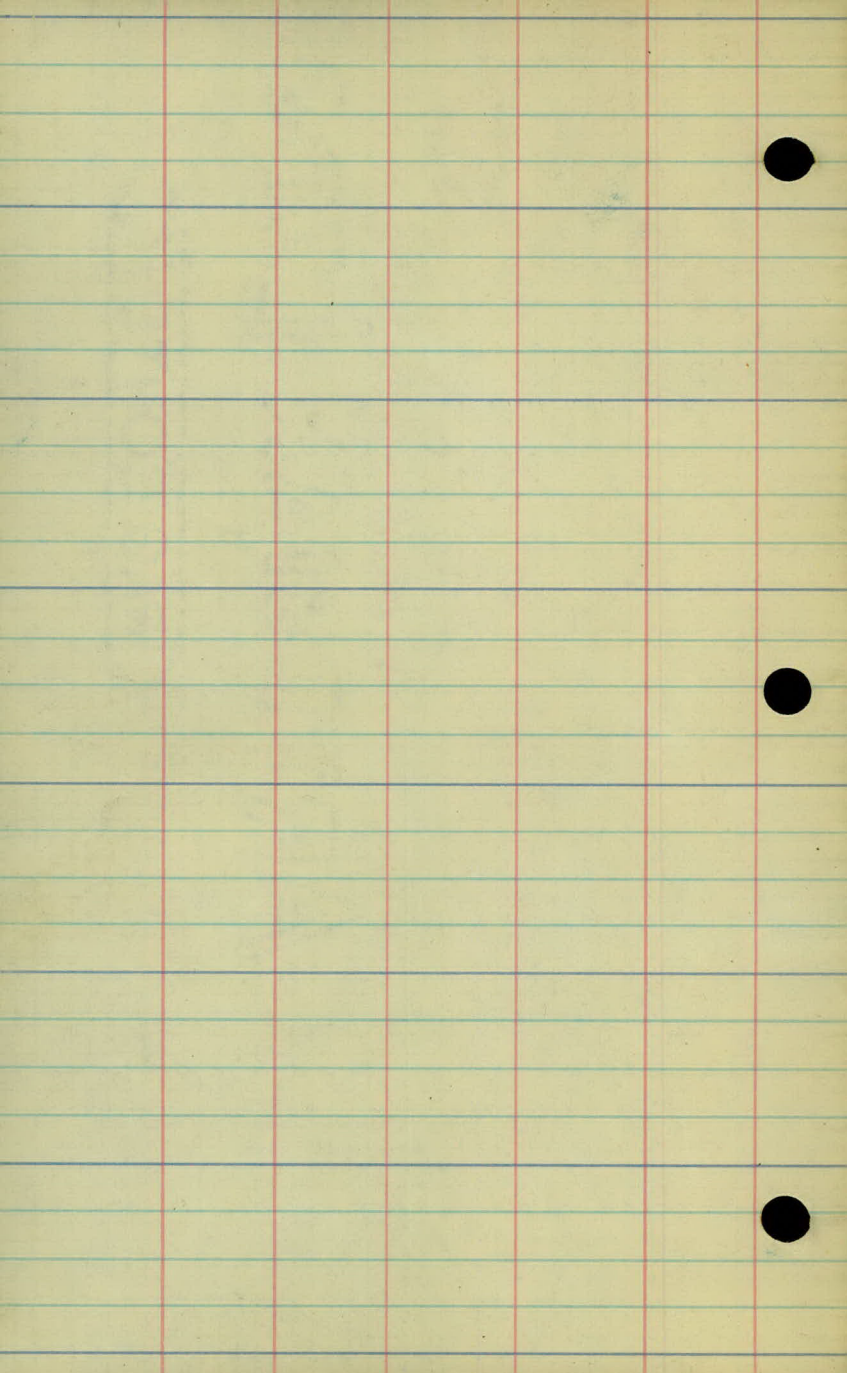
10+74.1 2 Labors Rd.

10+16.4 - Begin Relax

8+87.5 2 Manhole 0.5' Rt.

6+83.2





Arcade & Labore

Culvert Relay

Levels

B.M.	4.34	870.20		865.86	
	9.54	869.65	10.09	860.11	N. Surface
B.M.			4.21	865.44	
T.P.	13.05	882.45	0.25	869.40	
/	11.83	894.02	0.26	882.19	

6+83.2 8.09

7+0 86.8
6.7

8+0 93.5

T.P. 12.76 906.32 0.46 893.56 5 1/2 8+0

8+69

8+72 = W. end C.M. Culv. 30"

8+87.5 ± Nankole 0.5 Rt.

47.790

9+0 901.2

9+0 1.5

46.8

9+50 904.6

W.S. Gervais Lake 4-14-36

Top of old conc. Abat Arcade & Keller Pkwy.

$\frac{9.8}{21.8}$	$\frac{11.2}{21.8}$	$\frac{11.2}{18.3}$	$\frac{9.8}{18.3}$	$\frac{7.8}{7.0}$	$\frac{7.2}{-}$
--------------------	---------------------	---------------------	--------------------	-------------------	-----------------

$\frac{2.7}{22.9}$	$\frac{3.9}{22.9}$	$\frac{3.9}{19.4}$	$\frac{2.7}{19.4}$	$\frac{1.1}{12}$	$\frac{0.45}{-}$
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$\frac{9.5}{23.6}$	$\frac{12.3}{23.1}$	$\frac{12.3}{19.6}$	$\frac{8.2}{16}$	$\frac{7.5}{-}$
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$\frac{12.6}{19.5}$

894.9

$\frac{11.42}{0.5} = \text{Flow Line}$ 6.46 = So. edge M.H. Ring

— 12" Ut N. East

$\frac{24}{24.8}$	$\frac{83}{21}$	$\frac{74}{19.5}$	$\frac{6.0}{17}$	$\frac{5.1}{-}$
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conc.

$\frac{71}{13.6} = \text{Flow Line 12" Ut inlet}$
H.W. 1'x3'-24" H46

$\frac{2.5}{26}$	$\frac{4.0}{22.6}$	$\frac{2.7}{18}$	1.7
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906.32

11.99

917.74

0.57

905.75

10.6

1040

907.9

17.8

10+16.4 = RegRelay (F. Line 30")

15.20

902.54

10+50

911.8

B.N.

3.87

917.74

3.87

913.87

10+24 - S. end 12" VIT

10+74.1 ± Lab ore Rd.

10490

N end Culv.

10+96 = o to B Line

1+27 B Line = o to C Line

T.R

4.04

920.00

915.96

0+58.4

Top A Wall.

4.29

F. Line 30"

9.90

910.10

$$\begin{array}{r} 27 \\ 79 \end{array} \quad \begin{array}{r} 11.8 \\ 72.9 \end{array} \quad \begin{array}{r} 12.9 \\ 21.8 \end{array} \quad \begin{array}{r} 15.9 \\ 18.7 \end{array} \quad \begin{array}{r} 98 \\ 98 \end{array}$$

$$\underline{87}$$

$$\underline{59}$$

Nailin T.R. 48' Lx 10' 48' S. W. Cor. Cu bore + Trade.

$$\frac{9.4}{2.4} = \text{S. end 12" bit}$$

$$\frac{4}{5}$$

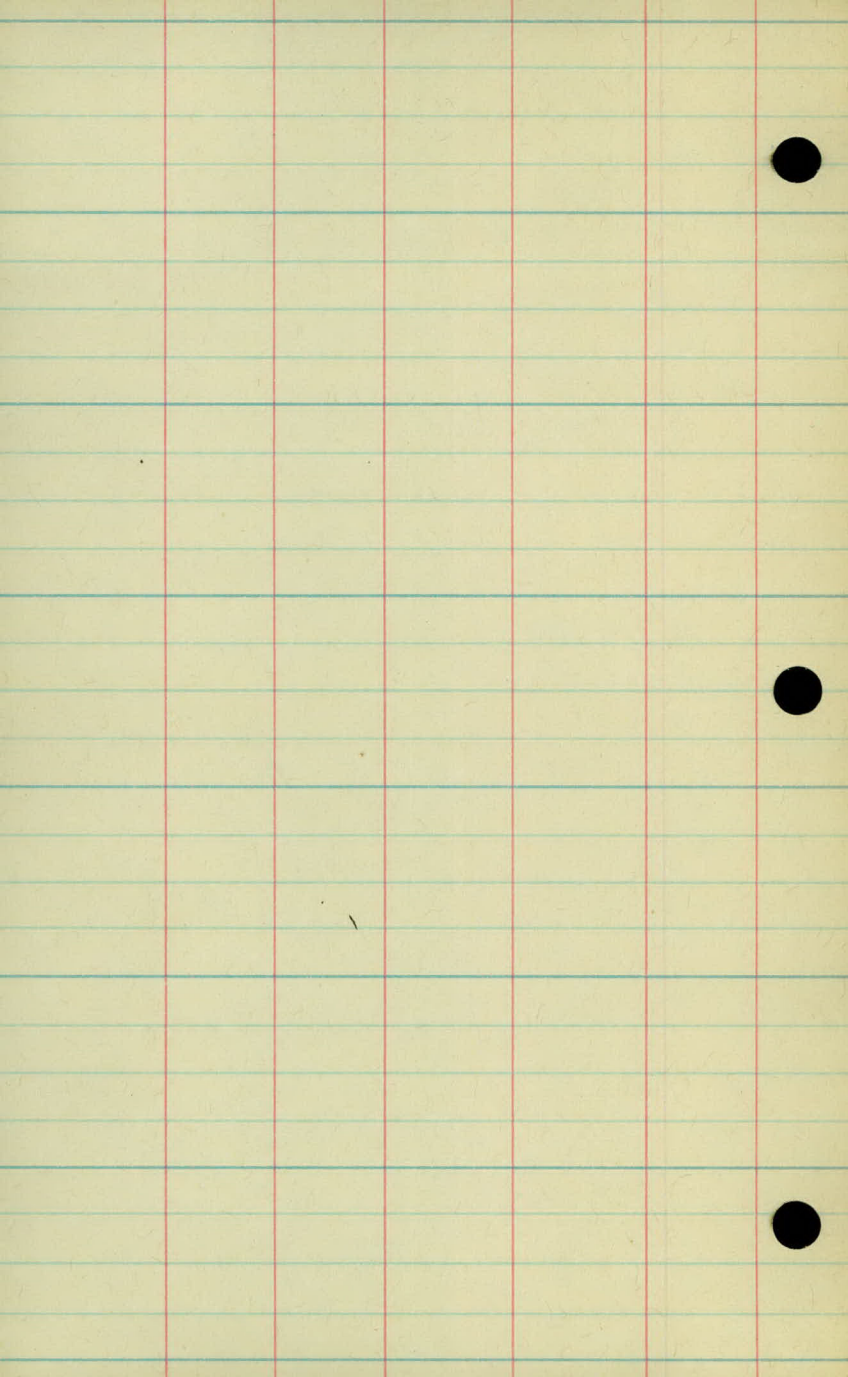
Ditch

$$\begin{array}{r} 908.7 \\ 9.0 \\ \hline 75 \end{array}$$

$$\begin{array}{r} 910.0 \\ 7.7 \\ \hline 28 \end{array} \quad \begin{array}{l} \text{W. end 12" bit} \\ \text{F/Ling} \end{array}$$

$$\begin{array}{r} 912.7 \\ 5.0 \\ \hline \end{array} = \text{Ditch}$$

$$\begin{array}{r} 914.3 \\ 3.4 \\ \hline \end{array} \quad \text{Prop Top C.B.}$$



State for Sewer Pipe.

		π	Rod	Elev.
B.M.	6.13	920.00		913.87

10+16.4

10+50

10+70

10+96 = 2 M.H.

Eq.
-0+10
-0+00

0+75

0+50

0+75

1+00

1+27
0+0

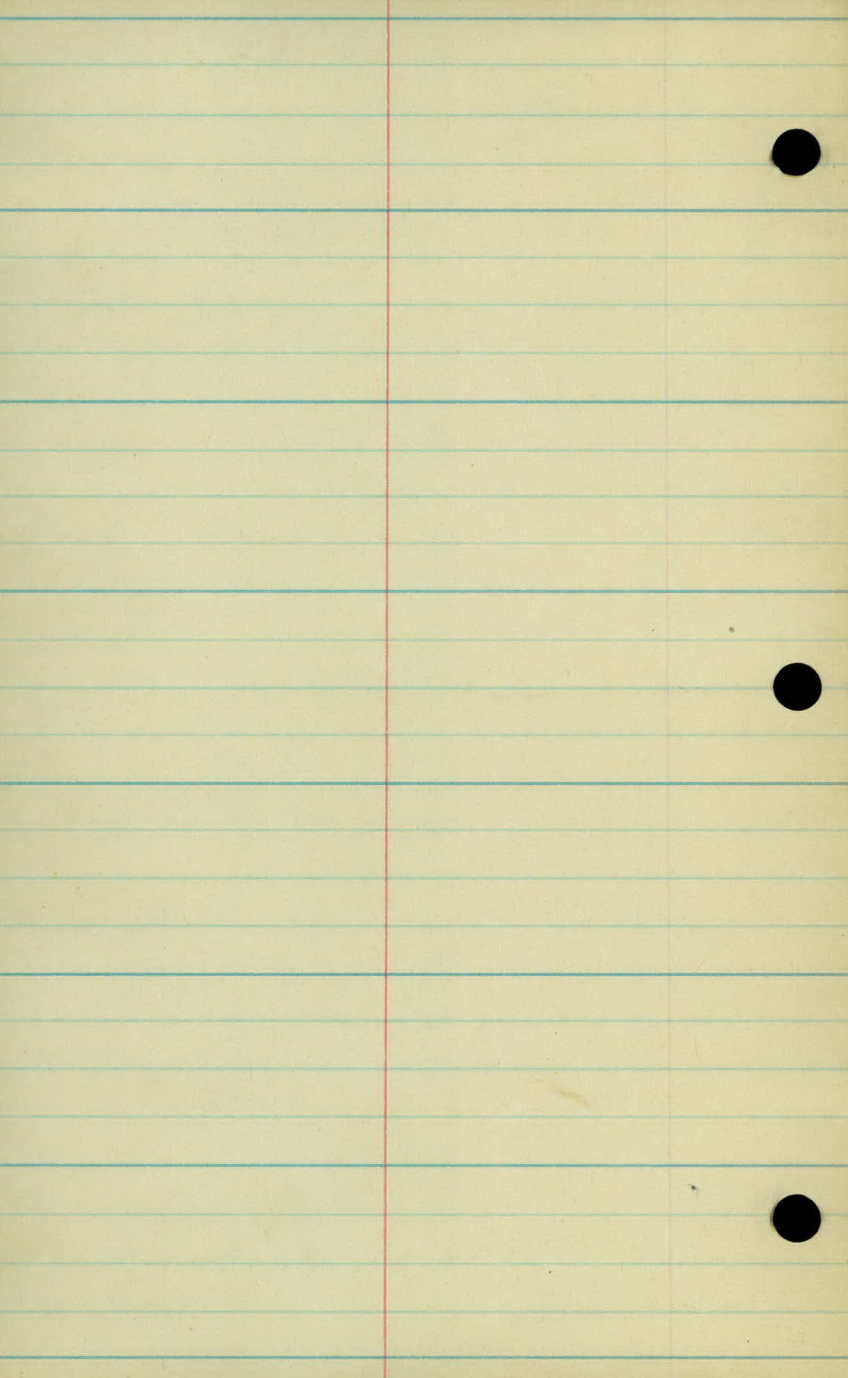
0+75

0+52

0+56

0+58.4 - H. ed. W. W. Fl. 11.0

	Top Stake Elev.	Grade Elev.	Cut.
10.35	909.65	902.54	7.11
7.57	912.43	903.88	8.55
5.86	914.14	904.68	9.46
6.08	913.92	905.72	8.20
6.75	913.75	905.47 905.72	8.28
6.10	913.90	906.35	7.55
6.10	913.90	906.97	6.93
5.25	914.75	907.60	7.15
4.70	915.30	908.22	7.08
4.13	915.87	908.90	6.97
4.20	915.80	908.90	6.90
1.48	912.52	909.42	9.10
2.02	917.98	910.06 910.10	7.92



$$\begin{array}{r}
 765 \overline{) 7.56} \quad 12.85 \\
 \underline{530} \\
 2260 \\
 \underline{2170} \\
 1400 \\
 \underline{1375} \\
 75
 \end{array}$$

$$\begin{array}{r}
 5265 \quad 3265 \quad \checkmark \\
 2120 \quad 1325 \quad 3265 \\
 \underline{285} \\
 1325 \\
 2120 \\
 \underline{530} \\
 725625
 \end{array}$$

$$\begin{array}{r}
 893.56 \\
 12.76 \\
 \hline
 906.32 \\
 11.42 \\
 \hline
 894.90
 \end{array}$$

$$\begin{array}{r}
 6785 \quad 1146 \\
 \underline{80} \quad \underline{692} \\
 72800 \quad \checkmark \\
 902.54 \quad 379.64 \quad \checkmark \\
 904.82 \quad 712.5 \quad 3.184 \\
 725
 \end{array}$$

$$\begin{array}{r}
 10 + 16.4 \quad 902.54 \\
 8 + 87.5 = 894.9 - \text{H.L.} \\
 \hline
 129 \quad 7.64 = \text{Drop} \\
 \checkmark \quad 129 \overline{) 7.64} \quad 15.3\% \\
 \underline{725} \\
 390 \\
 387
 \end{array}$$

$$\begin{array}{r}
 902.54 \\
 \hline
 905.72 \\
 912.1 - \text{T.M.H.} \\
 905.7 \\
 \hline
 7.0 \\
 127 \\
 25
 \end{array}$$

$$\begin{array}{r}
 906.32 \\
 11.42 \\
 \hline
 894.9
 \end{array}$$

$$\begin{array}{r}
 3.81 \\
 905.72 \quad 127 \\
 \hline
 909.53 \quad 25 \\
 635 \\
 254 \\
 \hline
 3.175 \\
 905.72 \\
 \hline
 908.90 \quad 143 \\
 89 \\
 5.4
 \end{array}$$

$$\begin{array}{r}
 50.0 \\
 16.4 \\
 \hline
 33.6 \\
 4 \\
 \hline
 1.344 \\
 10.4 \\
 \hline
 2.50 \\
 .625
 \end{array}$$

$$\begin{array}{r}
 902.54 \\
 1.34 \\
 \hline
 903.88 \\
 .8 \\
 \hline
 904.68 \\
 1.04 \\
 \hline
 905.72 \\
 .625
 \end{array}$$

$$\begin{array}{r}
 906.345 \\
 \hline
 906.970 \\
 .625 \\
 \hline
 907.595 \\
 \hline
 908.220 \\
 68 \div 2.07 \\
 \hline
 .90 \quad .52
 \end{array}$$

$$910.10$$

$$908.9$$

$$\begin{array}{r}
 58.4 \div 1.20 = 2.09 \\
 116
 \end{array}$$

$$400$$

$$406$$

$$908.90$$

$$52$$

$$\begin{array}{r}
 908.9 \\
 116 \\
 \hline
 1035 \\
 116 \\
 \hline
 206
 \end{array}$$

H.W. Wall

12" x



58.4

8' 25"
6' 50"
7' 47"

7' 42"

127'

12/19

4' 25"

M. Hole 18' 96

10' 70

10' 50

Begin Delay 10' 16.4



8' 25"

8' 50"

8' 25"

4' 25"

-0' 10

11

M.H.



Over.

Arcade & Labore

68.816

81.2
00.00

707
96.516

W.B

87.4

91.774

66.11

90.5.06

17.1
90.6.32

12.76

95.5.68

94

894.08

11.83

882.19

45.206

02.51

91.7.16

02.51

57.2

12.45

01.016

6.6

90.0

(27.5)

7.6
1.1
5.5

18.816

18.8

91.7.16

17.7

3.4

10+96.0

10+16.4

79.6

90.254

79.6

4%

30'
cm.

Top M.H. 912.7

905.72

12.1

34.5 cm

Top M.H. 914.3

908.90

910.10

79.6

127.0

58.4

265.0

910.10

902.54

- 7.56

10.1
8.9
1.2