

Bk. 16 - Dr. 16

OFFICE OF COUNTY ENGINEER
RAMSEY CO. MINN.

_____ Drainage _____ Survey

_____ DITCH No. 7 _____
From Edgerton St. To Centerville Rd.

Road Acc't. No. _____

Date Filed 10-26-32 File _____

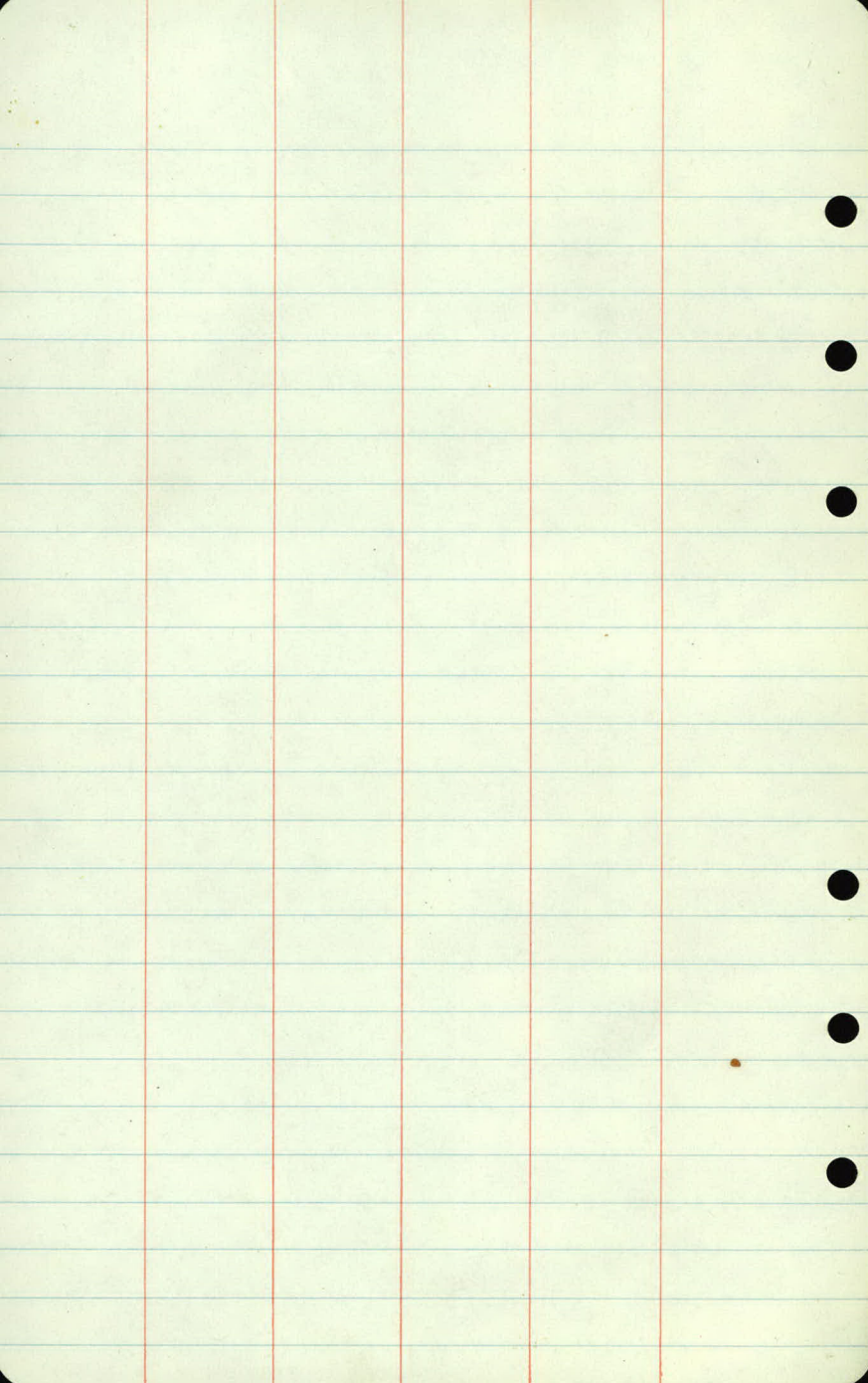
SURVEY DITCH #7

Edgerton St to Centerville Rd

Align - 1-4

Topog - 5-10

Xsections - 11-15



1-23-39
K. R.
L. G.
L. B. H.
M. J. G.

1

Alignment

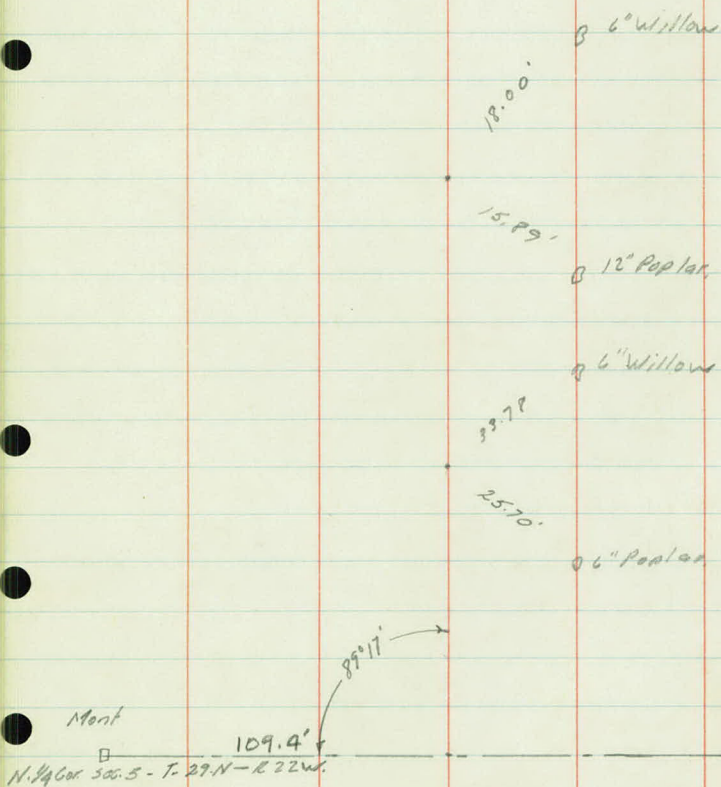
Sta	Point	ΔLt	ΔRt
-----	-------	-------------	-------------

13	+48.6	P.I.	22°18'
----	-------	------	--------

4	+43.58	P.I.	31°22'
---	--------	------	--------

3	+0.9	P.I.	33°19'
---	------	------	--------

0	+0.0		
---	------	--	--



Sta	Point	ΔLt	ΔRt
-----	-------	-------------	-------------

23	+70.7	P.I.	$12^{\circ}56'$
----	-------	------	-----------------

21	+83.5	P.I.	$17^{\circ}11'$
----	-------	------	-----------------

18	+100.87	P.I.	$19^{\circ}56'$
----	---------	------	-----------------

17	+91.57		
----	--------	--	--

16	+40.95	P.I.	$13^{\circ}25'$
----	--------	------	-----------------

$$\begin{array}{r} 2 \overline{) 68^{\circ} 55'} \\ \underline{54} \\ 14 \end{array}$$

3" Box Elder

7.88'

4" Box Elder

9.15

N. W. Cor.
Sec. 5.

& Centerville Rd.

293.75

34° 43'

10" Box Elder

17.70

8" Willow

B

0

Sta Point Δ Lt. Δ Rt.

75.71
10.5
86.21

31 +90.41 = Ctr. Cross Gate Under Geaterville Rd.

31 +52.51 P.I.

31°47'

2.9 +38.35 P.I.

56°41'

2.6 +36.55 P.I.

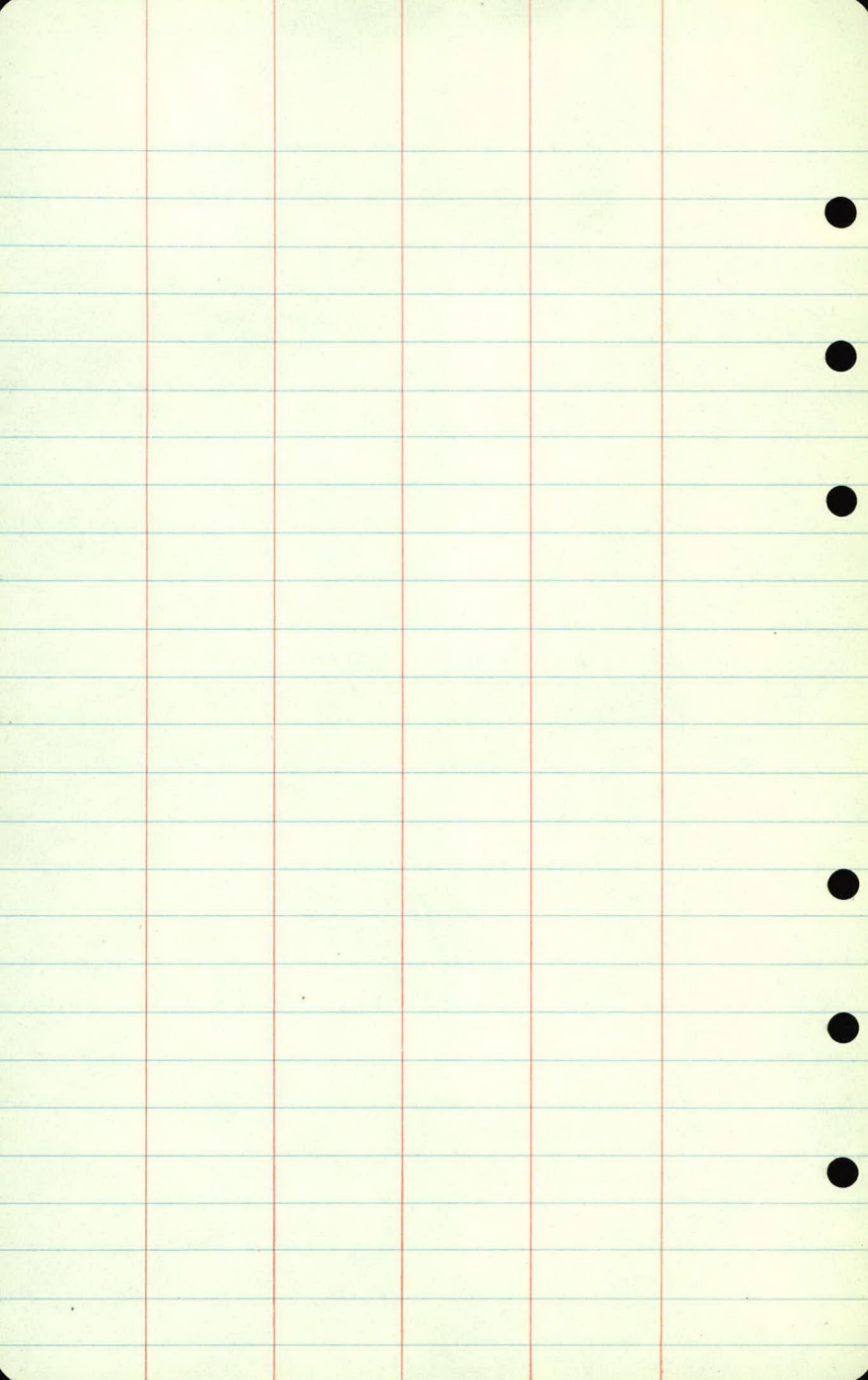
6°27'

14.60'

* F.R.

11.41'

* F.R.



Topography

85 Willow, Brush & Trees & stumps
+ 60 End Large Trees

5 Ditch - 16'

4 Ditch - 15'

+ 50 Ditch - 14'

3 Ditch - 17'

+ 50 Ditch - 15'

2 Ditch - 17'

+ 91 - Hole where piss pots
are dumped - 4'

+ 58 - N. W. Cor. Garage - 29'

+ 90 - Bes. Tree & stumps & 100 ft.

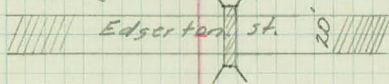
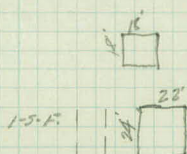
+ 20 - N. W. Cor. Ho. - 14'

1 Ditch - 16'

+ 20 - Ent. - 62'

0100

Moss. Culv. - 38.5' long, - 6' wide,
5' deep.
Wing Walls - 15' apart 4' from
End of Culv.



ctr of ditch has 6" to 15" willows & poplars

12

Ditch-16'

+60 -10" Elm -10'

11

10

Ditch-16'
+94-6" Typ Elm.+75-6" Tw Willows
+63-12" Willow

+25-12" Tw Willow.

9

+75-8" Tw Willow in Ditch
End Brush & Stumps.

8

Ditch-16'

7

Ditch-17'

+75-8" Tw Willow in Ditch
End Brush & Stumps

6

Ditch-16'

1

2

3

4

5

6

7

8

9

10

11

12

19

18

+92-End Trees in Ditch

17

+12-Box. Trs. in Ditch - 8" to 12" Trees

+96-36" E/m - 8'
* F.C. Cor.

+90-12" Trs Willow 0.0

+46-F.C. Cor - 12'
+44-Kang Tie

16

+12-8" E/m - 3'
+07-12" Box Elder - 5'

15

+10-10" Box Elder - 7'
+06-5" Tw. Box Elder - 3'
+82-15" Poplar - 3'

14

+48-6" E/m - 3'

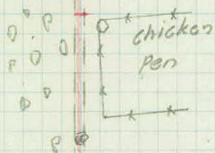
+50-Ditch 0.0

13

Ditch - 13'

cult

cult.



chicken
pen

Clean ditch from here to
Sta 281+46

+46-18" Willow -2'

26

FC-10'

25

Wire

FC-14'

+79-Beg Brush-10 Ditch

+27-End 36" C.M.-00'

+25-FC 1st E

+28-FC Cor-16'

24

End Box Elders
Ditch -1'

+09-36" C.M.-0.0

+71-End Box Elders-1'

+50-Ditch-2'

23

+82-Group Box Elders-6'

22

+85-Beg. Box Elders-4'

+51-Group-4-5" B. Elders-2' +50-Ditch-1'

+25-Ditch-3'

21

+11-18" Willow-2'

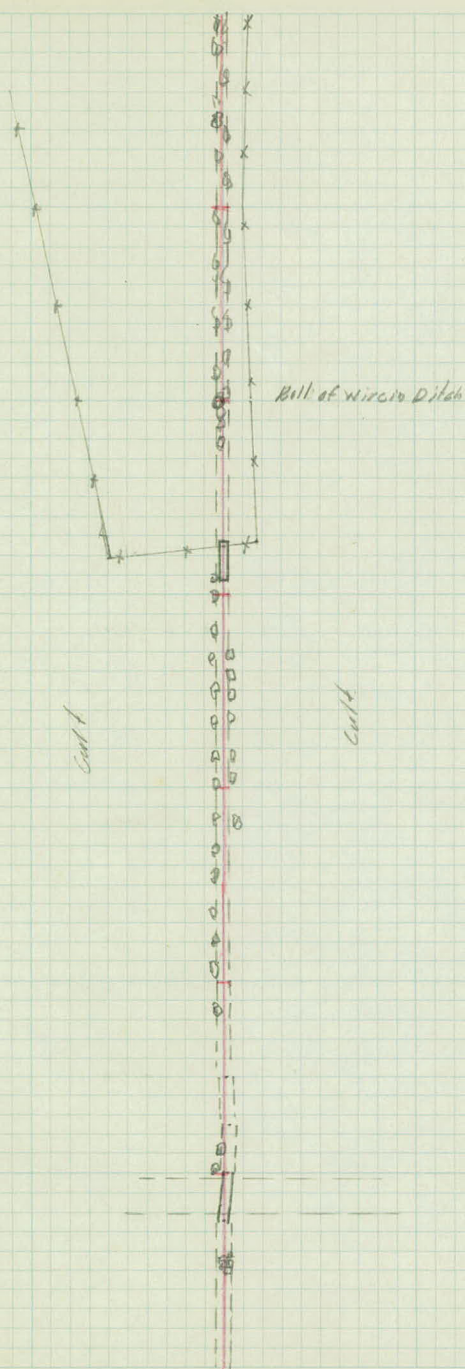
+03-18" Willow-5'

End 42" C.M.-1'

+76-End 42" C.M.-00

+52-Group-6-12" Willows 0.0

20



190. 41- Ctr. - Cong. Arch Culm.

154- Ditch Lt.

110- End 36" C.M.

188- End 36" C.M. Culm.

30

138- Ditch - 22' Ext. of P.I.

29

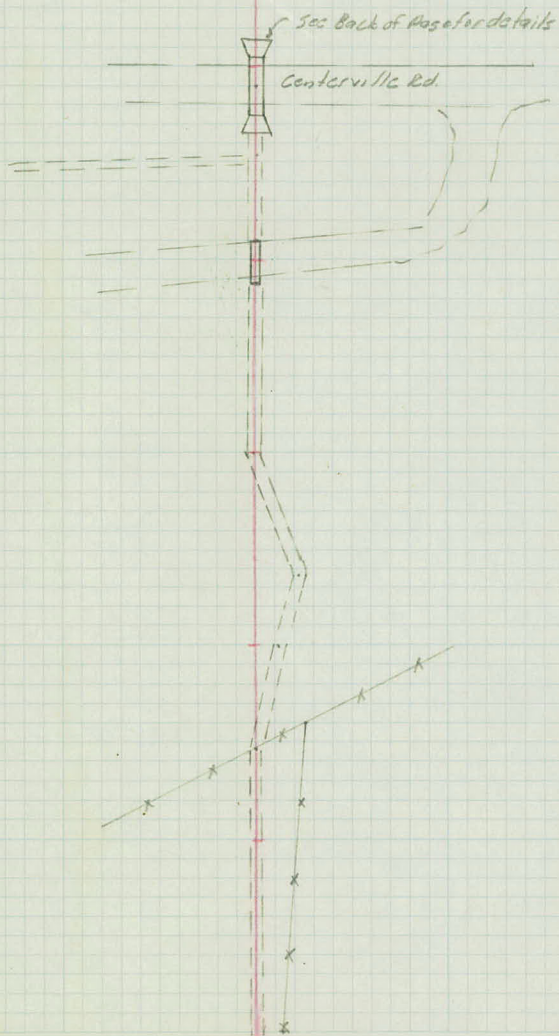
Ditch - 11'

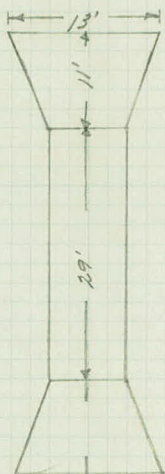
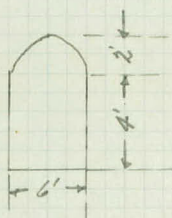
140- Fc Cor - 25'
196- Fc. X5 R Ditch - 9.0

28

27

Fc. - 14'





x-sections

sta	+	x	-	Elev.
B.M.	2.29	911.24		908.95

0 +

+25

+33

1

2

3

4

T.P.	4.22	910.73	4.73	906.51
------	------	--------	------	--------

+44

5

6

7

T.P.	6.76	911.79	5.70	906.03
------	------	--------	------	--------

B.M.			2.81	908.98
------	--	--	------	--------

908.95

k

Rt

Top Mont. N 1/4 Cor. Sec. 5-29-22

902.2

$$\frac{90}{150}$$

02.1

$$\frac{71}{35}$$

$$\frac{91}{150}$$

$$\frac{66}{650}$$

01.8

$$\frac{45}{11} \frac{62}{15} \frac{92}{17} \frac{94}{19} \frac{92}{26} \frac{49}{35} \frac{42}{35}$$

01.2

$$\frac{45}{7} \frac{50}{14} \frac{95}{16} \frac{100}{19} \frac{96}{26} \frac{53}{35} \frac{48}{35}$$

00.9

$$\frac{51}{7} \frac{57}{15} \frac{100}{17} \frac{103}{19} \frac{102}{26} \frac{65}{35} \frac{52}{35}$$

00.7

$$\frac{71}{8} \frac{67}{15} \frac{105}{17} \frac{105}{19} \frac{56}{31} \frac{51}{35}$$

900.4

10.3

$$\frac{55}{7} \frac{59}{13} \frac{108}{17} \frac{108}{26} \frac{46}{35} \frac{44}{35}$$

00.4

$$\frac{10.3}{100}$$

00.2

$$\frac{55}{6} \frac{58}{14} \frac{105}{18} \frac{105}{24} \frac{58}{35} \frac{59}{35}$$

$$\frac{00.2}{99.48}$$

99.9

$$\frac{50}{8}$$

$$\frac{56}{14} \frac{108}{18} \frac{108}{25} \frac{65}{35} \frac{65}{35}$$

877.9

$$\frac{62}{7} \frac{66}{15} \frac{113}{19} \frac{113}{26} \frac{72}{35} \frac{72}{35}$$

Sta	+	Σ	-	Elev	
B.M.	2.28	911.23			908.95
T.P.	1.76	905.46	7.53	903.70	
8	+00				
9					
10					
11					
12					
13					
T.P.	1.57	901.64	5.39	900.07	
14				95.8	
15				95.2	
16				95.0	
17				94.6	
18				93.6	
T.P.	2.78	902.52	1.90	899.74	

457.8

$$\begin{array}{r} 99.7 \\ \hline 29 \frac{32}{7} \frac{54}{13} \frac{58}{16} \frac{55}{19} \frac{35}{23} \frac{31}{35} \end{array}$$

$$\begin{array}{r} 99.7 \\ \hline 41 \frac{40}{10} \quad \frac{58}{16} \quad \frac{32}{23} \frac{29}{35} \end{array}$$

$$\begin{array}{r} 97.7 \\ \hline 41 \frac{48}{9} \frac{78}{14} \frac{78}{16} \frac{77}{18} \frac{23}{25} \frac{24}{35} \end{array}$$

$$\begin{array}{r} 97.7 \\ \hline 49 \frac{50}{7} \quad \frac{75}{14} \quad \frac{57}{30} \frac{56}{35} \end{array}$$

$$\begin{array}{r} 97.1 \\ \hline 52 \frac{50}{7} \frac{78}{11} \frac{83}{15} \frac{84}{18} \frac{64}{21} \frac{64}{35} \end{array}$$

$$\begin{array}{r} 96.4 \\ \hline 65 \frac{66}{2} \quad \frac{91}{13} \quad \frac{71}{19} \frac{72}{35} \end{array}$$

$$\begin{array}{r} Lt. \quad \quad \quad Rt. \\ 31 \frac{31}{15} \frac{56}{7} \frac{58}{3} \frac{51}{4} \frac{33}{7} \frac{36}{15} \end{array}$$

$$\begin{array}{r} 42 \frac{42}{15} \frac{42}{8} \quad \frac{64}{15} \quad \frac{47}{7} \frac{44}{15} \end{array}$$

$$\begin{array}{r} 38 \frac{35}{15} \frac{62}{11} \frac{64}{4} \frac{71}{2} \frac{71}{1} \quad \frac{66}{15} \frac{61}{4} \frac{45}{8} \frac{38}{16} \end{array}$$

$$\begin{array}{r} 50 \frac{53}{15} \frac{67}{10} \frac{70}{5} \frac{75}{2} \frac{70}{1} \quad \frac{69}{4} \frac{56}{19} \frac{52}{15} \end{array}$$

$$\begin{array}{r} 59 \frac{61}{15} \frac{79}{9} \frac{79}{4} \quad \frac{80}{3} \frac{80}{9} \frac{51}{9} \frac{41}{15} \end{array}$$

Top Stamp.

Sta	+	X	-	Elev
		902.52		
19				96.2
20				96.0
20	+76	Flow N. End 46" G. M. Culv.		891.53
21		Flow S. End Culv.		
21				
22				
23				
T.P.	5.33	898.09	9.76	892.76
24				
	+09	N. End 36" G. M. Culv.		889.80
	+27	S. End 36" G. M. Culv.		
25				

Lt.

K

Rt.

$$\frac{71}{15} \quad \frac{70}{6}$$

$$\frac{73}{5}$$

$$\frac{77}{10} \quad \frac{77}{15}$$

$$\frac{74}{15} \quad \frac{84}{7} \quad \frac{96}{5} \quad \frac{98}{2}$$

$$\frac{95}{5} \quad \frac{85}{13} \quad \frac{56}{15} \quad \frac{53}{15} \quad L.O.$$

1099

$$\begin{array}{r} 777 \\ 230 \\ \hline 1127 \end{array}$$

1127

$$\frac{75}{15} \quad \frac{84}{8} \quad \frac{97}{5} \quad \frac{99}{5} \quad \frac{95}{11} \quad \frac{73}{15} \quad \frac{70}{15}$$

$$\frac{80}{15} \quad \frac{86}{11} \quad \frac{107}{6} \quad \frac{111}{3} \quad \frac{111}{9} \quad \frac{102}{11} \quad \frac{92}{15} \quad \frac{90}{15}$$

$$\frac{87}{15} \quad \frac{91}{9} \quad \frac{115}{5} \quad \frac{121}{5} \quad \frac{117}{7} \quad \frac{103}{10} \quad \frac{93}{15} \quad \frac{90}{15}$$

$$\frac{52}{15} \quad \frac{53}{10} \quad \frac{77}{5} \quad \frac{78}{2} \quad \frac{82}{1} \quad \frac{82}{1} \quad \frac{81}{2} \quad \frac{76}{6} \quad \frac{44}{10} \quad \frac{60}{15} \quad \frac{55}{15}$$

$$\frac{829}{5}$$

$$\frac{848}{5}$$

$$\frac{61}{15} \quad \frac{42}{11} \quad \frac{88}{7} \quad \frac{90}{3} \quad \frac{92}{4} \quad \frac{90}{8} \quad \frac{72}{15} \quad \frac{45}{15}$$

Sta.	+	π	-	Elev.
		898.09		

26

T.P.	1.21	899.34	8.96	889.13
------	------	--------	------	--------

27

28

29

30

+5.8 Flow Line E. End 36" C.M.

31 +1.0 Flow Line W. End 36" C.M.

+5.4 to Ditch Lt.

+75.9 Flow Line Conc. Calc. at End of Barrel.

T.P.	11.37	902.99	1.72	891.62
------	-------	--------	------	--------

T.P.	13.56	915.92	0.63	902.36
------	-------	--------	------	--------

B.M.			3.80	912.12
------	--	--	------	--------

et.

(912.18)

lt. L. pt.

$$\frac{68}{15} \quad \frac{65}{9} \quad \frac{89}{3} \quad \frac{102}{1} \quad \frac{110}{3} \quad \frac{100}{5} \quad \frac{76}{5} \quad \frac{77}{8} \quad \frac{71}{15}$$

Nail in 18" Willow

$$\frac{22}{15} \quad \frac{23}{10} \quad \frac{64}{3} \quad \frac{65}{3} \quad \frac{63}{6} \quad \frac{37}{15}$$

$$\frac{38}{15} \quad \frac{38}{10} \quad \frac{70}{4} \quad \frac{70}{2} \quad \frac{70}{9} \quad \frac{31}{15}$$

$$\frac{48}{4} \quad \frac{50}{7} \quad \frac{71}{11} \quad \frac{73}{15} \quad \frac{67}{19} \quad \frac{55}{27}$$

$$\frac{50}{15} \quad \frac{52}{9}$$

$$\frac{80}{9}$$

$$\frac{58}{9} \quad \frac{57}{15}$$

$$\frac{10.25}{1}$$

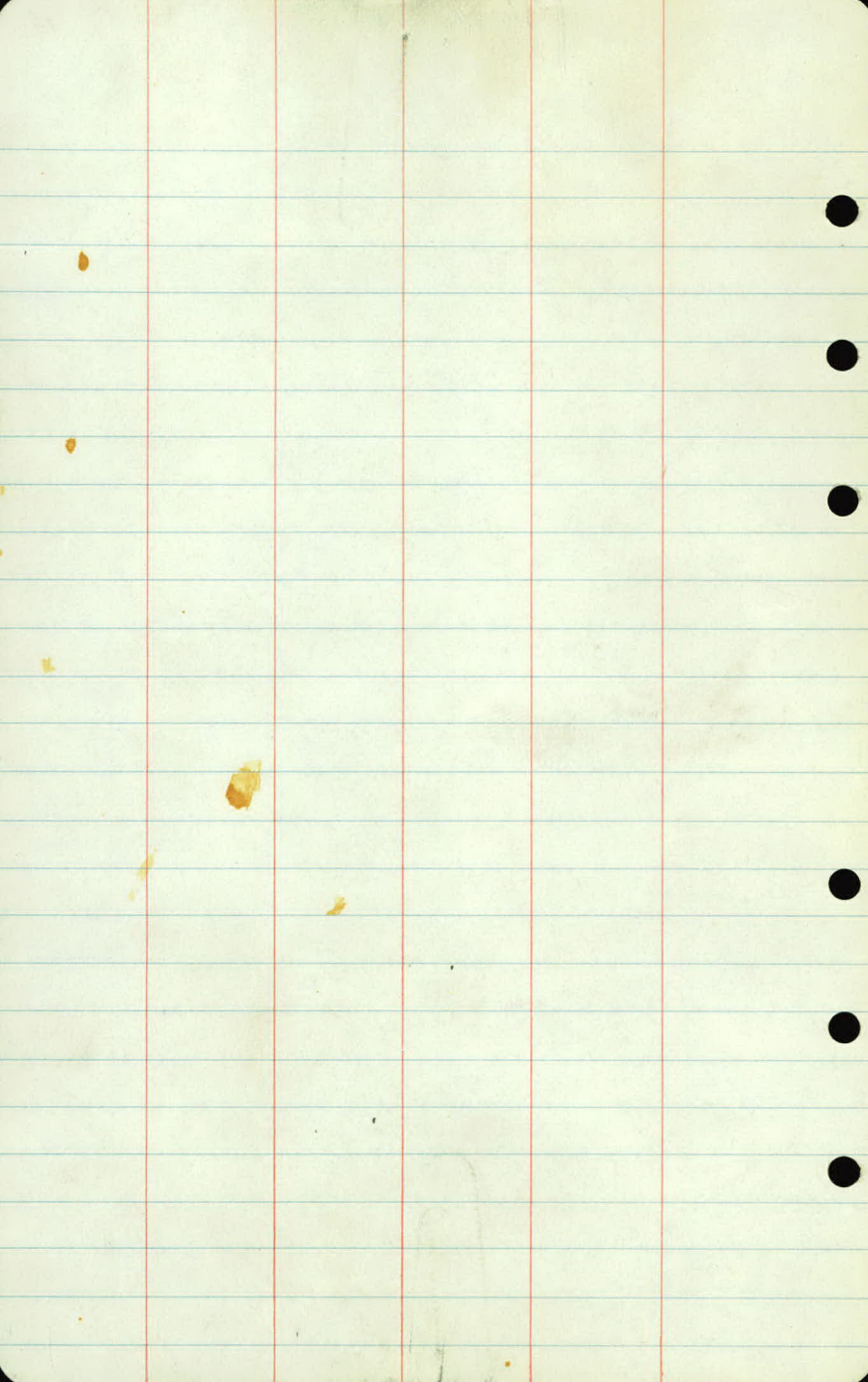
$$\frac{10.61}{1}$$

$$\frac{93}{100}$$

$$\frac{106}{1}$$

$$\frac{1068}{1}$$

Spk. in 18" Box Elder N.W. Cor. Centerville Edg Co. Rd "B"



slope stakes

Ditch #7

Co. Rd. "D" & Edgerton St.

Sta.	+	π	-	Grade
B.M.	1.44	710.39		708.95
0	+00			02.2
	+25			02.1
	+33			01.8
1				01.2
	+50			01.0
2				00.8
	+50			00.6
			10.40	
3			0.1	00.4
	+50			00.2
4				900.0
	+50			899.8

6/6/39

Gr. Road

Lt.

R.

pt.

Top Marsh Lt. sta. 0100

9.2

✓

9.4

✓

9.6

✓

9.8

✓

10.0

✓

10.2

✓

10.4

✓

10.6

Sta.	+	x	-	Grade
		910.39		
5				877.6
+50				897.4
B.M.	0.34	909.29		908.95
I.P.	1.97	908.03	3.25	906.04
6				97.2
+50				97.0
7				98.8
+50				98.6
8				98.4
+50				98.2
9				98.0
+50				97.8

6-2-29
K.A.

Gr. Rock

Lt

R

Rt

10.8

✓
11.0

Top Mont. N. 1/4 Cor. Sec. 5 - New Canada.

8.83 ✓

✓
9.03

✓
9.23

✓
9.43

✓
9.63

✓
9.83

✓
10.03

✓
10.23

Sta.	+	π	-	Elev.
		908.03		
10				97.6
+50				97.4
T.P.	6.49	905.90	8.62	877.91
11				97.2
+50				97.0
12				96.8
+50				96.6
13				96.4
+50				96.2
T.P.	10.20	910.39	5.71	900.19
T.R.	5.91	911.44	4.86	905.53
B.M.			2.52	908.93

908.95

Gr. Rod.

✓
10.43

✓
10.63

✓
8.70

✓
8.90

✓
9.1

✓
9.3

9.5

9.7

Top Mast N. $\frac{1}{4}$ Cor. Sec. 5-

2.5
1.00

Edgerton St. Ditch W. Side of Rd. Between Ditch & 1st Ent. N.

B.M.	4.58	913.53	Grade Elev	908.95 Not Ground.
------	------	--------	---------------	--------------------------

+ 75 = E. Ditch

+50	10.05	9.2
-----	-------	-----

2	9.85	9.0 ✓
---	------	-------

+50	9.65	8.6 ✓
-----	------	-------

1	9.45	8.8 ✓
---	------	-------

D +50	9.25	8.9 ✓
-------	------	-------

0+00 Flow Line culv N. of Ditch	9.05	
------------------------------------	------	--

Profile Levels

Ditch #7

Labore to Mississippi.

Index

Pages
1 to 7

9-24-51

HAW

AM

M.B

Rec'd. 9-25-51

R.C.

Drawn up

247
13.2
51.8

247
13.2
51.8

Sta	+	π	-	Elev
-----	---	-------	---	------

B.M.	5.97	918.78		912.81
------	------	--------	--	--------

	7.92	923.43	3.27	915.51
--	------	--------	------	--------

0+00 = End 30" V.I. Pipe				09.55
--------------------------	--	--	--	-------

1				09.4
---	--	--	--	------

2				11.0
---	--	--	--	------

3				12.1
---	--	--	--	------

T.P.	5.02	922.99	5.46	917.97
------	------	--------	------	--------

4				12.5
---	--	--	--	------

5				12.6
---	--	--	--	------

6				13.0
---	--	--	--	------

7				12.8
---	--	--	--	------

Lt

L

Rt

✓

Top E Edge M.H. Rim 2' N of Int Labore 1 Arcade

Inv

1388

1400

124

113

105.

104

100

102

Sta	+	Δ	-	Elev
-----	---	----------	---	------

922.99

8				13.4
---	--	--	--	------

9				13.5
---	--	--	--	------

10				13.8
----	--	--	--	------

T.P.	0.88	920.03	3.84	919.15
11				13.6

12				14.0
----	--	--	--	------

13				13.4
----	--	--	--	------

14				13.4
----	--	--	--	------

15				13.4
----	--	--	--	------

7

96

95

92

111

Top Fe Post 10715

64

10.9

60

66

66

66

Sta	+	Δ	-	Elev
		920.03		
16				13.8
17				14.0
18				14.2
T.P	7.48	923.43	4.08	915.95
19				14.3
20				14.5
21				14.6
22				15.1
+ 44		S West End	36" CM	15.0
+ 64		N. E End	36" CM	14.98

Lt

L

Pl

4

6.2

6.0

5.8

11.5

9.1

11.2

8.9

8.8

8.3

8.4

8.45

Sta	+	Δ	-	Elev
		923.43		.
23				15.0
24				14.8
25				15.1
26	+04	CORD "D" Sec. Limy		15.3
T.P	0.99	922.96	1.52	921.91
27				15.1
28				15.0
+38		36" CM		14.29
+58		36" CM		13.98

5

*

84

86

83

81

124

Iron Fr Post

26 + 15

78

124

79

861
100

892

Sta	+	Δ	-	Elev
		92290		.
29				14.6
				.
30				15.0
				.
31				15.0
				.
32				15.0
				.
33				14.9
T.P	464	924611	2.93	919.97
				.
34				15.1
				.
35				15.4
				.
36				16.0

Lt

Z

Rt

6

8.3

7.9

7.9

7.9

12 B

End Define Pitch 8.0

Cow Alley
Blocking
Ditch

No Pitch 16.3

8.3/50

9.5

12

16.3

8.3/50

16.2

8.4

75

87

50

9.2

16.2

8.4/50

8.6

Sta + π - Elev

92461

37

15.9

38

16.4

38+80

15.7

39

15.9

40

15.7

+34

Beg 6" Tile

16.79

+47

End 6" Tile

16.99

T.P

5.72

926.75

3.58

921.03

41

17.6

Lt

L

Rt

7

Pothole

15.5
91/75

89

Defined Ditch

82

89

87

89 130

782/Inv

Requires
24"

762/Inv

End Ditch

Na. 1 in F. Post West 40447

17.8
90/50

92 148

18.7
81
35

Sta	+	π	-	Elev
		926.75		

42				18.6
----	--	--	--	------

43				19.5
----	--	--	--	------

44				21.2
----	--	--	--	------

45				21.6
----	--	--	--	------

46				22.3
----	--	--	--	------

47				23.8
----	--	--	--	------

T.B.M	4.25	928.59	2.41	924.34
-------	------	--------	------	--------

	3.93	928.07	4.45	924.14
--	------	--------	------	--------

B.M			3.23	924.84
-----	--	--	------	--------

924.93

Lt

~~2~~

Rt

8

8.2

7.3

5.6

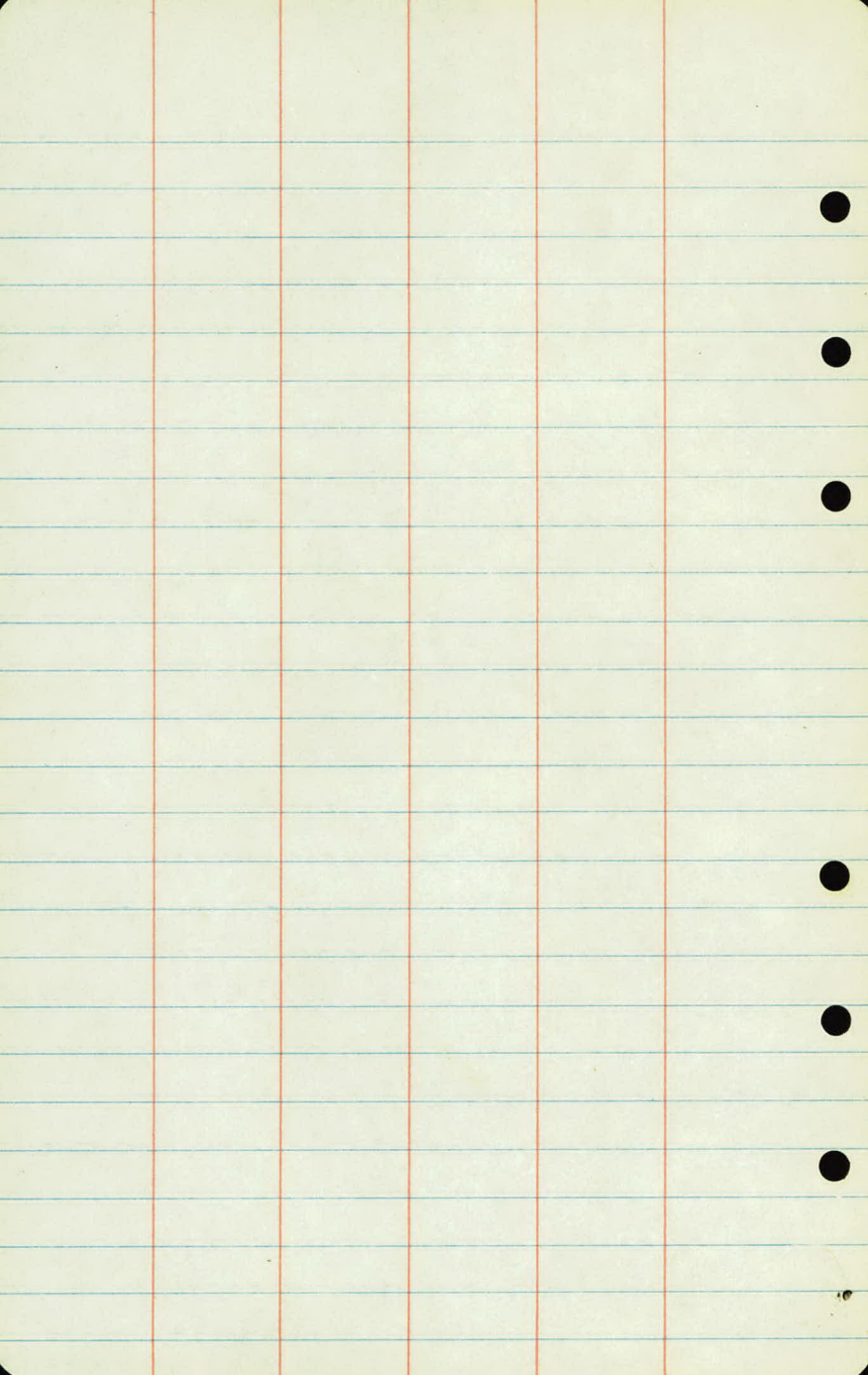
5.2

4.5

3.0

Spk in 15" Oak in Belland's Yard West of
Garage

Spk in T.P. NE Cor Berwood & Labors



9

Ditch #7

Ditch

5/9

1

2

3

4

5

6

7

8

9

10

11

12

13

Nat Gr.

Btm Ditch

+ 8.6

00

+ 7.4

00

+ 5.0

00

+ 5.0

00

+ 4.6

00

+ 4.0

00

+ 2.8

00

+ 2.9

00

+ 2.2

00

+ 1.8

00

+ 1.6

00

+ 1.0

00

+ 1.2

00

14

15

16

17

18

19

20

21

22

23

24

25

26

Net Gr

Btm Pitch

+ 1.3

0.0

+ 1.6

0.0

+ 1.4

0.0

+ 1.5

0.0

+ 1.3

0.0

+ 2.6

0.0

+ 3.0

0.0

+ 3.0

0.0

+ 3.0

0.0

+ 3.0

0.0

+ 3.2

0.0

+ 2.6

0.0

+ 2.3

0.0

27

28

29

30

31

32

33

34

35

36

37

38

39

Nat Gr

Btm Ditch

+23

00

+26

00

+28

00

+19

00

+20

00

+22

00

+20

00

+20

00

+20

+1.8

+1

+20

