

Dr. 8 - Bk 143

DRAINAGE SURVEYS

SNELLING AVE.

Near Co. Rd. "C"

FAIRCHILD AVE.

Sunset Lane to Orchard Pl.

LARPENTEUR AVE.

Arona to Hamline

CENTERVILLE ROAD

N. Line Sec 5-N.C.TWP. to Sta. 31+00

CO. RD. "F"

Near Second St.

Drainage

Culvert Survey
Snelling Avend Co. Rd "E"

Lt

Rt

20" x 67' G.M.

14

13

12

166 E. End Ep. Culv 38' 4" } 3 1/4 Feet of Dirt.
 10" x 32' G.M.

11

173 - 24" x 81' Conc. Culv

42'

39'

10 + 100

9

160 - 24" x 77' Conc. Culv.

37'

40'

4

1 1/2" Cor. 5 cc. 3
 Draw. Runs N.E. from
 End Culv.
 +10 End 20" C.M. 27'

+22 W. End 20" C.M. 21'

to Gluck Farm

Extend

+47 N. End 24" C.M. 170'
 20" C.M.

12" Cong.
 +15 S. End 24" Cong. Culv. 174'

Edge Black Top.
 Culv. Completely Buried
 +56 N. End 15" C.M. 56'

+80 S. End 15" C.M. 56'

+58 N. End Cong. Culv. 63'
 2' X 2.35 X 47' Oval Shaped
 Old R.R. Culv.

+11 S. End Cong. Culv. 63'

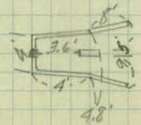
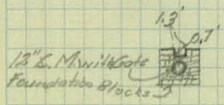


Manit

5 W. Cor. 5 cc. 3

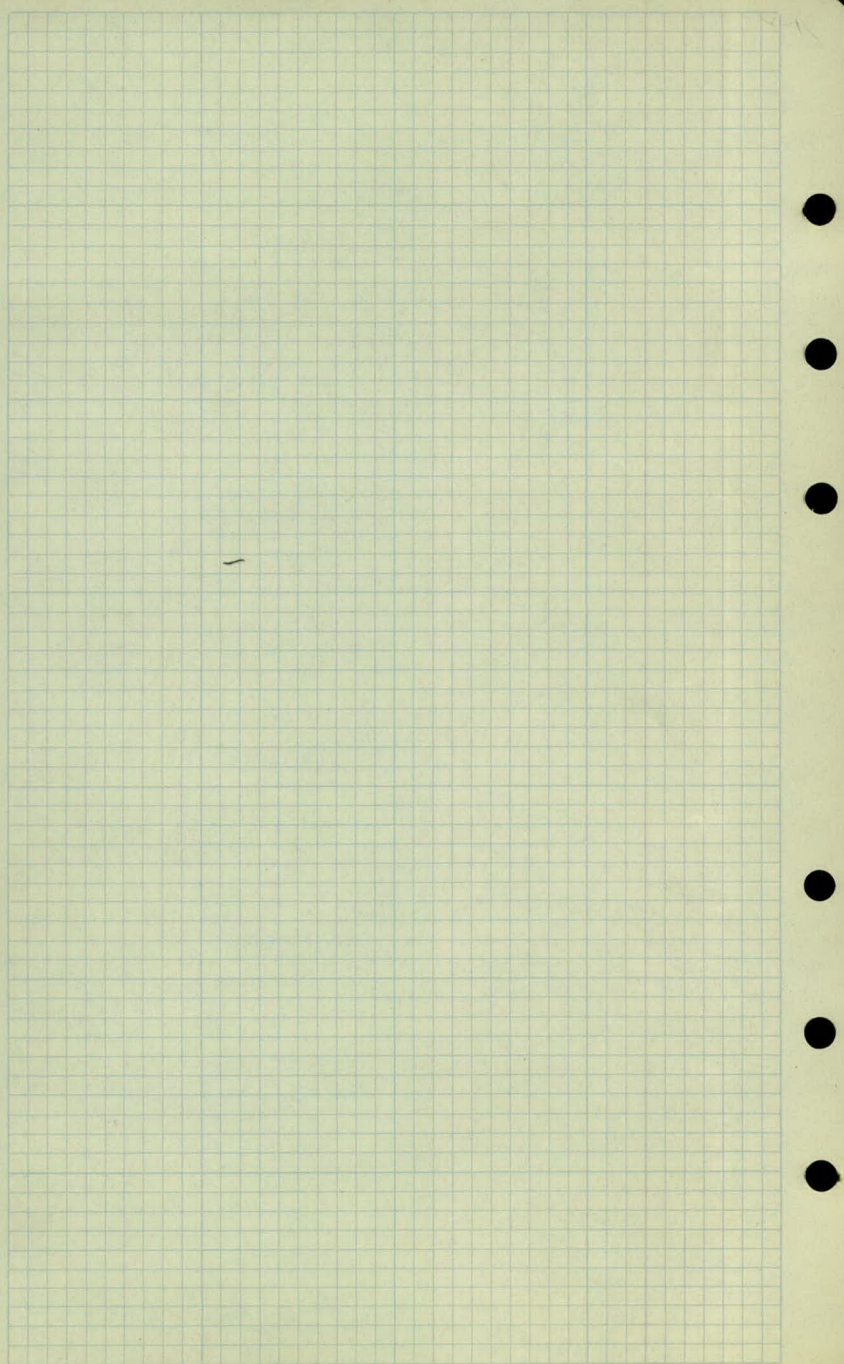
+13 N. End 15" C.M. 91'

+23 S. End 15" C.M. 91'



Sagged in Middle

Fore tang. produced back,



D W. 14' 6" 560.3
 Draw Rupts NE From
 End Culv.

+70-E End 20' C.M. 27'

+22-W End 20' C.M. 21'



To Quick Farrow

+17 N End 24' C.M. 170'
 20' C.M.

12' Conc
 +15-30 End 24' Conc. 174'

Black Top

Culv. Completely buried
 +32 N End 15' C.M. 56'

+100-S End 15' C.M. 56'

+58 N End Conc Culv. 63'

2' x 2.35' x 47' Conc Culv.

+11-S End Conc Culv. 63'
 Oval shaped

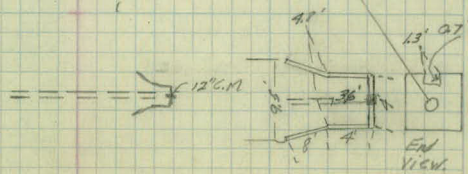


Mont. S.W. Cor. 560.3

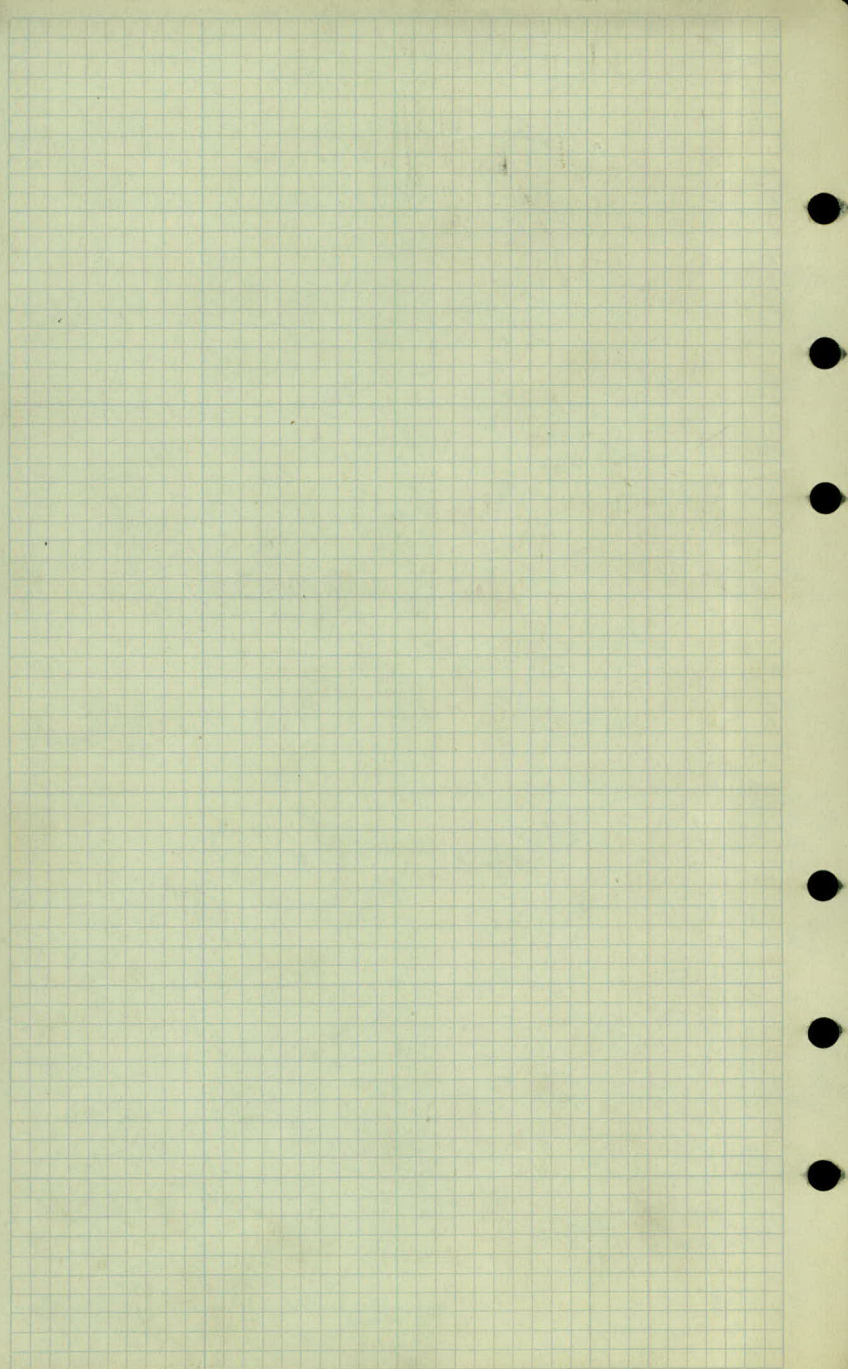
+83 N End 15' C.M. 91'

12' C.M. with 2 Gals
 +83.35 End 15' C.M. 91'

Sag ed in Middle



Fair tang. Reduced back wards



Levels.

Sta.	+	Δ	-	Elev.	
B.M.	0.90	918.18		917.28	908.77
A+60			15.28	02-9	
A+60			14.75		
A+60			14.86	03-3	
B.M.	1.31	918.59		917.28	908.77
9 + 23			12.16		
+83			20.3		
10 + 11			11.89		
+58			10.17		
+73			9.66		
+73			8.46		
11+00			6.02		
+56			5.35		

Lt

R

Rt

Top Mont. J. W. Cor 3 cc. 3

W. End 24" Cong. Culv.

Flow Line 18" C.M.

E. End 24" Cong. Culv.

S. End 15" C.M.

N. End 15" C.M. Rb

S. End R.R. Cong. Culv.

N. End R.R. Cong. Culv.

W. End 24" Cong. Culv.

E. End 24" Cong. Culv.

S. End 15" C.M.

N. End 15" C.M.

Sta	+	π	-	Elev.
		989.75		
11	+15		6.96	
	+47		6.49	
	+42	Ditch Parallel to Co. Rd. 2"		
	+66		7.18	
	+66		6.90	
B.M.	4.42	912.86		908.44
12				
13				
14				
	+22		8.99	
	+20		9.70	

Levels of draw running N.E. 00=End Culv.

1	7.3
2	8.0
3	9.5
4	11.6
5	12.7

H

E

Rt

So. End 24" C.M.

N. End CULV.

68	76	64	66	68	69	59	37	16
350	300	250	200	150	100	76	36	

E. End 10" C.M.

W. End 10" C.M.

Top. Mont.

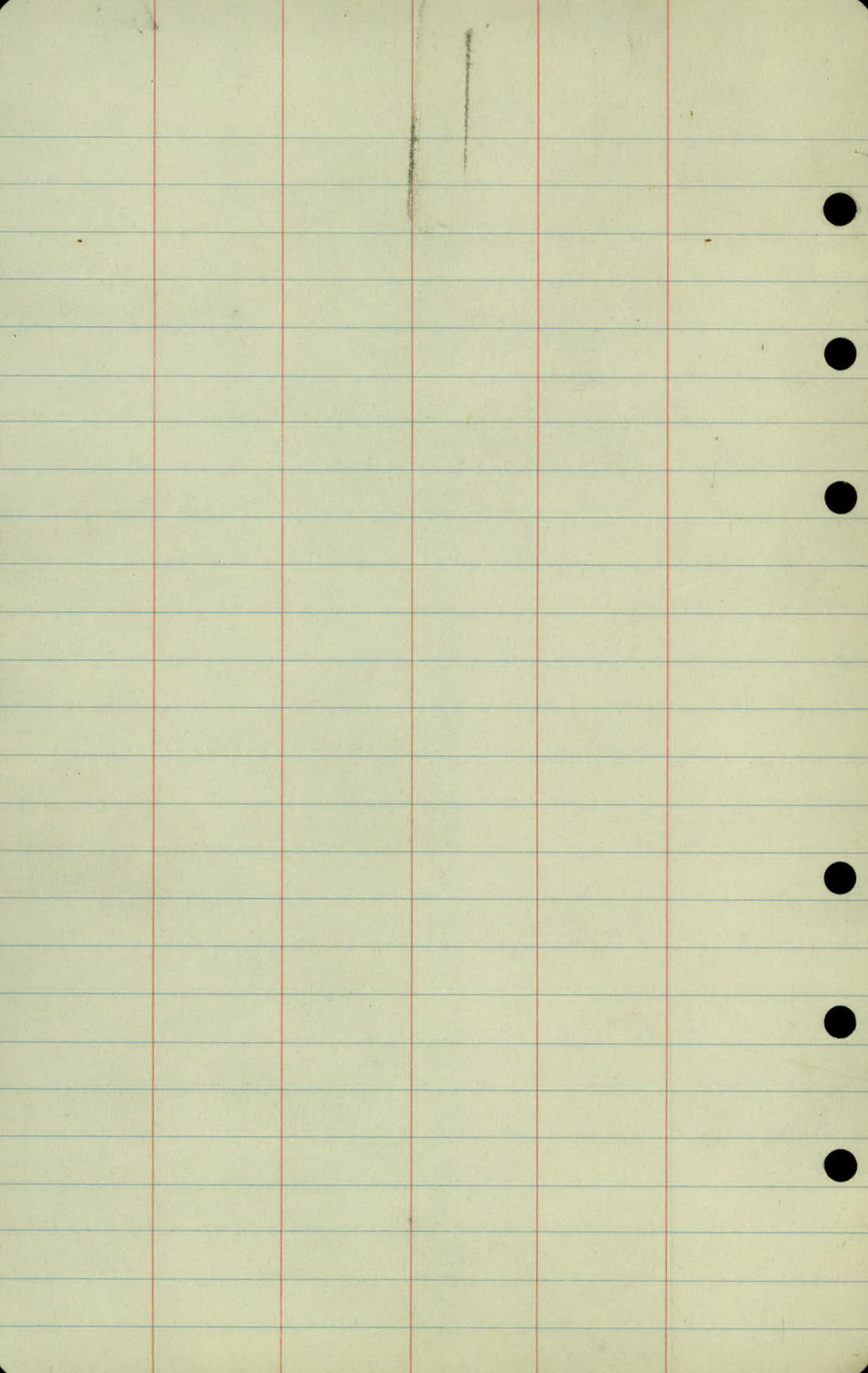
66	80	81	57	47
100	52	27	18	

45	77	80	59	47
100	30	27	18	

48	61	72	70	55	44
100	64	40	25	18	

W. End C.M.

E. End C.M.



1

Drainage Levels.

Fairchild Ave., from
Sunset Lane Sta. 0+00 to Orchard
Place & Silver Lake Road Sta. 12+08.27

4/6/28

Sta.	+	X	-	Elev.
B.M.	302	956.14		953.12

0+00 Section thru Sunset Lane Left.

0+50

1+00

1+22 Section thru entrance

1+50

2+00

Lt.

E

Rt.

21

R.R. spike in 20" Oak 25' West & 100' North
of Fairchild Ave. & Sunset Lane.

52.34
 $\frac{+1.0}{50}$ $\frac{0.6}{33}$ $\frac{4.8}{16}$ $\frac{4.8}{15}$ $\frac{4.4}{12}$ $\frac{3.8}{10}$ $\frac{3.7}{10}$ $\frac{3.2}{23}$ $\frac{2.9}{50}$

(Inv.)
5.4

50.74

0+19
12" x 38' C.M.

19°

0-19

(Inv.)
5.1

51.24

50.44
 $\frac{1.0}{50}$ $\frac{2.1}{33}$ $\frac{5.1}{18}$ $\frac{5.7}{15}$ $\frac{5.2}{11}$ $\frac{4.9}{10}$ $\frac{5.2}{10}$ $\frac{5.3}{14}$ $\frac{4.7}{16}$ $\frac{3.0}{26}$

49.74
 $\frac{2.0}{50}$ $\frac{2.5}{34}$ $\frac{4.5}{18}$ $\frac{6.4}{15}$ $\frac{6.2}{11}$ $\frac{5.8}{10}$ $\frac{6.2}{10}$ $\frac{6.7}{13}$ $\frac{5.8}{29}$ $\frac{3.5}{50}$

14' 15" x 20' C.M.

14' 14' 14' 14'

(Inv.)
4.2

47.84

(Inv.)
4.75

48.39

Entrance Rt.

49.94
 $\frac{6.2}{50}$ $\frac{6.5}{10}$ $\frac{6.1}{14}$ $\frac{4.2}{50}$

48.64
 $\frac{4.5}{50}$ $\frac{4.7}{33}$ $\frac{5.3}{26}$ $\frac{5.5}{18}$ $\frac{7.5}{15}$ $\frac{7.5}{11}$ $\frac{6.5}{11}$ $\frac{7.4}{14}$ $\frac{8.0}{15}$ $\frac{7.8}{17}$ $\frac{7.8}{33}$

48.14

47.34
 $\frac{7.0}{50}$ $\frac{7.0}{34}$ $\frac{7.5}{18}$ $\frac{8.5}{16}$ $\frac{8.8}{14}$ $\frac{8.5}{11}$ $\frac{8.1}{12}$ $\frac{8.7}{12}$ $\frac{8.8}{15}$ $\frac{8.8}{17}$ $\frac{8.2}{19}$ $\frac{9.2}{50}$

48.04

46.34

Sta. + π - Elev.

956.14

2+50

3+00

+34 Sec. thru entrance Rt.

3+50

4+00

T.P.

1.74

946.00

11.88

944.26

+50

+76

Section thru Entrance Rt.

5+00

Lt.

E

Rt.

3

$\frac{84}{50}$ $\frac{51}{18}$ $\frac{10.0}{16}$ $\frac{96}{10}$ $\frac{46.14}{}$ $\frac{91}{50}$ $\frac{96}{12}$ $\frac{109}{14}$ $\frac{109}{16}$ $\frac{100}{19}$ $\frac{104}{42}$ $\frac{47.04}{}$ $\frac{45.24}{}$

$\frac{91}{50}$ $\frac{91}{33}$ $\frac{102}{18}$ $\frac{111}{15}$ $\frac{104}{11}$ $\frac{45.04}{}$ $\frac{100}{50}$ $\frac{103}{12}$ $\frac{116}{15}$ $\frac{116}{18}$ $\frac{111}{22}$ $\frac{108}{46}$ $\frac{44.14}{}$ $\frac{44.54}{}$

$\frac{105}{13}$ $\frac{106}{16}$ $\frac{103}{16}$ $\frac{10.2}{50}$ $\frac{45.64}{}$

$\frac{144}{12.4}$ $\frac{43.74}{}$
 3+42
 15" x 20' CM
 16"

$\frac{97}{50}$ $\frac{100}{35}$ $\frac{105}{19}$ $\frac{119}{15}$ $\frac{119}{13}$ $\frac{111}{11}$ $\frac{44.24}{}$ $\frac{107}{50}$ $\frac{110}{13}$ $\frac{120}{15}$ $\frac{120}{18}$ $\frac{118}{20}$ $\frac{111}{50}$ $\frac{45.44}{}$ $\frac{44.14}{}$

$\frac{100}{50}$ $\frac{107}{30}$ $\frac{111}{18}$ $\frac{123}{15}$ $\frac{123}{13}$ $\frac{118}{12}$ $\frac{43.84}{}$ $\frac{114}{50}$ $\frac{120}{12}$ $\frac{128}{15}$ $\frac{128}{17}$ $\frac{125}{19}$ $\frac{126}{50}$ $\frac{44.74}{}$ $\frac{43.34}{}$

$\frac{10}{50}$ $\frac{16}{29}$ $\frac{22}{18}$ $\frac{28}{15}$ $\frac{24}{12}$ $\frac{43.2}{}$ $\frac{19}{50}$ $\frac{24}{12}$ $\frac{35}{15}$ $\frac{33}{17}$ $\frac{26}{50}$ $\frac{44.10}{}$ $\frac{42.50}{}$

$\frac{23}{10}$ $\frac{25}{10}$ $\frac{23}{15}$ $\frac{17}{50}$ $\frac{43.7}{}$

$\frac{144}{4.6}$ $\frac{44.4}{}$
 14
 15" x 20' CM

$\frac{15}{50}$ $\frac{24}{34}$ $\frac{31}{18}$ $\frac{30}{16}$ $\frac{30}{12}$ $\frac{42.4}{}$ $\frac{27}{50}$ $\frac{30}{12}$ $\frac{37}{13}$ $\frac{37}{14}$ $\frac{29}{15}$ $\frac{27}{27}$ $\frac{15}{50}$ $\frac{42.3}{}$ $\frac{41.6}{}$

Sta.	+	π	-	Elev.
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946.00 ✓

6+00

+50 See thru field Ent. Lt.

+64

7+00

8+00

+50 See Thru Ent. Rt.

9+00

L.t.

L

R.t.

4

$\frac{25}{50}$ $\frac{30}{35}$ $\frac{46}{17}$ $\frac{47}{15}$ $\frac{47}{13}$ $\frac{42}{11}$ $\frac{41}{8}$ $\frac{38}{11}$ $\frac{45}{11}$ $\frac{49}{14}$ $\frac{53}{15}$ $\frac{47}{17}$ $\frac{40}{50}$

40.4
 $\frac{100}{5.6}$ $\checkmark$ 261

Field Entr.

6+50

12" x 22' C.M.

$\angle$ 14.0 $\rightarrow$

40.5
 $\frac{100}{5.5}$ 139

$\frac{31}{50}$ $\frac{34}{34}$ $\frac{41}{14}$ $\frac{46}{10}$ $\frac{42}{42}$ 41.8

Culvert #20-8 = Either gone or buried cannot locate

$\frac{15}{50}$ $\frac{28}{30}$ $\frac{50}{25}$ $\frac{57}{19}$ $\frac{48}{11}$ $\frac{45}{13}$ $\frac{52}{13}$ $\frac{63}{17}$ $\frac{60}{18}$ $\frac{64}{50}$

$\frac{32}{50}$ $\frac{41}{27}$ $\frac{54}{20}$ $\frac{57}{18}$ $\frac{54}{10}$ $\frac{40}{20}$ $\frac{56}{13}$ $\frac{67}{15}$ $\frac{67}{17}$ $\frac{61}{18}$ $\frac{69}{20}$ $\frac{76}{50}$

40.8
 $\frac{52}{15}$ $\frac{57}{24}$ $\frac{67}{50}$ $\frac{78}{50}$ 38.5
 $\checkmark$ 8+42 $\frac{100}{7.5}$

$\angle$ 16' $\rightarrow$ 15" x 20' C.M.

39.4
 $\frac{46}{50}$ $\frac{47}{25}$ $\frac{63}{22}$ $\frac{66}{16}$ $\frac{59}{14}$ $\frac{56}{13}$ $\frac{63}{13}$ $\frac{73}{16}$ $\frac{73}{23}$ $\frac{73}{50}$ 38.9
 40.4
 $\frac{8+41}{8+41}$ $\frac{100}{7.1}$

Sta.	+	π	-	Elev.
		946.00		

10+00

T.P.	7.44	946.39	7.03	938.97
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10+90

Sec. 3rd Culvert.

11+00

11+53 Entry Pt.

12+00

+88 Rd. Ditch Lt.

13+08²⁷ Silver Lake Road Lt.

B.M.

2.05 944.34

944.37

17.

8

17.

5

$\frac{49}{50}$ $\frac{65}{24}$ $\frac{77}{19}$ $\frac{27}{19}$ $\frac{73}{16}$ $\frac{67}{14}$ $\frac{38.3}{}$ $\frac{64}{}$ $\frac{69}{13}$ $\frac{86}{16}$ $\frac{93}{34}$ $\frac{90}{27}$ $\frac{96}{50}$ $\frac{37.4}{}$

$12" \times 33$ C.M. $\frac{88}{50}$ $\frac{92}{21}$ $\frac{101}{18}$ $\frac{75}{14}$ $\frac{71}{13}$ $\frac{76}{13}$ $\frac{104}{15}$ $\frac{116}{20}$ $\frac{103}{21}$ $\frac{108}{50}$ $\frac{36.5}{}$ $\frac{15.8}{}$ $\frac{36.0}{}$ $\frac{420-10}{}$

$\frac{88}{50}$ $\frac{91}{22}$ $\frac{94}{17}$ $\frac{25}{13}$ $\frac{71}{13}$ $\frac{76}{13}$ $\frac{103}{20}$ $\frac{112}{24}$ $\frac{112}{50}$ $\frac{35.9}{}$ $\frac{39.5}{}$

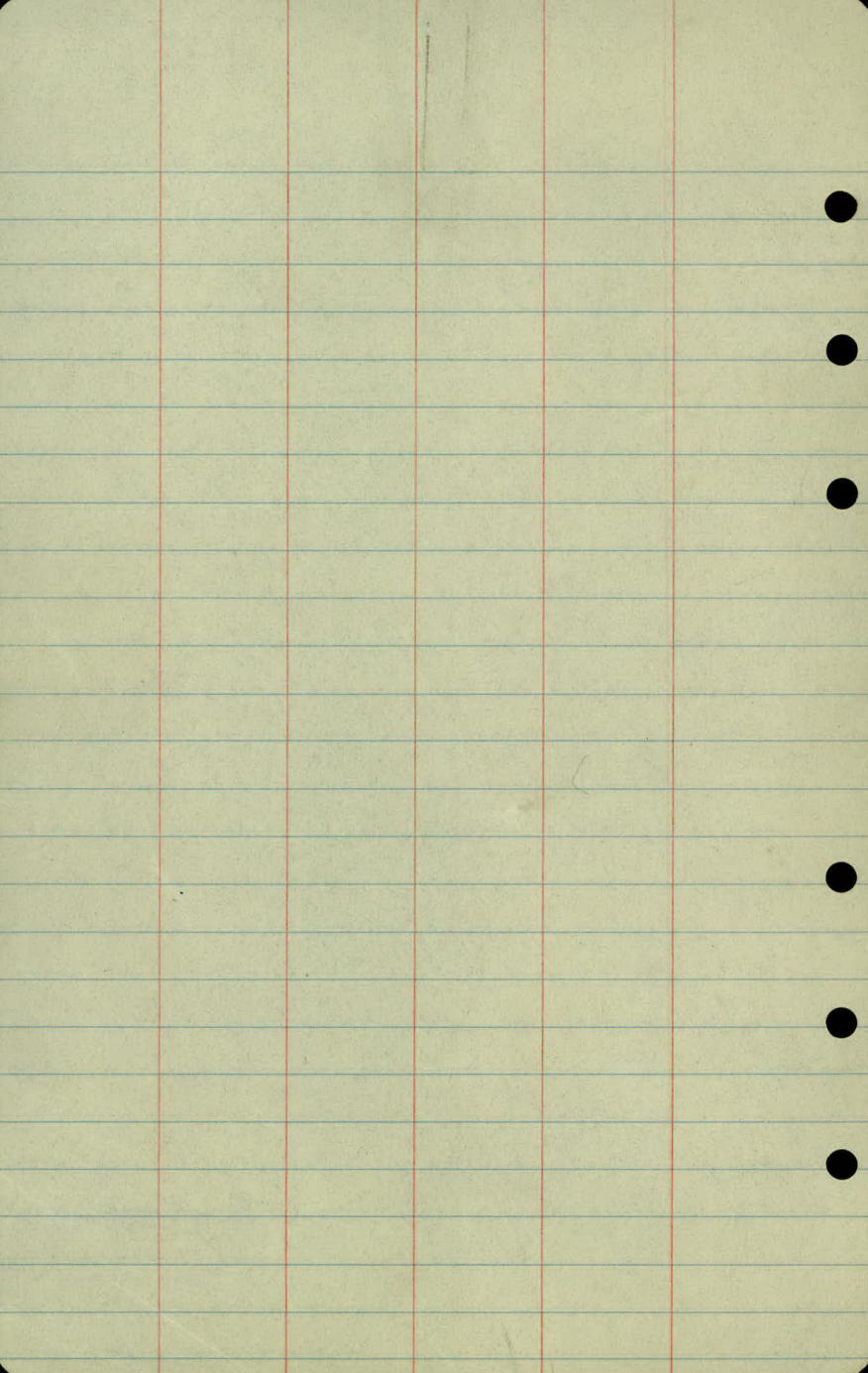
$\frac{69}{11}$ $\frac{71}{18}$ $\frac{81}{27}$ $\frac{87}{50}$ $\frac{101}{10.1}$ $\frac{36.3}{}$ $\frac{10.1}{}$ $\frac{12" \times 20'$ C.M. $\frac{10.2}{10.2}$ $\frac{34.2}{}$

$\frac{85}{50}$ $\frac{92}{29}$ $\frac{99}{17}$ $\frac{20}{11}$ $\frac{66}{13}$ $\frac{71}{13}$ $\frac{100}{21}$ $\frac{100}{22}$ $\frac{98}{24}$ $\frac{96}{50}$ $\frac{37.4}{}$ $\frac{39.8}{}$ $\frac{36.4}{}$

$\frac{56}{100}$ $\frac{64}{50}$ $\frac{65}{28}$ $\frac{59}{22}$ $\frac{56}{16}$ $\frac{51}{10}$ $\frac{48}{13}$ $\frac{54}{13}$ $\frac{77}{17}$ $\frac{77}{18}$ $\frac{74}{20}$ $\frac{84}{50}$ $\frac{41.5}{}$ $\frac{41.6}{}$ $\frac{38.7}{}$

$\frac{35}{100}$ $\frac{43}{50}$ $\frac{46}{13}$ $\frac{51}{13}$ $\frac{64}{16}$ $\frac{64}{18}$ $\frac{63}{20}$ $\frac{69}{50}$ $\frac{41.8}{}$

Spills in 10" Oak, N.W. Cor. Silver Lake Rd. & Fairchild



1

Carpenter Ave.

Drainage Situation, North side
of Carpenter between Avon
& Adams Ave.

27/28

Sta.	+	π	-	Elev.
B.M.	0.36	957.00		956.64

111+68.5 Conc Box Culvert

112+08 Approx $\frac{1}{2}$ Arona Arc.

+50

113+00

114+00

115+00

116+00

117+00

Lt.

E

2/

Top of Monument Carpenter & Snelling

$$1.7' \times 4' \times 42' \quad \begin{array}{r} 1.7 \\ 77 \\ \hline 49.3 \end{array} \quad \begin{array}{r} 2.1 \\ 77 \\ \hline 49.3 \end{array}$$

$$112+33 \quad \begin{array}{r} 1.7 \\ 77 \\ \hline 49.3 \end{array}$$

24' x 50' C.M.

$$111+83 \quad \begin{array}{r} 1.7 \\ 81 \\ \hline 48.9 \end{array}$$

$$\begin{array}{r} 50 \\ 60 \\ \hline \end{array} \quad \begin{array}{r} 51 \\ 22 \\ \hline \end{array} \quad \begin{array}{r} 53 \\ 10 \\ \hline \end{array} \quad \begin{array}{r} 53 \\ 51.7 \\ \hline \end{array}$$

$$\begin{array}{r} 64 \\ 60 \\ \hline \end{array} \quad \begin{array}{r} 64 \\ 48 \\ \hline \end{array} \quad \begin{array}{r} 74 \\ 44 \\ \hline \end{array} \quad \begin{array}{r} 23 \\ 26 \\ \hline \end{array} \quad \begin{array}{r} 56 \\ 21 \\ \hline \end{array} \quad \begin{array}{r} 53 \\ 10 \\ \hline \end{array} \quad \begin{array}{r} 53 \\ 51.7 \\ \hline \end{array}$$

$$\begin{array}{r} 57 \\ 60 \\ \hline \end{array} \quad \begin{array}{r} 58 \\ 49 \\ \hline \end{array} \quad \begin{array}{r} 21 \\ 44 \\ \hline \end{array} \quad \begin{array}{r} 73 \\ 27 \\ \hline \end{array} \quad \begin{array}{r} 55 \\ 21 \\ \hline \end{array} \quad \begin{array}{r} 54 \\ 10 \\ \hline \end{array} \quad \begin{array}{r} 53 \\ 51.7 \\ \hline \end{array}$$

$$\begin{array}{r} 59 \\ 60 \\ \hline \end{array} \quad \begin{array}{r} 57 \\ 49 \\ \hline \end{array} \quad \begin{array}{r} 22 \\ 34 \\ \hline \end{array} \quad \begin{array}{r} 23 \\ 26 \\ \hline \end{array} \quad \begin{array}{r} 55 \\ 21 \\ \hline \end{array} \quad \begin{array}{r} 55 \\ 10 \\ \hline \end{array} \quad \begin{array}{r} 54 \\ 51.6 \\ \hline \end{array}$$

$$\begin{array}{r} 60 \\ 60 \\ \hline \end{array} \quad \begin{array}{r} 55 \\ 49 \\ \hline \end{array} \quad \begin{array}{r} 74 \\ 43 \\ \hline \end{array} \quad \begin{array}{r} 27 \\ 26 \\ \hline \end{array} \quad \begin{array}{r} 58 \\ 21 \\ \hline \end{array} \quad \begin{array}{r} 56 \\ 10 \\ \hline \end{array} \quad \begin{array}{r} 56 \\ 51.4 \\ \hline \end{array}$$

$$\begin{array}{r} 56 \\ 60 \\ \hline \end{array} \quad \begin{array}{r} 56 \\ 49 \\ \hline \end{array} \quad \begin{array}{r} 74 \\ 43 \\ \hline \end{array} \quad \begin{array}{r} 26 \\ 26 \\ \hline \end{array} \quad \begin{array}{r} 57 \\ 21 \\ \hline \end{array} \quad \begin{array}{r} 58 \\ 10 \\ \hline \end{array} \quad \begin{array}{r} 57 \\ 51.3 \\ \hline \end{array}$$

$$\begin{array}{r} 60 \\ 60 \\ \hline \end{array} \quad \begin{array}{r} 59 \\ 49 \\ \hline \end{array} \quad \begin{array}{r} 74 \\ 43 \\ \hline \end{array} \quad \begin{array}{r} 26 \\ 26 \\ \hline \end{array} \quad \begin{array}{r} 60 \\ 21 \\ \hline \end{array} \quad \begin{array}{r} 58 \\ 10 \\ \hline \end{array} \quad \begin{array}{r} 57 \\ 51.3 \\ \hline \end{array}$$

Sta.	+	π	-	Elev.
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957.00

118+00

+45

+60 Approx $\pm$ Pascal

T.P.	1.20	952.25	5.95	951.05
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119+00

120+00

121+00

+75

Sec thru ditch Holton Ave.

121+96 Approx $\pm$ Holton Ave.

Lt.

L

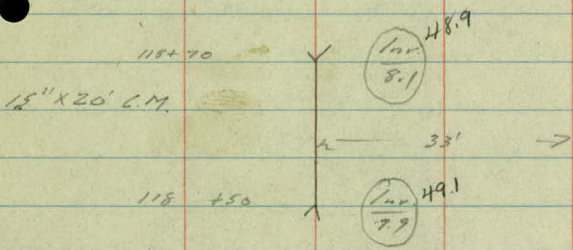
$$\frac{6.2}{60} \quad \frac{6.1}{49} \quad \frac{7.7}{43} \quad \left(\frac{7.9}{26} \right) \frac{6.1}{21} \quad \frac{6.0}{10} \quad \frac{5.9}{60} \quad 51.1$$

49.1

$$\frac{6.4}{60} \quad \frac{6.5}{49} \quad \frac{7.4}{43} \quad \left(\frac{7.6}{26} \right) \frac{6.1}{21} \quad \frac{6.0}{10} \quad \frac{6.0}{60} \quad 51.0$$

49.4

$$\frac{6.1}{60} \quad \frac{6.1}{30} \quad \frac{6.0}{10} \quad \frac{6.0}{60} \quad 51.0$$



$$\frac{1.7}{60} \quad \frac{1.7}{49} \quad \frac{3.1}{44} \quad \left(\frac{3.1}{26} \right) \frac{1.3}{21} \quad \frac{1.2}{10} \quad \frac{1.1}{60} \quad 51.15$$

49.15

$$\frac{0.8}{60} \quad \frac{0.9}{49} \quad \frac{3.2}{43} \quad \left(\frac{3.3}{26} \right) \frac{1.5}{22} \quad \frac{1.3}{10} \quad \frac{1.2}{60} \quad 51.05$$

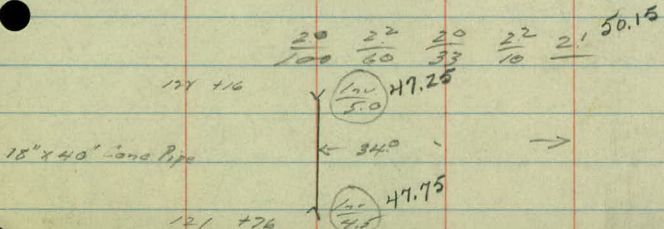
48.95

$$\frac{0.7}{60} \quad \frac{0.6}{49} \quad \frac{3.3}{41} \quad \left(\frac{3.2}{26} \right) \frac{1.7}{21} \quad \frac{1.6}{10} \quad \frac{1.5}{60} \quad 50.75$$

48.65

$$\frac{3.4}{100} \quad \frac{3.4}{60} \quad \frac{3.9}{46} \quad \left(\frac{4.3}{31} \right) \frac{2.2}{26} \quad \frac{2.0}{10} \quad \frac{1.9}{60} \quad 60.35$$

47.95



Sta.	+	K	-	Elev
		952.25		
B.M.	2.92	952.25	2.92	949.33

114+15

122+50

123+18 Entrance Lt.

124+00

125+00

125+19 Sec. thru ditch Albert St.

+37 Approx. to Albert St.

T.P.		2.94	949.33
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Lt.

2

4

Top of Hydrant. Leporteur & Albert.

$$\begin{array}{r} 3.6 \\ 100 \end{array} \quad \begin{array}{r} 3.7 \\ 60 \end{array} \quad \begin{array}{r} 4.0 \\ 50 \end{array} \quad \begin{array}{r} 5.0 \\ 34 \end{array} \quad \begin{array}{r} 47.25 \\ 27 \end{array} \quad \begin{array}{r} 2.2 \\ 10 \end{array} \quad \begin{array}{r} 2.4 \\ 10 \end{array} \quad \begin{array}{r} 2.3 \\ 10 \end{array} \quad 49.95$$

$$\begin{array}{r} 2.6 \\ 60 \end{array} \quad \begin{array}{r} 2.6 \\ 49 \end{array} \quad \begin{array}{r} 5.0 \\ 44 \end{array} \quad \begin{array}{r} 5.0 \\ 26 \end{array} \quad \begin{array}{r} 47.25 \\ 21 \end{array} \quad \begin{array}{r} 2.8 \\ 10 \end{array} \quad \begin{array}{r} 2.7 \\ 10 \end{array} \quad 49.55$$

$$\begin{array}{r} 3.0 \\ 60 \end{array} \quad \begin{array}{r} 3.2 \\ 34 \end{array} \quad \begin{array}{r} 3.5 \\ 10 \end{array} \quad \begin{array}{r} 3.4 \\ 10 \end{array} \quad 48.85$$

123+30

$$\begin{array}{r} 1.4 \\ 5.5 \end{array} \quad 46.75$$

15" x 30' C.M.

133+00

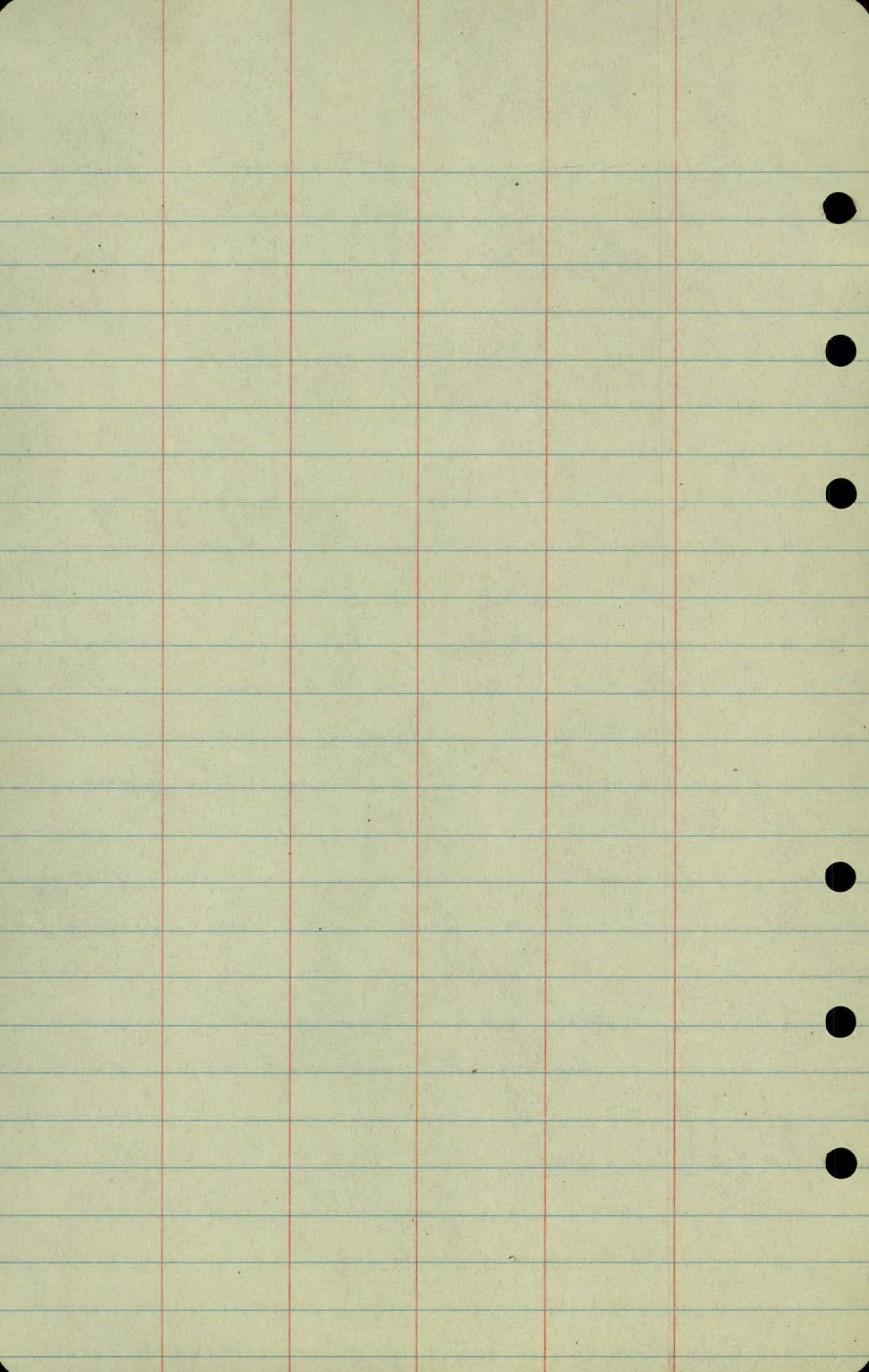
$$\begin{array}{r} 1.4 \\ 5.5 \end{array} \quad 46.75$$

$$\begin{array}{r} 5.3 \\ 60 \end{array} \quad \begin{array}{r} 4.6 \\ 48 \end{array} \quad \begin{array}{r} 6.1 \\ 44 \end{array} \quad \begin{array}{r} 6.1 \\ 26 \end{array} \quad \begin{array}{r} 46.15 \\ 21 \end{array} \quad \begin{array}{r} 4.4 \\ 10 \end{array} \quad \begin{array}{r} 4.3 \\ 10 \end{array} \quad \begin{array}{r} 4.2 \\ 10 \end{array} \quad 48.05$$

$$\begin{array}{r} 3.2 \\ 60 \end{array} \quad \begin{array}{r} 6.1 \\ 44 \end{array} \quad \begin{array}{r} 6.9 \\ 42 \end{array} \quad \begin{array}{r} 7.1 \\ 26 \end{array} \quad \begin{array}{r} 45.15 \\ 21 \end{array} \quad \begin{array}{r} 5.5 \\ 10 \end{array} \quad \begin{array}{r} 5.0 \\ 10 \end{array} \quad \begin{array}{r} 4.9 \\ 10 \end{array} \quad 47.35$$

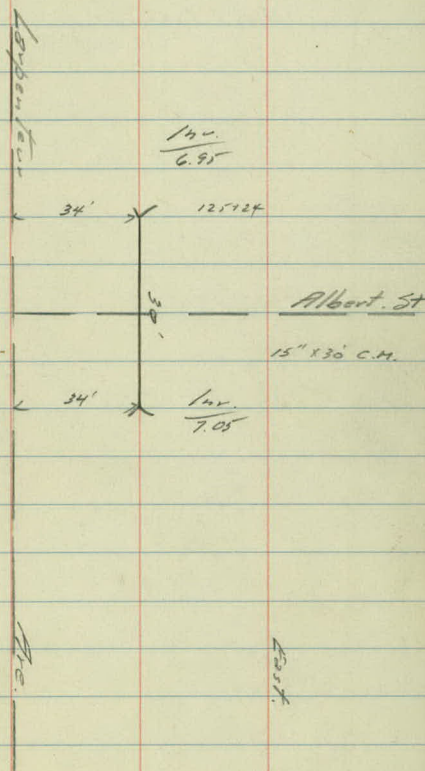
$$\begin{array}{r} 5.4 \\ 500 \end{array} \quad \begin{array}{r} 7.4 \\ 400 \end{array} \quad \begin{array}{r} 8.0 \\ 300 \end{array} \quad \begin{array}{r} 9.4 \\ 241 \end{array} \quad \begin{array}{r} 9.7 \\ 200 \end{array} \quad \begin{array}{r} 9.5 \\ 150 \end{array} \quad \begin{array}{r} 9.0 \\ 100 \end{array} \quad \begin{array}{r} 8.7 \\ 81 \end{array} \quad \begin{array}{r} 8.3 \\ 50 \end{array} \quad \begin{array}{r} 7.7 \\ 36 \end{array} \quad \begin{array}{r} 6.6 \\ 25 \end{array} \quad \begin{array}{r} 45.65 \\ 25 \end{array} \quad \begin{array}{r} 5.7 \\ 25 \end{array} \quad \begin{array}{r} 5.1 \\ 10 \end{array} \quad \begin{array}{r} 5.0 \\ 10 \end{array} \quad 47.25$$

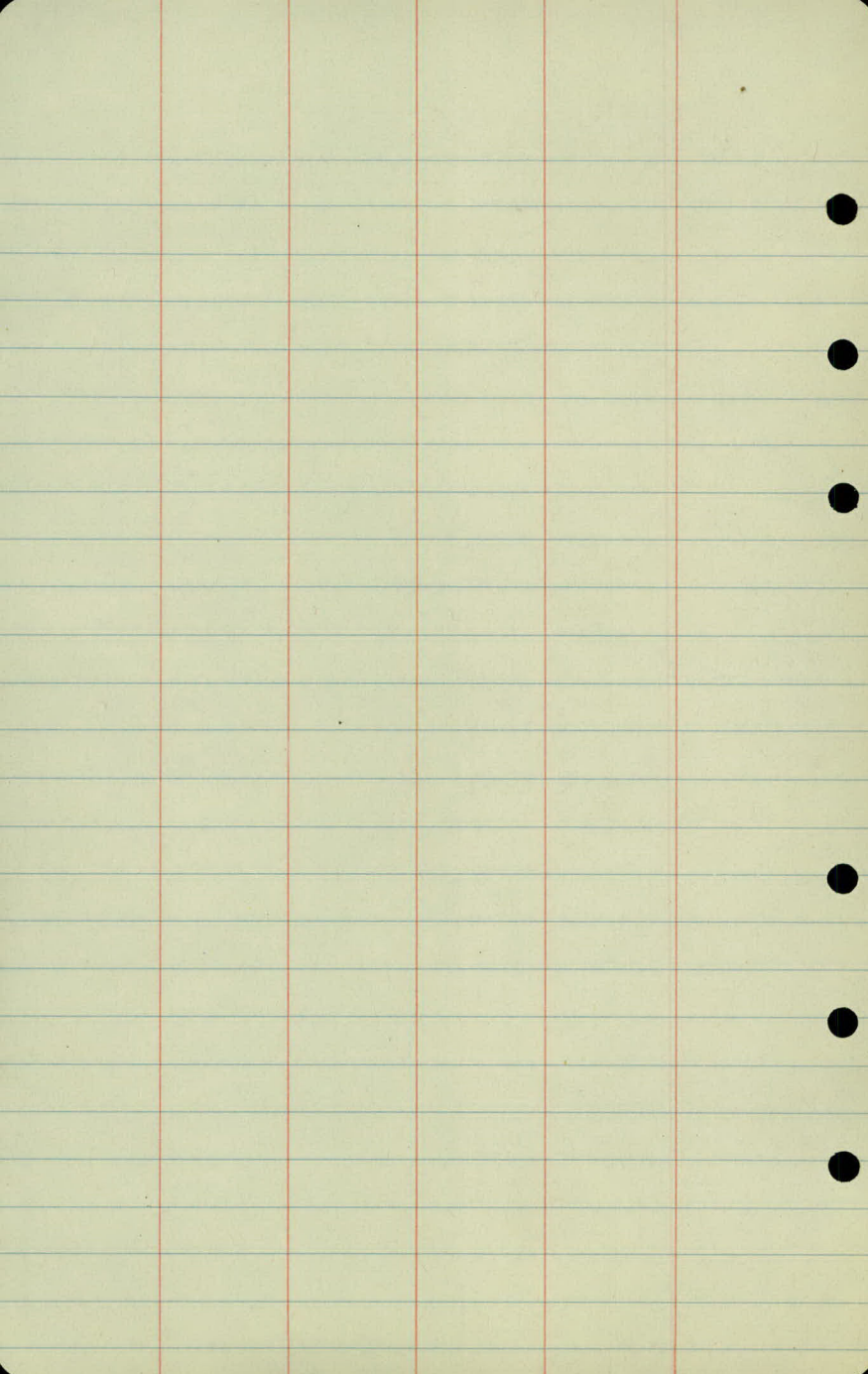
$$\begin{array}{r} 7.1 \\ 100 \end{array} \quad \begin{array}{r} 6.1 \\ 50 \end{array} \quad \begin{array}{r} 5.5 \\ 34 \end{array} \quad \begin{array}{r} 5.2 \\ 10 \end{array} \quad \begin{array}{r} 5.1 \\ 10 \end{array} \quad 47.15$$



Top of Hnd. Loop + Albert.	$5\frac{1}{2}$	+	π	-	Elev.
	2.76		957.09		949.33

North. 





5
Albert St. -

Carpenters Ave. Sta. 0+00
to Sta. 5+00 North.

Sta.	+	π	-	Elev.
B.M.	2.23	951.56		949.33

0+50

1+00

2+00

2+40 - 15" x 30' C.M.

3+00

4+00

5+00

Note: 2" H. Posts @ 100' Int.
of H. Post. @ No Property Line Log.

Lt.

Approx
L

Rt.

6
1

Top of Hydrant Carpenter & Albert St.

D 44.56

$\frac{70}{20} \frac{66}{18} \frac{58}{14} \frac{56}{11}$

46.16

$\frac{54}{54} \frac{57}{10}$

Ditch

$\frac{70}{14} \frac{44.56}{44.56}$

D 43.24

$\frac{83}{18} \frac{70}{14}$

45.16

$\frac{64}{64} \frac{66}{9}$

D

$\frac{76}{13} \frac{43.96}{43.96}$

1461 42.91

15" x 30' C.M.

1431 43.31

D 42.66

$\frac{89}{17} \frac{73}{14}$

44.96

$\frac{66}{66} \frac{67}{9}$

D 42.44

$\frac{51}{15} \frac{51}{15}$

D 43.06

$\frac{85}{17} \frac{85}{15} \frac{68}{13}$

143.01

44.76

$\frac{64}{64} \frac{67}{9} \frac{28}{15}$

142.51

$\frac{80}{17} \frac{81}{18} \frac{80}{50}$

3461 44.06

12" C.M.

2484 43.06

D 43.46

$\frac{81}{16} \frac{68}{12}$

45.36

$\frac{62}{62}$

D 44.96

$\frac{66}{17} \frac{53}{13}$

46.56

$\frac{50}{50}$

D 47.06

$\frac{45}{19} \frac{38}{14}$

47.96

$\frac{36}{36}$

Leopentev, contd

Sta.	+	π	-	Elev.
B.M.	2.23	951.56		949.33

126+00

127+00

127+54 Entr. Lt.

+83

128+21 Entr. Lt.

129+00

+50

← North
Lt.

2 7

Top Hydrant Carpenter + Albert.

$\frac{4.9}{60}$ $\frac{5.0}{49}$ $\frac{6.9}{43}$ $\frac{6.9}{26}$ 44.66
 $\frac{5.0}{21}$ $\frac{4.7}{10}$ $\frac{4.6}{1}$ 46.94

$\frac{6.0}{60}$ $\frac{5.9}{49}$ $\frac{6.7}{46}$ $\frac{6.9}{26}$ 44.64
 $\frac{5.1}{21}$ $\frac{5.0}{10}$ $\frac{4.9}{1}$ 46.66

Y $127+63$ $\frac{12.2}{2.0}$ 44.51
 36

A $127+07$ $\frac{12.2}{2.8}$ 44.76

$\frac{4.6}{60}$ $\frac{4.7}{21}$ $\frac{5.1}{10}$ $\frac{5.0}{1}$ 46.54

$\frac{4.7}{60}$ $\frac{5.0}{49}$ $\frac{7.0}{45}$ $\frac{6.8}{26}$ 44.76
 $\frac{5.1}{21}$ $\frac{5.2}{10}$ $\frac{5.1}{1}$ 46.46

Y $128+28$ $\frac{12.2}{7.35}$ 44.21
 31' 15" C.M.

A $128+08$ $\frac{12.2}{7.2}$ 44.34

$\frac{5.1}{60}$ $\frac{4.8}{24}$ $\frac{5.3}{11}$ $\frac{5.2}{1}$ 46.34

$\frac{5.7}{60}$ $\frac{5.7}{49}$ $\frac{7.2}{44}$ $\frac{7.3}{26}$ 44.24
 $\frac{5.7}{21}$ $\frac{5.5}{10}$ $\frac{5.4}{1}$ 46.16

$\frac{6.1}{60}$ $\frac{6.1}{49}$ $\frac{7.1}{44}$ $\frac{7.6}{26}$ 43.94
 $\frac{5.8}{21}$ $\frac{5.6}{10}$ $\frac{5.5}{1}$ 46.06

Sta. + π - Elev.

951.56

129+97 East. Lt.

130+50

131+00

T.P. 6.33 957.11 0.78 950.78

B.M. 0.48 956.63

956.64

4.

8

8

$$\frac{100}{2.8} 43.74$$

130+07

35 > 15" C.M

$$\frac{100}{2.6} 43.96$$

129+87

$$\frac{59}{60} \frac{6.2}{45} \frac{54}{21} \frac{57}{10} \frac{56}{4} 45.94$$

$$\frac{68}{60} \frac{68}{49} \frac{27}{45} \frac{28}{37} \frac{27}{26} \frac{62}{21} \frac{38}{10} \frac{57}{4} 45.86$$

$$\frac{68}{60} \frac{68}{49} \frac{27}{45} \frac{28}{36} \frac{27}{26} \frac{62}{21} \frac{60}{10} \frac{57}{4} 45.66$$

24" C.M. Thru Hamline

$$\frac{100}{4.3} 40.26$$

132+57

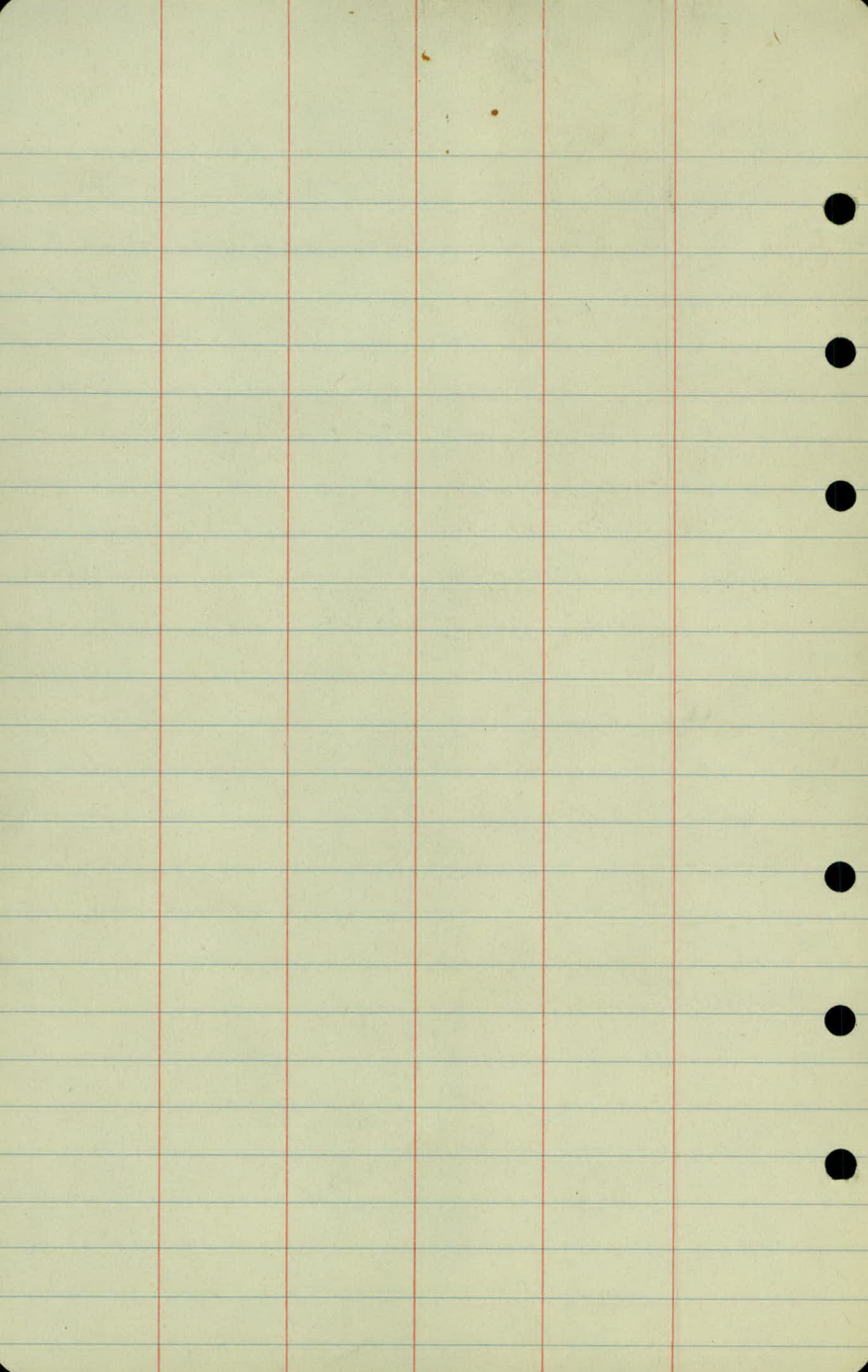
36 >

131+56

$$\frac{100}{8.6} 12.94$$

Top of Men. Snelling & Carpenter

Down 3960 476



near Madelon Rd -

Drainage Survey

Alignment of Centerville
Road from intersection with
North Line of Section 5
New Canada Township, South
to Sta. 31+00.

H. Bratager

H. Wilke

L. Goldberg

A. Moeschter

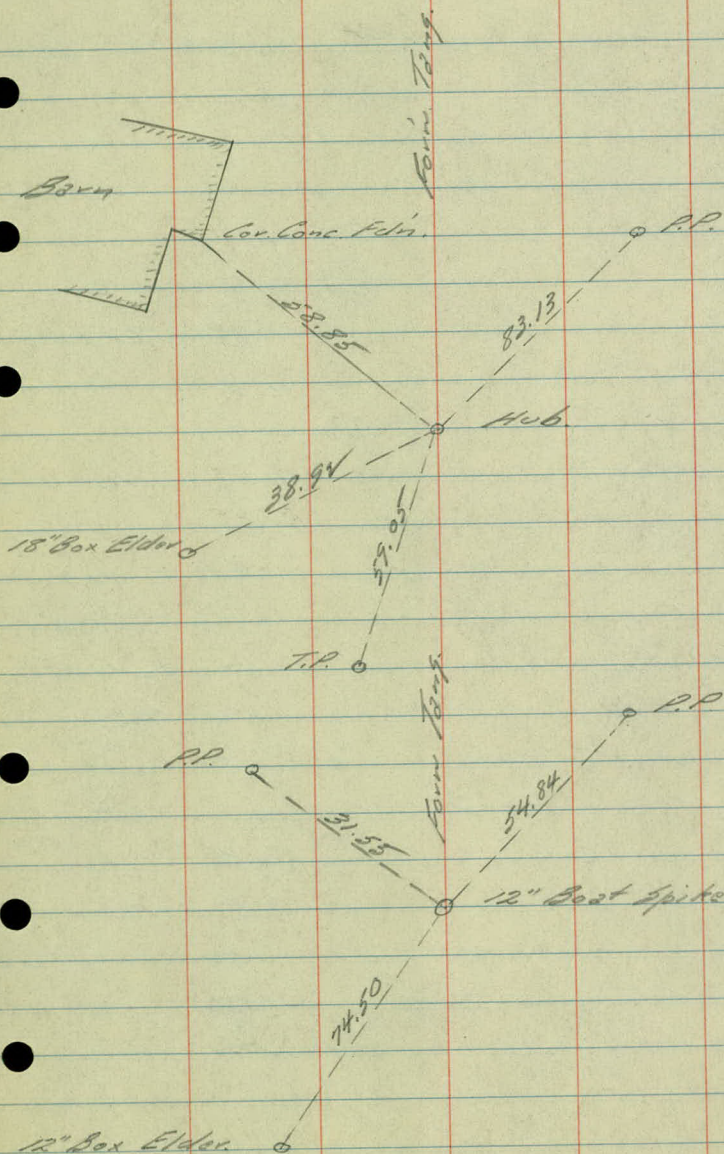
} Party

5/26/38

Refer to Road Map Survey
Notes of Centerville Road
from Little Canada Rd. to
Edgerton St., Road Acct. #26
Filed 4-7-25

Angle

Sta.	Point	Lt	Rt	Defl.
38+55.49	P.T.			12°03'
+50				11°58'
38				9°33'
+50				7°18' D=9°
37+23.75	P.I.		24°06'	T=136.04
37				5°03' L=267.78
+50				2°48'
36				0°33'
35+87.71	P.C.			
35+50.2	P.T.			1°32 $\frac{1}{2}$ '
35				1°17'
+50				1°02' D=1°
34				0°47' D=3°05'
33+96.6	P.I.		3°05'	T=154.21
+50				0°32' L=308.33
33				0°17'
+50				0°02'
32+42.4	P.C.			
31+00	P.O.T.			



Angle

Sta	Point	Lt.	Rt.	Defl.
42+93.15	P.O.S.T.			
41+73.8	P.T.			2°27'
+50				2°55½' D=3°
41				1°20½' T=81.73
40+92.2	P.I.		4°54'	L=163.31
+50				0°35½'
40+10.5	P.C.			

N.W. Cor. Sec. 5.

Stone Mon.

New Canada
Township

33°32'7"
733.3

6' Cone Arch. with
Headwall.

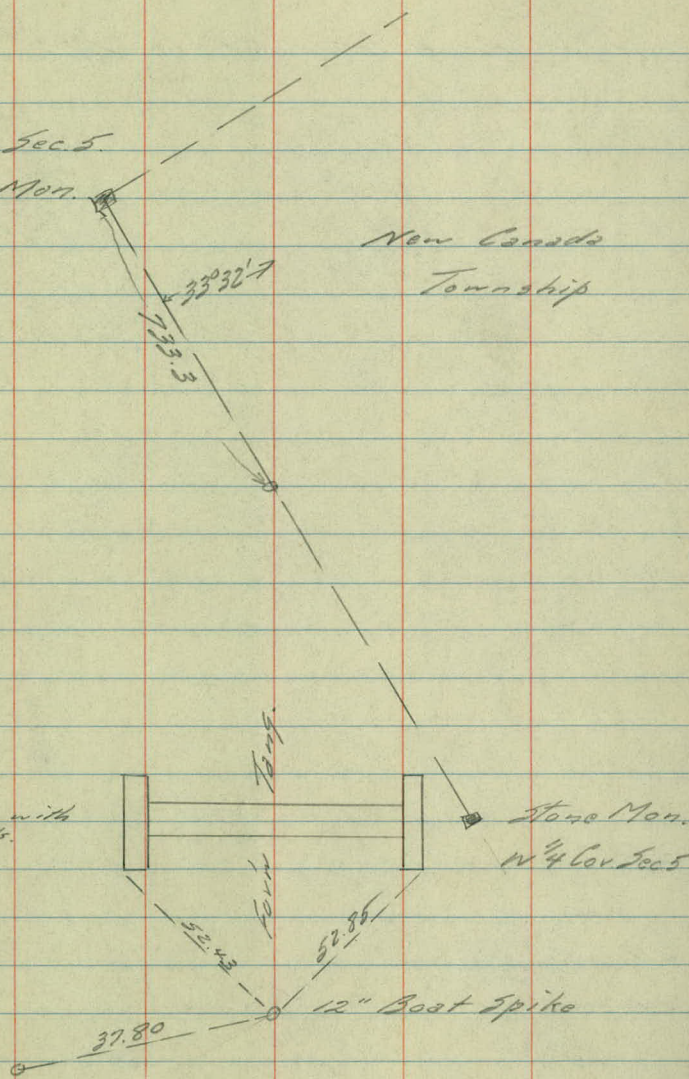
Long.
Fert.

Stone Mon.
N¹/₄ Cor. Sec. 5

52.43
52.85

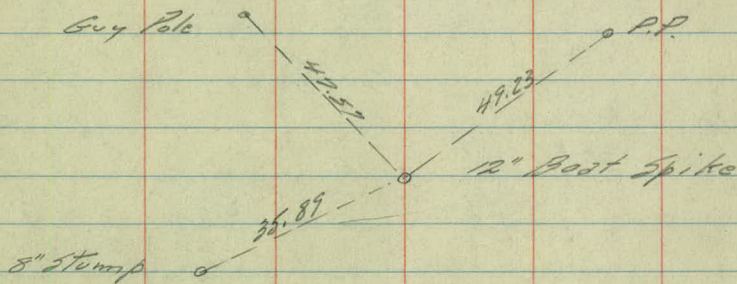
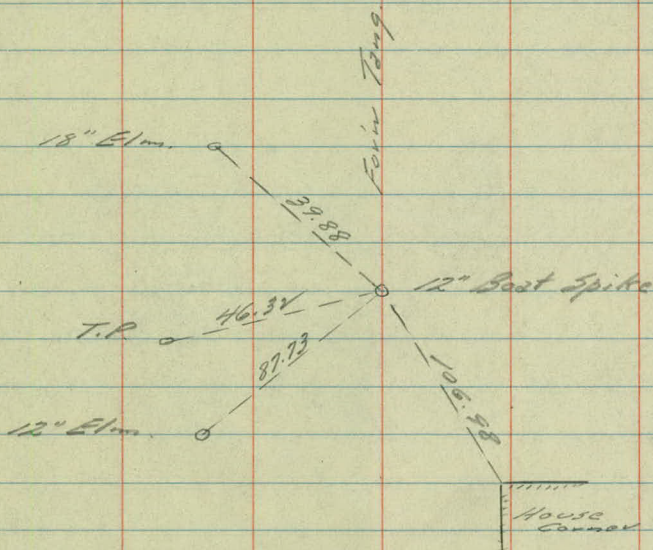
12" Boat Spike

24" Maple.



Angle

Sta.	Point	Lt.	Rt.	Defl.	
55+58.9	P.T.			2°59'	
+50				2°56'	
55				2°41'	
+50				2°26'	
54				2°11'	
+50				1°56'	
53				1°41'	
52+60.7	P.I.	5°58'			
+50				1°26'	D=1°
52				1°11'	T=298.63
+50				0°56'	L=596.67
51				0°41'	
+50				0°26'	
50				0°11'	
49+62.1	P.C.				
45+78.8	P.T.			5°49 1/2'	
+50				5°15'	
45				4°15'	D=4°
+50				3°15'	T=146.15
44+33.7	P.I.		11°39'		L=291.25
44				2°15'	
+50				1°15'	
43				0°15'	
42+87.55	P.C.				



Angle

Sta. Point Lt. Rt.

52+85.6 P.O.S.T.

52+60.7 P.I.

No. 4 Cor.
Sec. 5

Stone
Mon.

51053'

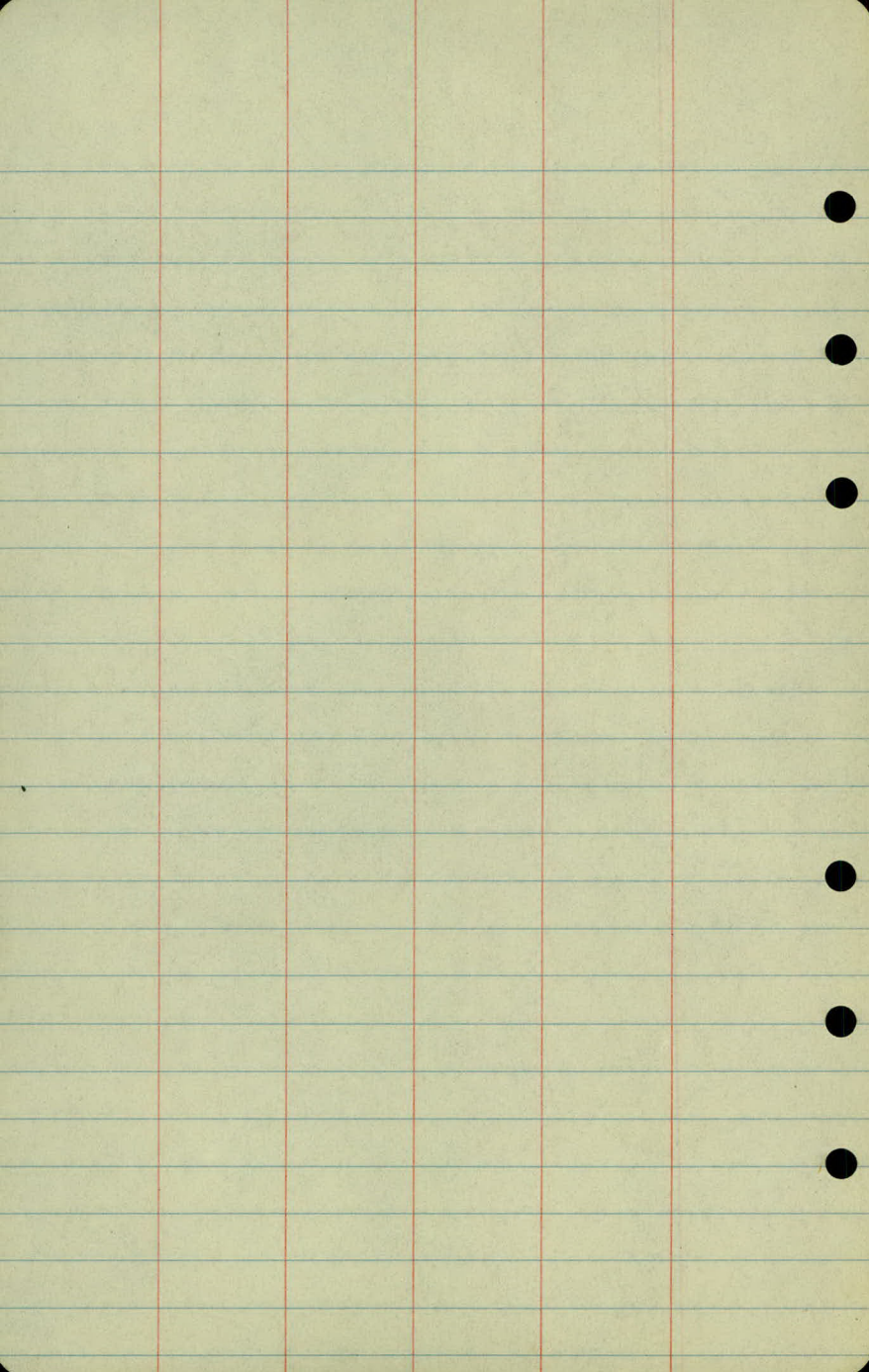
New Canada
Township

N.W. Cor.
Sec. 5

Stone Mon.

681.3

255.5'



21
Topography Centerville Road
Sta 31+00 to Sta. 43+00, Sec 5,
New Canada Township, Account
Drainage Situation.

5/26/
38

38

Black Top.

Tiles Drain to Ditch

37

10 11

36

12 9

35

13 9

34

11 8

33

11 9

32

9 9

31

9 10

Cultivated Field Entr.

+78 End Fc. 35.0

+58 = 15" x 32' C.M.

12' Dist Entr.

+58 = 4" To Begin From Begn 34.0

+84 Dist Entr. From Ho 33.0

+70 Begin Fc. 36.0

+45 R.P. 27.0

+33 End Fc. 33.0

If pipe here buried

Cultivated

85.0

Fc. 25' out

36+53

Field Entr.

36+46 = 15" x 22' C.M. 20.0

+21 R.P. 35.0

+26 T.P. 21.0

Cultivated

Cultivated

30.0

+47 R.P. 22.0

+20 R.P. 24.0

+83 T.P. 19.0

+55 Begin Fence 31.0

+31 = 24" x 36' C.M.

Field Entr.

+51 = 12" x 18' C.M. 20.0

12" x 32' C.M.

24' Dist Entrance

+57 Fc. Cor. 32.0

+69 R.P. 21.0

+50 T.P. 21.0

31485 Field Entrance
12" x 18' C.M. 24.5

Cultivated

Cultivated

+22 T.P. 24'

12' Dist Entrance
31+17

12" x 24' C.M. 19.0

⁴
Blacktop

43

42

41

10 9

40

10 9

39

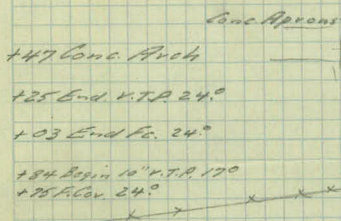
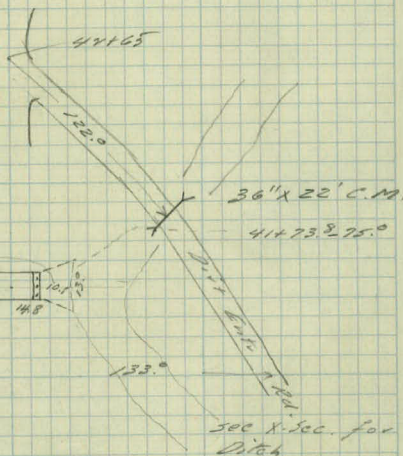
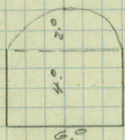
10 10

38

7 13

37

Head walls 14" x 4" Hi. x 8.
 Wings 12" x 11.
 Iron Ed Rail Each Side 44" x 10.
 Barrel 29.6



+47 Conc. Arch

+25 End V.T.P. 24.0

+03 End Fe. 24.0

+84 Begin 10" V.T.P. 170

+75 Floor 24.0

+46 T.P. 17.0

Cultivated

Cultivated

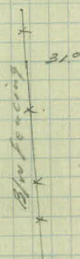
+87 No Drain 4" Tile 29'

+68 P.P. 30.0

+28 End Fe. 33.0

+20 P.P. V.T.P. 12.0

Cultivated



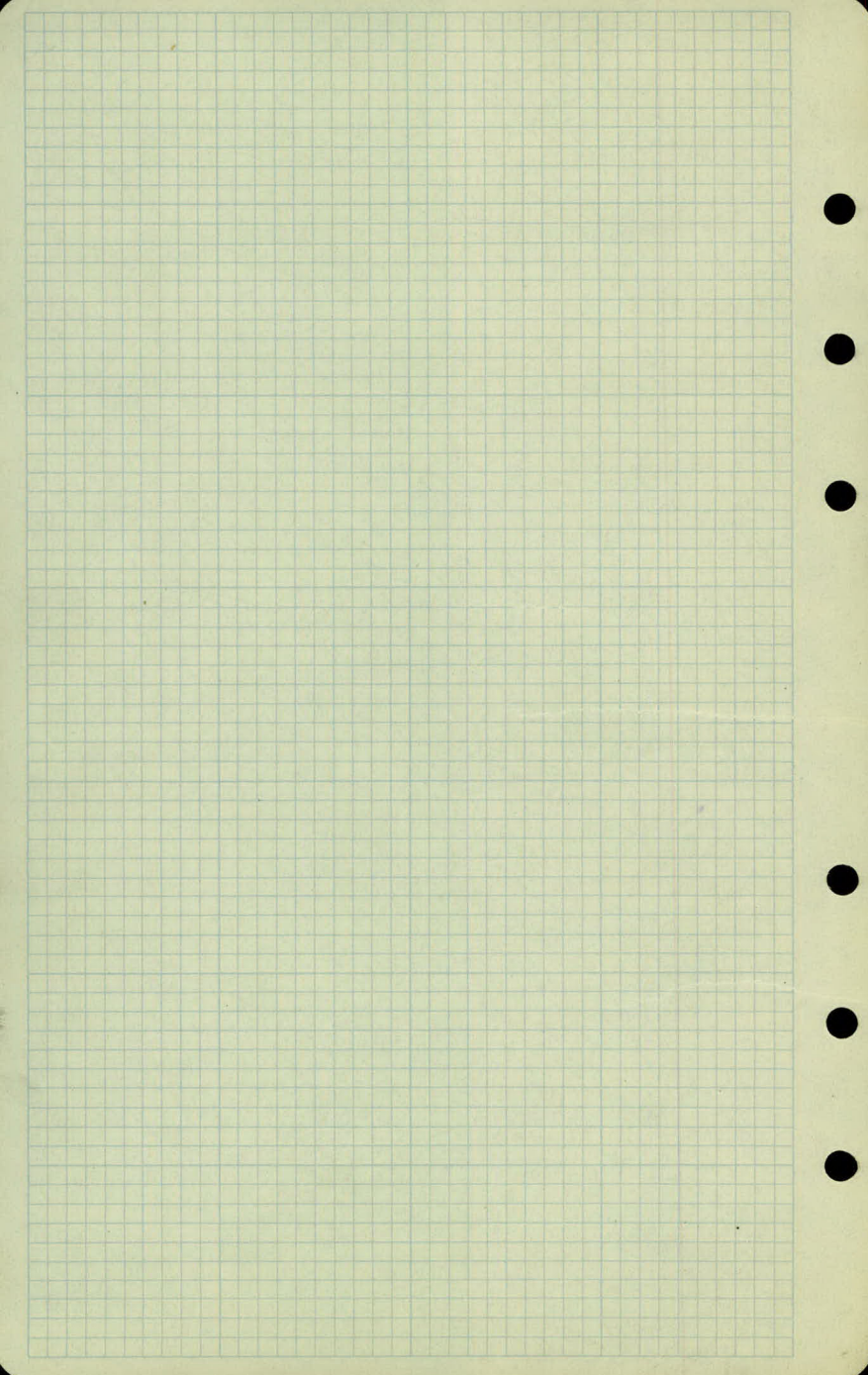
+58 Beg. Fe. 24.0

+25 Beg. Pole 21.0

+91 T.P. 19.0

+96 P.P. 24.0

Cultivated



9
/

Cross Sections Centerville Road
Sta. 31+00 North to 6' Conc. Arch
Sta. 41+47, Section 5, New Canada
Township, Account of drainage
situation.

5/27/38

Sta.	+	Σ	-	Elev.
B.M.	4.05	916.23		912.18
T.P.	1.11	906.58	10.76	905.47
B.M.	8.55	901.47	13.71	897.87
B.M.	3.99	901.47	3.99	897.43
31+00				98.6
31+17		Sec Thru Enter Lt.		98.4
31+50				98.2
31+85		Field Enter Lt.		
32+00				97.9
150				97.6
B.M.	4.65	907.08	3.99	897.43
32+70		Sec Thru Enter Lt.		97.5
33+00				97.3
33+31		24" C.M.		

Lt.

E

Rt.

10

Spike in 18" Box Elder near Intersection of
No. Line Sec. 5 and Centerville Road.
Sec Survey Co. Rd. "D".

N.E. Cor. of East Head Wall of Cone Arch

Spike in 12" Ash. 25' Lt. Sta. 33+30

25	24	51	52	30	28	32	37	62	62	56	49	49	51
50	36	28	18	11	28	10	18	18	17	20	24	34	50

2986
2884
2884
2884

33	53	59
9	32	50

N $\frac{100}{66}$
94.8
S $\frac{100}{66}$
6.7957

20	22	35	54	34	26	36	64	59	63
26	36	28	17	11	32	11	18	32	50

2982
2882
2882
2882

N $\frac{100}{66}$ 95.2
S $\frac{100}{66}$ 95.2

27	30	57	60	58	43	38	35	40	67	71
50	34	28	24	18	14	11	35	12	19	50

2976
2876
2876
2876

25	35	50	59	59	48	40	38	39	70	76
50	33	27	26	21	23	9	38	12	19	50

2976
2876
2876
2876

Spike in 12" Ash. 35' Lt. Sta. 33+30

N $\frac{100}{73}$ 94.8
S $\frac{100}{73}$ 94.9
7.2

2975
2875
2875
2875

32	37	62	62	69	62	53	51	79	77	88	83	87
50	38	33	26	24	23	22	16	13	19	22	24	33

2973
2873
2873
2873

$\frac{100}{77}$
93.7
94.4

$\frac{100}{83}$
93.8

Sta.	+	π	-	Elev.
		902.08		
		27		
33+50		3.9		97.0
33+56	C.M. on Rt.			
34+00				96.7
34+50				96.5
35+00				96.4
+50				96.1
36+00				95.9
+35				96.0
+60				95.9
+57	C.M. Rt.			
+70				95.9
36+84	6" Iron Pipe Ho Drain	Lt.		
36+88.4	4" Barn Drain	Lt.		

LT.

R

RT.

94.9

$\frac{41}{50} \frac{47}{28} \frac{72}{25} \frac{72}{24} \frac{52}{19}$

97.0

$\frac{53}{10} \frac{80}{19} \frac{80}{20} \frac{76}{22} \frac{84}{31} \frac{91}{50}$

N Y $\frac{100}{8.7} 93.4$
S $\frac{100}{8.6} 93.5$

94.7

$\frac{52}{50} \frac{51}{38} \frac{66}{30} \frac{74}{28} \frac{74}{23} \frac{55}{13}$

96.7

$\frac{57}{11} \frac{90}{18} \frac{90}{20} \frac{86}{22} \frac{92}{50}$

94.6

$\frac{55}{50} \frac{55}{37} \frac{63}{34} \frac{75}{26} \frac{75}{23} \frac{58}{16}$

96.5

$\frac{60}{11} \frac{91}{17} \frac{86}{22} \frac{92}{32} \frac{93}{50}$

95.1

$\frac{52}{50} \frac{55}{37} \frac{68}{28} \frac{70}{21} \frac{60}{17} \frac{60}{13}$

96.4

$\frac{62}{11} \frac{97}{22} \frac{94}{25} \frac{96}{50}$

94.8

$\frac{49}{50} \frac{53}{37} \frac{71}{28} \frac{73}{23} \frac{62}{19}$

96.1

$\frac{66}{9} \frac{69}{13} \frac{93}{19} \frac{96}{50}$

94.8

$\frac{37}{50} \frac{49}{37} \frac{70}{28} \frac{73}{21} \frac{62}{16}$

95.9

$\frac{66}{13} \frac{92}{20} \frac{90}{24} \frac{96}{50}$

$\frac{30}{50} \frac{34}{39} \frac{54}{28}$

96.0

$\frac{66}{9} \frac{64}{13} \frac{95}{18} \frac{95}{21} \frac{80}{26} \frac{85}{34} \frac{85}{50}$

$\frac{20}{50} \frac{30}{46} \frac{52}{21}$

95.9

$\frac{66}{9} \frac{66}{14} \frac{77}{22} \frac{90}{50}$

94.2

$\frac{15}{50} \frac{30}{36} \frac{72}{26} \frac{78}{22} \frac{68}{20} \frac{58}{19}$

95.9

$\frac{67}{11} \frac{67}{13} \frac{95}{20} \frac{95}{21} \frac{85}{24} \frac{91}{50}$

N Y $\frac{100}{10.5} 91.3$
S $\frac{100}{10.5} 91.6$

$\frac{100}{6.5} 895.58$

$\frac{100}{3.5} 898.58$

Sta.	+	π	-	Elev.
		907.08		
37+00				95.8
+50				95.7
37+68	C.M. Culvert Lt.			
38				95.6
T.P.	10.07	905.61	6.49	895.59
+50				95.5
39				95.1
T.P.	2.65	907.06	11.70	894.41
+50				94.9
40+00				94.7
39+82	No Drain Lt. 4" Tile			
T.P.	2.32	896.73	7.65	894.41

47.

4

47.

93.7

$\frac{02}{50} \frac{04}{38} \frac{26}{24} \frac{54}{23} \frac{84}{21} \frac{73}{19} \frac{63}{17}$

95.8

$\frac{69}{11} \frac{68}{13} \frac{102}{19} \frac{102}{21} \frac{85}{25} \frac{88}{50}$

$\frac{10}{50}$

$\frac{12}{39} \frac{83}{20} \frac{83}{17} \frac{68}{14}$

95.7

$\frac{70}{14} \frac{106}{19} \frac{106}{21} \frac{56}{24} \frac{50}{21} \frac{88}{50}$

N. $\frac{100}{8.4} 893.68$

S. $\frac{100}{8.3} 893.78$

$\frac{00}{50} \frac{10}{41} \frac{20}{46} \frac{25}{29} \frac{34}{28} \frac{39}{22} \frac{82}{17} \frac{82}{15} \frac{65}{12}$

95.6

$\frac{70}{15} \frac{112}{21} \frac{112}{23} \frac{95}{26} \frac{88}{32} \frac{96}{50}$

93.6

95.5

$\frac{26}{50} \frac{35}{45} \frac{44}{43} \frac{47}{30} \frac{120}{18} \frac{120}{16} \frac{102}{13}$

$\frac{106}{14} \frac{148}{19} \frac{148}{22} \frac{143}{24} \frac{141}{28} \frac{136}{50}$

93.7

95.1

$\frac{42}{50} \frac{41}{44} \frac{65}{31} \frac{118}{23} \frac{118}{19} \frac{118}{17} \frac{103}{15}$

$\frac{109}{9} \frac{106}{11} \frac{143}{19} \frac{141}{26} \frac{139}{50}$

93.1

94.9

$\frac{102}{50} \frac{03}{45} \frac{15}{33} \frac{80}{20} \frac{80}{17} \frac{25}{12}$

$\frac{78}{11} \frac{120}{19} \frac{113}{24} \frac{134}{100} \frac{184}{105} \frac{184}{107} \frac{138}{114}$

92.5

94.7

$\frac{04}{50} \frac{23}{33} \frac{85}{25} \frac{80}{17} \frac{80}{16} \frac{27}{12}$

$\frac{78}{11} \frac{129}{21} \frac{120}{24} \frac{130}{34} \frac{136}{50} \frac{147}{85} \frac{176}{88} \frac{176}{91} \frac{150}{95}$

$\frac{100}{7.3} 894.76$

Ditch

12/26

Sta.	+	-	Elev.
------	---	---	-------

896.73

40+50

94.4

+64

94.4

41+00

94.3

41+05

Origin Lt.

+28

94.2

41+47

Section Thru Conc. Arch ^{94.2}

41+74

C.M. Road Culvert Rt.

B.M.

11.76

904.63

3.86

897.87

T.P.

12.88

916.83

0.68

903.95

B.M.

4.63

917.70

917.18

CH

Q

CH

81.7

72.1

94.4

Ditch

130	00	20	29	46	46	25	25	29	93	103	89	126	126	98
50	40	33	24	20	18	13	10	21	30	50	50	73	77	78

Ditch

44	44	50	53	26	25	80	100	109	127	127	98
50	23	21	18	12	11	19	28	68	70	77	79

Ditch

50	54	48	27	28	104	110	123	129	108
50	24	16	11	11	22	80	54	86	89

N Y $\frac{124}{98} 886.93$

S Y $\frac{124}{79} 888.85$

Ditch

85	64	48	28	25	28	104	108	125	125	116
50	23	19	11	25	11	23	36	41	44	50

81.73

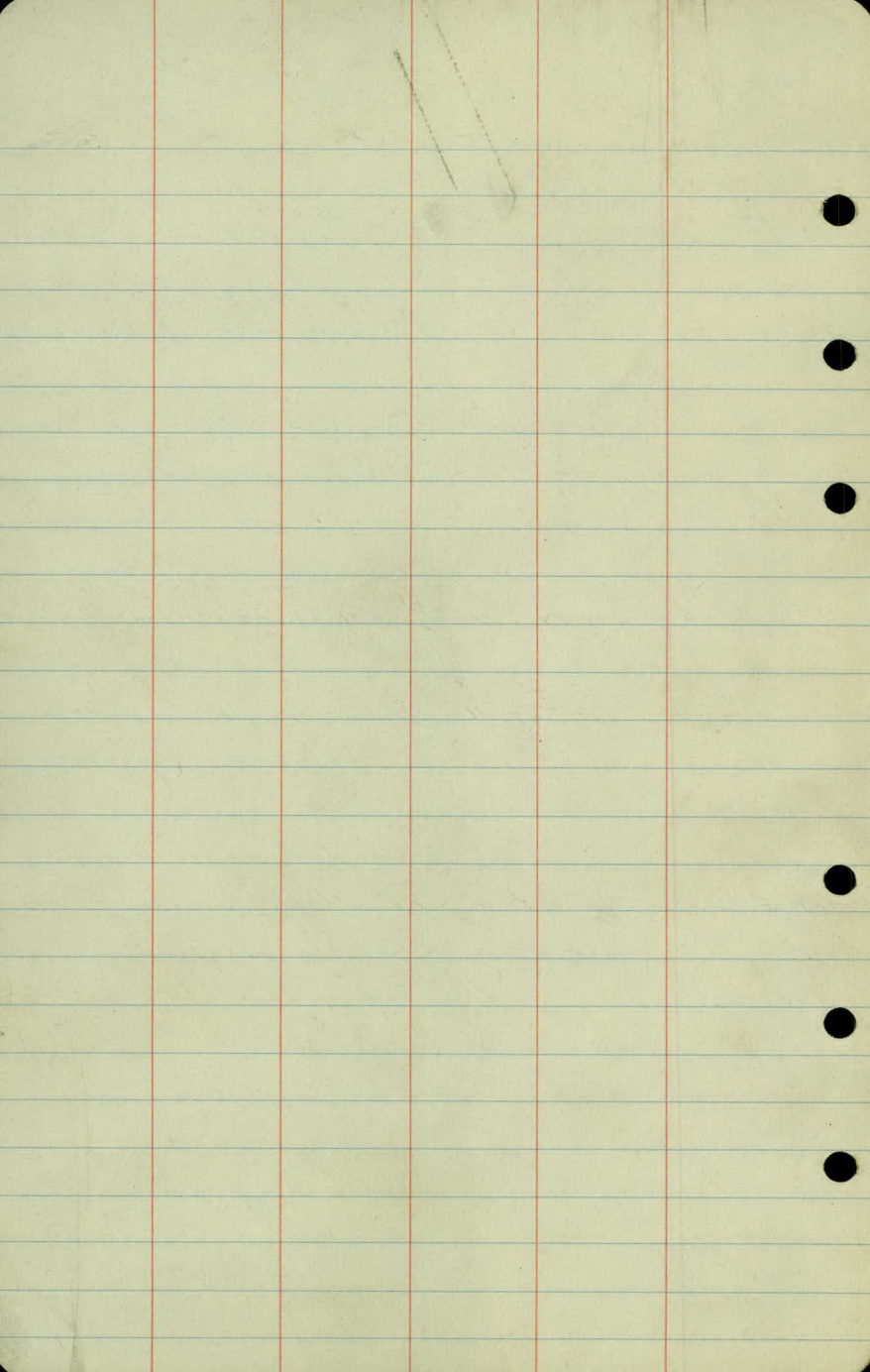
82.63

163	150	45	28	27	38	141	188	137
50	148	148	11	10	15	15	30	41

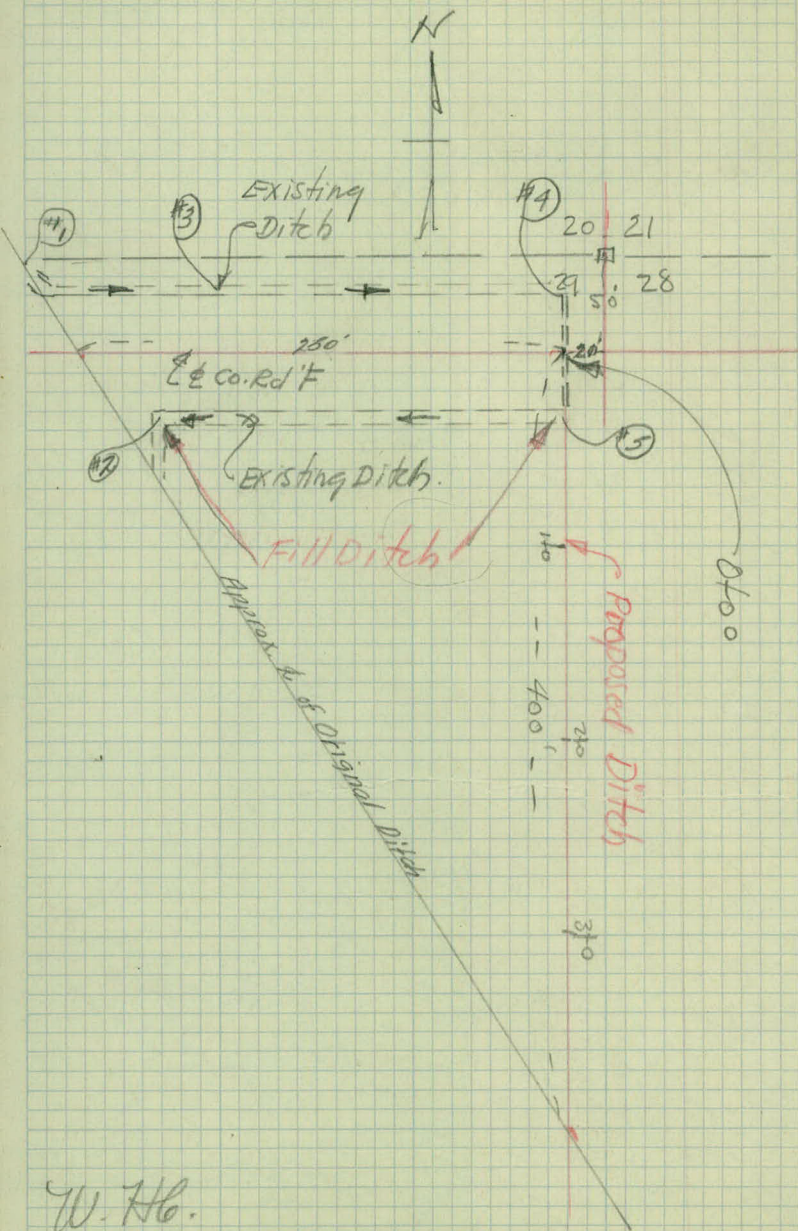
W. $\frac{124}{136} 883.13$

E. $\frac{124}{140} 882.73$

N.E. Cor. of East Head wall of Conc. Arch.



Co. Rd. "F"
Ditch



W. H. G.
K. a.

Sta	+	-	Elev	
B.M.	-0.02	905.89	905.91	
	5.53	908.16	826	897.63
# 1 Bot. of original ditch		9.2	894.0	892 - 92.6
# 1 Water Surface		8.65	894.51	
" 2 " "		8.65	894.51	
# 3 Bot. Ditch		9.6	893.6	
# 2 " "		10.1	893.06	
# 4 Flowing Culv		9.93	893.23	
# 5 " " "		10.1	893.06	

Levels over Proposed Ditch

0+30 - F¹

0+30 - F. Culv.

0+43

1+0

+50

2

+50

3

+90

4

10.1

4.8

4.9

4.7

5.3

6.9

8.7

9.3

10.0

8-143

Drainage Survey

County Road "F"
near Second St. N.B.