Dr 8 · Bk 127

FICE OF COUNTY ENGINEER
RAMSEY CO. MINN.

PLAN Survey

Menemy St.

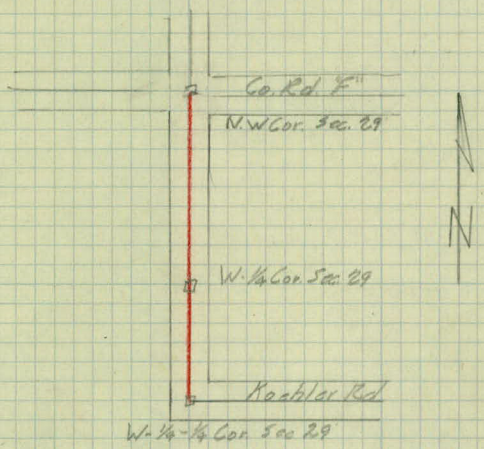
ehler Rd. To Co. Rd. "F"

Road Acc't. No.

Date Filed File

PLAN SURVEY

McMenamy St.
from
Kochler Rd to Co. Rd "F"

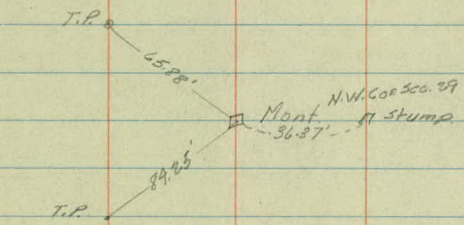


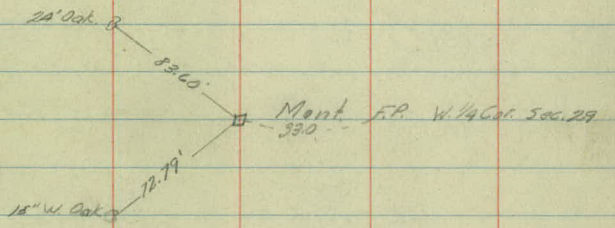
INDEX.

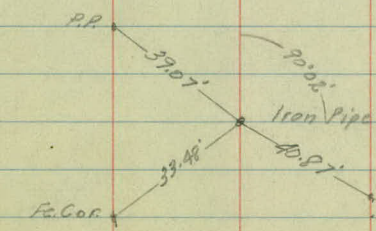
W. Parker
4/8/38

Alignment

Sta	Point	Δ Lt	Δ Rt
39 +46.32			
13 +08.79	P.I.		
0+00	= ℄ Kochler Rd.		


T.P.
65.98'
N.W. Cor Sec. 29
Mont
36.37'
A Stump
89.45'
T.P.


24" Oak
83.60'
Mont. F.B. W. 1/4 Cor. Sec. 29
33.0'
12.79'
15" W. Oak


P.P.
39.07'
90°00'
Iron Pipe
33.48'
40.97'
Fd. Cor.
P.P.

Topography

5 9' 18'

4 8' 15'

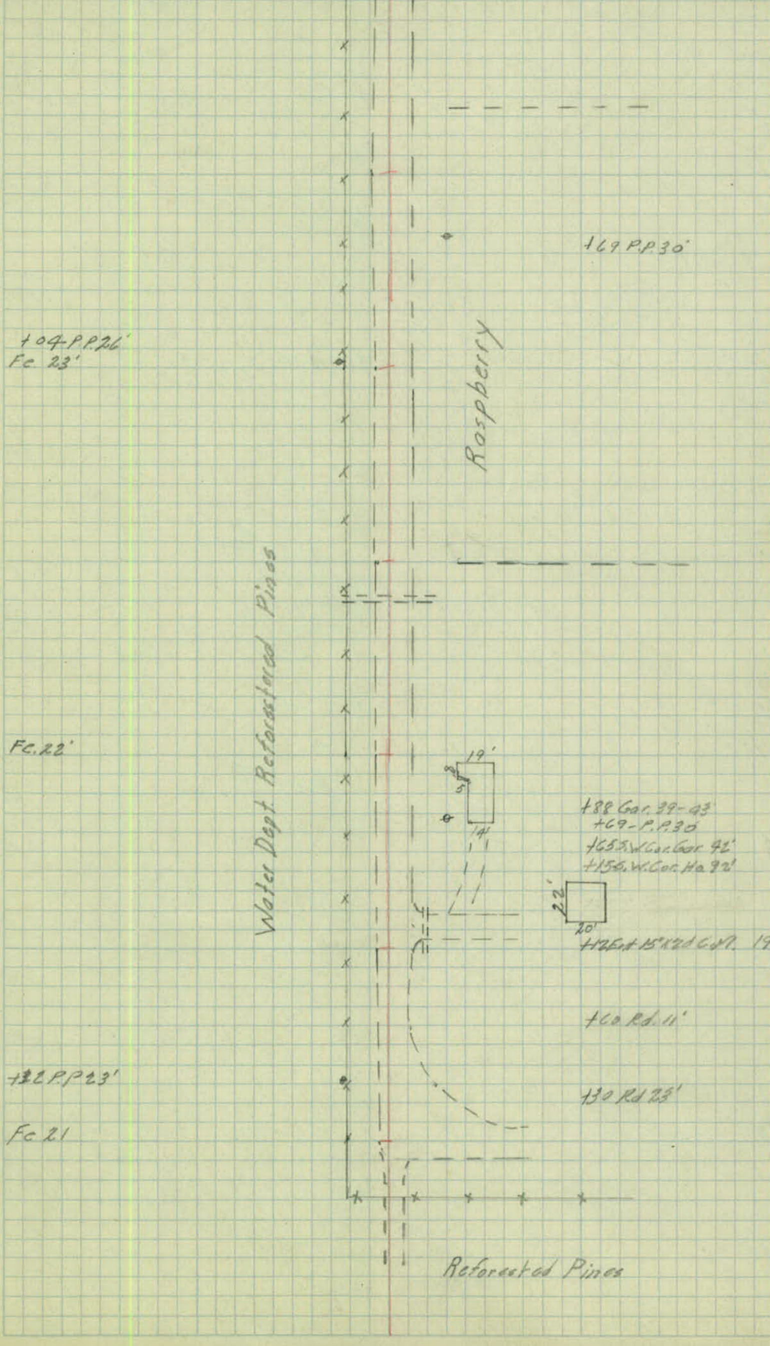
3 7' 13'

+82 R 12" X 40' C.M. 15 Ld. 25' Rt.

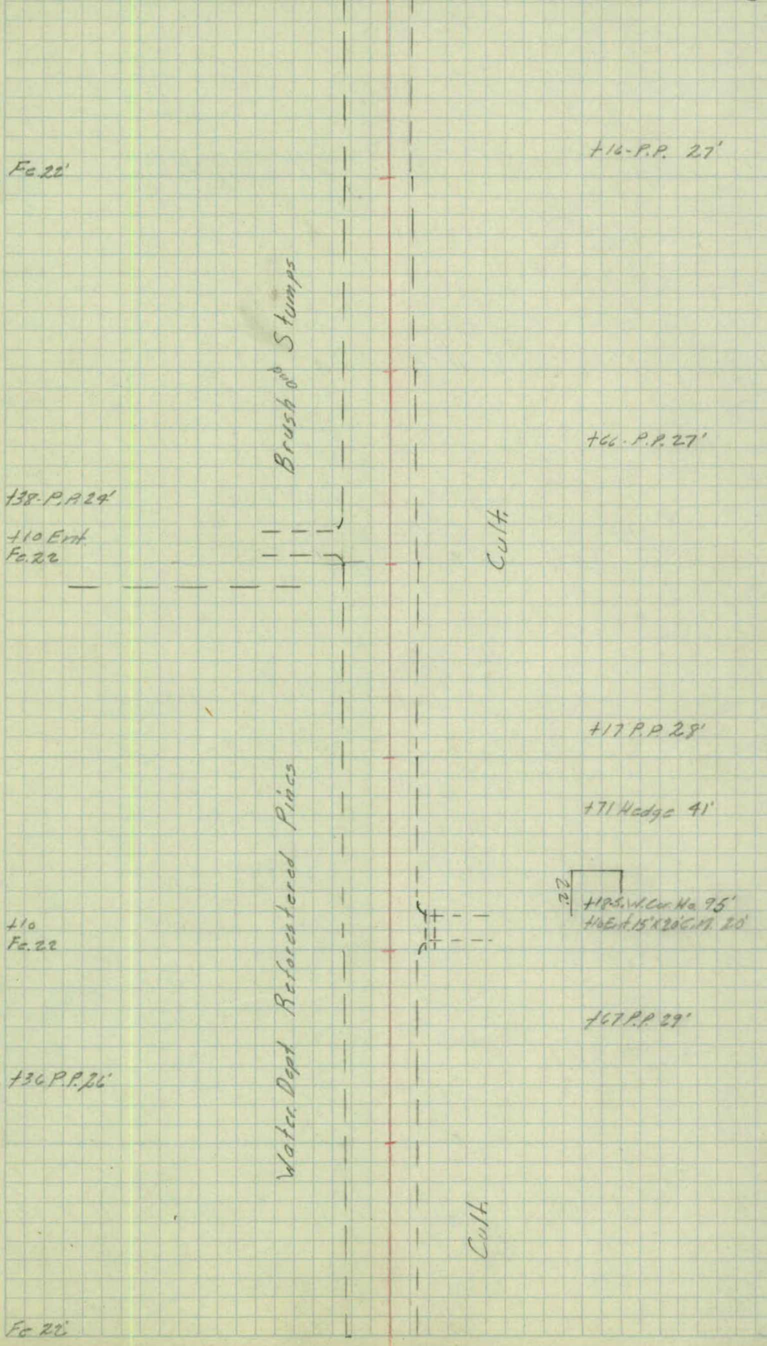
2 8' 13'

1 8' 11'

0+00 5'


+04-P.P.26'
Fc. 23'
Fc. 22'
+32 P.P 23'
Fc 21
Water Dept. Reforestered Pines
Raspberry
+69 P.P.30'
19'
8
5
14'
+88 Gar. 29-43
+69-P.P.30
+65 S.W.Cor.Gar 42'
+156.W.Cor. Ho 92'
22'
20'
+60 Rd. 11'
130 Rd 23'
Reforested Pines

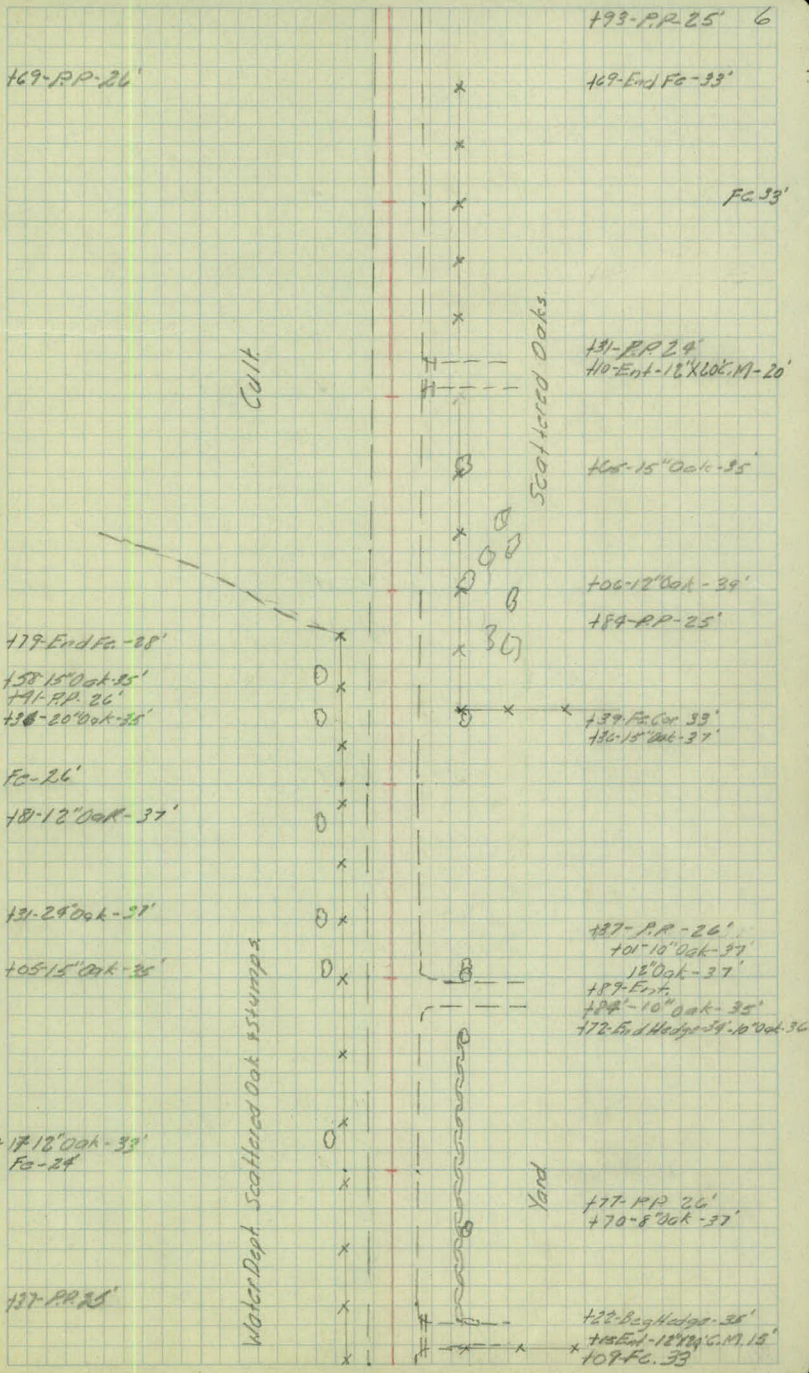
12	11'	11'
11	11'	12'
10	9'	13'
9	9'	13'
8	9'	13'
7	8'	13'
6	7'	13'


+16-P.P. 27'
Fc. 22'
Brush and Stumps
+66-P.P. 27'
+38-P.P. 24'
+10 Ent.
Fc. 22
Cult.
+17 P.P. 28'
+71 Hedge 41'
22'
+18 S.W. Cor. Ho. 95'
+16 Ent. 15"x20" C.M. 20'
+10
Fc. 22
+67 P.P. 29'
Water Dept. Reforestered Pines
+36 P.P. 26'
Cult.
Fc. 22'

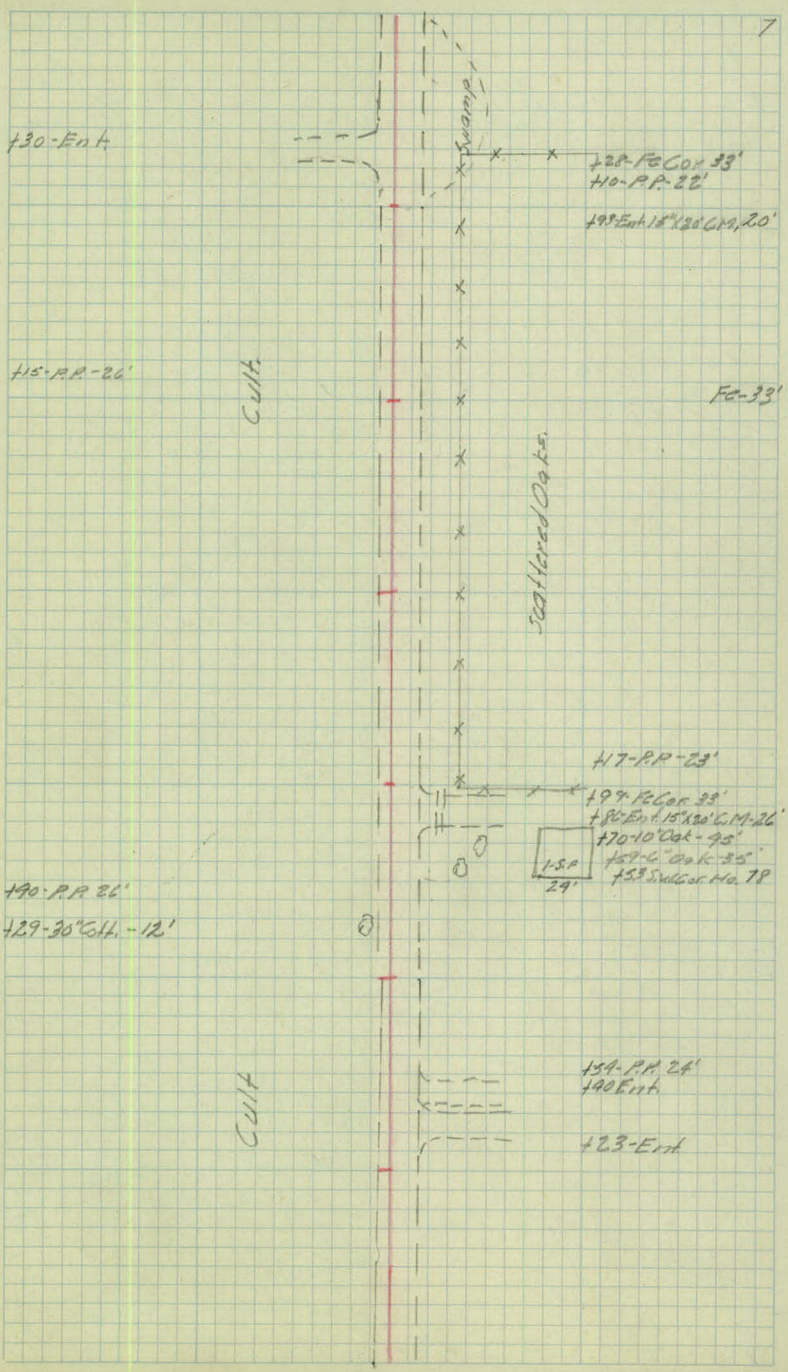
19	9'	15'
18	11'	15
17	12'	14'
16	13'	12'
15	12'	13'
14	12'	12'

#33 Water Dept & Point-21'

13	12'	12'


+93-P.P. 25'
+69-P.P. 26'
+69-End Fc-33'
Fc 33'
Cult
Scattered Oaks
+31-P.P. 24'
+10-End-18"X20" M-20'
+05-15"Oak-35'
+06-12"Oak-34'
+84-P.P.-25'
+79-End Fc.-28'
+58 15"Oak-25'
+91-P.P. 26'
+96-20"Oak-35'
+39-Fc Cor. 33'
+36-15"Oak-37'
Fc-26'
+81-12"Oak-37'
+31-24"Oak-37'
+05-15"Oak-35'
+87-P.P.-26'
+01-10"Oak-37'
12"Oak-37'
+89-End
+84'-10"Oak-35'
+72-End Hedge-34'-10"Oak-30
Water Dept. Scattered Oak Stumps
+17 12"Oak-33'
Fc-24'
Yard
+77-P.P. 26'
+70-8"Oak-37'
+37-P.P.25'
+22-Beg Hedge-35'
+18-End-18"X24" C.M. 18'
109-Fc. 33

26	7'	14'
25	8'	14'
24	7'	14'
23	6'	14'
22	6'	15'
21	8'	15'
20	9'	15'


+30-Ent
Swamp
+28-FeCor. 33'
+10-P.P.-22'
+93-Ent. 15"X20" C.M.-20'
+15-P.P.-26'
Cult.
Fe-33'
Scattered Oaks
+17-P.P.-23'
+97-Fe Cor. 33'
+86-Ent. 15"X20" C.M.-26'
+70-10" Oak-95'
+69-6" Oak-85'
+53 Sul. Cor. No. 78
1.5 A
29'
+90-P.P. 26'
+29-30" C.H.-12'
Cult.
+59-P.P. 24'
+90 Ent.
+23-Ent.

33 4' 20'

32 107-12"x32'GM 10' 3' 21' 22'

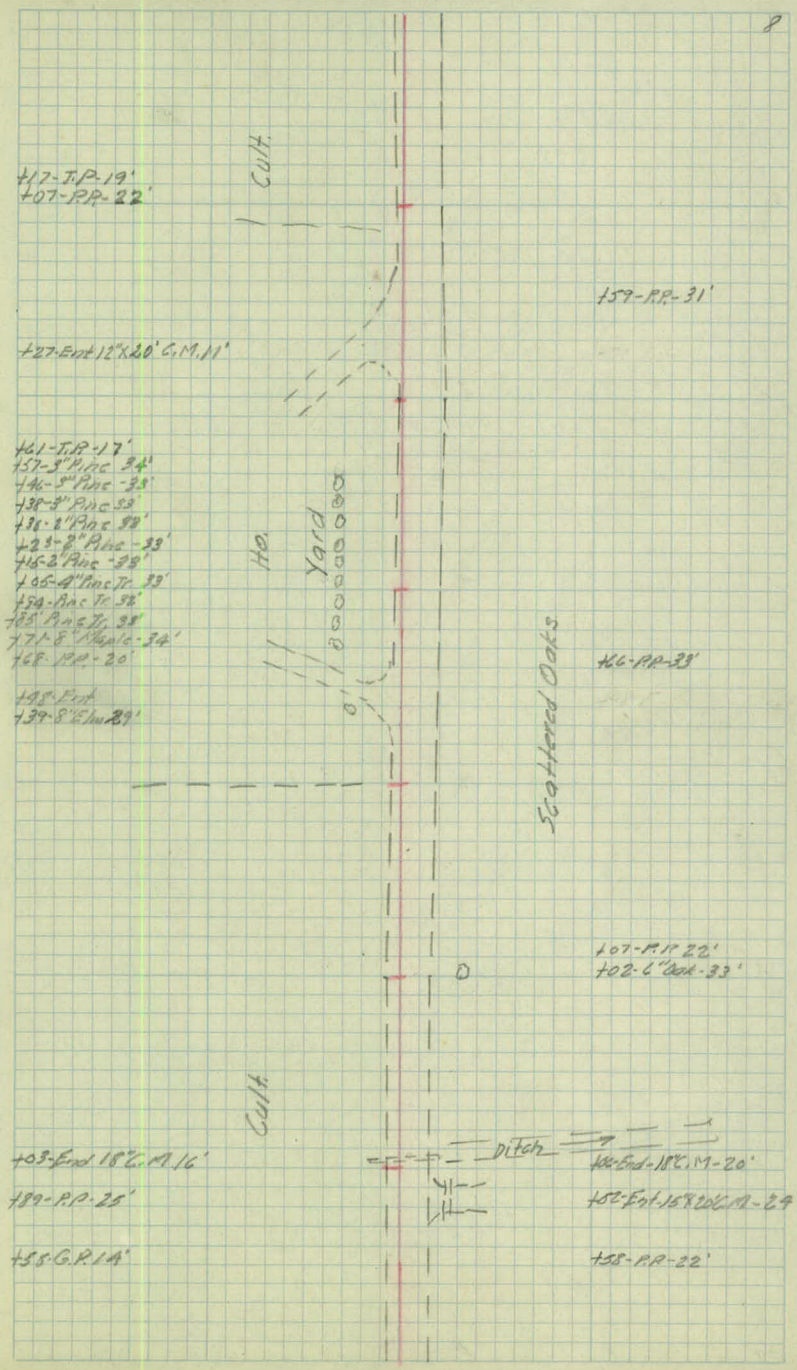
31 4' 20'

30 5' 17'

29 8' 15'

28 18"x32'GM 9' 15'

27 8' 16'


417-T.P.-19'
407-P.P.-22'
Cult.
457-P.P.-31'
427-Ent 12"x20' C.M.11'
461-T.P.-17'
457-3"Pine-34'
446-8"Pine-33'
438-8"Pine 33'
436-8"Pine 33'
423-8"Pine-33'
415-8"Pine-33'
406-4"Pine Tr. 39'
389-Pine Tr. 36'
385-Pine Tr. 38'
371-8"Maple-34'
368-WP-20'
398-Ent
439-8"Elm 29'
Ho.
Yard
5-6 Horse Oaks
466-PP-38'
407-P.P.22'
402-6"Oak-33'
Cult.
403-End 18"C.M.16'
389-P.P.-25'
455-G.P.14'
Ditch
446-End-18"C.M.-20'
452-End-15"&20"C.M.-24'
458-P.P.-22'

40

+35
+20

16'
60'

39

+91

50'
25'

+65

19'

38

11'

14'

37

10'

13'

36

8'

14'

35

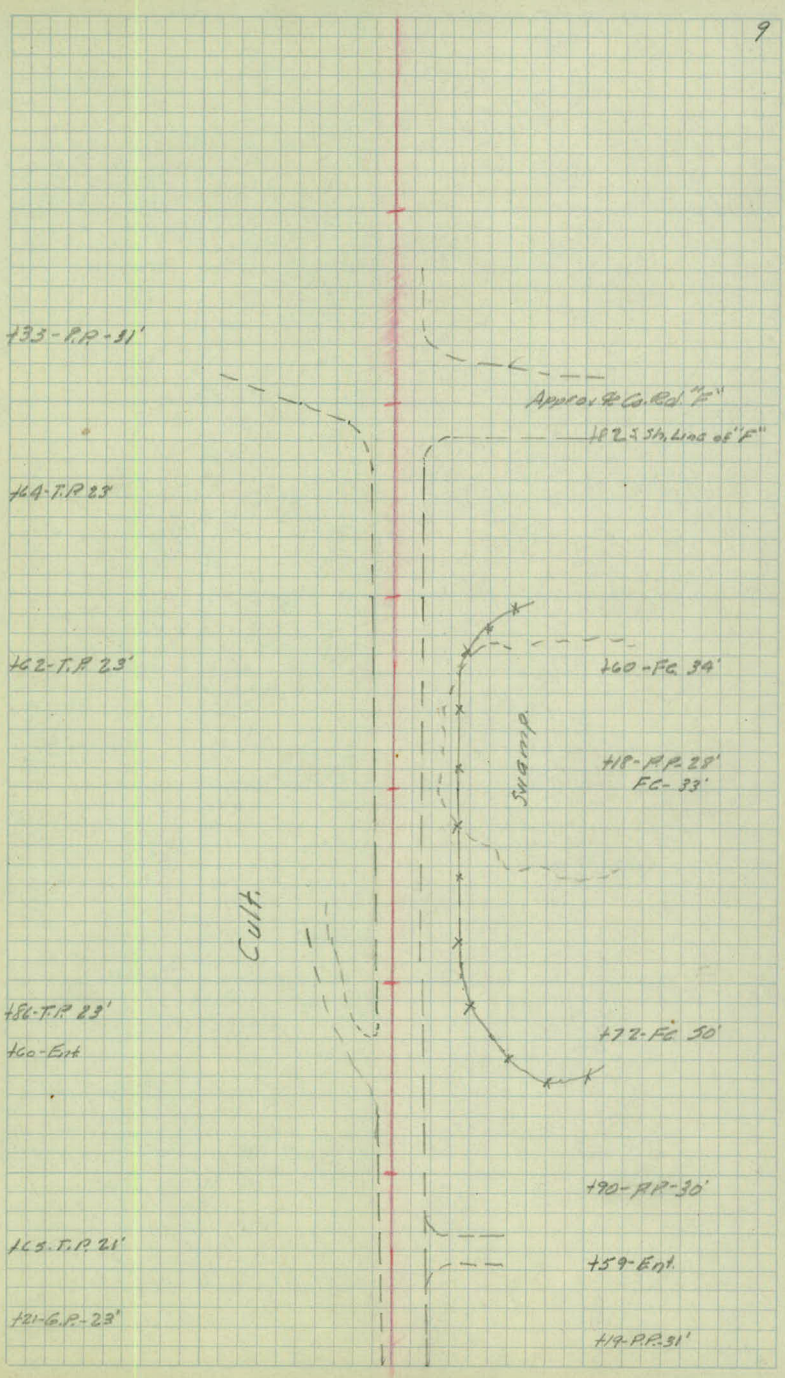
7'

17'

34

5'

19'


+33 - P.P. - 31'
Approx. R.R. Co. Rd. "F"
+62 - Sh. Line of "F"
+64 - T.P. 23
+62 - T.P. 23'
+60 - F.G. 34'
Swamp
+58 - P.P. 28'
F.G. - 33'
Cut
+56 - T.P. 23'
+60 - Ent.
+72 - F.G. 30'
+90 - P.P. - 30'
+59 - Ent.
+65 - T.P. 21'
+21 - G.P. - 23'
+19 - P.P. - 31'

Levels

Sta	+	⊼	−	Elev	
B.M.	2.59	912.74			910.15
T.P.	13.03	922.75	3.02	909.72	
T.P.	13.75	936.36	6.14	922.61	
T.P.	3.47	939.26	0.57	935.79	
B.M.	2.42	937.26	2.42	934.84	
T.P.	2.19	931.39	10.06	929.20	
T.P.	0.13	917.90	13.62	917.77	
B.M.	7.28	917.90	7.28	910.62 ✓	
		921.23			
T.P.	9.74	921.33	6.41	911.49	
T.P.	7.97	925.37	3.83	917.40	
		932.14			
T.P.	7.89	932.41	1.12	924.25	
B.M.			0.73	931.41	

Spike in P.K. N. W. Cor. 19 & M Cemetery & Rockford Rd

Top Mont 13+08

Spike in 24" Oak 40' Rt 25+45

Top Mont M&M Cemetery & Co. Rd. E"

X Sections

Sta	+	H	−	Elev	
B.M.	3.10	913.25			910.15
0+00				906.2	
+25				07.2	
+34				07.4	
+70				07.3	
1				07.4	
+50				07.4	
+82				07.5	
2				07.6	
T.P	5.27	913.47	5.05	908.20	
+50				07.7	
3				07.8	
+50				08.2	

Lt. ℄ Rt.

Spk in RPLt start

8.6 / 50	6.9 / 33	6.1 / 22	6.1 / 13	7.1 / 10	7.1	6.7 / 9	6.3 / 33	6.1 / 50	
5.5 / 50	4.0 / 35	4.7 / 32	5.3 / 12	6.7 / 9	6.1	5.8 / 11	6.7 / 26	6.4 / 30	
3.7 / 50	3.8 / 35	4.3 / 25	4.9 / 16	6.8 / 10	5.9	5.8 / 8	6.9 / 21	6.6 / 26	4.0 / 32	3.8 / 50
10.4 / 50	0.8 / 33	2.7 / 15	6.4 / 11	6.0	6.0 / 6	6.3 / 11	6.1 / 14	4.9 / 33	3.8 / 50
1.5 / 50	+0.1 / 33	2.6 / 15	6.2 / 11	5.9	6.0 / 17	6.7 / 19	5.5 / 21	4.9 / 33	4.0 / 50
0.0 / 50	1.6 / 33	2.6 / 27	3.7 / 17	6.6 / 12	6.8 / 9	5.9	6.2 / 16	6.8 / 18	5.9 / 20	5.2 / 33	4.7 / 37	4.2 / 50
3.7 / 50	3.8 / 33	5.0 / 22	5.7 / 18	7.0 / 14	6.3 / 9	5.8	5.8 / 6	6.2 / 17	7.0 / 20	6.2 / 37	5.3 / 42	
5.7 / 50	7.6 / 23	8.5 / 16	8.1 / 13	6.3 / 9	5.7	6.0 / 18	8.0 / 22	7.7 / 33	7.2 / 37	6.4 / 40	
Top Post +1.5										
11.9 / 50	11.6 / 33	11.5 / 24	11.0 / 16	6.3 / 9	5.8	6.4 / 17	11.2 / 24	11.5 / 33	11.7 / 50	
13.0 / 50	12.9 / 33	12.3 / 18	6.2 / 9		5.7	5.9 / 15	10.4 / 22	10.8 / 33	10.8 / 50	
11.3 / 50	10.3 / 33	10.1 / 23	9.5 / 15	5.7 / 9	5.3	5.6 / 16	8.3 / 20	8.4 / 33	8.0 / 50	

Sta	+	HI	−	Elev.
		913.47		
A +00				908.8 ✓
T.R	10.53	920.81 ✓	3.19	910.28
+70				10.2
5				11.0
+40				11.0
6				13.5
+50				15.1
7				16.6
+50				18.1
8				19.9 ✓
T.R	19.58	933.73 ✓	0.66	920.15
+50				21.8
9				23.7

LL E RL

59/50 56/33 57/22 61/12 50/9 47/— 53/19 48/21 40/39 31/50

70/50 78/33 80/18 113/13 106/— 108/14 117/17 117/20 60/27 50/33 40/50

66/50 62/33 62/20 102/12 98/— 93/14 109/17 110/21 75/26 73/33 65/50

111/50 103/33 98/14 95/9 98/— 93/17 105/22 98/24 109/33 98/50

112/50 105/33 98/14 77/10 73/— 75/18 86/21 87/29 83/33 74/50

72/50 64/33 60/21 70/19 70/12 62/10 57/— 59/18 76/22 75/24 65/29 65/33 61/50

56/50 51/33 50/18 60/14 46/10 42/— 45/18 62/22 53/24 54/33 51/50

45/50 27/33 26/22 35/17 41/15 41/12 29/10 27/— 29/16 42/20 30/22 32/33 27/50

24/50 12/30 07/21 20/16 20/13 13/11 09/— 10/15 16/18 05/20 102/33 108/50

152/50 151/33 140/20 131/14 122/11 119/— 120/7 125/15 133/18 124/20 118/26 113/33 104/50

150/50 150/33 143/18 103/11 100/— 102/18 118/23 118/33 112/50

Sta	+	H	−	Elev.
		933.73		
9 +50				925.6
10				27.7 ✓
T.P.	11.18	941.96 ✓	2.95	930.78
+50				30.1
11				32.4
+50				34.0
12				35.3
+50				36.6
13				37.0
B.M.	5.13	941.96 ✓	5.13	936.83 ✓
+50				36.0
14				34.7
+27				33.8

LL Q RL

$\frac{117}{50}$ $\frac{125}{33}$ $\frac{121}{17}$ $\frac{83}{11}$ $\frac{81}{-}$ $\frac{85}{21}$ $\frac{103}{24}$ $\frac{106}{33}$ $\frac{102}{50}$

$\frac{87}{50}$ $\frac{74}{33}$ $\frac{66}{22}$ $\frac{64}{10}$ $\frac{69}{-}$ $\frac{64}{11}$ $\frac{72}{20}$ $\frac{72}{27}$ $\frac{42}{33}$ $\frac{41}{50}$

$\frac{119}{50}$ $\frac{107}{33}$ $\frac{103}{20}$ $\frac{122}{13}$ $\frac{127}{11}$ $\frac{119}{-}$ $\frac{123}{16}$ $\frac{136}{19}$ $\frac{135}{23}$ $\frac{74}{32}$ $\frac{69}{50}$

$\frac{102}{50}$ $\frac{83}{33}$ $\frac{70}{20}$ $\frac{104}{12}$ $\frac{96}{-}$ $\frac{98}{13}$ $\frac{102}{18}$ $\frac{77}{24}$ $\frac{71}{26}$ $\frac{43}{31}$ $\frac{46}{50}$

$\frac{97}{50}$ $\frac{89}{33}$ $\frac{67}{21}$ $\frac{88}{14}$ $\frac{80}{-}$ $\frac{84}{13}$ $\frac{85}{14}$ $\frac{85}{18}$ $\frac{47}{28}$ $\frac{47}{33}$ $\frac{53}{50}$

$\frac{93}{50}$ $\frac{75}{33}$ $\frac{65}{21}$ $\frac{76}{19}$ $\frac{77}{14}$ $\frac{73}{13}$ $\frac{67}{-}$ $\frac{70}{12}$ $\frac{74}{13}$ $\frac{73}{16}$ $\frac{52}{21}$ $\frac{54}{33}$ $\frac{56}{50}$

$\frac{91}{50}$ $\frac{71}{33}$ $\frac{57}{17}$ $\frac{67}{13}$ $\frac{59}{-}$ $\frac{56}{12}$ $\frac{59}{15}$ $\frac{43}{20}$ $\frac{44}{33}$ $\frac{41}{50}$

$\frac{94}{50}$ $\frac{77}{33}$ $\frac{56}{19}$ $\frac{58}{16}$ $\frac{50}{-}$ $\frac{52}{11}$ $\frac{56}{14}$ $\frac{40}{19}$ $\frac{37}{33}$ $\frac{31}{50}$

$\frac{97}{50}$ $\frac{70}{33}$ $\frac{58}{23}$ $\frac{54}{16}$ $\frac{65}{14}$ $\frac{60}{-}$ $\frac{65}{15}$ $\frac{46}{20}$ $\frac{47}{26}$ $\frac{32}{30}$ $\frac{23}{39}$ $\frac{23}{50}$

$\frac{101}{50}$ $\frac{83}{33}$ $\frac{63}{19}$ $\frac{81}{14}$ $\frac{73}{-}$ $\frac{77}{15}$ $\frac{56}{22}$ $\frac{58}{28}$ $\frac{41}{32}$ $\frac{36}{50}$

$\frac{106}{50}$ $\frac{91}{33}$ $\frac{77}{19}$ $\frac{89}{15}$ $\frac{82}{-}$ $\frac{83}{16}$ $\frac{67}{21}$ $\frac{63}{28}$ $\frac{43}{32}$ $\frac{41}{50}$

Sta.	+	↗	−	Elev.
		941.96		
14 +70				932.6
15				31.5 ✓
T.P.	2.60	934.22 ✓	10.34	931.62
+50				30.3
16				29.7
+28				29.4
+75				29.0
17				28.8
+50				28.6
18				29.1
+50				29.1
19				28.9

Lt ℄ Rt

11.8	11.2		10.5	10.1	9.4	9.9	10.3	9.6	9.6
30	33		23	12	—	14	28	31	50
12.2	12.3	12.6	12.2	11.7	11.2	10.5	10.8	12.5	13.6	14.0
50	33	25	18	17	11	—	14	19	33	50
6.5	6.0	5.8	5.8	4.5	3.9	4.7	6.2	8.4	9.2
30	33	22	14	12	—	14	17	33	50
4.7	4.7	5.0	6.7	6.7	5.2	4.5	5.1	6.9	8.8	10.1
30	33	22	19	16	13	—	13	17	33	50
4.1	3.6	3.7	6.9	6.9	5.6	4.8	5.3	6.9	7.5	9.3	9.7
30	33	24	20	16	13	—	12	17	26	36	50
5.0	5.4	5.3	5.8	7.0	6.7	6.0	5.2	5.6	7.0	8.3	8.7	10.3
50	36	27	23	21	16	13	—	12	15	30	33	50
5.3	5.7	6.0	6.7	5.9	5.4	4.3	7.8	8.7	9.4	10.3
30	33	20	16	12	—	14	17	29	33	50
4.8	5.4	5.8	7.4	5.9	5.6	6.1	8.4	9.3	8.7
30	33	20	16	12	—	16	20	33	50
3.6	4.9	5.0	5.8	6.0	5.3	5.1	6.2	7.5	7.4	6.9	4.8
30	33	21	18	14	11	—	17	20	31	33	50
1.0	1.8	1.9	5.9	5.4	5.1	5.4	6.2	6.2	4.5	3.3	3.5
30	33	21	15	10	—	14	16	21	25	33	50
0.0	+0.1	0.0	6.3	5.6	5.3	6.0	6.1	3.0	2.2	3.2
50	33	22	15	9	—	14	19	25	33	50

Sta	+	∧	−	Elev.
		929.22		
19 +50				927.8
20				26.3 ✓
T.P.	0.30	929.46 ✓	5.06	929.16
+ 50				24.9
21				23.2
+ 50				21.8
22				20.1
+ 50				18.6
23				16.9 ✓
T.P.	0.05	917.18 ✓	12.33	917.13
+ 50				15.5
24				14.2
+ 50				13.3

Lt. & Rt.

16	17	15	7.3	6.9	6.4	7.0	4.3	3.8	5.5
50	33	23	15	12		19	24	33	50

8.2	4.7	9.1	8.6	8.2	7.9	8.3	5.6	7.6	11.0
50	33	20	14	11		17	22	33	50

Nail in R.P.

9.5	6.3	3.5	5.3	4.6	5.3	2.2	2.6	2.4
50	33	21	15		15	19	33	50

8.8	6.4	5.2	6.7	6.3	6.7	2.6	3.5	2.7
50	33	20	15		13	19	33	50

5.7	5.3	7.3	7.3	8.0	7.7	8.0	5.6	7.0	6.6
50	38	33	20	17		12	17	33	50

9.2	10.1	9.9	9.8	9.4	9.6	9.3	9.7	5.9
50	33	18	13		17	33	40	50

12.1	12.6	12.6	11.2	10.9	11.4	12.8	10.3	9.2
50	33	14	11		15	33	40	50

13.5	13.4	14.0	13.1	12.6	13.2	15.1	16.4	15.3
50	33	15	11		14	18	33	50

1.9	2.3	2.3	2.0	1.7	2.4	4.7	6.1	5.9
50	33	14	13		14	18	33	50

2.8	3.1	3.1	3.5	3.0	3.4	5.4	6.8	7.2
50	33	12	9		14	17	33	50

3.3	3.7	3.8	4.3	3.9	4.6	5.4	7.1	7.4
50	33	22	9		16	17	33	50

Sta	+	℄	−	Elev.	
		917.18			
25				912.5	
B.M.			6.56	910.62	910.62
+50				12.0	
26				11.6	
+50				11.4	
27				11.5	
T.P.	6.25	917.87	5.56	911.62	
+50				11.6	
28				11.6	
+					
+50				11.9	
29				12.4	
+50				13.3	

Lt ℄ Rt

3.2	4.4	4.9	4.7	5.4	6.8	7.8	7.7	6.9
50	33	14		15	16	28	41	50

3 pk in 24" Oak. 40'Rt 25+95

4.6	5.2	5.2	5.7	8.1	8.6	7.7
50	33		14	18	33	50

5.7	5.5	5.7	5.6	6.0	8.5	9.5	9.0
50	33	10		14	19	33	50

6.3	6.4	5.8	6.3	9.3	9.7	9.3
50	33		14	19	33	50

6.6	6.7	6.6	6.1	5.7	6.2	8.8	9.6	10.2
50	33	15	12		15	20	33	50

8.9	9.2	8.7	6.6	6.3	6.9	7.9	8.4	9.6
50	33	17	10		15	18	33	50

9.8	10.2	10.0	7.0	6.3	6.7	8.6	9.4	10.7
50	33	18	12		15	18	33	50

11.6		11.9	12.4	12.9	Bottom ditch
culv.		culv	50	100	Runs N.E.

9.7	9.8	9.8	6.7	6.0	6.6	9.5	10.0	10.5
50	33	17	12		15	21	33	50

8.7	9.1	9.4	6.1	5.5	5.5	6.0	9.0	9.5	9.9
50	33	17	11		6	15	20	33	50

5.4	5.6	5.4	4.9	4.6	4.5	5.0	5.9	6.5	6.2
50	33	13	11		6	16	19	33	50

Sta	+	HI	−	Elev
		917.87		
30				914.6
TP	11.46	927.15	2.18	915.69
+21				15.3
+32				15.7
31				16.2
+50				16.4
32				16.5
107				
+50				16.8
33				16.9
TP	12.47	929.39	10.23	916.92
+50				17.3
34				17.7

Lt Z Rt

0.6/40 1.4/33 3.5/5 3.3 3.4/9 4.0/30 1.1/40 1.5/50

9.1/39 9.5/28 10.4/16 11.7/8 11.9 12.1/9 12.5/24 10.3/33 8.5/40 9.0/50

2.0/50 4.4/23 10.6/14 11.3/7 11.5 11.7/9 12.3/24 10.1/33 8.1/40 8.2/50

+0.3/50 2.0/33 3.2/21 10.5/13 11.0 10.9/9 11.6/25 10.5/33 13.4/15

0.7/50 2.9/33 4.3/24 10.6/15 10.8 10.7/8 12.1/28 15.8/37 16.7/50

3.2/50 5.4/33 7.6/18 10.7/13 10.9 10.8/10 11.2/21 14.2/27 15.6/41 16.4/50

11.6 Early 13.0 Early

4.4/50 6.1/33 7.0/20 10.4/14 10.4 10.5/9 11.2/22 12.3/29 14.0/33 15.9/50

3.9/50 4.9/33 5.7/21 10.5/14 10.2/9 10.3 10.2/9 10.7/21 11.4/27 14.1/33 16.5/50

5.6/50 6.6/30 8.4/20 12.2/14 12.1 12.2/9 12.7/20 12.3/29 16.2/38 18.2/50

4.9/50 4.0/33 5.9/25 7.5/15 11.7 12.1/19 11.5/33 13.6/37 14.8/50

Sta	+	H.I.	−	Elev.
		929.39		
34+50				918.2
35				18.5
+75				19.1
TP	4.12	923.40 ✓	10.11	919.28 ✓
36				19.2
+25				19.5
+50				19.8
37				20.9
+50				22.7 ✓
TP	7.65	930.86 ✓	0.19	923.21
38				24.9
+64				27.8
+82				28.7 ✓
T.P.	7.98	937.44 ✓	1.40	929.46

Lt. R. Rt.

1.8/50 1.7/33 3.9/25 10.9/15 11.2 11.2/9 11.4/21 9.8/33 11.5/50

3.0/50 3.3/33 4.7/25 10.8/16 11.1/7 10.9 11.0/8 11.6/20 10.9/27 9.9/30 12.4/46 12.6/50

8.7/50 8.3/33 8.5/26 10.1/22 12.1/19 12.0/10 10.6/8 10.3 11.1/16 12.0/18 13.8/33 16.3/50

7.5/50 6.5/33 6.2/27 8.1/23 8.0/17 4.7/11 4.2 5.1/14 7.7/20 9.7/30 11.5/46 12.0/15

10.6/50 12.0/38 10.9/29 10.6/21 4.4/11 3.9 4.7/14 9.9/21 11.5/33 12.7/50

13.3/50 12.8/33 11.9/30 11.5/21 4.1/11 3.6 4.4/13 10.7/23 12.1/33 13.1/50

12.3/50 11.8/33 11.6/26 2.9/12 2.5 3.2/14 10.8/26 12.4/33 12.6/50

9.1/50 9.0/33 8.8/25 1.5/14 0.7 1.3/14 9.5/29 10.8/35 12.8/50

13.4/50 13.6/33 12.5/23 3.6/14 6.0 6.8/14 14.6/25 16.4/36 18.0/50

7.6/50 8.5/33 8.4/24 3.4/13 3.1 3.8/15 12.9/50

12/30 51/38 54/29 22/20 22 33/21 49/50

Sta	+	I	−	Elev.	
		937.44			
39				929.6	
+21				30.7	
+37				31.5	
+46.32				31.9	
B M			5.94	931.50 ✓	(931.41)

Lt		&		Rt.	
5.9/50	6.9/23	7.9		10.2/50	
	4.4/50	6.7		10.8/50	
	3.5/50	5.9	6.7/17	8.8/26	11.5/50
3.2/50	4.6/21	5.5	6.3/14	3.3/33	2.8/50

Top Mont.

Sta	+	Δ	−	Elev.

1

Levels in Ditch North & South of No. Co. Line Road at Sta. 316+47. to show fall. (Present culvert buried)

5/20/38

Sta	+	⊼	−	Elev.	
B.M.	4.87	898.77			893.95
Going North in Ditch					
0+00			4.8	94.0	
0+15			5.7		
0+17			7.0		
0+28			7.9		
0+36			8.4		
0+45			8.8		
1+00			9.0		
2+00			9.0		
3+00			9.0		
4+00			9.1		
5+00			9.2		
6+00			9.3	89.5	

Spike in 6" Poplar 85' Rt. Sta. 313+90

Sta.	+	π	−	Elev	
		898.77			
T.P.	7.14	898.84	7.09		891.68
7+00			9.3		
8+00			9.5		
9+00			9.6		
10+00			9.6		
10+70			9.6		
11+00			9.5		
12+00			9.6		
13+00			9.5		
14+00			10.0	88.8	
T.P.	5.44	898.44	5.80		893.04
15+00			9.5		
16+00			8.8		Hi Spot
17+00			9.3		
18+00			8.6		Hi Spot
19+00			9.8		
20+00			9.6		
21+00			8.8		Hi Spot
22+00			9.1		
23+00			9.9		
24+			9.7		
24+20			9.9	Co Ditch	
B.M.			3.93		894.51

I should say if ditch is cleaned & culvert placed under road (present culvert seems low & is plugged) that when water subsides in main ditch Sta 24+20 (which is now running full) that surface of Poplar lake to the South of No. Co. Line Rd which is now overflowing its adjacent flat lands would be lowered 12" to 18" enough to relieve the flooded flat land.

JB. 5/20/38

Water Running Good but ditch full.

Mail in EP. 300' West of Sta 17+00

Ditch So. of No. Co Line Rd.

To Poplar Lake.

Sta.	+	=	−	Elev.
B.M	4.99	898.94		893.95
0+00			5.0	
0+14			5.3	
0+23			7.3	
0+27			8.1	
0+43			8.7	
1+00			9.0	
2+00			9.4	89.5
Elev. Top Water So. Side			6.95	
" Top " No. Side			7.30	

Small Lake is 400' So.,

Spike in 8" Poplar. 85' Rt. Sta. 313+90

Water over boats cannot go further

Slope Stakes

M^c Mcneany

Rt. Side Sta 0-9

11 Pages

Sta.	+	T	−	Grade	Adjusted Grade
B.M.	3.01	9/3/16			910.15
B.M.			7.10	906.06	
0	+34			906.6	06.4
	+40			06.7	06.0
	+70			06.8	05.7
1				06.9	05.4
	+50			07.1	05.2
	+82			07.2	05.1
2				07.2	05.0
	+50			07.5	
3				07.8	
T.P.	9.46	9/7.22	5.40	907.76	
	+50			08.2	
4				08.9	

Gr. Road	Ditch Gr. Rod.	℄	Rt.
Spk. in P.P. N.W. Cor. Kochler Rod & 19" Maple			
Top Large Rock S.W. Cor Kochler Rd & 14" Mich Carp St.			
6.6	6.8		
6.5	7.2	59 / 102	40 / 32 / 30.8
6.4	7.5	59 / 105	53 / 42 / 25.6
6.3	7.8	57 / 102	49 / 29 / 27.8
6.1	8.0	57 / 109	55 / 25 / 27.8
6.0	8.1	57 / 103	68 / 31.3 / 25.8
6.0	8.2	55 / 105	78 / 32.0 / 29.2
5.7		55 / 102	110 / -53 / 25.6
5.4		59 / 00	99 / -45 / 24.0
9.0		80 / 00	110 / 32.00 / 22.1
8.3		83 / 00	80 / 40.3 / 27.6

Sta	+	H	−	Grade	
		917.22			
4	+35			09.4	
	+70			10.0	
5				10.6	
	+40			11.6	
6				13.1	
	+50			14.6	
7				16.2	
T.P.		12.72	929.50	0.44	916.78
	+50			18.0	
8				19.9	
	+50			21.8	
T.P.				2.10	927.40 (927.40)

Cor Bed	Lt	R	Rt.
7.8		7.7 / +0.1	4.8 / +3.0 / 33.0
7.2		6.9 / +0.3	1.4 / +5.8 / 33.0
6.6		6.2 / +0.4	3.5 / +3.1 / 33.0
5.6		5.2 / +0.4	6.3 / +2.3 / 25.6
4.1		3.6 / +0.5	5.0 / +1.1 / 25.2
2.6		2.1 / +0.5	3.6 / +1.0 / 25.0
1.0		0.5 / +0.5	1.5 / +1.5 / 26.0
11.5		11.2 / +0.3	11.7 / +1.8 / 24.6
9.6		9.5 / +0.1	8.5 / +1.1 / 29.2
7.7		7.6 / +0.1	7.3 / +0.4 / 27.8

Top Large Rock at 9+00

Slope Stakes

Mc Mamamy St.

Sta	+	H	−	Grade	Ditch Grade Lt.	Rt.
B.M.	7.87	917.22			910.13	
0 + 10				06.5		
0 + 25				06.6	12.6 04.6	
+ 34				06.6	12.6 04.6	
+ 70				06.8	12.7 04.6	
1 + 00				06.9	12.7 04.5	
+ 50				07.1	12.7 04.5	
+ 82				07.2	12.8 04.4	
T.P.	5.71	913.34	9.57	907.63		
2 + 00				07.2	8.9 04.4	
+ 25					9.0 04.4	
+ 50				07.5		
3 + 00				07.8		

Gr. Rod	Ht.	℄	Rt.

Spk. in P.P. N.W. Cor. Kochler Rd & NPC Monument

10.7	29.2 / 96 / 41	10.7 / 00	
10.6	32.6 / 78 / 12.8	10.1 / 10.5	
10.6			
10.4	41.0 / 40 / 15.87	10.0 / 10.4	
10.3	41.4 / 2.5 / 15.11.2	9.8 / 10.5	
10.1	40.4 / 96 / 15.81	9.8 / 10.5	
10.0	34.8 / 76 / 15.5.1	9.7 / 10.3	
6.1	28.2 / 71 / 15.18	5.7 / -0.4	
5.8	20.0 / 11.3 / -5.5		
5.5	29.0 / 12.5 / -7.0		

Sta	+	H	−	Grade
		913.34		
3	+50			08.2
4				08.9
	+35			09.4
	+70			10.0
T.P.	11.58	922.64	2.28	911.06
5				10.6
	+90			11.6
6				13.1
	+50			14.6
7				16.2
	+50			18.0
8				19.9
	+50			21.8
T.P.	9.04	930.90	0.78	921.86

Cor Rod	LA	L	Pt.
5.1	25.0 / 10.1 / -5.0		
4.4	26.6 / 5.3 / 12.18		
3.9	29.6 / 2.6 / 41.3		
3.3	33.4 / 6.1 / 43.2		
12.0	35.2 / 7.9 / 41	NC	
11.0	26.2 / 11.4 / 12.16		
8.5	19.8 / 11.9 / -2.4		
8.0	26.8 / 8.1 / 12.19		
6.4	26.0 / 6.9 / 10.15		
4.6	27.0 / 4.6 / 12.20		
2.7	27.2 / 2.6 / 10.1		
0..8	23.0 / 2.8 / 10.0		

Sta.	+	H	−	Grade	
		930.90			
9				23.7	
+50				25.6	
10				27.5	
T.P	13.62	941.02	3.50	927.40	
+50				29.2	
11				30.8	
+50				32.0	
12				33.0	
+50				33.7	
13				34.1	
B.M.	3.50	940.34	4.19	936.83	936.84
+50				34.3	
14				34.2	

11/10/39
K.F.
L.B.H.
L.C.
M.G.

Gr. Rod	Lt.	R	Bl.
7.2	29.6 / 12.0 / -9.8	7.2 / 0.0	9.2 / 20.0 / 24.3
5.3	23.8 / 9.7 / -4.4	5.3 / 0.0	7.3 / 20.0 / 23.9
3.4	24.0 / 3.9 / 21.5	3.2 / +0.2	4.4 / 21.0 / 25.0
Top Large Rock Rt. 9/90			
11.7	31.0 / 5.7 / +2.0	10.9 / +0.8	6.2 / +5.7 / 33.0
10.2	33.4 / 7.0 / +3.2	8.6 / +1.6	3.2 / +7.0 / 33.0
2.0	31.4 / 6.8 / +2.2	7.1 / +1.9	3.6 / +5.4 / 33.0
2.0	30.6 / 6.2 / +1.8	5.7 / +2.3	4.4 / +3.6	
7.3	30.8 / 5.4 / +1.9	4.5 / +2.8	3.4 / +3.9	
6.9	28.6 / 6.1 / +0.8	4.0 / +2.9	2.6 / +4.3 / 33.0	
Top Mark R 19+08.79			
6.0	29.9 / 4.8 / +1.2	4.4 / +1.6	1.2 / +4.8 / 33.0	
6.1	27.8 / 5.7 / +1.9	5.6 / +0.5	2.2 / +3.9 / 33.0	

Sta.	+	∧	−	Grade
		940.34		
14	+27			34.0
	+70			33.6
15				33.25
	+50			32.5
16				31.75
	+28			31.3
	+75			30.6
17				30.25
T.R.		7.60	936.91	11.47	928.81
	+50				29.5
18					28.76
	+50				28.0

Gr. Rod.	Lt.	C	Rt.
6.3	25.8 / 6.9 / +1.4	6.5 / -0.2	3.0 / +3.3 / 33.0
6.7	23.0 / 8.7 / +2.00	7.8 / -1.1	8.5 / +2.02 / 23.7
7.0	22.6 / 10.8 / -3.8	8.7 / -1.7	10.9 / -3.9 / 22.8
7.8	23.2 / 11.9 / -4.1	10.0 / -2.2	13.2 / -3.4 / 25.8
8.5	21.0 / 11.5 / -3.0	10.7 / -2.2	14.0 / -3.5 / 24.0
9.0	20.6 / 11.8 / -2.8	11.0 / -2.0	13.5 / -2.5 / 24.0
9.7	21.2 / 12.8 / -3.1	11.4 / -1.7	14.0 / -2.3 / 23.6
10.0	23.0 / 12.0 / +2.00	11.5 / -1.5	14.6 / -2.6 / 24.2
7.0	25.4 / 7.8 / +1.2	7.8 / -0.8	10.3 / -3.5 / 22.0
7.7	22.2 / 6.6 / +1.1	7.3 / -0.7	9.5 / +0.2 / 23.4
8.5	35.8 / 4.1 / +9.4	7.3 / +1.2	5.5 / +9.0 / 39.0

Sta.	+	I	-	Grade
		936.47		
19				27.25
+50				26.4
20				25.95
+50				24.4
21				23.1
T.P.	1.04	924.23	13.28	923.19
+50				21.7
22				20.2
+50				18.75
23				17.6
+50				16.75
24				16.2
T.P.	1.57	916.47	9.33	914.90

Cr. Bed	Lt.	L	Rt.
9.2	40.6 / 24 / +4.8	75 / +1.7	46 / +9.6 / 33.0
10.1	38.6 / 43 / +5.8	86 / +1.5	59 / +9.2 / 33.0
11.0	34.8 / 71 / +3.9	161 / +0.9	91 / +1.9 / 30.8
12.1	32.3 / 95 / +2.6	176 / +0.5	121 / +2.0 / 27.0
13.4	33.0 / 107 / +3.0	183 / +0.1	130 / +0.4 / 27.8
2.5	28.8 / 16 / +0.7	29 / +0.1	20 / +0.5 / 28.0
4.0	26.4 / 43 / +1.7	41 / -0.1	42 / +1.9 / 26.8
5.4	23.4 / 72 / +0.2	57 / -0.3	74 / +0.0 / 22.0
6.6	19.2 / 87 / -2.1	73 / -0.7	96 / -3.0 / 21.0
7.4	19.0 / 94 / -2.0	83 / -1.4	123 / -4.9 / 23.8
8.0	19.0 / 100 / -2.0	100 / -2.0	134 / -5.4 / 25.8

Fos.

Sta	+	X	−	Grade	
		916.47			
24	+50			15.8	
25				15.4	
B.M.					(910.62)
	+50			15.0	
26				14.8	
	+50			14.6	
27				14.5	
	+50			14.6	
28				14.6	
	+50			14.7	
29				15.0	
	+50			15.3	

Gr. Rod.	Lt.	Rt.	Elt.
0.7	19.4 / 2.9 / 2.2	31 / +24	5.7 / 5.0 / 25.0
1.1	20.4 / 3.8 / 2.7	4.0 / 2.9	6.7 / 5.6 / 26.2
Spk in 24" Oak 40' Rt Sta. 25+45 bmc			
1.5	20.2 / 4.6 / 3.1	4.4 / 2.9	7.5 / 6.3 / 27.6
1.7	20.8 / 4.6 / 2.9	4.8 / 3.1	8.4 / 6.7 / 28.4
1.9	21.4 / 5.1 / 3.2	5.0 / 3.1	8.7 / 6.8 / 28.6
2.0	23.0 / 6.0 / 4.0	4.9 / 2.9	8.5 / 6.5 / 28.0
2.0	26.2 / 7.6 / 5.6	4.8 / 2.8	6.8 / 4.8 / 24.6
1.9	28.0 / 8.4 / 6.5	4.9 / 3.0	8.1 / 6.2 / 27.4
1.5	27.6 / 8.1 / 6.3	4.5 / 2.7	8.4 / 6.6 / 28.2
1.5	27.0 / 7.5 / 6.0	4.1 / 2.6	7.6 / 6.1 / 27.2
1.2	20.6 / 4.0 / 2.8	3.1 / 1.9	4.1 / 2.9 / 20.8

Sta	+	π	−	Grade
		76.47		
30				15.6
T.P.	7.69	92.211	2.05	919.42
+21				15.6
+32				15.6
+65				16.0
31				16.2
+50				16.5
32				16.8
+50				17.1
33				17.4
+50				17.7
T.P.	6.33	92.4.28	4.16	917.95
34				18.0
+50				18.3

Cor. Rad	Lt.		Rt.	Rt.
0.9	28.8 /	0.0 / +0.9	2.0 / -.1	26 / R0.3 / 23.6
6.5			64 / +0.1	65 / +0.0 / 27.0
6.1			55 / +0.3	51 / +0 / 29.0
5.9	15.0 /	4.0 / +1.9	6.0 / -0.1	58 / +0.1 / 27.2
5.6	15.0 /	4.2 / +0.7	5.7 / -0.1	66 / R1.9 / 25.0
5.3			56 / +0.3	73 / R0.0 / 28.2
5.0	(109 / 93)	36.6 / 0.2 / +1.8	5.3 / -0.3	70 / R0.0 / 28.0
4.7	(+5.0 / 330)	37.4 / +0.5 / +5.2	(+5.2 / 346) 5.2 / -0.5	67 / R0.0 / 28.3
4.4	(+5.3 / 37)	38.8 / +1.5 / +5.9	(+5.6 / 354) 4.9 / -0.5	48 / R1.4 / 26.2
4.3	(+1.2 / 53)	42.0 / +1.2 / +1.5	(+7.5 / 383) 6.5 / -0.2	69 / R1.9 / 25.8
4.0	(+7.4 / 33)	46.2 / +3.6 / +9.6	(+9.5 / 41.3)	

Sta	+	x	−	Grade	
		929.28			
35				18.6	
	+40			18.8	
	+75			19.0	
36				19.2	
T.P.	6.24	925.47	5.05	919.23	
	+25			19.4	
	+50			19.8	
37				20.8	
	+50			22.4	
38				24.5	
T.P.	8.61	933.46	0.62	924.85	
	+50				
	+64				
BM			1.92	131.54	(931.41)

Gr. Rod	Lt.		Rt.	
5.7	(76.3 / 33) 42.4 / 42.0 / 47.7	(47.7 / 386)	5.7 / 0.0	5.7 / 20.0 / 27.0
5.5	(49.2 / 33) 37.7 / 0.4 / 45.1	(45.8 / 342)	5.5 / 0.0	6.6 / 20.7 / 24.8
5.3	31.0 / 19.3 / 20		5.2 / 20.1	7.8 / 20.0 / 21.1
5.1	23.0 / 9.1 / 20		5.1 / 0.0	9.4 / 23 / 23.6
Rsta 3C				
6.1	28.8 / 13.0 / 29		6.0 / 20.1	12.1 / 29 / 29.0
5.7	33.0 / 14.7 / 29.0		5.6 / 20.1	13.8 / 31 / 31.2
4.7	31.8 / 13.1 / 29		4.5 / 20.2	14.4 / 29.7 / 33.0
3.1	30.0 / 10.6 / 29.5		2.8 / 20.3	12.7 / 29.6 / 33.0
1.0	28.9 / 7.7 / 29.7		1.0 / 20.9	10.7 / 29.7 / 33.0
6.4				15.2 / 29.8 / 32.6
5.6	24.6 / 10.5 / 29.9			

Top Plant 39+96.32

Sta	+	x	−	Grade

McMenemy St.

& Levels

10 to 14

18 to 21

Sta.	+	X	−	Grade
		941.90		
10	100		13.7	27.7
	50		11.8	29.6
11			9.8	31.6
	50		8.5	32.9
12			7.2	34.2
	50		6.0	35.4
13			5.7	35.7
	50		6.4	35.0
14			7.4	34.0
	50		8.9	32.5

Nitch
Ht.

14.3

12.6

11.9

10.4

9.7

9.3

Sta.	+	Π	−	Grade
		33.56		
18			4.9	28.7
	+50		5.0	28.6
19			5.4	28.2
	+50		6.9	27.2
20			7.9	25.7
	+50		9.3	24.3
21			10.5	23.1