

Bk. 27 - Dr. 12A
12A

OFFICE OF COUNTY ENGINEER
RAMSEY CO. MINN.

_____ Plan _____ Survey

_____ FERNDAL AVE. _____

From Minnehaha St. To Conway St. _____

Road Acc't. No. N-50 _____

Filed 10-26-79

File _____

①
PLAN SURVEY

FERNDALE AVE.

from
Minnehaha St
to
Conway St.

9-2-39

Party:

R. O. P.

C. F.

E. B.

Index:

Transit Notes - 1-3

Topography - 4-8

Bench Levels - 9-10

Cross-Sections - 11-17

Rec'd 9/5/39 WJB

Sta.	Pt.	Lt.	Angle Rt.
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13+21.38	P.O.T.	±	5 th St.
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6+60.82	P.O.T.	±	Sigel St.
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0+00	P.O.T.	±	Conway St.
------	--------	---	------------

Lot Iron
o

45.17

o 44.05

o Lot Iron

Spike

Lot Iron
o

45.77

43.91

o Lot Iron

Spike

41.30

21.25

o o Twin 12" Oak

o o Triple 8" Oak

Sta.	P.T.	Lt.	Angle Rt.
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P.O.T.

26+41.15	P.O.T.		± Minnehaha St.
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19+81.46	P.O.T.		± Margaret St.
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Iron Fe. Cor

32.91

Spike in Pavt.

46.88

45.68

Lot Cor. Iron

Lot Cor Iron.

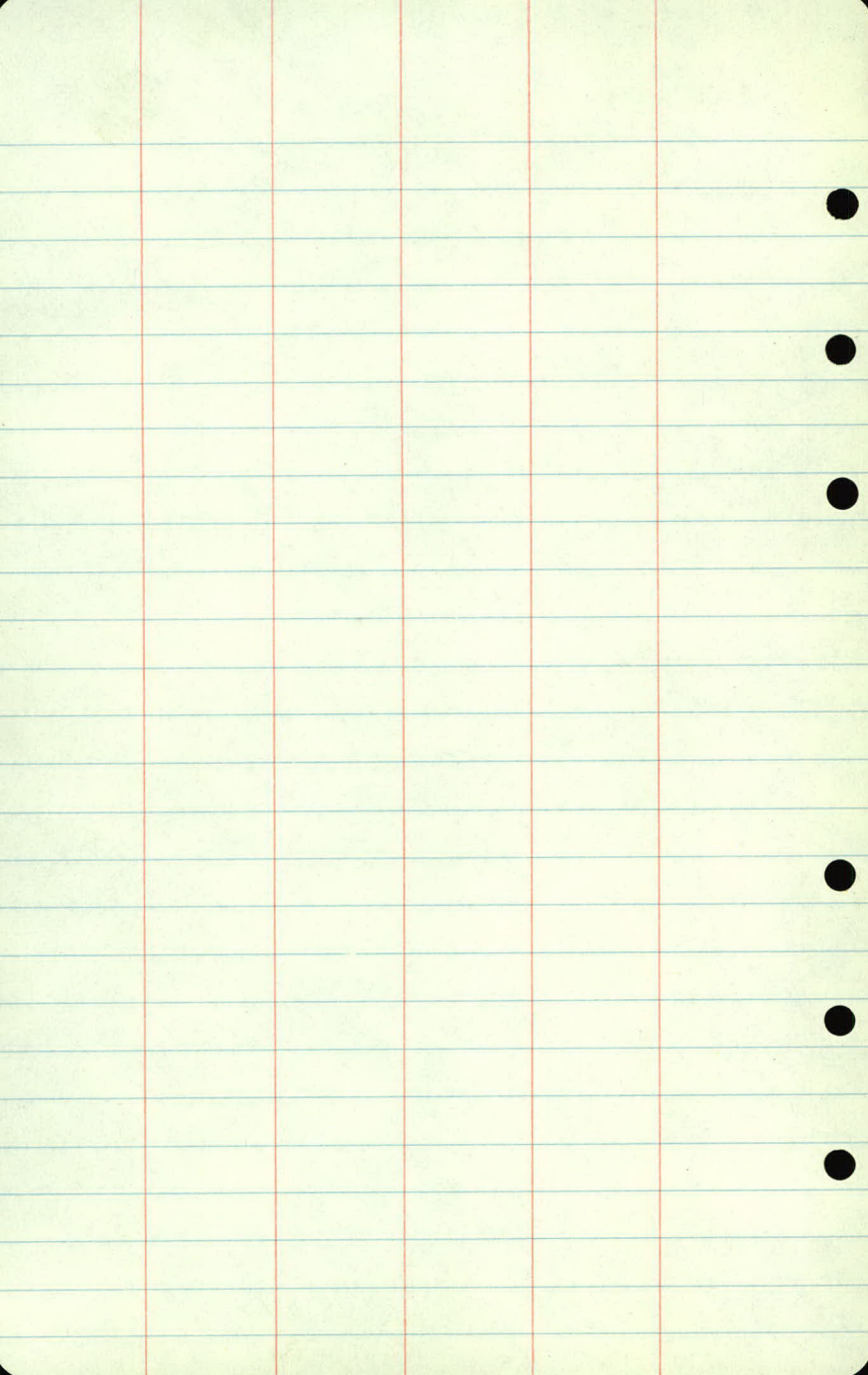
Lot Iron

Lot Iron

35.36

43.98

Spike



Topography

FERNDAL AVE.

4-19

6

5'-20'

5

4'-20'

4

4-19'

3

5'-19'

2

7'-14'

1

6'-15'

0

+91 Lot Iron 33'

+74 Shldr x sch

+49 Shldr. x 3 d

+66 Ent

Sigel St.

+30 Ent

+54 P.P. 26'
+43 Ent

Yards

+04 Ent

+88 P.P. 25'
+83 Ent

+83 Ent

Yard

+71 P.P. 26'

+47 Ent

+25 P.P. 24

Yards

+51 P.P. 26'

+00 Ent

Uncult

+33 Cor. Lot Iron 33
+25 P.P. - 25

+48 End Rod - 7-17
+33 Cor. Lot Iron - 33

+11 Beg Rod - 46
Conway St +02 Beg Rod - 44

4-20

13

4-20'

12

4-20'

11

4'-20

10

5'-20'

9

5'-20

8

4-19

7

4-19

+43 P.P. - 26

+13 Ent.



+54 Cor. Lot Iron-324

5th St

+36 Shldr x 3 1/2

+10 Shldr x 3 1/2

+109 P.P. - 25'

+78 Ent.



+18-15" Pop. 27'



+57 Ent.

+46 P.P. 25'



+73 Ent.

+81 P.P. 25'

+73 Ent.



+90 Ent.

+73 P.P. 27'

+52 Ent.

+17 P.P. 25'



4-20

20

4-20

19

5-19

18

5-20

17

6-22'

+72 E Calv. 12" x 26' C.M. 0-26'

16

5'-20'

15

5'-20'

14

4-20

+10 Ent
+91 P.P. 25'
+78 Ent.

+12 Cor. Lot Iron 32.0
+95 Shldr x 3 E
Margaret St.
+70 Shldr x 3 E

+30 P.P. 26'

+34 P.P. 37'
+25 Ent 24'
12" x 18' C.M.

+65 12" x 24' C.M. 0
+56 Ent.
+41 12" x 24' C.M. 0

+72 P.P. 26'
1

+96 Ent.
+75 Ent.

+06 - 12" x 36' C.M. 4
+70 - 12" x 36' C.M. 4

+10 P.P. - 25'

+20 Ent

27

+50 Edge Pav't.

+30 Edge Pav't.

26

6-22'

+05 Bay. Rod. 6-22

25

5'-20'

2'

+59 $\frac{1}{2}$ Culv. 12" x 30" W.I.P.

+57 $\frac{1}{2}$ Culv. 12" x 20" C.M.

28'
2-22'

24

4-21

23

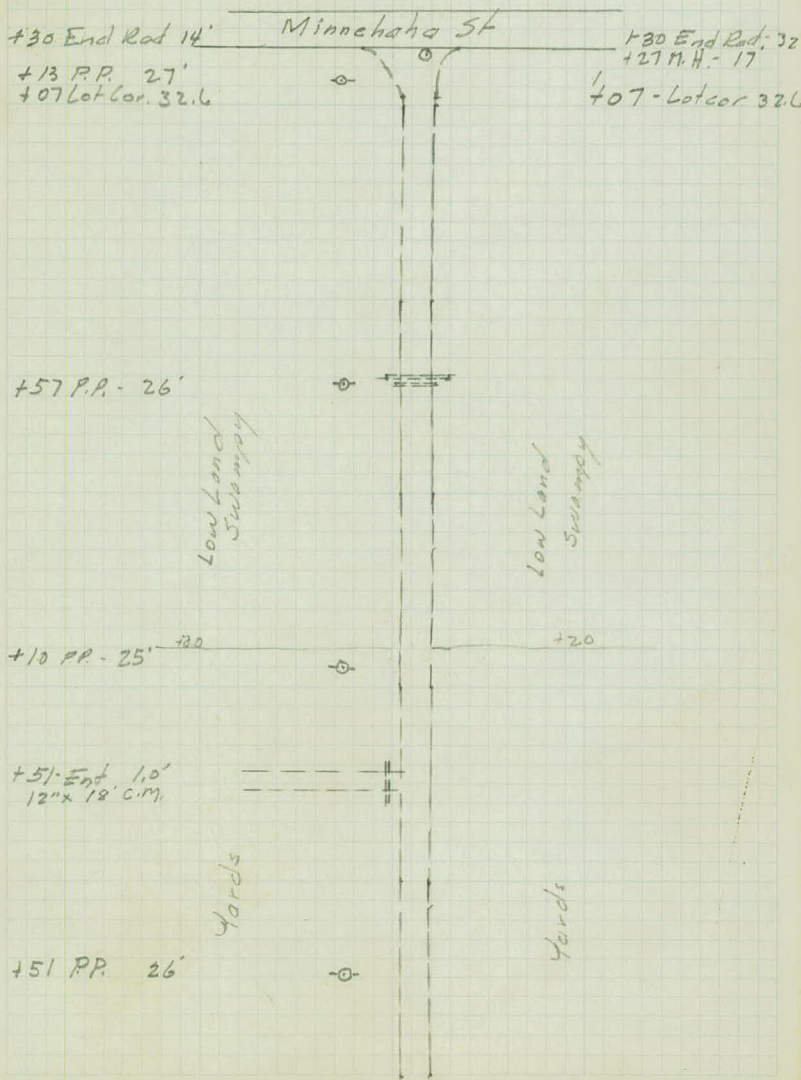
4'-19'

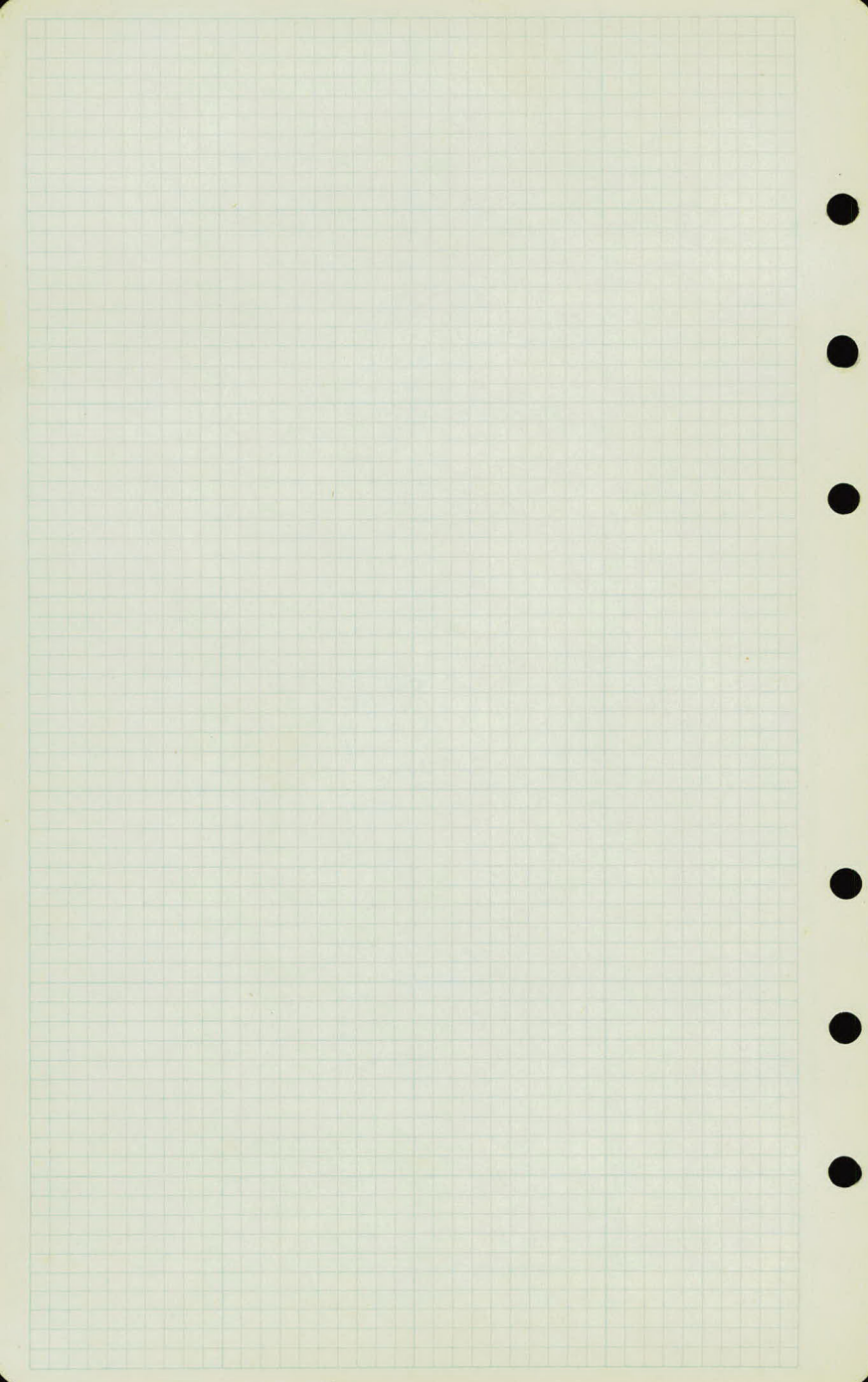
22

4-19'

21

4-20'





Bench Levels

FERNDALE AVE.

P_i	+	π	-	Elev
B.M.	10.34	1006.08		995.74
T.P.	3.62	1003.28	6.42	999.66
T.P.	3.73	1001.41	5.60	997.68
T.P.	7.11	1001.06	7.46	993.95
T.P.	2.38	1000.54	2.90	998.16
T.P.	3.02	994.18	9.38	991.16
B.M.	3.75		3.75	990.43
T.P.	6.66	991.37	9.47	984.71
T.P.	11.73	1003.10	0.00	991.37
T.P.	8.24	1011.08	0.26	1002.84
B.M.	1.40		1.40	1009.68
T.P.	12.32	1015.17	8.23	1002.85
T.P.	2.70	1010.05	7.82	1007.35
B.M.	2.83	1006.43	6.45	1003.60
T.P.	1.45	1000.07	7.81	998.62
B.M.			5.67	994.40

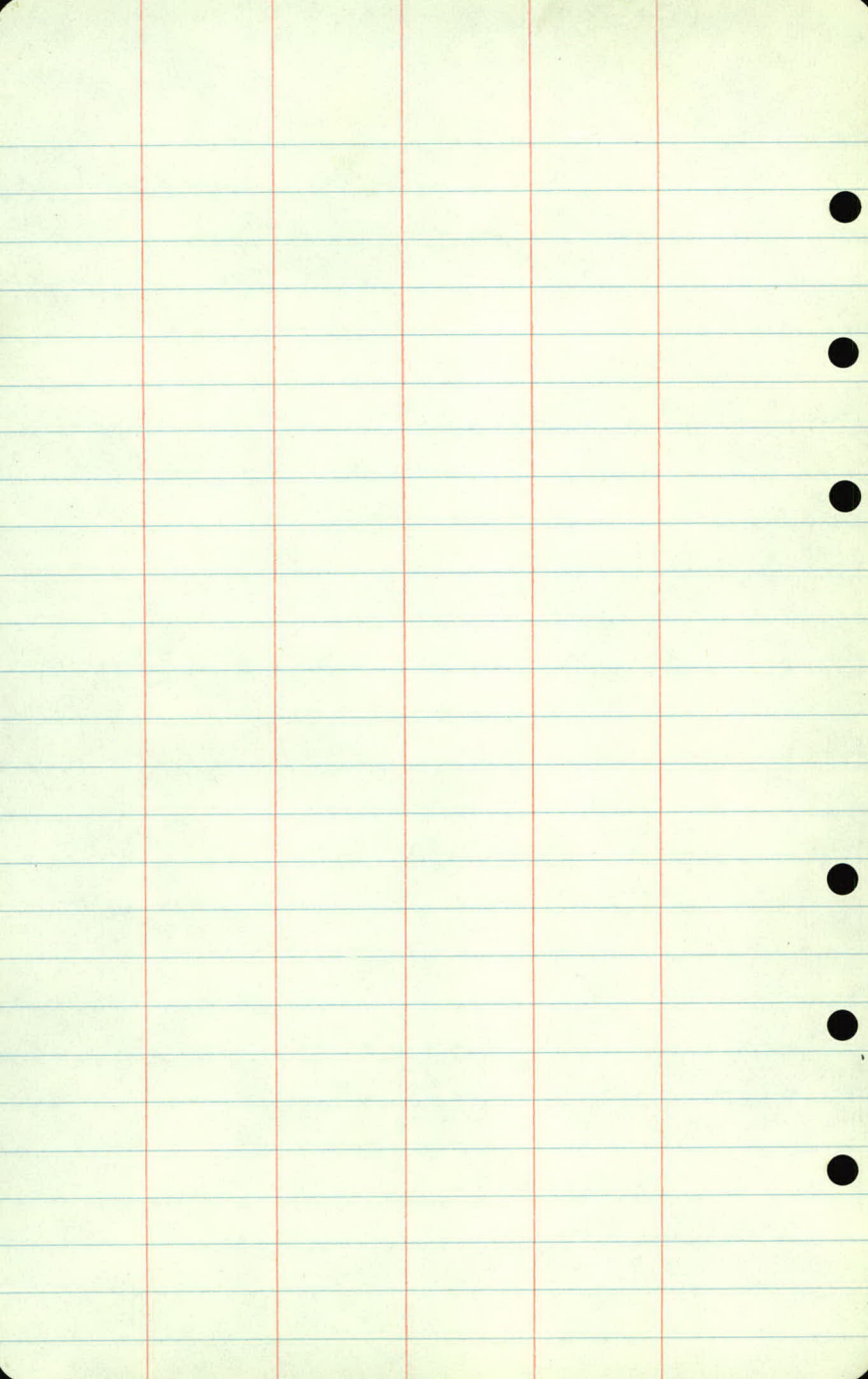
Top Hyd. N.W. Cor. East Ave. & Minnehaha

Top Spike in Guy Pole N.W. Cor. Minnehaha & Ferndale

Top Spike in P.P. 80' Rt. Sta 20+00

Top Spike in P.P. 26' Lt. Sta. 5+45

Spike in 8" Oak 0-13'



Cross Sections

FERNDALE AVE.

Sta	+	*	-	Elev
B.M.	5.67	1000.07		994.40.
0+00			6.9	93.2.

+05 Profile Canway St (93.0)

+50			7.9	92.2.
-----	--	--	-----	-------

1			7.8	92.3.
---	--	--	-----	-------

+40			7.1	93.0.
-----	--	--	-----	-------

2			4.2	95.9.
---	--	--	-----	-------

T.P.	5.75	1004.28	1.54	998.53.
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+37			7.1	97.2
-----	--	--	-----	------

+64			7.1	97.2.
-----	--	--	-----	-------

3			7.6	96.7.
---	--	--	-----	-------

+50			7.6	96.7.
-----	--	--	-----	-------

4			7.0	97.3.
---	--	--	-----	-------

+27			5.9	98.4.
-----	--	--	-----	-------

T.P.	12.33	1012.69	3.92	1000.36
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4

Top Spike in 8" Oak of Sta. 0-13

$\frac{9.1}{50}$ $\frac{8.2}{25}$ 6.9 $\frac{6.0}{25}$ $\frac{4.3}{50}$

7.1 $\frac{5.6}{28}$ $\frac{4.3}{50}$ $\frac{0.9}{100}$ $\frac{+1.8}{143}$ $\frac{+8.1}{200}$ $\frac{+10.6}{237}$

$\frac{9.4}{50}$ $\frac{8.9}{25}$ 7.9 $\frac{7.5}{5}$ $\frac{7.4}{24}$ $\frac{6.5}{24}$ $\frac{4.4}{50}$

$\frac{9.0}{50}$ $\frac{9.2}{30}$ $\frac{8.7}{16}$ 7.8 $\frac{7.6}{5}$ $\frac{7.2}{22}$ $\frac{6.6}{24}$ $\frac{4.0}{50}$

$\frac{8.4}{50}$ $\frac{8.1}{25}$ 7.1 $\frac{6.1}{11}$ $\frac{6.3}{24}$ $\frac{5.4}{24}$ $\frac{3.5}{50}$

$\frac{5.3}{50}$ $\frac{6.3}{36}$ $\frac{5.0}{26}$ 4.2 $\frac{3.2}{7}$ $\frac{2.8}{19}$ $\frac{3.1}{24}$ $\frac{2.2}{24}$ $\frac{0.3}{50}$

$\frac{7.9}{50}$ $\frac{8.4}{40}$ $\frac{8.2}{36}$ 7.1 $\frac{6.1}{7}$ $\frac{5.4}{21}$ $\frac{4.7}{22}$ $\frac{3.0}{50}$

$\frac{8.2}{50}$ $\frac{8.0}{30}$ 7.1 $\frac{6.3}{6}$ $\frac{5.5}{24}$ $\frac{4.6}{24}$ $\frac{2.2}{50}$

$\frac{8.3}{50}$ $\frac{7.7}{25}$ 7.6 $\frac{7.0}{5}$ $\frac{6.6}{18}$ $\frac{7.0}{23}$ $\frac{6.0}{23}$ $\frac{4.2}{50}$

$\frac{8.9}{50}$ $\frac{7.9}{25}$ 7.6 $\frac{7.3}{3}$ $\frac{6.8}{23}$ $\frac{6.1}{23}$ $\frac{4.0}{50}$

$\frac{8.4}{50}$ $\frac{7.5}{25}$ 7.0 $\frac{6.0}{12}$ $\frac{6.2}{23}$ $\frac{5.6}{23}$ $\frac{3.7}{50}$

$\frac{7.7}{50}$ $\frac{6.6}{25}$ $\frac{5.5}{3}$ $\frac{6.0}{3}$ 5.9 $\frac{4.9}{7}$ $\frac{5.3}{23}$ $\frac{4.5}{23}$ $\frac{2.4}{50}$

Sta.	+	π	-	Elev.
		1012.69		
4	+72		11.1	01.6
5			9.1	03.6
	+50		8.9	03.8
6			9.7	03.0
	+50		9.4	03.3
B.M.	8.94	1012.54	9.07	1003.62
	+60	Profile Siegel St.	9.1	1003.60
				03.4
7			8.5	04.0
	+60		5.6	06.9
8			5.1	07.4
	+50		5.0	07.5
9			5.6	06.9
	+50		5.7	06.8

$\frac{13.8}{50}$ $\frac{13.6}{48}$ $\frac{12.3}{48}$ $\frac{12.1}{27}$ $\frac{10.5}{2}$ 11.1 $\frac{10.5}{3}$ $\frac{9.9}{12}$ $\frac{10.6}{23}$ $\frac{9.3}{23}$ $\frac{8.0}{37}$ $\frac{6.5}{50}$

$\frac{12.8}{50}$ $\frac{12.4}{45}$ $\frac{10.7}{45}$ $\frac{8.9}{18}$ $\frac{8.7}{2}$ 9.1 $\frac{8.5}{4}$ $\frac{8.0}{14}$ $\frac{7.5}{24}$ $\frac{6.7}{24}$ $\frac{4.8}{50}$

$\frac{11.7}{50}$ $\frac{10.7}{40}$ $\frac{10.3}{24}$ 8.9 $\frac{8.0}{8}$ $\frac{7.5}{23}$ $\frac{6.5}{23}$ $\frac{4.4}{39}$ $\frac{3.3}{50}$

$\frac{10.9}{50}$ $\frac{10.9}{40}$ $\frac{10.4}{17}$ 9.7 $\frac{8.9}{7}$ $\frac{8.2}{24}$ $\frac{7.4}{24}$ $\frac{5.1}{41}$ $\frac{4.2}{50}$

$\frac{13.4}{50}$ $\frac{11.6}{38}$ $\frac{11.1}{25}$ 9.4 $\frac{8.3}{10}$ $\frac{7.9}{24}$ $\frac{7.2}{24}$ $\frac{4.9}{50}$

Top Spike in P.P. 26 Lt 5 + 45

9.1 $\frac{8.6}{5}$ $\frac{7.6}{15}$ $\frac{6.4}{29}$ $\frac{5.2}{47}$ $\frac{4.6}{73}$ $\frac{4.1}{100}$ $\frac{3.5}{150}$ $\frac{3.7}{200}$

$\frac{11.0}{50}$ $\frac{10.5}{44}$ $\frac{8.7}{38}$ $\frac{9.5}{35}$ $\frac{9.7}{25}$ 8.5 $\frac{8.2}{6}$ $\frac{8.2}{24}$ $\frac{6.8}{50}$

$\frac{8.4}{50}$ $\frac{7.6}{42}$ $\frac{6.5}{37}$ $\frac{6.3}{22}$ $\frac{5.0}{2}$ 5.6 $\frac{5.2}{7}$ $\frac{5.4}{19}$ $\frac{6.0}{24}$ $\frac{5.0}{24}$ $\frac{5.0}{50}$

$\frac{7.0}{50}$ $\frac{6.1}{41}$ $\frac{5.0}{33}$ $\frac{4.7}{3}$ 5.1 $\frac{4.4}{11}$ $\frac{5.3}{24}$ $\frac{4.5}{24}$ $\frac{3.9}{50}$

$\frac{6.6}{50}$ $\frac{5.6}{46}$ $\frac{5.4}{20}$ 5.0 $\frac{4.2}{10}$ $\frac{4.9}{24}$ $\frac{4.6}{24}$ $\frac{4.3}{50}$

$\frac{6.5}{50}$ $\frac{5.9}{42}$ $\frac{5.4}{32}$ $\frac{6.1}{17}$ $\frac{5.7}{8}$ 5.6 $\frac{5.7}{3}$ $\frac{5.2}{5}$ $\frac{4.8}{13}$ $\frac{5.3}{20}$ $\frac{5.8}{25}$ $\frac{5.4}{25}$ $\frac{5.8}{37}$ $\frac{6.8}{50}$

$\frac{5.3}{50}$ $\frac{5.1}{33}$ $\frac{5.5}{27}$ $\frac{6.0}{9}$ 5.7 $\frac{5.6}{6}$ $\frac{5.2}{12}$ $\frac{5.5}{20}$ $\frac{6.0}{25}$ $\frac{5.1}{25}$ $\frac{5.1}{50}$

Sta	+	π	-	Elev.
		1012.54		
10			4.5	08.0.
T.P.	7.53	1015.70	4.37	1008.17
+50			5.6	10.1-
11			6.5	09.2.
+50			6.8	08.9.
12			6.5	09.2.
+50			5.4	10.3.
13			4.3	11.4.
+ 19	Profile	5 th st.	4.4	11.3.
+50			4.5	11.2.
14			3.9	11.8.
+ 50			2.3	13.4.
15 +			4.0	11.7.
T.P.	7.71	1013.74	9.67	1006.03

$\frac{4.1}{50}$ $\frac{4.3}{33}$ $\frac{5.1}{31}$ $\frac{4.5}{6}$ $\frac{4.3}{13}$ $\frac{4.7}{20}$ $\frac{5.3}{24}$ $\frac{4.3}{24}$ $\frac{3.3}{50}$

$\frac{6.9}{50}$ $\frac{6.4}{25}$ $\frac{5.6}{4}$ $\frac{5.4}{7}$ $\frac{5.2}{13}$ $\frac{5.6}{20}$ $\frac{6.1}{25}$ $\frac{5.1}{25}$ $\frac{4.9}{50}$

$\frac{9.2}{50}$ $\frac{7.5}{19}$ $\frac{5.6}{6}$ $\frac{5.0}{13}$ $\frac{5.2}{19}$ $\frac{5.5}{25}$ $\frac{4.6}{25}$ $\frac{3.5}{50}$

$\frac{10.3}{50}$ $\frac{9.2}{37}$ $\frac{7.8}{24}$ $\frac{5.7}{7}$ $\frac{5.4}{14}$ $\frac{5.2}{20}$ $\frac{5.2}{25}$ $\frac{4.1}{25}$ $\frac{2.4}{50}$

$\frac{8.2}{50}$ $\frac{5.9}{25}$ $\frac{5.8}{7}$ $\frac{5.6}{14}$ $\frac{5.8}{20}$ $\frac{6.3}{25}$ $\frac{5.2}{25}$ $\frac{4.1}{50}$

$\frac{5.3}{50}$ $\frac{5.0}{40}$ $\frac{4.2}{25}$ $\frac{4.6}{18}$ $\frac{4.9}{2}$ $\frac{4.7}{7}$ $\frac{4.6}{14}$ $\frac{4.9}{19}$ $\frac{5.6}{25}$ $\frac{5.0}{25}$ $\frac{4.6}{50}$

$\frac{4.8}{50}$ $\frac{4.6}{26}$ $\frac{4.1}{3}$ $\frac{3.9}{6}$ $\frac{3.7}{12}$ $\frac{4.1}{18}$ $\frac{4.9}{25}$ $\frac{4.3}{26}$ $\frac{5.3}{50}$

$\frac{3.9}{7}$ $\frac{3.7}{13}$ $\frac{3.8}{18}$ $\frac{4.1}{23}$ $\frac{4.9}{50}$ $\frac{5.1}{100}$ $\frac{5.3}{150}$ $\frac{6.3}{200}$

$\frac{5.0}{50}$ $\frac{5.2}{25}$ $\frac{4.1}{45}$ $\frac{3.8}{6}$ $\frac{4.3}{12}$ $\frac{5.1}{19}$ $\frac{4.6}{25}$ $\frac{5.9}{25}$ $\frac{5.9}{50}$

$\frac{4.6}{50}$ $\frac{4.6}{35}$ $\frac{3.7}{22}$ $\frac{4.7}{2}$ $\frac{4.5}{7}$ $\frac{4.3}{14}$ $\frac{4.9}{20}$ $\frac{5.7}{25}$ $\frac{6.4}{34}$ $\frac{7.4}{45}$ $\frac{7.7}{50}$

$\frac{2.5}{50}$ $\frac{1.8}{40}$ $\frac{1.3}{19}$ $\frac{4.3}{2}$ $\frac{4.5}{7}$ $\frac{4.2}{13}$ $\frac{4.6}{23}$ $\frac{3.1}{23}$ $\frac{4.4}{34}$ $\frac{5.8}{43}$ $\frac{7.1}{50}$

$\frac{3.3}{50}$ $\frac{3.2}{36}$ $\frac{3.2}{19}$ $\frac{6.5}{2}$ $\frac{5.3}{8}$ $\frac{5.1}{13}$ $\frac{5.6}{24}$ $\frac{4.2}{24}$ $\frac{5.4}{42}$ $\frac{6.1}{50}$

Sta.	+	π	-	Elev.
		1013.74		
15+50			4.7	09.0
+70			6.7	07.0
16			10.2	03.5
T.P.	477	1007.63	10.88	1002.86
+50			7.5	00.1
+71	E Cul. v. 12' x 26' CM. 6.9			00.7
17			6.8	00.8
+50			6.3	01.3
18			5.5	02.1
+30			5.4	02.2
+65			5.5	02.1
T.P.	7.54	1011.81	3.36	1004.27
19			8.6	03.2
+30			7.3	04.5

$\frac{5.0}{50}$ $\frac{4.4}{30}$ $\frac{3.4}{21}$ $\frac{4.0}{16}$ 4.7 $\frac{5.9}{2}$ $\frac{5.6}{8}$ $\frac{5.0}{13}$ $\frac{6.3}{23}$ $\frac{5.3}{23}$ $\frac{5.7}{41}$ $\frac{6.1}{50}$

$\frac{5.5}{50}$ $\frac{5.7}{29}$ $\frac{5.0}{21}$ $\frac{6.2}{12}$ 6.7 $\frac{8.1}{4}$ $\frac{7.1}{7}$ $\frac{6.9}{13}$ $\frac{7.5}{23}$ $\frac{7.0}{23}$ $\frac{7.7}{37}$ $\frac{7.8}{50}$

$\frac{11.8}{50}$ $\frac{12.2}{33}$ $\frac{12.1}{20}$ $\frac{11.5}{5}$ 10.2 $\frac{9.4}{7}$ $\frac{9.1}{12}$ $\frac{9.5}{19}$ $\frac{9.3}{20}$ $\frac{10.3}{24}$ $\frac{10.1}{50}$

$\frac{6.0}{50}$ $\frac{5.7}{36}$ $\frac{8.9}{29}$ $\frac{7.7}{25}$ 7.5 $\frac{5.8}{7}$ $\frac{5.6}{14}$ $\frac{6.3}{23}$ $\frac{6.8}{25}$ $\frac{6.7}{40}$ $\frac{6.2}{50}$
 99.78 FL 98.93 FL

$\frac{6.8}{50}$ $\frac{7.0}{40}$ $\frac{7.8}{32}$ $\frac{7.7}{22}$ $\frac{8.0}{10}$ 6.9 $\frac{7.85}{0.3}$ $\frac{6.3}{7}$ $\frac{5.9}{14}$ $\frac{6.2}{23}$ $\frac{8.70}{26}$ $\frac{7.6}{27}$ $\frac{5.8}{50}$

$\frac{6.6}{50}$ $\frac{7.1}{32}$ $\frac{7.2}{26}$ $\frac{7.3}{9}$ 6.8 $\frac{6.2}{8}$ $\frac{6.0}{14}$ $\frac{6.2}{21}$ $\frac{5.9}{22}$ $\frac{6.7}{26}$ $\frac{5.7}{38}$ $\frac{4.3}{50}$

$\frac{7.2}{50}$ $\frac{6.4}{27}$ $\frac{5.4}{15}$ 6.3 $\frac{5.2}{9}$ $\frac{5.4}{14}$ $\frac{5.5}{24}$ $\frac{3.8}{24}$ $\frac{3.3}{50}$

$\frac{6.6}{50}$ $\frac{5.3}{19}$ $\frac{4.6}{16}$ $\frac{4.4}{1}$ 5.5 $\frac{4.8}{6}$ $\frac{4.7}{12}$ $\frac{5.3}{25}$ $\frac{4.1}{25}$ $\frac{4.1}{50}$

$\frac{4.9}{50}$ $\frac{4.0}{33}$ $\frac{3.5}{16}$ $\frac{4.3}{10}$ $\frac{4.6}{1}$ 5.4 $\frac{4.7}{8}$ $\frac{4.5}{12}$ $\frac{4.8}{23}$ $\frac{5.4}{25}$ $\frac{4.4}{25}$ $\frac{4.4}{50}$

$\frac{4.7}{50}$ $\frac{4.0}{16}$ $\frac{4.7}{11}$ $\frac{5.1}{1}$ 5.5 $\frac{5.0}{5}$ $\frac{4.6}{11}$ $\frac{4.9}{20}$ $\frac{5.6}{25}$ $\frac{5.2}{27}$ $\frac{5.2}{50}$

$\frac{7.3}{50}$ $\frac{5.7}{15}$ $\frac{7.7}{2}$ 8.6 $\frac{8.2}{3}$ $\frac{8.0}{11}$ $\frac{8.7}{21}$ $\frac{9.0}{22}$ $\frac{9.0}{27}$ $\frac{9.1}{50}$

$\frac{6.1}{50}$ $\frac{4.2}{15}$ $\frac{5.9}{2}$ 7.3 $\frac{7.1}{3}$ $\frac{6.9}{12}$ $\frac{7.5}{20}$ $\frac{8.2}{22}$ $\frac{8.0}{25}$ $\frac{7.8}{50}$

Sta.	+	π	-	Elev.
		1011.81		
19+68			6.1	05.7.
+82		Profile Margaret St. 5.7		06.1.
B.M.	2.10	1011.78	2.10	1009.71
20+45			7.9	03.9.
21			10.8	01.0.
+50			14.1	97.7.
T.P.	1.79	1000.11	13.46	998.32
22			6.0	94.1.
+50			10.3	89.8.
T.P.	3.14	989.57	13.68	986.43.
23			3.9	85.7.
+50			6.0	83.6.
24			6.3	83.3.
+56	2 $\frac{1}{2}$ Culv.	12" CM x 20' 12" W.I.P. x 26'	7.1	82.5.
25			5.1	84.5.
T.P.	8.50	995.24	2.83	986.74

$\frac{5.9}{50}$ $\frac{4.7}{36}$ $\frac{3.8}{15}$ $\frac{4.8}{3}$ 6.1 $\frac{5.8}{13}$ $\frac{6.4}{24}$ $\frac{5.9}{26}$ $\frac{6.0}{50}$

$\frac{6.1}{50}$ $\frac{4.7}{32}$ $\frac{4.3}{2}$ 5.7 $\frac{5.6}{12}$ $\frac{5.0}{50}$ $\frac{4.1}{100}$ $\frac{4.7}{150}$ $\frac{6.2}{200}$

Top spike in P.R 80' RT 31.2 20

$\frac{4.2}{50}$ $\frac{3.4}{32}$ $\frac{3.7}{13}$ $\frac{4.5}{8}$ $\frac{4.4}{4}$ 7.9 $\frac{7.2}{12}$ $\frac{7.7}{22}$ $\frac{4.9}{26}$ $\frac{3.6}{30}$ $\frac{4.3}{50}$

$\frac{10.1}{50}$ $\frac{8.5}{31}$ $\frac{6.6}{4}$ 10.8 $\frac{10.1}{12}$ $\frac{11.0}{24}$ $\frac{6.9}{24}$ $\frac{7.0}{37}$ $\frac{7.9}{50}$

$\frac{11.5}{50}$ $\frac{9.9}{30}$ $\frac{8.6}{15}$ $\frac{8.6}{4}$ 14.1 $\frac{13.8}{3}$ $\frac{13.6}{10}$ $\frac{14.0}{22}$ $\frac{11.0}{26}$ $\frac{12.5}{41}$ $\frac{13.9}{50}$

$\frac{6.2}{50}$ $\frac{5.2}{32}$ $\frac{4.7}{16}$ $\frac{4.2}{11}$ $\frac{5.1}{2}$ 6.0 $\frac{5.6}{5}$ $\frac{5.5}{12}$ $\frac{6.3}{22}$ $\frac{6.1}{27}$ $\frac{8.2}{50}$

$\frac{11.9}{50}$ $\frac{11.9}{34}$ $\frac{11.8}{21}$ 10.3 $\frac{10.0}{11}$ $\frac{11.0}{24}$ $\frac{11.6}{27}$ $\frac{12.8}{50}$

$\frac{5.7}{50}$ $\frac{5.6}{32}$ $\frac{4.6}{2}$ 3.9 $\frac{3.2}{4}$ $\frac{2.8}{12}$ $\frac{3.4}{22}$ $\frac{5.0}{27}$ $\frac{5.7}{50}$

$\frac{6.7}{50}$ $\frac{6.7}{15}$ $\frac{6.9}{5}$ 6.0 $\frac{4.9}{5}$ $\frac{4.6}{13}$ $\frac{5.4}{23}$ $\frac{6.7}{26}$ $\frac{6.8}{39}$ $\frac{6.9}{50}$

$\frac{6.8}{50}$ $\frac{6.8}{35}$ $\frac{6.7}{2}$ 6.3 $\frac{5.3}{4}$ $\frac{5.2}{13}$ $\frac{5.5}{22}$ $\frac{5.9}{24}$ $\frac{6.6}{37}$ $\frac{6.6}{50}$

$\frac{6.6}{50}$ $\frac{6.5}{25}$ $\frac{6.3}{4}$ (FLWIP) $\frac{7.2}{(1.5)}$ 7.1 (FLCM) $\frac{6.4}{2.5}$ $\frac{4.7}{7}$ $\frac{4.8}{13}$ $\frac{5.0}{20}$ $\frac{6.5}{24}$ (FLCM) $\frac{6.15}{22.5}$ (FLWIP) $\frac{7.25}{28.5}$ $\frac{6.3}{50}$

$\frac{5.4}{50}$ $\frac{5.0}{25}$ 5.1 $\frac{4.5}{3}$ $\frac{4.5}{15}$ $\frac{4.6}{22}$ $\frac{5.2}{27}$ $\frac{5.0}{50}$

Sta.	+	$\bar{x}$	-	Elev.
------	---	-----------	---	-------

		995.24		
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25+50				
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			8.8	
--	--	--	-----	--

				86.4
--	--	--	--	------

26				
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			8.9	
--	--	--	-----	--

				86.3
--	--	--	--	------

+15				
-----	--	--	--	--

			7.0	
--	--	--	-----	--

				88.2
--	--	--	--	------

+27				
-----	--	--	--	--

			5.7	
--	--	--	-----	--

				89.5
--	--	--	--	------

+41.15				
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		$\pm$ Minnehaha		
--	--	-----------------	--	--

			5.06	
--	--	--	------	--

				90.18
--	--	--	--	-------

B.M.				
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			4.79	
--	--	--	------	--

				990.45
--	--	--	--	--------

				990.43
--	--	--	--	--------

$$\begin{array}{r} 10.4 \\ 50 \end{array} \quad \begin{array}{r} 9.8 \\ 25 \end{array} \quad 8.8 \quad \begin{array}{r} 9.2 \\ 3 \end{array} \quad \begin{array}{r} 8.6 \\ 7 \end{array} \quad \begin{array}{r} 8.3 \\ 16 \end{array} \quad \begin{array}{r} 8.6 \\ 25 \end{array} \quad \begin{array}{r} 7.1 \\ 46 \end{array} \quad \begin{array}{r} 7.1 \\ 46 \end{array}$$

$$\begin{array}{r} 10.2 \\ 50 \end{array} \quad \begin{array}{r} 9.9 \\ 25 \end{array} \quad \begin{array}{r} 8.9 \\ 7 \end{array} \quad 8.9 \quad \begin{array}{r} 7.7 \\ 6 \end{array} \quad \begin{array}{r} 6.9 \\ 17 \end{array} \quad \begin{array}{r} 7.1 \\ 22 \end{array} \quad \begin{array}{r} 8.3 \\ 30 \end{array} \quad \begin{array}{r} 8.7 \\ 50 \end{array}$$

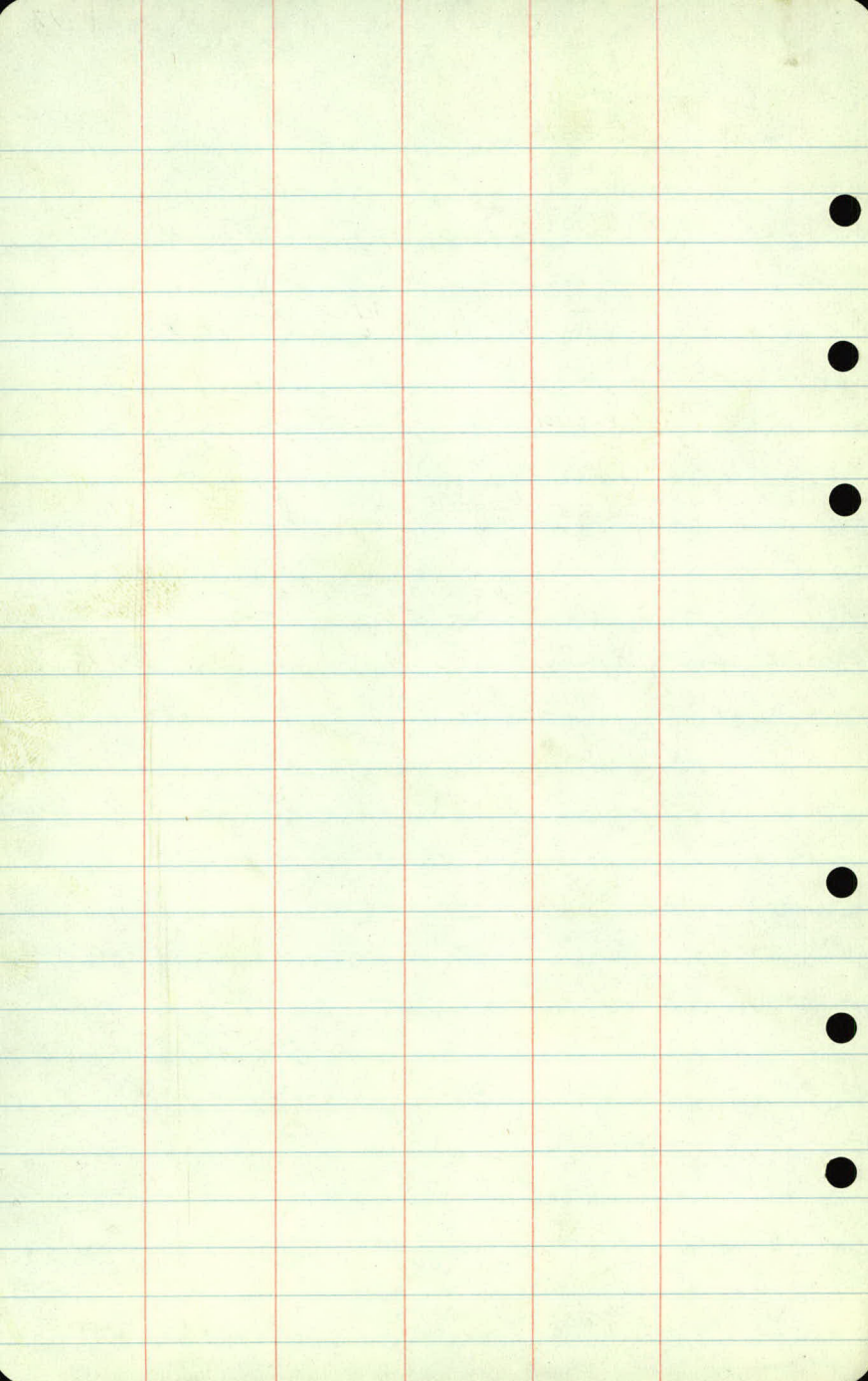
$$\begin{array}{r} 9.6 \\ 50 \end{array} \quad \begin{array}{r} 9.4 \\ 31 \end{array} \quad \begin{array}{r} 8.2 \\ 4 \end{array} \quad 7.0 \quad \begin{array}{r} 6.5 \\ 7 \end{array} \quad \begin{array}{r} 6.2 \\ 15 \end{array} \quad \begin{array}{r} 6.3 \\ 23 \end{array} \quad \begin{array}{r} 7.6 \\ 32 \end{array} \quad \begin{array}{r} 8.0 \\ 50 \end{array}$$

Top MH

$$\begin{array}{r} 5.8 \\ 50 \end{array} \quad \begin{array}{r} 5.6 \\ 38 \end{array} \quad \begin{array}{r} 5.5 \\ 9 \end{array} \quad 5.7 \quad \begin{array}{r} (4.95) \\ 17 \end{array} \quad \begin{array}{r} 5.2 \\ 30 \end{array} \quad \begin{array}{r} 5.0 \\ 50 \end{array}$$

$$\begin{array}{r} 5.60 \\ 50 \end{array} \quad 5.06 \quad \begin{array}{r} 4.80 \\ 50 \end{array}$$

Spike in P.P. N.W. Cor Minnehaha & Ferdinand



Slope stakes
Fennel Ave.

Sta	+ B.M.	T 8.50	T 1002.90	-	Grade (994.40)
0	+00 +30 +50	128' Culv. Lt = 30' = 16.M. Elev. 89.9 18" x 46"		Culv. Rt. = Elev. 90.4	93.0
					93.4
1					93.7
	+40				94.0
	+70				94.3
2					94.4
	+37				94.7
	+64				94.8
3					95.2
	+50				96.1
4					97.5
T.P.		10.03	1011.84	1.09	1001.81

Gr. Rod.

Lt.

R

Rt.

Spt. in 8" Oak 0-13

9.9

$$28.6 / \begin{array}{r} 11.2 \\ -1.5 \end{array}$$

8.700

99

9.7

$$\begin{array}{r} 10.6 \\ -0.9 \end{array}$$

$$\begin{array}{r} 8.8 \\ 10.8 / 27.6 \end{array}$$

9.5

$$31.0 / \begin{array}{r} 12.0 \\ -2.5 \end{array}$$

$$\begin{array}{r} 10.7 \\ -1.2 \end{array}$$

$$\begin{array}{r} 8.8 \\ 10.6 / 27.2 \end{array}$$

9.2

$$31.6 / \begin{array}{r} 12.0 \\ -2.8 \end{array}$$

$$\begin{array}{r} 10.5 \\ -1.3 \end{array}$$

$$\begin{array}{r} 9.0 \\ 10.2 / 26.4 \end{array}$$

8.9

$$30.6 / \begin{array}{r} 11.2 \\ -2.3 \end{array}$$

$$\begin{array}{r} 10.0 \\ -1.1 \end{array}$$

$$\begin{array}{r} 7.9 \\ 11.0 / 28.0 \end{array}$$

8.6

$$28.8 / \begin{array}{r} 10.0 \\ -1.4 \end{array}$$

$$\begin{array}{r} 8.8 \\ -0.2 \end{array}$$

$$\begin{array}{r} 6.0 \\ 12.6 / 31.2 \end{array}$$

8.5

$$22.0 / \begin{array}{r} 8.0 \\ 10.5 \end{array}$$

$$\begin{array}{r} 7.1 \\ 11.4 \end{array}$$

$$\begin{array}{r} 4.3 \\ 12.2 / 33.0 \end{array}$$

8.2

$$27.2 / \begin{array}{r} 6.6 \\ 11.6 \end{array}$$

$$\begin{array}{r} 5.6 \\ +2.6 \end{array}$$

$$\begin{array}{r} 2.4 \\ 15.8 / 33.0 \end{array}$$

8.1

$$28.8 / \begin{array}{r} 6.7 \\ 11.4 \end{array}$$

$$\begin{array}{r} 5.6 \\ +3.5 \end{array}$$

$$\begin{array}{r} 2.1 \\ 16.0 / 33.0 \end{array}$$

7.7

$$28.6 / \begin{array}{r} 6.4 \\ 11.3 \end{array}$$

$$\begin{array}{r} 6.2 \\ 11.5 \end{array}$$

$$\begin{array}{r} 3.9 \\ 12.8 / 33.0 \end{array}$$

6.8

$$26.4 / \begin{array}{r} 6.6 \\ 10.2 \end{array}$$

$$\begin{array}{r} 6.1 \\ 10.7 \end{array}$$

$$\begin{array}{r} 4.0 \\ 12.8 / 31.6 \end{array}$$

5.4

$$27.6 / \begin{array}{r} 6.2 \\ -0.8 \end{array}$$

$$\begin{array}{r} 5.6 \\ 10.2 \end{array}$$

$$\begin{array}{r} 3.5 \\ 11.5 / 29.0 \end{array}$$

Sta	+	π	-	Grade
		1011.84		
4	+ 27			98.5
	+ 72			1000.1
5				00.9
B.M.	5.21	1011.81	8.21	1003.63
	+ 50			02.0
6				02.6
	+ 30			03.0
7				03.7
	+ 30			04.1
	+ 60			04.4
8				04.9
I.P.	7.10	1015.40	8.51	1008.30
	+ 50			05.4

1003.60

Grade Rod

Lt

R

Rt

$$13.3 \quad 28.0 / \begin{array}{r} 10.3 \\ -1.0 \end{array} \quad \begin{array}{r} 19.5 \\ -0.2 \end{array} \quad \begin{array}{r} 11.5 \\ 11.8 / 29.6 \end{array}$$

$$11.7 \quad 26.8 / \begin{array}{r} 11.3 \\ -10.4 \end{array} \quad \begin{array}{r} 10.2 \\ 11.5 \end{array} \quad \begin{array}{r} 7.9 \\ 13.8 / 33.0 \end{array}$$

$$10.9 \quad 30.0 / \begin{array}{r} 8.9 \\ 12.0 \end{array} \quad \begin{array}{r} 8.2 \\ 12.7 \end{array} \quad \begin{array}{r} 6.4 \\ 14.5 / 33.0 \end{array}$$

Spk. in P.P. 26 Lt. Sta. 5+45

$$9.8 \quad 26.4 / \begin{array}{r} 9.6 \\ 10.2 \end{array} \quad \begin{array}{r} 8.1 \\ 11.7 \end{array} \quad \begin{array}{r} 4.5 \\ 15.3 / 33.0 \end{array}$$

$$9.2 \quad 27.8 / \begin{array}{r} 10.1 \\ -0.9 \end{array} \quad \begin{array}{r} 8.8 \\ 10.9 \end{array} \quad \begin{array}{r} 5.4 \\ 13.8 / 33.0 \end{array}$$

$$8.8 \quad 25 \left(28.8 / \begin{array}{r} 10.3 \\ -1.4 \end{array} \right) \quad \begin{array}{r} 8.8 \\ 10 \end{array} \quad \begin{array}{r} 5.8 \\ 12.0 / 32.0 \end{array}$$

$$8.1 \quad 28.0 / \begin{array}{r} 9.1 \\ -1.0 \end{array} \quad \begin{array}{r} 7.8 \\ 10.3 \end{array} \quad \begin{array}{r} 6.3 \\ 14.2 / 28.4 \end{array}$$

$$7.7 \quad 27.2 / \begin{array}{r} 7.1 \\ 10.6 \end{array} \quad \begin{array}{r} 6.3 \\ 11.4 \end{array} \quad \begin{array}{r} 5.8 \\ 11.9 / 29.8 \end{array}$$

$$7.4 \quad 29.6 / \begin{array}{r} 5.6 \\ 11.8 \end{array} \quad \begin{array}{r} 1.8 \\ 12.6 \end{array} \quad \begin{array}{r} 1.4 \\ 14.0 / 32.0 \end{array}$$

$$6.9 \quad 31.2 / \begin{array}{r} 4.3 \\ 12.6 \end{array} \quad \begin{array}{r} 4.3 \\ 12.6 \end{array} \quad \begin{array}{r} 3.7 \\ 13.2 / 32.4 \end{array}$$

Top Lot 1000 Rt Lot. - 45

$$10.0 \quad 29.9 / \begin{array}{r} 8.3 \\ 11.7 \end{array} \quad \begin{array}{r} 7.8 \\ 12.2 \end{array} \quad \begin{array}{r} 7.3 \\ 12.7 / 31.4 \end{array}$$

Sta.	+	π	-	Grade
		101540		
9				06.0
	150			06.6
10				07.2
	150			07.7
11				08.3
	150			08.9
12				09.4
	150			10.0
	191			10.5
B.M.	4.27	1016.03	3.64	1011.76
13	151			11.1
14				11.3

Grade Rod

L_tL_uR_t

$$9.4 \quad 28.0 / \begin{array}{r} 8.9 \\ 11.0 \end{array} \quad \begin{array}{r} 84 \\ 110 \end{array} \quad \begin{array}{r} 8.2 \\ 11.2 / 28.4 \end{array}$$

$$8.8 \quad 26.6 / \begin{array}{r} 8.5 \\ 10.3 \end{array} \quad \begin{array}{r} 85 \\ 103 \end{array} \quad \begin{array}{r} 8.0 \\ 10.8 / 27.6 \end{array}$$

$$8.2 \quad 27.0 / \begin{array}{r} 7.7 \\ 10.5 \end{array} \quad \begin{array}{r} 74 \\ 108 \end{array} \quad \begin{array}{r} 6.9 \\ 11.3 / 28.6 \end{array}$$

$$7.7 \quad 29.2 / \begin{array}{r} 6.1 \\ 11.6 \end{array} \quad \begin{array}{r} 55 \\ 122 \end{array} \quad \begin{array}{r} 4.7 \\ 13.0 / 32.0 \end{array}$$

$$7.1 \quad 26.4 / \begin{array}{r} 7.3 \\ 9.2 \end{array} \quad \begin{array}{r} 62 \\ 109 \end{array} \quad \begin{array}{r} 3.8 \\ 13.3 / 32.6 \end{array}$$

$$6.5 \quad 29.0 / \begin{array}{r} 8.0 \\ 11.5 \end{array} \quad \begin{array}{r} 64 \\ 101 \end{array} \quad \begin{array}{r} 3.0 \\ 13.1 / 32.2 \end{array}$$

$$6.0 \quad 27.0 / \begin{array}{r} 6.5 \\ 9.5 \end{array} \quad \begin{array}{r} 62 \\ 92 \end{array} \quad \begin{array}{r} 4.7 \\ 11.3 / 28.6 \end{array}$$

$$5.4 \quad 28.6 / \begin{array}{r} 4.1 \\ 11.3 \end{array} \quad \begin{array}{r} 51 \\ 103 \end{array} \quad \begin{array}{r} 4.5 \\ 10.9 / 27.8 \end{array}$$

$$4.9 \quad 28.0 / \begin{array}{r} 3.9 \\ 11.0 \end{array} \quad \begin{array}{r} 41 \\ 108 \end{array} \quad \begin{array}{r} 4.1 \\ 10.8 / 27.6 \end{array}$$

Nailing R.R.Lt. 13142

$$4.9 \quad 27.4 / \begin{array}{r} 5.6 \\ 9.7 \end{array} \quad \begin{array}{r} 49 \\ 90 \end{array} \quad \begin{array}{r} 5.0 \\ 9.1 / 26.2 \end{array}$$

$$4.7 \quad 26.6 / \begin{array}{r} 4.4 \\ 10.3 \end{array} \quad \begin{array}{r} 43 \\ 104 \end{array} \quad \begin{array}{r} 6.2 \\ 11.5 / 29.0 \end{array}$$

Sta	+	π	-	Grade
		1016.03		
14	+25			11.1
	+50			10.5
	+75			09.9
15				08.8
	+25			07.8
	+50			06.1
	+70			05.0
16				03.5
T.P.	6.93	1011.05	11.91	1004.12
	+25			02.6
	+50			01.8
	+71			01.3

Gr. Rod.

Lt.

K.

Rt.

$$4.9 \quad 30.2' / \begin{array}{r} 2.8 \\ +21 \end{array} \quad \begin{array}{r} 3.0 \\ 4.9 \end{array} \quad \begin{array}{r} 51 \\ -0.2 / 26.4 \end{array}$$

$$5.5 \quad 32.8' / \begin{array}{r} 21 \\ +24 \end{array} \quad \begin{array}{r} 26 \\ 4.9 \end{array} \quad \begin{array}{r} 91 \\ 4.4 / 28.8 \end{array}$$

$$6.1 \quad 32.8' / \begin{array}{r} 27 \\ +24 \end{array} \quad \begin{array}{r} 31 \\ +30 \end{array} \quad \begin{array}{r} 96 \\ 4.5 / 29.0 \end{array}$$

$$7.2 \quad 33.0' / \begin{array}{r} 35 \\ +27 \end{array} \quad \begin{array}{r} 42 \\ +30 \end{array} \quad \begin{array}{r} 5.2 \\ 120 / 30.0 \end{array}$$

$$8.2 \quad 33.0' / \begin{array}{r} 45 \\ +27 \end{array} \quad \begin{array}{r} 54 \\ +28 \end{array} \quad \begin{array}{r} 61 \\ 121 / 30.2 \end{array}$$

$$9.9 \quad 32.2' / \begin{array}{r} 48 \\ +21 \end{array} \quad \begin{array}{r} 70 \\ +29 \end{array} \quad \begin{array}{r} 81 \\ 4.8 / 29.6 \end{array}$$

$$11.0 \quad 31.4' / \begin{array}{r} 8.3 \\ +2.7 \end{array} \quad \begin{array}{r} 24 \\ 11.6 \end{array} \quad \begin{array}{r} 100 \\ 11.0 / 28.0 \end{array}$$

$$12.5 \quad 27.6' / \begin{array}{r} 18.3 \\ -0.8 \end{array} \quad \begin{array}{r} 12.6 \\ -0.1 \end{array} \quad \begin{array}{r} 131 \\ -0.6 / 27.2 \end{array}$$

$$8.5 \quad 20.8' / \begin{array}{r} 11.4 \\ -2.9 \end{array} \quad \begin{array}{r} 94 \\ -0.9 \end{array} \quad \begin{array}{r} 91 \\ -0.6 / 27.2 \end{array}$$

$$9.3 \quad 31.6' / \begin{array}{r} 12.1 \\ -2.8 \end{array} \quad \begin{array}{r} 10.2 \\ -1.6 \end{array} \quad \begin{array}{r} 10.4 \\ -1.1 / 28.2 \end{array}$$

$$9.8 \quad 29.2' / \begin{array}{r} 11.4 \\ -1.6 \end{array} \quad \begin{array}{r} 11.1 \\ -1.3 \end{array} \quad \begin{array}{r} 10.7 \\ -0.9 / 27.8 \end{array}$$

07.55
225
48.0

Sta.	+	π	-	Grade
		1011.05		
17				01.0
	+50			01.0
18				01.5
	+30			01.9
	+65			02.7
19				03.9
	+30			04.7
	+68			05.1
	+82			05.0
20 + 12				04.6
B.M.	1.35	1011.03	1.35	1009.70
	+45			03.4
				1009.68

Gr. Rod.

Lt

E

Rt

10.1

$$27.0' / \frac{10.6}{-0.5}$$

$$\frac{10.2}{-0.1}$$

$$\frac{10.1}{10.0} / 26.0$$

10.1

$$26.6' / \frac{9.8}{+0.3}$$

$$\frac{8.8}{-1.3}$$

$$\frac{7.7}{+2.4} / 30.8'$$

9.6

$$26.6' / \frac{9.3}{+0.3}$$

$$\frac{8.9}{+0.7}$$

$$\frac{7.7}{+1.9} / 27.8'$$

9.1

$$27.4' / \frac{7.4}{+1.7}$$

$$\frac{8.7}{+0.4}$$

$$\frac{7.8}{+1.3} / 28.6'$$

8.3

$$27.8' / \frac{7.4}{+0.9}$$

$$\frac{8.8}{-0.5}$$

$$\frac{8.7}{-0.4} / 26.8$$

7.1

$$29.0' / \frac{5.6}{+1.5}$$

$$\frac{7.8}{-0.7}$$

$$-\frac{8.9}{+1.3} / 25.6$$

6.3

$$30.4' / \frac{4.1}{+2.2}$$

$$-\frac{7.1}{+0.8} / 27.6'$$

5.9

$$30.2' / \frac{3.8}{+2.1}$$

$$\frac{5.2}{+0.7}$$

6.0

$$30.2' / \frac{3.9}{+2.1}$$

$$\frac{5.0}{+1.0}$$

6.4

$$30.6' / \frac{4.1}{+2.3}$$

$$\frac{5.6}{+0.8}$$

$$\frac{5.2}{+1.2} / 32.4'$$

Spk. in P.R. 80' Rt 20 to 0

7.6

$$33.0' / \frac{2.7}{+0.9}$$

$$\frac{7.0}{+0.6}$$

$$\frac{5.3}{+1.3} / 33.0'$$

Sta + π - Grade
 1011.03

20 170 02.3

21 1000.3

+50 996.6

I.P. 1.48 998.72 18.79 997.24

22 93.3

+50 90.6

23 88.5

I.P. 3.66 989.77 12.61 986.11

+50 87.0

24 86.2

6 4.0 C.M. Culm.

+50 El. Culvert
82.5/32.3

El. Culv. Rt
82.8/31.7

86.0

25 86.4

+50 87.4

Gr. Rad.

Lt.

E

RA

8.7

$$33.0 / \begin{array}{r} 9.7 \\ +1.0 \end{array}$$

$$\begin{array}{r} 3.9 \\ +9.8 \end{array} / 33.0$$

10.7

$$31.6 / \begin{array}{r} 7.9 \\ +2.8 \end{array}$$

$$\begin{array}{r} 9.5 \\ +1.2 \end{array}$$

$$\begin{array}{r} 6.2 \\ +4.5 \end{array} / 33.0$$

14.4

$$33.0 / \begin{array}{r} 9.6 \\ +4.8 \end{array}$$

$$\begin{array}{r} 10.7 \\ +12.7 \end{array} / 33.0$$

5.4

$$27.8 / \begin{array}{r} 4.5 \\ +0.9 \end{array}$$

$$\begin{array}{r} 4.5 \\ +0.9 \end{array}$$

$$\begin{array}{r} 4.6 \\ +0.8 \end{array} / 27.6$$

8.1

$$31.0 / \begin{array}{r} 10.6 \\ -2.5 \end{array}$$

$$\begin{array}{r} 8.9 \\ -0.8 \end{array}$$

$$\begin{array}{r} 10.3 \\ -2.2 \end{array} / 30.4$$

10.2

$$33.0 / \begin{array}{r} 14.8 \\ -9.6 \end{array}$$

$$\begin{array}{r} 13.2 \\ -3.0 \end{array}$$

$$\begin{array}{r} 14.0 \\ -3.8 \end{array} / 33.0$$

2.8

$$33.0 / \begin{array}{r} 7.0 \\ -4.2 \end{array}$$

$$\begin{array}{r} 6.4 \\ -3.6 \end{array}$$

$$\begin{array}{r} 7.1 \\ -4.3 \end{array} / 33.0$$

3.6

$$32.8 / \begin{array}{r} 1.0 \\ -3.4 \end{array}$$

$$\begin{array}{r} 6.8 \\ -3.3 \end{array}$$

$$\begin{array}{r} 7.0 \\ -3.4 \end{array} / 32.8$$

3.8

$$32.4 / \begin{array}{r} 7.0 \\ -3.2 \end{array}$$

$$\begin{array}{r} 6.6 \\ -2.8 \end{array}$$

$$\begin{array}{r} 6.7 \\ -2.9 \end{array} / 31.8$$

3.4

$$28.6 / \begin{array}{r} 9.7 \\ -6.3 \end{array}$$

$$\begin{array}{r} 5.2 \\ -1.8 \end{array}$$

$$\begin{array}{r} 5.9 \\ -2.0 \end{array} / 30.0$$

2.4

$$30.4 / \begin{array}{r} 4.6 \\ -2.2 \end{array}$$

$$\begin{array}{r} 3.8 \\ -1.0 \end{array}$$

$$\begin{array}{r} 3.2 \\ -0.8 \end{array} / 27.6$$

Sta.	+	π	-	Grade
		989.27		
T.P.	76.4	994.74	2.67	987.10
26				88.8
107				89.0
B.M.			4.32	990.42
	4. Pavement		4.60	990.43

Gr. Rod.

Lt.

A.

Rt.

5.9

$$33.0' / \frac{94}{-95}$$

$$\frac{85}{-2.6}$$

$$\frac{77}{-1.8} / 29.6$$

5.7

$$33.0' / \frac{95}{-98}$$

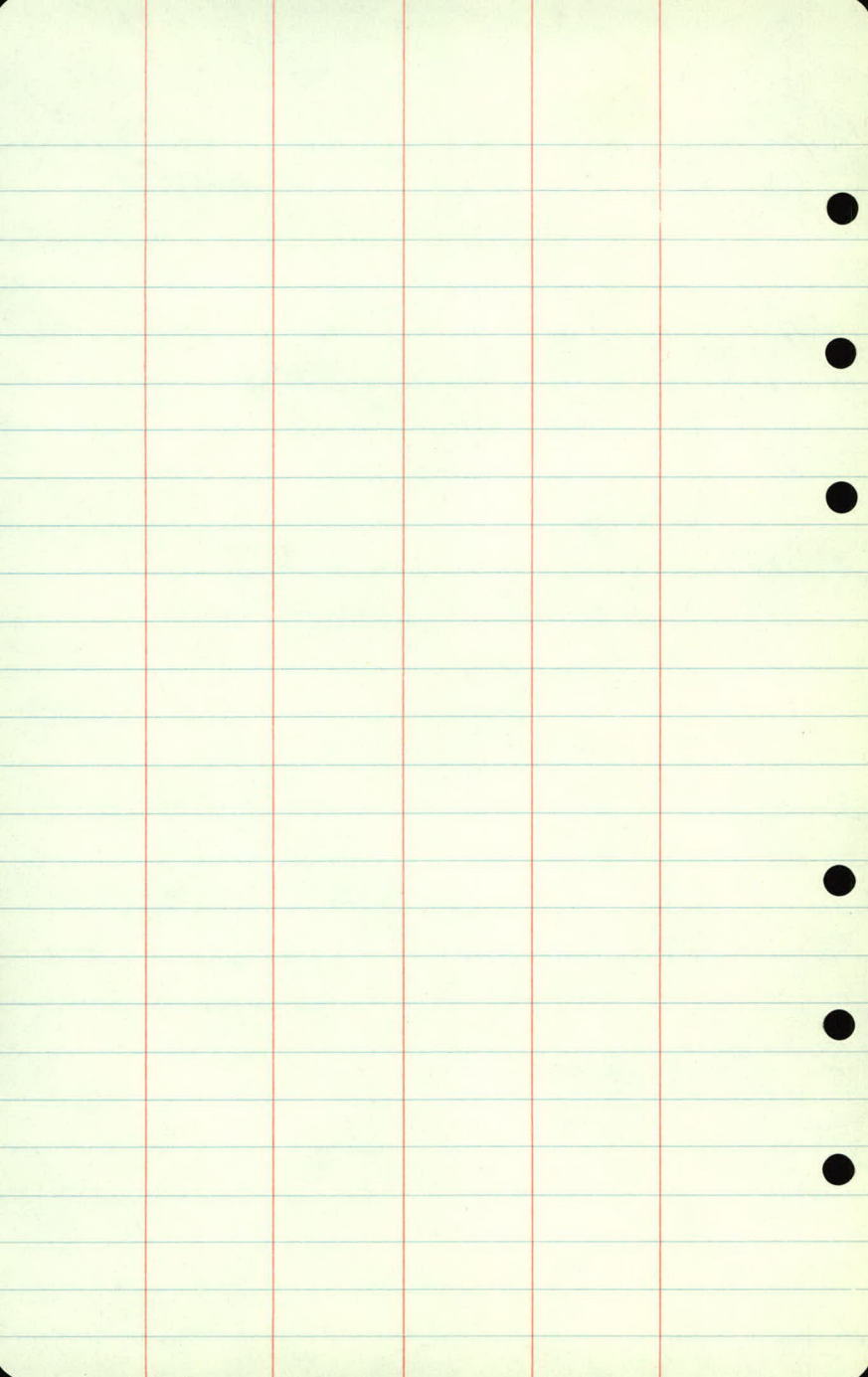
$$\frac{80}{-2.3}$$

$$\frac{78}{-2.1} / 30.2'$$

Spk. in P.P. N. w. Cor. Minn. & Penn. dols

$$\begin{array}{r} 94.79 \\ 89.86 \\ \hline 4.88 \\ 60 \\ \hline .28 \end{array}$$

$$\begin{array}{r} 2.7 \\ 2.1 \\ \hline 189 \\ 89.84 \\ 49 \end{array}$$



Storm Sewer
Ferndale Ave.

Sta.	+	x	-	Grade
B.M.	0.44	1010.12		1009.68

17	+50			98.0
----	-----	--	--	------

	+75			97.95
--	-----	--	--	-------

18				97.9
----	--	--	--	------

	+25			97.85
--	-----	--	--	-------

	+65			97.77
--	-----	--	--	-------

19				97.70
----	--	--	--	-------

	+30			97.64
--	-----	--	--	-------

	+68			97.56
--	-----	--	--	-------

20				97.5
----	--	--	--	------

	+12			97.48
--	-----	--	--	-------

	+49			97.45
--	-----	--	--	-------

Ger. Rod.

9' offset

Rt.

Spt. in RR 80 ft. 20+

12.12

$$\begin{array}{r} 9.12 \\ + 3.0 \\ \hline \end{array}$$

12.17

$$\begin{array}{r} 8.77 \\ + 3.4 \\ \hline \end{array}$$

12.22

$$\begin{array}{r} 8.62 \\ + 3.60 \\ \hline \end{array}$$

12.27

$$\begin{array}{r} 8.27 \\ + 4.0 \\ \hline \end{array}$$

12.35

$$\begin{array}{r} 7.44 \\ + 4.91 \\ \hline \end{array}$$

12.42

$$\begin{array}{r} 6.21 \\ + 6.21 \\ \hline \end{array}$$

12.48

$$\begin{array}{r} 5.46 \\ + 7.02 \\ \hline \end{array}$$

12.56

$$\begin{array}{r} 5.03 \\ + 7.53 \\ \hline \end{array}$$

12.62

$$\begin{array}{r} 5.51 \\ + 7.11 \\ \hline \end{array}$$

12.64

$$\begin{array}{r} 5.51 \\ + 7.13 \\ \hline \end{array}$$

12.67

$$\begin{array}{r} 6.73 \\ + 5.94 \\ \hline \end{array}$$

Sta	+	π	-	Grade
		1010.12		
20	+70			97.36
21	Pl.			97.3
T.P.	0.60	1000.92	7.80	1000.32
	+25			95.78
	+50			94.26
	+75			92.74
22				91.22
	+25			89.70
	+50			88.18
B.M.			1981	890.61

Gr. Rod

9' Offset

Rt.

12.76

$$\begin{array}{r} 7.81 \\ + 4.95 \\ \hline \end{array}$$

12.87

$$\begin{array}{r} 9.80 \\ + 3.07 \\ \hline \end{array}$$

5' Offset Rt.

5.14

$$\begin{array}{r} 2.24 \\ + 4.90 \\ \hline \end{array}$$

6.66

$$\begin{array}{r} 4.06 \\ + 2.60 \\ \hline \end{array}$$

8.18

$$\begin{array}{r} 4.38 \\ + 3.80 \\ \hline \end{array}$$

9.70

$$\begin{array}{r} 7.1 \\ + 2.6 \\ \hline \end{array}$$

11.22

$$\begin{array}{r} 9.92 \\ + 1.30 \\ \hline \end{array}$$

Ground = 10.0'

12.74

Top Blue Top Rt 5/4 22/50

