

Book- 37- Dr 6

OFFICE OF COUNTY ENGINEER
RAMSEY CO. MINN.

Drainage Survey

HUGO RD. and BUFFULO ST.

From _____ To _____

Road Acc't. No. _____

Date

Filed 6-11-35

File 6

H.P.

DRAINAGE SURVEY

Hugo Rd & Buffalo St

Bald Eagle

Levels Hugo to the North on RR.

Sta	+	π	-	Elev.
B.M.	0.24	100.24		
0+00	± Trk & Buffalo		4.0	96.2
	RR Box Culv Lt		7.0	93.2
	" " " Rt		5.9	94.3
1+00				95.7
2+00				95.6
3+00				95.5
4+00				95.2
5+00				95.0
①	2.45	97.58	5.11	95.13
6				94.8

$$\frac{4}{\text{Trk}}$$

Top Battery Well Buffalo & Hugo El=100.00

$$\frac{6.7}{15}$$

$$4.5$$

$$\frac{6.7}{15}$$

2W

$$\frac{7.3}{16}$$

$$4.6$$

$$\frac{6.6}{13}$$

$$\frac{7.4}{16}$$

$$4.7$$

$$\frac{7.0}{13}$$

$$\frac{7.7}{15}$$

$$5.0$$

$$\frac{7.3}{14}$$

.3W

$$\frac{8.8}{16}$$

$$5.2$$

$$\frac{7.8}{15}$$

.1W

$$\frac{5.8}{15}$$

$$2.8$$

$$\frac{4.6}{15}$$

97.58

7

8

9

10

11

12

13

①

179

9426

5.11

92.47

$$\begin{array}{r} .5W \\ 90.6 \\ \underline{7.0} \\ 16 \end{array}$$

$$\begin{array}{r} 94.4 \\ \underline{3.2} \end{array}$$

$$\begin{array}{r} 92.4 \\ \underline{5.2} \\ 17 \end{array}$$

$$\begin{array}{r} 4W \\ 90.5 \\ \underline{7.1} \\ 15 \end{array}$$

$$\begin{array}{r} 94.2 \\ \underline{3.4} \end{array}$$

$$\begin{array}{r} 91.9 \\ \underline{5.7} \\ 16 \end{array}$$

$$\begin{array}{r} .3W \\ 90.1 \\ \underline{7.5} \\ 15 \end{array}$$

$$\begin{array}{r} 93.9 \\ \underline{3.7} \end{array}$$

$$\begin{array}{r} 91.6 \\ \underline{6.0} \\ 16 \end{array}$$

$$\begin{array}{r} .2W \\ 89.5 \\ \underline{8.1} \\ 16 \end{array}$$

$$\begin{array}{r} 93.6 \\ \underline{4.0} \end{array}$$

$$\begin{array}{r} 90.9 \\ \underline{6.7} \\ 15 \end{array}$$

$$\begin{array}{r} 4W \\ 88.4 \\ \underline{9.2} \\ 17 \end{array}$$

$$\begin{array}{r} 93.3 \\ \underline{4.3} \end{array}$$

$$\begin{array}{r} 90.6 \\ \underline{7.0} \\ 16 \end{array}$$

$$\begin{array}{r} .7W \\ 9.5 \\ \underline{18} \end{array}$$

$$\begin{array}{r} 92.8 \\ \underline{48} \end{array}$$

$$\begin{array}{r} 7.4 \\ \underline{16} \end{array}$$

$$\begin{array}{r} .2W \\ 9.0 \\ \underline{20} \end{array}$$

$$\begin{array}{r} 92.2 \\ \underline{5.4} \end{array}$$

$$\begin{array}{r} 7.2 \\ \underline{18} \end{array}$$

14

15

Pot Hole Lt 50 Long

16

17

18

1.81

82.72

13.35

80.91

$$\begin{array}{r} \text{E.H.H.} \\ 6.6 \\ \hline 74 \end{array} \quad \begin{array}{r} 7.4 \\ \hline 60 \end{array} \quad \begin{array}{r} 10.5 \\ \hline 54 \end{array} \quad \begin{array}{r} 10.8 \\ \hline 25 \end{array} \quad \begin{array}{r} 4.3 \\ \hline 11 \end{array} \quad \begin{array}{r} 91.9 \\ \hline 24 \end{array}$$

$$\begin{array}{r} \text{H.W.} \\ 8.8 \\ \hline 75 \end{array} \quad \begin{array}{r} 9.6 \\ \hline 63 \end{array} \quad \begin{array}{r} 11.8 \\ \hline 56 \end{array} \quad \begin{array}{r} 7.8 \\ \hline 12.1 \end{array} \quad \begin{array}{r} 4.5 \\ \hline 10 \end{array} \quad \begin{array}{r} 91.2 \\ \hline 3.1 \end{array}$$

$$\begin{array}{r} \text{H.W.} \\ 11.8 \\ \hline 77 \end{array} \quad \begin{array}{r} 11.4 \\ \hline 64 \end{array} \quad \begin{array}{r} 12.7 \\ \hline 63 \end{array} \quad \begin{array}{r} 13.8 \\ \hline 40 \end{array} \quad \begin{array}{r} 12.4 \\ \hline 26 \end{array} \quad \begin{array}{r} 5.4 \\ \hline 10 \end{array} \quad \begin{array}{r} 90.8 \\ \hline 3.5 \end{array}$$

$$\begin{array}{r} 90.3 \\ \hline 4.0 \end{array}$$

Nail in T.P. Rt. Sta 16+85 Hugo Rd. line

18+49

7

82.72

R.R. Culv Mono

Hwy Mono.

0+00 = $\pm$ Mono. Culv & Hugo Creek to Lt

+17

1

2

2

3

4

+52

Bald Eagle Lake

W/S

10.5

72.2

5/7/35

$$\begin{array}{r} 72.77 \\ \hline 9.95 \end{array}$$

$$\begin{array}{r} 72.97 \\ \hline 9.75 \end{array}$$

$$\begin{array}{r} 79.27 \text{ R1} \\ \hline 3.45 \end{array}$$

$$\begin{array}{r} 72.7 \\ \hline 10.0 \end{array}$$

$$\begin{array}{r} 72.7 \\ \hline 10.0 \end{array}$$

$$\begin{array}{r} 72.6 \\ \hline 10.1 \end{array}$$

$$\begin{array}{r} 72.4 \\ \hline 10.3 \end{array}$$

$$\begin{array}{r} 72.37 \\ \hline 10.35 \end{array}$$

$$\begin{array}{r} 72.1 \\ \hline 10.6 \end{array}$$

Hugo South

0+00 = Intersection Buffalo

4.38 104.38

Box Culv	10.95	93.43
Pot Hole East	10.95	93.43
" " West	11.65	92.73
24" CM Culv No End	11.25	93.13
So End	11.0	93.40
W/S in Hole	11.5	92.9
W/S East Pot Hole	10.6	93.8

2

+78

Prop O.T. Lt

3

①

4.10 98.86 9.62 94.76

3

R

4

B.M. Top Battery Well E1.100.00

$$\frac{10.7}{22}$$

$$\frac{95.6}{8.8}$$

$$\frac{10.2}{20}$$

$$\frac{8.7}{118}$$

$$\frac{11.7}{102}$$

$$\frac{9.1}{82}$$

$$\frac{10.7}{40}$$

$$\frac{95.3}{9.1}$$

$$\frac{10.7}{60}$$

$$\frac{8.2}{19}$$

$$\frac{9.7}{16}$$

$$\frac{95.2}{9.2}$$

$$\frac{95.2}{17}$$

$$\frac{4.6}{16}$$

$$\frac{94.7}{4.2}$$

$$\frac{4.8}{17}$$

98.86

5

6

+50

Ctr. 100' Pot Hole

7

B.M.

$$\frac{6.0}{18}$$

$$\frac{93.8}{5.1}$$

$$\frac{5.1}{15}$$

0.6W

$$\frac{92.8}{}$$

$$\frac{12.4}{36}$$

$$\frac{11.4}{22}$$

$$\frac{6.8}{12}$$

$$\frac{6.1}{15}$$

$$\frac{6.2}{15}$$

$$\frac{8.2}{18}$$

Hwy Culv

10.25 East

R.R. Culv

8.83 West

" "

12.72 West End

13.90 East End

Pot Hole 12.7 = 86.2

10 Water

Pot Hole

$$\frac{92.6}{}$$

$$\frac{12.7}{42}$$

$$\frac{11.2}{23}$$

$$\frac{7.2}{14}$$

$$\frac{6.3}{15}$$

$$\frac{6.5}{15}$$

$$\frac{8.5}{17}$$

$$\frac{8.1}{82}$$

$$\frac{11.8}{70}$$

$$\frac{11.5}{50}$$

$$\frac{10.5}{24}$$

$$\frac{8.0}{20}$$

$$\frac{7.0}{12}$$

$$\frac{92.4}{}$$

$$\frac{6.5}{16}$$

$$\frac{6.6}{16}$$

$$\frac{8.1}{19}$$

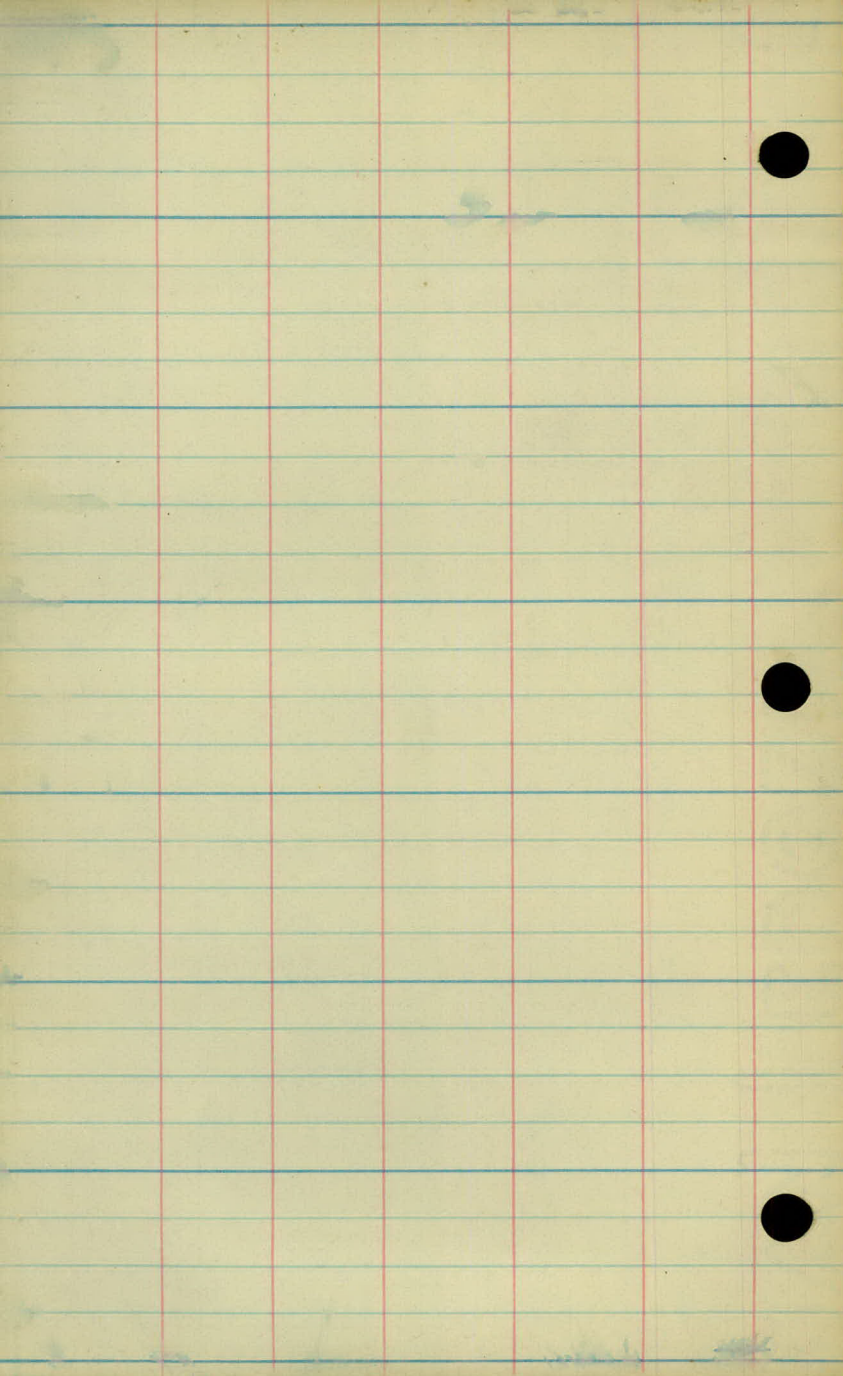
4

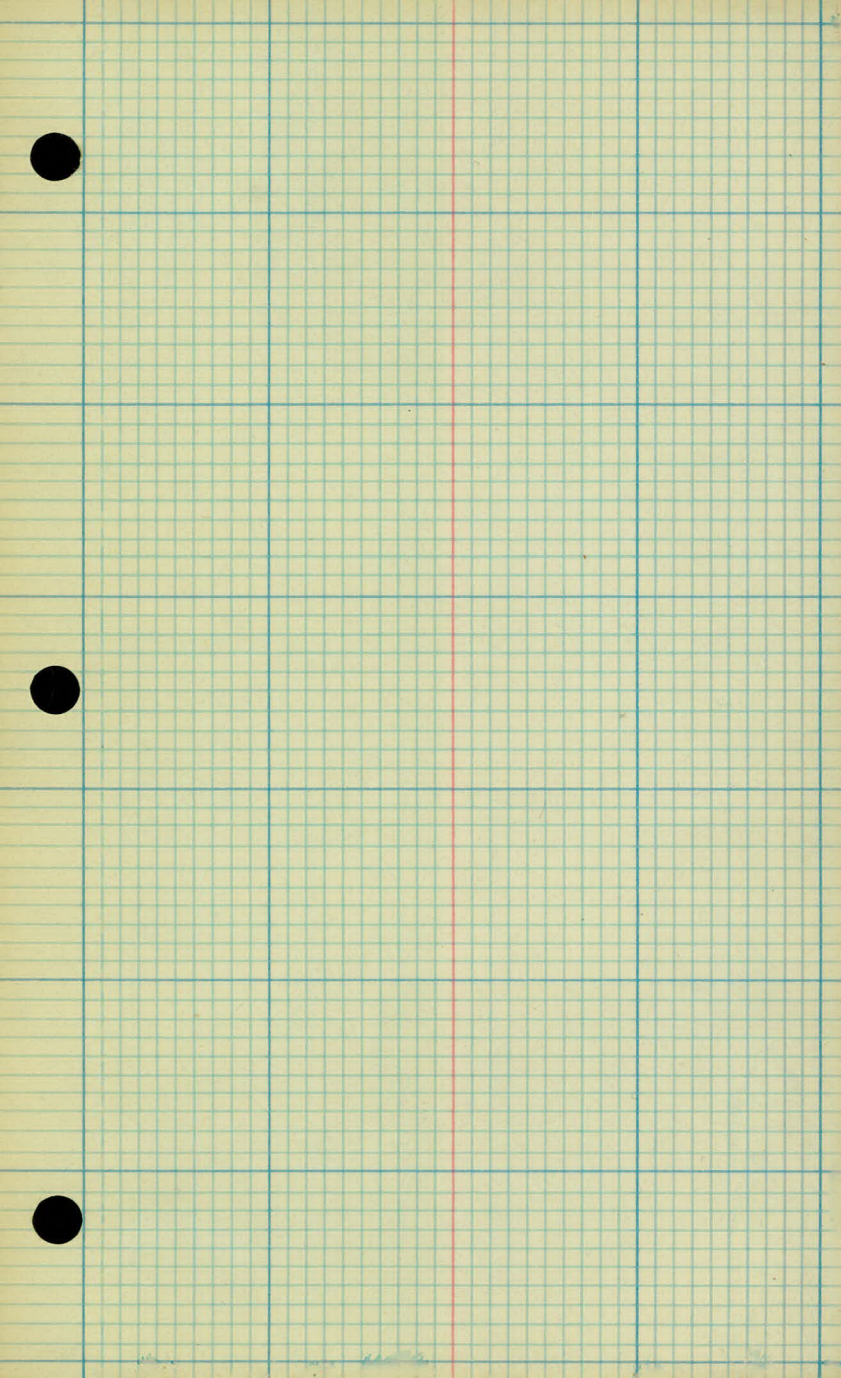
$$\frac{3.8}{110}$$

Deq C.M.

$$6.85 = 92.01$$

$$\text{End Tile 5483 } 9.00 = 89.86$$





Hugo + Buffalo - Bald Eagle

+49 RR Culk

18

Bald Eagle Lake
492

Trk

17+88-12x10 CM
20

15+82 End Holes

14+91 Ent 12x20 CM
19

11+57 Taylor Av 10x45 CM
21

9+16 Ent

8+46 Vrt. P. 9"x44"

8+00 Pot Hde
100'

4+00 Ent.

2+31 Ent

24"x42 CM.

0+00 Buffalo St R/I ¹⁶⁵ 12x18 Box Culk Trk US. Hy #61
101-137 120 211

2+96 Ent

6+34 15"x31 CM. #164
#

5+83 End 10" Tile

7+46 Ent 12"x63 CM
17

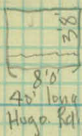
8+90 Ent

17 14+4 Beg 15" CM.
6+55-30"x52 Gw Trk 19
86 110'

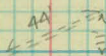
Bald Eagle



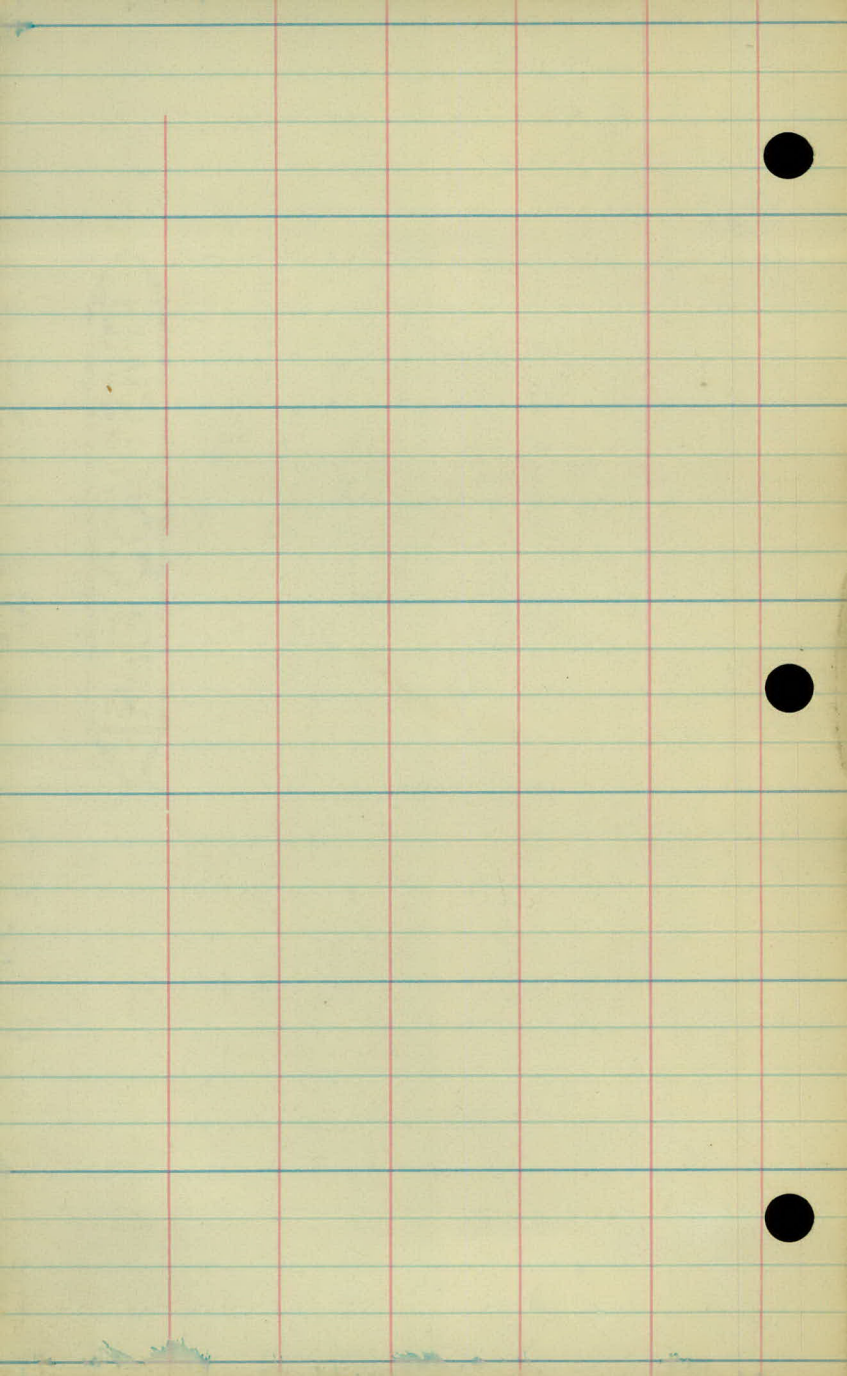
R.R.
37.5 long

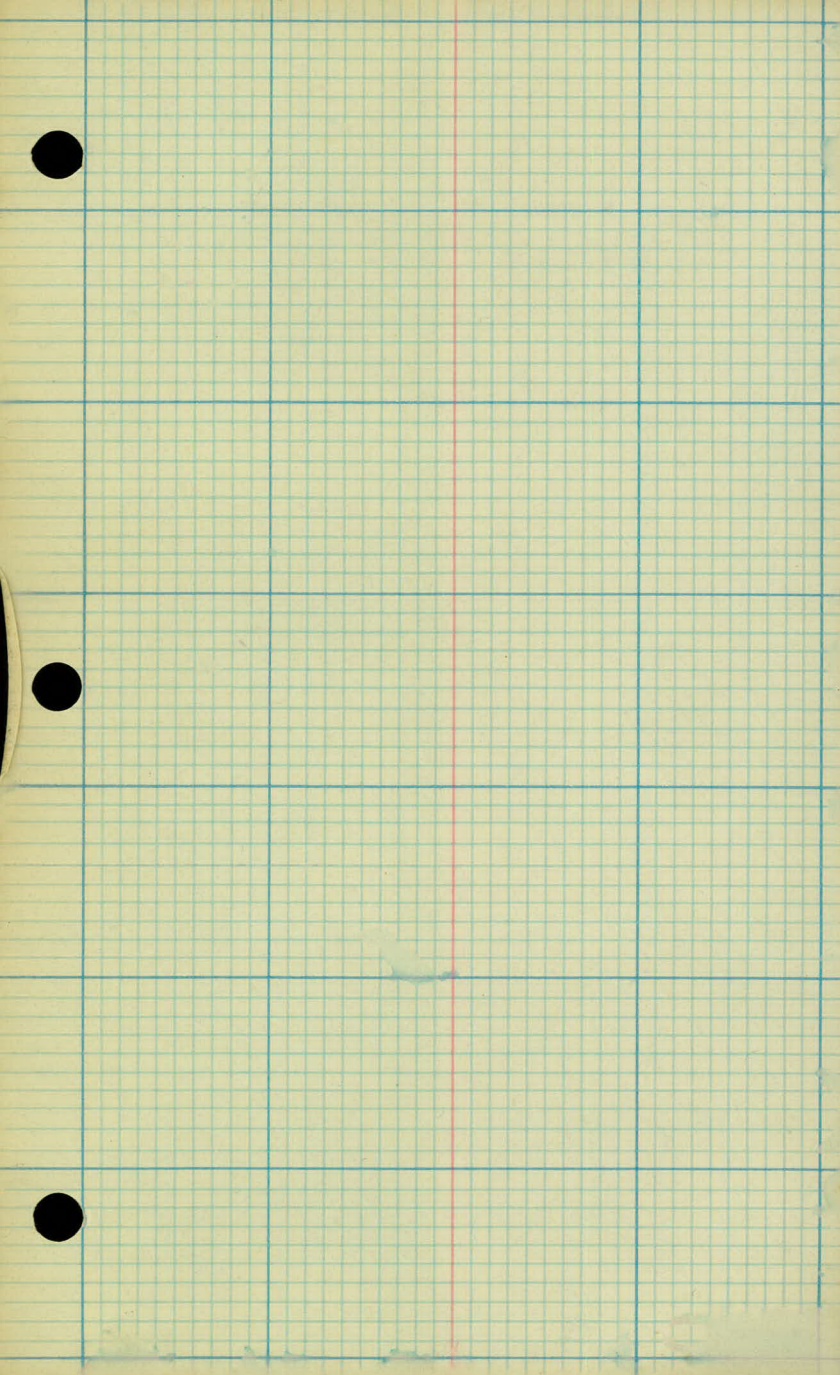


Hugo Road North



Classical
18" x 32" C.M.
180





Hugo Rd North

BM 6.32 106.32

0+00

{ Pot Hole Lt.
So Dt. Buffalo
24" X 42 C.M. S. End
" " " N "

① 3.06 100.93 8.45 97.87

9" 91.8 { 9.10 WE } Gully
91.2 { 9.7 EE }
90.6 { 10.3 R.R.Dt }
8+00 Pot Hole = Lt. 91.5 { 9.4

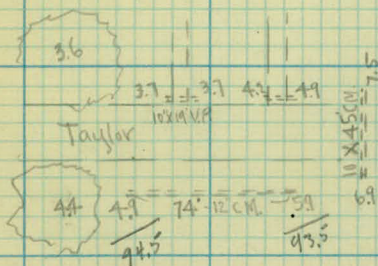
-Top Battery Well El. 100.00

$$\begin{array}{r} 97.2 \\ 8.8 \\ \hline 12.7 \end{array} \begin{array}{r} 93.6 \\ \hline \end{array}$$

$$\begin{array}{r} 94.0 \\ 12.3 \\ \hline \end{array}$$

$$12.95 = 99.37$$

$$13.2 = 93.1$$



$$H1 = 99.44$$

+ π -

B

99.44

11+37

$\pm$ Taylor

12

13

①

1.44 89.38 11.50 87.94

B.M.

8.47 89.38 8.47 80.91

14

17

+78

18

+44

$$\begin{array}{r} 4.1 \\ 36 \end{array} \quad \begin{array}{r} 6.0 \\ 12 \end{array} \quad \begin{array}{r} 93.4 \\ 6.0 \end{array} \quad \begin{array}{r} 6.5 \\ 11 \end{array} \quad \begin{array}{r} 7.0 \\ 21 \end{array} \quad \begin{array}{r} 3.0 \\ 27 \end{array}$$

$$\begin{array}{r} 8.0 \\ 12 \end{array} \quad \begin{array}{r} 7.2 \\ 16 \end{array} \quad \begin{array}{r} 92.3 \\ 7.1 \end{array} \quad \begin{array}{r} 7.7 \\ 13 \end{array} \quad \begin{array}{r} 9.0 \\ 20 \end{array} \quad \begin{array}{r} 7.4 \\ 40 \end{array}$$

$$\begin{array}{r} 10.0 \\ 19 \end{array} \quad \begin{array}{r} 9.6 \\ 12 \end{array} \quad \begin{array}{r} 90.1 \\ 9.3 \end{array} \quad \begin{array}{r} 9.8 \\ 13 \end{array} \quad \begin{array}{r} 12.0 \\ 20 \end{array} \quad \begin{array}{r} 11.0 \\ 22 \end{array} \quad \begin{array}{r} 48 \\ 37 \end{array}$$

hail mTP. 8+

$$\begin{array}{r} 2.1 \\ 17 \end{array} \quad \begin{array}{r} 1.5 \\ 15 \end{array} \quad \begin{array}{r} 88.0 \\ 1.4 \end{array} \quad \begin{array}{r} 1.7 \\ 11 \end{array} \quad \begin{array}{r} 3.6 \\ 17 \end{array} \quad \begin{array}{r} 5.5 \\ 33 \end{array} \quad \begin{array}{r} 5.5 \\ 50 \end{array}$$

$$\begin{array}{r} 8.8 \\ 22 \end{array} \quad \begin{array}{r} 8.2 \\ 15 \end{array} \quad \begin{array}{r} 81.4 \\ 8.0 \end{array} \quad \begin{array}{r} 8.5 \\ 14 \end{array} \quad \begin{array}{r} 9.5 \\ 17 \end{array} \quad \begin{array}{r} 11.0 \\ 34 \end{array} \quad \begin{array}{r} 11.5 \\ 43 \end{array}$$

$$\begin{array}{r} 80.0 \\ 9.4 \end{array} \quad \begin{array}{r} 9.8 \\ 14 \end{array} \quad \begin{array}{r} 13.8 \\ 22 \end{array} \quad \begin{array}{r} 13.8 \\ 39 \end{array}$$

$$\begin{array}{r} 12.2 \\ 20 \end{array} \quad \begin{array}{r} 10.2 \\ 4 \end{array} \quad \begin{array}{r} 79.6 \\ 7.8 \end{array} \quad \begin{array}{r} 10.1 \\ 14 \end{array} \quad \begin{array}{r} 12.6 \\ 19 \end{array} \quad \begin{array}{r} 10.6 \\ 25 \end{array} \quad \begin{array}{r} 11.2 \\ 33 \end{array} \quad \begin{array}{r} 12.8 \\ 39 \end{array}$$

$$\begin{array}{r} 115.0 \\ 34 \end{array} \quad \begin{array}{r} 12.8 \\ 28 \end{array} \quad \begin{array}{r} 10.7 \\ 16 \end{array} \quad \begin{array}{r} 79.3 \\ 10.1 \end{array} \quad \begin{array}{r} 10.7 \\ 15 \end{array} \quad \begin{array}{r} 11.6 \\ 24 \end{array} \quad \begin{array}{r} 13.6 \\ 33 \end{array} \quad \begin{array}{r} 13.2 \\ 50 \end{array}$$

18+49

4 Cr

BM

B.46

10.25
6.42
16.67

63

Bot Cr						Bot Cr
<u>16.67</u>	<u>10.5</u>	<u>10.5</u>	<u>79.3</u>	<u>10.4</u>	<u>11.0</u>	<u>16.3</u>
17	17	11	10.1	15	23	23

Nail in TP

H.S.