

Dr. 14 - Bk 27

OFFICE OF COUNTY ENGINEER
RAMSEY CO. MINN.

STORM SEWER Survey

SECOND ST. (W.B.C.)

From Bald Eagle Ave To Murray St.

Road Acc't. No.

Date Filed 12-23-38

File

City W.B. Lake

PLAN SURVEY

SECOND ST.

Bald Eagle Ave to Murray St.

Town of White Bear

Storm Sewer

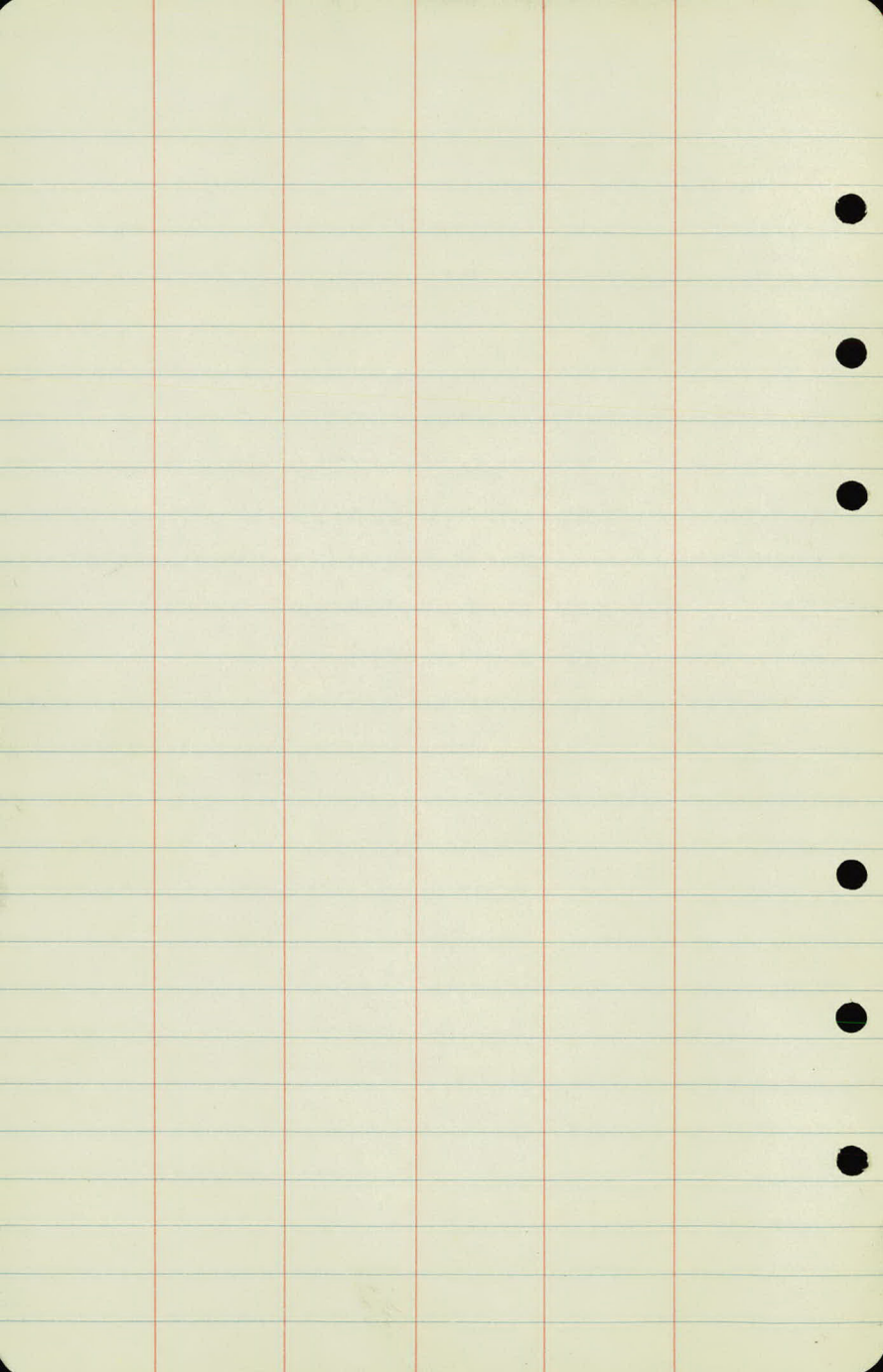
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Align. - 1-2

Tapes - 3-4

Xsections - 5-7

12/18/38



Alignment

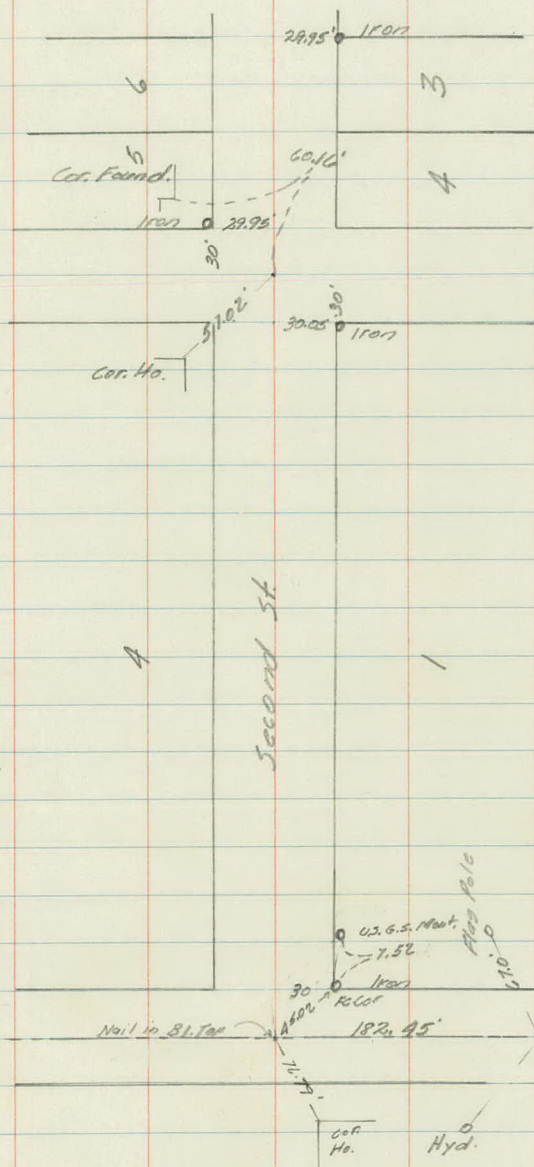
Sta

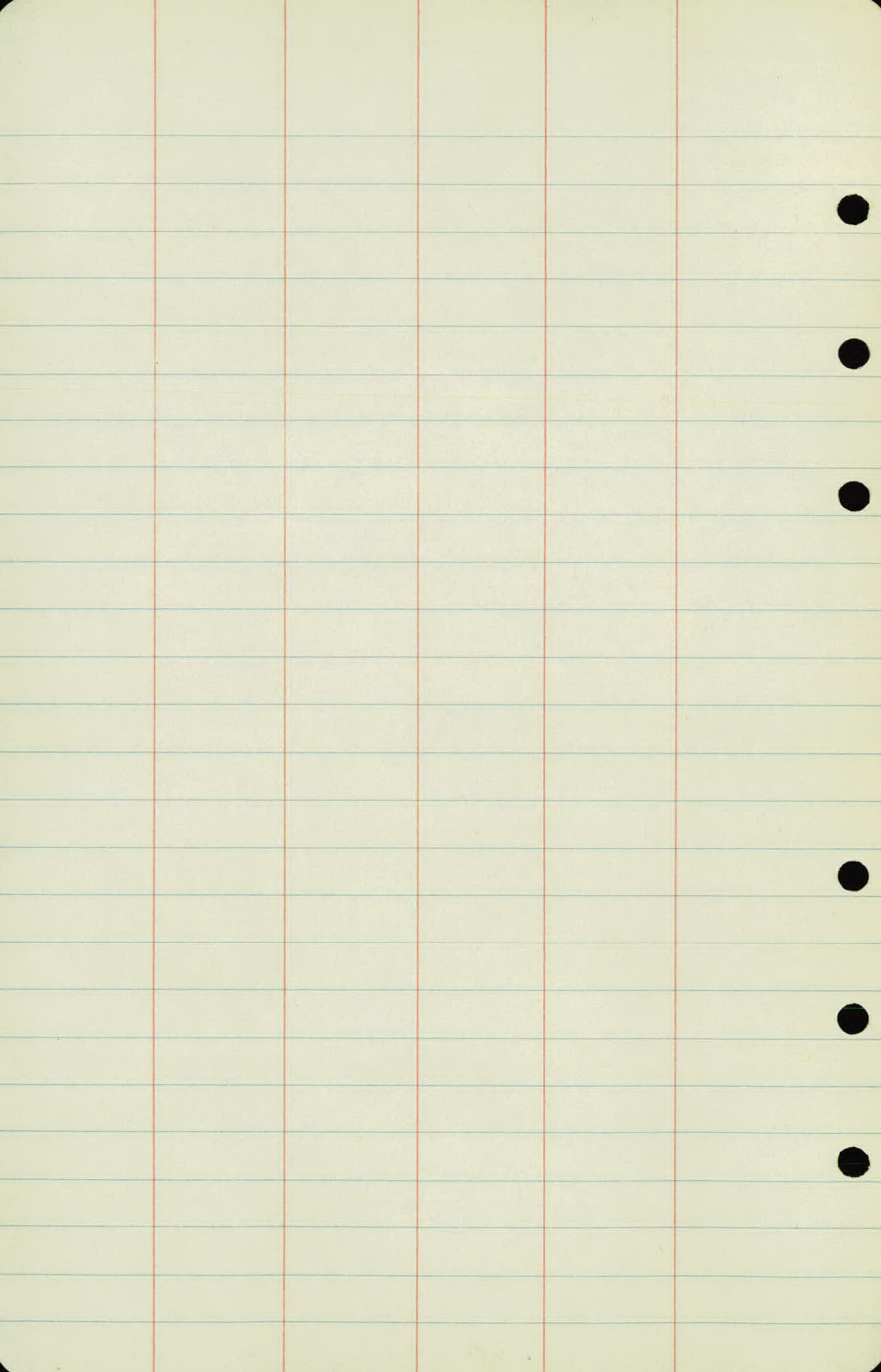
2 +47.35 P.O.T. = E. Murray Ave.

0 +00 = E. Bald Eagle Ave.

K. D.
L. B. H.
L. C.
M. J. G.

2





Topography

+70 - W. Edge sidewalk
 +66 - 18" E. Edge - 19'
 +64 - 4 yd - 31'
 +62 - 88" X 28' dump.
 +49 - 3 yd walk - 25'

+67 - RP - 22'

14' 14'

+61 - End 12" C.M. - 15'

+47 - Manhole - 23'

+27 - End 12" V.P. - 14'

+27 - 12 ft - 23'

+17.35 - Cor. Sidewalk - 30'
 Sidewalk - 7.5'

Cor. Sidewalk - 2.4'
 Side walk - 14'
 +03 - Co. Cor. - 33'

13'

12'

2

+88 - 30" Oak - 34'

+71 - S.W. Cor. Ho. - 38'

1

+57 - 15" B. Edge - 47.5 Cor. - 34'

+38 - Ent.

+17 - 20" B. Edge - 33'

+15 - Pump - 37'

1

16'

14'

+96 - RP - 23'

+73 - N.W. Cor. School - 30'

+97 - 30" stump - 32'

+93 - E. 3' walk - 30'

+68 - S.W. Cor. Ho. - 40'

+63 - 18" B. Edge - 31'

+50 - 18" B. Edge - 21'

+45 - 6" Cor. - 31'

+27 - W. Edge sidewalk - 16'

+35 - N. End 5" T.P. - 18'

+18 - N. End 15" C.M. - 17'

+15 - Manhole - 16'

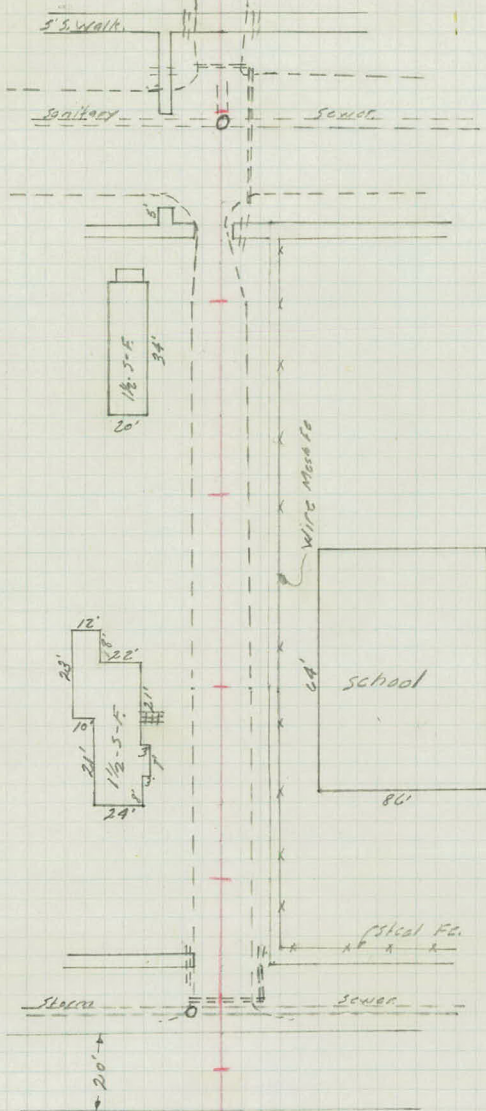
0+00

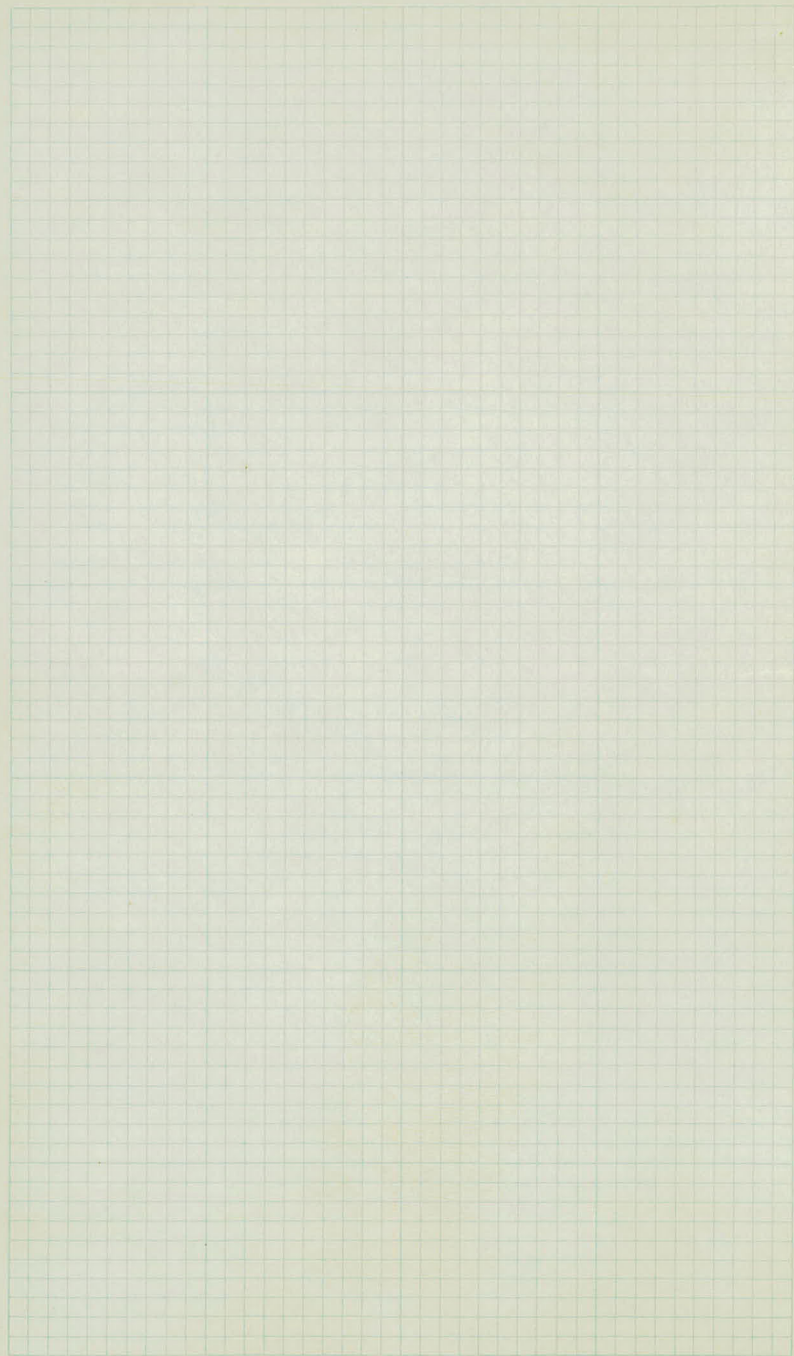
+27 - End 12" C.M. - 19'

+27 - Cor. sidewalk - 24'

+23 - RP - 22'

+18 - 12 in. Culv - 21'





X sections

Sta.	+	π	-	Elev.	
B.M.	5.11	938.40			933.29
0	+00			33.30	
	+10			33.14	
	+15				
	+18			33.3	
	+21			33.4	
	+23			33.4	
	+20			33.5	
1	+00			33.7	
	+50			34.2	
2				34.4	
	+18			34.6	

Lt.

Q.

Rt.

U.S.G.S. Monh. 7.5' East of N.W. Cor. St. Marys School Yard (Next to side walk)

510

519
30

526

530
50

27.03

1137
F.L. Monhels

5.26 33.14
Cover

50 50 68 683 53 51 51
50 22 17 17 15 50 50

448 425 32 50
50 17.5 16

4.9 50 607 50 50 50 6.5 6.5 50 4.91 5.12
50 21 19 17 17.3 19.3 20.3 20.3 24 50

39 4.9 52 4.9 5.3 62 62 4.72 4.72
42 18 17 16 18 18 24 30

34 4.9 4.8 4.7 5.1 5.9 5.9 4.98 4.36
41 18 16 15 18 19 24 30

38 36 46 4.2 45 55 55 4.14 4.13
50 18 14 16 18 19 24 30

28 46 43 40 38 54 54 3.85 3.80
39 17 13 15 17 20 24 30

380 381 38 390 57 57 3.93 3.75
40 14.7 18.2 18.2 18.3 13.3 30

Sta	+	x	-	Elev
		928.90		
2	+27			
	+47			34.92
	+59			34.8
	+61	Flowline Culv		
	+62			34.8
	+69	Top Hyd.		
	+70	W. Edge S.W.		34.6
B.M.			5.11	33.29

LH

K

RH

$$\begin{array}{r} 575 \\ \hline \end{array} 32.65^{\circ}$$

FL. CIV

$$\begin{array}{r} 41 \\ \hline \end{array} \quad \begin{array}{r} 348 \\ \hline \end{array} \quad \begin{array}{r} 28.85^{\circ} \\ \hline \end{array} \quad \begin{array}{r} 9.55 \\ \hline \end{array} \quad \begin{array}{r} 40 \\ \hline 50 \end{array}$$

COVER. (FL. MONITOR)

$$\begin{array}{r} 45 \\ \hline 50 \end{array} \quad \begin{array}{r} 47 \\ \hline 32 \end{array} \quad \begin{array}{r} 52 \\ \hline 14 \end{array} \quad \begin{array}{r} 40 \\ \hline 11 \end{array} \quad \begin{array}{r} 36 \\ \hline 14 \end{array} \quad \begin{array}{r} 41 \\ \hline 20 \end{array} \quad \begin{array}{r} 3.7 \\ \hline 50 \end{array}$$

$$\begin{array}{r} 5.30 \\ \hline \end{array} 33.10$$

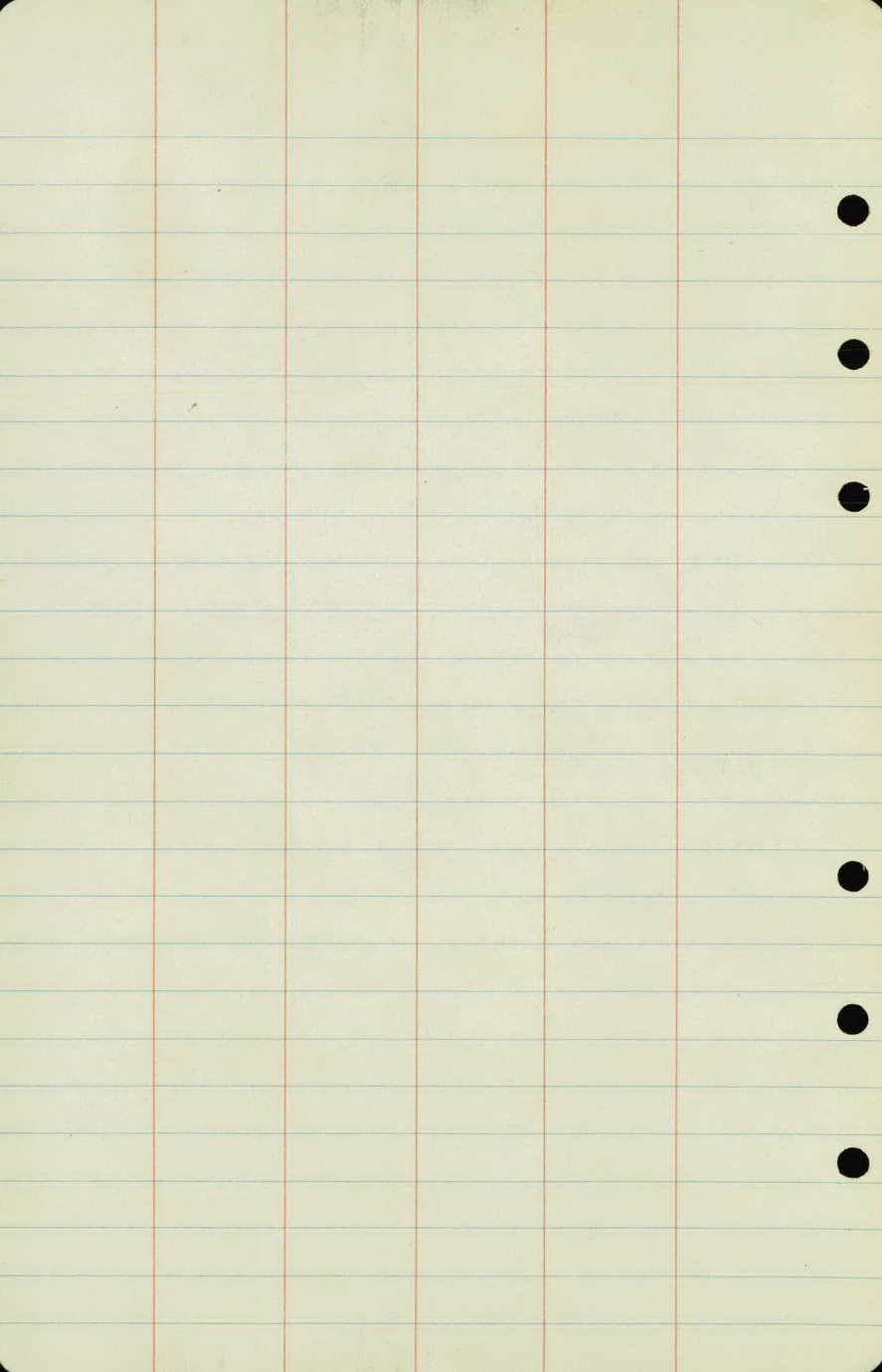
$$\begin{array}{r} 33.01 \\ \hline \end{array} \quad \begin{array}{r} 38.3 \\ \hline 25 \end{array} \quad \begin{array}{r} 3.7 \\ \hline 18 \end{array} \quad \begin{array}{r} 5.1 \\ \hline 15 \end{array} \quad \begin{array}{r} 5.38 \\ \hline 14 \end{array} \quad \begin{array}{r} 4.2 \\ \hline 12 \end{array} \quad \begin{array}{r} 36 \\ \hline 14 \end{array} \quad \begin{array}{r} 4.2 \\ \hline 14 \end{array} \quad \begin{array}{r} 5.1 \\ \hline 15 \end{array} \quad \begin{array}{r} 3.7 \\ \hline 16 \end{array} \quad \begin{array}{r} 3.6 \\ \hline 30 \end{array}$$

Curv. 33.30

$$\begin{array}{r} 1080 \\ \hline 37.60 \end{array}$$

$$\begin{array}{r} 374 \\ \hline 90 \end{array} \quad \begin{array}{r} 372 \\ \hline 158 \end{array} \quad \begin{array}{r} 47 \\ \hline 15 \end{array} \quad \begin{array}{r} 470 \\ \hline 15 \end{array} \quad \begin{array}{r} 3.75 \\ \hline 15 \end{array} \quad \begin{array}{r} 38 \\ \hline 15 \end{array} \quad \begin{array}{r} 866 \\ \hline 148 \end{array} \quad \begin{array}{r} 45 \\ \hline 148 \end{array} \quad \begin{array}{r} 45 \\ \hline 148 \end{array} \quad \begin{array}{r} 266 \\ \hline 157 \end{array} \quad \begin{array}{r} 3.58 \\ \hline 30 \end{array}$$

U.S. G.S.



Storm Sewer.

2nd St. at White Bear
from Bald Eagle Ave to Murray Ave

$\frac{1}{38}$

6' Offset Line ticks every 50'
grades every 25'

Sta.	+	K	-	Grade.
B.M.	6.28	939.57		922.29

0+15				27.89
------	--	--	--	-------

0+25				27.93
------	--	--	--	-------

0+50				28.0
------	--	--	--	------

0+75				28.1
------	--	--	--	------

1				28.2
---	--	--	--	------

+25				28.3
-----	--	--	--	------

+50				28.4
-----	--	--	--	------

+75				28.5
-----	--	--	--	------

2				28.6
---	--	--	--	------

+30				28.75
-----	--	--	--	-------

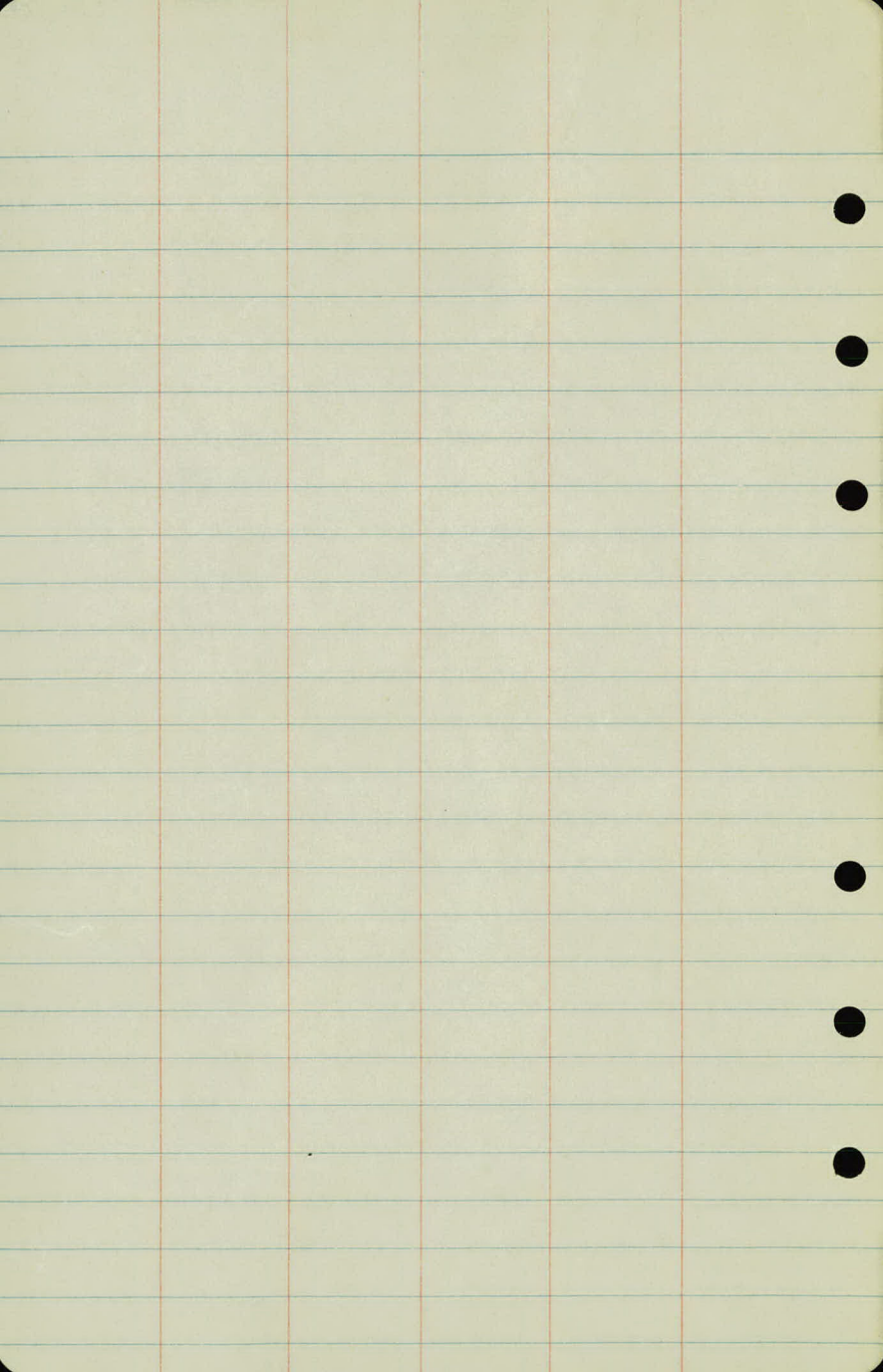
Grade Rod
Rod. Reading

offset
Line
Stake
Cut.

11.50

11.68

11.64	6.19	✓	C. 5.45
11.57	6.15	✓	C. 5.42
11.47	5.74	✓	C. 5.73
11.37	5.38	✓	C. 5.99
11.27	5.15	✓	C. 6.12
11.17	4.79	✓	C. 6.38
11.07	4.76	✓	C. 6.31
10.97	4.83	✓	C. 6.14
10.82	5.23	✓	C. 5.59



Curb Stakes
Second St.
W. Bear.

Sta.	+	-	Grade
B.M.	2.15	943.83	941.68
0	+75		
1			
	+25		
	+46 Rt		
	+59 Lt		
	+66 Rt		
	+74 Lt		
	+75		
2			
	+21 Lt		
	+25		
T.P.	5.24	944.21	938.97

C-8-32 57.5
38.0

5.67
38.3

Lt.

Bt

Gr. Rod. Gr. Rod. Grade & Grade Gr. Rod.

Top Hyd S.E. Cor Clark & 2nd St.

✓ +35 = 5.08 155 5.22 ✓

✓ 5.08 38.75 38.65 5.18 ✓

✓ 5.04 38.79 38.70 5.13 ✓

✓ 5.00 38.83 38.74 5.09 ✓

38.78 5.05 ✓

✓ 4.96 38.87

38.81 5.02 ✓

✓ 4.93 38.90

38.84 4.99 ✓

4.89 38.94 38.88 ~~4.95~~

✓ 4.86 38.97

38.97 38.92 4.91 ✓

Sta	+	π	-	Grade
		944.21		

2 +91 Lt.

+50

+62 Rt

+68 Lt

+82 Rt

+88 Lt

3

+25

+50

+67 Lt

+72 Rt

T.P.	453	943.70	504	939.17
------	-----	--------	-----	--------

Lt

L

Rt

Gr. Rod.

Gr. Rod

Grade

Grade

Gr. Rod.

✓

5.21

39.0

✓

5.20

39.01

38.97

5.24

✓

38.99

5.22

✓

✓

5.17

39.04

✓

39.02

5.19

✓

5.14

39.07

✓

5.12

39.09

39.06

5.15

✓

✓

5.08

39.13

39.10

✓

✓

5.05

39.16

39.15

5.06

✓

✓

5.02

39.19

39.18

5.03

✓

Sta	+	π	-	Grade
		943.70		
3	+87	Lt		
	+92	Rt		
B.M.				
4				39.24
	+116	Lt		39.16
	+125			39.11
	+136	Lt		39.05
	+150			38.98
	+165	Lt		38.90
	+175			38.85
	+186	Lt		38.80
5				38.72

Gr. Rod

✓

4.48

39.22

39.22

✓
4.48

✓
A.46

✓
4.54

✓
4.59

✓
4.65

✓
4.72

✓
4.80

✓
4.85

✓
4.90

✓
4.98

Sta.	+	π	-	Grade
		943.70		
5	+25			38.59
	+50			38.46
	+75			38.33
B.M.	0.52	942.60	1.62	942.08
6	+15.8			38.20
	461 Lt			38.11
	+75			38.02
	+78 Rt			37.98
	+99.5 Lt			37.85
7				37.85
	+195 Lt			37.72
	+25			37.68

942.08

Gr. Rod.

Grade

Gr. Rod.

511 ✓

524 ✓

$$\begin{array}{r}
 4.7 \\
 4.4 \\
 2.68 \\
 6.7 \\
 \hline
 .93
 \end{array}$$

Top Hyd. N.W. Cor. Banning + 22nd St.

~~Curb Rd E. H.~~

4.40

~~38.31~~

4.51

4.49 ✓

$$\begin{array}{r}
 4.91 \\
 4.83 \\
 4.77 \\
 4.70 \\
 4.64 \\
 4.58 \\
 4.52 \\
 4.46 \\
 4.40 \\
 4.34 \\
 4.28 \\
 4.22 \\
 4.16 \\
 4.10 \\
 4.04 \\
 3.98 \\
 3.92 \\
 3.86 \\
 3.80 \\
 3.74 \\
 3.68 \\
 3.62 \\
 3.56 \\
 3.50 \\
 3.44 \\
 3.38 \\
 3.32 \\
 3.26 \\
 3.20 \\
 3.14 \\
 3.08 \\
 3.02 \\
 2.96 \\
 2.90 \\
 2.84 \\
 2.78 \\
 2.72 \\
 2.66 \\
 2.60 \\
 2.54 \\
 2.48 \\
 2.42 \\
 2.36 \\
 2.30 \\
 2.24 \\
 2.18 \\
 2.12 \\
 2.06 \\
 2.00 \\
 1.94 \\
 1.88 \\
 1.82 \\
 1.76 \\
 1.70 \\
 1.64 \\
 1.58 \\
 1.52 \\
 1.46 \\
 1.40 \\
 1.34 \\
 1.28 \\
 1.22 \\
 1.16 \\
 1.10 \\
 1.04 \\
 0.98 \\
 0.92 \\
 0.86 \\
 0.80 \\
 0.74 \\
 0.68 \\
 0.62 \\
 0.56 \\
 0.50 \\
 0.44 \\
 0.38 \\
 0.32 \\
 0.26 \\
 0.20 \\
 0.14 \\
 0.08 \\
 0.02
 \end{array}$$
~~38.09~~

4.73

4.58

4.62 ✓

37.81

4.75 ✓

4.75

4.88 ✓

4.92 ✓

Sta + π - Grade

942.60

7 +48 Rt 37.52

+52.5 Lt 37.5

+68 Rt 37.39

+72.5 Lt 37.37

+75 37.35

8 37.18

T.P. 37.01

+25 36.84

+75 36.68

9 36.51

+25 36.35

502
518
509

407
16

Gr. Rod.

5.08

5.10

5.21

5.23

5.25 ✓

5.42 ✓

5.59 ✓

5.76 ✓

5.92 ✓

6.09 ✓

6.25 ✓

Sta.	+	-	Grade	
		942.60		
T.P.	1.64	940.53	3.71	938.89
9	+44.97 Lt			36.21
	+50 Rt			36.18 4.15
	+55 Rt			36.14
10	+100			35.66
10	+104.97 Lt			35.60
	+119 Rt			35.28
	+125			35.13
	+150			34.57
	+160 Rt			34.34
	+164 Lt			34.25
	+184 Lt Lt			33.79
11				33.43
	+116 Lt			33.07
	+125			32.87

Gr. Red.

4.32 Rad Level N.W. Cor.

Top Hyd N.E. Cor. 2124 Cook St.

4.39 3.50 on Apron at Cor.

4.87 4.62 at Prop Line

4.93 4.69 Beg. Rad N.E. Cor.

5.25 ✓

5.40 ✓

5.96 ✓

6.19 ✓

6.28 ✓

6.74 ✓

7.10 ✓

7.46 ✓

7.66 ✓

Sta	+	π	-	Grade
		940.53		

11	+34.3			32.42
----	-------	--	--	-------

+36				32.37
-----	--	--	--	-------

T.P.	4.19	936.62	8.10	932.43
------	------	--------	------	--------

+50				32.42
-----	--	--	--	-------

+59 Lf				32.37
--------	--	--	--	-------

+75				32.37
-----	--	--	--	-------

12

B.M.	9.58	939.01	7.19	929.43
------	------	--------	------	--------

B.M.	4.08	942.98	0.11	938.90
------	------	--------	------	--------

B.M.			0.90	942.08 (942.08)
------	--	--	------	-----------------

Gr. Rod.	Et.	Gr. Rod.	Grade	Grade	Et.
Gr. Rod.	Gr. Rod.	Grade	Grade	Grade	Gr. Rod.

6.16

4.20

✓ 4.33 32.29

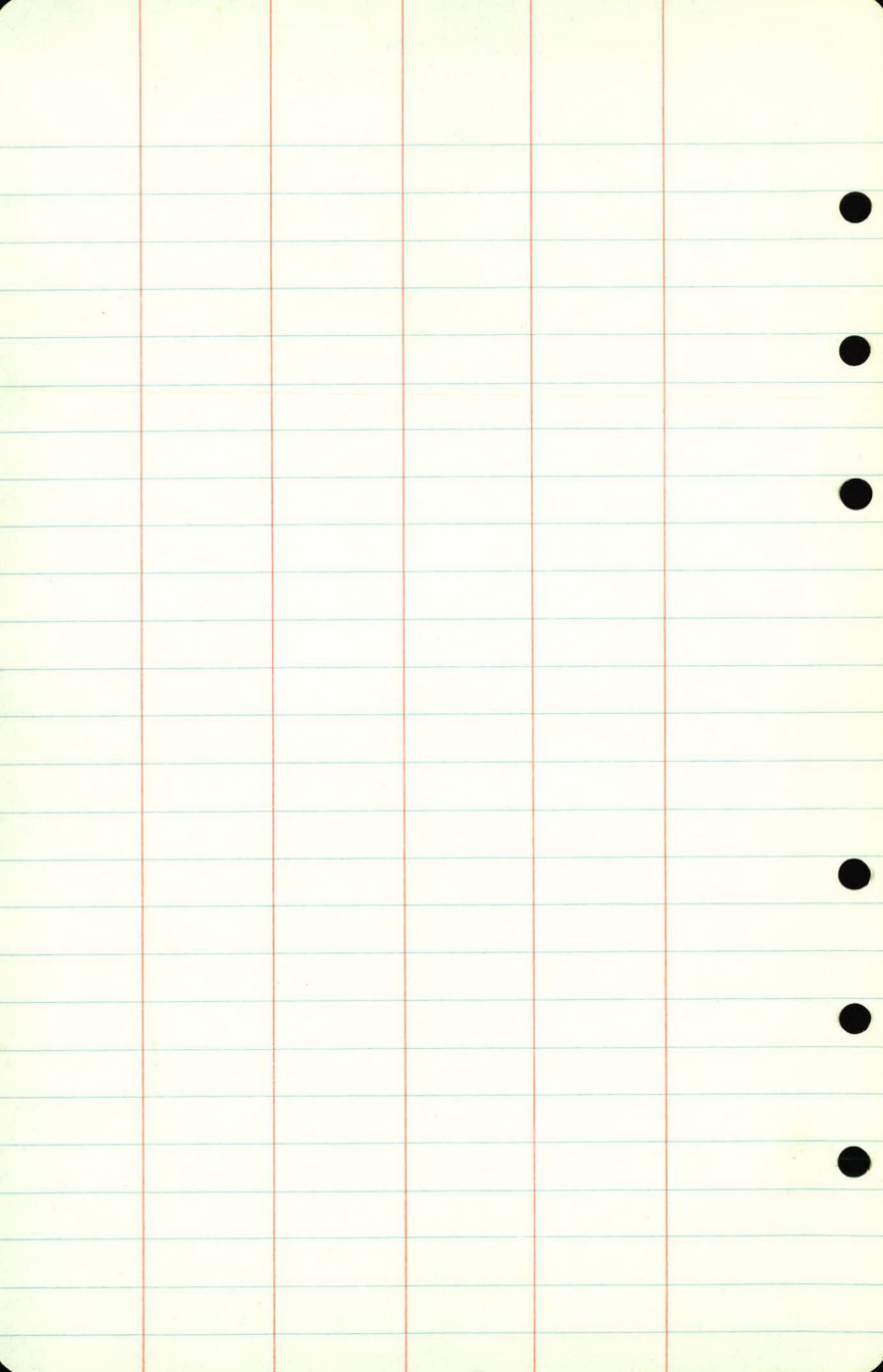
✓ 4.38 32.24 32.20 4.42 ✓

4.44 32.18 31.97 4.65

Top Mont. M.G. 931.42

Top Hyd N.E. Cor Cook & Second St.

Top Hyd N.W. Banning & 2nd St



N. E. Cor. 23rd & Lake Ave.

Sts	+	π	-	Elev
B.M.	7.77	937.20		929.43

Top Sanitary sewer			6.93	930.27
Bottom Sanitary sewer			8.38	928.82
Flow Line C.B.			9.18	928.02
Bottom curb			6.45	930.75

Top M.C. 2nd & Lake Ave.

