

Book #3, Dr. 14-A

OFFICE OF COUNTY ENGINEER
RAMSEY CO. MINN.

Drainage Survey

CHARLES STREET

North St. Paul

From..... To.....

Road Acc't. No.

Date Filed...1932.....

File...14.....

8th Ave

0+00

4' Conc S.W.

N.E. 4'

4' Conc S.W.

4'

0+44

7th St

1+16.6

E Charles

Alley

N.E.

Side drain
2+45

4+00

X Drain

	+	H.I.	-	Elev.
B.M.	1.90	101.90		100.0 Assumed

0+00

+50

+75

1

+166 Δ point on Charles St.

+50

2

+45 = N. end of Side drain at Alley
 $\uparrow$
 12" X 135' C.M.

+585 S. end

3

+50

4 = E. end of X. Drain = 12" X 41' C.M.

+41 = W. end
 $\uparrow$

Edge S.W. E Ditch E St.

Top Hyd. N.E. cor Charles St and 8th Ave N.E.

$$\frac{0.10}{101.80} -$$

$$\frac{1.10}{100.8} -$$

$$\frac{0.4}{101.5} -$$

$$\frac{2.6}{99.3} -$$

$$\frac{3.3}{98.6} -$$

$$\frac{2.7}{99.2} -$$

$$\frac{3.9}{98.0} -$$

$$\frac{4.3}{97.6} -$$

$$\frac{3.9}{98.0} -$$

$$\frac{5.0}{96.9} -$$

$$\frac{4.7}{97.2} -$$

$$\frac{4.4}{97.5} -$$

$$\frac{5.1}{96.8} -$$

$$\frac{5.4}{96.5} -$$

$$\frac{5.4}{96.5} -$$

$$\frac{5.4}{96.5} -$$

$$\frac{6.0}{95.9} -$$

$$\frac{5.8}{96.1} -$$

$$\frac{5.7}{96.2} -$$

$$\frac{7.1}{94.8} -$$

$$\frac{6.3}{95.6} -$$

$$\frac{7.72}{94.18} -$$

$$\frac{7.77}{94.13} -$$

$$\frac{7.5}{94.4} -$$

$$\frac{8.2}{93.7} -$$

$$\frac{9.25}{92.65} -$$

$$\frac{9.98}{91.92} -$$

B.M. 5.34 283.81[✓] 278.47

0 + 00 E of 15th Ave and 2nd St. 77.6

1 78.4

2 79.2

3 79.4

4 78.9

+50 78.4

5 76.5

+50 77.0

6 78.7

B.M. 0.47 280.54[✓] 3.74 280.07[✓]

+50 75.6

7 72.5

+50 70.9

8 70.6

+50 70.8

9 72.8

Left. $\pm$ RIGHT

Top Hyd N.E. cor. 15th Ave and 2nd St. N.E.

6.2

5.4

4.6

4.4

$\frac{3.4}{30}$ $\frac{3.6}{23}$ $\frac{5.2}{16}$ $\frac{5.0}{11}$ 4.9 $\frac{5.0}{14}$ $\frac{5.1}{30}$

$\frac{4.0}{30}$ $\frac{4.3}{23}$ $\frac{4.6}{19}$ $\frac{4.4}{12}$ $\frac{5.6}{9}$ 5.4 $\frac{5.3}{15}$ $\frac{5.1}{30}$

$\frac{7.8}{30}$ $\frac{7.4}{24}$ $\frac{8.3}{17}$ $\frac{7.6}{11}$ 7.3 $\frac{7.3}{19}$ $\frac{10.3}{30}$

$\frac{6.3}{30}$ $\frac{6.7}{23}$ $\frac{7.6}{18}$ $\frac{6.8}{11}$ 6.8 $\frac{8.0}{15}$ $\frac{10.7}{20}$ $\frac{12.7}{30}$

$\frac{3.2}{30}$ $\frac{2.9}{22}$ $\frac{3.5}{11}$ $\frac{5.0}{8}$ 5.1 $\frac{5.3}{11}$ $\frac{4.7}{15}$ $\frac{5.9}{30}$

Top Hyd. 18' Pt. 6 + 18

$\frac{4.6}{30}$ $\frac{4.3}{20}$ $\frac{4.6}{14}$ $\frac{5.2}{7}$ 4.9 $\frac{5.0}{13}$ $\frac{5.8}{30}$

$\frac{8.5}{30}$ $\frac{8.2}{21}$ $\frac{9.1}{15}$ $\frac{8.2}{12}$ 8.0 $\frac{8.0}{14}$ $\frac{9.0}{17}$ $\frac{9.4}{30}$

$\frac{11.4}{30}$ $\frac{11.2}{17}$ $\frac{10.4}{11}$ 9.6 $\frac{9.8}{15}$ $\frac{10.5}{17}$ $\frac{10.5}{21}$ $\frac{9.7}{24}$ $\frac{10.2}{30}$

$\frac{12.2}{30}$ $\frac{12.2}{25}$ $\frac{11.5}{18}$ $\frac{10.7}{12}$ 9.9 $\frac{10.0}{12}$ $\frac{10.5}{18}$ $\frac{10.2}{30}$

$\frac{12.1}{30}$ $\frac{11.3}{16}$ $\frac{10.4}{11}$ 9.7 $\frac{9.6}{11}$ $\frac{9.6}{18}$ $\frac{9.1}{22}$ $\frac{9.2}{30}$

$\frac{7.5}{30}$ $\frac{7.5}{14}$ $\frac{8.4}{9}$ 7.7 $\frac{7.8}{10}$ $\frac{6.9}{22}$ $\frac{6.3}{30}$

✓
280.54

+50
BM.

✓ 73.5
486 275.68

Lt.

L

Rt.

 $\frac{5.1}{30}$ $\frac{5.2}{20}$ $\frac{6.8}{15}$

7.0

 $\frac{7.2}{16}$ $\frac{8.3}{30}$

Top Hyd 22' Rt. 9+45

