INTERNAL UTILITIES

SEE SHEET 2

SEE RIGHT

SEE SHEET 4

SEE LEFT

SEE SHEET 4

12"x 8" TEE
8" VALVE
HYDRANT, 6" VALVE, 88 L.F. 6" DIP AND 8"x 6" TEE
8" VALVE
MH 17
INV. S 919.57
INV. W 914.23
INV. N 914.00
INV. E 913.90
MH 18
INV. W 920.33
INV. N 920.00
HYDRANT, 6" VALVE, 4 L.F. 6" DIP AND 8"x 6" TEE
8" 11 1/4° BEND
MH 19
INV. N 915.58
INV. S 915.48
50' DRAINAGE AND UTILITY EASEMENT
8"x 8" TEE
HYDRANT, 6" VALVE, 4 L.F. 6" DIP AND 8"x 6" TEE
8" VALVE
8" VALVE
8" 11 1/4° BEND
8" 11 1/4° BEND
2" WATER
2" WATER (TYP.)
4" SAN.
4" SANITARY (TYP.)
4" SAN.
DEFLECT WATERMAIN TO MAINTAIN 18" MINIMUM VERTICAL SEPARATION BELOW SANITARY SEWER
MH 20
INV. N 916.24
INV. S 916.14
FF= 928.87
FF= 928.87
FF= 928.87
FF= 928.87
FF= 929.87
S00°36'50"E 95.28
50' DRAINAGE AND UTILITY EASEMENT
CONNECT TO EXISTING 12" WATERMAIN WITH 12" VALVE
EXISTING 15" SANITARY SEWER
EXISTING 12" WATERMAIN
EX. 6" WATERMAIN
MH 17
INV. S 919.57
INV. W 914.23
INV. N 914.00
INV. E 913.90
MH 16
INV. W 912.85
INV. E 912.75
154 L.F.-2" WATERMAIN SERVICE (TYP.)
134'-4" SAN. SERVICE (TYP.)
HYDRANT, 6" VALVE, 51 L.F. 6" DIP AND 12"x 6" TEE
FUTURE
EX. SAN. MH
INV. N 917.28 OUTSIDE DROP
INV. W 911.72
INV. S 911.10

TOP 928.24 | TOP 927.67 | TOP 927.67 | TOP 927.54

928.69 | 928.50 | 928.31 | 927.95 | 927.82 | 927.68 | 927.67 | 927.67 | 927.67 | 927.67 | 927.67 | 927.67 | 927.67 | 927.64 | 927.58 | 927.76 | 926.00

930 | 925 | 920 | 915 | 910 | 905

FINISHED ℄ GRADE
7.5'MIN. COVER
118'-8" SANITARY SEWER @ 0.40%
INV. 916.71
139'-8" SANITARY SEWER @ 0.40%
INV. N 916.24
INV. S 916.14
371' - 8" SANITARY SEWER @ 0.40%
INV. N 915.58
INV. S 915.48
800 L.F. - 8" WATERMAIN
107'-8" SANITARY SEWER @ 0.40%
INV. W 920.33
INV. N 920.00
INV. S 919.57
(8" OUTSIDE DROP)
INV. W 914.23
INV. N 914.00
INV. E 913.90
PROPOSED STORM SEWER

MH 20 | +82 | MH 19 | +43 | MH 17 | 2 | +72 | 1 | MH 18 | +65 | 0

8 | 7 | 6 | 5 | 4 | 3

TOP 927.67 | TOP 929.95 | TOP 934.80

927.42 | 926.74 | 926.05 | 926.68 | 928.45 | 929.96 | 930.48 | 931.68 | 932.80 | 934.04 | 934.99

940 | 935 | 930 | 925 | 920 | 915

FINISHED ℄ GRADE
DEFLECT WATERMAIN TO MAINTAIN 18" MINIMUM VERTICAL SEPARATION BELOW PROPOSED STORM SEWER
PROPOSED STORM SEWER
18"
7.5'MIN. COVER
391 L.F.-12" WATERMAIN
INV. S 919.57
INV. W 914.23
INV. N 914.00
INV. E 913.90
261'-8" SANITARY SEWER @ 0.40%
INV. W 912.85
INV. E 912.75
195'-8" SANITARY SEWER @ 0.40%
INV. N 917.28 OUTSIDE DROP
INV. W 911.72
INV. S 911.10

MH 17 | +18 | 5 | 4 | 3 | MH 16 | +57 | 2 | 1 | +62 CONNECT TO EX. | +00 EX. SAN. MH | 0

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE _____ REG.NO. _____

MSA CONSULTING ENGINEERS
1326 ENERGY PARK DRIVE
ST. PAUL, MINNESOTA 55108
(612) 644-4389
9800 SHELARD PARKWAY
MINNEAPOLIS, MINNESOTA 55441
(612) 546-0432

REVISIONS	DATE	DESCRIPTION

DESIGNED ____
CHECKED ____
DRAWN CLS
GRAPHIC SCALE
0 HORIZ. 50
0 VERT. 5

CITY OF ELK RIVER

SANITARY SEWER AND WATERMAIN
INTERNAL UTILITIES

STA.
0+00 TO 5+18
0+00 TO 8+00

DATE MAY 1994 | SHEET 1 OF 6 SHEETS | PROJECT NO. 230-218

ER218-3

SAFCO PRODUCTS • NEW HOPE, MINNESOTA
REORDER BY PART NUMBER 6502