

## MEMORANDUM

TO: Honorable Mayor and City Council  
Neil Jensen, City Administrator

FROM: Bill Angerman, P.E. and Daren Sikkink, P.E.  
Consulting City Engineers

DATE: April 4, 2023

RE: 3<sup>rd</sup> Street Lift Station and Force main Project

On December 6, 2022, the City Council approved a resolution to proceed with plans and specifications for the 2023 street & utility improvement project. The project scope included the replacement of the sanitary sewer, watermain, and pavement in the Cannon Street and 3<sup>rd</sup> Street area. A sanitary sewer lift station and force main beneath the Cannon River to replace the sewer bridge were also part of the project.

Land acquisition from adjacent property owners was required to complete the necessary improvements. To date, one of the adjacent property owners has not agreed to sell their property or grant an easement to complete the project.

City staff is recommending continuing with a portion of the project that does not require the City to acquire land from the objecting property owner. Staff is recommending constructing the lift station and force main during the 2023 construction season. The remaining utility and street construction will be delayed until the 2024 construction season. This will allow City staff further time to negotiate with the objecting property owner to obtain the required property. Another reason to construct the lift station this year is some components are subject to long delays as part of continued supply chain issues. Constructing the lift station in 2023 will allow for any delays that may occur before it is put into service in 2024.

The City will eventually need to approve the assessed portion of the street & utility plans by October, 2023 and award a contract by December 5, 2023, otherwise, the City will need to restart the assessment process. The lift station and force main are not assessed to the adjacent property owners, therefore the City can proceed with the project without affecting the assessment process.

We are requesting the City Council act on the resolution approving plans and specifications and ordering advertising for bids for the 3<sup>rd</sup> Street Lift Station and Force main project.

EXTRACT OF MINUTES OF MEETING OF THE  
CITY COUNCIL OF THE CITY OF  
CANNON FALLS, MINNESOTA

HELD: April 4, 2023

Pursuant to due call and notice thereof, a regular meeting of the City Council of the City of Cannon Falls Minnesota, was duly called and held at the City Hall in said City on the 4<sup>th</sup> day of April, 2023, at 6:30 o'clock P.M.

The following members were present:

and the following were absent:

Member \_\_\_\_\_ introduced the following resolution and moved its adoption:

**RESOLUTION NUMBER 2678**

**RESOLUTION APPROVING PLANS AND SPECIFICATIONS AND  
ORDERING ADVERTISEMENT FOR BIDS**

WHEREAS, the consulting engineers for the City have prepared final plans and specifications for the construction of the 3<sup>rd</sup> Street Lift Station and Force Main in the City, and such plans and specifications have been presented to this Council for approval;

NOW THEREFORE, BE IT RESOLVED by the City Council of the City of Cannon Falls, Minnesota:

1. Such plans and specifications are hereby approved and ordered placed on file in the office of the City Administrator.
2. The City Administrator shall prepare and cause to be inserted in the official city newspaper an advertisement for bids upon the making of such improvements under such approved plans and specifications.

The advertisement shall be published in said publications at least once not less than ten days before the date set for opening bids, shall specify the work to be done, shall state that bids will be publicly opened on April 27, 2023 at 2:00 o'clock P.M. online and that no bids will be considered unless accompanied by an electronic copy of a cashier's check, bid bond or certified check payable to the Administrator for 5% of the amount of such bid.

The motion for the adoption of the foregoing resolution was seconded by member \_\_\_\_\_ and upon vote being taken thereon, the following voted in favor thereof:

and the following voted against the same:

Whereupon said resolution was declared duly passed and adopted by the City Council of the City of Cannon Falls, Minnesota on this 4<sup>th</sup> day of April, 2023.

---

Matt Montgomery, Mayor

ATTEST:

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Neil L. Jensen, City Administrator

STATE OF MINNESOTA )  
COUNTY OF GOODHUE ) ss  
CITY OF CANNON FALLS )

I, the undersigned, being the duly qualified and acting Administrator of the City of Cannon Falls, Minnesota, DO HEREBY CERTIFY that I have compared the attached and foregoing extract of minutes with the original minutes on file and of record in my office, and the same is a true and correct transcript of the minutes of a meeting of the City Council held on the date therein indicated, insofar as the same relates to a resolution approving plans and specifications and ordering advertisement for bids for the construction of the 3<sup>rd</sup> Street Lift Station and Force Main for said City.

WITNESS my hand as such Administrator and the seal of said City this 4<sup>th</sup> day of April, 2023.

\_\_\_\_\_  
City Administrator

(SEAL)

FILE PATH: S:\Jobs\Cannon Falls\9574 - 2023 Street Improvements\Drawings\9574 - Details (Lift Station Plans).dwg PLOT DATE: 3/29/2023 2:40 PM

**SYMBOL LEGEND**

- CONTROL POINT
- EXISTING SANITARY CLEANOUT
- EXISTING SANITARY MANHOLE
- EXISTING STORM MANHOLE
- EXISTING HYDRANT
- EXISTING GATE VALVE
- PROPOSED HYDRANT
- PROPOSED GATE VALVE
- PROPOSED MANHOLE
- EXISTING CONIFER TREE
- EXISTING DECIDUOUS TREE
- EXISTING SOIL BORE
- EXISTING SHRUB
- EXISTING POWER POLE
- EXISTING GUY WIRE
- EXISTING TELEPHONE PEDESTAL
- EXISTING CURB STOP
- EXISTING ELECTRIC PEDESTAL
- EXISTING CABLE TV PEDESTAL
- EXISTING SATELLITE DISH
- EXISTING MAILBOX
- EXISTING SIGN
- EXISTING WELL
- EXISTING LIGHTPOLE
- EXISTING BOLLARD
- EXISTING STUMP
- EXISTING GAS VALVE
- BENCHMARK
- EXISTING GAS METER
- EXISTING TRAFFIC LIGHT

**LINE LEGEND**

- FIB FIB FIB FIB
- CONTROLLED ACCESS ROW
- UTILITY
- EX. DRAINAGE DITCH
- MNDOT-ROW
- BARB WIRE FENCE
- CHAIN LINK FENCE
- SECTION LINE
- QUARTER SECTION LINE
- WOODEN FENCE
- TREELINE
- RETAINING WALL
- EX. SEALCOAT
- GUARD RAIL
- EX. WATERMAIN
- UNDERGROUND ELECTRIC
- UNDERGROUND CABLE TV
- EX. CRUSHED ROCK
- UNDERGROUND TELEPHONE
- UNDERGROUND GAS
- EX. CONTOUR
- EX. STORM SEWER
- PERMANENT EASEMENT
- TEMPORARY EASEMENT
- OVERHEAD ELECTRIC
- OVERHEAD TELEPHONE
- EX. SANITARY SEWER
- CENTERLINE
- SILT FENCE

# 3RD STREET LIFT STATION & FORCEMAIN

## CANNON FALLS, MN

### 2023

**INDEX**

SHEET 1	_____	TITLE SHEET
SHEET 2-3	_____	DETAILS
SHEET 4	_____	LIFT STATION DETAILS
SHEET 5-7	_____	PLAN & PROFILES
SHEET E1-E3	_____	ELECTRICAL

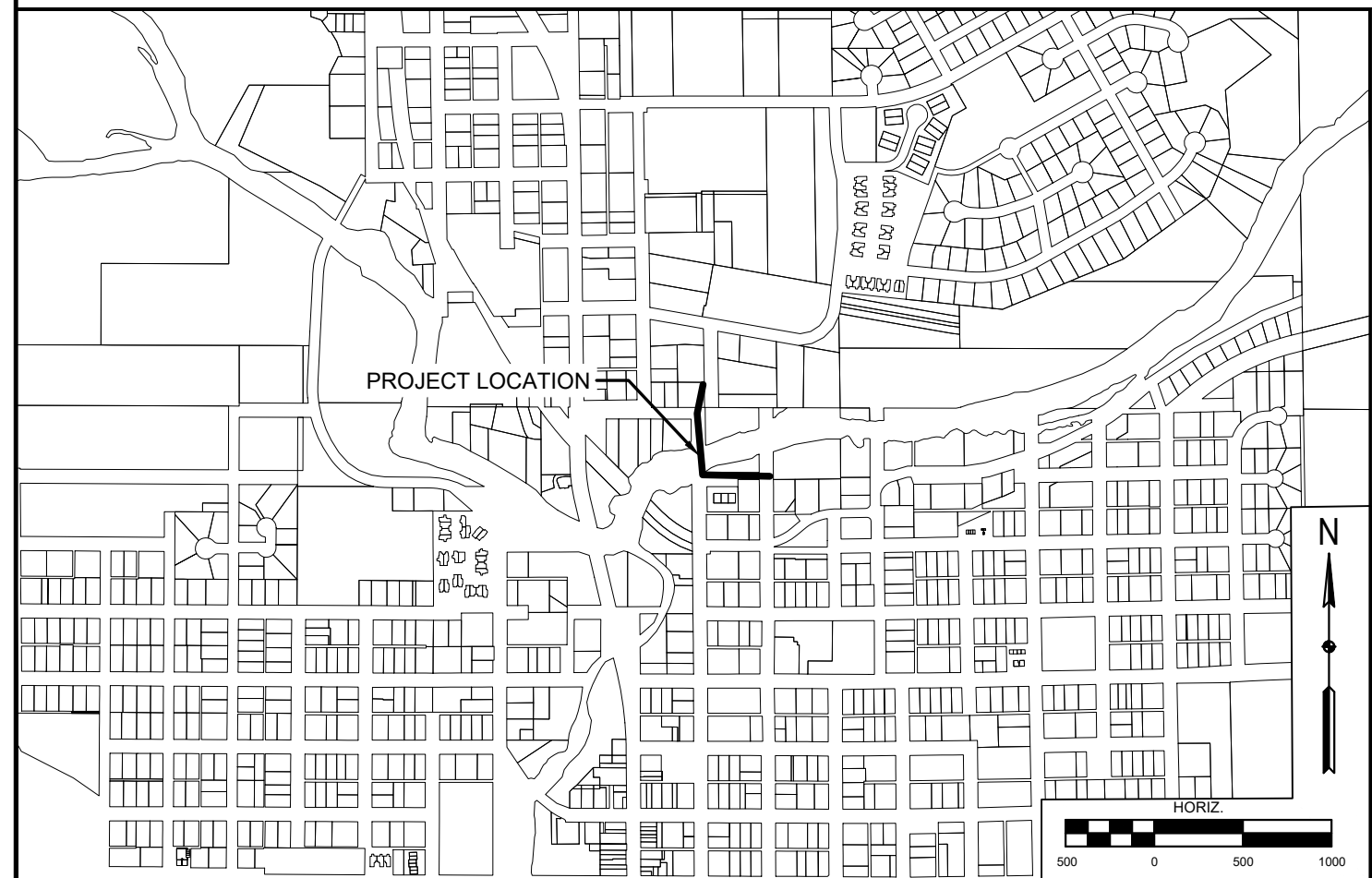
**GOVERNING SPECIFICATIONS**

THE 2020 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" AND ANY SUPPLEMENTAL SPECIFICATIONS SHALL GOVERN, EXCLUDING DIVISION 1.

**NOTES:**

- WHERE PUBLIC UTILITY FIXTURES OR FACILITIES ARE SHOWN AS EXISTING ON THE PLANS OR ENCOUNTERED WITHIN THE CONSTRUCTION AREA, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE OWNERS OF THESE UTILITIES PRIOR TO THE BEGINNING OF ANY CONSTRUCTION INVOLVING EXCAVATION. THE CONTRACTOR SHALL AFFORD ACCESS TO THESE FACILITIES FOR NECESSARY MODIFICATION OF SERVICES OR RELOCATION. UNDERGROUND FACILITIES, STRUCTURES AND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE SURVEYS, RECORDS AND UTILITY OPERATOR LOCATION MARKINGS THAT WERE REQUESTED THROUGH GOPHER STATE ONE CALL; THEREFORE THEIR LOCATIONS MUST BE CONSIDERED APPROXIMATE ONLY. TYPE, SIZE AND GENERAL LOCATION OF THE FACILITIES WERE REQUESTED OF THE OPERATORS AND SHOWN ON THE PLANS, AND IF NECESSARY, UPDATED WITHIN 90 DAYS OF COMPLETION OF THE FINAL PLANS. IT IS POSSIBLE THERE MAY BE OTHERS, THE EXISTENCE OF WHICH IS PRESENTLY NOT KNOWN OR SHOWN. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THEIR EXISTENCE AND EXACT LOCATION AND TO AVOID DAMAGE THERETO. NO CLAIMS FOR ADDITIONAL COMPENSATION WILL BE ALLOWED TO THE CONTRACTOR FOR ANY INTERFERENCE OR DELAY CAUSED BY THE WORK.
- GOPHER STATE ONE CALL TELE: 1-800-252-1166.
- CONTRACTOR SHALL COORDINATE UTILITY RELOCATIONS WITH THE UTILITY COMPANIES, THIS SHALL BE INCIDENTAL TO THE PROJECT.

**PROJECT LOCATION**



**CITY OFFICIALS**

MAYOR: MATT MONTGOMERY  
 COUNCIL: STEVE GESME  
 LISA GROTH  
 RYAN JEPPESEN  
 DIANE JOHNSON  
 LAURA KRONENBERGER  
 DEREK LUNDELL

CITY ADMINISTRATOR: NEIL JENSEN  
 PUBLIC WORKS SUPERINTENDENT: DAN HOWARD

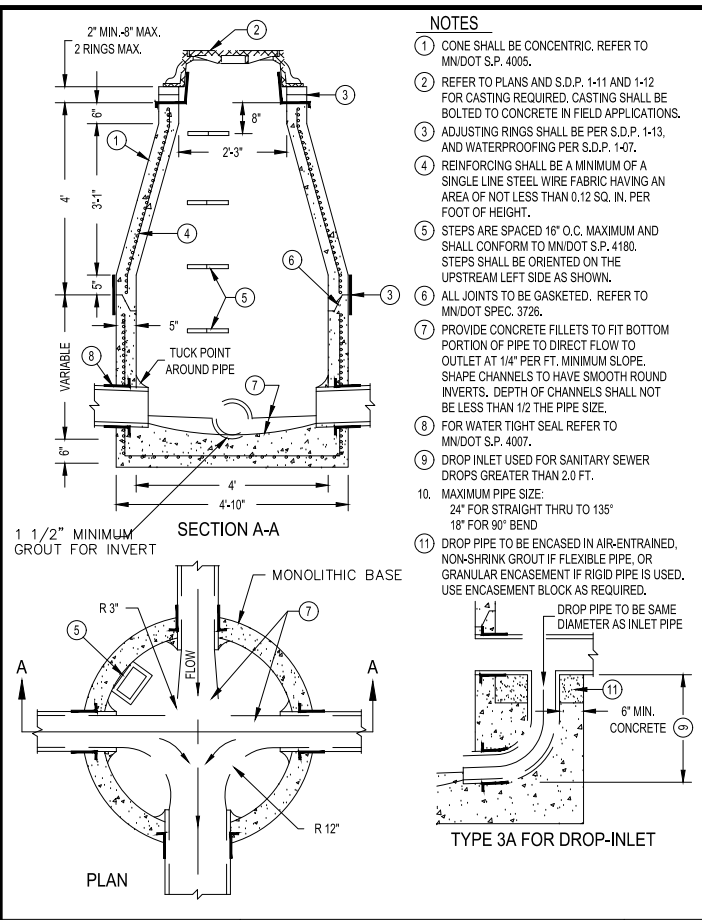
**UTILITY LOCATION**  
 UTILITY QUALITY LEVEL C UNLESS OTHERWISE INDICATED

UTILITY LOCATION PERFORMED ON: 1-23-23  
 GOPHER ONE CALL TICKET NUMBERS:  
 230130137  
 230130146  
 230130153  
 UTILITY DESIGN MEETING HELD ON: 3-27-2023

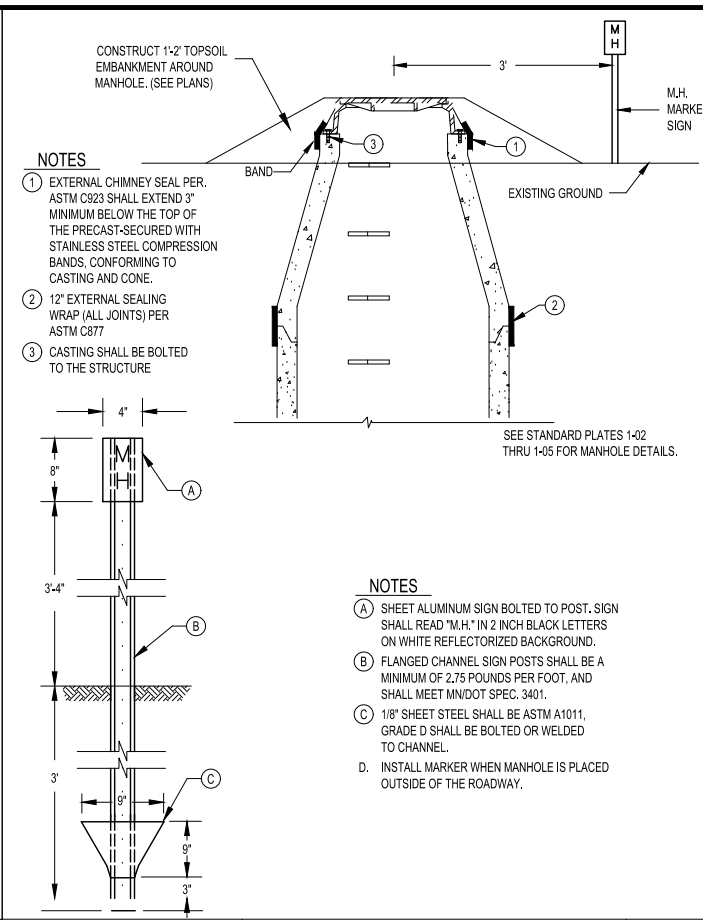
I hereby certify that this plan, specification or report was prepared by me or under my direct personal supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Daren D. Sikkink  
 Date \_\_\_\_\_ License No. 40914

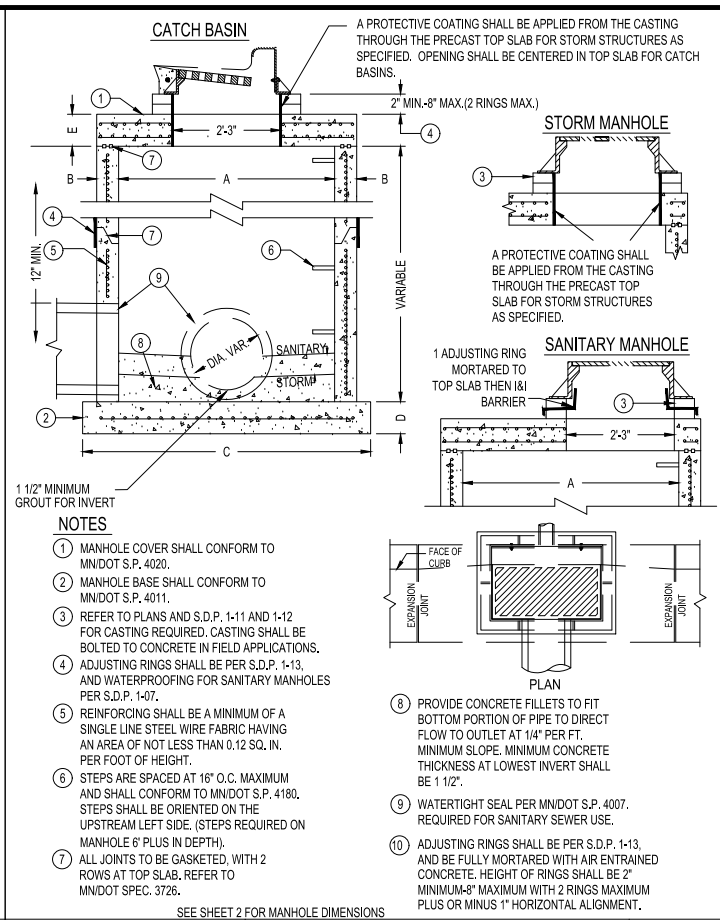




- NOTES**
1. CONE SHALL BE CONCENTRIC. REFER TO MNDOT S.P. 4005.
  2. REFER TO PLANS AND S.D.P. 1-11 AND 1-12 FOR CASTING REQUIRED. CASTING SHALL BE BOLTED TO CONCRETE IN FIELD APPLICATIONS.
  3. ADJUSTING RINGS SHALL BE PER S.D.P. 1-13, AND WATERPROOFING PER S.D.P. 1-07.
  4. REINFORCING SHALL BE A MINIMUM OF A SINGLE LINE STEEL WIRE FABRIC HAVING AN AREA OF NOT LESS THAN 0.12 SQ. IN. PER FOOT OF HEIGHT.
  5. STEPS ARE SPACED AT 16" O.C. MAXIMUM AND SHALL CONFORM TO MNDOT S.P. 4180. STEPS SHALL BE ORIENTED ON THE UPSTREAM LEFT SIDE AS SHOWN.
  6. ALL JOINTS TO BE GASKETED. REFER TO MNDOT SPEC. 3726.
  7. PROVIDE CONCRETE FILLETS TO FIT BOTTOM PORTION OF PIPE TO DIRECT FLOW TO OUTLET AT 1/4" PER FT. MINIMUM SLOPE. SHAPE CHANNELS TO HAVE SMOOTH ROUND INVERTS. DEPTH OF CHANNELS SHALL NOT BE LESS THAN 1/2 THE PIPE SIZE.
  8. FOR WATER TIGHT SEAL REFER TO MNDOT S.P. 4007.
  9. DROP INLET USED FOR SANITARY SEWER DROPS GREATER THAN 2.0 FT.
  10. MAXIMUM PIPE SIZE: 24" FOR STRAIGHT THRU TO 135° 18" FOR 90° BEND
  11. DROP PIPE TO BE ENCASED IN AIR-ENTRAINED, NON-SHRINK GROUT IF FLEXIBLE PIPE, OR GRANULAR ENCASEMENT IF RIGID PIPE IS USED. USE ENCASEMENT BLOCK AS REQUIRED.



- NOTES**
1. EXTERNAL CHIMNEY SEAL PER ASTM C923 SHALL EXTEND 3" MINIMUM BELOW THE TOP OF THE PRECAST-SECURED WITH STAINLESS STEEL COMPRESSION BANDS, CONFORMING TO CASTING AND CONE.
  2. 12" EXTERNAL SEALING WRAP (ALL JOINTS) PER ASTM C877
  3. CASTING SHALL BE BOLTED TO THE STRUCTURE
- NOTES**
- A. SHEET ALUMINUM SIGN BOLTED TO POST. SIGN SHALL READ "M.H." IN 2 INCH BLACK LETTERS ON WHITE REFLECTORIZED BACKGROUND.
  - B. FLANGED CHANNEL SIGN POSTS SHALL BE A MINIMUM OF 2.75 POUNDS PER FOOT, AND SHALL MEET MNDOT SPEC. 3401.
  - C. 1/2" SHEET STEEL SHALL BE ASTM A1011, GRADE D SHALL BE BOLTED OR WELDED TO CHANNEL.
  - D. INSTALL MARKER WHEN MANHOLE IS PLACED OUTSIDE OF THE ROADWAY.



- NOTES**
1. MANHOLE COVER SHALL CONFORM TO MNDOT S.P. 4020.
  2. MANHOLE BASE SHALL CONFORM TO MNDOT S.P. 4011.
  3. REFER TO PLANS AND S.D.P. 1-11 AND 1-12 FOR CASTING REQUIRED. CASTING SHALL BE BOLTED TO CONCRETE IN FIELD APPLICATIONS.
  4. ADJUSTING RINGS SHALL BE PER S.D.P. 1-13, AND WATERPROOFING FOR SANITARY MANHOLES PER S.D.P. 1-07.
  5. REINFORCING SHALL BE A MINIMUM OF A SINGLE LINE STEEL WIRE FABRIC HAVING AN AREA OF NOT LESS THAN 0.12 SQ. IN. PER FOOT OF HEIGHT.
  6. STEPS ARE SPACED AT 16" O.C. MAXIMUM AND SHALL CONFORM TO MNDOT S.P. 4180. STEPS SHALL BE ORIENTED ON THE UPSTREAM LEFT SIDE. (STEPS REQUIRED ON MANHOLE 6" PLUS IN DEPTH).
  7. ALL JOINTS TO BE GASKETED, WITH 2 ROWS AT TOP SLAB. REFER TO MNDOT SPEC. 3726.
  8. PROVIDE CONCRETE FILLETS TO FIT BOTTOM PORTION OF PIPE TO DIRECT FLOW TO OUTLET AT 1/4" PER FT. MINIMUM SLOPE. MINIMUM CONCRETE THICKNESS AT LOWEST INVERT SHALL BE 1 1/2".
  9. WATERTIGHT SEAL PER MNDOT S.P. 4007. REQUIRED FOR SANITARY SEWER USE.
  10. ADJUSTING RINGS SHALL BE PER S.D.P. 1-13, AND BE FULLY MORTARED WITH AIR ENTRAINED CONCRETE. HEIGHT OF RINGS SHALL BE 2" MINIMUM-8" MAXIMUM WITH 2 RINGS MAXIMUM PLUS OR MINUS 1" HORIZONTAL ALIGNMENT.

**MANHOLE TOP SLAB**

**MANHOLE TOP SLAB**

**ALTERNATE TOP SLAB FOR CATCH BASINS**

MANHOLE TOP SLAB		MANHOLE DIMENSIONS		MAXIMUM PIPE SIZE				
L	W	X	Y	Z	A B C D E	135°-180°	90°	
17"	6"	12"	-	56"	48" 5" 64"	6" 6"	27"	18"
20.5"	6"	12"	-	65"	54" 5.5" 72"	8" 8"	33"	21"
24"	7"	12"	-	72"	60" 6" 78"	8" 8"	36"	24"
27.5"	7"	12"	-	79"	66" 6.5" 85"	8" 8"	42"	30"
31"	8"	12"	3"	86"	72" 7" 92"	8" 8"	42"	33"
34.5"	8"	12"	6"	93"	78" 7.5" 100"	8" 8"	48"	36"
38"	9"	12"	9"	100"	84" 8" 106"	8" 8"	54"	42"
41.5"	9"	12"	12"	107"	90" 8.5" 114"	8" 8"	60"	42"
45"	9"	12"	15"	114"	96" 9" 120"	8" 8"	60"	42"
48.5"	9"	12"	18"	121"	102" 9.5" 127"	8" 8"	60"	48"
51"	10"	12"	21"	128"	108" 10" 132"	9" 12"	60"	54"
58"	11"	12"	24"	140"	120" 10" 146"	12" 12"	60"	60"

**STRUCTURE TYPES 3 AND 3A (PRECAST) (SANITARY SEWER)**

REVISIONS: 12/31/19

SHEET: 1 OF 1

PLATE NO. 1-03

**MANHOLE WATERPROOFING (NON-PAVED AREAS)**

REVISIONS: 12/31/19

SHEET: 2 OF 2

PLATE NO. 1-07

**STRUCTURE TYPE 4 (XX in.)**

REVISIONS: 12/31/19

SHEET: 1 OF 2

PLATE NO. 1-04

**STRUCTURE TYPE 4 (XX in.) MANHOLE DIMENSIONS**

REVISIONS: 12/31/19

SHEET: 2 OF 2

PLATE NO. 1-04

**CASTINGS - STRUCTURE TYPE 1**

TYPE	DESCRIPTION	NEENAH REF. NO.	REMARKS
B	3" CURB INLET FRAME, GRATE & BOX	R-3067	DIAGONAL USE WHERE DRIVEWAY PRECLUDES USE OF TYPE B IN BATTERFACE CURB
C	3" DRIVEWAY INLET FRAME & GRATE	R-3280-A	PARALLEL (BICYCLE SAFE)
V	3" CURB INLET FRAME, GRATE & BOX	R-3067	PERPENDICULAR VANE USE WHEN STREET GRADE EXCEEDS 2%

**CASTINGS - OTHER STRUCTURES**

TYPE	DESCRIPTION	NEENAH REF. NO.	REMARKS
1	9" FRAME & COVER-T GASKETED	R-1916-C	COVER/GRATE USED IN FLOOD PRONE AREAS & IN CONCRETE PAVING
2	9" FRAME & COVER-T GASKETED	R-1733-B	INDENTED TOP
3	7" FRAME & COVER-T GASKETED	R-1642	INDENTED TOP
4	7" FRAME & COVER-NON ROCKING OR T GASKET	R-1740-B	INDENTED TOP
5	9" FRAME & GRATE-NON ROCKING OR T GASKET	R-2633	FLAT GRATE
6	DITCH GRATE-STOOL TYPE-TALL	R-431-A	STOOL GRATE
7	DITCH GRATE-STOOL TYPE-SHORT	R-4942	STOOL GRATE
8	POND SKIMMER GRATE		1/2" STEEL PLATE

**NOTES:**

1. CASTINGS SHALL BE ACCORDING TO MNDOT SPEC 3321.1-2, SUPPLIED BY FOUNDRIES THAT ARE APPROVED ON THE MNDOT APPROVED QUALIFIED PRODUCTS LIST
2. ALL CASTINGS SHALL COMPLY WITH AASHTO M406
3. ALL CASTINGS SHALL COMPLY WITH U.S. CODE OF FEDERAL REGULATIONS 23CFR653.410, THE "BUY AMERICAN STEEL & IRON" REGULATION
4. ALL STORM SEWER CASTINGS SHALL INCLUDE IMPRINT FISH STAMP AND "DUMP NO WASTE"
5. COVERS SHALL BE STAMPED FOR SPECIFIC UTILITY (EX. SANITARY SEWER).

**CASTINGS - OTHER STRUCTURES**

TYPE	DESCRIPTION	L	M	N	O	P	Q
1	9" FRAME & COVER-GASKETED	23	1 1/2	21	38	9	
2	9" FRAME & COVER-GASKETED	25 3/4	7/8	24	35 7/16	9	
3	7" FRAME & COVER-GASKETED	26	1 1/2	24 1/8	35 7/8	6 15/16	
4	7" FRAME & COVER-NON ROCKING	32	1 1/2	30	45 1/2	7	
5	9" FRAME & GRATE-NON ROCKING	23	1 1/2	20	33	8	8 11/16
6	DITCH GRATE-STOOL TYPE-TALL	23	1 7/16	20	33	33	6 5/8
7	DITCH GRATE-STOOL TYPE-SHORT	23	1 1/2	21	33	33	6 5/8
8	POND SKIMMER GRATE						1/2

**CASTINGS - OTHER STRUCTURES**

TYPE	MINIMUM OPENING	REMARKS
1		BOLTED LID USED IN FLOOD PRONE AREAS & IN CONCRETE PAVING
2		WITH TWO C/T PICK HOLES
3		USED FOR P.V. MANHOLES
4		USED FOR P.V. MANHOLES
5	1.1 SQ. FT.	PAVEMENT DRAIN
6	2.5 SQ. FT.	HEAVY DUTY
7	1.75 SQ. FT.	LIGHT DUTY
8	7.61 SQ. FT.	HOT DIPPED GALVANIZED, NOT SUBJECT TO H2O LOADING

**NOTES:**

1. CASTINGS SHALL BE ACCORDING TO MNDOT SPEC 3321.1-2, SUPPLIED BY FOUNDRIES THAT ARE APPROVED ON THE MNDOT APPROVED QUALIFIED PRODUCTS LIST
2. ALL CASTINGS SHALL COMPLY WITH AASHTO M406
3. ALL CASTINGS SHALL COMPLY WITH U.S. CODE OF FEDERAL REGULATIONS 23CFR653.410, THE "BUY AMERICAN STEEL & IRON" REGULATION
4. ALL STORM SEWER CASTINGS MAY INCLUDE IMPRINT FISH STAMP AND "DUMP NO WASTE"

**CASTING REFERENCE NUMBERS**

REVISIONS: 12/31/19

SHEET: 1 OF 1

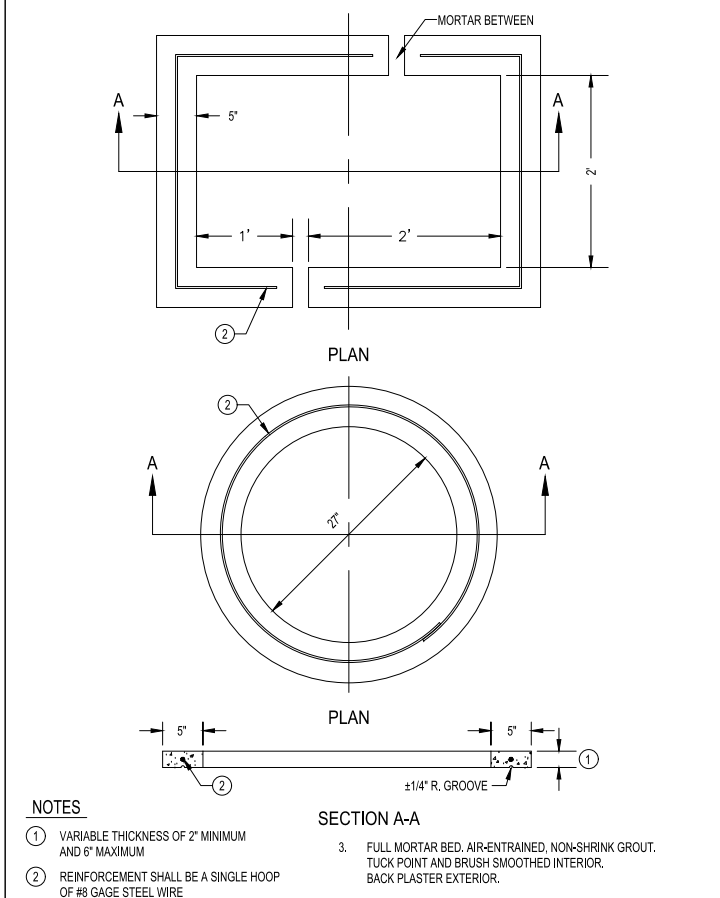
PLATE NO. 1-11

**STANDARD CASTING ASSEMBLIES**

REVISIONS: 12/31/19

SHEET: 2 OF 2

PLATE NO. 1-12



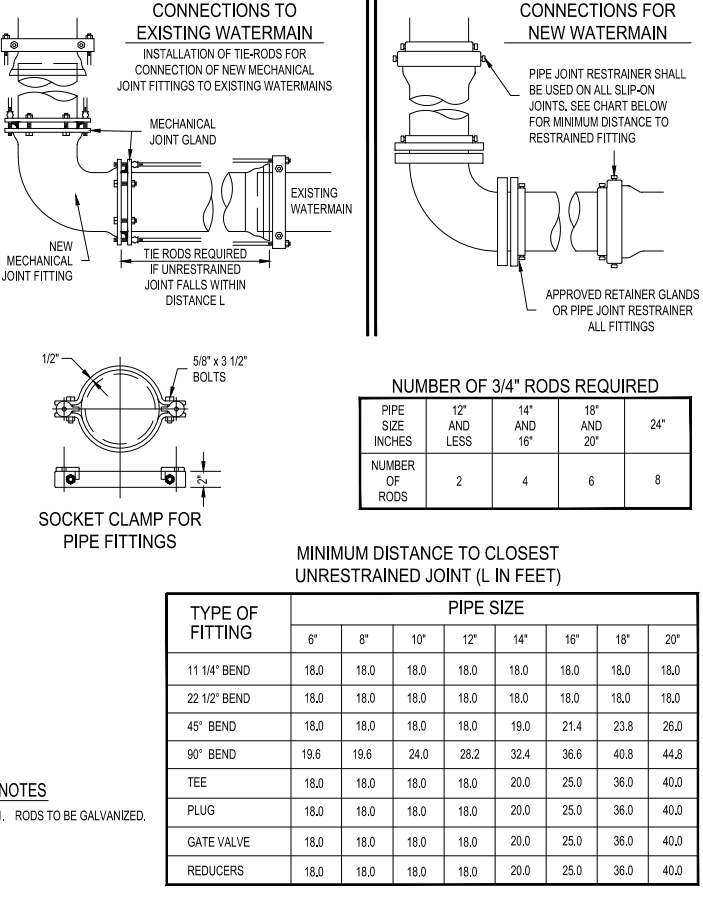
- NOTES**
1. VARIABLE THICKNESS OF 2" MINIMUM AND 6" MAXIMUM
  2. REINFORCEMENT SHALL BE A SINGLE HOOP OF #8 GAGE STEEL WIRE
  3. FULL MORTAR BED, AIR-ENTRAINED, NON-SHRINK GROUT. TUCK POINT AND BRUSH SMOOTHED INTERIOR. BACK PLASTER EXTERIOR.

**CONCRETE STRUCTURE ADJUSTING RINGS**

REVISIONS: 12/31/19

SHEET: 1 OF 2

PLATE NO. 1-13



**RESTRAINED JOINT DETAIL**

REVISIONS: 12/31/19

SHEET: 1 OF 1

PLATE NO. 6-05

**whks** engineers + planners + land surveys

I hereby certify that this plan, specification or report was prepared by me or under my direct personal supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Daren D. Sikkink License No. 409214 Date

**REVISIONS**

NO.	DATE	DESCRIPTION

**DETAILS**

3RD STREET LIFT STATION & FORCEMAIN  
CANNON FALLS, MN  
2023

SCALE: AS SHOWN

WHKS PROJECT NO. 9574

DRAWN BY: AMS

CHECKED BY: DAM

SHEET 2 OF 7

FILE PATH: S:\Jobs\Cannon Falls\9574 2023 Street Improvements\Drawings\9574 - Details (Lift Station Plans).dwg PLOT DATE: 3/29/2023 2:40 PM

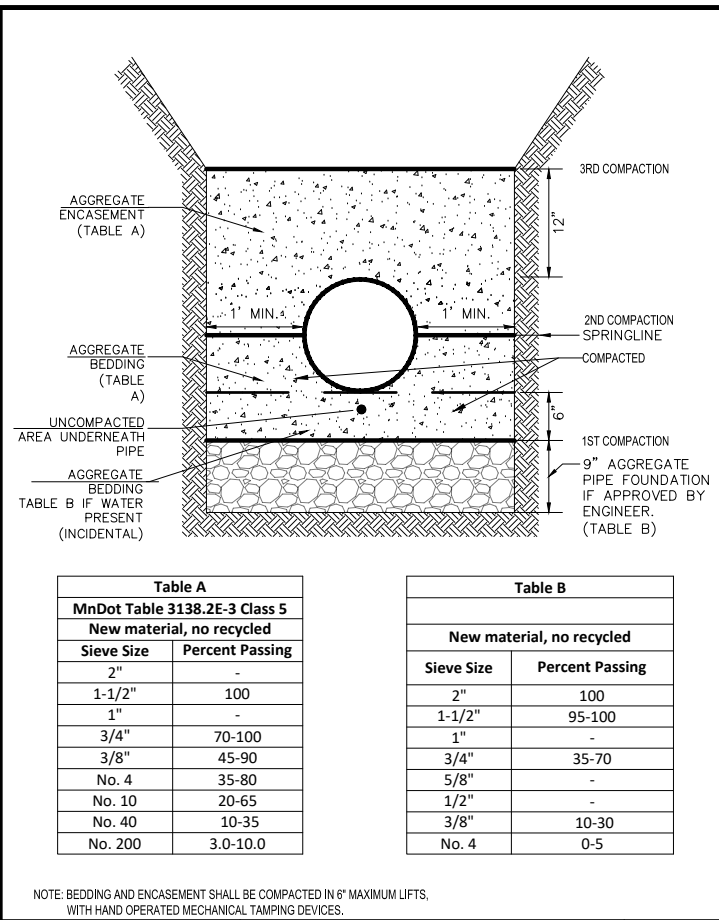
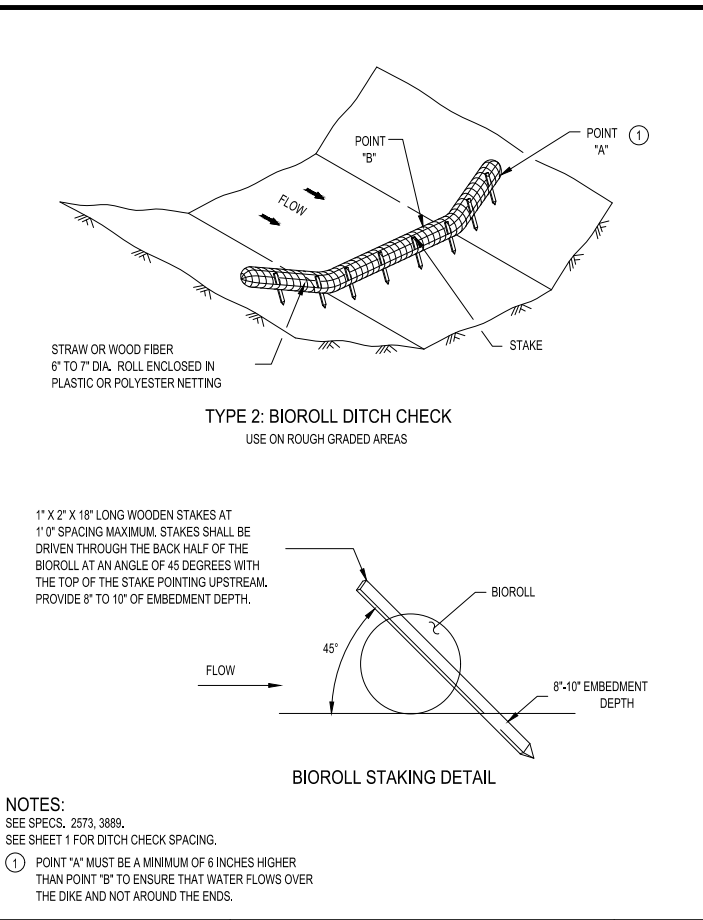
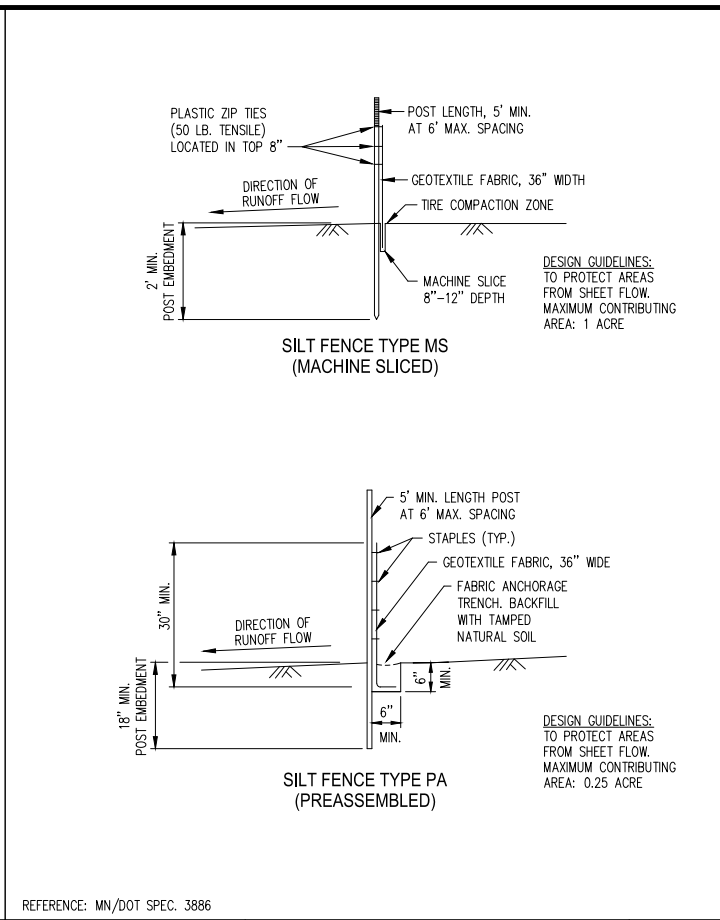
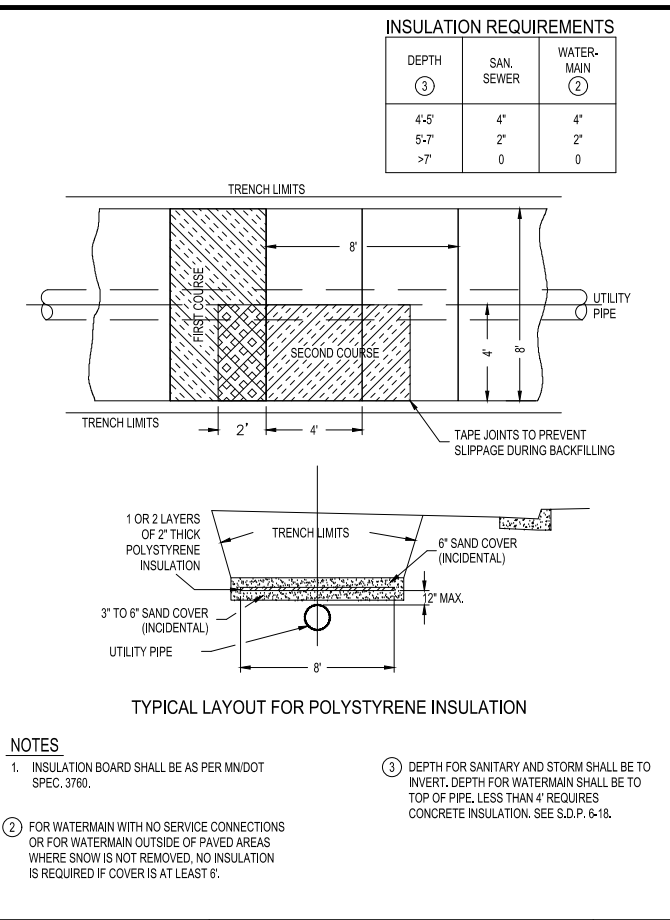


Table A	
MnDot Table 3138.2E-3 Class 5	
New material, no recycled	
Sieve Size	Percent Passing
2"	-
1-1/2"	100
1"	-
3/4"	70-100
3/8"	45-90
No. 4	35-80
No. 10	20-65
No. 40	10-35
No. 200	3.0-10.0

Table B	
New material, no recycled	
Sieve Size	Percent Passing
2"	100
1-1/2"	95-100
1"	-
3/4"	35-70
5/8"	-
1/2"	-
3/8"	10-30
No. 4	0-5

NOTE: BEDDING AND ENCASEMENT SHALL BE COMPACTED IN 6" MAXIMUM LIFTS, WITH HAND OPERATED MECHANICAL TAMPING DEVICES.



whks

FLEXIBLE PIPE BEDDING AND ENCASEMENT INSTALLATION DETAIL

REVISOR: 12/31/2019  
SHEET: 1 OF 1  
PLATE NO. 6-09a

whks

POLYSTYRENE INSULATION

REVISOR: 12/31/19  
SHEET: 1 OF 1  
PLATE NO. 6-19

whks

SILT FENCE DETAILS TYPES MS AND PA

REVISOR: 12/31/19  
SHEET: 1 OF 3  
PLATE NO. 7-01

whks

TEMP. SEDIMENT CONTROL TYPE 2 DITCH CHECKS

REVISOR: 2/01/08  
SHEET: 3 OF 6  
PLATE NO. 7-03

**whks**  
engineers + planners + land surveys

I hereby certify that this plan, specification or report was prepared by me or under my direct personal supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.  
Name: \_\_\_\_\_ Date: \_\_\_\_\_  
PRELIMINARY ONLY - NOT FOR CONSTRUCTION

NO.	DATE	DESCRIPTION

**DETAILS**

**3RD STREET LIFT STATION & FORCEMAIN  
CANNON FALLS, MN  
2023**

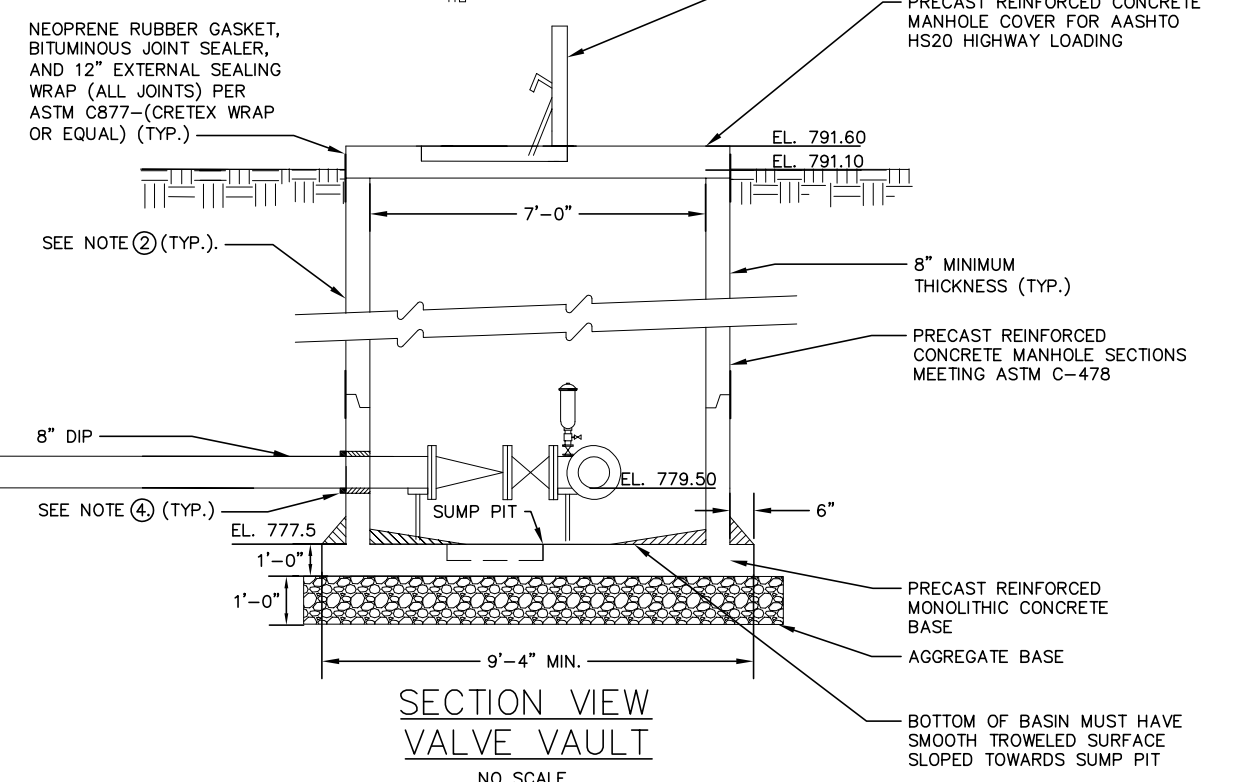
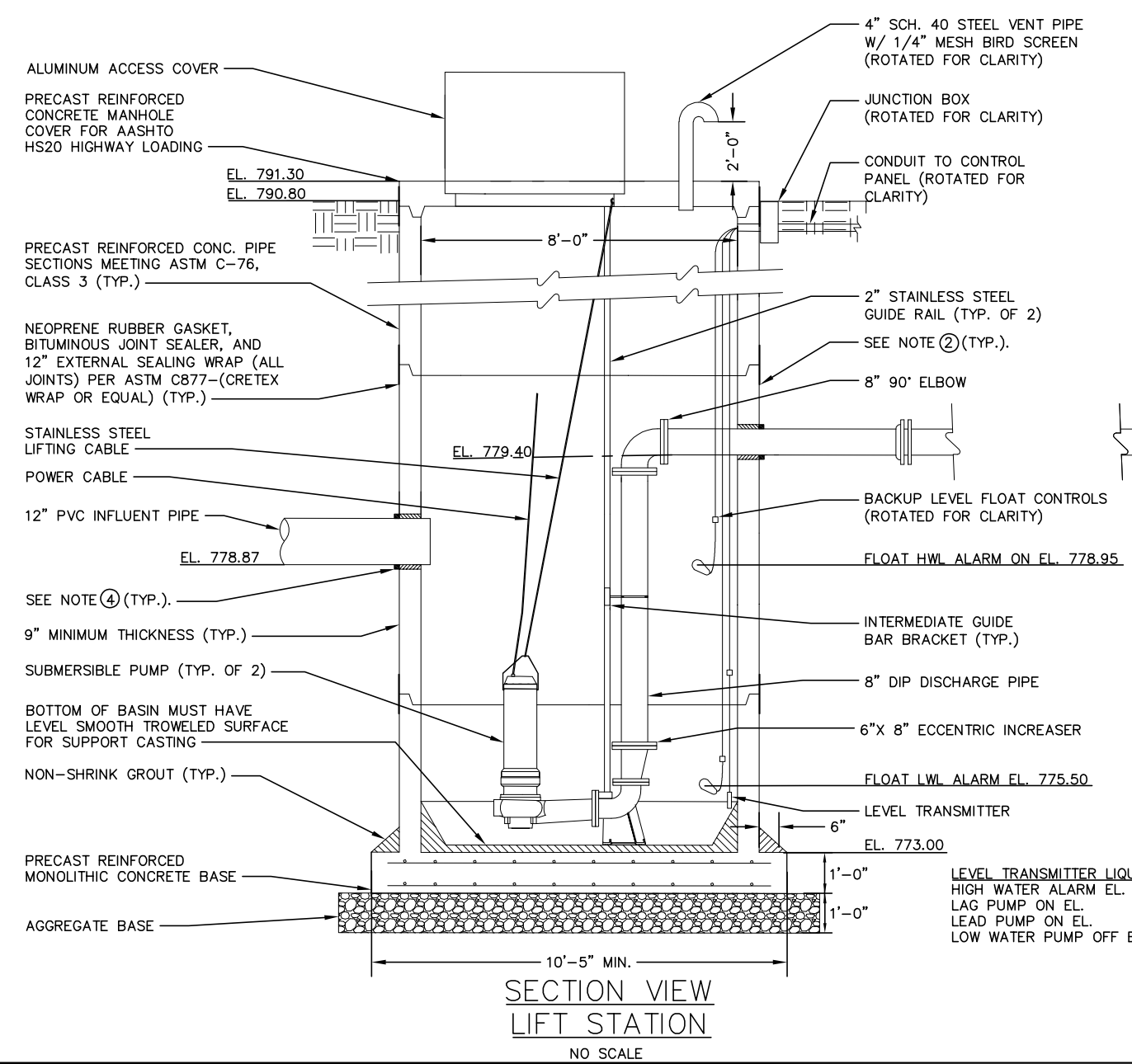
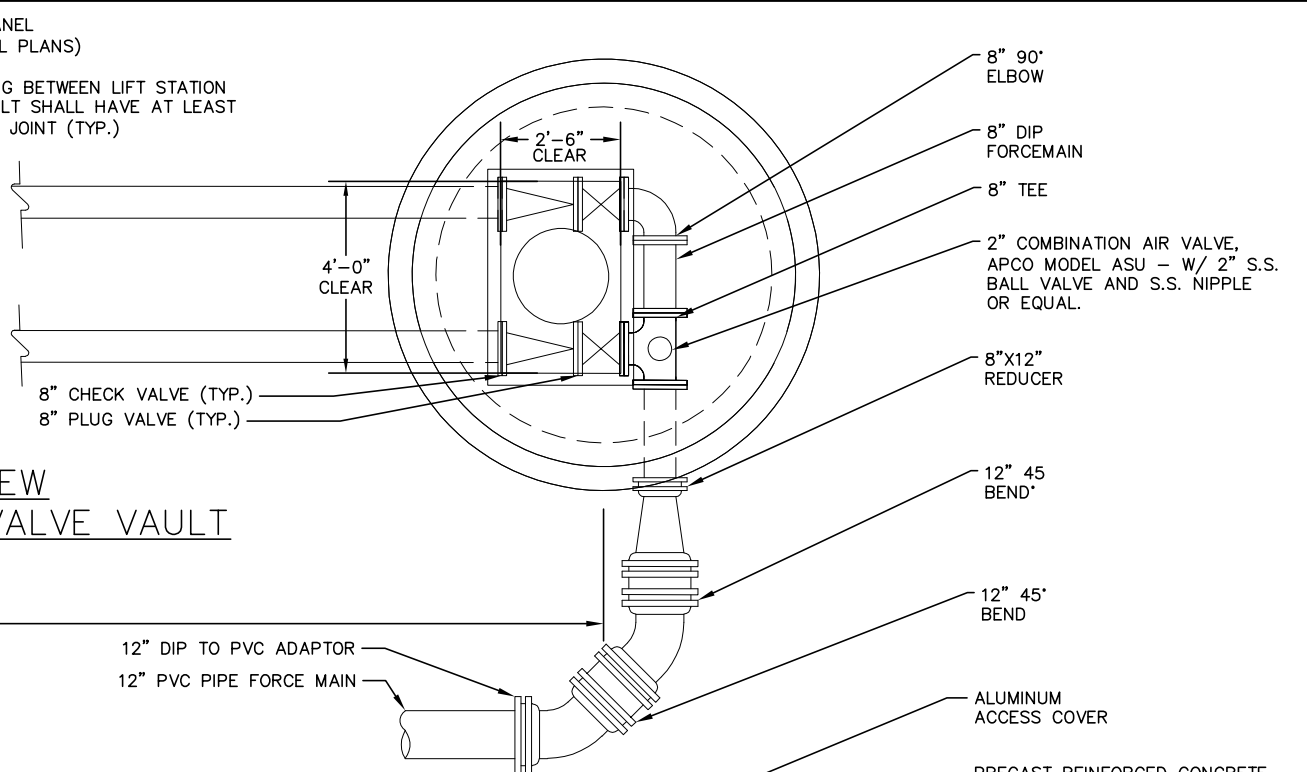
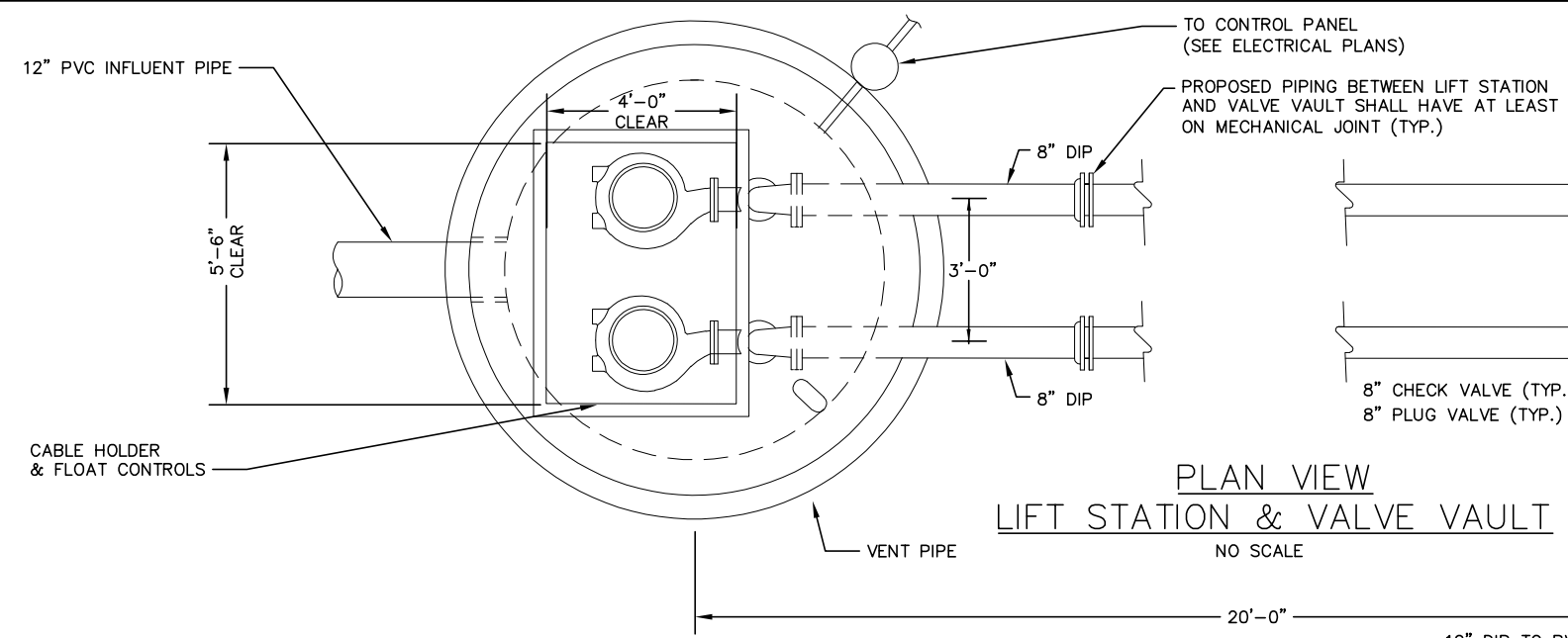
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WHKS PROJECT NO. 9574  
DRAWN BY: AMS  
CHECKED BY: DAM  
SHEET 3 OF 7

I hereby certify that this plan specification or report was prepared by me or under my direct personal supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.  
Eric A. Tourdout License No. 46320 Date

NO.	DATE	DESCRIPTION

**PROPOSED LIFT STATION**  
2023 STREET & UTILITY IMPROVEMENTS  
CANNON FALLS, MN  
2023

SCALE: AS SHOWN  
PROJECT NO. 9574.00  
DRAWN BY: EAT  
CHECKED BY: DDS  
SHEET 4 OF 7



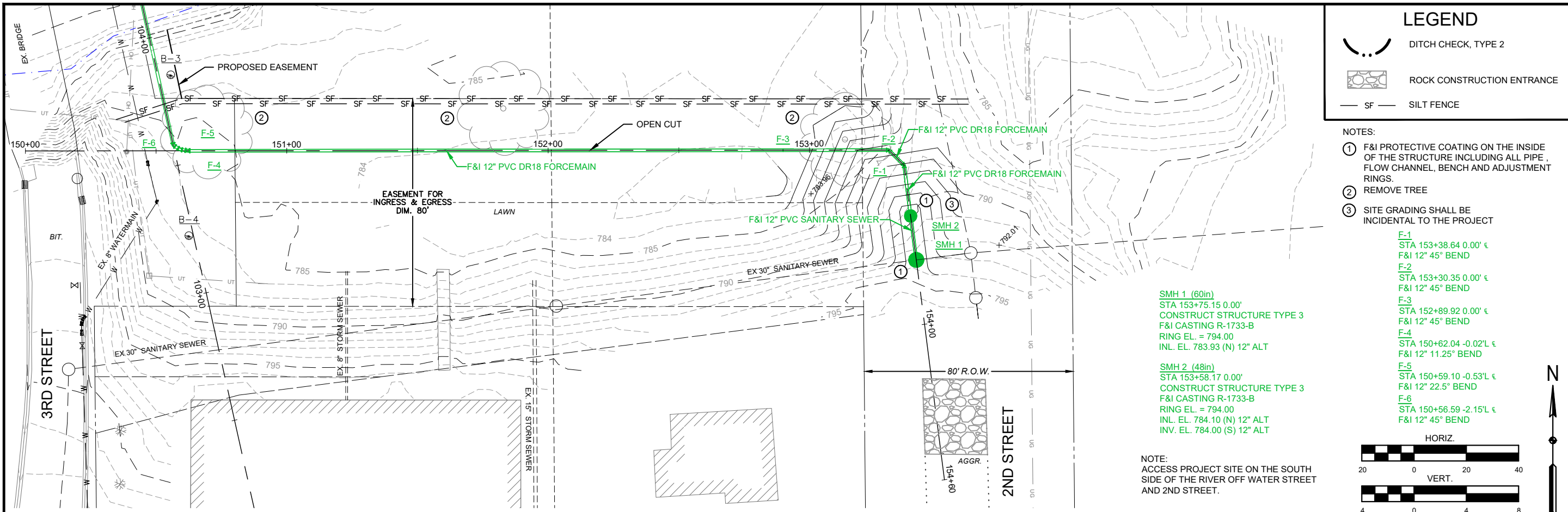
- NOTES:
- AGGREGATE BASE FOR STRUCTURES SHALL BE PLACED ON UNDISTURBED SOIL.
  - STRUCTURES AND PIPING SHALL BE BACKFILLED WITH GRANULAR MATERIAL TO WITHIN 2 FT. OF FINISH GRADE. SEE SPECIFICATION FOR FURTHER DETAILS.
  - PROVIDE MINIMUM 3" CLEARANCE BETWEEN PUMP AND HATCH OPENING ON ALL SIDES. CONTRACTOR TO VERIFY PUMP DIMENSIONS FOR MANUFACTURER SELECTED.
  - PROPOSED FLEXIBLE WATERTIGHT PIPE BOOT SEAL CONNECTION. SEAL NON-SHRINK GROUT AROUND INTERIOR PIPE OPENING FLUSH WITH INTERIOR WALL.
  - WET WELL AND PIPING SIZING HAS BEEN DESIGNED TO ALLOW FOR REPLACEMENT WITH LARGER PUMPS IN THE FUTURE.
  - PIPE USED FOR BURIED LOCATIONS SHALL BE FURNISHED WITH STANDARD BITUMINOUS EXTERIOR COATING. PIPE USED FOR INTERIOR AND EXPOSED LOCATIONS SHALL BE FURNISHED WITHOUT COATING TO FACILITATE PAINTING AS SPECIFIED IN DIVISION 25.
  - METAL ITEMS IN THE STRUCTURES INCLUDING BUT NOT LIMITED TO PIPING, SUPPORTS, CONDUITS, PUMPING EQUIPMENT, ETC. SHALL BE PAINTED. INTERIOR CONCRETE SHALL TO BE PAINTED FOR LIFT STATION BUT NOT VALVE VAULT. SEE SPECIFICATION DIVISION 25 FOR PAINTING DETAILS FOR THE LIFT STATION AND VALVE VAULT.

LEVEL TRANSMITTER LIQUID LEVELS

HIGH WATER ALARM EL.	778.50
LAG PUMP ON EL.	778.00
LEAD PUMP ON EL.	777.00
LOW WATER PUMP OFF EL.	776.00



FILE PATH: S:\Jobs\Cannon Falls\9574 2023 Street Improvements\Drawings\9574 - Design Utilities.dwg PLOT DATE: 3/29/2023 2:41 PM



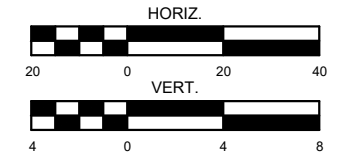
### LEGEND

- DITCH CHECK, TYPE 2
- ROCK CONSTRUCTION ENTRANCE
- SILT FENCE

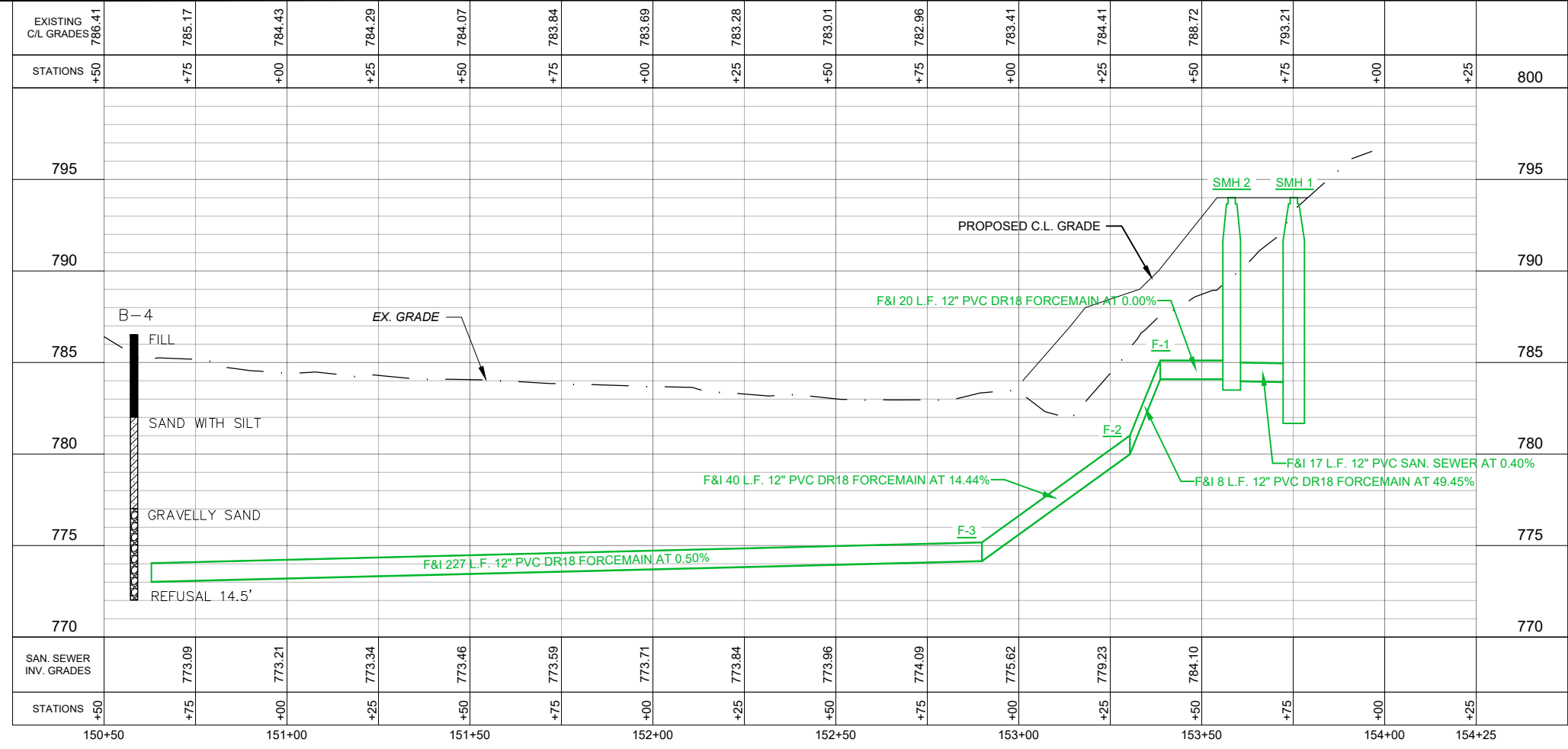
- NOTES:
- ① F&I PROTECTIVE COATING ON THE INSIDE OF THE STRUCTURE INCLUDING ALL PIPE, FLOW CHANNEL, BENCH AND ADJUSTMENT RINGS.
  - ② REMOVE TREE
  - ③ SITE GRADING SHALL BE INCIDENTAL TO THE PROJECT

- F-1**  
STA 153+38.64 0.00' €  
F&I 12" 45° BEND
- F-2**  
STA 153+30.35 0.00' €  
F&I 12" 45° BEND
- F-3**  
STA 152+89.92 0.00' €  
F&I 12" 45° BEND
- F-4**  
STA 150+62.04 -0.02' €  
F&I 12" 11.25° BEND
- F-5**  
STA 150+59.10 -0.53' €  
F&I 12" 22.5° BEND
- F-6**  
STA 150+56.59 -2.15' €  
F&I 12" 45° BEND
- SMH 1 (60in)**  
STA 153+75.15 0.00'  
CONSTRUCT STRUCTURE TYPE 3  
F&I CASTING R-1733-B  
RING EL. = 794.00  
INL. EL. 783.93 (N) 12" ALT
- SMH 2 (48in)**  
STA 153+58.17 0.00'  
CONSTRUCT STRUCTURE TYPE 3  
F&I CASTING R-1733-B  
RING EL. = 794.00  
INV. EL. 784.10 (N) 12" ALT  
INL. EL. 784.00 (S) 12" ALT

NOTE:  
ACCESS PROJECT SITE ON THE SOUTH SIDE OF THE RIVER OFF WATER STREET AND 2ND STREET.



## UTILITY EASEMENT BETWEEN 2ND & 3RD STREET



engineers + planners + land surveyors

I hereby certify that this plan, specification or report was prepared by me or under my direct personal supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Daren D. Sikkink  
Date: \_\_\_\_\_ License No. 40914

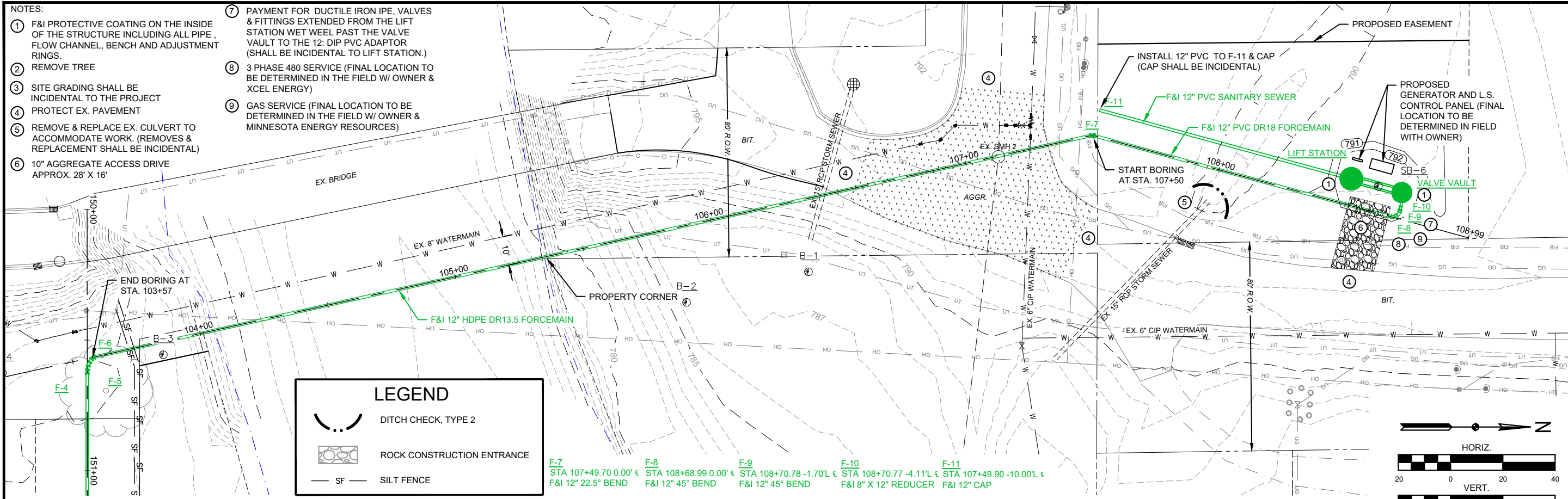
NO.	DATE	DESCRIPTION

### FORCEMAIN PLAN & PROFILE

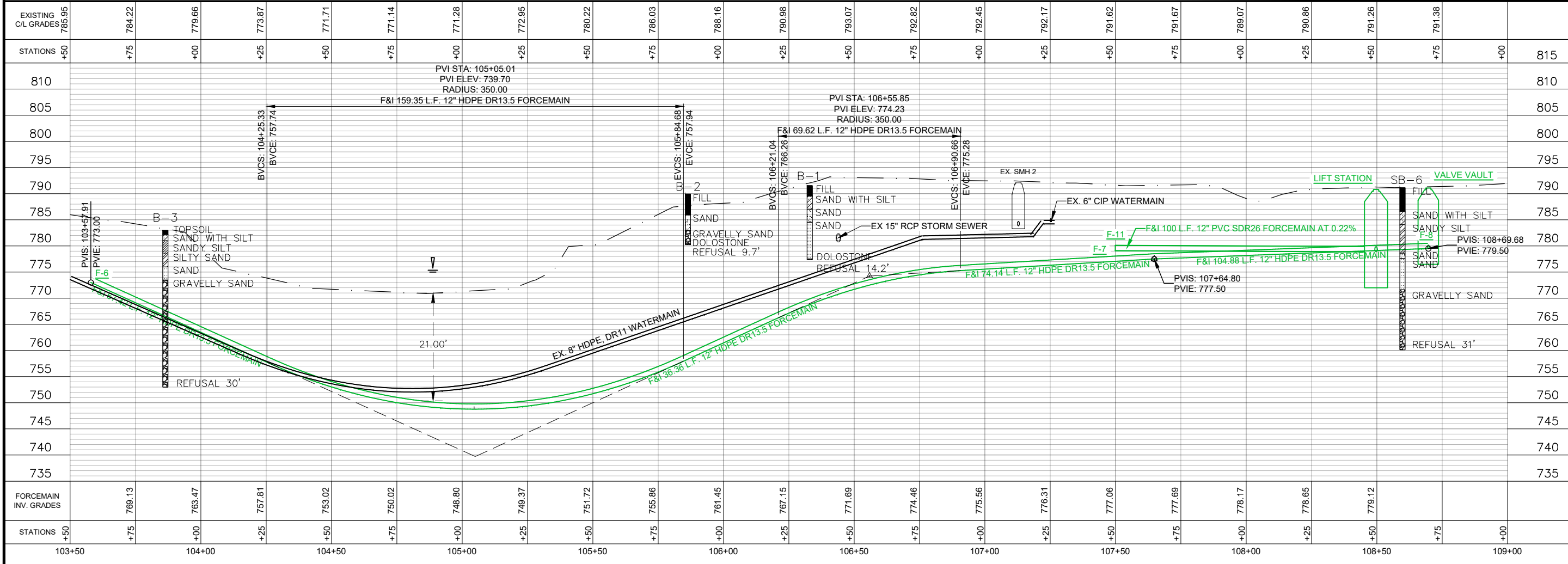
3RD STREET LIFT STATION & FORCEMAIN  
CANNON FALLS, MN  
2023

SCALE: AS SHOWN  
WHKS PROJECT NO. 9574  
DRAWN BY: AMS  
CHECKED BY: DAM  
SHEET 5 OF 7

FILE PATH: S:\Jobs\Cannon Falls\9574 Street Improvements\Drawings\9574 - Design Utilities.dwg PLOT DATE: 3/29/2023 2:41 PM



**3RD STREET NORTH**



**whks**  
engineers + planners + land surveyors

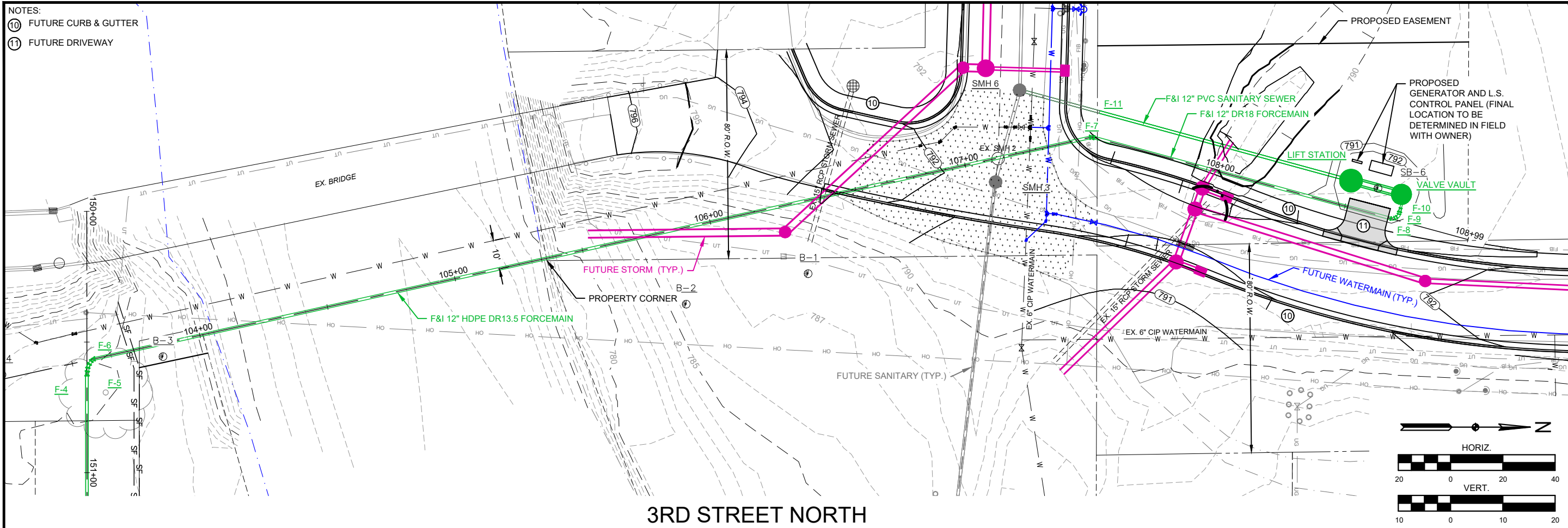
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Daren D. Sikkink  
Date: \_\_\_\_\_ License No. 40914

NO.	DATE	DESCRIPTION

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WHKS PROJECT NO. 9574  
DRAWN BY: AMS  
CHECKED BY: DAM  
SHEET 6 OF 7

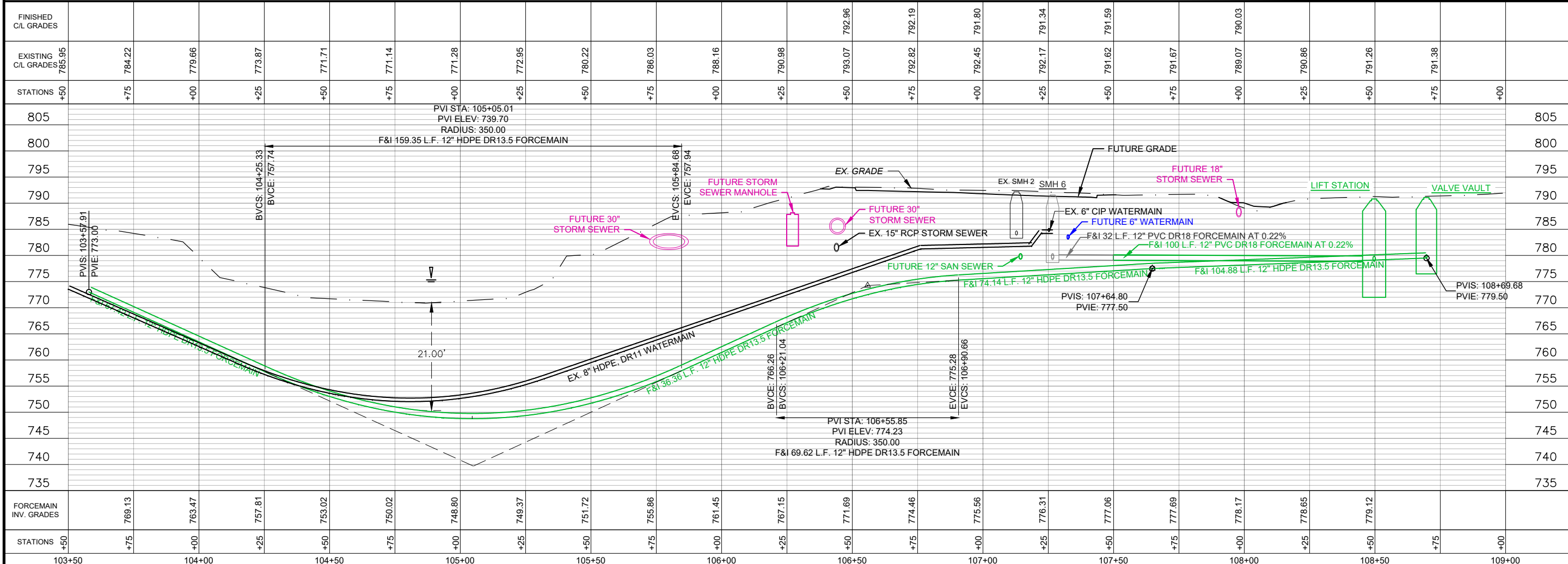
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3RD STREET NORTH

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 Date: \_\_\_\_\_ License No. 409214  
 Daren D. Sikkink

NO.	DATE	DESCRIPTION

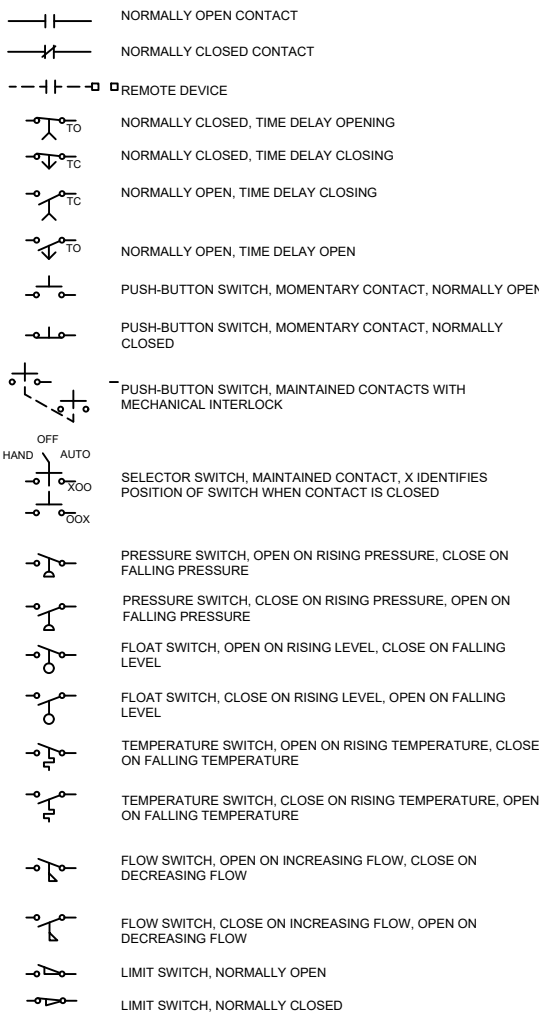
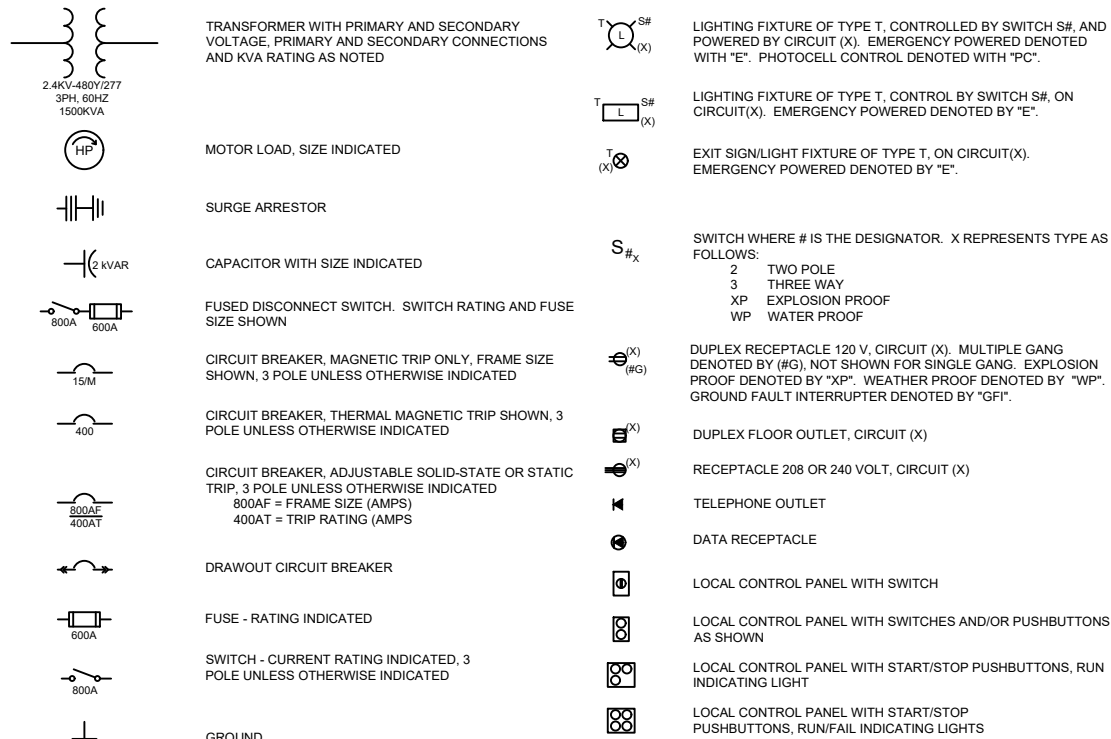


**FUTURE STREET & UTILITY IMPROVEMENTS**

3RD STREET LIFT STATION & FORCEMAIN  
CANNON FALLS, MN  
2023

SCALE: AS SHOWN  
 WHKS PROJECT NO. 9574  
 DRAWN BY: AMS  
 CHECKED BY: DAM  
 SHEET 7 OF 7

ELECTRICAL SYMBOLS



DIVISION 16 - ELECTRICAL GENERAL REQUIREMENTS

- 1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ROUTING ALL CONDUITS NOT SHOWN ON THE PLANS. THIS SHALL INCLUDE ALL CONDUITS SHOWN ON THE ONE-LINES AND INDICATED ON THE PLAN DRAWINGS. CONDUITS SHALL BE ROUTED AS DEFINED IN THE SPECIFICATIONS. REUSE EXISTING CONDUIT AND CONDUCTORS WHERE NOTED AND APPLICABLE.
2. DO NOT ROUTE CONDUITS THROUGH OR UNDER EQUIPMENT ACCESS AND OTHER OPENINGS IN FLOOR AND CEILING. DO NOT INSTALL CONDUITS ACROSS SKYLIGHTS, WINDOW OR GLASS BLOCK WALLS, ETC. DO NOT INSTALL CONDUITS UNDER REMOVABLE GRATINGS.
3. SPARE WIRES SHALL BE LABELED, TAPED, AND COILED.
4. IF EQUIPMENT SUPPLIED BY MANUFACTURER HAS A LARGER LOAD THAN VALUE SHOWN, THE CABLE, CONDUIT, AND ELECTRICAL EQUIPMENT SHALL BE ENLARGED, AS REQUIRED, TO ACCOMMODATE THE HIGHER VALUE.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING PROPERLY SIZED STARTER OVERLOADS FOR EQUIPMENT FURNISHED.
6. IN GENERAL, LIGHTING, RECEPTACLE, AND OTHER LIGHTING AND POWER PANEL CIRCUITS DESIGNATED ON THE FLOOR PLANS AND ON PANEL SCHEDULES ARE NOT SHOWN ON THE ONE LINES. CONDUCTORS AND CONDUIT SHALL BE SIZED ACCORDING TO THE RESPECTIVE OVERCURRENT DEVICE AND ACCORDING TO THE NATIONAL ELECTRIC CODE. CONDUCTORS FOR LIGHTING, RECEPTACLES, AND MISCELLANEOUS PANELBOARD CIRCUITS SHALL BE MINIMUM NO. 12 AWG FOR CIRCUIT LENGTHS LESS THAN 75 FEET AND NO. 10 AWG FOR LENGTHS GREATER THAN 75 FEET. CONDUIT FOR LIGHTING, RECEPTACLES, AND MISCELLANEOUS PANELBOARD CIRCUITS SHALL BE MINIMUM 3/4".
7. IN AREAS WHERE THERE ARE OVERHEAD BRIDGE CRANES, HOISTS, ETC., NO CONDUITS SHALL BE RUN OVERHEAD THAT WILL INTERFERE WITH THE OPERATION OF THE EQUIPMENT.
8. WIRE AND CONDUIT SIZES GIVEN ARE MINIMUM SIZES, WIRE AND CONDUIT SIZES MAY BE INCREASED AS REQUIRED BY CONTRACTOR BUT IN NO CASE SHALL BE SMALLER THAN THE DESIGNATED SIZES NOTED IN THE DRAWINGS AND SPECIFICATIONS. IF WIRE SIZES ARE INCREASED, INCREASE CONDUIT SIZES ACCORDINGLY TO COMPLY WITH THE NATIONAL ELECTRIC CODE.
9. INSTALL CHANNEL BETWEEN STRUCTURAL SUPPORT BEAMS OF PLATFORMS TO SUPPORT LUMINAIRES, JUNCTION BOXES, ELECTRICAL DEVICES, AND/OR DETECTORS.
10. THE INFORMATION SHOWN ON THE FOLLOWING DRAWINGS HAS BEEN TAKEN FROM PREVIOUS PLAN DOCUMENTS. ACTUAL CONSTRUCTION OF FACILITIES MAY VARY FROM THAT SHOWN. CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFYING ACTUAL CONDITIONS.
11. THIS IS A STANDARD LEGEND SHEET, SOME SYMBOLS MAY APPEAR ON THIS DRAWING AND NOT ON THE PLANS.
12. FOR ABBREVIATIONS OF OTHER DIVISIONS, SEE OTHER LEGENDS.

DRAWING INDEX

Table with columns SHEET, DRAWING, TITLE. Row 1: 1, E-1, ELECTRICAL LEGEND. Row 2: 2, E-2, ELECTRICAL SITE PLAN AND DETAILS. Row 3: 3, E-3, ELECTRICAL ONE-LINE AND CONTROL PANEL MOUNTING.

ABBREVIATIONS

Table of abbreviations: A AMPERES, AA AIR TO AIR, AF AMP FRAME, AFF ABOVE FINISHED FLOOR, AFG ABOVE FINISHED GRADE, AM AMP-METER, ANLG ANALOG, ATS AUTOMATIC TRANSFER SWITCH, BC BARE COPPER, BFG BELOW FINISHED GRADE, BRKR BREAKER, C CONDUIT, CB CIRCUIT BREAKER, CCTV CLOSED CIRCUIT TV, CKT CIRCUIT, CP CONTROL PANEL, CPT CONTROL POWER TRANSFORMER, CR CONTROL RELAY, CRS COATED RIGID STEEL (CONDUIT), CS CURRENT SWITCH, CONTROL STATION, CT CURRENT TRANSFORMER, DC DIRECT CURRENT, DCC DISTRIBUTION CONTROL CENTER, DH DEHUMIDIFIER, DISC DISCRETE, DPMI DIGITAL POWER METER, EXST EXISTING, FCV FLOW CONTROL VALVE, FDR FEEDER, F FUSE, FE FLOW ELEMENT, FLR FLOOR, FLUOR FLUORESCENT, FR FORWARD-REVERSE, FS FLOW SWITCH, FT FLOW TRANSMITTER, FUT FUTURE, FV FLOW VALVE, FVNR FULL VOLTAGE NON-REVERSING, FVR FULL VOLTAGE REVERSING, G GROUND, GALV GALVANIZED, GDS GENERATOR DOCKING STATION, GFCI GROUND FAULT CIRCUIT INTERRUPTER, GFR GROUND FAULT RELAY, GND GROUND, HH HANDHOLE, HO HAND-OFF, HOA HAND-OFF-AUTO, HOAR HAND-OFF-AUTO-REMOTE, HOR HAND-OFF-REMOTE, HP HORSEPOWER, HS HAND SWITCH, IC INTERRUPTING CAPACITY, INCAND INCANDESCENT, INST INSTANTANEOUS, J, J-BOX JUNCTION BOX, K KEY INTERLOCK, L LIGHTING CONTACTOR, LOW SPEED, LP LIGHTING PANELBOARD, LOS LOCKOUT STOP PUSHBUTTON, LR LATCHING RELAY, LS LIMIT SWITCH, LEVEL SWITCH, LT LEVEL TRANSMITTER, LT FLEX LIQUID TIGHT FLEX (CONDUIT), LTS LIGHTS, M MAGNETIC CONTACTOR COIL, MCC MOTOR CONTROL CENTER, MD MOTORIZED DAMPER, MH MANHOLE, MLO MAIN LUGS ONLY, MS MOTOR STARTER, MSC MANUFACTURER SUPPLIED CABLE, MTD MOUNTED, N NEUTRAL, N/A NOT APPLICABLE, NC NORMALLY CLOSED, NEC NATIONAL ELECTRIC CODE, NO NORMALLY OPEN, NP NAMEPLATE, OCA ON CENTER, OPEN-CLOSE, OCA OPEN-CLOSE-AUTO, OH OVERHEAD DOOR, OHDO OVERHEAD DOOR OPENER, OL OVERLOAD RELAY, OO ON-OFF, OOA ON-OFF-AUTO, PB PULL BOX, PUSH BUTTON, PP POWER PANELBOARD, PC PHOTOCELL, PH PHASE, PLC PROGRAMMABLE LOGIC CONTROLLER, PMP POWER MONITOR PANEL, PMR PHASE MONITOR RELAY, PNL PANEL, PR PAIR, PS PRESSURE SWITCH, PT POTENTIAL TRANSFORMER, PRESSURE TRANSMITTER, PVC POLYVINYL CHLORIDE (CONDUIT), PWR POWER, RCPT RECEPTACLE, REQD REQUIRED, RGS RIGID GALVANIZED STEEL (CONDUIT), RS RIGID STEEL (CONDUIT), RST RESET TIMER, RVAT REDUCED VOLTAGE AUTOTRANSFORMER, RVNR REDUCED VOLTAGE NON-REVERSING, SA SURGE ARRESTOR, SCCR SHORT CIRCUIT CURRENT RATING, S/N SOLID NEUTRAL, SPD SPEED, SV SOLENOID VALVE, SW SWITCH, T THERMOSTAT, TC TIME CLOSE, TD TEMPERATURE DETECTOR RELAY, TDR TIME DELAY RELAY, TJB TERMINAL JUNCTION BOX, TO TIME OPEN, TS TEMPERATURE SWITCH, TST TWISTED SHIELDED PAIR, TT TEMPERATURE TRANSMITTER, TYP TYPICAL, UH UNIT HEATER, UPS UNINTERRUPTIBLE POWER SUPPLY, V VOLT, VC VALVE CONTROL, VM VOLTMETER, W WATT, WM WATTMETER, WP WEATHERPROOF, XFMR TRANSFORMER, XP EXPLOSION PROOF.

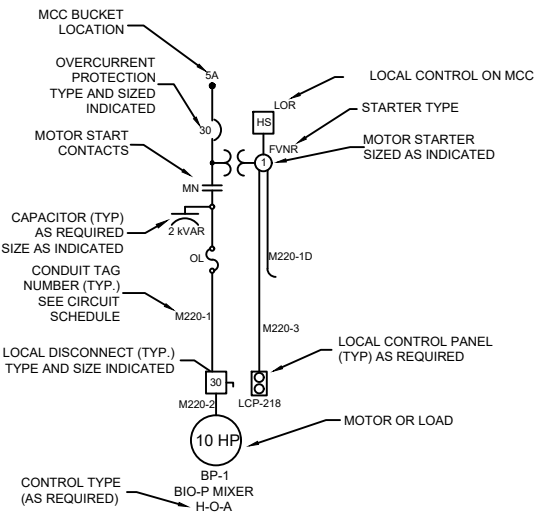
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Print Name:
Signature:
Date:
License #

integrated technology ENGINEERING, INC.
Rochester, Minn.
507-282-5736
CITY OF CANNON FALLS, MN
3RD STREET LIFT STATION
ELECTRICAL LEGEND

DRAWN BY: R.F.
APPROVED: R.F.
DATE: 3/9/2023
PROJECT NO: 9574
SCALE: N/A

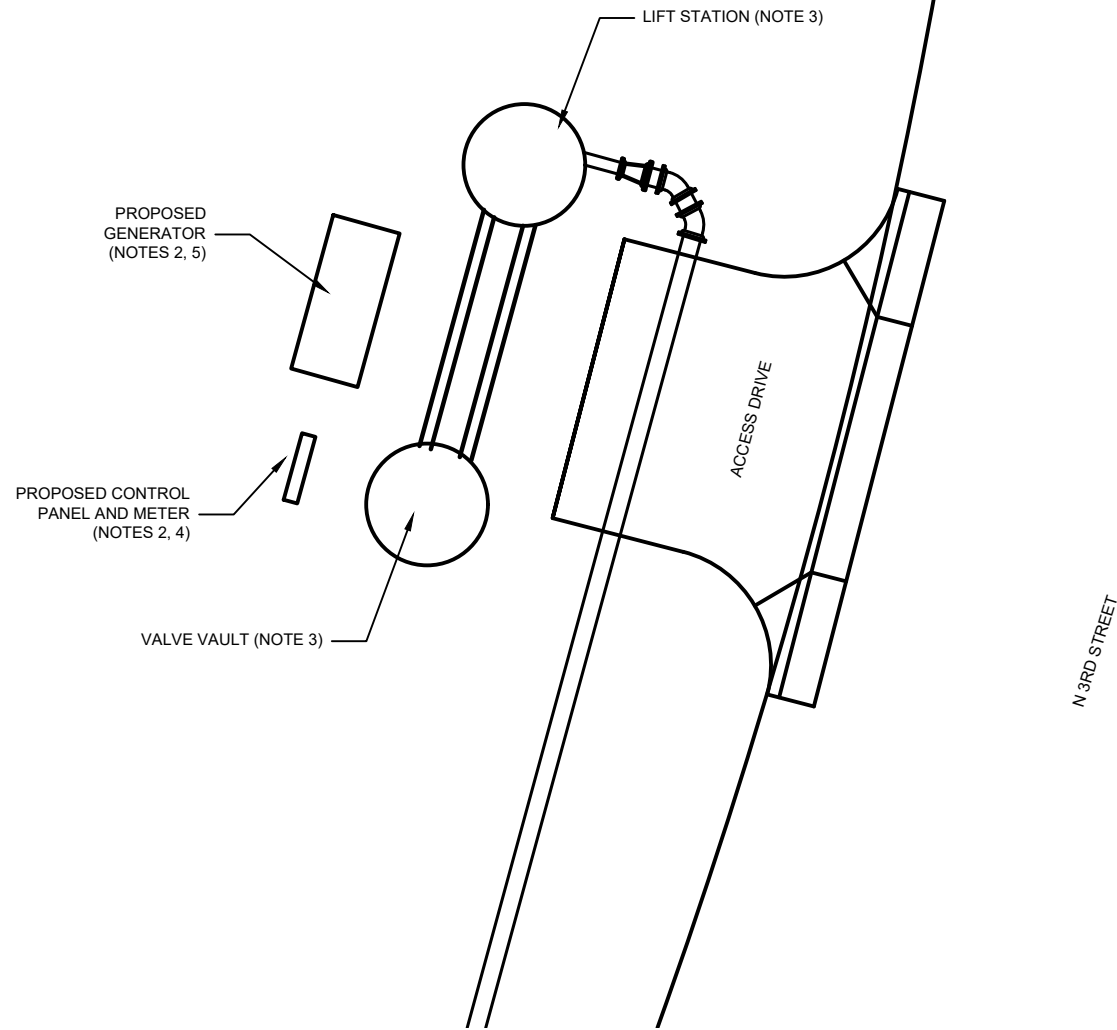
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SHEET
1 OF 3



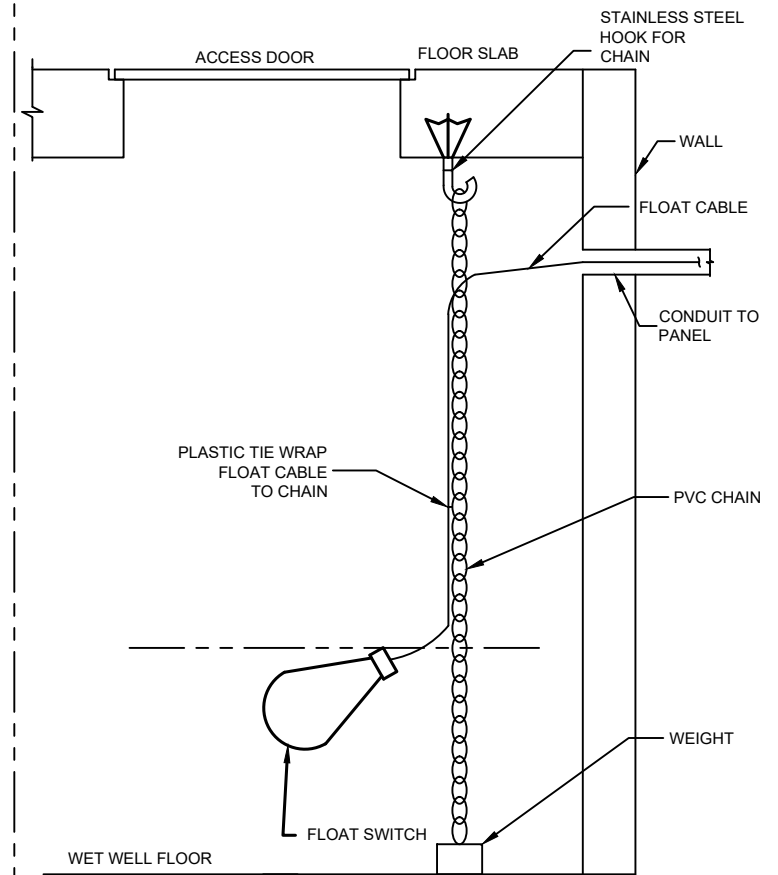
ELECTRICAL ONE-LINE SYMBOL KEY

**NOTES:**

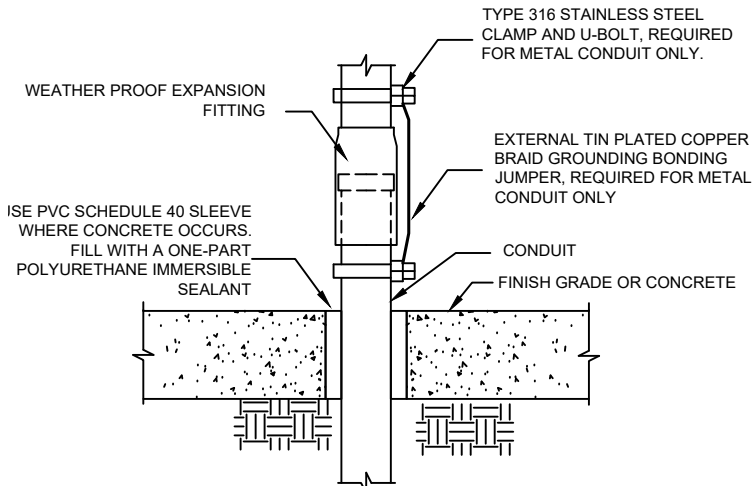
- CONTRACTOR SHALL FIELD VERIFY ALL EQUIPMENT LOCATIONS AND NOTED SCALES. EQUIPMENT SIZES AND LOCATIONS ARE APPROXIMATE. SEE OVERALL SITE PLAN DRAWING FOR LOCATIONS, CONTOURS, DIMENSIONS AND SCALES. CONTRACTOR TO FIELD DETERMINE FINAL EQUIPMENT LAYOUT AND LOCATION BASED ON PROVIDED EQUIPMENT AND INSTALLATION REQUIREMENTS.
- LOCATION AND LAYOUT OF EQUIPMENT PROVIDED AS RECOMMENDATION ONLY. ACTUAL EQUIPMENT LOCATION AND LAYOUT TO BE FIELD DETERMINED BY CONTRACTOR AND ENGINEER. PROVIDE MOUNTING STRUCTURE FOR EQUIPMENT MOUNTING. SEE DETAILS FOR MOUNTING STRUCTURE.
- SEE SPECIFICATION SECTION 16000 FOR AREA CLASSIFICATION WITHIN AND AROUND STRUCTURES. SELECTION AND INSTALLATION OF COMPONENTS SHALL MEET CLASSIFICATION REQUIREMENTS.
- NEW 480 VOLT 3 PHASE ELECTRICAL SERVICE TO BE INSTALLED. COORDINATE WITH UTILITY FOR ALL REQUIREMENTS AND LOCATION OF SERVICE CONNECTION POINT. INCOMING SERVICE TO COMPLY WITH ELECTRIC UTILITY SERVICE RULES. COORDINATE WITH UTILITY ON METERING LOCATION.
- PROVIDE AND INSTALL GENERATOR AND GENERATOR PAD. SEE SHEET E3 FOR PAD DETAILS AND CONSTRUCTION REQUIREMENTS. PAD SHALL ACCOMMODATE FUTURE GENERATOR. EXTEND AND CONNECT NATURAL GAS SERVICE TO GENERATOR. INSTALL SHUTOFF ISOLATION VALVE AT GENERATOR. NATURAL GAS SERVICE SHALL BE SIZED TO ACCOMMODATE A FUTURE GENERATOR FUEL CONNECTION SIZE OF UP TO 1-1/2" AND FUEL CONSUMPTION OF APPROXIMATELY 1700 CFH.



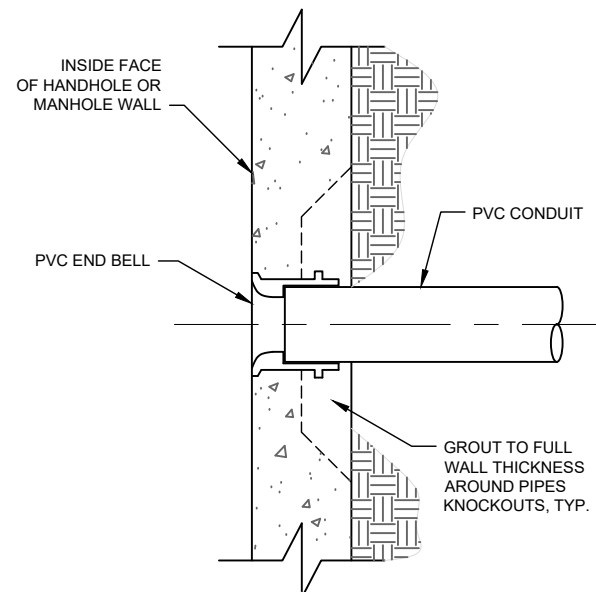
**ELECTRICAL SITE PLAN**  
SCALE: 3/16" = 1'



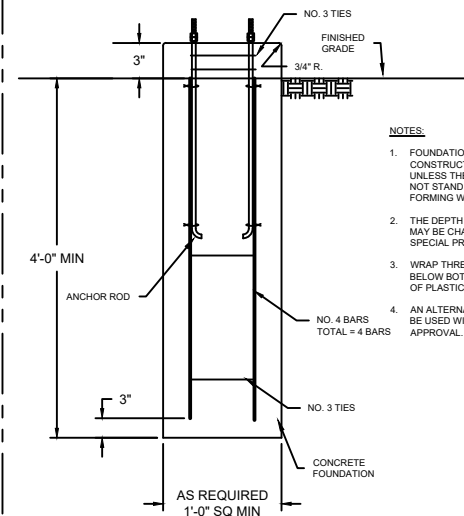
**FLOAT SWITCH INSTALLATION DETAIL**



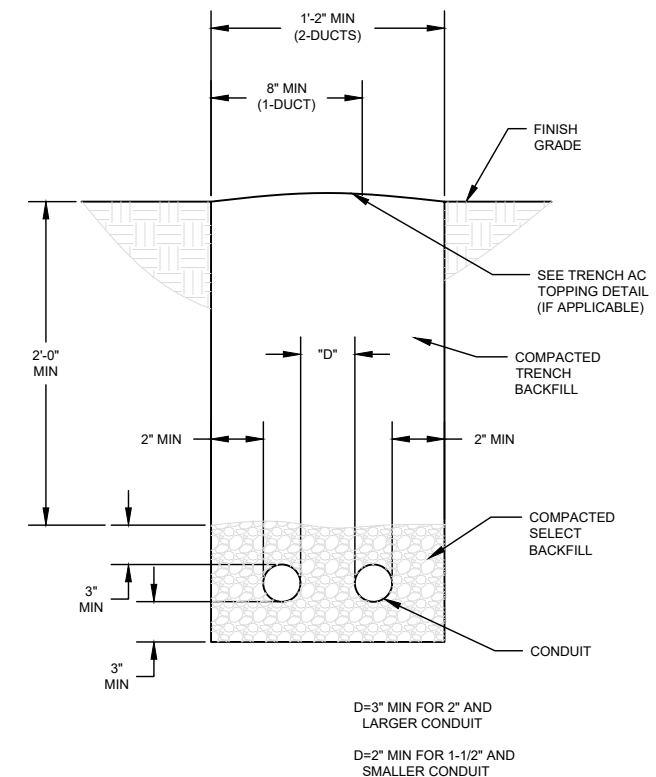
**CONDUIT EXPANSION FITTING DETAIL**



**CONDUIT MANHOLE ENTRANCE DETAIL**



**ENCLOSURE SUPPORT BASE DETAIL**



**TRENCH AND CONDUIT PLACEMENT DETAIL**

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IF NOT ONE-HALF INCH  
ON THIS SHEET, ADJUST  
SCALES ACCORDINGLY.

NO.	BY	DATE	REVISIONS

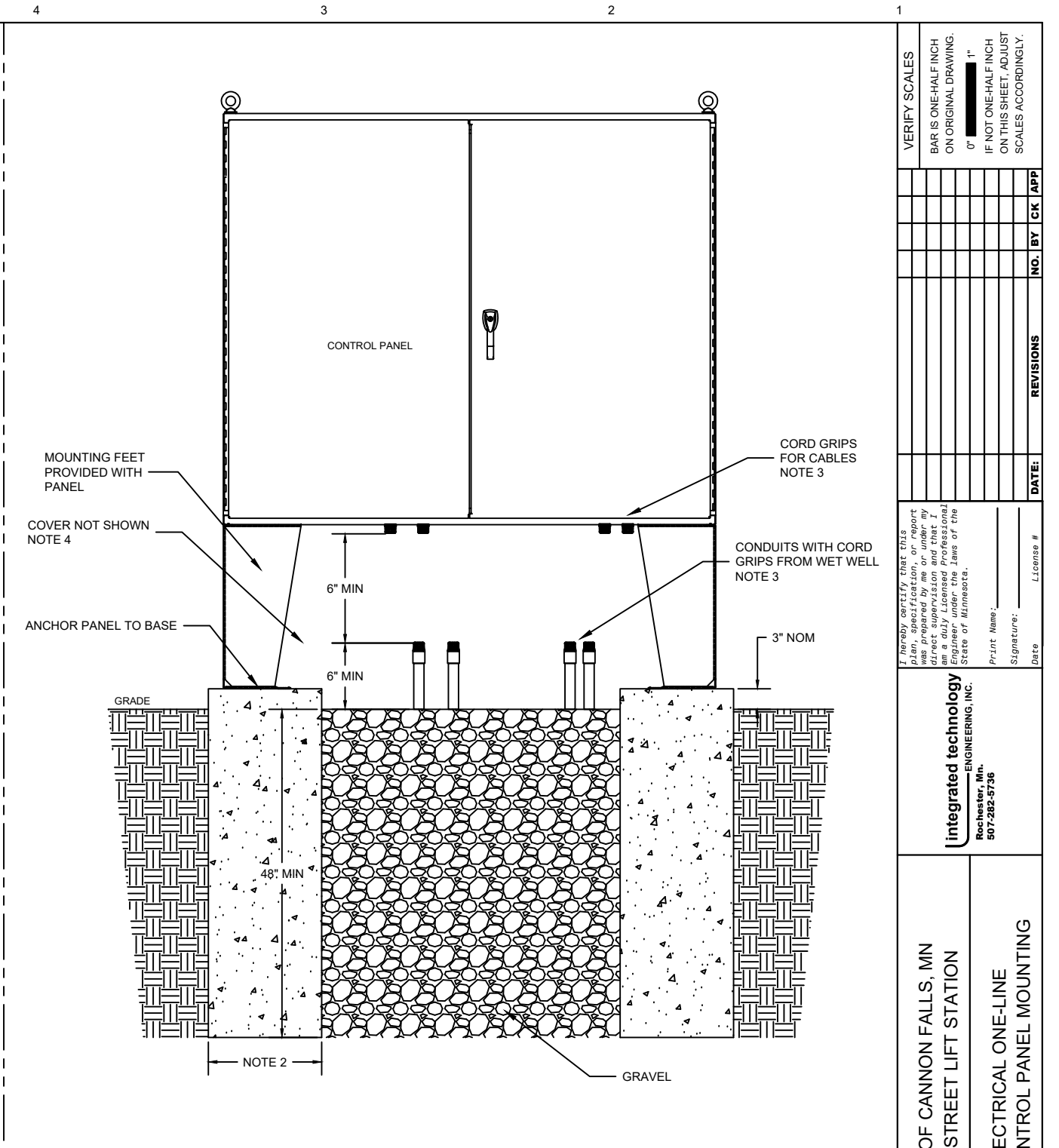
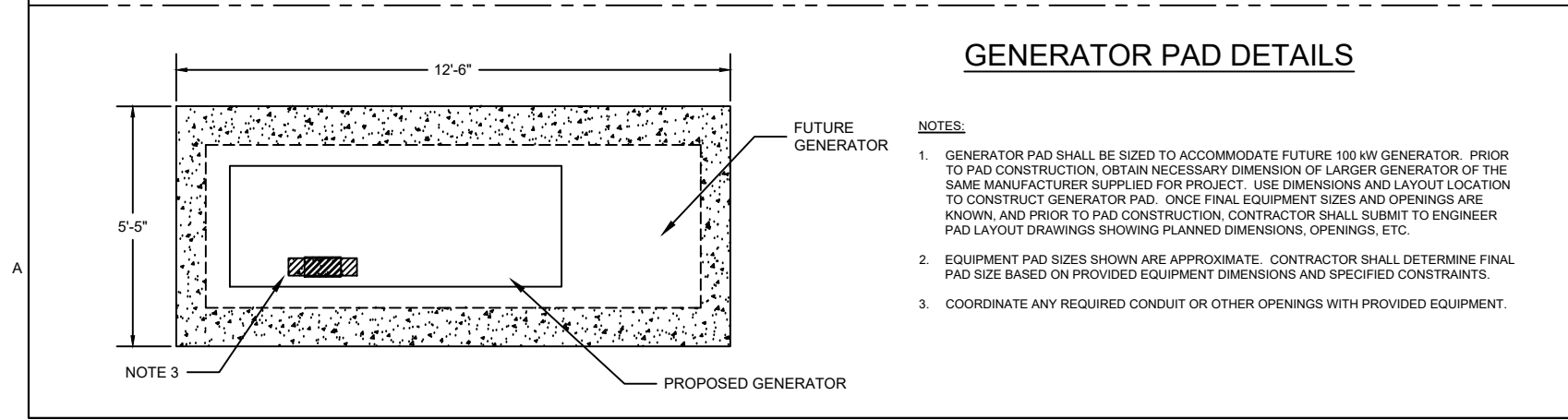
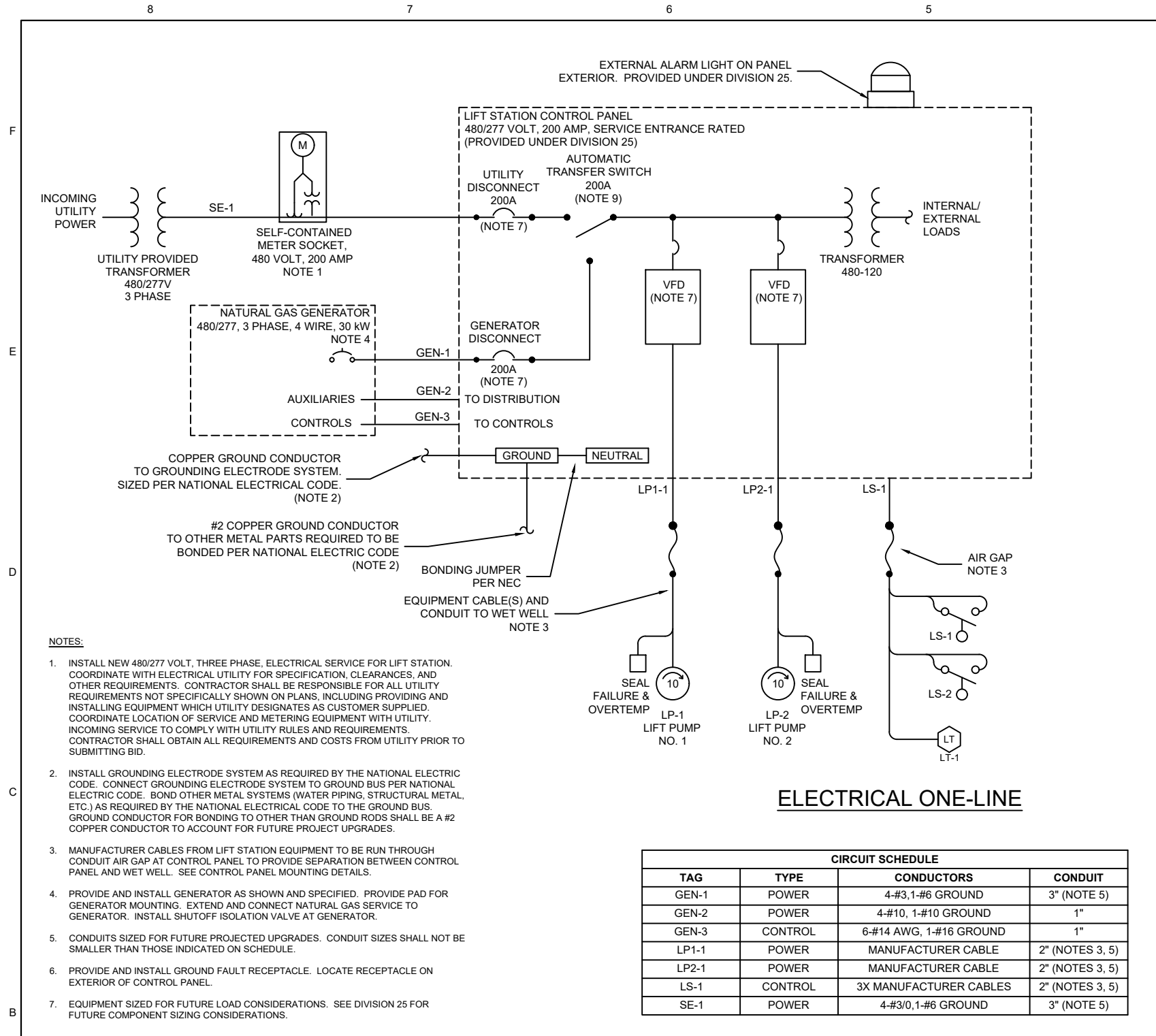
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Print Name: \_\_\_\_\_  
Signature: \_\_\_\_\_  
Date: \_\_\_\_\_  
License # \_\_\_\_\_

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CITY OF CANNON FALLS, MN  
3RD STREET LIFT STATION  
ELECTRICAL SITE PLAN  
AND DETAILS

DRAWN BY: R.F.  
APPROVED: R.F.  
DATE: 3/9/2023  
PROJECT NO: 9574  
SCALE: N/A

DRAWING  
E-2  
SHEET  
2 OF 3



**NOTES:**

- INSTALL NEW 480/277 VOLT, THREE PHASE, ELECTRICAL SERVICE FOR LIFT STATION. COORDINATE WITH ELECTRICAL UTILITY FOR SPECIFICATION, CLEARANCES, AND OTHER REQUIREMENTS. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL UTILITY REQUIREMENTS NOT SPECIFICALLY SHOWN ON PLANS, INCLUDING PROVIDING AND INSTALLING EQUIPMENT WHICH UTILITY DESIGNATES AS CUSTOMER SUPPLIED. COORDINATE LOCATION OF SERVICE AND METERING EQUIPMENT WITH UTILITY. INCOMING SERVICE TO COMPLY WITH UTILITY RULES AND REQUIREMENTS. CONTRACTOR SHALL OBTAIN ALL REQUIREMENTS AND COSTS FROM UTILITY PRIOR TO SUBMITTING BID.
- INSTALL GROUNDING ELECTRODE SYSTEM AS REQUIRED BY THE NATIONAL ELECTRIC CODE. CONNECT GROUNDING ELECTRODE SYSTEM TO GROUND BUS PER NATIONAL ELECTRIC CODE. BOND OTHER METAL SYSTEMS (WATER PIPING, STRUCTURAL METAL, ETC.) AS REQUIRED BY THE NATIONAL ELECTRIC CODE TO THE GROUND BUS. GROUND CONDUCTOR FOR BONDING TO OTHER THAN GROUND RODS SHALL BE A #2 COPPER CONDUCTOR TO ACCOUNT FOR FUTURE PROJECT UPGRADES.
- MANUFACTURER CABLES FROM LIFT STATION EQUIPMENT TO BE RUN THROUGH CONDUIT AIR GAP AT CONTROL PANEL TO PROVIDE SEPARATION BETWEEN CONTROL PANEL AND WET WELL. SEE CONTROL PANEL MOUNTING DETAILS.
- PROVIDE AND INSTALL GENERATOR AS SHOWN AND SPECIFIED. PROVIDE PAD FOR GENERATOR MOUNTING. EXTEND AND CONNECT NATURAL GAS SERVICE TO GENERATOR. INSTALL SHUTOFF ISOLATION VALVE AT GENERATOR.
- CONDUITS SIZED FOR FUTURE PROJECTED UPGRADES. CONDUIT SIZES SHALL NOT BE SMALLER THAN THOSE INDICATED ON SCHEDULE.
- PROVIDE AND INSTALL GROUND FAULT RECEPTACLE. LOCATE RECEPTACLE ON EXTERIOR OF CONTROL PANEL.
- EQUIPMENT SIZED FOR FUTURE LOAD CONSIDERATIONS. SEE DIVISION 25 FOR FUTURE COMPONENT SIZING CONSIDERATIONS.

**CITY OF CANNON FALLS, MN  
3RD STREET LIFT STATION**

**ELECTRICAL ONE-LINE  
AND CONTROL PANEL MOUNTING**

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0" 1"  
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**DRAWN BY:** R.F.  
**APPROVED:** R.F.  
**DATE:** 3/9/2023  
**PROJECT NO:** 9574  
**SCALE:** N/A

**DRAWING  
E-3  
SHEET  
3 OF 3**