

# RENVILLE COUNTY COUNTY DITCH No. 77 PUMP REPAIR

HAWK CREEK TWP., MINNESOTA

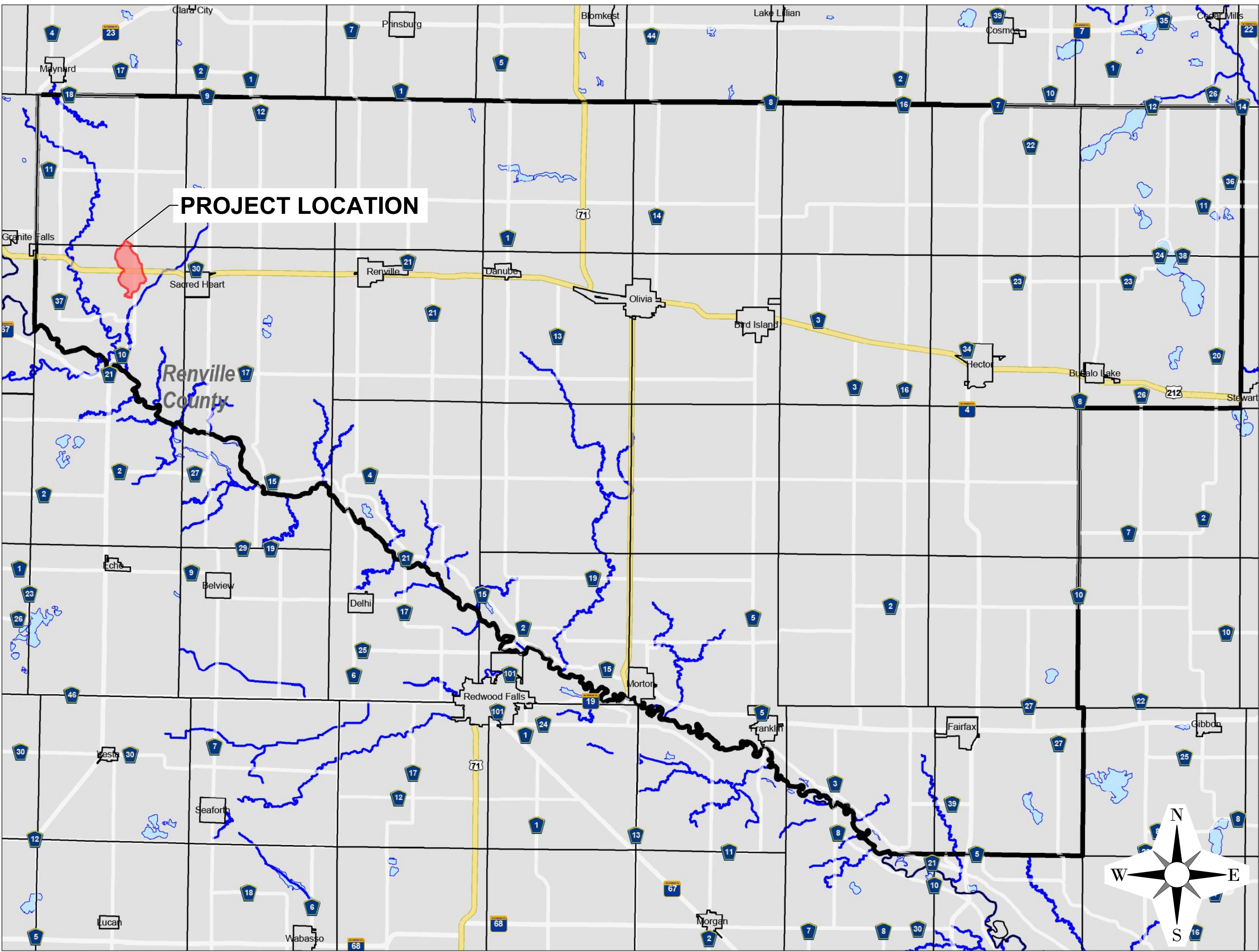
CONSTRUCTION PLANS

ISG PROJECT # 14-16717



## LEGEND

EXISTING	
	WATERSHED BOUNDARY
	CITY LIMITS
	SECTION LINE
	QUARTER SECTION LINE
	RIGHT OF WAY LINE
	PROPERTY / LOTLINE
	EASEMENT LINE
	ACCESS CONTROL
	WATER EDGE
	WETLAND BOUNDARY
	FENCE LINE
	EXISTING OPEN DITCH
	CULVERT
	TILE
	PRIVATE TILE
	WATER
	GAS
	OVERHEAD ELECTRIC
	UNDERGROUND ELECTRIC
	UNDERGROUND TELEPHONE
	UNDERGROUND TV
	OVERHEAD UTILITY
	UNDERGROUND UTILITY
	UNDERGROUND FIBER OPTIC
	CONTOUR (MAJOR)
	CONTOUR (MINOR)
	DECIDUOUS TREE
	CONIFEROUS TREE
	TREE LINE
	DROP INTAKE
	HYDRANT
	POWER POLE
PROPOSED	
	EASEMENT
	PROPOSED OPEN DITCH
	OPEN DITCH REPAIR
	CULVERT (RCP)
	CULVERT (CMP)
	CULVERT (HDPE)
	TILE
	TILE (PIPE WIDTH)
	PRIVATE TILE
	WATER
	GAS
	OVERHEAD ELECTRIC
	UNDERGROUND ELECTRIC
	UNDERGROUND TV
	CONTOUR (MAJOR)
	CONTOUR (MINOR)
	DROP INTAKE
	SLOUGH REPAIR
	SPOIL PLACEMENT
	TREE CLEARING
	REMOVE TREE
	BUFFER



LOCATION MAP

## SHEET INDEX

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- 9 SITE ELECTRIC PLAN (BY OTHERS)

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CHARLES J. BRANDEL

*Charles J. Brandel*

DATE: 10/10/24 LIC. NO. 43359

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PROJECT

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HAWK CREEK TWP. MINNESOTA

REVISION SCHEDULE		
DATE	DESCRIPTION	BY

PROJECT NO.	14-16717
FILE NAME	16717 TITLE
DRAWN BY	JAT
DESIGNED BY	JMW
REVIEWED BY	CJB
ORIGINAL ISSUE DATE	10/10/24
CLIENT PROJECT NO.	-

TITLE

**TITLE**

SHEET

**1**

OF 9

## PROJECT INDEX:

### OWNER:

HAWK CREEK TOWNSHIP  
MARK TOLLEFSON  
15447 840TH AVENUE  
SACRED HEART, MN 56285

### PROJECT ADDRESS / LOCATION:

SECTION: 11

HAWK CREEK TWP,  
RENVILLE COUNTY  
MINNESOTA

### MANAGING OFFICE:

MANKATO OFFICE  
115 EAST HICKORY STREET  
SUITE 300  
MANKATO, MN 56001  
PHONE: 507.387.6651

PROJECT MANAGER: CHUCK BRANDEL  
EMAIL: CHUCK.BRANDEL@ISGINC.COM

### SPECIFICATIONS REFERENCE

ALL CONSTRUCTION SHALL COMPLY WITH RENVILLE COUNTY'S  
REQUIREMENTS AND MNDOT STANDARD SPECIFICATIONS FOR  
CONSTRUCTION, 2020 EDITION, THE STANDARD SPECIFICATIONS FOR  
SANITARY SEWER, STORM DRAIN AND WATERMAIN AS PROPOSED BY THE  
CITY ENGINEERS ASSOCIATION OF MINNESOTA, 2023 EDITION, AND THE  
CURRENT VERSION OF THE MINNESOTA STATE PLUMBING CODE UNLESS  
DIRECTED OTHERWISE.

### PROJECT DATUM

HORIZONTAL COORDINATES HAVE BEEN REFERENCED TO THE NORTH  
AMERICAN DATUM OF 1983 (NAD83), 1996 ADJUSTMENT (NAD83(1996))  
ON THE RENVILLE COUNTY COORDINATE SYSTEM, IN U.S. SURVEY FEET.

ELEVATIONS HAVE BEEN REFERENCED TO THE NORTH AMERICAN  
VERTICAL DATUM OF 1988 (NAVD 88).  
RTK GPS METHODS WERE USED TO ESTABLISH HORIZONTAL AND  
VERTICAL COORDINATES FOR THIS PROJECT.

### B.M. ELEVATION=1048.46

MnDOT GEODETIC MARKER "WANG

MNDOT".

### TOPOGRAPHIC SURVEY

THIS PROJECT'S TOPOGRAPHIC SURVEY CONSISTS  
OF DATA COLLECTED IN FEBRUARY 2017 BY ISG.



GENERAL PROJECT NOTES:

1. DURING CONSTRUCTION, CONTRACTOR SHALL MAINTAIN A DRAINAGE OUTLET FOR THE ENTIRE CD 77 PROJECT AREA.
2. ALL PIPE DIMENSIONS REFERENCED IN THE PLANS REFER TO THE INSIDE DIAMETER.
3. ALL ROAD SIGNAGE, COORDINATION, AND TRAFFIC CONTROL SIGNAGE SHALL BE INCIDENTAL TO ROAD RESTORATIONS AND SHALL CONFORM TO LOCAL ROAD AUTHORITY PERMITS AND REGULATIONS.
4. THE CONTRACTOR SHALL SUBMIT A WINTER CONSTRUCTION PLAN FOR SITE STABILIZATION, EROSION PREVENTION, AND SEDIMENT CONTROL IF THE PROJECT IS NOT COMPLETED BY OCTOBER 15 OF THE GIVEN CONSTRUCTION SEASON, UNLESS APPROVED BY THE ENGINEER. THE PLAN SHALL BE DEVELOPED TO SPECIFICALLY ADDRESS SHUTDOWN PROCEDURES OR ACTIVE CONSTRUCTION PLANS.
5. ALL DEWATERING FOR THE PROJECT IS INCIDENTAL.
6. PRODUCT MATERIAL SHALL BE AS SPECIFIED IN THE PLANS. IF NO SPECIFIC MATERIAL IS CALLED OUT, MATERIAL SHALL CONFORM TO THE APPROVED PRODUCT LIST IN THE APPROPRIATE SPECIFICATION.
7. ALL EFFORTS SHALL BE MADE DURING CONSTRUCTION TO SEPARATE SOIL TYPES. BACKFILL SHALL BE COMPACTED PRIOR TO PLACEMENT OF TOPSOIL. EXCEPT THE TOP TWO (2) FEET, FOR WHICH COMPACTION SHALL BE MINIMIZED TO THE EXTENT POSSIBLE. TOPSOIL SHALL BE PLACED TO A MINIMUM DEPTH OF 18", OR UNIFORM TO THE TOPSOIL DEPTH OF THE SURROUNDING AREA UNLESS SPECIFIED ELSEWHERE IN THE PLANS. EXCAVATED SPOILS SHALL BE SPREAD EVENLY IN CONSTRUCTION AREA AS TO NOT IMPEDE DRAINAGE. ALL EFFORTS SHALL BE MADE TO KEEP TOPSOIL ON TOP AND SEPARATED. NO TOPSOIL SHALL BE PLACED IN THE TRENCH BELOW 2' FROM EXISTING GROUND UNLESS APPROVED BY THE ENGINEER.
8. ALL SPOIL LEVELING, GRADING, AND RESTORATION OF DISTURBED AREAS SHALL BE IN ACCORDANCE TO THE CONTRACT DOCUMENTS AND SHALL BE INCIDENTAL TO THE WORK UNLESS OTHERWISE SPECIFIED.
9. AGGREGATE SURFACE SHALL BE INCIDENTAL TO CROSSING OR ROAD RESTORATION.
10. RIPRAP QUANTITIES ARE ESTIMATED. ADDITIONAL QUANTITY MAY BE REQUIRED BY THE ENGINEER. ALL RIPRAP QUANTITIES SHALL BE PAID BY THE CUBIC YARD INSTALLED, UNLESS RIPRAP IS INCIDENTAL TO A SEPARATE PAY ITEM. ALL EXCAVATION AND GEOTEXTILE FABRIC SHALL BE INCIDENTAL TO RESPECTIVE BID ITEM.
11. EXISTING TILES THAT ARE DISTURBED DURING CONSTRUCTION SHALL BE REPAIRED AT NO COST TO THE PROJECT, UNLESS OTHERWISE SPECIFIED.
12. ALL SIGNS AND MARKERS SHALL BE PROTECTED OR REMOVED AND REINSTALLED AT NO ADDITIONAL COST TO THE PROJECT. UNLESS OTHERWISE SPECIFIED, THE ENGINEER SHALL BE NOTIFIED OF ANY SIGNS OR MARKERS IN POOR CONDITION PRIOR TO REMOVAL.
13. THE DRAINAGE AUTHORITY TAKES NO AUTHORITY OVER OR RESPONSIBILITY FOR ANY AND ALL PRIVATE TILE SHOWN ON THESE PLANS. PRIVATE TILE LOCATIONS HAVE BEEN SUPPLIED BY LANDOWNERS FOR USE BY THE CONTRACTOR.
14. THE CONTRACTOR SHALL PAY ALL DAMAGES OUTSIDE OF THE AGREED UPON EASEMENT IN AN AMOUNT OF \$1,200 PER ACRE OF DISTURBANCE, AS MEASURED BY THE ENGINEER.
15. ALL DUAL WALL HDPE AGRICULTURAL TILE SHALL BE FULLY ENCASED IN FOUNDATION MATERIAL, INCIDENTAL TO CONSTRUCTION.

TOTAL ESTIMATED QUANTITIES			
Item Code	Item	Unit	Estimated Quantity
01.7113.1000.01	MOBILIZATION	LS	1
25.0350.3131.01	PVC DISCHARGE PIPES	LS	1
31.2316.1000.05	TOPSOIL STRIP	CY	5832
31.2316.1000.07	CONSTRUCT CLAY CORE BERM	CY	1762
31.3700.1000.07	CLASS II RIPRAP WITH GEOTEXTILE FABRIC	CY	16.5
31.3700.1000.07	CLASS III RIPRAP WITH GEOTEXTILE FABRIC	CY	12
32.9219.1000.04	SEED MIX 25-142 W/MNDOT EROSION CONTROL BLANKET CATEGORY 20 BERM SEEDING	SY	532
32.9219.1000.10	(SEED MIX: 25-142 WITH TYPE 3 MULCH)	AC	0.1
33.0513.1000.02	GRANULAR FOUNDATION MATERIAL	EA	1
33.0513.1000.02	PUMP STRUCTURE	EA	1
33.4510.1000.03	24-INCH AGRICULTURAL TILE	LF	100
33.4510.1000.07	GRANULAR PIPE FOUNDATION	CY	8
33.4510.1000.10	TILE INVESTIGATION	HR	1
34.0100.1000.07	RODENT GUARD ROCK TRENCH	LF	300
33.0513.1000.02	96-INCH PRECAST CONCRETE STRUCTURE	LS	1

SITE BALANCE: Renville 77			Berm
On Site Clay Borrow		+	2114 CY
Construct Clay Core Berm		-	1762 CY
Topsoil Strip		+	5832 CY
Topsoil Redress		-	5832 CY
Shrink/ Swell	Common Excavation Shrink		352 CY
	TOTAL:		0 CY

**\*\*Note:** A positive total indicates excess material is left after grading operations are complete. A negative total indicates a shortage of material exists. Additional calculations may be needed to determine if an adequate amount of suitable fill material is available to achieve desired grading.\*\*

EARTHWORK SUMMARY:
COMMON EXCAVATION (P)(EV): 1,762 CY
TOPSOIL STRIP INPLACE OF SPOILS (EV): 0 CY
A SHRINKAGE FACTOR OF 20% (TOPSOIL) WAS APPLIED TO ALL EXCAVATED MATERIAL WHEN DETERMINING SITE BALANCE.
NO WARRANTY IS MADE OR IMPLIED AS TO THE ACCURACY, SUFFICIENCY, OR RELIABILITY OF THE SHRINKAGE FACTORS.
THE SITE BALANCE PROVIDED ABOVE IS FOR INFORMATIONAL PURPOSES. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL QUANTITIES PROIR TO SUBMITTING A BID FOR THE PROJECT.



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PROJECT

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COUNTY DITCH  
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PUMP REPAIR

HAWK CREEK TWP. MINNESOTA

REVISION SCHEDULE		
DATE	DESCRIPTION	BY

PROJECT NO.	14-16717
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DRAWN BY	JAT
DESIGNED BY	JMW
REVIEWED BY	CJB
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TITLE

NOTES -  
QUANTITIES

SHEET

2

OF 9

ABBREVIATIONS

AC	ACRE	GA	GAUGE	PP	POLYPROPYLENE
ADD	ADDENDUM	GAL	GALLON	PSI	POUNDS PER SQUARE INCH
AGG	AGGREGATE	GPM	GALLONS PER MINUTE	PVC	POLYVINYL CHLORIDE
APPROX	APPROXIMATE	HDPE	HIGH DENSITY POLYETHYLENE	PVMT	PAVEMENT
BIT	BITUMINOUS	HORIZ	HORIZONTAL	QTY	QUANTITY
CAD	COMPUTER-AIDED DESIGN	HR	HOURL	RCP	REINFORCED CONCRETE PIPE
CFS	CUBIC FEET PER SECOND	HWL	HIGH WATER LEVEL	REBAR	REINFORCING BAR
CF	CUBIC FOOT	HWY	HIGHWAY	REM	REMOVE
CL	CENTERLINE	HYD	HYDRANT	ROW	RIGHT OF WAY
CMP	CORRUGATED METAL PIPE	I	INVERT	R/W	RIGHT OF WAY
CONC	CONCRETE	ID	INSIDE DIAMETER	SCH	SCHEDULE
CONST	CONSTRUCTION	IN	INCH	SF	SQUARE FOOT
CONT	CONTINUOUS	INV	INVERT	SPEC	SPECIFICATION
CR	COUNTY ROAD	LF	LINEAR FEET	SQ	SQUARE
CSAH	COUNTY STATE AID	LIN	LINEAR	STA	STATION
	HIGHWAY	LS	LUMP SUM	SY	SQUARE YARD
CY	CUBIC YARD	MAX	MAXIMUM	TEMP	TEMPORARY
DI	DROP INTAKE	MH	MANHOLE	THRU	THROUGH
DIA	DIAMETER	MIN	MINIMUM	TRANS	TRANSFORMER
DIM	DIMENSION	MISC	MISCELLANEOUS	TV	TELEVISION
EA	EACH	NO	NUMBER	TYP	TYPICAL
ELEC	ELECTRICAL	NTS	NOT TO SCALE	UT	UTILITY, UNDERGROUND
ELEV	ELEVATION	NWL	NORMAL WATER LEVEL	VCP	VITRIFIED CLAY PIPE
EOF	EMERGENCY OVERFLOW	OC	ON CENTER	W/O	WITHOUT
EQ	EQUAL	OCEW	ON CENTER EACH WAY	W/	WITH
EX	EXISTING	OH	OVERHEAD	YD	YARD
FDN	FOUNDATION	OHWL	ORDINARY HIGH WATER	YR	YEAR
FPM	FEET PER MINUTE	OZ	OUNCE		
FPS	FEET PER SECOND	PERF	PERFORATED		
FT	FOOT, FEET	PL	PROPERTY LINE		





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TITLE

## DETAILS

SHEET

3

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www.HallidayProducts.com  
Phone: (800) 298-1027  
Local: (407) 298-4470  
Sales@HallidayProducts.com

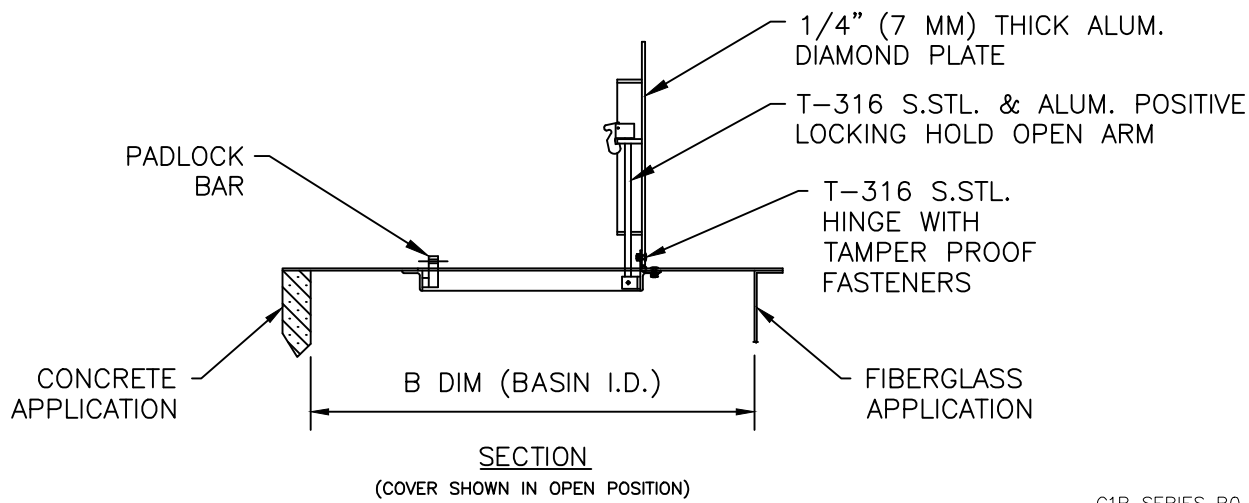
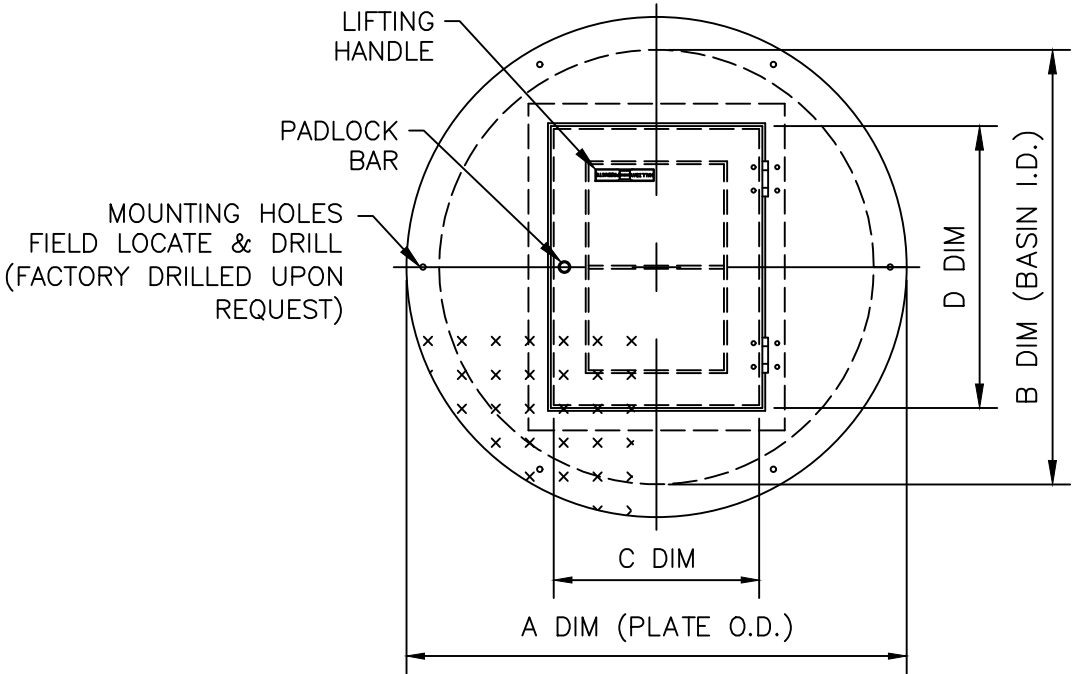
STANDARD SIZES					
QTY.	MODEL NO.	A DIM INCHES (MM)	B DIM INCHES (MM)	C DIM INCHES (MM)	D DIM INCHES (MM)
1	C1R96	96 (2438)	92 (2337)	48 (1219)	48 (1219)

### SERIES C1R ACCESS DOOR

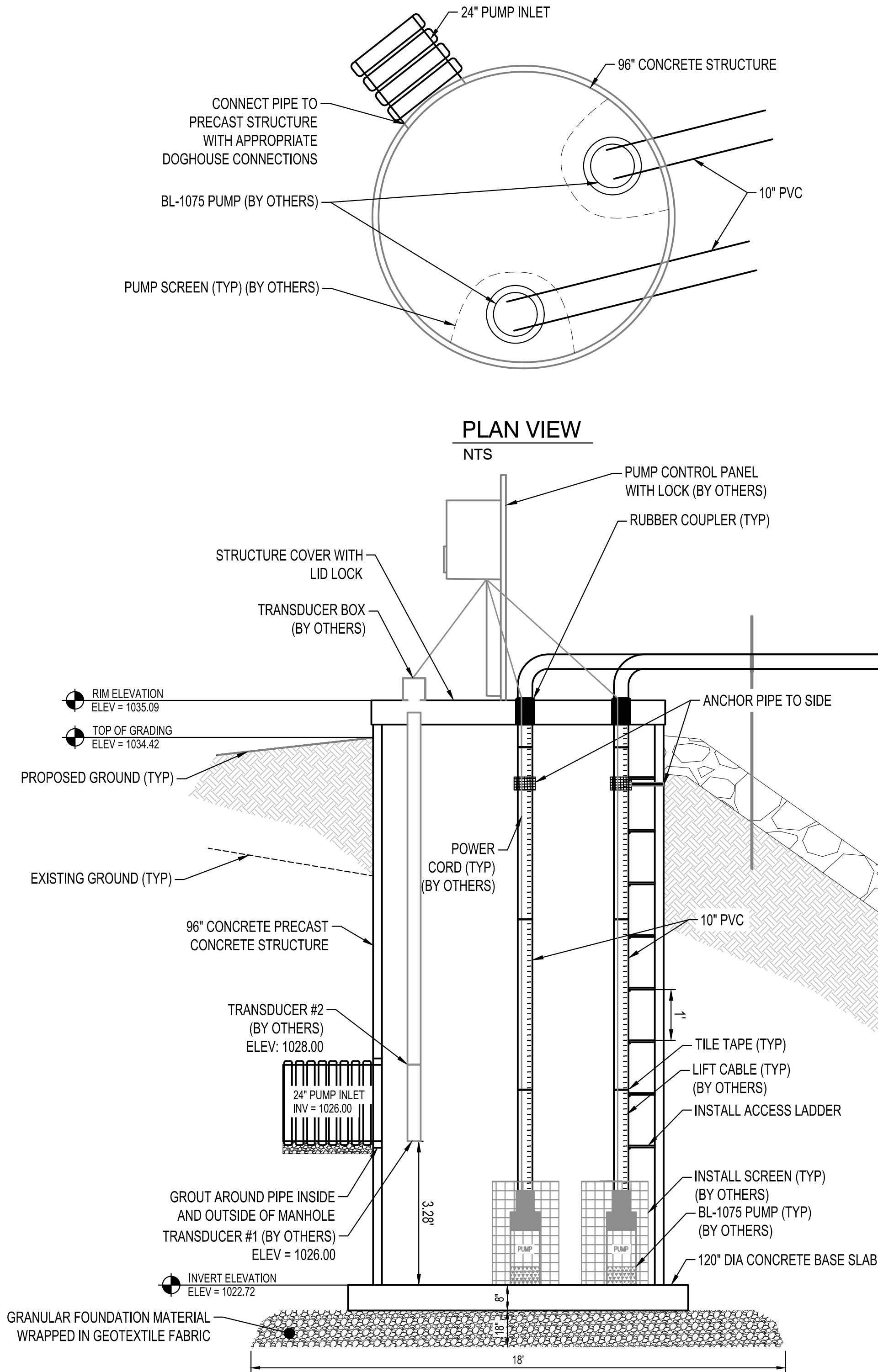
#### STANDARD FEATURES:

- 300 LBS. PER SQ. FT. LOAD RATING (1464 KG. PER SQ. METER LOAD RATING)
- SINGLE LEAF CONSTRUCTION (ADDITIONAL LEAVES OPTIONAL)
- AUTO-LOCK T-316 STAINLESS STEEL HOLD OPEN ARM WITH RELEASE HANDLE
- T-316 STAINLESS STEEL HINGES AND ATTACHING HARDWARE
- NON-CORROSIVE PADLOCK BAR
- VENT COUPLING & MOUNTING HOLES UPON REQUEST
- RECESSED LIFTING HANDLE
- LIFETIME GUARANTEE
- LARGER SIZES AVAILABLE
- ALSO AVAILABLE FOR RECTANGULAR BASINS

- NOTES:
- 1) WHEN MOUNTING ON CONCRETE ADD A MINIMUM OF 2" TO THE "A" DIMENSION TO ENSURE PROPER EDGE DISTANCE FOR ANCHOR BOLTS (ANCHORS BY OTHERS)
  - 2) C & D DIMENSIONS SIZED AS REQUIRED



C1R SERIES R0



PLAN VIEW  
NTS

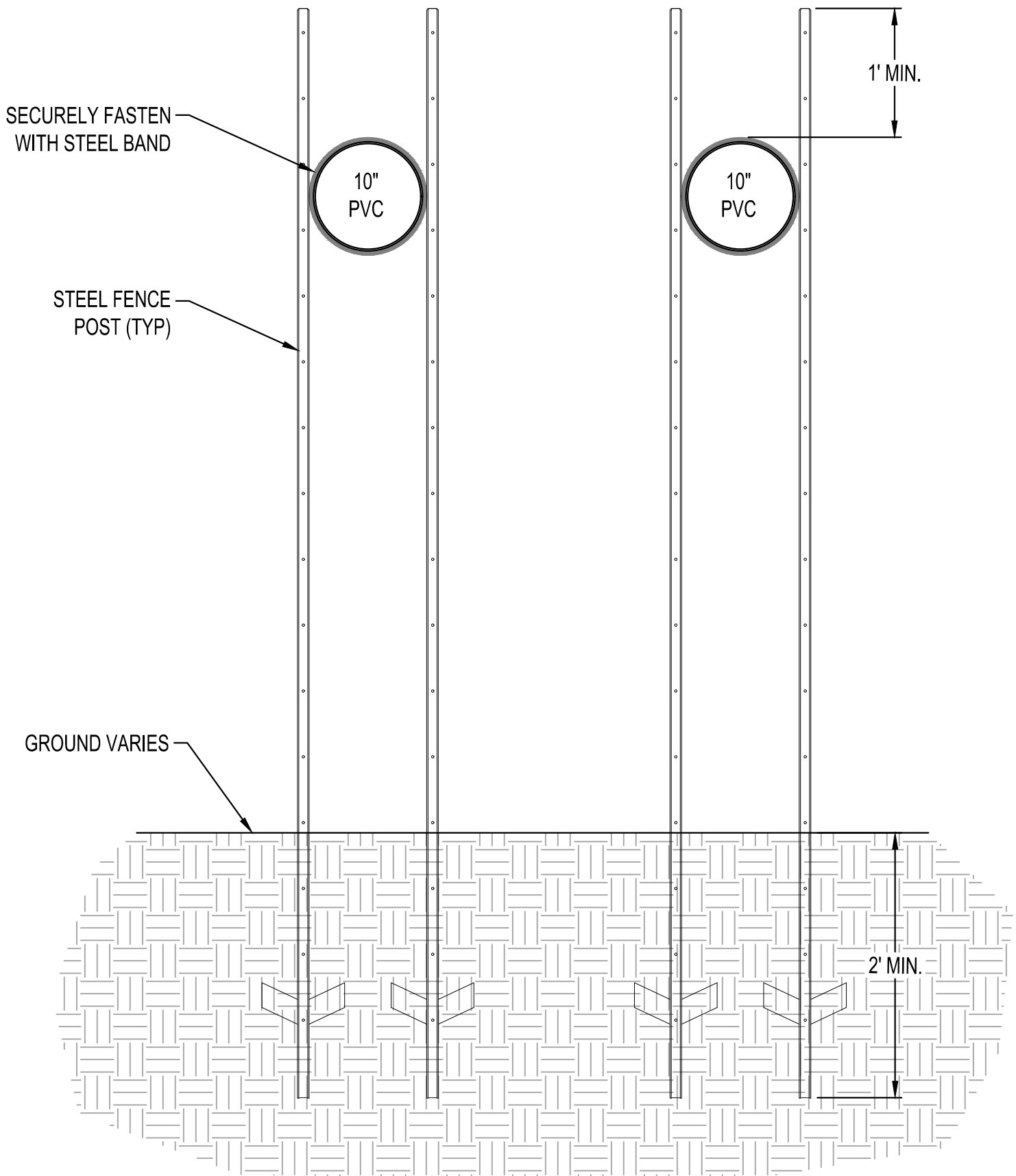
SECTION VIEW  
NTS

PUMP LIFT STATION DETAIL  
NTS

#### NOTES

1. PUMPS, PUMP AND ELECTRICAL CONTROLS, AND ELECTRICAL SERVICES SHALL BE COMPLETED BY OTHERS.
2. STRUCTURE COVER SHALL BE HALLIDAY C1R96 WITH 300 LB PSF LOAD RATING (OR APPROVED EQUAL)

BID ITEM INCIDENTALS:		
BID ITEM	UNIT	INCIDENTALS
PUMP STRUCTURE	EA	STRUCTURE, BASE SLAB, LID WITH LOCK, CUT/GROUT/FITTINGS FOR PIPE CONNECTIONS, LADDER RUNGS
PVC DISCHARGE PIPES	LS	PVC PIPES WITH FITTINGS, METAL ANCHORS, STEEL FENCE POSTS, STEEL BANDS
GRANULAR FOUNDATION MATERIALS	CY	GRANULAR MATERIALS, GEOTEXTILE FABRIC



METAL ANCHOR DETAIL  
NTS



1. BERM MATERIAL SHOULD BE PLACED TO 95% STANDARD PROCTOR COMPACTION (MAXIMUM 6" LIFTS)
2. BERM MATERIAL SHOULD BE KEYED ON ALL SIDES INTO TILL MATERIAL
3. ROCK TRENCH SHOULD CONSIST OF CLASS I BALLAST ROCK (3/4" - 4")

BERM  
NTS

## STILLING BASIN DETAIL

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HAWK CREEK TWP. MINNESOTA

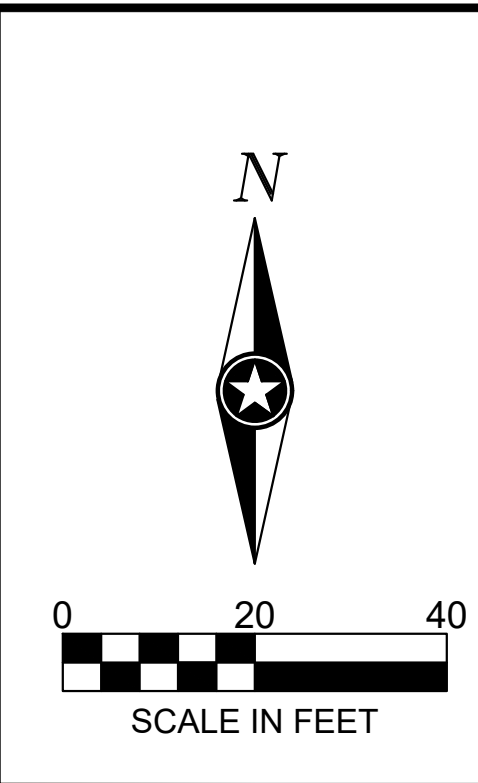
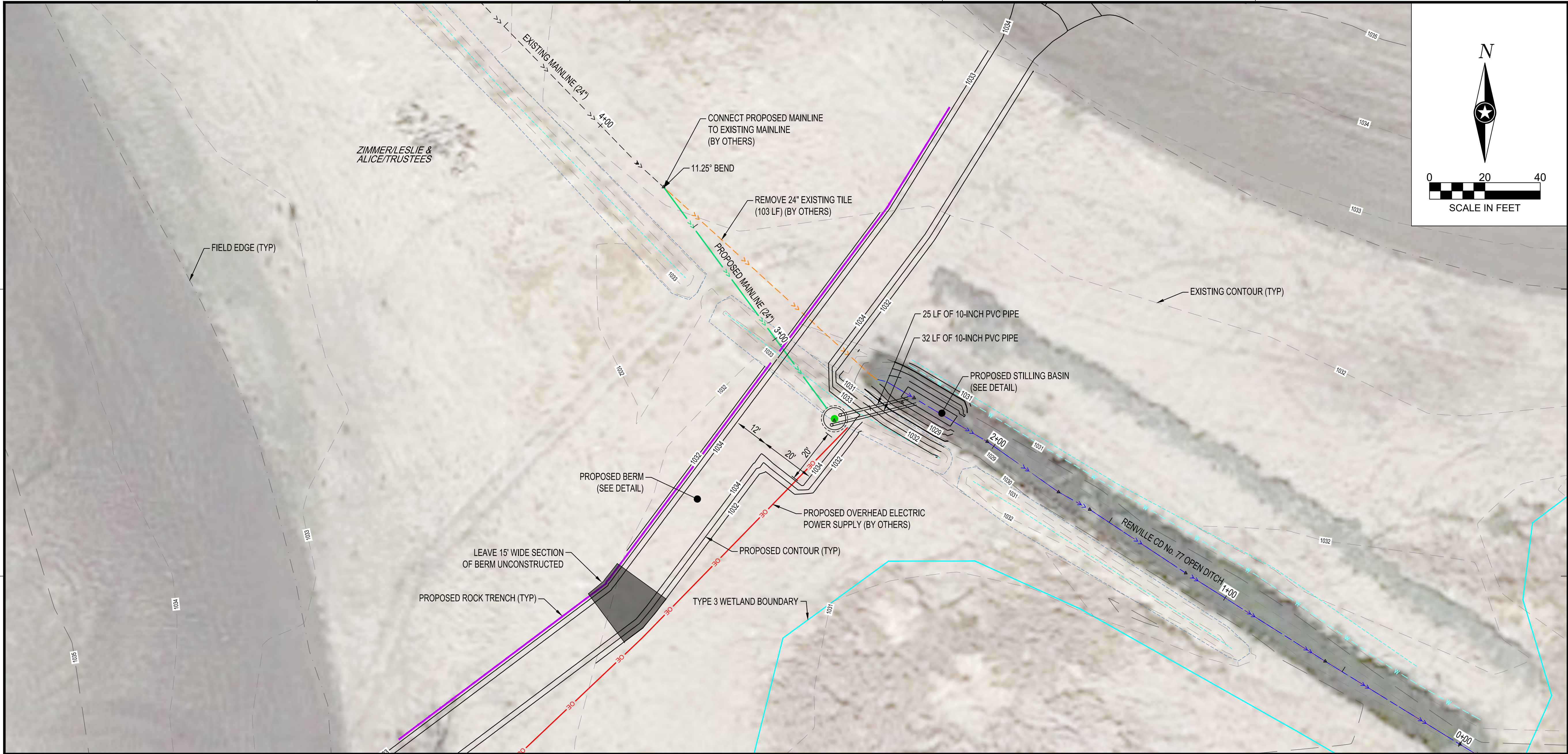
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## DETAILS

SHEET





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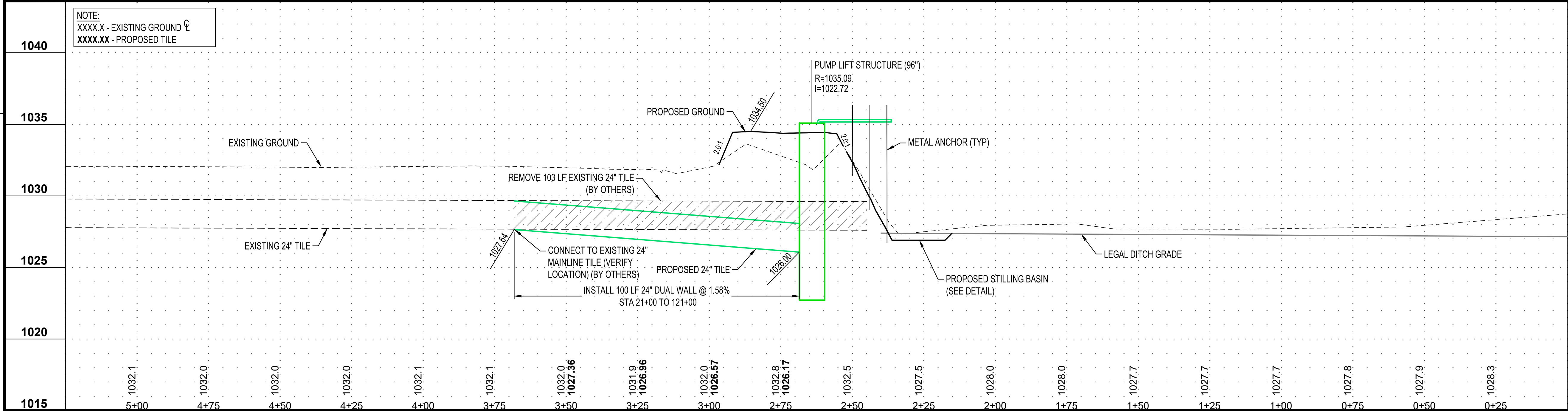
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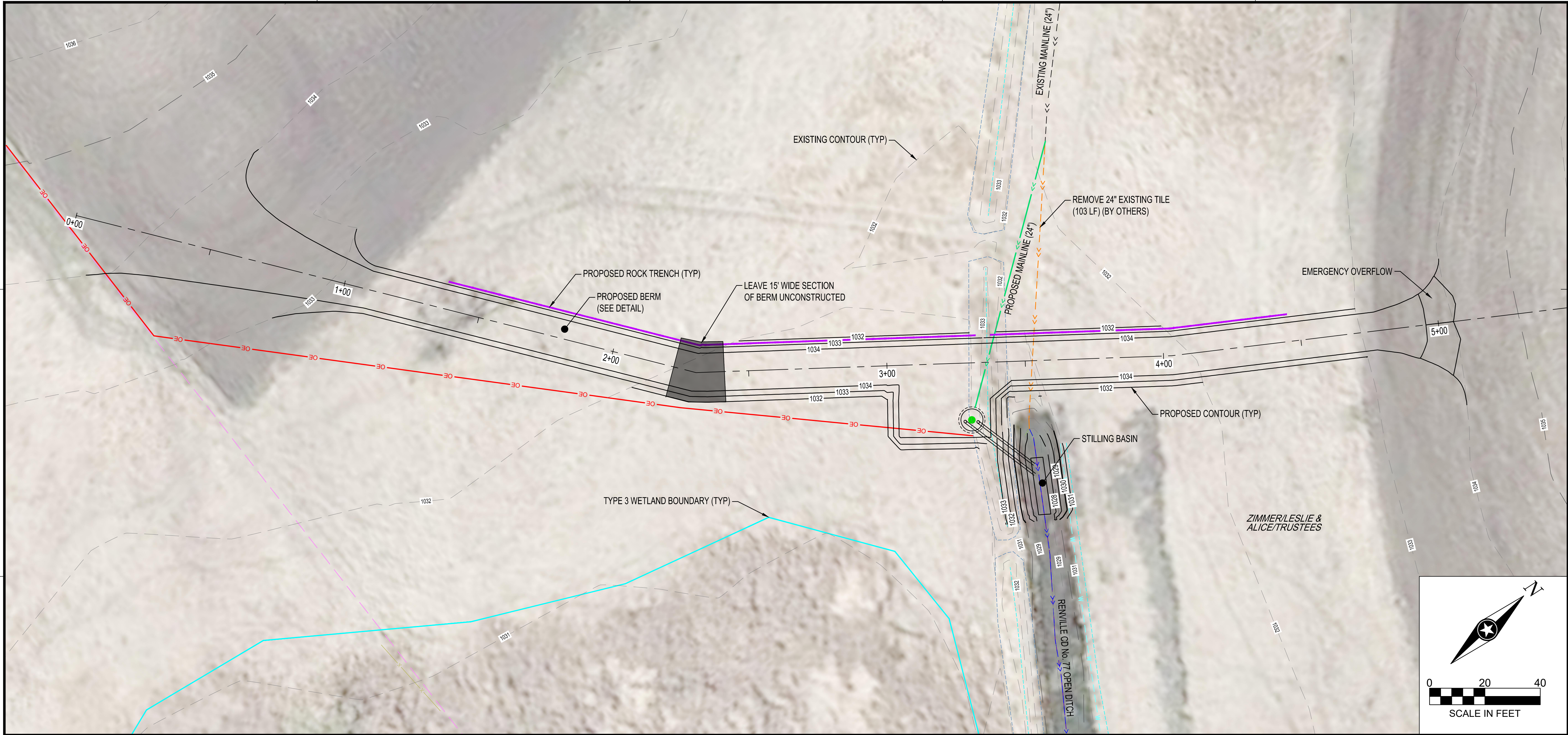
**PLAN - PROFILE**

SHEET

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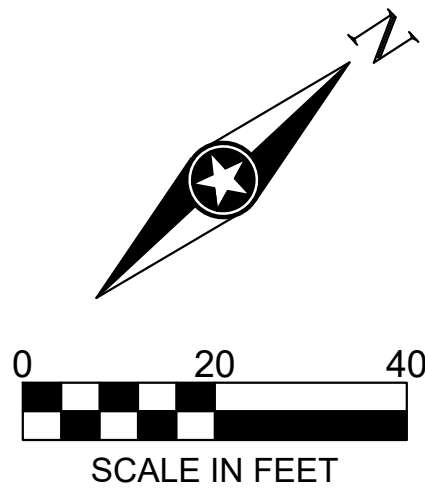
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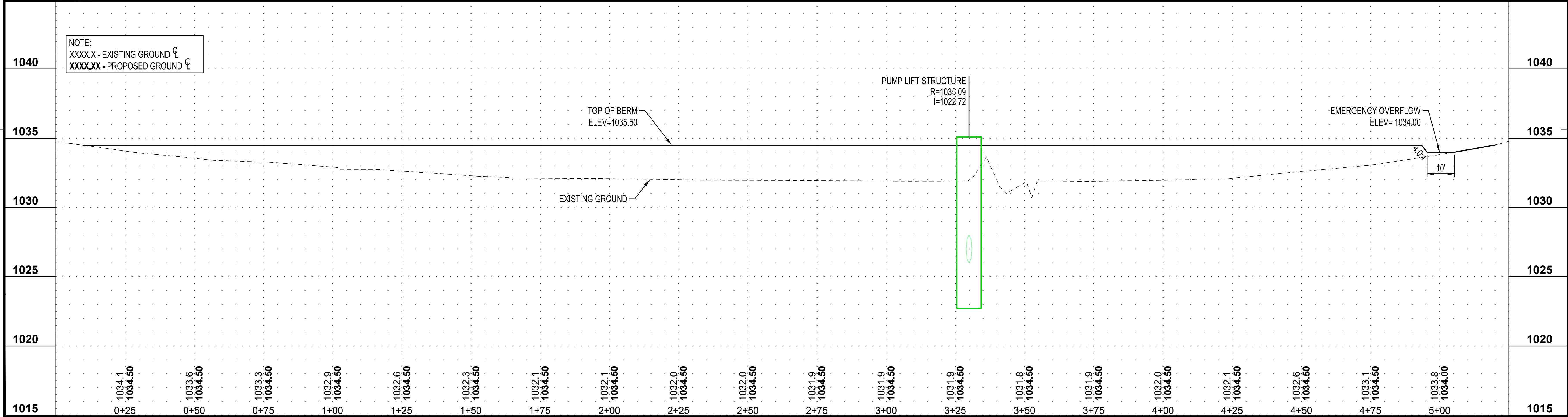
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SHEET

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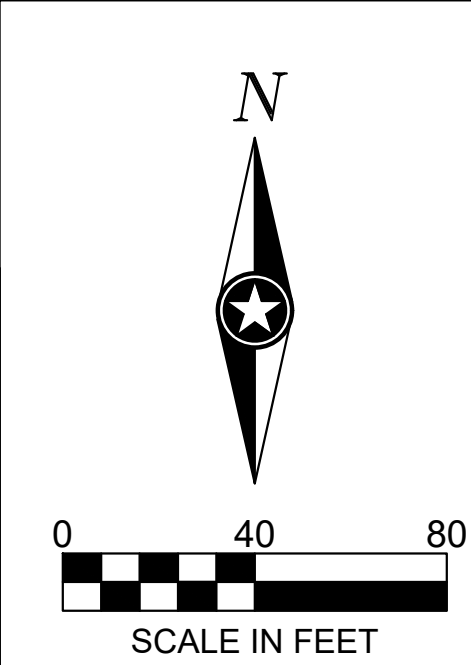
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SHEET

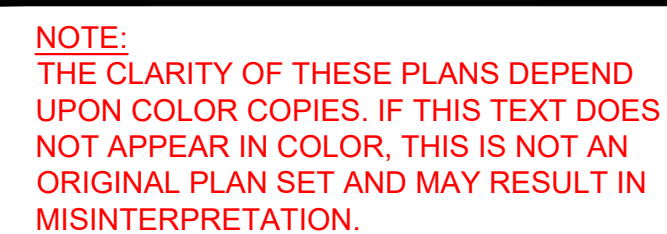
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OF 9

LEGEND	
SYMBOL	DESCRIPTION
	AREA OF FILL
	AREA OF CUT







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**RENNVILLE COUNTY  
COUNTY DITCH  
No.77  
PUMP REPAIR**

HAWK CREEK TWP. MINNESOTA

[illegible]

PROJECT NO.	14-16717
FILE NAME	16717 GRADING
DRAWN BY	JAT
DESIGNED BY	JMW
REVIEWED BY	CJB
ORIGINAL ISSUE DATE	10/10/24
CLIENT PROJECT NO.	-

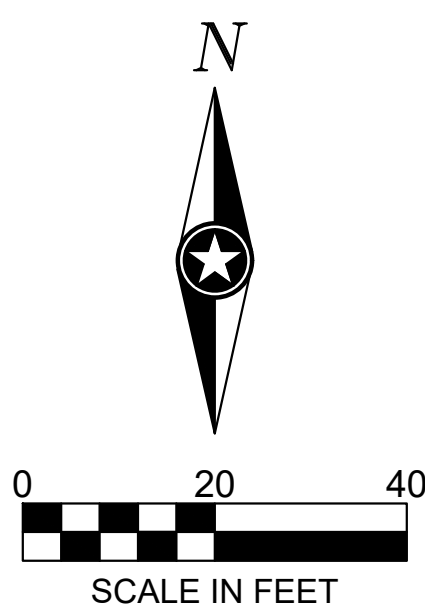
TITLE

**DETAILED  
GRADING**

SHEET

8

OF







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

CHARLES J. BRANDEL  
*Charles J. Brandel*

DATE: 10/10/24 LIC. NO. 43359

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PROJECT

# RENVILLE COUNTY COUNTY DITCH No.77 PUMP REPAIR

HAWK CREEK TWP. MINNESOTA

REVISION SCHEDULE		
DATE	DESCRIPTION	BY

PROJECT NO.	14-16717
FILE NAME	16717 ELECTRICAL
DRAWN BY	JAT
DESIGNED BY	JMW
REVIEWED BY	CJB
ORIGINAL ISSUE DATE	10/10/24
CLIENT PROJECT NO.	-

TITLE

## SITE ELECTRIC PLAN (BY OTHERS)

SHEET