



# ANOKA COUNTY TRANSPORTATION DIVISION

1440 BUNKER LAKE BLVD NW

ANDOVER, MN 55304

763-324-3176

highwaypermits@anokacountymn.gov

RIGHT OF WAY

COMMERCIAL ACCESS

APPLICATION FOR PERMIT FOR INSTALLATION OF UTILITIES OR PLACING OBSTRUCTIONS ON THE COUNTY HIGHWAY SYSTEM  
ALL APPLICANTS MUST BE REGISTERED PRIOR TO PERMIT APPROVAL

APPLICANT NAME **SEH**

CONTACT PERSON **Andrew Olsen**

ADDRESS **10650 Red Circle Drive, Suite 500**

CITY **Minnetonka**

PHONE NUMBER **641.590.3198**

EMAIL **aolsen@sehinc.com**

COMPANY OR INDIVIDUAL PERFORMING WORK **Northdale Construction**

CONTACT PERSON **Troy Huschle**

EMAIL **TroyH@northdaleconst.com**

PHONE NUMBER **763.428.4868**

PERMIT WORK TO START **04/03/2024**

PERMIT WORK TO BE COMPLETED **09/27/2024**

DURATION OF JOB **178 days**

ARE YOU BEING ASKED TO RELOCATE DUE TO A COUNTY PROJECT? **No**

ANOKA COUNTY PROJECT NUMBER

WORK SITE ADDRESS **Bunker Lake Blvd, 143rd St., Town Center Dr.**

CITY **Ramsey**

METHOD OF INSTALLATION/CONSTRUCTION **Open cut & directional drill water main**

NATURE OF WORK **Various sizes of water main will be installed inside of the R.O.W on multiple streets in the City of Ramsey. Water main will be installed using both open cut and direction drilling methods.**

SURFACE TO BE DISTURBED

SITE PLAN

IF THE ROADWAY IS ENCROACHED, YOU MUST ATTACH A TRAFFIC CONTROL PLAN AND/OR REFERENCE THE MOST CURRENT VERSION OF THE MN TEMPORARY TRAFFIC CONTROL FIELD MANUAL (3+ DAYS REQUIRES PLANS TO BE SIGNED BY A LICENSED PE).

DITCH/BLVD



GRAVEL

BITUMINOUS

CONCRETE

NONE

IS SIGNING AND STRIPING REQUIRED? **Yes**

DEPTH FROM SURFACE **96" or 8'**

(60" minimum under county roads)

SIZE AND KIND OF PIPE/CABLE **6"/8"/10"/12"/16" DIP, 20"/24" PVC**

NUMBER OF EXCAVATIONS **4+**

SIZE OF EXCAVATIONS **Please refer to attached plan set for all**  
(Length, width, and depth)

LOCATION OF EXCAVATIONS **ALL EXCAVATIONS ARE TO BE PROTECTED AT ALL TIMES AND THEN BACKFILLED WHEN UNATTENDED AND/OR OVERNIGHT**

Specific written descriptions of excavations - if shown on attached drawing, drawing shall be specific with depth and distance from centerline, curb, or other distinguishable location. Traffic control plans cannot be approved without specific excavation descriptions.

**Please refer to attached plan set for all excavation sizes and locations.**

**THIS PERMIT COVERS THE RIGHT OF WAY IN ANOKA COUNTY ONLY**

**ACTD reserves the right to make changes to these special conditions.**



Anoka County  
MINNESOTA

Respectful. Innovative. Fiscally Responsible

## ANOKA COUNTY TRANSPORTATION DIVISION

1440 BUNKER LAKE BLVD NW

ANDOVER, MN 55304

PERMIT PHONE: 763-324-3176

highwaypermits@anokacountymn.gov

### GENERAL INFORMATION

One permit must be approved for each county road on which work will be performed prior to any work within the right of way by any utility/contractor. Emergency conditions which threaten the safety of the public and require immediate repair are exceptions to this rule. Under those circumstances, the utility/contractor is permitted to begin and/or complete the necessary repairs. The Anoka County Transportation Division (ACTD) shall be notified of emergency repairs as soon as feasible and a written permit is to be completed within two business days of occurrence.

A license-permit bond is generally required of the contractor as part of the registration process, the amount of which will be determined by the nature of the utility work.

A sketch or drawing shall accompany each permit application which will show the location of the proposed work/utility with reference to the county highway center line and right of way line. A complete set of plans is required for all sewer/water projects.

It shall be the responsibility of the applicant to determine which of the special conditions apply to each permit.

ACTD reserves the right to revoke any utility permit and halt work, if, upon inspection of any job site, the special conditions are not met, and/or a hazard exists for the applicant or public safety is threatened. **The failure to comply with the terms and conditions of any applicable Federal, State, Regional, and local laws, rules and regulations, including any provision of Anoka County's Right-of-Way Ordinance shall be cause for immediate revocation of a permit.**

The applicant shall notify ACTD immediately upon completion of project so that the ACTD can inspect the site to determine if restoration has been satisfactorily completed.

The undersigned hereby accepts the terms and conditions of this permit and the regulations of Anoka County, and agrees to fully comply therewith to the satisfaction of the ACTD. The county of Anoka, its officials, employees, and agents, shall be held harmless, by the applicant/permittee, from any demands, claims, lawsuits, or damages relating to the work described in this permit.

APPLICANT'S SIGNATURE

DocuSigned by:

*Andrew Olsen*

DC3E47E9D9DE487...

DATE 3/20/2024

### AUTHORIZATION OF PERMIT

In consideration of the applicant's agreement to comply in all respects with the regulations of the ACTD covering such operations, permission is hereby granted for the work to be done as described in the above application. Said work to be done in accordance with the general conditions listed above and the special conditions required as hereby stated. It is expressly understood that this permit is conditioned upon replacement or restoration of the county highway and its right of way to their original or to a satisfactory condition. It is further understood that this permit is issued subject to the approval of local city or township authorities having joint supervision over said street or highway.

APPROVED BY:

DATE

TITLE: Traffic Technician

NOT VALID UNLESS SIGNED BY ANOKA COUNTY

*THIS PERMIT COVERS THE RIGHT OF WAY IN ANOKA COUNTY ONLY*  
**ACTD reserves the right to make changes to these special conditions.**



## ANOKA COUNTY TRANSPORTATION DIVISION

1440 BUNKER LAKE BLVD NW

ANDOVER, MN 55304

PERMIT PHONE: 763-324-3176

highwaypermits@anokacountymn.gov

### SPECIAL CONDITIONS

#### TRAFFIC CONTROL

- 1) Detours
  - a) Detailed detour layouts shall be submitted to the traffic engineer for approval.
  - b) No detours shall be permitted without prior approval of the Anoka county traffic engineer.
  - c) A ten day notice must be given prior to the installation of any detour.
  - d) It shall be the responsibility of the applicant to notify Anoka county central communications, local government bodies, and any affected bus companies ten days prior to any road closures/detours.
  - e) Immediately upon completion of work and/or detours, all posts, barricades, and signs shall be removed from the right of way.
- 2) Traffic control devices
  - a) All traffic control devices, barricades, flashers, etc., shall be furnished by the applicant and shall be in accordance with the most recent edition of the Minnesota manual on uniform traffic control devices and temporary traffic control zone layouts – field manual of the same manual.

#### CONSTRUCTION REQUIREMENTS

- 1) Open cutting of bituminous or concrete surfaced roads will be allowed only at the discretion of the county engineer.
- 2) Neither supplies nor excavation materials shall be placed on the bituminous or concrete surface at any time.
- 3) No trenches will be allowed to remain open overnight.
- 4) Materials removed from the trench shall be used as backfill insofar as they are suitable. All backfill material shall conform to MNDOT specifications for compaction. The use of heavy equipment on top of trench, slapping with backhoe bucket and/or back casting to achieve compaction is prohibited. Any additional material required to back fill to the original grade shall be furnished by the applicant at no expense to the ACTD. All the base and surface courses damaged during construction operations shall be restored to a condition equal to or better than before operations began. The applicant shall be responsible for and restore any settlement.
- 5) All culverts, ditches, shoulders, and backslopes shall be restored to their original condition unless otherwise directed by the ACTD. Shoulders which have been previously constructed or reconstructed with special materials shall be replaced in kind. Restoration of signs, guardrails, guard posts, etc., are the sole responsibility of the applicant and shall be restored to their original condition.
- 6) All roadway maintenance required within the limits of the utility project that is related to the applicant's activities shall be the sole responsibility of the applicant for one year after completion of the project. Upon completion of the restoration work, the applicant shall request a final inspection by the ACTD. The ACTD's approved completion date shall be the starting date of the applicant's one-year responsibility.

#### HORIZONTAL BORING AND JACKING

- 1) All hard surface roadways shall be jacked or bored.
- 2) All crossings of Anoka County maintained roadbeds, shall be made by boring inside a casing or carrier pipe, or by jacking unless otherwise directed by the Anoka County Engineer. The auger shall lead the casing or carrier pipe by at least six inches whenever possible and never lead the carrier pipe by more than one inch.
- 3) The use of pneumatic devices to facilitate the roadbed crossings will be allowed in most cases with prior approval. In the event approval is not granted and applicant uses a pneumatic device to cross a roadbed and encounters an obstruction and/or unstable subbase material which makes forward or reverse motion of pneumatic device impossible, said pneumatic device then becomes part of the roadway subbase and permission to excavate to retrieve device will not be granted.
- 4) If a pneumatic device is used for the work permitted herein, the installation must be kept to a minimum of four feet below the surface of the roadway if the pneumatic device is less than two inches in diameter, and a minimum of five feet below the surface of the roadway if the pneumatic device is two inches in diameter or larger.

#### BITUMINOUS RESTORATION

- 1) The locations and dimensions of all openings to be made in the bituminous surface shall be approved by the ACTD prior to any cutting or any surface opening operations.
- 2) All openings in bituminous surfaces shall be cut in a straight line with the sides smooth and vertical. No ragged edges will be permitted. Cutting shall be done with a concrete saw.
- 3) All necessary dust control operations shall be carried out by the applicant at no expense to Anoka County.
- 4) The minimum requirement for subgrade replacement shall be the upper twelve inches of material and shall meet MNDOT specifications for class five placed in six inch layers compacted to one hundred percent of optimum density.
- 5) All manhole casings, gate valves, and other utility structures shall be set one quarter inch below the top of the finished surface.
- 6) Bituminous tack coat materials and application thereof shall conform to MNDOT specification 2357.
- 7) All bituminous surfacing shall be replaced as soon as practicable after the base construction. All bituminous surfacing shall be machine laid. Any exceptions must be approved by the ACTD. Bituminous surfacing shall be replaced to original pavement depth or to a minimum of six inches of bituminous mixture (2360), whichever is greater. Bituminous mixtures must be placed in lifts not exceeding three inches in thickness for base and binder courses and not exceeding two inches for the wear course.
- 8) All surface restoration regardless of size shall conform to existing grades.
- 9) Any unnecessary or negligent damage to bituminous surface in conjunction with the installation and/or repair of a utility shall be cut out and replaced in kind as directed by the ACTD.

***THIS PERMIT COVERS THE RIGHT OF WAY IN ANOKA COUNTY ONLY***  
***ACTD reserves the right to make changes to these special conditions.***



# ANOKA COUNTY TRANSPORTATION DIVISION

1440 BUNKER LAKE BLVD NW

ANDOVER, MN 55304

PERMIT PHONE: 763-324-3176

highwaypermits@anokacountymn.gov

CONCRETE RESTORATION

- 1) Curb and gutter, sidewalks, and driveways shall be restored in accordance with MNDOT specifications 2531 and 2521.

UTILITY LINES

- 1) There shall be only a single pole line on the county right of way on either side of the center line thereof.
- 2) Exact locations of longitudinal installations on county highways shall be located as directed by the ACTD.

SECTION CORNER MONUMENTS

- 1) Utility locations shall not interfere with the location of any section, quarter, witness, or right of way monuments. For assistance in locations, contact the Anoka County Surveyor's Office.
- 2) The applicant shall be responsible for replacement of any existing property irons disturbed during construction.
- 3) The applicant shall notify the Anoka County Surveyor's Office three working days in advance of any anticipated disturbance of any section, quarter, witness, or right of way monuments.
- 4) Any monument disturbed during the course of construction, shall be reset by the Anoka County Surveyor's Office at the expense of the applicant.

ATTACHING TO BRIDGES/STRUCTURES

- 1) No utility is permitted to be hung from, or otherwise attached to, any bridge or structure without having detailed plans approved by the Anoka County Engineer. These plans are to show approaches to the structure, method of installation, type, and dimension of housing for the utility.

ADDITIONAL PROVISIONS

- 1) All subcontractors, installers, and crew shall possess a physical or electronic copy of all documents in relation to the approved permit prior to the commencement of work and be kept on site. This includes, but it not limited to the following:
  - a) Approved permit
  - b) Any/all traffic control plans and/or layouts
- 2) Shall notify Anoka County Permits at 763-324-3176 or highwaypermits@anokacountymn.gov
  - a) At least 36 hours prior to the commencement of work
  - b) With time frame of proposed of work
  - c) Anticipated traffic control
  - d) When work is complete - including restorations - to request a final inspection
- 3) No work during inclement weather or when plows are out in any capacity
- 4) All traffic control shall be in accordance with the most current version of the MnDOT Temporary Traffic Control Field Manual
- 5) For staking of right-of way or proposed infrastructure, contact Chris Osterhus at 763-324-3189 a minimum of 48 hours prior to the commencement of work.

INITIAL DS  
AO



# CITY OF RAMSEY, MINNESOTA

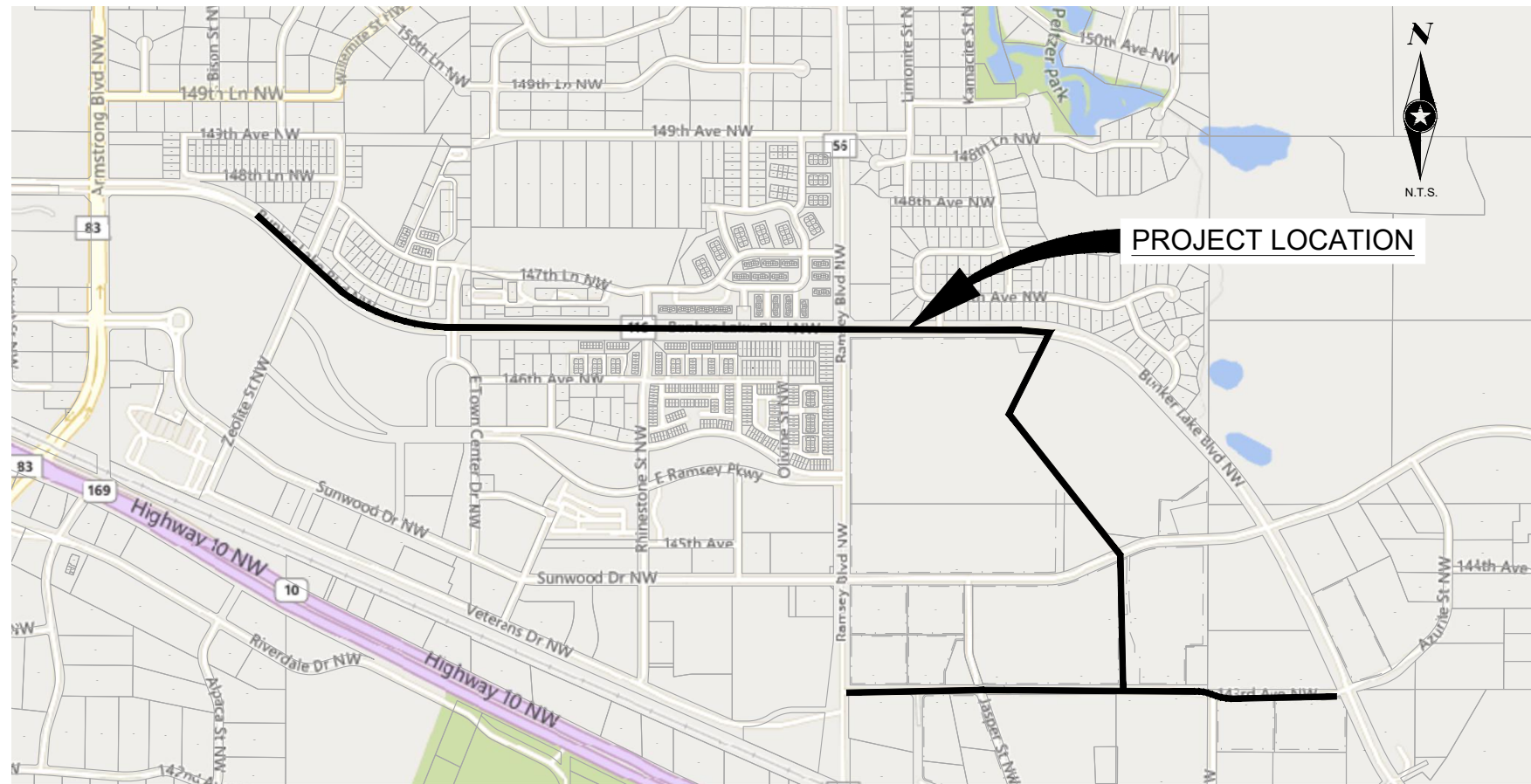
## CONSTRUCTION PLANS FOR WATER MAIN INSTALLATION, EXCAVATION, HORIZONTAL DIRECTIONAL DRILLING, GRADING, BITUMINOUS PAVING, & RESTORATION WATER TREATMENT PLANT TRUNK WATER MAIN IMPROVEMENTS CITY PROJECT NO. 21-08

GOVERNING SPECIFICATIONS  
THE 2020 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" AND "AND THE SUPPLEMENTAL SPECIFICATIONS DATED SEPTEMBER 2022 SHALL GOVERN EXCEPT AS MODIFIED BY THE SPECIFICATIONS FOR THIS PROJECT."  
THE 2018 EDITION OF THE CITY ENGINEERS ASSOCIATION OF MINNESOTA "STANDARD SPECIFICATIONS" SHALL GOVERN FOR UTILITY INSTALLATION EXCEPT AS MODIFIED BY THE SPECIFICATIONS FOR THIS PROJECT.  
ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE LATEST EDITION OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING THE LATEST FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS.

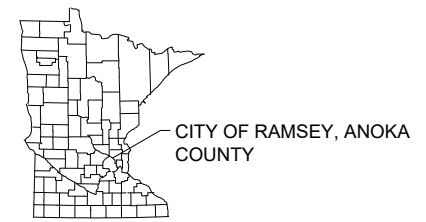
SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	PROJECT OVERVIEW
3	STATEMENT OF ESTIMATED QUANTITIES
4	CONSTRUCTION NOTES
5-6	CONSTRUCTION PHASING - 143RD AVE.
7-10	DETAILS
11-20	REMOVAL PLAN
21-38	WATER MAIN PLAN AND PROFILE
39-40	COTTONWOOD TRAIL PLAN AND PROFILE
41-48	EROSION CONTROL AND TURF ESTABLISHMENT
49-50	SWPPP
51-53	TRAFFIC CONTROL PLAN
54	PAVEMENT MARKING AND SIGNING PLAN
55	METER VAULT PLAN & SECTION
56	METER VAULT DETAILS
57	ELECTRICAL SYMBOLS, ABBREVIATIONS AND NOTES
58	ELECTRICAL PLANS, ELEVATION AND DIAGRAMS

THIS PLAN CONTAINS 58 SHEETS.

- EXISTING**
- RIGHT OF WAY
  - PERMANENT EASEMENT
  - DRAINAGE AND UTILITY EASEMENT
  - PROPERTY LINE
  - HORIZONTAL CONTROL POINT
  - BENCHMARK
  - SURVEY MARKER
  - SOIL BORING
  - SANITARY SEWER AND MANHOLE
  - FORCE MAIN AND LIFT STATION
  - SANITARY SEWER SERVICE & CLEANOUT
  - WATER MAIN, HYDRANT, VALVE AND MANHOLE
  - WATER SERVICE AND CURB STOP BOX
  - STORM SEWER, MANHOLE AND CATCH BASIN
  - CULVERT AND APRON ENDWALL
  - GAS MAIN, VALVE, VENT AND METER
  - HANDHOLE
  - BURIED FIBER OPTIC CABLE AND MANHOLE
  - BURIED PHONE CABLE, PEDESTAL AND MANHOLE
  - BURIED TV CABLE, PEDESTAL AND MANHOLE
  - BURIED ELECTRIC CABLE, PEDESTAL, MANHOLE, TRANSFORMER AND METER
  - OVERHEAD WIRE, POLE AND GUY WIRE
  - LIGHT POLE
  - TRAFFIC SIGNAL
  - STREET NAME SIGN
  - SIGN (NON STREET NAME)
  - RAILROAD TRACKS
  - DECIDUOUS AND CONIFEROUS TREE
  - BUSH / SHRUB AND STUMP
  - EDGE OF WOODED AREA
  - WETLAND
  - BUILDING
  - FENCE (UNIDENTIFIED)
  - BARBED WIRE FENCE
  - CHAIN LINK FENCE
  - ELECTRIC WIRE FENCE
  - WOOD FENCE
  - WOVEN WIRE FENCE
  - PLATE BEAM GUARDRAIL
  - CABLE GUARDRAIL
  - POST / BOLLARD
  - RETAINING WALL
- PROPOSED**
- STREET CENTERLINE
  - RIGHT-OF-WAY
  - PERMANENT EASEMENT
  - TEMPORARY EASEMENT
  - CONSTRUCTION LIMITS
  - SANITARY SEWER, BULKHEAD AND MANHOLE
  - FORCE MAIN
  - SANITARY SERVICE AND CLEANOUT
  - WATER MAIN, TEE, HYDRANT, BULKHEAD AND VALVE
  - WATER VALVE MANHOLE, REDUCER, BEND AND CROSS
  - WATER SERVICE AND CURB STOP BOX
  - STORM SEWER, MANHOLE AND CATCH BASIN
  - CULVERT AND APRON ENDWALL
  - DRAIN TILE
  - DITCH / SWALE
  - RIPRAP
  - STREET NAME SIGN
  - SIGN (NON STREET NAME)
  - RETAINING WALL



### PROJECT LOCATION



RAMSEY, MINNESOTA

**SEH**  
PHONE: 651.490.2000  
3535 VADNAIS CENTER DRIVE  
ST. PAUL, MN 55110-5196  
www.sehinc.com

I HEREBY CERTIFY THAT THIS PLAN 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 MN.

Signature: *David E. Hutton*  
David E. Hutton

Date: 10-06-2023 Lic. No. 19133

FILE NO.  
RAMSY174498

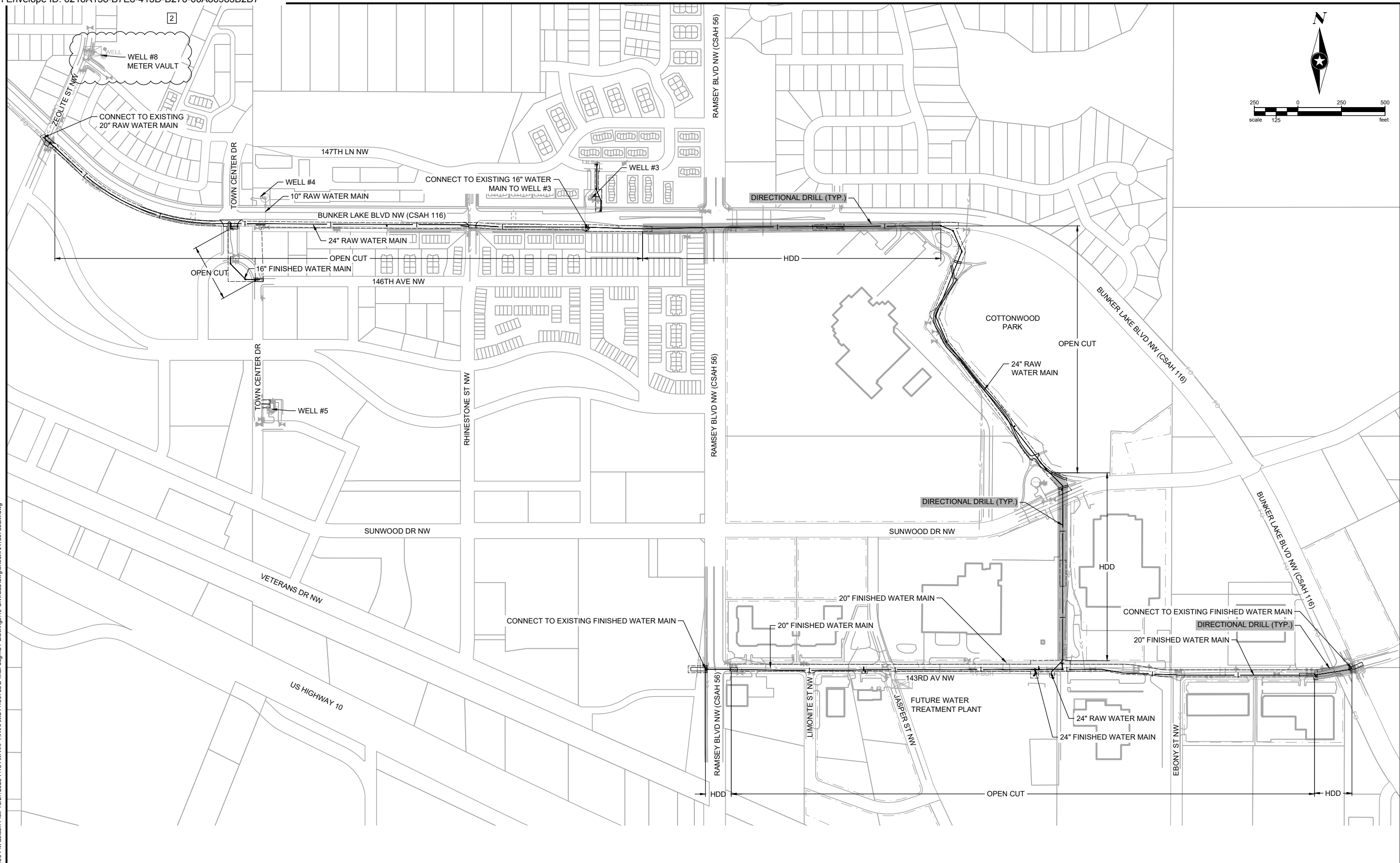
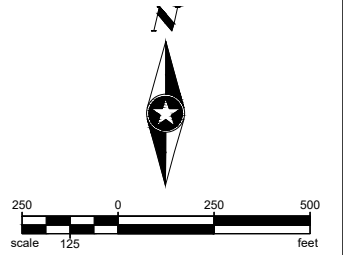
1  
of 58

NOTE:  
THE SUBSURFACE UTILITY QUALITY INFORMATION IN THIS PLAN IS LEVEL D. THIS UTILITY QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38-02 ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA."

THE CONTRACTOR SHALL CALL THE GOPHER STATE ONE CALL SYSTEM AT 811 BEFORE COMMENCING EXCAVATION.


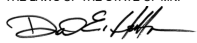


Save: 10/16/2023 2:54 PM rknowles Plot: 10/7/2023 2:13 PM X:\PT\RAMSY\159783\5-final-dspn\5-1-drawings\10-Civil\ca0\dwg\sheet\RA 159783TL.dwg



Save: 10/25/2023 2:09 PM aolisen Plot: 10/27/2023 7:48 AM X:\P\RAMSY\1597893\5-final.dgn\15-drawings\10-Civil\cad\dwg\sheet\RA159783.LM.dwg

SEH Project	RAMSY174498	Rev.#	Revision Issue Description	Date	Rev.#	Revision Issue Description	Date
Drawn By	JRB, SRP	2	ADDENDUM #2	10/27/2023	.		
Designed By	KLK				.		
Checked By	CES				.		


 I HEREBY CERTIFY THAT THIS PLAN 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 MN.  
  
 David E. Hutton  
 LICENSE NO. 19133  
 DATE 10-06-2023

**WATER TREATMENT PLANT**  
**TRUNK WATER MAIN IMPROVEMENTS**  
 Ramsey, Minnesota

PROJECT OVERVIEW

STATEMENT OF ESTIMATED QUANTITIES										
LINE	ITEM NO.	ITEM DESCRIPTION	UNITS	TOTAL ESTIMATED QUANTITY	BUNKER LAKE BOULEVARD	COTTONWOOD PARK/SUNWOOD DRIVE EASEMENT	143RD AVE NW	TOWN CENTER DRIVE	WELL #3 CROSSING	WELL #5
<b>SECTION A: STREET</b>										
1	2021.601	MOBILIZATION	LS	1.00	0.42	0.26	0.24	0.05	0.02	0.01
2	2101.505	CLEARING	ACRE	0.50		0.50				
3	2101.505	GRUBBING	ACRE	0.50		0.50				
4	2101.502	CLEARING	EA	12.00	2.00	10.00				
5	2101.502	GRUBBING	EA	12.00	2.00	10.00				
6	2104.502	SALVAGE SIGN TYPE C	EA	13.00	9.00		2.00		2.00	
7	2104.503	REMOVE CURB AND GUTTER	LF	915.00			805.00	85.00	25.00	
8	2104.503	SAWING BITUMINOUS PAVEMENT (FULL DEPTH)	LF	2325.00	430.00	110.00	1425.00	280.00	80.00	
9	2104.503	SAWING CONCRETE PAVEMENT (FULL DEPTH)	LF	47.00	26.00		16.00		5.00	
10	2104.504	REMOVE BITUMINOUS PAVEMENT	SY	1185.00	380.00			759.00	46.00	
11	2104.504	REMOVE BITUMINOUS PAVEMENT (DRIVEWAY & TRAIL)	SY	1662.00	101.00	1547.00			14.00	
12	2104.518	REMOVE CONCRETE WALK	SF	825.00	380.00		320.00		125.00	
13	2105.610	EXPLORATORY EXCAVATION	HR	31.00	8.00	6.00	12.00	3.00	1.00	1.00
14	2123.610	STREET SWEEPER (WITH PICKUP BROOM)	HR	34.00	6.00	2.00	24.00	2.00		
15	2211.509	AGGREGATE BASE CLASS 5 (MODIFIED)	TON	6330.00	135.00	580.00	5400.00	185.00	30.00	
16	2215.504	FULL DEPTH RECLAMATION	SY	15667.00			15667.00			
17	2360.509	TYPE SP 12.5 WEARING COURSE MIXTURE (3,B) - TRAIL	TON	329.00	21.00	306.00			2.00	
18	2360.509	TYPE SP 9.5 WEARING COURSE MIXTURE (3,C) - FULL WIDTH	TON	1366.00			1366.00			
19	2360.509	TYPE SP 12.5 NON-WEARING COURSE MIXTURE (3,C) - FULL WIDTH	TON	1821.00			1821.00			
20	2360.509	TYPE SP 9.5 WEARING COURSE MIXTURE (3,C) - PATCH	TON	134.00	37.00		17.00	72.00	8.00	
21	2360.509	TYPE SP 12.5 NON-WEARING COURSE MIXTURE (3,C) - PATCH	TON	176.00	49.00		22.00	95.00	10.00	
22	2504.602	ADJUST VALVE BOX	EA	14.00	8.00		3.00	3.00		
23	2506.502	ADJUST FRAME AND RING CASTING	EA	2.00	1.00		1.00			
24	2531.503	CONCRETE CURB AND GUTTER DESIGN B612	LF	100.00			100.00			
25	2531.503	CONCRETE CURB AND GUTTER DESIGN B618	LF	815.00			705.00	85.00	25.00	
26	2563.601	TRAFFIC CONTROL	LS	1.00	0.42	0.26	0.24	0.05	0.02	0.01
27	2564.502	INSTALL SIGN TYPE C	EA	11.00	9.00		2.00			
28	2573.501	STORM DRAIN INLET PROECTION	EA	49.00	20.00	5.00	23.00	1.00		
29	2573.503	SILT FENCE, TYPE MS	LF	8500.00	4000.00	4500.00				
30	2575.504	SODDING TYPE MINERAL	SY	1950.00		110.00	1700.00	50.00	20.00	70.00
31	2575.505	TURF RESTORATION (SEEDING)	ACRE	4.00	2.00	1.00	1.00			
32	2575.505	TEMP SEEDING	ACRE	4.00	2.00	1.00	1.00			
<b>SECTION B: STORM SEWER</b>										
33	2104.502	SALVAGE STORM PIPE APRON	EACH	1.00	1.00					
34	2104.503	REMOVE PIPE CULVERTS	LF	52.00	52.00					
35	2104.503	SALVAGE STORM SEWER PIPE	LF	65.00	45.00		20.00			
36	2501.502	PROTECT AND SUPPORT 73" SPAN RC PIPE-ARCH	EACH	1.00	1.00					
37	2501.502	INSTALL SALVAGED STORM PIPE APRON	EACH	1.00	1.00					
38	2501.502	15" CS PIPE APRON	EACH	2.00	2.00					
39	2501.503	INSTALL SALVAGED STORM PIPE	LF	65.00	45.00		20.00			
40	2501.503	15" CS PIPE	LF	52.00	52.00					
<b>SECTION C: WATER MAIN</b>										
41	2104.502	REMOVE/SALVAGE HYDRANT & VALVE	EACH	2.00	1.00		1.00			
42	2104.503	REMOVE WATER MAIN	LF	320.00	110.00			200.00	10.00	
43	2105.601	DEWATERING	LS	1.00	0.25	0.75				
44	2105.609	CRUSHED ROCK	TON	2000.00	1500.00	500.00				
45	2503.604	4" INSULATION	SY	8.00	8.00					
46	2504.602	CONNECT TO EXISTING WATER MAIN (RAW WATER)	EACH	6.00	1.00			5.00		
47	2504.602	CONNECT TO EXISTING WATER MAIN TAPPING SLEEVE AND 8" VALVE (FINISHED WATER)	EACH	3.00			1.00		2.00	
48	2504.602	CONNECT TO EXISTING WATER MAIN TAPPING SLEEVE AND 12" VALVE (FINISHED WATER)	EACH	1.00			1.00			
49	2504.602	CONNECT TO EXISTING WATER MAIN TAPPING SLEEVE AND 16" VALVE (FINISHED WATER)	EACH	1.00			1.00			
50	2504.602	CONNECT TO EXISTING WATER MAIN (HYDRANT LEAD)	EACH	2.00	1.00			1.00		
51	2504.602	HYDRANT	EACH	12.00	5.00	2.00	3.00	1.00	1.00	
52	2504.602	INSTALL SALVAGED HYDRANT	EACH	1.00			1.00			
53	2504.602	6" GATE VALVE AND BOX	EACH	13.00	5.00	2.00	4.00	1.00	1.00	
54	2504.602	16" GATE VALVE AND BOX	EACH	8.00	2.00			5.00	1.00	
55	2504.602	20" GATE VALVE AND BOX	EACH	3.00			3.00			
56	2504.602	24" GATE VALVE AND BOX	EACH	5.00	4.00		1.00			
57	2504.603	1" COPPER SERVICE	LF	85.00					25.00	60.00
58	2504.603	6" DIP WATER MAIN CL 53	LF	225.00	80.00	20.00	110.00	45.00		
59	2504.603	8" DIP WATER MAIN	LF	288.00			18.00		270.00	
60	2504.603	10" DIP WATER MAIN	LF	20.00	20.00					
61	2504.603	12" DIP WATER MAIN	LF	25.00			25.00			
62	2504.603	16" DIP WATER MAIN	LF	355.00			5.00	340.00	10.00	
63	2504.603	20" PVC WATER MAIN STAB JOINT TRENCHED (FINISHED WATER)	LF	3035.00			3035.00			
64	2504.603	20" PVC WATER MAIN RJ TRENCHED (FINISHED WATER)	LF	330.00			330.00			
65	2504.603	20" DR 18 FUSIBLE PVC WATER MAIN (HDD) (FINISHED WATER)	LF	360.00			360.00			
66	2504.603	24" DR 18 FUSIBLE PVC WATER MAIN (HDD) (RAW WATER)	LF	2635.00	1650.00	985.00				
67	2504.603	24" PVC WATER MAIN RJ TRENCHED (FINISHED WATER)	LF	45.00			45.00			
68	2504.603	24" PVC WATER MAIN RJ TRENCHED (RAW WATER)	LF	1320.00	850.00	470.00				
69	2504.603	24" PVC WATER MAIN STAB JOINT TRENCHED (RAW WATER)	LF	4310.00	2810.00	1500.00				
70	2504.603	WATER METER VAULT	LS	1.00	1.00					
71	2504.608	DUCTILE IRON FITTINGS*	LB	24966.00	9060.00	7370.00	5864.00	1958.00	714.00	
<b>ALTERNATE BID ITEM</b>										
72		ADDITIONAL BID COST IF PREVAILING WAGES ARE ADDED AS A REQUIREMENT	LS	1.00						

\*NOTE:  
DUCTILE IRON FITTINGS WEIGHT  
DETERMINATION CAN BE FOUND IN  
THE SPEC BOOK UNDER "WATER  
DISTRIBUTION SYSTEMS" (SECTION  
33.11.00, PART 2.02)

Save: 10/27/2023 7:42 AM aolben Plot: 10/27/2023 7:47 AM X:\PT\RAMSY\159783\5-final.dgn 15 - drawings\10-Civil\cardwg\sheet\RA159783ECO.dwg

SEH Project	RAMSY174498	Rev.#	1	Revision Issue Description	Date	10/23/2023
Drawn By	JRB, SRP	1		ADDENDUM #1	10/23/2023	
Designed By	KLK	2		ADDENDUM #2	10/27/2023	
Checked By	CES					



I HEREBY CERTIFY THAT THIS PLAN 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 MN.  
 David E. Hutton  
 LICENSE NO. 19133  
 DATE 10-06-2023

**WATER TREATMENT PLANT  
TRUNK WATER MAIN IMPROVEMENTS**  
 Ramsey, Minnesota

**STATEMENT OF  
ESTIMATED QUANTITIES**

**CONSTRUCTION NOTES**

ANY USE OF TRENCH BOX, SHEETING, SHORING OR OTHER METHODS OR MEANS OF CONSTRUCTION NECESSARY TO COMPLETE CONSTRUCTION WITHIN THE CONSTRUCTION LIMITS OR SLOPE EASEMENTS SHOWN WILL BE CONSIDERED TO BE INCIDENTAL AND NO DIRECT COMPENSATION WILL BE MADE THEREFORE.

COMPACTION OF GRADING ITEMS, INCLUDING AGGREGATE BASE, SHALL BE ACCOMPLISHED BY THE "QUALITY COMPACTION METHOD".

BACKFILLING OF CURBS WITH ON-SITE MATERIAL IS INCIDENTAL TO CURB CONSTRUCTION.

WHEN CONNECTION TO EXISTING BITUMINOUS PAVEMENT IS REQUIRED, THE EDGE OF EXISTING PAVEMENT SHALL BE CUT TO A NEAT LINE AND COMPLY WITH CITY OF RAMSEY STANDARD DETAIL STR-25.

PROVIDE FOR A UNIFORM BITUMINOUS TACK COAT BETWEEN ALL COURSES. THE TACK COAT SHALL BE IN ACCORDANCE WITH MN/DOT SPECIFICATION 2357 WITH THE FOLLOWING MODIFICATIONS:

1. THE TACK COAT SHALL CONSIST OF EMULSIFIED ASPHALT (CSS-1 OR CSS-1H) AND SHALL BE APPLIED TO THE MILLED BITUMINOUS SURFACE AND BETWEEN ALL NEWLY CONSTRUCTED COURSES.
2. THE TACK COAT BETWEEN BITUMINOUS LIFTS SHALL BE APPLIED AT A UNIFORM RATE OF 0.08 GALLONS PER SQUARE YARD BETWEEN BITUMINOUS LAYERS. THE APPLICATION RATES ARE BASED ON DILUTED TACK MATERIAL

WATER, GAS, ELECTRIC, TELEPHONE, SEWER, AND TV CABLE LINES SHOWN ON THE DRAWINGS ARE PLOTTED FROM THE BEST INFORMATION AVAILABLE AT THE TIME OF PLAN PREPARATION, BUT MAY NOT REFLECT ACTUAL LOCATIONS OR ELEVATIONS. THE CONTRACTOR SHALL VERIFY LOCATION OF ALL UTILITIES BEFORE BEGINNING CONSTRUCTION WHICH MAY BE AFFECTED BY A UTILITY CONFLICT. THE CONTRACTOR SHALL GIVE 48 HOURS NOTICE TO THE OWNERS OF ALL KNOWN UTILITIES BEFORE STARTING ANY OPERATIONS AFFECTING THOSE PROPERTIES, OR BEGINNING EXCAVATION IN THE VICINITY OF THOSE PROPERTIES. THE CONTRACTORS ATTENTION IS DIRECTED TO SECTION 1507 IN THE STANDARD SPECIFICATIONS. THE CONTRACTOR IS HEREBY REMINDED OF HIS RESPONSIBILITY UNDER STATE LAW TO CONTACT ALL UTILITIES THAT MAY HAVE FACILITIES IN THE AREA. CONTACT MUST BE MADE THROUGH GOPHER STATE ONE-CALL.

ALL USES OF THE WORD "INCIDENTAL" IN THESE CONSTRUCTION DOCUMENTS SHALL BE CONSTRUED TO MEAN INCIDENTAL WORK FOR WHICH NO DIRECT COMPENSATION SHALL BE MADE.

(P) DENOTES A PLAN QUANTITY ITEM

CONTRACTOR SHALL PROVIDE AND MAINTAIN ALL EROSION CONTROL MEASURES AS SHOWN ON THESE PLANS AND SPECIFICATION, AND WILL IMPLEMENT ANY ADDITIONAL EROSION CONTROL MEASURES NECESSARY, OR AS DIRECTED BY ENGINEER, IN ORDER TO PROTECT ADJACENT PROPERTY.

ALL DIMENSIONS SHALL BE TO FACE OF CURB UNLESS STATED OTHERWISE.

PROVIDE FOR THE REMOVAL AND DISPOSAL, OUTSIDE THE CONSTRUCTION ZONE, OF ANY INPLACE SURFACING OR OTHER STRUCTURES THAT WOULD INTERFERE WITH CONSTRUCTION. ALL SUCH MATERIALS SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL EITHER BE RECYCLED TO THE EXTENT ALLOWED OR DISPOSED OF OUTSIDE THE RIGHT OF WAY IN ACCORDANCE WITH SPECIFICATION 2104.3C. PROVIDE FOR SAW CUTTING AS DEEMED NECESSARY BY THE DESIGNER.

ALL EXCAVATED MATERIAL SHALL BE USED ONSITE FOR BORROW ITEMS IF MEETS GRADATION REQUIREMENTS UNLESS DIRECTED OTHERWISE BY THIS PLAN OR AS DIRECTED BY THE ENGINEER.

IN FILL SECTIONS, TOPSOIL AND OTHER UNSUITABLE MATERIALS SHALL BE ELIMINATED FROM THE UPPER 3 FEET OF THE "GRADING GRADE" BENEATH THE ROADWAY AS DIRECTED BY THE ENGINEER.

THE FOLLOWING STANDARD PLATES APPROVED BY THE DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION SHALL APPLY ON THIS PROJECT.

STANDARD PLATES	
7100H	CONCRETE CURB AND GUTTER DESIGN B & V
7111J	INSTALLATION OF CATCH BASIN CASTINGS (CONCRETE CURB AND GUTTER)
8000I	STANDARD BARRICADES

TEST ROLLING WILL BE REQUIRED ON THIS PROJECT.

PLACE A MINIMUM OF 4 INCHES OF TOPSOIL BORROW ON ALL DISTURBED AREAS AND ALL AREAS SCHEDULED FOR TURF RESTORATION. TOPSOIL SHALL CONTAIN NO MORE THAN 35% SAND CONTENT. SEE CITY OF RAMSEY STANDARD DETAIL ERO-6. REFERENCE MNDOT SPECIFICATION 3877

USE SEED MIXTURES AS INDICATED ON EROSION CONTROL AND TURF ESTABLISHMENT PLANS.

FERTILIZE ALL AREAS TO BE RESTORED WITH SEED.

THE CONTRACTOR SHALL LIMIT EQUIPMENT USE AND NUMBER OF ACCESS ROUTES ON PRIVATE PROPERTY TO COMPLETE THE PROJECT WITH MINIMAL DISTURBANCE WHERE PRACTICAL. ANY DAMAGE TO PRIVATE PROPERTY, TURF AND/OR OTHER DRIVING SURFACES DEEMED UNNECESSARY BY THE ENGINEER SHALL BE RESTORED AT THE CONTRACTOR'S EXPENSE.

THE CONTRACTOR SHALL PROTECT ANY NEWLY CONSTRUCTED ASPHALT OR CONCRETE SURFACE FROM DAMAGE DURING UTILITY INSTALLATION. ANY DAMAGE DEEMED UNNECESSARY BY THE ENGINEER SHALL BE RESTORED AT THE CONTRACTOR'S EXPENSE. THE DEFINITION OF DAMAGE SHALL INCLUDE, BUT IS NOT LIMITED TO: GOUGES, DENTS, PERMANENT SCRAPES, CRACKING OR ANY OTHER PHYSICAL OR VISIBLE CHANGE FROM THE SURFACE'S PREVIOUS CONDITION CAUSED BY THE CONSTRUCTION PROCESS.

THE CONTRACTOR SHALL SUPPLY "AS BUILT" INFORMATION OF WATER SERVICES INCLUDING LENGTH AND LOCATION.

CONCRETE DRIVEWAY PAVEMENT (HIGH EARLY) - CONTRACTOR SHALL POUR CONCRETE DRIVEWAYS IN HALVES TO MAINTAIN CONTINUOUS ACCESS TO HOMES UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

TOP OF GRADING GRADE

TOP OF "GRADING GRADE" IS HEREBY DEFINED AS THE TOP OF THE SELECT GRANULAR MATERIAL OR THE BOTTOM OF THE AGGREGATE BASE.

SUITABLE MATERIALS

SUITABLE MATERIALS SHALL BE ALL GRANULAR SOILS ENCOUNTERED ON THE PROJECT FROM BORROW, NOT DEFINED AS BEING UNSUITABLE BY THE ENGINEER, EXCEPT THAT ONLY SELECT GRANULAR MATERIAL SHALL BE USED WHERE SPECIFIED AS SUCH IN THE PLANS.

UNSUITABLE MATERIALS

UNSUITABLE MATERIALS ARE ALL MATERIALS DETERMINED BY THE ENGINEER AS BEING UNSUITABLE FOR GRANULAR BORROW OR STRUCTURAL BACKFILL FOR ROADWAY CONSTRUCTION.

WHERE SECTION OR SUBSECTION MONUMENTS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH MONUMENTS ARE REMOVED. CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE ALL PROPERTY MARKS AND MONUMENTS UNTIL THE OWNER AND AUTHORIZED SURVEYOR OR AGENT HAS WITNESSED OR OTHERWISE REFERENCED THE LOCATION.

WATERMAIN CLASS

DIP 6" OR LESS IS CLASS 53, DIP 8" OR LARGER IS CLASS 52.

KNOWN PRIVATE UTILITIES WITHIN THE PROJECT AREA:

- ARVIG (COMM.)
- CENTERPOINT ENERGY (GAS)
- COMCAST (COMM.)
- CENTURYLINK (COMM.)
- CONNEXUS (ELECTRIC)
- ZAYO (COMM.)

BASIS OF ESTIMATED QUANTITIES

SELECT GRANULAR BORROW	140 #/CF
AGGREGATE BASE CLASS 5	1.8 TONS/CU YD
TYPE SP 9.5 WEARING COURSE	113 #/SY/INCH
TYPE SP 12.5 NON-WEARING COURSE	113 #/SY/INCH
BITUMINOUS MATERIAL FOR TACK COAT	0.08 GAL/S.Y.
MULCH MATERIAL TYPE 6	80 CY/ACRE
COMM. FERT. ANALYSIS 25-5-10	400 #/ACRE
SEED MIXTURE 25-151	300 #/ACRE
SEED MIXTURE 25-141	59 #/ACRE

CONSTRUCTION SEQUENCING

RAW WATER MAIN SEQUENCING

1. VERIFY LOCATION OF EXISTING 20" RAW WATER MAIN AT BUNKER LAKE BLVD NW AND ZEOLITE ST NW
2. SHUT DOWN EXISTING RAW WATER MAIN FROM WELL #8 TO WELL #7
3. INSTALL 24"x20" REDUCER ON EXISTING 20" RAW WATER MAIN
4. LAY 24" RAW WATER MAIN AND APPURTENANCES FROM 24"x20" REDUCER TO 24"x10" TEE
5. CONNECT 24"x10" TEE TO EXISTING 10" RAW WATER MAIN USING A BEND, PIPING, AND APPURTENANCES
6. LAY 24" RAW WATER MAIN FROM 24"x10" TEE TO 24" GATE VALVE ON THE EAST SIDE OF BUNKER LAKE BLVD NW AND ZEOLITE ST NW; CLOSE 24" GATE VALVE
7. PLACE RAW WATER MAIN IN SERVICE FROM WELL #8 TO WELL #7
8. INSTALL 24" RAW WATER MAIN AND APPURTENANCES FROM 24" GATE VALVE ON THE EAST SIDE OF BUNKER LAKE BLVD NW AND ZEOLITE ST NW TO 24"x16" TEE AT BUNKER LAKE BLVD NW AND TOWN CENTER DR NW
9. INSTALL 16" STUB FOR A FUTURE CONNECTION TO THE EXISTING 16" RAW WATER MAIN UTILIZING A VALVE, PIPING, AND APPURTENANCES
10. INSTALL 24" RAW WATER MAIN AND APPURTENANCES FROM 24"x16" TEE AT BUNKER LAKE BLVD NW AND TOWN CENTER DR NW TO 24"x16" TEE AT STA. 33+35
11. INSTALL 16" STUB FOR A FUTURE CONNECTION TO THE EXISTING 16" FINISHED WATER MAIN UTILIZING A VALVE, PIPING, AND APPURTENANCES
12. INSTALL 24" RAW WATER MAIN AND APPURTENANCES FROM 24"x16" TEE AT STA. 33+35 TO HYDRANT ASSEMBLY AND PLUG AT THE FUTURE WATER TREATMENT PLANT SITE AT STA. 83+05
13. PRESSURE TEST 24" RAW WATER MAIN AGAINST EVERY 24" GATE VALVE TO VERIFY A "SURE CUT" AT EACH 24" GATE VALVE
14. CHLORINATE RAW WATER MAIN
15. VERIFY THE FOLLOWING GATE VALVES ARE CLOSED WHEN PRESSURE TESTING AND CHLORINATING IS COMPLETE:
  - 15.1. 24" GATE VALVE AT STA. 1+27 (EAST GATE VALVE AT BUNKER LAKE BLVD NW AND ZEOLITE ST NW)
  - 15.2. 24" GATE VALVE AT STA. 12+77 AT BUNKER LAKE BLVD NW AND TOWN CENTER DR NW
  - 15.3. 16" GATE VALVE ON 16" STUB AT BUNKER LAKE BLVD NW AND TOWN CENTER DR NW
  - 15.4. 24" GATE VALVE AT STA. 33+27
  - 15.5. 16" GATE VALVE ON 16" STUB AT STA. 33+35
  - 15.6. 24" GATE VALVE AT STA. 83+00 AT THE FUTURE WATER TREATMENT PLANT SITE
16. VERIFY THE 24" GATE VALVE AT STA. 0+90 (WEST GATE VALVE AT BUNKER LAKE BLVD NW AND ZEOLITE ST NW) IS OPEN WHEN PRESSURE TESTING IS COMPLETE

FINISHED WATER MAIN SEQUENCING

17. INSTALL 12"x12" TAPPING SLEEVE AND TAPPING VALVE AT 143RD AVE NW AND RAMSEY BLVD NW
18. INSTALL 20"x12" REDUCER ON EAST SIDE OF THE 12" TAPPING VALVE AT 143RD AVE NW AND RAMSEY BLVD NW
19. INSTALL 20" FINISHED WATER MAIN AND APPURTENANCES FROM 20"x12" REDUCER TO 20"x8" TEE AT STA. 109+17
20. INSTALL 8" STUB UTILIZING PIPING, APPURTENANCES, AND A TEMPORARY VALVED BLOWOFF ASSEMBLY FOR A CONNECTION TO THE EXISTING 8" FINISHED WATER MAIN; THIS CONNECTION WILL TAKE PLACE AFTER THE FINISHED WATER MAIN HAS BEEN PLACED IN SERVICE
21. INSTALL 20"/24" FINISHED WATER MAIN AND APPURTENANCES FROM 20"x8" TEE TO 20" GATE VALVE AT STA. 119+10
22. INSTALL 24" FINISHED WATER MAIN AND APPURTENANCES FROM 24"x24" TEE AT STA. 200+75 TO 24"x12" TEE AT STA. 200+61
23. INSTALL 12" STUB UTILIZING PIPING, APPURTENANCES, AND A TEMPORARY VALVED BLOWOFF ASSEMBLY FOR A CONNECTION TO THE EXISTING 12" FINISHED WATER MAIN; THIS CONNECTION WILL TAKE PLACE AFTER THE FINISHED WATER MAIN HAS BEEN PLACED IN SERVICE
24. INSTALL 24" FINISHED WATER MAIN FROM 24"x12" TEE AT STA. 200+61 TO HYDRANT ASSEMBLY AND PLUG AT THE FUTURE WATER TREATMENT PLANT SITE
25. DISINFECT 20"/24" FINISHED WATER MAIN BETWEEN RAMSEY BLVD NW AND THE FUTURE WATER TREATMENT PLANT SITE
26. PRESSURE TEST EVERY SEGMENT OF 20"/24" FINISHED WATER MAIN AGAINST EVERY 20"/24" GATE VALVE TO VERIFY A "SURE CUT" AT EACH 20"/24" GATE VALVE BETWEEN RAMSEY BLVD NW AND THE FUTURE WATER TREATMENT PLANT SITE
27. AFTER 20"/24" FINISHED WATER MAIN ON 143RD ST NW BETWEEN RAMSEY BLVD NW AND THE FUTURE WATER TREATMENT PLANT SITE HAS PASSED PRESSURE TEST AND THE DISINFECTION PROCESS, REMOVE TEMPORARY VALVED BLOWOFF ASSEMBLY AT STA. 109+17 AND CONNECT 8" STUB TO THE EXISTING 8" FINISHED WATER MAIN UTILIZING A TAPPING SLEEVE, TAPPING VALVE, PIPING, AND APPURTENANCES; SWAB CONNECTION PIPING AND APPURTENANCES WITH A MINIMUM OF 50 PPM CHLORINE SOLUTION
28. AFTER 20"/24" FINISHED WATER MAIN ON 143RD ST NW BETWEEN RAMSEY BLVD NW AND THE FUTURE WATER TREATMENT PLANT SITE HAS PASSED PRESSURE TEST AND THE DISINFECTION PROCESS, REMOVE TEMPORARY VALVED BLOWOFF ASSEMBLY AT STA. 200+61 AND CONNECT 12" STUB TO THE EXISTING 12" FINISHED WATER MAIN UTILIZING A TAPPING SLEEVE, TAPPING VALVE, PIPING, AND APPURTENANCES; SWAB CONNECTION PIPING AND APPURTENANCES WITH A MINIMUM OF 50 PPM CHLORINE SOLUTION
29. INSTALL 16"x16" TAPPING SLEEVE AND TAPPING VALVE AT 143rd AVE NW AND BUNKER LAKE BLVD NW
30. INSTALL 20"x16" REDUCER ON WEST SIDE OF THE 16" TAPPING VALVE AT 143RD AVE NW AND BUNKER LAKE BLVD NW
31. INSTALL 20" FINISHED WATER MAIN AND APPURTENANCES FROM 20"x16" REDUCER TO 20"x6" TEE AT STA. 135+49
32. INSTALL HYDRANT TEE, VALVE, AND TEMPORARY VALVED BLOWOFF AT STA. 135+49; THIS CONNECTION TO THE EXISTING HYDRANT WILL TAKE PLACE AFTER THE FINISHED WATER MAIN HAS BEEN PLACED IN SERVICE
33. INSTALL 20" FINISHED WATER MAIN AND APPURTENANCES FROM 20"x6" TEE AT STA. 135+49 TO 20"x6" TEE AT STA. 120+52
34. INSTALL HYDRANT TEE, VALVE, AND TEMPORARY VALVED BLOWOFF AT STA. 120+52; THIS CONNECTION TO THE EXISTING HYDRANT WILL TAKE PLACE AFTER THE FINISHED WATER MAIN HAS BEEN PLACED IN SERVICE
35. INSTALL 20" FINISHED WATER MAIN AND APPURTENANCES FROM 20"x6" TEE AT STA. 120+52 TO THE TEMPORARY VALVED BLOWOFF ASSEMBLY AT STA. 119+30
36. DISINFECT 20" FINISHED WATER MAIN BETWEEN BUNKER LAKE BLVD NW AND THE TEMPORARY VALVED BLOWOFF ASSEMBLY NEAR THE FUTURE WATER TREATMENT PLANT SITE
37. PRESSURE TEST 20" FINISHED WATER MAIN BETWEEN BUNKER LAKE BLVD NW AND THE TEMPORARY VALVED BLOWOFF ASSEMBLY NEAR THE FUTURE WATER TREATMENT PLANT SITE.
38. AFTER 20" FINISHED WATER MAIN BETWEEN BUNKER LAKE BLVD NW AND THE TEMPORARY VALVED BLOWOFF ASSEMBLY NEAR THE FUTURE WATER TREATMENT PLANT SITE HAS PASSED PRESSURE TEST AND THE DISINFECTION PROCESS, REMOVE TEMPORARY VALVED BLOWOFF ASSEMBLY AT STA. 119+30 AND CONNECT 20" FINISHED WATER MAIN TO THE 20" GATE VALVE AT STA. 119+10 UTILIZING PIPING AND APPURTENANCES; SWAB CONNECTION PIPING AND APPURTENANCES WITH A MINIMUM OF 50 PPM CHLORINE SOLUTION
39. AFTER 20" FINISHED WATER MAIN BETWEEN BUNKER LAKE BLVD NW AND THE TEMPORARY VALVED BLOWOFF ASSEMBLY NEAR THE FUTURE WATER TREATMENT PLANT SITE HAS PASSED PRESSURE TEST AND THE DISINFECTION PROCESS, REMOVE TEMPORARY VALVED BLOWOFF ASSEMBLY AT STA. 135+49 AND CONNECT TO EXISTING HYDRANT BRANCH AFTER THE EXISTING HYDRANT HAS BEEN REMOVED, INSTALL HYDRANT ASSEMBLY UTILIZING A TEE, VALVES, PIPING, HYDRANT, AND APPURTENANCES; SWAB HYDRANT ASSEMBLY AND CONNECTION PIPING AND APPURTENANCES WITH A MINIMUM OF 50 PPM CHLORINE SOLUTION
40. AFTER 20" FINISHED WATER MAIN BETWEEN BUNKER LAKE BLVD NW AND THE TEMPORARY VALVED BLOWOFF ASSEMBLY NEAR THE FUTURE WATER TREATMENT PLANT SITE HAS PASSED PRESSURE TEST AND THE DISINFECTION PROCESS REMOVE TEMPORARY VALVED BLOWOFF ASSEMBLY AT STA. 120+52 AND CONNECT TO EXISTING HYDRANT BRANCH AFTER THE EXISTING HYDRANT HAS BEEN REMOVED, INSTALL HYDRANT ASSEMBLY UTILIZING A TEE, VALVES, PIPING, HYDRANT, AND APPURTENANCES; SWAB HYDRANT ASSEMBLY AND CONNECTION PIPING AND APPURTENANCES WITH A MINIMUM OF 50 PPM CHLORINE SOLUTION
41. VERIFY THE 24" GATE VALVE AT THE FUTURE WATER TREATMENT PLANT SITE IS CLOSED WHEN CONNECTIONS ARE COMPLETE
42. VERIFY THE FOLLOWING GATE VALVES ARE OPEN WHEN CONNECTIONS ARE COMPLETE:
  - 42.1. 12" GATE VALVE AT 143RD AVE NW AND RAMSEY BLVD NW
  - 42.2. 8" GATE VALVE AT STA. 109+17
  - 42.3. 12" GATE VALVE AT STA. 200+61
  - 42.4. 6" GATE VALVE AT HYDRANT ASSEMBLY AT STA. 120+52
  - 42.5. 6" GATE VALVE AT HYDRANT ASSEMBLY AT STA. 135+49
  - 42.6. 16" GATE VALVE AT 143RD AVE NW AND BUNKER LAKE BLVD NW

Save: 10/6/2023 11:51 AM Knowles Plot: 10/7/2023 2:14 PM X:\PT\TR\RAM\SY159783\5-final-dsgn\51-drawings\10-Civil\caddwg\sheet\RA159783CN1.dwg

SEH Project	RAMSY174498	Rev.#	Revision Issue Description	Date	Rev.#	Revision Issue Description	Date
Drawn By	JRB, SRP	.			.		
Designed By	KLK	.			.		
Checked By	CES	.			.		

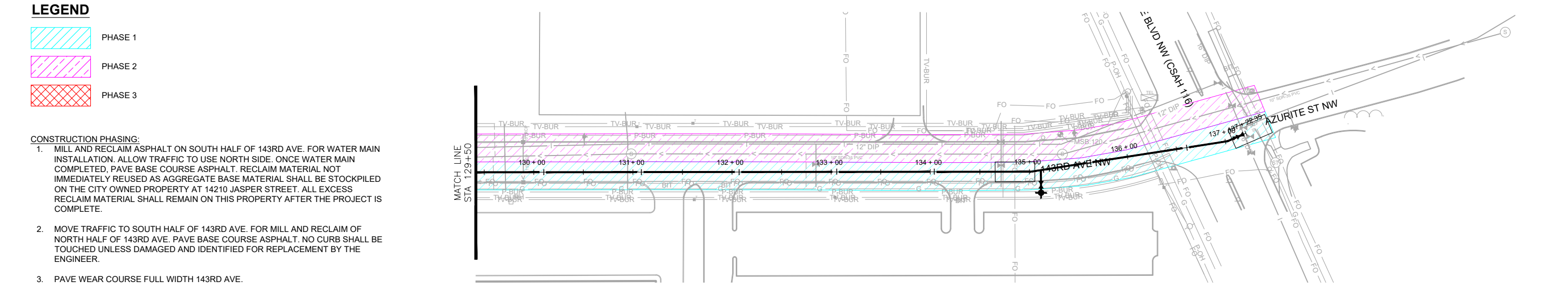
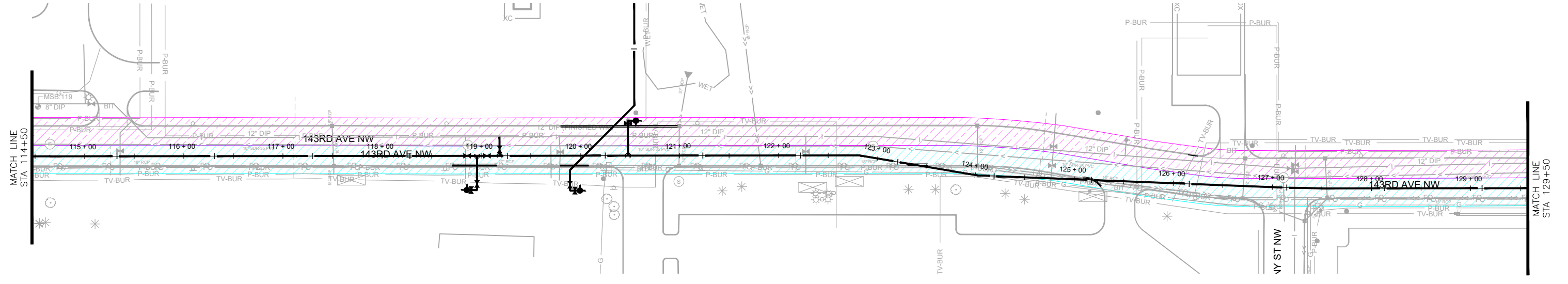
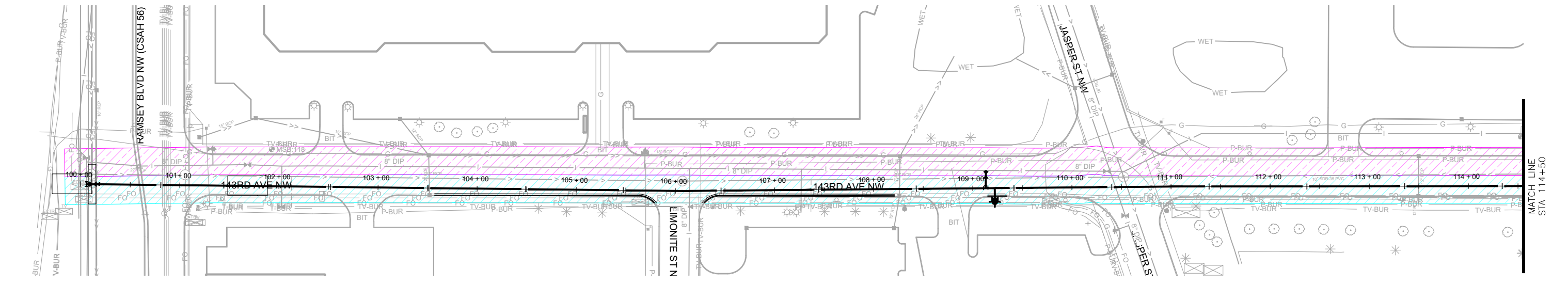


I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MN.  
 David E. Hutton  
 LICENSE NO. 19133  
 DATE 10-06-2023

**WATER TREATMENT PLANT**  
**TRUNK WATER MAIN IMPROVEMENTS**  
 Ramsey, Minnesota

**CONSTRUCTION NOTES**





- LEGEND**
- PHASE 1
  - PHASE 2
  - PHASE 3

- CONSTRUCTION PHASING:**
1. MILL AND RECLAIM ASPHALT ON SOUTH HALF OF 143RD AVE. FOR WATER MAIN INSTALLATION. ALLOW TRAFFIC TO USE NORTH SIDE. ONCE WATER MAIN COMPLETED, PAVE BASE COURSE ASPHALT. RECLAIM MATERIAL NOT IMMEDIATELY REUSED AS AGGREGATE BASE MATERIAL SHALL BE STOCKPILED ON THE CITY OWNED PROPERTY AT 14210 JASPER STREET. ALL EXCESS RECLAIM MATERIAL SHALL REMAIN ON THIS PROPERTY AFTER THE PROJECT IS COMPLETE.
  2. MOVE TRAFFIC TO SOUTH HALF OF 143RD AVE. FOR MILL AND RECLAIM OF NORTH HALF OF 143RD AVE. PAVE BASE COURSE ASPHALT. NO CURB SHALL BE TOUCHED UNLESS DAMAGED AND IDENTIFIED FOR REPLACEMENT BY THE ENGINEER.
  3. PAVE WEAR COURSE FULL WIDTH 143RD AVE.

Save: 10/3/2023 8:00 AM aolsen Plot: 10/17/2023 2:15 PM X:\PT\RAMSY\15978315-final.dgn\15-drawings\10-Civil\cad\dwg\sheet\RA159783CP.dwg

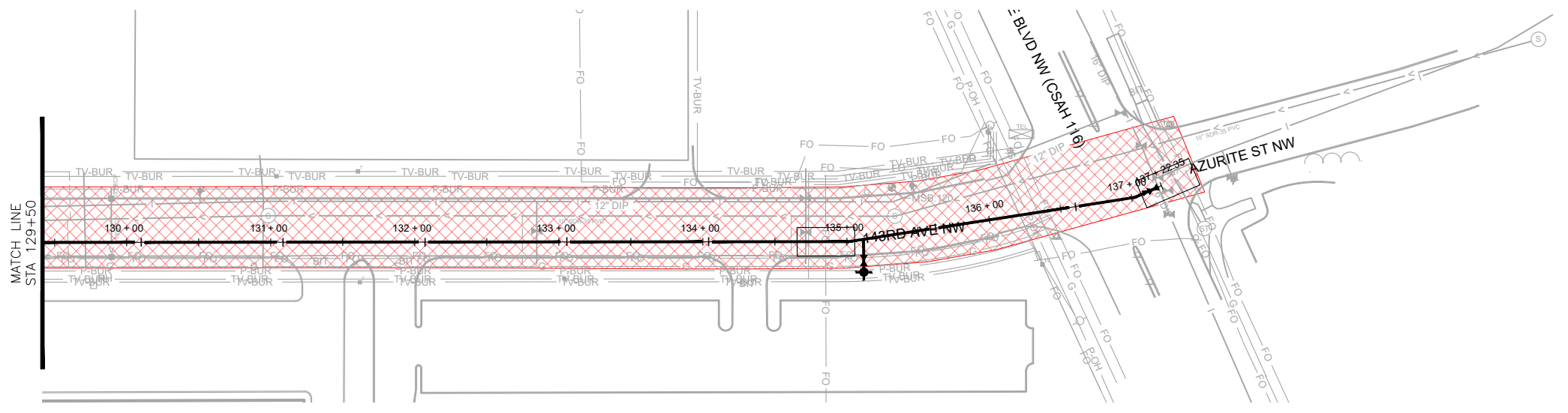
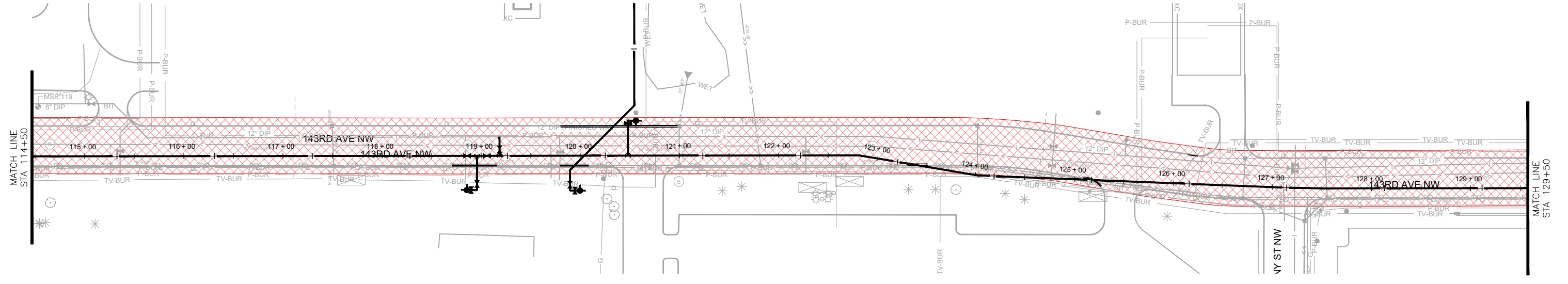
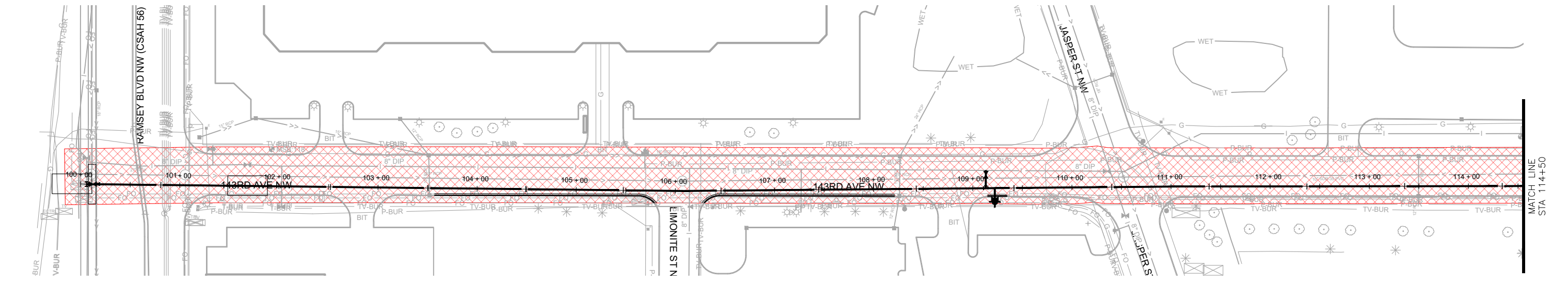
SEH Project	RAMSY174498	Rev.#	Revision Issue Description	Date	Rev.#	Revision Issue Description	Date
Drawn By	JRB, SRP	.			.		
Designed By	KLK	.			.		
Checked By	CES	.			.		



I HEREBY CERTIFY THAT THIS PLAN 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 MN.  
 David E. Hutton  
 LICENSE NO. 19133  
 DATE 10-06-2023

**WATER TREATMENT PLANT TRUNK WATER MAIN IMPROVEMENTS**  
 Ramsey, Minnesota

**CONSTRUCTION PHASING - 143RD AVE.**



- LEGEND**
- PHASE 1
  - PHASE 2
  - PHASE 3

- CONSTRUCTION PHASING:**
1. MILL AND RECLAIM ASPHALT ON SOUTH HALF OF 143RD AVE. FOR WATER MAIN INSTALLATION. ALLOW TRAFFIC TO USE NORTH SIDE. ONCE WATER MAIN COMPLETED, PAVE BASE COURSE ASPHALT. RECLAIM MATERIAL NOT IMMEDIATELY REUSED AS AGGREGATE BASE MATERIAL SHALL BE STOCKPILED ON THE CITY OWNED PROPERTY AT 14210 JASPER STREET. ALL EXCESS RECLAIM MATERIAL SHALL REMAIN ON THIS PROPERTY AFTER THE PROJECT IS COMPLETE.
  2. MOVE TRAFFIC TO SOUTH HALF OF 143RD AVE. FOR MILL AND RECLAIM OF NORTH HALF OF 143RD AVE. PAVE BASE COURSE ASPHALT. NO CURB SHALL BE TOUCHED UNLESS DAMAGED AND IDENTIFIED FOR REPLACEMENT BY THE ENGINEER.
  3. PAVE WEAR COURSE FULL WIDTH 143RD AVE.

Save: 10/3/2023 8:00 AM aolsen Plot: 10/7/2023 2:15 PM X:\PT\RAMSY\15978315-final-dwg\15-drawings\10-Civil\cad\dwg\sheet\RA159783CP.dwg

SEH Project	RAMSY174498	Rev.#	Revision Issue Description	Date	Rev.#	Revision Issue Description	Date
Drawn By	JRB, SRP	.			.		
Designed By	KLK	.			.		
Checked By	CES	.			.		

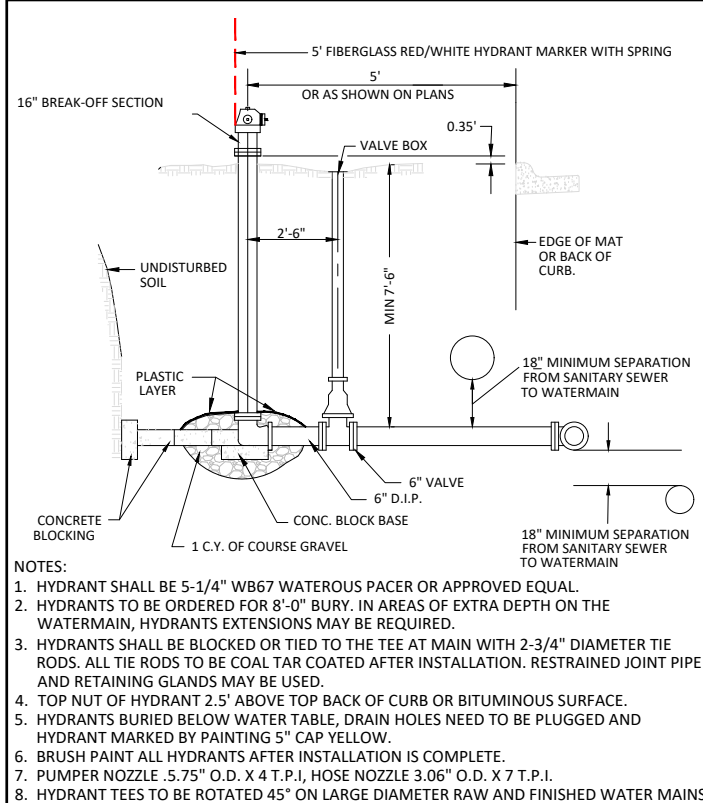


I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MN.  
*David E. Hutton*  
 David E. Hutton  
 LICENSE NO. 19133  
 DATE 10-06-2023

**WATER TREATMENT PLANT  
 TRUNK WATER MAIN IMPROVEMENTS**  
 Ramsey, Minnesota

**CONSTRUCTION PHASING - 143RD AVE.**



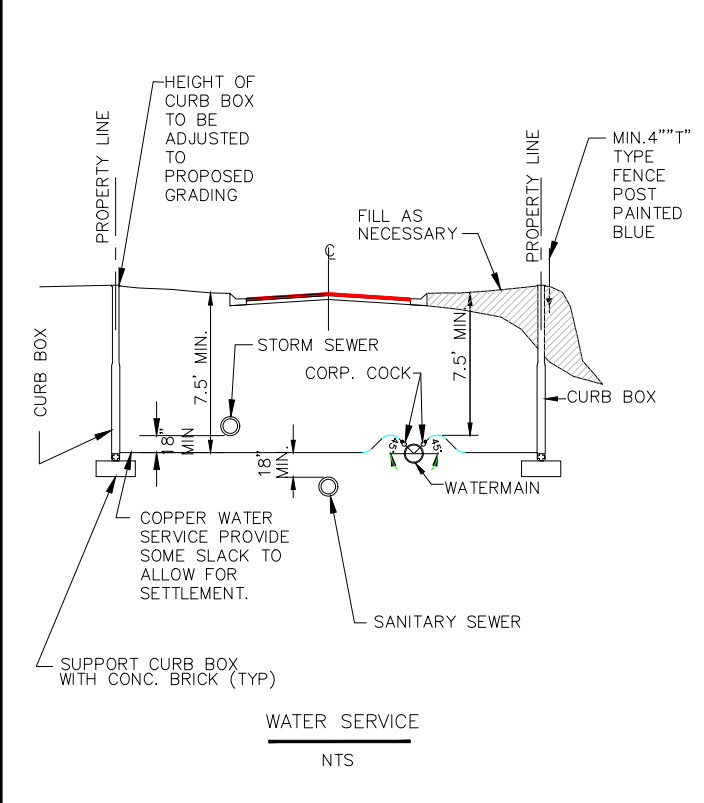


NOTES:  
 1. HYDRANT SHALL BE 5-1/4" WB67 WATEROUS PACER OR APPROVED EQUAL.  
 2. HYDRANTS TO BE ORDERED FOR 8'-0" BURY. IN AREAS OF EXTRA DEPTH ON THE WATERMAIN, HYDRANTS EXTENSIONS MAY BE REQUIRED.  
 3. HYDRANTS SHALL BE BLOCKED OR TIED TO THE TEE AT MAIN WITH 2-3/4" DIAMETER TIE RODS. ALL TIE RODS TO BE COAL TAR COATED AFTER INSTALLATION. RESTRAINED JOINT PIPE AND RETAINING GLANDS MAY BE USED.  
 4. TOP NUT OF HYDRANT 2.5' ABOVE TOP BACK OF CURB OR BITUMINOUS SURFACE.  
 5. HYDRANTS BURIED BELOW WATER TABLE, DRAIN HOLES NEED TO BE PLUGGED AND HYDRANT MARKED BY PAINTING 5" CAP YELLOW.  
 6. BRUSH PAINT ALL HYDRANTS AFTER INSTALLATION IS COMPLETE.  
 7. PUMPER NOZZLE .5.75" O.D. X 4 T.P.I., HOSE NOZZLE 3.06" O.D. X 7 T.P.I.  
 8. HYDRANT TEES TO BE ROTATED 45° ON LARGE DIAMETER RAW AND FINISHED WATER MAINS

APPROVED: 3 - 2022

**City of RAMSEY**  
 CITY PLATE No. WAT-1

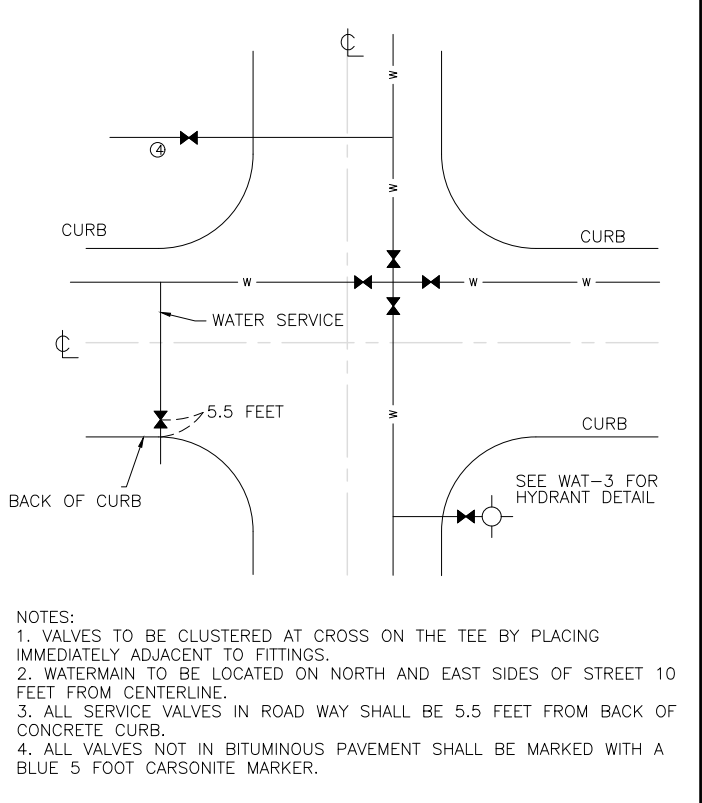
STANDARD DETAILS: HYDRANT



APPROVED: 3 - 2022

**City of RAMSEY**  
 CITY PLATE No. WAT-2

STANDARD DETAILS: WATER SERVICE

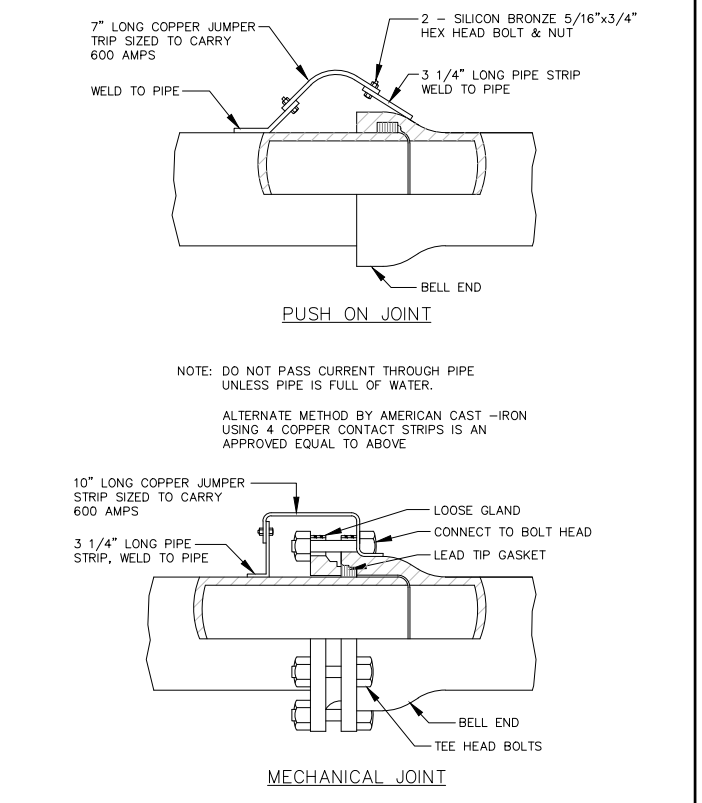


APPROVED: 4 - 2016

**City of RAMSEY**  
 CITY PLATE No. WAT-3

STANDARD DETAILS: WATERMAIN VALVE LOCATION

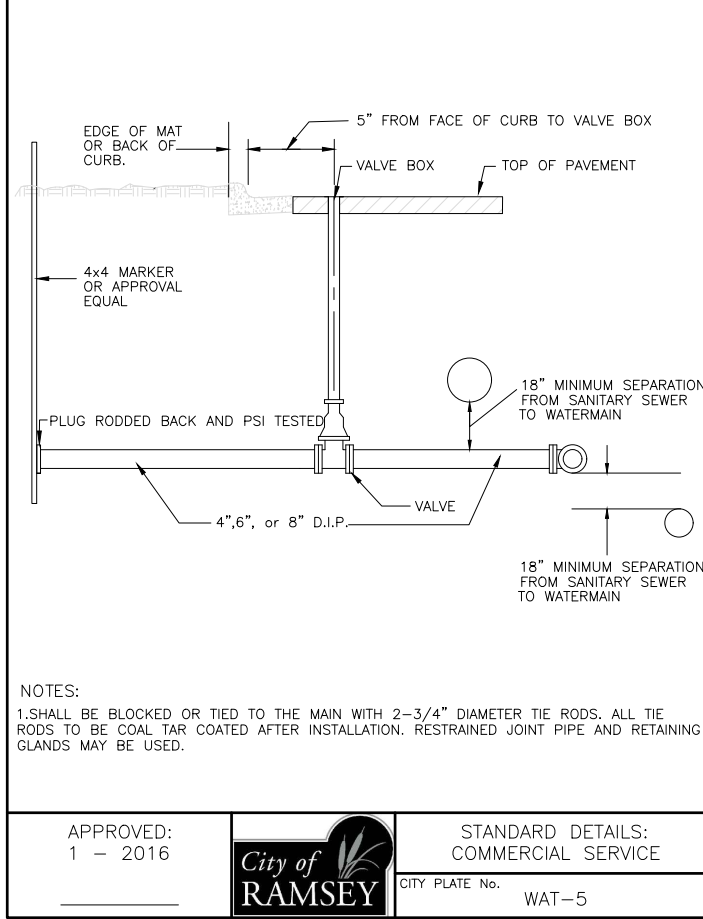
NOTES:  
 1. VALVES TO BE CLUSTERED AT CROSS ON THE TEE BY PLACING IMMEDIATELY ADJACENT TO FITTINGS.  
 2. WATERMAIN TO BE LOCATED ON NORTH AND EAST SIDES OF STREET 10 FEET FROM CENTERLINE.  
 3. ALL SERVICE VALVES IN ROAD WAY SHALL BE 5.5 FEET FROM BACK OF CONCRETE CURB.  
 4. ALL VALVES NOT IN BITUMINOUS PAVEMENT SHALL BE MARKED WITH A BLUE 5 FOOT CARSONITE MARKER.



APPROVED: 1 - 2016

**City of RAMSEY**  
 CITY PLATE No. WAT-4

STANDARD DETAILS: JOINT CONNECTION

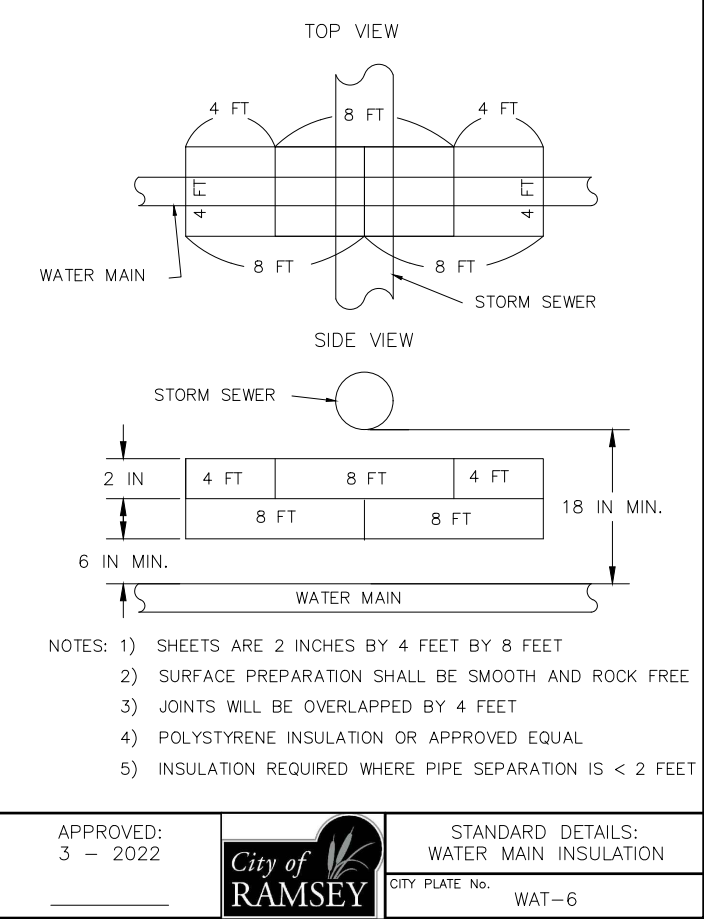


APPROVED: 1 - 2016

**City of RAMSEY**  
 CITY PLATE No. WAT-5

STANDARD DETAILS: COMMERCIAL SERVICE

NOTES:  
 1. SHALL BE BLOCKED OR TIED TO THE MAIN WITH 2-3/4" DIAMETER TIE RODS. ALL TIE RODS TO BE COAL TAR COATED AFTER INSTALLATION. RESTRAINED JOINT PIPE AND RETAINING GLANDS MAY BE USED.

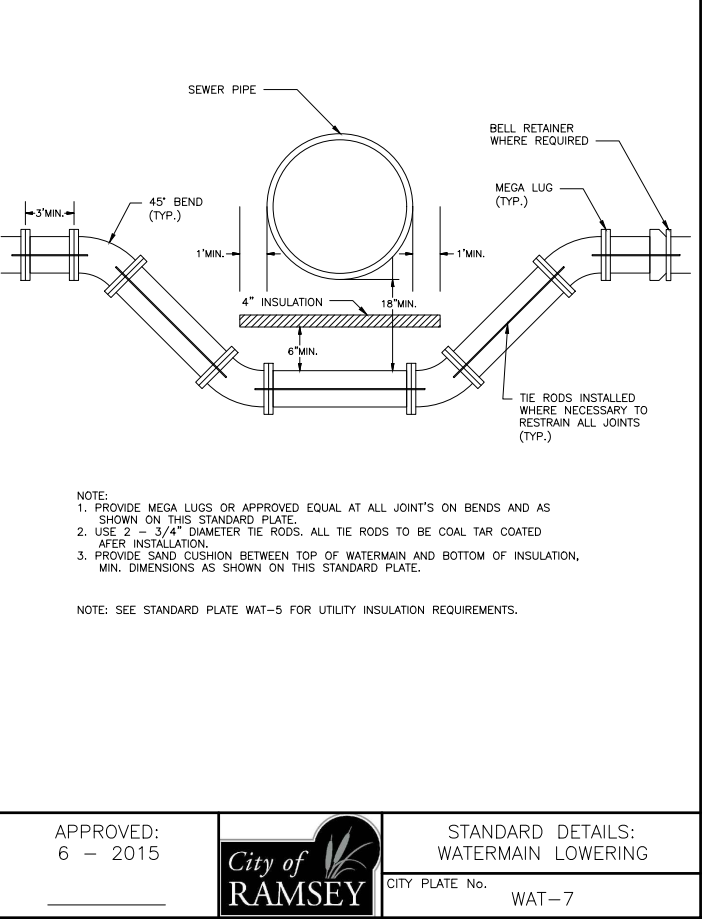


APPROVED: 3 - 2022

**City of RAMSEY**  
 CITY PLATE No. WAT-6

STANDARD DETAILS: WATER MAIN INSULATION

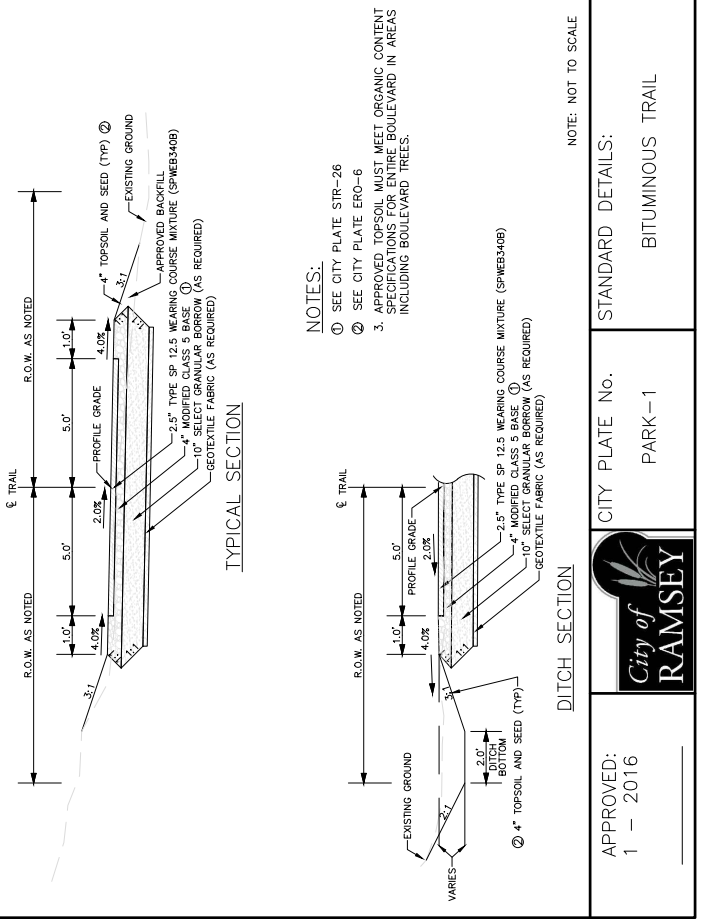
NOTES:  
 1) SHEETS ARE 2 INCHES BY 4 FEET BY 8 FEET  
 2) SURFACE PREPARATION SHALL BE SMOOTH AND ROCK FREE  
 3) JOINTS WILL BE OVERLAPPED BY 4 FEET  
 4) POLYSTYRENE INSULATION OR APPROVED EQUAL  
 5) INSULATION REQUIRED WHERE PIPE SEPARATION IS < 2 FEET



APPROVED: 6 - 2015

**City of RAMSEY**  
 CITY PLATE No. WAT-7

STANDARD DETAILS: WATERMAIN LOWERING



APPROVED: 1 - 2016

**City of RAMSEY**  
 CITY PLATE No. PARK-1

STANDARD DETAILS: BITUMINOUS TRAIL

NOTES:  
 1. SEE CITY PLATE STR-26  
 2. SEE CITY PLATE ERO-6  
 3. APPROVED TOPSOIL MUST MEET ORGANIC CONTENT SPECIFICATIONS FOR ENTIRE BOULEVARD IN AREAS INCLUDING BOULEVARD TREES.

Save: 10/6/2023 3:20 PM Knowles Plot: 10772023.2:15 PM X:\PT\RAMSEY\1597835-final\dsn\51-drawings\10-Civil\cad\dwg\sheet\RA1597835.DWG

SEH Project	RAMSY174498	Rev.#	Revision Issue Description	Date	Rev.#	Revision Issue Description	Date
Drawn By	JRB, SRP	.	.	.	.	.	.
Designed By	KLK	.	.	.	.	.	.
Checked By	CES	.	.	.	.	.	.

I HEREBY CERTIFY THAT THIS PLAN 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 MN.

**SEH**  
 DATE 10-06-2023

David E. Hutton  
 LICENSE NO. 19133

**WATER TREATMENT PLANT  
 TRUNK WATER MAIN IMPROVEMENTS**  
 Ramsey, Minnesota

DETAILS

**MnDOT B618 (URBAN)**  
**DRIVEWAY FOR B618**

**MnDOT B612 (URBAN)**  
**SURMOUNTABLE**

**NOTES:**  
 1. ON WEAR COURSE MILL THE EXISTING BITUMINOUS 1.5" BY 24" IN FRONT OF THE REPLACEMENT CURB.  
 2. ON BASE COURSE SAW CUT AND REMOVE EXISTING BITUMINOUS 18" IN FRONT OF THE REPLACEMENT CURB.

APPROVED: 1 - 2016  
 City of RAMSEY  
 STANDARD DETAILS: CURB AND GUTTER  
 CITY PLATE No. STR-1

**PLAN**

**SECTION A-A**

**NOTES:**  
 1. WITH REMOVAL OF EXISTING CURB AT A STREET, MILL BITUMINOUS TO A DEPTH OF 1.5" AND A WIDTH OF 18" IN EXISTING STREET.  
 2. TO BE USED WHENEVER CROSS DRAINAGE IS < 2%.  
 3. CONCRETE CURB AND GUTTER SHALL BE CAST INTEGRAL WITH CONCRETE CROSS GUTTER AREA.  
 4. CONCRETE CURB AND GUTTER SHALL BE PAID SEPARATELY FROM CONCRETE CROSS GUTTER AREA.

APPROVED: 3 - 2017  
 City of RAMSEY  
 STANDARD DETAILS: CROSS GUTTER  
 CITY PLATE No. STR-2

**PLAN**

**SECTION A-A**

**NOTE:**  
 ① BROOM FINISH CONCRETE WALK SURFACE  
 ② MAXIMUM 100 FOOT SPACING BETWEEN EXPANSION JOINTS  
 ③ 1/2" EXPANSION JOINT MEETING MNDOT SPEC 3702. PROVIDE ONE PIECE OF FILLER FOR THE ENTIRE DEPTH AND WIDTH OF THE JOINT

APPROVED: 10 - 2015  
 City of RAMSEY  
 STANDARD DETAILS: CONCRETE SIDEWALK  
 CITY PLATE No. STR-3

**TYPICAL TRENCH LAYOUT IN STREET BOULEVARD**

**TYPICAL TRENCH LAYOUT IN UTILITY EASEMENT**

**REFERENCE NOTES:**  
 ① GRADE TO MATCH EXISTING SURFACE MINIMUM 4" COMMON TOPSOIL BORROW IN BOULEVARDS.  
 ② SEE CITY PLATE No. ERO-6  
 ③ CLASS 5 GRADATION IS MODIFIED PER CITY PLATE No. STR-26  
 ④ CONTRACTOR SHALL SCARIFY AND COMPACT, ACCORDING TO THE SPECIFIED DENSITY METHOD. THE TOP 12 INCHES OF MATERIAL PRIOR TO PLACING ANY FILL MATERIALS OR CLASS 5 AGGREGATE BASE.  
 ⑤ ALL SIDEWALKS SHALL BE 6" THICK, 6" WIDE, PLACED ON PREPARED SUBGRADE.  
 ⑥ CONCRETE CURB AND GUTTER PER PLAN. SEE CITY PLATE No. STR-1.

APPROVED: 6 - 2016  
 City of RAMSEY  
 STANDARD DETAILS: 32' - URBAN STREET  
 CITY PLATE No. STR-5

**STREET PATCHING STANDARDS**

**NOTES:**  
 1. BITUMINOUS SHALL BE SAWCUT AND REMOVED AFTER CURB IS REPLACED.  
 2. CLASS 5 AND BITUMINOUS COURSES SHALL BE MECHANICALLY COMPACTED.  
 3. SEE CITY PLATE STR-26 FOR MODIFIED CLASS 5 SPECIFICATIONS.

APPROVED: 3 - 2022  
 City of RAMSEY  
 STANDARD DETAILS: STREET PATCHING STANDARDS  
 CITY PLATE No. STR-25

**TABLE A**  
**MODIFIED CLASS 5 SPECIFICATIONS**

	% PASSING
1"	100
3/4"	90 - 100
3/8"	50 - 80
No.4	35 - 70
No.10	20 - 60
No.40	10 - 35
No.200	5 - 10

**NOTES:**  
 1. THE AGGREGATE BASE CONSTRUCTION WILL BE ACCEPTED FOR PAYMENT IN ACCORDANCE WITH THE PROVISIONS IN TABLE A.  
 2. IF THE AGGREGATE BASE FAILS TO MEET THE REQUIREMENTS OF TABLE A THE MATERIAL CAN BE CORRECTED IN PLACE OR REMOVED AND REPLACED WITH MATERIAL THAT MEET THE REQUIREMENTS OF TABLE A.  
 3. IN THE EVENT THAT RECYCLED MATERIAL IS USE IT MUST MEET MNDOT REQUIREMENTS FOR RECYCLED BASE.

APPROVED: 2 - 2003  
 City of RAMSEY  
 STANDARD DETAILS: MODIFIED CLASS 5 SPECIFICATION  
 CITY PLATE No. STR-26

**STREET TIE-IN**

**NOTES:**  
 1. BITUMINOUS SHALL BE SAWCUT AND REMOVED  
 2. CLASS 5 AND BITUMINOUS COURSES SHALL BE MECHANICALLY COMPACTED.  
 3. SEE CITY PLATE STR-26 FOR MODIFIED CLASS 5 SPECIFICATIONS.

APPROVED: 3 - 2017  
 City of RAMSEY  
 STANDARD DETAILS: STREET TIE-IN  
 CITY PLATE No. STR-31

**TYPICAL TRENCH LAYOUT IN UTILITY EASEMENT**

**NOTES:**  
 1. TRENCH AND UTILITY LOCATIONS SHALL CORRESPOND WITH STREET SERIES LAYOUT AND CONNEXUS PLANS.  
 2. WARNING TAPE AND LOCATING WIRE PLACED ABOVE GAS AND ELECTRIC

APPROVED: 7 - 1996  
 City of RAMSEY  
 STANDARD DETAILS: TYPICAL TRENCH LOCATIONS  
 CITY PLATE No. UTL-2

Save: 10/6/2023 3:20 PM Knowles Plot: 10772023.2:15 PM X:\PT\RAMSEY\15978935-final-dsgn\51-drawings\10-Civil\cad\dwg\sheet\RA1597830T.dwg

SEH Project	RAMSY174498	Rev.#	Revision Issue Description	Date	Rev.#	Revision Issue Description	Date
Drawn By	JRB, SRP	.	.	.	.	.	.
Designed By	KLK	.	.	.	.	.	.
Checked By	CES	.	.	.	.	.	.

I HEREBY CERTIFY THAT THIS PLAN 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 MN.

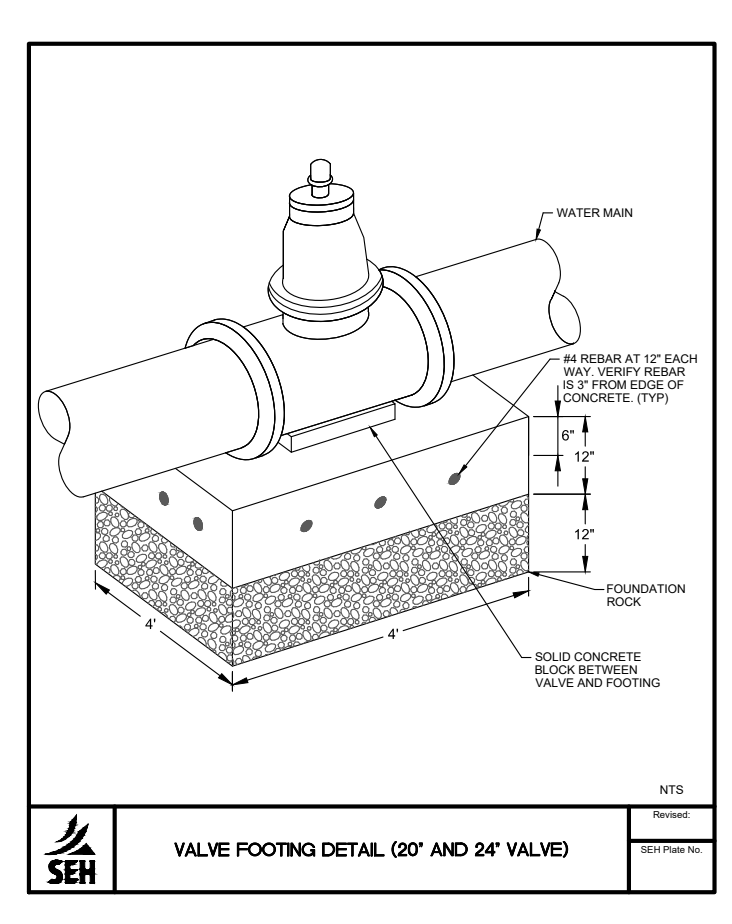
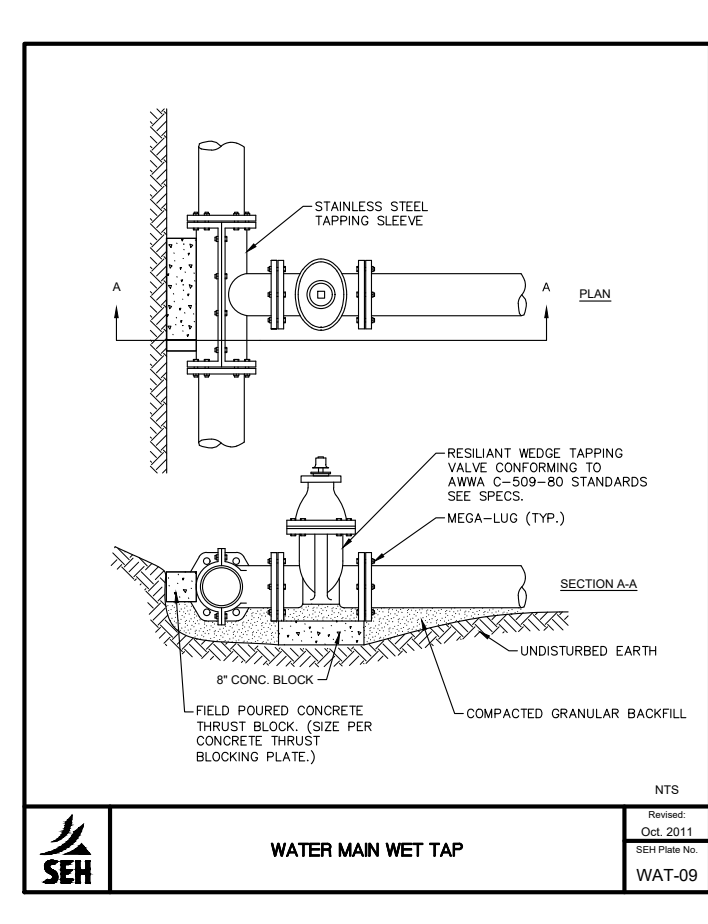
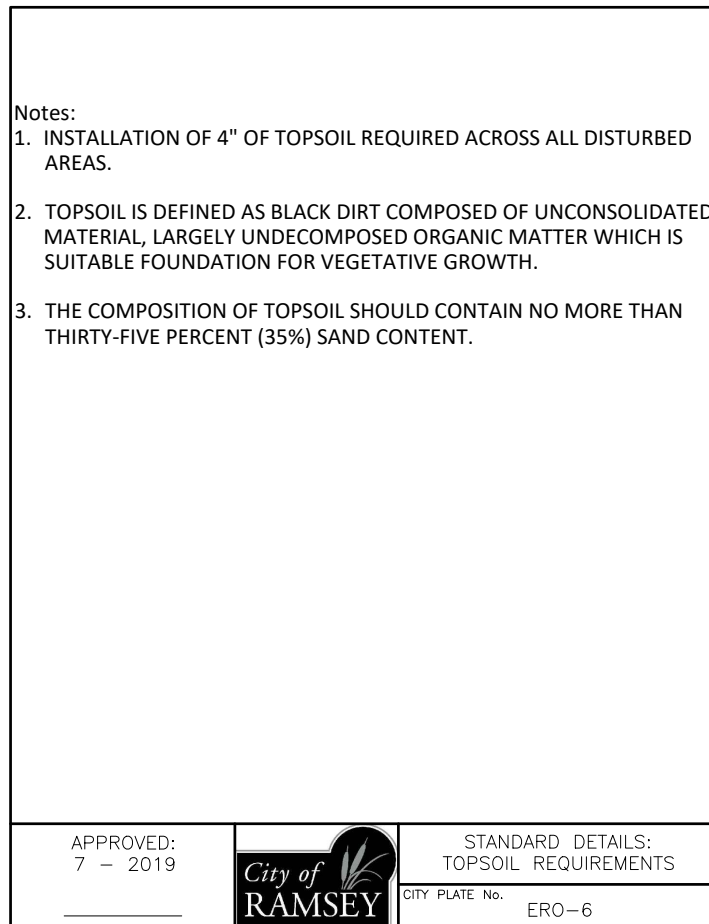
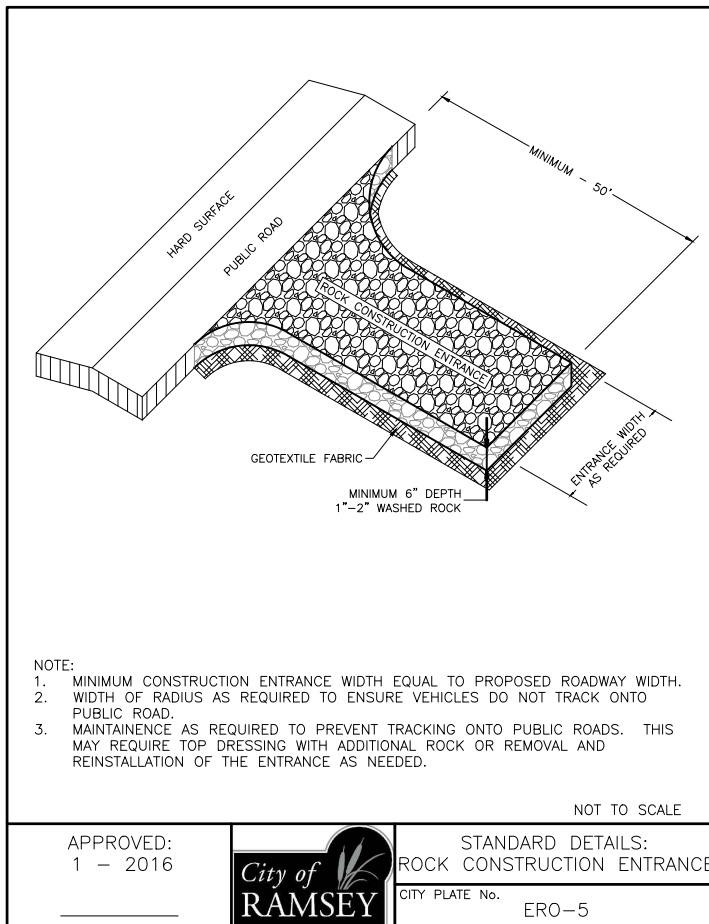
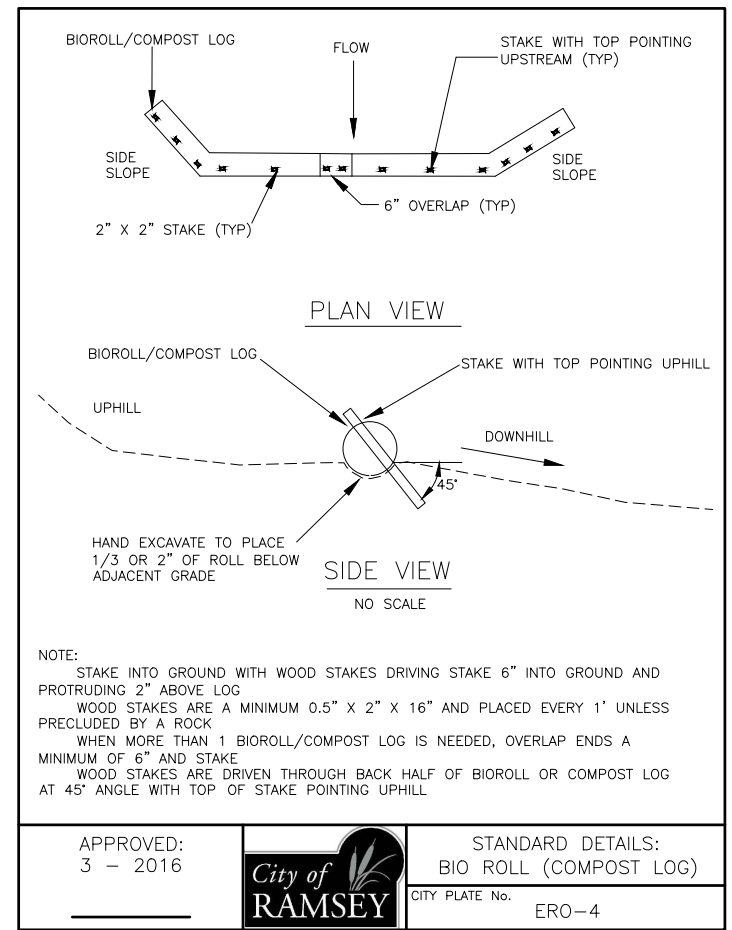
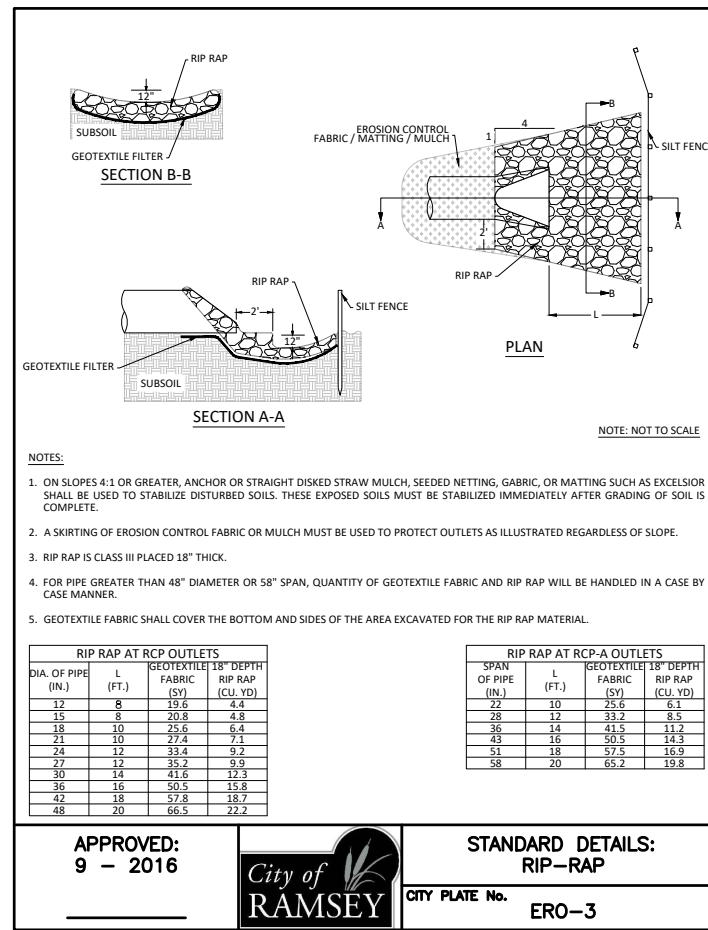
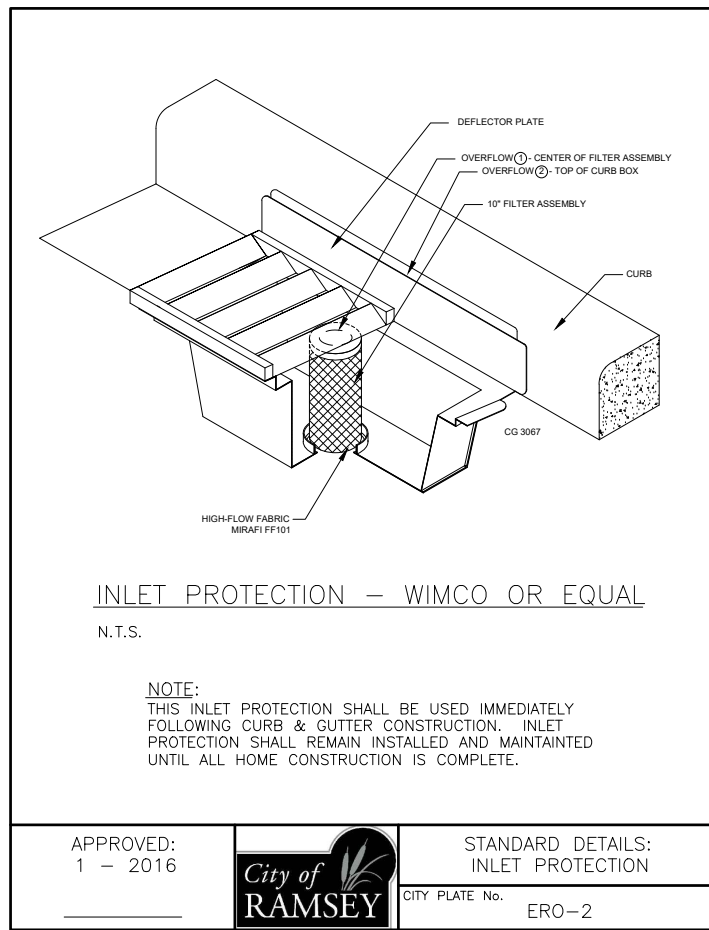
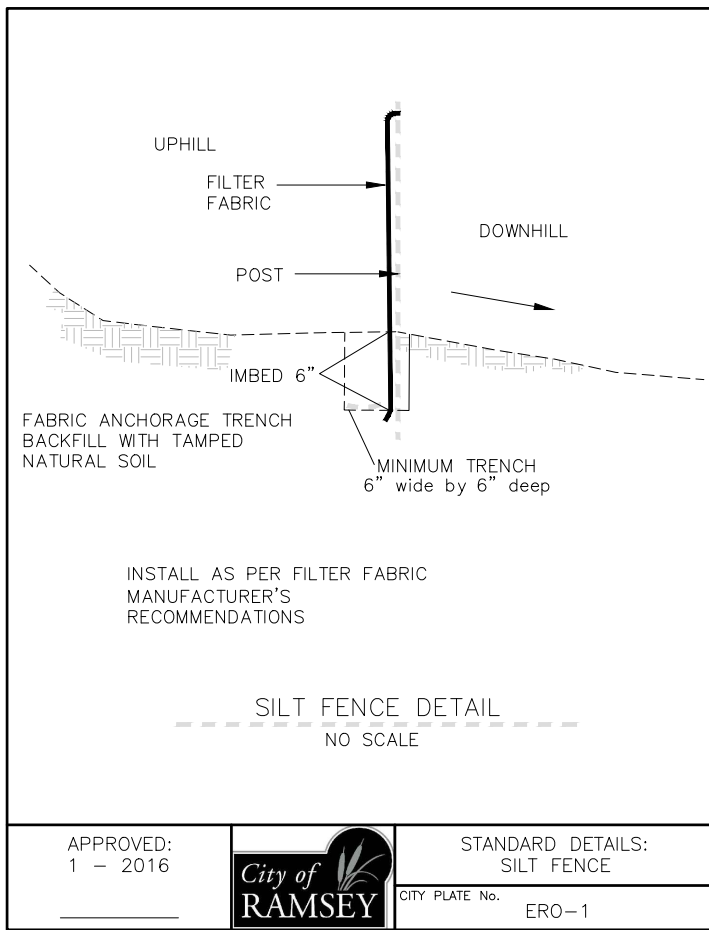
**SEH**  
 DATE 10-06-2023

David E. Hutton  
 LICENSE NO. 19133

**WATER TREATMENT PLANT**  
**TRUNK WATER MAIN IMPROVEMENTS**  
 Ramsey, Minnesota

**DETAILS**

8  
 of 58



Save: 10/6/2023 3:20 PM Knowles Plot: 10/7/2023 2:16 PM X:\PT\RAMSEY\15978\9\5-final\dsn\51-drawings\10-Civil\cad\dwg\sh\ee\159783DT.dwg

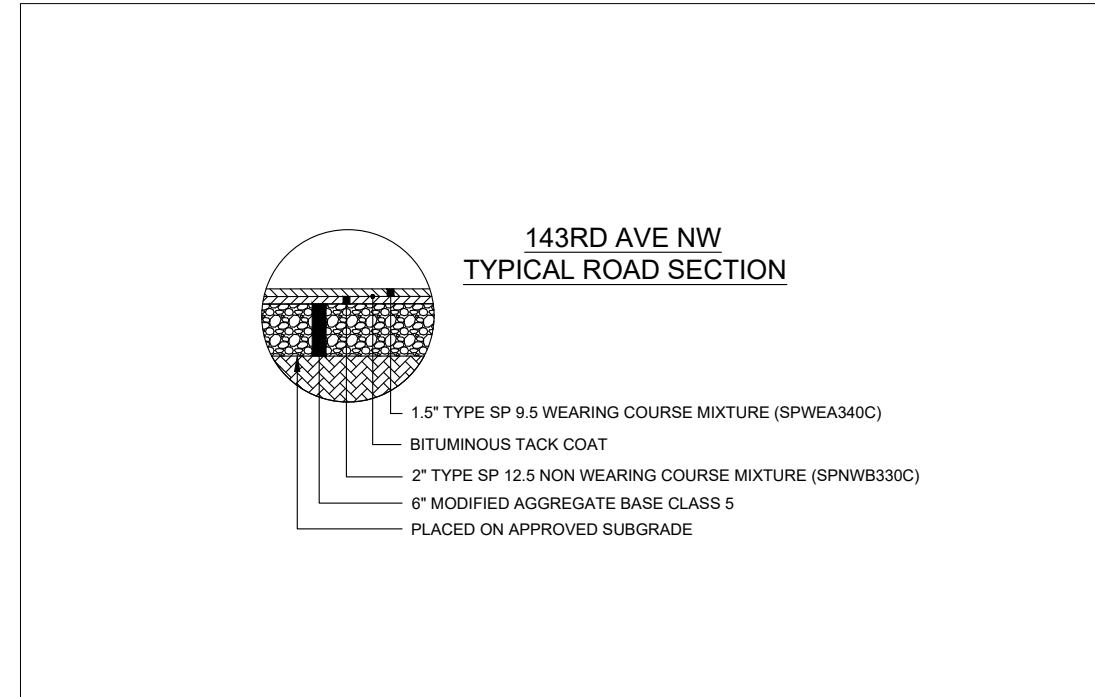
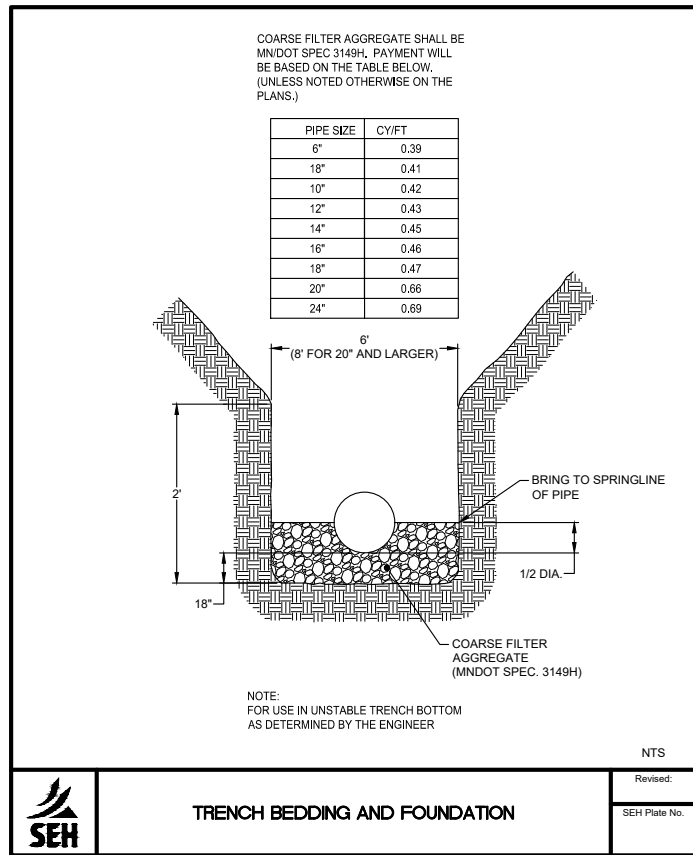
SEH Project	RAMSY174498	Rev.#	Revision Issue Description	Date	Rev.#	Revision Issue Description	Date
Drawn By	JRB, SRP	.			.		
Designed By	KLK	.			.		
Checked By	CES	.			.		

I HEREBY CERTIFY THAT THIS PLAN 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 MN.

DATE 10-06-2023

David E. Hutton  
LICENSE NO. 19133

**WATER TREATMENT PLANT TRUNK WATER MAIN IMPROVEMENTS**  
Ramsey, Minnesota



Save: 10/7/2023 3:18 PM Knowles Plot: 10/7/2023 3:18 PM X:\PT\RAMS\15978\35-final\dsn\51-drawings\10-Civil\cad\dwg\sheet\RA159783DT.dwg

SEH Project	RAMSY174498	Rev.#	Revision Issue Description	Date	Rev.#	Revision Issue Description	Date
Drawn By	JRB, SRP	.			.		
Designed By	KLK	.			.		
Checked By	CES	.			.		

**SEH**

I HEREBY CERTIFY THAT THIS PLAN 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 MN.

*David E. Hutton*

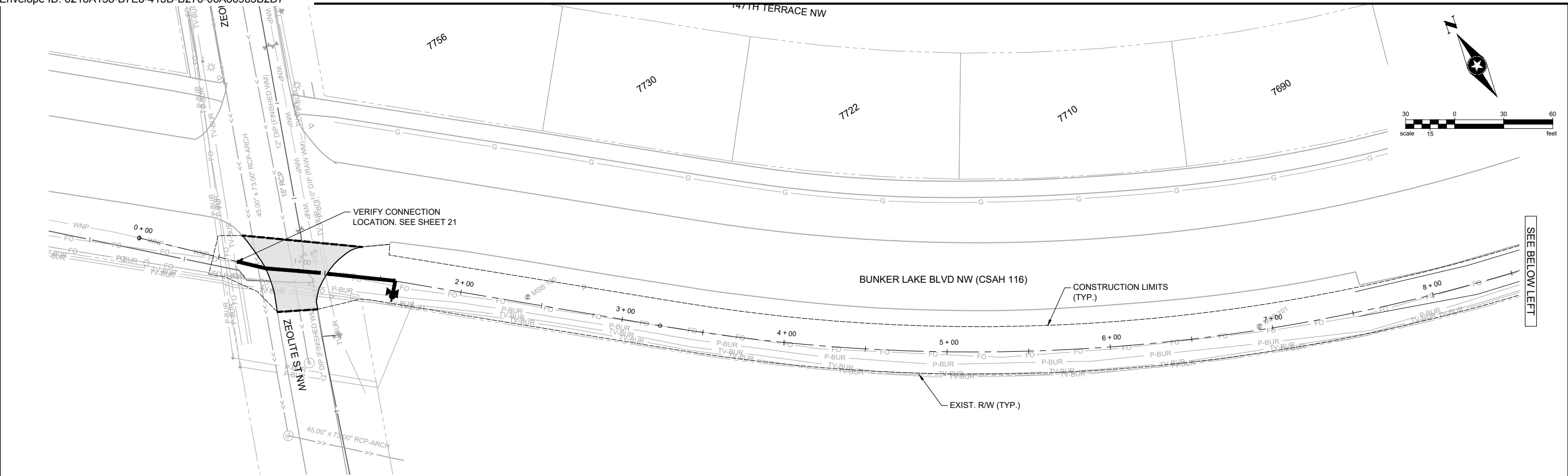
DATE 10-06-2023 David E. Hutton LICENSE NO. 19133

**WATER TREATMENT PLANT  
TRUNK WATER MAIN IMPROVEMENTS**

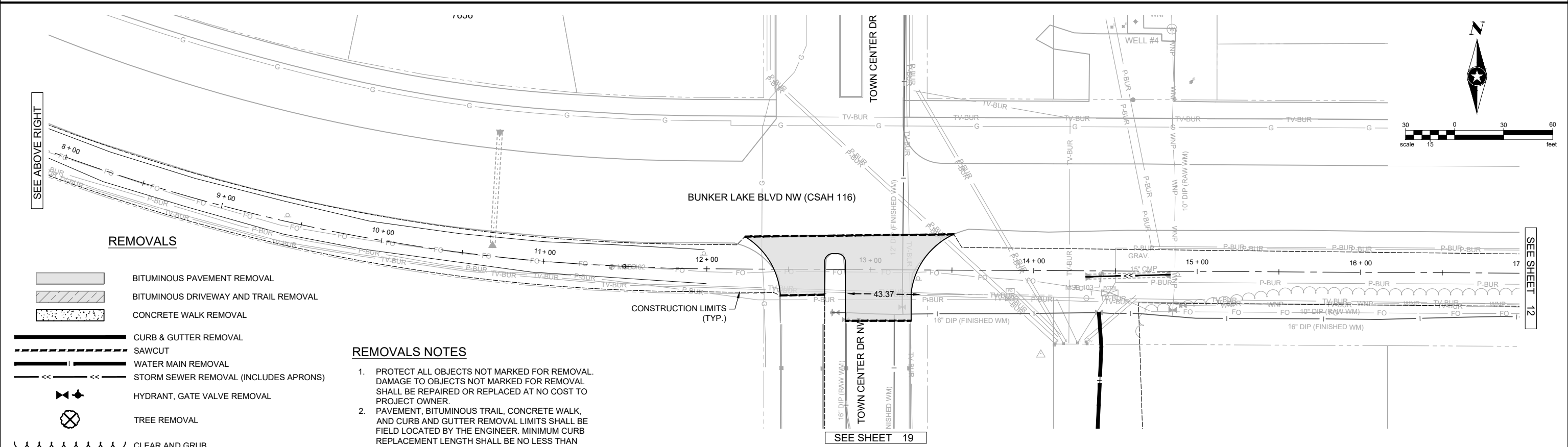
Ramsey, Minnesota

**DETAILS**





### BUNKER LAKE BLVD NW (CSAH 116)



#### REMOVALS

- BITUMINOUS PAVEMENT REMOVAL
- BITUMINOUS DRIVEWAY AND TRAIL REMOVAL
- CONCRETE WALK REMOVAL
- CURB & GUTTER REMOVAL
- SAWCUT
- WATER MAIN REMOVAL
- STORM SEWER REMOVAL (INCLUDES APRONS)
- HYDRANT, GATE VALVE REMOVAL
- TREE REMOVAL
- CLEAR AND GRUB

#### REMOVALS NOTES

1. PROTECT ALL OBJECTS NOT MARKED FOR REMOVAL. DAMAGE TO OBJECTS NOT MARKED FOR REMOVAL SHALL BE REPAIRED OR REPLACED AT NO COST TO PROJECT OWNER.
2. PAVEMENT, BITUMINOUS TRAIL, CONCRETE WALK, AND CURB AND GUTTER REMOVAL LIMITS SHALL BE FIELD LOCATED BY THE ENGINEER. MINIMUM CURB REPLACEMENT LENGTH SHALL BE NO LESS THAN HALF A CURB PANEL.

Save: 10/6/2023 2:52 PM rrcwiles Plot: 10/7/2023 2:17 PM X:\PT\RAMSY\1597835-fmal-dsgm15-drawings\10-Civil\cad\dwg\sheet\RA1\_597835RE1.dwg

SEH Project	RAMSY174498	Rev.#	Revision Issue Description	Date	Rev.#	Revision Issue Description	Date
Drawn By	JRB, SRP	.			.		
Designed By	KLK	.			.		
Checked By	CES	.			.		

I HEREBY CERTIFY THAT THIS PLAN 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 MN.  
  
 David E. Hutton  
 LICENSE NO. 19133  
 DATE 10-06-2023

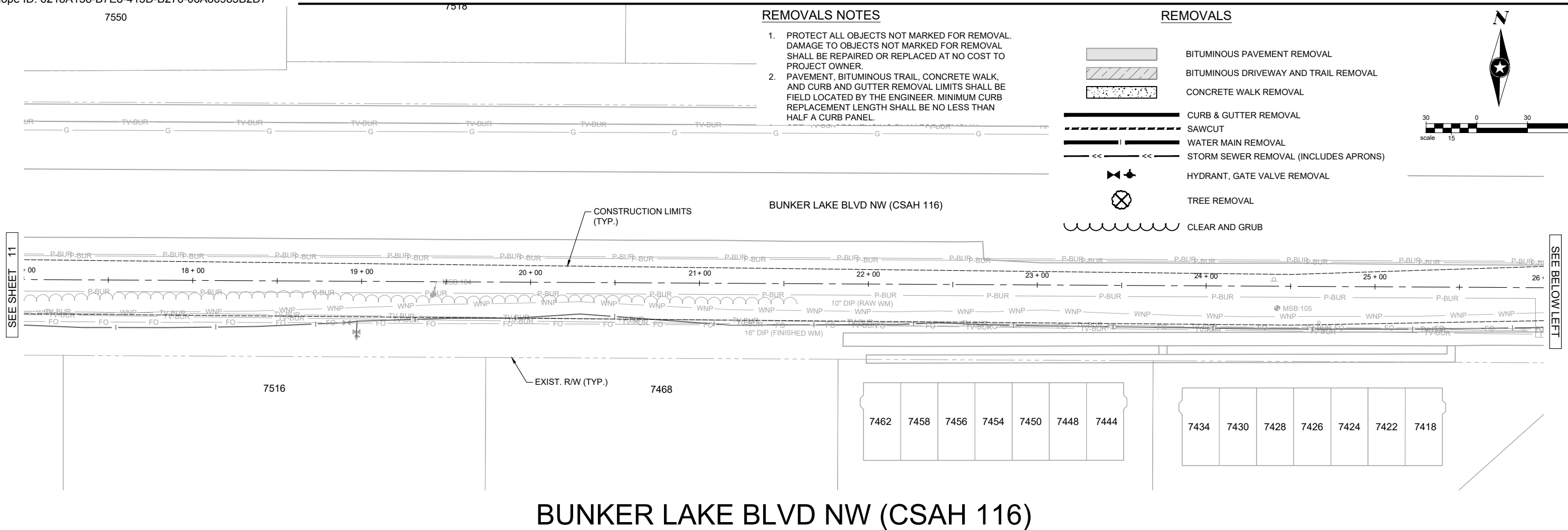
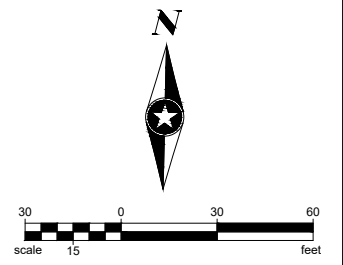
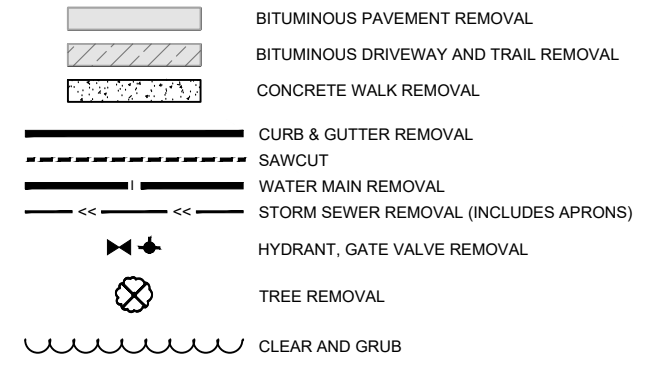
## WATER TREATMENT PLANT TRUNK WATER MAIN IMPROVEMENTS

Ramsey, Minnesota

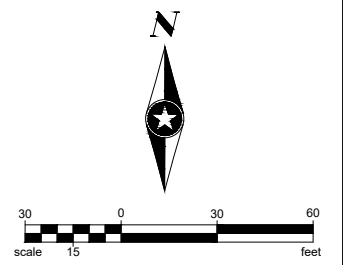
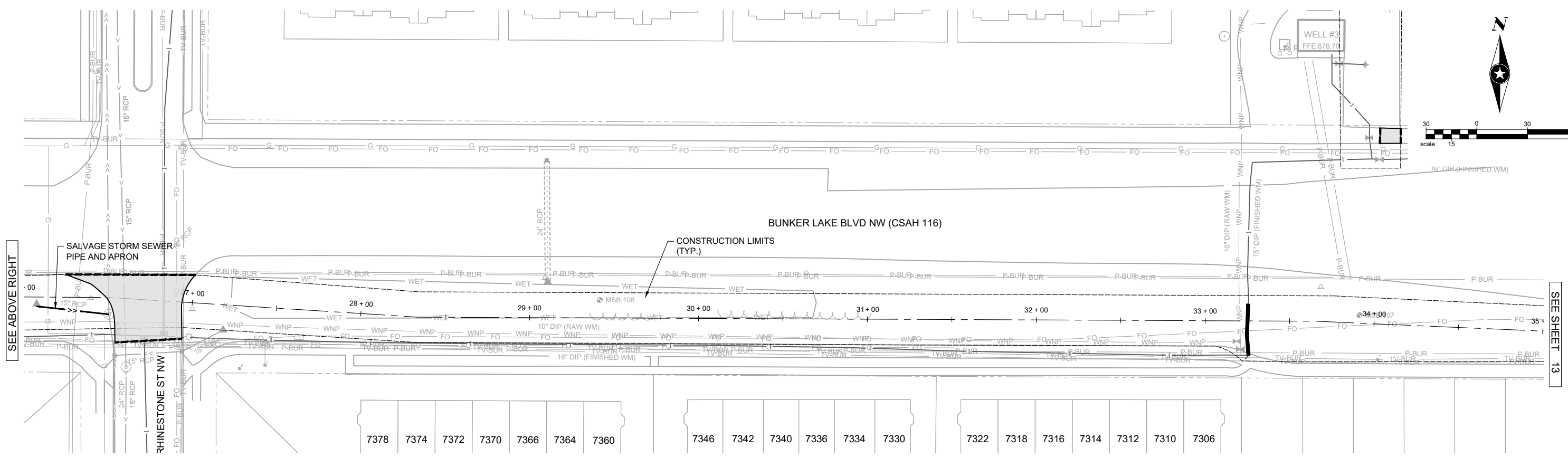
**REMOVALS NOTES**

1. PROTECT ALL OBJECTS NOT MARKED FOR REMOVAL. DAMAGE TO OBJECTS NOT MARKED FOR REMOVAL SHALL BE REPAIRED OR REPLACED AT NO COST TO PROJECT OWNER.
2. PAVEMENT, BITUMINOUS TRAIL, CONCRETE WALK, AND CURB AND GUTTER REMOVAL LIMITS SHALL BE FIELD LOCATED BY THE ENGINEER. MINIMUM CURB REPLACEMENT LENGTH SHALL BE NO LESS THAN HALF A CURB PANEL.

**REMOVALS**



**BUNKER LAKE BLVD NW (CSAH 116)**



Save: 10/6/2023 2:52 PM I:\P\RAMS\Y159783\Final-dgn\1-drawings\10-Civil\cad\dwg\sheet\RA159783RET.dwg

SEH Project	RAMSY174498	Rev.#	Revision Issue Description	Date	Rev.#	Revision Issue Description	Date
Drawn By	JRB, SRP	.			.		
Designed By	KLK	.			.		
Checked By	CES	.			.		

I HEREBY CERTIFY THAT THIS PLAN 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 MN.

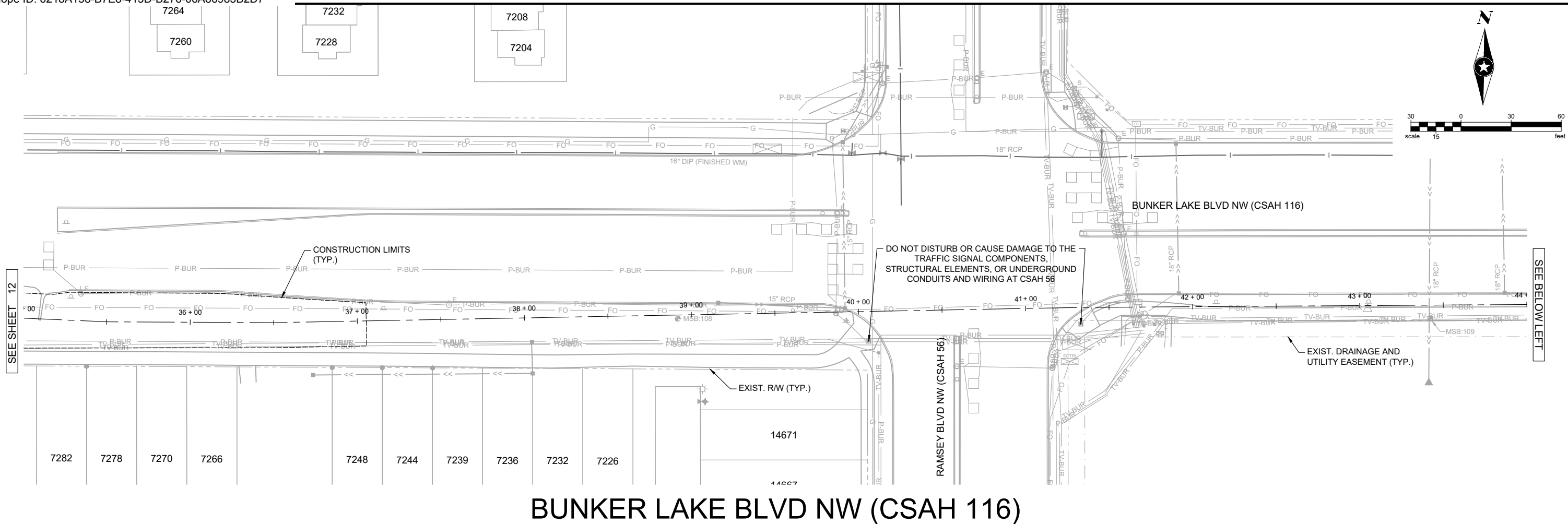
*David E. Hutton*  
 David E. Hutton  
 LICENSE NO. 19133  
 DATE 10-06-2023

**WATER TREATMENT PLANT  
 TRUNK WATER MAIN IMPROVEMENTS**  
 Ramsey, Minnesota

**REMOVAL PLAN  
 BUNKER LAKE BLVD NW (CSAH 116)**

12  
 of 58





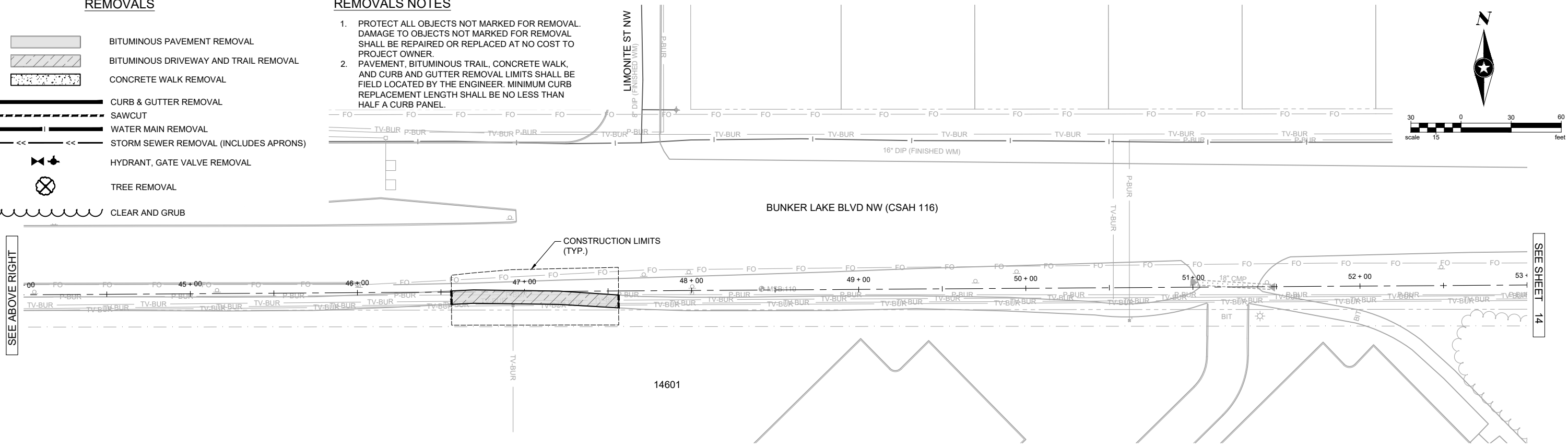
### BUNKER LAKE BLVD NW (CSAH 116)

#### REMOVALS

- BITUMINOUS PAVEMENT REMOVAL
- BITUMINOUS DRIVEWAY AND TRAIL REMOVAL
- CONCRETE WALK REMOVAL
- CURB & GUTTER REMOVAL
- SAWCUT
- WATER MAIN REMOVAL
- STORM SEWER REMOVAL (INCLUDES APRONS)
- HYDRANT, GATE VALVE REMOVAL
- TREE REMOVAL
- CLEAR AND GRUB

#### REMOVALS NOTES

1. PROTECT ALL OBJECTS NOT MARKED FOR REMOVAL. DAMAGE TO OBJECTS NOT MARKED FOR REMOVAL SHALL BE REPAIRED OR REPLACED AT NO COST TO PROJECT OWNER.
2. PAVEMENT, BITUMINOUS TRAIL, CONCRETE WALK, AND CURB AND GUTTER REMOVAL LIMITS SHALL BE FIELD LOCATED BY THE ENGINEER. MINIMUM CURB REPLACEMENT LENGTH SHALL BE NO LESS THAN HALF A CURB PANEL.



Save: 10/6/2023 2:52 PM R:\P\RAMSY\1597835-fmal-dsgm15-drawings\10-Civil\cad\dwg\sheet\RA1\_1597835.dwg

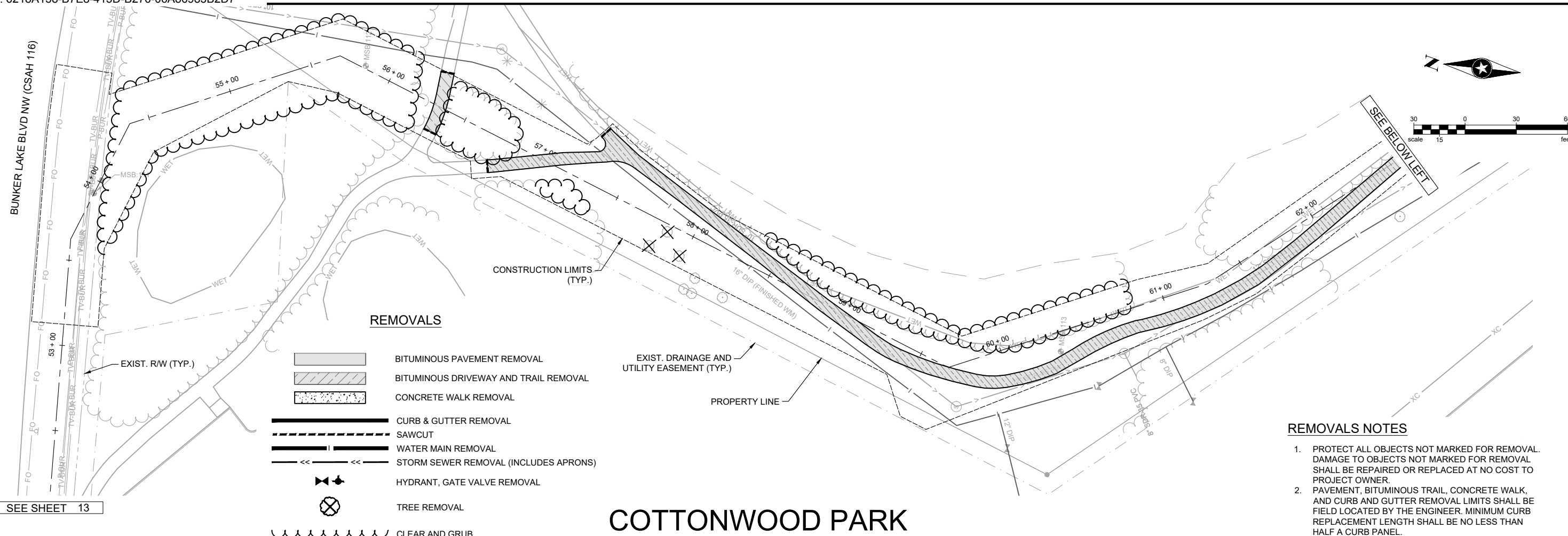
SEH Project	RAMSY174498	Rev.#	Revision Issue Description	Date	Rev.#	Revision Issue Description	Date
Drawn By	AJO, SRP	.			.		
Designed By	KLK	.			.		
Checked By	DH,SRP	.			.		

I HEREBY CERTIFY THAT THIS PLAN 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 MN.

David E. Hutton  
 DATE 10-06-2023 LICENSE NO. 19133

**WATER TREATMENT PLANT**  
**TRUNK WATER MAIN IMPROVEMENTS**  
 Ramsey, Minnesota

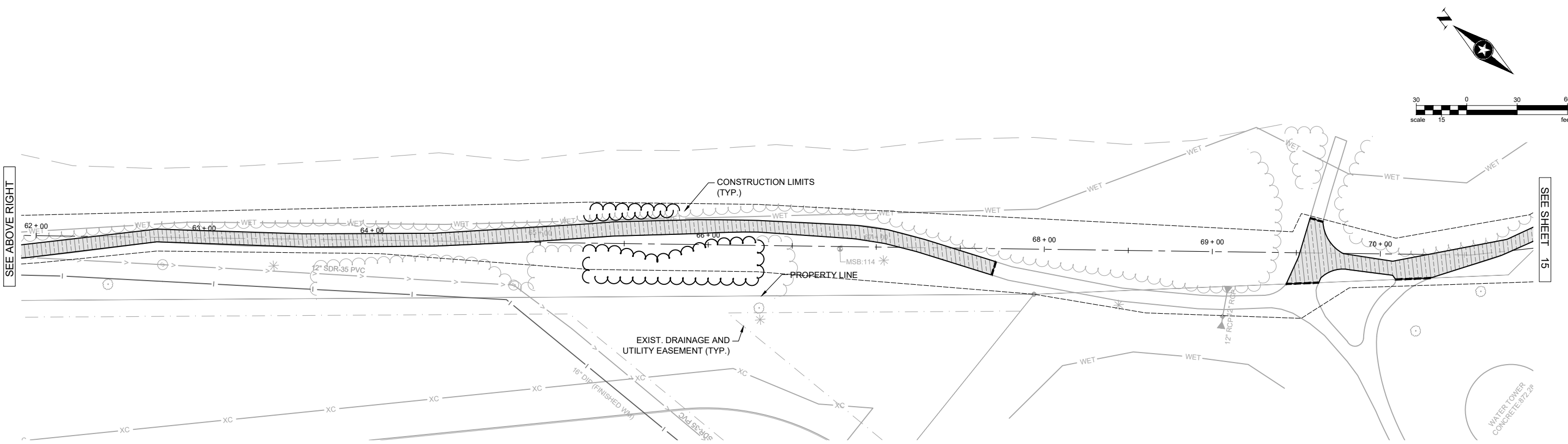
**REMOVAL PLAN**  
**BUNKER LAKE BLVD NW (CSAH 116)**



SEE SHEET 13

# COTTONWOOD PARK

- REMOVALS NOTES**
1. PROTECT ALL OBJECTS NOT MARKED FOR REMOVAL. DAMAGE TO OBJECTS NOT MARKED FOR REMOVAL SHALL BE REPAIRED OR REPLACED AT NO COST TO PROJECT OWNER.
  2. PAVEMENT, BITUMINOUS TRAIL, CONCRETE WALK, AND CURB AND GUTTER REMOVAL LIMITS SHALL BE FIELD LOCATED BY THE ENGINEER. MINIMUM CURB REPLACEMENT LENGTH SHALL BE NO LESS THAN HALF A CURB PANEL.



SEE ABOVE RIGHT

SEE SHEET 15

Save: 10/6/2023 2:52 PM rrcwiles Plot: 10/7/2023 2:19 PM X:\P\TRRAMSY1597835-fmal-dsgm15-drawings\10-Civil\cad\dwg\sheet\RA1597835RE1.dwg

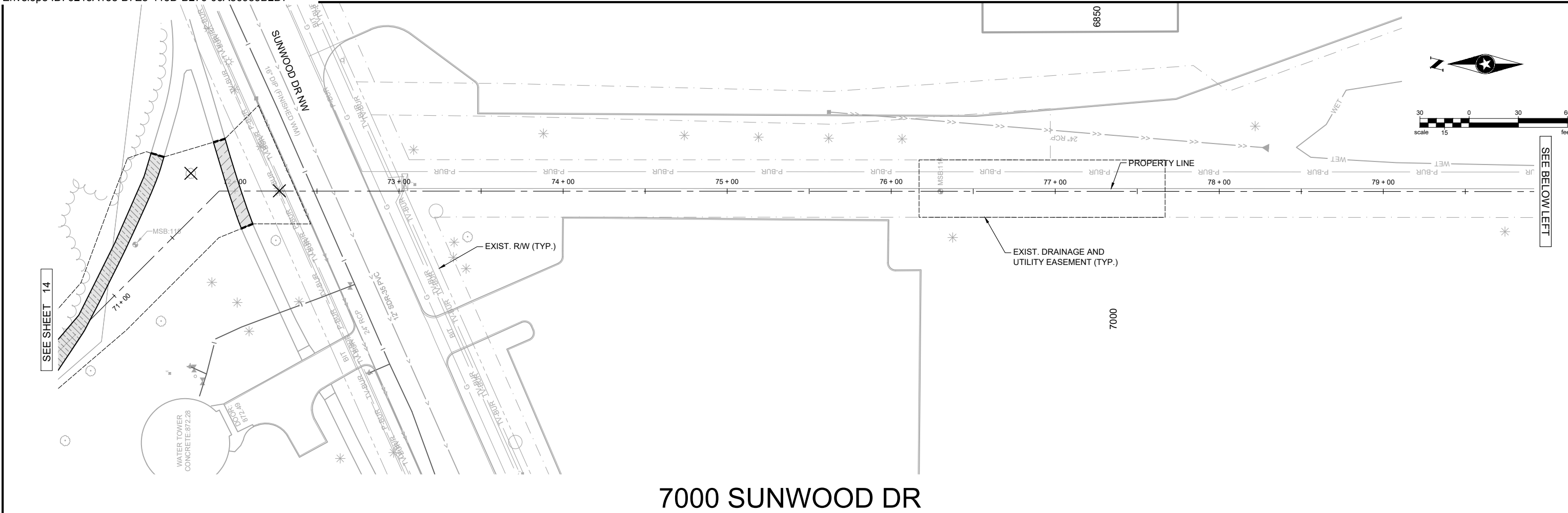
SEH Project	RAMSY174498	Rev.#	Revision Issue Description	Date	Rev.#	Revision Issue Description	Date
Drawn By	JRB, SRP	.			.		
Designed By	KLK	.			.		
Checked By	CES	.			.		

I HEREBY CERTIFY THAT THIS PLAN 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 MN.

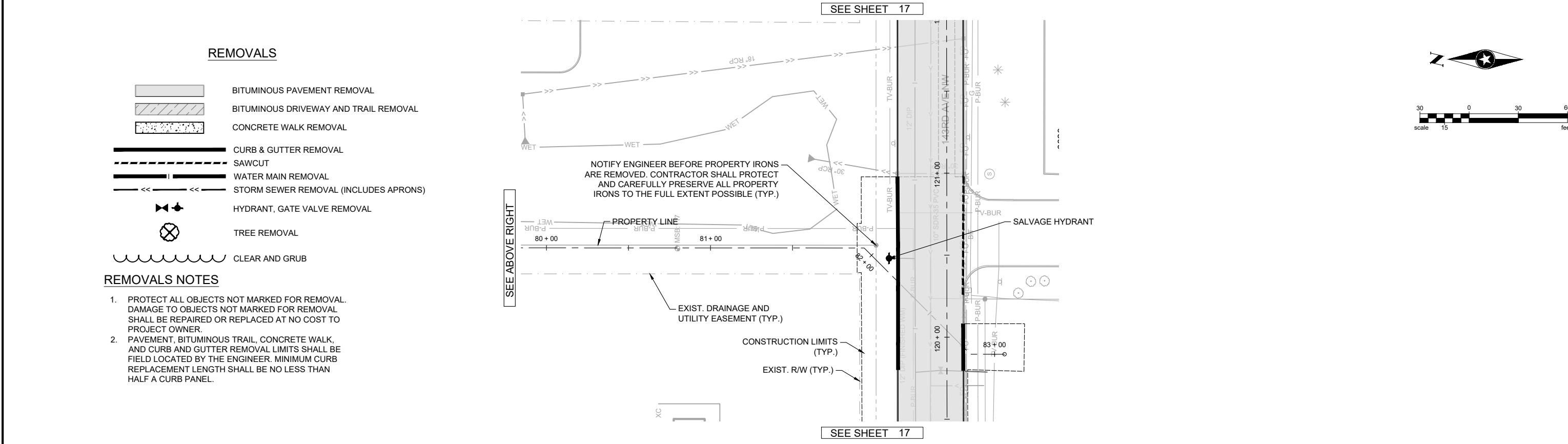
*David E. Hutton*  
 David E. Hutton  
 LICENSE NO. 19133  
 DATE 10-06-2023

**WATER TREATMENT PLANT  
 TRUNK WATER MAIN IMPROVEMENTS**  
 Ramsey, Minnesota



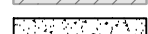







**REMOVAL PLAN  
 COTTONWOOD PARK**



# 7000 SUNWOOD DR



### REMOVALS

-  BITUMINOUS PAVEMENT REMOVAL
-  BITUMINOUS DRIVEWAY AND TRAIL REMOVAL
-  CONCRETE WALK REMOVAL
-  CURB & GUTTER REMOVAL
-  SAWCUT
-  WATER MAIN REMOVAL
-  STORM SEWER REMOVAL (INCLUDES APRONS)
-  HYDRANT, GATE VALVE REMOVAL
-  TREE REMOVAL
-  CLEAR AND GRUB

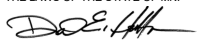
### REMOVALS NOTES

1. PROTECT ALL OBJECTS NOT MARKED FOR REMOVAL. DAMAGE TO OBJECTS NOT MARKED FOR REMOVAL SHALL BE REPAIRED OR REPLACED AT NO COST TO PROJECT OWNER.
2. PAVEMENT, BITUMINOUS TRAIL, CONCRETE WALK, AND CURB AND GUTTER REMOVAL LIMITS SHALL BE FIELD LOCATED BY THE ENGINEER. MINIMUM CURB REPLACEMENT LENGTH SHALL BE NO LESS THAN HALF A CURB PANEL.

NOTIFY ENGINEER BEFORE PROPERTY IRONS ARE REMOVED. CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE ALL PROPERTY IRONS TO THE FULL EXTENT POSSIBLE (TYP.)

SEH Project	RAMSY174498	Rev.#	Revision Issue Description	Date	Rev.#	Revision Issue Description	Date
Drawn By	JRB, SRP	.			.		
Designed By	KLK	.			.		
Checked By	CES	.			.		

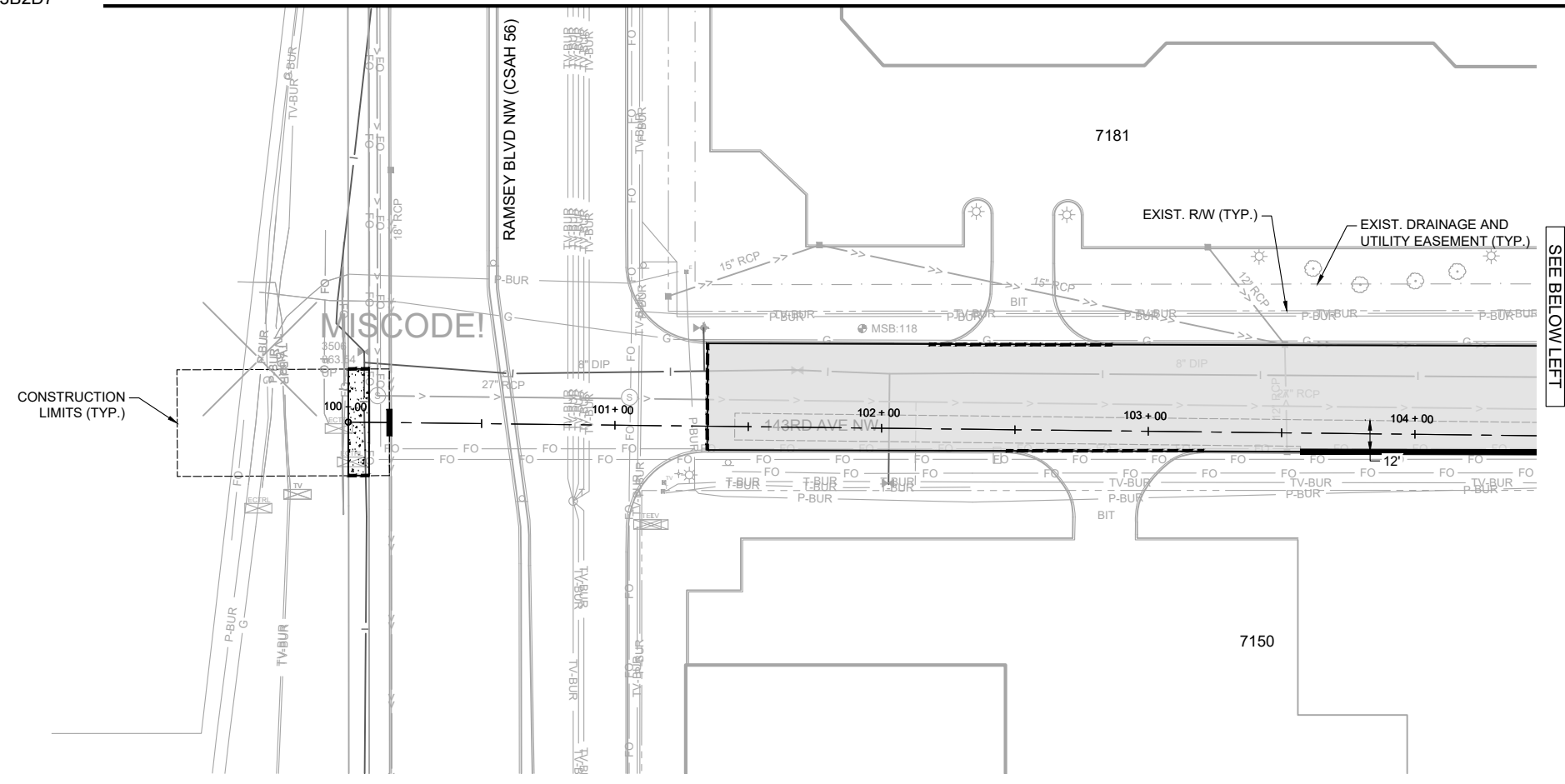
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MN.

  
 David E. Hutton  
 LICENSE NO. 19133  
 DATE 10-06-2023

## WATER TREATMENT PLANT TRUNK WATER MAIN IMPROVEMENTS

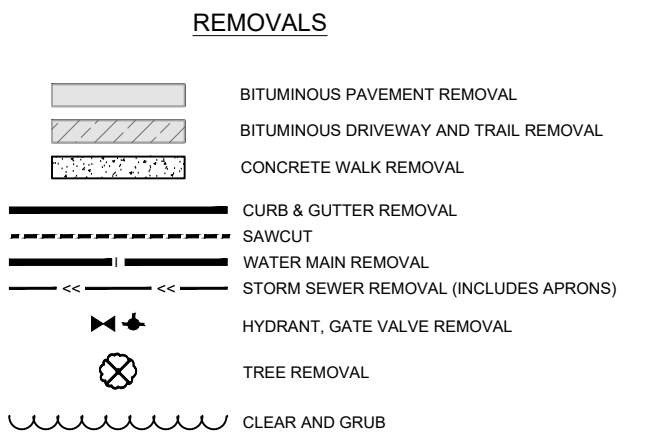
Ramsey, Minnesota

### REMOVAL PLAN 7000 SUNWOOD DR

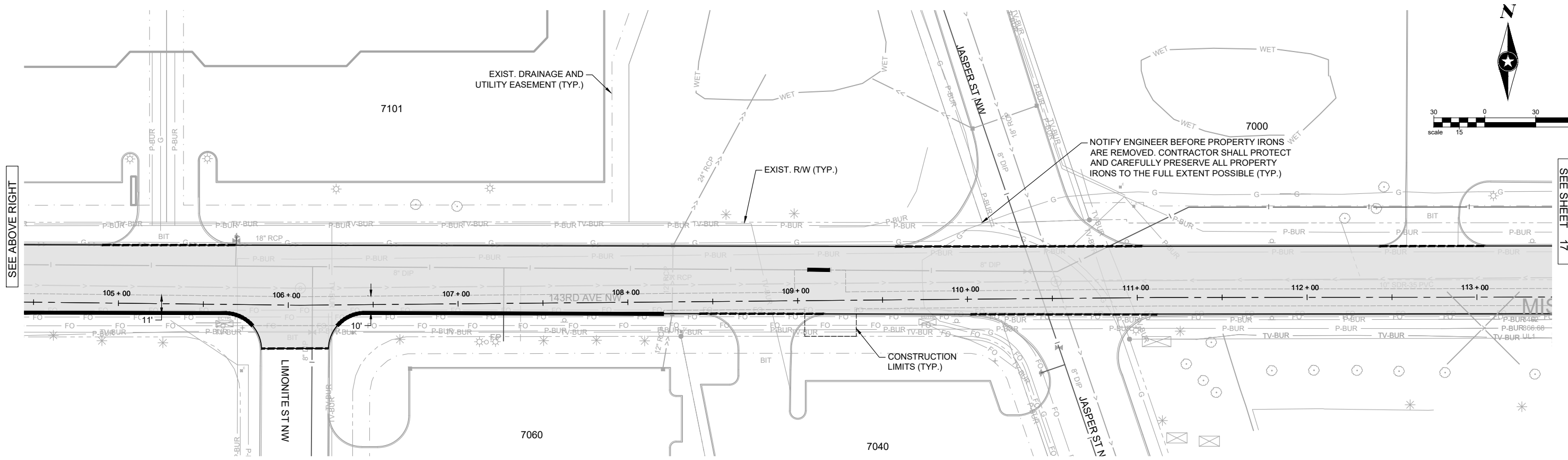


**REMOVALS NOTES**

1. PROTECT ALL OBJECTS NOT MARKED FOR REMOVAL. DAMAGE TO OBJECTS NOT MARKED FOR REMOVAL SHALL BE REPAIRED OR REPLACED AT NO COST TO PROJECT OWNER.
2. PAVEMENT, BITUMINOUS TRAIL, CONCRETE WALK, AND CURB AND GUTTER REMOVAL LIMITS SHALL BE FIELD LOCATED BY THE ENGINEER. MINIMUM CURB REPLACEMENT LENGTH SHALL BE NO LESS THAN HALF A CURB PANEL.
3. SEE 143RD SEQUENCING PLAN FOR REMOVAL STAGING DETAILS.
4. ALL MOBILIZATIONS NECESSARY TO COMPLETE 143RD REMOVALS ARE INCIDENTAL TO THE OVERALL MOBILIZATION BID ITEM.



**143RD AVE NW**



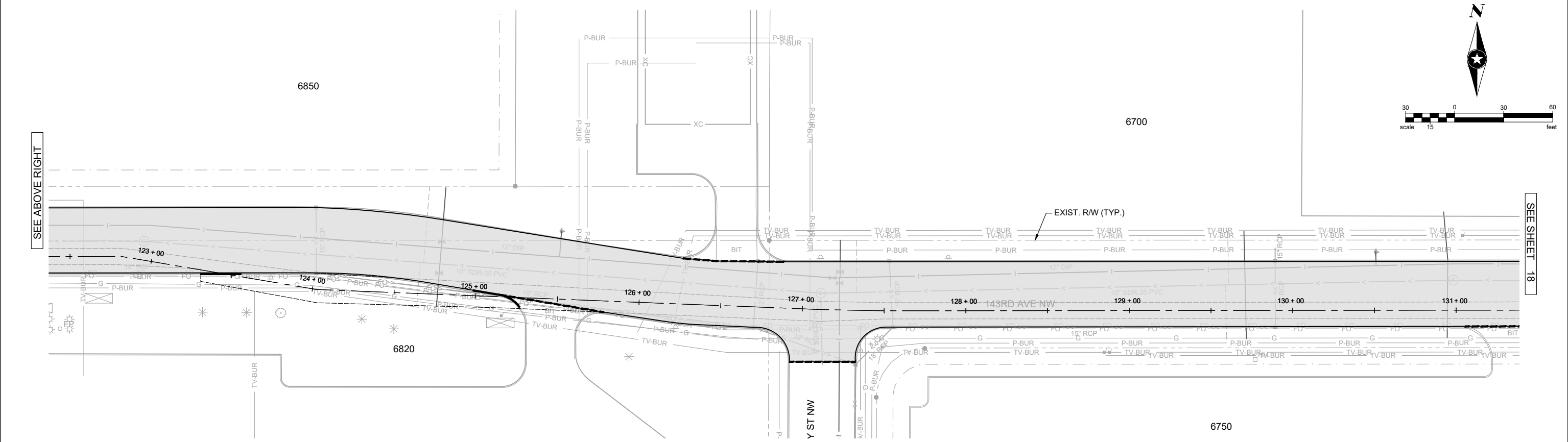
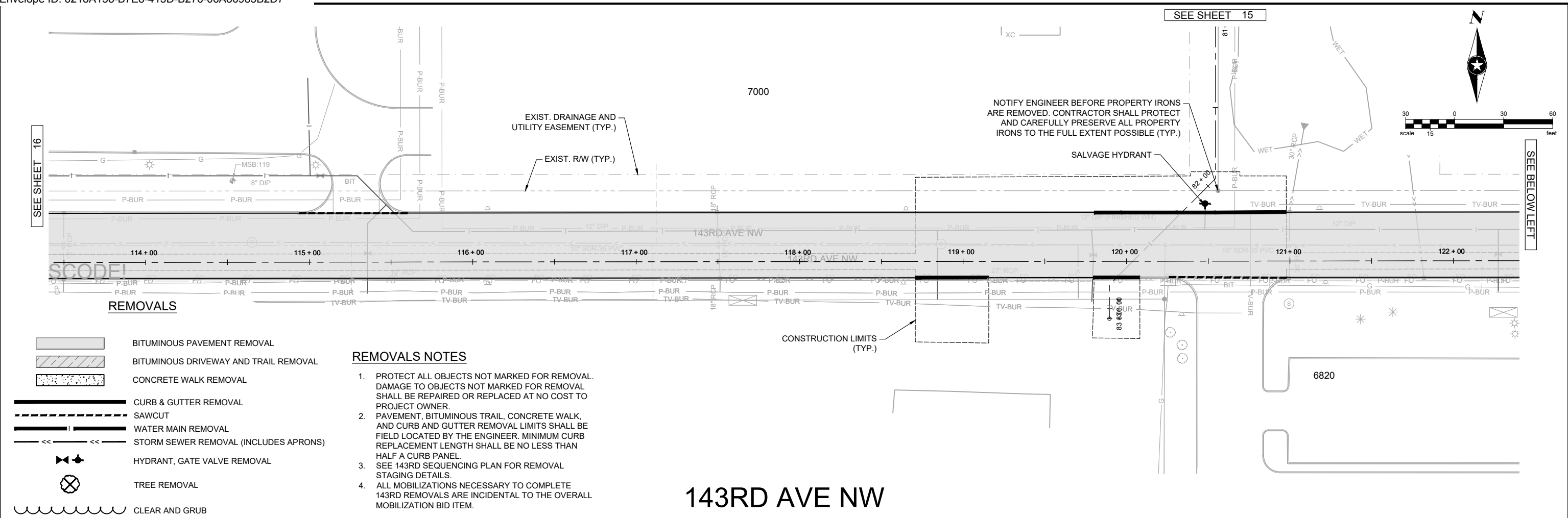
Save: 10/27/2023 8:18 AM aolsen Plot: 10/27/2023 2:22 PM X:\P\TRRAMSY15978315-final-dsgm\51-drawings\10-Civil\lead\dwg\sheet\RA159783RE2.dwg

SEH Project	RAMSY174498
Drawn By	JRB, SRP
Designed By	KLK
Checked By	CES

Rev.#	Revision Issue Description	Date

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED ENGINEER UNDER THE LAWS OF THE STATE OF MN.  
  
 David E. Hutton  
 DATE 10-06-2023 LICENSE NO. 19133

**WATER TREATMENT PLANT**  
**TRUNK WATER MAIN IMPROVEMENTS**  
 Ramsey, Minnesota



**REMOVALS**

- BITUMINOUS PAVEMENT REMOVAL
- BITUMINOUS DRIVEWAY AND TRAIL REMOVAL
- CONCRETE WALK REMOVAL
- CURB & GUTTER REMOVAL
- SAWCUT
- WATER MAIN REMOVAL
- STORM SEWER REMOVAL (INCLUDES APRONS)
- HYDRANT, GATE VALVE REMOVAL
- TREE REMOVAL
- CLEAR AND GRUB

**REMOVALS NOTES**

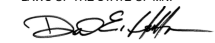
1. PROTECT ALL OBJECTS NOT MARKED FOR REMOVAL. DAMAGE TO OBJECTS NOT MARKED FOR REMOVAL SHALL BE REPAIRED OR REPLACED AT NO COST TO PROJECT OWNER.
2. PAVEMENT, BITUMINOUS TRAIL, CONCRETE WALK, AND CURB AND GUTTER REMOVAL LIMITS SHALL BE FIELD LOCATED BY THE ENGINEER. MINIMUM CURB REPLACEMENT LENGTH SHALL BE NO LESS THAN HALF A CURB PANEL.
3. SEE 143RD SEQUENCING PLAN FOR REMOVAL STAGING DETAILS.
4. ALL MOBILIZATIONS NECESSARY TO COMPLETE 143RD REMOVALS ARE INCIDENTAL TO THE OVERALL MOBILIZATION BID ITEM.

**143RD AVE NW**

Save: 10/2/2023 8:18 AM aolsen Plot: 10/7/2023 2:23 PM X:\P\TRRAMSY15978365-mail-dsgm\51-drawings\10-Civil\lead\dwg\sheet\RA15978365R2.dwg

SEH Project	RAMSY174498	Rev.#	Revision Issue Description	Date	Rev.#	Revision Issue Description	Date
Drawn By	JRB, SRP	.			.		
Designed By	KLK	.			.		
Checked By	CES	.			.		

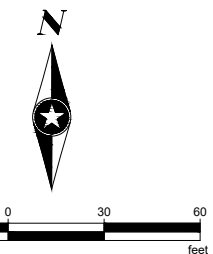
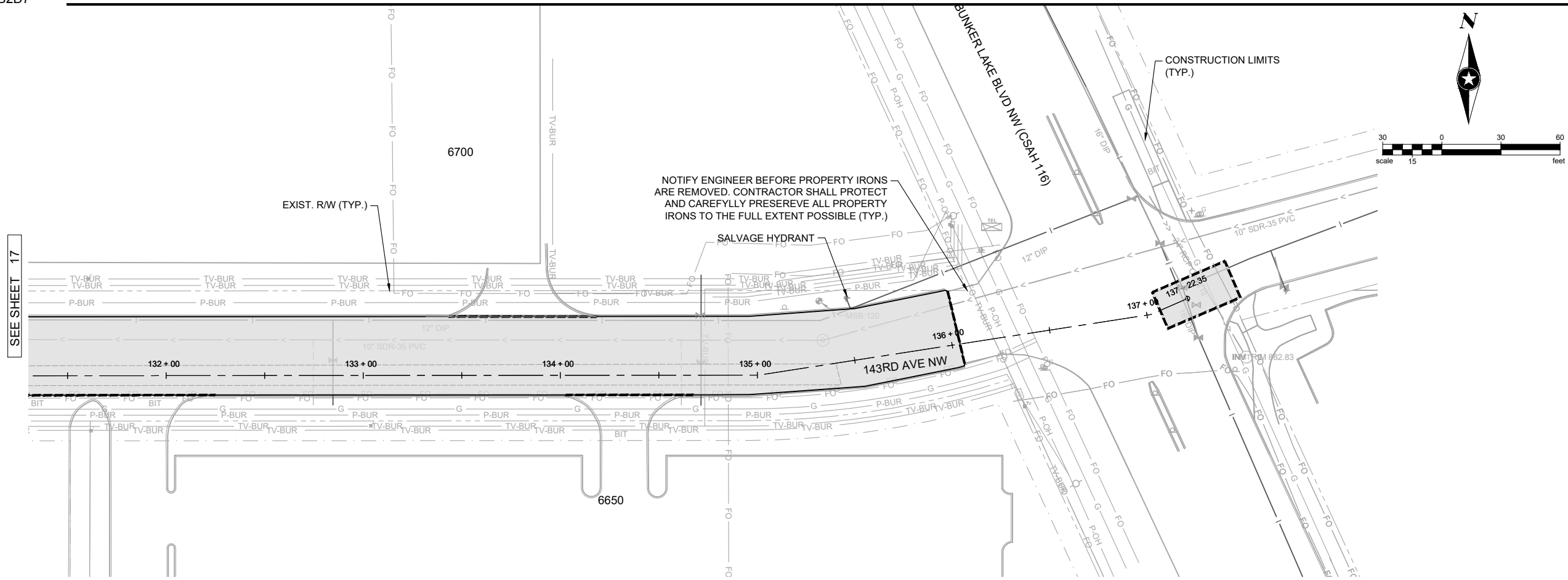
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED ENGINEER UNDER THE LAWS OF THE STATE OF MN.



David E. Hutton  
 LICENSE NO. 19133  
 DATE 10-06-2023

**WATER TREATMENT PLANT  
 TRUNK WATER MAIN IMPROVEMENTS**  
 Ramsey, Minnesota

**REMOVAL PLAN  
 143RD AVE NW**








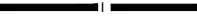




**REMOVALS NOTES**

1. PROTECT ALL OBJECTS NOT MARKED FOR REMOVAL. DAMAGE TO OBJECTS NOT MARKED FOR REMOVAL SHALL BE REPAIRED OR REPLACED AT NO COST TO PROJECT OWNER.
2. PAVEMENT, BITUMINOUS TRAIL, CONCRETE WALK, AND CURB AND GUTTER REMOVAL LIMITS SHALL BE FIELD LOCATED BY THE ENGINEER. MINIMUM CURB REPLACEMENT LENGTH SHALL BE NO LESS THAN HALF A CURB PANEL.
3. SEE 143RD SEQUENCING PLAN FOR REMOVAL STAGING DETAILS.
4. ALL MOBILIZATIONS NECESSARY TO COMPLETE 143RD REMOVALS ARE INCIDENTAL TO THE OVERALL MOBILIZATION BID ITEM.

**143RD AVE NW**

BENCHMARK EL.

**REMOVALS**

-  BITUMINOUS PAVEMENT REMOVAL
-  BITUMINOUS DRIVEWAY AND TRAIL REMOVAL
-  CONCRETE WALK REMOVAL
-  CURB & GUTTER REMOVAL
-  SAWCUT
-  WATER MAIN REMOVAL
-  STORM SEWER REMOVAL (INCLUDES APRONS)
-  HYDRANT, GATE VALVE REMOVAL
-  TREE REMOVAL
-  CLEAR AND GRUB

Save: 10/2/2023 8:18 AM aolsen Plot: 10/7/2023 2:23 PM X:\P\TRRAMSY15978315-final-dsgm\51-draw\pss10-Civil\lead\dwg\sheet\RA159783RE2.dwg

SEH Project	RAMSY174498	Rev.#	Revision Issue Description	Date	Rev.#	Revision Issue Description	Date
Drawn By	JRB, SRP	.			.		
Designed By	KLK	.			.		
Checked By	CES	.			.		

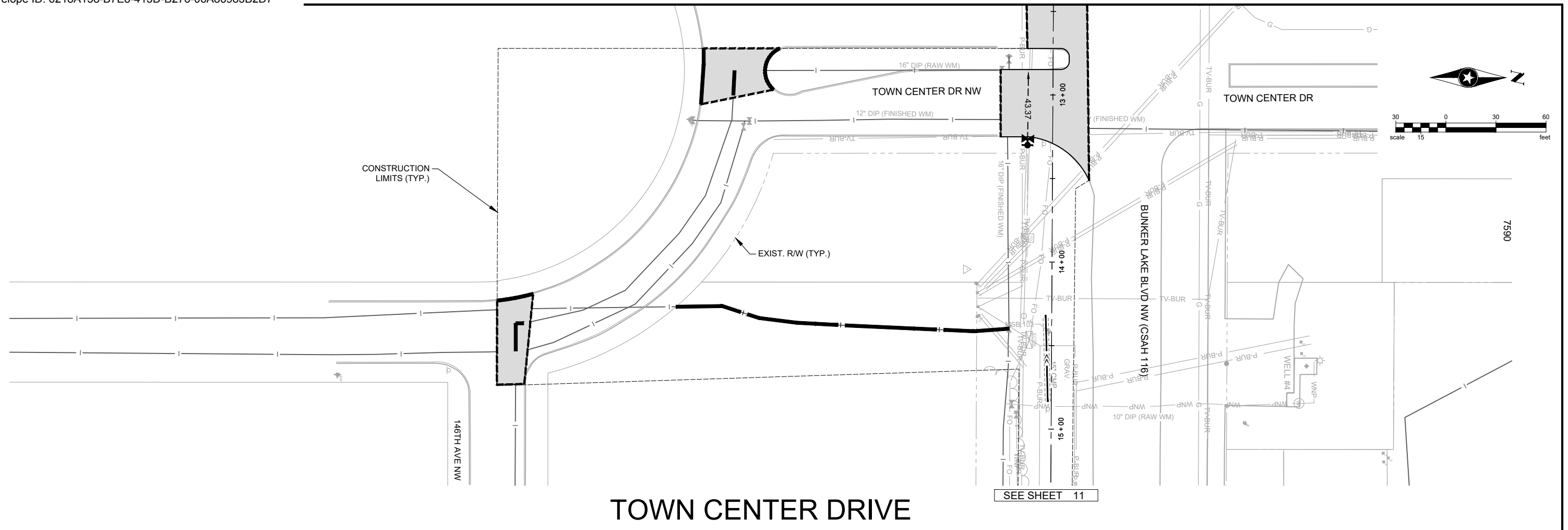


I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED #\_\_\_\_\_ UNDER THE LAWS OF THE STATE OF MN.  
 David E. Hutton  
 LICENSE NO. 19133  
 DATE 10-06-2023

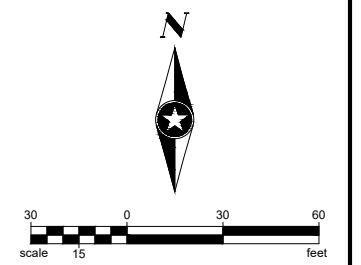
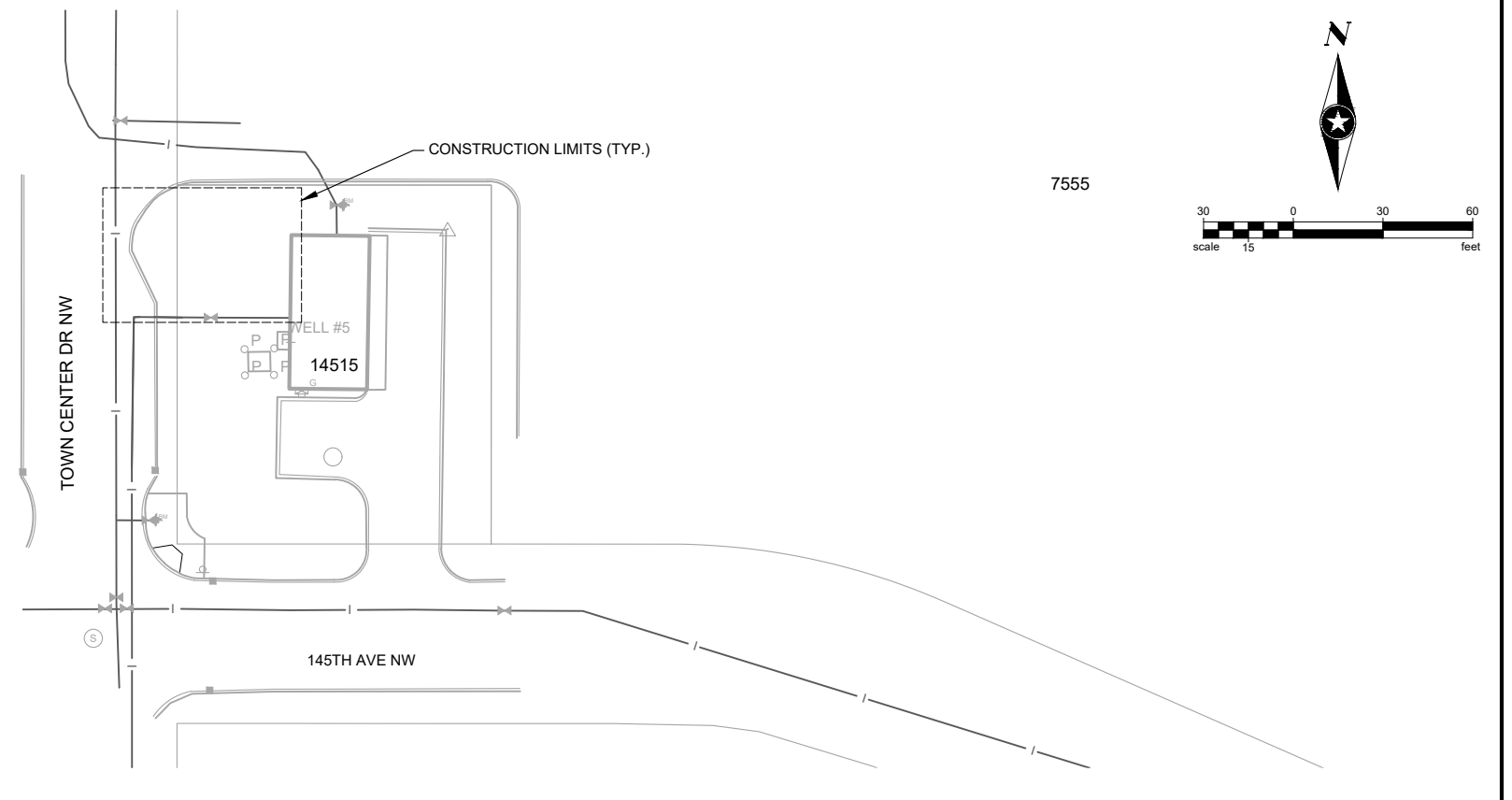
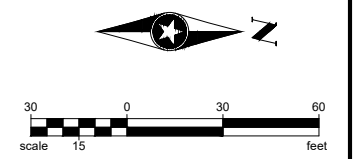
**WATER TREATMENT PLANT  
TRUNK WATER MAIN IMPROVEMENTS**  
 Ramsey, Minnesota

**REMOVAL PLAN  
143RD AVE NW**






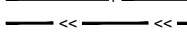








# TOWN CENTER DRIVE



### REMOVALS

-  BITUMINOUS PAVEMENT REMOVAL
-  BITUMINOUS DRIVEWAY AND TRAIL REMOVAL
-  CONCRETE WALK REMOVAL
-  CURB & GUTTER REMOVAL
-  SAWCUT
-  WATER MAIN REMOVAL
-  STORM SEWER REMOVAL (INCLUDES APRONS)
-  HYDRANT, GATE VALVE REMOVAL
-  TREE REMOVAL
-  CLEAR AND GRUB

### REMOVALS NOTES

1. PROTECT ALL OBJECTS NOT MARKED FOR REMOVAL. DAMAGE TO OBJECTS NOT MARKED FOR REMOVAL SHALL BE REPAIRED OR REPLACED AT NO COST TO PROJECT OWNER.
2. PAVEMENT, BITUMINOUS TRAIL, CONCRETE WALK, AND CURB AND GUTTER REMOVAL LIMITS SHALL BE FIELD LOCATED BY THE ENGINEER. MINIMUM CURB REPLACEMENT LENGTH SHALL BE NO LESS THAN HALF A CURB PANEL.

SEH Project	RAMSY174498	Rev.#	Revision Issue Description	Date	Rev.#	Revision Issue Description	Date
Drawn By	JRB, SRP	.			.		
Designed By	KLK	.			.		
Checked By	CES	.			.		

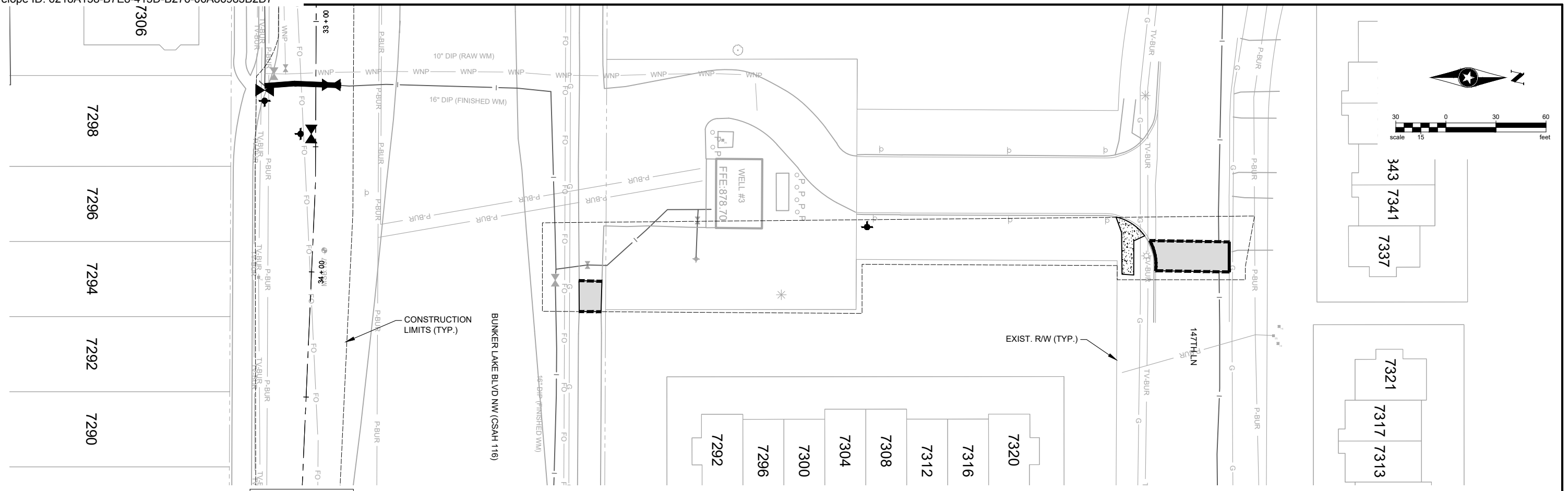


I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MN.  
 David E. Hutton  
 LICENSE NO. 19133  
 DATE 10-06-2023

**WATER TREATMENT PLANT  
TRUNK WATER MAIN IMPROVEMENTS**  
 Ramsey, Minnesota

**REMOVAL PLAN  
TOWN CENTER DRIVE**

Save: 10/6/2023 2:52 PM knowles Plot: 10/7/2023 2:25 PM X:\PT\RAMSY\159783\5-final.dgn\151-drawings\10-Civil\cad\dwg\sheet\RAM159783RE - Town Center Dr.dwg



## BUNKER BLVD CROSSING AT WELL #3

### REMOVALS

- BITUMINOUS PAVEMENT REMOVAL
- BITUMINOUS DRIVEWAY AND TRAIL REMOVAL
- CONCRETE WALK REMOVAL
- CURB & GUTTER REMOVAL
- SAWCUT
- WATER MAIN REMOVAL
- STORM SEWER REMOVAL (INCLUDES APRONS)
- HYDRANT, GATE VALVE REMOVAL
- TREE REMOVAL
- CLEAR AND GRUB

### REMOVALS NOTES

1. PROTECT ALL OBJECTS NOT MARKED FOR REMOVAL. DAMAGE TO OBJECTS NOT MARKED FOR REMOVAL SHALL BE REPAIRED OR REPLACED AT NO COST TO PROJECT OWNER.
2. PAVEMENT, BITUMINOUS TRAIL, CONCRETE WALK, AND CURB AND GUTTER REMOVAL LIMITS SHALL BE FIELD LOCATED BY THE ENGINEER. MINIMUM CURB REPLACEMENT LENGTH SHALL BE NO LESS THAN HALF A CURB PANEL.

SEH Project	RAMSY174498	Rev.#	Revision Issue Description	Date	Rev.#	Revision Issue Description	Date
Drawn By	JRB, SRP	.			.		
Designed By	KLK	.			.		
Checked By	CES	.			.		



I HEREBY CERTIFY THAT THIS PLAN 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 MN.

*David E. Hutton*  
 David E. Hutton  
 LICENSE NO. 19133  
 DATE 10-06-2023

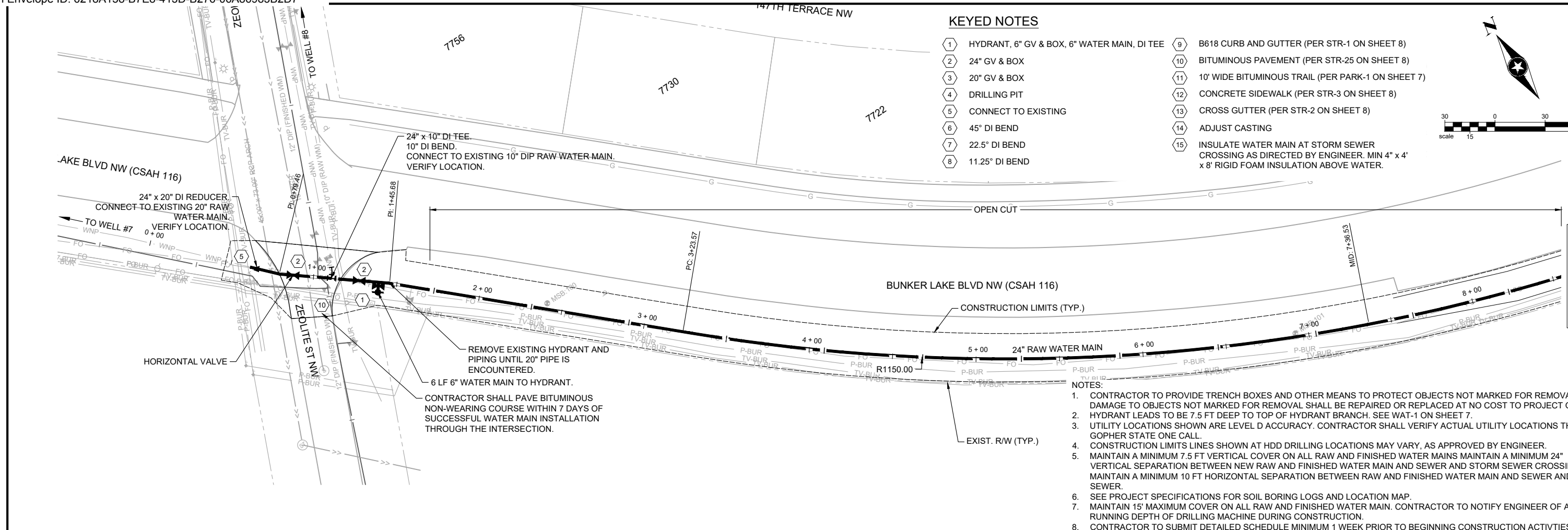
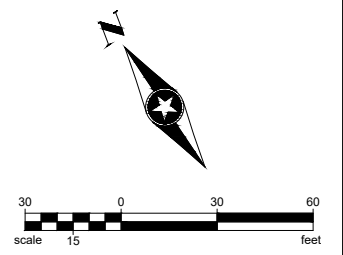
**WATER TREATMENT PLANT  
 TRUNK WATER MAIN IMPROVEMENTS**  
 Ramsey, Minnesota

**REMOVAL PLAN  
 BUNKER BLVD CROSSING AT WELL #3**

Save: 10/6/2023 2:52 PM: knowles Plot: 10/7/2023 2:25 PM X:\PT\TR\RAMSY\159783\5-final.dgn\51-drawings\10-Civil\cad\dwg\sheet\RA159783RE - Town Center Dr.dwg

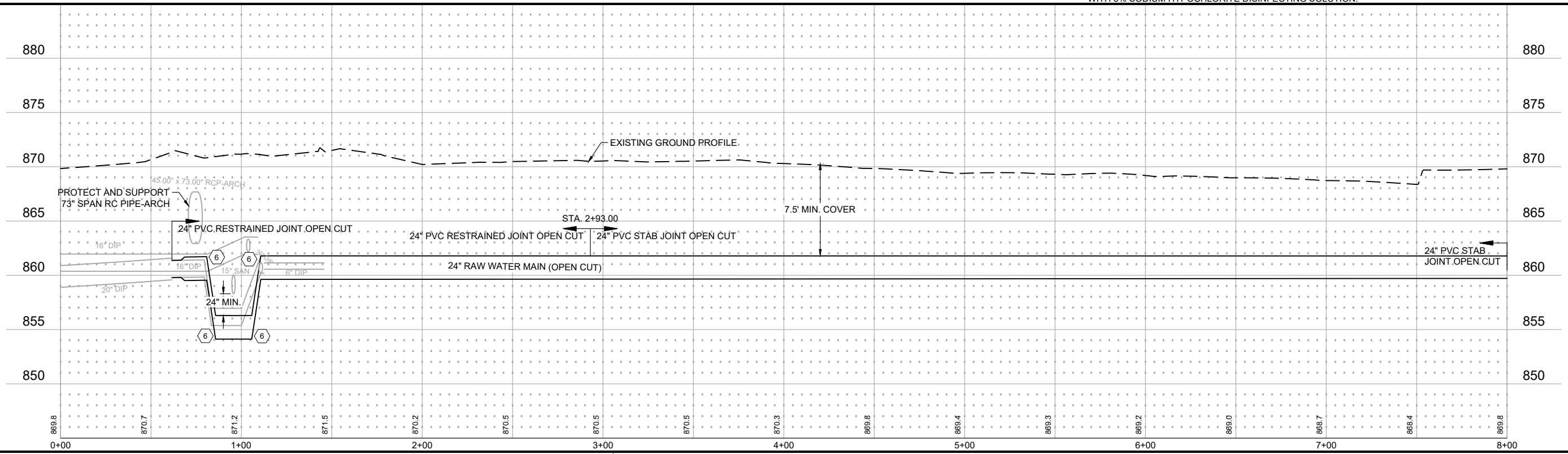
**KEYED NOTES**

- ① HYDRANT, 6" GV & BOX, 6" WATER MAIN, DI TEE
- ② 24" GV & BOX
- ③ 20" GV & BOX
- ④ DRILLING PIT
- ⑤ CONNECT TO EXISTING
- ⑥ 45° DI BEND
- ⑦ 22.5° DI BEND
- ⑧ 11.25° DI BEND
- ⑨ B618 CURB AND GUTTER (PER STR-1 ON SHEET 8)
- ⑩ BITUMINOUS PAVEMENT (PER STR-25 ON SHEET 8)
- ⑪ 10' WIDE BITUMINOUS TRAIL (PER PARK-1 ON SHEET 7)
- ⑫ CONCRETE SIDEWALK (PER STR-3 ON SHEET 8)
- ⑬ CROSS GUTTER (PER STR-2 ON SHEET 8)
- ⑭ ADJUST CASTING
- ⑮ INSULATE WATER MAIN AT STORM SEWER CROSSING AS DIRECTED BY ENGINEER. MIN 4" x 4" x 8' RIGID FOAM INSULATION ABOVE WATER.



**BUNKER LAKE BLVD NW (CSAH 116)**

- NOTES:**
1. CONTRACTOR TO PROVIDE TRENCH BOXES AND OTHER MEANS TO PROTECT OBJECTS NOT MARKED FOR REMOVAL. DAMAGE TO OBJECTS NOT MARKED FOR REMOVAL SHALL BE REPAIRED OR REPLACED AT NO COST TO PROJECT OWNER.
  2. HYDRANT LEADS TO BE 7.5 FT DEEP TO TOP OF HYDRANT BRANCH. SEE WAT-1 ON SHEET 7.
  3. UTILITY LOCATIONS SHOWN ARE LEVEL D ACCURACY. CONTRACTOR SHALL VERIFY ACTUAL UTILITY LOCATIONS THROUGH GOPHER STATE ONE CALL.
  4. CONSTRUCTION LIMITS LINES SHOWN AT HDD DRILLING LOCATIONS MAY VARY, AS APPROVED BY ENGINEER.
  5. MAINTAIN A MINIMUM 7.5 FT VERTICAL COVER ON ALL RAW AND FINISHED WATER MAINS MAINTAIN A MINIMUM 24" VERTICAL SEPARATION BETWEEN NEW RAW AND FINISHED WATER MAIN AND SEWER AND STORM SEWER CROSSING. MAINTAIN A MINIMUM 10 FT HORIZONTAL SEPARATION BETWEEN RAW AND FINISHED WATER MAIN AND SEWER AND STORM SEWER.
  6. SEE PROJECT SPECIFICATIONS FOR SOIL BORING LOGS AND LOCATION MAP.
  7. MAINTAIN 15' MAXIMUM COVER ON ALL RAW AND FINISHED WATER MAIN. CONTRACTOR TO NOTIFY ENGINEER OF AVERAGE RUNNING DEPTH OF DRILLING MACHINE DURING CONSTRUCTION.
  8. CONTRACTOR TO SUBMIT DETAILED SCHEDULE MINIMUM 1 WEEK PRIOR TO BEGINNING CONSTRUCTION ACTIVITIES FOR COORDINATION WITH THE CITY OF RAMSEY UTILITIES DEPARTMENT. CONTACT UTILITIES SUPERINTENDENT JOHN NELSON AT 763.250.4592. CITY OF RAMSEY TO OPERATE VALVES AND HYDRANTS FOR CONTRACTOR.
  9. DURING INSTALLATION OF THE FITTINGS AND PIPING BETWEEN THE CONNECTION TO THE EXISTING RAW WATER MAINS AND THE GATE VALVE AT STA. 1+27.42, CLEAN THE INTERIOR OF THE COMPONENTS BY MECHANICAL MEANS AND SWAB WITH 5% SODIUM HYPOCHLORITE DISINFECTING SOLUTION.



SEH Project	RAMSY174498	Rev.#	Revision Issue Description	Date	Rev.#	Revision Issue Description	Date
Drawn By	JRB, SRP						
Designed By	KLK						
Checked By	CES						

I HEREBY CERTIFY THAT THIS PLAN 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 MN.

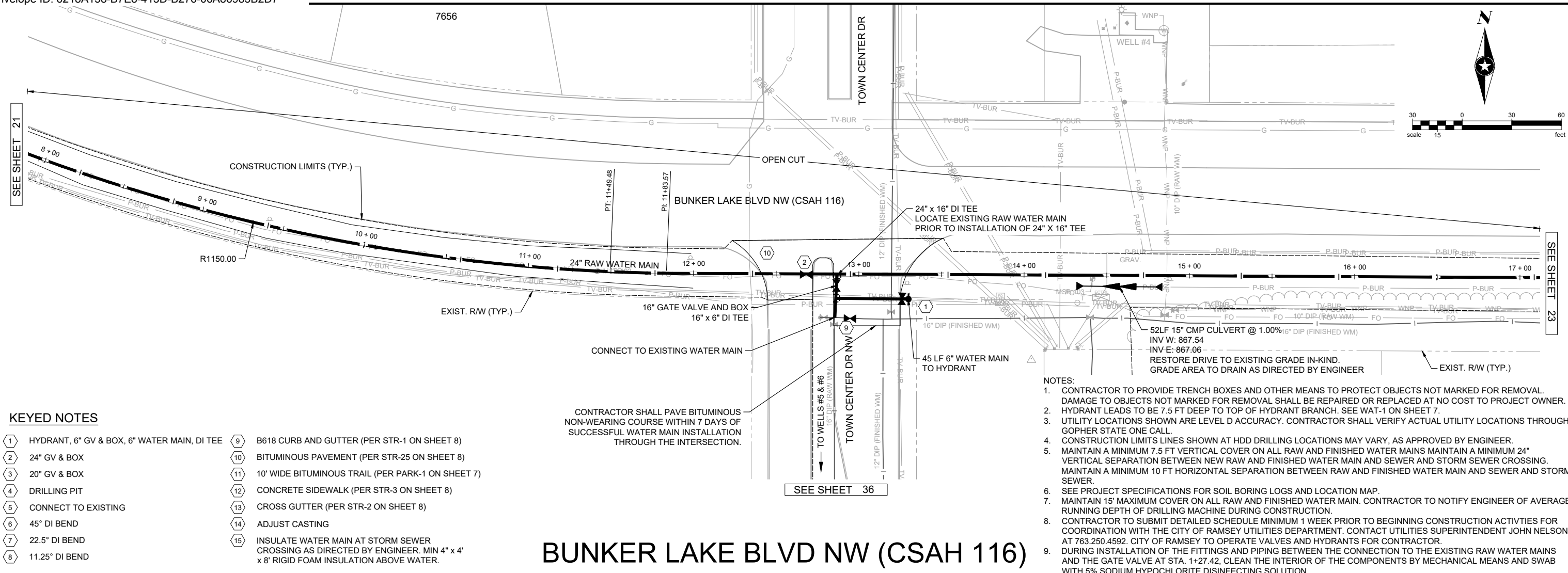
*David E. Hutton*  
 David E. Hutton  
 LICENSE NO. 19133  
 DATE 10-06-2023

**WATER TREATMENT PLANT**  
**TRUNK WATER MAIN IMPROVEMENTS**  
 Ramsey, Minnesota

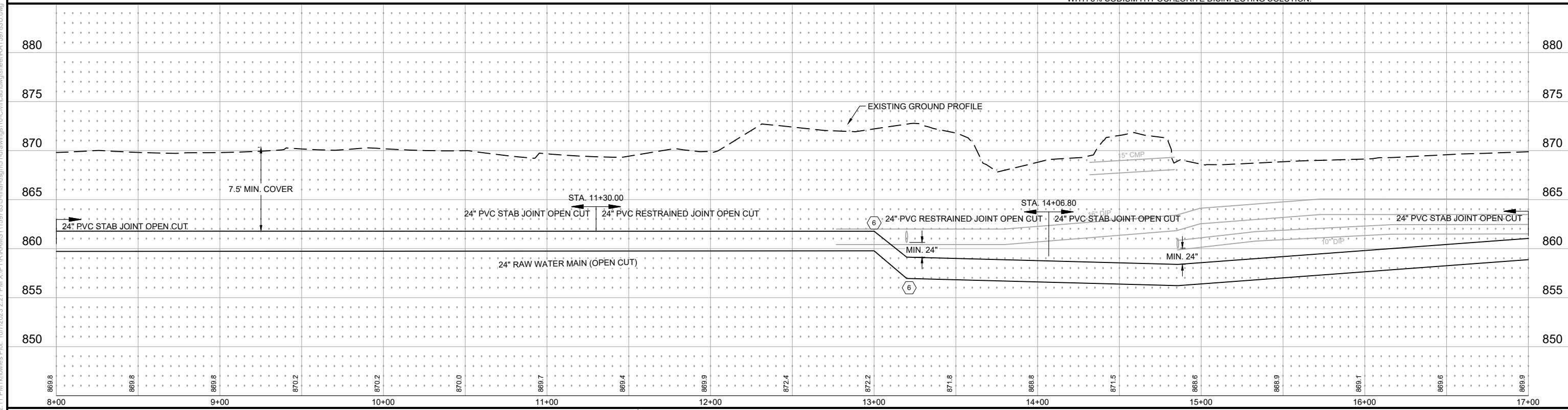
**UTILITY PLAN & PROFILE**  
**BUNKER LAKE BLVD NW (CSAH 116)**

21  
of 58

Save: 10/7/2023 2:11 PM rrcowles Plot: 10/7/2023 2:26 PM X:\P\TR\RAMSY\15978355-fmal-dsgm5-1-drawings\10-Civil\cad\dwg\sheet\RA1597835.dwg



# BUNKER LAKE BLVD NW (CSAH 116)



SEH Project	RAMSY174498	Rev.#	Revision Issue Description	Date	Rev.#	Revision Issue Description	Date
Drawn By	JRB, SRP						
Designed By	KLK						
Checked By	CES						

I HEREBY CERTIFY THAT THIS PLAN 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 MN.

*David E. Hutton*  
 David E. Hutton  
 LICENSE NO. 19133  
 DATE 10-06-2023

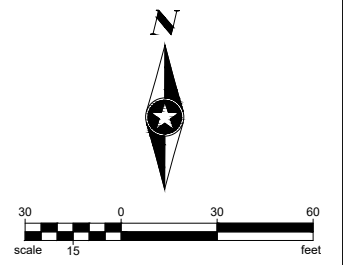
**WATER TREATMENT PLANT**  
**TRUNK WATER MAIN IMPROVEMENTS**  
 Ramsey, Minnesota

**UTILITY PLAN & PROFILE**  
**BUNKER LAKE BLVD NW (CSAH 116)**

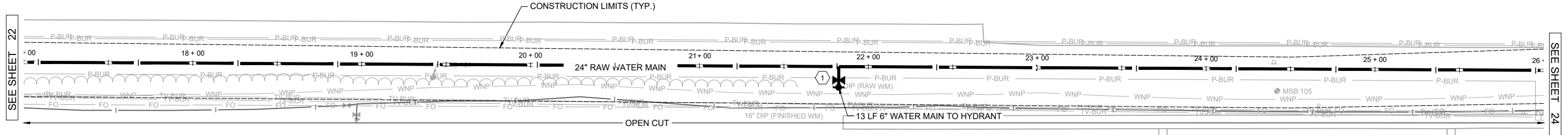
22 of 58

**KEYED NOTES**

- 1 HYDRANT, 6" GV & BOX, 6" WATER MAIN, DI TEE
- 2 24" GV & BOX
- 3 20" GV & BOX
- 4 DRILLING PIT
- 5 CONNECT TO EXISTING
- 6 45° DI BEND
- 7 22.5° DI BEND
- 8 11.25° DI BEND
- 9 B618 CURB AND GUTTER (PER STR-1 ON SHEET 8)
- 10 BITUMINOUS PAVEMENT (PER STR-25 ON SHEET 8)
- 11 10' WIDE BITUMINOUS TRAIL (PER PARK-1 ON SHEET 7)
- 12 CONCRETE SIDEWALK (PER STR-3 ON SHEET 8)
- 13 CROSS GUTTER (PER STR-2 ON SHEET 8)
- 14 ADJUST CASTING
- 15 INSULATE WATER MAIN AT STORM SEWER CROSSING AS DIRECTED BY ENGINEER. MIN 4" x 4" x 8' RIGID FOAM INSULATION ABOVE WATER.

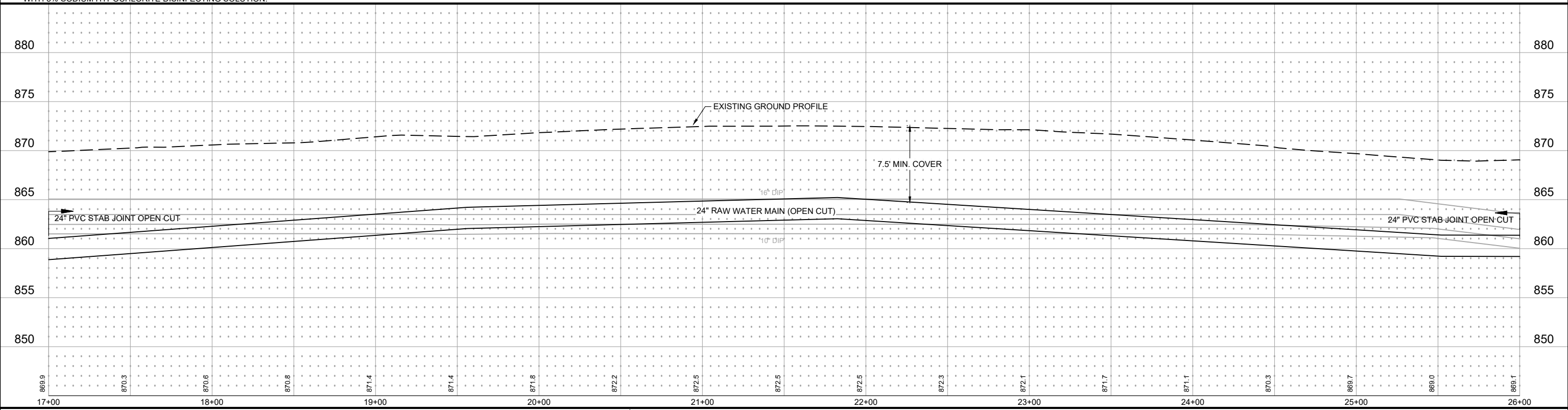


**BUNKER LAKE BLVD NW (CSAH 116)**



- NOTES:**
- CONTRACTOR TO PROVIDE TRENCH BOXES AND OTHER MEANS TO PROTECT OBJECTS NOT MARKED FOR REMOVAL. DAMAGE TO OBJECTS NOT MARKED FOR REMOVAL SHALL BE REPAIRED OR REPLACED AT NO COST TO PROJECT OWNER.
  - HYDRANT LEADS TO BE 7.5 FT DEEP TO TOP OF HYDRANT BRANCH. SEE WAT-1 ON SHEET 7.
  - UTILITY LOCATIONS SHOWN ARE LEVEL D ACCURACY. CONTRACTOR SHALL VERIFY ACTUAL UTILITY LOCATIONS THROUGH GOPHER STATE ONE CALL.
  - CONSTRUCTION LIMITS LINES SHOWN AT HDD DRILLING LOCATIONS MAY VARY, AS APPROVED BY ENGINEER.
  - MAINTAIN A MINIMUM 7.5 FT VERTICAL COVER ON ALL RAW AND FINISHED WATER MAINS MAINTAIN A MINIMUM 24" VERTICAL SEPARATION BETWEEN NEW RAW AND FINISHED WATER MAIN AND SEWER AND STORM SEWER CROSSING. MAINTAIN A MINIMUM 10 FT HORIZONTAL SEPARATION BETWEEN RAW AND FINISHED WATER MAIN AND SEWER AND STORM SEWER.
  - SEE PROJECT SPECIFICATIONS FOR SOIL BORING LOGS AND LOCATION MAP.
  - MAINTAIN 15' MAXIMUM COVER ON ALL RAW AND FINISHED WATER MAIN. CONTRACTOR TO NOTIFY ENGINEER OF AVERAGE RUNNING DEPTH OF DRILLING MACHINE DURING CONSTRUCTION.
  - CONTRACTOR TO SUBMIT DETAILED SCHEDULE MINIMUM 1 WEEK PRIOR TO BEGINNING CONSTRUCTION ACTIVITIES FOR COORDINATION WITH THE CITY OF RAMSEY UTILITIES DEPARTMENT. CONTACT UTILITIES SUPERINTENDENT JOHN NELSON AT 763.250.4592. CITY OF RAMSEY TO OPERATE VALVES AND HYDRANTS FOR CONTRACTOR.
  - DURING INSTALLATION OF THE FITTINGS AND PIPING BETWEEN THE CONNECTION TO THE EXISTING RAW WATER MAINS AND THE GATE VALVE AT STA. 1+27.42, CLEAN THE INTERIOR OF THE COMPONENTS BY MECHANICAL MEANS AND SWAB WITH 5% SODIUM HYPOCHLORITE DISINFECTING SOLUTION.

**BUNKER LAKE BLVD NW (CSAH 116)**



SEH Project	RAMSY174498	Rev.#	Revision Issue Description	Date	Rev.#	Revision Issue Description	Date
Drawn By	JRB, SRP	.			.		
Designed By	KLK	.			.		
Checked By	CES	.			.		

I HEREBY CERTIFY THAT THIS PLAN 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 MN.

*David E. Hutton*  
 David E. Hutton  
 LICENSE NO. 19133  
 DATE 10-06-2023

**WATER TREATMENT PLANT**  
**TRUNK WATER MAIN IMPROVEMENTS**  
 Ramsey, Minnesota

**UTILITY PLAN & PROFILE**  
**BUNKER LAKE BLVD NW (CSAH 116)**

23  
of 58

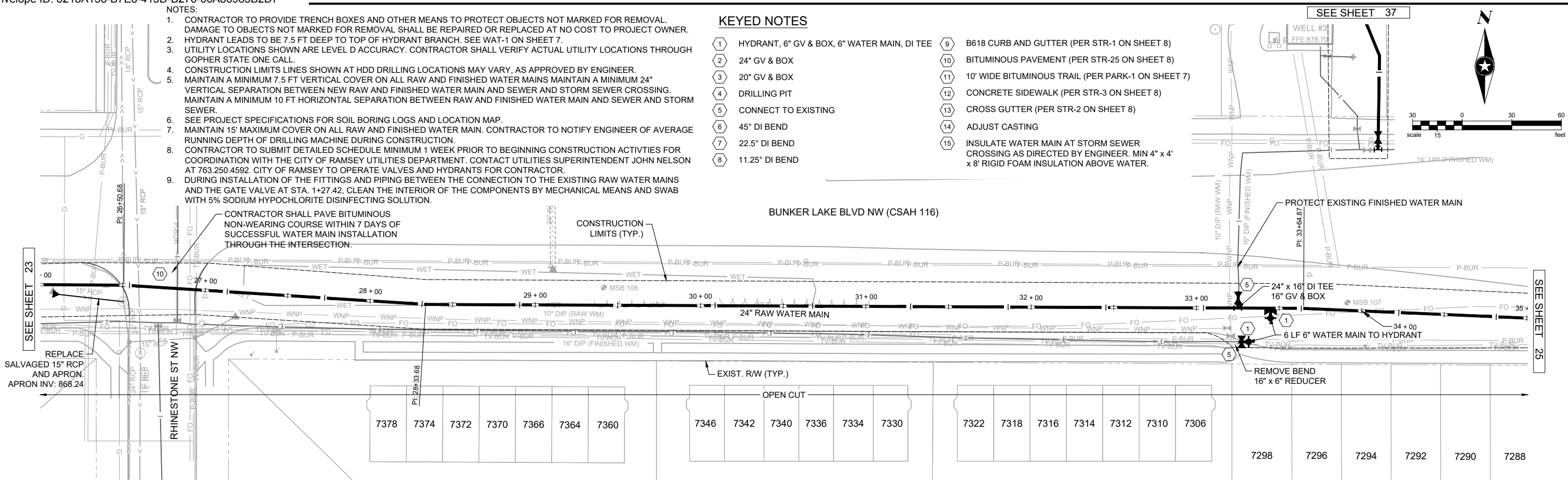
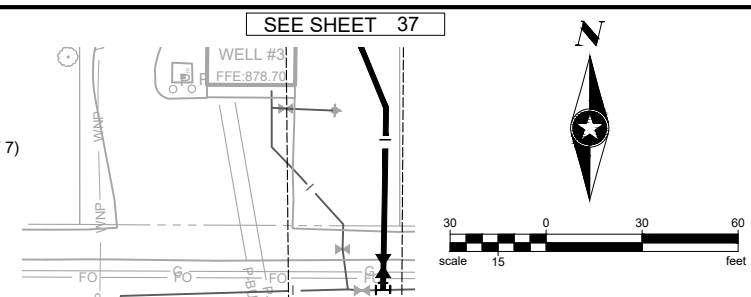
Save: 10/7/2023 2:11 PM I:\projects\10772023\2-27 PM X\PT\RAMSY174498\1-drawings\10-Civil\cad\dwg\sheet\RA1\_159783U.dwg

NOTES:

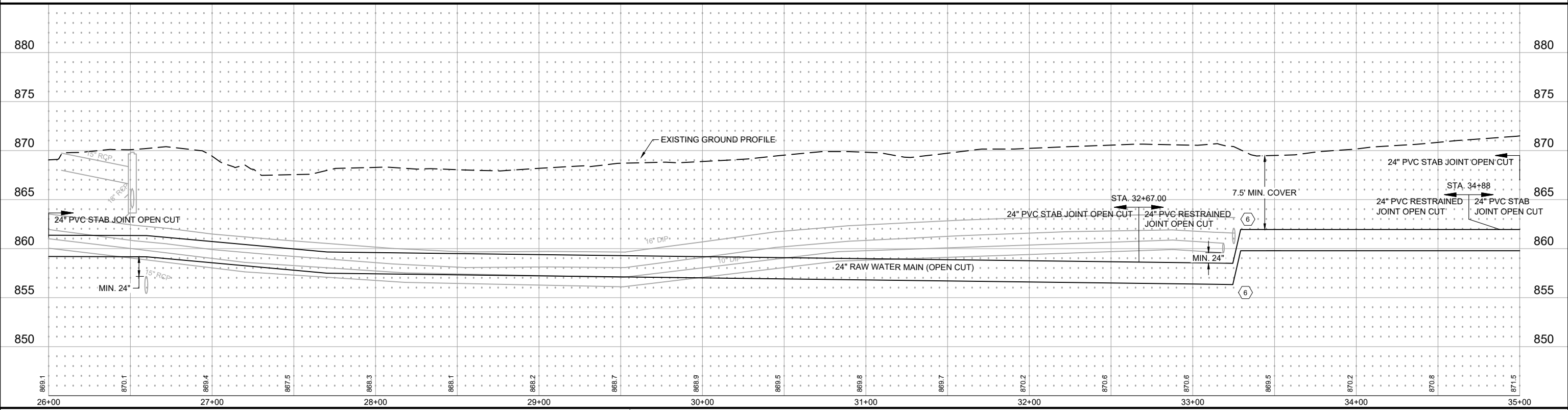
1. CONTRACTOR TO PROVIDE TRENCH BOXES AND OTHER MEANS TO PROTECT OBJECTS NOT MARKED FOR REMOVAL. DAMAGE TO OBJECTS NOT MARKED FOR REMOVAL SHALL BE REPAIRED OR REPLACED AT NO COST TO PROJECT OWNER.
2. HYDRANT LEADS TO BE 7.5 FT DEEP TO TOP OF HYDRANT BRANCH. SEE WAT-1 ON SHEET 7.
3. UTILITY LOCATIONS SHOWN ARE LEVEL D ACCURACY. CONTRACTOR SHALL VERIFY ACTUAL UTILITY LOCATIONS THROUGH GOPHER STATE ONE CALL.
4. CONSTRUCTION LIMITS LINES SHOWN AT HDD DRILLING LOCATIONS MAY VARY, AS APPROVED BY ENGINEER.
5. MAINTAIN A MINIMUM 7.5 FT VERTICAL COVER ON ALL RAW AND FINISHED WATER MAINS MAINTAIN A MINIMUM 24" VERTICAL SEPARATION BETWEEN NEW RAW AND FINISHED WATER MAIN AND SEWER AND STORM SEWER CROSSING. MAINTAIN A MINIMUM 10 FT HORIZONTAL SEPARATION BETWEEN RAW AND FINISHED WATER MAIN AND SEWER AND STORM SEWER.
6. SEE PROJECT SPECIFICATIONS FOR SOIL BORING LOGS AND LOCATION MAP.
7. MAINTAIN 15' MAXIMUM COVER ON ALL RAW AND FINISHED WATER MAIN. CONTRACTOR TO NOTIFY ENGINEER OF AVERAGE RUNNING DEPTH OF DRILLING MACHINE DURING CONSTRUCTION.
8. CONTRACTOR TO SUBMIT DETAILED SCHEDULE MINIMUM 1 WEEK PRIOR TO BEGINNING CONSTRUCTION ACTIVITIES FOR COORDINATION WITH THE CITY OF RAMSEY UTILITIES DEPARTMENT. CONTACT UTILITIES SUPERINTENDENT JOHN NELSON AT 763.250.4592. CITY OF RAMSEY TO OPERATE VALVES AND HYDRANTS FOR CONTRACTOR.
9. DURING INSTALLATION OF THE FITTINGS AND PIPING BETWEEN THE CONNECTION TO THE EXISTING RAW WATER MAINS AND THE GATE VALVE AT STA. 1+27.42, CLEAN THE INTERIOR OF THE COMPONENTS BY MECHANICAL MEANS AND SWAB WITH 5% SODIUM HYPOCHLORITE DISINFECTING SOLUTION.

KEYED NOTES

- |                                               |                                                                                                                            |
|-----------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|
| ① HYDRANT, 6" GV & BOX, 6" WATER MAIN, DI TEE | ⑨ B618 CURB AND GUTTER (PER STR-1 ON SHEET 8)                                                                              |
| ② 24" GV & BOX                                | ⑩ BITUMINOUS PAVEMENT (PER STR-25 ON SHEET 8)                                                                              |
| ③ 20" GV & BOX                                | ⑪ 10' WIDE BITUMINOUS TRAIL (PER PARK-1 ON SHEET 7)                                                                        |
| ④ DRILLING PIT                                | ⑫ CONCRETE SIDEWALK (PER STR-3 ON SHEET 8)                                                                                 |
| ⑤ CONNECT TO EXISTING                         | ⑬ CROSS GUTTER (PER STR-2 ON SHEET 8)                                                                                      |
| ⑥ 45° DI BEND                                 | ⑭ ADJUST CASTING                                                                                                           |
| ⑦ 22.5° DI BEND                               | ⑮ INSULATE WATER MAIN AT STORM SEWER CROSSING AS DIRECTED BY ENGINEER. MIN 4" x 4" x 8' RIGID FOAM INSULATION ABOVE WATER. |
| ⑧ 11.25° DI BEND                              |                                                                                                                            |



BUNKER LAKE BLVD NW (CSAH 116)



SEH Project	RAMSY174498	Rev.#	Revision Issue Description	Date	Rev.#	Revision Issue Description	Date
Drawn By	JRB, SRP						
Designed By	KLK						
Checked By	CES						

I HEREBY CERTIFY THAT THIS PLAN 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 MN.

*David E. Hutton*

David E. Hutton  
LICENSE NO. 19133

DATE 10-06-2023

WATER TREATMENT PLANT  
TRUNK WATER MAIN IMPROVEMENTS  
Ramsey, Minnesota

UTILITY PLAN & PROFILE  
BUNKER LAKE BLVD NW (CSAH 116)

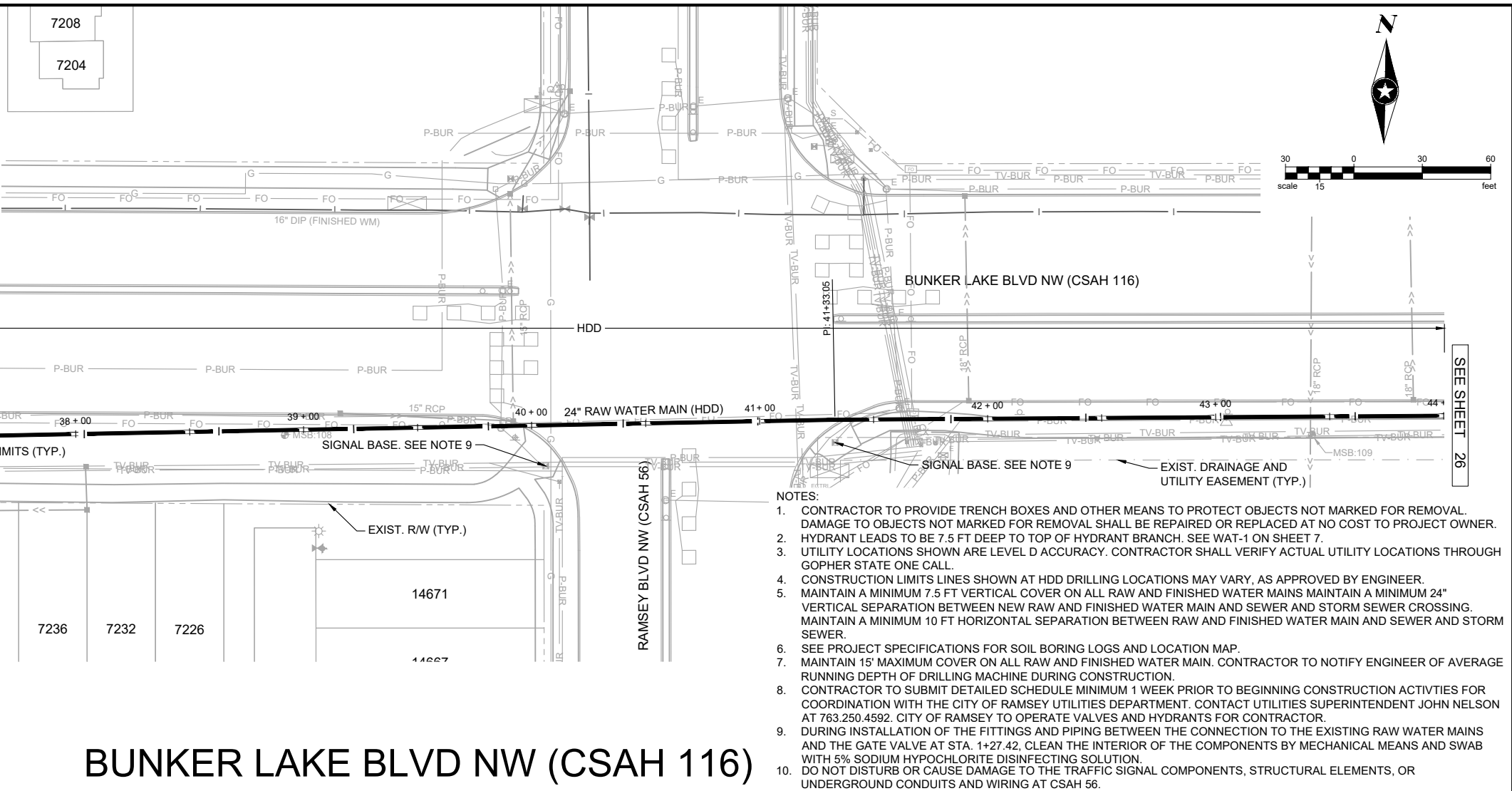
24  
of 58

Save: 10/7/2023 2:11 PM rrcwiles Plot: 10/7/2023 2:28 PM X:\P\TRRAMSY174498\Drawings\10-Civil\cad\dwg\sheetRA1\_597831U.dwg



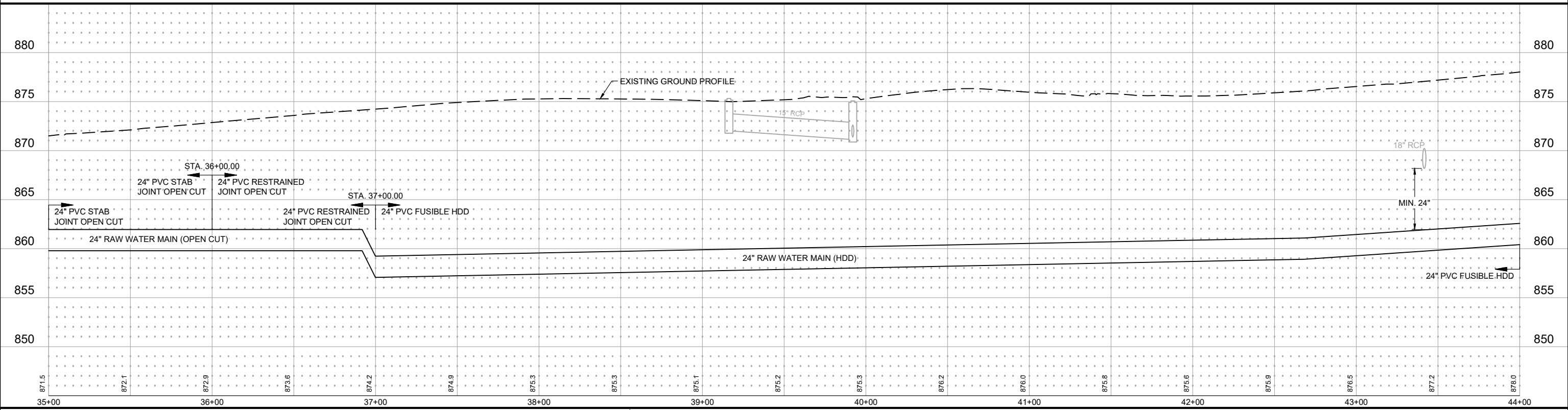
**KEYED NOTES**

- ① HYDRANT, 6" GV & BOX, 6" WATER MAIN, DI TEE
- ② 24" GV & BOX
- ③ 20" GV & BOX
- ④ DRILLING PIT
- ⑤ CONNECT TO EXISTING
- ⑥ 45° DI BEND
- ⑦ 22.5° DI BEND
- ⑧ 11.25° DI BEND
- ⑨ B618 CURB AND GUTTER (PER STR-1 ON SHEET 8)
- ⑩ BITUMINOUS PAVEMENT (PER STR-25 ON SHEET 8)
- ⑪ 10' WIDE BITUMINOUS TRAIL (PER PARK-1 ON SHEET 7)
- ⑫ CONCRETE SIDEWALK (PER STR-3 ON SHEET 8)
- ⑬ CROSS GUTTER (PER STR-2 ON SHEET 8)
- ⑭ ADJUST CASTING
- ⑮ INSULATE WATER MAIN AT STORM SEWER CROSSING AS DIRECTED BY ENGINEER. MIN 4" x 4" x 8' RIGID FOAM INSULATION ABOVE WATER.



- NOTES:**
1. CONTRACTOR TO PROVIDE TRENCH BOXES AND OTHER MEANS TO PROTECT OBJECTS NOT MARKED FOR REMOVAL. DAMAGE TO OBJECTS NOT MARKED FOR REMOVAL SHALL BE REPAIRED OR REPLACED AT NO COST TO PROJECT OWNER.
  2. HYDRANT LEADS TO BE 7.5 FT DEEP TO TOP OF HYDRANT BRANCH. SEE WAT-1 ON SHEET 7.
  3. UTILITY LOCATIONS SHOWN ARE LEVEL D ACCURACY. CONTRACTOR SHALL VERIFY ACTUAL UTILITY LOCATIONS THROUGH GOPHER STATE ONE CALL.
  4. CONSTRUCTION LIMITS LINES SHOWN AT HDD DRILLING LOCATIONS MAY VARY, AS APPROVED BY ENGINEER.
  5. MAINTAIN A MINIMUM 7.5 FT VERTICAL COVER ON ALL RAW AND FINISHED WATER MAINS MAINTAIN A MINIMUM 24" VERTICAL SEPARATION BETWEEN NEW RAW AND FINISHED WATER MAIN AND SEWER AND STORM SEWER CROSSING. MAINTAIN A MINIMUM 10 FT HORIZONTAL SEPARATION BETWEEN RAW AND FINISHED WATER MAIN AND SEWER AND STORM SEWER.
  6. SEE PROJECT SPECIFICATIONS FOR SOIL BORING LOGS AND LOCATION MAP.
  7. MAINTAIN 15' MAXIMUM COVER ON ALL RAW AND FINISHED WATER MAIN. CONTRACTOR TO NOTIFY ENGINEER OF AVERAGE RUNNING DEPTH OF DRILLING MACHINE DURING CONSTRUCTION.
  8. CONTRACTOR TO SUBMIT DETAILED SCHEDULE MINIMUM 1 WEEK PRIOR TO BEGINNING CONSTRUCTION ACTIVITIES FOR COORDINATION WITH THE CITY OF RAMSEY UTILITIES DEPARTMENT. CONTACT UTILITIES SUPERINTENDENT JOHN NELSON AT 763.250.4592. CITY OF RAMSEY TO OPERATE VALVES AND HYDRANTS FOR CONTRACTOR.
  9. DURING INSTALLATION OF THE FITTINGS AND PIPING BETWEEN THE CONNECTION TO THE EXISTING RAW WATER MAINS AND THE GATE VALVE AT STA. 1+27.42, CLEAN THE INTERIOR OF THE COMPONENTS BY MECHANICAL MEANS AND SWAB WITH 5% SODIUM HYPOCHLORITE DISINFECTING SOLUTION.
  10. DO NOT DISTURB OR CAUSE DAMAGE TO THE TRAFFIC SIGNAL COMPONENTS, STRUCTURAL ELEMENTS, OR UNDERGROUND CONDUITS AND WIRING AT CSAH 56.

**BUNKER LAKE BLVD NW (CSAH 116)**



SEH Project	RAMSY174498	Rev.#	Revision Issue Description	Date	Rev.#	Revision Issue Description	Date
Drawn By	JRB, SRP	.	.	.	.	.	.
Designed By	KLK	.	.	.	.	.	.
Checked By	CES	.	.	.	.	.	.

I HEREBY CERTIFY THAT THIS PLAN 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 MN.

*David E. Hutton*  
 David E. Hutton  
 LICENSE NO. 19133  
 DATE 10-06-2023

**WATER TREATMENT PLANT**  
**TRUNK WATER MAIN IMPROVEMENTS**  
 Ramsey, Minnesota

**UTILITY PLAN & PROFILE**  
**BUNKER LAKE BLVD NW (CSAH 116)**

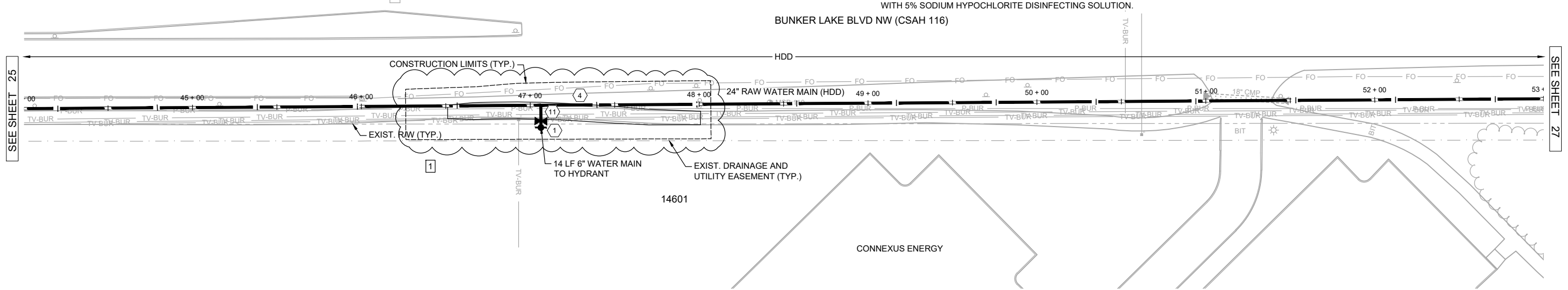
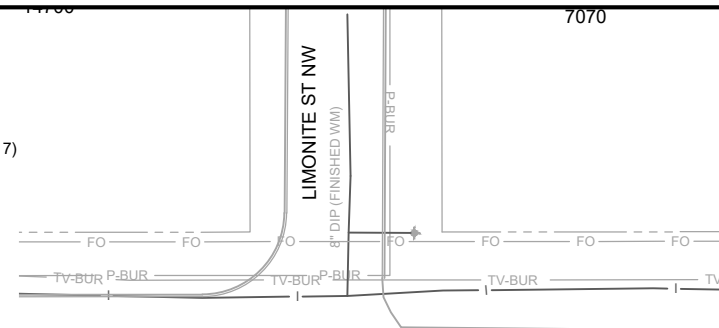
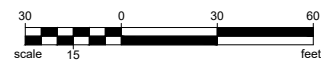
Save: 10/7/2023 2:11 PM rrcwiles Plot: 10/7/2023 2:29 PM X:\P\TRRAMSY15578315-fmal-dsgm51-drawings\10-Civil\cad\dwg\sheet\RA1\_597831U.dwg

**KEYED NOTES**

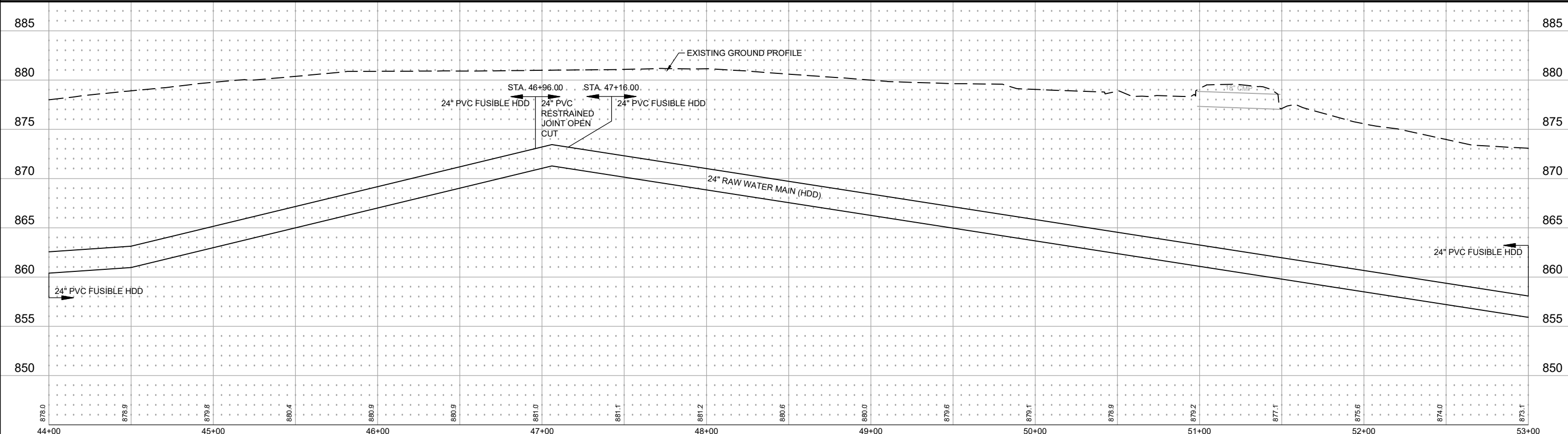
- 1 HYDRANT, 6" GV & BOX, 6" WATER MAIN, DI TEE
- 2 24" GV & BOX
- 3 20" GV & BOX
- 4 DRILLING PIT
- 5 CONNECT TO EXISTING
- 6 45° DI BEND
- 7 22.5° DI BEND
- 8 11.25° DI BEND
- 9 B618 CURB AND GUTTER (PER STR-1 ON SHEET 8)
- 10 BITUMINOUS PAVEMENT (PER STR-25 ON SHEET 8)
- 11 10' WIDE BITUMINOUS TRAIL (PER PARK-1 ON SHEET 7)
- 12 CONCRETE SIDEWALK (PER STR-3 ON SHEET 8)
- 13 CROSS GUTTER (PER STR-2 ON SHEET 8)
- 14 ADJUST CASTING
- 15 INSULATE WATER MAIN AT STORM SEWER CROSSING AS DIRECTED BY ENGINEER. MIN 4" x 4" x 8' RIGID FOAM INSULATION ABOVE WATER.

**NOTES:**

1. CONTRACTOR TO PROVIDE TRENCH BOXES AND OTHER MEANS TO PROTECT OBJECTS NOT MARKED FOR REMOVAL. DAMAGE TO OBJECTS NOT MARKED FOR REMOVAL SHALL BE REPAIRED OR REPLACED AT NO COST TO PROJECT OWNER.
2. HYDRANT LEADS TO BE 7.5 FT DEEP TO TOP OF HYDRANT BRANCH. SEE WAT-1 ON SHEET 7.
3. UTILITY LOCATIONS SHOWN ARE LEVEL D ACCURACY. CONTRACTOR SHALL VERIFY ACTUAL UTILITY LOCATIONS THROUGH GOPHER STATE ONE CALL.
4. CONSTRUCTION LIMITS LINES SHOWN AT HDD DRILLING LOCATIONS MAY VARY, AS APPROVED BY ENGINEER.
5. MAINTAIN A MINIMUM 7.5 FT VERTICAL COVER ON ALL RAW AND FINISHED WATER MAINS MAINTAIN A MINIMUM 24" VERTICAL SEPARATION BETWEEN NEW RAW AND FINISHED WATER MAIN AND SEWER AND STORM SEWER CROSSING. MAINTAIN A MINIMUM 10 FT HORIZONTAL SEPARATION BETWEEN RAW AND FINISHED WATER MAIN AND SEWER AND STORM SEWER.
6. SEE PROJECT SPECIFICATIONS FOR SOIL BORING LOGS AND LOCATION MAP.
7. MAINTAIN 15' MAXIMUM COVER ON ALL RAW AND FINISHED WATER MAIN. CONTRACTOR TO NOTIFY ENGINEER OF AVERAGE RUNNING DEPTH OF DRILLING MACHINE DURING CONSTRUCTION.
8. CONTRACTOR TO SUBMIT DETAILED SCHEDULE MINIMUM 1 WEEK PRIOR TO BEGINNING CONSTRUCTION ACTIVITIES FOR COORDINATION WITH THE CITY OF RAMSEY UTILITIES DEPARTMENT. CONTACT UTILITIES SUPERINTENDENT JOHN NELSON AT 763.250.4592. CITY OF RAMSEY TO OPERATE VALVES AND HYDRANTS FOR CONTRACTOR.
9. DURING INSTALLATION OF THE FITTINGS AND PIPING BETWEEN THE CONNECTION TO THE EXISTING RAW WATER MAINS AND THE GATE VALVE AT STA. 1+27.42, CLEAN THE INTERIOR OF THE COMPONENTS BY MECHANICAL MEANS AND SWAB WITH 5% SODIUM HYPOCHLORITE DISINFECTING SOLUTION.



**BUNKER LAKE BLVD NW (CSAH 116)**



Save: 10/20/2023 12:18 PM adasen Plot: 10/20/2023 12:46 PM X:\PT\RAMSY\159783\5-final-dsgn\5-drawings\10-Civil\cad\dwg\sheet\RA159783\2.dwg

SEH Project	RAMSY174498	Rev.#	1	Revision Issue Description	ADDENDUM #1	Date	10/23/2023
Drawn By	JRB, SRP						
Designed By	KLK						
Checked By	CES						

I HEREBY CERTIFY THAT THIS PLAN 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 MN.

*David E. Hutton*  
 David E. Hutton  
 LICENSE NO. 19133  
 DATE 10-06-2023

**WATER TREATMENT PLANT**  
**TRUNK WATER MAIN IMPROVEMENTS**  
 Ramsey, Minnesota

**UTILITY PLAN & PROFILE**  
**BUNKER LAKE BLVD NW (CSAH 116)**

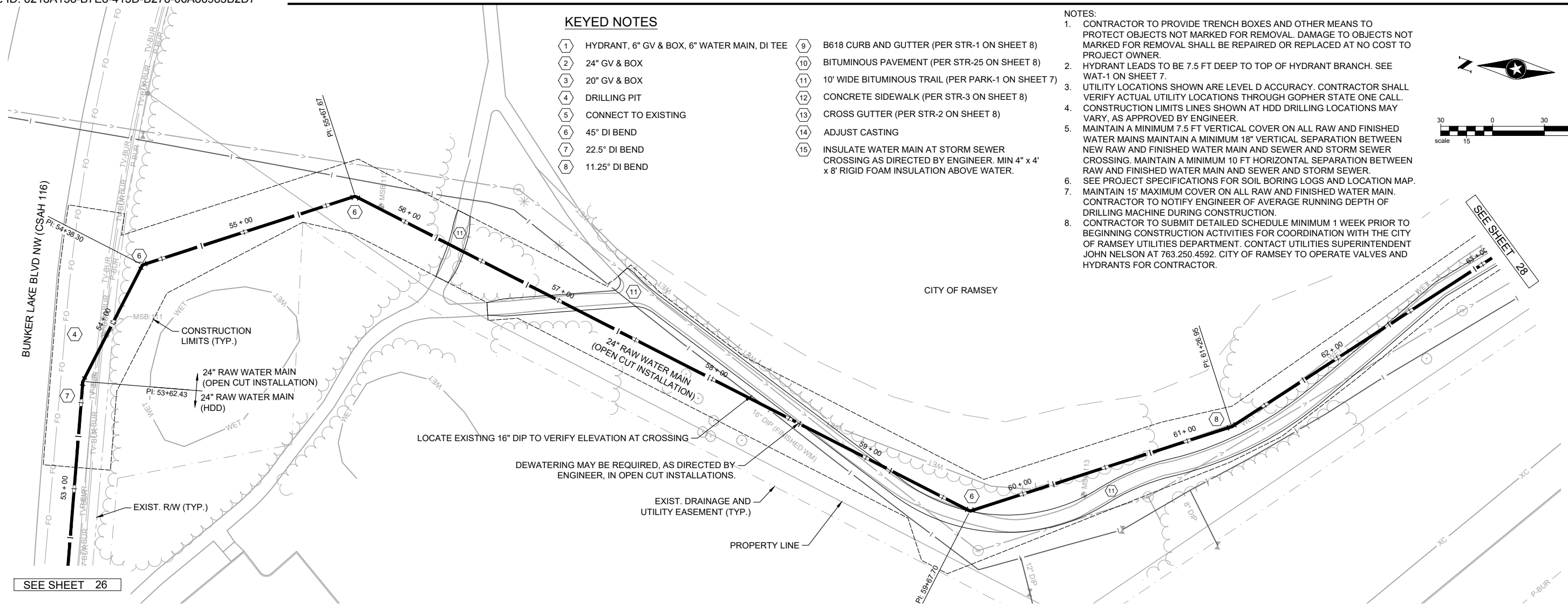
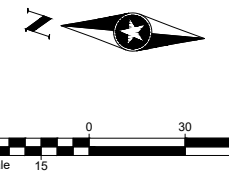
26  
of 58

**KEYED NOTES**

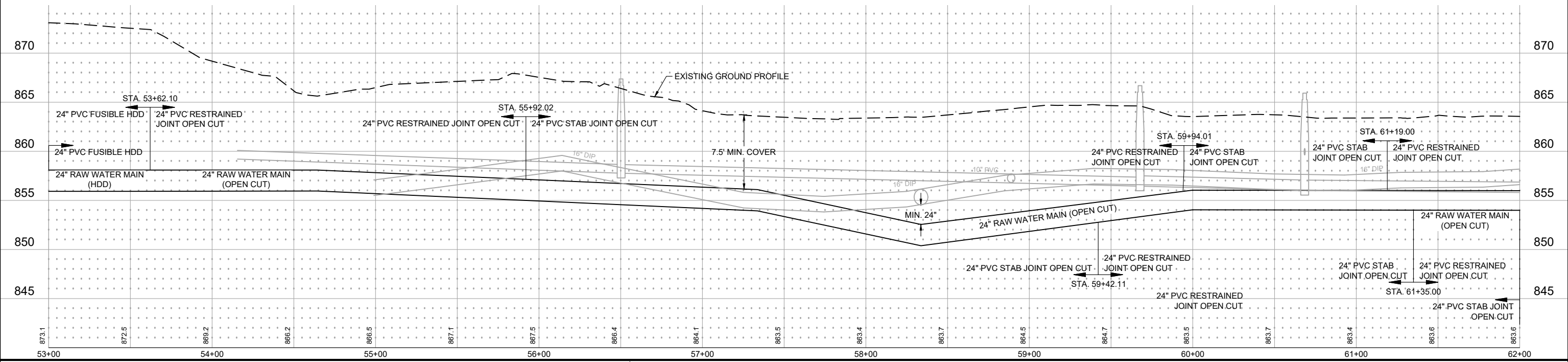
- ① HYDRANT, 6" GV & BOX, 6" WATER MAIN, DI TEE
- ② 24" GV & BOX
- ③ 20" GV & BOX
- ④ DRILLING PIT
- ⑤ CONNECT TO EXISTING
- ⑥ 45° DI BEND
- ⑦ 22.5° DI BEND
- ⑧ 11.25° DI BEND
- ⑨ B618 CURB AND GUTTER (PER STR-1 ON SHEET 8)
- ⑩ BITUMINOUS PAVEMENT (PER STR-25 ON SHEET 8)
- ⑪ 10' WIDE BITUMINOUS TRAIL (PER PARK-1 ON SHEET 7)
- ⑫ CONCRETE SIDEWALK (PER STR-3 ON SHEET 8)
- ⑬ CROSS GUTTER (PER STR-2 ON SHEET 8)
- ⑭ ADJUST CASTING
- ⑮ INSULATE WATER MAIN AT STORM SEWER CROSSING AS DIRECTED BY ENGINEER. MIN 4" x 4" x 8' RIGID FOAM INSULATION ABOVE WATER.

**NOTES:**

1. CONTRACTOR TO PROVIDE TRENCH BOXES AND OTHER MEANS TO PROTECT OBJECTS NOT MARKED FOR REMOVAL. DAMAGE TO OBJECTS NOT MARKED FOR REMOVAL SHALL BE REPAIRED OR REPLACED AT NO COST TO PROJECT OWNER.
2. HYDRANT LEADS TO BE 7.5 FT DEEP TO TOP OF HYDRANT BRANCH. SEE WAT-1 ON SHEET 7.
3. UTILITY LOCATIONS SHOWN ARE LEVEL D ACCURACY. CONTRACTOR SHALL VERIFY ACTUAL UTILITY LOCATIONS THROUGH GOPHER STATE ONE CALL.
4. CONSTRUCTION LIMITS LINES SHOWN AT HDD DRILLING LOCATIONS MAY VARY, AS APPROVED BY ENGINEER.
5. MAINTAIN A MINIMUM 7.5 FT VERTICAL COVER ON ALL RAW AND FINISHED WATER MAINS MAINTAIN A MINIMUM 18" VERTICAL SEPARATION BETWEEN NEW RAW AND FINISHED WATER MAIN AND SEWER AND STORM SEWER CROSSING. MAINTAIN A MINIMUM 10 FT HORIZONTAL SEPARATION BETWEEN RAW AND FINISHED WATER MAIN AND SEWER AND STORM SEWER.
6. SEE PROJECT SPECIFICATIONS FOR SOIL BORING LOGS AND LOCATION MAP.
7. MAINTAIN 15' MAXIMUM COVER ON ALL RAW AND FINISHED WATER MAIN. CONTRACTOR TO NOTIFY ENGINEER OF AVERAGE RUNNING DEPTH OF DRILLING MACHINE DURING CONSTRUCTION.
8. CONTRACTOR TO SUBMIT DETAILED SCHEDULE MINIMUM 1 WEEK PRIOR TO BEGINNING CONSTRUCTION ACTIVITIES FOR COORDINATION WITH THE CITY OF RAMSEY UTILITIES DEPARTMENT. CONTACT UTILITIES SUPERINTENDENT JOHN NELSON AT 763.250.4592. CITY OF RAMSEY TO OPERATE VALVES AND HYDRANTS FOR CONTRACTOR.



**COTTONWOOD PARK**



SEH Project	RAMSY174498	Rev.#	Revision Issue Description	Date	Rev.#	Revision Issue Description	Date
Drawn By	JRB, SRP						
Designed By	KLK						
Checked By	CES						

I HEREBY CERTIFY THAT THIS PLAN 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 MN.

*David E. Hutton*  
 David E. Hutton  
 LICENSE NO. 19133  
 DATE 10-06-2023

**WATER TREATMENT PLANT**  
**TRUNK WATER MAIN IMPROVEMENTS**  
 Ramsey, Minnesota

**UTILITY PLAN & PROFILE**  
**COTTONWOOD PARK**

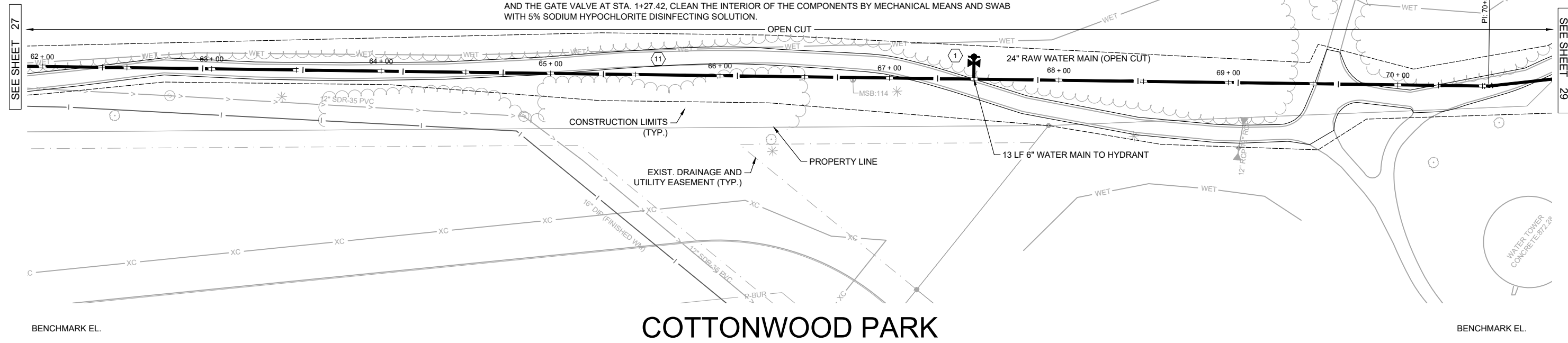
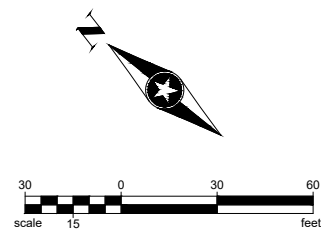
27  
 of 58

**KEYED NOTES**

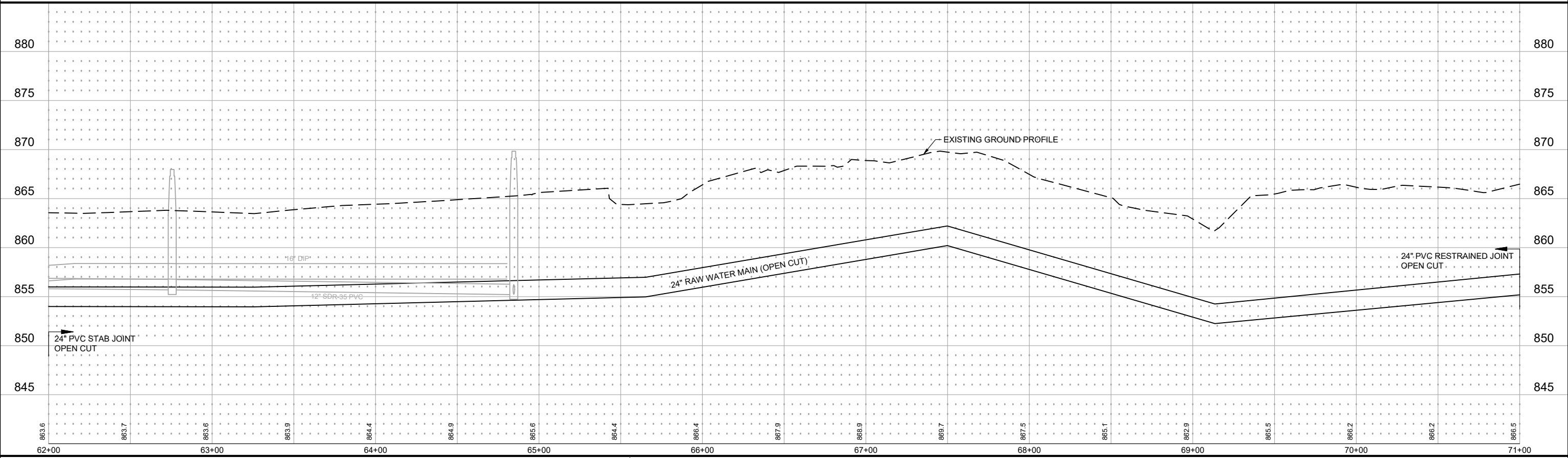
- 1 HYDRANT, 6" GV & BOX, 6" WATER MAIN, DI TEE
- 2 24" GV & BOX
- 3 20" GV & BOX
- 4 DRILLING PIT
- 5 CONNECT TO EXISTING
- 6 45° DI BEND
- 7 22.5° DI BEND
- 8 11.25° DI BEND
- 9 B618 CURB AND GUTTER (PER STR-1 ON SHEET 8)
- 10 BITUMINOUS PAVEMENT (PER STR-25 ON SHEET 8)
- 11 10' WIDE BITUMINOUS TRAIL (PER PARK-1 ON SHEET 7)
- 12 CONCRETE SIDEWALK (PER STR-3 ON SHEET 8)
- 13 CROSS GUTTER (PER STR-2 ON SHEET 8)
- 14 ADJUST CASTING
- 15 INSULATE WATER MAIN AT STORM SEWER CROSSING AS DIRECTED BY ENGINEER. MIN 4" x 4" x 8' RIGID FOAM INSULATION ABOVE WATER.

**NOTES:**

1. CONTRACTOR TO PROVIDE TRENCH BOXES AND OTHER MEANS TO PROTECT OBJECTS NOT MARKED FOR REMOVAL. DAMAGE TO OBJECTS NOT MARKED FOR REMOVAL SHALL BE REPAIRED OR REPLACED AT NO COST TO PROJECT OWNER.
2. HYDRANT LEADS TO BE 7.5 FT DEEP TO TOP OF HYDRANT BRANCH. SEE WAT-1 ON SHEET 7.
3. UTILITY LOCATIONS SHOWN ARE LEVEL D ACCURACY. CONTRACTOR SHALL VERIFY ACTUAL UTILITY LOCATIONS THROUGH GOPHER STATE ONE CALL.
4. CONSTRUCTION LIMITS LINES SHOWN AT HDD DRILLING LOCATIONS MAY VARY, AS APPROVED BY ENGINEER.
5. MAINTAIN A MINIMUM 7.5 FT VERTICAL COVER ON ALL RAW AND FINISHED WATER MAINS. MAINTAIN A MINIMUM 24" VERTICAL SEPARATION BETWEEN NEW RAW AND FINISHED WATER MAIN AND SEWER AND STORM SEWER CROSSING. MAINTAIN A MINIMUM 10 FT HORIZONTAL SEPARATION BETWEEN RAW AND FINISHED WATER MAIN AND SEWER AND STORM SEWER.
6. SEE PROJECT SPECIFICATIONS FOR SOIL BORING LOGS AND LOCATION MAP.
7. MAINTAIN 15" MAXIMUM COVER ON ALL RAW AND FINISHED WATER MAIN. CONTRACTOR TO NOTIFY ENGINEER OF AVERAGE RUNNING DEPTH OF DRILLING MACHINE DURING CONSTRUCTION.
8. CONTRACTOR TO SUBMIT DETAILED SCHEDULE MINIMUM 1 WEEK PRIOR TO BEGINNING CONSTRUCTION ACTIVITIES FOR COORDINATION WITH THE CITY OF RAMSEY UTILITIES DEPARTMENT. CONTACT UTILITIES SUPERINTENDENT JOHN NELSON AT 763.250.4592. CITY OF RAMSEY TO OPERATE VALVES AND HYDRANTS FOR CONTRACTOR.
9. DURING INSTALLATION OF THE FITTINGS AND PIPING BETWEEN THE CONNECTION TO THE EXISTING RAW WATER MAINS AND THE GATE VALVE AT STA. 1+27.42, CLEAN THE INTERIOR OF THE COMPONENTS BY MECHANICAL MEANS AND SWAB WITH 5% SODIUM HYPOCHLORITE DISINFECTING SOLUTION.



**COTTONWOOD PARK**

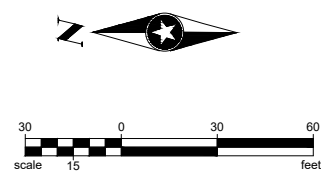
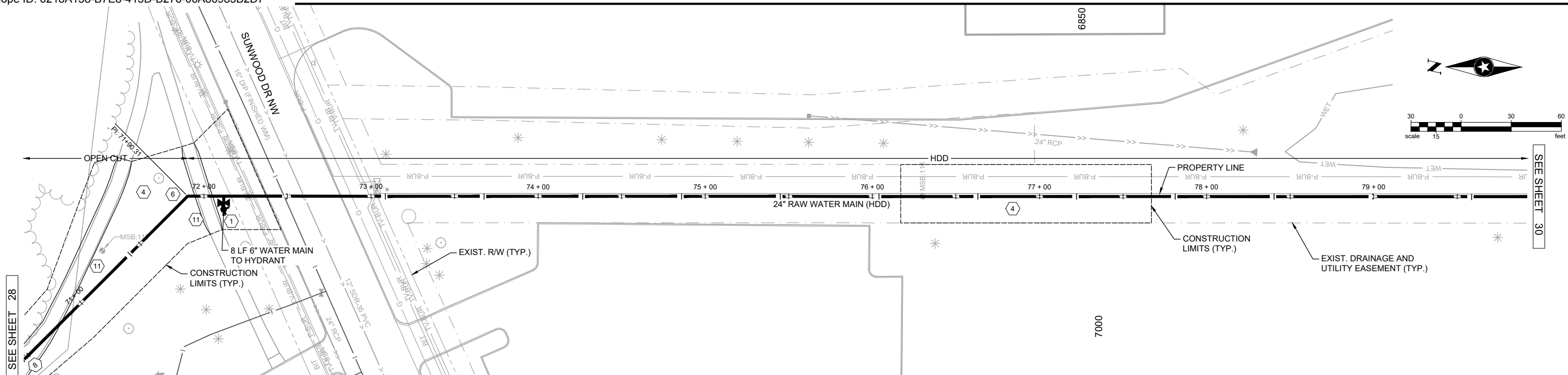


SEH Project	RAMSY174498	Rev.#	Revision Issue Description	Date	Rev.#	Revision Issue Description	Date
Drawn By	JRB, SRP	.			.		
Designed By	KLK	.			.		
Checked By	CES	.			.		

I HEREBY CERTIFY THAT THIS PLAN 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 MN.

*David E. Hutton*  
 David E. Hutton  
 LICENSE NO. 19133  
 DATE 10-06-2023

**WATER TREATMENT PLANT  
 TRUNK WATER MAIN IMPROVEMENTS**  
 Ramsey, Minnesota

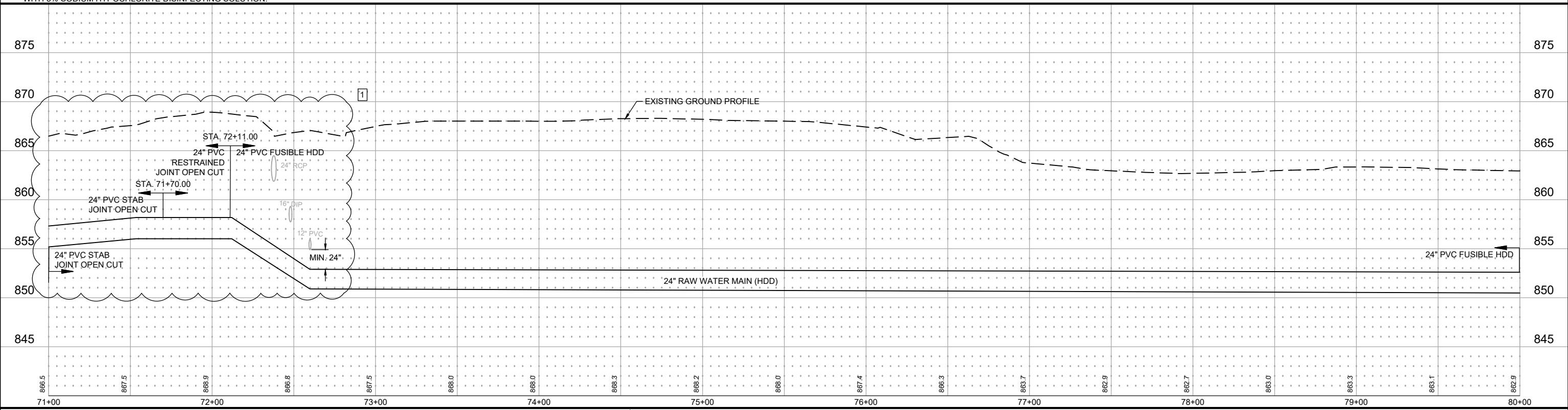


- NOTES:**
- CONTRACTOR TO PROVIDE TRENCH BOXES AND OTHER MEANS TO PROTECT OBJECTS NOT MARKED FOR REMOVAL. DAMAGE TO OBJECTS NOT MARKED FOR REMOVAL SHALL BE REPAIRED OR REPLACED AT NO COST TO PROJECT OWNER.
  - HYDRANT LEADS TO BE 7.5 FT DEEP TO TOP OF HYDRANT BRANCH. SEE WAT-1 ON SHEET 7.
  - UTILITY LOCATIONS SHOWN ARE LEVEL D ACCURACY. CONTRACTOR SHALL VERIFY ACTUAL UTILITY LOCATIONS THROUGH GOPHER STATE ONE CALL.
  - CONSTRUCTION LIMITS LINES SHOWN AT HDD DRILLING LOCATIONS MAY VARY, AS APPROVED BY ENGINEER.
  - MAINTAIN A MINIMUM 7.5 FT VERTICAL COVER ON ALL RAW AND FINISHED WATER MAINS MAINTAIN A MINIMUM 24" VERTICAL SEPARATION BETWEEN NEW RAW AND FINISHED WATER MAIN AND SEWER AND STORM SEWER CROSSING. MAINTAIN A MINIMUM 10 FT HORIZONTAL SEPARATION BETWEEN RAW AND FINISHED WATER MAIN AND SEWER AND STORM SEWER.
  - SEE PROJECT SPECIFICATIONS FOR SOIL BORING LOGS AND LOCATION MAP.
  - MAINTAIN 15' MAXIMUM COVER ON ALL RAW AND FINISHED WATER MAIN. CONTRACTOR TO NOTIFY ENGINEER OF AVERAGE RUNNING DEPTH OF DRILLING MACHINE DURING CONSTRUCTION.
  - CONTRACTOR TO SUBMIT DETAILED SCHEDULE MINIMUM 1 WEEK PRIOR TO BEGINNING CONSTRUCTION ACTIVITIES FOR COORDINATION WITH THE CITY OF RAMSEY UTILITIES DEPARTMENT. CONTACT UTILITIES SUPERINTENDENT JOHN NELSON AT 763.250.4592. CITY OF RAMSEY TO OPERATE VALVES AND HYDRANTS FOR CONTRACTOR.
  - DURING INSTALLATION OF THE FITTINGS AND PIPING BETWEEN THE CONNECTION TO THE EXISTING RAW WATER MAINS AND THE GATE VALVE AT STA. 1+27.42, CLEAN THE INTERIOR OF THE COMPONENTS BY MECHANICAL MEANS AND SWAB WITH 5% SODIUM HYPOCHLORITE DISINFECTING SOLUTION.

**KEYED NOTES**

- |   |                                             |   |                                                                                                                          |
|---|---------------------------------------------|---|--------------------------------------------------------------------------------------------------------------------------|
| ① | HYDRANT, 6" GV & BOX, 6" WATER MAIN, DI TEE | ⑨ | B618 CURB AND GUTTER (PER STR-1 ON SHEET 8)                                                                              |
| ② | 24" GV & BOX                                | ⑩ | BITUMINOUS PAVEMENT (PER STR-25 ON SHEET 8)                                                                              |
| ③ | 20" GV & BOX                                | ⑪ | 10' WIDE BITUMINOUS TRAIL (PER PARK-1 ON SHEET 7)                                                                        |
| ④ | DRILLING PIT                                | ⑫ | CONCRETE SIDEWALK (PER STR-3 ON SHEET 8)                                                                                 |
| ⑤ | CONNECT TO EXISTING                         | ⑬ | CROSS GUTTER (PER STR-2 ON SHEET 8)                                                                                      |
| ⑥ | 45° DI BEND                                 | ⑭ | ADJUST CASTING                                                                                                           |
| ⑦ | 22.5° DI BEND                               | ⑮ | INSULATE WATER MAIN AT STORM SEWER CROSSING AS DIRECTED BY ENGINEER. MIN 4" x 4" x 8' RIGID FOAM INSULATION ABOVE WATER. |
| ⑧ | 11.25° DI BEND                              |   |                                                                                                                          |

# 7000 SUNWOOD DR



SEH Project	RAMSY174498	Rev.#	1	Revision Issue Description	ADDENDUM #1	Date	10/23/2023
Drawn By	JRB, SRP	Checked By	CES				
Designed By	KLK						

**SEH**

I HEREBY CERTIFY THAT THIS PLAN 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 MN.

DATE 10-06-2023

**WATER TREATMENT PLANT**

**TRUNK WATER MAIN IMPROVEMENTS**

Ramsey, Minnesota

**UTILITY PLAN & PROFILE**

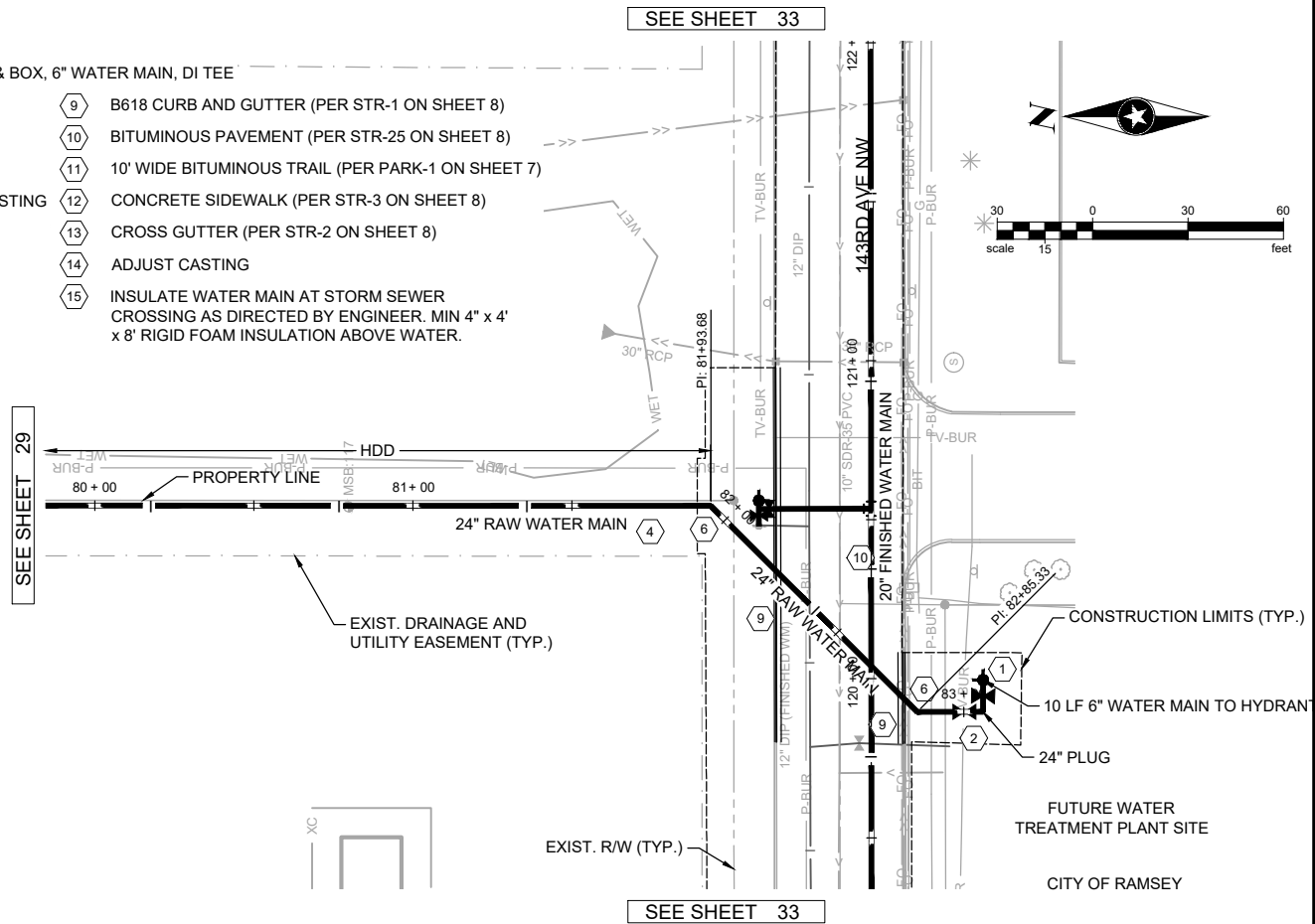
**7000 SUNWOOD DR**

**29**

of 58

**KEYED NOTES**

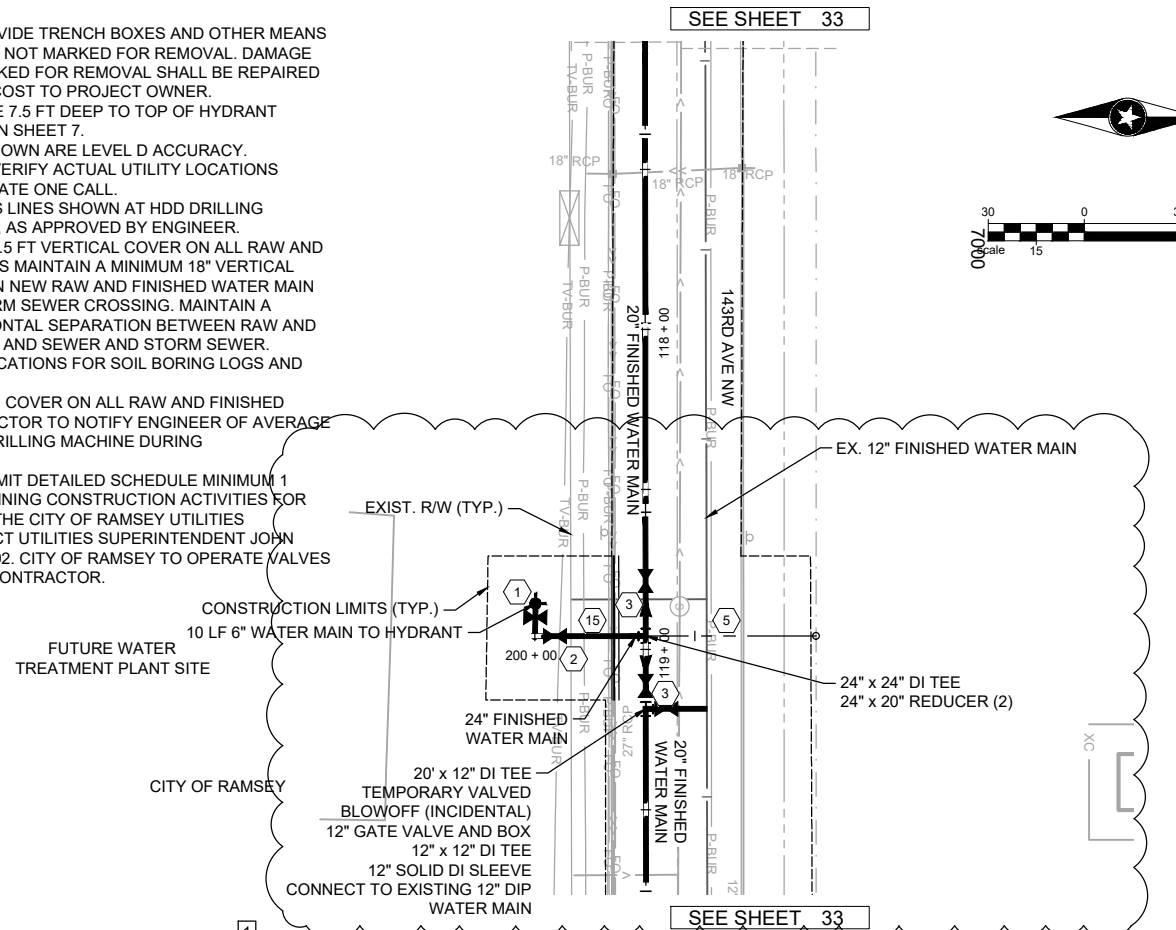
- 1 HYDRANT, 6" GV & BOX, 6" WATER MAIN, DI TEE
- 2 24" GV & BOX
- 3 20" GV & BOX
- 4 DRILLING PIT
- 5 CONNECT TO EXISTING
- 6 45° DI BEND
- 7 22.5° DI BEND
- 8 11.25° DI BEND
- 9 B618 CURB AND GUTTER (PER STR-1 ON SHEET 8)
- 10 BITUMINOUS PAVEMENT (PER STR-25 ON SHEET 8)
- 11 10' WIDE BITUMINOUS TRAIL (PER PARK-1 ON SHEET 7)
- 12 CONCRETE SIDEWALK (PER STR-3 ON SHEET 8)
- 13 CROSS GUTTER (PER STR-2 ON SHEET 8)
- 14 ADJUST CASTING
- 15 INSULATE WATER MAIN AT STORM SEWER CROSSING AS DIRECTED BY ENGINEER. MIN 4" x 4" x 8" RIGID FOAM INSULATION ABOVE WATER.



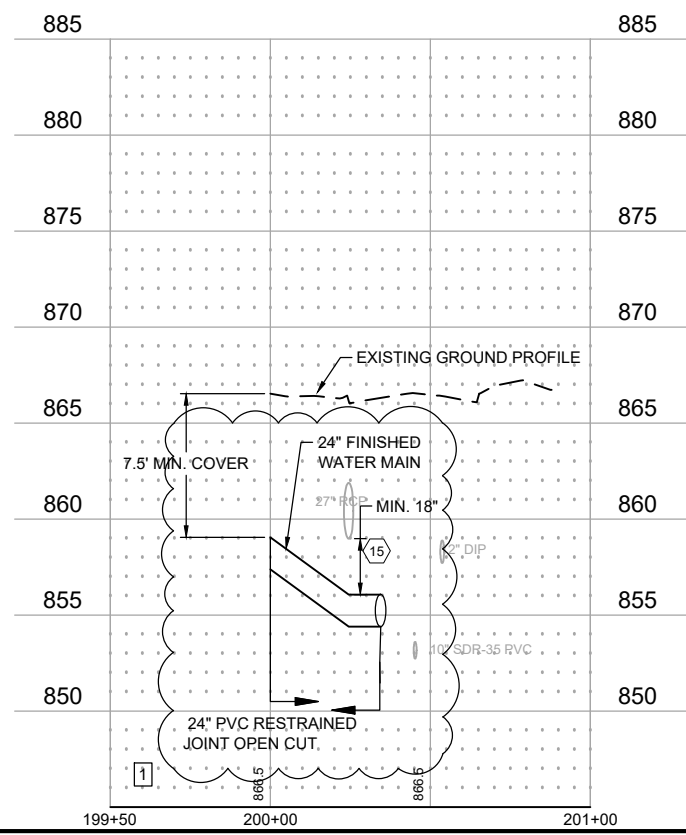
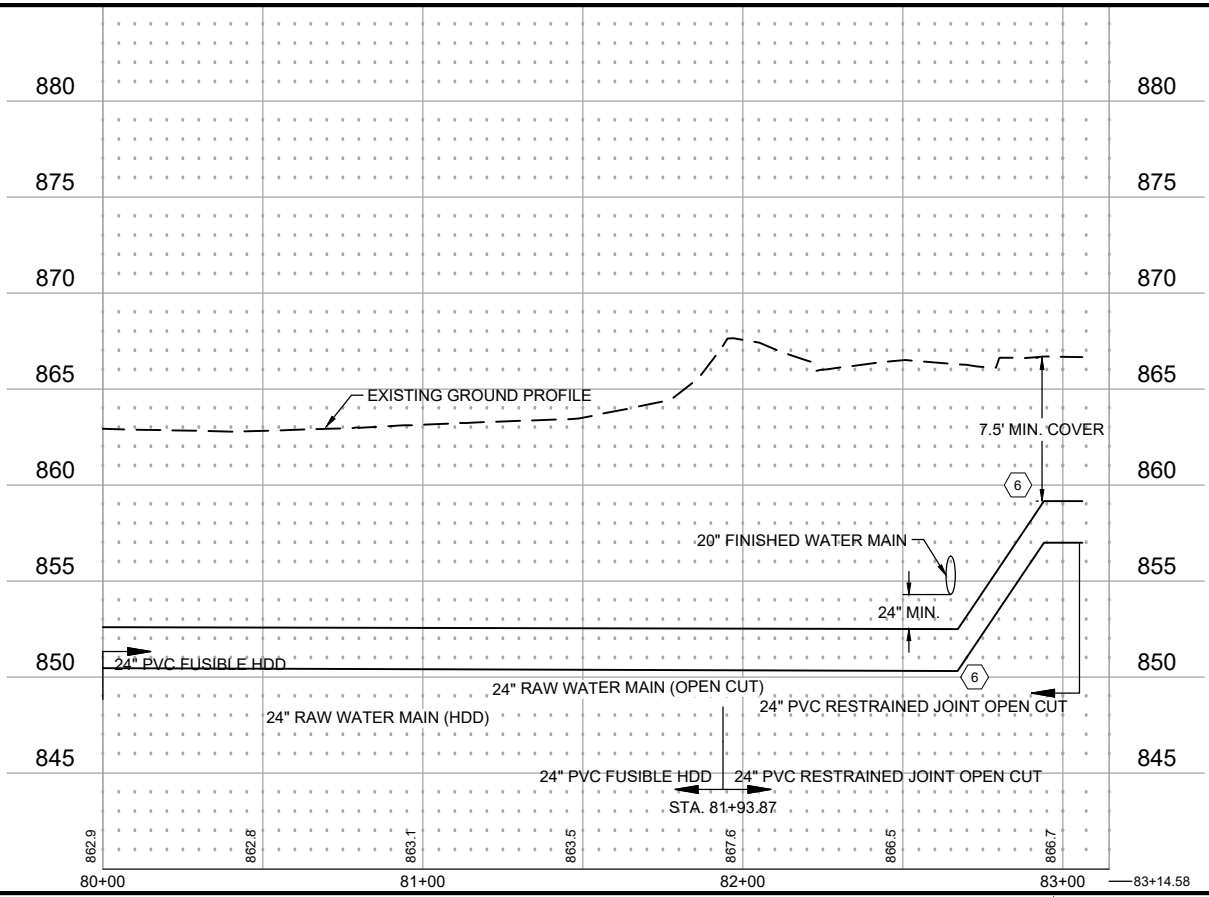
**FUTURE WTP**

**NOTES:**

- CONTRACTOR TO PROVIDE TRENCH BOXES AND OTHER MEANS TO PROTECT OBJECTS NOT MARKED FOR REMOVAL. DAMAGE TO OBJECTS NOT MARKED FOR REMOVAL SHALL BE REPAIRED OR REPLACED AT NO COST TO PROJECT OWNER.
- HYDRANT LEADS TO BE 7.5 FT DEEP TO TOP OF HYDRANT BRANCH. SEE WAT-1 ON SHEET 7.
- UTILITY LOCATIONS SHOWN ARE LEVEL D ACCURACY. CONTRACTOR SHALL VERIFY ACTUAL UTILITY LOCATIONS THROUGH GOPHER STATE ONE CALL.
- CONSTRUCTION LIMITS LINES SHOWN AT HDD DRILLING LOCATIONS MAY VARY, AS APPROVED BY ENGINEER.
- MAINTAIN A MINIMUM 7.5 FT VERTICAL COVER ON ALL RAW AND FINISHED WATER MAINS MAINTAIN A MINIMUM 18" VERTICAL SEPARATION BETWEEN NEW RAW AND FINISHED WATER MAIN AND SEWER AND STORM SEWER CROSSING. MAINTAIN A MINIMUM 10 FT HORIZONTAL SEPARATION BETWEEN RAW AND FINISHED WATER MAIN AND SEWER AND STORM SEWER.
- SEE PROJECT SPECIFICATIONS FOR SOIL BORING LOGS AND LOCATION MAP.
- MAINTAIN 15' MAXIMUM COVER ON ALL RAW AND FINISHED WATER MAIN. CONTRACTOR TO NOTIFY ENGINEER OF AVERAGE RUNNING DEPTH OF DRILLING MACHINE DURING CONSTRUCTION.
- CONTRACTOR TO SUBMIT DETAILED SCHEDULE MINIMUM 1 WEEK PRIOR TO BEGINNING CONSTRUCTION ACTIVITIES FOR COORDINATION WITH THE CITY OF RAMSEY UTILITIES DEPARTMENT. CONTACT UTILITIES SUPERINTENDENT JOHN NELSON AT 763.250.4592. CITY OF RAMSEY TO OPERATE VALVES AND HYDRANTS FOR CONTRACTOR.



**FUTURE WTP**



Save: 10/20/2023 12:46 PM adasen Plot: 10/20/2023 2:15 PM X:\P\T\RAMSEY\15978375-final-dsgn\51-drawings\10-Civil\cad\longsheet\RA15978375.dwg

Rev.#	Revision Issue Description	Date	Rev.#	Revision Issue Description	Date
1	ADDENDUM #1	10/23/2023			

I HEREBY CERTIFY THAT THIS PLAN 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 MN.  
 David E. Hutton  
 LICENSE NO. 19133  
 DATE 10-06-2023

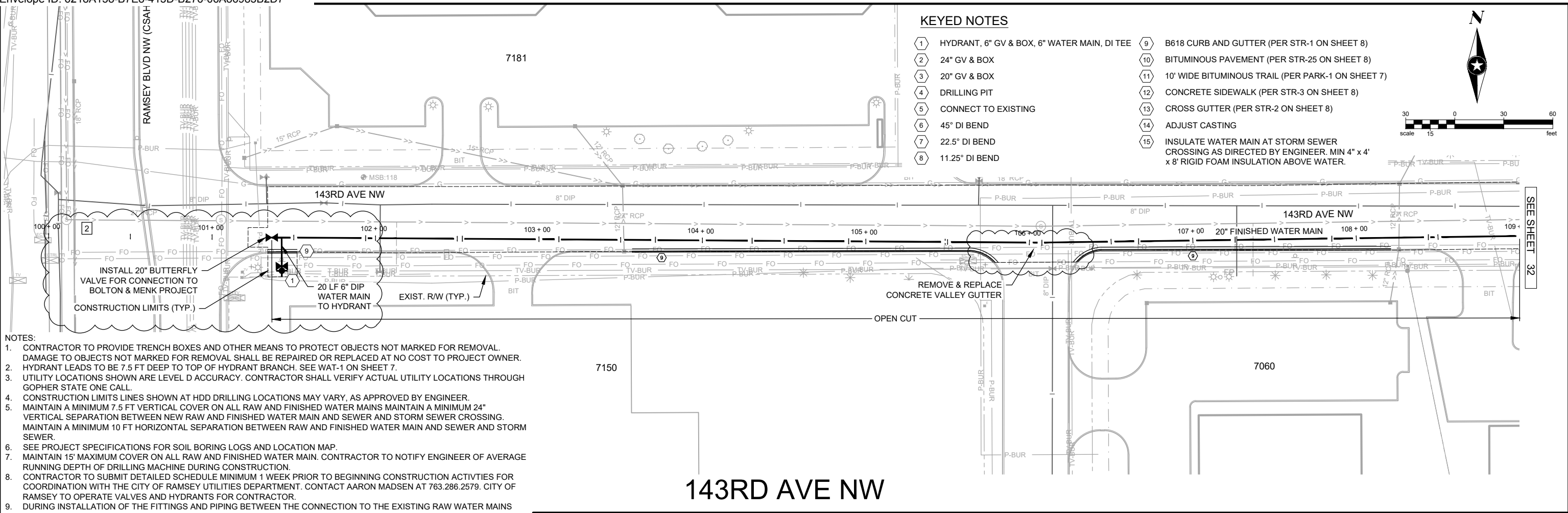
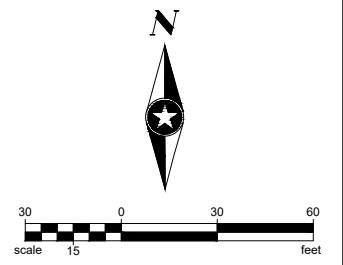
**WATER TREATMENT PLANT TRUNK WATER MAIN IMPROVEMENTS**  
 Ramsey, Minnesota

**UTILITY PLAN & PROFILE FUTURE WTP**



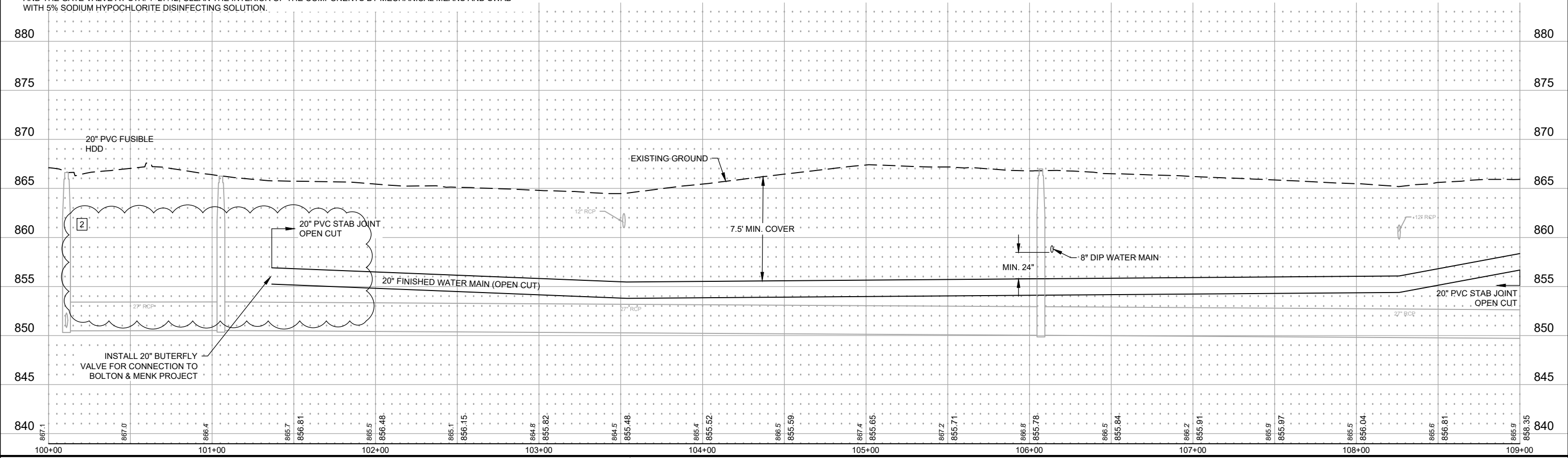
**KEYED NOTES**

- ① HYDRANT, 6" GV & BOX, 6" WATER MAIN, DI TEE
- ② 24" GV & BOX
- ③ 20" GV & BOX
- ④ DRILLING PIT
- ⑤ CONNECT TO EXISTING
- ⑥ 45° DI BEND
- ⑦ 22.5° DI BEND
- ⑧ 11.25° DI BEND
- ⑨ B618 CURB AND GUTTER (PER STR-1 ON SHEET 8)
- ⑩ BITUMINOUS PAVEMENT (PER STR-25 ON SHEET 8)
- ⑪ 10' WIDE BITUMINOUS TRAIL (PER PARK-1 ON SHEET 7)
- ⑫ CONCRETE SIDEWALK (PER STR-3 ON SHEET 8)
- ⑬ CROSS GUTTER (PER STR-2 ON SHEET 8)
- ⑭ ADJUST CASTING
- ⑮ INSULATE WATER MAIN AT STORM SEWER CROSSING AS DIRECTED BY ENGINEER. MIN 4" x 4" x 8' RIGID FOAM INSULATION ABOVE WATER.



- NOTES:**
1. CONTRACTOR TO PROVIDE TRENCH BOXES AND OTHER MEANS TO PROTECT OBJECTS NOT MARKED FOR REMOVAL. DAMAGE TO OBJECTS NOT MARKED FOR REMOVAL SHALL BE REPAIRED OR REPLACED AT NO COST TO PROJECT OWNER. HYDRANT LEADS TO BE 7.5 FT DEEP TO TOP OF HYDRANT BRANCH. SEE WAT-1 ON SHEET 7.
  2. UTILITY LOCATIONS SHOWN ARE LEVEL D ACCURACY. CONTRACTOR SHALL VERIFY ACTUAL UTILITY LOCATIONS THROUGH GOPHER STATE ONE CALL.
  3. CONSTRUCTION LIMITS LINES SHOWN AT HDD DRILLING LOCATIONS MAY VARY, AS APPROVED BY ENGINEER.
  4. MAINTAIN A MINIMUM 7.5 FT VERTICAL COVER ON ALL RAW AND FINISHED WATER MAINS MAINTAIN A MINIMUM 24" VERTICAL SEPARATION BETWEEN NEW RAW AND FINISHED WATER MAIN AND SEWER AND STORM SEWER CROSSING. MAINTAIN A MINIMUM 10 FT HORIZONTAL SEPARATION BETWEEN RAW AND FINISHED WATER MAIN AND SEWER AND STORM SEWER.
  5. SEE PROJECT SPECIFICATIONS FOR SOIL BORING LOGS AND LOCATION MAP.
  6. MAINTAIN 15' MAXIMUM COVER ON ALL RAW AND FINISHED WATER MAIN. CONTRACTOR TO NOTIFY ENGINEER OF AVERAGE RUNNING DEPTH OF DRILLING MACHINE DURING CONSTRUCTION.
  7. CONTRACTOR TO SUBMIT DETAILED SCHEDULE MINIMUM 1 WEEK PRIOR TO BEGINNING CONSTRUCTION ACTIVITIES FOR COORDINATION WITH THE CITY OF RAMSEY UTILITIES DEPARTMENT. CONTACT AARON MADSEN AT 763.286.2579. CITY OF RAMSEY TO OPERATE VALVES AND HYDRANTS FOR CONTRACTOR.
  8. DURING INSTALLATION OF THE FITTINGS AND PIPING BETWEEN THE CONNECTION TO THE EXISTING RAW WATER MAINS AND THE GATE VALVE AT STA. 1+27.42, CLEAN THE INTERIOR OF THE COMPONENTS BY MECHANICAL MEANS AND SWAB WITH 5% SODIUM HYPOCHLORITE DISINFECTING SOLUTION.

**143RD AVE NW**



SEH Project	RAMSY174498	Rev. #	1	Revision Issue Description	Date	Rev. #	ADDENDUM #1	Date
Drawn By	JRB, SRP		2	CHANGE ORDER #1	10/23/2023			03/08/2024
Designed By	KLK							
Checked By	CES							

**SEH**

I HEREBY CERTIFY THAT THIS PLAN 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 MN.

*David E. Hutton*

DATE 10-06-2023      David E. Hutton  
LICENSE NO. 19133

**WATER TREATMENT PLANT**

**TRUNK WATER MAIN IMPROVEMENTS**

Ramsey, Minnesota

**UTILITY PLAN AND PROFILE**

**143RD AVE NW**

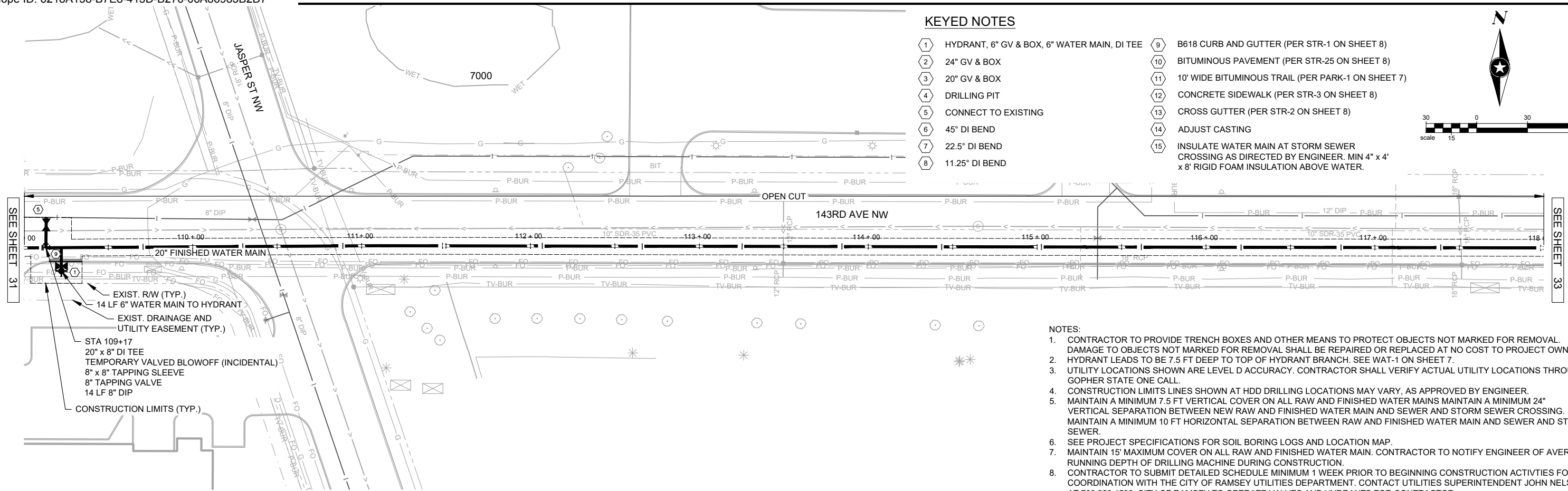
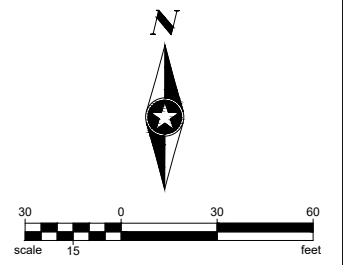
**31**

of 58

Save: 3/7/2024 3:46 PM aolisen Plot: 3/7/2024 3:48 PM X:\PT\RAMSY\15978315-final-dsgn\51-drawings\10-Civil\cad\dwg\sheet\RA15978317.dwg

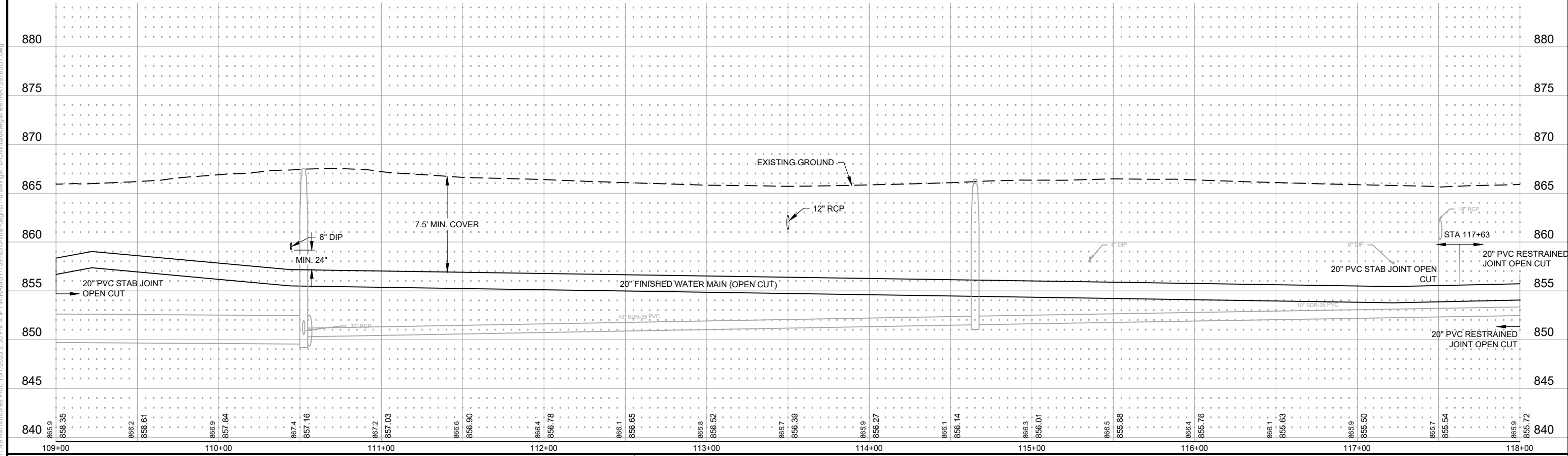
**KEYED NOTES**

- ① HYDRANT, 6" GV & BOX, 6" WATER MAIN, DI TEE
- ② 24" GV & BOX
- ③ 20" GV & BOX
- ④ DRILLING PIT
- ⑤ CONNECT TO EXISTING
- ⑥ 45° DI BEND
- ⑦ 22.5° DI BEND
- ⑧ 11.25° DI BEND
- ⑨ B618 CURB AND GUTTER (PER STR-1 ON SHEET 8)
- ⑩ BITUMINOUS PAVEMENT (PER STR-25 ON SHEET 8)
- ⑪ 10' WIDE BITUMINOUS TRAIL (PER PARK-1 ON SHEET 7)
- ⑫ CONCRETE SIDEWALK (PER STR-3 ON SHEET 8)
- ⑬ CROSS GUTTER (PER STR-2 ON SHEET 8)
- ⑭ ADJUST CASTING
- ⑮ INSULATE WATER MAIN AT STORM SEWER CROSSING AS DIRECTED BY ENGINEER. MIN 4" x 4" x 8' RIGID FOAM INSULATION ABOVE WATER.



**143RD AVE NW**

- NOTES:**
1. CONTRACTOR TO PROVIDE TRENCH BOXES AND OTHER MEANS TO PROTECT OBJECTS NOT MARKED FOR REMOVAL. DAMAGE TO OBJECTS NOT MARKED FOR REMOVAL SHALL BE REPAIRED OR REPLACED AT NO COST TO PROJECT OWNER.
  2. HYDRANT LEADS TO BE 7.5 FT DEEP TO TOP OF HYDRANT BRANCH. SEE WAT-1 ON SHEET 7.
  3. UTILITY LOCATIONS SHOWN ARE LEVEL D ACCURACY. CONTRACTOR SHALL VERIFY ACTUAL UTILITY LOCATIONS THROUGH GOPHER STATE ONE CALL.
  4. CONSTRUCTION LIMITS LINES SHOWN AT HDD DRILLING LOCATIONS MAY VARY, AS APPROVED BY ENGINEER.
  5. MAINTAIN A MINIMUM 7.5 FT VERTICAL COVER ON ALL RAW AND FINISHED WATER MAINS MAINTAIN A MINIMUM 24" VERTICAL SEPARATION BETWEEN NEW RAW AND FINISHED WATER MAIN AND SEWER AND STORM SEWER CROSSING. MAINTAIN A MINIMUM 10 FT HORIZONTAL SEPARATION BETWEEN RAW AND FINISHED WATER MAIN AND SEWER AND STORM SEWER.
  6. SEE PROJECT SPECIFICATIONS FOR SOIL BORING LOGS AND LOCATION MAP.
  7. MAINTAIN 15' MAXIMUM COVER ON ALL RAW AND FINISHED WATER MAIN. CONTRACTOR TO NOTIFY ENGINEER OF AVERAGE RUNNING DEPTH OF DRILLING MACHINE DURING CONSTRUCTION.
  8. CONTRACTOR TO SUBMIT DETAILED SCHEDULE MINIMUM 1 WEEK PRIOR TO BEGINNING CONSTRUCTION ACTIVITIES FOR COORDINATION WITH THE CITY OF RAMSEY UTILITIES DEPARTMENT. CONTACT UTILITIES SUPERINTENDENT JOHN NELSON AT 763.250.4592. CITY OF RAMSEY TO OPERATE VALVES AND HYDRANTS FOR CONTRACTOR.
  9. DURING INSTALLATION OF THE FITTINGS AND PIPING BETWEEN THE CONNECTION TO THE EXISTING RAW WATER MAINS AND THE GATE VALVE AT STA. +27.42, CLEAN THE INTERIOR OF THE COMPONENTS BY MECHANICAL MEANS AND SWAB WITH 5% SODIUM HYPOCHLORITE DISINFECTING SOLUTION.



SEH Project	RAMSY174498	Rev.#	Revision Issue Description	Date	Rev.#	Revision Issue Description	Date
Drawn By	JRB, SRP						
Designed By	KLK						
Checked By	CES						

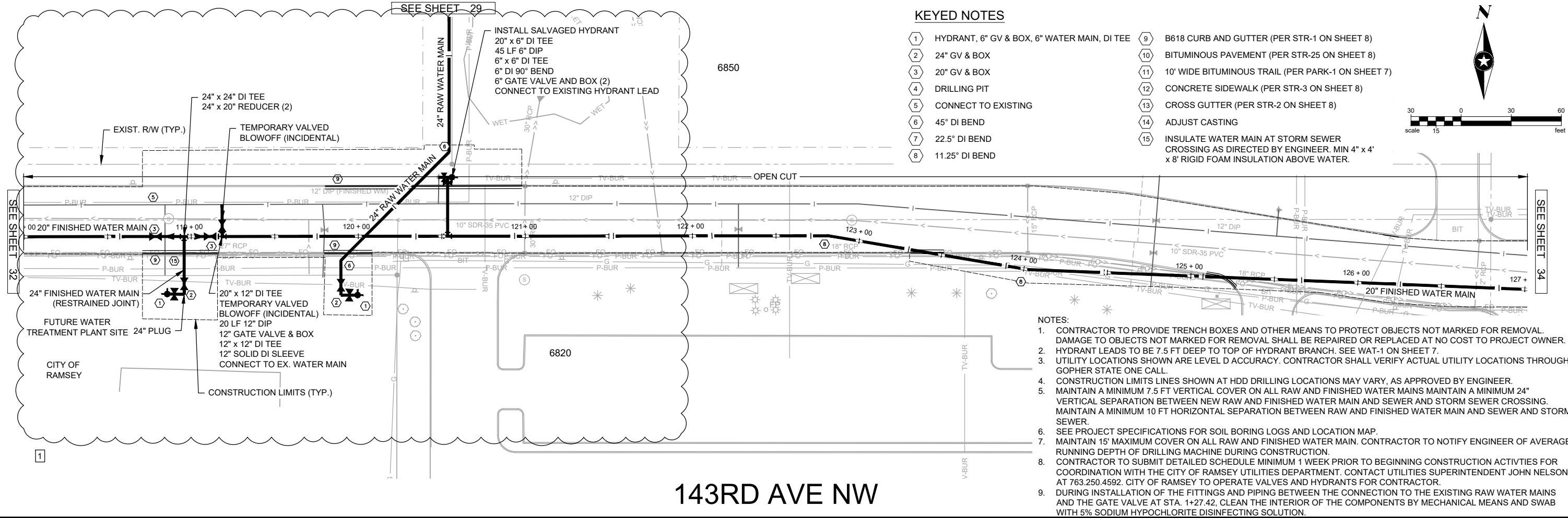
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MN.

*David E. Hutton*  
 David E. Hutton  
 LICENSE NO. 19133  
 DATE 10-06-2023

**WATER TREATMENT PLANT**  
**TRUNK WATER MAIN IMPROVEMENTS**  
 Ramsey, Minnesota

**UTILITY PLAN AND PROFILE**  
**143RD AVE NW**

32 of 58



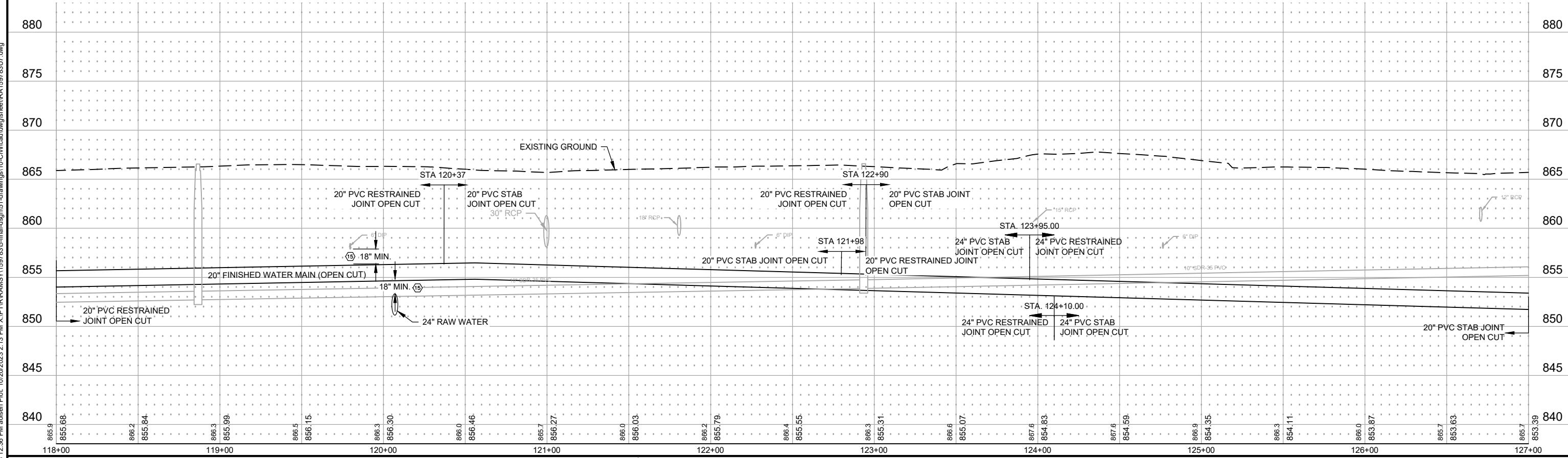
**KEYED NOTES**

- ① HYDRANT, 6" GV & BOX, 6" WATER MAIN, DI TEE
- ② 24" GV & BOX
- ③ 20" GV & BOX
- ④ DRILLING PIT
- ⑤ CONNECT TO EXISTING
- ⑥ 45° DI BEND
- ⑦ 22.5° DI BEND
- ⑧ 11.25° DI BEND
- ⑨ B618 CURB AND GUTTER (PER STR-1 ON SHEET 8)
- ⑩ BITUMINOUS PAVEMENT (PER STR-25 ON SHEET 8)
- ⑪ 10' WIDE BITUMINOUS TRAIL (PER PARK-1 ON SHEET 7)
- ⑫ CONCRETE SIDEWALK (PER STR-3 ON SHEET 8)
- ⑬ CROSS GUTTER (PER STR-2 ON SHEET 8)
- ⑭ ADJUST CASTING
- ⑮ INSULATE WATER MAIN AT STORM SEWER CROSSING AS DIRECTED BY ENGINEER. MIN 4" x 4" x 8' RIGID FOAM INSULATION ABOVE WATER.

**NOTES:**

1. CONTRACTOR TO PROVIDE TRENCH BOXES AND OTHER MEANS TO PROTECT OBJECTS NOT MARKED FOR REMOVAL. DAMAGE TO OBJECTS NOT MARKED FOR REMOVAL SHALL BE REPAIRED OR REPLACED AT NO COST TO PROJECT OWNER.
2. HYDRANT LEADS TO BE 7.5 FT DEEP TO TOP OF HYDRANT BRANCH. SEE WAT-1 ON SHEET 7.
3. UTILITY LOCATIONS SHOWN ARE LEVEL D ACCURACY. CONTRACTOR SHALL VERIFY ACTUAL UTILITY LOCATIONS THROUGH GOPHER STATE ONE CALL.
4. CONSTRUCTION LIMITS LINES SHOWN AT HDD DRILLING LOCATIONS MAY VARY, AS APPROVED BY ENGINEER.
5. MAINTAIN A MINIMUM 7.5 FT VERTICAL COVER ON ALL RAW AND FINISHED WATER MAINS. MAINTAIN A MINIMUM 24" VERTICAL SEPARATION BETWEEN NEW RAW AND FINISHED WATER MAIN AND SEWER AND STORM SEWER CROSSING. MAINTAIN A MINIMUM 10 FT HORIZONTAL SEPARATION BETWEEN RAW AND FINISHED WATER MAIN AND SEWER AND STORM SEWER.
6. SEE PROJECT SPECIFICATIONS FOR SOIL BORING LOGS AND LOCATION MAP.
7. MAINTAIN 15' MAXIMUM COVER ON ALL RAW AND FINISHED WATER MAIN. CONTRACTOR TO NOTIFY ENGINEER OF AVERAGE RUNNING DEPTH OF DRILLING MACHINE DURING CONSTRUCTION.
8. CONTRACTOR TO SUBMIT DETAILED SCHEDULE MINIMUM 1 WEEK PRIOR TO BEGINNING CONSTRUCTION ACTIVITIES FOR COORDINATION WITH THE CITY OF RAMSEY UTILITIES DEPARTMENT. CONTACT UTILITIES SUPERINTENDENT JOHN NELSON AT 763.250.4592. CITY OF RAMSEY TO OPERATE VALVES AND HYDRANTS FOR CONTRACTOR.
9. DURING INSTALLATION OF THE FITTINGS AND PIPING BETWEEN THE CONNECTION TO THE EXISTING RAW WATER MAINS AND THE GATE VALVE AT STA. 1+27.42, CLEAN THE INTERIOR OF THE COMPONENTS BY MECHANICAL MEANS AND SWAB WITH 5% SODIUM HYPOCHLORITE DISINFECTING SOLUTION.

**143RD AVE NW**



Save: 10/20/2023 12:36 PM adasen Plot: 10/20/2023 2:13 PM X:\P\T\RAMSY\1597835-final-dsgn\51-drawings\10-Civil\cad\logs\sheet\RA159783UT.dwg

SEH Project	RAMSY174498	Rev. #	1	Revision Issue Description	ADDENDUM #1	Date	10/23/2023
Drawn By	JRB, SRP	Checked By	CES				
Designed By	KLK						

**SEH**

I HEREBY CERTIFY THAT THIS PLAN 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 MN.

DATE 10-06-2023

David E. Hutton

LICENSE NO. 19133

**WATER TREATMENT PLANT**

**TRUNK WATER MAIN IMPROVEMENTS**

Ramsey, Minnesota

**UTILITY PLAN AND PROFILE**

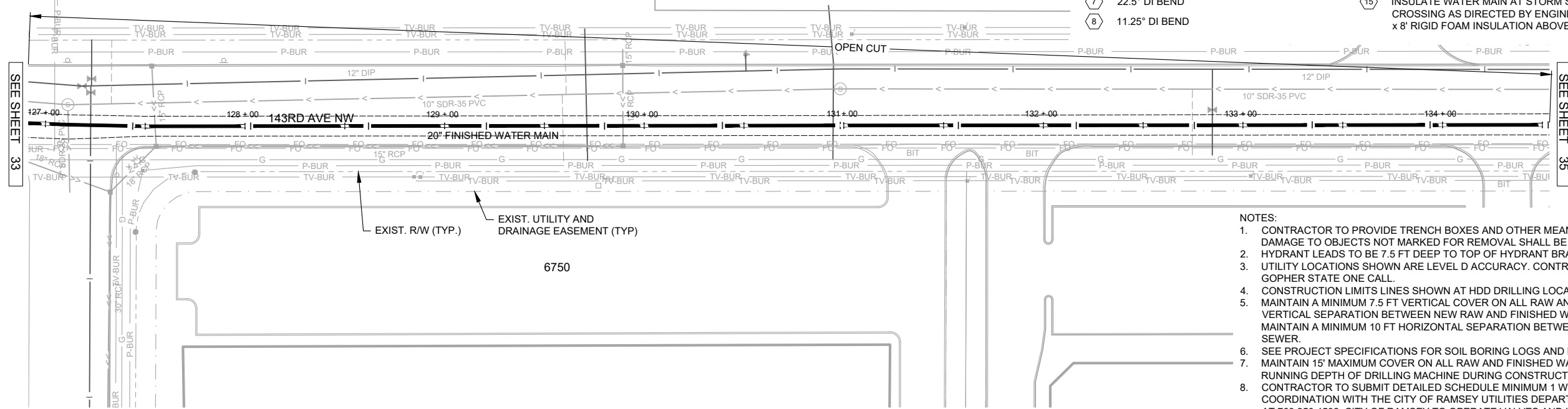
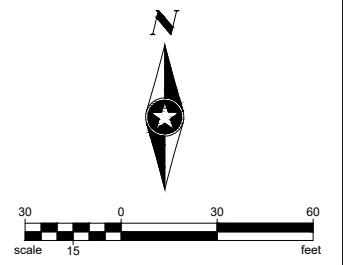
**143RD AVE NW**

**33**

of 58

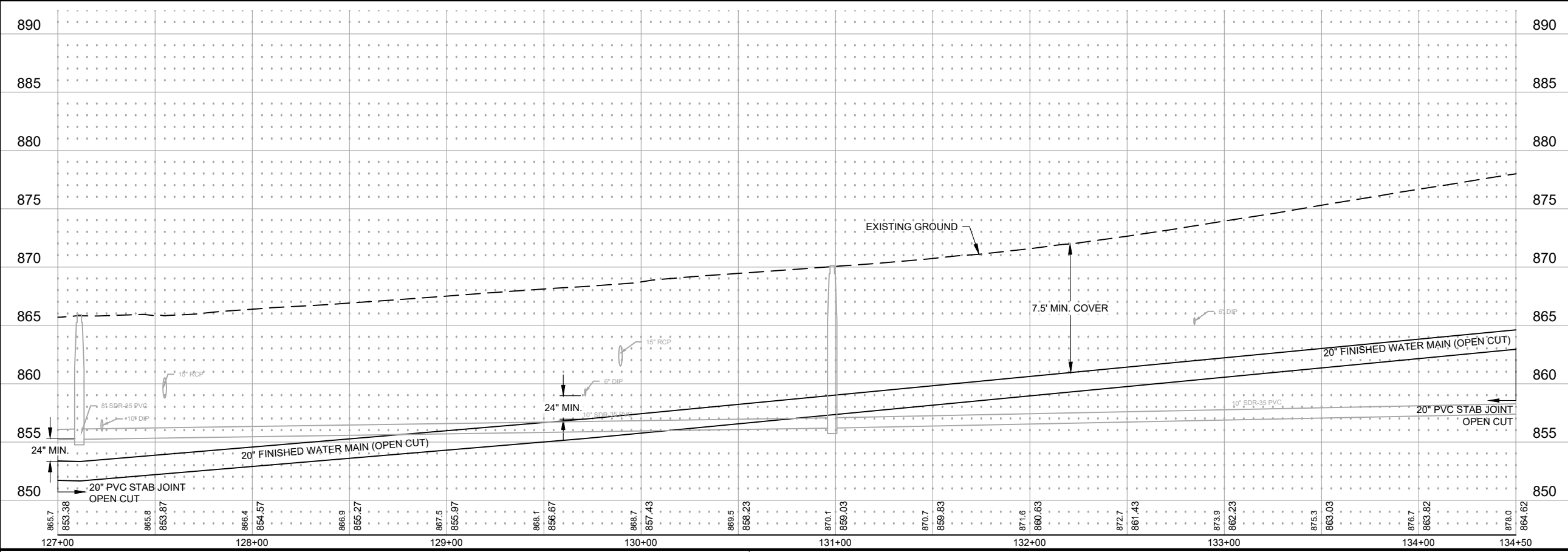
**KEYED NOTES**

- ① HYDRANT, 6" GV & BOX, 6" WATER MAIN, DI TEE
- ② 24" GV & BOX
- ③ 20" GV & BOX
- ④ DRILLING PIT
- ⑤ CONNECT TO EXISTING
- ⑥ 45° DI BEND
- ⑦ 22.5° DI BEND
- ⑧ 11.25° DI BEND
- ⑨ B618 CURB AND GUTTER (PER STR-1 ON SHEET 8)
- ⑩ BITUMINOUS PAVEMENT (PER STR-25 ON SHEET 8)
- ⑪ 10' WIDE BITUMINOUS TRAIL (PER PARK-1 ON SHEET 7)
- ⑫ CONCRETE SIDEWALK (PER STR-3 ON SHEET 8)
- ⑬ CROSS GUTTER (PER STR-2 ON SHEET 8)
- ⑭ ADJUST CASTING
- ⑮ INSULATE WATER MAIN AT STORM SEWER CROSSING AS DIRECTED BY ENGINEER. MIN 4" x 4" x 8' RIGID FOAM INSULATION ABOVE WATER.



- NOTES:**
1. CONTRACTOR TO PROVIDE TRENCH BOXES AND OTHER MEANS TO PROTECT OBJECTS NOT MARKED FOR REMOVAL. DAMAGE TO OBJECTS NOT MARKED FOR REMOVAL SHALL BE REPAIRED OR REPLACED AT NO COST TO PROJECT OWNER.
  2. HYDRANT LEADS TO BE 7.5 FT DEEP TO TOP OF HYDRANT BRANCH. SEE WAT-1 ON SHEET 7.
  3. UTILITY LOCATIONS SHOWN ARE LEVEL D ACCURACY. CONTRACTOR SHALL VERIFY ACTUAL UTILITY LOCATIONS THROUGH GOPHER STATE ONE CALL.
  4. CONSTRUCTION LIMITS LINES SHOWN AT HDD DRILLING LOCATIONS MAY VARY, AS APPROVED BY ENGINEER.
  5. MAINTAIN A MINIMUM 7.5 FT VERTICAL COVER ON ALL RAW AND FINISHED WATER MAINS MAINTAIN A MINIMUM 24" VERTICAL SEPARATION BETWEEN NEW RAW AND FINISHED WATER MAIN AND SEWER AND STORM SEWER CROSSING. MAINTAIN A MINIMUM 10 FT HORIZONTAL SEPARATION BETWEEN RAW AND FINISHED WATER MAIN AND SEWER AND STORM SEWER.
  6. SEE PROJECT SPECIFICATIONS FOR SOIL BORING LOGS AND LOCATION MAP.
  7. MAINTAIN 15' MAXIMUM COVER ON ALL RAW AND FINISHED WATER MAIN. CONTRACTOR TO NOTIFY ENGINEER OF AVERAGE RUNNING DEPTH OF DRILLING MACHINE DURING CONSTRUCTION.
  8. CONTRACTOR TO SUBMIT DETAILED SCHEDULE MINIMUM 1 WEEK PRIOR TO BEGINNING CONSTRUCTION ACTIVITIES FOR COORDINATION WITH THE CITY OF RAMSEY UTILITIES DEPARTMENT. CONTACT UTILITIES SUPERINTENDENT JOHN NELSON AT 763.250.4592. CITY OF RAMSEY TO OPERATE VALVES AND HYDRANTS FOR CONTRACTOR.
  9. DURING INSTALLATION OF THE FITTINGS AND PIPING BETWEEN THE CONNECTION TO THE EXISTING RAW WATER MAINS AND THE GATE VALVE AT STA. 1+27.42, CLEAN THE INTERIOR OF THE COMPONENTS BY MECHANICAL MEANS AND SWAB WITH 5% SODIUM HYPOCHLORITE DISINFECTING SOLUTION.

**143RD AVE NW**



Save: 10/6/2023 11:49 AM; Plot: 10/7/2023 2:36 PM; X:\P\TR\RAMSY\159783\5-final-dwg\51-drawings\10-Civil\cad\dwg\sheet\RA159783U7.dwg

SEH Project	RAMSY174498	Rev.#	Revision Issue Description	Date	Rev.#	Revision Issue Description	Date
Drawn By	JRB, SRP						
Designed By	KLK						
Checked By	CES						

I HEREBY CERTIFY THAT THIS PLAN 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 MN.

David E. Hutton  
LICENSE NO. 19133

DATE 10-06-2023

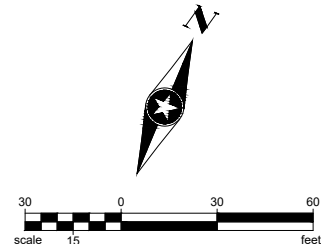
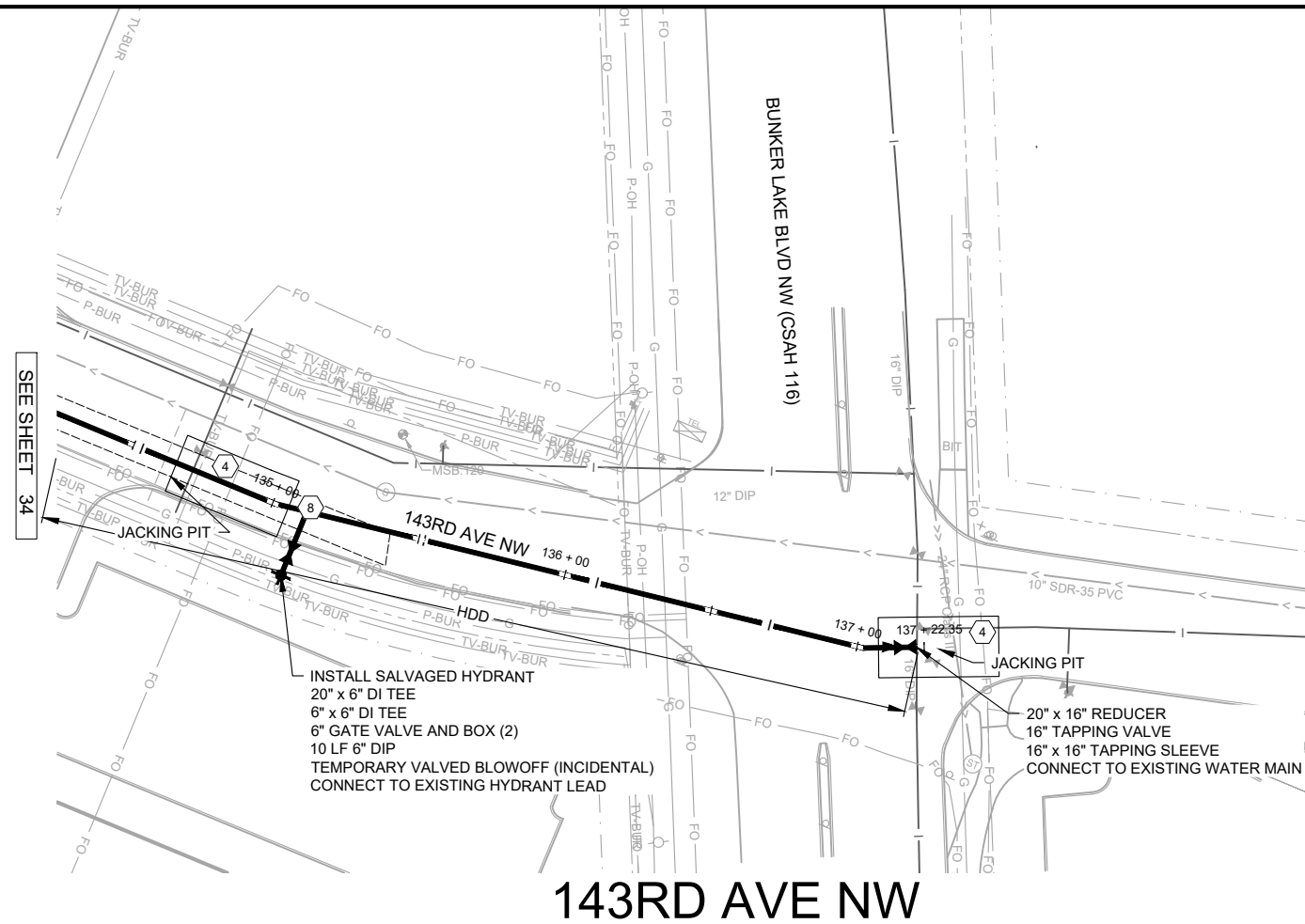
**WATER TREATMENT PLANT  
TRUNK WATER MAIN IMPROVEMENTS**  
Ramsey, Minnesota

**KEYED NOTES**

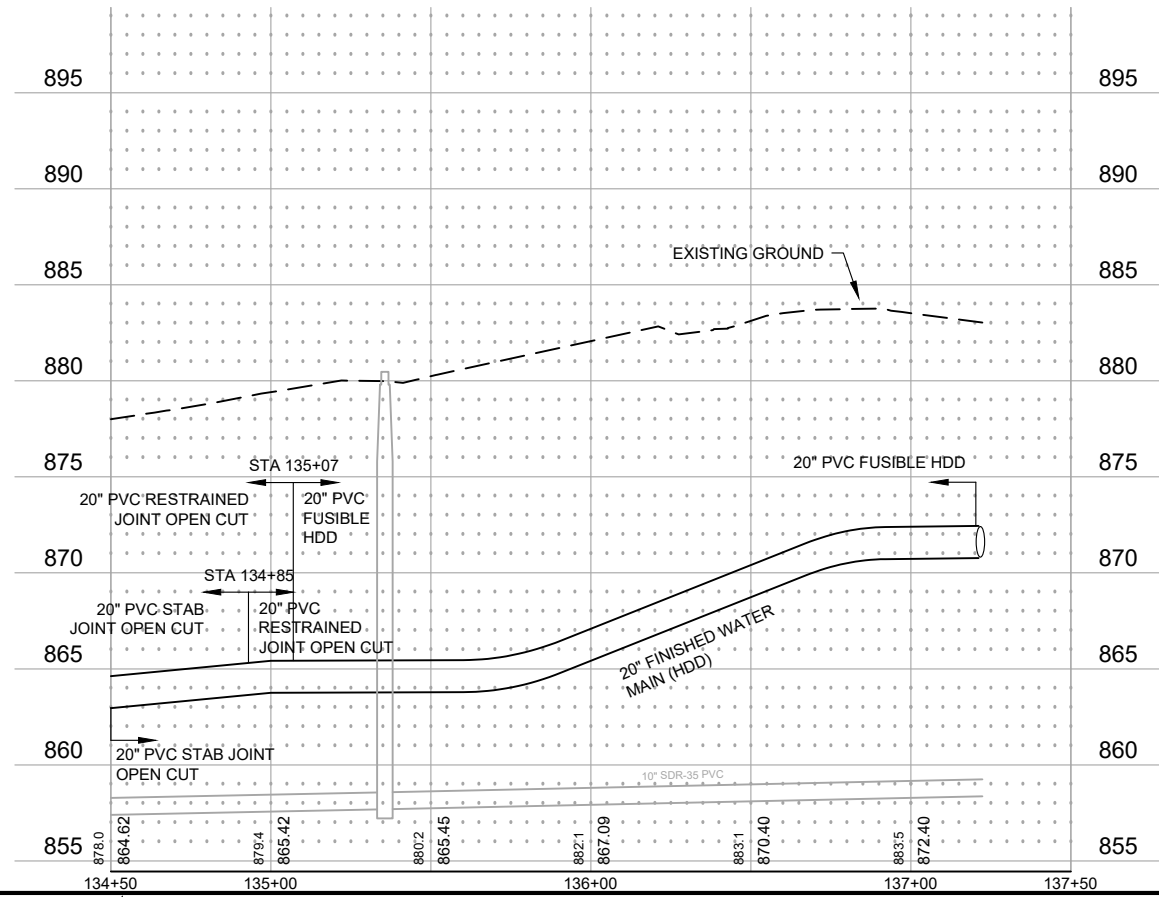
- |                                               |                                                                                                                             |
|-----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| 1 HYDRANT, 6" GV & BOX, 6" WATER MAIN, DI TEE | 9 B618 CURB AND GUTTER (PER STR-1 ON SHEET 8)                                                                               |
| 2 24" GV & BOX                                | 10 BITUMINOUS PAVEMENT (PER STR-25 ON SHEET 8)                                                                              |
| 3 20" GV & BOX                                | 11 10' WIDE BITUMINOUS TRAIL (PER PARK-1 ON SHEET 7)                                                                        |
| 4 DRILLING PIT                                | 12 CONCRETE SIDEWALK (PER STR-3 ON SHEET 8)                                                                                 |
| 5 CONNECT TO EXISTING                         | 13 CROSS GUTTER (PER STR-2 ON SHEET 8)                                                                                      |
| 6 45° DI BEND                                 | 14 ADJUST CASTING                                                                                                           |
| 7 22.5° DI BEND                               | 15 INSULATE WATER MAIN AT STORM SEWER CROSSING AS DIRECTED BY ENGINEER. MIN 4" x 4" x 8' RIGID FOAM INSULATION ABOVE WATER. |
| 8 11.25° DI BEND                              |                                                                                                                             |

**NOTES:**

- CONTRACTOR TO PROVIDE TRENCH BOXES AND OTHER MEANS TO PROTECT OBJECTS NOT MARKED FOR REMOVAL. DAMAGE TO OBJECTS NOT MARKED FOR REMOVAL SHALL BE REPAIRED OR REPLACED AT NO COST TO PROJECT OWNER.
- HYDRANT LEADS TO BE 7.5 FT DEEP TO TOP OF HYDRANT BRANCH. SEE WAT-1 ON SHEET 7.
- UTILITY LOCATIONS SHOWN ARE LEVEL D ACCURACY. CONTRACTOR SHALL VERIFY ACTUAL UTILITY LOCATIONS THROUGH GOPHER STATE ONE CALL.
- CONSTRUCTION LIMITS LINES SHOWN AT HDD DRILLING LOCATIONS MAY VARY, AS APPROVED BY ENGINEER.
- MAINTAIN A MINIMUM 7.5 FT VERTICAL COVER ON ALL RAW AND FINISHED WATER MAINS MAINTAIN A MINIMUM 24" VERTICAL SEPARATION BETWEEN NEW RAW AND FINISHED WATER MAIN AND SEWER AND STORM SEWER CROSSING. MAINTAIN A MINIMUM 10 FT HORIZONTAL SEPARATION BETWEEN RAW AND FINISHED WATER MAIN AND SEWER AND STORM SEWER.
- SEE PROJECT SPECIFICATIONS FOR SOIL BORING LOGS AND LOCATION MAP.
- MAINTAIN 15' MAXIMUM COVER ON ALL RAW AND FINISHED WATER MAIN. CONTRACTOR TO NOTIFY ENGINEER OF AVERAGE RUNNING DEPTH OF DRILLING MACHINE DURING CONSTRUCTION.
- CONTRACTOR TO SUBMIT DETAILED SCHEDULE MINIMUM 1 WEEK PRIOR TO BEGINNING CONSTRUCTION ACTIVITIES FOR COORDINATION WITH THE CITY OF RAMSEY UTILITIES DEPARTMENT. CONTACT UTILITIES SUPERINTENDENT JOHN NELSON AT 763.250.4592. CITY OF RAMSEY TO OPERATE VALVES AND HYDRANTS FOR CONTRACTOR.
- DURING INSTALLATION OF THE FITTINGS AND PIPING BETWEEN THE CONNECTION TO THE EXISTING RAW WATER MAINS AND THE GATE VALVE AT STA. 1+27.42, CLEAN THE INTERIOR OF THE COMPONENTS BY MECHANICAL MEANS AND SWAB WITH 5% SODIUM HYPOCHLORITE DISINFECTING SOLUTION.



**143RD AVE NW**



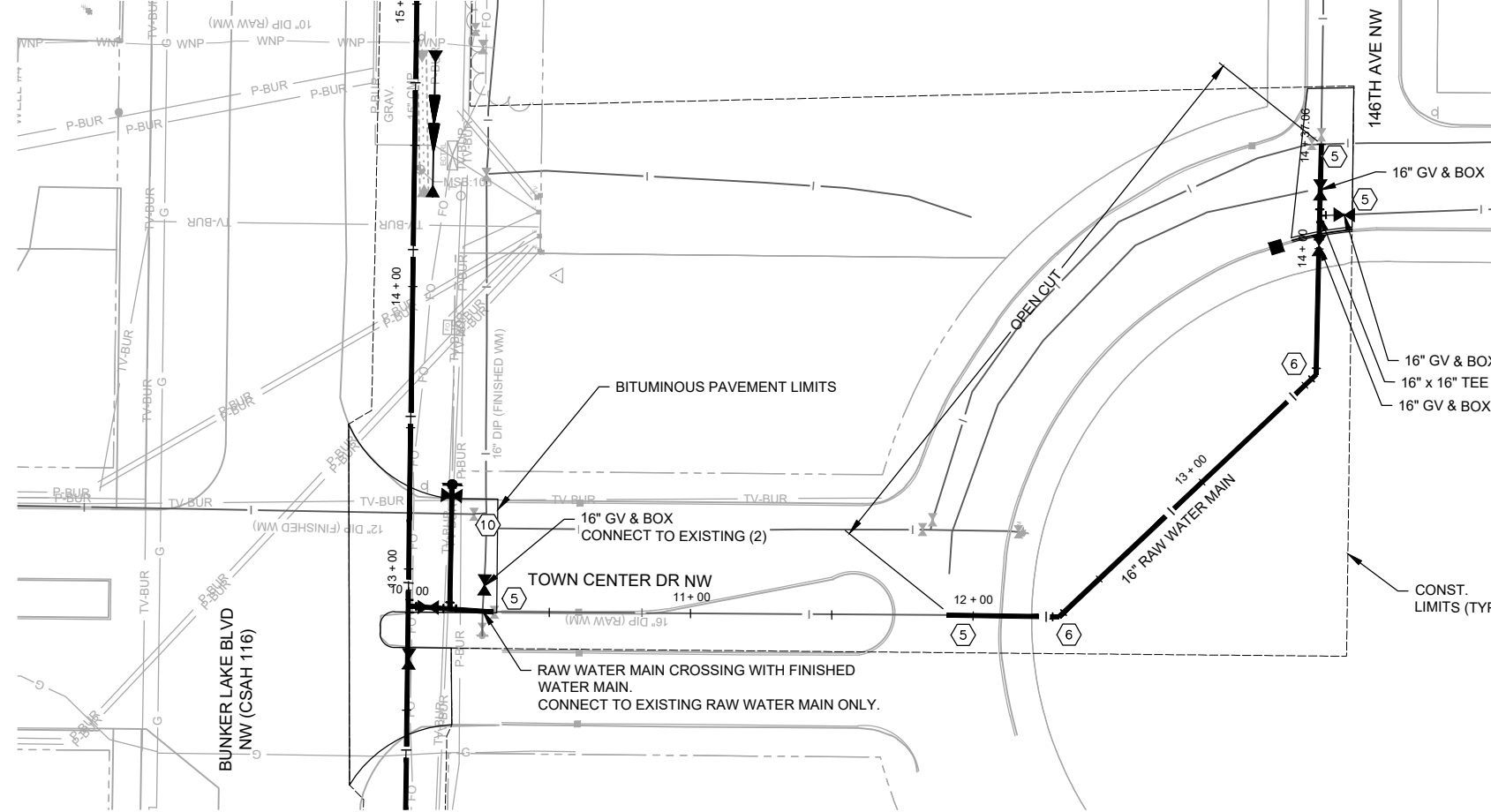
Save: 10/6/2023 11:49 AM; hknowles Plot: 10/7/2023 2:37 PM; X:\P\TR\RAMSY\159783\5-final-dsgm\51-drawings\10-civil\card\dwg\sheet\RA159783U7.dwg

SEH Project	RAMSY174498	Rev.#	Revision Issue Description	Date	Rev.#	Revision Issue Description	Date
Drawn By	JRB, SRP	.			.		
Designed By	KLK	.			.		
Checked By	CES	.			.		

I HEREBY CERTIFY THAT THIS PLAN 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 MN.  
  
 David E. Hutton  
 LICENSE NO. 19133  
 DATE 10-06-2023

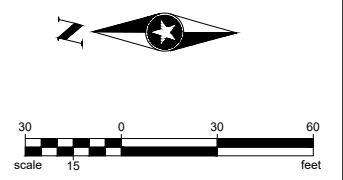
**WATER TREATMENT PLANT**  
**TRUNK WATER MAIN IMPROVEMENTS**  
 Ramsey, Minnesota

**UTILITY PLAN AND PROFILE**  
**143RD AVE NW**



**KEYED NOTES**

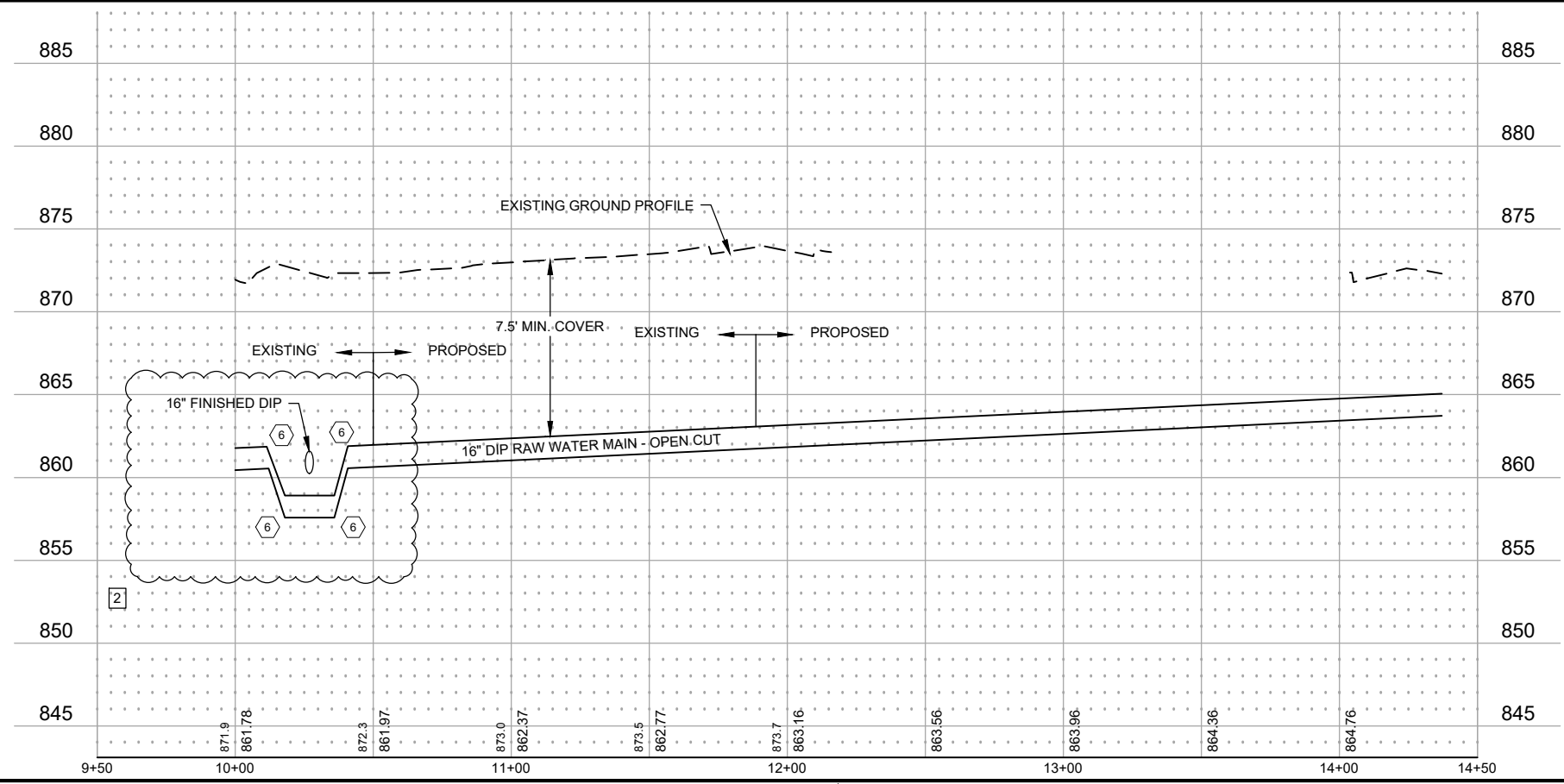
- ① HYDRANT, 6" GV & BOX, 6" WATER MAIN, DI TEE
- ② 24" GV & BOX
- ③ 20" GV & BOX
- ④ DRILLING PIT
- ⑤ CONNECT TO EXISTING
- ⑥ 45° DI BEND
- ⑦ 22.5° DI BEND
- ⑧ 11.25° DI BEND
- ⑨ B618 CURB AND GUTTER (PER STR-1 ON SHEET 8)
- ⑩ BITUMINOUS PAVEMENT (PER STR-25 ON SHEET 8)
- ⑪ 10' WIDE BITUMINOUS TRAIL (PER PARK-1 ON SHEET 7)
- ⑫ CONCRETE SIDEWALK (PER STR-3 ON SHEET 8)
- ⑬ CROSS GUTTER (PER STR-2 ON SHEET 8)
- ⑭ ADJUST CASTING
- ⑮ INSULATE WATER MAIN AT STORM SEWER CROSSING AS DIRECTED BY ENGINEER. MIN 4" x 4" x 8' RIGID FOAM INSULATION ABOVE WATER.



**NOTES:**

1. CONTRACTOR TO PROVIDE TRENCH BOXES AND OTHER MEANS TO PROTECT OBJECTS NOT MARKED FOR REMOVAL. DAMAGE TO OBJECTS NOT MARKED FOR REMOVAL SHALL BE REPAIRED OR REPLACED AT NO COST TO PROJECT OWNER.
2. HYDRANT LEADS TO BE 7.5 FT DEEP TO TOP OF HYDRANT BRANCH. SEE WAT-1 ON SHEET 7.
3. UTILITY LOCATIONS SHOWN ARE LEVEL D ACCURACY. CONTRACTOR SHALL VERIFY ACTUAL UTILITY LOCATIONS THROUGH GOPHER STATE ONE CALL.
4. CONSTRUCTION LIMITS LINES SHOWN AT HDD DRILLING LOCATIONS MAY VARY, AS APPROVED BY ENGINEER.
5. MAINTAIN A MINIMUM 7.5 FT VERTICAL COVER ON ALL RAW AND FINISHED WATER MAINS MAINTAIN A MINIMUM 24" VERTICAL SEPARATION BETWEEN NEW RAW AND FINISHED WATER MAIN AND SEWER AND STORM SEWER CROSSING. MAINTAIN A MINIMUM 10 FT HORIZONTAL SEPARATION BETWEEN RAW AND FINISHED WATER MAIN AND SEWER AND STORM SEWER.
6. SEE PROJECT SPECIFICATIONS FOR SOIL BORING LOGS AND LOCATION MAP.
7. MAINTAIN 15' MAXIMUM COVER ON ALL RAW AND FINISHED WATER MAIN. CONTRACTOR TO NOTIFY ENGINEER OF AVERAGE RUNNING DEPTH OF DRILLING MACHINE DURING CONSTRUCTION.
8. CONTRACTOR TO SUBMIT DETAILED SCHEDULE MINIMUM 1 WEEK PRIOR TO BEGINNING CONSTRUCTION ACTIVITIES FOR COORDINATION WITH THE CITY OF RAMSEY UTILITIES DEPARTMENT. CONTACT UTILITIES SUPERINTENDENT JOHN NELSON AT 763.250.4592. CITY OF RAMSEY TO OPERATE VALVES AND HYDRANTS FOR CONTRACTOR.
9. DURING INSTALLATION OF THE FITTINGS AND PIPING BETWEEN THE CONNECTION TO THE EXISTING RAW WATER MAINS AND THE GATE VALVE AT STA. 1+27.42, CLEAN THE INTERIOR OF THE COMPONENTS BY MECHANICAL MEANS AND SWAB WITH 5% SODIUM HYPOCHLORITE DISINFECTING SOLUTION.

**TOWN CENTER DRIVE**



Save: 10/26/2023 2:59 PM aolsen Plot: 10/26/2023 3:00 PM X:\PT\RAMSY\15978315-final-dsgn\51-drawings\10-Civil\cad\dwg\sheet\RA15978314.dwg

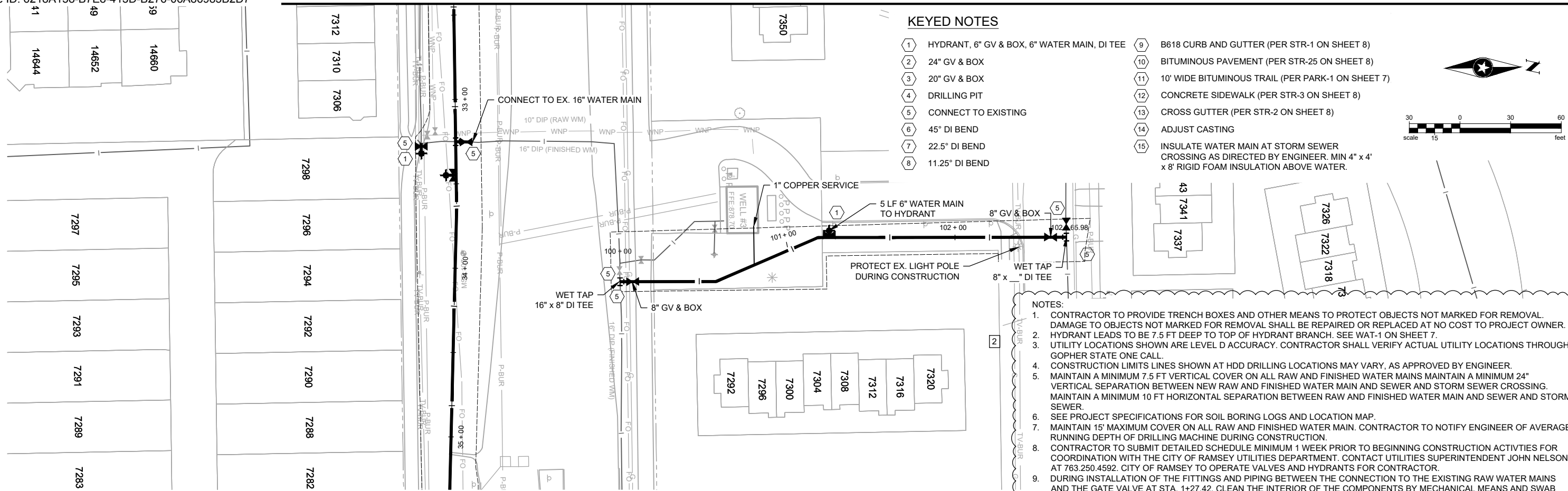
SEH Project	RAMSY174498	Rev.#	2	Revision Issue Description	ADDENDUM #2	Date	10/27/2023
Drawn By	JRB, SRP						
Designed By	KLK						
Checked By	CES						

I HEREBY CERTIFY THAT THIS PLAN 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 MN.

*David E. Hutton*  
 David E. Hutton  
 LICENSE NO. 19133  
 DATE 10-06-2023

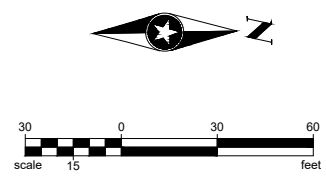
**WATER TREATMENT PLANT TRUNK WATER MAIN IMPROVEMENTS**  
 Ramsey, Minnesota





**KEYED NOTES**

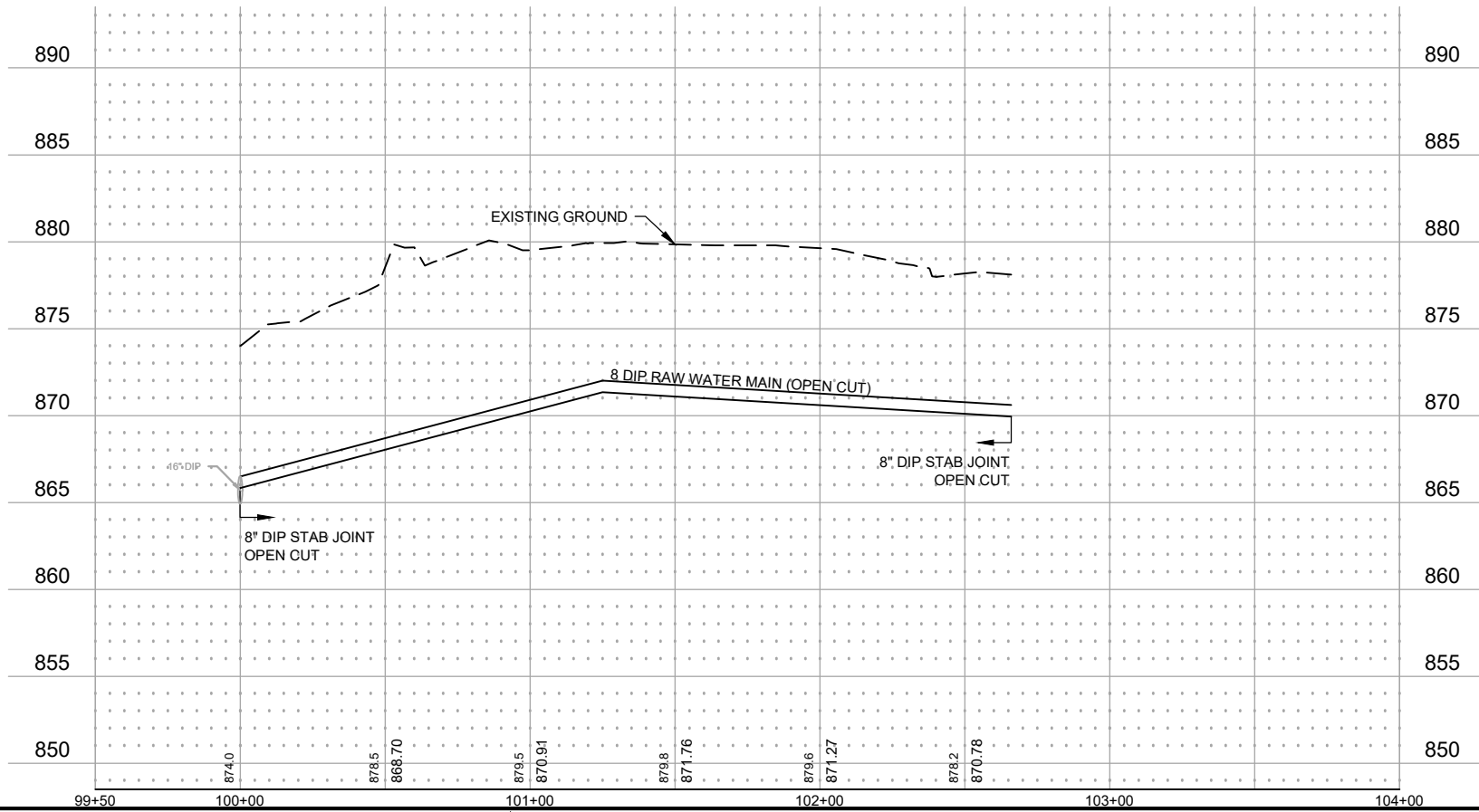
- ① HYDRANT, 6" GV & BOX, 6" WATER MAIN, DI TEE
- ② 24" GV & BOX
- ③ 20" GV & BOX
- ④ DRILLING PIT
- ⑤ CONNECT TO EXISTING
- ⑥ 45° DI BEND
- ⑦ 22.5° DI BEND
- ⑧ 11.25° DI BEND
- ⑨ B618 CURB AND GUTTER (PER STR-1 ON SHEET 8)
- ⑩ BITUMINOUS PAVEMENT (PER STR-25 ON SHEET 8)
- ⑪ 10' WIDE BITUMINOUS TRAIL (PER PARK-1 ON SHEET 7)
- ⑫ CONCRETE SIDEWALK (PER STR-3 ON SHEET 8)
- ⑬ CROSS GUTTER (PER STR-2 ON SHEET 8)
- ⑭ ADJUST CASTING
- ⑮ INSULATE WATER MAIN AT STORM SEWER CROSSING AS DIRECTED BY ENGINEER. MIN 4" x 4" x 8' RIGID FOAM INSULATION ABOVE WATER.



**BUNKER TO 147TH AT WELL #3**

**NOTES:**

1. CONTRACTOR TO PROVIDE TRENCH BOXES AND OTHER MEANS TO PROTECT OBJECTS NOT MARKED FOR REMOVAL. DAMAGE TO OBJECTS NOT MARKED FOR REMOVAL SHALL BE REPAIRED OR REPLACED AT NO COST TO PROJECT OWNER.
2. HYDRANT LEADS TO BE 7.5 FT DEEP TO TOP OF HYDRANT BRANCH. SEE WAT-1 ON SHEET 7.
3. UTILITY LOCATIONS SHOWN ARE LEVEL D ACCURACY. CONTRACTOR SHALL VERIFY ACTUAL UTILITY LOCATIONS THROUGH GOPHER STATE ONE CALL.
4. CONSTRUCTION LIMITS LINES SHOWN AT HDD DRILLING LOCATIONS MAY VARY, AS APPROVED BY ENGINEER.
5. MAINTAIN A MINIMUM 7.5 FT VERTICAL COVER ON ALL RAW AND FINISHED WATER MAINS MAINTAIN A MINIMUM 24" VERTICAL SEPARATION BETWEEN NEW RAW AND FINISHED WATER MAIN AND SEWER AND STORM SEWER CROSSING. MAINTAIN A MINIMUM 10 FT HORIZONTAL SEPARATION BETWEEN RAW AND FINISHED WATER MAIN AND SEWER AND STORM SEWER.
6. SEE PROJECT SPECIFICATIONS FOR SOIL BORING LOGS AND LOCATION MAP.
7. MAINTAIN 15" MAXIMUM COVER ON ALL RAW AND FINISHED WATER MAIN. CONTRACTOR TO NOTIFY ENGINEER OF AVERAGE RUNNING DEPTH OF DRILLING MACHINE DURING CONSTRUCTION.
8. CONTRACTOR TO SUBMIT DETAILED SCHEDULE MINIMUM 1 WEEK PRIOR TO BEGINNING CONSTRUCTION ACTIVITIES FOR COORDINATION WITH THE CITY OF RAMSEY UTILITIES DEPARTMENT. CONTACT UTILITIES SUPERINTENDENT JOHN NELSON AT 763.250.4592. CITY OF RAMSEY TO OPERATE VALVES AND HYDRANTS FOR CONTRACTOR.
9. DURING INSTALLATION OF THE FITTINGS AND PIPING BETWEEN THE CONNECTION TO THE EXISTING RAW WATER MAINS AND THE GATE VALVE AT STA. 1+27.42, CLEAN THE INTERIOR OF THE COMPONENTS BY MECHANICAL MEANS AND SWAB WITH 5% SODIUM HYPOCHLORITE DISINFECTING SOLUTION.
10. 1" COPPER SERVICE WILL BE BROUGHT INTO THE WELL HOUSE BY THE CONTRACTOR. CITY STAFF TO HOOK UP INSIDE.



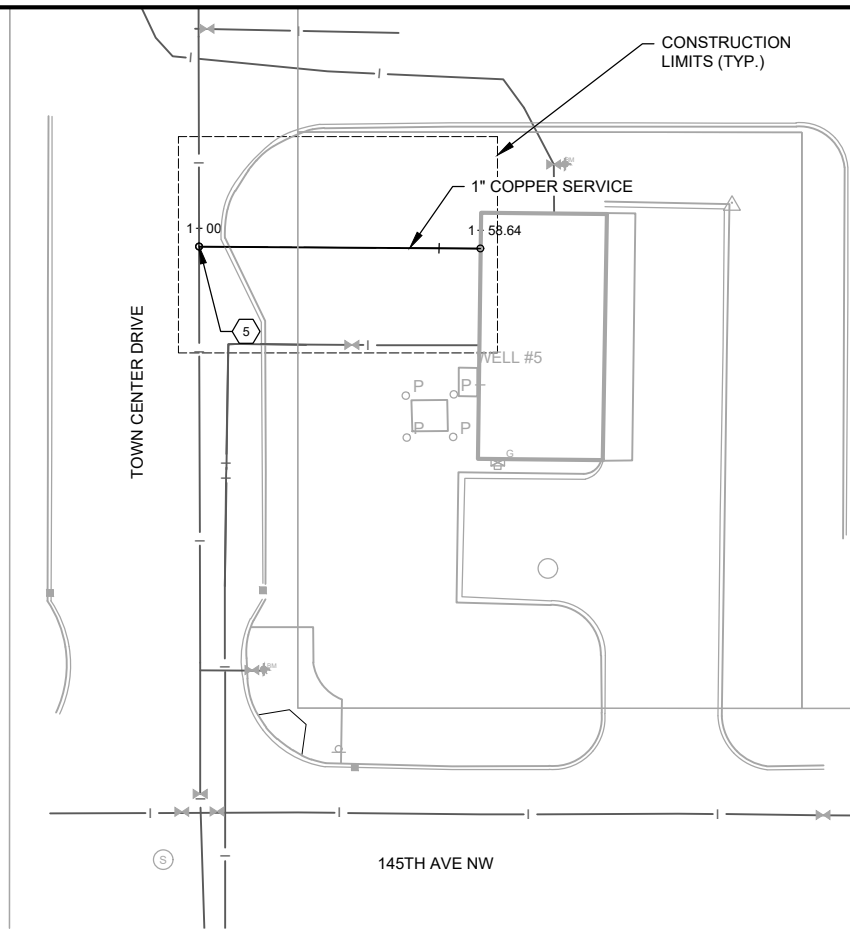
Save: 10/25/2023 4:03 PM aolsen Plot: 10/27/2023 7:55 AM X:\PT\RAMSY\15978315-final-dgn\51-drawings\10-Civil\cadd\dwg\sheet\RA15978315 (1).dwg

SEH Project	RAMSY174498	Rev.#	2	Revision Issue Description	ADDENDUM #2	Date	10/27/2023
Drawn By	JRB, SRP	Rev.#	.	Revision Issue Description		Date	.
Designed By	KLK	Rev.#	.	Revision Issue Description		Date	.
Checked By	CES	Rev.#	.	Revision Issue Description		Date	.

I HEREBY CERTIFY THAT THIS PLAN 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 MN.

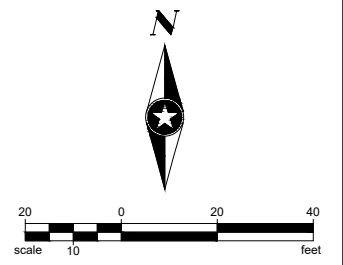
*David E. Hutton*  
 David E. Hutton  
 LICENSE NO. 19133  
 DATE 10-06-2023

**WATER TREATMENT PLANT**  
**TRUNK WATER MAIN IMPROVEMENTS**  
 Ramsey, Minnesota



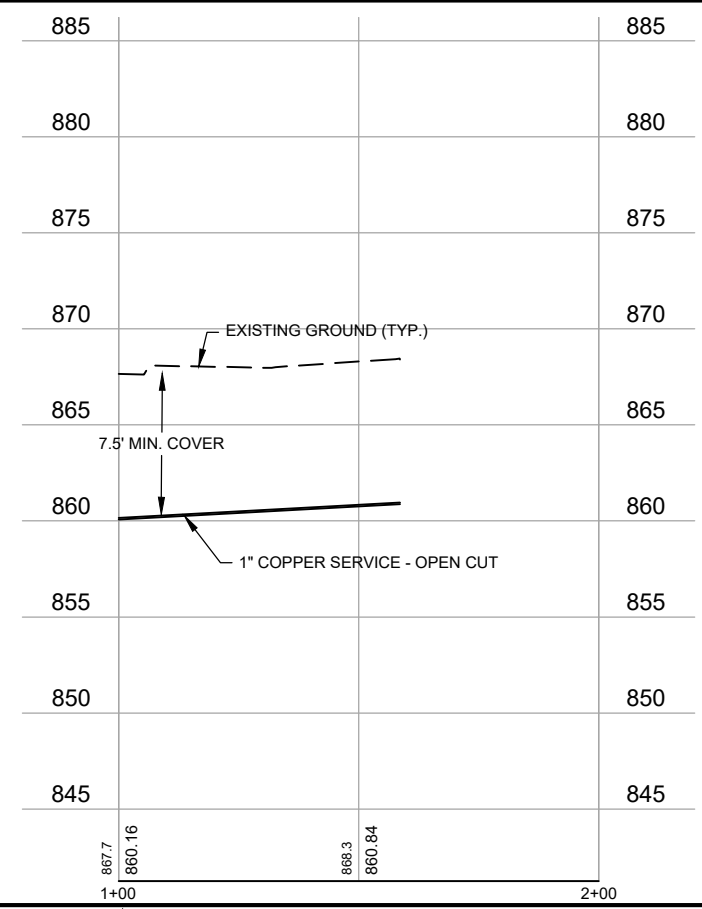
**KEYED NOTES**

- ① HYDRANT, 6" GV & BOX, 6" WATER MAIN, DI TEE
- ② 24" GV & BOX
- ③ 20" GV & BOX
- ④ DRILLING PIT
- ⑤ CONNECT TO EXISTING
- ⑥ 45° DI BEND
- ⑦ 22.5° DI BEND
- ⑧ 11.25° DI BEND
- ⑨ B618 CURB AND GUTTER (PER STR-1 ON SHEET 8)
- ⑩ BITUMINOUS PAVEMENT (PER STR-25 ON SHEET 8)
- ⑪ 10' WIDE BITUMINOUS TRAIL (PER PARK-1 ON SHEET 7)
- ⑫ CONCRETE SIDEWALK (PER STR-3 ON SHEET 8)
- ⑬ CROSS GUTTER (PER STR-2 ON SHEET 8)
- ⑭ ADJUST CASTING
- ⑮ INSULATE WATER MAIN AT STORM SEWER CROSSING AS DIRECTED BY ENGINEER. MIN 4" x 4" x 8' RIGID FOAM INSULATION ABOVE WATER.



- NOTES:**
1. CONTRACTOR TO PROVIDE TRENCH BOXES AND OTHER MEANS TO PROTECT OBJECTS NOT MARKED FOR REMOVAL. DAMAGE TO OBJECTS NOT MARKED FOR REMOVAL SHALL BE REPAIRED OR REPLACED AT NO COST TO PROJECT OWNER.
  2. HYDRANT LEADS TO BE 7.5 FT DEEP TO TOP OF HYDRANT BRANCH. SEE WAT-1 ON SHEET 7.
  3. UTILITY LOCATIONS SHOWN ARE LEVEL D ACCURACY. CONTRACTOR SHALL VERIFY ACTUAL UTILITY LOCATIONS THROUGH GOPHER STATE ONE CALL.
  4. CONSTRUCTION LIMITS LINES SHOWN AT HDD DRILLING LOCATIONS MAY VARY, AS APPROVED BY ENGINEER.
  5. MAINTAIN A MINIMUM 7.5 FT VERTICAL COVER ON ALL RAW AND FINISHED WATER MAINS MAINTAIN A MINIMUM 24" VERTICAL SEPARATION BETWEEN NEW RAW AND FINISHED WATER MAIN AND SEWER AND STORM SEWER CROSSING. MAINTAIN A MINIMUM 10 FT HORIZONTAL SEPARATION BETWEEN RAW AND FINISHED WATER MAIN AND SEWER AND STORM SEWER.
  6. SEE PROJECT SPECIFICATIONS FOR SOIL BORING LOGS AND LOCATION MAP.
  7. MAINTAIN 15' MAXIMUM COVER ON ALL RAW AND FINISHED WATER MAIN. CONTRACTOR TO NOTIFY ENGINEER OF AVERAGE RUNNING DEPTH OF DRILLING MACHINE DURING CONSTRUCTION.
  8. CONTRACTOR TO SUBMIT DETAILED SCHEDULE MINIMUM 1 WEEK PRIOR TO BEGINNING CONSTRUCTION ACTIVITIES FOR COORDINATION WITH THE CITY OF RAMSEY UTILITIES DEPARTMENT. CONTACT UTILITIES SUPERINTENDENT JOHN NELSON AT 763.250.4592. CITY OF RAMSEY TO OPERATE VALVES AND HYDRANTS FOR CONTRACTOR.
  9. DURING INSTALLATION OF THE FITTINGS AND PIPING BETWEEN THE CONNECTION TO THE EXISTING RAW WATER MAINS AND THE GATE VALVE AT STA. 1+27.42, CLEAN THE INTERIOR OF THE COMPONENTS BY MECHANICAL MEANS AND SWAB WITH 5% SODIUM HYPOCHLORITE DISINFECTING SOLUTION.
  10. 1" COPPER SERVICE WILL BE BROUGHT INTO THE WELL HOUSE BY THE CONTRACTOR. CITY STAFF TO HOOK UP INSIDE.

**WELL #5**



Save: 10/25/2023 4:03 PM aolsen Plot: 10/27/2023 7:53 AM X:\PT\RAMSY\159783\5-final-dsgn\51-drawings\10-Civil\cad\dwg\sheet\F01\_159783UG.dwg

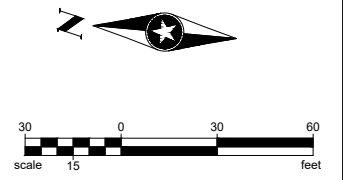
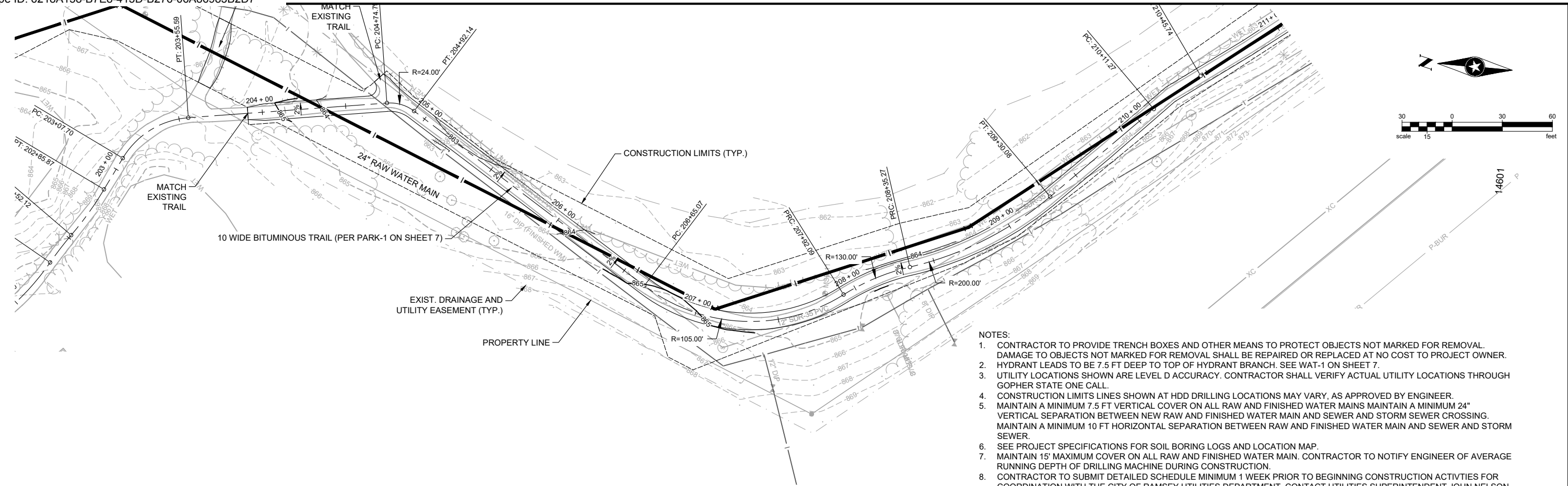
SEH Project	RAMSY174498	Rev.#	Revision Issue Description	Date	Rev.#	Revision Issue Description	Date
Drawn By	JRB, SRP	2	ADDENDUM #2	10/27/2023	.		
Designed By	KLK				.		
Checked By	CES				.		

I HEREBY CERTIFY THAT THIS PLAN 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 MN.

*David E. Hutton*  
 David E. Hutton  
 LICENSE NO. 19133  
 DATE 10-06-2023

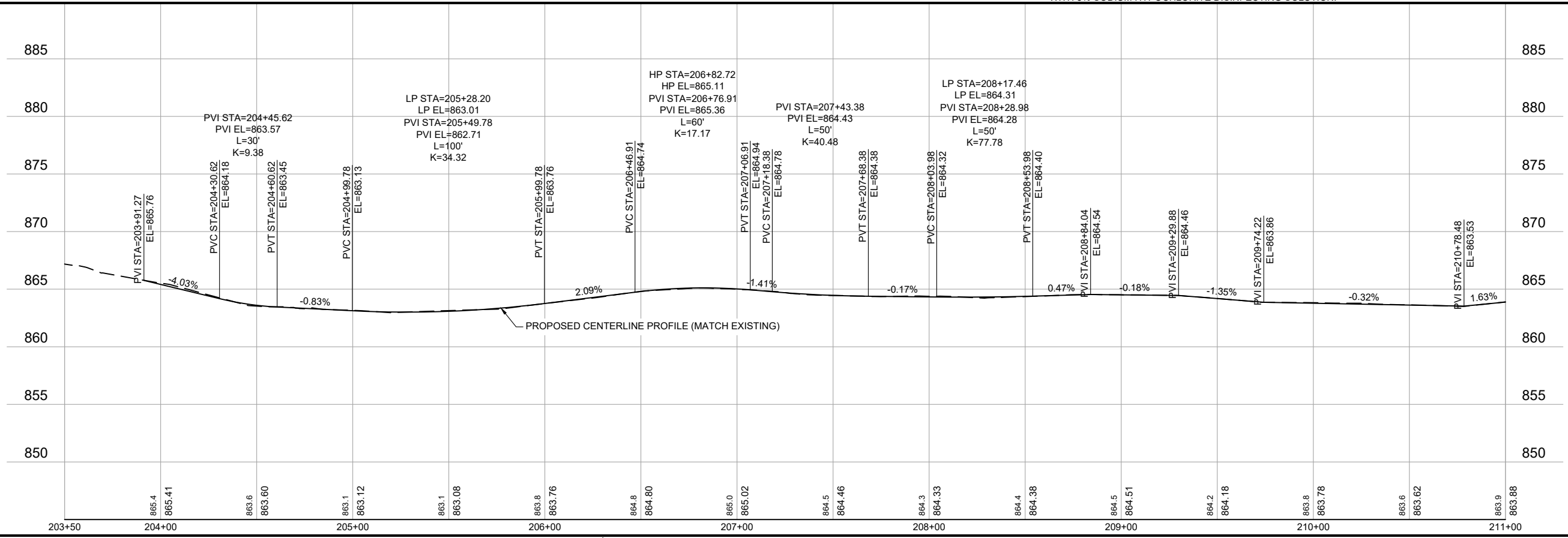
**WATER TREATMENT PLANT**  
**TRUNK WATER MAIN IMPROVEMENTS**  
 Ramsey, Minnesota

**UTILITY PLAN AND PROFILE**  
**WELL #5**



- NOTES:**
1. CONTRACTOR TO PROVIDE TRENCH BOXES AND OTHER MEANS TO PROTECT OBJECTS NOT MARKED FOR REMOVAL. DAMAGE TO OBJECTS NOT MARKED FOR REMOVAL SHALL BE REPAIRED OR REPLACED AT NO COST TO PROJECT OWNER.
  2. HYDRANT LEADS TO BE 7.5 FT DEEP TO TOP OF HYDRANT BRANCH. SEE WAT-1 ON SHEET 7.
  3. UTILITY LOCATIONS SHOWN ARE LEVEL D ACCURACY. CONTRACTOR SHALL VERIFY ACTUAL UTILITY LOCATIONS THROUGH GOPHER STATE ONE CALL.
  4. CONSTRUCTION LIMITS LINES SHOWN AT HDD DRILLING LOCATIONS MAY VARY, AS APPROVED BY ENGINEER.
  5. MAINTAIN A MINIMUM 7.5 FT VERTICAL COVER ON ALL RAW AND FINISHED WATER MAINS MAINTAIN A MINIMUM 24" VERTICAL SEPARATION BETWEEN NEW RAW AND FINISHED WATER MAIN AND SEWER AND STORM SEWER CROSSING. MAINTAIN A MINIMUM 10 FT HORIZONTAL SEPARATION BETWEEN RAW AND FINISHED WATER MAIN AND SEWER AND STORM SEWER.
  6. SEE PROJECT SPECIFICATIONS FOR SOIL BORING LOGS AND LOCATION MAP.
  7. MAINTAIN 15" MAXIMUM COVER ON ALL RAW AND FINISHED WATER MAIN. CONTRACTOR TO NOTIFY ENGINEER OF AVERAGE RUNNING DEPTH OF DRILLING MACHINE DURING CONSTRUCTION.
  8. CONTRACTOR TO SUBMIT DETAILED SCHEDULE MINIMUM 1 WEEK PRIOR TO BEGINNING CONSTRUCTION ACTIVITIES FOR COORDINATION WITH THE CITY OF RAMSEY UTILITIES DEPARTMENT. CONTACT UTILITIES SUPERINTENDENT JOHN NELSON AT 763.250.4592. CITY OF RAMSEY TO OPERATE VALVES AND HYDRANTS FOR CONTRACTOR.
  9. DURING INSTALLATION OF THE FITTINGS AND PIPING BETWEEN THE CONNECTION TO THE EXISTING RAW WATER MAINS AND THE GATE VALVE AT STA. 1+27.42, CLEAN THE INTERIOR OF THE COMPONENTS BY MECHANICAL MEANS AND SWAB WITH 5% SODIUM HYPOCHLORITE DISINFECTING SOLUTION.

# COTTONWOOD PARK TRAIL



Save: 10/6/2023 11:48 AM; I:\projects\RAMSY\159783\5-final-dsgm\51-drawings\11-Civil\cadd\dwg\sheet\RA159783P01.dwg

SEH Project	RAMSY174498	Rev.#	Revision Issue Description	Date	Rev.#	Revision Issue Description	Date
Drawn By	JRB, SRP	.			.		
Designed By	KLK	.			.		
Checked By	CES	.			.		

I HEREBY CERTIFY THAT THIS PLAN 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 MN.

*David E. Hutton*  
 David E. Hutton  
 DATE 10-06-2023  
 LICENSE NO. 19133

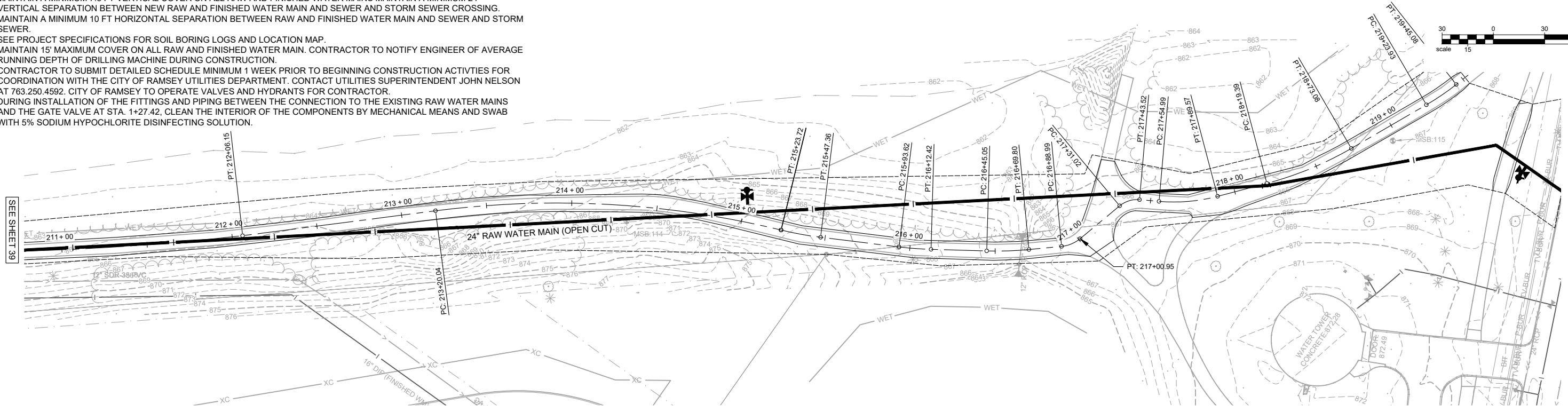
**WATER TREATMENT PLANT**  
**TRUNK WATER MAIN IMPROVEMENTS**  
 Ramsey, Minnesota

**PLAN AND PROFILE**  
**COTTONWOOD PARK TRAIL**

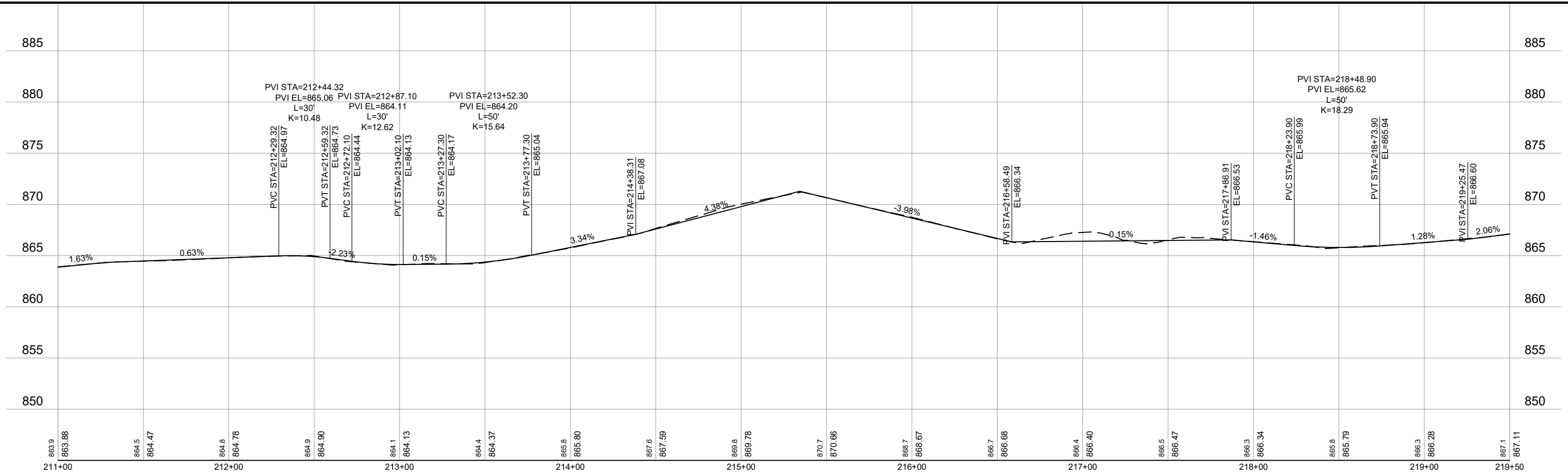
39  
of 58

NOTES:

- CONTRACTOR TO PROVIDE TRENCH BOXES AND OTHER MEANS TO PROTECT OBJECTS NOT MARKED FOR REMOVAL. DAMAGE TO OBJECTS NOT MARKED FOR REMOVAL SHALL BE REPAIRED OR REPLACED AT NO COST TO PROJECT OWNER.
- HYDRANT LEADS TO BE 7.5 FT DEEP TO TOP OF HYDRANT BRANCH. SEE WAT-1 ON SHEET 7.
- UTILITY LOCATIONS SHOWN ARE LEVEL D ACCURACY. CONTRACTOR SHALL VERIFY ACTUAL UTILITY LOCATIONS THROUGH GOPHER STATE ONE CALL.
- CONSTRUCTION LIMITS LINES SHOWN AT HDD DRILLING LOCATIONS MAY VARY, AS APPROVED BY ENGINEER.
- MAINTAIN A MINIMUM 7.5 FT VERTICAL COVER ON ALL RAW AND FINISHED WATER MAINS MAINTAIN A MINIMUM 24" VERTICAL SEPARATION BETWEEN NEW RAW AND FINISHED WATER MAIN AND SEWER AND STORM SEWER CROSSING. MAINTAIN A MINIMUM 10 FT HORIZONTAL SEPARATION BETWEEN RAW AND FINISHED WATER MAIN AND SEWER AND STORM SEWER.
- SEE PROJECT SPECIFICATIONS FOR SOIL BORING LOGS AND LOCATION MAP.
- MAINTAIN 15" MAXIMUM COVER ON ALL RAW AND FINISHED WATER MAIN. CONTRACTOR TO NOTIFY ENGINEER OF AVERAGE RUNNING DEPTH OF DRILLING MACHINE DURING CONSTRUCTION.
- CONTRACTOR TO SUBMIT DETAILED SCHEDULE MINIMUM 1 WEEK PRIOR TO BEGINNING CONSTRUCTION ACTIVITIES FOR COORDINATION WITH THE CITY OF RAMSEY UTILITIES DEPARTMENT. CONTACT UTILITIES SUPERINTENDENT JOHN NELSON AT 763.250.4592. CITY OF RAMSEY TO OPERATE VALVES AND HYDRANTS FOR CONTRACTOR.
- DURING INSTALLATION OF THE FITTINGS AND PIPING BETWEEN THE CONNECTION TO THE EXISTING RAW WATER MAINS AND THE GATE VALVE AT STA. 1+27.42, CLEAN THE INTERIOR OF THE COMPONENTS BY MECHANICAL MEANS AND SWAB WITH 5% SODIUM HYPOCHLORITE DISINFECTING SOLUTION.



# COTTONWOOD PARK TRAIL



Save: 10/6/2023 11:48 AM; h:\work\159783\15-final-dsgm\51-drawings\10-civil\cadd\dwg\sheet\RA159783P01.dwg

SEH Project	RAMSY174498	Rev.#	Revision Issue Description	Date	Rev.#	Revision Issue Description	Date
Drawn By	JRB, SRP	.			.		
Designed By	KLK	.			.		
Checked By	CES	.			.		

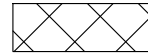






I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MN.

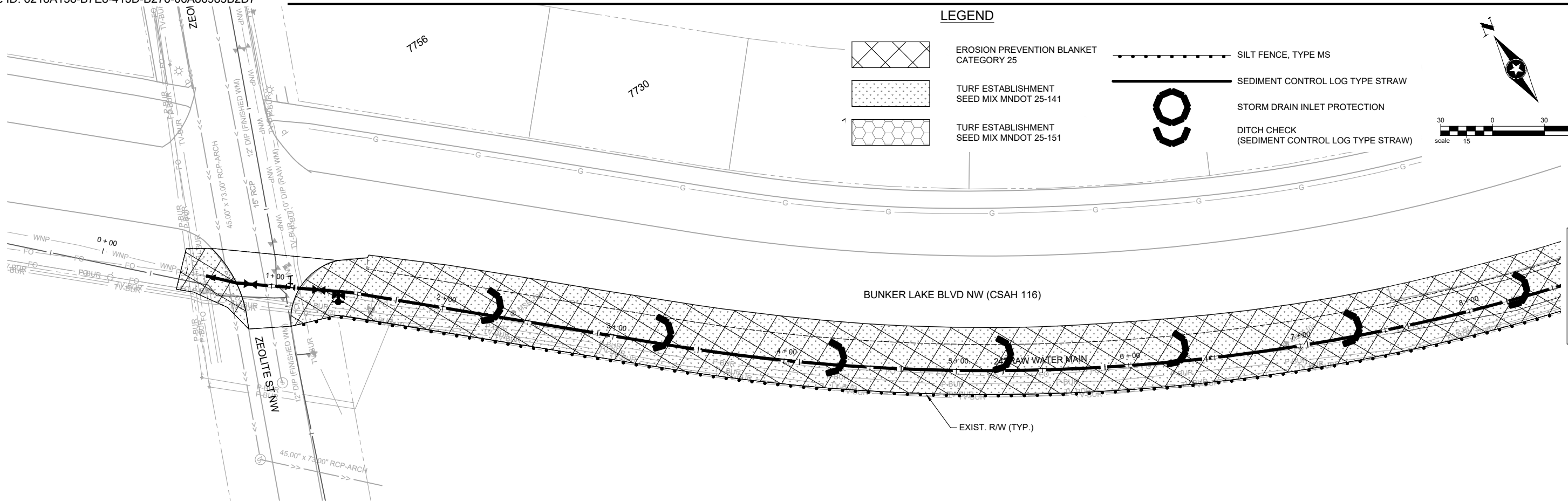
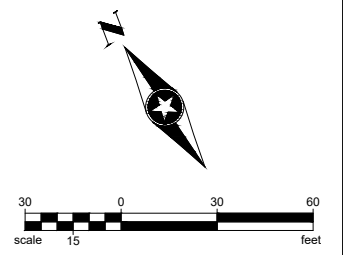
*David E. Hutton*  
 David E. Hutton  
 LICENSE NO. 19133  
 DATE 10-06-2023

**WATER TREATMENT PLANT**  
**TRUNK WATER MAIN IMPROVEMENTS**  
 Ramsey, Minnesota

**PLAN AND PROFILE**  
**COTTONWOOD PARK TRAIL**

LEGEND

-  EROSION PREVENTION BLANKET CATEGORY 25
-  TURF ESTABLISHMENT SEED MIX MNDOT 25-141
-  TURF ESTABLISHMENT SEED MIX MNDOT 25-151
-  SILT FENCE, TYPE MS
-  SEDIMENT CONTROL LOG TYPE STRAW
-  STORM DRAIN INLET PROTECTION
-  DITCH CHECK (SEDIMENT CONTROL LOG TYPE STRAW)



# BUNKER LAKE BLVD NW (CSAH 116)

BENCHMARK EL.

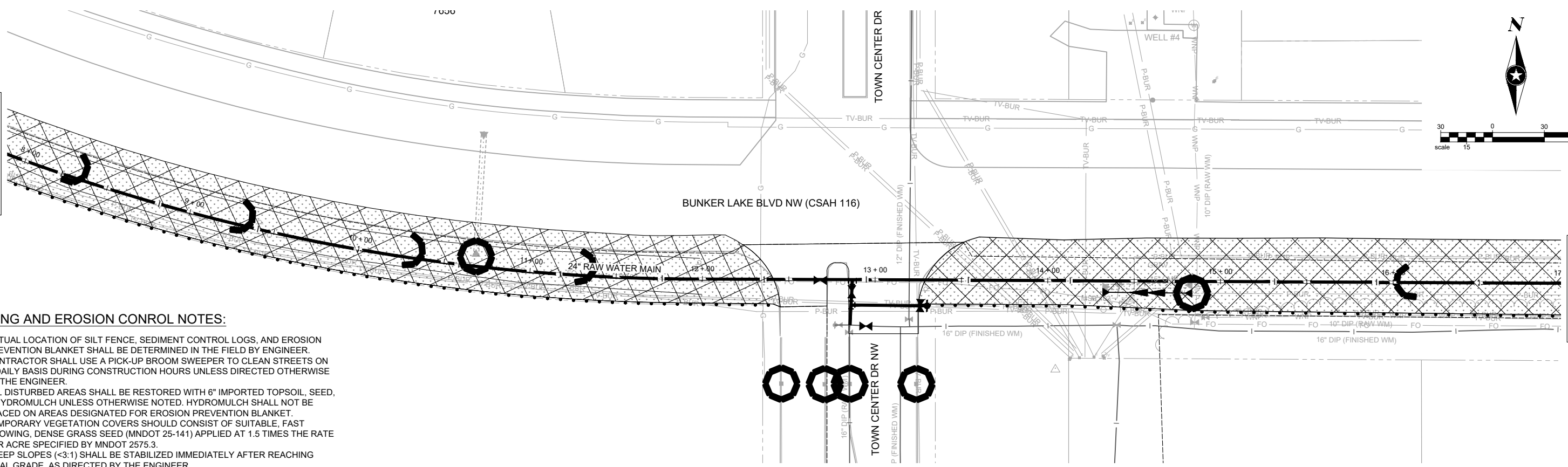
BENCHMARK EL.

SEE ABOVE RIGHT

SEE BELOW LEFT

### SEEDING AND EROSION CONTROL NOTES:


1. ACTUAL LOCATION OF SILT FENCE, SEDIMENT CONTROL LOGS, AND EROSION PREVENTION BLANKET SHALL BE DETERMINED IN THE FIELD BY ENGINEER.
2. CONTRACTOR SHALL USE A PICK-UP BROOM SWEEPER TO CLEAN STREETS ON A DAILY BASIS DURING CONSTRUCTION HOURS UNLESS DIRECTED OTHERWISE BY THE ENGINEER.
3. ALL DISTURBED AREAS SHALL BE RESTORED WITH 6" IMPORTED TOPSOIL, SEED, & HYDROMULCH UNLESS OTHERWISE NOTED. HYDROMULCH SHALL NOT BE PLACED ON AREAS DESIGNATED FOR EROSION PREVENTION BLANKET.
4. TEMPORARY VEGETATION COVERS SHOULD CONSIST OF SUITABLE, FAST GROWING, DENSE GRASS SEED (MNDOT 25-141) APPLIED AT 1.5 TIMES THE RATE PER ACRE SPECIFIED BY MNDOT 2575.3.
5. STEEP SLOPES (<3:1) SHALL BE STABILIZED IMMEDIATELY AFTER REACHING FINAL GRADE, AS DIRECTED BY THE ENGINEER.




SEE SHEET 42

SEH Project	RAMS174498	Rev.#	Revision Issue Description	Date	Rev.#	Revision Issue Description	Date
Drawn By	JRB, SRP	.	.	.	.	.	.
Designed By	KLK	.	.	.	.	.	.
Checked By	CES	.	.	.	.	.	.

I HEREBY CERTIFY THAT THIS PLAN 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 MN.



David E. Hutton  
LICENSE NO. 19133



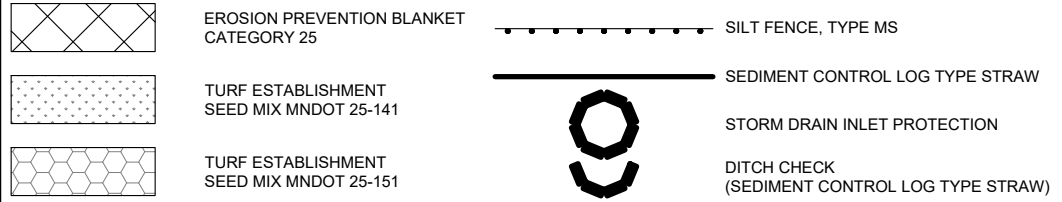
DATE 10-06-2023

## WATER TREATMENT PLANT TRUNK WATER MAIN IMPROVEMENTS

Ramsey, Minnesota

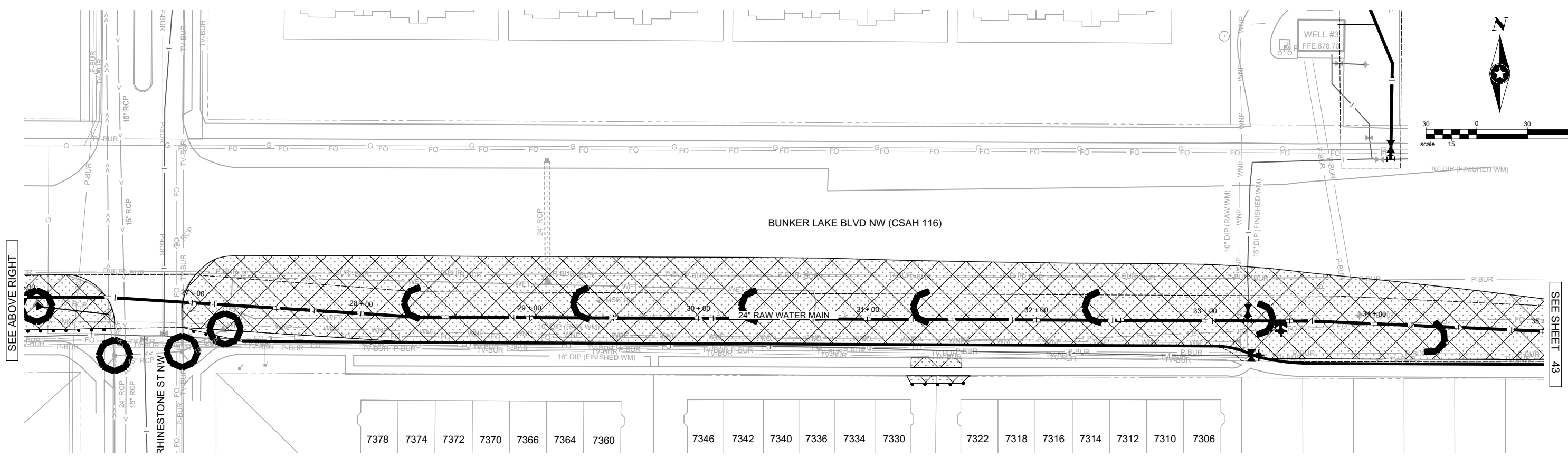
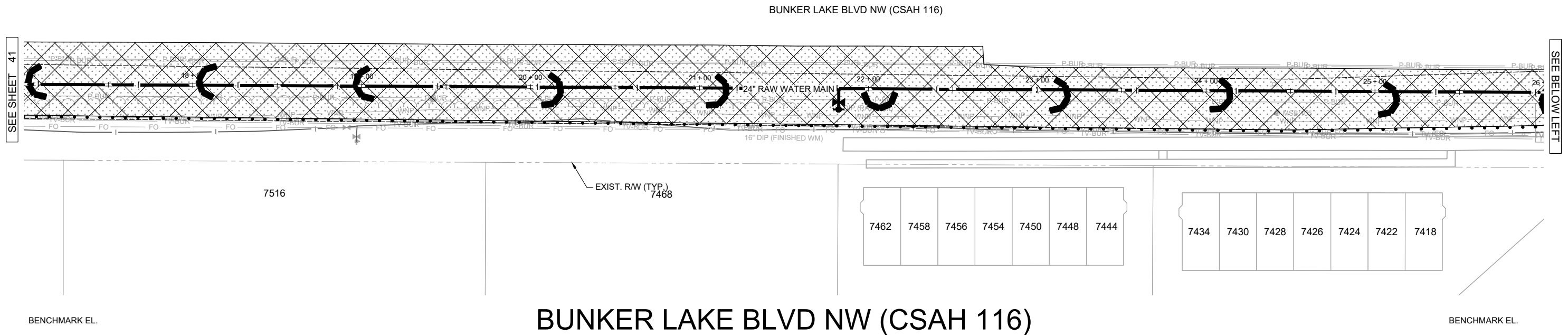
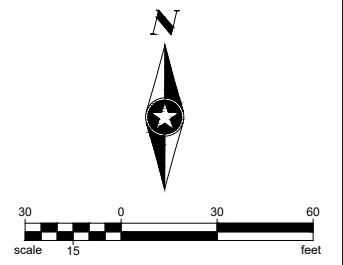
## EROSION CONTROL AND TURF ESTABLISHMENT PLAN BUNKER LAKE BLVD NW (CSAH 116)

**LEGEND**



**SEEDING AND EROSION CONTROL NOTES:**

1. ACTUAL LOCATION OF SILT FENCE, SEDIMENT CONTROL LOGS, AND EROSION PREVENTION BLANKET SHALL BE DETERMINED IN THE FIELD BY ENGINEER.
2. CONTRACTOR SHALL USE A PICK-UP BROOM SWEEPER TO CLEAN STREETS ON A DAILY BASIS DURING CONSTRUCTION HOURS UNLESS DIRECTED OTHERWISE BY THE ENGINEER.
3. ALL DISTURBED AREAS SHALL BE RESTORED WITH 6" IMPORTED TOPSOIL, SEED, & HYDROMULCH UNLESS OTHERWISE NOTED. HYDROMULCH SHALL NOT BE PLACED ON AREAS DESIGNATED FOR EROSION PREVENTION BLANKET.
4. TEMPORARY VEGETATION COVERS SHOULD CONSIST OF SUITABLE, FAST GROWING, DENSE GRASS SEED (MNDOT 25-141) APPLIED AT 1.5 TIMES THE RATE PER ACRE SPECIFIED BY MNDOT 2575.3.
5. STEEP SLOPES (<3:1) SHALL BE STABILIZED IMMEDIATELY AFTER REACHING FINAL GRADE, AS DIRECTED BY THE ENGINEER.



Save: 8/20/2021 7:57 AM sprall Plot: 10/7/2023 2:44 PM X:\P\RAMS\159783\5-final-dwg\51-drawings\10-Civil\cad\dwg\sheet\RA159783E01.dwg

SEH Project	RAMSY174498	Rev.#	Revision Issue Description	Date	Rev.#	Revision Issue Description	Date
Drawn By	JRB, SRP						
Designed By	KLK						
Checked By	CES						

I HEREBY CERTIFY THAT THIS PLAN 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 MN.  
  
 David E. Hutton  
 LICENSE NO. 19133  
 DATE 10-06-2023

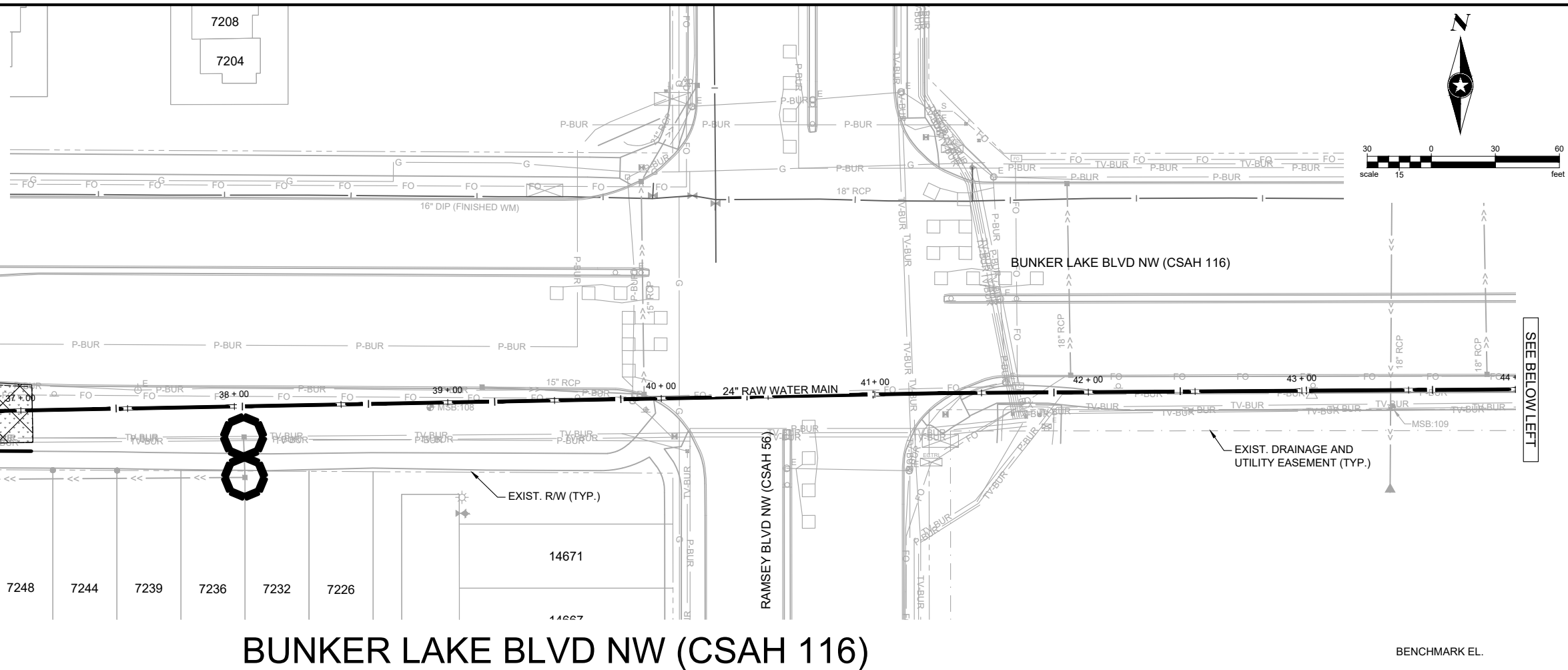
**WATER TREATMENT PLANT  
 TRUNK WATER MAIN IMPROVEMENTS**  
 Ramsey, Minnesota

**EROSION CONTROL AND TURF  
 ESTABLISHMENT PLAN  
 BUNKER LAKE BLVD NW (CSAH 116)**  
 42 of 58




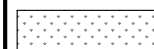

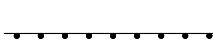



**SEEDING AND EROSION CONTROL NOTES:**

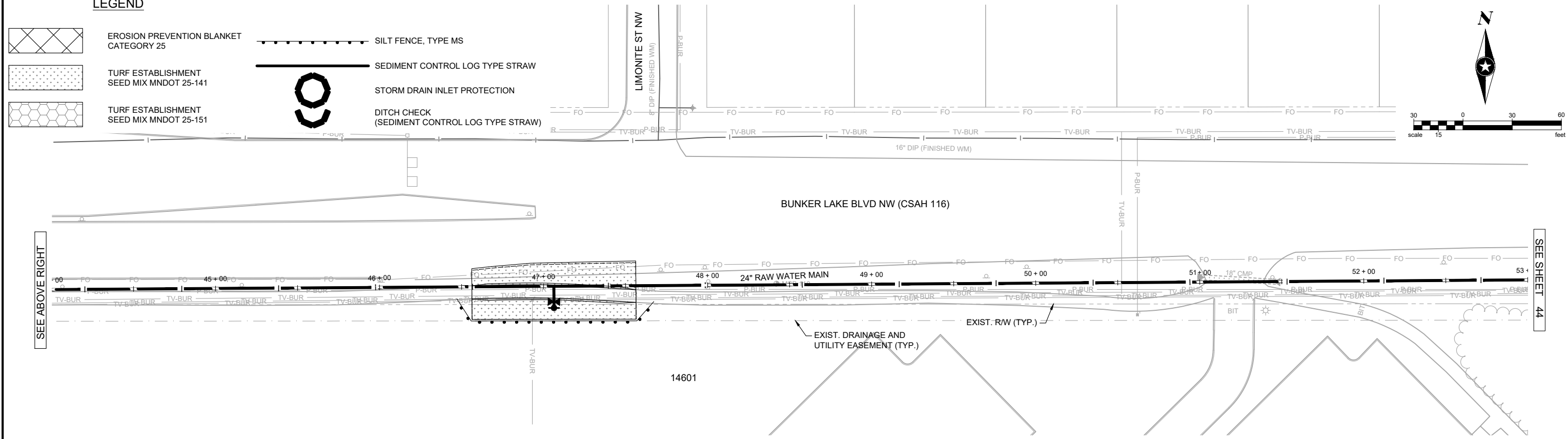
1. ACTUAL LOCATION OF SILT FENCE, SEDIMENT CONTROL LOGS, AND EROSION PREVENTION BLANKET SHALL BE DETERMINED IN THE FIELD BY ENGINEER.
2. CONTRACTOR SHALL USE A PICK-UP BROOM SWEEPER TO CLEAN STREETS ON A DAILY BASIS DURING CONSTRUCTION HOURS UNLESS DIRECTED OTHERWISE BY THE ENGINEER.
3. ALL DISTURBED AREAS SHALL BE RESTORED WITH 6" IMPORTED TOPSOIL, SEED, & HYDROMULCH UNLESS OTHERWISE NOTED. HYDROMULCH SHALL NOT BE PLACED ON AREAS DESIGNATED FOR EROSION PREVENTION BLANKET.
4. TEMPORARY VEGETATION COVERS SHOULD CONSIST OF SUITABLE, FAST GROWING, DENSE GRASS SEED (MNDOT 25-141) APPLIED AT 1.5 TIMES THE RATE PER ACRE SPECIFIED BY MNDOT 2575.3.
5. STEEP SLOPES (<3:1) SHALL BE STABILIZED IMMEDIATELY AFTER REACHING FINAL GRADE, AS DIRECTED BY THE ENGINEER.



**BUNKER LAKE BLVD NW (CSAH 116)**

**LEGEND**

-  EROSION PREVENTION BLANKET CATEGORY 25
-  TURF ESTABLISHMENT SEED MIX MNDOT 25-141
-  TURF ESTABLISHMENT SEED MIX MNDOT 25-151
-  SILT FENCE, TYPE MS
-  SEDIMENT CONTROL LOG TYPE STRAW
-  STORM DRAIN INLET PROTECTION
-  DITCH CHECK (SEDIMENT CONTROL LOG TYPE STRAW)



SEH Project	RAMSY174498	Rev.#	Revision Issue Description	Date	Rev.#	Revision Issue Description	Date
Drawn By	JRB, SRP	.			.		
Designed By	KLK	.			.		
Checked By	CES	.			.		

I HEREBY CERTIFY THAT THIS PLAN 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 MN.

*David E. Hutton*  
 David E. Hutton  
 LICENSE NO. 19133  
 DATE 10-06-2023

**WATER TREATMENT PLANT  
 TRUNK WATER MAIN IMPROVEMENTS**  
 Ramsey, Minnesota

**EROSION CONTROL AND TURF  
 ESTABLISHMENT PLAN  
 BUNKER LAKE BLVD NW (CSAH 116)**

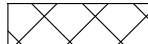



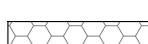


**43**  
of 58

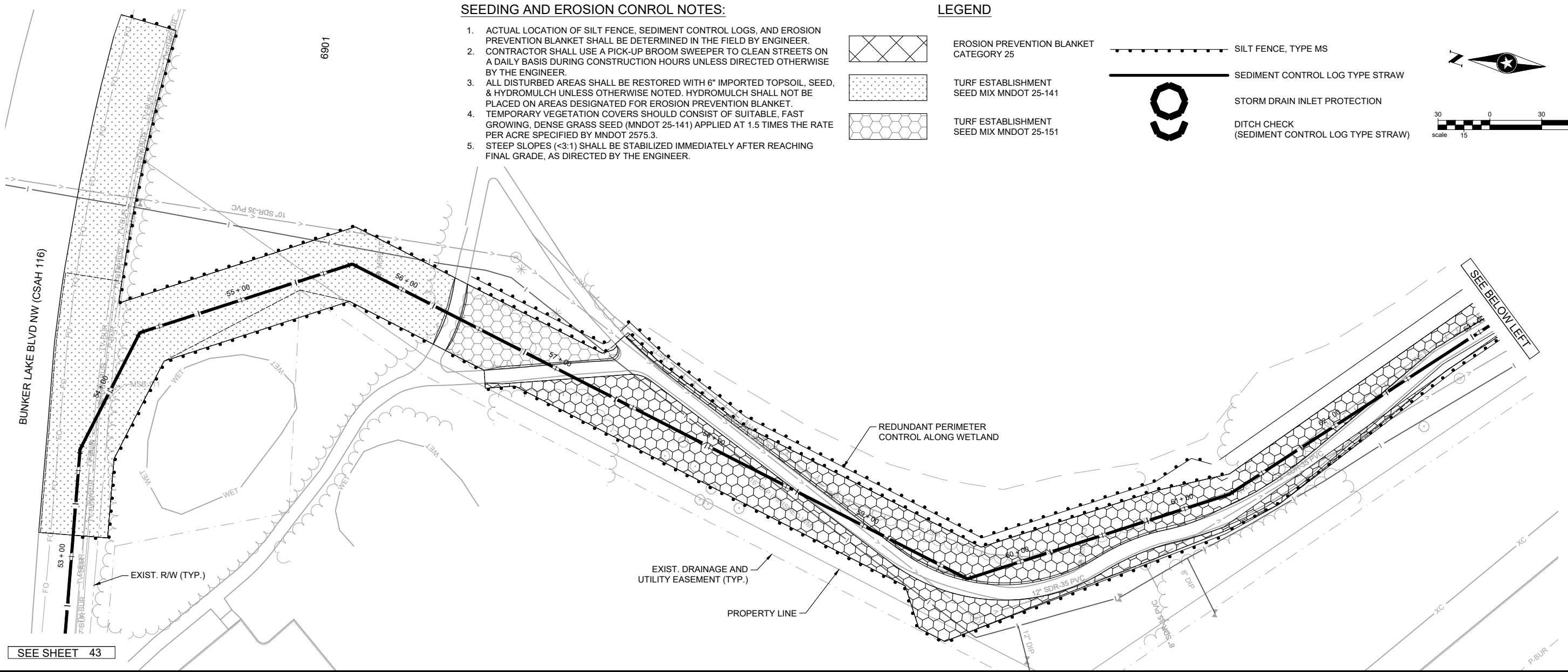
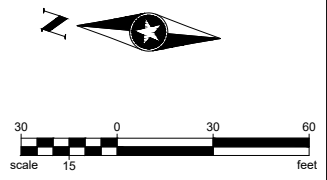
Save: 8/20/2021 7:57 AM sprall Plot: 10/7/2023 2:45 PM X:\PT\RAMSY174498\5-final-dsgn\51-drawings\10-Civil\cad\dwg\sheet\RA1507783E01.dwg

**SEEDING AND EROSION CONTROL NOTES:**

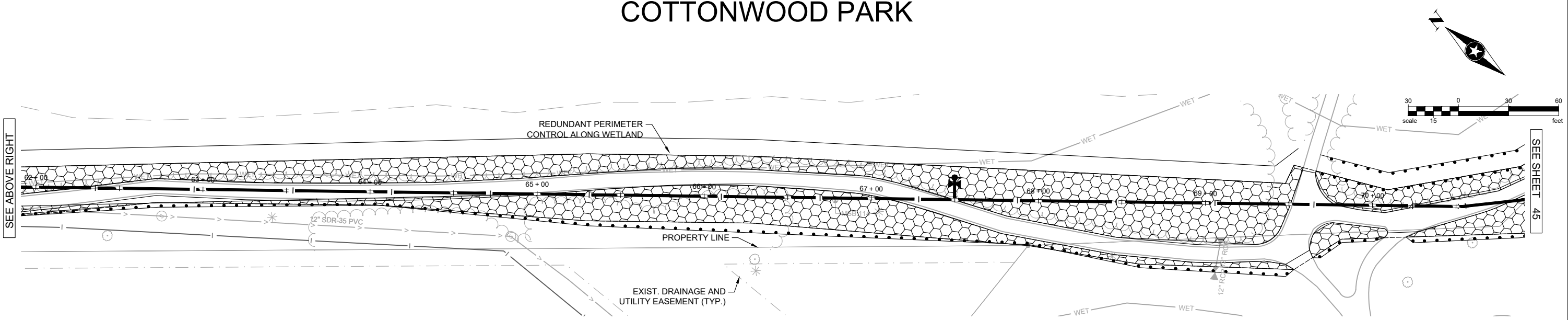
1. ACTUAL LOCATION OF SILT FENCE, SEDIMENT CONTROL LOGS, AND EROSION PREVENTION BLANKET SHALL BE DETERMINED IN THE FIELD BY ENGINEER.
2. CONTRACTOR SHALL USE A PICK-UP BROOM SWEEPER TO CLEAN STREETS ON A DAILY BASIS DURING CONSTRUCTION HOURS UNLESS DIRECTED OTHERWISE BY THE ENGINEER.
3. ALL DISTURBED AREAS SHALL BE RESTORED WITH 6" IMPORTED TOPSOIL, SEED, & HYDROMULCH UNLESS OTHERWISE NOTED. HYDROMULCH SHALL NOT BE PLACED ON AREAS DESIGNATED FOR EROSION PREVENTION BLANKET.
4. TEMPORARY VEGETATION COVERS SHOULD CONSIST OF SUITABLE, FAST GROWING, DENSE GRASS SEED (MNDOT 25-141) APPLIED AT 1.5 TIMES THE RATE PER ACRE SPECIFIED BY MNDOT 2575.3.
5. STEEP SLOPES (<3:1) SHALL BE STABILIZED IMMEDIATELY AFTER REACHING FINAL GRADE, AS DIRECTED BY THE ENGINEER.

**LEGEND**

	EROSION PREVENTION BLANKET CATEGORY 25		SILT FENCE, TYPE MS
	TURF ESTABLISHMENT SEED MIX MNDOT 25-141		SEDIMENT CONTROL LOG TYPE STRAW
	TURF ESTABLISHMENT SEED MIX MNDOT 25-141		STORM DRAIN INLET PROTECTION
			DITCH CHECK (SEDIMENT CONTROL LOG TYPE STRAW)



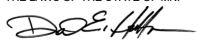
**COTTONWOOD PARK**



Save: 8/20/2021 7:57 AM sprall Plot: 10/7/2023 2:46 PM X:\P\RAMS\159783\5-final-dwg\51-drawings\10-Civil\cad\dwg\sheet\RA159783E01.dwg

SEH Project	RAMSY174498	Rev.#	Revision Issue Description	Date	Rev.#	Revision Issue Description	Date
Drawn By	JRB, SRP						
Designed By	KLK						
Checked By	CES						

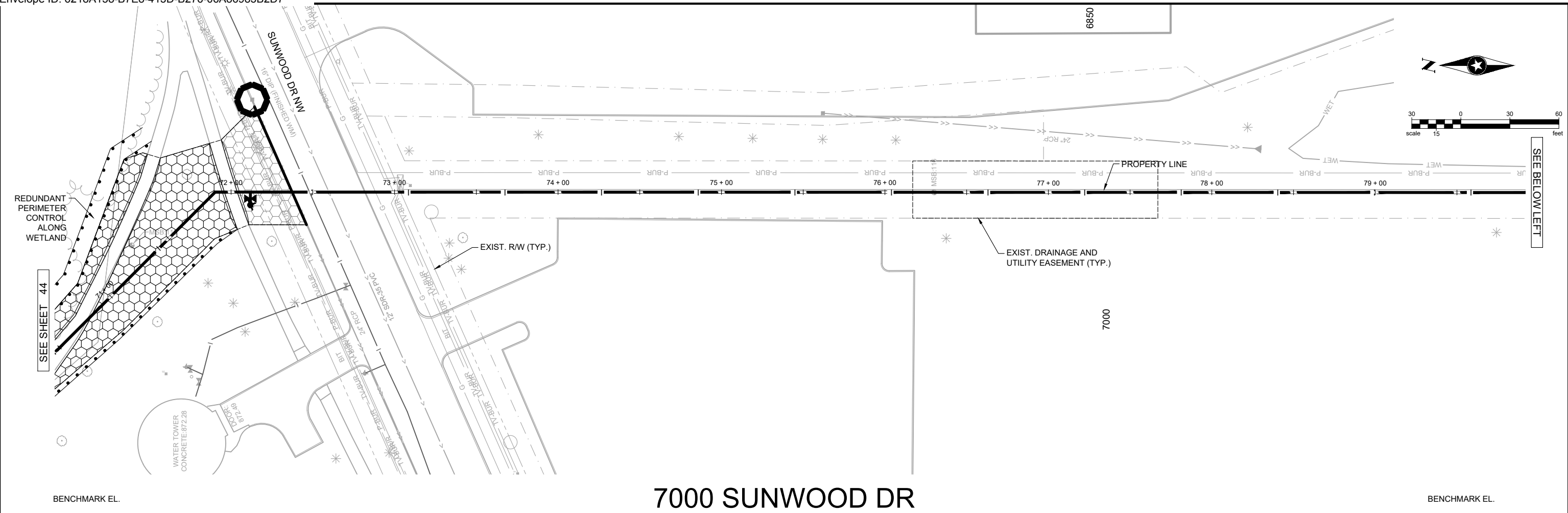
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MN.

  
 David E. Hutton  
 LICENSE NO. 19133  
 DATE 10-06-2023

**WATER TREATMENT PLANT  
TRUNK WATER MAIN IMPROVEMENTS**  
 Ramsey, Minnesota

**EROSION CONTROL AND TURF ESTABLISHMENT PLAN  
COTTONWOOD PARK**

44  
of 58



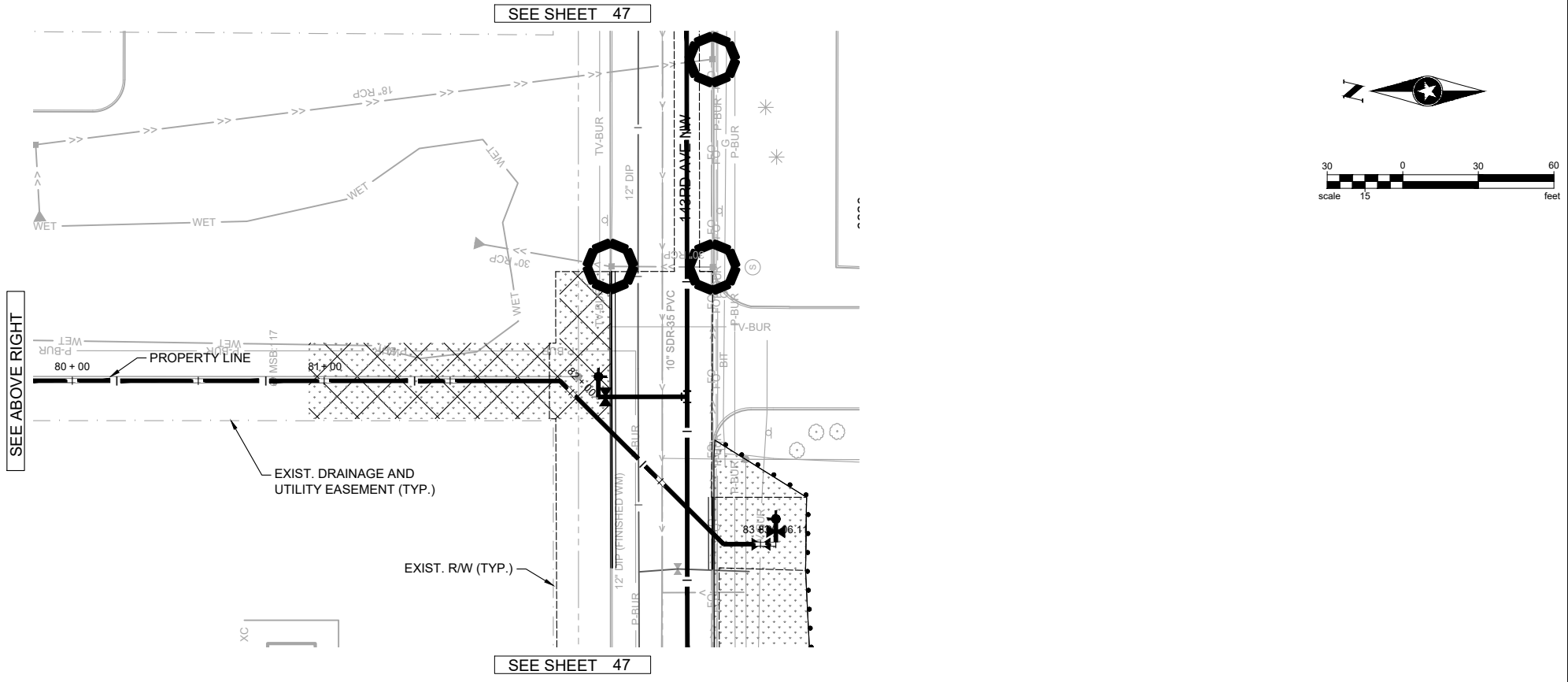
# 7000 SUNWOOD DR

**SEEDING AND EROSION CONTROL NOTES:**

1. ACTUAL LOCATION OF SILT FENCE, SEDIMENT CONTROL LOGS, AND EROSION PREVENTION BLANKET SHALL BE DETERMINED IN THE FIELD BY ENGINEER.
2. CONTRACTOR SHALL USE A PICK-UP BROOM SWEEPER TO CLEAN STREETS ON A DAILY BASIS DURING CONSTRUCTION HOURS UNLESS DIRECTED OTHERWISE BY THE ENGINEER.
3. ALL DISTURBED AREAS SHALL BE RESTORED WITH 6" IMPORTED TOPSOIL, SEED, & HYDROMULCH UNLESS OTHERWISE NOTED. HYDROMULCH SHALL NOT BE PLACED ON AREAS DESIGNATED FOR EROSION PREVENTION BLANKET.
4. TEMPORARY VEGETATION COVERS SHOULD CONSIST OF SUITABLE, FAST GROWING, DENSE GRASS SEED (MNDOT 25-141) APPLIED AT 1.5 TIMES THE RATE PER ACRE SPECIFIED BY MNDOT 2575.3.
5. STEEP SLOPES (<3:1) SHALL BE STABILIZED IMMEDIATELY AFTER REACHING FINAL GRADE, AS DIRECTED BY THE ENGINEER.

**LEGEND**

	EROSION PREVENTION BLANKET CATEGORY 25		SILT FENCE, TYPE MS
	TURF ESTABLISHMENT SEED MIX MNDOT 25-141		SEDIMENT CONTROL LOG TYPE STRAW
	TURF ESTABLISHMENT SEED MIX MNDOT 25-151		STORM DRAIN INLET PROTECTION
			DITCH CHECK (SEDIMENT CONTROL LOG TYPE STRAW)



SEH Project	RAMSY174498	Rev.#	Revision Issue Description	Date	Rev.#	Revision Issue Description	Date
Drawn By	JRB, SRP	.			.		
Designed By	KLK	.			.		
Checked By	CES	.			.		

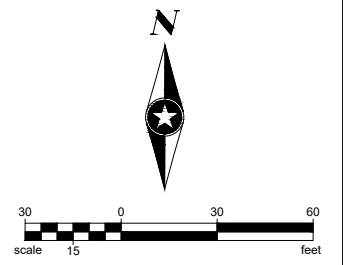
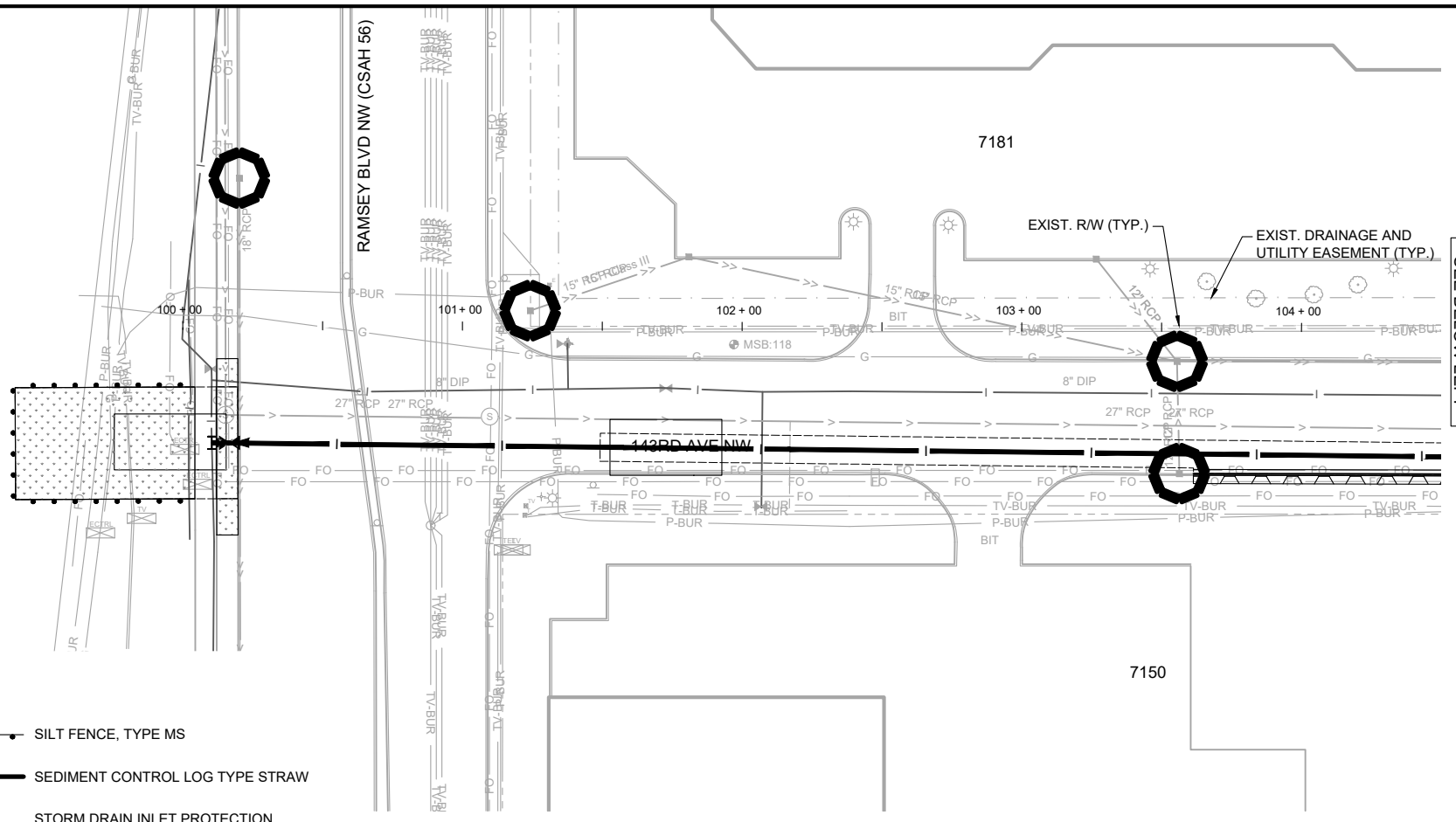
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MN.

*David E. Hutton*  
 David E. Hutton  
 LICENSE NO. 19133  
 DATE 10-06-2023

## WATER TREATMENT PLANT TRUNK WATER MAIN IMPROVEMENTS








Ramsey, Minnesota

Save: 8/20/2021 7:57 AM sprall Plot: 10/7/2023 2:47 PM X:\P\RAMSY174498\Drawings\10-Civil\cad\dwg\sheet\RA150783E01.dwg



SEE BELOW LEFT

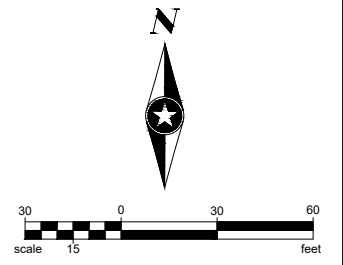
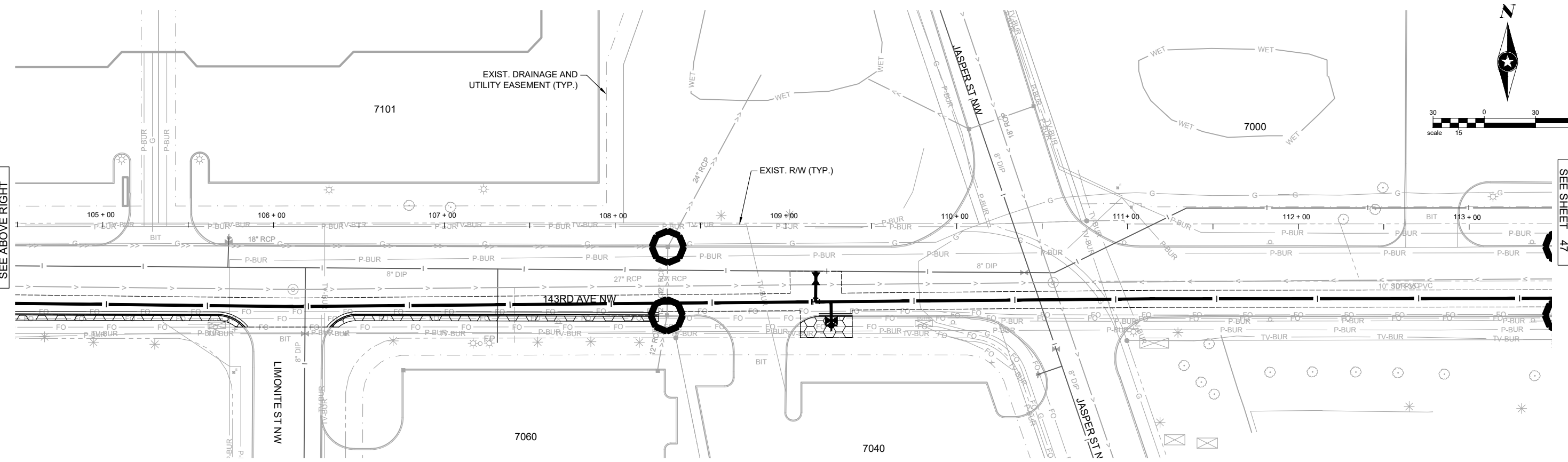
**LEGEND**

-  EROSION PREVENTION BLANKET CATEGORY 25
-  TURF ESTABLISHMENT SEED MIX MNDOT 25-141
-  TURF ESTABLISHMENT SEED MIX MNDOT 25-151
-  SILT FENCE, TYPE MS
-  SEDIMENT CONTROL LOG TYPE STRAW
-  STORM DRAIN INLET PROTECTION
-  DITCH CHECK (SEDIMENT CONTROL LOG TYPE STRAW)

**SEEDING AND EROSION CONTROL NOTES:**

1. ACTUAL LOCATION OF SILT FENCE, SEDIMENT CONTROL LOGS, AND EROSION PREVENTION BLANKET SHALL BE DETERMINED IN THE FIELD BY ENGINEER.
2. CONTRACTOR SHALL USE A PICK-UP BROOM SWEEPER TO CLEAN STREETS ON A DAILY BASIS DURING CONSTRUCTION HOURS UNLESS DIRECTED OTHERWISE BY THE ENGINEER.
3. ALL DISTURBED AREAS SHALL BE RESTORED WITH 6" IMPORTED TOPSOIL, SEED, & HYDROMULCH UNLESS OTHERWISE NOTED. HYDROMULCH SHALL NOT BE PLACED ON AREAS DESIGNATED FOR EROSION PREVENTION BLANKET.
4. TEMPORARY VEGETATION COVERS SHOULD CONSIST OF SUITABLE, FAST GROWING, DENSE GRASS SEED (MNDOT 25-141) APPLIED AT 1.5 TIMES THE RATE PER ACRE SPECIFIED BY MNDOT 2575.3.
5. STEEP SLOPES (<3:1) SHALL BE STABILIZED IMMEDIATELY AFTER REACHING FINAL GRADE, AS DIRECTED BY THE ENGINEER.

**143RD AVE NW**

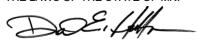


SEE ABOVE RIGHT

SEE SHEET 47

SEH Project	RAMSY174498	Rev.#	Revision Issue Description	Date	Rev.#	Revision Issue Description	Date
Drawn By	JRB, SRP	.			.		
Designed By	KLK	.			.		
Checked By	CES	.			.		

I HEREBY CERTIFY THAT THIS PLAN 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 MN.

  
 David E. Hutton  
 LICENSE NO. 19133

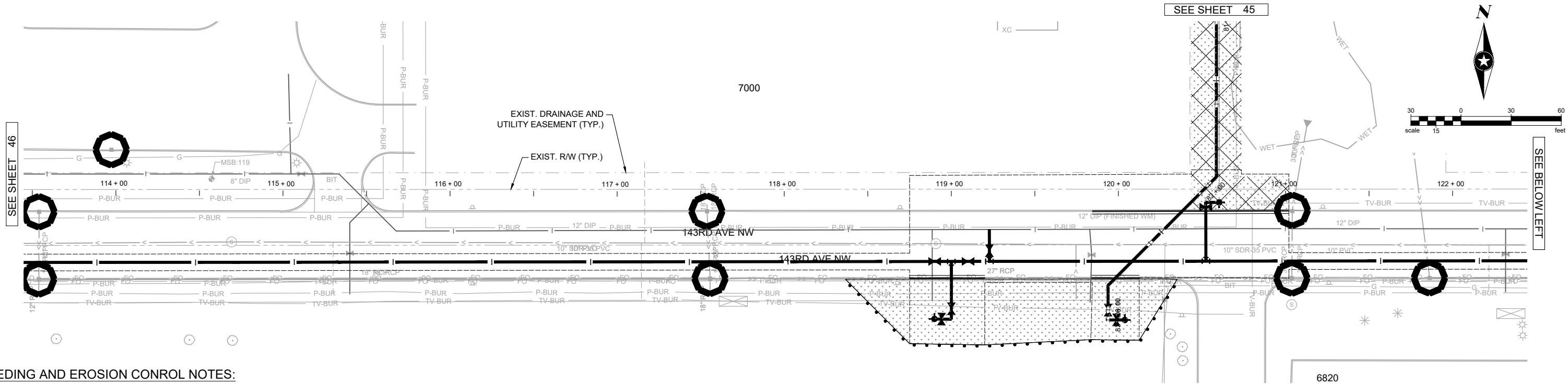
DATE 10-06-2023

**WATER TREATMENT PLANT  
 TRUNK WATER MAIN IMPROVEMENTS**  
 Ramsey, Minnesota

**EROSION CONTROL AND TURF  
 ESTABLISHMENT PLAN  
 143RD AVE NW**

46  
 of 58

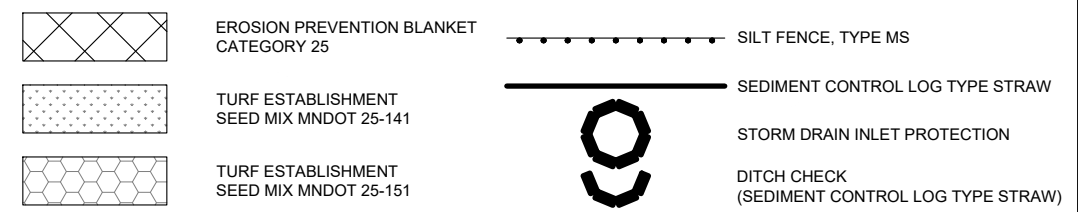
Save: 8/20/2021 8:13 AM sprall Plot: 10/7/2023 2:50 PM X:\PT\RAMSY174498\Drawings\10-Civil\cad\dwg\sheet\RA150758E02.dwg



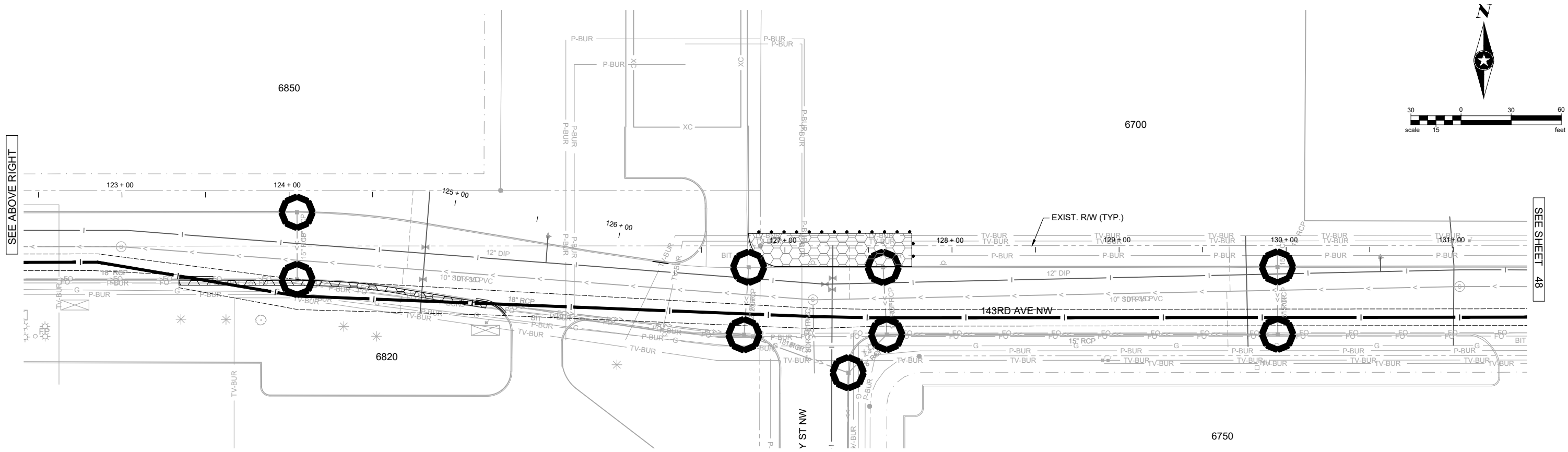
**SEEDING AND EROSION CONTROL NOTES:**

1. ACTUAL LOCATION OF SILT FENCE, SEDIMENT CONTROL LOGS, AND EROSION PREVENTION BLANKET SHALL BE DETERMINED IN THE FIELD BY ENGINEER.
2. CONTRACTOR SHALL USE A PICK-UP BROOM SWEEPER TO CLEAN STREETS ON A DAILY BASIS DURING CONSTRUCTION HOURS UNLESS DIRECTED OTHERWISE BY THE ENGINEER.
3. ALL DISTURBED AREAS SHALL BE RESTORED WITH 6" IMPORTED TOPSOIL, SEED, & HYDROMULCH UNLESS OTHERWISE NOTED. HYDROMULCH SHALL NOT BE PLACED ON AREAS DESIGNATED FOR EROSION PREVENTION BLANKET.
4. TEMPORARY VEGETATION COVERS SHOULD CONSIST OF SUITABLE, FAST GROWING, DENSE GRASS SEED (MNDOT 25-141) APPLIED AT 1.5 TIMES THE RATE PER ACRE SPECIFIED BY MNDOT 2575.3.
5. STEEP SLOPES (<3:1) SHALL BE STABILIZED IMMEDIATELY AFTER REACHING FINAL GRADE, AS DIRECTED BY THE ENGINEER.

**LEGEND**



**143RD AVE NW**



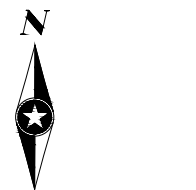
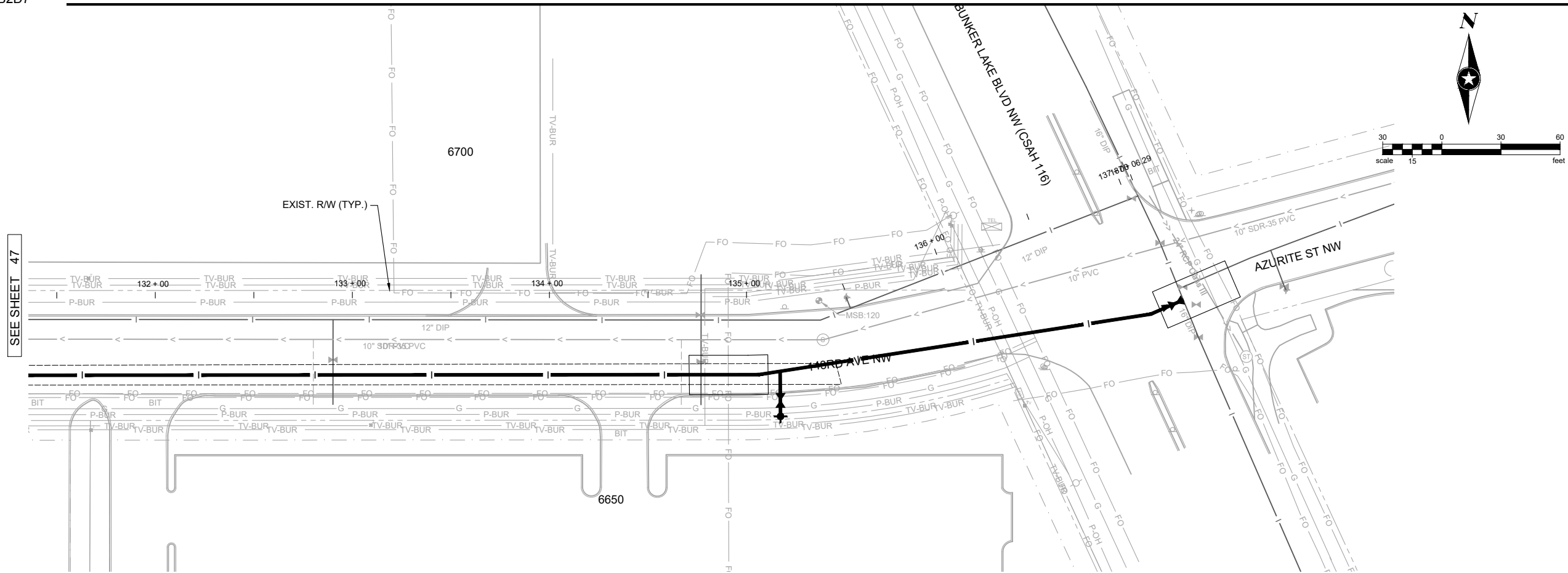
SEH Project	RAMSY174498	Rev.#	Revision Issue Description	Date	Rev.#	Revision Issue Description	Date
Drawn By	JRB, SRP	.			.		
Designed By	KLK	.			.		
Checked By	CES	.			.		

I HEREBY CERTIFY THAT THIS PLAN 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 MN.  
  
 David E. Hutton  
 LICENSE NO. 19133  
 DATE 10-06-2023

**WATER TREATMENT PLANT  
 TRUNK WATER MAIN IMPROVEMENTS**  
 Ramsey, Minnesota

**EROSION CONTROL AND TURF  
 ESTABLISHMENT PLAN  
 143RD AVE NW**  
 47  
 of 58

Save: 8/20/2021 8:13 AM sprall Plot: 10/7/2023 2:51 PM X:\PT\RAMSY174498\Drawings\10-Civil\cad\dwg\sheet\RA1507783E02.dwg

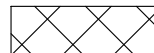
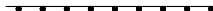







# 143RD AVE NW

**SEEDING AND EROSION CONTROL NOTES:**

1. ACTUAL LOCATION OF SILT FENCE, SEDIMENT CONTROL LOGS, AND EROSION PREVENTION BLANKET SHALL BE DETERMINED IN THE FIELD BY ENGINEER.
2. CONTRACTOR SHALL USE A PICK-UP BROOM SWEEPER TO CLEAN STREETS ON A DAILY BASIS DURING CONSTRUCTION HOURS UNLESS DIRECTED OTHERWISE BY THE ENGINEER.
3. ALL DISTURBED AREAS SHALL BE RESTORED WITH 6" IMPORTED TOPSOIL, SEED, & HYDROMULCH UNLESS OTHERWISE NOTED. HYDROMULCH SHALL NOT BE PLACED ON AREAS DESIGNATED FOR EROSION PREVENTION BLANKET.
4. TEMPORARY VEGETATION COVERS SHOULD CONSIST OF SUITABLE, FAST GROWING, DENSE GRASS SEED (MNDOT 25-141) APPLIED AT 1.5 TIMES THE RATE PER ACRE SPECIFIED BY MNDOT 2575.3.
5. STEEP SLOPES (<3:1) SHALL BE STABILIZED IMMEDIATELY AFTER REACHING FINAL GRADE, AS DIRECTED BY THE ENGINEER.

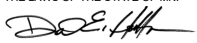
**LEGEND**

	EROSION PREVENTION BLANKET CATEGORY 25		SILT FENCE, TYPE MS
	TURF ESTABLISHMENT SEED MIX MNDOT 25-141		SEDIMENT CONTROL LOG TYPE STRAW
	TURF ESTABLISHMENT SEED MIX MNDOT 25-151		STORM DRAIN INLET PROTECTION
			DITCH CHECK (SEDIMENT CONTROL LOG TYPE STRAW)

Save: 8/20/2021 8:13 AM sprall Plot: 10/7/2023 2:52 PM X:\PT\RAMS\159783\5-final-dsgn\5-final-dsgn\10-Civil\cad\dwg\sheet\RA159783E02.dwg

SEH Project	RAMS174498	Rev.#	Revision Issue Description	Date	Rev.#	Revision Issue Description	Date
Drawn By	JRB, SRP	.			.		
Designed By	KLK	.			.		
Checked By	CES	.			.		



I HEREBY CERTIFY THAT THIS PLAN 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 MN.  
  
 David E. Hutton  
 LICENSE NO. 19133  
 DATE 10-06-2023

**WATER TREATMENT PLANT  
 TRUNK WATER MAIN IMPROVEMENTS**  
 Ramsey, Minnesota

**EROSION CONTROL AND TURF  
 ESTABLISHMENT PLAN  
 143RD AVE NW**



**SWPPP SUMMARY/OVERVIEW:**

THIS STORM WATER POLLUTION PREVENTION PLAN (SWPPP) HAS BEEN DEVELOPED TO ADDRESS THE REQUIREMENTS OF NPDES PERMIT MN R100001. THIS SWPPP INCLUDES A COMBINATION OF NARRATIVE AND PLAN SHEETS THAT DESCRIBE THE TEMPORARY AND PERMANENT STORM WATER MANAGEMENT PLAN FOR THE PROJECT.

**PROJECT INFORMATION:**

LOCATION:	CITY OF RAMSEY, MINNESOTA
LATITUDE/LONGITUDE:	45.237184N, 93.449348W
PROJECT DESCRIPTION:	NEW WATER MAIN FOR FUTURE WATER TREATMENT PLANT
SOIL DISTURBING ACTIVITIES:	TRENCH EXCAVATION AND HDD FOR WATER MAIN

**CONTACTS:**

OWNER:	CITY OF RAMSEY
CONTACT:	BRUCE WESTBY, CITY ENGINEER
ADDRESS:	7550 SUNWOOD DRIVE NW, RAMSEY, MN 55303
PHONE:	763.433.9825
EMAIL:	bwestby@cityoframsey.com

ENGINEER:	SHORT ELLIOTT HENDRICKSON INC. (SEH)
CONTACT:	ANDREW OLSEN
PHONE:	641.590.3198
EMAIL:	aolsen@sehinc.com
PROJECT NO.:	RAMSY 174498

**KNOWLEDGEABLE PERSON/CHAIN OF RESPONSIBILITY**  
THE CONTRACTOR SHALL IDENTIFY A PERSON KNOWLEDGEABLE AND EXPERIENCED IN THE APPLICATION OF EROSION PREVENTION AND SEDIMENT CONTROL BMPs WHO WILL COORDINATE WITH ALL CONTRACTORS, SUBCONTRACTORS, AND OPERATORS ON-SITE TO OVERSEE THE IMPLEMENTATION OF THE SWPPP.

CONTRACTOR	Northdale Construction Co. Inc.
CONTACT	Troy Huschle
PHONE	(320)-221-2723
EMAIL	TroyH@northdaleconst.com

THE CONTRACTOR SHALL ESTABLISH A CHAIN OF RESPONSIBILITY FOR ALL CONTRACTORS AND SUB-CONTRACTORS ON SITE TO ENSURE THE SWPPP IS BEING PROPERLY IMPLEMENTED AND MAINTAINED. THE CONTRACTOR SHALL PROVIDE THE CHAIN OF RESPONSIBILITY TO THE OWNER AND ATTACH TO THE SWPPP PRIOR TO ANY CONSTRUCTION ACTIVITY.

**GENERAL SWPPP RESPONSIBILITIES:**  
THE CONTRACTOR SHALL KEEP THE SWPPP, INCLUDING ALL AMENDMENTS AND INSPECTION AND MAINTENANCE RECORDS ON SITE DURING CONSTRUCTION.

THE SWPPP WILL BE AMENDED AS NEEDED AND/OR AS REQUIRED BY PROVISIONS OF THE PERMIT. PERMITTEES MUST AMEND THE SWPPP TO INCLUDE ADDITIONAL OR MODIFIED BMPs AS NECESSARY TO CORRECT PROBLEMS IDENTIFIED OR ADDRESS SITUATIONS WHENEVER THERE IS A CHANGE IN DESIGN, CONSTRUCTION, OPERATION, MAINTENANCE, WEATHER OR SEASONAL CONDITIONS HAVING A SIGNIFICANT EFFECT ON THE DISCHARGE OF POLLUTANTS TO SURFACE WATERS OR GROUNDWATER. AMENDMENTS WILL BE APPROVED BY BOTH THE OWNER AND CONTRACTOR AND WILL BE ATTACHED OR OTHERWISE INCLUDED WITH THE SWPPP DOCUMENTS. THE SWPPP AMENDMENTS SHALL BE INITIATED, FACILITATED, AND PROCESSED BY THE CONTRACTOR.

ALL SWPPP CHANGES MUST BE DONE BY AN INDIVIDUAL TRAINED IN ACCORDANCE WITH SECTION 21.4 OR 21.5. CHANGES INVOLVING THE USE OF A LESS STRINGENT BMP MUST INCLUDE A JUSTIFICATION DESCRIBING HOW THE REPLACEMENT BMP IS EFFECTIVE FOR THE SITE CHARACTERISTICS.

BOTH THE OWNER AND CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER TERMINATION AND/OR TRANSFER OF THE PERMIT.

**LONG TERM OPERATION AND MAINTENANCE**  
THE OWNER WILL BE RESPONSIBLE OR WILL OTHERWISE IDENTIFY WHO WILL BE RESPONSIBLE FOR THE LONG TERM OPERATION AND MAINTENANCE OF THE PERMANENT STORMWATER MANAGEMENT SYSTEM(S).

THE OWNER WILL PREPARE AND IMPLEMENT A PERMANENT STORMWATER TREATMENT SYSTEM(S) MAINTENANCE PLAN.

**PROJECT LOCATION MAP, INCLUDING ALL RECEIVING WATERS WITHIN ONE MILE OF PROJECT SITE AND ARROWS SHOWING OVERLAND FLOW.**



**TRAINING DOCUMENTATION:**

PREPARER/DESIGNER OF SWPPP:	STEVE PRALL, PE
EMPLOYER:	SEH
DATE OBTAINED / REFRESHED	2/6/2020
INSTRUCTOR(S)/ENTITY PROVIDING TRAINING:	UNIVERSITY OF MINNESOTA

CONTENT OF TRAINING AVAILABLE UPON REQUEST.

THE CONTRACTOR (OPERATOR) SHALL ADD TO THE SWPPP TRAINING RECORDS FOR THE FOLLOWING PERSONNEL:

-INDIVIDUALS OVERSEEING THE IMPLEMENTATION OF, REVISING, AND AMENDING THE SWPPP  
-INDIVIDUALS PERFORMING INSPECTIONS  
-INDIVIDUALS PERFORMING OR SUPERVISING THE INSTALLATION, MAINTENANCE AND REPAIR OF BMPs

TRAINING MUST RELATE TO THE INDIVIDUAL'S JOB DUTIES AND RESPONSIBILITIES AND SHALL INCLUDE:

- 1) DATES OF TRAINING
- 2) NAME OF INSTRUCTORS
- 3) CONTENT AND ENTITY PROVIDING TRAINING

THE CONTRACTOR SHALL ENSURE THAT THE INDIVIDUALS ARE TRAINED BY LOCAL, STATE, FEDERAL AGENCIES, PROFESSIONAL ORGANIZATIONS, OR OTHER ENTITIES WITH EXPERTISE IN EROSION PREVENTION, SEDIMENT CONTROL, PERMANENT STORMWATER MANAGEMENT AND THE MINNESOTA NPDES/SDS CONSTRUCTION STORMWATER PERMIT.

**PROJECT SUMMARY:**

TOTAL DISTURBED AREA:	7.0 AC
PRE-CONSTRUCTION IMPERVIOUS AREA:	0.5 AC
POST-CONSTRUCTION IMPERVIOUS AREA:	0.5 AC
IMPERVIOUS AREA ADDED:	0 AC

RECEIVING WATER(S) WITHIN ONE MILE FROM PROJECT BOUNDARIES:  
(<http://pca-gis02.pca.state.mn.us/CSW/index.html>)

ID	NAME	TYPE	SPECIAL WATER?	IMPAIRED WATER?	CONSTRUCTION RELATED IMPAIRMENT OR SPECIAL WATER CLASSIFICATION	TMDL
02-0117-00	UNNAMED	LAKE	NO	NO	N/A	N/A
07010206-805	MISSISSIPPI	RIVER	YES	YES	SCENIC AND RECREATIONAL RIVER IMPAIRED FOR NUTRIENTS	Hg-F

ADDITIONAL BMPs AND/OR ACTIONS REQUIRED: SECTION 23.9 (IMMEDIATELY INITIATE STABILIZATION OF EXPOSED SOIL AREAS AND COMPLETE STABILIZATION WITHIN 7 CALENDAR DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE TEMPORARILY OR PERMANENTLY CEASES)

SEE SECTION 23 OF THE PERMIT AND APPLICABLE TMDL WLA'S

WATERBODY	NO WORK DURING
LAKES	APRIL 1 - JUNE 30
NON-TROUT STREAMS	MARCH 15 - JUNE 15
TROUT STREAMS	SEPTEMBER 1 - APRIL 1

SEE DNR PERMIT FOR MORE INFORMATION

SITE SOIL INFORMATION: (<http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>)  
(SOIL INFORMATION PROVIDED IS FOR NPDES PERMIT INFORMATION ONLY. SOIL INFORMATION WAS OBTAINED FROM THE USGS WEBSITE. THE CONTRACTOR SHALL NOT RELY ON THIS SOIL INFORMATION FOR CONSTRUCTION PURPOSES.)

SOIL NAME:	HYDROLOGIC CLASSIFICATION:
HUBBARD LOAMY SAND	A
DUELM LOAMY SAND	A
MARSH	A/D
ANTICIPATED RANGE OF PARTICLE SIZES	LOAMY SAND

**RELATED REVIEWS & PERMITS:**  
ENVIRONMENTAL, WETLAND, ENDANGERED OR THREATENED SPECIES, ARCHEOLOGICAL, LOCAL, STATE, AND/OR FEDERAL REVIEWS/PERMITS:

AGENCY:	TYPE OF PERMIT:
LOWER RUM RIVER WMO	WCA PERMIT
MDH	WATER MAIN PERMIT

**IMPLEMENTATION SEQUENCE:**  
THE CONTRACTOR SHALL COMPLY WITH THE FOLLOWING SEQUENCE. THE ENGINEER MAY APPROVE ADJUSTMENTS TO THE SEQUENCE AS NEEDED.

2.	INSTALL PERIMETER CONTROL AND STABILIZE DOWN GRADIENT BOUNDARIES
3.	INSTALL INLET PROTECTION ON EXISTING CATCH BASINS
5.	INSTALL UTILITIES, STORM SEWER, INLET PROTECTION, CURB & GUTTER, PAVING
6.	COMPLETE FINAL GRADING AND STABILIZE DISTURBED AREAS
7.	AFTER CONSTRUCTION IS COMPLETE AND THE SITE IS STABILIZED, REMOVE ACCUMULATED SEDIMENT, REMOVE BMPs, AND RE-STABILIZE ANY AREAS DISTURBED BY THEIR REMOVAL.

THE FOLLOWING DOCUMENTS ARE CONSIDERED PART OF THE SWPPP:

- PLAN AND PROFILE PLAN SHEETS:
- EROSION AND SEDIMENT CONTROL PLAN SHEETS:
- TURF ESTABLISHMENT PLAN SHEETS:
- GRADING PLAN SHEETS:
- DETAIL PLAN SHEETS:
- SWPPP NOTE AND DETAIL SHEETS:
- PROJECT SPECIFICATIONS:
- PROJECT BID FORM:

**TEMPORARY BMP DESIGN FACTORS:**  
EROSION PREVENTION AND SEDIMENT CONTROL BMP'S MUST BE DESIGNED TO ACCOUNT FOR:

THE EXPECTED AMOUNT, FREQUENCY, INTENSITY, AND DURATION OF PRECIPITATION  
THE NATURE OF STORMWATER RUNOFF AND RON-ON AT THE SITE, INCLUDING FACTORS SUCH AS EXPECTED FLOW FROM IMPERVIOUS SURFACES, SLOPES, AND SITE DRAINAGE FEATURES

THE STORMWATER VOLUME, VELOCITY, AND PEAK FLOW RATES TO MINIMIZE DISCHARGE OF POLLUTANTS IN STORMWATER AND TO MINIMIZE CHANNEL AND STREAMBANK EROSION AND SCOUR IN THE IMMEDIATE VICINITY OF DISCHARGE POINTS

THE RANGE OF SOIL PARTICLE SIZES EXPECTED TO BE PRESENT.

**TEMPORARY SEDIMENT BASINS:**  
THE CONTRACTOR SHALL INSTALL TEMPORARY SEDIMENT BASIN(S) INDICATED ON PLANS AND REQUIRED BY THE NPDES CONSTRUCTION PERMIT.

THE TEMPORARY BASIN MUST PROVIDE LIVE STORAGE FOR A CALCULATED VOLUME OF RUNOFF FROM A TWO (2)-YEAR, 24-HOUR STORM FROM EACH ACRE DRAINED TO THE BASIN OR 1,800 CUBIC FEET OF LIVE STORAGE PER ACRE DRAINED, WHICHEVER IS GREATER.

TEMPORARY SEDIMENT BASIN OUTLETS SHALL BE CONSTRUCTED TO PREVENT SHORT-CIRCUITING AND PREVENT THE DISCHARGE OF FLOATING DEBRIS.

OUTLET STRUCTURES MUST BE DESIGNED TO WITHDRAW WATER FROM THE SURFACE TO MINIMIZE THE DISCHARGE OF POLLUTANTS.

BASINS MUST INCLUDE A STABILIZED EMERGENCY OVERFLOW, WITHDRAW WATER FROM THE SURFACE, AND PROVIDE ENERGY DISSIPATION AT THE OUTLET.

TEMPORARY SEDIMENT BASINS SHALL BE PROVIDED WITH ENERGY DISSIPATION AT ANY BASIN OUTLET TO PREVENT SOIL EROSION.

SEDIMENT BASINS MUST BE SITUATED OUTSIDE OF SURFACE WATERS AND ANY BUFFER ZONES, AND MUST BE DESIGNED TO AVOID THE DRAINING WATER FROM WETLANDS.



**MUCA Erosion Control Certification**

**TROY HUSCHLE**

has completed the Erosion Control Site Management Course through the Minnesota Utility-Contractors Association MEETS MINNESOTA CONSTRUCTION STORMWATER PERMIT TRAINING REQUIREMENTS

Minnesota Utility Contractors Association  
1000 Westgate Drive, Suite 252, St. Paul, MN 55114 (651) 735-3908

Card Number: 6568

Expires: 12/7/2024

This card certifies that the cardholder has completed training in the required area of NPDES Construction Stormwater Site Management

SEH Project	RAMSY174498	Rev.#	Revision Issue Description	Date	Rev.#	Revision Issue Description	Date
Drawn By	JRB, SRP						
Designed By	KLK						
Checked By	CES						

I HEREBY CERTIFY THAT THIS PLAN 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 MN.  
  
David E. Hutton  
LICENSE NO. 19133  
DATE 10-06-2023

**WATER TREATMENT PLANT TRUNK WATER MAIN IMPROVEMENTS**  
Ramsey, Minnesota

**STORM WATER POLLUTION PREVENTION PLAN**  
49 of 58

Source: 9/6/2023 1:41 PM aaddeen Plot: 10/7/2023 2:52 PM X:\PT\RAMSY\15978935-final-dsgn1-10-Civil\cardholder\hushle\RA15978935\SW1.dwg



**EROSION PREVENTION MEASURES AND TIMING:**  
THE CONTRACTOR IS RESPONSIBLE FOR ALL EROSION PREVENTION MEASURES FOR THE PROJECT.

EROSION PREVENTION MEASURES SHOWN ON PLANS ARE THE ABSOLUTE MINIMUM REQUIREMENTS. THE CONTRACTOR SHALL IMPLEMENT ADDITIONAL EROSION PREVENTION MEASURES AS NECESSARY TO PROPERLY MANAGE THE PROJECT AREA.

THE CONTRACTOR SHALL PLAN AND IMPLEMENT APPROPRIATE CONSTRUCTION PRACTICES AND CONSTRUCTION PHASING TO MINIMIZE EROSION AND RETAIN VEGETATION WHENEVER POSSIBLE.

THE PERMITTEE SHALL DELINEATE AREAS NOT TO BE DISTURBED. PERMITTEE(S) MUST MINIMIZE THE NEED FOR DISTURBANCE OF PORTIONS OF THE PROJECT WITH STEEP SLOPES. WHEN STEEP SLOPES MUST BE DISTURBED, PERMITTEES MUST USE TECHNIQUES SUCH AS PHASING AND STABILIZATION PRACTICES DESIGNED FOR STEEP SLOPES.

THE CONTRACTOR SHALL STABILIZE OF ALL EXPOSED SOILS IMMEDIATELY TO LIMIT SOIL EROSION. IN NO CASE SHALL ANY EXPOSED AREAS, INCLUDING STOCK PILES, HAVE EXPOSED SOILS FOR MORE THAN 7 DAYS WITHOUT PROVIDING TEMPORARY OR PERMANENT STABILIZATION. STABILIZATION MUST BE COMPLETED WITHIN 7 DAYS AFTER CONSTRUCTION ACTIVITY HAS CEASED. TEMPORARY STOCKPILES WITHOUT SIGNIFICANT CLAY, SILT, OR ORGANIC COMPONENTS DO NOT REQUIRE STABILIZATION.

DRAINAGE PATHS, DITCHES, AND/OR SWALES SHALL HAVE TEMPORARY OR PERMANENT STABILIZATION WITHIN 24 HOURS OF CONNECTING TO A SURFACE WATER OR 24 HOURS AFTER CONSTRUCTION ACTIVITY IN THE DITCH/SWALE HAS TEMPORARILY OR PERMANENTLY CEASED.

THE CONTRACTOR SHALL COMPLETE THE STABILIZATION OF ALL EXPOSED SOILS WITHIN 24 HOURS THAT LIE WITHIN 200 FEET OF PUBLIC WATERS PROMULGATED "WORK IN WATER RESTRICTIONS" BY THE MN DNR DURING SPECIFIED FISH SPAWNING TIMES.

THE CONTRACTOR SHALL IMPLEMENT EROSION CONTROL BMPS AND VELOCITY DISSIPATION DEVICES ALONG CONSTRUCTED STORMWATER CONVEYANCE CHANNELS AND OUTLETS.

THE CONTRACTOR SHALL STABILIZE TEMPORARY AND/OR PERMANENT DRAINAGE DITCHES OR SWALES WITHIN 200 LINEAL FEET FROM PROPERTY EDGE, OR DISCHARGE POINT(S) WITHIN 24 HOURS AFTER CONNECTING TO A SURFACE WATER OR PROPERTY EDGE.

TEMPORARY OR PERMANENT DITCHES OR SWALES USED AS A SEDIMENT CONTAINMENT SYSTEM DURING CONSTRUCTION MUST BE STABILIZED WITHIN 24 HOURS AFTER NO LONGER BEING USED AS A SEDIMENT CONTAINMENT SYSTEM.

THE CONTRACTOR SHALL NOT UTILIZE HYDROMULCH, TACKIFIER, POLYACRYLAMIDE OR SIMILAR EROSION PREVENTION PRACTICES AS A FORM OF STABILIZATION FOR TEMPORARY OR PERMANENT DRAINAGE DITCHES OR SWALE SECTION WITH A CONTINUOUS SLOPE OF GREATER THAN 2 PERCENT.

THE CONTRACTOR SHALL ENSURE PIPE OUTLETS HAVE TEMPORARY OR PERMANENT ENERGY DISSIPATION WITH IN 24 HOURS OF CONNECTION TO A SURFACE WATER.

THE CONTRACTOR SHALL DIRECT DISCHARGES FROM BMPS TO VEGETATED AREAS TO INCREASE SEDIMENT REMOVAL AND MAXIMIZE STORMWATER INFILTRATION. VELOCITY DISSIPATION DEVICES MUST BE USED TO PREVENT EROSION WHEN DIRECTING STORMWATER TO VEGETATED AREAS.

**SEDIMENT CONTROL MEASURES AND TIMING:**  
THE CONTRACTOR IS RESPONSIBLE FOR ALL SEDIMENT CONTROL MEASURES FOR THE PROJECT.

SEDIMENT CONTROL MEASURES SHOWN ON PLANS ARE THE ABSOLUTE MINIMUM REQUIREMENTS. THE CONTRACTOR SHALL IMPLEMENT ADDITIONAL SEDIMENT CONTROL MEASURES AS NECESSARY TO PROPERLY MANAGE THE PROJECT AREA.

THE CONTRACTOR SHALL ENSURE SEDIMENT CONTROL MEASURES ARE ESTABLISHED ON ALL DOWN GRADIENT PERIMETERS BEFORE ANY UPGRADIENT LAND DISTURBING ACTIVITIES BEGIN. THESE MEASURES SHALL REMAIN IN PLACE UNTIL FINAL STABILIZATION HAS BEEN ESTABLISHED.

A FLOATING SILT CURTAIN PLACED IN THE WATER IS NOT A SEDIMENT CONTROL BMP EXCEPT WHEN WORKING ON A SHORELINE OR BELOW THE WATERLINE. IMMEDIATELY AFTER THE SHORT TERM CONSTRUCTION ACTIVITY IS COMPLETE, PERMITTEE(S) MUST INSTALL AN UPLAND PERIMETER CONTROL PRACTICE IF EXPOSED SOILS STILL DRAIN TO A SURFACE WATER.

THE CONTRACTOR SHALL ENSURE SEDIMENT CONTROL PRACTICES REMOVED OR ADJUSTED FOR SHORT-TERM ACTIVITIES BE RE-INSTALLED IMMEDIATELY AFTER THE SHORT-TERM ACTIVITY HAS BEEN COMPLETED. SEDIMENT CONTROL PRACTICES MUST BE REINSTALLED BEFORE THE NEXT PRECIPITATION EVENT EVEN IF THE SHORT-TERM ACTIVITY IS NOT COMPLETE.

THE CONTRACTOR SHALL ENSURE STORM DRAIN INLETS ARE PROTECTED BY APPROPRIATE BMPS DURING CONSTRUCTION UNTIL ALL SOURCES WITH POTENTIAL FOR DISCHARGING TO THE INLET HAVE BEEN STABILIZED.

THE CONTRACTOR SHALL PROVIDE SILT FENCE OR OTHER EFFECTIVE SEDIMENT CONTROL AT THE BASE OF THE STOCKPILES.

THE CONTRACTOR SHALL INSTALL PERIMETER CONTROL AROUND ALL STAGING AREAS, BORROW PITS, AND AREAS CONSIDERED ENVIRONMENTALLY SENSITIVE.

THE CONTRACTOR SHALL ENSURE VEHICLE TRACKING BE MINIMIZED WITH EFFECTIVE BMPS. WHERE THE BMPS FAIL TO PREVENT SEDIMENT FROM TRACKING ONTO STREETS THE CONTRACTOR SHALL CONDUCT STREET SWEEPING TO REMOVE ALL TRACKED SEDIMENT.

THE CONTRACTOR SHALL IMPLEMENT CONSTRUCTION PRACTICES TO MINIMIZE SOIL COMPACTION.

THE CONTRACTOR SHALL ENSURE ALL CONSTRUCTION ACTIVITY REMAIN WITHIN PROJECT LIMITS AND THAT ALL IDENTIFIED RECEIVING WATER BUFFERS ARE MAINTAINED.

RECEIVING WATER	NATURAL BUFFER	IS THE BUFFER BEING ENCRoACHED ON?	REASON FOR BUFFER ENCRoACHMENT
UNNAMED LAKE	0 FT	YES	WATER MAIN ALIGNMENT CONSTRAINED TO LOCATION DUE EASEMENTS AND REQUIRED SEPARATION FROM SANITARY SEWER

A 50 FOOT NATURAL BUFFER MUST BE PRESERVED OR PROVIDE REDUNDANT (DOUBLE) PERIMETER SEDIMENT CONTROLS IF NATURAL BUFFER IS INFEASIBLE.

THE CONTRACTOR SHALL NOT UTILIZE SEDIMENT CONTROL CHEMICALS ON SITE.

**INSPECTION AND MAINTENANCE:**  
ALL INSPECTIONS, MAINTENANCE, REPAIRS, REPLACEMENTS, AND REMOVAL OF BMPS IS TO BE CONSIDERED INCIDENTAL TO THE BMP BID ITEMS.

THE PERMITTEE(S) IS RESPONSIBLE FOR COMPLETING SITE INSPECTIONS, AND BMP MAINTENANCE TO ENSURE COMPLIANCE WITH THE PERMIT REQUIREMENTS.

THE PERMITTEE(S) SHALL INSPECT THE CONSTRUCTION SITE ONCE EVERY 7 DAYS DURING ACTIVE CONSTRUCTION AND WITHIN 24 HOURS AFTER A RAINFALL EVENT GREATER THAN 0.5 INCHES IN 24 HOURS.

THE PERMITTEE(S) SHALL DOCUMENT A WRITTEN SUMMARY OF ALL INSPECTIONS AND MAINTENANCE ACTIVITIES CONDUCTED WITHIN 24 HOURS OF OCCURRENCE. RECORDS OF EACH ACTIVITY SHALL INCLUDE THE FOLLOWING:

- DATE AND TIME OF INSPECTIONS;
- NAME OF PERSON(S) CONDUCTING INSPECTION;
- FINDINGS AND RECOMMENDATIONS FOR CORRECTIVE ACTIONS IF NECESSARY;
- CORRECTIVE ACTIONS TAKEN;
- DATE AND AMOUNT OF RAINFALL EVENTS;
- POINTS OF DISCHARGE OBSERVED DURING INSPECTION AND DESCRIPTION OF THE DISCHARGE
- AMENDMENTS MADE TO THE SWPPP.

THE PERMITTEE(S) SHALL SUBMIT A COPY OF THE WRITTEN INSPECTIONS TO THE ENGINEER AND OWNER ON A MONTHLY BASIS. IF MONTHLY INSPECTION REPORTS ARE NOT SUBMITTED, MONTHLY PAYMENTS MAY BE HELD.

THE CONTRACTOR SHALL DOCUMENT AMENDMENTS TO THE SWPPP AS A RESULT OF INSPECTION(S) WITHIN 7 DAYS.

THE CONTRACTOR SHALL KEEP THE SWPPP, ALL INSPECTION REPORTS, AND AMENDMENTS ONSITE. THE CONTRACTOR SHALL DESIGNATE A SPECIFIC ONSITE LOCATION TO KEEP THE RECORDS

THE CONTRACTOR IS RESPONSIBLE FOR THE OPERATION AND MAINTENANCE OF TEMPORARY AND PERMANENT WATER QUALITY BMP'S, AS WELL AS EROSION AND SEDIMENT CONTROL BMP'S.

THE CONTRACTOR SHALL INSPECT EROSION PREVENTION AND SEDIMENTATION CONTROL BMPS TO ENSURE INTEGRITY AND EFFECTIVENESS. ALL NONFUNCTIONAL BMPS SHALL BE REPAIRED, REPLACED, OR SUPPLEMENTED WITH FUNCTIONAL BMPS WITHIN 24 HOURS OF FINDING. THE CONTRACTOR SHALL INVESTIGATE AND COMPLY WITH THE FOLLOWING INSPECTION AND MAINTENANCE REQUIREMENTS:

PERIMETER CONTROL DEVICES, INCLUDING SILT FENCE SHALL BE REPAIRED, OR REPLACED, WHEN THEY BECOME NONFUNCTIONAL OR THE SEDIMENT REACHES 1/2 OF THE DEVICE HEIGHT. THESE REPAIRS SHALL BE MADE WITHIN 24 HOURS OF DISCOVERY.

TEMPORARY AND PERMANENT SEDIMENT BASINS SHALL BE DRAINED AND THE SEDIMENT REMOVED WHEN THE DEPTH OF SEDIMENT COLLECTED IN THE BASIN REACHES 1/2 THE STORAGE VOLUME. DRAINAGE AND REMOVAL MUST BE COMPLETED WITHIN 72 HOURS OF DISCOVERY.

SURFACE WATERS, INCLUDING DRAINAGE DITCHES AND CONVEYANCE SYSTEMS, MUST BE INSPECTED FOR EVIDENCE OF EROSION AND SEDIMENT DEPOSITION. THE CONTRACTOR SHALL REMOVE ALL DELTAS AND SEDIMENT DEPOSITED IN SURFACE WATERS, INCLUDING DRAINAGE WAYS, CATCH BASINS, AND OTHER DRAINAGE SYSTEMS. THE CONTRACTOR SHALL RE-STABILIZE THE AREAS WHERE SEDIMENT REMOVAL RESULTS IN EXPOSED SOIL. REMOVAL AND STABILIZATION MUST TAKE PLACE WITHIN 7 DAYS OF DISCOVERY, UNLESS PRECLUDED BY LEGAL, REGULATORY, OR PHYSICAL CONSTRAINTS. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING ALL LOCAL, REGIONAL, STATE AND FEDERAL AUTHORITIES AND OBTAIN ANY APPLICABLE PERMITS, PRIOR TO CONDUCTING ANY WORK IN SURFACE WATERS.

CONSTRUCTION SITE VEHICLE EXIT LOCATIONS SHALL BE INSPECTED DAILY FOR EVIDENCE OF SEDIMENT TRACKING ONTO PAVED SURFACES. TRACKED SEDIMENT MUST BE REMOVED FROM ALL PAVED SURFACES WITHIN 24 HOURS OF DISCOVERY.

IF SEDIMENT ESCAPES THE CONSTRUCTION SITE, OFF-SITE ACCUMULATIONS OF SEDIMENT MUST BE REMOVED IN A MANOR AND AT A FREQUENCY SUFFICIENT TO MINIMIZE OFF-SITE IMPACTS.

**EROSION PREVENTION BMP SUMMARY:**  
SEE EROSION AND SEDIMENT CONTROL PLAN SHEET AND BID FORM FOR TYPE, LOCATION, AND QUANTITY OF EROSION PREVENTION BMPS.

**SEDIMENT CONTROL BMP SUMMARY:**  
SEE EROSION AND SEDIMENT CONTROL PLAN SHEETS AND BID FORM FOR TYPE, LOCATION, AND QUANTITY OF SEDIMENT CONTROL BMPS.

**DEWATERING AND BASIN DRAINING ACTIVITIES:**  
THE CONTRACTOR IS RESPONSIBLE FOR ADHERING TO ALL DEWATERING AND SURFACE DRAINAGE REGULATIONS.

WATER FROM DEWATERING ACTIVITIES SHALL DISCHARGE TO A TEMPORARY AND/OR PERMANENT SEDIMENT BASIN.

IF WATER CANNOT BE DISCHARGED TO A SEDIMENTATION BASIN, IT SHALL BE TREATED WITH OTHER APPROPRIATE BMPS, TO EFFECTIVELY REMOVE SEDIMENT.

DISCHARGE THAT CONTAINS OIL OR GREASE MUST BE TREATED WITH AN OIL-WATER SEPARATOR OR SUITABLE FILTRATION DEVICE PRIOR TO DISCHARGE.

WATER FROM DEWATERING SHALL BE DISCHARGED IN A MANNER THAN DOES NOT CAUSE NUISANCE CONDITIONS, EROSION, OR INUNDATION OF WETLANDS.

BACKWASH WATER USED FOR FILTERING SHALL BE HAULED AWAY FOR DISPOSAL, RETURNED TO THE BEGINNING OF TREATMENT PROCESS, OR INCORPORATED INTO THE SITE IN A MANNER THAT DOES NOT CAUSE EROSION. THE CONTRACTOR SHALL REPLACE AND CLEAN FILTER MEDIAS USED IN DEWATERING DEVICES WHEN REQUIRED TO MAINTAIN ADEQUATE FUNCTION.

**POLLUTION PREVENTION MANAGEMENT MEASURES:**  
THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL POLLUTION PREVENTION MANAGEMENT MEASURES.

ALL POLLUTION PREVENTION MEASURES ARE CONSIDERED INCIDENTAL TO THE MOBILIZATION BID ITEM, UNLESS OTHERWISE NOTED.

THE CONTRACTOR IS RESPONSIBLE FOR THE PROPER DISPOSAL, IN COMPLIANCE WITH MPCA DISPOSAL REQUIREMENTS, OF ALL HAZARDOUS MATERIALS, SOLID WASTE, AND PRODUCTS ON-SITE.

THE CONTRACTOR SHALL ENSURE BUILDING PRODUCTS THAT HAVE THE POTENTIAL TO LEAK POLLUTANTS ARE KEPT UNDER COVER TO PREVENT THE DISCHARGE OF POLLUTANTS.

THE CONTRACTOR SHALL ENSURE PESTICIDES, HERBICIDES, INSECTICIDES, FERTILIZERS, TREATMENT CHEMICALS, AND LANDSCAPE MATERIALS ARE COVERED TO PREVENT THE DISCHARGE OF POLLUTANTS.

THE CONTRACTOR SHALL ENSURE HAZARDOUS MATERIALS AND TOXIC WASTE IS PROPERLY STORED IN SEALED CONTAINERS TO PREVENT SPILLS, LEAKS, OR OTHER DISCHARGE. STORAGE AND DISPOSAL OF HAZARDOUS WASTE OR HAZARDOUS MATERIALS MUST BE IN COMPLIANCE WITH MINN. R. CH. 7045 INCLUDING SECONDARY CONTAINMENT AS APPLICABLE.

THE CONTRACTOR SHALL ENSURE ASPHALT SUBSTANCES USED ON-SITE SHALL ARE APPLIED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.

THE CONTRACTOR SHALL ENSURE PAINT CONTAINERS AND CURING COMPOUNDS SHALL BE TIGHTLY SEALED AND STORED WHEN NOT REQUIRED FOR USE. EXCESS PAINT AND/OR CURING COMPOUNDS SHALL NOT BE DISCHARGED INTO THE STORM SEWER SYSTEM AND SHALL BE PROPERLY DISPOSED OF ACCORDING TO MANUFACTURE'S INSTRUCTION.

THE CONTRACTOR SHALL ENSURE SOLID WASTE BE STORED, COLLECTED AND DISPOSED OF PROPERLY IN COMPLIANCE WITH MINN. R. CH. 7035.

THE CONTRACTOR SHALL ENSURE POTABLE TOILETS ARE POSITIONED SO THAT THEY ARE SECURE AND WILL NOT BE TIPPED OR KNOCKED OVER. SANITARY WASTE MUST BE DISPOSED OF PROPERLY IN ACCORDANCE WITH MINN. R. CH. 7041.

THE CONTRACTOR SHALL MONITOR ALL VEHICLES ON-SITE FOR LEAKS AND RECEIVE REGULAR PREVENTION MAINTENANCE TO REDUCE THE CHANCE OF LEAKAGE.

THE CONTRACTOR SHALL ENSURE WASHOUT WASTE MUST CONTACT THE GROUND AND BE PROPERLY DISPOSED OF IN COMPLIANCE WITH MPCA RULES.

THE CONTRACTOR SHALL INCLUDE SPILL KITS WITH ALL FUELING SOURCES AND MAINTENANCE ACTIVITIES. SECONDARY CONTAINMENT MEASURES SHALL BE INSTALLED AND MAINTAINED BY THE CONTRACTOR.

THE CONTRACTOR SHALL ENSURE SPILLS ARE CONTAINED AND CLEANED UP IMMEDIATELY UPON DISCOVERY. SPILLS LARGE ENOUGH TO REACH THE STORM WATER CONVEYANCE SYSTEM SHALL BE REPORTED TO THE MINNESOTA DUTY OFFICER AT 1.800.422.0798.

Save: 9/5/2023 1:41 PM aolisen Plot: 10/7/2023 2:52 PM X:\PT\RAMSY\1597835-final-dgn\5-1-drawings\10-Civil\caad\wg\sheet\RA 1597835\SW1.dwg

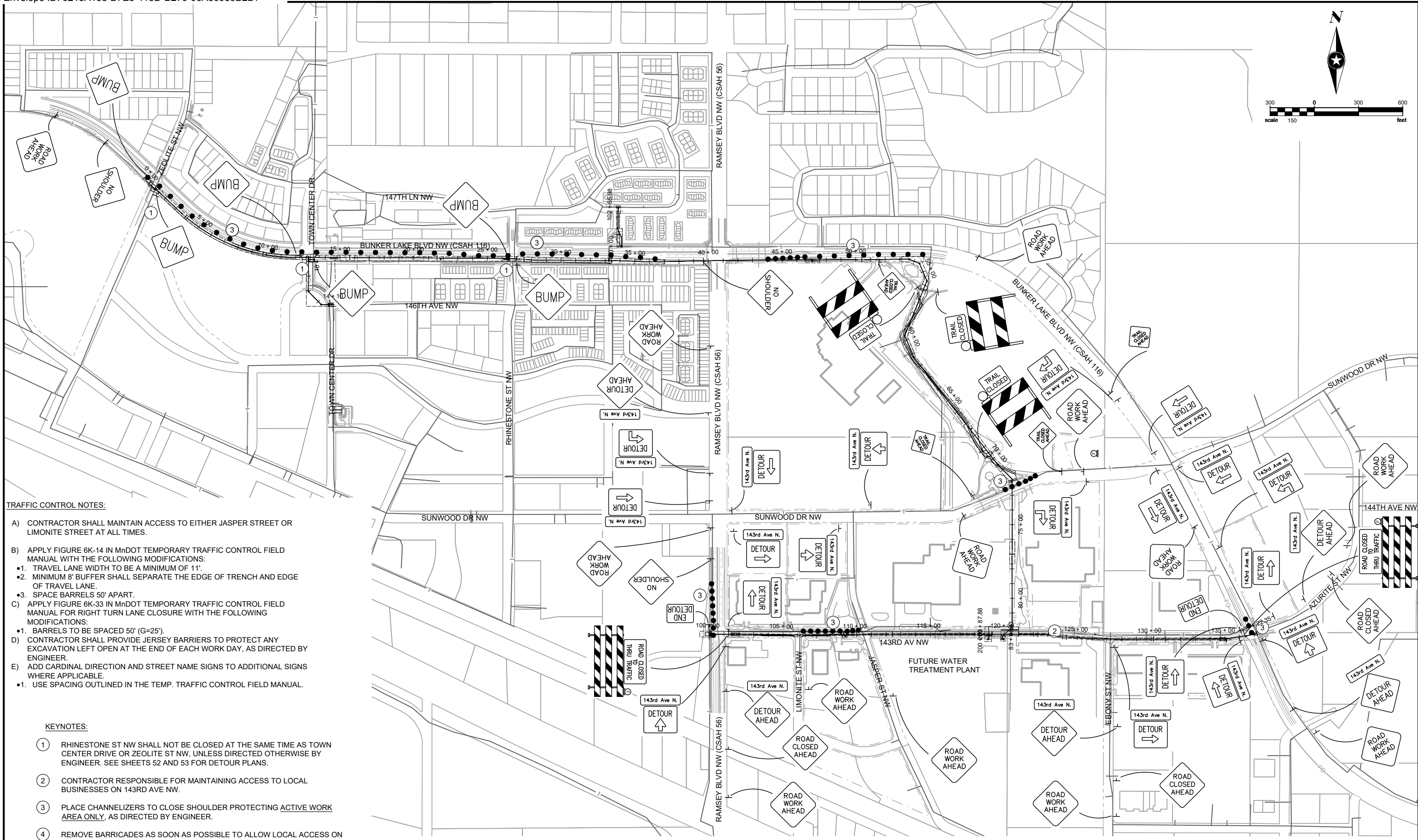
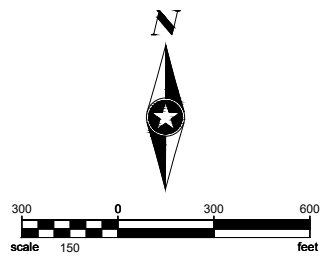
SEH Project	RAMSY174498	Rev.#	Revision Issue Description	Date	Rev.#	Revision Issue Description	Date
Drawn By	JRB, SRP	.			.		
Designed By	KLK	.			.		
Checked By	CES	.			.		



I HEREBY CERTIFY THAT THIS PLAN 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 MN.  
  
 David E. Hutton  
 DATE 10-06-2023 LICENSE NO. 19133

**WATER TREATMENT PLANT**  
**TRUNK WATER MAIN IMPROVEMENTS**  
 Ramsey, Minnesota

**STORM WATER POLLUTION PREVENTION PLAN**  
 50  
 of 58



**TRAFFIC CONTROL NOTES:**

- A) CONTRACTOR SHALL MAINTAIN ACCESS TO EITHER JASPER STREET OR LIMONITE STREET AT ALL TIMES.
- B) APPLY FIGURE 6K-14 IN MnDOT TEMPORARY TRAFFIC CONTROL FIELD MANUAL WITH THE FOLLOWING MODIFICATIONS:
  - 1. TRAVEL LANE WIDTH TO BE A MINIMUM OF 11'.
  - 2. MINIMUM 8' BUFFER SHALL SEPARATE THE EDGE OF TRENCH AND EDGE OF TRAVEL LANE.
  - 3. SPACE BARRELS 50' APART.
- C) APPLY FIGURE 6K-33 IN MnDOT TEMPORARY TRAFFIC CONTROL FIELD MANUAL FOR RIGHT TURN LANE CLOSURE WITH THE FOLLOWING MODIFICATIONS:
  - 1. BARRELS TO BE SPACED 50' (G=25').
- D) CONTRACTOR SHALL PROVIDE JERSEY BARRIERS TO PROTECT ANY EXCAVATION LEFT OPEN AT THE END OF EACH WORK DAY, AS DIRECTED BY ENGINEER.
- E) ADD CARDINAL DIRECTION AND STREET NAME SIGNS TO ADDITIONAL SIGNS WHERE APPLICABLE.
  - 1. USE SPACING OUTLINED IN THE TEMP. TRAFFIC CONTROL FIELD MANUAL.

**KEYNOTES:**

- ① RHINESTONE ST NW SHALL NOT BE CLOSED AT THE SAME TIME AS TOWN CENTER DRIVE OR ZEOLITE ST NW, UNLESS DIRECTED OTHERWISE BY ENGINEER. SEE SHEETS 52 AND 53 FOR DETOUR PLANS.
- ② CONTRACTOR RESPONSIBLE FOR MAINTAINING ACCESS TO LOCAL BUSINESSES ON 143RD AVE NW.
- ③ PLACE CHANNELIZERS TO CLOSE SHOULDER PROTECTING ACTIVE WORK AREA ONLY, AS DIRECTED BY ENGINEER.
- ④ REMOVE BARRICADES AS SOON AS POSSIBLE TO ALLOW LOCAL ACCESS ON 143RD STREET

Save: 9/25/2023 2:22 PM aolsen Plot: 10/7/2023 2:53 PM X:\PT\RAMSY\15978315-final-dsgn15-drawings\10-Civil\caddwg\sheet\RA159783101.dwg

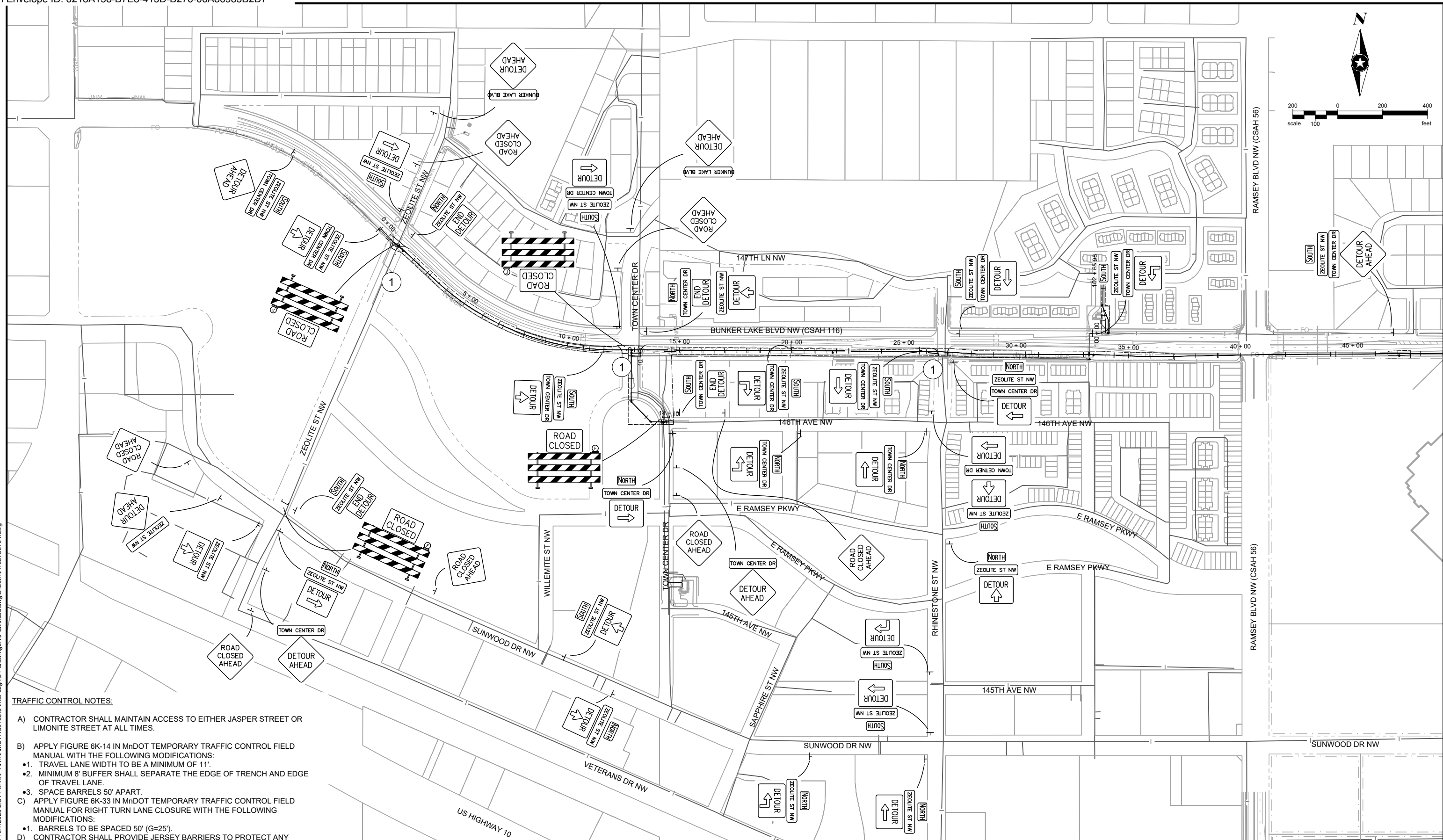
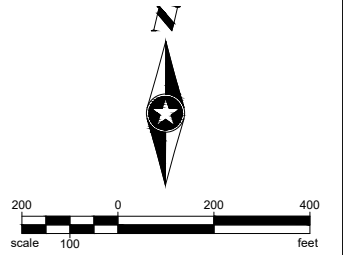
SEH Project	RAMSY174498	Rev.#	Revision Issue Description	Date	Rev.#	Revision Issue Description	Date
Drawn By	JRB, SRP	.	.	.	.	.	.
Designed By	KLK	.	.	.	.	.	.
Checked By	CES	.	.	.	.	.	.

I HEREBY CERTIFY THAT THIS PLAN 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 MN.

*David E. Hutton*  
 David E. Hutton  
 LICENSE NO. 19133  
 DATE 10-06-2023

**WATER TREATMENT PLANT TRUNK WATER MAIN IMPROVEMENTS**  
 Ramsey, Minnesota

**TRAFFIC CONTROL PLAN**




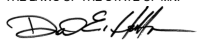
**TRAFFIC CONTROL NOTES:**

- A) CONTRACTOR SHALL MAINTAIN ACCESS TO EITHER JASPER STREET OR LIMONITE STREET AT ALL TIMES.
- B) APPLY FIGURE 6K-14 IN MnDOT TEMPORARY TRAFFIC CONTROL FIELD MANUAL WITH THE FOLLOWING MODIFICATIONS:
  - 1. TRAVEL LANE WIDTH TO BE A MINIMUM OF 11'.
  - 2. MINIMUM 8' BUFFER SHALL SEPARATE THE EDGE OF TRENCH AND EDGE OF TRAVEL LANE.
  - 3. SPACE BARRELS 50' APART.
- C) APPLY FIGURE 6K-33 IN MnDOT TEMPORARY TRAFFIC CONTROL FIELD MANUAL FOR RIGHT TURN LANE CLOSURE WITH THE FOLLOWING MODIFICATIONS:
  - 1. BARRELS TO BE SPACED 50' (G=25).
- D) CONTRACTOR SHALL PROVIDE JERSEY BARRIERS TO PROTECT ANY EXCAVATION LEFT OPEN AT THE END OF EACH WORK DAY, AS DIRECTED BY ENGINEER.
- E) ADD CARDINAL DIRECTION AND STREET NAME SIGNS TO ADDITIONAL SIGNS WHERE APPLICABLE.
  - 1. USE SPACING OUTLINED IN THE TEMP. TRAFFIC CONTROL FIELD MANUAL.

**KEYNOTES:**

- ① RHINESTONE ST NW SHALL NOT BE CLOSED AT THE SAME TIME AS TOWN CENTER DRIVE OR ZEOLITE ST NW, UNLESS DIRECTED OTHERWISE BY ENGINEER. SEE SHEETS 52 AND 53 FOR DETOUR PLANS.

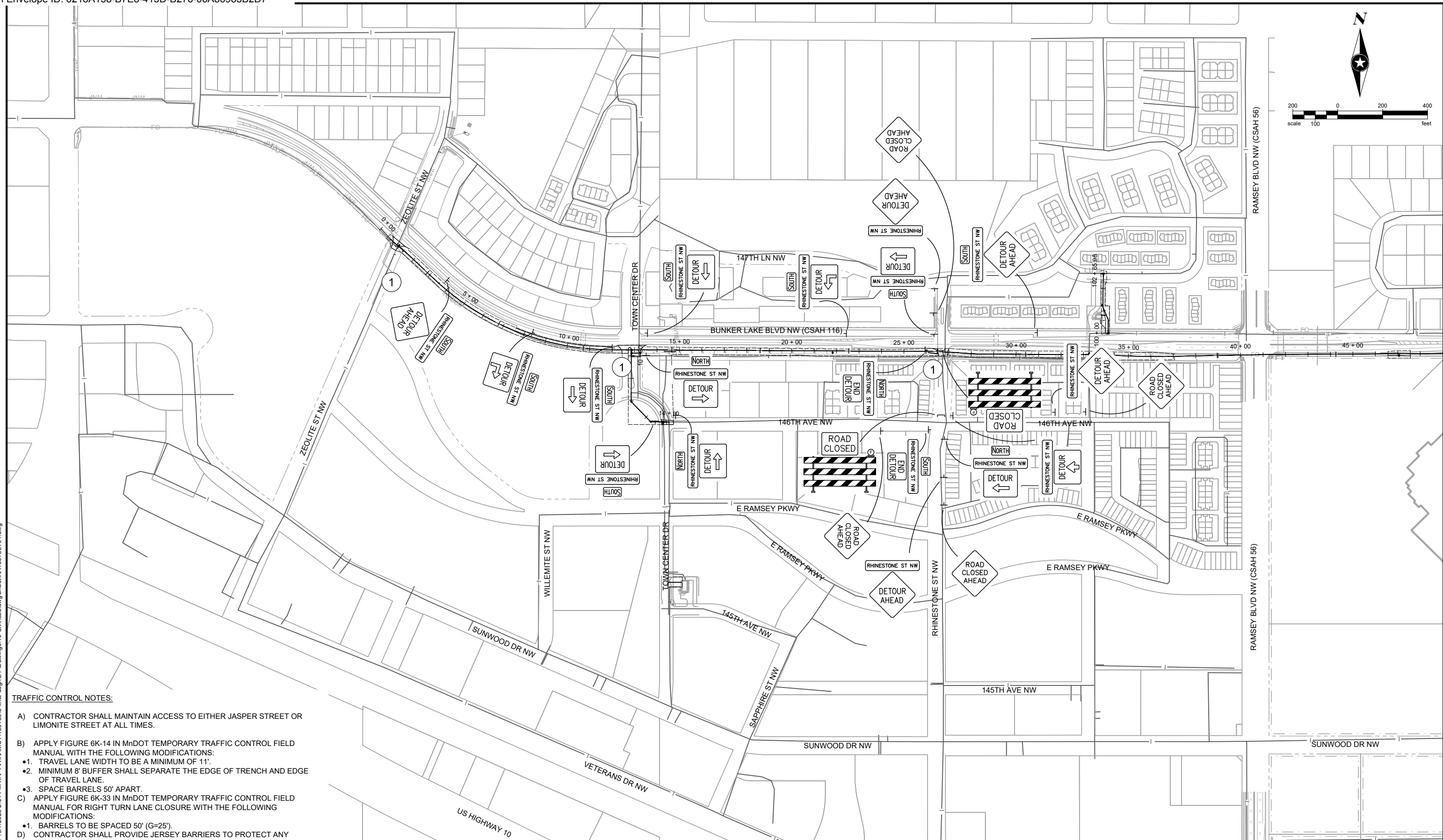
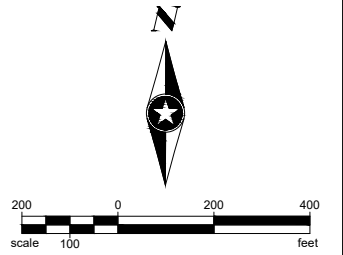
SEH Project	RAMSY174498	Rev.#	Revision Issue Description	Date	Rev.#	Revision Issue Description	Date
Drawn By	JRB, SRP	.	.	.	.	.	.
Designed By	KLK	.	.	.	.	.	.
Checked By	CES	.	.	.	.	.	.


 I HEREBY CERTIFY THAT THIS PLAN 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 MN.  
  
 David E. Hutton  
 LICENSE NO. 19133  
 DATE 10-06-2023

**WATER TREATMENT PLANT**  
**TRUNK WATER MAIN IMPROVEMENTS**  
 Ramsey, Minnesota

**DETOUR PLAN**  
**ZEOLITE ST NW AND TOWN CENTER DR**  
**NW**

Save: 9/25/2023 2:22 PM aolsen Plot: 10/7/2023 2:54 PM X:\PT\RAMSY\15978315-final-dsgn\1-drawings\10-Civil\cad\dwg\sheet\RA159783101.dwg



**TRAFFIC CONTROL NOTES:**

- A) CONTRACTOR SHALL MAINTAIN ACCESS TO EITHER JASPER STREET OR LIMONITE STREET AT ALL TIMES.
- B) APPLY FIGURE 6K-14 IN MnDOT TEMPORARY TRAFFIC CONTROL FIELD MANUAL WITH THE FOLLOWING MODIFICATIONS:
  - 1. TRAVEL LANE WIDTH TO BE A MINIMUM OF 11'.
  - 2. MINIMUM 8' BUFFER SHALL SEPARATE THE EDGE OF TRENCH AND EDGE OF TRAVEL LANE.
  - 3. SPACE BARRELS 50' APART.
- C) APPLY FIGURE 6K-33 IN MnDOT TEMPORARY TRAFFIC CONTROL FIELD MANUAL FOR RIGHT TURN LANE CLOSURE WITH THE FOLLOWING MODIFICATIONS:
  - 1. BARRELS TO BE SPACED 50' (G=25).
- D) CONTRACTOR SHALL PROVIDE JERSEY BARRIERS TO PROTECT ANY EXCAVATION LEFT OPEN AT THE END OF EACH WORK DAY, AS DIRECTED BY ENGINEER.
- E) ADD CARDINAL DIRECTION AND STREET NAME SIGNS TO ADDITIONAL SIGNS WHERE APPLICABLE.
  - 1. USE SPACING OUTLINED IN THE TEMP. TRAFFIC CONTROL FIELD MANUAL.

**KEYNOTES:**

- ① RHINESTONE ST NW SHALL NOT BE CLOSED AT THE SAME TIME AS TOWN CENTER DRIVE OR ZEOLITE ST NW, UNLESS DIRECTED OTHERWISE BY ENGINEER. SEE SHEETS 52 AND 53 FOR DETOUR PLANS.

SEH Project	RAMSY174498	Rev.#	Revision Issue Description	Date	Rev.#	Revision Issue Description	Date
Drawn By	JRB, SRP	.			.		
Designed By	KLK	.			.		
Checked By	CES	.			.		

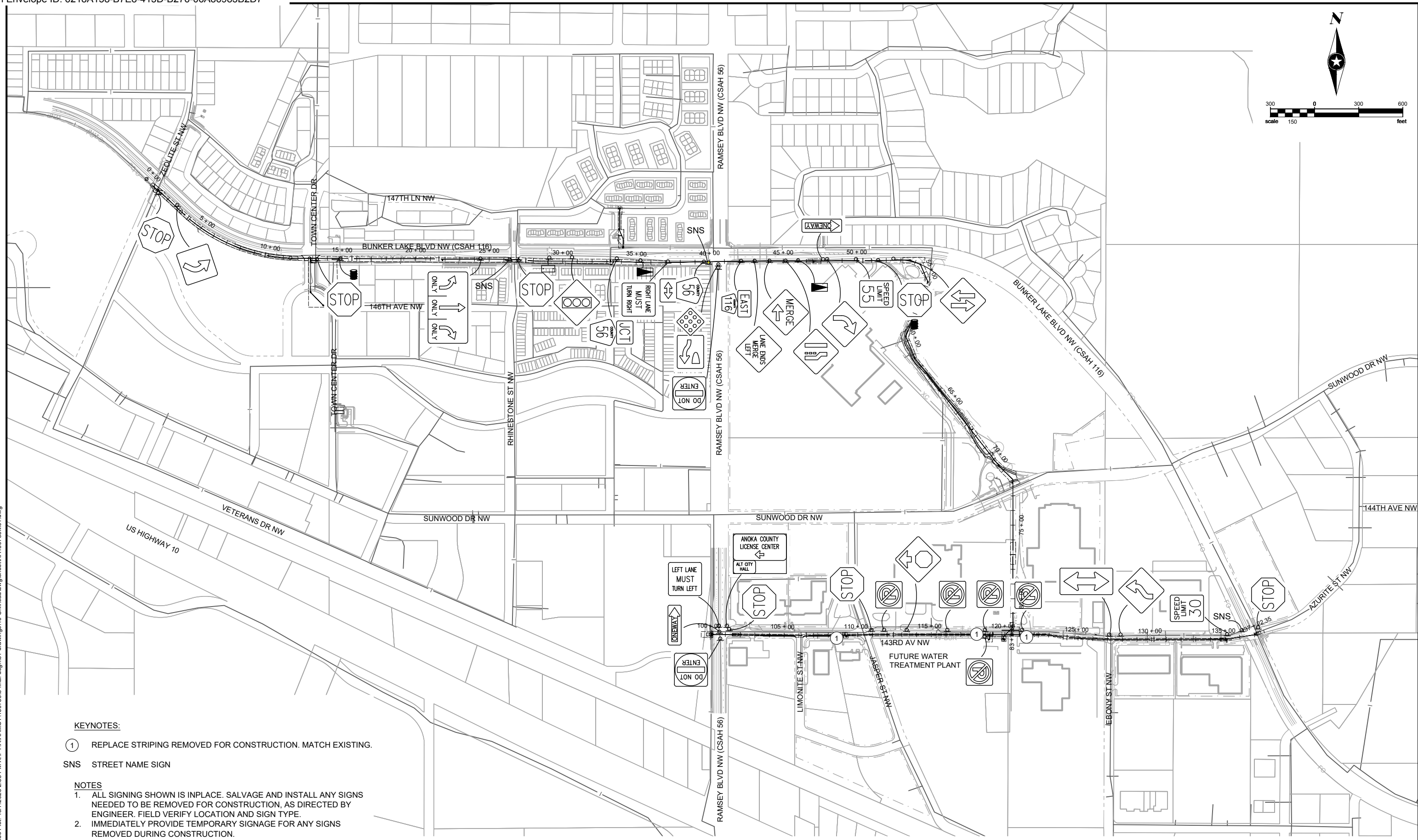
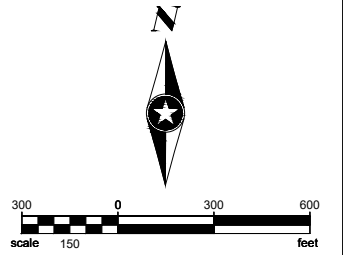
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MN.

*David E. Hutton*  
 David E. Hutton  
 LICENSE NO. 19133  
 DATE 10-06-2023

**WATER TREATMENT PLANT TRUNK WATER MAIN IMPROVEMENTS**  
 Ramsey, Minnesota

Save: 9/25/2023 2:22 PM aolsen Plot: 10/7/2023 2:54 PM X:\PT\RAMSY\15978315-final-dsgn\10-Civil\cad\dwg\sheet\RA159783101.dwg





**KEYNOTES:**

- ① REPLACE STRIPING REMOVED FOR CONSTRUCTION. MATCH EXISTING.
- SNS STREET NAME SIGN

**NOTES**

1. ALL SIGNING SHOWN IS INPLACE. SALVAGE AND INSTALL ANY SIGNS NEEDED TO BE REMOVED FOR CONSTRUCTION, AS DIRECTED BY ENGINEER. FIELD VERIFY LOCATION AND SIGN TYPE.
2. IMMEDIATELY PROVIDE TEMPORARY SIGNAGE FOR ANY SIGNS REMOVED DURING CONSTRUCTION.

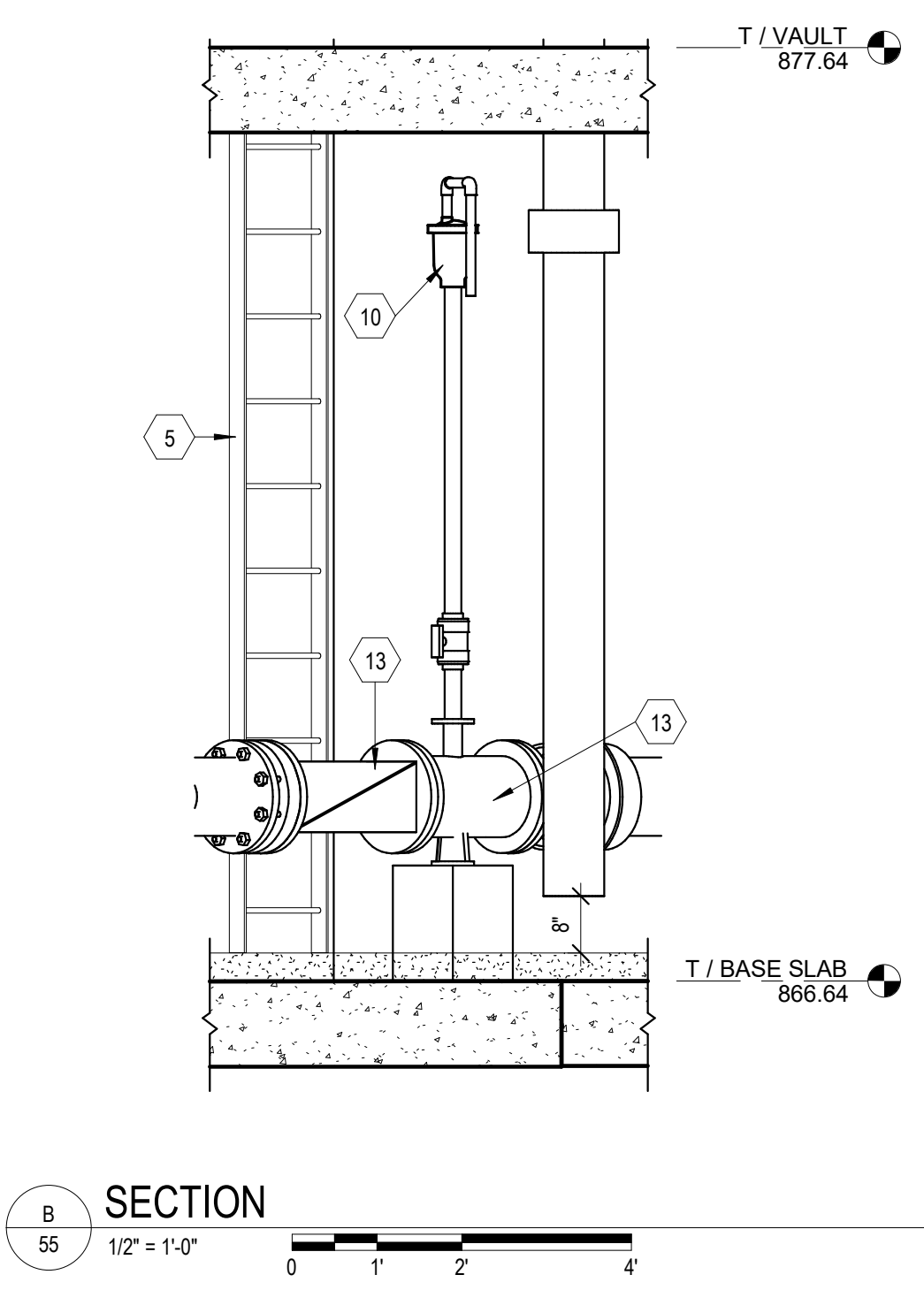
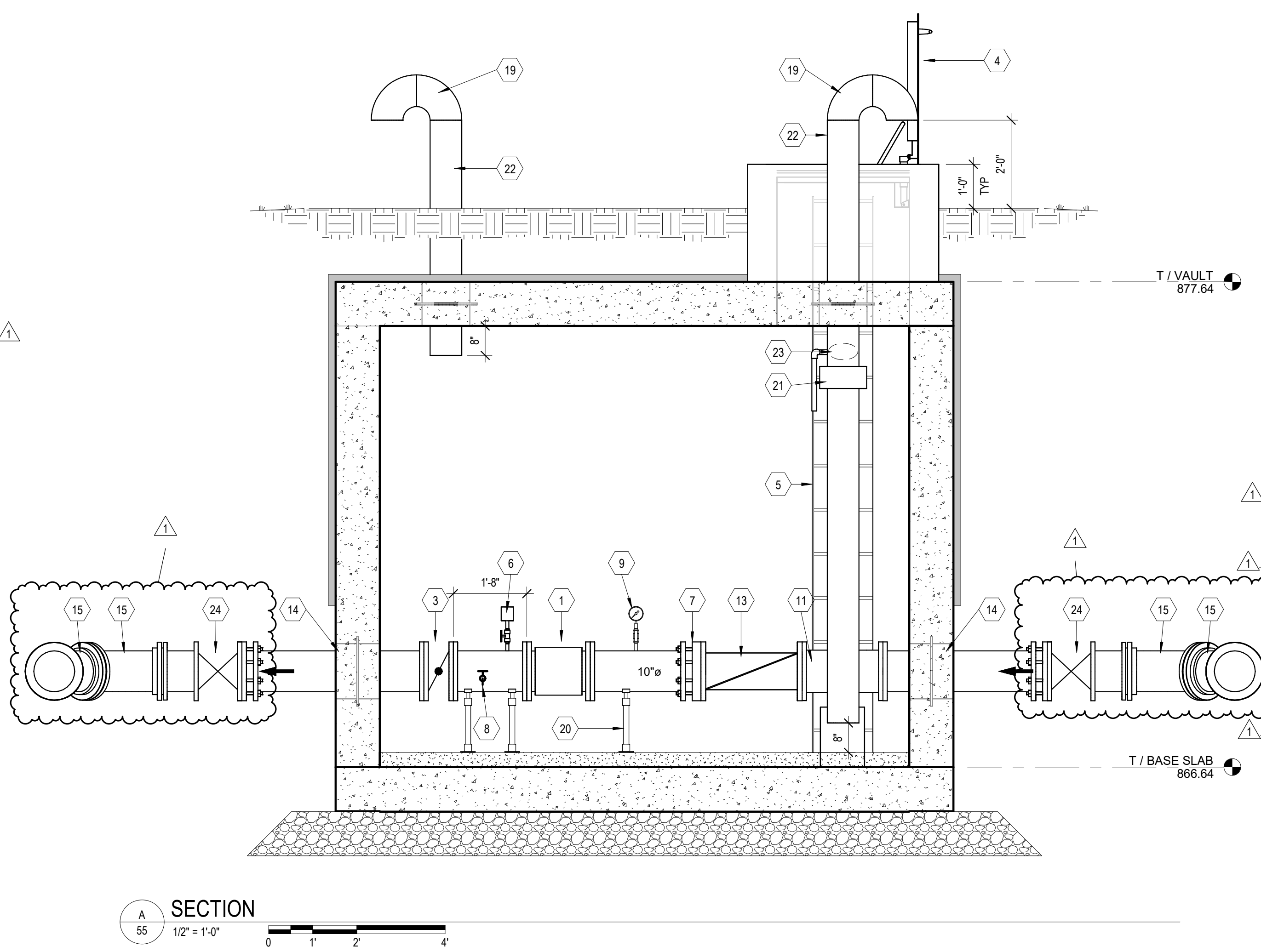
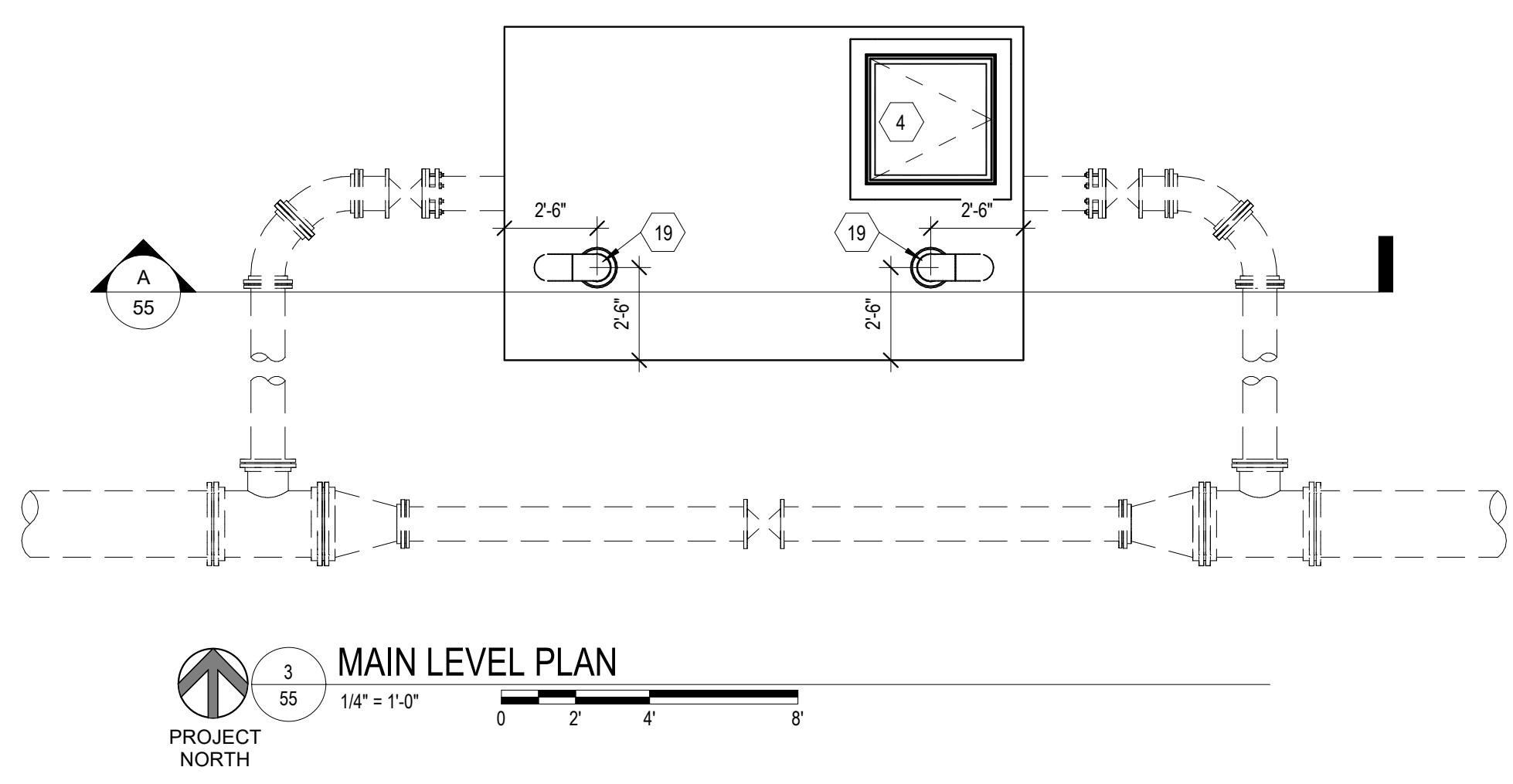
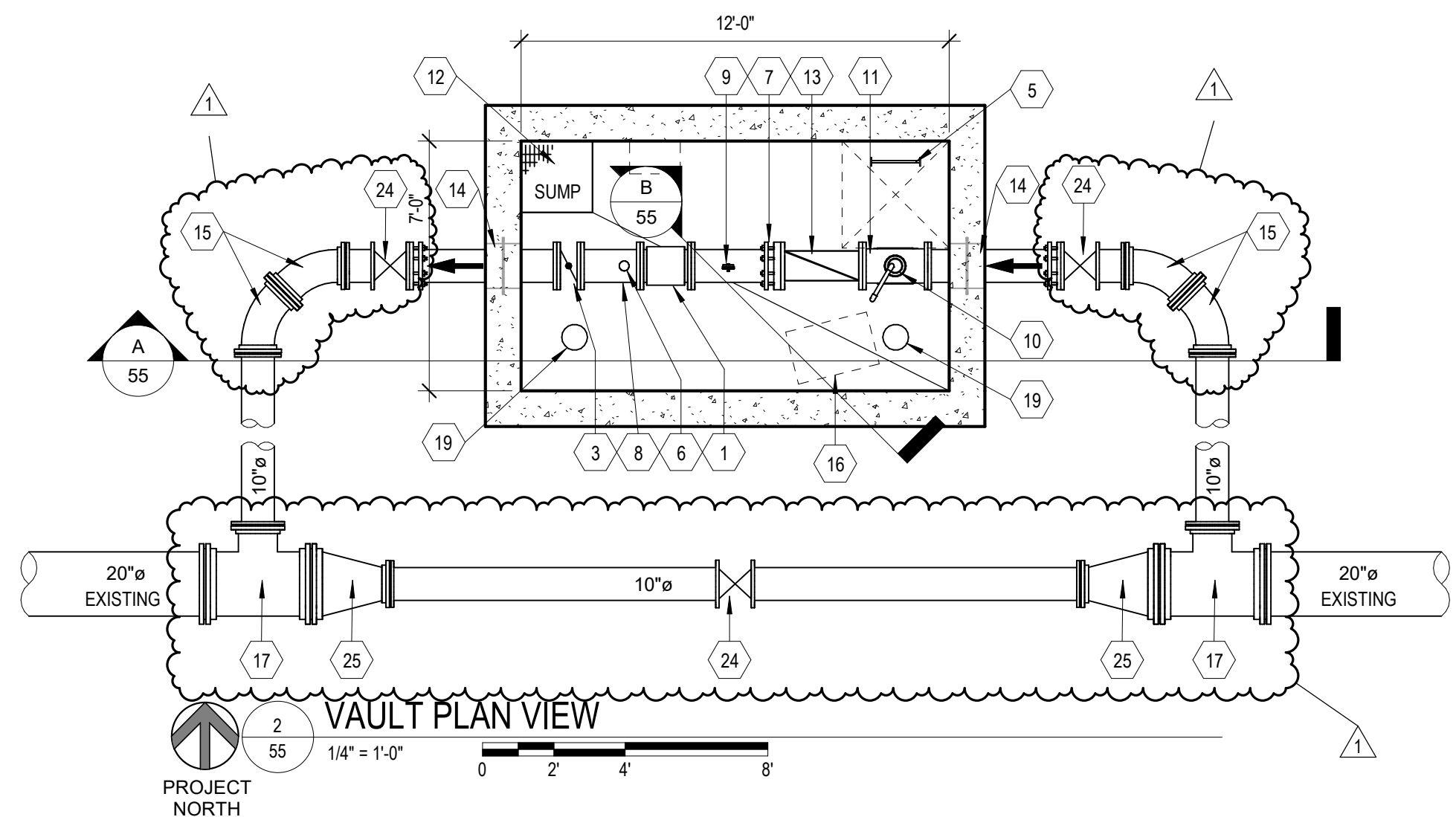
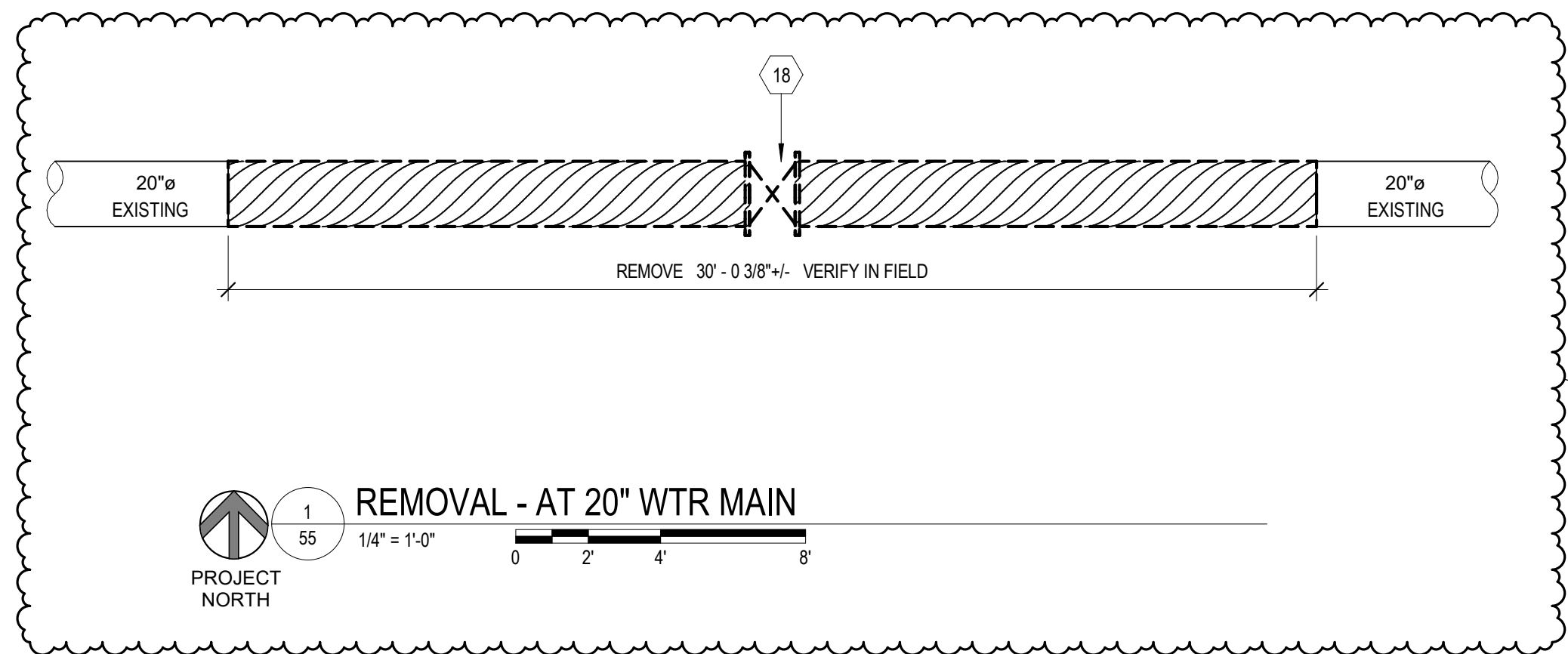
Save: 10/7/2023 2:10 PM Knowles Plot: 10772023 2:55 PM X:\PT\RAMS\1597835-final.dgn\51-drawings\10-Civil\cad\dwg\sheet\RA159783M01.dwg

SEH Project	RAMSY174498	Rev.#	Revision Issue Description	Date	Rev.#	Revision Issue Description	Date
Drawn By	JRB, SRP	.			.		
Designed By	KLK	.			.		
Checked By	CES	.			.		

I HEREBY CERTIFY THAT THIS PLAN 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 MN.

*David E. Hutton*  
 David E. Hutton  
 LICENSE NO. 19133  
 DATE 10-06-2023

**WATER TREATMENT PLANT  
 TRUNK WATER MAIN IMPROVEMENTS**  
 Ramsey, Minnesota



- ### KEYNOTES
- 1 10" FLOW METER
  - 2 2" RIGID POLYSTYRENE BOARD INSULATION TYPE X (ASTM C578) FASTENED TO CONCRETE WITH COMPATIBLE ADHESIVE
  - 3 10" BUTTERFLY VALVE
  - 4 36" x 36" CLEAR OPENING. WATER TIGHT, ALUMINUM ACCESS HATCH WITH FALL THROUGH PROTECTION.
  - 5 ALUMINUM LADDER W/ EXTENSION. SEE G/54
  - 6 AIR RELIEF VALVE
  - 7 10" FLANGE COUPLING ADAPTER
  - 8 SAMPLE TAP. SEE F/54
  - 9 TAP FOR 4-1/2" PRESSURE GAUGE 3/4" TAP, 3/4" SS BALL VALVE, SS NIPPLES AND SS CAP (QTY OF 2). SEE C/54.
  - 10 2" AIR/VACUUM VALVE
  - 11 10" x 4" FLANGED TEE, REDUCING
  - 12 SUMP PUMP
  - 13 10" CHECK VALVE
  - 14 WALL SLEEVE. SEE DETAIL B/54
  - 15 10" MJ 45° ELBOW (TYP 4)
  - 16 ELECTRIC HEATER MOUNTED TO CEILING
  - 17 20"x10" MJ TEE
  - 18 REMOVE EXISTING 20" GATE VALVE & WATER MAIN PIPING
  - 19 8" STEEL RETURN AIR VENT WITH INSECT SCREEN. SEE E/54
  - 20 STEEL PIPE SUPPORT. SEE A/54
  - 21 8" INLINE FAN
  - 22 8" FRP VENT PIPE
  - 23 GRAVITY EXHAUST DAMPER
  - 24 10" GATE VALVE (TYP 3)
  - 25 20" x 10" MJ REDUCER

- ### NOTES:
1. ALL UNDERGROUND PIPING SHALL BE LAID ON GRADE BETWEEN THE ELEVATION POINTS SHOWN. NO LOW OR HIGH POINTS WILL BE ALLOWED EXCEPT AS SHOWN.
  2. ALL MECHANICAL JOINTS SHALL BE RESTRAINED
  3. SIZE OF FITTINGS AND VALVES SHALL CORRESPOND TO THE SIZE OF ADJACENT PIPING. ALL BOLTS AND TIES SHALL BE OF STAINLESS STEEL
  4. ALL LINES SHALL BE ADEQUATELY ANCHORED AND SUPPORTED TO PREVENT EXCESSIVE MOVEMENT DURING OPERATION AND TESTING.
  5. PIPING WITHIN THE VALVE VAULT SHALL BE FLANGED.
  6. ALL FASTENERS SHALL BE STAINLESS STEEL.

SEH Project	RAMSY 174498	Rev. #	Revision Issue Description	Date	Rev. #	Revision Issue Description	Date
Drawn By:	KAK	1	ADDENDUM #2	10/27/2023			
Designed By:	KAK						
Checked By:	MBJ						

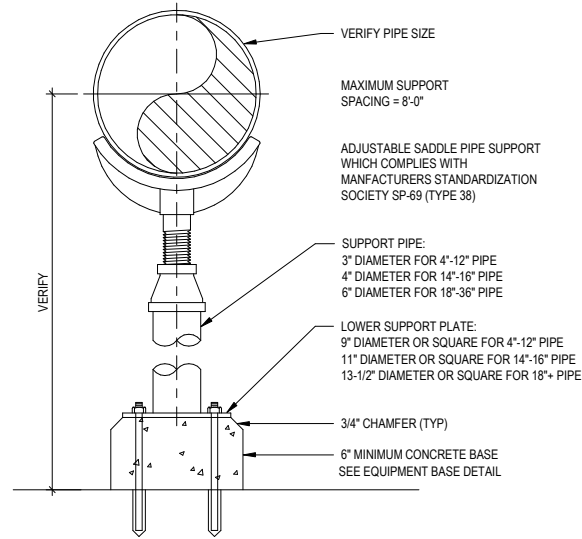
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

MILES B. JENSEN  
DATE 9/29/2023 LICENSE NO. 19869

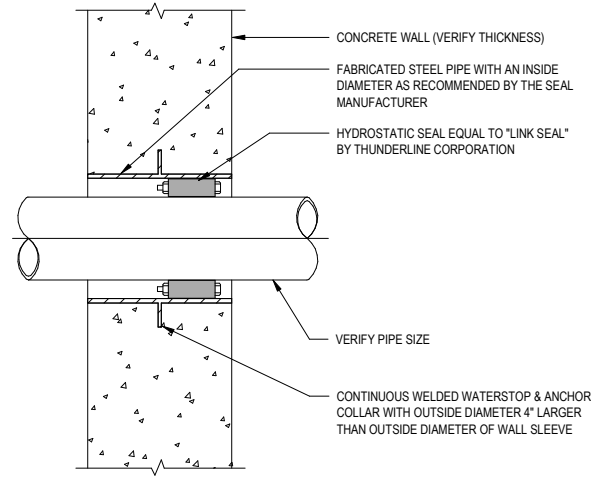
## WATER TREATMENT PLANT TRUNK WATER MAIN IMPROVEMENTS

Ramsey, Minnesota

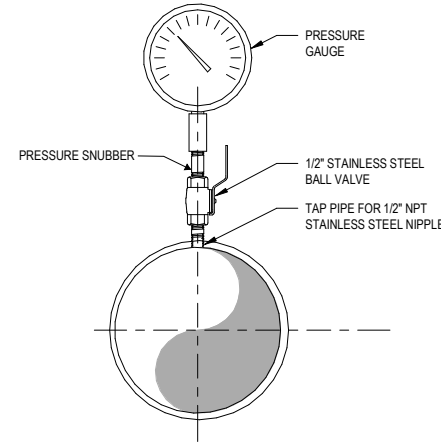




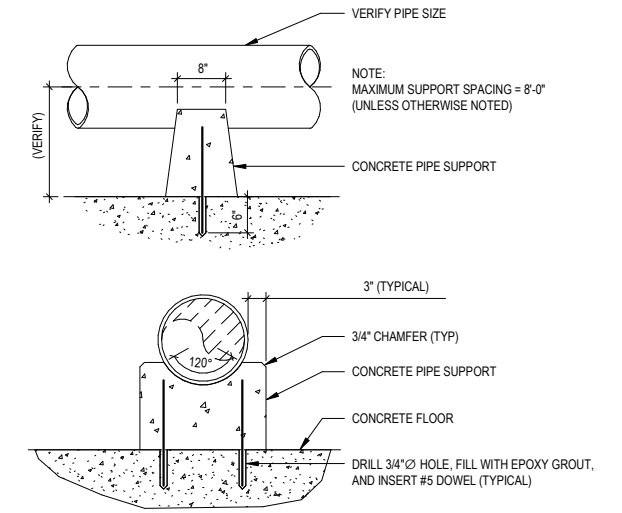
**A** STEEL PIPE SUPPORT  
 56 NOT TO SCALE



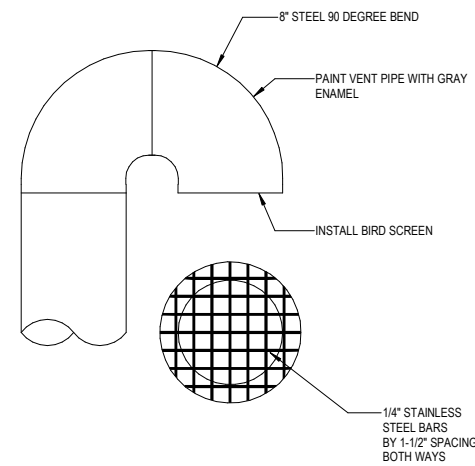
**B** WALL SLEEVE DETAIL  
 56 NOT TO SCALE



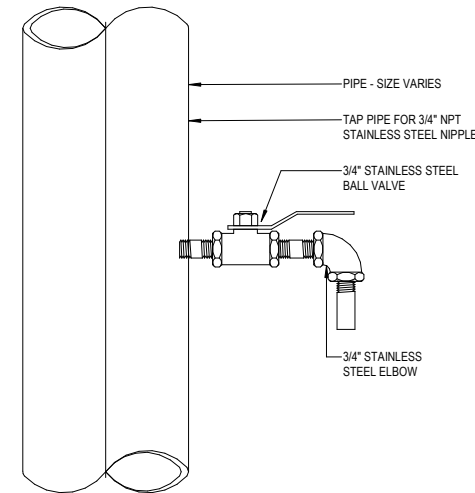
**C** PRESSURE GAUGE TAP DETAIL  
 56 NOT TO SCALE



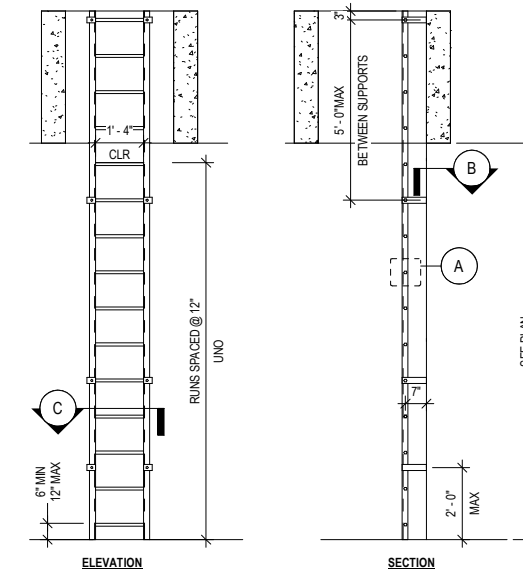
**D** CONCRETE PIPE SUPPORT  
 56 NOT TO SCALE



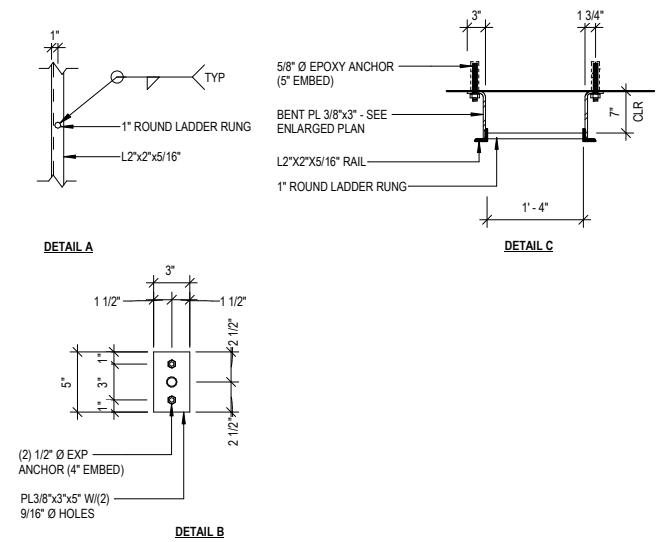
**E** STEEL VENT SCREEN  
 56 NOT TO SCALE



**F** SAMPLE TAP DETAIL  
 56 NOT TO SCALE



**G** ALUMINUM LADDER DETAIL  
 56 NOT TO SCALE



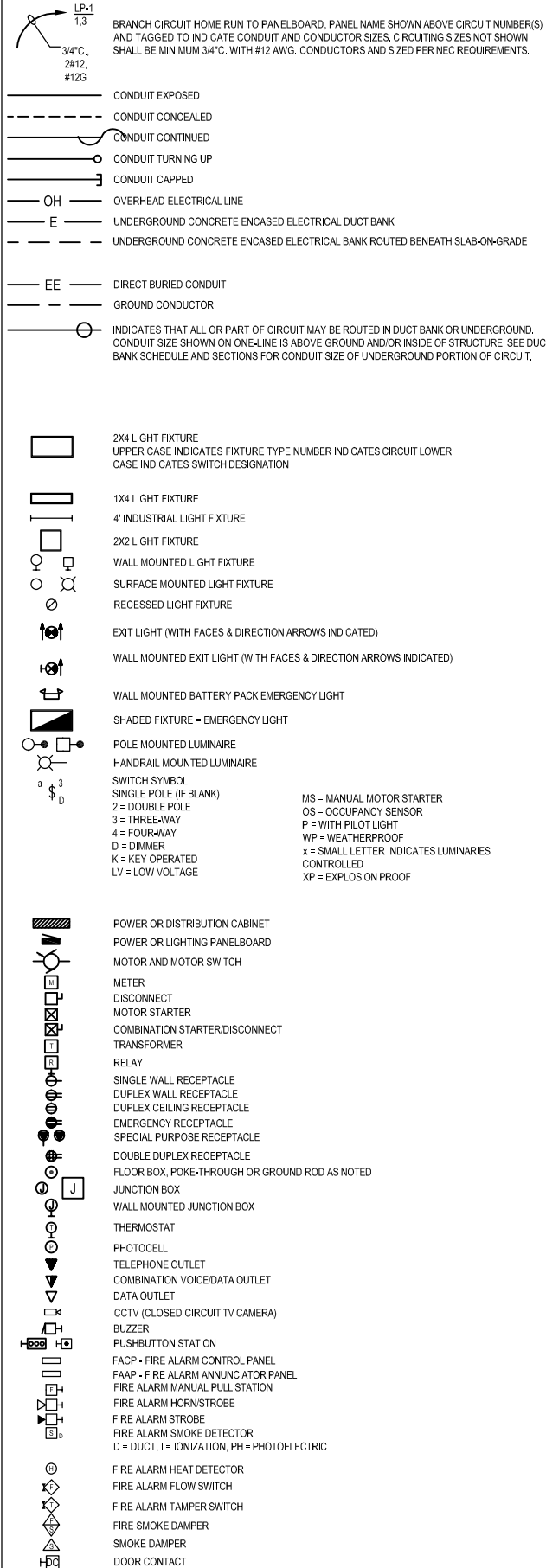
SEH Project	RAMSY 174498	Rev. #	Revision Issue Description	Date	Rev. #	Revision Issue Description	Date
Drawn By:	KAK						
Designed By:	KAK						
Checked By:	MBJ						



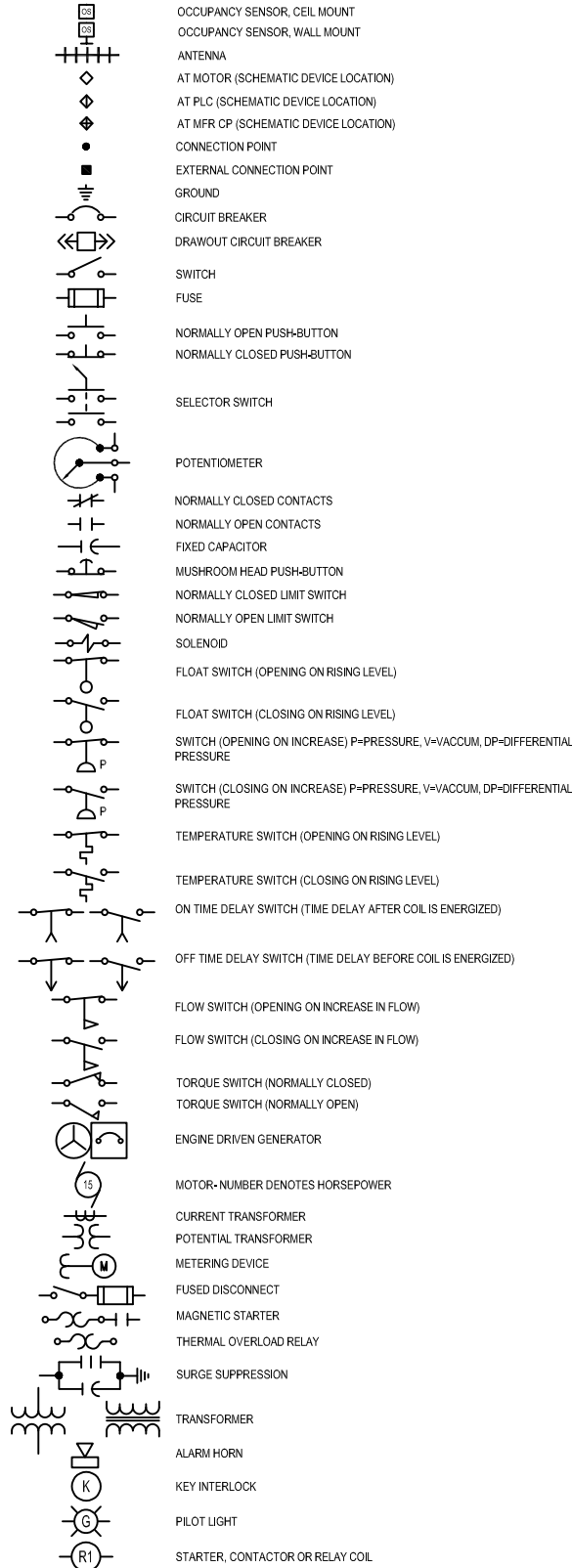
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.  
 MILES B. JENSEN  
 DATE 9/29/2023  
 LICENSE NO. 19869

**WATER TREATMENT PLANT TRUNK WATER MAIN IMPROVEMENTS**  
 Ramsey, Minnesota

POWER & LIGHTING SYMBOLS



SCHEMATIC SYMBOLS



MISC. SYSTEM COMPONENT, SEE ABBREVIATIONS FOR LETTER DESIGNATIONS NOT LISTED BELOW.

LE = LEVEL ELEMENT  
LIT = LEVEL INDICATING TRANSMITTER  
FE = FLOW ELEMENT  
FIT = FLOW INDICATING TRANSMITTER  
FS = FLOW SWITCH  
HS = HAND SWITCH  
PB = PULLBOX  
PT = PRESSURE TRANSDUCER  
SS = SOFT STARTER  
TS = TAMPER SWITCH  
ATS = AUTOMATIC TRANSFER SWITCH  
HOA = HAND OFF AUTO SELECTOR SWITCH  
TIT = TEMPERATURE INDICATING TRANSMITTER  
TSH = TEMPERATURE SWITCH HIGH  
TVSS = TRANSIENT VOLTAGE SURGE SUPPRESSER  
VFD = VARIABLE FREQUENCY DRIVE  
SV = SOLENOID VALVE  
XS = MOISTURE SWITCH  
XSH = MOISTURE SWITCH HIGH  
ZS = POSITION SWITCH

ELECTRICAL ABBREVIATIONS

A	AMBER, AMPERE, ALARM	LIT	LEVEL INDICATING TRANSMITTER
AC	ALTERNATING CURRENT	LP	LIGHTING PANEL
AF	ABOVE FINISHED FLOOR	LS	LIMIT OR LEVEL SWITCH
AFG	ABOVE FINISHED GRADE	LTG	LIGHTING
AM	AMMETER	LWCO	LOW WATER CUTOFF
ANN	ANNUNCIATOR	M	MAGNETIC MOTOR STARTER
AR	ALARM RELAY	MA	MILLIAMPERE
AS	AMMETER SWITCH	MCB	MAIN CIRCUIT BREAKER
ATS	AUTOMATIC TRANSFER SWITCH	MCC	MOTOR CONTROL CENTER
AWG	AMERICAN WIRE GAUGE	MD	MOISTURE DETECTOR
BC	BATTERY CHARGER	MFR	MANUFACTURER
BILDG	BUILDING	MH	MANHOLE OR MOUNTING HEIGHT
C	CLOSE, COUNTER OR CONTACTOR	MOV	MOTOR OPERATED VALVE
CAP	CAPACITOR	MS	MANUAL MOTOR STARTER
CB	CIRCUIT BREAKER	MSH	MOTOR SPACE HEATER
CD	CONTROL DAMPER	MTR	MOTOR
CGD	COMBUSTIBLE GAS DETECTOR	MTS	MANUAL TRANSFER SWITCH
CKT	CIRCUIT	MV	MILLIVOLT, MEDIUM VOLTAGE
CL2	CHLORINE	MVA	MEGA VOLT AMPERE
CP	CONTROL PANEL	N	NEUTRAL
CPT	CONTROL POWER TRANSFORMER	NC	NORMALLY CLOSED
CR	CURRENT OR CONTROL RELAY	NMC	NON-METALLIC CONDUIT
CS	CONTROL STATION	NO	NORMALLY OPEN
CT	CYCLE TIMER OR CURRENT TRANSFORMER	O	OPEN
CV	CONTROL VALVE	OL	OVERLOAD
2/C	2 CONDUCTOR	OOA	ON-OFF-AUTO
4"C	4" CONDUIT	OOR	ON-OFF-REMOTE
DC	DIRECT CURRENT	OH	OVERHEAD
DI	DOOR INTERLOCK	P	PRIMARY
DM	DAMPER MOTOR OR DEMAND METER	PB	PUSHBUTTON OR PULL BOX
DPDT	DOUBLE POLE DOUBLE THROW	PLC	PROGRAMMABLE LOGIC CONTROLLER
DPST	DOUBLE POLE SINGLE THROW	PF	POWER FACTOR
DP	DIFFERENTIAL PRESSURE	PFCC	POWER FACTOR CORRECTION CAPACITOR
DPS	DIFFERENTIAL PRESSURE SWITCH	PH	PHASE, CHEMICAL TERM
DS, DISC	DISCONNECT SWITCH	PRS	PROXIMITY SWITCH
DWG	DRAWING	PRV	POWER ROOF VENTILATOR
E	EMERGENCY OR DAMPER OPERATOR	PS	PRESSURE SWITCH OR PUMP STATION
EC	EMPTY CONDUIT	PT	POTENTIAL TRANSFORMER OR PROGRAM TIMER
ECP	EQUIPMENT CONTROL PANEL	PVC	POLYVINYL CONDUIT
EG	ENGINE GENERATOR	2P	2 POLE
EL	ELEVATION OR EMERGENCY LIGHT	R	RED, RAISE RELAY OR REVERSE
EMH	ELECTRICAL MANHOLE	RECP	RECEPTACLE
ES	END SWITCH	RGS	RIGID GALVANIZED STEEL
ETM	ELAPSED TIME METER	RMC	RIGID METALLIC CONDUIT
EUH	ELECTRICAL UNIT HEATER	RTD	RESISTANCE TYPE TEMP DETECTOR
EVS	EMERGENCY VENTILATION SHUTOFF	RTU	REMOTE TERMINAL UNIT
EXIST	EXISTING	SA	SURGE SUPPRESSOR
F	FORWARD	SCC	SHORT CIRCUIT CURRENT
FA	FIRE ALARM	SCADA	SUPERVISORY CONTROL AND DATA ACQUISITION
FACP	FIRE ALARM CONTROL PANEL	S2	SIZE 2 STARTER
FDR	FEEDER	SP	SINGLE POLE
FE	FLOW ELEMENT	SPD	SURGE PROTECTOR
FIT	FLOW INDICATING TRANSMITTER	SPDT	SINGLE POLE DOUBLE THROW
FO	FIBER OPTIC	SPST	SINGLE POLE SINGLE THROW
FS	FLOW SWITCH	SS	SELECTOR SWITCH OR SOFT STARTER
FPS	FIRE PROTECTION SIGNALING PANEL	S, S, SST	STAINLESS STEEL
FVNR	FULL VOLTAGE NON-REVERSING	SSRV	SOLID STATE REDUCED VOLTAGE STARTER
G	GREEN OR GROUND OR GENERATOR	STR	STARTER
GD	GROUND DETECTOR OR GAS DETECTOR	SV	SOLENOID VALVE
GEN	GENERATOR	SWBD	SWITCHBOARD
GFI	GROUND FAULT INTERRUPTER	SWGR	SWITCHGEAR
GFCI	GROUND FAULT CKT INTERRUPTER	T	THERMOSTAT, TIMER OR TOTALIZER
GND	GROUND	TB	TERMINAL BLOCK
GUH	GAS UNIT HEATER	TC	TEMPERATURE CONTROL PANEL
H	HIGH OR HUMIDISTAT	TD	TIME DELAY RELAY
HH	HANDHOLE	TEMP	TEMPERATURE
HOA	HAND-OFF-AUTO	TQ	TORQUE
HP	HORSEPOWER	TTB	TELEPHONE TERMINAL BOX
HTR	HEATER	TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR
HVMH	HIGH VOLTAGE ELECTRIC MANHOLE	UG	UNDERGROUND
HZ	HERTZ (CYLES PER SECOND)	UPS	UNINTERRUPTIBLE POWER SUPPLY
I/O	INPUT/OUTPUT	UV	UNDER VOLTAGE OR ULTRAVIOLET
INST	INSTANTANEOUS	V	VOLTS
IS	INTRINSICALLY SAFE	VA	VOLT AMPERE
ISO	ISOLATION	VAR	VOLTAAMPERE REACTIVE
J	JUNCTION BOX	VFD	VARIABLE FREQUENCY DRIVE
K	KEY INTERLOCK	VM	VOLTMETER
KAIC	KILOAMPERE	VS	VOLTMETER SWITCH
KCML	THOUSAND CIRCULAR MILS	W	WHITE OR WATTS
KV	KILVOLT	WE	WEIGHT ELEMENT
KVA	KILVOLT AMPERE	WIT	WEIGHT INDICATING TRANSMITTER
KVAR	KILOVAR	WP	WEATHERPROOF
KW	KILOWATT	WPI	WEATHERPROOF IN-USE RECEPTACLE COVER
KWH	KILOWATT HOUR	XFMR	TRANSFORMER
L	LOW, LEVEL	XP	EXPLOSION-PROOF
LA	LIGHTNING ARRESTER		
LAN	LOCAL AREA NETWORK		
LC	LIGHTING CONTACTOR		
LE	LEVEL ELEMENT		

NOTES

GENERAL WIRING METHODS:  
1. USE NO. 10 AWG CONDUCTOR FOR 20 AMPERE, 120-VOLT BRANCH CIRCUIT HOME RUNS LONGER THAN 75 FEET; AND FOR 20 AMPERE, 277-VOLT BRANCH CIRCUIT HOME RUNS LONGER THAN 150 FEET.

CONTACT INFORMATION:

JAMES BRUMMEL  
PHONE: 651.765.2915  
E-MAIL: jbrummel@sehinc.com

JOHN P. CARLSON, PE  
PHONE: 651.490.2166  
E-MAIL: jcarlson@sehinc.com

INDEX OF ELECTRICAL DRAWINGS	
57	ELECTRICAL - SYMBOLS, ABBREVIATIONS AND NOTES
58	ELECTRICAL - PLANS, ELEVATION AND DIAGRAMS

Save: 9/29/2023 4:15 PM | jbrummel | Plot: 9/29/2023 4:46 PM | X:\P\TRRAMS\17448815-1\mak-dsgn\15-1-drawings\316-Elect\RA1744881.dwg

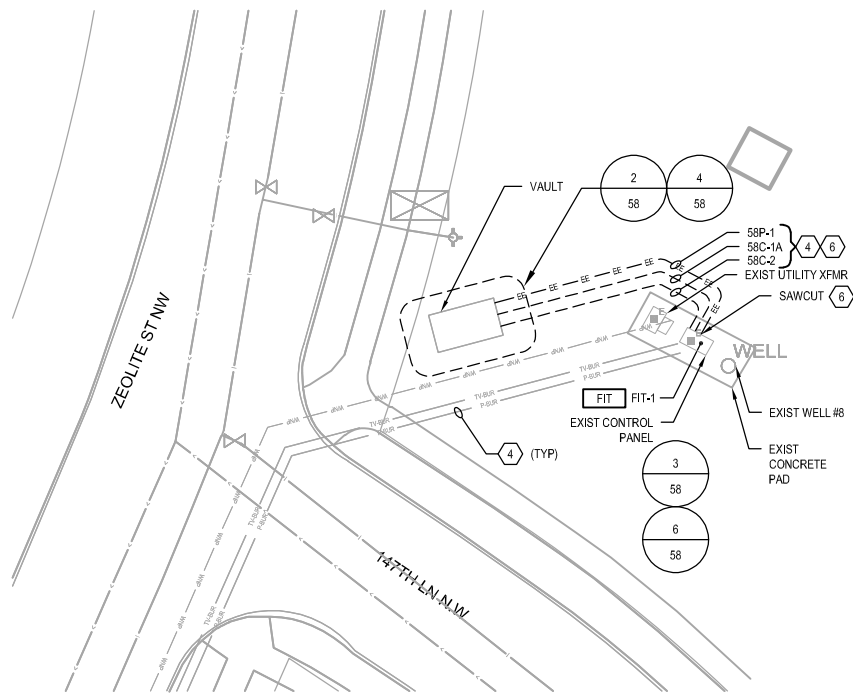
SEH Project	Ramsy174498	Rev.#	Revision Issue Description	Date	Rev.#	Revision Issue Description	Date
Drawn By	JRB	-			-		
Designed By	JRB	-			-		
Checked By	JPC	-			-		



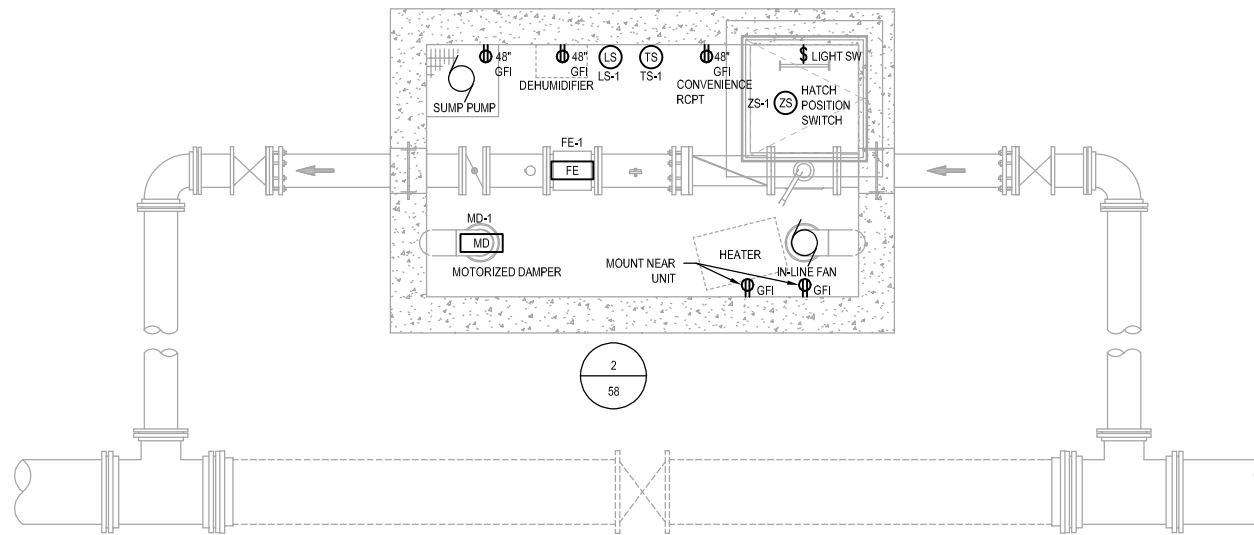
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MN.  
JOHN P. CARLSON, P.E.  
DATE: 09-29-2023 LICENSE NO. 24001

WATER TREATMENT PLANT  
TRUNK WATER MAIN IMPROVEMENTS  
Ramsey, Minnesota

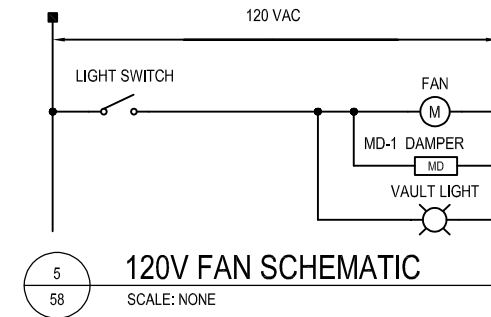
ELECTRICAL - SYMBOLS, ABBREVIATIONS AND NOTES  
BUNKER LAKE BLVD NW (CSAH 116)



**1 ELECTRICAL - SITE PLAN**  
SCALE: 1"=10'  
SCALE IN FEET



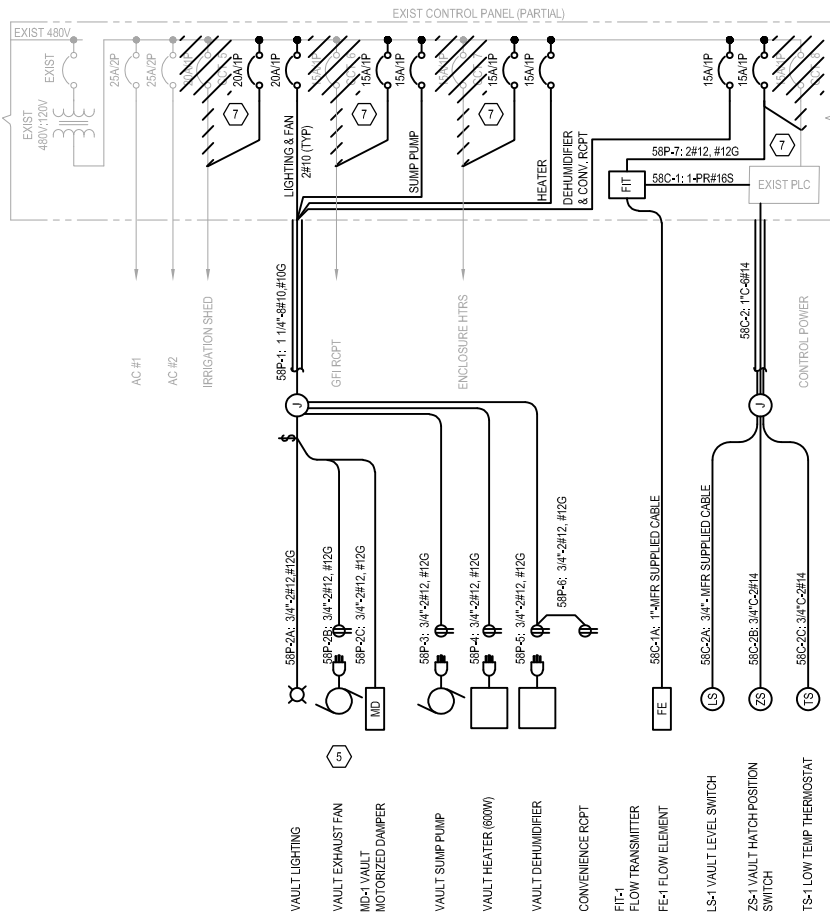
**2 ELECTRICAL - PLAN**  
SCALE: 3/8"=1'-0"  
SCALE: 3/8"=1'-0"



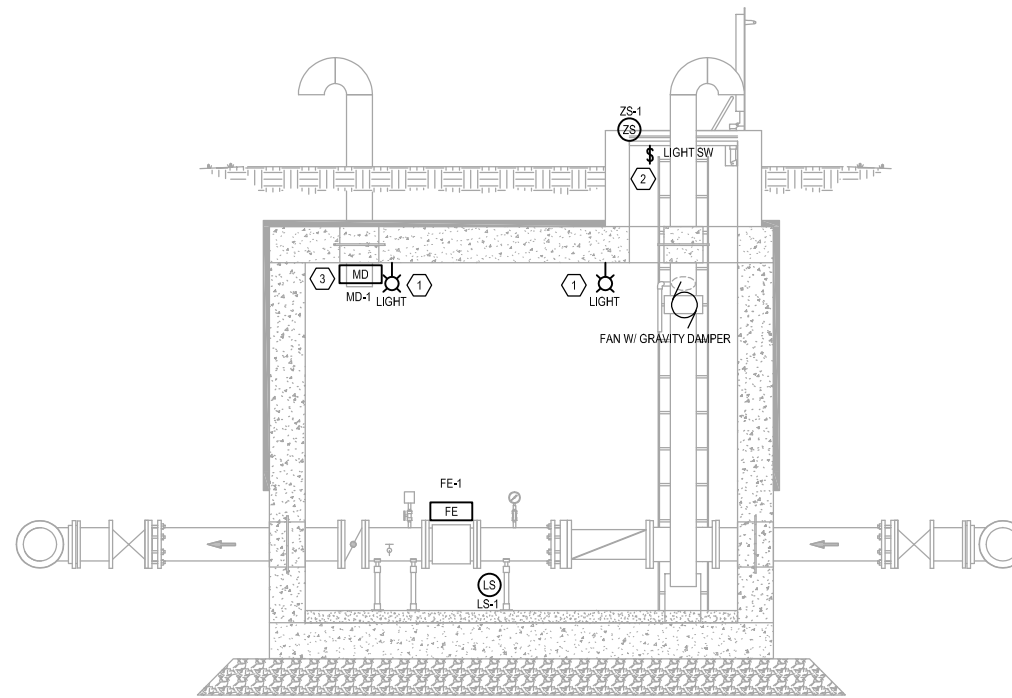
**5 120V FAN SCHEMATIC**  
SCALE: NONE



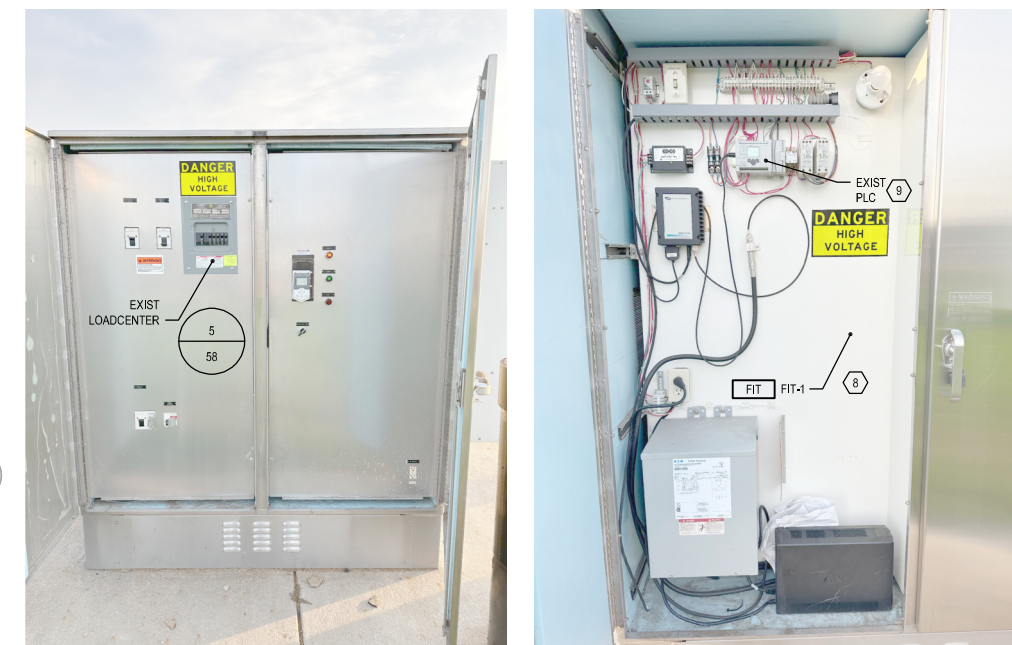
**5 EXIST LOADCENTER ELEVATION**  
SCALE: NONE



**3 ELECTRICAL - SITE PLAN**  
SCALE: NONE



**4 ELECTRICAL - ELEVATION**  
SCALE: 3/8"=1'-0"  
SCALE: 3/8"=1'-0"



**6 EXIST CONTROL PANEL ELEVATIONS**  
SCALE: NONE

- GENERAL NOTES:**
- COORDINATE ELECTRICAL REQUIREMENTS WITH OTHER TRADES.
  - ELECTRICAL WORK SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE LATEST ADDITION OF THE NATIONAL ELECTRICAL CODE, STATE, COUNTY, MUNICIPAL, AND FEDERAL LAWS OR ORDINANCES GOVERNING THE PROJECT. IF THE PLANS AND SPECIFICATIONS ARE IN CONFLICT WITH SUCH CODES, LAWS OR ORDINANCES, NOTIFY THE ENGINEER FOR RESOLUTION PRIOR TO MAKING CHANGES. WORK SHALL BE PERFORMED UNDER A LICENSED MASTER ELECTRICIAN.
  - PROVIDE LABOR, MATERIALS, EQUIPMENT AND NECESSARY OPERATIONS REQUIRED TO PROVIDE COMPLETE AND OPERATIONAL ELECTRICAL INSTALLATION IN ACCORDANCE WITH ACCOMPANYING PLANS AND SPECIFICATIONS.
  - MATERIAL SHALL BE NEW, UL LISTED AND APPROVED FOR THE PURPOSE AND INSTALLATION PER CODE IN A WORKMANSHIP MANNER.
  - SECURE AND PAY FOR PERMITS, LICENSES AND INSPECTION FEES, AND COORDINATE WITH UTILITIES AND AUTHORITIES HAVING JURISDICTION.
  - EXPOSED CONDUIT SHALL BE RIGID METAL CONDUIT (RMC). BELOW GRADE CONDUIT SHALL BE SCHEDULE 40 PVC.
  - 600V CONDUCTORS SHALL BE XHHW OR THWN/THHN STRANDED COPPER AS SPECIFIED.
  - PROVIDE GROUNDING OF SERVICE PER LATEST ADDITION OF NATIONAL ELECTRICAL CODE.
- KEYNOTES:**
- PROVIDE RAB LIGHTING FIXTURE #VLED13NDG.
  - LIGHT SWITCH SHALL CONTROL LIGHT, FAN AND MOTORIZED DAMPER. SEE SCHEMATIC 558.
  - MOTORIZED DAMPER TURNS ON WITH LIGHT SWITCH AND FAN.
  - APPROXIMATE LOCATION OF BURIED CIRCUITRY. VERIFY ROUTING WITH UTILITY, OTHER TRADES AND CIVIL PLANS.
  - PROVIDE MATCHING CORD AND PLUG.
  - SAWCUT CONCRETE FOR COMPLETELY CONCEALED CONDUIT ENTRY.
  - REPLACE EXIST 1-POLE LOADCENTER BREAKER WITH TANDEM 1-POLE BREAKER OF SAME AMPERAGE.
  - INSTALL FIT-1 IN EXIST CONTROL PANEL.
  - REARRANGE DEVICES TO ADD ANALOG AND DIGITAL INPUT CARDS TO EXIST PLC.

Save: 9/29/2023 4:17 PM x:\P1\RAMSY1744805-mak-dgn\5-drawings\3-Electrical\44882.dwg

SEH Project	Ramsy174498	Rev.#	Revision Issue Description	Date	Rev.#	Revision Issue Description	Date
Drawn By	JRB						
Designed By	JRB						
Checked By	JPC						

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MN.

**SEH**  
JOHN P. CARLSON, P.E.  
DATE: 09-29-2023  
LICENSE NO. 24001

**WATER TREATMENT PLANT**  
**TRUNK WATER MAIN IMPROVEMENTS**  
Ramsey, Minnesota

**ELECTRICAL - PLANS, ELEVATION AND DIAGRAMS**  
**BUNKER LAKE BLVD NW (CSAH 116)**

**Certificate Of Completion**

Envelope Id: 6218A158B7E8413DB27606A86983B2D7	Status: Sent
Subject: Andrew Olsen - ROW Permit Application	
Source Envelope:	
Document Pages: 62	Signatures: 1
Certificate Pages: 4	Initials: 1
AutoNav: Enabled	Envelope Originator:
Envelopeld Stamping: Enabled	Highway Permits
Time Zone: (UTC-06:00) Central Time (US & Canada)	Anoka County Government Center
	2100 3rd Avenue
	Anoka, MN 55303
	HighwayPermits@co.anoka.mn.us
	IP Address: 20.125.212.230

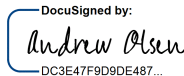
**Record Tracking**

Status: Original	Holder: Highway Permits	Location: DocuSign
3/20/2024 7:54:04 AM	HighwayPermits@co.anoka.mn.us	
Security Appliance Status: Connected	Pool: StateLocal	
Storage Appliance Status: Connected	Pool: Anoka County	Location: DocuSign

**Signer Events**

Andrew Olsen  
aolsen@sehinc.com  
Security Level:  
DocuSign.email  
ID: 1  
3/20/2024 7:54:06 AM

**Signature**

DocuSigned by:  
  
DC3E47F9D9DE487...  
Signature Adoption: Pre-selected Style  
Using IP Address: 20.125.212.230

**Timestamp**

Sent: 3/20/2024 7:54:05 AM  
Viewed: 3/20/2024 7:54:23 AM  
Signed: 3/20/2024 8:27:07 AM

**Electronic Record and Signature Disclosure:**

Accepted: 3/20/2024 7:54:23 AM  
ID: 842c955b-fefb-4f64-bb5f-6a8aadd8ace3

Susan Burgmeier  
Susan.Burgmeier@co.anoka.mn.us  
Associate Traffic Technician  
Anoka County  
Signing Group: Highway Permits  
Security Level: Email, Account Authentication (Optional)

Sent: 3/20/2024 8:27:16 AM  
Viewed: 3/20/2024 9:10:33 AM

**Electronic Record and Signature Disclosure:**

Accepted: 1/10/2024 8:33:18 AM  
ID: 918806bc-10b8-4722-9380-473245a1689f

In Person Signer Events	Signature	Timestamp
Editor Delivery Events	Status	Timestamp
Agent Delivery Events	Status	Timestamp
Intermediary Delivery Events	Status	Timestamp
Certified Delivery Events	Status	Timestamp
Carbon Copy Events	Status	Timestamp

Andrew Olsen  
aolsen@sehinc.com  
Security Level: Email, Account Authentication (Optional)

**Electronic Record and Signature Disclosure:**

<b>Carbon Copy Events</b>	<b>Status</b>	<b>Timestamp</b>
---------------------------	---------------	------------------

Not Offered via DocuSign

<b>Witness Events</b>	<b>Signature</b>	<b>Timestamp</b>
-----------------------	------------------	------------------

<b>Notary Events</b>	<b>Signature</b>	<b>Timestamp</b>
----------------------	------------------	------------------

<b>Envelope Summary Events</b>	<b>Status</b>	<b>Timestamps</b>
--------------------------------	---------------	-------------------

Envelope Sent	Hashed/Encrypted	3/20/2024 7:54:05 AM
Envelope Updated	Security Checked	3/20/2024 8:27:07 AM
Certified Delivered	Security Checked	3/20/2024 9:10:33 AM

<b>Payment Events</b>	<b>Status</b>	<b>Timestamps</b>
-----------------------	---------------	-------------------

<b>Electronic Record and Signature Disclosure</b>
---------------------------------------------------

## **ELECTRONIC RECORD AND SIGNATURE DISCLOSURE**

The following information constitutes Anoka County's (we, us or Company) written notices or disclosures relating to your use of DocuSign in relation to Anoka County's license. Described below are the terms and conditions for providing notices and disclosures electronically through the DocuSign system. Please read the information below carefully and thoroughly, and if you agree to this Electronic Record and Signature Disclosure (ERSD), please confirm your agreement by selecting the check-box next to 'I agree to use electronic records and signatures' before clicking 'CONTINUE' within the DocuSign system.

### **Getting paper copies**

At any time, you may request from us a paper copy of any record provided or made available electronically to you by us. You will have the ability to download and print documents we send to you through the DocuSign system during and immediately after the signing session and, if you elect to create a DocuSign account, you may access the documents for a limited period of time (30 days) after the documents are first sent to you. At any time, if you request paper copies of any documents, you may be charged a fee. You may request paper copies from us by following the procedure described below.

### **Withdrawing your consent**

If you decide to receive notices, disclosures and documents from us electronically, you may change your mind and tell us that going forward you want to receive documents only in paper format. Please note, processing time will be slowed down dramatically as we will be required to print and send the document through the mail and await your return of the documents. The process to change the method of receipt is described below.

### **All notices and disclosures will be sent to you electronically**

Upon your acceptance to receive electronic notifications, all required notices, disclosures, authorizations, acknowledgements, and other documents that are required to be provided or made available to you during the course of our relationship with you will be provided electronically through the DocuSign system. All of the required documents will be provided to you at the address that you have given us.

### **How to contact Anoka County:**

You may change your preferred method of contact whether electronically, or paper copies, or change your email address. You may also request paper copies of certain information from us, or withdraw your prior consent to receive documents. Please use the contact information below for your request and in the body of your correspondence, identify your desired action. If you are

changing an email address, please include your prior email address as well as your new address. If you no longer wish to receive future documents in electronic format, please include that request in the body of your email.

Email: helpdesk@co.anoka.mn.us

Phone: (763)-324-4110

Address: Anoka County Government Center  
Attn: Information Technology, #300  
2100 3rd Avenue  
Anoka, MN 55303

### **Required hardware and software**

The minimum system requirements for using the DocuSign system may change over time. The current system requirements are found here: <https://support.docusign.com/guides/signer-guide-signing-system-requirements>.

### **ACKNOWLEDGEMENT**

To confirm your access to the electronic notices and disclosures, which will be similar to other electronic notices and disclosures that we may provide to you, please acknowledge that you have read this ERSD by selecting the check-box next to 'I agree to use electronic records and signatures' before clicking 'CONTINUE' within the DocuSign system.

By selecting the check-box next to 'I agree to use electronic records and signatures', you confirm that:

- You can access and read this Electronic Record and Signature Disclosure; and
- You can print this Electronic Record and Signature Disclosure, or save or send this Electronic Record and Disclosure to a location where you can print it, for future reference and access; and
- Until or unless you notify Anoka County as described above, you consent to receive exclusively through electronic means all notices, disclosures, authorizations, acknowledgements, and other documents that are required to be provided or made available to you by Anoka County during the course of your relationship with Anoka County.