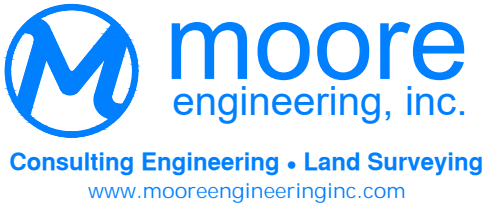


FILE LOCATION: Q:\Projects\24000\24500\24543 PlymouthMN ChankahdaWellInOutlet\CAD\C3D\Production\24543\_Cover.dwg



# OUTLET STRUCTURE IMPROVEMENTS AT 6105 VICKSBURG

CITY PROJECT #WR 180006



PLYMOUTH, MINNESOTA

VICINITY MAP

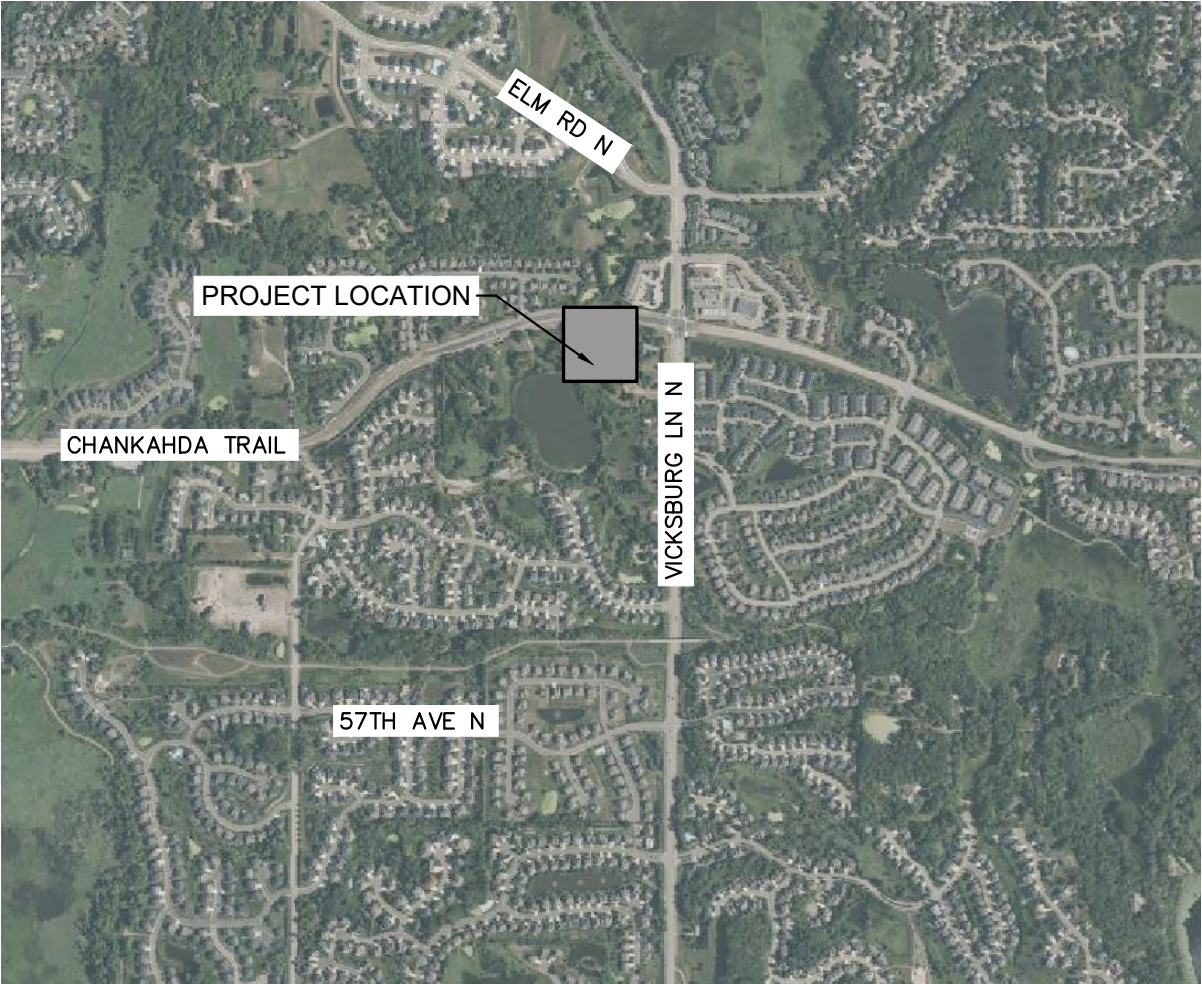
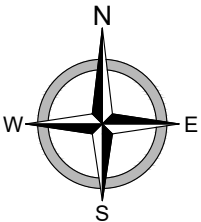


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I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

*Daniel T. Elemes*

DANIEL T. ELEMES

PROJECT No. 24543

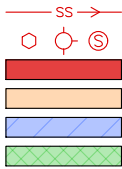
DATE: 12.23.2024 LIC. NO. 55420

FILE LOCATION: Q:\Projects\2400024500\24543 PlymouthMN ChanhadaWellInlet\CAD\CSD\Production\24543\_Cover.dwg

EXISTING	
	BENCHMARK
	IRON MONUMENT FOUND
	EXISTING PROPERTY LINE
	EXISTING PLAT LOT LINE
	EXISTING RIGHT OF WAY LINE
	EXISTING EASEMENT LINE
	EXISTING PLAT EASEMENT LINE
	EXISTING GAS LINE MARKER
	EXISTING GAS GATE VALVE
	EXISTING POWER POLE
	EXISTING LIGHT POLE
	EXISTING LIGHT POLE W/SIGN
	EXISTING GUY WIRE
	EXISTING TRAFFIC SIGNAL ARM
	EXISTING SIGN
	EXISTING CULVERT W/FLARED END SECTION (F.E.S.)
	EXISTING FLARED END SECTION (F.E.S.)
	EXISTING CURB STOP
	EXISTING HYDRANT W/GATE VALVE
	EXISTING GATE VALVE
	EXISTING PROPANE TANK
	EXISTING SANITARY SEWER MANHOLE
	EXISTING SANITARY SEWER CLEANOUT
	EXISTING STORM SEWER CATCH BASIN
	EXISTING STORM SEWER MANHOLE
	EXISTING WATER MAIN
	EXISTING WATER SERVICE W/CURB STOP
	EXISTING SANITARY SEWER
	EXISTING SANITARY SEWER (RELIN W/ CIPP)
	EXISTING SANITARY FORCEMAIN
	EXISTING SANITARY SEWER SERVICE
	EXISTING STORM SEWER
	EXISTING STORM SEWER FORCEMAIN
	EXISTING STEAM PIPE
	EXISTING AIR CONDITIONER
	EXISTING UTILITY PEDESTAL
	EXISTING UTILITY MANHOLE
	EXISTING UTILITY VAULT
	EXISTING UNDERGROUND COMMUNICATIONS
	EXISTING UNDERGROUND FIBER
	EXISTING UNDERGROUND TELEPHONE
	EXISTING OVERHEAD TELEPHONE
	EXISTING UNDERGROUND TELEVISION
	EXISTING OVERHEAD TELEVISION
	EXISTING UNDERGROUND GAS
	EXISTING UNDERGROUND ELECTRIC
	EXISTING OVERHEAD POWER
	EXISTING BARBED WIRE FENCE
	EXISTING CHAIN LINK/STEEL FENCE
	EXISTING PVC/WOOD FENCE
	EXISTING RAILROAD
	EXISTING SHRUB
	EXISTING STUMP
	EXISTING BOULDER
	EXISTING TREE/TREE CLUSTER
	EXISTING SPRINKLER HEAD
	EXISTING CLUSTER BOX UNIT (CBU)
	EXISTING MAILBOX
	EXISTING CURB AND GUTTER

PROPOSED	
	NEW PROPERTY LINE
	NEW PLAT LOT LINE
	NEW RIGHT OF WAY LINE
	NEW EASEMENT LINE
	NEW PLAT EASEMENT LINE
	CONSTRUCTION EASEMENT
	CONSTRUCTION LIMITS
	NEW LIGHT POLE
	NEW LIGHT POLE W/SIGN
	NEW GUY WIRE
	NEW SIGN
	TRAFFIC CONTROL - DRUM
	TRAFFIC CONTROL - TUBULAR MARKER
	NEW CULVERT W/FLARED END SECTION (F.E.S.)
	NEW FLARED END SECTION (F.E.S.)
	NEW CURB STOP
	NEW HYDRANT W/GATE VALVE
	NEW GATE VALVE
	NEW TAPPING SLEEVE
	NEW FITTINGS
	NEW PLUG
	NEW SANITARY SEWER MANHOLE
	NEW SANITARY SEWER CLEANOUT
	NEW STORM SEWER CATCH BASIN
	NEW STORM SEWER MANHOLE
	NEW WATER MAIN
	NEW WATER MAIN (DIRECTIONAL DRILLED OR CASD)
	NEW WATER SERVICE W/CURB STOP (S.B. ELEV.)
	NEW SANITARY SEWER
	NEW SANITARY SEWER (DIRECTIONAL DRILLED OR CASD)
	NEW SANITARY FORCEMAIN
	NEW SANITARY SEWER SERVICE (S.S. ELEV.)
	NEW STORM SEWER
	NEW STORM SEWER (DIRECTIONAL DRILLED OR CASD)
	NEW STORM SEWER FORCEMAIN
	NEW STEAM PIPE
	INSULATION PER DETAIL
	NEW BARBED WIRE FENCE
	NEW CHAIN LINK/STEEL FENCE
	NEW PVC/WOOD FENCE
	NEW CLUSTER BOX UNIT (CBU)
	NEW MAILBOX
	NEW LARGE DECIDUOUS TREE
	NEW SMALL DECIDUOUS TREE
	NEW SHRUB
	NEW LARGE EVERGREEN TREE
	NEW SMALL EVERGREEN TREE

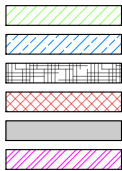
## CIVIL LEGEND



### REMOVALS

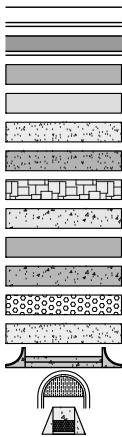
INDICATES REMOVAL

REMOVE CURB AND GUTTER  
REMOVE ASPHALT PAVEMENT  
REMOVE CONCRETE PAVEMENT  
REMOVE AGGREGATE SURFACE



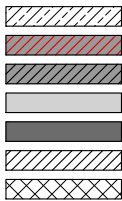
### PAVEMENT REHAB

UNIFORM MILL & OVERLAY  
TAPERED MILL & OVERLAY  
LEVELING COURSE  
RECLAIM  
ASPHALT PATCH  
CHIP SEAL



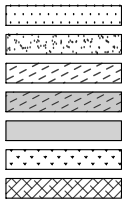
### PAVEMENT

NEW INFLOW CURB AND GUTTER  
NEW OUTFLOW CURB AND GUTTER  
NEW ASPHALT SURFACE  
NEW CONCRETE SURFACE  
NEW GRANULAR SURFACE  
NEW CRUSHED CONCRETE SURFACE  
NEW DECORATIVE COLORED CONCRETE  
NEW ASPHALT SIDEWALK/MULTI-USE PATH  
NEW CONCRETE SIDEWALK/MULTI-USE PATH  
NEW CONCRETE APPROACH/DRIVEWAY  
NEW DETECTABLE WARNING PANEL  
NEW GRAVEL APPROACH/DRIVEWAY  
NEW CONCRETE VALLEY GUTTER  
NEW MEDIAN NOSE APRON  
NEW ADA RAMP W/WARNING PANEL



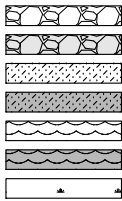
### SOIL DISTURBANCE

DISTURBANCE AREA / TOPSOIL REMOVAL  
REMOVE STOCKPILE  
EXISTING STOCKPILE  
TEMPORARY STOCKPILE  
PERMANENT STOCKPILE  
REAR YARD GRADING  
GRASS BUFFER STRIP



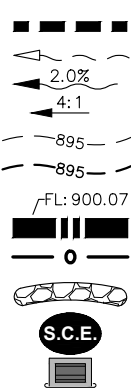
### SOIL STABILIZATION

DISTURBED SOIL STABILIZATION  
STRAW MULCH  
SEEDING & STRAW MULCH  
SEEDING & HYDRO MULCH  
TOPSOIL, SEEDING & STRAW MULCH  
TOPSOIL, SEEDING & HYDRO MULCH  
TOPSOIL, SEEDING & BLANKET



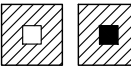
### MISCELLANEOUS

EXISTING RIPRAP  
NEW RIPRAP  
EXISTING LANDSCAPING AREA  
NEW LANDSCAPING AREA  
EXISTING WATER SURFACE  
NEW WATER SURFACE  
EXISTING WETLAND



### EROSION CONTROL

DRAINAGE BREAK LINE  
EXISTING DRAINAGE DIRECTION  
FINISHED DRAINAGE DIRECTION & SLOPE  
FINISHED GRADE  
EXISTING CONTOUR ELEVATION  
FINISHED CONTOUR ELEVATION  
GRADE ELEVATIONS  
SEDIMENTATION CONTROL WATTLE  
SEDIMENTATION CONTROL FENCE  
ROCK CHECK  
STABILIZED CONSTRUCTION ENTRANCE  
CONCRETE WASHOUT



INLET PROTECTION DEVICE

### ABBREVIATIONS:

BOC = BACK OF CURB  
BOW = BACK OF WALK  
C = COMMUNICATION  
CB# = STORM SEWER CATCH BASIN  
CIPP = CURED IN PLACE PIPE  
CL = CENTERLINE  
CSP = CORRUGATED STEEL PIPE  
CO# = SANITARY SEWER CLEANOUT  
CS# = CONTROL STRUCTURE  
DIA = DIAMETER  
DIP = DUCTILE IRON PIPE  
E = ELECTRICAL  
ECC = EDGE OF CRUSHED CONCRETE  
EG = EXISTING GRADE  
EOC = EDGE OF CONCRETE  
EOG = EDGE OF GRAVEL  
EOP = EDGE OF PAVEMENT  
EOW = EDGE OF WALK  
EX = EXISTING  
F = FIBER OPTIC  
FES = FLARED END SECTION  
FG = FINISHED GRADE  
FL = FLOWLINE  
FM = FORCEMAIN  
G = GAS LINE  
HP = HIGH POINT  
INV = INVERT  
LP = LOW POINT  
MA = MATCH  
M# = STORM SEWER MANHOLE  
MT# = STORM SEWER TEE MANHOLE  
MM# = STORM SEWER MULTI-MANHOLE  
MC = MIDPOINT OF CURVE  
OHP = OVERHEAD POWER  
OHT = OVERHEAD TELEPHONE  
OHTV = OVERHEAD TELEVISION  
PC = POINT OF CURVATURE  
PRC = POINT OF REVERSE CURVE  
PVC = POLYVINYL CHLORIDE PIPE  
PT = POINT OF TANGENCY  
RIM = RIM OF STRUCTURE  
S# = SANITARY SEWER MANHOLE  
S.B. ELEV = STOP BOX ELEVATION  
S.S. ELEV = SANITARY SEWER SERVICE INVERT  
SS = SANITARY SEWER  
ST = STORM SEWER  
STA = ALIGNMENT STATION  
T = TELEPHONE  
TOC = TOP OF CONCRETE  
TOP = TOP OF PAVEMENT  
TOP = TOP OF PIPE  
TOW = TOP OF WALK  
TR# = SANITARY TELEVISION RISER  
TRANS = TRANSFORMER  
TV = TELEVISION  
U = UTILITY (UNKNOWN UTILITY)

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

*Daniel Elemes*

DANIEL T. ELEMES

DATE: 12.23.2024

LIC. NO. 55420



CIVIL  
OUTLET STRUCTURE IMPROVEMENTS AT 6105 VICKSBURG  
CITY PROJECT #WR 180006  
PLYMOUTH, MINNESOTA  
CIVIL LEGEND

DATE:	12.23.2024
REV DATE:	---
REV NUM:	---
RECORD:	---
PROJECT No.	24543
MANAGER:	JCM
DESIGNER:	DTE
DRAFTER:	DWA
REVIEWER:	DTE

C-001



FILE LOCATION: Q:\Projects\24000\24500\24543 PlymouthMN ChankahdaWellInlet\CAD\CSD\Production\24543\_Cover.dwg

THE FOLLOWING PLAN NOTES SUPPLEMENT AND AMEND THE PLAN SHEETS, SPECIFICATIONS AND MNDOT REFERENCES AS FOLLOWS:

GENERAL NOTES:

1. Take necessary precautions required to protect adjacent properties during the construction operations.
2. Notify Engineer where section, subsection or property monuments are encountered, before such monuments are removed. Protect and carefully preserve all property markers and monuments until the engineer and authorized surveyor has witnessed or otherwise referenced the location.
3. The removal and replacement of existing street signs are incidental to the installation of the new utility. Replace any damaged signs.
4. The drawings designate those existing items for removal, replacement, or improvement. If not designated for removal, replacement, or improvement, all other existing items within the site to be protected.
5. Testing requirements for MNDOT bid item numbers to be in accordance with the MNDOT Schedule of Materials Controls unless otherwise noted.
6. Any construction traffic damage to roads, curb, pavement, or any other item not marked for removal shall to be repaired by the contractor at no cost to the owner.
7. Contractor shall protect and reinforce areas over pipes to ensure damage is not done to existing utilities. Replacement of damaged utilities is incidental and the responsibility of the contractor.
8. All excavated material is the property of the contractor. Contractor must provide the city the address of location excess material is hauled to.

EROSION CONTROL NOTES:

1. Contractor is responsible for obtaining a DNR Water Appropriations Permit for dewatering exceeding 10,000 gallons per day or 1 million gallons per year.

2. All water discharged from dewatering or basin-draining must be discharged in a manner that does not cause nuisance conditions to waters of the State, erosion in receiving water, inundation of wetland, or damage to properties. Appropriate BMPs must be used to treat the water prior to discharge. The contractor must ensure that discharge points are adequately protected from erosion and scour by an energy dissipation device.
3. All appropriate erosion and sediment control BMPs must be in place prior to beginning construction. Erosion and sediment control BMPs must remain in place until permanent cover is established.
4. Any tracked sediment on paved surfaces must be removed with 24 hours of discovery or as needed. Incidental to project cost.
5. Stabilization must be initiated immediately to limit soil erosion when grading activities have permanently or temporarily ceased on any portion of the site. Restoration of ground cover shall be provided within five days after completion of the grading operation.

UNDERGROUND NOTES:

1. Coordinate any utility relocations.
2. Unless otherwise noted, any removal, relocation, replacement, or bracing of power poles or any other utilities is the responsibility of the Contractor.
3. Existing utilities (both public and private) shown on the plans are approximate and may not be complete. It will be the contractor’s responsibility to verify and locate any utilities prior to excavation. There will be no additional payment for exploratory time.
4. There is potential for water on the project. It shall be the contractor’s responsibility to dewater for constructability.
5. The subsurface utility information in this plan is Utility Quality Level D. This quality level was determined according to the guidelines of ASCE 38-02 entitled “Standard Guidelines for the Collection and Depiction of Existing Subsurface Utility Data”.
6. Not all fittings required for a complete installation may be shown on the plans. Provide all required fittings.
7. Verify all existing pipe sizes in the field.

TRAFFIC CONTROL NOTES:

1. The contractor shall submit a traffic control plan to the City and Engineer for approval prior to beginning construction. Traffic control must be in place prior to any hauling.
2. The contractor will be responsible for maintaining access to all businesses/residences/public facilities at all times. This would include building & maintaining any required temporary access roadways.
3. Contractor must follow the current M.U.T.C.D. for traffic control for any and all construction operations that interfere with traffic.
4. Contractor to give no less than 48 hour notice prior to any work being done on the project. All no parking signs and any traffic control shall be posted at least 48 hours prior to work commencing. 7 day advance warning signage shall be posted if a lane closure is required. Full closure of Chankahda Trail is not allowed.

GOVERNING SPECIFICATIONS:

1. The following specifications shall govern this project, except as modified by the project manual special provisions.
  - a. The 2020 edition of the Minnesota Department of Transportation, the most current "standard specifications for construction",
  - b. The March 2023 (or most current) City of Plymouth engineering guidelines & standard detail specifications for sanitary sewer, watermain, storm sewer & street construction,
  - c. The contract documents, including the special provisions
  - d. All applicable federal, state, and local laws and ordinances shall be complied with in the construction of this project.
2. All traffic devices shall conform to the MN MUTCD, including "Field Manual for Temporary Traffic Control Zone Layouts" - current edition.

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

Daniel Elemen

DANIEL T. ELEMES

DATE: 12.23.2024 LIC. NO. 55420



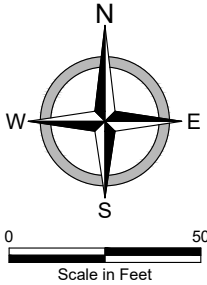
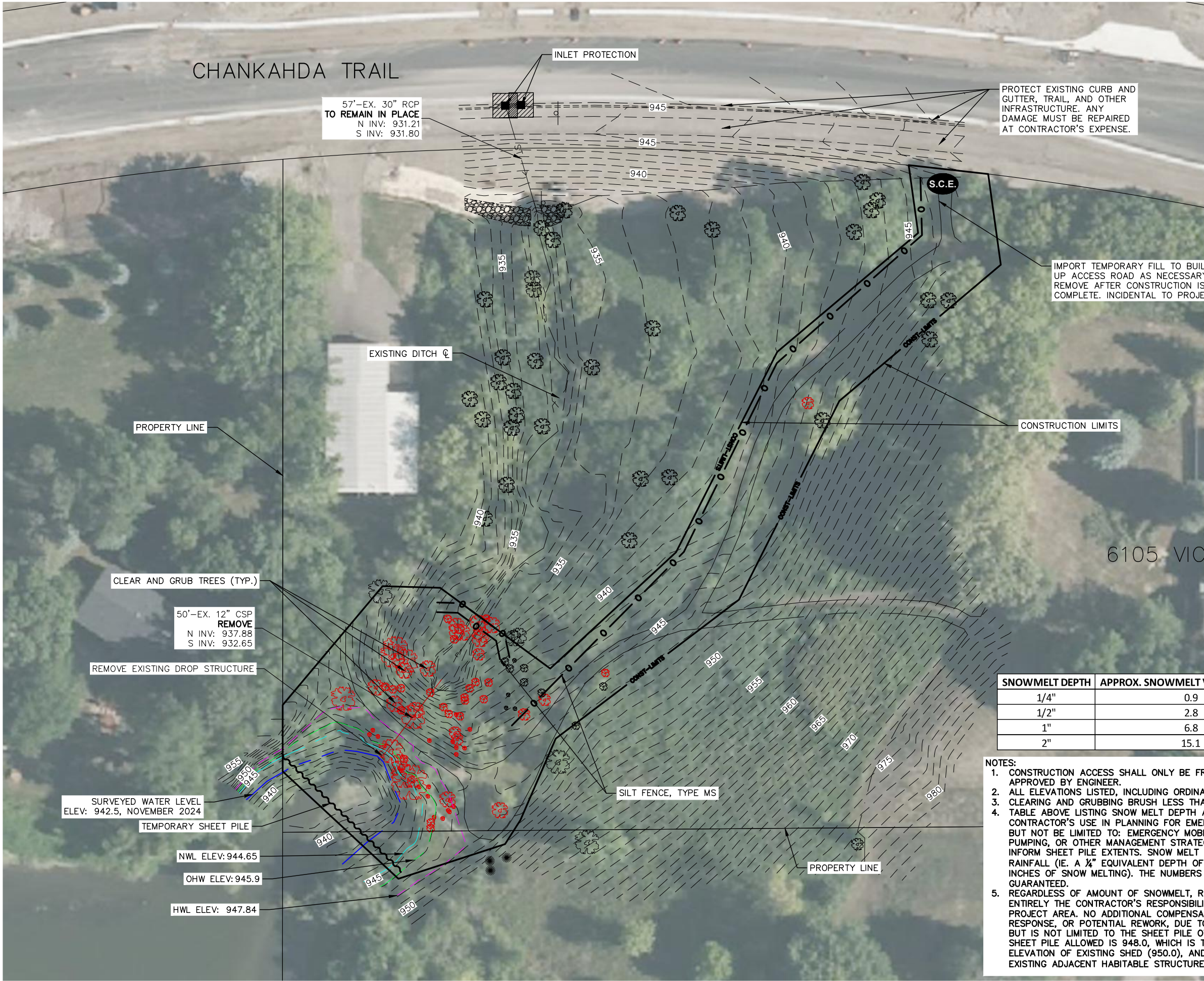
CIVIL  
OUTLET STRUCTURE IMPROVEMENTS AT 6105 VICKSBURG  
CITY PROJECT #WR 180006  
PLYMOUTH, MINNESOTA  
GENERAL NOTES

DATE:	12.23.2024
REV DATE:	---
REV NUM:	---
RECORD:	---
PROJECT No.	24543
MANAGER:	JCM
DESIGNER:	DTE
DRAFTER:	DWA
REVIEWER:	DTE

C-002



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*Daniel T. Elemen*

DANIEL T. ELEMES

DATE: 12.23.2024 LIC. NO. 55420



PROJECT LAYOUTS  
OUTLET STRUCTURE IMPROVEMENTS AT 6105 VICKSBURG  
CITY PROJECT #WR 180006  
PLYMOUTH, MINNESOTA  
EXISTING CONDITIONS, REMOVALS & TEMPORARY EROSION CONTROL

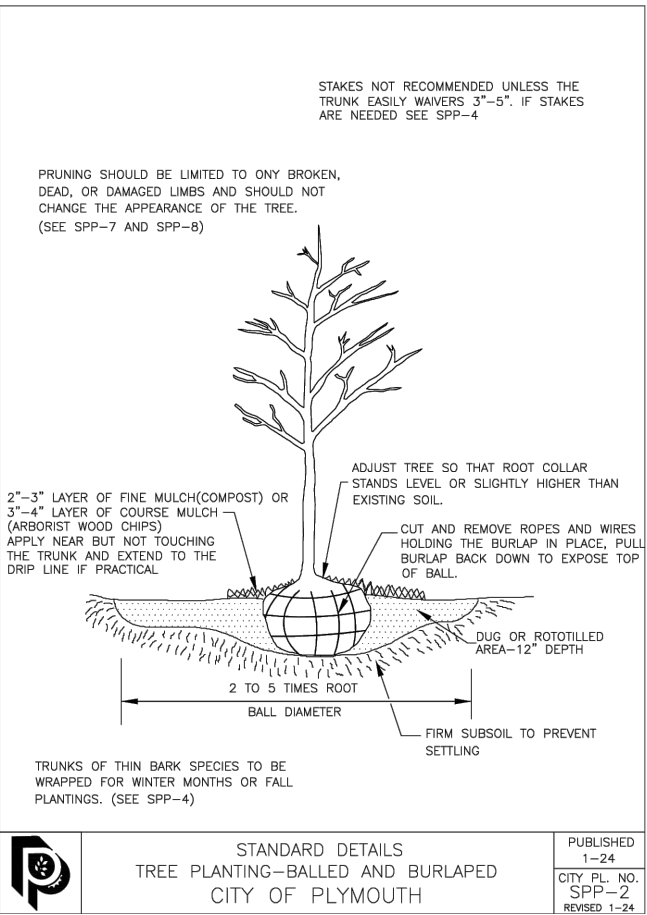
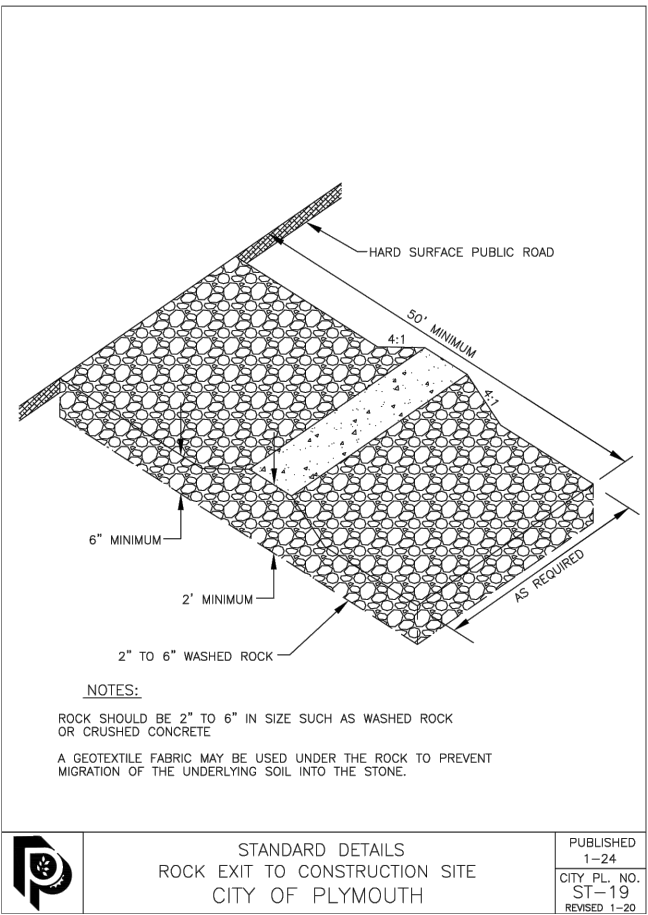
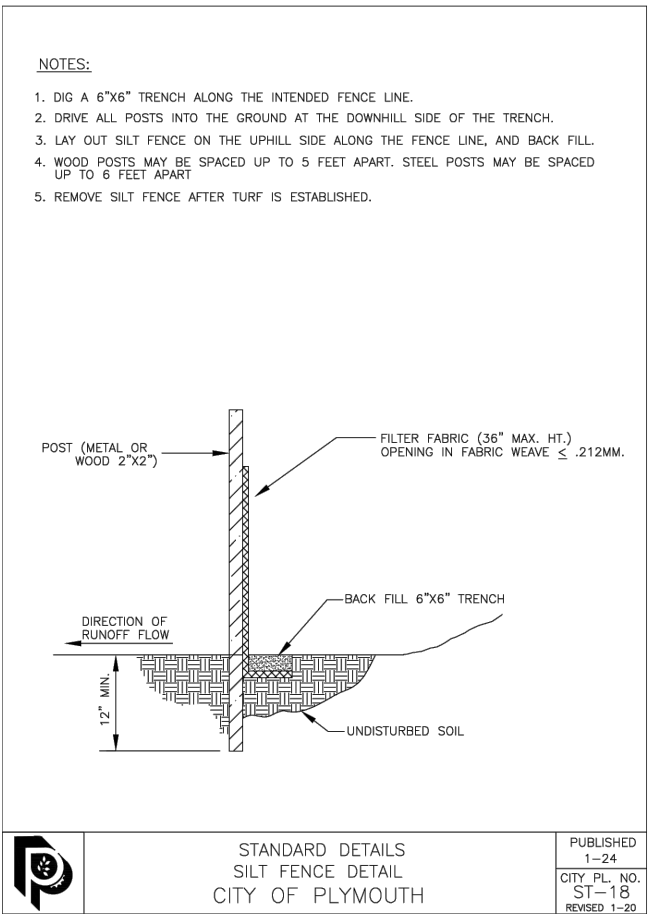
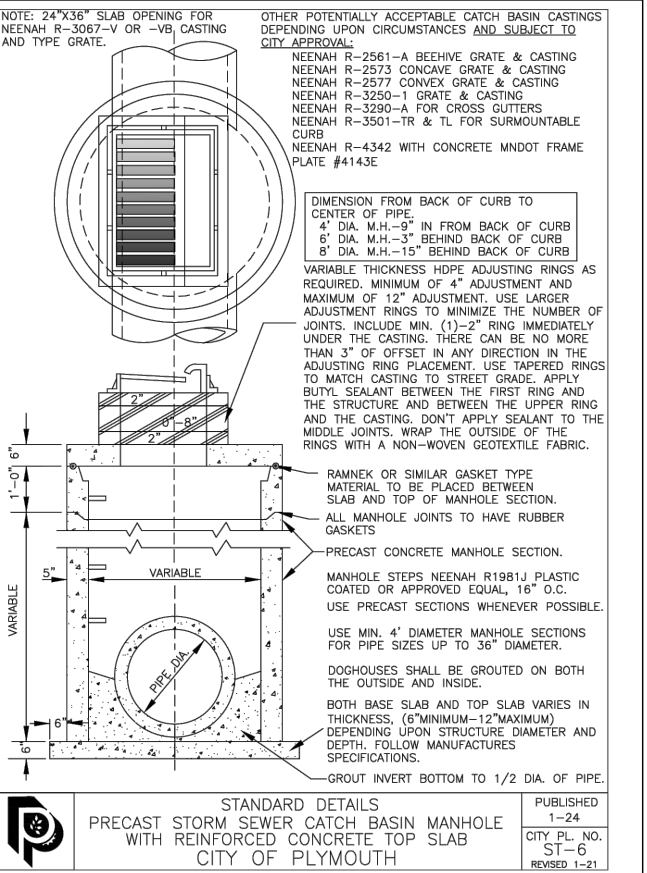
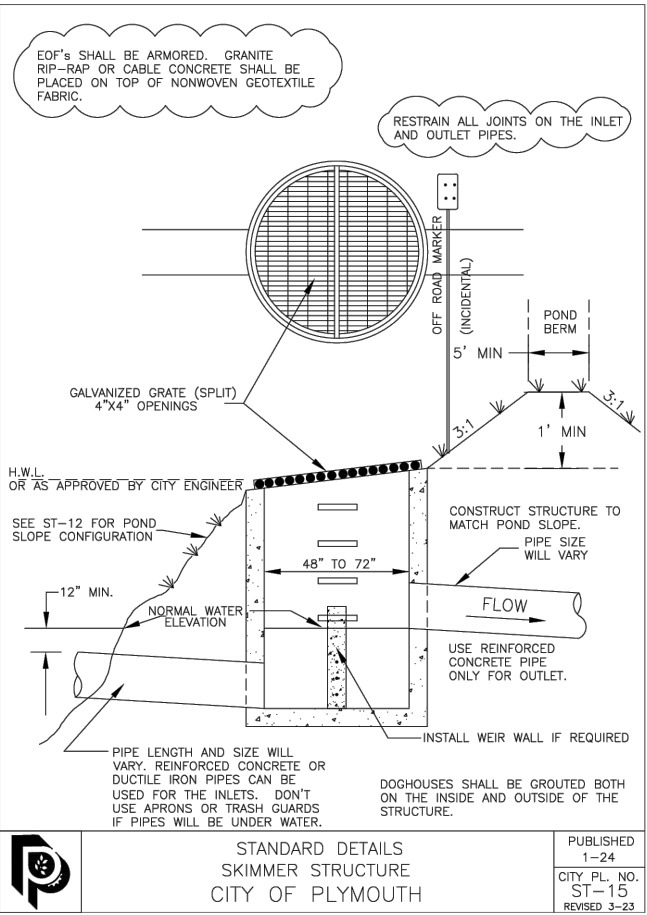
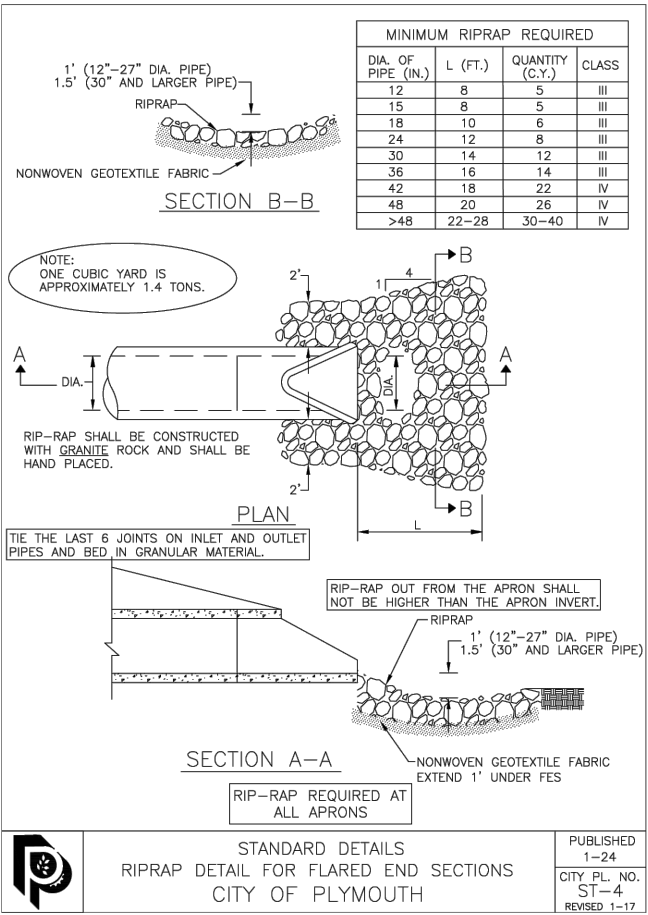
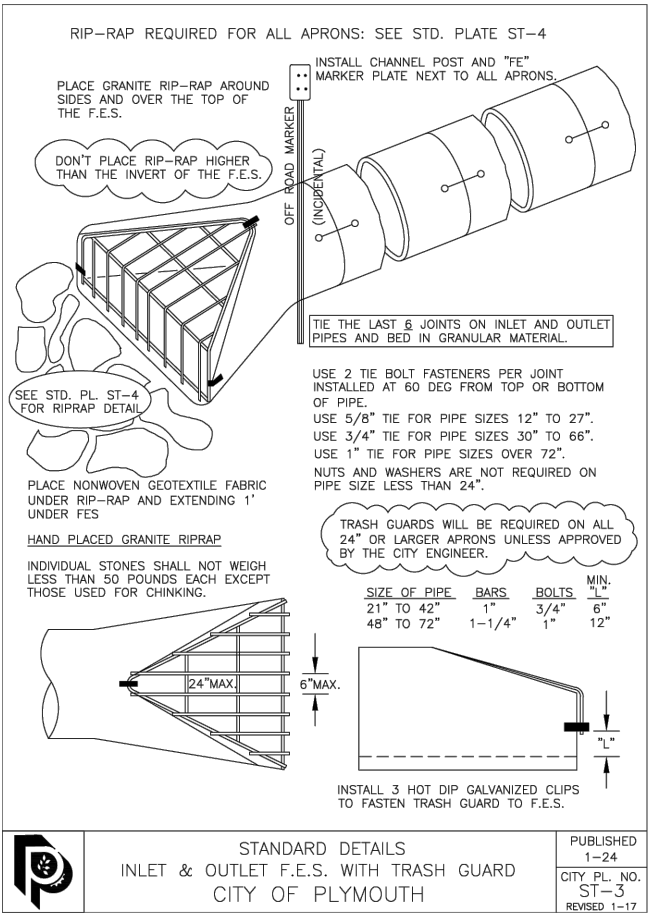
SNOWMELT DEPTH	APPROX. SNOWMELT VOLUME (AC-FT)	APPROX. HIGH WATER LEVEL
1/4"	0.9	944.8
1/2"	2.8	945.0
1"	6.8	945.4
2"	15.1	946.2

- NOTES:
- CONSTRUCTION ACCESS SHALL ONLY BE FROM ROUTES AS SHOWN ON THE PLAN UNLESS APPROVED BY ENGINEER.
  - ALL ELEVATIONS LISTED, INCLUDING ORDINARY HIGH WATER LEVEL, ARE IN NAVD88.
  - CLEARING AND GRUBBING BRUSH LESS THAN 6" DBH INCIDENTAL TO OTHER PROJECT ITEMS.
  - TABLE ABOVE LISTING SNOW MELT DEPTH AND HIGH WATER LEVELS IS INTENDED FOR CONTRACTOR'S USE IN PLANNING FOR EMERGENCY RESPONSE, WHICH LIKELY WOULD INCLUDE BUT NOT BE LIMITED TO: EMERGENCY MOBILIZATION, IMMEDIATE TEMPORARY STABILIZATION, PUMPING, OR OTHER MANAGEMENT STRATEGIES. HIGH WATER LEVELS ALSO MAY BE USED TO INFORM SHEET PILE EXTENTS. SNOW MELT DEPTH LISTED IS IN TERMS OF EQUIVALENT RAINFALL (IE. A 1/4" EQUIVALENT DEPTH OF RAINFALL LIKELY CORRESPONDS TO SEVERAL INCHES OF SNOW MELTING). THE NUMBERS LISTED ARE APPROXIMATE, AND ARE NOT GUARANTEED.
  - REGARDLESS OF AMOUNT OF SNOWMELT, RAIN, GROUNDWATER, OR OTHER INFLOWS, IT IS ENTIRELY THE CONTRACTOR'S RESPONSIBILITY TO MANAGE WATER LEVELS WITHIN THE PROJECT AREA. NO ADDITIONAL COMPENSATION WILL BE PROVIDED FOR EMERGENCY RESPONSE, OR POTENTIAL REWORK, DUE TO STORMWATER MANAGEMENT. THIS INCLUDES, BUT IS NOT LIMITED TO THE SHEET PILE OVERTOPPING. THE MAXIMUM ELEVATION OF THE SHEET PILE ALLOWED IS 948.0, WHICH IS TWO FEET LOWER THAN THE APPROXIMATE FLOOR ELEVATION OF EXISTING SHED (950.0), AND ABOUT FOUR FEET LOWER THAN THE LOWEST EXISTING ADJACENT HABITABLE STRUCTURE LOW FLOOR ELEVATION (954.3).

DATE:	12.23.2024
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RECORD:	---
PROJECT No.	24543
MANAGER:	JCM
DESIGNER:	DTE
DRAFTER:	DWA
REVIEWER:	DTE



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

Daniel Elemes

DANIEL T. ELEMES

DATE: 12.23.2024 LIC. NO. 55420



DETAILS

OUTLET STRUCTURE IMPROVEMENTS AT 6105 VICKSBURG

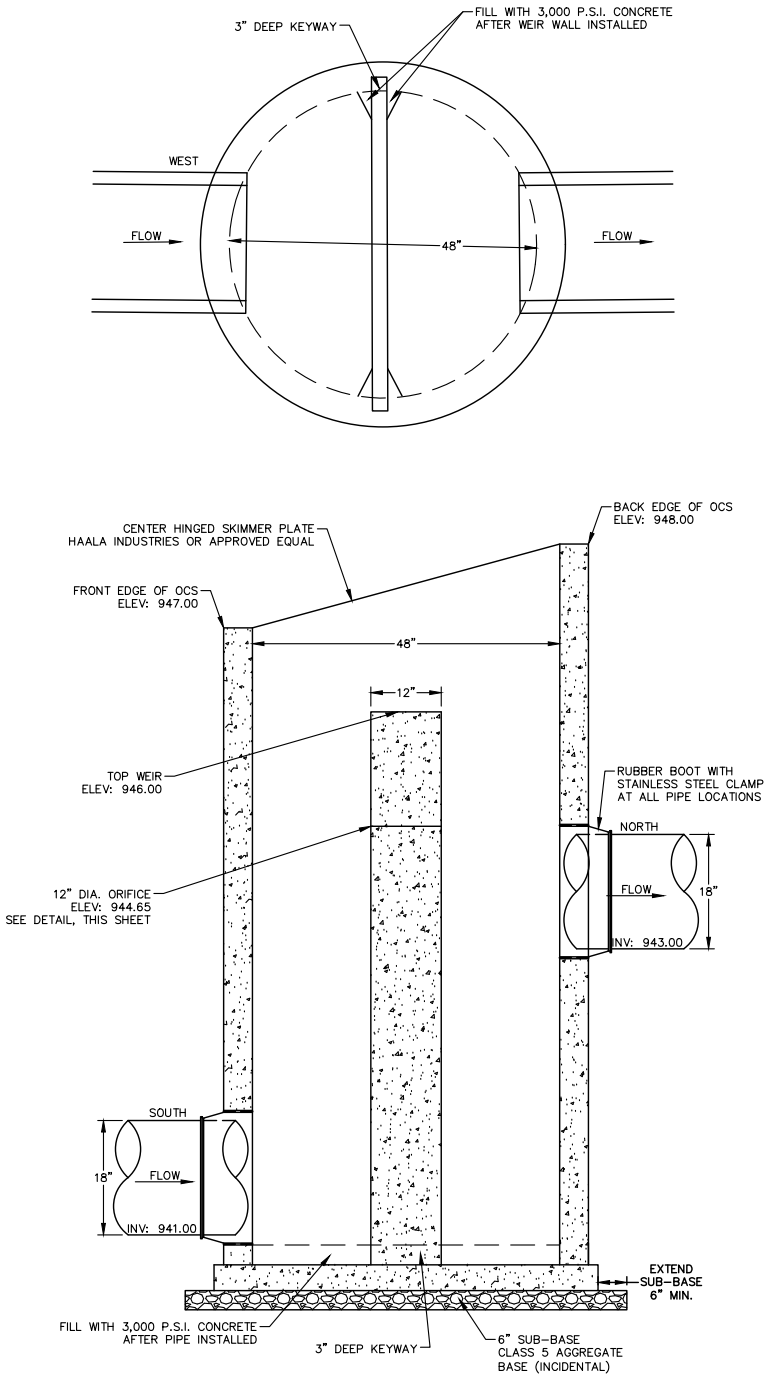
CITY PROJECT #WR 180006

PLYMOUTH, MINNESOTA

TYPICAL DETAILS

DATE:	12.23.2024
REV DATE:	----
REV NUM:	----
RECORD:	----
PROJECT No.	24543
MANAGER:	JCM
DESIGNER:	DTE
DRAFTER:	DWA
REVIEWER:	DTE

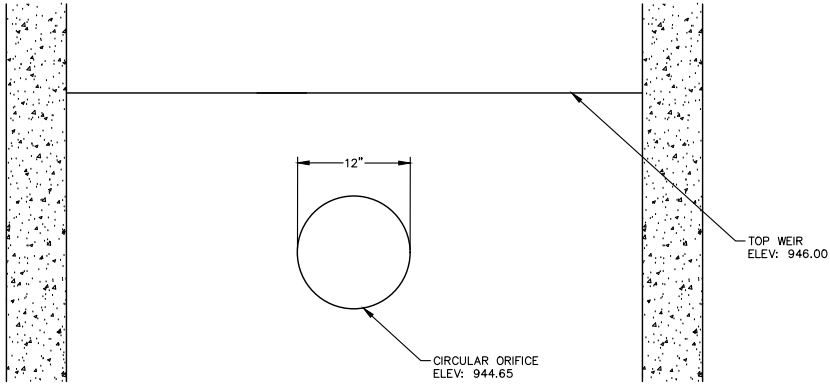
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- NOTES:
1. PRECAST MANUFACTURER TO VERIFY DIMENSIONS, STRUCTURAL INTEGRITY OF STRUCTURE, I.E. PROVIDE THICKNESSES, REBAR DESIGN, ETC. TO COMPLY WITH CURRENT AASHTO AND ACI CODES. ANY COST DIFFERENCE FOR UPSIZING MANHOLES DUE TO PIPE SIZES, ANGLES, WATER STOP, OR ANY OTHER REASON SHALL BE REFLECTED IN BID PRICES. NO ADDITIONAL PAY ADJUSTMENT WILL BE MADE.
  2. REMOVE DUST, OIL, LAITANCE, DEBRIS, TEC. FROM SURFACE PRIOR TO INSTALLING WATERSTOP AND WEIR.
  3. INSTALL NON-SWELLING WATERSTOP TO CREATE WATERTIGHT SEAL. WATERSTOP SHALL BE LOCKSTOP BY SIKA GREENSTREAK OR EQUAL. INSTALL PER MANUFACTURERS RECOMMENDATIONS. PROVIDE MINIMUM CLEARANCE/COVER AS REQUIRED BY MANUFACTURER.
  4. INSTALL CAST-IN-PLACE WEIR WALL WITH #4 REBAR 12" O.C. BOTH WAYS. DRILL AND EPOXY ANCHOR INTO SIDEWALLS AND BOTTOM SLAB.
  5. A WATERTIGHT PRECAST CONCRETE WEIR WALL SHALL BE CONSIDERED AN ACCEPTABLE ALTERNATE, SO LONG AS IT MEETS THE REINFORCEMENT AND WATER TIGHTNESS SPECIFICATIONS NOTED.
  6. STEPS 16" O.C. ARE REQUIRED ON DOWNSTREAM SIDE OF STRUCTURE.

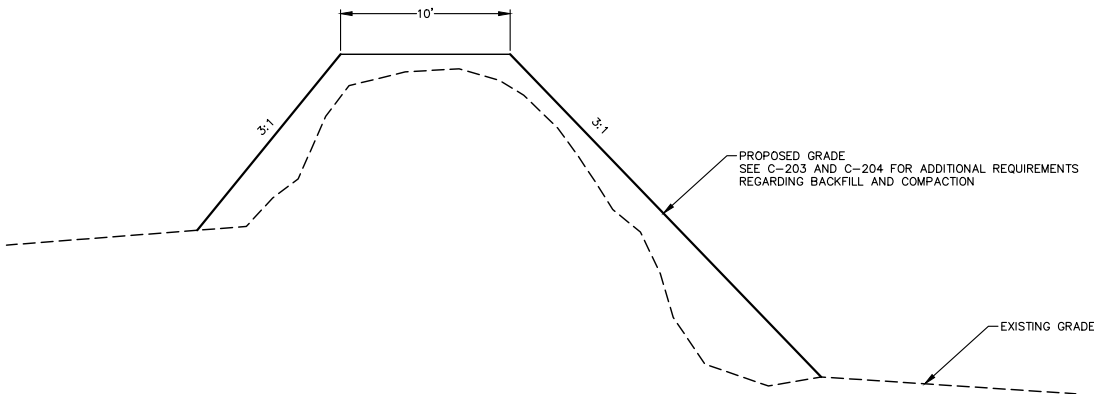
**OUTLET CONTROL STRUCTURE**

NO SCALE



**WEIR NOTCH DETAIL FOR OUTLET CONTROL STRUCTURE**

NO SCALE



**TYPICAL SECTION FOR EMBANKMENT**

NO SCALE

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

*Daniel Elemen*

DANIEL T. ELEMES

DATE: 12.23.2024 LIC. NO. 55420

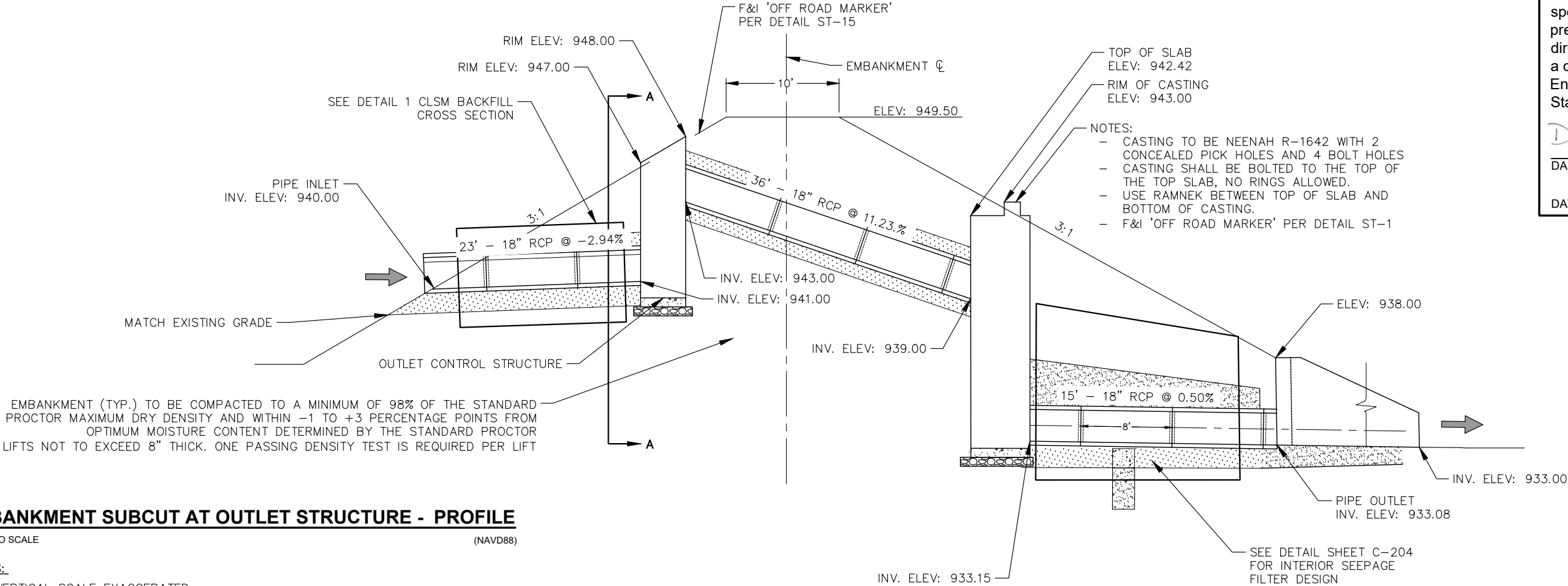


DETAILS  
OUTLET STRUCTURE IMPROVEMENTS AT 6105 VICKSBURG  
CITY PROJECT #WR 180006  
PLYMOUTH, MINNESOTA  
TYPICAL DETAILS

DATE:	12.23.2024
REV DATE:	---
REV NUM:	---
RECORD:	---
PROJECT No.	24543
MANAGER:	JCM
DESIGNER:	DTE
DRAFTER:	DWA
REVIEWER:	DTE

**C-202**

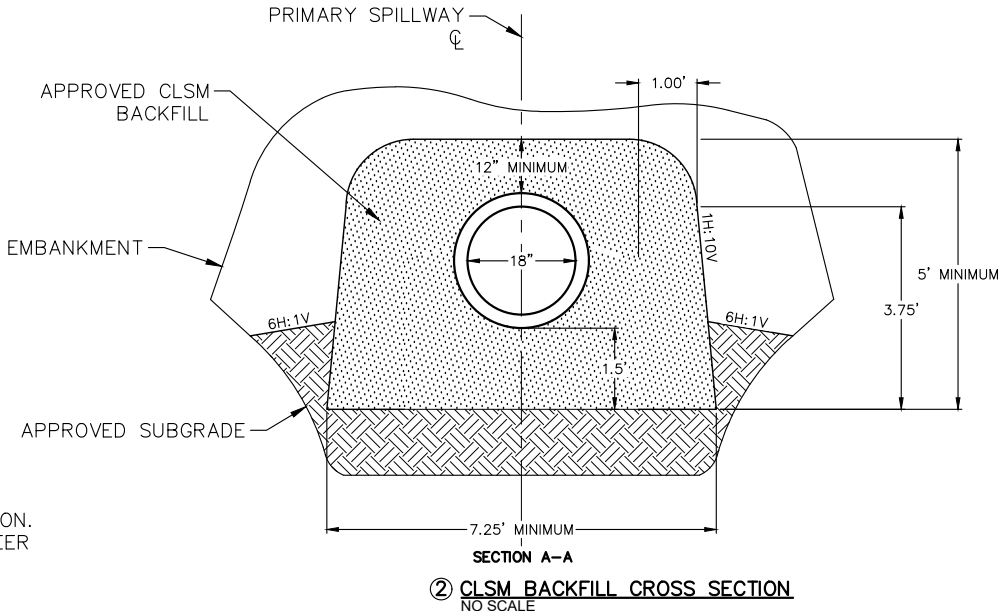
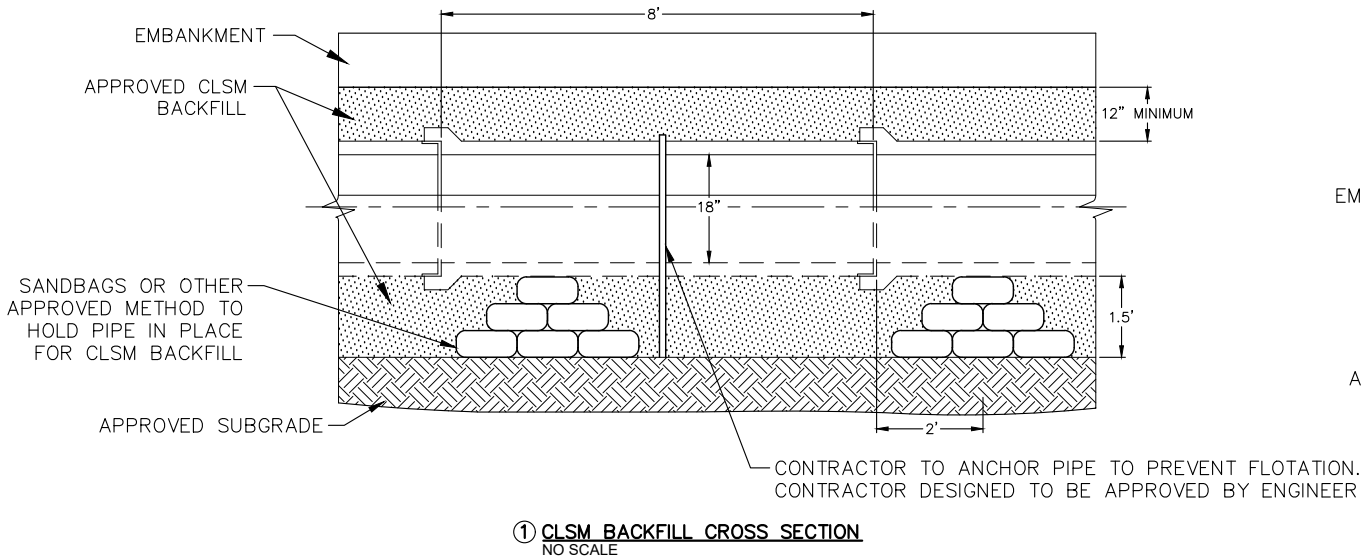
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**EMBANKMENT SUBCUT AT OUTLET STRUCTURE - PROFILE**  
NO SCALE (NAVD88)

**NOTES:**

1. VERTICAL SCALE EXAGGERATED
2. EMBANKMENT SLOPES PERPENDICULAR TO EMBANKMENT  $\phi$
3. EMBANKMENT RIPRAP NOT SHOWN. SEE DETAIL SHEET C-201
4. REINFORCED CONCRETE PIPE AND JOINT TO BE INSTALLED PER SPECIFICATIONS.
5. ANY OVER-EXCAVATED MATERIAL IN SEEPAGE CUTOFF CHANNEL SHALL BE BACKFILLED WITH CLSM.
6. CONTRACTOR RESPONSIBLE TO ANCHOR PIPE TO PREVENT FLOTATION. CONTRACTOR DESIGN.
7. TIE ALL PIPE JOINTS.
8. ALL LABOR AND MATERIALS NECESSARY TO EXCAVATE, PREPARE SUBGRADE, PREPARE STORM SEWER FOR CLSM BACKFILL, PLACE CLSM BACKFILL, AND CONSTRUCT SEEPAGE FILTER WITH PERFORATED PIPE IS PAID FOR BY BID ITEM "SEEPAGE FILTER AND CLSM BACKFILL".



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*Daniel Elemes*

DANIEL T. ELEMES

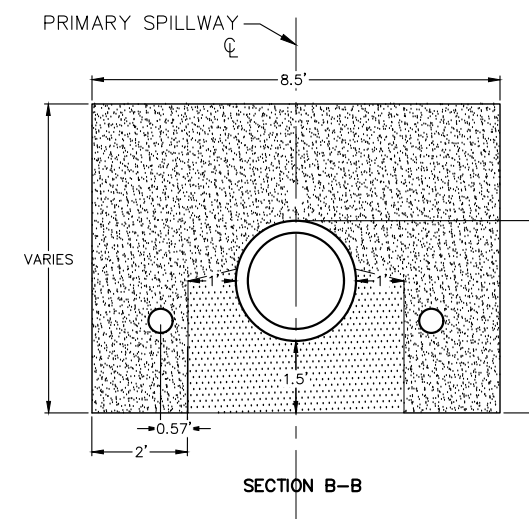
DATE: 12.23.2024 LIC. NO. 55420



DETAILS  
OUTLET STRUCTURE IMPROVEMENTS AT 6105 VICKSBURG  
CITY PROJECT #WR 180006  
PLYMOUTH, MINNESOTA  
TYPICAL DETAILS

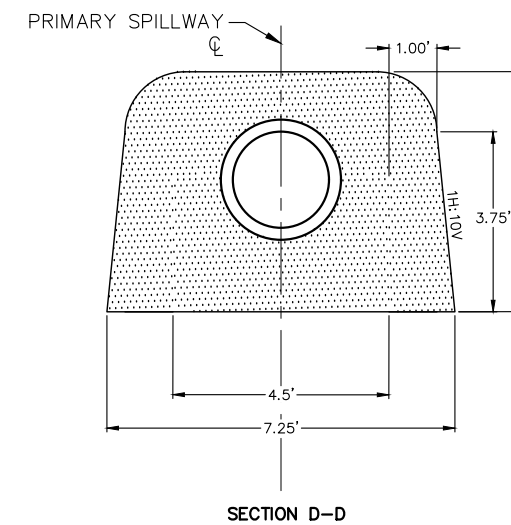
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REV DATE:	---
REV NUM:	---
RECORD:	---
PROJECT No.	24543
MANAGER:	JCM
DESIGNER:	DTE
DRAFTER:	DWA
REVIEWER:	DTE





NO SCALE (NAVD88)

1. INTERNAL CHECK VALVES AND RODENT GUARDS ARE NEEDED FOR PERFORATED INTERNAL SEEPAGE FILTER PIPE.
2. NOT ALL FITTINGS ARE SHOWN. ANY FITTINGS NECESSARY TO CONSTRUCT AS SHOWN ARE INCIDENTAL TO SEEPAGE FILTER BID ITEM.
3. ALL LABOR AND MATERIALS NECESSARY TO EXCAVATE, PREPARE SUBGRADE, PREPARE STORM SEWER FOR CLSM BACKFILL, PLACE CLSM BACKFILL, AND CONSTRUCT SEEPAGE FILTER WITH PERFORATED PIPE IS PAID FOR BY BID ITEM "SEEPAGE FILTER AND CLSM BACKFILL".



DATE: 12.23.2024 LIC. NO. 55420

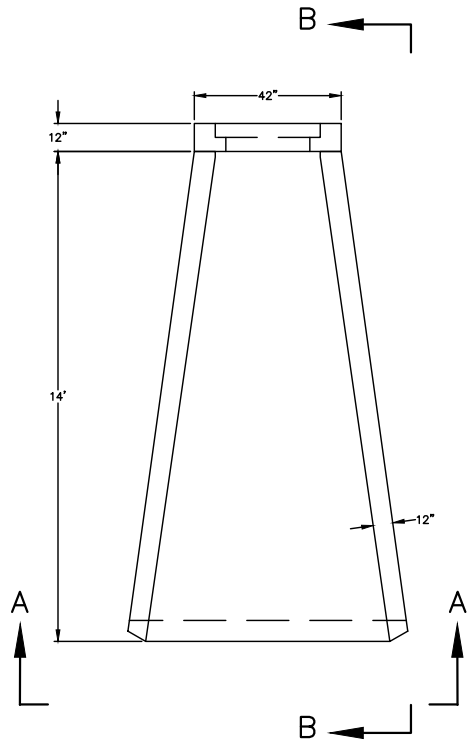


DETAILS  
OUTLET STRUCTURE IMPROVEMENTS AT 6105 VICKSBURG  
CITY PROJECT #WR 180006  
PLYMOUTH, MINNESOTA  
TYPICAL DETAILS

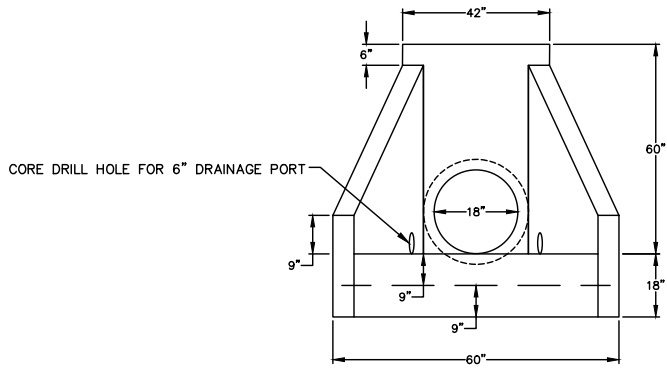
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REV NUM:	----
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PROJECT No. 24543	
MANAGER:	JCM
DESIGNER:	DTE
DRAFTER:	DWA
REVIEWER:	DTE



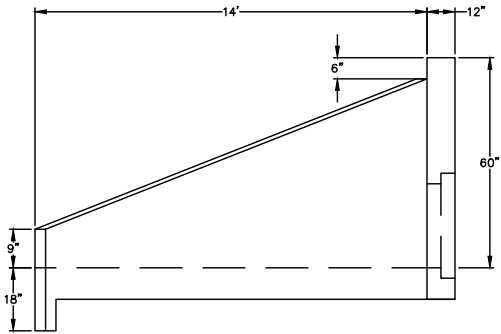
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PLAN VIEW



SECTION A-A



SECTION B-B

**NOTES:**

1. CONTRACTOR MUST SUBMIT SHOP DRAWINGS SIGNED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF MINNESOTA VERIFYING STRUCTURAL DESIGN FOR USE AS SHOWN IN THE PLANS.
2. CONCRETE: DESIGN STRENGTH OF 5,000 PSI AT 28 DAYS.
3. STEEL REINFORCEMENT: ASTM A-615 GRADE 60 OR ASTM A-497 WELDED WIRE FABRIC.
4. LOADING: H2O LOADING.
5. CI CASTINGS: ASTM A48 CLASS 30/35.
6. ALL EXPOSED CORNERS TO BE CHAMFERED 3/4".
7. CASTING HEADWALL IN PLACE MUST BE APPROVED BY ENGINEER AND MAY REQUIRE ADDITIONAL DETAILED DESIGN INFORMATION.

**HEADWALL DETAIL**

NO SCALE

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*Daniel Elemen*

DANIEL T. ELEMES

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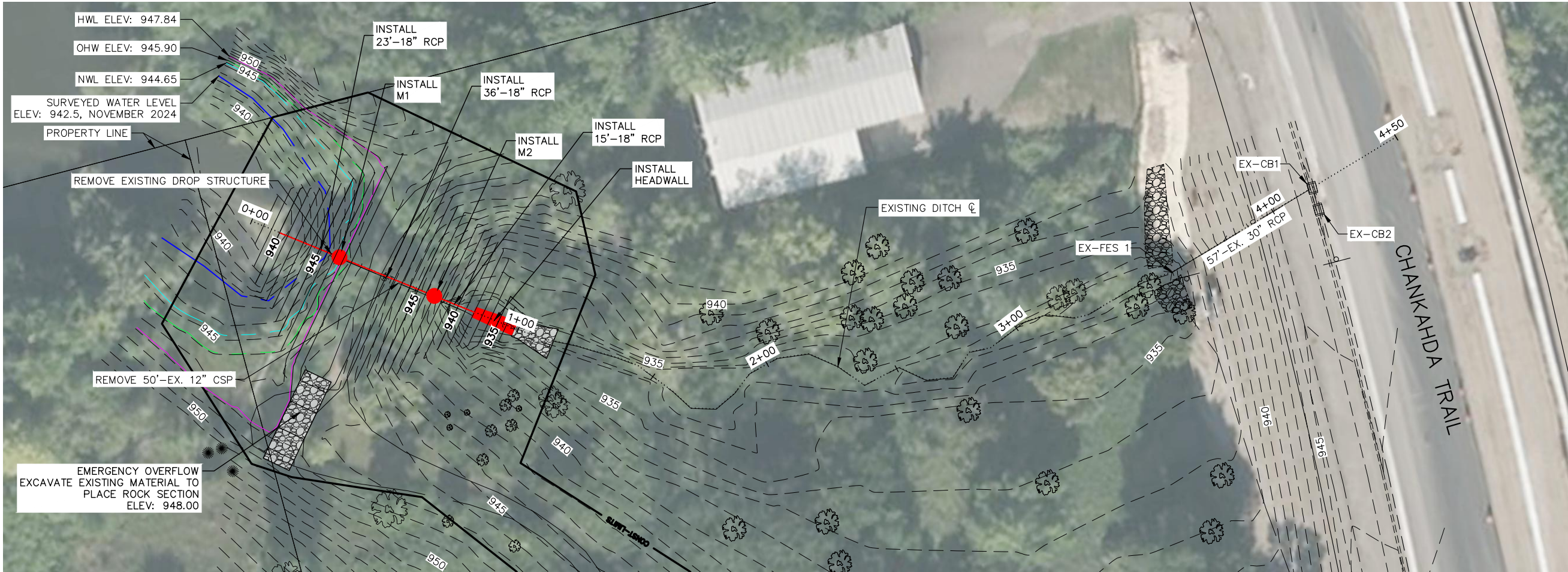


DETAILS  
OUTLET STRUCTURE IMPROVEMENTS AT 6105 VICKSBURG  
CITY PROJECT #WR 180006  
PLYMOUTH, MINNESOTA  
DETAILS

DATE:	12.23.2024
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RECORD:	----
PROJECT No.	24543
MANAGER:	JCM
DESIGNER:	DTE
DRAFTER:	DWA
REVIEWER:	DTE

**C-205**

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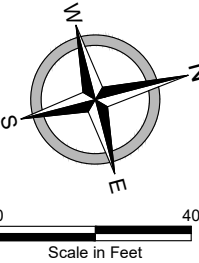


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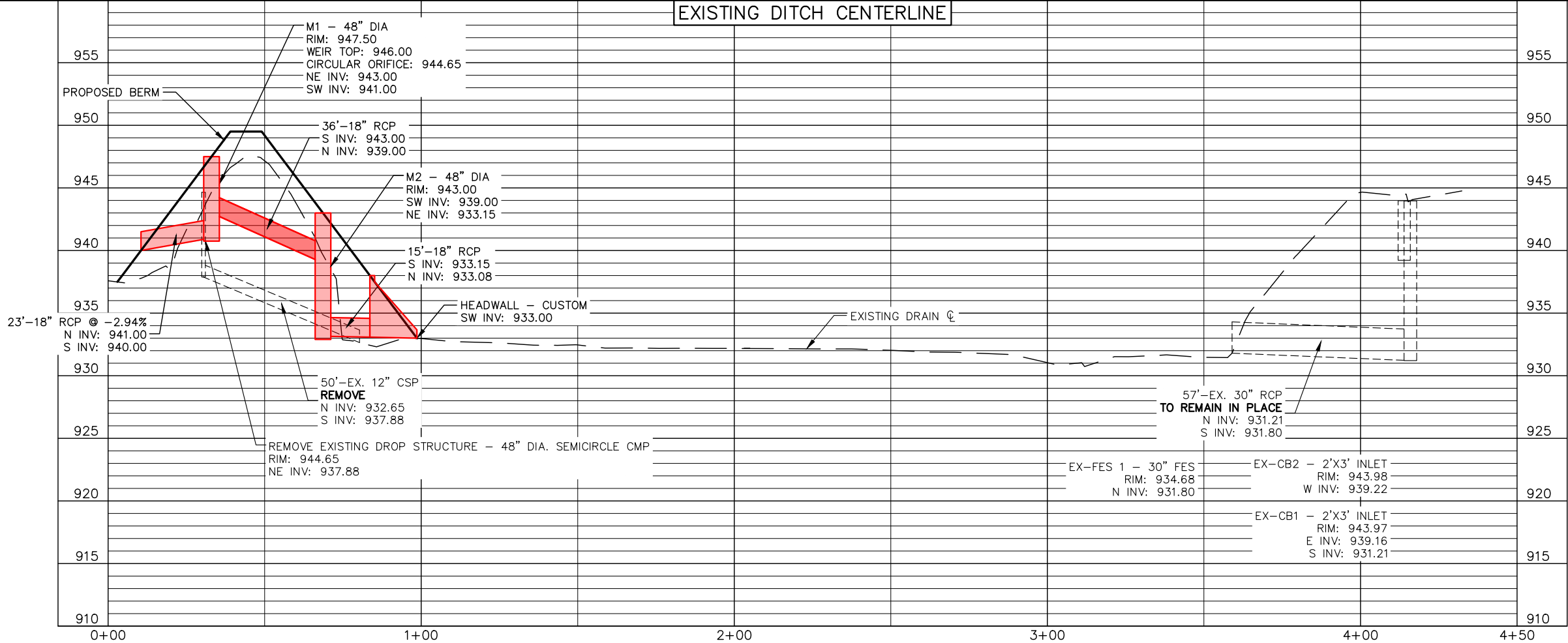
*Daniel Elemen*

DANIEL T. ELEMES

DATE: 12.23.2024 LIC. NO. 55420



PLAN AND PROFILE  
OUTLET STRUCTURE IMPROVEMENTS AT 6105 VICKSBURG  
CITY PROJECT #WR 180006  
PLYMOUTH, MINNESOTA  
OUTLET STRUCTURE AND CULVERT REPLACEMENT

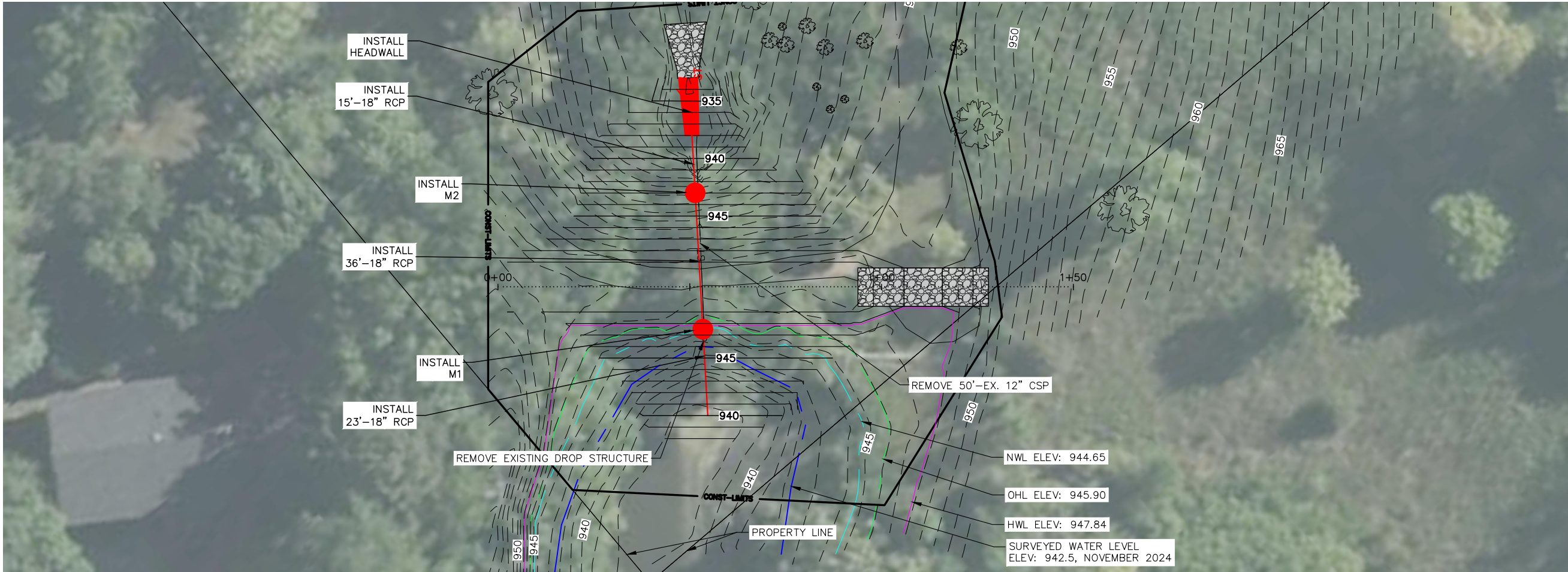


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PROJECT No.	24543
MANAGER:	JCM
DESIGNER:	DTE
DRAFTER:	DWA
REVIEWER:	DTE

C-401



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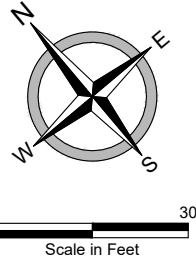


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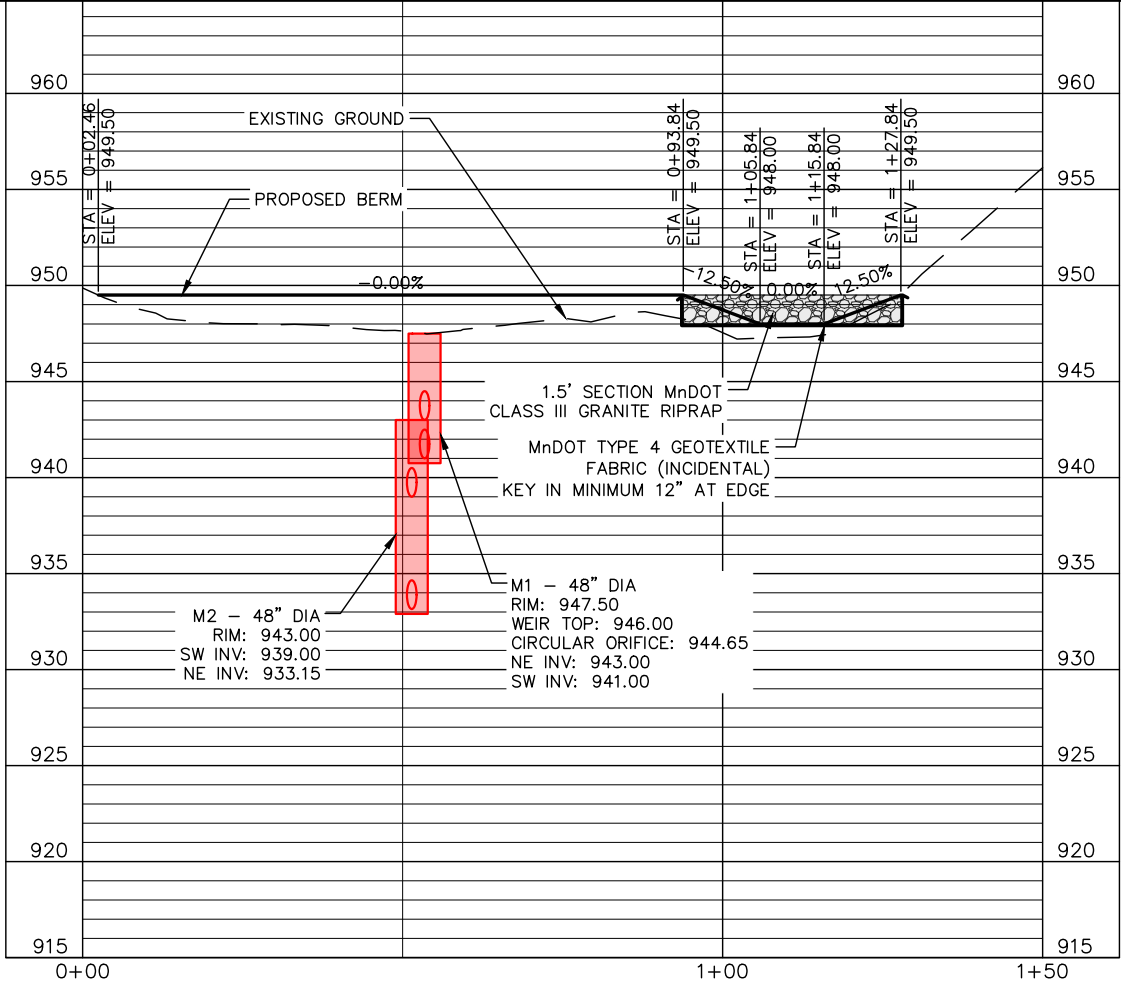
*Daniel Elemen*

DANIEL T. ELEMES

DATE: 12.23.2024 LIC. NO. 55420



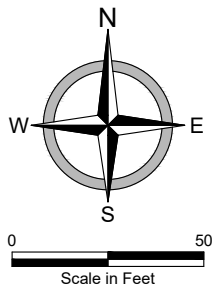
PLAN AND PROFILE  
OUTLET STRUCTURE IMPROVEMENTS AT 6105 VICKSBURG  
CITY PROJECT #WR 180006  
PLYMOUTH, MINNESOTA  
**PROPOSED BERM**



DATE:	12.23.2024
REV DATE:	---
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RECORD:	---
PROJECT No.	24543
MANAGER:	JCM
DESIGNER:	DTE
DRAFTER:	DWA
REVIEWER:	DTE

C-402





DATE: 12.23.2024 LIC. NO. 55420



DATE:	12.23.2024
REV DATE:	----
REV NUM:	----
RECORD:	----
PROJECT No. 24543	
MANAGER:	JCM
DESIGNER:	DTE
DRAFTER:	DWA
REVIEWER:	DTE

**C-601**