

LIFT STATION 13 FM REPLACEMENT - PHASE 1

TITLE SHEET



CONTACT INFORMATION

CITY OF BLAINE	
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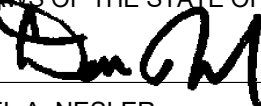


SITE LOCATION MAP



SHEET INDEX

SHEET NO.	DRAWING NO.	DRAWING NAME
1	G001	TITLE SHEET
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PLOT DATE: Apr 24, 2023 - 1:59pm
FILENAME: K:\a-f\blaine\18153000\04_Production\01_CAD - Phase_1_Gravity\02_Sheets\G001_TITLE SHEET.dwg

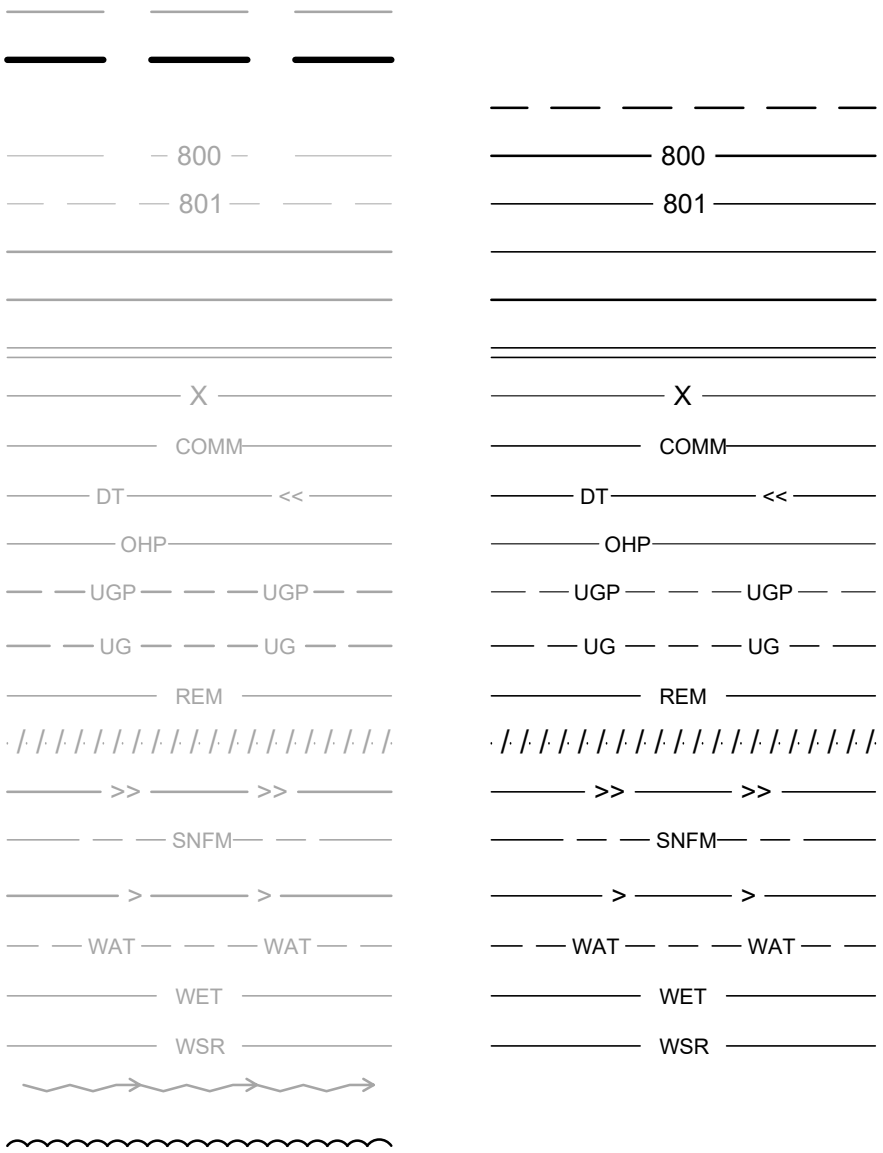
				DESIGNED BJM	I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA. SIGNATURE:  DATE: 04/24/23 NAME: DANIEL A. NESLER LIC. NO.: 47523	 <div>444 Cedar Street, Suite 1500 Saint Paul, MN 55101 651.292.4400 tkda.com</div>	 <div>CITY OF BLAINE CITY PROJECT NO. 21-30</div>	TITLE SHEET		PROJ. NO. 18153.000
				DRAWN BJM						DRAWING NO. G001
				CHECKED AMP				LIFT STATION 13 FM REPLACEMENT PHASE 1		SHEET NO. 1
0	04/24/23	DAN	ISSUED FOR BID							
NO.	DATE	BY	DESCRIPTION OF REVISIONS							

SYMBOL
EXISTING/PROPOSED



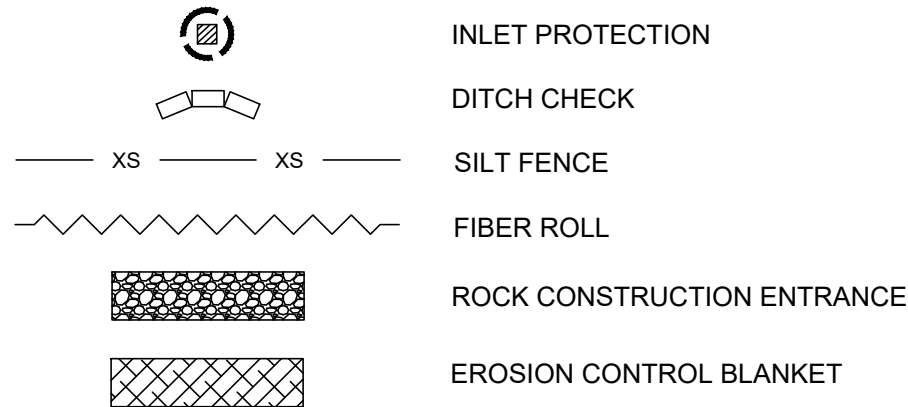
APRON
BEND
BM
BOLLARD
BORING
BUSH
CATCH BASIN
CATCH BASIN - CURB
CHECK VALVE
CLEAN OUT
CONIFEROUS TREE
CONIFEROUS TREE CLUSTER
CROSS
DECIDUOUS TREE
DECIDUOUS TREE CLUSTER
DERRAIL
DRAINAGE ARROW
ELECTRICAL BOX
F CRANE
FLAG
FPMP
GAS VALVE
GATE VALVE
GPS
GSR
GUY WIRE
HANDICAP
HYDRANT
HYDRANT AND GATE VALVE
LIGHT POLE
IRON PIN
MANHOLE - ELECTRICAL
MANHOLE - FIBER
MANHOLE - GAS
MANHOLE - SANITARY
MANHOLE - STORM
MANHOLE - TELE
MANHOLE - WATER
MANHOLE - UNKNOWN
MARKER POINT
MBX
METER
MON
MONITORING WELL
MPST
PED
PIN
PIPE SUPPORT
PLUG
POF
POS
POST
POWER POLE
REDUCER
SEWER VALVE
SIGN
SPRINKLER
STATION
STN
STORM CATCH BASIN
STORM CATCH BASIN - CURB
STUMP
TEE
WATER SHUTOFF
WATER VALVE
WELL
YARD HYDRANT

EXISTING
LINETYPE
PROPOSED

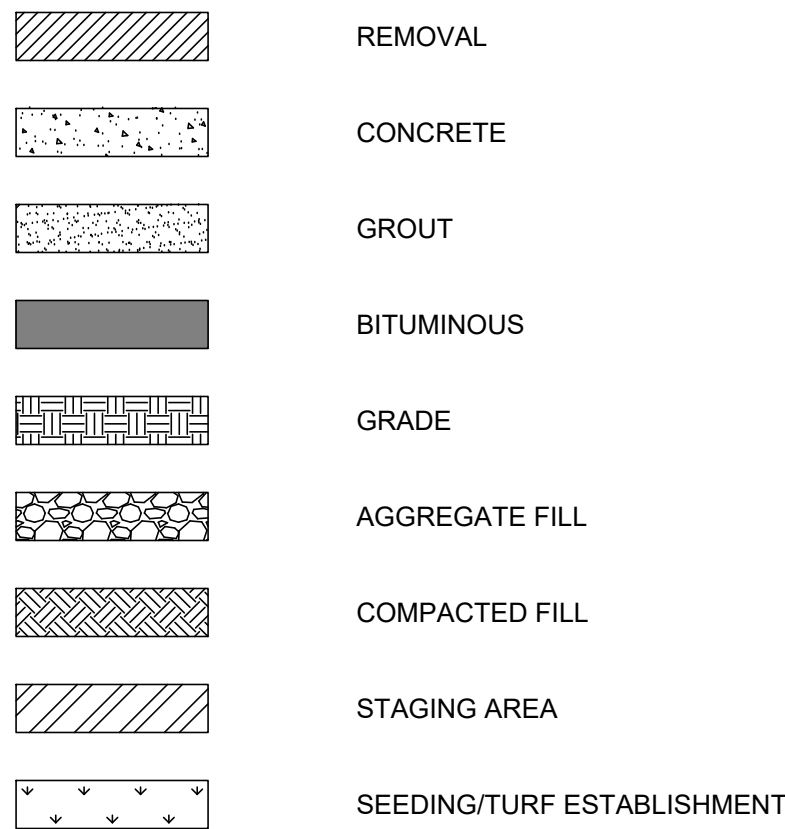


PROPERTY BOUNDARY
RIGHT OF WAY
CONSTRUCTION LIMITS
CONTOUR MAJOR
CONTOUR MINOR
BITUMINOUS PAVEMENT
CONCRETE PAVEMENT
CURB AND GUTTER
FENCE
COMMUNICATIONS
DRAINTILE
ELECTRIC OVERHEAD
ELECTRIC UNDERGROUND
GAS LINE UNDERGROUND
REMOVAL LIMITS
REMOVAL
SANITARY SEWER
SANITARY SEWER FORCEMAIN
STORM SEWER
WATERLINE
WETLAND
WATER SERVICE
WATERWAY/STREAM
TREELINE

EROSION CONTROL SYMBOLS



HATCHES



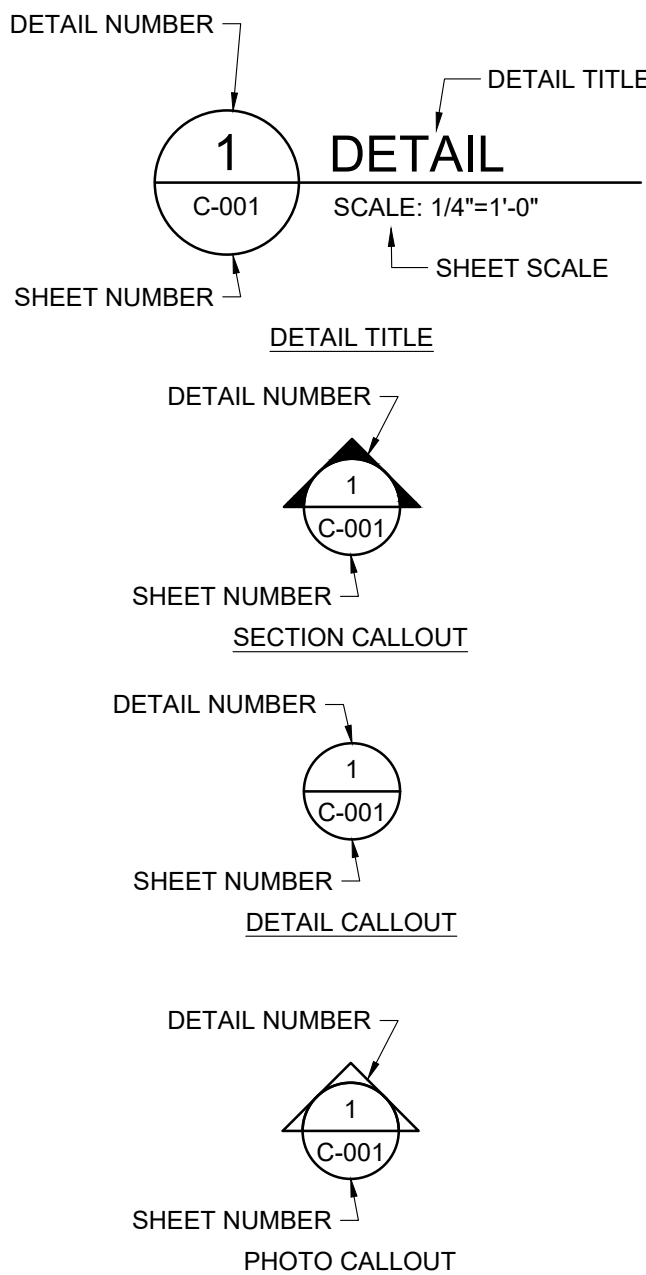
GENERAL NOTES:

- SCREENED DELINEATION SHOWN ON SHEETS DENOTES EXISTING FACILITIES.
- LOCATIONS OF EXISTING ABOVE GRADE STRUCTURES, SUBSURFACE STRUCTURES, AND SOIL CONDITIONS ARE BASED ON BEST AVAILABLE INFORMATION AND ARE APPROXIMATE. ACCURACY IS NOT GUARANTEED. CONTRACTOR SHALL FIELD VERIFY LOCATIONS, DIMENSIONS, AND CONDITIONS OF ALL EXISTING ITEMS PRIOR TO CONSTRUCTION.
- HORIZONTAL AND VERTICAL LOCATIONS OF EXISTING UTILITIES AS SHOWN ARE APPROXIMATE AND FOR INFORMATION PURPOSES ONLY. CONTRACTOR SHALL FIELD VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION. CONTRACTOR SHALL VERIFY AND RECORD THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL UTILITIES ENCOUNTERED IN THE FIELD AND RECORD ANY CHANGES ON THE RECORD DRAWINGS.
- CONTRACTOR SHALL PERFORM EXPLORATORY EXCAVATIONS TO DETERMINE THE EXACT LOCATIONS OF UNDERGROUND UTILITIES, FACILITIES, AND OTHER ITEMS AS NECESSARY. IF ITEMS NEED TO BE RELOCATED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND SUBMIT A PLAN WELL IN ADVANCE OF RELOCATING ANY ITEMS. CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING ALL ARRANGEMENTS, INCLUDING APPROVAL AND COORDINATION WITH THE OWNER FOR THE RELOCATION OF AN ITEM.
- ALL UTILITY PIPING AND CONDUIT TO REMAIN THAT IS ENCOUNTERED DURING CONSTRUCTION SHALL BE SUPPORTED BY THE CONTRACTOR BY MEANS ACCEPTABLE TO THE OWNER AND ENGINEER. CONTRACTOR SHALL PROTECT ANY EXISTING THRUST BLOCKS ENCOUNTERED THAT MAY BE RESTRAINING EXISTING UTILITIES AND SHALL NOT UNDERMINE THEM.
- CONTRACTOR SHALL PROTECT EXISTING UTILITIES AND PROPERTY NOT TO BE DEMOLISHED OR ABANDONED THROUGHOUT CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR OF ANY DAMAGED UTILITIES OR PROPERTY AT THEIR EXPENSE.
- REPLACE ANY DAMAGED SURFACES DUE TO CONSTRUCTION ACTIVITIES INCLUDING BUT NOT LIMITED TO GRADING, LANDSCAPING, PAVING, AND VEGETATION TO PRECONSTRUCTION CONDITIONS OR BETTER.
- CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL AND DISPOSAL OF ALL EXCESS EXCAVATED MATERIAL, SOILS, AND DEMOLITION DEBRIS TO AN OFFSITE LOCATION. EXCAVATED SOILS USED FOR BACKFILLING SHALL BE TEMPORARILY STOCKPILED AND SHALL NOT CONTAIN ANY CONSTRUCTION DEBRIS, ROCKS, OR OTHER DELETERIOUS MATERIALS.
- PIPING SHALL BE AS NOTED ON THE PLANS. UNLESS NOTED OTHERWISE, ALL WASTEWATER PIPING SHALL BE HDPE WITH DUCTILE IRON FITTINGS.
- ALL PIPE LENGTHS ARE BASED ON THE HORIZONTAL DISTANCE BETWEEN OUTSIDE WALLS OF STRUCTURES.
- ALL BACKFILL FOR UTILITY EXCAVATIONS SHALL BE COMPACTED TO A MINIMUM OF 95% OF MAXIMUM DENSITY.
- PROVIDE FULL DEPTH SAW CUT WHERE EXISTING PAVEMENT AND SIDEWALK IS BEING REMOVED.
- PROVIDE APPROPRIATE EROSION CONTROL AT ALL TIMES IN AREAS OF CONSTRUCTION. THIS INCLUDES, BUT IS NOT LIMITED TO ADDITIONAL SILT FENCE, ROCK CONSTRUCTION ENTRANCES, INLET PROTECTION, SEDIMENT TRAMPS, ETC.
- CONTRACTOR IS RESPONSIBLE FOR MAINTAINING COMPLIANCE WITH ALL EROSION CONTROL REQUIREMENTS AND PERMITS. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL ASSOCIATED CONSTRUCTION PERMITS.
- EROSION CONTROL DEVICES SHALL BE MAINTAINED OR REPLACED BY THE CONTRACTOR AT THE DISCRETION OF THE ENGINEER.
- DESIGNATE CONCRETE WASHOUT AND MIXING LOCATIONS IN THE EROSION CONTROL PLANS. ALL WASHOUT AND MIXING LOCATIONS SHALL MEET ALL REQUIREMENTS OF THE CONSTRUCTION PERMITS.

ABBREVIATIONS

BIT	BITUMINOUS
C/L	CENTERLINE
CI	CAST IRON
CL	CLASS
CONC	CONCRETE
DIA	DIAMETER
DIP	DUCTILE IRON PIPE
E	EAST
EL	ELEVATION
EG	EXISTING GRADE
FG	FUTURE GRADE
FM	FORCEMAIN
FT	FEET/FOOT
HDPE	HIGH DENSITY POLYETHYLENE
ID	INSIDE DIAMETER
IE	INVERT ELEVATION
IN	INCH
INV	INVERT
MH	MANHOLE
MIN	MINIMUM
MAX	MAXIMUM
MPH	MILES PER HOUR
N	NORTH
NOM	NOMINAL
PVC	POLY VINYL CHLORIDE
RCP	REINFORCED CONCRETE PIPE
ROW	RIGHT-OF-WAY
S	SOUTH
SAN	SANITARY
SB	SOIL BORING
SCH	SCHEDULE
SS	STAINLESS STEEL
STA	STATION
TOC	TOP OF CURB
TYP	TYPICAL
VCP	VITRIFIED CLAY PIPE
W	WEST
WM	WATER MAIN

CROSS REFERENCE SYSTEM



NOTE:
ITEMS SHOWN ON THIS DRAWING ARE STANDARD SYMBOLS
AND MAY NOT ALL APPEAR ON THESE PROJECT DRAWINGS

0	04/24/23	DAN	ISSUED FOR BID
NO.	DATE	BY	DESCRIPTION OF REVISIONS

DESIGNED	BJM
DRAWN	BJM
CHECKED	AMP
SIGNATURE:	DATE: 04/24/23
NAME: DANIEL A. NESLER	LIC. NO.: 47523



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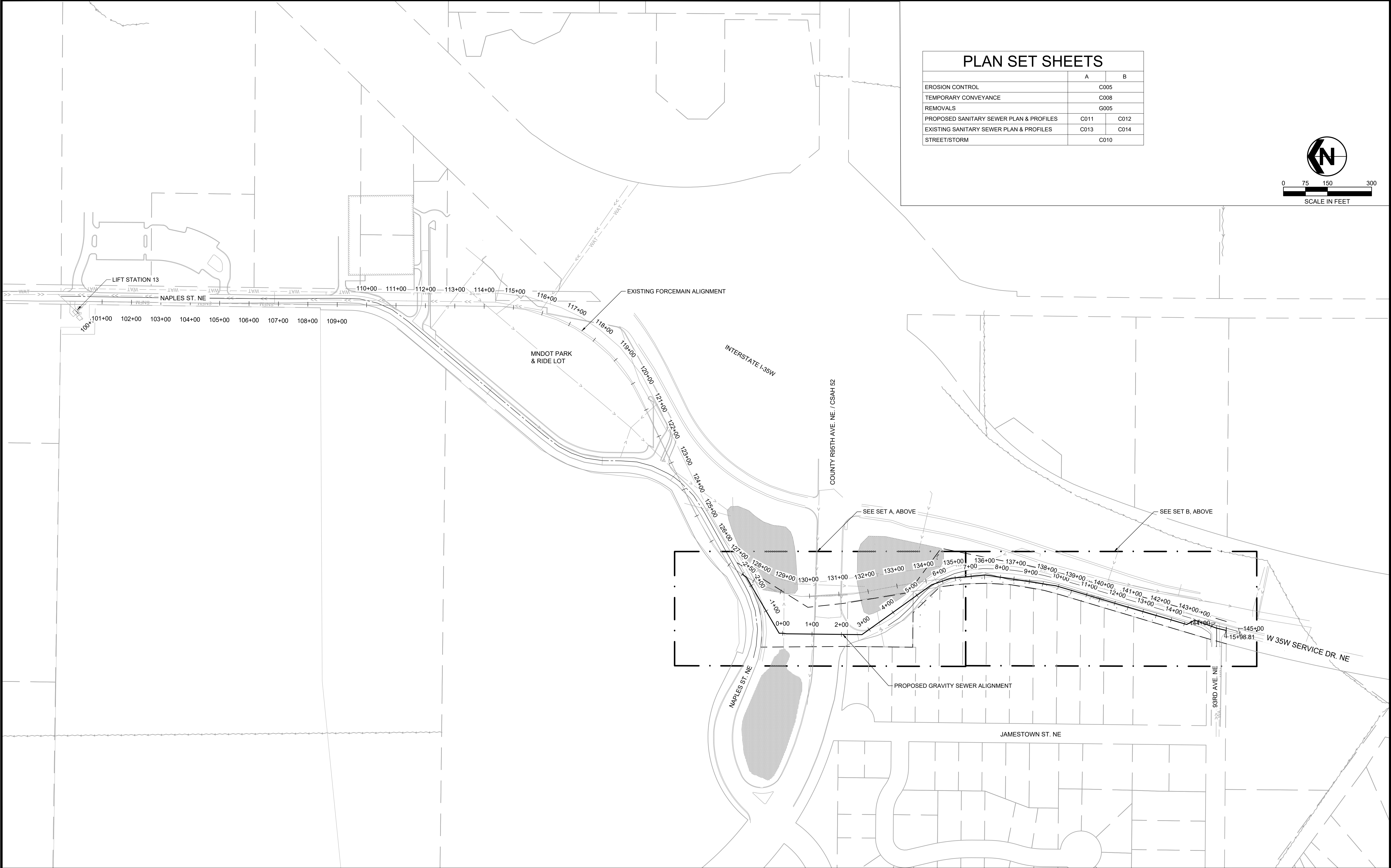
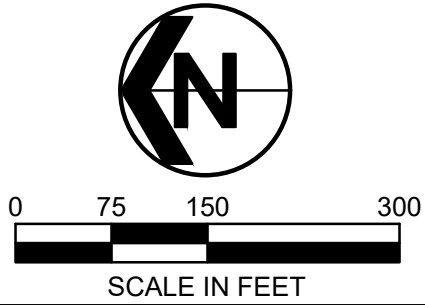
CITY OF BLAINE
CITY PROJECT NO. 21-30

GENERAL LEGEND
LIFT STATION 13 FM REPLACEMENT PHASE 1

PROJ. NO.	18153.000
DRAWING NO.	G002
SHEET NO.	2

PLOT DATE: Apr 24, 2023 - 1:59pm
FILENAME: K:\a-f\blaine\18153000\04_Production\01_CAD - Phase 1_Gravity\02_Sheets\G003_GENERAL LAYOUT.dwg


PLAN SET SHEETS		
	A	B
EROSION CONTROL	C005	
TEMPORARY CONVEYANCE	C008	
REMOVALS	G005	
PROPOSED SANITARY SEWER PLAN & PROFILES	C011	C012
EXISTING SANITARY SEWER PLAN & PROFILES	C013	C014
STREET/STORM	C010	



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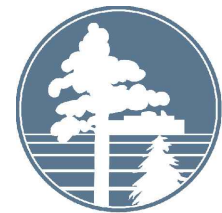
DESIGNED	BJM
DRAWN	BJM
CHECKED	AMP

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 ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

SIGNATURE:  DATE: 04/24/23
NAME: DANIEL A. NESLER LIC. NO.: 47523



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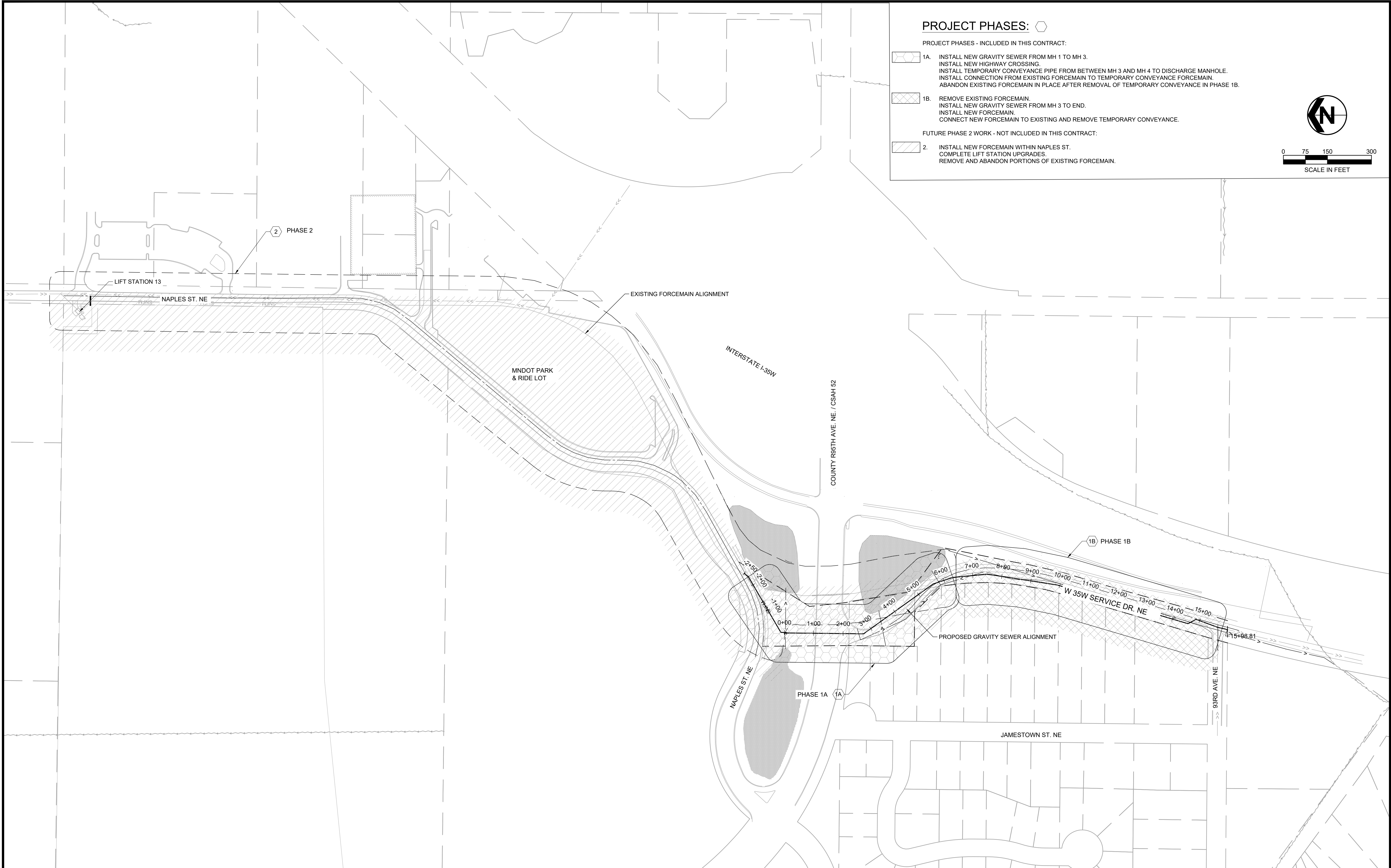


CITY OF BLAINE
CITY PROJECT NO. 21-30

GENERAL LAYOUT	
LIFT STATION 13 FM REPLACEMENT PHASE 1	

PROJ. NO.	18153.000
DRAWING NO.	G003
SHEET NO.	3

PLOT DATE: Apr 24, 2023 - 2:00pm
FILENAME: K:\a\Blaine\18153000\04_Production\01_CAD - Phase_1_Gravity\02_Sheets\G004_SEQUENCING PLAN.dwg



NO.	DATE	BY	DESCRIPTION OF REVISIONS
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DESIGNED	BJM
DRAWN	BJM
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SIGNATURE: *Daniel A. Nesler* DATE: 04/24/23
NAME: DANIEL A. NESLER LIC. NO.: 47523



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CITY OF BLAINE
CITY PROJECT NO. 21-30

SEQUENCING PLAN
LIFT STATION 13 FM REPLACEMENT PHASE 1

PROJ. NO.	18153.000
DRAWING NO.	G004
SHEET NO.	4

STORM WATER POLLUTION PREVENTION PLAN (SWPPP) NARRATIVE

PROJECT LOCATION/DESCRIPTION

THE PROJECT IS LOCATED WEST OF INTERSTATE 35W, NORTH OF 93RD AVE NE, AND SOUTH OF NAPLES ST NE IN THE CITY OF BLAINE IN ANOKA COUNTY. THE PROJECT WILL INCLUDE THE FOLLOWING STREETS FOR REHABILITATION: I-35W SERVICE DRIVE NE.

LATITUDE: 45.14942 LONGITUDE: -93.188030

THE PLANNED SCOPE OF THE PROJECT INCLUDES:
SANITARY SEWER, SANITARY SEWER FORCEMAIN REPLACEMENT, BITUMINOUS RESURFACING, CURB AND GUTTER, STORM SEWER REPLACEMENT.

RECEIVING WATER BODIES

THE FOLLOWING WATERBODIES ARE LOCATED WITHIN ONE MILE OF THE PROJECT LIMITS AND RECEIVE RUNOFF FROM THE PROJECT SITE.

NAME	CONSTRUCTION RELATED IMPAIRMENTS
ANOKA COUNTY DITCH NO. 1	NO
ANOKA COUNTY DITCH NO. 32	NO
ANOKA COUNTY DITCH NO. 62	NO

AREAS OF ENVIRONMENTAL SENSITIVITY (AES) AND INFESTED WATERS

THE CONTRACTOR SHALL BE AWARE THAT THERE ARE WETLANDS AND EXISTING STORMWATER FACILITIES WITHIN AND NEAR THE PROJECT BOUNDARY.

THE FOLLOWING WATER BODIES HAVE BEEN LISTED BY THE DNR AS BEING INFESTED BY INVASIVE SPECIES:

ALL EQUIPMENT THAT HAS BEEN IN CONTACT WITH DESIGNATED INFESTED WATERS GREATER THAN 24 HOURS MUST BE TREATED TO REMOVE AND KILL INVASIVE SPECIES PRESENT IN THOSE WATERS PRIOR TO REUSE ON ANOTHER WATER BODY OR TRANSPORTING ON PUBLIC ROADS.

SOIL TYPES

SOIL TYPES FOUND ON THIS PROJECT ARE AS FOLLOWS:
ISANTI FINE SANDY LOAM; SODERVILLE FINE SAND; ZIMMERMAN FINE SAND

ENVIRONMENTAL REVIEW

THERE ARE NO STORMWATER MITIGATION MEASURES REQUIRED AS A RESULT OF AN ENVIRONMENTAL, ARCHEOLOGICAL OR AGENCY REVIEW.

ALL MITIGATION MEASURES HAVE BEEN ADDRESSED IN THIS PLAN SET OR THE SPECIAL PROVISIONS.

THIS PROJECT IS NOT LOCATED IN A WELL HEAD PROTECTION AREA, DRINKING WATER SUPPLY MANAGEMENT AREA (DWSMA), KARST AREA, OR EMERGENCY RESPONSE AREA (ERA).

DESIGN DATA

STORMWATER CALCULATIONS AND HYDRAULIC INFORMATION IS ON FILE WITH THE PROJECT ENGINEER AND IS AVAILABLE ON REQUEST.

PROJECT CONTACTS

ORGANIZATION	CONTACT NAME	PHONE
CITY OF BLAINE/ ASST. CITY ENGINEER	STEFAN HIGGINS, PE	763-717-2722
PROJECT ENGINEER	AMY PATTERSON, PE	651-280-5691
SWPPP DESIGNER	AMY PATTERSON, PE	651-280-5691
CONSTRUCTION SITE MANAGER (CONTRACTOR)		
RICE CREEK WATERSHED DISTRICT		
MINNESOTA DEPARTMENT OF NATURAL RESOURCES		
MINNESOTA POLLUTION CONTROL AGENCY		

MPCA 24 HOUR EMERGENCY NOTIFICATION: 651-649-5451 TOLL FREE: 800-422-0798

PROJECT PERSONNEL AND TRAINING

THIS SWPPP WAS PREPARED BY AMY PATTERSON WHO IS CERTIFIED IN THE DESIGN OF CONSTRUCTION SWPPPS. COPIES OF THE CERTIFICATION ARE ON FILE WITH THE CITY AND ARE AVAILABLE UPON REQUEST.

IN ACCORDANCE WITH SPECIFICATION, THE CONTRACTOR SHALL PROVIDE A CERTIFIED CONSTRUCTION SITE MANAGER IN GOOD STANDING WHO IS KNOWLEDGEABLE AND EXPERIENCED IN THE APPLICATION OF EROSION PREVENTION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES. THE EROSION CONTROL SUPERVISOR WILL WORK WITH THE PROJECT ENGINEER TO OVERSEE THE IMPLEMENTATION OF THE SWPPP AND THE INSTALLATION, INSPECTION, AND MAINTENANCE OF THE EROSION PREVENTION AND SEDIMENT CONTROL BMPs BEFORE, DURING AND AFTER CONSTRUCTION UNTIL THE NOTICE OF TERMINATION (NOT) HAS BEEN FILED WITH THE MPCA.

IN ACCORDANCE WITH SPECIFCATION, PROVIDE AT LEAST ONE CERTIFIED INSTALLER FOR EACH CONTRACTOR OR SUBCONTRACTOR THAT INSTALLS THE PRODUCTS LISTED IN SPECIFICATION.

PROVIDE PROOF OF CERTIFICATION AT THE PRECONSTRUCTION MEETING. WORK WILL NOT BE ALLOWED TO COMMENCE UNTIL PROOF OF CERTIFICATION HAS BEEN PROVIDED TO THE PROJECT ENGINEER.

CHAIN OF RESPONSIBILITY

THE CITY OF BLAINE AND THE CONTRACTOR ARE CO-PERMITTEES FOR THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) CONSTRUCTION PERMIT. THE CONTRACTOR IS RESPONSIBLE TO COMPLY WITH ALL ASPECTS OF THE NPDES CONSTRUCTION PERMIT AT ALL TIMES UNTIL THE NOTICE OF TERMINATION (NOT) HAS BEEN FILED WITH THE MPCA. THE CONTRACTOR WILL DEVELOP A CHAIN OF COMMAND WITH ALL OPERATORS ON THE SITE TO ENSURE THAT THE SWPPP WILL BE IMPLEMENTED AND STAY IN EFFECT UNTIL THE CONSTRUCTION PROJECT IS COMPLETE, THE ENTIRE SITE HAS UNDERGONE FINAL STABILIZATION, AND THE NOT HAS BEEN SUBMITTED TO THE MPCA. THE CONSTRUCTION PROJECT ENGINEER WILL ENSURE THAT THE CONTRACTOR'S EROSION AND SEDIMENT CONTROL SUPERVISOR FULFILLS THEIR DUTIES.

LOCATION OF SWPPP REQUIREMENTS

THE REQUIRED SWPPP ELEMENTS MAY BE LOCATED IN MANY PLACES WITHIN THE PLAN SET, SPEC BOOK, OR ON FILE WITH THE PROJECT ENGINEER. THE NOTES AND TABLE BELOW ARE INTENDED TO BE A QUICK REFERENCE FOR THE CONTRACTOR AND PROJECT ENGINEER TO USE IN THE FIELD. THERE MAY BE ADDITIONAL REQUIRED SWPPP ELEMENTS INCLUDED ON THE PROJECT THAT ARE NOT LISTED ON THIS SHEET.

DESCRIPTION	LOCATION
TEMPORARY EROSION CONTROL MEASURES	C005
PERMANENT EROSION CONTROL MEASURES	C005
DIRECTION OF FLOW	C003 & C012
FINAL STABILIZATION	C005
SOILS AND CONSTRUCTION NOTES	C001 & C002
DRAINAGE STRUCTURES	C016
DRAINAGE TABULATION	G005
STORM SEWER PROFILE SHEETS	C012
EROSION AND SEDIMENT CONTROL DETAILS	C005 - C006
SITE MAP	G003
STORMWATER CALCULATIONS	ON FILE WITH THE ENGINEER
WATER RESOURCES NOTES	C003

STORMWATER CALCULATIONS AND ADDITIONAL HYDRAULIC DESIGN INFORMATION IS AVAILABLE UPON REQUEST FROM THE PROJECT ENGINEER.




LAND FEATURE CHANGES

TOTAL DISTURBED AREA	1.67 ACRES
TOTAL EXISTING IMPERVIOUS AREA	0.22 ACRES
TOTAL PROPOSED IMPERVIOUS AREA	0.22 ACRES
TOTAL NET CHANGE IN IMPERVIOUS AREA	0 ACRES

LONG TERM OPERATION AND MAINTENANCE

THE CITY OF BLAINE MAINTENANCE STAFF IS RESPONSIBLE FOR THE LONG TERM OPERATION AND MAINTENANCE OF THE PERMANENT STORMWATER SYSTEM CONSTRUCTED IN THIS PROJECT.

PLOT DATE: Apr 24, 2023 - 2:00pm
FILENAME: K:\a-f\blaine\18153000\04_Production\01_CAD - Phase_1_Gravity\02_Sheets\C001_SWPPP.dwg

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				DRAWN	BJM				DRAWING NO. C001		
0	04/24/23	DAN	ISSUED FOR BID	CHECKED	AMP				LIFT STATION 13 FM REPLACEMENT PHASE 1	SHEET NO. 6	
NO.	DATE	BY	DESCRIPTION OF REVISIONS								

STORM WATER POLLUTION PREVENTION PLAN (SWPPP) NARRATIVE (CONTINUED)

SITE INSPECTION AND MAINTENANCE

THE CERTIFIED CONSTRUCTION SITE MANAGER SHALL INSPECT THE ENTIRE CONSTRUCTION SITE A MINIMUM OF ONCE EVERY 7 DAYS DURING ACTIVE CONSTRUCTION AND WITHIN 24 HOURS AFTER A RAINFALL EVENT GREATER THAN 0.5 INCHES IN 24 HOURS. INSPECT ALL TEMPORARY AND PERMANENT WATER QUALITY MANAGEMENT, EROSION PREVENTION AND SEDIMENT CONTROL BMPS UNTIL THE SITE HAS UNDERGONE FINAL STABILIZATION AND THE NOT HAS BEEN SUBMITTED. INSPECT SURFACE WATER INCLUDING DRAINAGE DITCHES FOR SIGNS OF EROSION AND SEDIMENT DEPOSITION. INSPECT CONSTRUCTION SITE VEHICLE EXIT LOCATIONS FOR EVIDENCE OF TRACKING ONTO PAVED SURFACES. INSPECT SURROUNDING PROPERTIES FOR EVIDENCE OF OFF SITE SEDIMENT ACCUMULATION.

RECORD ALL INSPECTIONS AND MAINTENANCE ACTIVITIES IN WRITING WITHIN 24 HOURS. SUBMIT INSPECTION REPORTS IN A FORMAT THAT IS ACCEPTABLE TO MNDOT'S PROJECT ENGINEER. INCLUDE THE FOLLOWING IN THE RECORDS OF EACH INSPECTION AND MAINTENANCE ACTIVITY:

- A. DATE AND TIME OF INSPECTIONS
- B. NAME OF PERSONS CONDUCTING INSPECTIONS
- C. FINDINGS OF INSPECTIONS, INCLUDING RECOMMENDATIONS FOR CORRECTIVE ACTIONS
- D. CORRECTIVE ACTIONS TAKEN, INCLUDING DATES, TIMES, AND PARTY COMPLETING MAINTENANCE ACTIVITIES
- E. DATE AND AMOUNT OF ALL RAINFALL EVENTS GREATER THAN 0.5 INCH IN 24 HOURS
- F. CHANGES MADE TO THE SWPPP AND ASSOCIATED DOCUMENTS
- G. REPLACE, REPAIR OR SUPPLEMENT ALL NONFUNCTIONAL BMPS BY THE END OF THE NEXT BUSINESS DAY FOLLOWING DISCOVERY UNLESS LISTED DIFFERENTLY BELOW:
- H. REPAIR, REPLACE, OR SUPPLEMENT PERIMETER CONTROL DEVICES WHEN IT BECOMES NONFUNCTIONAL OR SEDIMENT REACHES 1/2 THE HEIGHT OF THE DEVICE. COMPLETE REPAIRS BY THE END OF THE NEXT BUSINESS DAY FOLLOWING DISCOVERY.
- I. REPAIR OR REPLACE INLET PROTECTION DEVICES WHEN THEY BECOME NONFUNCTIONAL OR SEDIMENT REACHES 1/2 THE HEIGHT AND/OR DEPTH OF THE DEVICE.
- J. DRAIN AND REMOVE SEDIMENT FROM TEMPORARY AND PERMANENT SEDIMENT BASINS ONCE THE SEDIMENT HAS REACHED 1/2 THE STORAGE VOLUME. COMPLETE WORK WITHIN 72 HOURS OF DISCOVERY.
- K. REMOVE ALL DELTAS AND SEDIMENT DEPOSITED IN SURFACE WATERS INCLUDING DRAINAGE WAYS, CATCH BASINS, AND OTHER DRAINAGE SYSTEMS. RESTABILIZE ANY AREAS THAT ARE DISTURBED BY SEDIMENT REMOVAL OPERATIONS. SEDIMENT REMOVAL AND STABILIZATION MUST BE COMPLETED WITHIN 7 DAYS OF DISCOVERY. PREPARE AND SUBMIT A SITE MANAGEMENT PLAN FOR WORKING IN SURFACE WATERS. CONTACT ALL APPROPRIATE AUTHORITIES PRIOR TO WORKING IN SURFACE WATERS.
- L. REMOVE TRACKED SEDIMENT FROM PAVED SURFACES BOTH ON AND OFF SITE WITHIN 24 HOURS OF DISCOVERY. STREET SWEEPING MAY HAVE TO OCCUR MORE OFTEN TO MINIMIZE OFF SITE IMPACTS. LIGHTLY WET THE PAVEMENT PRIOR TO SWEEPING.
- M. MAINTAIN ALL BMPS UNTIL WORK HAS BEEN COMPLETED, SITE HAS GONE UNDER FINAL STABILIZATION, AND THE NOTICE OF TERMINATION (NOT) HAS BEEN SUBMITTED TO THE MPCA.

GENERAL SWPPP NOTES FOR CONSTRUCTION ACTIVITY

- 1. AMEND THE SWPPP AND DOCUMENT ANY AND ALL CHANGES TO THE SWPPP AND ASSOCIATED PLAN SHEETS IN A TIMELY MANNER. STORE THE SWPPP AND ALL AMENDMENTS ON SITE AT ALL TIMES.
- 2. PREPARE AND SUBMIT A SITE MANAGEMENT PLAN FOR THE ENGINEER'S ACCEPTANCE FOR CONCRETE MANAGEMENT, CONCRETE SLURRY APPLICATION AREAS, WORK IN AND NEAR AREAS OF ENVIRONMENTAL SENSITIVITY, AREAS IDENTIFIED IN THE PLANS AS "SITE MANAGEMENT PLAN AREA", ANY WORK THAT WILL REQUIRE DEWATERING, AND AS REQUESTED BY THE ENGINEER. SUBMIT ALL SITE MANAGEMENT PLANS TO THE ENGINEER IN WRITING. ALLOW A MINIMUM OF 10 DAYS FOR PROJECT ENGINEER TO REVIEW AND ACCEPT SITE MANAGEMENT PLAN SUBMITTALS. WORK WILL NOT BE ALLOWED TO COMMENCE IF A SITE MANAGEMENT PLAN IS REQUIRED UNTIL ACCEPTANCE HAS BEEN GRANTED BY PROJECT ENGINEER. THERE WILL BE NO EXTRA TIME ADDED TO THE CONTRACT DUE TO THE UNTIMELY SUBMITTAL.
- 3. BURNING OF ANY MATERIAL IS NOT ALLOWED WITHIN PROJECT BOUNDARY.
- 4. ROUTE STORMWATER AROUND UNSTABILIZED AREAS OF THE SITE WHENEVER FEASIBLE. PROVIDE EROSION CONTROL AND VELOCITY DISSIPATION DEVICES AS NEEDED TO KEEP CHANNELS FROM ERODING AND TO PREVENT NUISANCE CONDITIONS AT THE OUTLET.
- 5. DIRECT DISCHARGES FROM BMPS TO VEGETATED AREAS WHENEVER FEASIBLE. PROVIDE VELOCITY DISSIPATION DEVICES AS NEEDED TO PREVENT EROSION.
- 6. THE EROSION PREVENTION AND SEDIMENT CONTROL BMPS SHALL BE PLACED AS NECESSARY TO MINIMIZE EROSION FROM DISTURBED SURFACES AND TO CAPTURE SEDIMENT ON SITE. ALL EROSION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO COMMENCEMENT OF ANY REMOVAL WORK AND/OR GROUND DISTURBING ACTIVITIES COMMENCE.
- 7. ESTABLISH SEDIMENT CONTROL DEVICES ON ALL DOWN GRADIENT PERIMETERS AND UPGRADIENT OF ANY BUFFER ZONES BEFORE ANY UP GRADIENT LAND DISTURBING ACTIVITIES BEGIN. MAINTAIN SEDIMENT CONTROL DEVICES UNTIL CONSTRUCTION IS COMPLETE AND THE SITE IS STABILIZED.
- 8. LOCATE PERIMETER CONTROL ON THE CONTOUR TO CAPTURE OVERLAND, LOW- VELOCITY SHEET FLOWS DOWN GRADIENT OF ALL EXPOSED SOILS AND PRIOR TO DISCHARGING TO SURFACE WATERS. PLACE J-HOOKS AT A MAXIMUM OF 100 FOOT INTERVALS.
- 9. PROVIDE PERIMETER CONTROL AROUND ALL STOCKPILES. DO NOT PLACE STOCKPILES IN NATURAL BUFFER AREAS, SURFACE WATERS OR STORMWATER CONVEYANCES.
- 10. FLOATING SILT CURTAIN IS ALLOWED AS PERIMETER CONTROL FOR IN WATER WORK ONLY. PLACE THE FLOATING SILT CURTAIN AS CLOSE TO SHORE AS POSSIBLE. PLACE PERIMETER CONTROL BMP ON LAND IMMEDIATELY AFTER THE IN WATER WORK IS COMPLETED.
- 11. DITCH CHECKS WILL BE PLACED AS INDICATED ON THE PLANS DURING ALL PHASES OF CONSTRUCTION.
- 12. PROTECT STORM SEWER INLETS AT ALL TIMES WITH THE APPROPRIATE INLET PROTECTION FOR EACH SPECIFIC PHASE OF CONSTRUCTION. PROVIDE INLET PROTECTION DEVICES WITH EMERGENCY OVERFLOW CAPABILITIES. SILT FENCE PLACED IN THE INLET GRATE IS NOT AN ACCEPTABLE INLET PROTECTION BMP FOR GRADING OPERATIONS. SILT FENCE PLACED IN THE GRATE IS ONLY ALLOWED FOR SHORT INTERVALS DURING MILLING OR PAVING OPERATIONS. INLET PROTECTION DEVICES MAY NEED TO BE PLACED MULTIPLE TIMES IN THE SAME LOCATION OVER THE LIFE OF THE CONTRACT. INLET PROTECTION DEVICES WILL BE PAID FOR ONCE PER INLET REGARDLESS OF THE NUMBER OF TIMES THE BMP IS PLACED. KEEP ALL STORM SEWER INLET PROTECTION DEVICES IN GOOD FUNCTIONAL CONDITION AT ALL TIMES. REPLACE INLET PROTECTION DEVICE WITH A SUITABLE ALTERNATIVE IF THE PROJECT ENGINEER DEEMS AN INLET PROTECTION DEVICE TO BE NONFUNCTIONAL, IN POOR CONDITION, INEFFECTIVE, OR NOT APPROPRIATE FOR THE CURRENT CONSTRUCTION ACTIVITIES. THERE WILL BE NO COST TO OWNER FOR REPLACEMENT OF INLET PROTECTION DEVICES.
- 13. PLACE CONSTRUCTION EXITS, AS NECESSARY, TO PREVENT TRACKING OF SEDIMENT ONTO PAVED SURFACES BOTH ON AND OFF THE PROJECT SITE. PROVIDE CONSTRUCTION EXITS OF SUFFICIENT SIZE TO PREVENT TRACK OUT. MAINTAIN CONSTRUCTION EXITS WHEN EVIDENCE OF TRACKING IS DISCOVERED. REGULAR STREET SWEEPING IS NOT AN ACCEPTABLE ALTERNATIVE TO PROPER CONSTRUCTION EXIT INSTALLATION AND MAINTENANCE.
- 14. DISCHARGE TURBID OR SEDIMENT LADEN WATER TO TEMPORARY SEDIMENT BASINS WHENEVER FEASIBLE. IN THE EVENT THAT IT IS NOT FEASIBLE TO DISCHARGE THE SEDIMENT LADEN WATER TO A TEMPORARY SEDIMENT BASIN, THE WATER MUST BE TREATED SO THAT IT DOES NOT CAUSE A NUISANCE CONDITION IN THE RECEIVING WATERS OR TO DOWNSTREAM LANDOWNERS. CLEAN OUT ALL PERMANENT STORMWATER BASINS REGARDLESS OF WHETHER USED AS TEMPORARY SEDIMENT BASINS OR TEMPORARY SEDIMENT TRAPS TO THE DESIGN CAPACITY AFTER ALL UPGRADIENT LAND DISTURBING ACTIVITY IS COMPLETED.
- 15. PROVIDE SCOUR PROTECTION AT ANY OUTFALL OF DEWATERING ACTIVITIES.
- 16. PROVIDE STABILIZATION IN ANY TRENCHES CUT FOR DEWATERING OR SITE DRAINING PURPOSES.
- 17. REMOVE SEDIMENT FROM STORMWATER SYSTEM AT THE END OF PROJECT.
- 18. PRESERVE A 50 FOOT NATURAL BUFFER OR (IF BUFFER IS INFEASIBLE) PROVIDE REDUNDANT SEDIMENT CONTROLS WHEN A SURFACE WATER IS LOCATED WITHIN 50 FEET OF LAND DISTURBANCE AND STORMWATER FLOWS TO THE SURFACE WATER.
- 19. INPLACE VEGETATION SHALL BE MAINTAINED WHEREVER FEASIBLE. INPLACE TOPSOIL SHALL BE STOCKPILED FOR RE-USE SUBSOILING AND OR SOIL BED PREPARATION PER MNDOT SPEC 2574 SHALL BE PERFORMED TO REDUCE SOIL COMPACTION PRIOR TO PLACING SEED, MULCH OR BLANKET AND FERTILIZER.
- 20. SEE TURF ESTABLISHMENT PLANS FOR METHODS TO BE USED FOR FINAL STABILIZATION OF ALL EXPOSED SOIL AREAS.
- 21. THE CONTRACTOR SHALL MODIFY AND/OR ESTABLISH ADDITIOAL TEMPORARY EROSION AND SEDIMENT CONTROL BMPS AS NECESSARY DUE TO CHANGES IN SITE CONDITIONS. THE CONTRACTOR SHALL DOCUMENT THESE CHANGES IN A SWPPP AMENDMENT AND STORE THE SWPPP AND ALL AMENDMENTS ON SITE AT ALL TIMES.

STABILIZATION TIME FRAMES


AREA	TIME FRAME	NOTES
LAST 200 LINEAL FEET OF DRAINAGE DITCH OR SWALE	WITHIN 24 HOURS OF CONNECTION TO SURFACE WATER OR PROPERTY EDGE	1, 2, 3, 6
REMAINING PORTIONS OF DRAINAGE DITCH OR SWALE	WITHIN 7 DAYS	1, 3, 6
PIPE AND CULVERT OUTLETS	WITHIN 24 HOURS	3
EXPOSED SOILS AND STOCKPILES	WITHIN 7 DAYS	1
WITHIN 200 FEET OF A PUBLIC WATER	WITHIN 24 HOURS	7


- 1. INITIATE STABILIZATION IMMEDIATELY WHEN CONSTRUCTION HAS TEMPORARILY OR PERMANENTLY CEASED ON ANY PORTION OF THE SITE. COMPLETE STABILIZATION WITHIN THE TIME FRAME LISTED. IN MANY INSTANCES THIS WILL REQUIRE STABILIZATION TO OCCUR MORE THAN ONCE DURING THE COURSE OF THE PROJECT. TEMPORARY SOIL STOCKPILES WITHOUT SIGNIFICANT CLAY OR SILT AND STOCKPILED AND CONSTRUCTED ROAD BASE ARE EXEMPT FROM THE STABILIZATION REQUIREMENT.
- 2. STABILIZE WETTED PERIMETER OF DITCH (I.E. WHERE THE DITCH GETS WET).
- 3. APPLICATION OF MULCH, HYDROMULCH, TACKIFIER AND POLYACRYLAMIDE ARE NOT ACCEPTABLE STABILIZATION METHODS IN THESE AREAS.
- 4. STABILIZE ALL AREAS OF THE SITE PRIOR TO THE ONSET OF WINTER. ANY WORK STILL BEING PERFORMED WILL BE SNOW MULCHED, SEEDED, AND BLANKETED WITHIN THE TIME FRAMES IN THE NPDES PERMIT.
- 5. TOPSOIL BERMS MUST BE STABILIZED IN ORDER TO BE CONSIDERED PERIMETER CONTROL BMPS.
- 6. KEEP DITCHES AND EXPOSED SOILS IN AN EVEN ROUGH GRADED CONDITION IN ORDER TO BE ABLE TO APPLY EROSION CONTROL MULCHES, HYDROMULCHES AND BLANKETS.
- 7. SEE WATER RESOURCES NOTES FOR A LIST OF PUBLIC WATER EXCLUSION DATES. 24-HR STABILIZATION REQUIREMENT ONLY APPLIES DURING THE EXCLUSION DATES.

PLOT DATE: Apr 24, 2023 - 2:00pm
FILENAME: K:\a-f\blaine\1815300\04_Production\01_CAD_Phase_1_Gravity\02_Sheets\C002_SWPPP.dwg


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NO.	DATE	BY	DESCRIPTION OF REVISIONS

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DRAWN	BJM
CHECKED	AMP

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SIGNATURE: 	DATE: 04/24/23
NAME: DANIEL A. NESLER	LIC. NO.: 47523



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CITY OF BLAINE
CITY PROJECT NO. 21-30

SWPPP		PROJ. NO. 18153.000
LIFT STATION 13 FM REPLACEMENT PHASE 1		DRAWING NO. C002
		SHEET NO. 7

STORM WATER POLLUTION PREVENTION PLAN (SWPPP) NARRATIVE (CONTINUED)

POLLUTION PREVENTION

1. PROVIDE A SPILL KIT ON THE SITE. SEE SPILL CONTAINMENT PLAN FOR LIST OF EXPECTED POLLUTANTS, PROTECTION MEASURES, AND SPILL RESPONSE PLAN.
2. STORE ALL BUILDING MATERIALS THAT HAVE THE POTENTIAL TO LEACH POLLUTANTS, PESTICIDES, HERBICIDES, INSECTICIDES, FERTILIZERS, TREATMENT CHEMICALS, AND LANDSCAPE MATERIALS UNDER COVER (E.G PLASTIC SHEETING OR TEMPORARY ROOFS) OR PROTECT BY A SIMILAR EFFECTIVE MEANS DESIGNED TO MINIMIZE CONTACT WITH STORMWATER.
3. PROVIDE A SECURE STORAGE AREA WITH RESTRICTED ACCESS FOR ALL HAZARDOUS MATERIALS AND TOXIC WASTE. RETURN ALL HAZARDOUS MATERIALS AND TOXIC WASTE TO THE DESIGNATED STORAGE AREA AT THE END OF THE BUSINESS DAY UNLESS INFEASIBLE. STORE ALL HAZARDOUS MATERIALS AND TOXIC WASTE (INCLUDING BUT NOT LIMITED TO OIL, DIESEL FUEL,GASOLINE, HYDRAULIC FLUIDS, PAINT, PETROLEUM BASED PRODUCTS, WOOD PRESERVATIVES, ADDITIVES, CURING COMPOUNDS, AND ACIDS) IN SEALED CONTAINERS WITH SECONDARY CONTAINMENT. CLEAN UP SPILLS IMMEDIATELY.
4. STORE, COLLECT AND DISPOSE OF ALL SOLID WASTE.
5. POSITION ALL PORTABLE TOILETS SO THAT THEY ARE SECURE AND CANNOT BE TIPPED OR KNOCKED OVER. PROPERLY DISPOSE OF ALL SANITARY WASTE.
6. FUEL AND MAINTAIN VEHICLES IN A DESIGNATED CONTAINED AREA WHENEVER FEASIBLE. USE DRIP PANS OR ABSORBENT MATERIALS TO PREVENT SPILLS OR LEAKED CHEMICALS FROM DISCHARGING TO SURFACE WATER OR STORMWATER CONVEYANCES. PROVIDE A SPILL KIT AT EACH LOCATION THAT VEHICLES AND EQUIPMENT ARE FUELED OR MAINTAINED AT.
7. LIMIT VEHICLE AND EQUIPMENT WASHING TO A DEFINED AREA OF THE SITE. CONTAIN RUNOFF FROM THE WASHING AREA TO A TEMPORARY SEDIMENT BASIN OR OTHER EFFECTIVE CONTROL. PROPERLY DISPOSE OF ALL WASTE GENERATED BY VEHICLE AND EQUIPMENT WASHING. ENGINE DEGREASING IS NOT ALLOWED ON THE SITE.
8. PROVIDE EFFECTIVE CONTAINMENT FOR ALL LIQUID AND SOLID WASTES GENERATED BY WASHOUT OF CONCRETE, STUCCO, PAINT, FORM RELEASE OILS, CURING COMPOUNDS AND OTHER CONSTRUCTION MATERIALS. LIQUID AND SOLID WASHOUT WASTES MUST NOT CONTACT THE GROUND. DESIGN THE CONTAINMENT SO THAT IT DOES NOT RESULT IN RUNOFF FROM THE WASHOUT OPERATIONS OR CONTAINMENT AREA.
9. CREATE AND FOLLOW A WRITTEN DISPOSAL PLAN FOR ALL WASTE MATERIALS. INCLUDE IN THE PLAN HOW THE MATERIAL WILL BE DISPOSED OF AND THE LOCATION OF THE DISPOSAL SITE. SUBMIT PLAN TO THE ENGINEER.
- 10.USE METHODS AND OPERATIONAL PROCEDURES THAT PREVENT DISCHARGE OR PLACEMENT OF BITUMINOUS GRINDINGS, CUTTINGS, MILLINGS, AND OTHER BITUMINOUS WASTES FROM AREAS OF EXISTING OR FUTURE VEGETATED SOILS AND FROM ALL WATER CONVEYANCE SYSTEMS, INCLUDING INLETS, DITCHES AND CURB FLOW LINES.
- 11.USE METHODS AND OPERATIONAL PROCEDURES THAT PREVENT CONCRETE DUST, PARTICLES, CONCRETE WASH OUT, AND OTHER CONCRETE WASTES FROM LEAVING MNDOT RIGHT OF WAY, DEPOSITING IN EXISTING OR FUTURE VEGETATED AREAS, AND FROM ENTERING STORMWATER CONVEYANCE SYSTEMS, INCLUDING INLETS, DITCHES AND CURB FLOW LINES. USE METHODS AND OPERATIONAL PROCEDURES THAT PREVENT SAW CUT SLURRY AND PLANING WASTE FROM LEAVING MNDOT RIGHT OF WAY AND FROM ENTERING STORMWATER CONVEYANCE SYSTEMS INCLUDING DITCHES AND CULVERTS.
- 12.WATER FOR DUST CONTROL SHALL BE PROVIDED BY THE CONTRACTOR WITHIN 24 HOURS OF ORDERING BY THE ENGINEER.

WATER RESOURCES NOTES

1. THESE NOTES ALONG WITH THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) NARRATIVE ARE INTENDED TO GIVE INFORMATION ON CRITICAL DRAINAGE FEATURES, NATURAL RESOURCES AND CONTRACTOR OPERATIONS THAT MAY IMPACT DRAINAGE AND NATURAL RESOURCES.
2. THE SIZE AND ELEVATION OF CULVERTS, STORM SEWER PIPES, CATCH BASINS, PONDS AND OVERFLOW DEVICES HAVE BEEN SPECIFICALLY DESIGNED TO CONFORM TO MNDOT DESIGN STANDARDS, MINNESOTA POLLUTION CONTROL AGENCY (MPCA) AND WATERSHED DISTRICT PERMIT REQUIREMENTS. THE DESIGN COMPUTATIONS ARE ON FILE WITH THE PROJECT ENGINEER. CHANGING THESE ITEMS OR THE DIRECTION OF FLOW FROM WHAT IS SHOWN ON THE PLANS MAY CAUSE PROBLEMS OFF THE PROJECT AND COULD MEAN THE PROJECT IS OUT OF COMPLIANCE WITH APPROVED DRAINAGE PERMITS. ANY CHANGES TO THE SIZE, ELEVATION OR DIRECTION OF FLOW OF THE DRAINAGE SYSTEM MUST BE APPROVED BY THE WATER RESOURCES ENGINEER OF RECORD.
3. SUBSOIL ALL DISTURBED GREEN SPACES EXCEPT AS LISTED IN 2574.3A.5.
4. ANY SUBSURFACE DRAINAGE TILES DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED, REPLACED OR REROUTED, AND CONNECTED TO THE EXISTING TILE OR DRAINAGE SYSTEM TO ENSURE THAT EXISTING UPLAND DRAINAGE IS PERPETUATED. THIS SHOULD BE DONE TO THE APPROVAL AND SATISFACTION OF THE ENGINEER.

THE FOLLOWING WATER RELATED PERMITS APPLY TO THIS PROJECT:




AGENCY	TYPE OF PERMIT
MINNESOTA POLLUTION CONTROL AGENCY (MPCA)	NPDES CONSTRUCTION STORMWATER PERMIT

REVIEW ALL PERMITS FOR ANY SPECIAL CONDITIONS THAT WILL AFFECT CONSTRUCTION OF THE PROJECT.

5. TEMPORARY DEWATERING ACTIVITIES MAY BE REQUIRED FOR ROADWAY CONSTRUCTION AND UTILITY WORK. THEREFORE IT IS POSSIBLE THAT A PERMIT FOR THE TEMPORARY APPROPRIATION OF WATERS OF THE STATE, NON-IRRIGATION FROM MNDNR WILL BE REQUIRED FOR THIS PROJECT. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING THIS PERMIT PRIOR TO COMMENCING DEWATERING ACTIVITIES. ALL TEMPORARY DEWATERING SHALL BE DISCHARGED TO AN APPROVED LOCATION FOR TREATMENT PRIOR TO DISCHARGE TO THE RECEIVING WATER. SUBMIT A SITE MANAGEMENT PLAN TO THE ENGINEER FOR APPROVAL A MINIMUM OF 10 DAYS PRIOR TO COMMENCING WORK.
6. THE FOLLOWING TYPES OF WATERS HAVE WORK IN WATER EXCLUSIONS. NO WORK IN THE WATER IS ALLOWED DURING THE EXCLUSION DATES. SEE DNR PERMIT FOR WHICH WATERBODIES THIS APPLIES TO.
7. A 50-FOOT NATURAL BUFFER SHALL BE MAINTAINED AT ALL LAKES AND CREEKS WHERE FEASIBLE. REDUNDANT PERIMETER CONTROL BMPS SHALL BE PLACED WHEN 50-FOOT BUFFER IS NOT FEASIBLE.
8. WORK PERFORMED WITHIN 200 FEET OF A LAKE OR CREEK REQUIRES A SITE MANAGEMENT PLAN IDENTIFYING BMPS THAT WILL BE USED TO PREVENT SEDIMENT, DEBRIS, OR UNTREATED RUNOFF FROM ENTERING THE LAKE OR CREEK. NO ACTIVITY AFFECTING THE BED OF THE LAKE OR CREEK MAY BE CONDUCTED BETWEEN APRIL 1 AND JUNE 30 AND MARCH 15 AND JUNE 15 RESPECTIVELY TO MINIMIZE IMPACTS ON FISH SPAWNING AND MIGRATION.

WATERBODY	EXCLUSION DATES
LAKES	APRIL 1 - JUNE 30
NON-TROUT STREAMS	MARCH 15 - JUNE 15

PLOT DATE: Apr 24, 2023 - 2:00pm
FILENAME: K:\a-f\blaine\18153000\04_Production\01_CAD - Phase_1_Gravity\02_Sheets\003 SWPPP.dwg

				DESIGNED	BJM	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 ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA. SIGNATURE:  DATE: 04/24/23 NAME: DANIEL A. NESLER LIC. NO.: 47523	 <div>444 Cedar Street, Suite 1500 Saint Paul, MN 55101 651.292.4400 tkda.com</div>	 <div>CITY OF BLAINE CITY PROJECT NO. 21-30</div>	SWPPP		PROJ. NO. 18153.000
			DRAWN	BJM	DRAWING NO. C003						
0	04/24/23	DAN	ISSUED FOR BID	CHECKED	AMP				LIFT STATION 13 FM REPLACEMENT PHASE 1	SHEET NO. 8	
NO.	DATE	BY	DESCRIPTION OF REVISIONS								

STORM WATER POLLUTION PREVENTION PLAN (SWPPP) NARRATIVE (CONTINUED)

THREATENED AND ENDANGERED SPECIES

FEDERAL: NORTHERN LONG-EARED BAT. THE REMOVAL OF BRIDGES AND TREES WILL NOT OCCUR BETWEEN APRIL 1 THROUGH OCTOBER 31; THEREFORE, NO IMPACT TO THE NORTHERN LONG-EARED BAT IS ANTICIPATED.

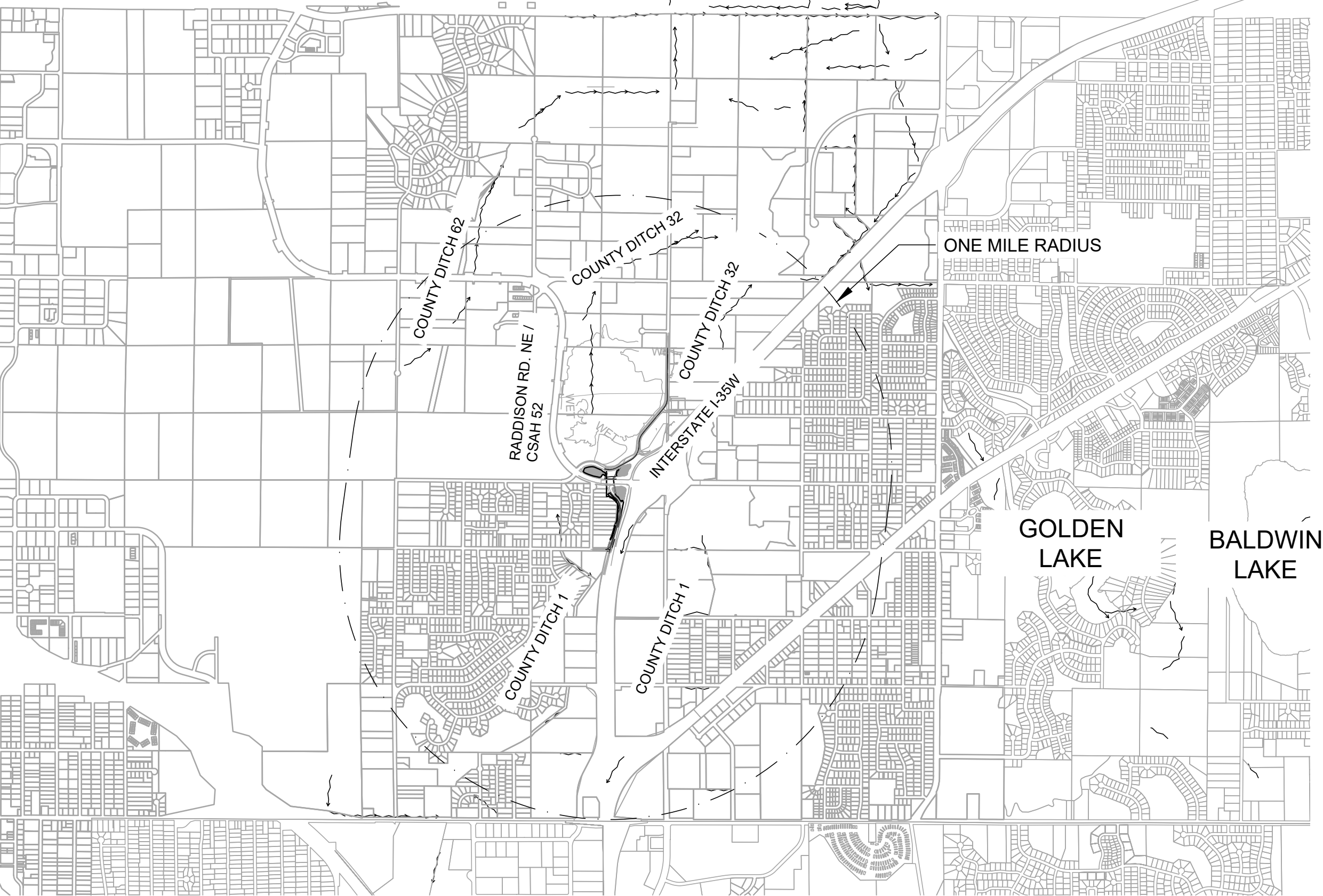
STATE: BLANDING'S TURTLES HAVE BEEN REPORTED IN THE VICINITY OF THE PROJECT AREA AND MAY BE ENCOUNTERED ON SITE. IF TURTLES ARE IN IMMINENT DANGER THEY SHOULD BE MOVED BY HAND OUT OF HARM'S WAY, OTHERWISE THEY SHOULD BE LEFT UNDISTURBED.

CONSTRUCTION SEQUENCING SUMMARY

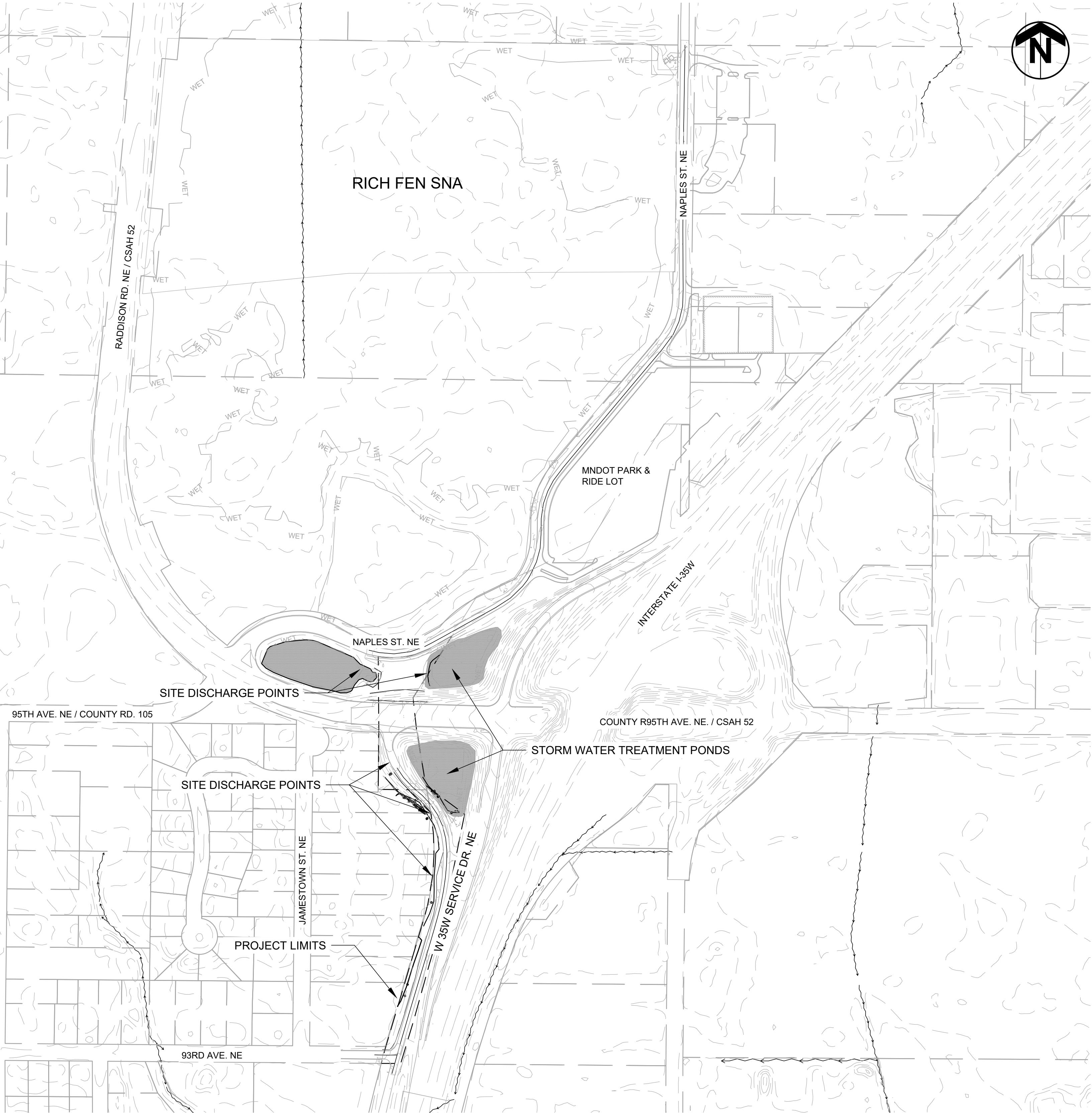
1. LAND DISTURBING ACTIVITY IS EXPECTED TO BEGIN MAY 2023 AND BE COMPLETED BY AUGUST 2023.
2. CONSTRUCTION WILL BE PHASED AND STAGED WHERE FEASIBLE TO MINIMIZE THE DURATION OF EXPOSED SOIL AREAS.

ESTIMATED EROSION PREVENTION & SEDIMENT CONTROL QUANTITIES

ITEM	UNIT	QUANTITY
WATER FOR DUST CONTROL	MGAL	XX
STABILIZED CONSTRUCTION EXIT	EACH	1
STREET SWEEPER (WITH PICKUP BROOM)	LUMP SUM	1
SEDIMENT CONTROL LOG TYPE COMPOST	LIN FT	2580
INLET PROTECTION	EACH	8
TOPSOIL BORROW (SUPPLEMENTAL, USE AS NEEDED)	CU YD	100
SALVAGE AND REINSTALL TOPSOIL	CU YD	1180
SODDING TYPE SALT TOLERANT	SQ YD	0
FERTILIZER TYPE 1 (200LBS/ACRE)	POUND	292
RAPID STABILIZATION METHOD 1	ACRE	1.46



SURFACE WATER MAP



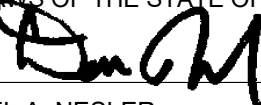
OFFSITE DRAINAGE MAP

PLOT DATE: Apr 24, 2023 - 2:00pm
FILENAME: K:\a-f\blaine\18153000\04_Production\01_CAD_Phase_1_Gravity\02_Sheets\C004_SWPPP.dwg

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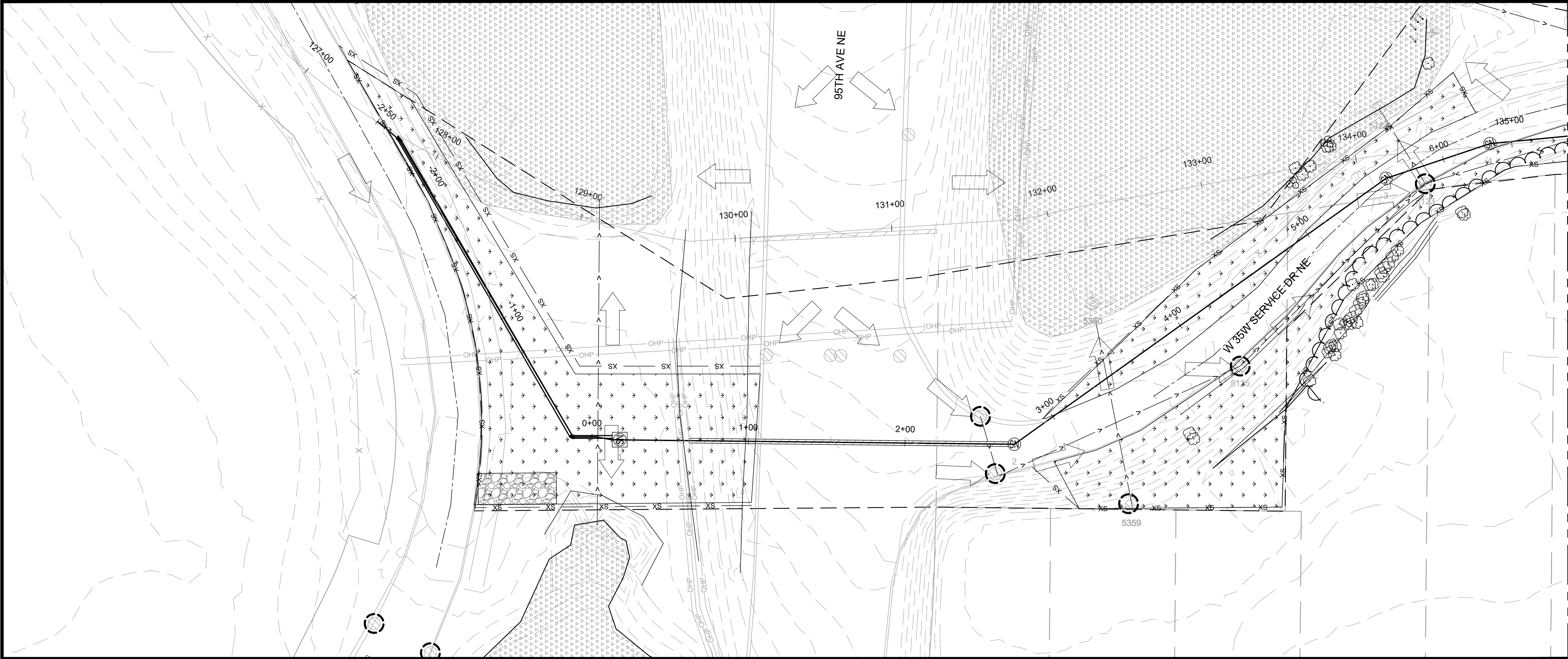
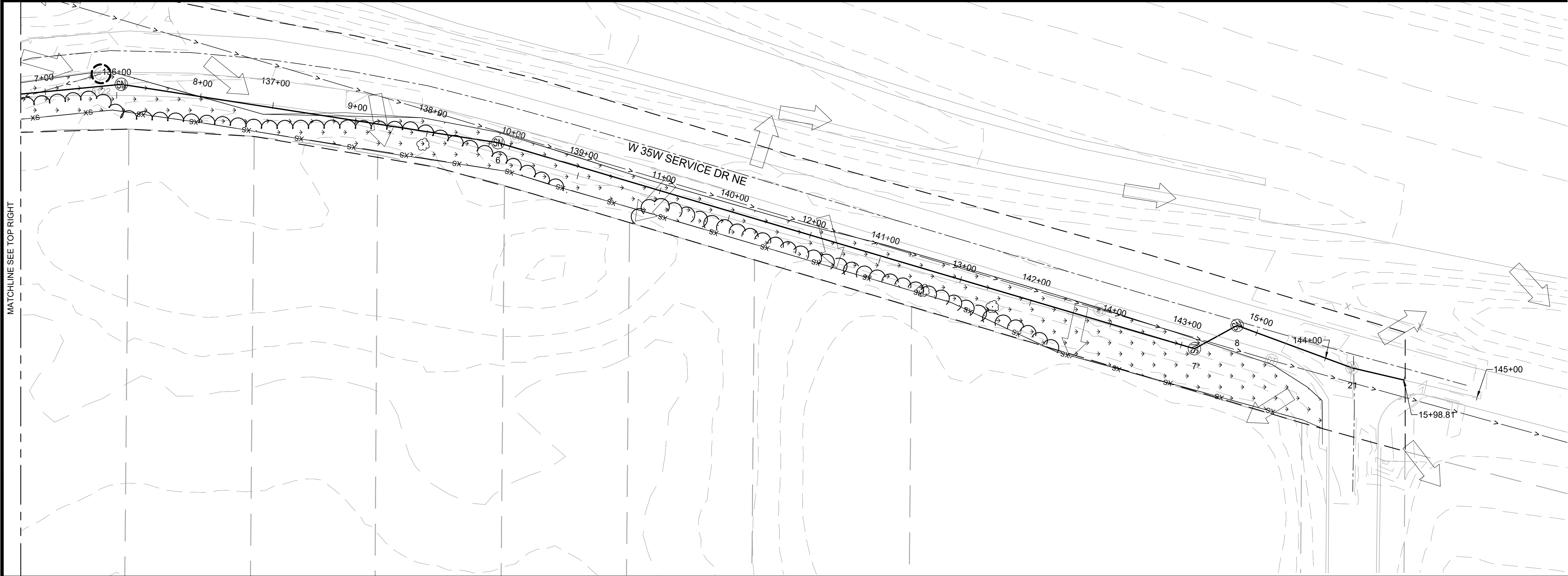


CITY OF BLAINE
CITY PROJECT NO. 21-30

SWPPP
LIFT STATION 13 FM REPLACEMENT PHASE 1

PROJ. NO. 18153.000
DRAWING NO. C004
SHEET NO. 9

PLOT DATE: Apr 24, 2023 - 2:01pm
FILENAME: K:\a-fblaine\18153000\04_Production\01_CAD - Phase 1_Gravity\02_Sheets\005 EROSION CONTROL PLAN.dwg

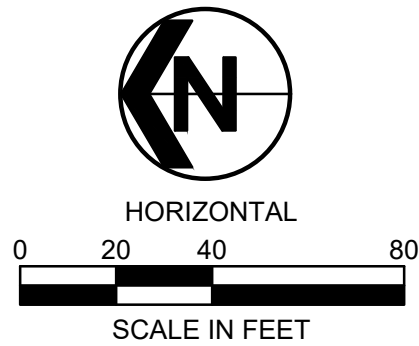


GENERAL NOTES:

1. COMPLETE TURF ESTABLISHMENT OF ALL DISTURBED AREAS WITH TOPSOIL, SEED & MULCH.
2. PLAN VIEW LOCATION OF SILT FENCE AND BIOROLLS USED FOR PERIMETER CONTROL IS APPROXIMATE. FINAL LOCATION WILL BE DETERMINED IN THE FIELD.
3. SEE SHEETS C006 FOR EROSION CONTROL DETAILS.
4. CONTRACTOR TO PROTECT NEW STRUCTURES WITH INLET PROTECTION (INCIDENTAL)

LEGEND

- INLET PROTECTION
- SURFACE FLOW DIRECTION
- SILT FENCE
- ROCK CONSTRUCTION EXIT
- TURF RESTORATION
- CONSTRUCTION LIMITS
- EDGE OF VEGETATION



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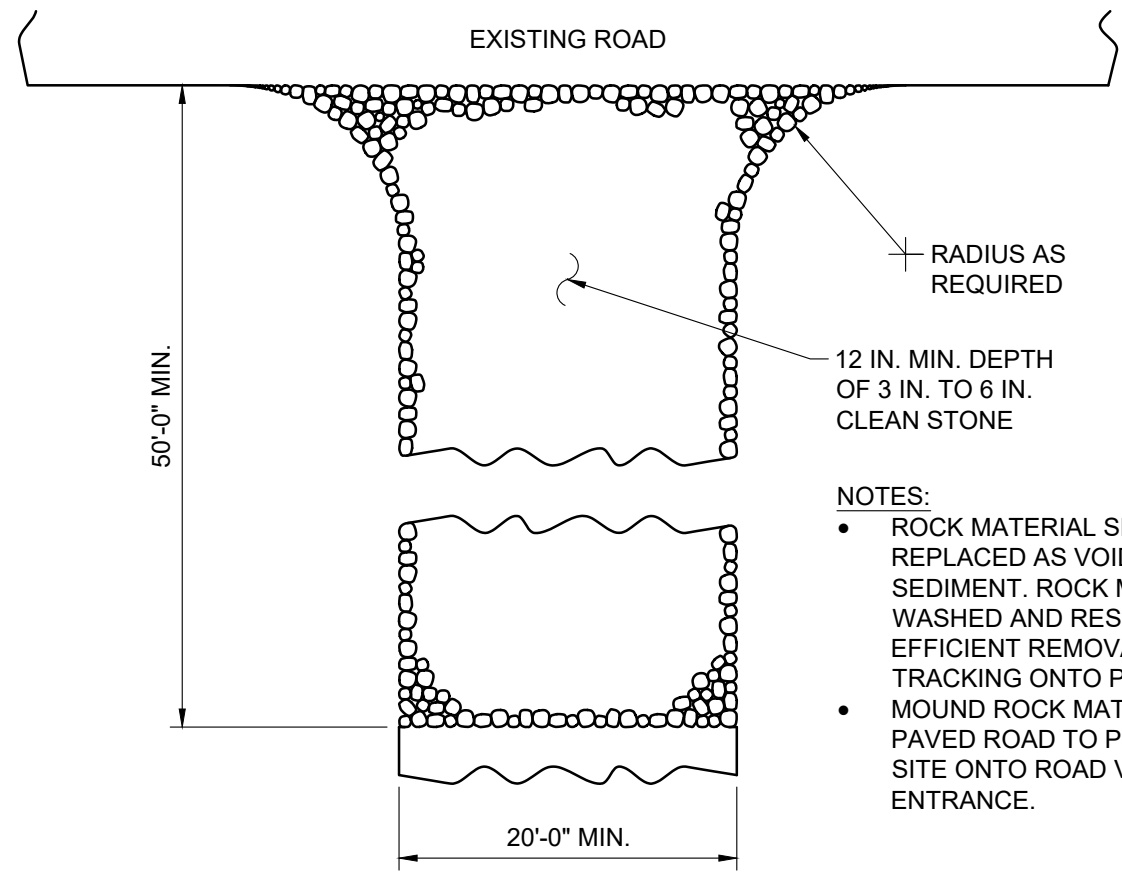


CITY OF BLAINE
CITY PROJECT NO. 21-30

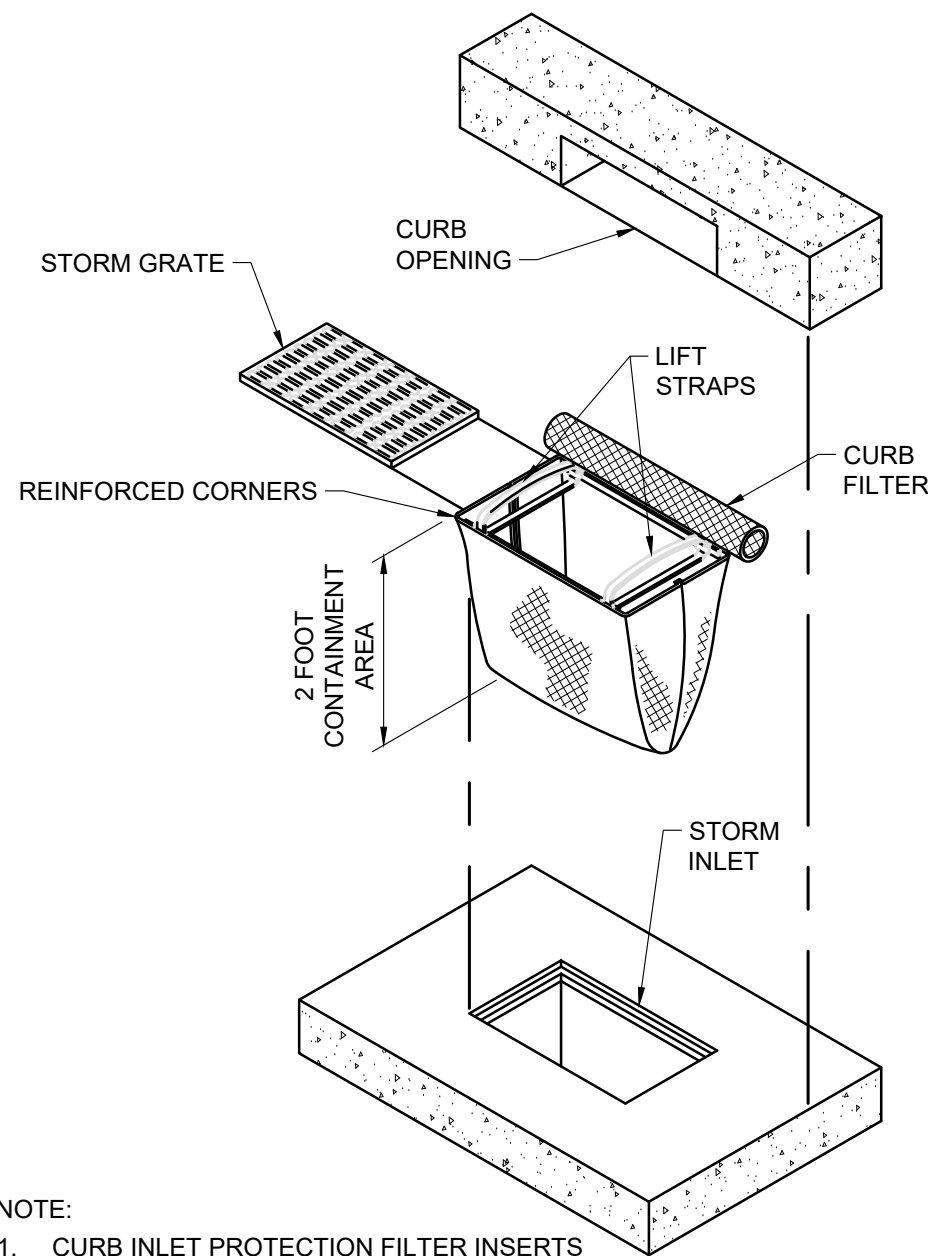
EROSION CONTROL PLAN

LIFT STATION 13 FM REPLACEMENT PHASE 1

PROJ. NO. 18153.000
DRAWING NO. C005
SHEET NO. 10

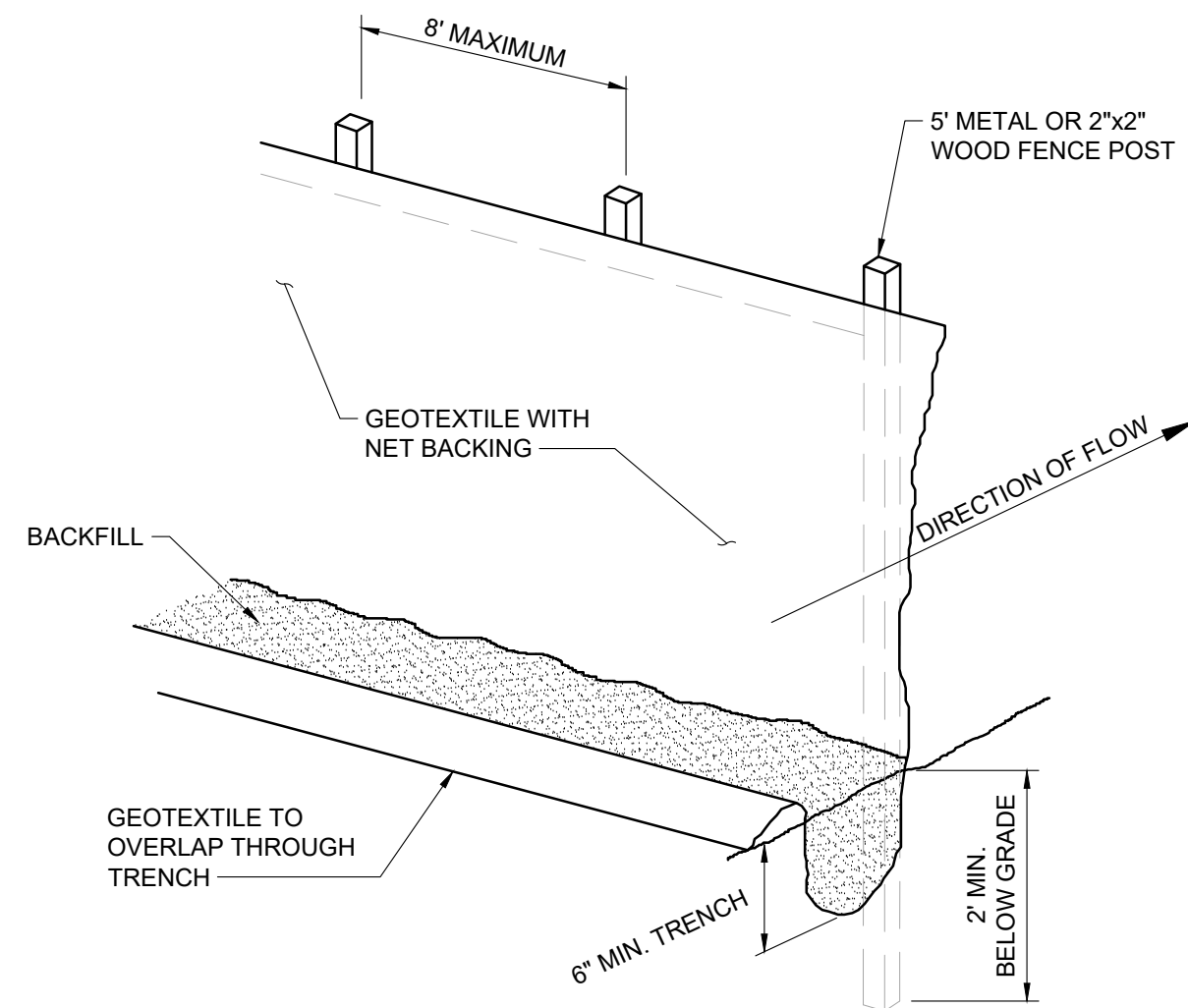


1 ROCK CONSTRUCTION EXIT
C006 NO SCALE



NOTE:
1. CURB INLET PROTECTION FILTER INSERTS SHALL BE DANDY CURB SACK, DANDY PRODUCTS INC. OR APPROVED EQUAL.

3 STORM INLET PROTECTION DETAIL
C006 NO SCALE



NOTE:
1. SILT FENCE SHALL CONFORM TO MNDOT 3886, TYPE B.
2. FENCING SHALL BE PLACED ALONG CONTOURS OR AS DIRECTED BY ENGINEER.

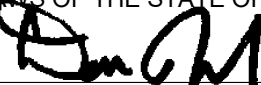
2 SILT FENCE
C006 NO SCALE

PLOT DATE: Apr 24, 2023 - 2:01pm
FILENAME: K:\a-f\blaine\18153000\04_Production\01_CAD - Phase_1_Gravity\02_Sheets\C006 EROSION CONTROL DETAILS.dwg

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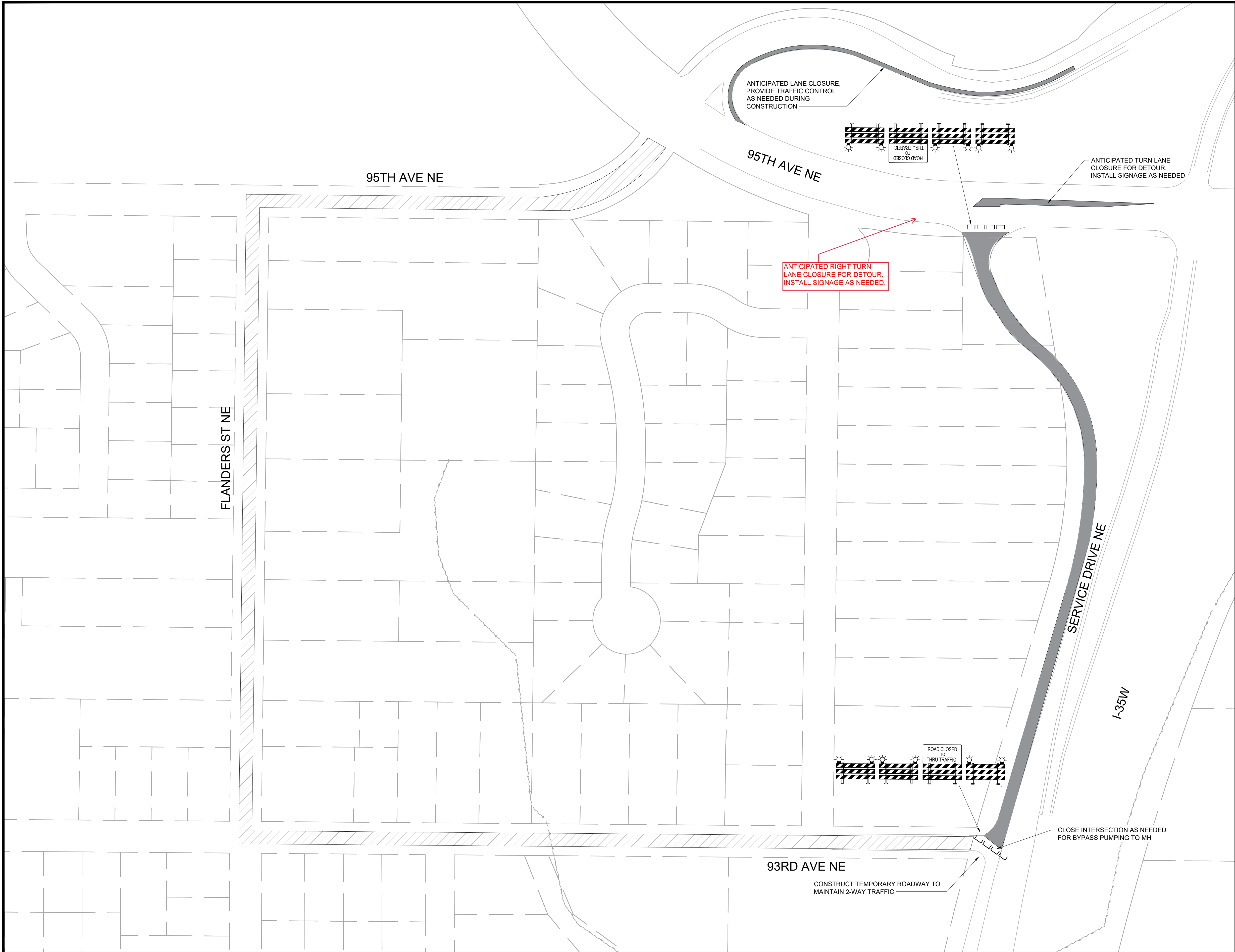


CITY OF BLAINE
CITY PROJECT NO. 21-30

EROSION CONTROL DETAILS	
LIFT STATION 13 FM REPLACEMENT PHASE 1	

PROJ. NO.	18153.000
DRAWING NO.	C006
SHEET NO.	11

PLOT DATE: Apr 24, 2023 - 2:01pm
FILENAME: K:\a-f\blaine\18153000\04_Production\01_CAD - Phase_1_Gravity\02_Sheets\007 TRAFFIC CONTROL PLAN.dwg



TRAFFIC CONTROL NOTES:

1. CLOSE SERVICE DR NE AS REQUIRED FOR THE WORK.
2. PROVIDE ADVANCE NOTICE OF ALL CLOSURES.
3. PROVIDE DETOUR AND SIGNAGE PER MN MUTCD (MOST CURRENT).
4. CONTRACTOR TO SUBMIT TRAFFIC CONTROL PLAN FOR DETOUR ROUTE FOR APPROVAL BY ENGINEER.

TRAFFIC CONTROL NARRATIVE:

PHASE 1A:

CONSTRUCTION:

1. CONSTRUCTION OF FM CONNECTION AND GRAVITY PIPE UNDER 95TH AVENUE NE.

TRAFFIC:

1. PROVIDE SIGNAGE AND TEMPORARY LANE SHIFTS AS NEEDED FOR THE WORK. NO CLOSURES ARE ANTICIPATED.

PHASE 1B:

CONSTRUCTION:

1. CONSTRUCTION OF GRAVITY PIPE ALONG SERVICE DRIVE NE AND DEMOLITION AND ABANDONMENT OF EXISTING FM.

TRAFFIC:

1. CLOSE W 35W SERVICE DRIVE NE BETWEEN 93RD AVENUE NE AND 95TH AVENUE NE AS REQUIRED FOR THE WORK.
2. PROVIDE DETOUR ROUTE AS SHOWN.
3. CONTRACTOR TO SUBMIT TRAFFIC CONTROL PLAN FOR DETOUR ROUTE AND ROAD CLOSURE FOR APPROVAL BY OWNER AND ENGINEER.

KEY

- ANTICIPATED ROAD CLOSURE
- ANTICIPATED DETOUR ROUTE

NO.	DATE	BY	DESCRIPTION OF REVISIONS
0	04/24/23	DAN	ISSUED FOR BID

DESIGNED	BJM
DRAWN	BJM
CHECKED	AMP

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SIGNATURE:	DATE: 04/24/23
NAME: DANIEL A. NESLER	LIC. NO.: 47523



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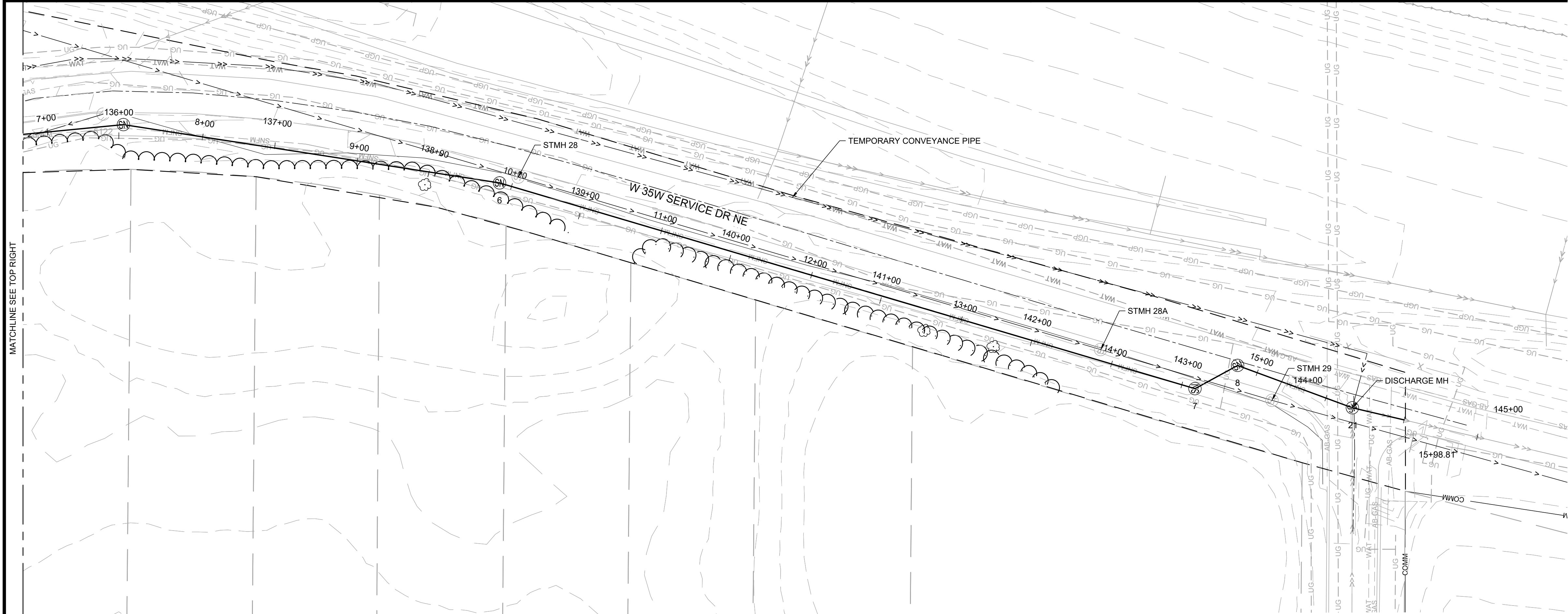
CITY OF BLAINE
CITY PROJECT NO. 21-30

TRAFFIC CONTROL PLAN

LIFT STATION 13 FM REPLACEMENT PHASE 1

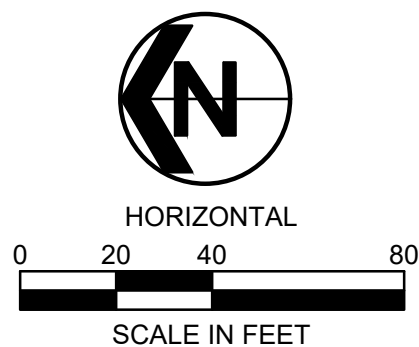
PROJ. NO.	18153.000
DRAWING NO.	C007
SHEET NO.	12

PLOT DATE: Apr 24, 2023 - 2:02pm
FILENAME: K:\a-f\blaine\18153000\04_Production\01_CAD - Phase 1_Gravity\02_Sheets\008 TEMPORARY CONVEYANCE PLAN.dwg



GENERAL NOTES:

1. THIS TEMPORARY CONVEYANCE PLAN IS CONCEPTUAL. FINAL PLAN SHALL BE DESIGNED BY CONTRACTOR AND APPROVED BY ENGINEER PRIOR TO BEGINNING THE WORK.
2. INSTALL AND TEST CONVEYANCE PIPE PRIOR TO TYING INTO EXISTING FORCE MAIN. COORDINATE SYSTEM SWITCH OVER WITH CITY
3. RESTORE ALL AREAS DISTURBED BY TEMPORARY CONVEYANCE TO EXISTING CONDITIONS IN ACCORDANCE WITH THE CONTRACT DOCUMENTS



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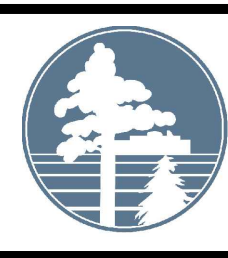
DESIGNED	BJM
DRAWN	BJM
CHECKED	AMP

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SIGNATURE: *[Signature]* DATE: 04/24/23
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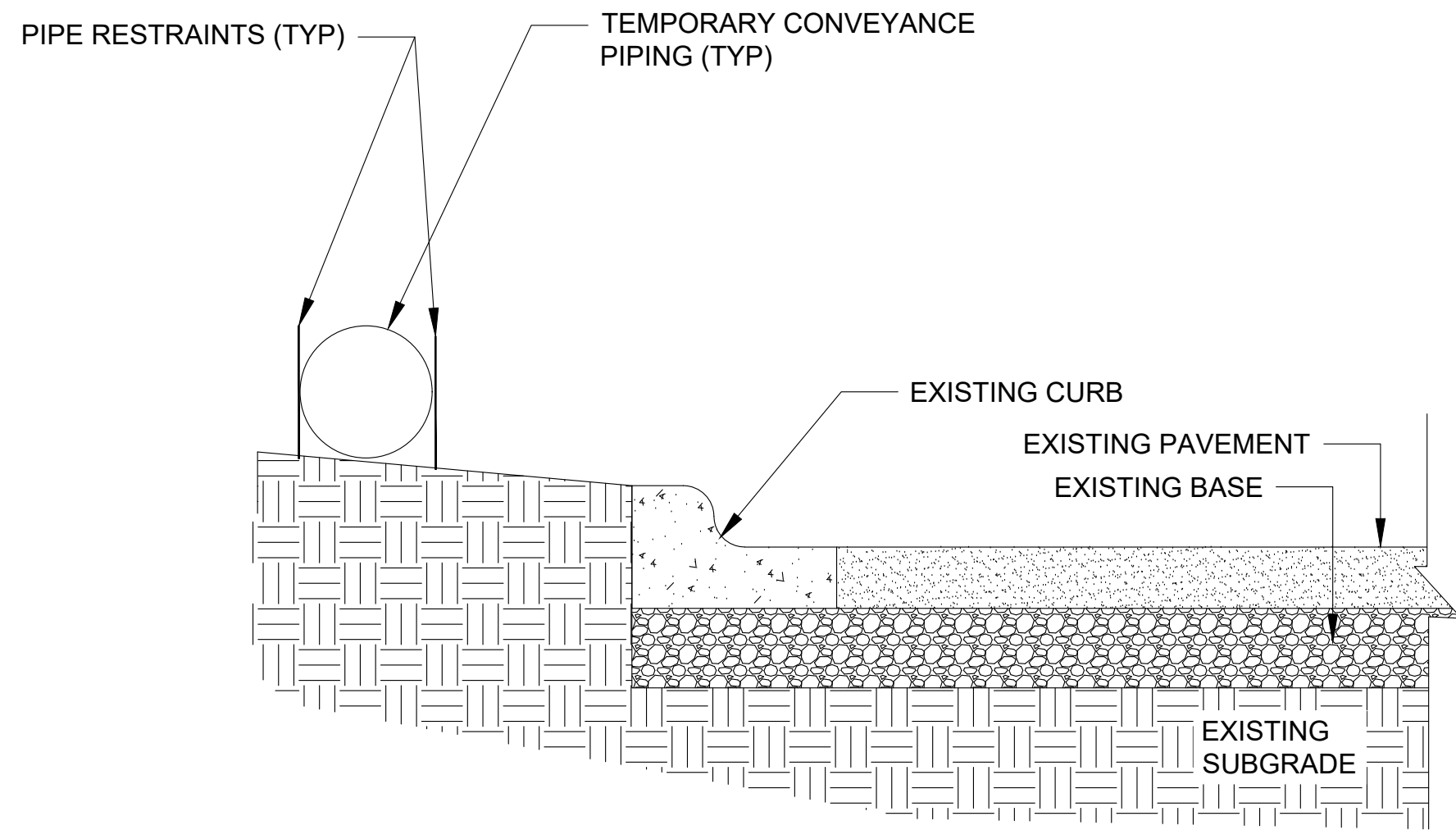
CITY OF BLAINE
CITY PROJECT NO. 21-30

TEMPORARY CONVEYANCE PLAN

LIFT STATION 13 FM REPLACEMENT PHASE 1

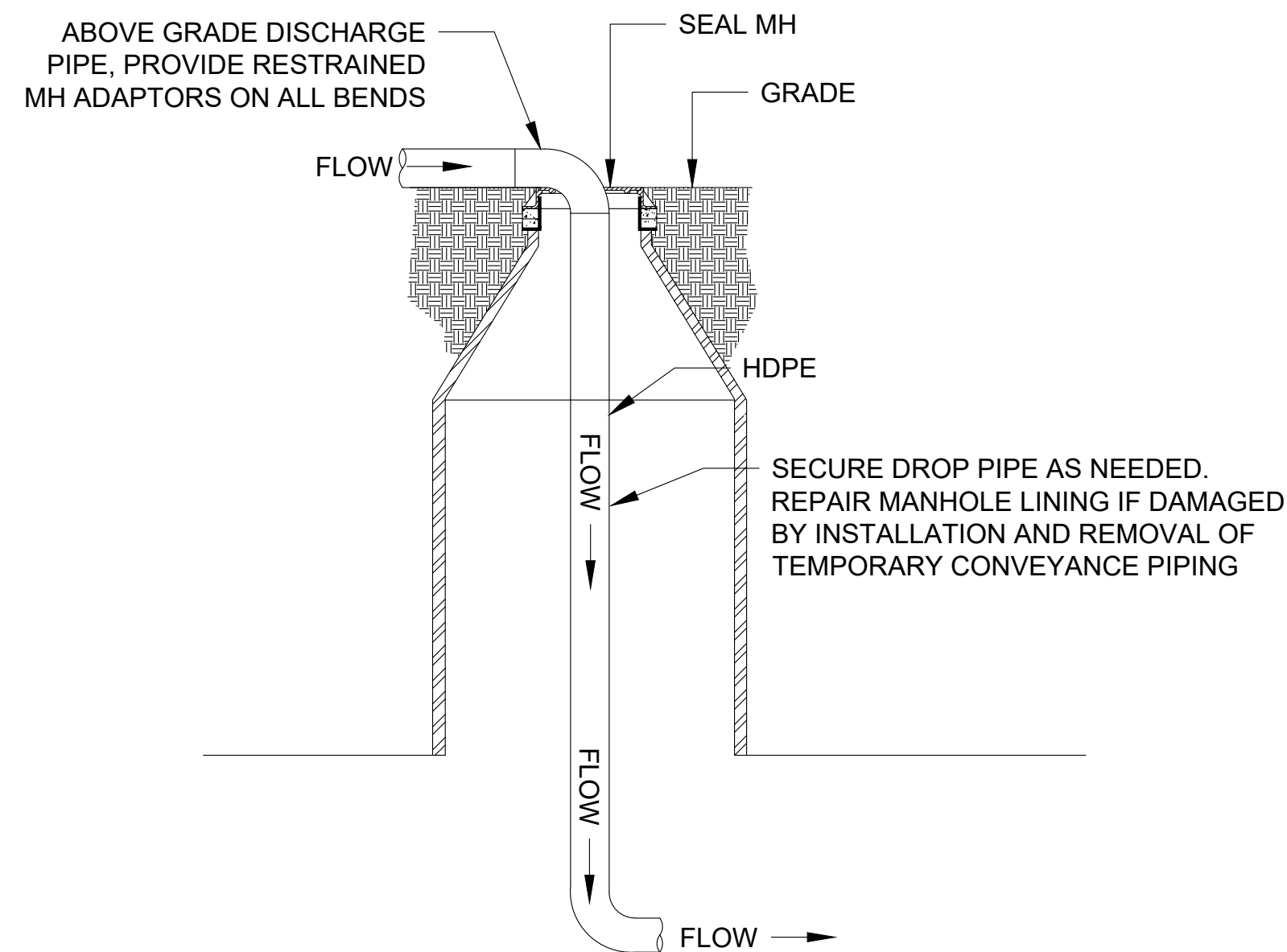
PROJ. NO. 18153.000
DRAWING NO. C008
SHEET NO. 13

PLOT DATE: Apr 24, 2023 - 2:02pm
FILENAME: K:\a-f\blaine\18153000\04_Production\01_CAD - Phase_1_Gravity\02_Sheets\C009 TEMPORARY CONVEYANCE DETAILS.dwg



1
C009
NO SCALE

TEMPORARY CONVEYANCE BLVD/OPEN SPACE INSTALLATION



NOTE:
DO NOT BLOCK 93RD AVENUE SEWER DISCHARGE LINE
WITH TEMPORARY CONVEYANCE PIPING

2
C009
NO SCALE

TEMPORARY CONVEYANCE DISCHARGE

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SIGNATURE: *[Signature]* DATE: 04/24/23
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TEMPORARY CONVEYANCE DETAILS
LIFT STATION 13 FM REPLACEMENT PHASE 1

PROJ. NO.	18153.000
DRAWING NO.	C009
SHEET NO.	14

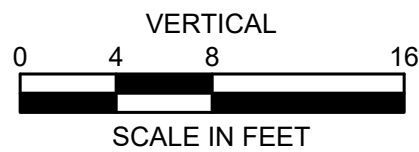
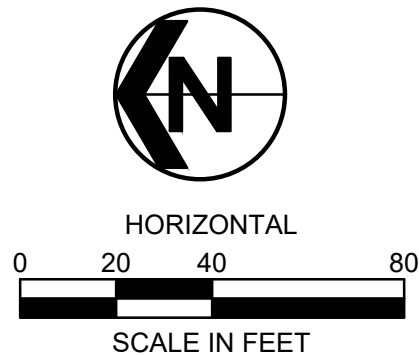
GENERAL NOTES:

- PAVEMENT REMOVALS BEYOND AREA SHOWN REQUIRE APPROVAL BY OWNER.
- REMOVE AND REINSTALL FENCE AS NEEDED FOR CONSTRUCTION.

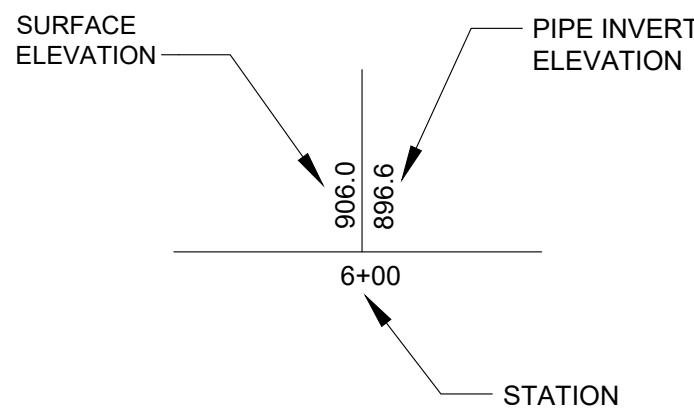
KEY NOTES:

- SAWCUT BITUMINOUS PAVEMENT
- PROTECT STORM SEWER PIPE AND STRUCTURES, SEE MH SCHEDULE SHEET G005
- REMOVE B612 CURB & GUTTER
- CLEAR AND GRUB AS REQUIRED
- REMOVE BITUMINOUS PAVEMENT
- PROTECT EXISTING BITUMINOUS AND REDUCE IMPACTS
- REMOVE STORM SEWER PIPE

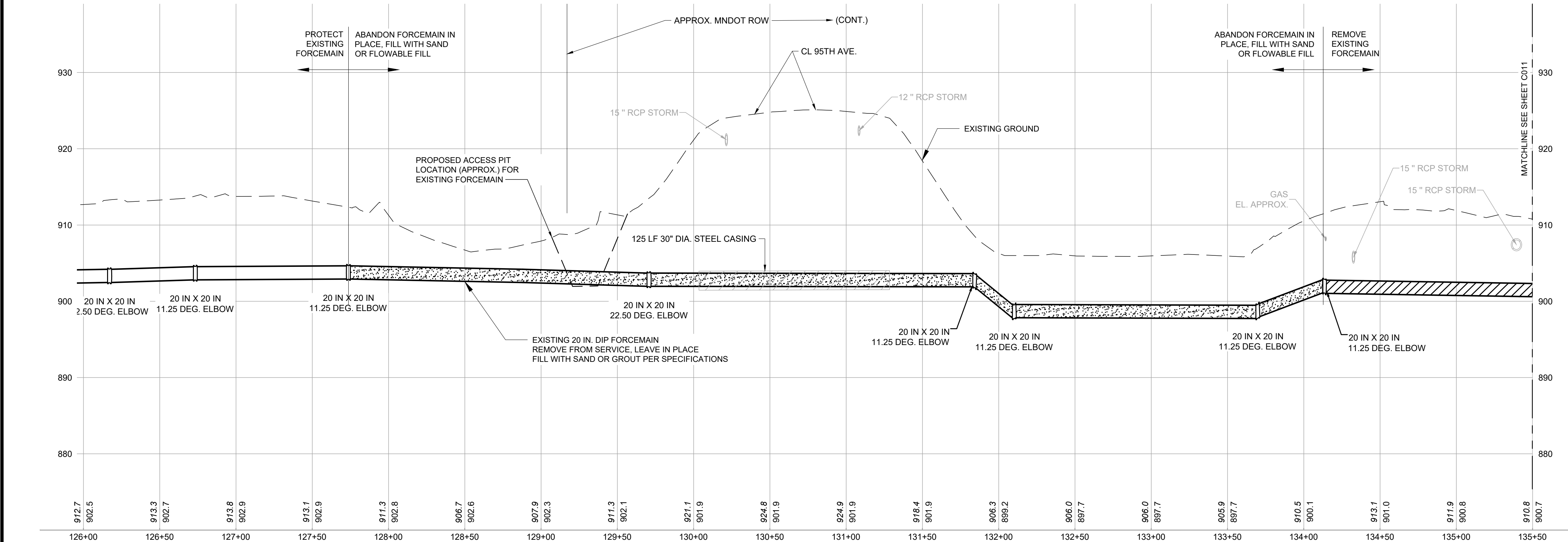
TREE REMOVAL			
DESCRIPTION	SIZE	X	Y
DECIDUOUS	4"	520260.85	138785.56
DECIDUOUS	7"	520323.83	138388.26
DECIDUOUS	6"	520230.57	138069.21
DECIDUOUS	5"	520220.27	138024.93



LEGEND:



PLOT DATE: Apr 24, 2023 - 2:03pm
FILENAME: K:\a-f\blaine\18153000\04_Production\01_CAD - Phase 1_Gravity\02_Sheets\010 EXISTING PLAN & PROFILE.dwg



NO.	DATE	BY	DESCRIPTION OF REVISIONS
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DESIGNED	BJM	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 ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA. SIGNATURE: <i>[Signature]</i> DATE: 04/24/23 NAME: DANIEL A. NESLER LIC. NO.: 47523
DRAWN	BJM	
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CITY OF BLAINE
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EXISTING-REMOVAL PLAN & PROFILE

LIFT STATION 13 FM REPLACEMENT PHASE 1

PROJ. NO.	18153.000
DRAWING NO.	C010
SHEET NO.	15

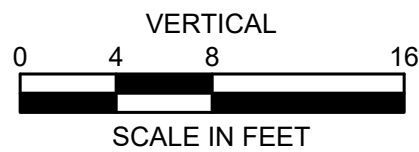
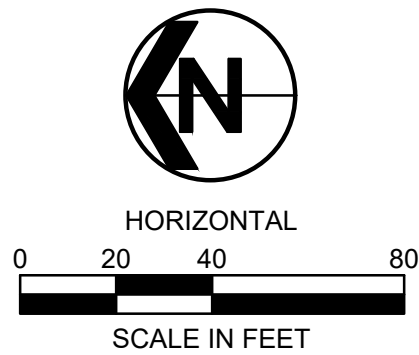
GENERAL NOTES:

- PAVEMENT REMOVALS BEYOND AREA SHOWN REQUIRE APPROVAL BY OWNER.
- REMOVE AND REINSTALL FENCE AS NEEDED FOR CONSTRUCTION.

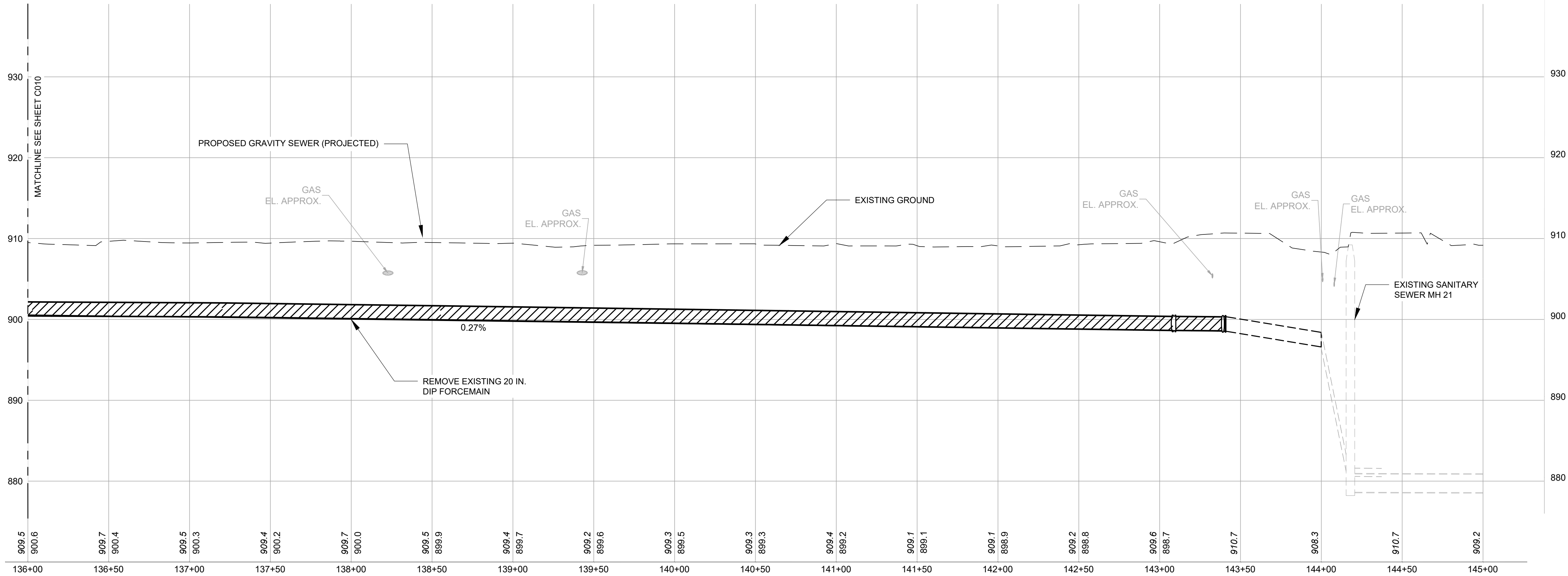
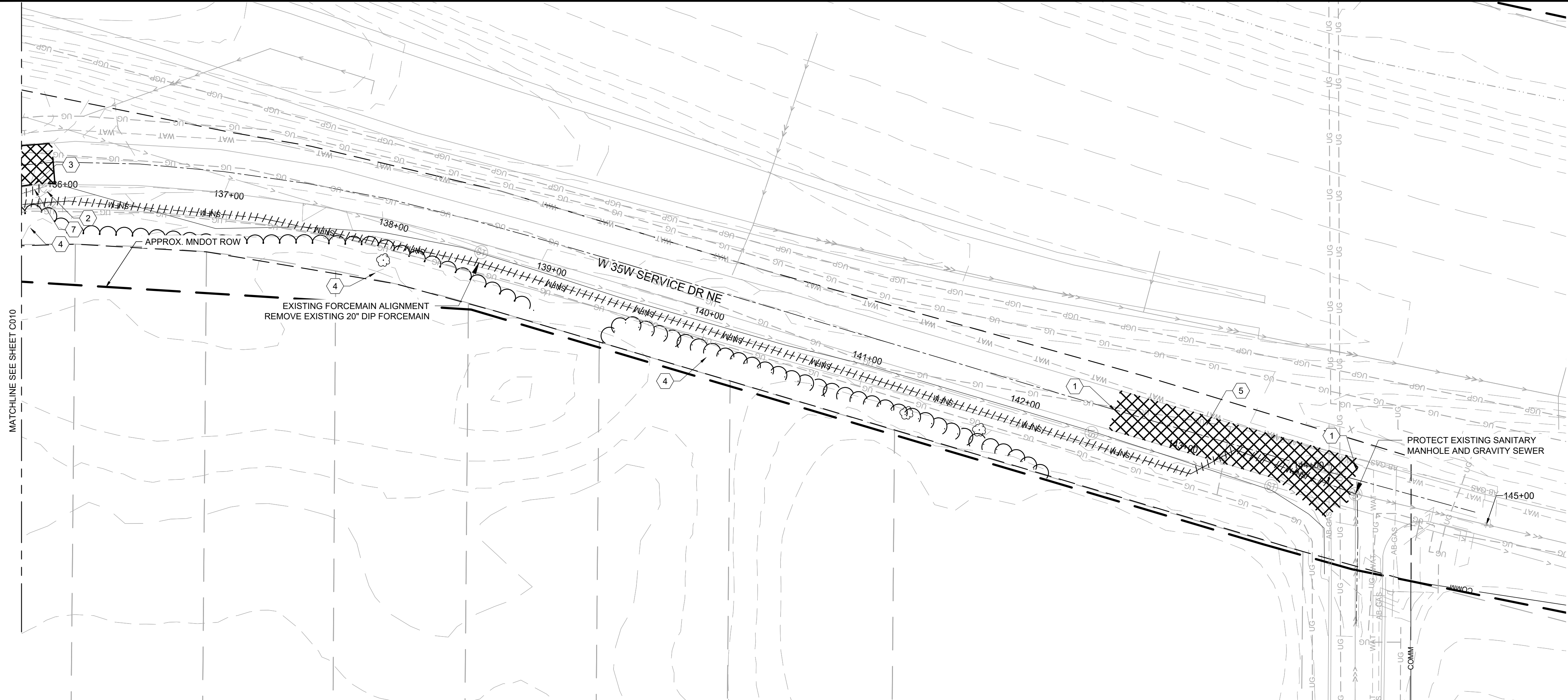
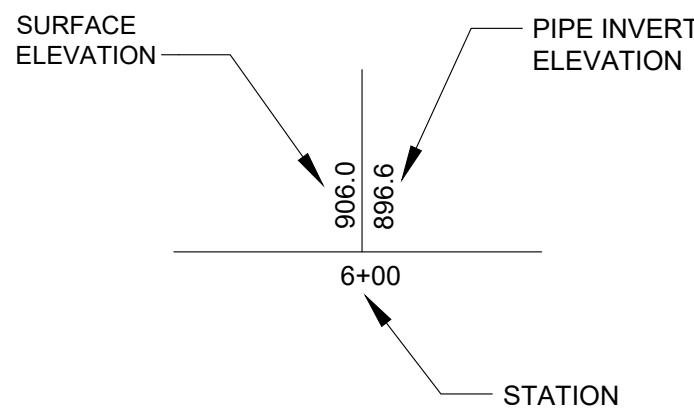
KEY NOTES:

- SAWCUT BITUMINOUS PAVEMENT
- PROTECT STORM SEWER PIPE AND STRUCTURES, SEE MH SCHEDULE SHEET G005
- REMOVE B612 CURB & GUTTER
- CLEAR AND GRUB AS REQUIRED
- REMOVE BITUMINOUS PAVEMENT
- PROTECT EXISTING BITUMINOUS AND REDUCE IMPACTS
- REMOVE STORM SEWER PIPE

TREE REMOVAL			
DESCRIPTION	SIZE	X	Y
DECIDUOUS	4"	520260.85	138785.56
DECIDUOUS	7"	520323.83	138388.26
DECIDUOUS	6"	520230.57	138069.21
DECIDUOUS	5"	520220.27	138024.93



LEGEND:



PLOT DATE: Apr 24, 2023 - 2:04pm
FILENAME: K:\a-f\blaine\18153000\04_Production\01_CAD - Phase 1_Gravity\02_Sheets\011_EXISTING PLAN & PROFILE.dwg

NO.	DATE	BY	DESCRIPTION OF REVISIONS
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DESIGNED	BJM	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 ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA. SIGNATURE: <i>[Signature]</i> DATE: 04/24/23 NAME: DANIEL A. NESLER LIC. NO.: 47523
DRAWN	BJM	
CHECKED	AMP	



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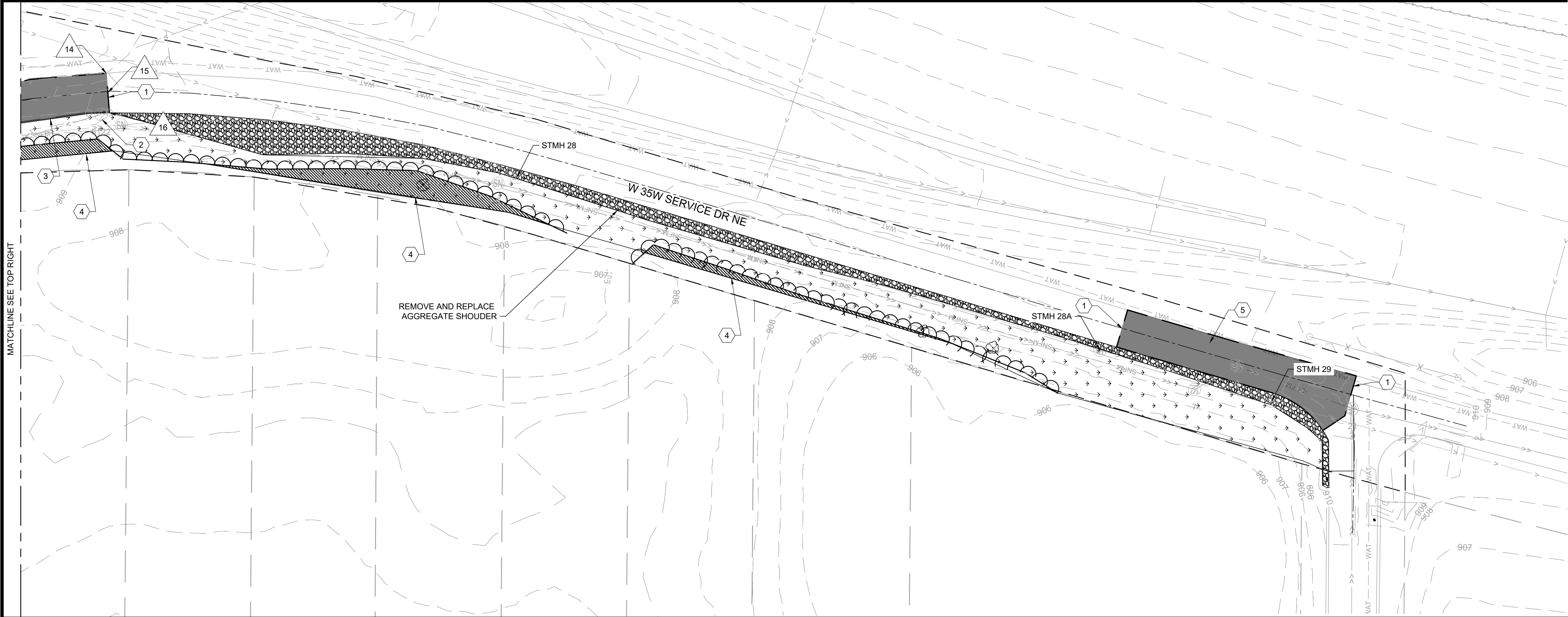
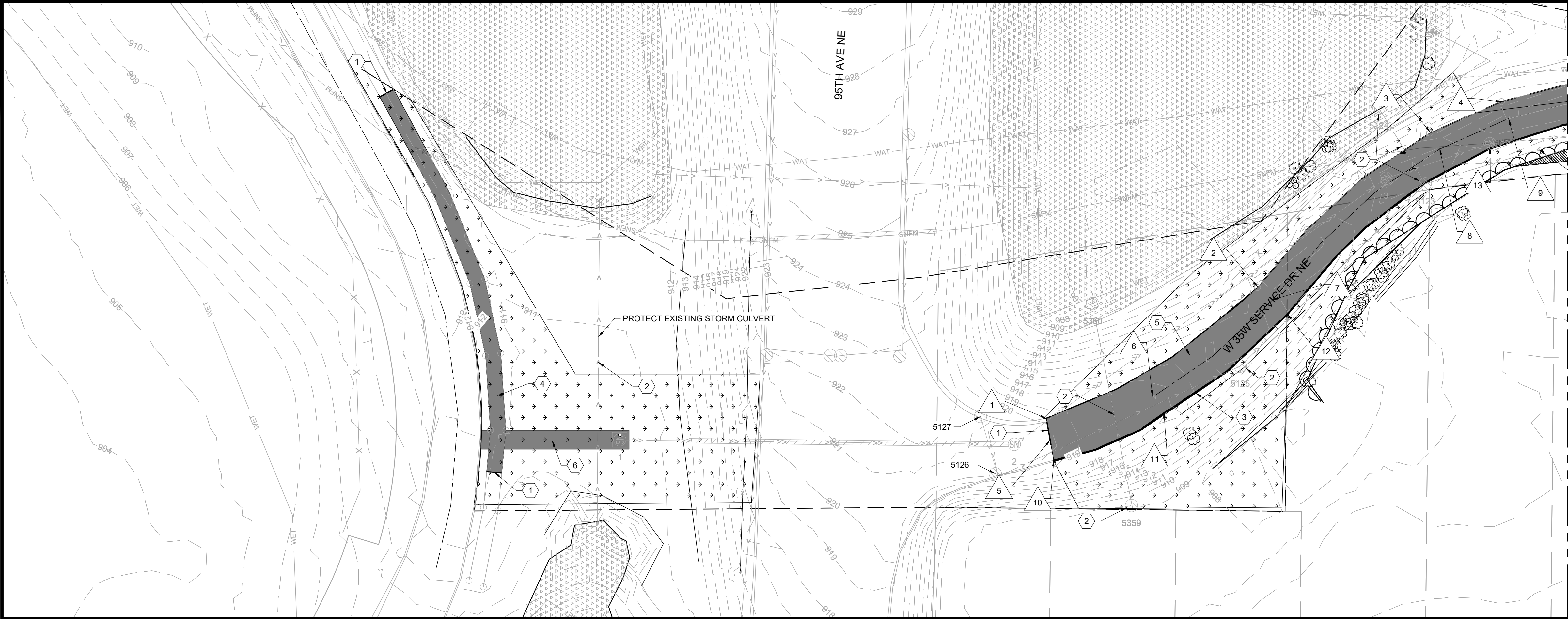


CITY OF BLAINE
CITY PROJECT NO. 21-30

EXISTING-REMOVAL PLAN & PROFILE

LIFT STATION 13 FM REPLACEMENT PHASE 1

PROJ. NO. 18153.000
DRAWING NO. C011
SHEET NO. 16

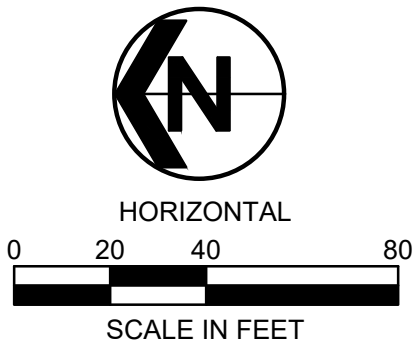


GENERAL NOTES:

- 1. CONTRACTOR TO FIELD VERIFY PAVEMENT LOCATIONS AND ELEVATIONS PRIOR TO REMOVAL. MATCH PROPOSED PAVEMENT TO EXISTING AT SAWCUTS.

KEY NOTES:

- 1. SAWCUT BITUMINOUS PAVEMENT
- 2. PROTECT STORM SEWER PIPE AND STRUCTURES, SEE MH SCHEDULE SHEET G005
- 3. REPLACE B612 CURB & GUTTER
- 4. REPLACE BITUMINOUS PAVEMENT PER STANDARD DETAIL ON SHEET C017
- 5. REPLACE BITUMINOUS PAVEMENT PER DETAIL 2/C017
- 6. INSTALL ACCESS ROAD PER DETAIL 1/C017



PAVEMENT SCHEDULE				
NO.	DESCRIPTION	X	Y	ELEVATION
1	EDGE OF BITUMINOUS PAVEMENT	520175.5343	138981.01	919.64
2	EDGE OF BITUMINOUS PAVEMENT	520259.44	138846.07	916.73
3	EDGE OF BITUMINOUS PAVEMENT	520357.76	138736.10	913.49
4	EDGE OF BITUMINOUS PAVEMENT	520377.79	138690.44	912.59
5	PAVEMENT CENTER LINE	520161.81	138978.62	920.02
6	PAVEMENT CENTER LINE	520189.78	138913.21	919.07
7	PAVEMENT CENTER LINE	520250.91	138836.90	916.64
8	PAVEMENT CENTER LINE	520347.94	138729.97	913.09
9	PAVEMENT CENTER LINE	520366.69	138685.91	912.00
10	GUTTER LINE	520148.79	138976.25	919.39
11	GUTTER LINE	520179.41	138906.00	918.69
12	GUTTER LINE	520241.93	138827.50	916.18
13	GUTTER LINE	520348.43	138697.84	911.96
14	EDGE OF BITUMINOUS PAVEMENT	520395.19	138590.69	911.97
15	PAVEMENT CENTER LINE	520382.82	138589.70	911.58
16	GUTTER LINE	520369.83	138588.55	911.16

PLOT DATE: Apr 24, 2023 - 2:04pm
FILENAME: K:\a-f\blaine\18153000\04_Production\01_CAD - Phase 1_Gravity\02_Sheets\012 STREET & STORM SEWER PLAN.dwg

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SIGNATURE: *[Signature]* DATE: 04/24/23
NAME: DANIEL A. NESLER LIC. NO.: 47523



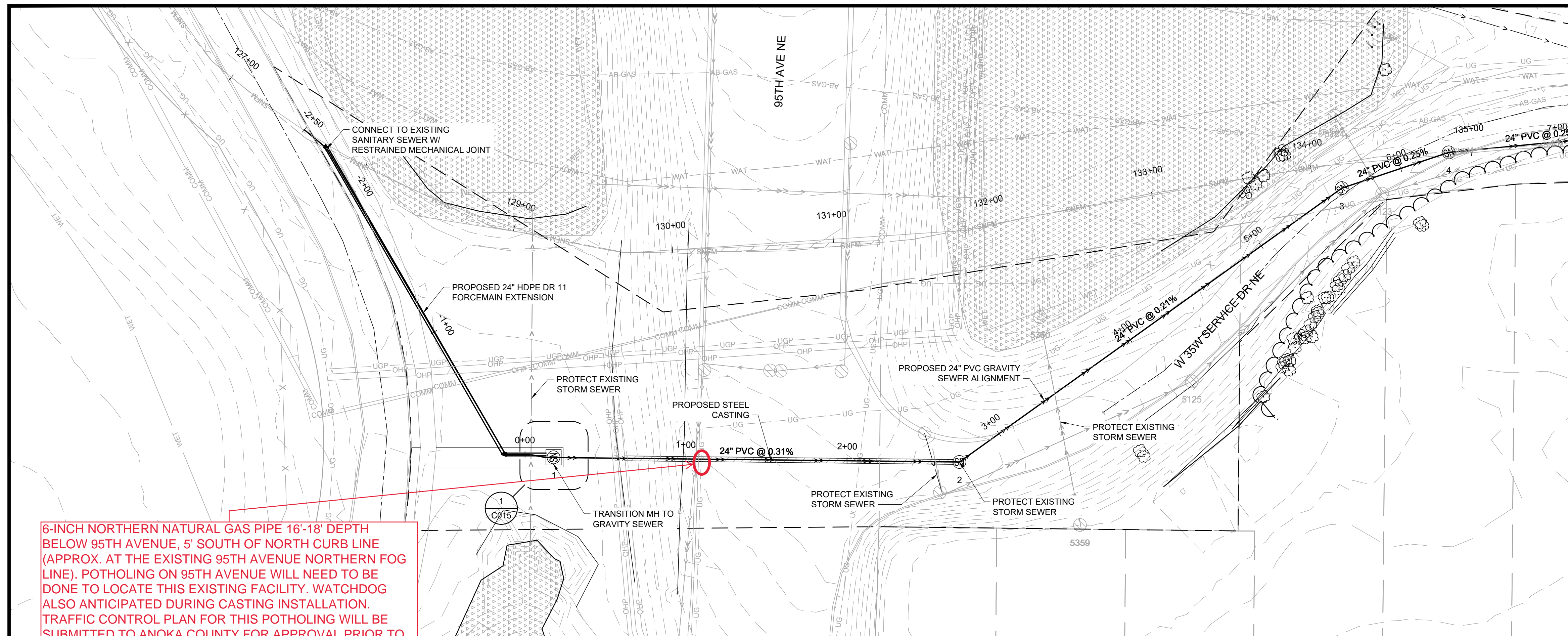
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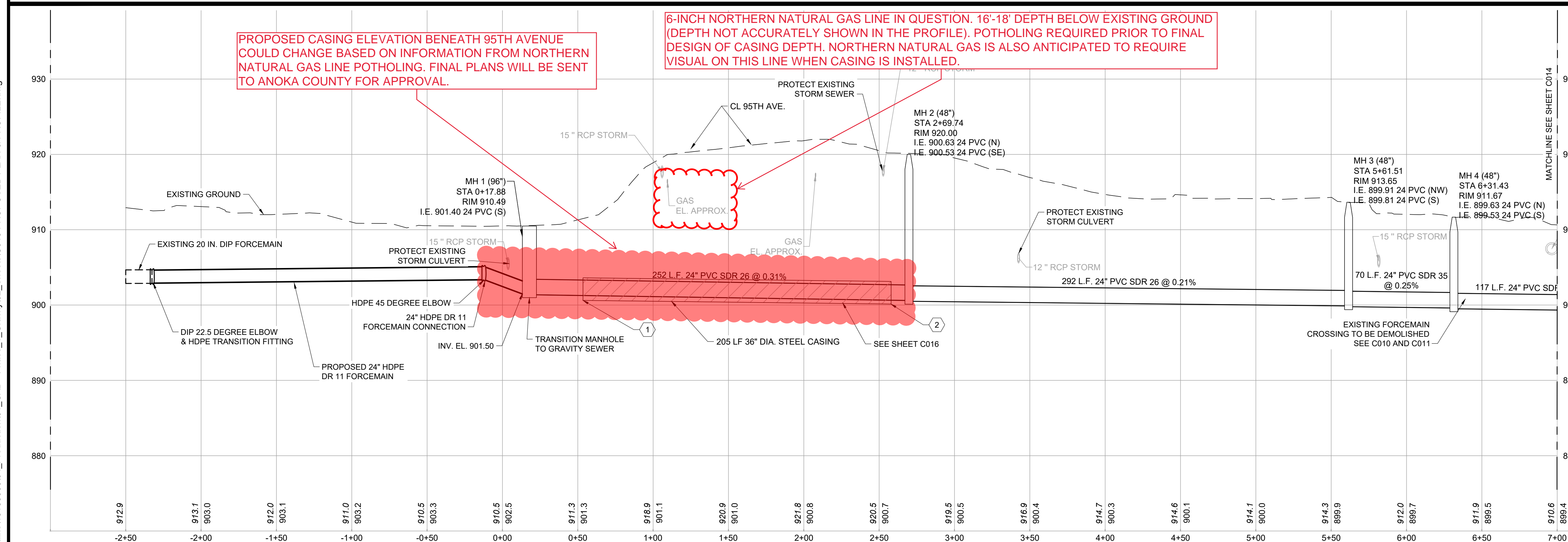
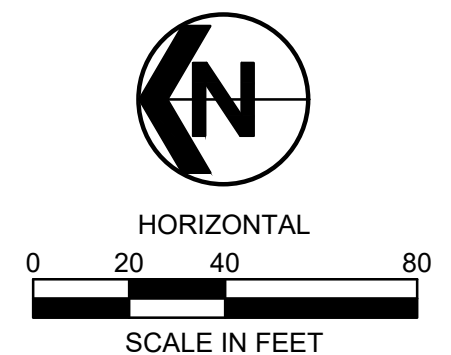
CITY OF BLAINE
CITY PROJECT NO. 21-30

STREET & STORM SEWER PLAN
LIFT STATION 13 FM REPLACEMENT PHASE 1

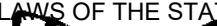
PROJ. NO. 18153.000
DRAWING NO. C012
SHEET NO. 17



- NOTES:



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	BJM	
DRAWN		
	BJM	
CHECKED		SIGNATURE:  DATE: 04/24/23
	AMP	NAME: DANIEL A. NESLER LIC. NO.: 47523



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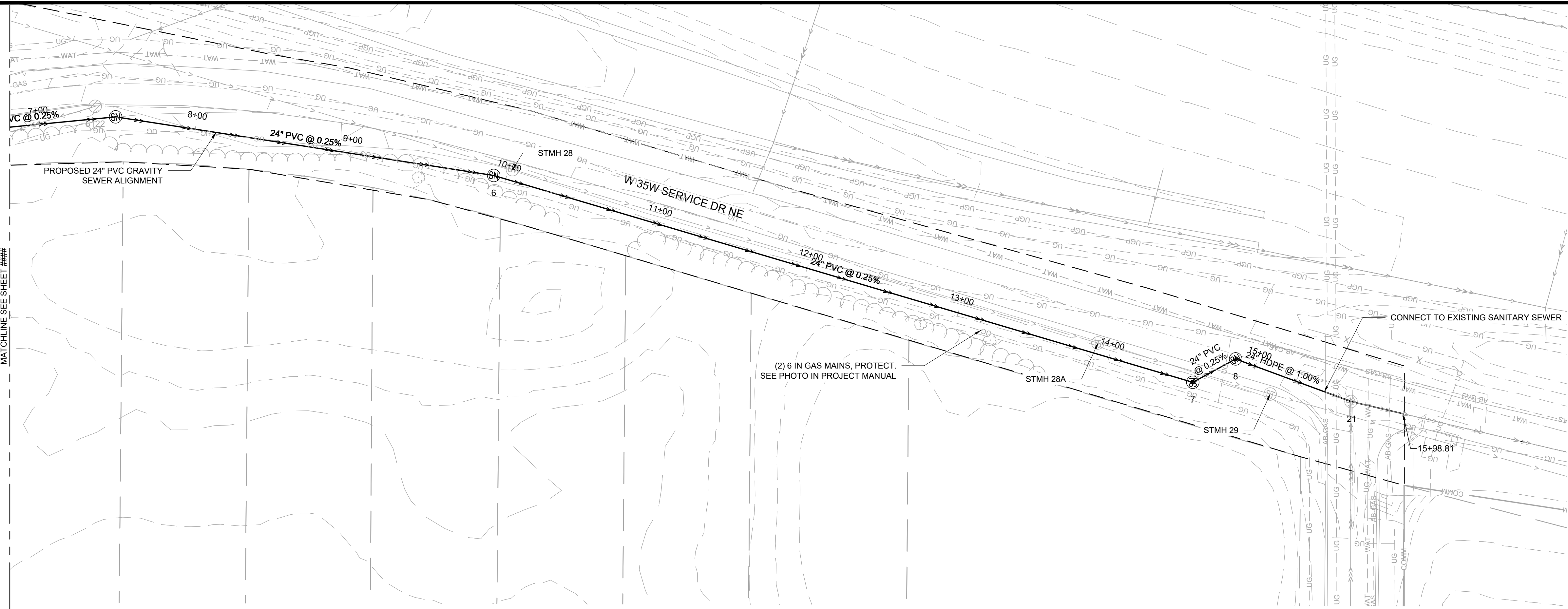
CITY OF BLAINE
CITY PROJECT NO. 21-30

PROPOSED PLAN & PROFILE

LIFT STATION 13 FM REPLACEMENT PHASE 1

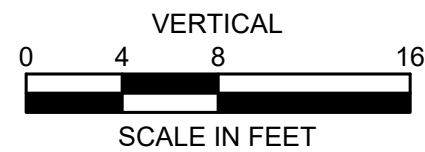
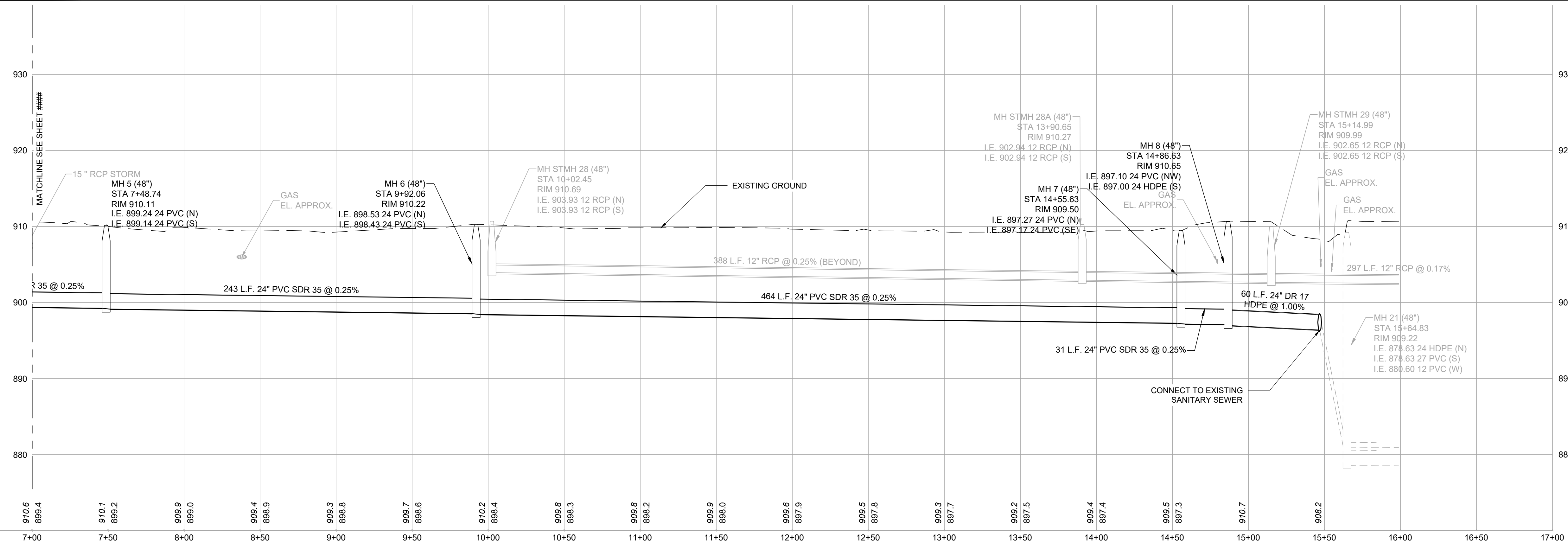
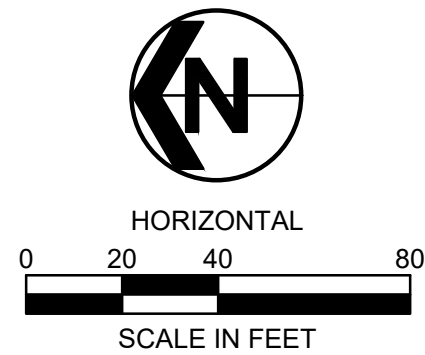
PROJ. NO.	18153.000
DRAWING NO.	C013
SHEET NO.	18

PLOT DATE: Apr 24, 2023 - 2:06pm
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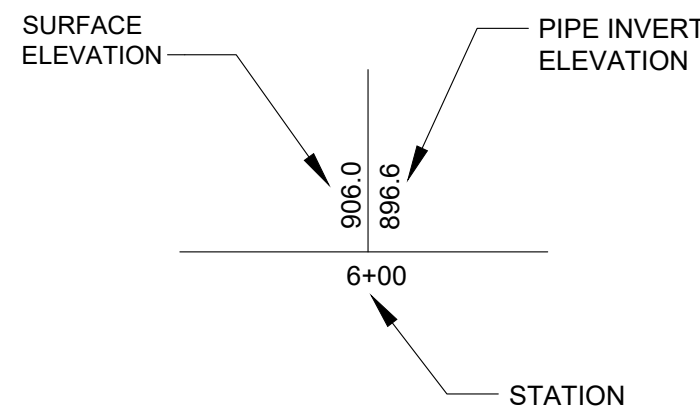


NOTES:

1. CONTRACTOR SHALL SUPPORT AND PROTECT EXISTING UTILITIES EXPOSED DURING CONSTRUCTION BY MEANS ACCEPTABLE TO UTILITY OWNER AND ENGINEER
2. A TRENCH BOX IS REQUIRED IN ALL TRENCHES TO MINIMIZE SURFACE IMPACTS



LEGEND:



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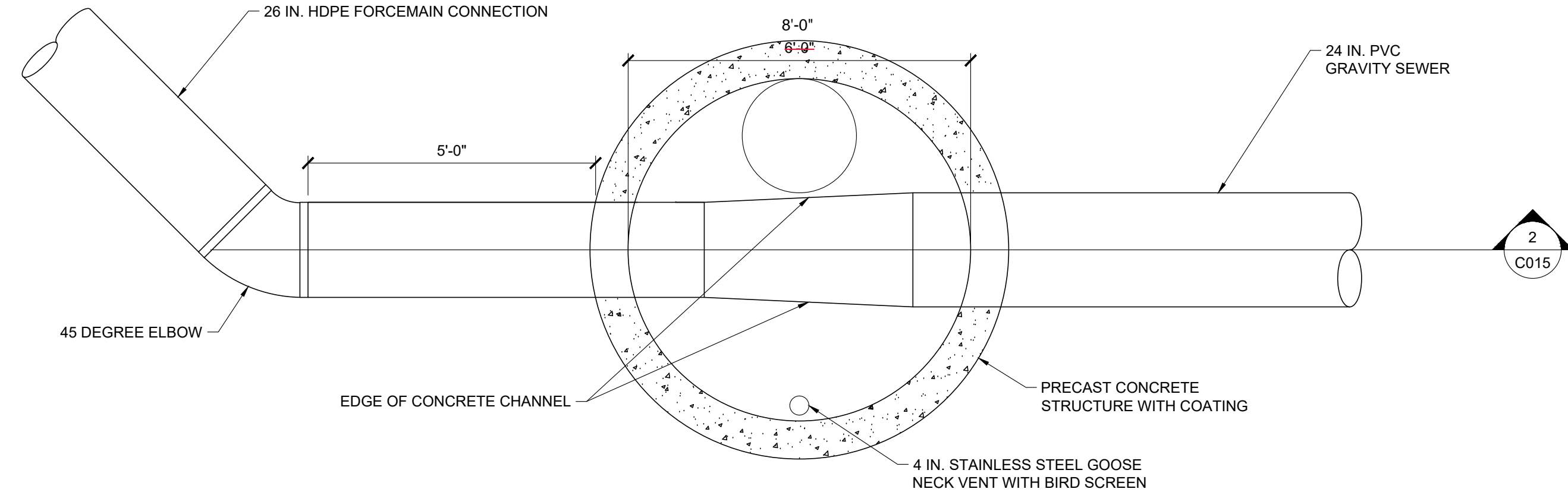
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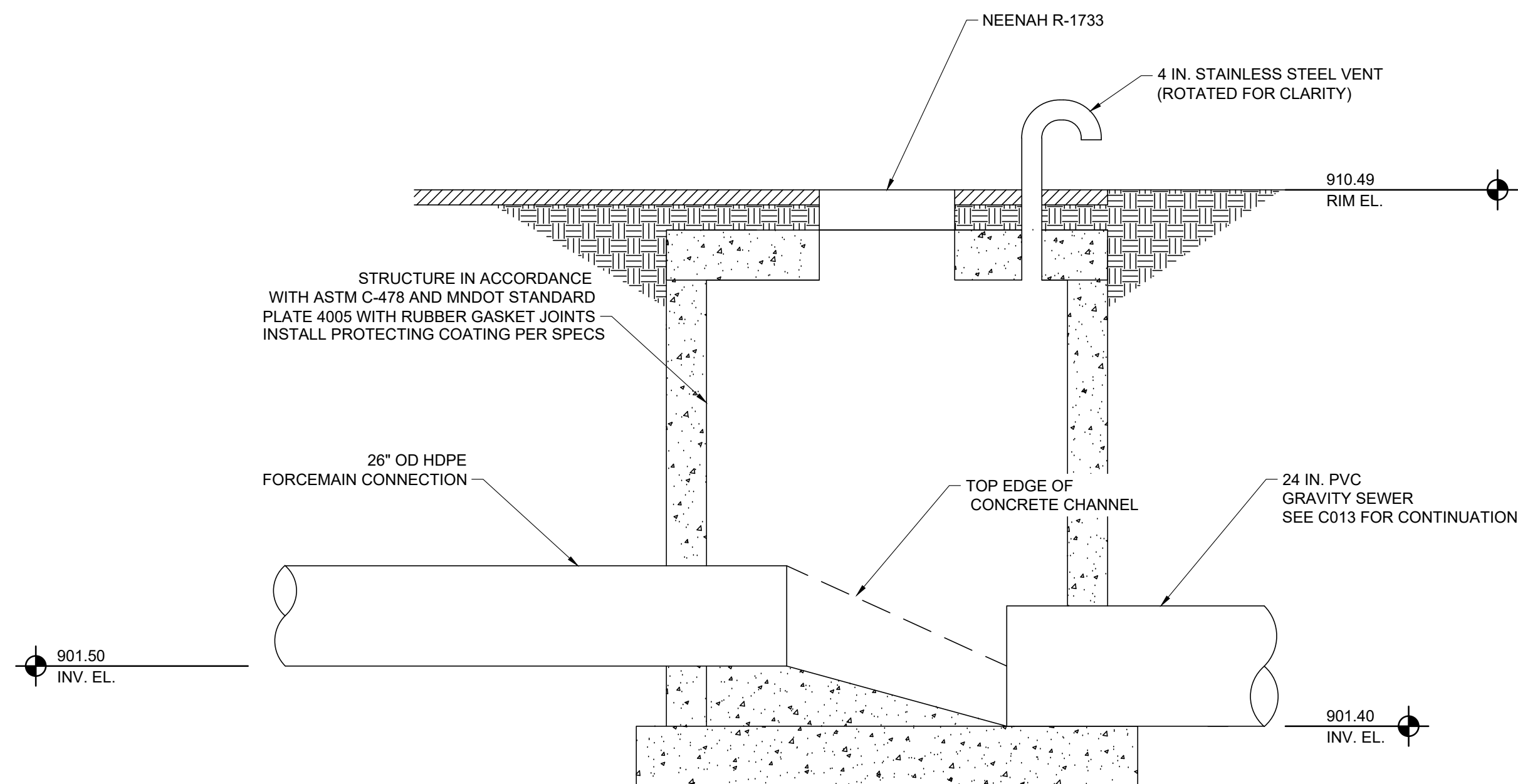
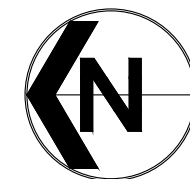
CITY OF BLAINE
CITY PROJECT NO. 21-30

PROPOSED PLAN & PROFILE
LIFT STATION 13 FM REPLACEMENT PHASE 1

PROJ. NO. 18153.000
DRAWING NO. C014
SHEET NO. 19



1 PLAN - TRANSITION MANHOLE
C015 SCALE:
1/2"=1'-0"



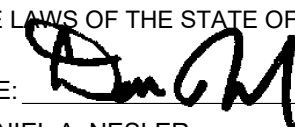
2 SECTION - TRANSITION MANHOLE
C015 SCALE:
1/2"=1'-0"

PLOT DATE: Apr 24, 2023 - 2:06pm
FILENAME: K:\a-f\blaine\18153000\04_Production\01_CAD - Phase_1_Gravity\02_Sheets\C015 CIVIL DETAILS.dwg

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SIGNATURE:  DATE: 04/24/23
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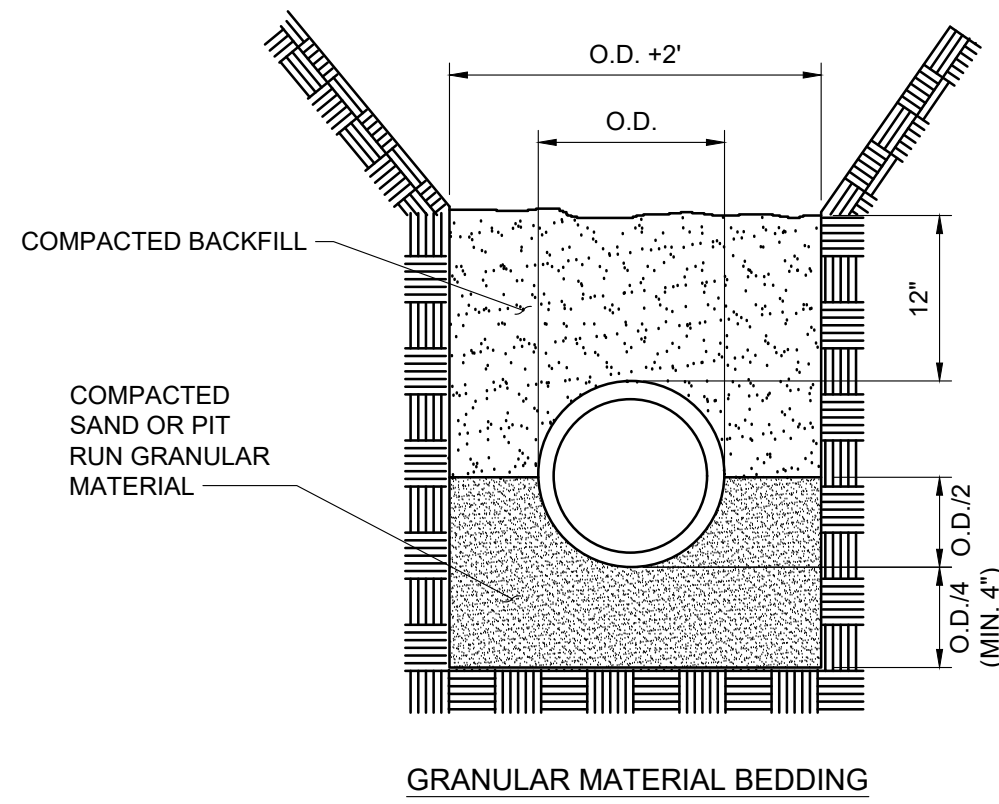
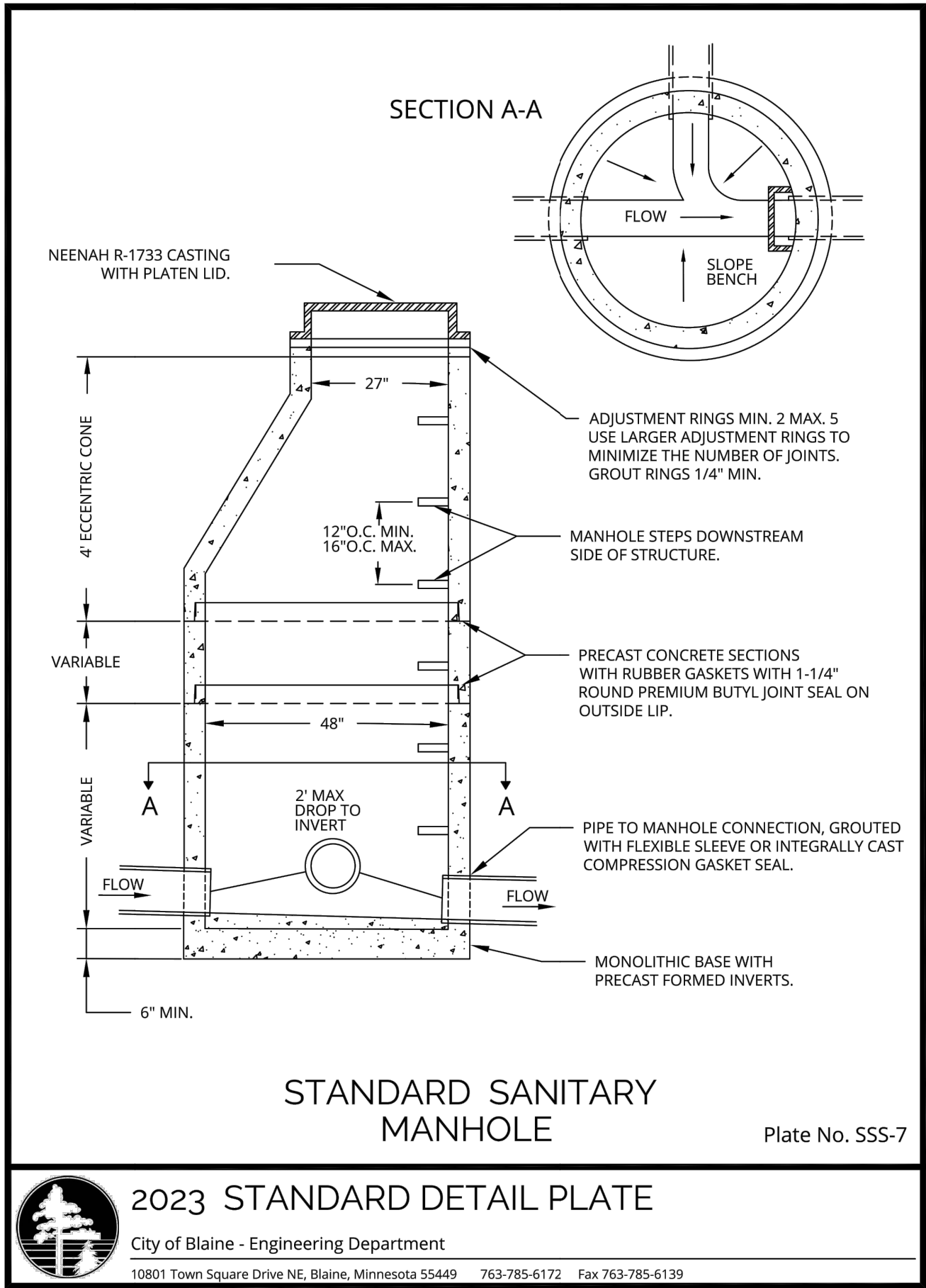
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CITY PROJECT NO. 21-30

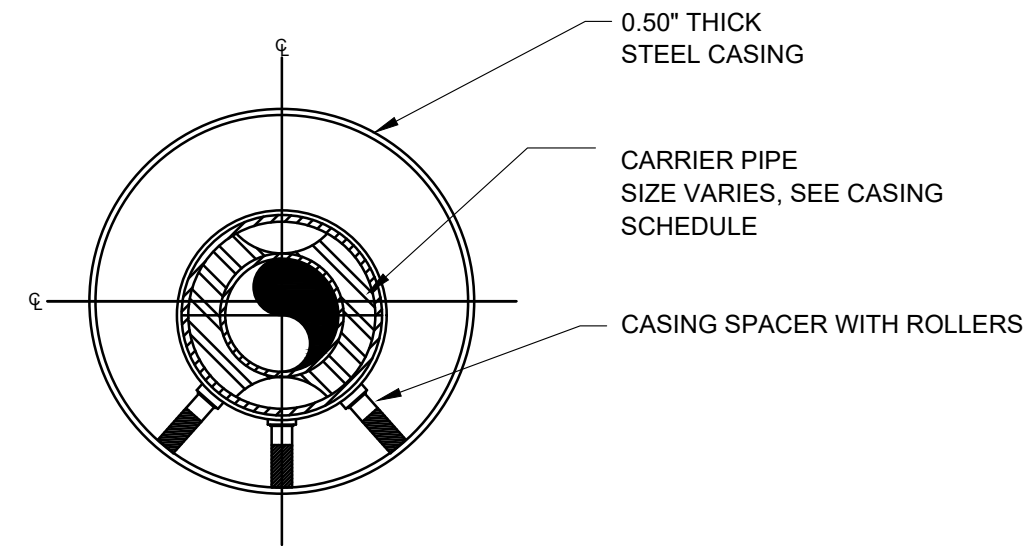
CIVIL DETAILS	
LIFT STATION 13 FM REPLACEMENT PHASE 1	

PROJ. NO.	18153.000
DRAWING NO.	C015
SHEET NO.	20



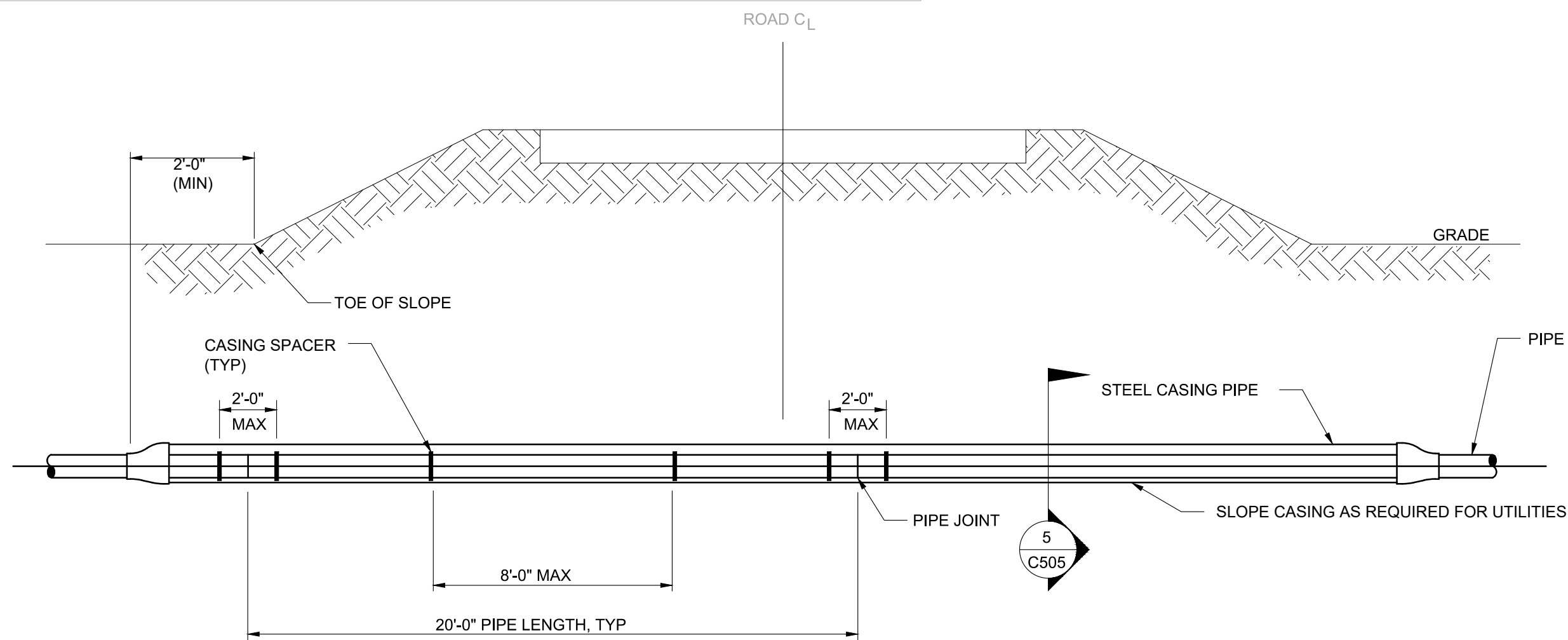
1 PIPE FOUNDATION DETAILS

C016 NO SCALE



2 PIPE CASING SECTION - SINGLE CARRIER PIPE

C016 NO SCALE



CASING NOTES:

- CASING LENGTHS ARE APPROXIMATE. CONTRACTOR TO DETERMINE CASING LENGTHS AND CASING INVERTS BASED ON CARRIER PIPE INVERTS.
- SEE SITE UTILITIES PLAN FOR CASING PLAN LAYOUT.
- HORIZONTAL CONSTRUCTION TOLERANCES SHALL BE ± 2.0 FEET OF THE DESIGN CENTERLINE OF THE PIPE. VERTICAL CONSTRUCTION TOLERANCES SHALL BE WITHIN 0.10' OF DETERMINED INVERTS. WATER SHALL BE FREE DRAINING BETWEEN ANY TWO POINTS AT THE PIPE INVERT.
- AS A MINIMUM, THE CONTRACTOR SHALL ENSURE ALL PIPING ROUTED THRU A CASING IS SUPPORTED BY A SPACER AT THE MFG'S RECOMMENDED INTERVALS. THE CONTRACTOR SHALL RETAIN THE SERVICES OF THE CASING SPACER MFG FOR THE SELECTION OF SPACERS AND THE LAYOUT OF MULTIPLE PIPING ARRANGEMENTS FOR CASINGS NOT DETAILED.
- THE CONTRACTOR SHALL SUBMIT CASING SPACERS/SUPPORTS FOR AND APPROVAL. FOR BOTH SINGLE AND MULTIPLE PIPING ARRANGEMENTS TO BE FURNISHED.
- CONTRACTOR SHALL PROVIDE SHOP DRAWINGS FOR ALL MATERIALS FURNISHED FOR ENGINEER'S REVIEW AND APPROVAL.

3 PIPE CASING DETAIL

C016 NO SCALE

PLOT DATE: Apr 24, 2023 - 2:06pm
FILENAME: K:\a-f\blaine\18153000\04_Production\01_CAD - Phase 1_Gravity\02_Sheets\C016 CIVIL DETAILS.dwg

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DESIGNED	BJM
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CHECKED	AMP

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 ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

SIGNATURE: *Daniel A. Nesler* DATE: 04/24/23
NAME: DANIEL A. NESLER LIC. NO.: 47523



444 Cedar Street, Suite 1500
Saint Paul, MN 55101
651.292.4400
tkda.com

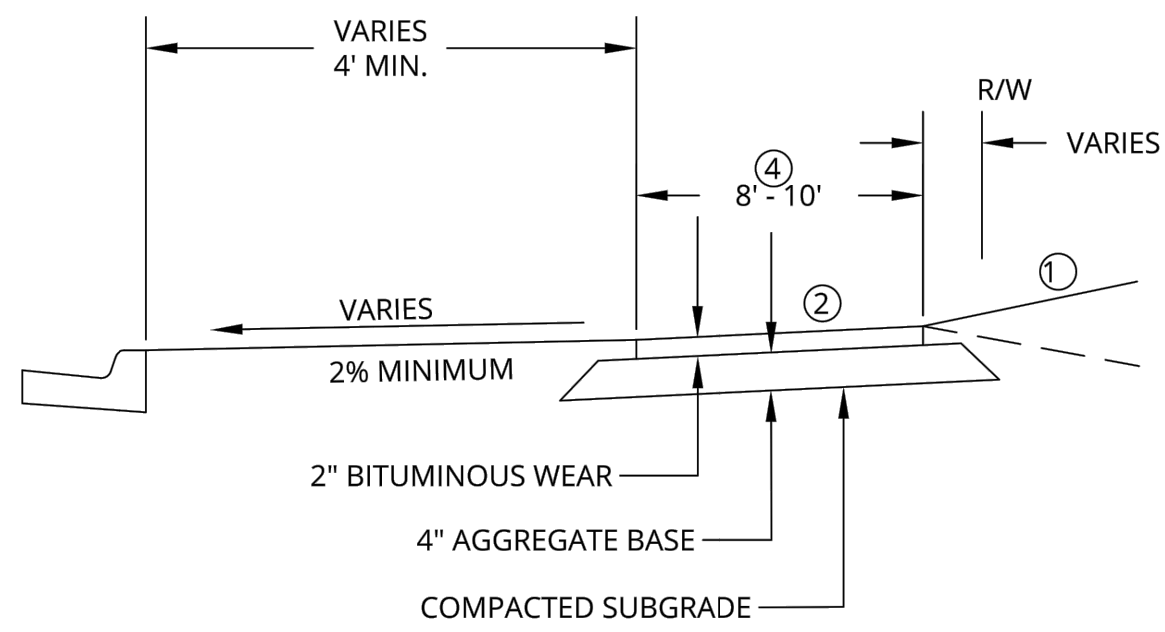


CITY OF BLAINE
CITY PROJECT NO. 21-30

CIVIL DETAILS

LIFT STATION 13 FM REPLACEMENT PHASE 1

PROJ. NO. 18153.000
DRAWING NO. C016
SHEET NO. 21



- NOTES:
- ① - SLOPE VARIES 1:2 TO 1:4
 - ② - CROSS SLOPE 2%
 - ③ - RESTORE ALL DISTURBED AREAS WITH 4" TOPSOIL AND SOD.
 - ④ - CHECK WITH CITY ENGINEERING DEPARTMENT FOR REQUIRED WIDTH.

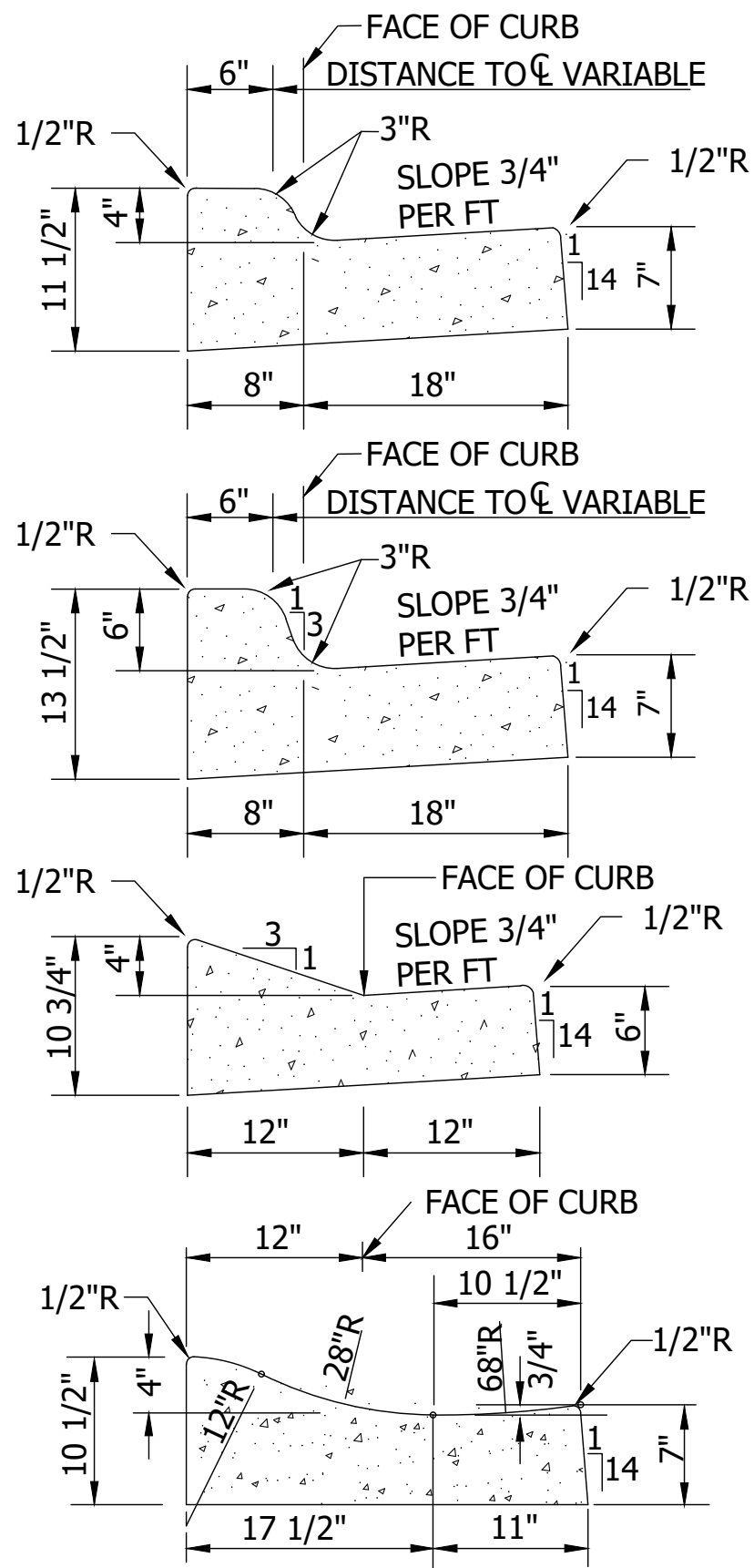
OFF ROAD TRAIL
TYPICAL SECTION

Plate No. ST-13



2023 STANDARD DETAIL PLATE

City of Blaine - Engineering Department
10801 Town Square Drive NE, Blaine, Minnesota 55449 763-785-6172 Fax 763-785-6139

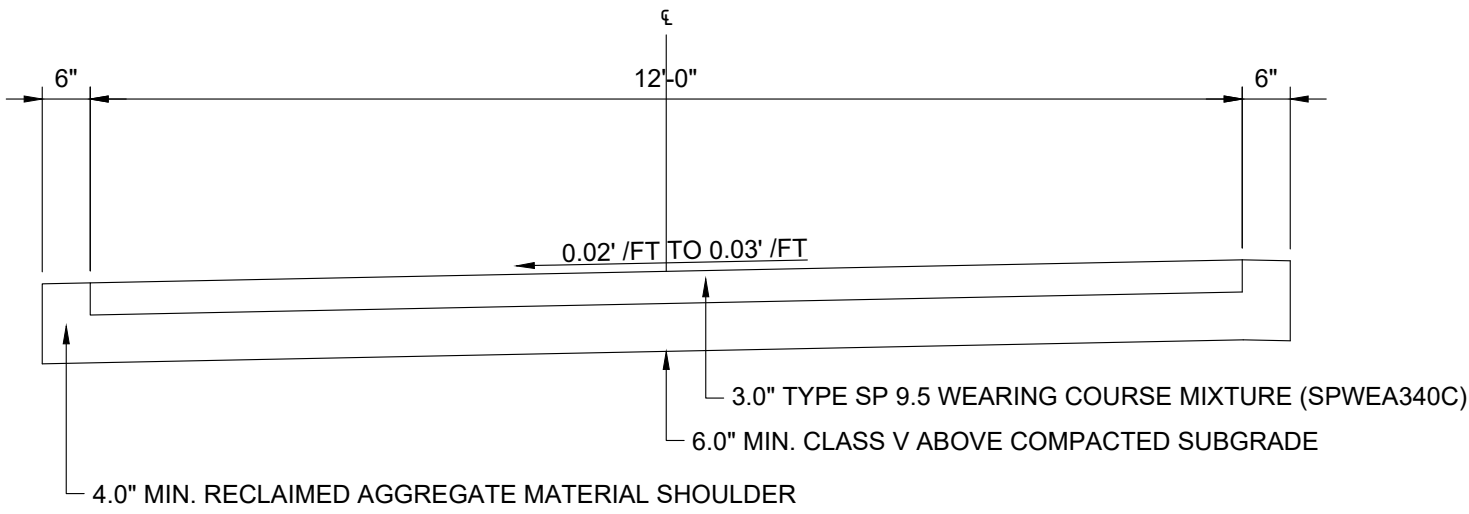


MNDOT B418

MNDOT B618

SURMOUNTABLE
D-412

SURMOUNTABLE
D-428

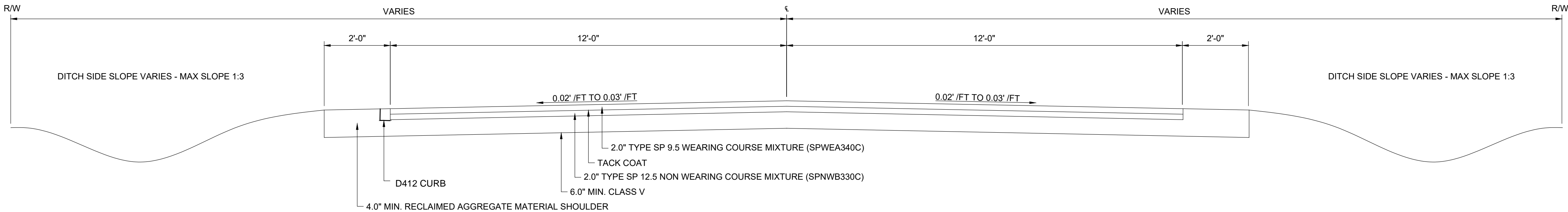


MH ACCESS ROAD
TYPICAL SECTION

1

C017

NO
SCALE



35W SERVICE ROAD
EXISTING TYPICAL SECTION

2

C017

NO
SCALE

PLOT DATE: Apr 24, 2023 - 2:07pm
FILENAME: K:\a-f\blaine\18153000\04_Production\01_CAD - Phase_1_Gravity\02_Sheets\C017 CIVIL DETAILS.dwg

NO.	DATE	BY	DESCRIPTION OF REVISIONS
0	04/24/23	DAN	ISSUED FOR BID

DESIGNED	BJM
DRAWN	BJM
CHECKED	AMP

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CITY OF BLAINE
CITY PROJECT NO. 21-30

CIVIL DETAILS
LIFT STATION 13 FM REPLACEMENT PHASE 1

PROJ. NO. 18153.000
DRAWING NO. C017
SHEET NO. 22