CITY OF RAMSEY

CONSTRUCTION PLANS FOR

RIVERS BEND REGIONAL STORM WATER IMPROVEMENTS

CITY PROJECT NUMBER 25-01

STORM SEWER, POND GRADING, EROSION CONTROL AND TURF ESTABLISHMENT

AUGUST, 2024

MAP OF THE
CITY OF RAMSEY
ANOKA COUNTY, MN

MAP LEGEND

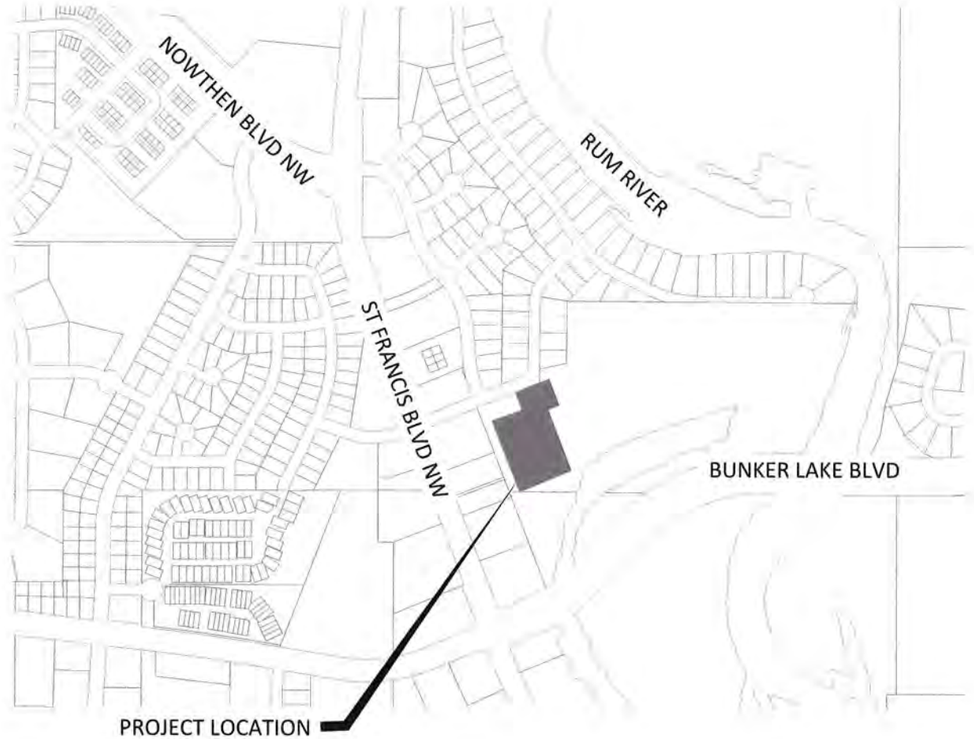
PROJECT LIMITS

NOTE: EXISTING UTILITY INFORMATION SHOWN ON THIS PLAN HAS BEEN PROVIDED BY THE UTILITY OWNER. THE CONTRACTOR SHALL FIELD VERIFY EXACT LOCATIONS PRIOR TO COMMENCING CONSTRUCTION AS REQUIRED BY STATE LAW. NOTIFY GOPHER STATE ONE CALL, 1-800-252-1166 OR 651-454-0002.

THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D UNLESS OTHERWISE NOTED. THIS UTILITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38-22, ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA."

--- GOVERNING SPECIFICATIONS ---
THE 2020 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATION FOR CONSTRUCTION" AND THE 2023 EDITION OF THE CITY ENGINEERS ASSOCIATION OF MINNESOTA (CEAM) "STANDARD SPECIFICATIONS" FOR MUNICIPAL UTILITIES SHALL GOVERN.

ALL TRAFFIC CONTROL DEVICES AND SIGNING SHALL CONFORM AND BE INSTALLED IN ACCORDANCE WITH THE LATEST "MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MN MUTCD) AND PART VI, THE LATEST "FIELD MANUAL" FOR TEMPORARY TRAFFIC CONTROL DEVICES.



SHEET NUMBER	SHEET TITLE
1	TITLE SHEET
2	LEGEND
3	EXISTING CONDITIONS & REMOVALS
4	STATEMENT OF ESTIMATED QUANTITIES
5	POND TYPICAL SECTION
6	DETAILS
7	EROSION CONTROL & TURF ESTABLISHMENT
8 - 10	STORMWATER POLLUTION PREVENTION PLAN
11	GRADING PLANS
12	STORM SEWER PROFILES
THIS PLAN SET CONTAINS 12 SHEETS.	

FOR CONSTRUCTION
9/24/2024

Approved: City Engineer / Director of Public Works Date 9/24/2024

BM=862.90
TNH
77' SE OF SE INTERSECTION OF 142ND AVENUE NW & XKINO STREET

PROJECT DATUM:
HORIZONTAL: ANOKA COUNTY COORDINATES (1996 ADJUSTMENT)
VERTICAL: NAVD 88

RECORD DRAWING INFORMATION
OBSERVER:
CONTRACTOR:
DATE:

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.
KEVIN P. KIELB
LIC. NO. 23211 DATE 8/20/2024

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7533 SUNWOOD DR NW, SUITE 206
RAMSEY, MN 55303
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www.bolton-menk.com

DESIGNED	NO	ISSUE/DESCRIPTION	DATE
ZFL			
DRAWN TJH			
CHECKED KPK			
CLIENT PROJ. NO. CP 25-01			

CITY OF RAMSEY, MINNESOTA
RIVERS BEND REGIONAL STORMWATER IMPROVEMENTS
TITLE SHEET

SHEET 1 OF 12

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EXISTING TOPOGRAPHIC SYMBOLS

- ACCESS GRATE
- AIR CONDITION UNIT
- ANTENNA
- AUTO SPRINKLER CONNECTION
- BARRICADE PERMANENT
- BASKETBALL POST
- BENCH
- BIRD FEEDER
- BOLLARD
- BUSH
- CATCH BASIN RECTANGULAR CASTING
- CATCH BASIN CIRCULAR CASTING
- CURB STOP
- CLEAN OUT
- CULVERT END
- DRINKING FOUNTAIN
- DOWN SPOUT
- ELECTRIC CAR CHARGE STATION
- FILL PIPE
- FIRE HYDRANT
- FLAG POLE
- FLARED END / APRON
- FUEL PUMP
- GRILL
- GUY WIRE ANCHOR
- HANDHOLE
- HANDICAP SPACE
- IRRIGATION SPRINKLER HEAD
- IRRIGATION VALVE BOX
- LIFT STATION CONTROL PANEL
- LIFT STATION
- LIGHT POLE
- MAILBOX
- MANHOLE-COMMUNICATION
- MANHOLE-ELECTRIC
- MANHOLE-GAS
- MANHOLE-HEAT
- MANHOLE-RECLAIMED WATER
- MANHOLE-SANITARY SEWER
- MANHOLE-STORM SEWER
- MANHOLE-UTILITY
- MANHOLE-WATER
- METER
- DRIVE-THRU MICROPHONE
- PARKING METER
- PAVEMENT MARKING
- PEDESTAL-COMMUNICATION
- PEDESTAL-ELECTRIC
- PEDESTRIAN PUSH BUTTON
- PICNIC TABLE
- POLE-UTILITY
- POST
- RAILROAD SIGNAL POLE
- REGULATION STATION GAS
- SATELLITE DISH
- SIGN TRAFFIC
- SIGNAL CONTROL CABINET
- SOIL BORING
- SIREN
- TELEPHONE BOOTH
- TILE INLET
- TILE OUTLET
- TILE RISER
- TRANSFORMER-ELECTRIC
- TREE-CONIFEROUS
- TREE-DEAD
- TREE-DECIDUOUS
- TREE STUMP
- TRAFFIC ARM BARRIER
- TRAFFIC SIGNAL
- TRASH CAN
- UTILITY MARKER
- VALVE
- VALVE POST INDICATOR
- VALVE VAULT
- VAULT
- VENT PIPE
- WATER SPIGOT
- WELL
- WETLAND DELINEATED MARKER
- WETLAND
- WET WELL
- YARD HYDRANT

PROPOSED TOPOGRAPHIC SYMBOLS

- CLEANOUT
- MANHOLE
- LIFT STATION
- STORM SEWER CIRCULAR CASTING
- STORM SEWER RECTANGULAR CASTING
- STORM SEWER FLARED END / APRON
- STORM SEWER OUTLET STRUCTURE
- STORM SEWER OVERFLOW STRUCTURE
- CURB BOX
- FIRE HYDRANT
- WATER VALVE
- WATER REDUCER
- WATER BEND
- WATER TEE
- WATER CROSS
- WATER SLEEVE
- WATER CAP / PLUG
- RIP RAP
- DRAINAGE FLOW
- TRAFFIC SIGNS

SURVEY SYMBOLS

- BENCHMARK LOCATION
- CONTROL POINT
- MONUMENT FOUND
- CAST IRON MONUMENT
- STONE MONUMENT

EXISTING TOPOGRAPHIC LINES

- RETAINING WALL
- FENCE
- FENCE-DECORATIVE
- GUARD RAIL
- TREE LINE
- BUSH LINE

SURVEY LINES

- CONTROLLED ACCESS
- BOUNDARY
- CENTERLINE
- EXISTING EASEMENT LINE
- PROPOSED EASEMENT LINE
- EXISTING LOT LINE
- PROPOSED LOT LINE
- EXISTING RIGHT-OF-WAY
- PROPOSED RIGHT-OF-WAY
- SETBACK LINE
- SECTION LINE
- QUARTER LINE
- SIXTEENTH LINE
- TEMPORARY EASEMENT

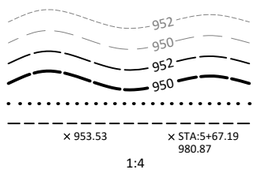
EXISTING UTILITY LINES

- FORCEMAIN
- SANITARY SEWER
- SANITARY SERVICE
- STORM SEWER
- STORM SEWER DRAIN TILE
- WATERMAIN
- WATER SERVICE
- RECLAIMED WATER

PROPOSED UTILITY LINES

- FORCEMAIN
- SANITARY SEWER
- SANITARY SERVICE
- STORM SEWER
- STORM SEWER DRAIN TILE
- WATERMAIN
- WATER SERVICE
- PIPE CASING
- TRENCHLESS PIPE (PLAN VIEW)
- TRENCHLESS PIPE (PROFILE VIEW)

GRADING INFORMATION



- EXISTING CONTOUR MINOR
- EXISTING CONTOUR MAJOR
- PROPOSED CONTOUR MINOR
- PROPOSED CONTOUR MAJOR
- PROPOSED GRADING LIMITS / SLOPE LIMITS
- PROJECT LIMITS
- PROPOSED SPOT ELEVATION
- RISE:RUN (SLOPE)

HATCH PATTERNS

- BITUMINOUS
- GRAVEL
- CONCRETE

EXISTING PRIVATE UTILITY LINES

NOTE:
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- UNDERGROUND FIBER OPTIC
- UNDERGROUND ELECTRIC
- UNDERGROUND GAS
- UNDERGROUND COMMUNICATION
- OVERHEAD ELECTRIC
- OVERHEAD COMMUNICATION
- OVERHEAD UTILITY

UTILITIES IDENTIFIED WITH A QUALITY LEVEL :

LINE TYPES FOLLOW THE FORMAT: UTILITY TYPE - QUALITY LEVEL
EXAMPLE: G-A G-A UNDERGROUND GAS, QUALITY LEVEL A
UTILITY QUALITY LEVEL (A,B,C,D) DEFINITIONS CAN BE FOUND IN CI/ASCE 38-22.

UTILITY QUALITY LEVELS:

QUALITY LEVEL D: PROVIDES THE MOST BASIC LEVEL OF INFORMATION. IT INVOLVES COLLECTING DATA FROM EXISTING UTILITY RECORDS. RECORDS MAY INCLUDE AS-BUILT DRAWINGS, DISTRIBUTION AND SERVICES MAPS, EXISTING GEOGRAPHIC INFORMATION SYSTEM DATABASES, CONSTRUCTION PLANS, ETC.

QUALITY LEVEL C: INVOLVES SURVEYING VISIBLE SUBSURFACE UTILITY STRUCTURES SUCH AS MANHOLES, HAND-HOLES, UTILITY VALVES AND METERS, FIRE HYDRANTS, PEDESTALS AND UTILITY MARKERS, AND THEN CORRELATING THE INFORMATION WITH EXISTING UTILITY RECORDS TO CREATE COMPOSITE DRAWINGS. INCLUDES QUALITY LEVEL D ACTIVITIES.

QUALITY LEVEL B: INVOLVES DESIGNATING THE HORIZONTAL POSITION OF SUBSURFACE UTILITIES THROUGH SURFACE DETECTION METHODS AND COLLECTING THE INFORMATION THROUGH A SURVEY METHOD. INCLUDES QUALITY LEVEL C AND D TASKS.

QUALITY LEVEL A: PROVIDES THE HIGHEST LEVEL OF ACCURACY. IT INVOLVES LOCATING OR POTHOLING UTILITIES AS WELL AS ACTIVITIES IN QUALITY LEVELS B, C, AND D. THE LOCATED FACILITY INFORMATION IS SURVEYED AND MAPPED AND THE DATA PROVIDES PRECISE PLAN AND PROFILE INFORMATION.

ABBREVIATIONS

A	ALGEBRAIC DIFFERENCE	GRAV	GRAVEL	RSC	RIGID STEEL CONDUIT
ADJ	ADJUST	GU	GUTTER	RT	RIGHT
ALT	ALTERNATE	GV	GATE VALVE	SAN	SANITARY SEWER
B-B	BACK TO BACK	HDPE	HIGH DENSITY POLYETHYLENE	SCH	SCHEDULE
BIT	BITUMINOUS	HH	HANDHOLE	SERV	SERVICE
BLDG	BUILDING	HP	HIGH POINT	SHLD	SHOULDER
BMP	BEST MANAGEMENT PRACTICE	HWL	HIGH WATER LEVEL	STA	STATION
BR	BEGIN RADIUS	HYD	HYDRANT	STD	STANDARD
BV	BUTTERFLY VALVE	I	INVERT	STM	STORM SEWER
CB	CATCH BASIN	K	CURVE COEFFICIENT	TC	TOP OF CURB
C&G	CURB AND GUTTER	L	LENGTH	TE	TEMPORARY EASEMENT
CIP	CAST IRON PIPE	LO	LOWEST OPENING	TEMP	TEMPORARY
CIPP	CURED-IN-PLACE PIPE	LP	LOW POINT	TNH	TOP NUT HYDRANT
CL	CENTER LINE	LT	LEFT	TP	TOP OF PIPE
CL.	CLASS	MAX	MAXIMUM	TYP	TYPICAL
CLVT	CULVERT	MH	MANHOLE	VCP	VITRIFIED CLAY PIPE
CMP	CORRUGATED METAL PIPE	MIN	MINIMUM	VERT	VERTICAL
C.O.	CHANGE ORDER	MR	MID RADIUS	VPC	VERTICAL POINT OF CURVE
COMM	COMMUNICATION	NIC	NOT IN CONTRACT	VPI	VERTICAL POINT OF INTERSECTION
CON	CONCRETE	NMC	NON-METALLIC CONDUIT	VPT	VERTICAL POINT OF TANGENT
CSP	CORRUGATED STEEL PIPE	NTS	NOT TO SCALE	WM	WATERMAIN
DIA	DIAMETER	NWL	NORMAL WATER LEVEL		
DIP	DUCTILE IRON PIPE	OHW	ORDINARY HIGH WATER LEVEL		
DWY	DRIVEWAY	PC	POINT OF CURVE	AC	ACRES
E	EXTERNAL CURVE DISTANCE	PCC	POINT OF COMPOUND CURVE	CF	CUBIC FEET
ELEC	ELECTRIC	PE	PERMANENT EASEMENT	CV	COMPACTED VOLUME
ELEV	ELEVATION	PED	PEDESTRIAN, PEDESTAL	CY	CUBIC YARD
EOF	EMERGENCY OVERFLOW	PERF	PERFORATED PIPE	EA	EACH
ER	END RADIUS	PERM	PERMANENT	EV	EXCAVATED VOLUME
ESMT	EASEMENT	PI	POINT OF INTERSECTION	LB	POUND
EX	EXISTING	PL	PROPERTY LINE	LF	LINEAR FEET
FES	FLARED END SECTION	PRC	POINT OF REVERSE CURVE	LS	LUMP SUM
F-F	FACE TO FACE	PT	POINT OF TANGENT	LV	LOOSE VOLUME
FF	FINISHED FLOOR	PVC	POLYVINYL CHLORIDE PIPE	SF	SQUARE FEET
F&I	FURNISH AND INSTALL	PVMT	PAVEMENT	SV	STOCKPILE VOLUME
FM	FORCEMAIN	R	RADIUS	SY	SQUARE YARD
FO	FIBER OPTIC	R/W	RIGHT-OF-WAY		
F.O.	FIELD ORDER	RCP	REINFORCED CONCRETE PIPE		
GRAN	GRANULAR	RET	RETAINING		

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KEVIN P. KIELB
LIC. NO. 23211 DATE 8/20/2024

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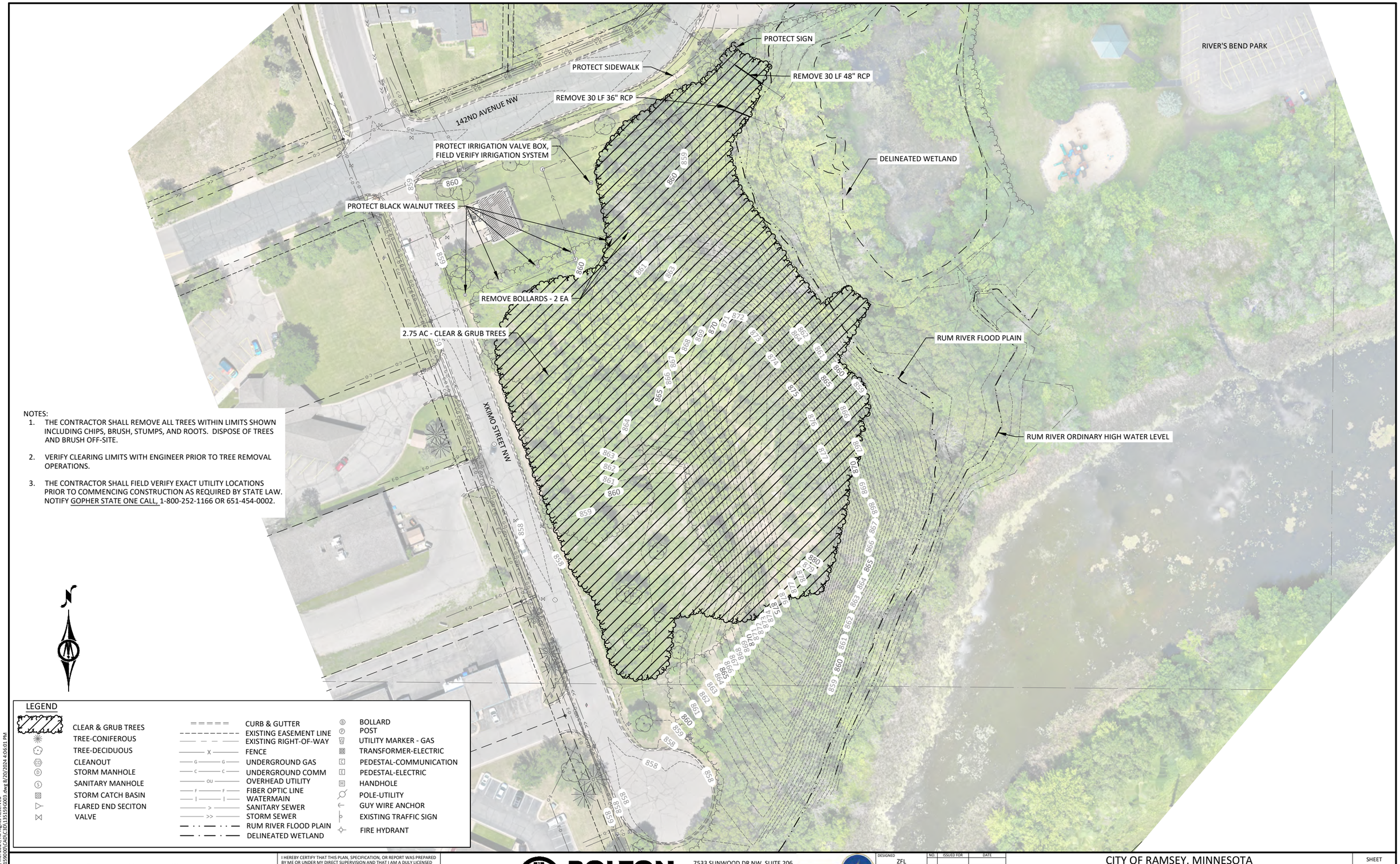
City of RAMSEY

DESIGNED	ZFL
DRAWN	TJH
CHECKED	KPK
CLIENT PROJ. NO.	CP 25-01

NO.	ISSUED FOR	DATE

CITY OF RAMSEY, MINNESOTA
RIVERS BEND REGIONAL STORMWATER IMPROVEMENTS
LEGEND



NOTES:

1. THE CONTRACTOR SHALL REMOVE ALL TREES WITHIN LIMITS SHOWN INCLUDING CHIPS, BRUSH, STUMPS, AND ROOTS. DISPOSE OF TREES AND BRUSH OFF-SITE.
2. VERIFY CLEARING LIMITS WITH ENGINEER PRIOR TO TREE REMOVAL OPERATIONS.
3. THE CONTRACTOR SHALL FIELD VERIFY EXACT UTILITY LOCATIONS PRIOR TO COMMENCING CONSTRUCTION AS REQUIRED BY STATE LAW. NOTIFY GOPHER STATE ONE CALL, 1-800-252-1166 OR 651-454-0002.

LEGEND

- CLEAR & GRUB TREES
- TREE-CONIFEROUS
- TREE-DECIDUOUS
- CLEANOUT
- STORM MANHOLE
- SANITARY MANHOLE
- STORM CATCH BASIN
- FLARED END SECITON
- VALVE
- CURB & GUTTER
- EXISTING EASEMENT LINE
- EXISTING RIGHT-OF-WAY
- FENCE
- UNDERGROUND GAS
- UNDERGROUND COMM
- OVERHEAD UTILITY
- FIBER OPTIC LINE
- WATERMAIN
- SANITARY SEWER
- STORM SEWER
- RUM RIVER FLOOD PLAIN
- DELINEATED WETLAND
- BOLLARD
- POST
- UTILITY MARKER - GAS
- TRANSFORMER-ELECTRIC
- PEDESTAL-COMMUNICATION
- PEDESTAL-ELECTRIC
- HANDHOLE
- POLE-UTILITY
- GUY WIRE ANCHOR
- EXISTING TRAFFIC SIGN
- FIRE HYDRANT

0 40 80
SCALE FEET

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City of RAMSEY

DESIGNED	ZFL
DRAWN	TJH
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CLIENT PROJ. NO.	CP 25-01

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CITY OF RAMSEY, MINNESOTA
RIVERS BEND REGIONAL STORMWATER IMPROVEMENTS
EXISTING CONDITIONS & REMOVALS

SHEET 3 OF 12

STATEMENT OF ESTIMATED QUANTITIES

ITEM NO.	MNDOT SPEC NO.	ITEM	NOTES	UNIT	TOTAL QUANTITY
BASE BID					
1	2021.501	MOBILIZATION		LUMP SUM	1
2	2101.505	CLEARING		ACRE	2.75
3	2101.505	GRUBBING		ACRE	2.75
4	2104.503	REMOVE BOLLARDS		EACH	2
5	2104.503	REMOVE PIPE SEWERS (STORM)		LIN FT	60
6	2106.507	EXCAVATION - COMMON	(1)	LUMP SUM	1
7	2106.507	COMMON EMBANKMENT (CV)	(2)	CU YD	940
8	2106.601	DEWATERING		LUMP SUM	1
9	2108.604	POND LINER SYSTEM	(1), (2), (3)	SQ YD	4415
10	2123.610	STREET SWEEPER (WITH PICKUP BROOM)		HR	24
11	2502.502	15" RC PIPE APRON		EACH	1
12	2502.502	24" RC PIPE APRON		EACH	3
13	2503.503	15" RC PIPE SEWER 3006 CLASS V		LIN FT	64
14	2503.503	24" RC PIPE SEWER 3006 CLASS III		LIN FT	150
15	2503.503	36" RC PIPE SEWER 3006 CLASS III		LIN FT	30
16	2503.503	48" RC PIPE SEWER 3006 CLASS III		LIN FT	30
17	2503.601	TEMPORARY BYPASS PUMPING		LUMP SUM	1
18	2503.602	CONNECT TO EXISTING STORM SEWER		EACH	4
19	2506.502	CASTING ASSEMBLY (STORM SEWER)		EACH	2
20	2504.601	IRRIGATION REPAIR		LIN FT	200
21	2506.603	CONSTRUCT DRAINAGE STRUCTURE (OUTLET CONTROL)		LIN FT	7
22	2506.603	CONSTRUCT DRAINAGE STRUCTURE DES 96-4020 WITH DIVERSION BAFFLE		LIN FT	14
23	2511.507	RANDOM RIP RAP CLASS III		CU YD	50
24	2563.601	TRAFFIC CONTROL		LUMP SUM	1
25	2573.501	STABILIZED CONSTRUCTION EXIT		EACH	1
26	2573.501	STORM DRAIN INLET PROTECTION		EACH	5
27	2573.503	SILT FENCE, TYPE MS		LIN FT	1800
28	2574.507	COMMON TOPSOIL BORROW (LV)		CU YD	900
29	2574.508	FERTILIZER TYPE 3		POUND	530
30	2575.504	EROSION PREVENTION CATEGORY 20		SQ YD	8500
31	2575.505	SEEDING		SQ YD	8500
32	2575.508	SEED MIXTURE 35-241		POUND	70
33	2575.508	HYDRAULIC BONDED FIBER MATRIX		POUND	500
ADD ALTERNATE 1					
34		PREVAILING WAGES	(4)	LUMP SUM	1

NOTES:

(1) BID ITEM INCLUDES ALL TOPSOIL STRIPING, EXCAVATION, AND STOCKPILING. SEE SPECIFICATIONS. AMOUNT OF EXCAVATION IS DEPENDENT ON THE LINER PRODUCT CHOSEN BY THE CONTRACTOR. SEE EARTHWORK TABLES FOR QUANTITIES ASSOCIATED WITH THE DIFFERENT LINER PRODUCTS.

(2) BID ITEM INCLUDES TOPSOIL PLACEMENT AND EMBANKMENT REQUIRED AROUND DIVERSION STRUCTURES. PLACEMENT OF SOIL COVER ASSOCIATED WITH THE GEOSYNTHETIC LINER SHALL BE INCLUDED IN THE POND LINER BID PRICE AND NO ADDITIONAL COMPENSATION SHALL BE GRANTED. SEE TABLE FOR APPROXIAMTE ADDITIONAL QUANTITY.

(3) BENTONITE COMPOSITE LINER, PVC LINER, HDPE LINER, 2.0-FEET THICK CLAY LINER, OR APPROVED EQUAL. SEE SPECIFICATIONS, THE FURNISHING AND INSTALLING OF SPECIFIC ITEMS AND/OR THE PERFORMANCE OF WORK SHALL NOT BE INDIVIDUALLY PAID IN THE ABSENCE OF A SPECIFIC BID ITEM FOR THE WORK. △1

(4) THE OWNER IS PURSUING ADDITIONAL GRANT FUNDING. SHOULD THE OWNER BE SUCCESSFUL, THE CONTRACT SHALL BE SUBJECT TO STATE PREVAILING WAGE REQUIREMENTS. SEE SPECIFICATION APPENDICES FOR REQUIREMENTS.

EARTHWORK SUMMARY - GEOSYNTHETIC LINER SYSTEM

NOTES	ITEMS	UNIT	PROJECT TOTAL
UNADJUSTED VOLUMES BASED ON CROSS SECTIONS			
1	TOPSOIL STRIPPING (EV)	CU YD	1400
1, 2	EXCAVATION (EV)	CU YD	50625
5	EMBANKMENT MATERIAL REQUIRED (CV)	CU YD	40
3	TOPSOIL REQUIRED (CV)	CU YD	900
	EMBANKMENT MATERIAL FOR SOIL COVER	CU YD	1475
EARTHWORK BALANCE			
	TOPSOIL BALANCE		
8	TOPSOIL REQUIRED (LV)	CU YD	1350
4	TOPSOIL GENERATED (LV)	CU YD	1470
	EXCESS TOPSOIL (LV)	CU YD	120
	GRADING MATERIAL BALANCE		
4	GRADING MATERIAL GENERATED (LV)	CU YD	53156
	EMBANKMENT MATERIAL REQUIRED (LV)	CU YD	48
9	EXCESS GRADING MATERIAL (LV)	CU YD	53108
EARTHWORK QUANTITIES			
7	COMMON EXCAVATION (EV)	CU YD	52025
6	COMMON EMBANKEMENT (CV)	CU YD	2415

EARTHWORK SUMMARY TABLE NOTES:

1. PAID FOR AS EXCAVATION - COMMON. TOPSOIL EXCAVATION DEPTHS ARE BASED ON SOIL BORINGS (SEE PROJECT MANUAL)
2. EXCAVATION BELOW TOPSOIL STRIPPING TO PROPOSED SUBRADE (BOTTOM OF PROPOSED TOPSOIL, BOTTOM OF LINER.)
3. 4" OF TOPSOIL ACROSS ALL DISTURBED AREAS ABOVE THE NORMAL WATER LEVEL.
4. ASSUMES 1.05 SWELL FACTOR.
5. PLACEMENT OF EMABANKMENT ANTICIPATING HOLD-DOWN FOR TOPSOIL PLACEMENT.
6. INCLUDES TOPSOIL PLACEMENT & 1' SOIL COVER OVER POND LINER PLACEMENT
7. INCLUDES TOPSOIL EXCAVATION AND REGULAR EXCAVATION
8. ASSUMES 1.5 SHRINKAGE FACTOR
9. ONCE THE SITE IS BALANCED, ALL EXCESS EXCAVATED MATERIAL WILL BECOME PROPERTY OF THE CONTRACTOR AND WILL BE REMOVED FROM THE SITE AND DISPOSED OF AT A SITE SECURED BY THE CONTRACTOR

EARTHWORK SUMMARY - CLAY LINER SYSTEM

NOTES	ITEMS	UNIT	PROJECT TOTAL
UNADJUSTED VOLUMES BASED ON CROSS SECTIONS			
1	TOPSOIL STRIPPING (EV)	CU YD	1400
1, 2	EXCAVATION (EV)	CU YD	52105
5	EMBANKMENT MATERIAL REQUIRED (CV)	CU YD	40
3	TOPSOIL REQUIRED (CV)	CU YD	900
EARTHWORK BALANCE			
	TOPSOIL BALANCE		
8	TOPSOIL REQUIRED (LV)	CU YD	1350
4	TOPSOIL GENERATED (LV)	CU YD	1470
	EXCESS TOPSOIL (LV)	CU YD	120
	GRADING MATERIAL BALANCE		
4	GRADING MATERIAL GENERATED (LV)	CU YD	54710
	EMBANKMENT MATERIAL REQUIRED (LV)	CU YD	48
9	EXCESS GRADING MATERIAL (LV)	CU YD	54662
EARTHWORK QUANTITIES			
	CLAY LINER (CV)	CU YD	2950
7	COMMON EXCAVATION (EV)	CU YD	53500
6	COMMON EMBANKEMENT (CV)	CU YD	940

EARTHWORK SUMMARY TABLE NOTES:

1. PAID FOR AS EXCAVATION - COMMON. TOPSOIL EXCAVATION DEPTHS ARE BASED ON SOIL BORINGS (SEE PROJECT MANUAL)
2. EXCAVATION BELOW TOPSOIL STRIPPING TO PROPOSED SUBRADE (BOTTOM OF PROPOSED TOPSOIL, BOTTOM OF CLAY LINER.)
3. 4" OF TOPSOIL ACROSS ALL DISTURBED AREAS ABOVE THE NORMAL WATER LEVEL.
4. ASSUMES 1.05 SWELL FACTOR.
5. PLACEMENT OF EMABANKMENT ANTICIPATING HOLD-DOWN FOR TOPSOIL PLACEMENT.
6. INCLUDES TOPSOIL PLACEMENT
7. INCLUDES TOPSOIL EXCAVATION AND REGULAR EXCAVATION
8. ASSUMES 1.5 SHRINKAGE FACTOR
9. ONCE THE SITE IS BALANCED, ALL EXCESS EXCAVATED MATERIAL WILL BECOME PROPERTY OF THE CONTRACTOR AND WILL BE REMOVED FROM THE SITE AND DISPOSED OF AT A SITE SECURED BY THE CONTRACTOR

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KEVIN P. KIELB
LIC. NO. 23211 DATE 8/20/2024

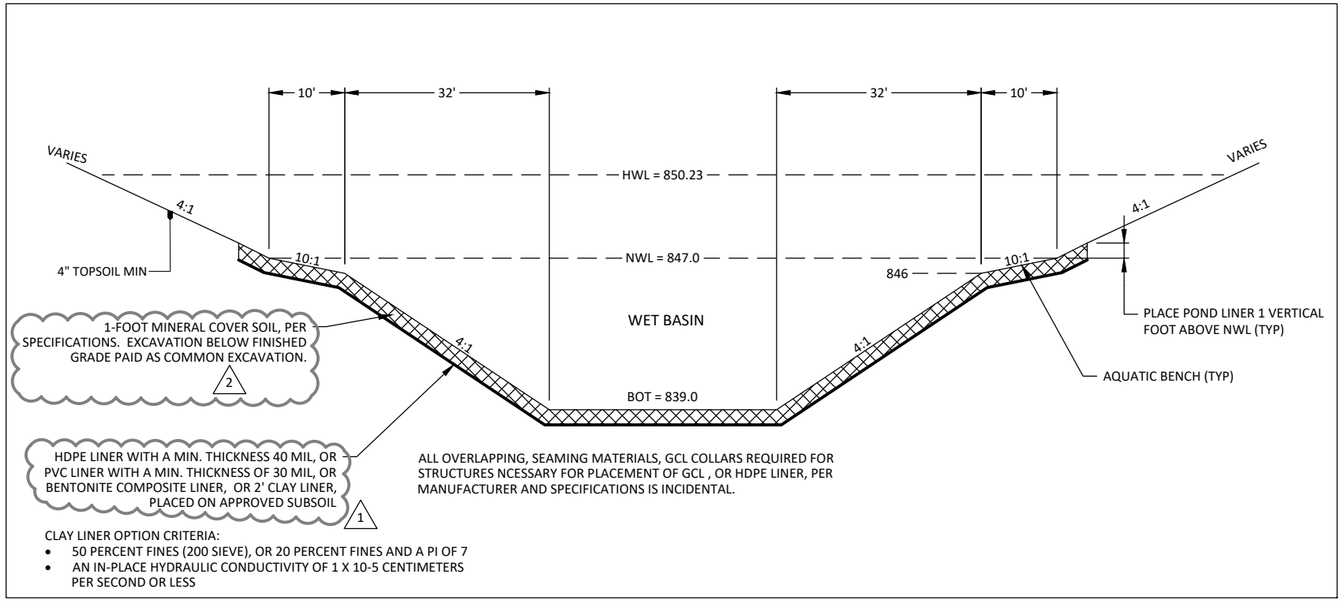
BOLTON & MENK
7533 SUNWOOD DR NW, SUITE 206
RAMSEY, MN 55303
Phone: (763) 433-2851
Email: Ramsey@bolton-menk.com
www.bolton-menk.com

City of RAMSEY

DESIGNED	ZFL
DRAWN	TJH
CHECKED	KPK
CLIENT PROJ. NO.	CP 25-01

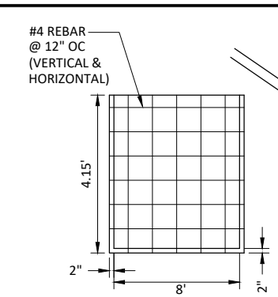
NO.	ISSUED FOR	DATE
1	ADD 1	09/03/2024

CITY OF RAMSEY, MINNESOTA
RIVERS BEND REGIONAL STORMWATER IMPROVEMENTS
STATEMENT OF ESTIMATED QUANTITIES

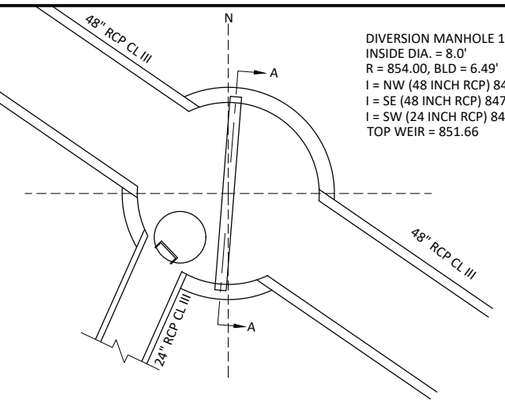


CLAY LINER OPTION CRITERIA:

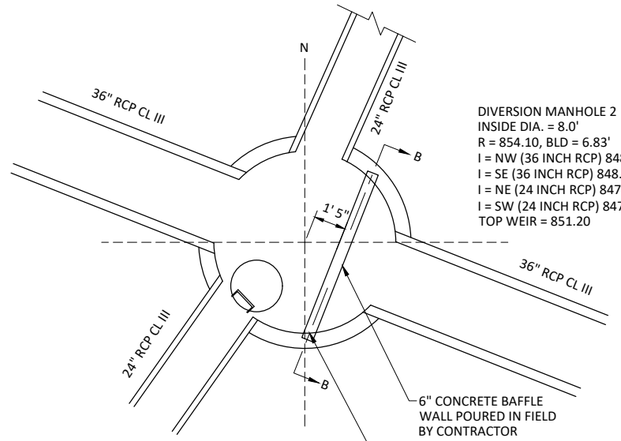
- 50 PERCENT FINES (200 SIEVE), OR 20 PERCENT FINES AND A PI OF 7
- AN IN-PLACE HYDRAULIC CONDUCTIVITY OF 1 X 10-5 CENTIMETERS PER SECOND OR LESS



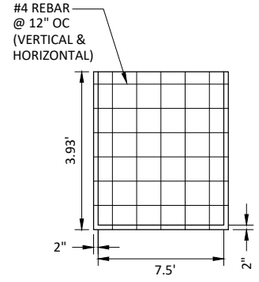
CONCRETE BAFFLE WALL
SECTION A-A



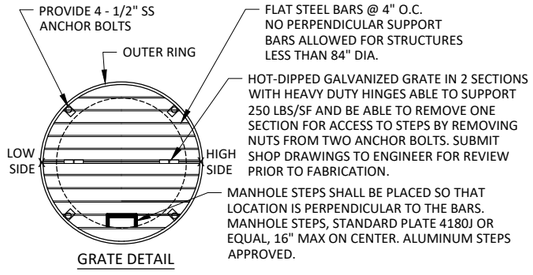
DIVERSION MANHOLE 1
INSIDE DIA. = 8.0'
R = 854.00, BLD = 6.49'
I = NW (48 INCH RCP) 847.57
I = SE (48 INCH RCP) 847.51
I = SW (24 INCH RCP) 847.51
TOP WEIR = 851.66



DIVERSION MANHOLE 2
INSIDE DIA. = 8.0'
R = 854.10, BLD = 6.83'
I = NW (36 INCH RCP) 848.44
I = SE (36 INCH RCP) 848.41
I = NE (24 INCH RCP) 847.27
I = SW (24 INCH RCP) 847.27
TOP WEIR = 851.20

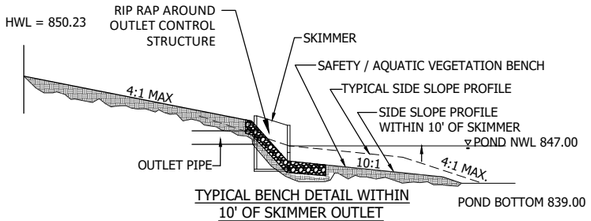


CONCRETE BAFFLE WALL
SECTION B-B

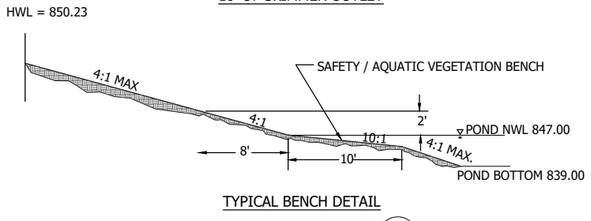


GRATE DETAIL

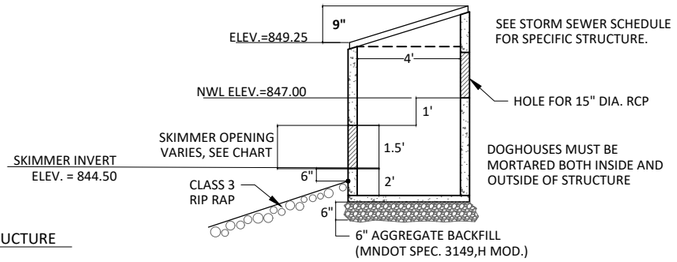
MANHOLE DIAMETER	SKIMMER OPENING
4'	3.5'x1.5'



TYPICAL BENCH DETAIL WITHIN
10' OF SKIMMER OUTLET



TYPICAL BENCH DETAIL



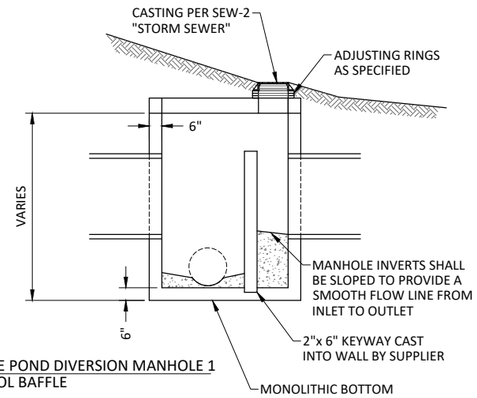
SECTION

1 OUTLET CONTROL STRUCTURE

NOT TO SCALE

NOTE:

1. BAFFLE WALL SHALL BE CONSTRUCTED TO PREVENT LEAKAGE AROUND THE WALL



2 PRECAST CONCRETE POND DIVERSION MANHOLE 1 WITH RATE CONTROL BAFFLE

NOT TO SCALE

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City of RAMSEY

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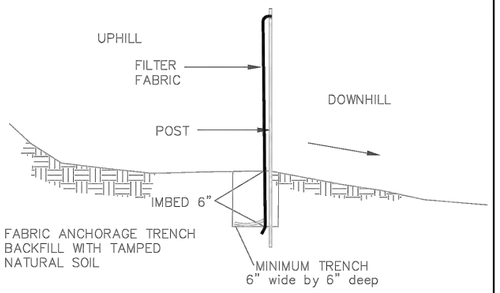
NO.	ISSUED FOR	DATE
1	ADD 1	09/03/2024
2	ADD 2	09/05/2024

CITY OF RAMSEY, MINNESOTA
RIVERS BEND REGIONAL STORMWATER IMPROVEMENTS
POND TYPICAL SECTION

SHEET 5 OF 12

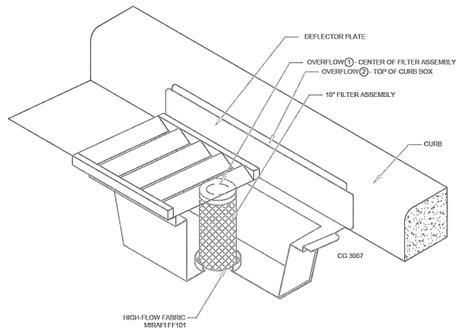


INSTALL AS PER FILTER FABRIC MANUFACTURER'S RECOMMENDATIONS

SILT FENCE DETAIL

NO SCALE

APPROVED: 1 – 2016	City of RAMSEY	STANDARD DETAILS: SILT FENCE
		CITY PLATE No. ERO–1

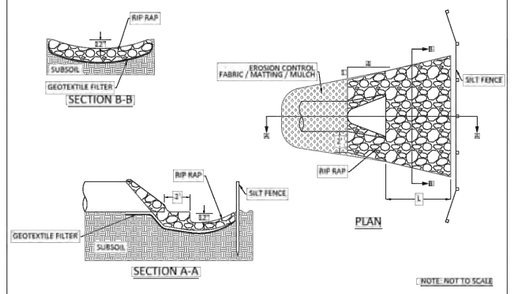


INLET PROTECTION – WIMCO OR EQUAL

N.T.S.

NOTE:
THIS INLET PROTECTION SHALL BE USED IMMEDIATELY FOLLOWING CURB & GUTTER CONSTRUCTION. INLET PROTECTION SHALL REMAIN INSTALLED AND MAINTAINTED UNTIL ALL HOME CONSTRUCTION IS COMPLETE.

APPROVED: 1 – 2016	City of RAMSEY	STANDARD DETAILS: INLET PROTECTION
		CITY PLATE No. ERO–2



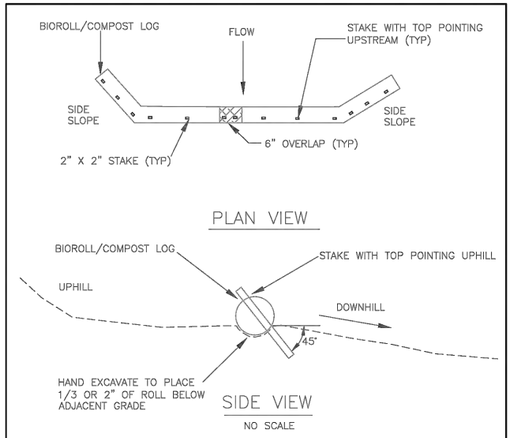
NOTE: NOT TO SCALE

NOTES:
1. ON SLOPES 4:1 OR GREATER, ANCHOR OR STRAIGHT DISKED STRAW MULCH, SEEDED NETTING, GABRIC, OR MATTING SUCH AS EXCELSIOR SHALL BE USED TO STABILIZE DISTURBED SOILS. THESE EXPOSED SOILS MUST BE STABILIZED IMMEDIATELY AFTER GRADING OF SOIL IS COMPLETE.
2. A SKIRTING OF EROSION CONTROL FABRIC OR MULCH MUST BE USED TO PROTECT OUTLETS AS ILLUSTRATED REGARDLESS OF SLOPE.
3. RIP RAP IS CLASS III PLACED 18" THICK.
4. FOR PIPE GREATER THAN 48" DIAMETER OR 58' SPAN, QUANTITY OF GEOTEXTILE FABRIC AND RIP RAP WILL BE HANDLED IN A CASE BY CASE MANNER.
5. GEOTEXTILE FABRIC SHALL COVER THE BOTTOM AND SIDES OF THE AREA EXCAVATED FOR THE RIP RAP MATERIAL.

RIP RAP AT RCP OUTLETS			
DIA. OF PIPE (IN.)	L (FT.)	GEOTEXTILE FABRIC (SY)	18" DEPTH RIP RAP (CU. YD)
12	8	19.6	4.4
15	8	20.8	4.6
18	10	25.6	6.4
21	10	27.4	7.1
24	12	33.4	9.2
27	12	35.2	9.9
30	14	41.6	12.3
36	16	50.5	15.8
42	18	57.8	18.7
48	20	66.5	22.2

RIP RAP AT RCP-A OUTLETS			
SPAN OF PIPE (IN.)	L (FT.)	GEOTEXTILE FABRIC (SY)	18" DEPTH RIP RAP (CU. YD)
22	10	25.6	6.1
28	12	33.2	8.5
36	14	43.5	11.2
43	16	50.5	14.3
51	18	57.5	16.9
58	20	65.2	19.8

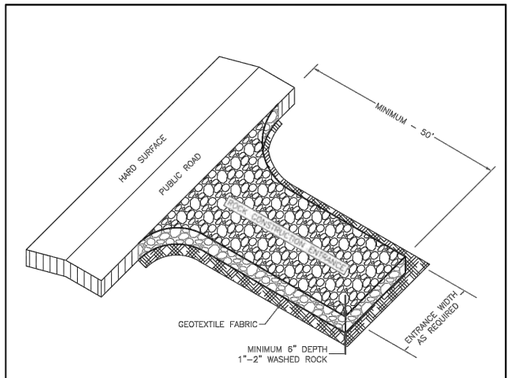
APPROVED: 9 – 2016	City of RAMSEY	STANDARD DETAILS: RIP–RAP
		CITY PLATE No. ERO–3



NO SCALE

NOTE:
STAKE INTO GROUND WITH WOOD STAKES DRIVING STAKE 6" INTO GROUND AND PROTRUDING 2" ABOVE LOG
WOOD STAKES ARE A MINIMUM 0.5" X 2" X 16" AND PLACED EVERY 1' UNLESS PRECLUDED BY A ROCK
WHEN MORE THAN 1 BIOROLL/COMPOST LOG IS NEEDED, OVERLAP ENDS A MINIMUM OF 6" AND STAKE
WOOD STAKES ARE DRIVEN THROUGH BACK HALF OF BIOROLL OR COMPOST LOG AT 45° ANGLE WITH TOP OF STAKE POINTING UPHILL

APPROVED: 3 – 2016	City of RAMSEY	STANDARD DETAILS: BIO ROLL (COMPOST LOG)
		CITY PLATE No. ERO–4

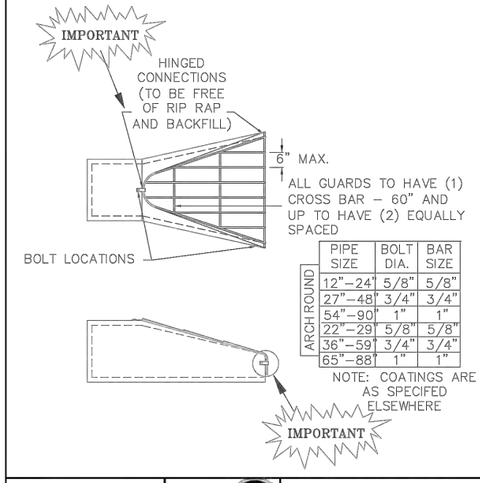


NOTE:
1. MINIMUM CONSTRUCTION ENTRANCE WIDTH EQUAL TO PROPOSED ROADWAY WIDTH.
2. WIDTH OF RADIUS AS REQUIRED TO ENSURE VEHICLES DO NOT TRACK ONTO PUBLIC ROAD.
3. MAINTAINENCE AS REQUIRED TO PREVENT TRACKING ONTO PUBLIC ROADS. THIS MAY REQUIRE TOP DRESSING WITH ADDITIONAL ROCK OR REMOVAL AND REINSTALLATION OF THE ENTRANCE AS NEEDED.

NOT TO SCALE

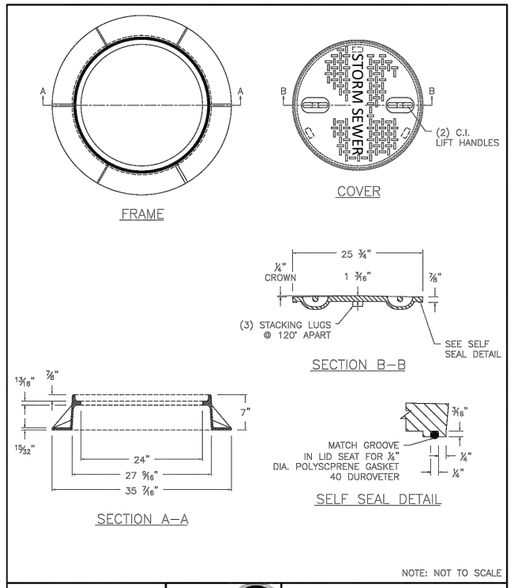
APPROVED: 1 – 2016	City of RAMSEY	STANDARD DETAILS: ROCK CONSTRUCTION ENTRANCE
		CITY PLATE No. ERO–5

NOTE:
GUARDS MUST BE INCORPORATED ON ALL INSTALLATIONS EXCEPT WHERE SPECIFICALLY ALLOWED OTHERWISE BY THE CITY ENGINEER.



ARCH ROUND	PIPE SIZE	BOLT DIA.	BAR SIZE
	12"–24"	5/8"	5/8"
	27"–48"	3/4"	3/4"
	54"–90"	1"	1"
	22"–29"	5/8"	5/8"
	36"–59"	3/4"	3/4"
	65"–88"	1"	1"

APPROVED: 2 – 2006	City of RAMSEY	STANDARD DETAILS: TRASH GUARD
		CITY PLATE No. STO–8



NOTE: NOT TO SCALE

APPROVED: 11 – 2015	City of RAMSEY	STANDARD DETAILS: WATER TIGHT CASTING
		CITY PLATE No. SEW–2

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CLIENT PROJ. NO.	CP 25-01

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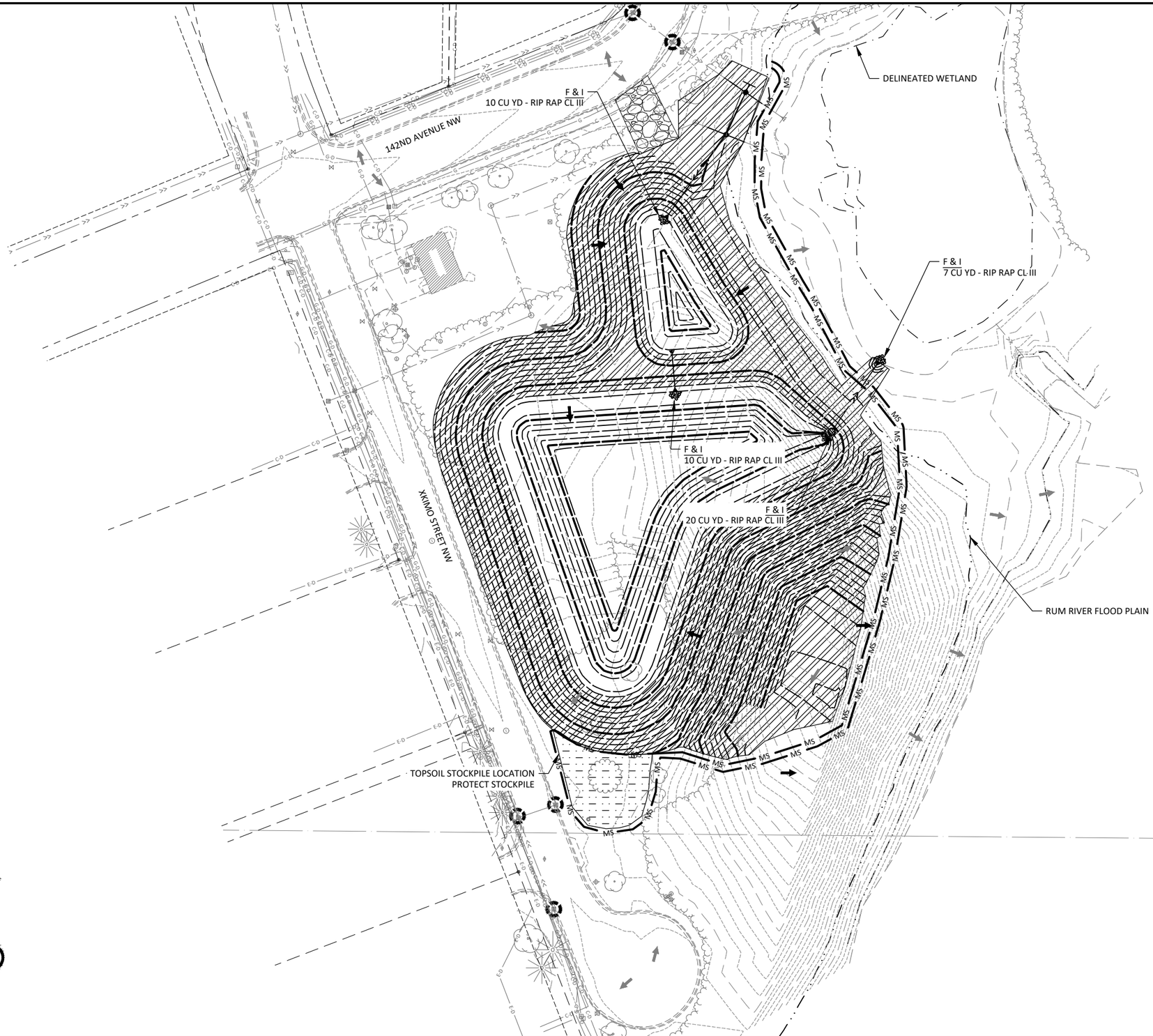
CITY OF RAMSEY, MINNESOTA
RIVERS BEND REGIONAL STORMWATER IMPROVEMENTS
DETAILS



EROSION CONTROL LEGEND

- STORM DRAIN INLET PROTECTION
- MS — SILT FENCE - MACHINE SLICED
- RIP RAP CLASS III
- PROPOSED DRAINAGE FLOW
- EXISTING DRAINAGE FLOW
- ROLLED EROSION PREVENTION CATEGORY 20 AND SEED MIX 35-241
- HYDRAULIC BONDED FIBER MATRIX
- STABILIZED CONSTRICTION EXIT

NOTES:

1. ALL CATCH BASINS AND INLETS, BOTH EXISTING AND PROPOSED, SHALL HAVE INLET PROTECTION INSTALLED PRIOR TO DISTURBANCE AND REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETED.
2. CONSTRUCT STABILIZED CONSTRUCTION EXITS AS NECESSARY THROUGHOUT THE PROJECT.
3. QUANTITY FOR INLET PROTECTION IS BASED ON INLET PROTECTION NEEDED FOR EACH STRUCTURE DURING THE COURSE OF THE PROJECT.
4. ONCE STARTED, STORM SEWER AND GRADING ACTIVITIES SHALL BE EXECUTED DILIGENTLY AND CONTINUOUSLY UNTIL COMPLETE.
5. PLACE 4" OF TOPSOIL IN OFF STREET GREEN SPACE.
6. THE CONTRACTOR SHALL USE ONSITE TOPSOIL STOCKPILE FOR TOPSOIL INSTALLATION. NO TOPSOIL SHALL BE IMPORTED WITHOUT APPROVAL FROM THE ENGINEER.
7. STABILIZE TOPSOIL STOCKPILE WITH HYDRAULIC BONDED FIBER MATRIX AT THE DIRECTION OF THE ENGINEER IN THE FIELD.

0 40 80
SCALE FEET

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.

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LIC. NO. 23211 DATE 8/20/2024

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City of RAMSEY

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CHECKED	KPK
CLIENT PROJ. NO.	CP 25-01

NO.	ISSUED FOR	DATE

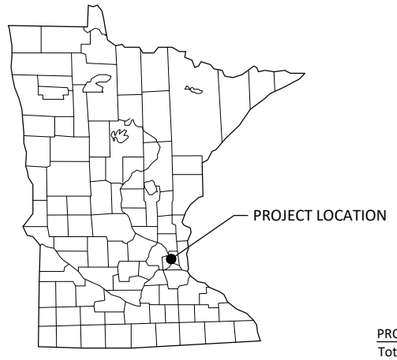
CITY OF RAMSEY, MINNESOTA
RIVERS BEND REGIONAL STORMWATER IMPROVEMENTS
EROSION CONTROL & TURF ESTABLISHMENT

SHEET 7 OF 12

STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

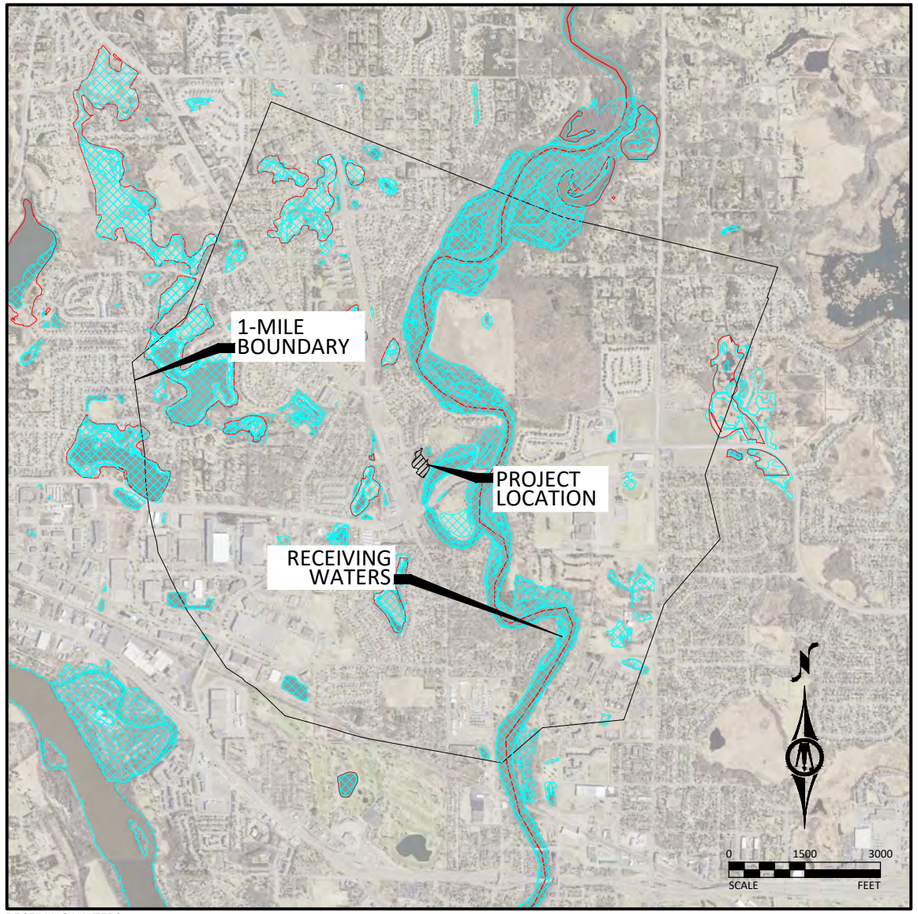
Rivers Bend Pond -2024

CITY OF Ramsey
Anoka COUNTY, MINNESOTA



LEGEND

- PROJECT LOCATION
- 1-MILE BOUNDARY
- IMPAIRED, SPECIAL OR PROTECTED WATERS
- NATIONAL WETLANDS INVENTORY
- RECEIVING WATERS



RESPONSIBLE PARTIES:
The Contractor and Owner will be joint applicants under the MPCA's General Stormwater Permit for Construction Activity as required by the National Pollutant Discharge Elimination System (NPDES) Phase II program.

The Contractor shall provide one or more trained Construction SWPPP Manager(s) knowledgeable and experienced in the application of erosion prevention and sediment control BMPs that will oversee the implementation of the SWPPP, and the installation, inspection and maintenance of the erosion prevention and sediment control BMPs.

A Construction SWPPP Manager must be available for an on-site inspection within 72 hours upon request by the MPCA.

	COMPANY	CONTACT PERSON	PHONE
OWNER:	City of Ramsey	Bruce Westby, PE	763-433-9825
SWPPP DESIGNER:	Bolton & Menk, Inc.	Timothy Haugo	763-433-2851
CONTRACTOR:	TBD	TBD	TBD
CONSTRUCTION SWPPP MANAGER:	TBD	TBD	TBD
PARTY RESPONSIBLE FOR LONG TERM O&M:	City of Ramsey	Bruce Westby, PE	763-433-9825

The SWPPP Designer, Construction SWPPP Manager, and BMP Installer must have appropriate training. Documentation showing training commensurate with the job duties and responsibilities is required to be included in the SWPPP prior to any work beginning on the site. Training documentation for the SWPPP Designer is included on the Narrative sheet. The Contractor shall attach training documentation to this SWPPP for the Construction SWPPP Manager and BMP Installer prior to the start of construction. This information shall be kept up to date until the project NOT is filed.

ADDITIONAL COMPENSATION
Payment for all work associated with Erosion and Sediment Control shall be as described in the Project Manual. Unless otherwise authorized by the Owner no additional payment shall be made for any work required to administer and maintain the site erosion and sediment control in compliance with the Minnesota Pollution Control Agency (MPCA) - General Stormwater Permit for Construction Activity (MN R100001) including but not limited to inspection, maintenance, and removal of BMPs or addition of BMPs to accommodate Contractor phasing.

DOCUMENT RETENTION
Permittees must make the SWPPP, including all inspection reports, maintenance records, training records and other information required by this permit, available to federal, state, and local officials within three (3) days upon request for the duration of the permit and for three (3) years following the NOT.

GENERAL STORMWATER DISCHARGE REQUIREMENTS
All requirements listed in Section 5.1 of the Permit for the design of the permanent stormwater management system and discharge have been included in the preparation of this SWPPP. These include but are not limited to:

1. The expected amount, frequency, intensity, and duration of precipitation.
2. The nature of stormwater runoff and run-on at the site
3. Peak flow rates and stormwater volumes to minimize erosion at outlets and downstream channel and stream bank erosion.
4. The range of soil particle sizes expected to be present on the site.

Permanent stormwater treatment systems for this project have been designed in accordance with the guidance in the MN Stormwater Manual in place at the time of bidding. Copies of the design information and calculations are part of this SWPPP and will be provided in digital format upon written request to the Engineer.

PROJECT AREAS:

Total Project Size (disturbed area) =	2.8	ACRES
Existing area of impervious surface =	0	ACRES
Post construction area of impervious surface =	0	ACRES
Total new impervious surface area created =	0	ACRES

Planned Construction Start Date:	9/15/2024
Estimated Construction Completion Date:	11/15/2024

PERMANENT STORMWATER MANAGEMENT SYSTEM:
Type of storm water management used if more than 1 acre of new impervious surface is created:

1	Wet Sedimentation Basin
	Infiltration/Filtration
	Regional Pond
	Permanent Stormwater Management Not Required

PROJECT LOCATION:

COUNTY	TOWNSHIP	RANGE	SECTION	LATITUDE	LONGITUDE
ANOKA	T32N	R25W	25	45.22821°	-93.39473°

BMP SUMMARY	QUANTITY	UNIT
STORM DRAIN INLET PROTECTION	5	EACH
ROLLED EROSION PREVENTION CATEGORY 20	8,500	SQ YD
SEEDING MIXTURE 35-241	70	POUND
SILT FENCE MACHINE SLICED	1,800	LIN FT
RIP RAP CLASS III	50	CU YD
STABILIZED CONSTRUCTION EXIT	1	EACH

DESCRIPTION OF CONSTRUCTION ACTIVITIES AND STORMWATER MANAGEMENT:
Construction activities include: Site grading, sanitary sewer and water main extensions, temporary erosion and sediment control, and permanent stabilization.

Storm water currently from the urbanized and undeveloped area is currently being routed to catch basins located along 142nd Ave NW and Xkimo St. NW and flow through storm drains into an existing pond located within Rivers Band park. The existing pond is located south of 142nd Ave NW and Waco st. NW intersection. The outlet of the pond is Rum River. The current pond size is in adequate to treat the current impervious area.

After construction is complete storm water will be managed in a different pond area. The water will be routed through the catch basins located on 142nnd Ave. NW and Xkimo ST. NW and then routed through storm drains to the new biofiltration pond. First entering a wet sedimentation basin with a capacity of 74,000 cubic feet, 5 feet deep, then entering the biofiltration basin. The pond will have a treatment capacity of 148,795 cubic feet.

This project includes the following stormwater management BMPs: Biofiltration and wet sedimentation.

RECEIVING WATERS:
Receiving waters, including surface water, wetlands, Public Waters, and stormwater ponds, within 1-mile of the project boundary are identified on the USGS 7.5 min quad map above. Receiving waters that are impaired, the impairment, and WLA are listed as follows. All specific BMPs relative to construction activities listed in the permit for special, prohibited, restricted, or impaired have been incorporated into this plan. All specific BMPs listed in approved TMDLs and those BMPs listed for construction related waste load allocations have also been incorporated.

NAME OF WATER BODY	TYPE (ditch, pond, wetland, lake, etc.)	Special, Prohibited, Restricted Water [1]	Flows to Impaired Water Within 1-Mile [2]	USEPA Approved Construction Related TMDL [3]
Rum River	River	Nutrients	Yes	NaN

[1] Special, prohibited, and restricted waters are listed in Section 23 of the MN Construction Stormwater General Permit (MNR100001).
[2] Identified as impaired under section 303 (d) of the federal Clean Water Act for phosphorus, turbidity, TSS, dissolved oxygen, and/or aquatic biota.
[3] Construction Related TMDLs include those related to: phosphorus, turbidity, TSS, dissolved oxygen, and/or aquatic biota.

IMPLEMENTATION SCHEDULE AND PHASING: The Contractor is required to provide an updated schedule and site management plan meeting the minimum requirements of Section 1717 of the Minnesota Standard Specifications for Construction.

1) Submit SWPPP Updates to Engineer. Submittal shall include any requested changes to the SWPPP, including but not limited to: Trained Personnel, Locations for Stockpiles, Concrete Washout, Sanitation Facilities, Types and Locations of Erosion & Sediment Control. Failure to submit updates shall be considered acceptance of the SWPPP as designed with no changes.
2) Install perimeter sediment control, inlet protection, and construction exit.
3) Complete Site Grading.
4) Add additional temporary BMPs as necessary during construction based on inspection reports.
5) Ensure final stabilization measures are complete.
6) Provide digital copy of all Field SWPPP Documentation including Inspection Reports and SWPPP Revisions to the Owner.
7) Submit Notice of Termination (NOT) to MPCA. NOTE: The NOT must be submitted to MPCA before Final Stabilization is considered complete.

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.
KEVIN P. KIELB
LIC. NO. 23211 DATE 8/20/2024

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ZFL			
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CLIENT PROJ. NO.			
CP 25-01			

CITY OF RAMSEY, MINNESOTA
RIVERS BEND REGIONAL STORMWATER IMPROVEMENTS
STORM WATER POLLUTION PREVENTION PLAN

Information contained in this SWPPP narrative sheet summarizes requirements of the GENERAL PERMIT AUTHORIZATION TO DISCHARGE STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITY UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM/STATE DISPOSAL SYSTEM PROGRAM - Permit No: MN RI0000I (Permit) as they apply to this project. All provisions of the Permit including those not specifically cited herein shall apply to this project. The Contractor is responsible to be familiar with and comply with all conditions of the permit. The full text of the Permit is available at: https://www.pca.state.mn.us/sites/default/files/wq-strm2-80a.pdf

SWPPP AMENDMENTS AND SUBMITTALS

Contractor must prepare and submit to the Engineer a SWPPP amendment as necessary to include additional Best Management Practices (BMPs) to correct problems identified or address the following situations.

1. Contact information and training documentation for Construction SWPPP Manager and BMP Installer,
2. There is a change in construction method of phasing, operation, maintenance, weather or seasonal conditions not anticipated during the design of the SWPPP including but not limited to:
   a. Types and/or Locations of BMPs
   b. Material Storage and Spill Response
   c. Fueling Plans
   d. Locations for Stockpiles, Concrete Washout, and Sanitation Facilities and
   e. Project Phasing
3. It is determined that the SWPPP is not achieving objectives of minimizing pollutants in stormwater discharges associated with construction activity, or
4. The SWPPP is not consistent with the terms and conditions of the permit.

The Contractor may implement SWPPP amendments immediately and is not required to wait for Engineer review of the submittal. The responsibility for completeness of SWPPP amendments and compliance with the Permit lies with the Contractor. Review, comment, or lack of comment by the Engineer on a SWPPP amendment shall not absolve the responsibilities of the Contractor in any way.

If a change order is issued for a design change the SWPPP amendment will be prepared by the Engineer and included in the change order.

In addition to SWPPP amendments, the Contractor shall submit to the Engineer Weekly Erosion and Sediment Control Schedule meeting the requirements of MnDOT 1717.

The Contractor shall keep copies of all SWPPP amendments, Weekly Erosion and Sediment Control Schedules, inspection logs, and maintenance logs with the field copy of the SWPPP. A PDF copy of these documents will be provided along with a copy of the final Field Copy of the SWPPP to the Engineer along with the signed Notice of Termination when final stabilization is complete.

EROSION PREVENTION PRACTICES

Stormwater conveyance channels shall be routed around unstabilized areas. Erosion controls and velocity dissipation devices shall be used at outlets within and along the length of any constructed conveyance channel.

The normal wetted perimeter of all ditches or swales, including storm water management pond slopes, that drain waters from the site must be stabilized within 200' of any property edge or discharge point, including storm sewer inlets, within 24 hours of connection.

Temporary or permanent ditches or swales used as sediment containment during construction do not need to be stabilized during temporary period of use and shall be stabilized within 24 hours after no longer used as sediment containment.

Mulch, hydromulch, tackifier, or similar practice shall not be used in any portion of the wetted perimeter of a temporary or permanent drainage ditch or swale section with a continuous slope of greater than 2 percent.

Energy dissipation shall be installed at all temporary or permanent pipe outlets within 24 hours of connection to a surface water or permanent stormwater treatment system.

The Contractor shall phase construction and use construction methods to the extent practical to minimize exposed soils. The project phasing shall be documented in the Weekly Erosion and Sediment Control Schedule.

SEDIMENT CONTROL PRACTICES

Down gradient BMPs including perimeter BMPs must be in place before up gradient land- disturbing activities begin and shall remain in place until final stabilization.

All BMPs that have been adjusted or removed to accommodate short-term activities shall be re-installed or replaced the earlier of the end of the work day or before the next precipitation event even if the activity is not complete.

Inlet BMPs may be removed for specific safety concerns. The BMPs shall be replaced as soon as the safety concern is resolved. The removal shall be documented in the SWPPP as a SWPPP amendment.

Temporary stockpiles must have sediment control BMPs. The Contractor shall prepare and submit to the Engineer a SWPPP amendment showing the location of temporary stockpiles and the BMPs for each stockpile. The SWPPP amendment must meet the minimum requirements of Section 9 of the Permit.

Soil compaction shall be minimized and topsoil shall be preserved, unless infeasible or if construction activities dictate soil compaction or topsoil stripping.

The use of polymers, flocculants, or other sedimentation treatment chemicals are not proposed as part of this SWPPP as designed by the Engineer. If methods or phasing of construction require the use of any of these chemicals, the Contractor shall prepare and submit to the Engineer a SWPPP amendment that meets the minimum requirements of Section 9 of the Permit.

TEMPORARY SEDIMENTATION BASINS

A temporary sedimentation basin has not been included in this SWPPP as designed by the Engineer. If a basin is later determined to be desirable or necessary the Contractor shall prepare and submit to the Engineer a SWPPP amendment. Temporary sedimentation basins shall meet or exceed the minimum requirements of Section 14 of the Permit and shall include a basin draining plan meeting or exceeding the minimum requirements of Section 10 of the Permit. Where the site discharges to Special and/or Impaired Waters the SWPPP amendment shall also meet or exceed the minimum requirements of Section 23 of the permit.

DEWATERING

A dewatering plan has not been included in this SWPPP as designed by the Engineer. If dewatering is required for this project, the Contractor shall prepare and submit to the Engineer a SWPPP amendment. All dewatering shall meet or exceed the minimum requirements of Section 10 of the Permit.

POLLUTION PREVENTION

Products and materials that have the potential to leach pollutants that are stored on the site must be stored in a manner designed to minimize contact with stormwater. Materials that are not a source of potential contamination to stormwater or that are designed for exposure to stormwater are not required to be covered.

Hazardous materials including but not limited to pesticides, fertilizer, petroleum products, curing compounds and toxic waste must be properly stored and protected from stormwater exposure as recommended by the manufacturer in an access restricted area.

Solid waste must be stored, collected and disposed of in compliance with Minnesota Administrative Rules Chapter 7035.

Portable toilets must be 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.

Exterior vehicle or equipment washing on the project site shall be limited to a defined area of the site. No engine degreasing is allowed on site. A sign must be installed adjacent to each washout facility that requires site personnel to utilize the proper facilities for disposal of concrete and other washout wastes.

The Contractor shall prepare and submit a SWPPP amendment detailing the location and BMPs proposed for storage of materials, solid waste, portable toilets, and exterior vehicle or equipment washing on the site. The SWPPP amendment shall include a spill prevention and response plan that is appropriate for the materials proposed to be on the site. The SWPPP amendment shall meet or exceed the minimum requirements of Section 12 of the Permit.

INSPECTION & MAINTENANCE

A trained person shall routinely inspect the entire construction site at the time interval indicated on this sheet of the SWPPP during active construction and within 24-hours after a rainfall event greater than 0.5 inches in 24 hours. Following an inspection that occurs within 24-hours after a rainfall event, the next inspection must be conducted at the time interval indicated in the Receiving Waters Table found on the SITE PLAN AND INFORMATION SHEET of the SWPPP.

All inspections and maintenance conducted during construction must be recorded on the day it is completed and must be retained with the SWPPP. Inspection report forms are available in the Project Specifications. Inspection report forms other than those provided shall be approved by the engineer.

The Contractor may request a change in inspection schedule for the following conditions:

a. Inspections of areas with permanent cover to be reduced to once per month,
b. Inspections of areas that have permanent cover and have had no construction activity for 12 months to be suspended until construction resumes,
c. Inspections of areas where construction is suspended due to frozen ground conditions, inspections to be suspended until the earlier of within 24 hours of runoff occurring, or upon resuming construction.

No change in inspection schedule shall occur until authorized by the Engineer.

Inspections must include:

1. All erosion prevention and sediment control BMPs and Pollution Prevention Management Measures to ensure integrity and effectiveness.
2. Surface waters, including drainage ditches and conveyance systems for evidence of erosion and sediment deposition.
3. Construction site vehicle exit locations, streets and curb and gutter systems within and adjacent to the project for sedimentation from erosion or tracked sediment from vehicles.
4. Infiltration areas to ensure that no sediment from ongoing construction activity is reaching the infiltration area and that equipment is not being driven across the infiltration area.

All non-functioning BMPs and those BMPs where sediment reaches one-half (1/2) of the depth of the BMP, or in the case of sediment basins one-half (1/2) of the storage volume, must be repaired, replaced, or supplemented by the end of the next business day after discovery, or as soon as field conditions allow.

Permittees must repair, replace or supplement all nonfunctional BMPs with functional BMPs by the end of the next business day after discovery, or as soon as field conditions allow.

Any sediment that escapes the site must be removed and the area stabilized within 7 calendar days of discovery unless precluded by legal, regulatory, or physical access in which case the work shall be completed within 7 calendar days of authorization. Paved surfaces such as streets shall have any escaped or tracked sediment removed by the end of the day that it is discovered. Sediment release, other than paved surfaces that can be cleaned up with street sweeping shall be reported immediately upon discovery to the Engineer.

PUBLIC WATER RESTRICTIONS:

For public waters that have been promulgated "work in water restrictions" during fish spawning time frames, all exposed soil areas that are within 200 feet of the water's edge, and drain to these waters must complete stabilization within 24-hours during the time period. MN DNR permits are not valid for work in waters that are designated as infested waters unless accompanied by an Infested Waters Permit or written notification has been obtained from MN DNR stating that such permit is not required. There is no exception for pre-existing permits. If a MN DNR Permit has been issued for the project and the water is later designated as infested, the Contractor shall halt all work covered by the MN DNR Permit until an Infested Waters Permit is obtained or that written notification is obtained stating that such permit is not required.

FINAL STABILIZATION

Final Stabilization is not complete until all the following requirements have been met:

1. Substantial Completion has been reached and no ground disturbing activities are anticipated.
2. Permanent cover has been installed with an established minimum uniform perennial vegetation density of 70 percent of its expected final growth. Vegetation is not required in areas where no vegetation is proposed by this project such as impervious surfaces or the base of a sand filter.
3. Accumulated sediment has been removed from all permanent stormwater treatment systems as necessary to ensure the system is operating as designed.
4. All sediment has been removed from conveyance systems
5. All temporary synthetic erosion prevention and sediment control BMPs have been removed. BMPs designated on the SWPPP to remain to decompose on-site may remain.
6. For residential construction only, permit coverage terminates on individual lots if the structures are finished and temporary erosion prevention and downgradient perimeter control is complete, the residence sells to the homeowner, and the permittee distributes the MPCA's "Homeowner Fact Sheet" to the homeowner.
7. For agricultural land only (e.g., pipelines across cropland), the disturbed land must be returned to its preconstruction agricultural use prior to submitting the NOT.

SITE STABILIZATION COMPLETION:

Stabilization of exposed soils shall begin immediately and shall be completed after the construction activity has temporarily or permanently ceased no later than:	7 calendar days

SITE INSPECTION INTERVAL:

A trained person shall routinely inspect the entire construction site during active construction at an interval of no more than:	7 calendar days

SPECIAL ENVIRONMENTAL CONSIDERATIONS AND PERMITS:

1)	Was an environmental review required for this project or any part of a common plan of development or sale that includes all or any portion of this project?	NO
2)	Does any portion of the site have the potential to affect threatened or endangered species or their critical habitat?	NO
3)	Does any portion of this site discharge to a Calcareous fen.	NO
4)	Will any portion of the site potentially affect properties listed on the National Register of Historic Places or a known or discovered archeological site?	NO
5)	Have any Karst features have been identified in the project vicinity?	NO
6)	Is compliance with temporary or permanent stormwater management design requirements infeasible for this project?	NO
7)	Has the MN DNR promulgated "work in water restrictions" for any Public Water this site disharges to during fish spawning?	NO

TYPE OF PERMIT	PERMITTING AGENCY	PERMIT STATUS AND CONDITIONS
Construction Stormwater NPDES	MPCA	Contractor Obtained
Watershed	LRRWMO	In Progress
Dewatering	MnDNR	Contractor Obtained

SWPPP DESIGNER TRAINING DOCUMENTATION:

UNIVERSITY OF MINNESOTA

Timothy Haugo

Design of Construction SWPPP (May 31 2025)

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CITY OF RAMSEY, MINNESOTA
RIVERS BEND REGIONAL STORMWATER IMPROVEMENTS
STORM WATER POLLUTION PREVENTION NARRATIVE

LEGEND

- PROJECT BOUNDARY
- SOIL TYPE
- STEEP SLOPES (>33.3%)

N

0 50 100
SCALE FEET

SOIL TYPE SUMMARY

Map Unit Symbol	Soil Name	Hyd. Soil Group
Ba	Becker	B
DnA	Dickman	A
NyC	Nymore	A

NHEL - Not Highly Erodible Land
PHEL - Potentially Highly Erodible Land
HEL - Highly Erodible Land

LOCATION OF SWPPP REQUIREMENTS IN PROJECT PLAN

DESCRIPTION	SHEET NO.
SITE MAP	8
DIRECTION OF FLOW	8
FINAL STABILIZATION	8
SOILS	10
DRAINAGE STRUCTURES	11
STORM SEWER PLAN & PROFILE SHEETS	12
EROSION & SEDIMENT CONTROL DETAILS	8
NARRATIVE & NOTES	9

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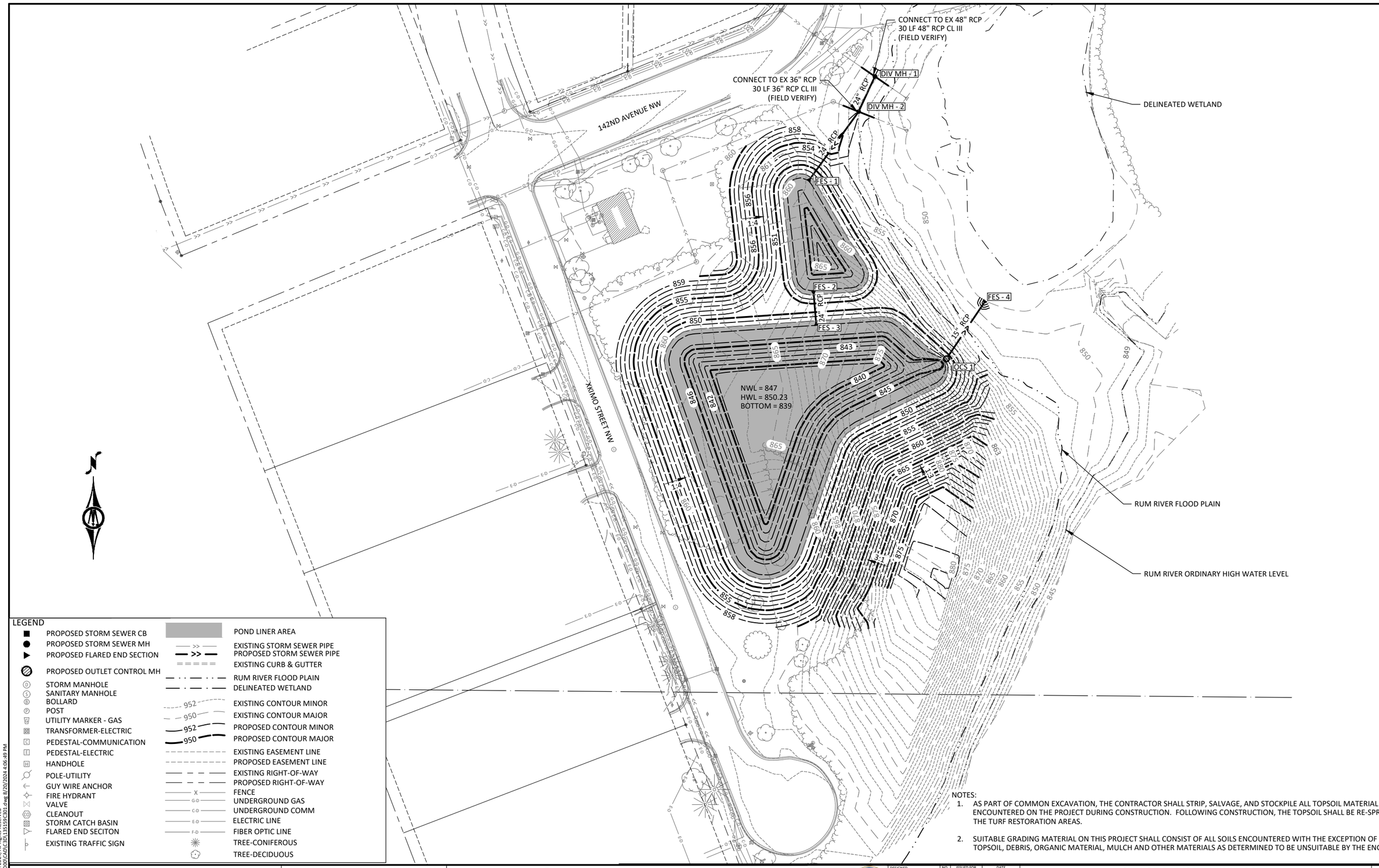
CITY OF RAMSEY, MINNESOTA
RIVERS BEND REGIONAL STORMWATER IMPROVEMENTS
STORM WATER POLLUTION PREVENTION SOILS

SHEET 10 OF 12



LEGEND

PROPOSED STORM SEWER CB	POND LINER AREA
PROPOSED STORM SEWER MH	EXISTING STORM SEWER PIPE
PROPOSED FLARED END SECTION	PROPOSED STORM SEWER PIPE
PROPOSED OUTLET CONTROL MH	EXISTING CURB & GUTTER
STORM MANHOLE	RUM RIVER FLOOD PLAIN
SANITARY MANHOLE	DELINEATED WETLAND
BOLLARD	EXISTING CONTOUR MINOR
POST	EXISTING CONTOUR MAJOR
UTILITY MARKER - GAS	PROPOSED CONTOUR MINOR
TRANSFORMER-ELECTRIC	PROPOSED CONTOUR MAJOR
PEDESTAL-COMMUNICATION	EXISTING EASEMENT LINE
PEDESTAL-ELECTRIC	PROPOSED EASEMENT LINE
HANDHOLE	EXISTING RIGHT-OF-WAY
POLE-UTILITY	PROPOSED RIGHT-OF-WAY
GUY WIRE ANCHOR	FENCE
FIRE HYDRANT	UNDERGROUND GAS
VALVE	UNDERGROUND COMM
CLEANOUT	ELECTRIC LINE
STORM CATCH BASIN	FIBER OPTIC LINE
FLARED END SECITON	TREE-CONIFEROUS
EXISTING TRAFFIC SIGN	TREE-DECIDUOUS

NOTES:

1. AS PART OF COMMON EXCAVATION, THE CONTRACTOR SHALL STRIP, SALVAGE, AND STOCKPILE ALL TOPSOIL MATERIAL ENCOUNTERED ON THE PROJECT DURING CONSTRUCTION. FOLLOWING CONSTRUCTION, THE TOPSOIL SHALL BE RE-SPREAD IN THE TURF RESTORATION AREAS.
2. SUITABLE GRADING MATERIAL ON THIS PROJECT SHALL CONSIST OF ALL SOILS ENCOUNTERED WITH THE EXCEPTION OF TOPSOIL, DEBRIS, ORGANIC MATERIAL, MULCH AND OTHER MATERIALS AS DETERMINED TO BE UNSUITABLE BY THE ENGINEER.

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SCALE FEET

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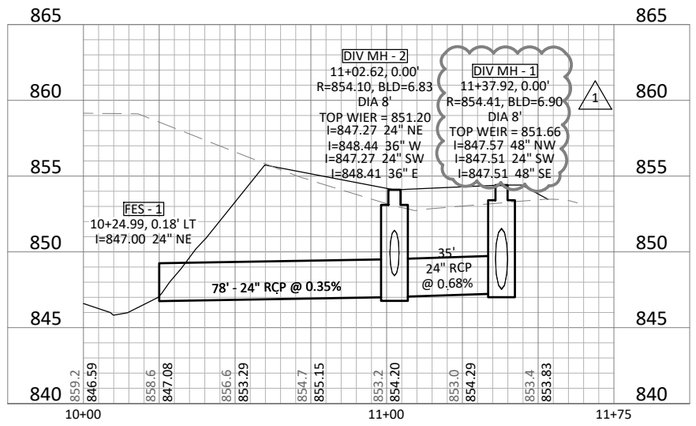
CITY OF RAMSEY, MINNESOTA

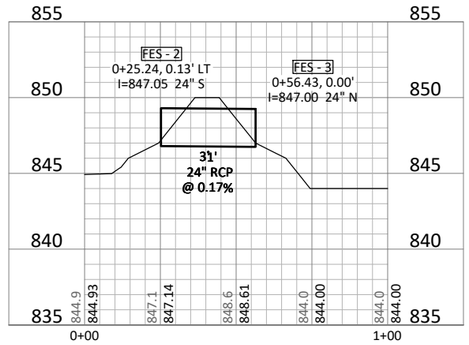
RIVERS BEND REGIONAL STORMWATER IMPROVEMENTS

GRADING PLANS

SHEET 11 OF 12



FES - 1 TO DIV MH - 1



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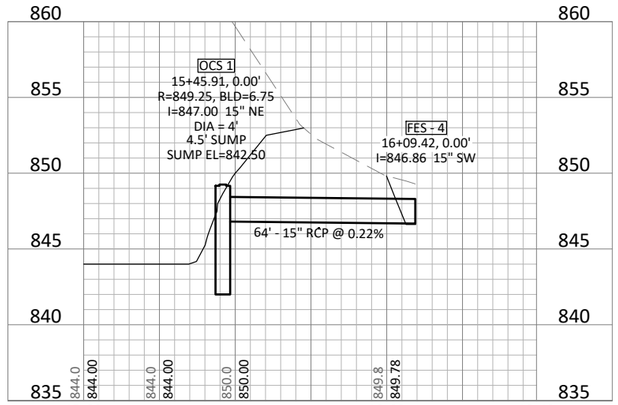

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CITY OF RAMSEY, MINNESOTA

RIVERS BEND REGIONAL STORMWATER IMPROVEMENTS

STORM SEWER PROFILES

SHEET 12 OF 12