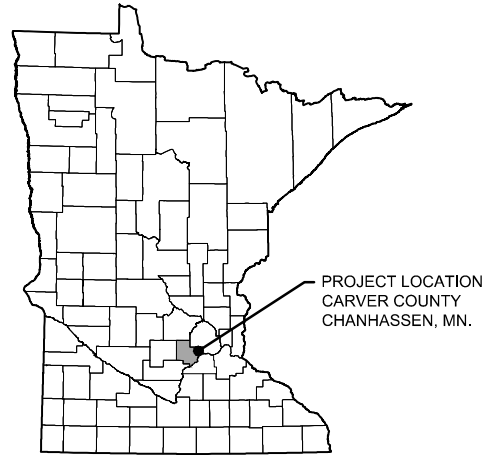


# RICE MARSH LAKE WATER QUALITY TREATMENT

RILEY PURGATORY BLUFF CREEK WATERSHED DISTRICT  
CHANHASSEN, MINNESOTA



MINNESOTA COUNTY MAP



GOPHER STATE ONE CALL:  
CALL BEFORE YOU DIG.  
1-800-252-1166

**CONTACTS:**

**PROJECT OWNER:**  
Riley Purgatory Bluff Creek Watershed District

**WATERSHED DISTRICT PROJECT MANAGER:**  
Terry Jeffery  
Riley Purgatory Bluff Creek Watershed District  
Phone: 952-807-6885  
Email: tjeffery@rpbccd.org

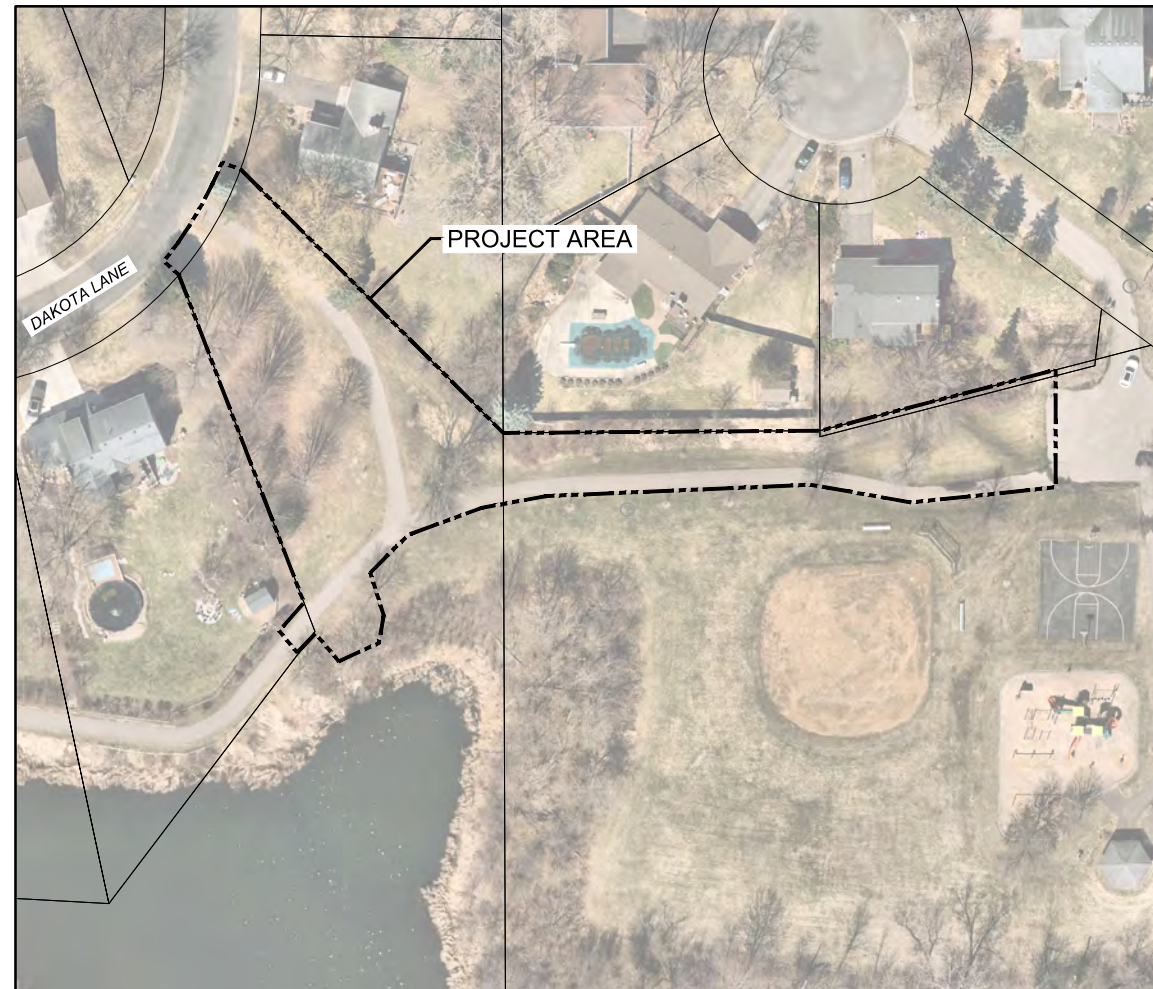
**RPBCWD ENGINEER:**  
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Barr Engineering Co.  
Phone: 952-832-2755  
Email: ssobiech@barr.com

**PROJECT ENGINEER:**  
Heather N. Hlavaty, PE  
Barr Engineering Co.  
Phone: 952-842-3613  
Email: HHlavaty@barr.com

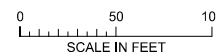
**CITY REPRESENTATIVES:**  
Charles Howley  
Director of Public Works/City Engineer  
Phone: 952-227-1169  
Email: CHowley@ci.chanhassen.mn.us

Matt Unmacht  
Water Resources Coordinator  
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Email: MUnmacht@ci.chanhassen.mn.us

Matt Petite  
Construction Manager  
Phone: 952-227-1166  
Email: MPetite@ci.chanhassen.mn.us



PROJECT AREA



SHEET NO.	DESCRIPTION
G-01	SITE LOCATION AND SHEET INDEX
C-01	EROSION CONTROL AND REMOVAL PLAN
C-02	EROSION CONTROL SECTIONS AND DETAILS
C-03	STORM SEWER AND WATER QUALITY TREATMENT - PLAN AND PROFILES
C-04	GRADING AND PAVEMENT RESTORATION - PLAN, PROFILE AND SECTIONS
C-05	CURB INLET AND SPLASH BLOCK ASSEMBLY - PLAN, SECTION AND DETAIL
C-06	CONSTRUCTION DETAILS AND SLIDE GATE DETAILS
C-07	CITY STANDARD PLATES
C-08	KRAKEN FILTRATION SYSTEM STANDARD DETAIL (PROPRIETARY)
C-09	KRAKEN FILTRATION SYSTEM PARTITION & BAFFLE WALL DETAILS (PROPRIETARY)
L-01	LANDSCAPE PLAN
L-02	LANDSCAPE SECTIONS AND DETAILS

**GENERAL NOTES:**

- TOPOGRAPHIC SURVEY CONDUCTED BY BARR ENGINEERING CO. IN NOVEMBER 2019.
- IMAGERY: COPYRIGHT NEARMAP LIMITED, DATED APRIL 2020.
- HORIZONTAL DATUM AND COORDINATE SYSTEM: NAD83 MINNESOTA STATE PLANES, SOUTH ZONE, US FOOT.
- VERTICAL DATUM: NAVD88.
- UTILITIES SHOWN ARE FOR ILLUSTRATION PURPOSES ONLY BASED ON AVAILABLE DATA AND DO NOT REFLECT A COMPREHENSIVE INVENTORY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE AND PROTECT ALL EXISTING UTILITIES.

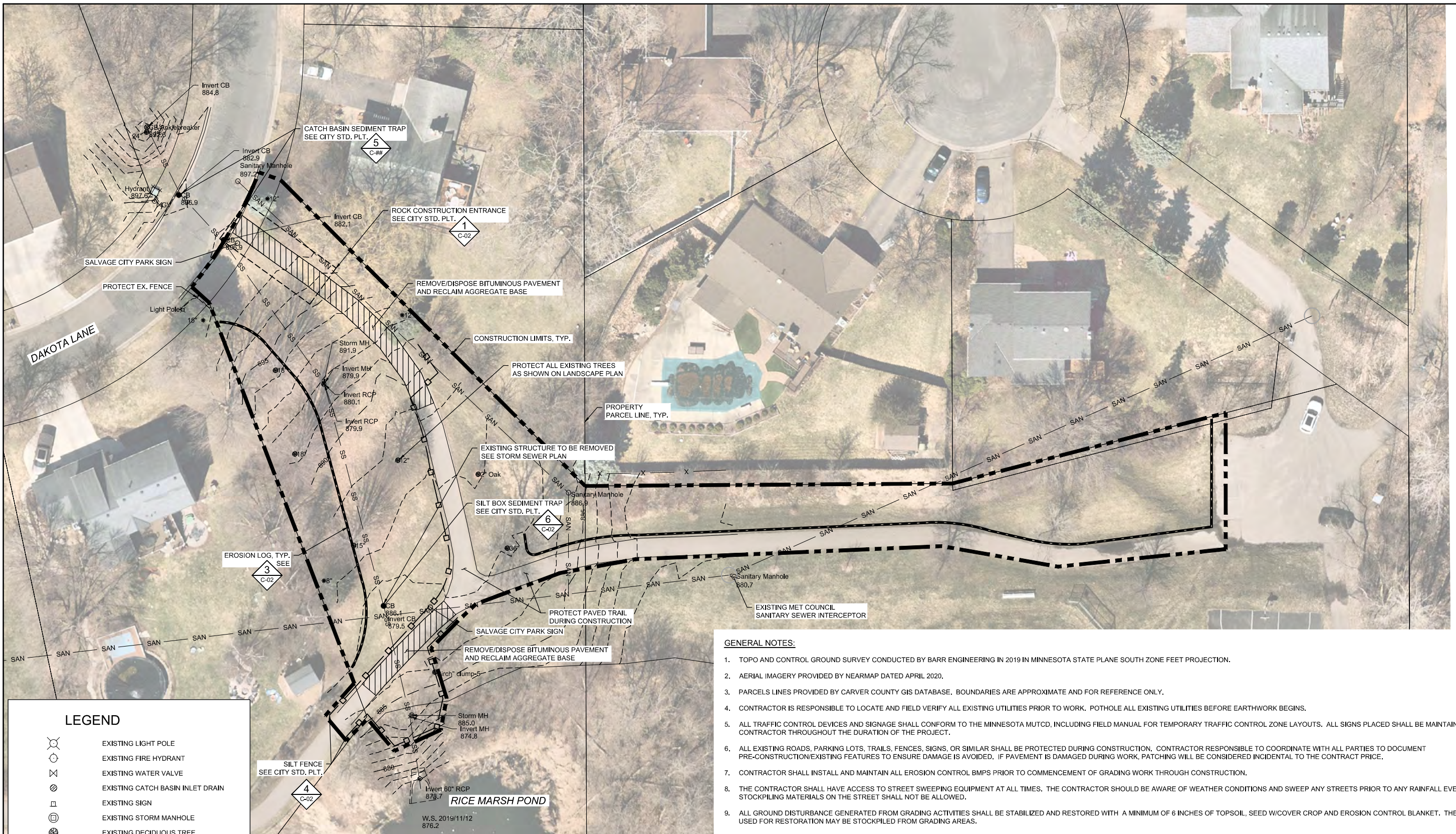
ISSUED FOR BID

CADD USER: Greg Nelson FILE: I:\DESIGN\2327053.14\_T028\_G-01.DWG PLOT SCALE: 1:2 PLOT DATE: 6/29/2021 4:10 PM

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.		CLIENT BID CONSTRUCTION RECORD	4/19/2021 6/28/2021 7/7/2021	Project Office: BARR ENGINEERING CO. 4300 MARKETPOINTE DRIVE Suite 200 MINNEAPOLIS, MN 55435 Corporate Headquarters: Minneapolis, Minnesota Ph: 1-800-632-2277 Fax: (952) 832-2801 Ph: 1-800-632-2277 www.barr.com			Scale Date Drawn Checked Designed Approved	AS SHOWN 4/12/2021 GJN - - -	RILEY PURGATORY BLUFF CREEK WATERSHED DISTRICT	RICE MARSH LAKE WQ TREATMENT CHANHASSEN, MINNESOTA	BARR PROJECT No. 23/27-0053.14
NO.	BY	CHK.	APP.	DATE	REVISION DESCRIPTION	RELEASED TO/FOR	DATE RELEASED	SITE LOCATION AND SHEET INDEX		CLIENT PROJECT No. TO28B	DWG. No. G-01



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### LEGEND

- EXISTING LIGHT POLE
- EXISTING FIRE HYDRANT
- EXISTING WATER VALVE
- EXISTING CATCH BASIN INLET DRAIN
- EXISTING SIGN
- EXISTING STORM MANHOLE
- EXISTING DECIDUOUS TREE
- EXISTING WOOD FENCE
- EXISTING SANITARY SEWER LINE
- EXISTING STORM SEWER LINE
- EXISTING MAJOR CONTOUR INTERVAL
- EXISTING MINOR CONTOUR INTERVAL
- CONSTRUCTION LIMITS

**1 PLAN: GRADING AND DRAINAGE**

SCALE IN FEET

**GENERAL NOTES:**

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**ISSUED FOR BID**

NO.	BY	CHK.	APP.	DATE	REVISION DESCRIPTION

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PRINTED NAME: **HEATHER N. HLAVATY**

SIGNATURE: \_\_\_\_\_

DATE: **JULY 7, 2021** LICENSE # **58700**

CLIENT	BID	CONSTRUCTION RECORD	RELEASED TO/FOR	DATE RELEASED

Project Office:  
**BARR ENGINEERING CO.**  
 4300 MARKETPOINTE DRIVE  
 Suite 200  
 MINNEAPOLIS, MN 55435

Corporate Headquarters:  
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 Ph: 1-800-632-2277  
 Fax: (952) 832-2601  
 Ph: 1-800-632-2277  
 www.barr.com

Scale	AS SHOWN
Date	6/22/2021
Drawn	GGN
Checked	-
Designed	-
Approved	-

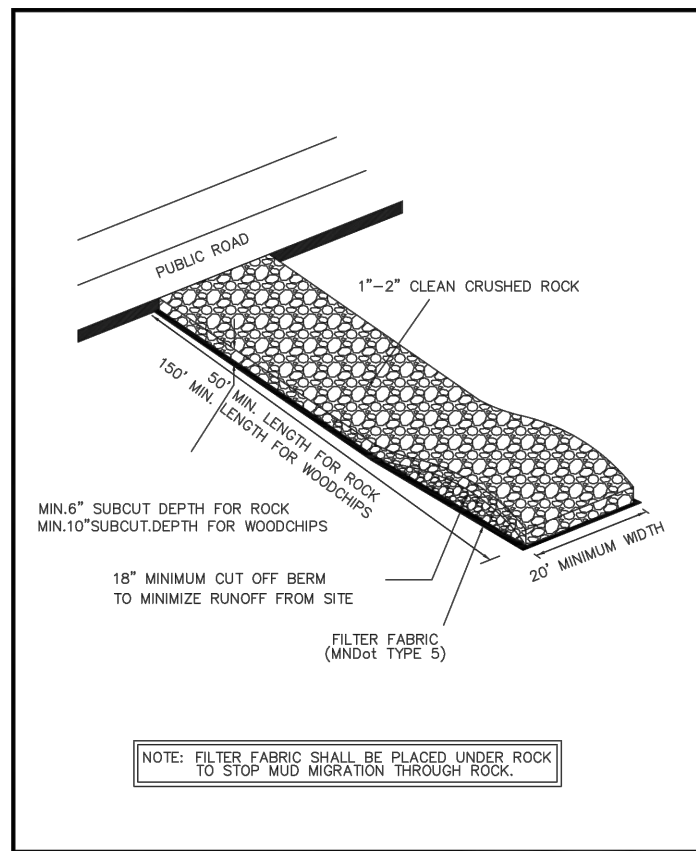
**RILEY PURGATORY BLUFF CREEK**  
 WATERSHED DISTRICT

**RICE MARSH LAKE WQ TREATMENT**  
 CHANHASSEN, MINNESOTA

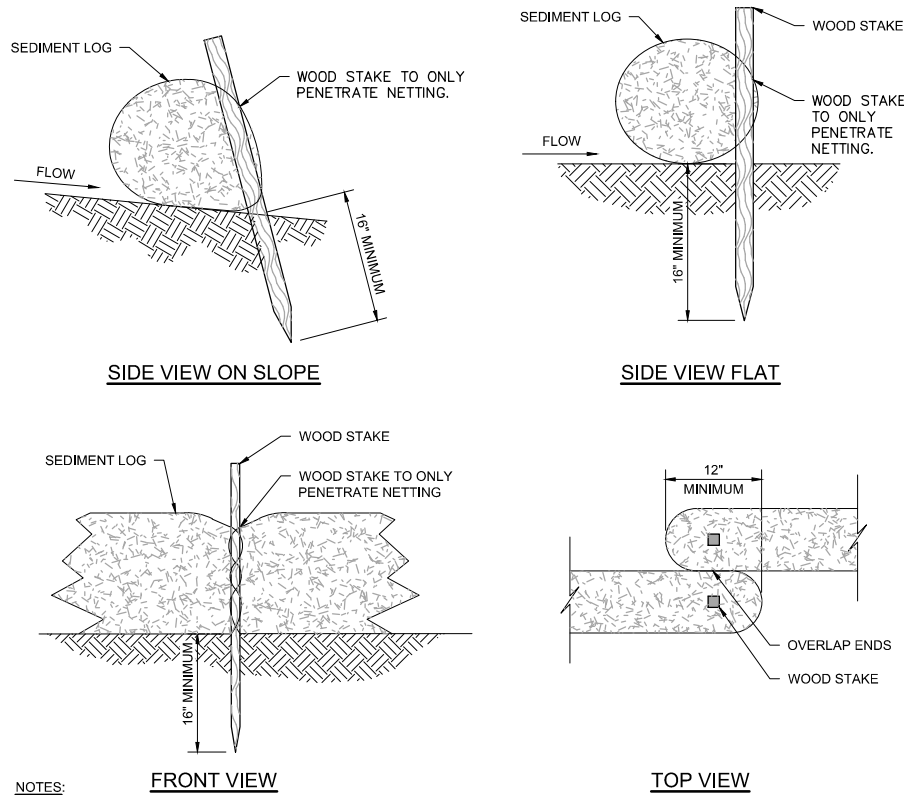
**EROSION CONTROL AND REMOVAL PLAN**

BARR PROJECT No. <b>23/27-0053.14</b>	
CLIENT PROJECT No. <b>TO28B</b>	
DWG. No. <b>C-01</b>	REV. No. <b>0</b>



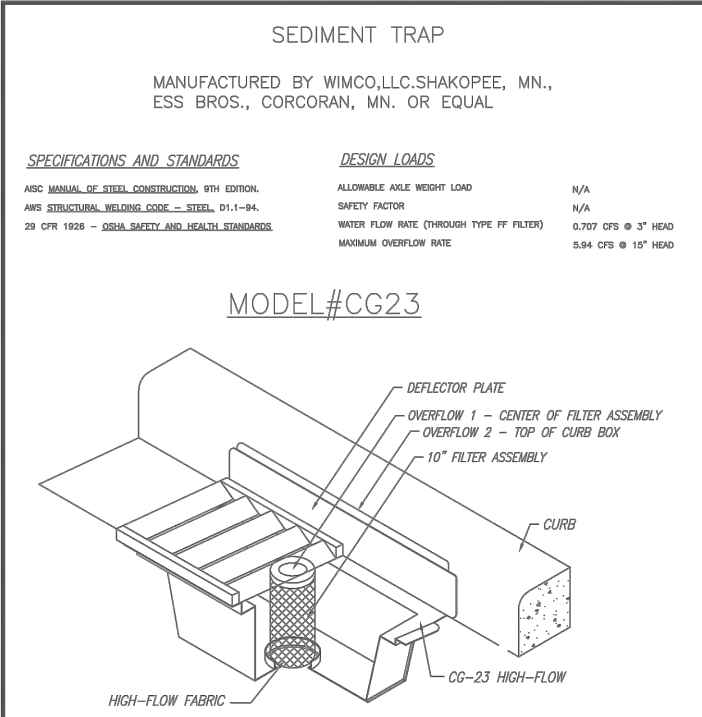


	<b>ROCK CONSTRUCTION ENTRANCE</b>	
	REVISED: 12-19 FILE NAME: G:\ENG\SPCS\5301	ENGINEERING DEPARTMENT PLATE NO.: 5301



- NOTES:**
- INSTALL SEDIMENT LOG ALONG CONTOURS (CONSTANT ELEVATION).
  - NO GAPS SHALL BE PRESENT UNDER SEDIMENT LOG. PREPARE AREA AS NEEDED TO SMOOTH SURFACE OR REMOVE DEBRIS.
  - REMOVE ACCUMULATED SEDIMENT WHEN REACHING 1/3 OF LOG HEIGHT.
  - MAINTAIN SEDIMENT LOG THROUGHOUT THE CONSTRUCTION PERIOD AND REPAIR OR REPLACED AS REQUIRED.

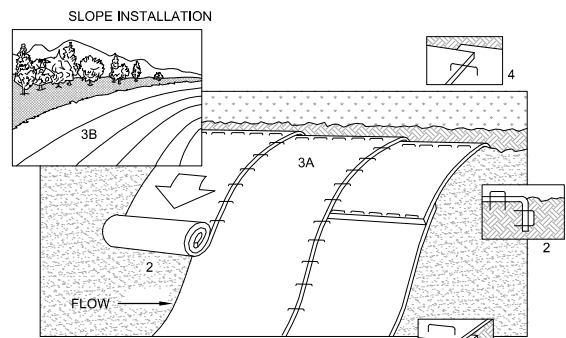
**3** DETAIL: EROSION LOG - STAKING  
NOT TO SCALE



- NOTES:**
- CLEAN FILTER MEDIA AFTER EACH RAIN EVENT AND REPLACE IF FILTER IS CLOGGED WITH SEDIMENT.
  - REMOVE DEBRIS/SEDIMENT FROM RECEPTACLE AFTER EACH RAIN EVENT.

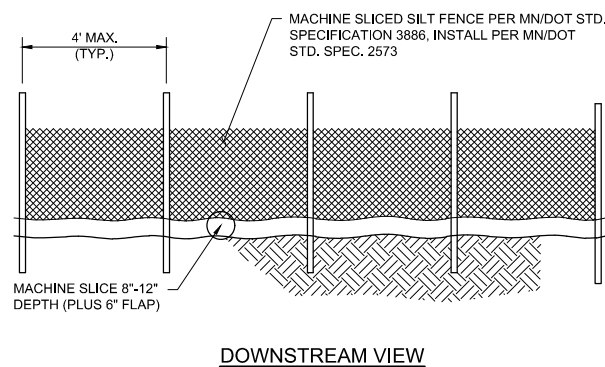
	<b>CATCH BASIN SEDIMENT TRAP</b>	
	REVISED: 1-10 FILE NAME: G:\ENG\SPCS\5302A	ENGINEERING DEPARTMENT PLATE NO.: 5302A

**1** CITY STANDARD PLATE 5301  
NOT TO SCALE



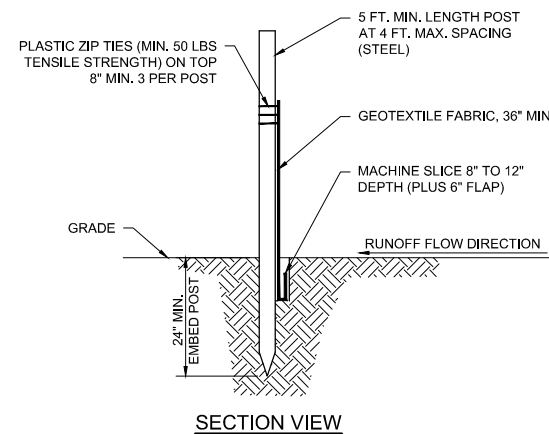
- NOTES:**
- REFER TO MANUFACTURER RECOMMENDATIONS FOR STAPLE PATTERNS FOR SLOPE INSTALLATIONS.
  - PREPARE SOIL BY LOOSENING TOP 1-2 INCHES AND APPLY SEED (AND FERTILIZER WHERE REQUIRED) PRIOR TO INSTALLING BLANKETS. GROUND SHOULD BE SMOOTH AND FREE OF DEBRIS.
  - BEGIN (A) AT THE TOP OF THE SLOPE AND ROLL THE BLANKETS DOWN OR (B) AT ONE END OF THE SLOPE AND ROLL THE BLANKETS HORIZONTALLY ACROSS THE SLOPE.
  - THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 6" OVERLAP, WITH THE UPHILL BLANKET ON TOP.
  - WHEN BLANKETS MUST BE SPLICED DOWN THE SLOPE, PLACE BLANKETS END OVER END (SHINGLE STYLE) WITH APPROXIMATELY 6" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART.
  - BLANKET MATERIALS SHALL BE AS SPECIFIED OR AS APPROVED BY ENGINEER.

**2** DETAIL: EROSION CONTROL BLANKET - INSTALLATION  
NOT TO SCALE

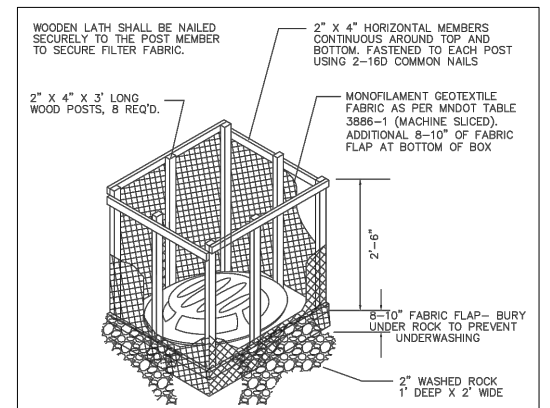


- NOTES:**
- INSTALL SILT FENCE PRIOR TO ANY GRADING WORK IN THE AREA TO BE PROTECTED AND MAINTAIN THROUGHOUT THE CONSTRUCTION PERIOD. REMOVE SILT FENCE AND ANY ACCUMULATED SEDIMENT IN CONJUNCTION WITH THE FINAL GRADING AND SITE STABILIZATION.
  - SILT FENCE MATERIALS AND INSTALLATION SHALL MEET THE REQUIREMENTS OF MN/DOT SPECIFICATIONS 2573 AND 3886.
  - NO HOLES OR GAPS SHALL BE PRESENT IN/UNDER SILT FENCE. PREPARE AREA AS NEEDED TO SMOOTH SURFACE OR REMOVE DEBRIS.
  - REMOVE ACCUMULATED SEDIMENT WHEN BUILD UP REACHES 1/3 OF FENCE HEIGHT. OR INSTALL A SECOND SILT FENCE DOWNSTREAM OF THE ORIGINAL FENCE AT A SUITABLE DISTANCE.
  - WHEN SPLICES ARE NECESSARY MAKE SPLICE AT POST ACCORDING TO SPLICE DETAIL. PLACE THE END POST OF THE SECOND FENCE INSIDE THE END POST OF THE FIRST FENCE. ROTATE BOTH POSTS TOGETHER AT LEAST 180 DEGREES TO CREATE A TIGHT SEAL WITH THE FABRIC MATERIAL. CUT THE FABRIC NEAR THE BOTTOM OF THE POSTS TO ACCOMMODATE THE 6 INCH FLAP, THEN DRIVE BOTH POSTS AND BURY THE FLAP AND COMPACT BACKFILL.

**4** DETAIL: SILT FENCE - MACHINE SLICED  
NOT TO SCALE



**5** CITY STANDARD PLATE 5302A  
NOT TO SCALE



- NOTES:**
- CONTRACTOR SHALL CONSTRUCT SILT BOX TO FIT AROUND THE INLET STRUCTURE WITH 6" MINIMUM CLEARANCE TO EDGES OF STRUCTURE. SILT BOX TO BE PLACED ON AN EVEN SURFACE 6" BELOW STRUCTURE OPENING. TOP OF SILT BOX TO EXTEND 18" MINIMUM ABOVE EXISTING GRADE.

	<b>SILT BOX SEDIMENT TRAP</b>	
	REVISED: 1-10 FILE NAME: G:\ENG\SPCS\5302A	ENGINEERING DEPARTMENT PLATE NO.: 5302A

**6** CITY STANDARD PLATE 5302G  
NOT TO SCALE

CADD USER: Greg Nelson FILE: I:\DESIGN\23270053\14\23270053\_14\_T02B\_C-04\_C-06\_DETAILS.DWG PLOT SCALE: 1:2 PLOT DATE: 6/29/2021 4:12 PM

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PRINTED NAME: <b>HEATHER N. HLAVATY</b>	SIGNATURE: _____
DATE: <b>JULY 7, 2021</b>	LICENSE #: <b>58700</b>

CLIENT	4/19/2021	6/28/2021					
BID			7/7/2021				
CONSTRUCTION RECORD							
RELEASED TO/FOR	A	B	C	0	1	2	3
DATE RELEASED							

Project Office:  
**BARR ENGINEERING CO.**  
 4300 MARKETPOINTE DRIVE  
 Suite 200  
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 www.barr.com

Scale	AS SHOWN
Date	4/12/2021
Drawn	GGN
Checked	-
Designed	-
Approved	-

**RILEY PURGATORY BLUFF CREEK WATERSHED DISTRICT**

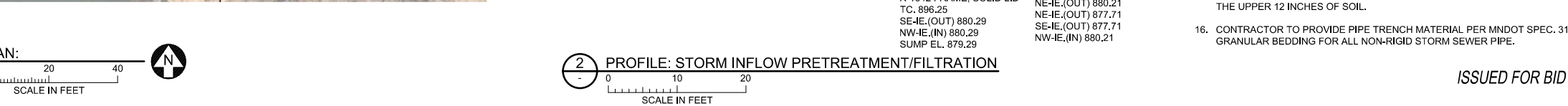
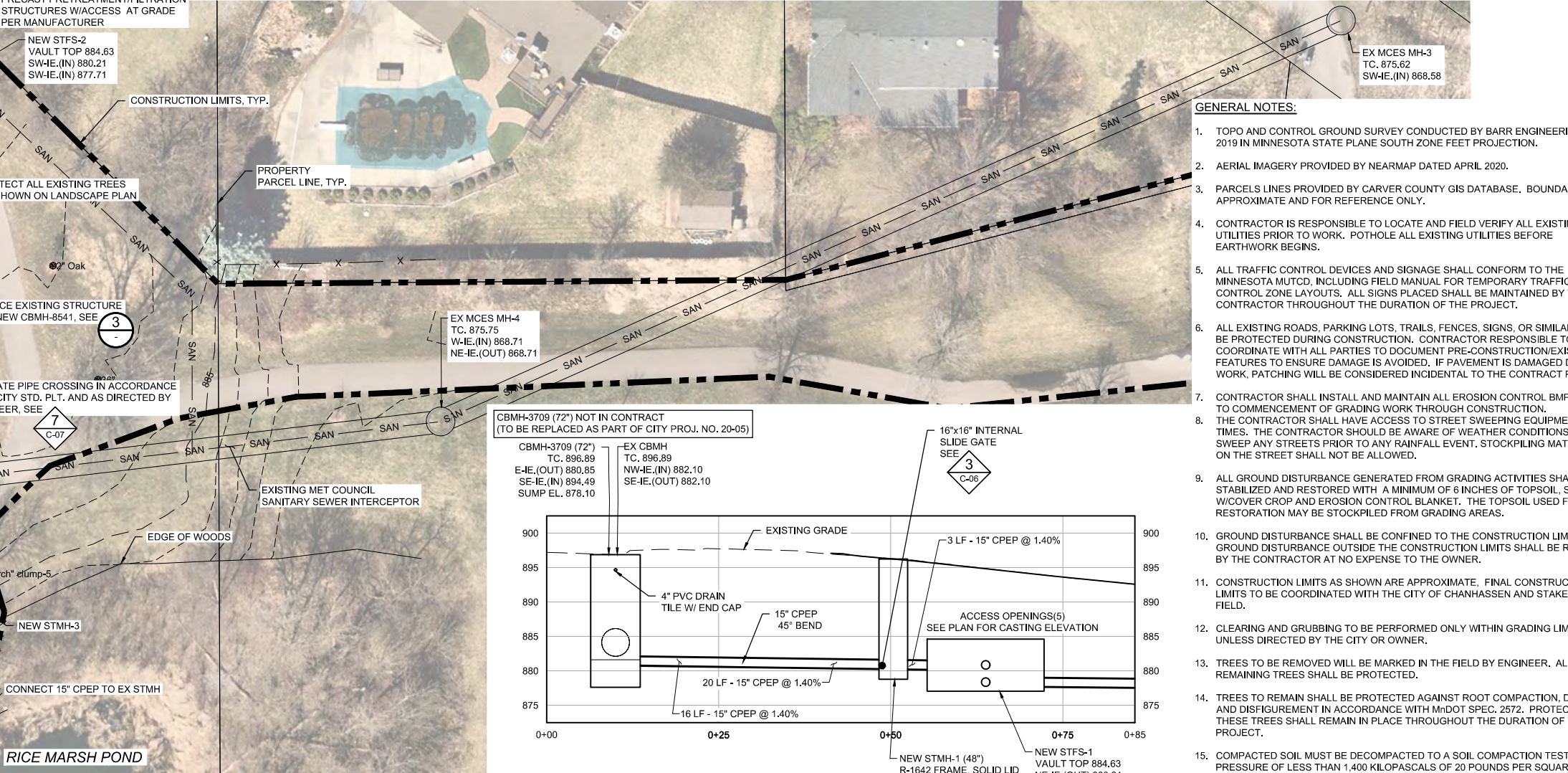
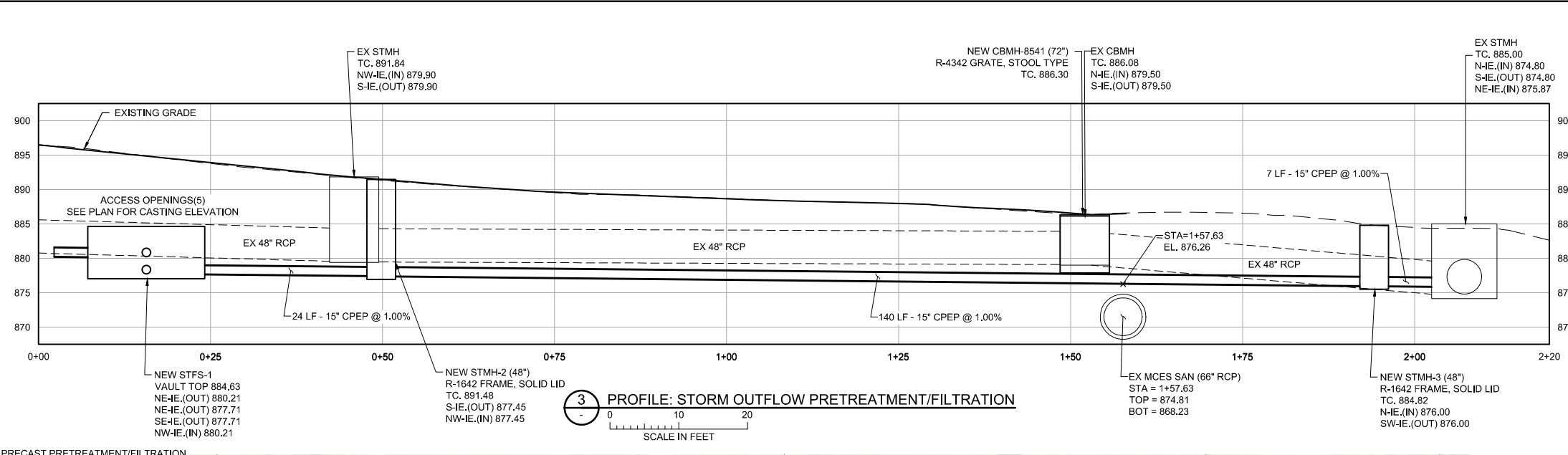
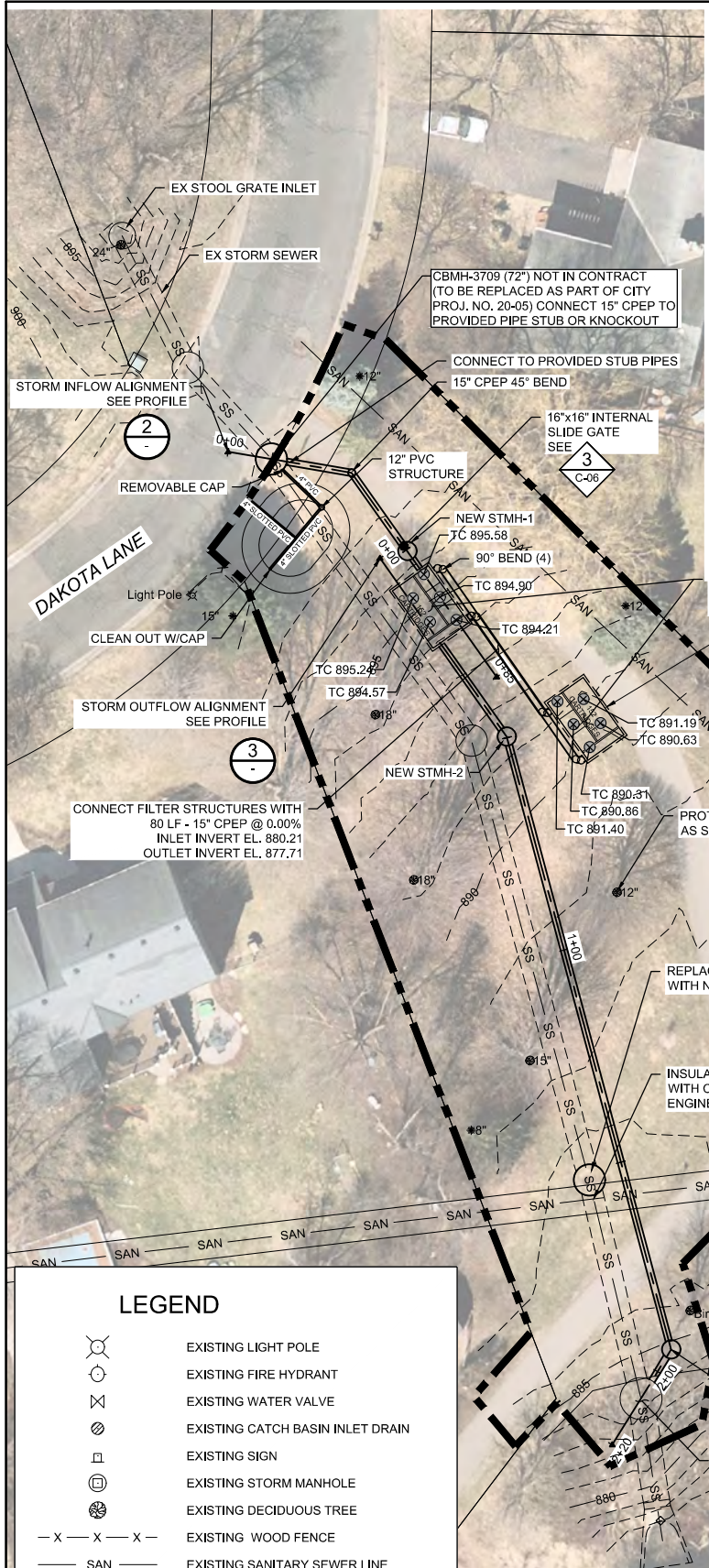
**RICE MARSH LAKE WQ TREATMENT CHANHASSEN, MINNESOTA**

**EROSION CONTROL SECTIONS AND DETAILS**

**ISSUED FOR BID**

BARR PROJECT No.	23/27-0053.14
CLIENT PROJECT No.	TO28B
DWG. No.	C-02
REV. No.	0





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  15. CONTRACTOR TO PROVIDE PIPE TRENCH MATERIAL PER MNDOT SPEC. 3149.2F GRANULAR BEDDING FOR ALL NON-RIGID STORM SEWER PIPE.

ISSUED FOR BID

CADD USER: Greg Nelson FILE: I:\DESIGN\23270053\14\_T028\_C-01.DWG PLOT SCALE: 1:2 PLOT DATE: 6/29/2021 4:12 PM

NO.	BY	CHK.	APP.	DATE	REVISION DESCRIPTION

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PRINTED NAME: HEATHER N. HLAWATY  
 SIGNATURE: \_\_\_\_\_  
 DATE: JULY 7, 2021 LICENSE # 58700

CLIENT	BID	CONSTRUCTION RECORD	RELEASED TO/FOR	DATE RELEASED
BARR ENGINEERING CO.	7/7/2021		A B C 0 1 2 3	

**BARR** Project Office:  
 BARR ENGINEERING CO.  
 4300 MARKETPOINTE DRIVE  
 Suite 200  
 MINNEAPOLIS, MN 55435

Corporate Headquarters:  
 Minneapolis, Minnesota  
 Ph: 1-800-632-2277  
 Fax: (952) 832-2601  
 www.barr.com

Scale	AS SHOWN
Date	2/4/2021
Drawn	GGN
Checked	-
Designed	-
Approved	-

**RILEY PURGATORY BLUFF CREEK**  
 WATERSHED DISTRICT

**RICE MARSH LAKE WQ TREATMENT**  
 CHANHASSEN, MINNESOTA

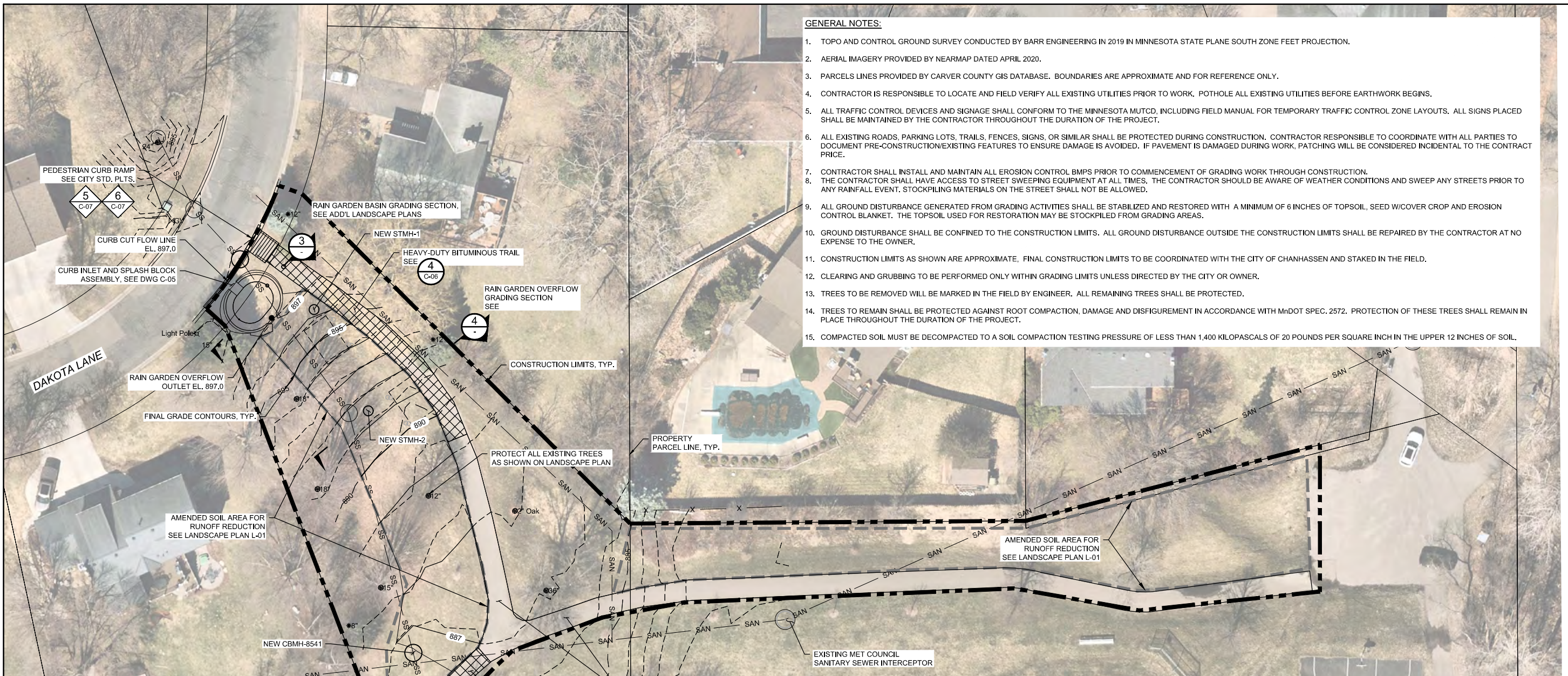
**STORM SEWER AND WATER QUALITY TREATMENT**  
 PLAN AND PROFILES

BARR PROJECT No.	23/27-0053.14
CLIENT PROJECT No.	TO28B
DWG. No.	C-03
REV. No.	0



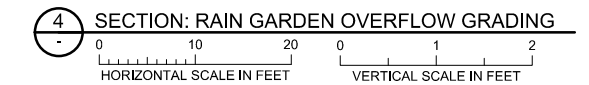
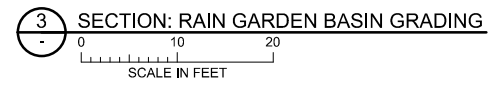
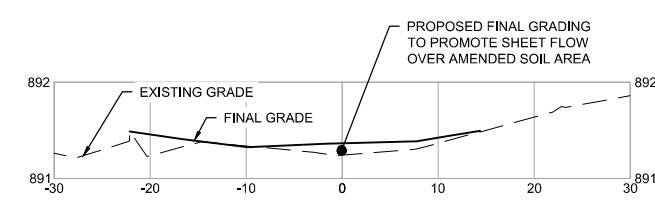
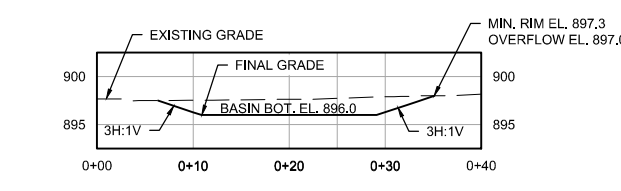
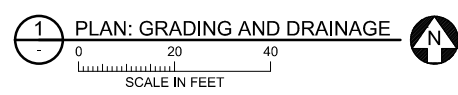
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5. ALL TRAFFIC CONTROL DEVICES AND SIGNAGE SHALL CONFORM TO THE MINNESOTA MUTCD, INCLUDING FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS. ALL SIGNS PLACED SHALL BE MAINTAINED BY THE CONTRACTOR THROUGHOUT THE DURATION OF THE PROJECT.
6. ALL EXISTING ROADS, PARKING LOTS, TRAILS, FENCES, SIGNS, OR SIMILAR SHALL BE PROTECTED DURING CONSTRUCTION. CONTRACTOR RESPONSIBLE TO COORDINATE WITH ALL PARTIES TO DOCUMENT PRE-CONSTRUCTION/EXISTING FEATURES TO ENSURE DAMAGE IS AVOIDED. IF PAVEMENT IS DAMAGED DURING WORK, PATCHING WILL BE CONSIDERED INCIDENTAL TO THE CONTRACT PRICE.
7. CONTRACTOR SHALL INSTALL AND MAINTAIN ALL EROSION CONTROL BMPs PRIOR TO COMMENCEMENT OF GRADING WORK THROUGH CONSTRUCTION.
8. THE CONTRACTOR SHALL HAVE ACCESS TO STREET SWEEPING EQUIPMENT AT ALL TIMES. THE CONTRACTOR SHOULD BE AWARE OF WEATHER CONDITIONS AND SWEEP ANY STREETS PRIOR TO ANY RAINFALL EVENT. STOCKPILING MATERIALS ON THE STREET SHALL NOT BE ALLOWED.
9. ALL GROUND DISTURBANCE GENERATED FROM GRADING ACTIVITIES SHALL BE STABILIZED AND RESTORED WITH A MINIMUM OF 6 INCHES OF TOPSOIL, SEED W/COVER CROP AND EROSION CONTROL BLANKET. THE TOPSOIL USED FOR RESTORATION MAY BE STOCKPILED FROM GRADING AREAS.
10. GROUND DISTURBANCE SHALL BE CONFINED TO THE CONSTRUCTION LIMITS. ALL GROUND DISTURBANCE OUTSIDE THE CONSTRUCTION LIMITS SHALL BE REPAIRED BY THE CONTRACTOR AT NO EXPENSE TO THE OWNER.
11. CONSTRUCTION LIMITS AS SHOWN ARE APPROXIMATE, FINAL CONSTRUCTION LIMITS TO BE COORDINATED WITH THE CITY OF CHANHASSEN AND STAKED IN THE FIELD.
12. CLEARING AND GRUBBING TO BE PERFORMED ONLY WITHIN GRADING LIMITS UNLESS DIRECTED BY THE CITY OR OWNER.
13. TREES TO BE REMOVED WILL BE MARKED IN THE FIELD BY ENGINEER. ALL REMAINING TREES SHALL BE PROTECTED.
14. TREES TO REMAIN SHALL BE PROTECTED AGAINST ROOT COMPACTION, DAMAGE AND DISFIGUREMENT IN ACCORDANCE WITH MNDOT SPEC. 2572. PROTECTION OF THESE TREES SHALL REMAIN IN PLACE THROUGHOUT THE DURATION OF THE PROJECT.
15. COMPACTED SOIL MUST BE DECOMPACTED TO A SOIL COMPACTION TESTING PRESSURE OF LESS THAN 1,400 KILOPASCALS OF 20 POUNDS PER SQUARE INCH IN THE UPPER 12 INCHES OF SOIL.



**LEGEND**

	EXISTING LIGHT POLE
	EXISTING FIRE HYDRANT
	EXISTING WATER VALVE
	EXISTING CATCH BASIN INLET DRAIN
	EXISTING SIGN
	EXISTING STORM MANHOLE
	EXISTING DECIDUOUS TREE
	EXISTING WOOD FENCE
	EXISTING SANITARY SEWER LINE
	EXISTING STORM SEWER LINE
	EXISTING MAJOR CONTOUR INTERVAL
	EXISTING MINOR CONTOUR INTERVAL
	CONSTRUCTION LIMITS
	PROPOSED MAJOR CONTOUR INTERVAL
	PROPOSED MINOR CONTOUR INTERVAL



CADD USER: Greg Nelson FILE: I:\DESIGN\23270053\14\_T028\_C-02.DWG PLOT SCALE: 1:2 PLOT DATE: 6/25/2021 4:13 PM

NO.	BY	CHK.	APP.	DATE	REVISION DESCRIPTION

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.

PRINTED NAME: **HEATHER N. HLAVATY**

SIGNATURE: \_\_\_\_\_

DATE: **JULY 7, 2021** LICENSE # **58700**

CLIENT	1/19/2021	6/28/2021				
BID						
CONSTRUCTION RECORD						
RELEASED TO/FOR	A	B	C	0	1	2
DATE RELEASED						

**BARR** ENGINEERING CO.  
4300 MARKETPOINTE DRIVE  
SUITE 200  
MINNEAPOLIS, MN 55435

Project Office:  
BARR ENGINEERING CO.  
4300 MARKETPOINTE DRIVE  
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MINNEAPOLIS, MN 55435

Corporate Headquarters:  
Minneapolis, Minnesota  
Ph: 1-800-632-2277  
Ph: (952) 832-2601  
www.barr.com

Scale	AS SHOWN
Date	2/4/2021
Drawn	GGN
Checked	-
Designed	-
Approved	-

**RILEY PURGATORY BLUFF CREEK**  
WATERSHED DISTRICT

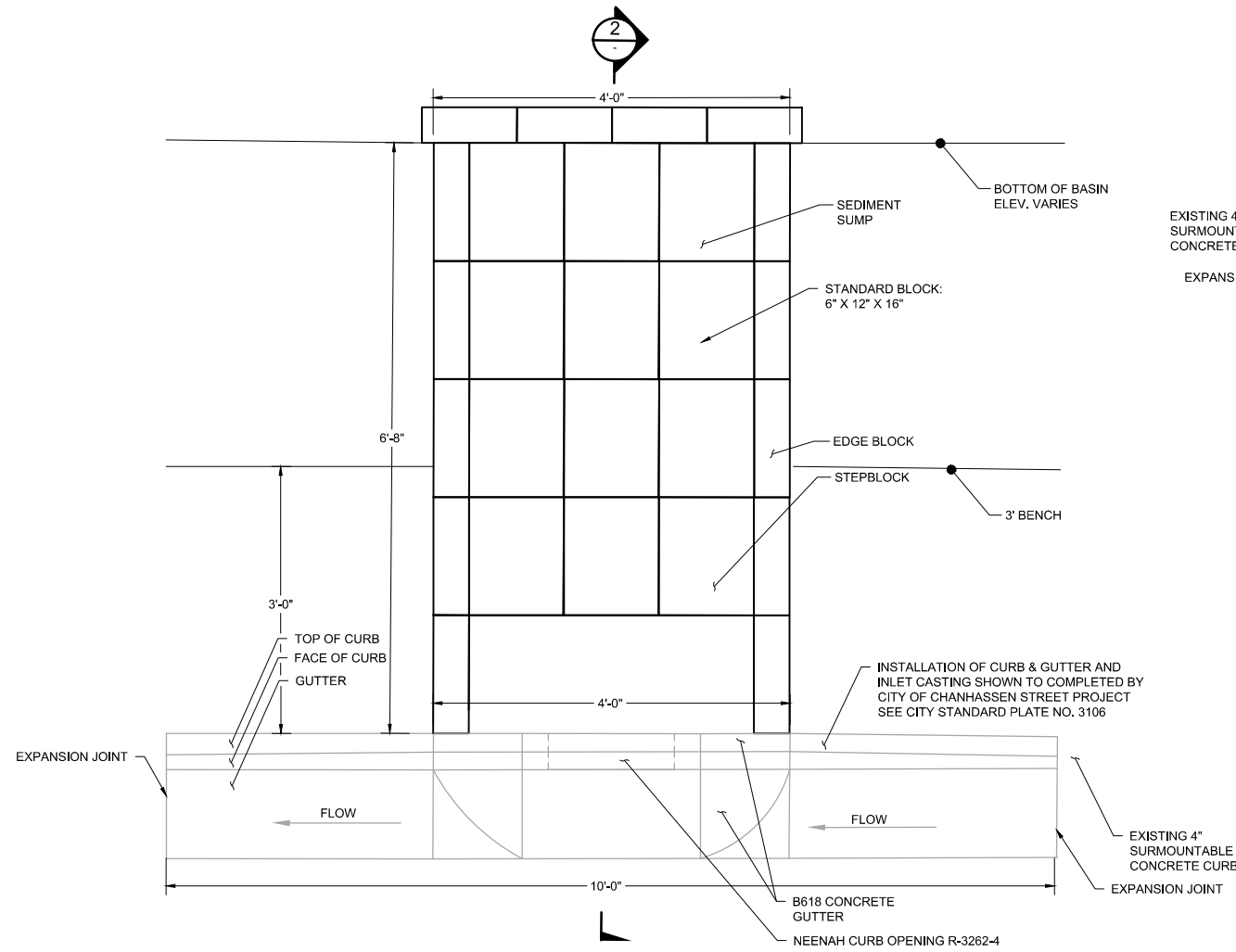
**RICE MARSH LAKE WQ TREATMENT**  
CHANHASSEN, MINNESOTA

**GRADING AND PAVEMENT RESTORATION**  
PLAN, PROFILE AND SECTIONS

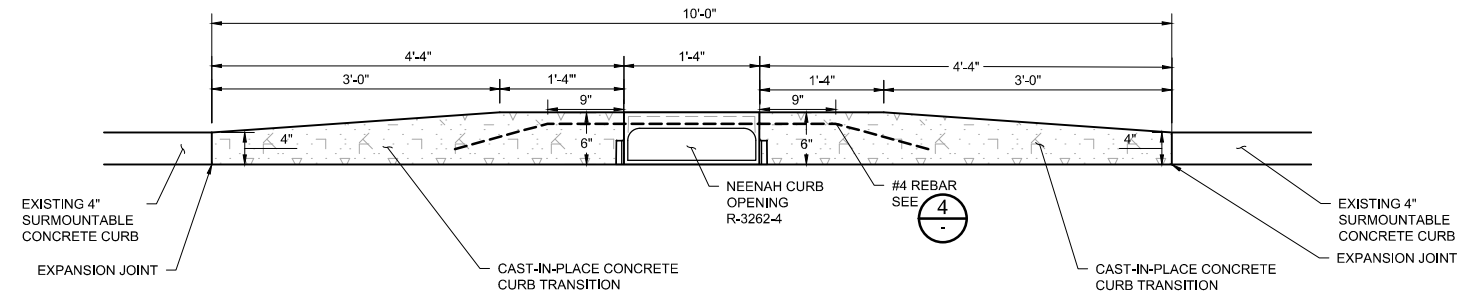
BARR PROJECT No.	23/27-0053.14
CLIENT PROJECT No.	TO28B
DWG. No.	C-04
REV. No.	0

ISSUED FOR BID

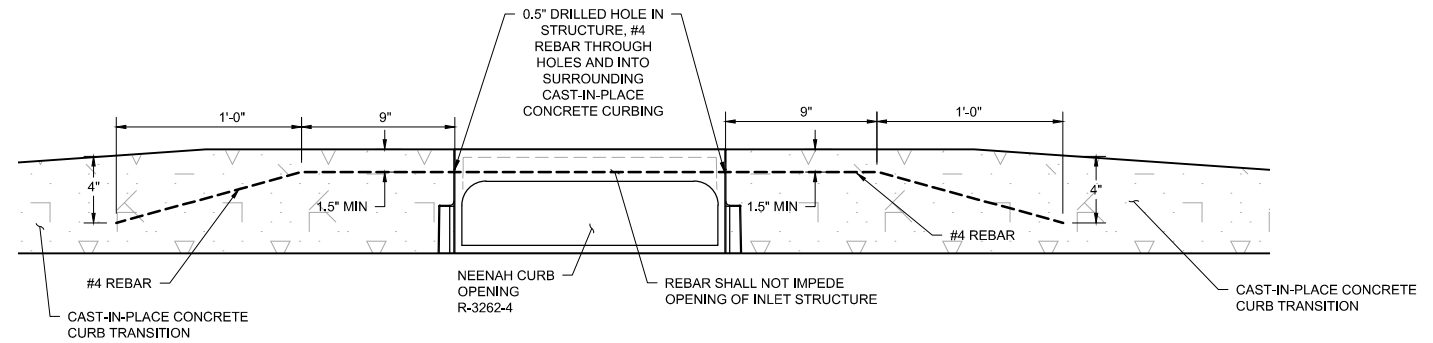




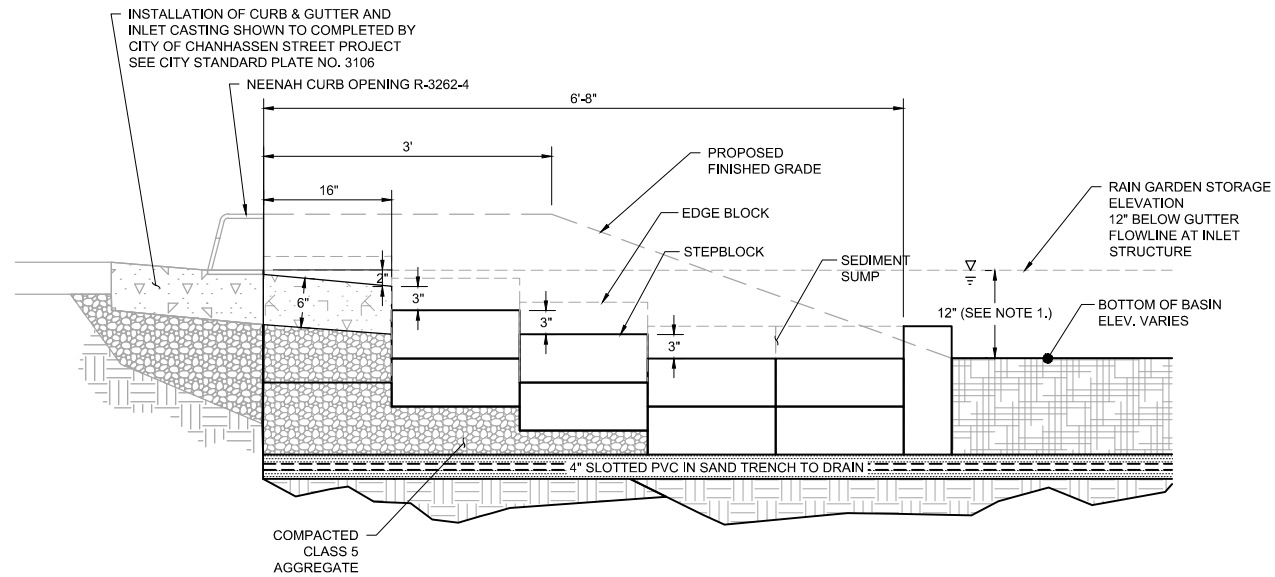
**1 PLAN: CURB OPENING INLET WITH STONE SPLASH BLOCK ASSEMBLY**  
NOT TO SCALE



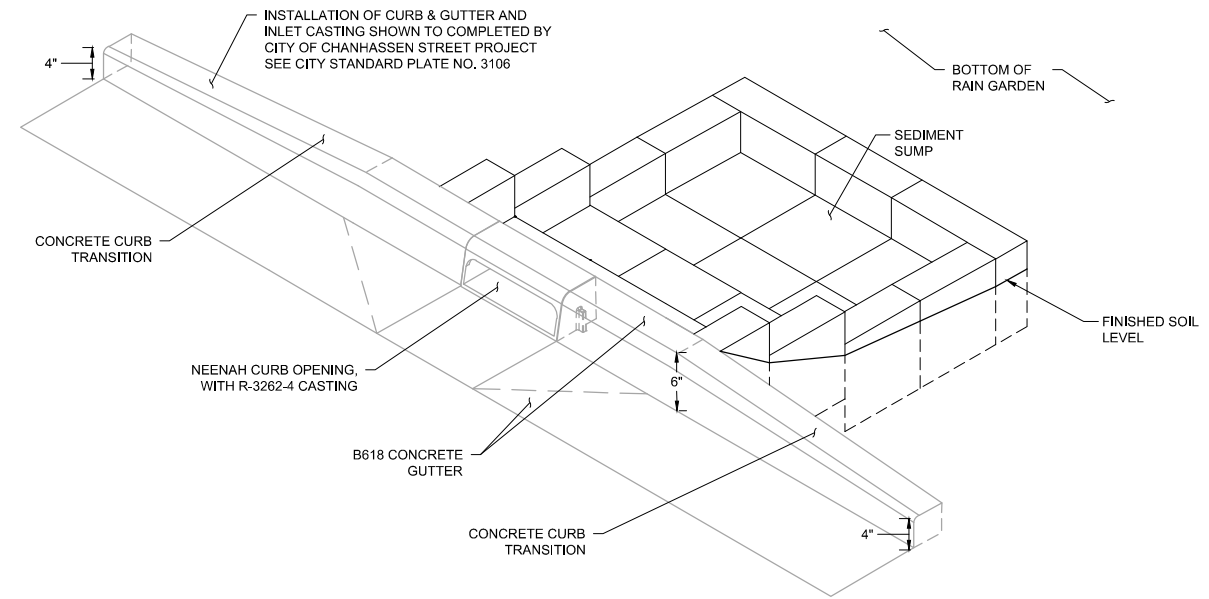
**3 PROFILE: CURB OPENING INLET (N.I.C.)**  
NOT TO SCALE



**4 DETAIL: REINFORCEMENT FOR CURB OPENING INLET (N.I.C.)**  
NOT TO SCALE



**2 SECTION: STONE SPLASH BLOCK ASSEMBLY AT CURB INLET OPENING**  
NOT TO SCALE



**5 ISOMETRIC: STONE SPLASH BLOCK ASSEMBLY AT CURB INLET OPENING**  
NOT TO SCALE

CADD USER: Greg Nelson FILE: I:\DESIGN\23270053\14\_T028\_C-03.DWG PLOT SCALE: 1:2 PLOT DATE: 6/25/2021 4:14 PM

ISSUED FOR BID

				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.				CLIENT BID CONSTRUCTION RECORD				4/19/2021 6/28/2021 7/7/2021				Project Office: BARR ENGINEERING CO. 4300 MARKETPOINTE DRIVE Suite 200 MINNEAPOLIS, MN 55435				Scale Date Drawn Checked Designed Approved				AS SHOWN 2/4/2021 GGN - - -				RICE MARSH LAKE WQ TREATMENT CHANHASSEN, MINNESOTA				BARR PROJECT No. 23/27-0053.14			
				PRINTED NAME: HEATHER N. HLAVATY SIGNATURE: _____ DATE: JULY 7, 2021 LICENSE # 58700				RELEASED TO/FOR				A B C 0 1 2 3 DATE RELEASED				Corporate Headquarters: Minneapolis, Minnesota Ph: 1-800-632-2277 Fax: (952) 832-2801 www.barr.com				MINNEAPOLIS, MN 55435				RILEY PURGATORY BLUFF CREEK WATERSHED DISTRICT				CURB INLET AND SPLASH BLOCK ASSEMBLY PLAN, SECTION AND DETAIL				CLIENT PROJECT No. TO28B			
NO.				BY				CHK.				APP.				DATE				REVISION DESCRIPTION				DWG. No. C-05				REV. No. 0							





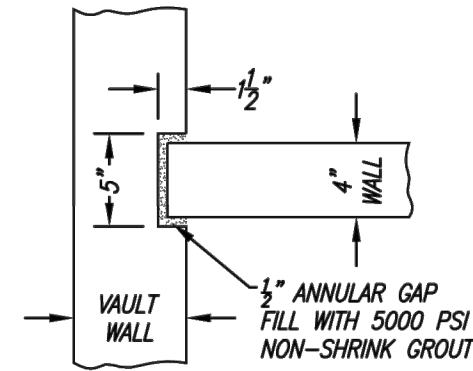




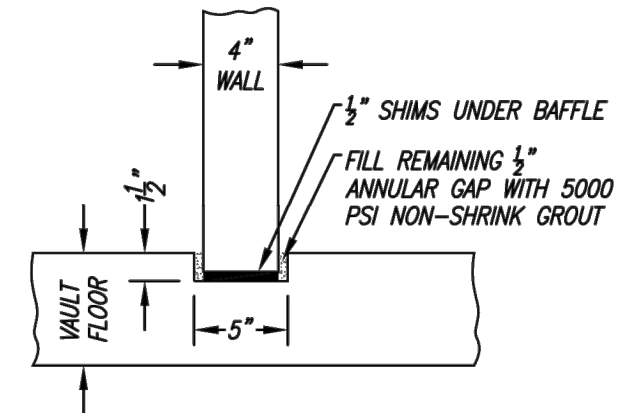


**PRECAST VAULT DESIGN & DRAWING PACKAGE REQUIREMENTS:**

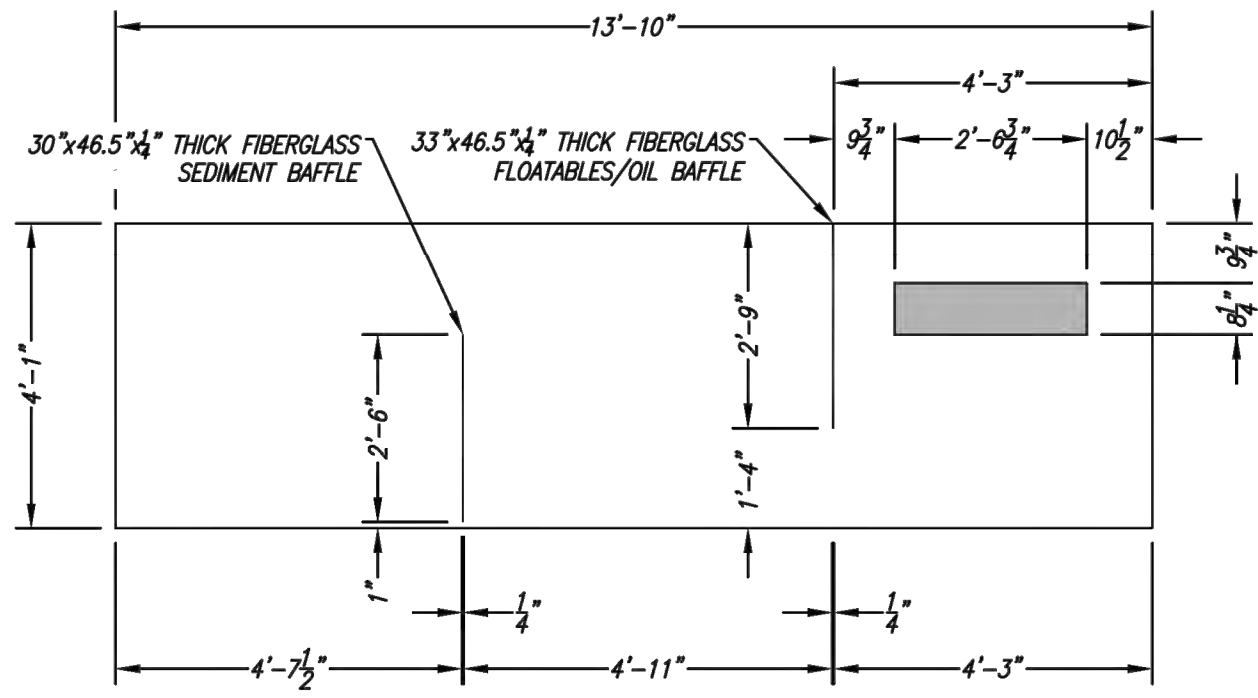
1. REFER TO KRAKEN INSTALLATION MANUAL FOR INSTALLATION OF FIBERGLASS BAFFLE WALLS AND INTERNAL PIECES.
2. CONCRETE PARTITION WALLS TO BE GROUTED AT BOTTOM AND SIDES TO BE WATERTIGHT.
3. CONCRETE PARTITION WALLS LIFTING RECESSES TO BE FILLED AFTER INSTALLATION.
4. UNDERDRAIN MANIFOLD TUBING TO BE INSTALLED PRIOR TO PARTITION WALLS.
5. 'INFLOW', 'OUTFLOW' OPENINGS AND 'BIO CLEAN' LOGO TO BE STENCILED ON EXTERIOR FACES.
6. WEIGHT ESTIMATION OF EACH PRECAST PIECE TO BE INCLUDED.
7. LIFTING POINTS SHALL BE LOCATED ON THE OUTSIDE OF ALL PIECES, DIMENSIONED AND LABELED WITH MANUFACTURER AND MODEL NUMBER.
8. HATCHES, MANHOLES, COVERS AND GRATES SHALL BE LABELED WITH MANUFACTURER AND MODEL NUMBER AND/OR SUBMITTED WITH ADDITIONAL MANUFACTURER'S DETAIL PAGE.
9. BIO CLEAN PROJECT NUMBER TO BE INCLUDED ON DRAWINGS AND DOCUMENTS.
10. STRUCTURAL DESIGN MEETS OR EXCEEDS REQUIREMENTS OF ASTM C857 & C858.
11. ALL CONCRETE PIECES DRY FIT BEFORE SHIPPING.
12. QUALITY CONTROL DRAWINGS AND PHOTOS MUST BE SUBMITTED AND APPROVED BEFORE SHIPPING.
13. JOINT SEALANT INCLUDED IN SHIPMENT: BUTYL RUBBER PER FEDERAL SPEC SS-S-210A.



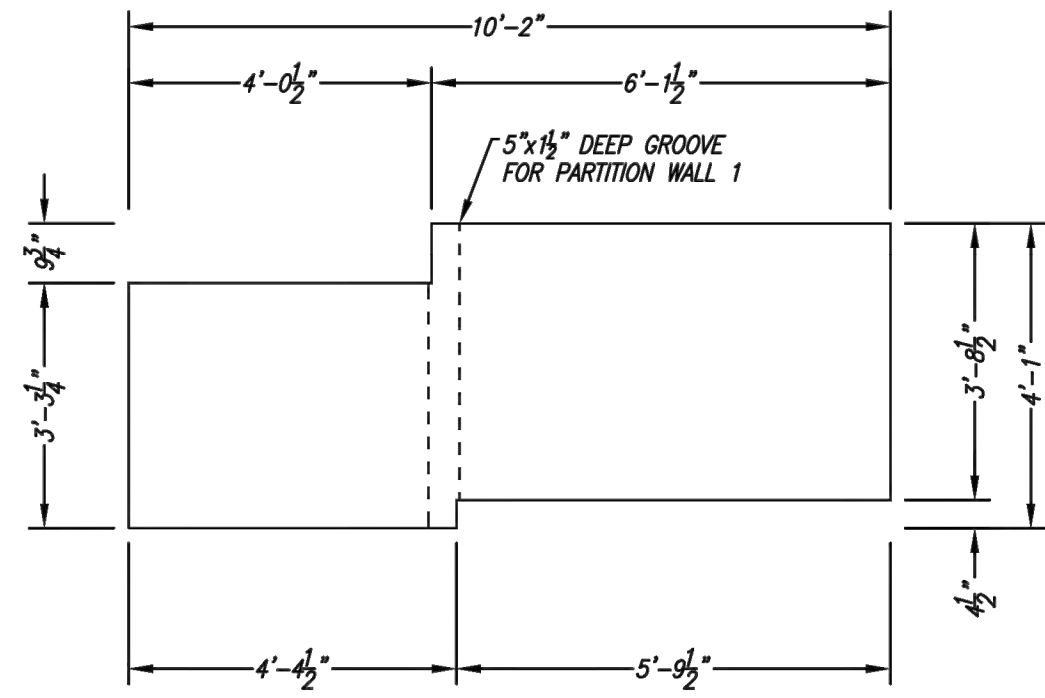
**CONCRETE PARTITION WALL TO VAULT WALL CONNECTION**  
1:10 SCALE



**CONCRETE PARTITION WALL TO VAULT FLOOR CONNECTION**  
1:10 SCALE



**CONCRETE PARTITION WALL 1**  
4" THICK 1:30 SCALE



**CONCRETE PARTITION WALL 2**  
4" THICK 1:30 SCALE

NOTE: CONTRACTOR IS REQUIRED TO HAVE THE MANUFACTURERS REPRESENTATIVE SUPERVISE THE INSTALLATION OF THIS PROPRIETARY STRUCTURAL BMP

PROJECT NUMBER	1111
PROJECT NAME	TEST1
PROJECT LOCATION	TEST2
STRUCTURE ID	TEST3

THIS PRODUCT MAY BE PROTECTED BY ONE OR MORE OF THE FOLLOWING US PATENTS: 10,369,496; 9,604,160; 10,145,765; RELATED FOREIGN PATENTS OR OTHER PATENTS PENDING

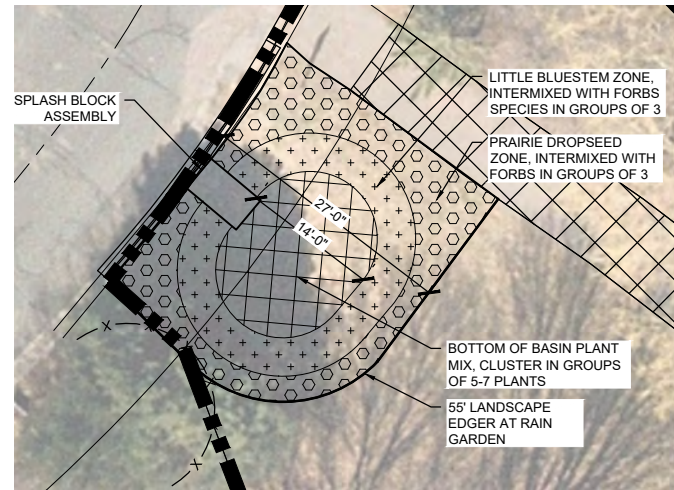
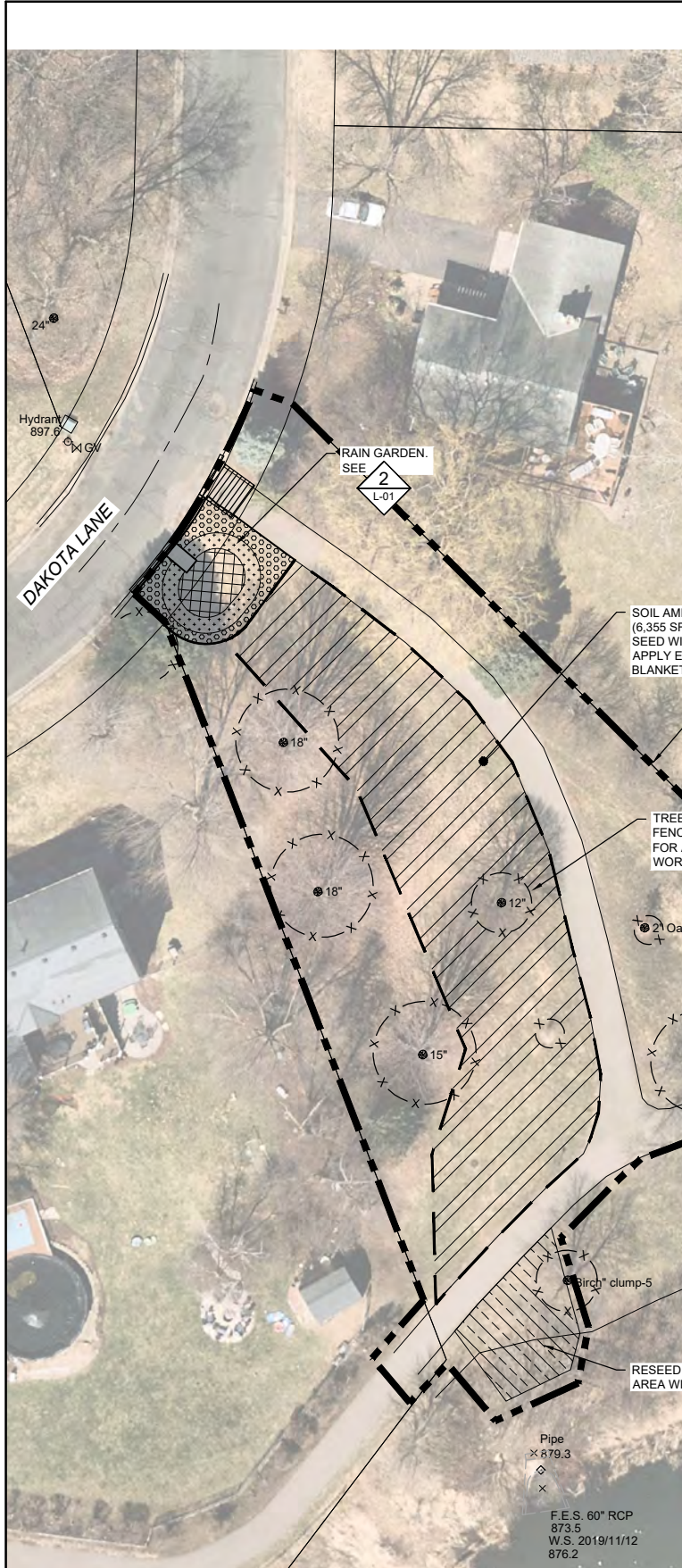
PROPRIETARY AND CONFIDENTIAL:  
THE INFORMATION CONTAINED IN THIS DOCUMENT IS THE SOLE PROPERTY OF FORTERRA AND ITS COMPANIES. THIS DOCUMENT, NOR ANY PART THEREOF, MAY BE USED, REPRODUCED OR MODIFIED IN ANY MANNER WITH OUT THE WRITTEN CONSENT OF FORTERRA.



**KRAKEN KF-10-16-72**  
MEMBRANE FILTRATION SYSTEM WITH PRETREATMENT  
PARTITION & BAFFLE WALL DETAILS

CADD USER: Greg Nelson FILE: I:\DESIGN\23270551\4\_23270551\_4\_T028\_C-07\_C08 KRAKEN.DWG PLOT SCALE: 1:2 PLOT DATE: 6/29/2021 4:31 PM





2 PLAN: RAIN GARDEN  
SCALE IN FEET

Rain Garden Planting			
Spacing 18" on center, all species			
Common Name	Scientific Name	Size	Qty
<b>Bottom of Basin</b>			
Tussock Sedge	<i>Carex stricta</i>	4"	43
Fox Sedge	<i>Carex vulpocarpa</i>	4"	43
White Wild Indigo	<i>Rhynchospora alba</i>	1 gal	10
<b>Best Edges</b>			
Fragrant Hyssop	<i>Agastache foeniculum</i>	4"	15
Prairie Coreopsis	<i>Coreopsis palmata</i>	4"	15
Dotterel Blazing Star	<i>Liatis pumila</i>	4"	15
Smooth Aster	<i>Synthyris alba</i>	4"	15
Prairie Dropseed	<i>Sporobolus heterolepis</i>	4"	52
Little Bluestem	<i>Schizachyrium scoparium</i>	4"	52
<b>Total</b>			<b>260</b>

Bee Lawn Seed Mix		
Common Name	Scientific Name	%
Dutch White Clover	<i>Trifolium repens</i>	4.7
Creeping Thyme	<i>Thymus serpyllum</i>	0.7
Sea Purslane	<i>Portulaca oleraceae</i>	2.6
Red Fescue	<i>Festuca rubra var. rubra</i>	23.1
Chewing's Fescue	<i>Festuca rubra ssp. Commutata</i>	23.1
Hard Fescue	<i>Festuca trachypodium</i>	23.1
Sheep Fescue	<i>Festuca ovina</i>	23.1
<b>Total</b>		<b>100</b>

Native Planting Mix		
Common Name	Scientific Name	PLS Rate (lb/ac)
Sideoats Grama	<i>Boerhaavia carolinensis</i>	8.00
Little Bluestem	<i>Schizachyrium scoparium</i>	3.00
<b>Seeding Subtotal</b>		<b>11.00</b>

Plug Planting, 32" on center, all species			
Common Name	Scientific Name	Size	Qty
Fox Sedge	<i>Carex vulpocarpa</i>	PL-32	125
Dotterel Blazing Star	<i>Liatis spicata</i>	PL-32	125
Dotterel Blazing Star	<i>Liatis pumila</i>	PL-32	125
Fringed Beardtongue	<i>Pennisetum ssp. ssp.</i>	PL-32	36
Great Blue Lobelia	<i>Lobelia siphilitica</i>	PL-32	36
Large Flowered Beardtongue	<i>Pennisetum grandifolium</i>	PL-32	36
Worthington Onion	<i>Allium cernuum</i>	PL-32	36
Pale Purple Coneflower	<i>Echinacea pallida</i>	PL-32	36
Prairie Coreopsis	<i>Coreopsis palmata</i>	PL-32	36
Prairie Alumroot	<i>Heuchera richardsonii</i>	PL-32	50
Smooth Aster	<i>Synthyris alba</i>	PL-32	36
<b>Planting Subtotal</b>			<b>855</b>

- PLANTING NOTES:**
- CONTRACTOR SHALL HAVE UTILITIES LOCATED PRIOR TO BEGINNING WORK, AND IS RESPONSIBLE FOR PROTECTING UTILITIES FROM DAMAGE DURING PLANTING INSTALLATION.
  - PROTECT EXISTING AND PROPOSED CURBS, PAVEMENT, SIDEWALKS, AND OTHER SITE ELEMENTS FROM IMPACT BY SOIL PREPARATION AND PLANTING OPERATIONS. AVOID COMPACTING SOIL WITH HEAVY EQUIPMENT. ANY DAMAGE TO SITE TO BE REPAIRED AT CONTRACTOR'S EXPENSE.
  - PROTECT PLANTS AT SITE FROM STRESS PRIOR TO INSTALLATION BY PLACING IN SHADE, HEELING IN TO MULCH, WATERING, AND OTHER APPROPRIATE MEASURES.
  - STAKE OR OTHERWISE LAYOUT ALL PROPOSED PLANT BEDS AS SHOWN ON PLAN, DETAILS, AND PLANT SCHEDULE. SOME FIELD ADJUSTMENT MAY BE NECESSARY. LANDSCAPE ARCHITECT TO REVIEW PLANT LAYOUT PRIOR TO PLANTING. INFORM THE LANDSCAPE ARCHITECT OF PLANTING TWO DAYS PRIOR TO PLANT DELIVERY.
  - NATIVE PLANTING AREA SHALL BE SEEDED. EROSION CONTROL BLANKET PLACED, AND PLUGS PLANTED THROUGH THE BLANKET.
  - PLUGS SHALL BE PLANTED IN CLUSTERS OF 5-7 PLANTS PER SPECIES AND STAGGERED THROUGHOUT NATIVE PLANTING AREA.
  - PLACE SHREDDED HARDWOOD MULCH (MIN/DOT SPEC 3882.2 TYPE 6 - WEED SEED FREE SHREDDED HARDWOOD) TO A DEPTH OF 3" WITHIN RAIN GARDEN.
  - THOROUGHLY WATER ALL PLANTINGS AFTER INSTALLATION.
  - NO RUBBER Tired EQUIPMENT IN BASIN AFTER LOOSENING. LOW GROUND PRESSURE TRACKED EQUIPMENT ONLY.
  - ANY COMPACTION OF PREVIOUSLY LOOSENEED SOIL MUST BE RELOOSENEED.
  - ALL TURF AREAS DISTURBED DURING CONSTRUCTION MUST BE RESTORED TO CITY SATISFACTION, INCLUDING BUT NOT LIMITED TO DECOMPACTION, MINIMUM 6" OF TOPSOIL, AND SODDING. FOR SOIL AMENDMENT AREAS SEE DETAILS ON L-02.

1 PLAN:  
SCALE IN FEET

CADD USER: Marcy D. Bean; FILE: MIDDESIGN2270053\_14\_T028\_L-01.DWG; PLOT SCALE: 1:2; PLOT DATE: 6/28/2021 10:13 AM

NO.	BY	CHK.	APP.	DATE	REVISION DESCRIPTION

CLIENT	BID	CONSTRUCTION RECORD	RELEASED TO/FOR
BARR ENGINEERING CO.			

**BARR** ENGINEERING CO.  
4300 MARKETPOINTE DRIVE  
SUITE 200  
MINNEAPOLIS, MN 55435

Project Office:  
BARR ENGINEERING CO.  
4300 MARKETPOINTE DRIVE  
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MINNEAPOLIS, MN 55435

Corporate Headquarters:  
Minneapolis, Minnesota  
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www.barr.com

Scale	AS SHOWN
Date	4/6/2021
Drawn	MDB3
Checked	GGN
Designed	-
Approved	-

**RILEY PURGATORY BLUFF CREEK**  
WATERSHED DISTRICT

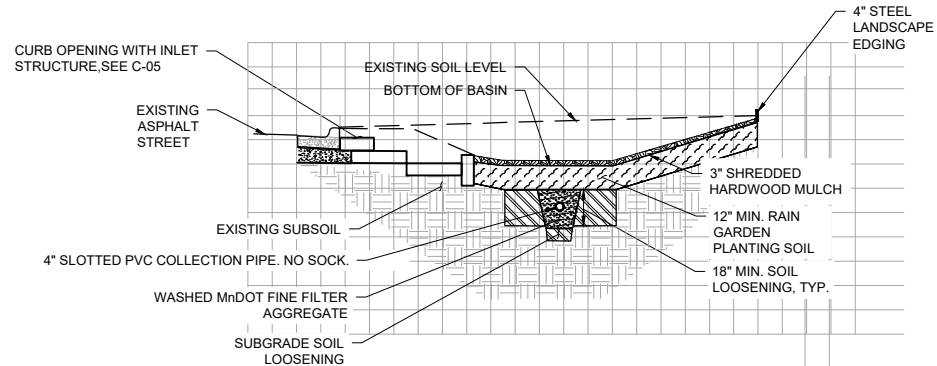
**RICE MARSH LAKE WQ TREATMENT**  
CHANHASSEN, MINNESOTA

**STORM FILTER AND SOIL AMENDMENT**  
LANDSCAPE PLAN

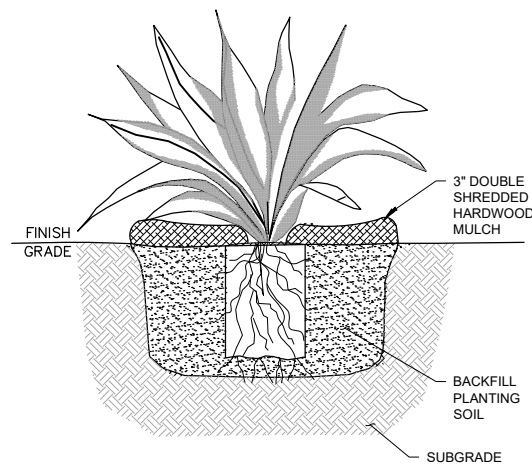
BARR PROJECT No.	23/27-0053.14
CLIENT PROJECT No.	TO28B
DWG. No.	L-01
REV. No.	0

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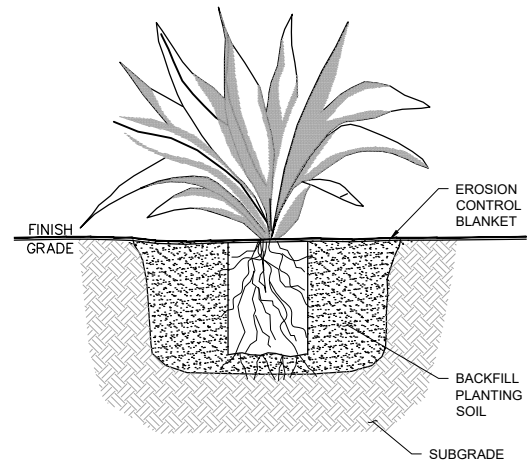




1 SECTION: RAIN GARDEN  
NOT TO SCALE



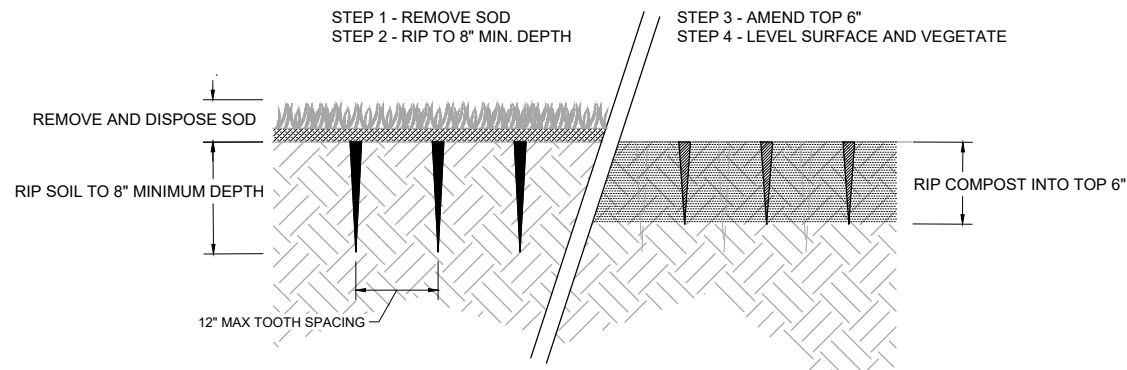
2 DETAIL: PERENNIAL PLANTING - RAIN GARDEN  
NOT TO SCALE



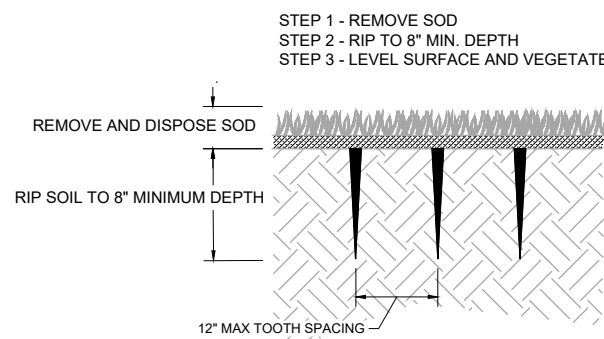
3 DETAIL: PERENNIAL PLANTING - NATIVE PLANTING  
NOT TO SCALE

- PERENNIAL PLANTING NOTES:**
1. PROVIDE AND INSTALL PLANTS PER SCHEDULE.
  2. REMOVE DEAD OR DAMAGED BRANCHES. RETAIN THE NATURAL FORM OF PLANT.
  3. DIG PLANT HOLES 18" MIN. LARGER THAN ROOT MASS, ALL SIDES.
  4. SET PLANT ON LIGHTLY FIRMED BACKFILL SOIL AT THE SAME DEPTH GROWN IN THE NURSERY. BACK FILL WITH PLANTING SOIL FIRM SOIL AROUND ROOT MASS TO MAINTAIN PLUMB AND ENSURE NO AIR GAPS AROUND ROOT MASS.
  5. CONSTRUCT 3" WATERING BASIN. THOROUGHLY WATER WITHIN 3 HOURS OF INSTALLATION.
  6. APPLY 3" DEPTH SHREDDED HARDWOOD MULCH TO ENTIRE PLANTING AREA (SOIL PREPARED AS PER PLAN).
  7. NO MULCH TO BE IN CONTACT WITH PLANT.
  8. WATER THOROUGHLY AFTER PLANTING.
  9. CONTRACTOR WILL BE RESPONSIBLE FOR WATERING PLANTS (REGARDLESS OF NOTIFICATION) DURING ENTIRE 60 DAY WARRANTY PERIOD. WATERING WILL BE CONSIDERED INCIDENTAL TO THE CONTRACT.

- PERENNIAL PLANTING NOTES:**
1. PROVIDE AND INSTALL PLANTS PER SCHEDULE.
  2. REMOVE DEAD OR DAMAGED BRANCHES. RETAIN THE NATURAL FORM OF PLANT.
  3. PREPARE SOIL PER SOIL AMENDMENT NOTES.
  4. SEED AND INSTALL EROSION CONTROL BLANKET.
  5. THROUGH EROSION CONTROL BLANKET, DIG PLANT HOLES 18" MIN. LARGER THAN ROOT MASS, ALL SIDES.
  6. SET PLANT ON LIGHTLY FIRMED BACKFILL SOIL AT THE SAME DEPTH GROWN IN THE NURSERY. BACK FILL WITH PLANTING SOIL FIRM SOIL AROUND ROOT MASS TO MAINTAIN PLUMB AND ENSURE NO AIR GAPS AROUND ROOT MASS.
  7. THOROUGHLY WATER WITHIN 3 HOURS OF INSTALLATION.
  9. CONTRACTOR WILL BE RESPONSIBLE FOR WATERING PLANTS (REGARDLESS OF NOTIFICATION) DURING ENTIRE 60 DAY WARRANTY PERIOD. WATERING WILL BE CONSIDERED INCIDENTAL TO THE CONTRACT.



4 DETAIL: SOIL AMENDMENT PROFILE "A"  
NOT TO SCALE  
NOTE: SOIL AMENDMENT DETAILS AND NOTES BASED ON CITY OF EAGAN SOIL STRATEGY



5 DETAIL: SOIL AMENDMENT PROFILE "B"  
NOT TO SCALE

**SOIL AMENDMENT NOTES:**

**SOIL AMENDMENT PROFILE "A" - LOOSENING AND COMPOST APPLICATION**

Prior to Final Stabilization:

1. Soil loosening & amendment requirement applies to all areas as shown on plans (not including areas under existing tree drip-lines or within 5-feet of building foundations), to restore soil permeability.
2. Soil remediation (loosening & amendment) must be implemented prior to any installation of irrigation system components, trees, shrubs, sod and/or seed. No wheeled equipment shall be used on loosened/amended soil - wide-tracked equipment only.
3. Soil remediation (loosening & amendment) must preserve existing trees. No remediation shall occur within dripline of all existing trees.
3. All disturbed areas to be revegetated (sod/seed and landscaping) shall have 8-inch minimum depth of soil loosening (e.g. soil ripping, 6-inch max. tooth spacing) and 3-inch minimum depth of MnDOT 3890 Grade 2 Compost incorporated into the top 6-inch depth of soil to restore soil permeability. Typical application rate is 50 cubic yards/10,000 square feet of MnDOT 3890 Grade 2 compost. Salvaged topsoil by itself does not count toward 5% soil organic content target.
4. Loosened/amended soils shall have a maximum of 200 psi in top 8-inches (inserting a 12-inch wire flag, by hand to depth) and a minimum of 5% organic content in top 6-inches of soil (visually black soil). Salvaged topsoil by itself does not count toward 5% soil organic target.
5. Implementation documentation shall be provided to Engineer to verify approved soil management strategy compliance. Documentation includes but is not limited to: photos/video of implementation, on-site soil samples, compost haul tickets, compaction testing, and soil organic content test results from vendor. Soil organic testing of final soil condition may be required by Engineer, if in question. Engineer is available prior to implementation to discuss necessary steps for compliance.
6. Contractor shall provide minimum of 24-hour notice to Engineer to arrange inspection of soil loosening/amendment process to verify soil remediation compliance.

**SOIL AMENDMENT PROFILE "B" - LOOSENING ONLY**

Prior to Final Stabilization:

1. Soil loosening applies to all areas as noted on the plans (not including areas under existing tree drip-lines or within 5-feet of building foundations), to restore soil permeability.
2. Soil remediation (loosening) must be implemented prior to any installation of irrigation system components, trees, shrubs, sod and/or seed. No wheeled equipment shall be used on loosened/amended soil - wide-tracked equipment only.
3. Soil remediation (loosening) must preserve existing trees. No remediation shall occur within dripline of all existing trees.
3. All disturbed areas to be revegetated (sod/seed and landscaping) shall have 8-inch minimum depth of soil loosening (e.g. soil ripping, 6-inch max. tooth spacing).
4. Loosened/amended soils shall have a maximum of 200 psi in top 8-inches (inserting a 12-inch wire flag, by hand to depth).
5. Implementation documentation shall be provided to Engineer to verify approved soil management strategy compliance. Documentation includes but is not limited to: photos/video of implementation, on-site soil samples, compost haul tickets, compaction testing, and soil organic content test results from vendor. Engineer is available prior to implementation to discuss necessary steps for compliance.
6. Contractor shall provide minimum of 24-hour notice to Engineer to arrange inspection of soil loosening process to verify soil remediation compliance.

CADD USER: Marcy D. Bean FILE: MIDDESIGN227063.14\_T028\_L01.DWG PLOT SCALE: 1:2 PLOT DATE: 6/28/2021 10:17 AM

				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 LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MINNESOTA.				CLIENT 4/19/2021 6/28/2021				Project Office: BARR ENGINEERING CO. 4300 MARKETPOINTE DRIVE Suite 200 MINNEAPOLIS, MN 55435				Scale AS SHOWN				BARR PROJECT No. 23/27-0053.14			
				PRINTED NAME MARCY D. BEAN				CONSTRUCTION RECORD				Corporate Headquarters: Minneapolis, Minnesota Ph: 1-800-632-2277 Fax: (952) 832-2601 www.barr.com				Date 4/6/2021				CLIENT PROJECT No. TO28B			
				SIGNATURE DATE: 7/7/2021 LICENSE # 48430				RELEASED TO/FOR				Ph: 1-800-632-2277 Fax: (952) 832-2601 www.barr.com				Drawn MDB3				DWG. No. L-02			
				DATE				DATE RELEASED				Checked GGN				REV. No. 0							
				REVISION DESCRIPTION								Designed -											
												Approved -											
RILEY PURGATORY BLUFF CREEK WATERSHED DISTRICT												RICE MARSH LAKE WQ TREATMENT CHANHASSEN, MINNESOTA											
STORM FILTER AND SOIL AMENDMENT LANDSCAPE SECTIONS AND DETAILS																							

ISSUED FOR BID