

## Riley Purgatory Bluff Creek Watershed District Permit Application Review

**Permit No:** 2023-047

**Considered at Board of Managers Meeting:** September 13, 2023

**Received complete:** August 14, 2023

**Applicant:** Hennepin County

**Consultant:** NA

**Project:** HCRRRA Culvert Replacements Mntka 60 & 61– This project involves relining two failing culverts -- one 36-inch ductile iron pipe (DIP) and one 36-inch clay pipe -- under the Minnetonka LRT Regional Trail.

**Location:** Between Vine Hill Road and County Road 101 in Deephaven and Minnetonka

**Reviewer:** Scott Sobiech, PE Barr Engineering

### Proposed Board Action

Manager \_\_\_\_\_ moved and Manager \_\_\_\_\_ seconded adoption of the following resolutions based on the permit report that follows and the presentation of the matter at the September 13, 2023 meeting of the managers. Resolved that the application for Permit 2023-047 is approved, subject to the conditions and stipulations set forth in the Recommendations section of the attached report;

Resolved that on determination by the RPBCWD administrator that the conditions of approval have been affirmatively resolved, the RPBCWD president or administrator is authorized and directed to sign and deliver Permit 2023-047 to the applicant on behalf of RPBCWD.

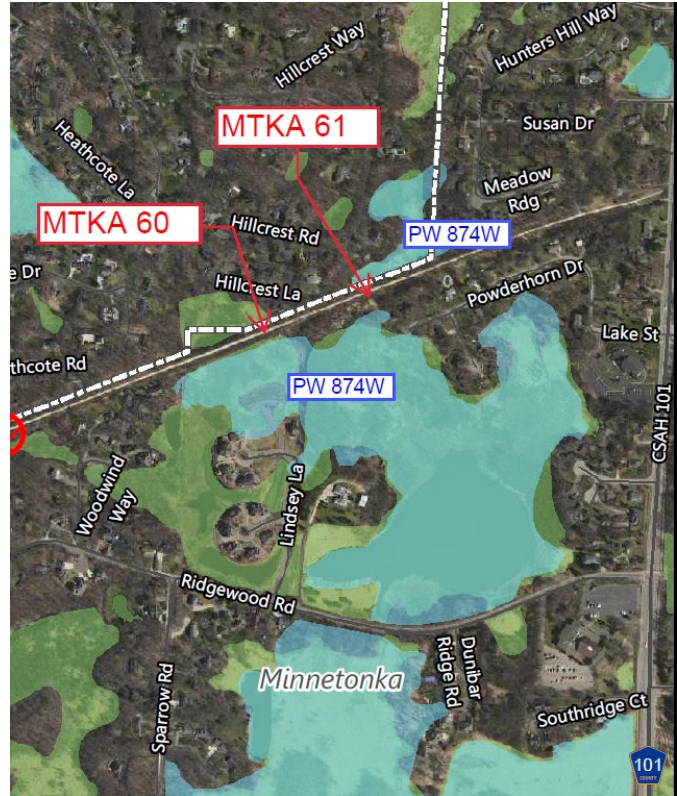
Upon vote, the resolutions were adopted, \_\_\_\_\_ [VOTE TALLY].

### Rule Conformance Summary

Rule	Issue	Conforms to RBPCWD Rules?	Comments
D	Wetland and Creek Buffer	NA	No land-disturbing activity upgradient from wetlands
G	Waterbody Crossing and Structures	See Comment	See Rule Specific Permit Condition G1 and G2 related to dates restricting work in public waters and entering a maintenance agreement for the crossings .
L	Permit Fee	NA	Governmental Entity
M	Financial Assurance	NA	Governmental Entity

**Project Background**

The county applicant proposes to reline two failing culverts that convey flow under the Minnetonka LRT Regional Trail between Vine Hill road and County Road 101 in Deephaven. The 36-inch ductile iron pipe (DIP) and 36-inch clay pipe are proposed to be repaired by slip lining existing culverts at the crossings identified as MNTKA 60 and MNTKA 61. The ultraviolet-cured liner will involve lining the culverts with a 5.8 mm liner. The water resources within the project site of the proposed activities are summarized in the following table. The table also provides a brief explanation of how each resource is implicated in the permit application review process.



**Water resource impacted by proposed project**

Water Resource	Projected resource impacts
874W	A public water wetland that is located on the south side of location MNTKA 60 and both north and south of location MNTKA 61. No land-disturbing activity is proposed upgradient from this wetland. The crossing repair at MNTKA 61 conveys flows between this resource.
MNTKA 60 North	A Wetland Conservation Act-protected wetland that is upgradient from the proposed crossing repair at location MNTKA 60.

While the applicant proposes minor ground disturbance at location MNTKA 60 to install an erosion control mat on the slopes adjacent to the crossing in order to stabilize existing erosion, the ground disturbance is downgradient from the delineated wetland, thus RPBCWD’s wetland and creek buffers (Rule D) does not impose requirements on this project location. The project proposes no ground disturbance at crossing MNTKA 61 or new or reconstructed impervious surface at either culvert location, so RPBCWD’s wetland and creek buffers (Rule D) and stormwater-management (Rule J) do not impose requirements on this project. The following photograph illustrates the planned equipment that will be used to reach the end of the existing culverts with the lining materials from the existing trails, thus avoiding land-disturbing activities. (Note this is a location outside RPBCWD for illustrative purposes only)



The project site information is summarized below:

Description	Area (acres)
Total Site Area	0.05
Existing Site Impervious	0.01
Post Construction Site Impervious	0.01
New (Increase) in Site Impervious Area	0
Disturbed impervious surface	0
Total Disturbed Area	0.005

Exhibits:

1. Permit Application received July 31, 2023 (The applicant was notified on August 4, 2023 that the submittal was incomplete because no information was provided to demonstrate compliance with the applicable criteria of RPBCWD’s Rule G, Waterbody Crossings and Structures; information completing the application was received on August 14, 2023)
2. Construction plan sheets dated July 26, 2023 (received revised August 14, 2023)
3. Wetland Assessment received July 31, 2023
4. Risk Assessment received July 31, 2023
5. Hydraulic computation spreadsheet received August 14, 2023

**Rule Specific Permit Conditions**

**Rule D: Wetland and Creek Buffers**

Because the proposed work triggers a permit under RPBCWD Rule G for the crossing rehabilitation work and the wetland are onsite, Rule D, Subsections 2.1a requires buffer adjacent to this watercourse. But because there is no land-disturbing activity upgradient of the wetlands associated with the proposed with the slip-lining project, Rule D does not impose requirements on the project.

### **Rule G: Waterbody Crossings and Structures**

Because the project will rehabilitate the existing culverts and install an ultraviolet-cured liner inside DIP and clay pipes, (i.e., improve crossings in contact with the bed of waterbodies) the project requires conformance with RPBCWD's Waterbody Crossings and Structures Rule (Rule G). Only the criteria in subsections 3.1, 3.2 and 3.7 impose requirements on the project. Because wetland 874W is a public water, the proposed work falls within the scope of Minnesota Department of Natural Resources General Permit #2015-1192.

This work represents a public benefit by repairing deteriorating culverts such as will maintain public use of the Minnetonka LRT Regional Trail (Rule G, Subsection 3.1a)

The engineer concurs with the spreadsheet computations provided by the applicant demonstrating that the slight reduction in pipe diameter resulting from the slip lining (less than  $\frac{3}{4}$  inch) is offset by the increase in the smoothness of the material to the degree that the flow capacity of the crossings is increased by about 4 and 6 cubic feet per second for MNTKA 61 and MNTKA 60 crossings, respectively. Because of the slight increase in flow capacity with the lined culverts, the upstream water surface elevations are anticipated to be unchanged, thus confirming the project will maintain the existing hydraulic capacity and not increase the flood stage of the existing waterbody conforming to Rule G, Subsection 3.2a.

These crossing locations are not used for navigation, thus Rule G, Subsection 3.2b is not relevant to this project. The applicant provided modeling demonstrating the project will maintain similar flow velocities through the culverts, therefore will not adversely affect water quality or cause increased scour, erosion or sedimentation (Rule G, Subsection 3.2c.) Because this is a rehabilitation of the existing crossings in place, wildlife will continue to be able to use the crossings as under existing conditions, thus preserving wildlife passage consistent with Rule G, Subsection 3.2d.

The RPBCWD engineer concurs with the applicant's assertion that a no-build option would result in flows through the existing deteriorating culverts potentially leading to the failure of the crossings. The feasibility efforts conducted by the applicant considered slip lining to rehabilitate the culvert in place or a full culvert replacement by open cutting the crossing. The open cut option was dismissed because of the extensive site disturbance. Because the rehabilitation option minimizes land-disturbing activities to maintain existing flow characteristic, it represents the minimal impact approach to maintaining the culverts, consistent with Rule G, Subsection 3.2e.

A note is included on the plan sheet indicating the project will be constructed so as to minimize the potential transfer of aquatic invasive species (e.g., zebra mussels, Eurasian watermilfoil, etc.) to the maximum extent possible (Rule G, Subsection 3.7c). Because no riprapping will occur with the project, Rule G subsection 3.7d do not impose requirements on the project.

To conform to the RPBCWD Rule G the following revisions are needed:

- G1. Update the plans to include a note directing the contractor that no work affecting the creek bed shall occur between March 15 and June 15
- G2. Permit applicant must provide a draft maintenance agreement for the waterbody crossing for RPBCWD approval, in accordance with Rule G, Section 5. As a public entity, Hennepin may comply with this requirement by entering into a maintenance agreement with the RPBCWD.

**Applicable General Requirements:**

1. The RPBCWD Administrator and Engineer shall be notified at least three days prior to commencement of work.
2. Construction must be consistent with the plans, specifications, and models that were submitted by the applicant that were the basis of permit approval. The date(s) of the approved plans, specifications, and modeling are listed above and on the permit. The granting of the permit does not in any way relieve the permittee, its engineer, or other professional consultants of responsibility for the permitted work.
3. The grant of the permit does not relieve the permittee of any responsibility to obtain approval of any other regulatory body with authority.
4. The issuance of this permit does not convey any rights to either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state, or local laws or regulations.
5. In all cases where the doing by the permittee of anything authorized by this permit involves the taking, using or damaging of any property, rights or interests of any other person or persons, or of any publicly owned lands or improvements or interests, the permittee, before proceeding therewith, must acquire all necessary property rights and interest.
6. RPBCWD's determination to issue this permit was made in reliance on the information provided by the applicant. Any substantive change in the work affecting the nature and extent of applicability of RPBCWD regulatory requirements or substantive changes in the methods or means of compliance with RPBCWD regulatory requirements must be the subject of an application for a permit modification to the RPBCWD.
7. If the conditions herein are met and the permit is issued by RPBCWD, the applicant, by accepting the permit, grants access to the site of the work at all reasonable times during and after construction to authorized representatives of the RPBCWD for inspection of the work.

**Findings**

1. The proposed project includes the information necessary, plan sheets and erosion control plan for review.
2. The proposed project will conform to Rule G if the conditions listed above are met.
3. Under Minnesota Department of Natural Resources General Permit 2015-1192 (attached to this report), approval of work under RPBCWD rule(s) G constitutes approval under applicable DNR work in waters rules. Compliance with conditions on approval and payment of applicable fees, if

any, are necessary to benefit from general permit approval and the responsibility of the applicants.

**Recommendation:**

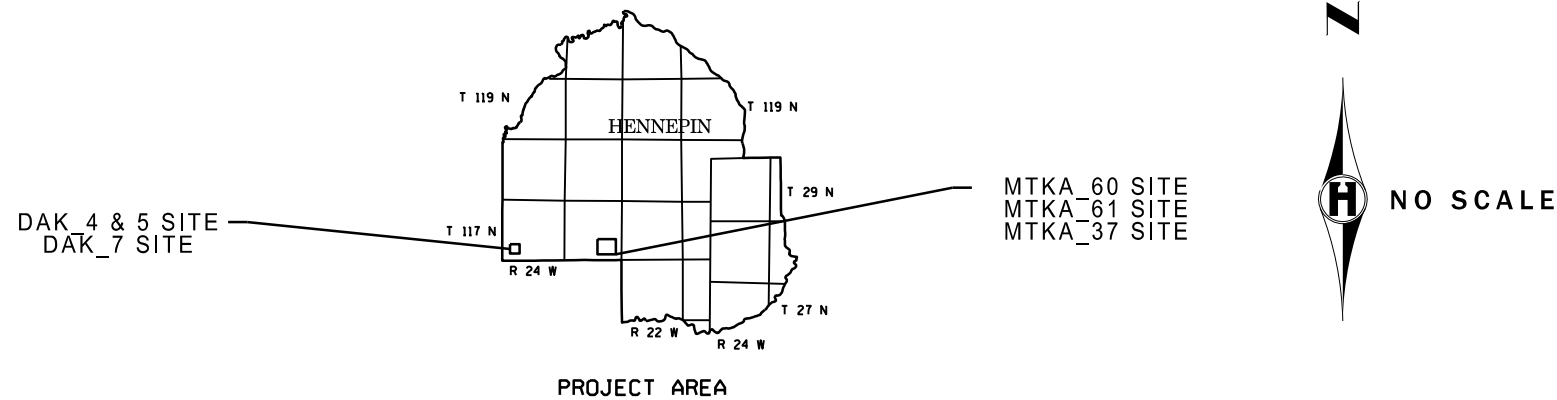
Approval of the permit contingent upon:

1. Continued compliance with General Requirements.
2. Receipt of updated plans to include a note directing the contractor that no work affecting the creek bed shall occur between March 15 and June 15.
3. Permit applicant must provide a draft maintenance agreement and inspection plan for the waterbody crossings and buffer areas. Once approved by RPBCWD, the Hennepin County must enter an agreement with RPBCWD to maintain the project facilities in accordance with the plan.



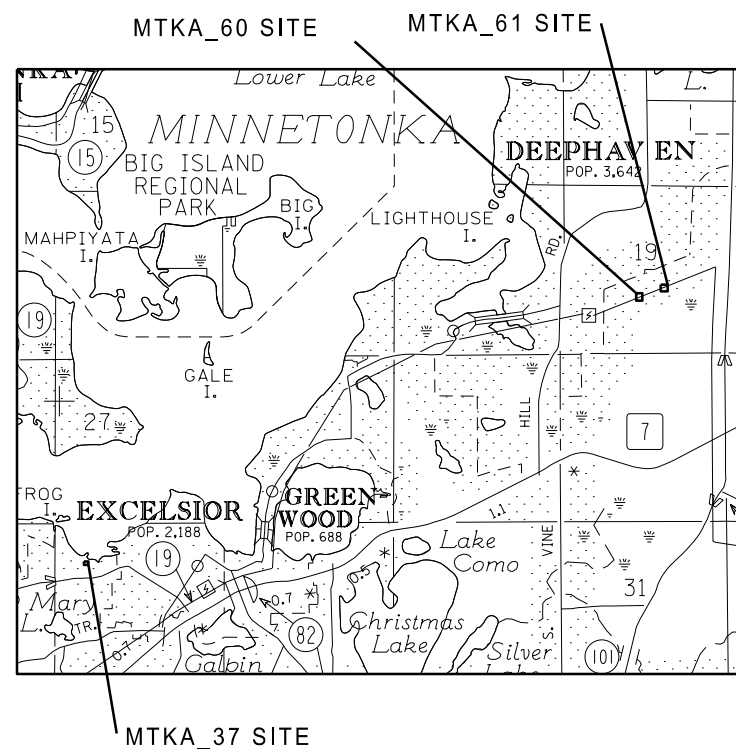
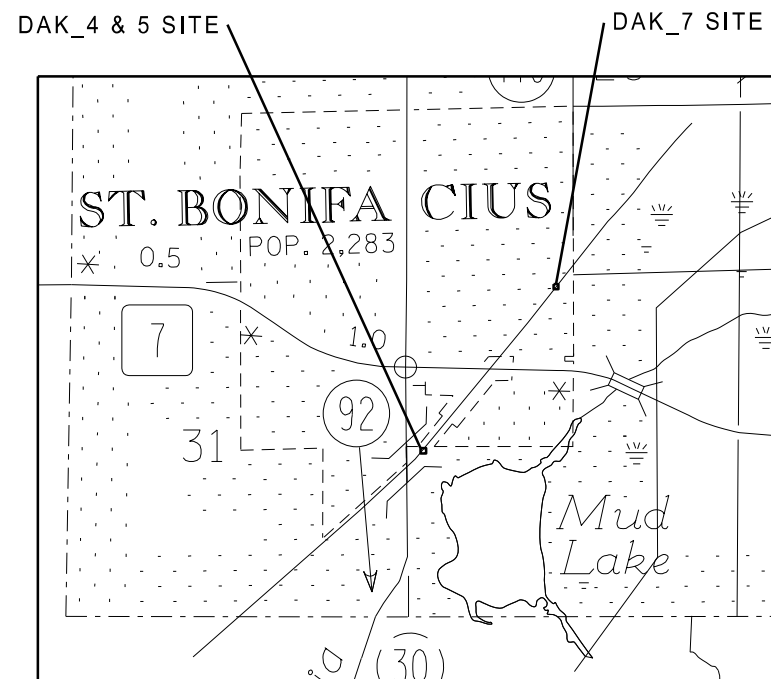
# HENNEPIN COUNTY TRANSPORTATION DEPARTMENT CONSTRUCTION PLAN FOR: HCRRRA CULVERT LINING IDIQ

MTKA 60 & 61 are the only sites within RPBCWD. The other sites have been removed for clarity.



**GOVERNING SPECIFICATIONS**  
THE 2020 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION", AND ALL SUPPLEMENTS THERETO, SHALL GOVERN. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM AND BE INSTALLED IN ACCORDANCE TO "MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MN MUTCD) AND PART VI, "FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS".

SHEET NO.	INDEX DESCRIPTION
1	TITLE SHEET
2	STATEMENT OF ESTIMATED QUANTITIES
3	STANDARD PLANS, TAB SHEET, AND CONSTRUCTION NOTES
4 - 5	SITE ACCESS
6 - 10	CONSTRUCTION PLANS



THIS PLAN CONTAINS 10 SHEETS

CULVERT ID	LAT	LONG
DAK_4	44.897987	-93.746534
DAK_5	44.897987	-93.746534
DAK_7	44.904719	-93.738889
MTKA_37	44.902665	-93.578884
MTKA_60	44.927824	-93.510891
MTKA_61	44.928235	-93.50944

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

**HORIZONTAL CONTROL:**  
COORDINATES ARE IN HENNEPIN COUNTY GROUND FEET, BASED ON THE MINNESOTA COORDINATE SYSTEM, SOUTHERN ZONE, NAD83 1986 (NON-HARN VALUES).

VERTICAL DATUM NAVD 88.



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

ANDREW MCGOVERN, PROFESSIONAL ENGINEER

48041 07/26/2023  
LICENSE NO. DATE

**DESIGN BY:** M KUCHAES  
**CAD BY:** M KUCHAES  
**CHECKED BY:** A MCGOVERN  
**LAST REVISION:** 08/11/2023

TITLE SHEET

HCRRRA CULVERT REPAIR  
COUNTY PROJECT 1009980

SHEET

1  
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NOTES	ITEM NO.	ITEM DESCRIPTION	UNIT	TOTAL PROJECT QUANTITY	HCRRA CULVERT DAK_4	HCRRA CULVERT DAK_5	HCRRA CULVERT DAK_7	HCRRA CULVERT MTKA_37	HCRRA CULVERT MTKA_60	HCRRA CULVERT MTKA_61
					QUANTITY	QUANTITY	QUANTITY	QUANTITY	QUANTITY	QUANTITY
(7)	2012.602	TRAFFIC CONTROL SPECIAL	EACH	5	1	1	1	1	1	1
	2101.502	GRUBBING	EACH	1	1					
(8)	2104.503	REMOVE CONCRETE CULVERT	LIN FT	16	8	8				
(10)	2106.507	COMMON EMBANKMENT (CV)	CU YD	12	2	2	2	2	2	2
(1) (2) (3) (4)	2507.603	LINING CULVERT PIPE (36") SPECIAL	LIN FT	376	71	72	47	51	78	57
-----										
(A)										
(5)	2573.503	SEDIMENT CONTROL LOG TYPE COMPOST	LIN FT	120	20	20	20	20	20	20
(B)	(5)	ROLLED EROSION PREVENTION CATEGORY 70	SQ YD	60	15	15			30	
(11)	2575.523	RAPID STABILIZATION METHOD 3	M GALLON	3	0.5	0.5	1	1	1	1
(9)	2575.602	SITE RESTORATION	EACH	5	1	1	1	1	1	1

ESTIMATED QUANTITY NOTES

- (1) SEE SPECIAL PROVISIONS
- (2) INCLUDES DEWATERING AND DAMMING AROUND CULVERT ENDS
- (3) INCLUDES CULVERT CLEANING AND INTERIOR SURFACE PREPERATION
- (4) UV CURE GRP CURED IN-PLACE PIPE
- (5) TO BE PLACED AT THE DIRECTION OF THE ENGINEER
- (C) (6) TRAFFIC CONTROL SHALL CONSIST OF FLAGGER AND/OR TRAIL CLOSED AHEAD SIGNS AT THE DIRECTION OF THE ENGINEER
- (8) ONE SECTION OF EACH PIPE ON DAK 4&5 HAS HEAVED UP. THE CONTRACTOR CAN CHOOSE TO RESET THE PIPE TO ORIGINAL GRADE AND THEN LINE OR REMOVE THE SECTION AND EXTEND THE LINER TO MATCH ORIGINAL.
- (9) DO NOT SEED IN OPEN WATER. WITHIN WETLAND BOUNDARIES USE MIX 33-261 AT A RATE OF 35 LBS/ACRE. ON SLOPE AREAS USE MIX 22-112 AT A RATE OF 40 LBS/ACRE. USE FERTILIZER TYPE 4 AT A RATE OF 150 LBS/ACRE.
- (10) FOR USE AS, DIRECTED BY THE ENGINEER, WITH RIPRAP STABILIZATION AREAS OR SITE RESTORATION
- (11) SHALL BE 100% BIODEGRADABLE FIBER MATRIX AND 100% NON-TOXIC BIOPOLYMERS

(A) 8/11/2023 REMOVED GEOTEXTILE TYPE 4 AND RANDOM RIPRAP CLASS III

(B) 8/11/2023 ADDED ROLLED EROSION PREVENTION CATEGORY 70

(C) 8/11/2023 RANDOM RIPRAP NOTE REMOVED



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STATEMENT OF ESTIMATED QUANTITIES

HCRRA CULVERT REPAIR  
COUNTY PROJECT 1009980

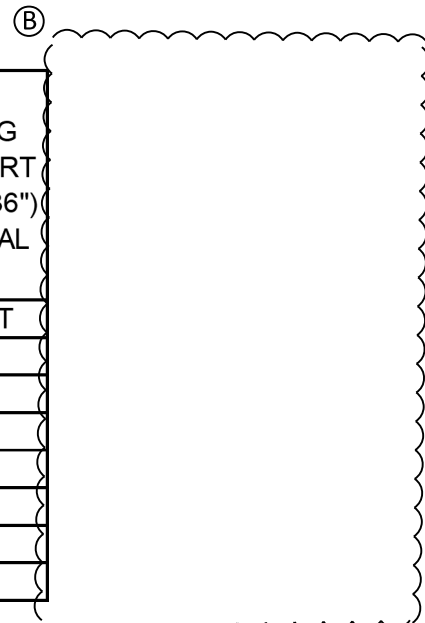
SHEET

R2.1  
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**CULVERT LINING TABULATION**

CULVERT ID	LATITUDE	LONGITUDE	EXISTING CULVERT			LINING CULVERT PIPE (36") SPECIAL
			PIPE SIZE	PIPE TYPE	PIPE LENGTH	
			INCHES		LIN FT	
DAK_4	44.897987	-93.746534	36	RCP	71	71
DAK_5	44.897987	-93.746534	36	RCP	72	72
DAK_7	44.904719	-93.738889	36	RCP	47	47
MTKA_37	44.902665	-93.578884	36	DIP	51	51
MTKA_60	44.927824	-93.510891	36	CLAY	74	78
MTKA_61	44.928235	-93.50944	36	DIP	57	57
<b>TOTAL</b>						<b>376</b>



THE FOLLOWING STANDARD PLANS, APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION, SHALL APPLY ON THIS PROJECT	
<b>STANDARD PLANS</b>	
PLAN NO.	DESCRIPTION
5-297.404	PERMANENT EROSION CONTROL (3 SHEETS)
5-297.405	TEMPORARY SEDIMENT CONTROL (3 SHEETS)

(A)

**EROSION CONTROL NOTES**

- a. Natural topography and soil conditions must be protected, including retention onsite of native topsoil to the greatest extent possible.
- b. Additional measures, such as hydraulic mulching and other practices as specified by the District must be used on slopes of 3:1 (H:V) or steeper to provide adequate stabilization.
- c. Final site stabilization measures must specify that at least six inches of topsoil or organic matter be spread and incorporated into the underlying soil during final site treatment wherever topsoil has been removed.
- d. Construction site waste such as discarded building materials, concrete truck washout, chemicals, litter and sanitary waste must be properly managed.
- e. All temporary erosion and sediment control BMPs must be maintained until completion of construction and vegetation is established sufficiently to ensure stability of the site, as determined by the District.
- f. All temporary erosion and sediment control BMPs must be removed upon final stabilization.
- g. Soil surfaces compacted during construction and remaining pervious upon completion of construction must be decompacted to achieve a soil compaction testing pressure of less than 1,400 kilopascals or 200 pounds per square inch in the upper 12 inches of the soil profile while taking care to protect utilities, tree roots, and other existing vegetation.
- h. All disturbed areas must be stabilized within 7 calendar days after land-disturbing work has temporarily or permanently ceased on a property that drains to an impaired water, within 14 days elsewhere.
- i. The permittee must, at a minimum, inspect, maintain and repair all disturbed surfaces and all erosion and sediment control facilities and soil stabilization measures every day work is performed on the site and at least weekly until land-disturbing activity has ceased. Thereafter, the permittee must perform these responsibilities at least weekly until vegetative cover is established. The permittee will maintain a log of activities under this section for inspection by the District on request.

Activities must be conducted so as to minimize the potential transfer of aquatic invasive species (e.g., zebra mussels, Eurasian watermilfoil, etc.) to the maximum extent possible.

**CONSTRUCTION NOTES:**

PERPETUATE DRAINAGE ON AND THROUGH THE CONSTRUCTION SITE ON ALL AREAS DISTURBED BY CONSTRUCTION (INCIDENTAL).

ALL MATERIAL NOT UTILIZED ON THIS PROJECT SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND DISPOSED OF OFF THE RIGHT OF WAY IN ACCORDANCE WITH SPEC. 2014.

BITUMINOUS SURFACING, CONCRETE STRUCTURES, ABANDONED UTILITY ITEMS, RAILROAD TIES OR ANY OTHER MATERIAL WHICH MAY BE ENCOUNTERED DURING CONSTRUCTION, MUST BE DISPOSED OF BY THE CONTRACTOR IN ACCORDANCE WITH SPEC. 2014 (INCIDENTAL).

THE CONTRACTOR'S ACTIVITIES SHALL NOT EXCEED CONSTRUCTION LIMITS IN WETLAND AREAS. THIS INCLUDES STAGING EQUIPMENT, PLACING OR STOCKPILING MATERIALS, OR IMPACTING THE WETLANDS IN ANY OTHER WAY.

ANY DAMAGE TO THE TRAIL OUTSIDE OF THE CONSTRUCTION LIMITS RESULTING FROM THE CONTRACTOR'S USE OF THE TRAIL IN ANY WAY SHALL BE REPAIRED AT THE CONTRACTORS EXPENSE.

DURING THE PROGRESS OF THE WORK, THE CONTRACTOR SHALL REMOVE ALL TRACKED DIRT MATERIAL FROM THE LENGTH OF THE TRAIL WITHIN 24 HRS OF DISCOVERY, BEFORE FINAL COMPLETION, THE CONTRACTOR SHALL REMOVE ALL TRACKED DIRT MATERIAL FROM THE LENGTH OF THE TRAIL AND LEAVE THE TRAIL IN THE SAME CLEAN AND USABLE CONDITION FOR TRAIL TRAFFIC AS PRE-CONSTRUCTION CONDITIONS.

**SURVEY AND RIGHT OF WAY:**

THE CONTRACTOR SHALL PRESERVE ALL LAND AND PROPERTY CORNERS, VERTICAL AND HORIZONTAL CONTROLS, AND RIGHT OF WAY MONUMENTS OUTSIDE OF THE CONSTRUCTION LIMITS. THE CONTRACTOR SHALL ESTABLISH THEIR OWN CONTROL POINTS OUTSIDE OF CONSTRUCTION LIMITS TO REPLACE THOSE EXISTING WITHIN CONSTRUCTION LIMITS DESTROYED DURING CONSTRUCTION.

**TEMPORARY STABILIZATION:**

RESPONSIBILITY FOR CONTROLLING EROSION IS SET FORTH IN MN/DOT SPECIFICATIONS 1717, 1803, 2101, 2105, 2573, 2575, AND AS AMENDED BY THE SPECIAL PROVISIONS.

(A) 8/11/2023 ADDED EROSION CONTROL NOTES FROM THE WATERSHED

(B) 8/11/2023 REMOVED GEOTEXTILE AND RIPRAP FROM TABLE



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

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STANDARD PLANS, TAB SHEET, AND CONSTRUCTION NOTES

HCRRA CULVERT REPAIR  
COUNTY PROJECT 1009980

SHEET

R3.1  
10

Access Exhibit  
MTKA\_37



Access Exhibit  
MTKA\_60/MTKA\_61



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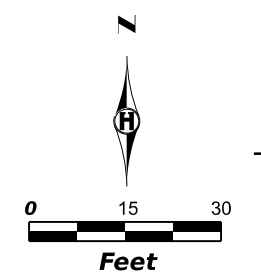
SITE ACCESS  
HCRRRA CULVERT REPAIR  
COUNTY PROJECT 1009980

SHEET

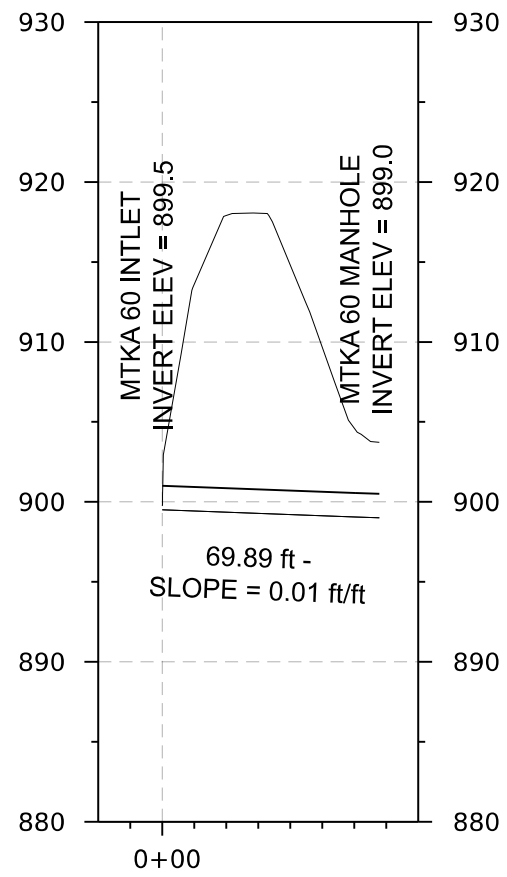
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MTKA 60 INLET ELE = 899.5  
 OUTLET ELE = 899.0  
 LENGTH = 80FT-36IN PIPE

**(A)**  
 ROLLED EROSION PREVENTION CATEGORY 70  
 AT THE DIRECTION OF THE ENGINEER

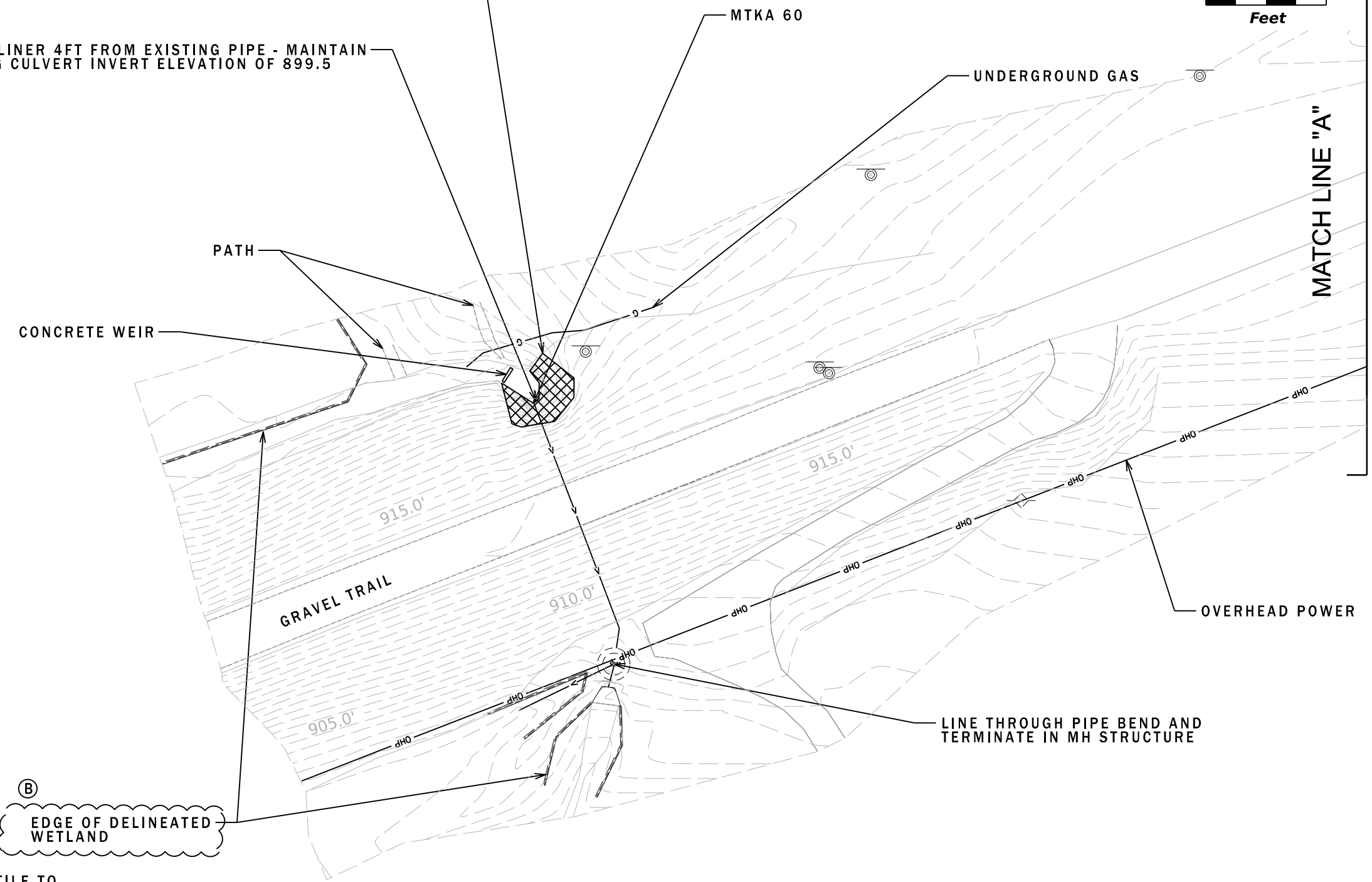


EXTEND LINER 4FT FROM EXISTING PIPE - MAINTAIN  
 EXISTING CULVERT INVERT ELEVATION OF 899.5



MTKA 60

**(B)**  
 EDGE OF DELINEATED  
 WETLAND



- (A)** 8/11/2023 CHANGED FROM RIPRAP AND GEOTEXTILE TO ROLLED EROSION PROTECTION CATEGORY 70
- (B)** 8/11/2023 UPDATED WETLAND LINE TO MATCH UPDATED WETLAND DELINEATION



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LAST REVISION: **08/11/2023**

MTKA\_60

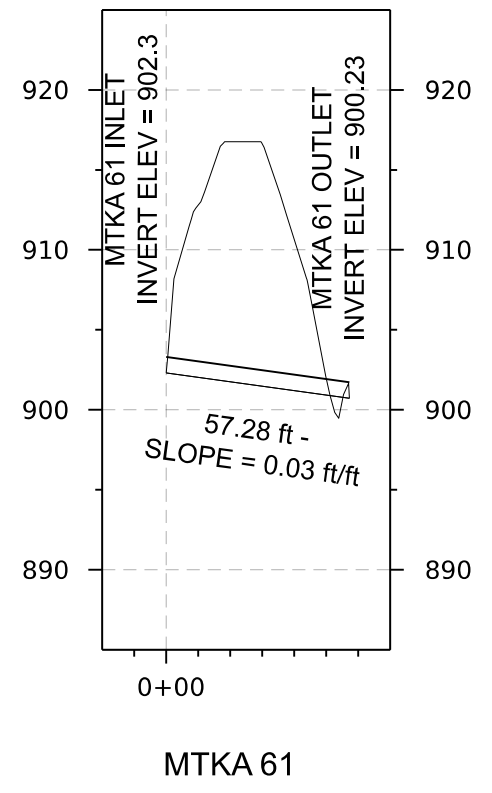
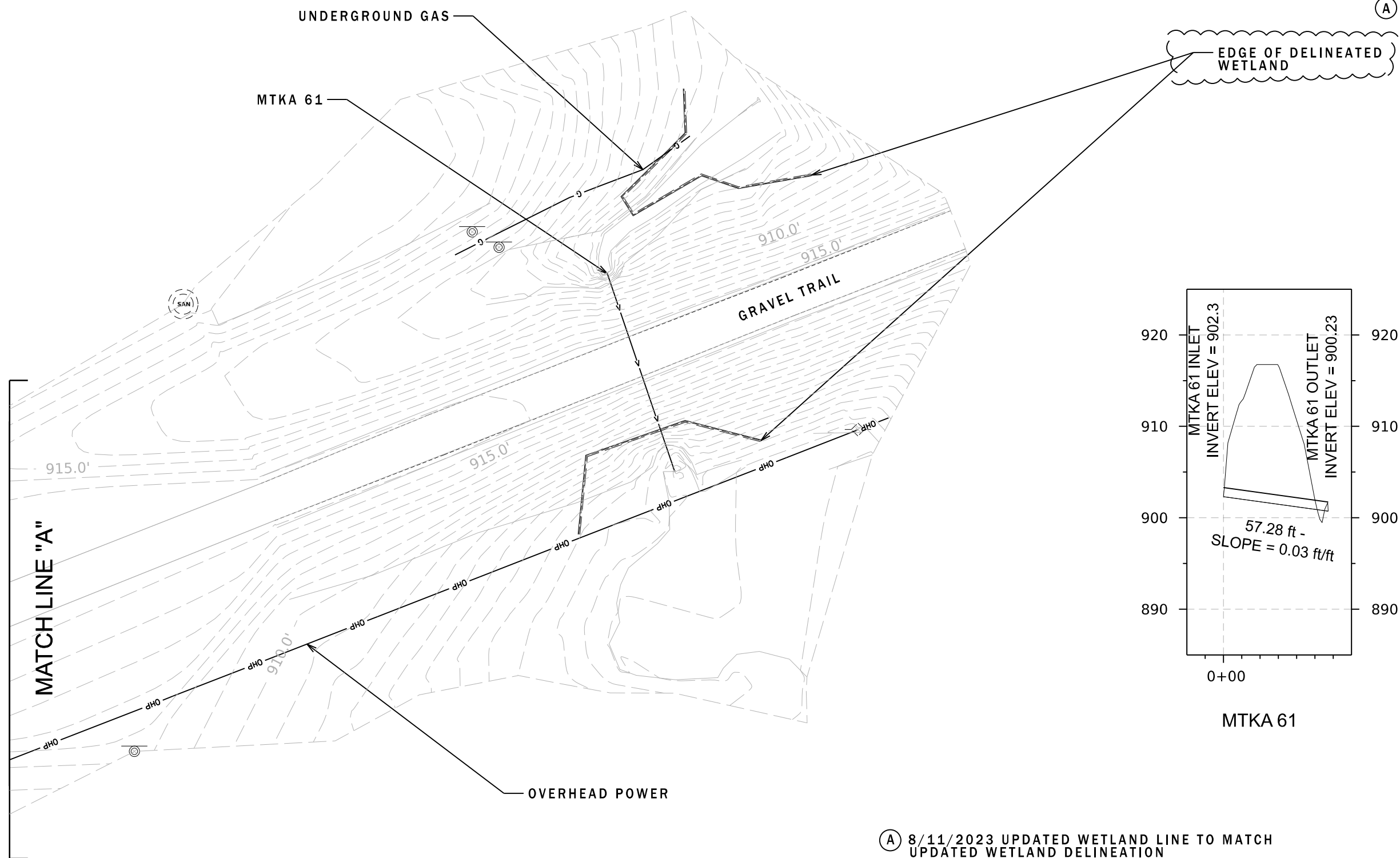
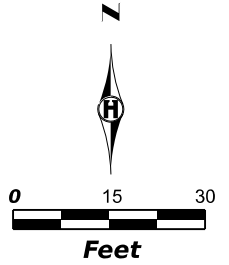
HCRRA CULVERT REPAIR  
 COUNTY PROJECT 1009980

SHEET

R9.1

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MTKA 61 INVERT ELE = 902.3  
 OUTLET ELE = 900.23  
 LENGHT = 57FT-36IN PIPE



Ⓐ 8/11/2023 UPDATED WETLAND LINE TO MATCH  
 UPDATED WETLAND DELINEATION



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 LAST REVISION: 08/11/2023

MTKA\_61  
 HCRRA CULVERT REPAIR  
 COUNTY PROJECT 1009980

SHEET  
 R10.1  
 10



Minnetonka – MTKA 60

36" Clay pipe – Culvert has joint separation and minor cracking. The County is concerned that a section could collapse and completely block flow, potentially leading to flooding upstream. The UV liner will span the separated joints and provide structural support to minimize the risk of future collapse.

Upstream end and inside pipe:



Downstream end and inside pipe/structure:





Minnetonka – MTKA 61

36" DIP pipe – Culvert has joint separation. The joint separation can be a source of erosion and potential trail/embankment failure above. The UV liner will span the separated joints and eliminate a potential source of erosion and failure.

Upstream end and inside pipe



Downstream end



**Amended**

## Public Waters Work General Permit

**Expiration Date: 05/01/2025**
**General Permit Number**
**2015-1192**

Pursuant to Minnesota Statutes, Chapter 103G, and on the basis of statements and information contained in the permit application, letters, maps, and plans submitted by the applicant and other supporting data, all of which are made part hereof by reference, **PERMISSION IS HEREBY GRANTED** to the applicant to perform actions as authorized below. This permit supersedes the original permit and all previous amendments.

<b>Project Name:</b> Riley-Purgatory-Bluff Creek Watershed District General Permit	<b>County:</b> Hennepin and Carver	<b>Watershed:</b> Lower Minnesota River - Shakopee	<b>Resource:</b> All Public Waters within Riley-Purgatory-Bluff Creek Watershed
<b>Purpose of Permit:</b> Sediment Removal, Sand Blanket w/o Excavation, Sand Blanket w/ Excavation, Riprap (Natural Rock), Retaining Wall, Erosion Control/Stabilization Fill & Grading, Culvert Construction/Modification/Replacement, Bridge Construction/Modification/Replacement, Bioengineering		<b>Authorized Action:</b> Place natural rock riprap; shape banks/shorelines for placement of riprap or bioengineering; install beach sand blankets; construct retaining walls, bridges and culverts; remove structures; remove sediment; all in accordance with the Conditions of this permit. For actions addressed by this general permit, no separate GP Authorization is needed from the DNR.	
<b>Permittee:</b> Riparian Property Owners within Riley-Purgatory-Bluff Creek Watershed District		<b>Authorized Agent:</b> N/A	
<b>Property Description (land owned or leased or where work will be conducted):</b>			
<b>Issued Date:</b> 06/15/2020	<b>Effective Date:</b> 05/01/2020	<b>Expiration Date:</b> 05/01/2025	
<b>Authorized Issuer:</b> Tom Hovey	<b>Title:</b> Water Regulations Unit Supervisor	<b>Email Address:</b> tom.hovey@state.mn.us	<b>Phone Number:</b> 651-259-5654

This permit is granted **subject to** the following **CONDITIONS**:

**APPLICABLE FEDERAL, STATE, OR LOCAL REGULATIONS:** The permittee is not released from any rules, regulations, requirements, or standards of any applicable federal, state, or local agencies; including, but not limited to, the U.S. Army Corps of Engineers, Board of Water and Soil Resources, MN Pollution Control Agency, watershed districts, water management organizations, county, city and township zoning.

**NOT ASSIGNABLE:** This permit is not assignable by the permittee except with the written consent of the Commissioner of Natural Resources.

**NO CHANGES:** The permittee shall make no changes, without written permission or amendment previously obtained from the Commissioner of Natural Resources, in the dimensions, capacity or location of any items of work authorized hereunder.

**SITE ACCESS:** The permittee shall grant access to the site at all reasonable times during and after construction to authorized representatives of the Commissioner of Natural Resources for inspection of the work authorized hereunder.

**TERMINATION:** This permit may be terminated by the Commissioner of Natural Resources at any time deemed



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necessary for the conservation of water resources of the state, or in the interest of public health and welfare, or for violation of any of the conditions or applicable laws, unless otherwise provided in the permit.

**COMPLETION DATE:** Construction work authorized under this permit shall be completed on or before the date specified above. The permittee may request an extension of the time to complete the project by submitting a written request, stating the reason thereof, to the Commissioner of Natural Resources.

**WRITTEN CONSENT:** In all cases where the permittee by performing the work authorized by this permit shall involve the taking, using, or damaging of any property rights or interests of any other person or persons, or of any publicly owned lands or improvements thereon or interests therein, the permittee, before proceeding, shall obtain the written consent of all persons, agencies, or authorities concerned, and shall acquire all property, rights, and interests needed for the work.

**PERMISSIVE ONLY / NO LIABILITY:** This permit is permissive only. No liability shall be imposed by the State of Minnesota or any of its officers, agents or employees, officially or personally, on account of the granting hereof or on account of any damage to any person or property resulting from any act or omission of the permittee or any of its agents, employees, or contractors. This permit shall not be construed as estopping or limiting any legal claims or right of action of any person other than the state against the permittee, its agents, employees, or contractors, for any damage or injury resulting from any such act or omission, or as estopping or limiting any legal claim or right of action of the state against the permittee, its agents, employees, or contractors for violation of or failure to comply with the permit or applicable conditions.

**EXTENSION OF PUBLIC WATERS:** Any extension of the surface of public waters from work authorized by this permit shall become public waters and left open and unobstructed for use by the public.

**GP AUTHORIZATION - APPLY USING MPARS:** The permittee shall apply for prior authorization for all projects to be constructed under this General Permit using the MNDNR Permitting and Reporting System (MPARS) at [www.mndnr.gov/mpars/signin](http://www.mndnr.gov/mpars/signin) . Users will need to create an account the first time they access the system. Once created, click on the link for 'Apply for a New Permit/Authorization' under the Actions box and complete the application questions.

**WETLAND CONSERVATION ACT:** Where the work authorized by this permit involves the draining or filling of wetlands not subject to DNR regulations, the permittee shall not initiate any work under this permit until the permittee has obtained official approval from the responsible local government unit as required by the Minnesota Wetland Conservation Act.

**INVASIVE SPECIES - EQUIPMENT DECONTAMINATION:** All equipment intended for use at a project site must be free of prohibited invasive species and aquatic plants prior to being transported into or within the state and placed into state waters. All equipment used in designated infested waters, shall be inspected by the Permittee or their authorized agent and adequately decontaminated prior to being transported from the worksite. The DNR is available to train inspectors and/or assist in these inspections. For more information refer to the "Best Practices for Preventing the Spread of Aquatic Invasive Species" at [http://files.dnr.state.mn.us/publications/ewr/invasives/ais/best\\_practices\\_for\\_prevention\\_ais.pdf](http://files.dnr.state.mn.us/publications/ewr/invasives/ais/best_practices_for_prevention_ais.pdf). Contact your regional Invasive Species Specialist for assistance at [www.mndnr.gov/invasives/contacts.html](http://www.mndnr.gov/invasives/contacts.html). A list of designated infested waters is available at [www.mndnr.gov/invasives/ais/infested.html](http://www.mndnr.gov/invasives/ais/infested.html). A list of prohibited invasive species is available at [www.mndnr.gov/invasives/laws.html#prohibited](http://www.mndnr.gov/invasives/laws.html#prohibited).

**CONSTRUCTION DEWATERING - GENERAL:** All construction dewatering in excess of 10,000 gallons per day or one million gallons per year must be authorized by a separate water appropriation permit. All worksite discharge water must be treated for sediment reduction prior to return to the surface water. Water from designated infested waters shall not be diverted to other waters, transported on a public road, or transported or appropriated off property riparian to infested waters without a DNR permit specifically for this use. All equipment in contact with infested waters must be decontaminated upon leaving the site.

**EROSION AND SEDIMENT CONTROL:** In all cases, methods that have been determined to be the most effective and practical means of preventing or reducing sediment from leaving the worksite shall be installed in areas that slope to the water and on worksite areas that have the potential for direct discharge due to pumping or draining of areas from within the worksite (e.g., coffer dams, temporary ponds, stormwater inlets). These methods, such as mulches, erosion control blankets, temporary coverings, silt fence, silt curtains or barriers, vegetation preservation, redundant methods, isolation of flow, or other engineering practices, shall be installed concurrently or within 24 hours after the start of the project, and will be maintained for the duration of the project in order to prevent sediment from leaving the worksite. DNR requirements may be waived in writing by the authorized DNR staff based on site conditions, expected weather conditions, or project completion timelines.

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**EXCAVATED MATERIALS - FLOODPLAIN CONCERN:** Excavated material shall not be permanently placed within community designated floodplain areas or shoreland areas, unless all necessary local permits and approvals have been obtained.

**AQUATIC PLANT MANAGEMENT:** For projects where vegetation is placed waterward of the ordinary high water level, a separate Aquatic Plant Management (APM) permit is needed from the DNR Regional APM Specialist. See contact list at: <http://www.dnr.state.mn.us/apm/index.html>. A permit shall be obtained (no fee required) for each site in order to monitor plant source, species, and planting location. Vegetation must be appropriate for the site and free of invasive species. This condition does not apply when only woody vegetation is used, such as willow and dogwood.

**APPLICABLE PROJECTS:** A project not meeting applicable conditions of this permit or a project the DNR identifies as having the potential for significant resource impacts, is not authorized herein. Rather, such projects will require an individual DNR permit application.

**ENVIRONMENTAL REVIEW:** If the project proposal is part of a project that requires mandatory environmental review pursuant to MN Environmental Quality Board rules, then the permit is not valid until environmental review is completed.

**RETAINING WALLS:** Retaining walls are generally discouraged because their impact on the near-shore aquatic environment can be severe and they restrict wildlife movement, however, they may be permitted if the following conditions are met: a. Existing or expected erosion problems shall preclude the use of riprap shore protection with a finished slope of 2:1 (horizontal to vertical) or more gentle, due to steep banks, nearby structures or other extenuating circumstances; or there shall be a demonstrated need for direct shoreland docking. b. Design shall be consistent with existing uses in the area. Examples are: riverfront commercial-industrial areas having existing structures of this nature, dense residential areas where similar retaining walls are common, or where barges are utilized to carry equipment and supplies. c. Adequate engineering studies shall be performed on foundation conditions, tiebacks, internal drainage, construction materials, and protection against flanking. d. The facility shall not be an aesthetic intrusion upon the area and is consistent with all applicable local, state, and federal management plans and programs for the water body. e. Encroachment below the ordinary high water elevation shall be limited to the absolute minimum necessary for construction.

**ICE RIDGE REMOVAL:** Ice ridge removal projects must meet the DNR "no permit required" conditions for ice ridge removal specified in Minn. Rules part 6115.0215, Subpart 4. If not, a DNR Individual permit is required as District rules do not address this category of project.

**HYDROLOGIC / HYDRAULIC DATA REPORTING ::** Unless waived by the DNR Area Hydrologist, hydrologic modeling to show the impacts of a bridge or culvert constructed in a Public Water to the 100-year flood elevation is required. Additional modeling may also be required for temporary fill or temporary structures required during demolition or construction. Calculations showing calculated velocities through the structures at 2-year peak flows may also be required.

**FISHERY PROTECTION - EXCLUSION DATES:** No activity affecting the bed of the protected water may be conducted between March 15 and April 15 on watercourses, or between April 1 and June 30 on all other waterbodies, to minimize impacts on fish spawning and migration. If work during this time is essential, it shall be done only upon written approval of the Area Fisheries Manager. See contact list at:

[http://files.dnr.state.mn.us/fisheries/management/dnr\\_fisheries\\_managers.pdf](http://files.dnr.state.mn.us/fisheries/management/dnr_fisheries_managers.pdf) Should work begin elsewhere in the project area within these dates, all exposed soils that are within 200 feet of Public Waters and drain to those waters must complete erosion control measures within 24 hours of its disturbance to prevent sediment from entering Public Waters.

**REPORTING:** The Riley-Purgatory-Bluff Creek Watershed District shall submit annually or as requested a summary report of the projects authorized under this General Permit to the Area Hydrologist.

**CONSTRUCTION AIDS:** No construction is allowed of temporary channel diversions or placement of fill for temporary work pads, bypass roads, access roads, or coffer dams to aid in the construction of any authorized structure unless approved in writing by the Area Hydrologist prior to beginning work.

**FISH PASSAGE:** Bridges, culverts and other crossings shall provide for fish movement unless the structure is intended to impede rough fish movement or the stream has negligible fisheries value as determined by the DNR Area Hydrologist in consultation with the Area Fisheries Manager. The accepted practices for achieving these conditions include: Where possible a single culvert or bridge shall span the natural bankfull width adequate to allow for debris and sediment transport rates to closely resemble those of upstream and downstream conditions. A single culvert shall be recessed in order to pass bedload and sediment load. Additional culvert inverts should be set at a higher elevation. All culverts should match the alignment and slope of the natural stream channel, and extend through the toe of the road side slope. "Where

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possible" means that other conditions may exist and could take precedence, such as unsuitable substrate, natural slope and background velocities, bedrock, flood control, 100 year flood elevations, wetland/lake level control elevations, local ditch elevations, and other adjacent features. Rock Rapids or other structures may be used to retrofit crossings to mimic natural conditions.

**PHOTOS AND AS-BUILTS:** Upon completion of the authorized work, the permittee may be required to submit a copy of established benchmarks, representative photographs, and may be required to provide as-built surveys of Public Watercourse crossing changes.

**EXCAVATION OF PUBLIC WATERS:** Excavation of Public Waters is authorized by this permit only when the proposed excavation is consistent with Minnesota Rules 6115.0200 and 6115.0201.

**REMOVAL OF STRUCTURES:** Removal of structures from public waters is authorized by this permit when the proposed removal is consistent with Minnesota Rules 6115.0211 subp. 8.

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cc: John Gleason, EWR District Manager