

Information for File # 2015-04254-MMJ; Lake Minnetonka Regional Park Channel Stabilization

Applicant: Three Rivers Park District (TRPD)

Corps Contact: Melissa Jenny

Address: 180 E. Fifth Street, Suite 700, St. Paul, Minnesota 55101

E-Mail: Melissa.m.jenny@usace.army.mil

Phone: (651) 290-5363

Primary County: Hennepin

Location: Northern channel – Section 34, T. 117 N., R. 24 W.;

Southern channel – Section 35, T. 117 N., R. 24 W.

Information Complete On: 12/4/2015

Posting Expires On: 12/13/2015

Authorization Type: MN-LOP-05

This application is being reviewed in accordance with current practices for documenting Corps jurisdiction under Section(s) 9 & 10 of the Rivers and Harbor Act of 1899 and Section 404 of the Clean Water Act.

We have made a preliminary determination that the aquatic resources that would be impacted by the proposed project are subject to Corps of Engineers jurisdiction under Section(s) 9 & 10 of the Rivers and Harbors Act of 1899 and/or Section 404 of the Clean Water Act. If an approved jurisdictional determination is completed as part of the review process for this application, a copy will be posted on the St. Paul District web page at the following link:

<http://www.mvp.usace.army.mil/Missions/Regulatory.aspx>.

Project:

PROJECT DESCRIPTION AND PURPOSE: The project as proposed is a water quality improvement project that would involve bank stabilization activities at two separate actively eroding channels located within Lake Minnetonka Regional Park. Stabilization measures at both channel locations (north and south) would consist of bank grading, and the installation of riprap toe, coir toe and rock cross vanes.

NAME, AREA AND TYPES OF WATERS (INCLUDING WETLANDS) SUBJECT TO LOSS: Stabilization activities at the northern project site would include work along approximately 930 linear feet of channel, requiring bank grading/excavation activities and the discharge of fill material into approximately 0.19 acre (8,370 square feet) of streambed located below the ordinary high water mark (OHWM) of the channel. All disturbed areas above the OHWM of the channel would be re-vegetated with a native seed mix.

Stabilization work at the southern project site would include work along approximately 1,050 linear feet of channel, requiring bank grading/excavation activities and the discharge of fill material into approximately 0.27 acre (11,700 square feet) of streambed located below the

OHWL of the channel. All disturbed areas above the OHWL of the channel would be re-vegetated with a native seed mix.

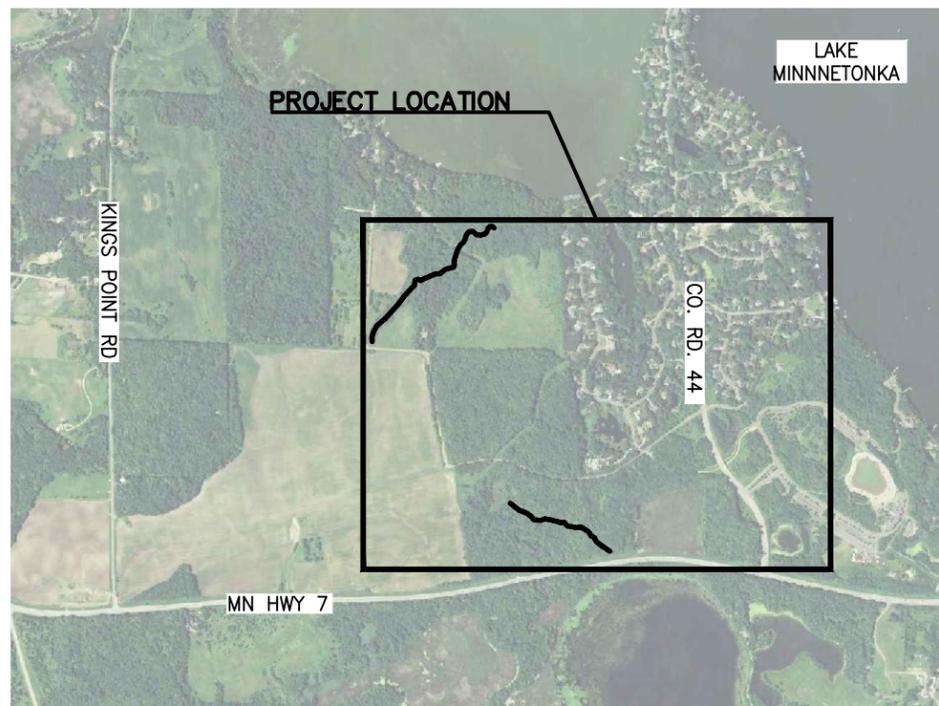
ALTERNATIVES CONSIDERED: The no build alternative was considered, but if the TRPD did not complete the project the banks along the areas identified for stabilization would continue to erode, adversely affecting downstream water quality. The applicant also considered hard-armoring portions of the channel identified for maintenance but instead decided to utilize more limited stabilization techniques (bank grading, riprap toe, coir toe and rock cross vanes) because it would be reduce erosion while increasing stream functions within the park.

COMPENSATORY MITIGATION: Was not proposed as part of this project. This is a water quality improvement project intended to improve the resource; it would not result in the loss of wetland functions or services.

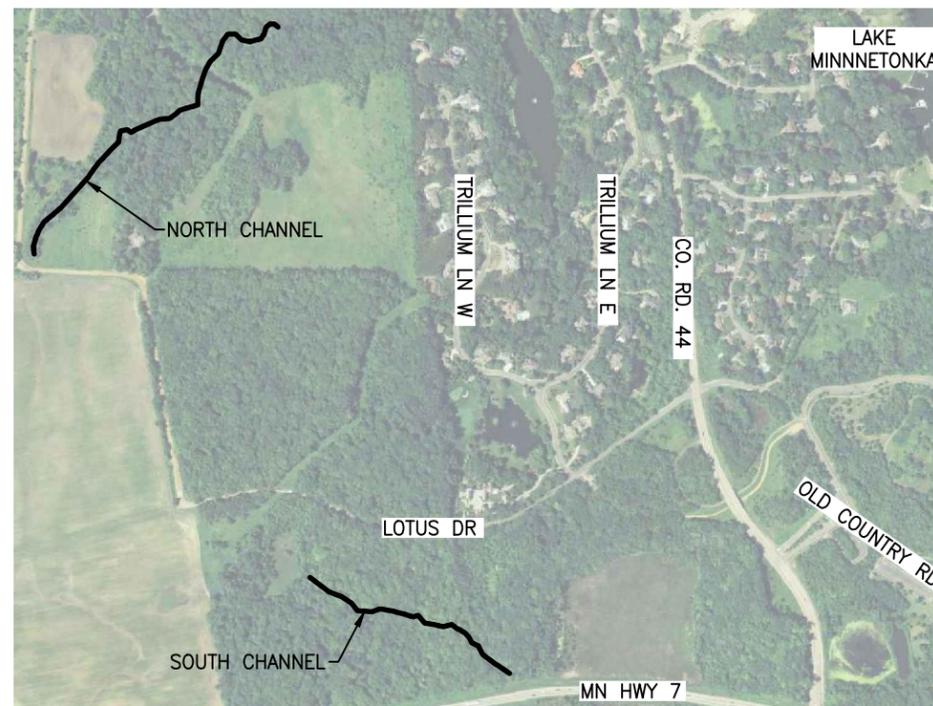
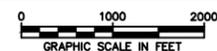
Drawings: See attached, labeled as 2015-04254-MMJ, Posting Figures 1-10.

Plot Date & Time: 12 October 2015 11:41 AM

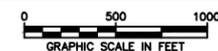
THREE RIVERS PARK DISTRICT LAKE MINNETONKA REGIONAL PARK CHANNEL STABILIZATION AUGUST 2015



PROJECT VICINITY MAP



PROJECT LOCATION MAP



SHEET INDEX	
SHEET	TITLE
G-101	TITLE AND INDEX SHEET
C-101	EXISTING CONDITIONS AND ACCESS PLAN - NORTH CHANNEL
C-102	EXISTING CONDITIONS AND ACCESS PLAN - SOUTH CHANNEL
C-103	NORTH CHANNEL STABILIZATION PLAN AND PROFILE STA. 8+30 TO 20+89
C-104	SOUTH CHANNEL STABILIZATION PLAN AND PROFILE STA. 0+00 TO 12+92
EC-101	SWPPP
D-101	DETAILS
D-102	DETAILS
THIS PLAN CONTAINS 8 SHEETS	

NOTE: THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D. THIS QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38-2 ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA".

EXACT LOCATION OF UNDERGROUND UTILITIES SUCH AS GAS, TELEPHONE, FIBER OPTIC, PIPELINES, ELECTRIC, AND CABLE TV ARE UNKNOWN.

WARNING:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR CALLING FOR LOCATIONS OF ALL EXISTING UTILITIES. THEY SHALL COOPERATE WITH ALL UTILITY COMPANIES IN MAINTAINING THEIR SERVICE AND/OR RELOCATION OF LINES.

THE CONTRACTOR SHALL CONTACT GOPHER STATE ONE CALL AT 651-454-0002 AT LEAST 48 HOURS IN ADVANCE FOR THE LOCATIONS OF ALL UNDERGROUND WIRES, CABLES, CONDUITS, PIPES, MANHOLES, VALVES OR OTHER BURIED STRUCTURES BEFORE DIGGING. THE CONTRACTOR SHALL REPAIR OR REPLACE THE ABOVE WHEN DAMAGED DURING CONSTRUCTION AT NO COST TO THE OWNER.

CALL BEFORE YOU DIG
GOPHER STATE ONE CALL
TWIN CITY AREA: 651-454-0002
TOLL FREE 1-800-252-1166

REV	REVISION DESCRIPTION	DWN	APP	REV DATE

SEAL
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.
[Signature]
ED MATTHIASEN
DATE 9/14/15 REG. NO. 16800

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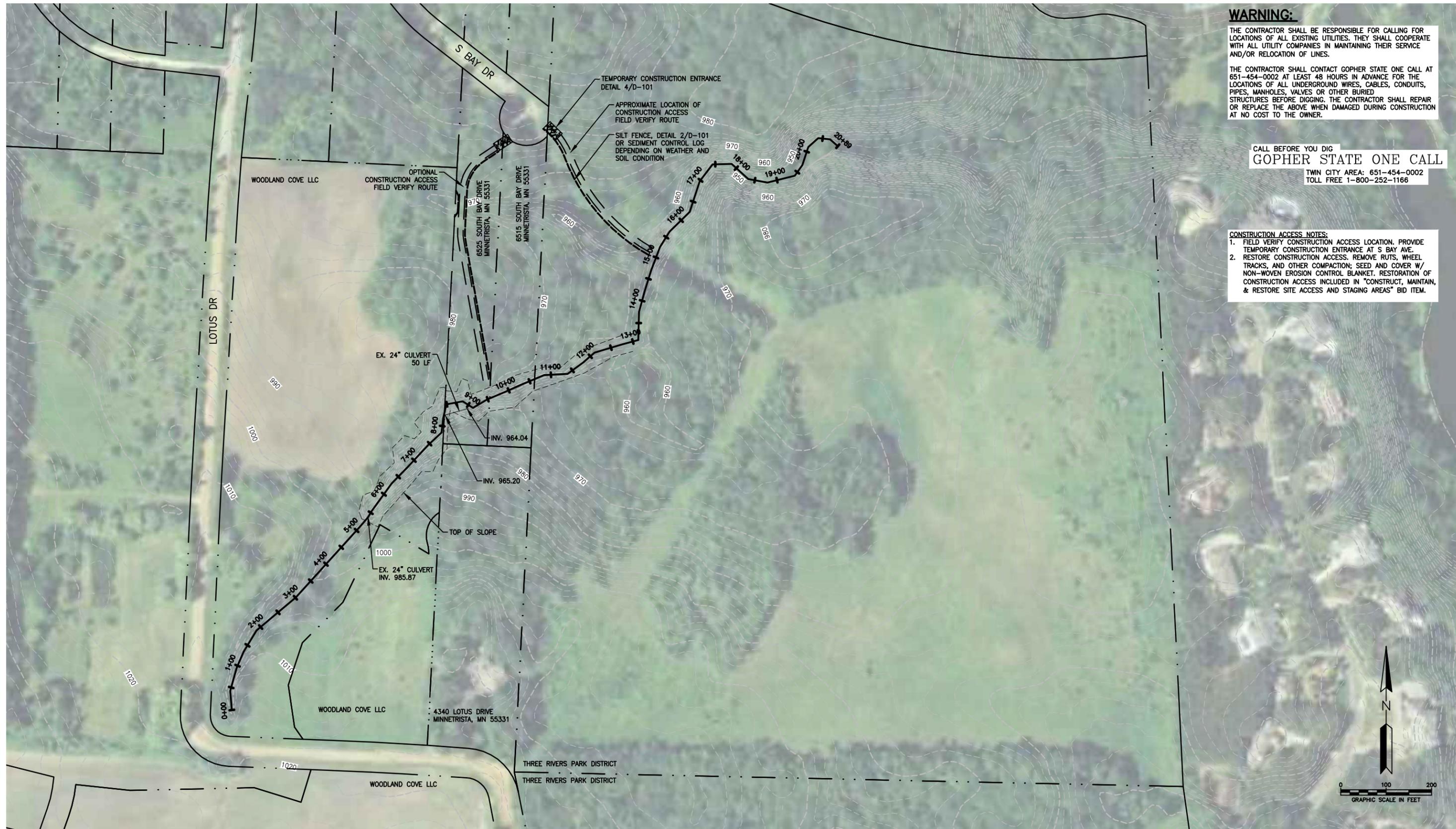
PROJECT TITLE
LAKE MINNETONKA REGIONAL PARK CHANNEL STABILIZATION

THREE RIVERS PARK DISTRICT
3000 XENIUM LANE NORTH
PLYMOUTH, MN 55441-1299

TITLE AND SHEET INDEX			
DWN BY	CHK'D	APP'D	DWG DATE
MJS	LNJ	EAM	APRIL 2015
PROJECT NO. 1414-0003		SHEET NO. G-101	
			REV NO. 0

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Plot Date & Time: 30 October 2015 4:07 PM



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CONSTRUCTION ACCESS NOTES:
 1. FIELD VERIFY CONSTRUCTION ACCESS LOCATION. PROVIDE TEMPORARY CONSTRUCTION ENTRANCE AT S BAY AVE.
 2. RESTORE CONSTRUCTION ACCESS. REMOVE RUTS, WHEEL TRACKS, AND OTHER COMPACTION; SEED AND COVER W/ NON-WOVEN EROSION CONTROL BLANKET. RESTORATION OF CONSTRUCTION ACCESS INCLUDED IN "CONSTRUCT, MAINTAIN, & RESTORE SITE ACCESS AND STAGING AREAS" BID ITEM.



LEGEND

- 898 --- CONTOUR MINOR (2 FT)
- 900 --- CONTOUR MAJOR (10 FT)
- . . . --- PROPERTY LINE

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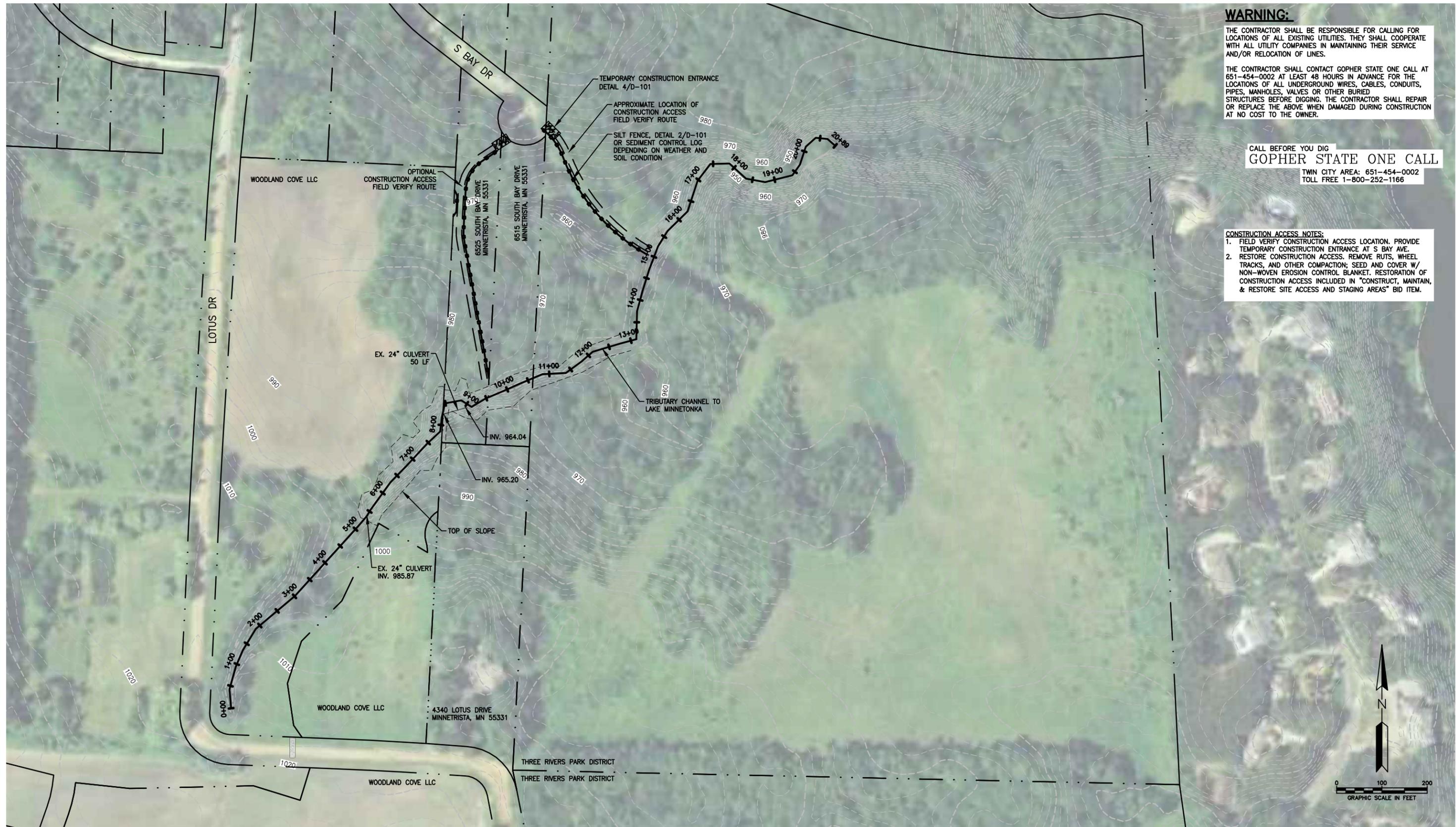
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PROJECT TITLE
 LAKE MINNETONKA REGIONAL PARK CHANNEL STABILIZATION
 THREE RIVERS PARK DISTRICT
 3000 XENIUM LANE NORTH PLYMOUTH, MN 55441-1299

SHEET TITLE			
EXISTING CONDITIONS AND ACCESS PLAN - NORTH CHANNEL			
DWN BY MJS	CHK'D LNJ	APP'D EAM	DWG DATE APRIL 2015
PROJECT NO. 1414-0003		SCALE AS SHOWN	REV NO. 0
SHEET NO. C-101		REV NO. 0	

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PROJECT TITLE
 LAKE MINNETONKA REGIONAL PARK CHANNEL STABILIZATION
 THREE RIVERS PARK DISTRICT
 3000 XENIUM LANE NORTH PLYMOUTH, MN 55441-1299

SHEET TITLE			
LAKE MINNETONKA REGIONAL PARK CHANNEL STABILIZATION - NORTH CHANNEL			
DWN BY	CHK'D	APP'D	DWG DATE
MJS	LNJ	EAM	APRIL 2015
PROJECT NO.		SCALE	
1414-0003		AS SHOWN	
SHEET NO.		REV NO.	
C-101A		0	

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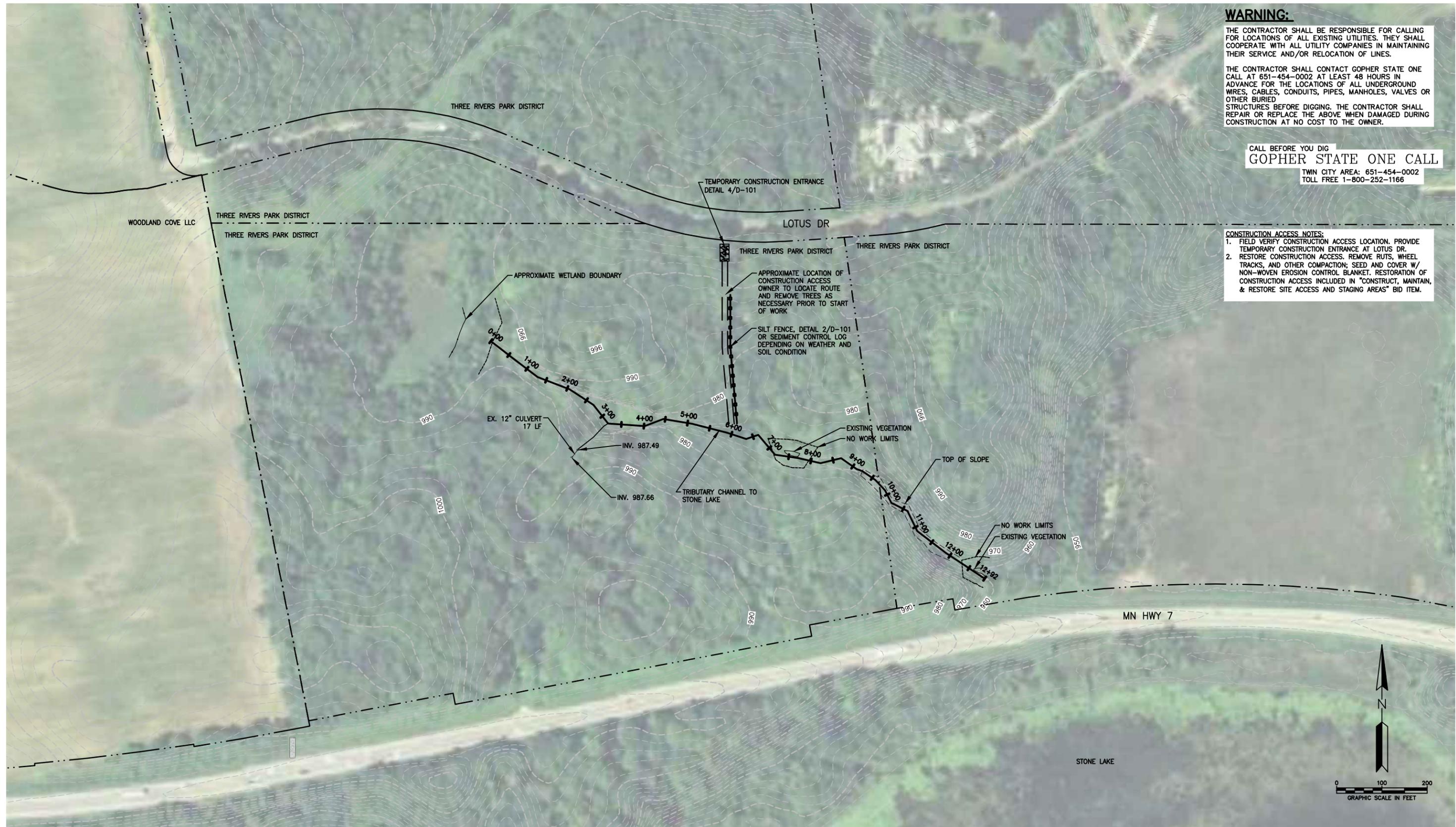
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 PLYMOUTH, MN 55441-1299

SHEET TITLE			
EXISTING CONDITIONS AND ACCESS PLAN - SOUTH CHANNEL			
DWN BY	CHK'D	APP'D	DWG DATE
MJS	LNJ	EAM	APRIL 2015
PROJECT NO.	SHEET NO.	SCALE	AS SHOWN
1414-0003	C-102		
REV NO.			
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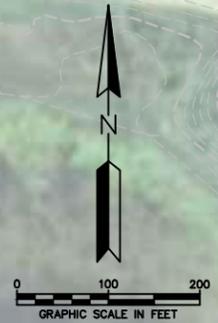
 ED MATTHESEN
 DATE 9/14/15 REG. NO. 16800

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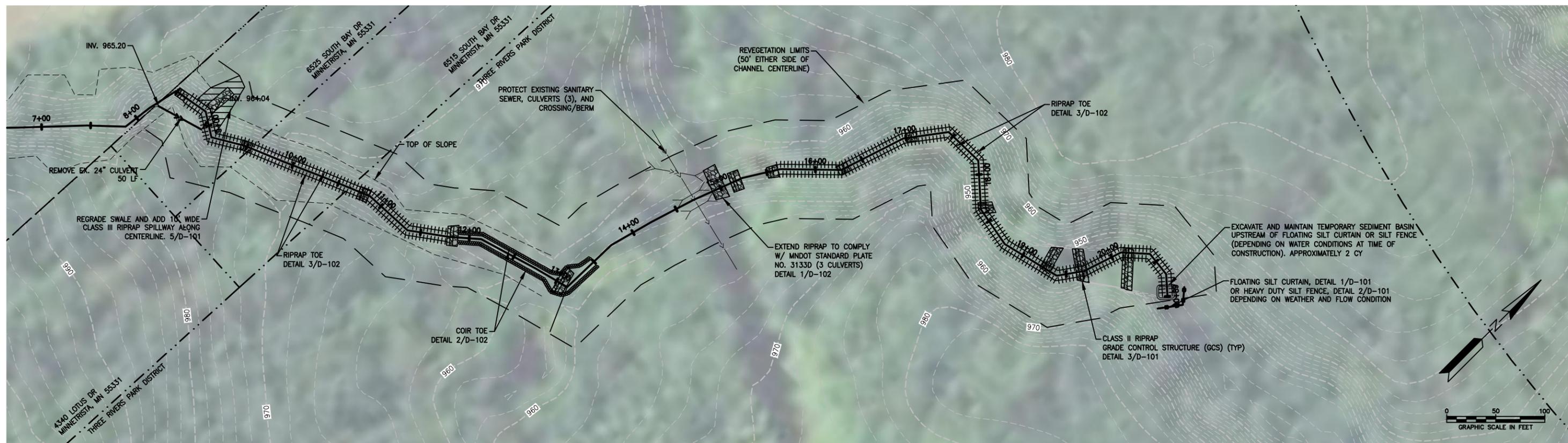
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 THREE RIVERS PARK DISTRICT
 3000 XENIUM LANE NORTH
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SHEET TITLE			
LAKE MINNETONKA REGIONAL PARK CHANNEL STABILIZATION - SOUTH CHANNEL			
DWN BY	CHK'D	APP'D	DWG DATE
MJS	LNJ	EAM	APRIL 2015
PROJECT NO.	SHEET NO.	SCALE	AS SHOWN
1414-0003	C-102A		
			REV NO.
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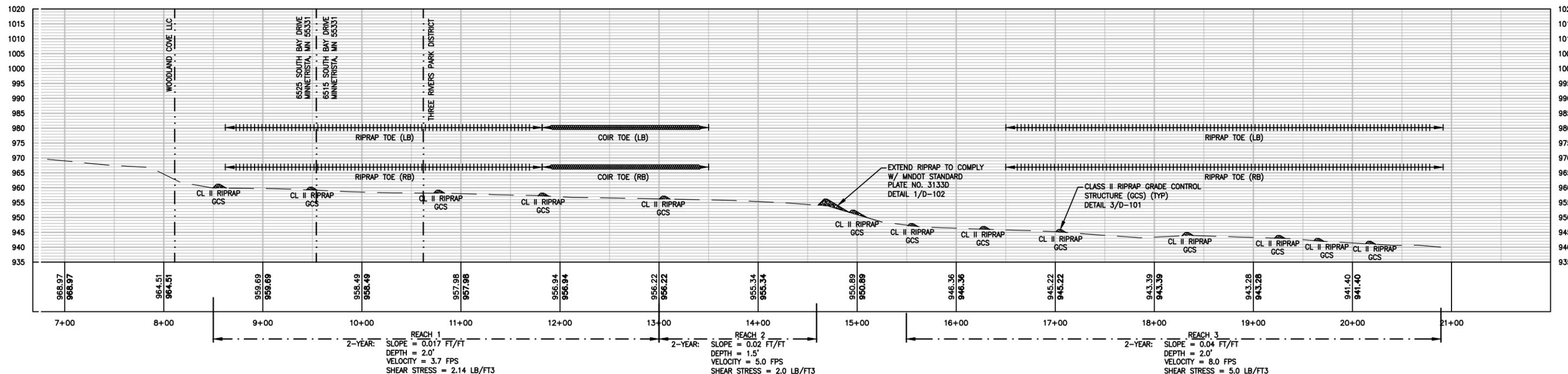


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NORTH CHANNEL CENTERLINE PROFILE



LEGEND

- COIR TOE
- +++++ RIPRAP TOE

NOTES:

1. REVEGETATE WITHIN REVEGETATION LIMITS WITH NATIVE SEED MIX AND HYDRAULIC MATRIX TYPE BONDED FIBER MATRIX.
2. PROVIDE EROSION CONTROL BLANKET ACCORDING TO APPLICABLE DETAIL.
3. FINAL LOCATION OF GRADE CONTROL STRUCTURES AND EXTENT OF BANK STABILIZATION WORK TO BE FIELD LOCATED AND STAKED BY ENGINEER.

REV	REVISION DESCRIPTION	DWN	APP	REV DATE

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[Signature]
ED MATTHIENSEN

DATE 9/14/15 REG. NO. 16800

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PROJECT TITLE
LAKE MINNETONKA REGIONAL PARK CHANNEL STABILIZATION

THREE RIVERS PARK DISTRICT

3000 XENIUM LANE NORTH PLYMOUTH, MN 55441-1299

SHEET TITLE			
NORTH CHANNEL STABILIZATION PLAN AND PROFILE 8+30 TO 20+89			
DWN BY MJS	CHK'D LNJ	APP'D EAM	DWG DATE APRIL 2015
PROJECT NO. 1414-0003	SHEET NO. C-103	SCALE AS SHOWN	REV NO. 0

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Plot Date & Time: 14 September 2016 07:07 PM

Construction Dates: December 2015 - June 2016

Party Responsible for Long Term Operation and Maintenance of the Site - OWNER

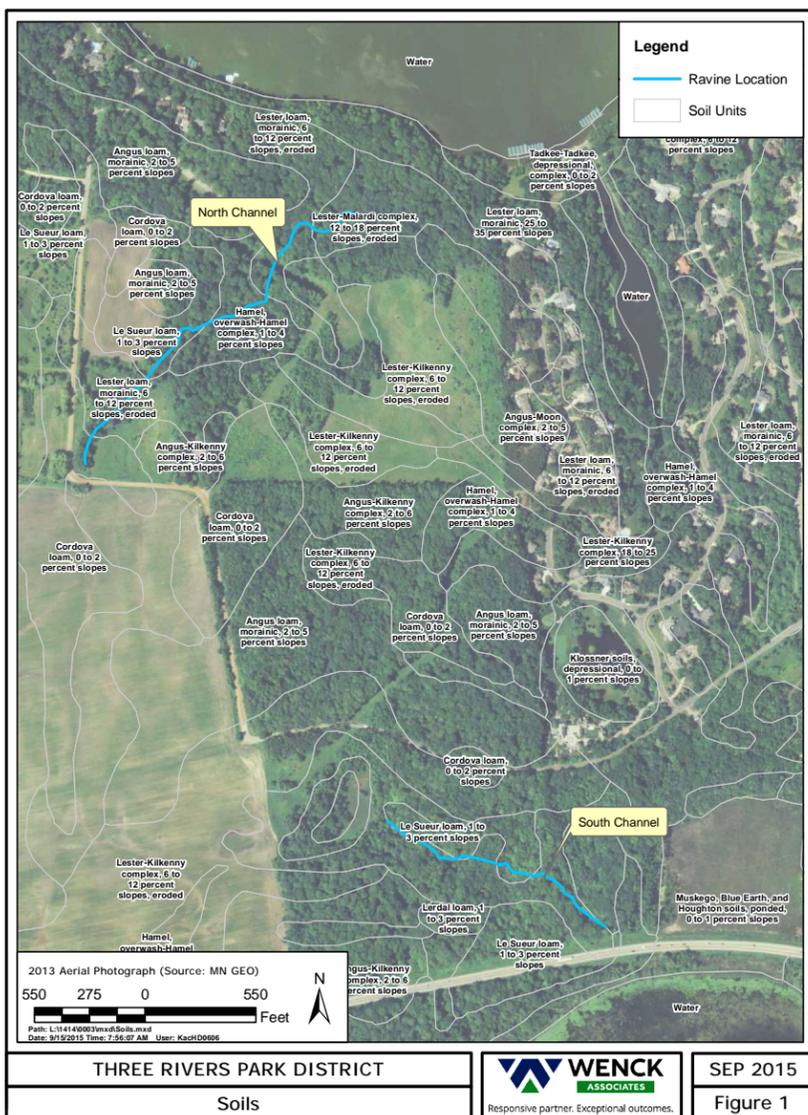
Three Rivers Park District
3000 Xenium Lane North
Plymouth, MN 55441

Eric Nelson
(763) 694-2060
ENelson@threeriversparkdistrict.org

Party Responsible for Implementation of the SWPPP - CONTRACTOR (TBD)

Surface Area Tabulation

Total Site Area	1.65 acres
North Channel Area	0.81 acres
South Channel Area	0.84 acres
Existing Impervious Area	0.00 acres
Proposed Impervious Area	0.00 acres



EROSION AND SEDIMENT CONTROL PRACTICES

All exposed soil areas must have temporary erosion protection (erosion control blanket, seed) as soon as possible or within 7 days after the construction activity in that portion of the site has temporarily or permanently ceased.

CONTRACTOR shall implement appropriate construction phasing, vegetative buffer strips, horizontal slope grading, and other construction practices that minimize erosion when practical. The normal wetted perimeter of any temporary or permanent drainage ditch that drains water from a construction site, or diverts water around a site, must be stabilized within 200 lineal feet from the property edge, or from the point of discharge to any surface water. Stabilization must be completed within 24 hours of connecting to a surface water. Pipe outlets must be provided with temporary or permanent energy dissipation within 24 hours of connection to a surface water.

The following measures will be taken as sediment control practices in order to minimize sediments from entering surface waters:

1. Installation of floating silt curtain as shown on Sheet D-101. Floating silt curtain shall be located at the downstream end of stream bank disturbances as shown on Sheets C-103 and C-104. The silt curtain shall be kept in place until that channel is stabilized.
2. Excavation of temporary sedimentation basins immediately upstream of floating silt curtains as indicated on Sheets C-103 and C-104.
3. Construction of rock construction entrance as shown on sheet D-101. Rock construction entrance shall be located as shown on Sheets C-103 and C-104 to prevent tracking of sediment offsite.

Temporary Sediment Basin

Because the total disturbed area for this project is less than 5 acres, there are no additional temporary sedimentation basin requirements.

Final Stabilization

All areas disturbed by construction will receive seed according to the plans and specifications and within the specified vegetative time schedule.

Final stabilization will occur when the site has a uniform vegetative cover with a density of 70% over the entire disturbed area. All temporary synthetic erosion prevention and sediment control BMPs (such as silt fence) must be removed as part of the site final stabilization. All sediment must be cleaned out of conveyances and temporary sedimentation basins if applicable.

Notice of Termination (NOT) must be submitted within 30 days of final stabilization. Before Termination, revegetation establishment and coverage must meet the permit requirements.

Dewatering

Turbid or sediment-laden water must be discharged to an onsite sedimentation basin, or treated with the appropriate BMPs, such that discharge does not adversely affect the receiving water. Ensure that discharge points are adequately protected from erosion and scour. CONTRACTOR responsible to develop and submit dewatering plan to engineer, secure any required permits, and comply with permits.

Pollution Prevention Measures

Solid Waste

Solid waste, including but not limited to, collected asphalt and concrete millings, floating debris, paper, plastic, fabric, construction and demolition debris and other waste must be disposed of properly and must comply with MPCA disposal requirements.

Hazardous Materials

Hazardous materials, including but not limited to oil, gasoline, paint and any hazardous substance must be properly stored including secondary containments, to prevent spills, leaks or other discharge. Restricted access to storage areas must be provided to prevent vandalism. Storage and disposal of hazardous waste must be in compliance with MPCA regulations.

Washing of Construction Vehicles

External washing of trucks and other construction vehicles must be limited to a defined area of the site. Runoff must be contained and waste properly disposed of. No engine degreasing is allowed on site.

Concrete Washout Area

The contractor shall use means to ensure turbid discharge from concrete washout is contained and not released to surface waters.

Amendments

Amend the SWPPP as necessary to address any changes in design, construction, operation, maintenance, weather or seasonal conditions that have a significant effect on discharge of pollutants to surface or underground waters; or to address concerns identified during inspections or investigations by OWNER, USEPA or MPCA.

Record Retention

The SWPPP, all changes to it, and inspection and maintenance records must be kept on-site during construction. The OWNER must retain a copy of the SWPPP along with the following records for three (3) years after submittal of the Notice of Termination.

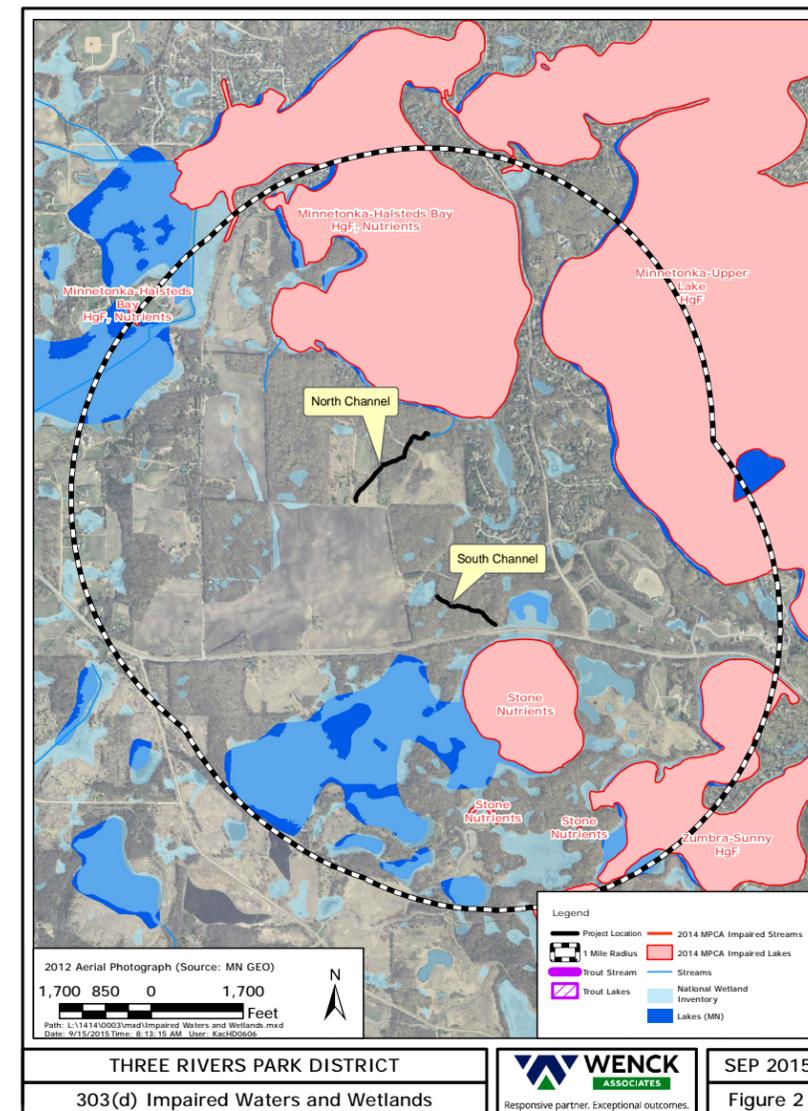
1. Any other permits required for the project;
2. Records of all inspection and maintenance conducted during construction;
3. All permanent operations and maintenance agreements that have been implemented, including all right of way, contract, covenants and other binding requirements regarding perpetual maintenance; and
4. All required calculations for design of the temporary and permanent stormwater management systems.

Inspections

The inspection log will be completed by the CONTRACTOR for the construction site. Inspections at the site will be completed as follows:

Once every seven (7) days during active construction and, Within 24 hours after a rainfall event greater than 0.5 inches in 24 hours.

The individual performing inspections must be trained as required by part IV.E of the Permit. CONTRACTOR to provide OWNER with proof of training. Inspections must include stabilized areas, erosion prevention and sediment control BMPs, and infiltration areas. Corrective actions must be identified and date of correction must be noted as identified in Section IV.E. of the Permit.



IMPAIRED WATERS, SPECIAL WATERS, AND WETLANDS

This Project is not located within 1 mile of a special water.

This Project is located within 1 mile of an impaired waters (Figure 2 this sheet): Lake Minnetonka impaired for HgF, Nutrients; Stone Lake impaired for Nutrients; Lake Zumbra impaired for HgF.

Because of the proximity of the project to an impaired water during construction:

1. All exposed soil areas must be stabilized as soon as possible to limit soil erosion but in no case later than 7 days after the construction activity in that portion of the site has temporarily or permanently ceased.

By field observation, there will be no wetland impacts, however the south channel is upstream of a wetland. The construction limits and access route shall stay outside of the 50 foot wetland buffer.

EROSION CONTROL ESTIMATED QUANTITIES

Material	North Channel Quantity	South Channel Quantity
MnDOT Seed Mix 33-262	44 lb/acre x 0.4 acres = 18 LBS	45 lb/acre x 0.5 acres = 23 LBS
Woven Erosion Control Blanket	1,800 SY	2,325 SY
Non-Woven Erosion Control Blanket	1,800 SY	2,325 SY
Bonded Fiber Matrix	3,000 lb/acre x 0.4 acres = 1,200 LBS	3,000 lb/acre x 0.4 acres = 1,200 LBS
Floating Silt Curtain	30 LF	40 LF
Sediment Control Log	250 LF	350 LF
Silt Fence	250 LF	350 LF

CERTIFICATION
In accordance with Part III.A.2 of the General Permit Authorization to Discharge Stormwater Associated with Construction Activity under the NPDES, the preparer of this document was trained under the University of Minnesota Erosion and Sediment Control Certification Program. Mr. Louis Sigtermans' certification in Design of SWPPP is valid through May 31, 2017.

UNIVERSITY OF MINNESOTA
Louis H Sigtermans
Saint Paul, MN

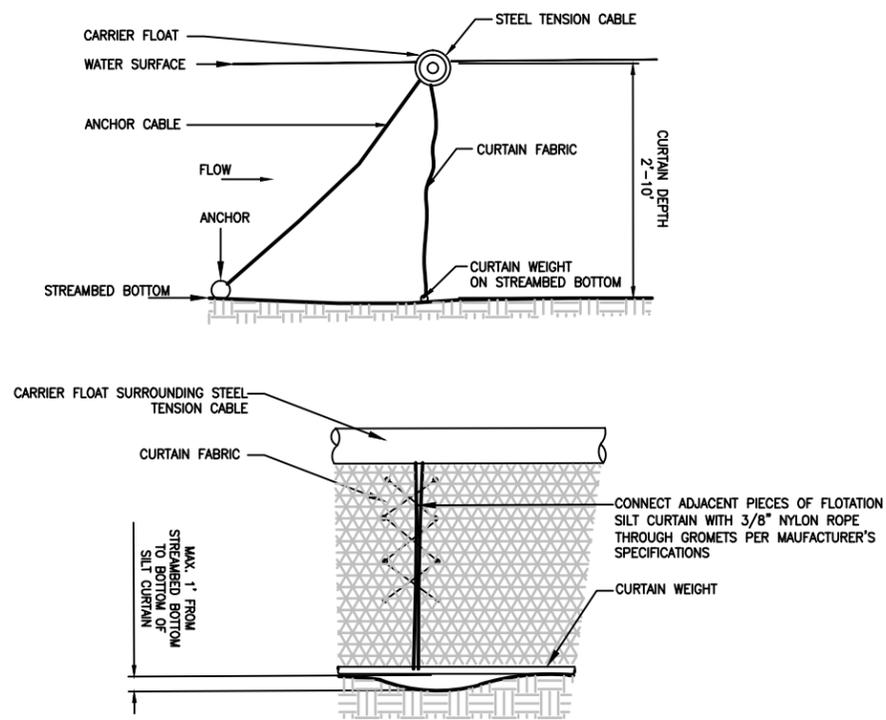
Design of Construction SWPPP (May 31, 2017)

SEAL	PRIME CONSULTANT
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ED MATTHIESEN	PROJECT TITLE LAKE MINNETONKA REGIONAL PARK CHANNEL STABILIZATION
DATE <u>9/14/15</u> REG. NO. <u>16800</u>	SHEET TITLE SWPPP
REV REVISION DESCRIPTION DWN APP REV DATE	DWN BY MJS CHK'D LNJ APP'D EAM DWG DATE APRIL 2015 SCALE AS SHOWN
	PROJECT NO. 1414-0003 SHEET NO. EC-101 REV NO. 0

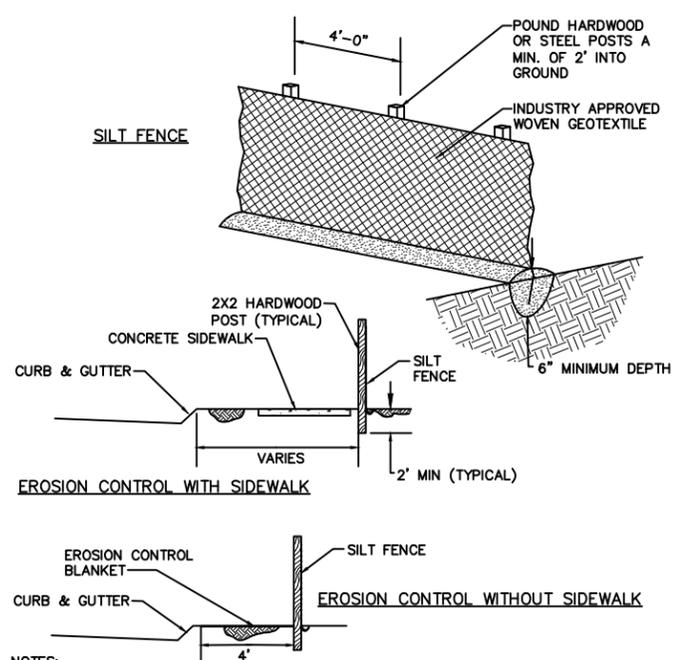
THREE RIVERS PARK DISTRICT	3000 XENIUM LANE NORTH PLYMOUTH, MN 55441-1299
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Plot Date & Time: 12 October 2015 4:07 PM

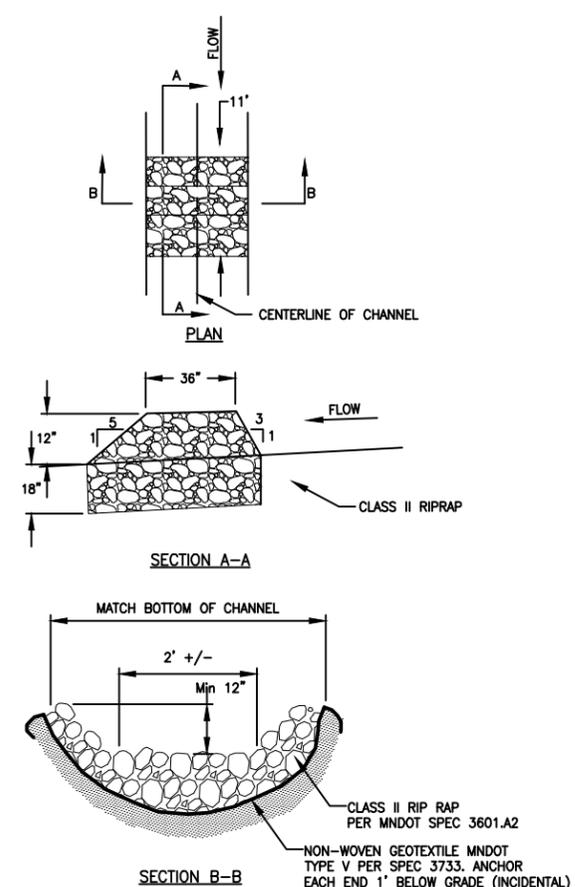


FLOTATION SILT CURTAIN
NOT TO SCALE

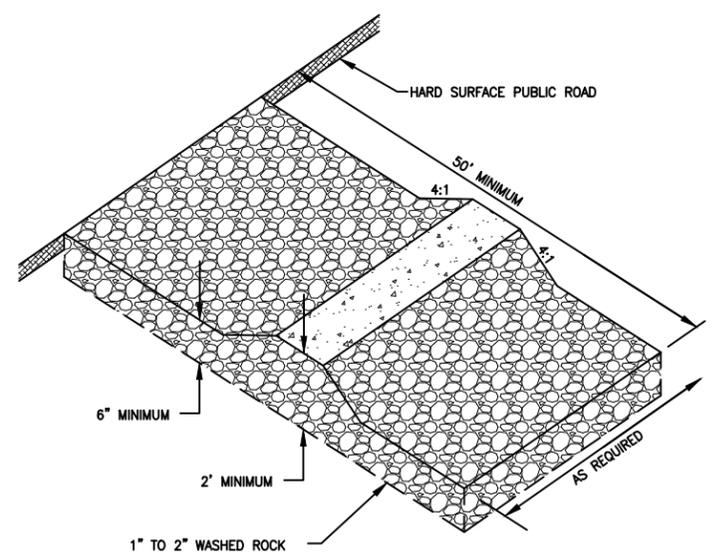


- NOTES:**
1. INSTALL SILT FENCE PER PLAN SET BEFORE BEGINNING CONSTRUCTION
 2. INSTALL SILT FENCE AND EROSION CONTROL BLANKET BEHIND CURB & GUTTER AS SHOWN
 3. REPLACE TORN, OVERBURDENED, OR DECOMPOSING SILT FENCE WITHIN 24 HOURS
 4. TO JOIN SECTIONS OF SILT FENCE, POSITION POSTS TO OVERLAP. FABRIC SHOULD FOLD AROUND EACH POST ONE FULL TURN

SILT FENCE
NOT TO SCALE

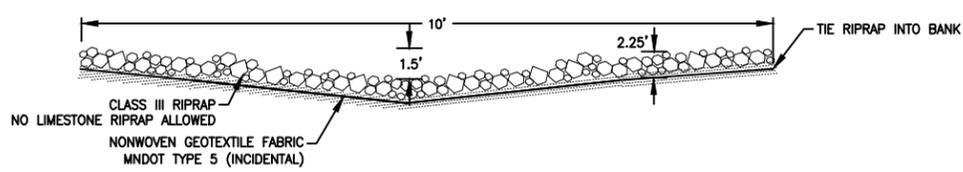


CLASS II RIPRAP GRADE CONTROL STRUCTURE
NOT TO SCALE



- NOTES:**
1. ROCK SIZE SHOULD BE 1" TO 2" IN SIZE SUCH AS MN/DOT CA-1 OR CA-2 COURSE AGGREGATE. (WASHED)
 2. A GEOTEXTILE FABRIC MAY BE USED UNDER THE ROCK TO PREVENT MIGRATION OF THE UNDERLYING SOIL INTO THE STONE.

TEMPORARY CONSTRUCTION ENTRANCE
NOT TO SCALE



CLASS III RIPRAP SPILLWAY DETAIL
NOT TO SCALE

REV	REVISION DESCRIPTION	DWN	APP	REV DATE	DATE 9/14/15	REG. NO. 16800
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SEAL
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.
ED MATTHIESEN

PRIME CONSULTANT
WENCK ASSOCIATES
Responsive partner. Exceptional outcomes.

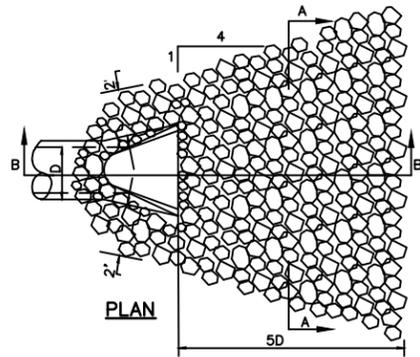
PROJECT TITLE
LAKE MINNETONKA REGIONAL PARK CHANNEL STABILIZATION

THREE RIVERS PARK DISTRICT
3000 XENIUM LANE NORTH
PLYMOUTH, MN 55441-1299

SHEET TITLE DETAILS			
DWN BY MJS	CHK'D LNJ	APP'D EAM	DWG DATE APRIL 2015
PROJECT NO. 1414-0003	SHEET NO. D-101	SCALE AS SHOWN	REV NO. 0

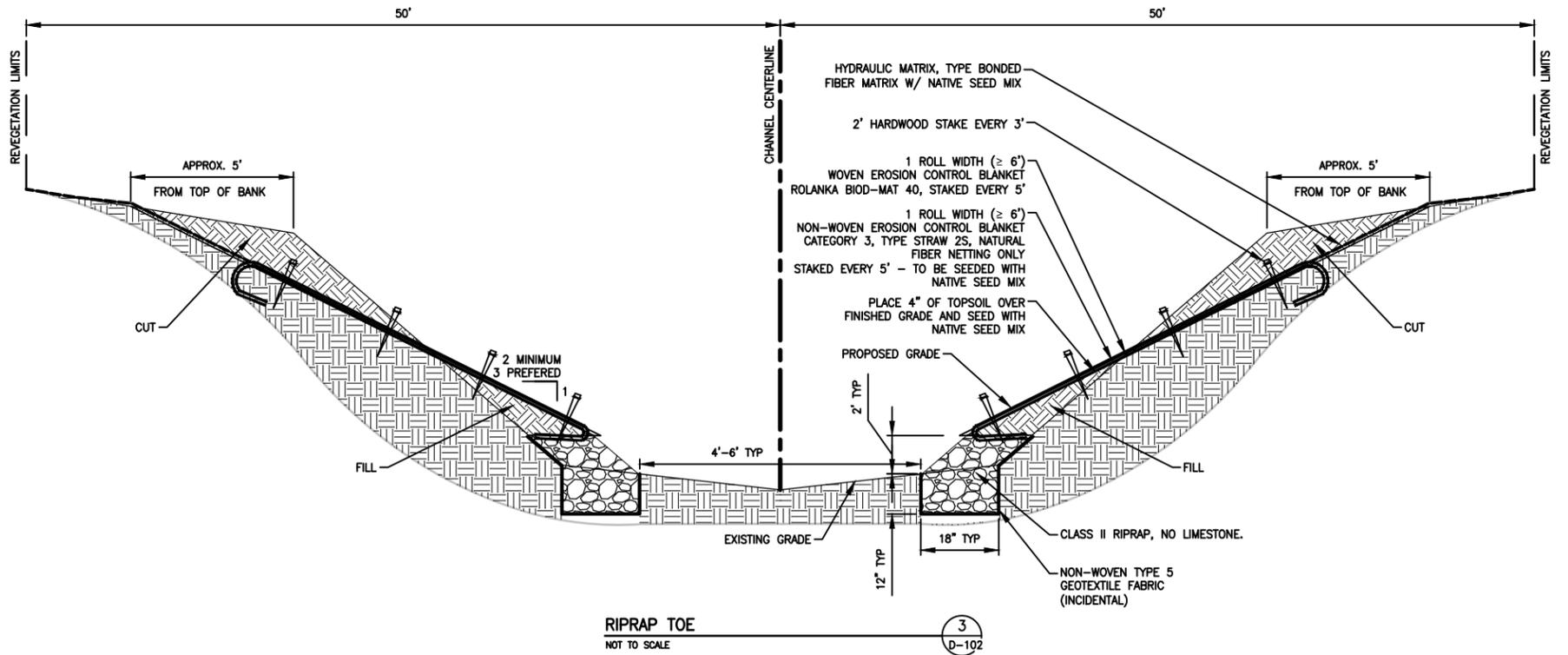
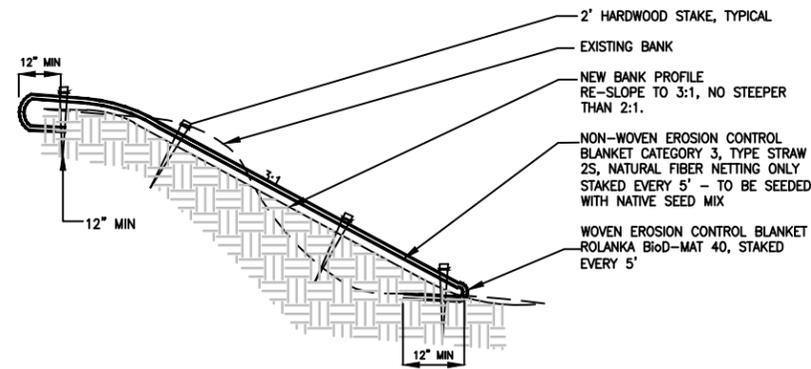
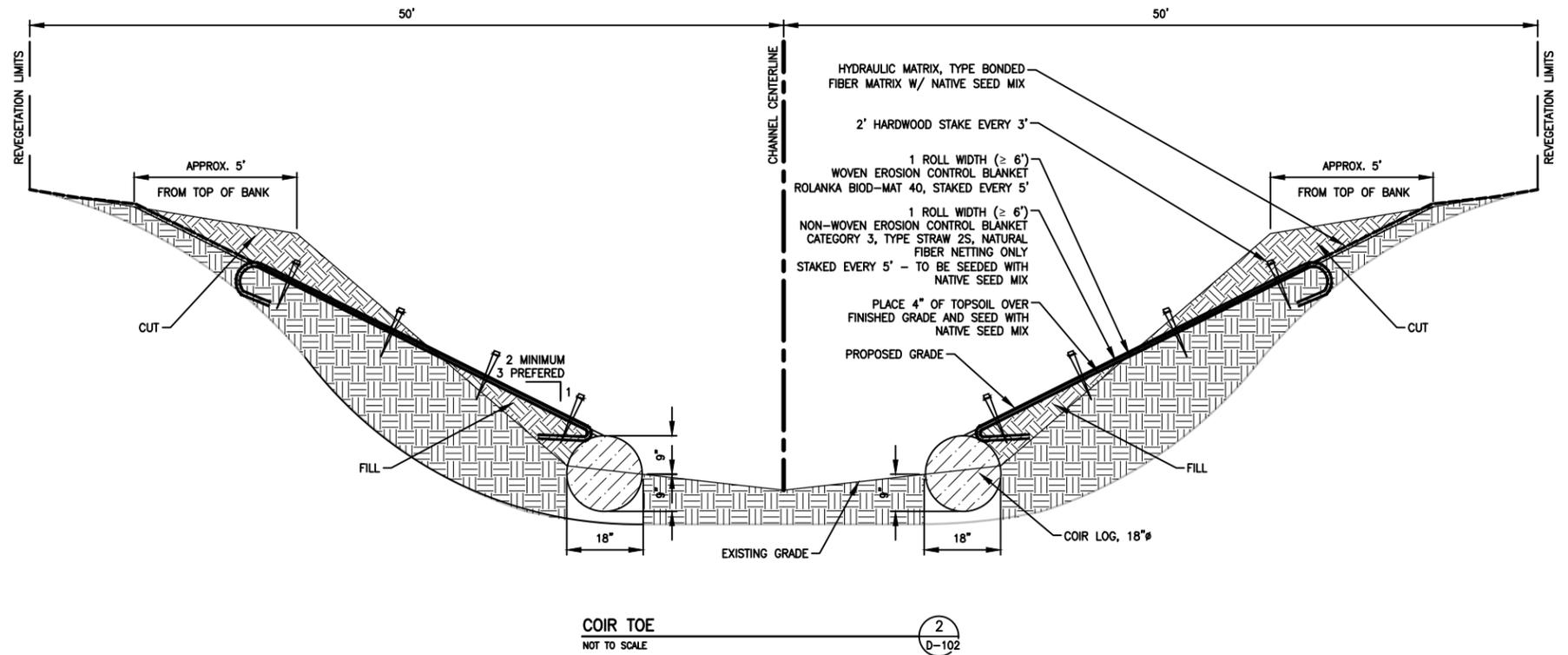
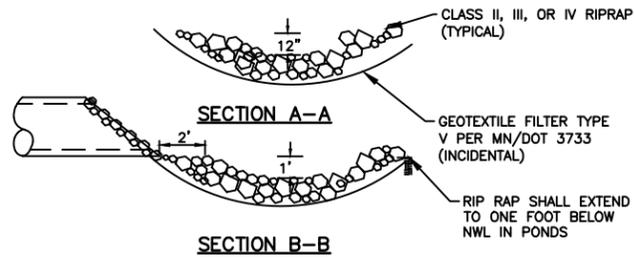
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Plot Date & Time: 13 October 2015 4:07 PM



PIPE DIAMETER	RIPRAP
12"-24"	8-12 CY CLASS II
27"-33"	12-20 CY CLASS III
36"-48"	23-38 CY CLASS III
54" AND UP	62 CY CLASS IV

RIPRAP AT FLARED END SECTIONS DETAIL
NOT TO SCALE



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REV	REVISION DESCRIPTION	DWN	APP	REV DATE

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Ed Matthesen

ED MATTHESEN

DATE 9/14/15 REG. NO. 16800

PRIME CONSULTANT

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PROJECT TITLE
LAKE MINNETONKA REGIONAL PARK CHANNEL STABILIZATION

THREE RIVERS PARK DISTRICT

3000 XENIUM LANE NORTH
PLYMOUTH, MN 55441-1299

SHEET TITLE			
DETAILS			
DWN BY MJS	CHK'D LNJ	APP'D EAM	DWG DATE APRIL 2015
PROJECT NO. 1414-0003	SHEET NO. D-102	SCALE AS SHOWN	REV NO. 0