PART ONE: Applicant Information

If applicant is an entity (company, government entity, partnership, etc.), an authorized contact person must be identified. If the applicant is using an agent (consultant, lawyer, or other third party) and has authorized them to act on their behalf, the agent's contact information must also be provided.

Applicant/Landowner Name: Barry Simonson
Enbridge Employee Services Inc
Mailing Address: 26 East Superior Street, Suite 309
Duluth, MN 55802
Phone: 218-522-4825
E-mail Address: Barry.Simonson@enbridge.com

Authorized Contact (do not complete if same as above): Bobby Hahn
Enbridge
Mailing Address: 26 East Superior Street, Suite 309
Duluth, MN 55802
Phone: 218-522-4751
E-mail Address: Bobby.Hahn@enbridge.com

Agent Name: Linda Fisher, Fredrikson & Byron, P.A.
Mailing Address: 200 South 6th Street, Suite 4000
Minneapolis, MN 55402
Phone: 612-492-7396
E-mail Address: lfisher@fredlaw.com

PART TWO: Site Location Information

County: See Supplemental Information **City/Township:** See Supplemental Information
Parcel ID and/or Address: See Supplemental Information
Legal Description (Section, Township, Range): See Supplemental Information
Lat/Long (decimal degrees): See Supplemental Information
Attach a map showing the location of the site in relation to local streets, roads, highways. See Appendix A of Supplemental information
Approximate size of site (acres) or if a linear project, length (feet): 330 miles

If you know that your proposal will require an individual Permit from the U.S. Army Corps of Engineers, you must provide the names and addresses of all property owners adjacent to the project site. This information may be provided by attaching a list to your application or by using block 25 of the Application for Department of the Army permit which can be obtained at:

http://www.mvp.usace.army.mil/Portals/57/docs/regulatory/RegulatoryDocs/engform_4345_2012oct.pdf

PART THREE: General Project/Site Information

If this application is related to a delineation approval, exemption determination, jurisdictional determination, or other correspondence submitted ***prior to*** this application then describe that here and provide the Corps of Engineers project number.

Describe the project that is being proposed, the project purpose and need, and schedule for implementation and completion. The project description must fully describe the nature and scope of the proposed activity including a description of all project elements that effect aquatic resources (wetland, lake, tributary, etc.) and must also include plans and cross section or profile drawings showing the location, character, and dimensions of all proposed activities and aquatic resource impacts.

- ***See Supplemental Information***

PART FOUR: Aquatic Resource Impact[1] Summary

If your proposed project involves a direct or indirect impact to an aquatic resource (wetland, lake, tributary, etc.) identify each impact in the table below. Include all anticipated impacts, including those expected to be temporary. Attach an overhead view map, aerial photo, and/or drawing showing all of the aquatic resources in the project area and the location(s) of the proposed impacts. Label each aquatic resource on the map with a reference number or letter and identify the impacts in the following table.

Aquatic Resource ID (as noted on overhead view)	**Aquatic Resource Type** (wetland, lake, tributary etc.)	**Type of Impact** (fill, excavate, drain, or remove vegetation)	**Duration of Impact** Permanent (P) or Temporary (T)[1]	**Size of Impact**[2]	**Overall Size of Aquatic Resource** [3]	**Existing Plant Community Type(s)** in Impact Area[4]	**County, Major Watershed #, and Bank Service Area #** of Impact Area[5]
See Supplemental Information							

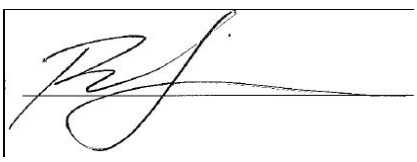
[1]If impacts are temporary; enter the duration of the impacts in days next to the "T". For example, a project with a temporary access fill that would be removed after 220 days would be entered "T (220)".
[2]Impacts less than 0.01 acre should be reported in square feet. Impacts 0.01 acre or greater should be reported as acres and rounded to the nearest 0.01 acre. Tributary impacts must be reported in linear feet of impact and an area of impact by indicating first the linear feet of impact along the flowline of the stream followed by the area impact in parentheses). For example, a project that impacts 50 feet of a stream that is 6 feet wide would be reported as 50 ft (300 square feet).
[3]This is generally only applicable if you are applying for a de minimis exemption under MN Rules 8420.0420 Subp. 8, otherwise enter "N/A".
[4]Use *Wetland Plants and Plant Community Types of Minnesota and Wisconsin* 3rd Ed. as modified in MN Rules 8420.0405 Subp. 2.
[5]Refer to Major Watershed and Bank Service Area maps in MN Rules 8420.0522 Subp. 7.

If any of the above identified impacts have already occurred, identify which impacts they are and the circumstances associated with each:

PART FIVE: Applicant Signature

☐ Check here if you are requesting a pre-application consultation with the Corps and LGU based on the information you have provided. Regulatory entities will not initiate a formal application review if this box is checked.

By signature below, I attest that the information in this application is complete and accurate. I further attest that I possess the authority to undertake the work described herein.

Signature:  Date: September 21, 2018

I hereby authorize to act on my behalf as my agent in the processing of this application and to furnish, upon request, supplemental information in support of this application.

[1] The term "impact" as used in this joint application form is a generic term used for disclosure purposes to identify activities that may require approval from one or more regulatory agencies. For purposes of this form it is not meant to indicate whether or not those activities may require mitigation/replacement.

Attachment A
Request for Delineation Review, Wetland Type Determination, or Jurisdictional Determination

By submission of the enclosed wetland delineation report, I am requesting that the U.S. Army Corps of Engineers, St. Paul District (Corps) and/or the Wetland Conservation Act Local Government Unit (LGU) provide me with the following (check all that apply):

☐ **Wetland Type Confirmation**

☐ **Delineation Concurrence**. Concurrence with a delineation is a written notification from the Corps and a decision from the LGU concurring, not concurring, or commenting on the boundaries of the aquatic resources delineated on the property. Delineation concurrences are generally valid for five years unless site conditions change. Under this request alone, the Corps will not address the jurisdictional status of the aquatic resources on the property, only the boundaries of the resources within the review area (including wetlands, tributaries, lakes, etc.).

☒ **Preliminary Jurisdictional Determination**. A preliminary jurisdictional determination (PJD) is a non-binding written indication from the Corps that waters, including wetlands, identified on a parcel may be waters of the United States. For purposes of computation of impacts and compensatory mitigation requirements, a permit decision made on the basis of a PJD will treat all waters and wetlands in the review area as if they are jurisdictional waters of the U.S. PJDs are advisory in nature and may not be appealed.

☐ **Approved Jurisdictional Determination**. An approved jurisdictional determination (AJD) is an official Corps determination that jurisdictional waters of the United States are either present or absent on the property. AJDs can generally be relied upon by the affected party for five years. An AJD may be appealed through the Corps administrative appeal process.

In order for the Corps and LGU to process your request, the wetland delineation must be prepared in accordance with the 1987 Corps of Engineers Wetland Delineation Manual, any approved Regional Supplements to the 1987 Manual, and the *Guidelines for Submitting Wetland Delineations in Minnesota* (2013).
http://www.mvp.usace.army.mil/Missions/Regulatory/DelineationJDGuidance.aspx

Project Name and/or Number:

Attachment B
Supporting Information for Applications Involving Exemptions, No Loss Determinations, and Activities Not Requiring Mitigation

Complete this part ***if*** you maintain that the identified aquatic resource impacts in Part Four do not require wetland replacement/compensatory mitigation OR ***if*** you are seeking verification that the proposed water resource impacts are either exempt from replacement or are not under CWA/WCA jurisdiction.

Identify the specific exemption or no-loss provision for which you believe your project or site qualifies:

Provide a detailed explanation of how your project or site qualifies for the above. Be specific and provide and refer to attachments and exhibits that support your contention. Applicants should refer to rules (e.g. WCA rules), guidance documents (e.g. BWSR guidance, Corps guidance letters/public notices), and permit conditions (e.g. Corps General Permit conditions) to determine the necessary information to support the application. Applicants are strongly encouraged to contact the WCA LGU and Corps Project Manager prior to submitting an application if they are unsure of what type of information to provide:

Attachment C
Avoidance and Minimization

Project Purpose, Need, and Requirements. Clearly state the purpose of your project and need for your project. Also include a description of any specific requirements of the project as they relate to project location, project footprint, water management, and any other applicable requirements. Attach an overhead plan sheet showing all relevant features of the project (buildings, roads, etc.), aquatic resource features (impact areas noted) and construction details (grading plans, storm water management plans, etc.), referencing these as necessary:

- See Supplemental Information

Avoidance. Both the CWA and the WCA require that impacts to aquatic resources be avoided if practicable alternatives exist. Clearly describe all on-site measures considered to avoid impacts to aquatic resources and discuss at least two project alternatives that avoid all impacts to aquatic resources on the site. These alternatives may include alternative site plans, alternate sites, and/or not doing the project. Alternatives should be feasible and prudent (see MN Rules 8420.0520 Subp. 2 C). Applicants are encouraged to attach drawings and plans to support their analysis:

- See Supplemental Information

Minimization. Both the CWA and the WCA require that all unavoidable impacts to aquatic resources be minimized to the greatest extent practicable. Discuss all features of the proposed project that have been modified to minimize the impacts to water resources (see MN Rules 8420.0520 Subp. 4):

- See Supplemental Information

Off-Site Alternatives. An off-site alternatives analysis is not required for all permit applications. If you know that your proposal will require an individual permit (standard permit or letter of permission) from the U.S. Army Corps of Engineers, you may be required to provide an off-site alternatives analysis. The alternatives analysis is not required for a complete application but must be provided during the review process in order for the Corps to complete the evaluation of your application and reach a final decision. Applicants with questions about when an off-site alternatives analysis is required should contact their Corps Project Manager.

- See Supplemental Information

Project Name and/or Number:

Attachment D
Replacement/Compensatory Mitigation

Complete this part ***if*** your application involves wetland replacement/compensatory mitigation not associated with the local road wetland replacement program. Applicants should consult Corps mitigation guidelines and WCA rules for requirements.

Replacement/Compensatory Mitigation via Wetland Banking. Complete this section if you are proposing to use credits from an existing wetland bank (with an account number in the State wetland banking system) for all or part of your replacement/compensatory mitigation requirements.

Wetland Bank Account #	**County**	**Major Watershed #**	**Bank Service Area #**	**Credit Type** (if applicable)	**Number of Credits**

Applicants should attach documentation indicating that they have contacted the wetland bank account owner and reached at least a tentative agreement to utilize the identified credits for the project. This documentation could be a signed purchase agreement, signed application for withdrawal of credits or some other correspondence indicating an agreement between the applicant and the bank owner. *However, applicants are advised not to enter into a binding agreement to purchase credits until the mitigation plan is approved by the Corps and LGU.*

Project-Specific Replacement/Permittee Responsible Mitigation. Complete this section if you are proposing to pursue actions (restoration, creation, preservation, etc.) to generate wetland replacement/compensatory mitigation credits for this proposed project.

WCA Action Eligible for Credit[1]	**Corps Mitigation Compensation Technique[2]**	**Acres**	**Credit % Requested**	**Credits Anticipated[3]**	**County**	**Major Watershed #**	**Bank Service Area #**

[1]Refer to the name and subpart number in MN Rule 8420.0526.
[2]Refer to the technique listed in *St. Paul District Policy for Wetland Compensatory Mitigation in Minnesota*.
[3]If WCA and Corps crediting differs, then enter both numbers and distinguish which is Corps and which is WCA.

Explain how each proposed action or technique will be completed (e.g. wetland hydrology will be restored by breaking the tile……) and how the proposal meets the crediting criteria associated with it. Applicants should refer to the Corps mitigation policy language, WCA rule language, and all associated Corps and WCA guidance related to the action or technique:

Attach a site location map, soils map, recent aerial photograph, and any other maps to show the location and other relevant features of each wetland replacement/mitigation site. Discuss in detail existing vegetation, existing landscape features, land use (on and surrounding the site), existing soils, drainage systems (if present), and water sources and movement. Include a topographic map showing key features related to hydrology and water flow (inlets, outlets, ditches, pumps, etc.):

Project Name and/or Number:

Attach a map of the existing aquatic resources, associated delineation report, and any documentation of regulatory review or approval. Discuss as necessary:

For actions involving construction activities, attach construction plans and specifications with all relevant details. Discuss and provide documentation of a hydrologic and hydraulic analysis of the site to define existing conditions, predict project outcomes, identify specific project performance standards and avoid adverse offsite impacts. Plans and specifications should be prepared by a licensed engineer following standard engineering practices. Discuss anticipated construction sequence and timing:

For projects involving vegetation restoration, provide a vegetation establishment plan that includes information on site preparation, seed mixes and plant materials, seeding/planting plan (attach seeding/planting zone map), planting/seeding methods, vegetation maintenance, and an anticipated schedule of activities:

For projects involving construction or vegetation restoration, identify and discuss goals and specific outcomes that can be determined for credit allocation. Provide a proposed credit allocation table tied to outcomes:

Provide a five-year monitoring plan to address project outcomes and credit allocation:

Discuss and provide evidence of ownership or rights to conduct wetland replacement/mitigation on each site:

Quantify all proposed wetland credits and compare to wetland impacts to identify a proposed wetland replacement ratio. Discuss how this replacement ratio is consistent with Corps and WCA requirements:

By signature below, the applicant attests to the following (only required if application involves project-specific/permittee responsible replacement):

- All proposed replacement wetlands were not:
  - Previously restored or created under a prior approved replacement plan or permit
  - Drained or filled under an exemption during the previous 10 years
  - Restored with financial assistance from public conservation programs
  - Restored using private funds, other than landowner funds, unless the funds are paid back with interest to the individual or organization that funded the restoration and the individual or organization notifies the local government unit in writing that the restored wetland may be considered for replacement.
- The wetland will be replaced before or concurrent with the actual draining or filling of a wetland.
- An irrevocable bank letter of credit, performance bond, or other acceptable security will be provided to guarantee successful completion of the wetland replacement.
- Within 30 days of either receiving approval of this application or beginning work on the project, I will record the Declaration of Restrictions and Covenants on the deed for the property on which the replacement wetland(s) will be located and submit proof of such recording to the LGU and the Corps.

Applicant or Representative: Title:

Signature: _____ Date:

Project Name and/or Number:

Attachment E
Local Road Replacement Program Qualification

Complete this part ***if*** you are a local road authority (county highway department, city transportation department, etc.) seeking verification that your project (or a portion of your project) qualifies for the MN Local Government Road Wetland Replacement Program (LGRWRP). If portions of your project are not eligible for the LGRWRP, then Attachment D should be completed and attached to your application.

Discuss how your project is a repair, rehabilitation, reconstruction, or replacement of a currently serviceable road to meet state/federal design or safety standards/requirements. Applicants should identify the specific road deficiencies and how the project will rectify them. Attach supporting documents and information as applicable:

Provide a map, plan, and/or aerial photograph accurately depicting wetland boundaries within the project area. Attach associated delineation/determination report or otherwise explain the method(s) used to identify and delineate wetlands. Also attach and discuss any type of review or approval of wetland boundaries or other aspects of the project by a member or members of the local Technical Evaluation Panel (TEP) or Corps of Engineers:

In the table below, identify only the wetland impacts from Part 4 that the road authority has determined should qualify for the LGRWRP.

Wetland Impact ID (as noted on overhead view)	**Type of Impact** (fill, excavate, drain)	**Size of Impact** (square feet or acres to 0.01)	**Existing Plant Community Type(s)** in Impact Area[1]	**County, Major Watershed #, and Bank Service Area #** of Impact[2]

[1]Use *Wetland Plants and Plant Community Types of Minnesota and Wisconsin* 3rd Ed. as modified in MN Rules 8420.0405 Subp. 2.

[2]Refer to Major Watershed and Bank Service Area maps in MN Rules 8420.0522 Subp. 7.

Discuss the feasibility of providing onsite compensatory mitigation/replacement for important site-specific wetland functions:

Please note that under the MN Wetland Conservation Act, projects with less than 10,000 square feet of wetland impact are allowed to commence prior to submission of this notification so long as the notification is submitted within 30 days of the impact. The Clean Water Act has no such provision and requires that permits be obtained prior to any regulated discharges into water of the United States. To avoid potential unauthorized activities, road authorities must, at a minimum, provide a complete application to the Corps and receive a permit prior to commencing work.

By signature below, the road authority attests that they have followed the process in MN Rules 8420.0544 and have determined that the wetland impacts identified in Attachment D are eligible for the MN Local Government Road Wetland Replacement Program.

Road Authority Representative: Title:

Signature: _____ Date:

Technical Evaluation Panel Concurrence: Project Name and/or Number:

TEP member: Representing:

Concur with road authority's determination of qualification for the local road wetland replacement program? ☐ Yes ☐ No

Signature: _____ Date:

TEP member: Representing:

Concur with road authority's determination of qualification for the local road wetland replacement program? ☐ Yes ☐ No

Signature: _____ Date:

TEP member: Representing:

Concur with road authority's determination of qualification for the local road wetland replacement program? ☐ Yes ☐ No

Signature: _____ Date:

TEP member: Representing:

Concur with road authority's determination of qualification for the local road wetland replacement program? ☐ Yes ☐ No

Signature: _____ Date:

Upon approval and signature by the TEP, application must be sent to: **Wetland Bank Administration**
Minnesota Board of Water & Soil Resources
520 Lafayette Road North
Saint Paul, MN 55155





U.S. Army Corps of Engineers - St. Paul District
Supplemental Information for Application

Enbridge Energy, Limited Partnership • Line 3 Replacement Project

September 2018

ENBRIDGE®

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ATTACHMENTS

ACRONYMS AND ABBREVIATIONS

Application	Application for USACE permit
ATWS	additional temporary workspace
BMPs	best management practices
CFR	Code of Federal Regulations
CWA	Clean Water Act
Designated Route	The Preferred Project Route inclusive of RSA-05 and RSA-22
DOC-EERA	Minnesota Department of Commerce, Energy Environmental Review and Analysis
EIS	Environmental Impact Statement
Enbridge	Enbridge Energy, Limited Partnership
EPA	U.S. Environmental Protection Agency
EPP	Environmental Protection Plan
ESA	Endangered Species Act
ESB	electrical service building
existing Line 3	A 282-mile, 34-inch-diameter pipeline that enters Minnesota at the North Dakota border in Kittson County, and exits Minnesota at the Wisconsin border in Carlton County.
FdL	Fond du Lac Band of Lake Superior Chippewa
FEIS	Final Environmental Impact Statement
HDD	horizontal directional drill
HUC	Hydrologic Unit Code
ILI	inline inspection gauge
ISS	in stream support
IVP	Intelligent Valve Placement
kbpd	thousand barrels per day
L3R or Project	Line 3 Replacement Project
MDNR	Minnesota Department of Natural Resources
Mitigation Policy	St. Paul District USACE Mitigation Policy
Mitigation Rule	USACE and EPA Final Rule regarding Compensatory Mitigation for Losses of Aquatic Resources 33 CFR Parts 325 and 322 and 40 CFR Part 230, (2008)
MPCA	Minnesota Pollution Control Agency
MPUC	Minnesota Public Utilities Commission
NHD	National Hydrography Data
NPDES	National Pollutant Discharge Elimination System
NRI	Nationwide Rivers Inventory
NWI	National Wetlands Inventory
NWP	Nationwide Permit
OHWM	ordinary high water mark

PHMSA	Pipeline and Hazardous Materials Safety Administration
PWI	Public Waters Inventory
RSA	Route Segment Alternative
SHPO	State Historic Preservation Office
TCSB	temporary clear span bridge
TMDL	Total Maximum Daily Load
TWS	temporary workspace
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
WQC	Water Quality Certification

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1.0 INTRODUCTION

Enbridge Energy, Limited Partnership ("Enbridge") submits this Supplemental Information for an Application for U.S. Army Corps of Engineers ("USACE") Permit ("Application") for the portions of its Line 3 Replacement Project ("L3R or Project") that cross waters of the U.S. under the jurisdiction of the USACE. This application includes L3R in Minnesota and the portion of L3R in North Dakota from the terminal point at the valve on the west side of the Red River to the North Dakota/Minnesota border. The portion of the replacement project in North Dakota from the origin point at the Joliette Valve to the terminal point has independent utility and is being reviewed by the Omaha District pursuant to USACE nationwide permit ("NWP") rules (NWP 12). Information on the Project applicant follows in this section. The remaining sections, tables, figures, and appendices are provided to complete the information requested in the Joint Application Form for Activities Affecting Water Resources in Minnesota.

Line 3 Replacement Project
Enbridge Energy, Limited Partnership
26 East Superior Street, Suite 309
Duluth, Minnesota 55802

Contact: Bobby Hahn
218-522-4751 (office)
218-269-6377 (cell)
Bobby.Hahn@enbridge.com

Barry Simonson
218-522-4825 (office)
218-269-0483 (cell)
Barry.Simonson@enbridge.com

2.0 PROJECT OVERVIEW AND PURPOSE

The existing Line 3 in Minnesota is a 282-mile, 34-inch-diameter pipeline that enters Minnesota at the North Dakota border in Kittson County, and exits Minnesota at the Wisconsin border in Carlton County ("existing Line 3"). It was constructed in the 1960s, and it has been operating in Minnesota since that time. Over the years, known integrity issues and safety risks have caused Enbridge to reduce the amount and change the type of oil being transported through the existing Line 3 in an effort to relieve pressure on the aging line. These pressure restrictions are now also reflected in a Consent Decree entered into by Enbridge and the Department of Justice in 2017.[1]

Existing Line 3's pipe materials, coating, manufacturing process, installation method, operating history, and surrounding environment have resulted in Line 3 having the largest external corrosion anomaly density of all pipelines in Enbridge's Mainline System. Stress corrosion cracking and long seam cracking anomalies are also present. Enbridge has recently identified a combination of integrity conditions on existing Line 3 that would require increasing maintenance and more frequent integrity digs to continue safely and economically operating the existing Line 3 in coming years. In Minnesota, there is a forecasted need for approximately 6,250 integrity digs over the next 15 years. This maintenance program will have associated year-after-year landowner and environmental impacts.

Enbridge proposes to construct the L3R using modern pipeline design, manufacturing, coating, and installation techniques, as well as wider, thicker pipe. Enbridge proposes to use 36-inch-diameter pipe with a wall thickness of 0.515 inch (as opposed to existing Line 3's 34-inch-diameter

[1] Final Consent Decree, *United States v. Enbridge Energy, Ltd. Partnership*, No. 1:16-cv-914 (W.D. Mich. May 23, 2017).

pipe with 0.281-inch wall thickness). The wider, thicker pipe has a yield strength 35 percent greater than existing Line 3. A new pipeline is expected to result in: 1) an increase in safety and reliability attributable to the use of new equipment and modern-day technologies, manufacturing, and coating processes; and 2) a reduction in the number of integrity digs required for ongoing maintenance.

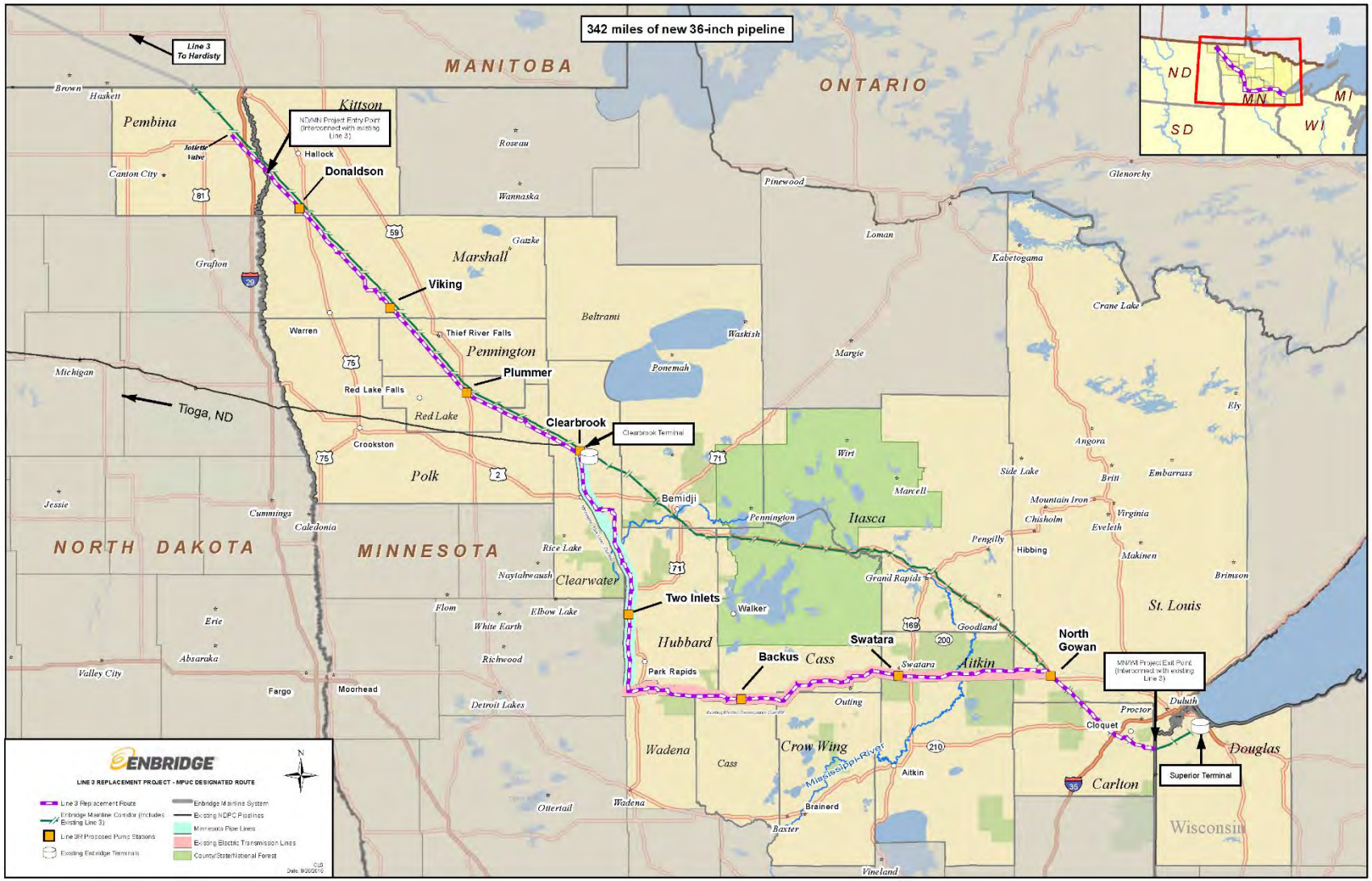
The Project will allow Enbridge to operate L3R in heavy, light, and mixed service. Currently, existing Line 3 is transporting predominantly light crude. The Project will also restore historic operating capabilities. The historic annual average operating capacity of existing Line 3 was 760 thousand barrels per day ("kbpd"). Enbridge voluntarily reduced the capacity of existing Line 3 to 390 kbpd for light crude oil. The proposed Project will allow Line 3 to be returned to an annual average capacity of 760 kbpd.

Enbridge has proposed the L3R Program to replace the existing Line 3 pipeline in phases between the Hardisty Terminal in Alberta, Canada, and Superior, Wisconsin, as follows (refer to Figure 2.0-1):

- In Canada, the Federal Government approved the project in November 2016, and the National Energy Board issued a Certificate approving the construction and operation of the L3R Program on December 1, 2016. Enbridge has already replaced two sections: a 1.7-mile segment from Gretna, Manitoba to the Canadian/U.S. border; and a 12.5-mile segment downstream of Cromer, Manitoba.
- Enbridge replaced a 15.3-mile segment of Line 3 from the Canadian/U.S. border to the Joliette Valve in Pembina, North Dakota.
- Enbridge has also replaced an approximate 13-mile portion of Line 3 in Wisconsin (referred to as "Segment 18") from the Minnesota/Wisconsin border to the Superior Terminal in Superior, Wisconsin.
- The third and final phase is the replacement of approximately 295 miles of the existing pipeline with 342 miles of new pipeline and its associated facilities traversing the states of North Dakota and Minnesota.
    - Enbridge proposes to replace a 12-mile segment with new 36-inch pipeline between the Joliette Valve in North Dakota and the Red River Valve, just west of the North Dakota/Minnesota border.
    - Enbridge proposes to replace a section of existing Line 3 in North Dakota from the terminal point at the Red River Valve through Minnesota to the Minnesota/Wisconsin border with approximately 330 miles of new 36-inch pipeline.

The portion of L3R in Minnesota from the terminal point at the Red River Valve to the Minnesota/Wisconsin border includes the replacement of approximately 282 miles of the existing Line 3 pipeline and is the subject of this Application (refer to Section 3.0).

Figure 2.0-1 General Project Location Map



2.1 MINNESOTA PUBLIC UTILITIES COMMISSION CERTIFICATE OF NEED AND ROUTE PERMIT PROCEEDINGS

Enbridge applied for a Certificate of Need and a Route Permit from the Minnesota Public Utilities Commission ("MPUC") to construct and operate L3R on April 24, 2015. The MPUC asked the Minnesota Department of Commerce, Energy Environmental Review and Analysis ("DOC-EERA") staff to prepare an Environmental Impact Statement ("EIS") in cooperation with the Minnesota Department of Natural Resources ("MDNR") and Minnesota Pollution Control Agency ("MPCA") to facilitate the review of Enbridge's Certificate of Need and Route Permit applications for L3R in accordance with Minnesota Administrative Rules Chapter 4410. The DOC-EERA issued the draft EIS on May 15, 2017 and the final EIS ("FEIS") on August 17, 2017[2]. On December 7, 2017, the MPUC deemed the FEIS inadequate solely on the basis of four specific and narrow issues, and a revised FEIS was published on February 12, 2018. On May 1, 2018, the MPUC issued a written order finding the revised FEIS adequate.

On June 28, 2018 the MPUC granted a Certificate of Need for the Project subject to Certificate of Need modifications. On September 5, 2018, the MPUC issued a written Order granting the Certificate of Need as modified and requiring filings. On June 28, 2018, the MPUC also granted a Route Permit for Enbridge's Preferred Project Route[3], including Route Segment Alternative ("RSA")-05; RSA-22 with permission of the Fond du Lac Band of Lake Superior Chippewa ("FdL"), or RSA-21 in the event FdL does not grant permission for RSA-22.[4] On August 31, 2018, Enbridge and FdL came to an agreement to proceed with the RSA-22 route. The MPUC's written Order granting Enbridge's Route Permit identifying the Preferred Project Route inclusive of RSA-05 and RSA-22 as the MPUC Designated Route (hereafter referred to as the "Designated Route") is forthcoming. The Designated Route approved by the MPUC is a 750-foot-wide corridor, which allows for minor adjustments to the pipeline alignment and permanent right-of-way within the Designated Route.

3.0 PROJECT DESCRIPTION

3.1 PIPELINE

L3R consists of approximately 355 miles of new 36-inch-diameter pipeline traversing the states of North Dakota, Minnesota, and Wisconsin, and terminating at the existing Enbridge Superior terminal facility near Superior, Wisconsin. The section of L3R which is the subject of this application, includes the replacement of approximately 282 miles of the existing 34-inch-diameter Line 3 pipeline with 330 miles of 36-inch[5]-diameter pipeline and associated facilities from the Red River valve in North Dakota to the Minnesota/Wisconsin border (refer to Figure 2.0-1). Enbridge's Designated Route generally follows the existing Line 3 pipeline along the Enbridge Mainline System right-of-way from the North Dakota/Minnesota border in Kittson County to the Clearbrook Terminal in Clearwater County. Next, L3R turns south from Clearbrook to generally follow an existing third-party crude oil pipeline right-of-way to Hubbard County. The route then turns east

[2] The L3R draft and final EIS are available on the Minnesota Department of Commerce website at: https://mn.gov/commerce/energyfacilities/line3/.
[3] The Preferred Route is defined as the Applicant's proposed route, which includes the pipeline centerline within the associated construction workspace.
[4] Refer to Section 7.3.1 (RSA-05), Section 7.3.6 (RSA-21), and Section 7.3.7 (RSA-22) of the Revised FEIS.
[5] 36-inch-diameter steel pipeline is a more standard pipeline than 34-inch in the industry and among the Enbridge Mainline System. The decision to replace with 36-inch-diameter pipeline makes pipe, pipefitting, valves, and maintenance equipment more readily available. A 36-inch pipeline is more energy efficient than a 34-inch pipeline.

to generally follow other existing electric transmission lines until it rejoins the Enbridge Mainline System right-of-way in St. Louis County, through the FdL Reservation to the Minnesota/Wisconsin border in Carlton County.

The Project is linear, and as such, a street address is not available or applicable. Table 3.1-1 identifies the townships, ranges, and sections the Project crosses. Attachment A includes Detailed Route Maps that depict the waterbodies and wetlands crossed by the Project.

Table 3.1-1
Township, Range, and Sections Crossed by the Project in Minnesota

Township	Range	Section
48	15	31
48	16	19, 27, 28, 29, 30, 34, 35, 36
48	17	6, 7, 8, 9, 13, 14, 15, 16, 17, 22, 23, 24
48	18	1
49	18	6, 7, 8, 16, 17, 21, 22, 26, 27, 35, 36
49	19	1
50	19	7, 8, 16, 17, 21, 22, 26, 27, 35, 36
50	20	1, 2, 12
51	20	19, 20, 21, 27, 28, 34, 35
51	21	19, 20, 21, 22, 23, 24
51	22	19, 20, 21, 22, 23, 24
51	23	22, 23, 24, 27, 28, 29,30
51	24	25, 26, 27, 28, 29, 31, 32
51	25	31, 32, 33, 34, 35, 36
51	26	31, 32, 33, 34, 35, 36
51	27	25, 26, 27, 28, 36
138	28	6
138	29	1, 7, 8, 9, 10, 11, 12, 14, 15
138	30	7, 8, 9, 10, 11, 12
138	31	5, 6, 8, 9, 10, 11, 12
138	32	1, 2, 3, 4, 5, 6
138	33	1, 2, 3, 4, 5, 6
138	34	1
139	25	1, 2, 3, 4, 7, 8, 9
139	26	11, 12, 14, 15, 19, 20, 21, 22
139	27	13, 14, 15, 19, 20, 21, 22, 24
139	28	24, 25, 26, 27, 28, 29, 31, 32
139	34	31, 32, 33, 34, 35, 36
139	35	5, 6, 7, 18, 19, 30, 31, 32, 33, 34, 35, 36
140	35	6, 7, 18, 19, 20, 29, 32
141	35	5, 8, 17, 20, 29, 31, 32
142	35	5, 8, 17, 20, 29, 32

Table 3.1-1
Township, Range, and Sections Crossed by the Project in Minnesota

Township	Range	Section
143	35	5, 8, 17, 20, 21, 29, 32, 33
144	35	19, 29, 30, 32
144	36	2, 11, 12, 13, 24
145	36	2, 11, 14, 23, 26, 35, 36
146	36	7, 8, 9, 10, 14, 15, 23, 26, 35
146	37	2, 3, 11, 12
147	37	5, 8, 16, 17, 21, 27, 28, 34
148	37	6, 7, 8, 17, 20, 29, 32
149	37	29, 30, 32
149	38	6, 7, 8, 9, 15, 16, 22, 23, 24, 25
149	39	1, 2, 3
150	39	19, 28, 29, 30, 33, 34
150	40	6, 7, 8, 9, 14, 15, 16, 23, 24
150	41	1, 2
151	41	19, 28, 29, 30, 33, 34, 35
151	42	4, 5, 9, 10, 14, 15, 23, 24
152	42	30, 31, 32
152	43	4, 5, 9, 10, 14, 15, 23, 24, 25
153	43	18, 19, 20, 29, 32, 33
153	44	2, 3, 11, 12, 13
154	44	18, 19, 20, 28, 29, 33, 34
154	45	2, 11, 12, 13
155	45	7, 17, 18, 20, 21, 28, 33, 34, 35
155	46	1, 2, 3, 4, 12
156	46	7, 17, 18, 20, 21, 28, 33
156	47	1, 2, 12
157	47	6, 7, 8, 16, 17, 21, 22, 26, 27, 35, 36
157	48	1
158	48	5, 6, 8, 9, 15, 16, 22, 23, 26, 35, 36
159	48	31
159	49	4, 5, 9, 10, 14, 15, 23, 25, 26, 36
160	49	30, 31, 32
160	50	4, 5, 9, 10, 14, 15, 23, 24, 25

3.2 ASSOCIATED FACILITIES

3.2.1 Clearbrook Terminal Expansion

As part of L3R, Enbridge will expand the existing Clearbrook Terminal footprint and modify equipment including the following:

- A new pump station, including four 7,000 horsepower motor and pump units, two 7,000 horsepower variable frequency drives,[6] valves,[7] sump[8] and crude oil reinjection pump, metering, instrumentation and monitoring equipment, and associated electrical facilities including a substation with redundant utility transformers and breakers. A 36-inch inline inspection gauge ("ILI") launcher,[9] pump station to terminal interconnections,[10] and associated terminal piping.[11]
- A 36-inch ILI receiver, valves, pressure relief system, metering, instrumentation and monitoring equipment, terminal piping, manifold interconnections,[12] and associated electrical facilities.
- A 16-inch meter manifold run will be added to the existing meter manifold 152 with associated valves, interconnections, piping, instrumentation, electrical facilities, and sample system.

3.2.2 Pump Stations

The Project will include the construction of four new pump stations adjacent to the existing Enbridge Donaldson, Viking, Plummer, and Clearbrook facilities. These new pump stations will replace the existing Line 3 pump stations at those sites. Four additional new pump stations, Two Inlets, Backus, Swatara, and North Gowan, will be constructed south of Clearbrook. The Clearbrook and Backus Pump Stations will include new inline inspection tool launcher and receiver traps in addition to the valves, metering, monitoring equipment, and associated electrical facilities that is required at all sites (refer to Figure 2.0-1). All pump stations will be installed on property that has been or will be purchased by Enbridge in fee.

Transmission Lines to Be Constructed to New Pump Stations

Enbridge requested electric service for the L3R pump stations south of Clearbrook, which include the Two Inlets, Backus, Swatara, and North Gowan, from Great River Energy, in partnership with its member retail distribution cooperatives. The transmission company or companies will submit

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[6] Variable frequency drive: A variable frequency drive is a set of equipment that provides a means of adjusting the speed of a mechanical load coupled to a motor.

[7] Valve: A valve is a piece of equipment used to control the flow of crude oil inside the pipeline. The valve acts as a gateway that can be opened and closed. A mainline valve describes an entire aboveground facility on the pipeline that is equipped with shutoff valves capable of stopping pipeline flow in the event of an emergency or for maintenance. A slide gate valve is a particular type of shutoff valve that operates by sliding a steel plate across the entire diameter of the pipe to seal off flow.

[8] Sump: A sump is a buried tank used for containing product drained out of the system during maintenance activities or pressure relief.

[9] ILI receiver and launcher traps: An ILI is an inspection tool that is inserted into the pipeline to inspect the inside of the pipeline. The tools are propelled through the pipeline by the flow of the pipeline. The tools are inserted into and retrieved from the pipeline at aboveground receiver and launcher traps.

[10] Interconnection: An interconnection is the location where one pipeline system connects to another pipeline system.

[11] Terminal piping: Terminal piping is above- and belowground pipe at a terminal site.

[12] Manifold interconnection: A manifold interconnection is a collection of valves and interconnects that enable product to flow to and from tanks.

a separate application(s) to the USACE St. Paul District for discharge of dredged or fill material in navigable waters or jurisdictional wetlands.

3.2.3 Valves

Valves are placed along the pipeline to protect populated areas, major waterbody crossings, drinking water sources, and environmentally sensitive areas. A valve is a remotely controlled shutoff mechanism that will be used to isolate a segment of pipeline for maintenance purposes or in the rare case of a leak. At each valve location, the following equipment will be installed:

- A slide gate valve that will be remotely controlled from the Enbridge Control Center and that can be operated manually as well.
- Digital pressure and temperature monitoring devices that will provide real-time pressure and temperature information to the Control Center.
- Associated electrical and communications equipment required to control the valve and communicate pressure and temperature information to the Control Center.

Enbridge will also construct and maintain a permanent access road to each valve site.

Pipeline safety, including valve placement requirements, is regulated by the U.S. Department of Transportation's Pipeline and Hazardous Materials Safety Administration ("PHMSA") under 49 Code of Federal Regulations ("CFR") Parts 100-199. Specifically, 49 CFR Part 195 prescribes safety standards and reporting requirements for hazardous liquid transportation pipeline facilities and 49 CFR Part 195.260 presents the minimum standards for valve installations. Enbridge consulted with PHMSA on the preliminary design of the Project and will comply with these and all other required federal safety regulations.

Enbridge completed an Intelligent Valve Placement ("IVP") analysis as part of the Project design to determine optimal valve locations for protecting populated areas, major waterbody crossings, drinking water sources, and environmentally sensitive areas in the event of a pipeline release.

Based on the IVP analysis and current design, 37 mainline valves will be installed in Minnesota. Valves will be installed near major rivers, other environmentally sensitive areas, population centers, and pump stations. Enbridge also considered the topography and elevation profiles near these features when determining valve placement.

3.2.4 Corrosion Protection

Enbridge mitigates corrosion by implementing a number of different measures, such as cathodic protection,[13] alternating current / direct current mitigation,[14] and corrosion-inhibiting coatings.

[13] Cathodic protection: Cathodic protection is a method for safeguarding the pipeline against corrosion. In a cathodic protection system, the metal to be protected (the pipeline) is connected to a metal that corrodes more easily (*anode array* or *anode groundbed*). The metal that corrodes more easily corrodes instead of the pipeline. Cathodic protection can be achieved by using reactive anode metals that are electrically connected to the pipeline (also known as a *galvanic anode* systems) or by using inert anode metals and impressing an electric current on the system (also known as an *impressed current* system). Enbridge's proposed cathodic protection system includes anode arrays installed in conventional beds near the ground surface as well as in deeper wells.

[14] Alternating current/direct current mitigation: Alternating current and direct current mitigation is a means of protecting the pipeline and its cathodic protection system from electromagnetic-induced voltage and stray current from nearby electric powerlines.

Cathodic protection is a commonly used form of corrosion control on buried pipelines. Cathodic protection inhibits external corrosion through the use of sacrificial anodes, which corrode instead of the pipe, and/or by impressing a small electrical current through the pipe. Alternating current/direct current mitigation systems are employed to account for potential stray current sources, such as adjacent cathodically protected structures or utilities, high-voltage direct current and alternating current transmission lines, geomagnetic/telluric activity, or welding shops.

Enbridge will construct a number of small facilities adjacent to the pipeline's permanent easement to operate and monitor the cathodic protection and impressed current mitigation systems. These facilities will contain aboveground and subsurface components such as anode and ground beds, test leads and stations, and rectifiers. Power will be supplied to these systems as well. These systems will be regularly monitored to ensure corrosion is effectively mitigated. Enbridge will apply cathodic protection and corrosion-inhibiting coatings along the entirety of the Project route to protect the pipeline from the corrosive effects of soil and co-located[15] utilities. Enbridge will install impressed current mitigation where required to account for the effects of co-located electric transmission lines.

Enbridge's coating specifications, which reference National Association of Corrosion Engineers International (a professional organization for the corrosion control industry), federal regulations, and other industry standards, have been implemented to reduce long term external corrosion defects. Enbridge also has a coating integrity program that manages the long-term status of the pipe coating and investigates areas of potential concern.

3.2.5 Access Roads

Public roads will typically be used to gain access to the construction workspace[16] where the public roads cross the right-of-way. In areas where public roads are limited, existing privately-owned roads may be used. If public or privately-owned roads are not available, Enbridge may need to construct new access roads[17]. Prior to use of private access roads, modifications to existing non-private roads, and construction of new access roads, Enbridge will obtain landowner permission, conduct environmental surveys, and obtain applicable environmental permits and clearances. Permanent access roads will be constructed to each mainline valve.

Enbridge will minimize temporary and permanent wetland and waterbody impacts as a result of use, modification, or construction of access roads.

[15] Co-located: Co-located is any portion of the route that is within 250-feet from the centerline of an existing parallel pipeline, utility, road, or railroad right-of-way.

[16] The terms "construction right-of-way," "temporary construction right-of-way," "construction workspace," and "temporary construction workspace" define the primary mainline workspace area required for installation of L3R. For clarity, Enbridge will generically use "construction workspace" instead of "temporary construction right-of-way, temporary construction workspace," or "construction right-of-way" as the terminology for 1) the permanent right-of-way and 2) temporary construction area (which includes the following defined terms: TWS and ATWS. All construction equipment and vehicles will be confined to this approved construction workspace.

[17] Access road: An access road is a road used to access the pipeline construction workspace, permanent right-of-way, or associated facility. Access roads can be public roads or private drives and can be existing, modified, or newly constructed.

4.0 LAND REQUIREMENTS

The Project will require the acquisition of new temporary workspace ("TWS")[18] and permanent right-of-way[19] in Minnesota. The anticipated workspace dimensions for the Project are presented in Section 4.1.

4.1 TEMPORARY AND PERMANENT RIGHTS-OF-WAY

Construction of L3R will generally require a 120-foot-wide construction workspace in uplands.[20] The construction workspace will allow for temporary storage of topsoil and spoil, as well as accommodate safe operation of construction equipment. Enbridge will generally use a 95-foot-wide construction workspace in wetland areas. A standard 50-foot-wide permanent right-of-way in both uplands and wetlands is assumed for calculating impacts, which will be wholly contained within the 120-foot-wide and 95-foot-wide construction rights-of-way. Table 4.1-1 presents the typical construction workspace and permanent right-of-way dimensions that will be used for pipeline construction and operation in Minnesota. Figures 4.1-1 and 4.1-2 present the temporary construction workspace and permanent right-of-way configurations in both upland, wetland, and when co-located with existing Enbridge or third-party pipelines or utilities, and in greenfield[21] locations. Overall, L3R will be co-located with other Enbridge pipelines; third-party pipelines or utilities; or roads, railroads, or highways for approximately 91 percent of the route.

Table 4.1-1
Typical Construction Workspace and Permanent Right-of-Way Dimensions for the Line 3 Replacement Project in Minnesota

Route Segment	Permanent Right-of-Way (feet)	Temporary Construction Workspace (feet)	Total Land Requirements (feet)	Corresponding Figure Number
Co-located with Enbridge Existing Pipeline	50 (~25 new)	70 (upland)	120 (upland)	Figure 4.1-1a
		45 (wetland)	95 (wetland)	Figure 4.1-1b
Greenfield	50	70 (upland)	120 (upland)	Figure 4.1-2a
		45 (wetland)	95 (wetland)	Figure 4.1-2c
Co-located with Existing Third-Party Utility	50	70 (upland)	120 (upland)	Figure 4.1-2b
		45 (wetland)	95 (wetland)	Figure 4.1-2d

During construction, topsoil will normally be placed on one side of the construction workspace, while the ditch spoil will be separated and located on the opposite side of the construction workspace. The working side (i.e., equipment work area and travel lane) will typically be 90 feet wide in uplands and 65 feet wide in wetlands. A more detailed description of Enbridge's plans for construction in wetlands and across waterbodies can be found in Enbridge's Summary of

[18] TWS: Land located adjacent to and contiguous with the proposed right-of-way.
[19] Permanent right-of-way: The legally acquired land rights used to install, maintain, operate, and access L3R.
[20] Uplands: Uplands are defined as an elevated region of land lying above the level where water flows or collects in basins.
[21] Greenfield: The term "greenfield" refers to land that has not previously been used for another pipeline, utility, road, or railroad right-of-way. For the purposes of this document, the term greenfield is applied to land that is more than 250 feet away from an existing parallel pipeline, utility, road, or railroad right-of-way.

Construction Methods and Procedures for Wetland and Waterbody Crossings (refer to Attachment B).

In Minnesota, approximately 90 percent of the L3R route is co-located with Enbridge's existing pipeline system or existing third-party pipelines, utilities, roads, or railroads. Where co-located with Enbridge's existing pipelines, Enbridge will use approximately 40 feet of existing permanent right-of-way as TWS that will revert back to permanent right-of-way after construction (refer to Figures 4.1-1a and 4.1-1b). The offset distance between L3R and the existing third-party pipeline or utility will vary, as presented on Figures 4.1-2b and 4.1-2d.

Figure 4.1-1a: Co-located with Existing Enbridge Pipeline (Uplands)

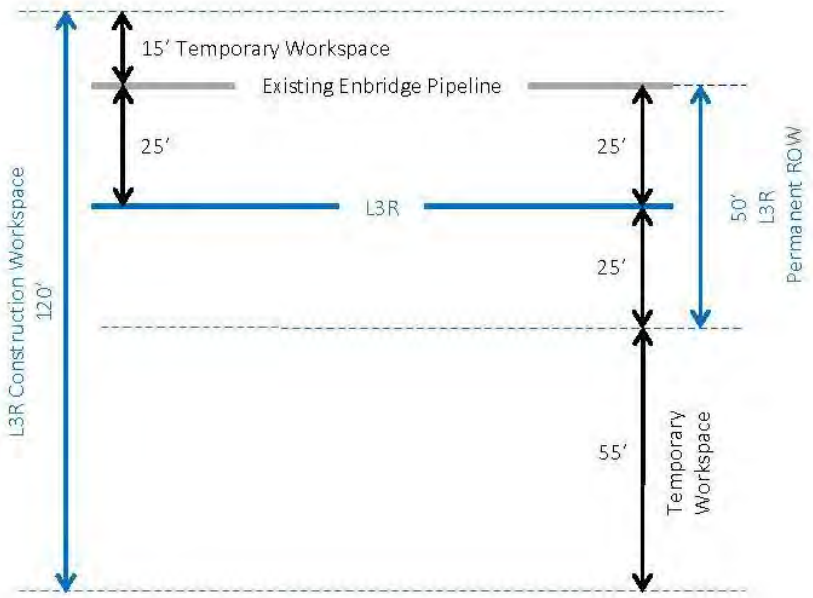


Figure 4.1-1b: Co-located with Existing Enbridge Pipeline (Wetlands)

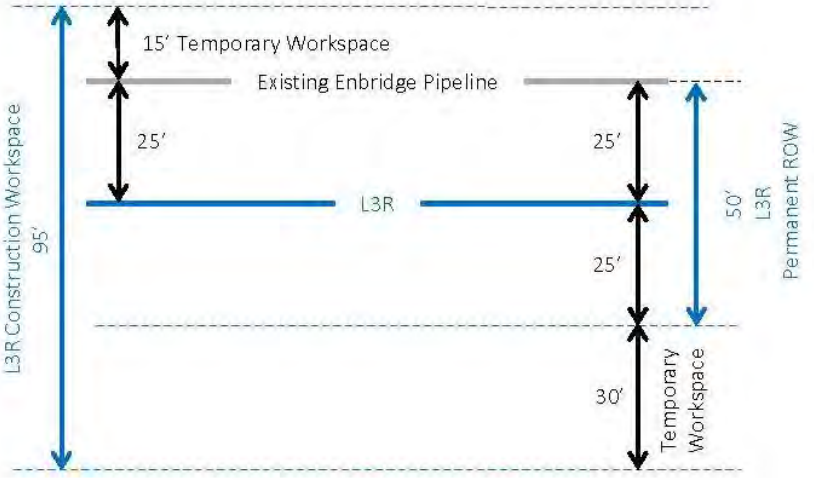


Figure 4.1-2a: Greenfield (Uplands)

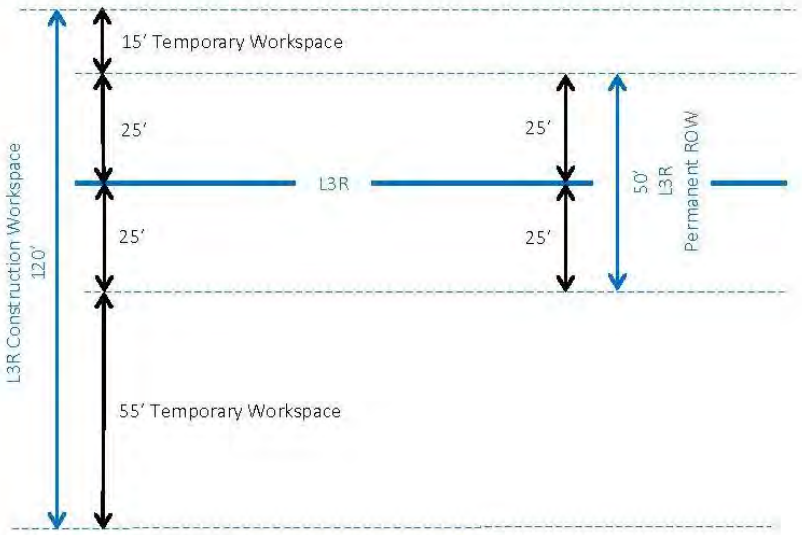


Figure 4.1-2b: Co-located with Existing Third-Party Utility (Uplands)

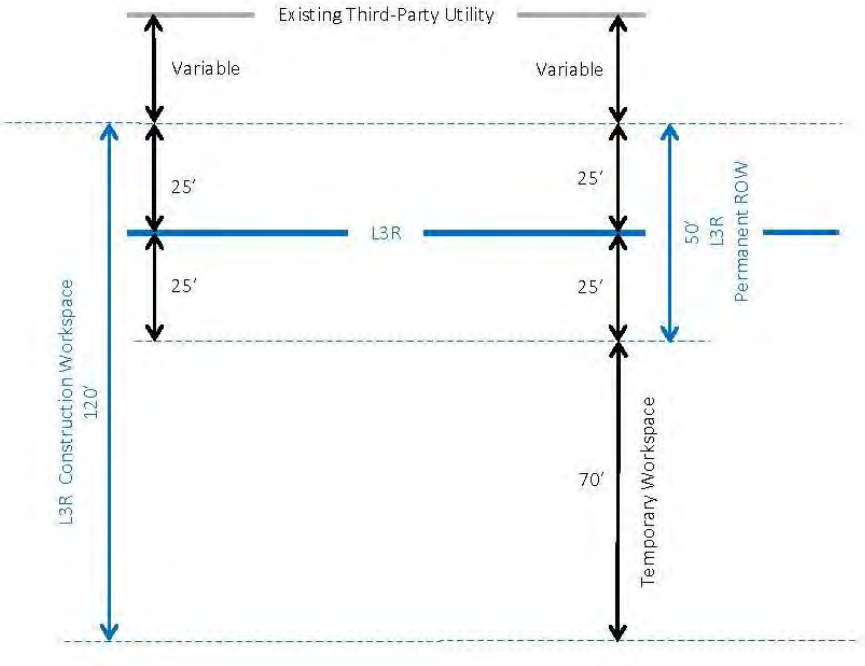


Figure 4.1-2c: Greenfield (Wetlands)

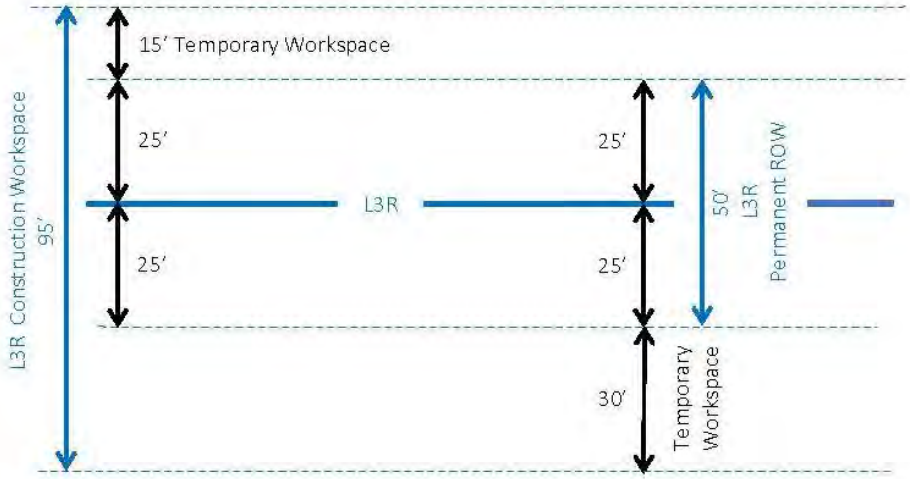
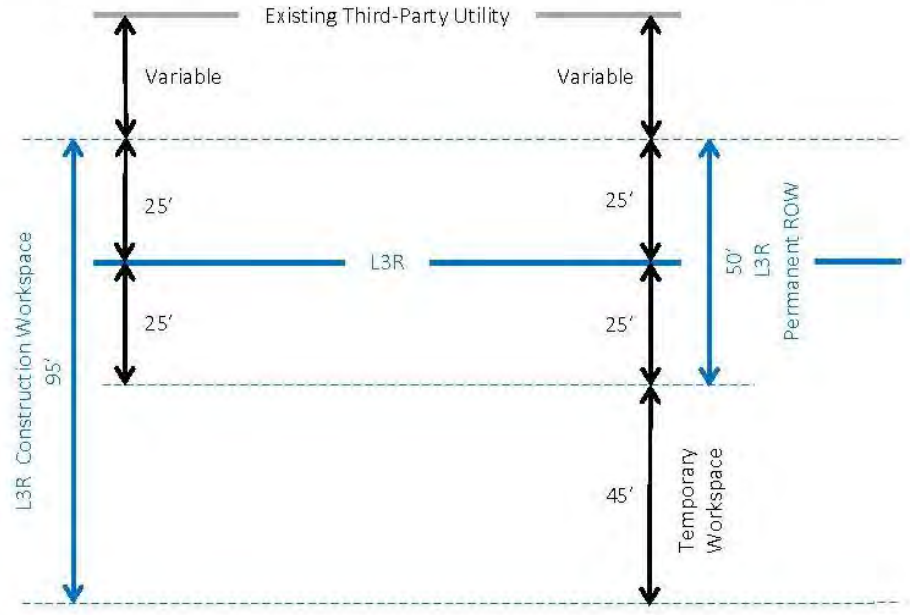


Figure 4.1-2d: Co-located with Existing Third-Party Utility (Wetlands)



4.2 ADDITIONAL TEMPORARY WORKSPACES

Additional temporary workspaces ("ATWS")[22] will be required outside of the typical construction workspace to facilitate specific aspects of construction. ATWS are planned in areas needed to stage equipment and materials, hold spoil material, and where construction methods will require additional workspace. For example, ATWS will be needed where the L3R route will cross features such as waterbodies, wetlands, roads, railroads, foreign pipelines and utilities, horizontal directional drill ("HDD") sites, and other special circumstances. Enbridge will also use ATWS to accommodate equipment and resources used for appropriating and discharging water to complete activities; dimensions of such ATWS will vary according to site-specific conditions.

In addition, Enbridge may require ATWS in locations where side-sloping terrain requires additional soil management to build a working area for:

- construction equipment and working personnel to travel safely within the Project's construction site;
- environmental monitoring and mitigation to be employed as required; and
- continuous ingress/egress for emergency equipment and personnel.

In general, Enbridge attempts to locate ATWS outside of wetlands wherever practicable. However, ATWS may be sited in select wetlands where the wetland is adjacent to a waterbody, road, railroad, foreign utility crossing, and/or pipeline cross-over.

5.0 CONSTRUCTION ACTIVITIES

Enbridge has developed an Environmental Protection Plan ("EPP") (refer to Attachment C) that contains elements of industry and company-wide best management practices ("BMPs") for addressing mitigation and erosion control measures, construction spill prevention, containment, and control; drilling fluid releases; noxious and invasive weeds; and restoration/revegetation measures. Enbridge will implement standardized erosion control and restoration measures to minimize potentially adverse environmental effects resulting from right-of-way preparation, construction, and maintenance of the pipeline.

The EPP includes, by reference, additional environmental documents, policies, plans, and protocols developed by Enbridge to minimize and/or mitigate the potential impacts of pipeline construction on the environment. These documents were developed based on Enbridge's experience implementing BMPs during construction. Permits issued by various federal, state, or local agencies may be more restrictive than the EPP. In these cases, the permit conditions supersede guidance provided in the EPP.

Enbridge also has developed a Summary of Construction Methods and Procedures for Wetland and Waterbody Crossings (refer to Attachment B), which outlines the various construction methods that Enbridge may utilize to construct through wetlands and waterbodies on the Project. The discussion of each method includes a description of the construction procedures; conditions required to employ the method (applicability of the method, and equipment needs, such as timber mats); environmental and/or constructability advantages and disadvantages associated with the

[22] ATWS: ATWS is temporary construction workspace needed when encountering environmental features that require special construction methods.

method; and mitigation measures that Enbridge will implement to avoid or reduce impacts associated with implementing the method.

The following subsections describe activities that will occur during Project construction, operation, and abandonment. They are also described in greater detail in the EPP and Summary of Construction Methods and Procedures for Wetland and Waterbody Crossings.

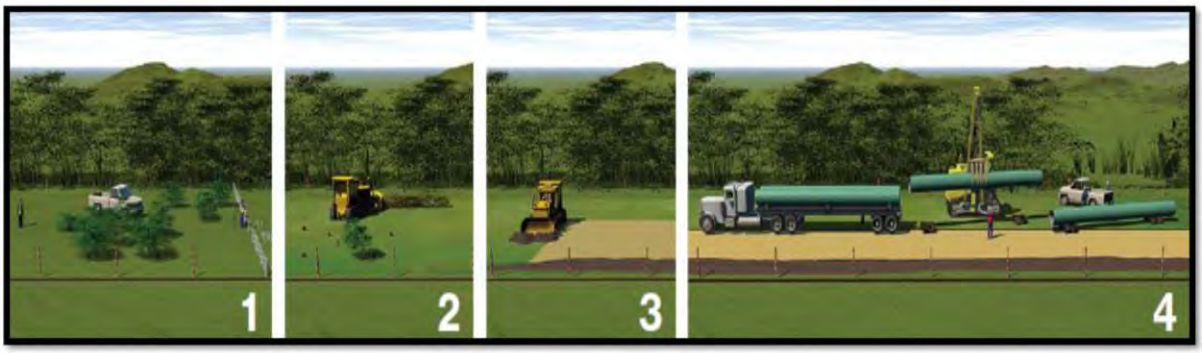
5.1 PIPELINE CONSTRUCTION SEQUENCE

Enbridge will install the replacement pipeline in uplands, wetlands, and waterbodies using industry-accepted construction methods. Pipeline construction will typically follow a sequential process, which includes: survey and staking, clearing and site preparation, pipe stringing, bending, welding, coating, trenching, lowering-in, backfilling, hydrostatic testing,[23] and cleanup and restoration. In most areas, these construction processes will proceed in an orderly assembly-line fashion with construction crews moving along the construction workspace (refer to Figure 5.1-1). Appropriate safety measures would be implemented before excavation begins, including notification through the One-Call system to ensure third-party utilities and adjacent pipelines are properly marked. Pipe, valves, and fittings would be transported to the workspace and placed along the workspace. Construction crews will use temporary access roads for ingress/egress to the Project workspace where travel down the right-of-way is not feasible.

The pipeline will typically be installed using the conventional trenching techniques described in Section 1.11 of the EPP (refer to Attachment C). In wetland features, Enbridge will reduce the construction workspace as described in Section 4.1, and implement the procedures described in Section 3.0 of the EPP, and Section 2.0 of the Section 3.0 of the Summary of Construction Methods and Procedures for Wetland and Waterbody Crossings (refer to Attachment B). The Project will cross waterbodies using either open-cut, dam-and-pump, or flume methods or low-impact methods like HDD or boring, as described in Section 2.0 of the EPP and as described in Section 3.0 of the Summary of Construction Methods and Procedures for Wetland and Waterbody Crossings.

[23] Hydrostatic testing: Hydrostatic testing is a process of verifying the integrity of the pipeline before it is placed into service. Hydrostatic testing involves filling the pipeline with water to a designated pressure and holding it for a specified period of time.

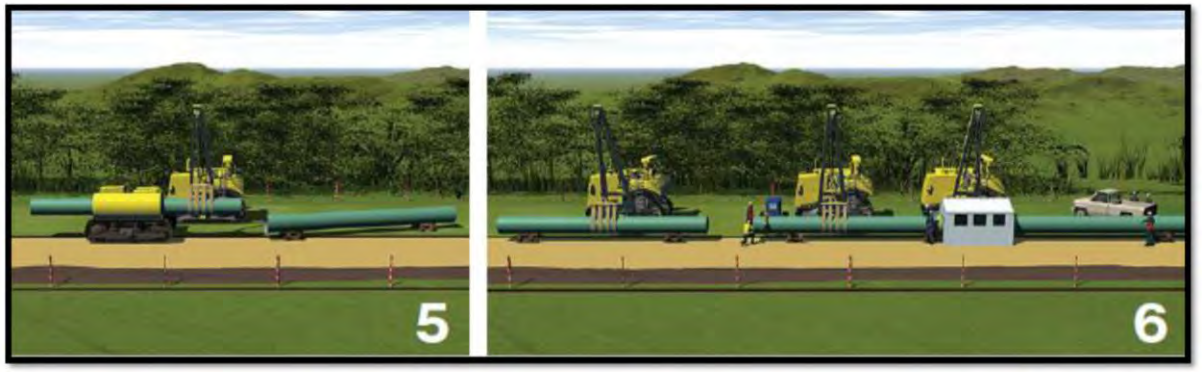
Figure 5.1-1a: Typical Construction Sequence – Steps 1 to 4



Note: These illustrations are conceptual and general in nature, specific construction and restoration techniques could vary depending on circumstances.

(1) Based on the information gathered during surveying, a final route is developed, and the route is then marked with stakes.	(2) Crews begin to prepare for construction by grading the right-of-way, removing trees and preparing the working space.	(3) In cultivated areas, the topsoil along the right-of-way is stripped and stored in piles for careful replacement following the installation of the pipeline.	(4) Crews then re-stake the center of the trench area, lay-out, or "string," sections of the pipe along the right-of-way.

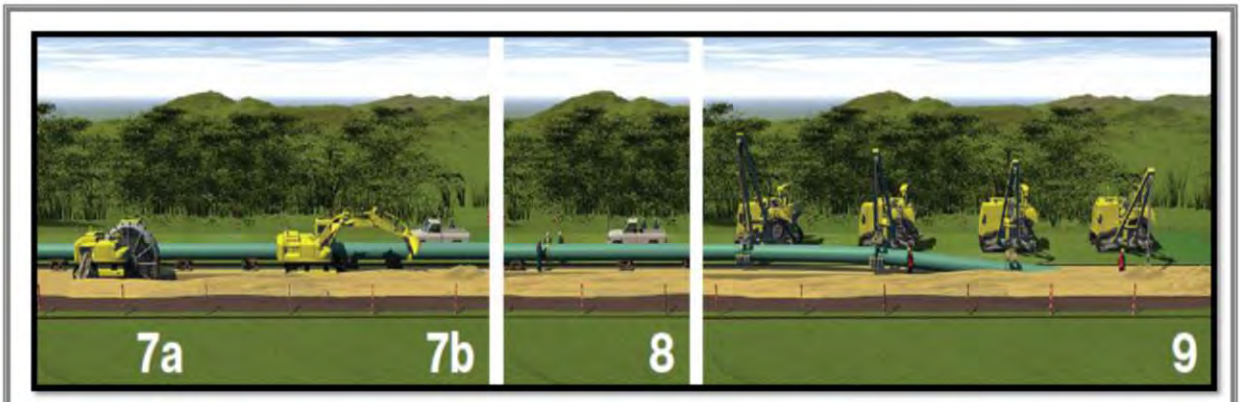
Figure 5.1-1b: Typical Construction Sequence – Steps 5 to 6



Note: These illustrations are conceptual and general in nature, specific construction and restoration techniques could vary depending on circumstances.

(5) Crews bend and weld the sections of pipe into a longer piece that follows the contours of the land.	(6) Individual sections are already coated to prevent corrosion. Each weld is inspected by X-ray and then coated.

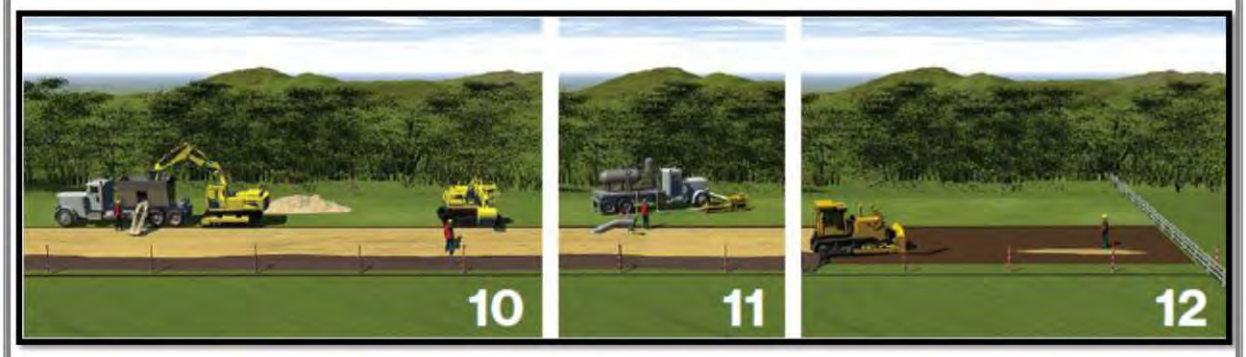
Figure 5.1-1c: Typical Construction Sequence – Steps 7 to 9



Note: These illustrations are conceptual and general in nature, specific construction and restoration techniques could vary depending on circumstances.

(7a) Once this process is complete, a trench is dug to accept the pipe. (7b) In agricultural areas, careful attention is paid to properly separate and store the topsoil and subsoil so they do not mix.	(8) The pipe coating is inspected one more time before the pipe is lowered into the trench.	(9) The pipe is lowered into the trench and laid within the prepared trench bottom.

Figure 5.1-1d: Typical Construction Sequence – Steps 10 to 12



Note: These illustrations are conceptual and general in nature, specific construction and restoration techniques could vary depending on circumstances.

(10) The trench is then carefully backfilled with subsoil and topsoil.	(11) Before operation, pressurized water is used to test the pipeline and verify the structural integrity of the pipe and welds.	(12) The right-of-way and workspace is regraded and vegetated according to agency requirements and landowner agreements. Throughout the many phases of preplanning and construction, Enbridge representatives work closely with communities and individuals along the route to provide information, seek input and answer questions.

5.1.1 Minimum Depth of Cover

In accordance with federal requirements (49 CFR 195.248), the depth of cover between the top of the pipe and the ground level, road bed, or river bottom can range between 18 to 48 inches, depending on the location of the pipe and the presence of rock, which is provided below (refer to Table 5.1-1).

Table 5.1-1
Depth of Cover Requirements

Location	Cover in inches	
	Normal Excavation	Rock Excavation [a]
Industrial, commercial, and residential areas	36	30
Crossing of inland bodies of water with a width of at least 100 ft. from high water mark to high water mark	48	18
Drainage ditches at public roads and railroads	36	36
Deepwater port safety zones	48	24
Gulf of Mexico and its inlets in waters less than 15 feet deep as measured from mean low water	36	18
Other offshore areas under water less than 12 feet deep as measured from mean low water	36	18
Any other area	30	18

[a] Rock excavation is any excavation that requires blasting or removal by equivalent means.

Minnesota Statute § 216G.07, Subd. 1 requires that the pipeline trench be excavated to a depth of at least 54 inches of backfill from ground surface to the top of pipeline in all areas where the pipeline crosses the right-of-way of any public drainage facility; or any county, town, or municipal street or highway; and where the pipeline crosses cultivated agricultural land. This depth requirement may be waived as described in Minnesota Statute § 216G.07, Subd. 2; however, the pipe must still be buried to a minimum depth that complies with the federal requirements outlined in Table 5.1-1. While Enbridge will seek waivers for Minnesota state depth of cover requirements in some circumstances, it will meet all federal depth of cover requirements and also target a nominal 48 inches of cover across the Project.

5.2 ASSOCIATED FACILITY CONSTRUCTION SEQUENCE

Facility construction will follow the same initial sequential process a pipeline construction, including survey and staking, clearing and site preparation.

5.2.1 Pump Stations

Prior to excavation, two independent four-way sweeps[24] would be conducted to positively locate any existing underground utilities. Temporary construction trailers would be placed, material

[24] Four-way sweep: Four-way sweep is a method of locating underground utilities. A four-way sweep involves scanning the ground with electromagnetic induction or ground-penetrating radar equipment to detect the presence of buried features; it does not involve

laydown areas[25] prepared, and temporary utilities (e.g., power, telephone) would be installed at the site.

Piping would be installed, either by being welded on-site or by placing shop-fabricated installations. The shop-fabricated installations, in which the pipe already has been bent and welded together at the factory, are usually hydrostatically tested before arriving on site; the field fabrications would be hydrostatically tested in place. Above grade piping would be tested for 4.25 hours; below grade piping would be tested for 8.25 hours.

The electrical service building(s) ("ESB"), either modular design or built on-site, would be placed and all associated electrical and controls equipment would be installed. Power and control cables would be routed, and additional pre-operational testing could begin once the system(s) are energized. Some sites would require the construction of a new electrical substation. This work may be performed by the utility supplying the power to the site or by an Enbridge contractor.

Upon completion of all pre-operational testing, the equipment would be flooded with crude oil according to the detailed flood plans developed for each site. Equipment operation would then be re-checked. Final site civil work and painting would be completed, and the site would then be cleaned up. Once all final checks have been completed, the facility would be turned over to Enbridge Operations for service.

5.2.2 Valves

Valves would be installed concurrently with the mainline pipe. The mainline pipe, valve foundation, and valve would be installed and backfilled. After backfilling is complete, the valve would be filled with water and hydrostatically tested. The ESB would be placed and all associated electrical and controls equipment would be installed. Power and control cables would be routed, and additional pre-operational testing would begin once the system(s) are energized. Some sites would require the construction of a new electrical service. This work may be performed by an electric utility supplying the power to the site or by an Enbridge contractor.

Upon completion of all pre-operational testing, the valve would be ready for use. Equipment operation would be re-checked and final site civil work including fencing installation, permanent access road construction, and painting would be completed. After the final site civil work is complete, the site would be cleaned up and restored. After all final checks have been completed, the valve site would be turned over to Enbridge Operations for service.

5.2.3 Corrosion Protection

A cathodic protection and impressed current mitigation systems would be constructed for L3R. Construction of this system includes both anode arrays installed in both conventional beds near the surface as well as in deep wells. Construction of cathodic protection systems includes excavation of soils at the site of installation. Methods utilized typically involve digging a trench for a cable using a mini-excavator, or ground trenching equipment such as a Ditch Witch. The technique used to trench the cables associated with the cathodic protection system is similar to

digging or other ground-disturbing activities. The term "four-way sweep" comes from the fact that an area typically is scanned (or swept) in at least four directions.

[25] Material laydown area: A material laydown area is a piece of land where materials are stored and staged for construction.

the methods used for installing fiber optic or telephone lines used for communications; which typically requires a 20- to 30-foot-wide construction workspace.

Conventional surface bed type cathodic protection systems would be installed 600 feet perpendicular to the pipeline. Anodes would be installed in either vertical or horizontal fashion and cables would be trenched to connect the anodes electrically to the protected metallic structures. Enbridge would also construct deep well cathodic protection systems where the anodes would be installed vertically in a well using construction methods similar to that of water wells. Deep well cathodic protection systems are normally installed closer to the pipeline, while the anodes themselves would be installed deeper (200-400 feet deep) than a conventional surface bed.

Both types of systems utilize native backfill for areas where trenching for the cable occurs. However, the area directly around the anodes would be backfilled with a more suitable backfill such as coke breeze[26]. Additionally, in a deep well cathodic protection system, a natural clay plug would be installed above the anodes to seal the well and prevent water from entering the hole.

5.2.4 Access Roads

Enbridge would predominantly use existing public and private roads to gain access to L3R. Many of the existing roads are presently in a condition that can accommodate construction traffic without modification or improvement. Some roads, however, are dirt or gravel roads that are not currently suitable for construction traffic. Enbridge is proposing to improve unsuitable dirt and gravel roads through widening and/or grading. Widening would involve increasing the width of the road bed. Grading would be confined to the existing road bed or to the footprint of the newly widened road. Enbridge has identified potential access roads for L3R (refer to Attachment A); however, Enbridge is currently in the process of identifying the type of improvements or modifications that would be required for each access road.

After construction, Enbridge would return improved roads to their pre-construction condition unless the landowner or land-managing agency requests that the improvements be left in place. To return the roads to pre-construction conditions, Enbridge would re-contour the disturbed areas outside the original road footprint and seed disturbed areas with an appropriate seed mix.

As discussed above, permanent access roads to the mainline valves along the L3R route would be constructed and maintained by Enbridge.

5.3 CONSTRUCTION SCHEDULE

Enbridge plans to commence construction of the new pipeline and associated facilities as soon as all construction related regulatory approvals have been obtained. Enbridge plans to complete construction, testing, and commissioning of the new pipeline and associated facilities by Q4 2019.

6.0 OPERATIONS ACTIVITIES

As discussed in Section 4.1, Enbridge will maintain a 50-foot permanent right-of-way centered over the pipeline. Enbridge will maintain the permanent right-of-way by removing woody shrubs

[26] Coke Breeze: Coke breeze is common carbonaceous backfill material used in cathodic protection. It provides a conductive path for current flow and ensures optimal effectiveness of the cathodic protection system.

and trimming branches overhanging the right-of-way approximately every 5 years to preserve pipeline integrity and to facilitate inspection of the pipeline. 49 CFR 195.412 (a) states that "each operator shall, at intervals not exceeding 3 weeks, but at least 26 times each calendar year, inspect the surface conditions on or adjacent to each pipeline right-of-way. Methods of inspection include walking, driving, flying or other appropriate means of traversing the right-of-way." Enbridge's preferred method to perform these required inspections is flying. To perform these inspections aerially, the right-of-way needs to be adequately cleared to be able to identify abnormal surface conditions. Other maintenance activities (e.g., maintenance digs) may occur as necessary over the life of the pipeline.

Routine vegetation maintenance along the permanent right-of-way may include mowing, grubbing, and treatment/mitigation of undesirable species once identified, including herbicide treatment as approved by the appropriate agencies.

7.0 DEACTIVATION

7.1 PERMANENT DEACTIVATION OF EXISTING LINE 3

PHMSA regulations consider a pipeline that is permanently removed from service as "abandoned."[27] PHMSA regulations prescribe certain steps for formal abandonment of pipelines.[28]

Enbridge will permanently deactivate (i.e., permanently remove from service) existing Line 3 after construction and commissioning of the L3R Project[29], including purging the pipeline of oil; cleaning the pipeline; isolating the pipeline from specified infrastructure transporting oil, further segmentation of the line as needed, including completing all required remediation at water bodies, roads and railroads and other permitting crossings in coordination with permit authorities; and continuing monitoring of the existing Line 3 right-of-way. Ongoing maintenance and monitoring will include continuing to apply cathodic protection until such time as it is ineffective or otherwise detrimental.

Once Line 3 is permanently removed from service, portions of pipeline may be removed, including exposed segments of the pipeline and those areas where landowners have requested removal after the appropriate permits and authorizations have been obtained.

Enbridge will consult with the USACE and apply for the appropriate permit(s) to conduct activities which may include dredge and fill activities within waters of the U.S. prior to commencing permanent deactivation of existing Line 3.

8.0 ALTERNATIVES

As part of the route selection process, Enbridge studied a variety of both major route alternatives, and minor route variations before selecting its Preferred Route for this Project. These alternatives consisted of route variations that satisfied the geographic limitations of this Project. Refer to

[27] Operations & Maintenance Enforcement Guidance, 49 CFR Part 195, Subpart F.

[28] 49 CFR 192.3, 195.2.

[29] The Department of Justice Consent Decree for Civil Action (No. 1:16-cv-914, *United States v. Enbridge and Subsidiaries*) requires Enbridge to begin cleaning and purging the existing line within three months of the in-service date of the proposed pipeline and to complete final clean-out and decommissioning of the existing line within one year thereafter.

Section 2.1 which describes the MPUC Certificate of Need and Route Permit Proceedings. In granting the Route Permit for the Designated Route, the MPUC relied in part on the EIS to comparatively evaluate impacts of Enbridge's Preferred Project Route, four (4) route alternatives and twenty-four (24) route segment alternatives, including, but not limited to, RSA-22 through the FdL Reservation. The Designated Route reduces the amount of greenfield[30] impact by 38 miles and the overall length of the Project by 13 miles. Approximately 90 percent of the Project route covered by this permit application would be co-located with other Enbridge pipelines; third-party pipelines or utilities; or roads, railroads or highways.

9.0 AQUATIC RESOURCE IMPACTS

9.1 WATERBODIES

Surface waters crossed by the Designated Route are located within the Red River of the North, Mississippi Headwaters, St. Croix River, and Western Lake Superior Basins (Figure 9.1-1). Table 9.1-1 summarizes the watersheds crossed by the Project.

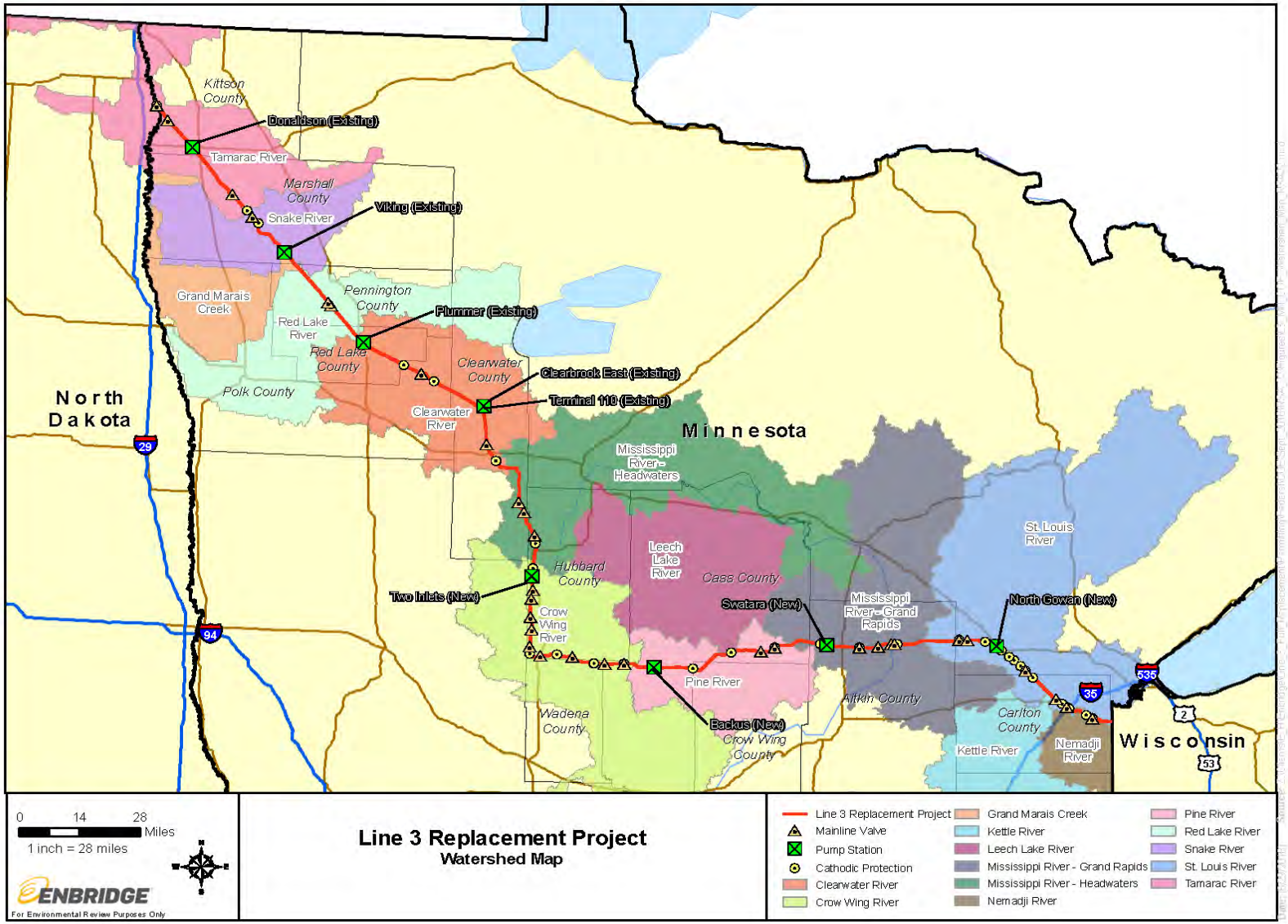
Table 9.1-1
Major Watersheds Crossed by the Line 3 Replacement Project

Major Watershed Name	Major Watershed ID Number	Crossing Length (miles) [a]
Red River of the North – Tamarac River	69	33.3
Snake River	68	17.4
Red River of the North – Grand Marais Creek	67	2.8
Red Lake River	63	21.9
Clearwater River	66	54.3
Mississippi River – Headwaters	7	26.6
Crow Wing River	12	49.5
Pine River	11	40.4
Leech Lake River	8	0.5
Mississippi River – Grand Rapids	9	31.5
Kettle River	35	1.6
Nemadji River	5	6.5
St. Louis River	3	44.3
	Total	**330.4**

[a] Numbers may not total consistently due to rounding.

[30] See. Footnote 27 for definition of greenfield.

Figure 9.1-1: Line 3 Replacement Project Watersheds



Enbridge conducted waterbody field surveys along the Designated Route between 2013 and 2018 to identify locations and widths of waterbodies (i.e., lakes, streams, rivers, and drainage ditches). Enbridge used hydrographic spatial data (National Hydrography Data ["NHD"]) to identify waterbodies crossed by the Designated Route when survey data were not available. This review identified 211 waterbodies crossed by the Designated Route, including 85 perennial streams, 106 intermittent streams, and 20 ephemeral streams. Of these waterbodies, 56 are designated as Public Waters by MDNR, and 3 are considered Section 10 navigable waters. Waterbodies crossed by the Project are summarized in Table 9.1-2. A list of individual waterbodies crossed by the Project is included in Attachment D. Any remaining waterbody field surveys will be completed in 2018, or prior to construction.

9.1.1 Impacts

Proposed (HDD, dry crossing, and wet open cut) and alternative crossing methods (wet open cut, where applicable) are identified in Attachment D for each waterbody crossed. The Summary of Construction Methods and Procedures for Wetland and Waterbody Crossings (Attachment B) provides a discussion of the criteria Enbridge applies to determine the least environmentally damaging practicable alternative crossing method for each affected waterbody.

Table 9.1-2
Summary of Waterbodies Crossed by the Project

County	Perennial	Intermittent	Ephemeral	MDNR Public Water-courses [a]	Wild & Scenic Rivers	State Canoe Routes [b]	Trout Streams [c]	Section 10 Navigable Waters [d]	Wild Rice Waters [e]
Kittson	2	15	2	3	-	1	-	1	-
Marshall	4	25	5	4	-	-	-	-	-
Pennington	1	16	1	2	-	1	-	1	-
Red Lake	2	14	-	2	-	-	-	-	1
Polk	-	16	-	-	-	-	-	-	-
Clearwater	17	9	2	14	-	1	-	-	-
Hubbard	9	-	-	8	-	-	2	-	1
Wadena	3	-	-	2	-	1	-	-	1
Cass	14	5	1	6	-	1	1	-	-
Crow Wing	3	-	-	-	-	-	-	-	-
Aitkin	13	3	-	6	-	1	1	1	-
St. Louis	10	3	-	4	-	-	-	-	
Carlton	7	-	9	5	-	-	1	-	-
Totals	**85**	**106**	**20**	**56**	**0**	**6**	**5**	**3**	**3**

[a] MDNR (https://gisdata.mn.gov/dataset/water-mn-public-waters). The Project will cross a total of 62 designated Public Inventory Watercourses. Six of these were either delineated as a wetland or as upland and are not included in this table. Four of the total 62 Public Inventory Watercourses that are tributaries to state-designated trout streams, which are treated as PWIs under MDNR permitting regulations.

[b] MDNR (https://gisdata.mn.gov/dataset/trans-water-trails-minnesota)

[c] MDNR (https://gisdata.mn.gov/dataset/env-trout-stream-designations); Designated a Trout Stream, per Minnesota Rules 6264.0050, Subp.4.

[d] Red River of the North (Pembina/Kittson County); Red Lake River (Pennington County); and Mississippi River (Aitkin County).

[e] MPCA (https://www.pca.state.mn.us/sites/default/files/wq-s6-43x.xlsx) and MDNR (https://gisdata.mn.gov/dataset/biota-wild-rice-lakes-dnr-wld); Hay Creek (Hubbard County). Field surveys also identified wild rice at the Lost River (Red Lake County) and Crow Wing River (Wadena County).

A total of 21 waterbodies will be crossed by access roads required for construction of the Project. Enbridge proposes to construct permanent bridges across two waterbodies to access valve sites.

All other bridges will be temporary bridges, some which Enbridge will install instream supports for equipment to travel safely across (refer to Attachment C). Temporary clear span bridges that do not require instream supports will have no impact below the ordinary high water mark ("OHWM"); therefore, no dredge and fill impacts are associated. Waterbodies crossed by access roads for the Project are summarized in Table 9.1-3.

Table 9.1-3
Summary of Waterbodies Crossed by Access Roads

County	Access Road ID	Feature ID	Waterbody Name	Flow Regime	Top of Bank Width (feet)	OHWM Width (feet)	Agency Designation [a]	Bridge Type [b]
Marshall	AR1022	s-155n45w21-a	Unnamed	I	2.5	1		TCSB
	AR1064	s-155n45w28-c	Unnamed	I	10	4		TCSB
	AR1065	s-155n45w33-a	Unnamed	I	25	10		TCSB - ISS
Polk	AR1042	s-150n40w16-b	Unnamed	I	18	9		TCSB - ISS
	AR1043	s-150n40w14-a	Unnamed	I	8	4		TCSB
Clearwater	AR1051.2	s-149n38w7-b	Unnamed	I	5	2		TCSB
	AR292	s-149n38w23-aa	Unnamed	I	6	3		TCSB
	AR293	s-149n38w25-a	Unnamed	I	2	2		TCSB
	AR298.1	s-148n37w20-b	Unnamed	E	1	1		TCSB
	AR300	s-148n37w29-b	Unnamed	E	10	3		TCSB
Cass	AR358	CAC5010aWB	Unnamed	P	4	3		TCSB
	AR392	s-139n25w18-aa	Unnamed	I	2	1		TCSB
	AR394	s-139n25w18-ab	Unnamed	I	1	1		TCSB
	AR394	s-139n25w18-ac	Unnamed	I	2	2		TCSB
	AR394.1	s-139n25w5-aa	Unnamed	I	3	3		TCSB
	AR394.6	s-139n25w4-aa	Unnamed	I	3	3		TCSB
Aitkin	AR533	s-51n26w33-g	Unnamed	P	15	4		TCSB - ISS
	AR533	s-51n26w33-h	Unnamed	P	10	2		TCSB
	AR554	s-51n23w28-a	Unnamed	I	3	1		TCSB
	AR541 / Valve RA22-2 Access	s-51n24w31-b	Willow River	P	50	30	MDNR Public Water, NRI	TCSB – ISS / Permanent
St. Louis	Valve RA22-6 Access	s-51n21w22-a	Unnamed	P	8	8		Permanent

[a] MDNR (https://gisdata.mn.gov/dataset/water-mn-public-waters); NPS; Nationwide Rivers Inventory data (https://www.nps.gov/subjects/rivers/nationwide-rivers-inventory.htm)

[b] TCSB = temporary clear span bridge; ISS = instream supports

Blasting

Blasting is currently proposed at Little Otter Creek, a PWI feature and designated trout stream. Enbridge developed a Blasting Plan and will consult a licensed blasting contractor to develop a Site-Specific Blasting Plan prior to work occurring (refer to Attachment E). Enbridge would adhere to the work exclusion dates for proposed in-stream blasting activities (refer to Attachment D).

9.1.2 Special Designated and Sensitive Waterbodies

Public Waters Inventory

The Project will cross 62 watercourses (Public Water Watercourses) and 9 water basins (Public Water Basins) listed on the MDNR Public Waters Inventory ("PWI")[31]. These watercourses and water basins are regulated as public waters under the MDNR's Public Waters Permit Program. Enbridge has prepared and submitted an application to MDNR to obtain a License to Cross Public Waters for PWI watercourse and basin features.

Crossings of PWI Wetlands located on private land will be permitted under the MDNR's Work in Public Waters permitting process.

Outstanding Resource Value Waters

The Project will cross the listed Gully 30 calcareous fen (Minn. Rule 8420.0935, subp. 3) in Polk County near MP 894.0. On November 13, 2009, MDNR approved a calcareous fen management plan for the Alberta Clipper (Line 67) Pipeline Crossing of the Gully 30 Calcareous Fen. Crossing this fen will require the MDNR Commissioner's approval of a new Fen Management Plan (Minn. Rule 8420.0935, subp. 4). Enbridge has prepared and submitted to MDNR a calcareous Fen Management Plan for this crossing.

Nationwide Rivers Inventory and Wild and Scenic Rivers

The Project will cross the Middle, Red Lake, Clearwater, Shell, Crow Wing, Moose, and Willow Rivers, which are listed on the Nationwide Rivers Inventory ("NRI"). The Project will not cross any river segments which are listed on the NRI as designated or potentially designated National Wild and Scenic Rivers. The Mississippi River has segments that are designated as Minnesota State Wild and Scenic Rivers; however, the Project does not cross the river at either designated segment.

Enbridge is proposing to install a permanent bridge for valve access over the Willow River near MP 1066.4 (refer to Table 9.1-3). The bridge design is currently in the preliminary stages and Enbridge will coordinate with the applicable regulating agencies as the bridge design is finalized.

Impaired Waters

Clean Water Act ("CWA") Section 303(d) requires that each state review, establish, and revise water quality standards for all surface waters within the state. Waters that do not meet their designated beneficial uses because of water quality standard violations are considered impaired. To comply with this requirement, each state crossed by the Project has been delegated by the U.S. Environmental Protection Agency ("EPA") to develop its own beneficial use classification system to describe state designated use(s). Regulatory programs for water quality standards include default narrative standards, non-degradation provisions, a Total Maximum Daily Load

[31] Six of the total 62 watercourses were either delineated as a wetland, or as upland; therefore, these waterbodies are not included in Table 9.1-2. Enbridge included all 62 PWI watercourse features in its submittal to MDNR to obtain a License to Cross Public Waters.

("TMDL") regulatory process for impaired waters, and associated minimum water quality requirements for the designated uses of listed surface waterbodies within the state.

Of the 211 streams crossed in Minnesota, the Project will cross 13 impaired streams in 19 different locations as identified by MPCA's 2014 EPA-approved Inventory of Impaired Waters per CWA Section 303(d)[32]. In addition, the Project will cross the Black River, delineated as a wetland during field survey efforts, which is also identified by MPCA's 2014 Inventory of Impaired Waters per CWA Section 303(d). Table 9.1-4 lists these streams, their affected use, and reason for impairment. No impaired lakes or wetlands on the 2014 inventory will be crossed by the Project.

The MPCA has recently released its proposed list of 2018 impaired waters[33]. The Black River was removed from the proposed 2018 inventory. The Project will cross two new waterbodies on the proposed 2018 inventory that were not previously listed (Snake River, South Branch; and the Lost River). These potential changes are reflected in italics in Table 9.1-4. No impaired lakes or wetlands on the 2018 inventory will be crossed by the Project. Enbridge will continue to monitor the status of these waterbodies and plan construction activities accordingly in the event that the proposed 2018 inventory is finalized by MPCA.

Table 9.1-4
Impaired Streams Crossed by the Line 3 Replacement Project

County	Waterbody	Milepost	Affected Use	Use Support [a]	Impairment
Kittson	Red River of the North	801.8	Aquatic Consumption, *Aquatic Life*	5A	Mercury in fish tissue; ~~PCB in fish tissue~~; *Mercury in water column; Arsenic; Turbidity*
Marshall	Tamarac River	828.5	Aquatic Life	5A	Aquatic macroinvertebrate bioassessments; Fishes bioassessments
	Middle River	835.9	Aquatic Life	5A	Dissolved oxygen; Turbidity; *Aquatic macroinvertebrate bioassessments*
	Snake River	843.2	Aquatic Life, *Aquatic Recreation*	5C	Dissolved oxygen; *E. coli; Fishes bioassessments; Aquatic macroinvertebrate bioassessments*
	Snake River, South Branch	*847.2*	*Aquatic Life*	*5C*	*Fishes bioassessments*
Pennington	~~Black River~~ [b]	~~855.0~~	~~Aquatic Life~~	~~5A~~	~~Dissolved Oxygen, Turbidity~~
	Red Lake River	864.3	Aquatic Consumption	4A	Mercury in fish tissue
Red Lake	Clearwater River	875.4	Aquatic Consumption, Aquatic Life	5B	~~Dissolved oxygen;~~ Mercury in fish tissue; Turbidity
Clearwater	*Lost River*	*904.0*	*Aquatic Recreation*	*5C*	*E. coli*
	Silver Creek	907.1 907.4 907.7	Aquatic Recreation; *Aquatic Life*	5C	Fecal Coliform*; Aquatic macroinvertebrate bioassessments*
	Clearwater River	922.2	Aquatic Consumption, Aquatic Life	5B	Mercury in fish tissue, Dissolved Oxygen
	Walker Brook	924.2	Aquatic Life	~~5C~~*; 4D*	Dissolved Oxygen

[32] https://www.pca.state.mn.us/water/last-approved-impaired-waters-list
[33] https://www.pca.state.mn.us/data/spatial-data; https://www.pca.state.mn.us/water/minnesotas-impaired-waters-list

Table 9.1-4
Impaired Streams Crossed by the Line 3 Replacement Project

County	Waterbody	Milepost	Affected Use	Use Support [a]	Impairment
	Mississippi River	941.0	~~Aquatic Life,~~ *Aquatic Consumption*	~~4D,~~ *5C*	~~Dissolved Oxygen~~; *Mercury in fish tissue*
Hubbard	Straight River	974.2	Aquatic Life	~~5C~~*; 4A*	Dissolved Oxygen
	Shell River	976.6	Aquatic Life	4C	Fishes bioassessments
		981.4			
Wadena	Shell River	991.2	Aquatic Life	~~5C~~; *4A*	Dissolved Oxygen
	Crow Wing River	993.3	Aquatic Consumption	4A	Mercury in fish tissue
Cass	Moose River	1048.0	Aquatic Life	~~5C~~*; 4D*	Dissolved Oxygen
Aitkin	Mississippi River	1069.6	Aquatic Consumption, *Aquatic Life*	~~4A,~~ *5B*	Mercury; *Turbidity*

Note: *Italicized text* indicates proposed status or change on the MPCA's 2018 Proposed List of Impaired Waters

[a] MPCA's 2014 EPA-approved List Categories:

4A: Impaired or threatened but all necessary TMDL plans have been completed.

4C: Impaired or threatened but does not require a TMDL because impairment not caused by a pollutant.

4D: Impaired or threatened but doesn't require a TMDL plan because the impairment is due to natural conditions with only insignificant anthropogenic influence.

5A: Impaired by multiple pollutants and no TMDL study plans are approved by EPA.

5B: Impaired by multiple pollutants and at least one TMDL study plan is approved by EPA.

5C: Impaired or threatened by one pollutant.

[b] The Black River crossing was delineated as a wetland during field surveys and therefore is not represented in the list of waterbody crossings in Attachment D.

9.2 WETLANDS

Enbridge conducted wetland delineation surveys along the Designated Route between 2013 and 2018 to identify the wetlands that will be affected during Project construction. Wetlands were identified and mapped in general accordance with the Great Plains, Midwest, and Northcentral and Northeast Regional Supplements of the 1987 Corps of Engineers Wetland Delineation Manual[34]. Enbridge will conduct remaining wetland delineations along the Designated Route in 2018, or prior to construction.

Where field-verified survey data were not available, Enbridge used U.S. Fish and Wildlife Service ("USFWS") National Wetlands Inventory ("NWI") data to identify potential wetlands that will be crossed by the Project. Through a combination of NWI and field data, Enbridge determined that the Project will cross approximately 78.3 linear miles of wetlands. Refer to Attachment F for a list of wetlands crossed by the Project.

[34] Environmental Laboratory. 1987. Corps of Engineers Wetland Delineation Manual, Technical Report Y-87-1. U.S. Army Corp of Engineers waterways experiment Station, Vicksburg, Mississippi.

9.2.1 Impacts

Construction within wetlands will result in temporary impacts and permanent wetland type conversion on 1,046.5 acres, and permanent fill impacts on a total of 10.8 acres. Enbridge narrowed the construction workspace width to 95 feet (inclusive of the 50-foot-wide permanent easement width) at wetland crossings to reduce impacts. Final acreages will be determined pending completion of wetland field surveys and evaluation of workspace in wetland areas. Refer to Attachment B for a detailed description of crossing techniques.

Table 9.2-1 provides a summary of wetland impacts by type, and nature of wetland impact consistent with the previous St. Paul District characterizations of Enbridge pipeline wetland impacts, along the Project's mainline construction corridor. Attachment F provides a detailed breakdown by wetland type and county of the Project's potential construction impacts in Minnesota.

Table 9.2-1
Acreage of Wetland Impact by Bank Service Area and Major Watershed Along the Project [a]

Watershed Name (HUC 8 Number)	Temporary Impacts (acres) [b]				Permanent Conversion (acres) [c]				Total	% in HUC 8
	PFO	PSS [d]	PEM	PUB	PFO	PSS	PEM	PUB		
BANK SERVICE AREA 1 – GREAT LAKES										
Nemadji River (04010301)	-	0.5	3.4	<0.1	0.1	0.2	-	-	4.3	0.4
St. Louis River (04010201)	-	39.9	99.6	2.1	146.9	37.0	-	-	325.5	33.8
BANK SERVICE AREA 3 – LOWER RED RIVER OF THE NORTH										
Red River of the North – Tamarac River [e] (09020311)	-	-	18.5	-	0.4	0.1	-	-	18.9	2.0
Snake River (07030004)	-	0.8	16.5	-	0.5	0.3	-	-	18.0	2.0
Red River of the North – Grand Marais Creek (09020306)	-	-	2.7	-	-	-	-	-	2.7	0.3
Red Lake River (09020303)	-	0.4	25.8	0.3	2.4	0.2	-	-	29.0	3.0
Clearwater River (09020305)	-	8.8	96.8	2.9	17.0	4.7	-	-	130.3	13.5
BANK SERVICE AREA 5 – MISSISSIPPI HEADWATERS										
Mississippi River – Headwaters (07010101)	-	5.7	18.5	0.2	20.0	4.5	-	-	48.9	5.1
Crow Wing River (07010106)	-	12.2	52.1	0.5	19.2	13.5	-	-	97.5	10.1
Pine River (07010105)	-	9.0	46.9	2.8	26.6	9.6	-	-	94.9	9.9
Leech Lake River (07010102)	-	-	<0.1	-	0.6	-	-	-	0.6	0.1
Mississippi River – Grand Rapids (07010103)	-	13.1	46.8	0.9	105.6	13.3	-	-	179.7	18.7
BANK SERVICE AREA 6 – ST. CROIX RIVER BASIN										
Kettle River (07030003)	-	0.8	8.9	1.0	0.5	0.2	-	-	11.4	1.2
TOTALS [f]	**-**	**91.3**	**436.1**	**10.8**	**339.8**	**83.6**	**-**	**-**	**961.7**	**100%**

[a] PEM = Palustrine Emergent; PSS = Palustrine Scrub Shrub; PFO = Palustrine Forested; PUB = Palustrine Unconsolidated Bottom (Cowardin et al, 1979)

[b] Includes the area of wetland impact within the construction workspace based typically on a 95-foot-wide workspace.

Table 9.2-1
Acreage of Wetland Impact by Bank Service Area and Major Watershed Along the Project [a]

Watershed Name (HUC 8 Number)	Temporary Impacts (acres) [b]				Permanent Conversion (acres) [c]				Total	% in HUC 8
	PFO	PSS [d]	PEM	PUB	PFO	PSS	PEM	PUB		

[c] Permanent conversion impacts include the area within the new permanent easement where the pipeline corridor will be maintained by periodic clearing activities resulting in a change from forested or scrub shrub wetland to a herbaceous wetland.

[d] PSS impacts calculated are only for the area within the temporary construction workspace where woody vegetation will be allowed to naturally regenerate.

[e] Wetland impacts from the portion of the Project in North Dakota that does not have independent utility are included in these totals (refer to Section 1.3).

[f] The sum of addends may not total correctly due to rounding.

Notes:

Hydrologic Unit Code ("HUC")

Additional Temporary Workspace

In general, Enbridge attempts to locate ATWS outside of wetlands wherever practicable (refer to Attachment C). However, ATWS may be sited in select wetlands where the wetland is adjacent to a waterbody, road, railroad, foreign utility crossing, and/or pipeline cross-over. Attachment G identifies all areas by milepost where siting ATWS in wetlands is unavoidable due to feature crossings (e.g., roads, railroads, waterbodies).

Pump Stations and Valves

Aboveground pump stations and valves associated with the Project will result in permanent fill of approximately 10.8 acres of wetlands. Table 9.2-2 summarizes the permanent fill impacts of aboveground facilities by wetland type. Temporary impacts and permanent conversion associated with the construction of these facilities are accounted for in Table 9.2-1 above, while permanent impacts are accounted for in Table 9.2-2.

Table 9.2-2
Permanent Fill at Pump Stations and Valves

County	Facility	Milepost Location	Bank Service Area	Major Watershed (HUC 8)	Wetland Type	Total Permanent Fill (acres)
PUMP STATIONS						
Kittson	Donaldson Pump Station	814.4	3	9020311	PEM	0.09
Red Lake	Plummer Pump Station	877.0	3	9020305	PEM	0.04
Clearwater	Clearbrook Terminal	909.4	3	9020305	PEM	1.83
Hubbard	Two Inlets Pump Station	959.3	5	7010101	PEM	0.08
					PSS	0.01
Aitkin	Swatara Pump Station	1054.2	5	7010103	PFO	4.03
					PSS	0.34
					PEM	0.68
St. Louis	North Gowan	1094.9	1	4010201	PSS	0.01
					Total	**7.10**
VALVES						
Kittson	Valve Access Road	805.6	3	9020311	PEM	0.01

Table 9.2-2
Permanent Fill at Pump Stations and Valves

County	Facility	Milepost Location	Bank Service Area	Major Watershed (HUC 8)	Wetland Type	Total Permanent Fill (acres)
Marshall	Valve	836.5	3	9020309	PEM	0.02
Clearwater	Valve Access Road	939.7	5	7010101	PFO PEM	<0.01 0.06
Hubbard	Valve Access Road	964.8	5	7010106	PSS	0.01
Cass	Valve Access Road	1002.6	5	7010106	PSS	0.01
Aitkin	Valve and Access Road	1061.6	5	7010103	PSS	0.17
Aitkin	Valve Access Road	1066.3	5	7010103	PFO PEM	0.08 0.01
Aitkin	Valve and Access Road	1069.2	5	7010103	PFO	0.20
St. Louis	Valve and Access Road	1085.5	1	4010201	PFO PSS	0.17 0.01
St. Louis	Valve	1087.3	1	4010201	PFO PSS PEM	0.46 2.01 0.46
St. Louis	Valve Access Road	1104.1	1	4010201	PSS PEM	<0.01 <0.01
					Total	**3.68**

Corrosion Protection

Cathodic protection and alternating current / direct current mitigation will be installed along the Designated Route to protect the pipeline from the corrosive effects of soil and co-located utilities. A summary of cathodic protection area impacts within wetlands are presented in Table 9.2-3 and are identified on the enclosed Detailed Route Maps (refer to Attachment A).

Table 9.2-3
Acreage of Wetland Impact by Bank Service Area and Major Watershed at Cathodic Protection Areas [a]

Watershed Name	Temporary Impacts (acres) [b]				Permanent Conversion (acres) [c]				Total
HUC 8 Number	PFO	PSS	PEM	PUB	PFO	PSS	PEM	PUB	
BANK SERVICE AREA 1 – GREAT LAKES									
Nemadji River (04010301)	-	-	-	-	-	-	-	-	-
St. Louis River (04010201)	-	2.1	0.3	-	-	-	-	-	2.5
BANK SERVICE AREA 3 – LOWER RED RIVER OF THE NORTH									
Red River of the North – Tamarac River (09020311)	-	-	-	-	-	-	-	-	-
Snake River (07030004)	-	-	-	-	-	-	-	-	-
Red River of the North – Grand Marais Creek (09020306)	-	-	-	-	-	-	-	-	-
Red Lake River (09020303)	-	-	-	-	-	-	-	-	-
Clearwater River (09020305)	-	-	-	-	-	-	-	-	-
BANK SERVICE AREA 5 – MISSISSIPPI HEADWATERS									
Mississippi River – Headwaters (07010101)	-	-	-	-	-	-	-	-	-

Table 9.2-3
Acreage of Wetland Impact by Bank Service Area and Major Watershed at Cathodic Protection Areas [a]

Watershed Name / HUC 8 Number	Temporary Impacts (acres) [b]				Permanent Conversion (acres) [c]				Total
	PFO	PSS	PEM	PUB	PFO	PSS	PEM	PUB	
Crow Wing River (07010106)	-	-	-	-	-	-	-	-	-
Pine River (07010105)	-	<0.1	-	-	-	-	-	-	<0.1
Leech Lake River (07010102)	-	-	-	-	-	-	-	-	-
Mississippi River – Grand Rapids (07010103)	-	-	0.1	-	0.2	-	-	-	0.3
BANK SERVICE AREA 6 – ST. CROIX RIVER BASIN									
Kettle River (07030003)	-	-	-	-	-	-	-	-	-
TOTAL [d]	**-**	**2.2**	**0.4**	**-**	**-**	**-**	**-**	**-**	**2.8**

[a] PEM = Palustrine Emergent; PSS = Palustrine Scrub Shrub; PFO = Palustrine Forested; PUB = Palustrine Unconsolidated Bottom (Cowardin et al, 1979)
[b] Includes the area of wetland impact within the construction workspace for cathodic protection areas based typically on a 30-foot-wide workspace.
[c] Permanent conversion impacts includes forested wetland areas within cathodic protection areas.
[d] The sum of addends may not total correctly due to rounding.
Notes:
Hydrologic Unit Code ("HUC")

Temporary Access Roads

Enbridge typically uses existing public and private roads to access the right-of-way and facilities to the extent practicable to limit impacts on waters of the U.S. However, Enbridge identified areas along the Project where new temporary access roads will likely be necessary to access the construction workspace, which will result in additional temporary wetland impacts.

Enbridge anticipates approximately 82.0 acres of temporary fill will be required on access roads (refer to Table 9.2-4). There will be no loss of waters of the U.S. due to construction of new temporary access roads for the Project because Enbridge will restore all affected wetlands to preconstruction conditions.

Table 9.2-4
Acreage of Wetland Impact by Bank Service Area and Major Watershed at Access Roads [a]

Watershed Name / HUC 8 Number	Temporary Impacts (acres) [b]				Permanent Conversion (acres) [c]				Total	% in HUC 8
	PFO	PSS	PEM	PUB	PFO	PSS	PEM	PUB		
BANK SERVICE AREA 1 – GREAT LAKES										
Nemadji River (04010301)	-	-	-	-	-	-	-	-	-	-
St. Louis River (04010201)	-	13.1	3.4	0.1	29.6	-	-	-	46.3	56.4
BANK SERVICE AREA 3 – LOWER RED RIVER OF THE NORTH										
Red River of the North – Tamarac River (09020311)	-	-	0.4	-	-	-	-	-	0.4	0.5
Snake River (07030004)	-	0.1	<0.1	-	-	-	-	-	0.1	0.1
Red River of the North – Grand Marais Creek (09020306)	-	-	-	-	-	-	-	-	-	-
Red Lake River (09020303)	-	-	<0.1	-	-	-	-	-	<0.1	<0.1
Clearwater River (09020305)	-	0.1	0.2	-	<0.1	-	-	-	0.3	0.4
BANK SERVICE AREA 5 – MISSISSIPPI HEADWATERS										

Table 9.2-4
Acreage of Wetland Impact by Bank Service Area and Major Watershed at Access Roads [a]

Watershed Name HUC 8 Number	Temporary Impacts (acres) [b]				Permanent Conversion (acres) [c]				Total	% in HUC 8
	PFO	PSS	PEM	PUB	PFO	PSS	PEM	PUB		
Mississippi River – Headwaters (07010101)	-	<0.1	0.6	-	0.1	-	-	-	0.8	1.0
Crow Wing River (07010106)	-	0.4	0.7	-	<0.1	-	-	-	1.2	1.5
Pine River (07010105)	-	1.4	0.8	-	0.3	-	-	-	2.5	3.0
Leech Lake River (07010102)	-	-	-	-	-	-	-	-	-	-
Mississippi River – Grand Rapids (07010103)	-	13.5	11.2	0.2	5.5	-	-	-	30.4	37.0
BANK SERVICE AREA 6 – ST. CROIX RIVER BASIN										
Kettle River (07030003)	-	<0.1	-	<0.1	<0.1	-	-	-	0.1	0.1
TOTALS [d]	**-**	**28.8**	**17.3**	**0.3**	**35.6**	**-**	**-**	**-**	**82.0**	**100%**

[a] PEM = Palustrine Emergent; PSS = Palustrine Scrub Shrub; PFO = Palustrine Forested; PUB = Palustrine Unconsolidated Bottom (Cowardin et al, 1979)
[b] Includes the area of wetland impact along new temporary access roads based typically on a 30-foot-wide workspace.
[c] Permanent conversion impacts includes forested wetland areas along new temporary access roads.
[d] The sum of addends may not total correctly due to rounding.

10.0 COMPENSATORY WETLAND MITIGATION FOR PROJECT WETLAND IMPACTS

Enbridge will provide compensatory wetland mitigation for unavoidable Project permanent fill and for wetland type conversion of scrub-shrub and forested wetlands, as well as temporal loss, in accordance with the USACE and EPA Final Rule regarding Compensatory Mitigation for Losses of Aquatic Resources 33 CFR Parts 325 and 322 and 40 CFR Part 230, (2008) ("Mitigation Rule"), the St. Paul District USACE Mitigation Policy ("District Mitigation Policy") and internal St. Paul District guidance.

Enbridge will restore all affected wetlands to pre-construction conditions, which is considered in-place compensation, but not in-kind and not in-advance. In applying the in-kind and in-advance factors, Enbridge proposes to use the baseline compensation ratios for impacts to emergent, forested, and scrub-shrub wetland types the St. Paul District used for previous Enbridge pipeline projects consistent with the Mitigation Rule, District Mitigation Rule and internal guidance. Enbridge will continue to work with the USACE to consider additional factors that may result in adjustment of those baseline compensation ratios.

Enbridge has purchased mitigation credits from USACE-approved wetland mitigation banks to compensate for unavoidable wetland impacts in watersheds crossed by the Project (refer to Tables 10.0-1 and 10.0-2).

Table 10.0-1
Proposed Baseline Compensation Ratios – Wetland Impacts Restored to Preconstruction Conditions

Bank Service Area Wetland Type [a]	Wetland Impact (acres) [b]	Proposed Compensatory Mitigation Ratio	Proposed Compensatory Mitigation (acres)
Bank Service Area 1 – GREAT LAKES			
PFO	176.66	0.50:1	88.33
PSS	37.28	0.50:1	18.64

Table 10.0-1
Proposed Baseline Compensation Ratios – Wetland Impacts Restored to Preconstruction Conditions

Bank Service Area Wetland Type [a]	Wetland Impact (acres) [b]	Proposed Compensatory Mitigation Ratio	Proposed Compensatory Mitigation (acres)
PSS [c]	55.64	0.10:1	5.56
PEM	106.80	0.03:1	3.20
PUB	2.19	0.03:1	0.07
Bank Service Area 3 – LOWER RED RIVER OF THE NORTH			
PFO	20.29	0.50:1	10.15
PSS	5.18	0.50:1	2.59
PSS [c]	10.23	0.10:1	1.02
PEM	160.78	0.03:1	4.82
PUB	3.22	0.03:1	0.10
Bank Service Area 5 – MISSISSIPPI HEADWATERS			
PFO	178.15	0.50:1	89.07
PSS	40.93	0.50:1	20.46
PSS [c]	55.51	0.10:1	5.55
PEM	177.57	0.03:1	5.33
PUB	4.62	0.03:1	0.14
Bank Service Area 6 – ST. CROIX RIVER BASIN			
PFO	0.52	0.50:1	0.26
PSS	0.23	0.50:1	0.12
PSS [c]	0.81	0.10:1	0.08
PEM	8.87	0.03:1	0.27
PUB	1.02	0.03:1	0.03
TOTAL [d]	**1046.5**	**--**	**255.79**

[a] PEM = Palustrine Emergent; PSS = Palustrine Scrub Shrub; PFO = Palustrine Forested; PUB = Palustrine Unconsolidated Bottom (Cowardin et al, 1979).

[b] Includes the area of wetland impact within the construction workspace based typically on a 95-foot-wide workspace, area temporarily used to install cathodic protection, and along new temporary access roads based typically on a 30-foot-wide workspace.

[c] PSS impacts calculated are only for the area within the temporary construction workspace where woody vegetation will be allowed to naturally regenerate.

[d] The sum of addends may not total correctly due to rounding.

Table 10.0-2
Summary of Proposed Wetland Compensatory Mitigation for Permanent Fill Impacts

Bank Service Area Wetland Type [a]	Wetland Impact (acres) [b]	Proposed Compensatory Mitigation Ratio [c]	Proposed Compensatory Mitigation (acres)
Bank Service Area 1 – GREAT LAKES			
PFO	0.63	TBD	TBD
PSS	2.02	TBD	TBD
PEM	0.46	TBD	TBD
PUB	-	TBD	TBD
Bank Service Area 3 – LOWER RED RIVER OF THE NORTH			
PEM	1.99	TBD	TBD
Bank Service Area 5 – MISSISSIPPI HEADWATERS			
PFO	4.32	TBD	TBD
PSS	0.53	TBD	TBD
PEM	0.83	TBD	TBD
TOTAL [d]	**10.78**	**--**	**TBD**

Table 10.0-2
Summary of Proposed Wetland Compensatory Mitigation for Permanent Fill Impacts

Bank Service Area Wetland Type [a]	Wetland Impact (acres) [b]	Proposed Compensatory Mitigation Ratio [c]	Proposed Compensatory Mitigation (acres)

[a] PEM = Palustrine Emergent; PSS = Palustrine Scrub Shrub; PFO = Palustrine Forested; PUB = Palustrine Unconsolidated Bottom (Cowardin et al, 1979).
[b] Permanent fill is associated with valves and pump stations with unavoidable wetland impacts (refer to Table 9.2-2).
[c] To be determined by the USACE based on evaluation of Project wetland impacts
[d] The sum of addends may not total correctly due to rounding.

11.0 POST-CONSTRUCTION WETLAND MONITORING

Enbridge proposes to conduct monitoring efforts during the growing season in years 1, 3, and 5 post-construction. Post-construction wetland monitoring will begin after restoration work is complete. The initial stage of monitoring will occur to ensure proper maintenance of erosion and sediment control and related site-restoration structures until affected areas stabilize with new vegetation. Enbridge will monitor wetlands for stabilization, crowning, subsidence, restoration of hydrologic features (e.g., ponding or water impoundment), invasive species (e.g., type, density, and distribution as compared to preconstruction conditions), vegetative cover and species composition. The primary focus of the initial monitoring will be on the development of plant communities in affected areas and the restoration of topography to match pre-construction conditions within the tolerance specified in the permits. Enbridge will provide a formal report of the monitoring results to the USACE by December 31st of each monitoring year.

12.0 STATUS OF OTHER APPROVALS

Table 12.0-1 lists the government agencies or authorities with which Enbridge must file applications or request concurrence prior to the construction of the Project. This table lists the title of each permit, certificate, or approval; anticipated application dates; and status of each permit, certificate, or approval required for the Project.

Table 12.0-1
Permits and Approvals Required

Unit of Government	Type of Application	Status	Reason Required
USACE – St. Paul District	Section 10/404 Individual Permit	Application Submitted September 2018	Authorizes discharge of dredged and fill material into waters of the United States, including wetlands, and crossing of navigable waters of the United States
USACE – St. Paul District	Section 408 Authorization for Lost River	Review Request Submitted	Authorizes alterations, occupation, or use of USACE civil works projects
U.S. Fish and Wildlife Service	Section 7 Endangered Species Act Consultation (Federal endangered species)	Consultation Ongoing	Establishes conservation measures and authorizes, as needed, take of federally protected species
	Migratory Bird Treaty Act	Consultation Ongoing	Established conservation measures to protect migratory birds
	Non-Purposeful Take (Bald Eagle Nest Disturbance) Permit	Application Submitted September 2018	Allows for removal of a known bald eagle nest in proximity to construction activities

Table 12.0-1
Permits and Approvals Required

Unit of Government	Type of Application	Status	Reason Required
U.S. Environmental Protection Agency	National Pollutant Discharge Elimination System ("NPDES") General Permit for Discharges from Construction Activities	Pending Submittal	Authorizes ground disturbance with approved protection measures to manage soil erosion and stormwater discharge on construction site; and removal of water that may accumulate in pipeline trench within the FdL Reservation boundaries
U.S. Bureau of Indian Affairs	Special Use Permit / Right-of-Way Grant	Pending Submittal	Required to cross BIA trust, allotted, of fee lands. Requires National Environmental Policy Act Review
FdL Resource Department	Tribal Environmental Policy Ordinance	Pending Submittal	Required for major Band actions on all lands within the exterior FdL Reservation boundaries, and/or lands owned by the FdL outside the exterior FdL Reservation
	Section 401 Water Quality Certification ("WQC")	Pending Submittal	Section 401 WQC required to issue the USACE Section 404/10 Permit; required for all waters of the FdL Reservation
	Standard Wetland Activity Permit	Pending Submittal	Authorizes impacts to wetlands (and adjacent uplands affecting wetlands) within the exterior boundaries of the FdL Reservation, regardless of land ownership
	Land Use Permit	Pending Submittal	Required for crossing FdL land use districts
	Shoreland Permit	Pending Submittal	Required for crossing shoreland overlay district
MPUC	Certificate of Need	Order Issued	Determines need for the pipeline, including questions of size, type, and timing
	Route Permit	Order Issued	Authorizes construction of the pipeline along a specific route, subject to certain conditions
MDNR	License to Cross Public Waters	Application Submitted September 2018	50-year license that allows for crossing of public waters with proposed utility
	Work in Public Waters Permit	Application Submitted September 2018	Authorizes in-water activities in public waters located on private lands
	License to Cross Public Lands	Application Submitted September 2018	50-year license that allows for crossing of public lands with proposed utility
	Leases – Access Roads	Application Submitted September 2018	Authorizes use of MDNR-managed access roads during construction and/or operation
	Individual Surface Water Appropriation Permit – HDD/Hydrostatic Test	Application Submitted September 2018	Authorizes withdrawal and use of water from surface water sources
	Individual Surface Water Appropriation Permit – Dust Control	Application Submitted September 2018	Authorizes withdrawal and use of water from surface water sources
	Individual Groundwater Water Appropriation Permit – Pipeline and Facilities	Application Submitted September 2018	Authorizes withdrawal of groundwater associated with trench/excavation dewatering activities
	Endangered Species Permit	Application Submitted September 2018	Outlines plans for avoidance, minimization, and mitigation of take of state-listed species and authorizes take of individuals

Table 12.0-1
Permits and Approvals Required

Unit of Government	Type of Application	Status	Reason Required
	Gully 30 Fen Management Plan Authorization	Application Submitted September 2018	Outlines the construction, restoration, and monitoring procedures to be implemented and authorizes construction across the Gully 30 Fen
	Individual Groundwater Water Appropriation Permit – Gully 30 Fen	Application Submitted September 2018	Authorizes withdrawal of groundwater associated with trench dewatering at the Gully 30 calcareous fen in accordance with the Fen Management Plan
MPCA	Section 401 WQC and Antidegradation Assessment	Application Submitted September 2018	Section 401 WQC is required to issue the USACE Section 404/10 Permit; antidegradation assessment supports the Industrial Hydrostatic Test Discharge and Construction Stormwater Permitting processes
	Clearbrook Terminal Air Quality Permit – Capped Emissions Permit	Application Submitted September 2018	Authorizes construction and operation at the modified Clearbrook Terminal
	NPDES Industrial Hydrostatic Test Discharge Permit	Application Submitted September 2018	Authorizes discharge of water from hydrotesting activities
	NPDES General Construction Stormwater Coverage – Pipeline and Facilities	Pending Submittal	Authorizes ground disturbance with approved protection measures to manage soil erosion and stormwater discharge on construction site, and removal of water that may accumulate in pipeline trench or within facility excavations
	NPDES General Construction Stormwater Coverage – Pipeyards	Permits Received; Stormwater Monitoring Ongoing	Authorizes ground disturbance with approved protection measures to manage soil erosion and stormwater discharge on construction site
Minnesota SHPO and Tribal Historic Preservation Offices	National Historic Preservation Act Section 106 Clearance, Minnesota Field Archaeology Act, and Minnesota Historic Sites Act	Consultation Ongoing	Ensures adequate consideration of impacts to significant cultural resources but especially National Register of Historical Properties eligible; Minnesota SHPO and Tribal Historic Preservation Offices are engaged through federal and state permitting processes
Minnesota Department of Agriculture	Agricultural Protection Plan	Consultation Ongoing	Establishes measures for agricultural protection
Minnesota Department of Transportation	Road Crossing Permits	Submittals Ongoing	Authorizes crossings of state-jurisdictional roadways
	Temporary access/entrance permits	Submittals Ongoing	Authorizes access to private lands during construction from state highway right-of-way
Mississippi Headwaters Board	Local Land Use Review	Consultation Ongoing	Ensures compatibility with land use plan
Red Lake, Two Rivers, and Middle-Snake-Tamarac Watershed Districts	Watershed District Permit	Permits Received	Authorizes crossing of legal drains and ditches within watershed
Minnesota Department of Health and Drinking Water Supply Management Areas	Drinking Water Supply Management Area /Wellhead Protection Area Consultation	Notifications Submitted September 2018	Ensures pipeline construction and operation are compatible with goals of relevant plans

Table 12.0-1
Permits and Approvals Required

Unit of Government	Type of Application	Status	Reason Required
Minnesota Board of Water and Soil Resources / Wetland Conservation Act Local Government Units	Notice of Intent to Utilize Federal Approvals for Utilities Project Exemption	Notices Submitted September 2018	Notice of use of exemption required
Local/County	Permits pertaining to off-right-of-way yard use	Submittals Ongoing	Ensures compatibility with relevant land use plans
	Road crossing permits	Submittals Ongoing	Authorizes crossing of local and county jurisdictional roadways
	Construction haul road agreements	Submittals Ongoing	Authorizes use of local and county roads to haul oversized loads
	Temporary access/entrance permits	Submittals Ongoing	Authorizes access to private lands from local and county road right-of-way
	Short- to long-term leases – Access Roads	Submittals Ongoing	Authorizes use of temporary roads on local and county owned lands
	Floodplain permits	Consultations Ongoing	Authorizes construction in floodplains

12.1 U.S. FISH AND WILDLIFE SERVICE ENDANGERED SPECIES ACT SECTION 7 CONSULTATION

Enbridge met with USFWS Minnesota-Wisconsin Field Office staff on November 18, 2014, and January 31, 2018, to discuss the Project and to discuss distribution and survey requirements for species protected under the Endangered Species Act ("ESA") that may occur along the Designated Route. Enbridge developed the Project's list of federally threatened and endangered species based on the USFWS's Information for Planning and Consultation website, USFWS Region 3 county lists, November 2014 and January 2018 meetings with the USFWS, and follow-up communications (A. Horton, USFWS, pers. comm., February 7, 2018) (Table 12.1-1). Enbridge will continue to monitor changes in ESA status for all species that may be affected by the Project.

Enbridge will submit an Applicant-Prepared Biological Assessment to the USACE to support its Section 7 consultation with the USFWS in Fall 2018.

Table 12.1-1
Federally Listed Species and Critical Habitat in Counties Crossed by the Project

Species Name	Federal Status	State Status	Habitat	Listed Counties
Northern Long-eared Bat (*Myotis septentrionalis*)	Threatened	MN: Special Concern	Caves and mines during hibernation; forested areas during active season	ND: Pembina MN: Kittson, Marshall, Pennington, Red Lake, Polk, Clearwater, Hubbard, Wadena, Cass, Crow Wing, Aitkin, St. Louis, Carlton
Canada Lynx (*Lynx canadensis*)	Threatened	MN: Special Concern	Northern forest	MN: Marshall, Clearwater, Cass, Aitkin, St. Louis, Carlton
Canada Lynx	Critical Habitat	N/A	Northern Forest	MN: St. Louis

Table 12.1-1
Federally Listed Species and Critical Habitat in Counties Crossed by the Project

Species Name	Federal Status	State Status	Habitat	Listed Counties
Gray Wolf (*Canis lupus*) – Western Great Lakes Distinct Population Segment	Threatened	None	Northern forests and areas with a matrix of forest and agriculture	ND: Pembina MN: Kittson, Marshall, Pennington, Red Lake, Polk, Clearwater, Hubbard, Wadena, Cass, Crow Wing, Aitkin, St. Louis, Carlton
Gray Wolf	Critical Habitat	N/A	Northern forests and areas with a matrix of forest and agriculture	MN: St. Louis
Whooping Crane *Grus americana*	Endangered	None	Wetlands and agricultural fields	ND: Pembina
Rufa Red Knot (*Calidris canutus rufa*)	Threatened	None	Shorelines of the Great Lakes	MN: St. Louis
Piping Plover – Great Lakes Distinct Population Segment *Charadrius melodus*	Endangered	MN: Endangered	Beaches along shorelines of the Great Lakes	MN: St. Louis
Piping Plover – Great Lakes Distinct Population Segment	Critical Habitat	N/A	Beaches along shorelines of the Great Lakes	MN: St. Louis
Rusty-patched Bumble Bee (*Bombus affinis*)	Endangered	None	Grasslands with flowering plants April through October, underground rodent cavities or clumps of grasses above ground as nesting sites, and undisturbed soil for overwintering hibernating queens	MN: Clearwater
Dakota Skipper (*Hesperia dacotae*)	Threatened	MN: Endangered	Native prairie	MN: Kittson, Polk
Dakota Skipper	Critical Habitat	N/A	Native prairie	MN: Kittson, Polk
Poweshiek Skipperling (*Oarisma poweshiek*)	Critical Habitat	N/A	Native prairie	MN: Kittson, Polk
Western Prairie Fringed Orchid (*Platanthera praeclara*)	Threatened	MN: Endangered	Wet prairies and sedge meadows	MN: Kittson, Pennington, Red Lake, Polk

12.2 HISTORIC PROPERTIES – SECTION 106 OF THE NATIONAL HISTORIC PRESERVATION ACT

Enbridge conducted archaeological and historic resource surveys along approximately 99 percent of the Designated Route between 2013 and 2017 to identify the historic properties[35] that may be

[35] The Advisory Council on Historic Preservation's Section 106 rules, define "historic property" to mean "any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in the National Register of Historic Places maintained by the Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such

affected during Project construction. Enbridge initiated Project consultation with the Minnesota State Historic Preservation Office ("SHPO") on November 25, 2014. Enbridge will continue to coordinate with SHPO on items that arise from the initial Project consultations. SHPO has provided and will likely continue to provide technical guidance regarding archaeological site significance and impacts to significant sites along the Project. Enbridge will conduct remaining archaeological and historic resource surveys along the Designated Route in 2018, or prior to construction.

Enbridge developed an Unanticipated Discoveries Plan (refer to Attachment H) for use during all Project construction activities. The Unanticipated Discoveries Plan prescribes actions to be taken in the event that previously unrecorded archaeological or historic site or human remains are discovered during construction activities.

Since September 2015, Enbridge and the USACE have been working with interested tribes to gather feedback on the Project and potential tribal resources in the Project area. Enbridge and the USACE sponsored two all-tribal meetings (December 2015 and March 2017), field site visits (October and November 2016), and three tribal survey planning meetings (August and September 2017). In October 2017, the Fond du Lac Band of Ojibwe, in coordination with Enbridge and the USACE, initiated Tribal Cultural Resources Surveys. This survey effort is sponsored by Enbridge and was reinitiated this spring (2018) along the entire Project route. Enbridge will continue to support the USACE in its tribal consultation effort.

properties. The term includes properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization and that meet the National Register criteria. (36 CFR Part 800.16(l)(1).

Attachment A

Detailed Route Maps

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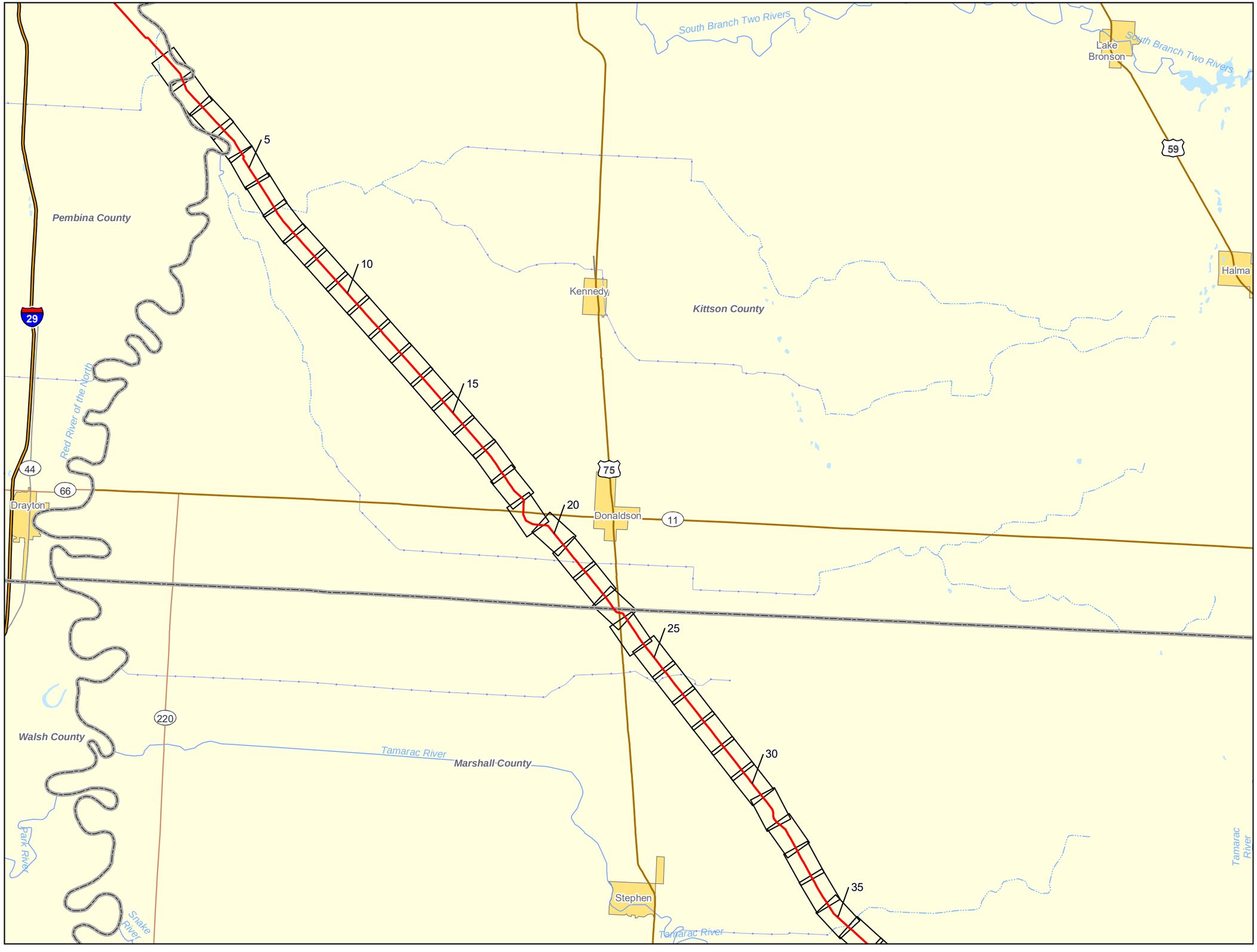

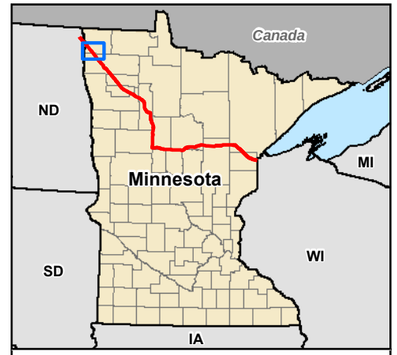

0 1 2 Miles

1 inch = 2 miles

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- Line 3 Centerline
- Line 3 COE Map Page Extent
- County Boundary

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For Environmental Review Purposes Only

September 2018

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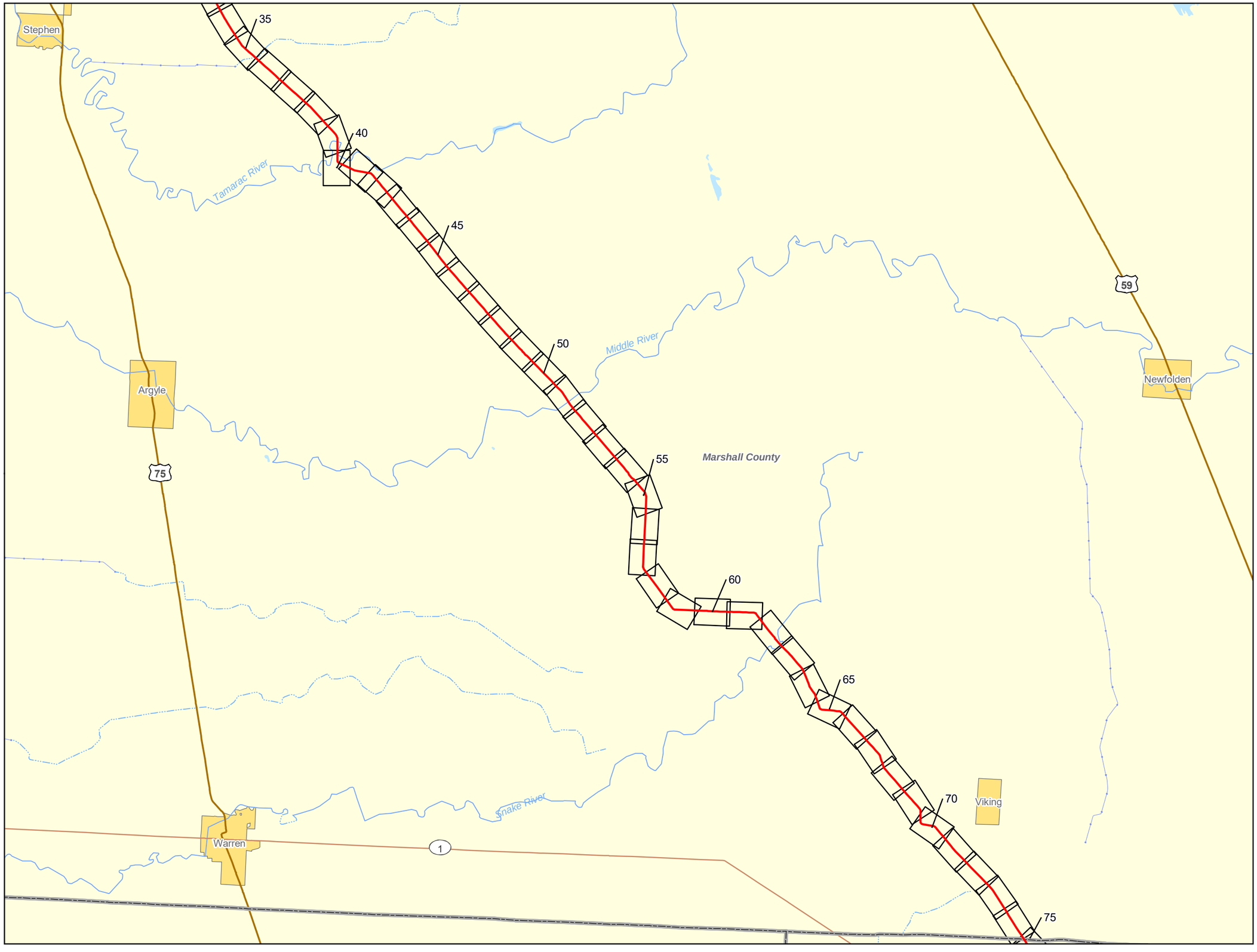

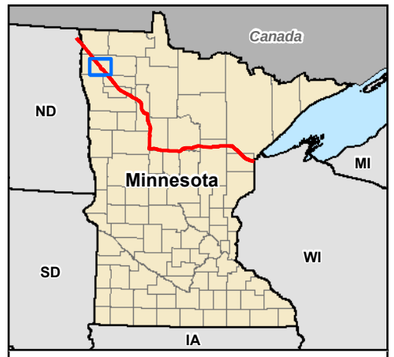

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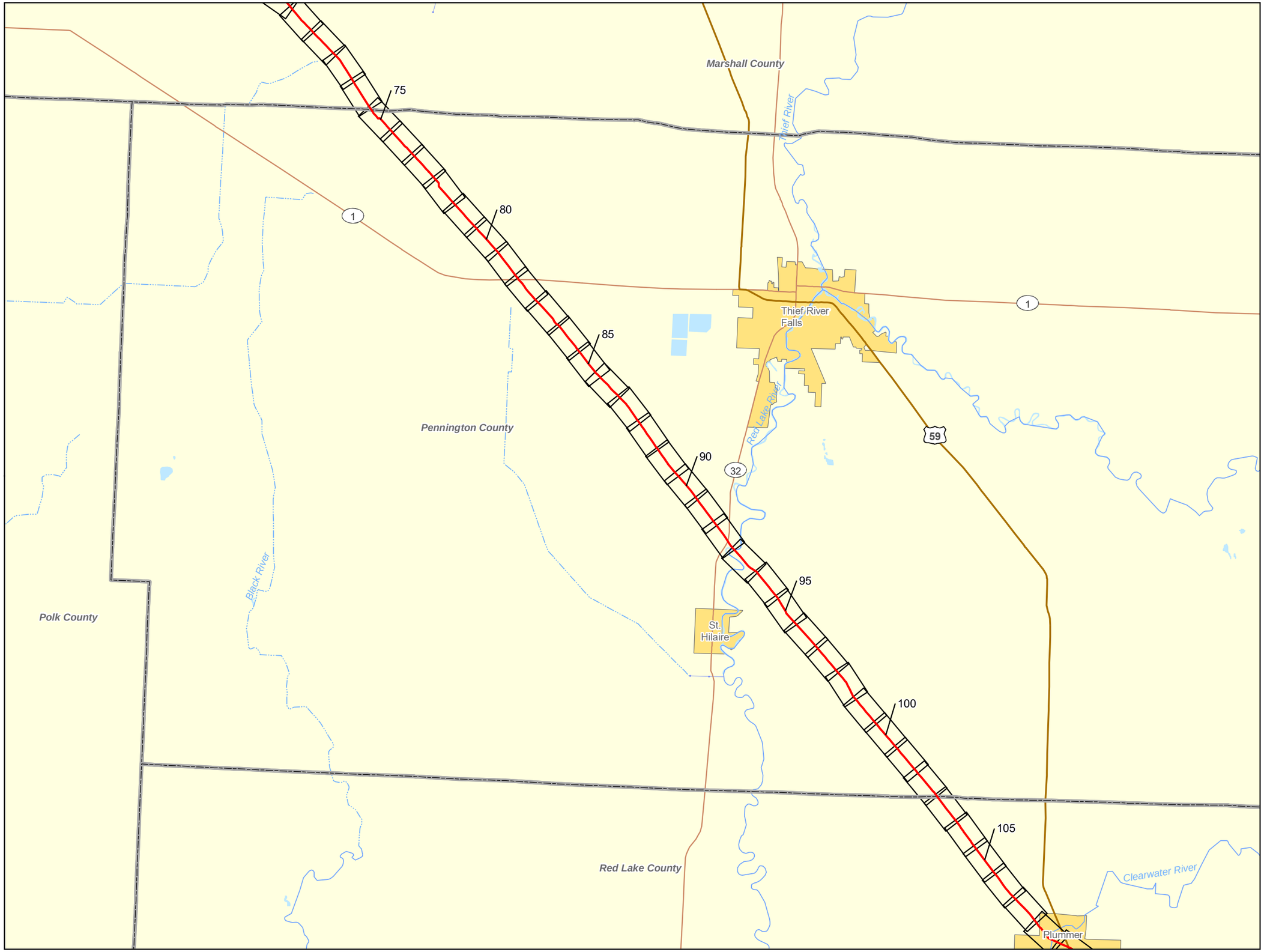

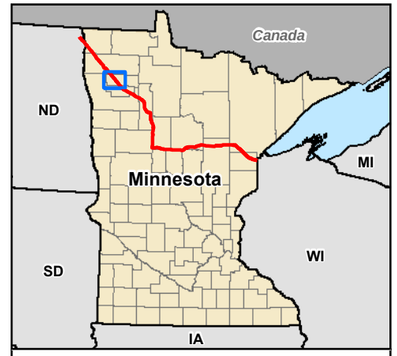

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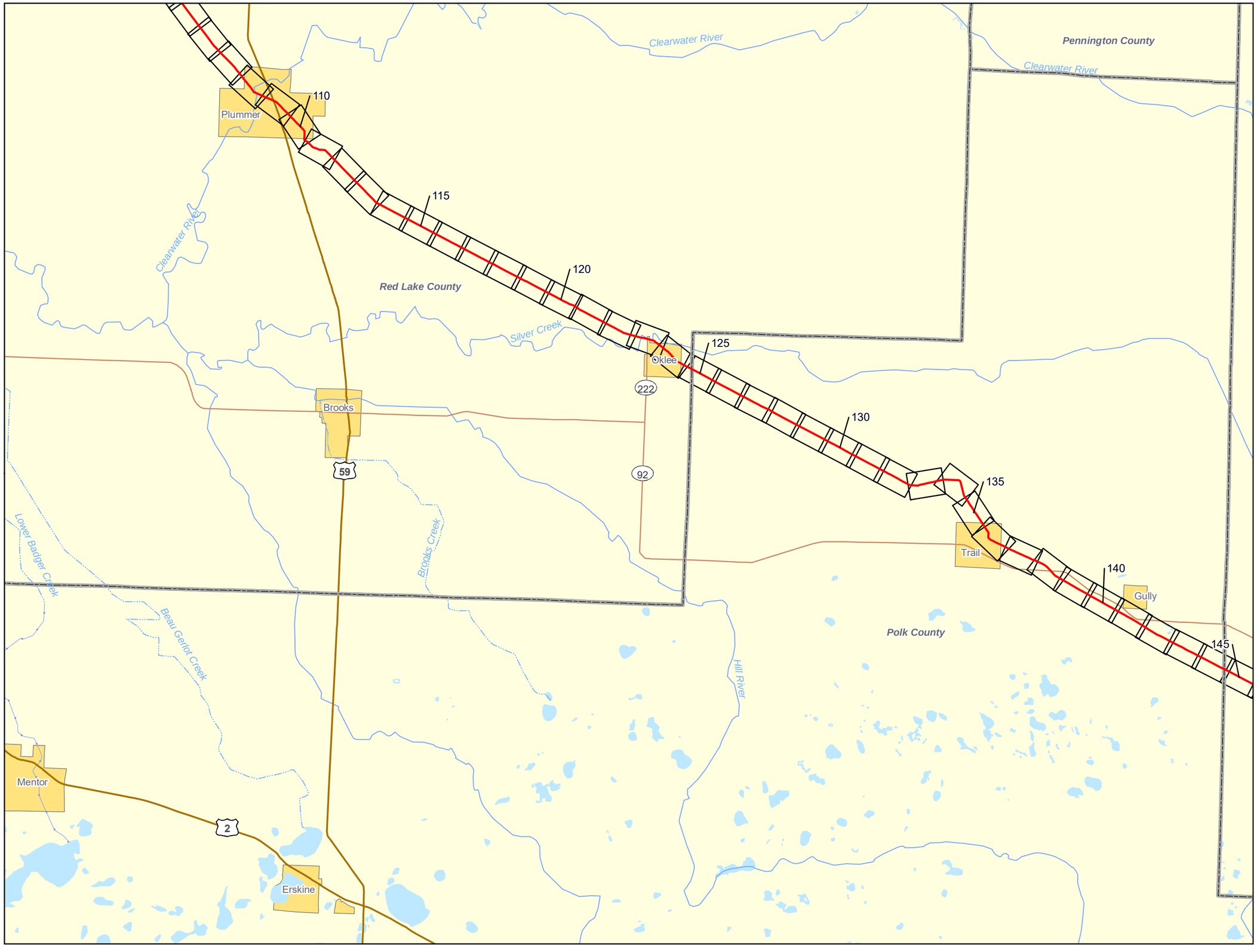

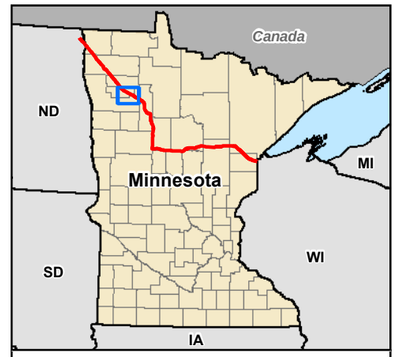

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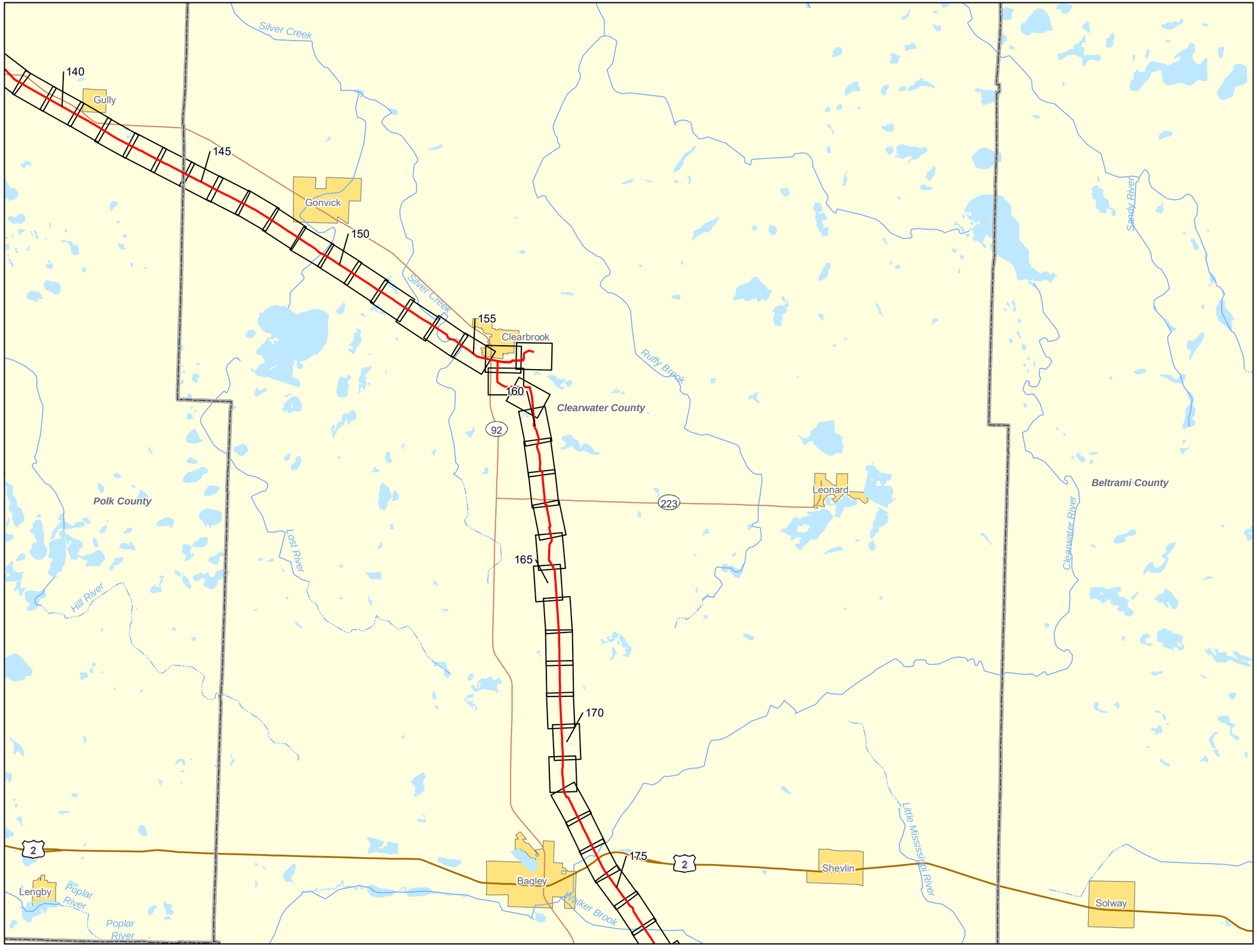

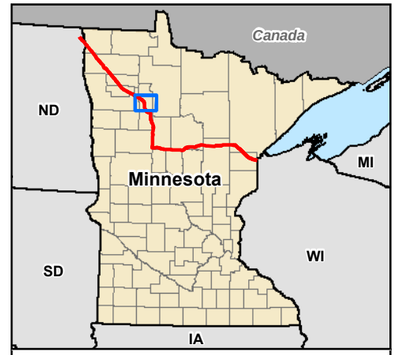

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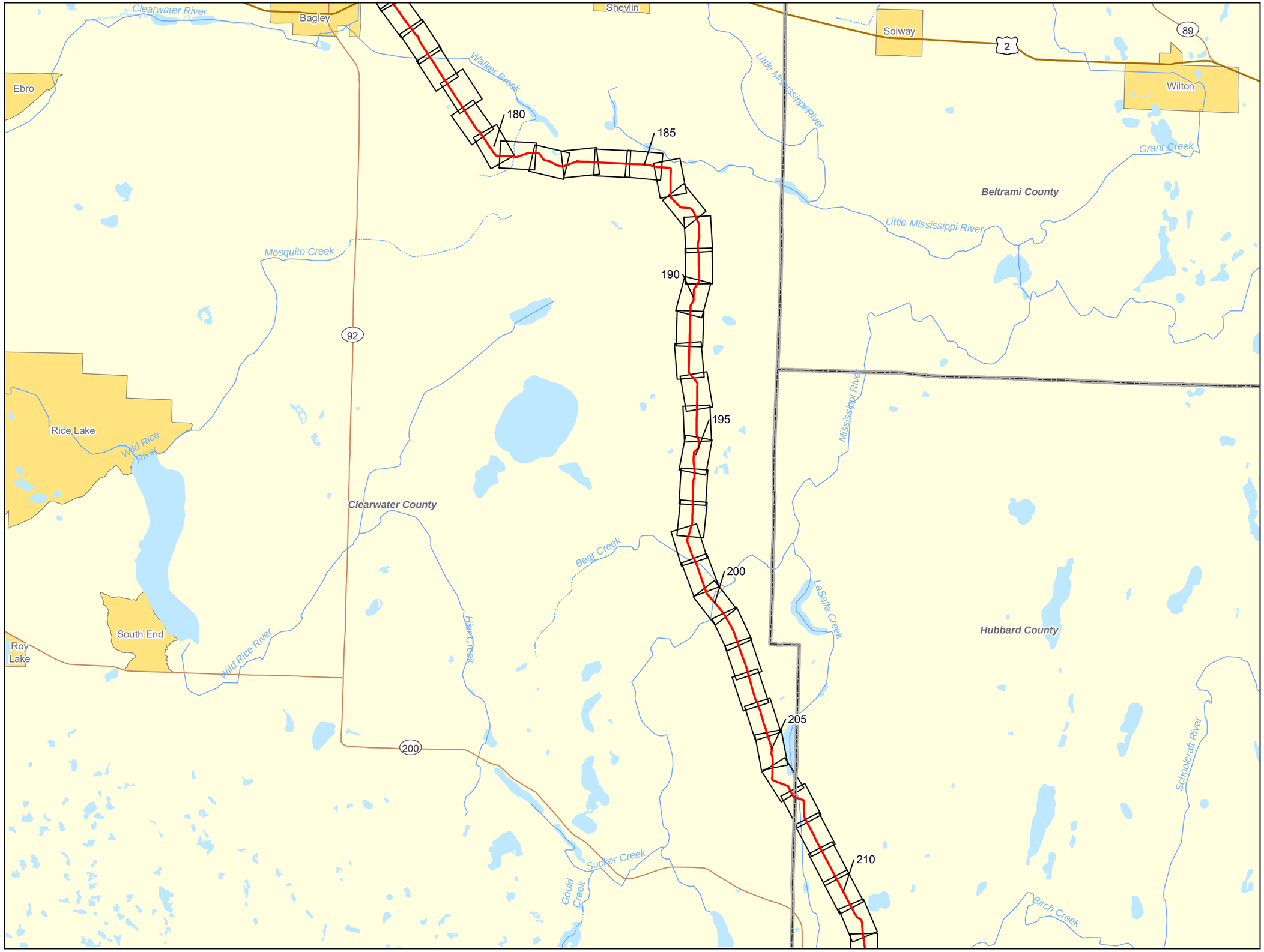

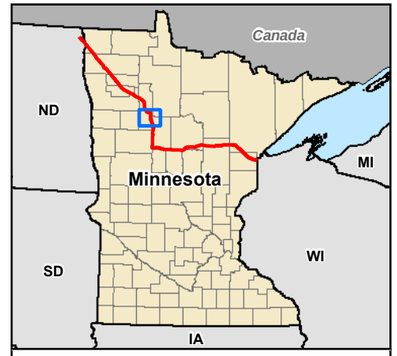

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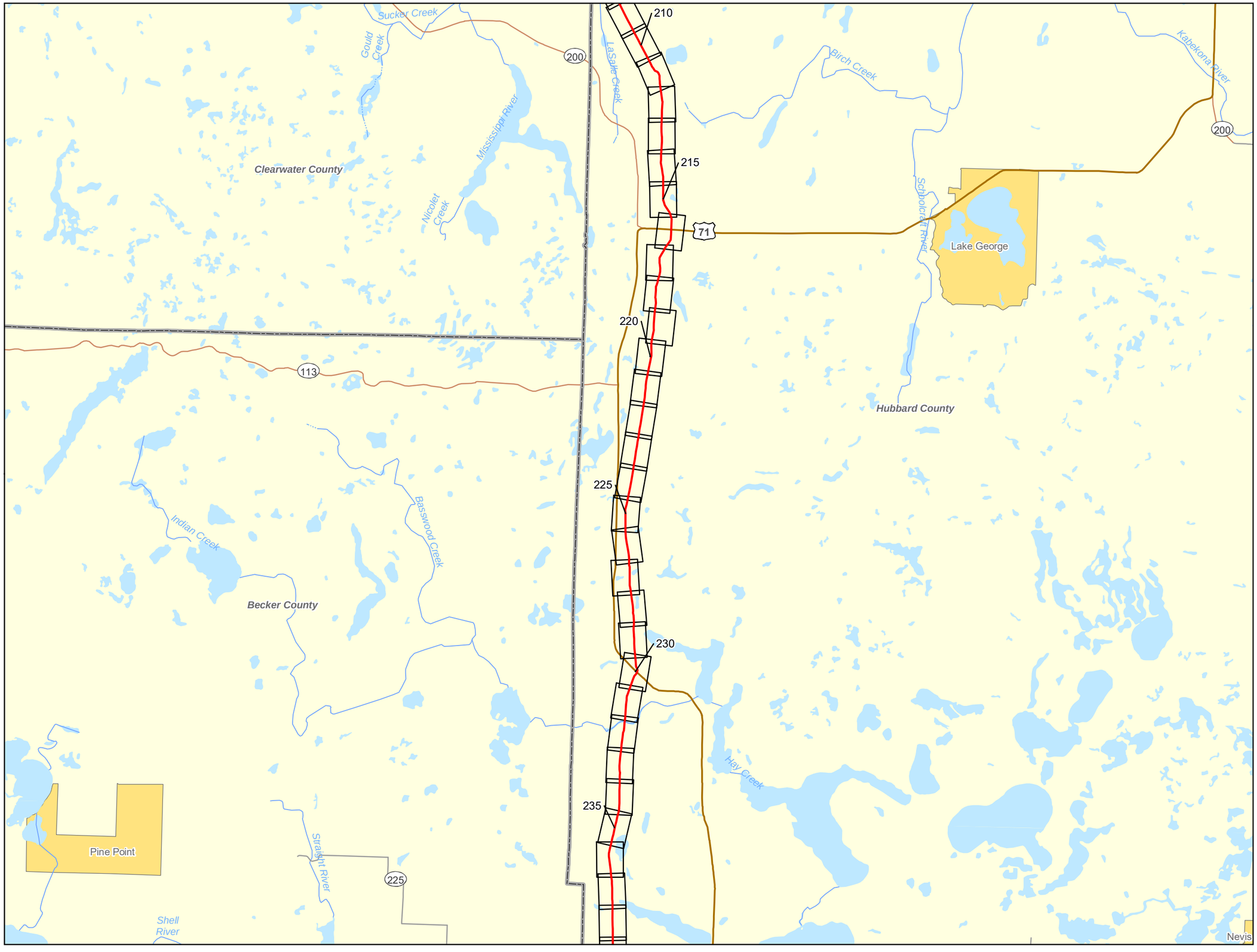

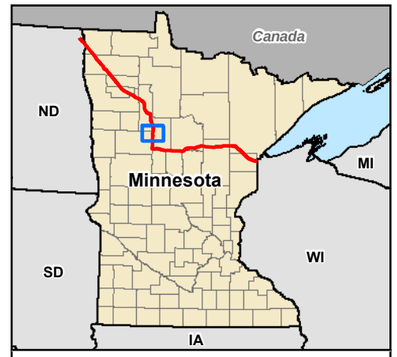

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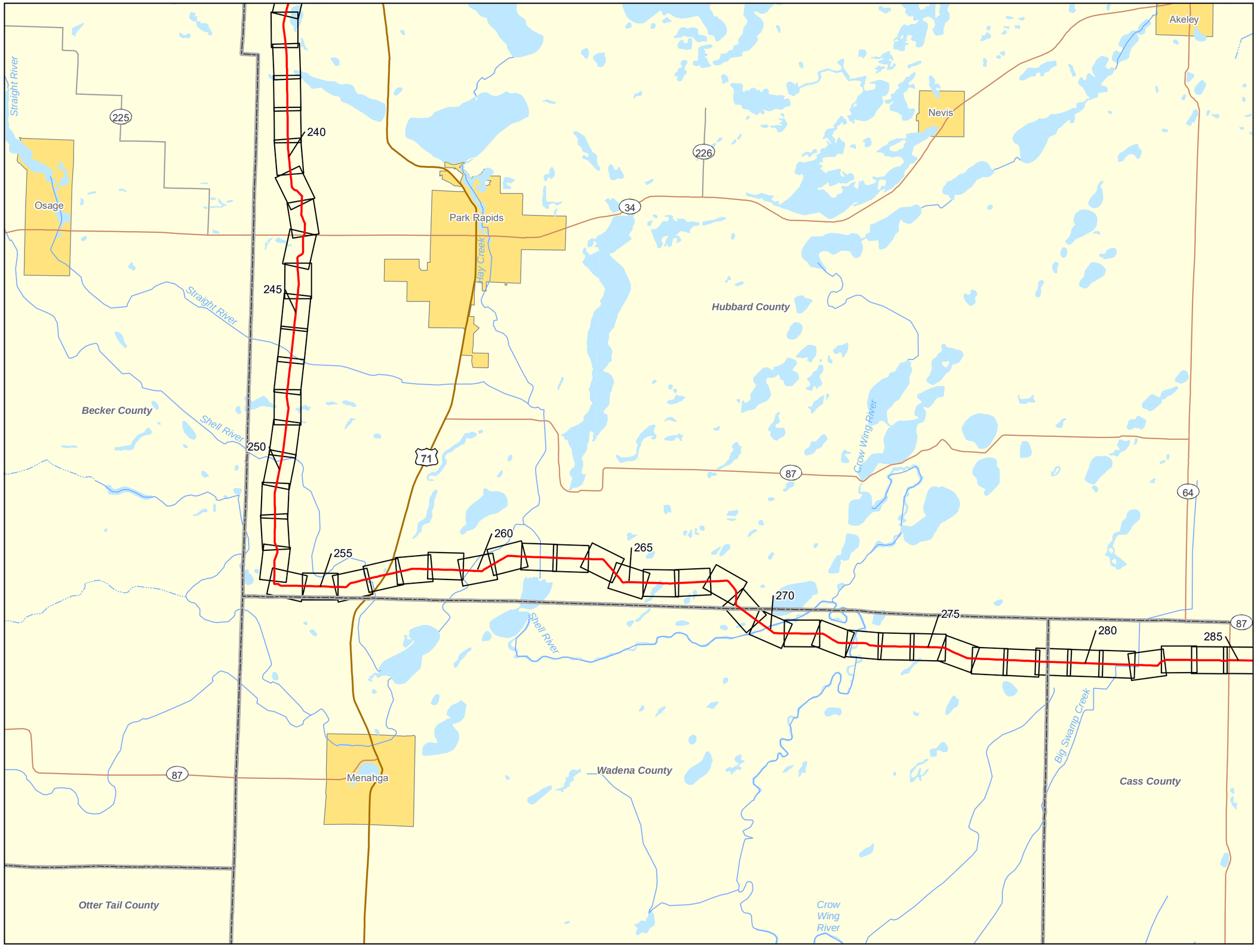

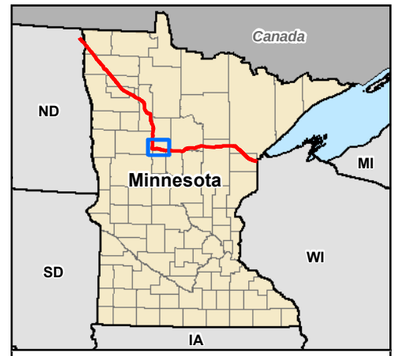

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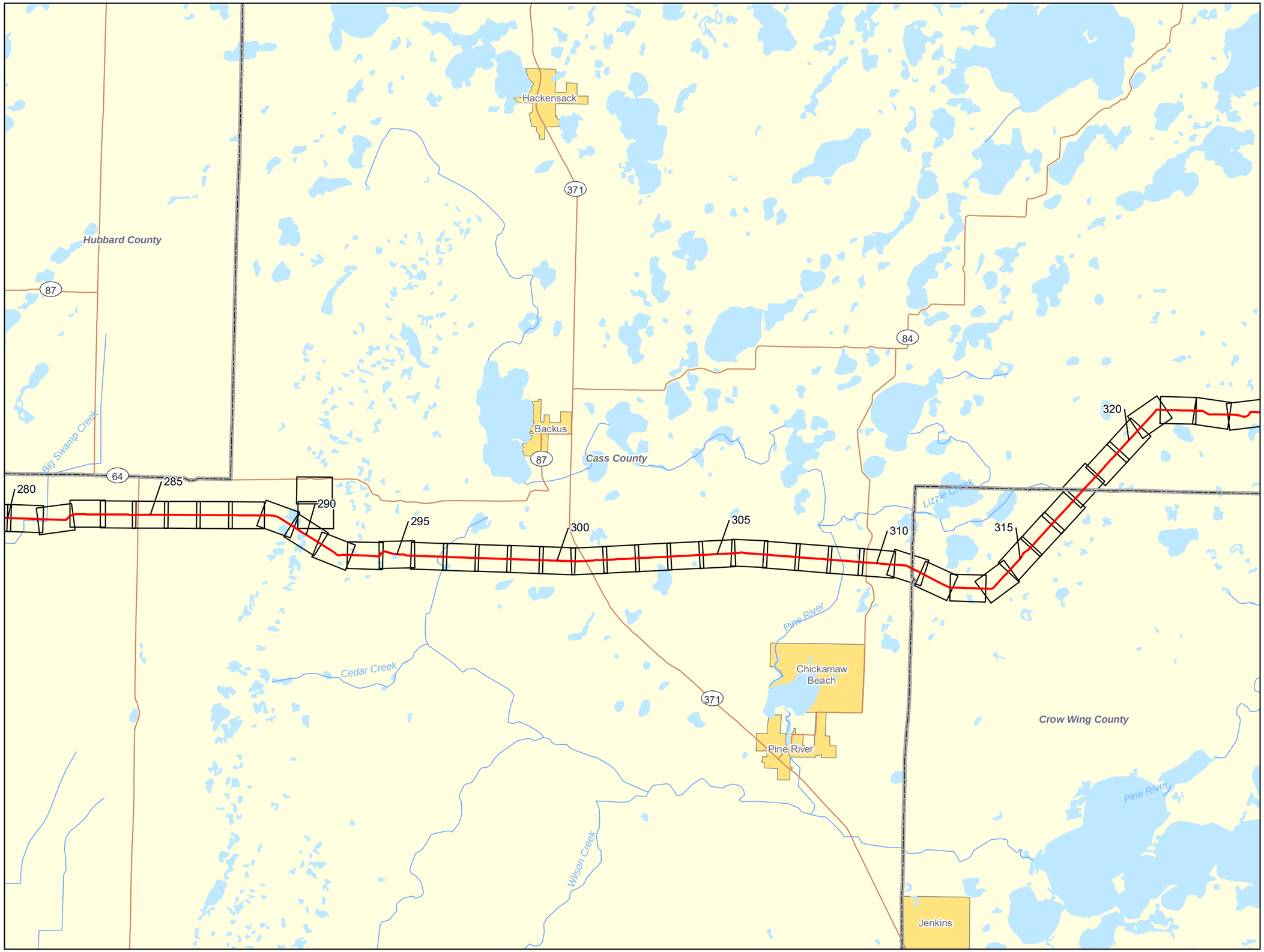

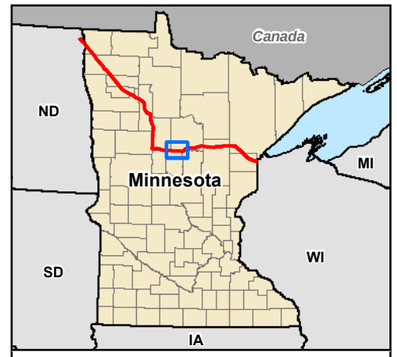

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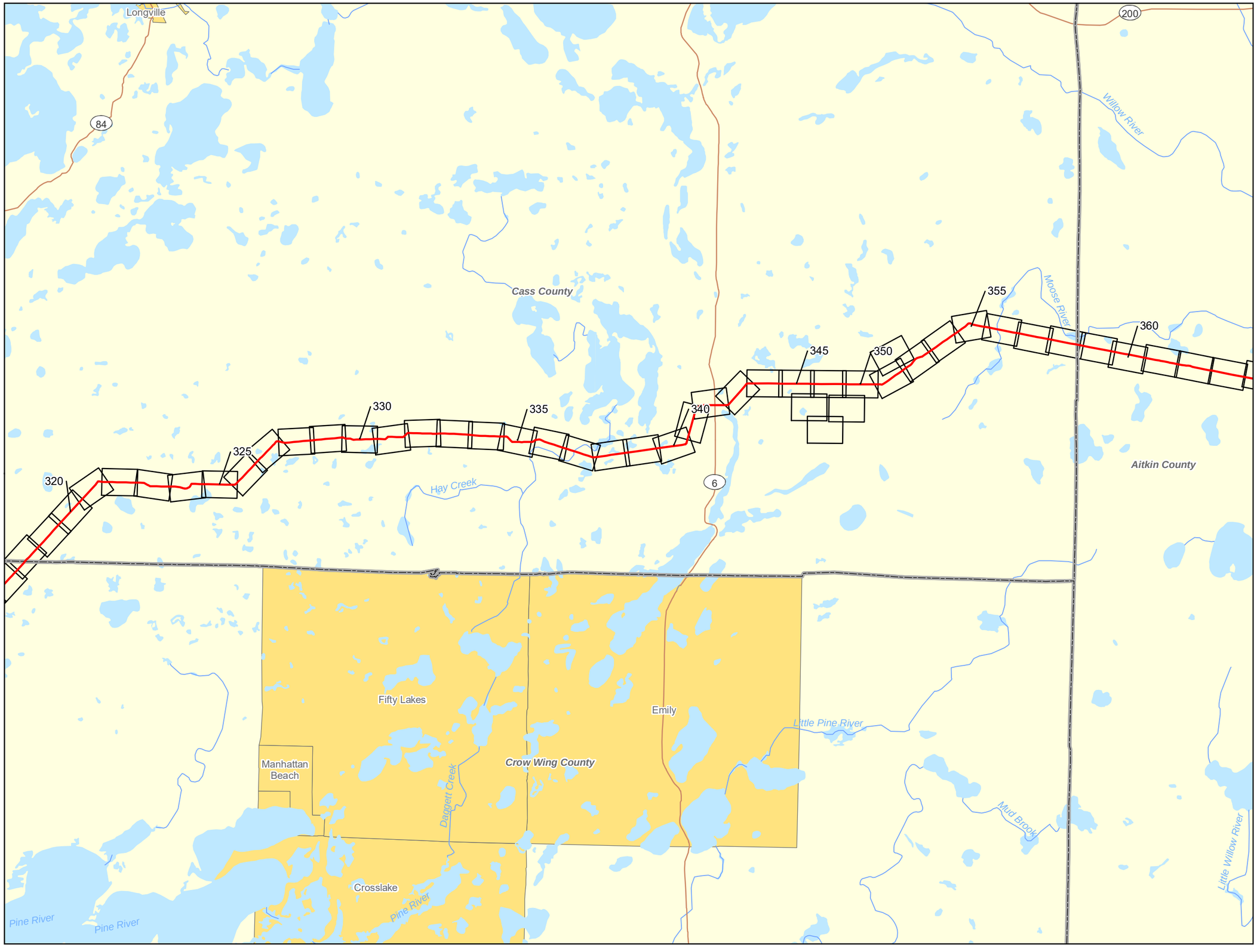

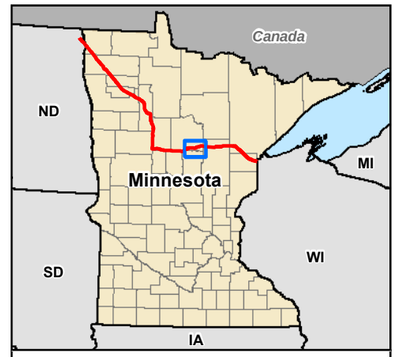

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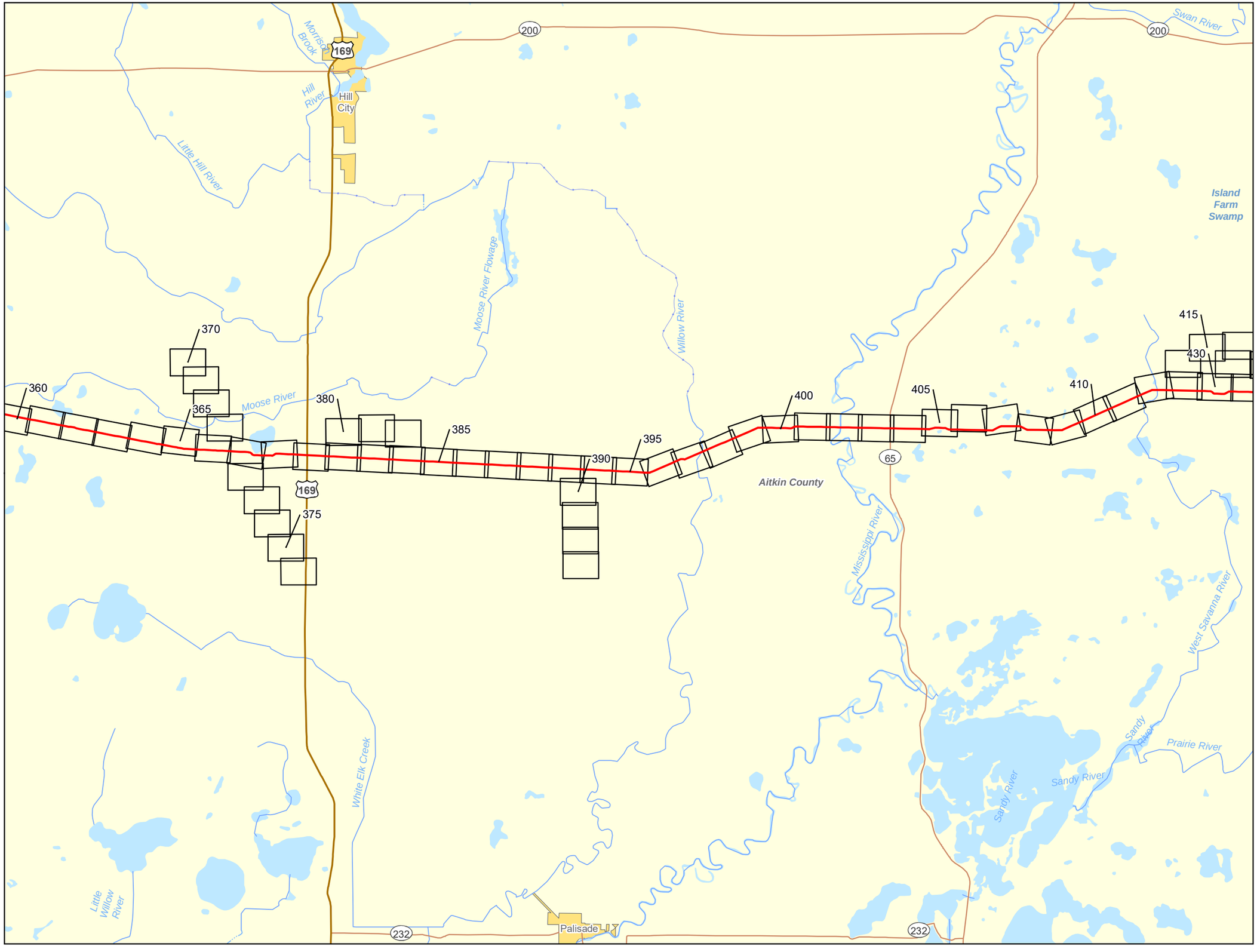

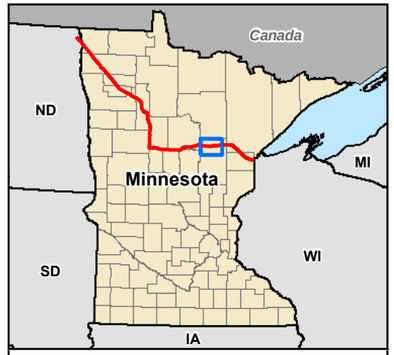

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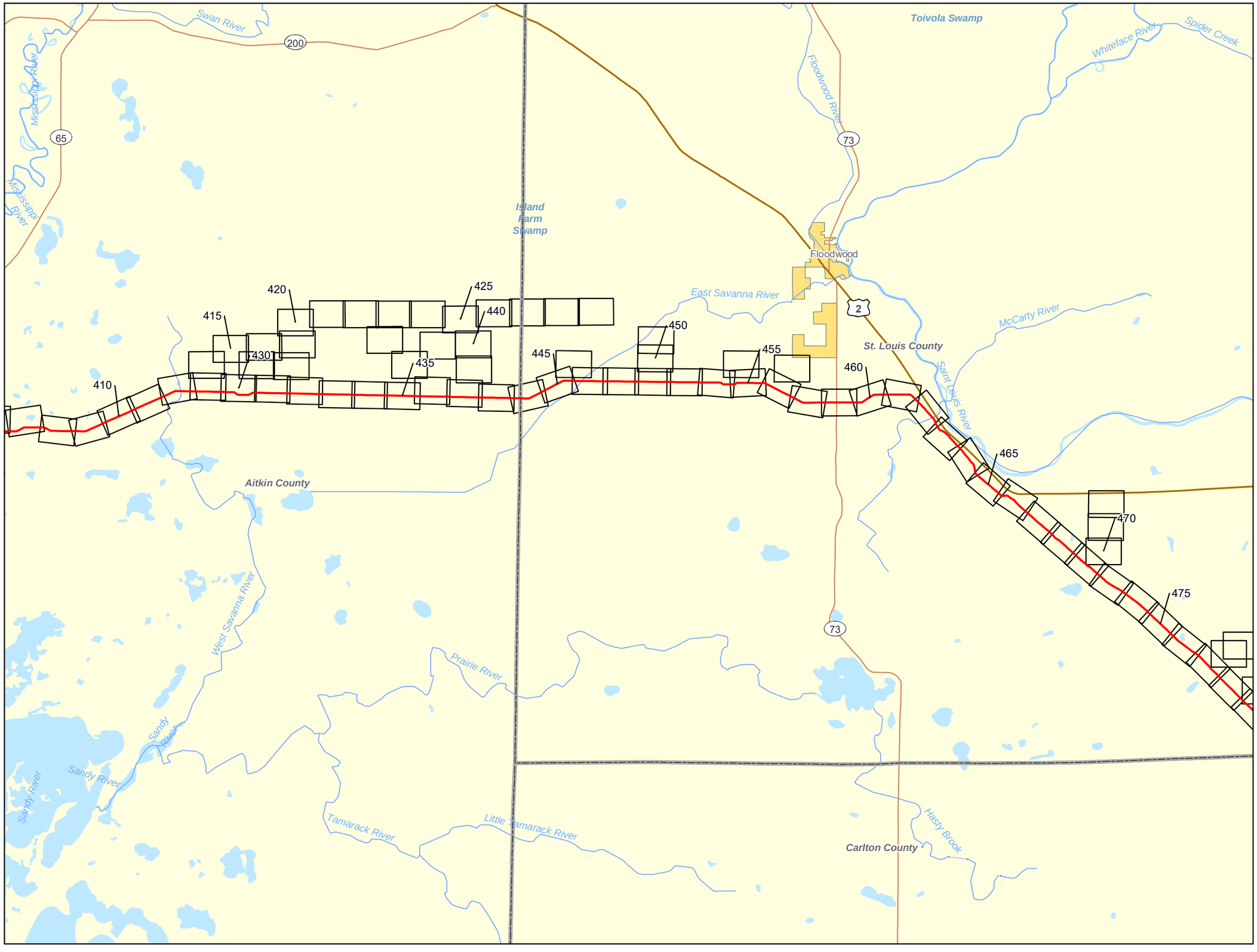

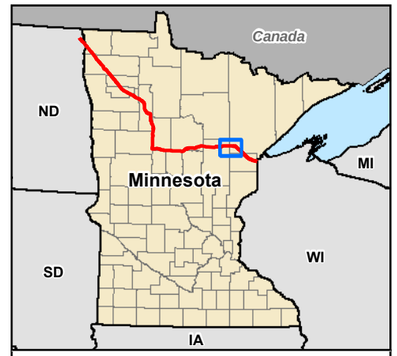

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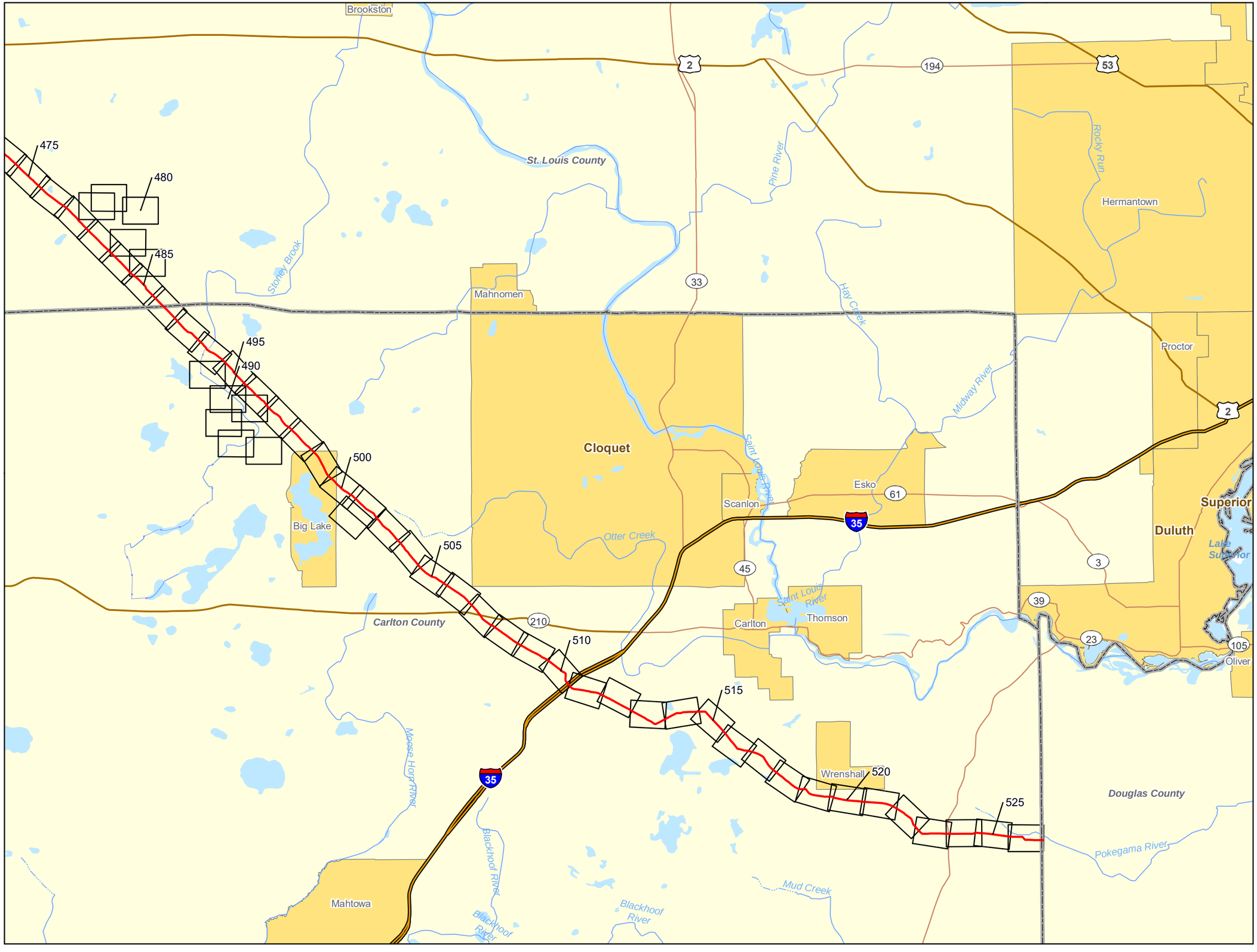

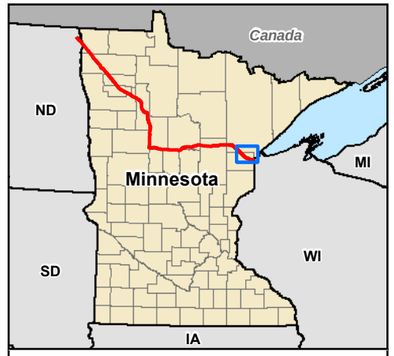

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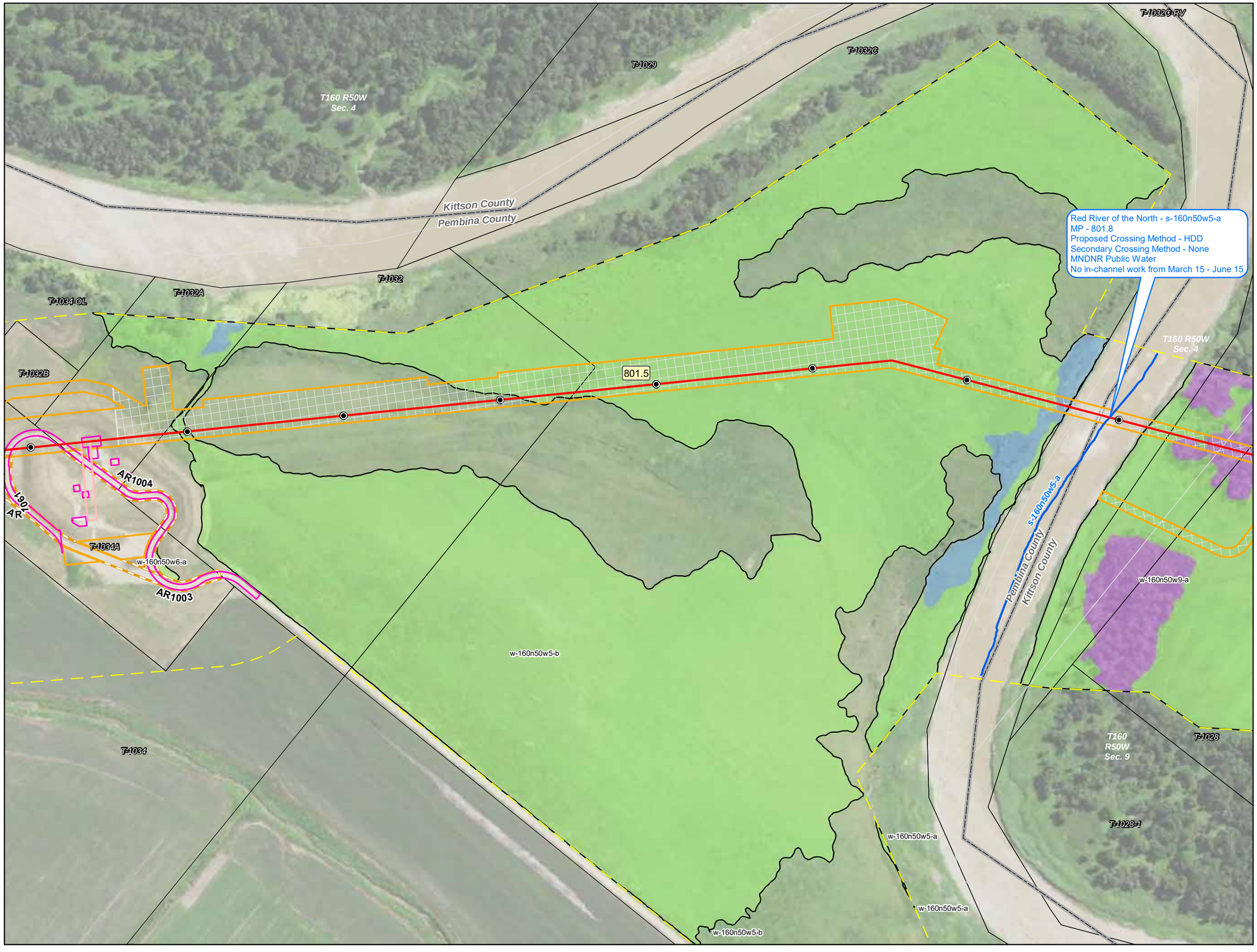
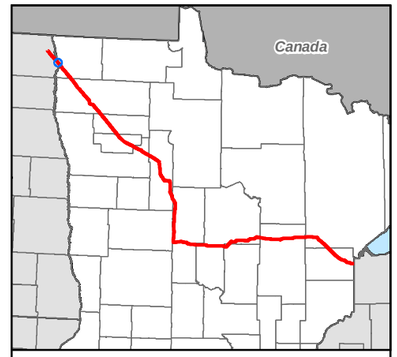




- Milepost
- Line 3 Centerline
- Construction Workspace
- Access Road
- COE Permit Area
- Survey Corridor
- Field Survey Partially or Not Complete
- Parcel Boundary
- County Boundary
- Section Boundary
- Cathodic Protection
- Valve Location
- Pump Station

Environmental Field Data

Wetlands

Field Delineated Wetland	NWI Wetlands
PEM	PEM
PFO	PFO
PSS	PSS
PUB	PUB

Waterbodies

- Field Delineated Waterbody
- NHD Waterbody

NWI Waterbodies

- Lake
- Riverine

0 150 300 Feet

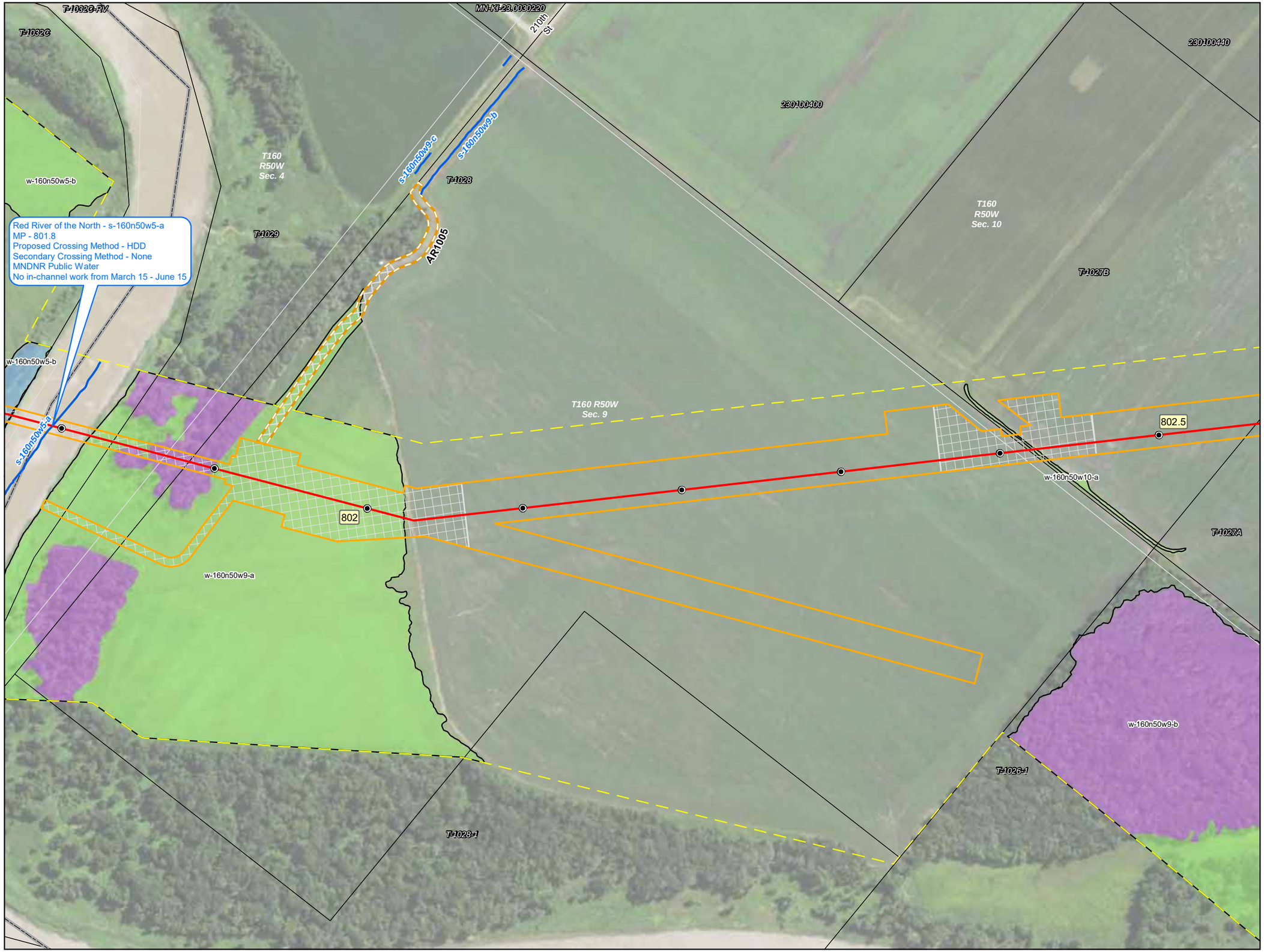
1 inch = 300 feet

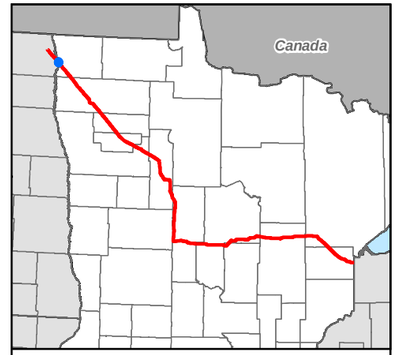
Detailed Route Maps

Line 3 Replacement Project

Pembina and Kittson Counties, ND/MN

ENBRIDGE





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Environmental Field Data

Wetlands

Field Delineated Wetland	NWI Wetlands
PEM	PEM
PFO	PFO
PSS	PSS
PUB	PUB

Waterbodies

- Field Delineated Waterbody
- NHD Waterbody

NWI Waterbodies

- Lake
- Riverine

0 150 300 Feet

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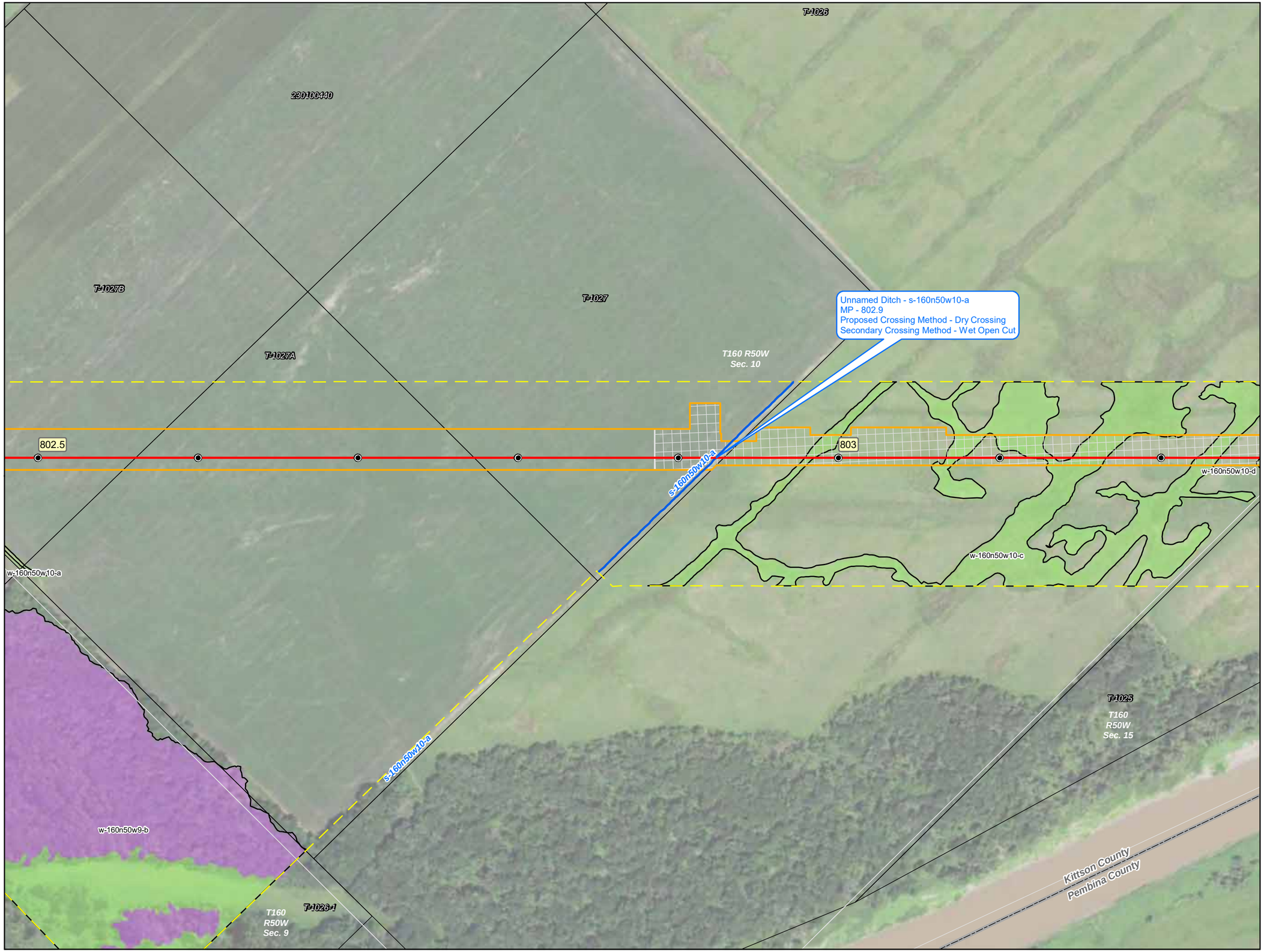
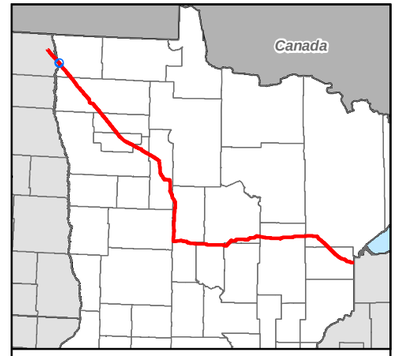
Detailed Route Maps

Line 3 Replacement Project

Kittson County, Minnesota

ENBRIDGE





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Environmental Field Data

Wetlands

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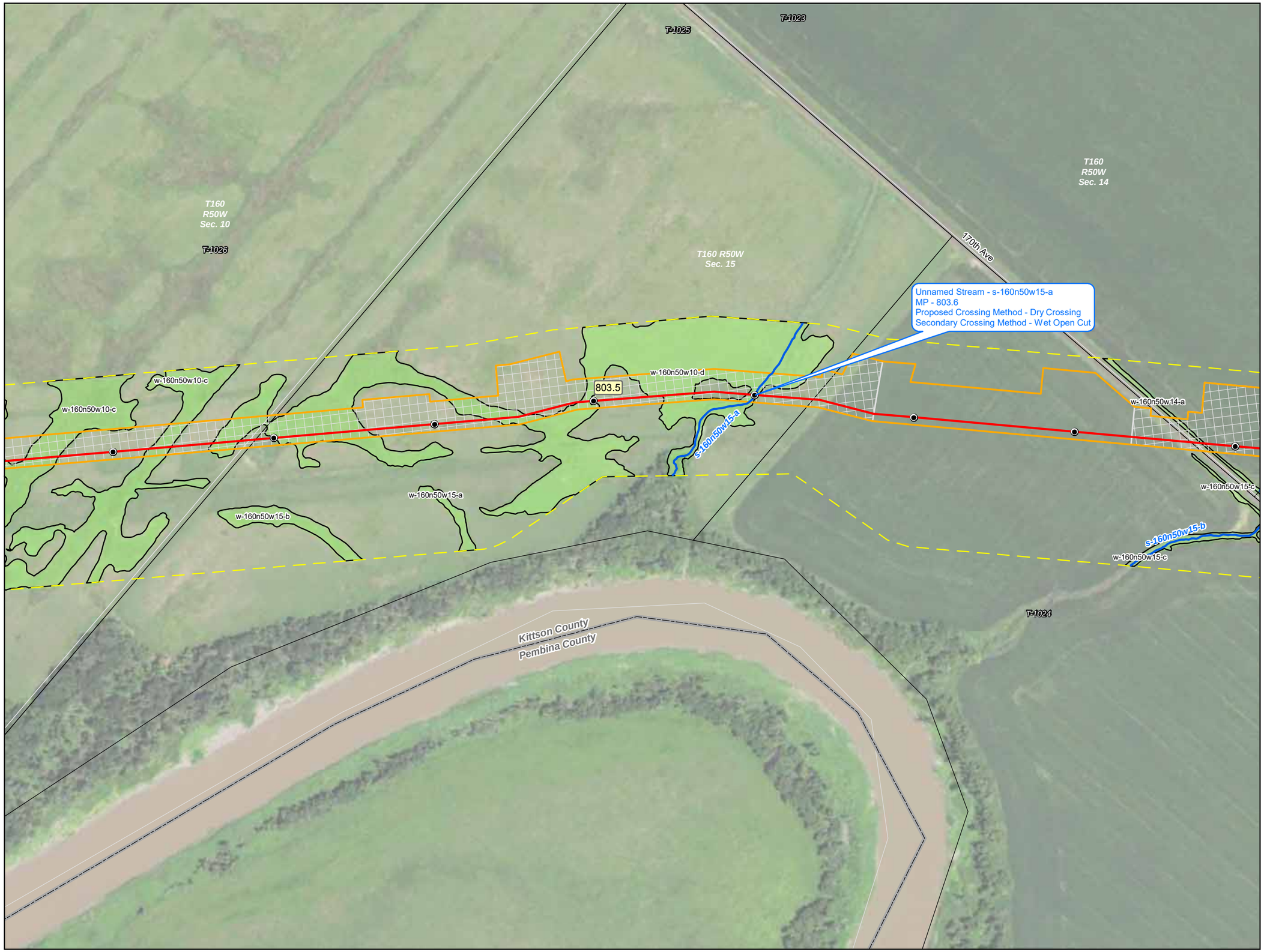
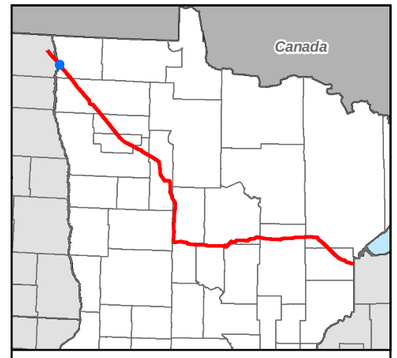
Detailed Route Maps

Line 3 Replacement Project

Kittson County, Minnesota

ENBRIDGE





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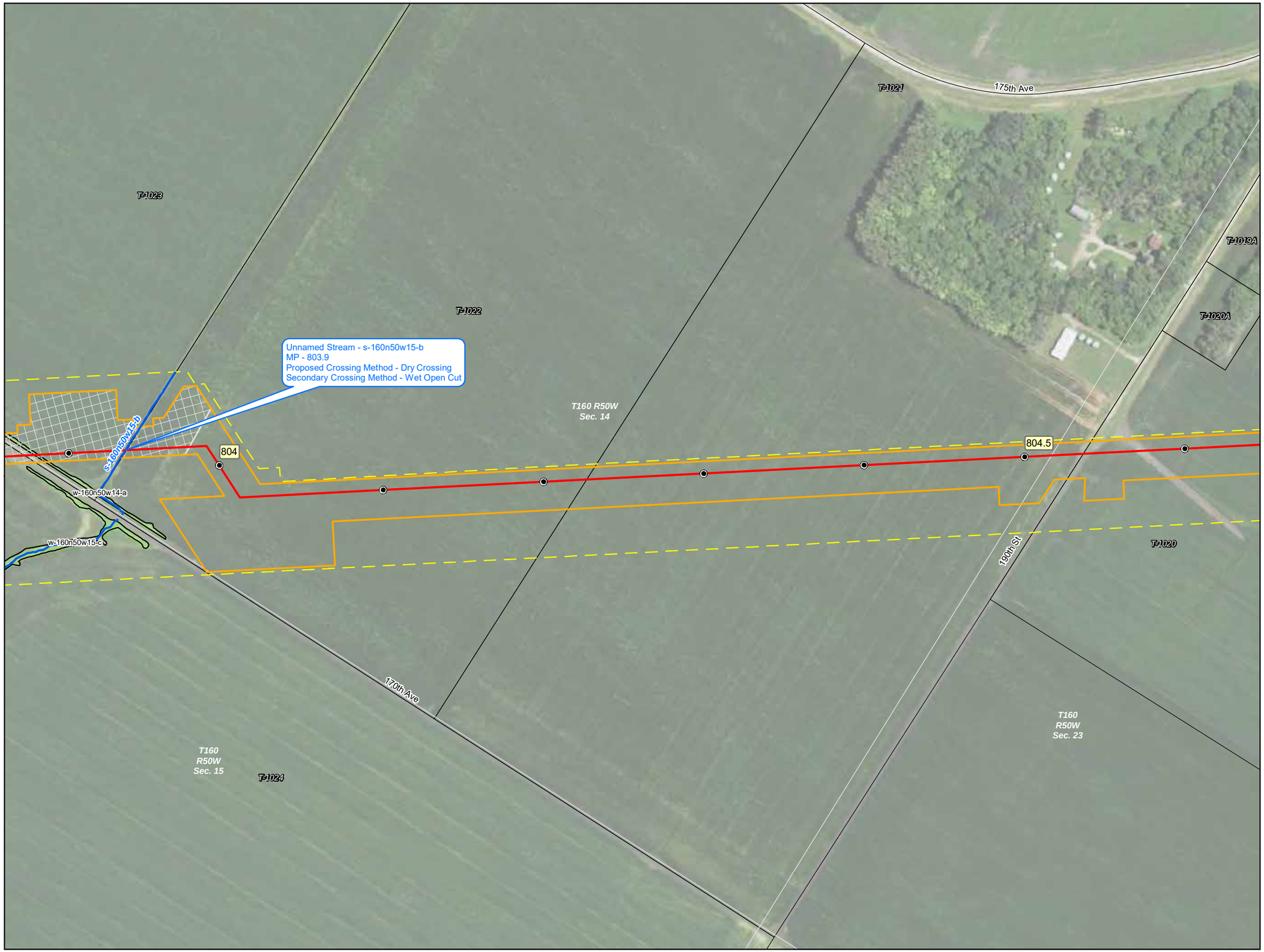
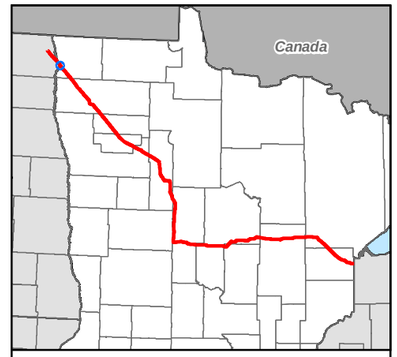
Detailed Route Maps

Line 3 Replacement Project

Kittson County, Minnesota

ENBRIDGE





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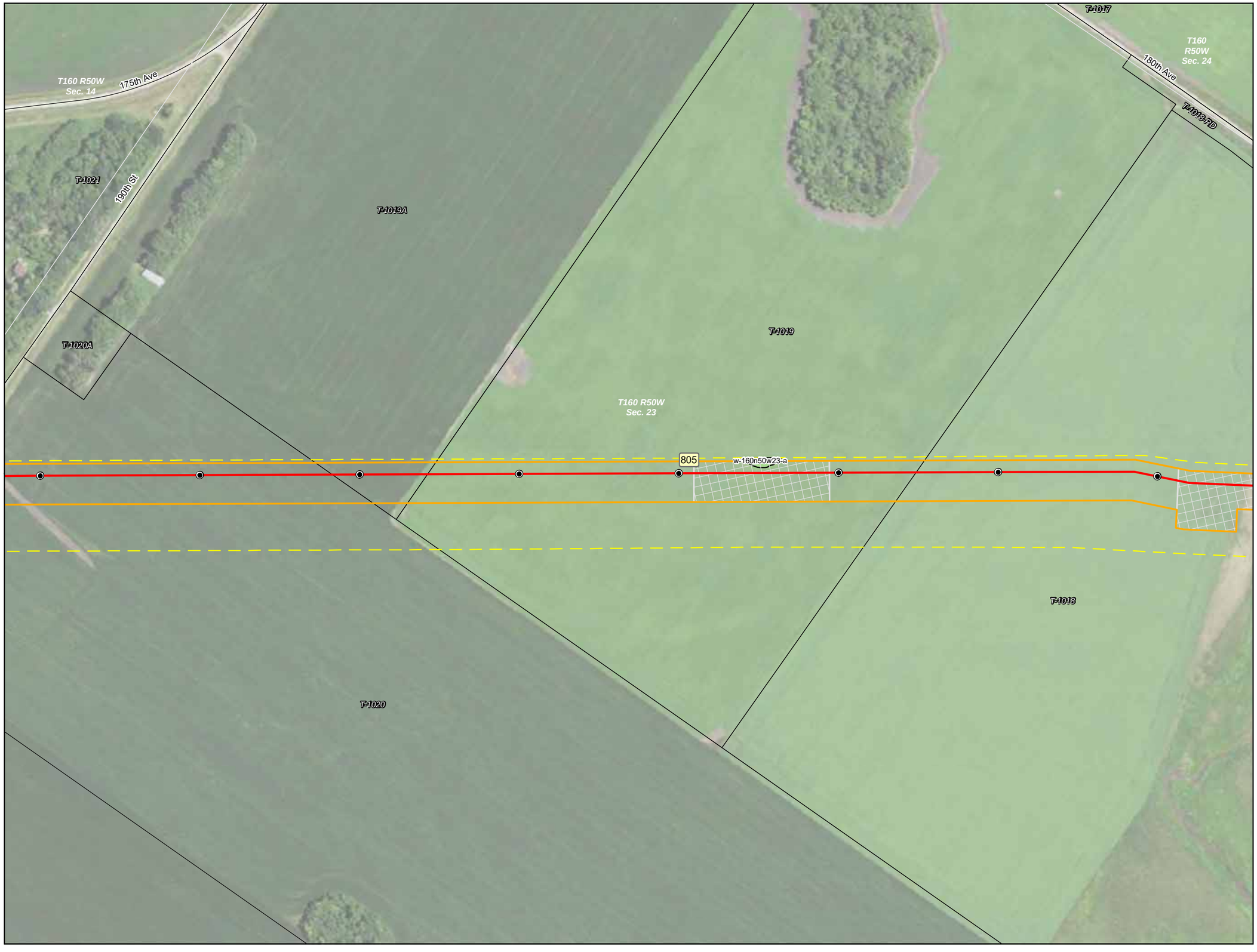
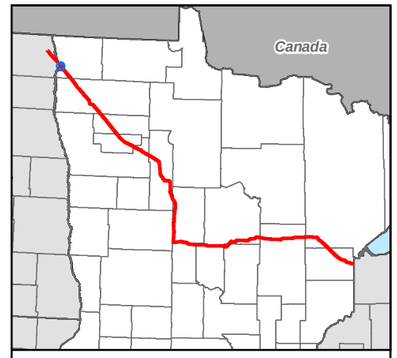
Line 3 Replacement Project

Kittson County, Minnesota

ENBRIDGE





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PFO	PFO
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PUB	PUB

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- NHD Waterbody

NWI Waterbodies

- Lake
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0 150 300 Feet

1 inch = 300 feet

Detailed Route Maps

Line 3 Replacement Project

Kittson County, Minnesota

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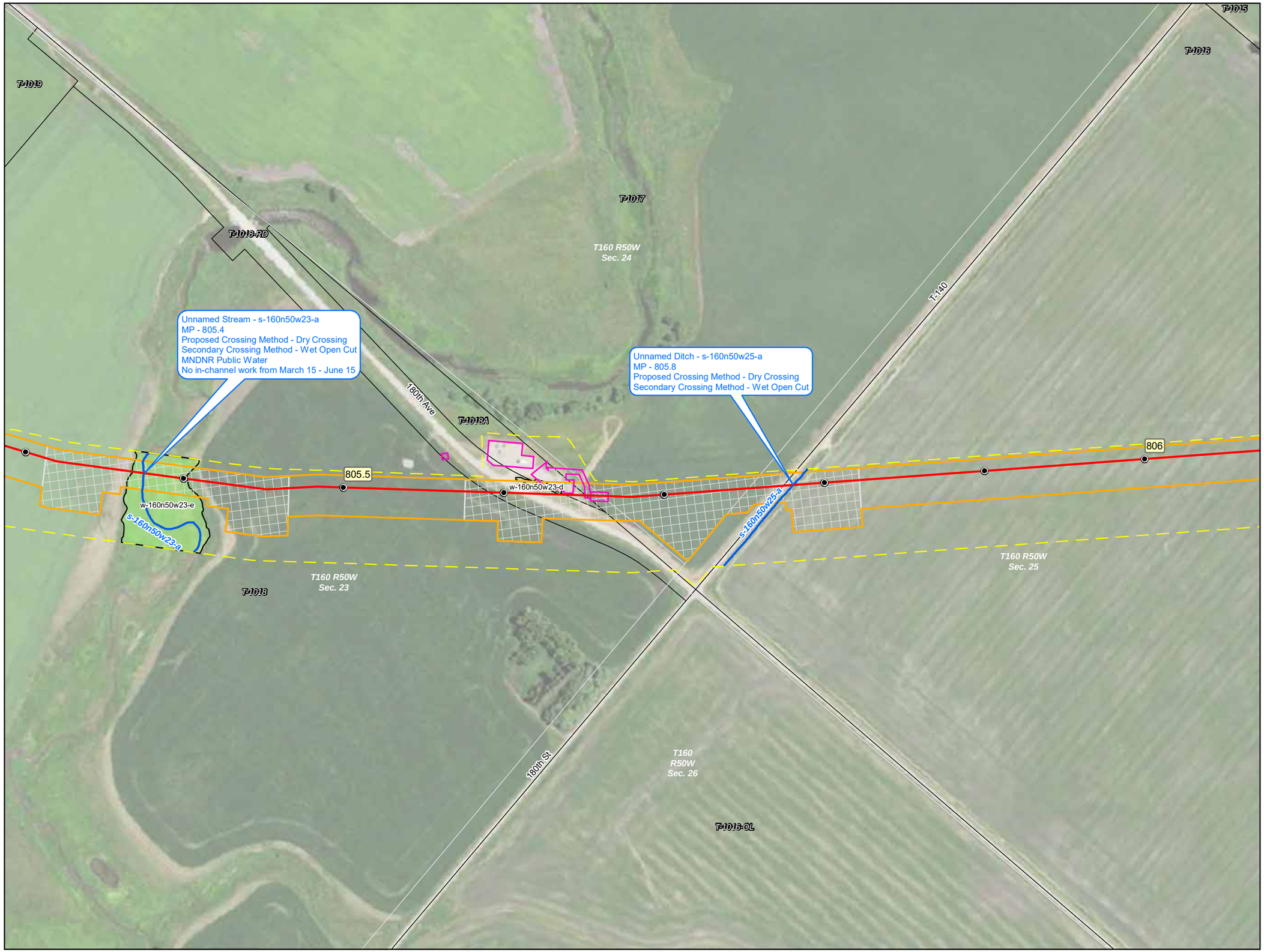

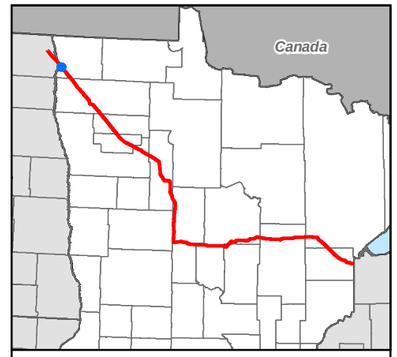

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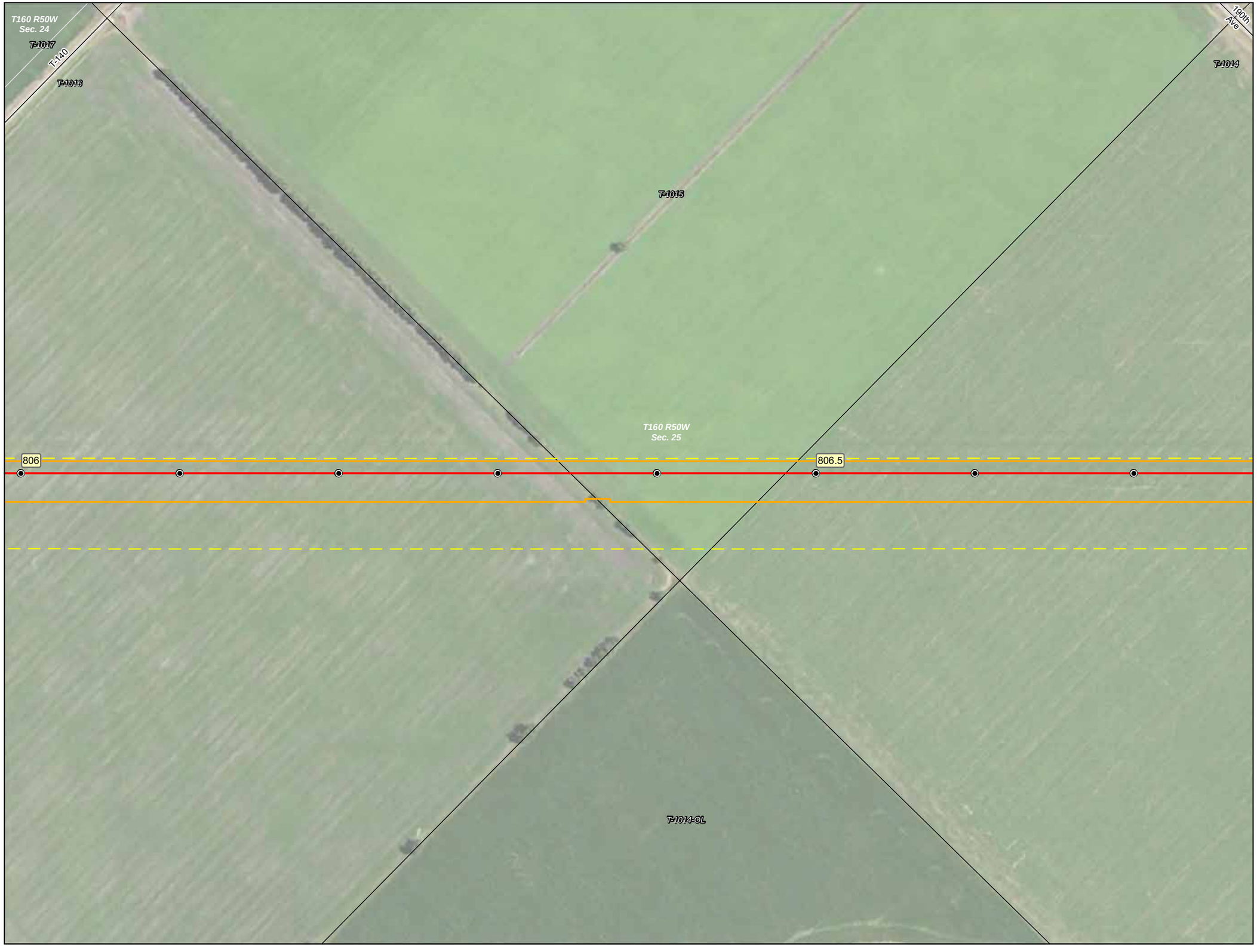

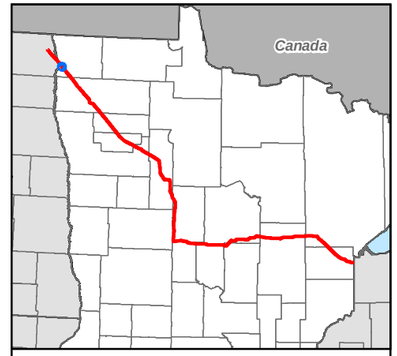

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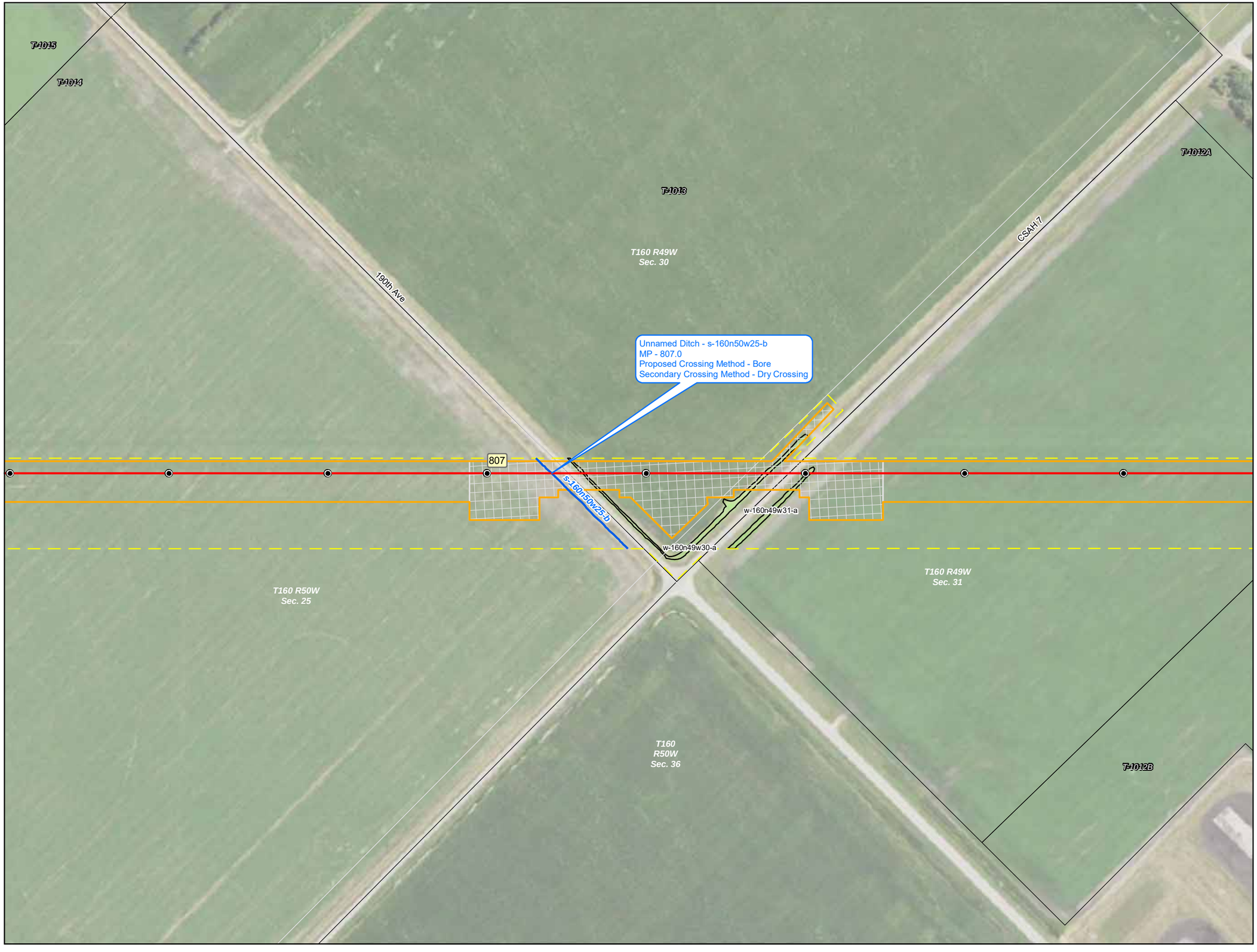

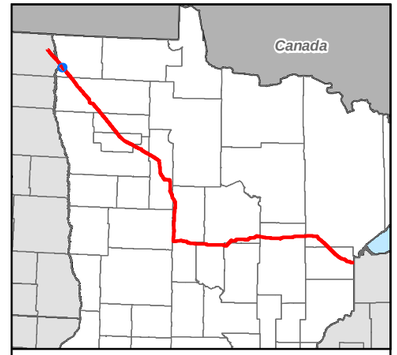

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Kittson County, Minnesota

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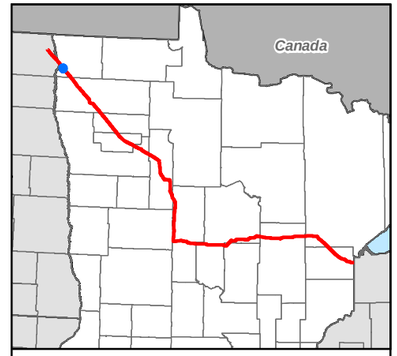

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Line 3 Replacement Project

Kittson County, Minnesota

ENBRIDGE

MN-KI-220323030

MN-KI-220323020

T-1012

T-1009

T160 R49W
Sec. 32

200th Ave

T-1011

Unnamed Ditch - s-160n49w32-a
MP - 808.4
Proposed Crossing Method - Dry Crossing
Secondary Crossing Method - Wet Open Cut

Unnamed Ditch - s-160n49w32-b
MP - 808.6
Proposed Crossing Method - Dry Crossing
Secondary Crossing Method - Wet Open Cut

w-160n49w31-b

808.5

s-160n49w32-a

w-160n49w32-a

s-160n49w32-b

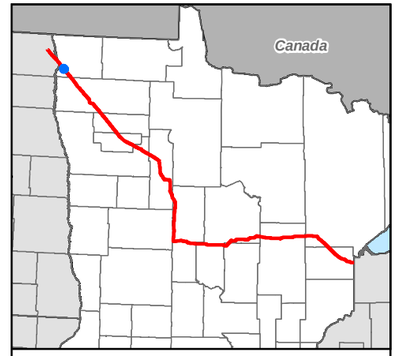
T160 R49W
Sec. 31

T-1008

T159 R49W
Sec. 5

T-1010

T159
R49W
Sec. 6



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Kittson County, Minnesota

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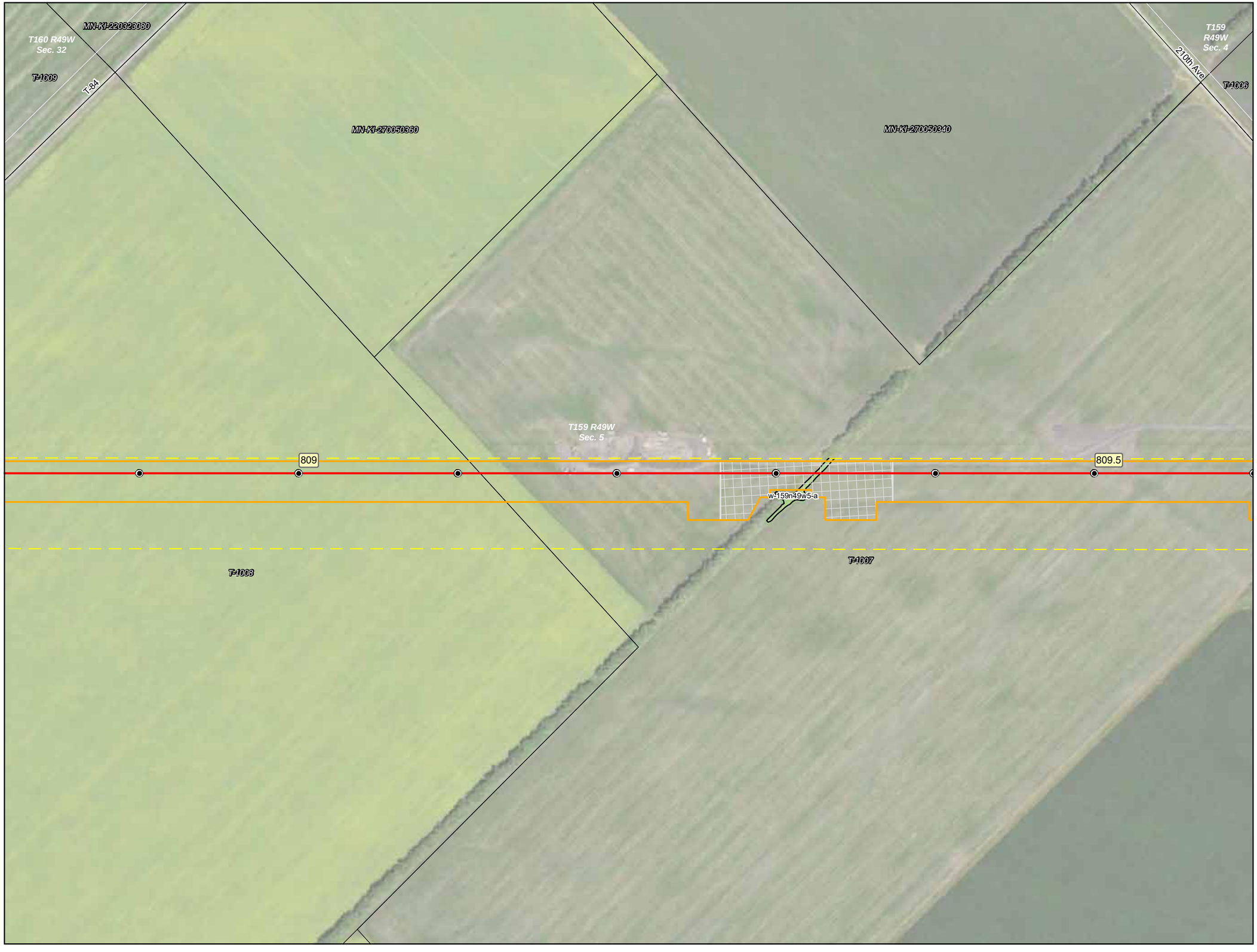

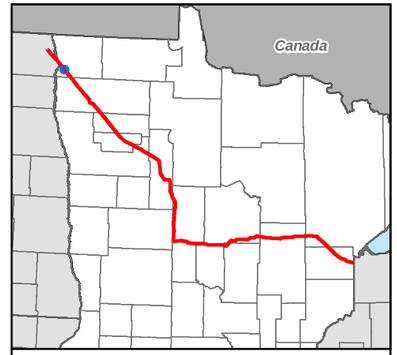

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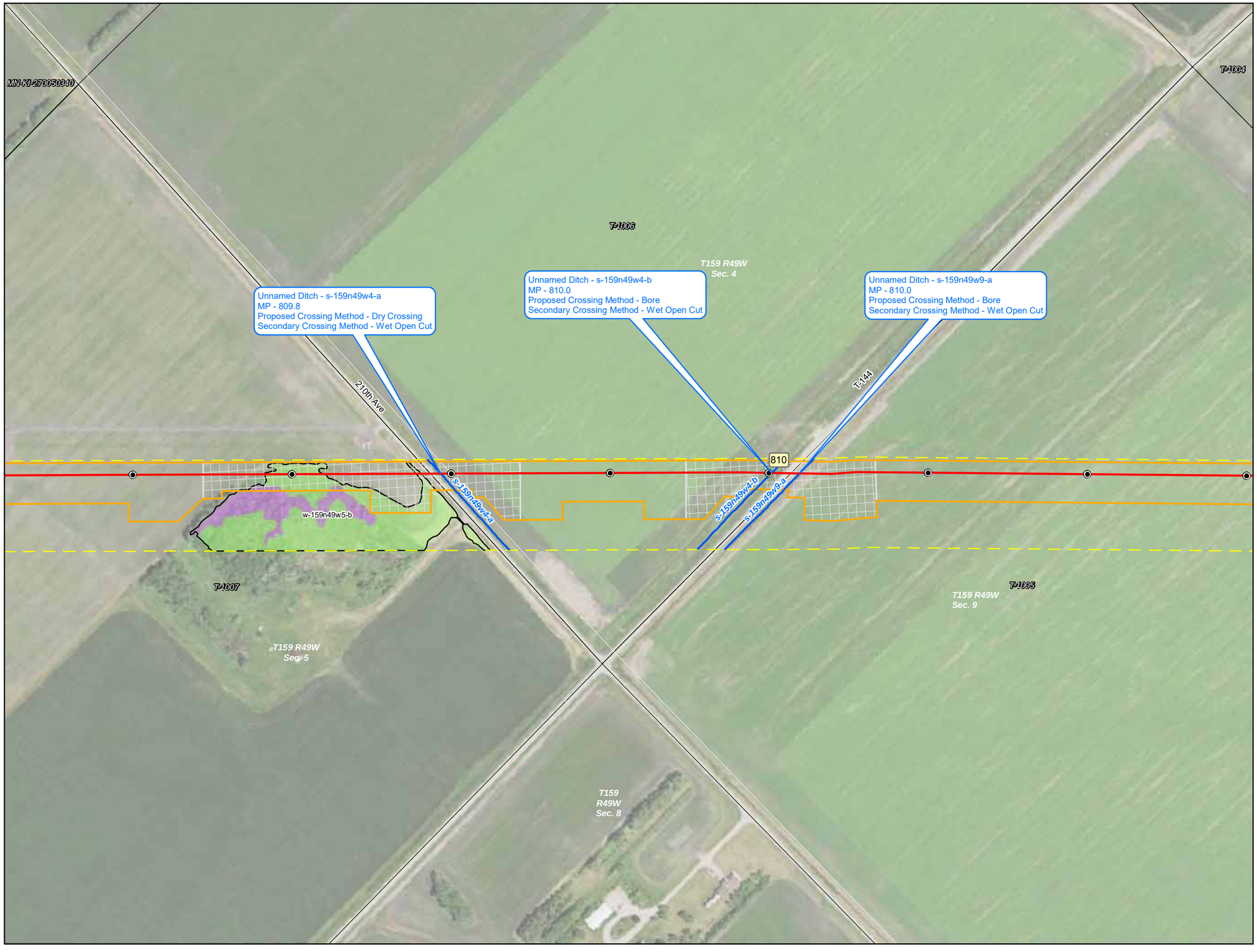

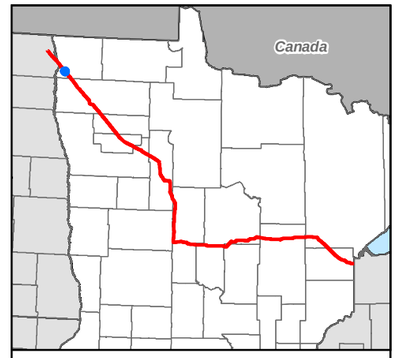

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Kittson County, Minnesota

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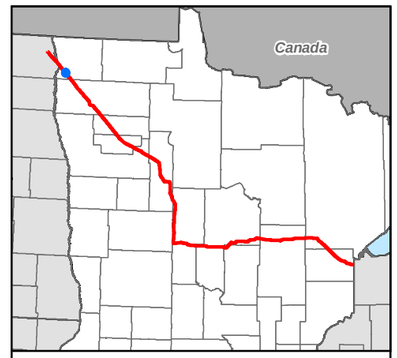

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Kittson County, Minnesota

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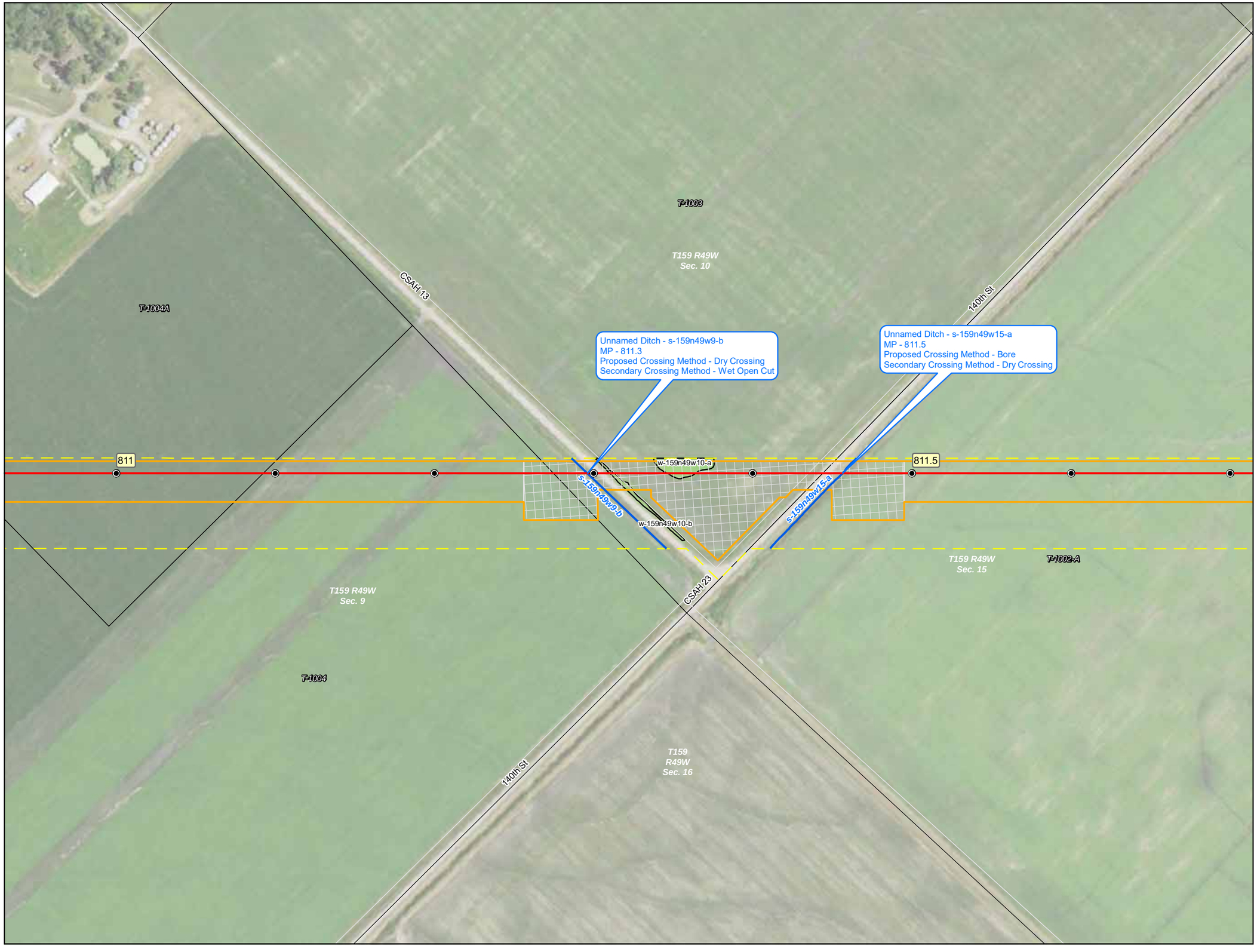

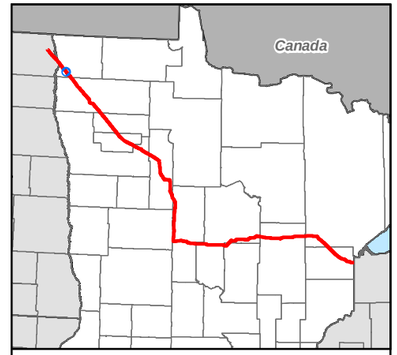

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Kittson County, Minnesota

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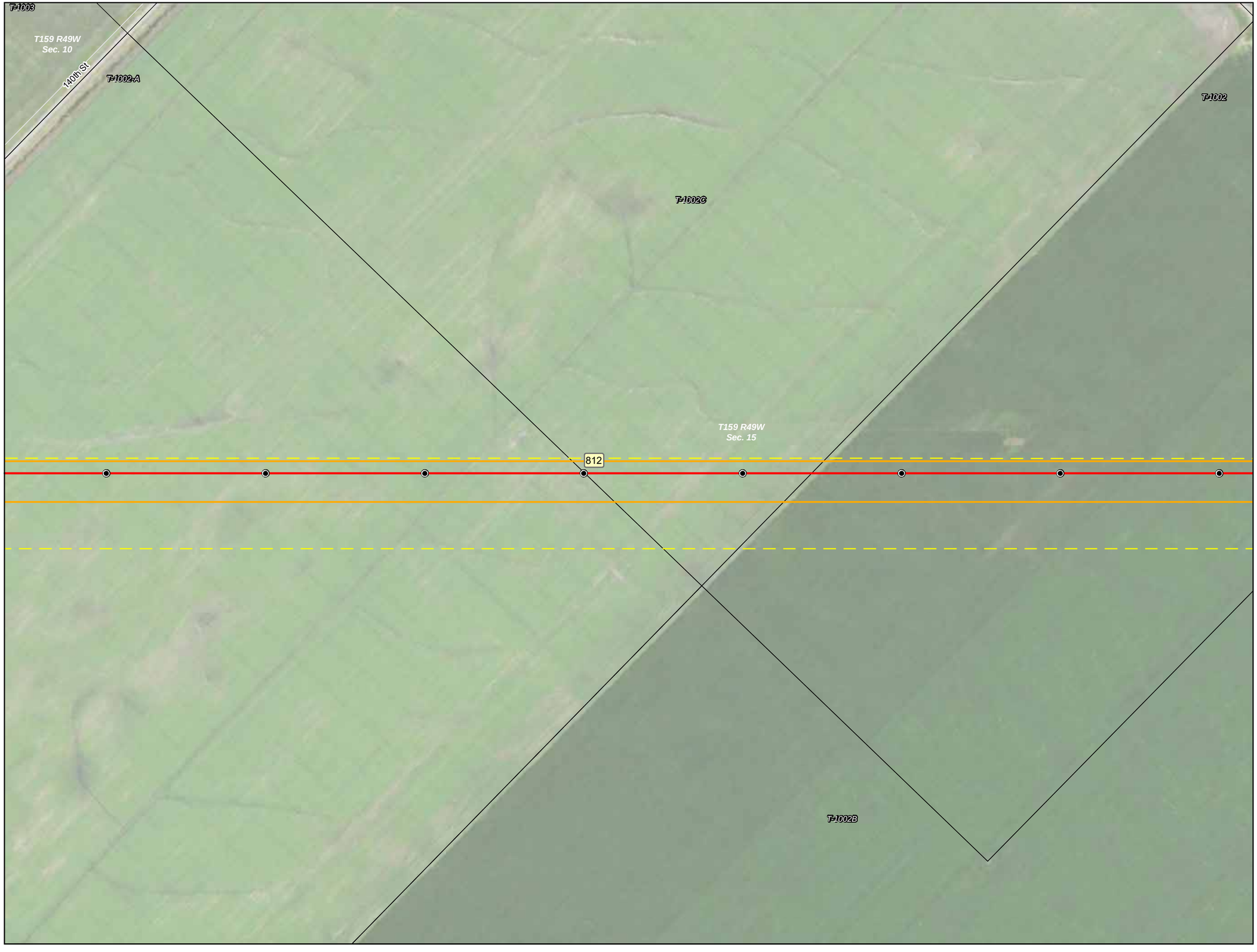

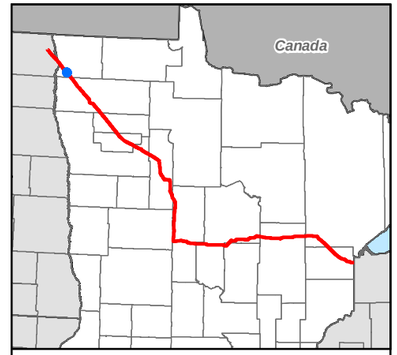

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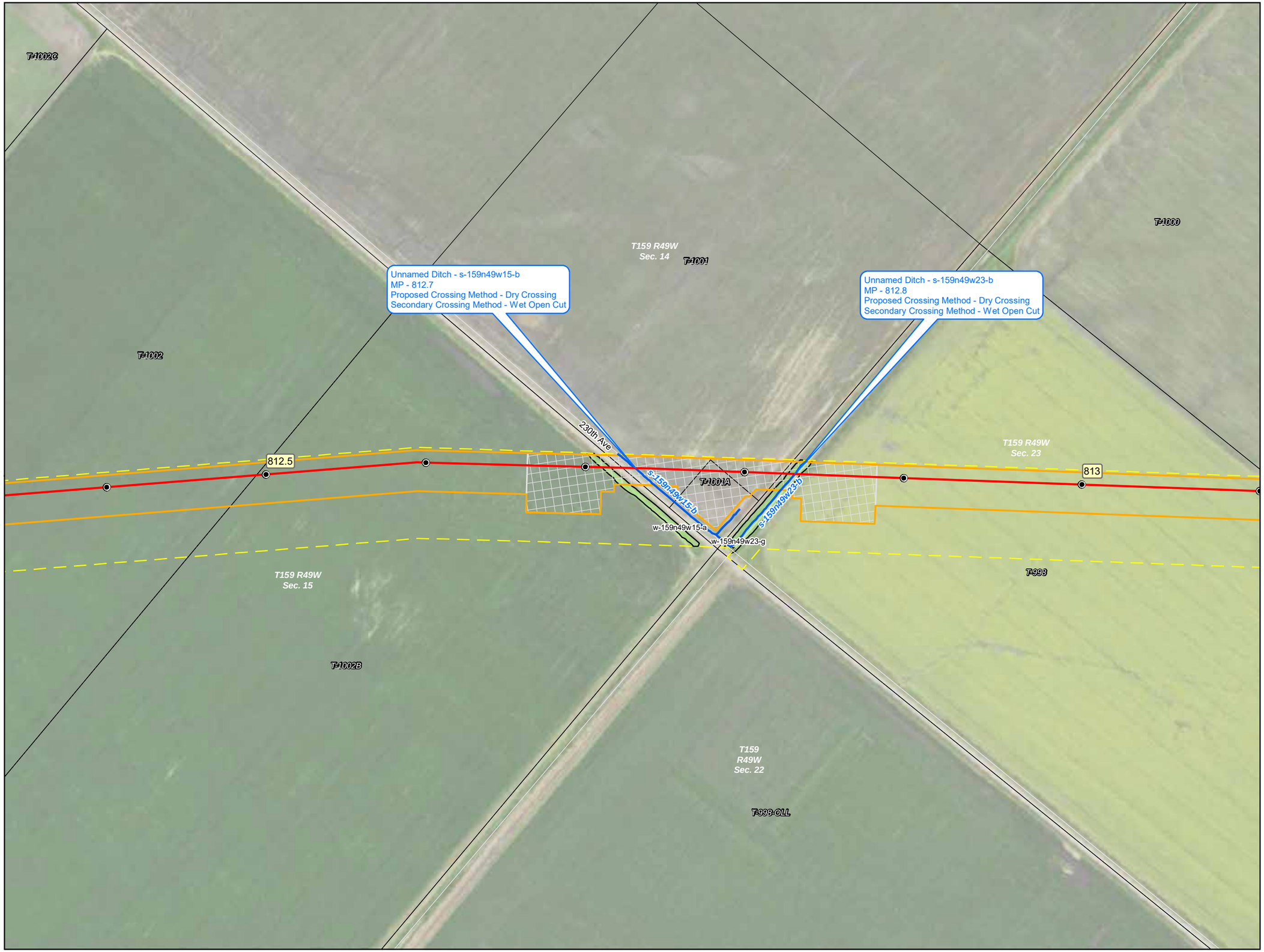

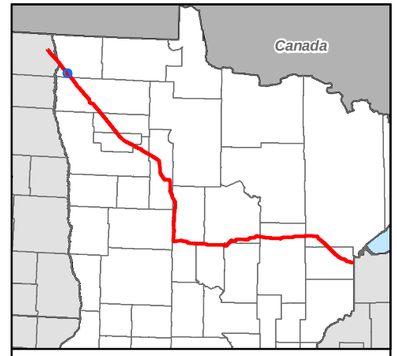

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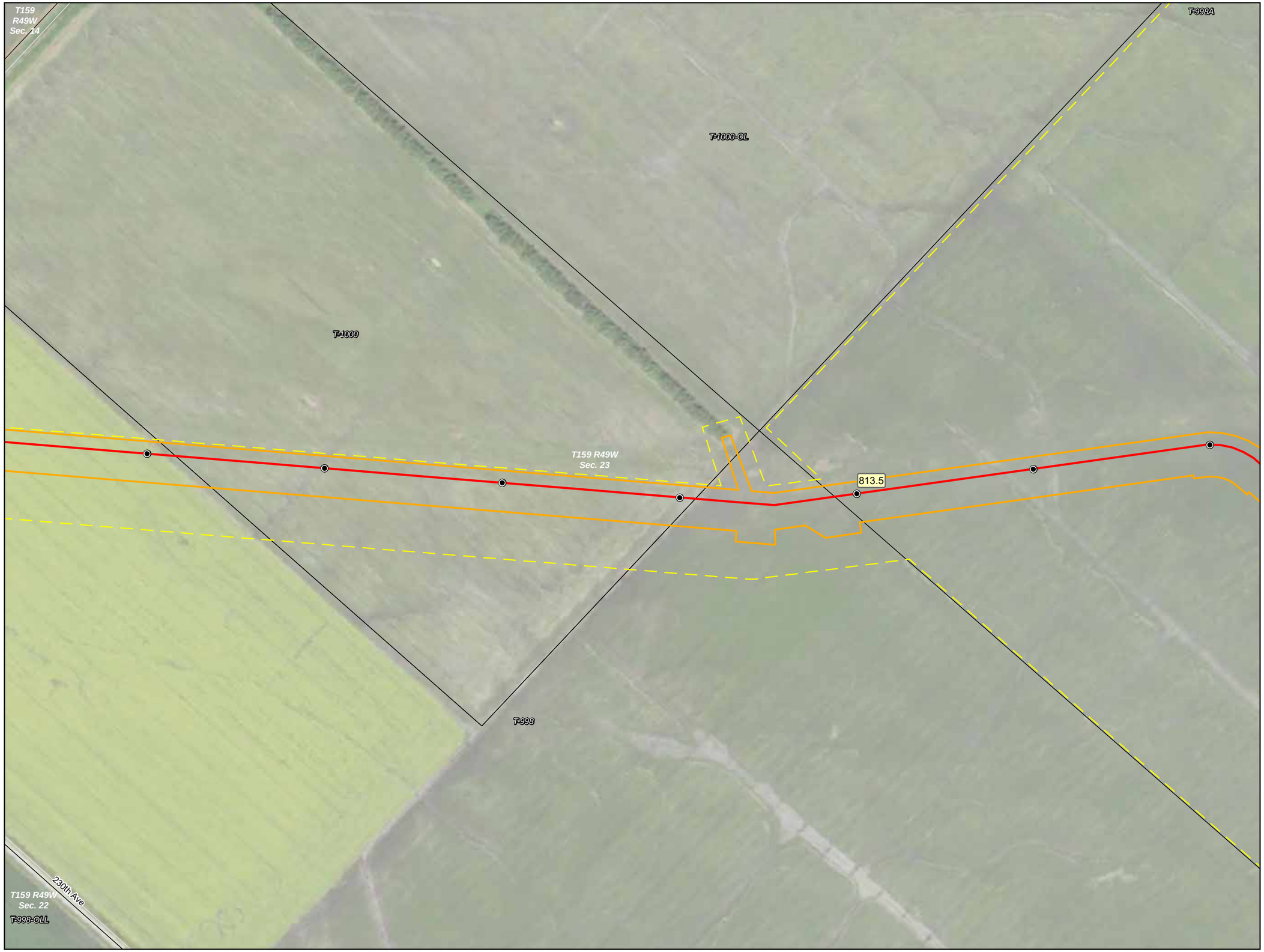

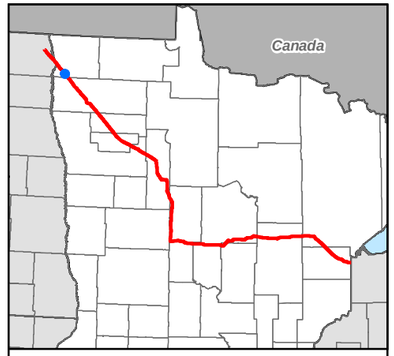

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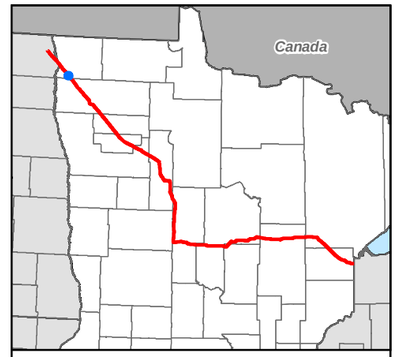

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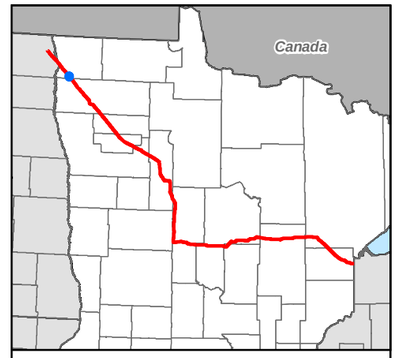

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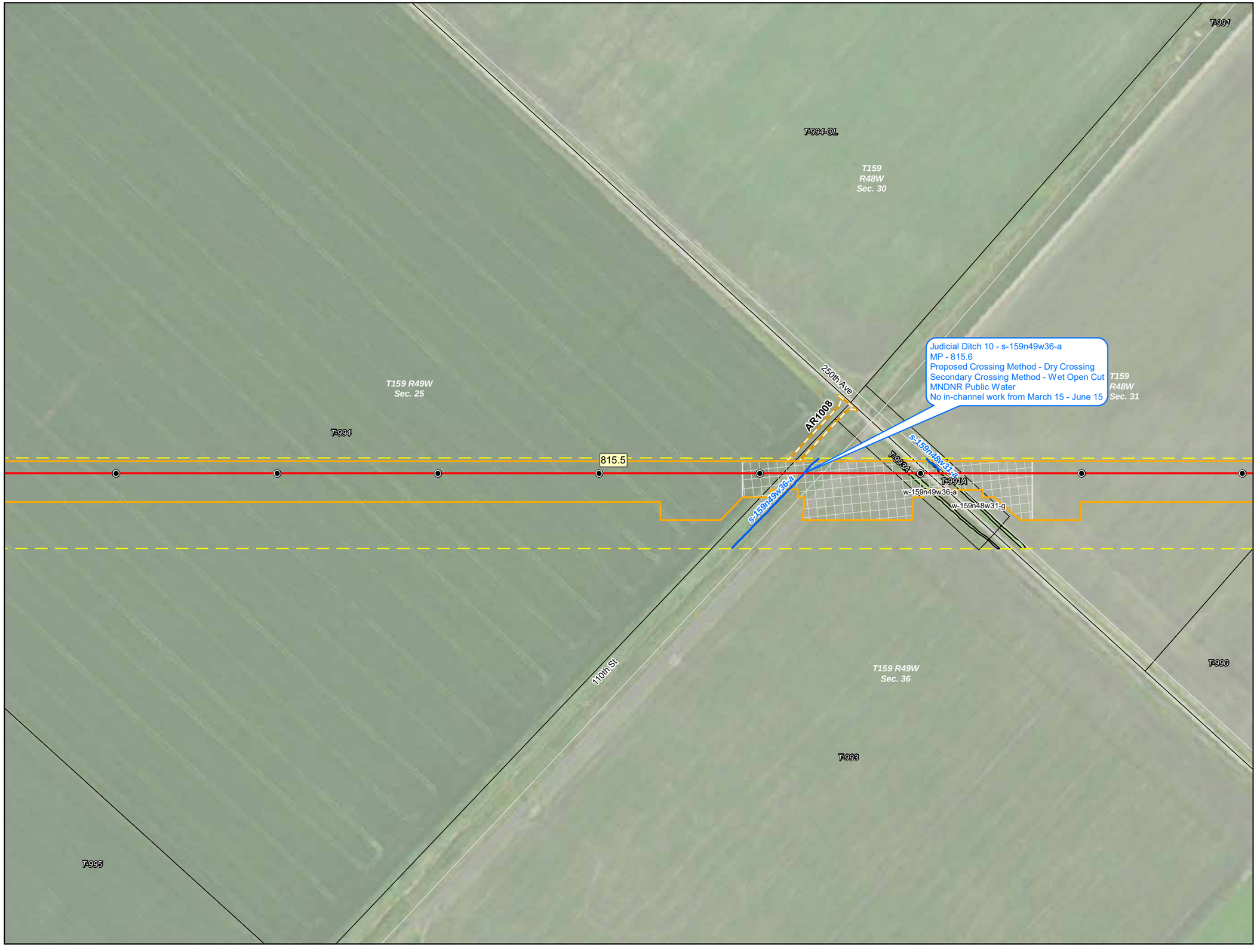

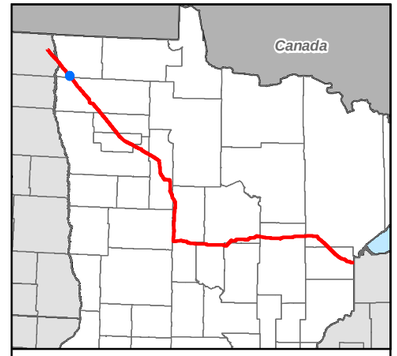

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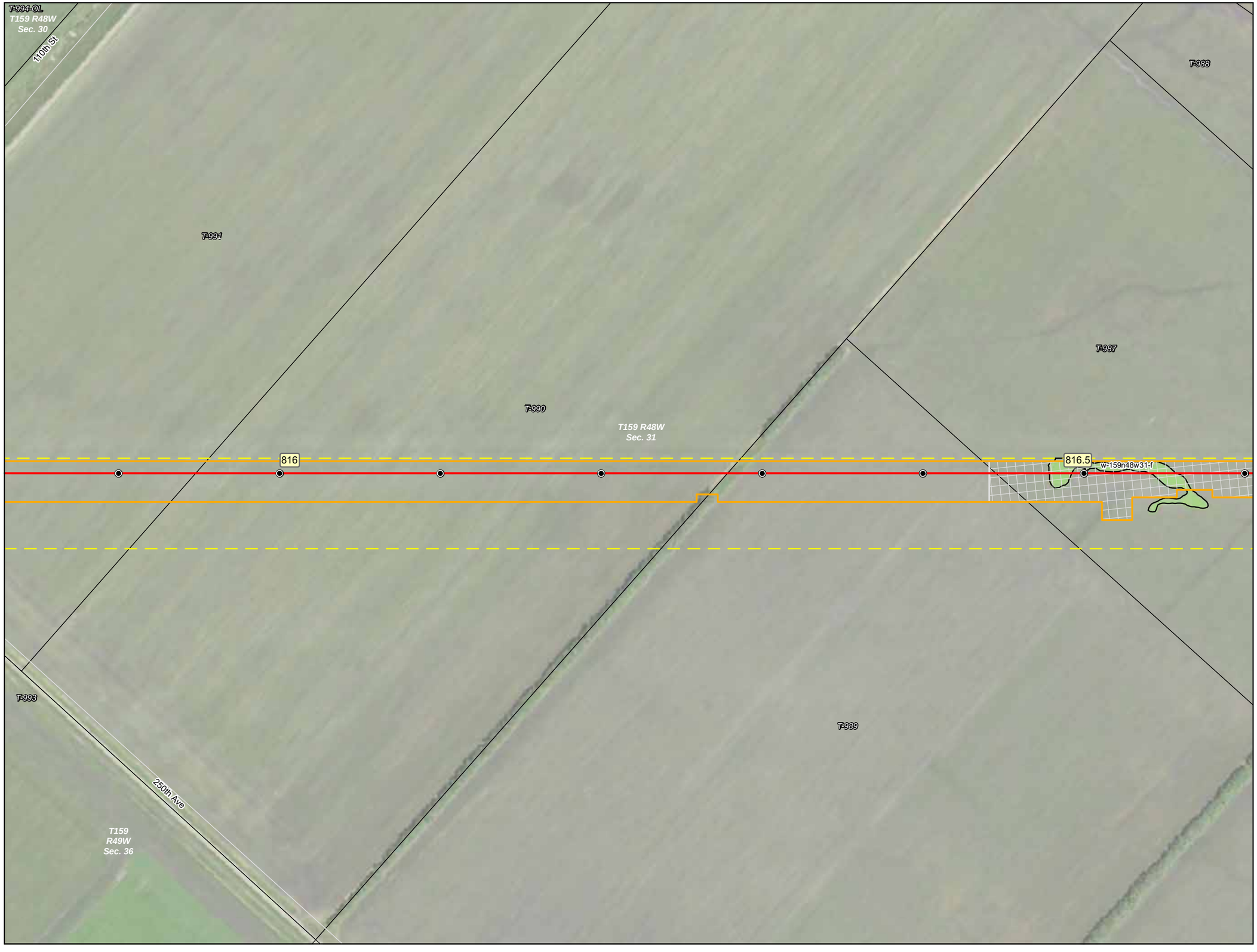

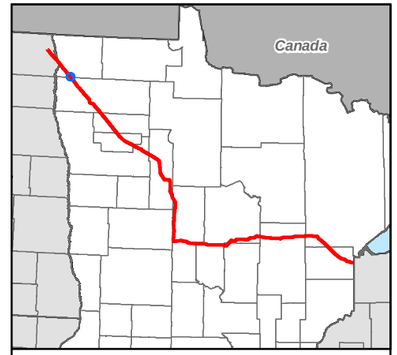

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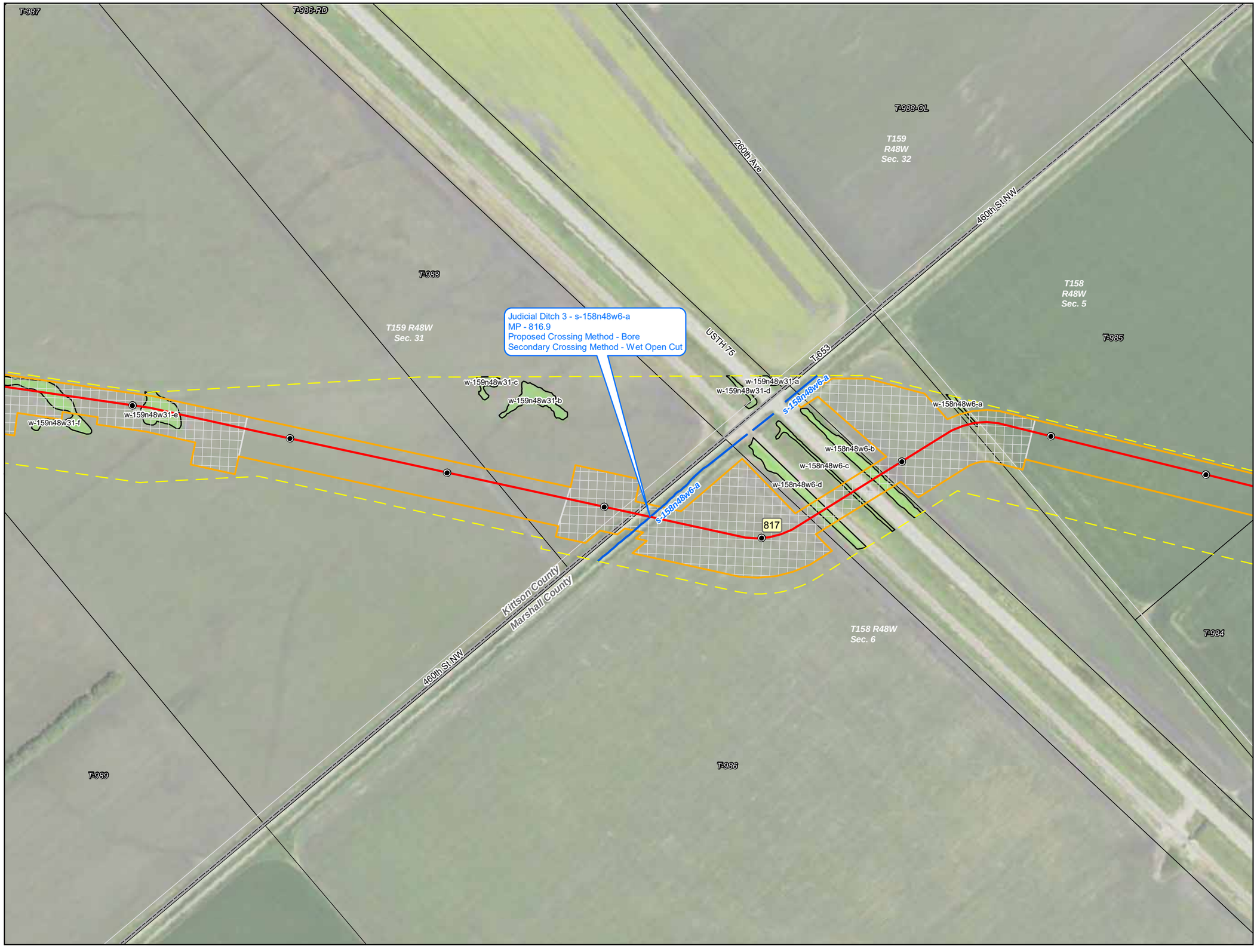

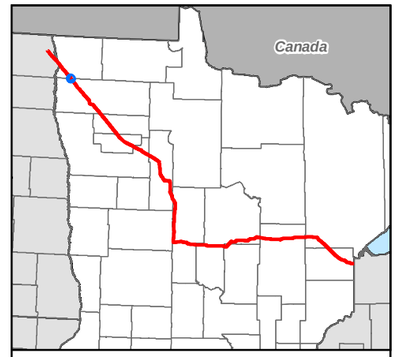

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Environmental Field Data

Wetlands

Field Delineated Wetland	NWI Wetlands
PEM	PEM
PFO	PFO
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PUB	PUB

Waterbodies

- Field Delineated Waterbody
- NHD Waterbody

NWI Waterbodies

- Lake
- Riverine

0 150 300 Feet

1 inch = 300 feet

Detailed Route Maps

Line 3 Replacement Project

Kittson and Marshall Counties, Minnesota

ENBRIDGE

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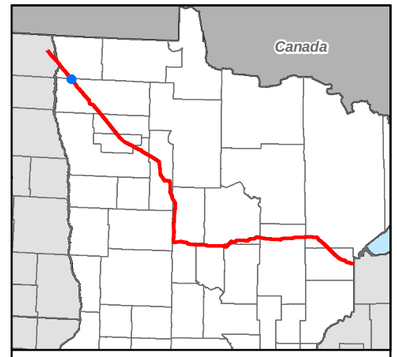

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Detailed Route Maps

Line 3 Replacement Project

Marshall County, Minnesota

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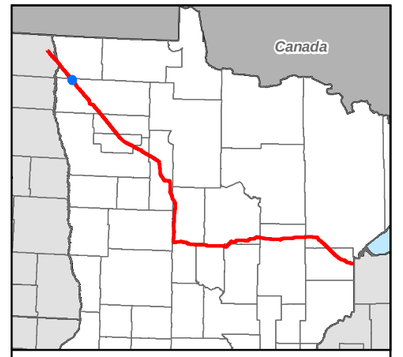

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Detailed Route Maps

Line 3 Replacement Project

Marshall County, Minnesota

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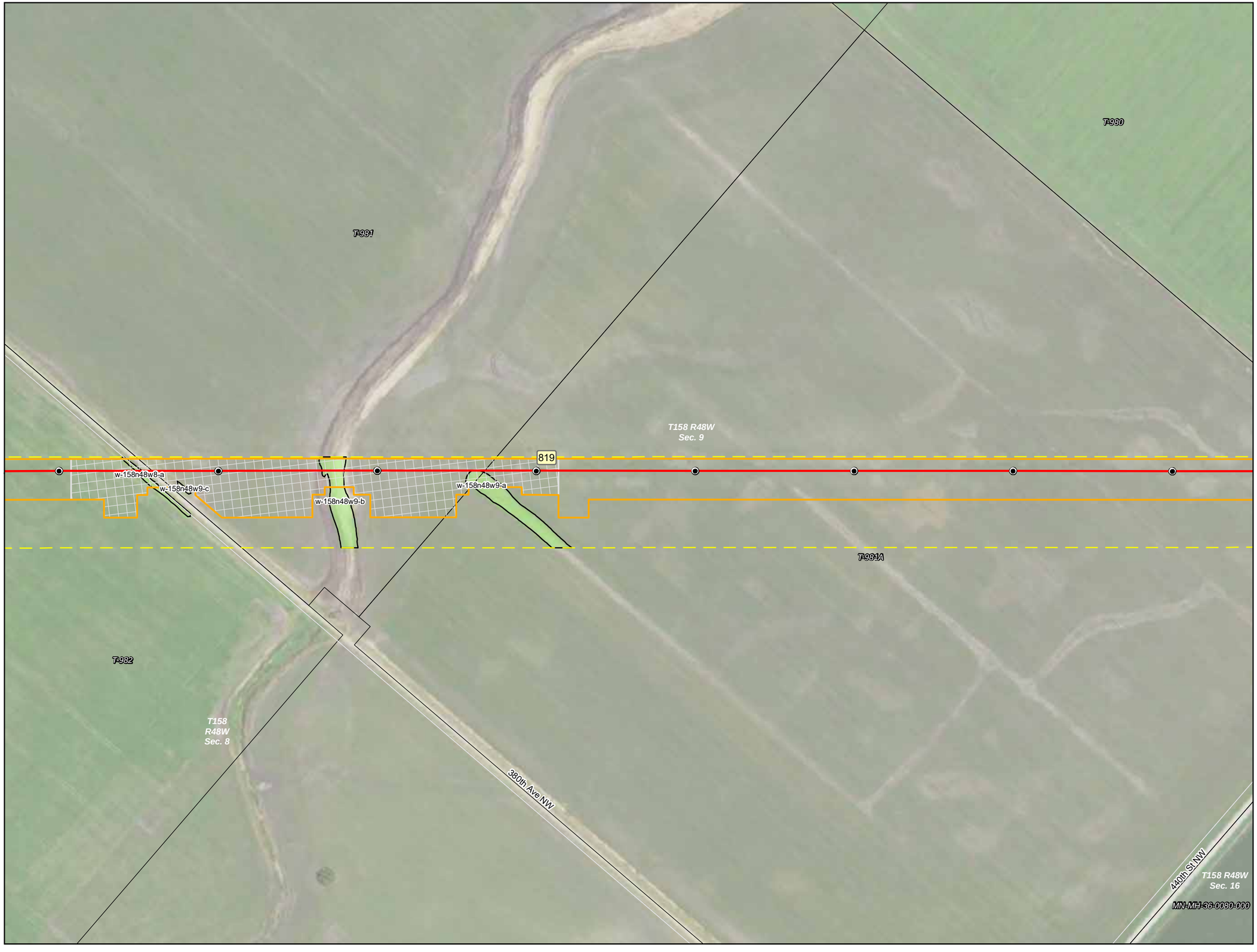

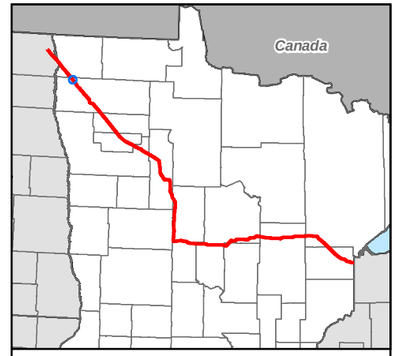

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Line 3 Replacement Project

Marshall County, Minnesota

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Date: (9/19/2018)

T-979

T158 R48W
Sec. 15

T-978

T-980

440th St NW

37.0th Ave NW

T158 R48W
Sec. 9

819.5

820

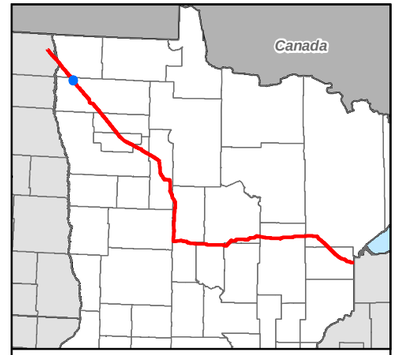
w-158n48w16-a

T158 R48W
Sec. 16

T-981A

MN-MH-36-0030-000

T-979A



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Line 3 Replacement Project

Marshall County, Minnesota

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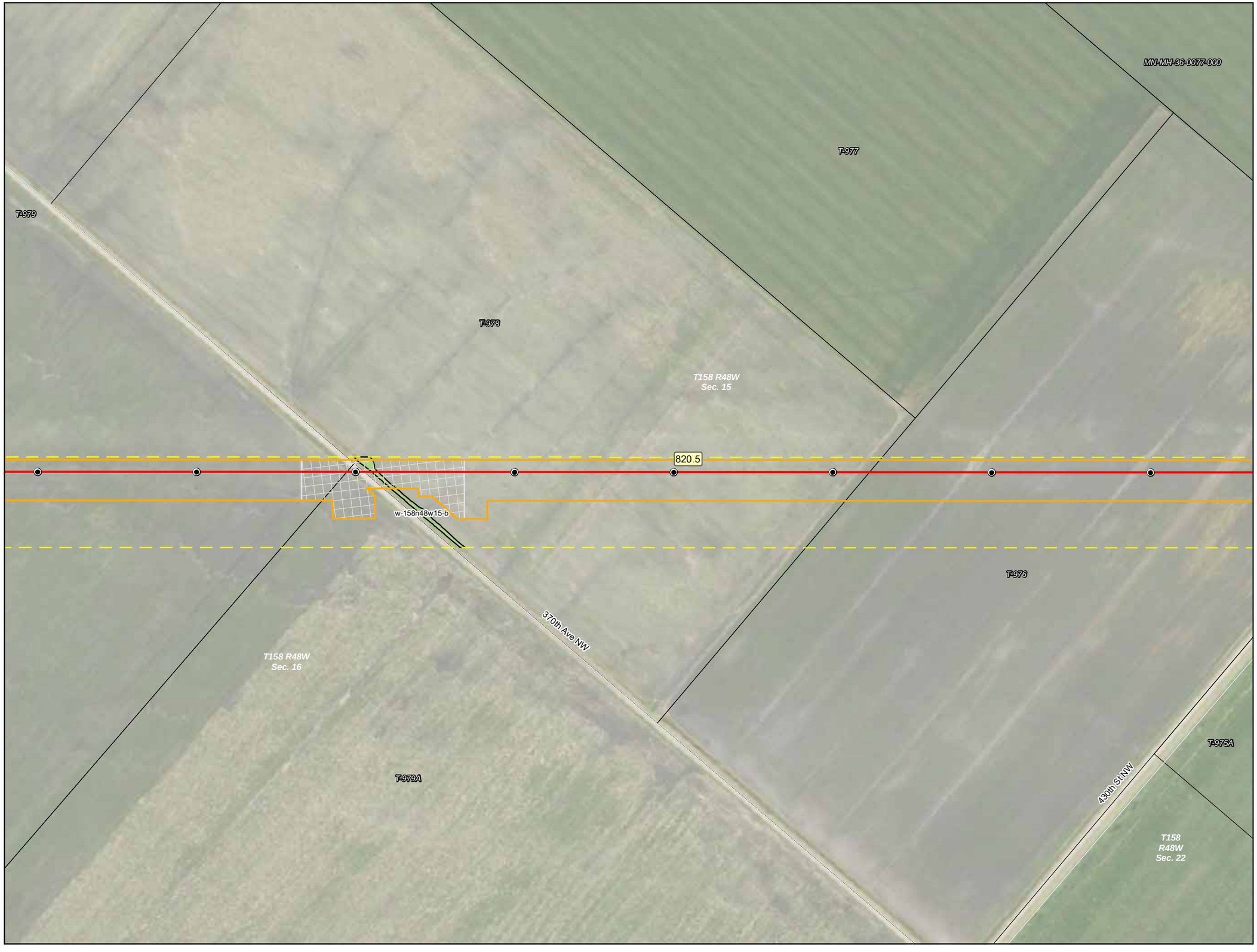

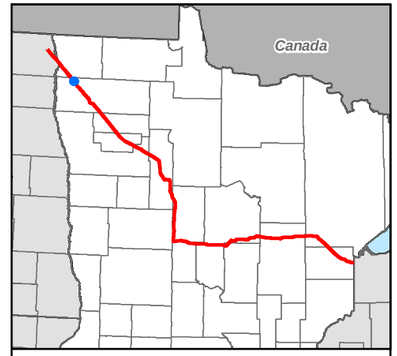

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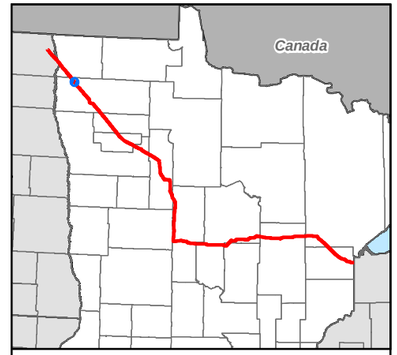
Line 3 Replacement Project

Marshall County, Minnesota

ENBRIDGE



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Line 3 Replacement Project

Marshall County, Minnesota

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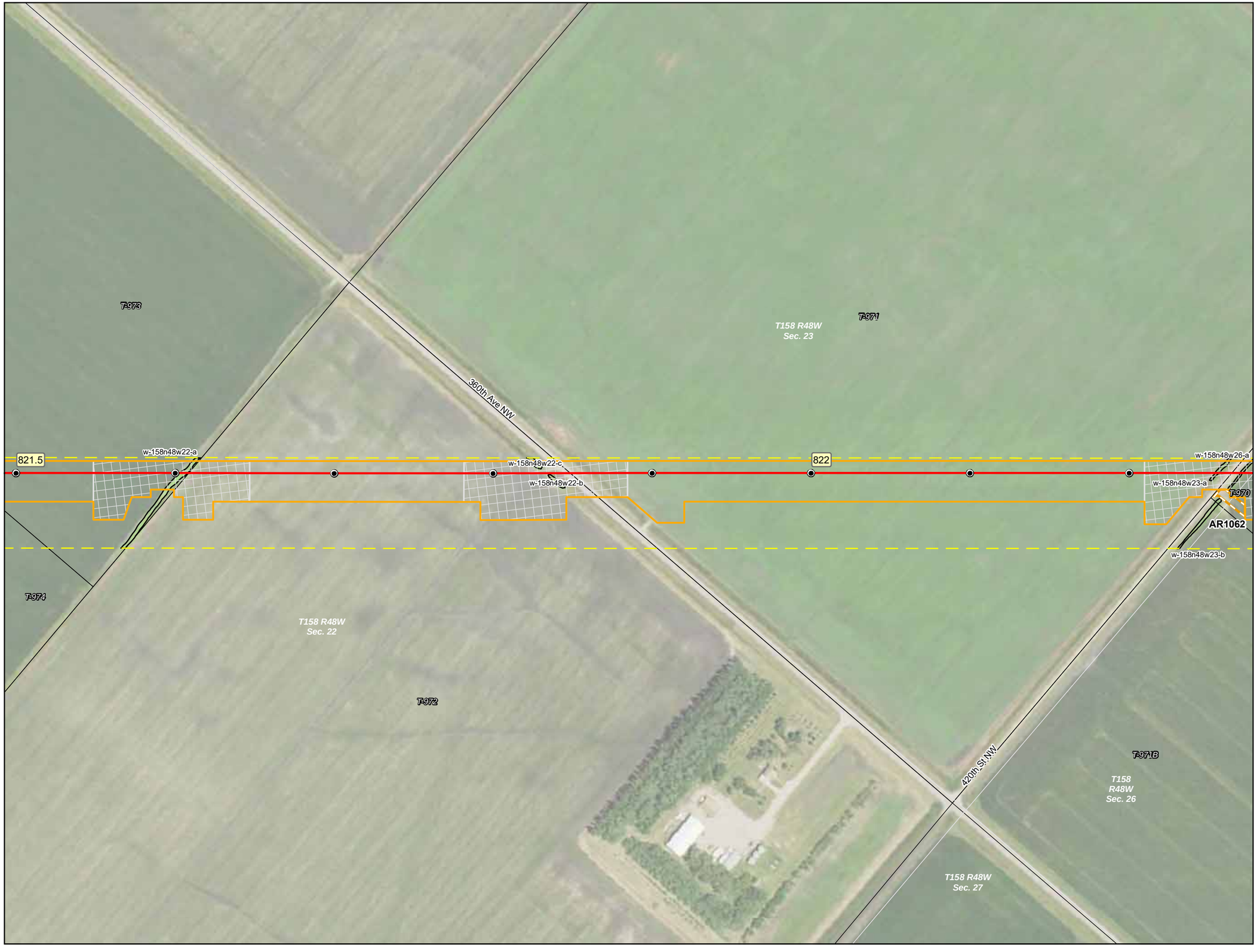

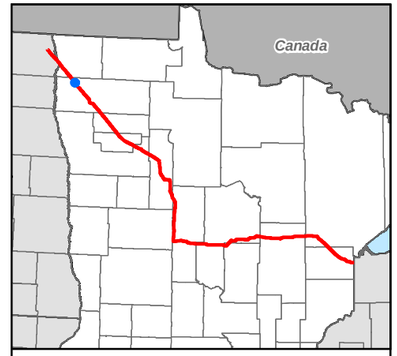

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Line 3 Replacement Project

Marshall County, Minnesota

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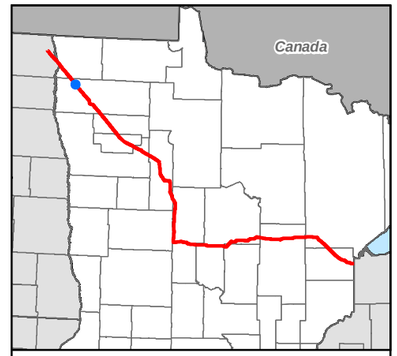

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Line 3 Replacement Project

Marshall County, Minnesota

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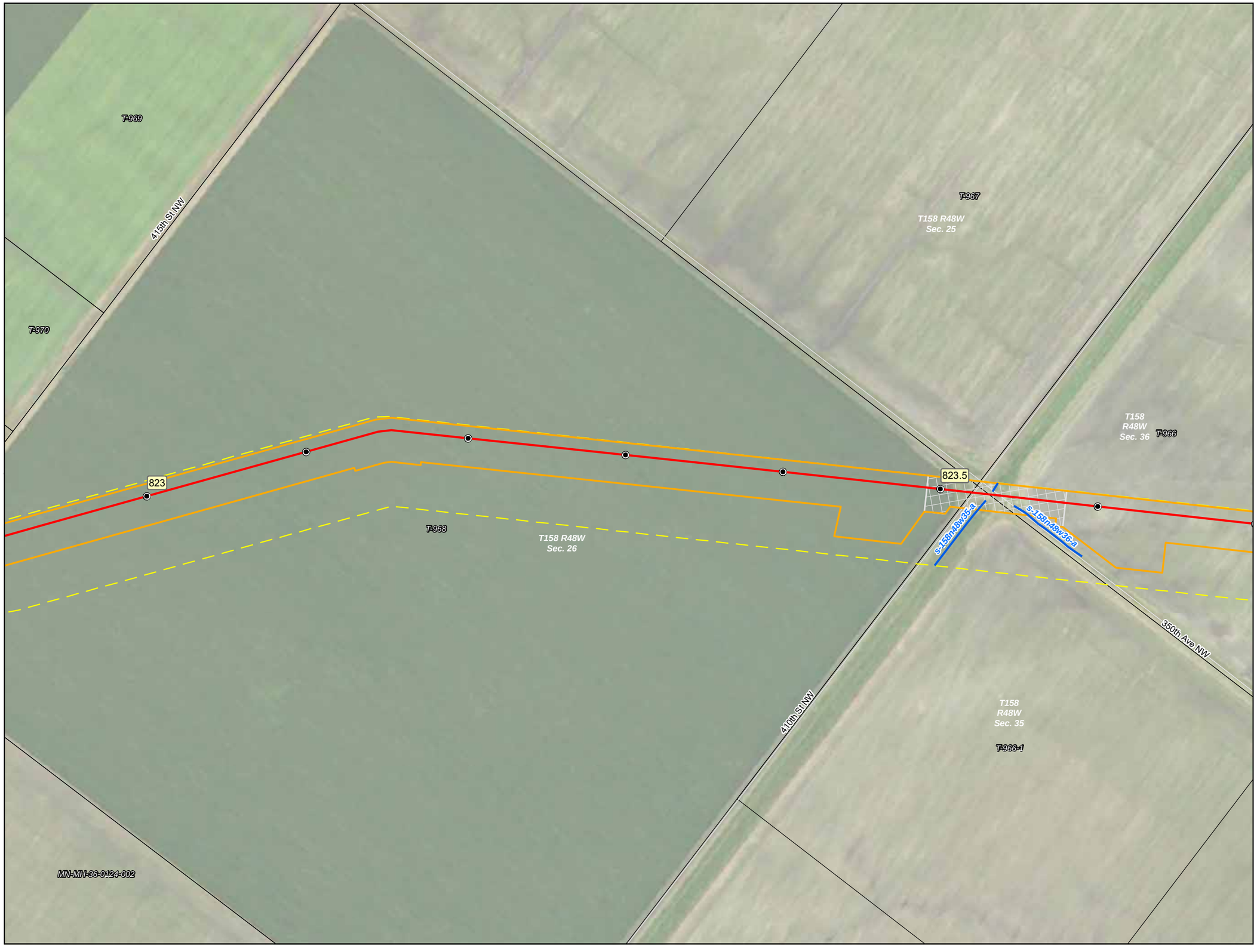

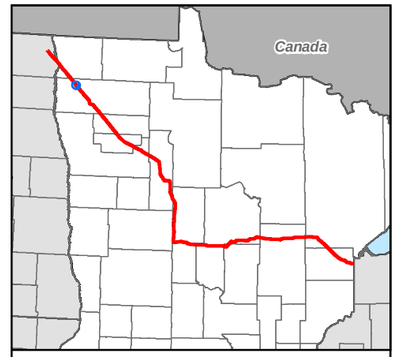

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Line 3 Replacement Project

Marshall County, Minnesota

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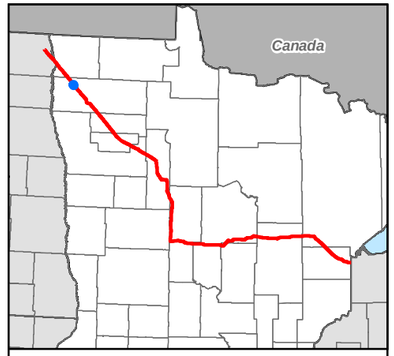

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Detailed Route Maps

Line 3 Replacement Project

Marshall County, Minnesota

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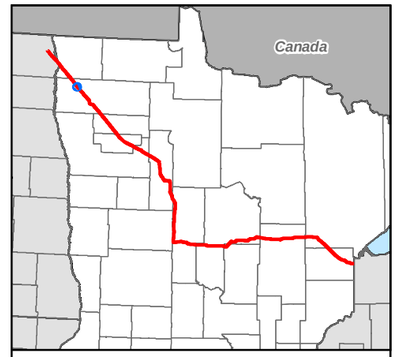

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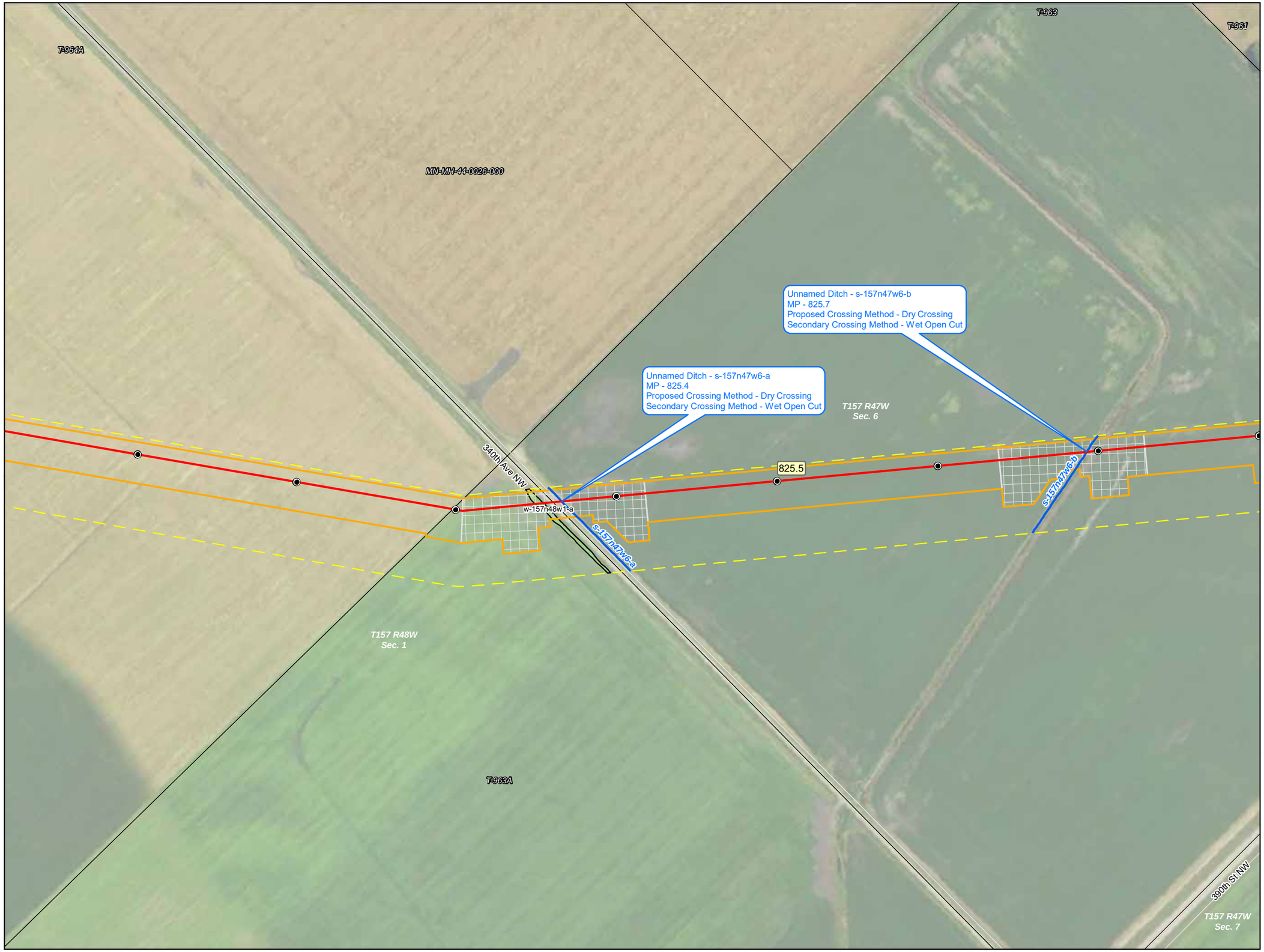

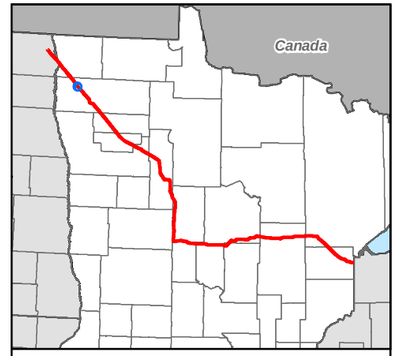

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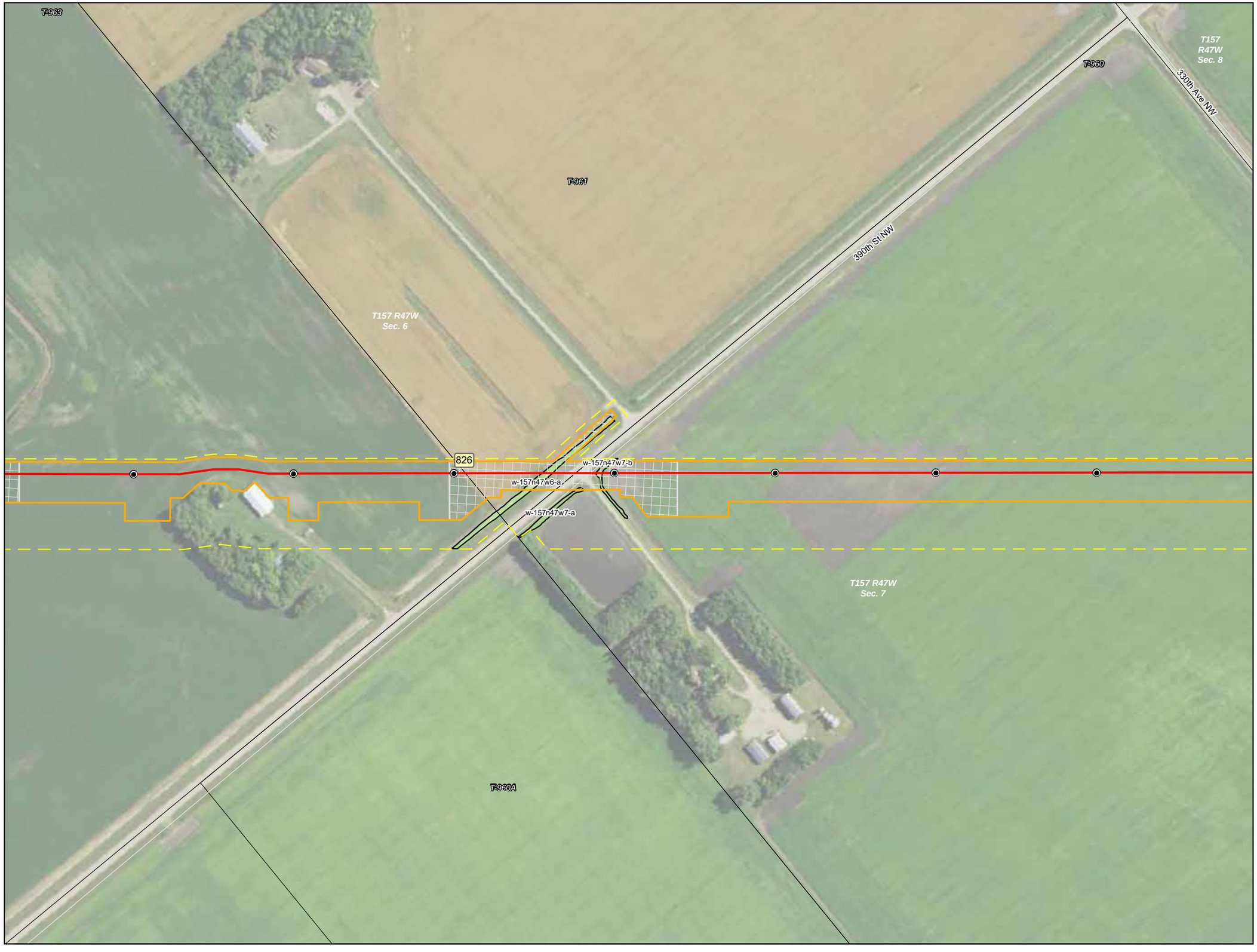

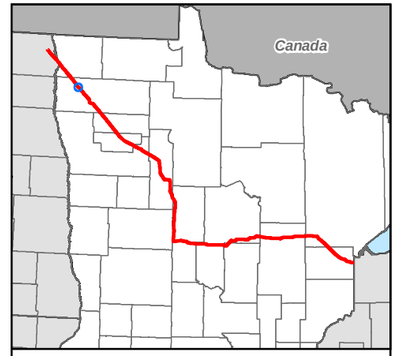

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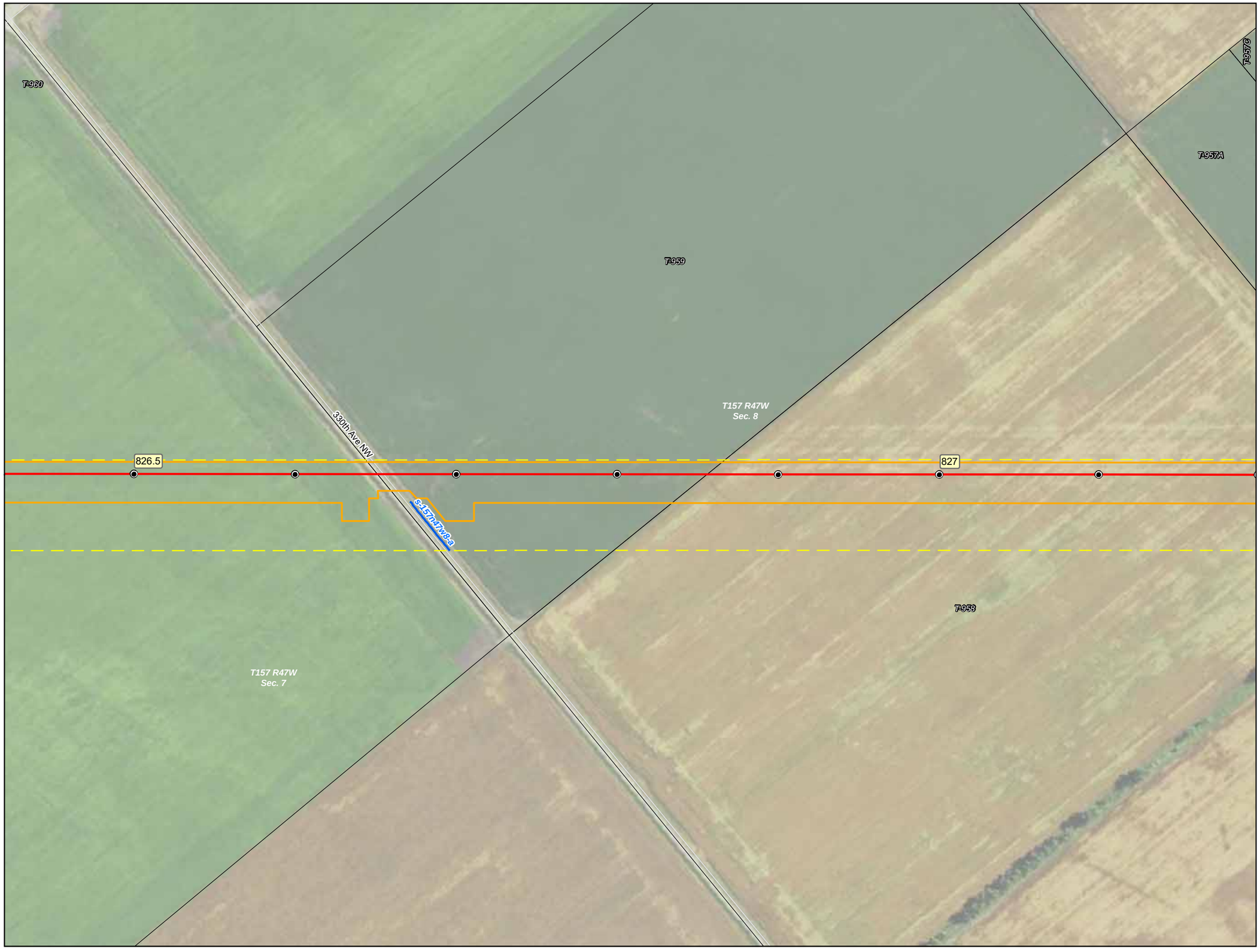

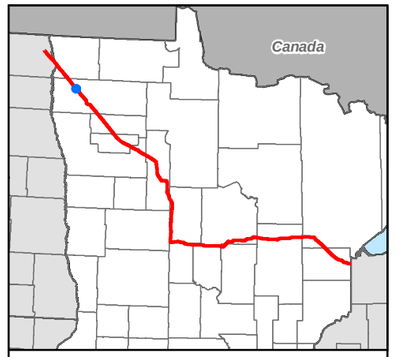

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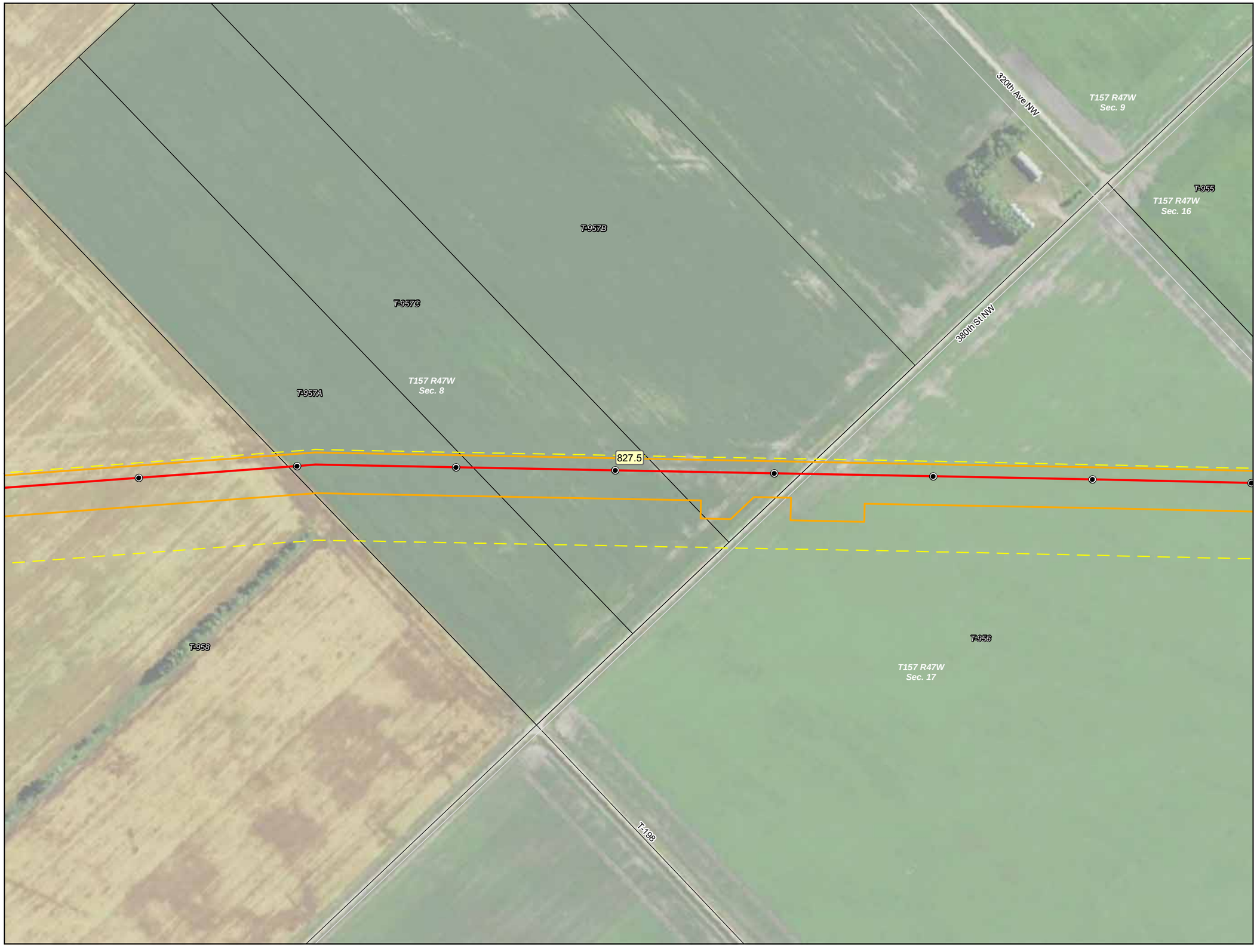

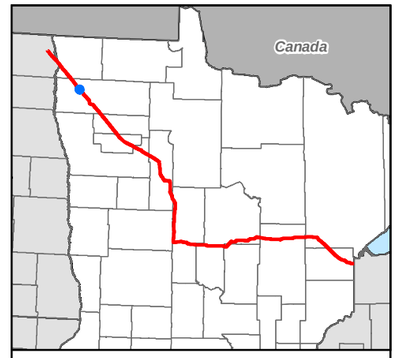

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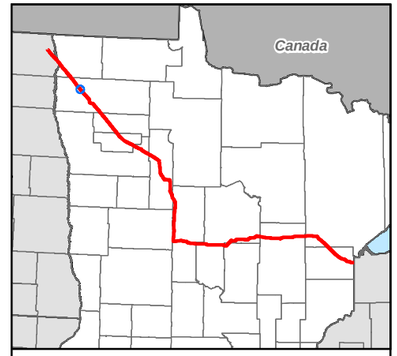

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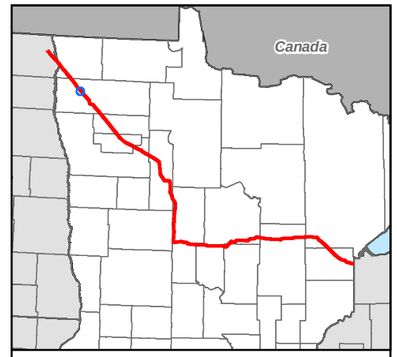

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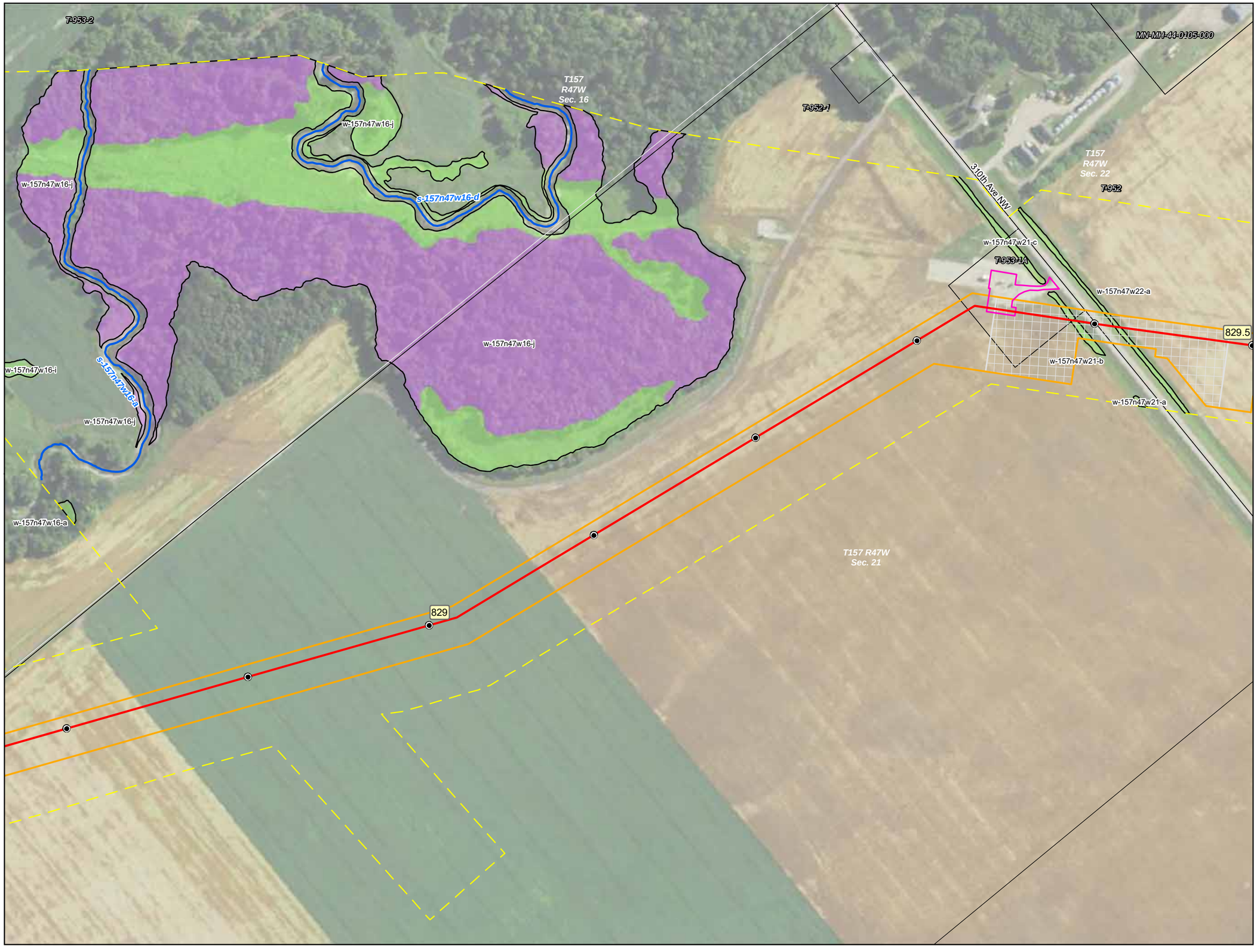

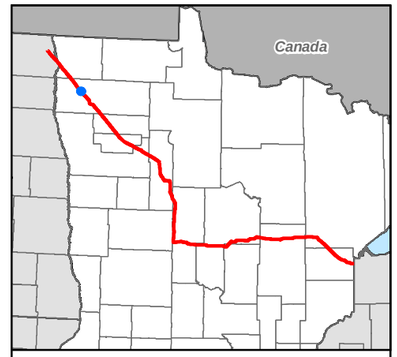

- Milepost
- Line 3 Centerline
- Construction Workspace
- Access Road
- COE Permit Area
- Survey Corridor
- Field Survey Partially or Not Complete
- Parcel Boundary
- County Boundary
- Section Boundary
- Cathodic Protection
- Valve Location
- Pump Station

Environmental Field Data

Wetlands

Field Delineated Wetland	NWI Wetlands
PEM	PEM
PFO	PFO
PSS	PSS
PUB	PUB

Waterbodies

- Field Delineated Waterbody
- NHD Waterbody

NWI Waterbodies

- Lake
- Riverine

0 150 300 Feet

1 inch = 300 feet

Detailed Route Maps

Line 3 Replacement Project

Marshall County, Minnesota

ENBRIDGE

Source: Z:\Clients\E_H\Enbridge\Line_3_Full_Replacement\Permitting\Federal\COE\Sept_2018\RSA_22\Figures\L3_MN_COE_Alignment_Sheets_RSA22.mxd
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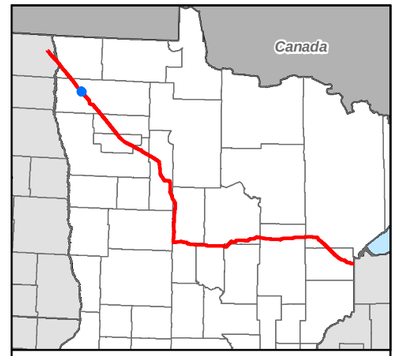

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Line 3 Replacement Project

Marshall County, Minnesota

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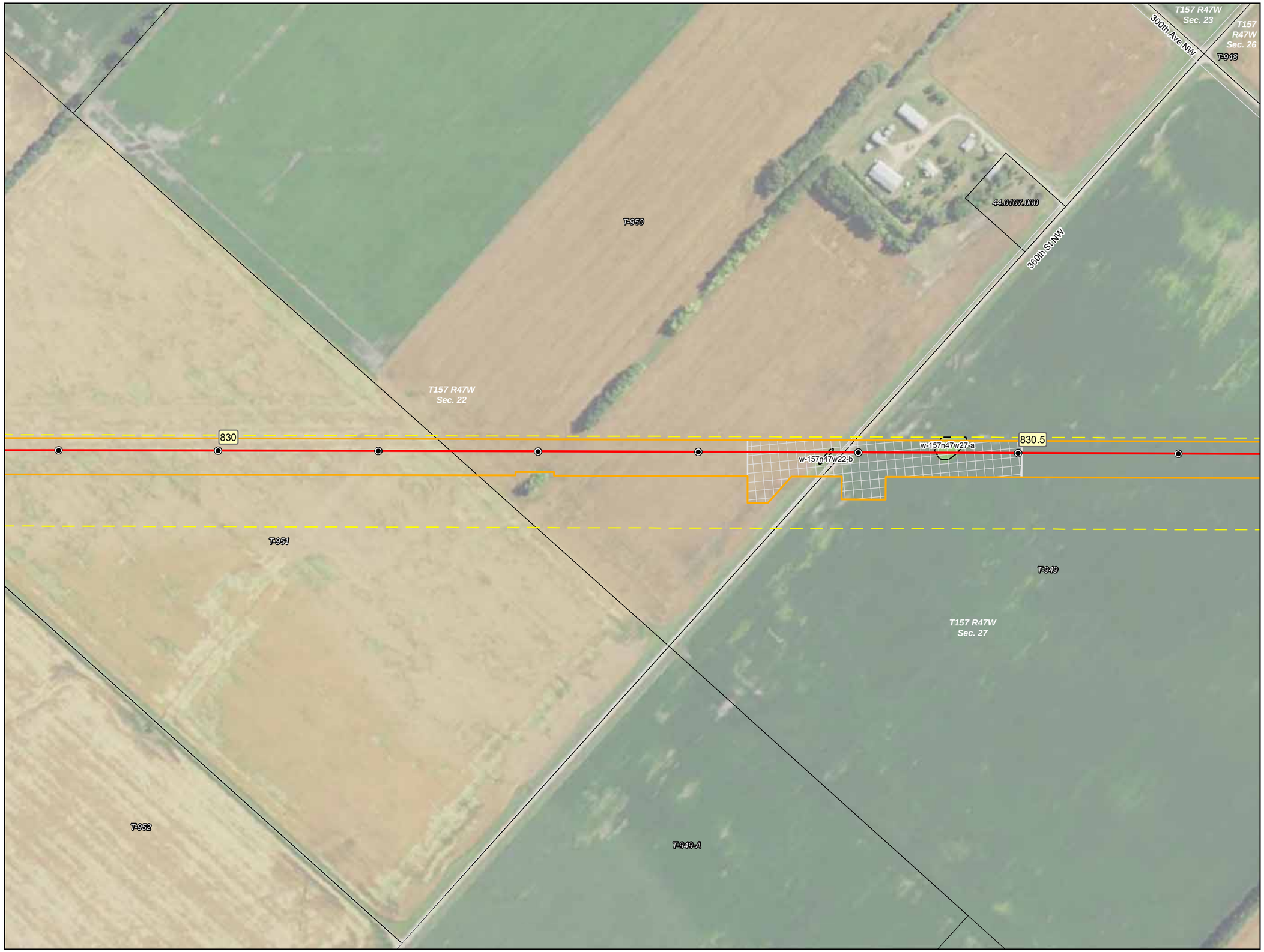

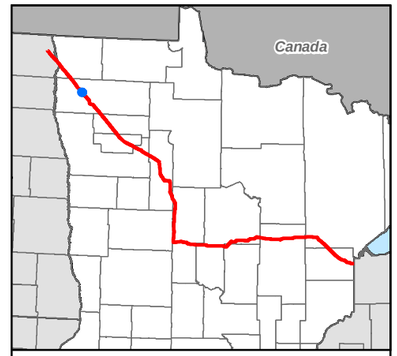

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Detailed Route Maps

Line 3 Replacement Project

Marshall County, Minnesota

ENBRIDGE

T157 R47W
Sec. 23

T950

T157 R47W
Sec. 22

360th St NW

T948

T947

Unnamed Stream - s-157n47w26-c
MP - 831.0
Proposed Crossing Method - Dry Crossing
Secondary Crossing Method - Wet Open Cut

Unnamed Stream - s-157n47w26-d
MP - 831.2
Proposed Crossing Method - Dry Crossing
Secondary Crossing Method - Wet Open Cut

T157 R47W
Sec. 26

300th Ave NW

831

s-157n47w26-c

s-157n47w26-d

T947A

s-157n47w27-a

w-157n47w26-c

s-157n47w26-d

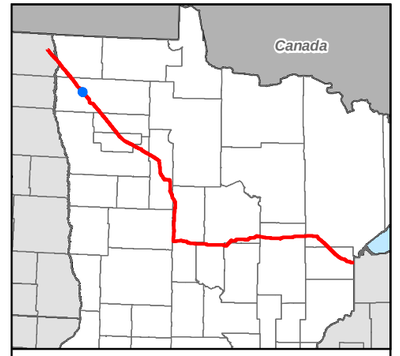
T949

T157 R47W
Sec. 27

w-157n47w27-c

s-157n47w27-b

T947A-OLL



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Detailed Route Maps

Line 3 Replacement Project

Marshall County, Minnesota

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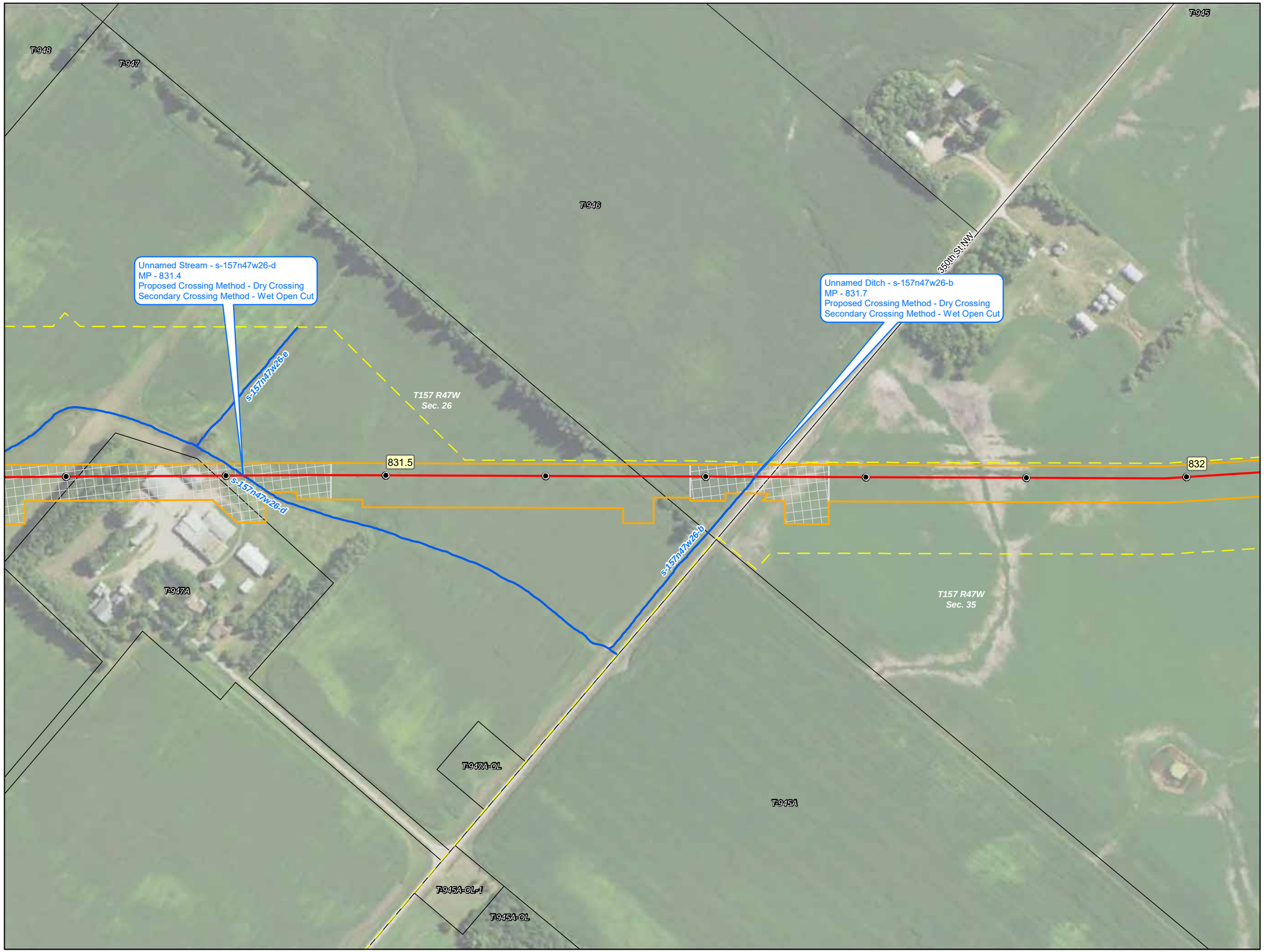

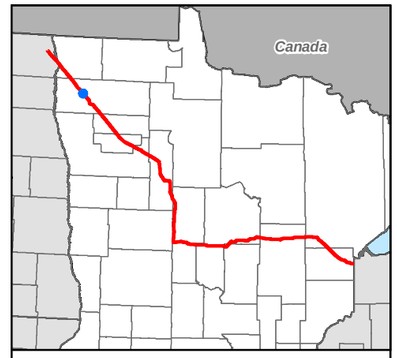

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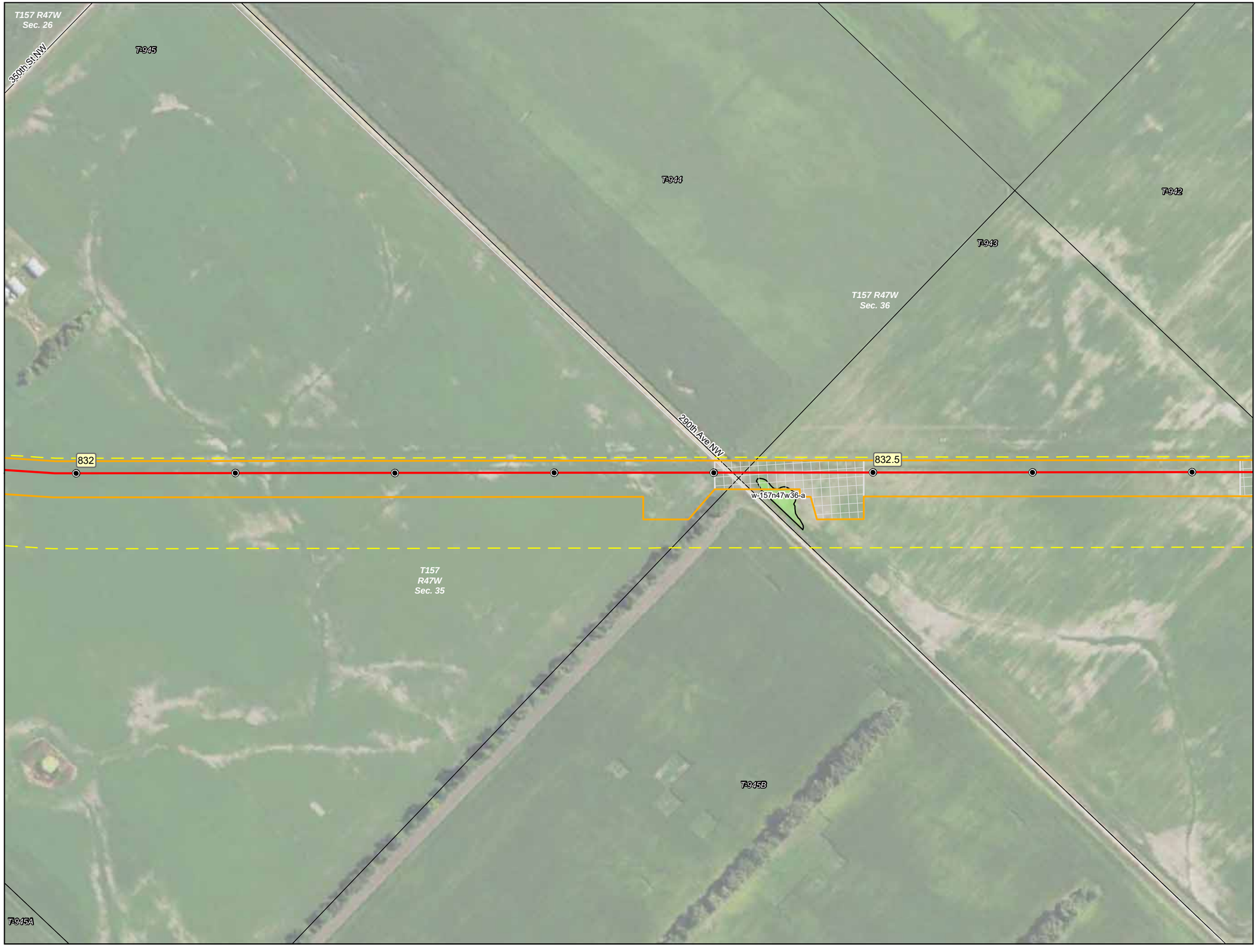
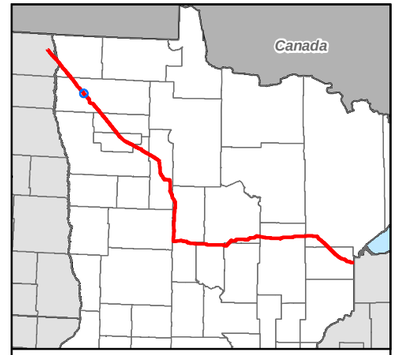
Detailed Route Maps

Line 3 Replacement Project

Marshall County, Minnesota

ENBRIDGE





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NWI Waterbodies

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Detailed Route Maps

Line 3 Replacement Project

Marshall County, Minnesota

ENBRIDGE

Source: Z:\Clients\IE_HEnbridge\Line_3_Full_Replacement\Permitting\Federal\COE\Sept_2018\RSA_22\Figures\L3_MN_COE_

Date: (9/19/2018)

T942
T941
T941-A
T156 R47W
Sec. 1
T939
280th Ave NW
Unnamed Ditch - s-157n47w36-b
MP - 832.8
Proposed Crossing Method - Dry Crossing
Secondary Crossing Method - Wet Open Cut
T157 R47W
Sec. 36
Unnamed Ditch - s-157n47w36-a
MP - 833.1
Proposed Crossing Method - Dry Crossing
Secondary Crossing Method - Wet Open Cut
833
w-157n47w36-c
w-157n47w36-b
s-157n47w36-b
s-157n47w36-a
340th St NW
T940
T156 R47W
Sec. 2
T943
290th Ave NW
T945B
T157 R47W
Sec. 35

Canada

- Milepost
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- Field Delineated Waterbody
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NWI Waterbodies

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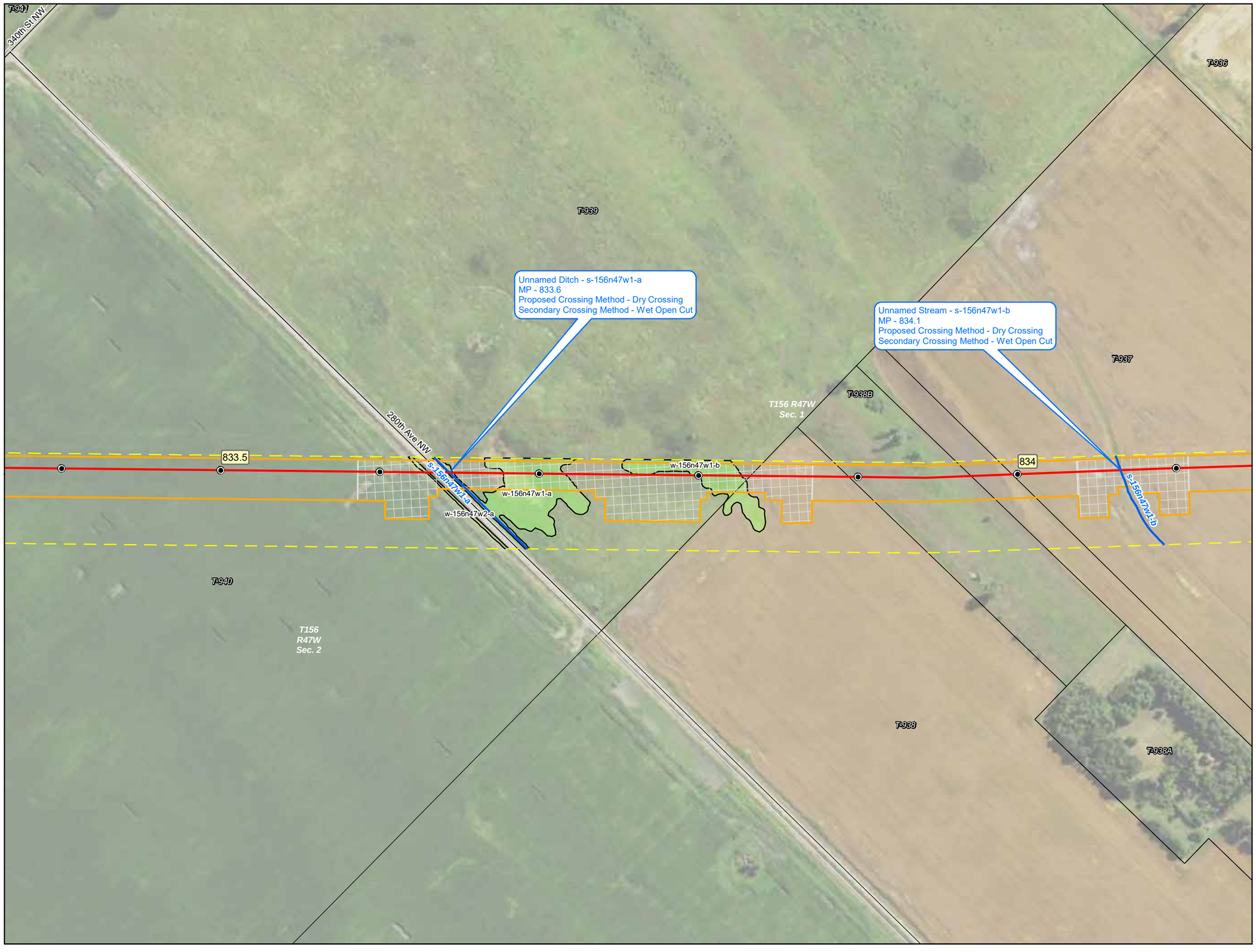
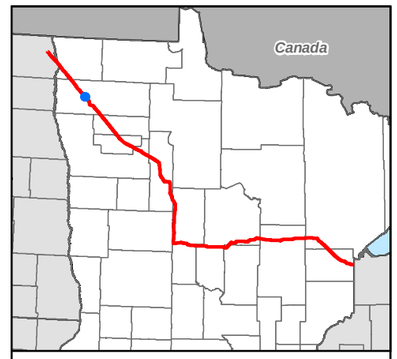
Detailed Route Maps

Line 3 Replacement Project

Marshall County, Minnesota

ENBRIDGE





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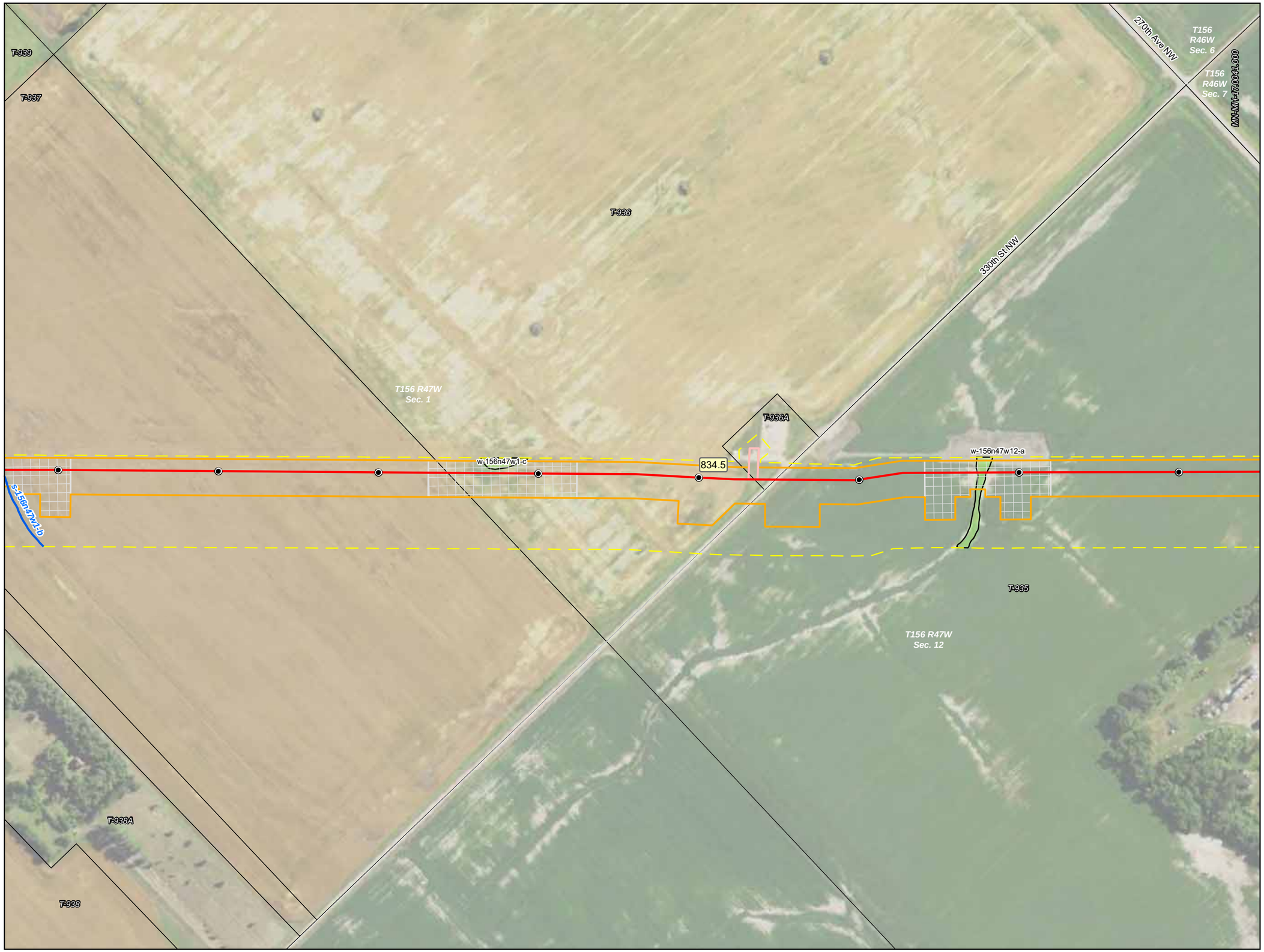
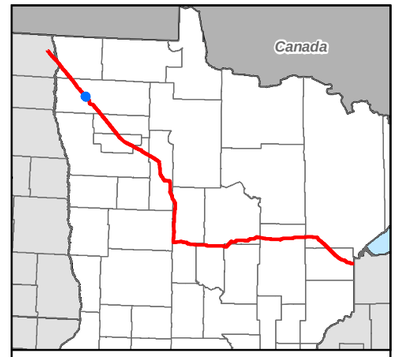
Detailed Route Maps

Line 3 Replacement Project

Marshall County, Minnesota

ENBRIDGE





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Line 3 Replacement Project

Marshall County, Minnesota

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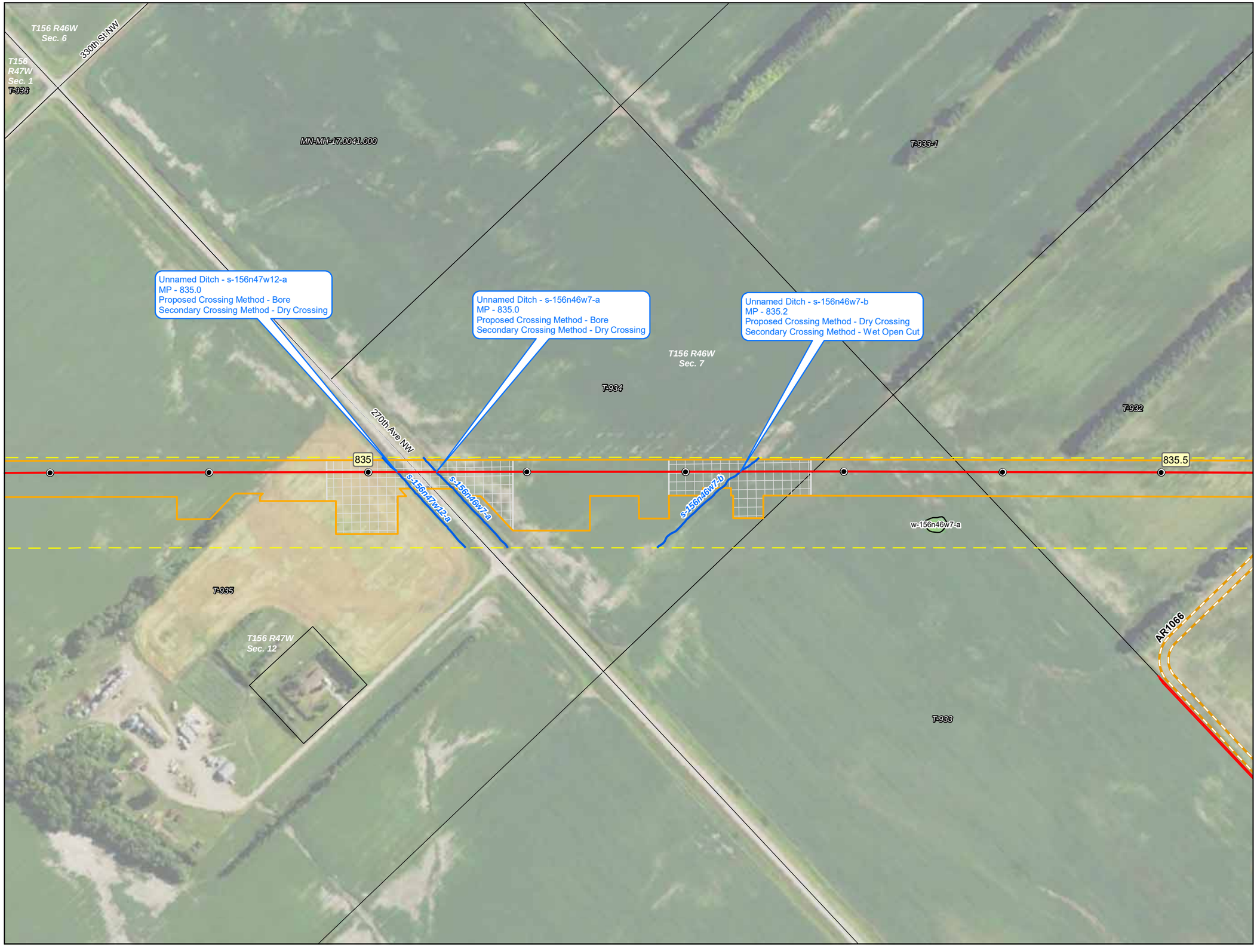

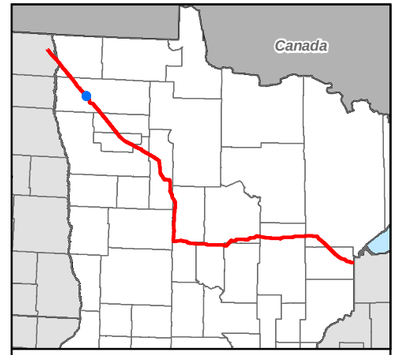

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Detailed Route Maps

Line 3 Replacement Project

Marshall County, Minnesota

ENBRIDGE

Source: Z:\Clients\LE_HiEnbridge\Line_3_Full_Replacement\Permitting\Federal\COE\Sept_2018\RSA_22\Figures\L3_MN_COE_

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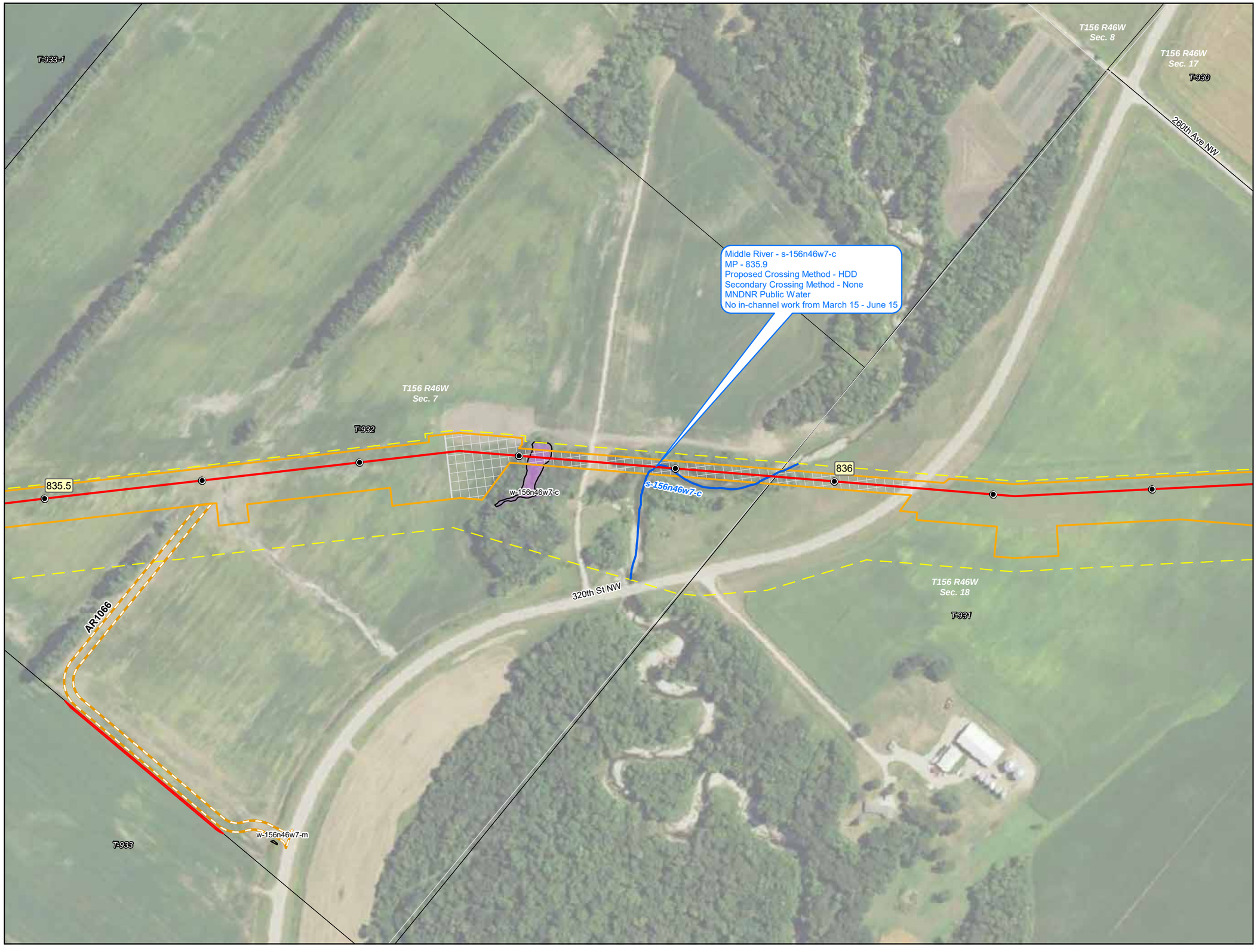

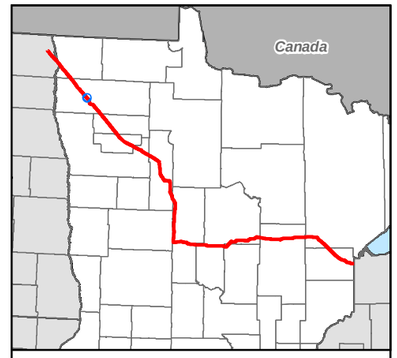

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Detailed Route Maps

Line 3 Replacement Project

Marshall County, Minnesota

ENBRIDGE

T156
R46W
Sec. 8

320th St NW

T-927

T-930

T-928

T156 R46W
Sec. 17

260th Ave NW

T-930A

836.5

w-156n46w17-a

w-156n46w17-b

w-156n46w17-d

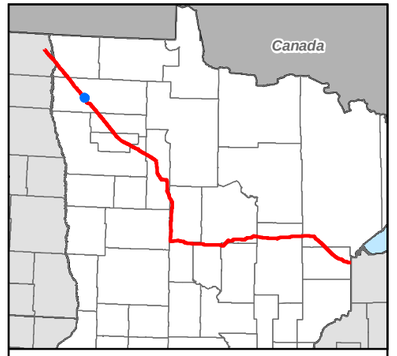
w-156n46w18-a

T-931

T156 R46W
Sec. 18

T-929

17-0093-000



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Line 3 Replacement Project

Marshall County, Minnesota

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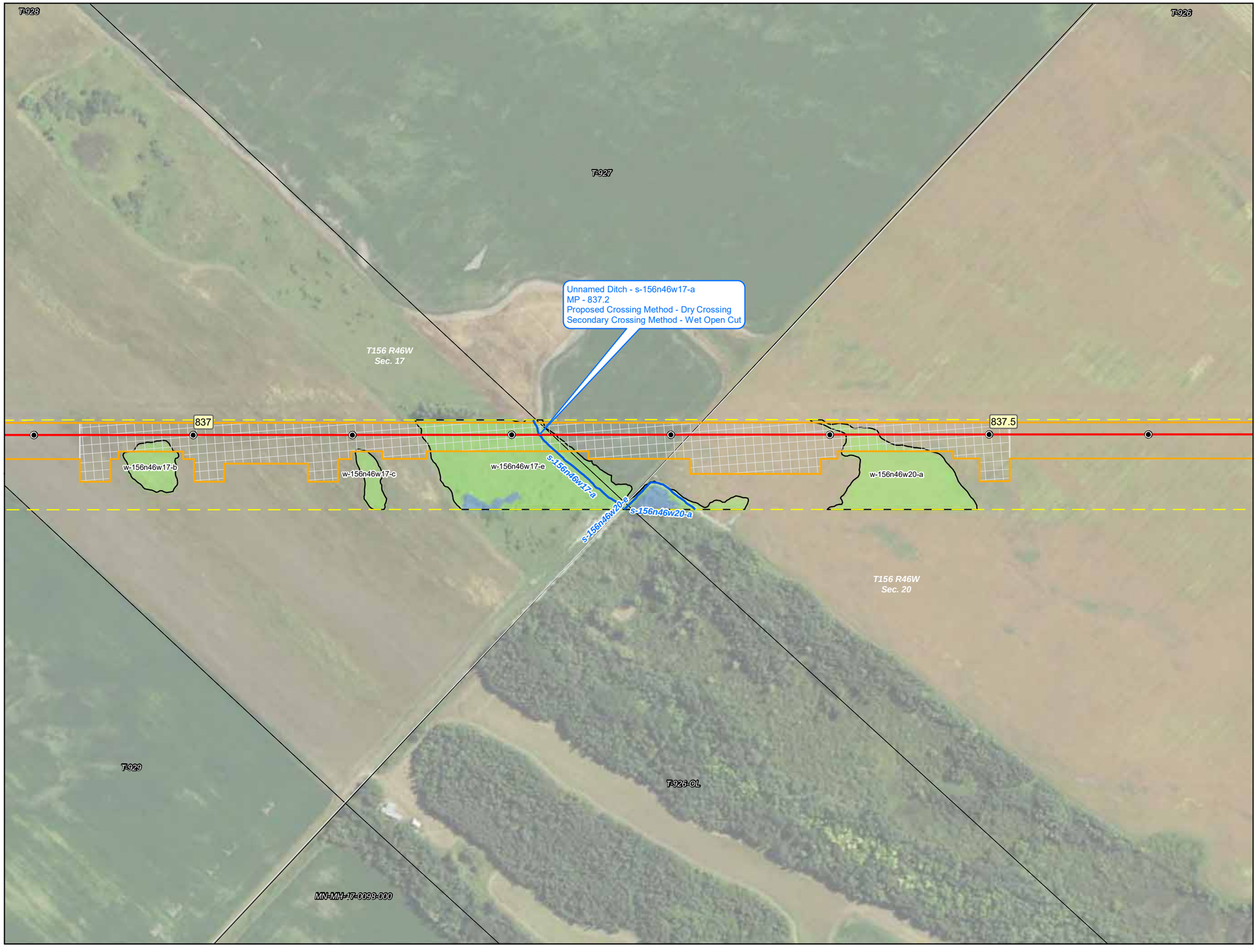

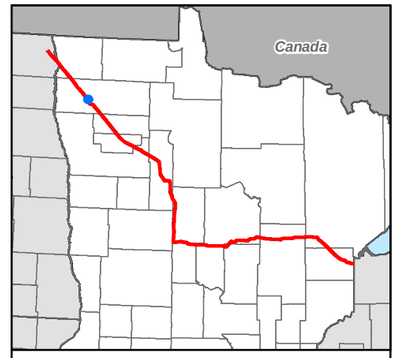

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Line 3 Replacement Project

Marshall County, Minnesota

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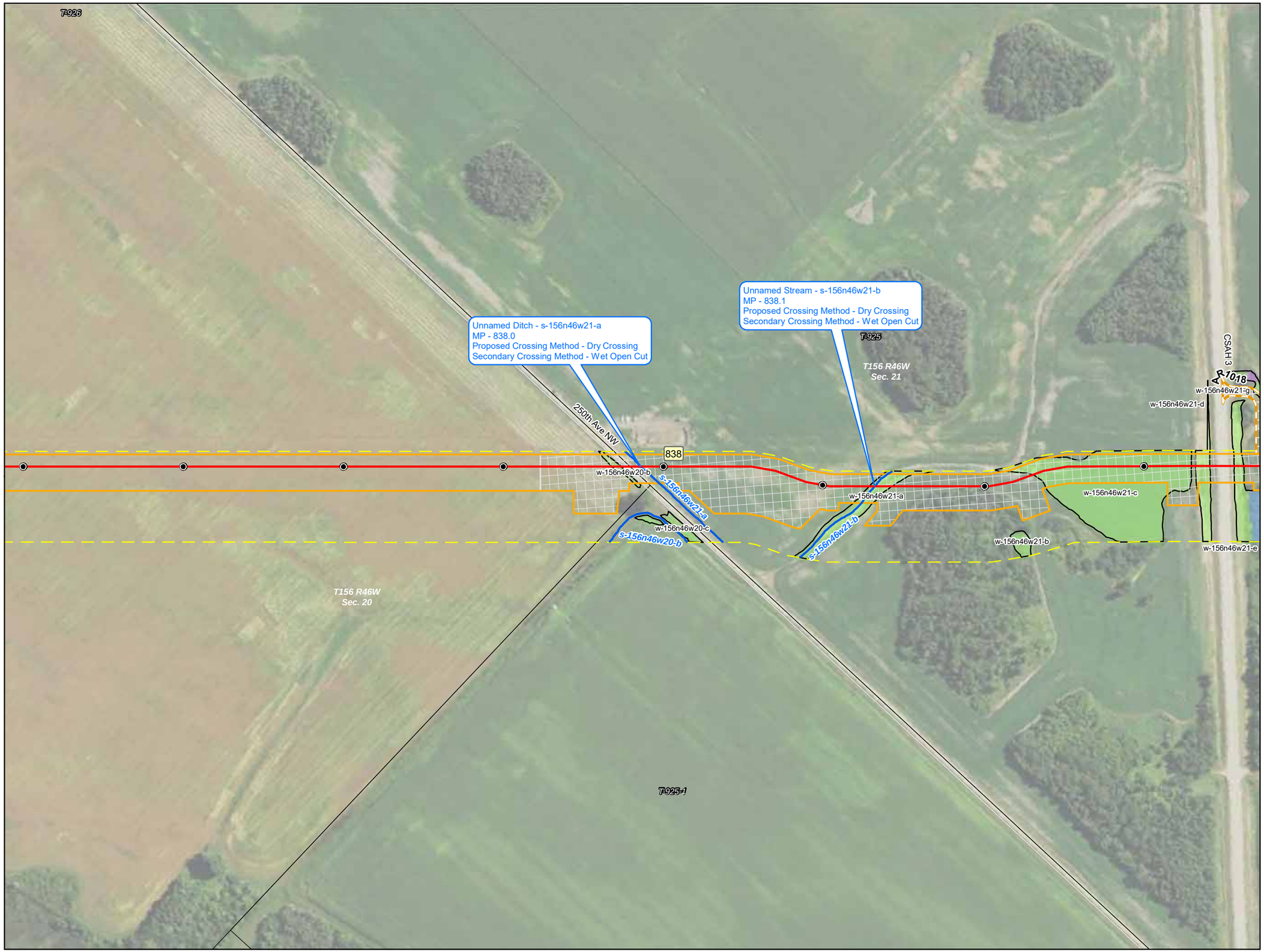

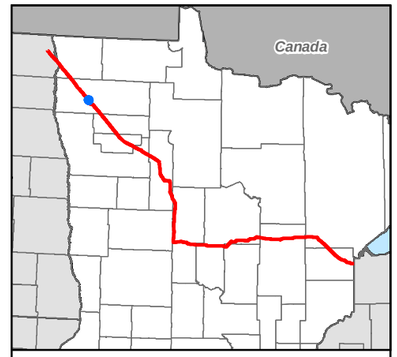

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Line 3 Replacement Project

Marshall County, Minnesota

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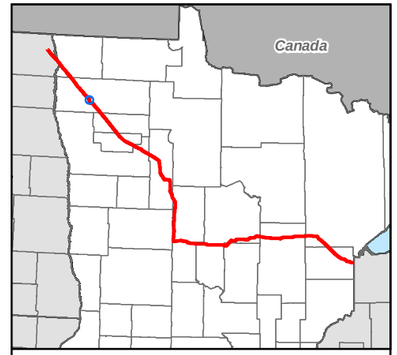

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Marshall County, Minnesota

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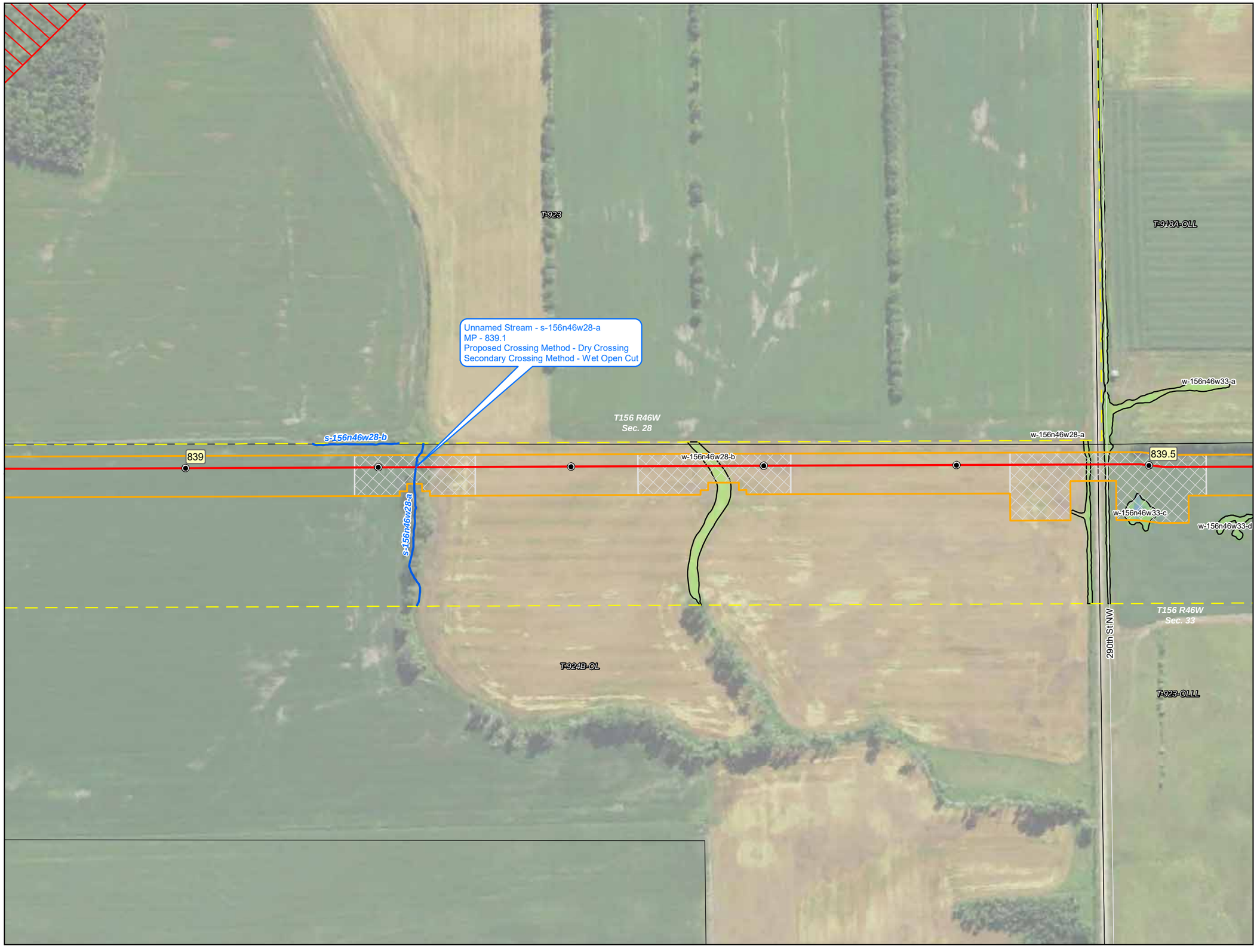

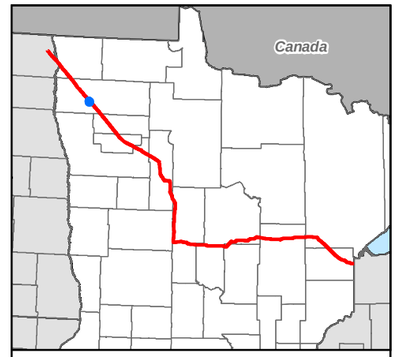

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Line 3 Replacement Project

Marshall County, Minnesota

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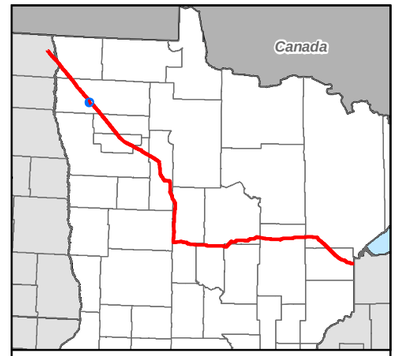

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Waterbodies

- Field Delineated Waterbody
- NHD Waterbody

NWI Waterbodies

- Lake
- Riverine

0 150 300 Feet

1 inch = 300 feet

Detailed Route Maps

Line 3 Replacement Project

Marshall County, Minnesota

ENBRIDGE

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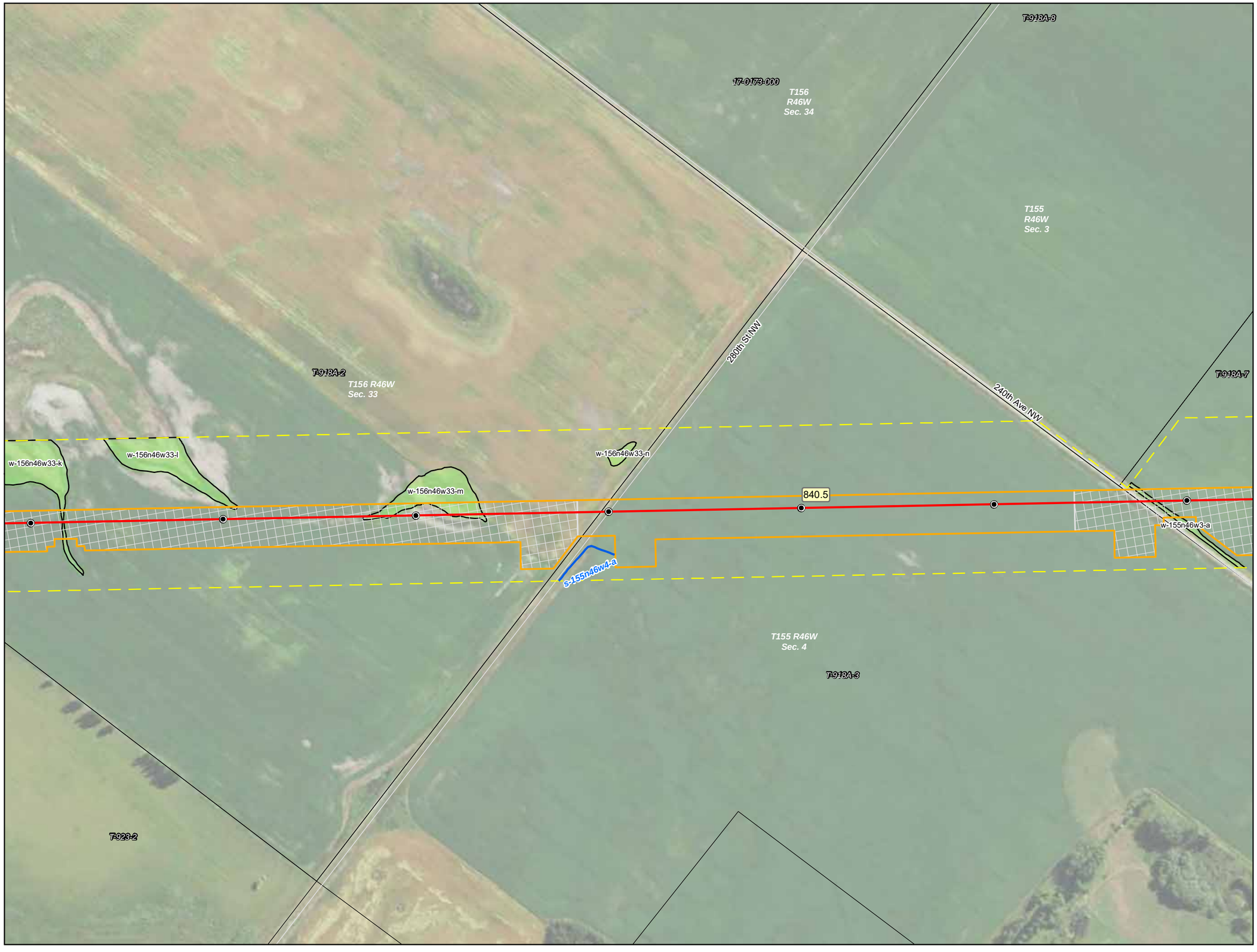

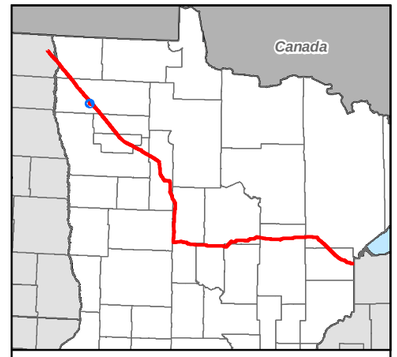

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Line 3 Replacement Project

Marshall County, Minnesota

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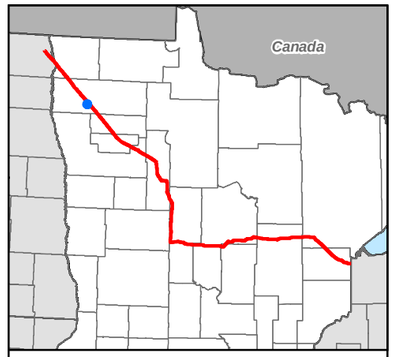

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Line 3 Replacement Project

Marshall County, Minnesota

ENBRIDGE

T-918A-3
09-0012-000
09-0012-001
T-918A-7
MN-MH-09-0014-001
230th Ave NW
T-916A-0L
T155 R46W
Sec. 3
T155 R46W
Sec. 2
841.5
w-155n46w3-d
w-155n46w2-e
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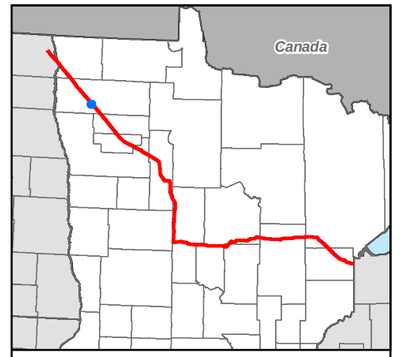
w-155n46w3-f
T-918A-5



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Line 3 Replacement Project

Marshall County, Minnesota

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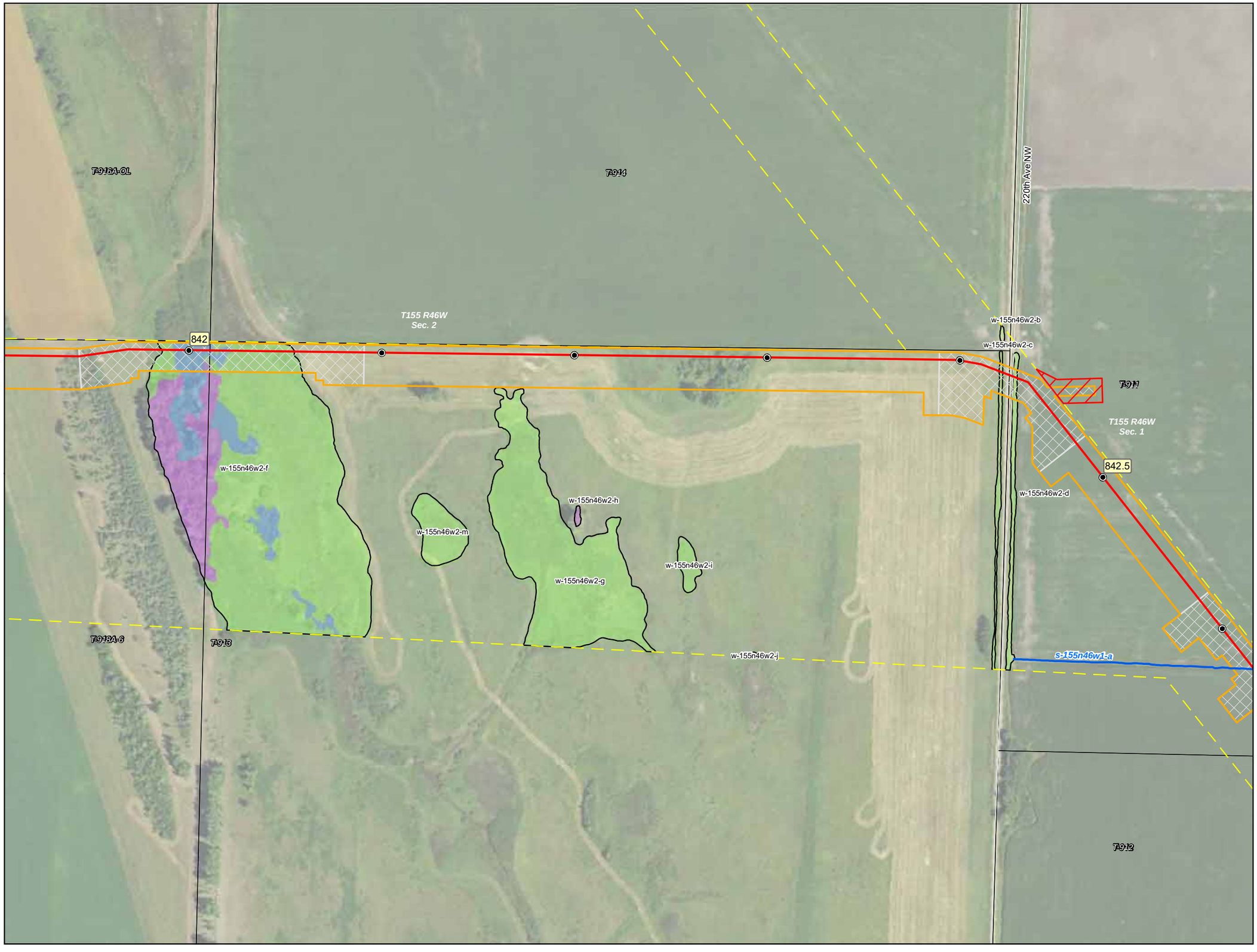

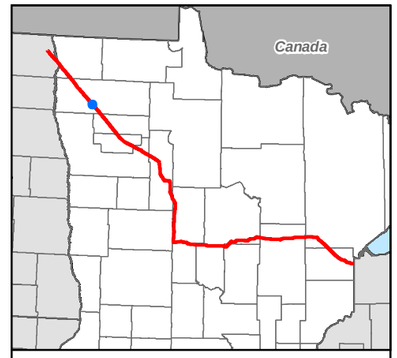

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Marshall County, Minnesota

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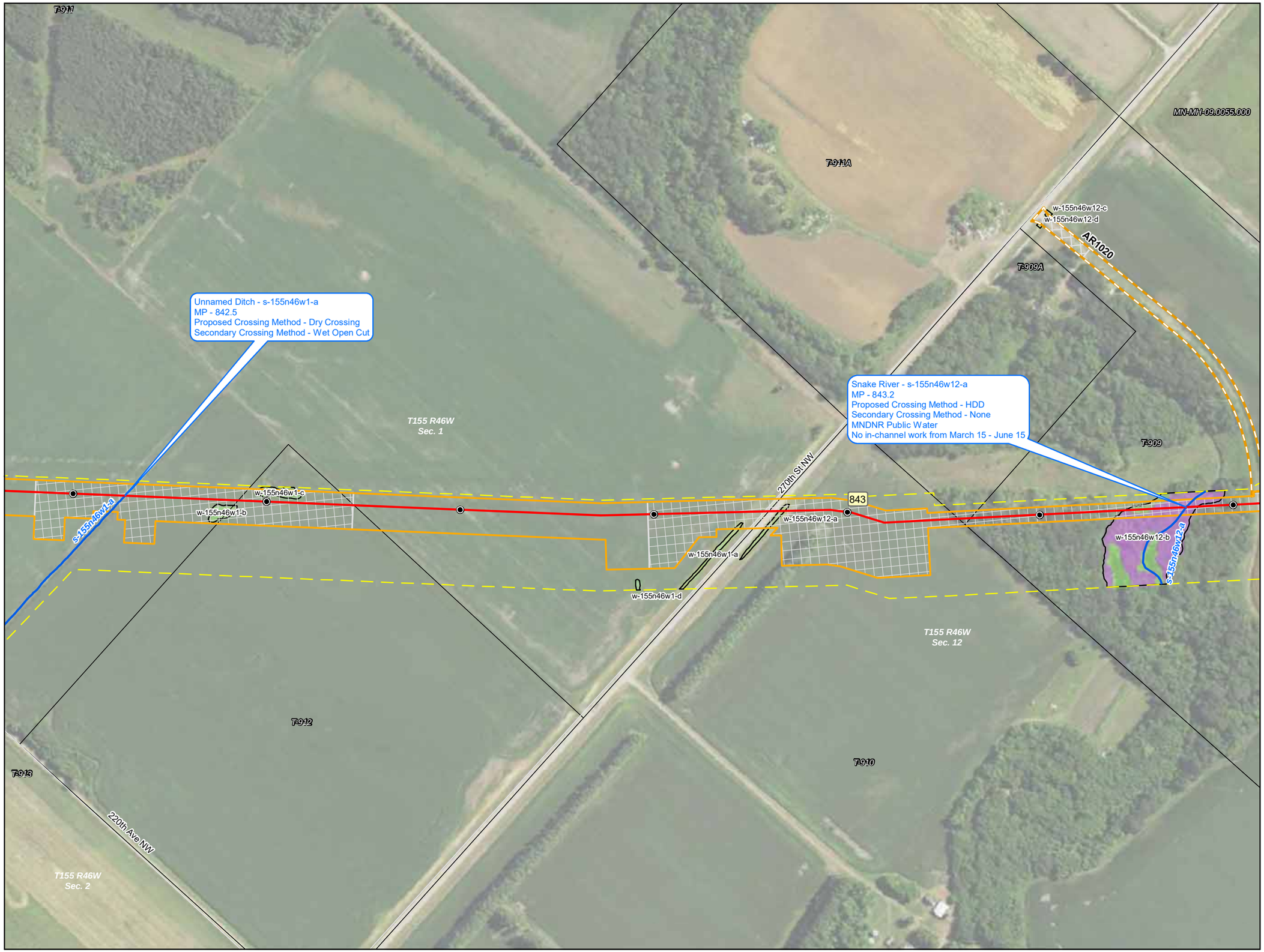

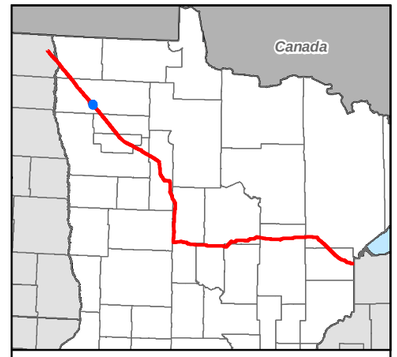

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Line 3 Replacement Project

Marshall County, Minnesota

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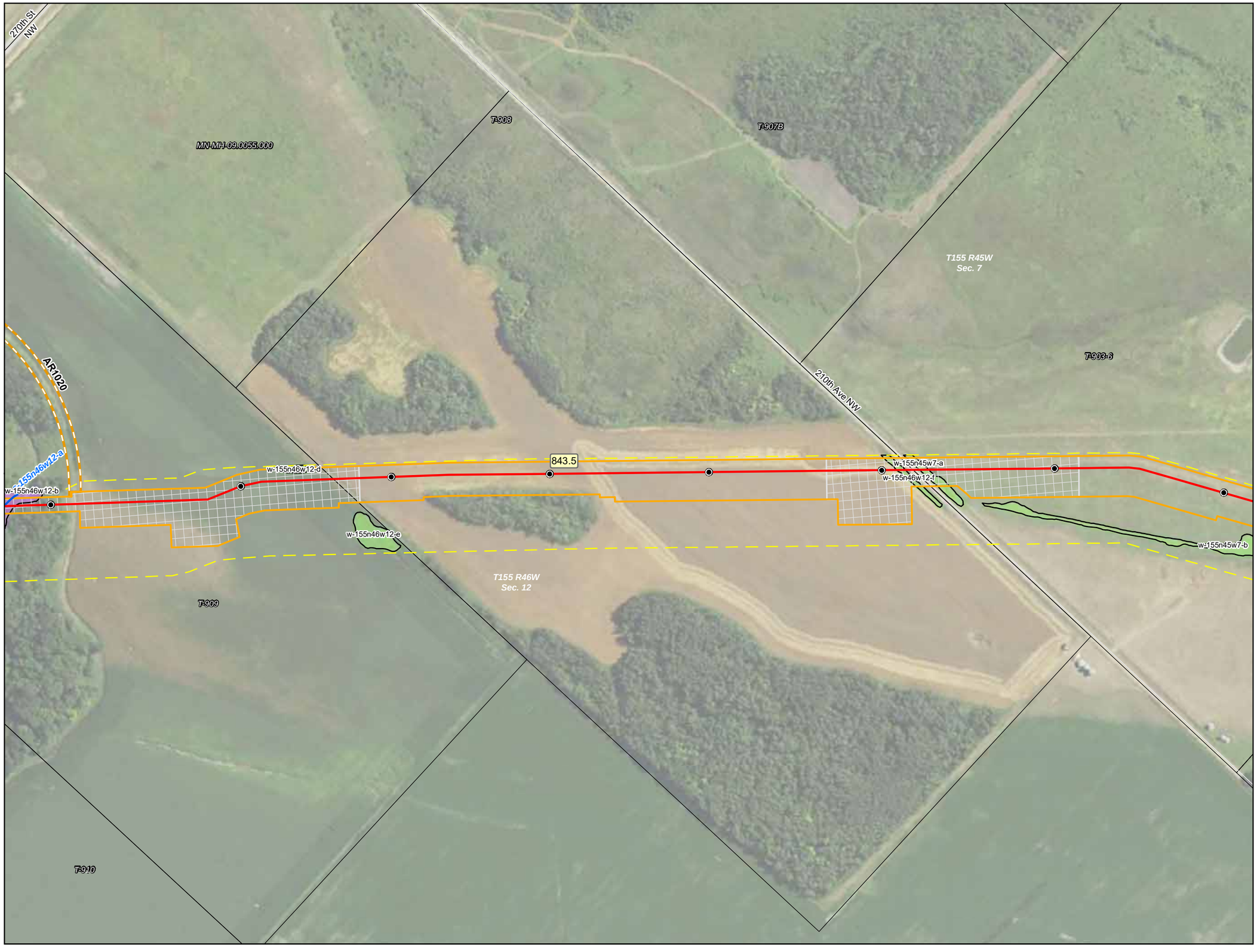

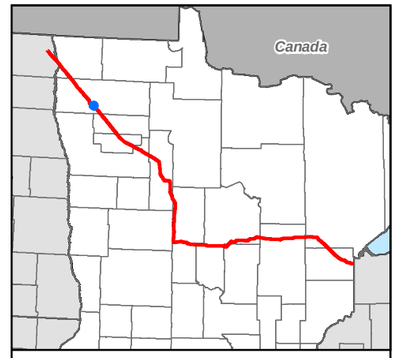

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Line 3 Replacement Project

Marshall County, Minnesota

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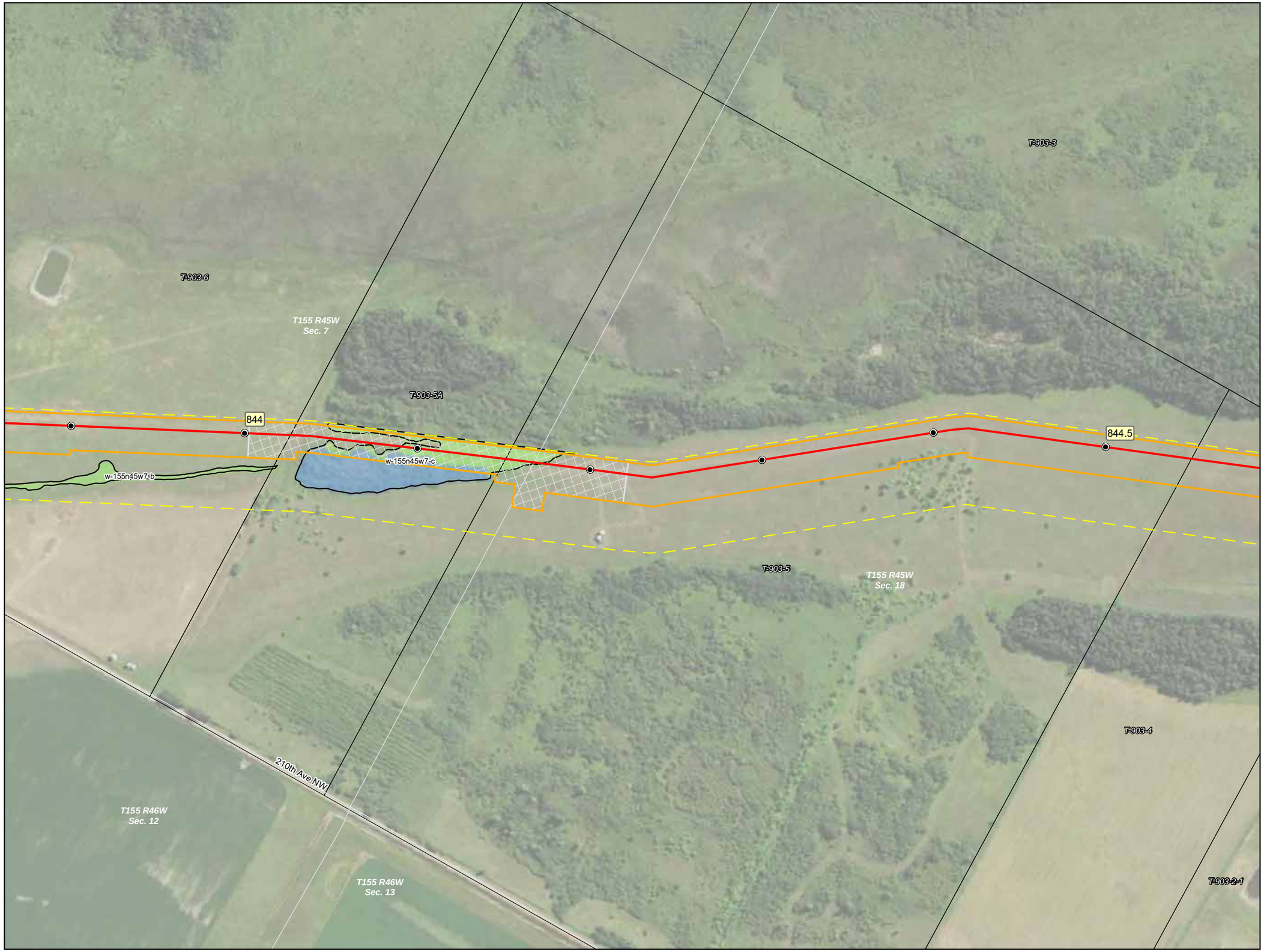

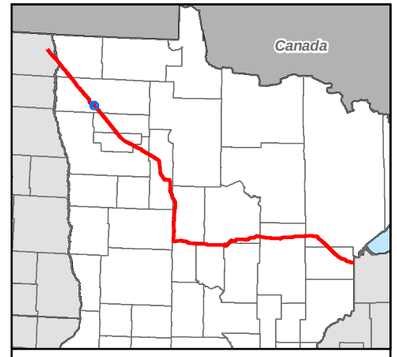

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Line 3 Replacement Project

Marshall County, Minnesota

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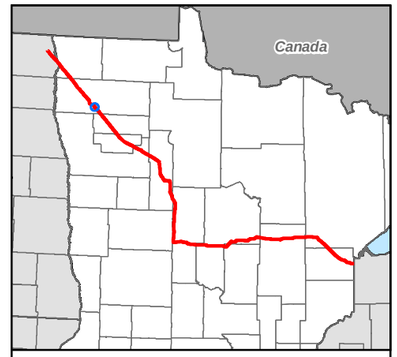

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Marshall County, Minnesota

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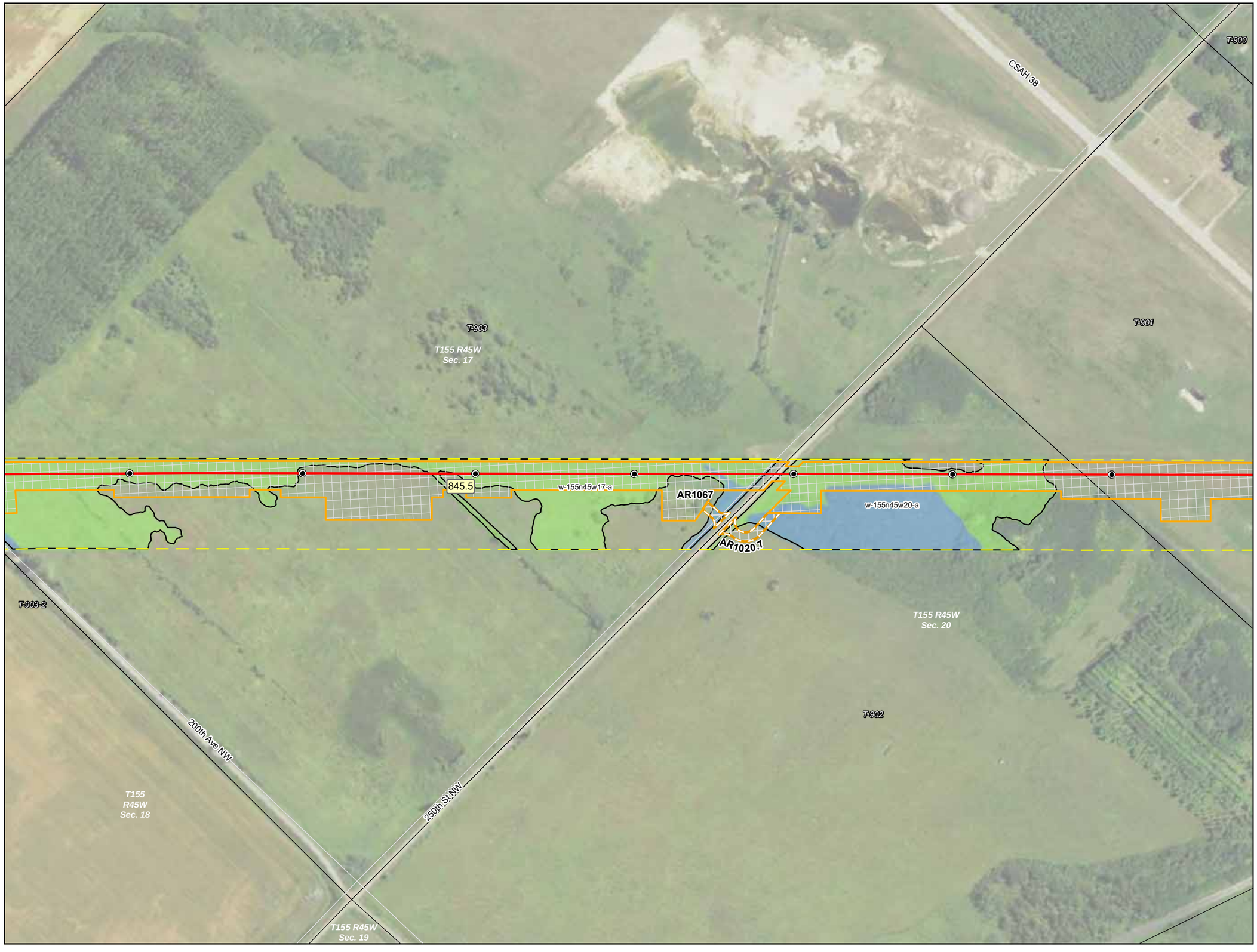

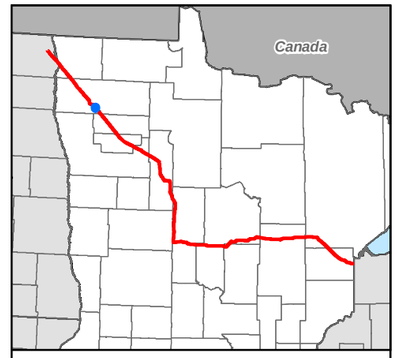

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Detailed Route Maps

Line 3 Replacement Project

Marshall County, Minnesota

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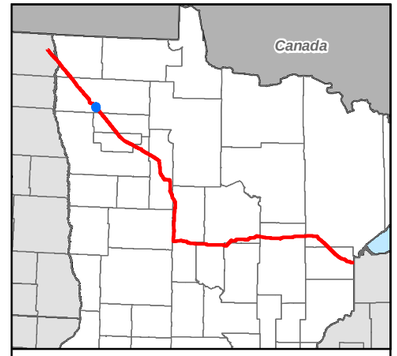

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Line 3 Replacement Project

Marshall County, Minnesota

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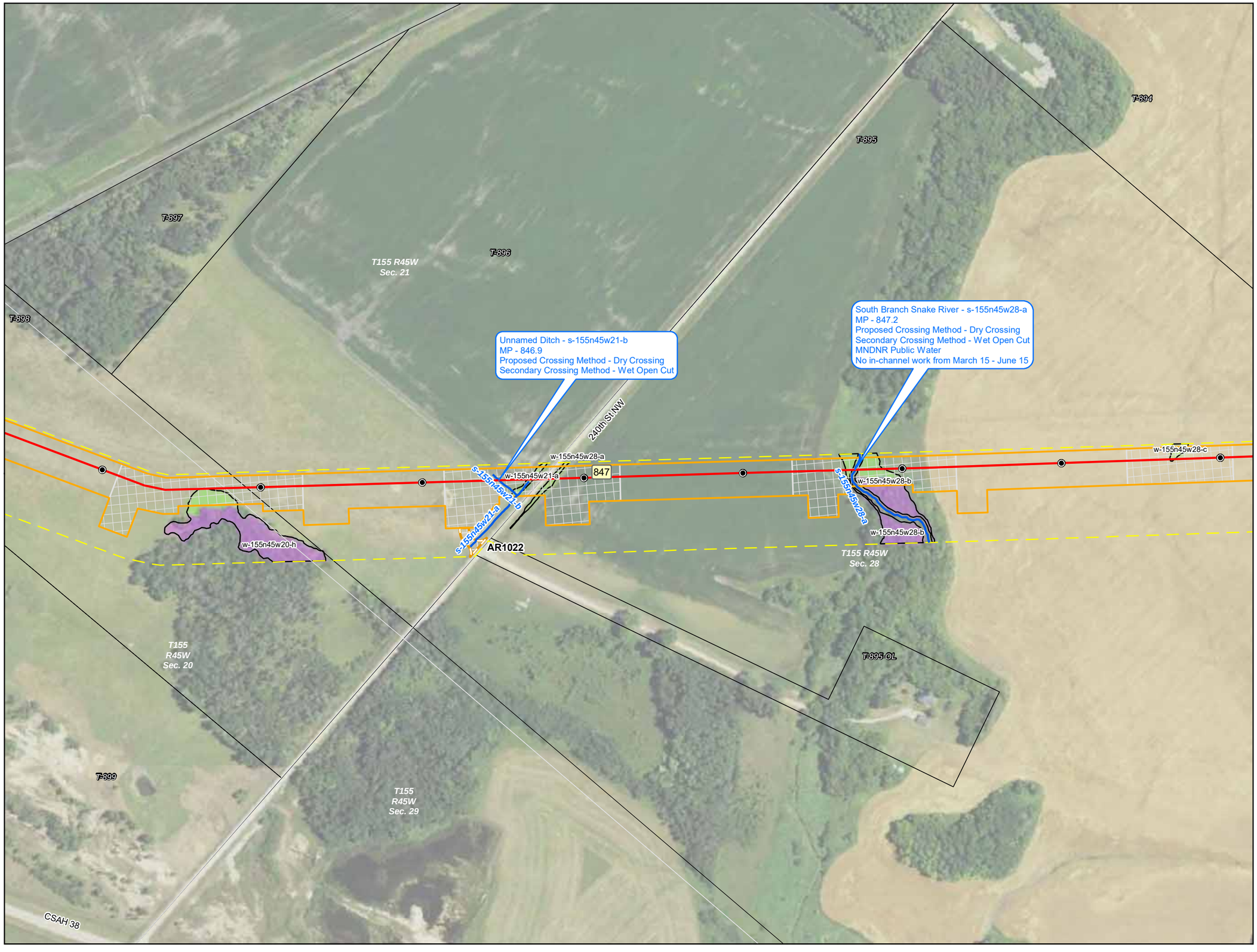

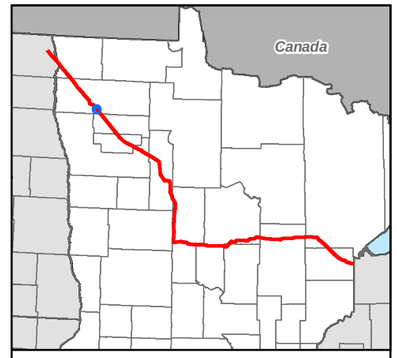

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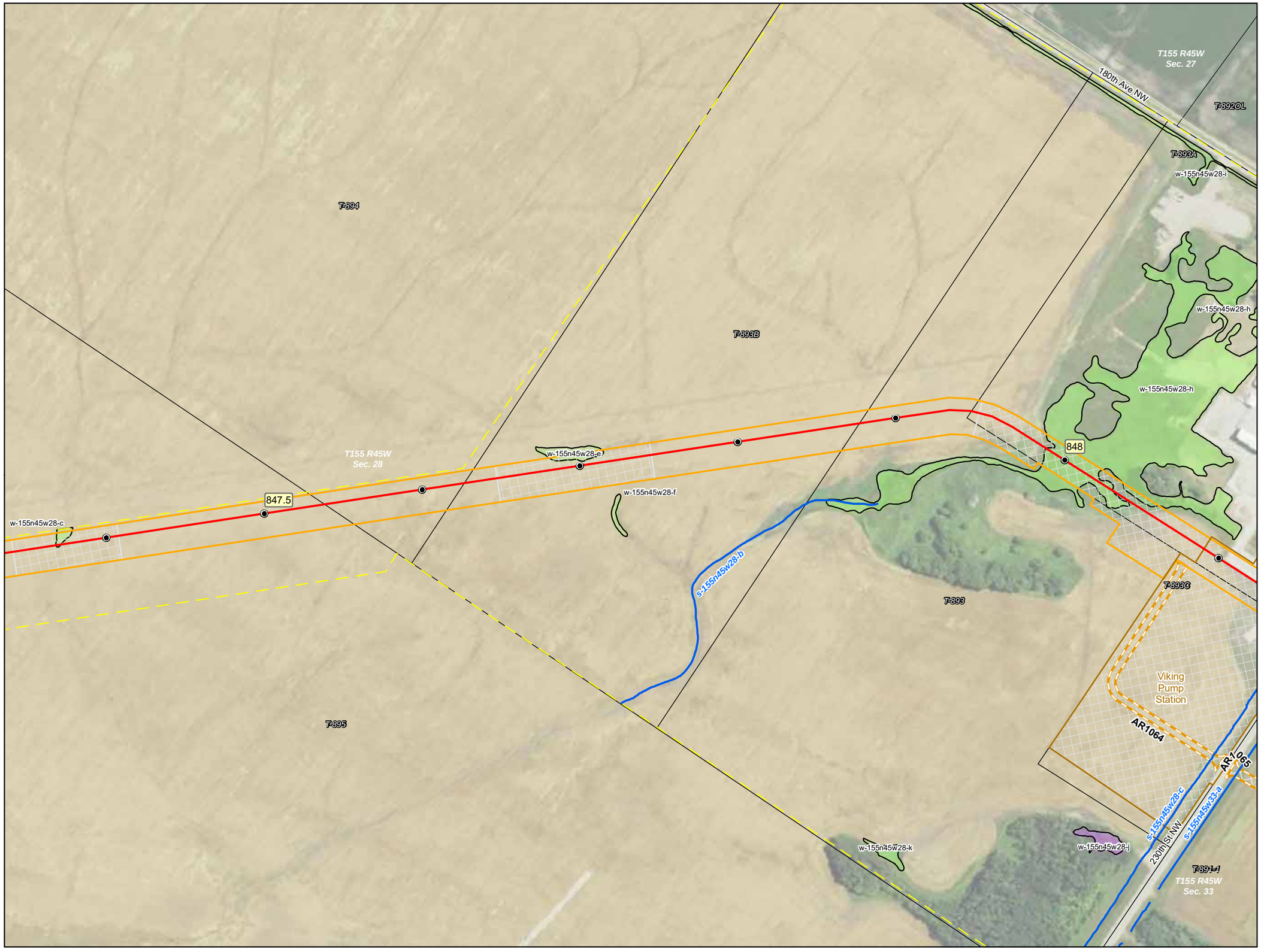

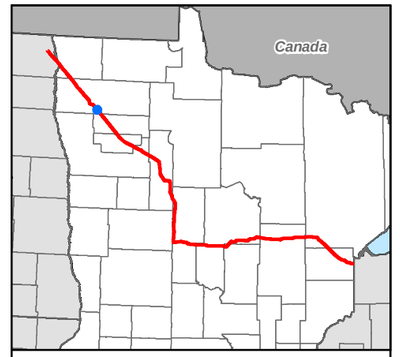

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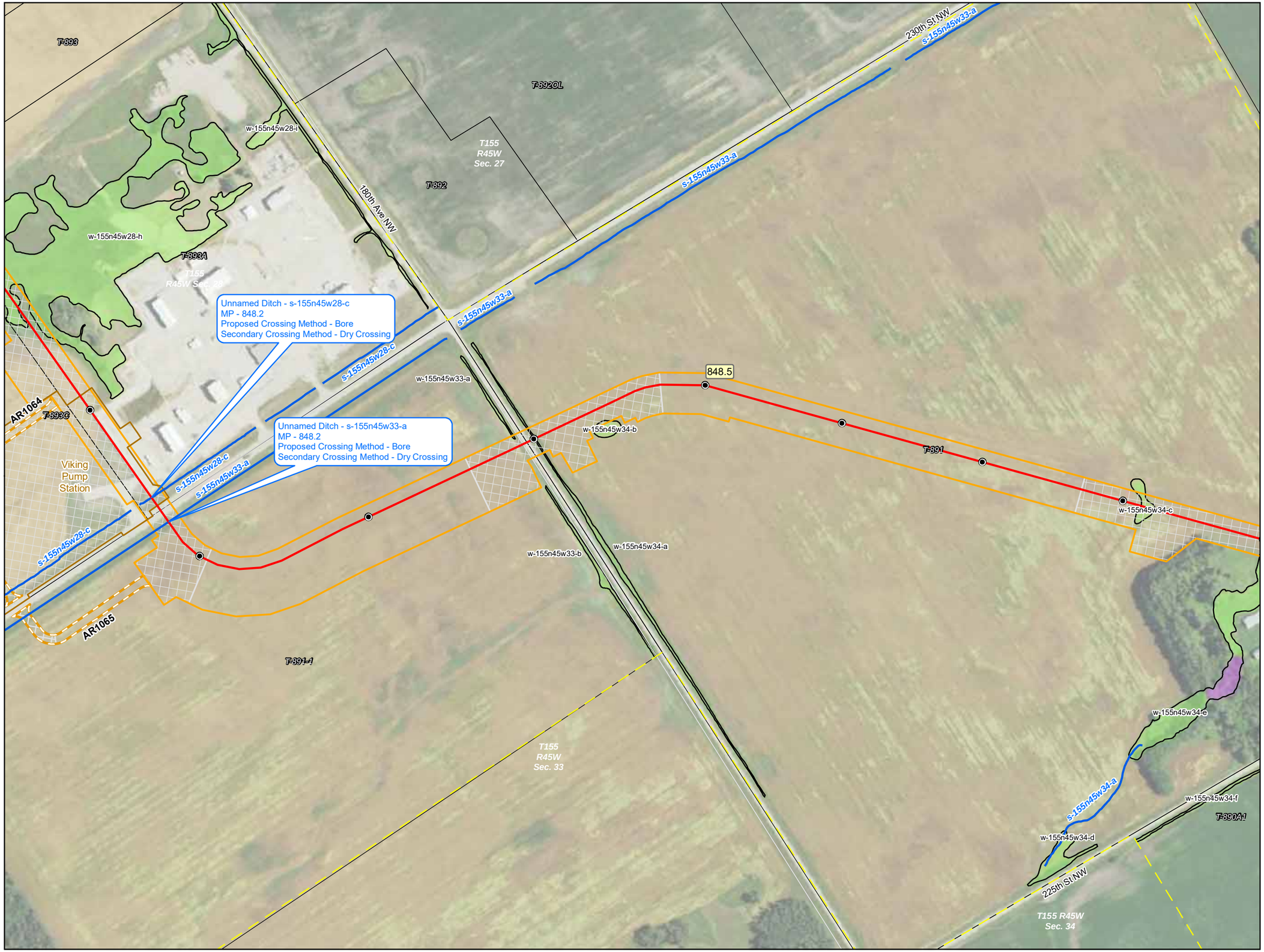

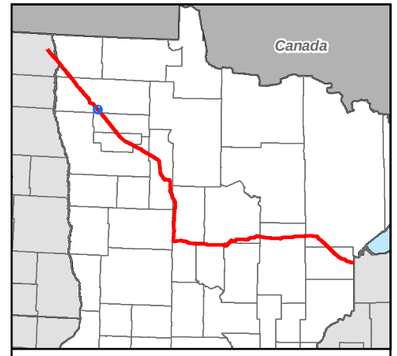

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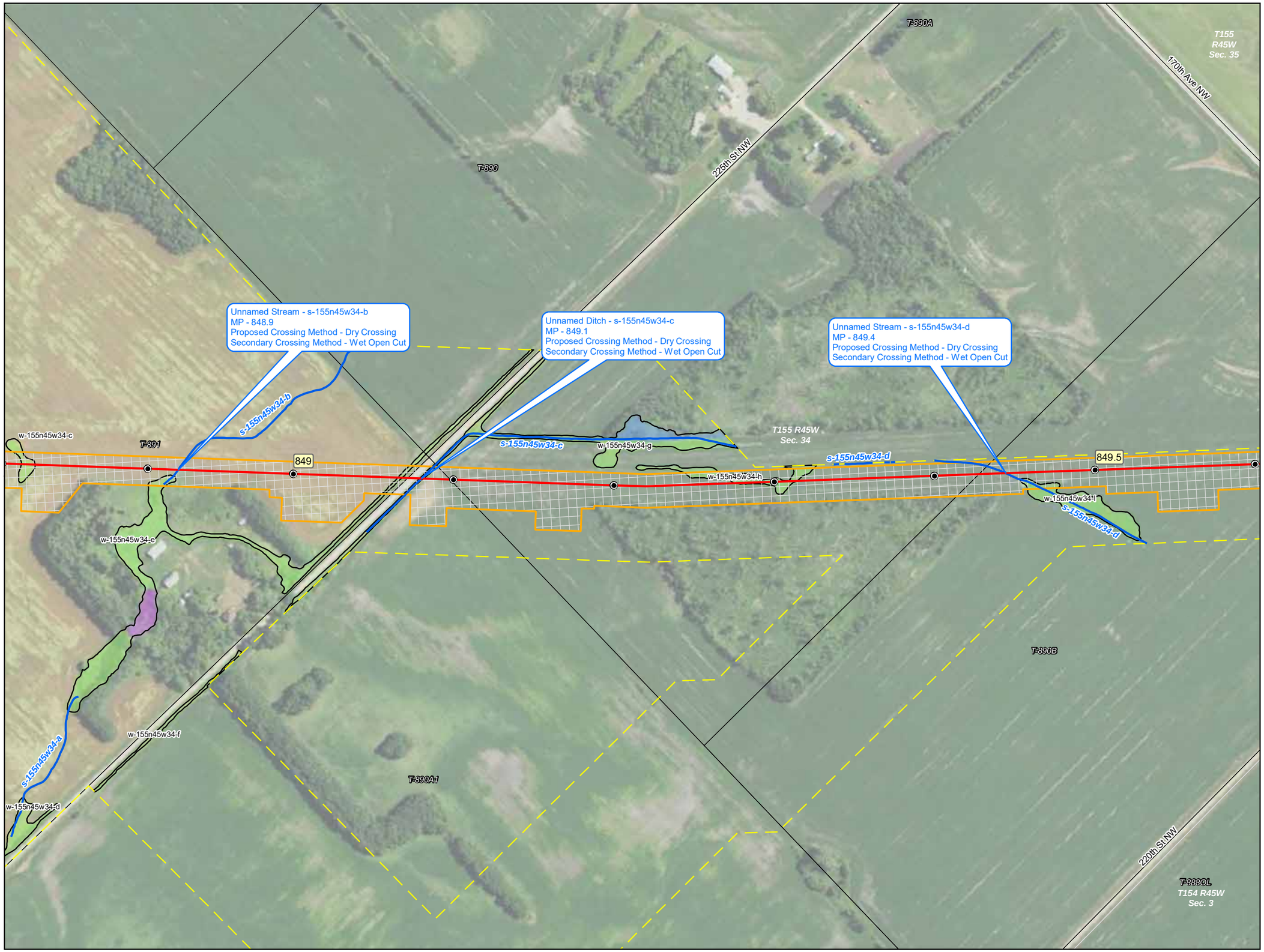

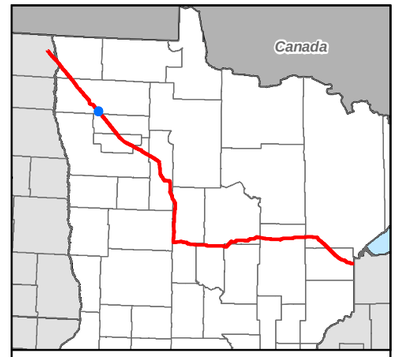

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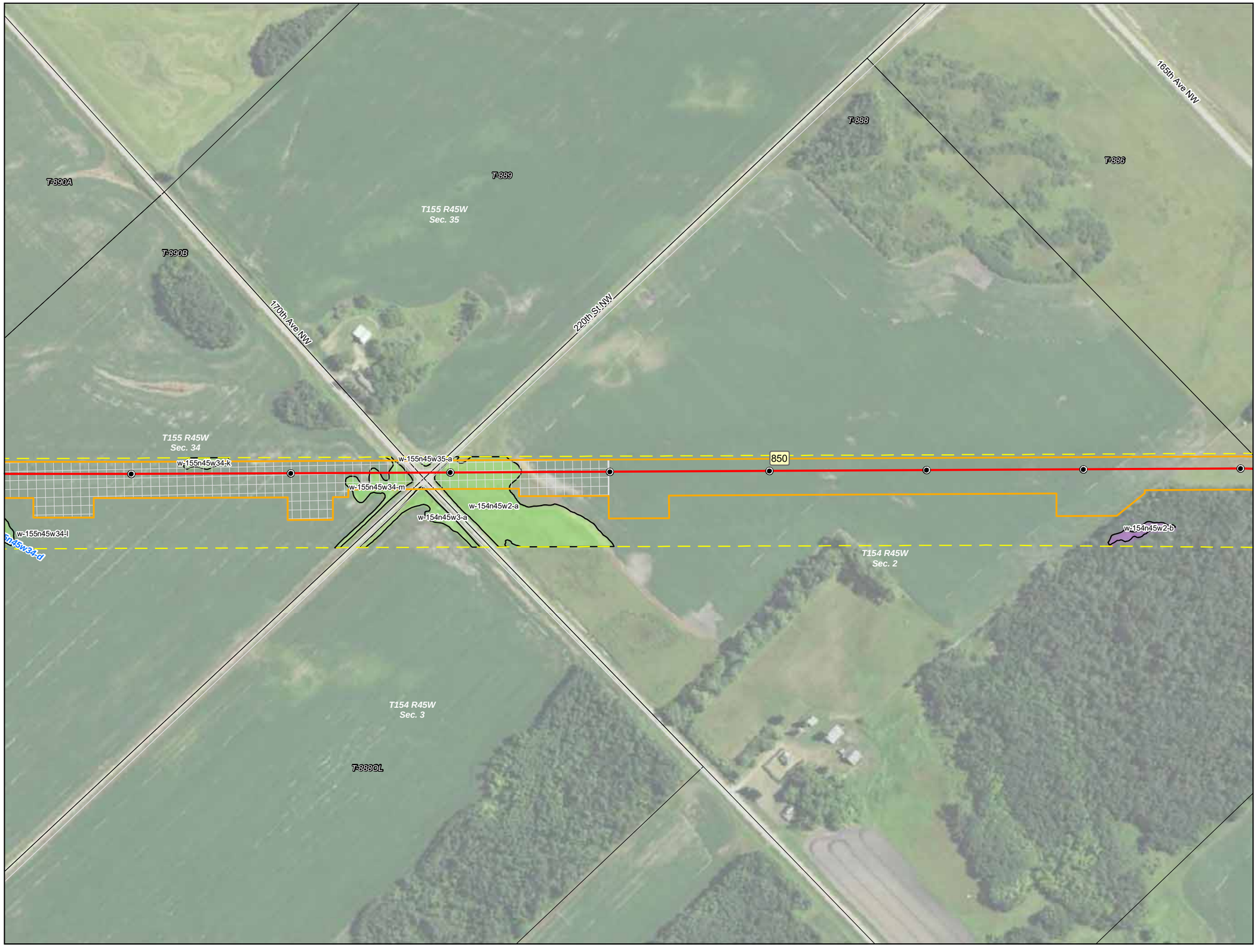

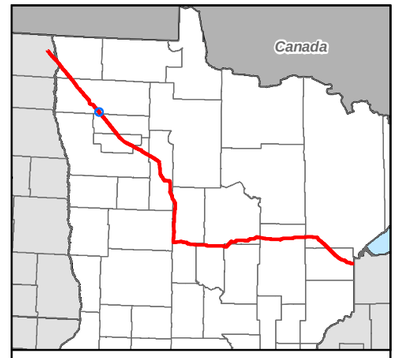

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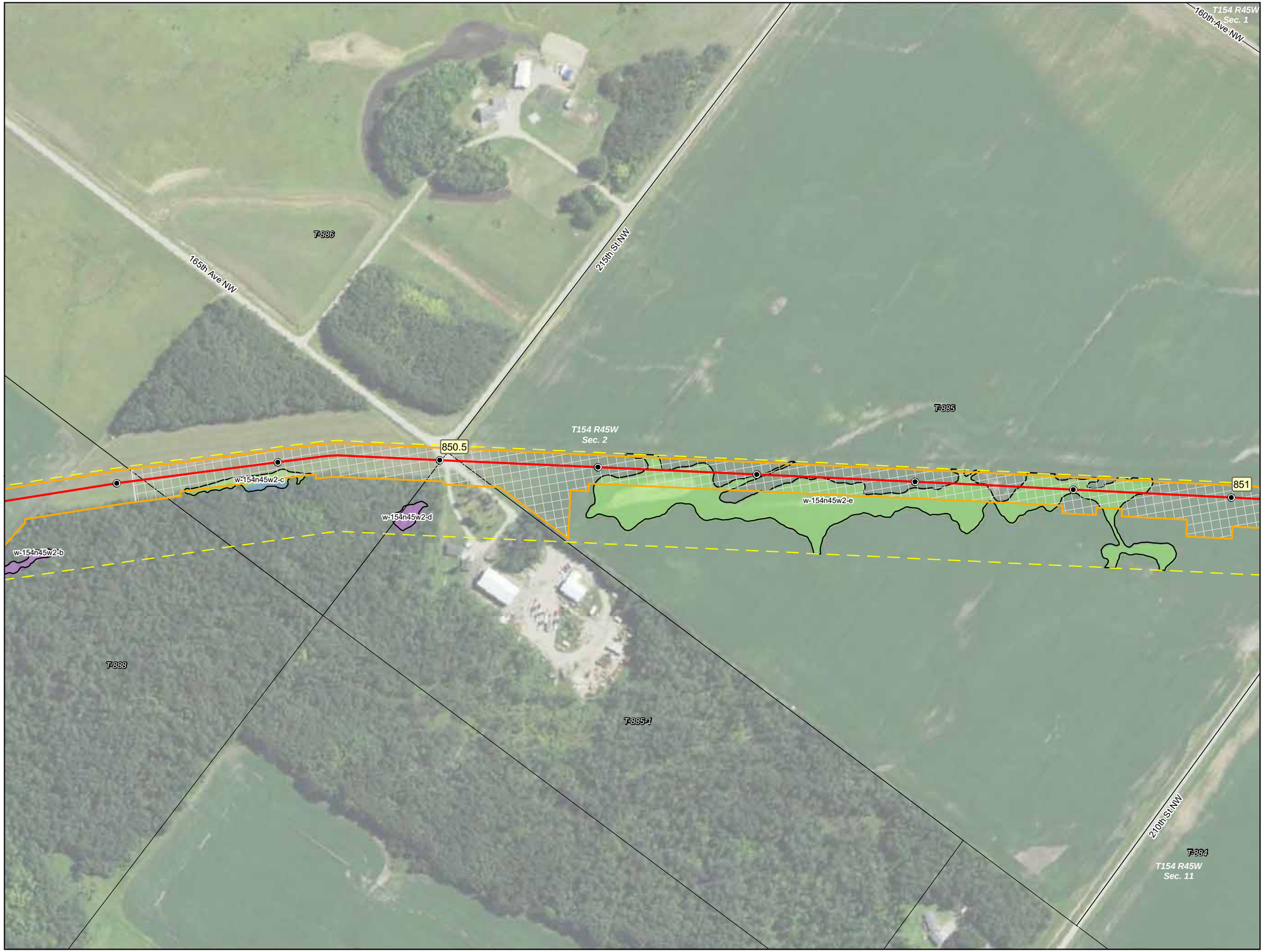

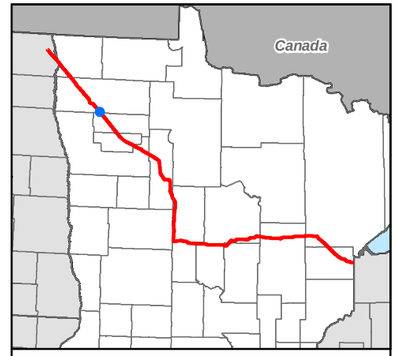

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Line 3 Replacement Project

Marshall County, Minnesota

ENBRIDGE

T154 R45W Sec. 1

T-883

T154 R45W Sec. 2

T154 R45W Sec. 12

T-882

T-885

210th St NW

160th Ave NW

Unnamed Ditch - s-154n45w2-a
MP - 851.1
Proposed Crossing Method - Bore
Secondary Crossing Method - Dry Crossing

Unnamed Ditch - s-154n45w11-b
MP - 851.1
Proposed Crossing Method - Bore
Secondary Crossing Method - Dry Crossing

Unnamed Ditch - s-154n45w11-a
MP - 851.4
Proposed Crossing Method - Dry Crossing
Secondary Crossing Method - Wet Open Cut

851

851.5

w-154n45w11-a

w-154n45w12-d

s-154n45w2-a

s-154n45w11-b

s-154n45w11-a

w-154n45w2-e

w-154n45w11-b

w-154n45w11-c

T154 R45W Sec. 11

T-884

T-881

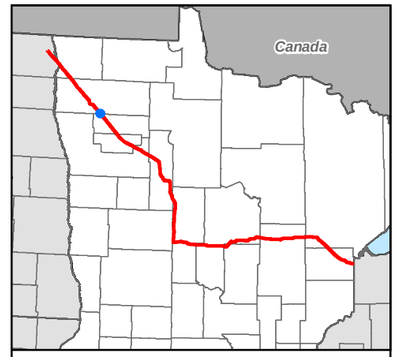
T154 R45W Sec. 12

T-882-1

T154 R45W Sec. 11

Marshall County

Pennington County



- Milepost
- Line 3 Centerline
- Construction Workspace
- Access Road
- COE Permit Area
- Survey Corridor
- Field Survey Partially or Not Complete
- Parcel Boundary
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- Section Boundary
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Environmental Field Data

Wetlands

Field Delineated Wetland	NWI Wetlands
PEM	PEM
PFO	PFO
PSS	PSS
PUB	PUB

Waterbodies

- Field Delineated Waterbody
- NHD Waterbody

NWI Waterbodies

- Lake
- Riverine

0 150 300 Feet

1 inch = 300 feet

Detailed Route Maps

Line 3 Replacement Project

Marshall and Pennington Counties, Minnesota

ENBRIDGE

Source: Z:\Clients\Enbridge_HT\Enbridge\Line_3_Full_Replacement\Permitting\Federal\COE\Sept_2018\RSA_22\Figures\L3_MN_COE_Alignment_Sheets_RSA22.mxd

Date: (9/19/2018)

T-382

T154 R45W
Sec. 12

T-381

T-381A

Marshall County
Pennington County

T154 R45W
Sec. 12

w-154n45w12-c

852

w-154n45w12-d

w-154n45w12-a

w-154n45w12-b

w-154n45w12-e

w-154n45w13-b

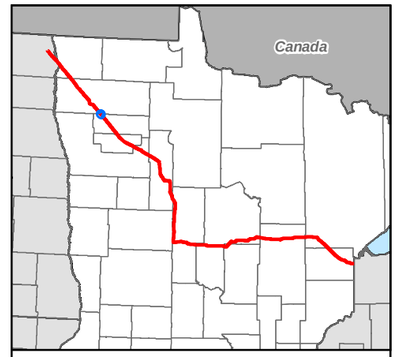
T-380

200th St NW

160th Ave NW

T154
R45W
Sec. 11

T154 R45W
Sec. 13



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Line 3 Replacement Project

Marshall and Pennington Counties, Minnesota

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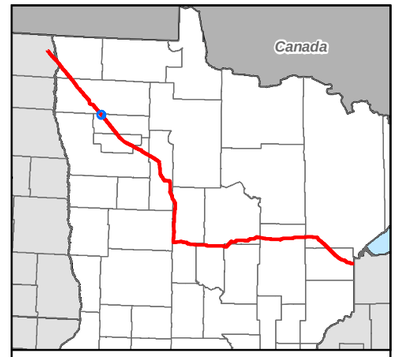
Date: (9/19/2018)

T-381A
T154 R44W Sec. 7
T-379
147th Ave NW
T-379A-OL
T-380
T154 R45W Sec. 12
T154 R44W Sec. 18
T-379A
200th St NW
Unnamed Ditch - s-154n44w18-a
MP - 852.9
Proposed Crossing Method - Dry Crossing
Secondary Crossing Method - Wet Open Cut
60th St SW
w-154n44w18-a
s-154n44w18-a
w-154n44w18-i
w-154n45w13-a
852.5
853
w-154n45w12-e
w-154n45w13-b
w-154n45w13-c
T154 R45W Sec. 13
T-373
T-380-1



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Detailed Route Maps

Line 3 Replacement Project

Pennington County, Minnesota

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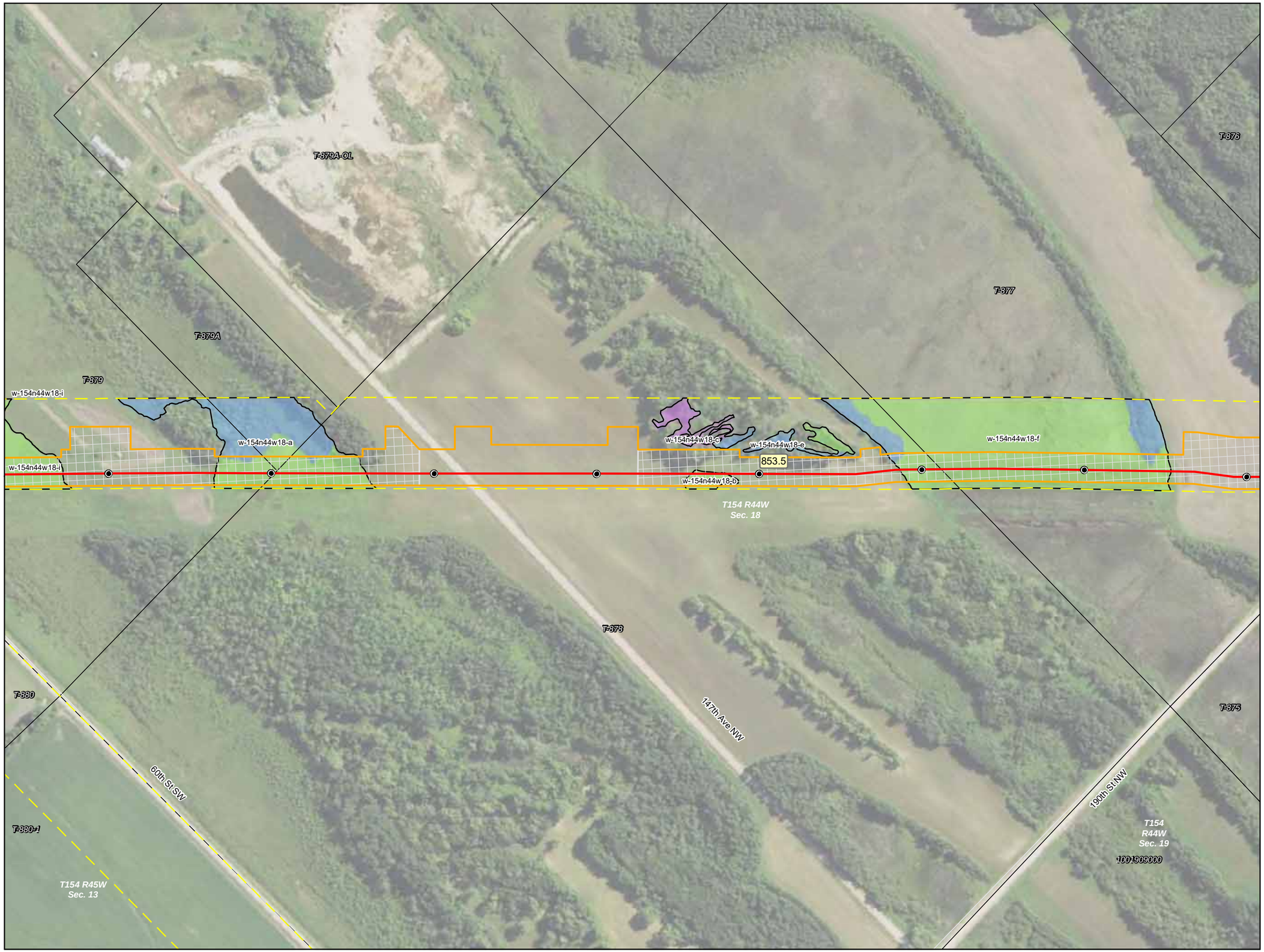

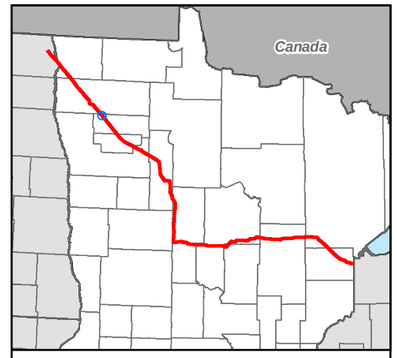

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Pennington County, Minnesota

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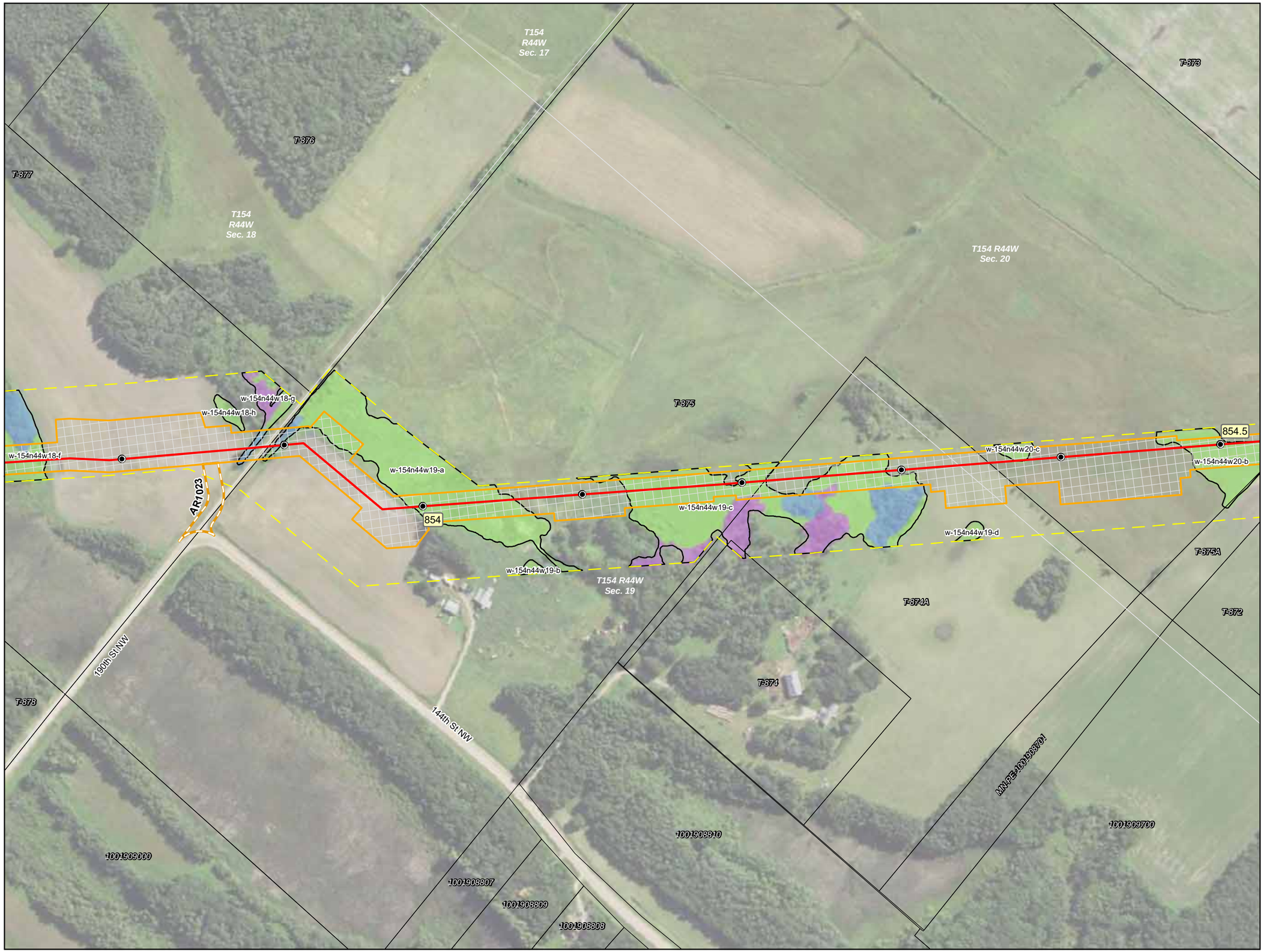

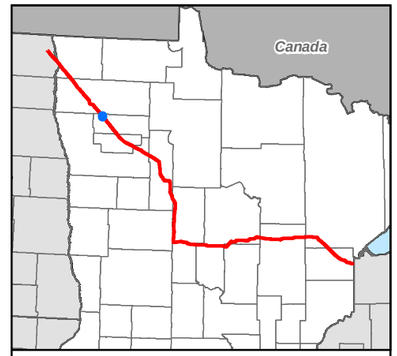

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Pennington County, Minnesota

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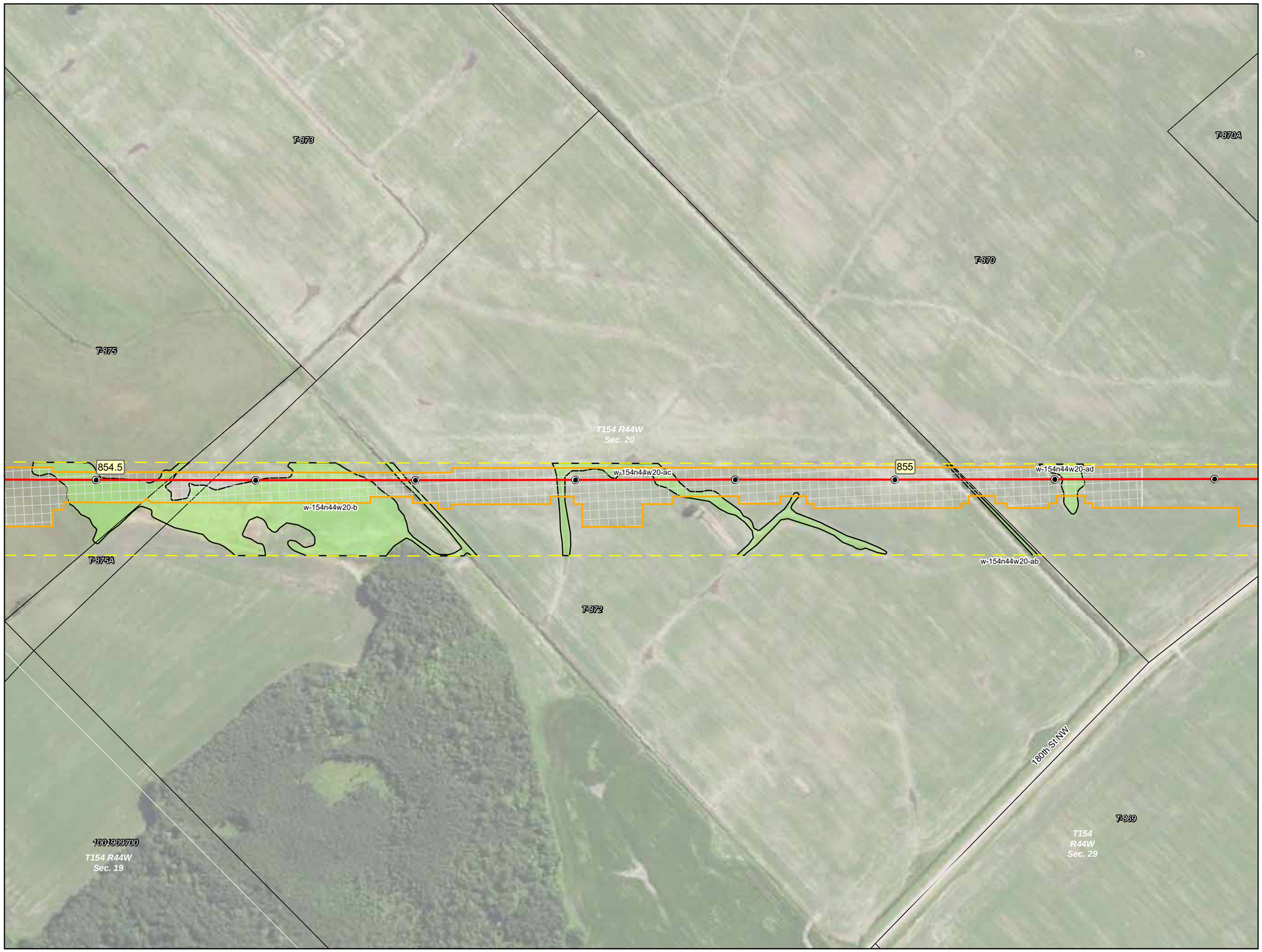

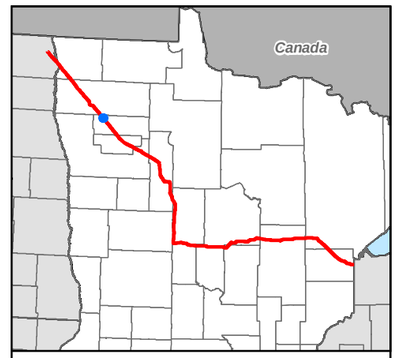

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Pennington County, Minnesota

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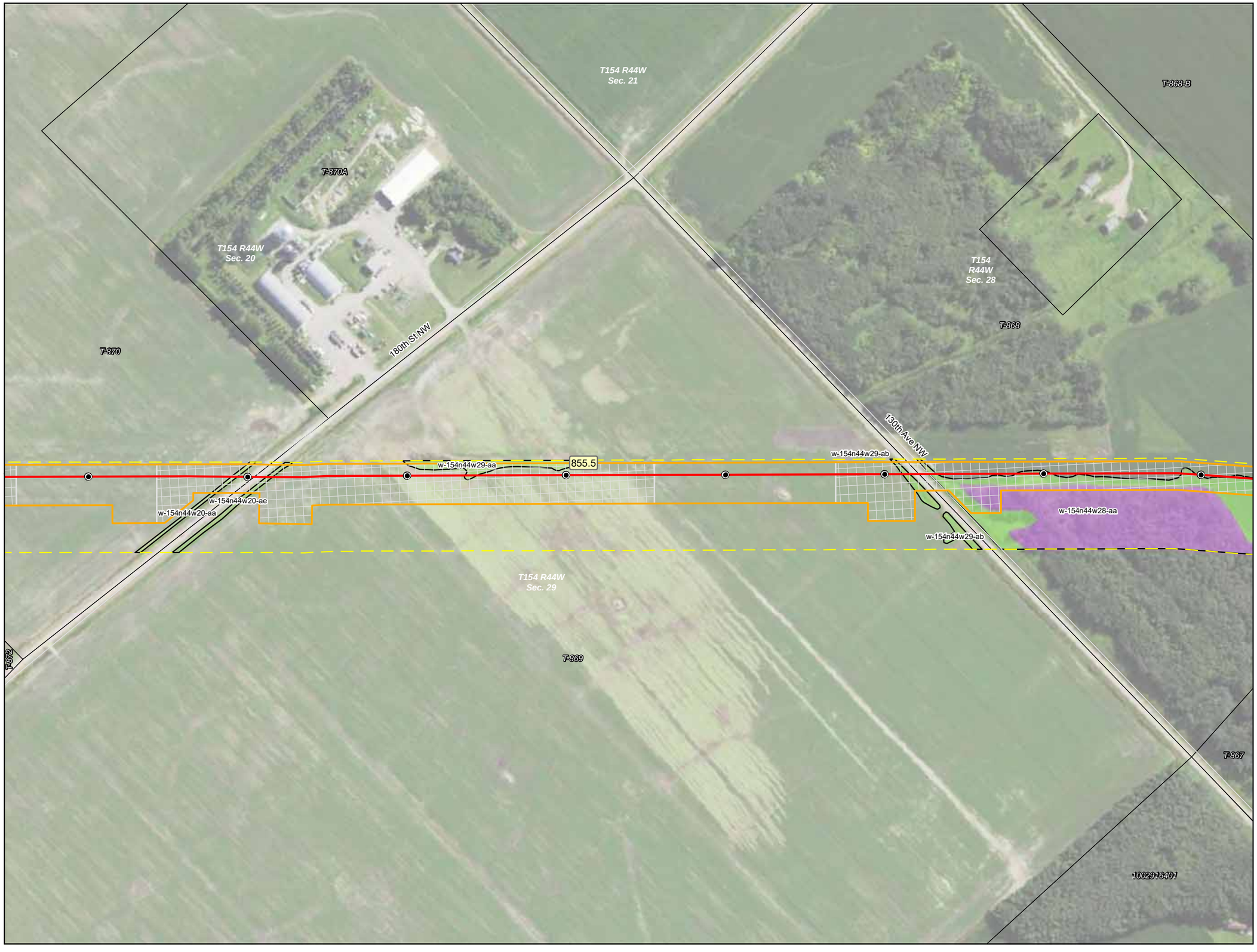

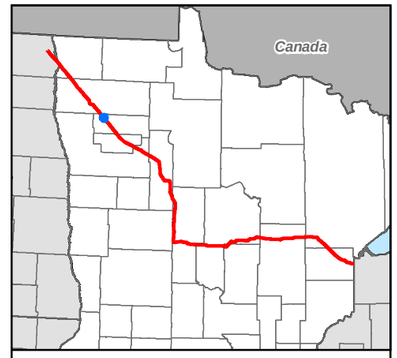

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Line 3 Replacement Project

Pennington County, Minnesota

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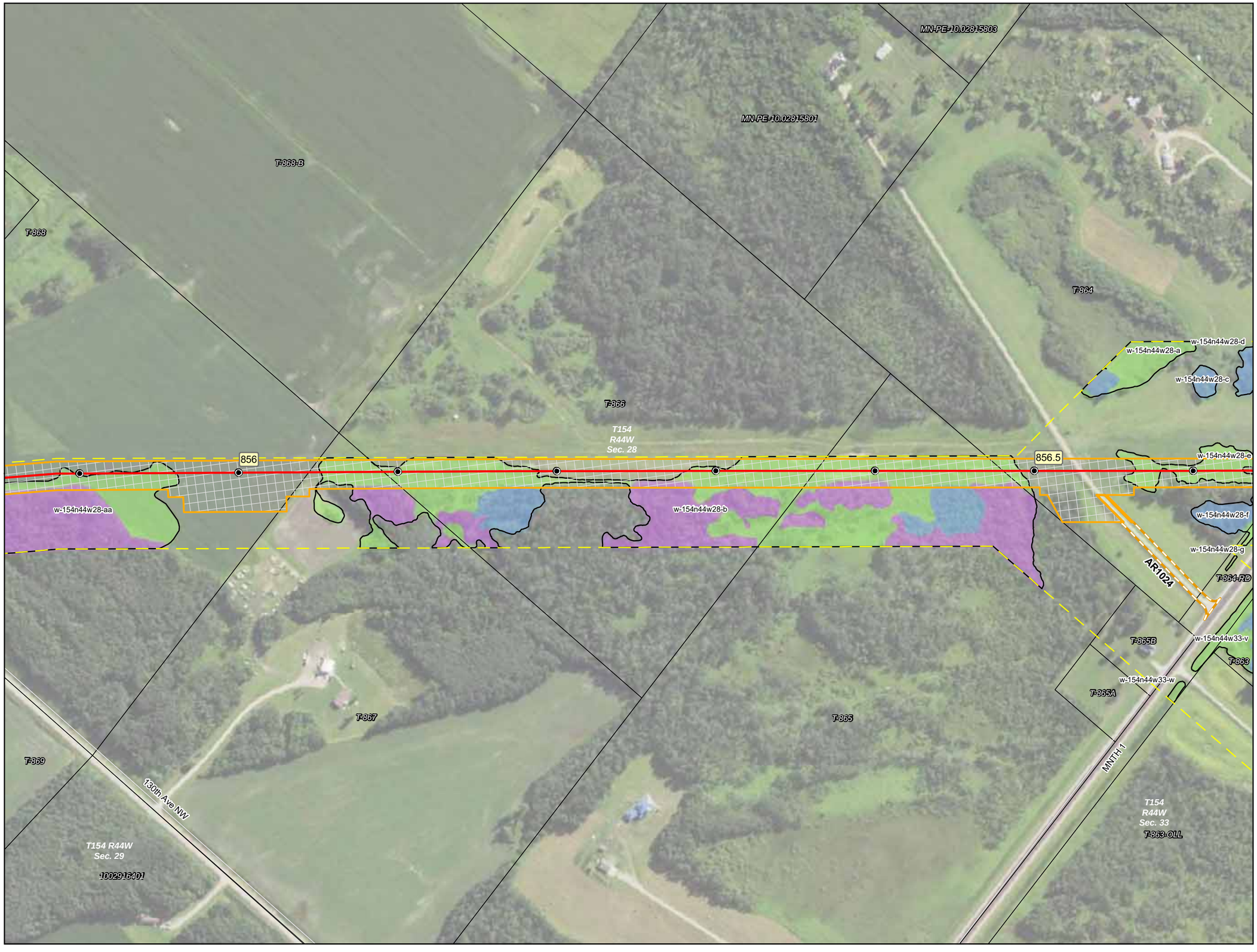

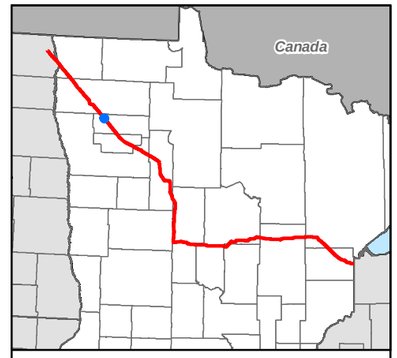

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Pennington County, Minnesota

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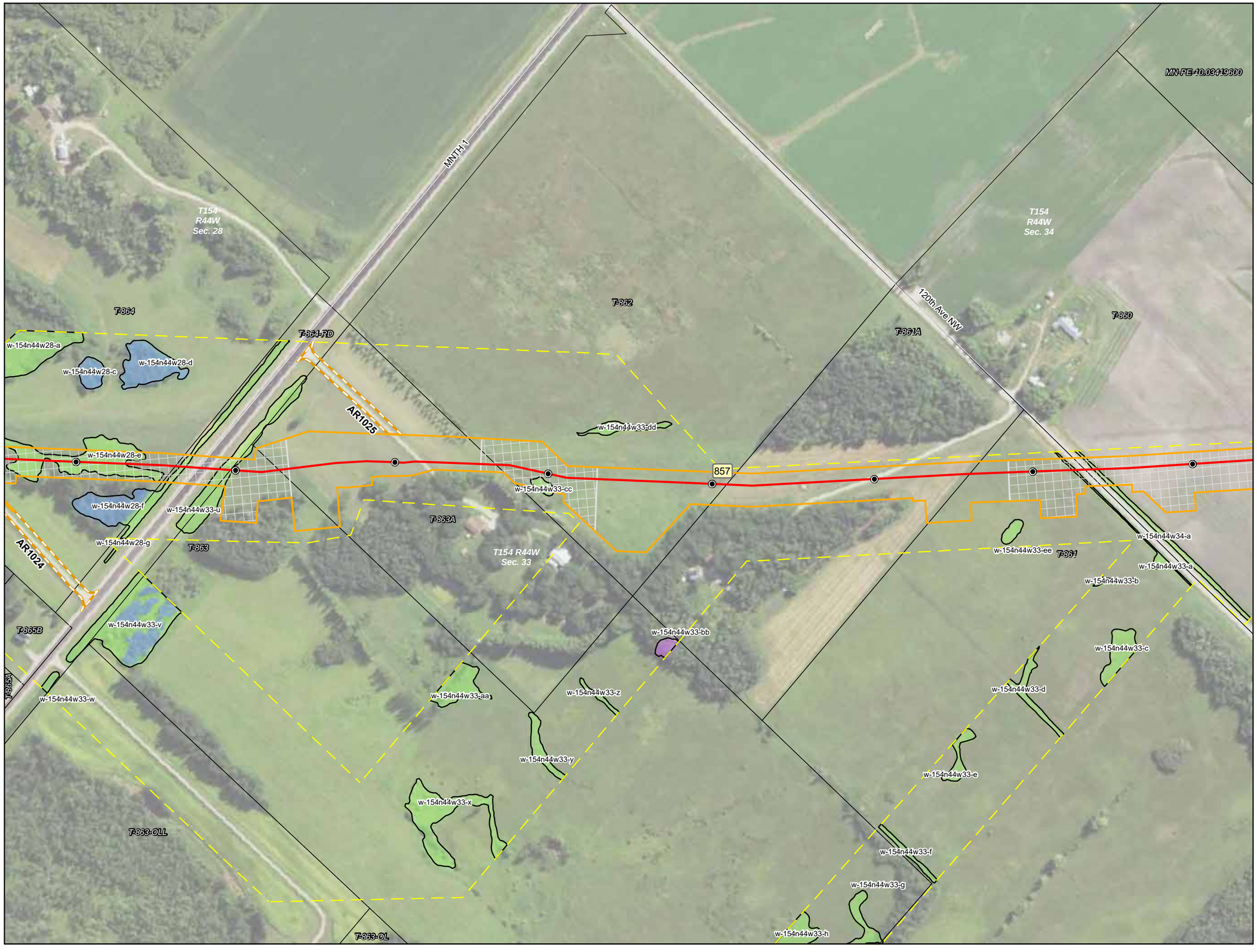

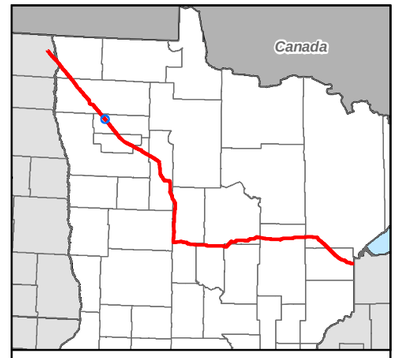

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Detailed Route Maps

Line 3 Replacement Project

Pennington County, Minnesota

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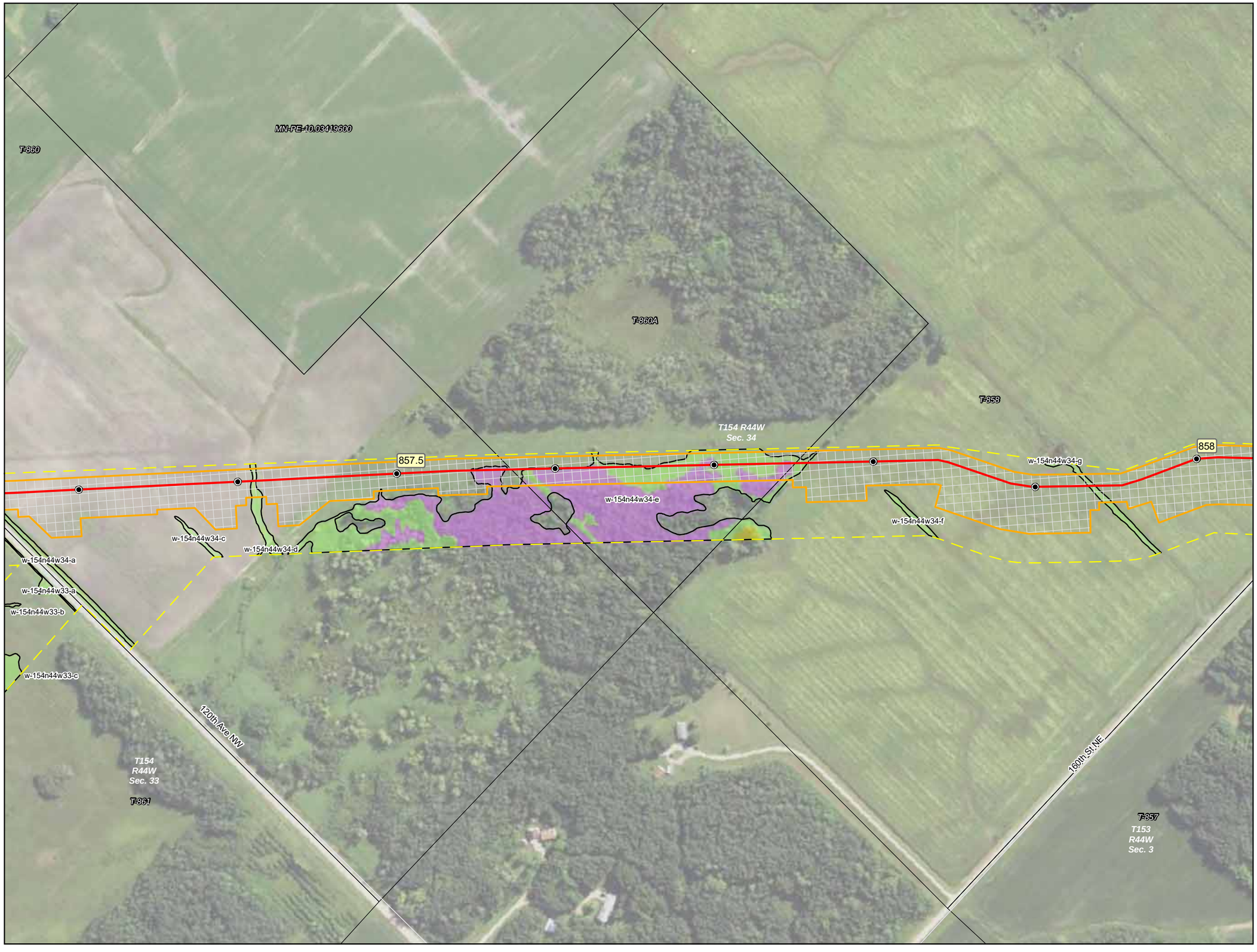

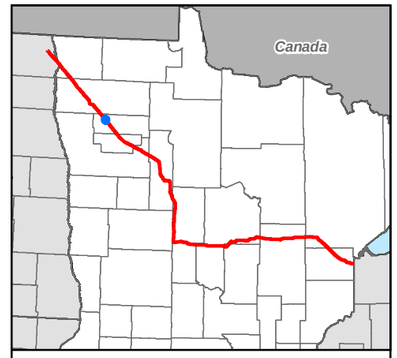

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Line 3 Replacement Project

Pennington County, Minnesota

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Date: (9/19/2018)

T154
R44W
Sec. 34

T-858

T-857

T153
R44W
Sec. 2

T-856

160th St NE

110th Ave NW

Unnamed Ditch - s-153n44w3-a
MP - 858.7
Proposed Crossing Method - Bore
Secondary Crossing Method - Dry Crossing

T-855B

w-153n44w3-f

w-153n44w3-k

w-153n44w3-j

w-153n44w2-a

w-153n44w3-e

858

w-153n44w3-c

w-153n44w3-d

858.5

s-153n44w3-a

w-154n44w34-h

w-153n44w3-a

w-153n44w3-l

AR1026

T-855

s-153n44w3-a

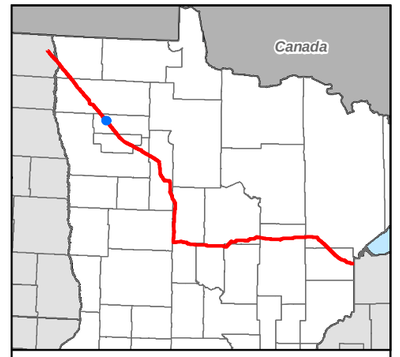
T153 R44W
Sec. 3

w-154n44w34-g

w-153n44w3-g

w-153n44w3-h

T-855A



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Pennington County, Minnesota

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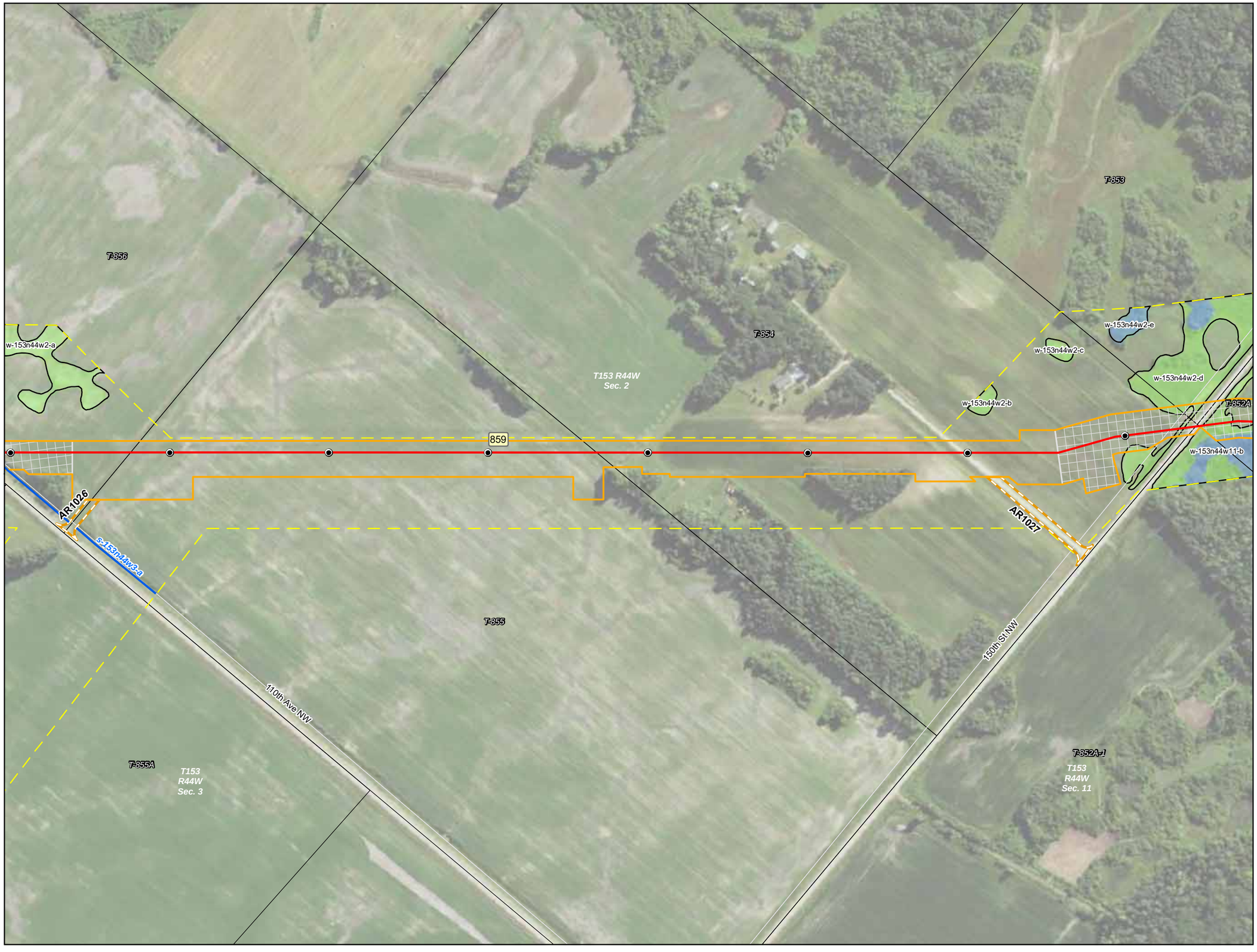

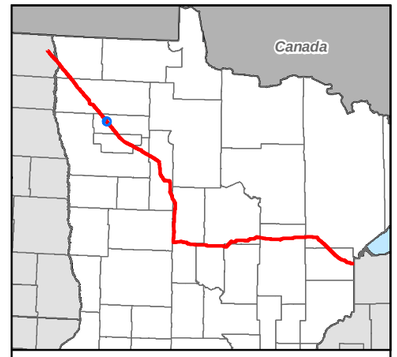

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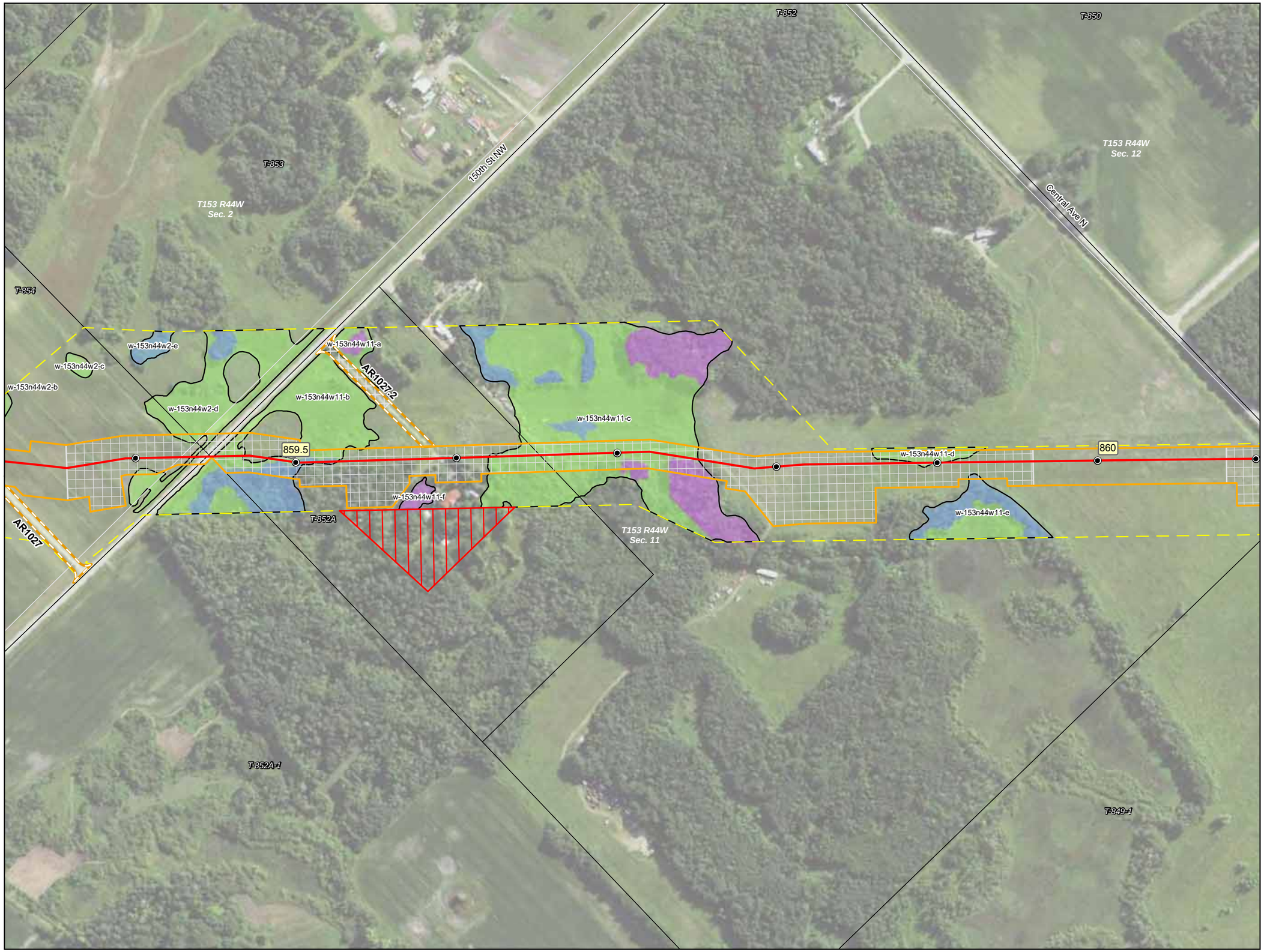

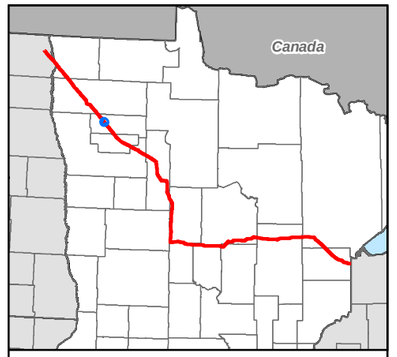

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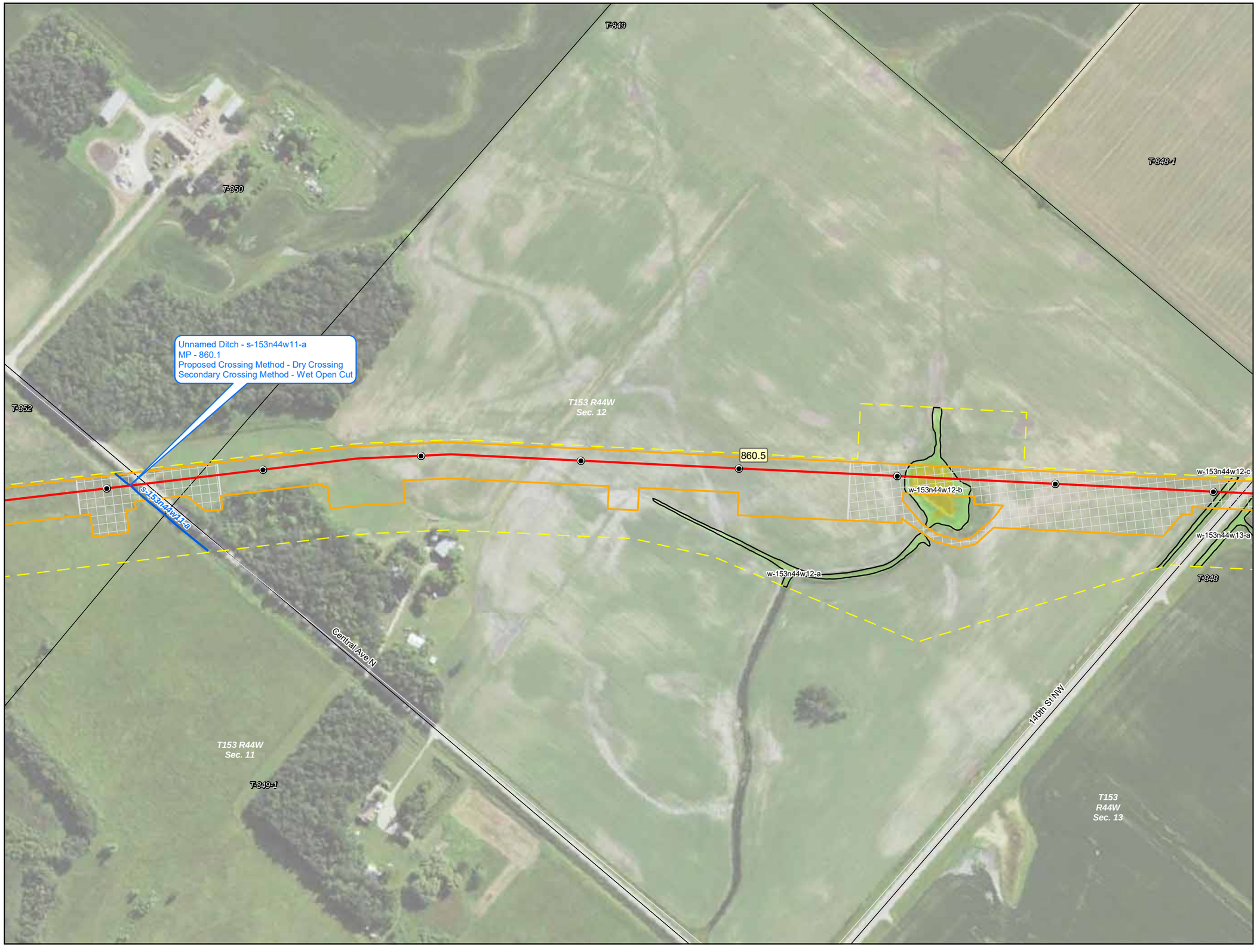

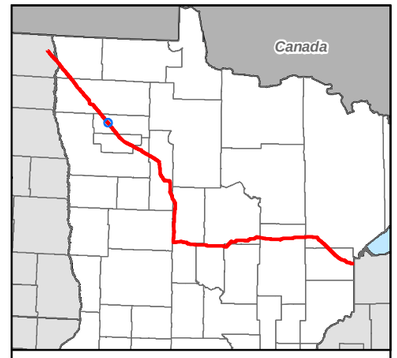

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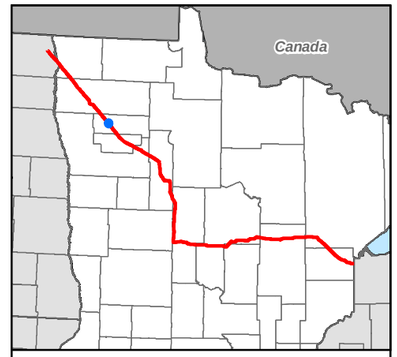

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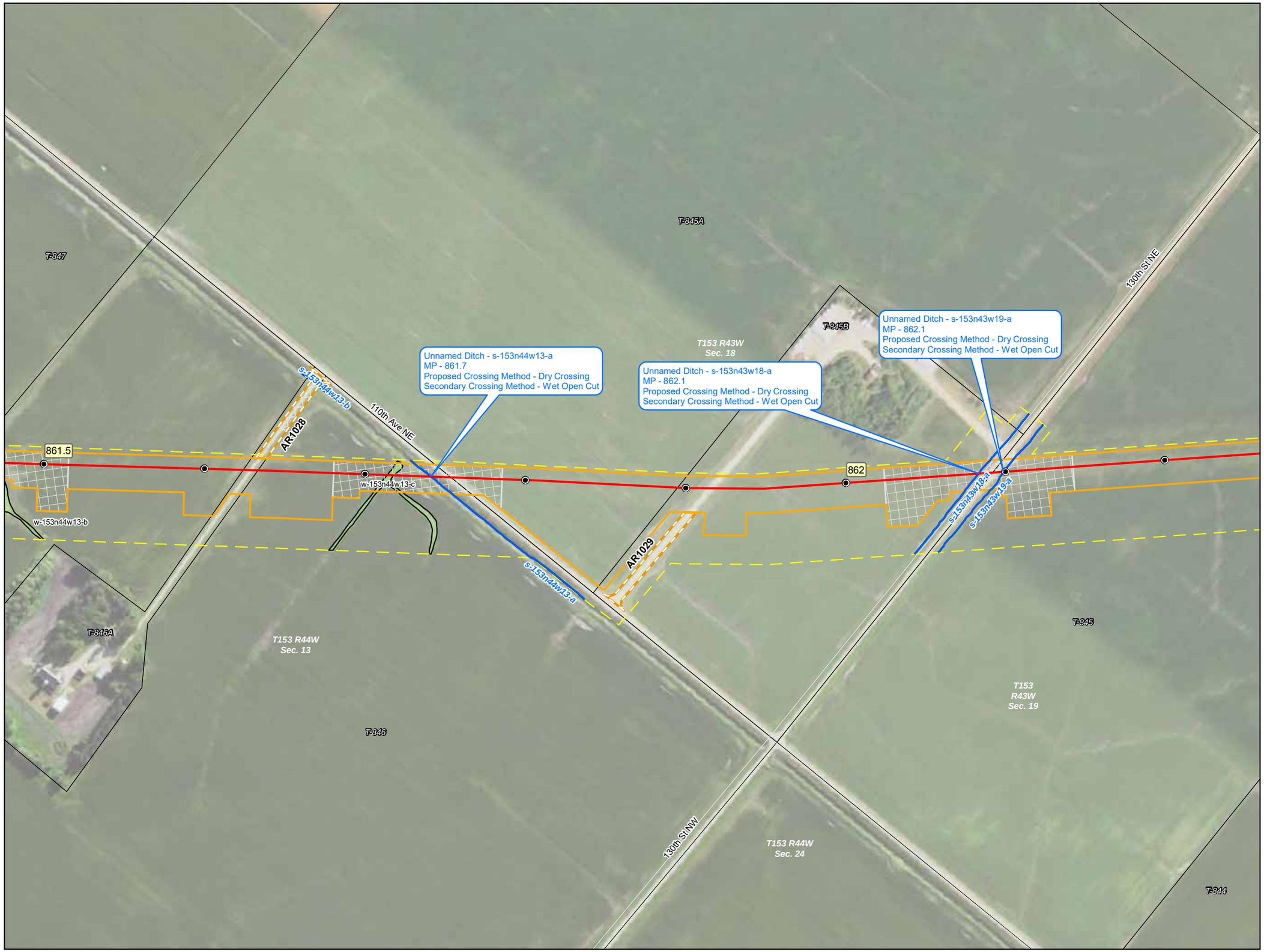
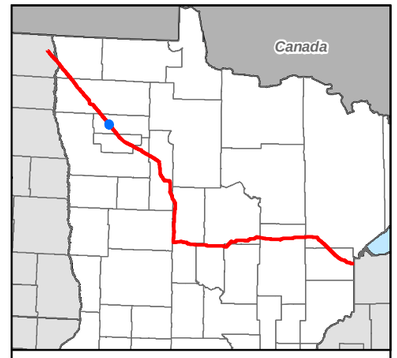




- Milepost
- Line 3 Centerline
- Construction Workspace
- Access Road
- COE Permit Area
- Survey Corridor
- Field Survey Partially or Not Complete
- Parcel Boundary
- County Boundary
- Section Boundary
- Cathodic Protection
- Valve Location
- Pump Station

Environmental Field Data

Wetlands

Field Delineated Wetland	NWI Wetlands
PEM	PEM
PFO	PFO
PSS	PSS
PUB	PUB

Waterbodies

- Field Delineated Waterbody
- NHD Waterbody

NWI Waterbodies

- Lake
- Riverine

0 150 300 Feet

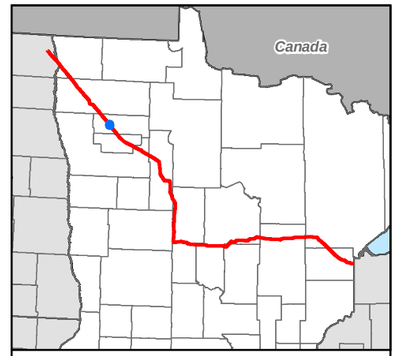
1 inch = 300 feet

Detailed Route Maps

Line 3 Replacement Project

Pennington County, Minnesota

ENBRIDGE



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Environmental Field Data

Wetlands

Field Delineated Wetland	NWI Wetlands
PEM	PEM
PFO	PFO
PSS	PSS
PUB	PUB

Waterbodies

- Field Delineated Waterbody
- NHD Waterbody

NWI Waterbodies

- Lake
- Riverine

0 150 300 Feet

1 inch = 300 feet

Detailed Route Maps

Line 3 Replacement Project

Pennington County, Minnesota

ENBRIDGE

T-344

AR1031

T-344A

T-342

T153 R43W
Sec. 20

T-341-RR

T-341

120th Ave NE

Unnamed Ditch - s-153n43w19-b
MP - 863.3
Proposed Crossing Method - Dry Crossing
Secondary Crossing Method - Wet Open Cut

Unnamed Ditch - s-153n43w20-a
MP - 863.3
Proposed Crossing Method - Dry Crossing
Secondary Crossing Method - Wet Open Cut

Unnamed Ditch - s-153n43w20-a
MP - 863.4
Proposed Crossing Method - Dry Crossing
Secondary Crossing Method - Wet Open Cut

863

w-153n43w29-a

863.5

s-153n43w19-b

s-153n43w20-a

T-343

T153 R43W
Sec. 19

T-343A

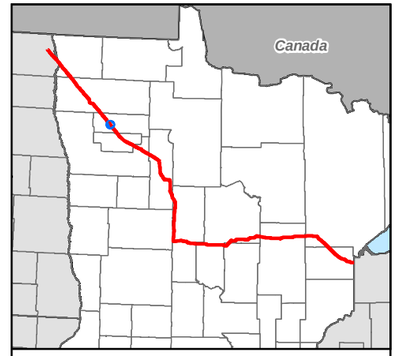
120th St NE

T153 R43W
Sec. 29

T153
R43W
Sec. 30

T-343-OLL

PN-019



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- Survey Corridor
- Field Survey Partially or Not Complete
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- County Boundary
- Section Boundary
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- Valve Location
- Pump Station

Environmental Field Data

Wetlands

Field Delineated Wetland	NWI Wetlands
PEM	PEM
PFO	PFO
PSS	PSS
PUB	PUB

Waterbodies

- Field Delineated Waterbody
- NHD Waterbody

NWI Waterbodies

- Lake
- Riverine

0 150 300 Feet

1 inch = 300 feet

Detailed Route Maps

Line 3 Replacement Project

Pennington County, Minnesota

ENBRIDGE

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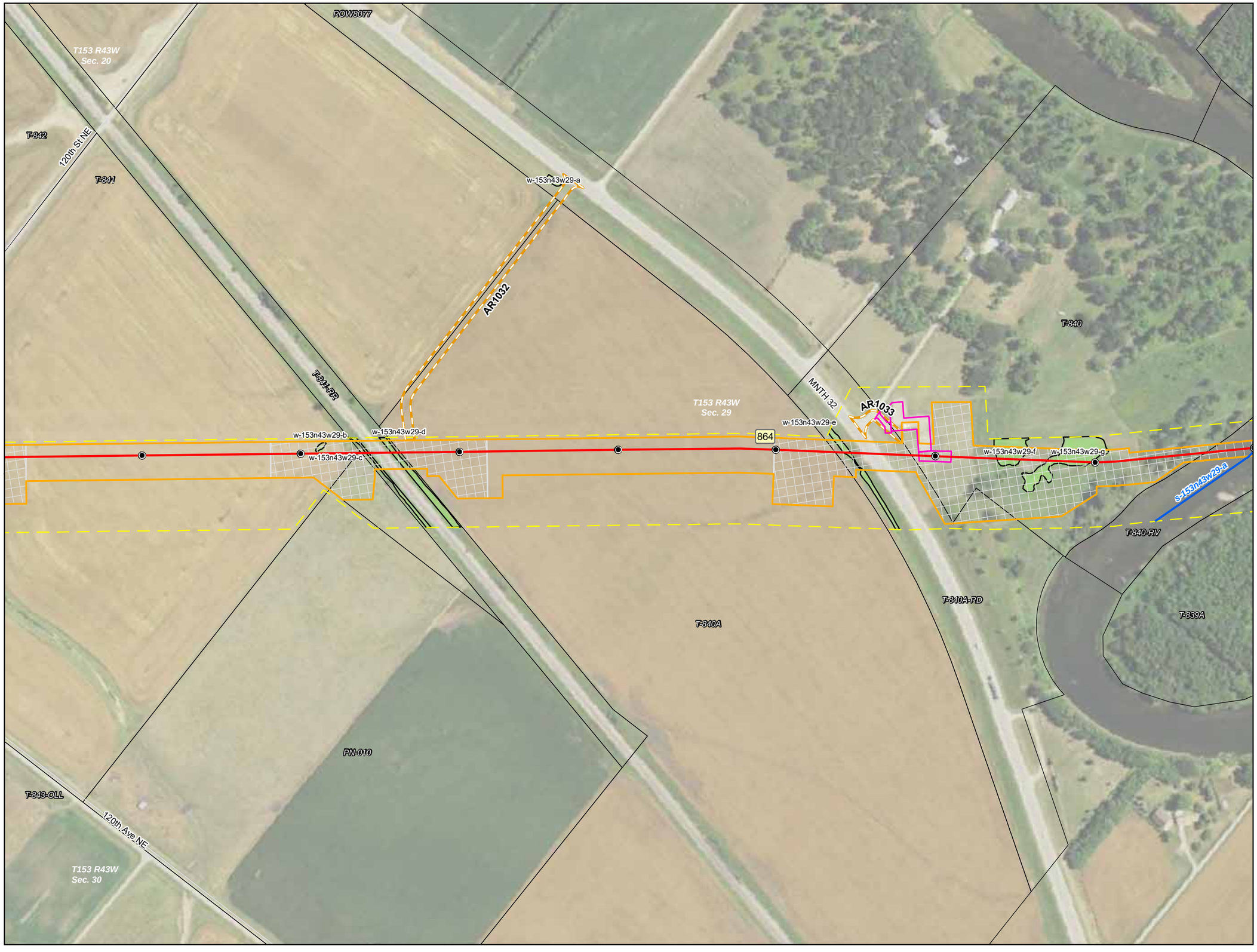

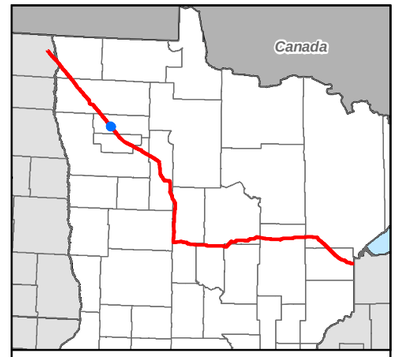

- Milepost
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- Survey Corridor
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- County Boundary
- Section Boundary
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Environmental Field Data

Wetlands

Field Delineated Wetland	NWI Wetlands
PEM	PEM
PFO	PFO
PSS	PSS
PUB	PUB

Waterbodies

- Field Delineated Waterbody
- NHD Waterbody

NWI Waterbodies

- Lake
- Riverine

0 150 300 Feet

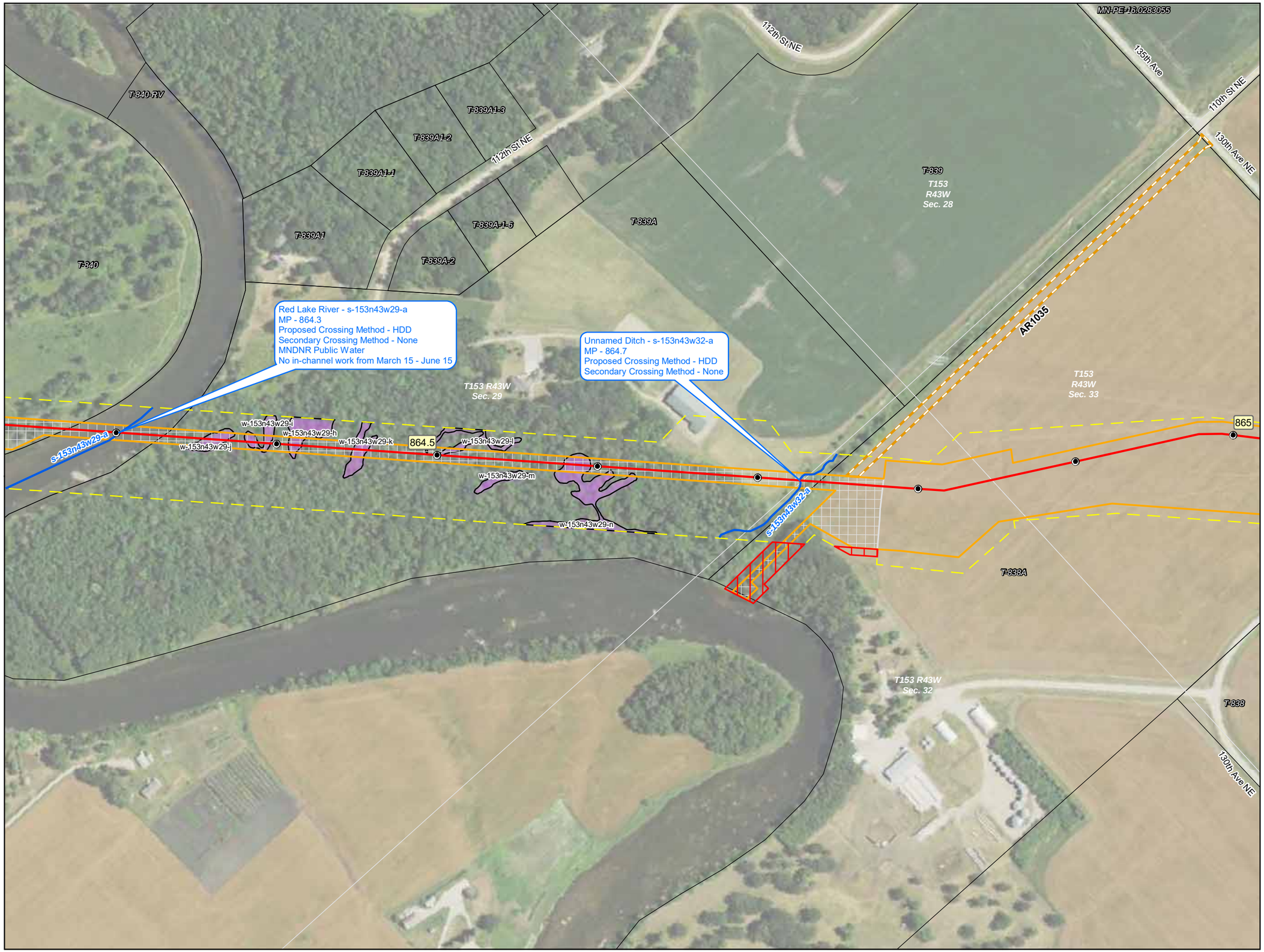
1 inch = 300 feet

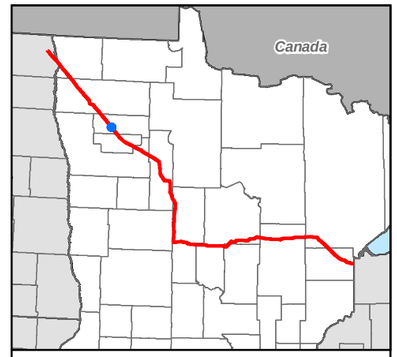
Detailed Route Maps

Line 3 Replacement Project

Pennington County, Minnesota

ENBRIDGE





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- Pump Station

Environmental Field Data

Wetlands

Field Delineated Wetland	NWI Wetlands
PEM	PEM
PFO	PFO
PSS	PSS
PUB	PUB

Waterbodies

- Field Delineated Waterbody
- NHD Waterbody

NWI Waterbodies

- Lake
- Riverine

0 150 300 Feet

1 inch = 300 feet

Detailed Route Maps

Line 3 Replacement Project

Pennington County, Minnesota

ENBRIDGE

MN-PE-16.0283055

T153
R43W
Sec. 28

110th St NE

52
AR10

T-338A

Unnamed Ditch - s-153n43w33-a
MP - 865.1
Proposed Crossing Method - Dry Crossing
Secondary Crossing Method - Wet Open Cut

T-338

T-338B

T-337

T153 R43W
Sec. 33

865

865.5

s-153n43w33-a

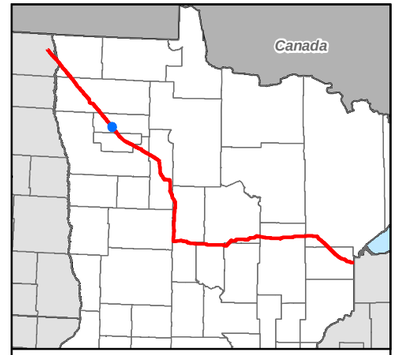
w-153n43w33-a

w-153n43w33-b

130th Ave NE

T-338C

T153 R43W
Sec. 32



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- Line 3 Centerline
- Construction Workspace
- Access Road
- COE Permit Area
- Survey Corridor
- Field Survey Partially or Not Complete
- Parcel Boundary
- County Boundary
- Section Boundary
- Cathodic Protection
- Valve Location
- Pump Station

Environmental Field Data

Wetlands

Field Delineated Wetland	NWI Wetlands
PEM	PEM
PFO	PFO
PSS	PSS
PUB	PUB

Waterbodies

- Field Delineated Waterbody
- NHD Waterbody

NWI Waterbodies

- Lake
- Riverine

0 150 300 Feet

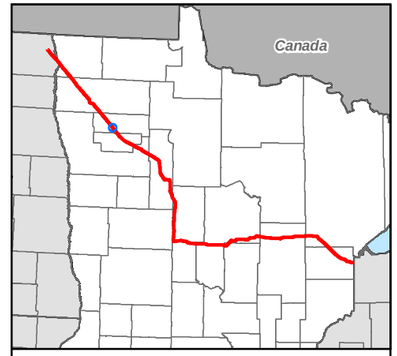
1 inch = 300 feet

Detailed Route Maps

Line 3 Replacement Project

Pennington County, Minnesota

ENBRIDGE



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Environmental Field Data

Wetlands

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PEM	PEM
PFO	PFO
PSS	PSS
PUB	PUB

Waterbodies

- Field Delineated Waterbody
- NHD Waterbody

NWI Waterbodies

- Lake
- Riverine

0 150 300 Feet

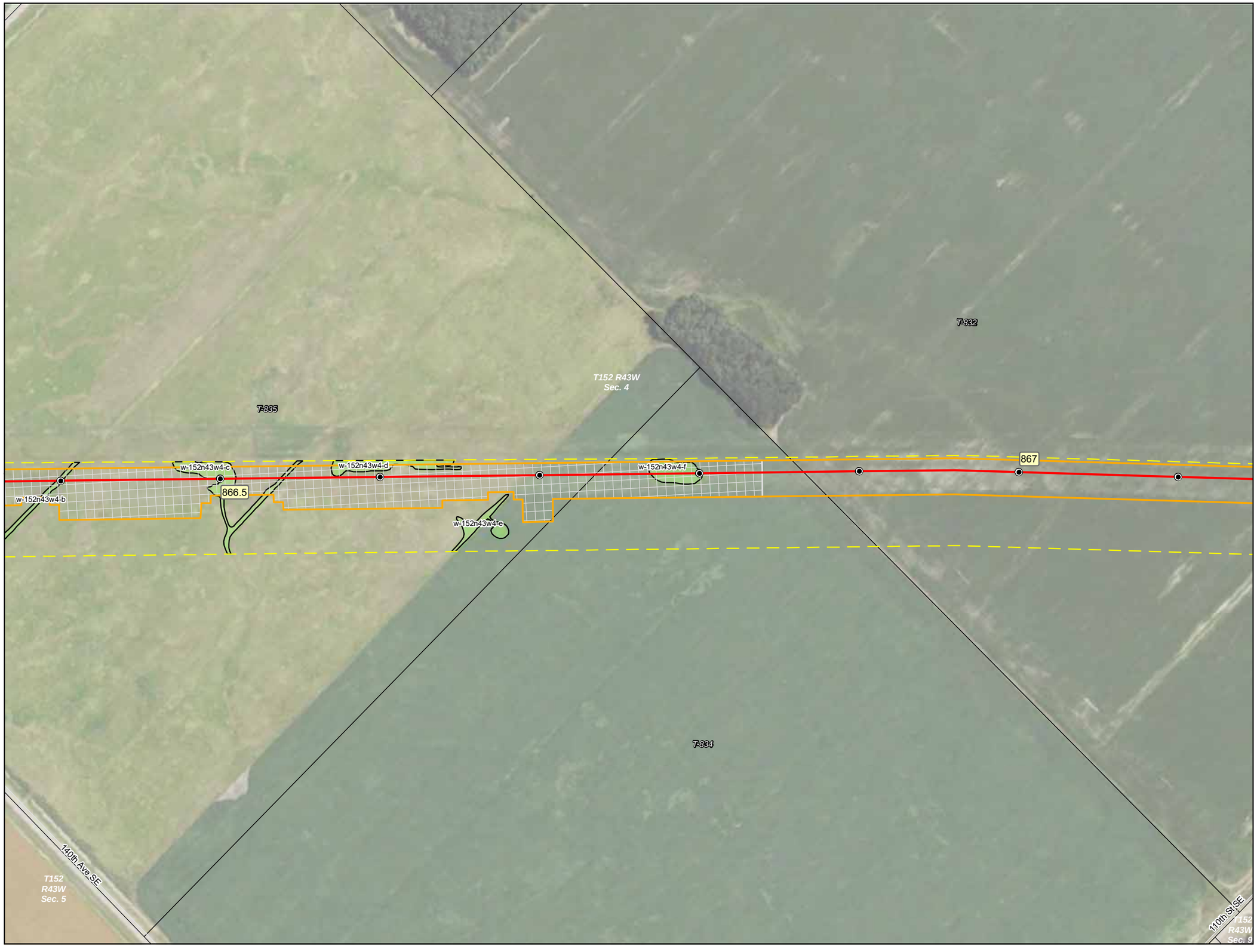
1 inch = 300 feet

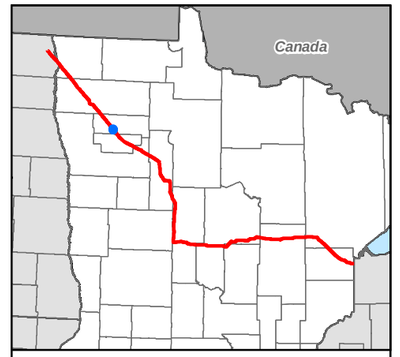
Detailed Route Maps

Line 3 Replacement Project

Pennington County, Minnesota

ENBRIDGE





- Milepost
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Wetlands

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NWI Waterbodies

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0 150 300 Feet

1 inch = 300 feet

Detailed Route Maps

Line 3 Replacement Project

Pennington County, Minnesota

ENBRIDGE

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Date: (9/19/2018)

T152 R43W Sec. 3

T-329

T152 R43W Sec. 10

T152 R43W Sec. 4

T-332

Unnamed Ditch - s-152n43w4-a
MP - 867.4
Proposed Crossing Method - Dry Crossing
Secondary Crossing Method - Wet Open Cut

110th St SE

867.5

s-152n43w4-a

w-152n43w9-b

w-152n43w9-a

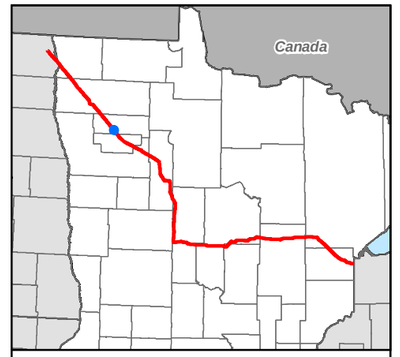
150th Ave SE

T-330

T152 R43W Sec. 9

T-331

T-334



- Milepost
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- Construction Workspace
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- Survey Corridor
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- Parcel Boundary
- County Boundary
- Section Boundary
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Environmental Field Data

Wetlands

Field Delineated Wetland	NWI Wetlands
PEM	PEM
PFO	PFO
PSS	PSS
PUB	PUB

Waterbodies

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- NHD Waterbody

NWI Waterbodies

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0 150 300 Feet

1 inch = 300 feet

Detailed Route Maps

Line 3 Replacement Project

Pennington County, Minnesota

ENBRIDGE

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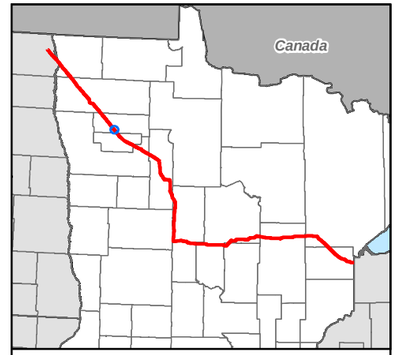

- Milepost
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- Survey Corridor
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- Parcel Boundary
- County Boundary
- Section Boundary
- Cathodic Protection
- Valve Location
- Pump Station

Environmental Field Data

Wetlands

Field Delineated Wetland	NWI Wetlands
PEM	PEM
PFO	PFO
PSS	PSS
PUB	PUB

Waterbodies

- Field Delineated Waterbody
- NHD Waterbody

NWI Waterbodies

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- Riverine

0 150 300 Feet

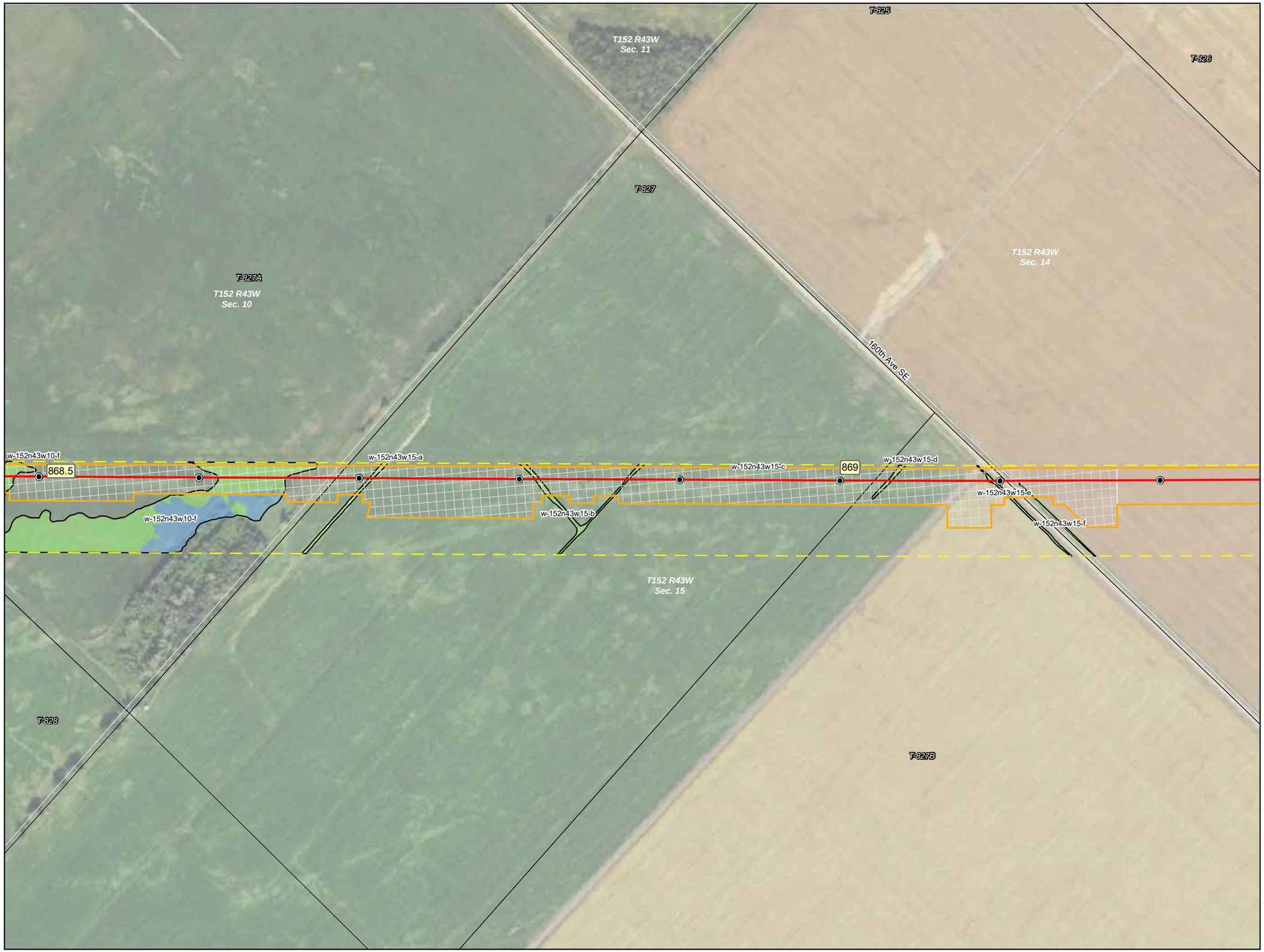
1 inch = 300 feet

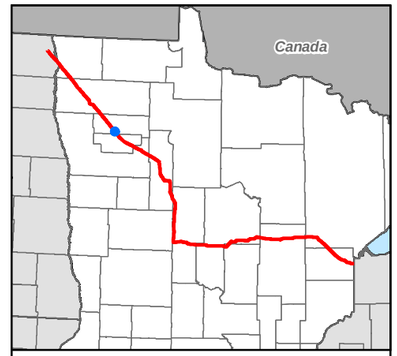
Detailed Route Maps

Line 3 Replacement Project

Pennington County, Minnesota

ENBRIDGE





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Environmental Field Data

Wetlands

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PEM	PEM
PFO	PFO
PSS	PSS
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Waterbodies

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- NHD Waterbody

NWI Waterbodies

- Lake
- Riverine

0 150 300 Feet

1 inch = 300 feet

Detailed Route Maps

Line 3 Replacement Project

Pennington County, Minnesota

ENBRIDGE

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Date: (9/19/2018)

Unnamed Ditch - s-152n43w14-a
MP - 869.5
Proposed Crossing Method - Dry Crossing
Secondary Crossing Method - Wet Open Cut

Unnamed Ditch - s-152n43w14-b
MP - 869.7
Proposed Crossing Method - Dry Crossing
Secondary Crossing Method - Wet Open Cut
MNDNR Public Water
No in-channel work from March 15 - June 15

Unnamed Ditch - s-152n43w14-c
MP - 869.7
Proposed Crossing Method - Dry Crossing
Secondary Crossing Method - Wet Open Cut

T-326
T-324A
T-323
T-325
T-327B

T152 R43W
Sec. 14

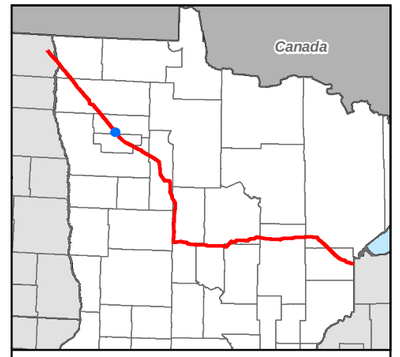
T152
R43W
Sec. 15

T152 R43W
Sec. 23

869.5

s-152n43w14-a
s-152n43w14-b
s-152n43w14-c
w-152n43w14-a
w-152n43w14-c

127th St SE
165th Ave SE
160th Ave SE



- Milepost
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- Construction Workspace
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- Parcel Boundary
- County Boundary
- Section Boundary
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Environmental Field Data

Wetlands

Field Delineated Wetland	NWI Wetlands
PEM	PEM
PFO	PFO
PSS	PSS
PUB	PUB

Waterbodies

- Field Delineated Waterbody
- NHD Waterbody

NWI Waterbodies
- Lake
- Riverine

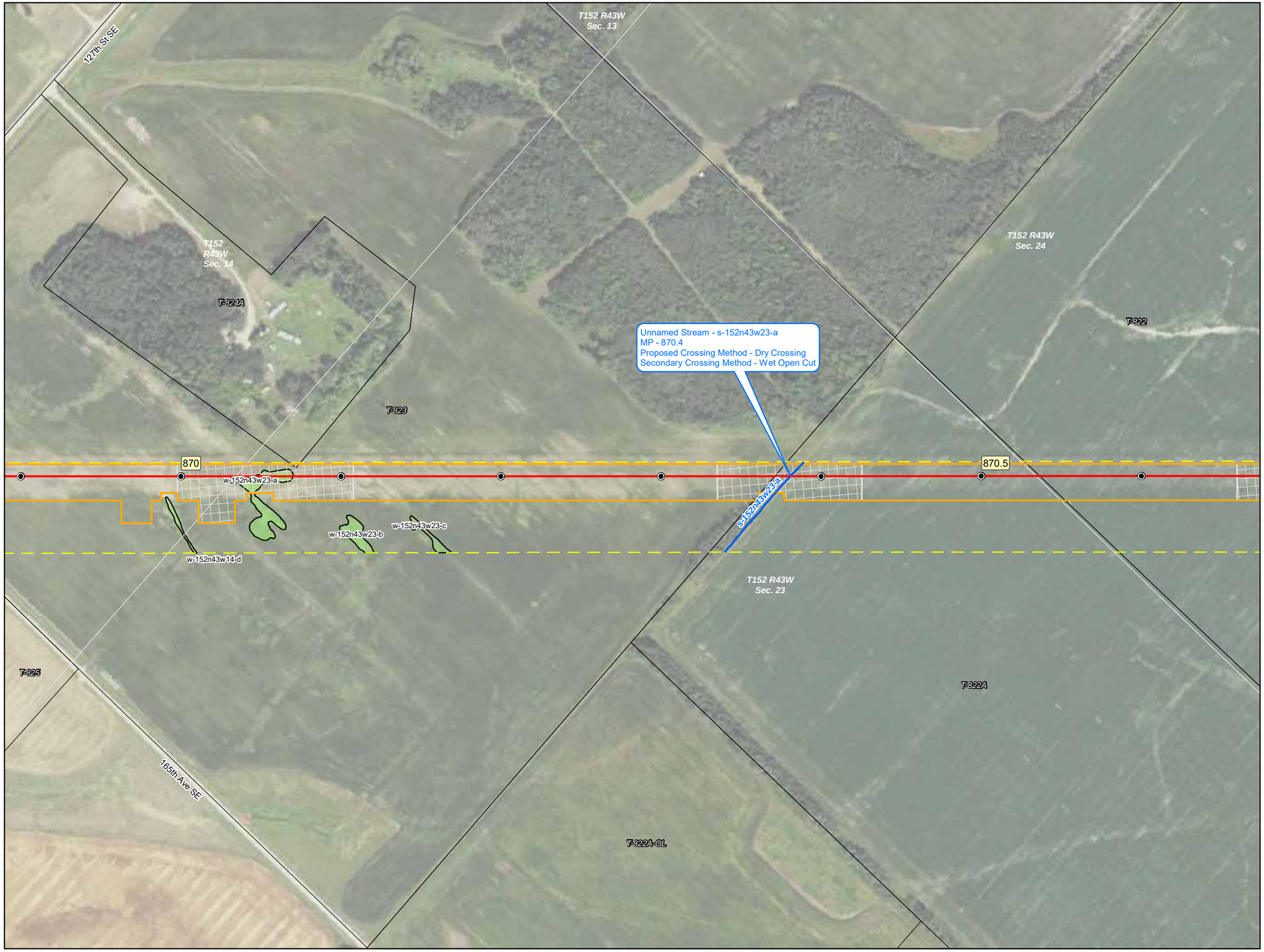
0 150 300 Feet
1 inch = 300 feet

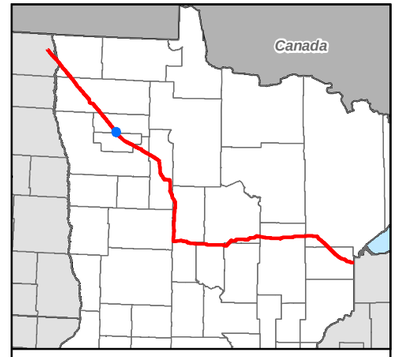
Detailed Route Maps

Line 3 Replacement Project

Pennington County, Minnesota

ENBRIDGE





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Environmental Field Data

Wetlands

Field Delineated Wetland	NWI Wetlands
PEM	PEM
PFO	PFO
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Waterbodies

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- NHD Waterbody

NWI Waterbodies

- Lake
- Riverine

0 150 300 Feet

1 inch = 300 feet

Detailed Route Maps

Line 3 Replacement Project

Pennington County, Minnesota

ENBRIDGE

T-322

T-321

175th Ave SE

Unnamed Ditch - s-152n43w24-b
MP - 871.3
Proposed Crossing Method - Dry Crossing
Secondary Crossing Method - Wet Open Cut

T152 R43W
Sec. 24

871

w-152n43w24-a

w-152n43w24-b

w-152n43w24-c

s-152n43w24-b

s-152n43w24-a

s-152n43w24-c

T-320

Pennington County

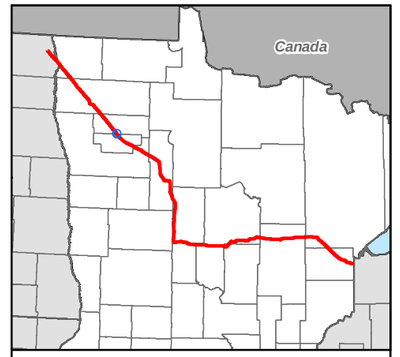
T-102 Red Lake County

T-822A

T152
R43W
Sec. 23

T-320-OL

T152
R43W
Sec. 25



- Milepost
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- Construction Workspace
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- County Boundary
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PEM	PEM
PFO	PFO
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PUB	PUB

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- NHD Waterbody

NWI Waterbodies

- Lake
- Riverine

0 150 300 Feet

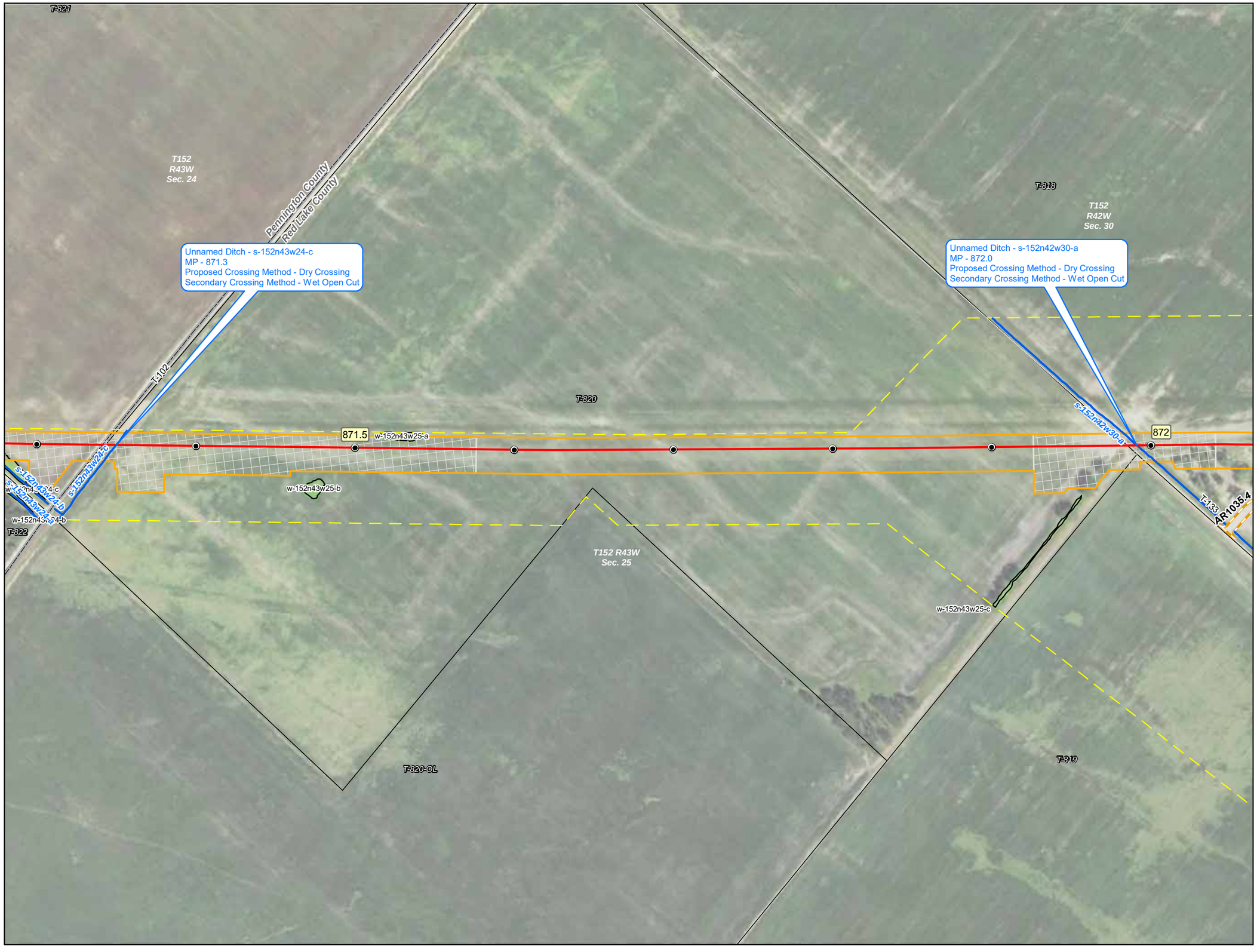
1 inch = 300 feet

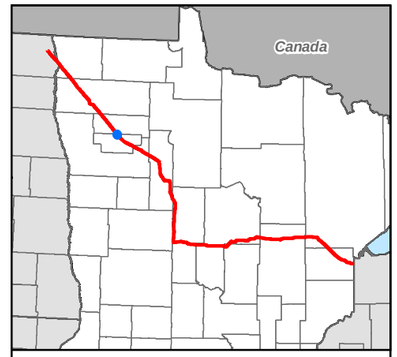
Detailed Route Maps

Line 3 Replacement Project

Pennington and Red Lake Counties, Minnesota

ENBRIDGE





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Environmental Field Data

Wetlands

Field Delineated Wetland	NWI Wetlands
PEM	PEM
PFO	PFO
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PUB	PUB

Waterbodies

- Field Delineated Waterbody
- NHD Waterbody

NWI Waterbodies

- Lake
- Riverine

0 150 300 Feet

1 inch = 300 feet

Detailed Route Maps

Line 3 Replacement Project

Pennington and Red Lake Counties, Minnesota

ENBRIDGE

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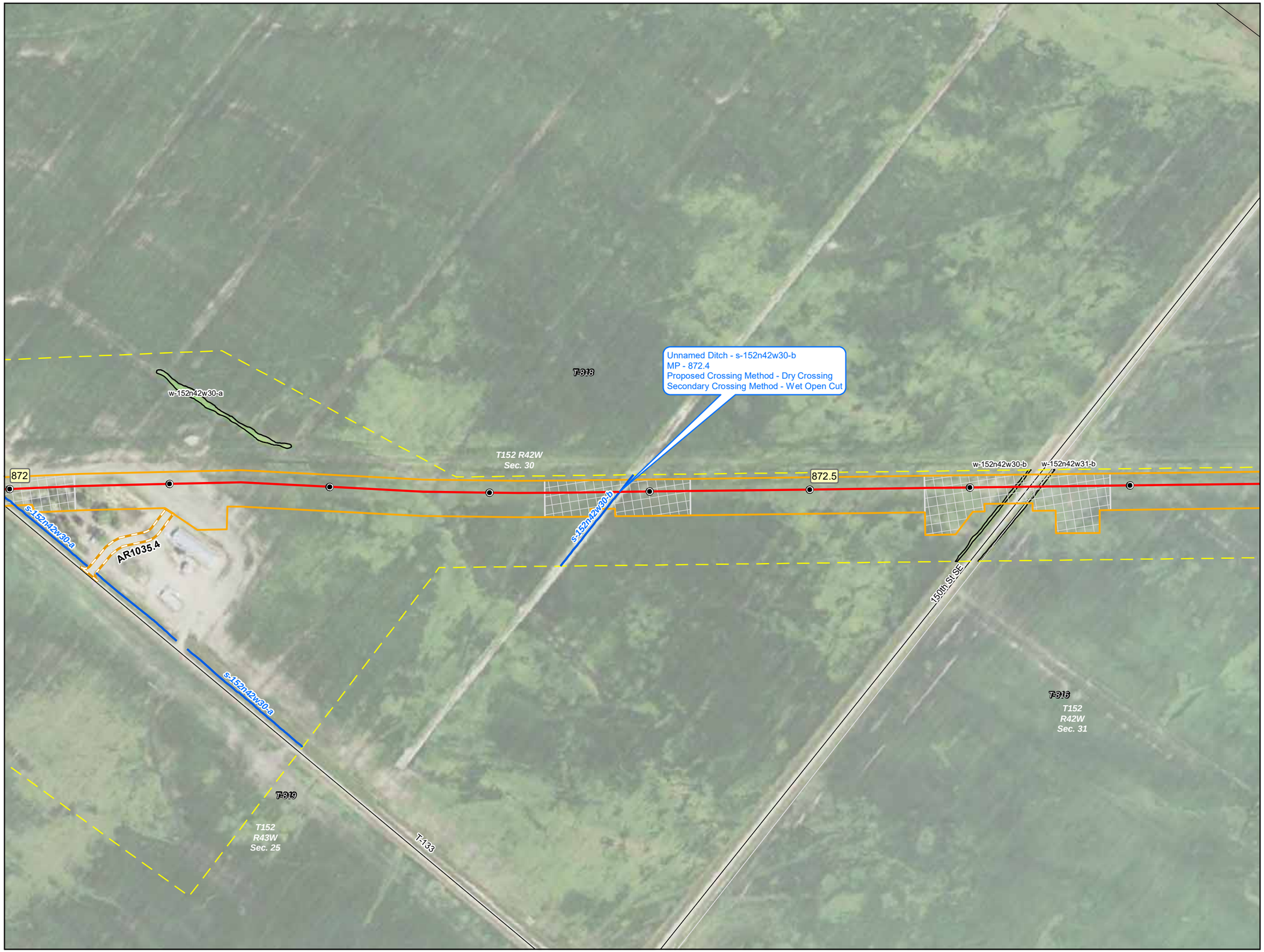

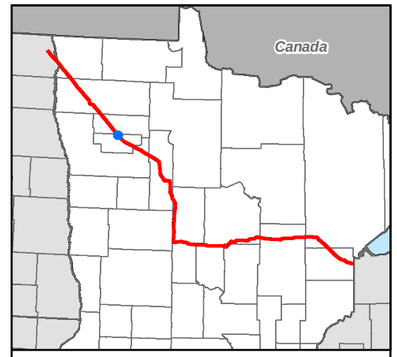

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Environmental Field Data

Wetlands

Field Delineated Wetland	NWI Wetlands
PEM	PEM
PFO	PFO
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PUB	PUB

Waterbodies

- Field Delineated Waterbody
- NHD Waterbody

NWI Waterbodies

- Lake
- Riverine

0 150 300 Feet

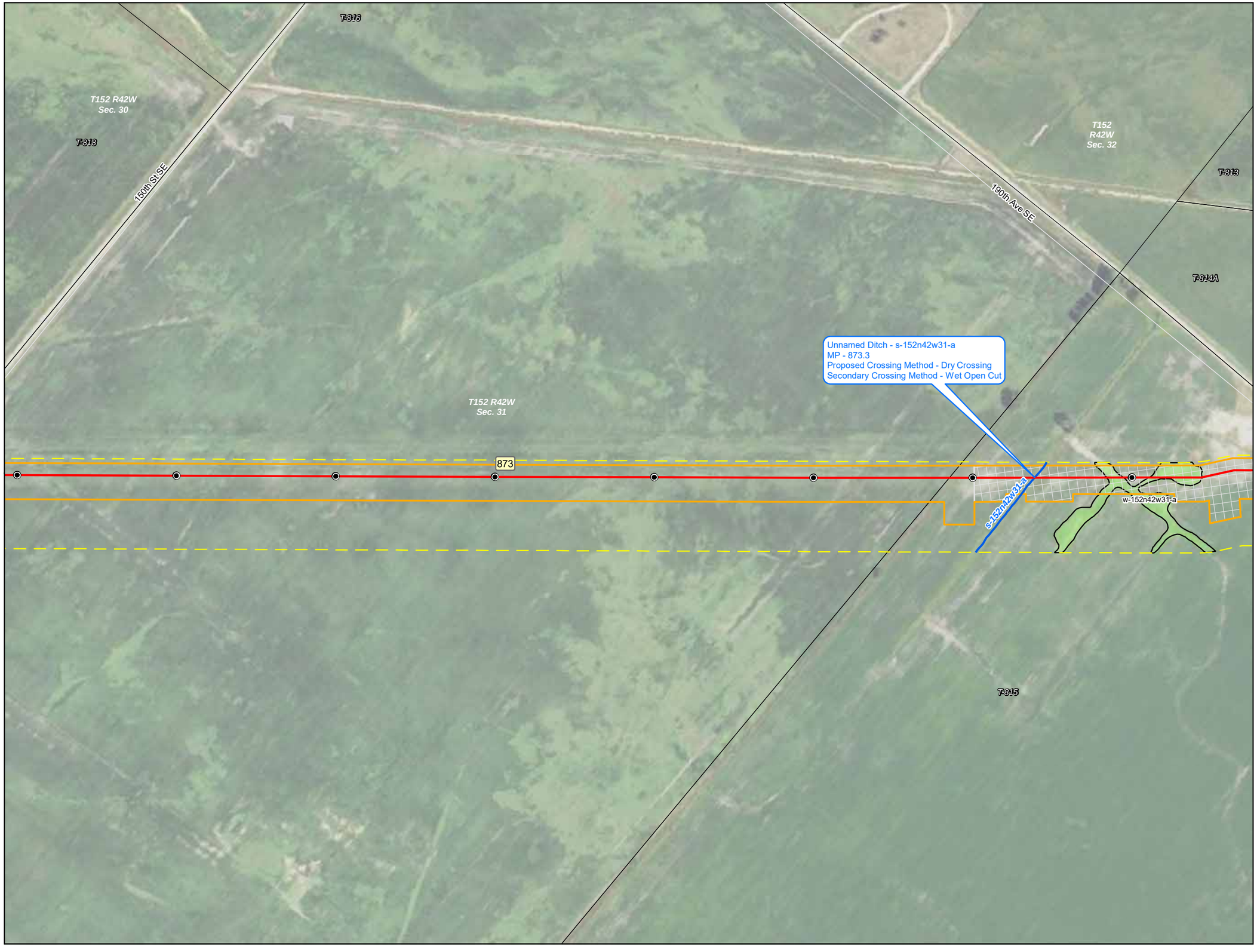
1 inch = 300 feet

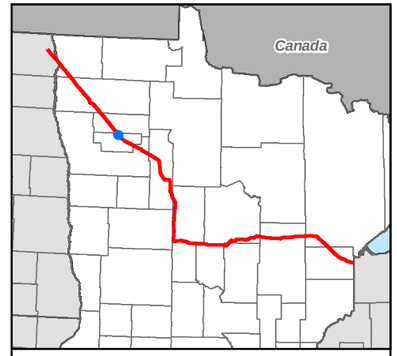
Detailed Route Maps

Line 3 Replacement Project

Red Lake County, Minnesota

ENBRIDGE





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PFO	PFO
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Waterbodies

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NWI Waterbodies

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- Riverine

0 150 300 Feet

1 inch = 300 feet

Detailed Route Maps

Line 3 Replacement Project

Red Lake County, Minnesota

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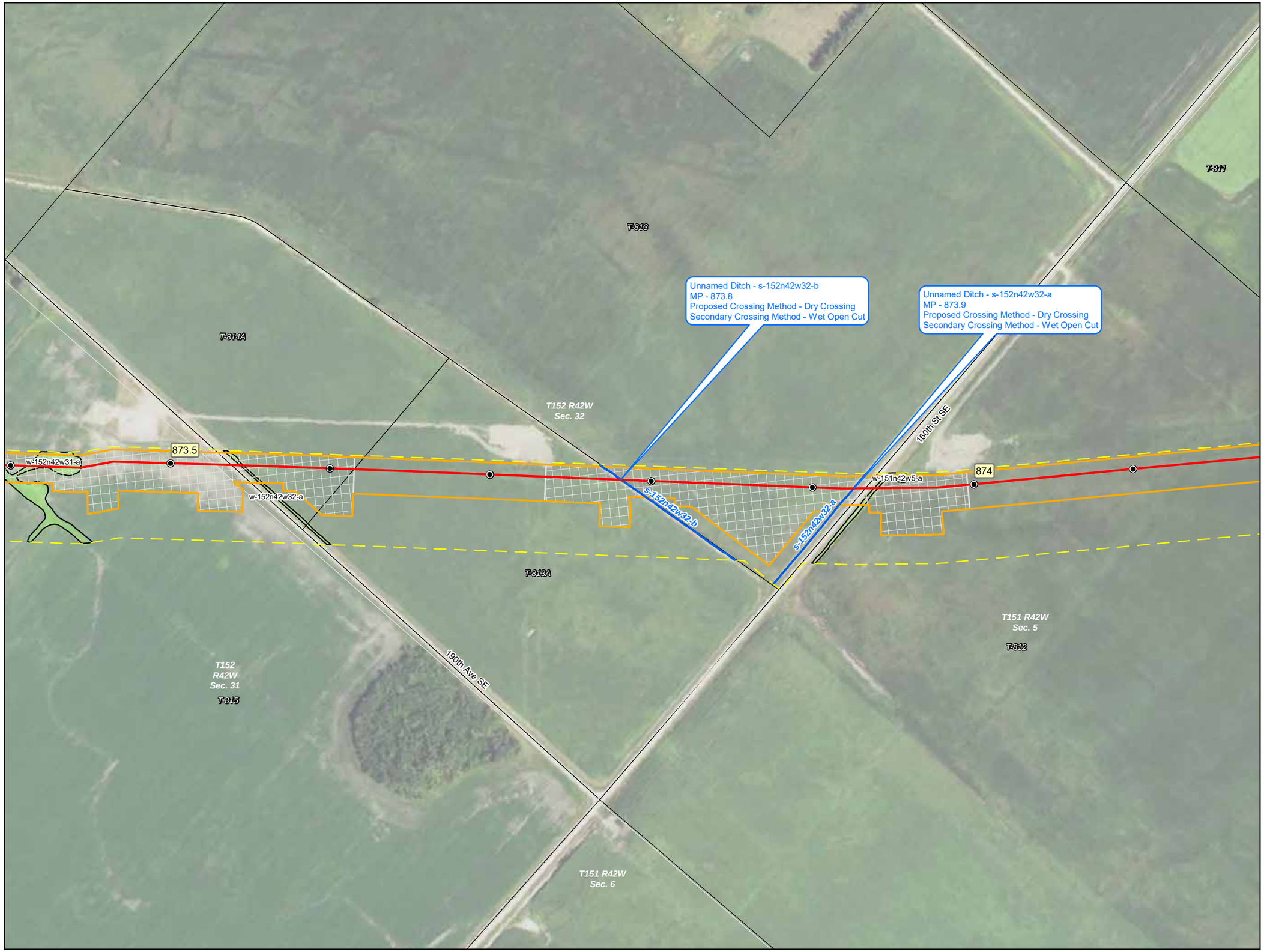

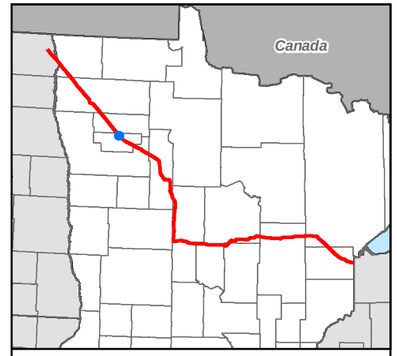

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Red Lake County, Minnesota

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T152 R42W
Sec. 32

160th St SE

T-813

T151 R42W
Sec. 4

T-809C

T-809B

T-811

T151 R42W
Sec. 5

874.5

w-151n42w5-b

w-151n42w5-c

w-151n42w5-d

w-151n42w5-e

T-812

T-107

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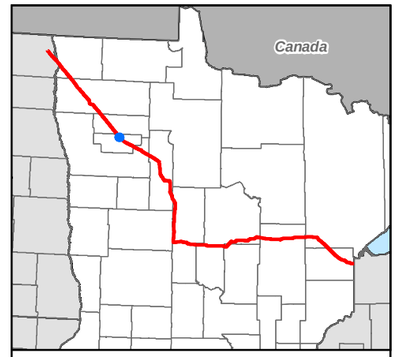
w-151n42w5-h

T-810B



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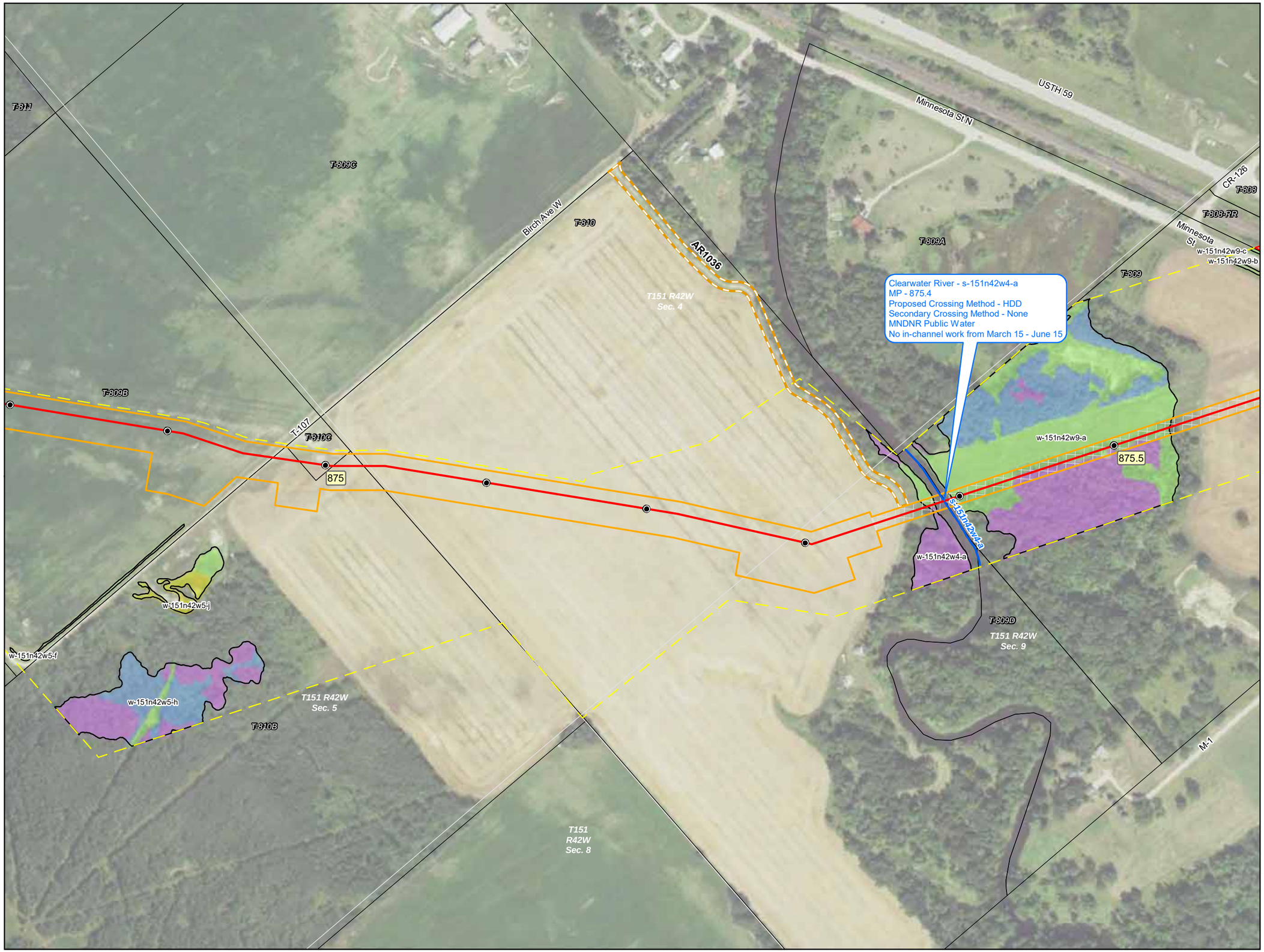

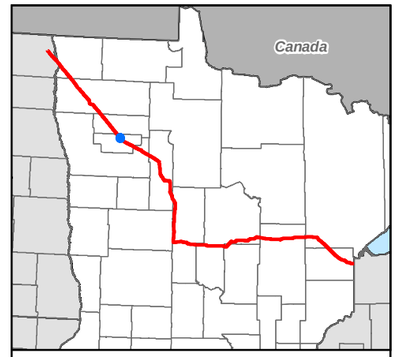

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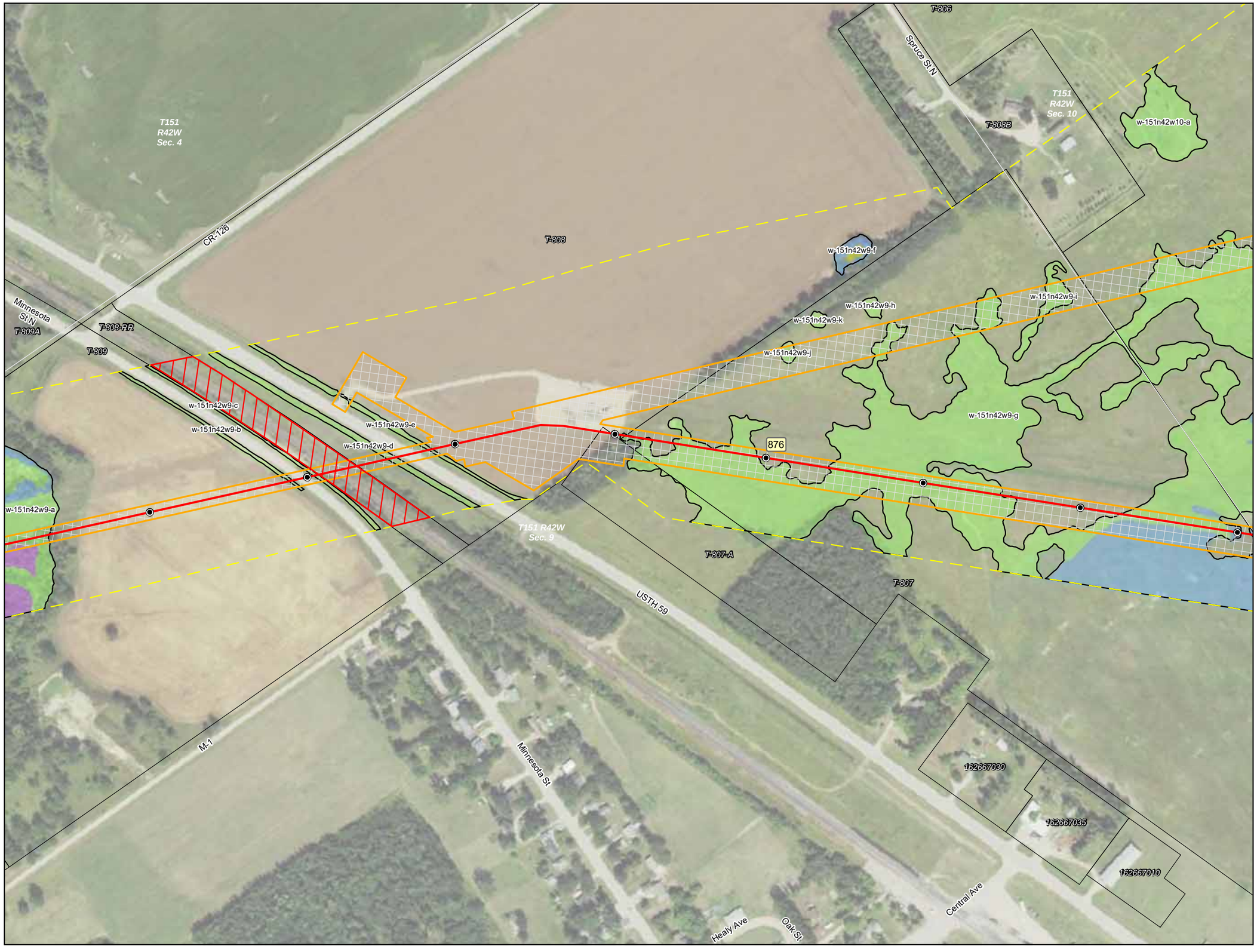

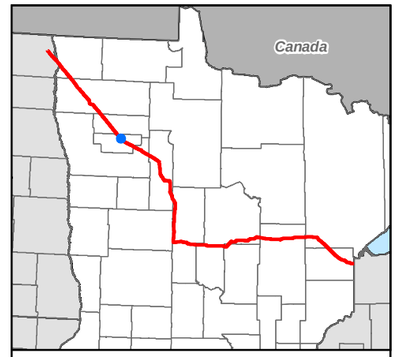

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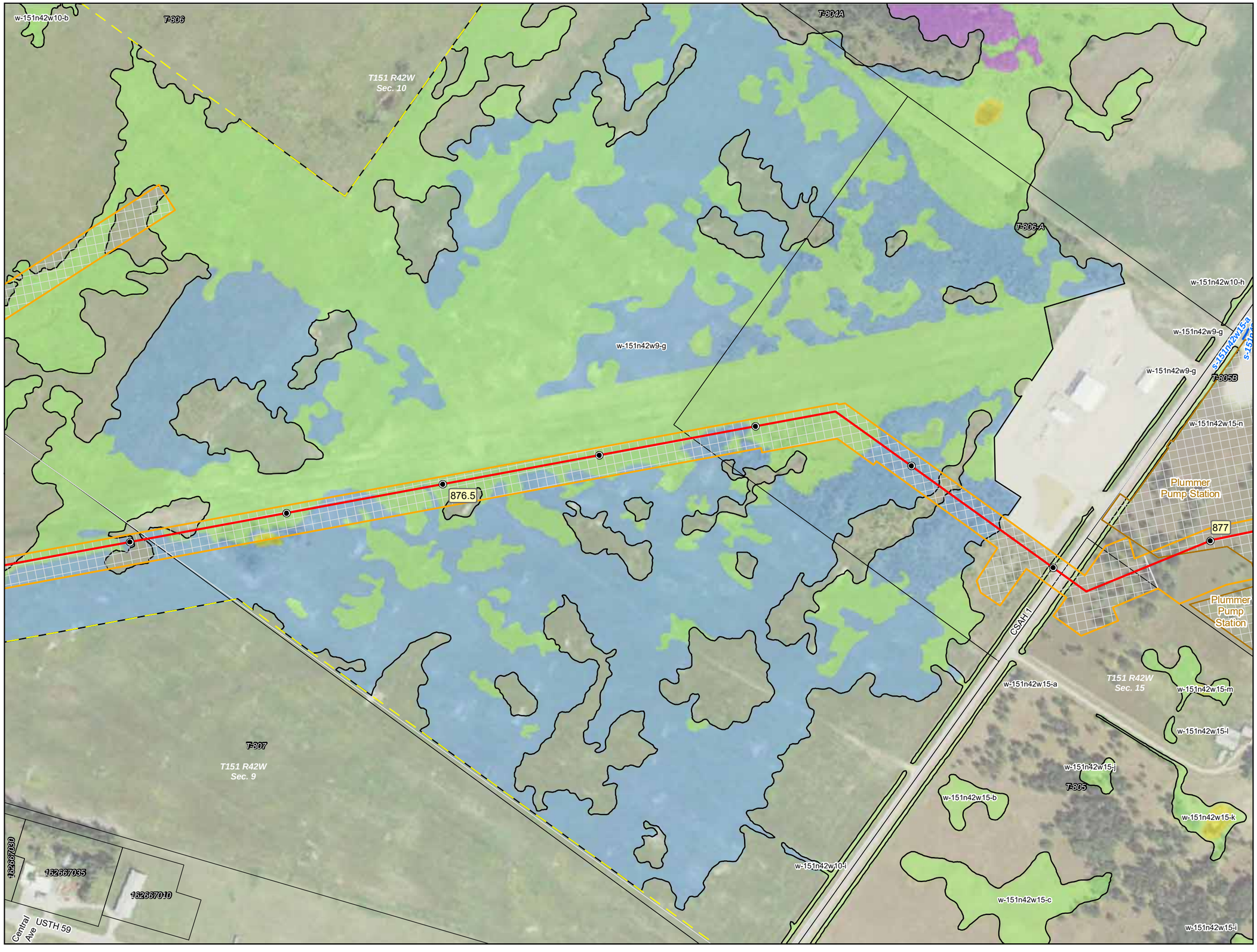

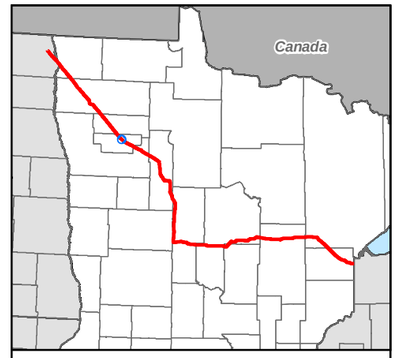

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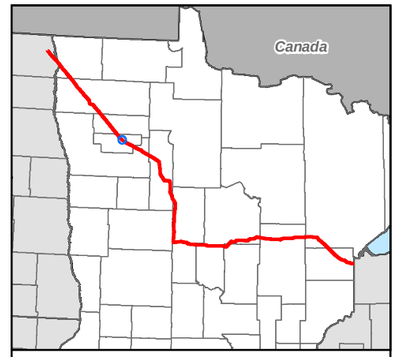

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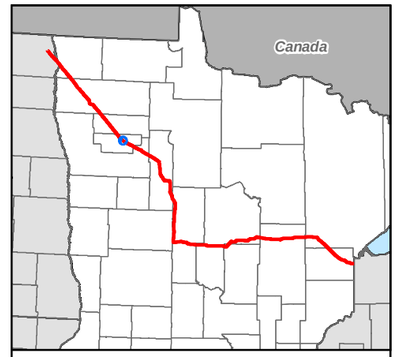

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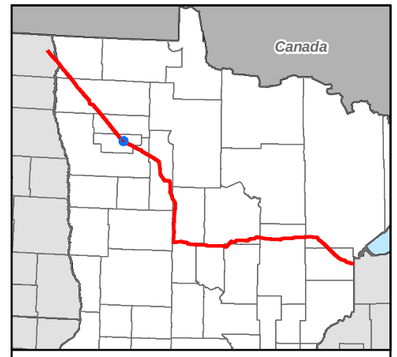

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Red Lake County, Minnesota

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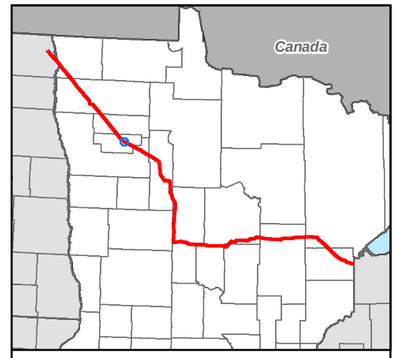

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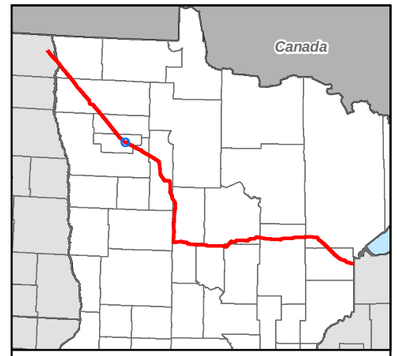

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Red Lake County, Minnesota

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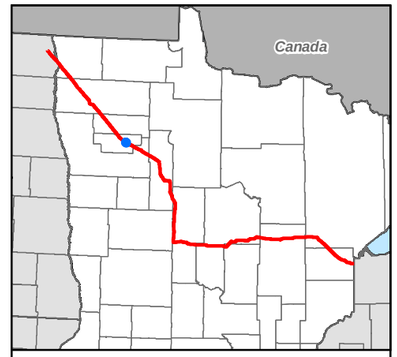

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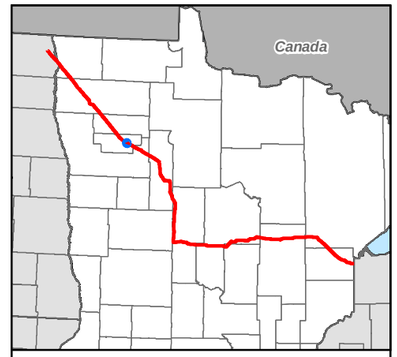

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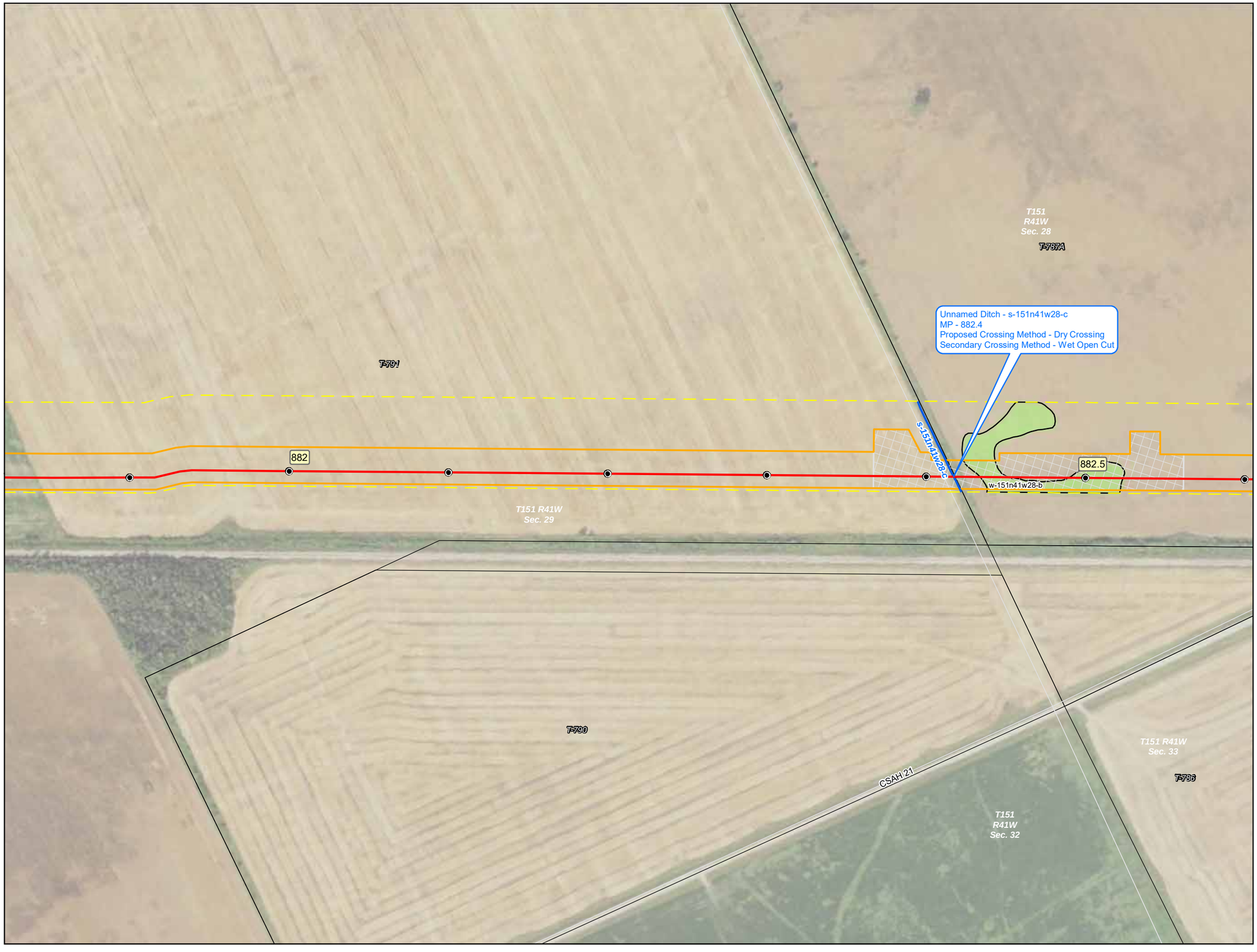

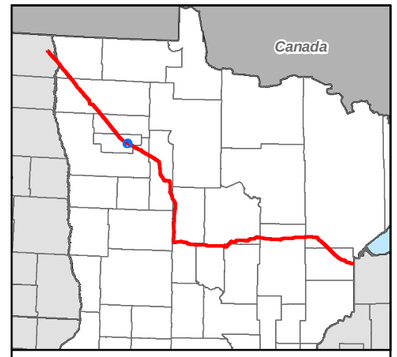

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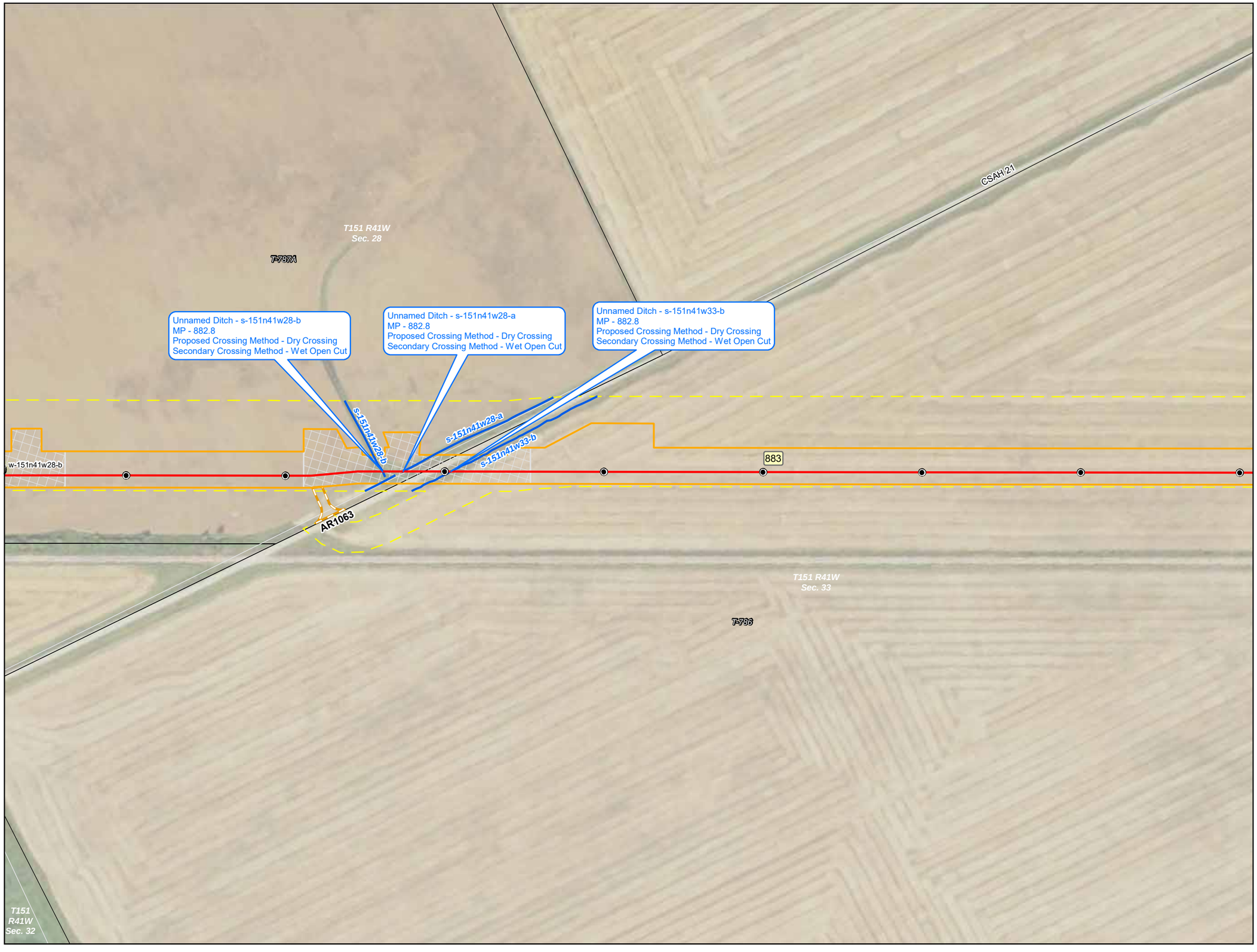

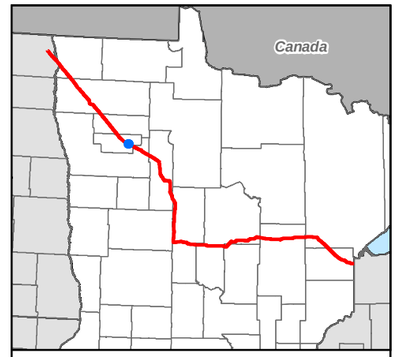

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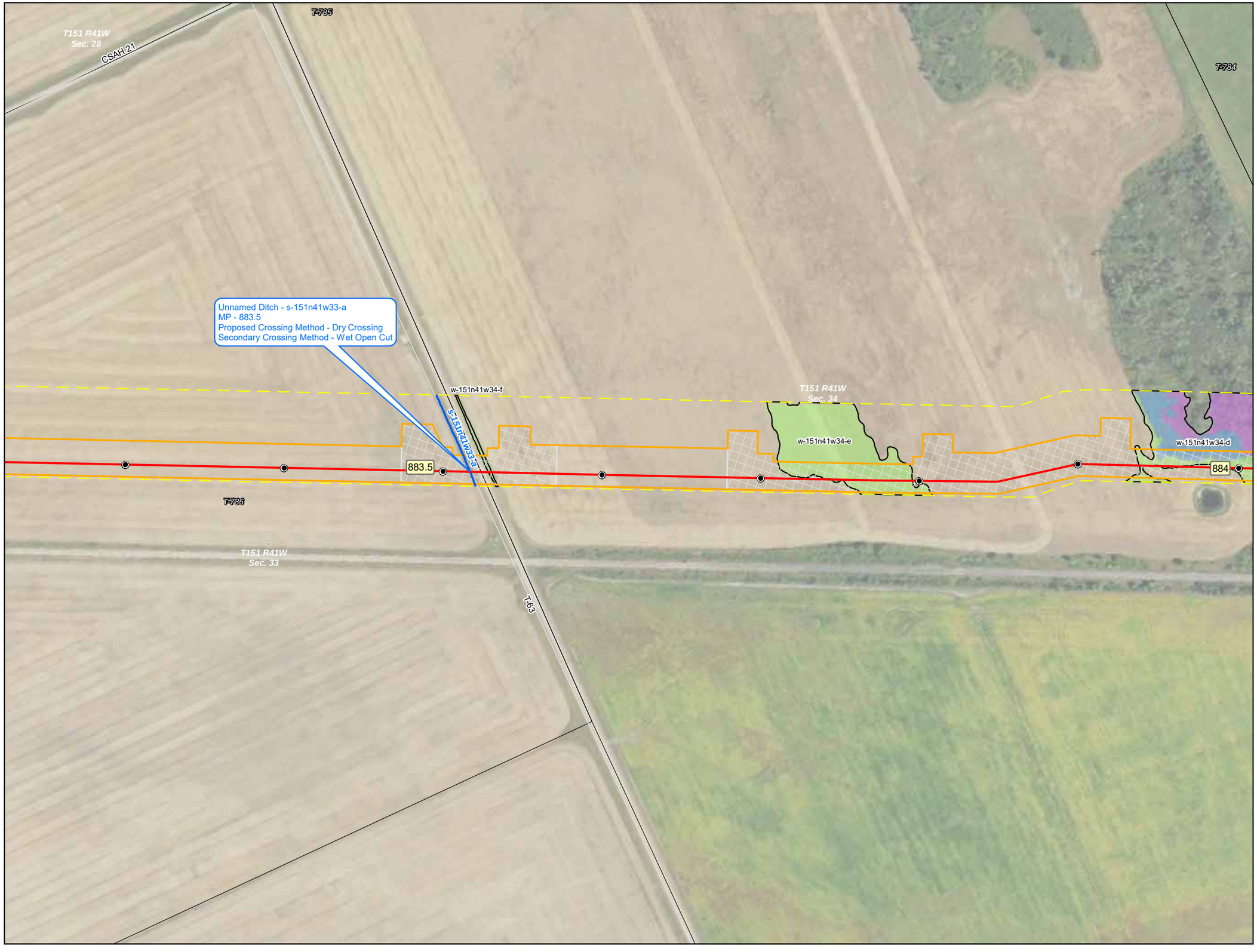

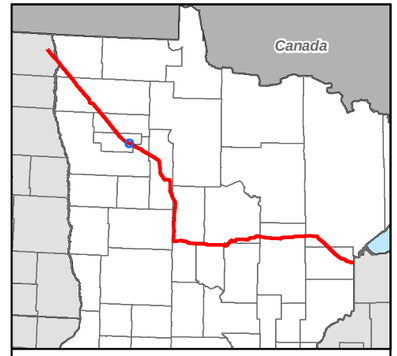

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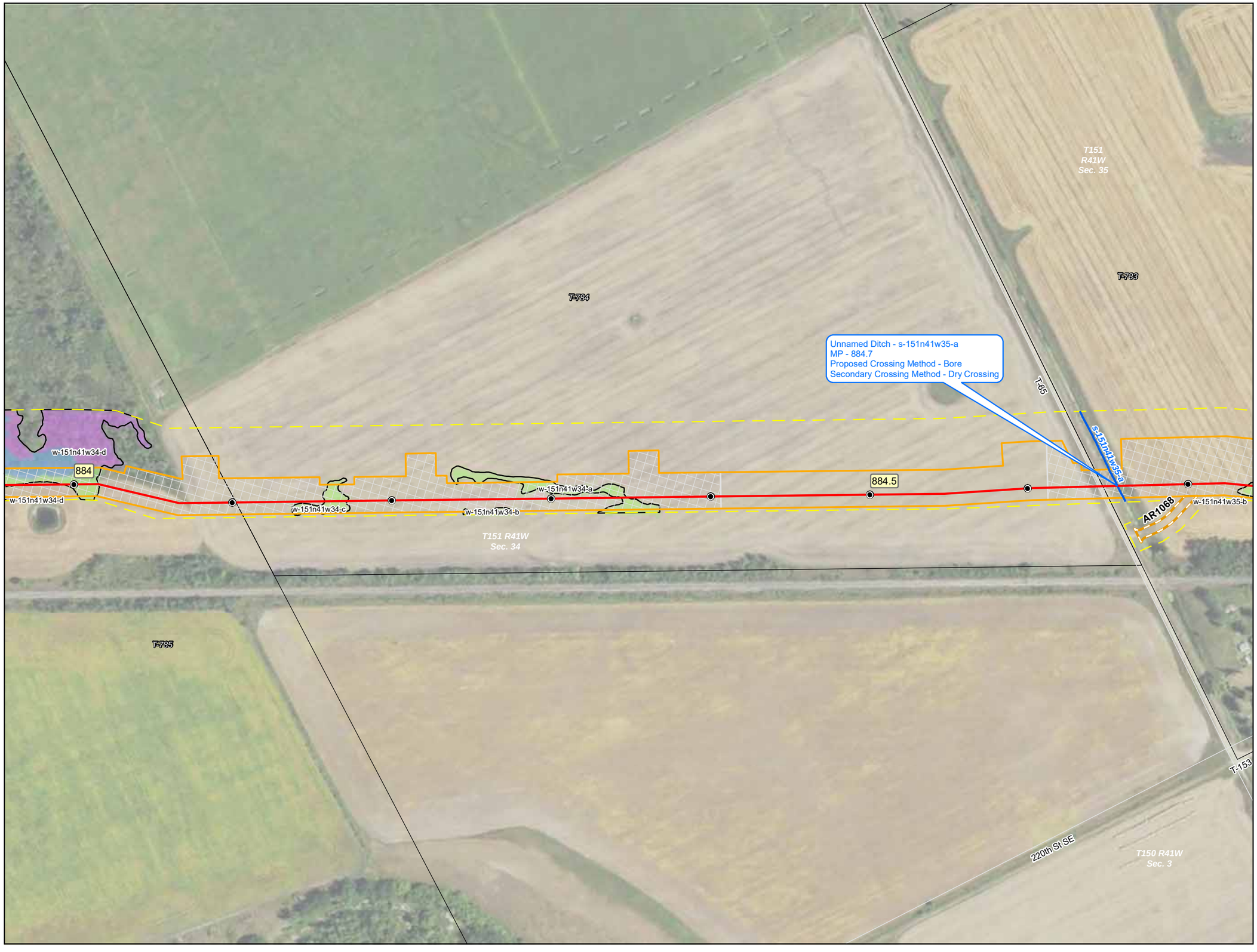

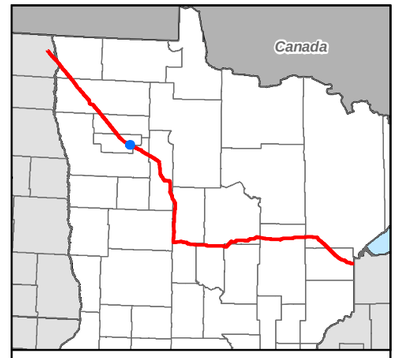

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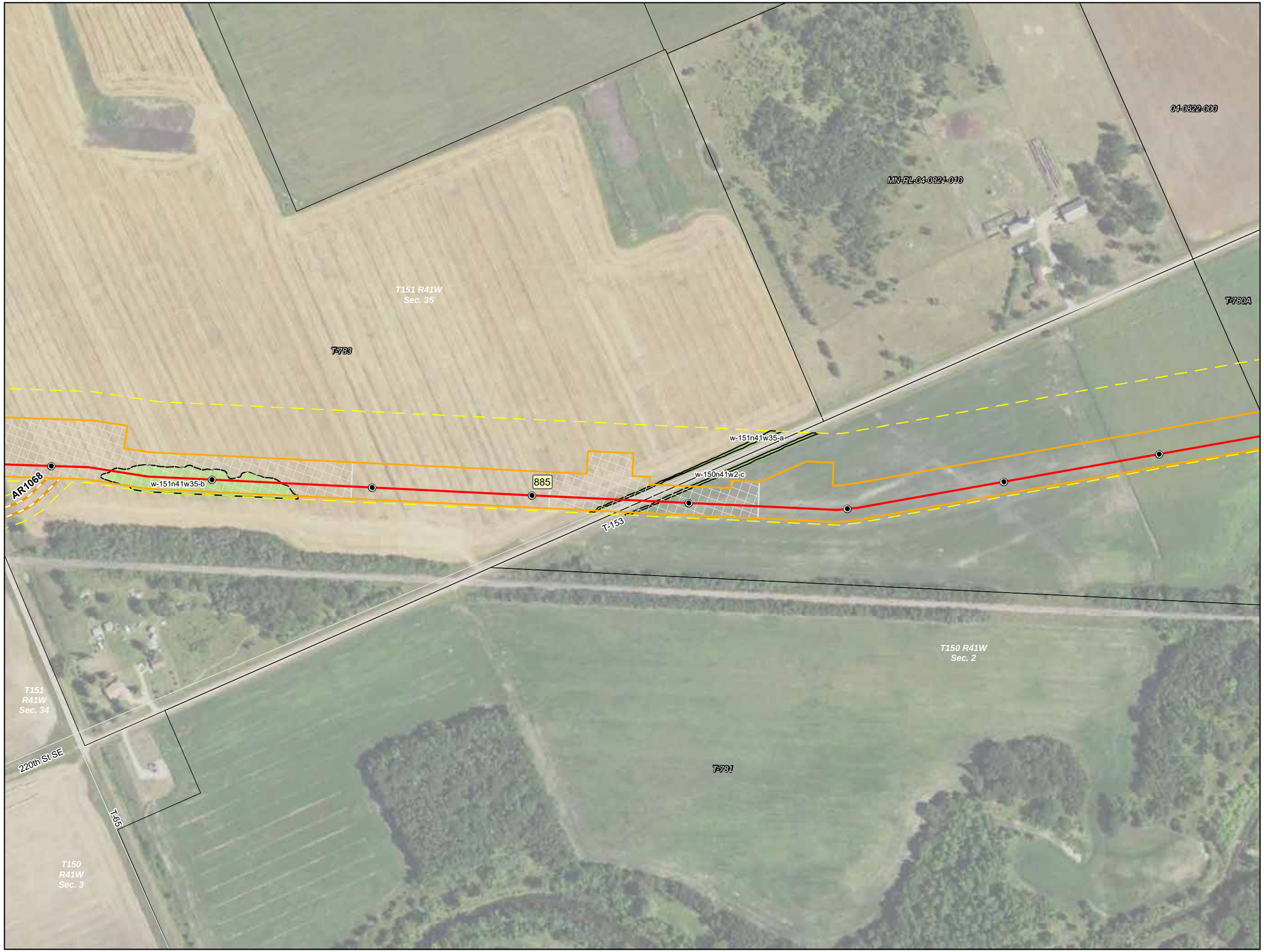

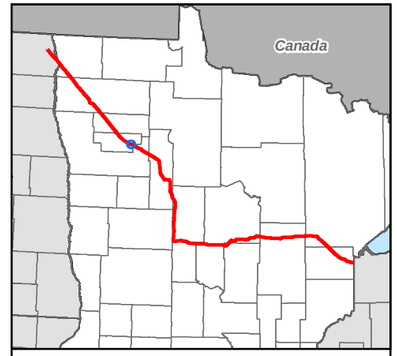

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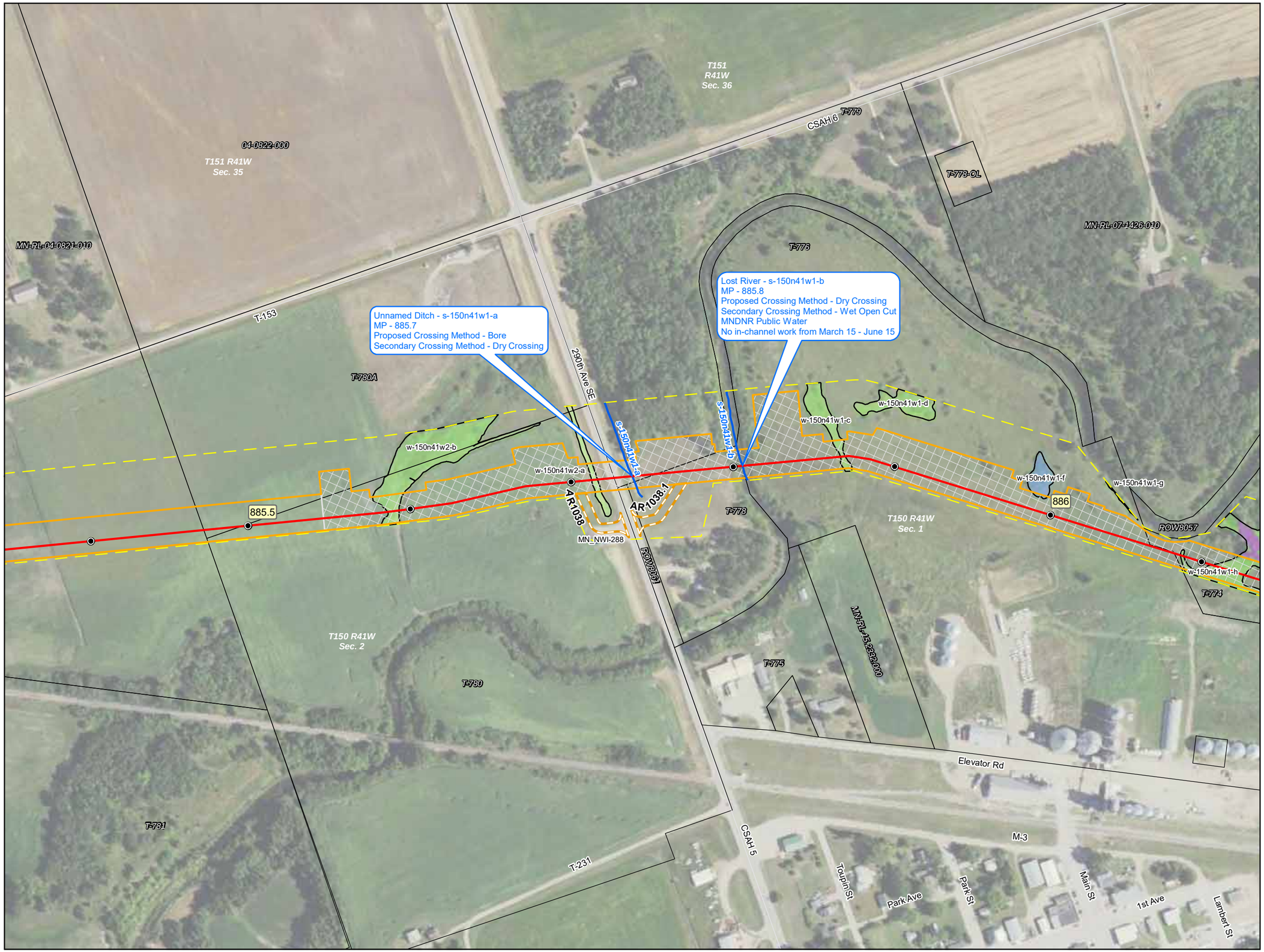

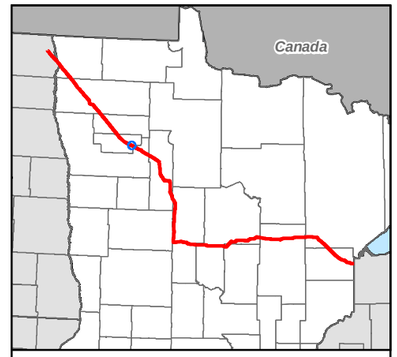

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- Line 3 Centerline
- Construction Workspace
- Access Road
- COE Permit Area
- Survey Corridor
- Field Survey Partially or Not Complete
- Parcel Boundary
- County Boundary
- Section Boundary
- Cathodic Protection
- Valve Location
- Pump Station

Environmental Field Data

Wetlands

Field Delineated Wetland	NWI Wetlands
PEM	PEM
PFO	PFO
PSS	PSS
PUB	PUB

Waterbodies

- Field Delineated Waterbody
- NHD Waterbody

NWI Waterbodies

- Lake
- Riverine

0 150 300 Feet

1 inch = 300 feet

Detailed Route Maps

Line 3 Replacement Project

Red Lake County, Minnesota

ENBRIDGE

Source: Z:\Clients\E_H\Enbridge\Line_3_Full_Replacement\Permitting\Federal\COE\Sept_2018\RSA_22\Figures\L3_MN_COE_Alignment_Sheets_RSA22.mxd
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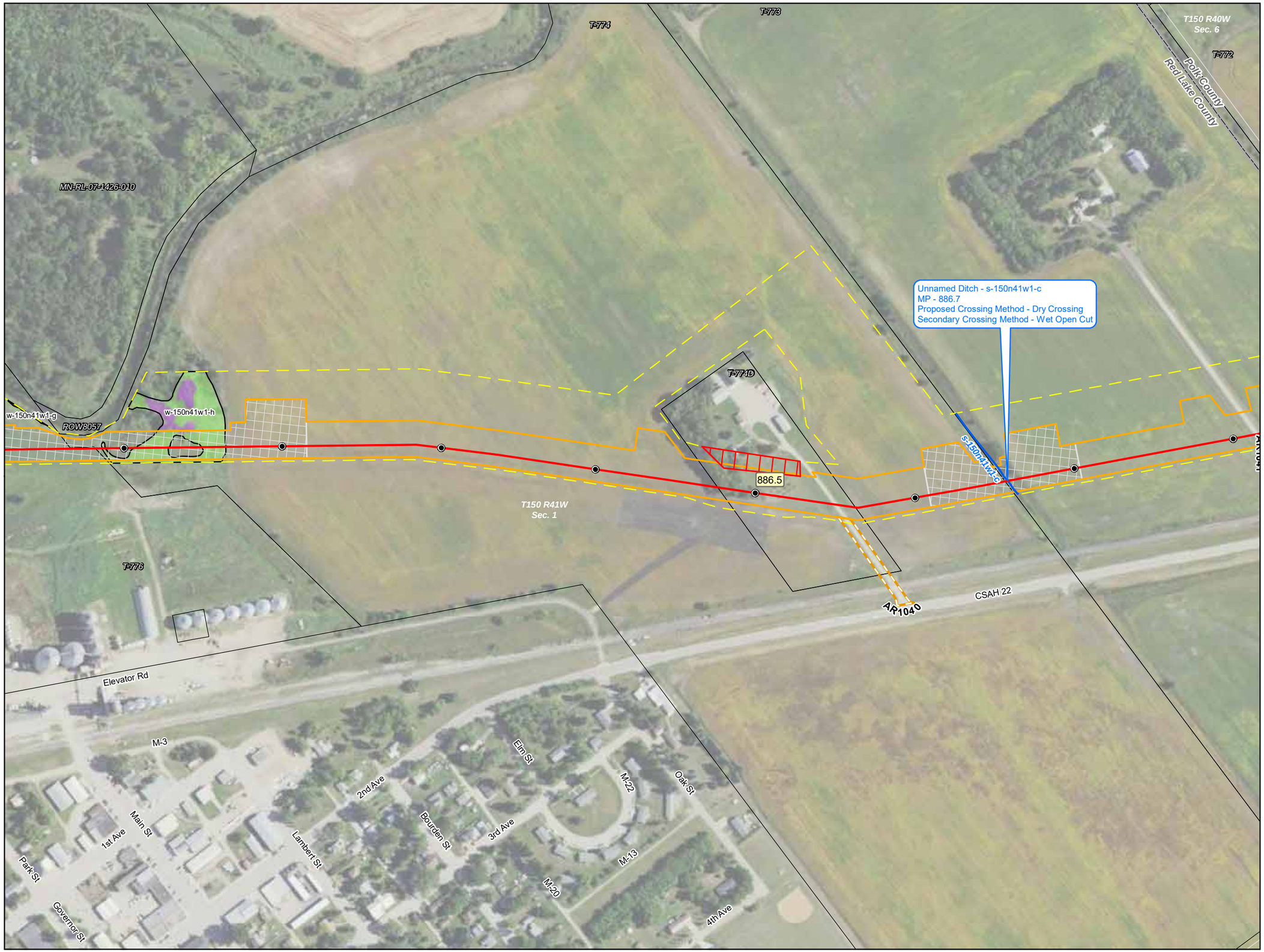

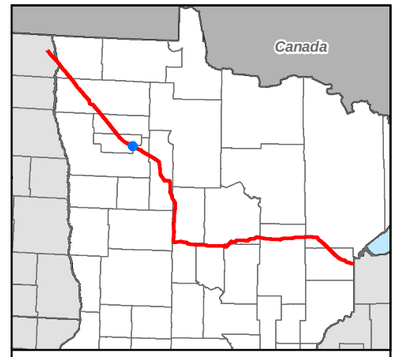

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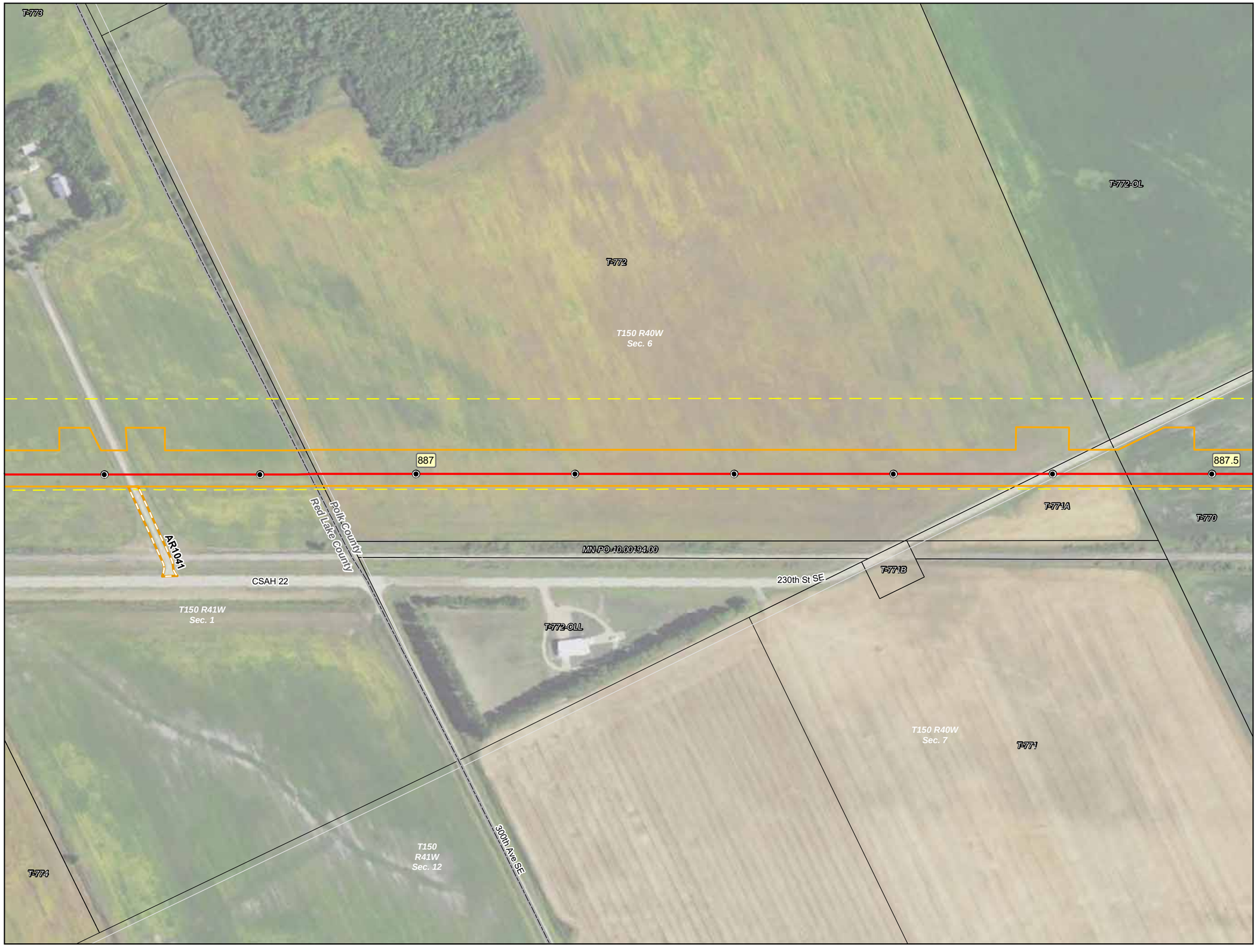
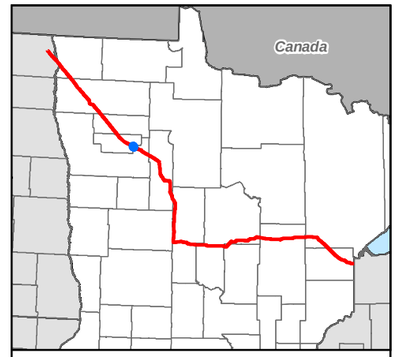
Detailed Route Maps

Line 3 Replacement Project

Red Lake County, Minnesota

ENBRIDGE





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Detailed Route Maps

Line 3 Replacement Project

Red Lake and Polk Counties, Minnesota

ENBRIDGE

T150 R40W Sec. 5

T772-OL

T150 R40W Sec. 6

230th St SE

T-769

T150 R40W Sec. 8

Unnamed Ditch - s-150n40w7-a
MP - 888.0
Proposed Crossing Method - Dry Crossing
Secondary Crossing Method - Wet Open Cut

Unnamed Ditch - s-150n40w8-a
MP - 888.0
Proposed Crossing Method - Dry Crossing
Secondary Crossing Method - Wet Open Cut

310th Ave SE

s-150n40w7-a

s-150n40w8-a

887.5

888

T-769A

T-771A

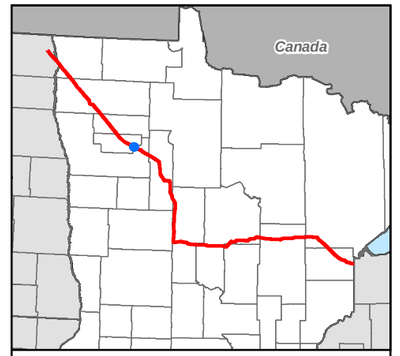
MN-PO-10.00194.00

T-770

T150 R40W Sec. 7

T-768-2

T-771



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Detailed Route Maps

Line 3 Replacement Project

Polk County, Minnesota

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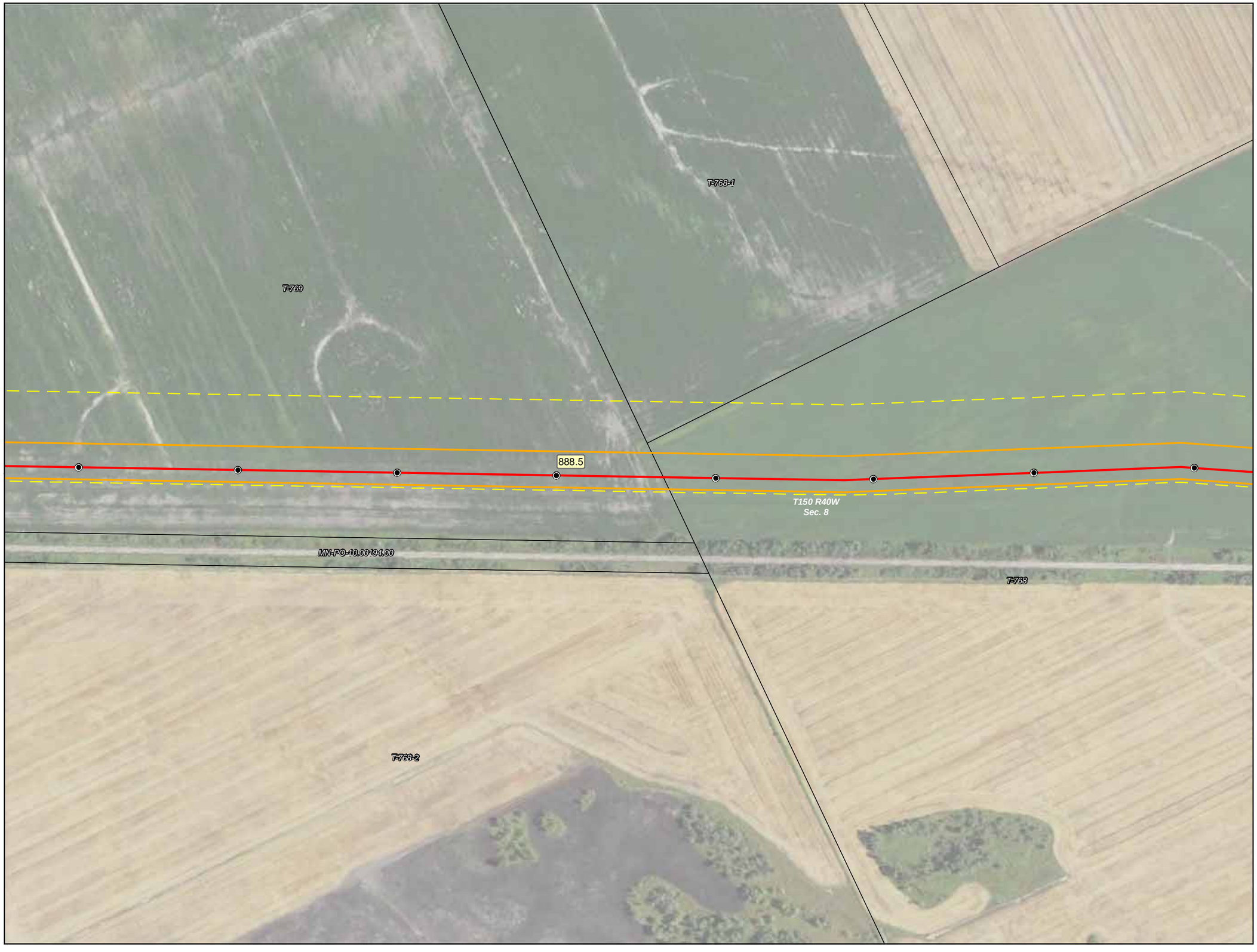

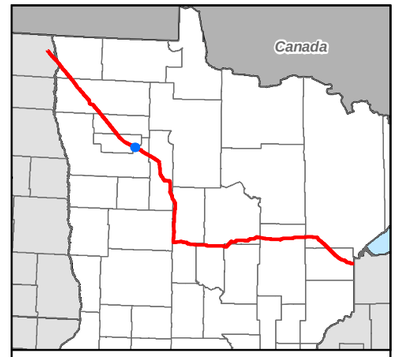

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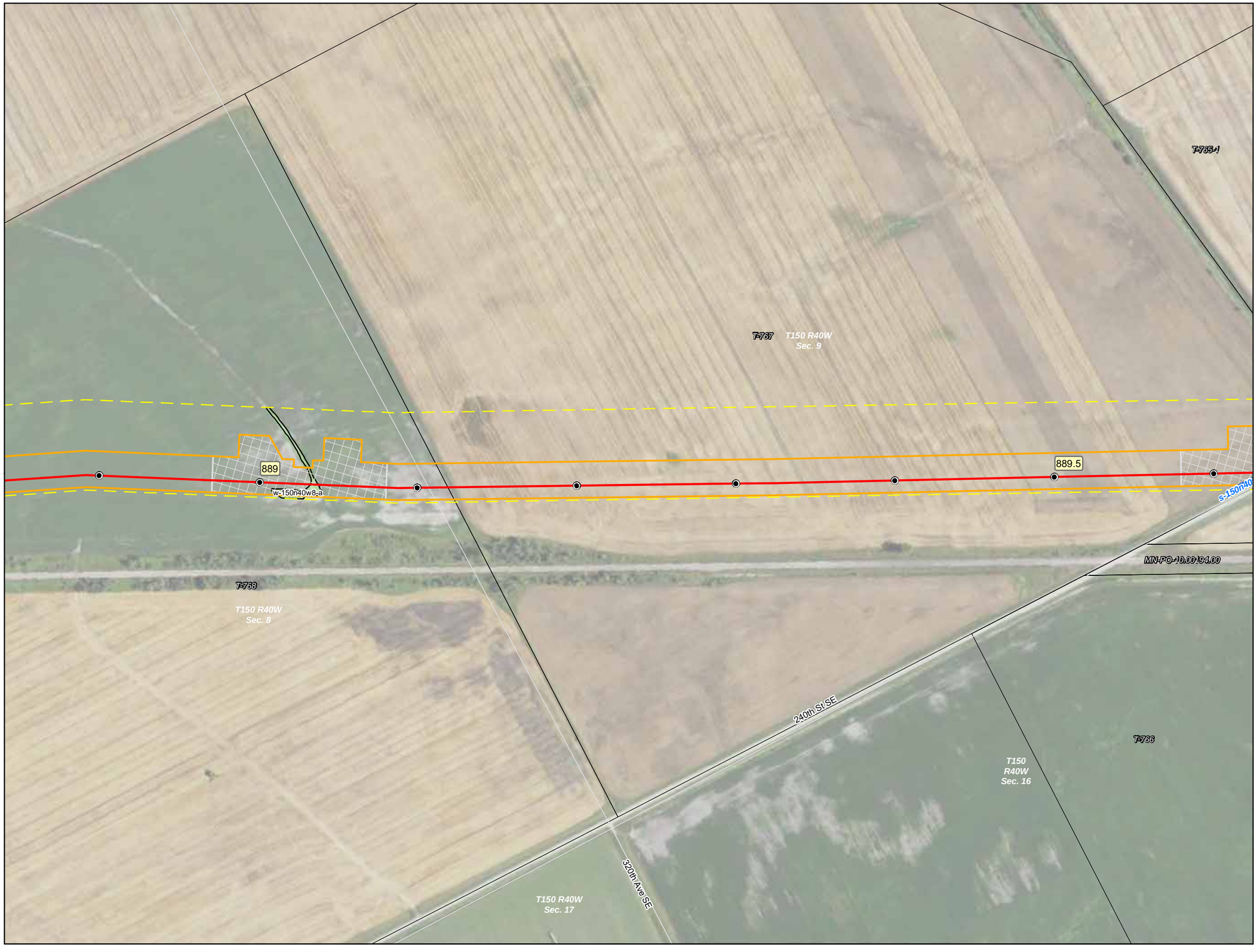
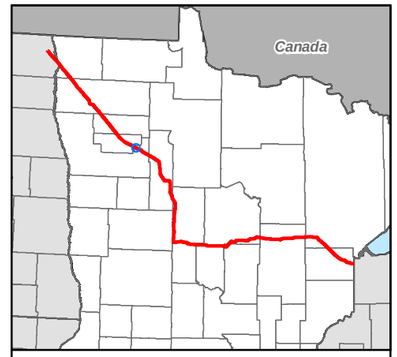
Detailed Route Maps

Line 3 Replacement Project

Polk County, Minnesota

ENBRIDGE





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Detailed Route Maps

Line 3 Replacement Project

Polk County, Minnesota

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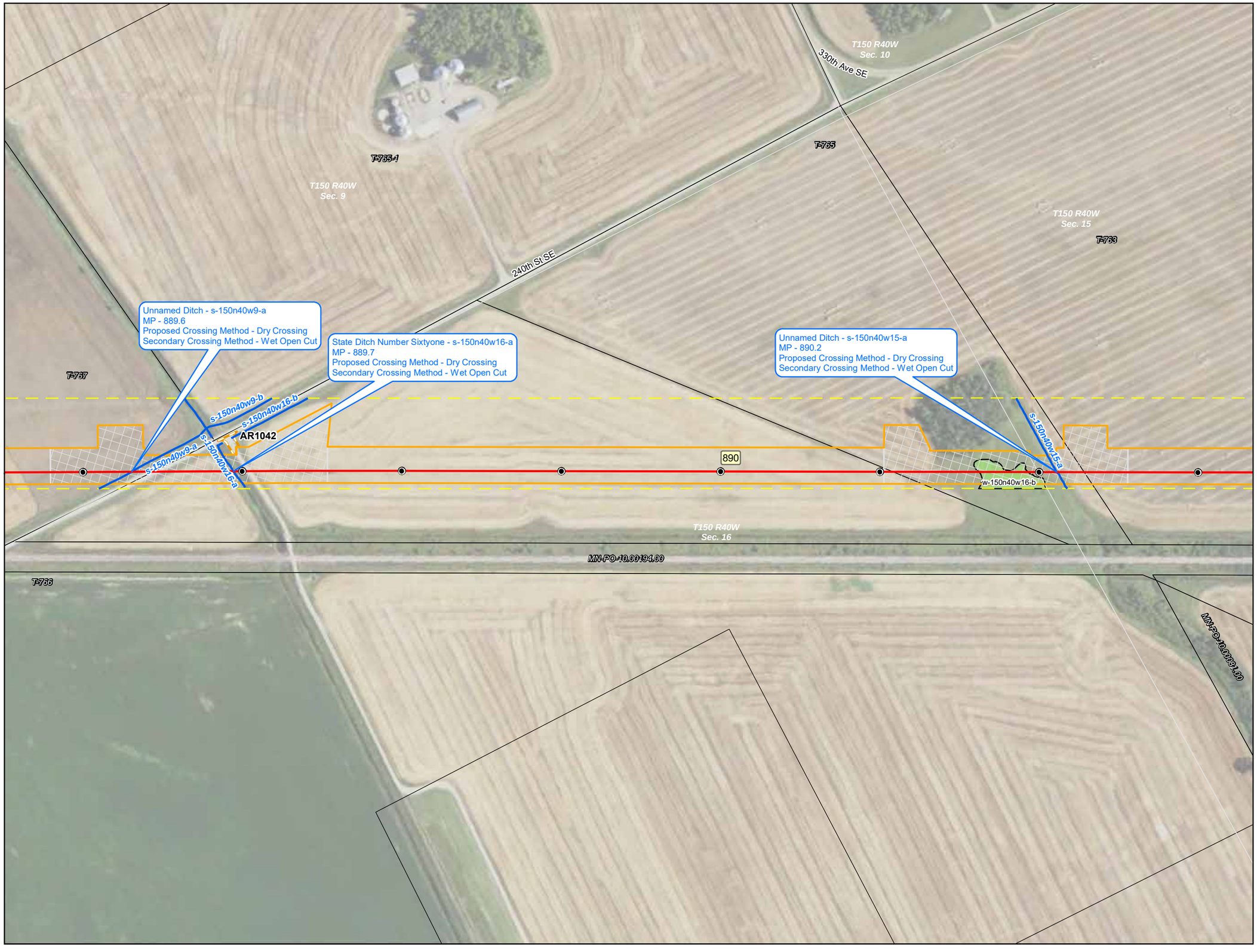

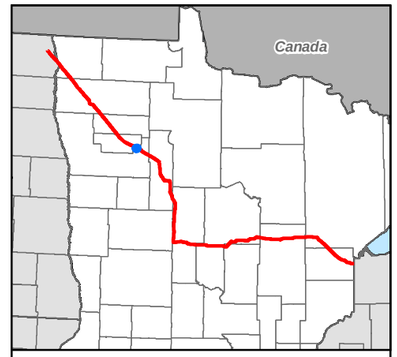

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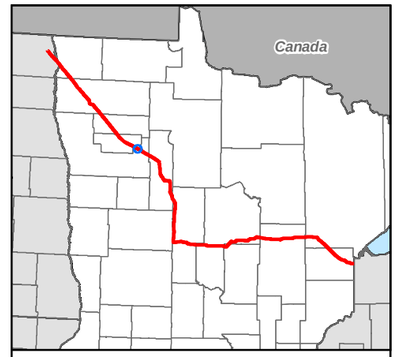
Detailed Route Maps

Line 3 Replacement Project

Polk County, Minnesota

ENBRIDGE



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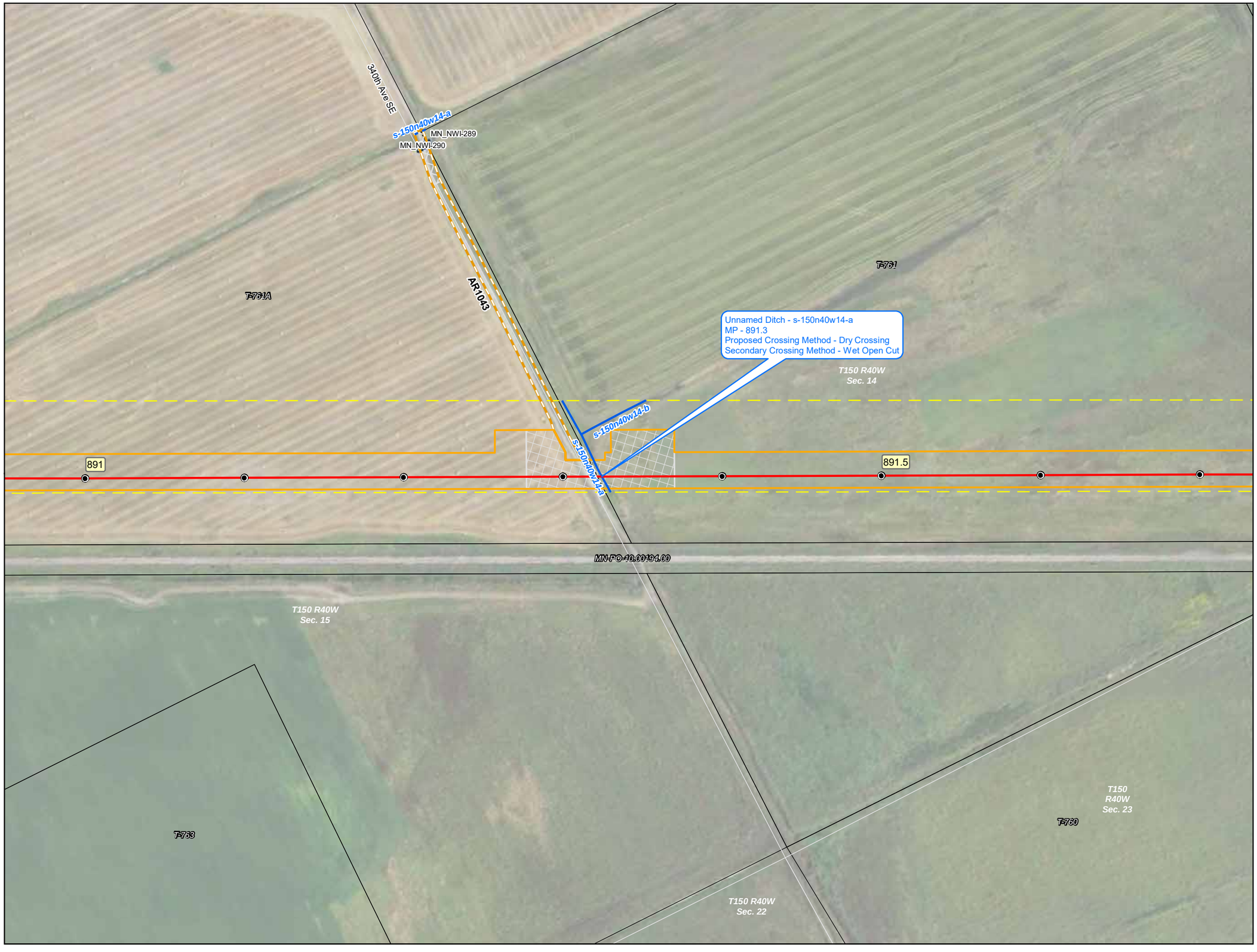
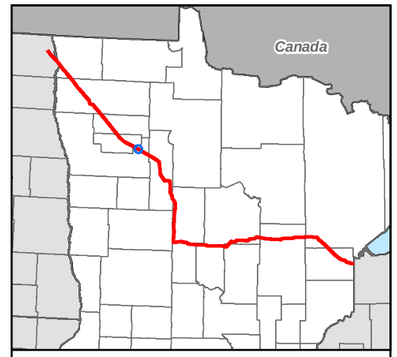
Detailed Route Maps

Line 3 Replacement Project

Polk County, Minnesota

ENBRIDGE





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Detailed Route Maps

Line 3 Replacement Project

Polk County, Minnesota

ENBRIDGE

T150 R40W
Sec. 13

T150
R40W
Sec. 24

T-760-1

T-759

Trail Rd SE

T-758-1

T150 R40W
Sec. 14

T-761

AR1044

S-150n40w23-a

w-150n40w23-b

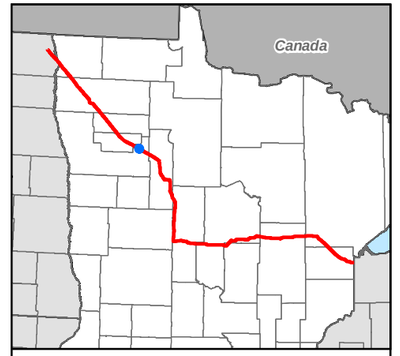
w-150n40w23-a

892

MN-PO-10.00194.00

T150 R40W
Sec. 23

T-760



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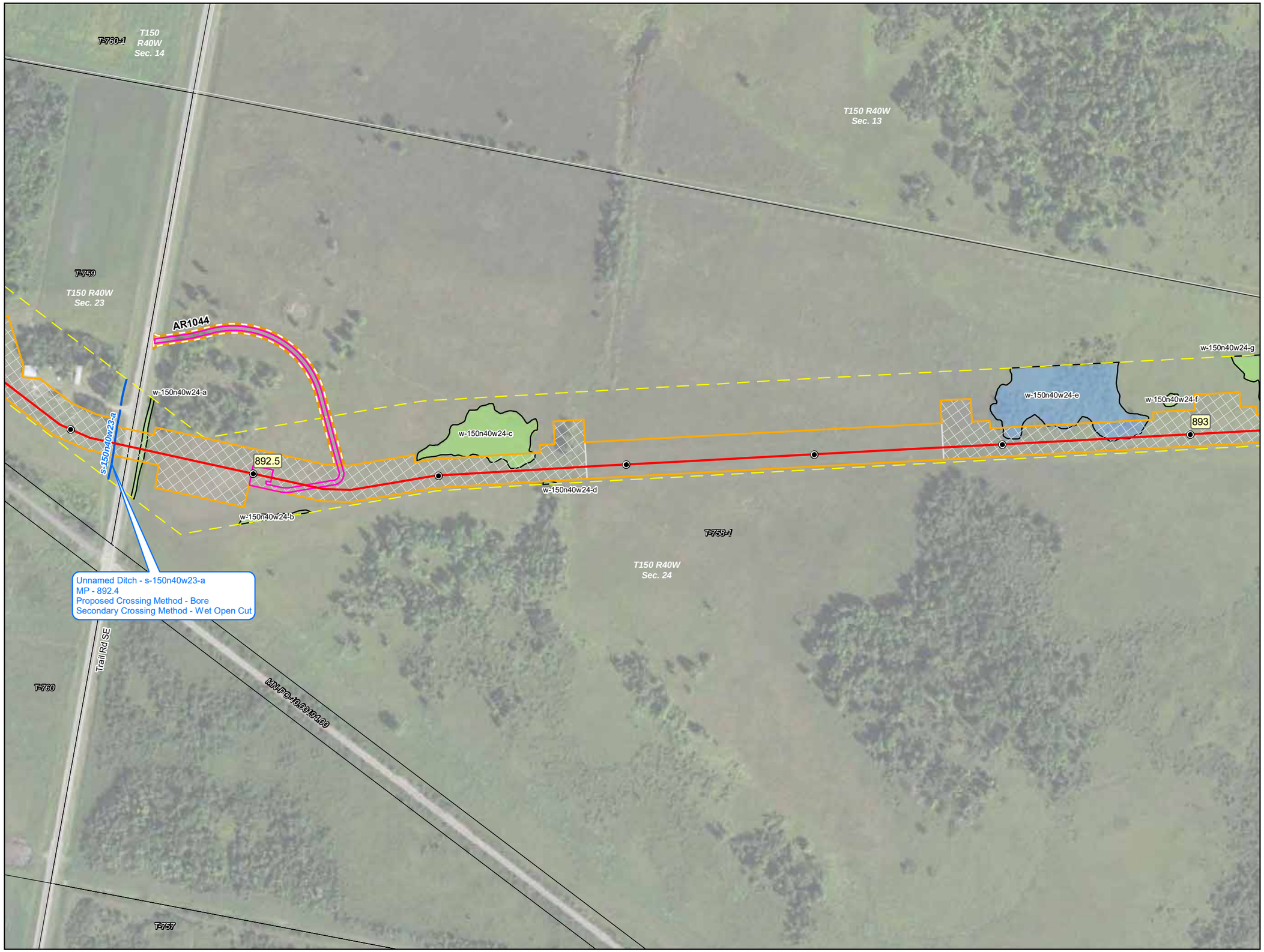
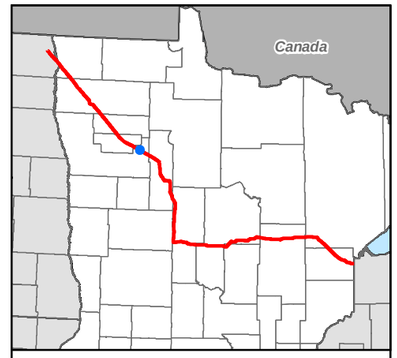
Detailed Route Maps

Line 3 Replacement Project

Polk County, Minnesota

ENBRIDGE





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N W E S

Detailed Route Maps

Line 3 Replacement Project

Polk County, Minnesota

ENBRIDGE

T-754-1-1A

T150
R39W
Sec. 18

T150
R40W
Sec. 13

Unnamed Ditch - s-150n39w19-a
MP - 893.3
Proposed Crossing Method - Dry Crossing
Secondary Crossing Method - Wet Open Cut

w-150n39w19-a

s-150n39w19-b

s-150n39w19-a

T150 R39W
Sec. 19

893.5

w-150n40w24-h

T-757-1

w-150n39w19-b

w-150n40w24-g

T150 R40W
Sec. 24

w-150n40w24-f

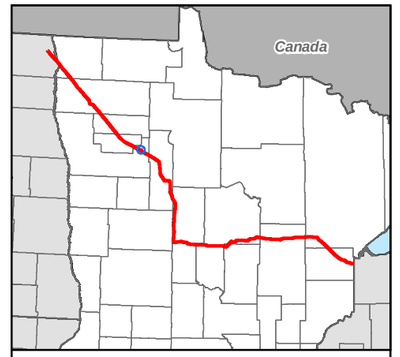
893

w-150n40w24-e

T-758-1

T-757

s-150n39w19-c



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Detailed Route Maps

Line 3 Replacement Project

Polk County, Minnesota

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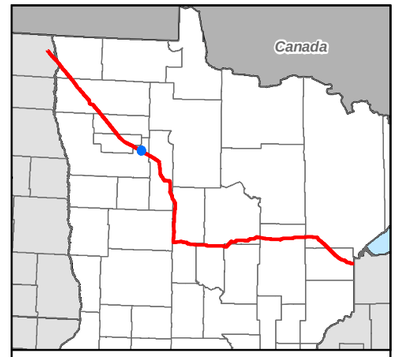

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Detailed Route Maps

Line 3 Replacement Project

Polk County, Minnesota

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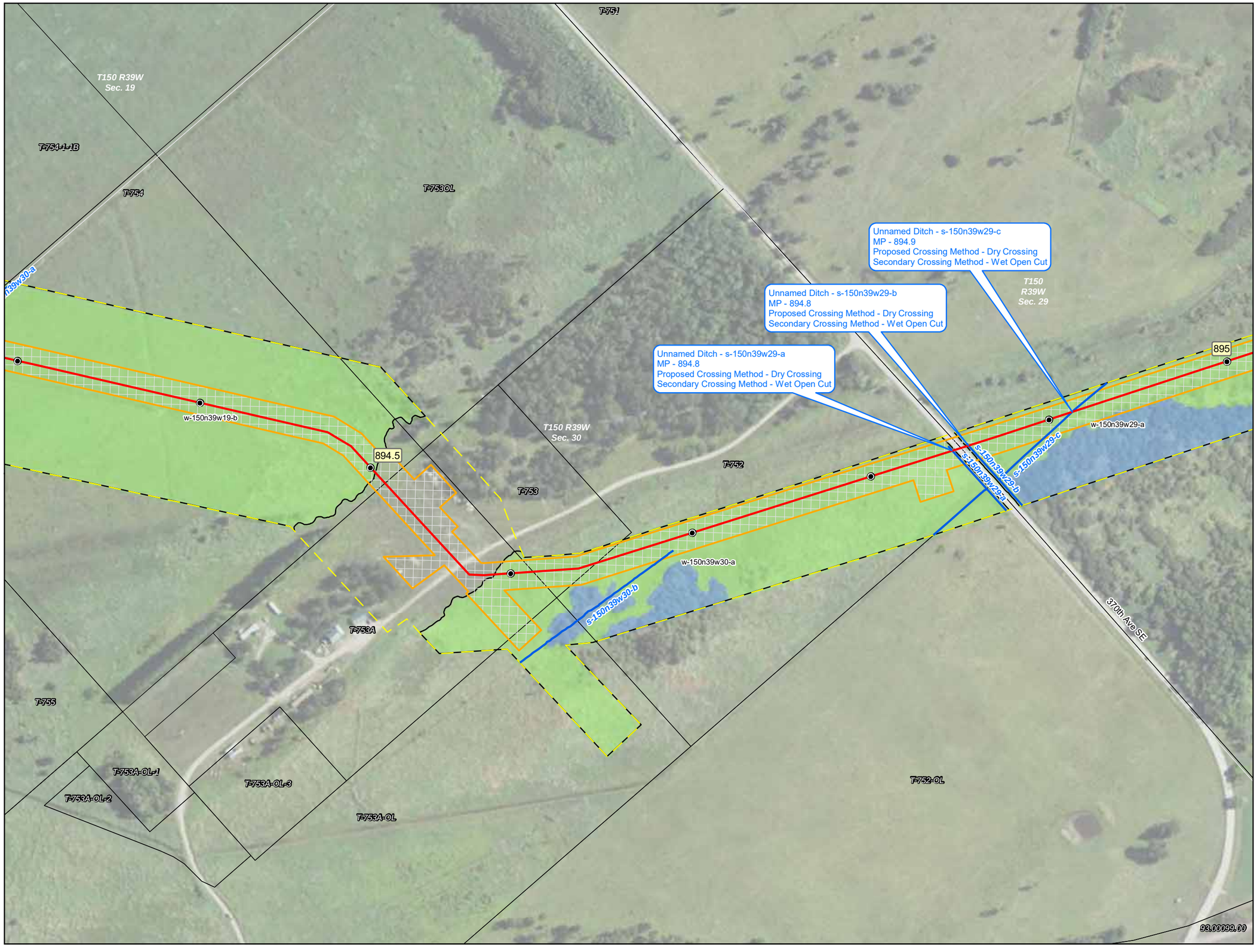

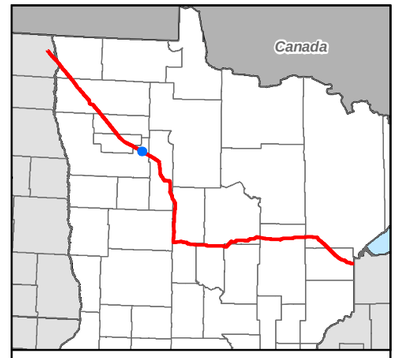

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Polk County, Minnesota

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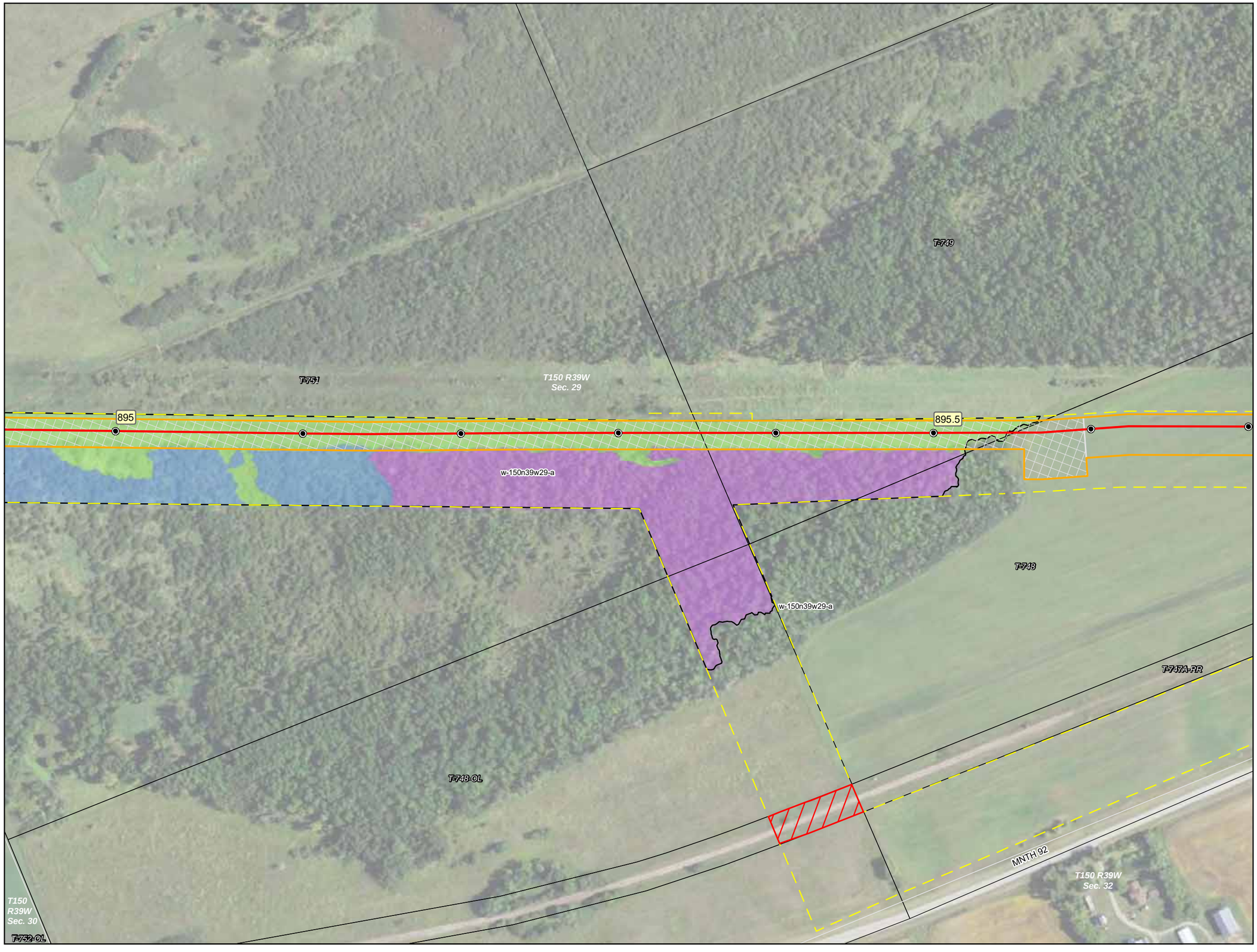

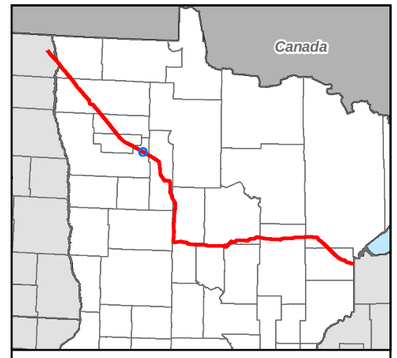

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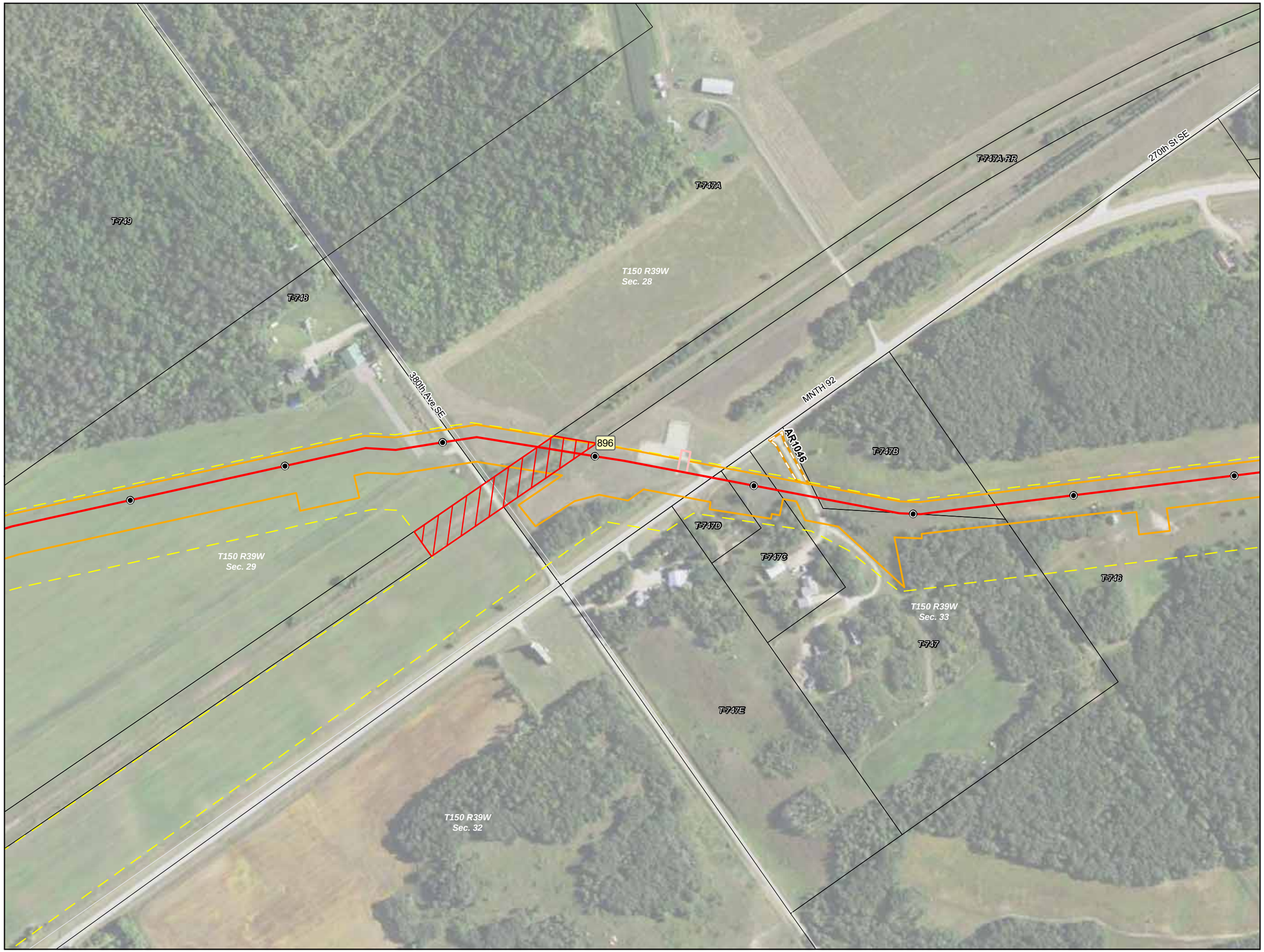

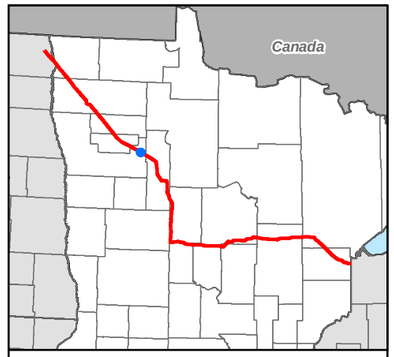

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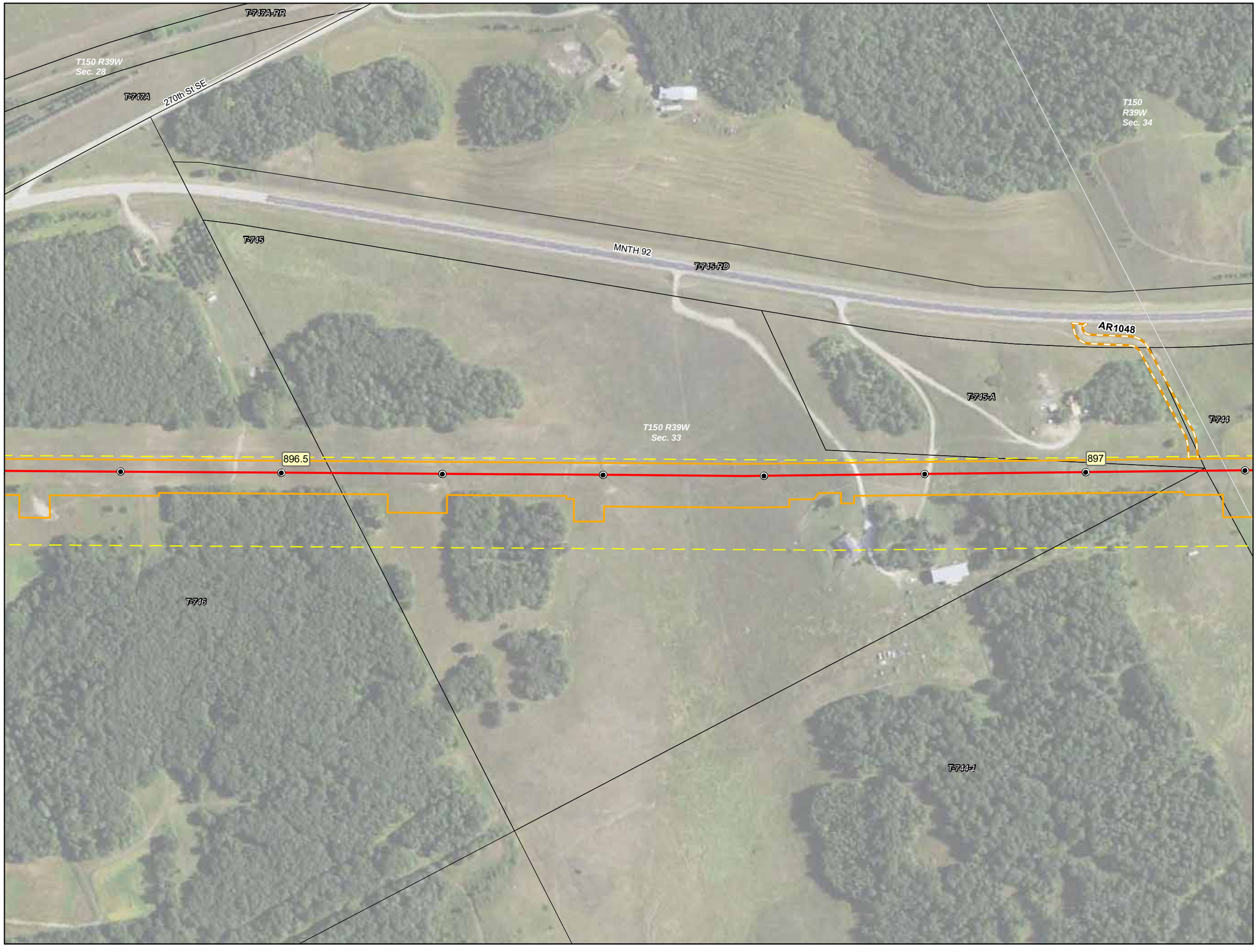

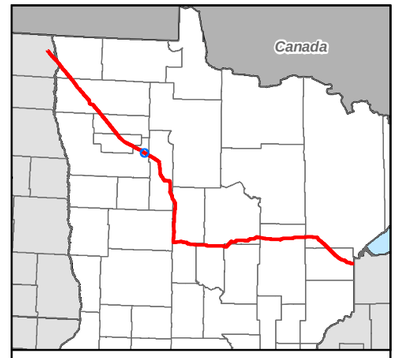

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PEM	PEM
PFO	PFO
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PUB	PUB

Waterbodies

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- NHD Waterbody

NWI Waterbodies

- Lake
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0 150 300 Feet

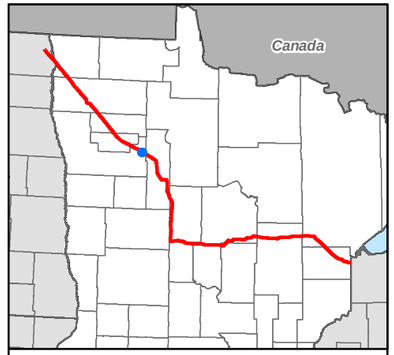
1 inch = 300 feet

Detailed Route Maps

Line 3 Replacement Project

Polk County, Minnesota

ENBRIDGE



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Polk County, Minnesota

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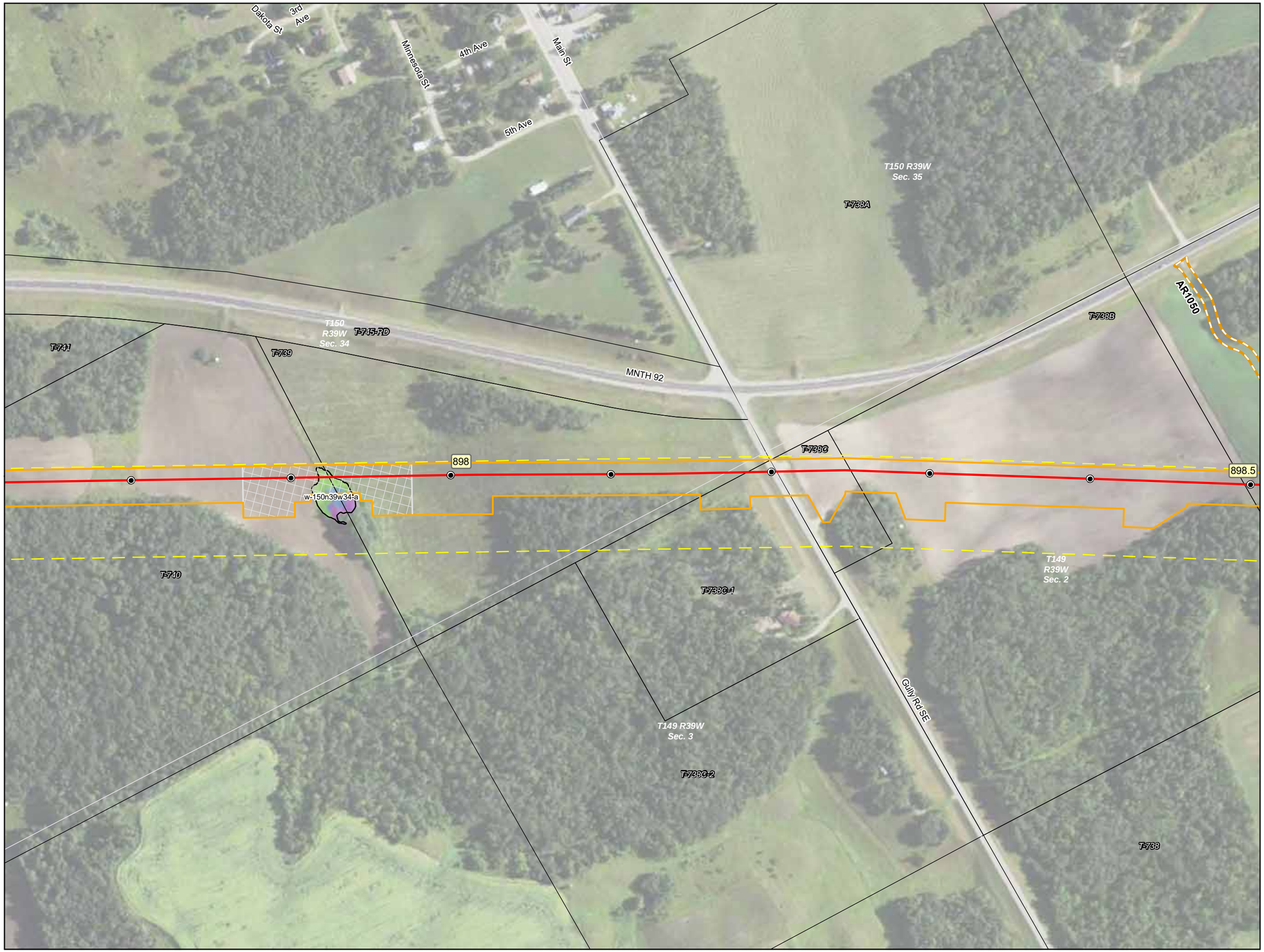

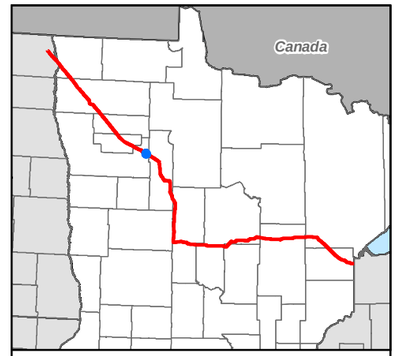

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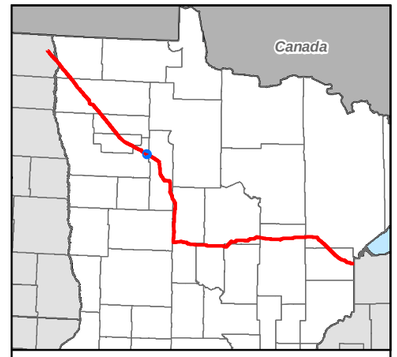

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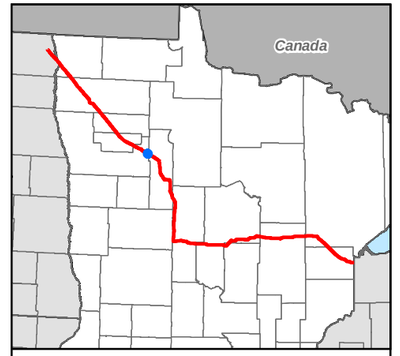

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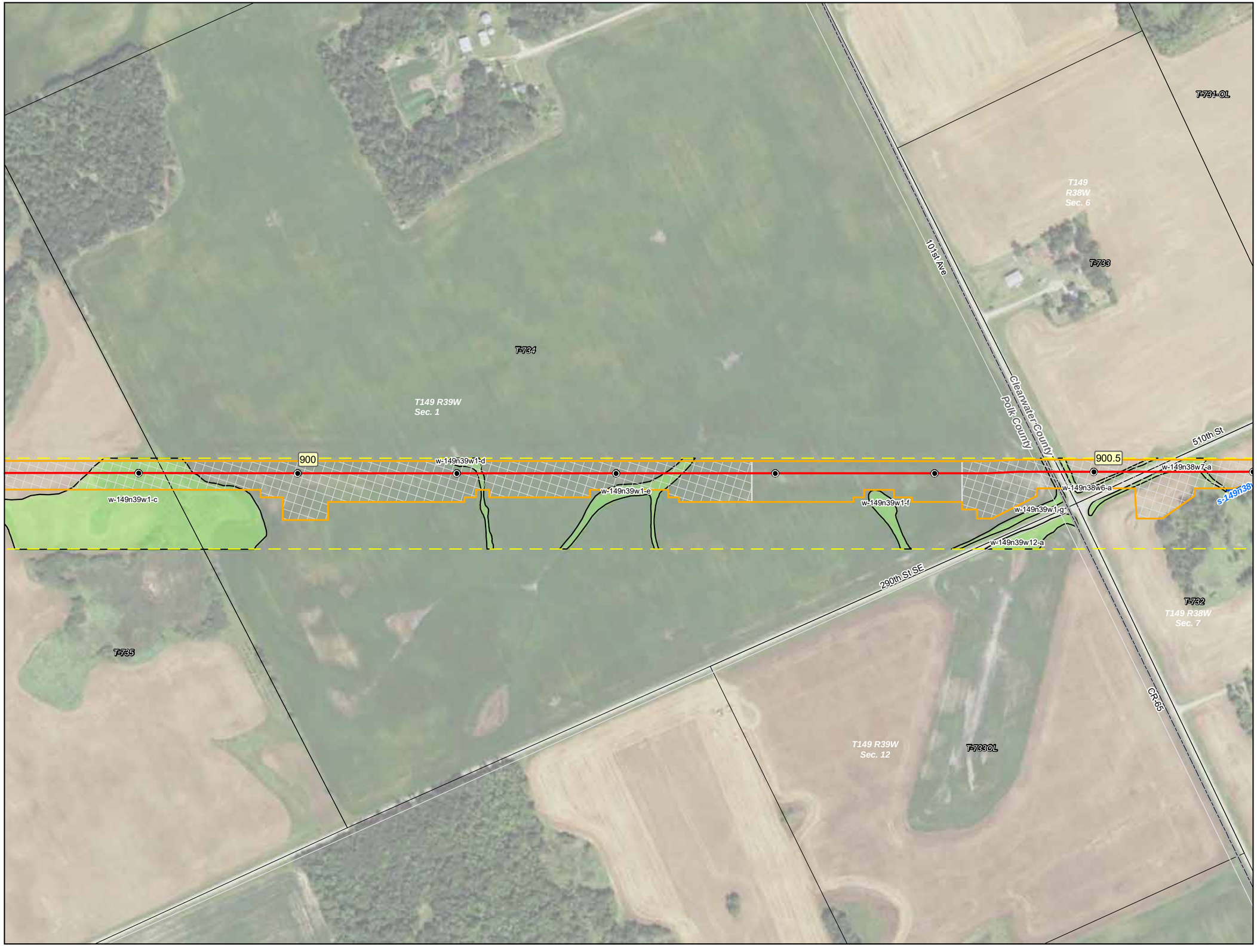

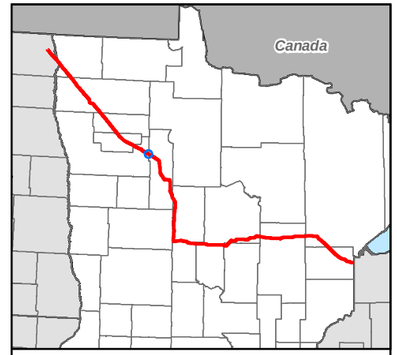

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Line 3 Replacement Project

Polk and Clearwater Counties, Minnesota

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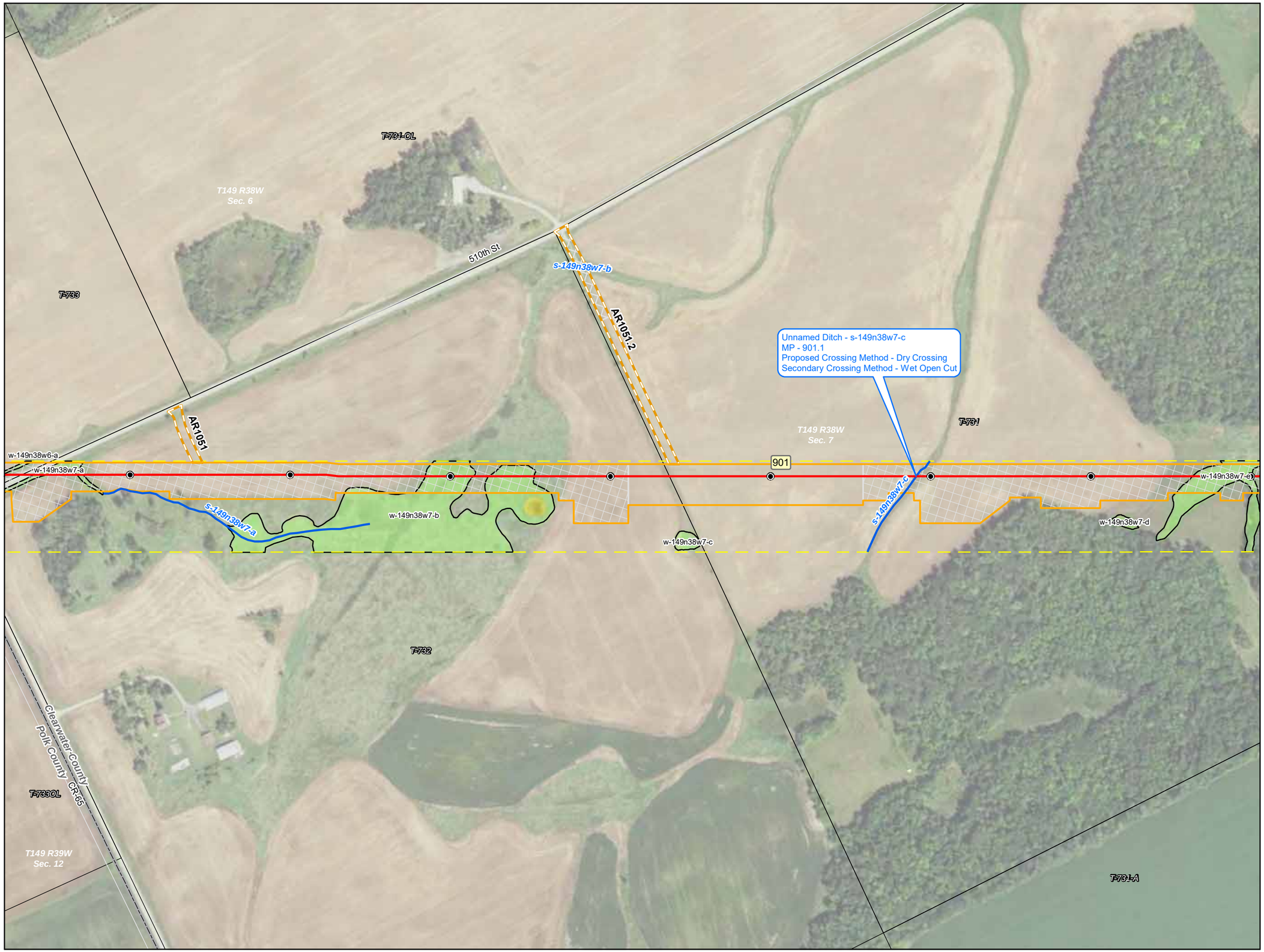

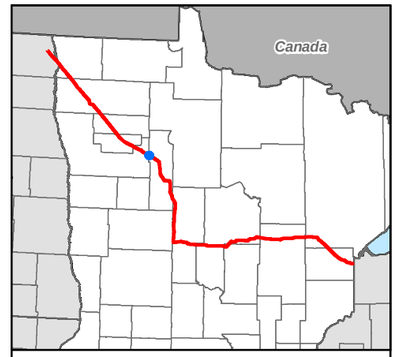

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Clearwater County, Minnesota

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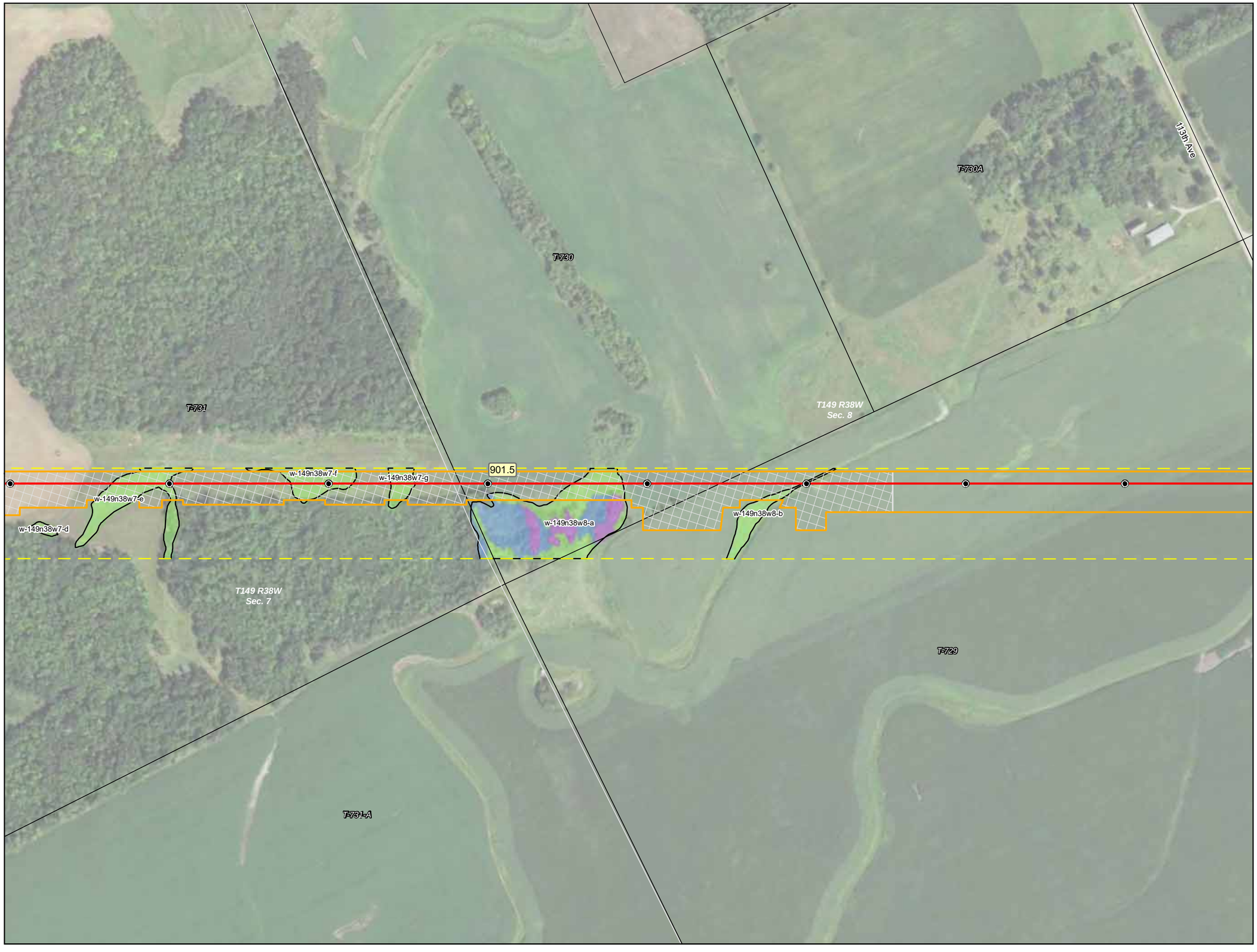

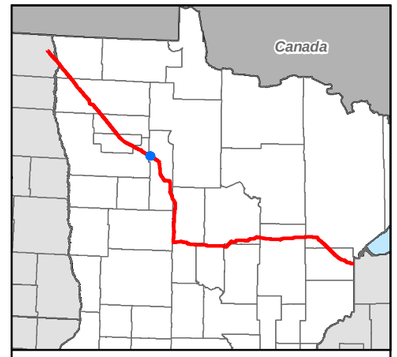

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Clearwater County, Minnesota

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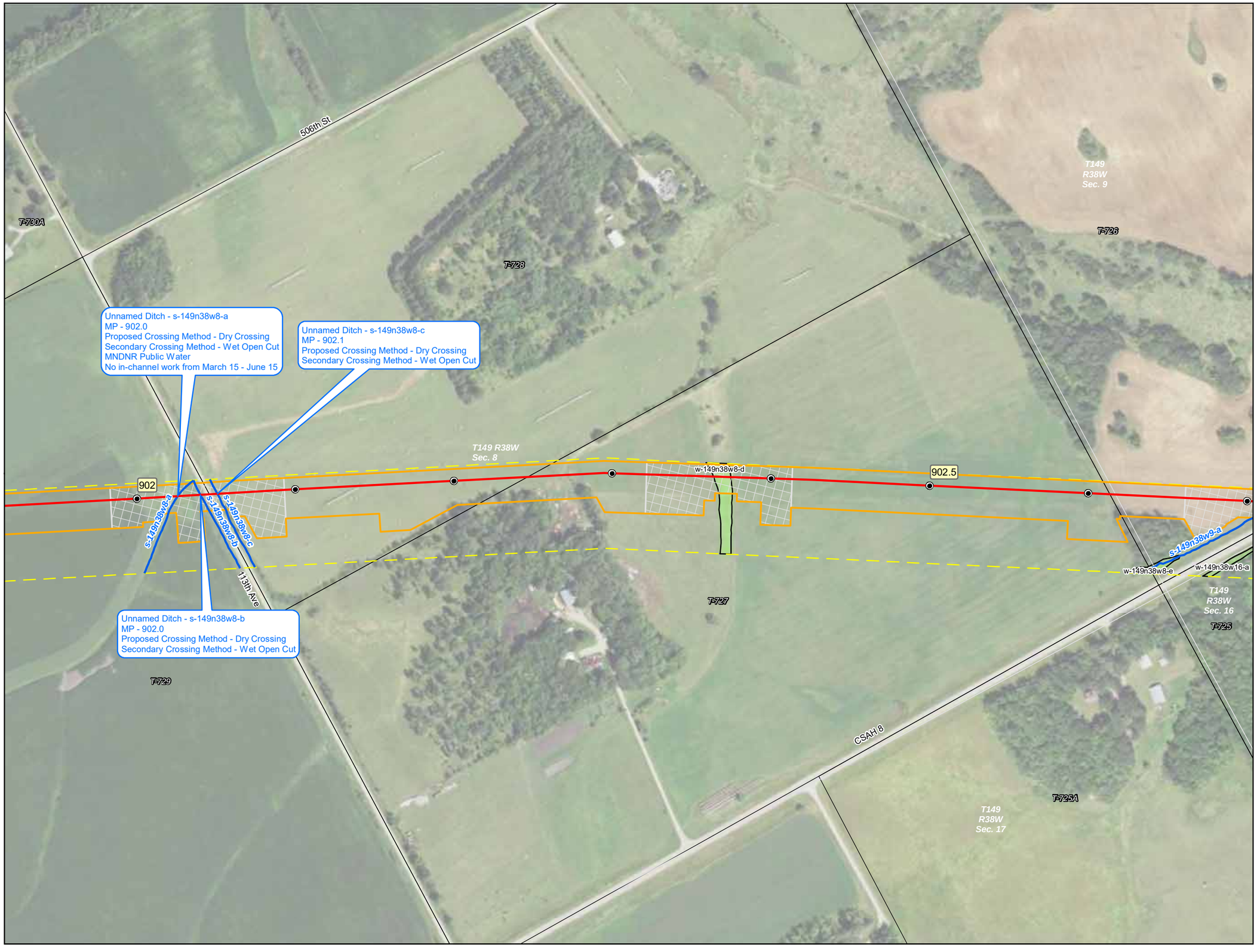

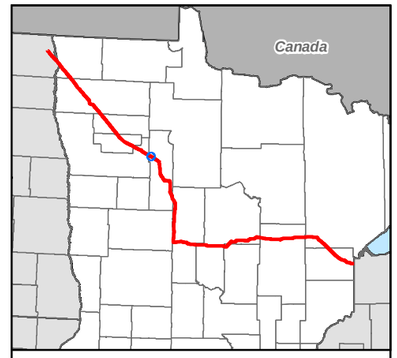

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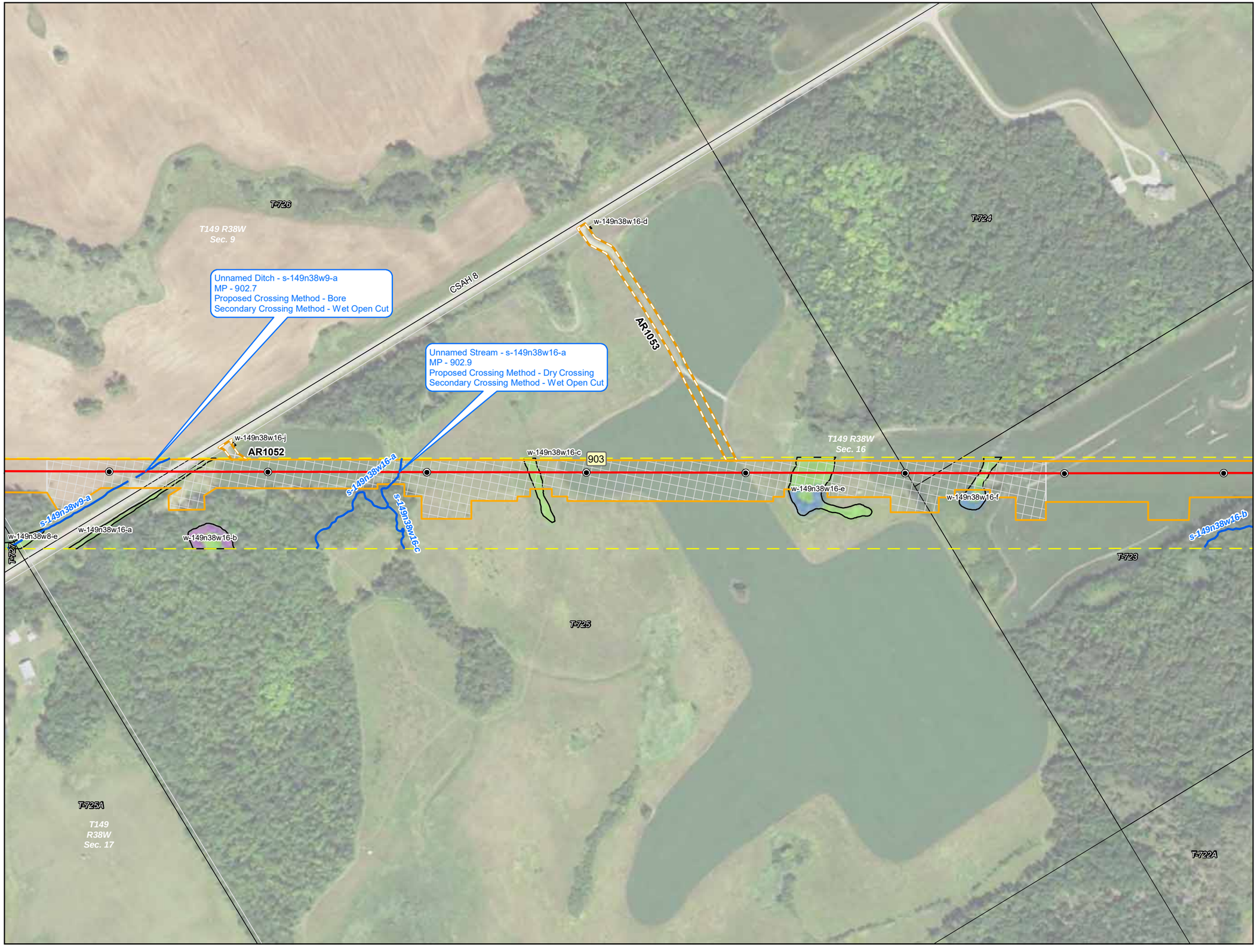

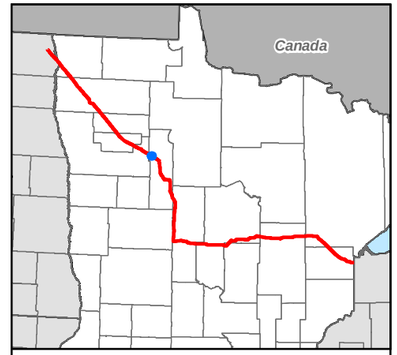

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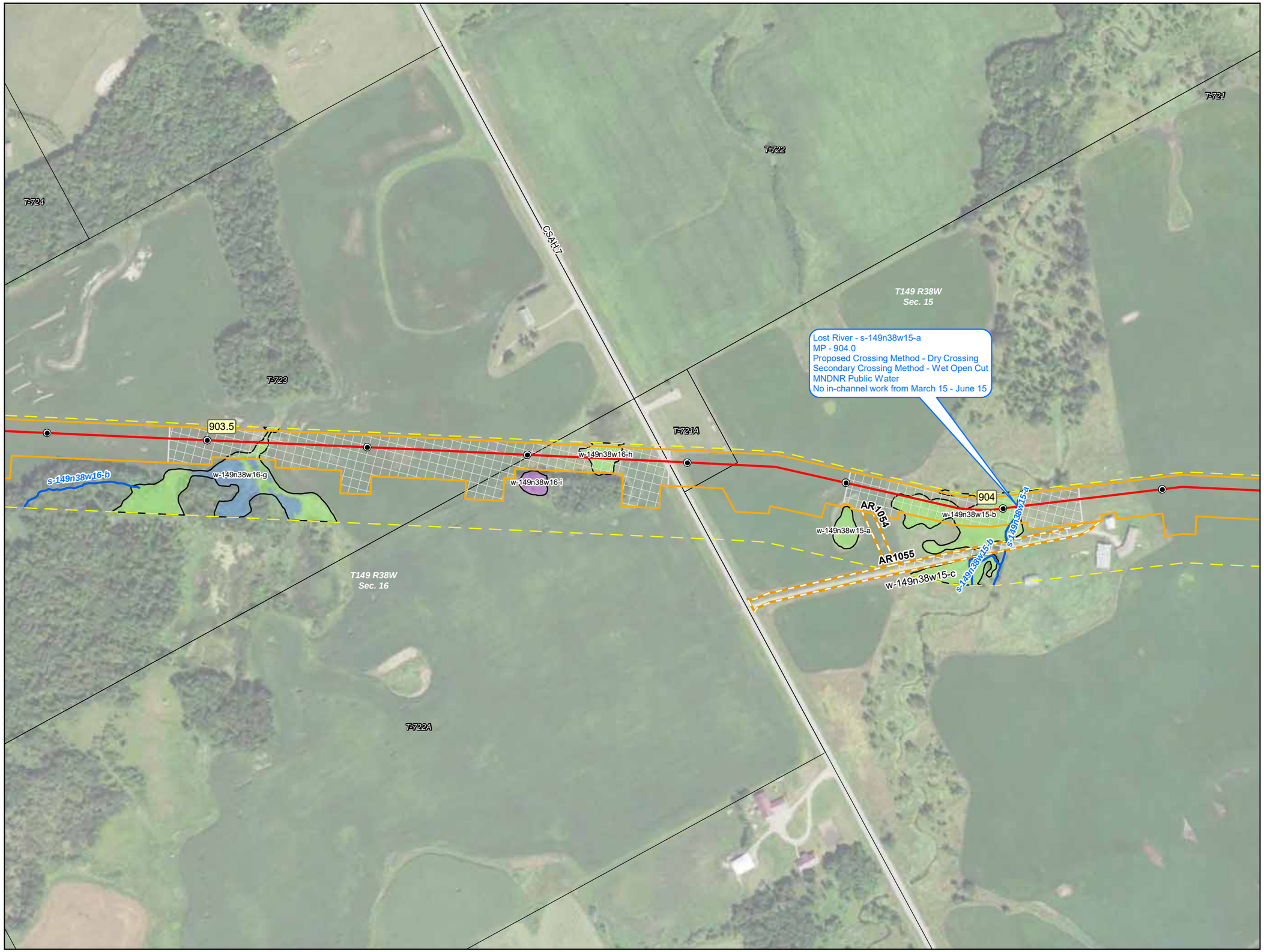

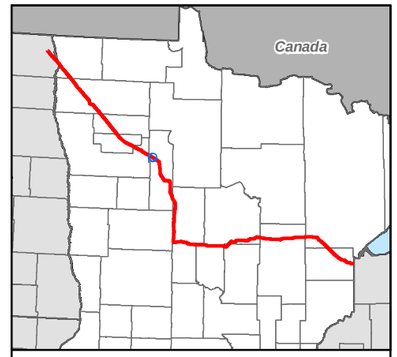

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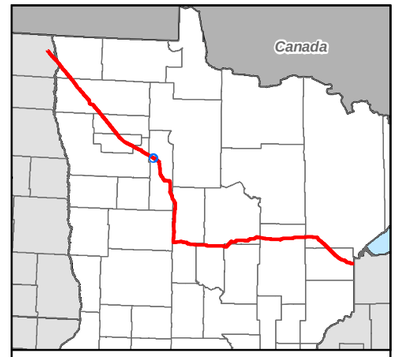

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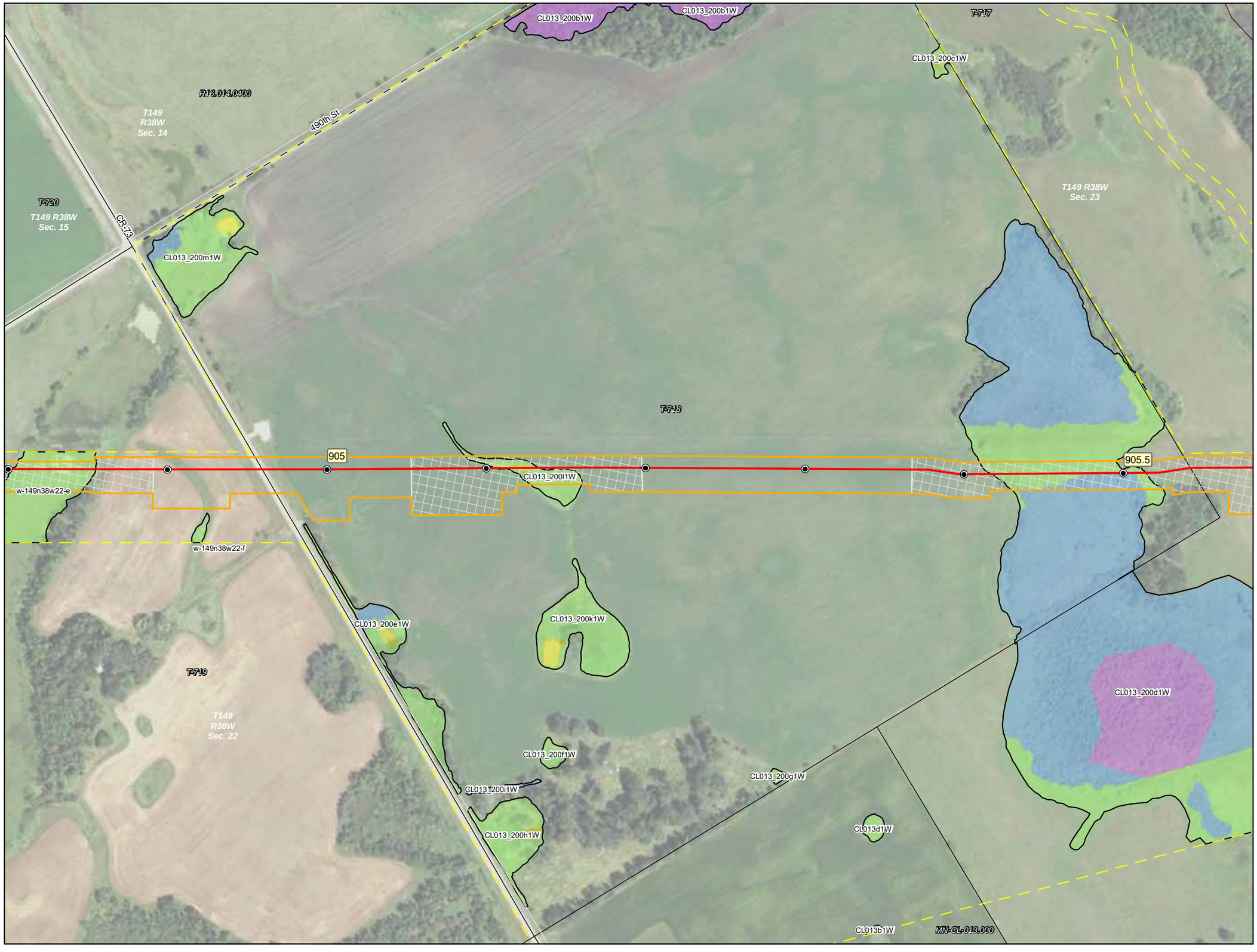

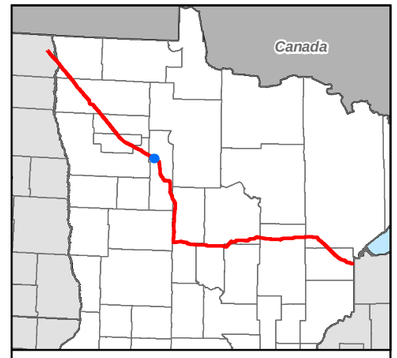

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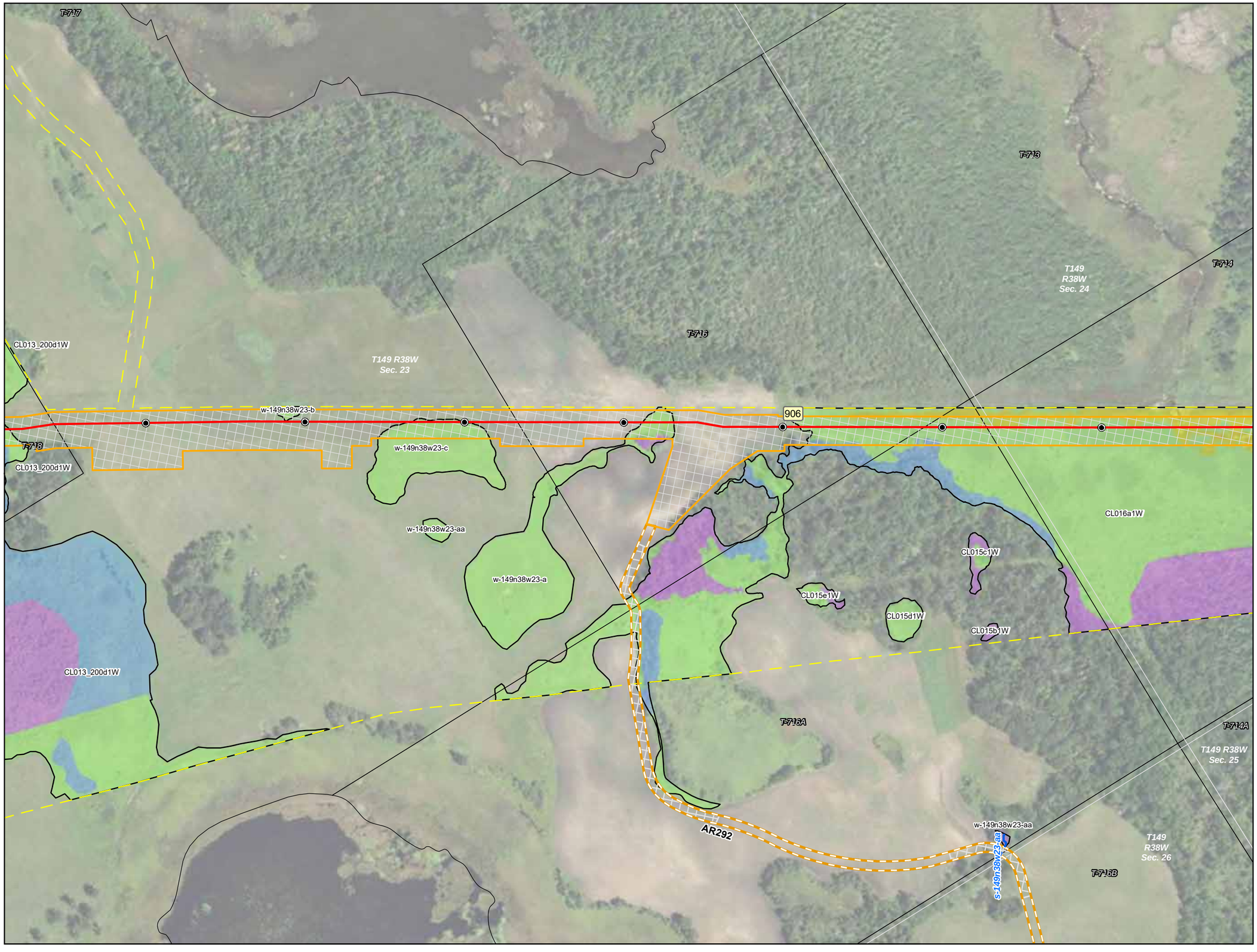

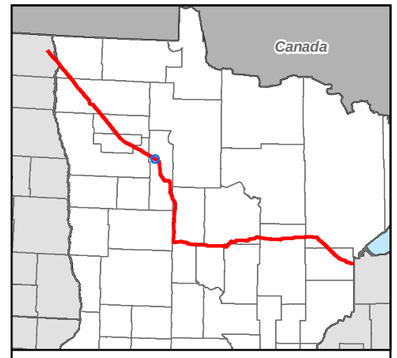

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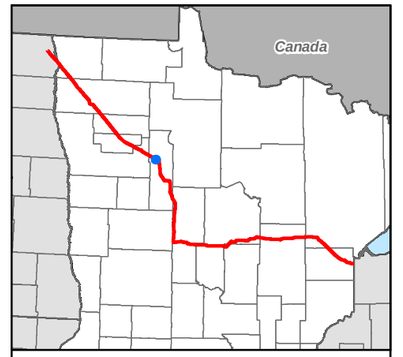

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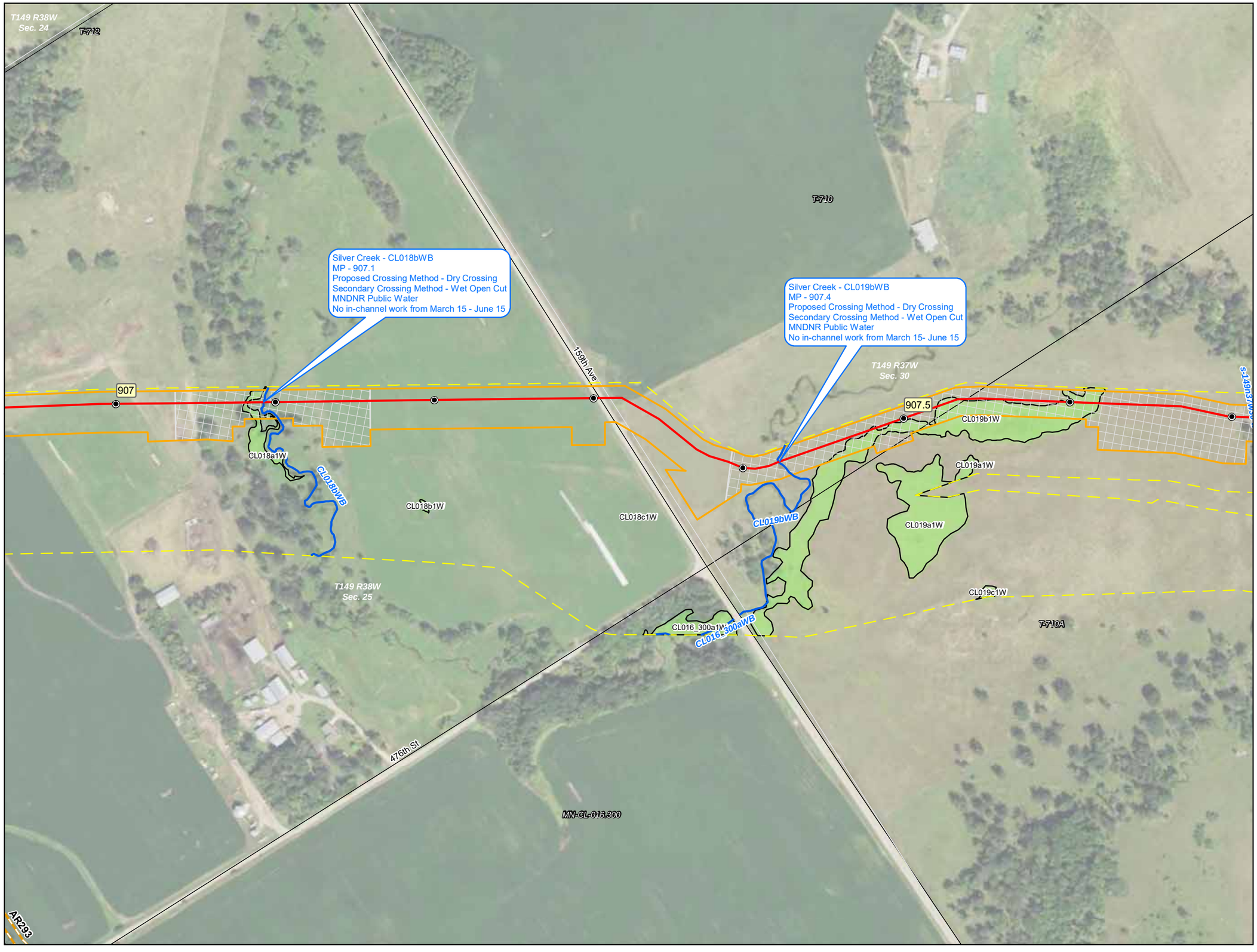

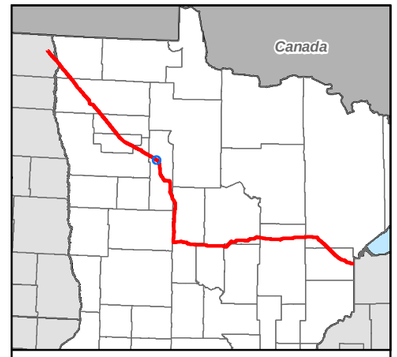

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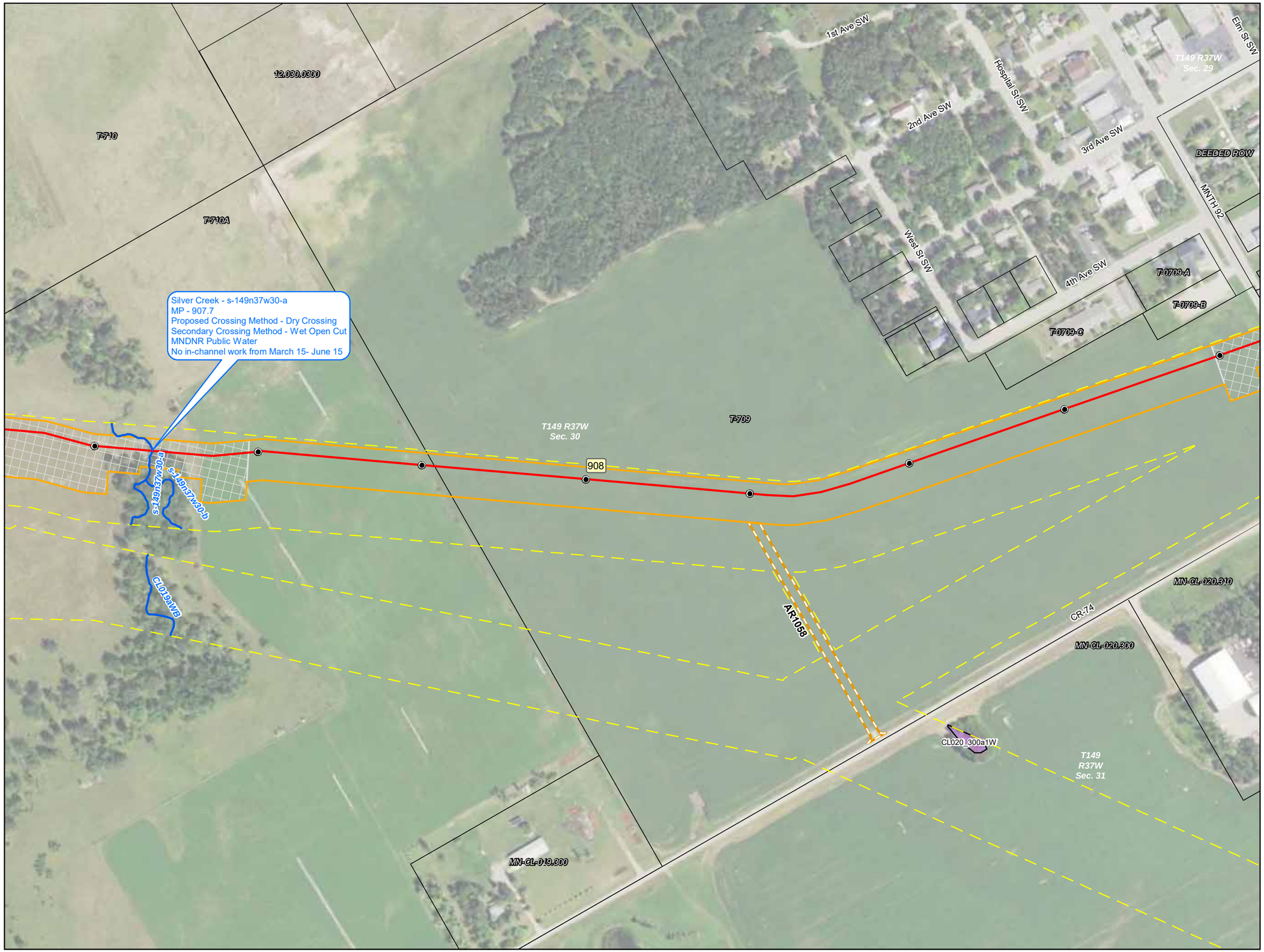

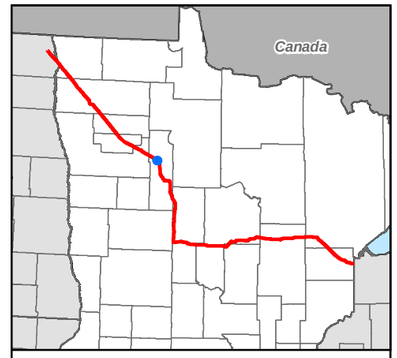

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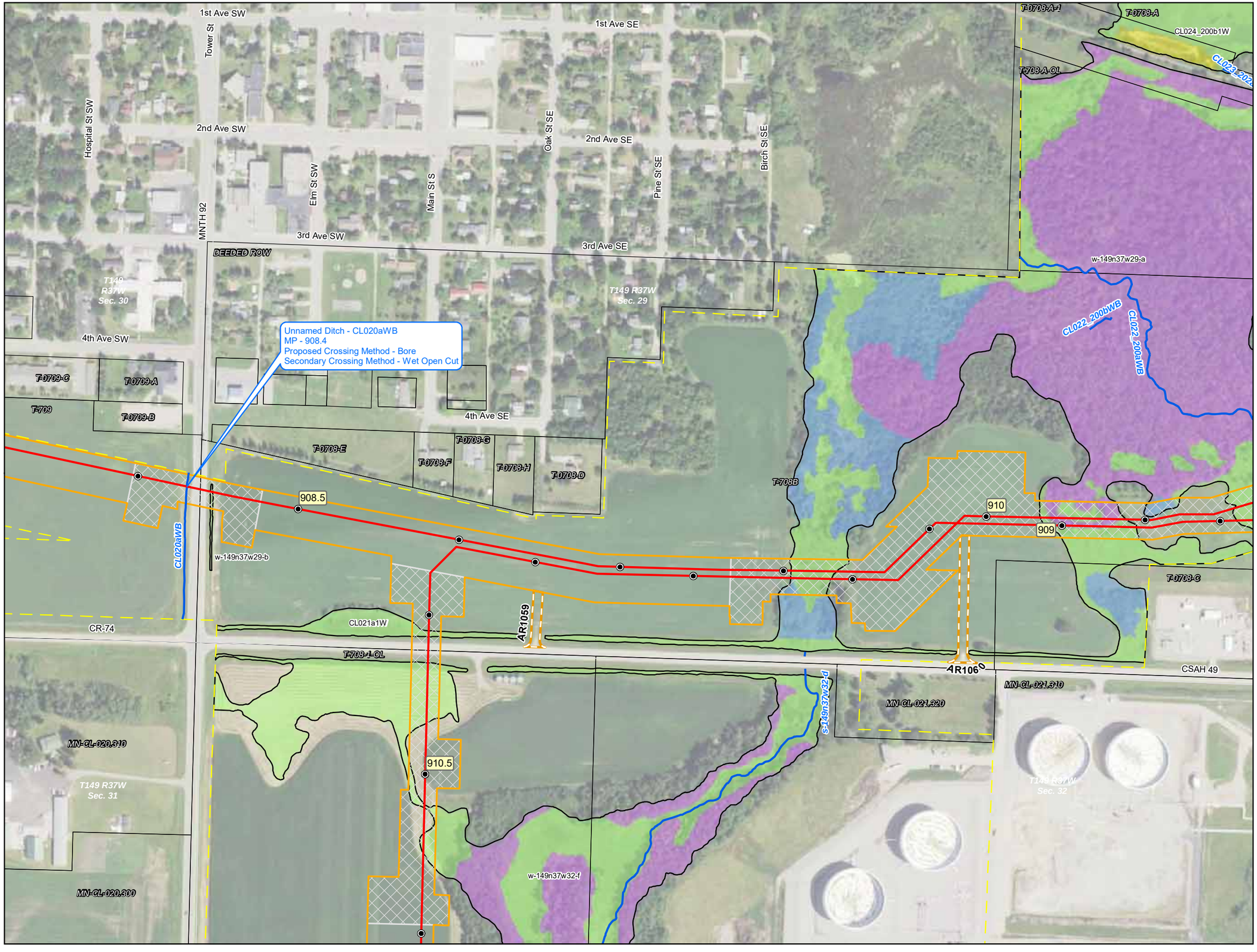

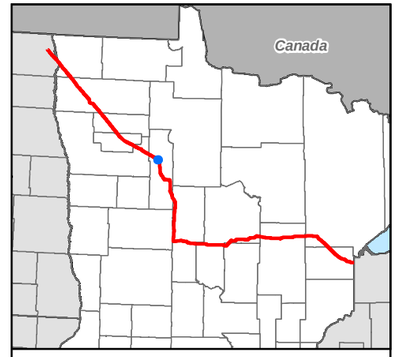

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Field Delineated Wetland	NWI Wetlands
PEM	PEM
PFO	PFO
PSS	PSS
PUB	PUB

Waterbodies

- Field Delineated Waterbody
- NHD Waterbody

NWI Waterbodies

- Lake
- Riverine

0 150 300 Feet

1 inch = 300 feet

N W E S

Detailed Route Maps

Line 3 Replacement Project

Clearwater County, Minnesota

ENBRIDGE

Source: Z:\Clients\L_P\Enbridge\Line_3_Full_Replacement\Permitting\Federal\COE\Sept_2018\RSA_22\Figures\L3_MN_COE_Alignment_Sheets_RSA22.mxd

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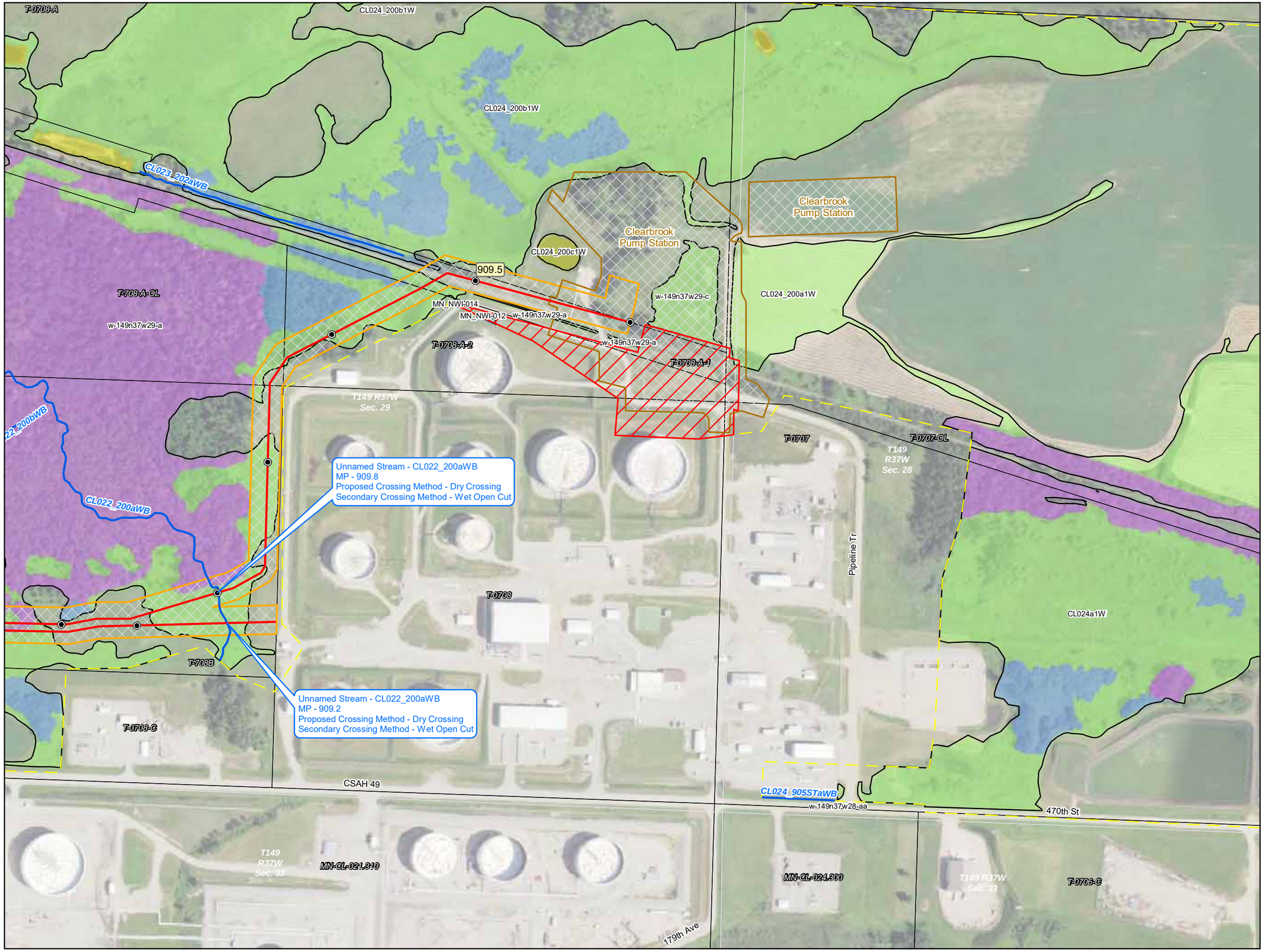

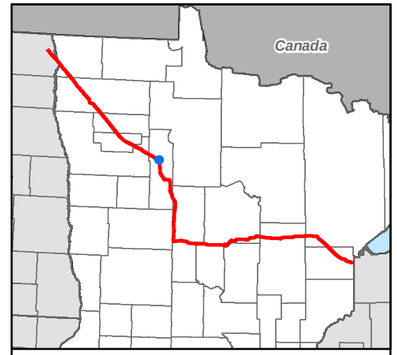

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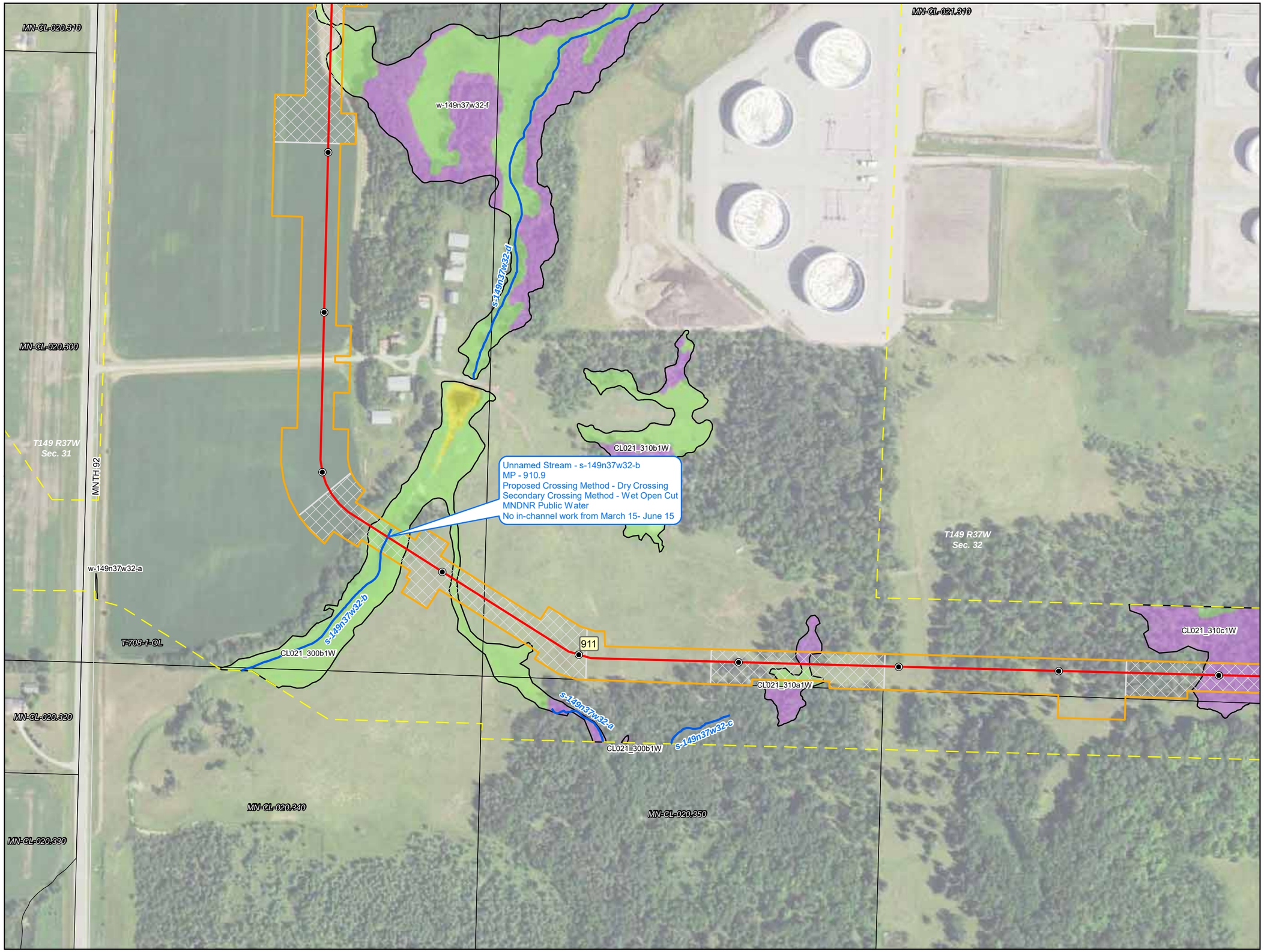

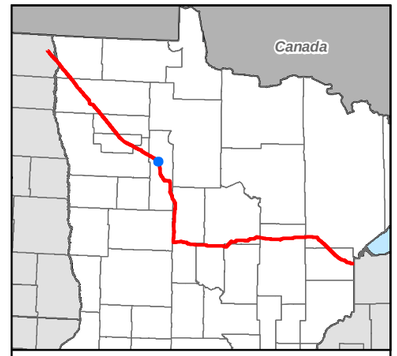

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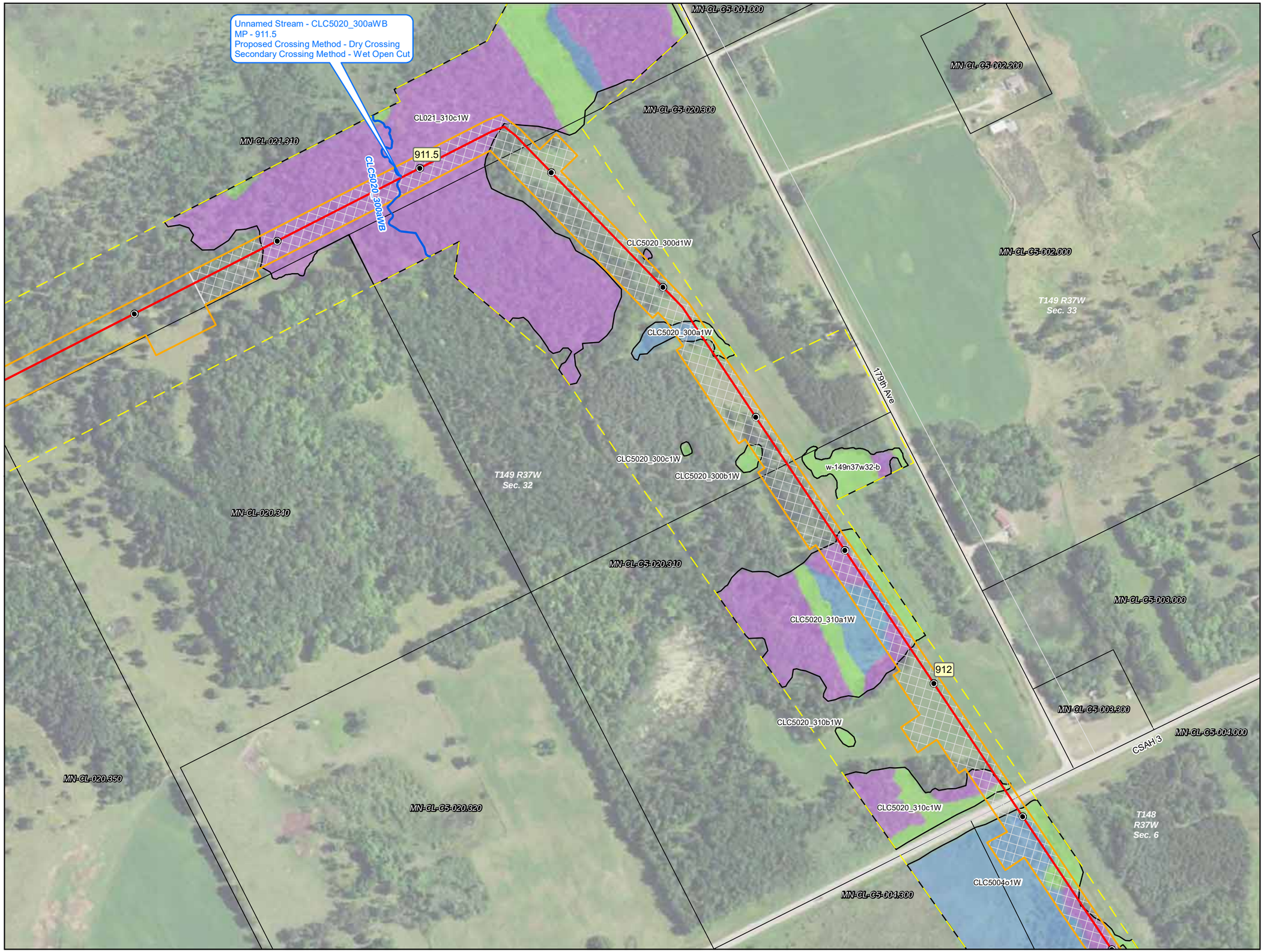

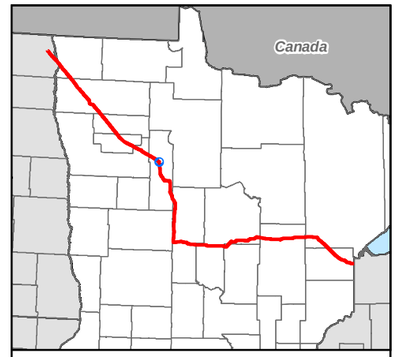

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MN-GL-C5-005.220
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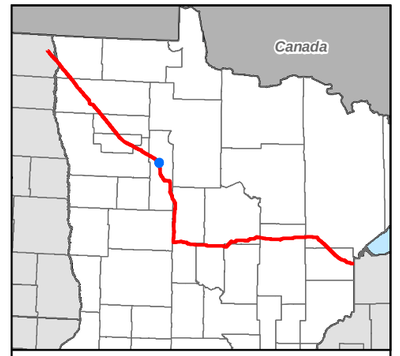

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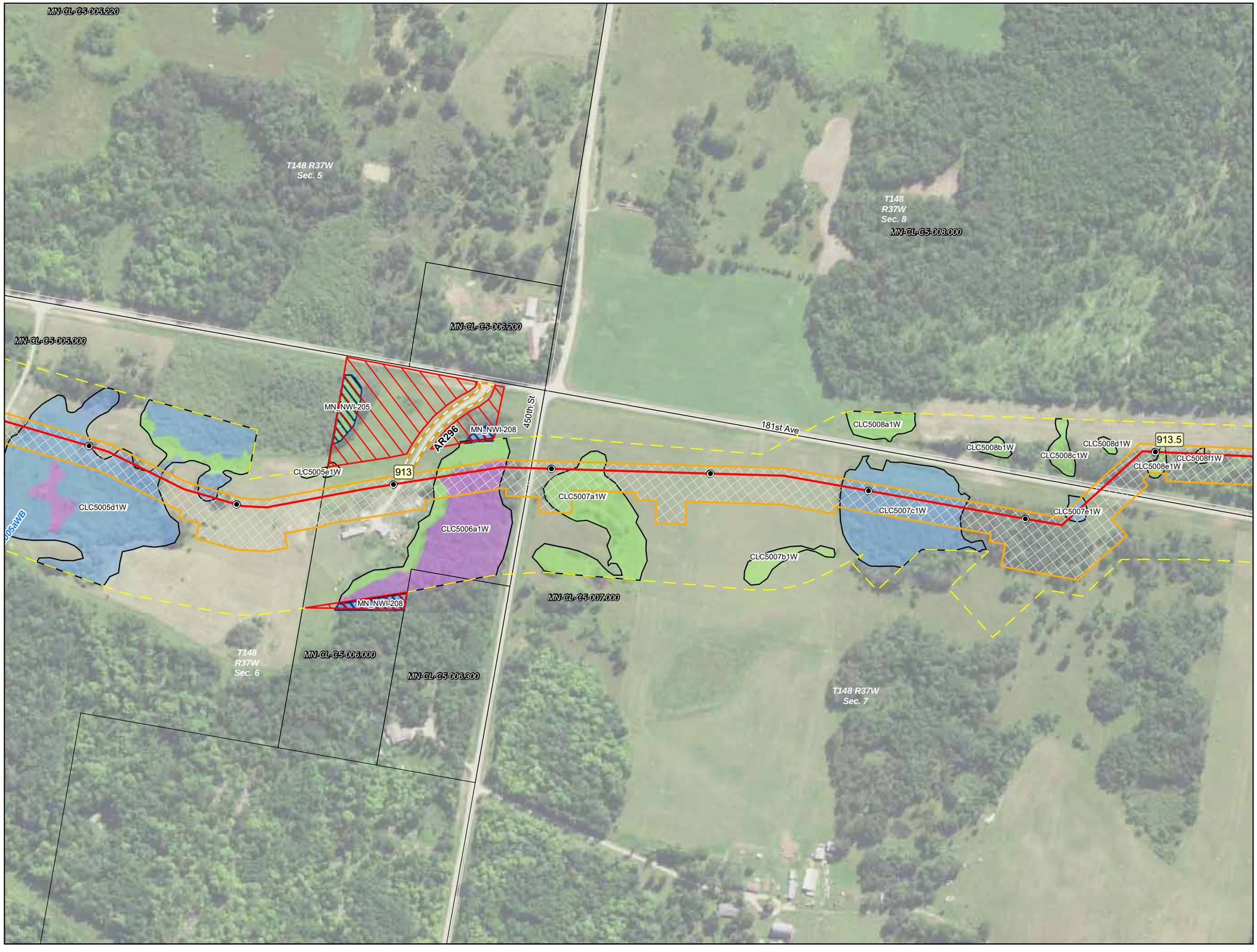

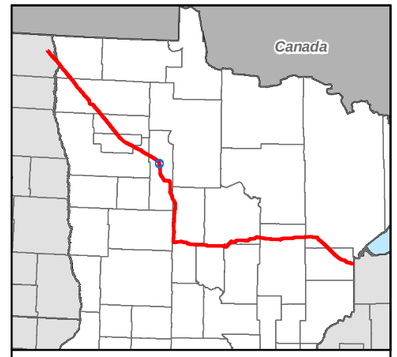

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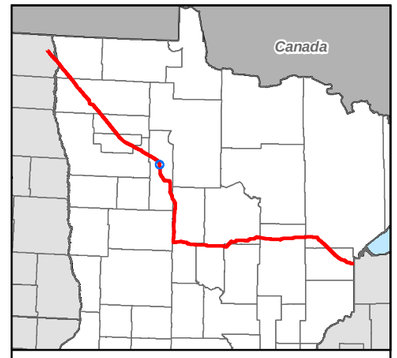

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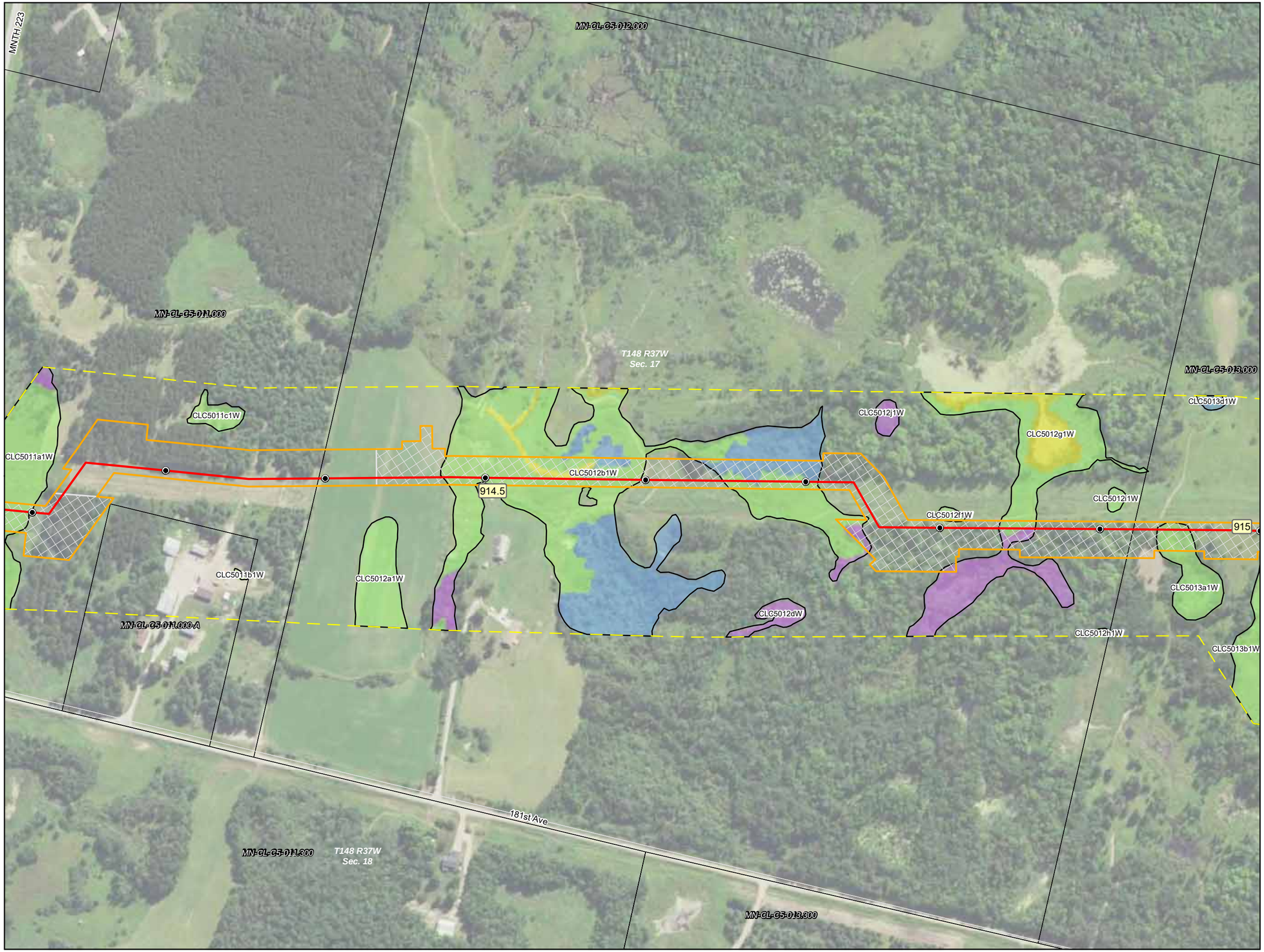

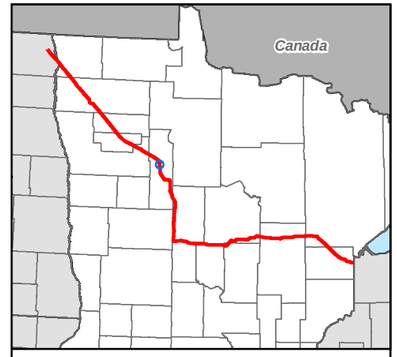

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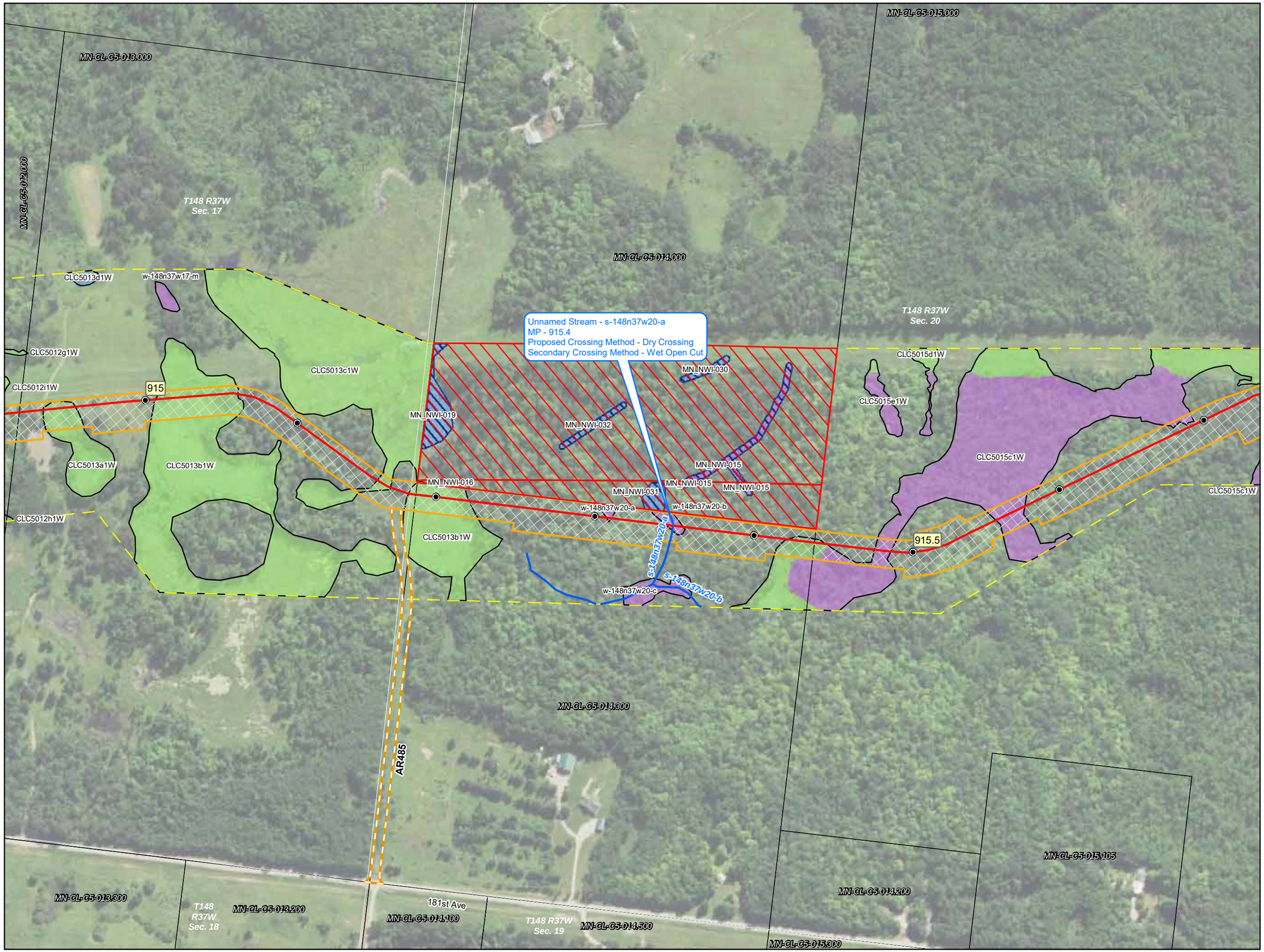

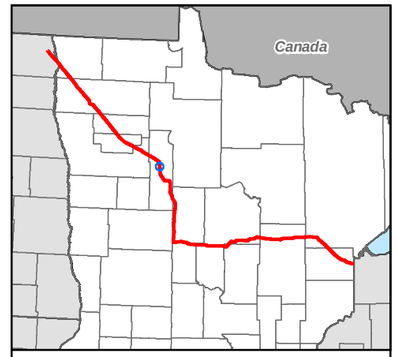

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Clearwater County, Minnesota

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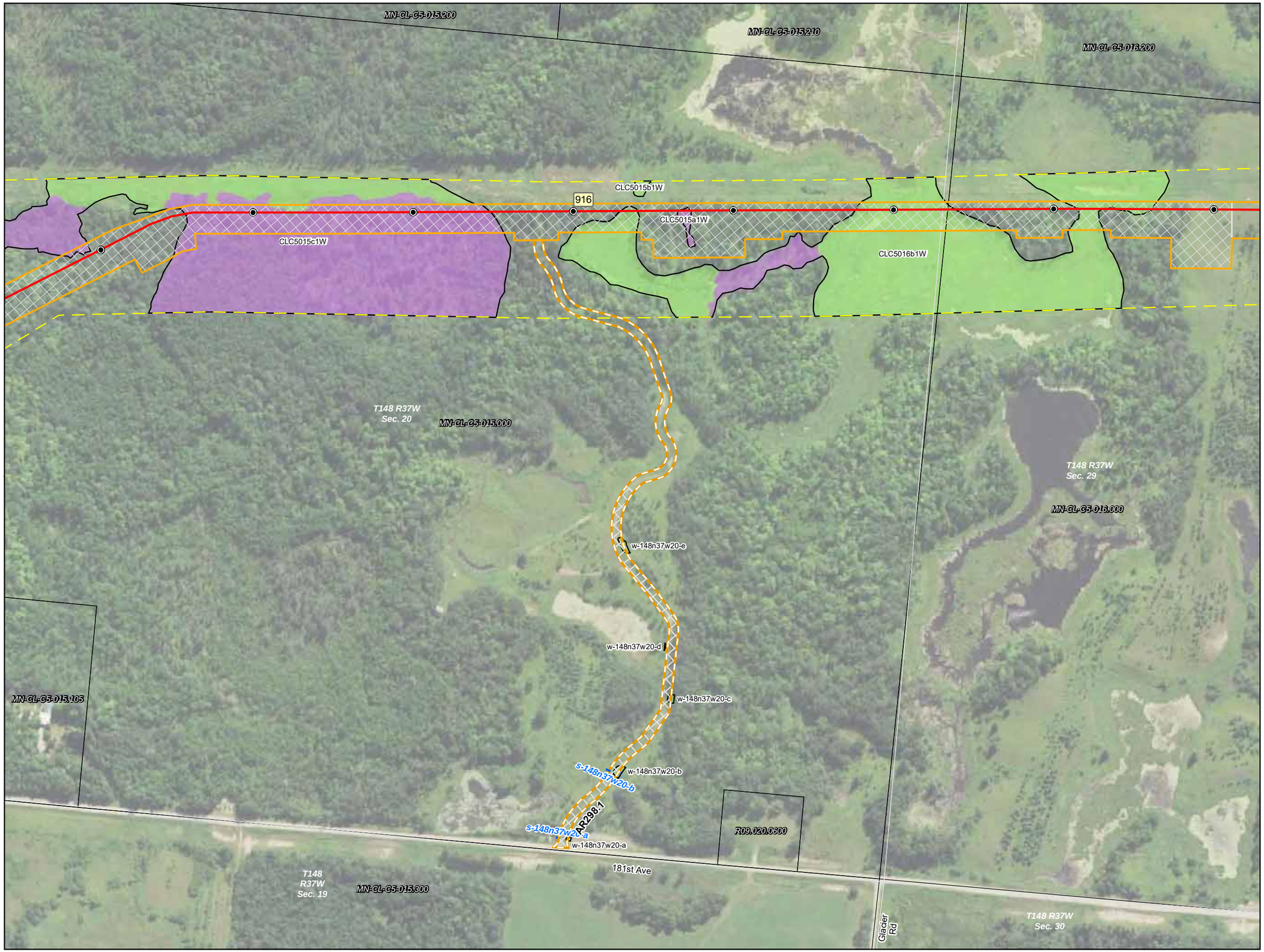

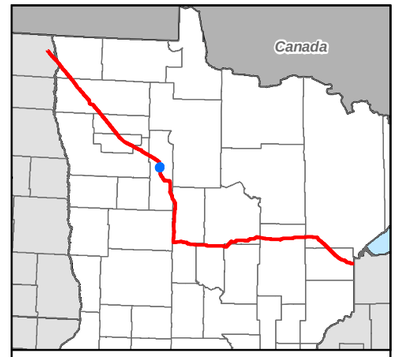

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Clearwater County, Minnesota

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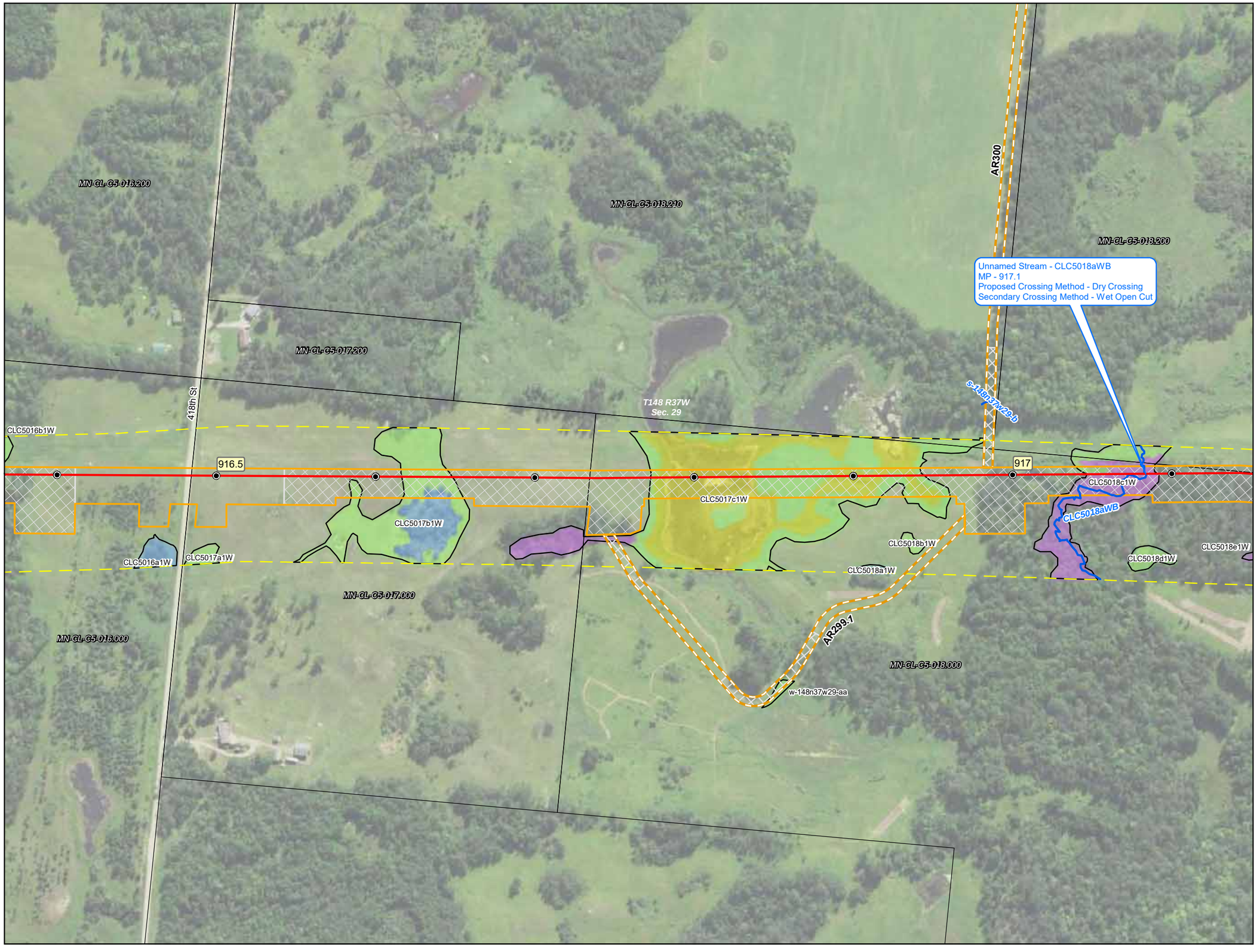

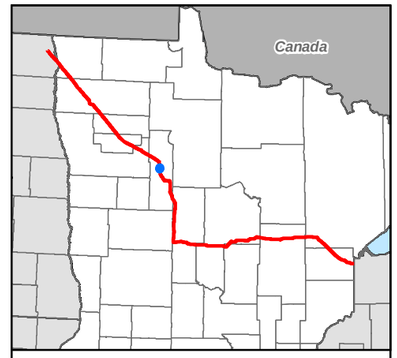

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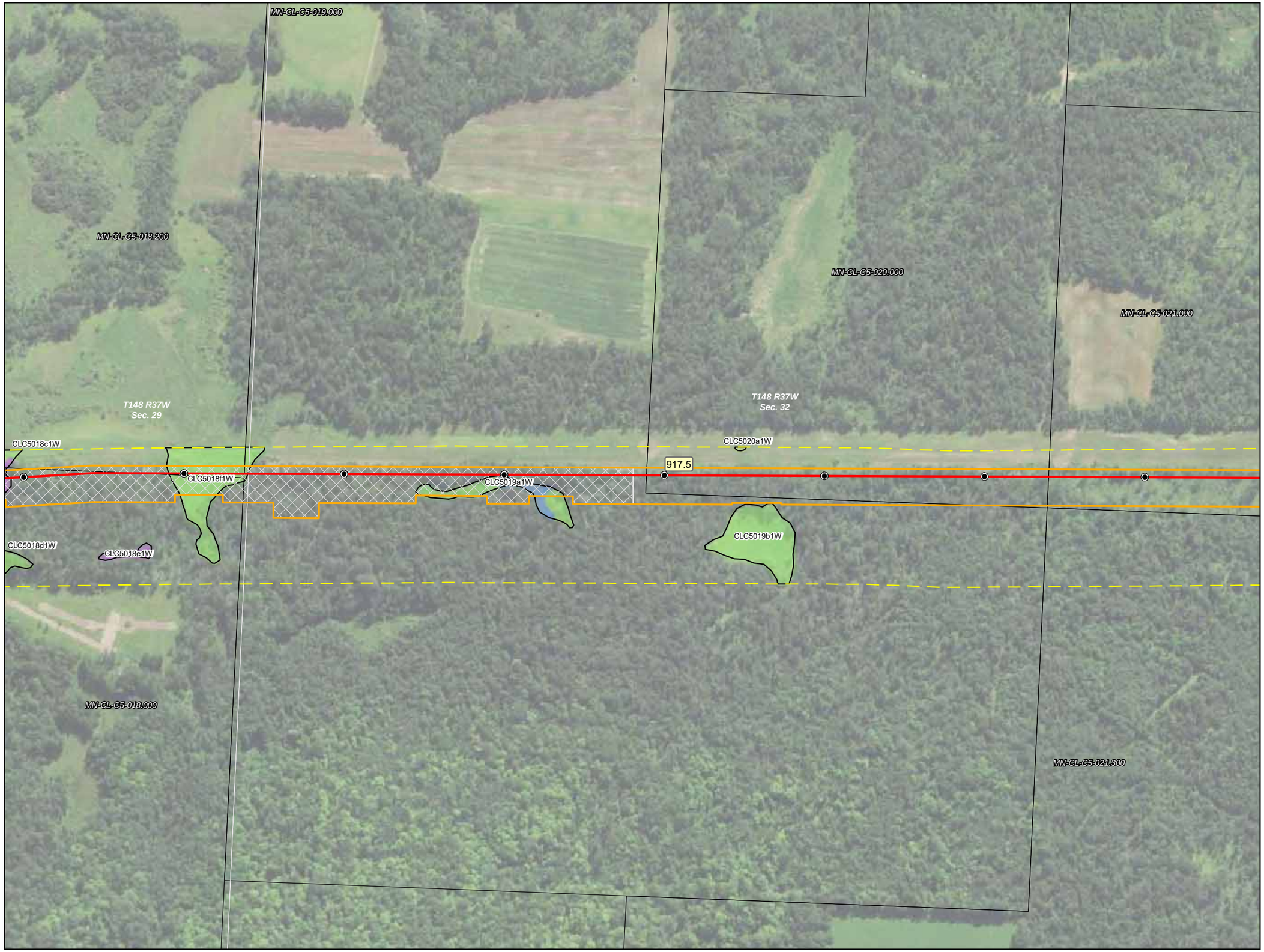

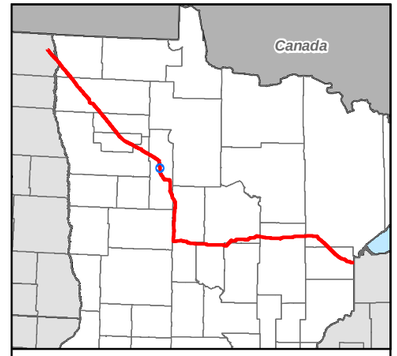

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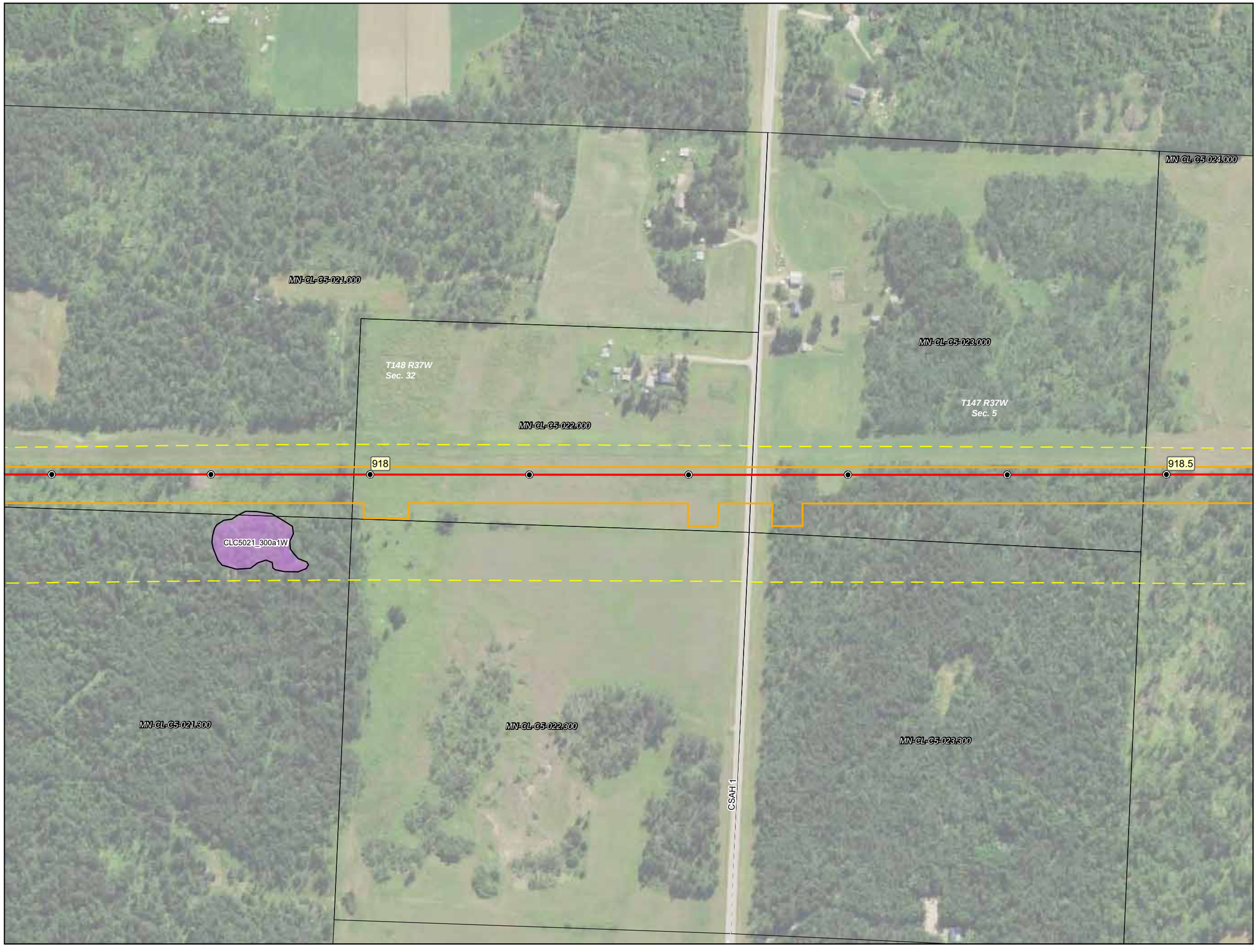

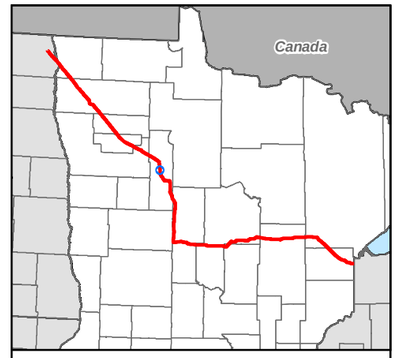

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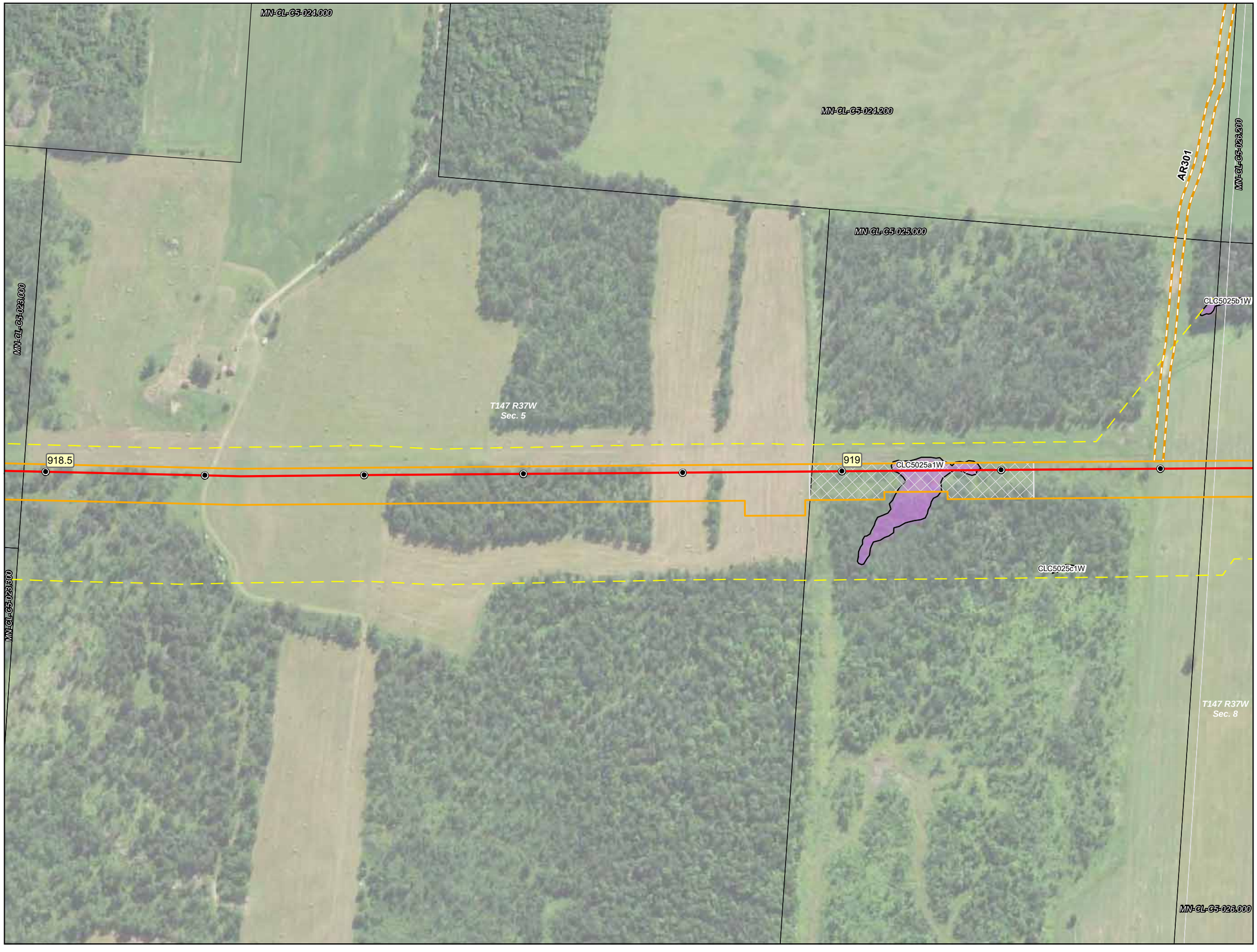

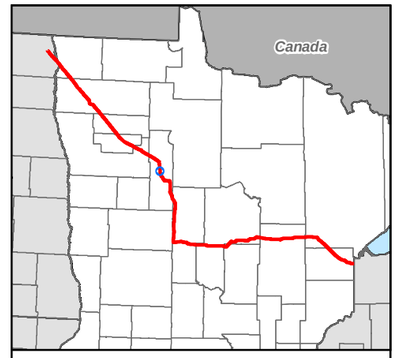

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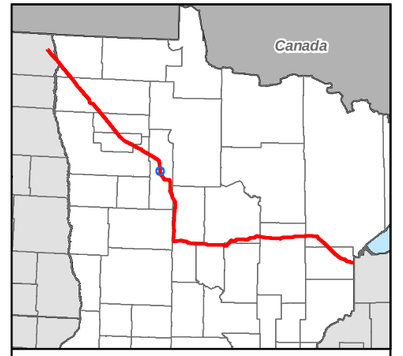

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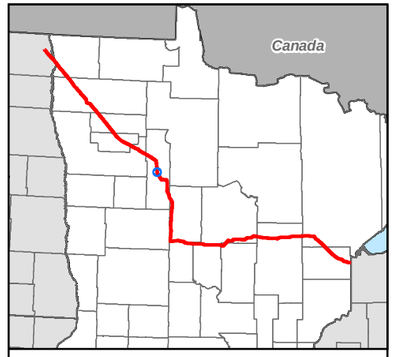

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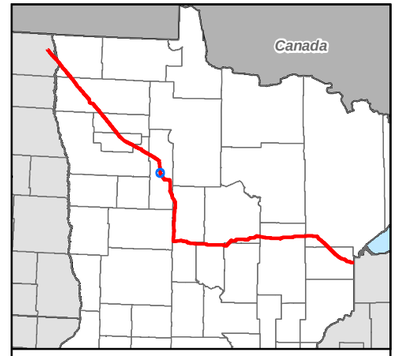

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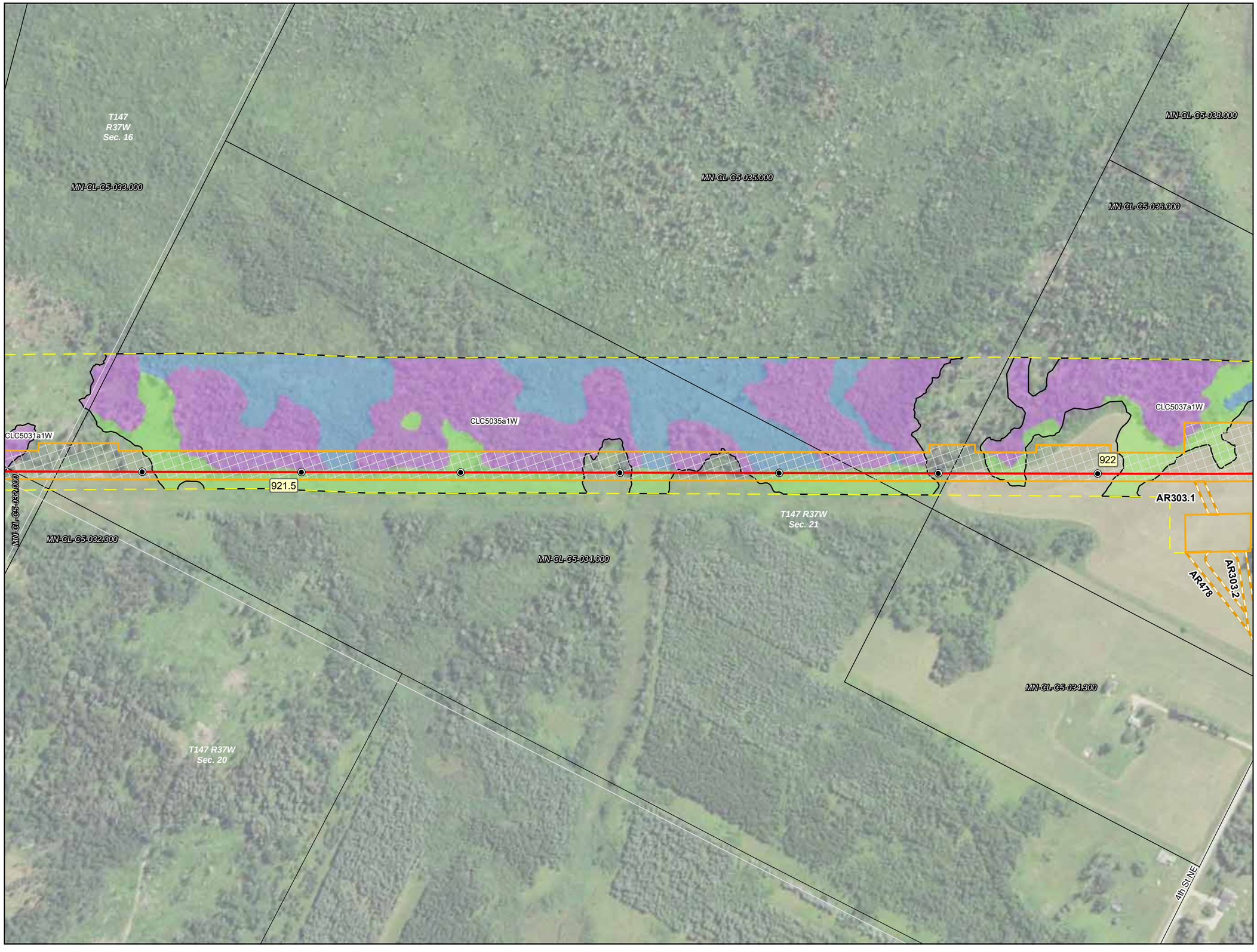

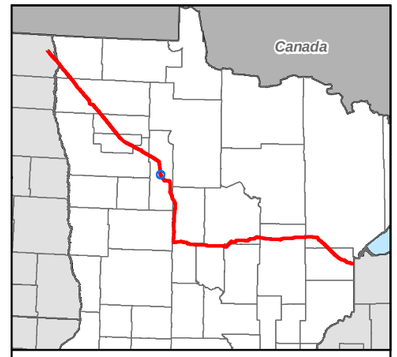

- Milepost
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- Pump Station

Environmental Field Data

Wetlands

Field Delineated Wetland	NWI Wetlands
PEM	PEM
PFO	PFO
PSS	PSS
PUB	PUB

Waterbodies

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- NHD Waterbody

NWI Waterbodies

- Lake
- Riverine

0 150 300 Feet

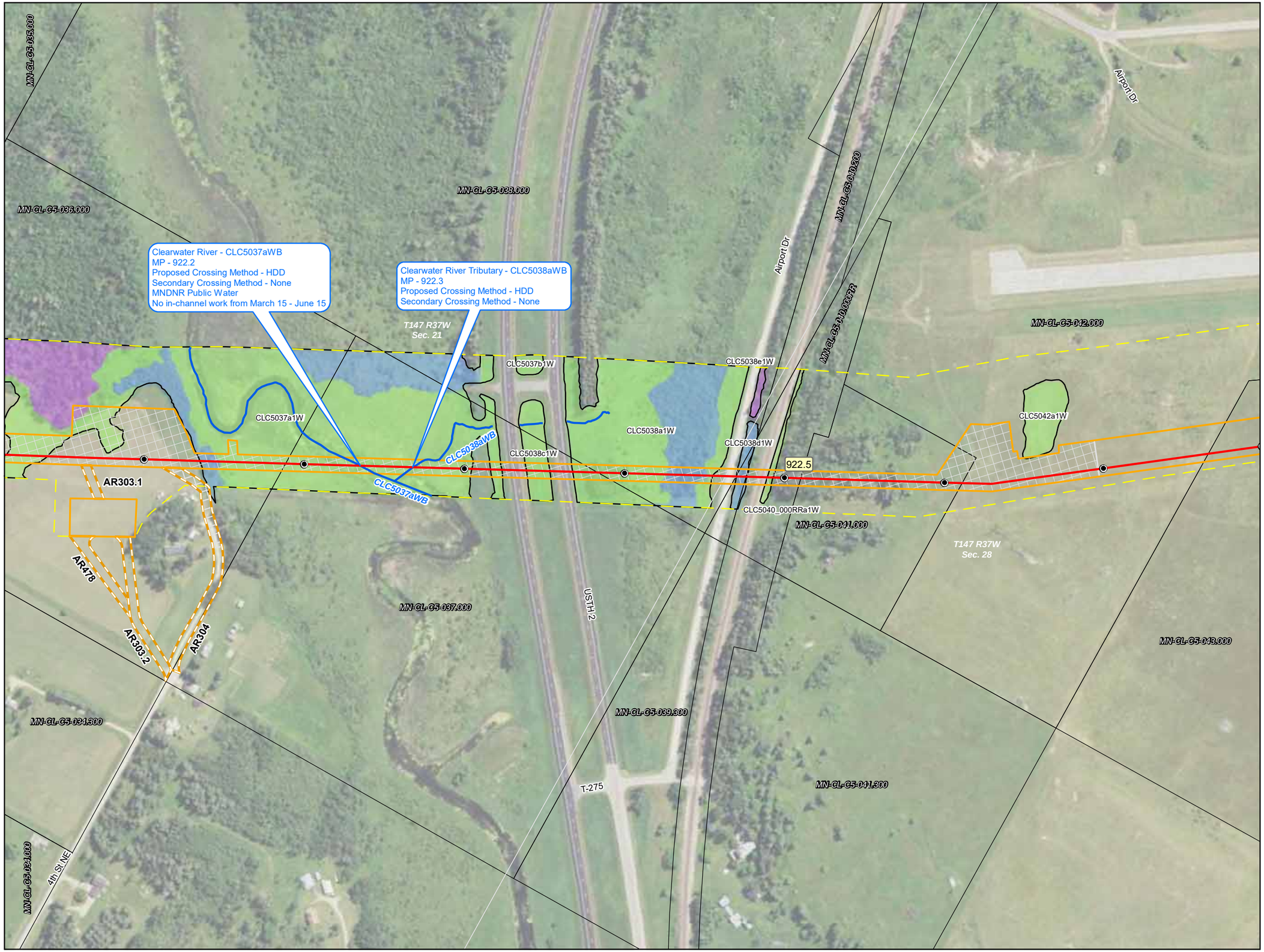
1 inch = 300 feet

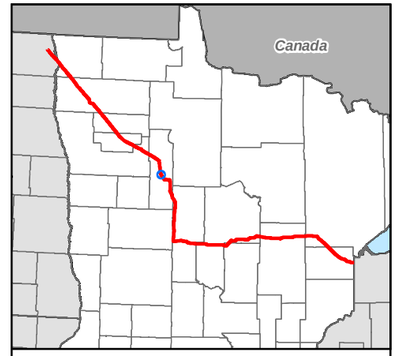
Detailed Route Maps

Line 3 Replacement Project

Clearwater County, Minnesota

ENBRIDGE





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Clearwater County, Minnesota

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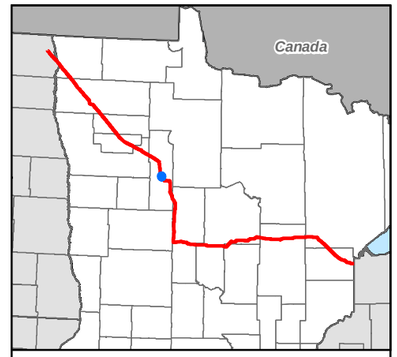

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Line 3 Replacement Project

Clearwater County, Minnesota

ENBRIDGE

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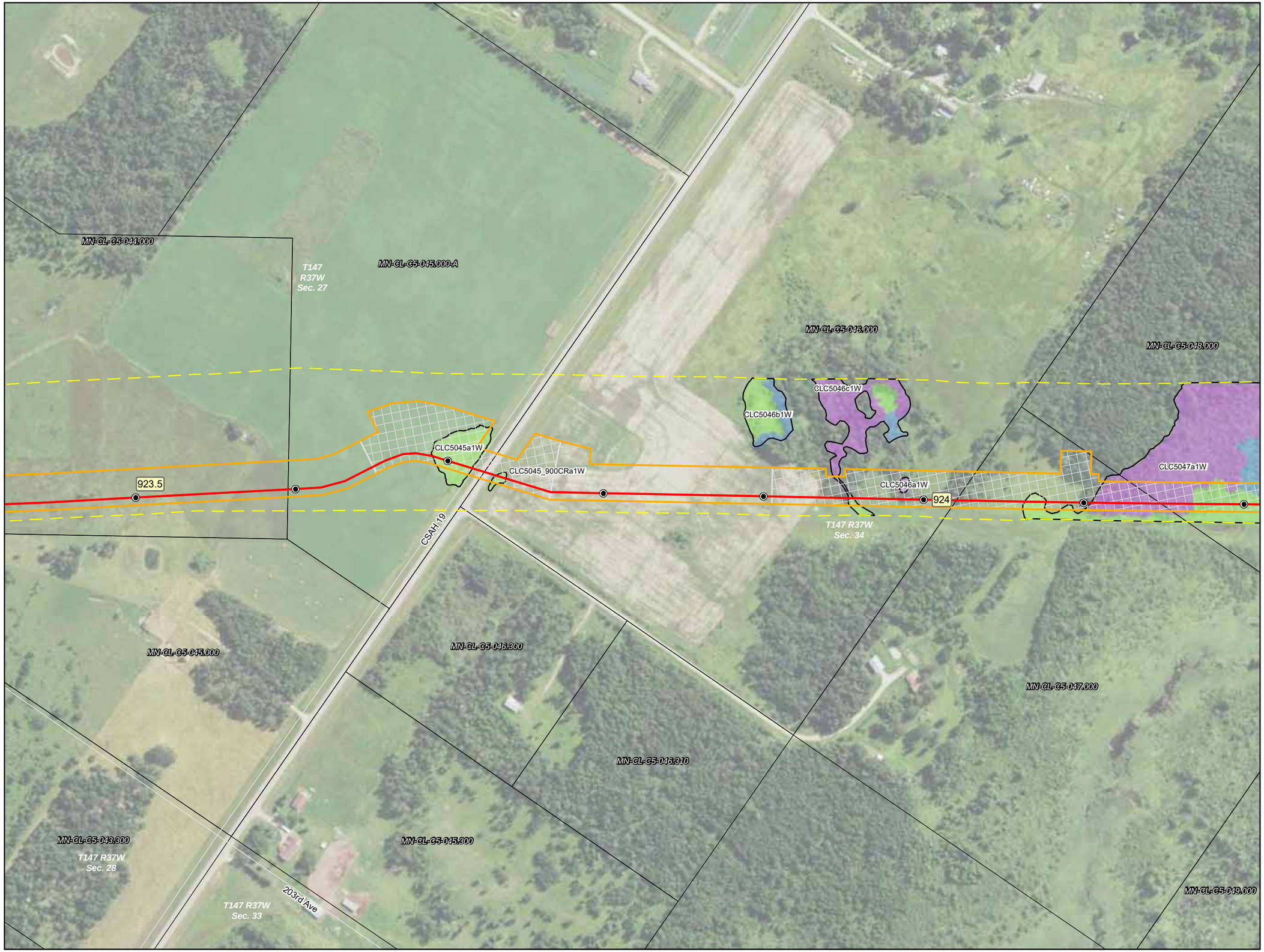

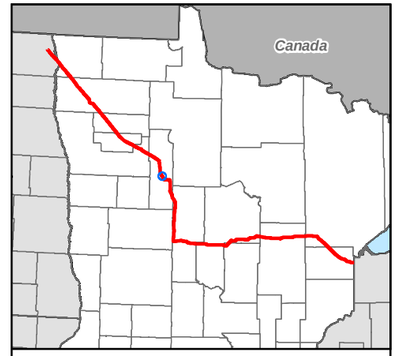

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Line 3 Replacement Project

Clearwater County, Minnesota

ENBRIDGE

MN-GL-C5-046.000
MN-GL-C5-049.800
T147
R37W
Sec. 35
MN-GL-C5-049.200
MN-GL-C5-049.210
MN-GL-C5-048.000
Walker Brook - CLC5048aWB
MP - 924.2
Proposed Crossing Method - Wet Open Cut
Secondary Crossing Method - None
MNDNR Public Water
No in-channel work from March 15 - June 15
CLC5048aWB
CLC5047a1W
CLC5049aWB
CLC5049b1W
CLC5049d1W
CLC5049e1W
CLC5049f1W
CLC5049c1W
924.5
T147 R37W
Sec. 34
MN-GL-C5-049.000
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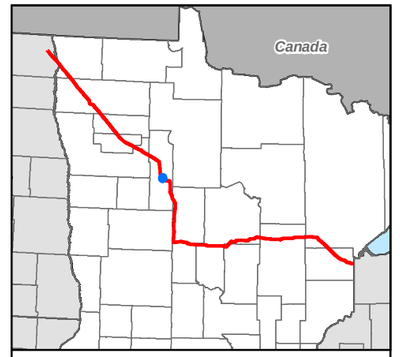
CSAH 26
T146 R37W
Sec. 3



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Clearwater County, Minnesota

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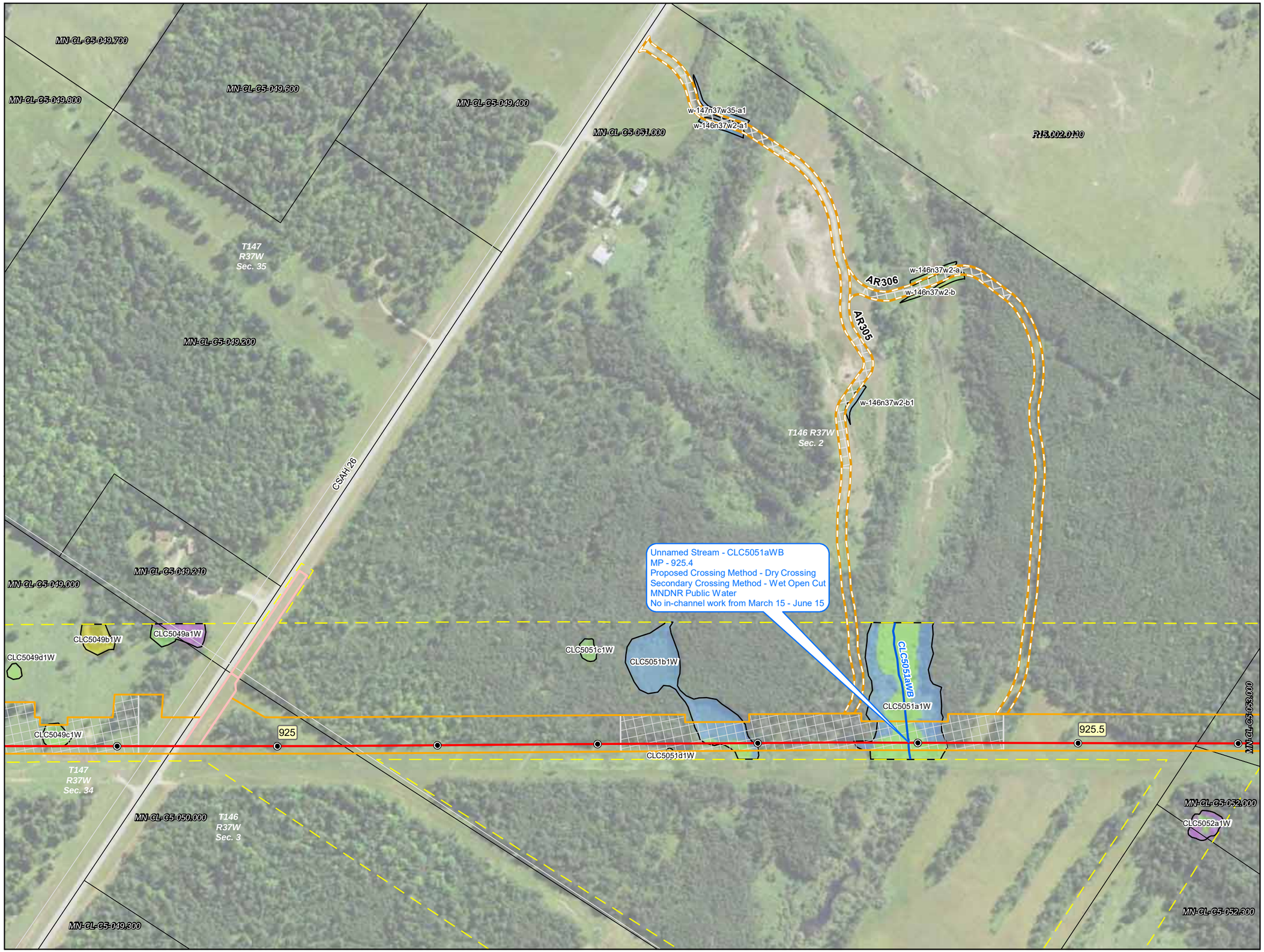

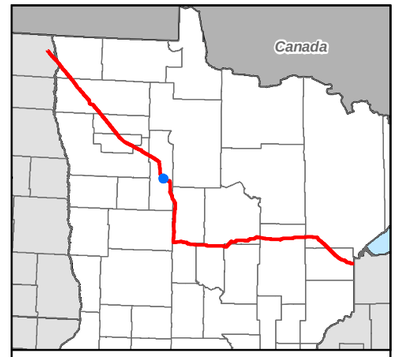

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Line 3 Replacement Project

Clearwater County, Minnesota

ENBRIDGE

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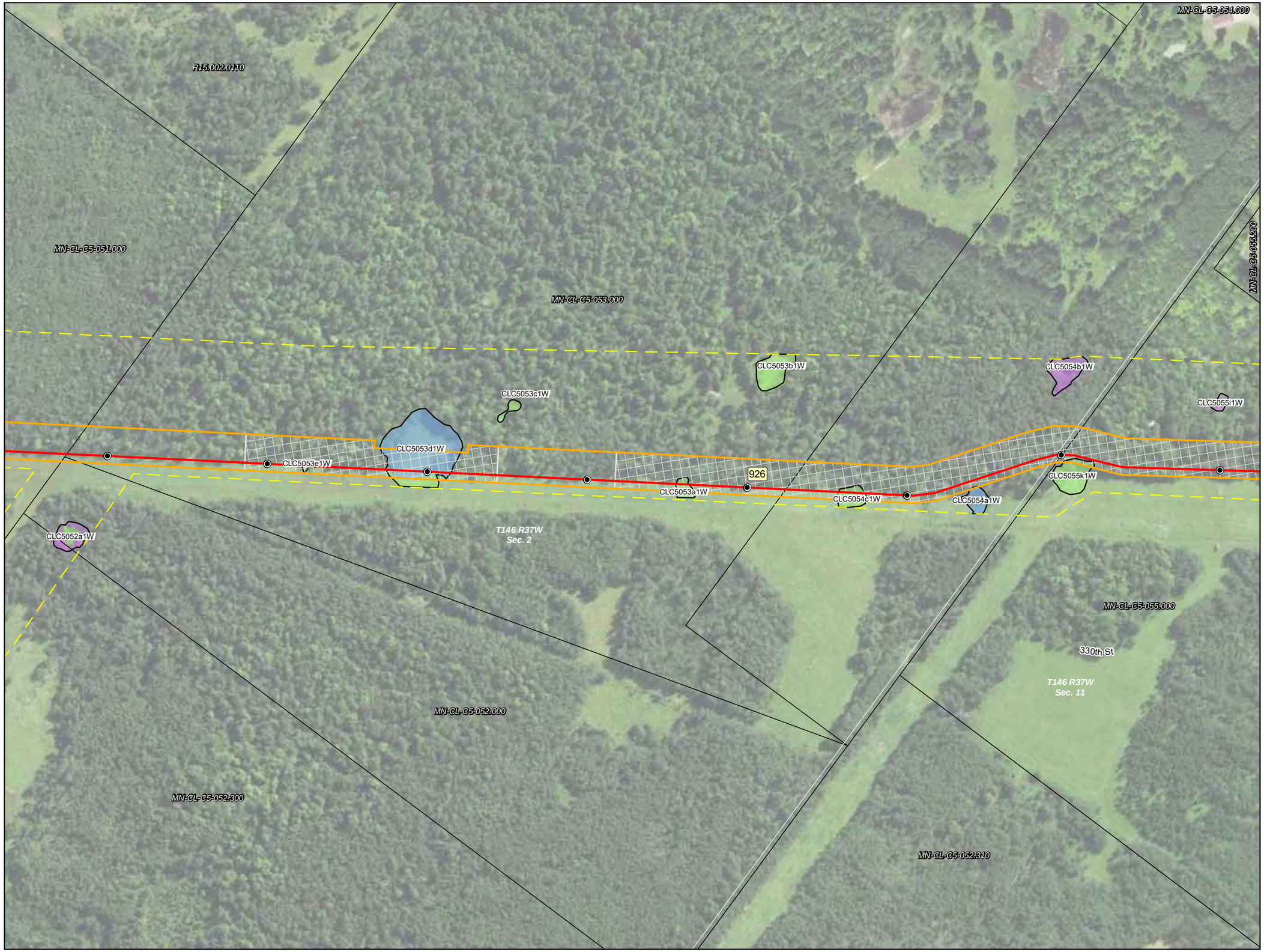

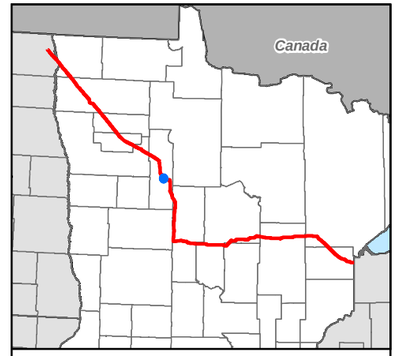

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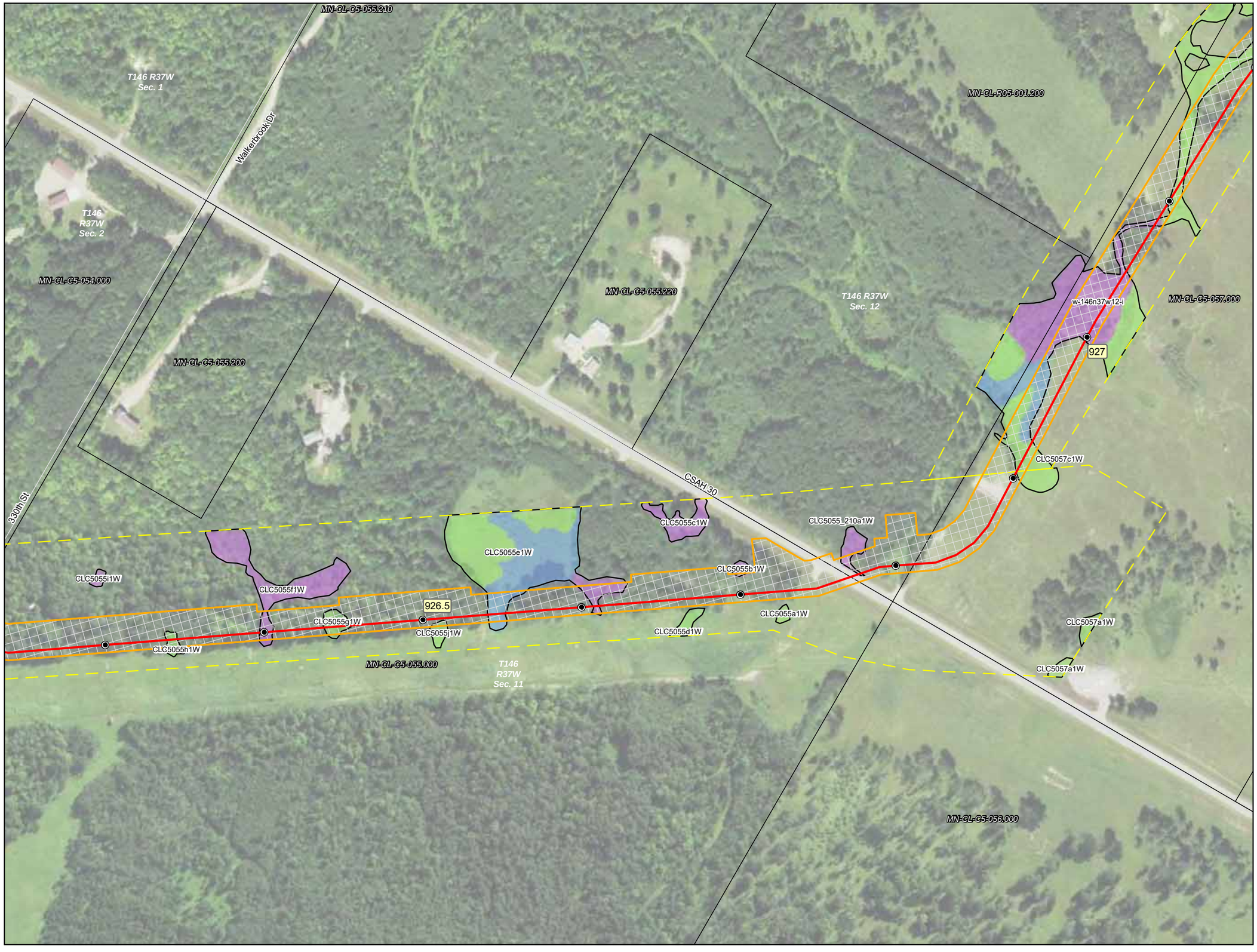
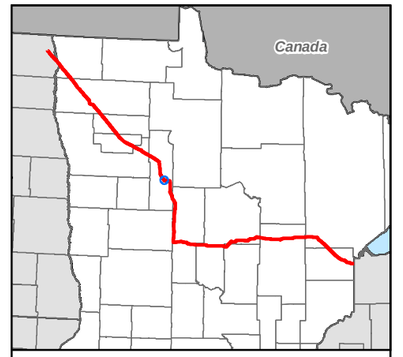
Clearwater County, Minnesota

ENBRIDGE





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Line 3 Replacement Project

Clearwater County, Minnesota

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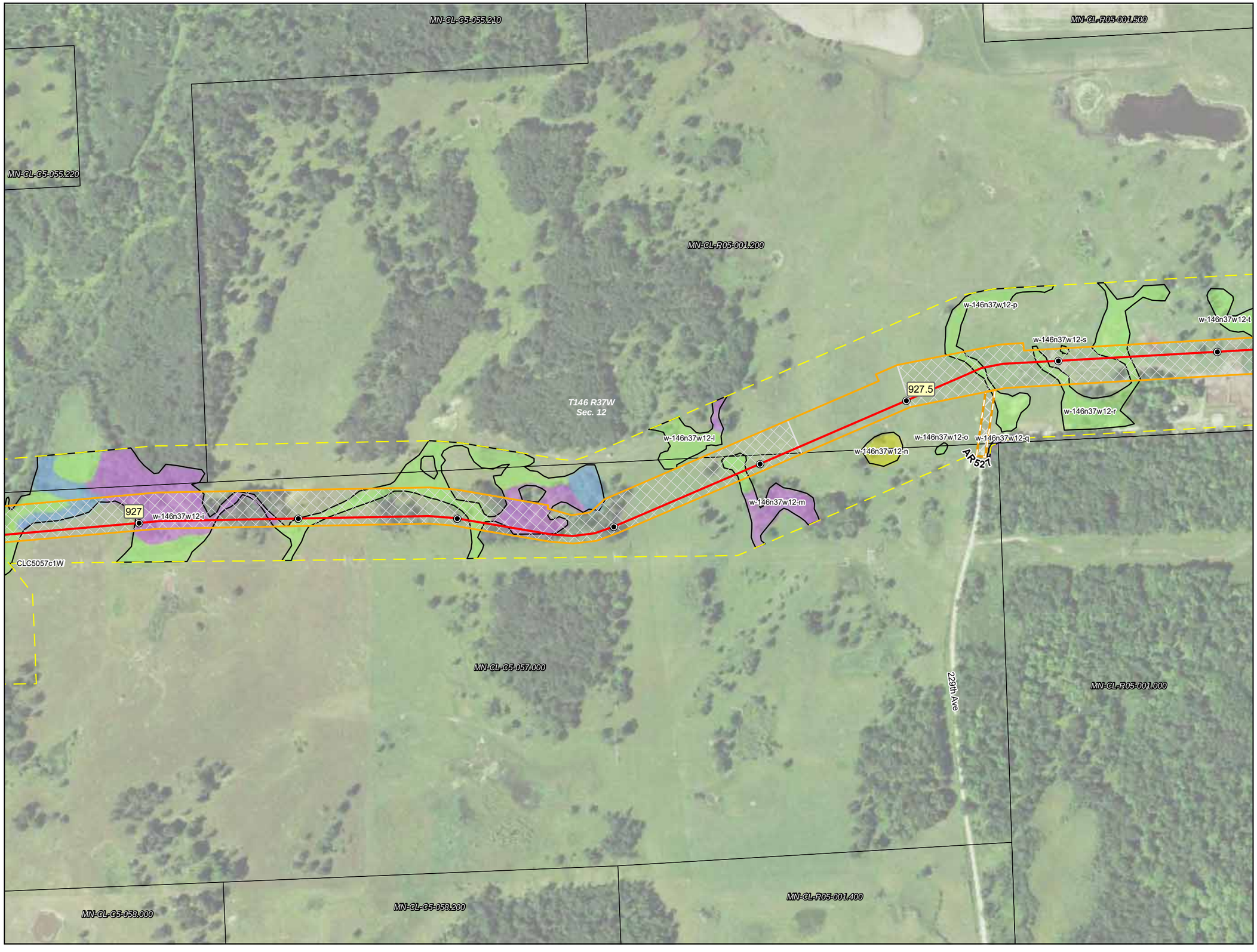

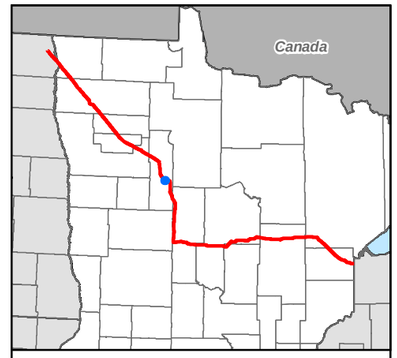

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Detailed Route Maps

Line 3 Replacement Project

Clearwater County, Minnesota

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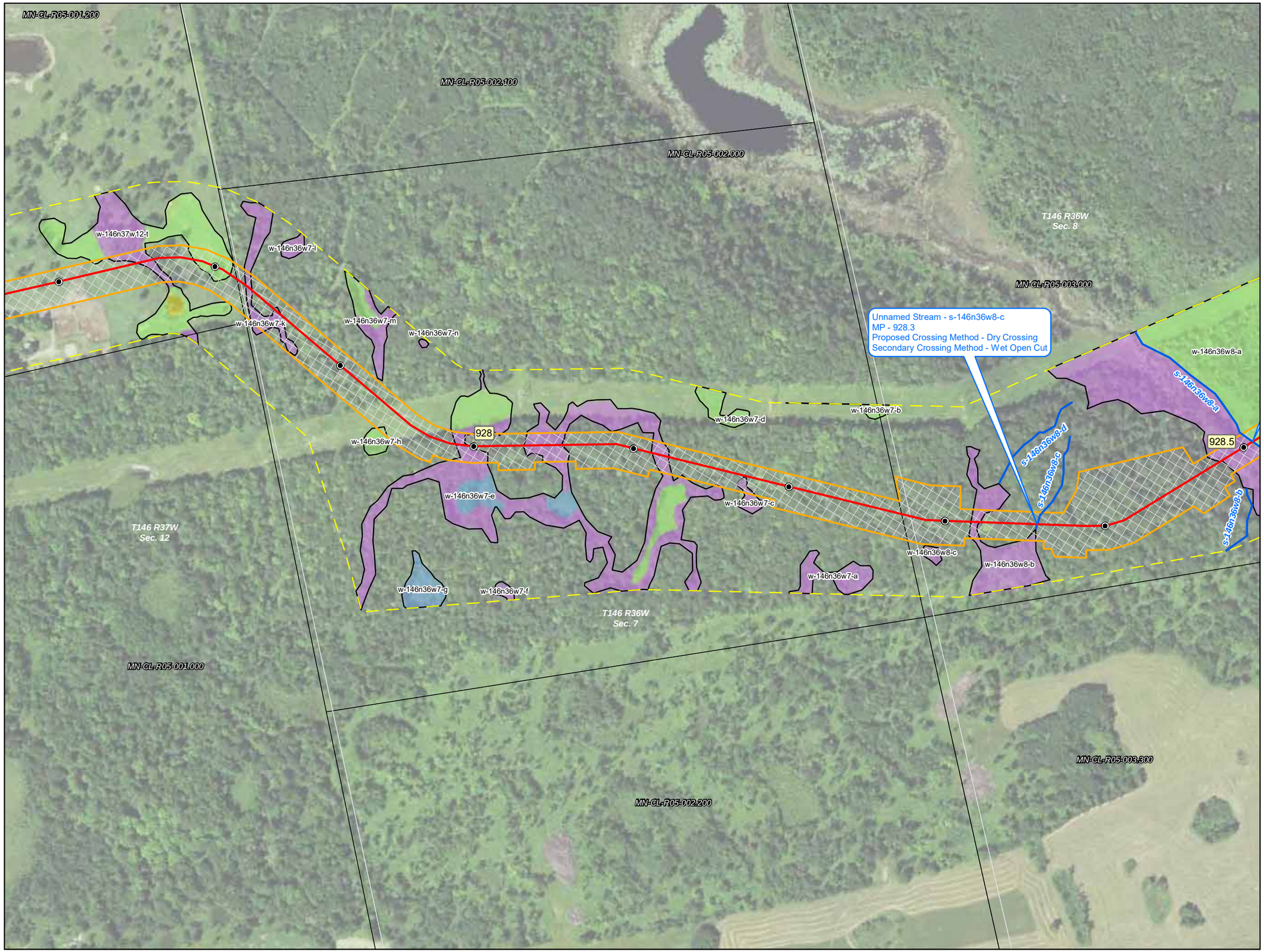

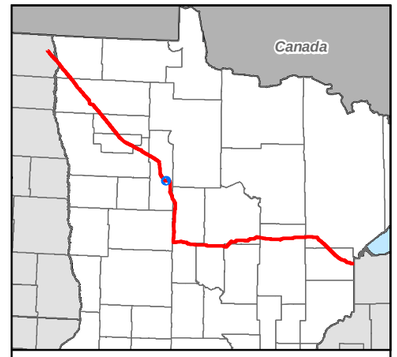

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Detailed Route Maps

Line 3 Replacement Project

Clearwater County, Minnesota

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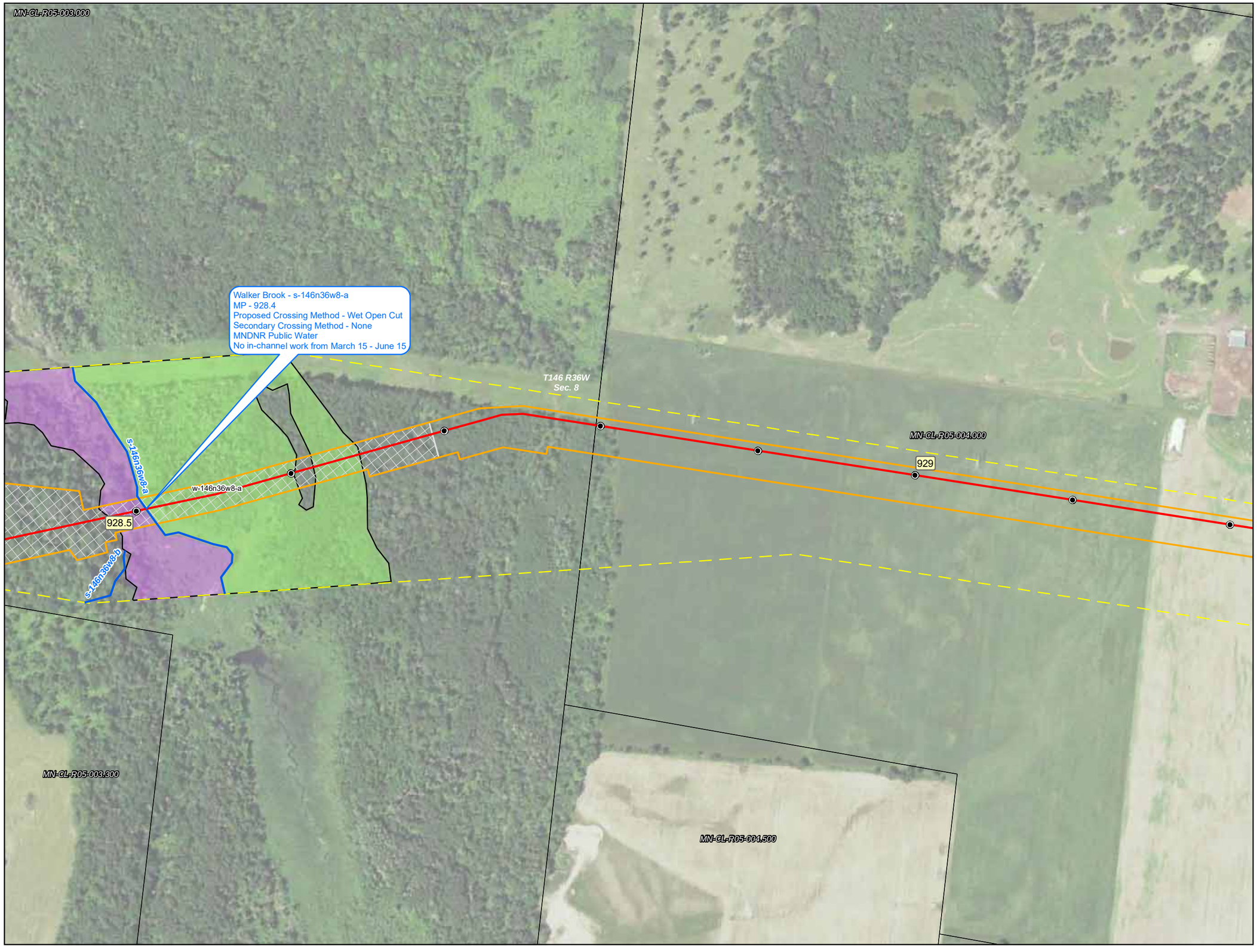

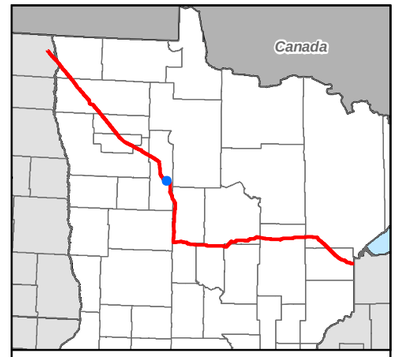

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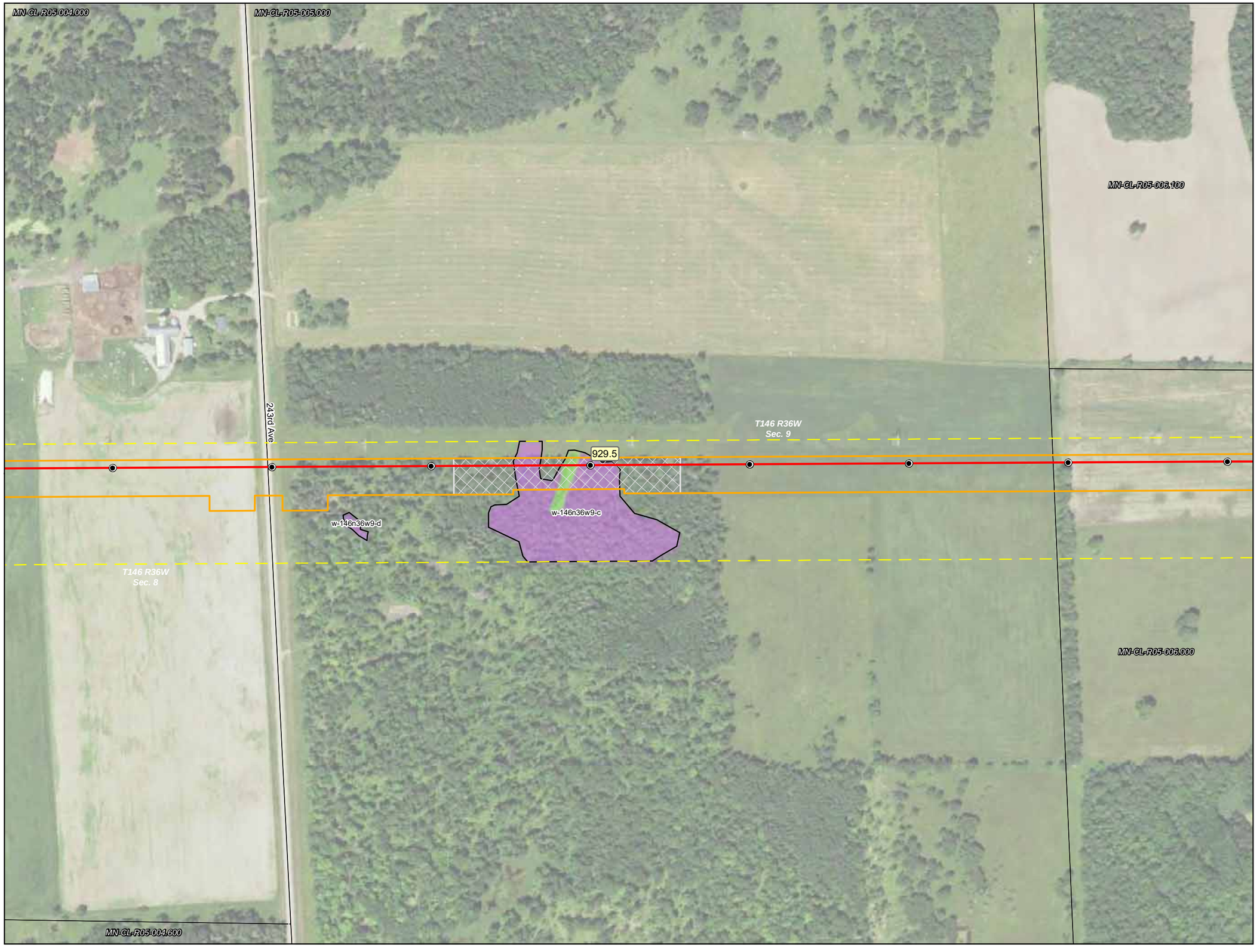

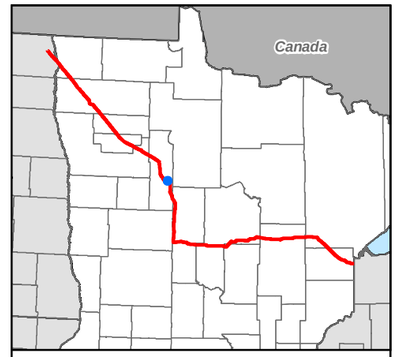

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Clearwater County, Minnesota

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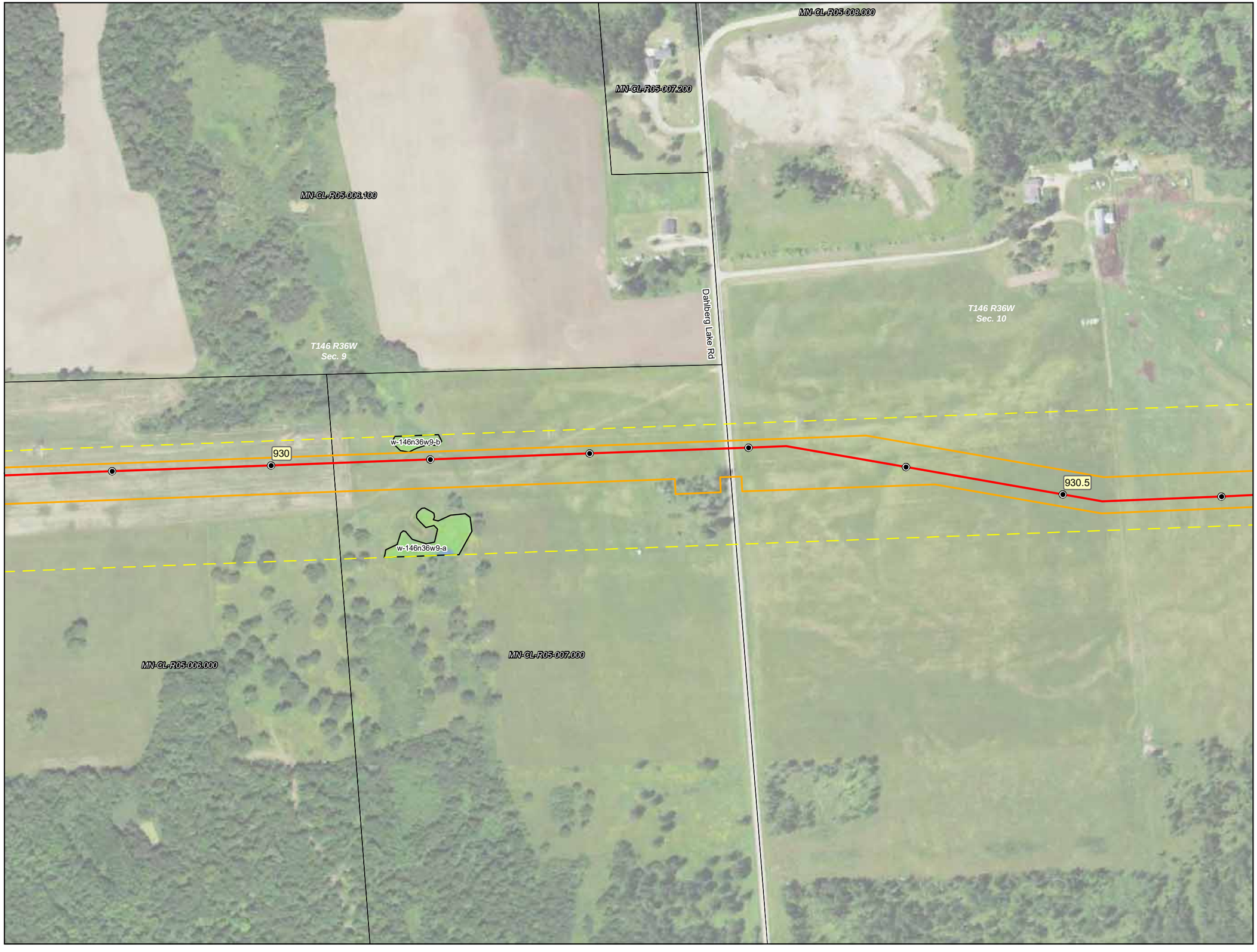

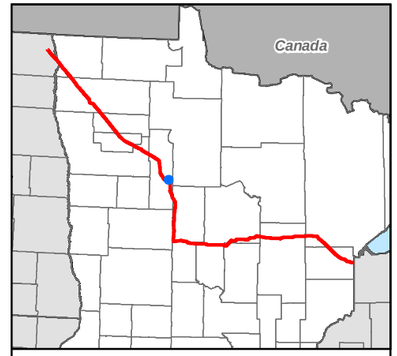

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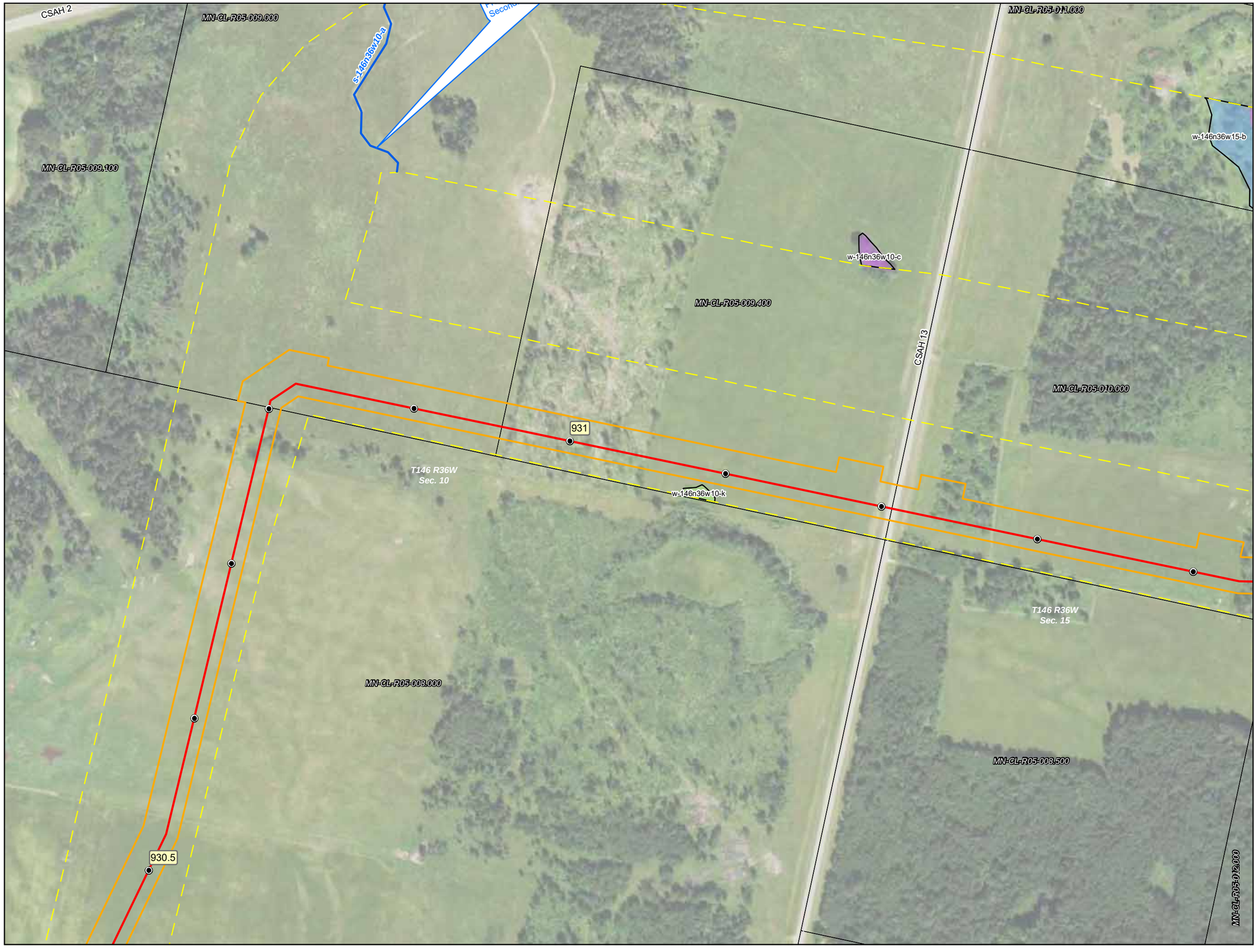

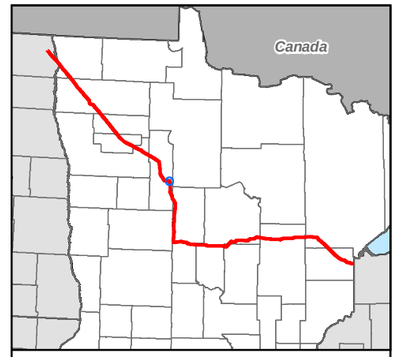

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Clearwater County, Minnesota

ENBRIDGE

MN-GL-R05-009.000
T146 R36W
Sec. 10
CSAH 13
MN-GL-R05-011.000
MN-GL-R05-011.100
MN-GL-R05-011.300
MN-GL-R05-016.100
MN-GL-R05-011.200
MN-GL-R05-013.100
MN-GL-R05-016.000
MN-GL-R05-012.000
MN-GL-R05-015.000
T146
R36W
Sec. 14
CSAH 2
T146 R36W
Sec. 15
932
MN-GL-R05-010.000
w-146n36w15-b
s-146n36w15-a
Unnamed Stream - s-146n36w15-a
MP - 931.7
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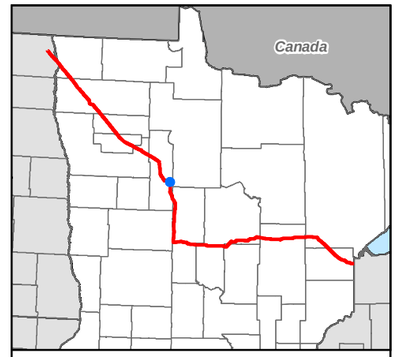
MN-GL-R05-014.000
MN-GL-R05-013.000



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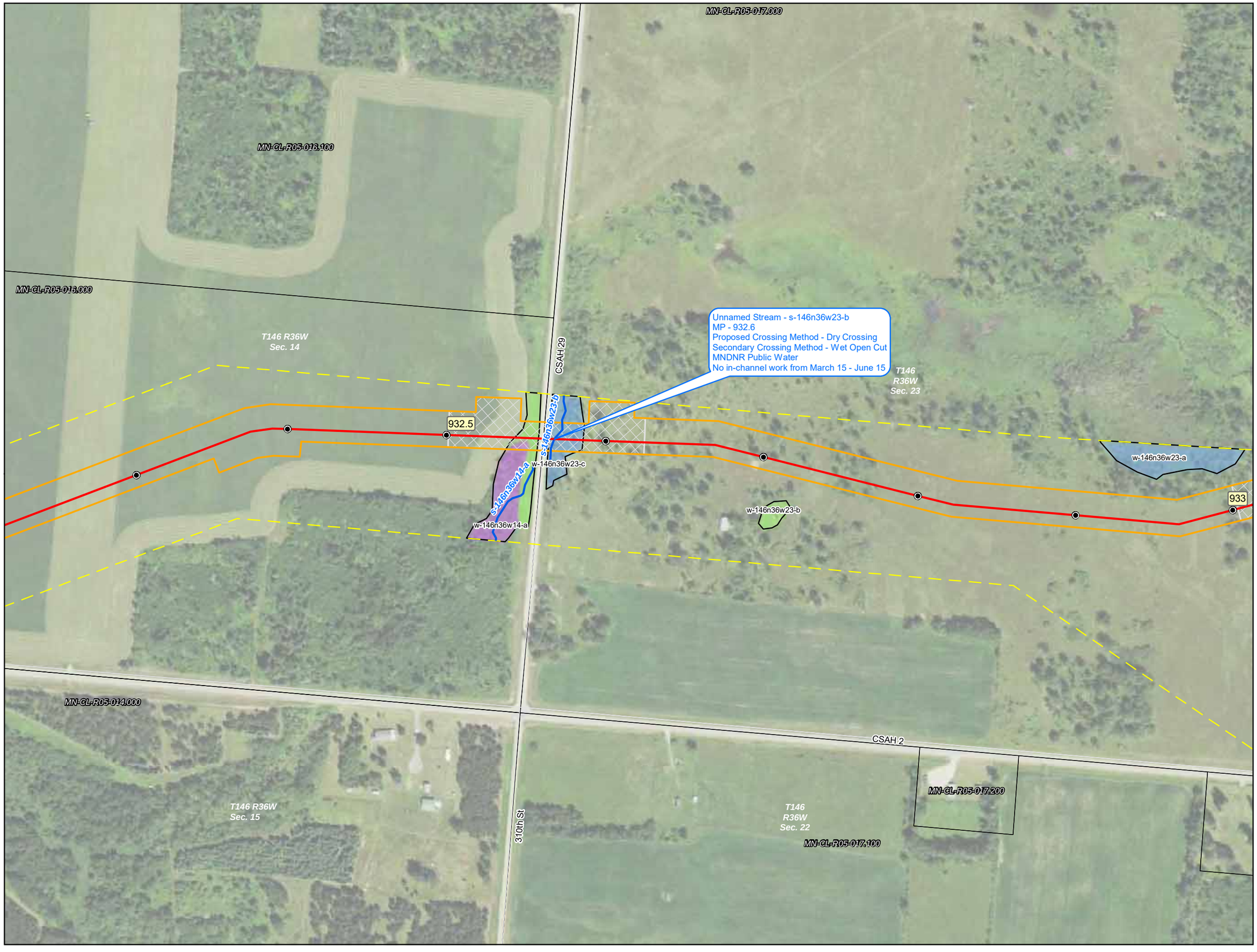

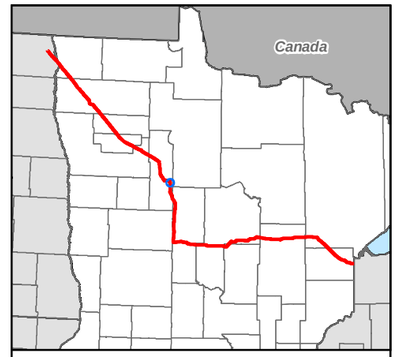

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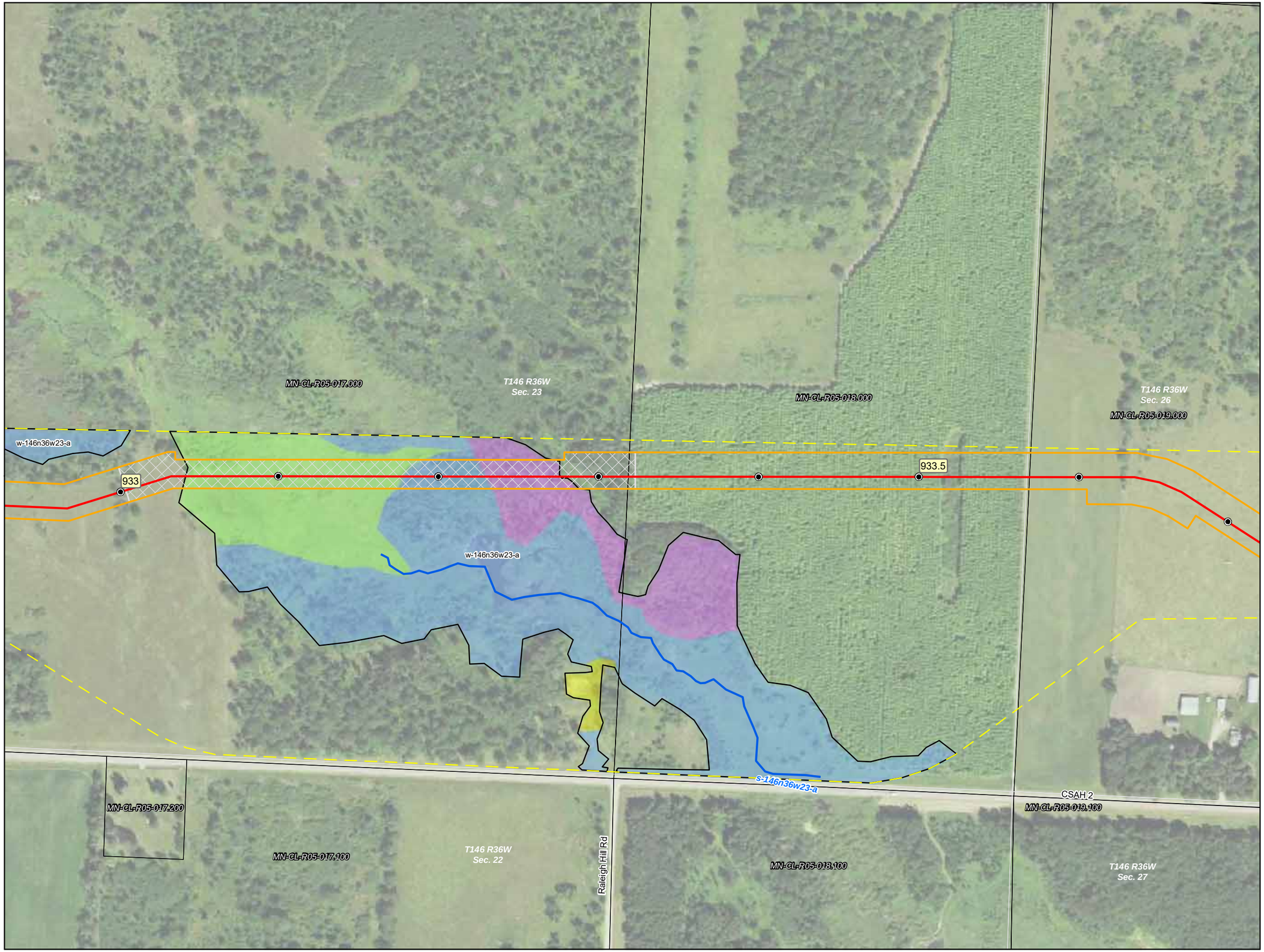
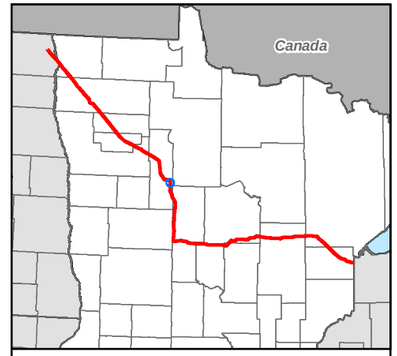
Clearwater County, Minnesota

ENBRIDGE





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Wetlands

Field Delineated Wetland	NWI Wetlands
PEM	PEM
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PSS	PSS
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Waterbodies

- Field Delineated Waterbody
- NHD Waterbody

NWI Waterbodies

- Lake
- Riverine

0 150 300 Feet

1 inch = 300 feet

Detailed Route Maps

Line 3 Replacement Project

Clearwater County, Minnesota

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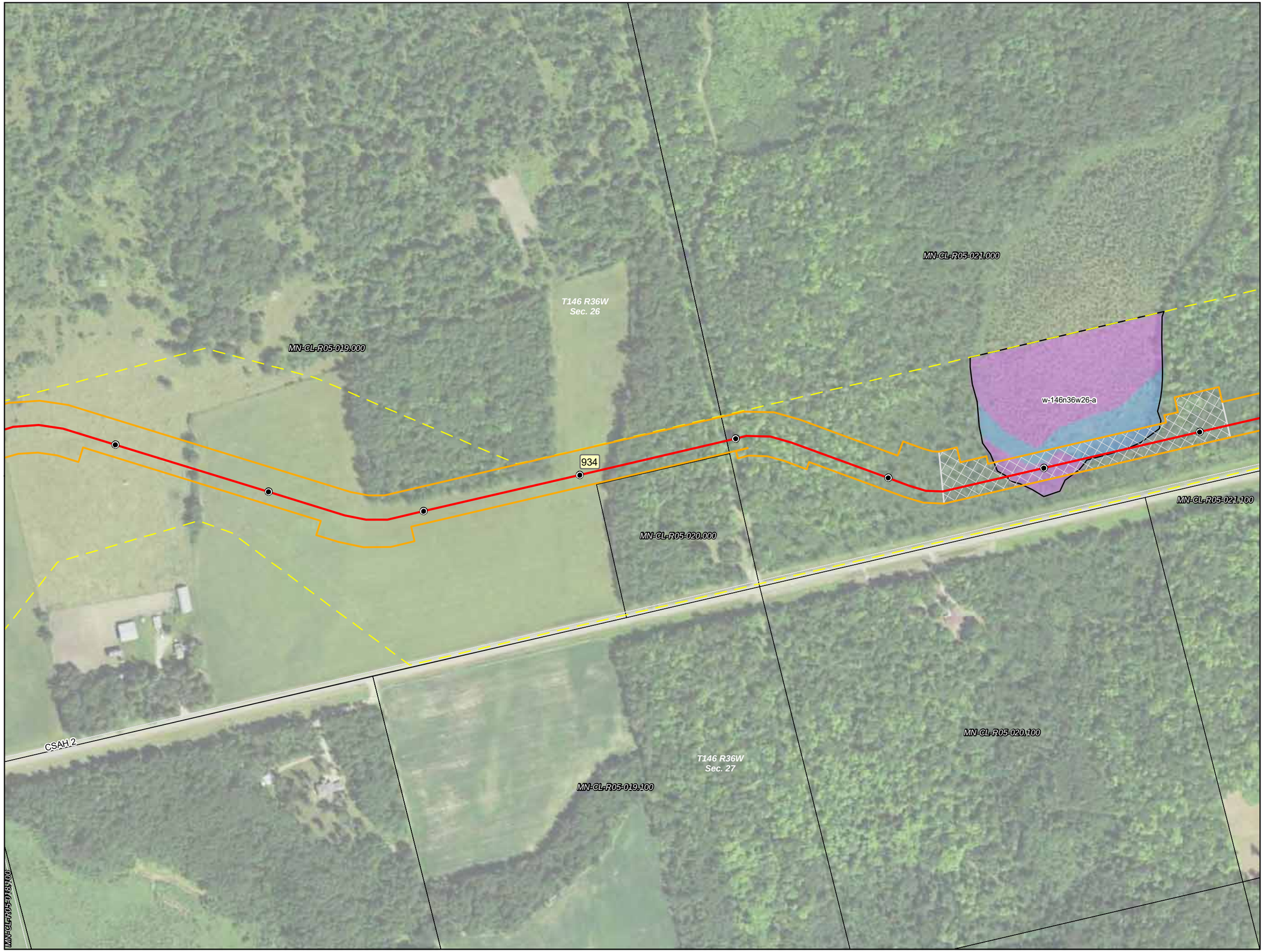

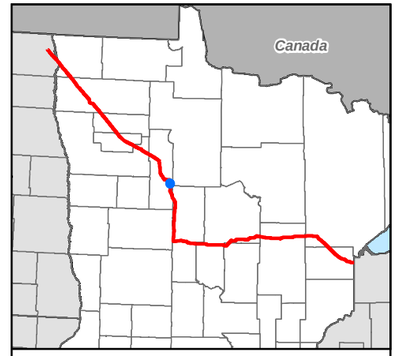

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Clearwater County, Minnesota

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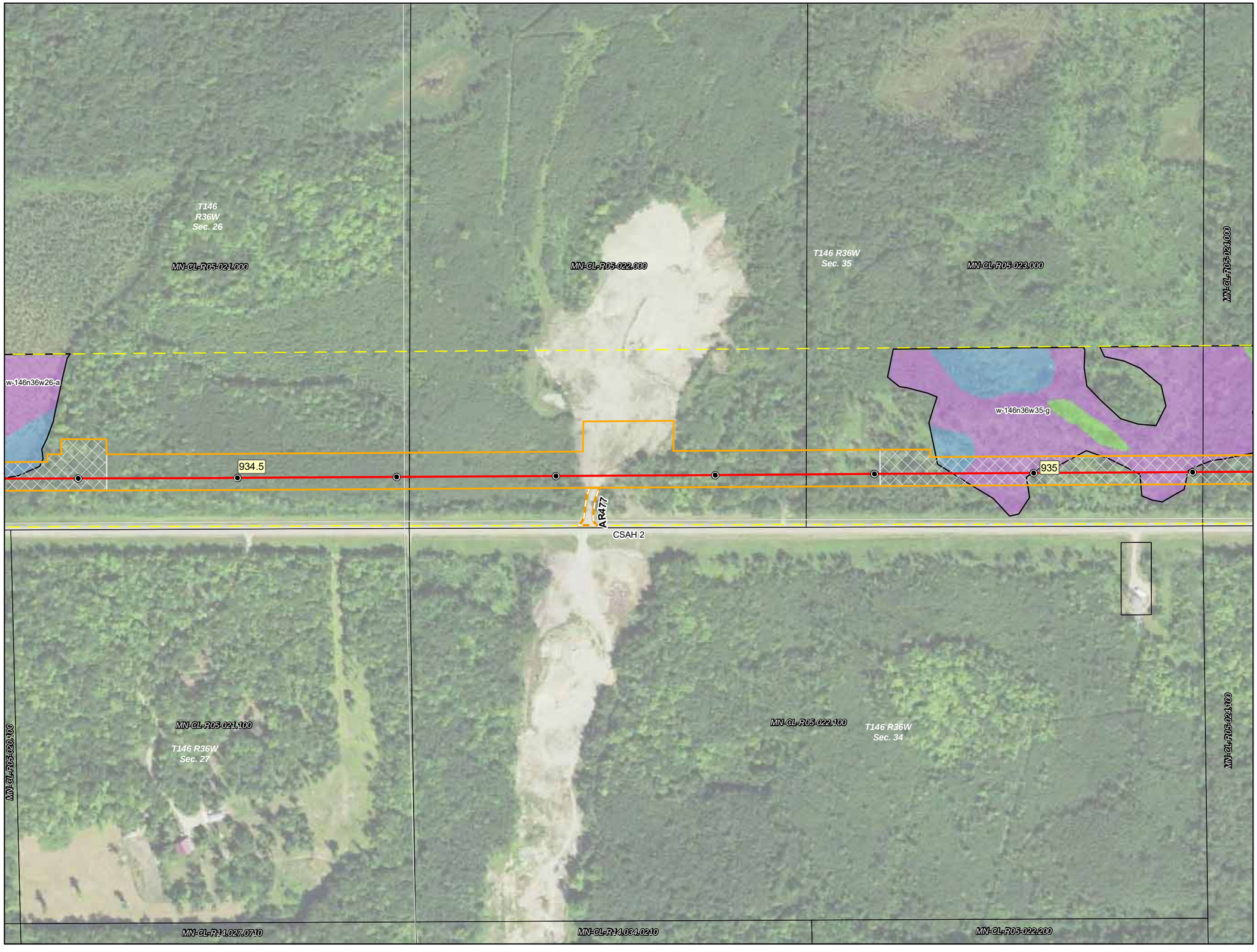

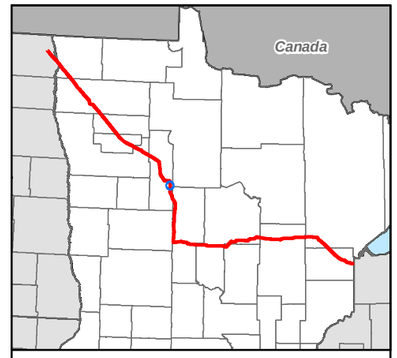

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Clearwater County, Minnesota

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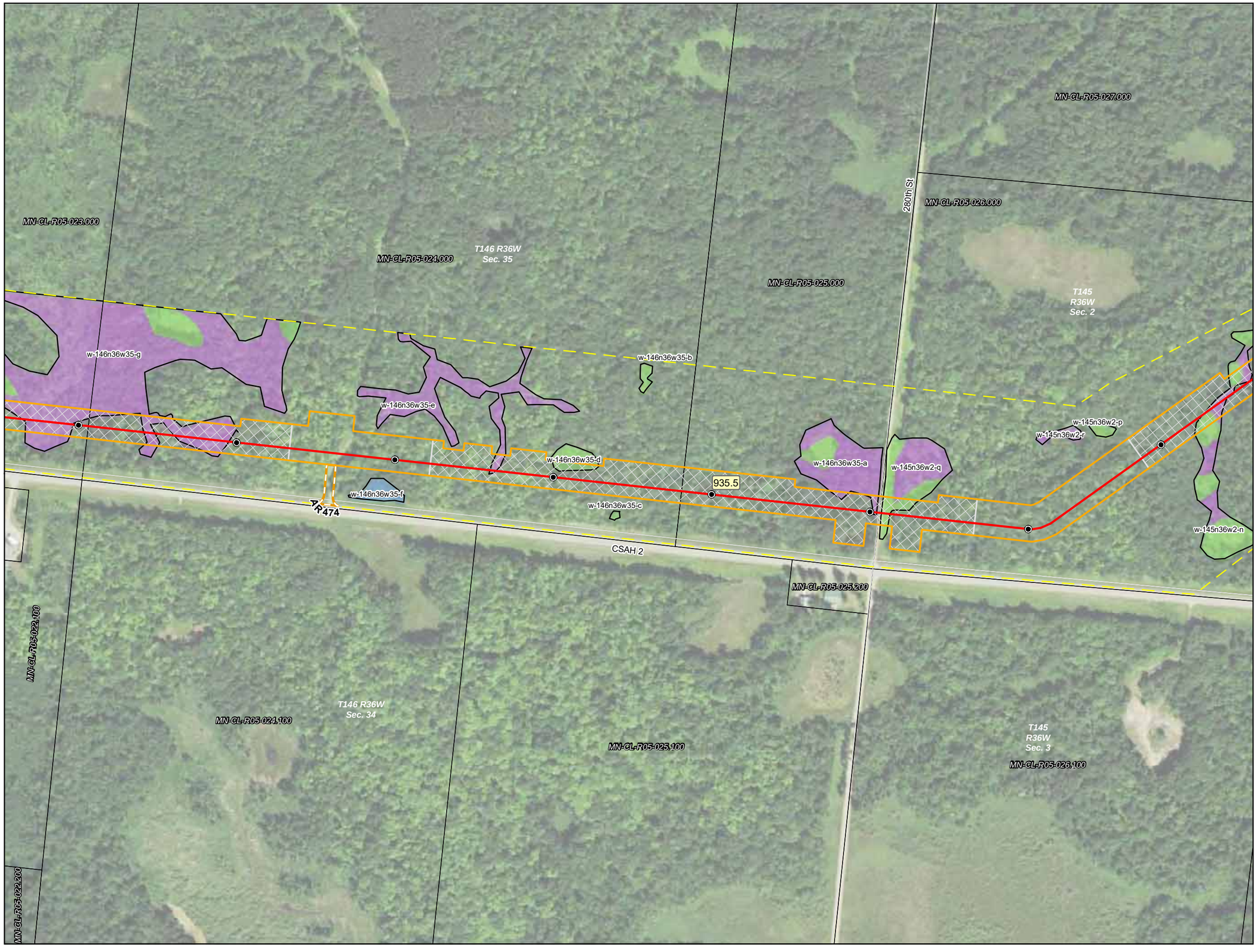

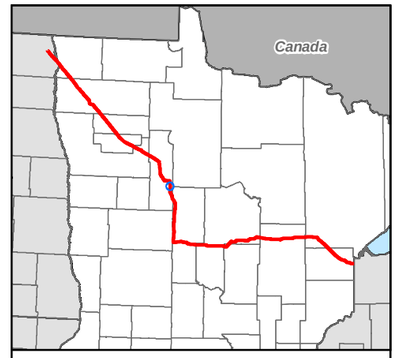

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Clearwater County, Minnesota

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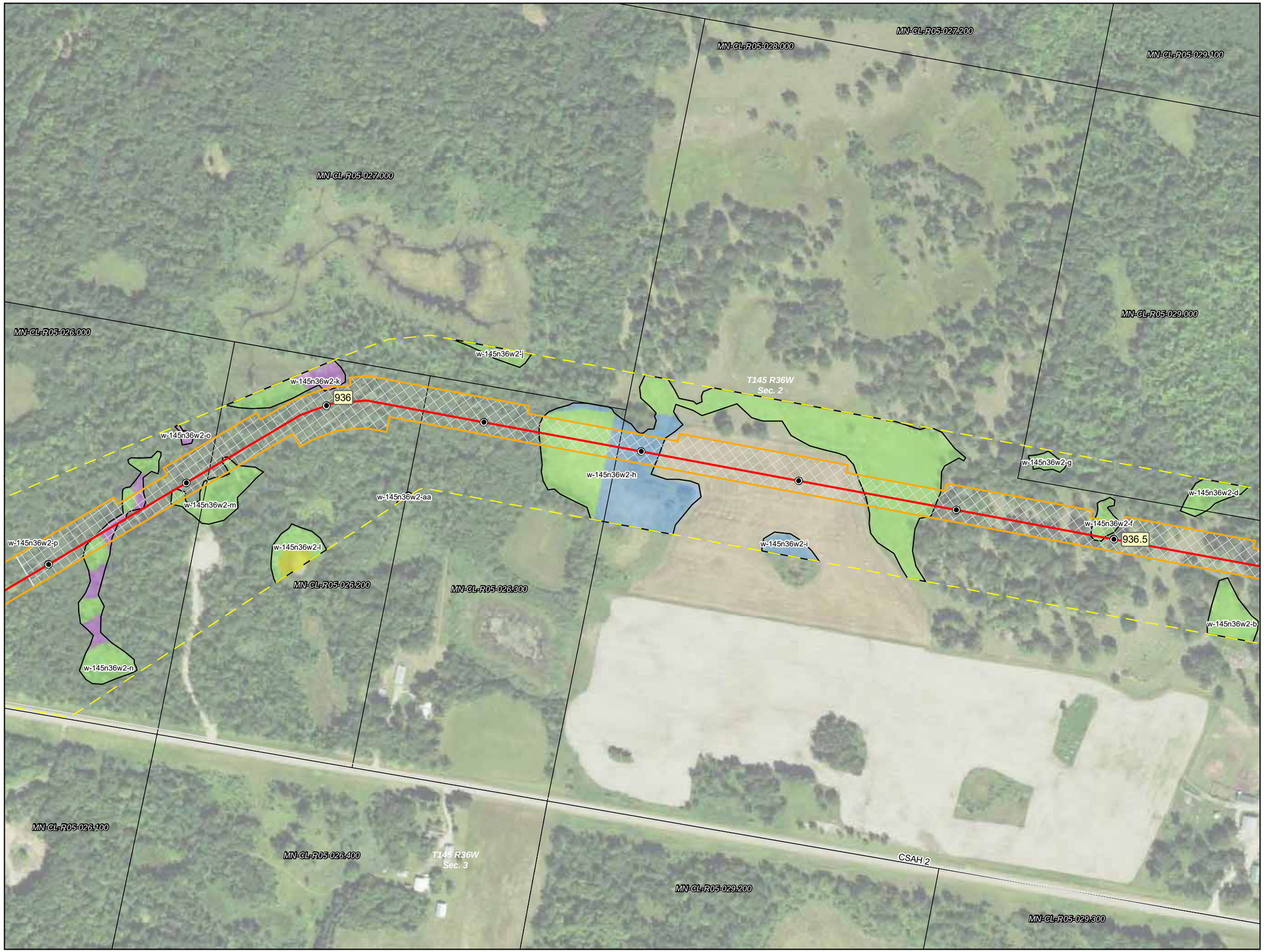

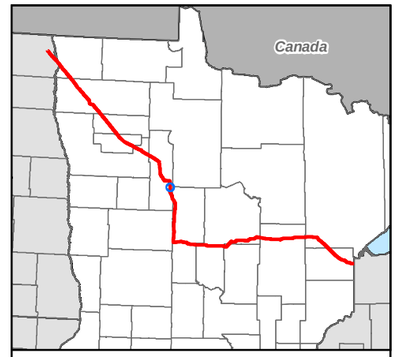

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Clearwater County, Minnesota

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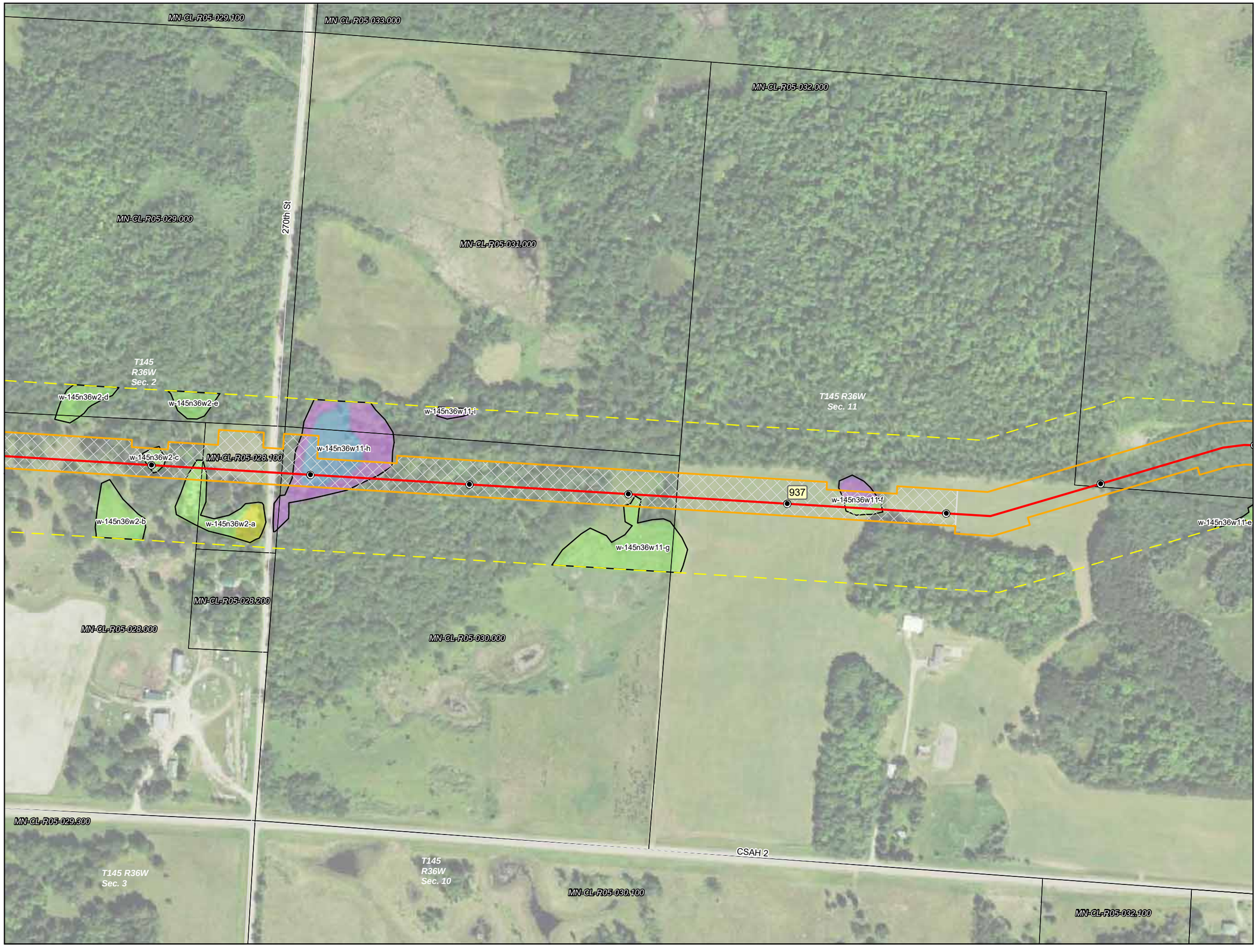

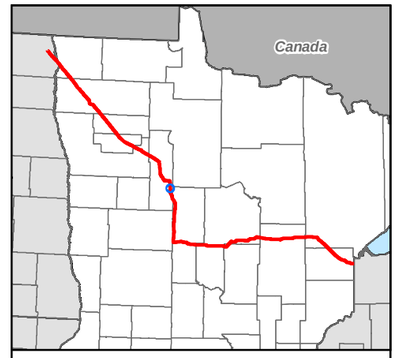

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Clearwater County, Minnesota

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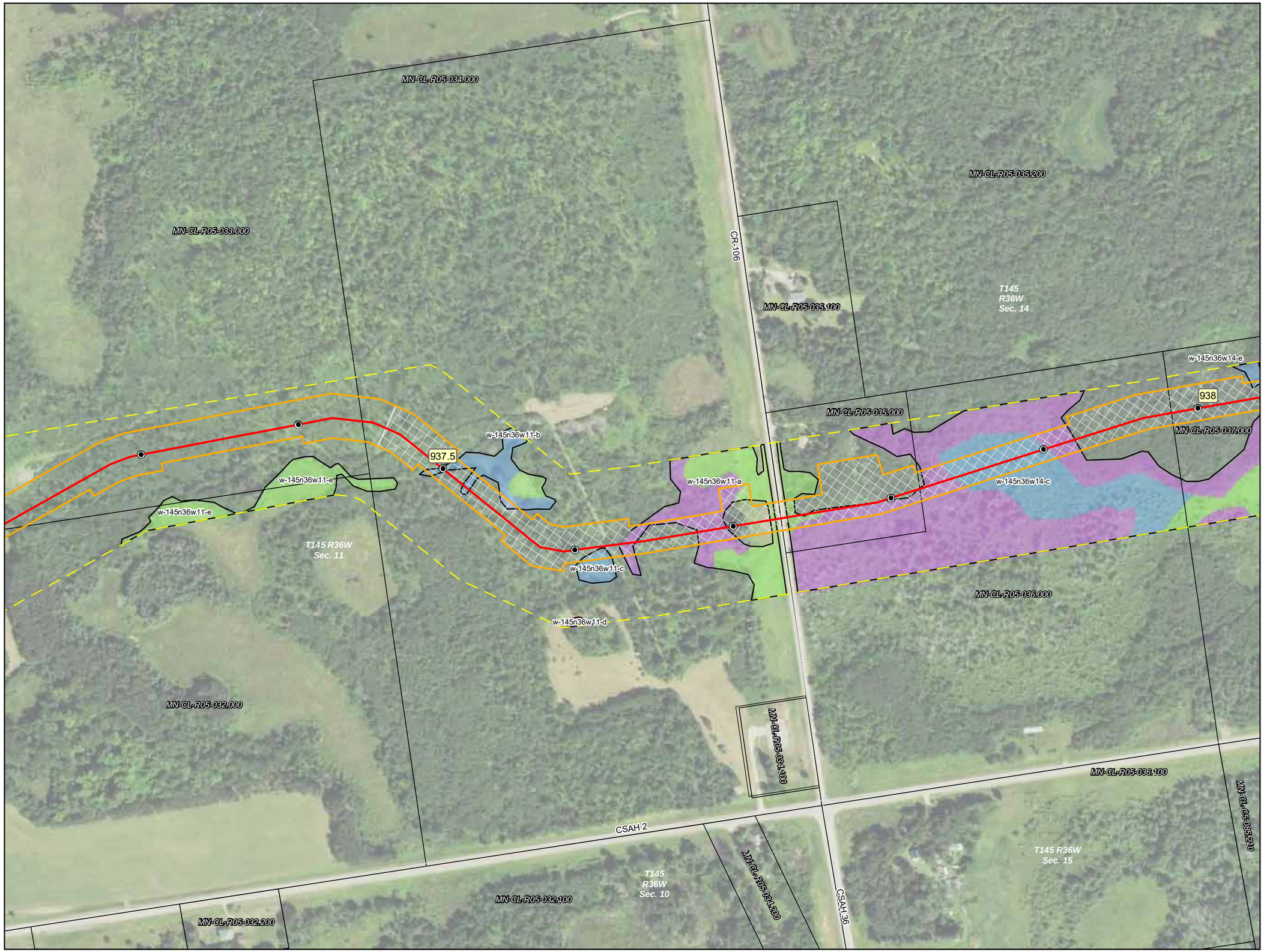

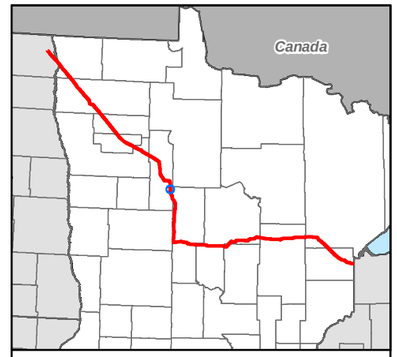

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Line 3 Replacement Project

Clearwater County, Minnesota

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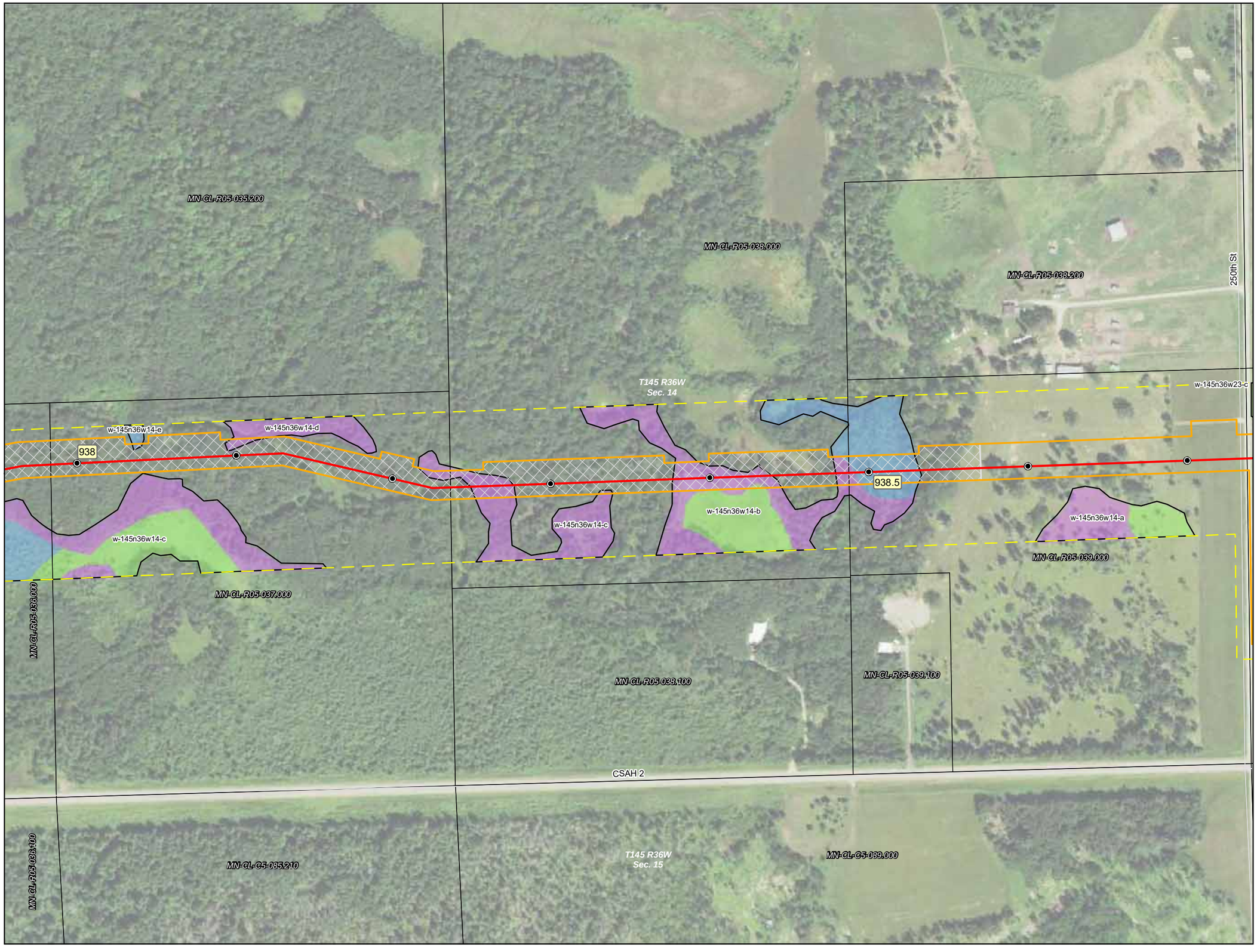

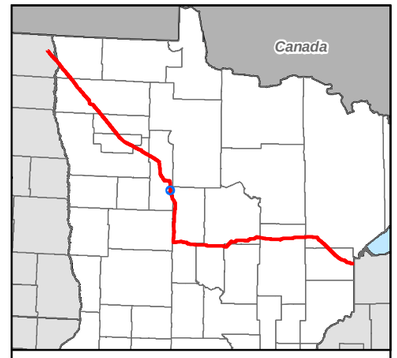

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Clearwater County, Minnesota

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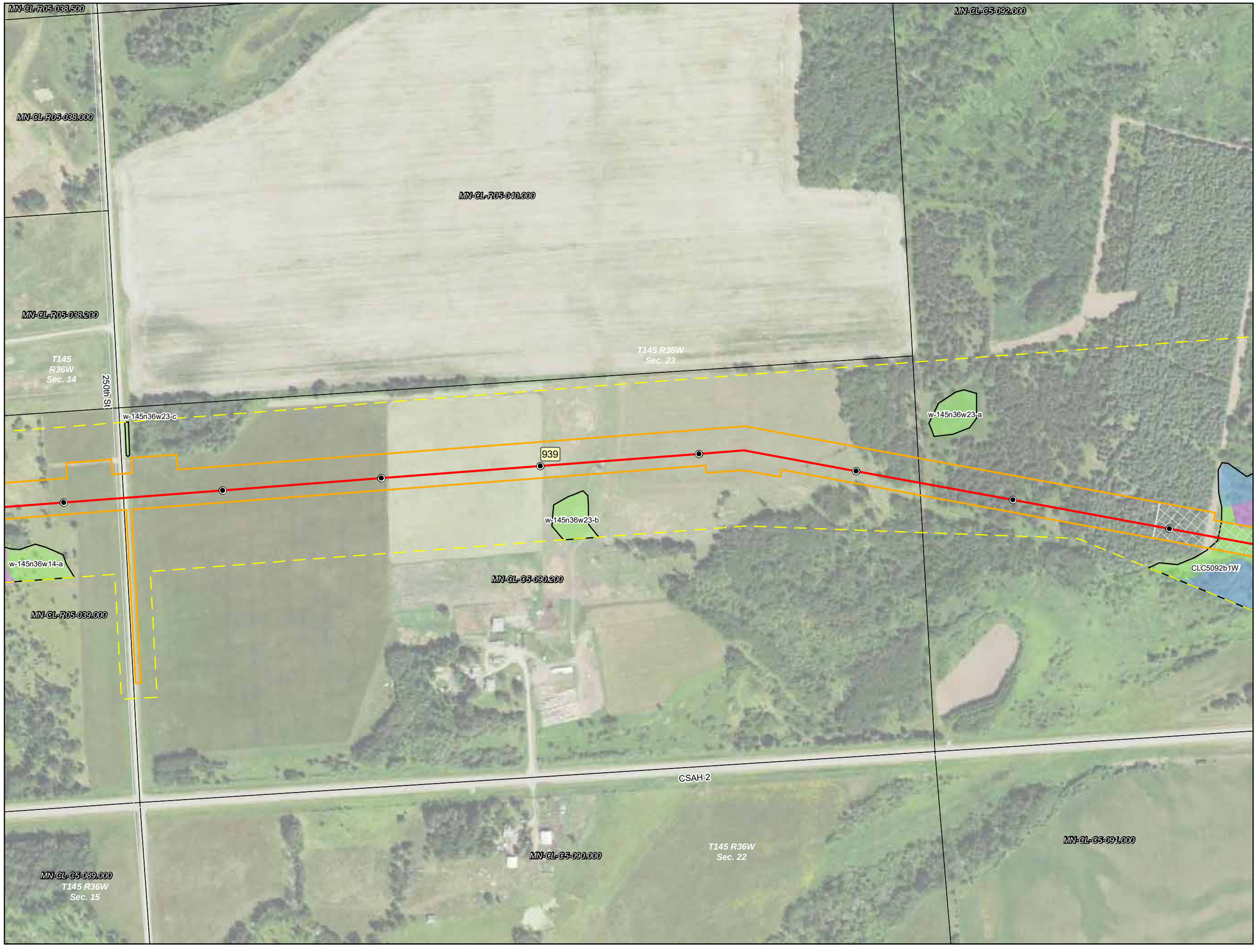

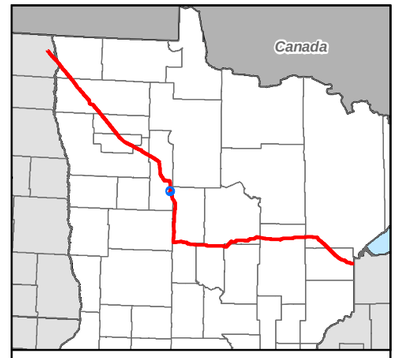

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Line 3 Replacement Project

Clearwater County, Minnesota

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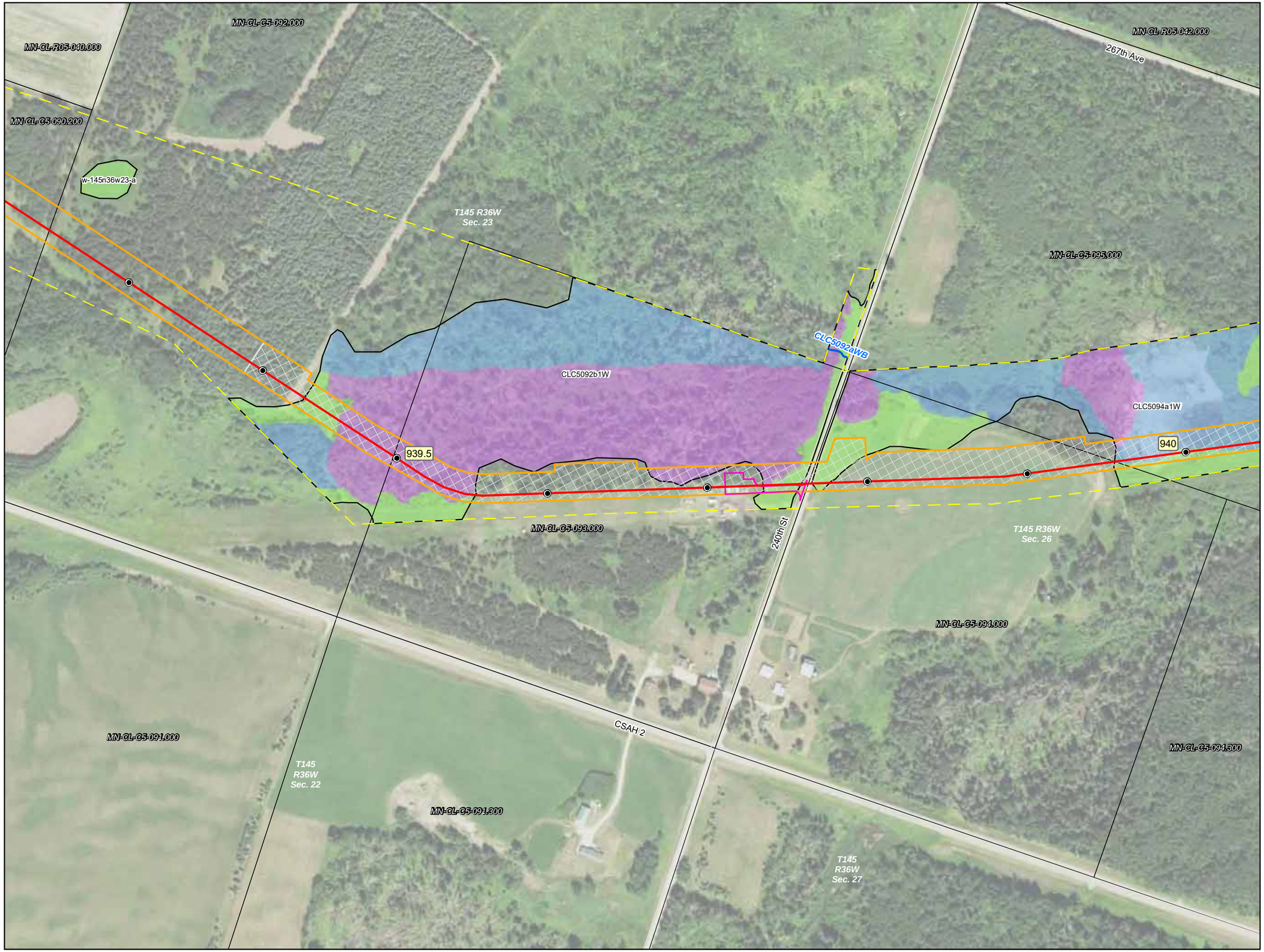

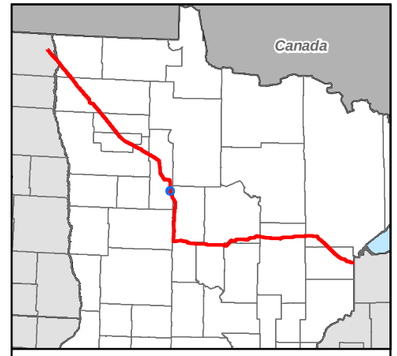

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Detailed Route Maps

Line 3 Replacement Project

Clearwater County, Minnesota

ENBRIDGE

MN-CL-R05-042.000

267th Ave

MN-CL-C5-095.000

MN-CL-C5-095.200

MN-CL-C5-097.000

Bear Creek - CLC5095aWB
MP - 940.1
Proposed Crossing Method - Dry Crossing
Secondary Crossing Method - Wet Open Cut
MNDNR Public Water
No in-channel work from March 15 - June 15

CLC5094a1W

CLC5095a1W

CLC5096a1W

940

940.5

CLC5095aWB

T145 R36W
Sec. 26

MN-CL-C5-094.000

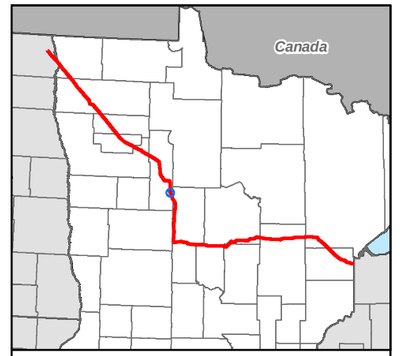
MN-CL-C5-096.000

MN-CL-C5-094.300

CSAH 2

CSAH 40

T145
R36W
Sec. 35



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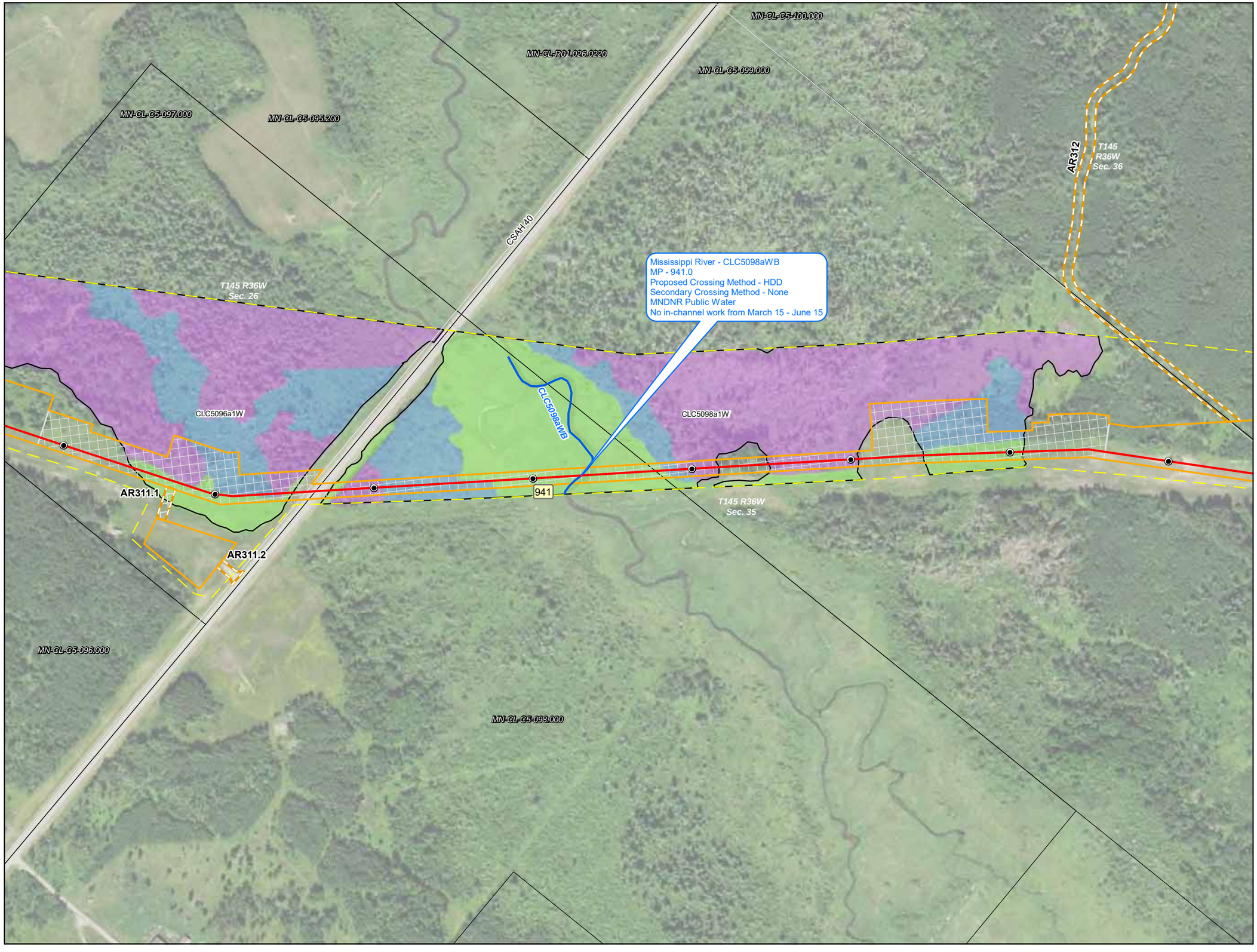

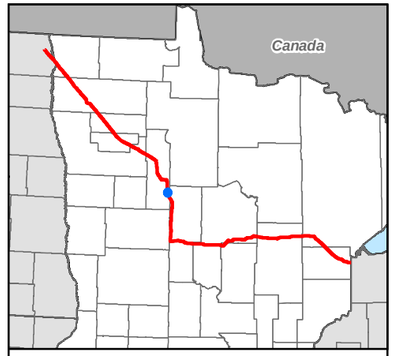

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AR313
AR314
MN-GL-C5-101.000
MN-GL-C5-104.000
T145 R36W
Sec. 36
CLC5100b1W
AR312
MN-GL-C5-103.000
941.5
CLC5100c1W
CLC5100a1W
942
CLC5102a1W
AR314.1
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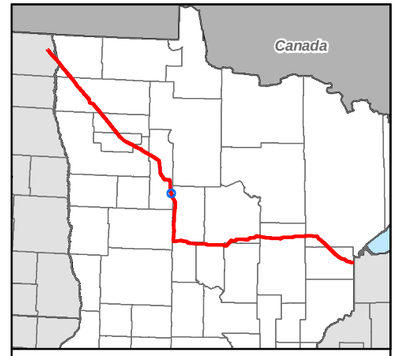

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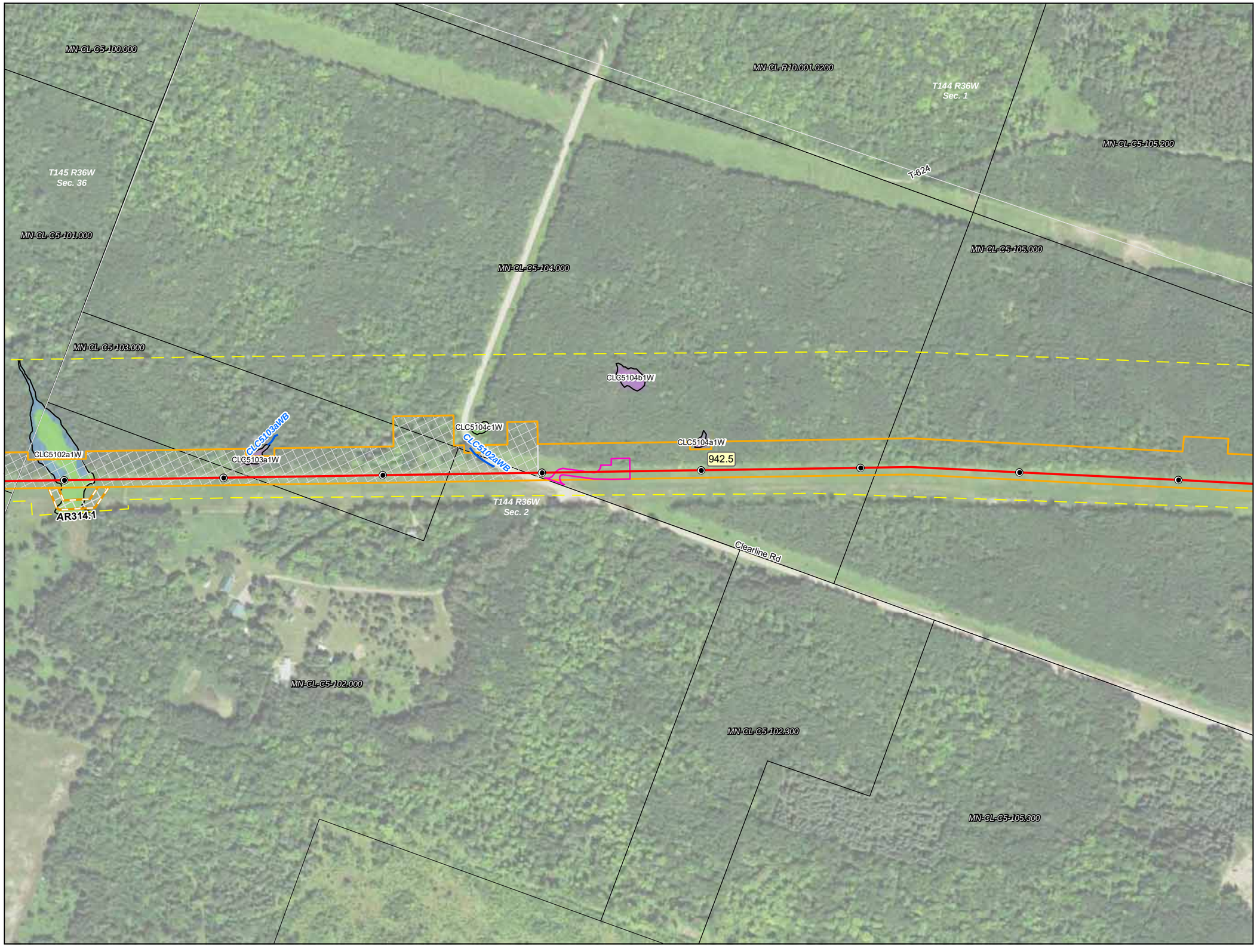

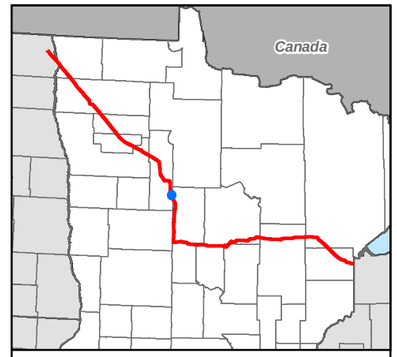

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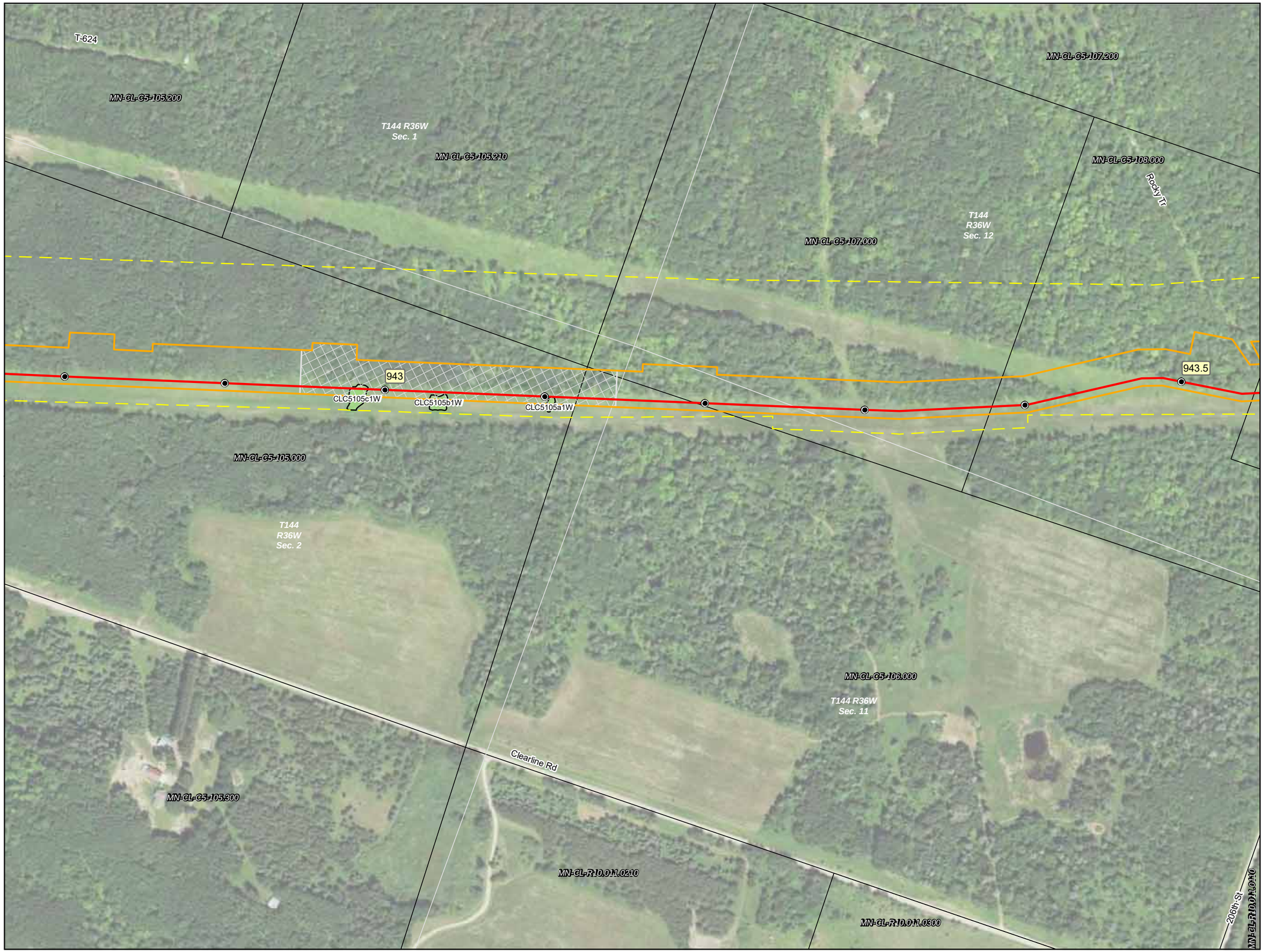

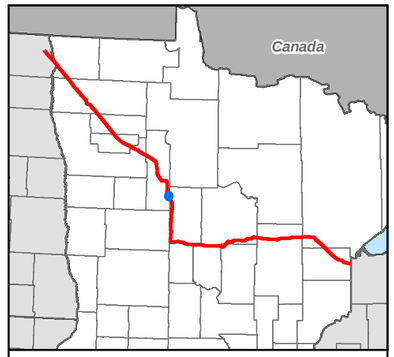

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MN-GL-10.012.1400
MN-GL-10.012.1500
MN-GL-G5-113.100
MN-GL-G5-107.200
MN-GL-G5-108.000
Rocky Tr
CLC5111a1W
CLC5122c1W
CLC5112a1W
CLC5113b1W
CLC5113c1W
CLC5113a1W
943.5
944
CLC5112b1W
MN-GL-G5-109.000
T144 R36W
Sec. 12
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MN-GL-G5-112.000
AR316
MN-GL-G5-108.300
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MN-GL-G5-106.000
T144 R36W
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Sec. 13
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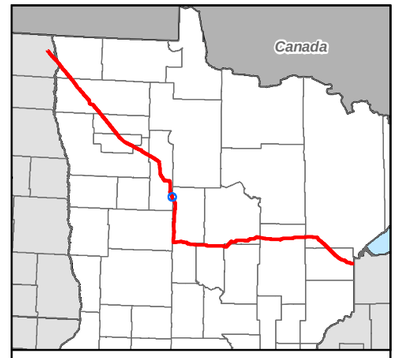

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NWI Waterbodies

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0 150 300 Feet

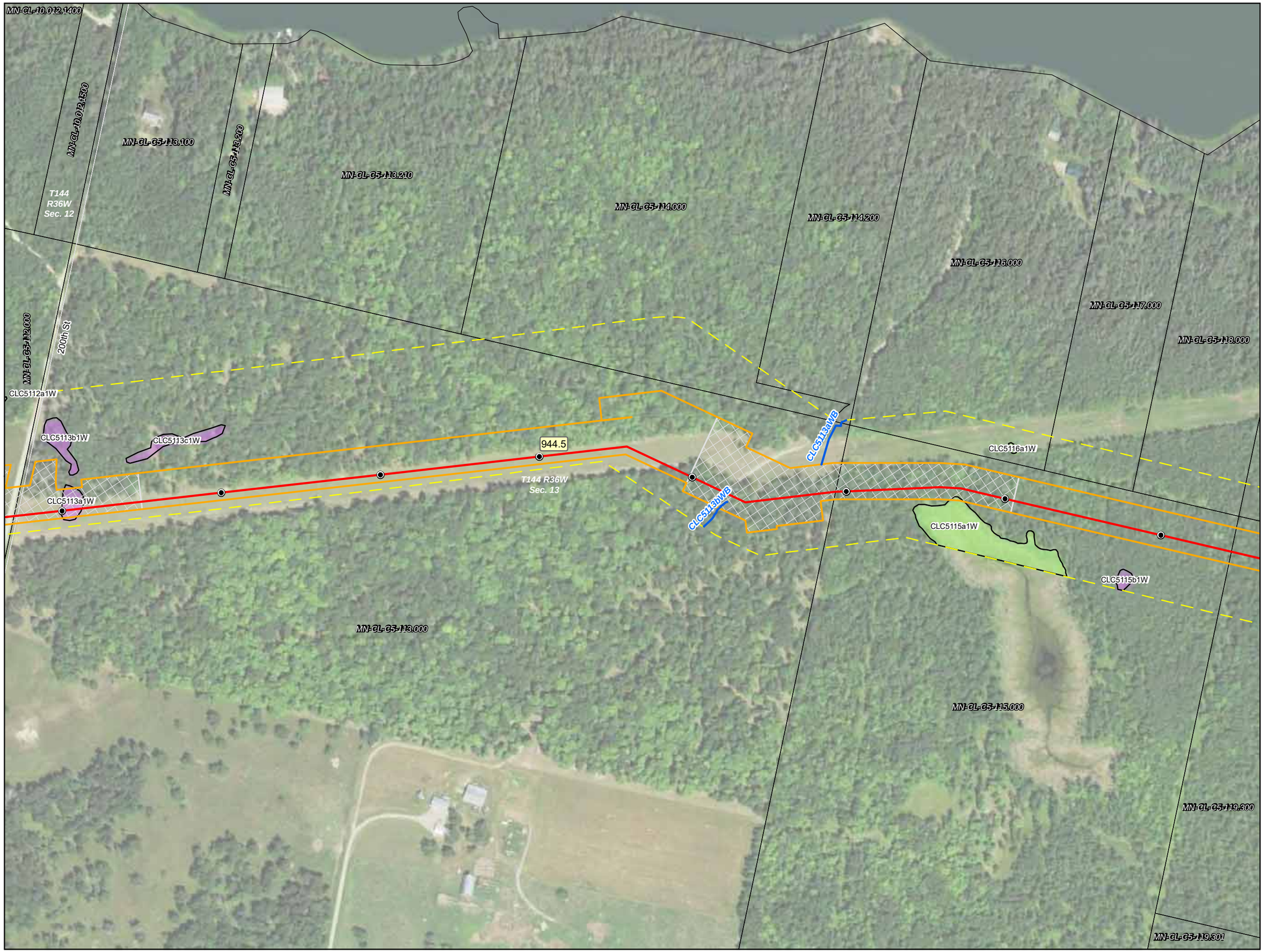
1 inch = 300 feet

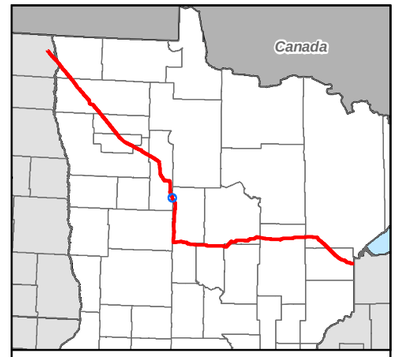
Detailed Route Maps

Line 3 Replacement Project

Clearwater County, Minnesota

ENBRIDGE





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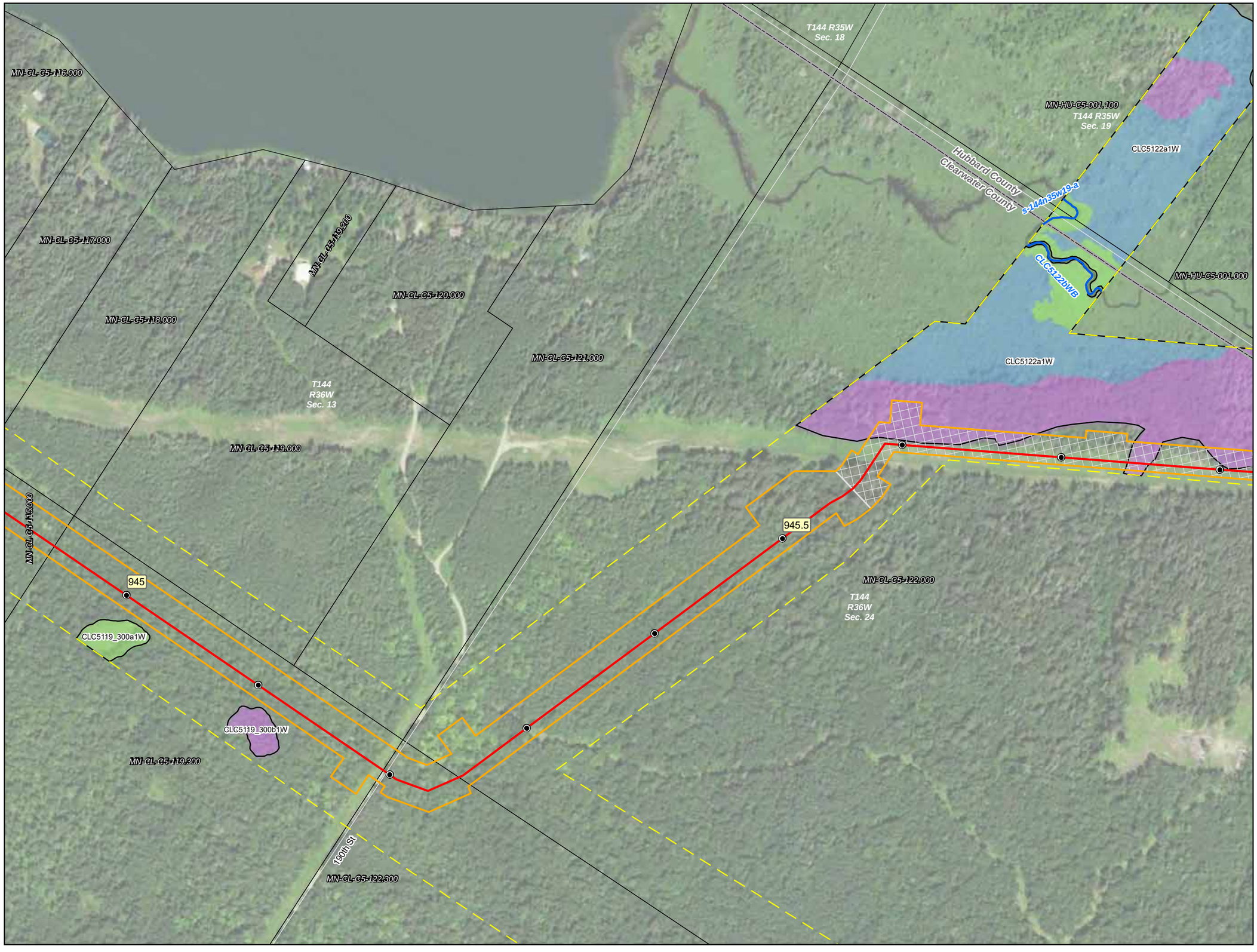

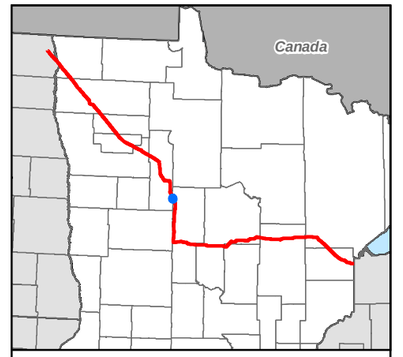

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Clearwater and Hubbard Counties, Minnesota

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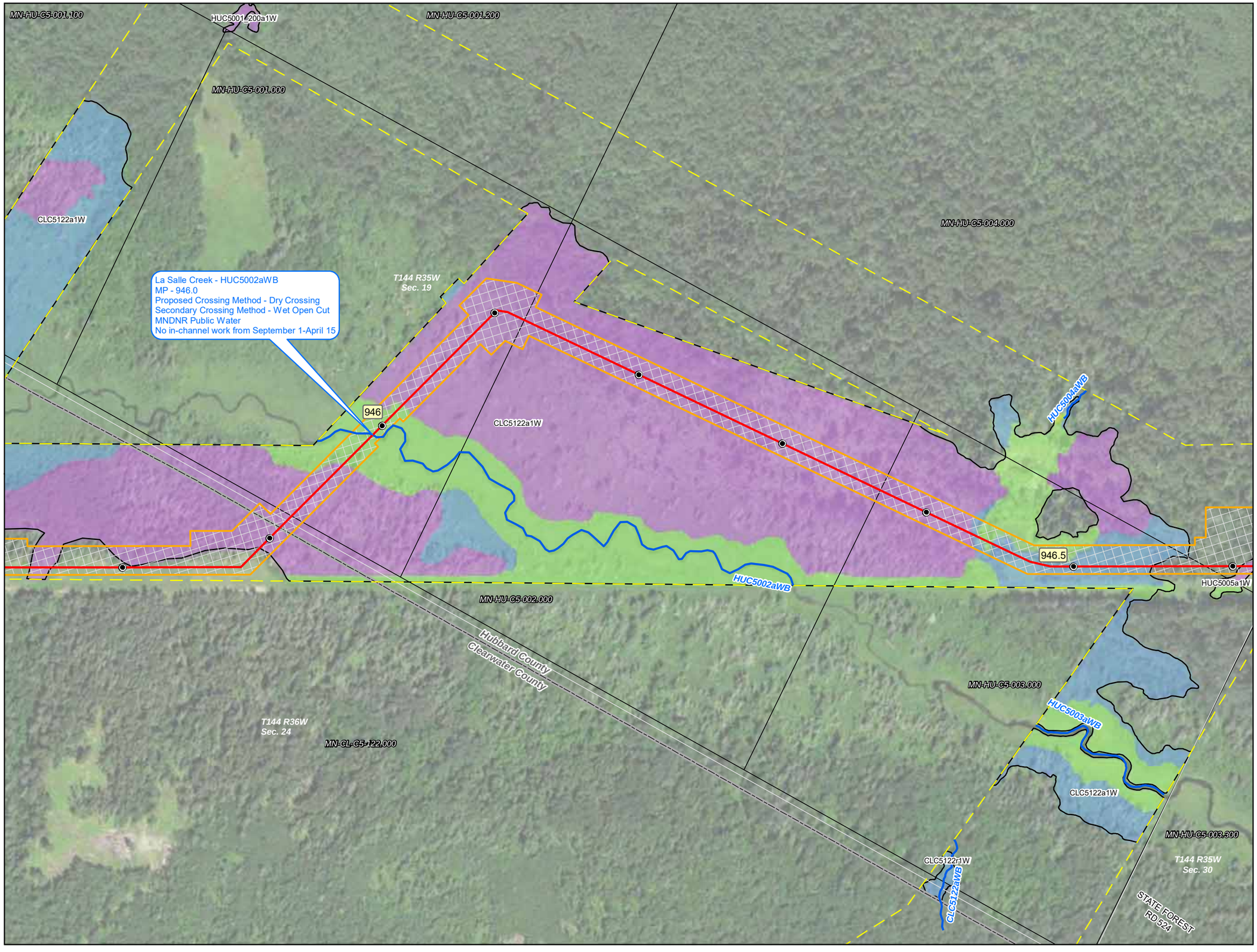

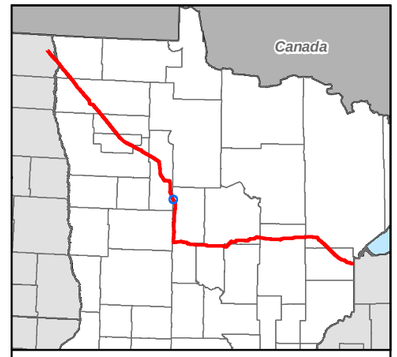

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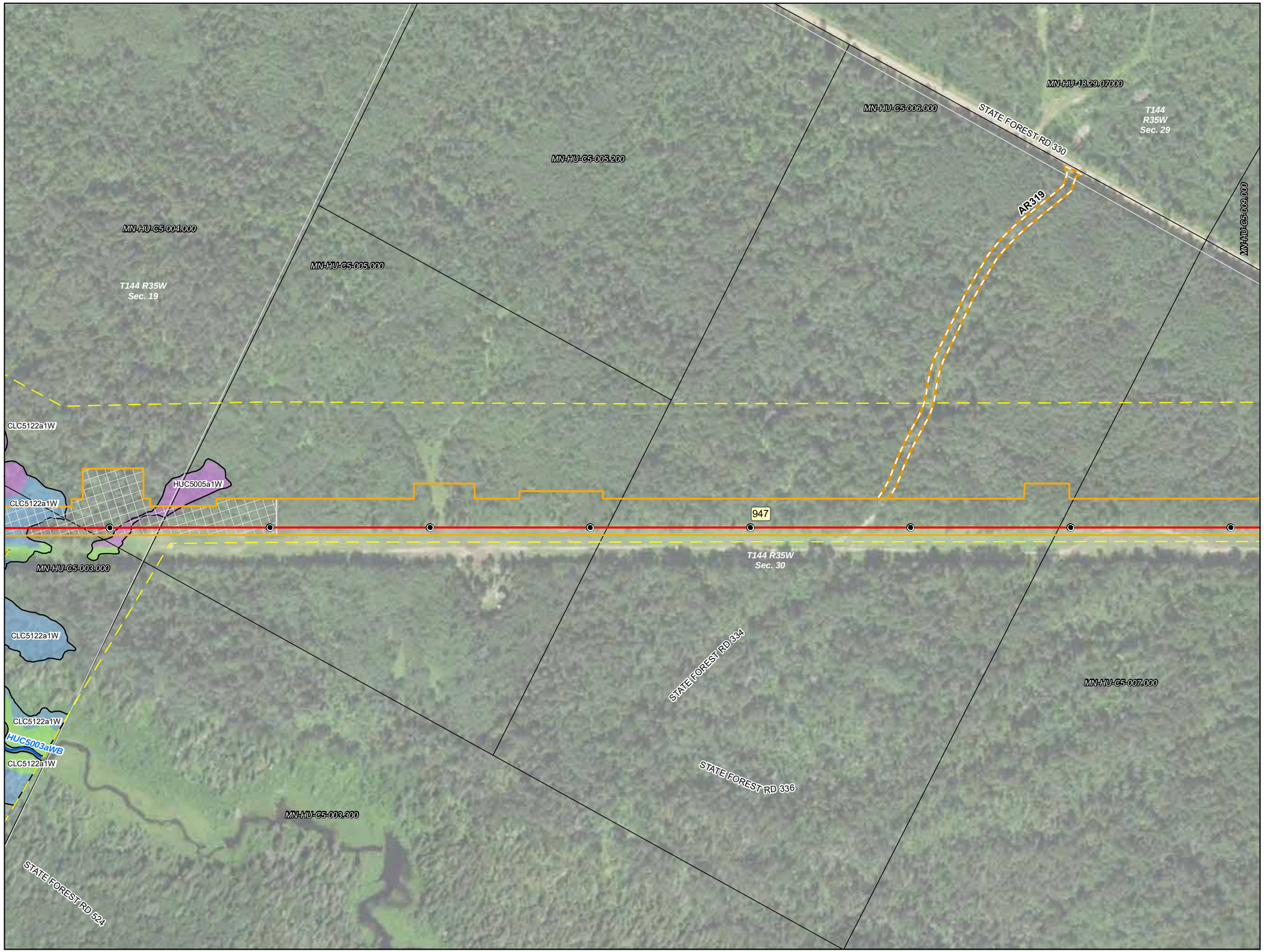

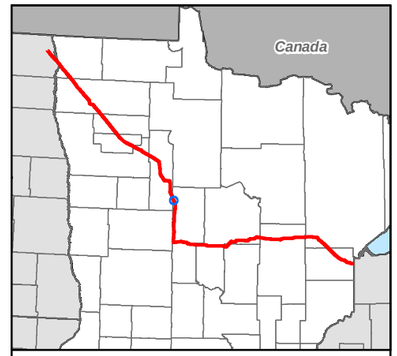

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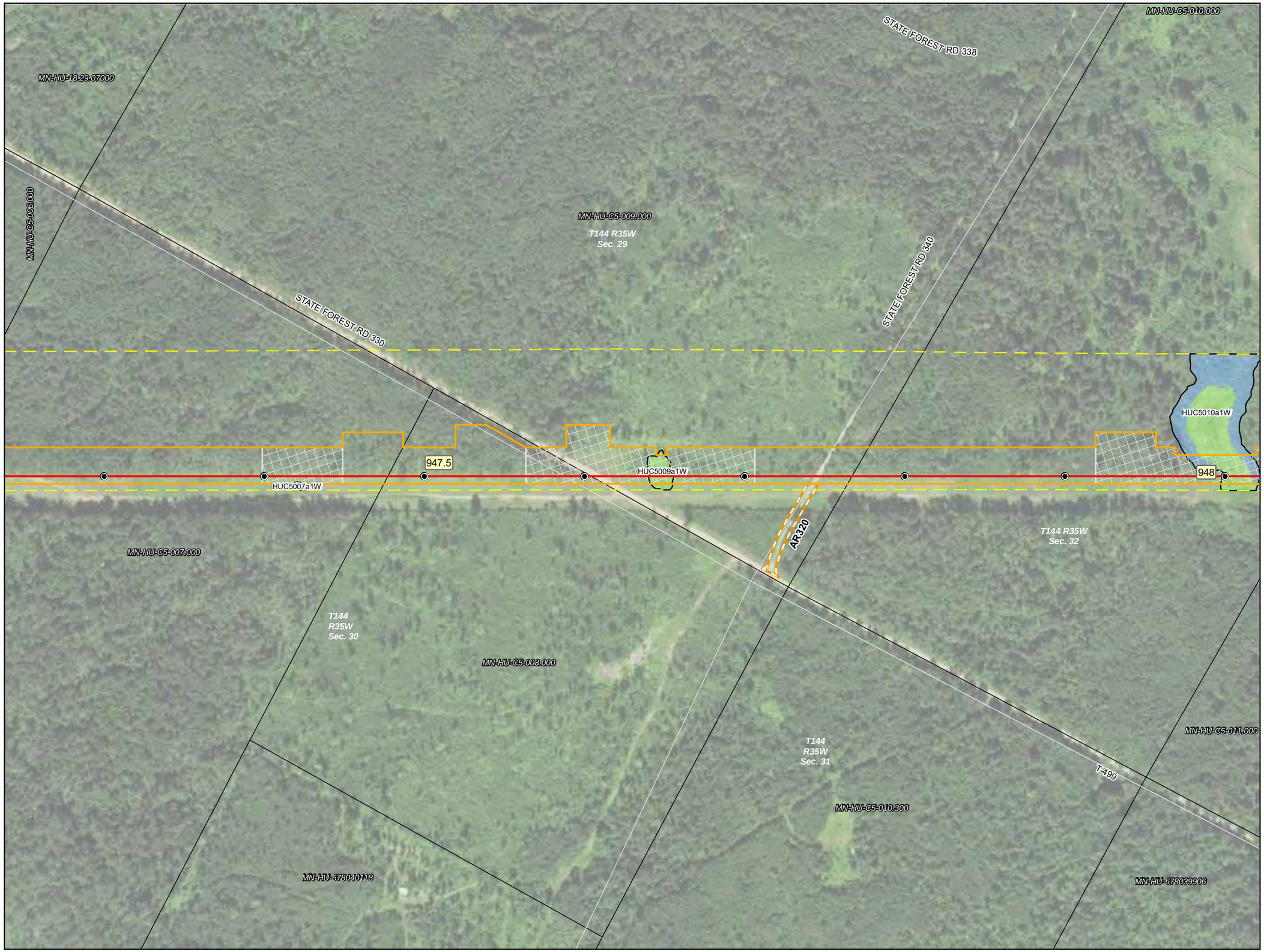

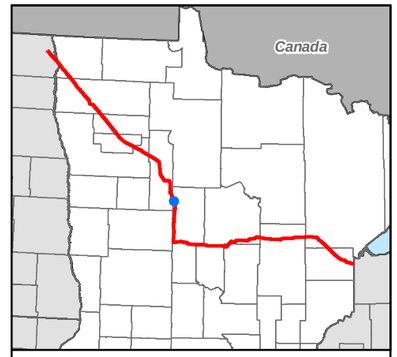

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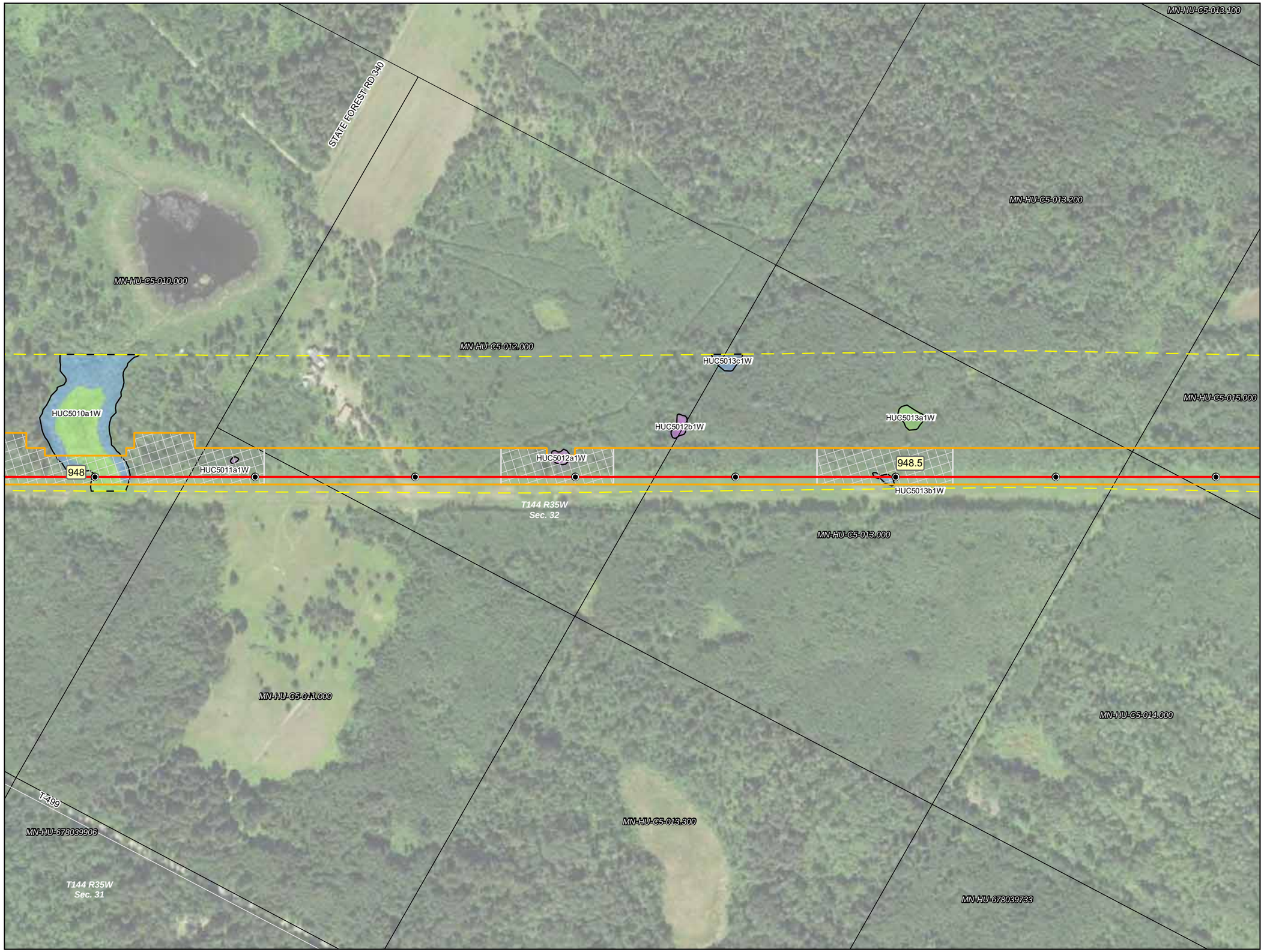

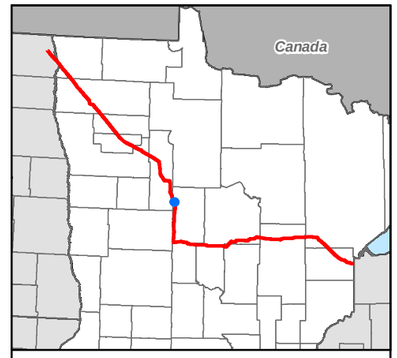

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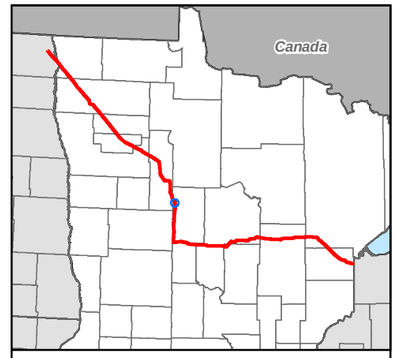

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Hubbard County, Minnesota

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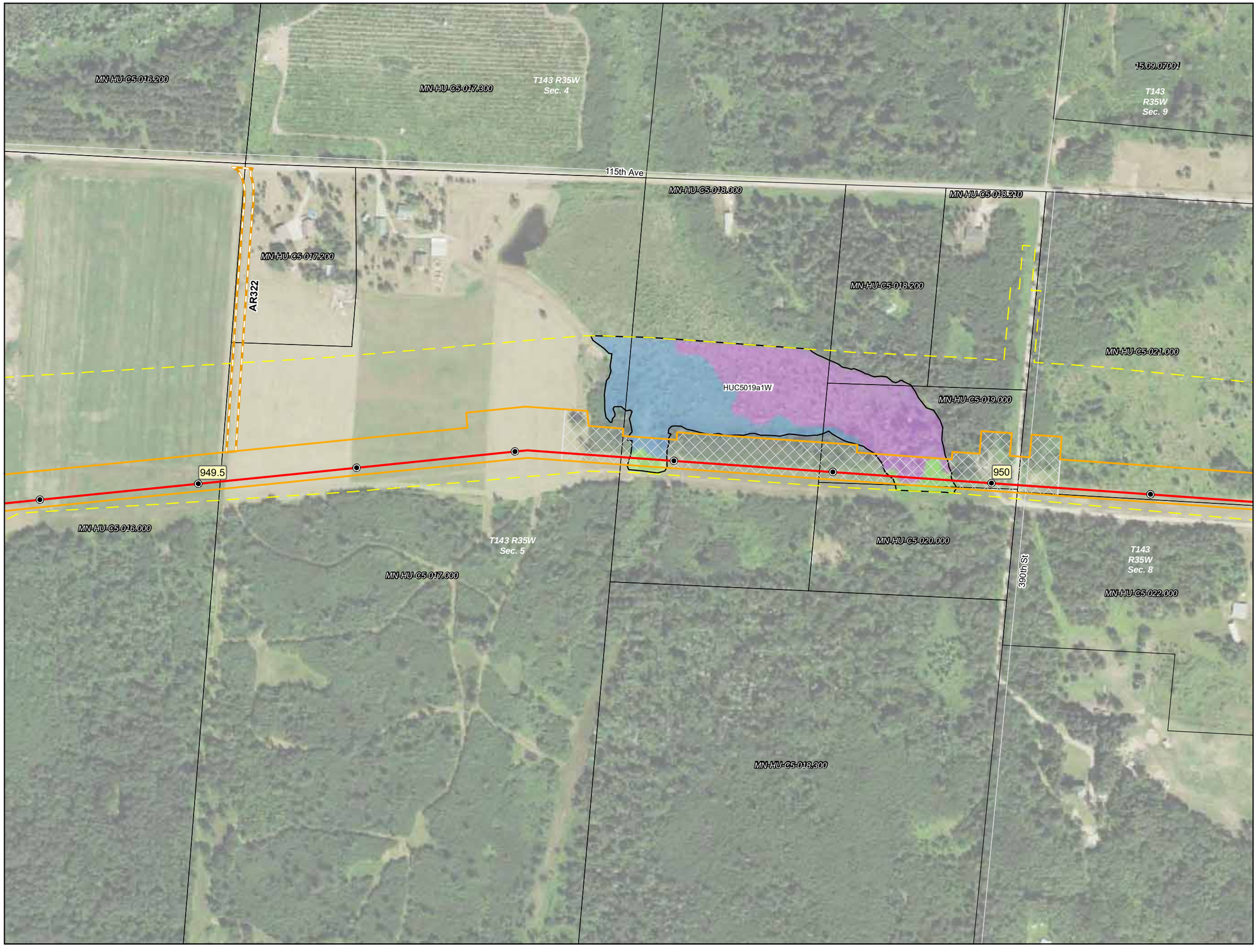

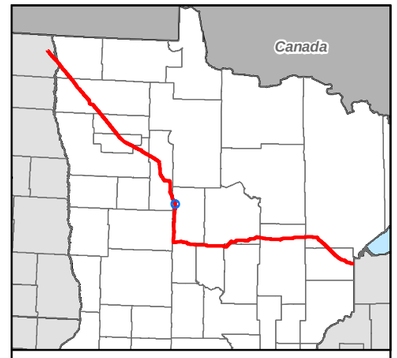

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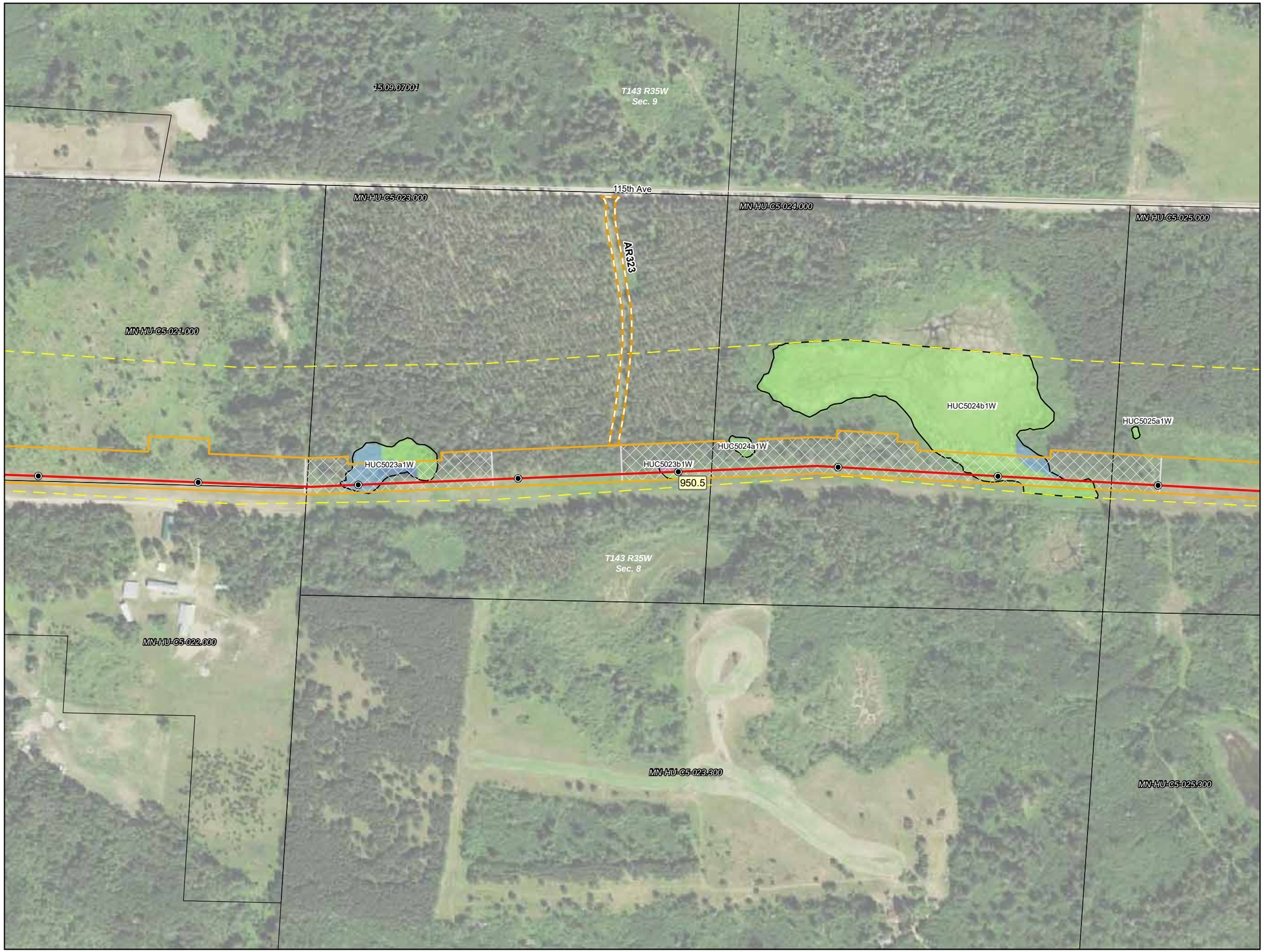

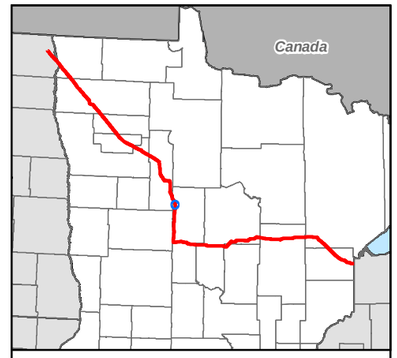

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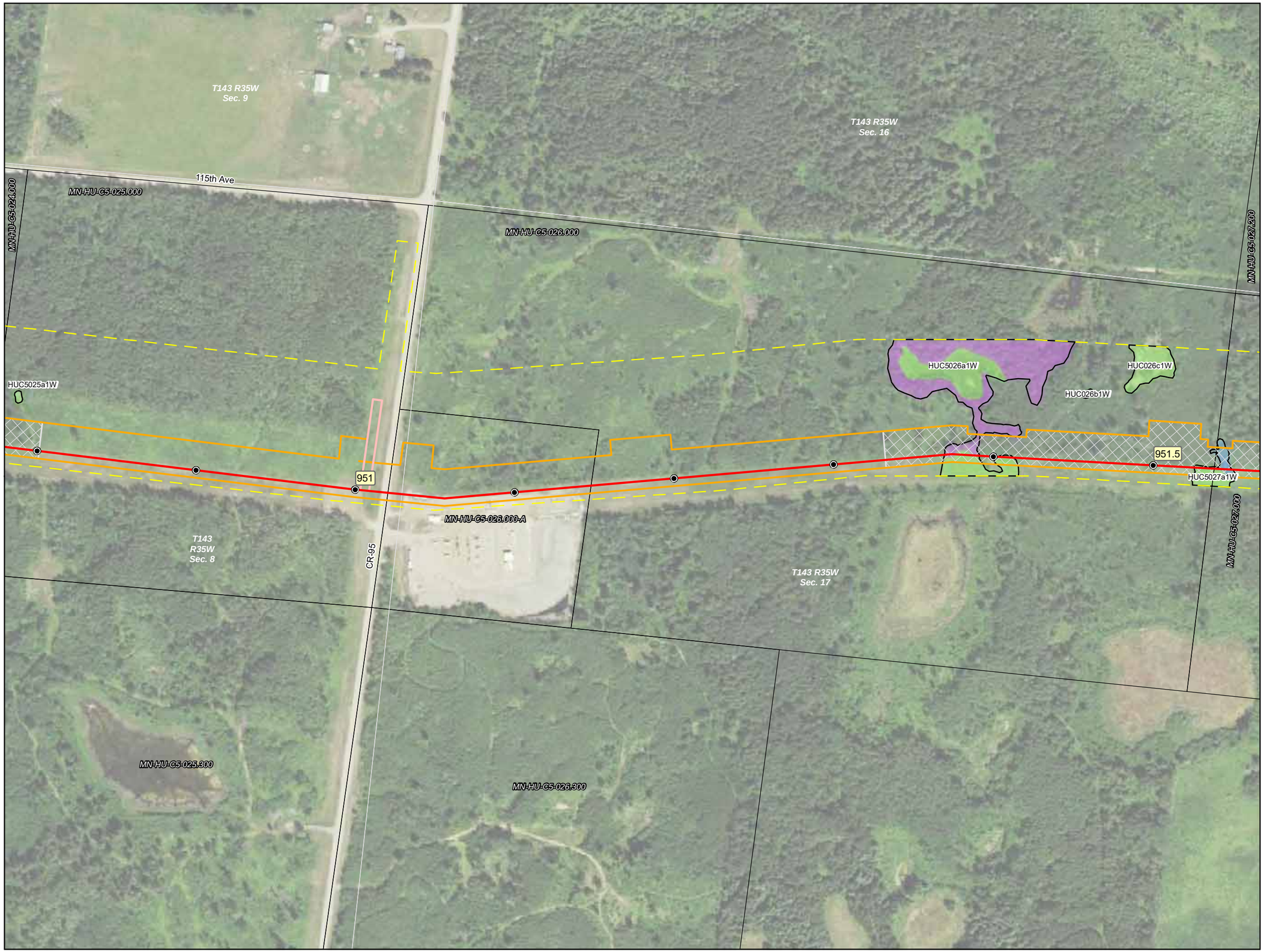

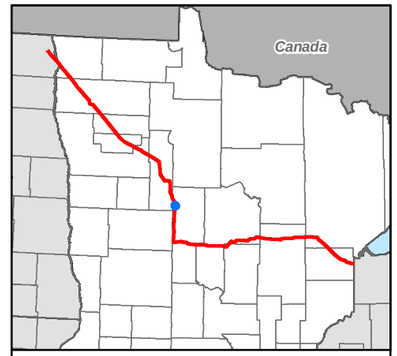

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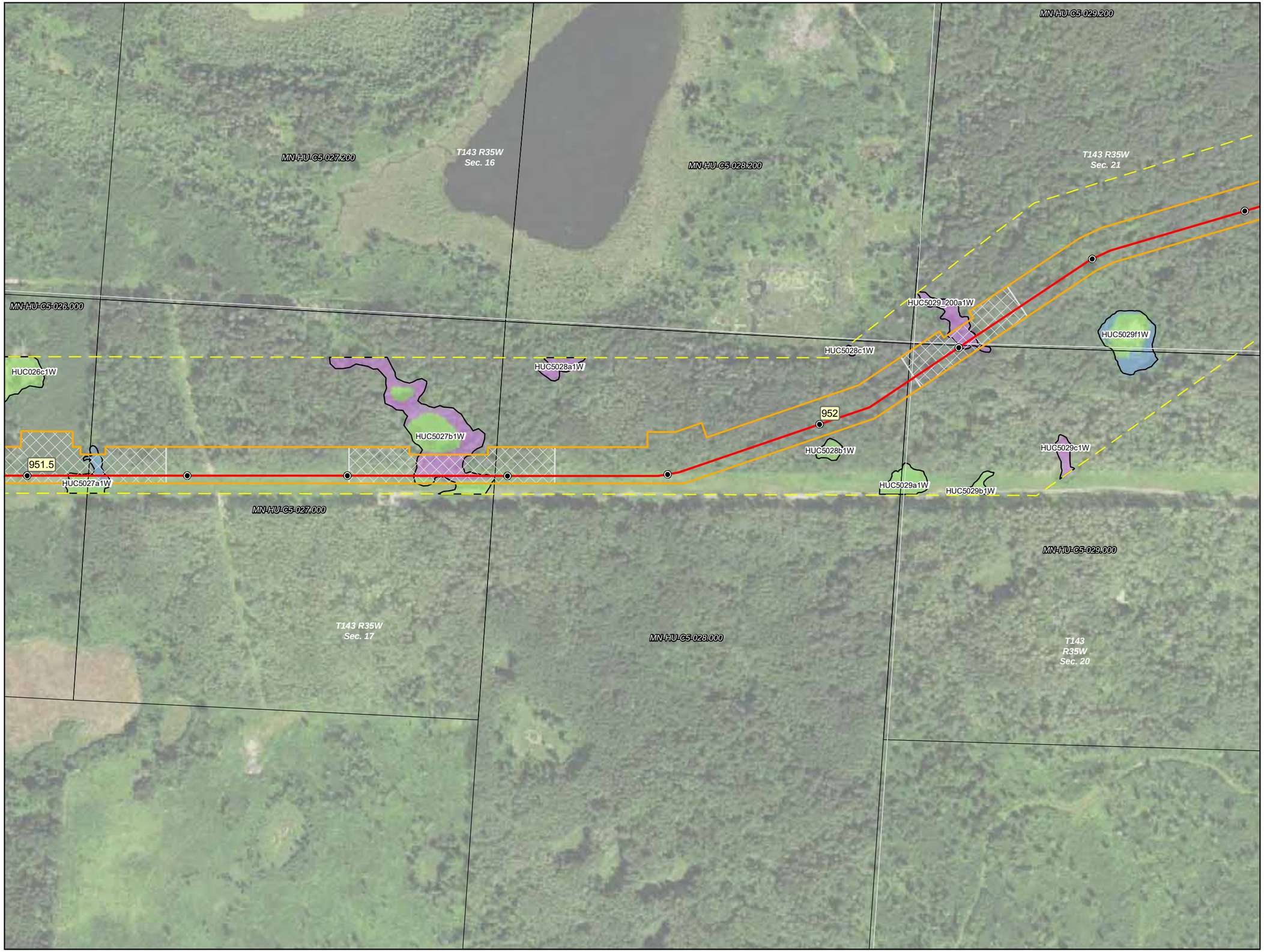

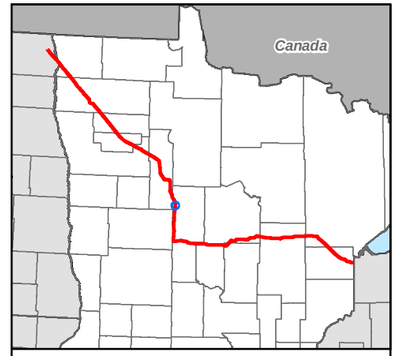

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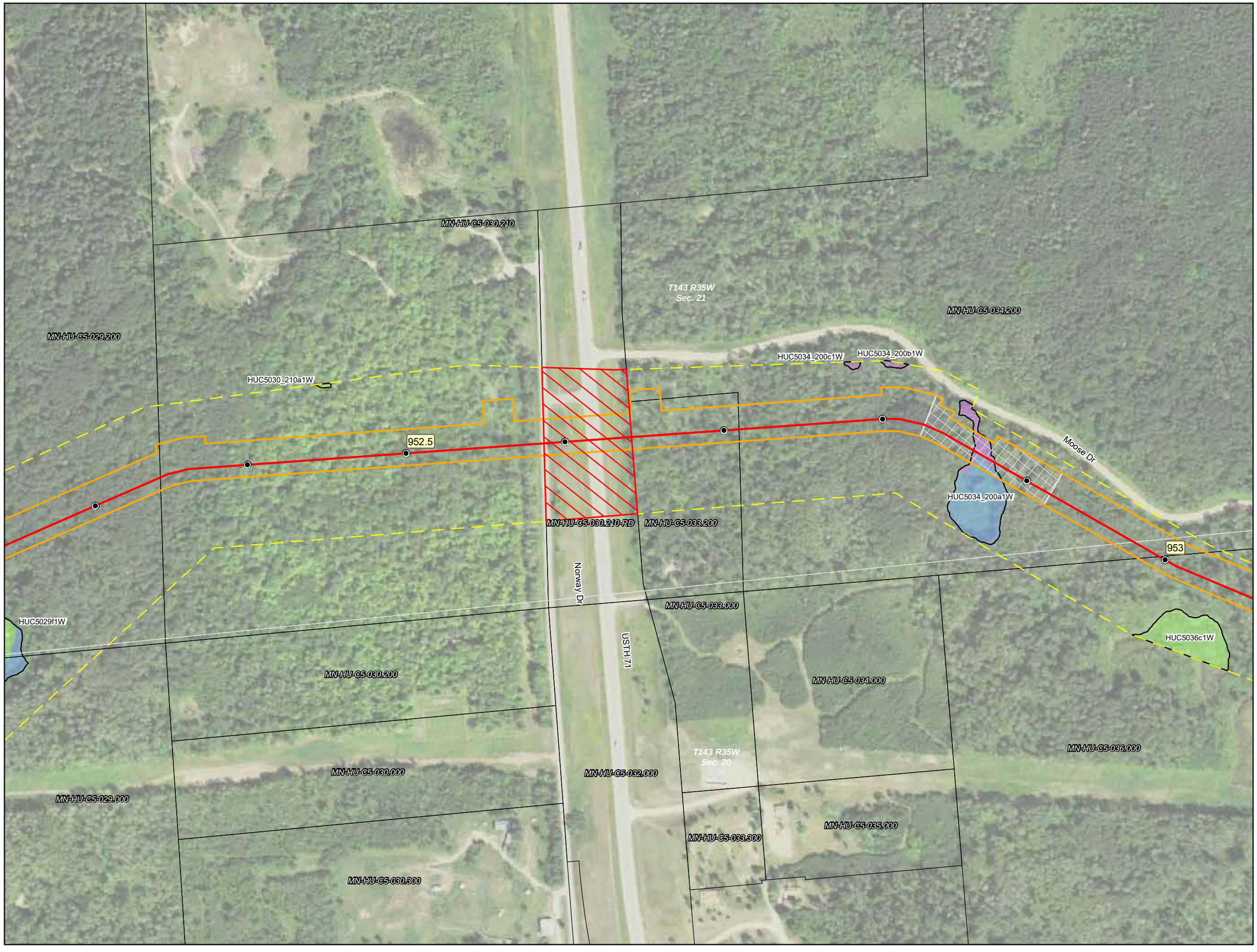

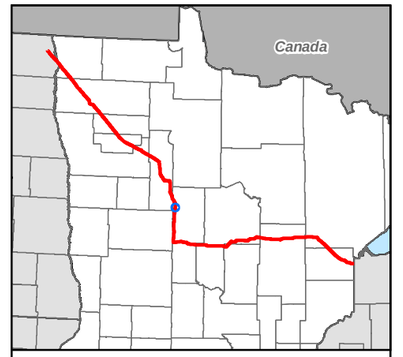

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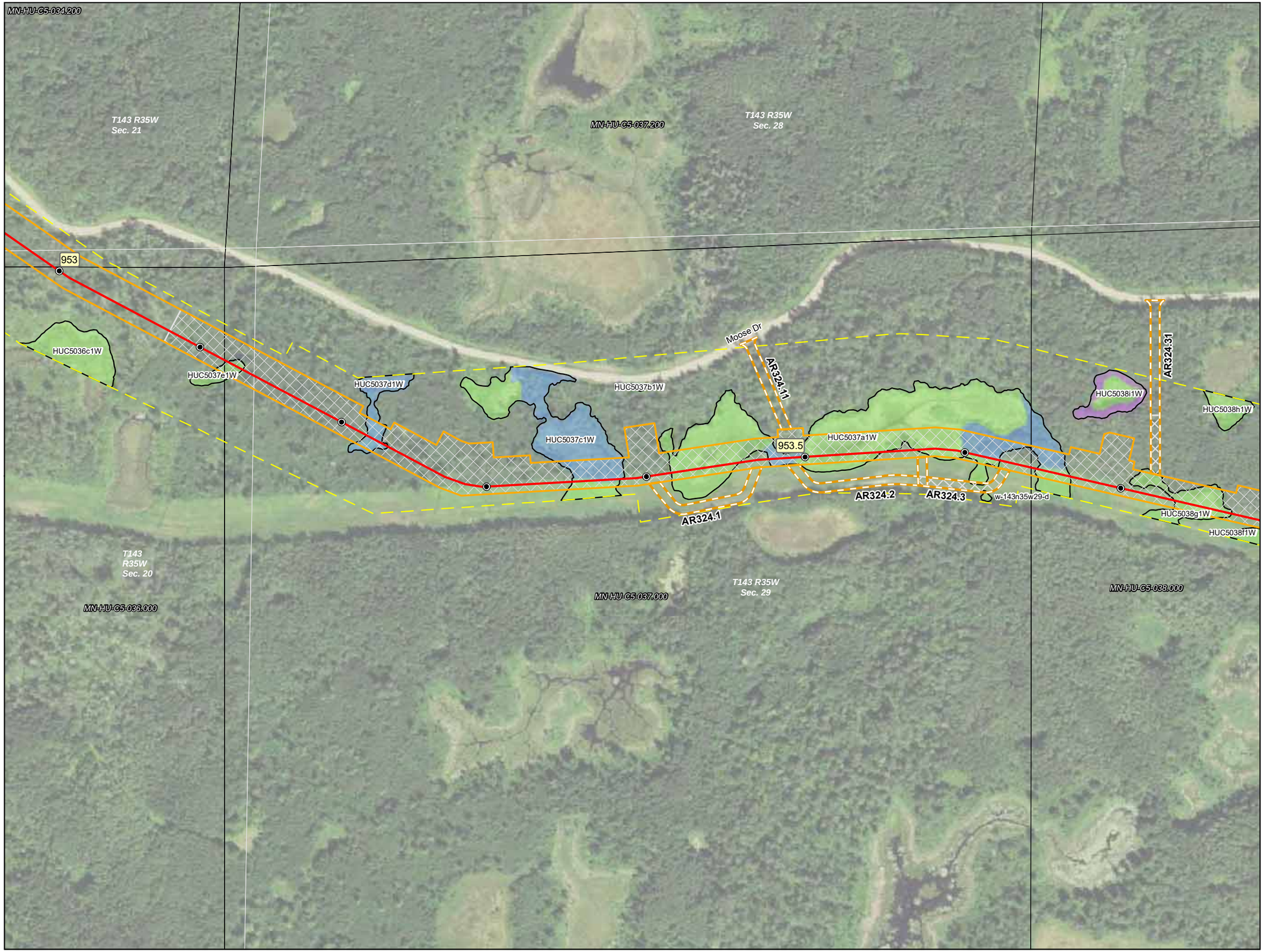

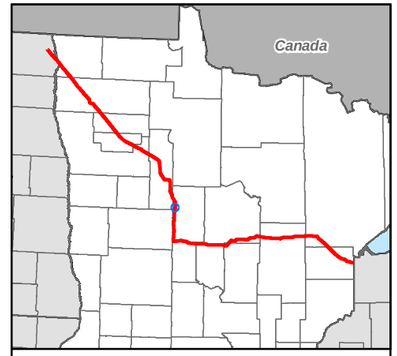

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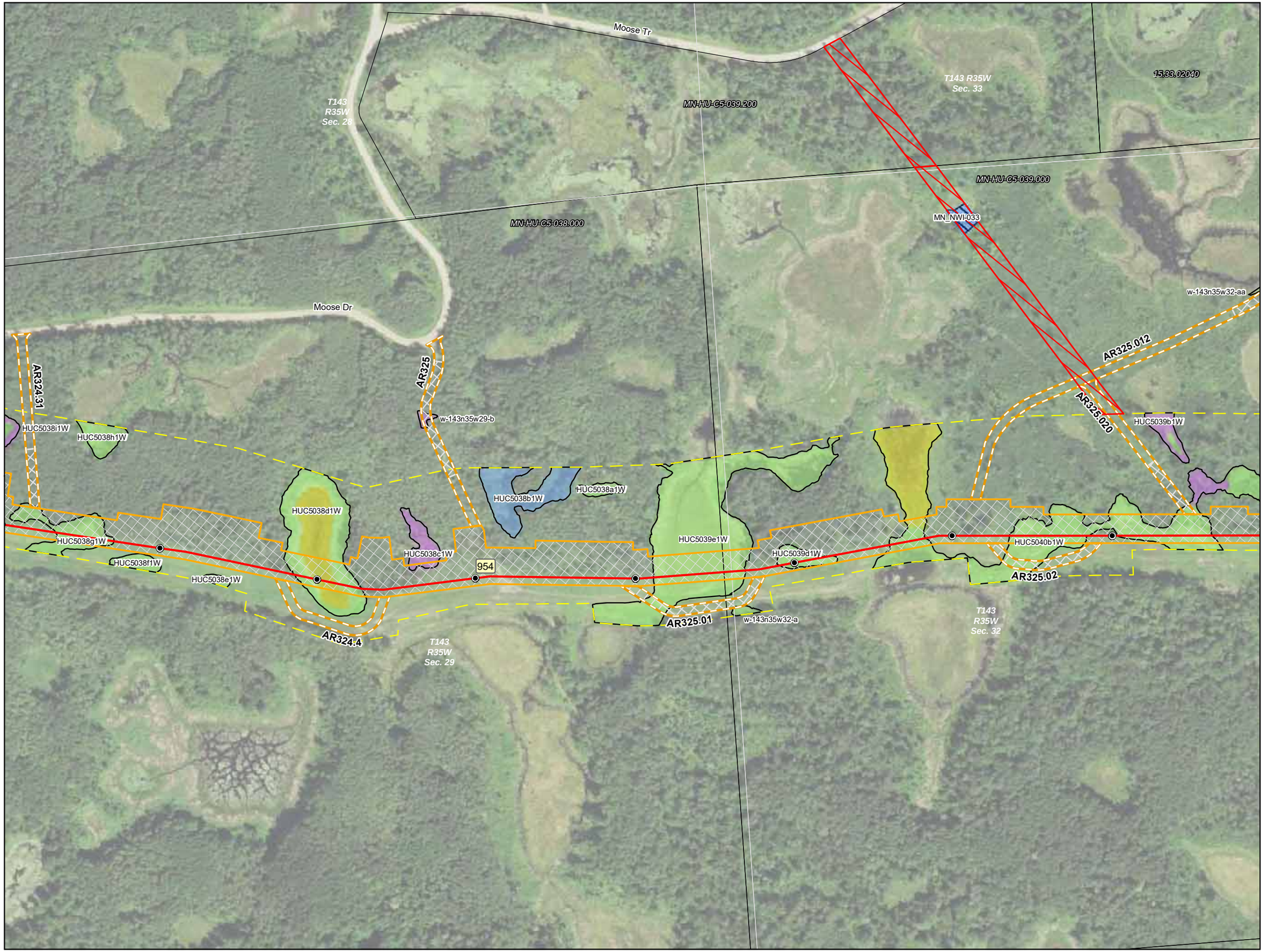

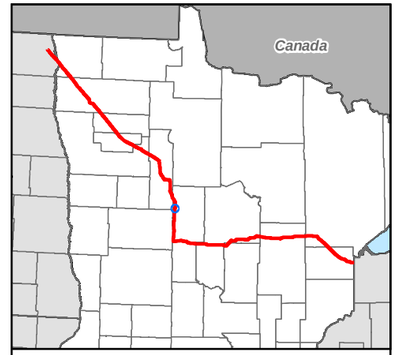

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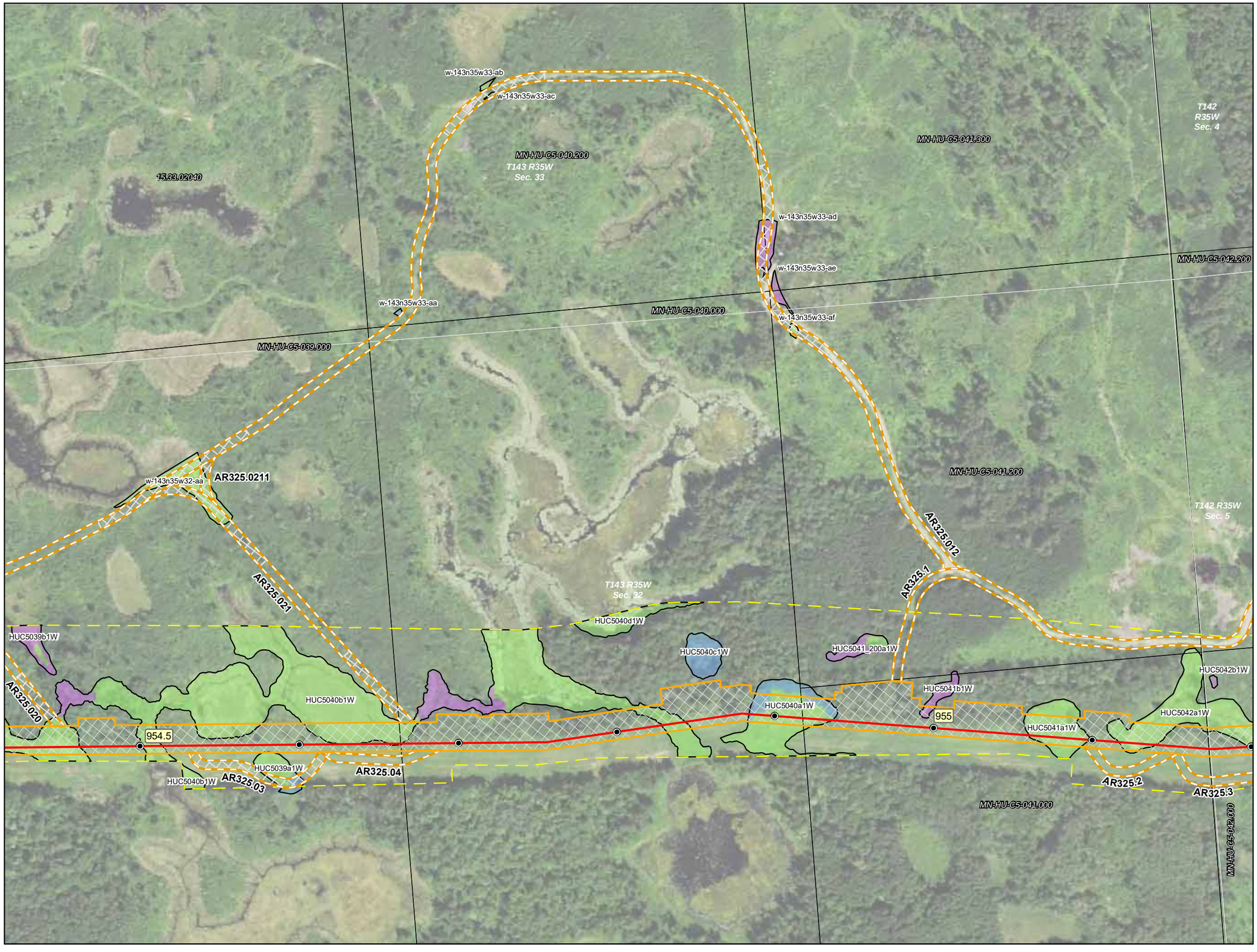

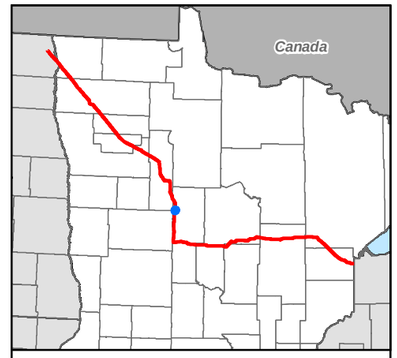

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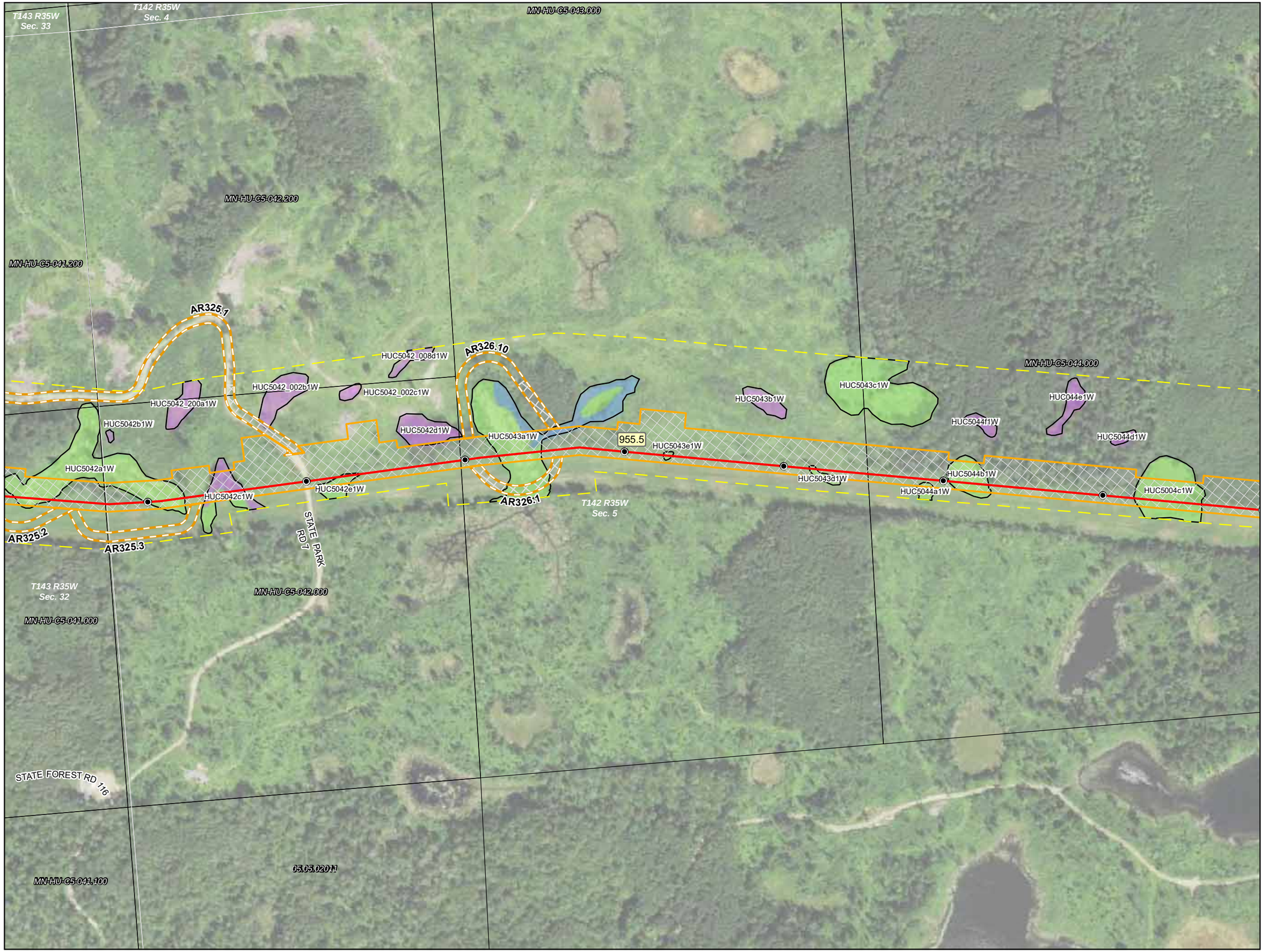

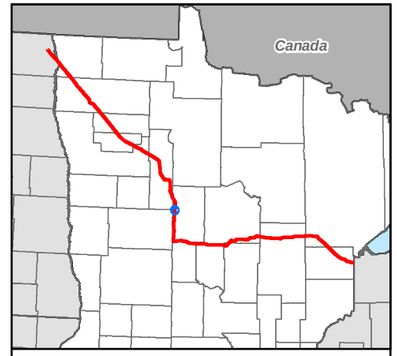

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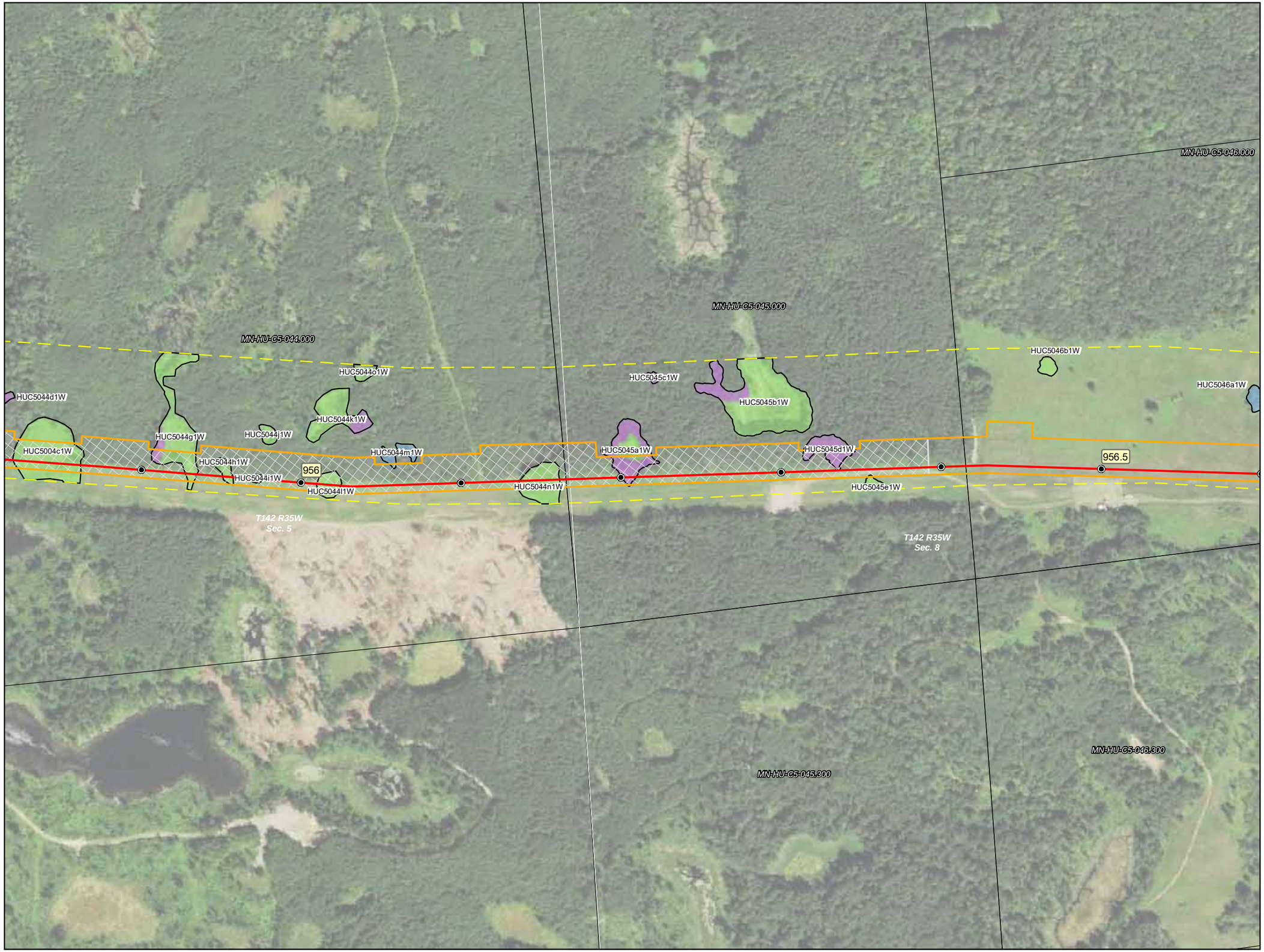

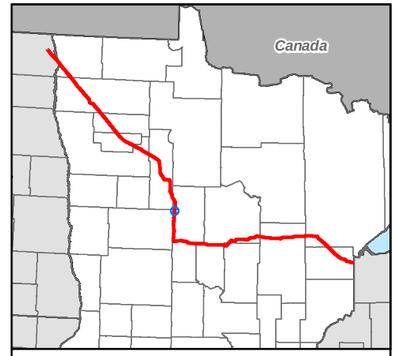

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Detailed Route Maps

Line 3 Replacement Project

Hubbard County, Minnesota

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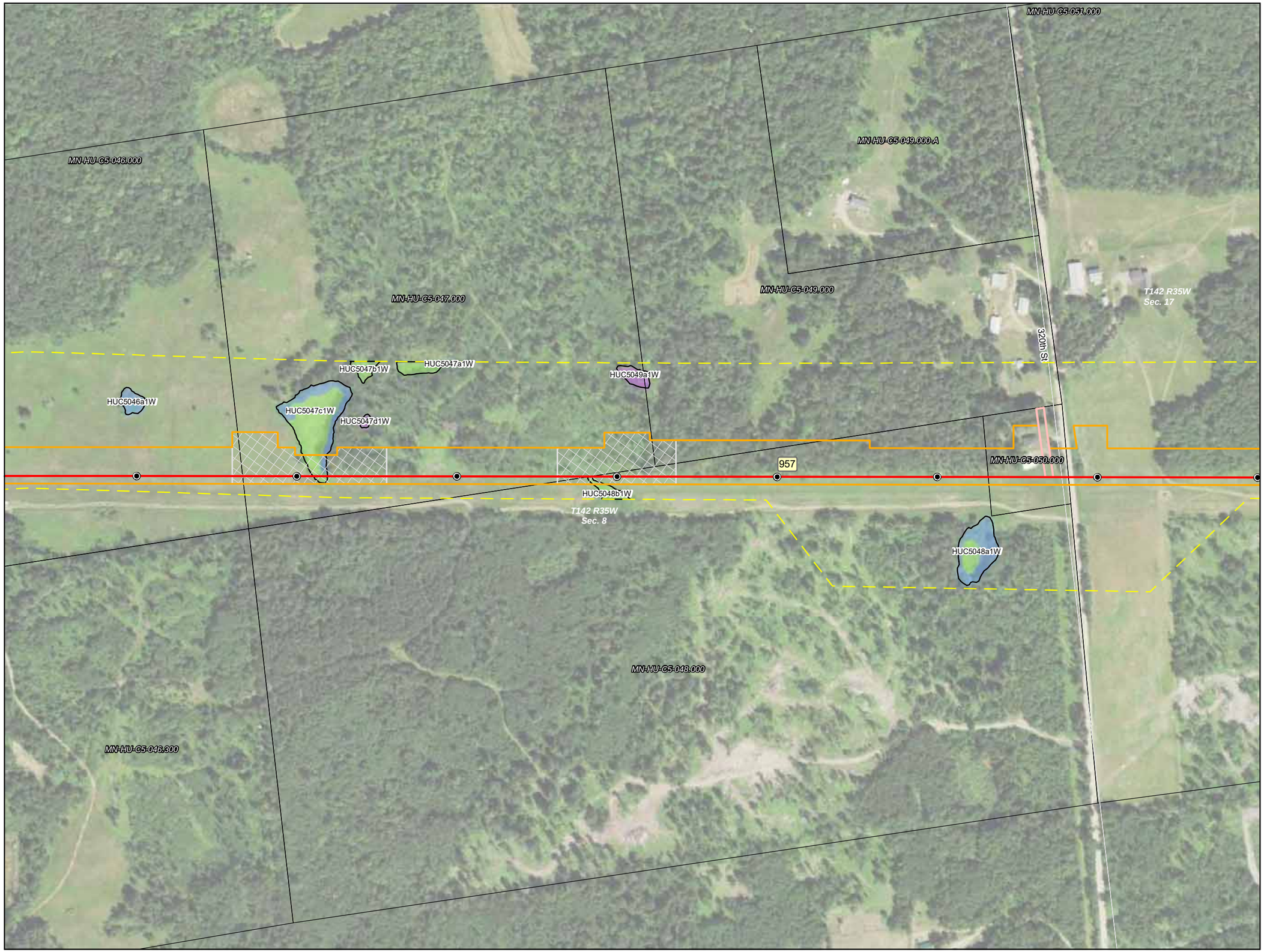

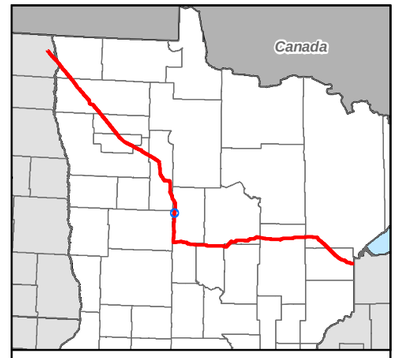

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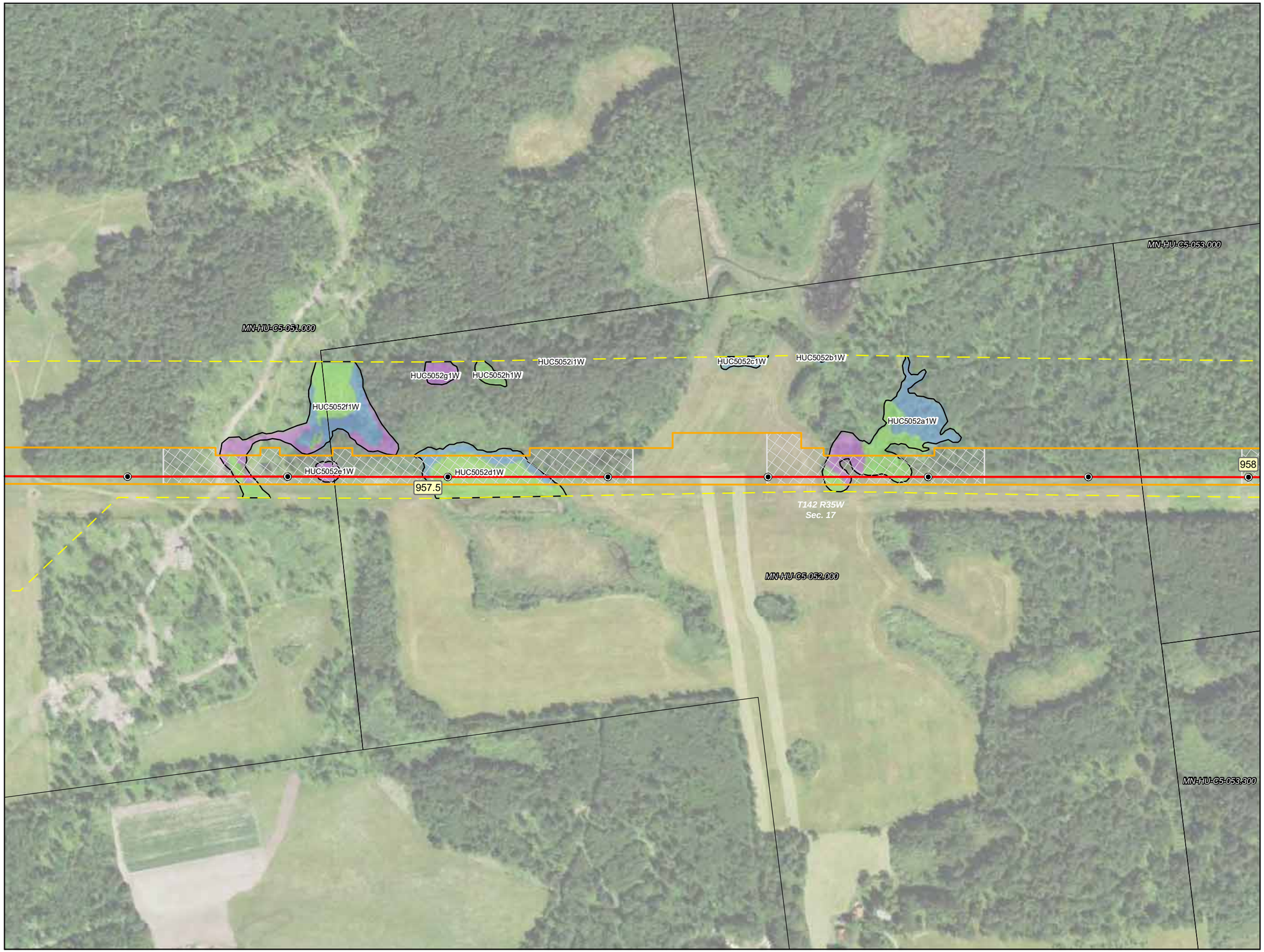

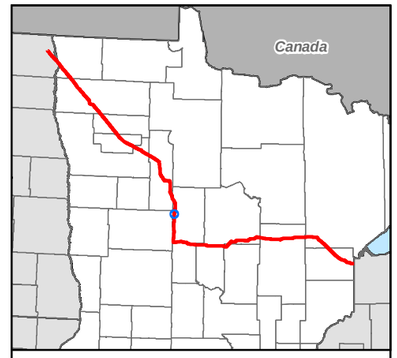

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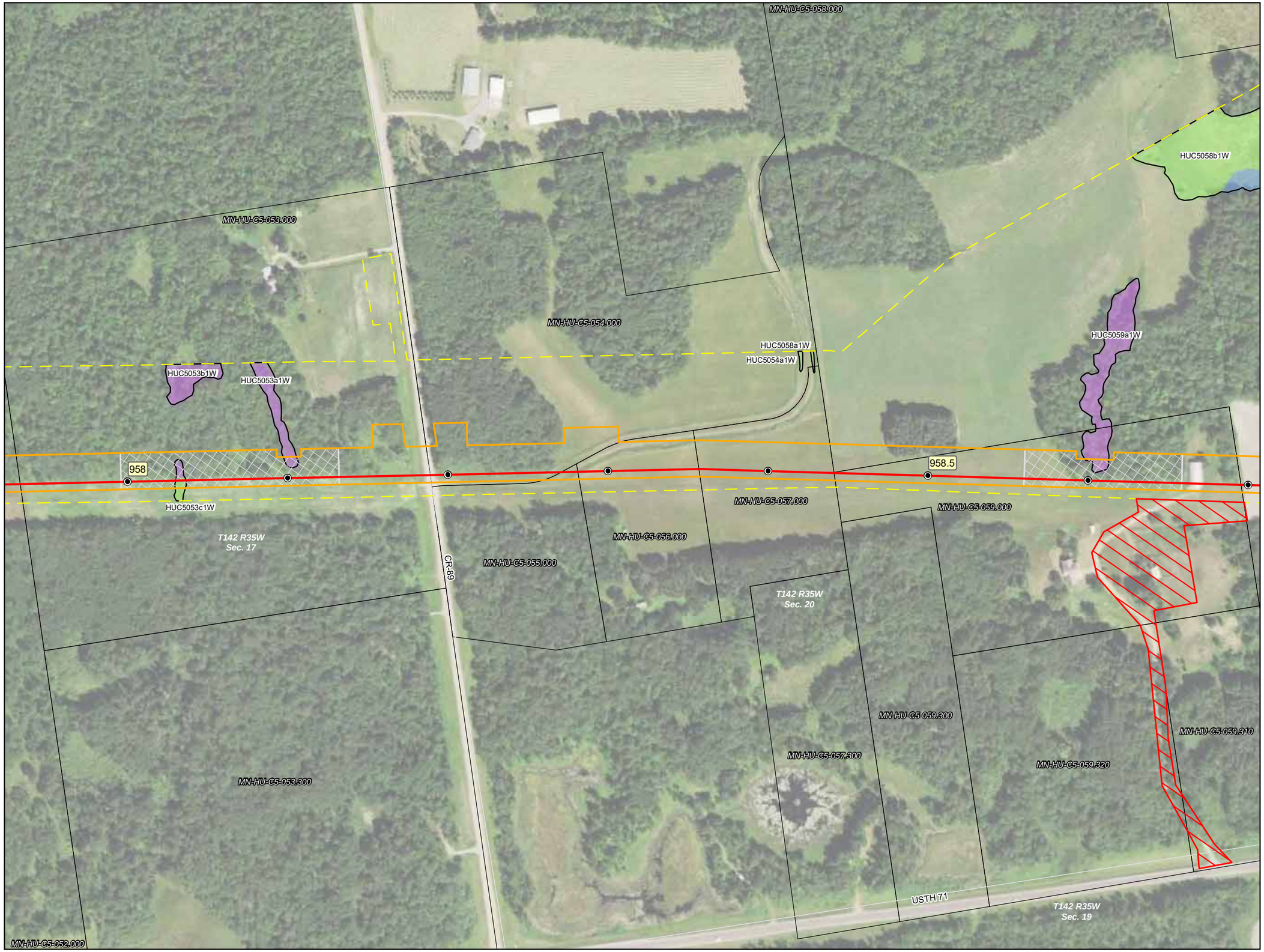

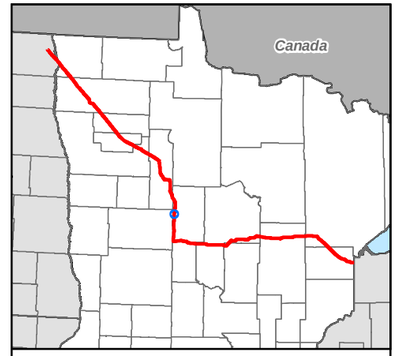

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Hubbard County, Minnesota

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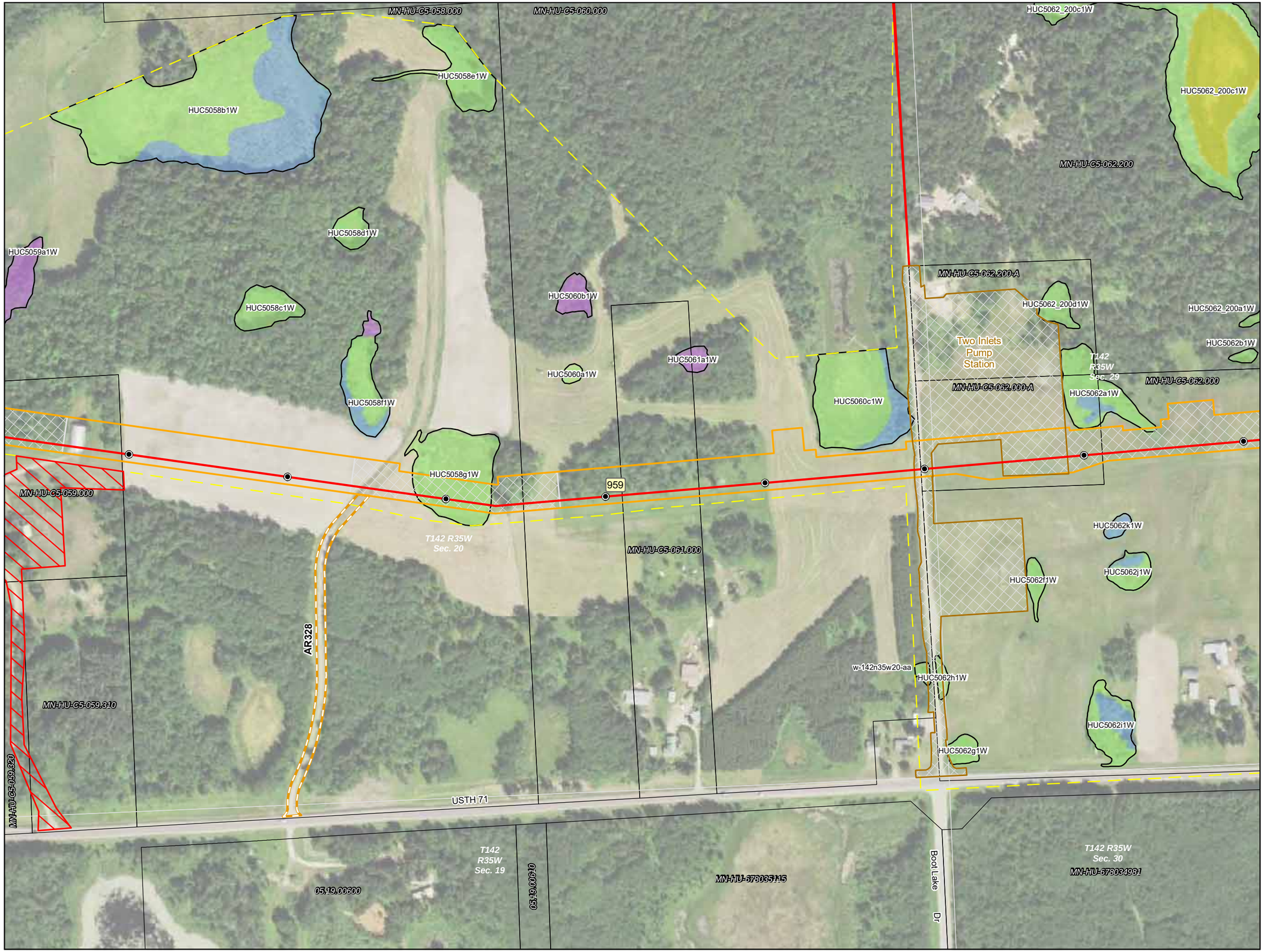

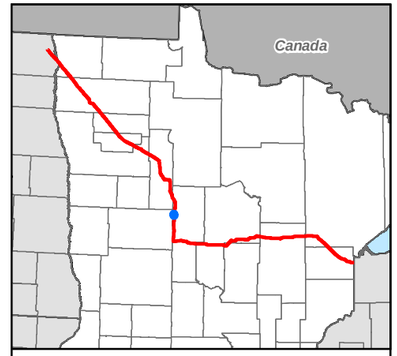

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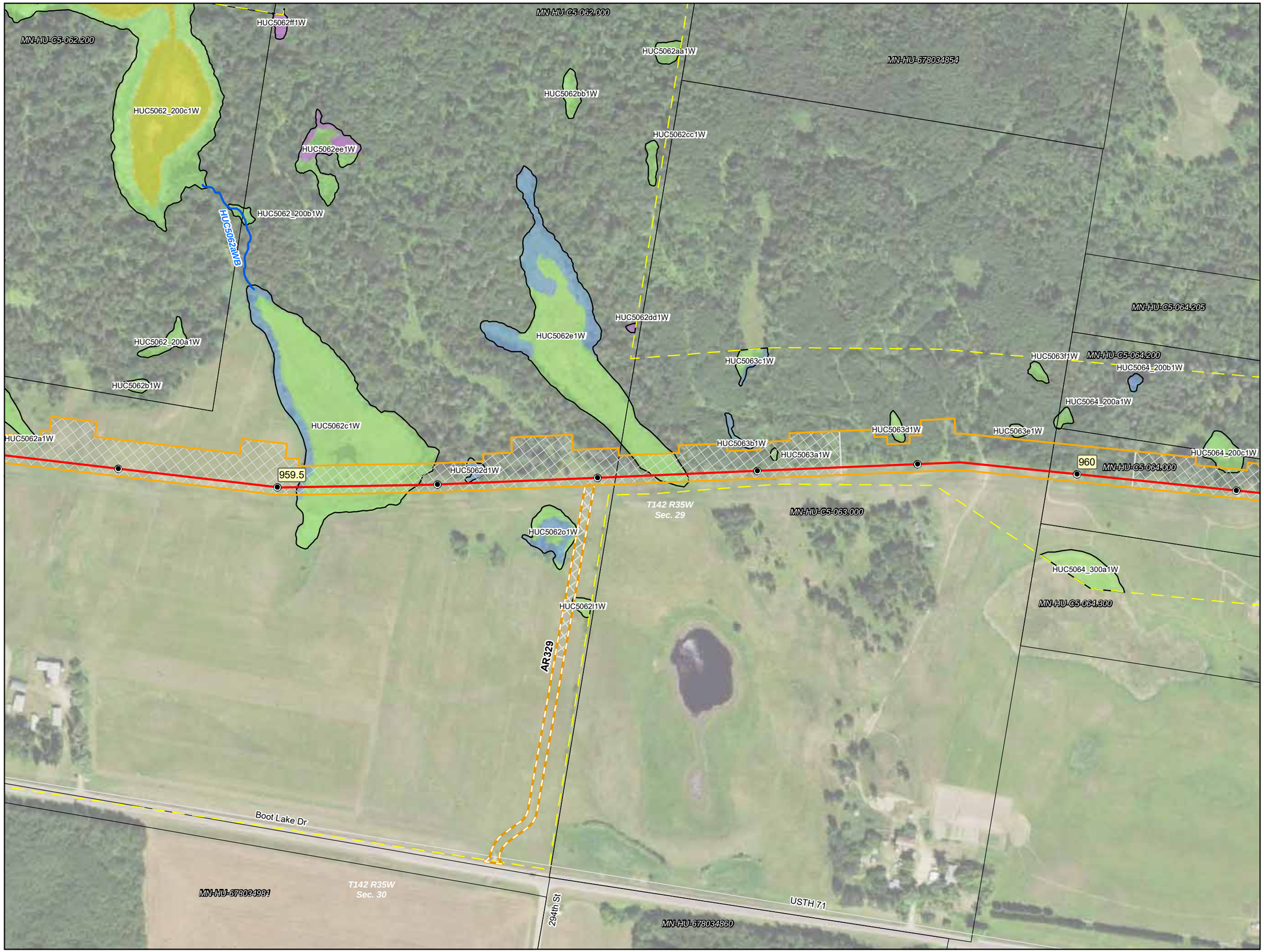

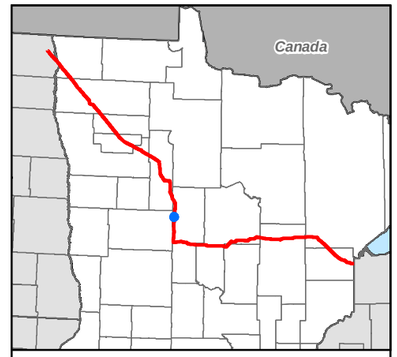

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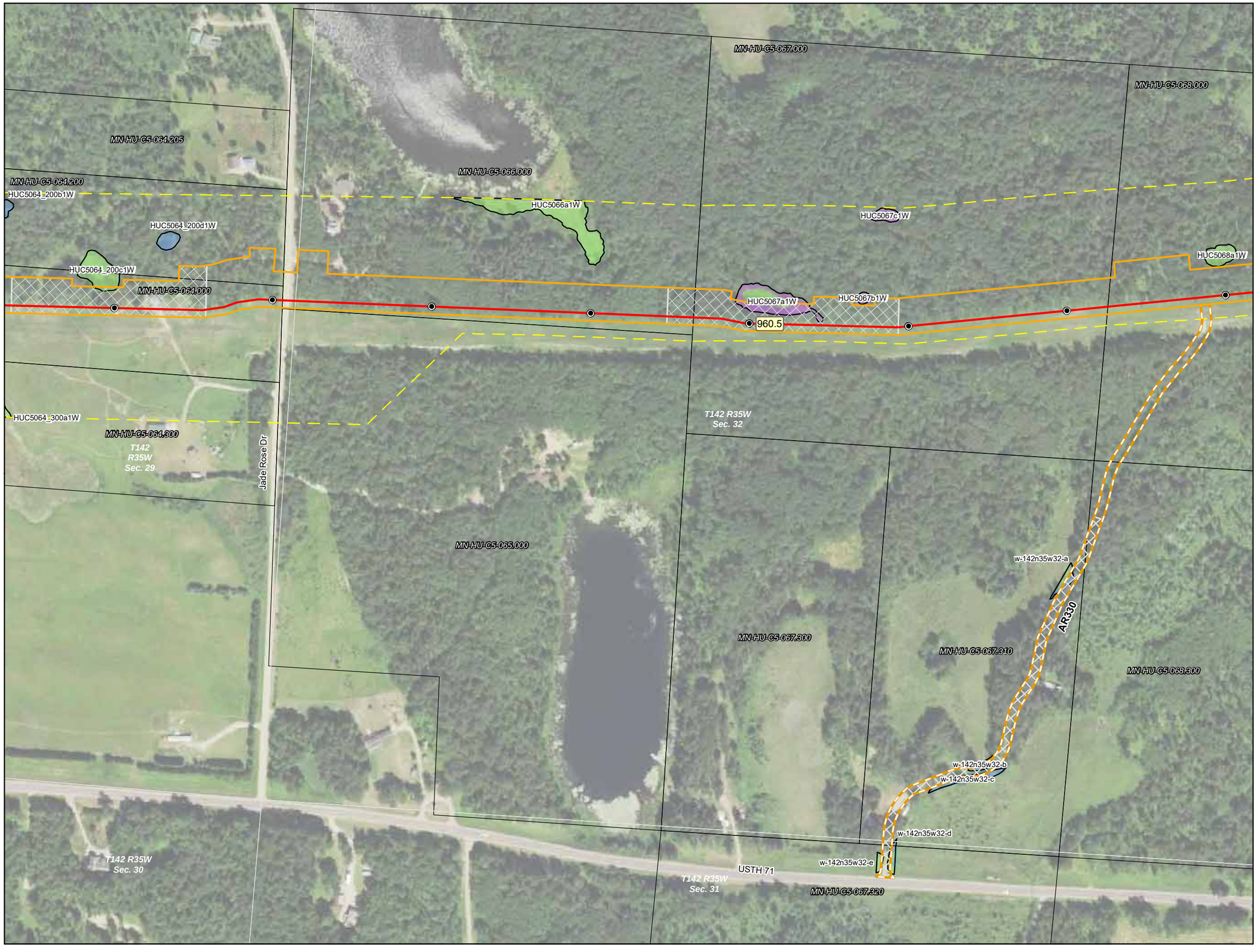

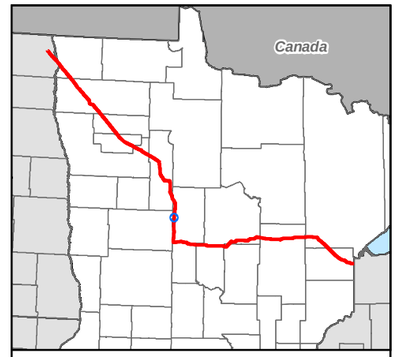

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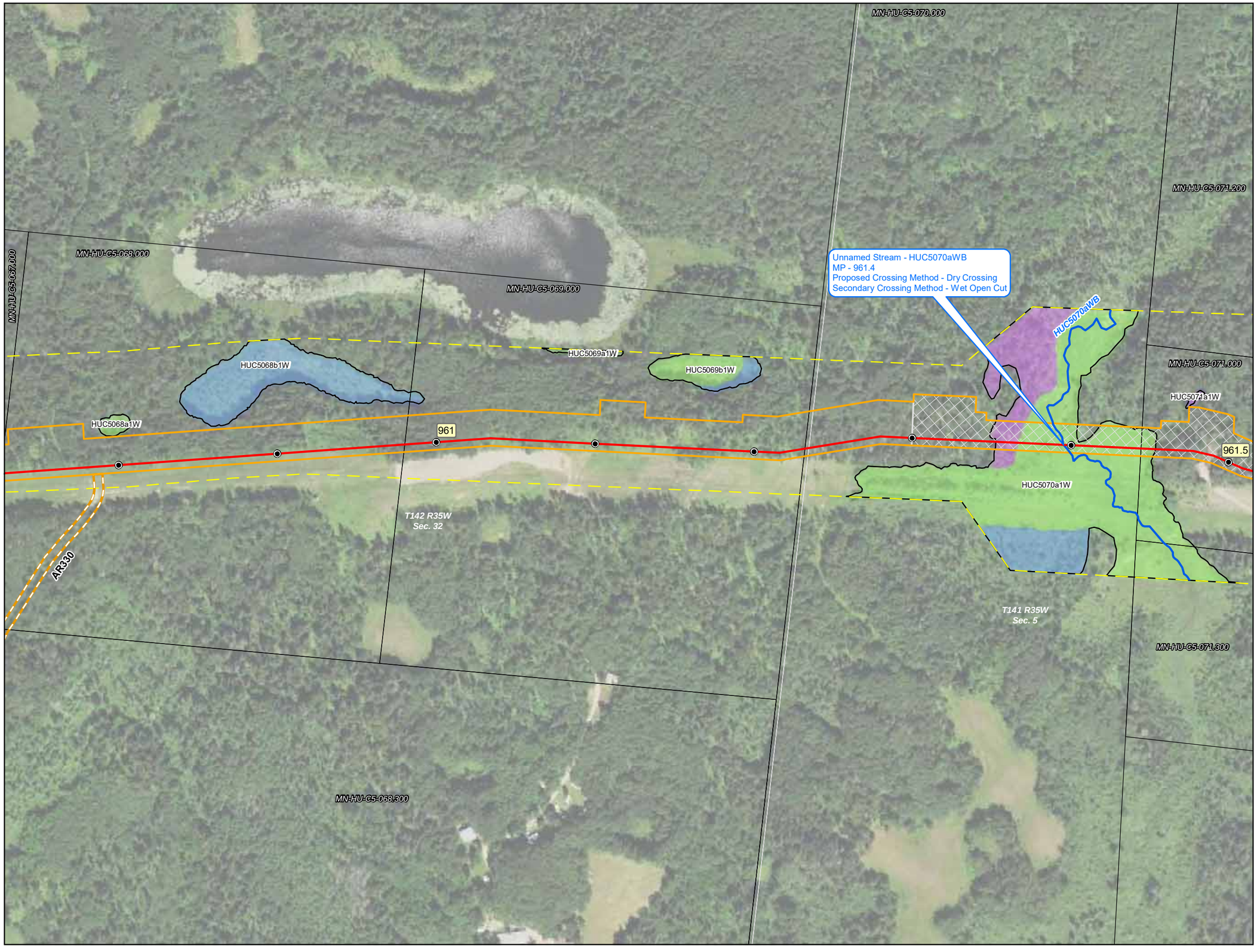

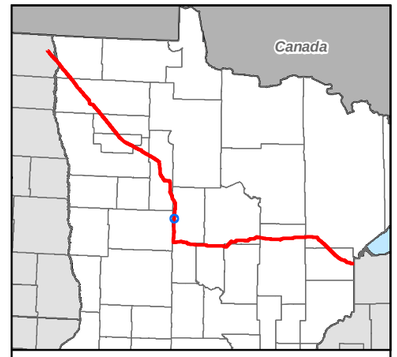

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Hubbard County, Minnesota

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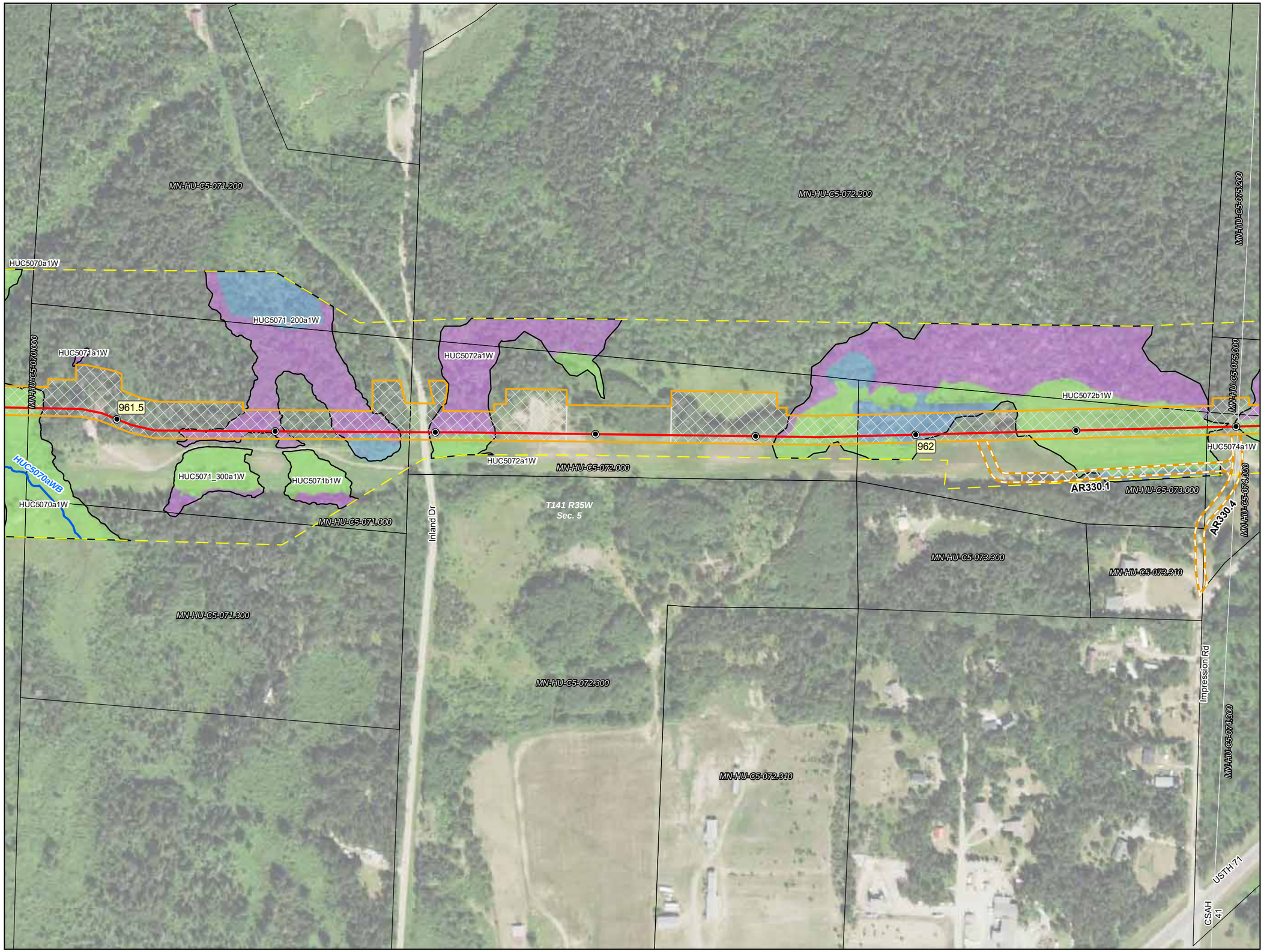

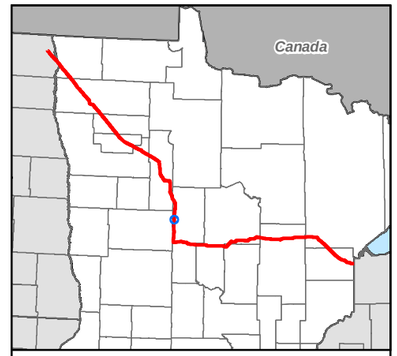

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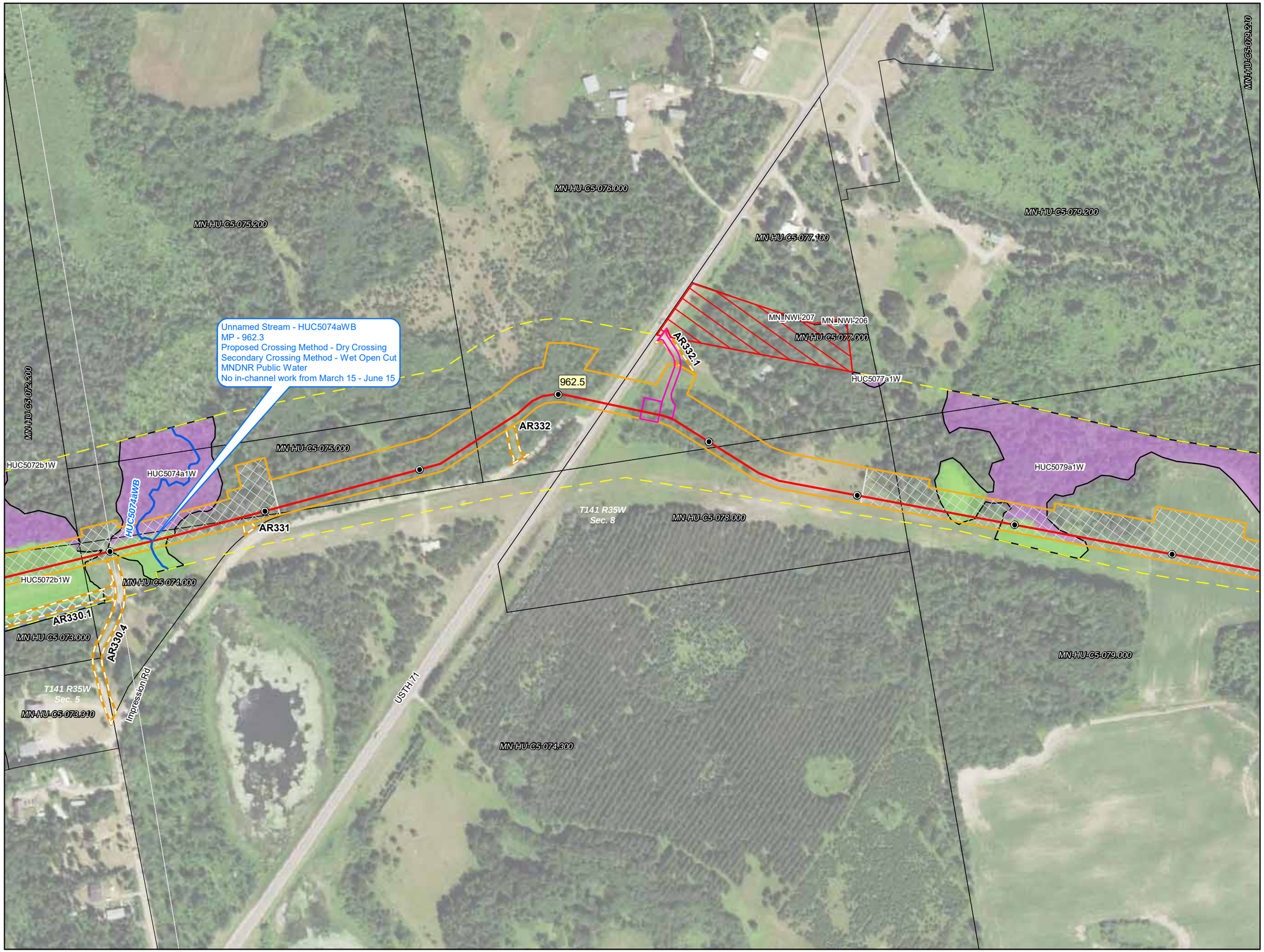

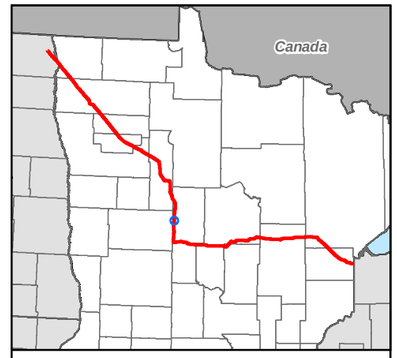

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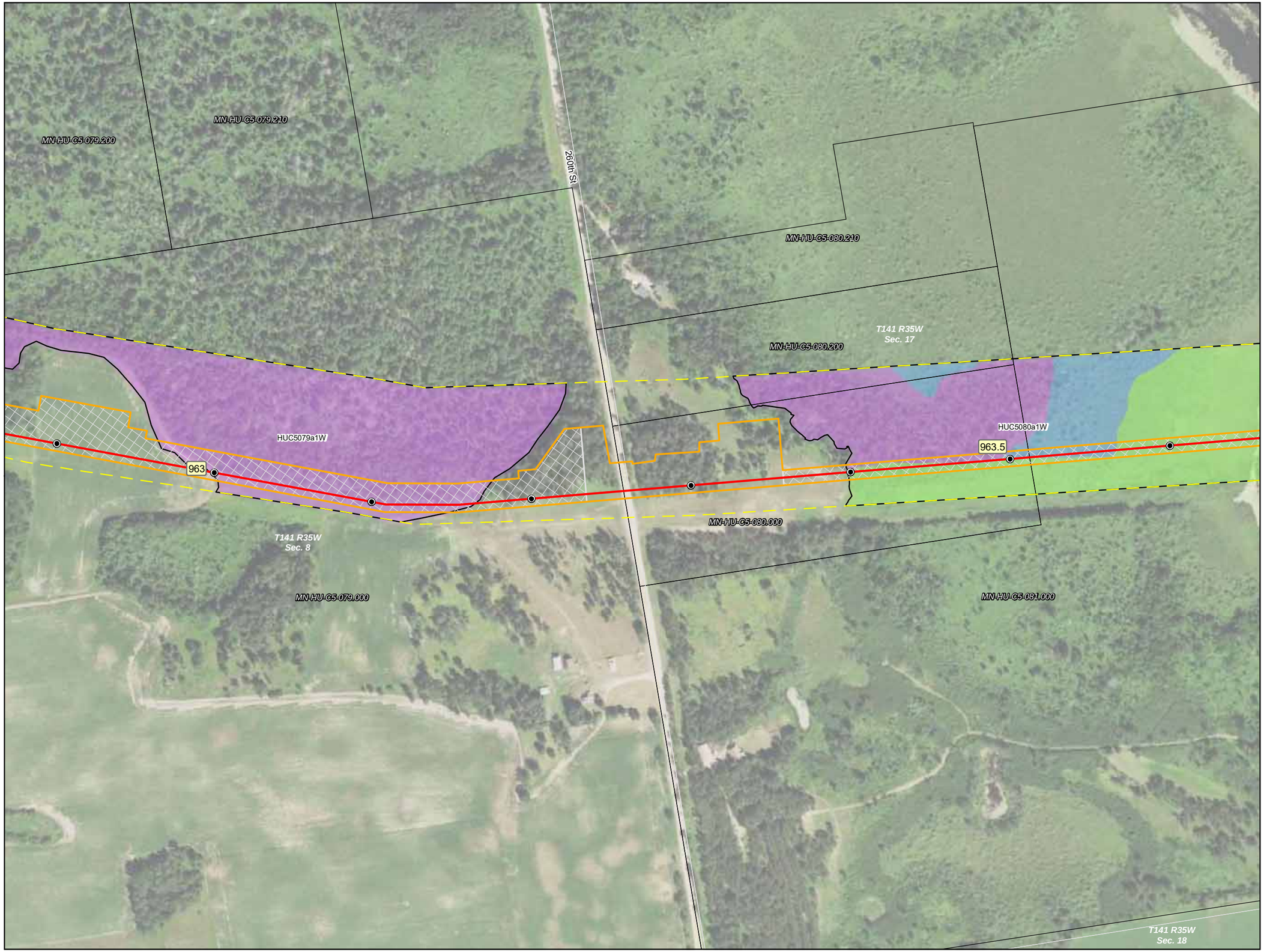

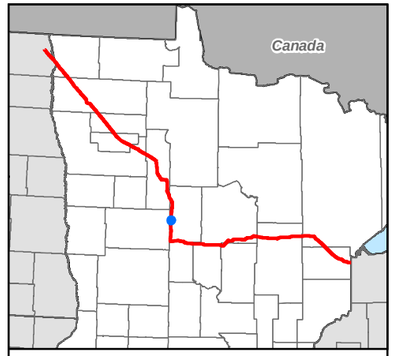

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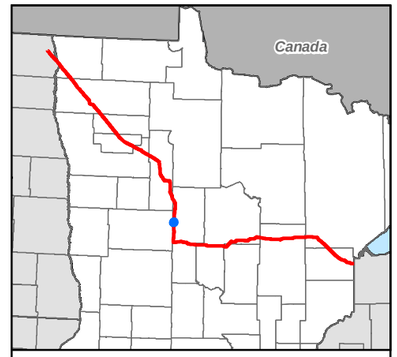

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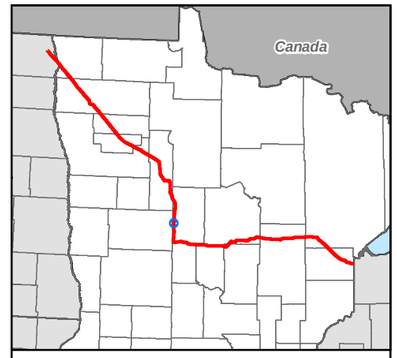

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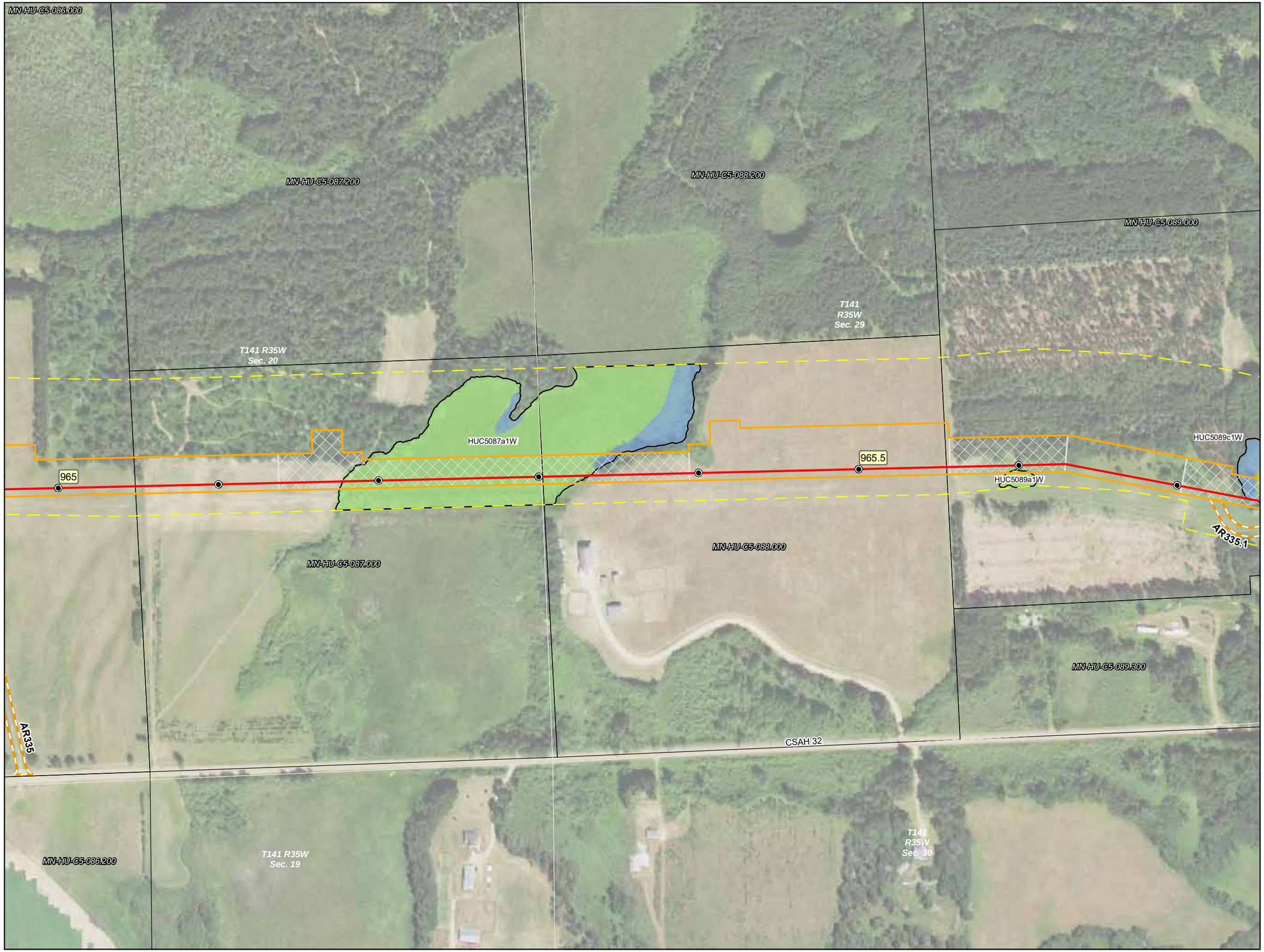

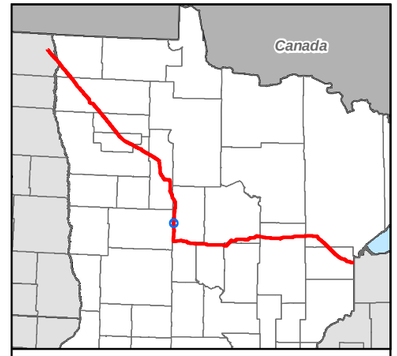

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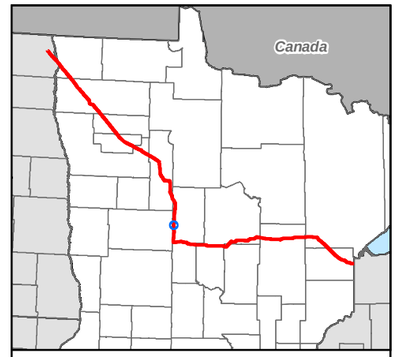

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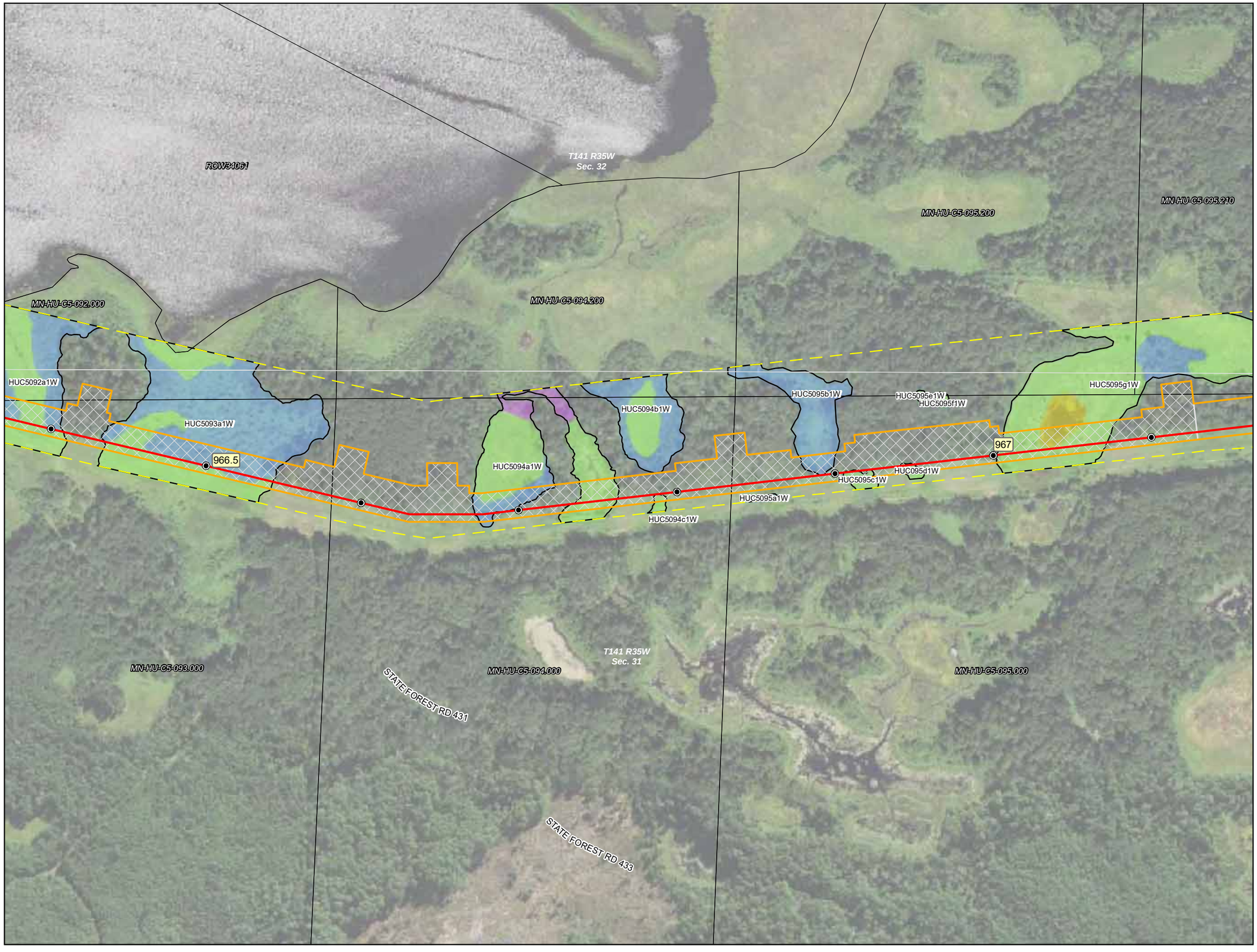

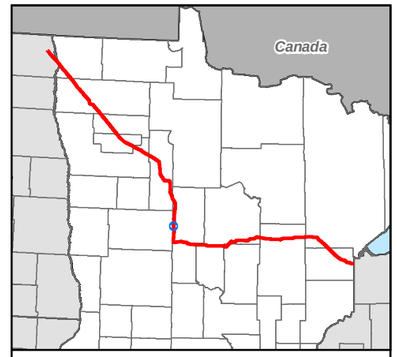

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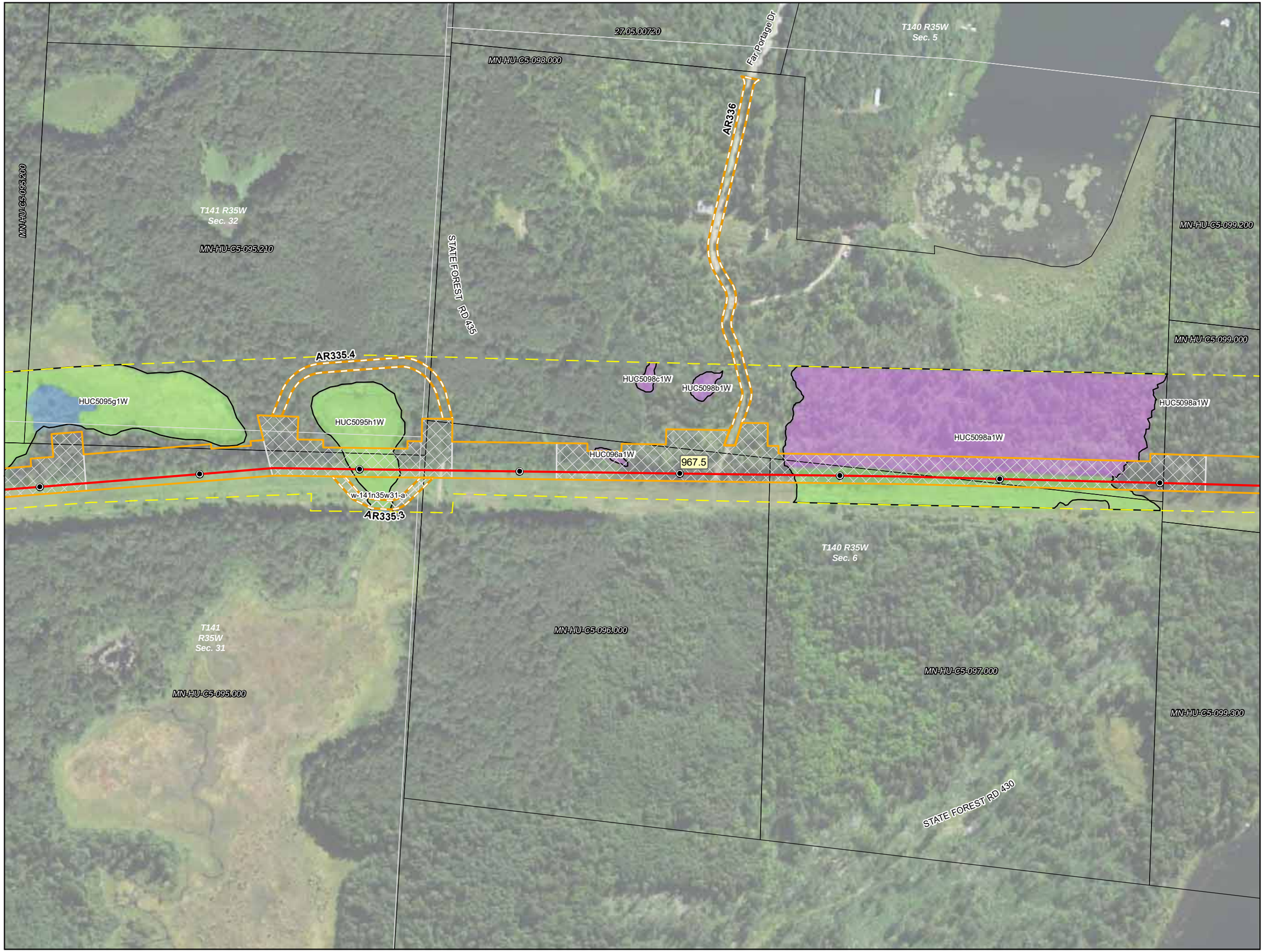

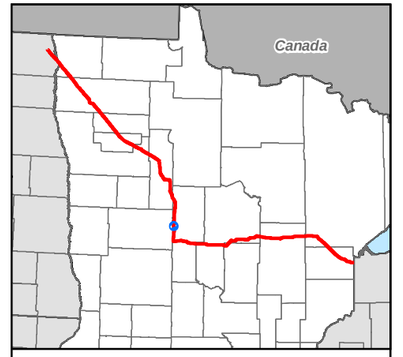

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Hubbard County, Minnesota

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Date: (9/19/2018)

T140 R35W Sec. 5

T140 R35W Sec. 8

210th St

MN-HU-C5-100.000

MN-HU-C5-099.200

MN-HU-C5-099.210

MN-HU-C5-100.200

MN-HU-C5-099.000

MN-HU-C5-099.000

CSAH 48

HUC5098a1W

HUC5099f1W

HUC5099d1W

HUC5099a1W

HUC5099e1W

968

HUC5099c1W

HUC5099g1W

HUC5099b1W

HUC5100a1W

HUC5100b1W

HUC5100c1W

968.5

HUC5098a1W

T140 R35W Sec. 6

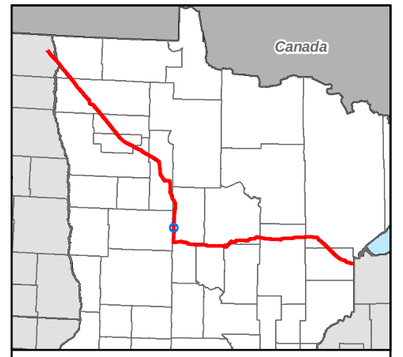
T140 R35W Sec. 7

STATE FOREST RD 430

MN-HU-C5-097.000

MN-HU-C5-099.300

MN-HU-C5-100.300



- Milepost
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Wetlands

Field Delineated Wetland	NWI Wetlands
PEM	PEM
PFO	PFO
PSS	PSS
PUB	PUB

Waterbodies

- Field Delineated Waterbody
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NWI Waterbodies

- Lake
- Riverine

0 150 300 Feet

1 inch = 300 feet

N E S W

Detailed Route Maps

Line 3 Replacement Project

Hubbard County, Minnesota

ENBRIDGE

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Date: (9/19/2018)

T140 R35W
Sec. 8

MN-HU-C5-101.200

T-7

CSAH 48

MN-HU-C5-100.000

MN-HU-C5-100.200

HUC5100e1W

HUC5100f1W

HUC5100c1W

968.5

HUC5100d1W

969

T140 R35W
Sec. 7

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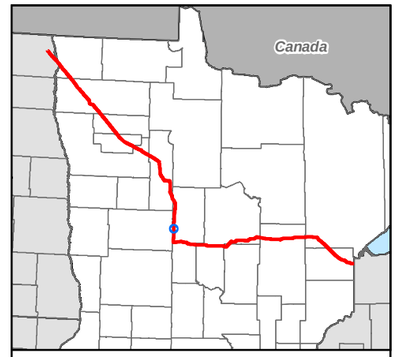
MN-HU-C5-102.000

MN-HU-C5-100.300



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Hubbard County, Minnesota

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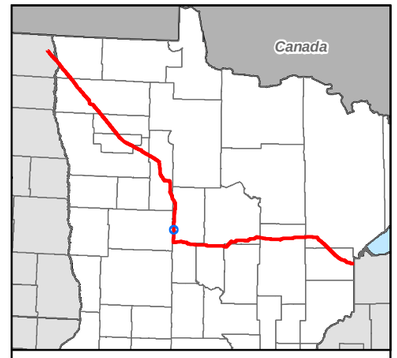

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Line 3 Replacement Project

Hubbard County, Minnesota

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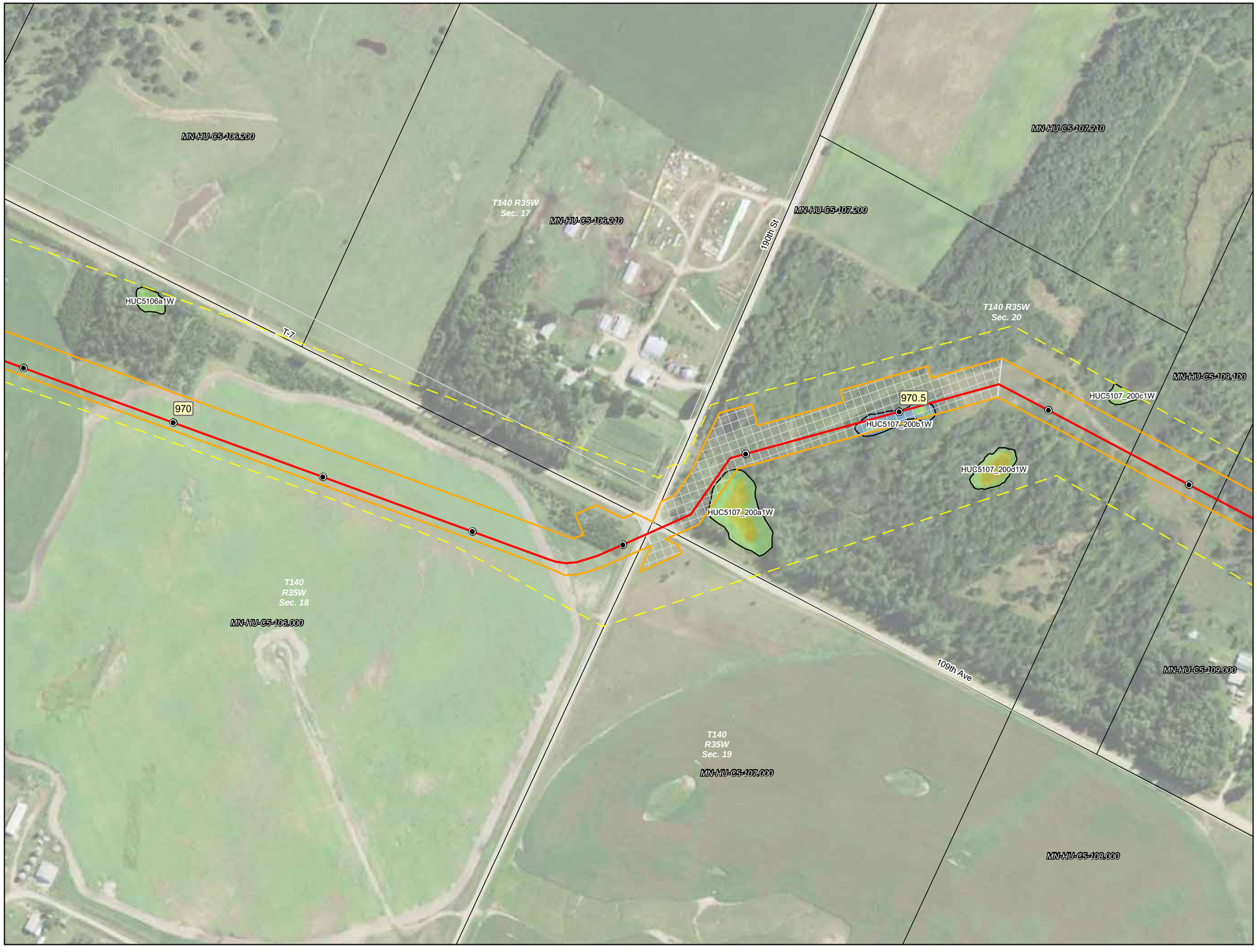

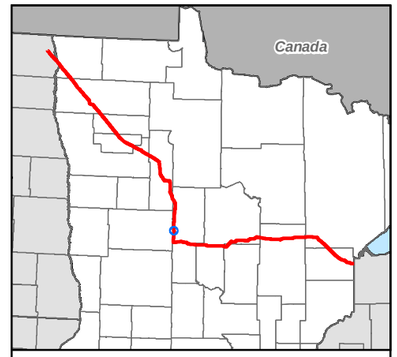

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Hubbard County, Minnesota

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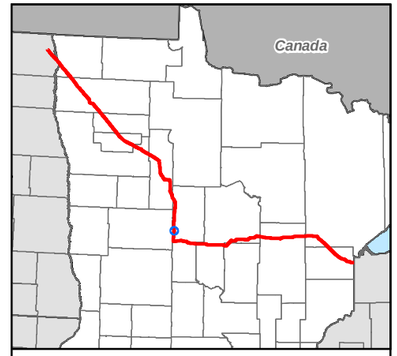

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Hubbard County, Minnesota

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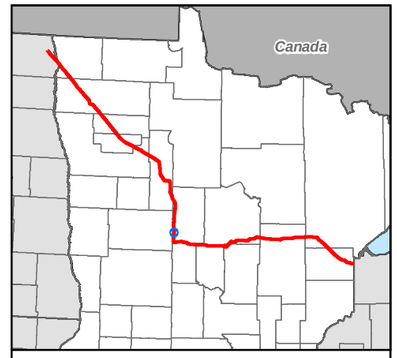

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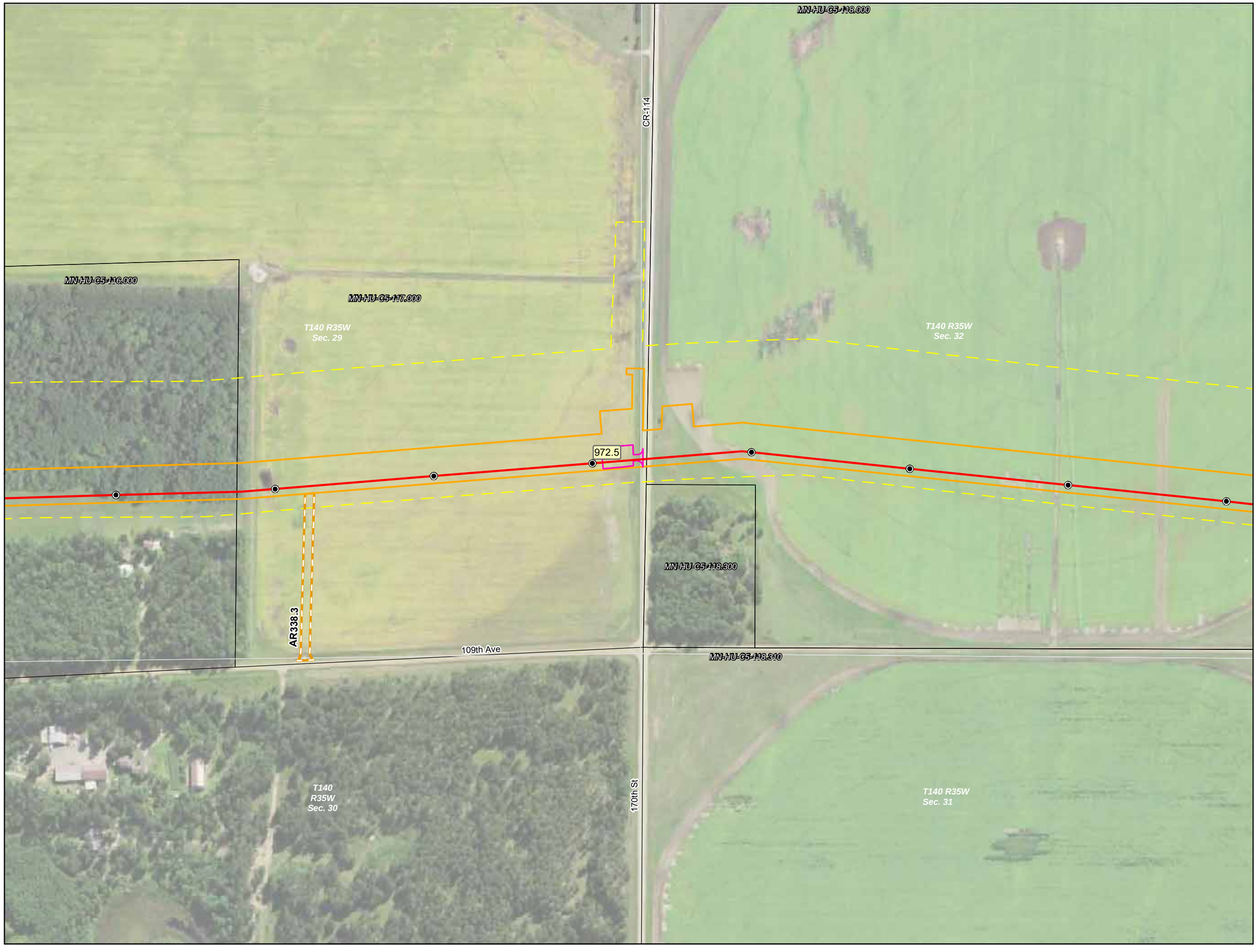

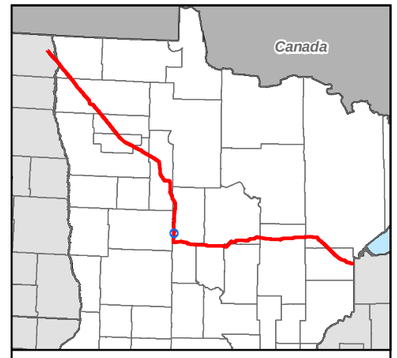

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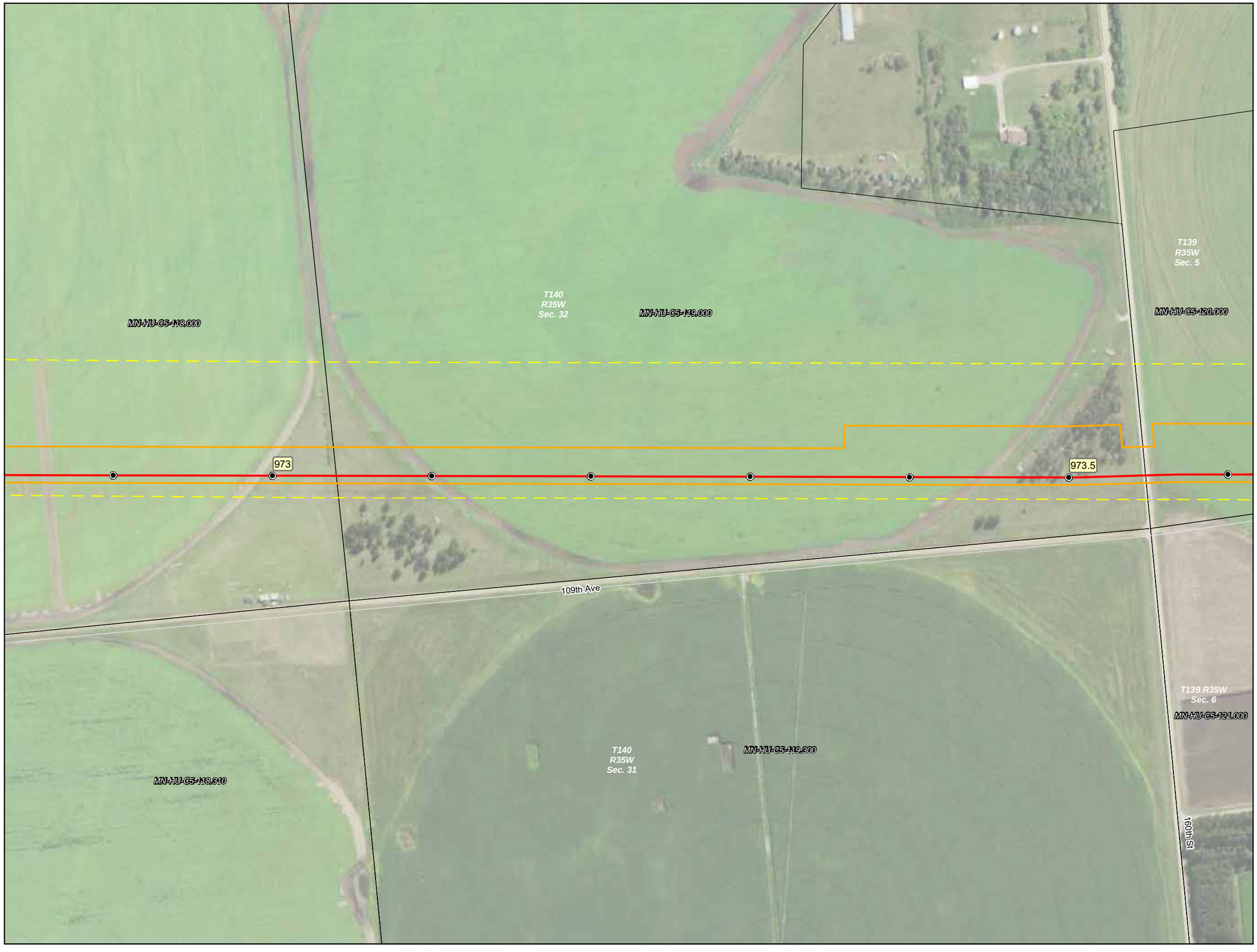

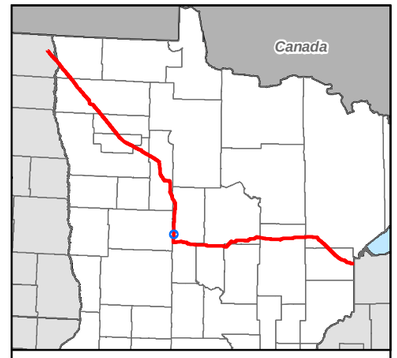

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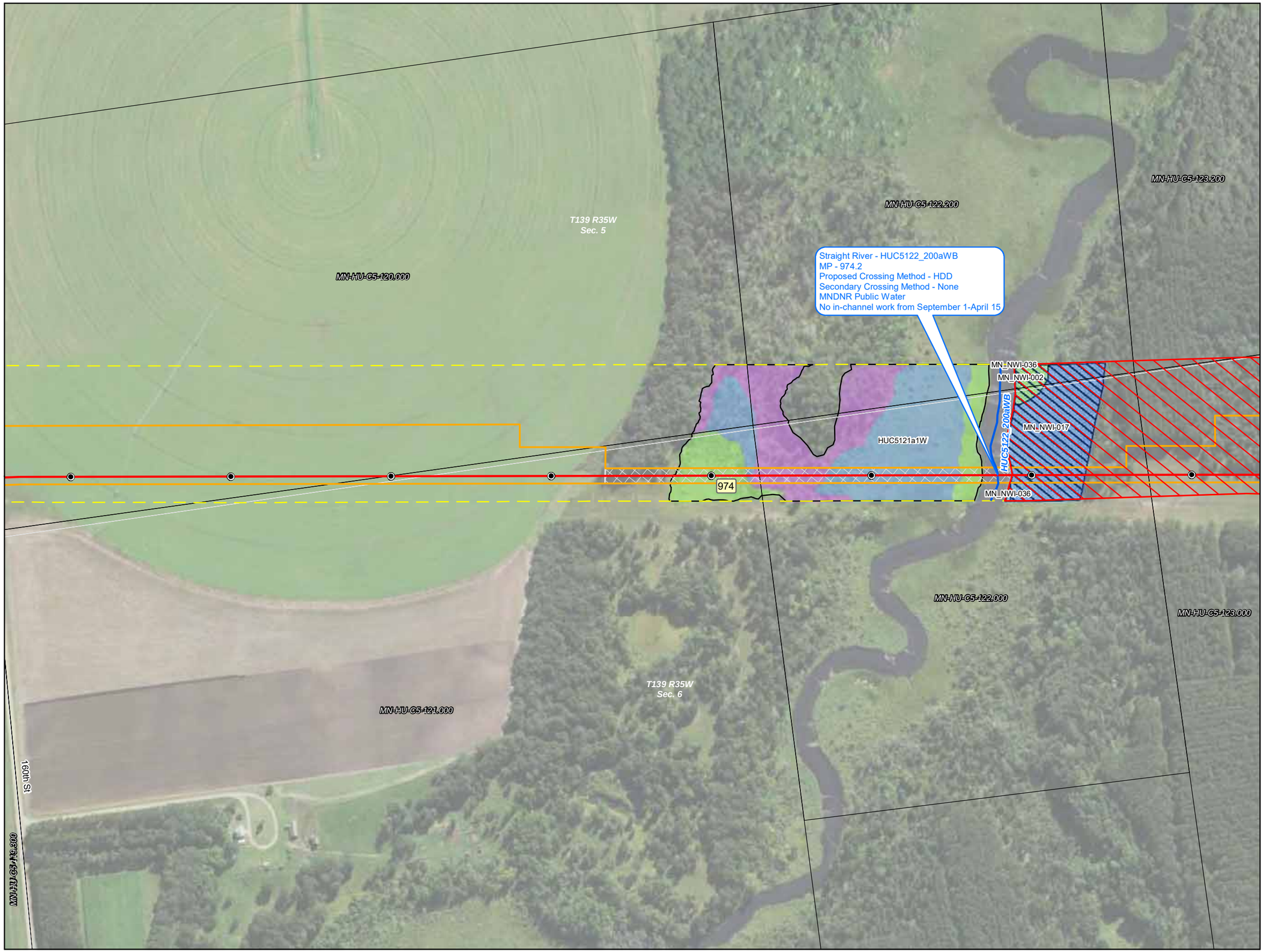

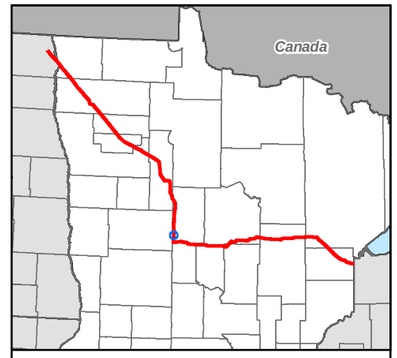

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Detailed Route Maps

Line 3 Replacement Project

Hubbard County, Minnesota

ENBRIDGE

MN-HU-C5-124.100

MN-HU-C5-125.100

T139 R35W
Sec. 8

MN-HU-C5-123.200

T139 R35W
Sec. 5

MN-HU-C5-122.200

MN-HU-C5-124.000

MN-HU-C5-125.000

MN-NWI-017

974.5

HUC5124b1W

975

HUC5124a1W

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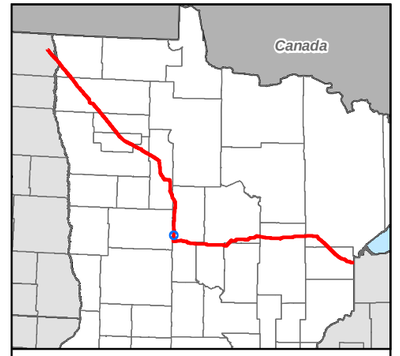
Sec. 7

MN-HU-C5-123.000

T139
R35W
Sec. 6

MN-HU-C5-122.000

150th St



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Line 3 Replacement Project

Hubbard County, Minnesota

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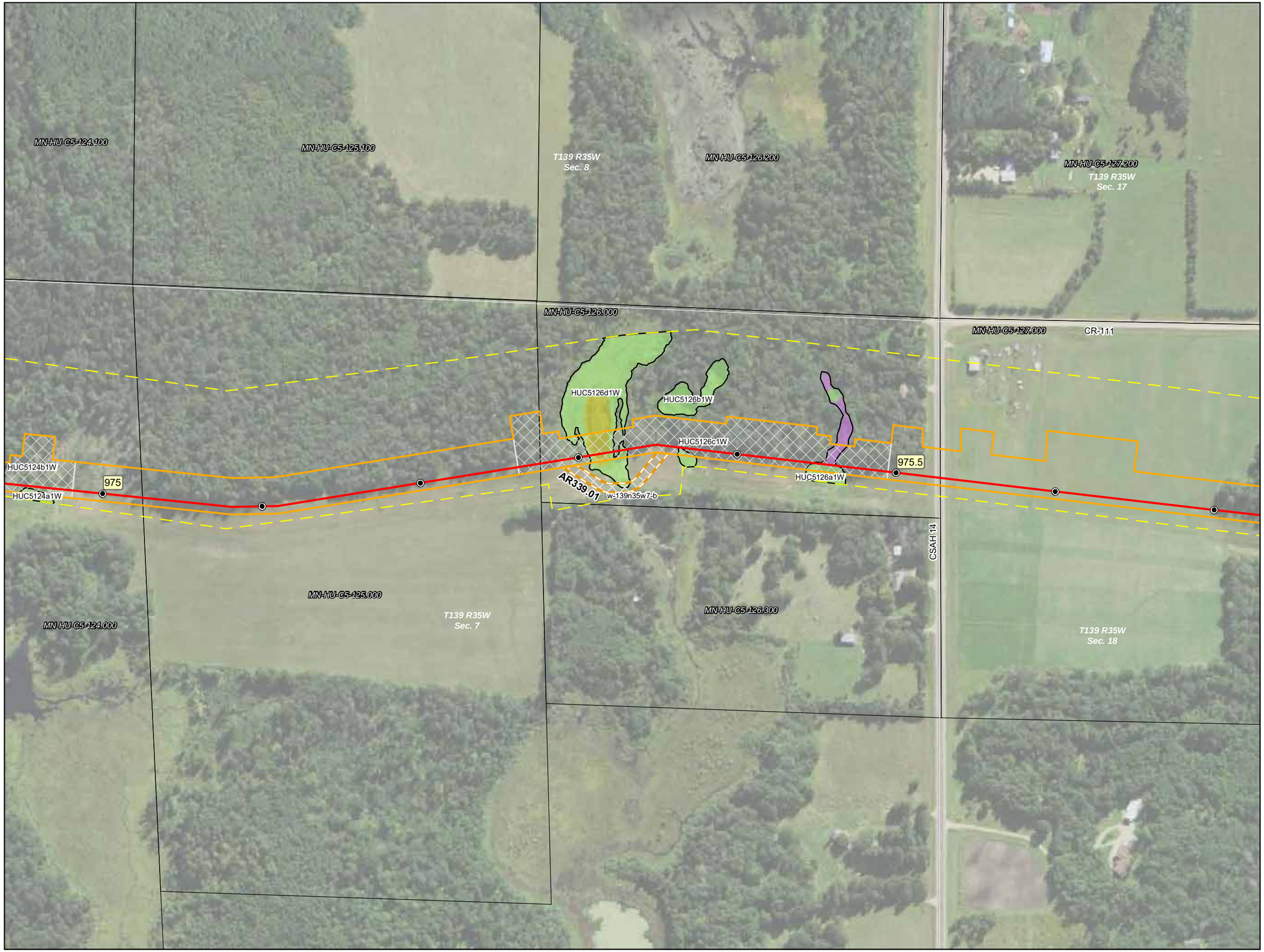

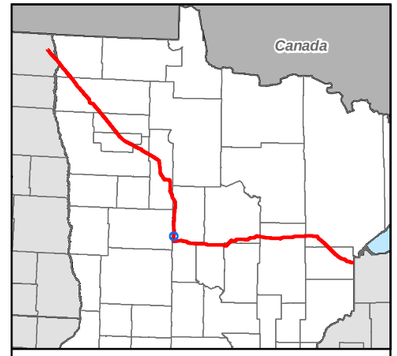

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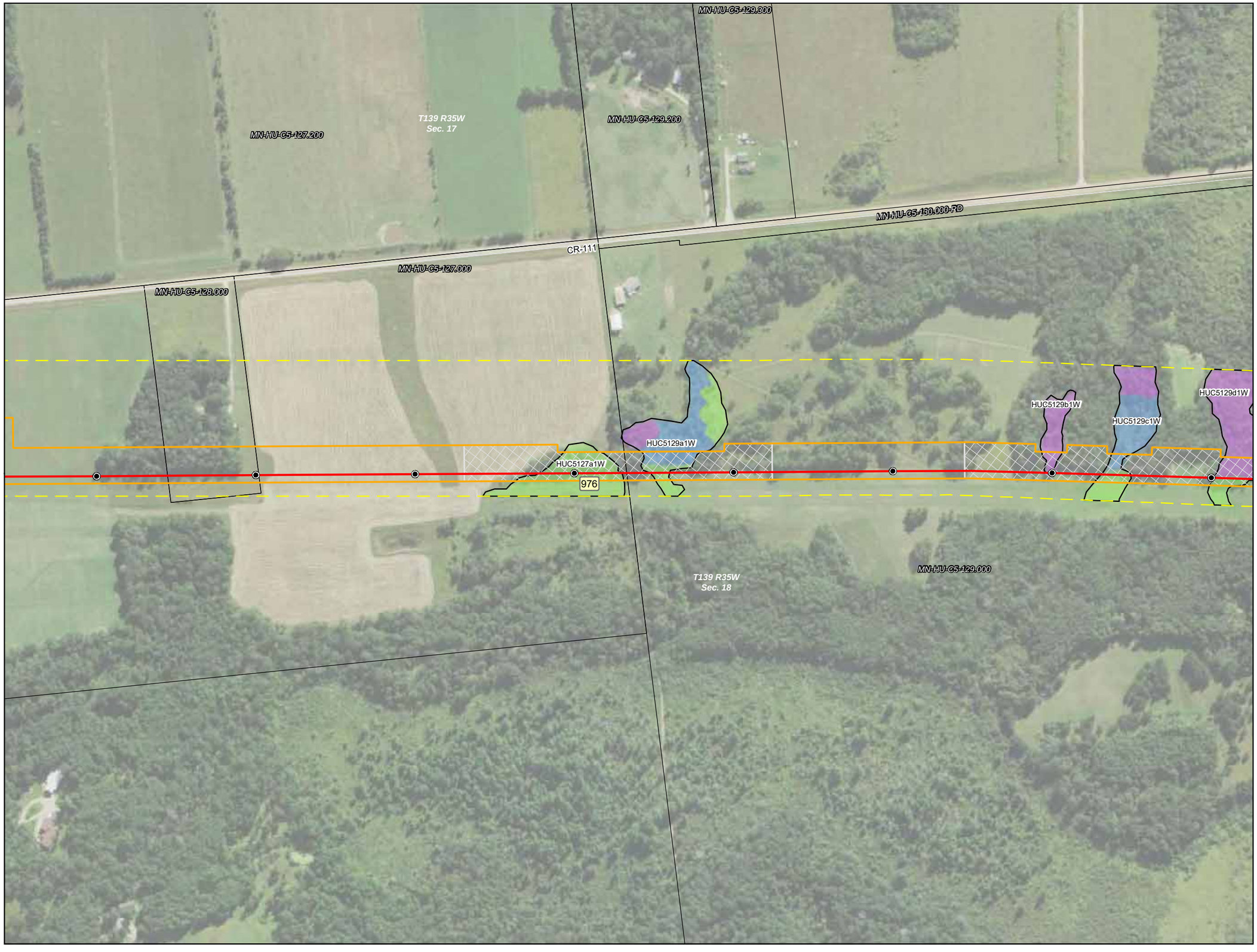

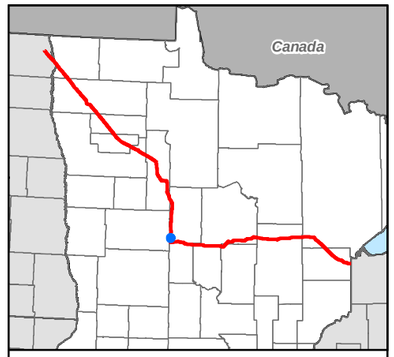

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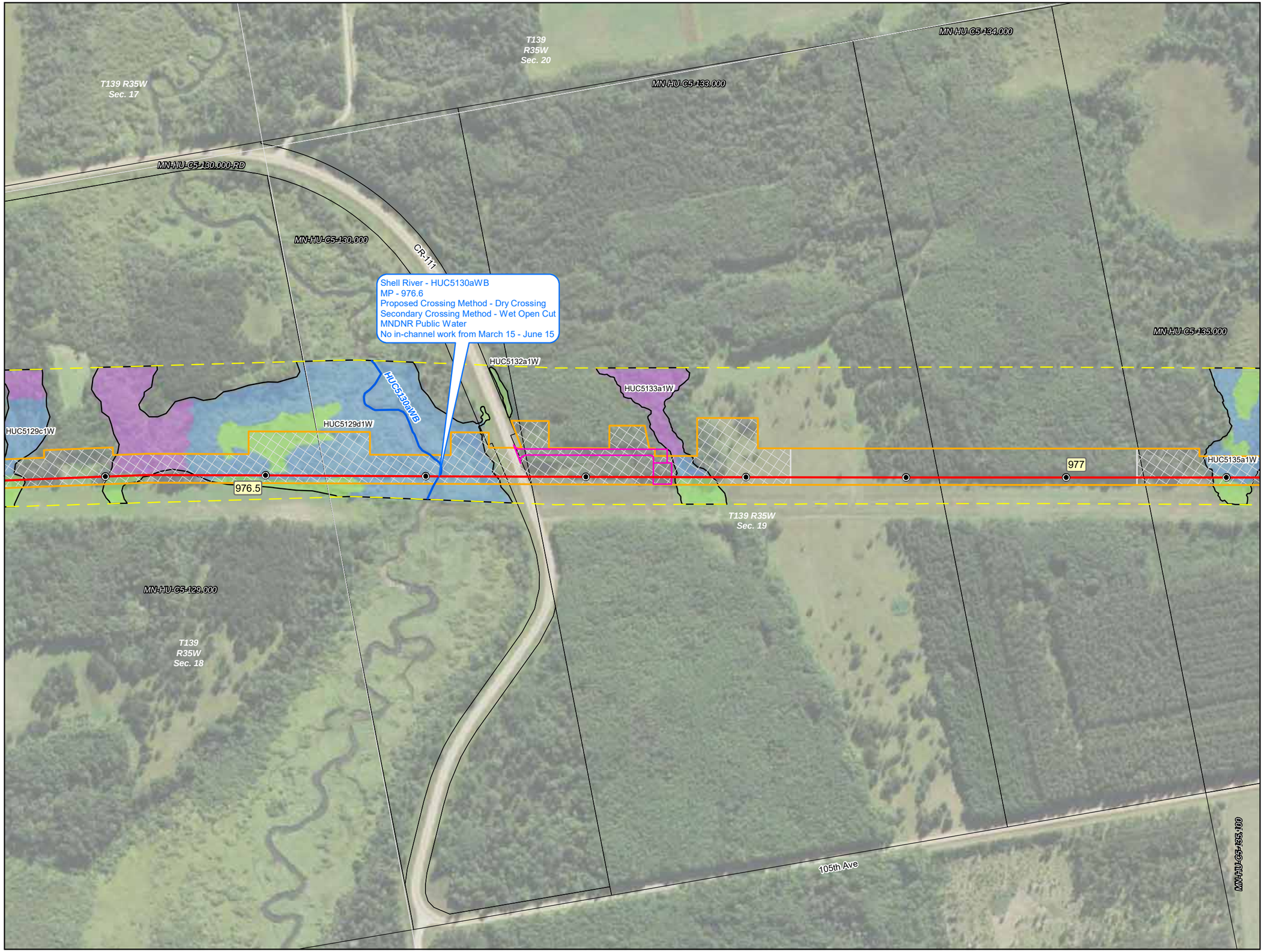

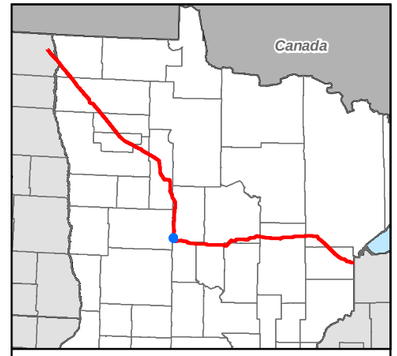

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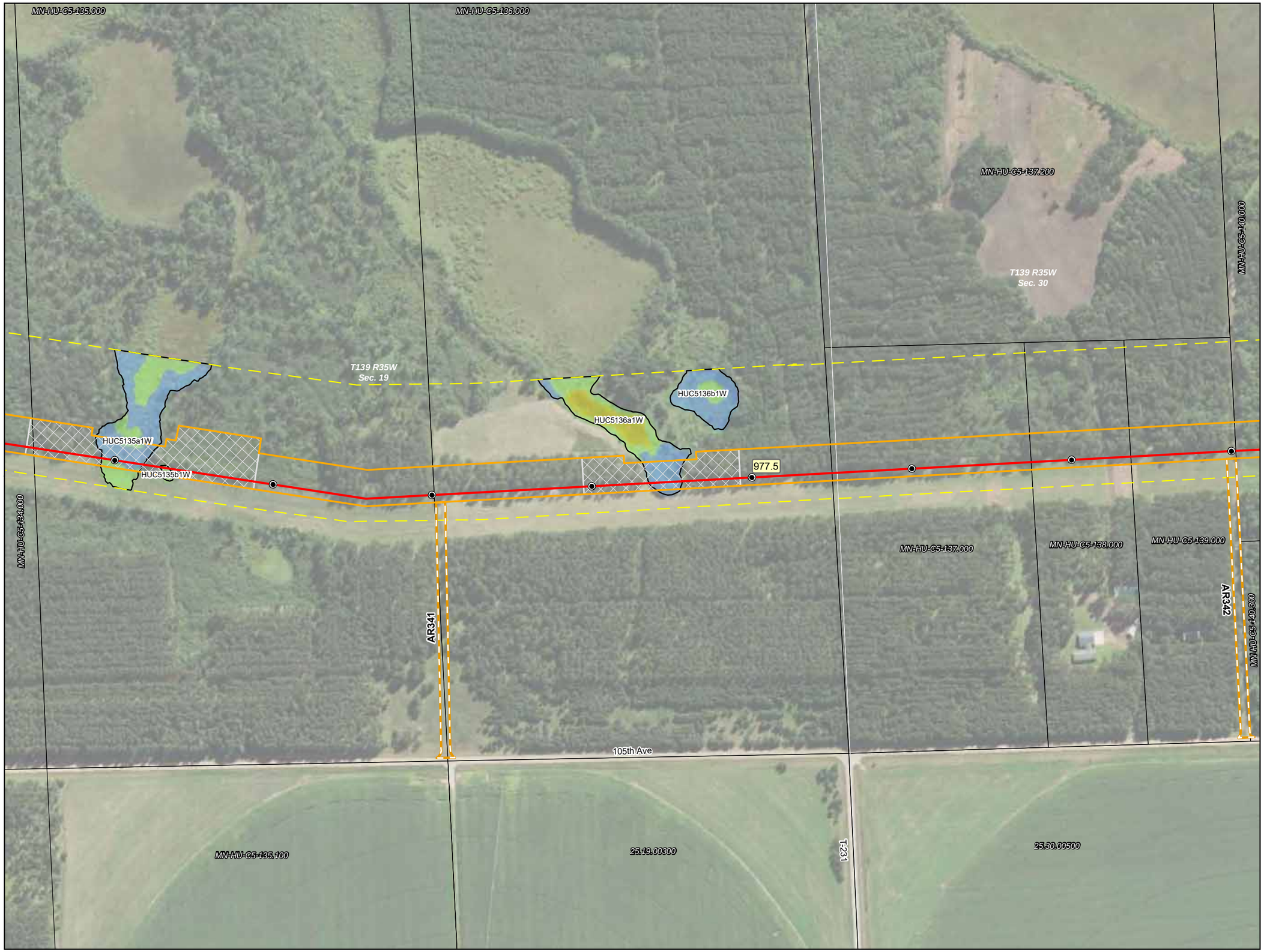

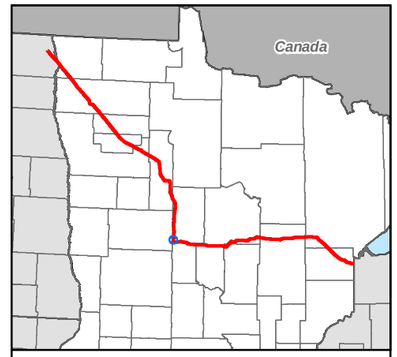

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ENBRIDGE

MN-HU-C5-140.000
T139 R35W Sec. 29
MN-HU-C5-137.200
MN-HU-C5-141.200
MN-HU-C5-144.000
978.5
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HUC5142a1W
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T139 R35W
Sec. 30
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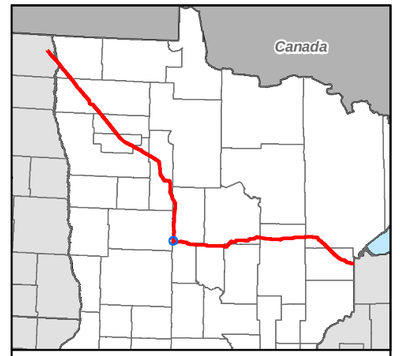

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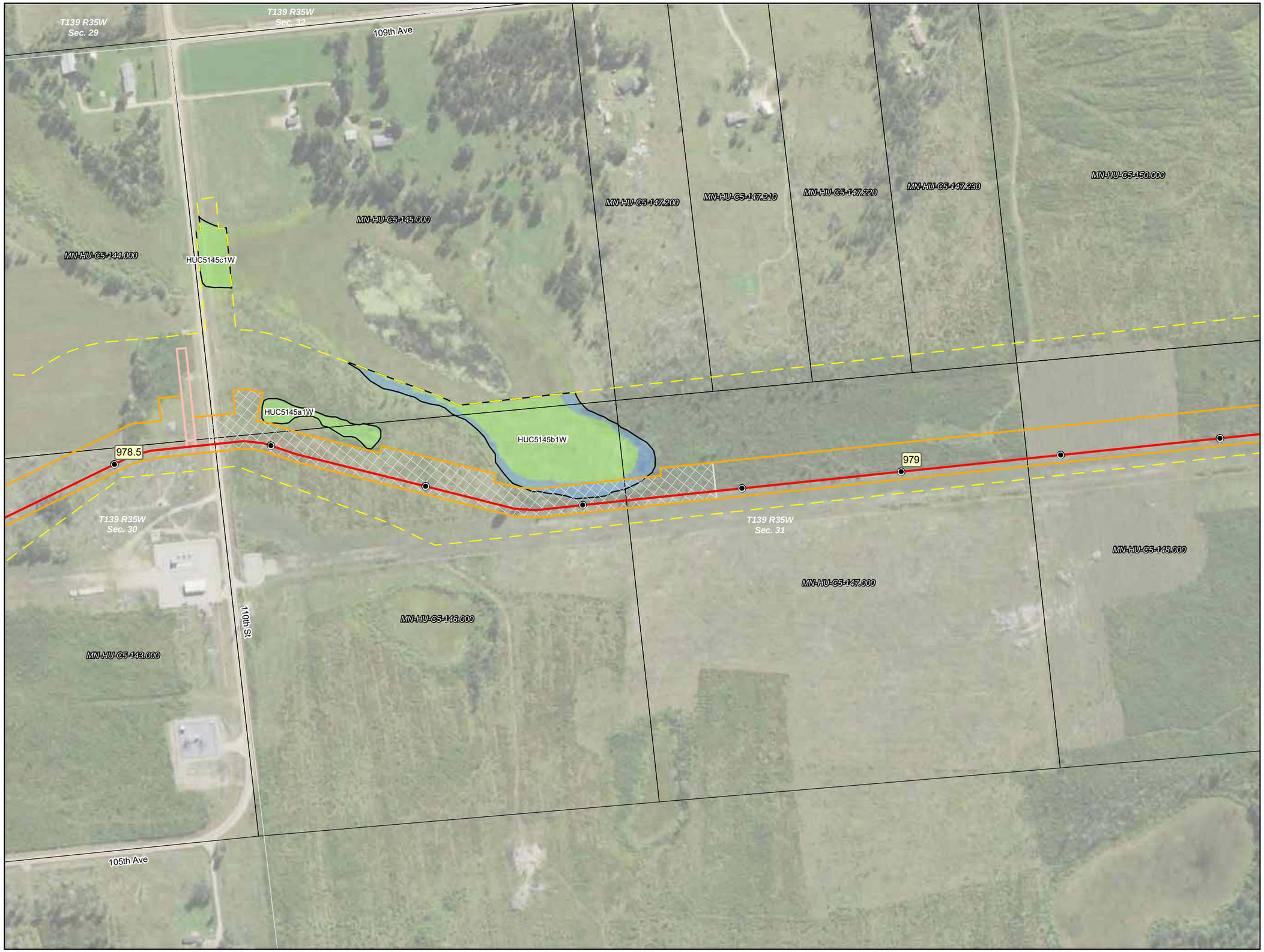

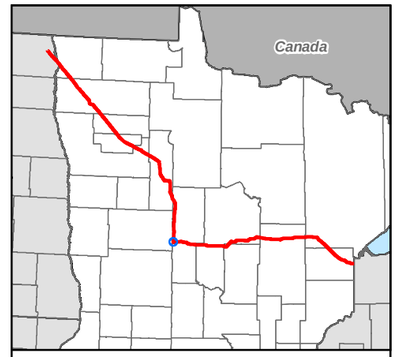

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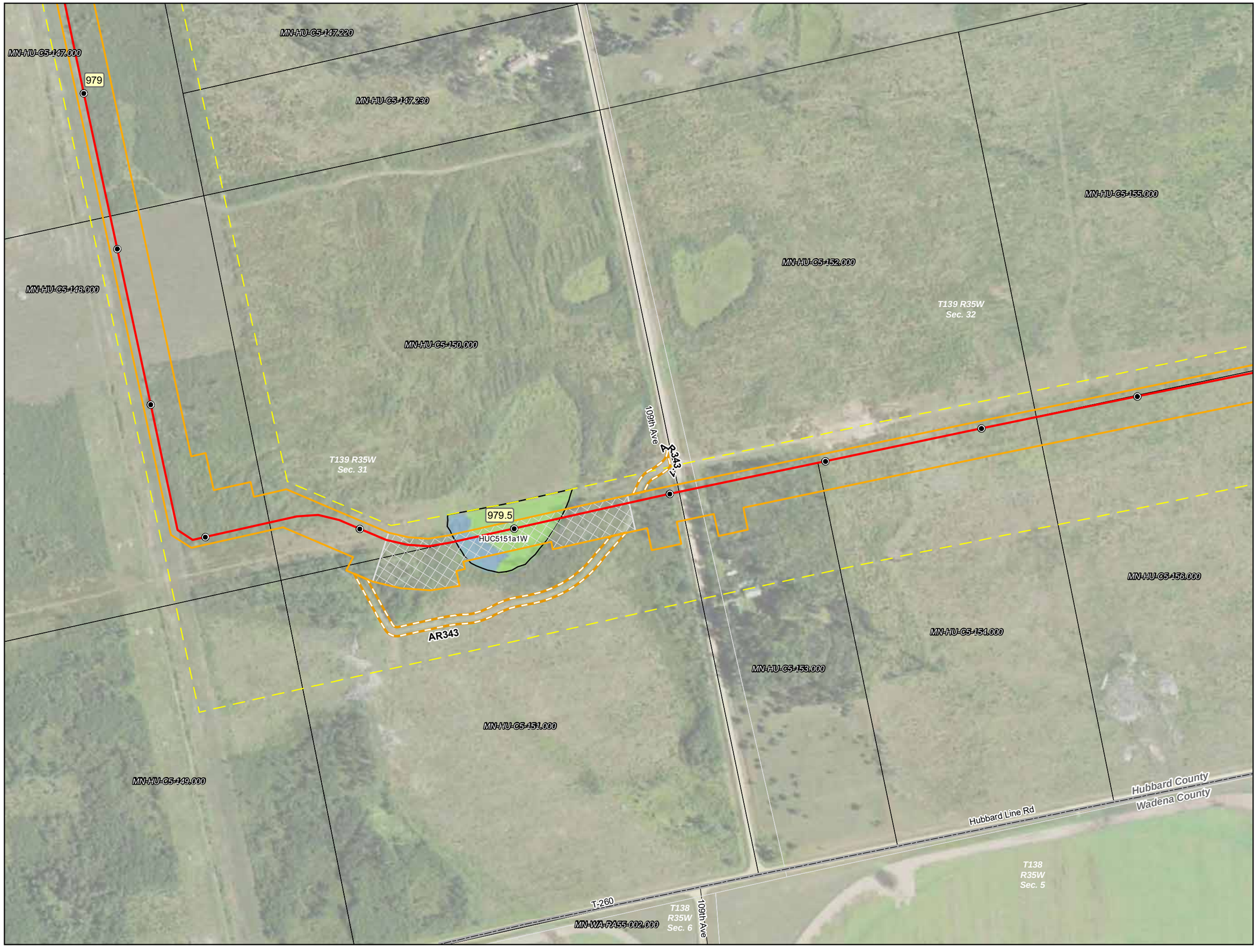

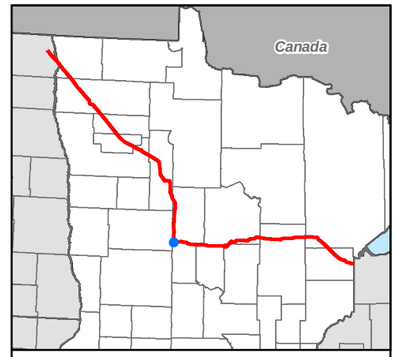

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- Riverine

0 150 300 Feet

1 inch = 300 feet

Detailed Route Maps

Line 3 Replacement Project

Hubbard and Wadena Counties, Minnesota

ENBRIDGE

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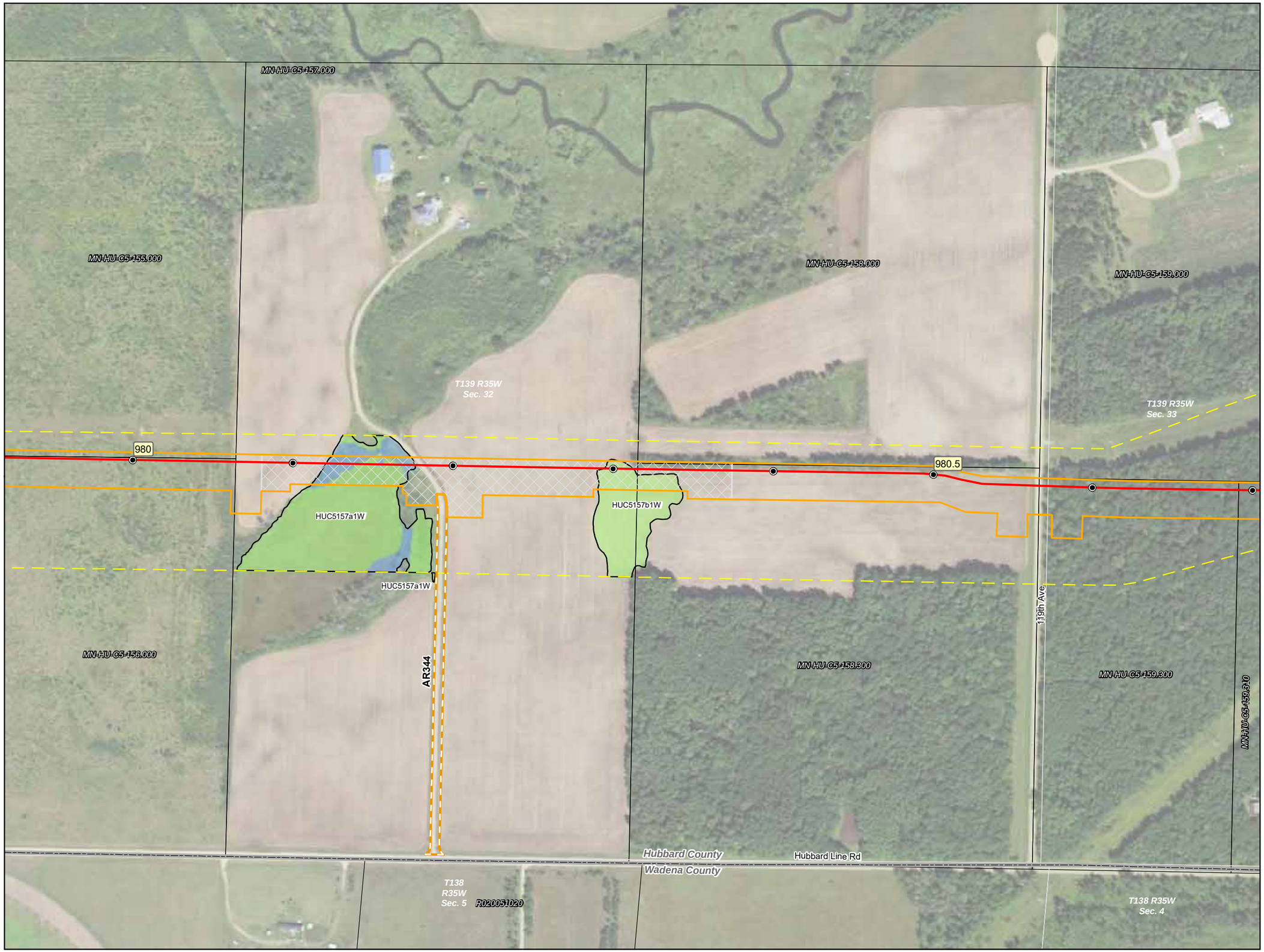

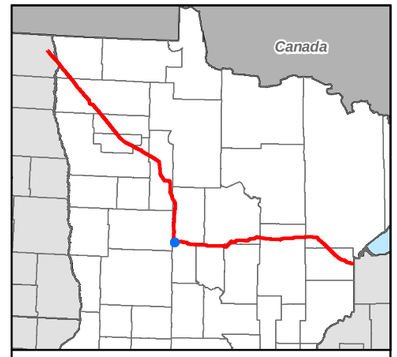

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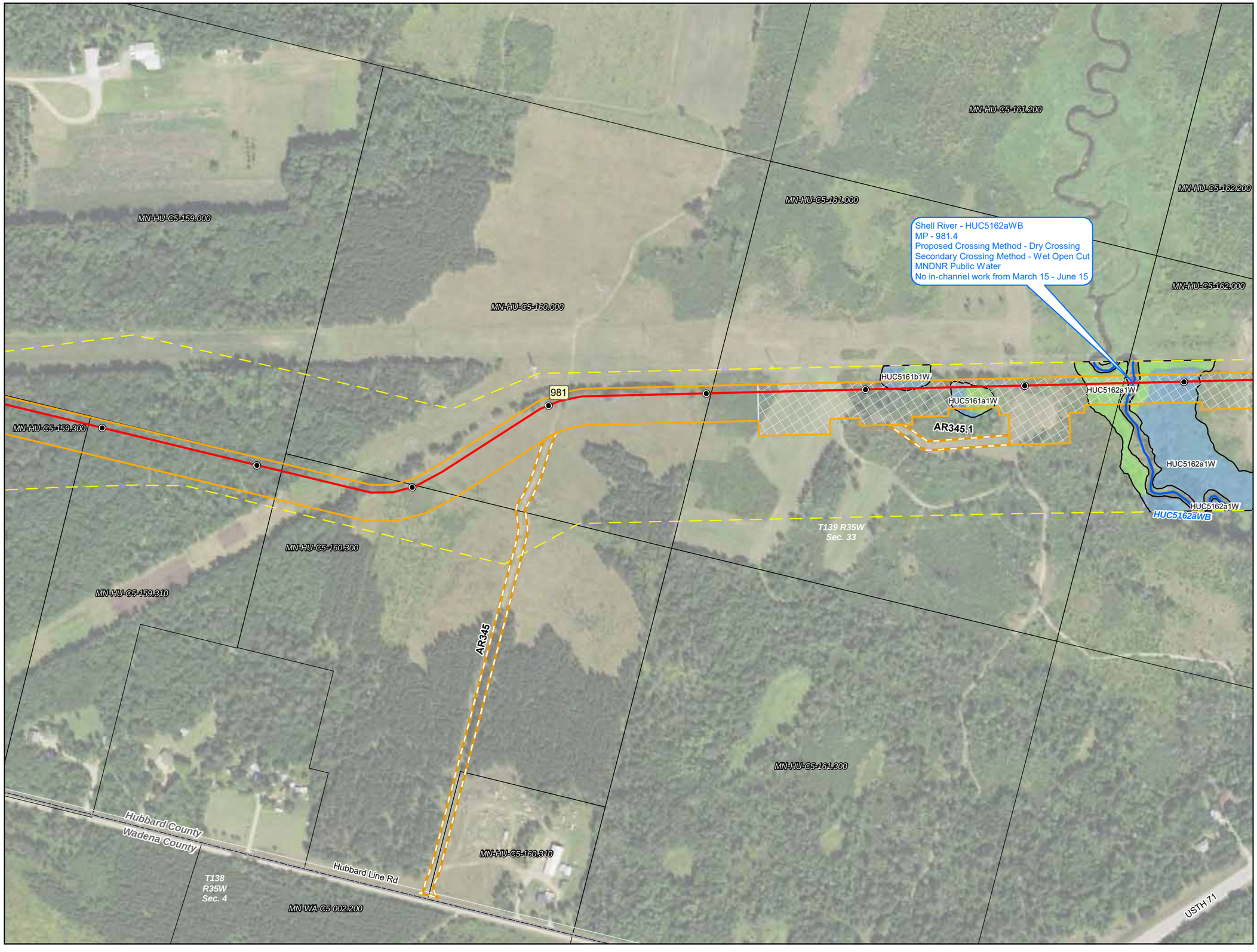

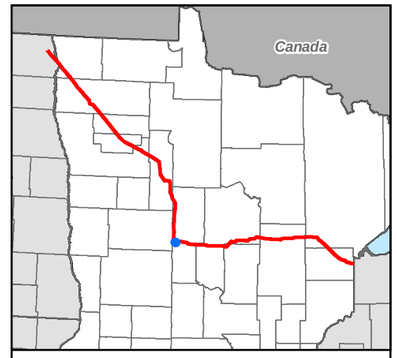

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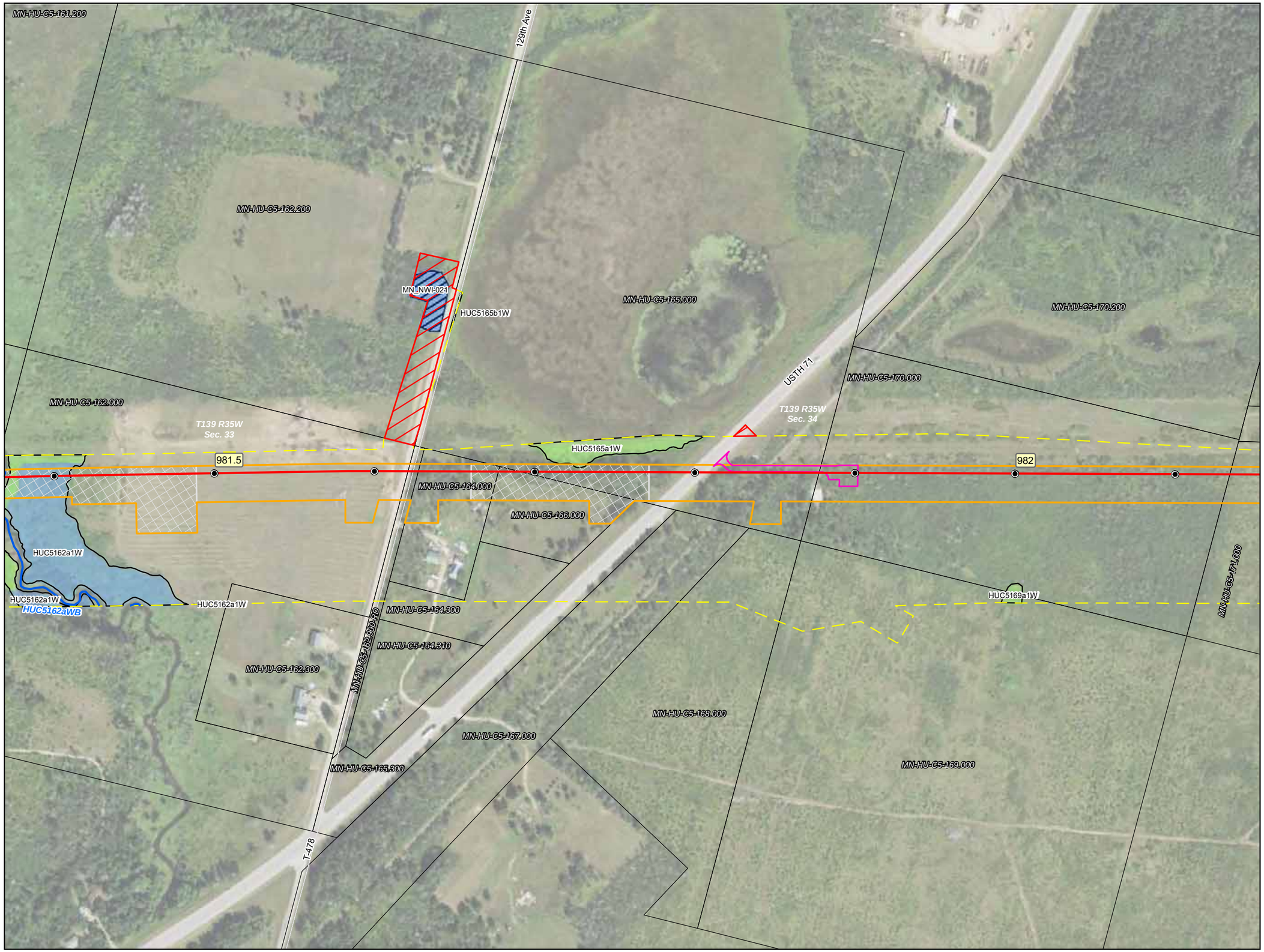

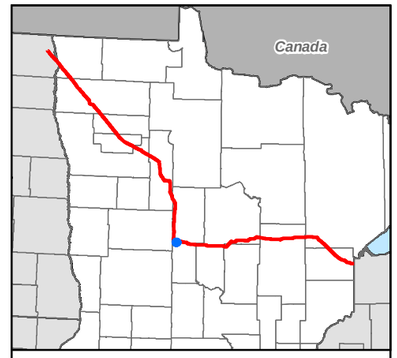

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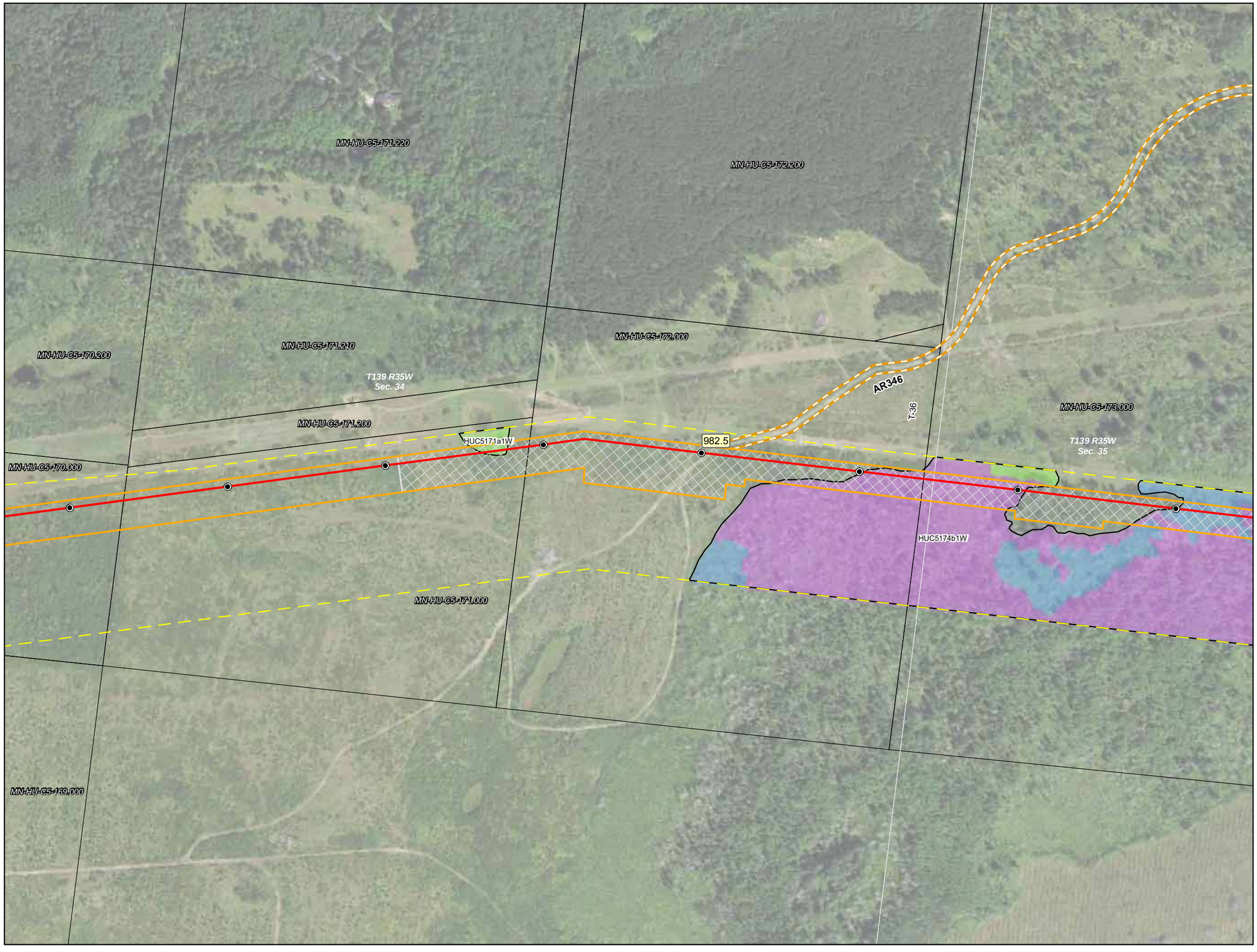

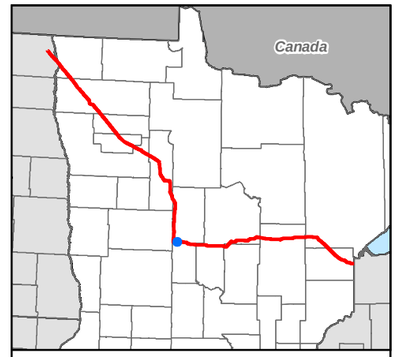

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Hubbard County, Minnesota

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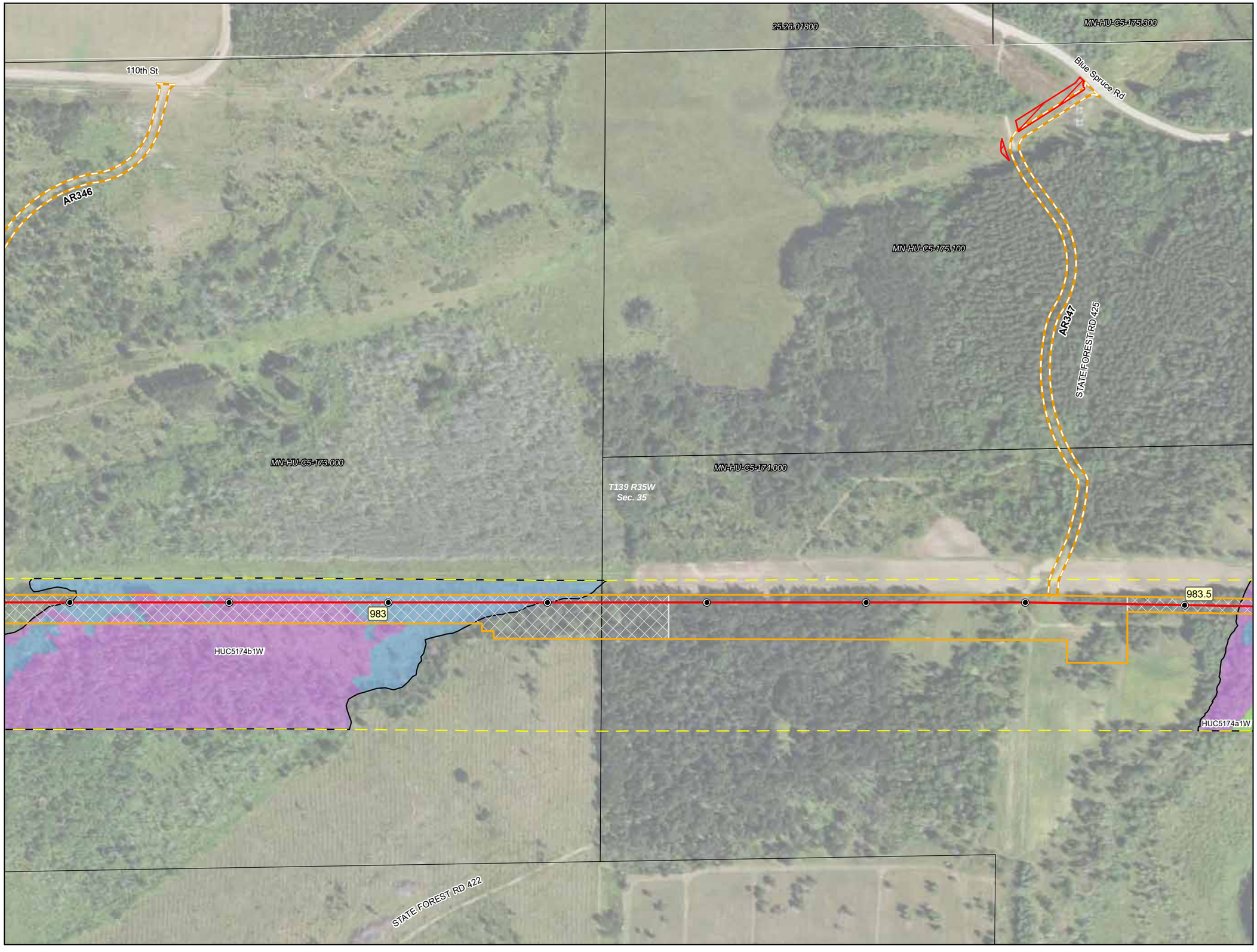

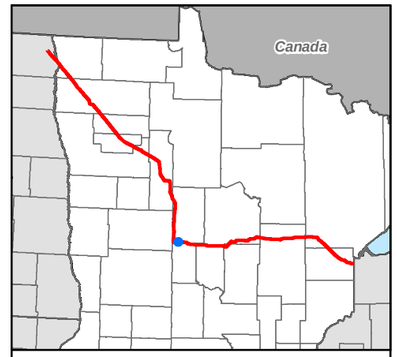

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Hubbard County, Minnesota

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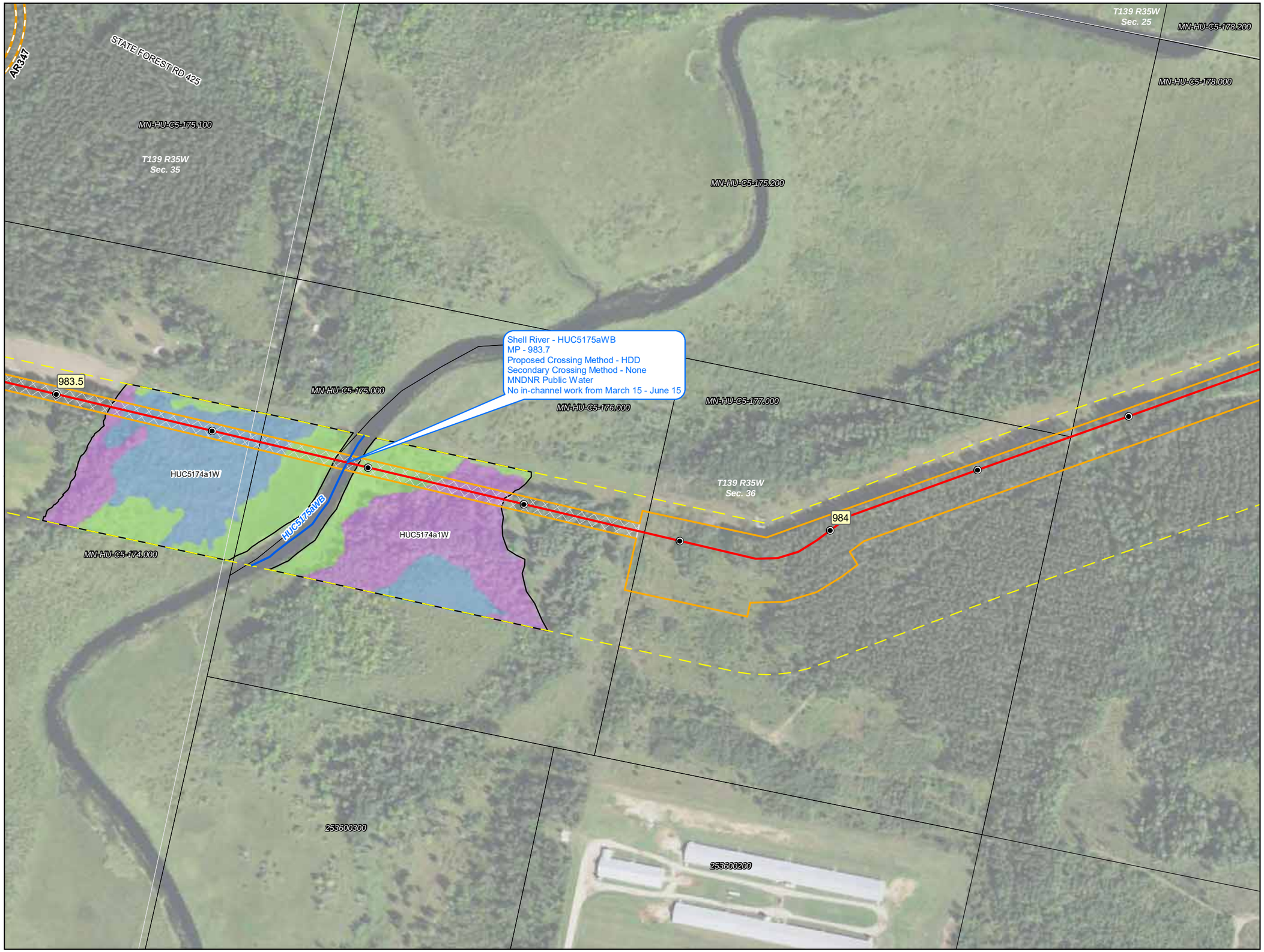

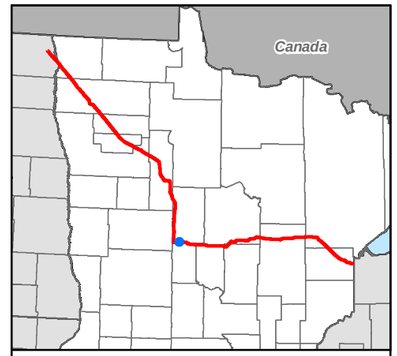

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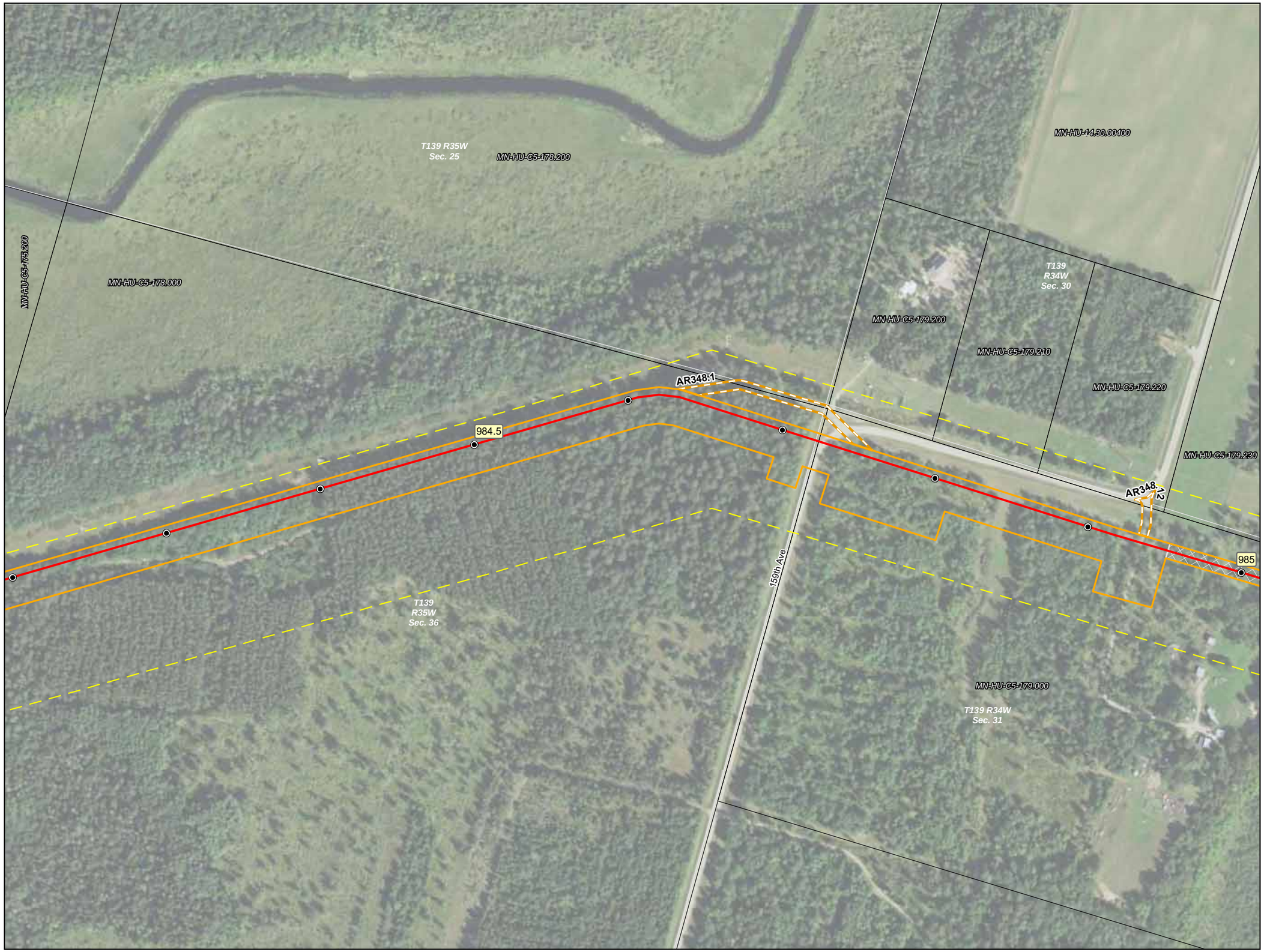

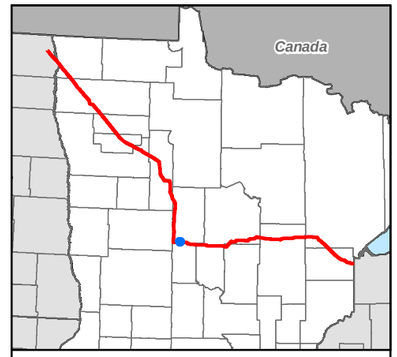

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Line 3 Replacement Project

Hubbard County, Minnesota

ENBRIDGE

MN-HU-14.30.03020

MN-HU-14.30.02020

159th Ave

MN-HU-C5-179.220

MN-HU-C5-179.230

T139 R34W Sec. 30

MN-HU-C5-179.240

MN-HU-C5-180.200

T139 R34W Sec. 29

MN-HU-C5-181.200

Oxbow Pond (Shell River) - HUC5179_240aWB
MP - 985.4
Proposed Crossing Method - HDD
Secondary Crossing Method - None
MNDNR Public Water
No in-channel work from March 15 - June 15

R348.12

985

985.5

HUC5179a1W

HUC5179a1W

HUC5179_240aWB

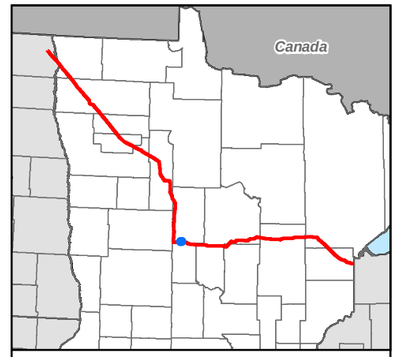
MN-HU-C5-181.000

MN-HU-C5-181.210

MN-HU-C5-179.000

MN-HU-C5-180.000

T139 R34W Sec. 31



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Line 3 Replacement Project

Hubbard County, Minnesota

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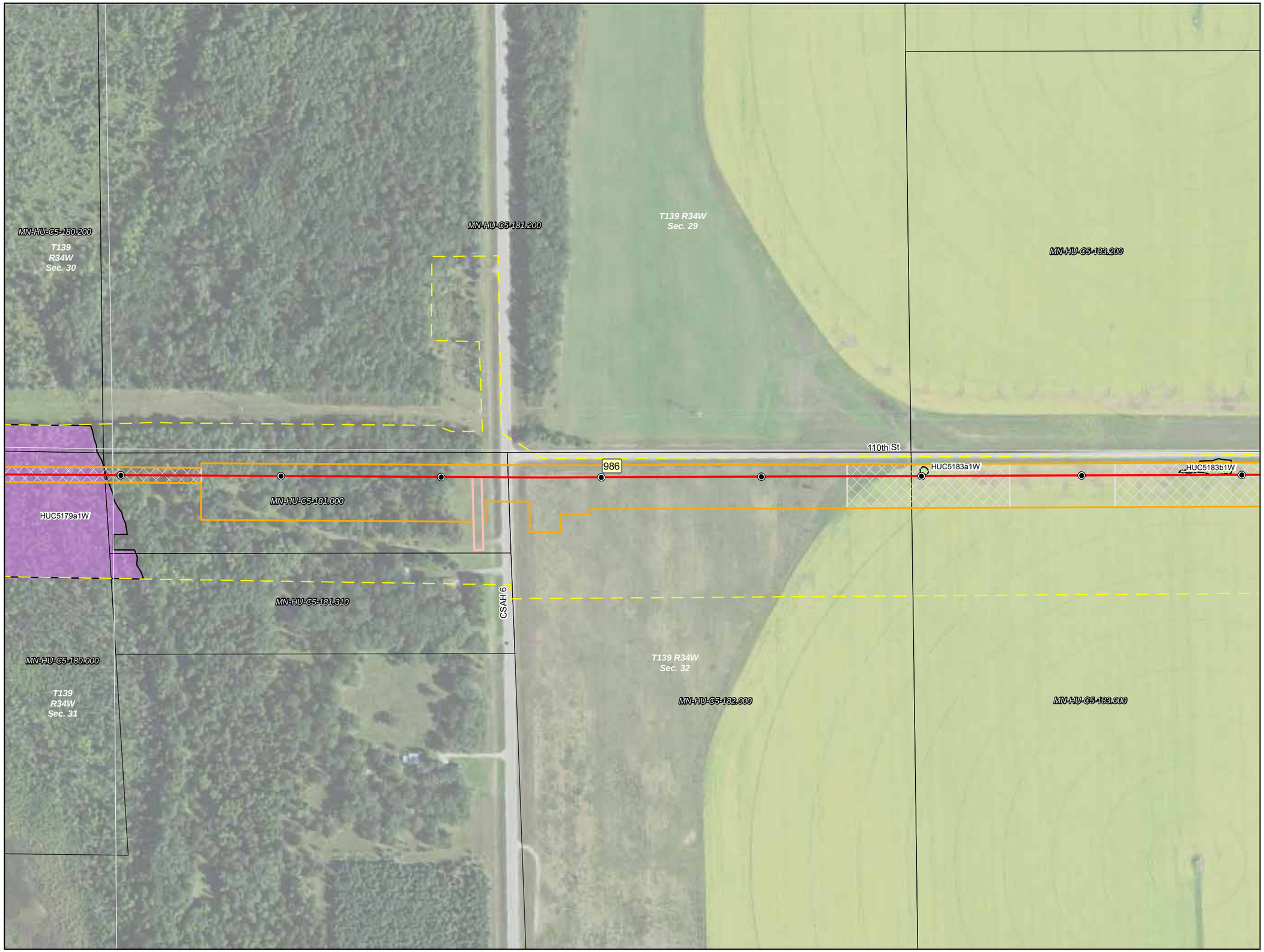

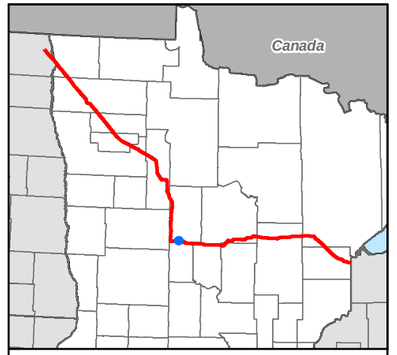

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Hubbard County, Minnesota

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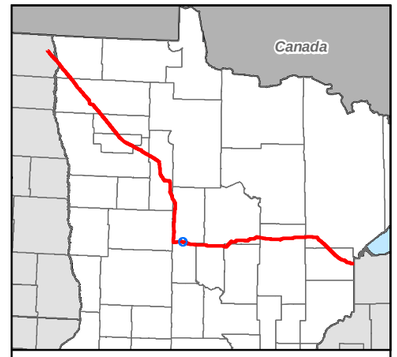

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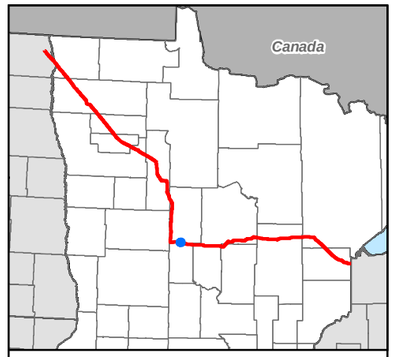

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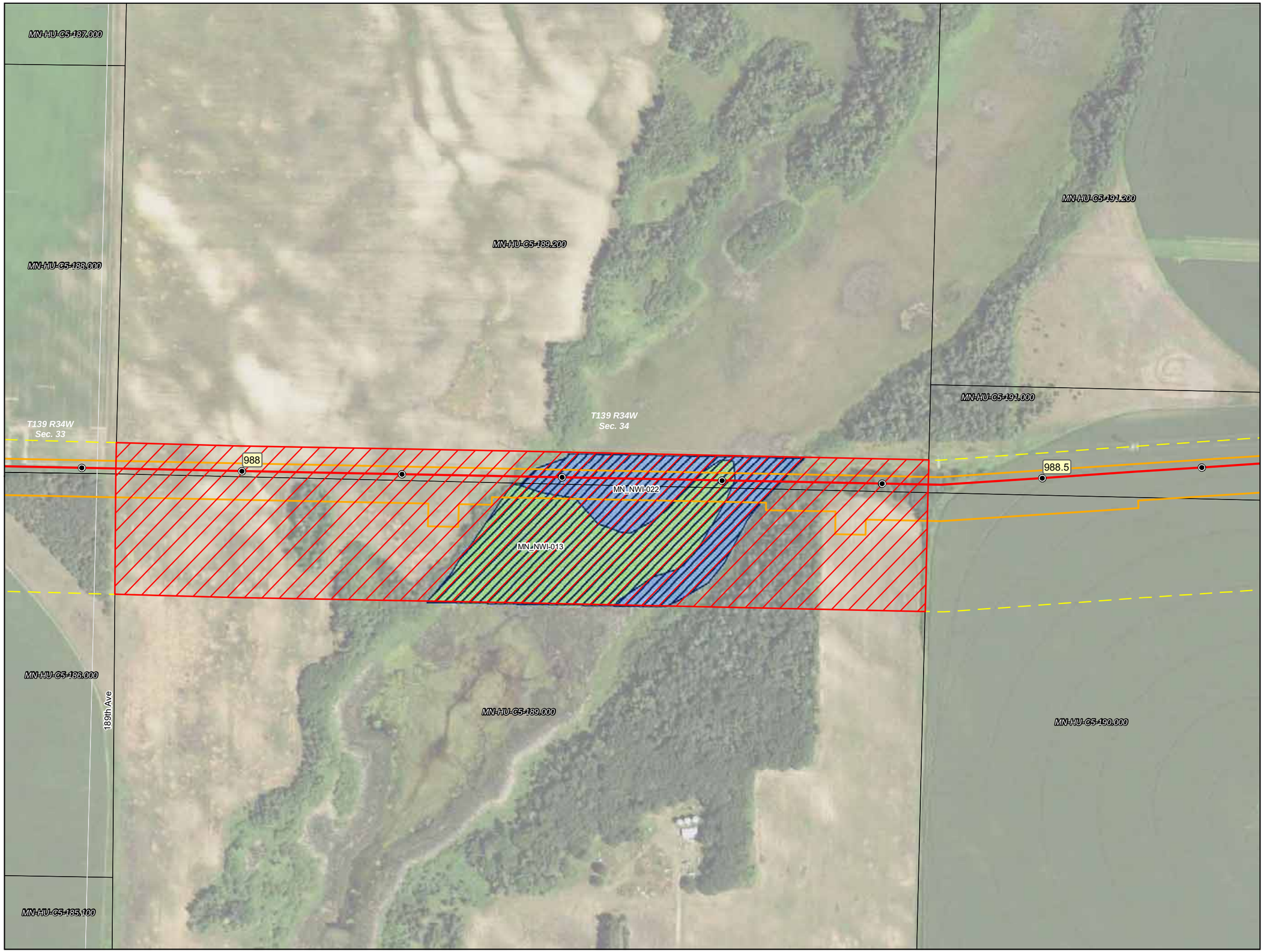

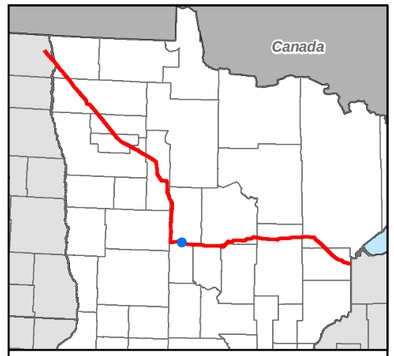

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MN-HU-C5-192.000

MN-HU-C5-191.200

MN-HU-C5-191.210

T139 R34W
Sec. 34

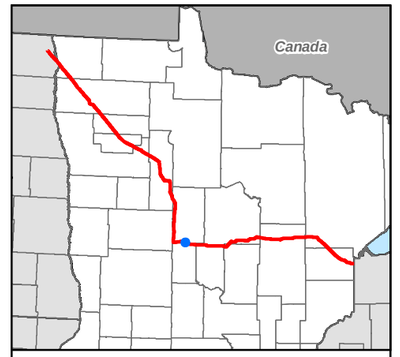
MN-HU-C5-191.000

T139 R34W
Sec. 35

989

CSAH 11

MN-HU-C5-190.000



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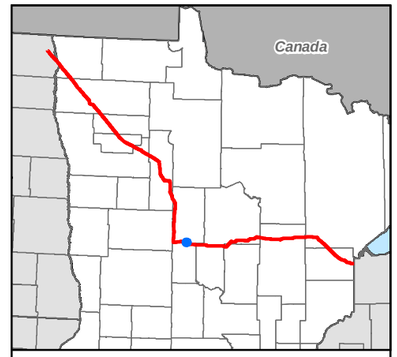

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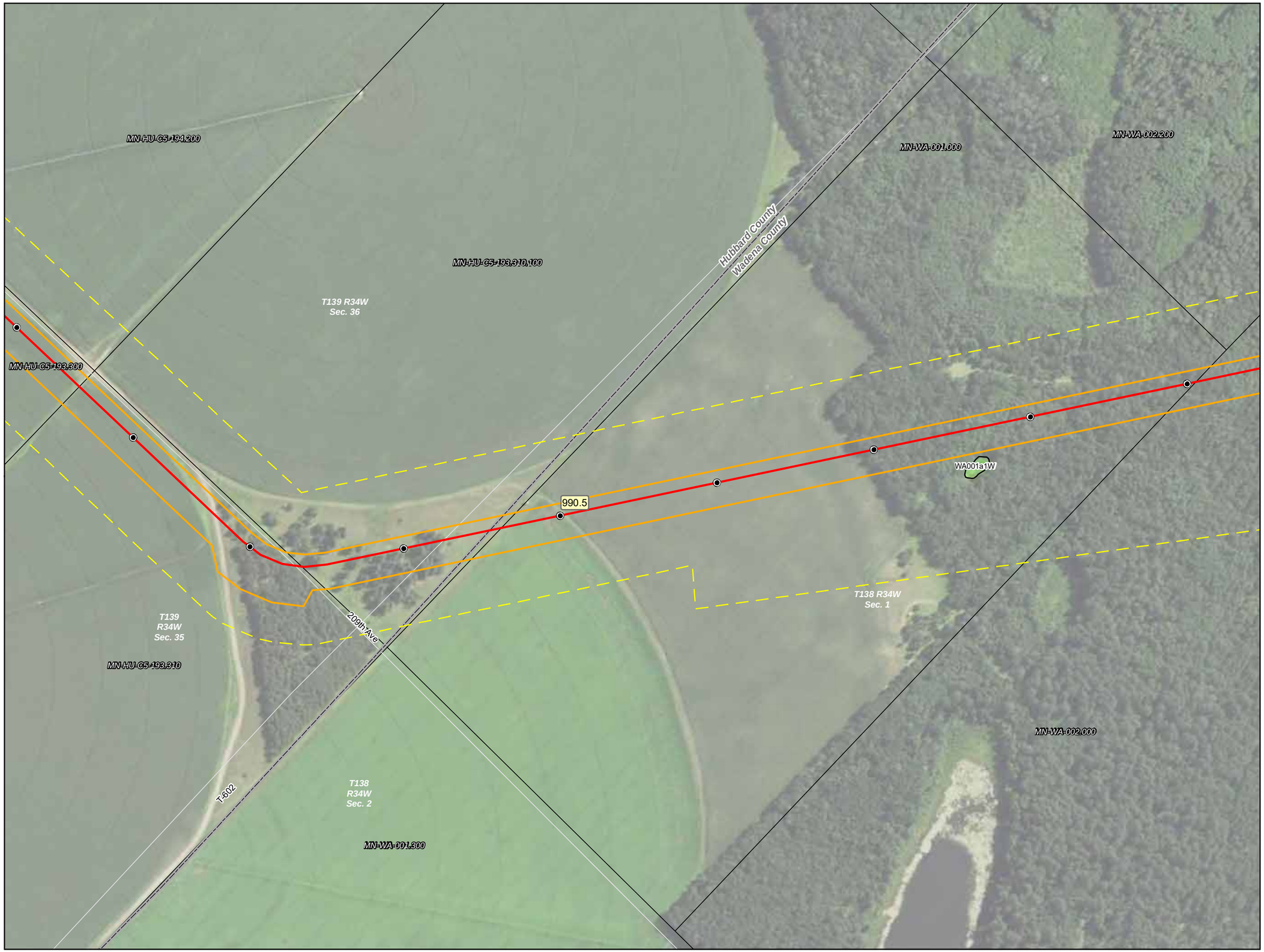

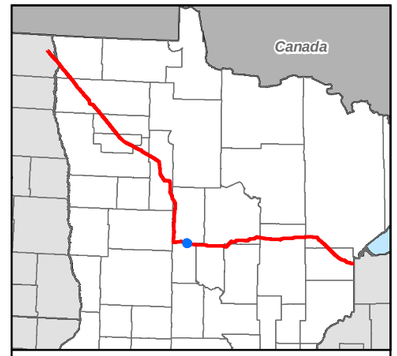

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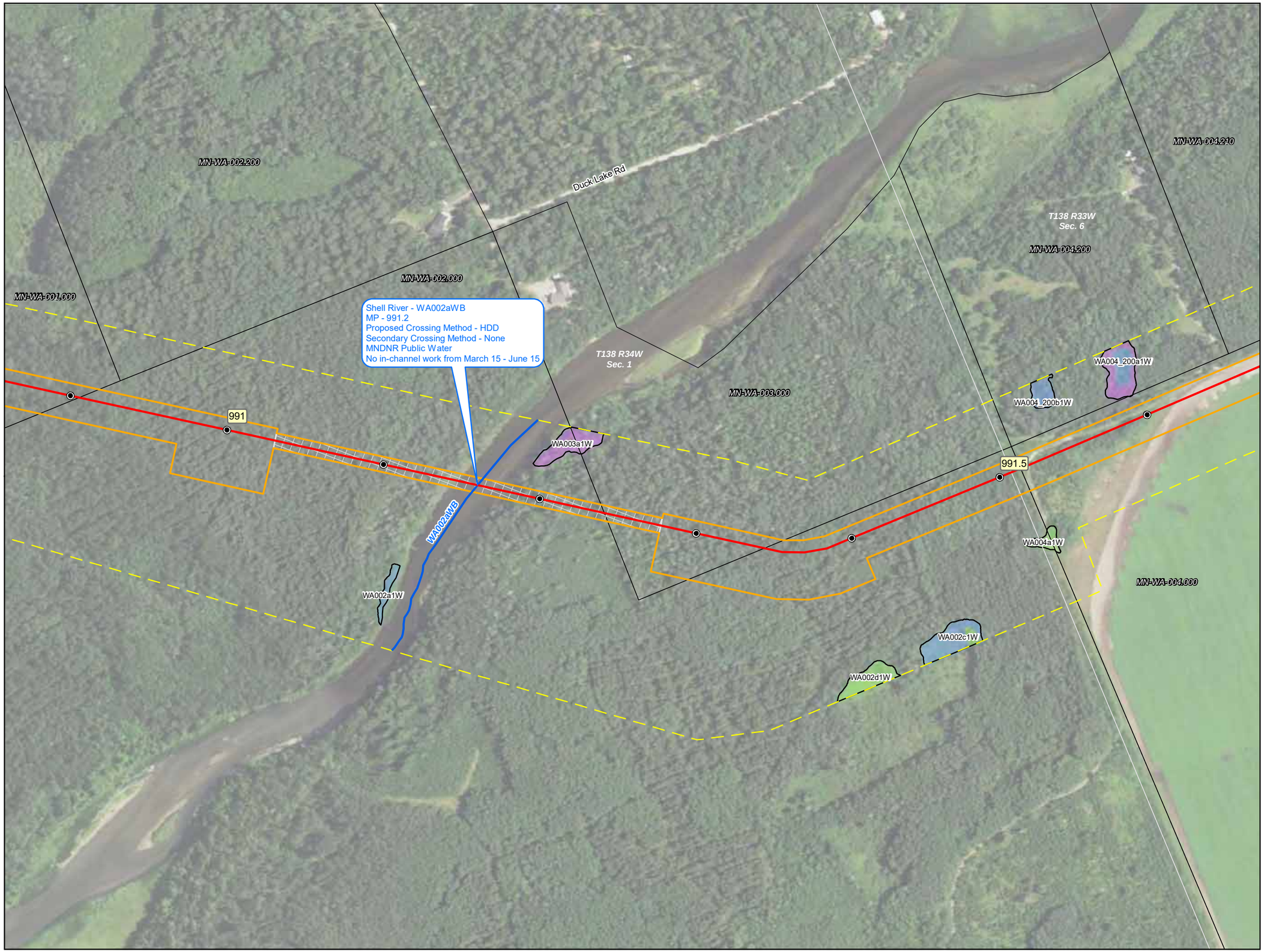

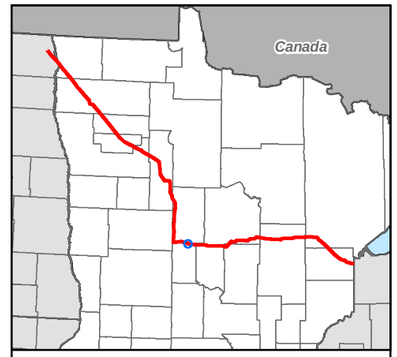

- Milepost
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- COE Permit Area
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Environmental Field Data

Wetlands

Field Delineated Wetland	NWI Wetlands
PEM	PEM
PFO	PFO
PSS	PSS
PUB	PUB

Waterbodies

- Field Delineated Waterbody
- NHD Waterbody

NWI Waterbodies

- Lake
- Riverine

0 150 300 Feet

1 inch = 300 feet

Detailed Route Maps

Line 3 Replacement Project

Wadena County, Minnesota

ENBRIDGE

MN-WA-004.200

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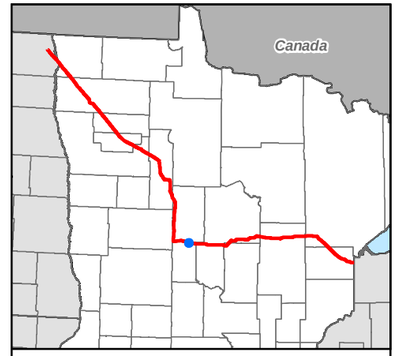
MN-WA-004.220

WA004_200a1W

T138 R33W
Sec. 6

992

MN-WA-004.000



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Detailed Route Maps

Line 3 Replacement Project

Wadena County, Minnesota

ENBRIDGE

Source: Z:\Clients\E_H\Enbridge\Line_3_Full_Replacement\Permitting\FederalCOE\Sept_2018\RSA_22\Figures\L3_MN_COE_Alignment_Sheets_RSA22.mxd

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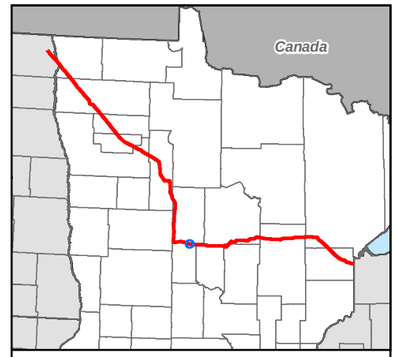

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Detailed Route Maps

Line 3 Replacement Project

Wadena County, Minnesota

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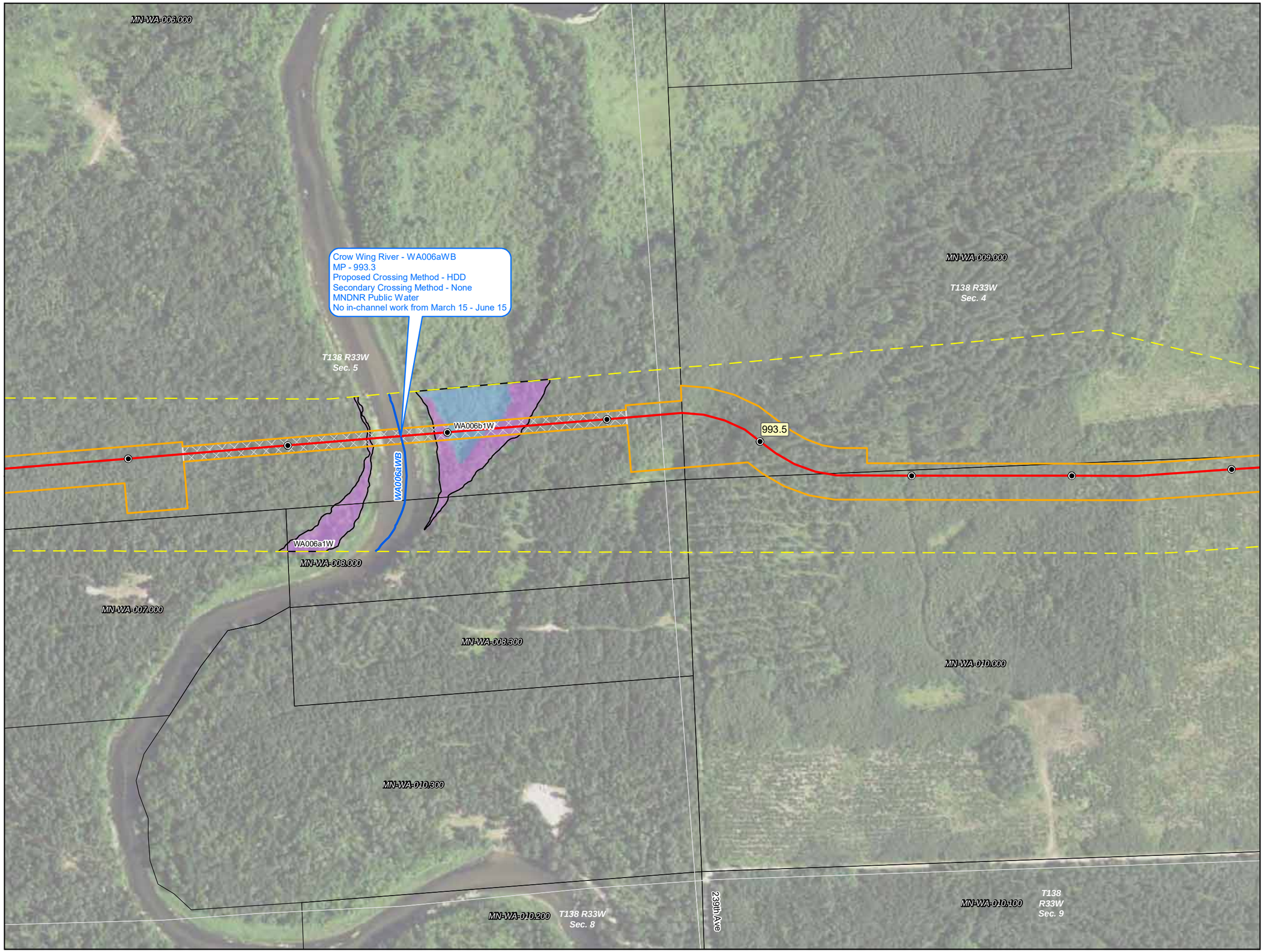

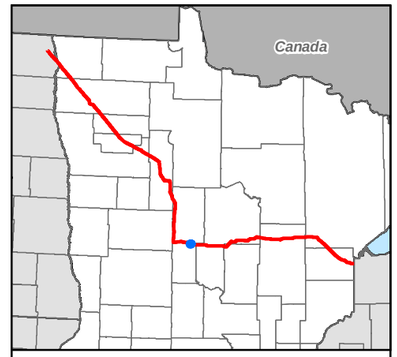

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Wadena County, Minnesota

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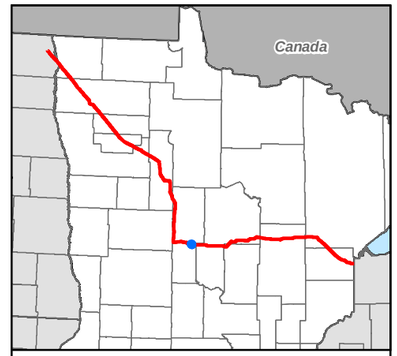

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Wadena County, Minnesota

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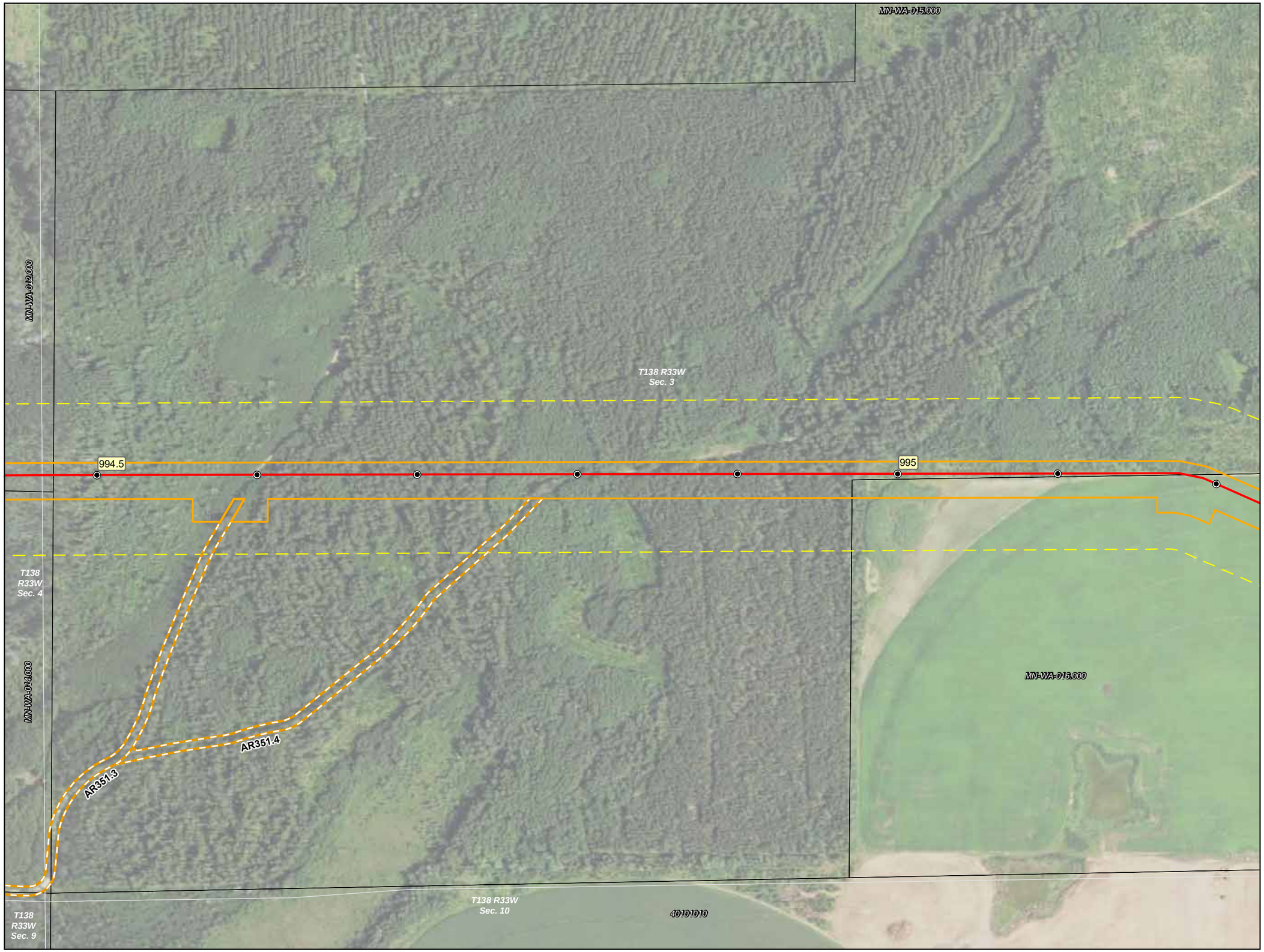

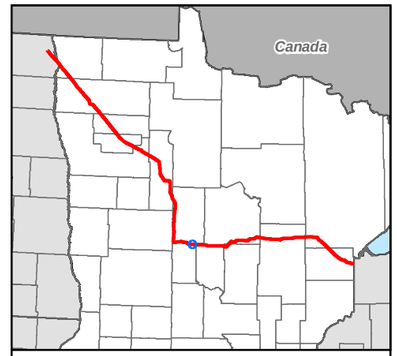

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Wadena County, Minnesota

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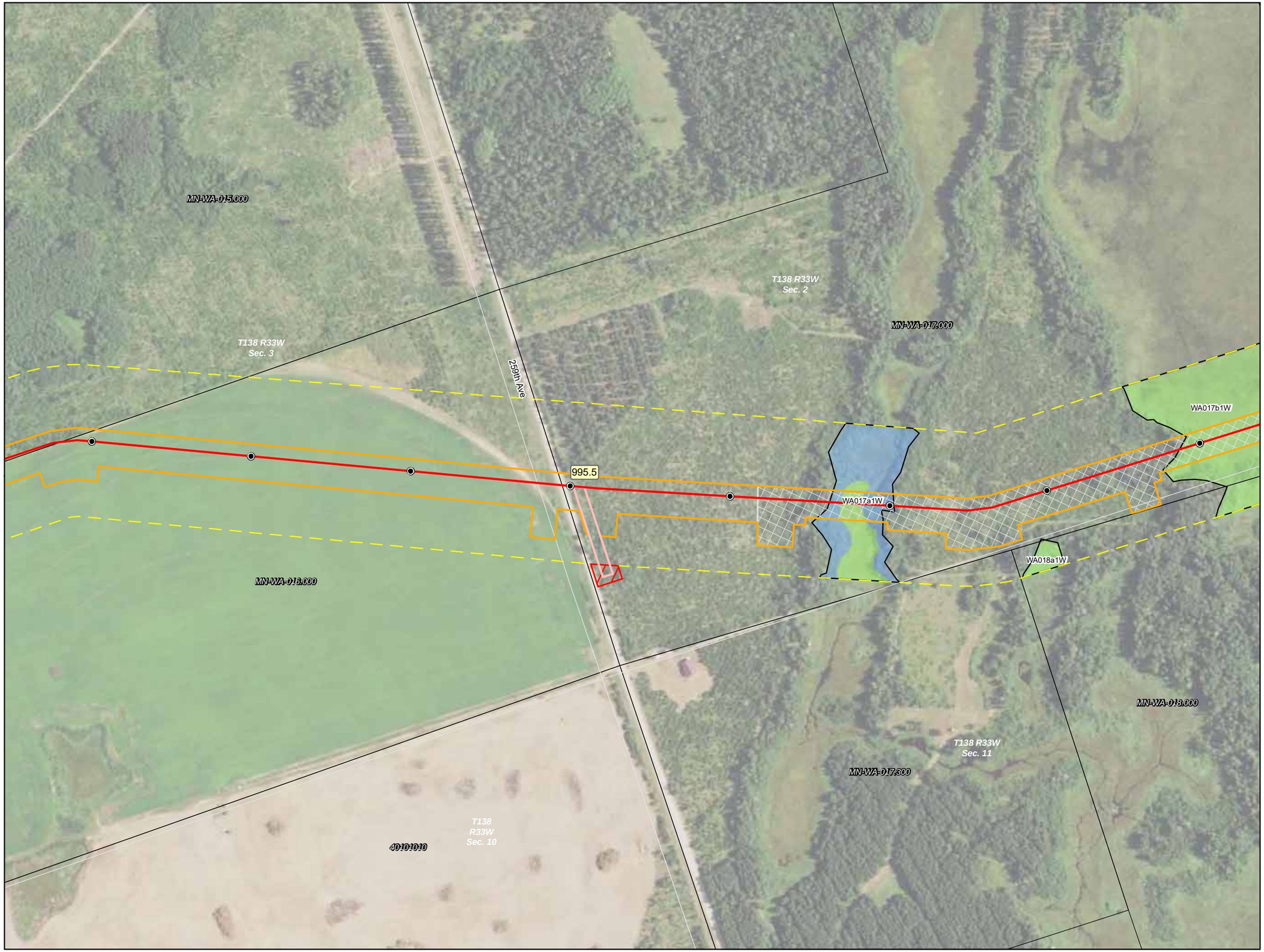

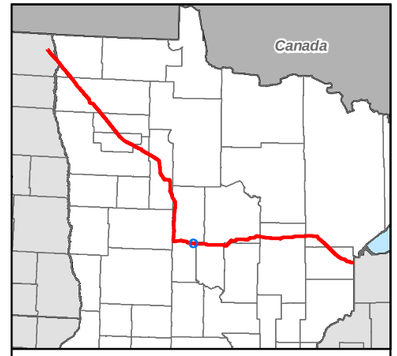

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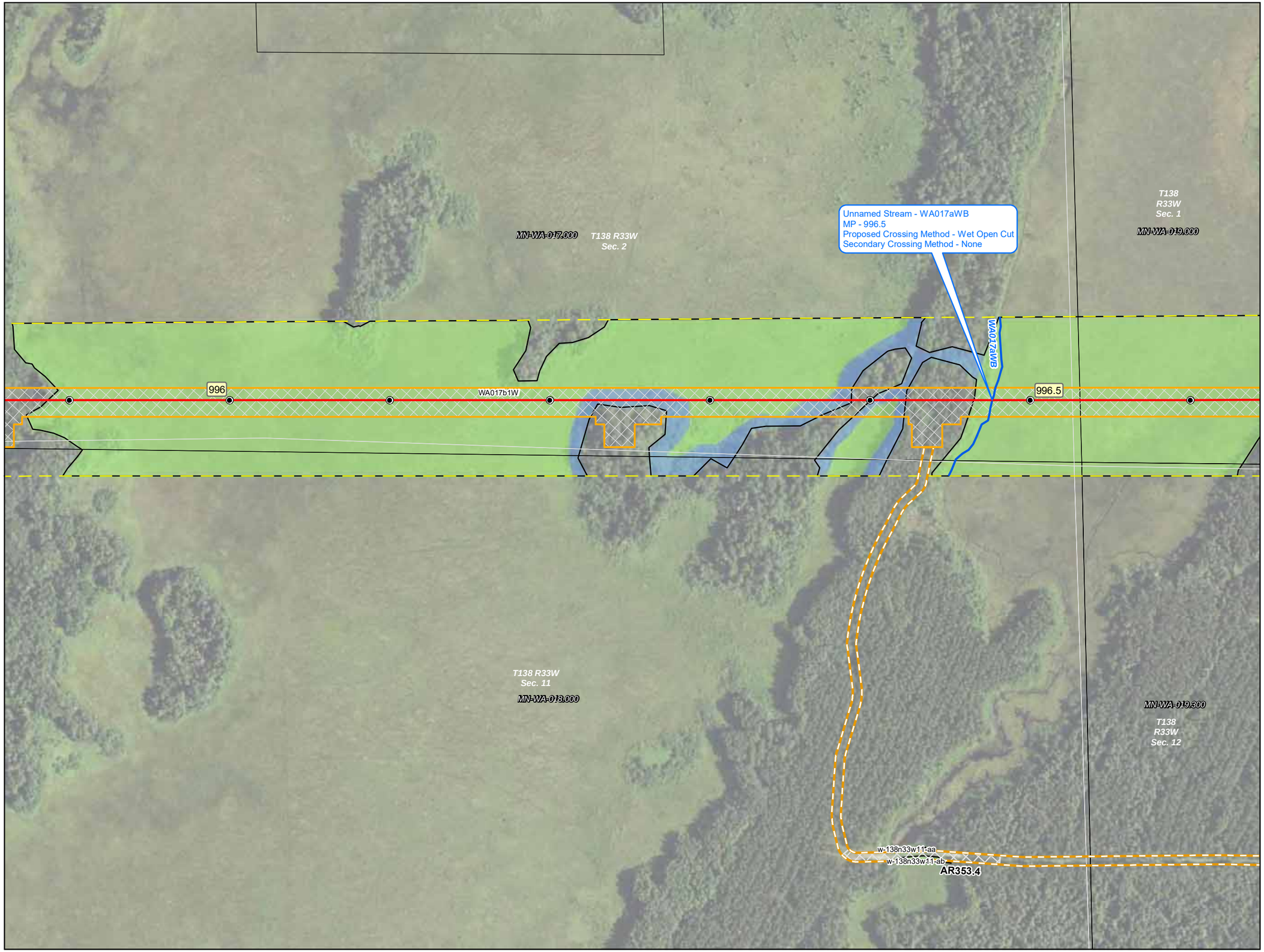
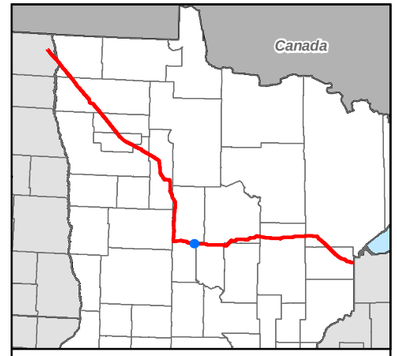
Detailed Route Maps

Line 3 Replacement Project

Wadena County, Minnesota

ENBRIDGE





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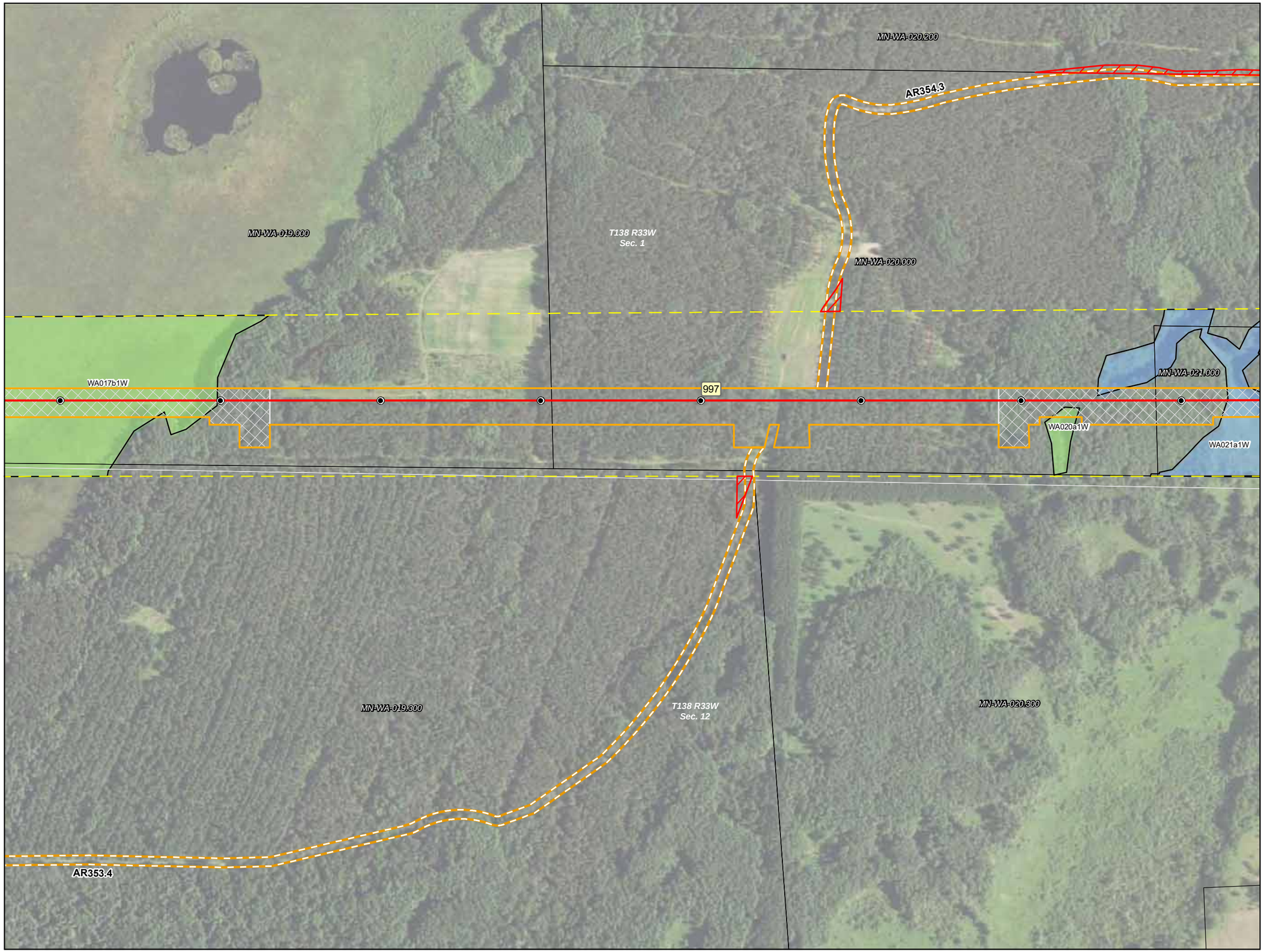
N W E S

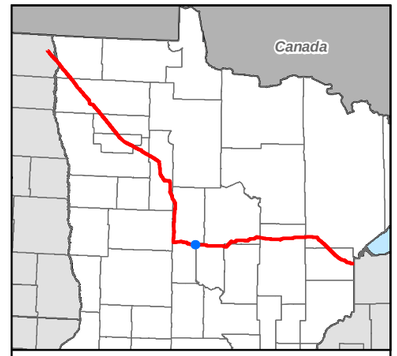
Detailed Route Maps

Line 3 Replacement Project

Wadena County, Minnesota

ENBRIDGE





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N W E S

Detailed Route Maps

Line 3 Replacement Project

Wadena County, Minnesota

ENBRIDGE

MN-CA-C5-001.500

MN-WA-020.200

w-138n33w1-aa

w-138n33w1-aa

w-138n33w1-ab

w-138n33w1-ac

AR354.3

T138
R33W
Sec. 1

MN-WA-020.000

Wadena County

Cass County

T138 R32W
Sec. 6

94th Ave SW

WA021a1W

CAC5001_500a1W

MN-WA-021.000

997.5

998

MN-CA-C5-001.510

WA021a1W

4th St SW

T-851

MN-CA-C5-001.510.300

MN-WA-020.300

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R33W
Sec. 12

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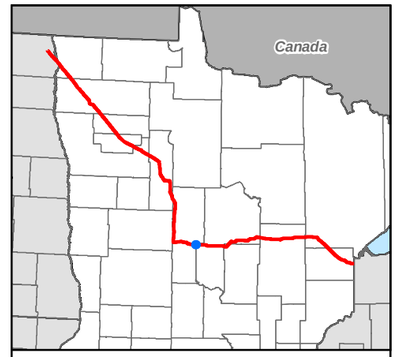
T138 R32W
Sec. 7

MN-CA-C5-001.500.310



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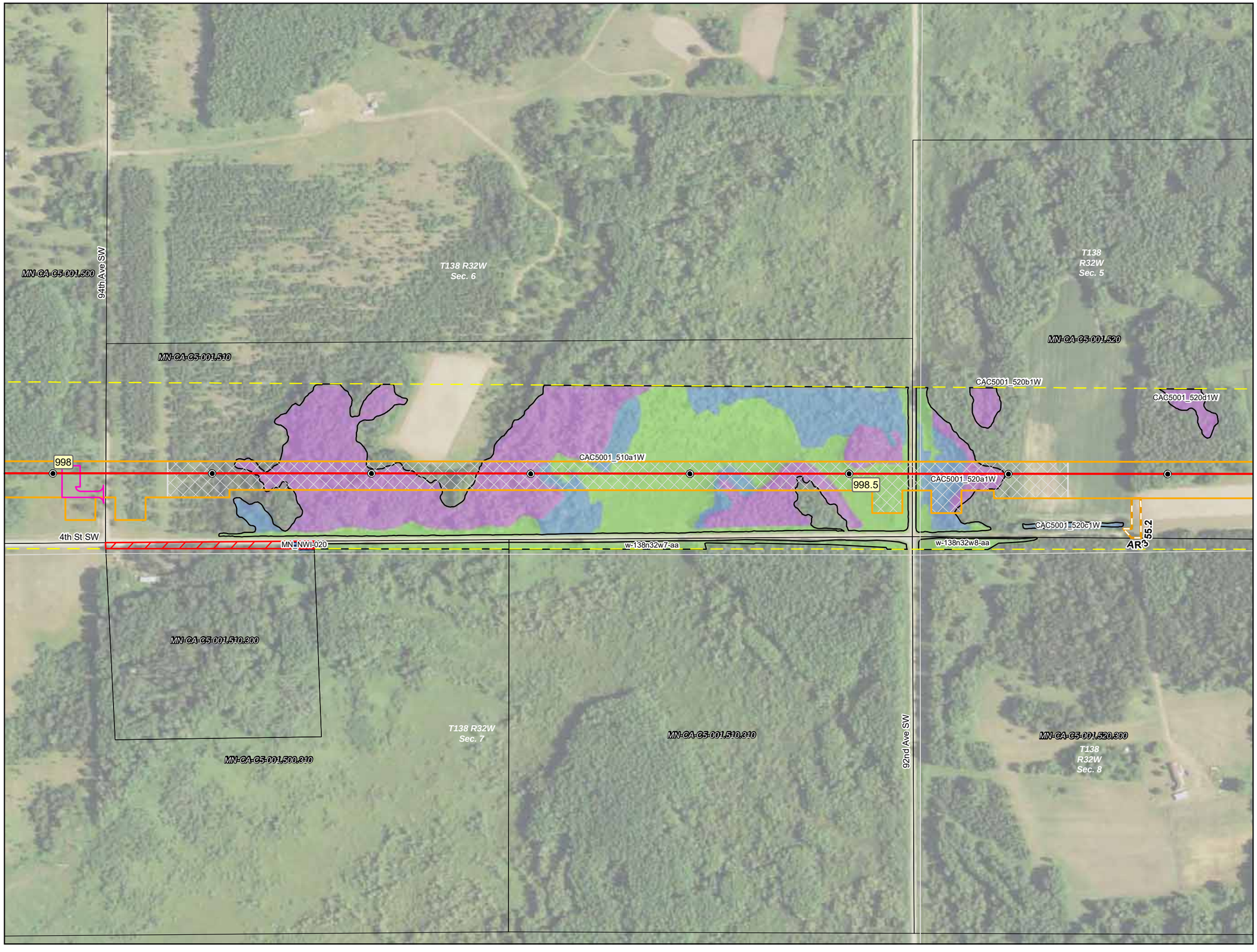
N W E S

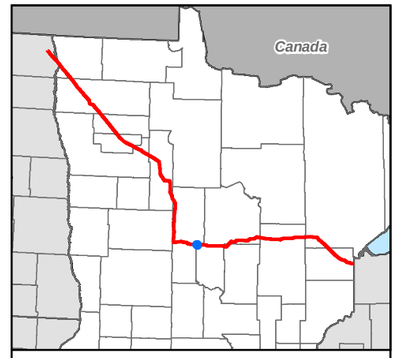
Detailed Route Maps

Line 3 Replacement Project

Wadena and Cass Counties, Minnesota

ENBRIDGE





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Detailed Route Maps

Line 3 Replacement Project

Cass County, Minnesota

ENBRIDGE

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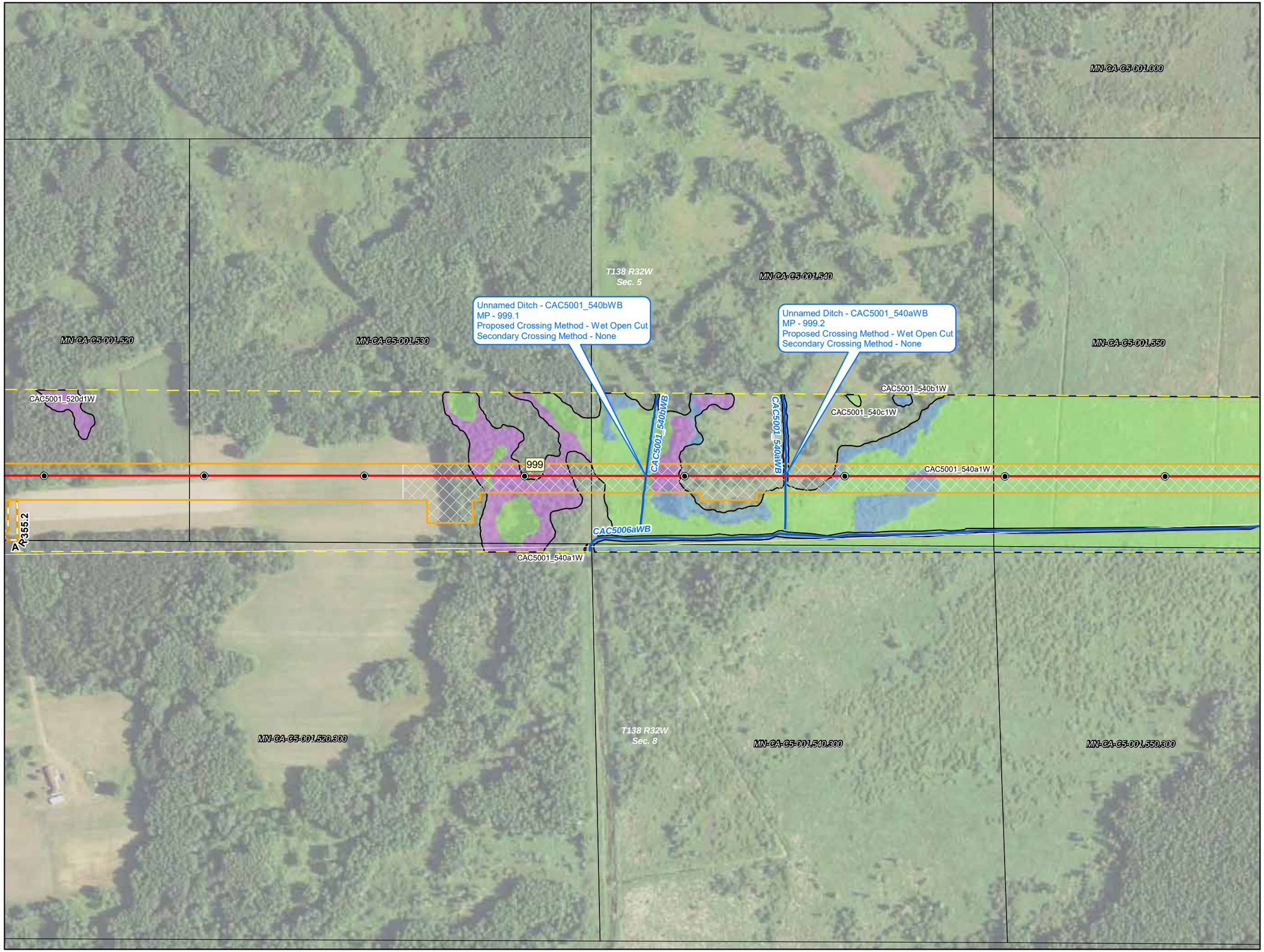

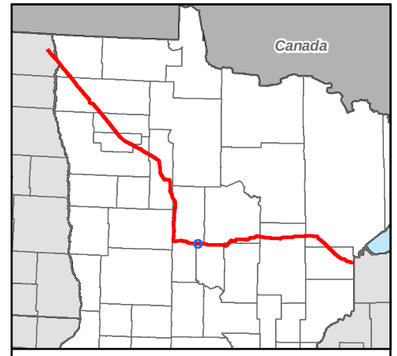

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Line 3 Replacement Project

Cass County, Minnesota

ENBRIDGE

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MN-CA-C5-001.000
MN-CA-C5-004.000
MN-CA-C5-005.000
T138
R32W
Sec. 5
MN-CA-C5-001.550
T138 R32W
Sec. 4
MN-CA-C5-006.000
Unnamed Ditch - CAC5006aWB
MP - 999.6
Proposed Crossing Method - Wet Open Cut
Secondary Crossing Method - None
CAC5006aWB
CAC5001_540a1W
999.5
1000
Mckinley Rd SW
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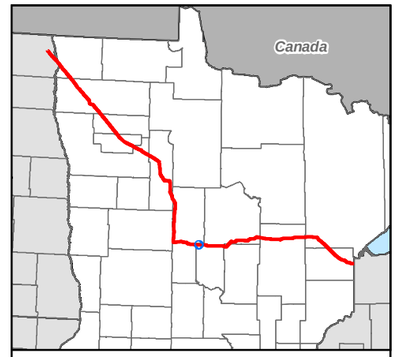
T138
R32W
Sec. 8
T138 R32W
Sec. 9
MN-CA-C5-006.300



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Line 3 Replacement Project

Cass County, Minnesota

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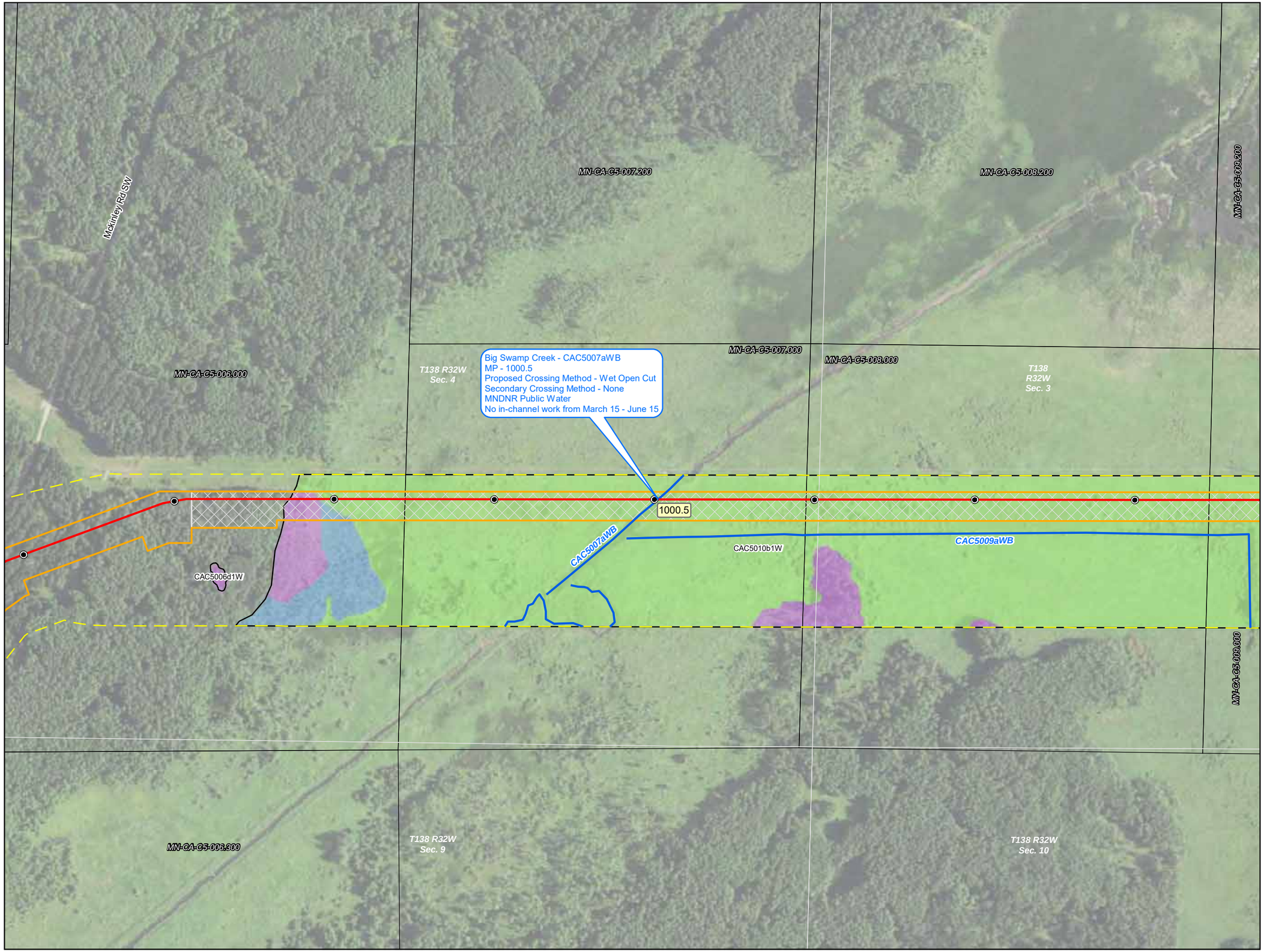

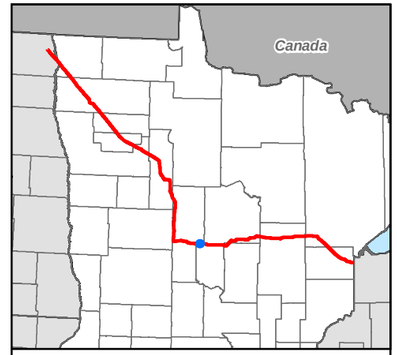

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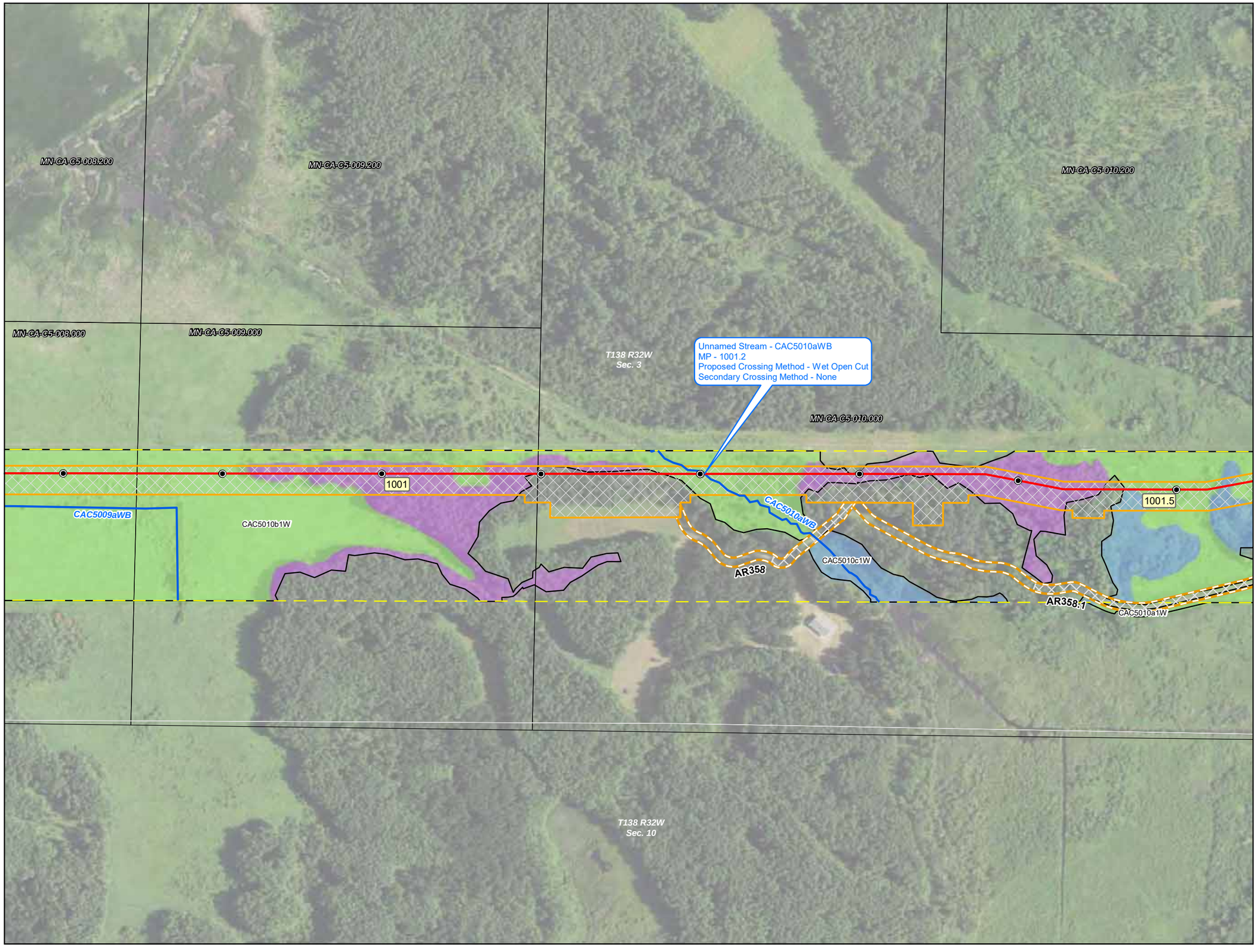

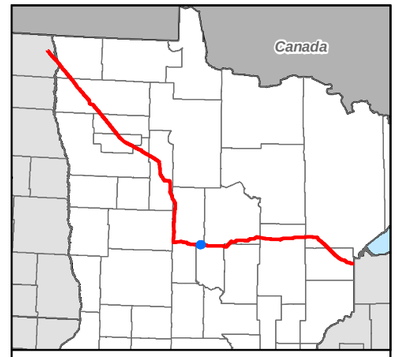

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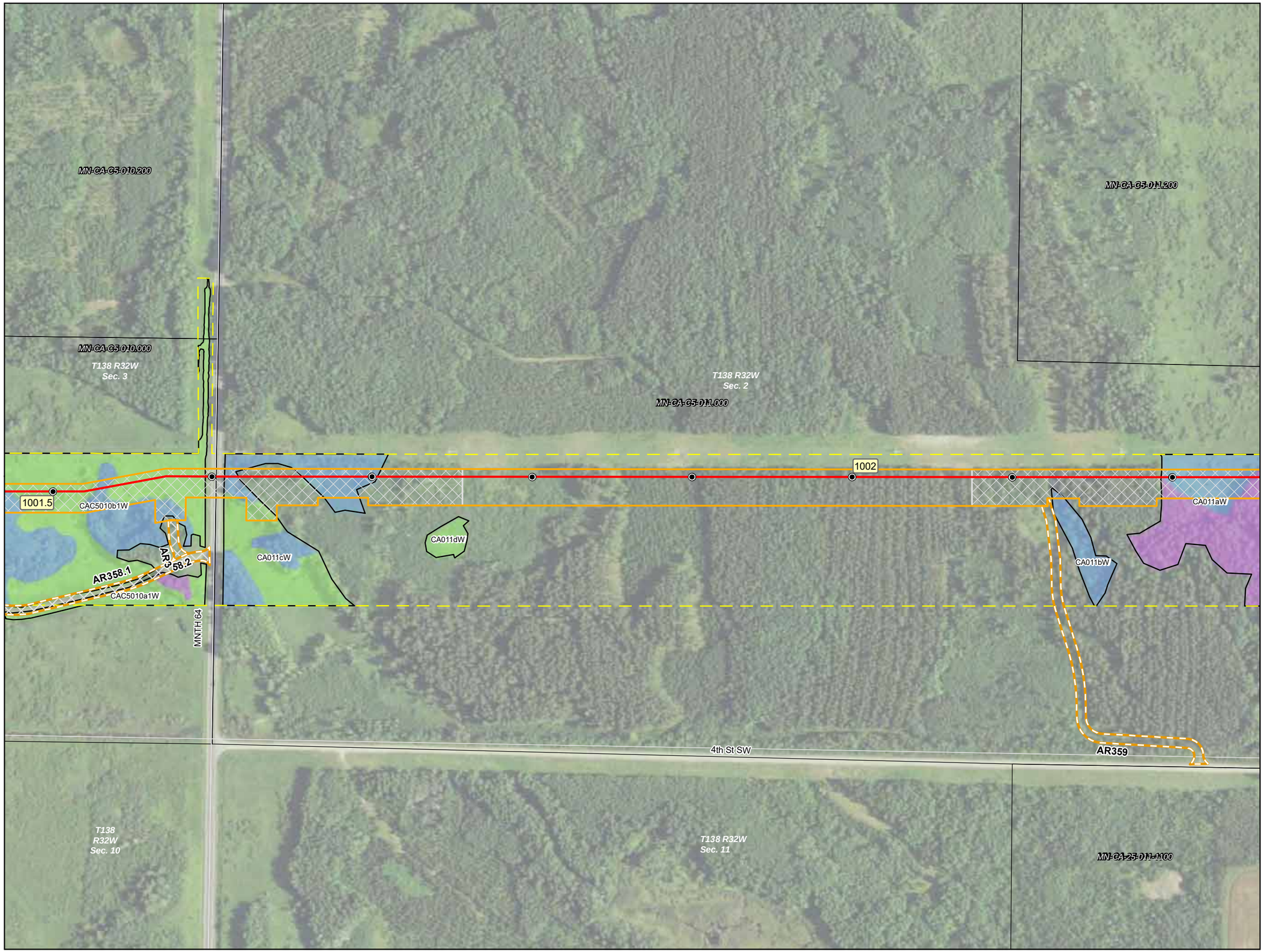

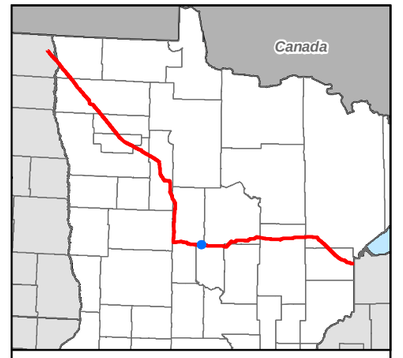

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Line 3 Replacement Project

Cass County, Minnesota

ENBRIDGE

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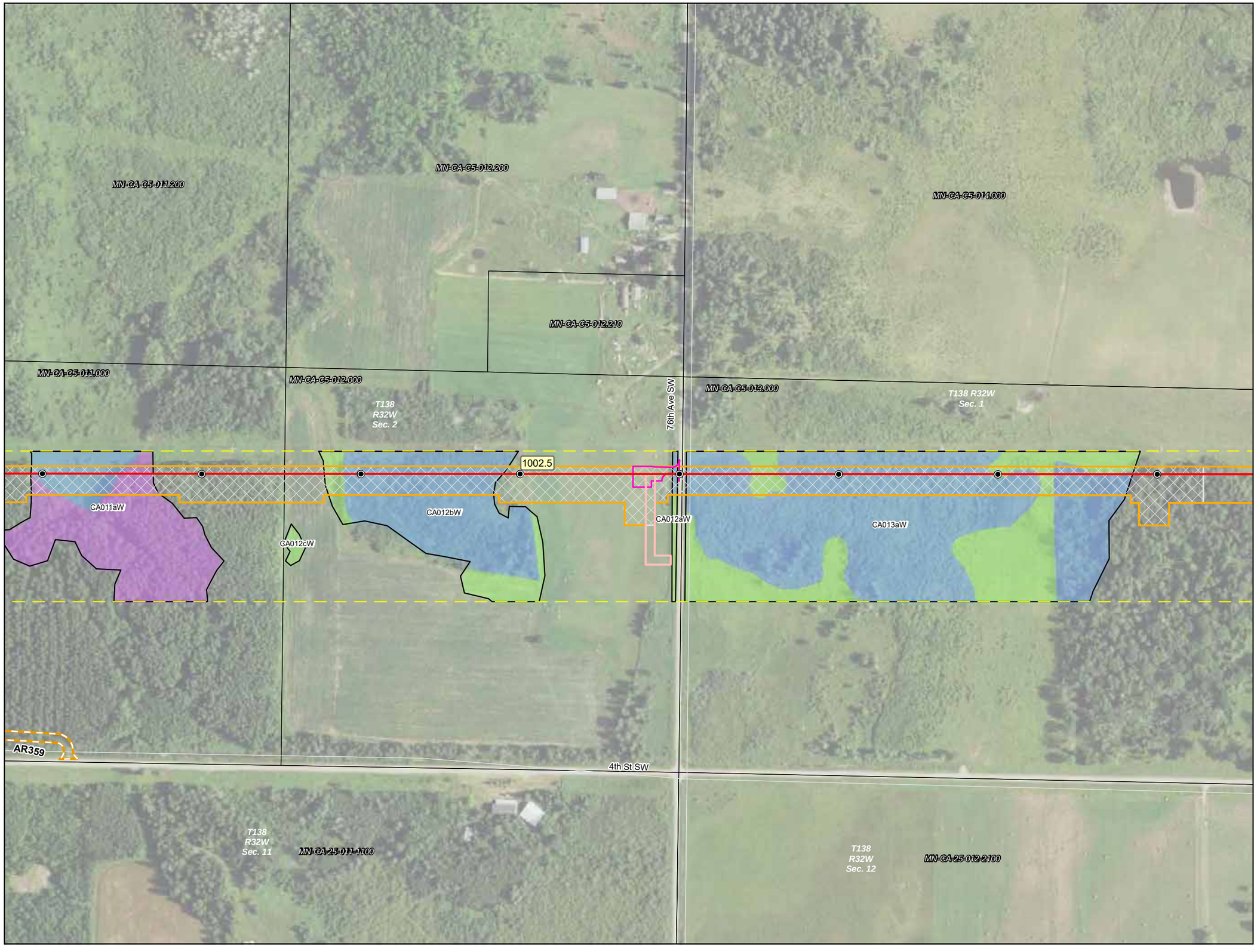
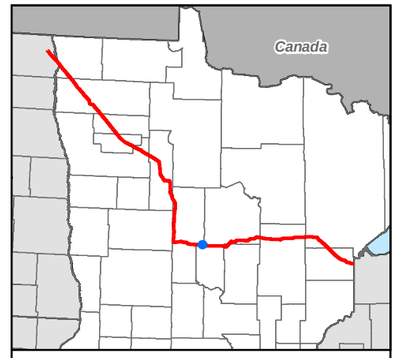
Date: (9/19/2018)





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Field Delineated Wetland	NWI Wetlands
PEM	PEM
PFO	PFO
PSS	PSS
PUB	PUB

Waterbodies

- Field Delineated Waterbody
- NHD Waterbody

NWI Waterbodies

- Lake
- Riverine

0 150 300 Feet

1 inch = 300 feet

N W E S

Detailed Route Maps

Line 3 Replacement Project

Cass County, Minnesota

ENBRIDGE

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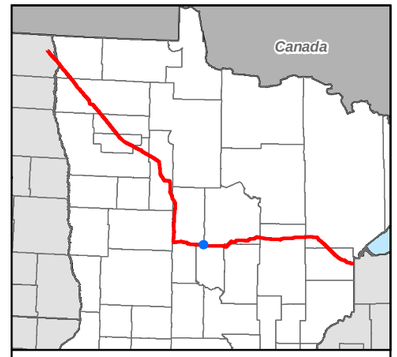

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Cass County, Minnesota

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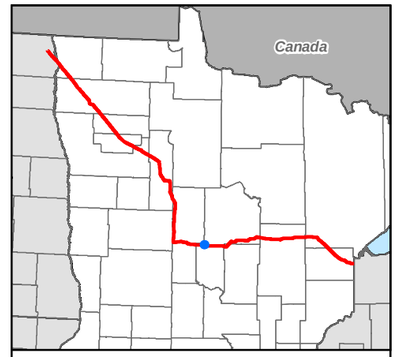

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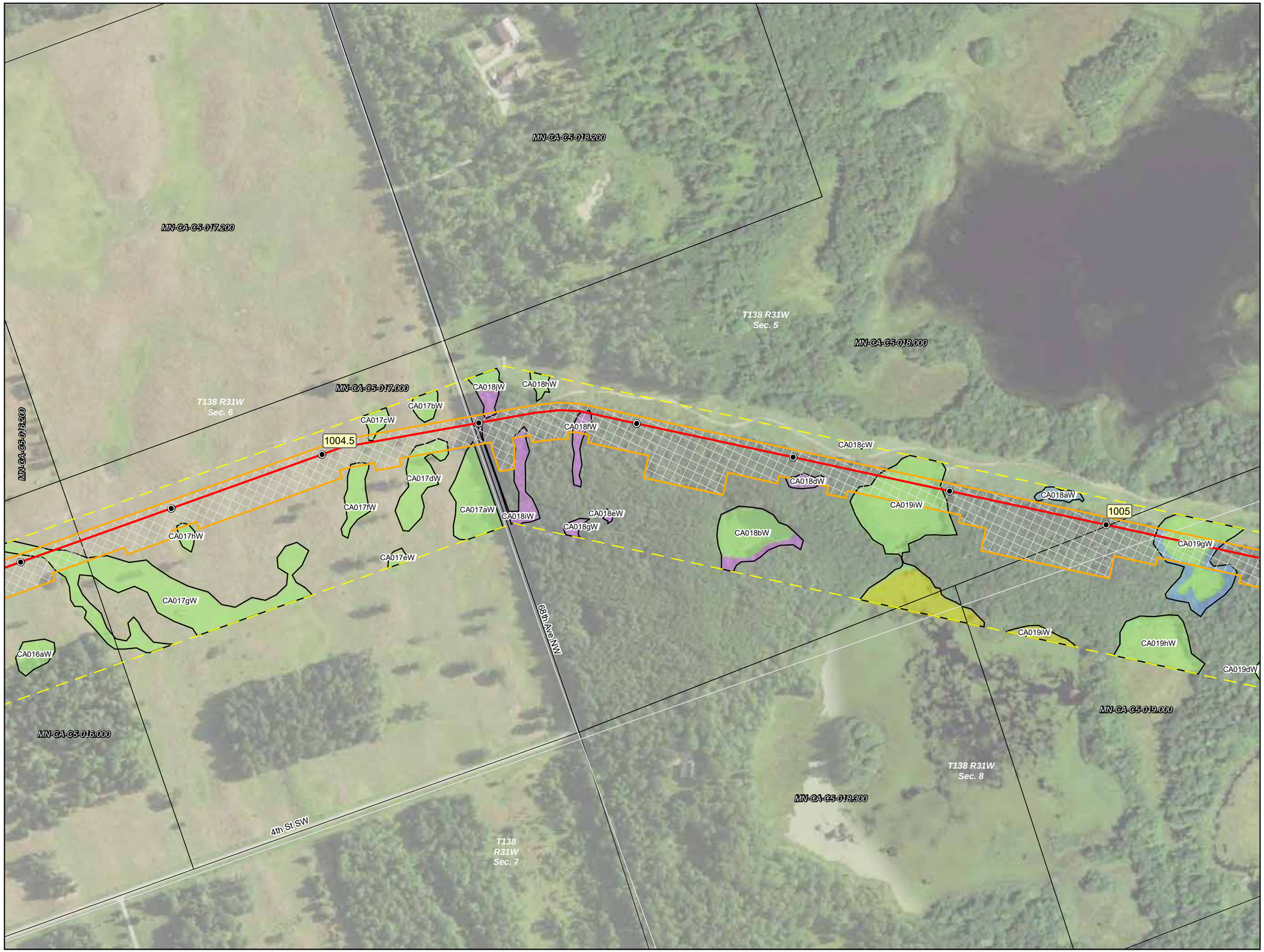

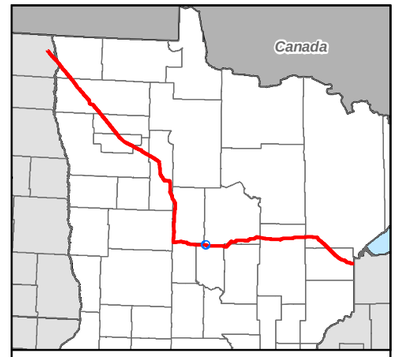

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MN-CA-C5-019.000

MN-CA-C5-018.000

T138
R31W
Sec. 5

T138
R31W
Sec. 9

59th Ave SW

AR361

T138 R31W
Sec. 8

AR360.1

1005.5

CA019gW

CA019fW

CA019dW

CA019eW

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CA019bW

CA019aW

CA019cW

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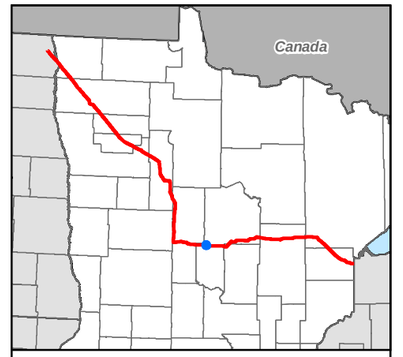

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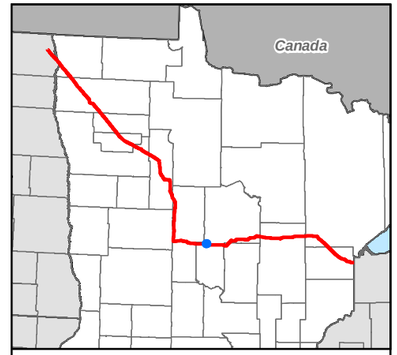

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Cass County, Minnesota

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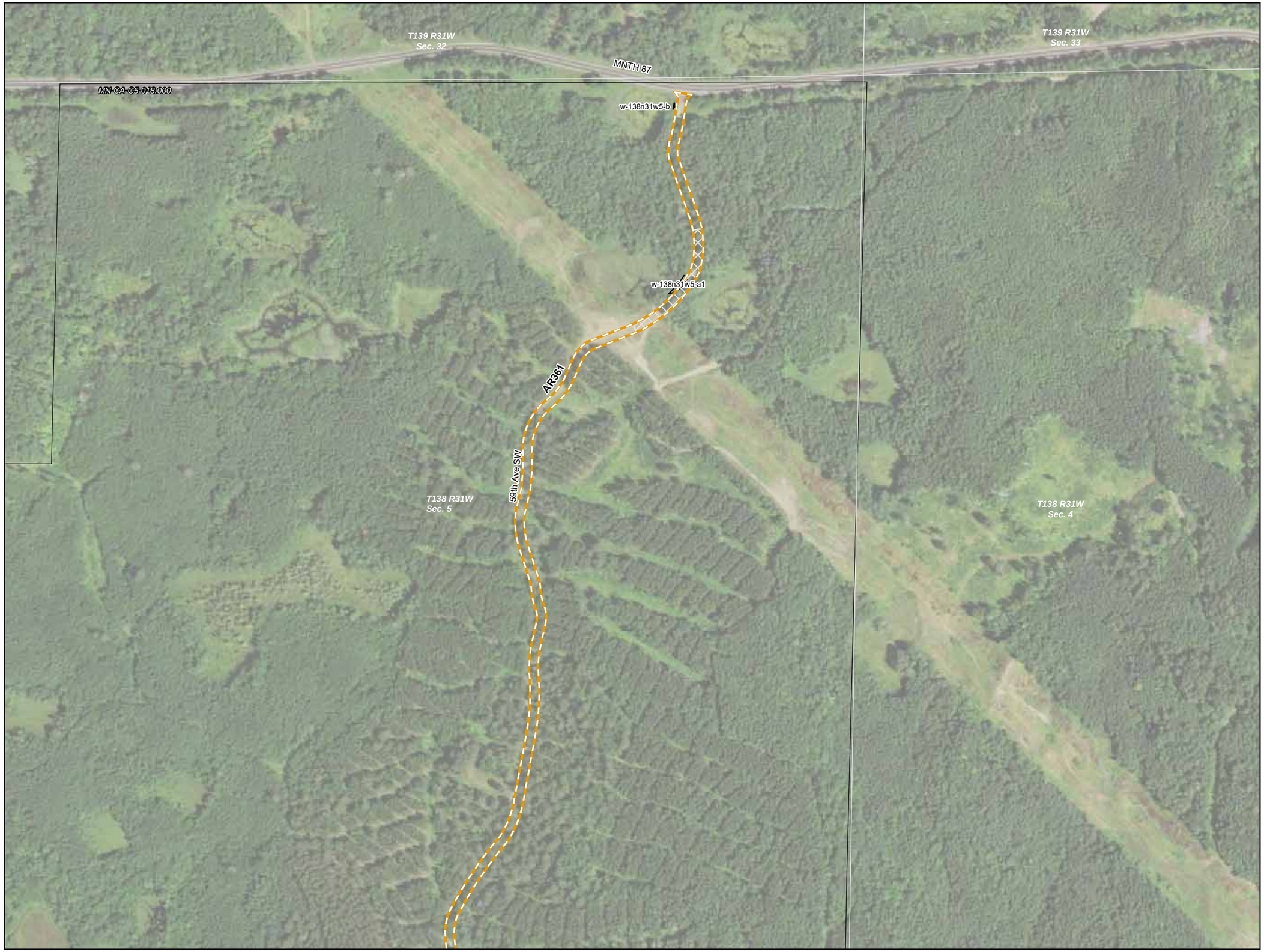

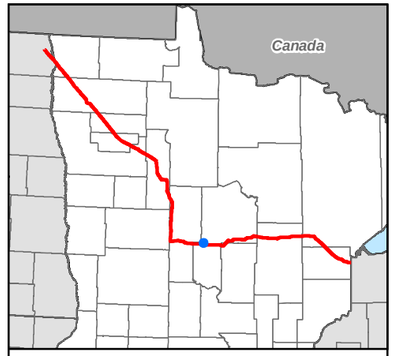

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Detailed Route Maps

Line 3 Replacement Project

Cass County, Minnesota

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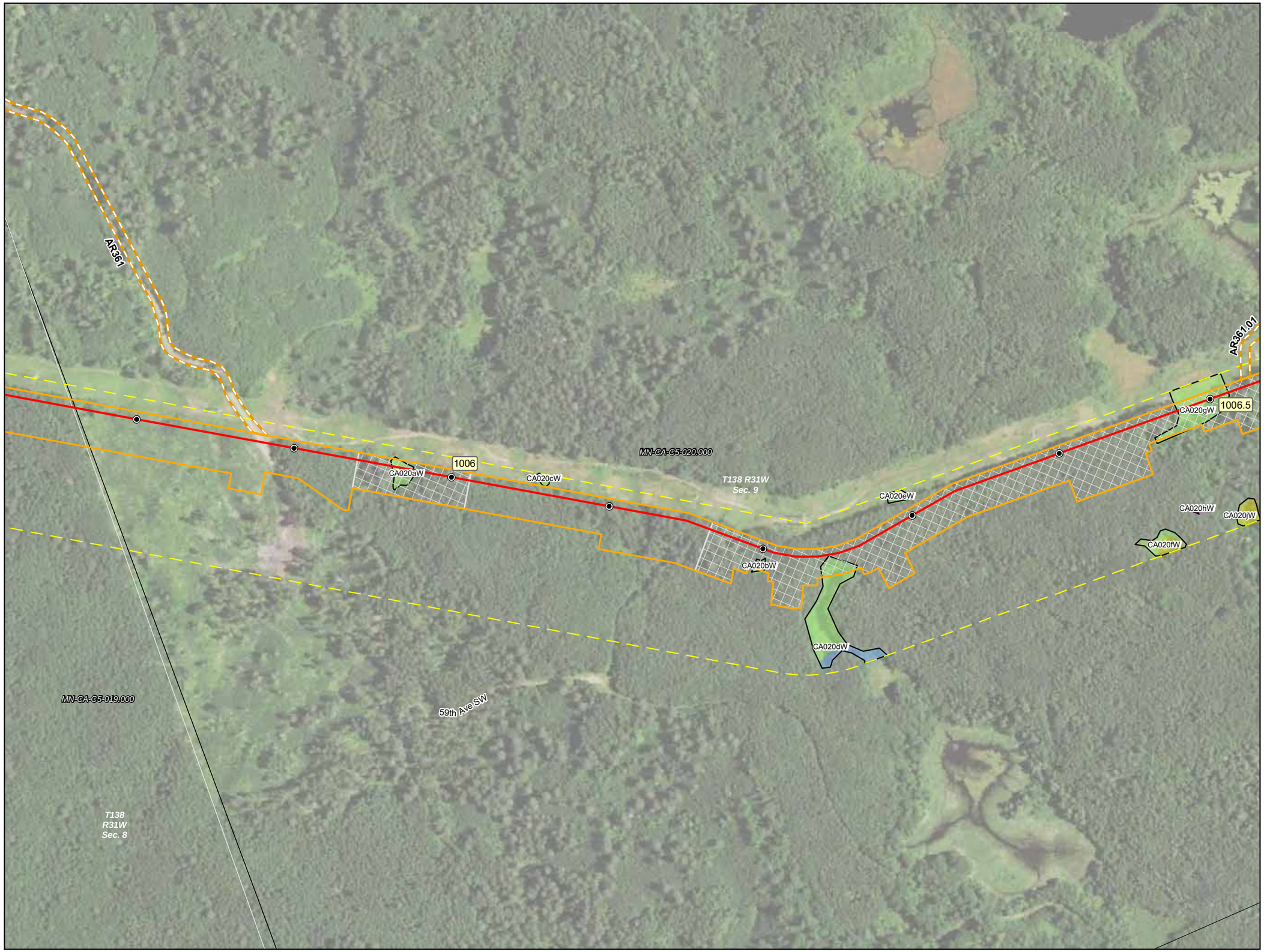

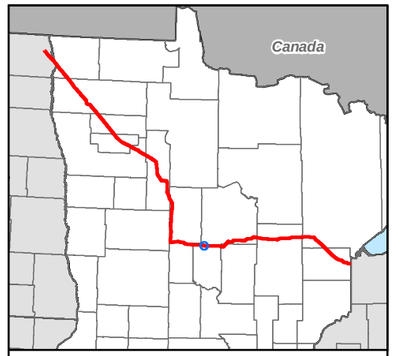

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Line 3 Replacement Project

Cass County, Minnesota

ENBRIDGE

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MN-CA-C5-021.000

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Sec. 9

T138 R31W
Sec. 10

AR361.07

CA020gW

CA020kW

CA020qW

CA020pW

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1007

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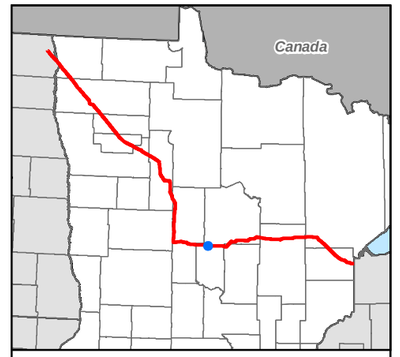

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Line 3 Replacement Project

Cass County, Minnesota

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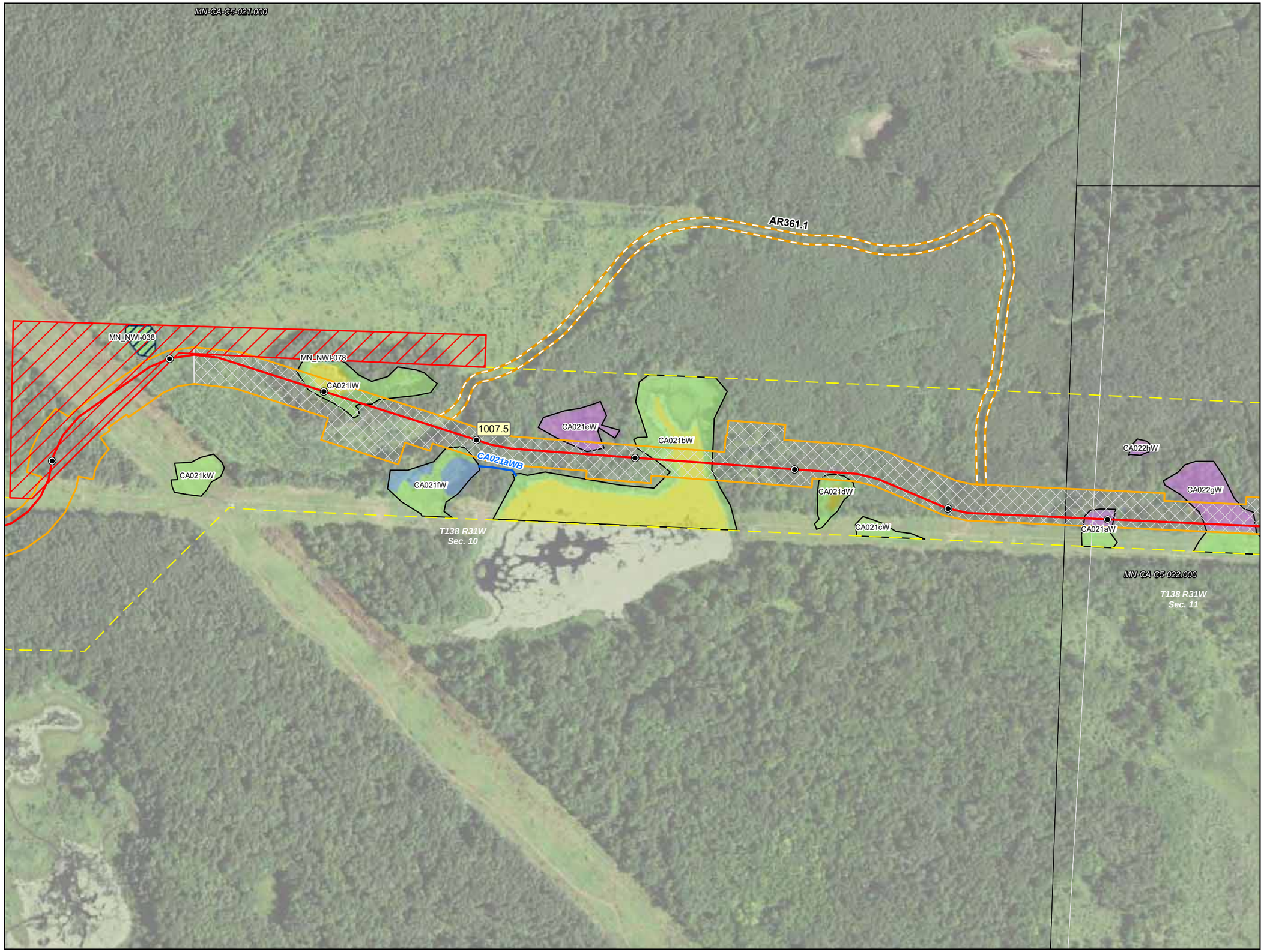

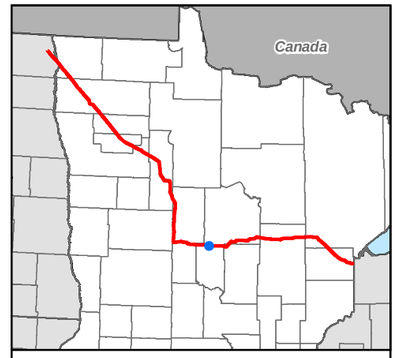

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Detailed Route Maps

Line 3 Replacement Project

Cass County, Minnesota

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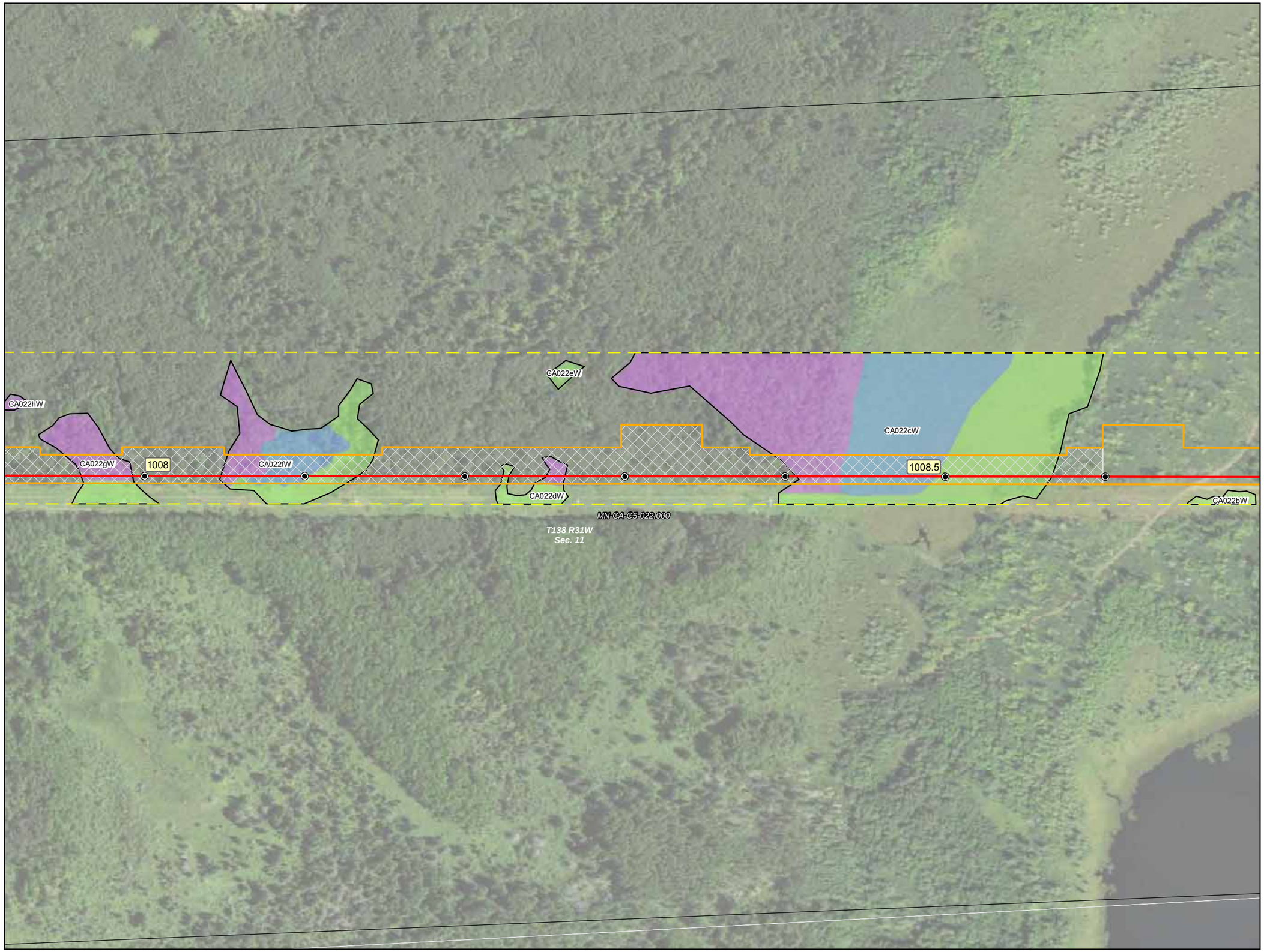

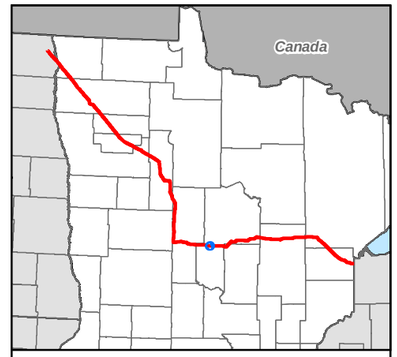

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Cass County, Minnesota

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MN-CA-C5-022.000
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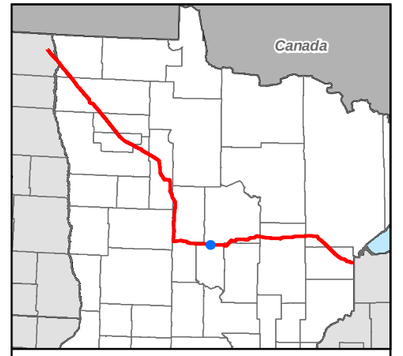

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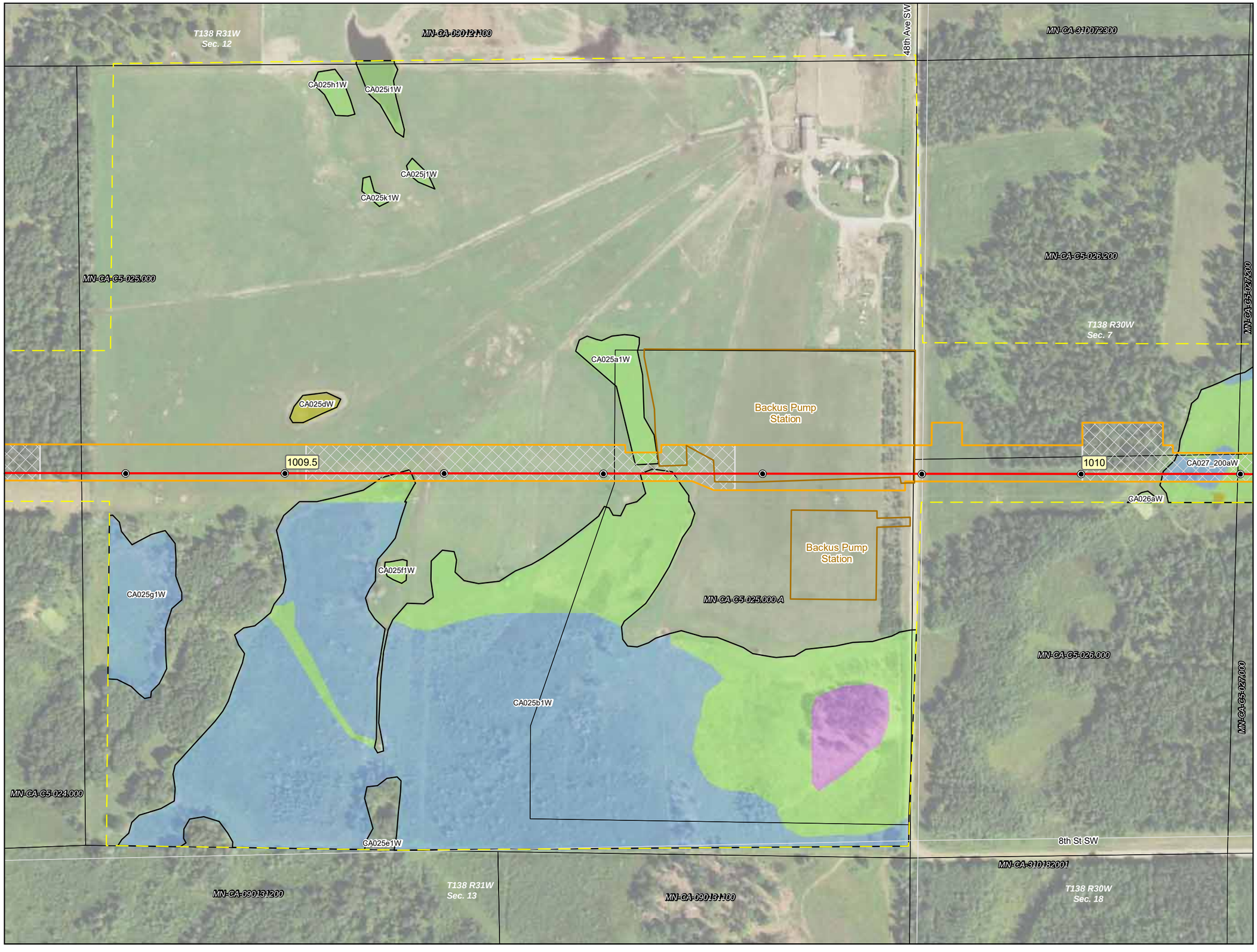

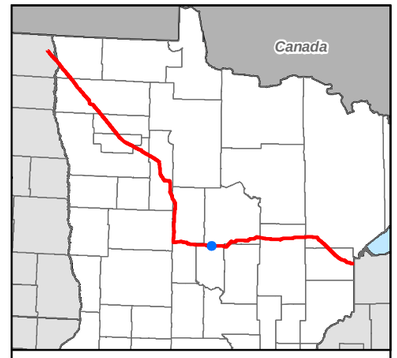

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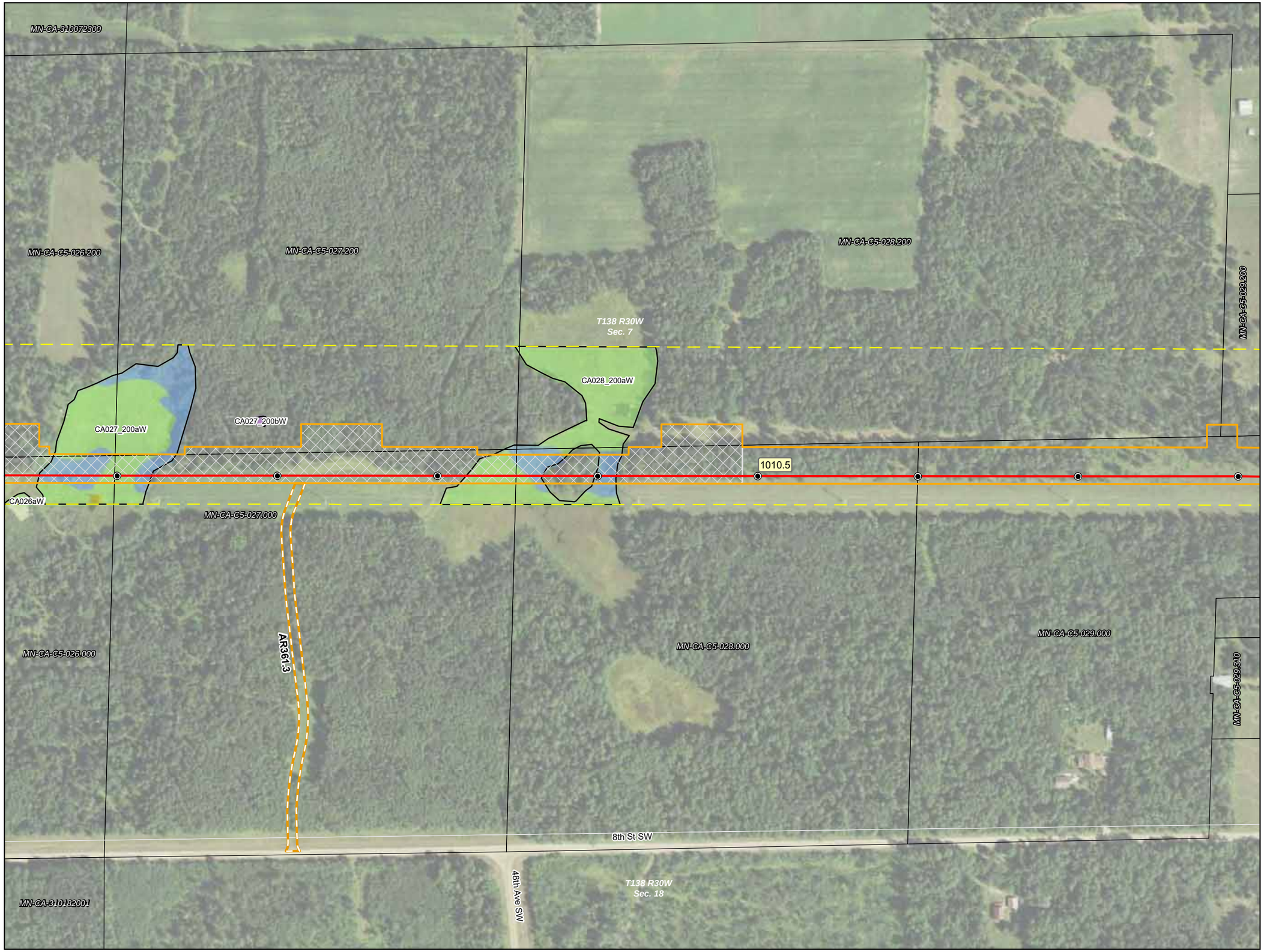

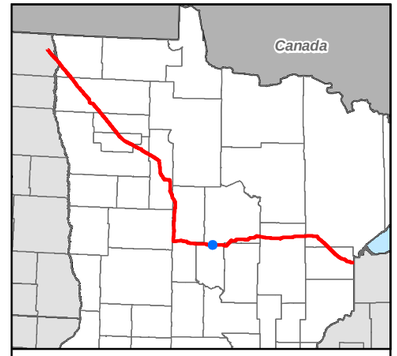

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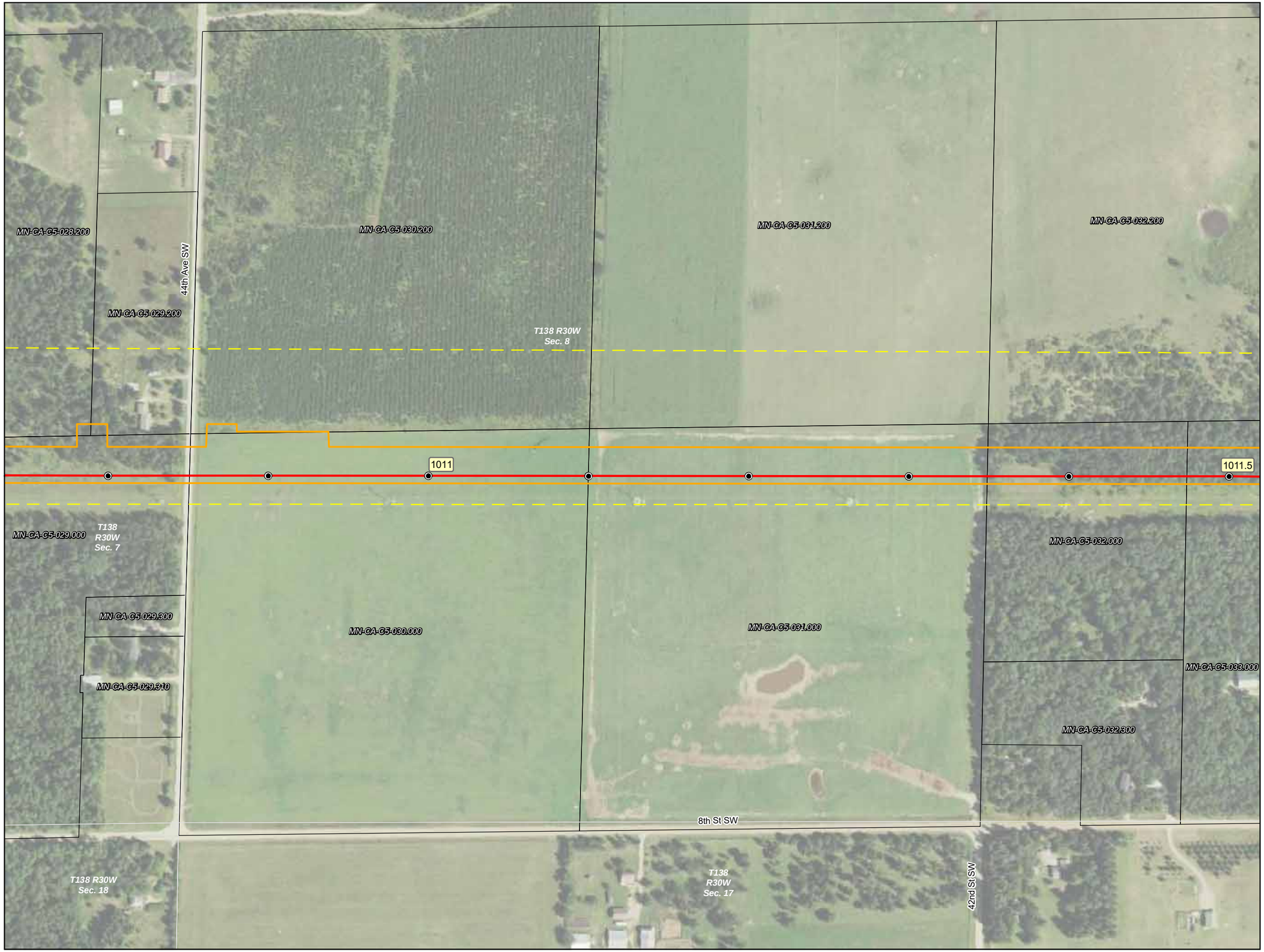

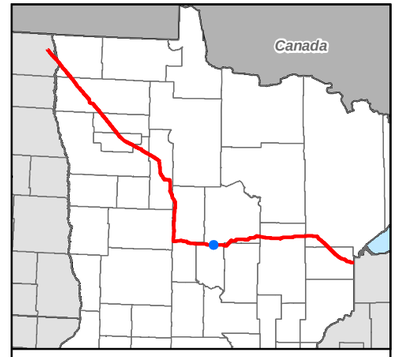

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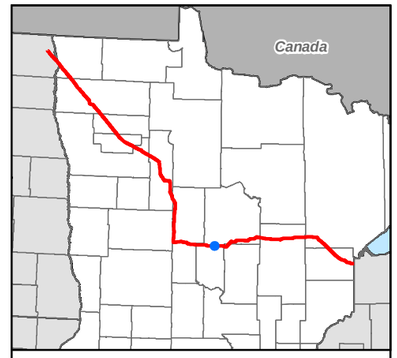

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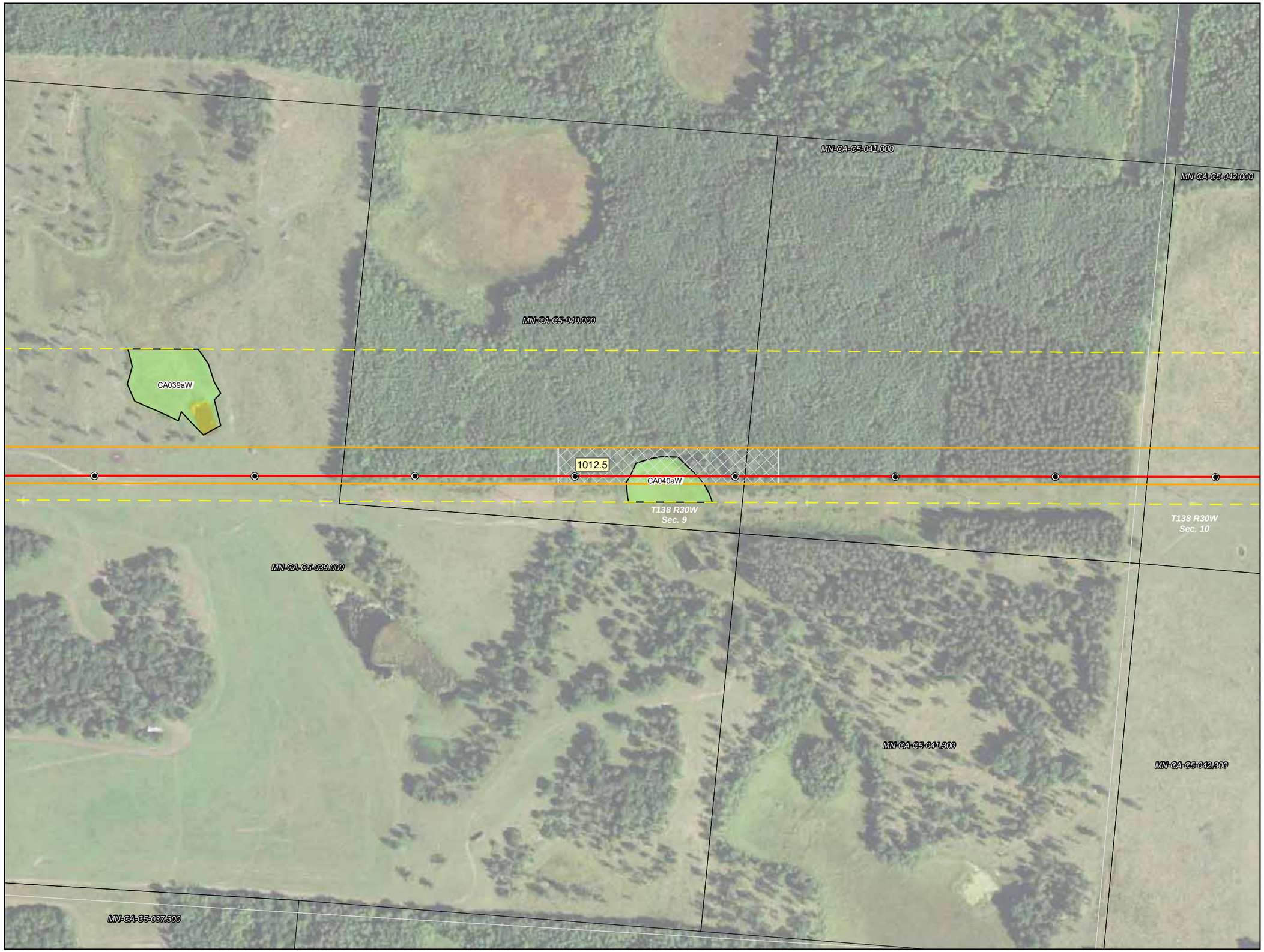

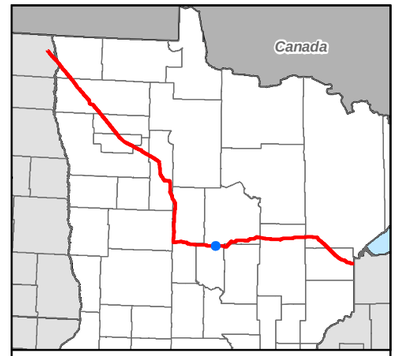

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Cass County, Minnesota

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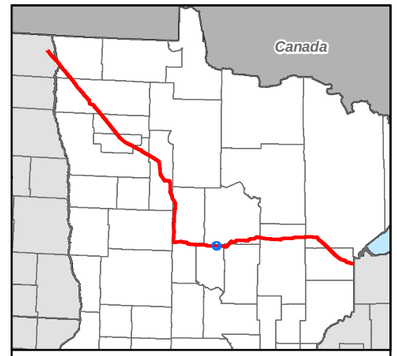

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Waterbodies

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NWI Waterbodies

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- Riverine

0 150 300 Feet

1 inch = 300 feet

N W E S

Detailed Route Maps

Line 3 Replacement Project

Cass County, Minnesota

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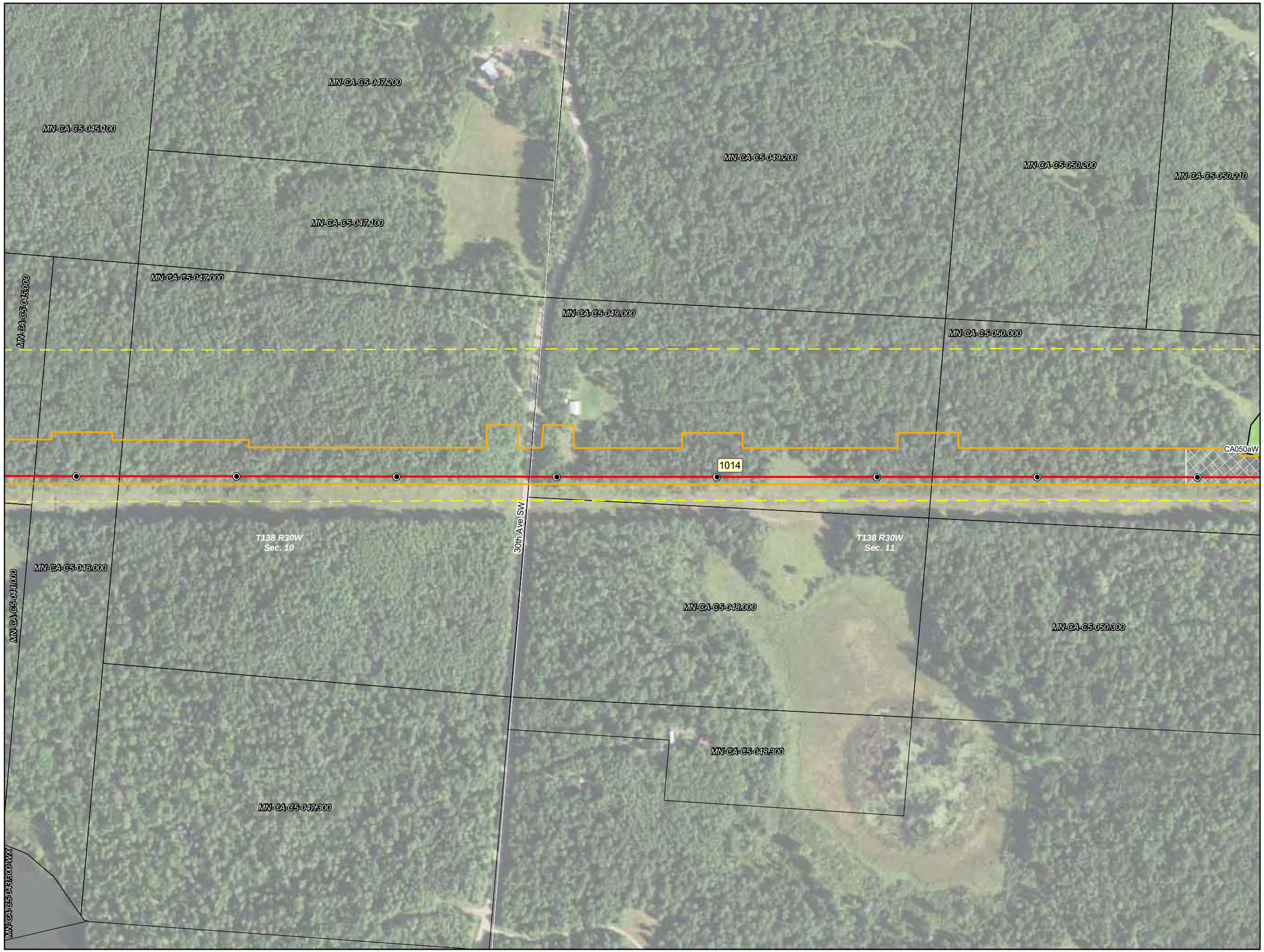

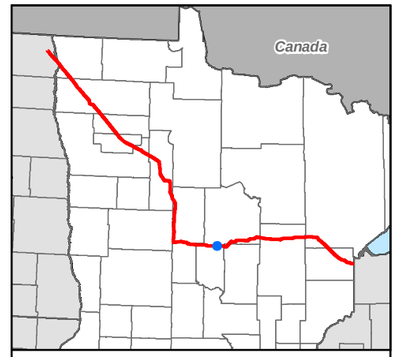

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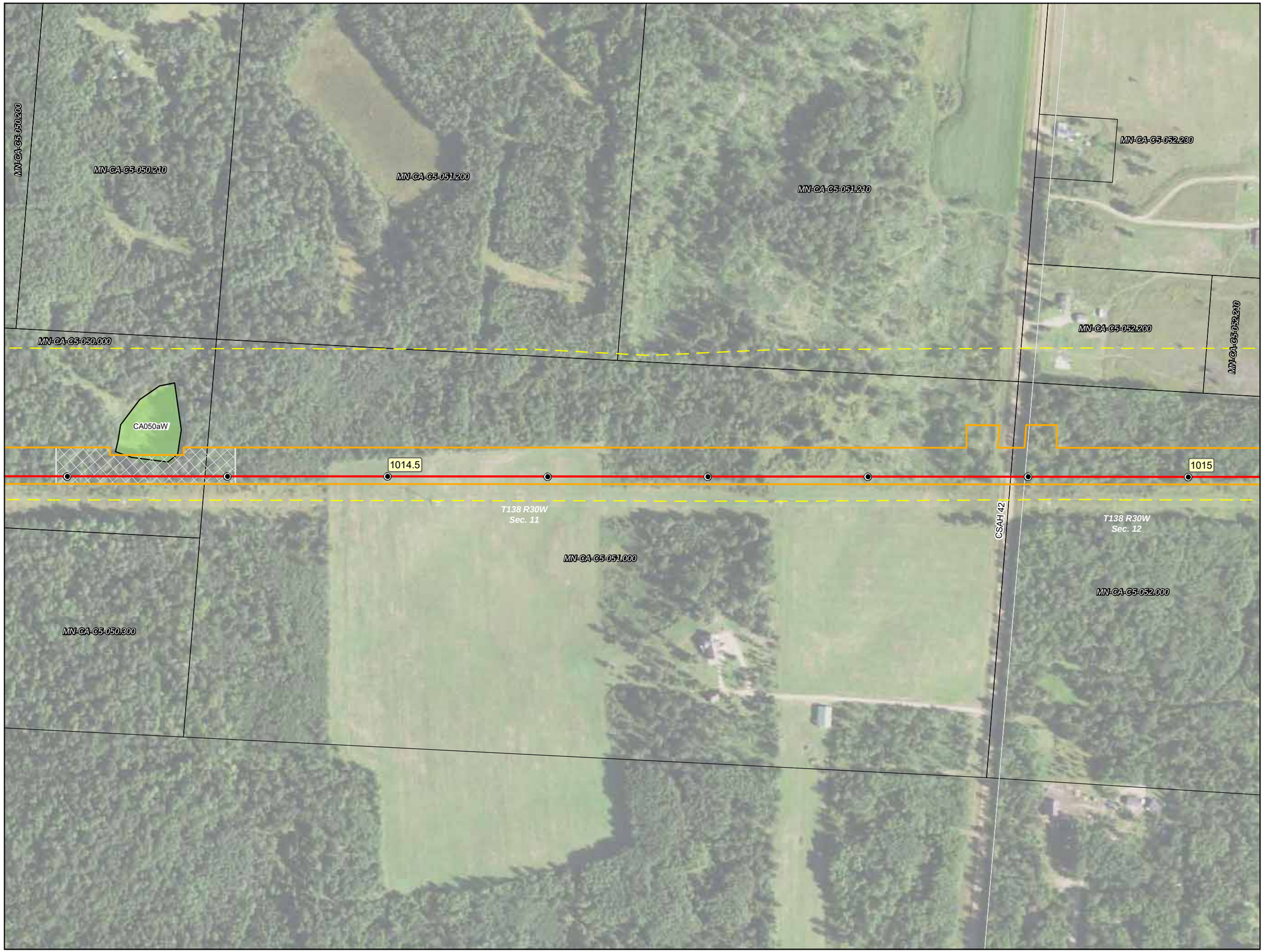

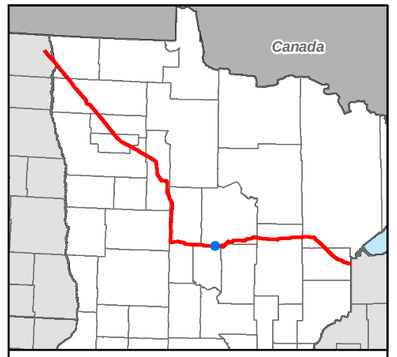

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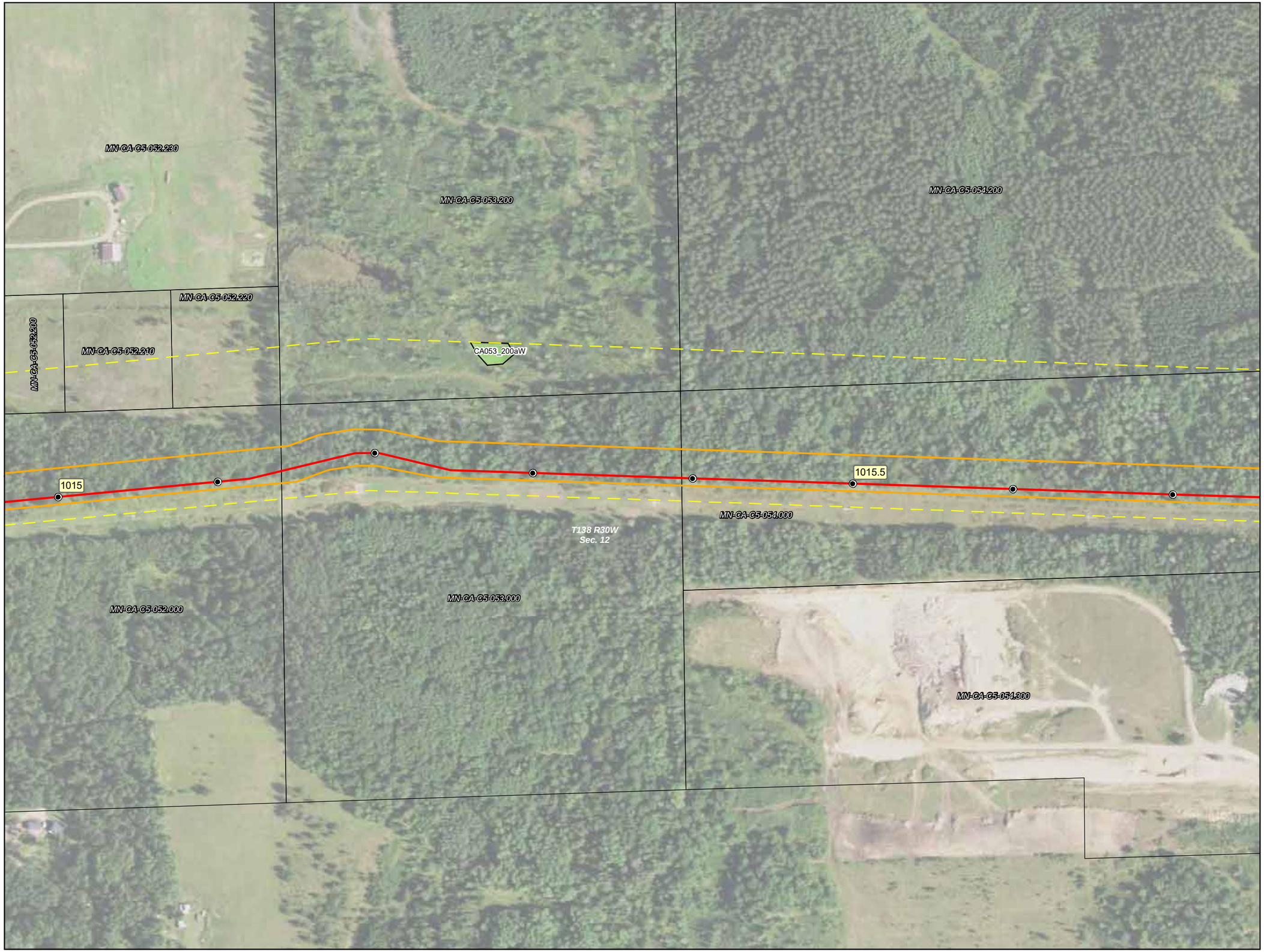

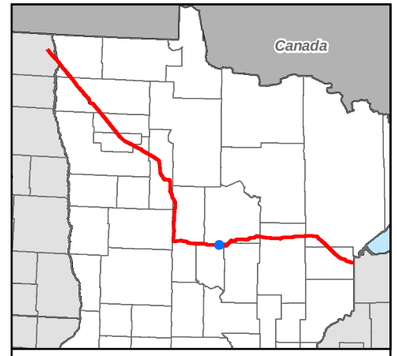

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Cass County, Minnesota

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MN-CA-C5-058.000
1016
MN-CA-C5-054.000
T138 R30W
Sec. 12
24th Ave SW
T138 R29W
Sec. 7
MN-CA-C5-059.000
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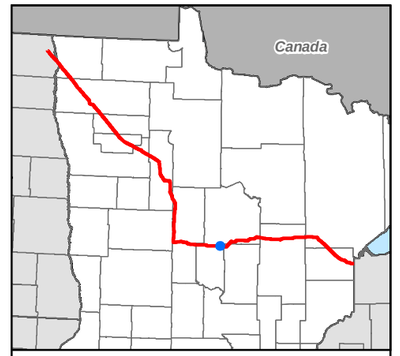

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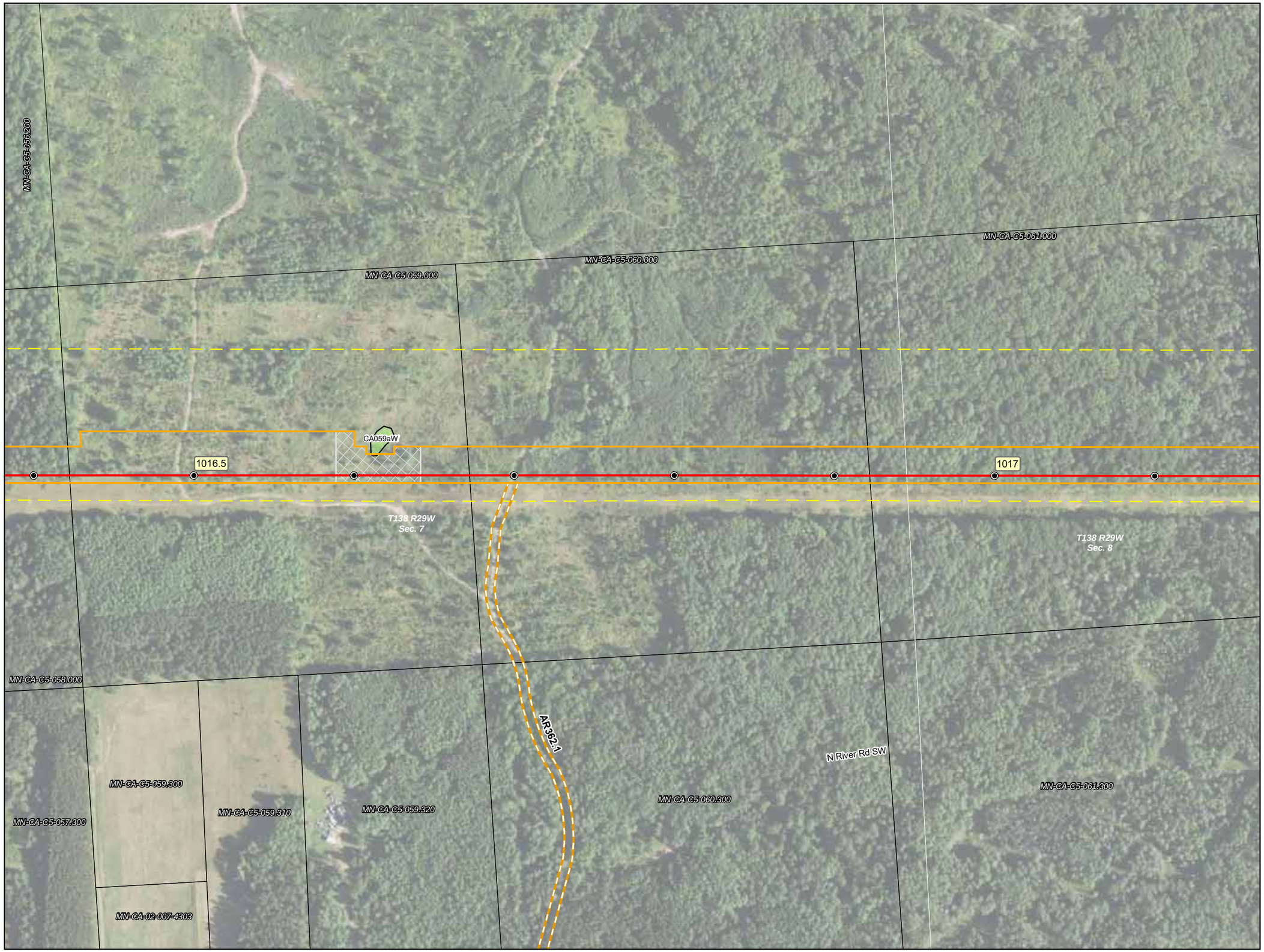

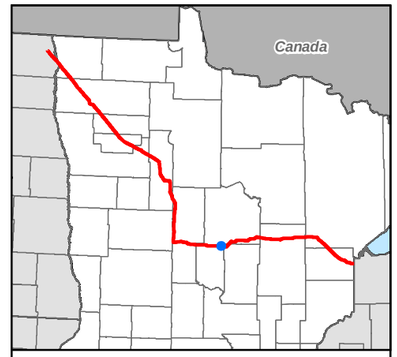

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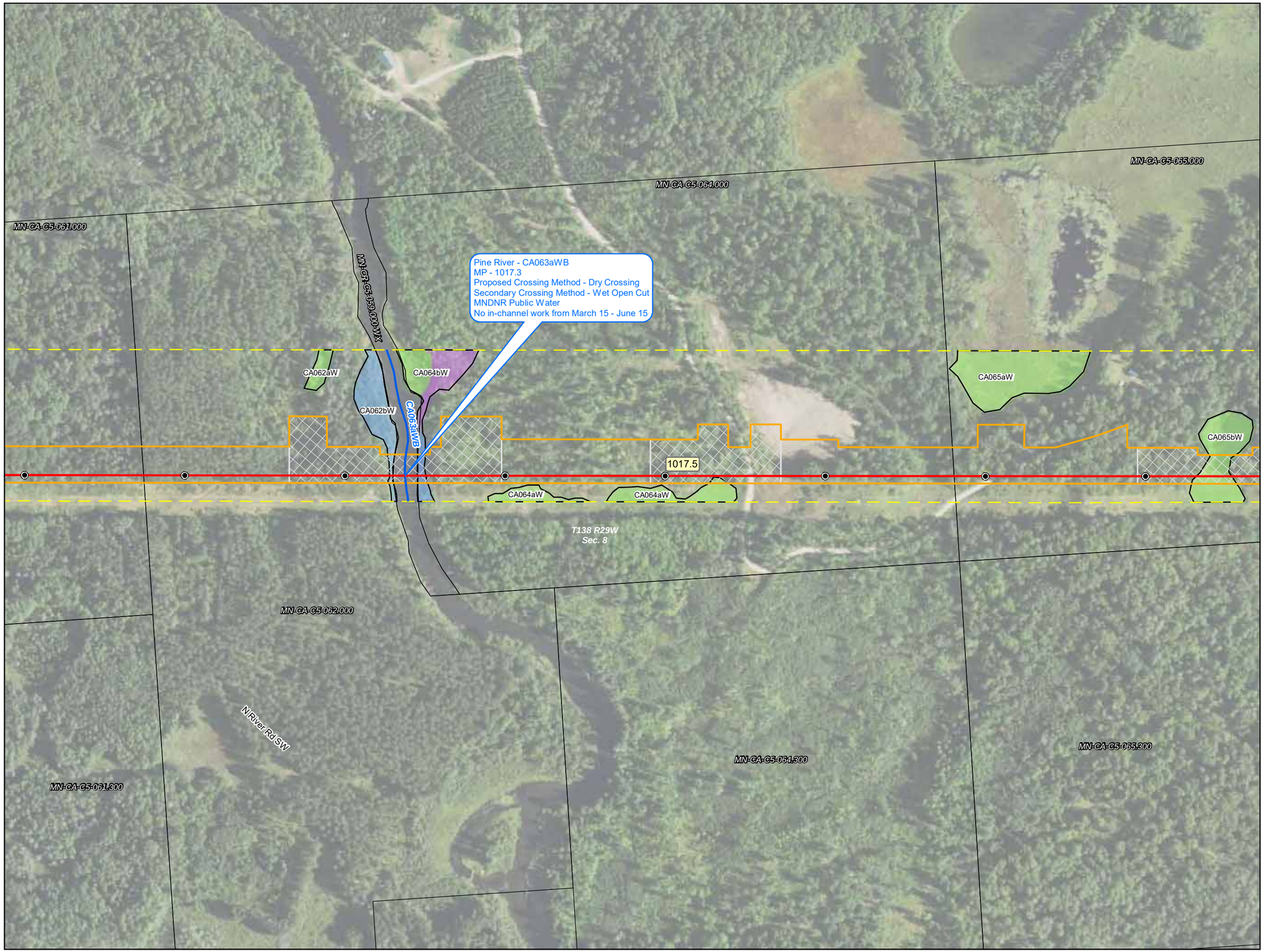

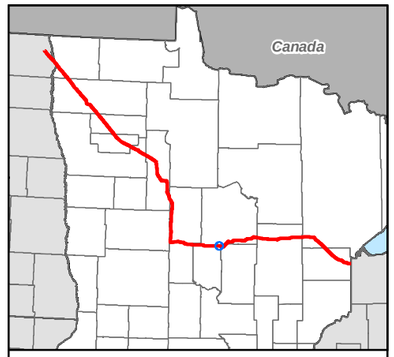

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Cass County, Minnesota

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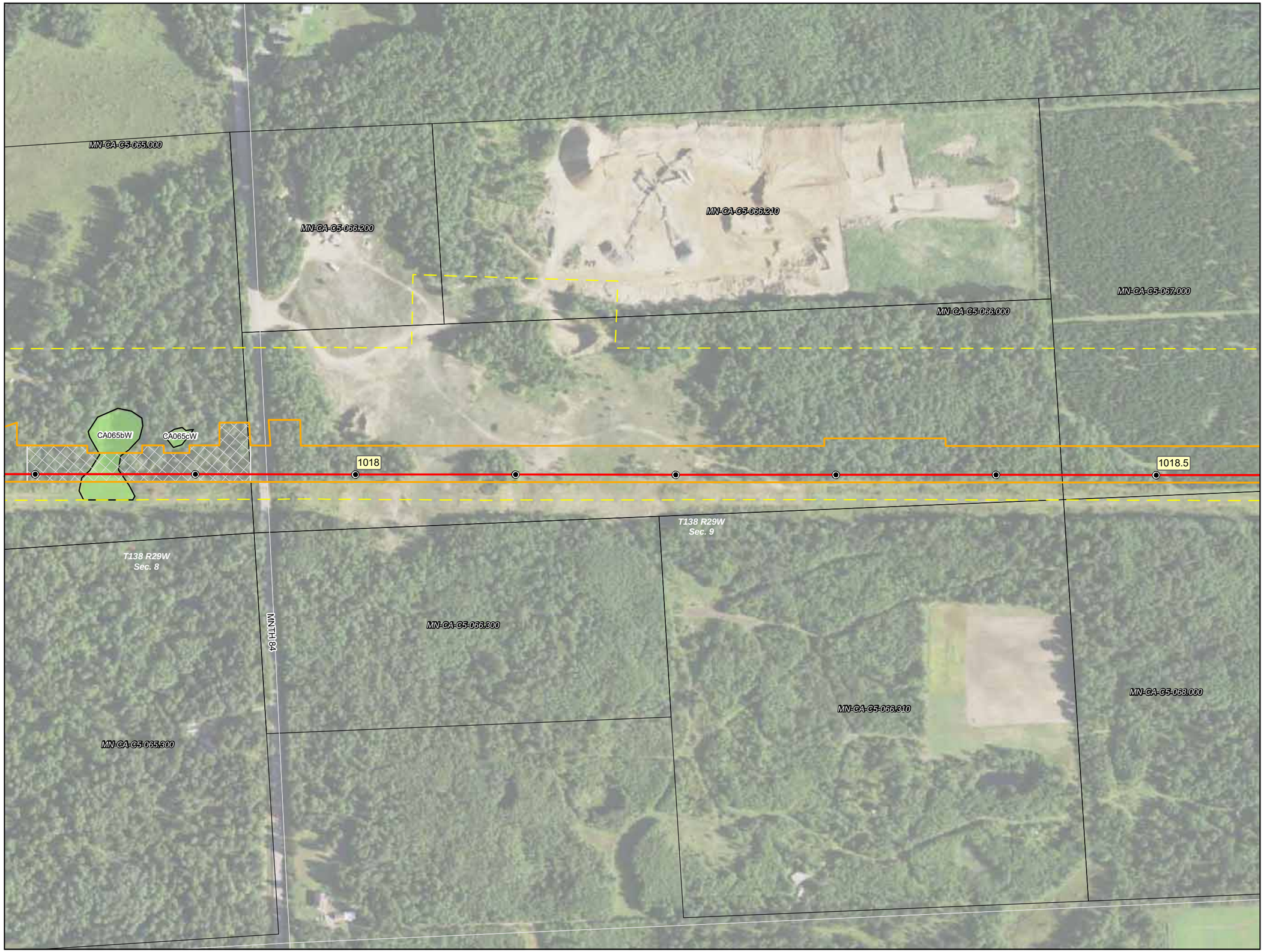

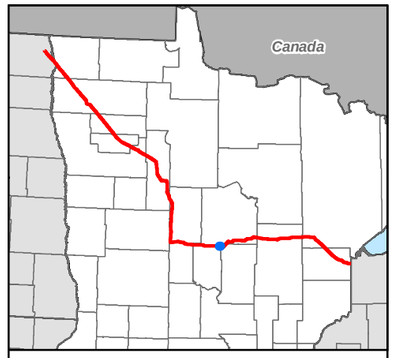

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Line 3 Replacement Project

Cass County, Minnesota

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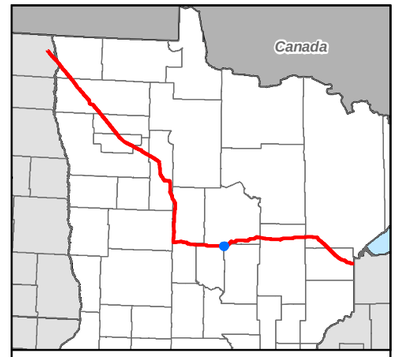

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Cass and Crow Wing Counties, Minnesota

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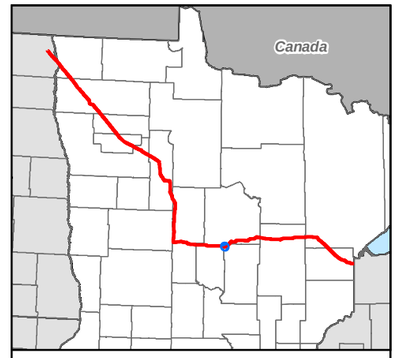

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Crow Wing County, Minnesota

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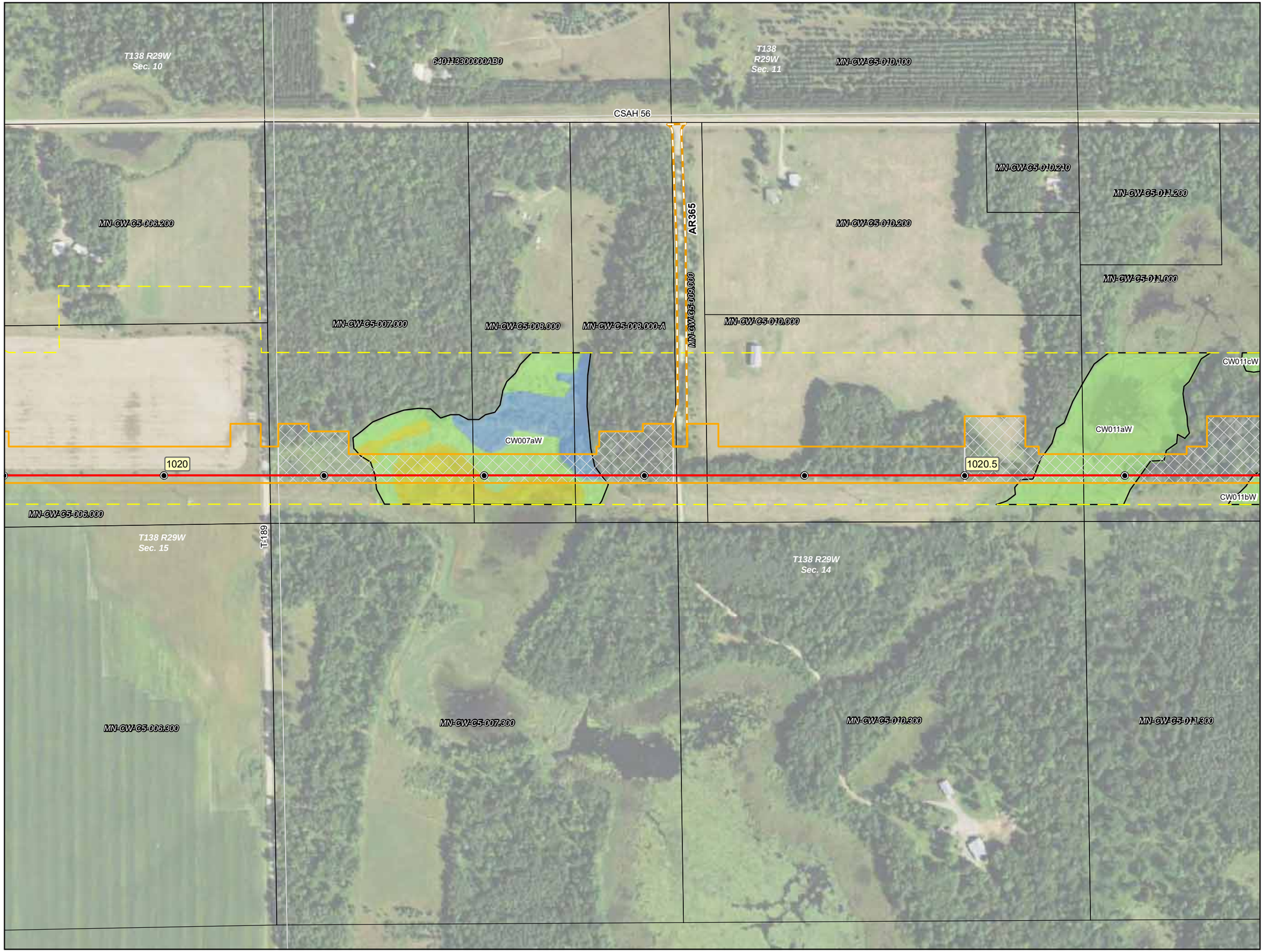

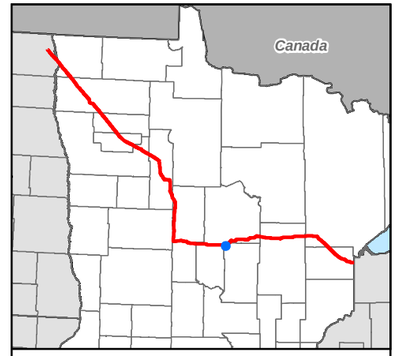

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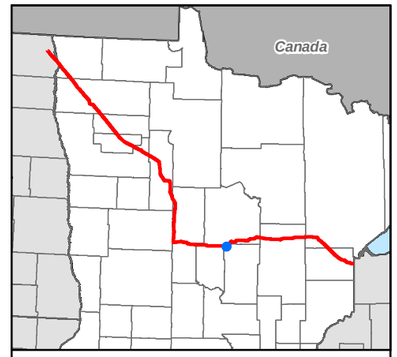

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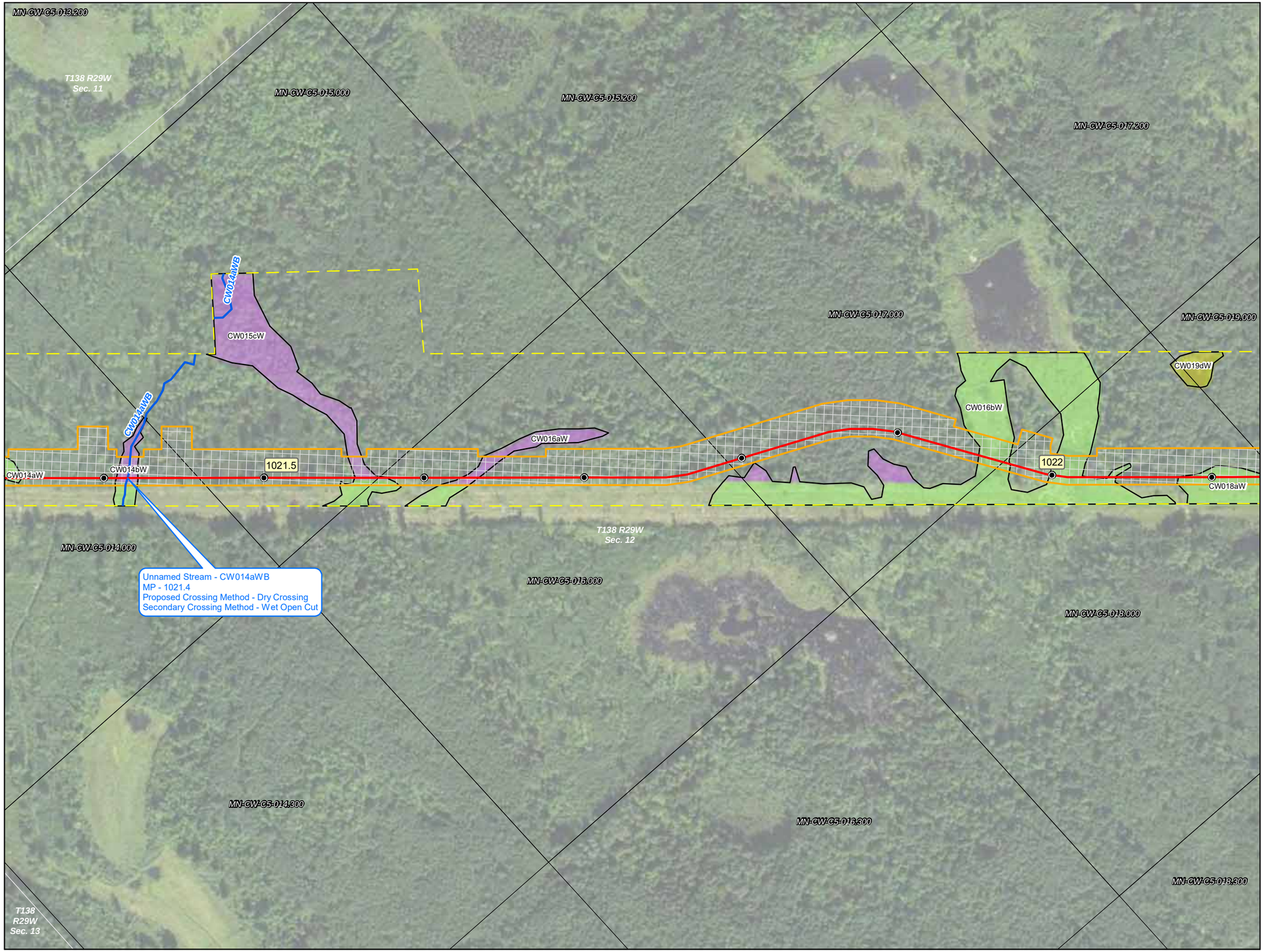

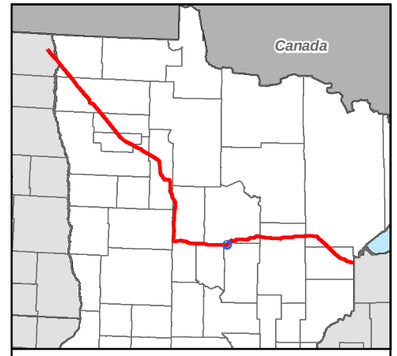

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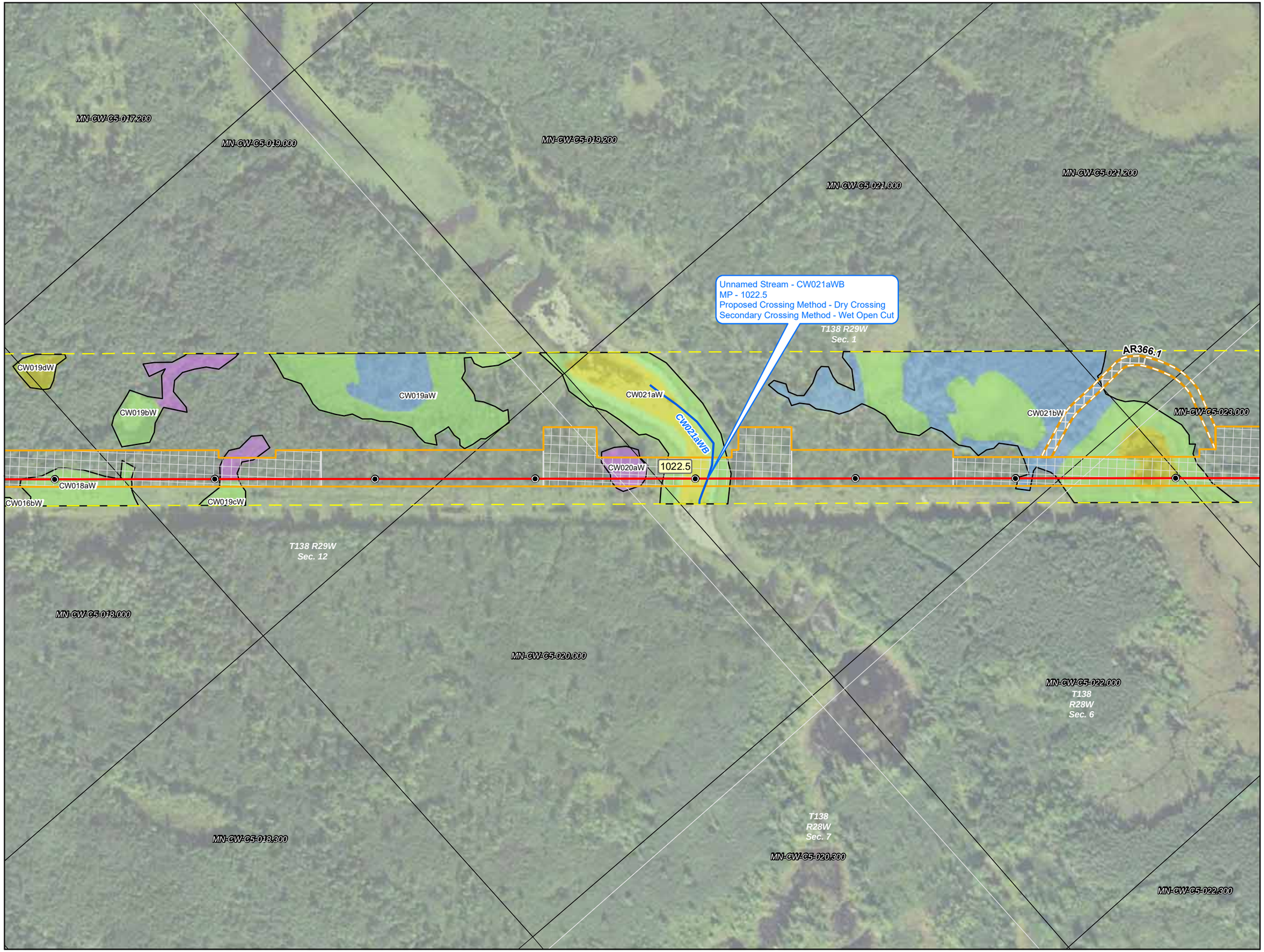

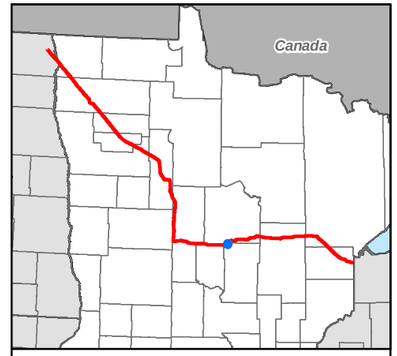

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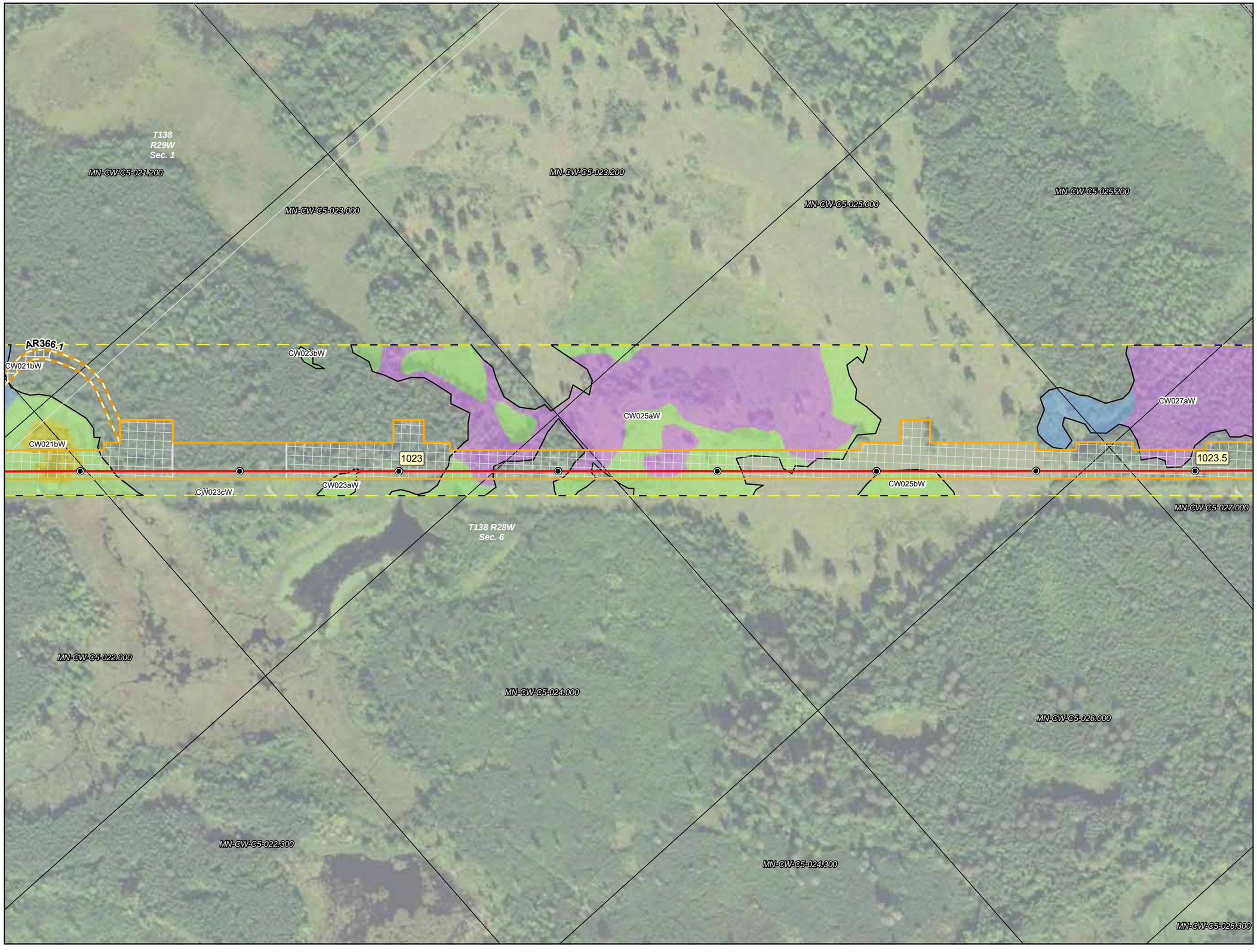

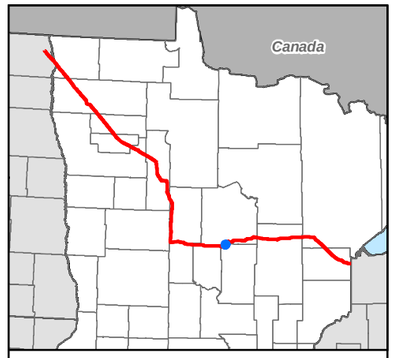

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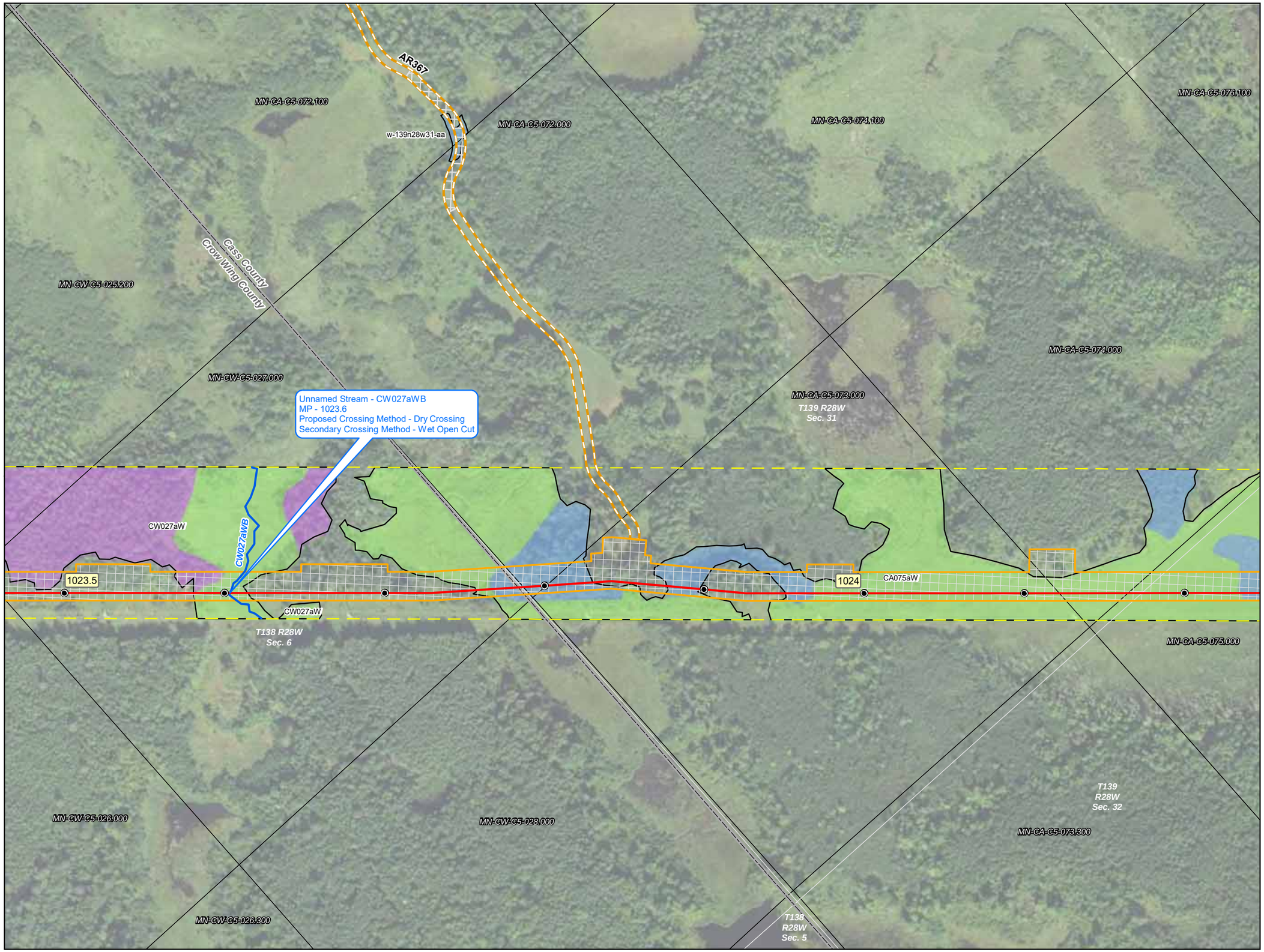

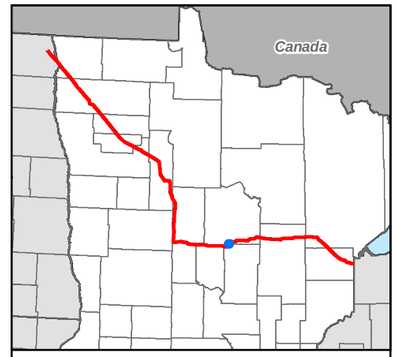

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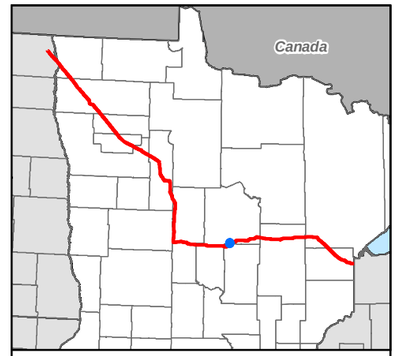

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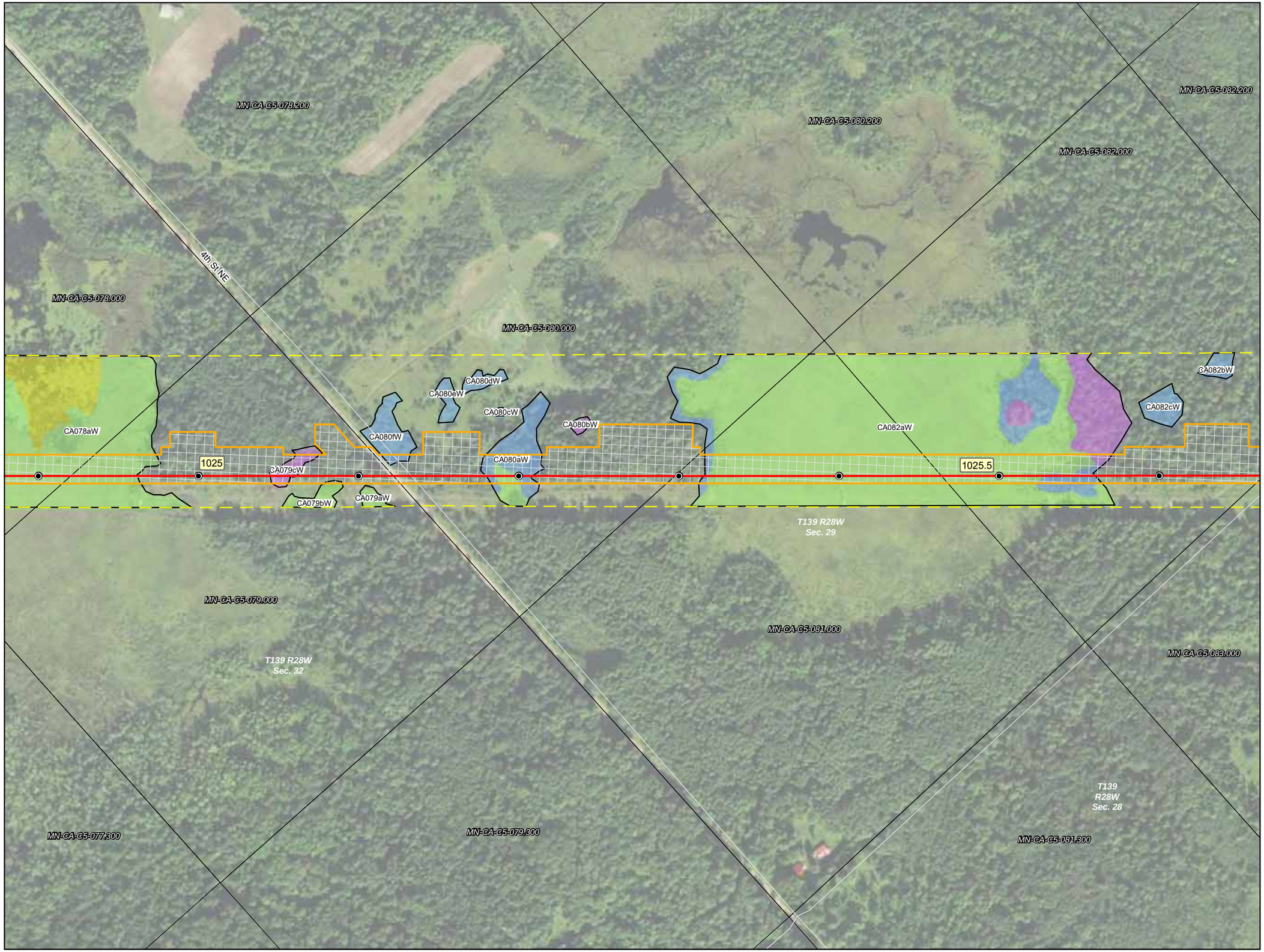

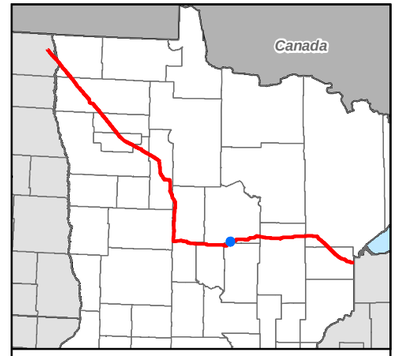

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Wetlands

Field Delineated Wetland	NWI Wetlands
PEM	PEM
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Waterbodies

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- NHD Waterbody

NWI Waterbodies

- Lake
- Riverine

0 150 300 Feet

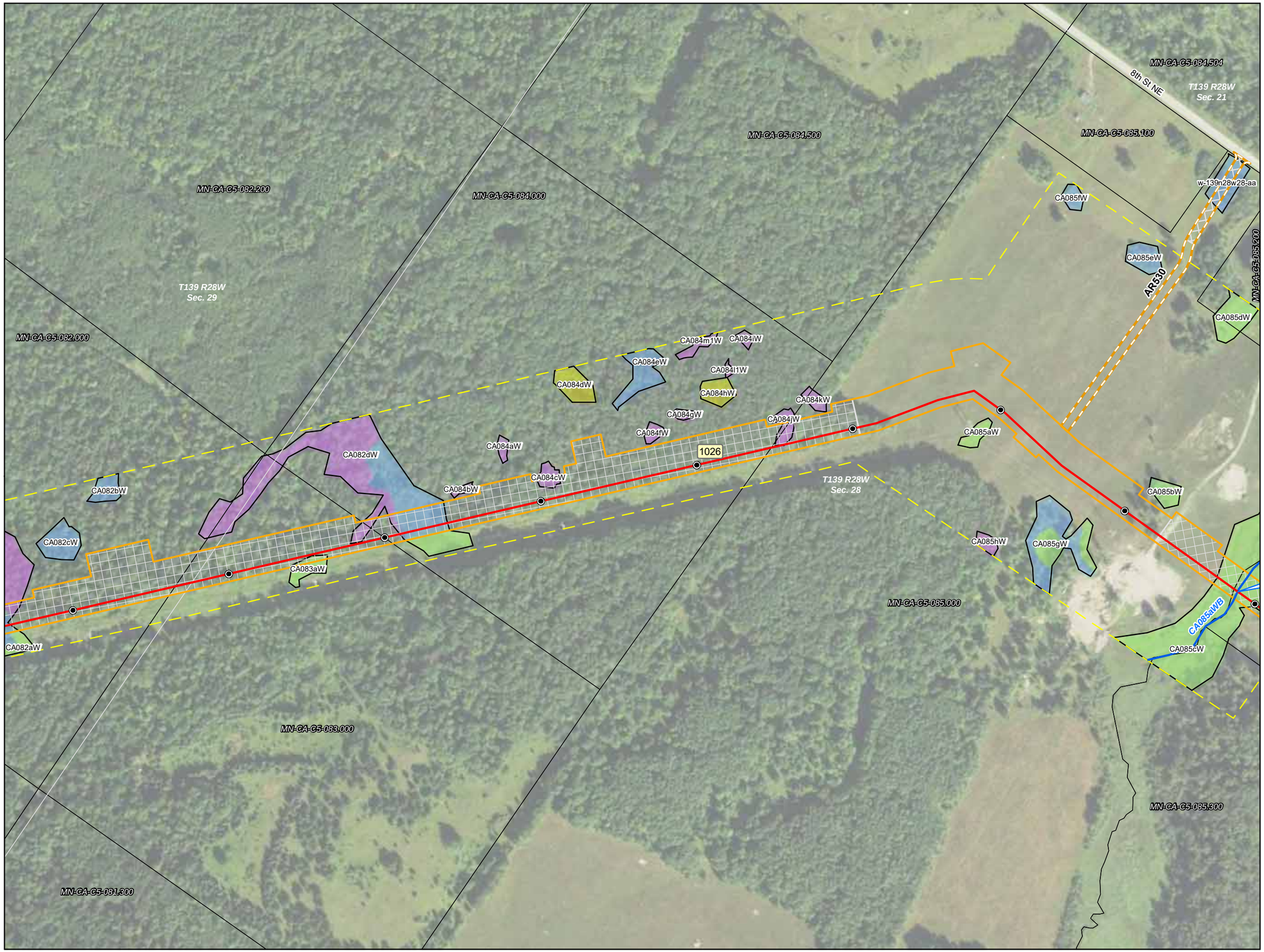
1 inch = 300 feet

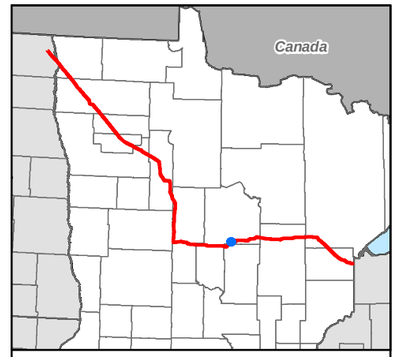
Detailed Route Maps

Line 3 Replacement Project

Cass County, Minnesota

ENBRIDGE





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Cass County, Minnesota

ENBRIDGE

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Date: (9/19/2018)

MN-CA-C5-084.504
MN-CA-06-021-4300
T139 R28W Sec. 21
MN-CA-06-021-4400
MN-CA-C5-088.200
T139 R28W Sec. 22
8th St NE
MN-CA-C5-086.000
MN-CA-C5-087.000
MN-CA-C5-088.000
MN-CA-C5-085.200
CA085dW
CA086aW
CA085aWB
Ada Brook / Blind Lake Creek - CA085aWB
MP - 1026.4
Proposed Crossing Method - Dry Crossing
Secondary Crossing Method - Wet Open Cut
MNDNR Public Water
No in-channel work from March 15 - June 15
CA087dW
CA087cW
CA087bW
CA088bW
CA088aW
CA088dW
CA085cW
CA085bW
1026.5
CA087aW
CA088bW
1027
T139 R28W Sec. 28
CA085gW
CA088_300aW
CA088_300bW
MN-CA-C5-087.310
T139 R28W Sec. 27
MN-CA-C5-035.000
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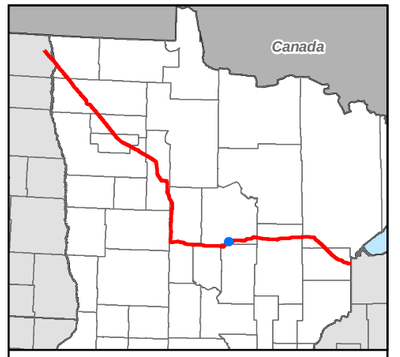

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Line 3 Replacement Project

Cass County, Minnesota

ENBRIDGE

MN-CA-C5-084.516
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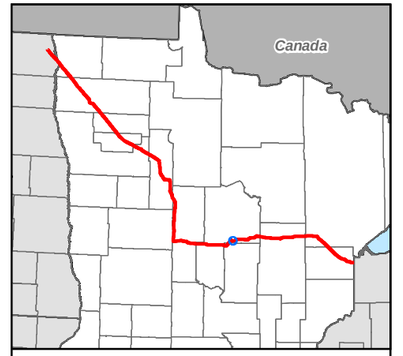
MN-CA-C5-088.200
T139
R28W
Sec. 22
MN-CA-C5-084.513
MN-CA-C5-084.521
MN-CA-C5-091.000
8th St NE
MN-CA-C5-088.000
MN-CA-C5-091.200
AR372
MN-CA-C5-090.000
MN-CA-C5-089.000
CA091eW
CA091bW
CA091bW
CA091cW
CA090dW
CA090cW
CA090aW
CA090bW
CA091g1W
CA091a1W
CA089aW
CA091f1W
CA091h1W
CA088dW
CA091_300c1W
CA091_300a1W
CA088cW
CA091i1W
1027.5
CA091d1W
CA091_300b1W
CA089_300b1W
CA091_300f1W
CA091_300e1W
CA091_300g1W
CA089_300a1W
T139 R28W
Sec. 27
MN-CA-C5-089.300
MN-CA-C5-091.300
MN-CA-C5-088.300



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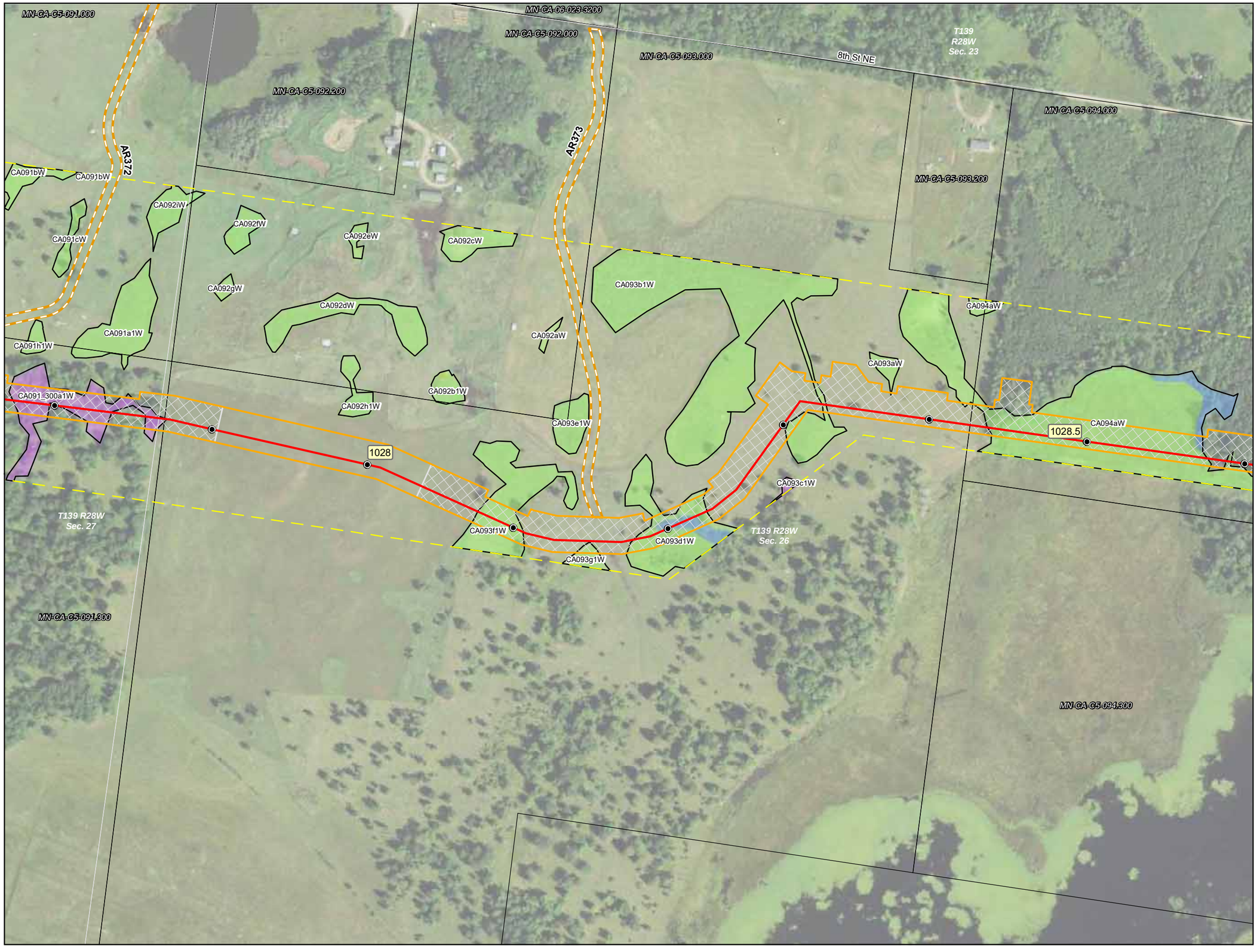

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Line 3 Replacement Project

Cass County, Minnesota

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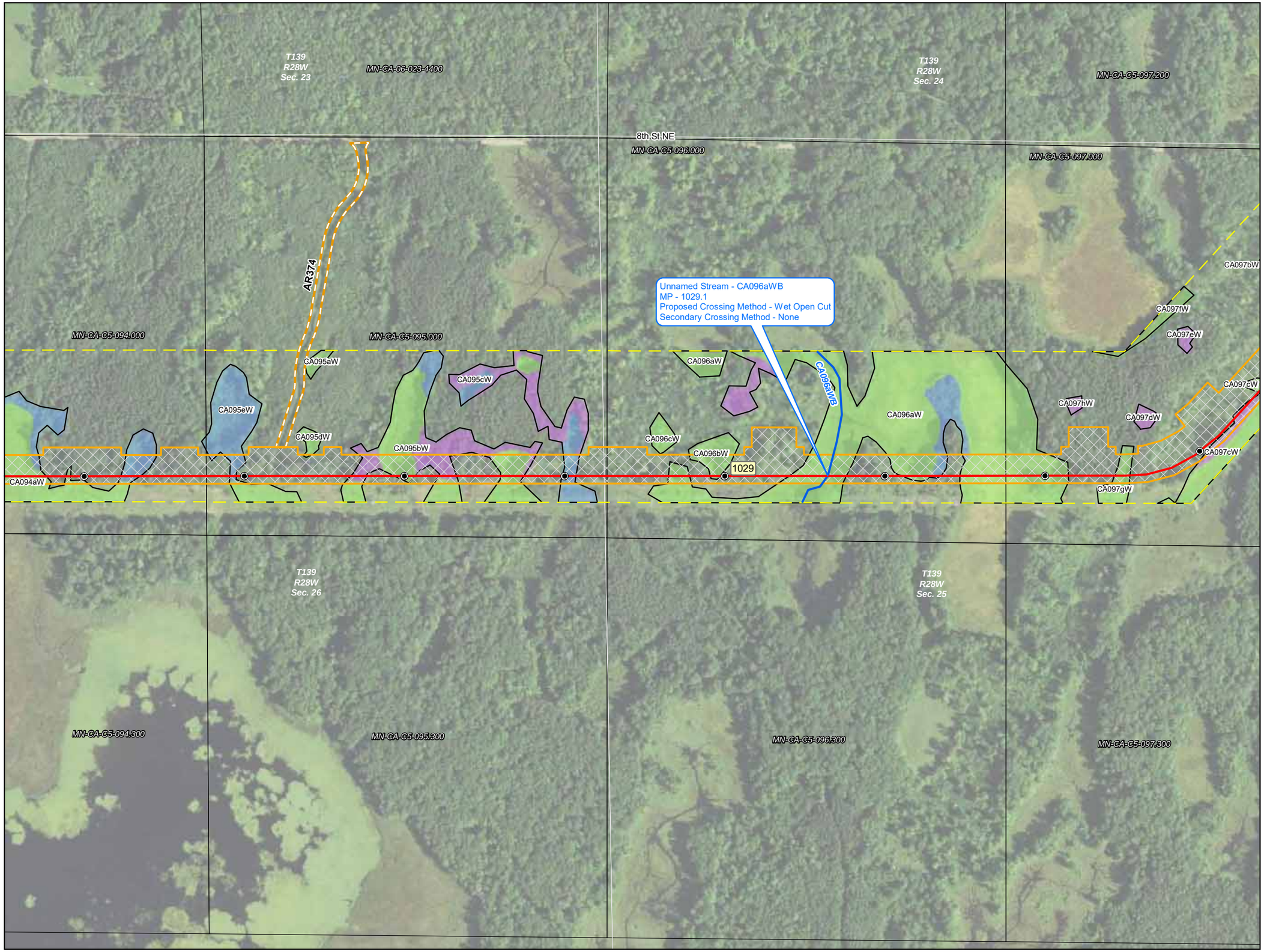

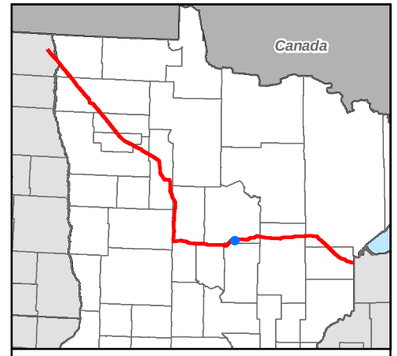

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Line 3 Replacement Project

Cass County, Minnesota

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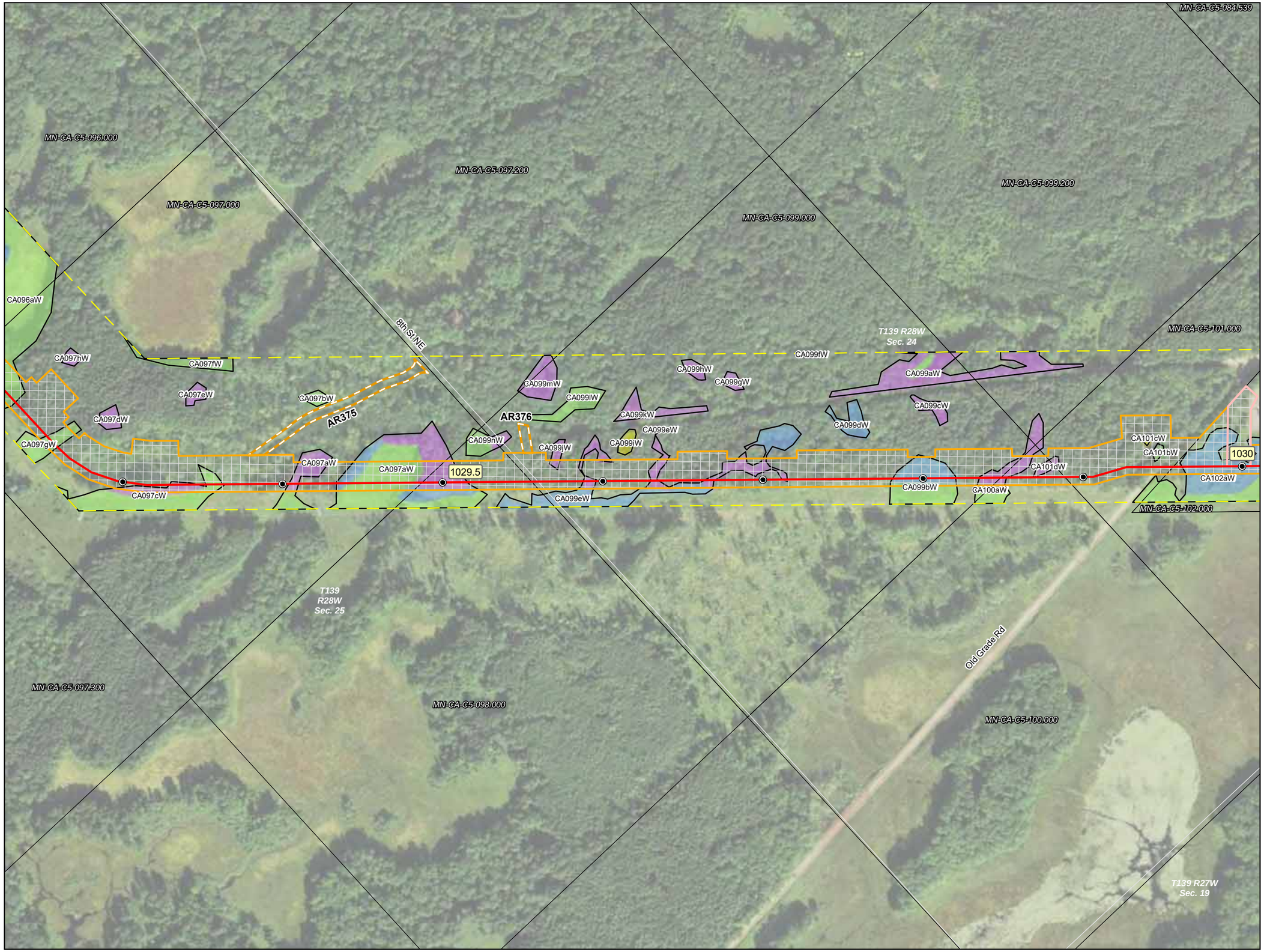

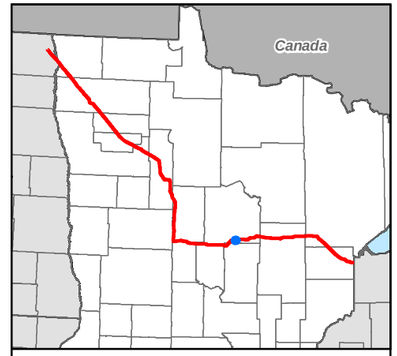

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Line 3 Replacement Project

Cass County, Minnesota

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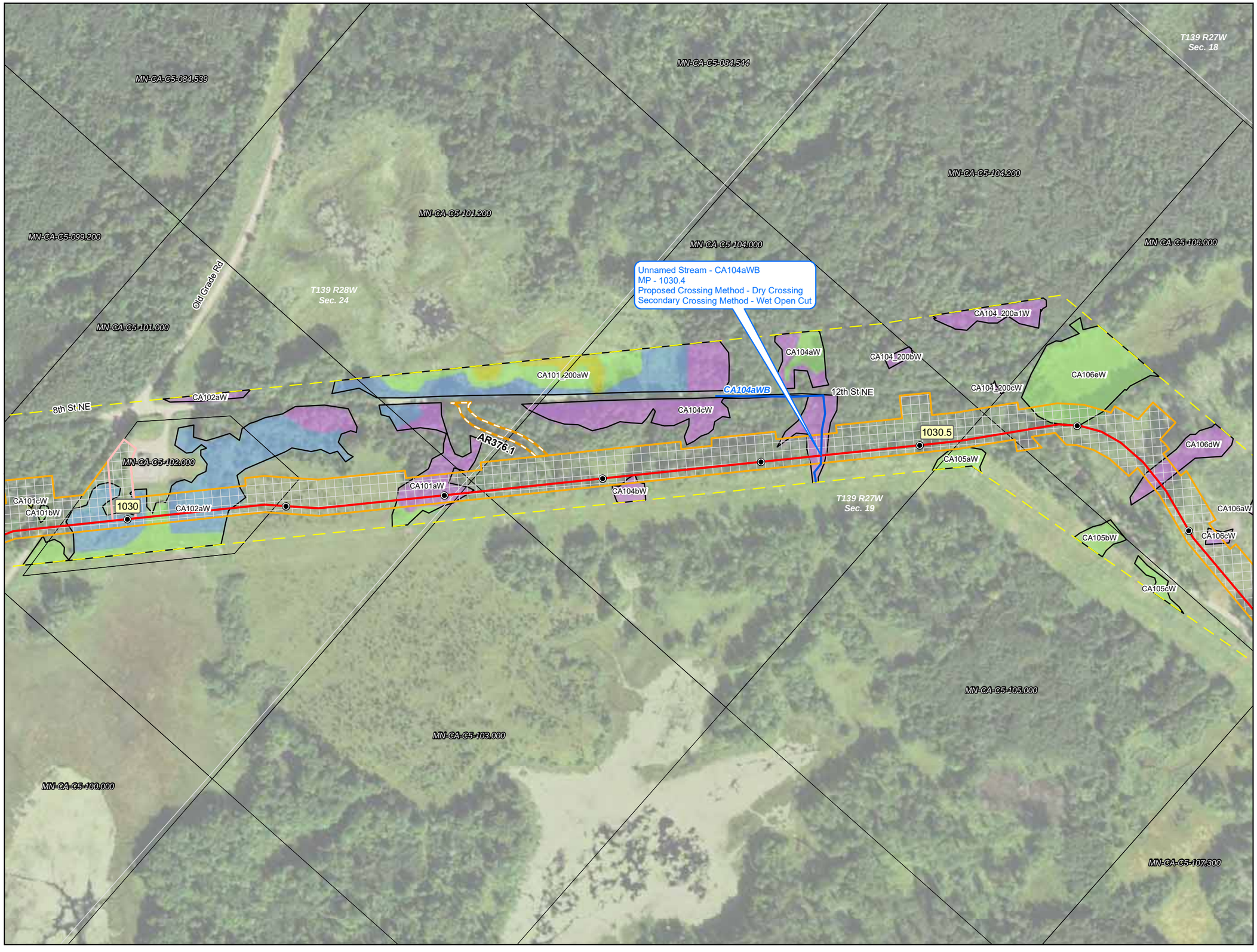

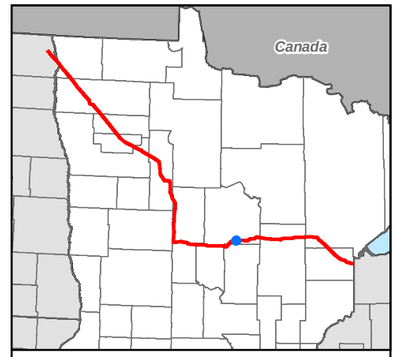

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Line 3 Replacement Project

Cass County, Minnesota

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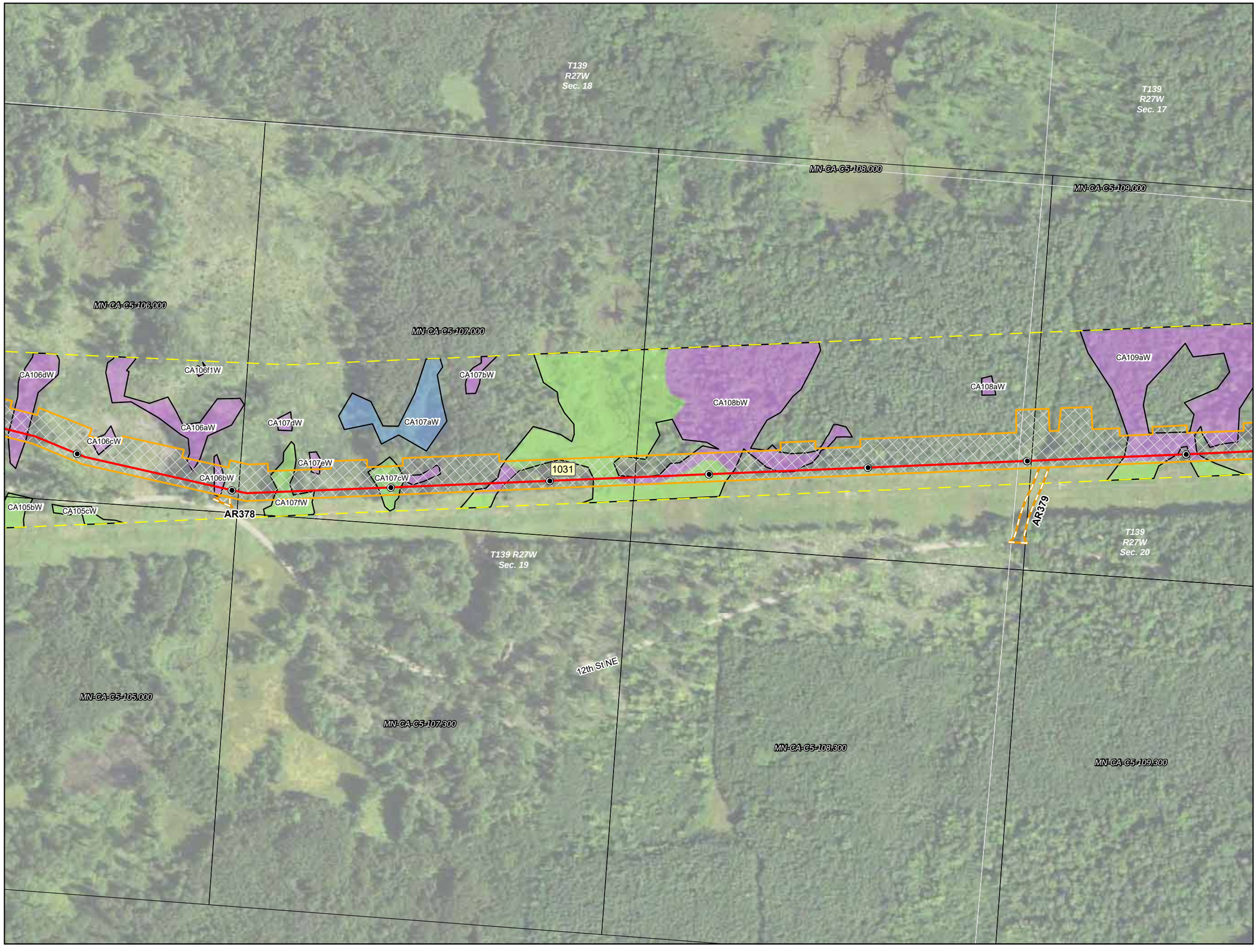

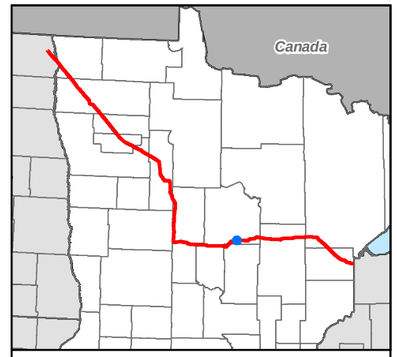

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Detailed Route Maps

Line 3 Replacement Project

Cass County, Minnesota

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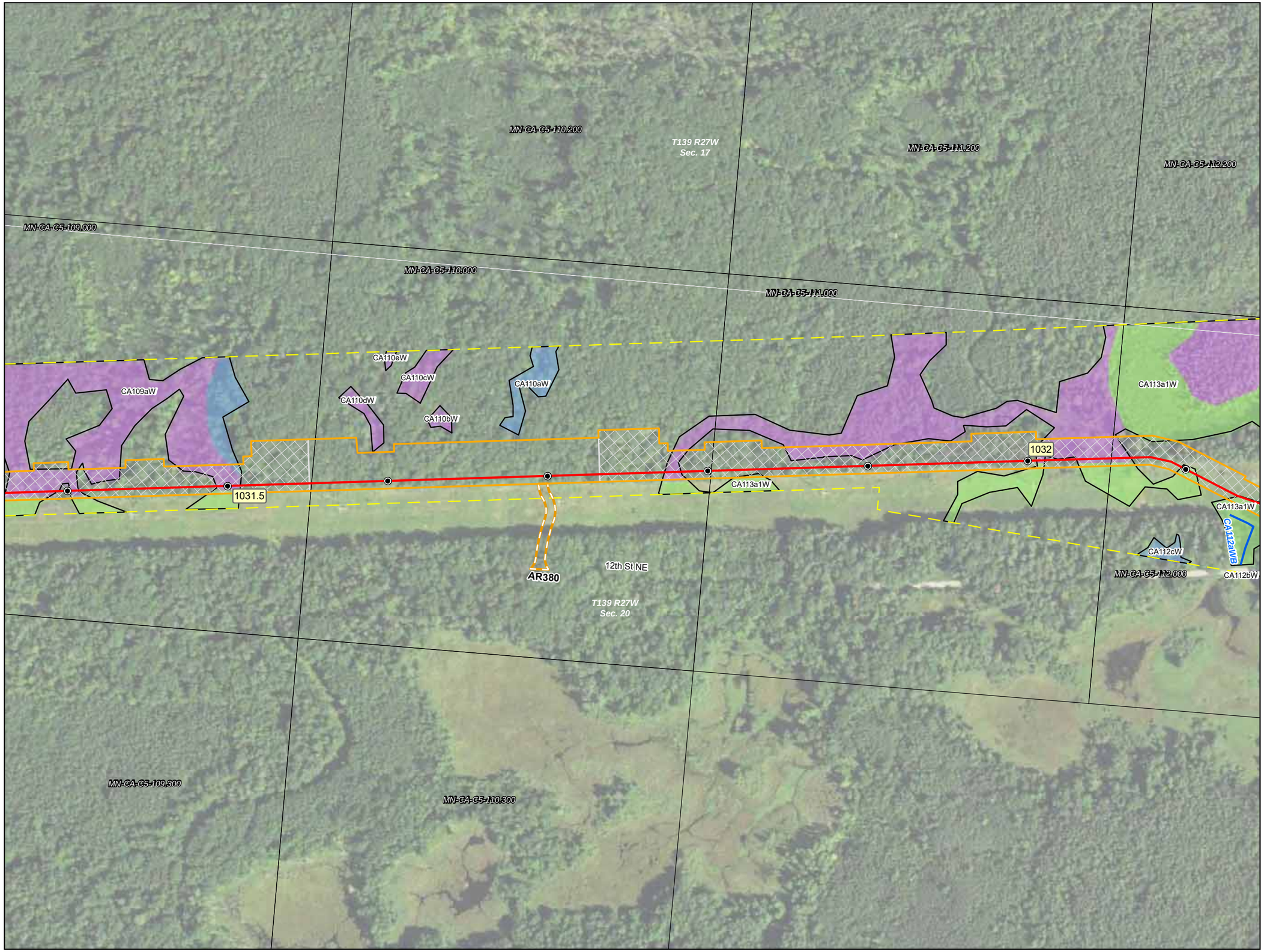

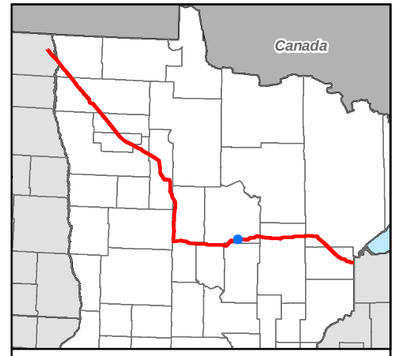

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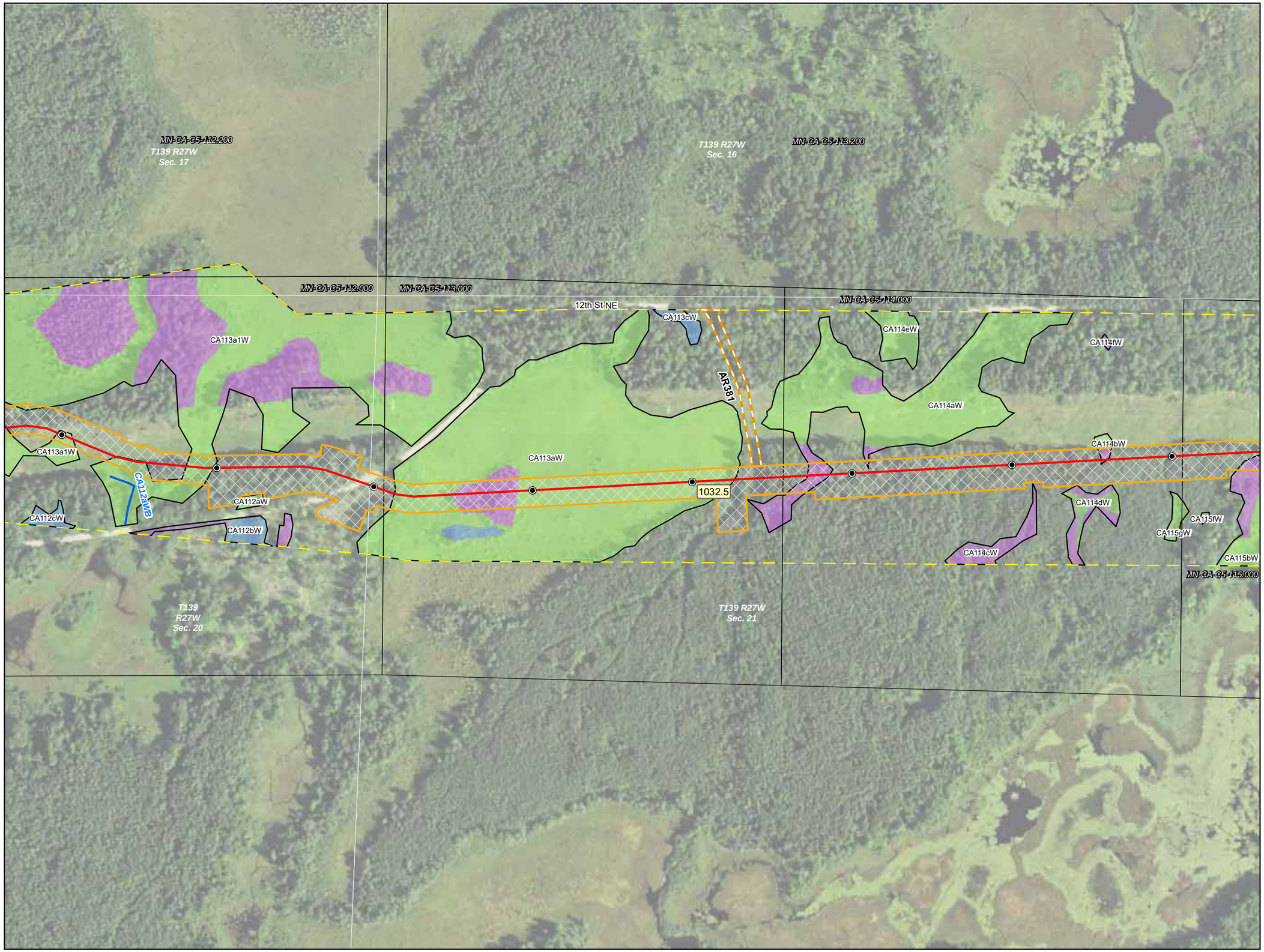

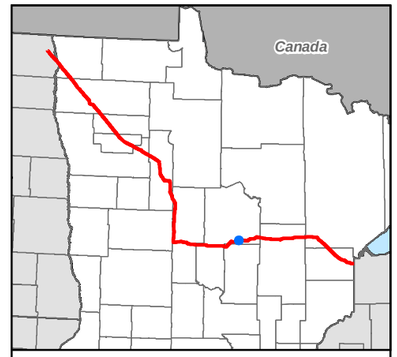

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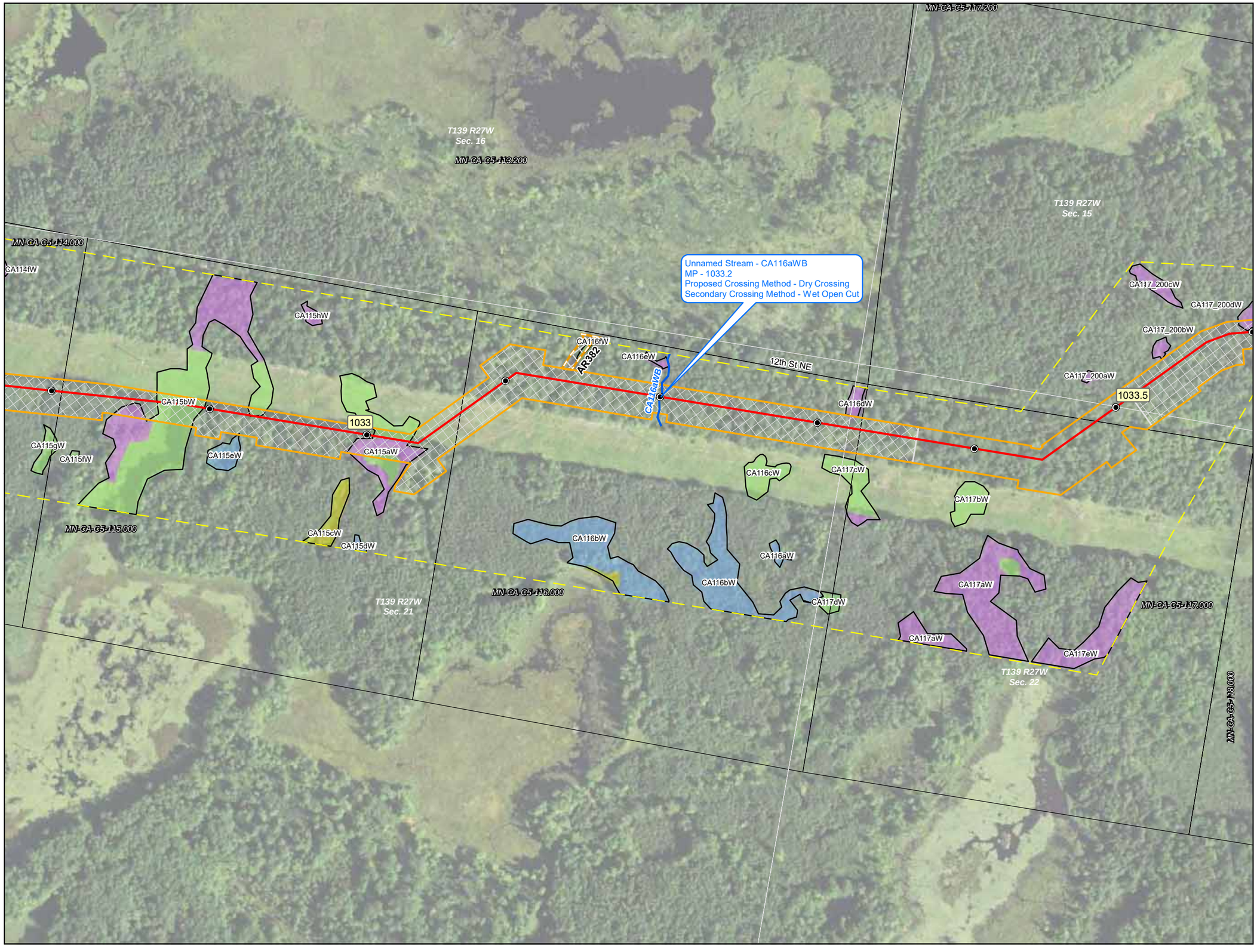

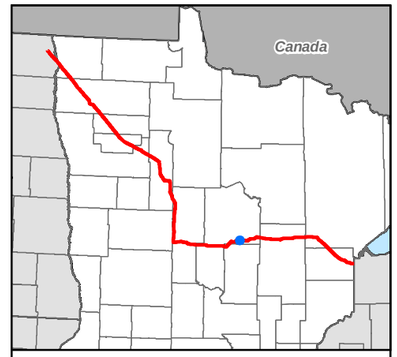

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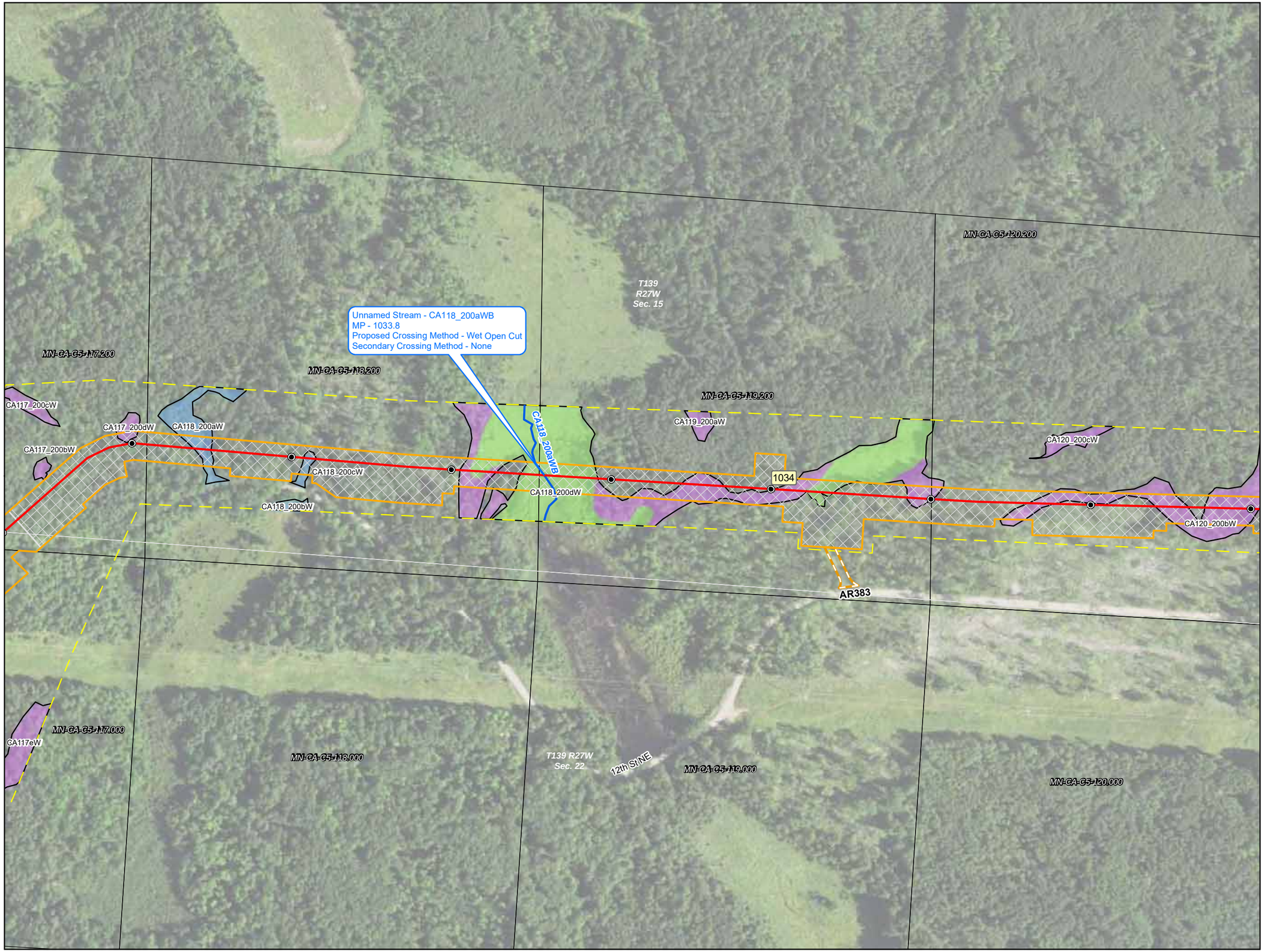

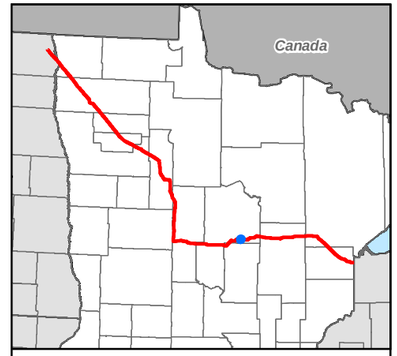

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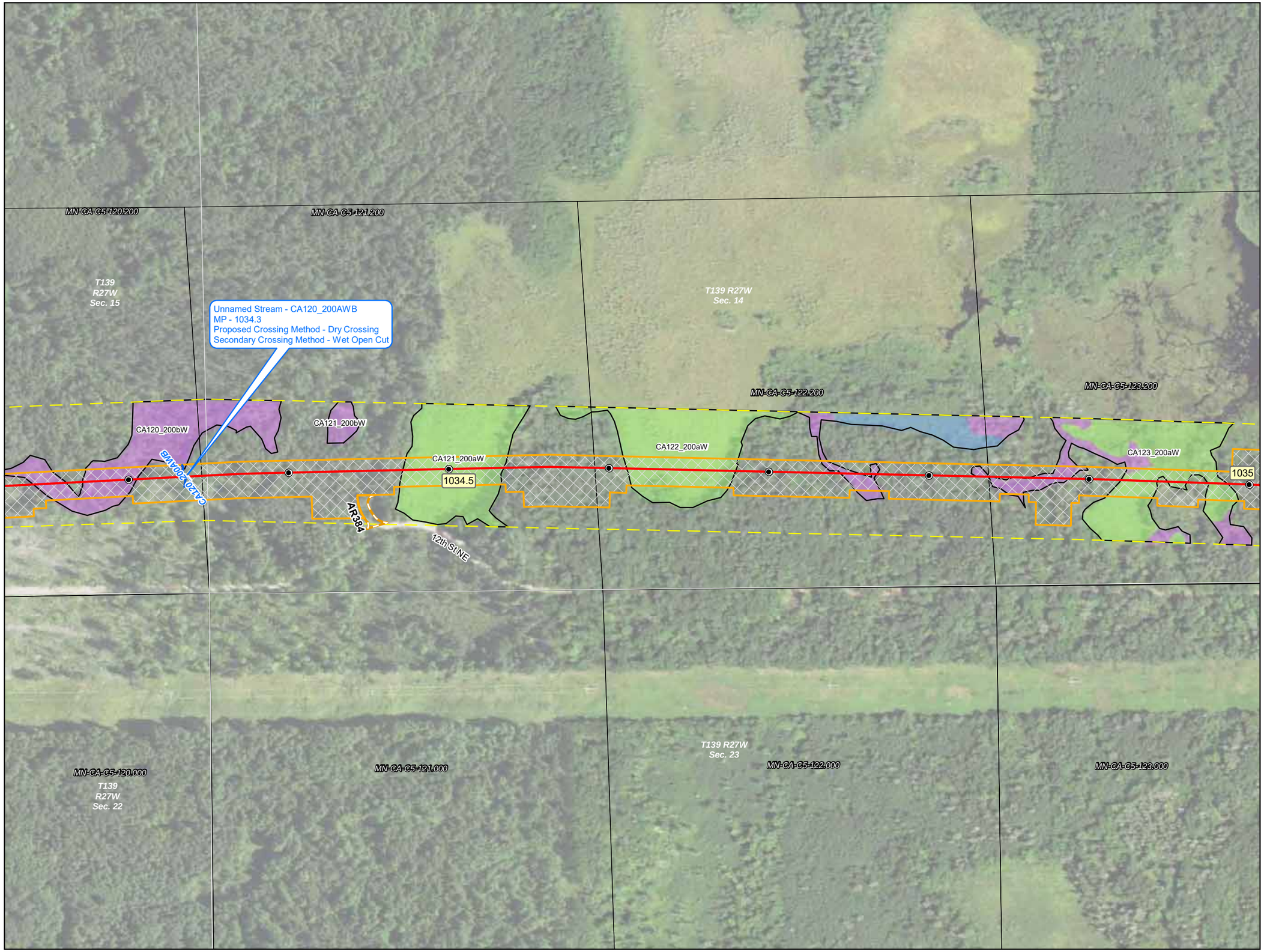

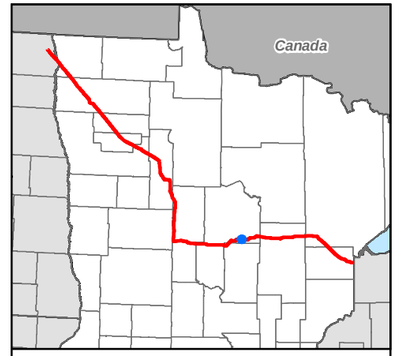

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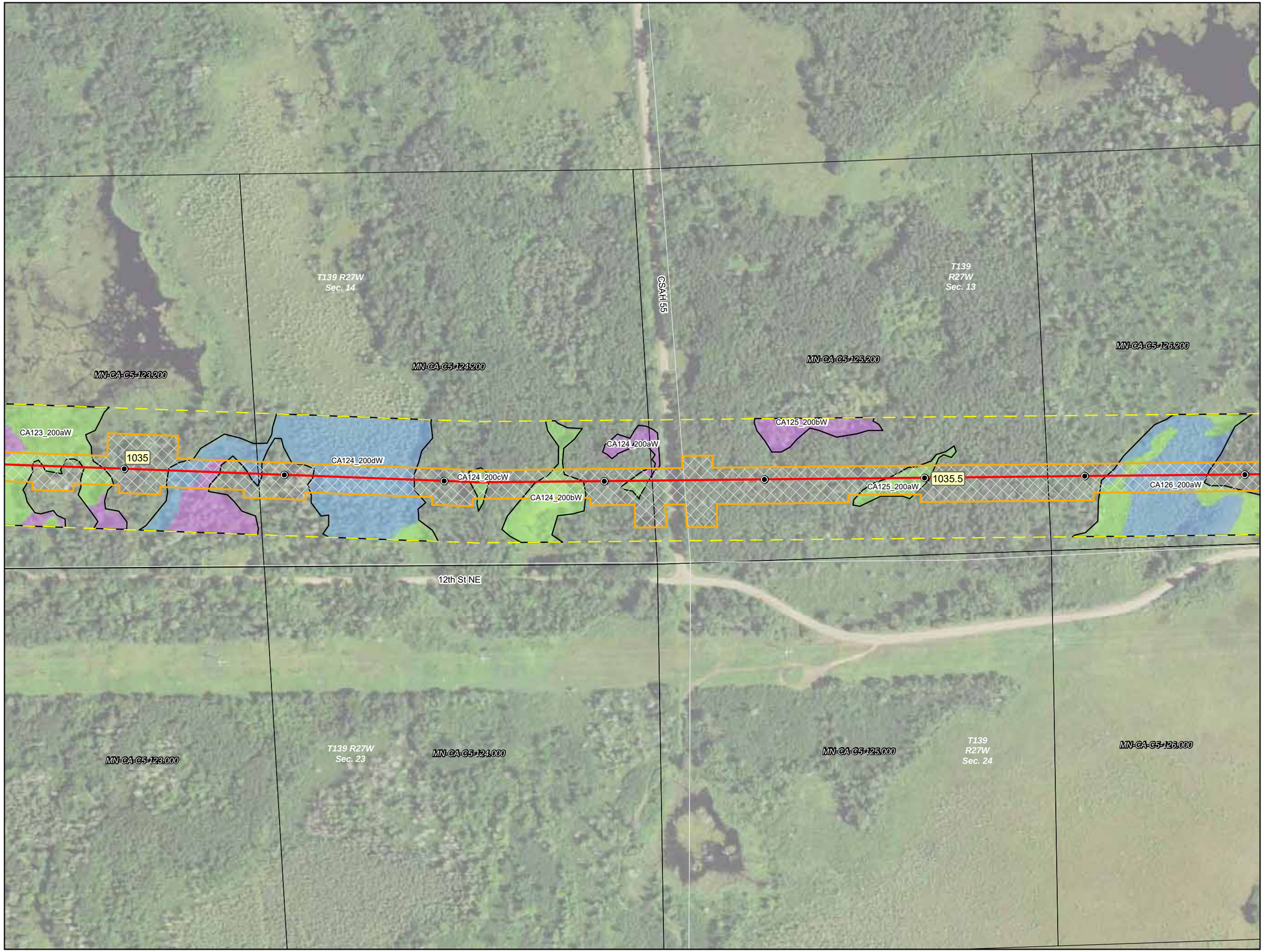

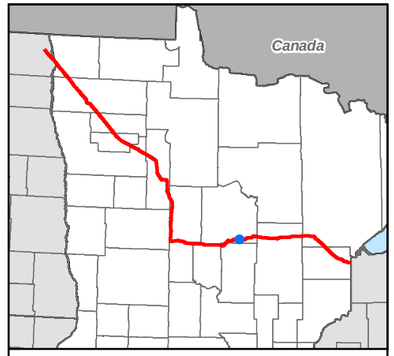

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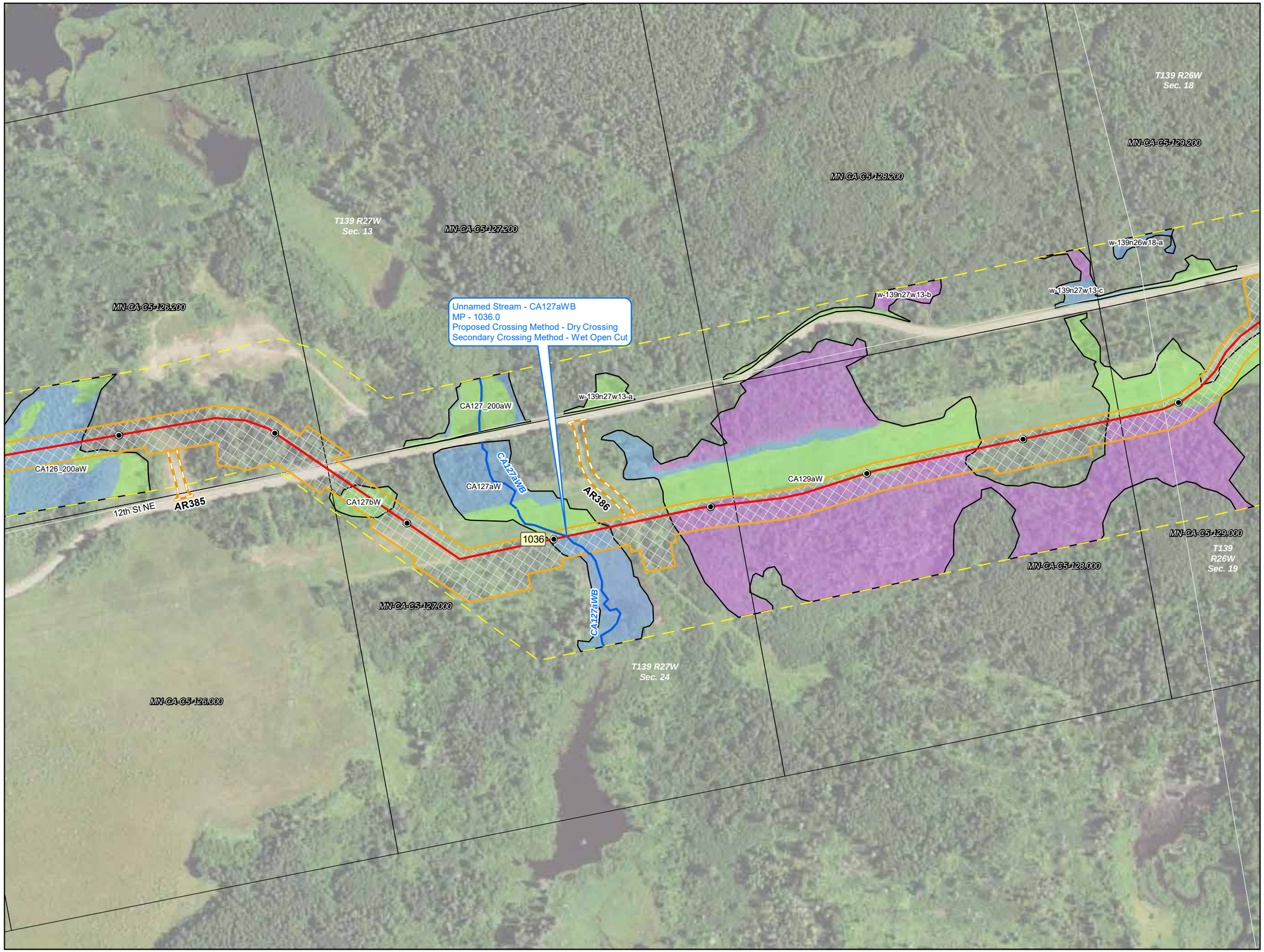

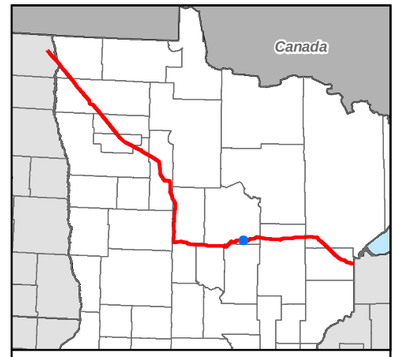

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PSS	PSS
PUB	PUB

Waterbodies

- Field Delineated Waterbody
- NHD Waterbody

NWI Waterbodies

- Lake
- Riverine

0 150 300 Feet

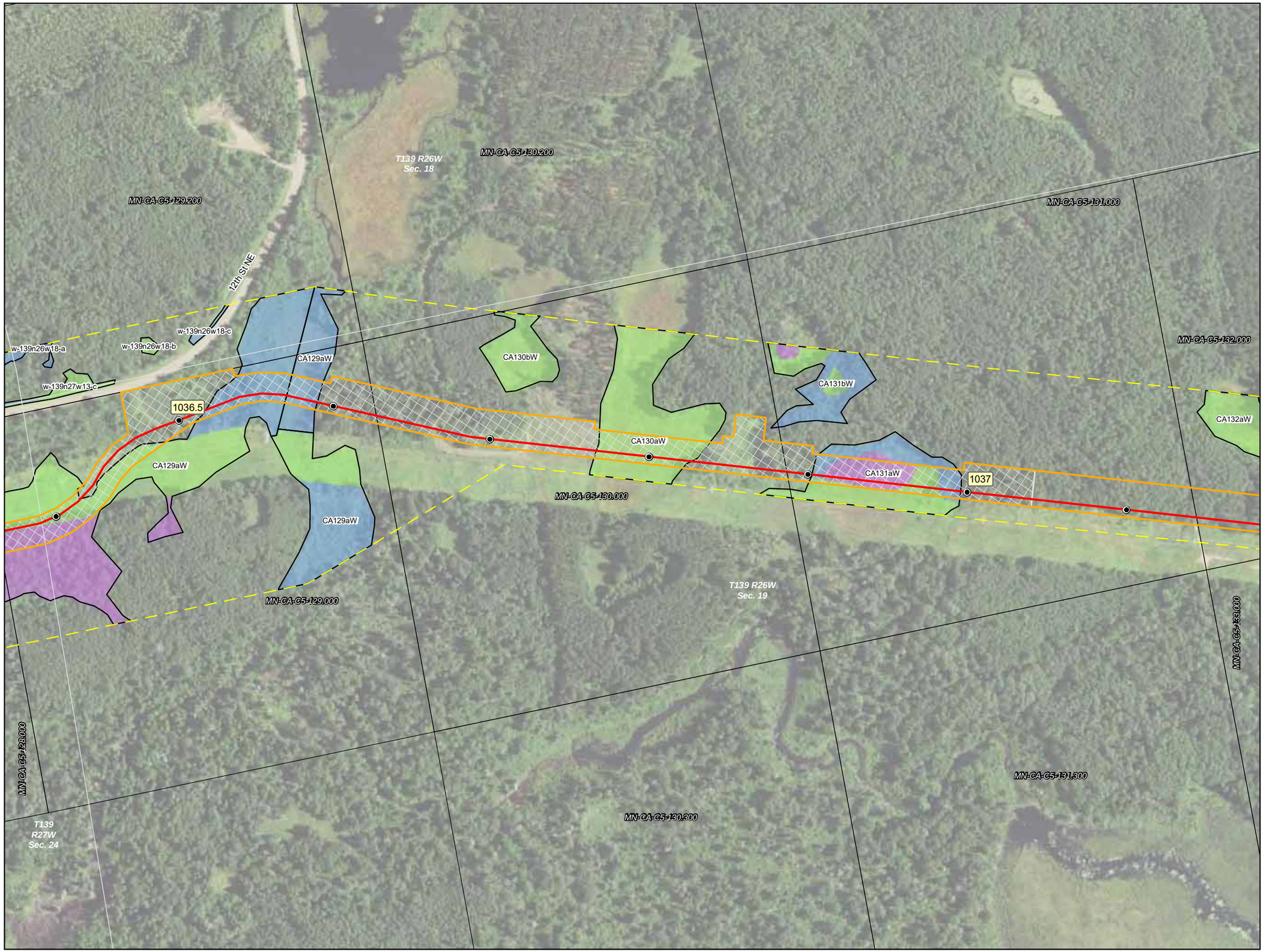
1 inch = 300 feet

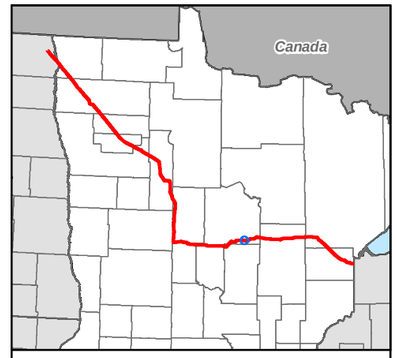
Detailed Route Maps

Line 3 Replacement Project

Cass County, Minnesota

ENBRIDGE





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Line 3 Replacement Project

Cass County, Minnesota

ENBRIDGE

T139 R26W
Sec. 18

MN-CA-C5-134.200

Mule Lake Dr NE

MN-CA-C5-135.000

MN-CA-C5-132.000

Dagget Brook - CA133aWB
MP - 1037.3
Proposed Crossing Method - Wet Open Cut
Secondary Crossing Method - None
MNDNR Public Water
No in-channel work from March 15 - June 15

CA133aWB

CA132aW

CA134dW

CA134bW

CA135cW

CA135dW

CA135eW

CA135fW

CA135aW

1037.5

CA134cW

CA135gW

CA134aW

CA135bW

MN-CA-C5-131.000

T139 R26W
Sec. 19

T139 R26W
Sec. 20

MN-CA-C5-134.000

AR387.1

w-139n26w20-aa

w-139n26w20-ab

AR388

CR-155

MN-CA-C5-133.000

w-139n26w20-ac

MN_NWI-037

MN-CA-C5-131.300

MN-CA-C5-12-446-0102

MN-CA-C5-135.300

MN-CA-12-446-0104

ROW34053

ROW34070

MN-CA-12-446-0106

MN-CA-C5-133.100

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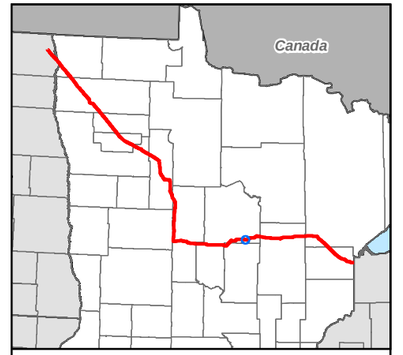

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Line 3 Replacement Project

Cass County, Minnesota

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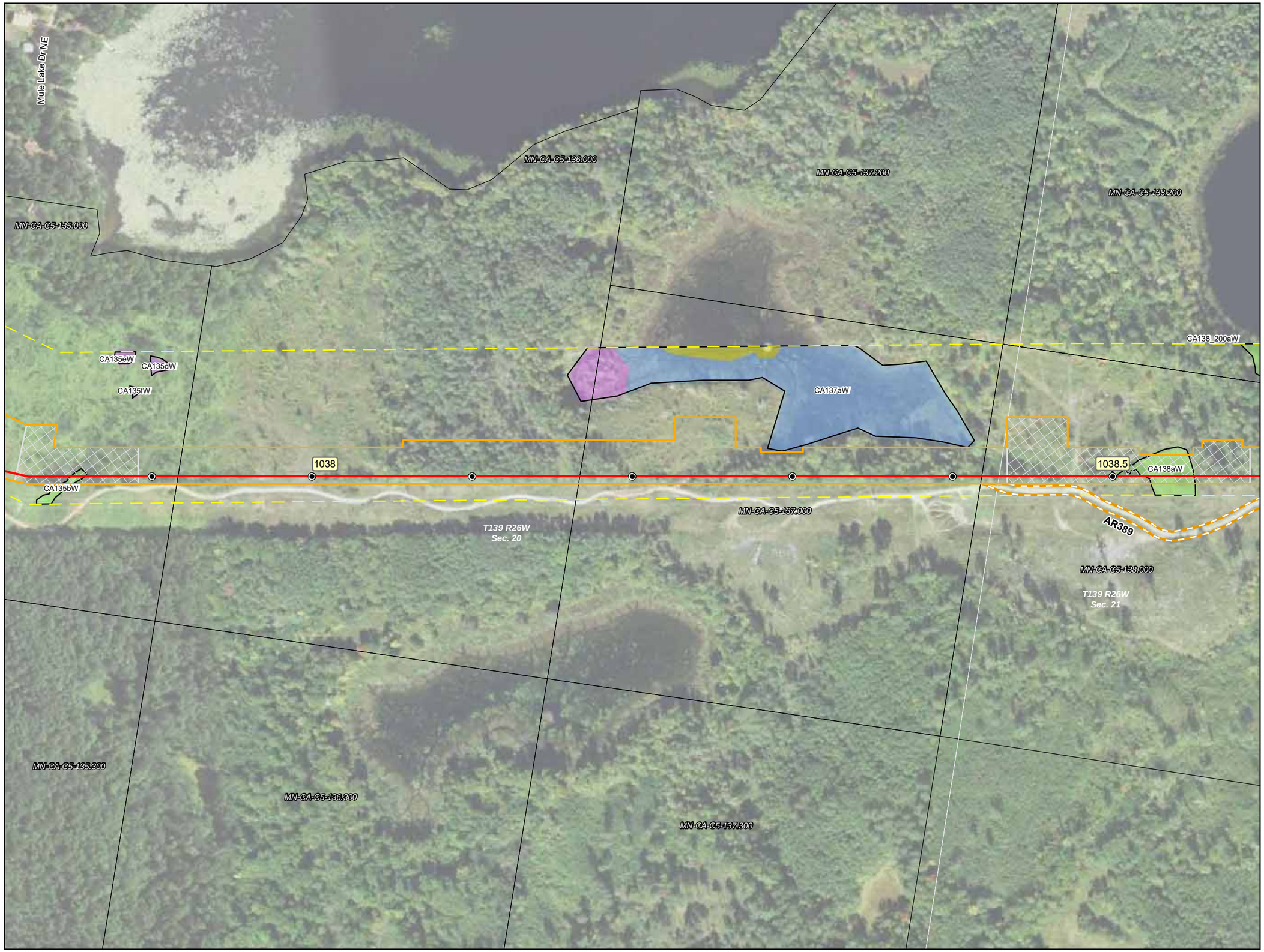

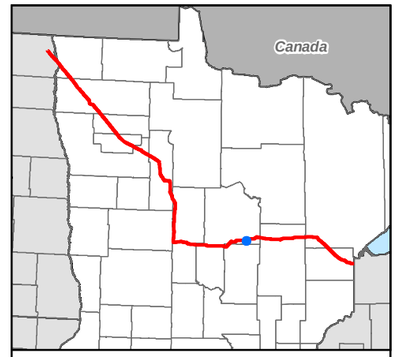

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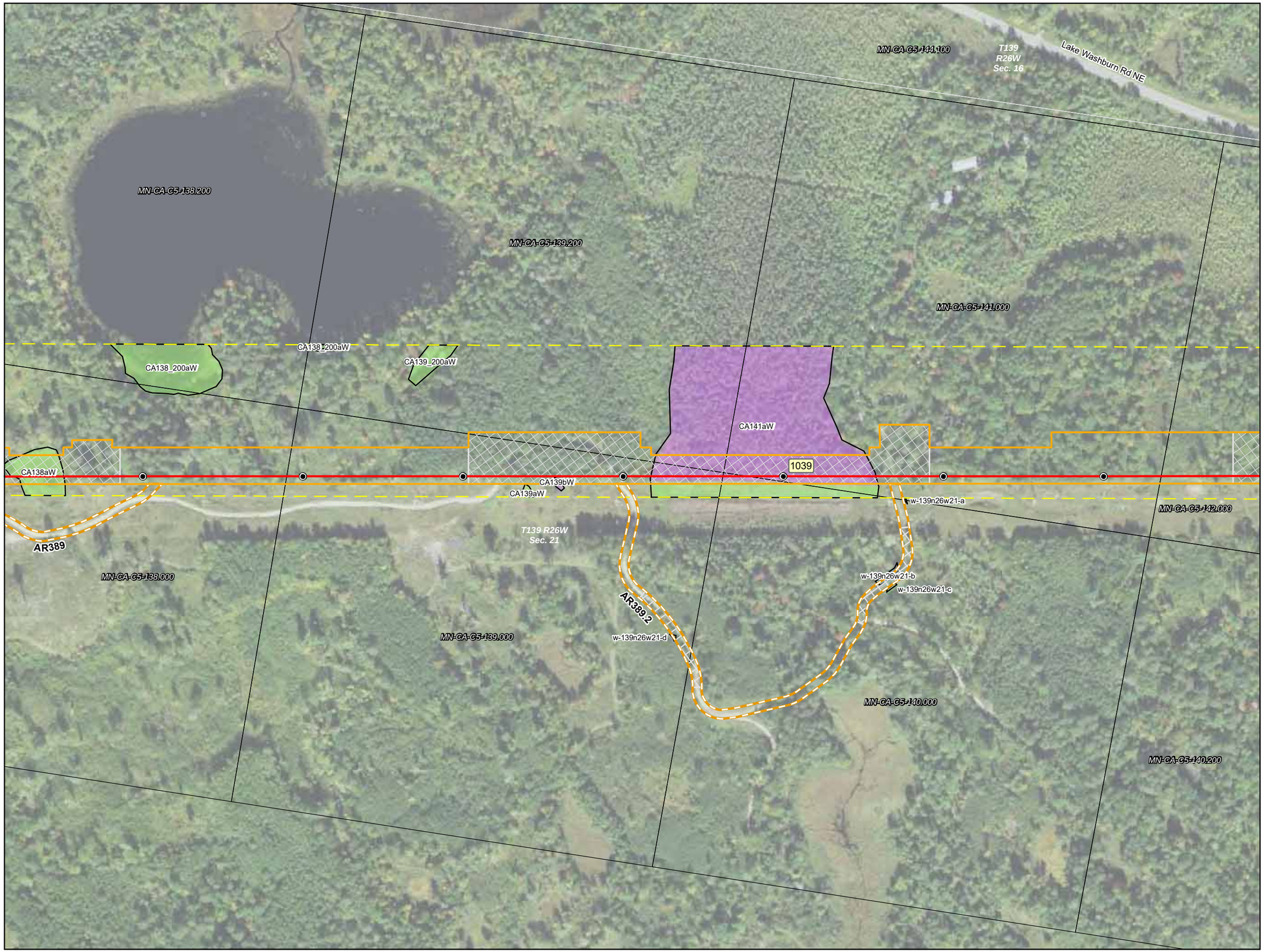

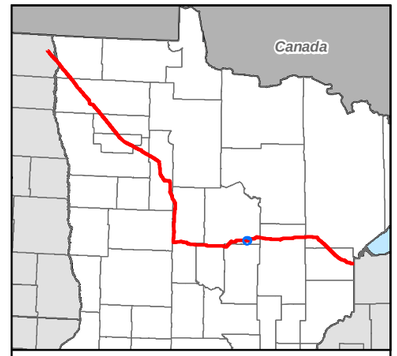

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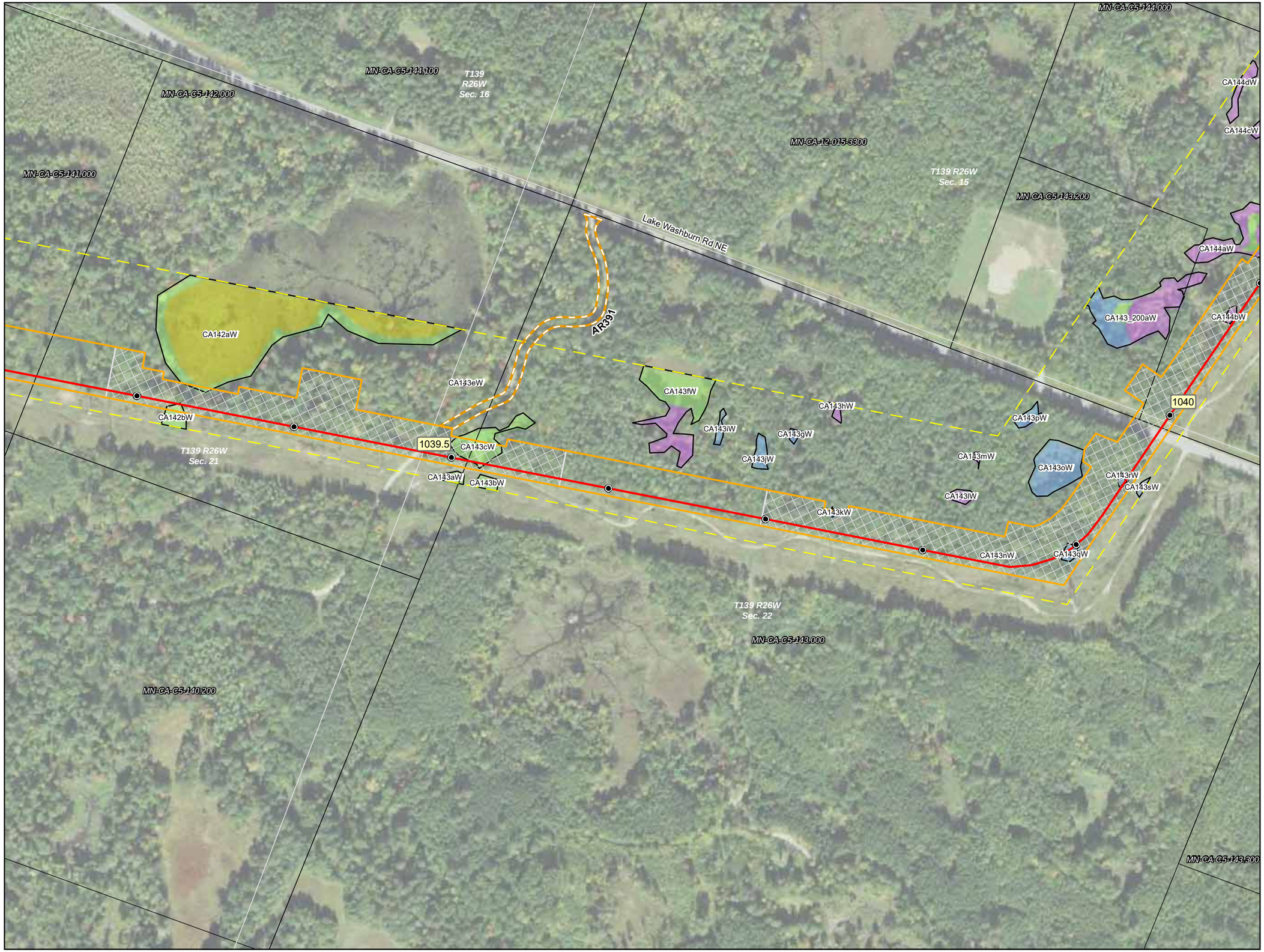

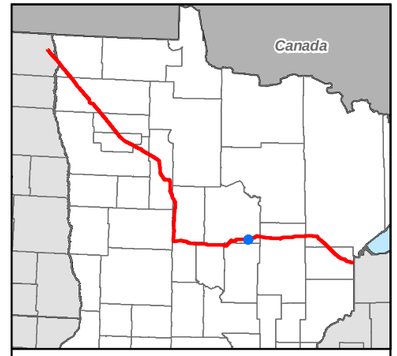

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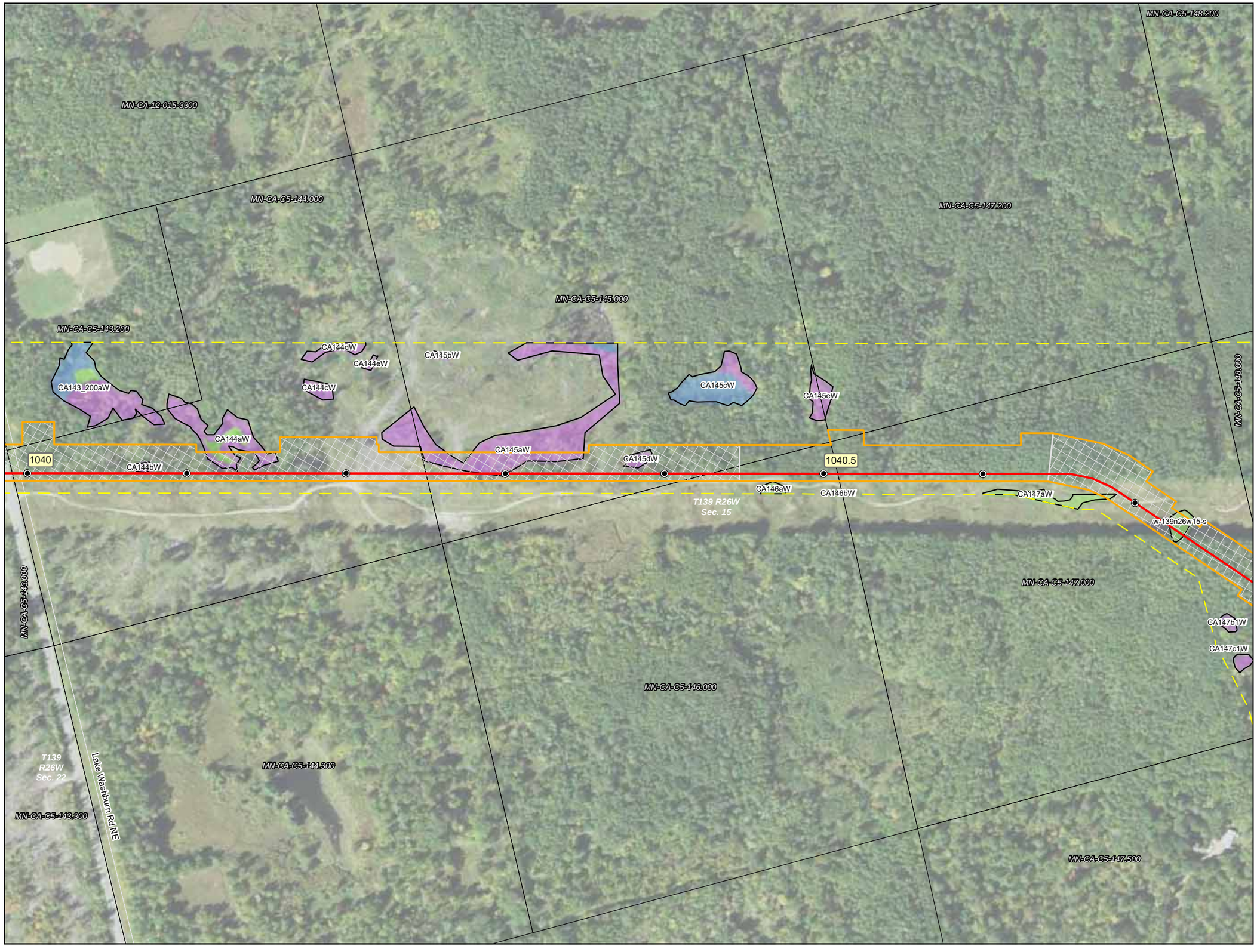

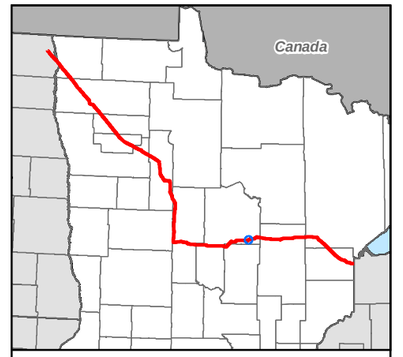

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Detailed Route Maps

Line 3 Replacement Project

Cass County, Minnesota

ENBRIDGE

Detailed Route Maps

Line 3 Replacement Project

Cass County, Minnesota

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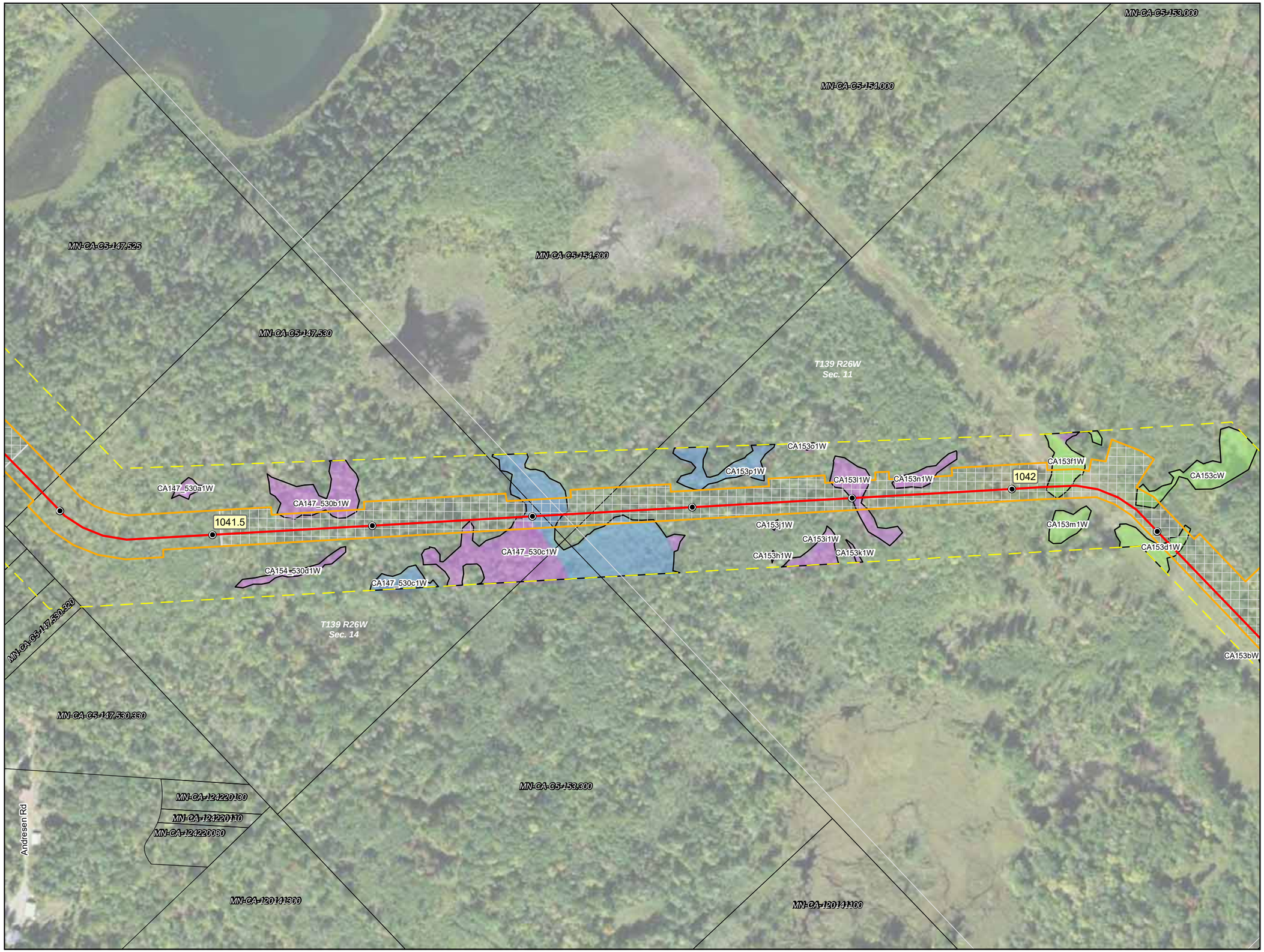

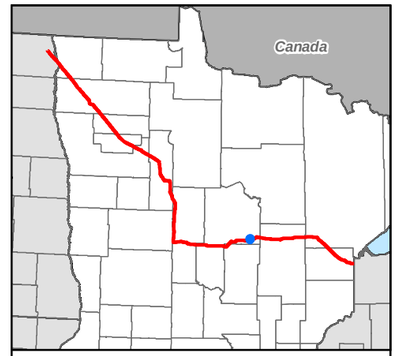

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Line 3 Replacement Project

Cass County, Minnesota

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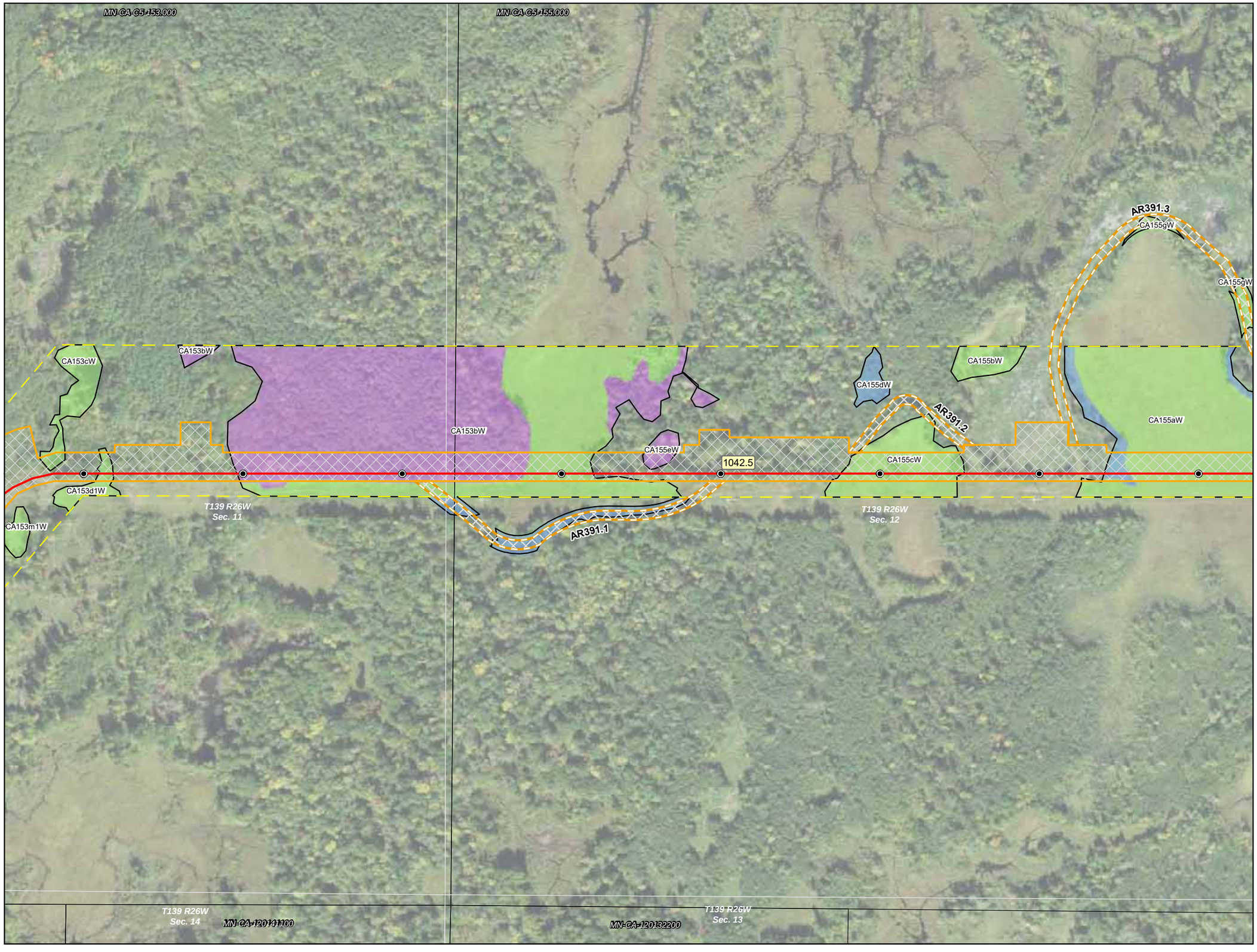

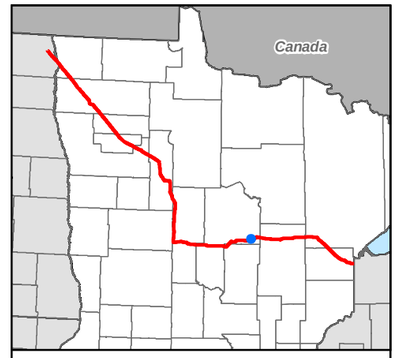

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Detailed Route Maps

Line 3 Replacement Project

Cass County, Minnesota

ENBRIDGE

MN-CA-C5-155.000

MN-CA-C5-156.000

AR391.3

CA155gW

CA155gW

CA155aW

CA155kW

CA155fW

CA155jW

CA155iW

CA155hW

CA155gW

AR391.4

CA156bW

CA156aW

1043

1043.5

CA155fW

CA155fW

CA155W

CA155W

CA156bW

T139 R26W
Sec. 12

T139 R25W
Sec. 7

AR392

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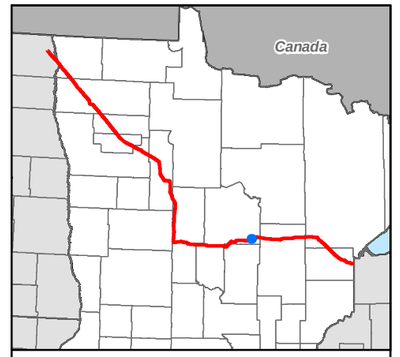
Sec. 13

MN-CA-C5-158.100

T139
R25W
Sec. 18



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Detailed Route Maps

Line 3 Replacement Project

Cass County, Minnesota

ENBRIDGE

September 2018

Source: Z:\Clients\E_H\Enbridge\Line_3_Full_Replacement\Permitting\Federal\COE\Sept_2018\RSA_22\Figures\L3_MN_COE_Alignment_Sheets_RSA22.mxd

Date: (9/19/2018)

MN-CA-C5-155.000

T139 R26W
Sec. 12

T139 R25W
Sec. 7

MN-CA-C5-156.000

MN-CA-C5-156.100

w-139n25w18-ae

MN-CA-04-018-2100

T139 R25W
Sec. 18

T139 R26W
Sec. 13

w-139n25w18-ad

w-139n25w18-ad

MN-CA-C5-156.200

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AR392

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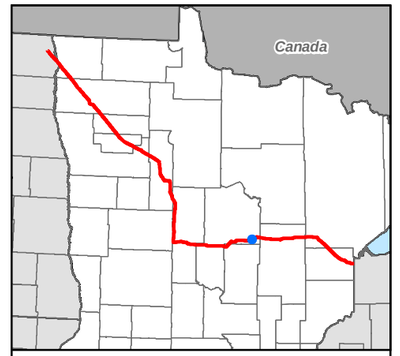

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Cass County, Minnesota

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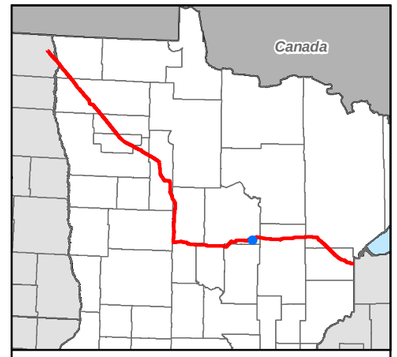

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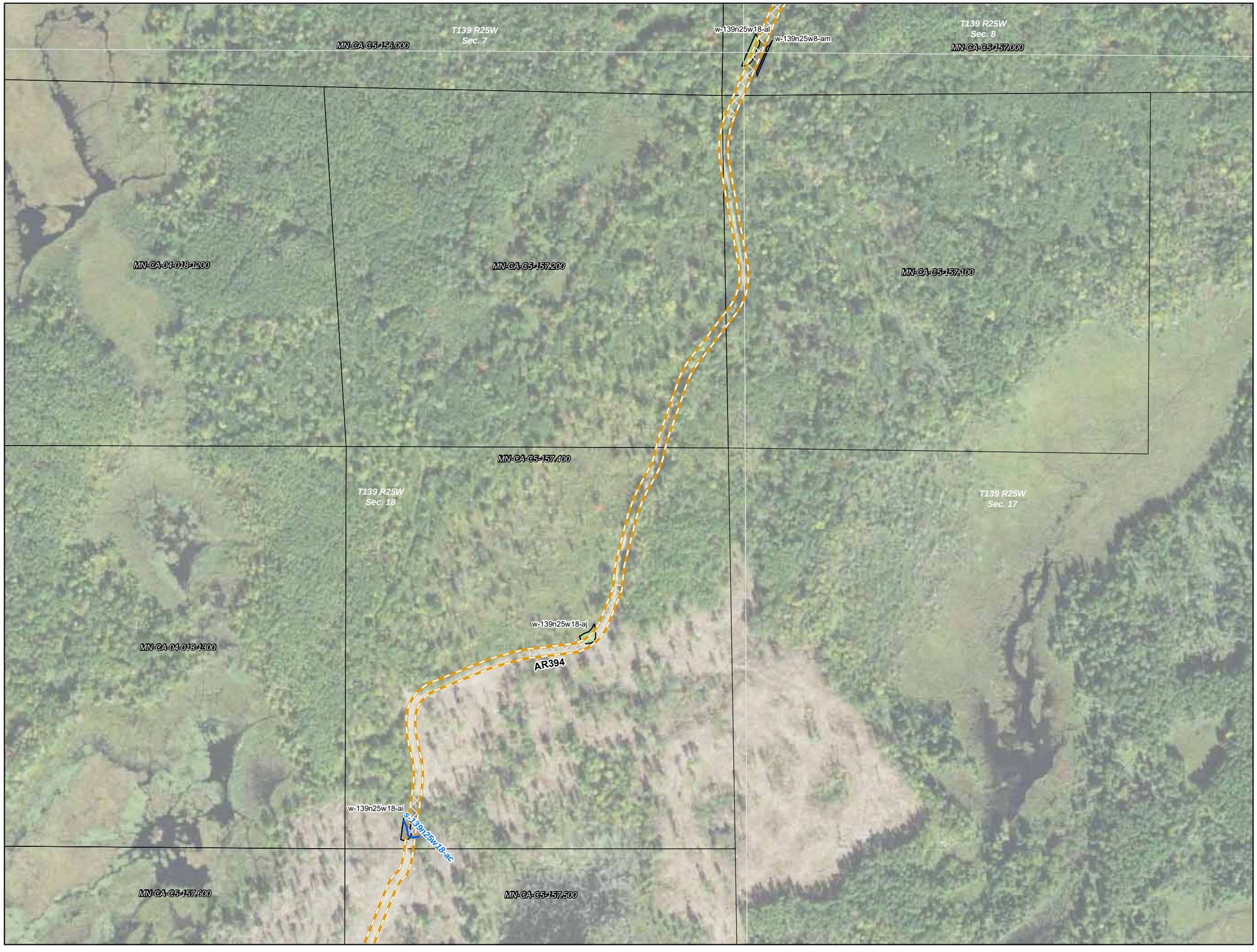
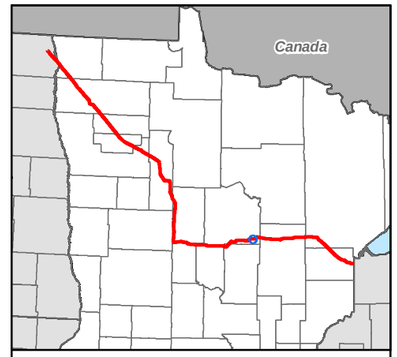
Line 3 Replacement Project

Cass County, Minnesota

ENBRIDGE





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MN-CA-C5-156.000

CA156bW

AR391.4

1043.5

CA156cW

CA156dW

CA156eW

CA156eW

1044

CA156fW

AR393.2

CA156gW

CA156iW

AR393.1

CA156hW

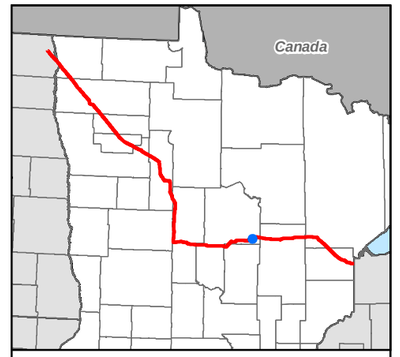
CA156iW

CA156kW

T139 R25W
Sec. 7

MN-CA-C5-156.100

MN-CA-01-018-2100



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MN-CA-C5-156.000

MN-CA-C5-157.000

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AR394.1

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w-139n25w8-at

w-139n25w8-ap

w-139n25w8-aq

w-139n25w8-au

w-139n25w8-ao

CA156iW

CA156gW

CA156hW

CA156jW

CA156lW

CA157bW

CA157aW

CA157eW

CA157dW

AR393.1

CA157cW

1044.5

CA156gW

CA156kW

CA157cW

CA157aW

CA157fW

T139 R25W
Sec. 8

T139 R25W
Sec. 7

w-139n25w8-ak

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AR394

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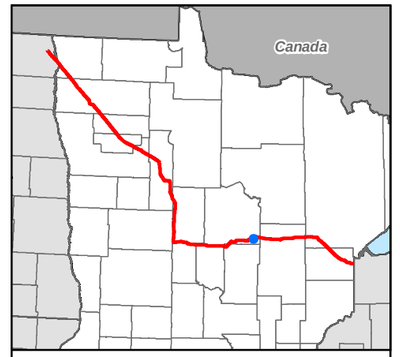
T139 R25W
Sec. 18

T139 R25W
Sec. 17



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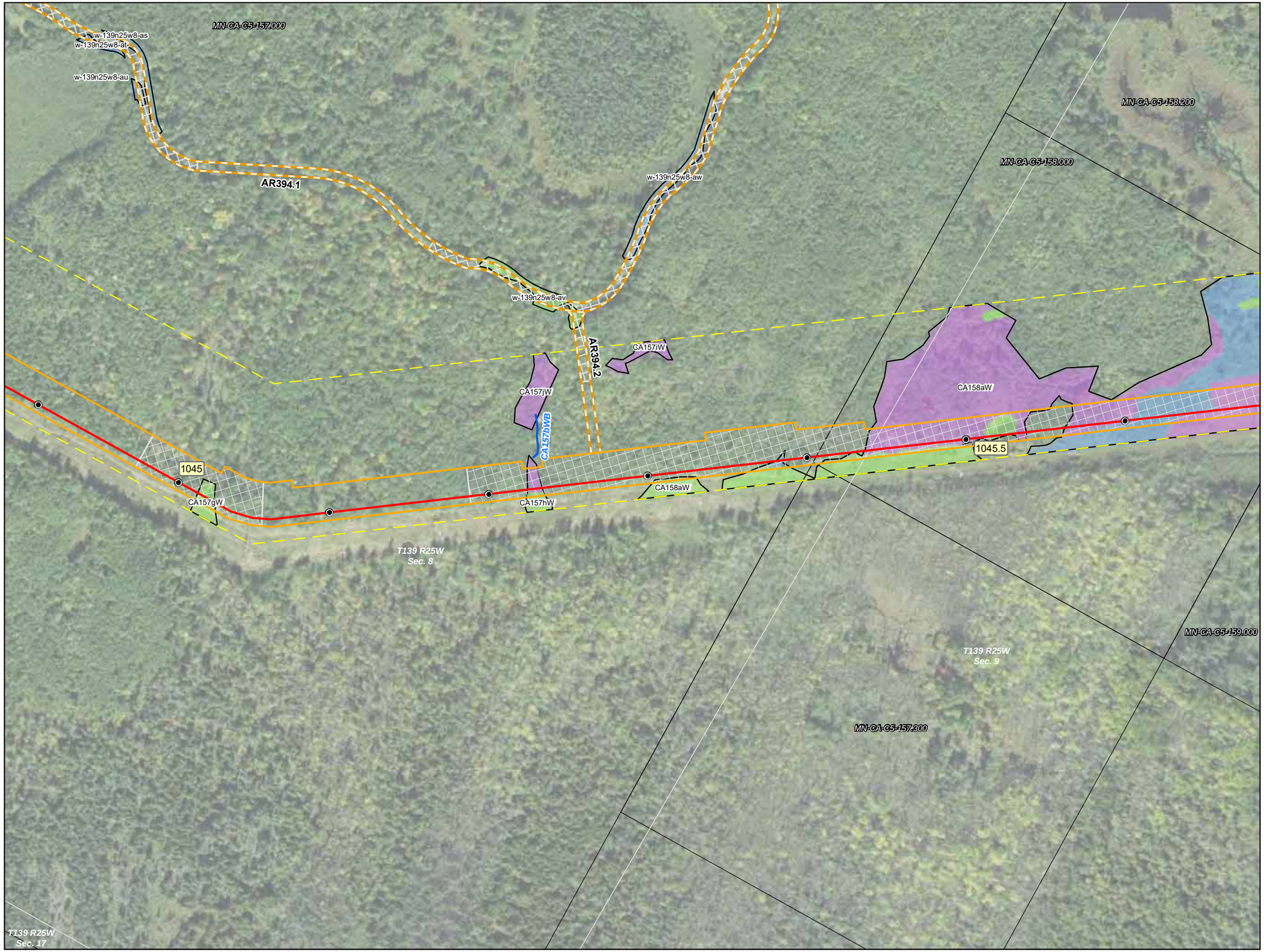

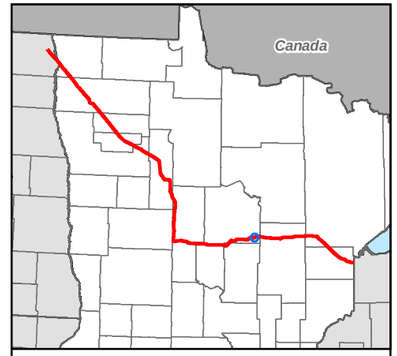

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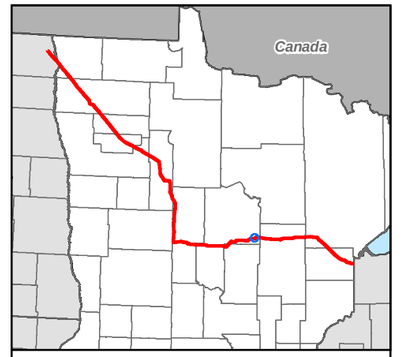

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- County Boundary
- Section Boundary
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- Pump Station

Environmental Field Data

Wetlands

Field Delineated Wetland	NWI Wetlands
PEM	PEM
PFO	PFO
PSS	PSS
PUB	PUB

Waterbodies

- Field Delineated Waterbody
- NHD Waterbody

NWI Waterbodies

- Lake
- Riverine

0 150 300 Feet

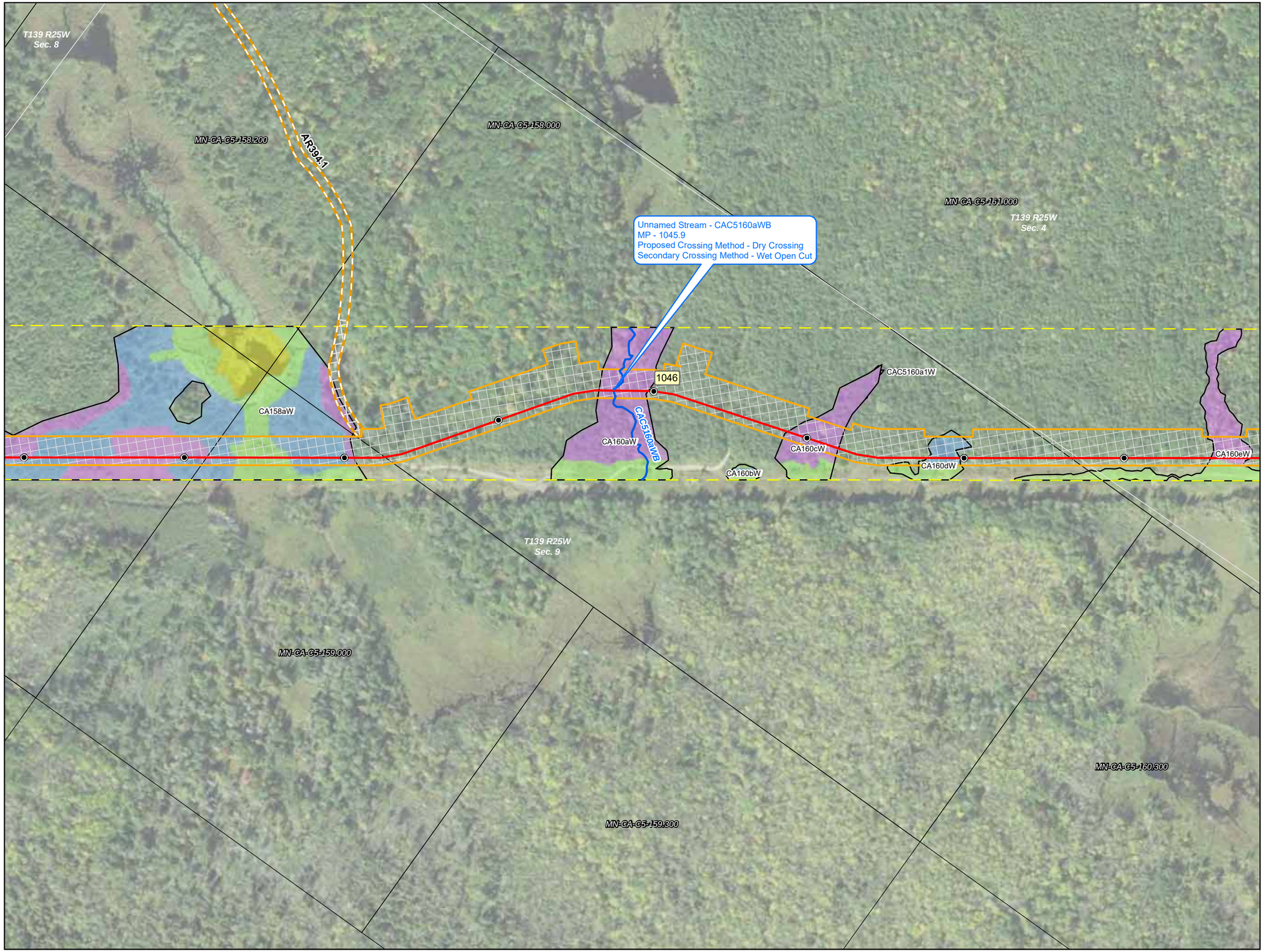
1 inch = 300 feet

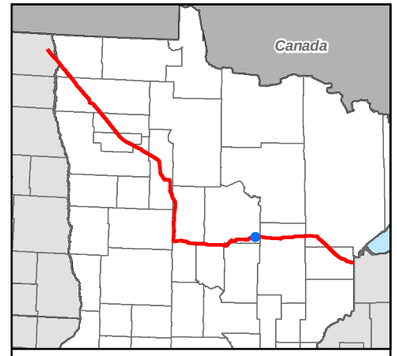
Detailed Route Maps

Line 3 Replacement Project

Cass County, Minnesota

ENBRIDGE





- Milepost
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Waterbodies

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NWI Waterbodies

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0 150 300 Feet

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Detailed Route Maps

Line 3 Replacement Project

Cass County, Minnesota

ENBRIDGE

MN-CA-C5-161.000

T139 R25W
Sec. 4

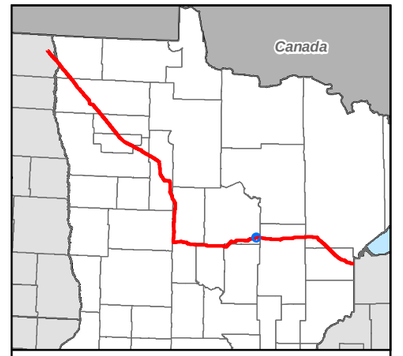
Unnamed Stream - CAC5161aWB
MP - 1046.5
Proposed Crossing Method - Wet Open Cut
Secondary Crossing Method - None

CAC5161aWB
CAC5161a1W
CAC5161b1W
CAC5161d1W
CAC5162a1W
CAC5162b1W
CAC5162c1W
CAC5162d1W
CAC5162e1W
CAC5162f1W
CAC5162g1W
CAC5162h1W
CAC5162i1W
CAC5162j1W
CAC5162k1W
CAC5162l1W
CA160eW
CA162yW
CA1625W
CA162xW
CA162abW
CA162tW
CA162tW
1046.5
1047
S-139n25w4-aa
AR394.6
w-139n25w4-aa

MN-CA-C5-162.000
T139 R25W
Sec. 3

MN-CA-C5-160.300
T139 R25W
Sec. 9

T139
R25W
Sec. 10



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Environmental Field Data

Wetlands

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PEM	PEM
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Waterbodies

- Field Delineated Waterbody
- NHD Waterbody

NWI Waterbodies

- Lake
- Riverine

0 150 300 Feet

1 inch = 300 feet

Detailed Route Maps

Line 3 Replacement Project

Cass County, Minnesota

ENBRIDGE

Unnamed Stream - CA162aWB
MP - 1047.3
Proposed Crossing Method - Dry Crossing
Secondary Crossing Method - Wet Open Cut

CAC5162s1W
CA162fW
CA162aWB
CAC5162r1W
CA162gW
CA162dW
1047.5
CAC5162q1W
CAC5162r1W
MN-CA-C5-162.000
CA162cW
CA162eW
T139 R25W
Sec. 3
CAC5162r1W
CA162aW
CAC5162o1W
CA162tW
CAC5162m1W
CAC5162n1W
CAC5162l1W
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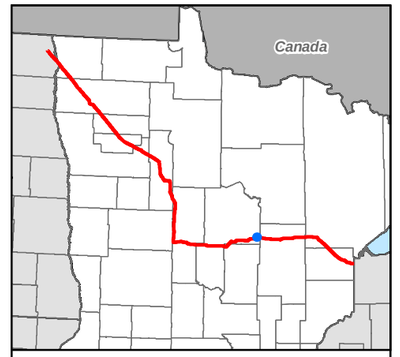
T139
R25W
Sec. 2
MN-CA-C5-163.300



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NWI Waterbodies

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- Riverine

0 150 300 Feet
1 inch = 300 feet

N W E S

Detailed Route Maps

Line 3 Replacement Project

Cass County, Minnesota

ENBRIDGE

September 2018

Source: Z:\Clients\E_H\Enbridge\Line_3_Full_Replacement\Permitting\Federal\COE\Sept_2018\RSA_22\Figures\L3_MN_COE_Alignment_Sheets_RSA22.mxd
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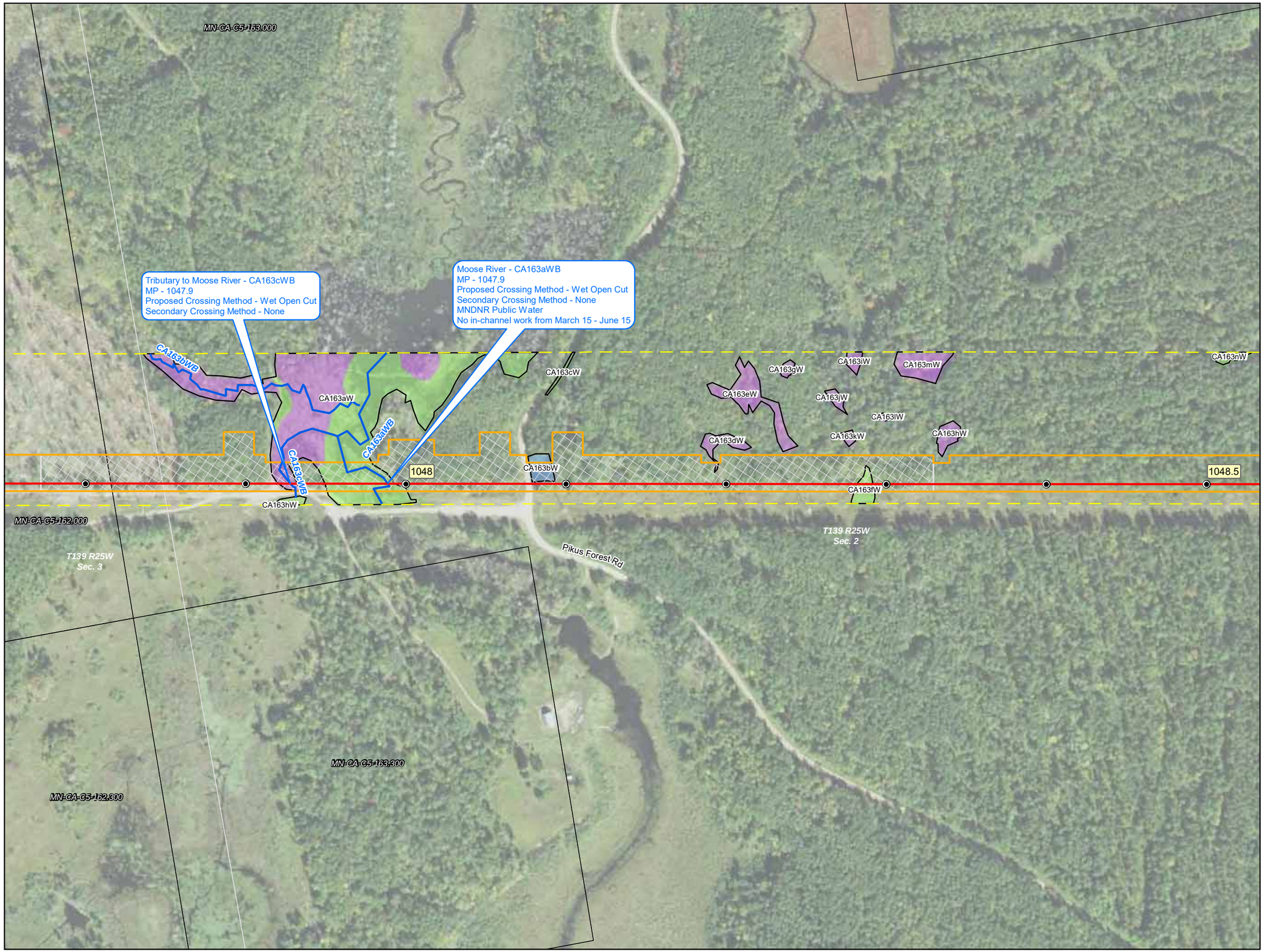

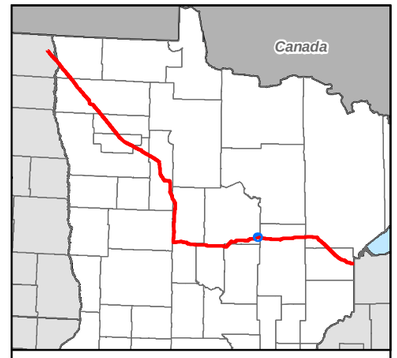

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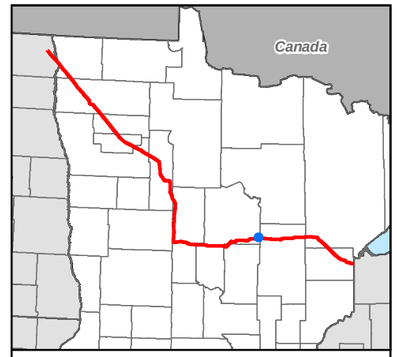
Detailed Route Maps

Line 3 Replacement Project

Cass County, Minnesota

ENBRIDGE



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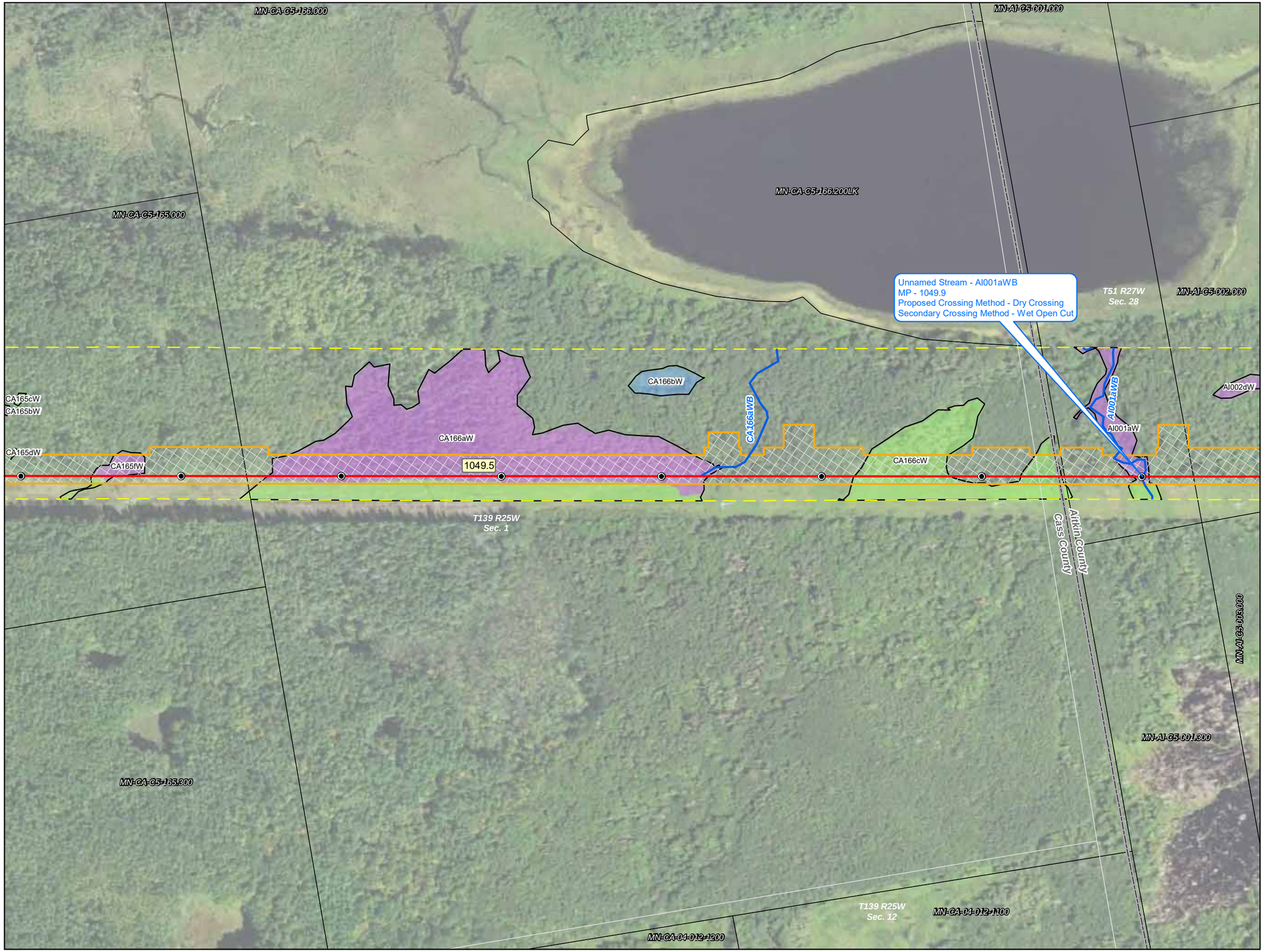
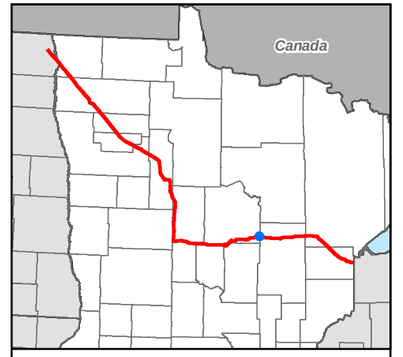
Detailed Route Maps

Line 3 Replacement Project

Cass County, Minnesota

ENBRIDGE





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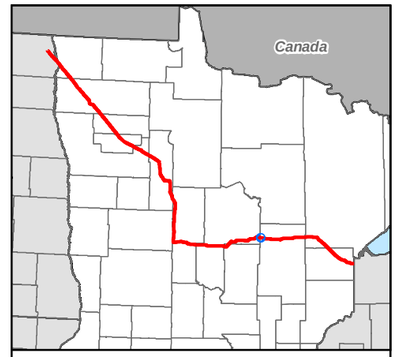
N E S W

Detailed Route Maps

Line 3 Replacement Project

Cass and Aitkin Counties, Minnesota

ENBRIDGE



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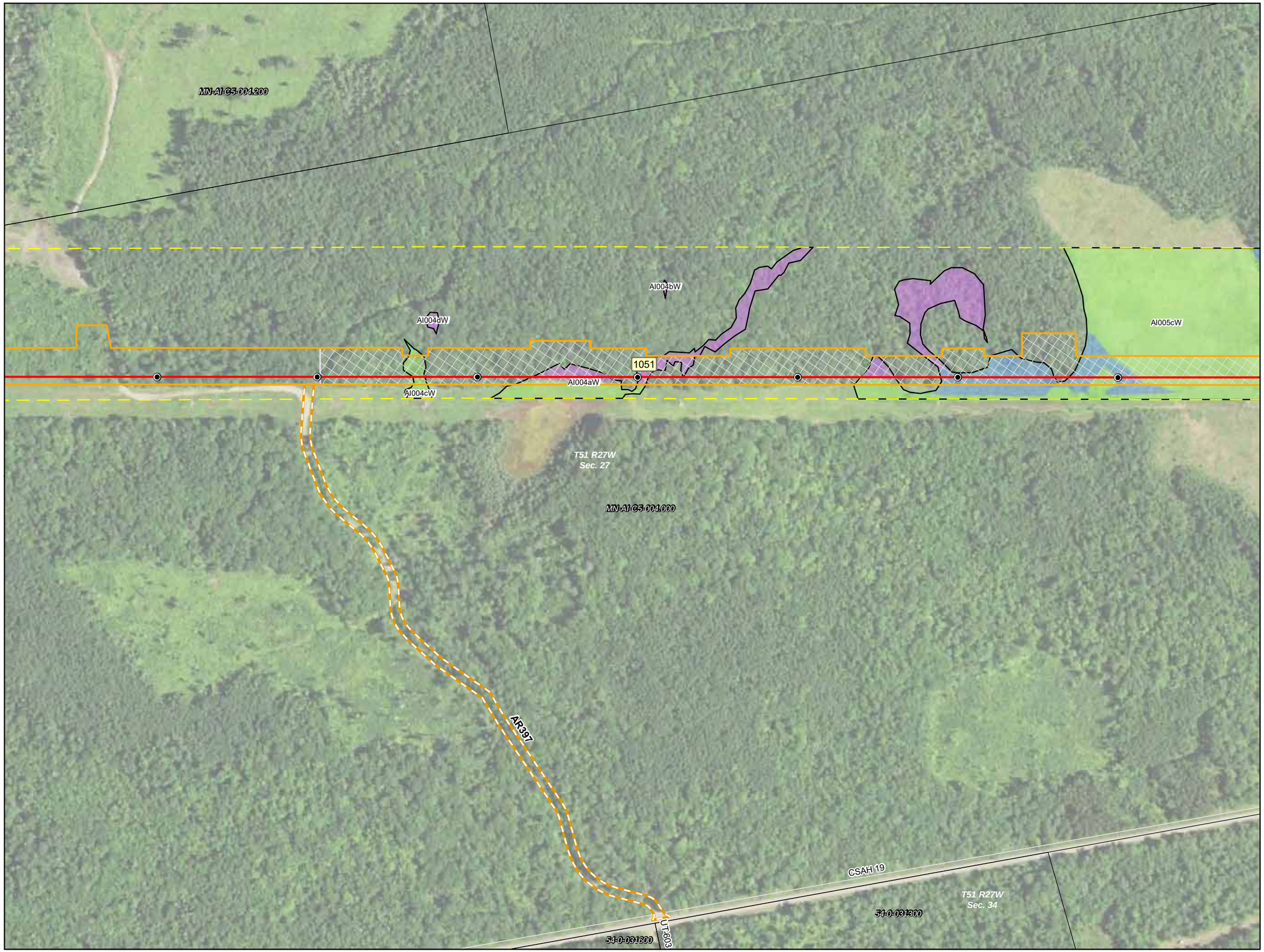
N E S W

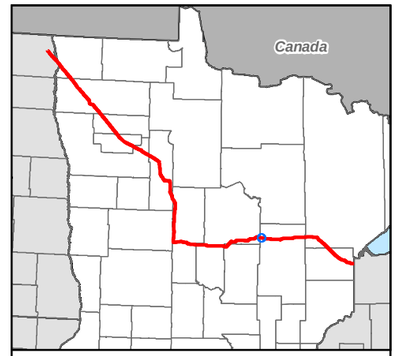
Detailed Route Maps

Line 3 Replacement Project

Aitkin County, Minnesota

ENBRIDGE





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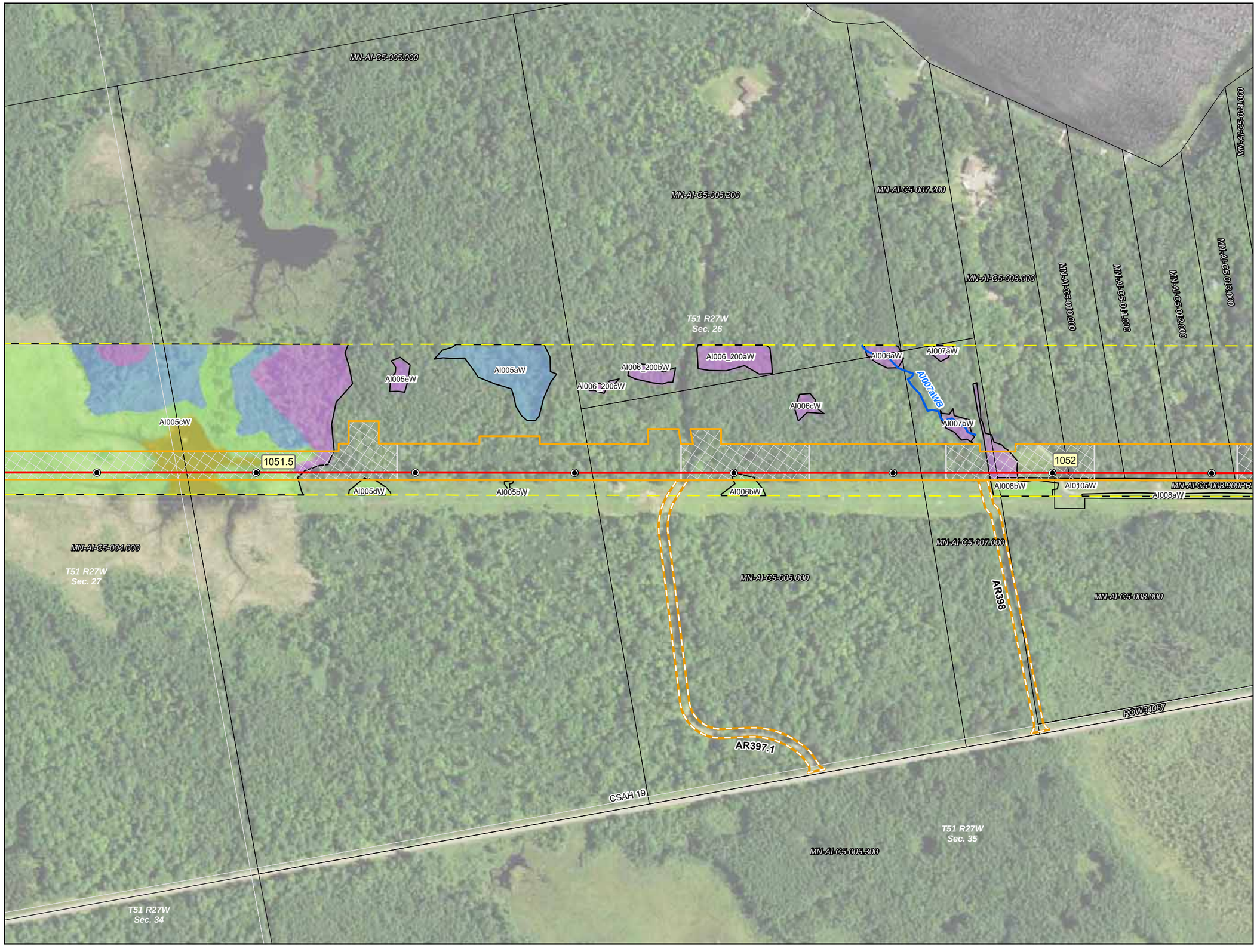
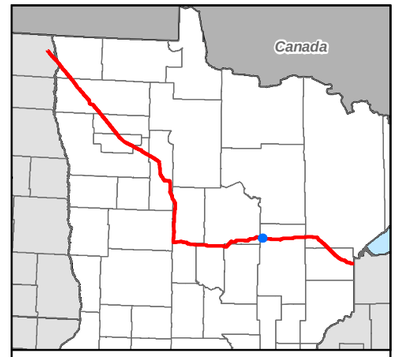
Detailed Route Maps

Line 3 Replacement Project

Aitkin County, Minnesota

ENBRIDGE





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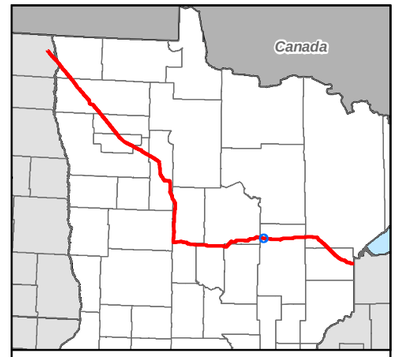
N E S W

Detailed Route Maps

Line 3 Replacement Project

Aitkin County, Minnesota

ENBRIDGE



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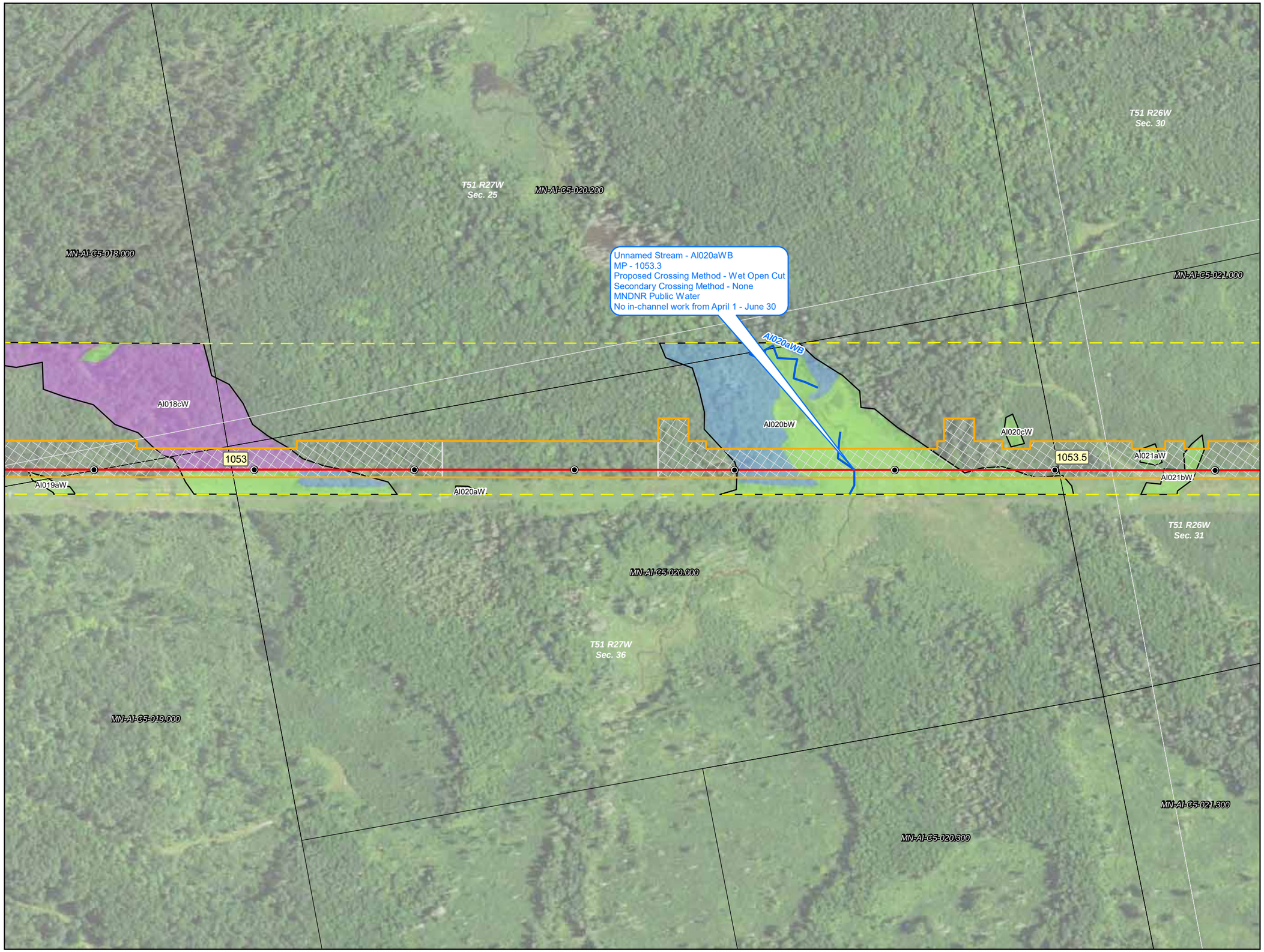
N E S W

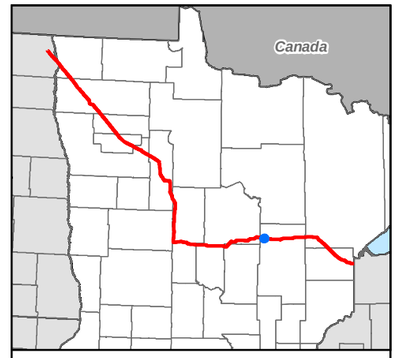
Detailed Route Maps

Line 3 Replacement Project

Aitkin County, Minnesota

ENBRIDGE





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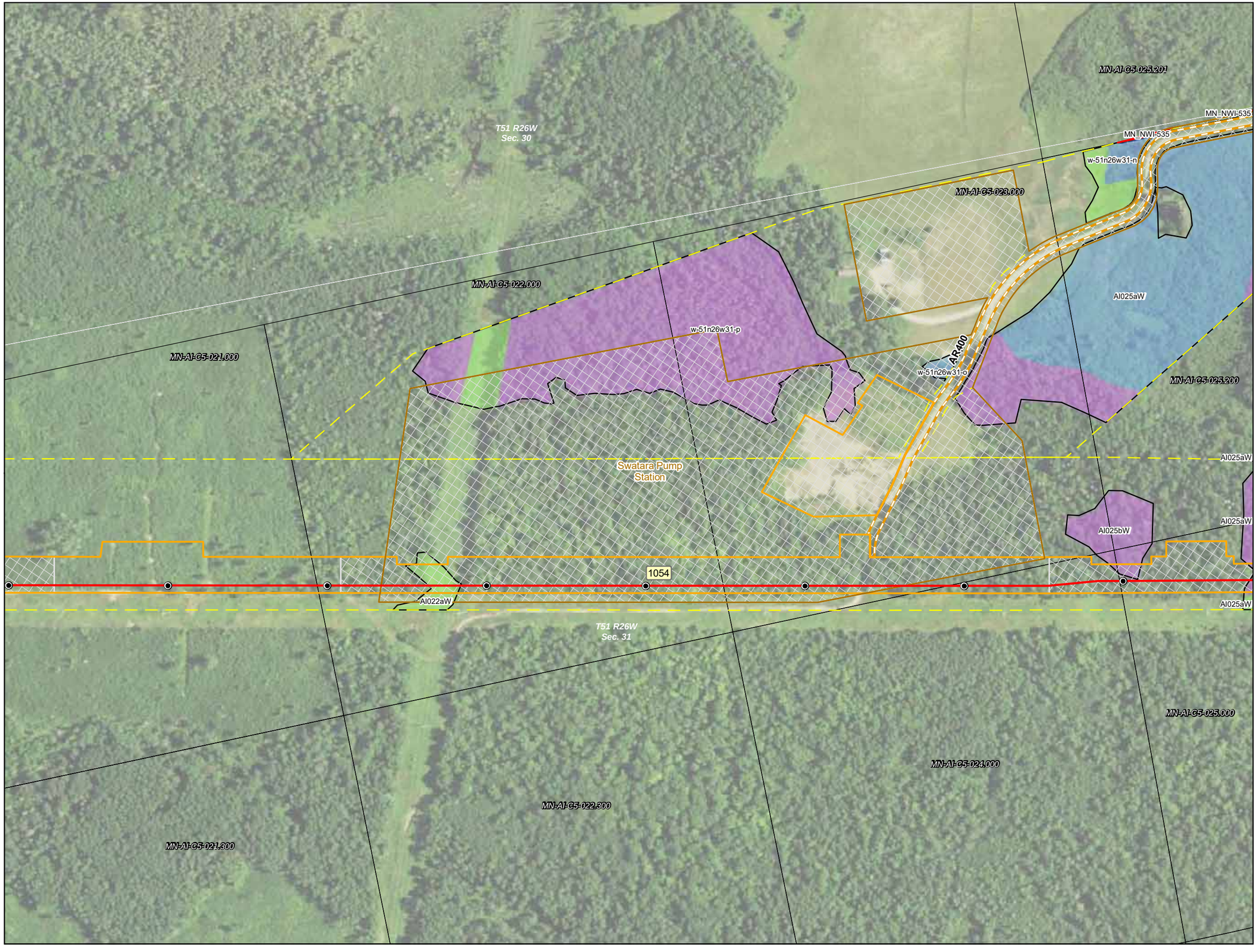
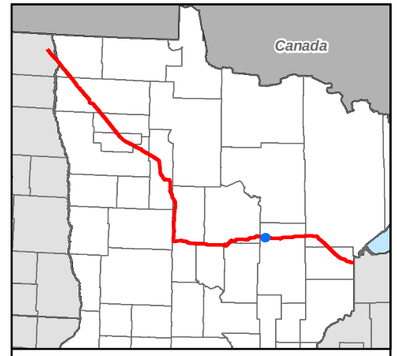
Detailed Route Maps

Line 3 Replacement Project

Aitkin County, Minnesota

ENBRIDGE





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N E S W

Detailed Route Maps

Line 3 Replacement Project

Aitkin County, Minnesota

ENBRIDGE

MN-AI-C5-025.201
w-51n26w29-a
w-51n26w29-b
s-51n26w29-a
MN-AI-C5-027.400
T51 R26W
Sec. 29
T51 R26W
Sec. 30
Swatara
Pump
Station
MN-NWI-535
MN-NWI-535
AR400
AI025aW
MN-AI-C5-025.200
CSAH 29
w-51n26w32-j
w-51n26w32-i
AR533
T51 R26W
Sec. 32
MN-AI-C5-027.000
w-51n26w32-h
w-51n26w32-e
w-51n26w32-f
AR531
AR532
w-51n26w32-g
T51 R26W
Sec. 31
AI027aWB
Unnamed Stream - AI027aWB
MP - 1054.6
Proposed Crossing Method - Wet - Push pull
Secondary Crossing Method - NA
AI025aW
AI027aW
1054.5
w-51n26w32-a
1055
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MN-AI-C5-025.000
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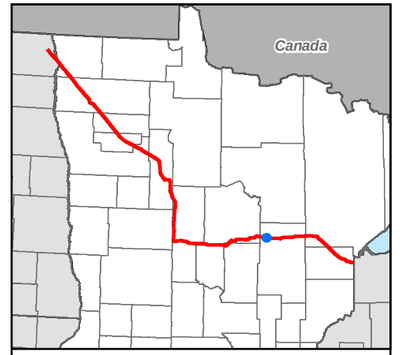

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N W E S

Detailed Route Maps

Line 3 Replacement Project

Aitkin County, Minnesota

ENBRIDGE

MN-A1-C5-027.000
MN_NWI-551
MN-A1-C5-031.000-RD
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AR624
w-51n26w33-y
w-51n26w33-w
w-51n26w32-c
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w-51n26w32-l
w-51n26w32-k
w-51n26w32-m
w-51n26w32-n
w-51n26w33-t
s-51n26w33-g
s-51n26w33-h
w-51n26w33-u
AR533
MN-A1-C5-029.000
MN-A1-C5-028.000
T51 R26W
Sec. 33
w-51n26w32-g
AR531
T51 R26W
Sec. 32
w-51n26w32-c
1055.5
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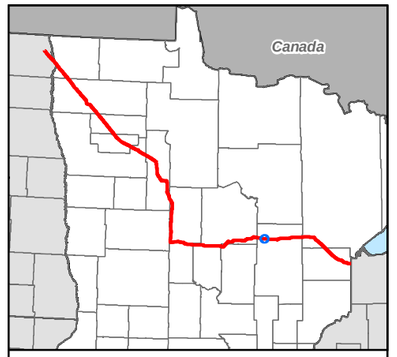

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Detailed Route Maps

Line 3 Replacement Project

Aitkin County, Minnesota

ENBRIDGE

Source: Z:\Clients\E_H\Enbridge\Line_3_Full_Replacement\Permitting\Federal\COE\Sept_2018\RSA_22\Figures\L3_MN_COE_Alignment_Sheets_RSA22.mxd
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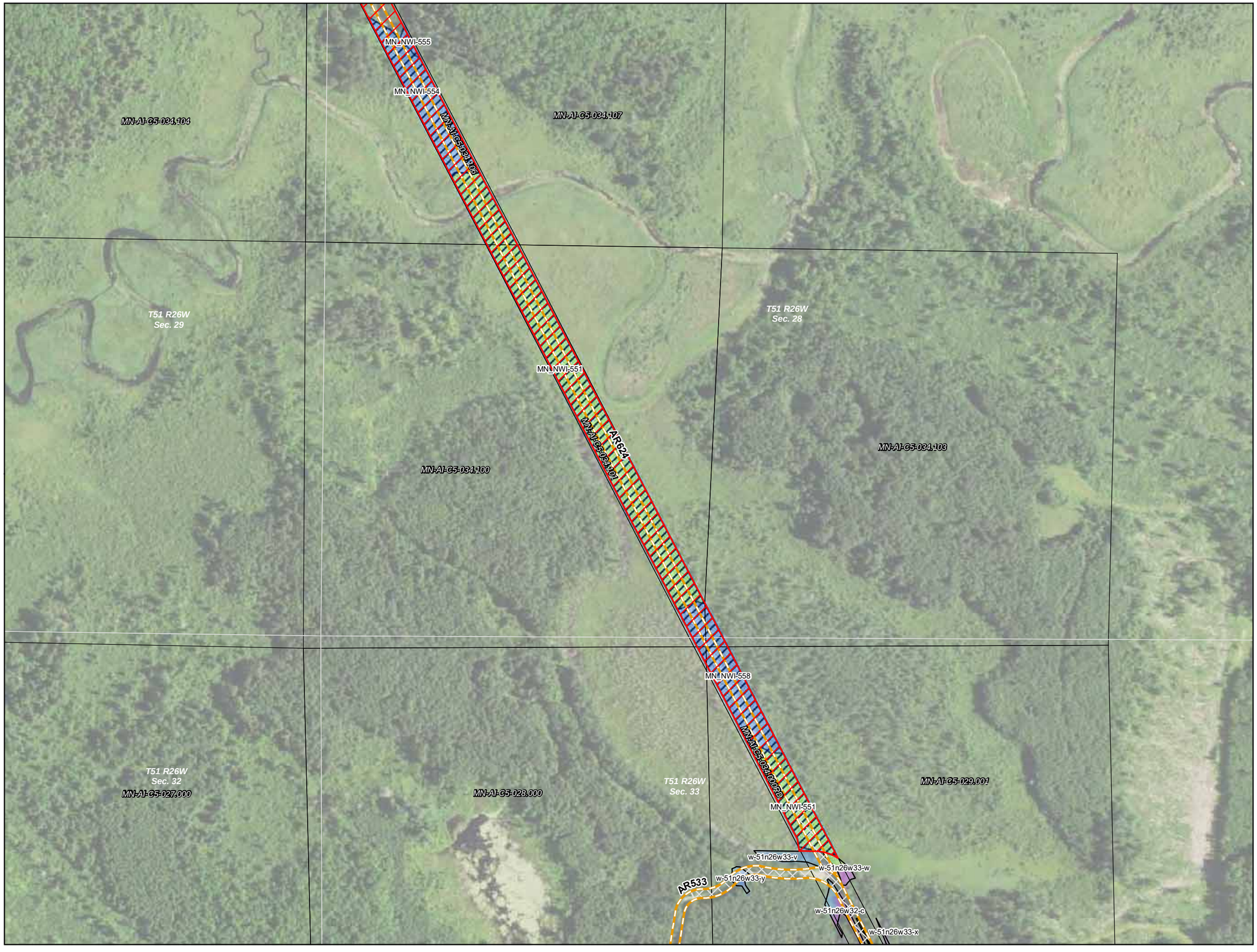

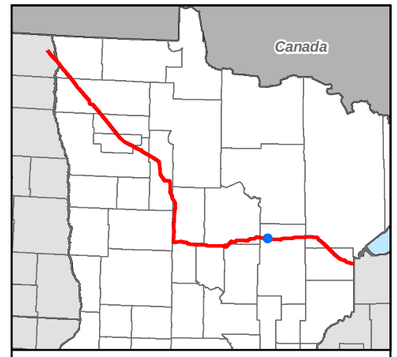

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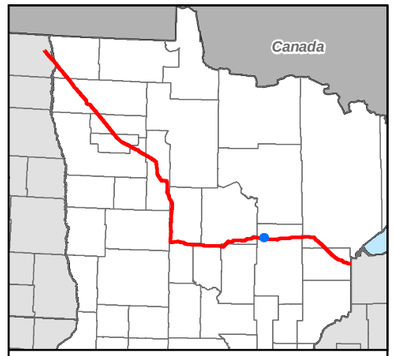
Line 3 Replacement Project

Aitkin County, Minnesota

ENBRIDGE



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N W E S

Detailed Route Maps

Line 3 Replacement Project

Aitkin County, Minnesota

ENBRIDGE

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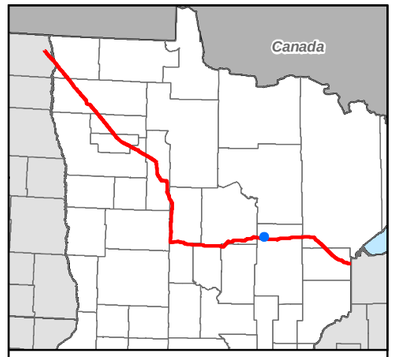

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Line 3 Replacement Project

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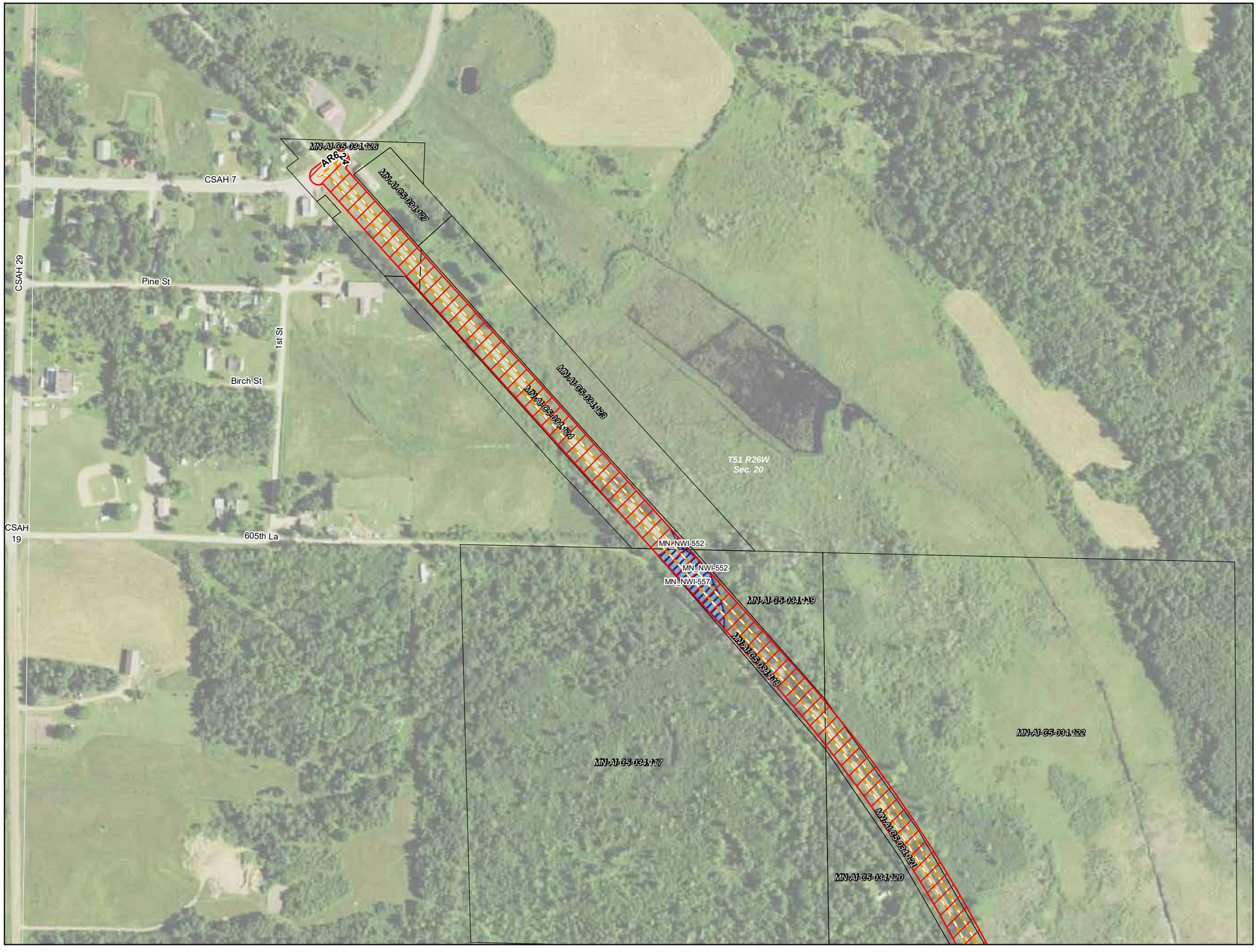

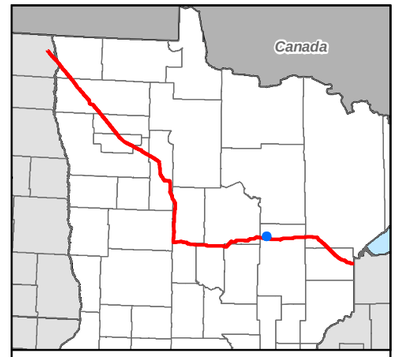

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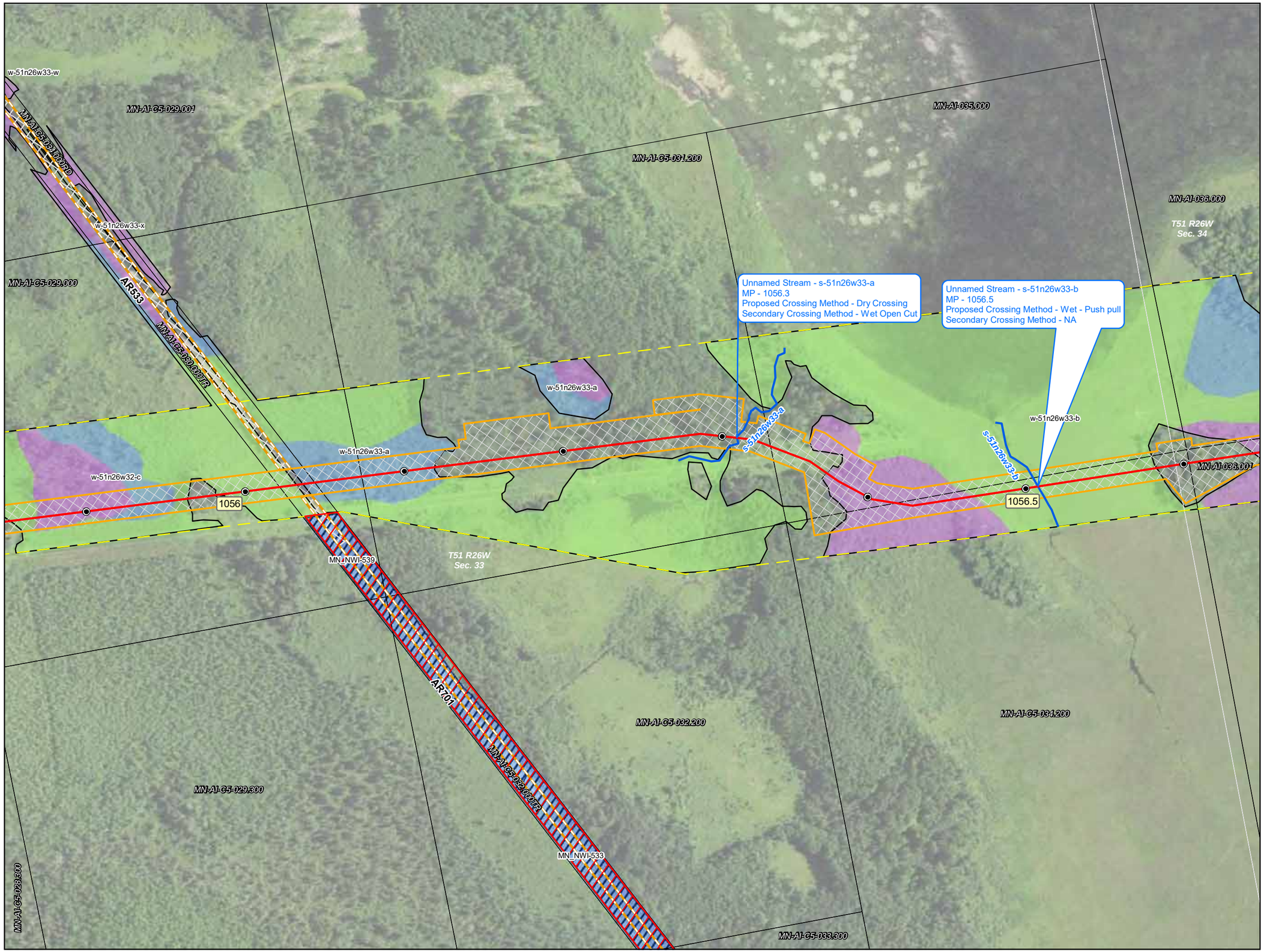

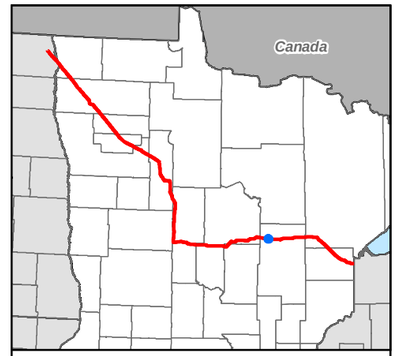

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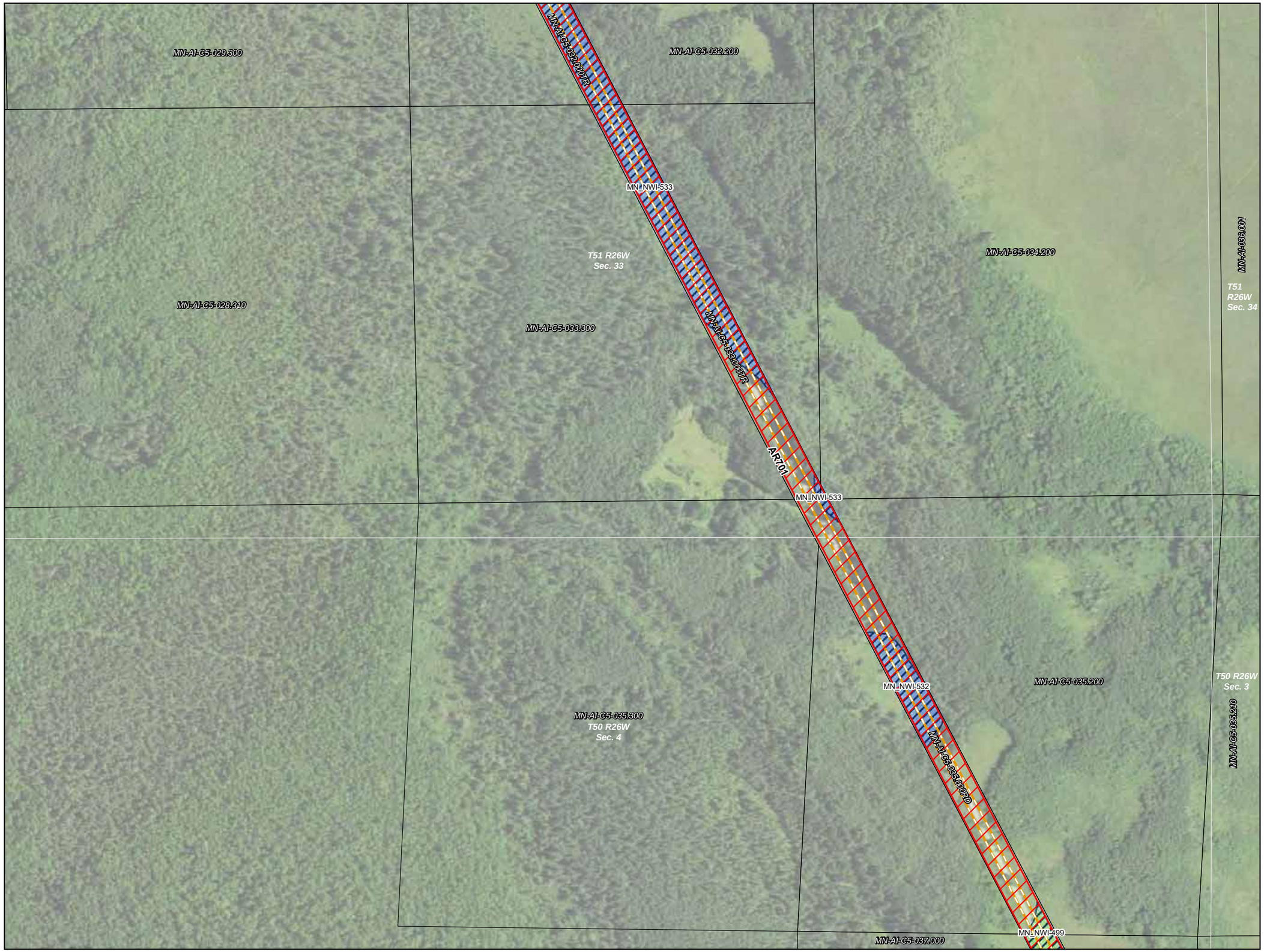

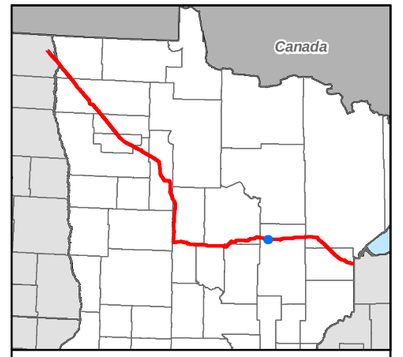

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MN-A1-C5-038.000TR
MN NWI-499
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MN-A1-C5-037.000
MN-A1-C5-038.000TR
AR7101
T50 R26W
Sec. 4
T50 R26W
Sec. 3
MN NWI-536
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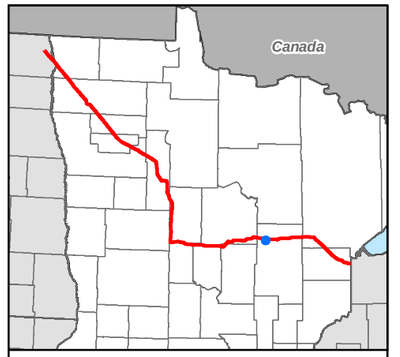

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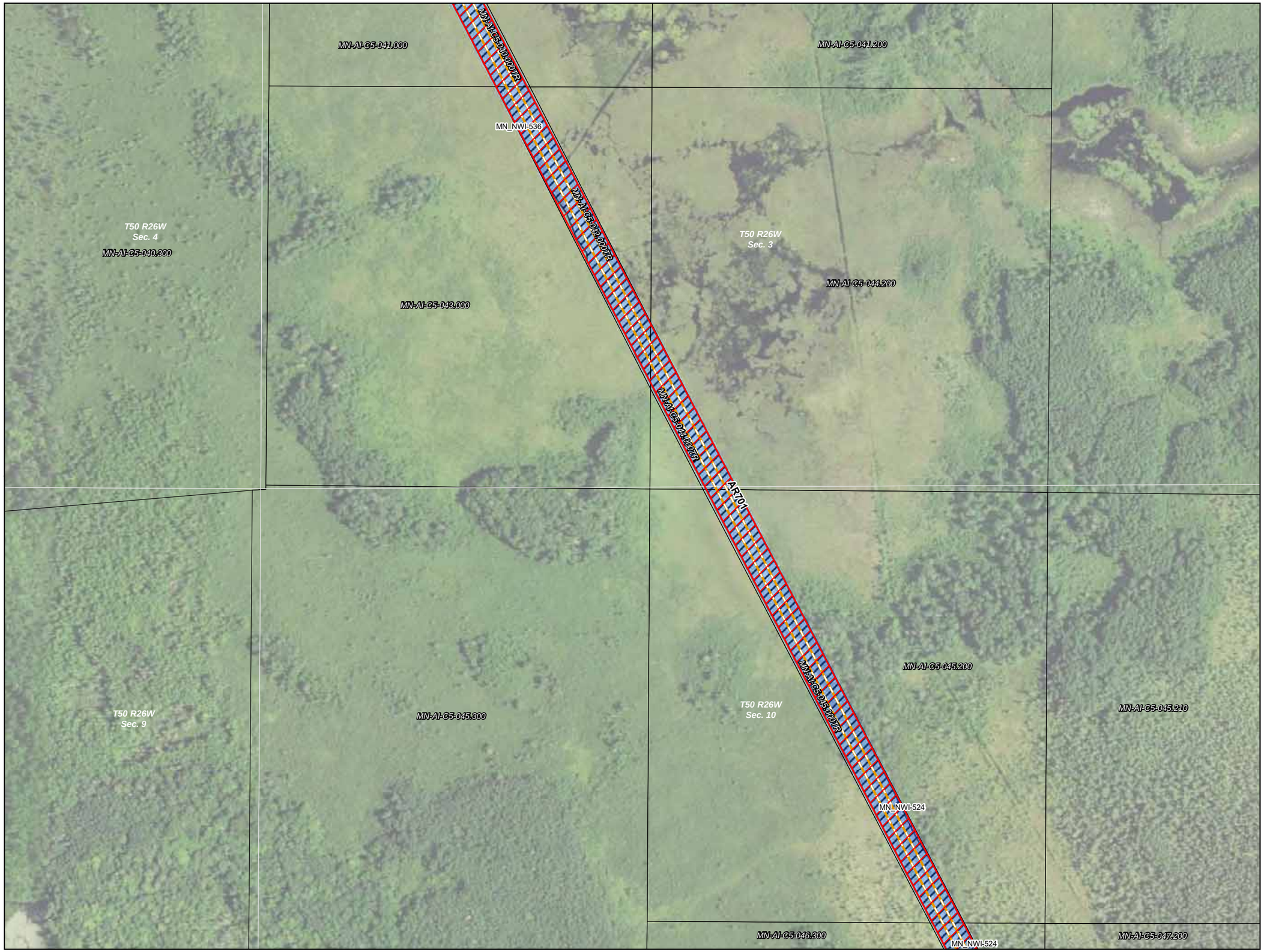

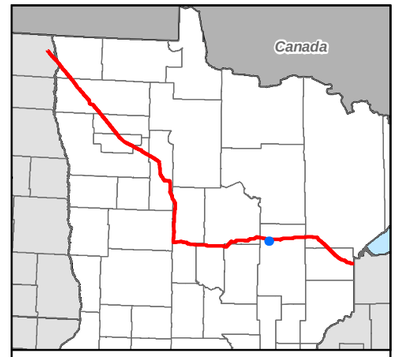

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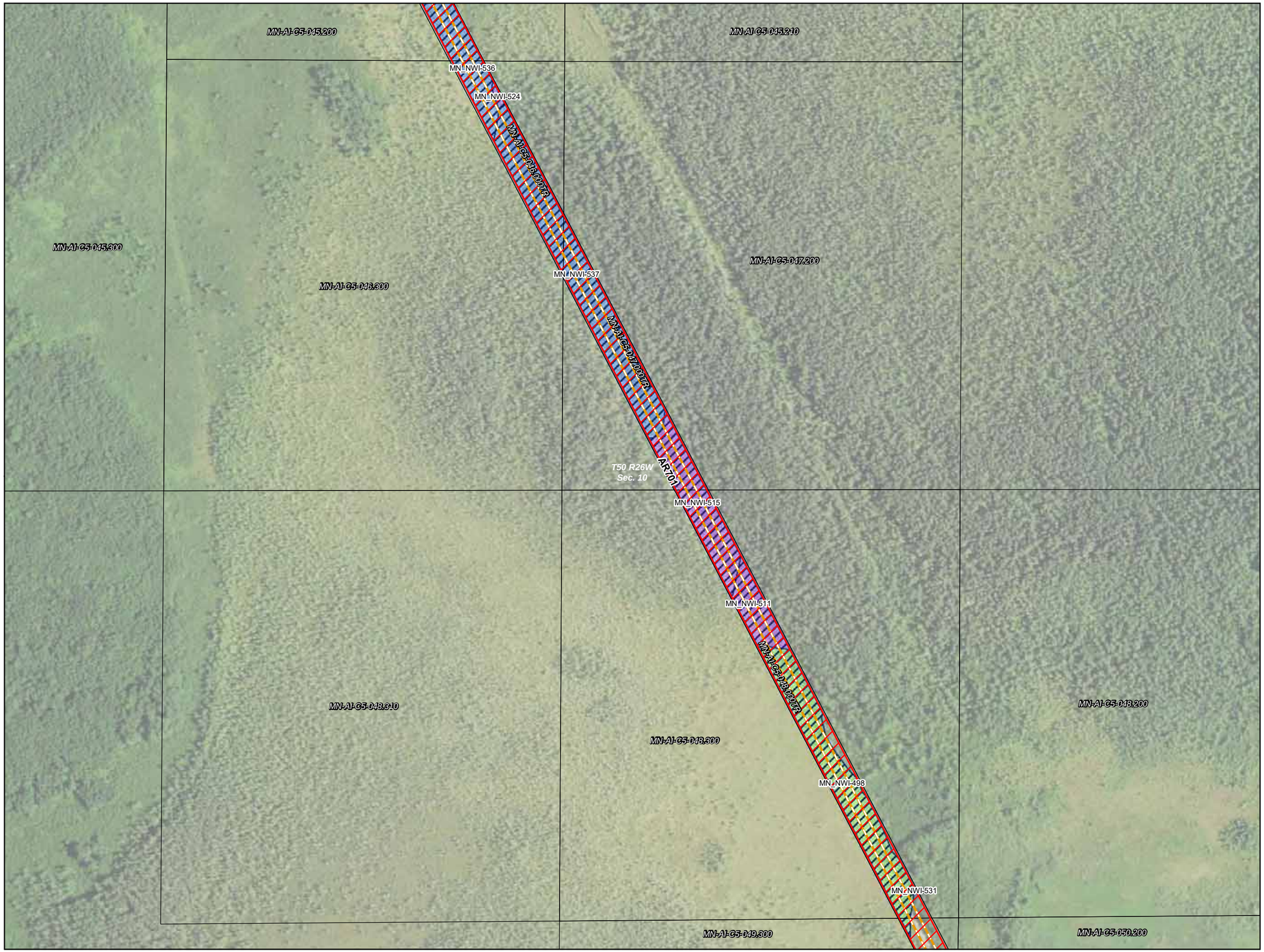

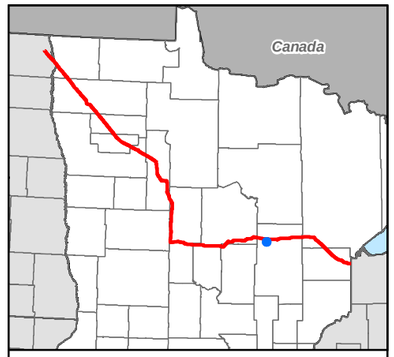

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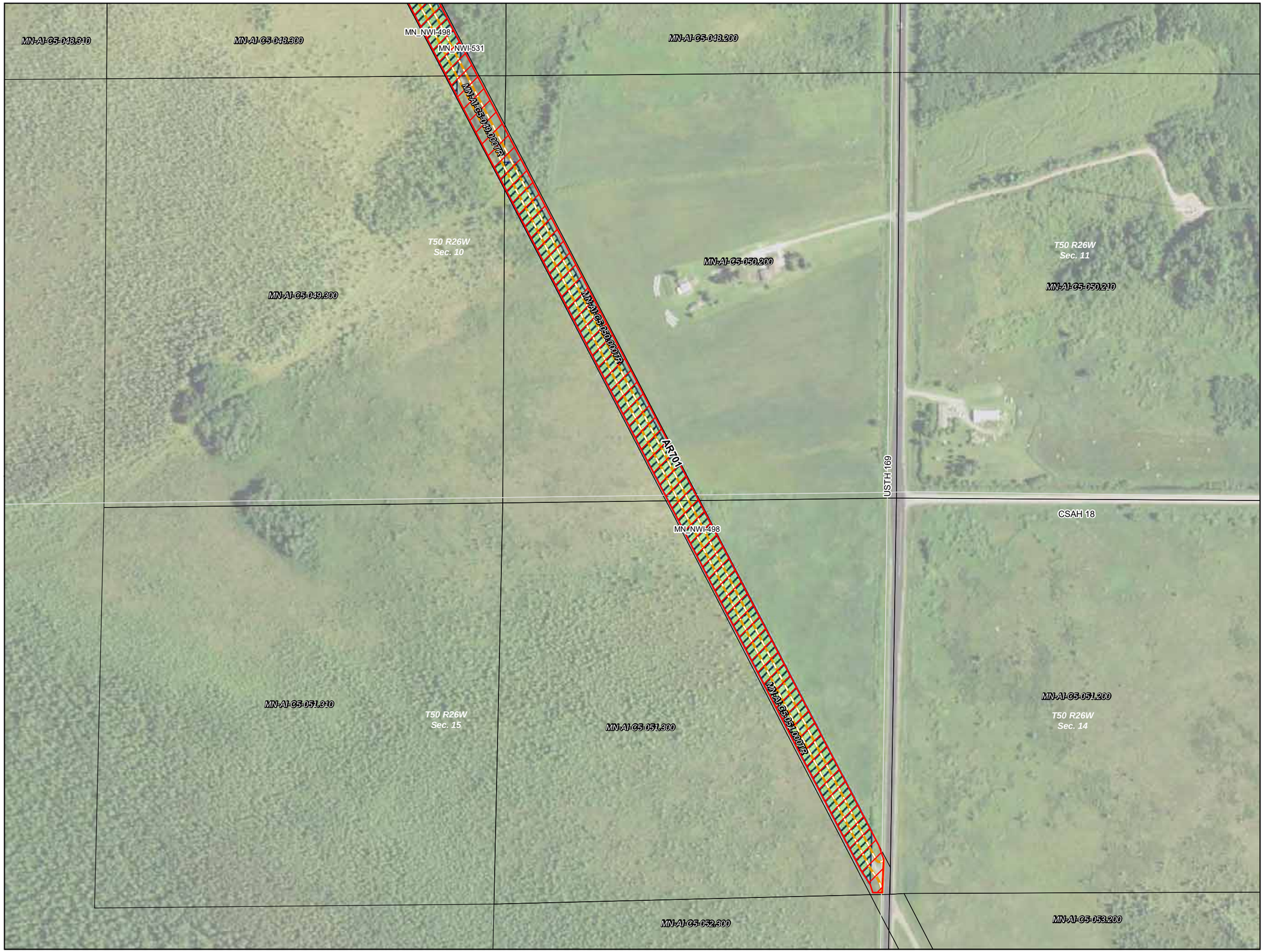

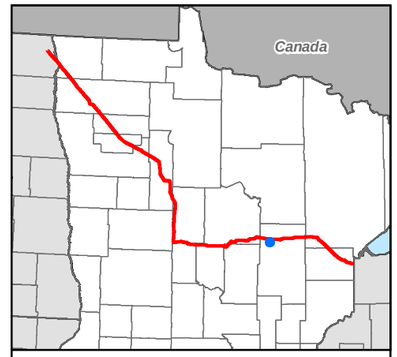

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Aitkin County, Minnesota

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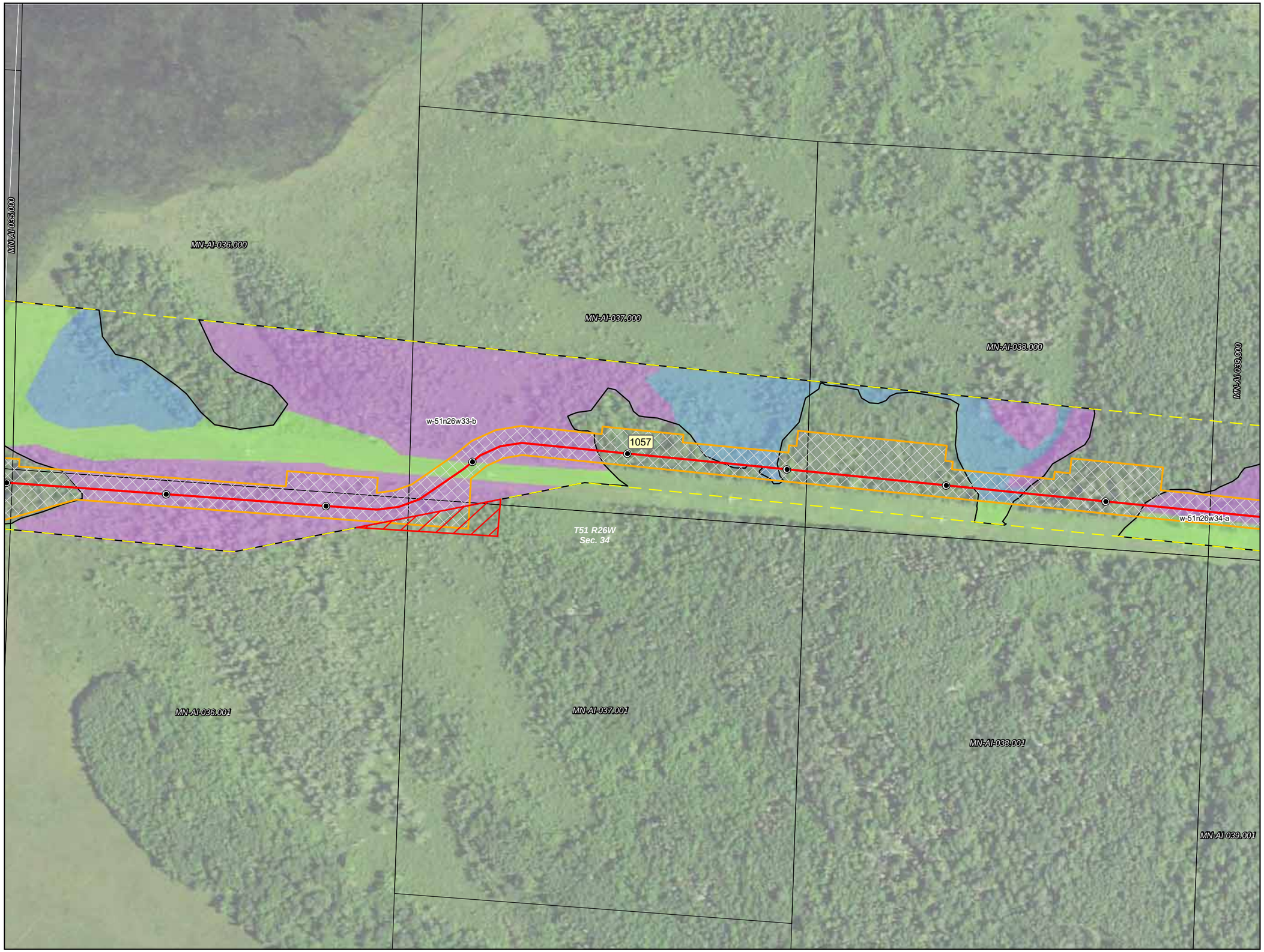

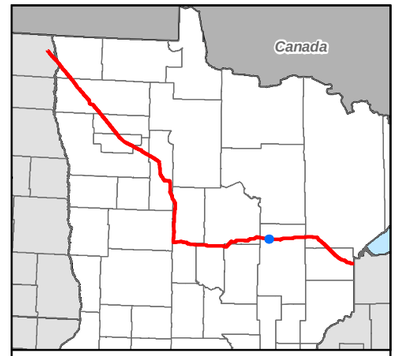

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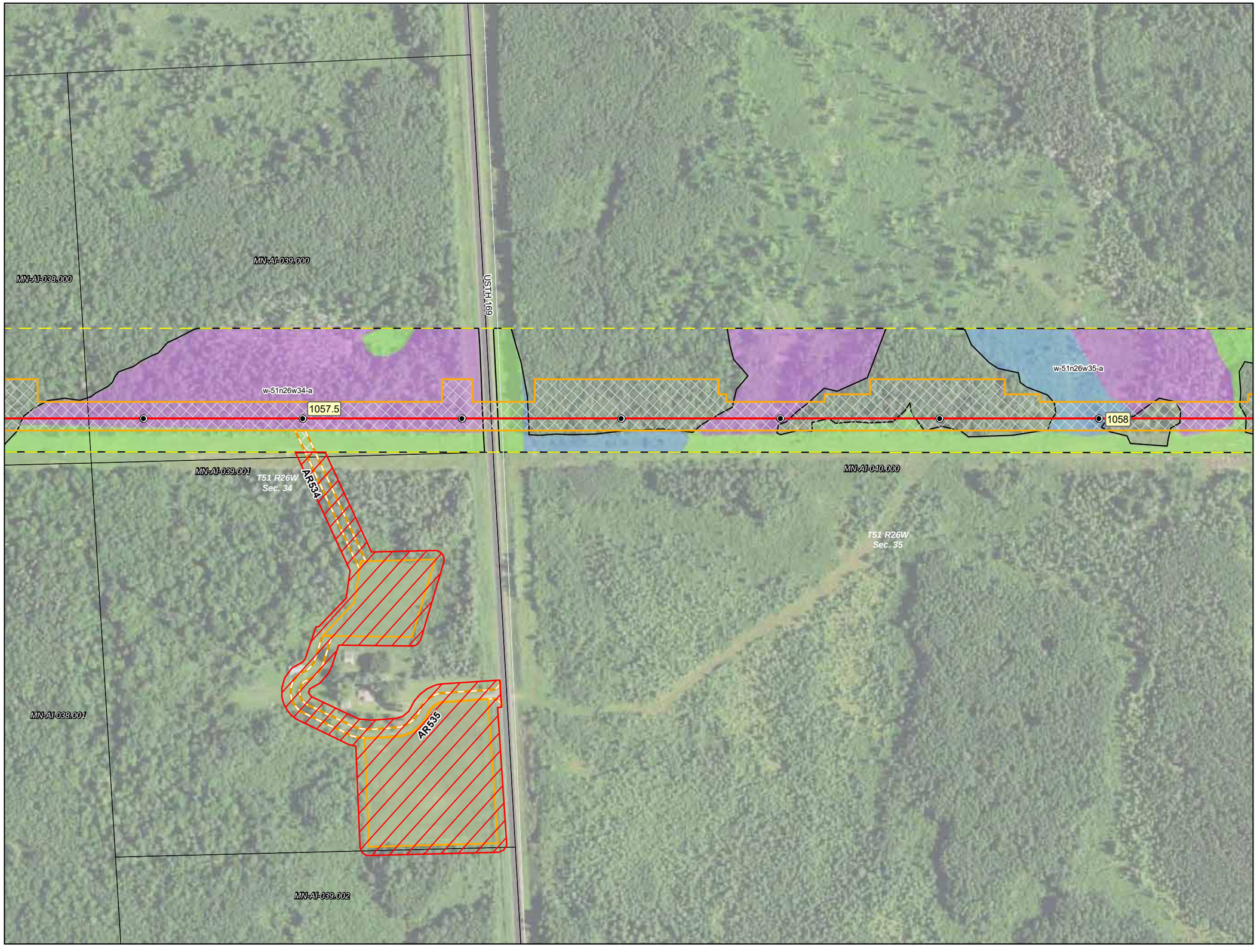

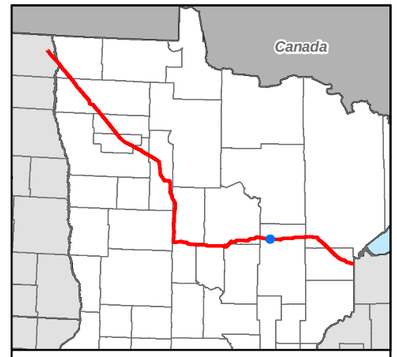

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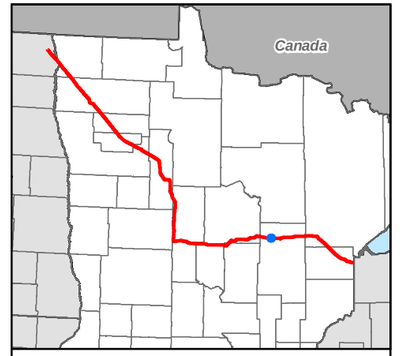

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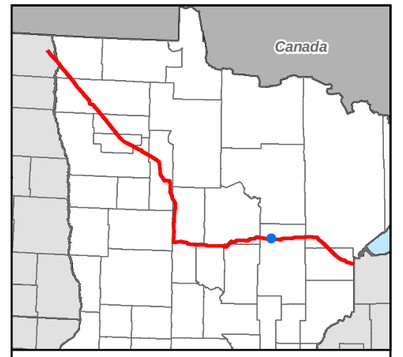

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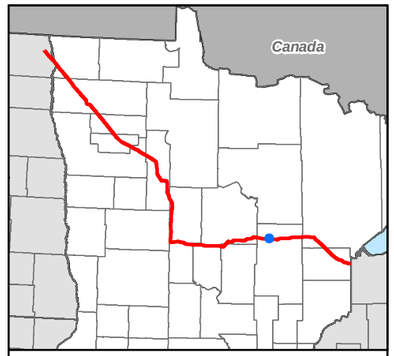

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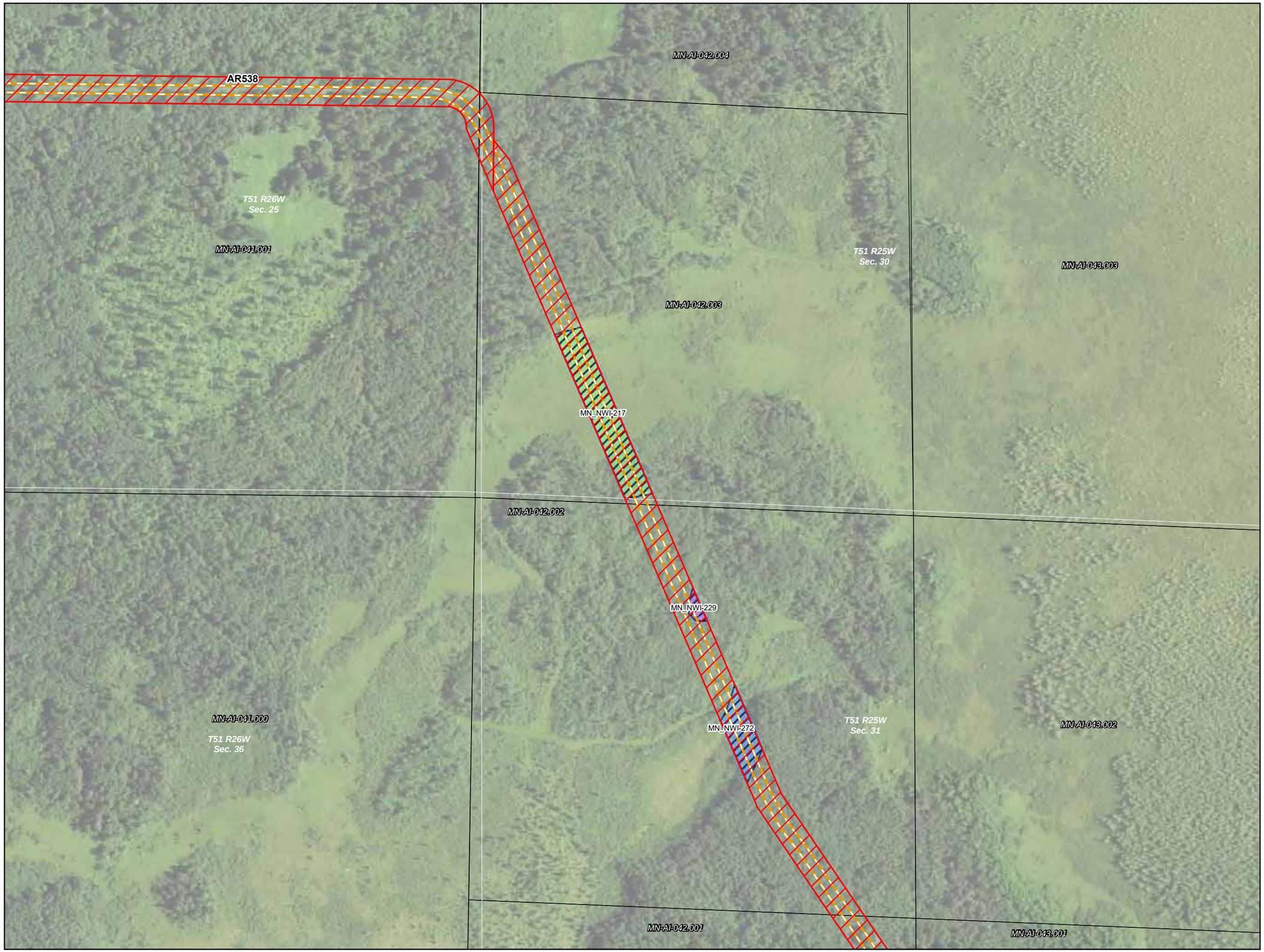

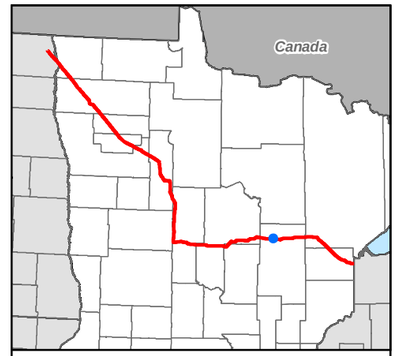

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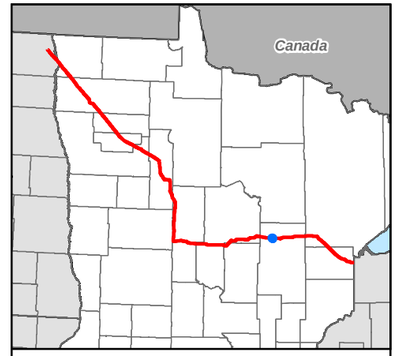

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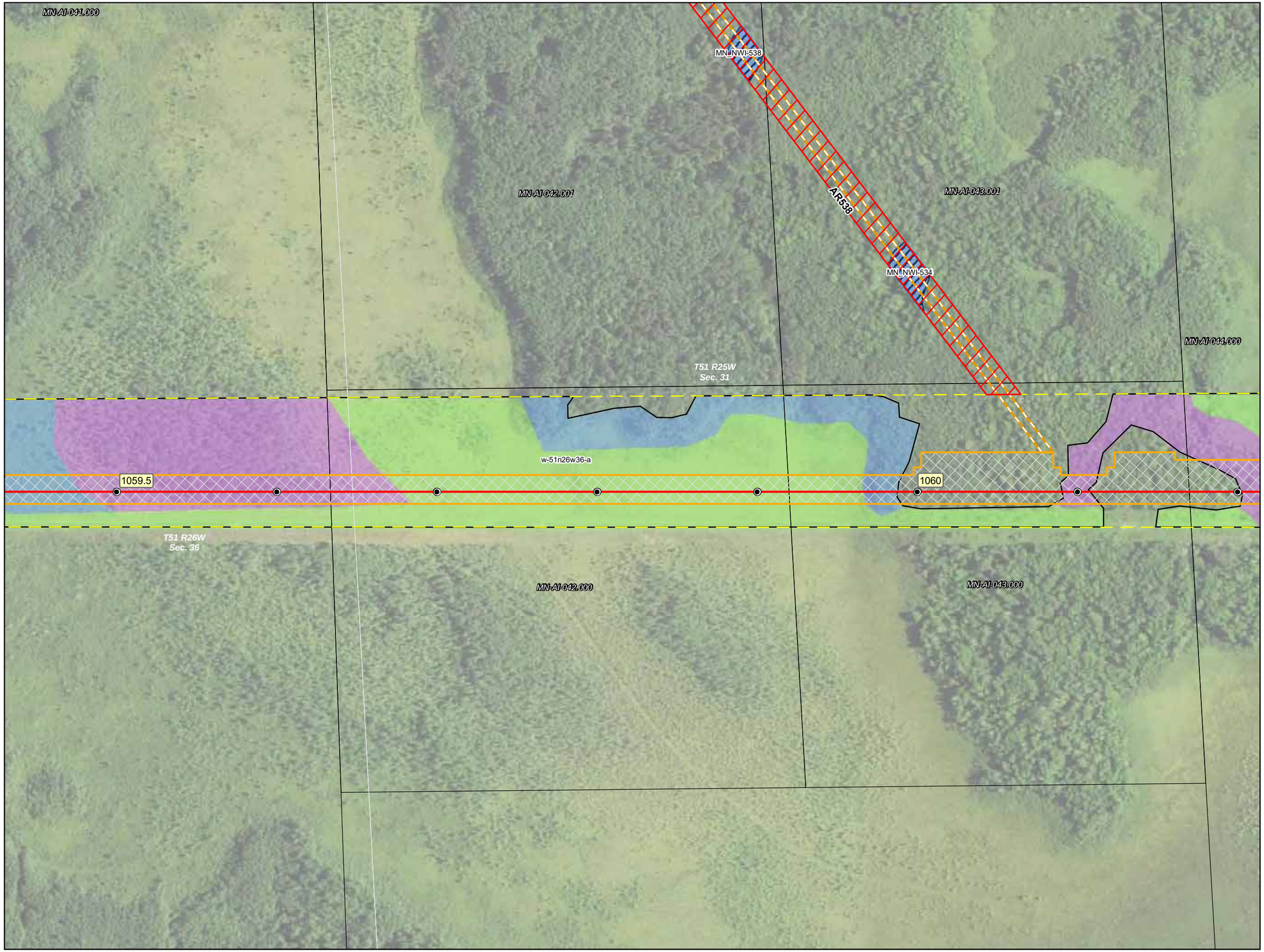

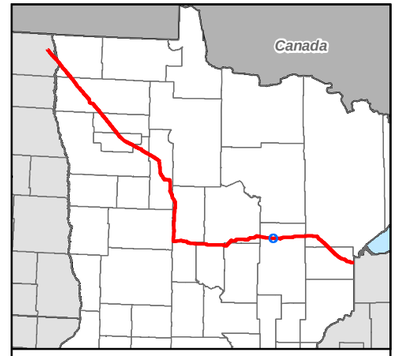

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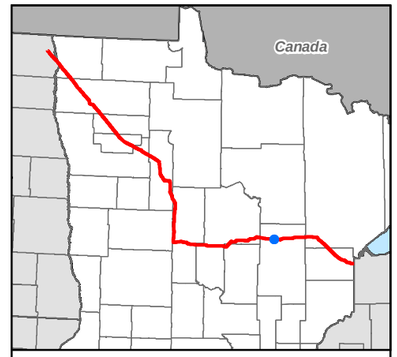

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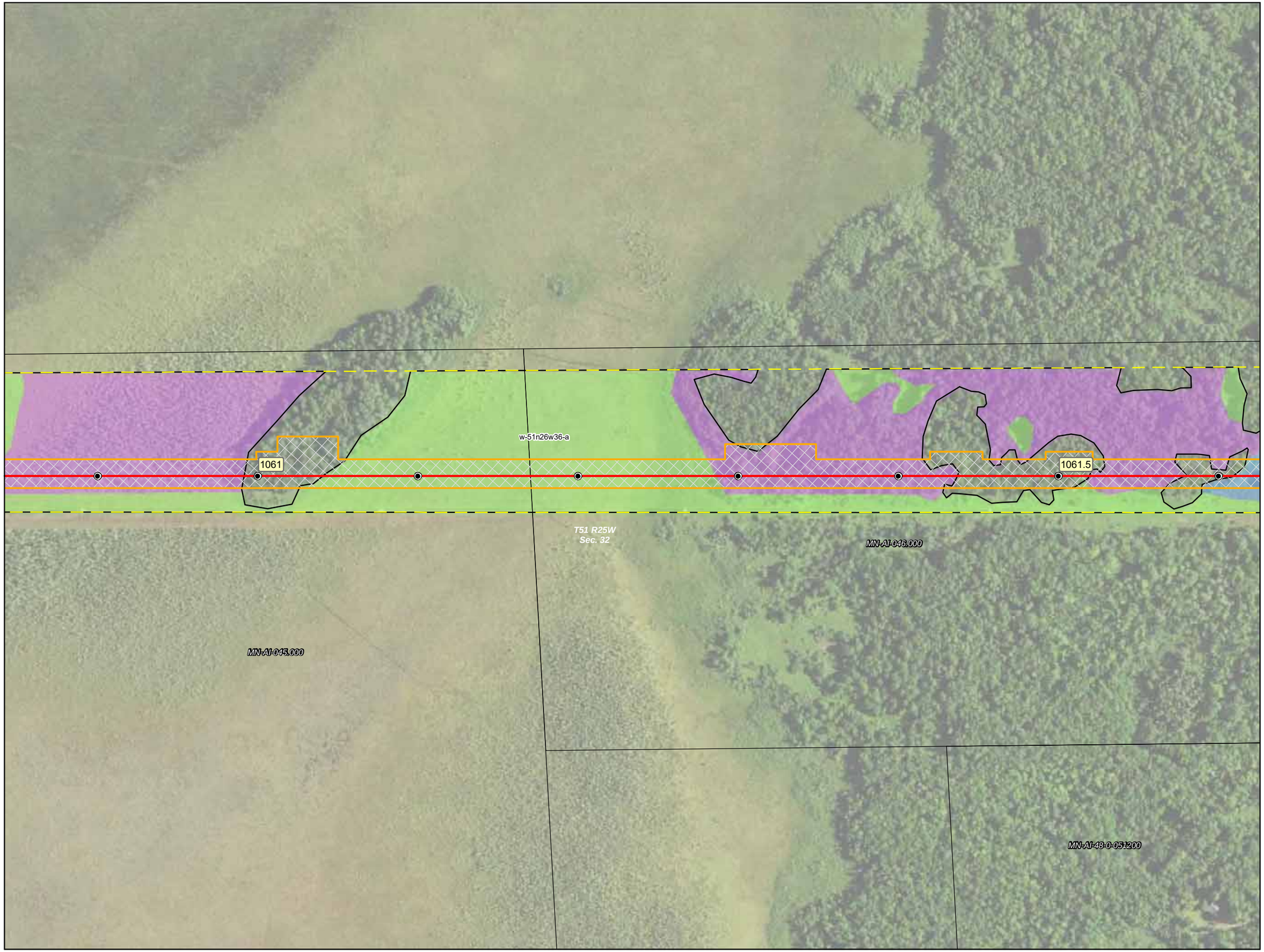
N W E S

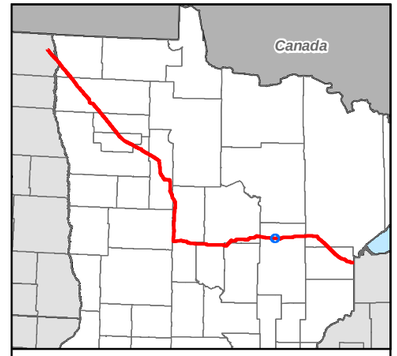
Detailed Route Maps

Line 3 Replacement Project

Aitkin County, Minnesota

ENBRIDGE





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Line 3 Replacement Project

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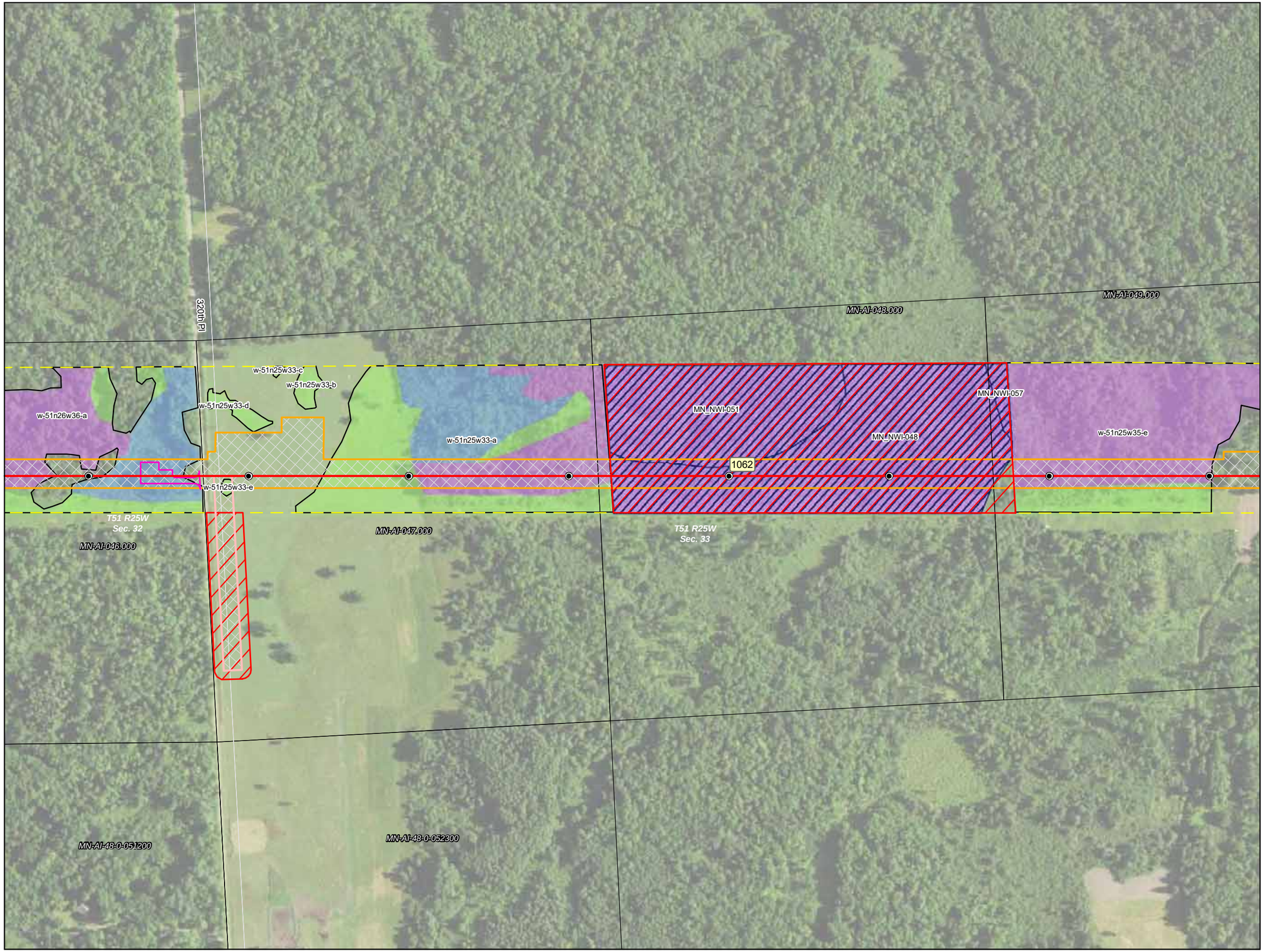

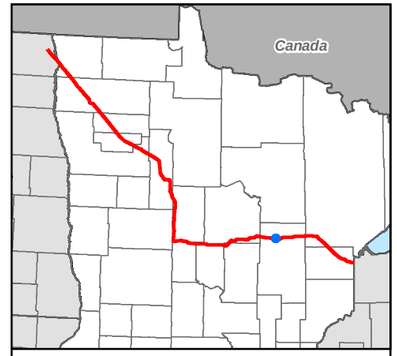

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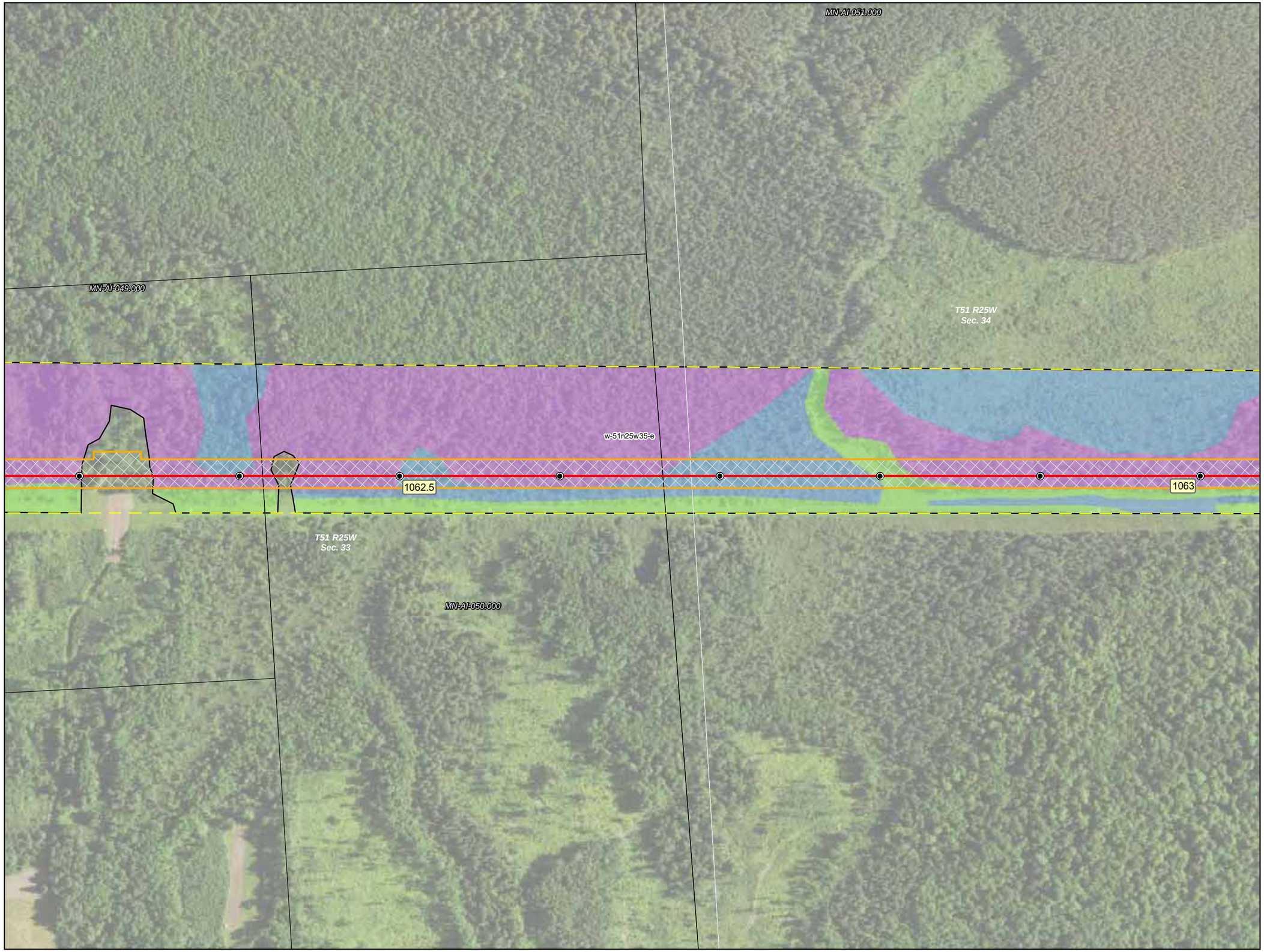

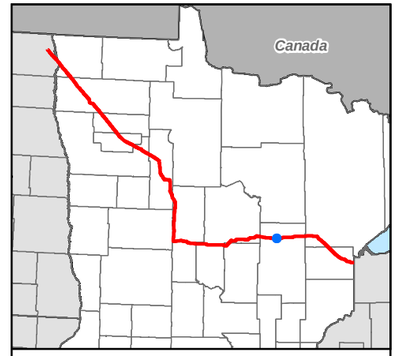

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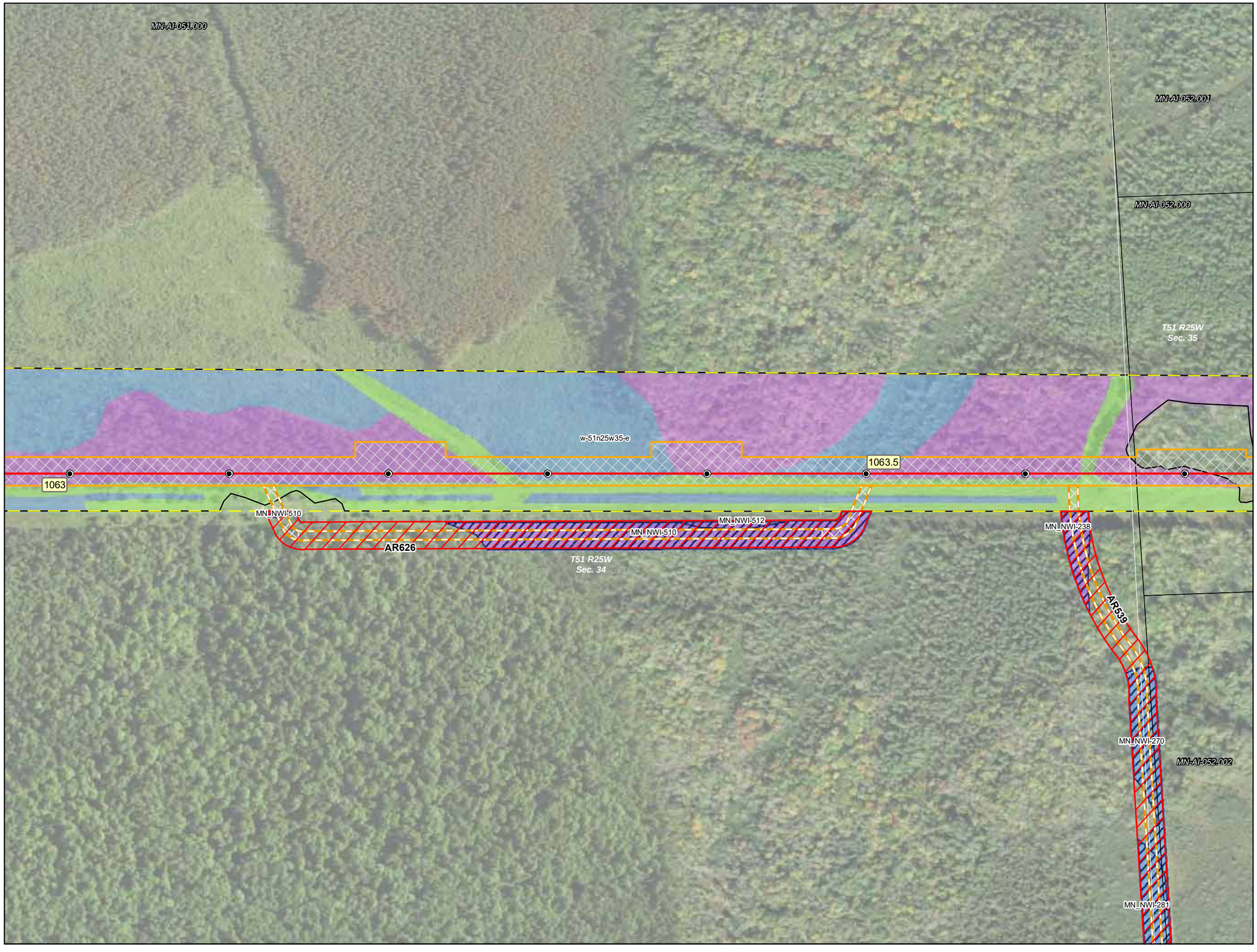

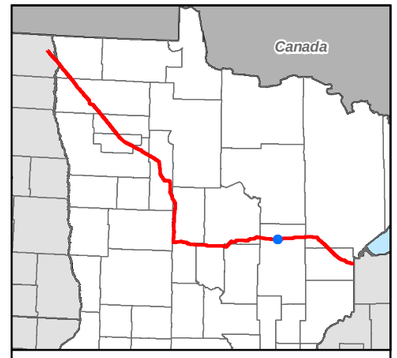

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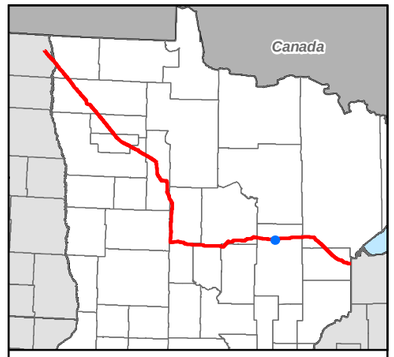

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AR539

MN-AI-051.001

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Sec. 3

T50 R25W
Sec. 2

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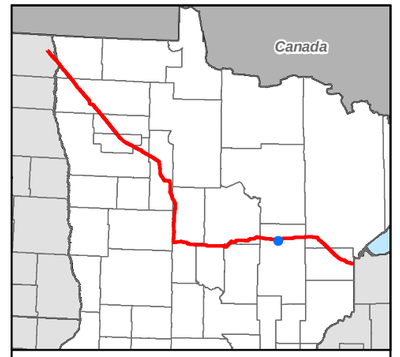

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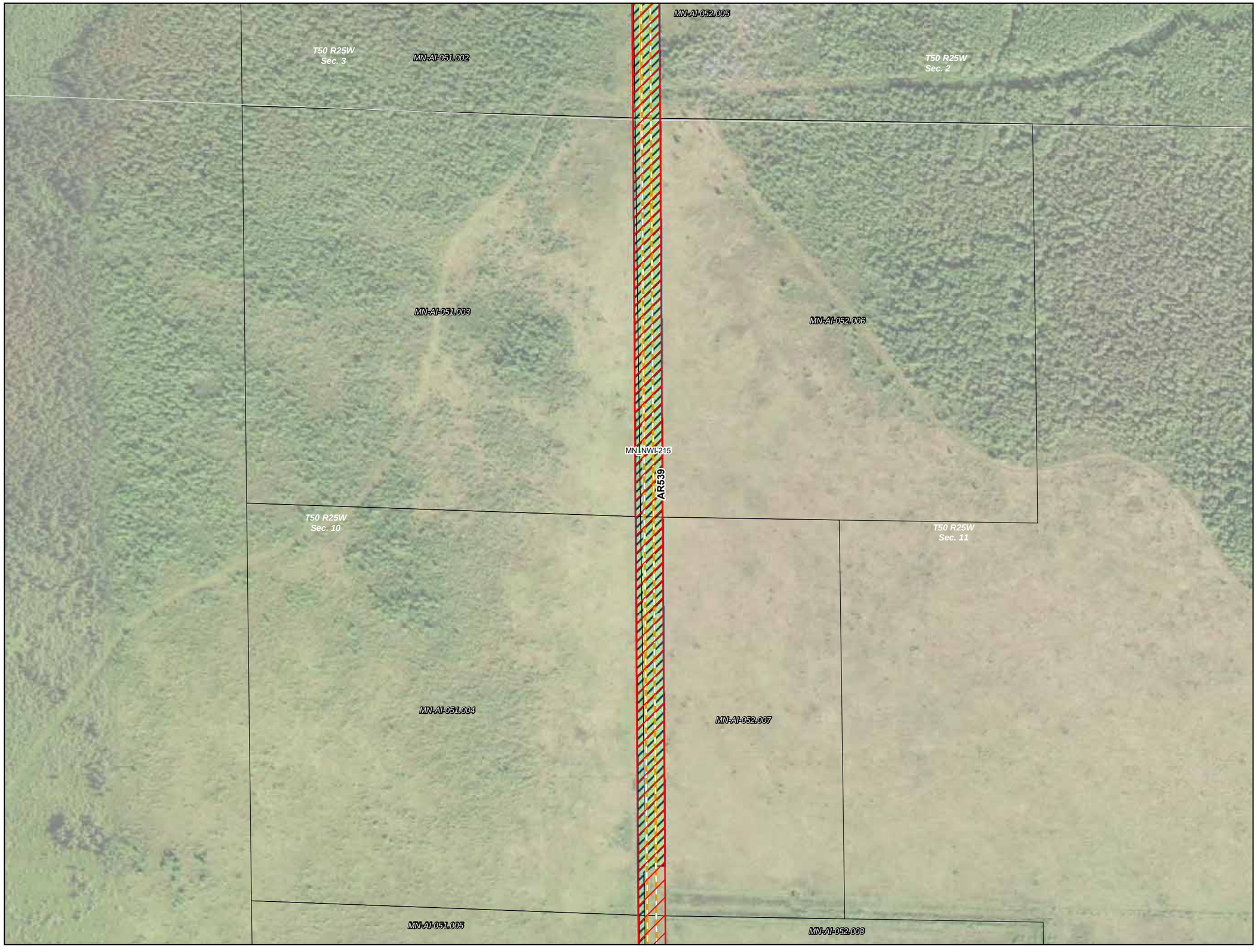

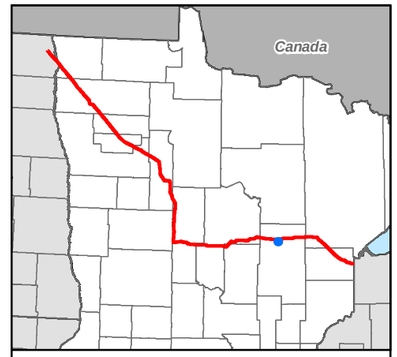

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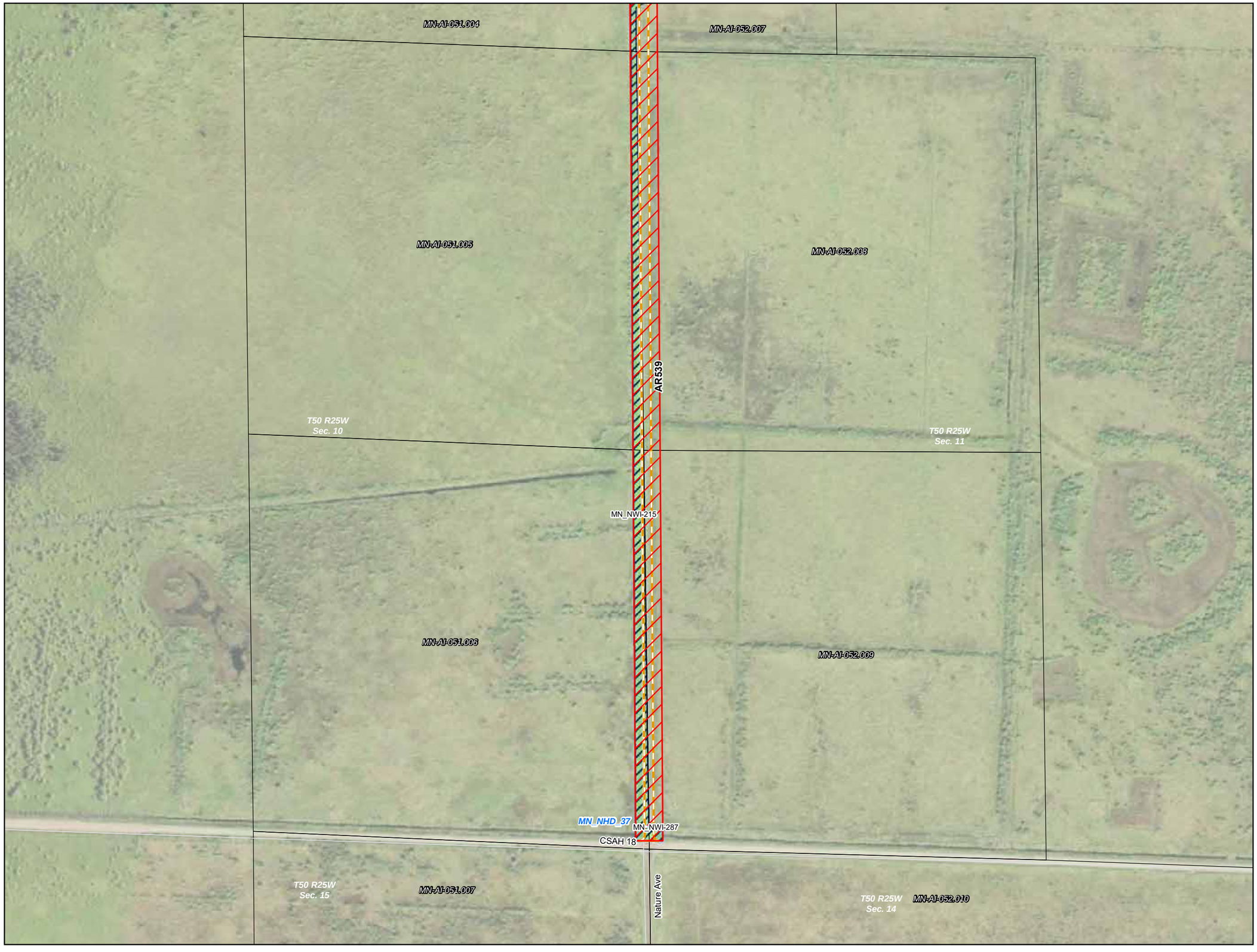

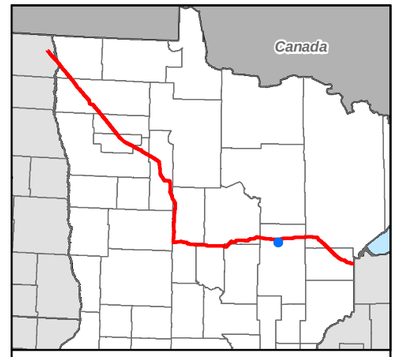

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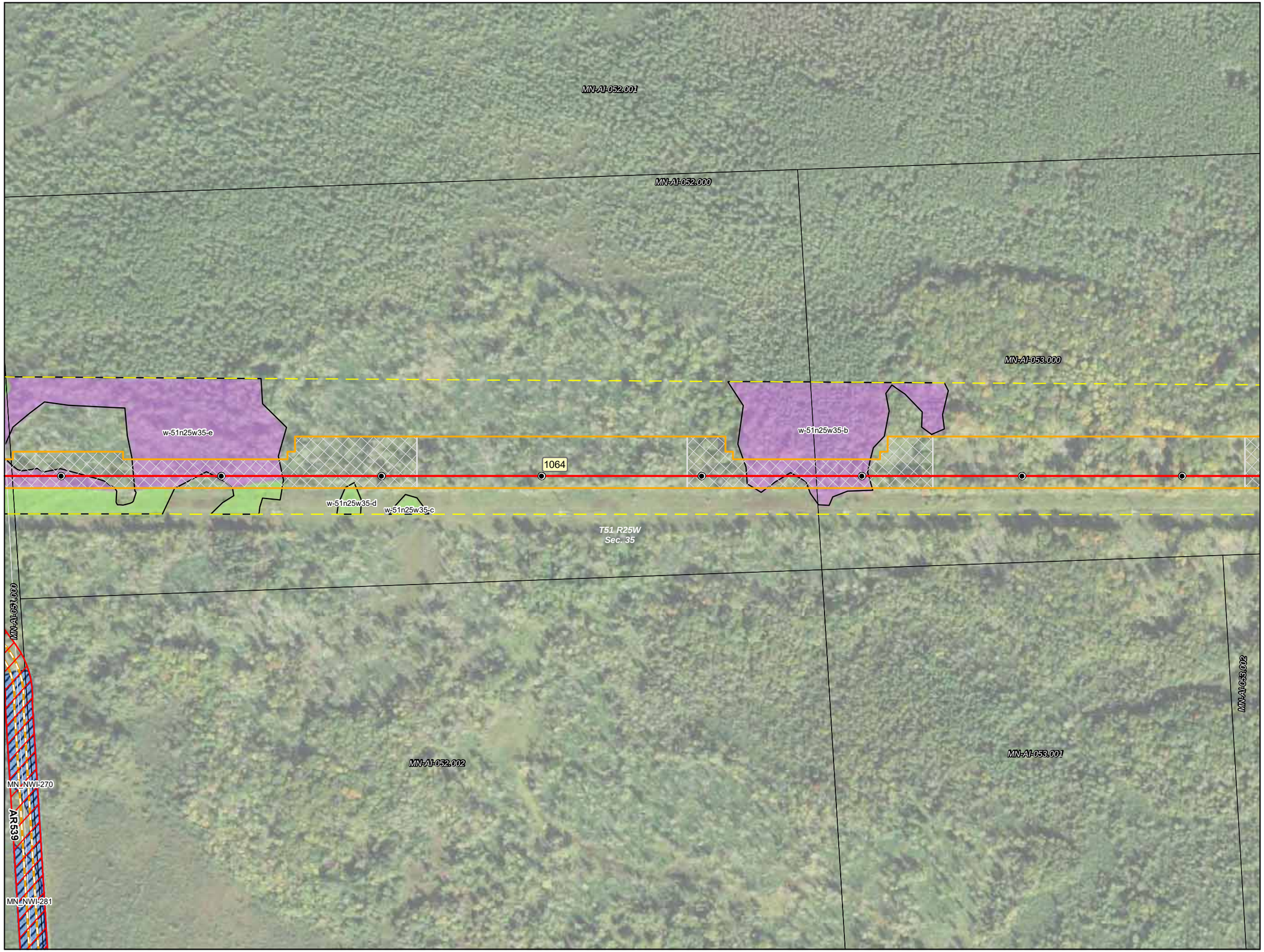

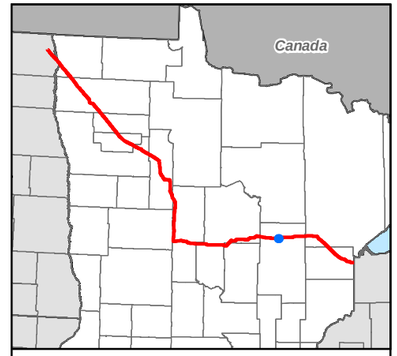

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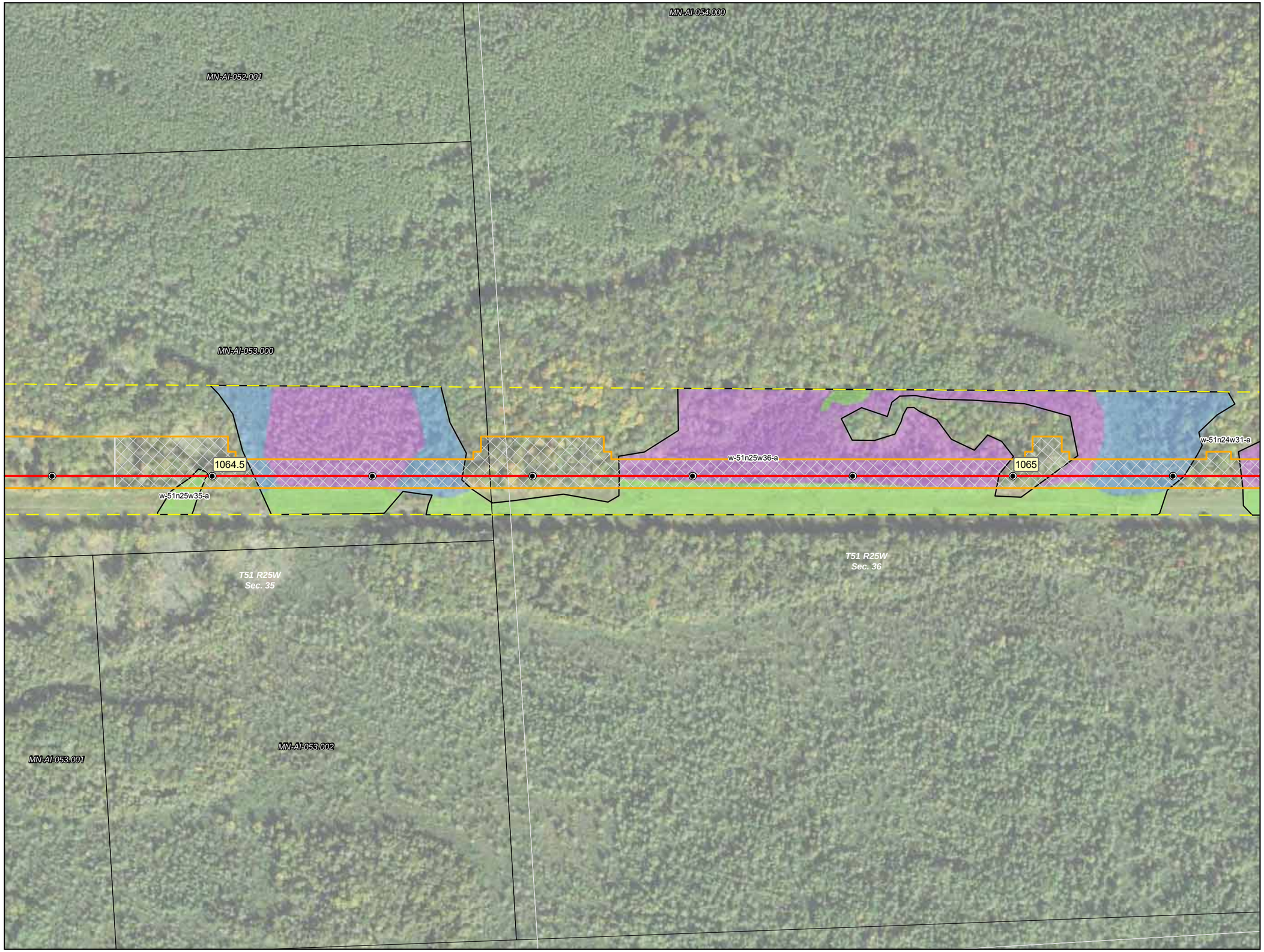

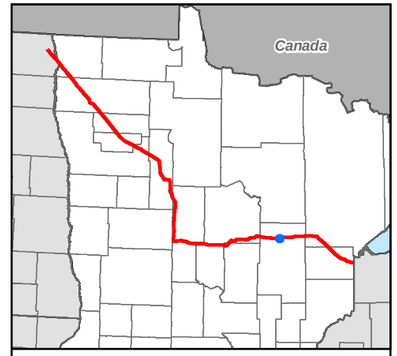

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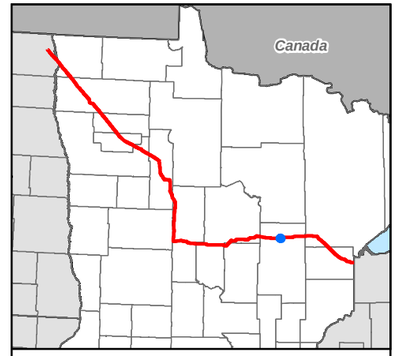

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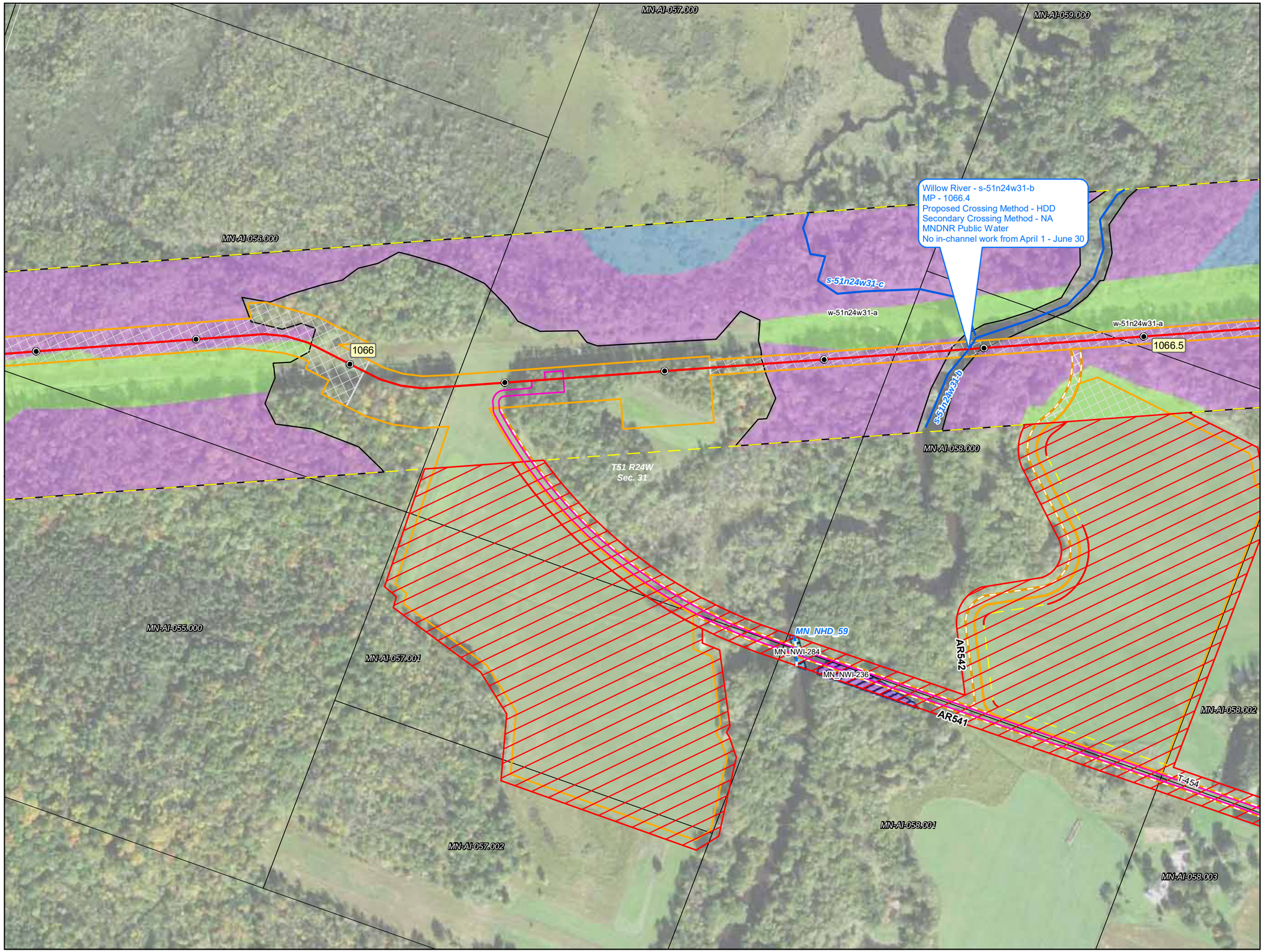

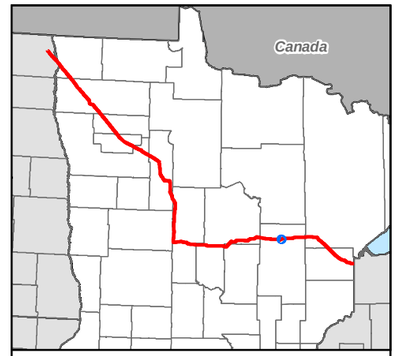

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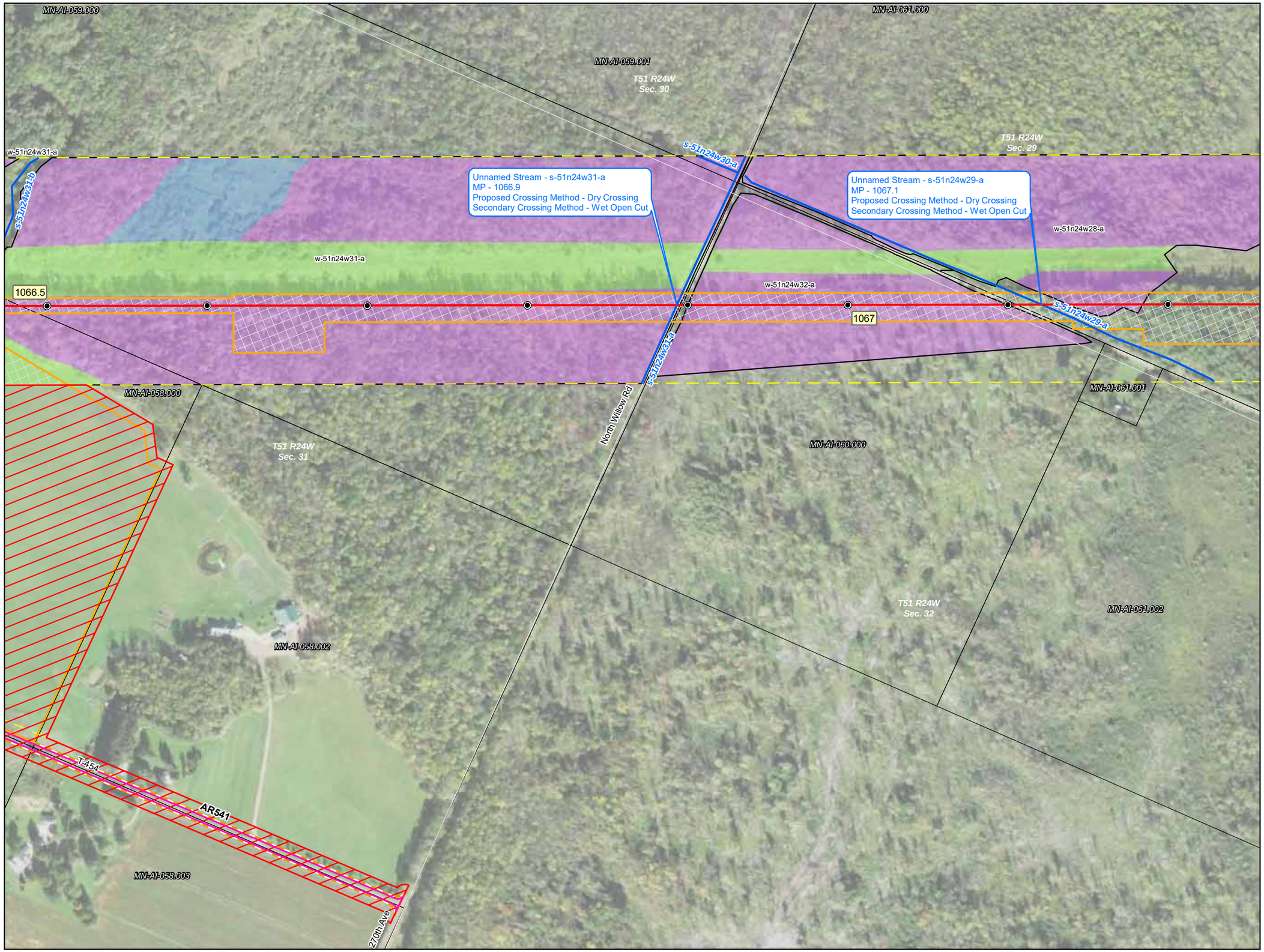

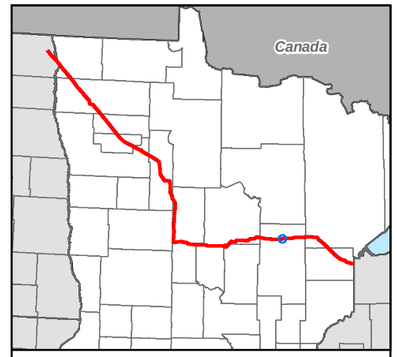

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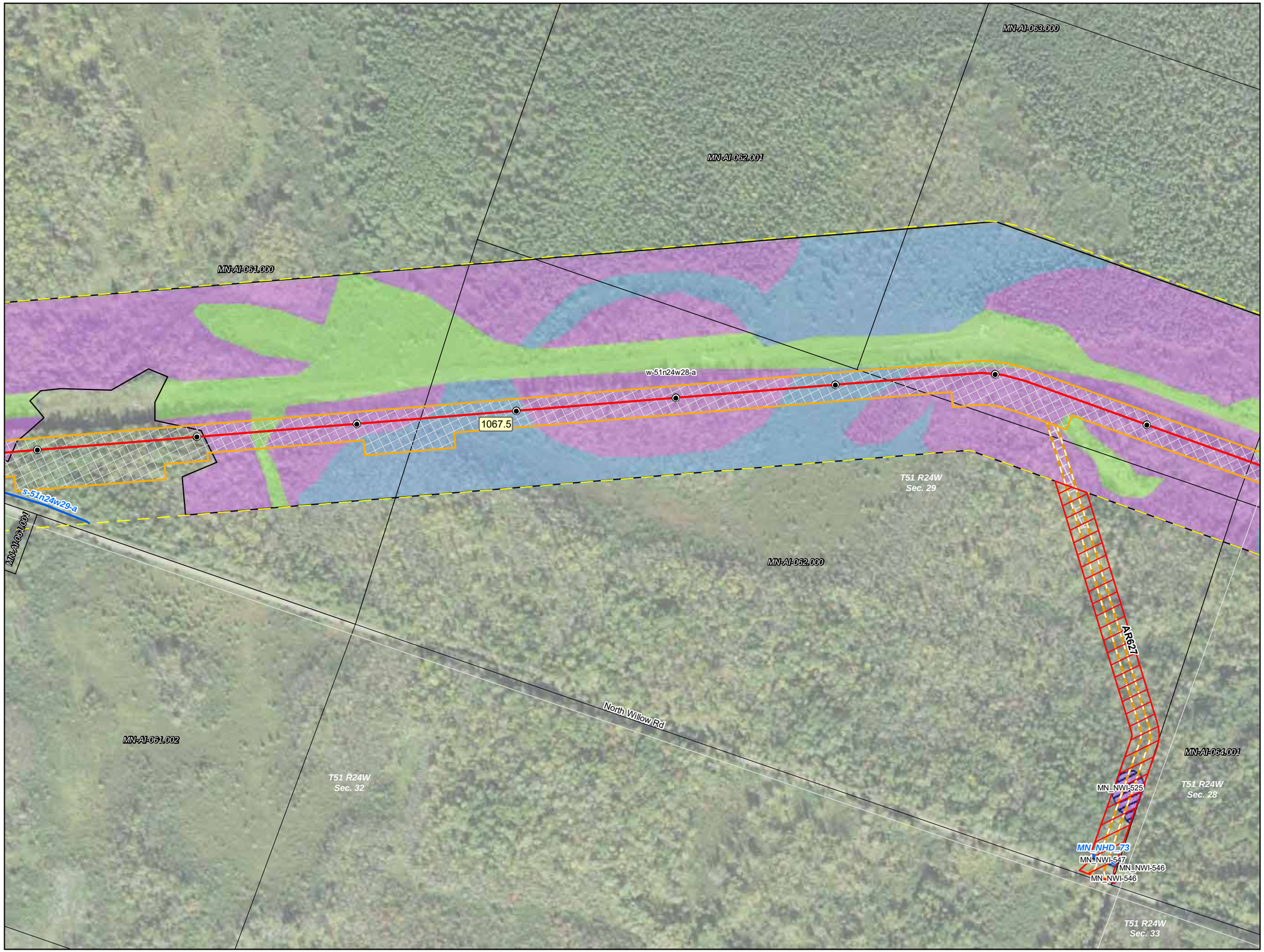

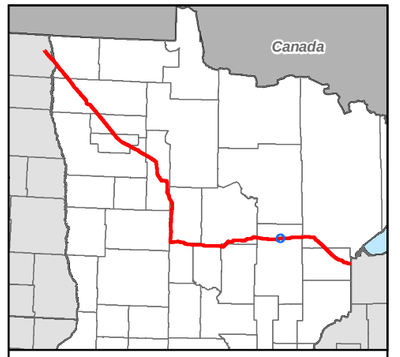

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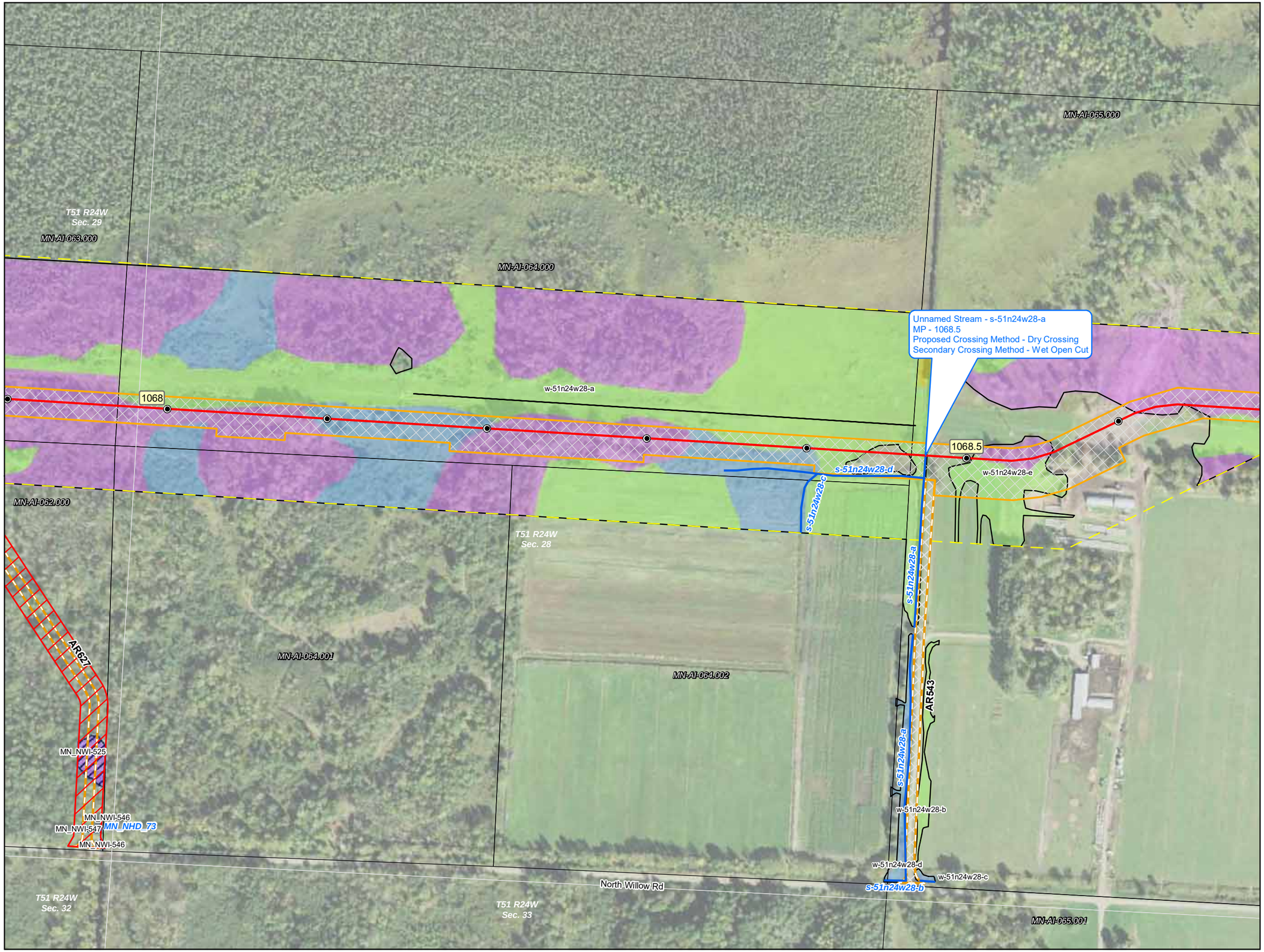

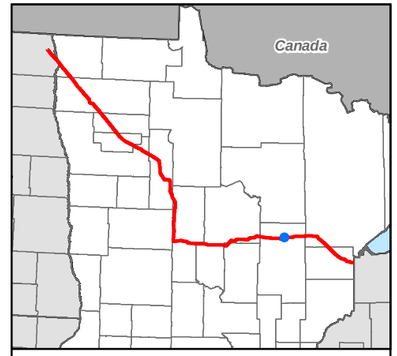

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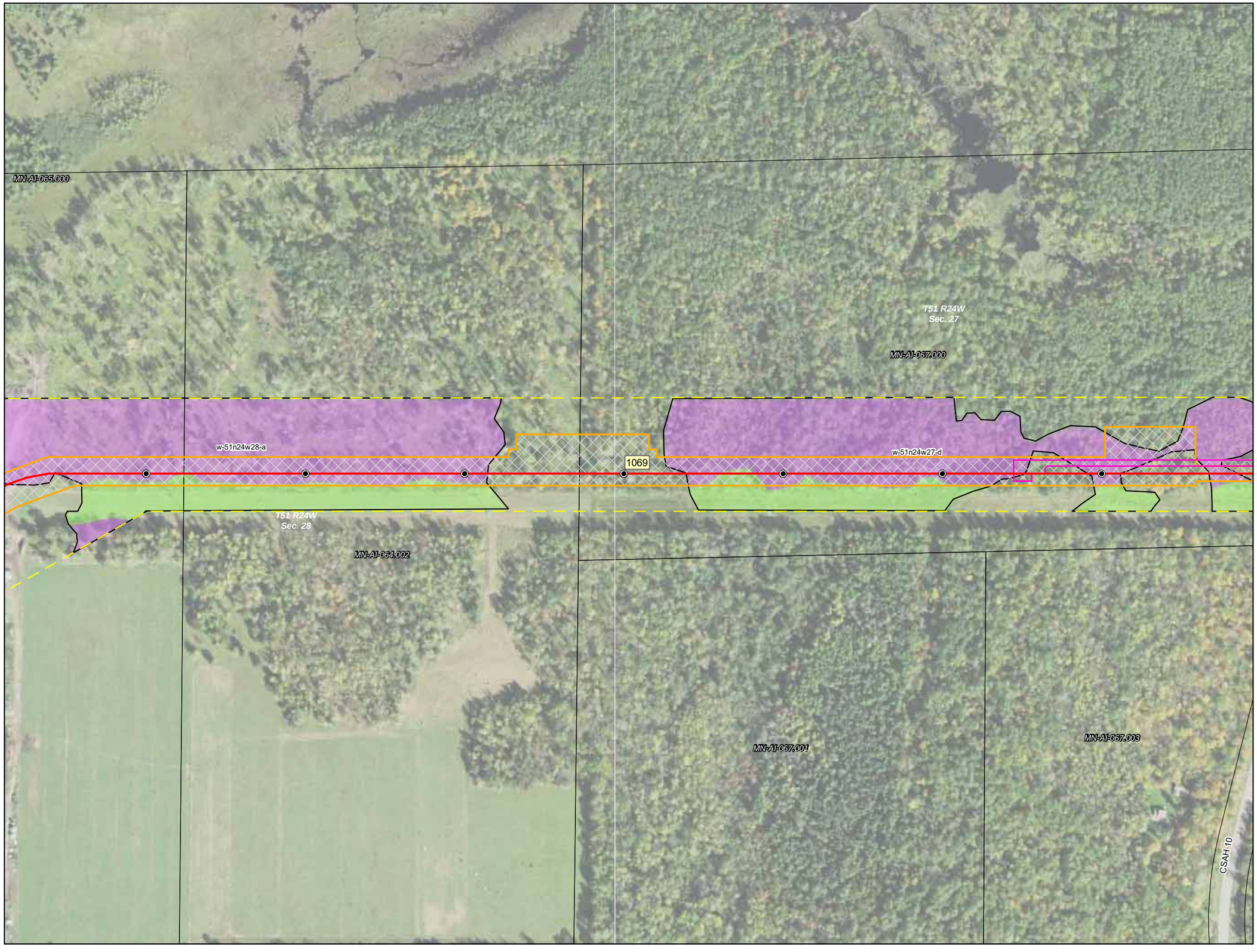

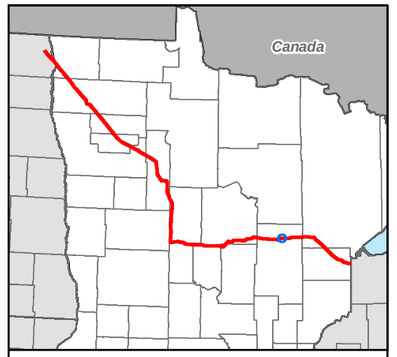

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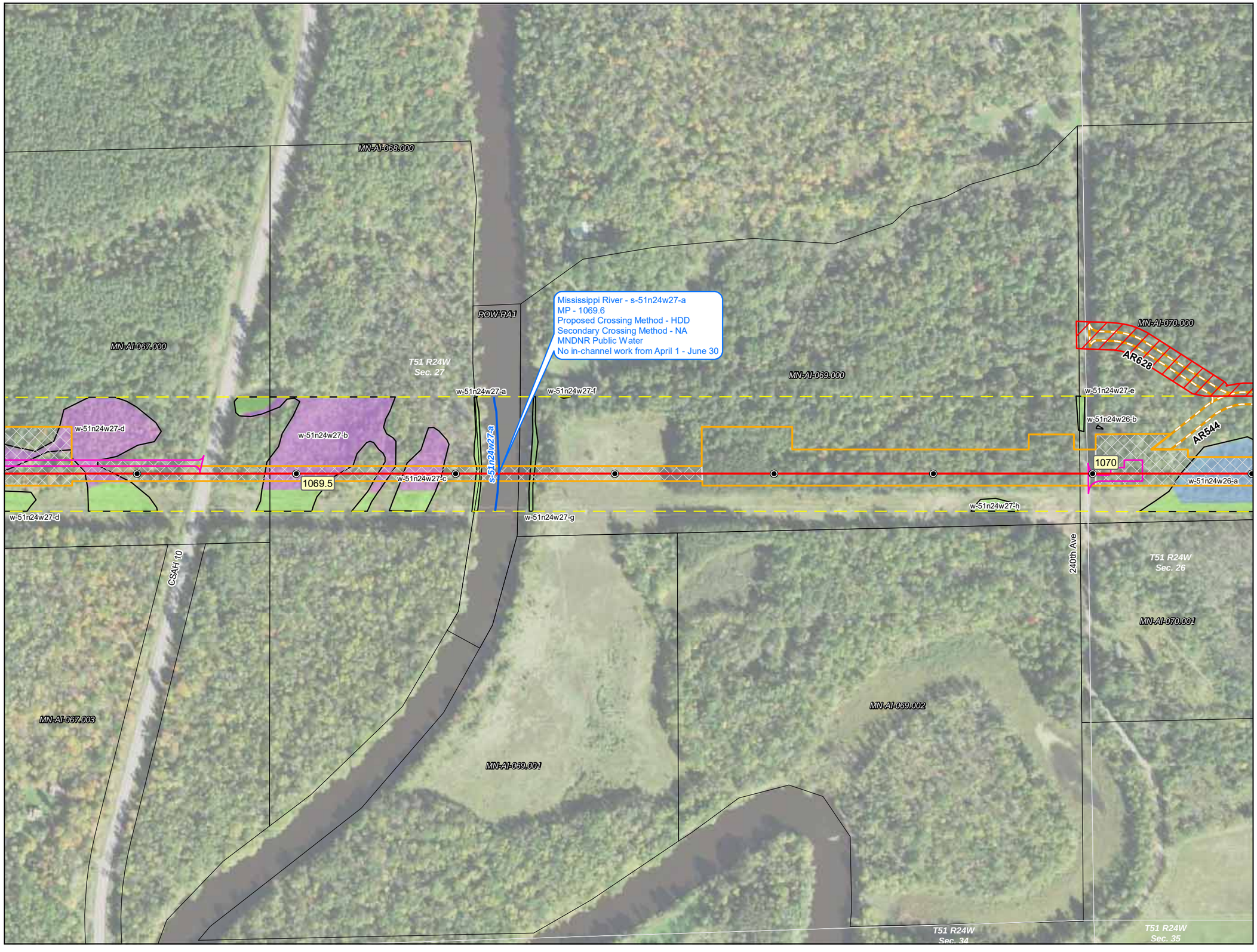

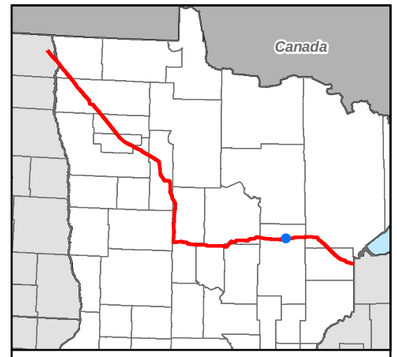

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Field Delineated Wetland	NWI Wetlands
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PFO	PFO
PSS	PSS
PUB	PUB

Waterbodies

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NWI Waterbodies

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0 150 300 Feet

1 inch = 300 feet

N W E S

Detailed Route Maps

Line 3 Replacement Project

Aitkin County, Minnesota

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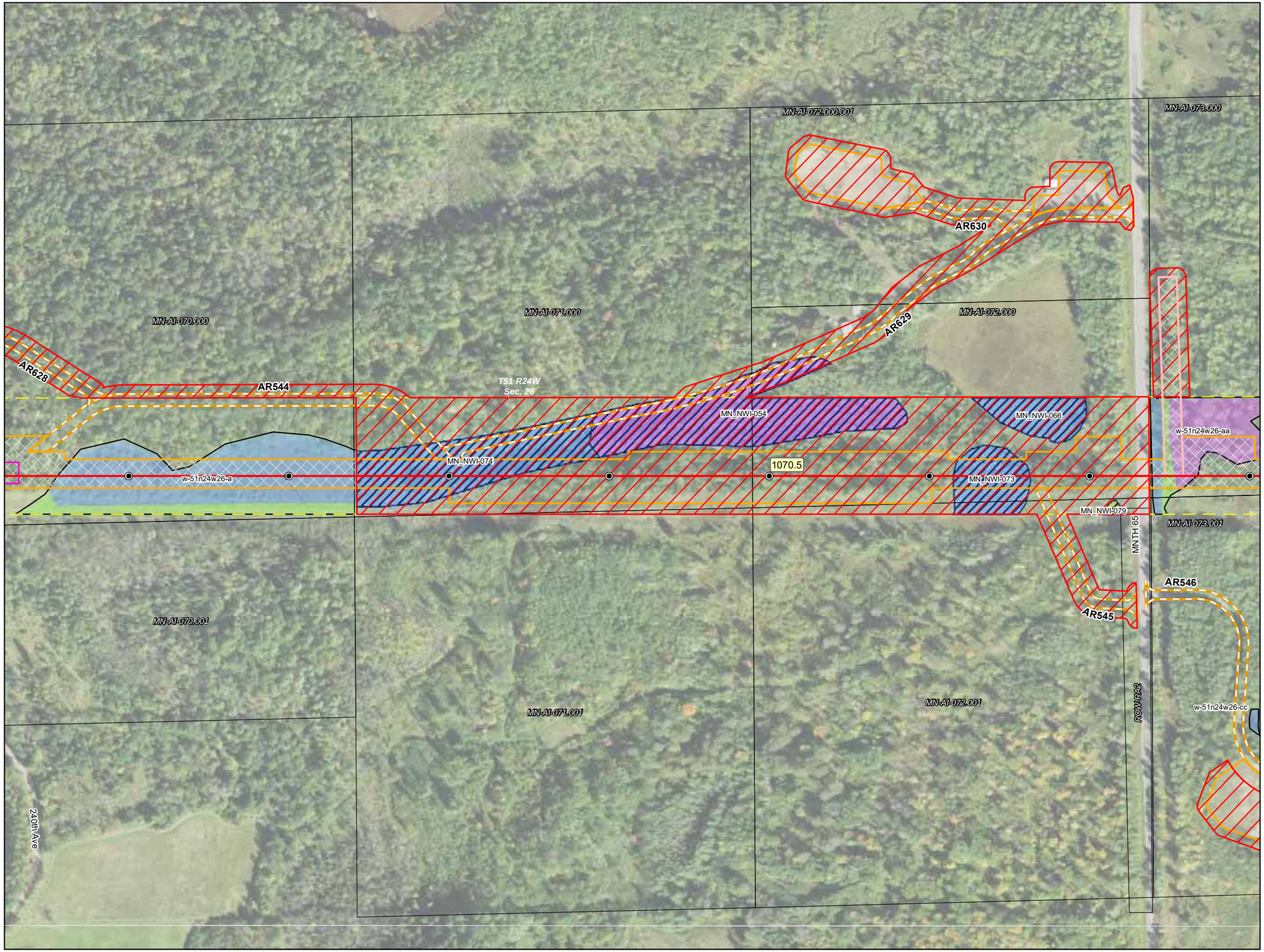

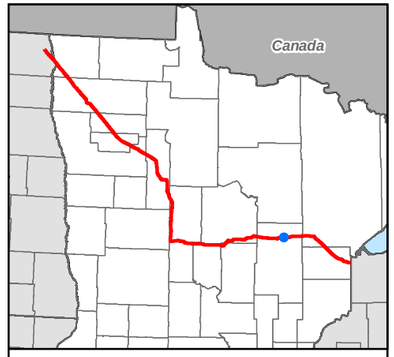

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Line 3 Replacement Project

Aitkin County, Minnesota

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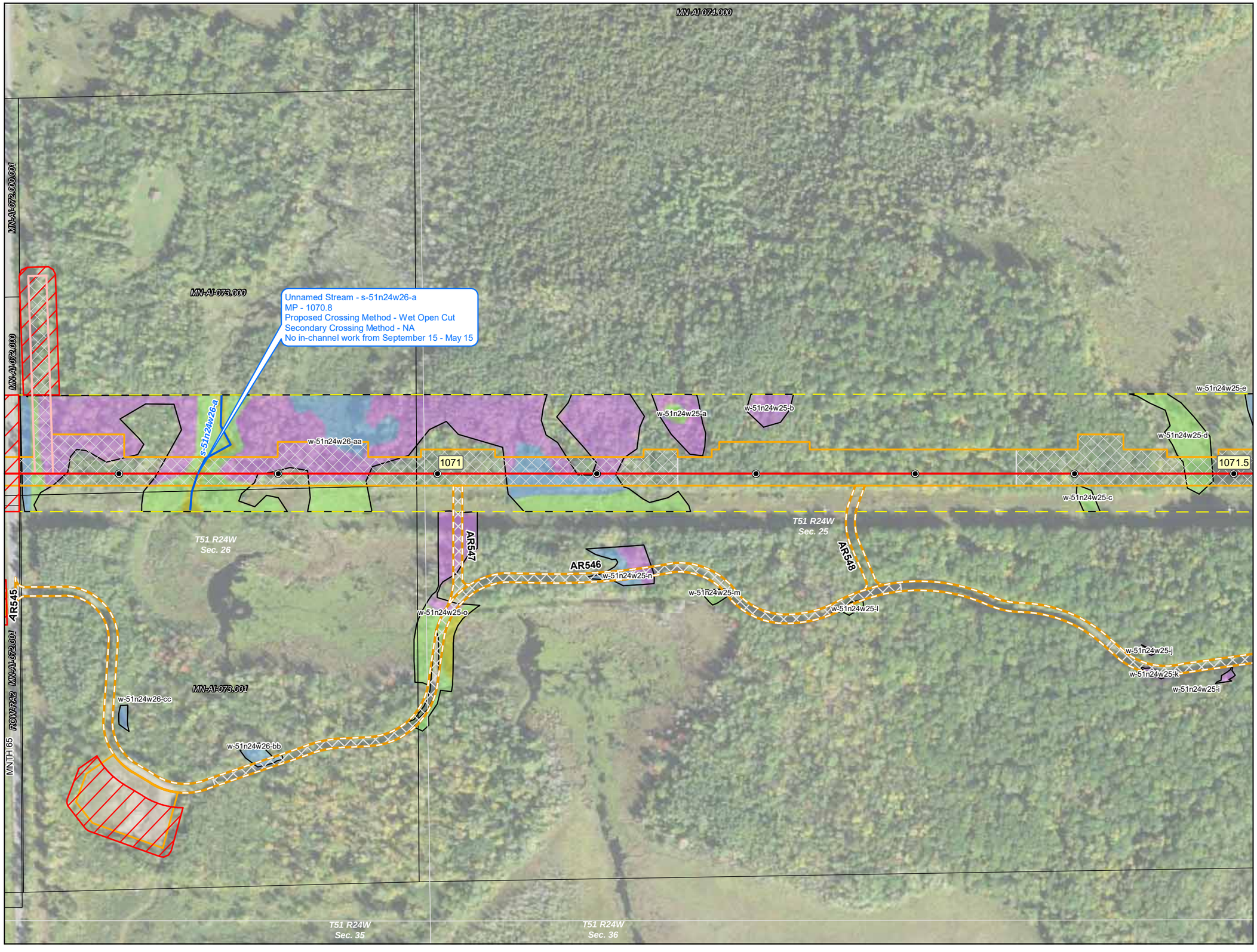

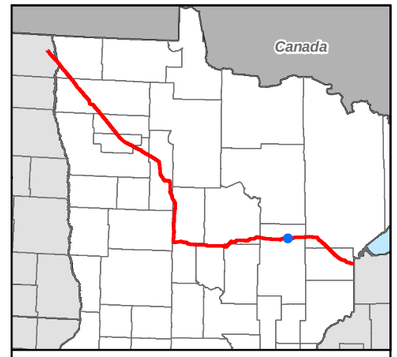

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Line 3 Replacement Project

Aitkin County, Minnesota

ENBRIDGE

MN-AI-074.000

MN-AI-075.002

AR549

T51 R24W
Sec. 25

T51 R23W
Sec. 30

MN-AI-075.000

w-51n24w25-d

w-51n24w25-e

1071.5

1072

w-51n24w25-f

MN-AI-075.001

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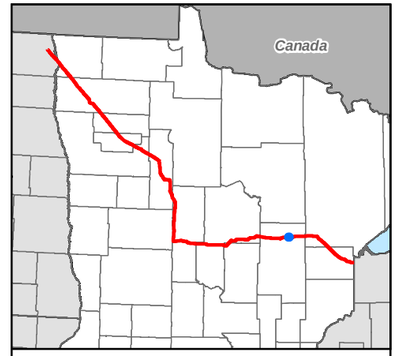

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Aitkin County, Minnesota

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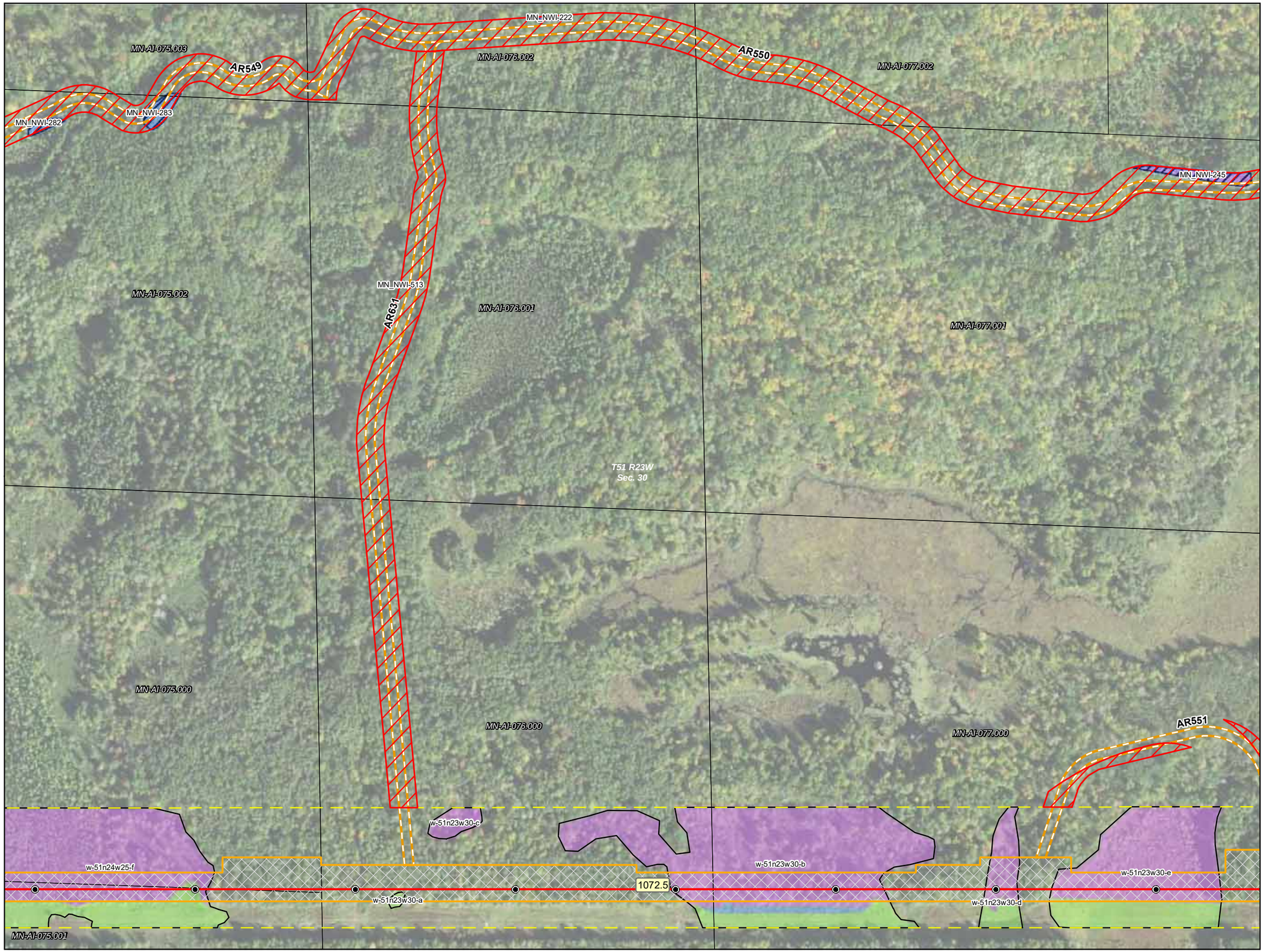

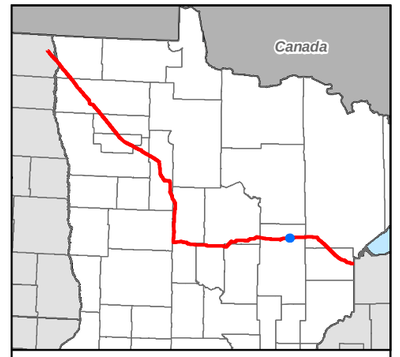

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Aitkin County, Minnesota

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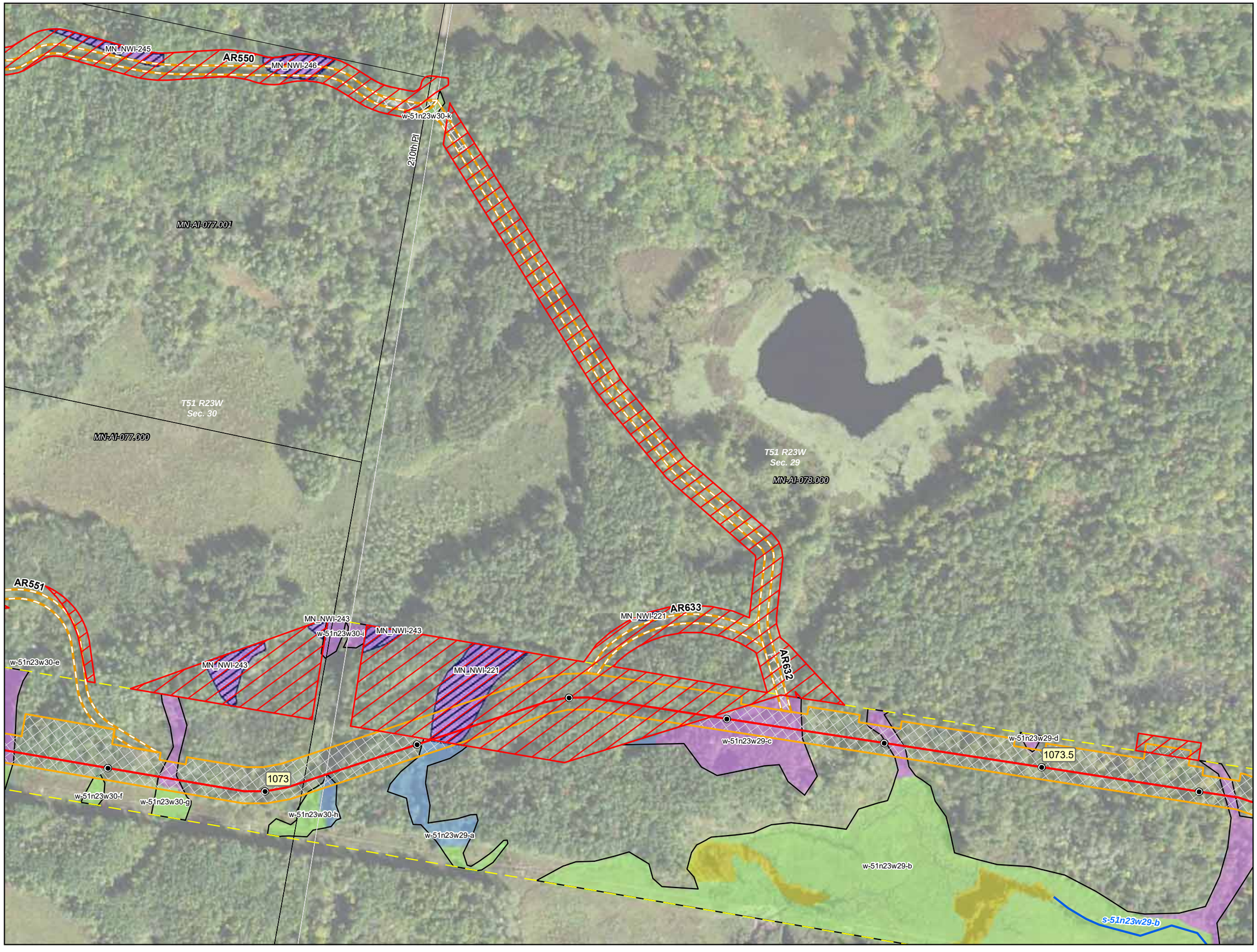

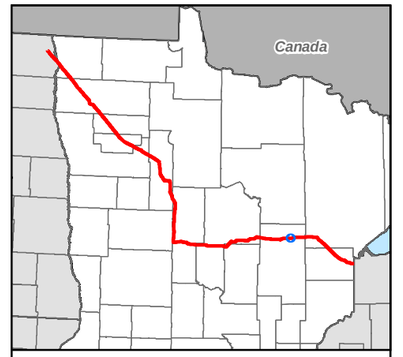

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Line 3 Replacement Project

Aitkin County, Minnesota

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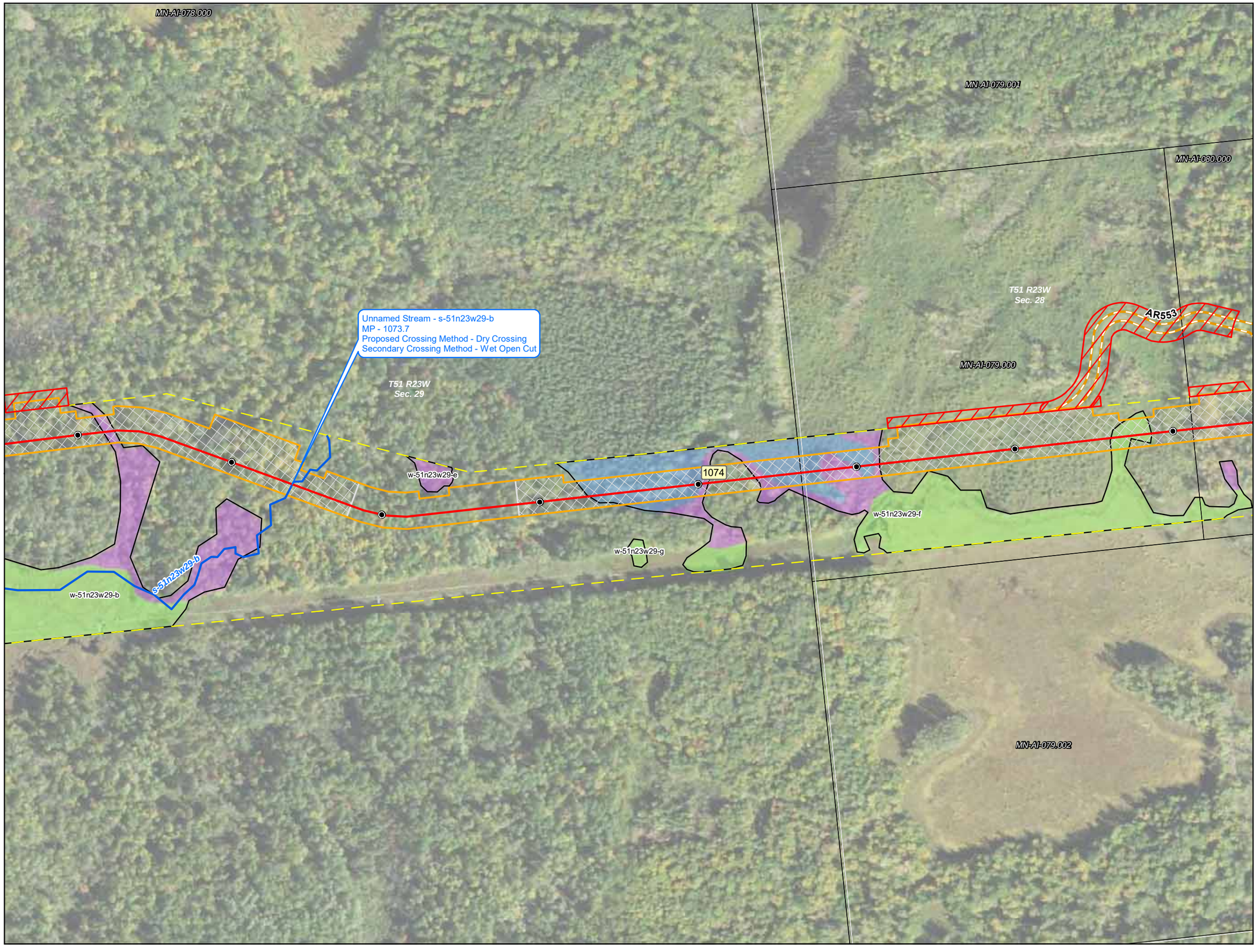

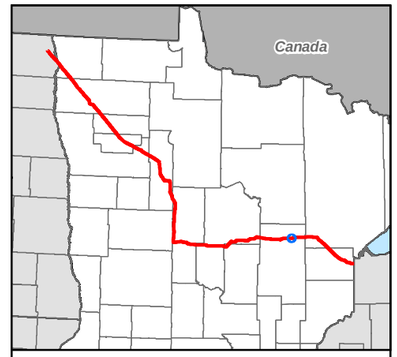

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Line 3 Replacement Project

Aitkin County, Minnesota

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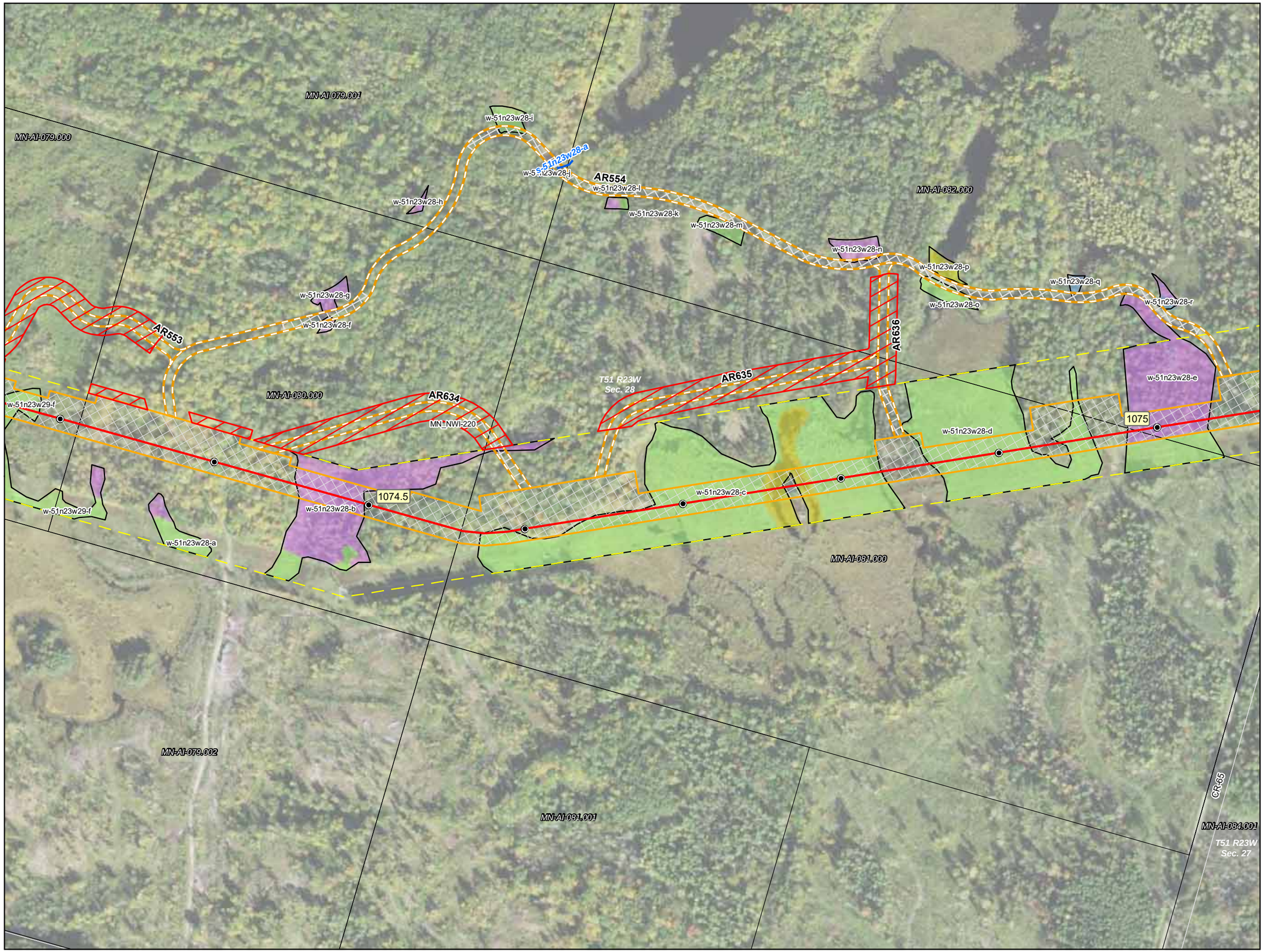

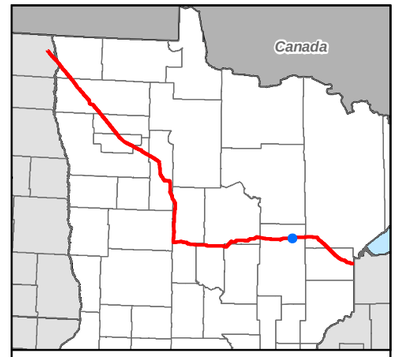

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Aitkin County, Minnesota

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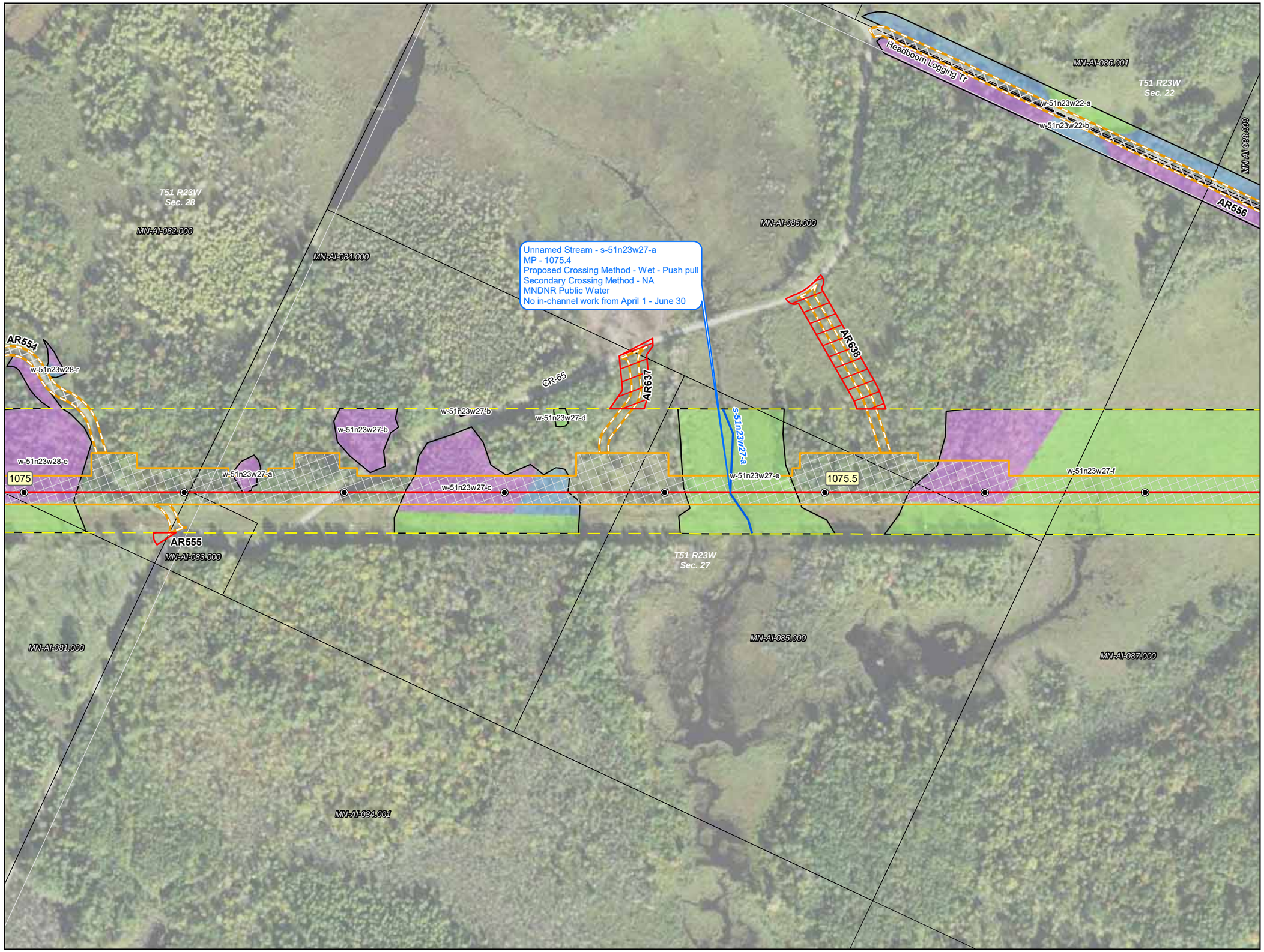

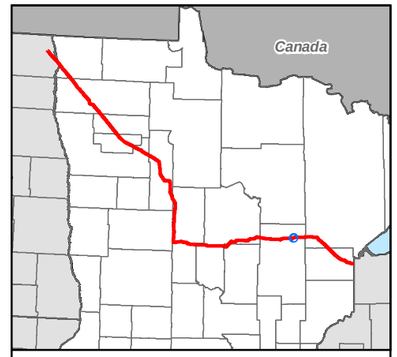

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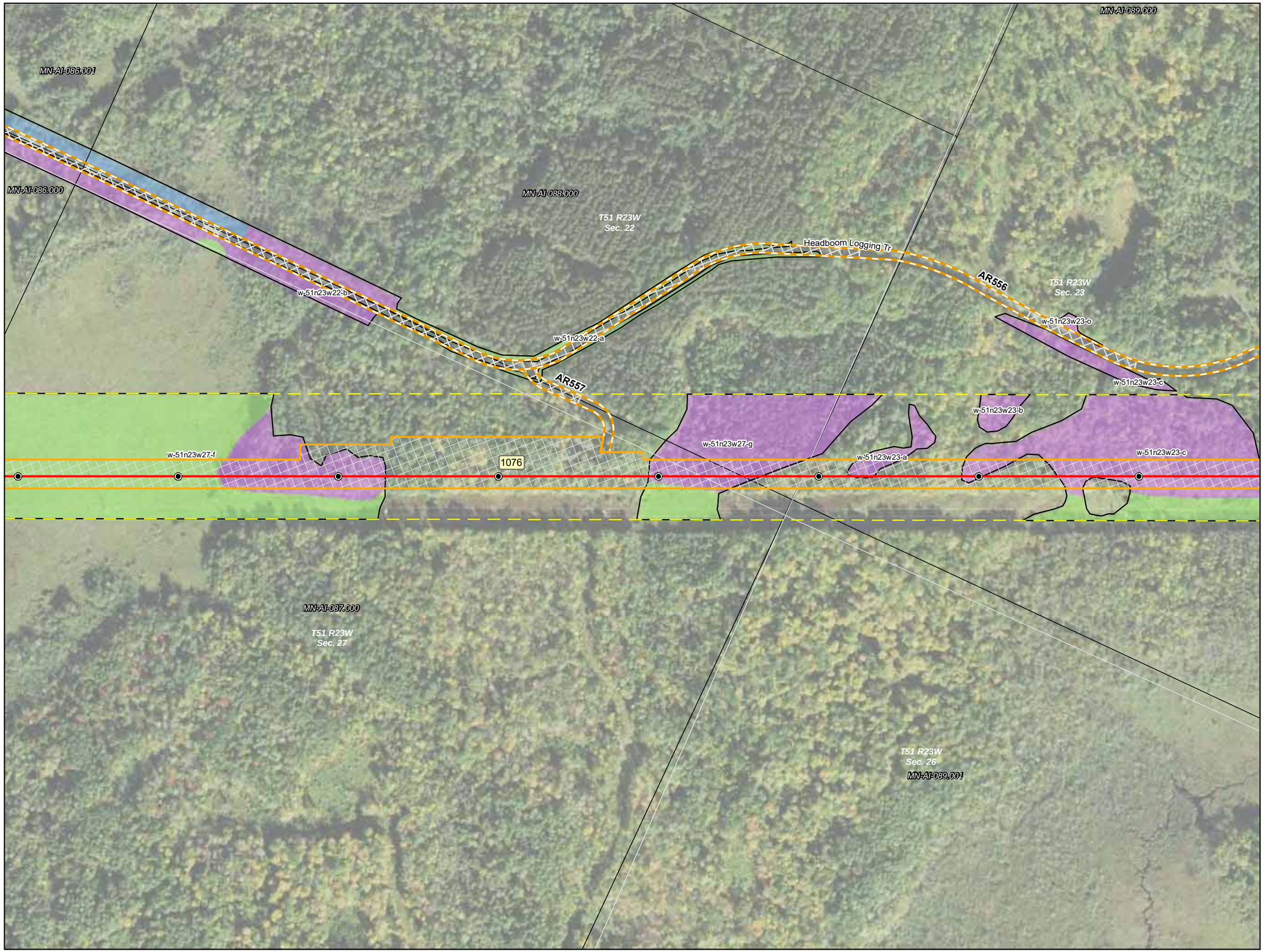

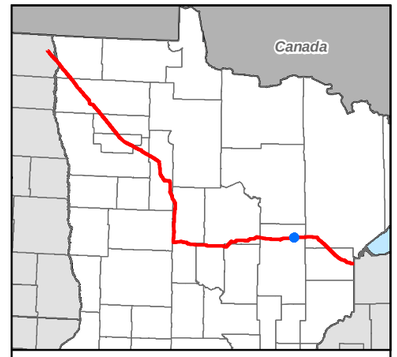

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Line 3 Replacement Project

Aitkin County, Minnesota

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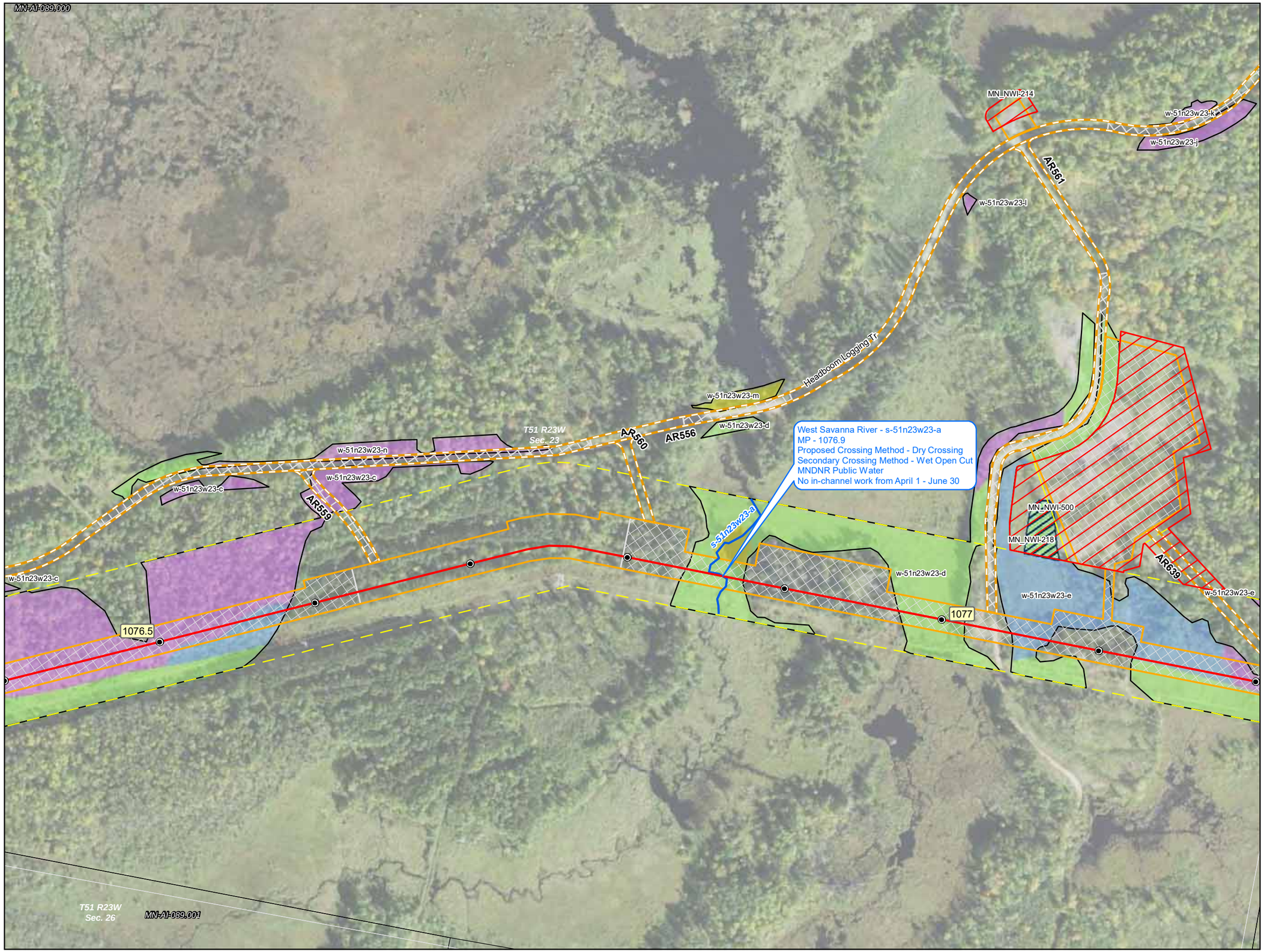

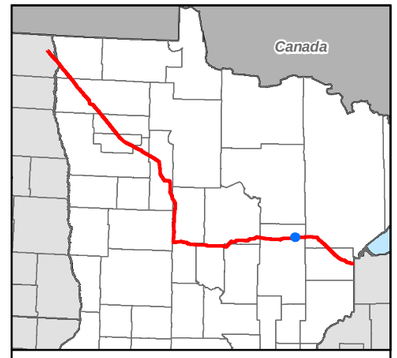

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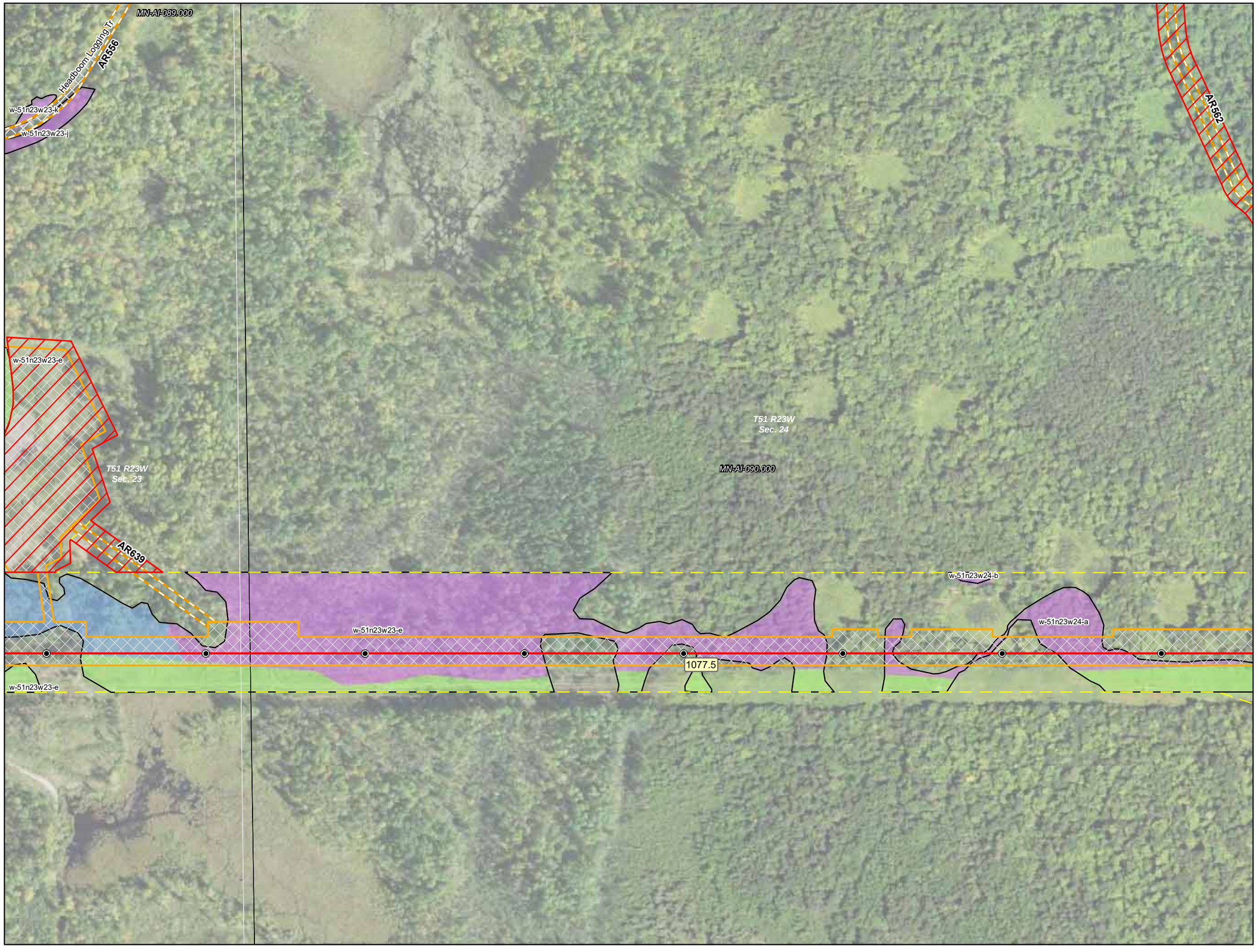

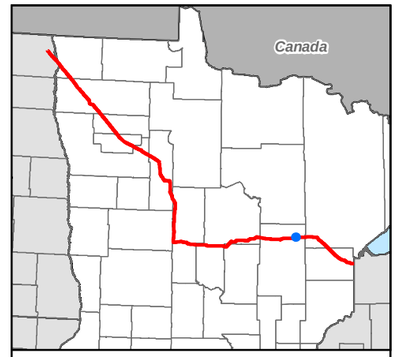

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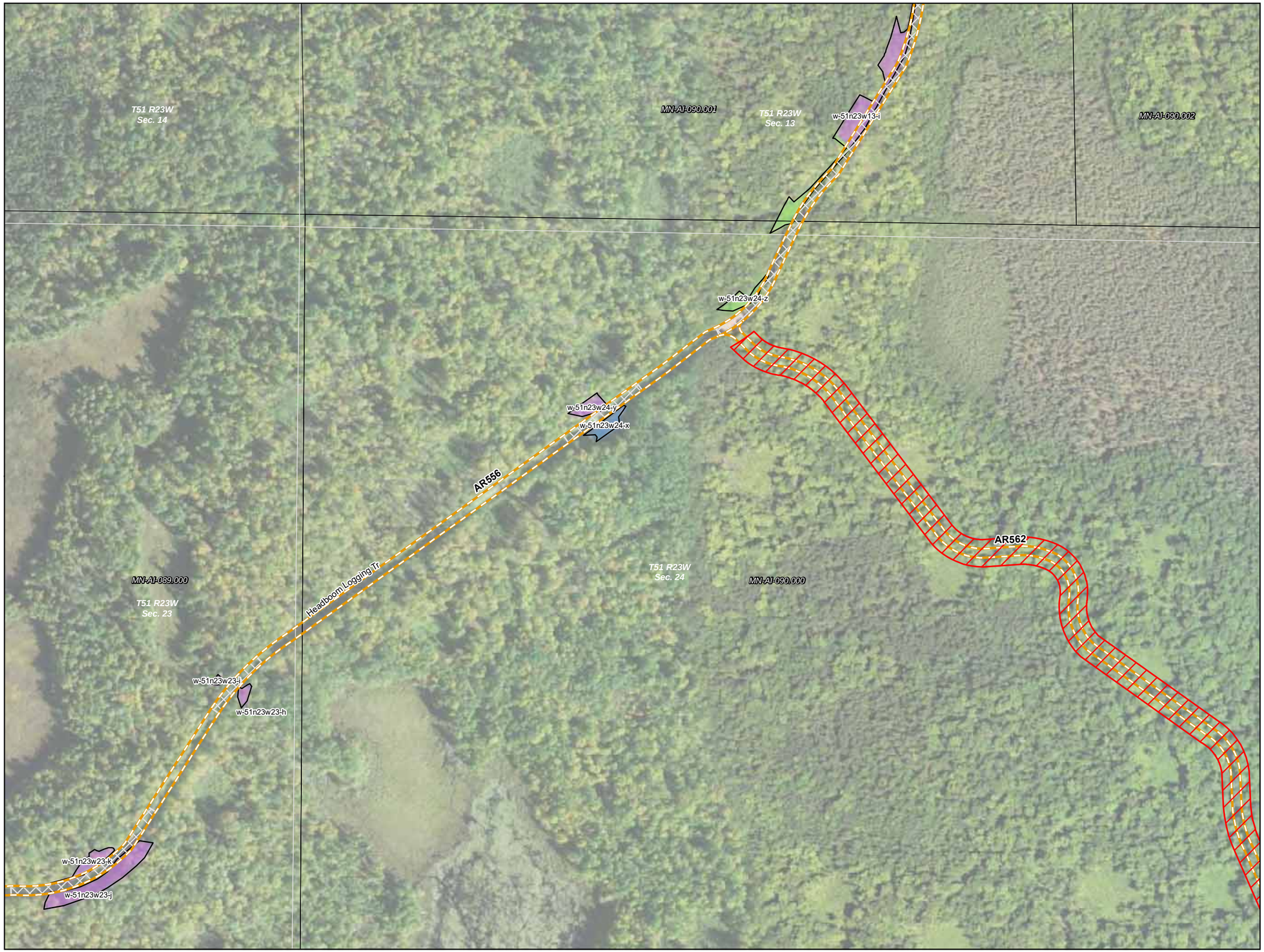

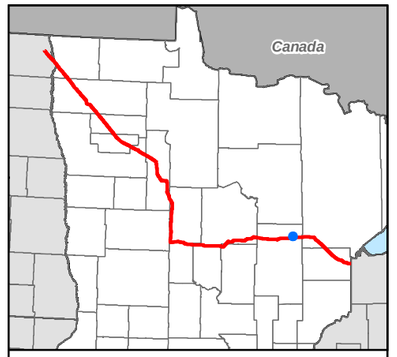

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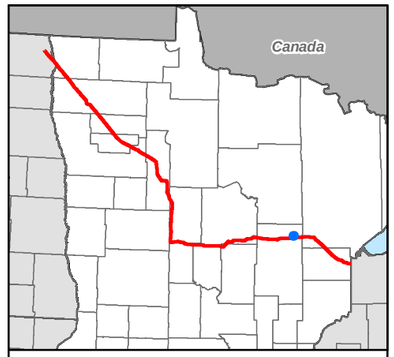

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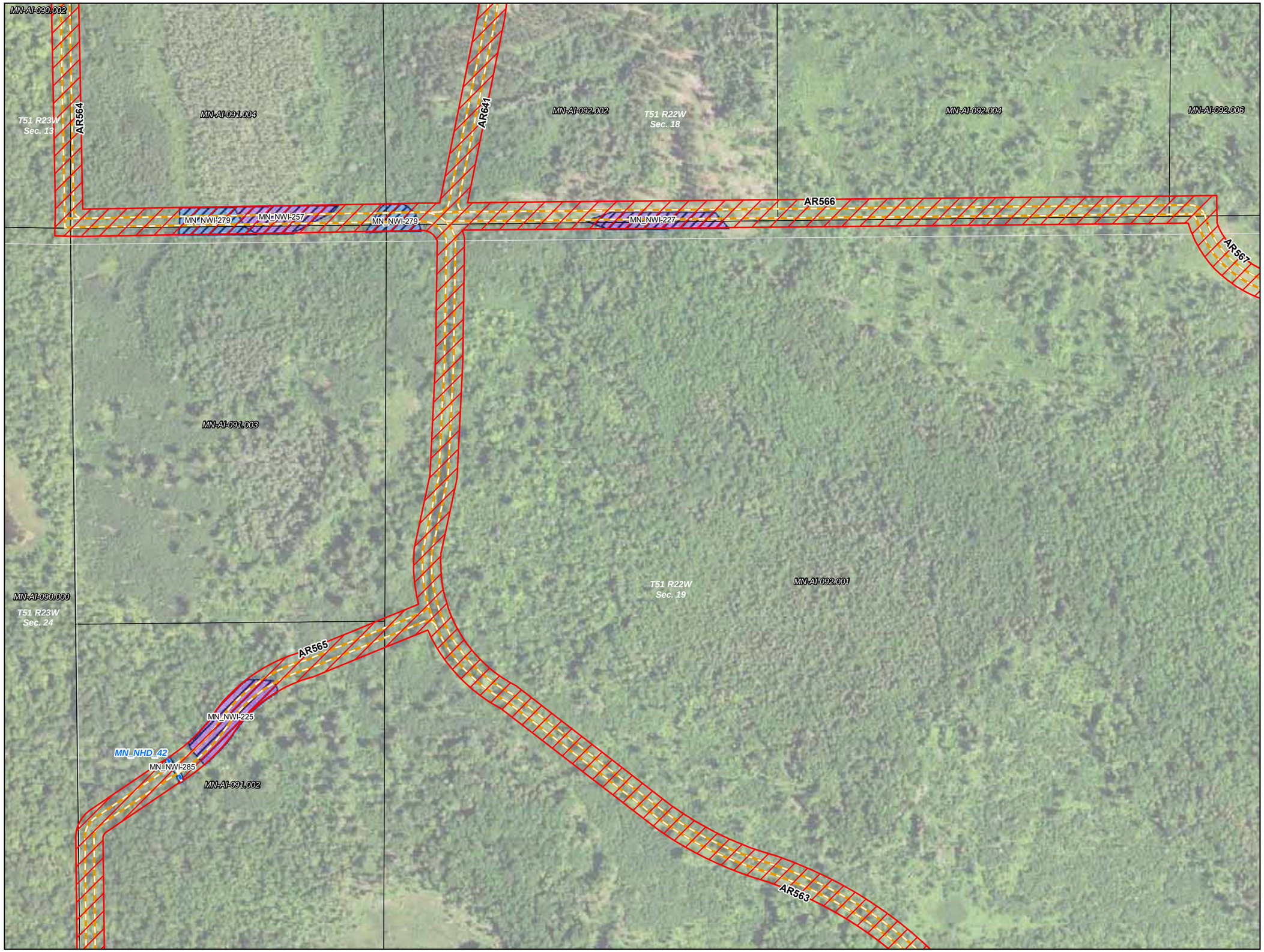

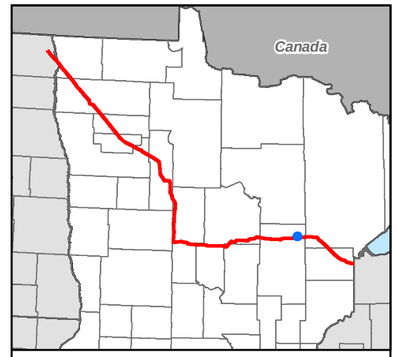

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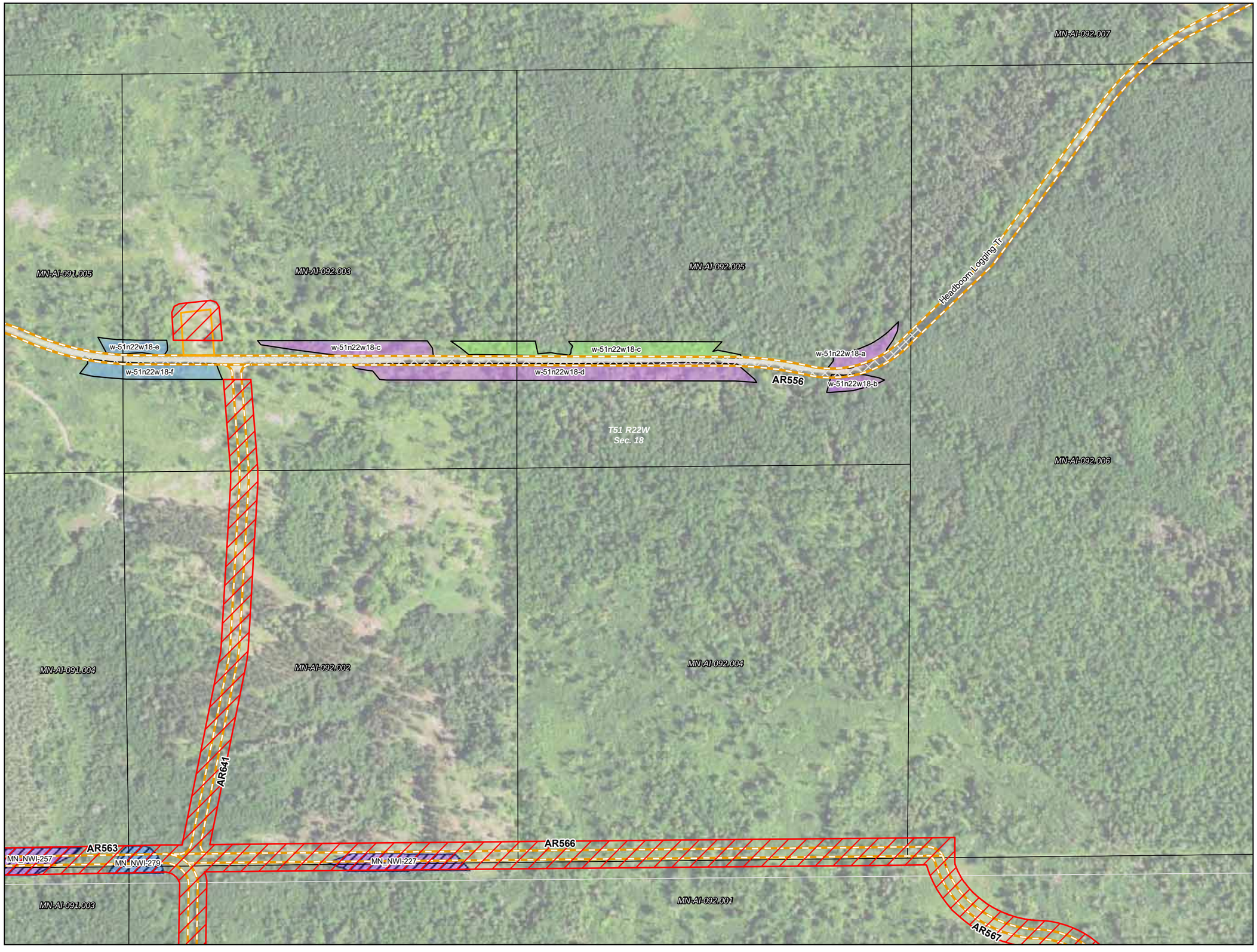

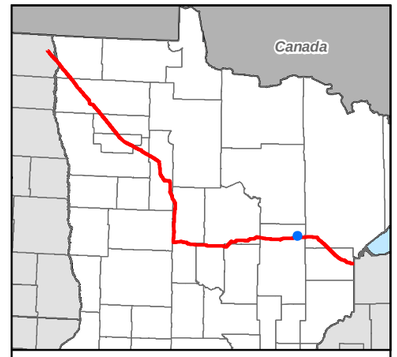

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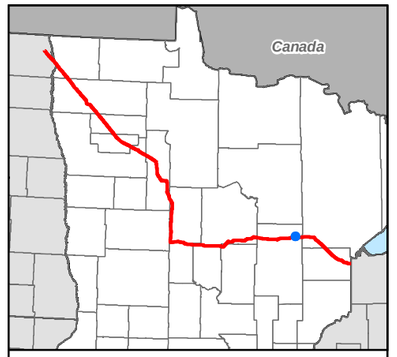

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Field Delineated Wetland	NWI Wetlands
PEM	PEM
PFO	PFO
PSS	PSS
PUB	PUB

Waterbodies

- Field Delineated Waterbody
- NHD Waterbody

NWI Waterbodies

- Lake
- Riverine

0 150 300 Feet

1 inch = 300 feet

N W E S

Detailed Route Maps

Line 3 Replacement Project

Aitkin County, Minnesota

ENBRIDGE

Source: Z:\Clients\E_H\Enbridge\Line_3_Full_Replacement\Permitting\Federal\COE\Sept_2018\RSA_22\Figures\L3_MN_COE_Alignment_Sheets_RSA22.mxd
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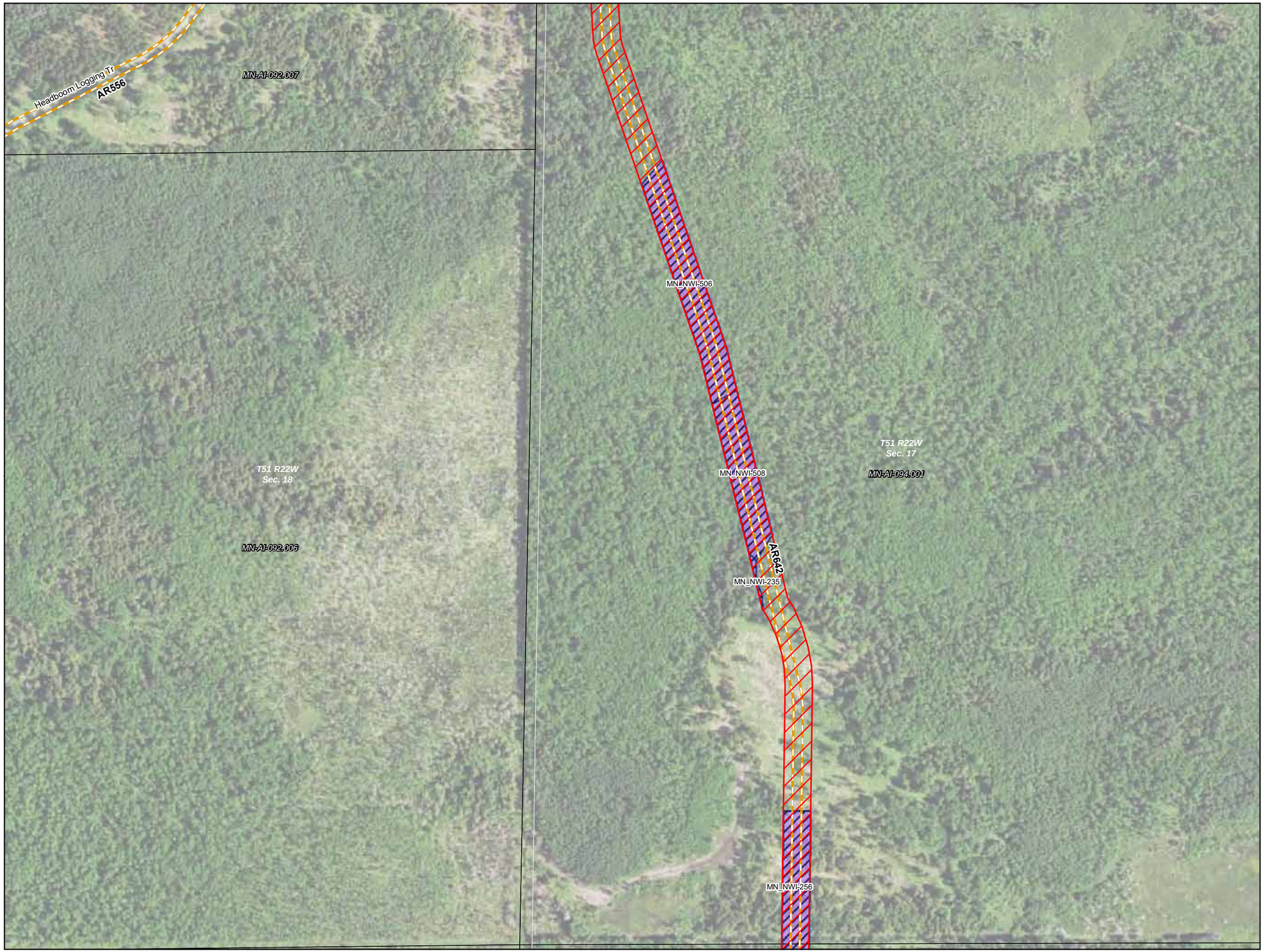

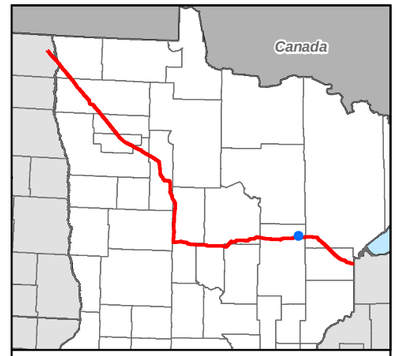

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Line 3 Replacement Project

Aitkin County, Minnesota

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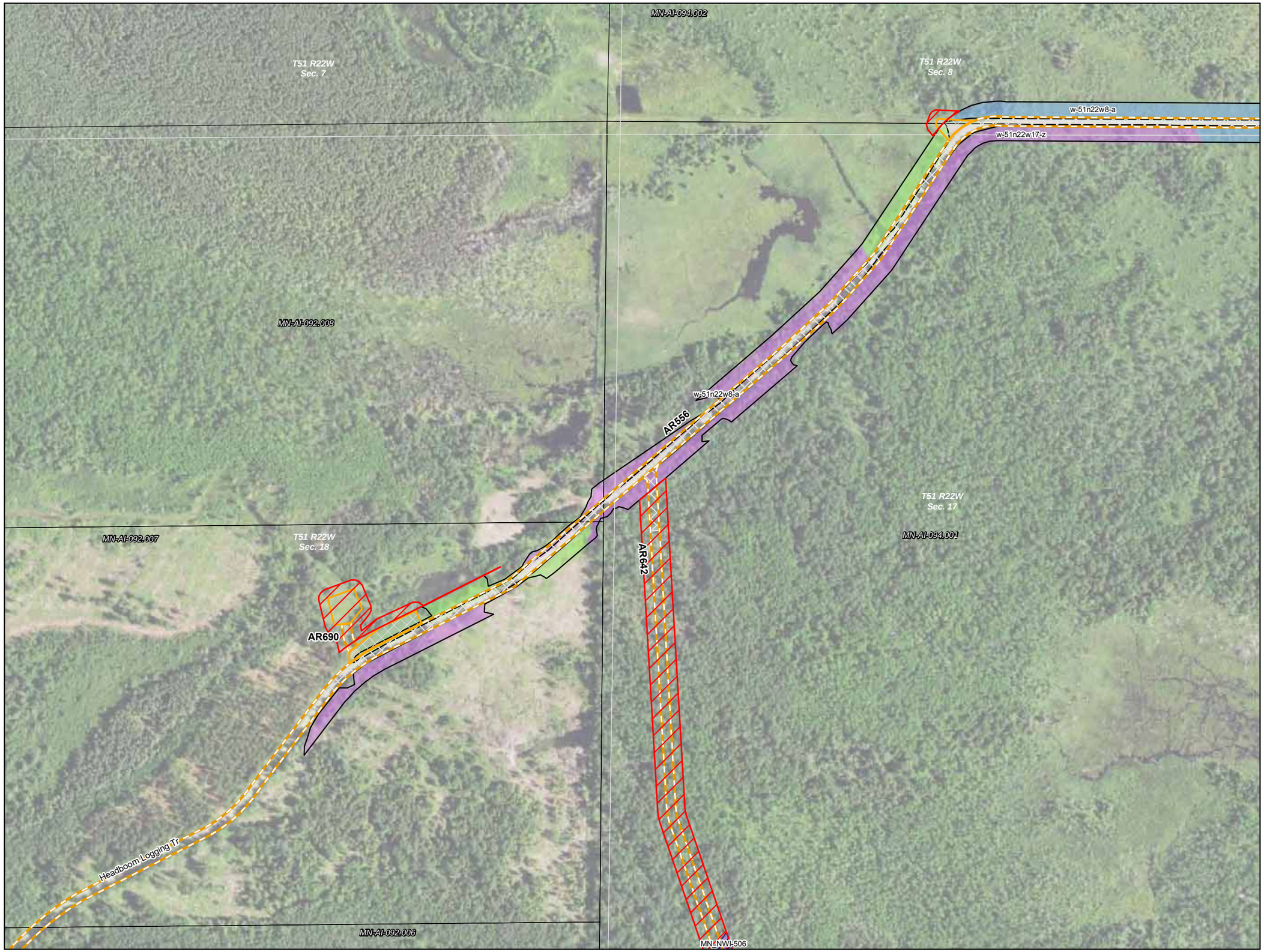

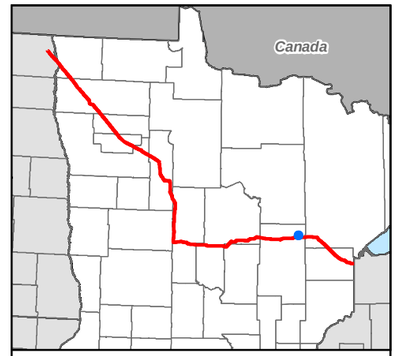

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Aitkin County, Minnesota

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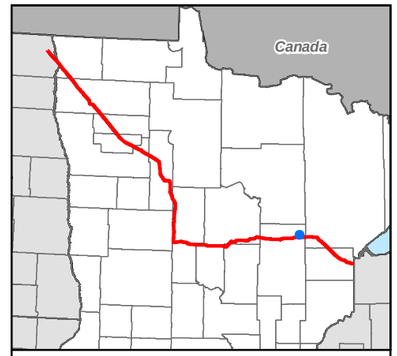

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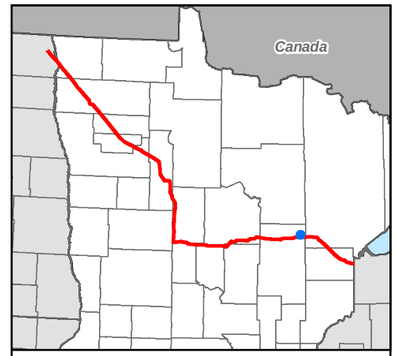

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Aitkin County, Minnesota

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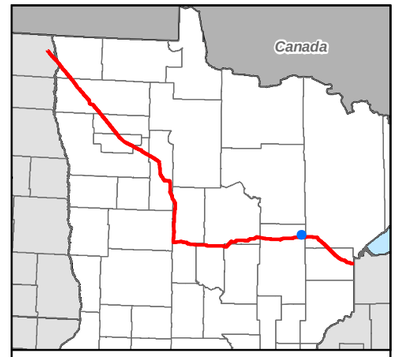

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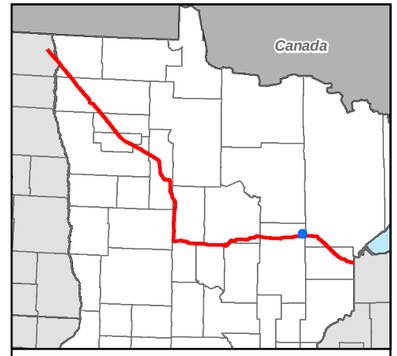

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Line 3 Replacement Project

Aitkin County, Minnesota

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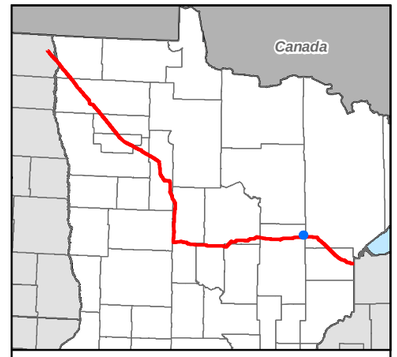

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Aitkin County, Minnesota

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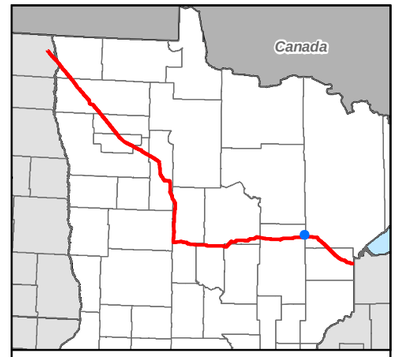

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Line 3 Replacement Project

Aitkin County, Minnesota

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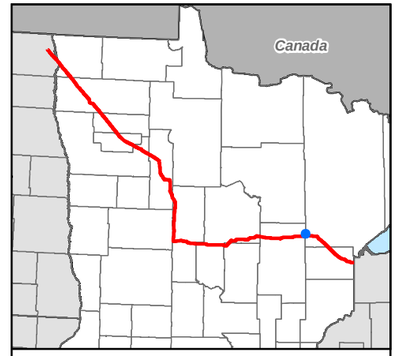

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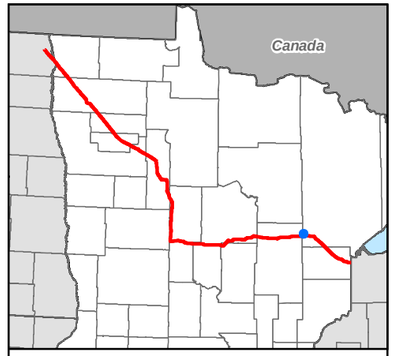
Detailed Route Maps

Line 3 Replacement Project

Aitkin and St. Louis County, Minnesota

ENBRIDGE



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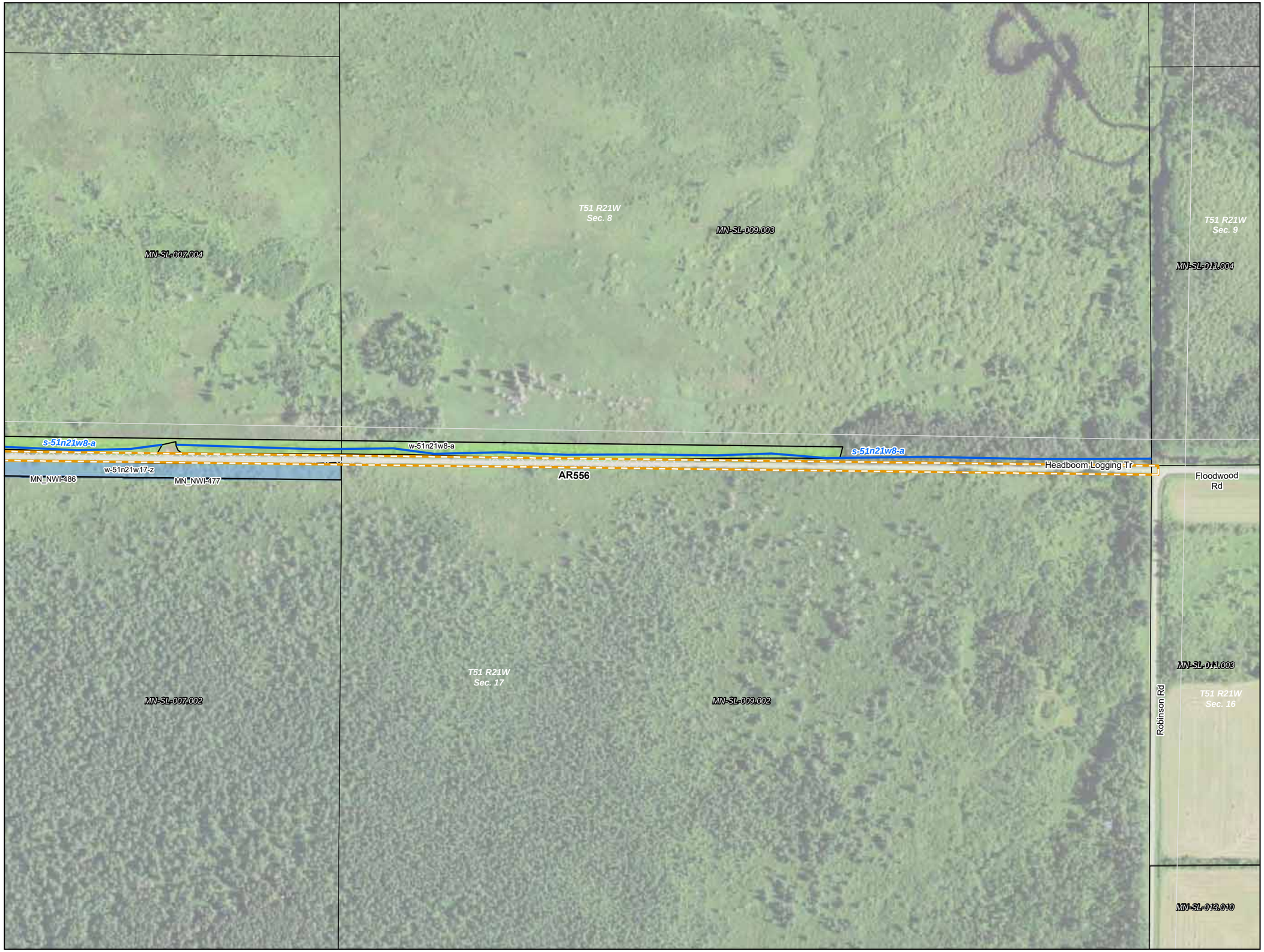
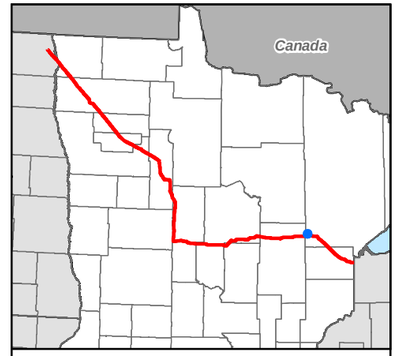
Detailed Route Maps

Line 3 Replacement Project

St. Louis County, Minnesota

ENBRIDGE





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Detailed Route Maps

Line 3 Replacement Project

St. Louis County, Minnesota

ENBRIDGE

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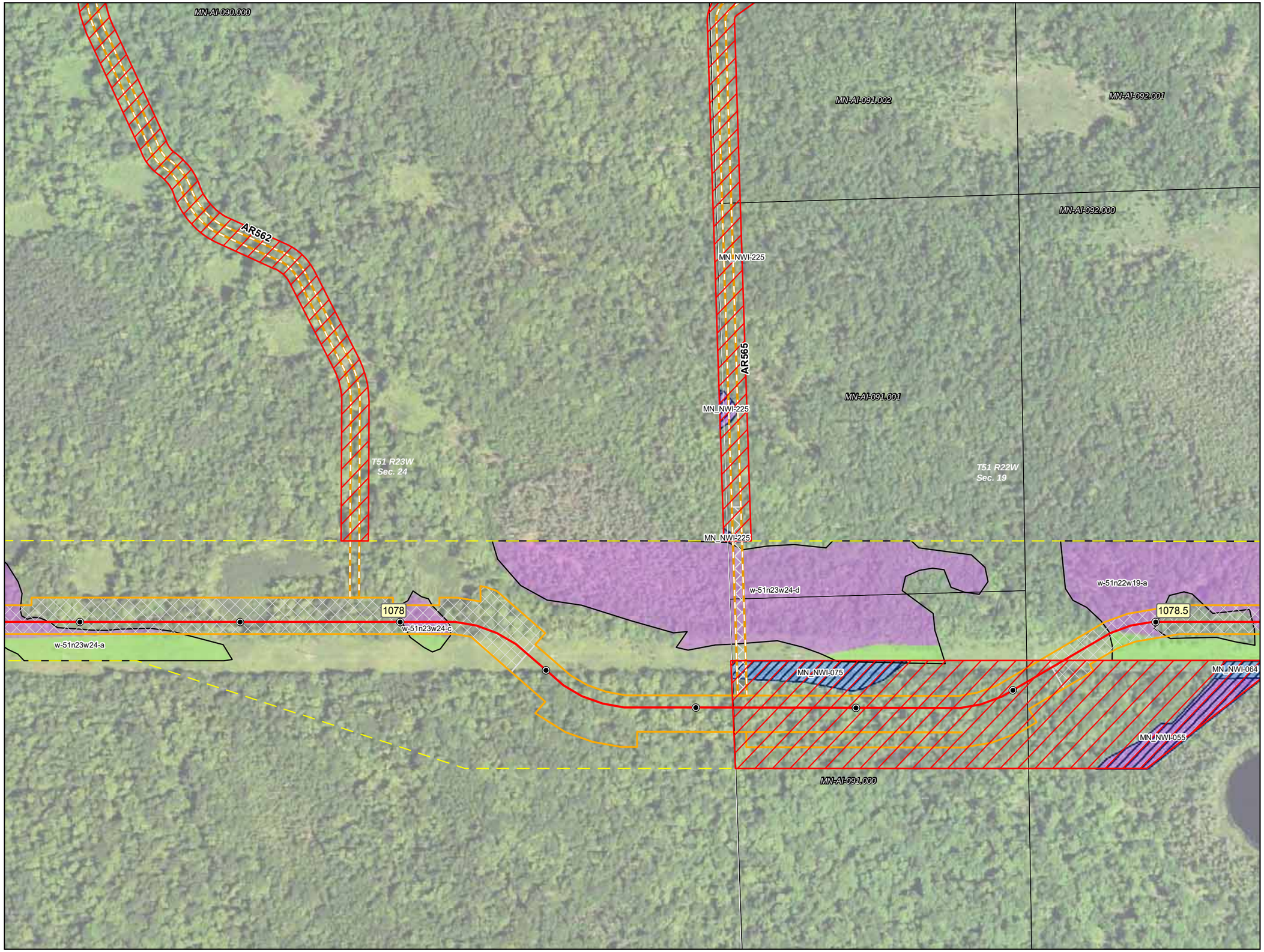

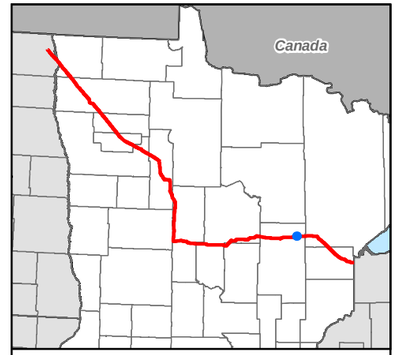

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Line 3 Replacement Project

Aitkin County, Minnesota

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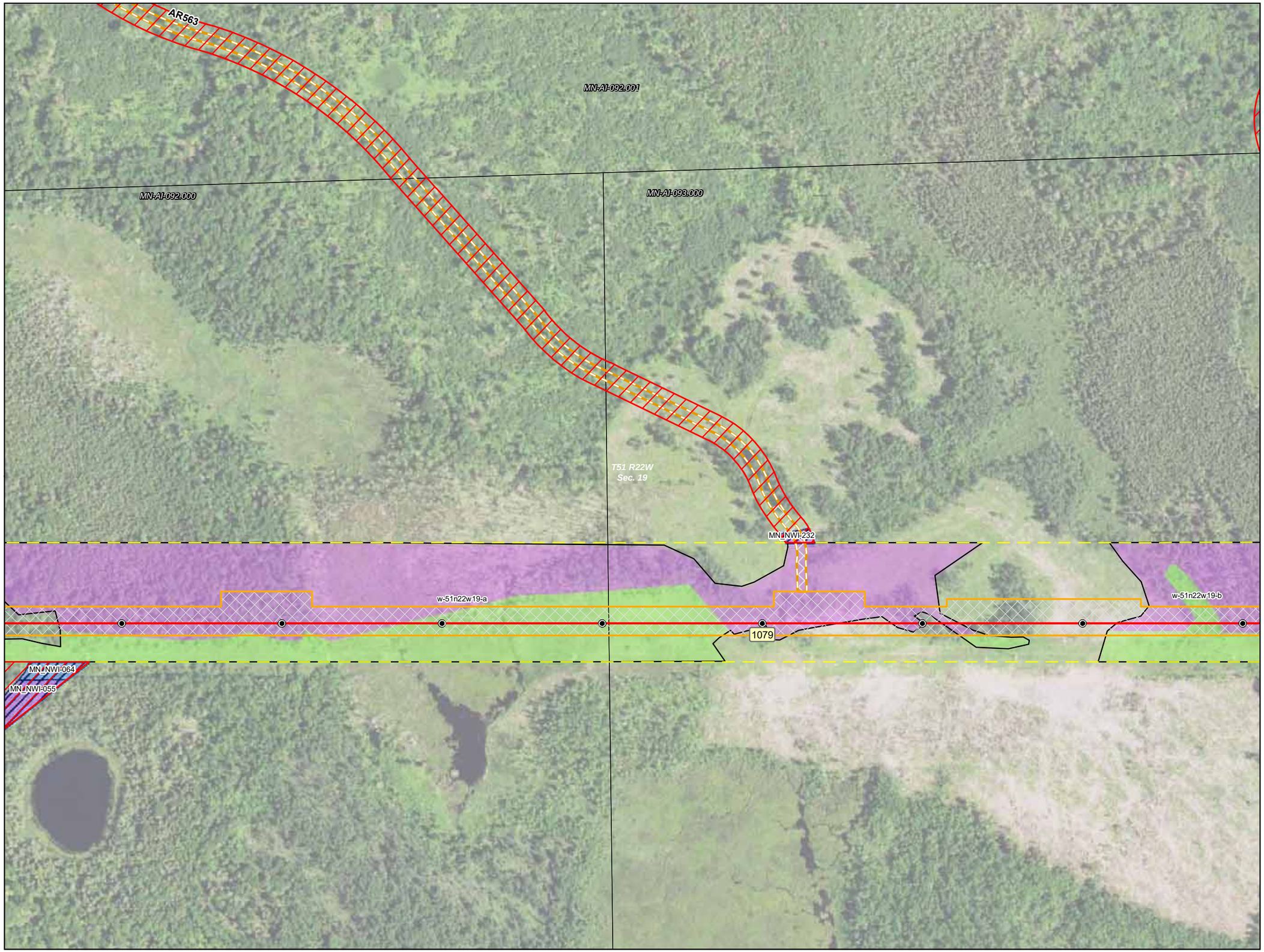

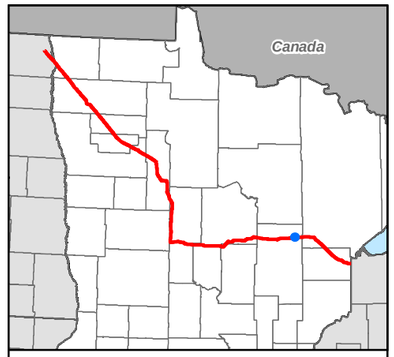

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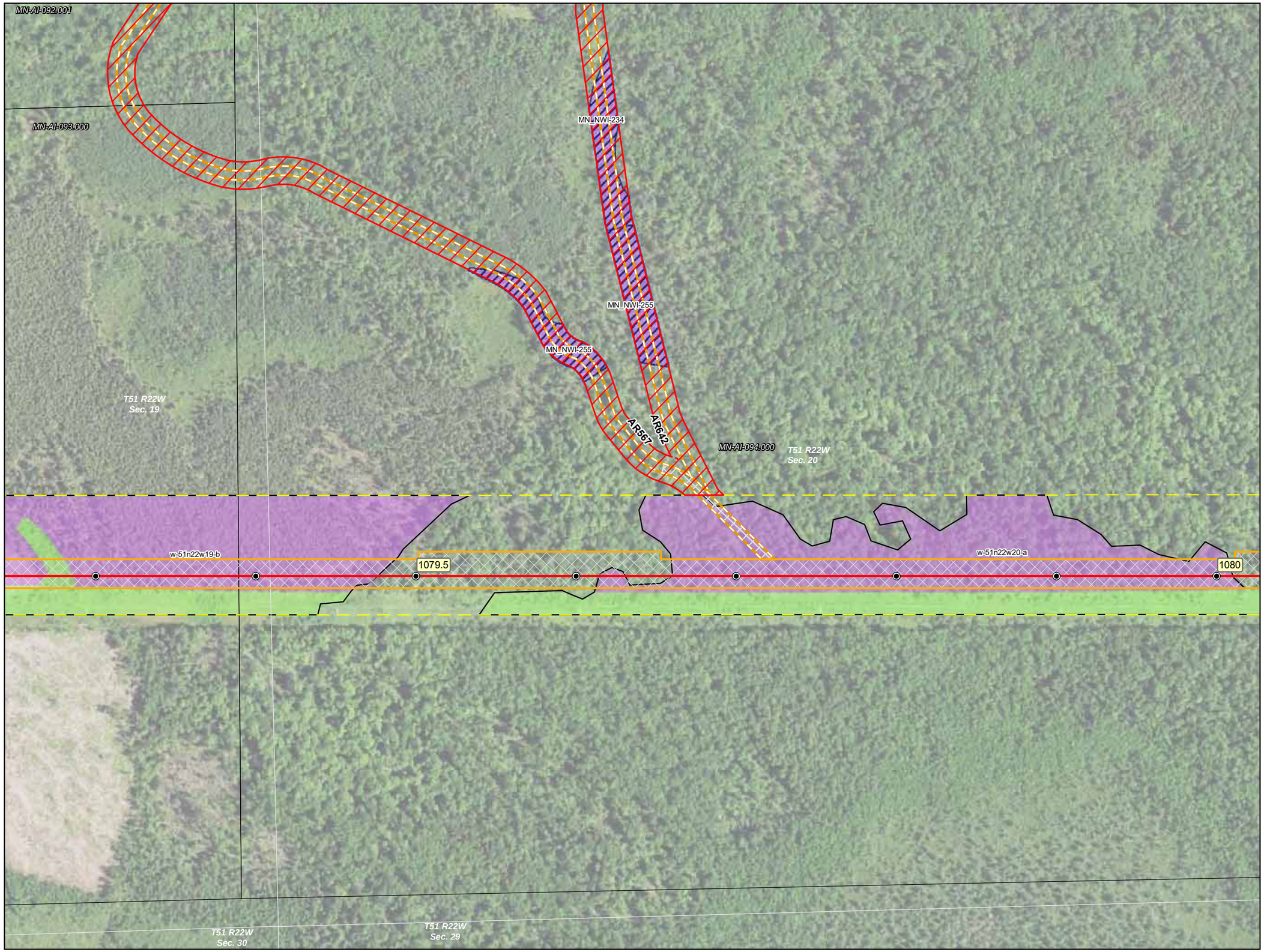

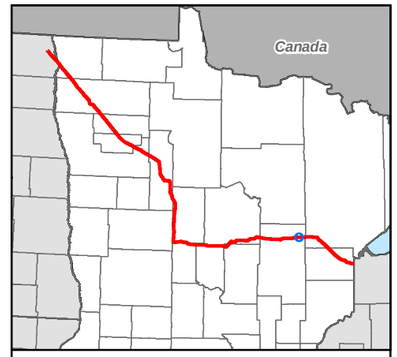

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Line 3 Replacement Project

Aitkin County, Minnesota

ENBRIDGE

MN-AI-094.000

T51 R22W
Sec. 20

T51 R22W
Sec. 21

MN-AI-095.000

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w-51n22w20-a

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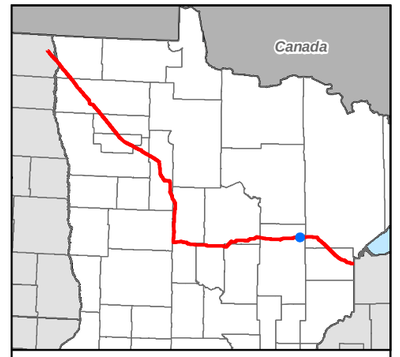
T51 R22W
Sec. 29

T51 R22W
Sec. 28



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Aitkin County, Minnesota

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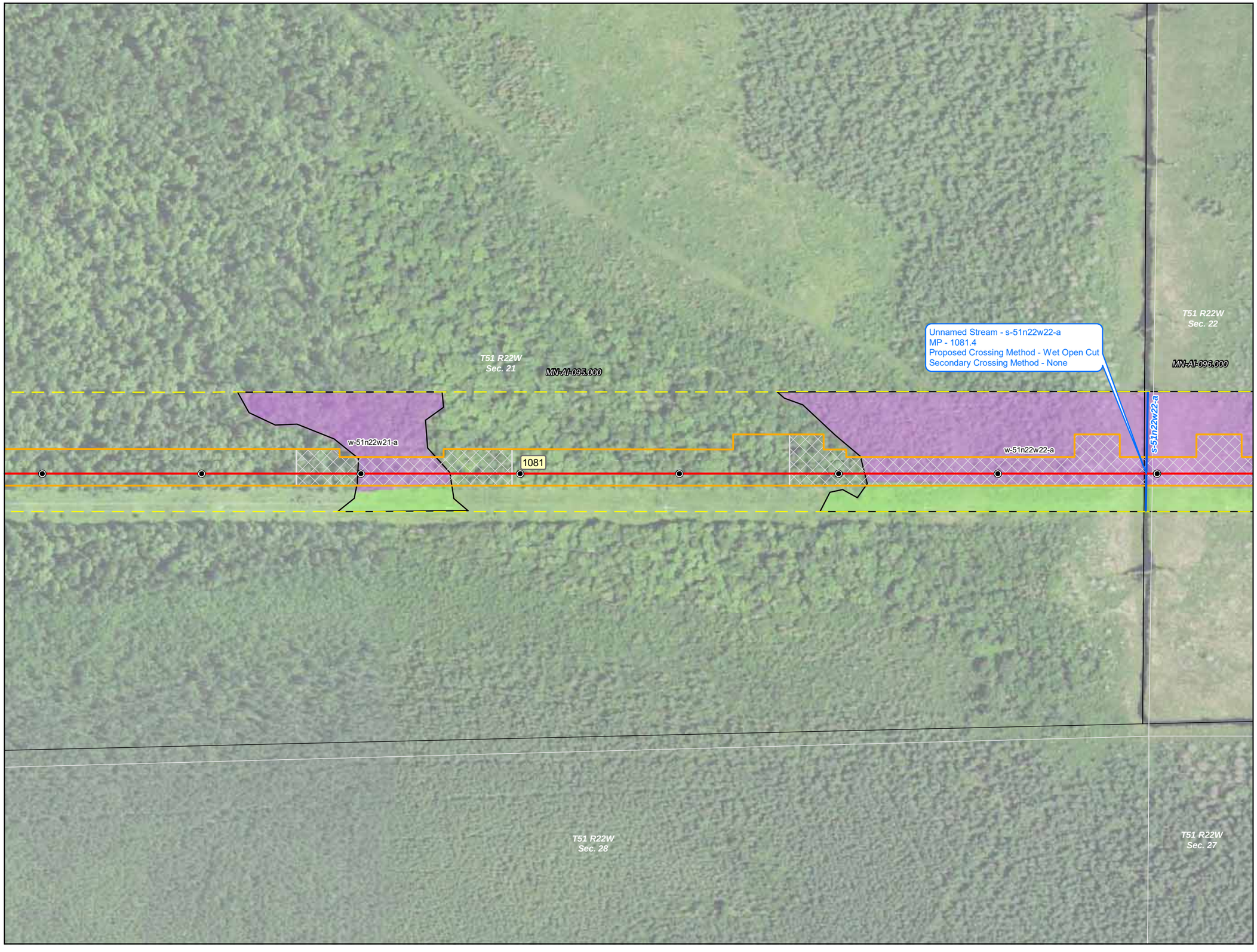

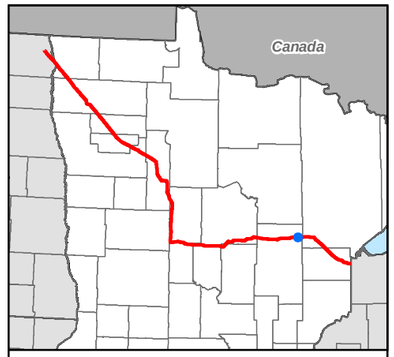

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ENBRIDGE

MN-AI-096.000

T51 R22W
Sec. 22

MN-AI-097.000

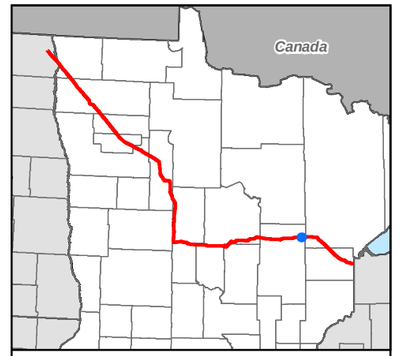
MN-AI-098.000

w-51n22w22-a

1081.5

1082

T51 R22W
Sec. 27



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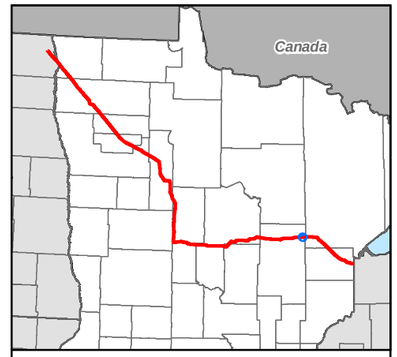

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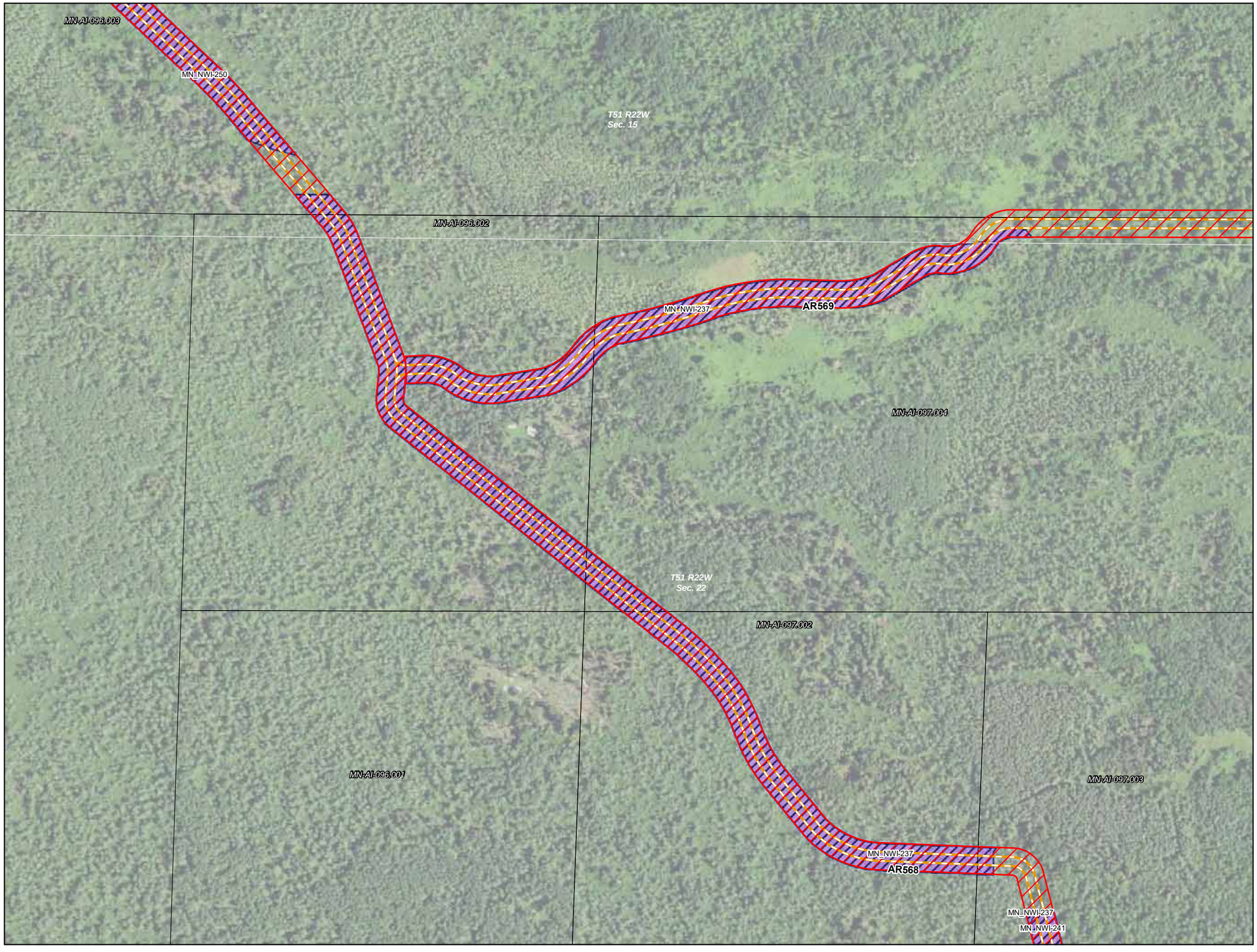

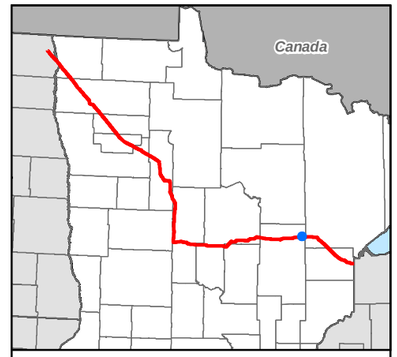

- Milepost
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- County Boundary
- Section Boundary
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- Valve Location
- Pump Station

Environmental Field Data

Wetlands

Field Delineated Wetland	NWI Wetlands
PEM	PEM
PFO	PFO
PSS	PSS
PUB	PUB

Waterbodies

- Field Delineated Waterbody
- NHD Waterbody

NWI Waterbodies

- Lake
- Riverine

0 150 300 Feet

1 inch = 300 feet

N W E S

Detailed Route Maps

Line 3 Replacement Project

Aitkin County, Minnesota

ENBRIDGE

Source: Z:\Clients\E_H\EnbridgeLine_3_Full_Replacement\Permitting\Federal\COE\Sept_2018\RSA_22\Figures\L3_MN_COE_Alignment_Sheets_RSA22.mxd

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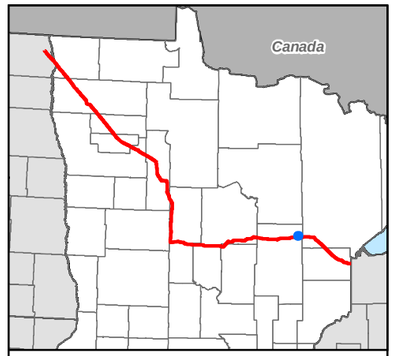

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Detailed Route Maps

Line 3 Replacement Project

Aitkin County, Minnesota

ENBRIDGE

MN-AI-096.003

MN-AI-098.001

MN_NWI-251

T51 R22W
Sec. 15

T51 R22W
Sec. 14

MN_NWI-249

MN_NWI-280

MN_NWI-249

MN_NWI-258

MN_NWI-258

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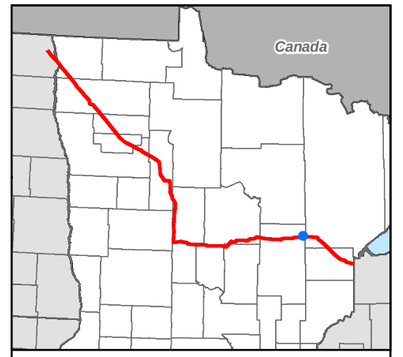
AR569

MN-AI-097.004

MN-AI-098.000

T51 R22W Sec. 22

T51 R22W Sec. 23



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Line 3 Replacement Project

Aitkin County, Minnesota

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Date: (9/19/2018)

MN_NWI-224

AR570

T51 R22W
Sec. 14

MN-AI-098.001

MN-AI-099.002

T51 R22W
Sec. 13

MN_NWI-251

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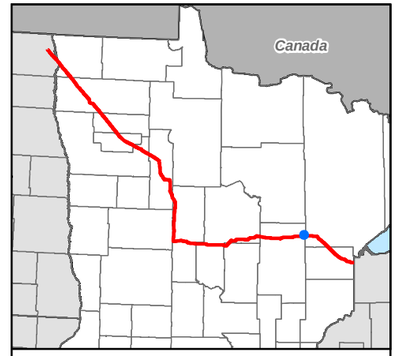

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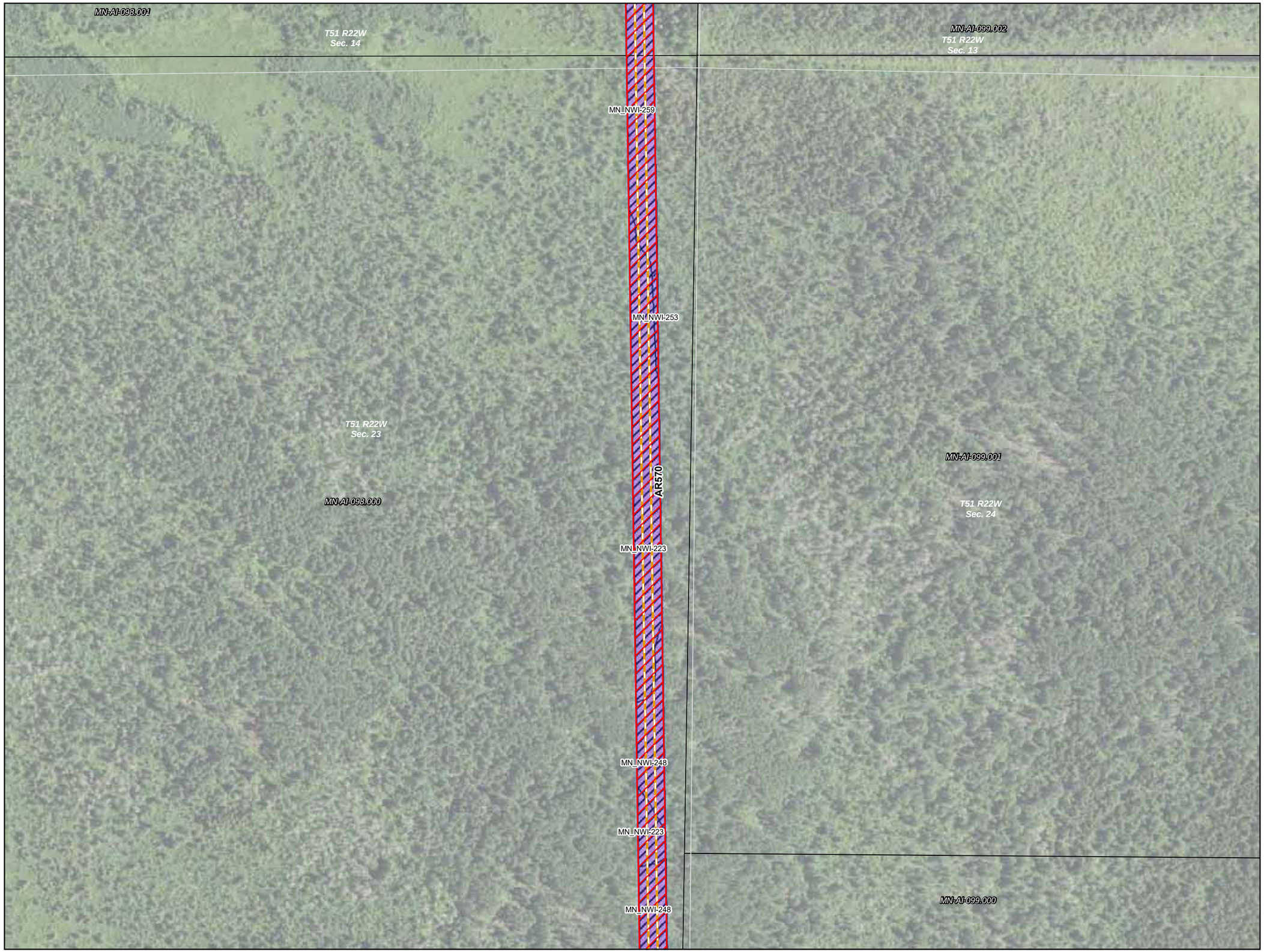
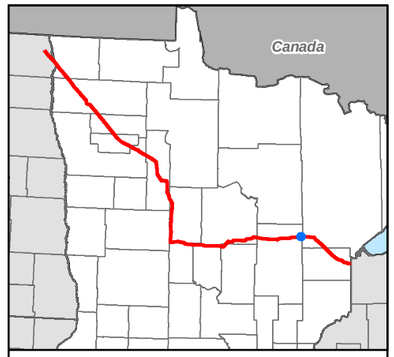
Line 3 Replacement Project

Aitkin County, Minnesota

ENBRIDGE





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Line 3 Replacement Project

Aitkin County, Minnesota

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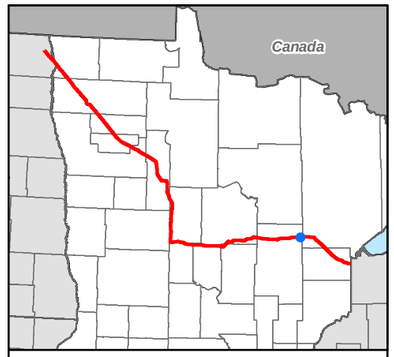

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Detailed Route Maps

Line 3 Replacement Project

Aitkin County, Minnesota

ENBRIDGE

MN-AI-099.000

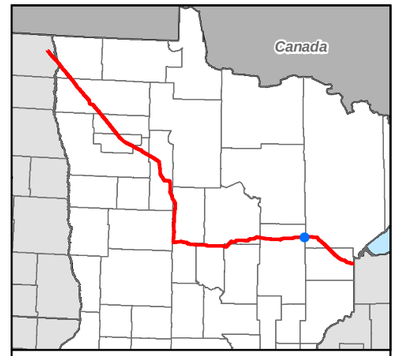
T51 R22W
Sec. 24

w-51n22w22-a

1083.5

1084

T51 R22W
Sec. 25



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Line 3 Replacement Project

Aitkin County, Minnesota

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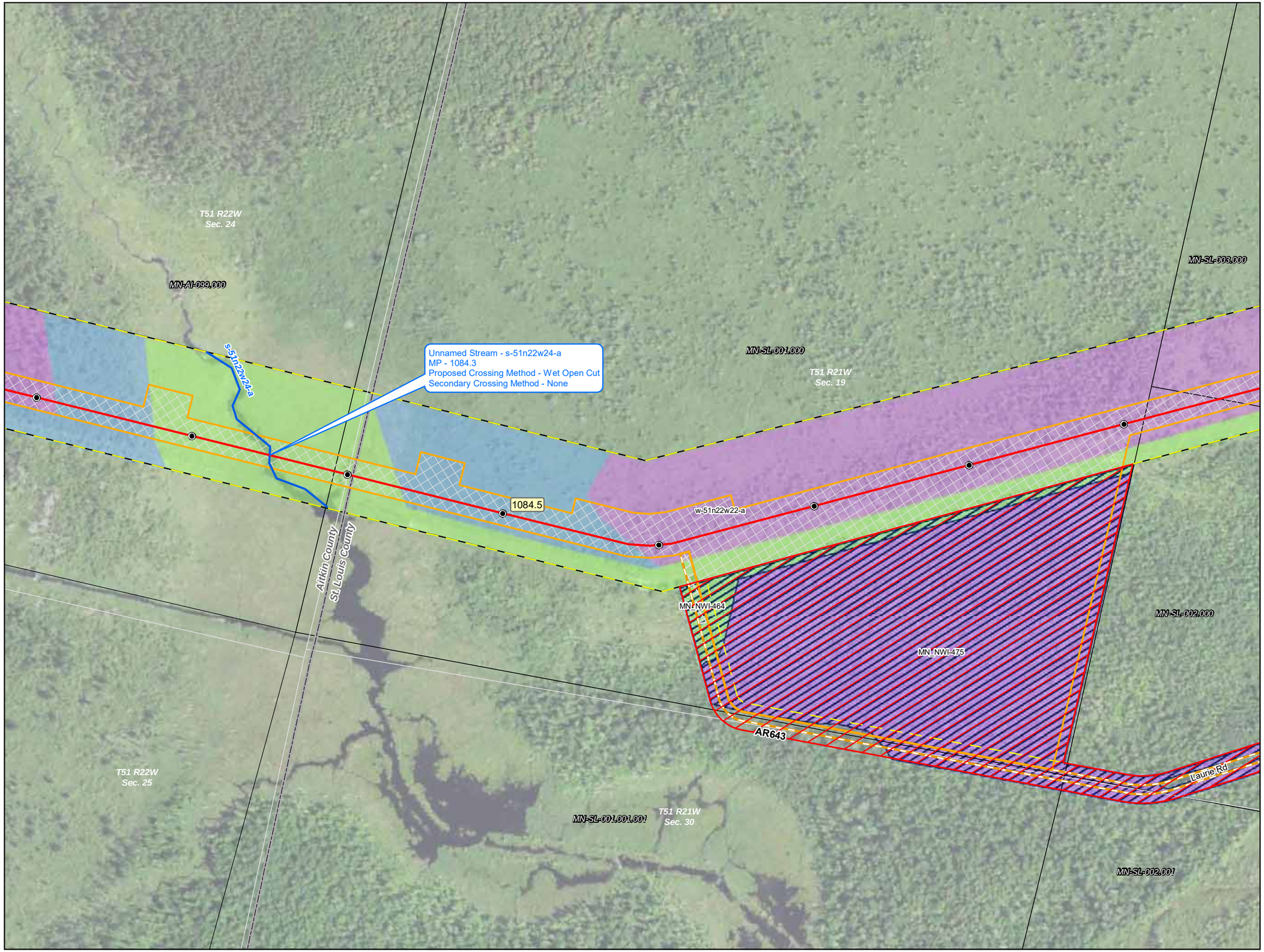

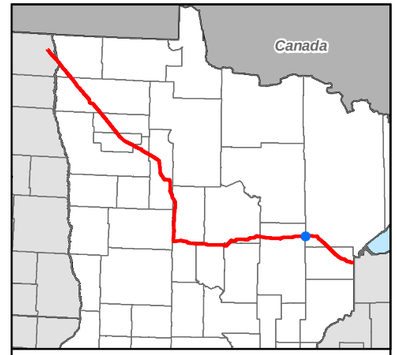

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Detailed Route Maps

Line 3 Replacement Project

Aitkin and St. Louis County, Minnesota

ENBRIDGE

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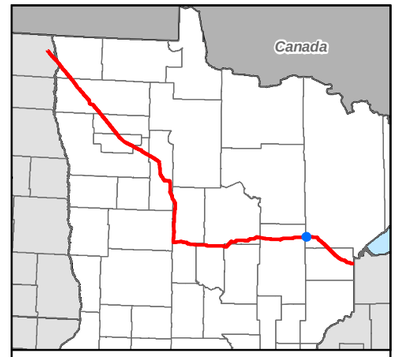

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Detailed Route Maps

Line 3 Replacement Project

St. Louis County, Minnesota

ENBRIDGE

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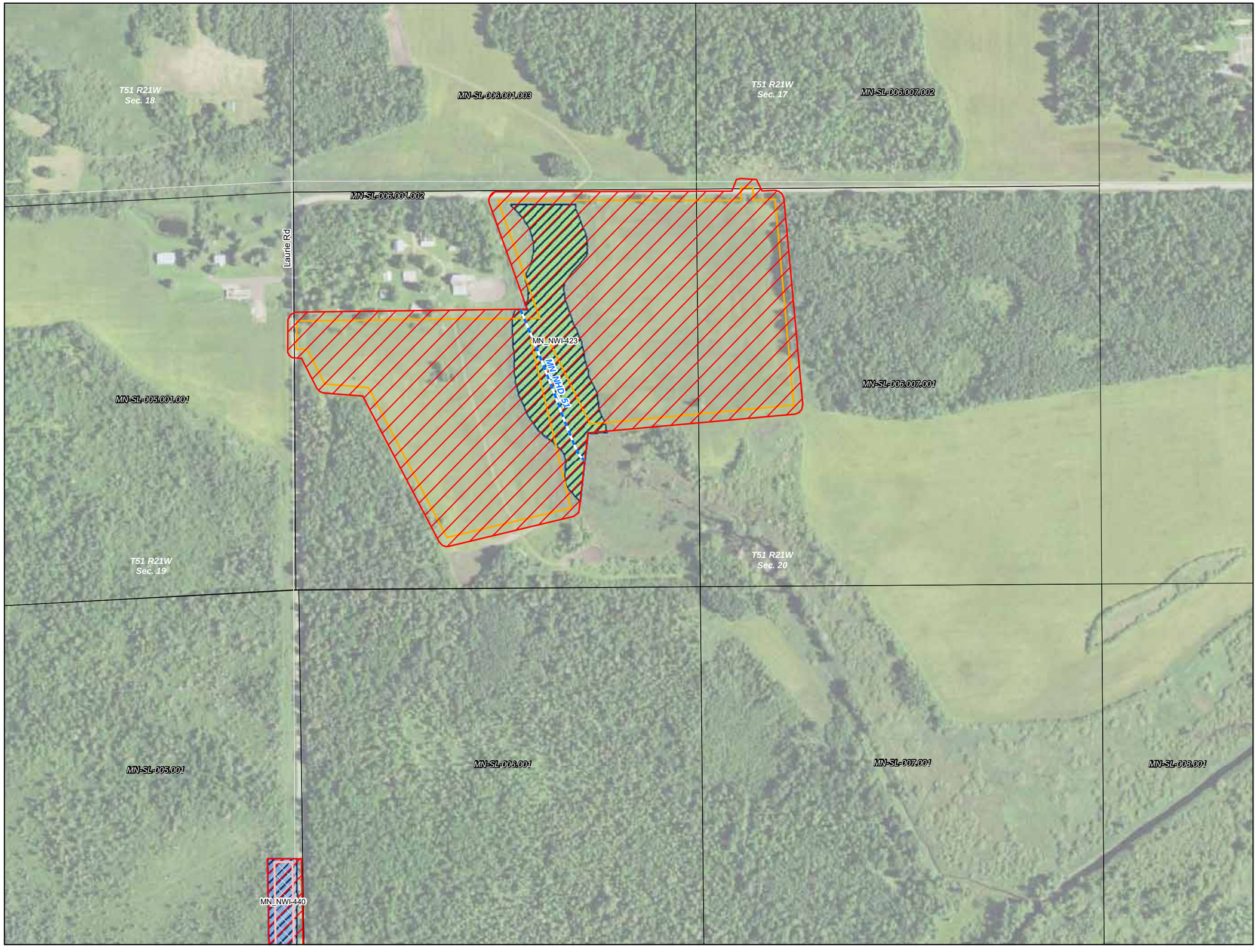

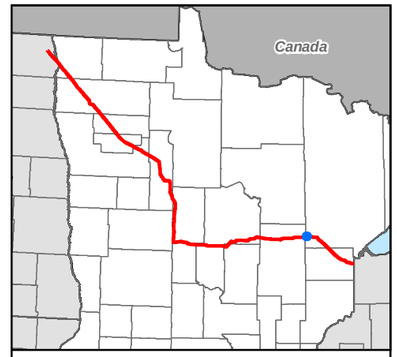

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Detailed Route Maps

Line 3 Replacement Project

St. Louis County, Minnesota

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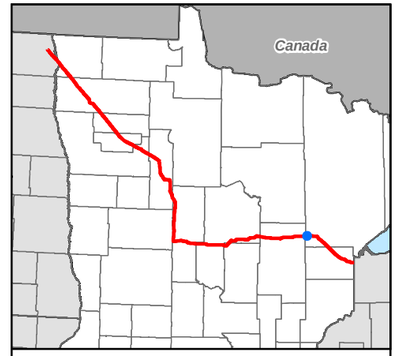
Date: (9/19/2018)

MN-SL-006.001
MN-SL-007.001
MN-SL-008.001
MN-SL-009.001
MN-SL-010.000
w-51n21w20-a
s-51n21w20-a
1086
w-51n21w22-a
MN_NWI-204
T51 R21W
Sec. 20
MN-SL-006.000
MN-SL-007.000
MN-SL-008.000
MN-SL-009.000
MN-SL-006.001.001
East Savanna River - s-51n21w20-a
MP - 1085.9
Proposed Crossing Method - HDD
Secondary Crossing Method - NA
MNDNR Public Water
No in-channel work from April 1 - June 30



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Line 3 Replacement Project

St. Louis County, Minnesota

ENBRIDGE

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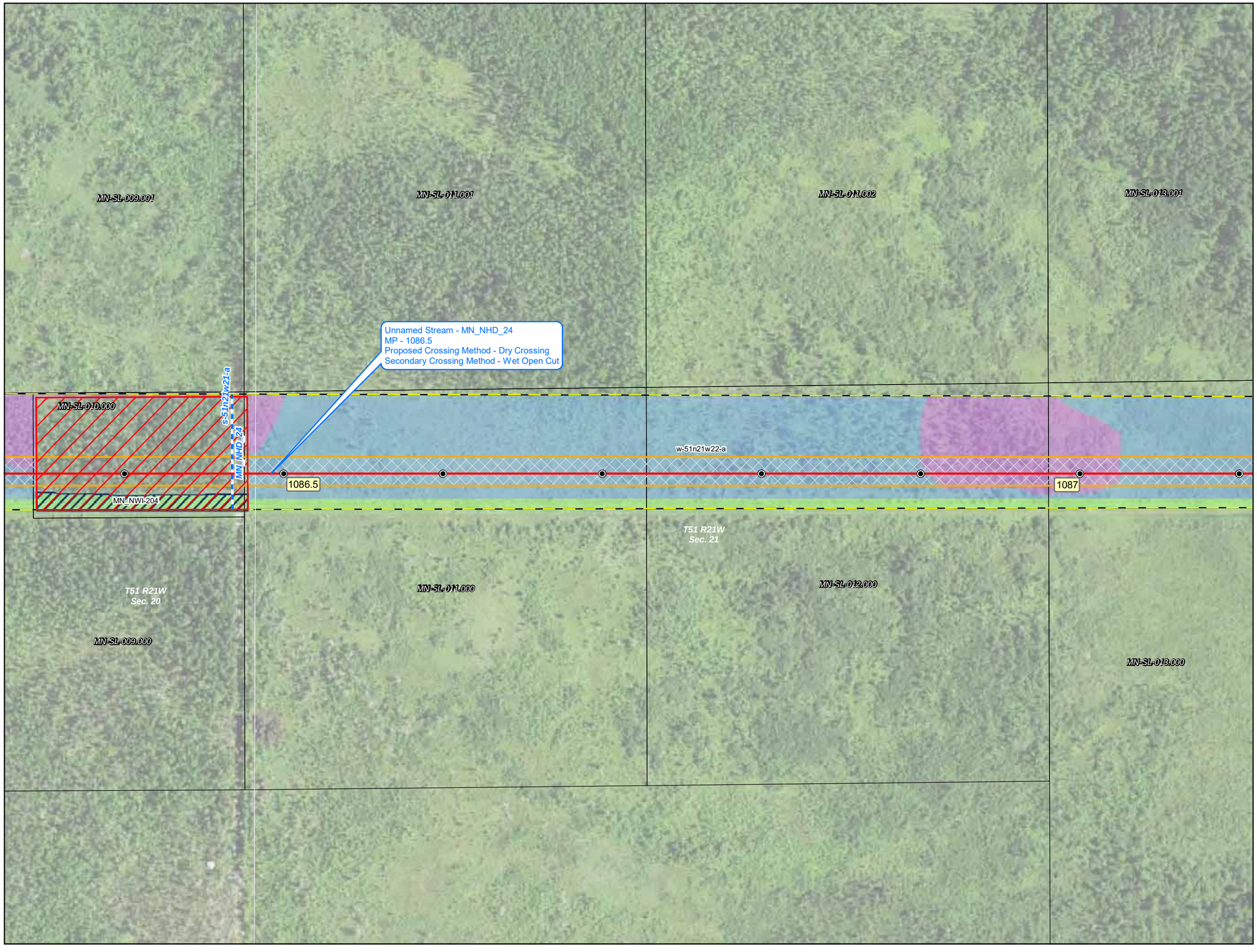

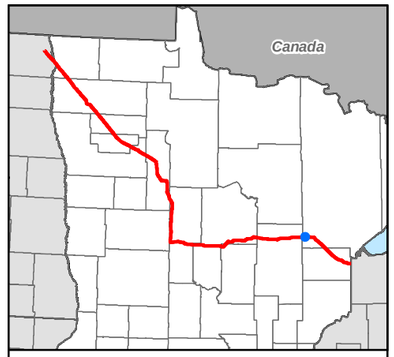

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Line 3 Replacement Project

St. Louis County, Minnesota

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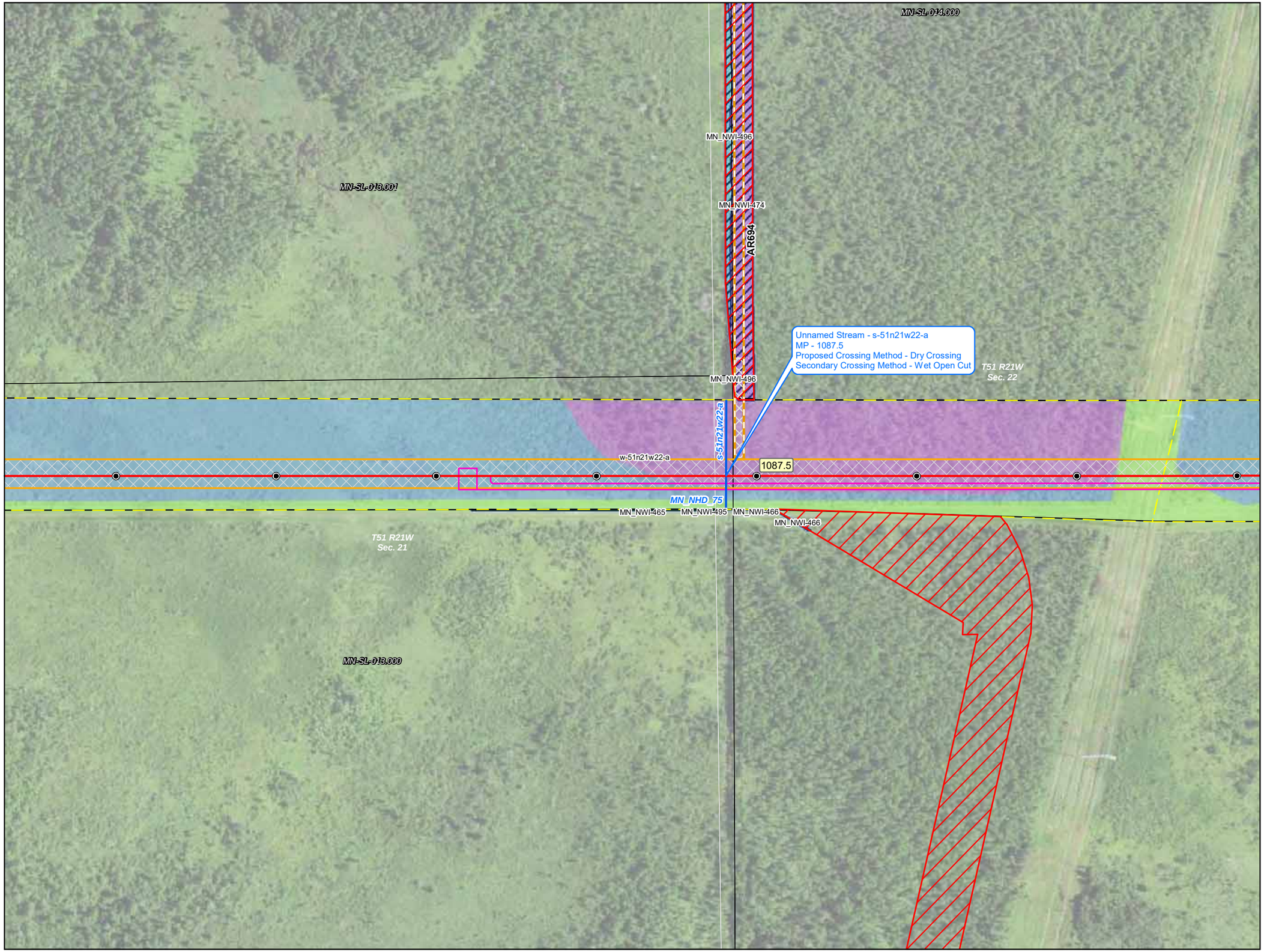

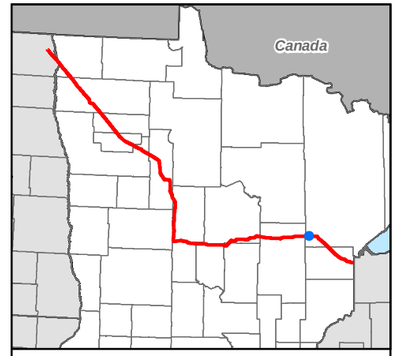

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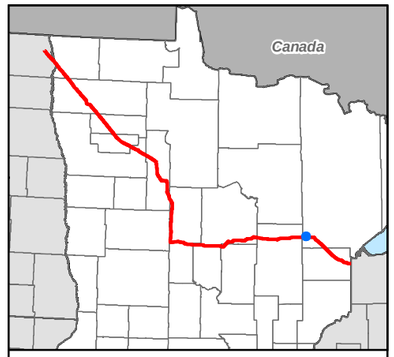

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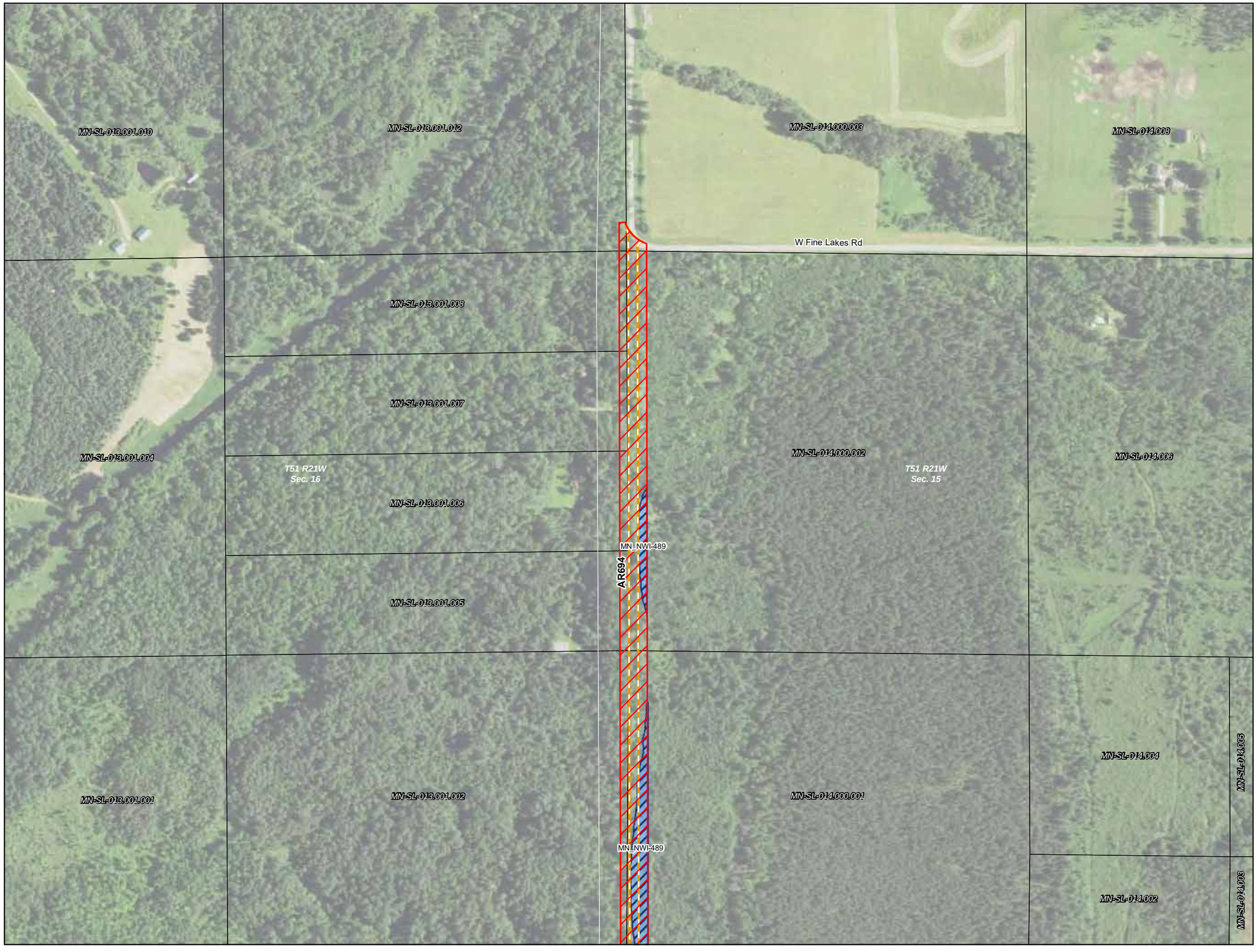

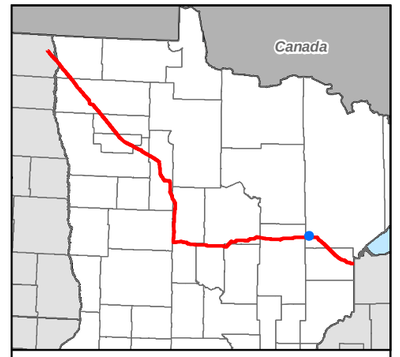

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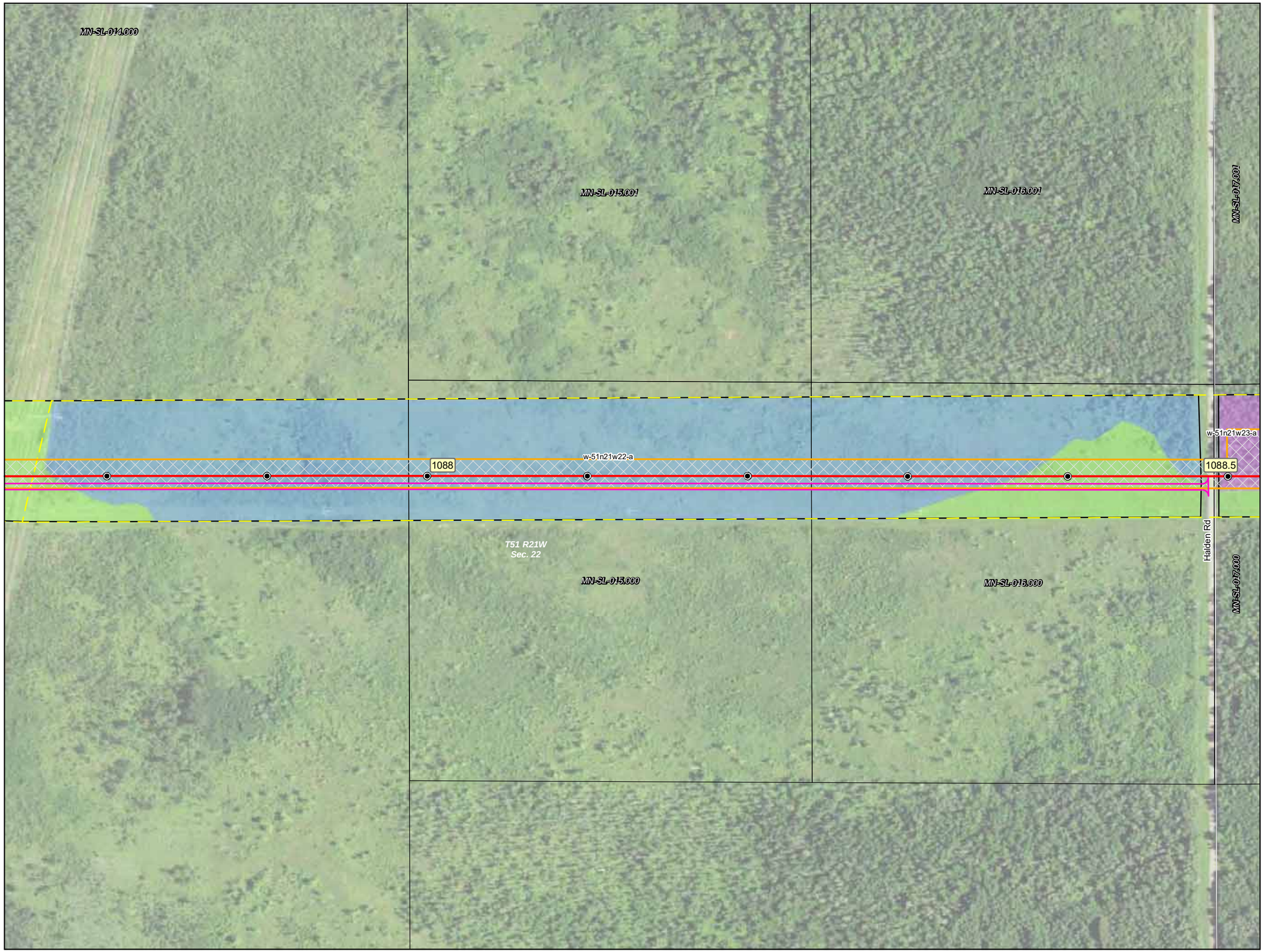

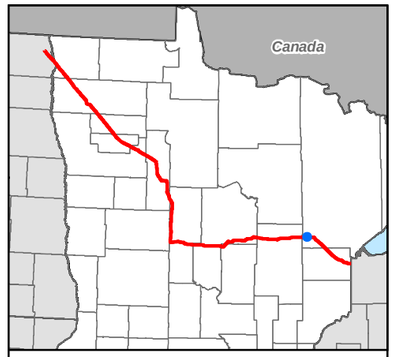

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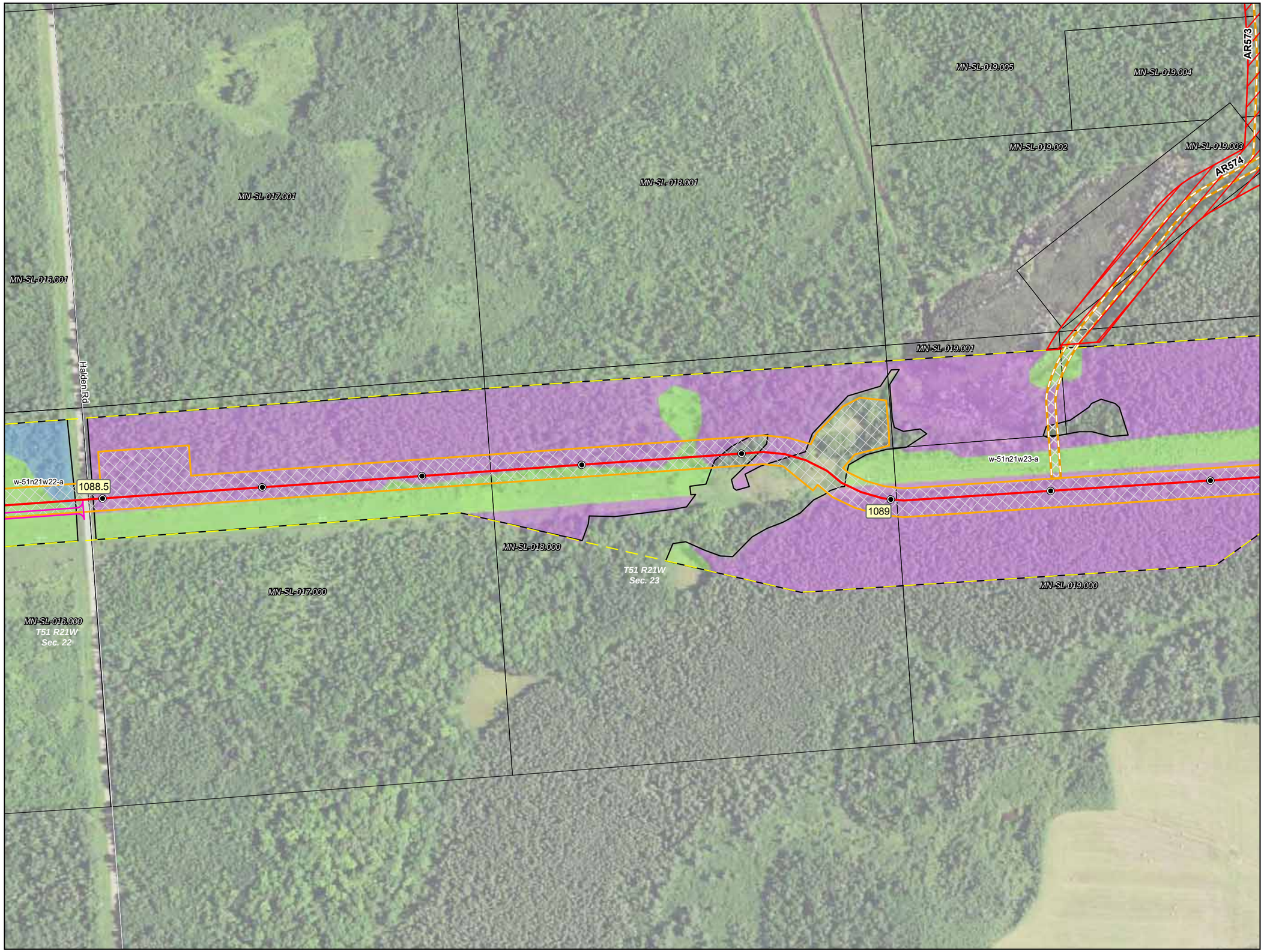

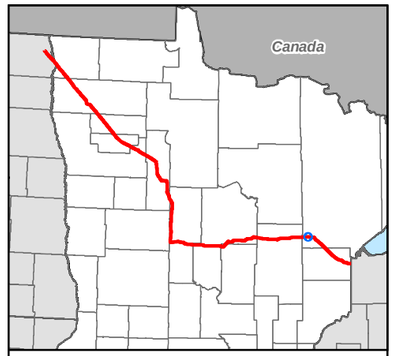

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St. Louis County, Minnesota

ENBRIDGE

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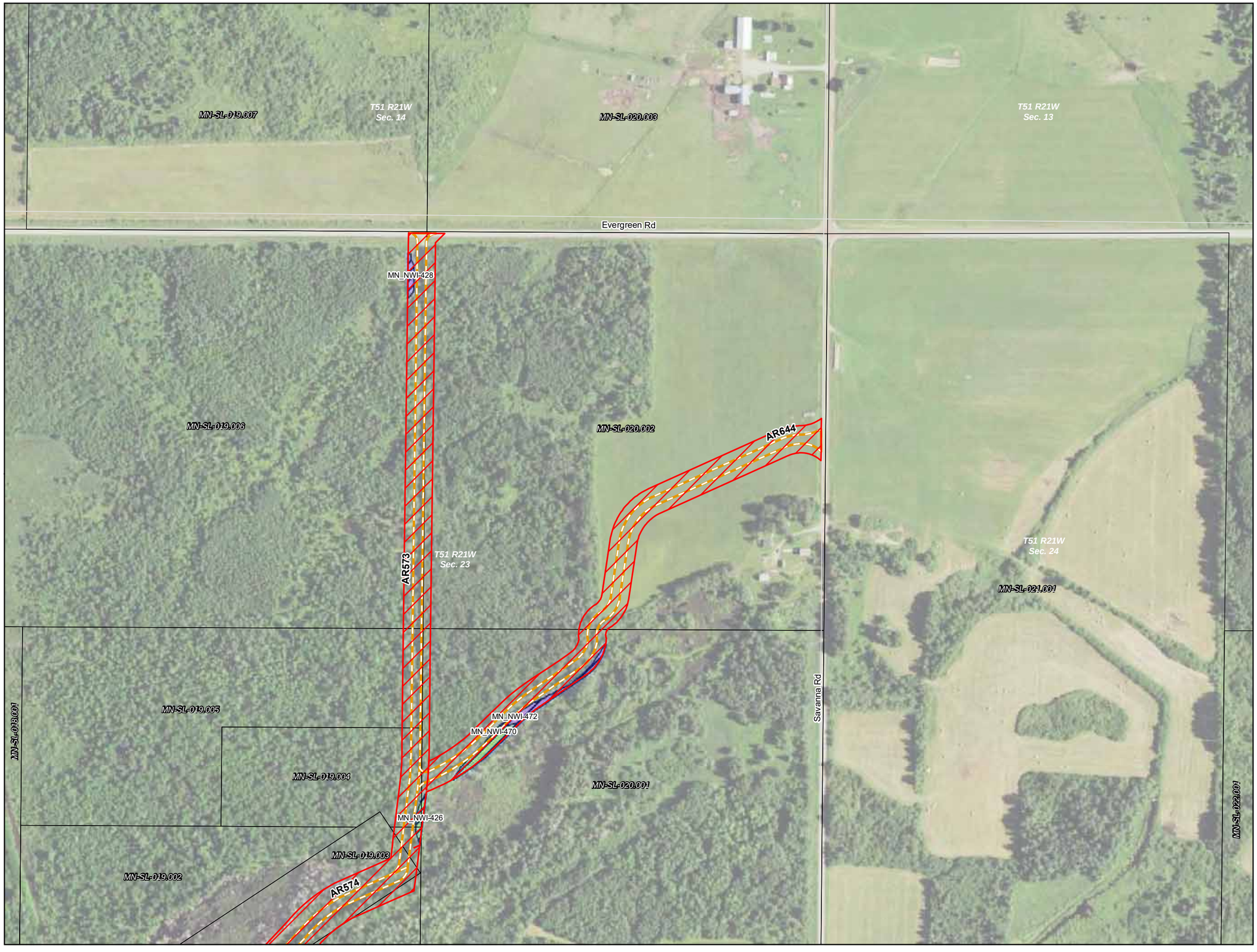

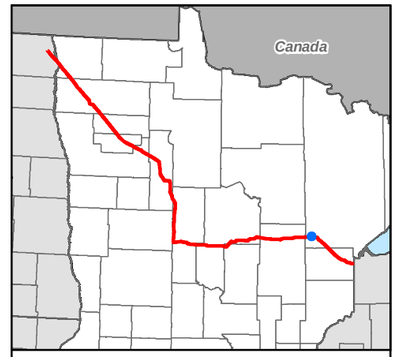

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Waterbodies

- Field Delineated Waterbody
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NWI Waterbodies

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0 150 300 Feet

1 inch = 300 feet

N W E S

Detailed Route Maps

Line 3 Replacement Project

St. Louis County, Minnesota

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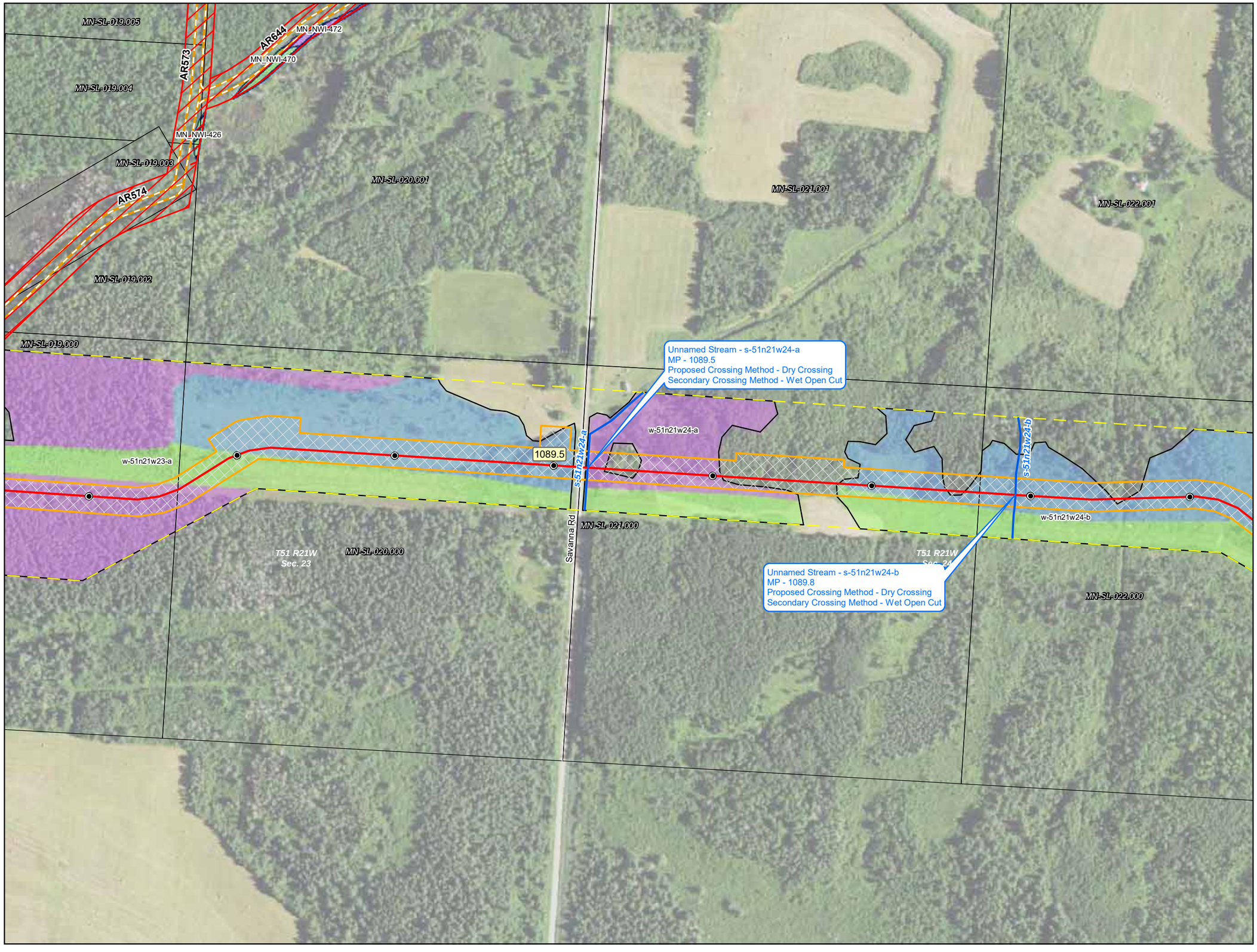

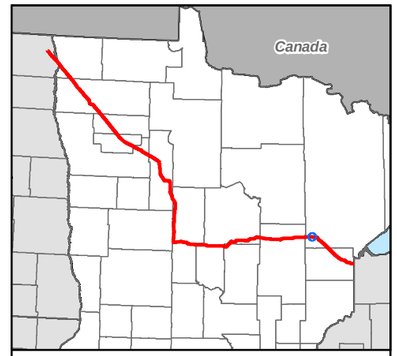

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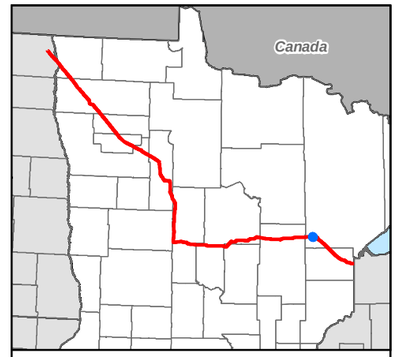

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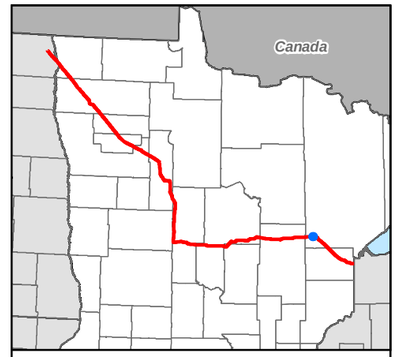

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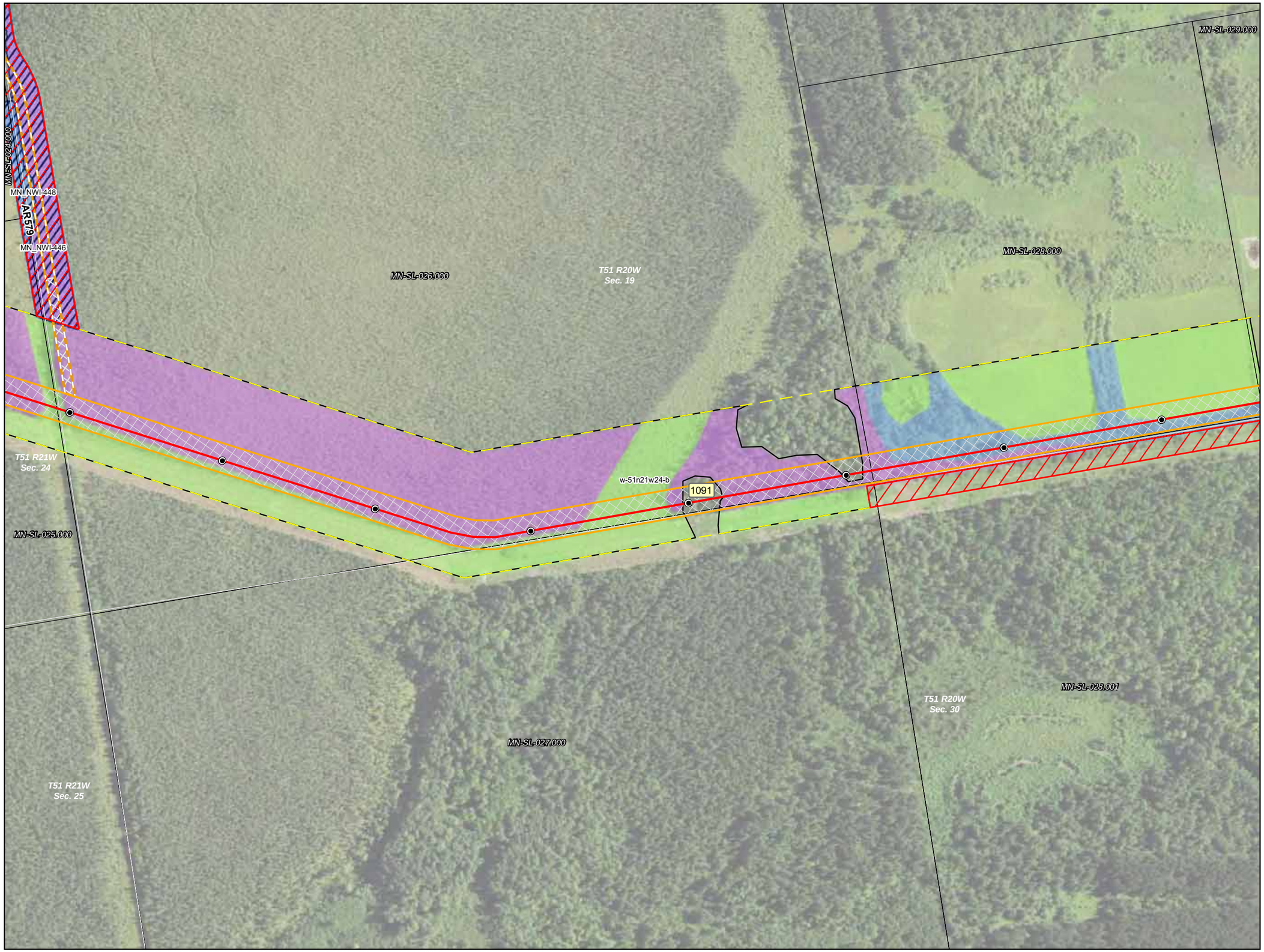

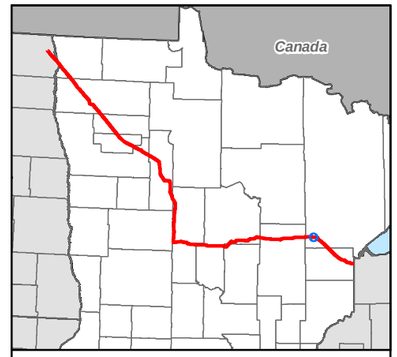

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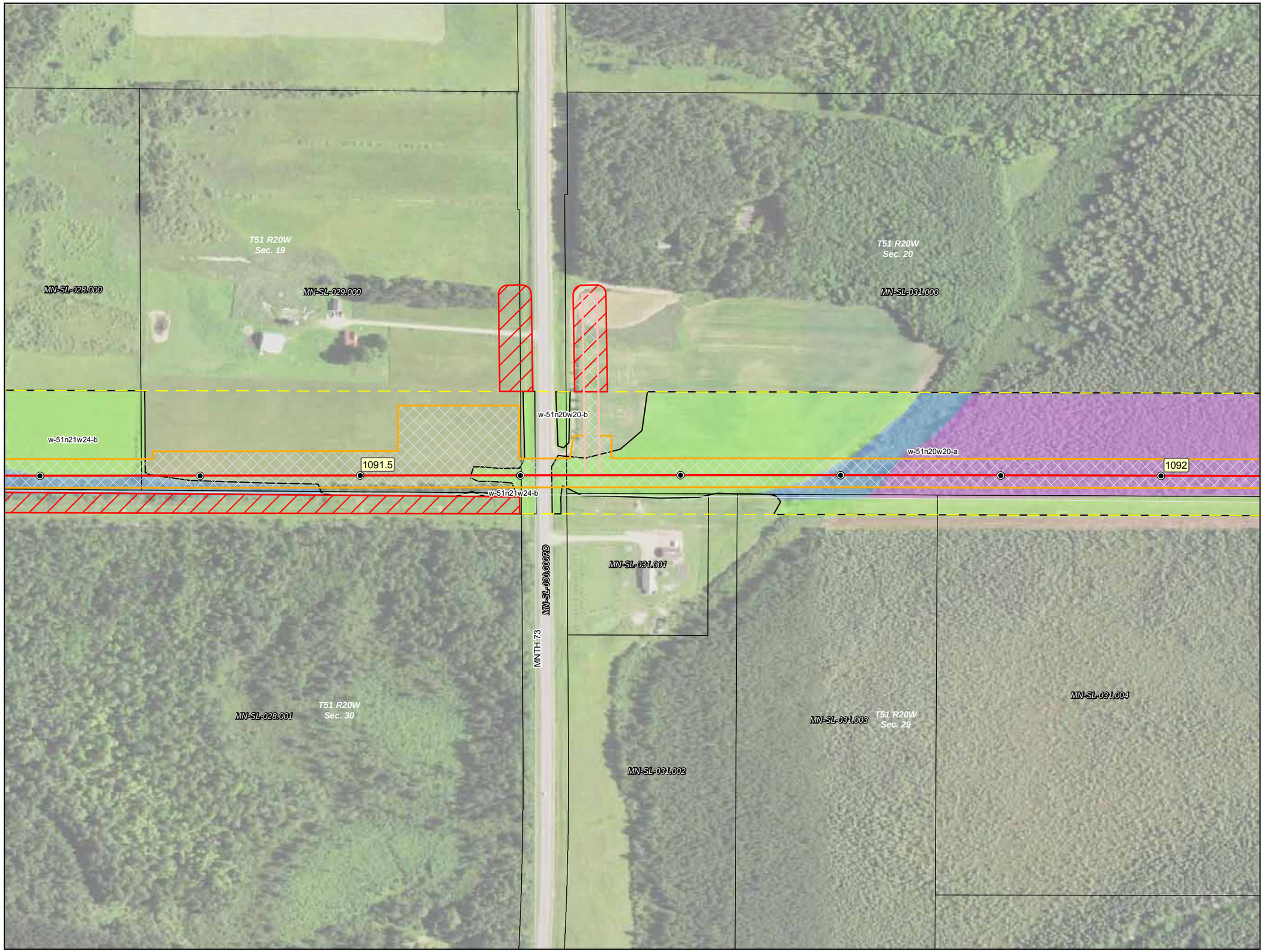

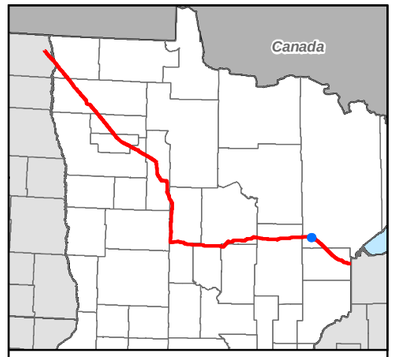

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St. Louis County, Minnesota

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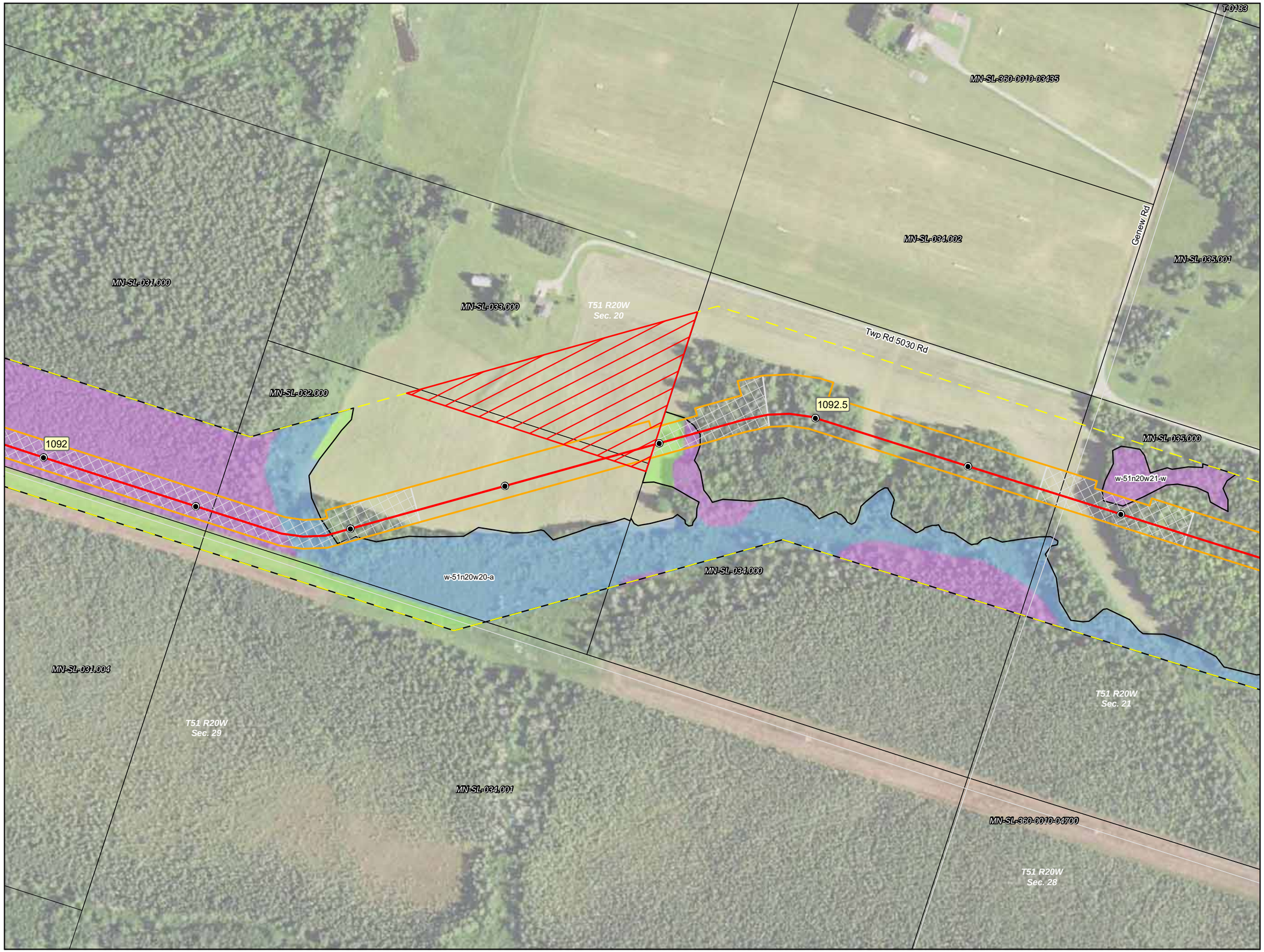

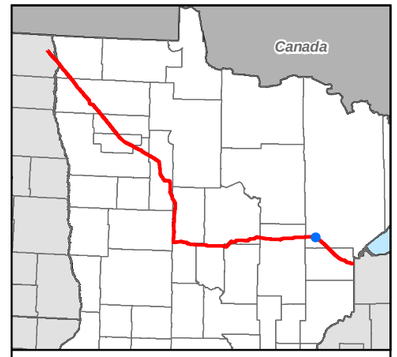

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St. Louis County, Minnesota

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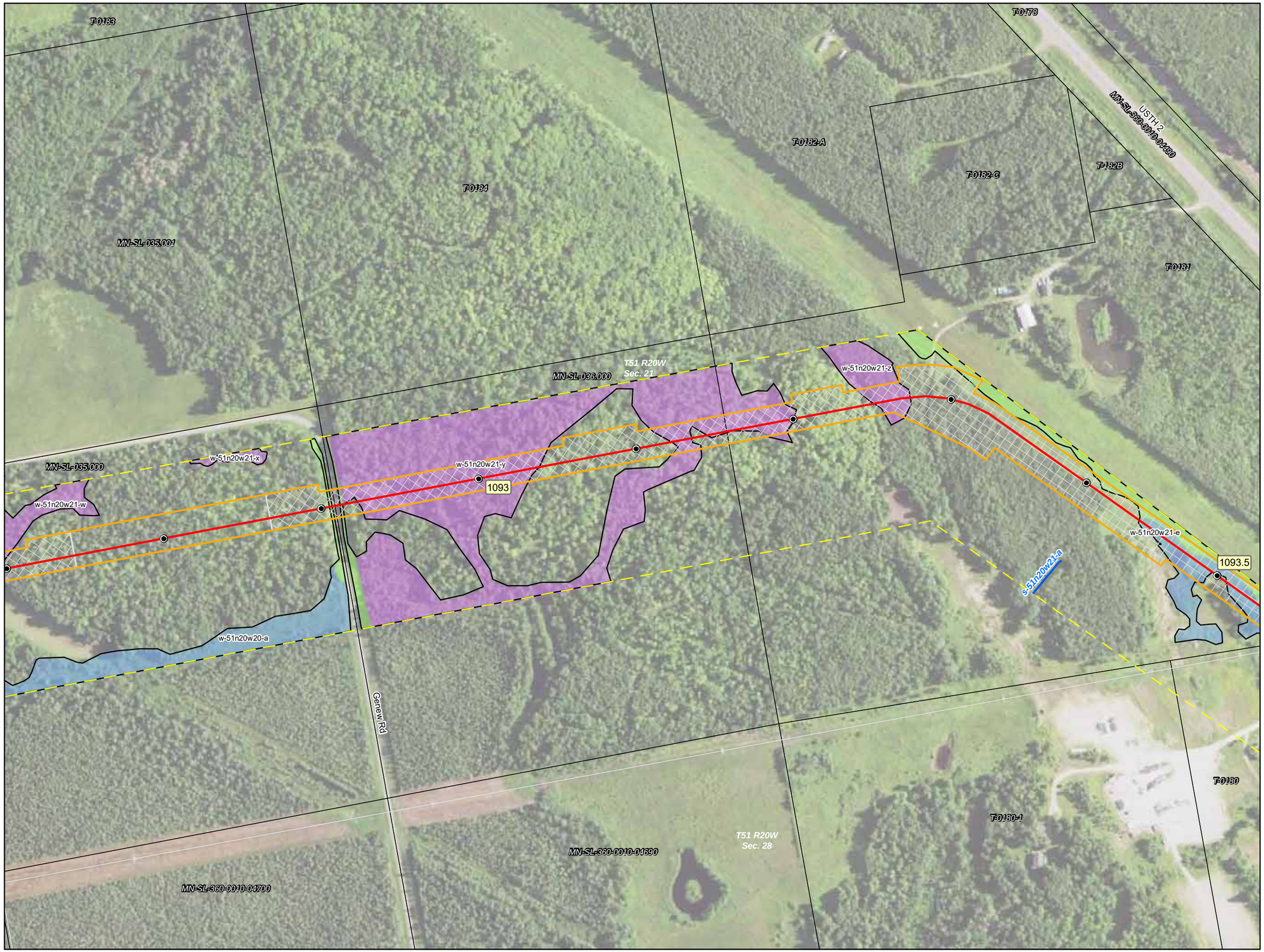

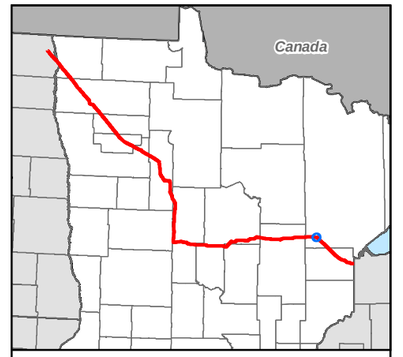

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St. Louis County, Minnesota

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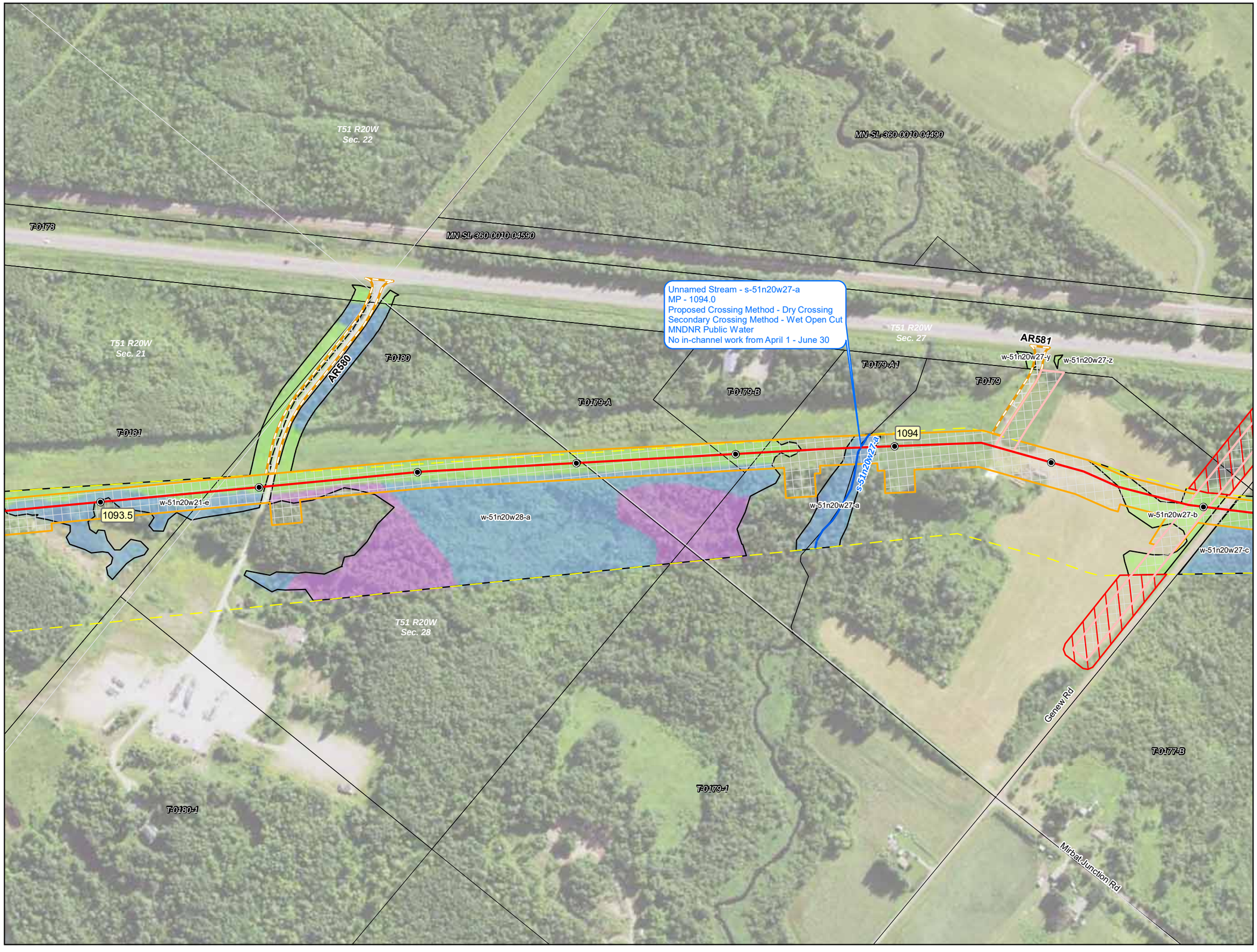

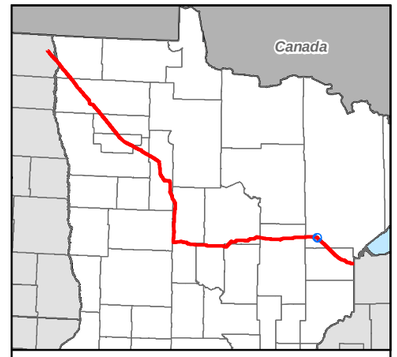

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St. Louis County, Minnesota

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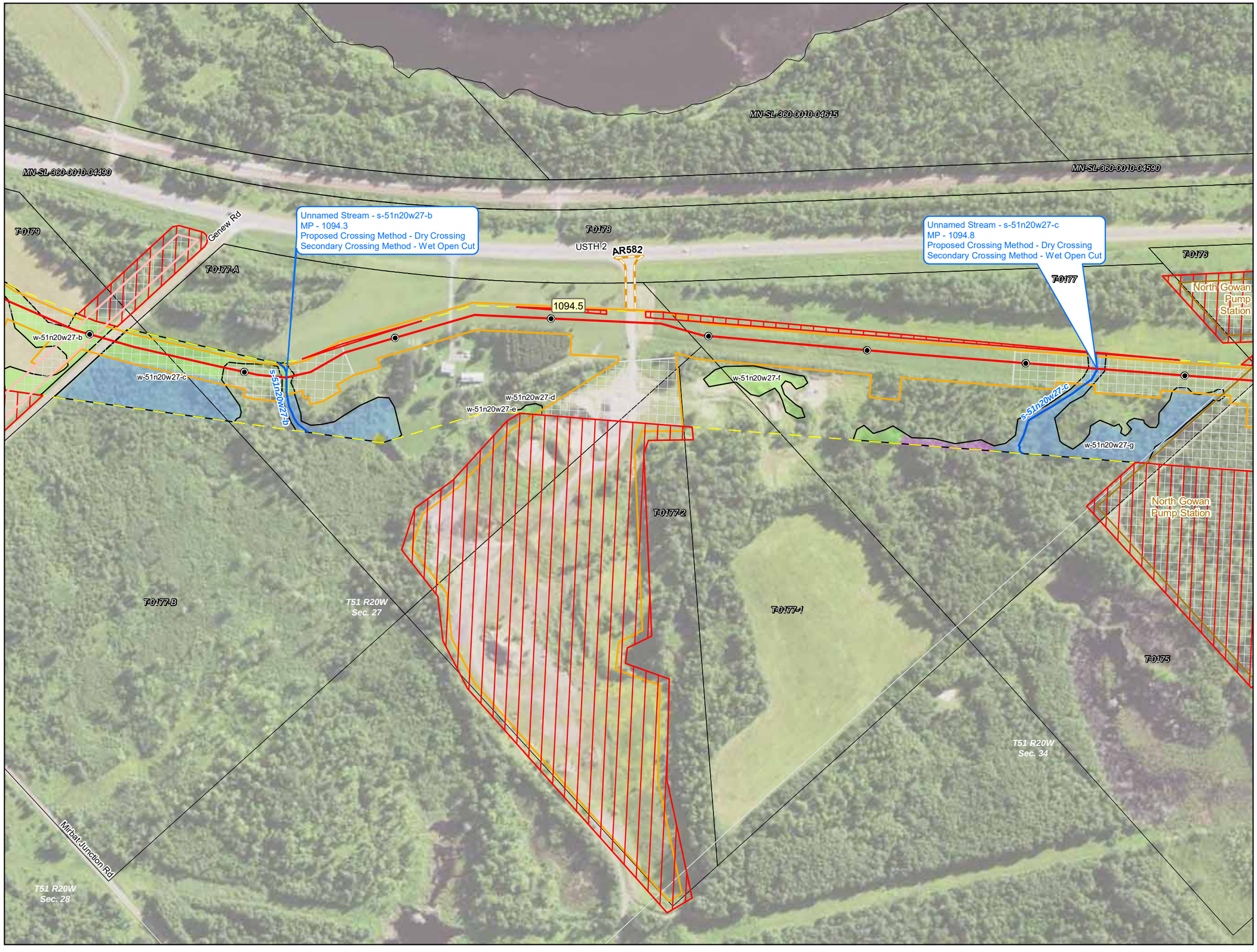

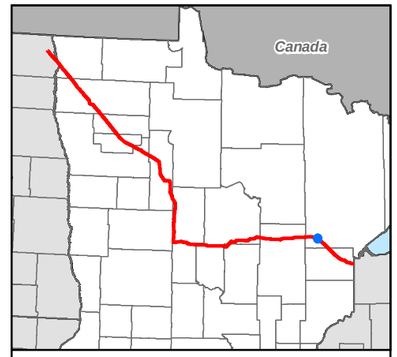

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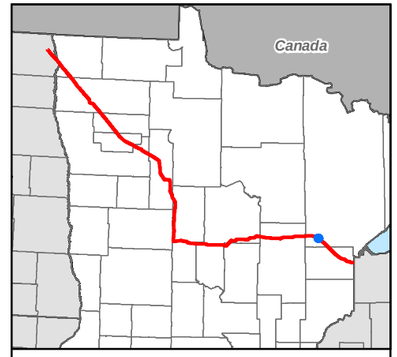

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Line 3 Replacement Project

St. Louis County, Minnesota

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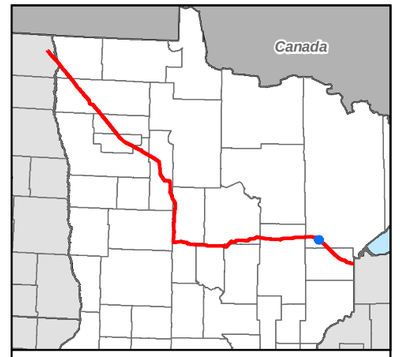
MN-SL-360-0010-04490
T-0168
Bush Rd
USTH 2
T-0173
T-0167-C
MN-SL-360-0010-05920
T-0167-A
T-0167
T-0169
Unnamed Stream - s-51n20w35-a
MP - 1095.9
Proposed Crossing Method - Dry Crossing
Secondary Crossing Method - Wet Open Cut
MNDNR Public Water
No in-channel work from April 1 - June 30
Unnamed Stream - s-51n20w35-b
MP - 1096.0
Proposed Crossing Method - Dry Crossing
Secondary Crossing Method - Wet Open Cut
T-0167-E
T51 R20W
Sec. 35
1096
s-51n20w35-c
s-51n20w35-d
s-51n20w35-b
w-51n20w35-c
w-51n20w35-d
w-51n20w35-b
w-51n20w35-e
w-50n20w2-a
T-0167-D
w-50n20w2-c
w-50n20w2-a
T-0165-1
Rogers Rd
T50 R20W
Sec. 2
w-50n20w2-a
Hingsley Rd
MN-SL-360-0010-05760
T-0167-1
T51 R20W
Sec. 34
MN-SL-355-0010-00210



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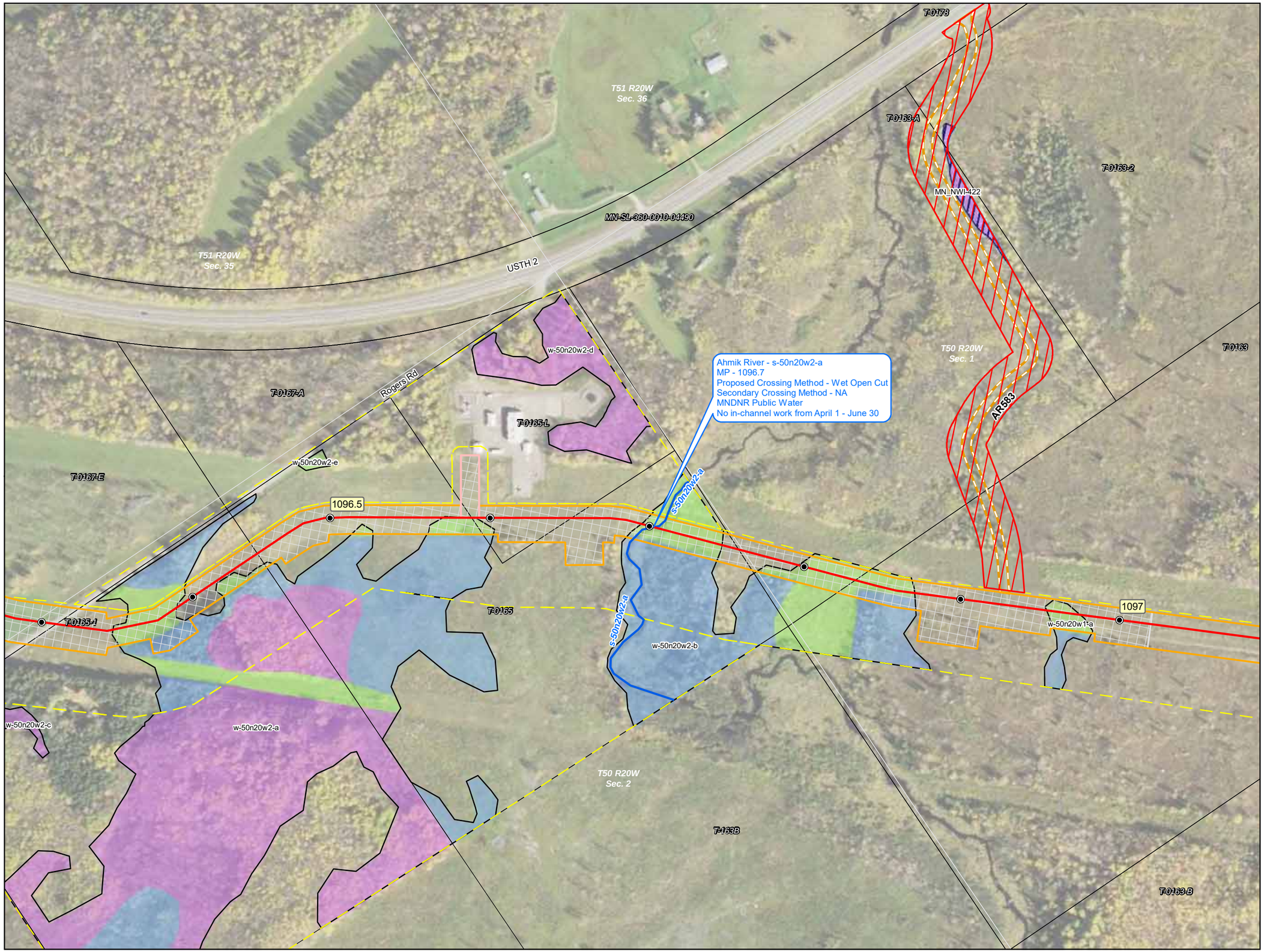

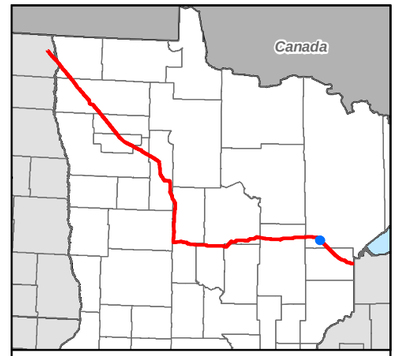

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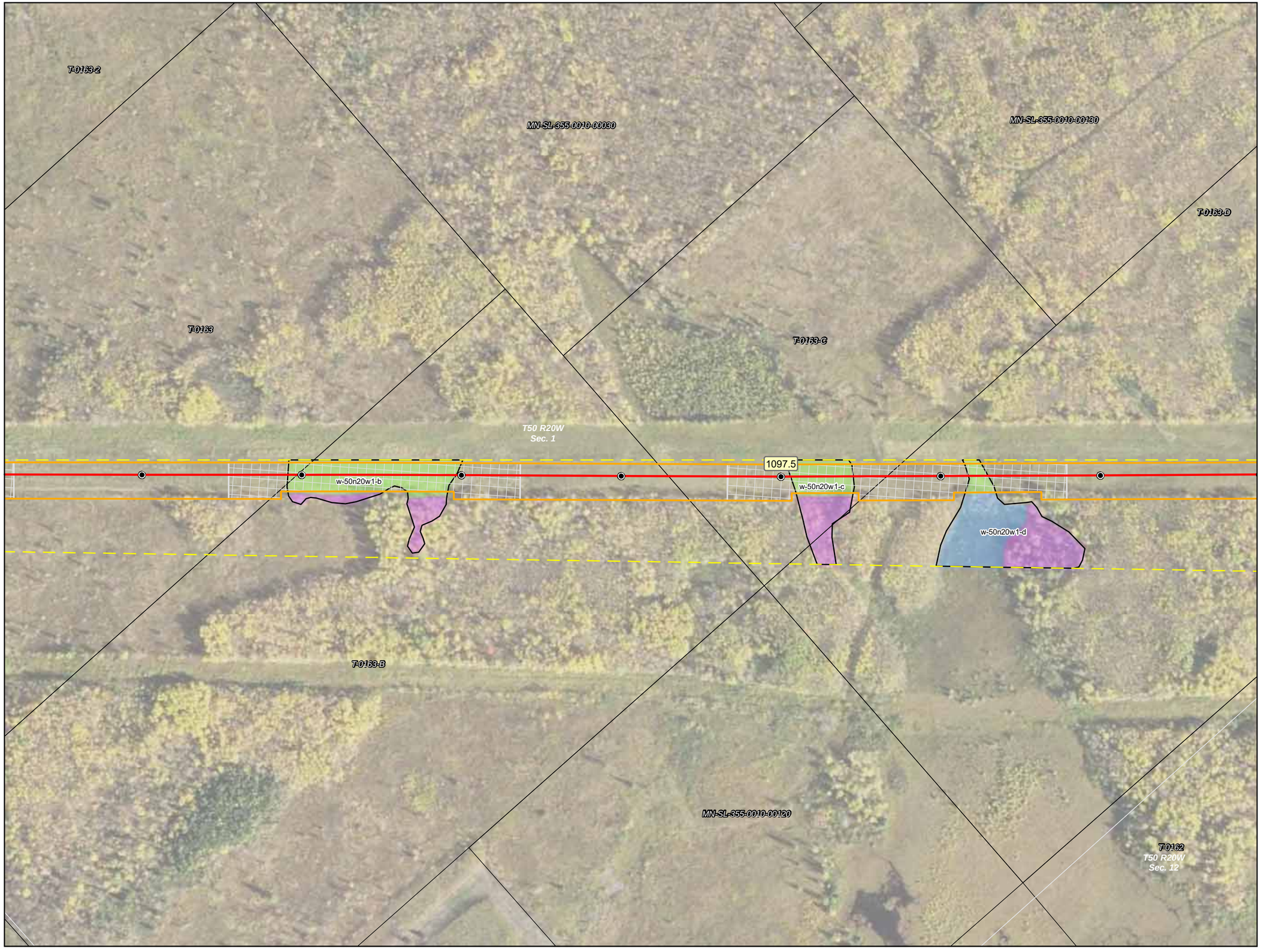

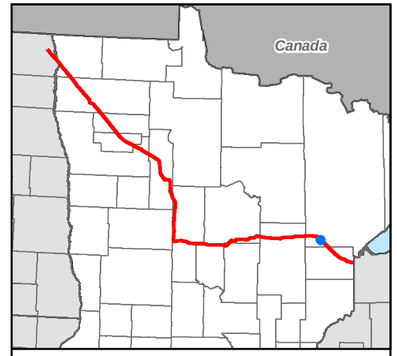

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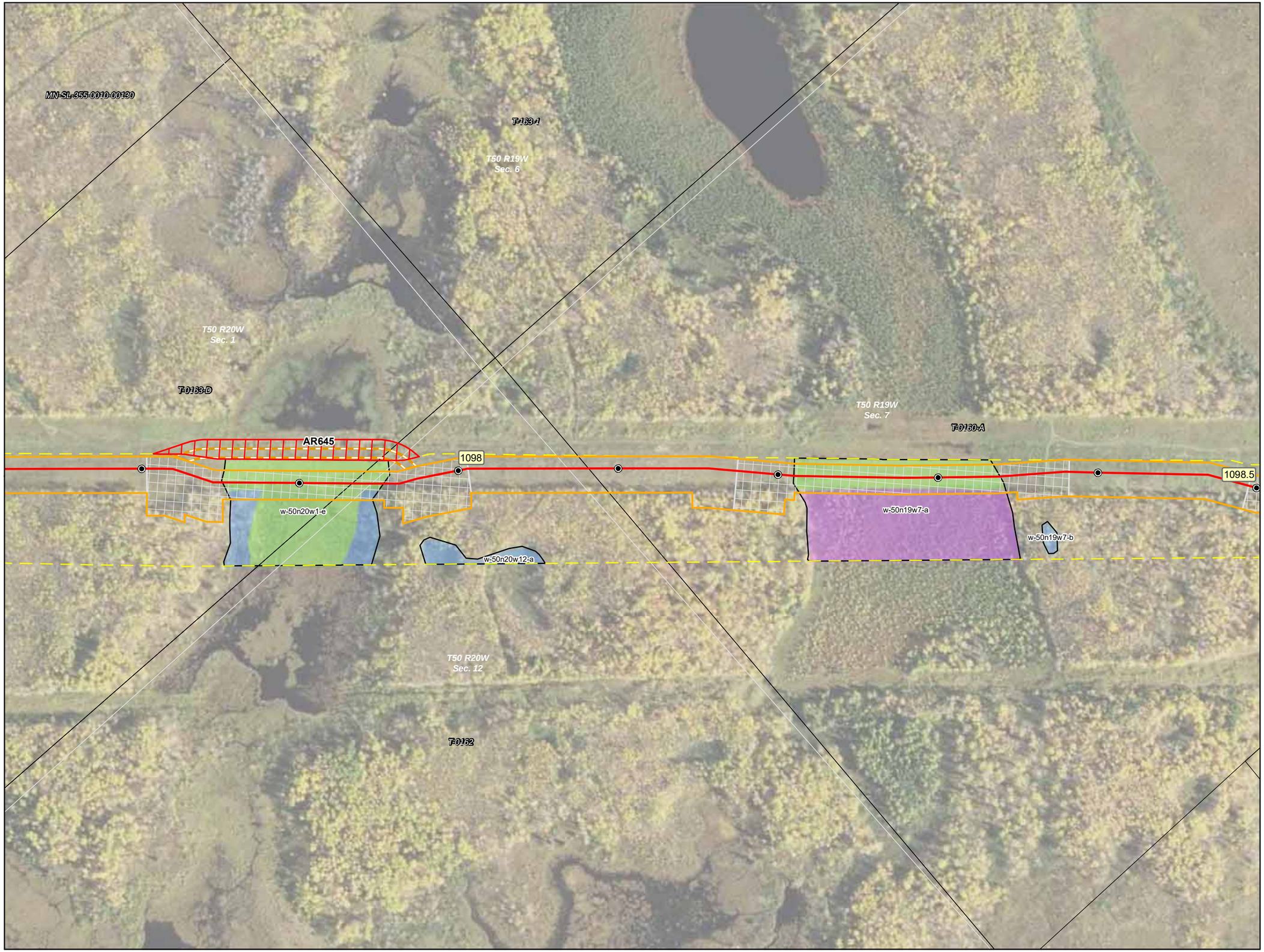

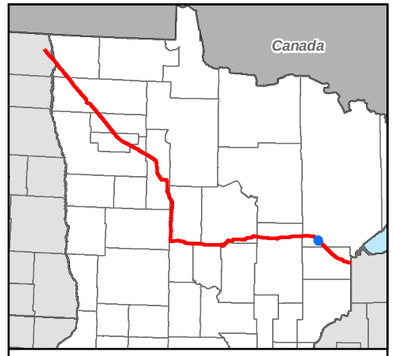

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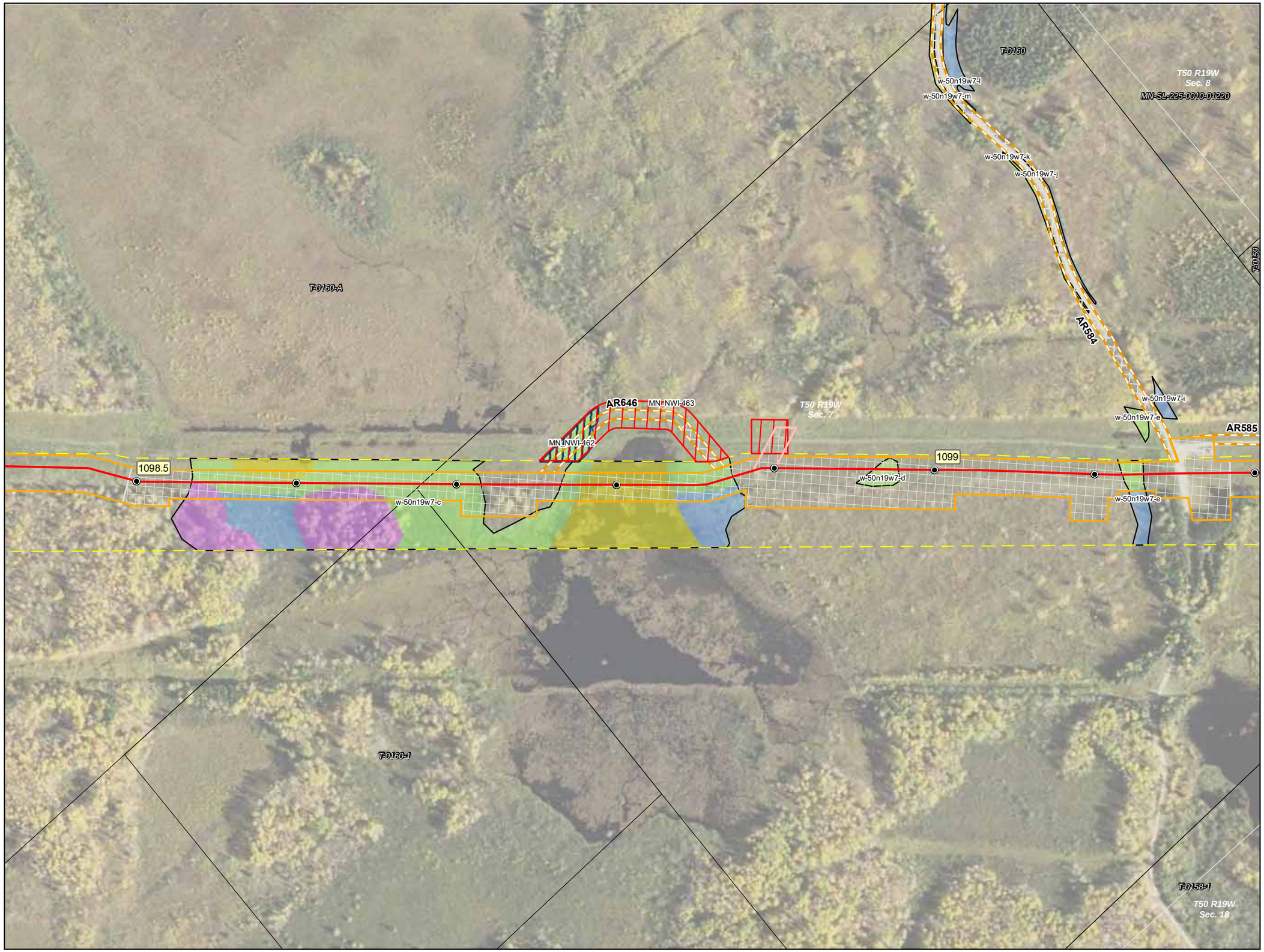

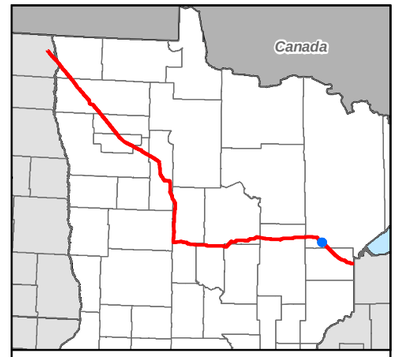

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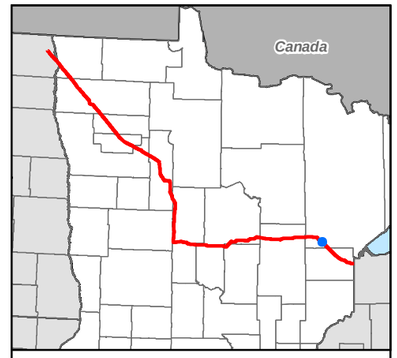

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Field Delineated Wetland	NWI Wetlands
PEM	PEM
PFO	PFO
PSS	PSS
PUB	PUB

Waterbodies

- Field Delineated Waterbody
- NHD Waterbody

NWI Waterbodies

- Lake
- Riverine

0 150 300 Feet

1 inch = 300 feet

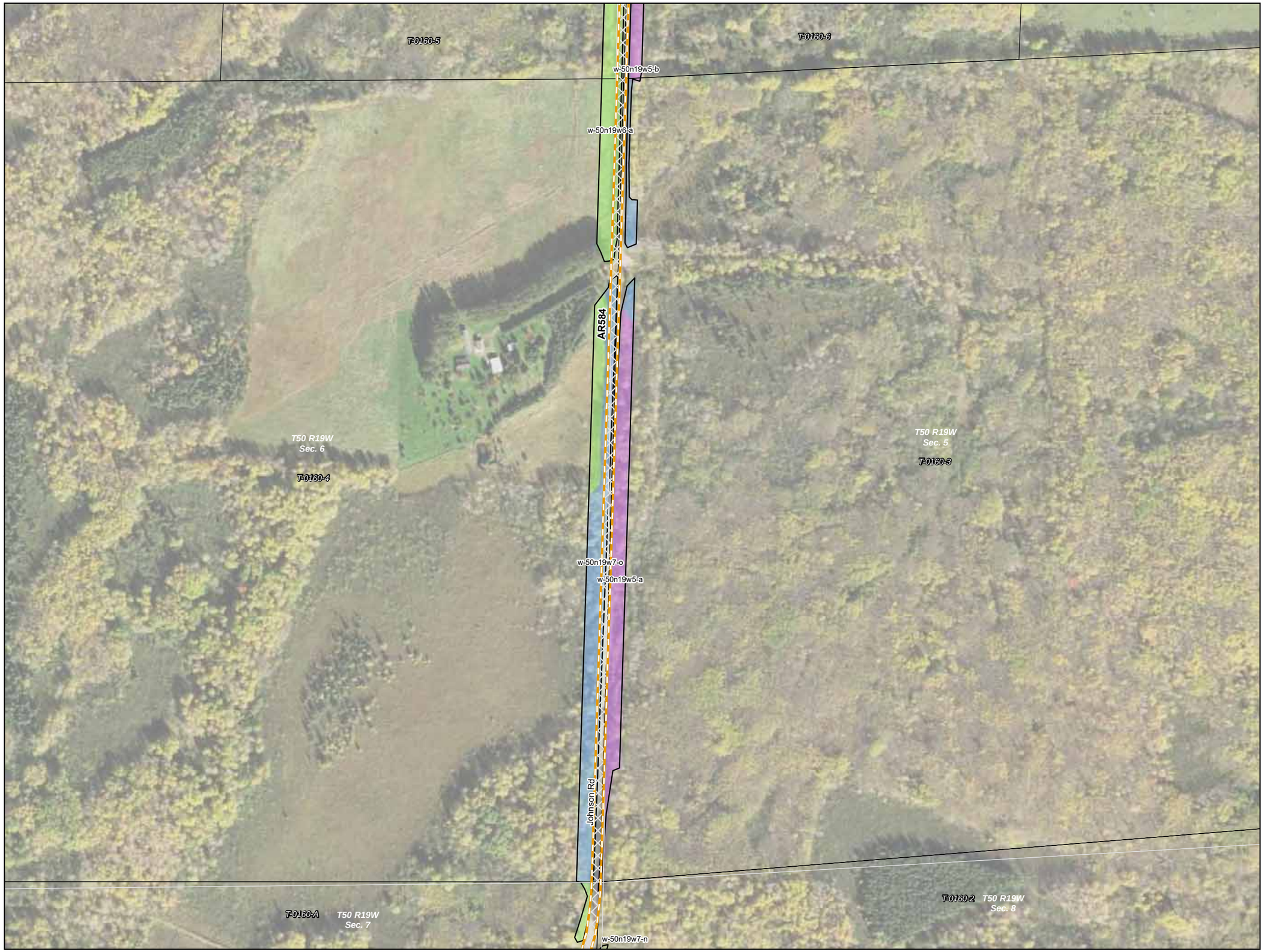
N W E S

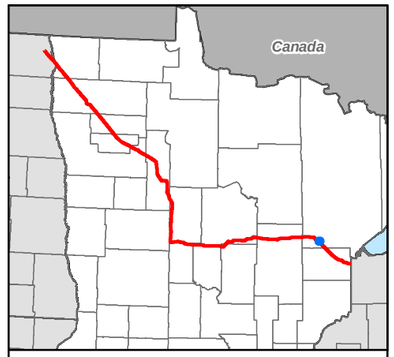
Detailed Route Maps

Line 3 Replacement Project

St. Louis County, Minnesota

ENBRIDGE





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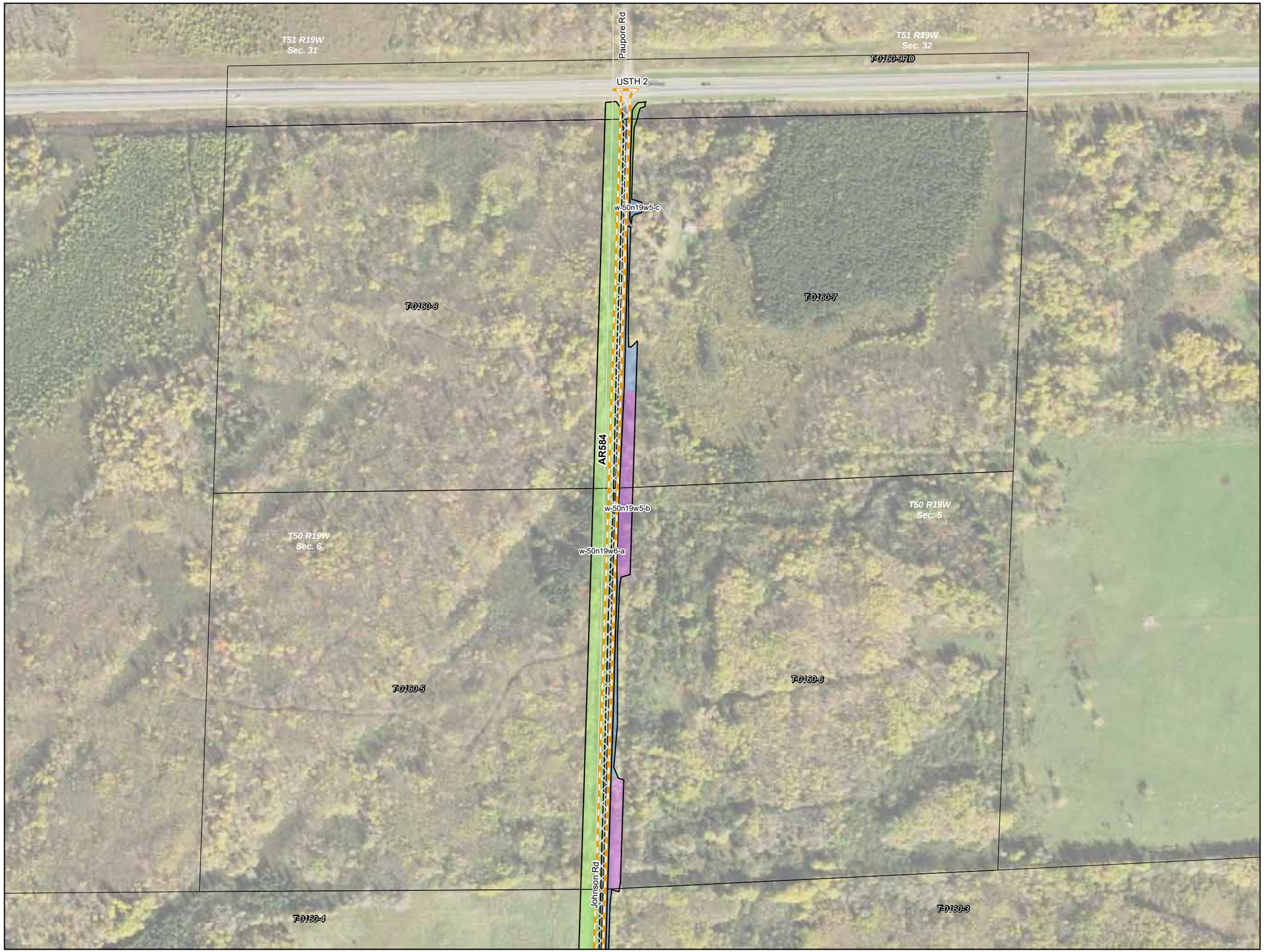

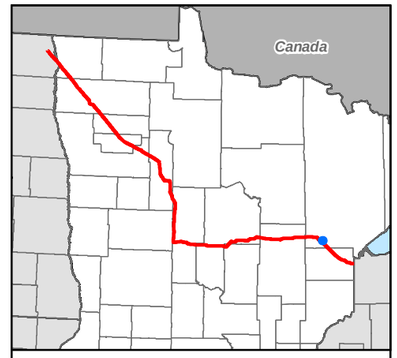

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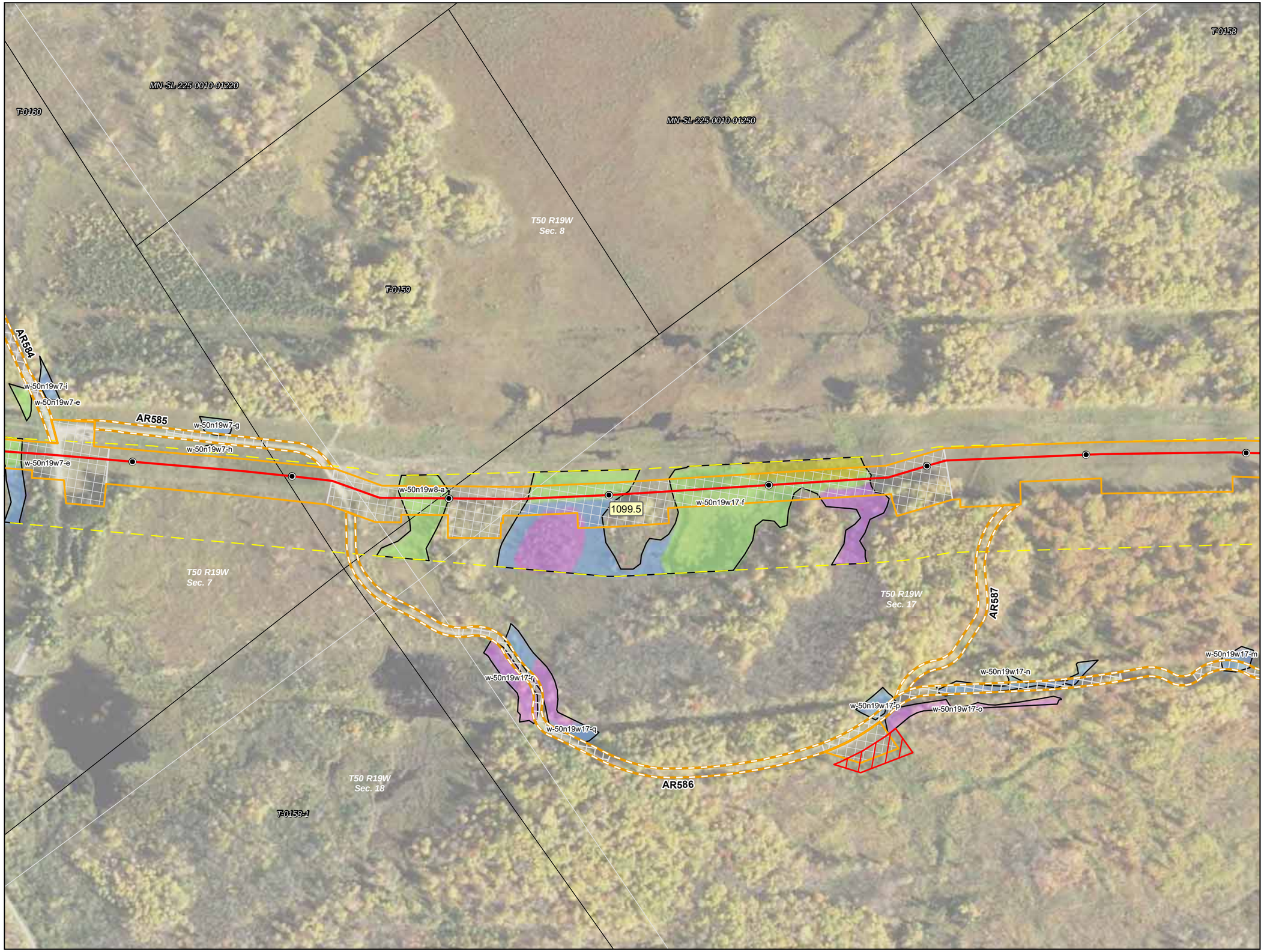

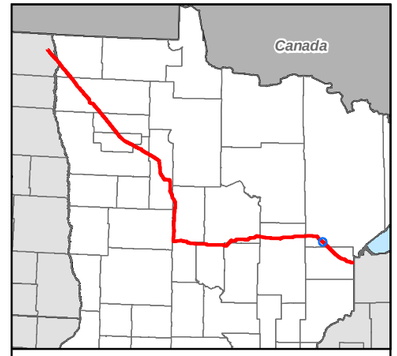

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St. Louis County, Minnesota

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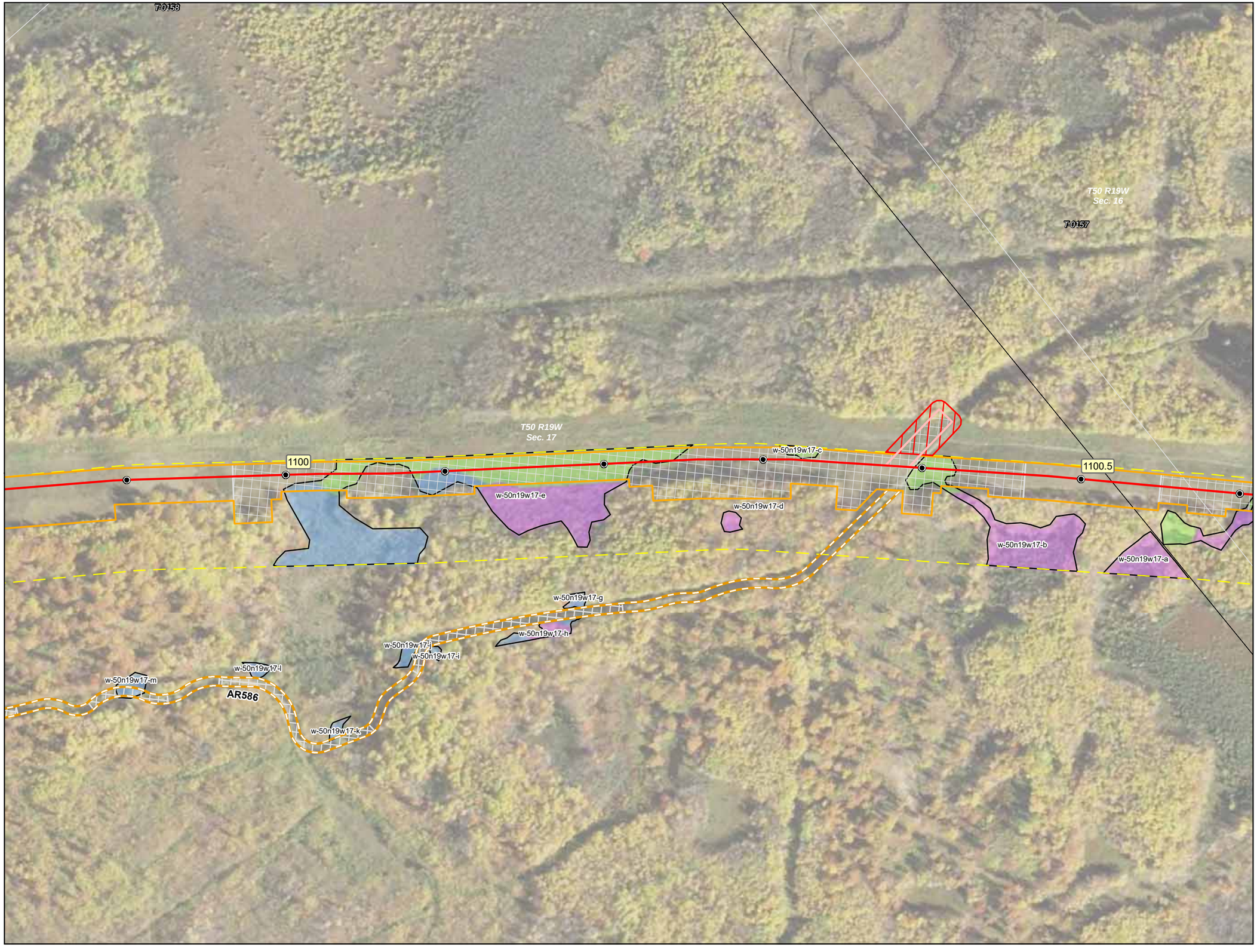

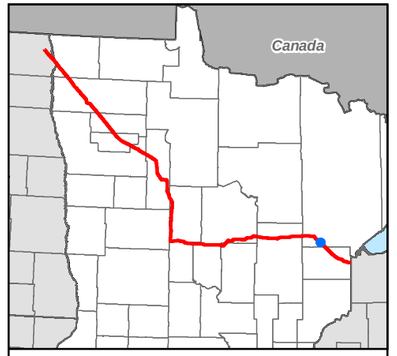

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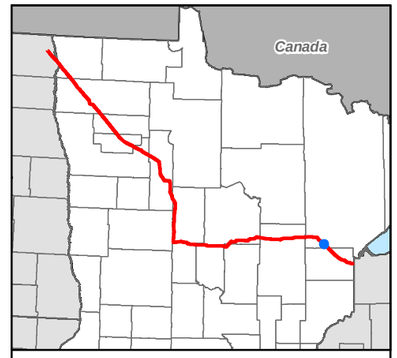

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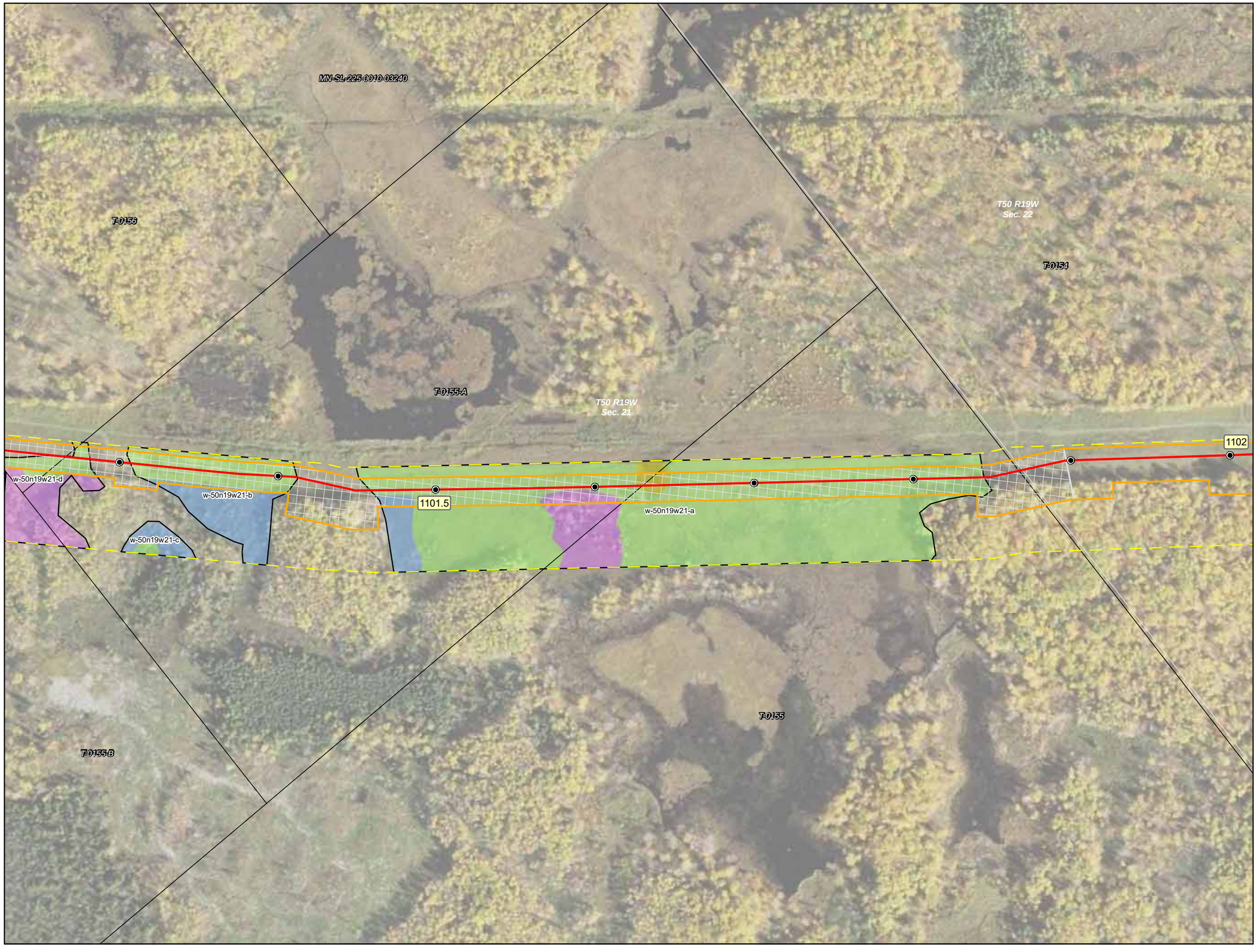

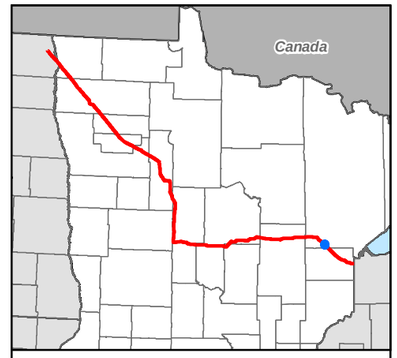

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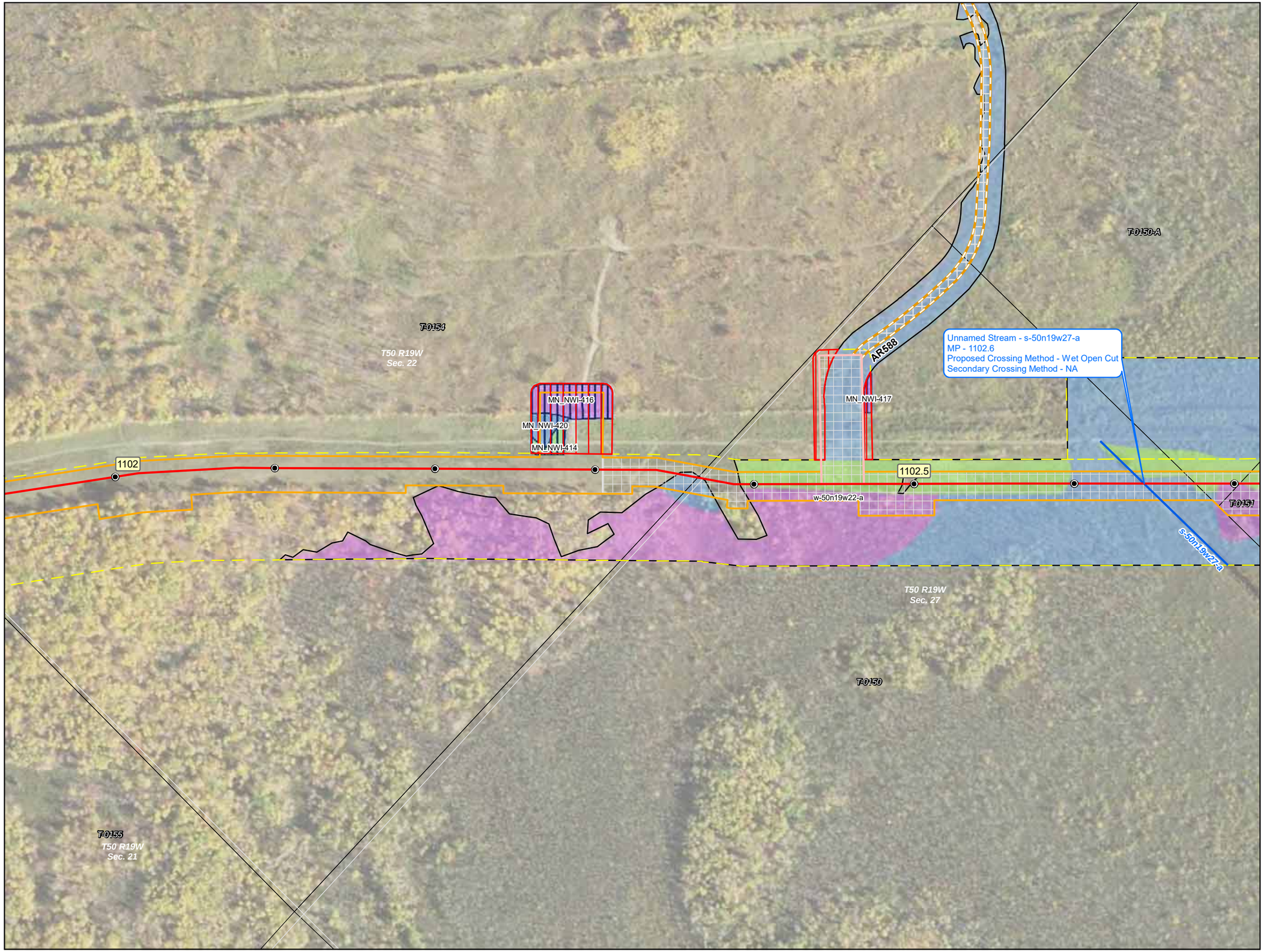

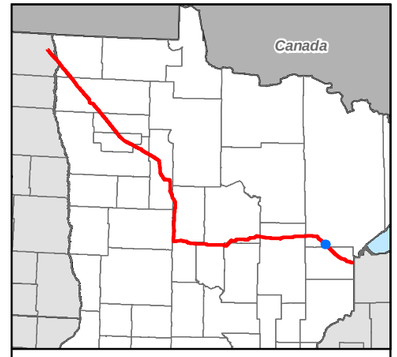

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Line 3 Replacement Project

St. Louis County, Minnesota

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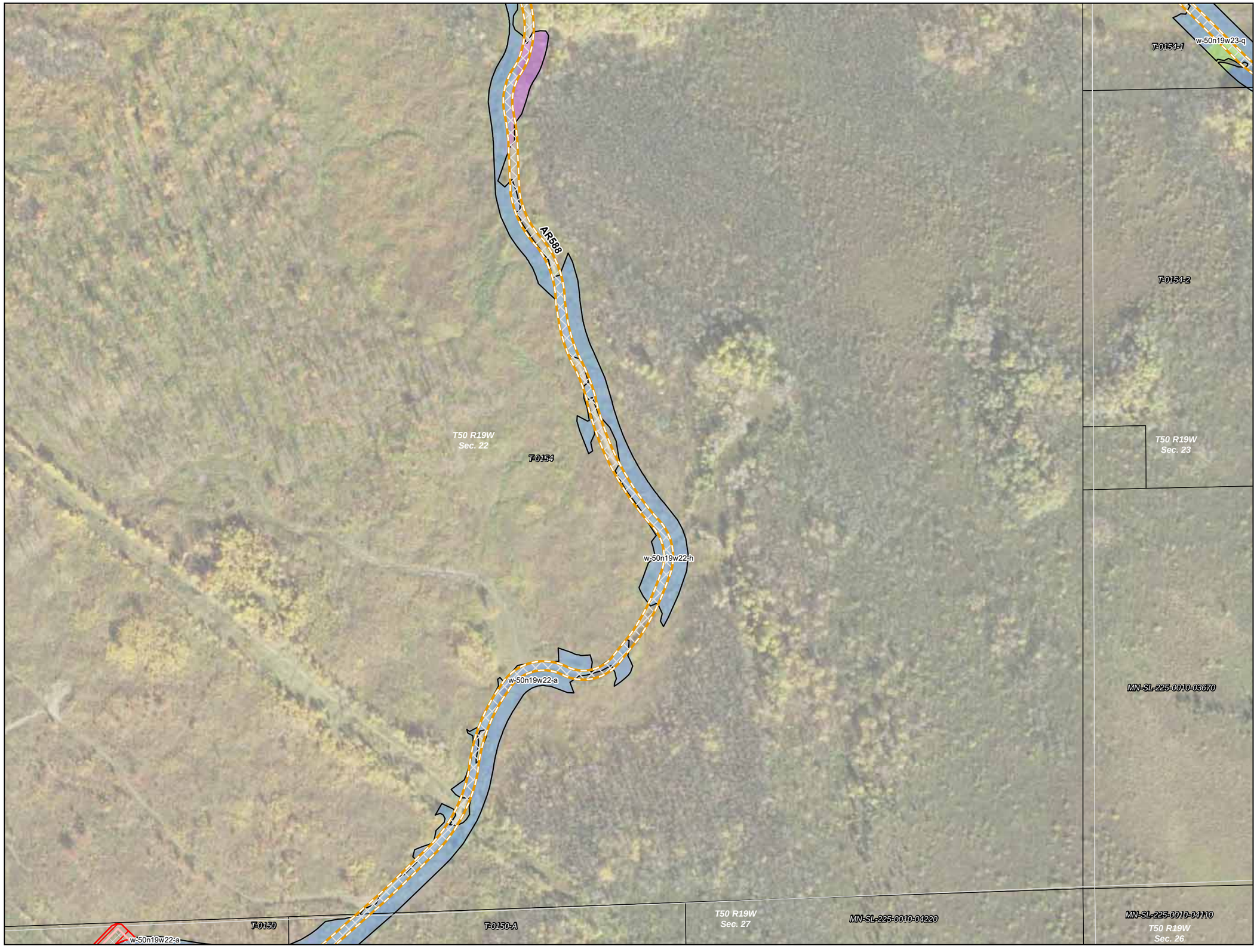

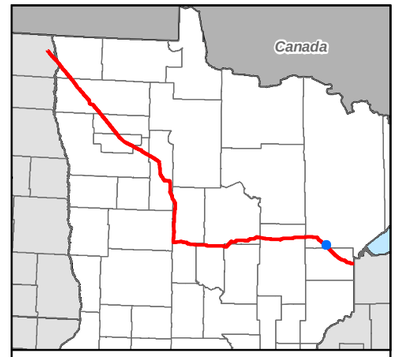

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Line 3 Replacement Project

St. Louis County, Minnesota

ENBRIDGE

Source: Z:\Clients\E_H\Enbridge\Line_3_Full_Replacement\Permitting\Federal\COE\Sept_2018\RSA_22\Figures\L3_MN_COE_Alignment_Sheets_RSA22.mxd

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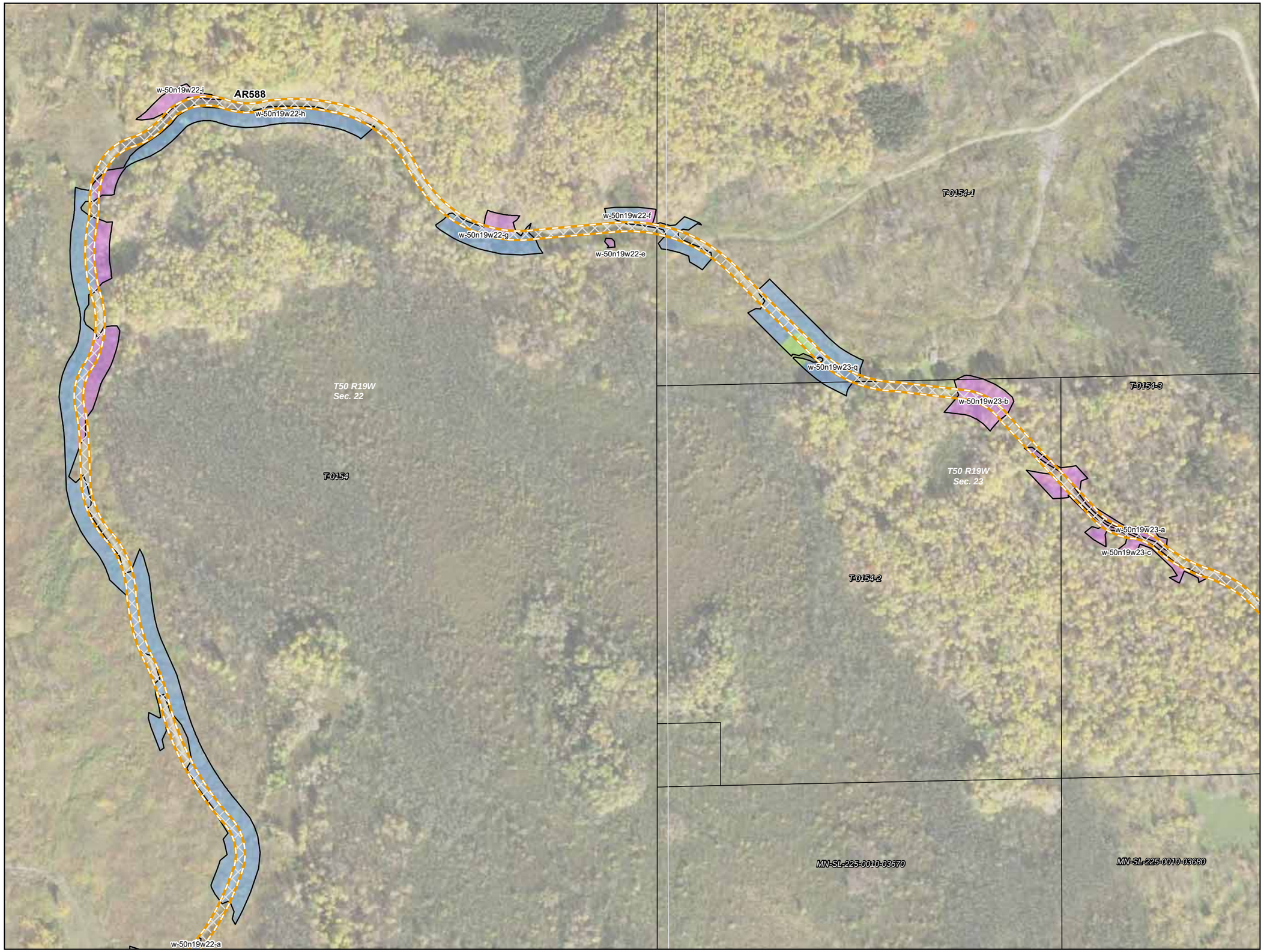

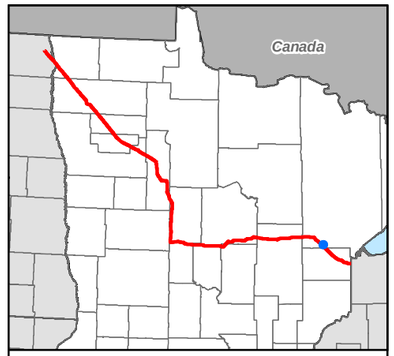

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Line 3 Replacement Project

St. Louis County, Minnesota

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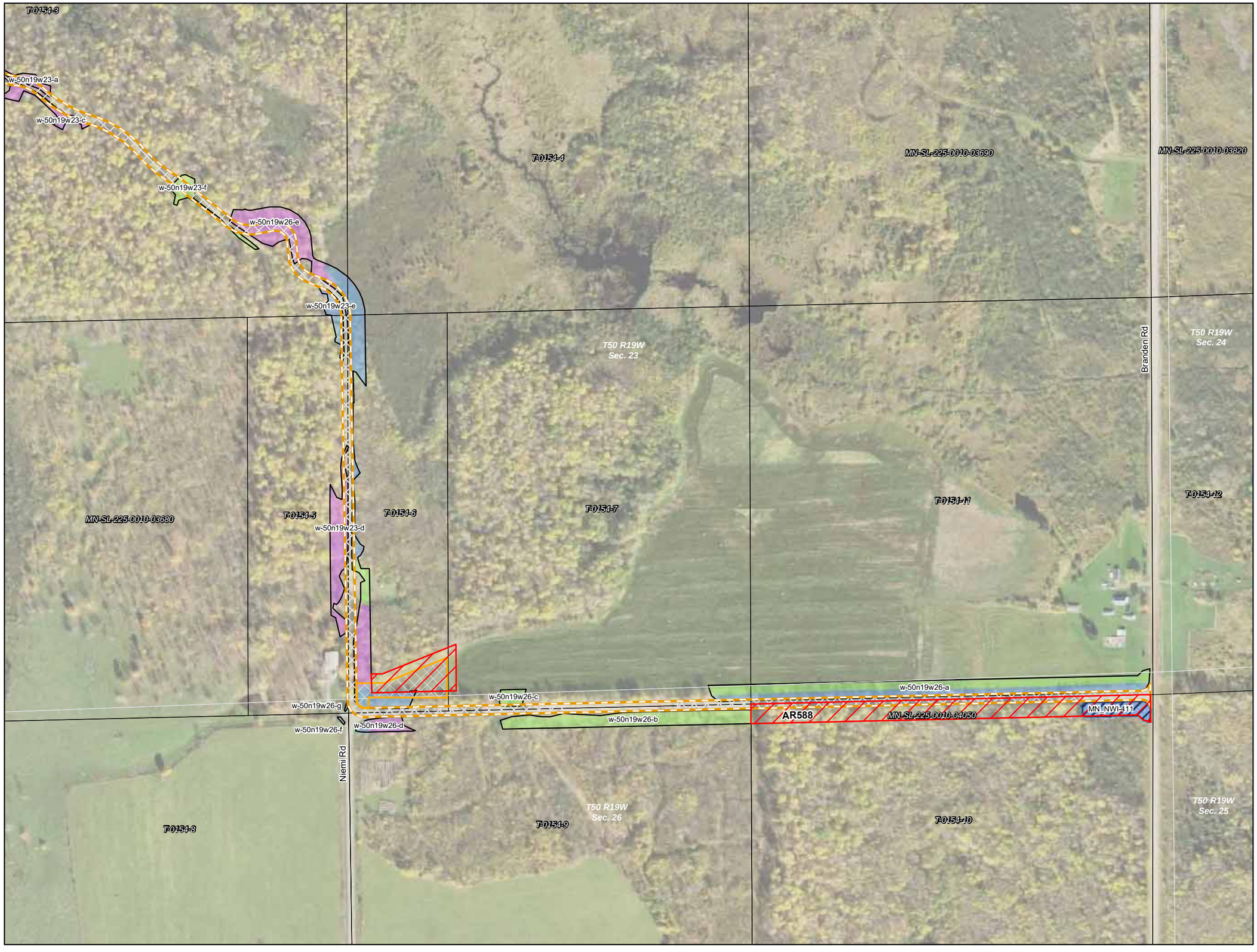

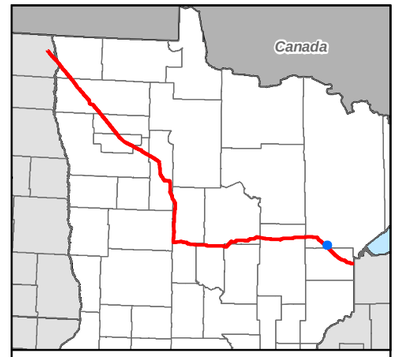

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Line 3 Replacement Project

St. Louis County, Minnesota

ENBRIDGE

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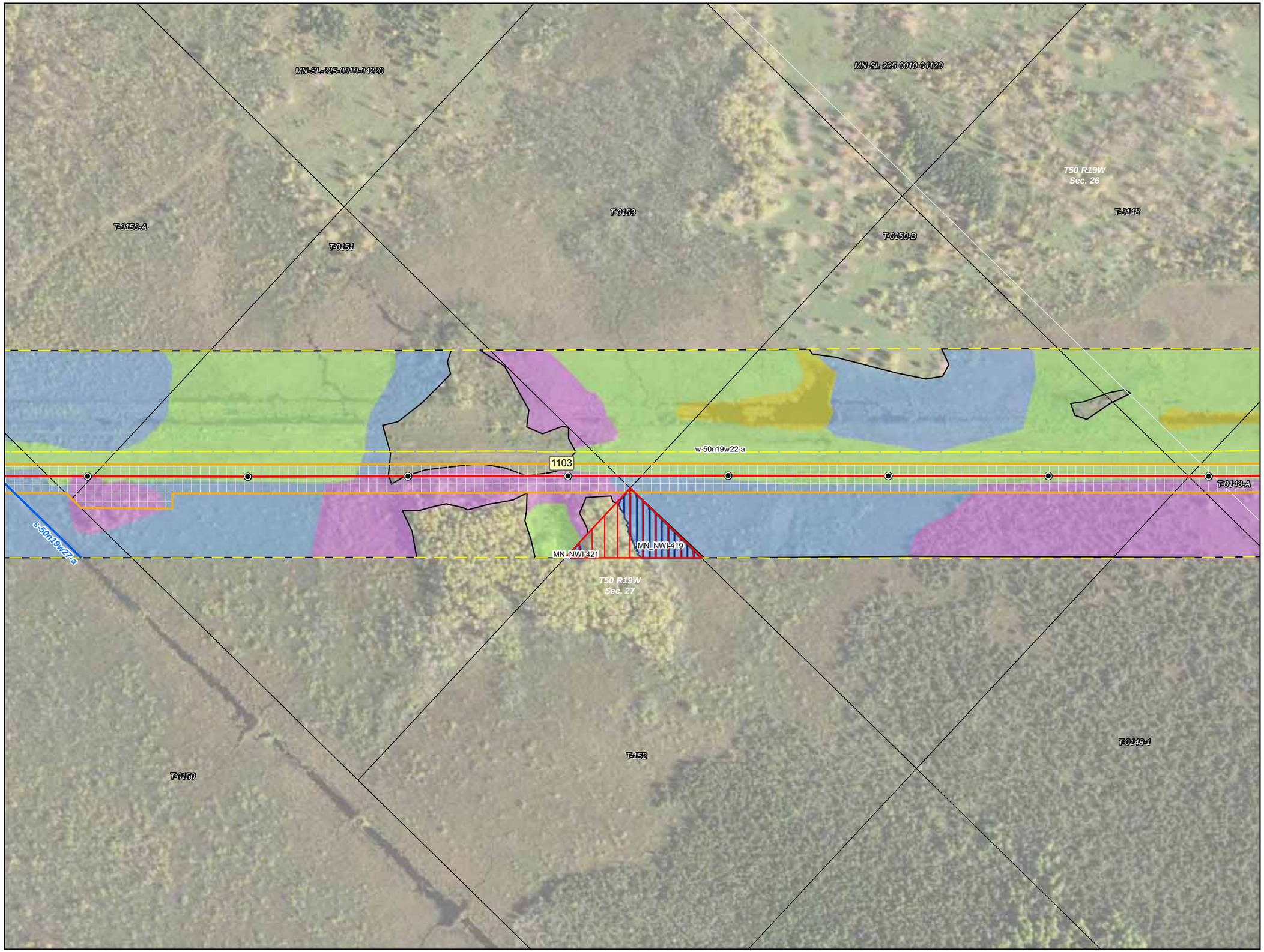

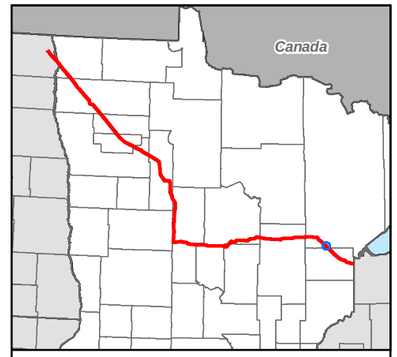

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St. Louis County, Minnesota

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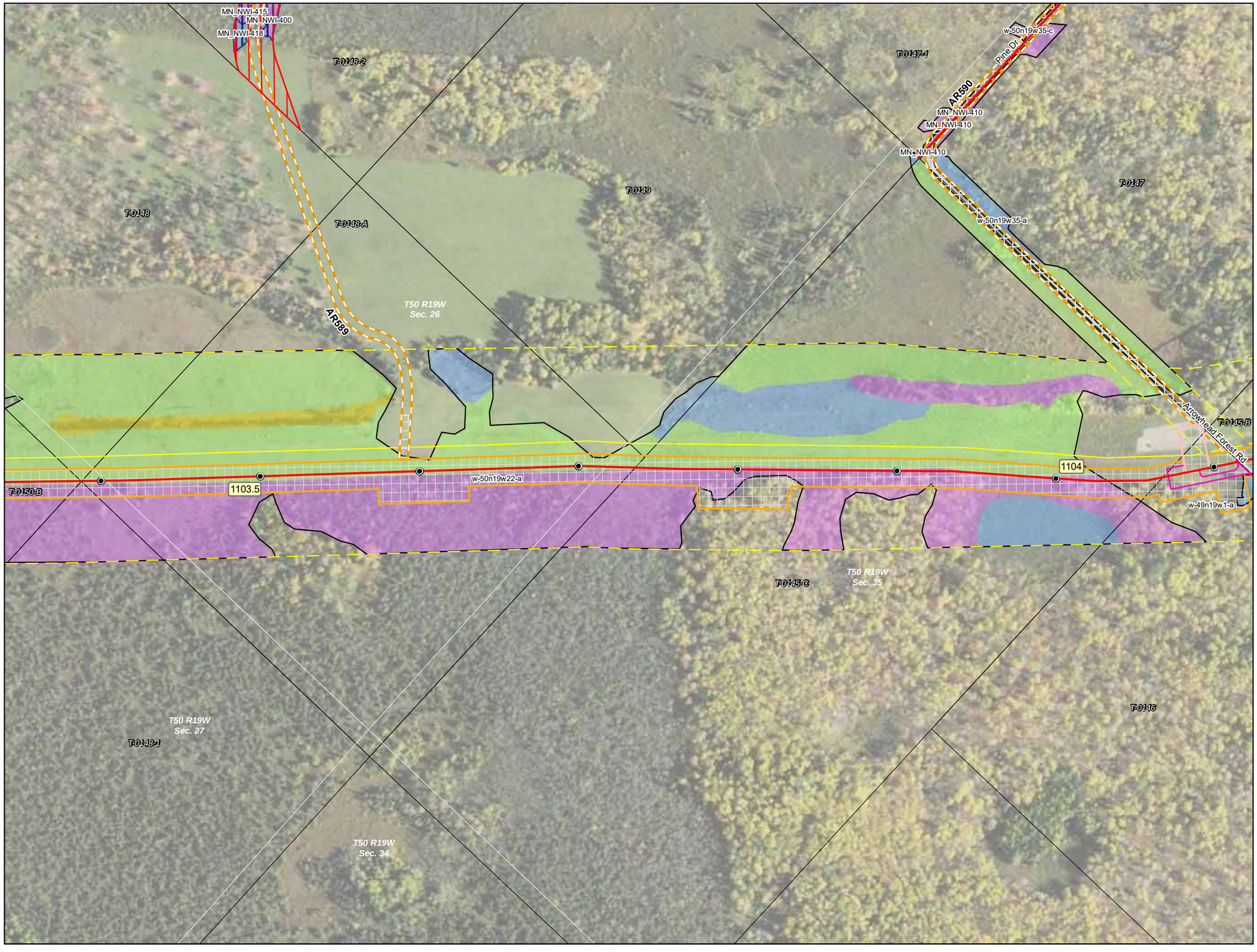

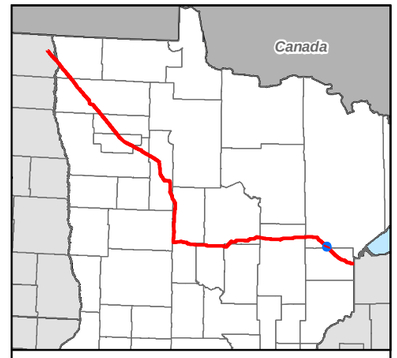

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St. Louis County, Minnesota

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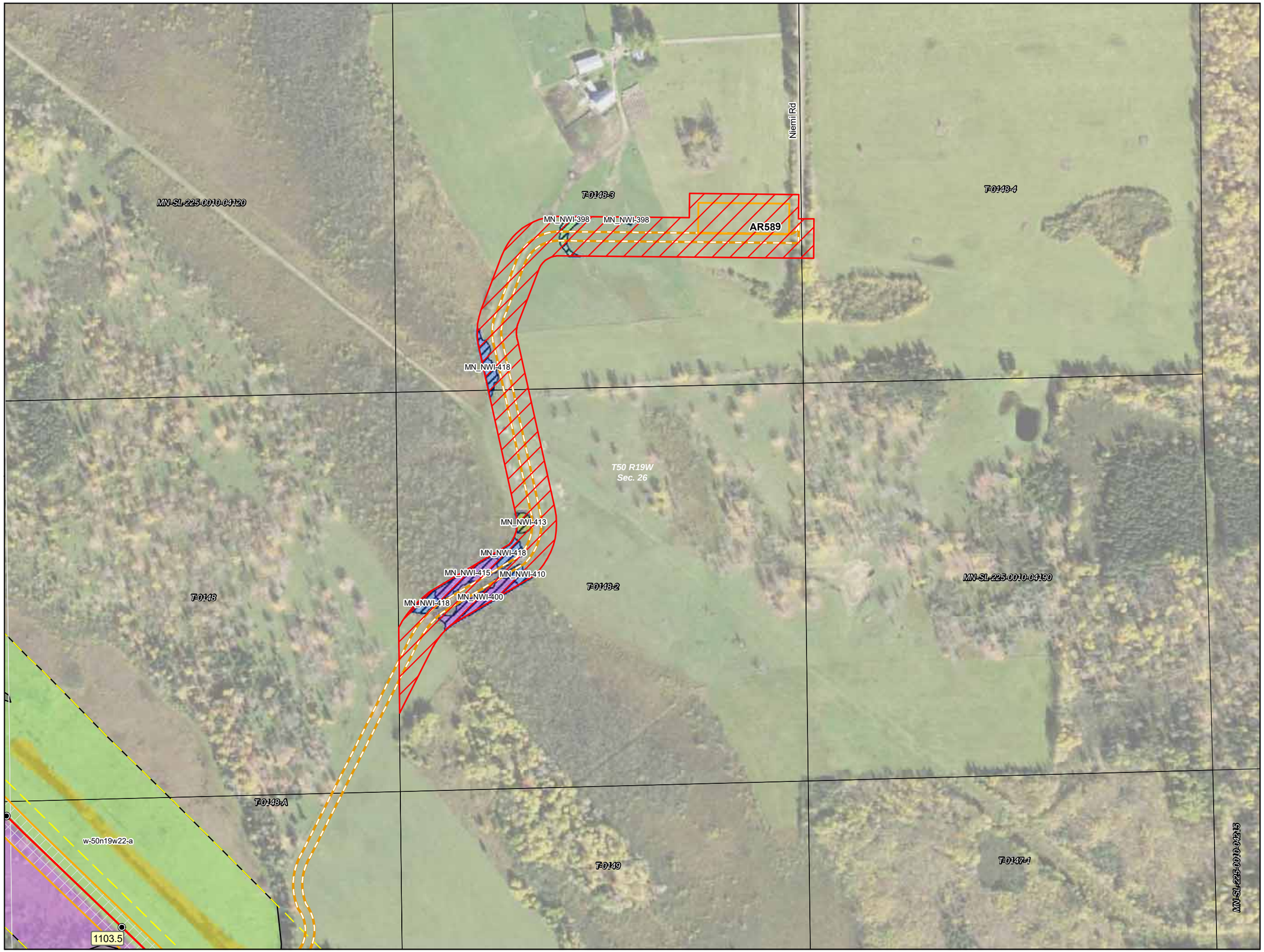

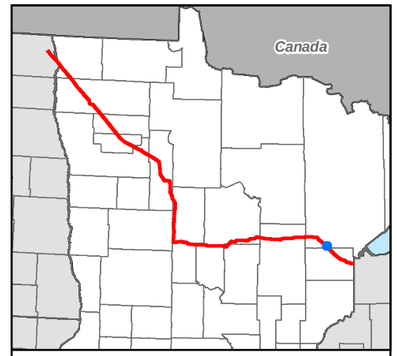

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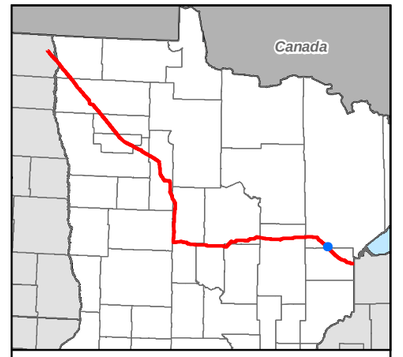
Line 3 Replacement Project

St. Louis County, Minnesota

ENBRIDGE

T-0148-2
MN-SL-225-0010-04190
MN-SL-225-0010-04215
Branden Rd
T50 R19W
Sec. 26
T50 R19W
Sec. 25
T-0147-4
T-0149
T-0147-1
T-0147-3
Pine Dr
AR590
w-50n19w35-c
MN_NWI-410
MN_NWI-410
MN_NWI-410
w-50n19w35-a
w-50n19w35-d
w-50n19w35-e
T-0145-C
w-50n19w22-a
T-0147
T-0147-2
MN-SL-225-0010-05730
T50 R19W
Sec. 35
T50 R19W
Sec. 36
Arrowhead Forest Rd
w-49n19w1-a
T-0145-B
T-0146



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Line 3 Replacement Project

St. Louis County, Minnesota

ENBRIDGE

T-0147-2
T-0147
T-0145-A
T-0145-B
T-0145-C
T-0144
T-0146
T-0145-1
T-0145
T50 R19W
Sec. 36
T50 R19W
Sec. 35
w-50n19w35-a
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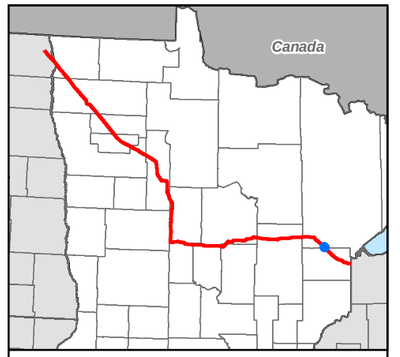

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St. Louis County, Minnesota

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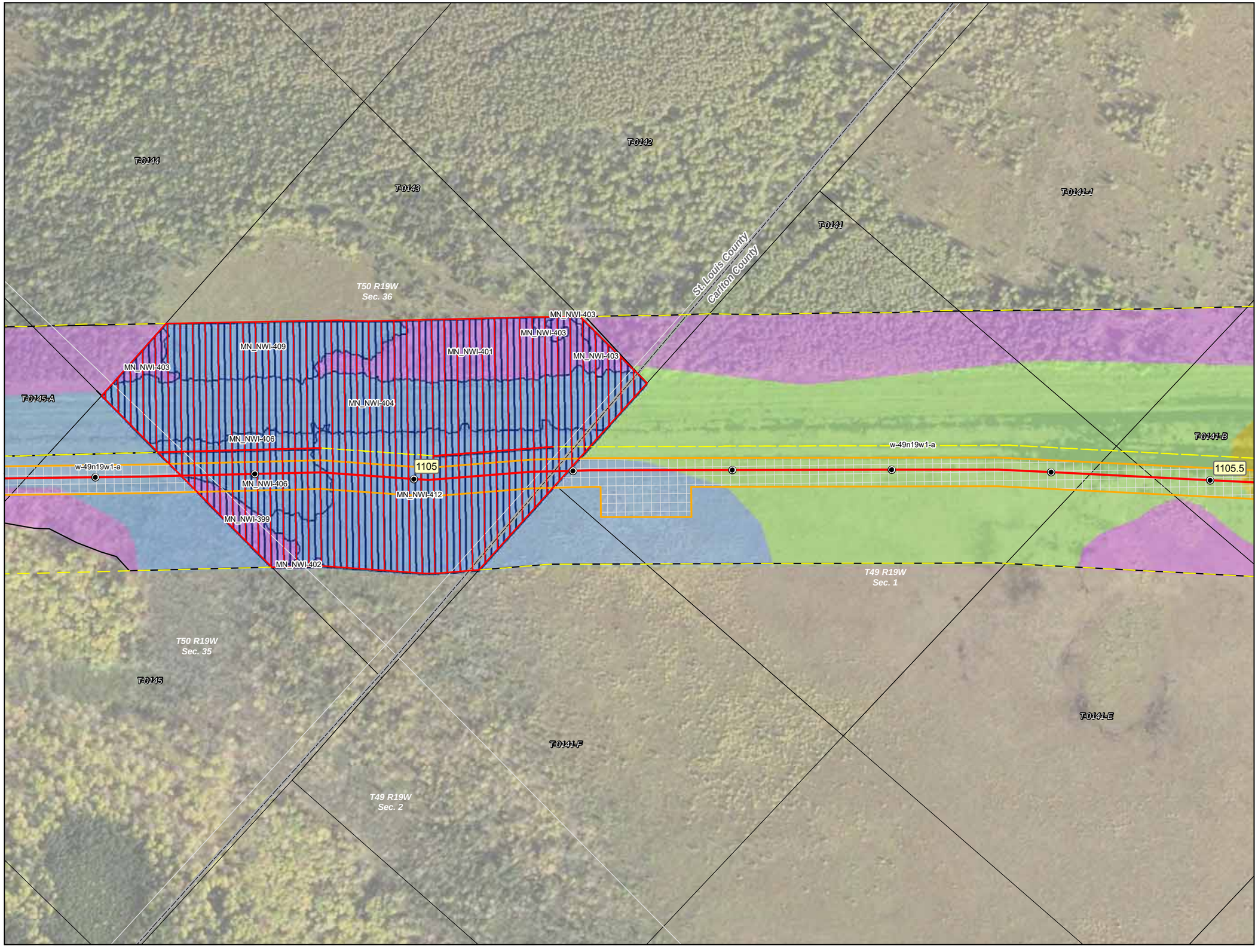

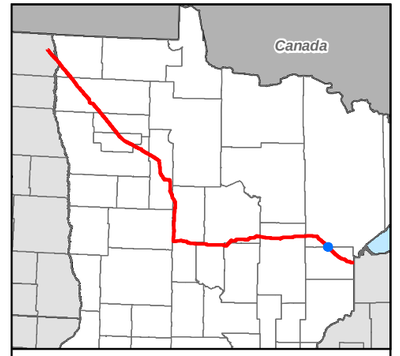

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Detailed Route Maps

Line 3 Replacement Project

St. Louis and Carlton County, Minnesota

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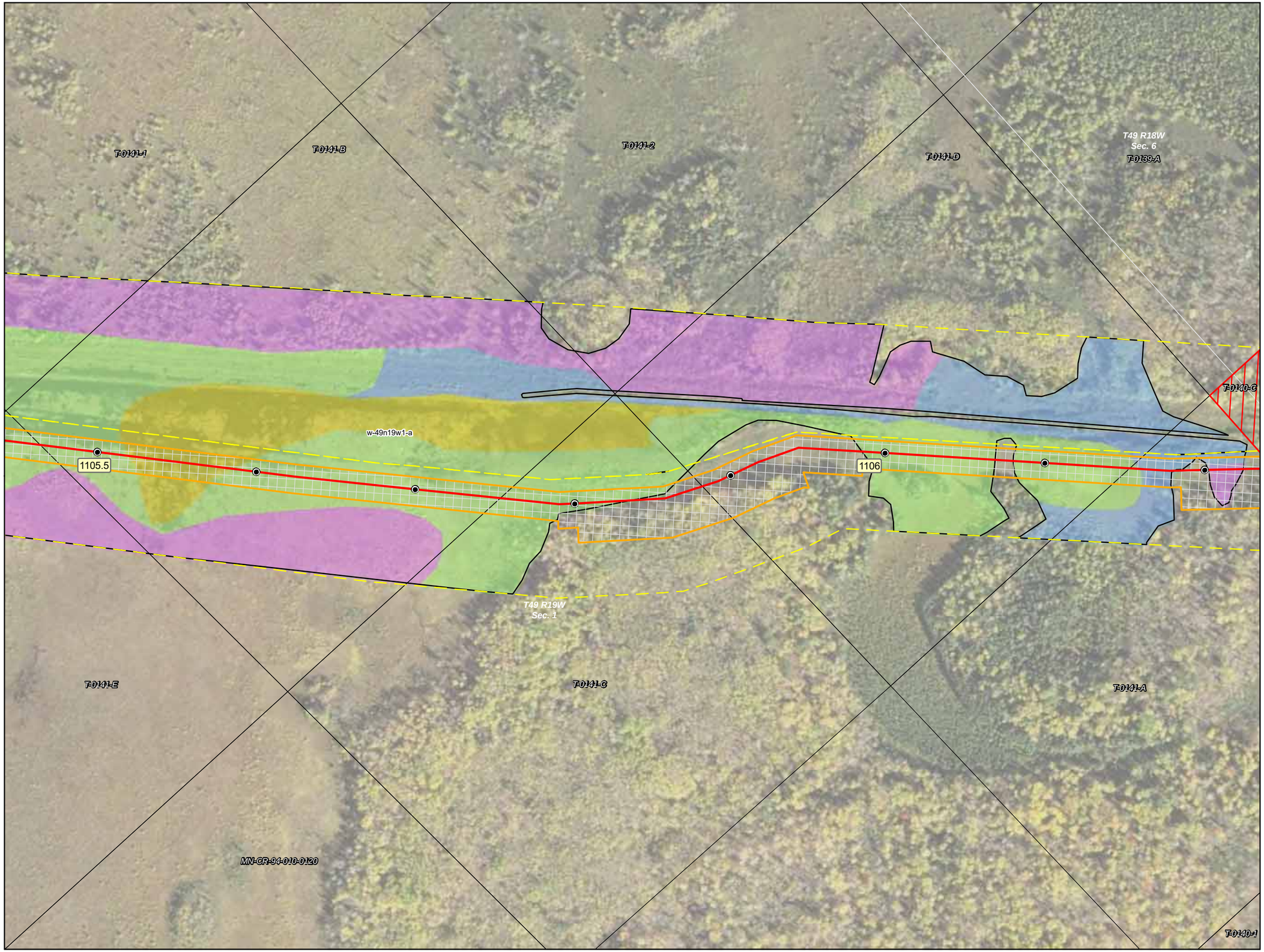

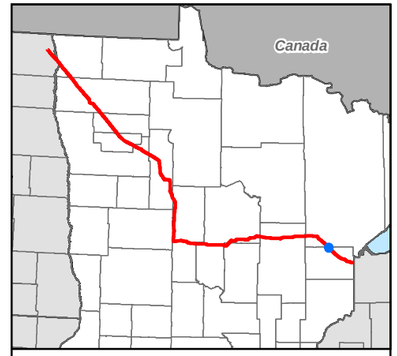

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Wetlands

Field Delineated Wetland	NWI Wetlands
PEM	PEM
PFO	PFO
PSS	PSS
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Waterbodies

- Field Delineated Waterbody
- NHD Waterbody

NWI Waterbodies

- Lake
- Riverine

0 150 300 Feet

1 inch = 300 feet

Detailed Route Maps

Line 3 Replacement Project

Carlton County, Minnesota

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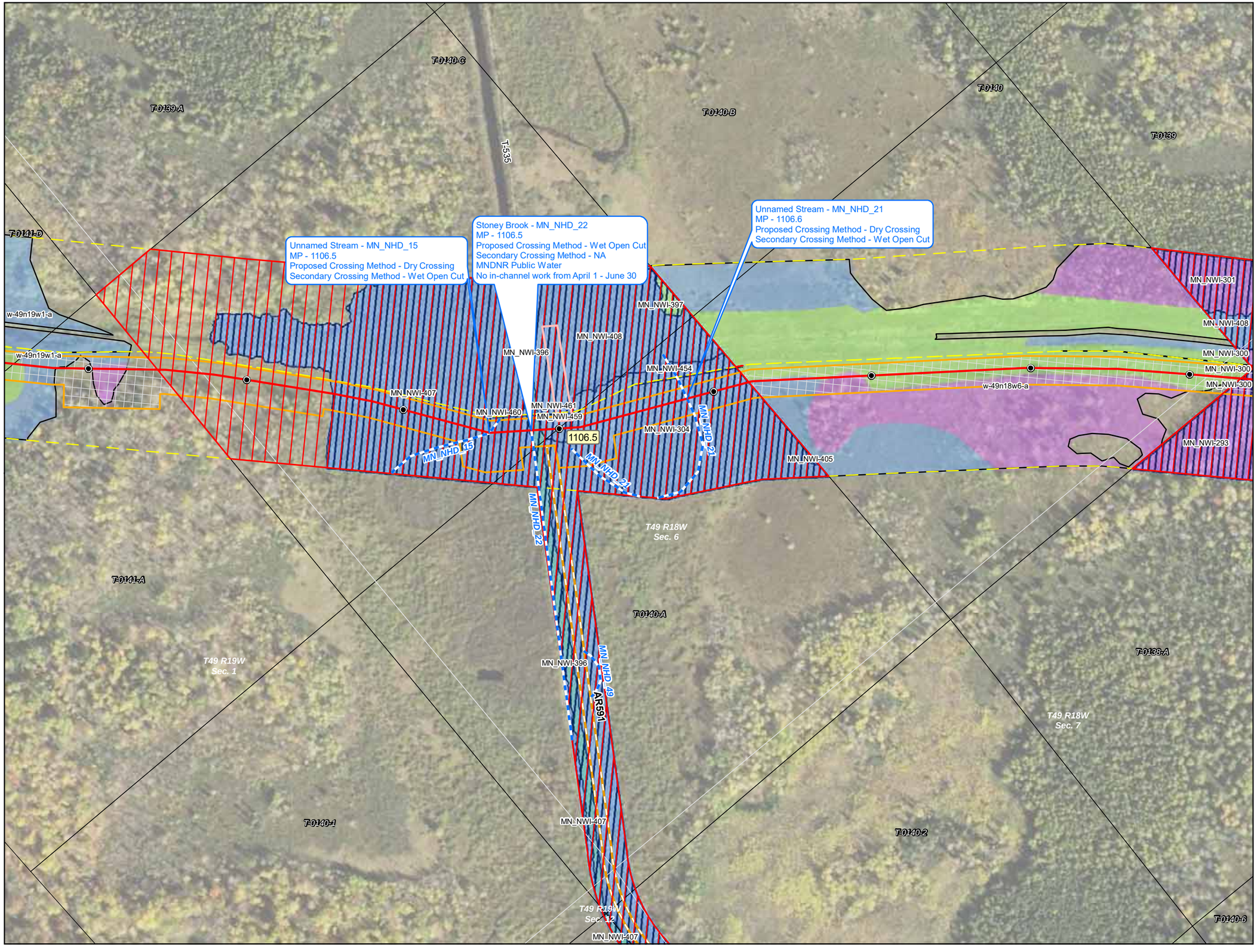

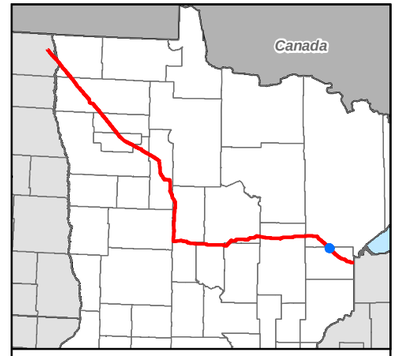

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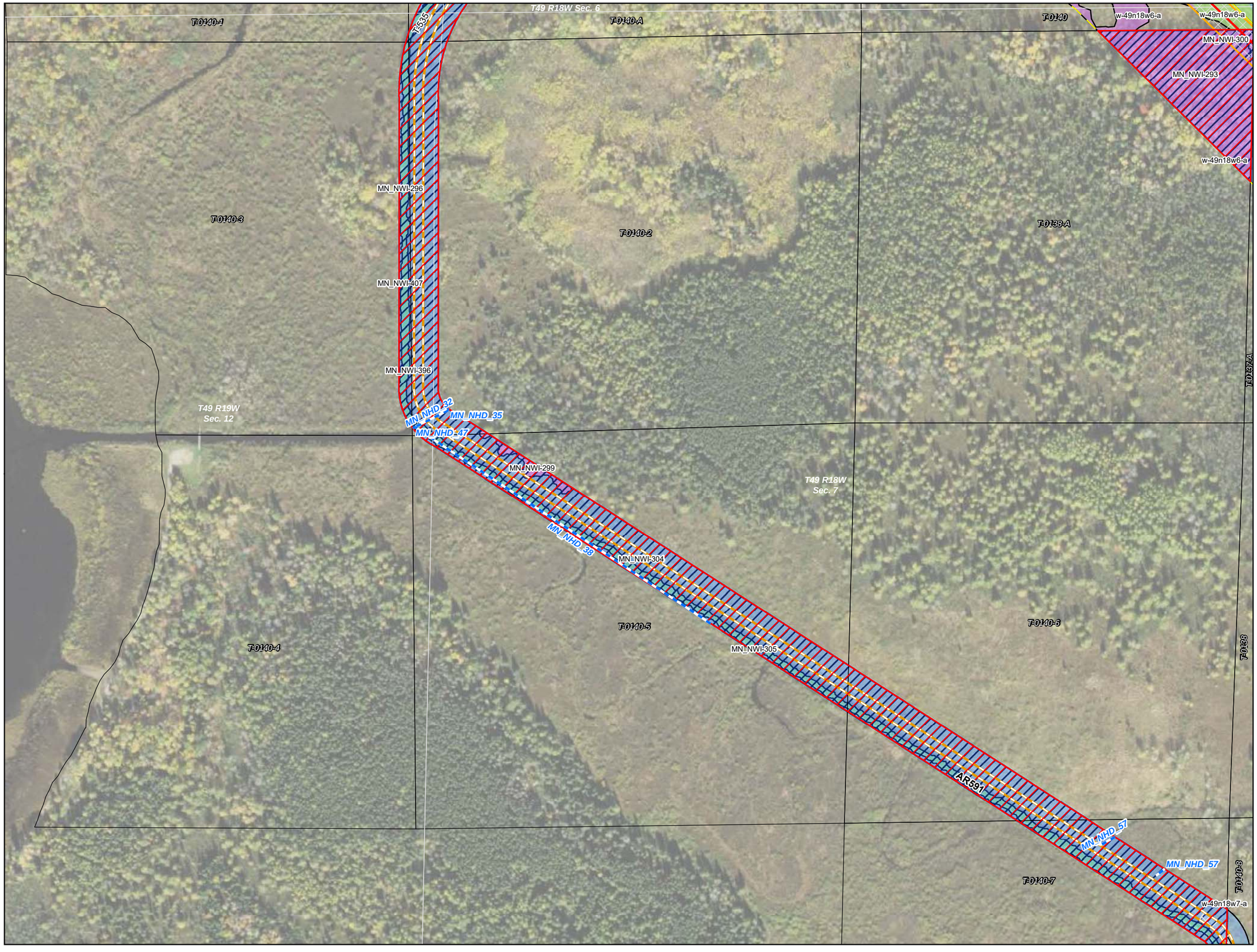

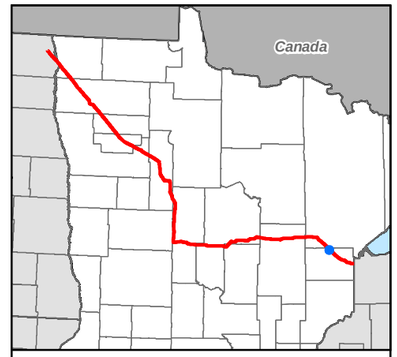

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Line 3 Replacement Project

St. Louis County, Minnesota

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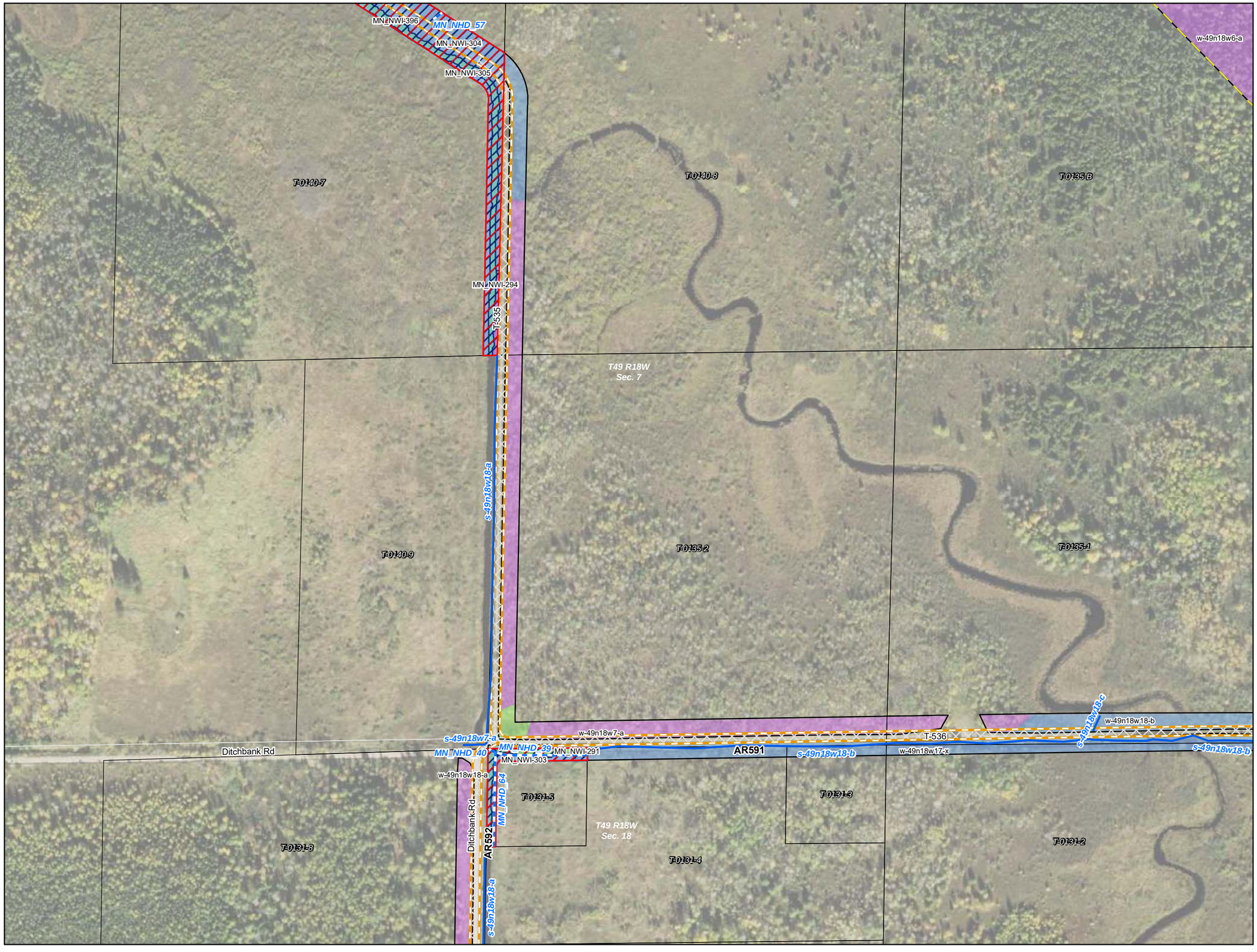

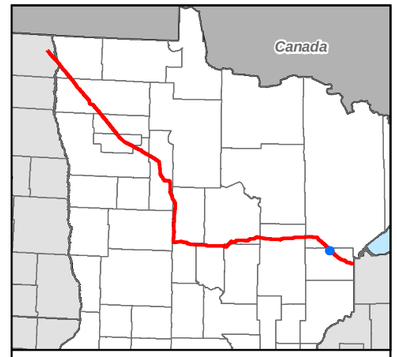

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Line 3 Replacement Project

St. Louis County, Minnesota

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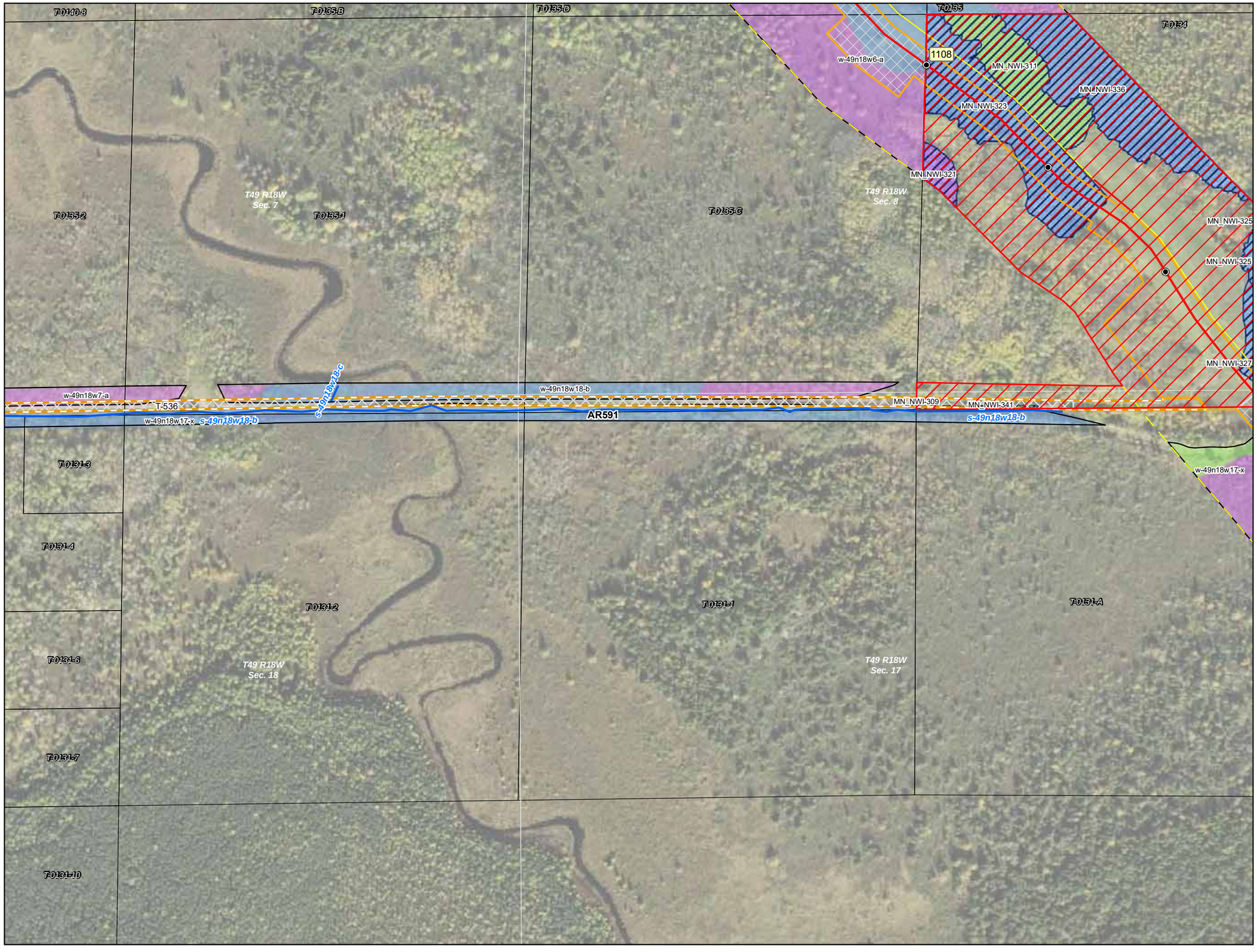

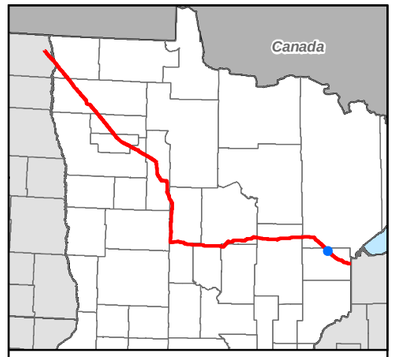

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St. Louis County, Minnesota

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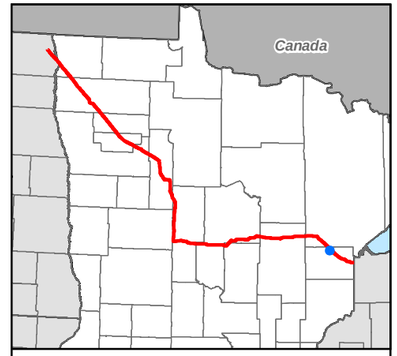

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St. Louis County, Minnesota

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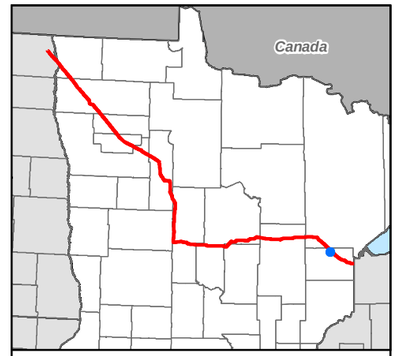

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St. Louis County, Minnesota

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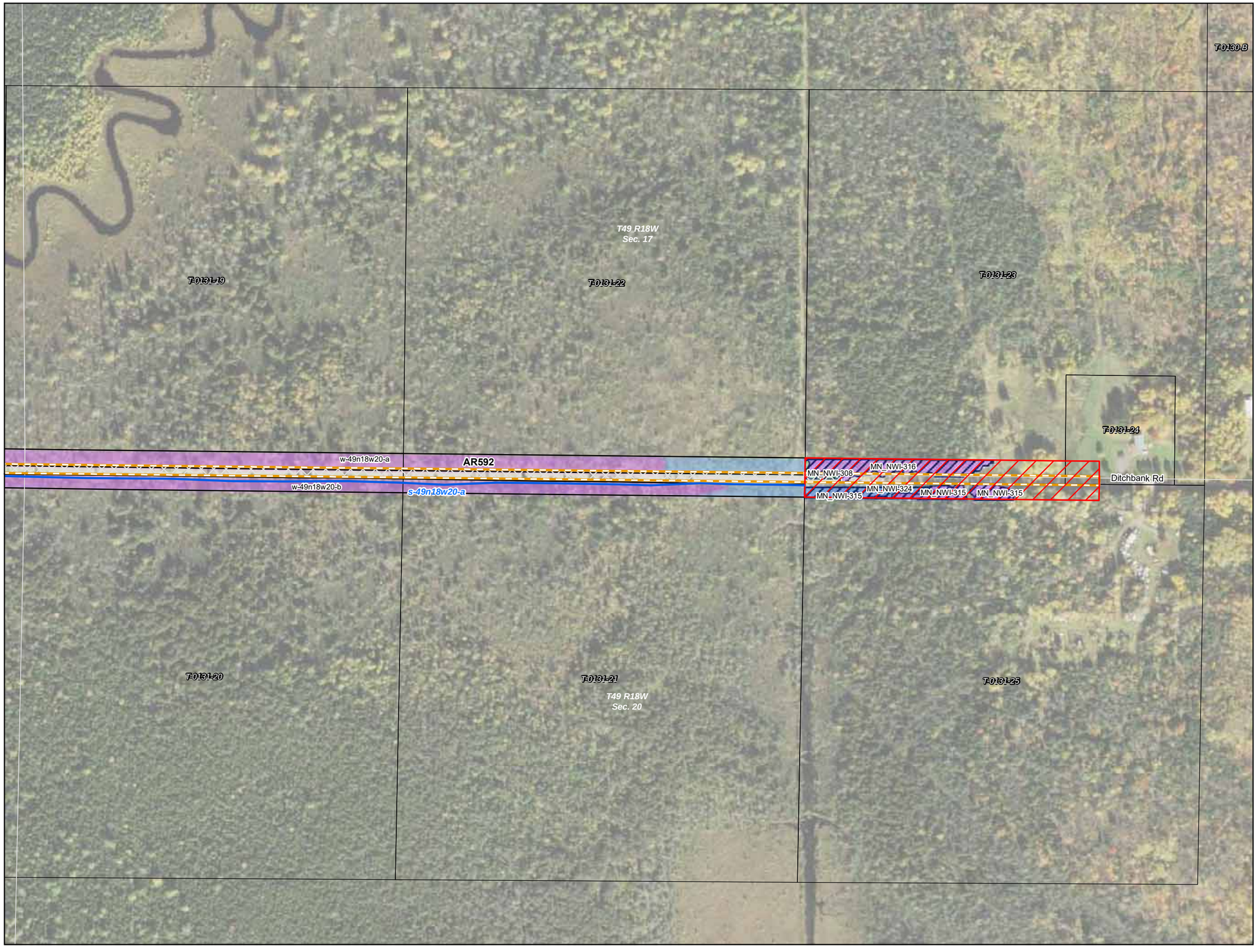

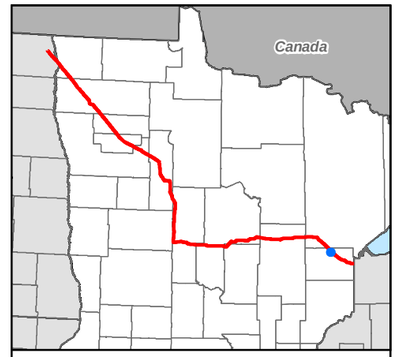

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St. Louis County, Minnesota

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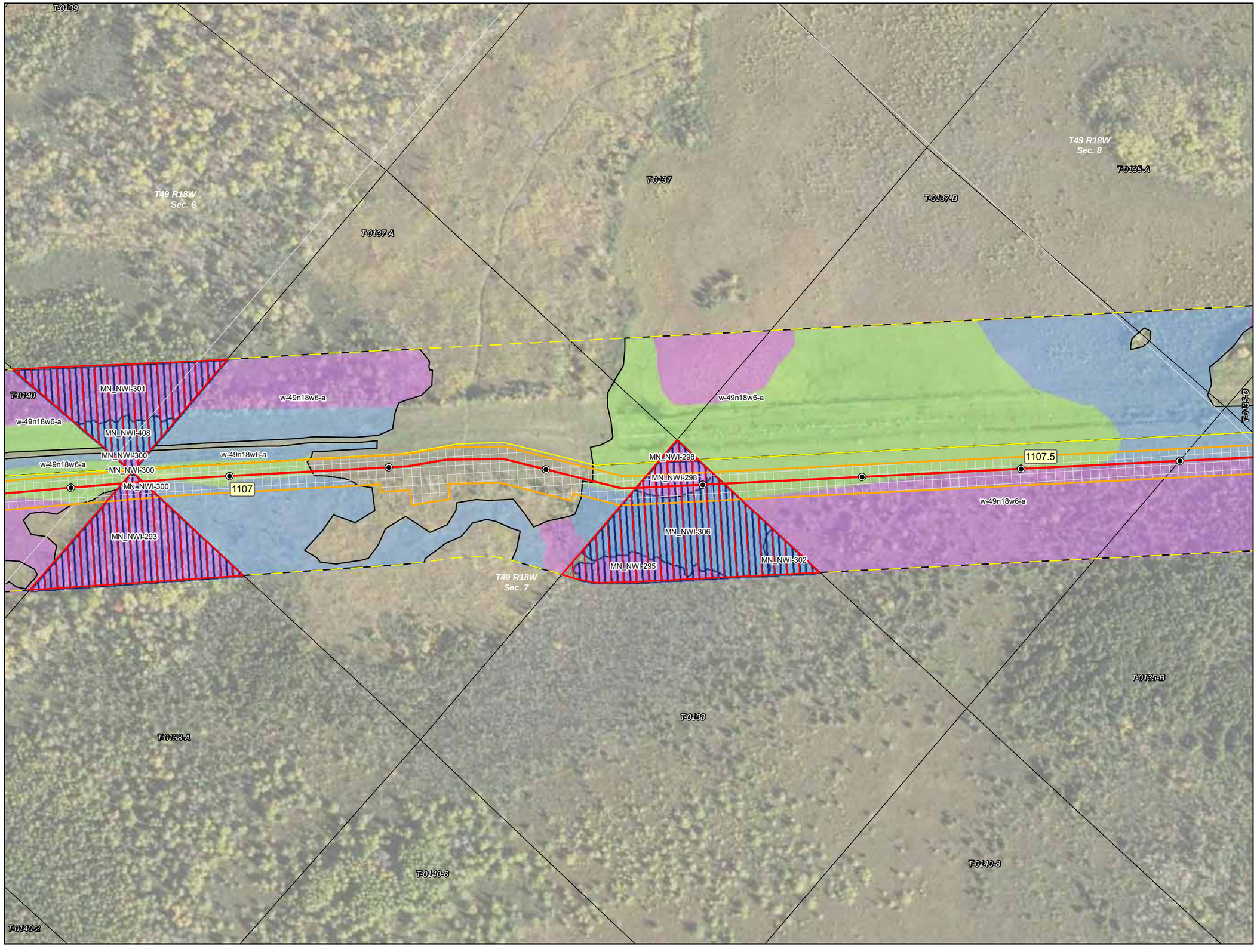

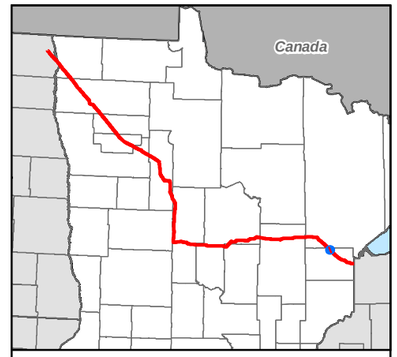

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Carlton County, Minnesota

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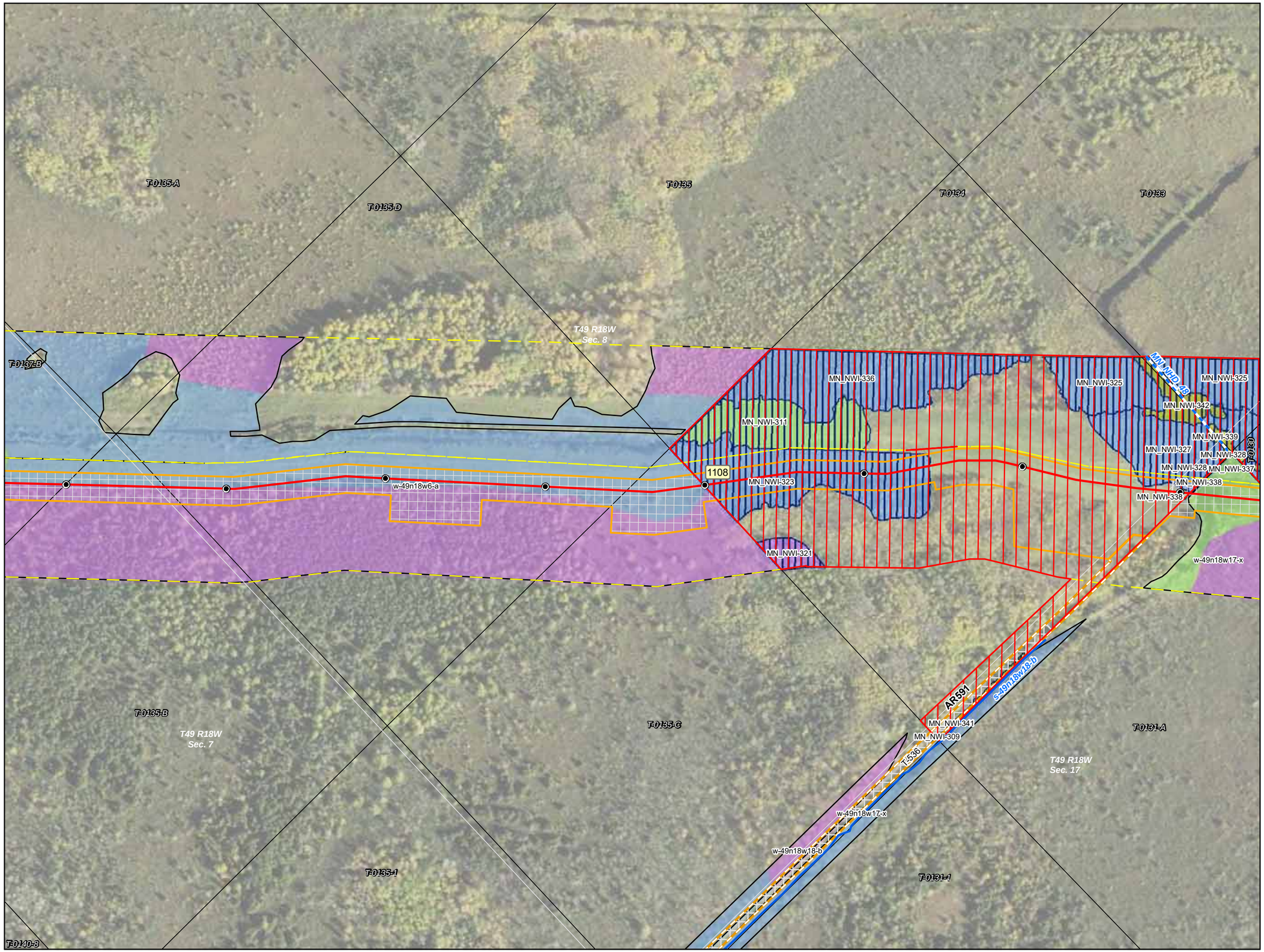

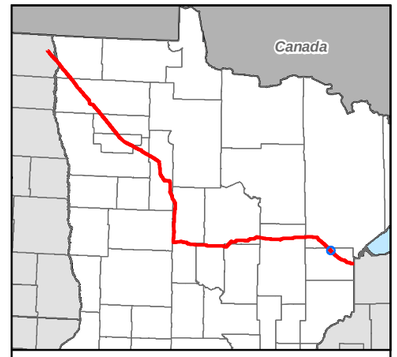

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Carlton County, Minnesota

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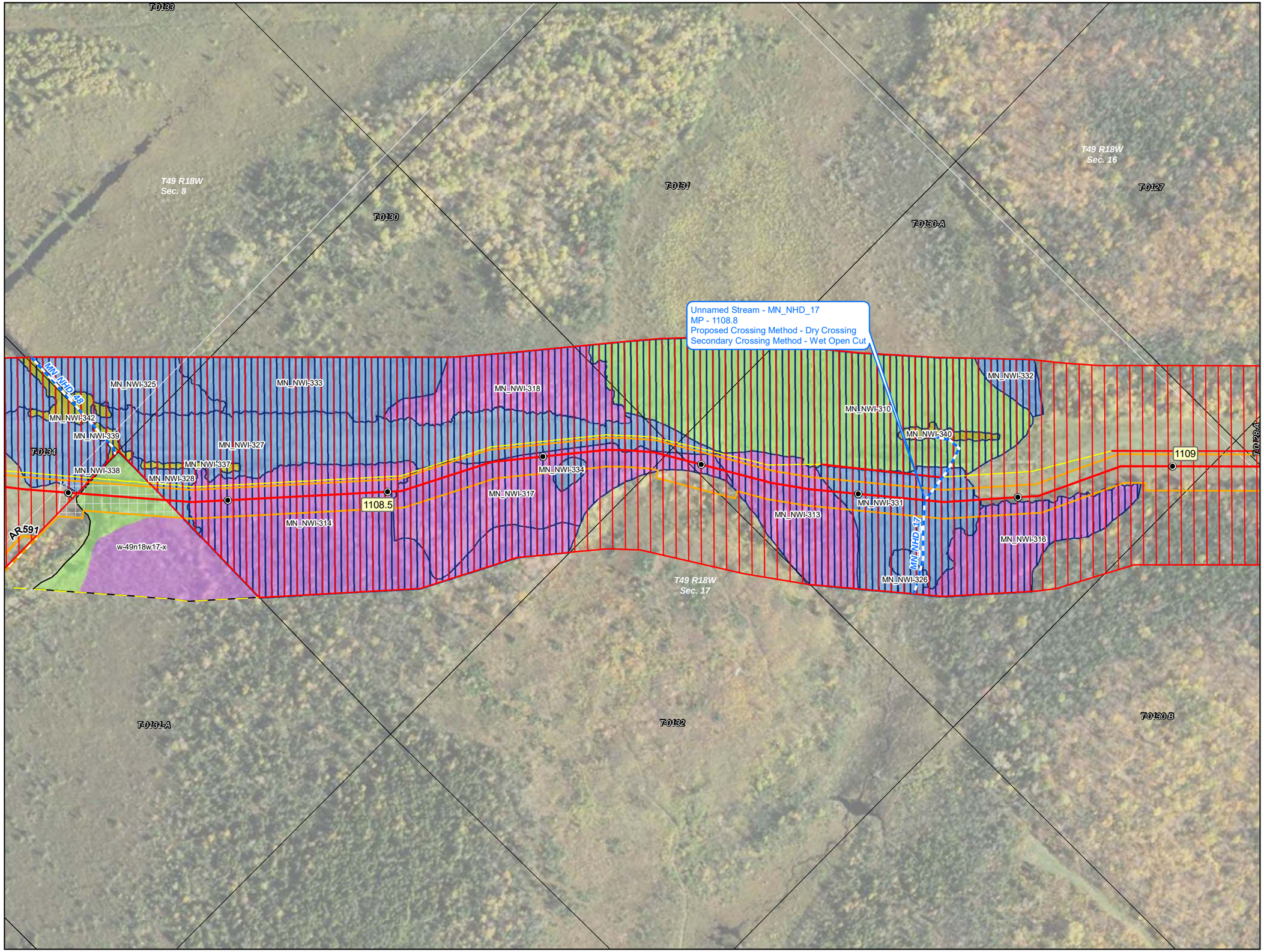

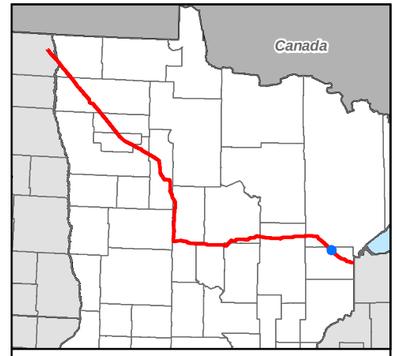

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Carlton County, Minnesota

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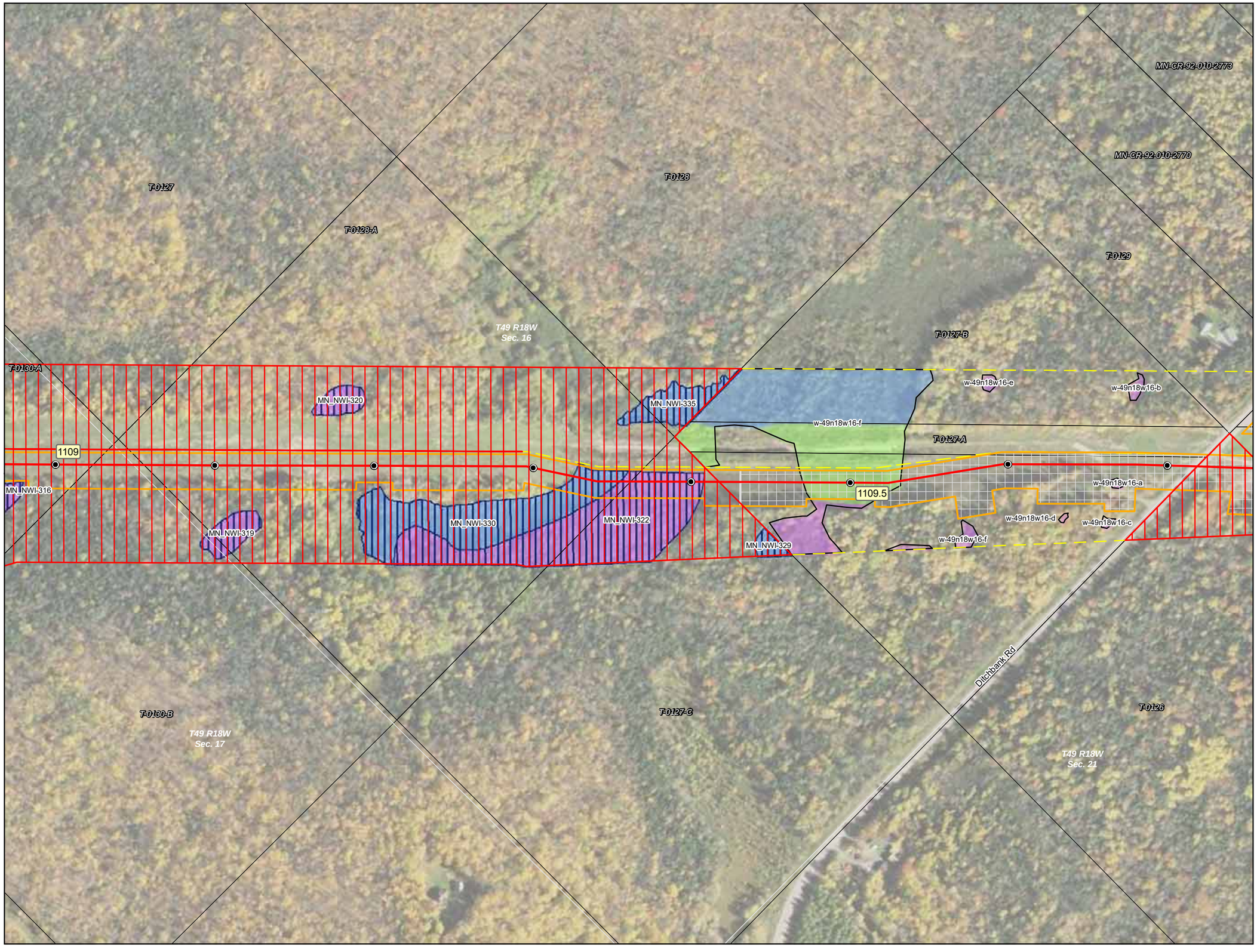

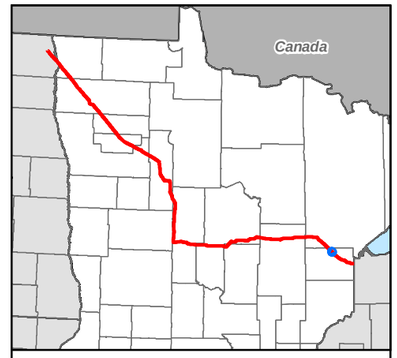

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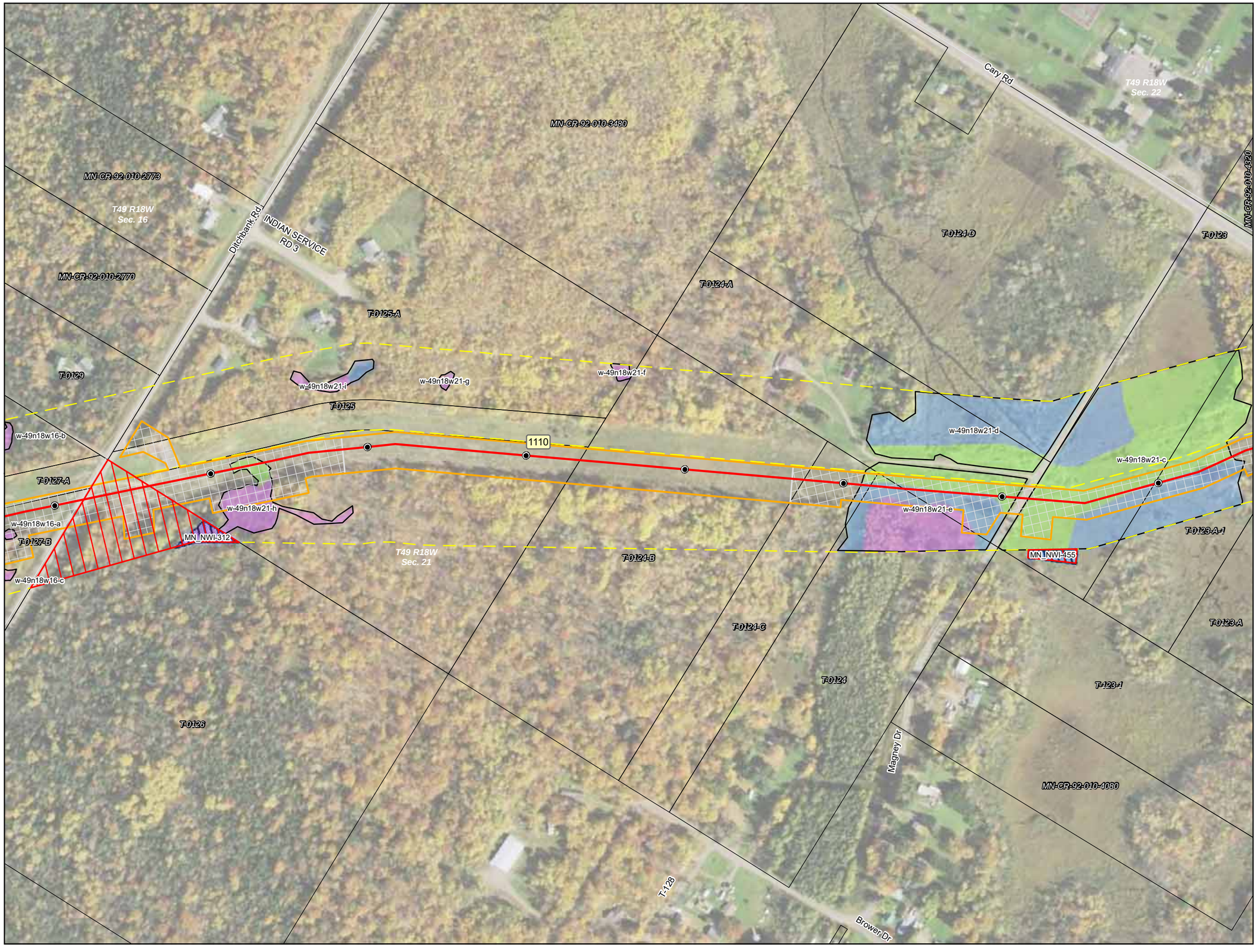

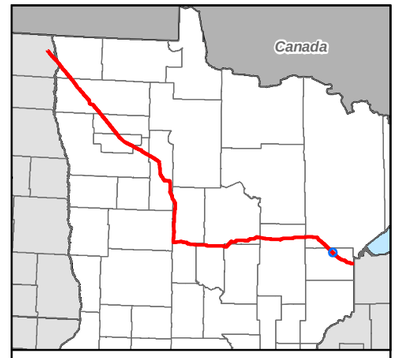

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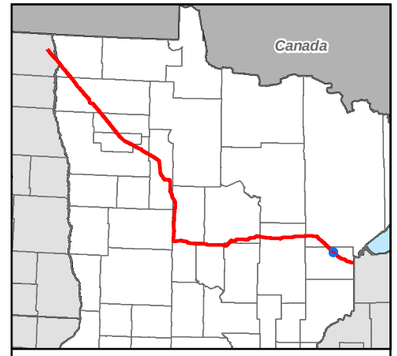

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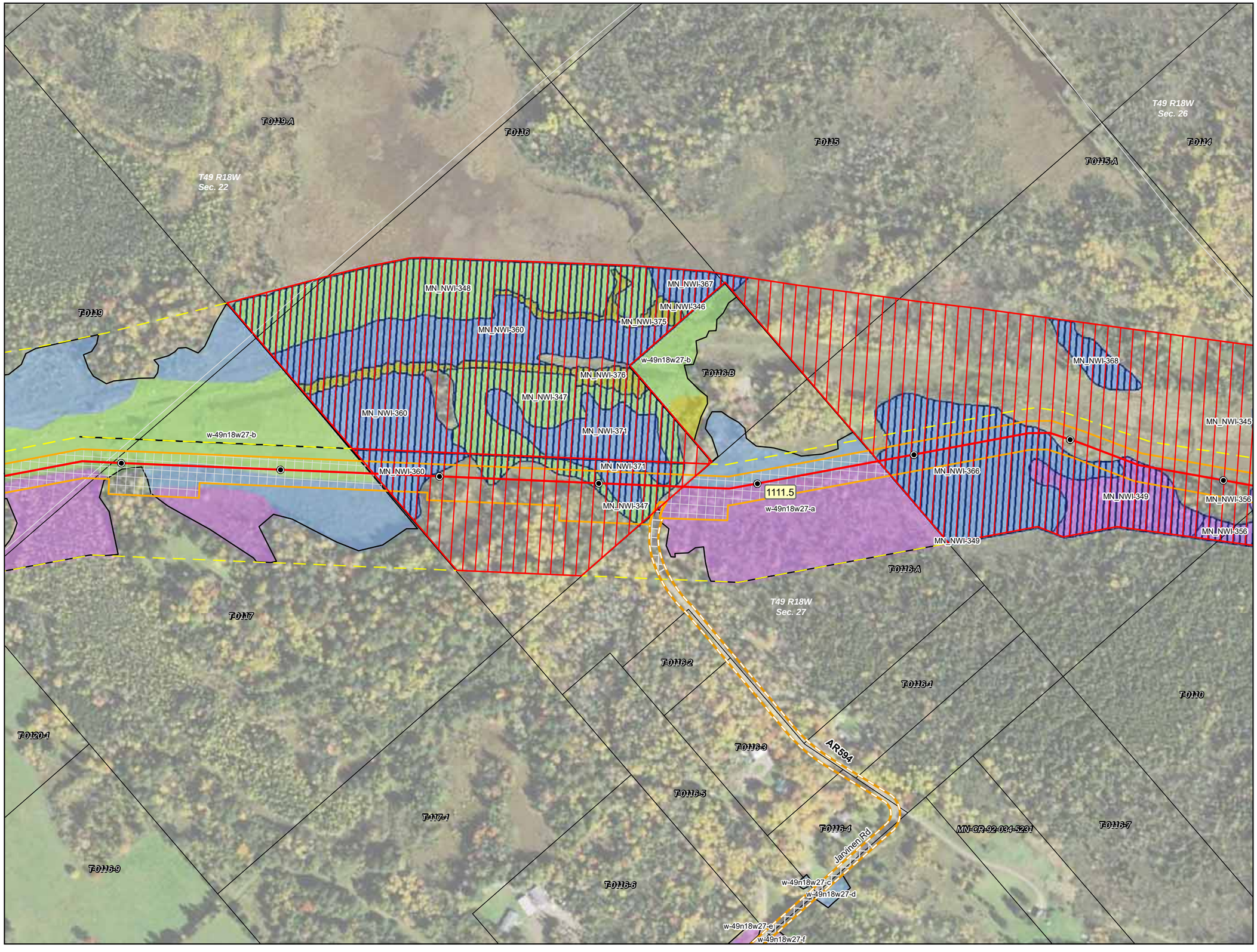

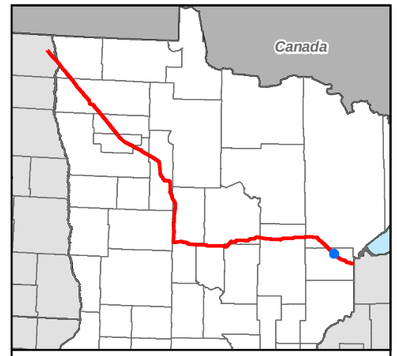

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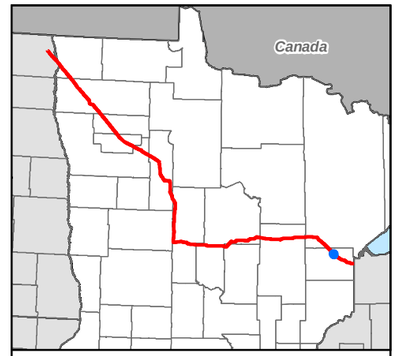

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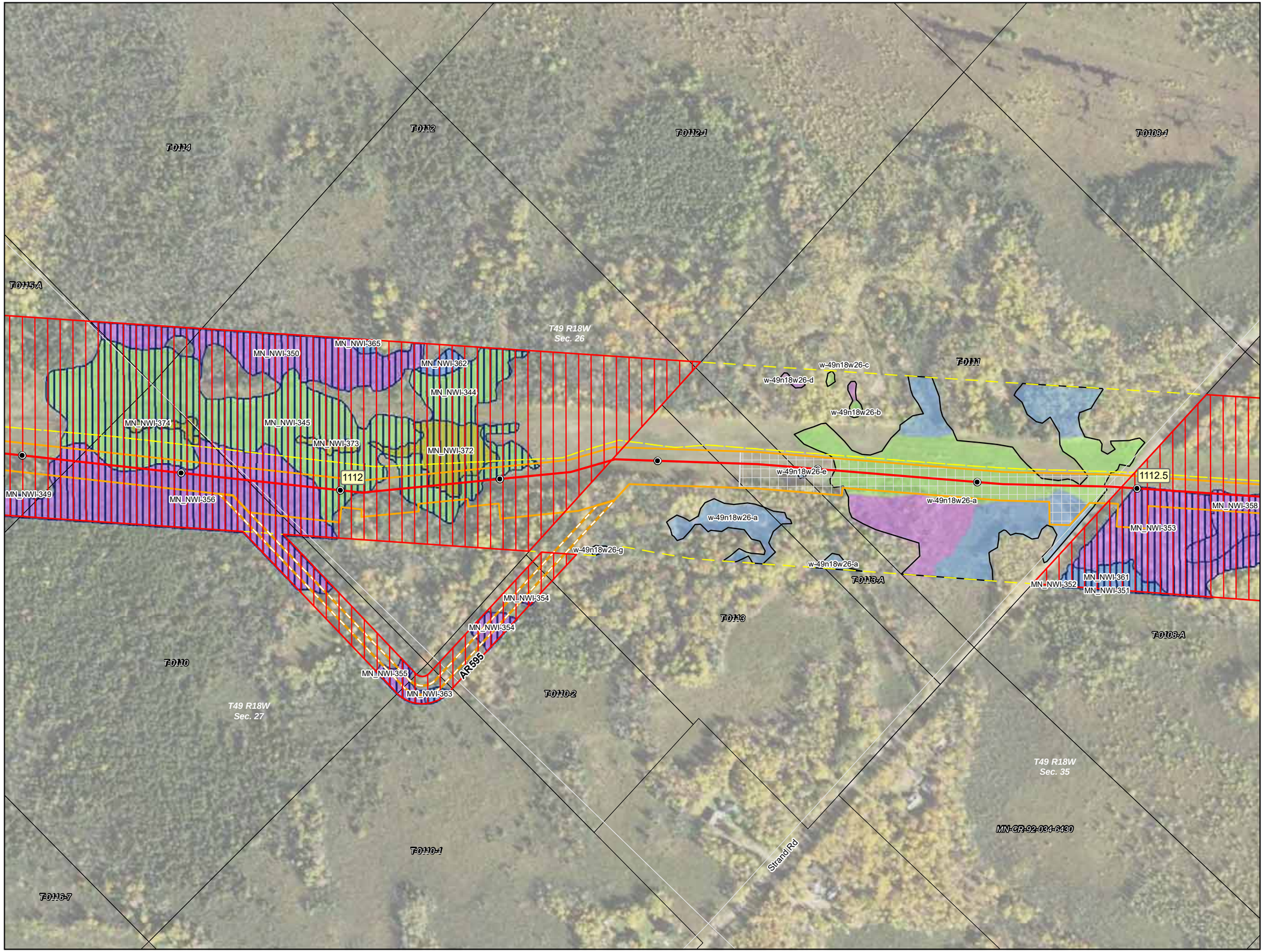

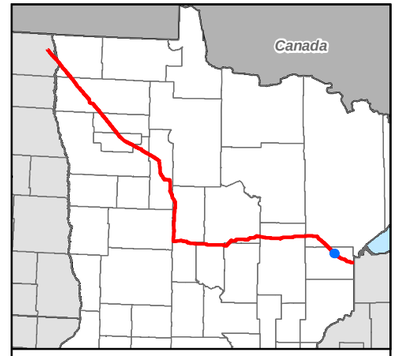

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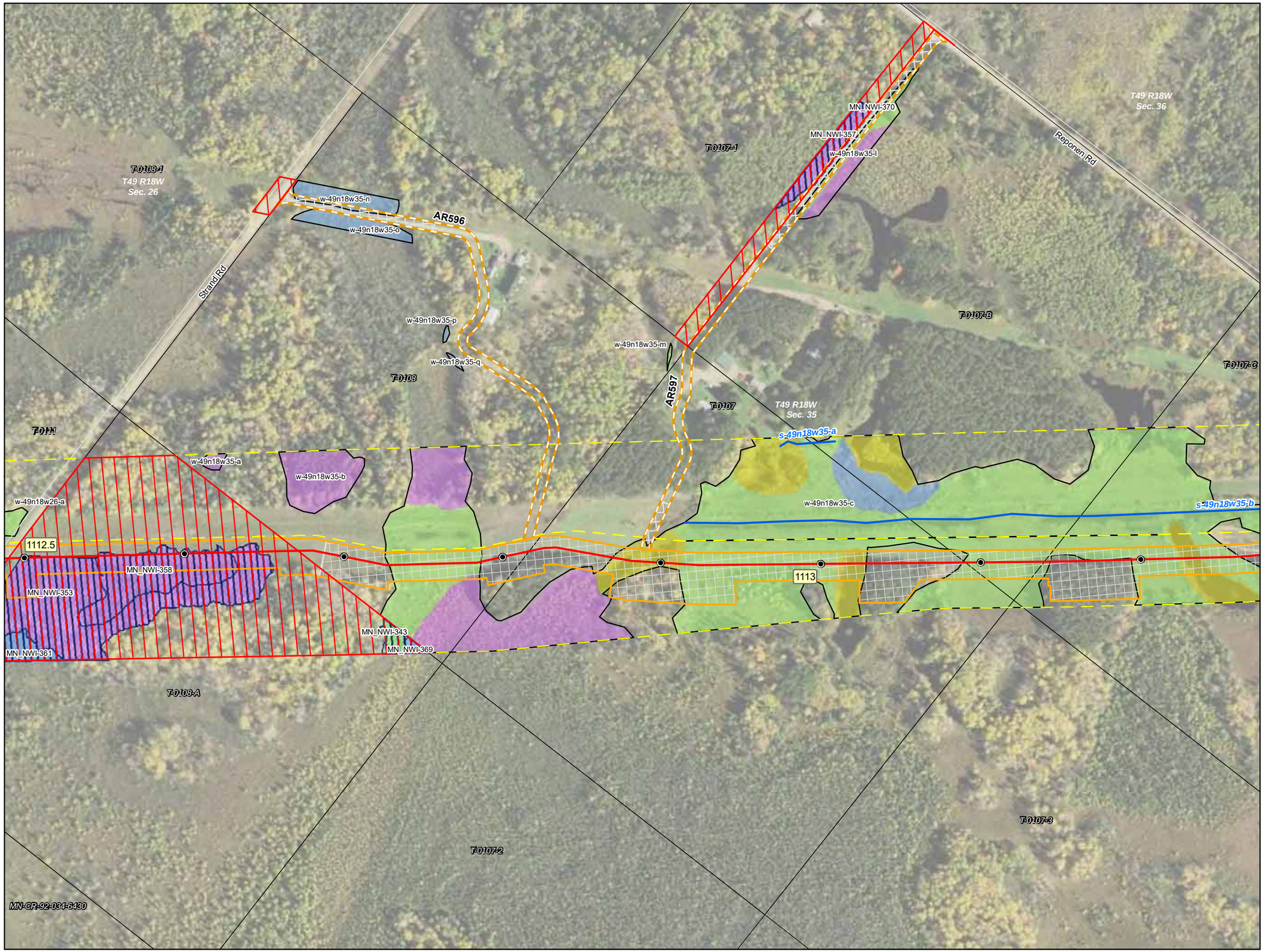

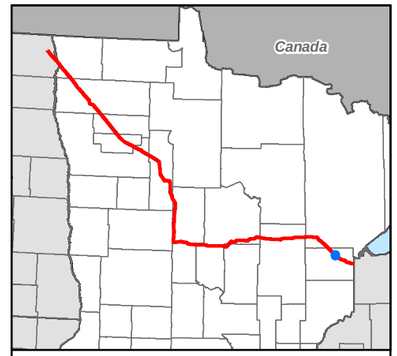

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NWI Waterbodies

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Detailed Route Maps

Line 3 Replacement Project

Carlton County, Minnesota

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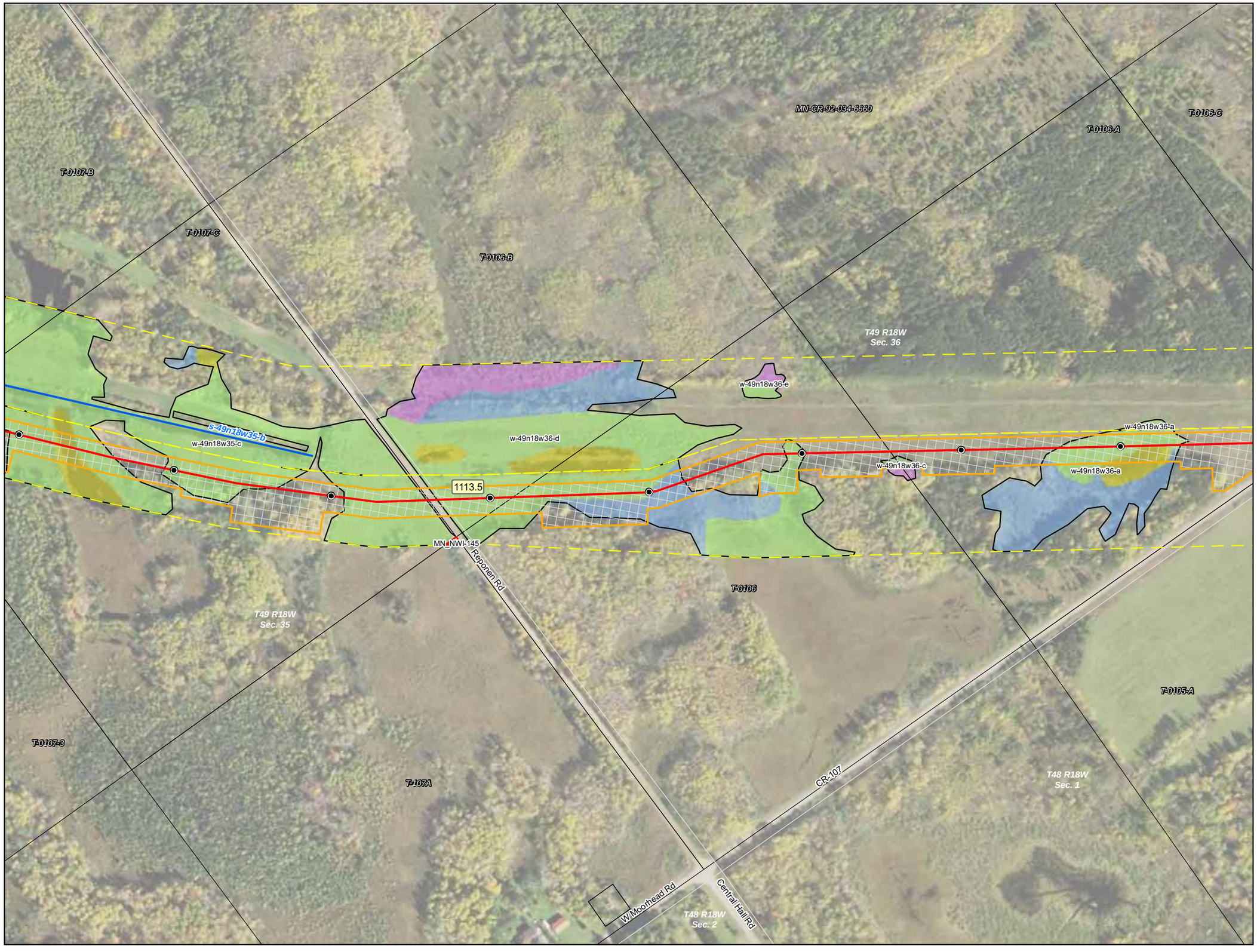

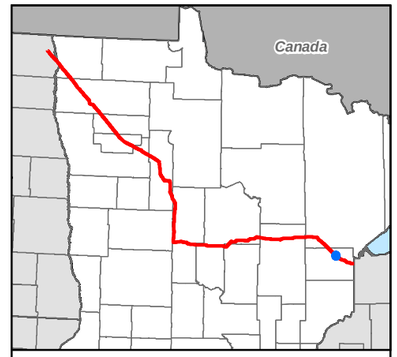

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Carlton County, Minnesota

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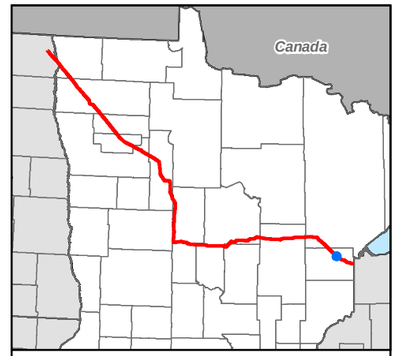

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Carlton County, Minnesota

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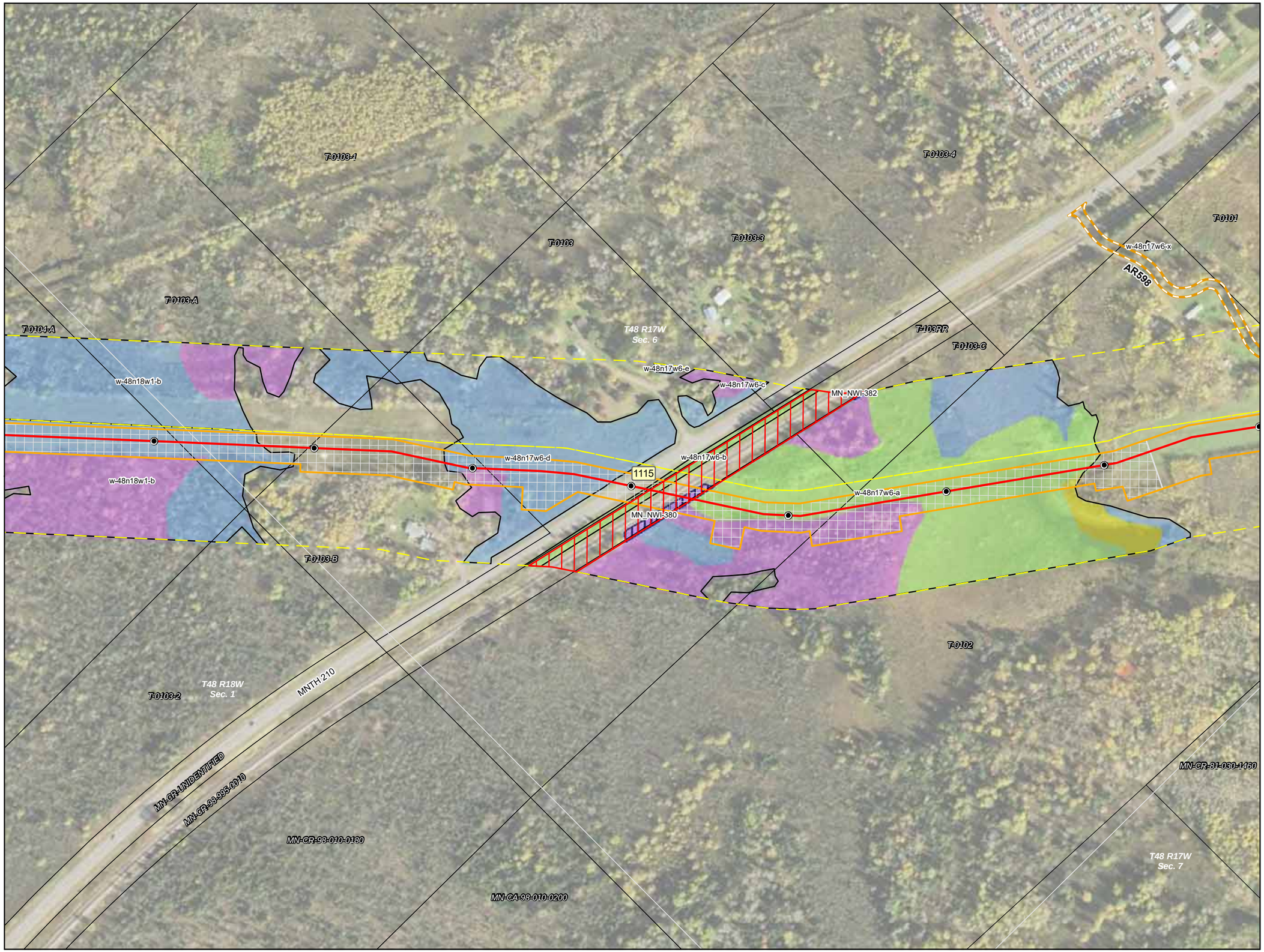

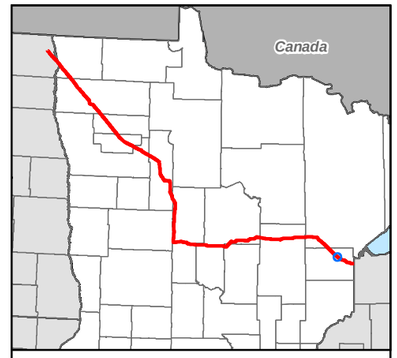

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Carlton County, Minnesota

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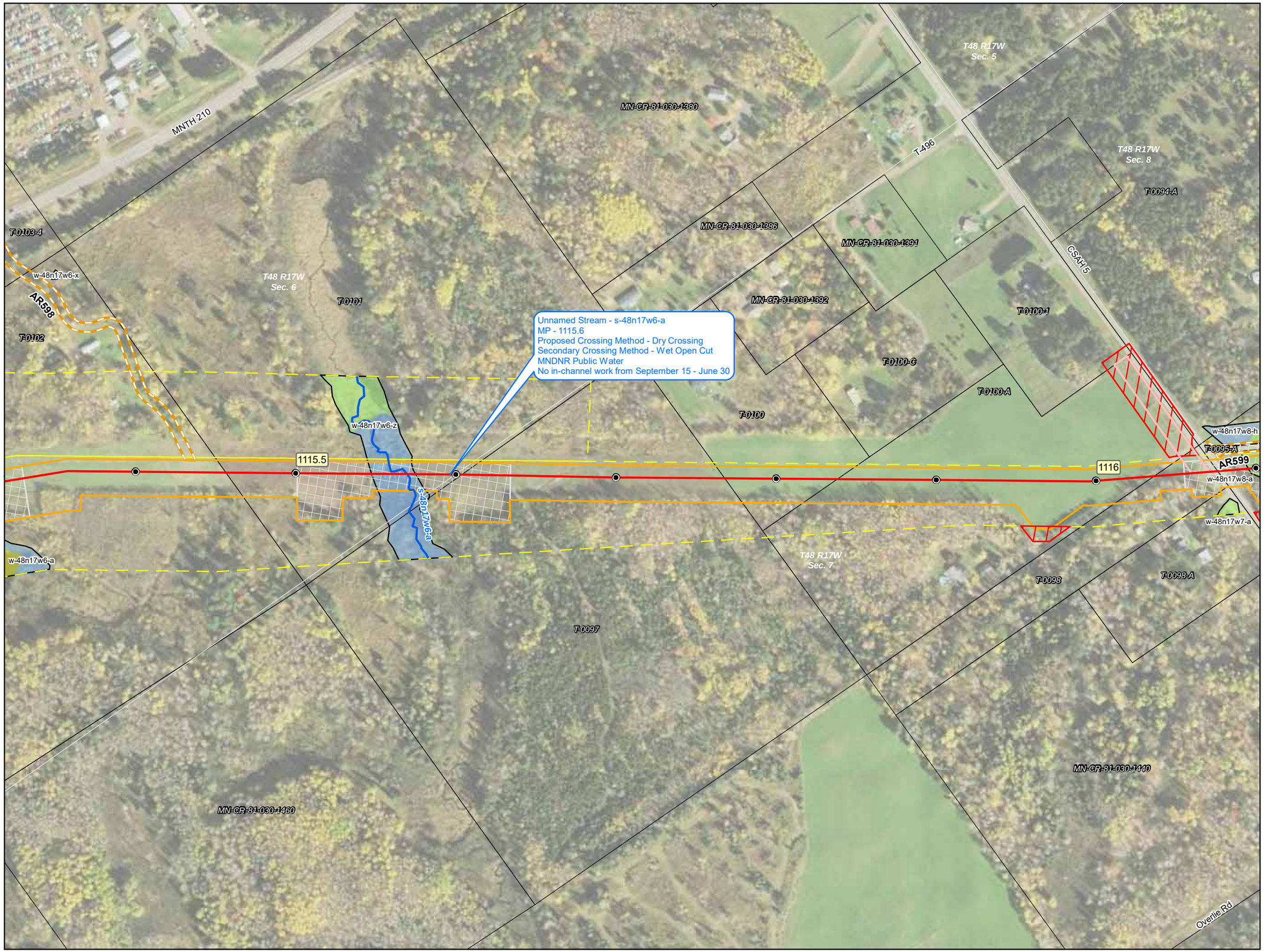

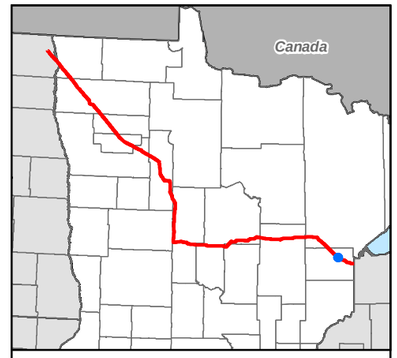

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Carlton County, Minnesota

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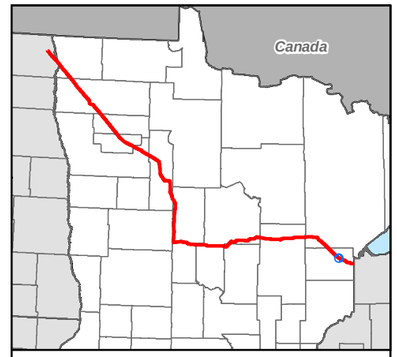

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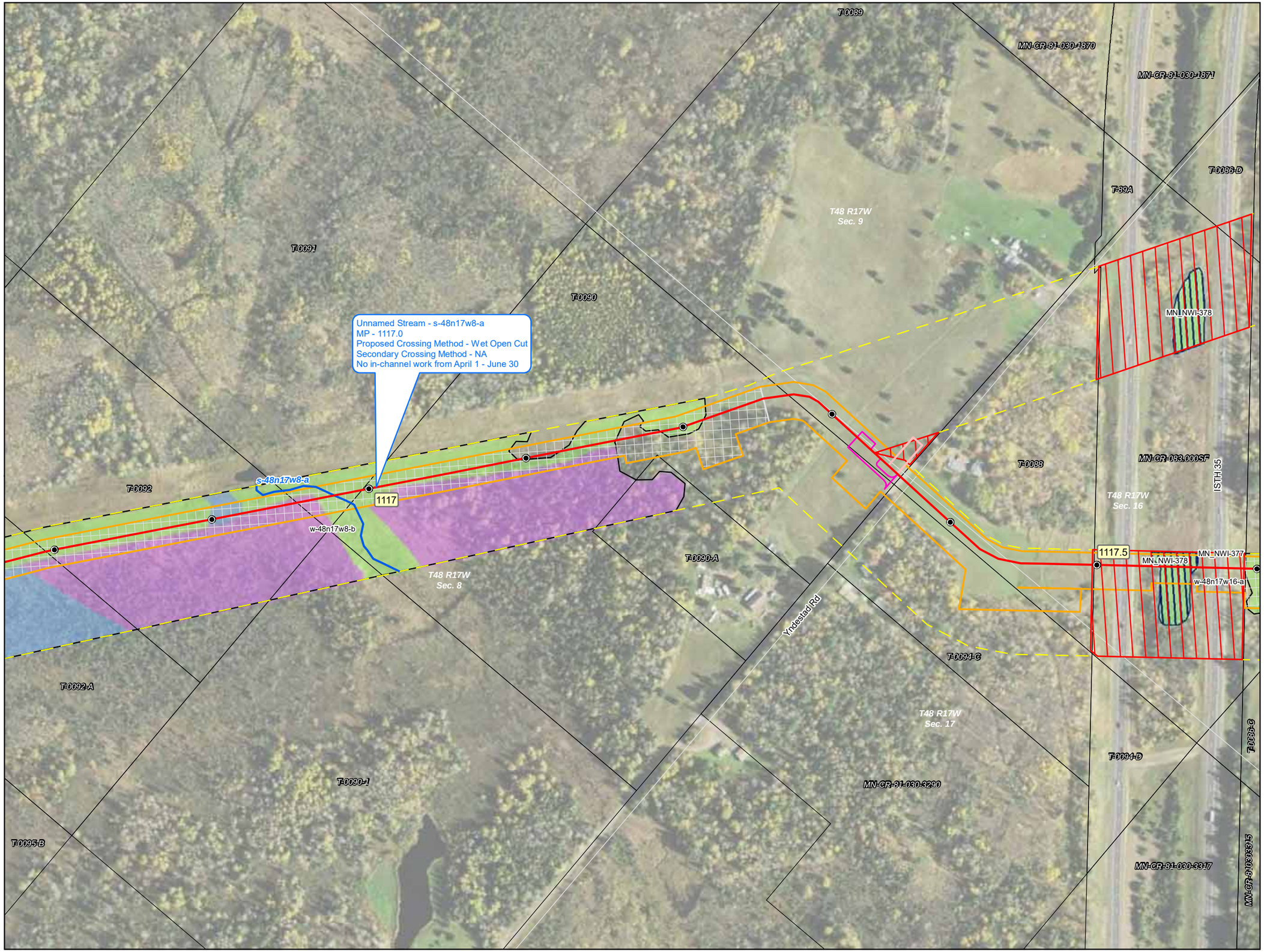

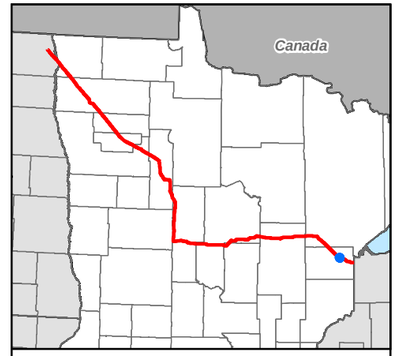

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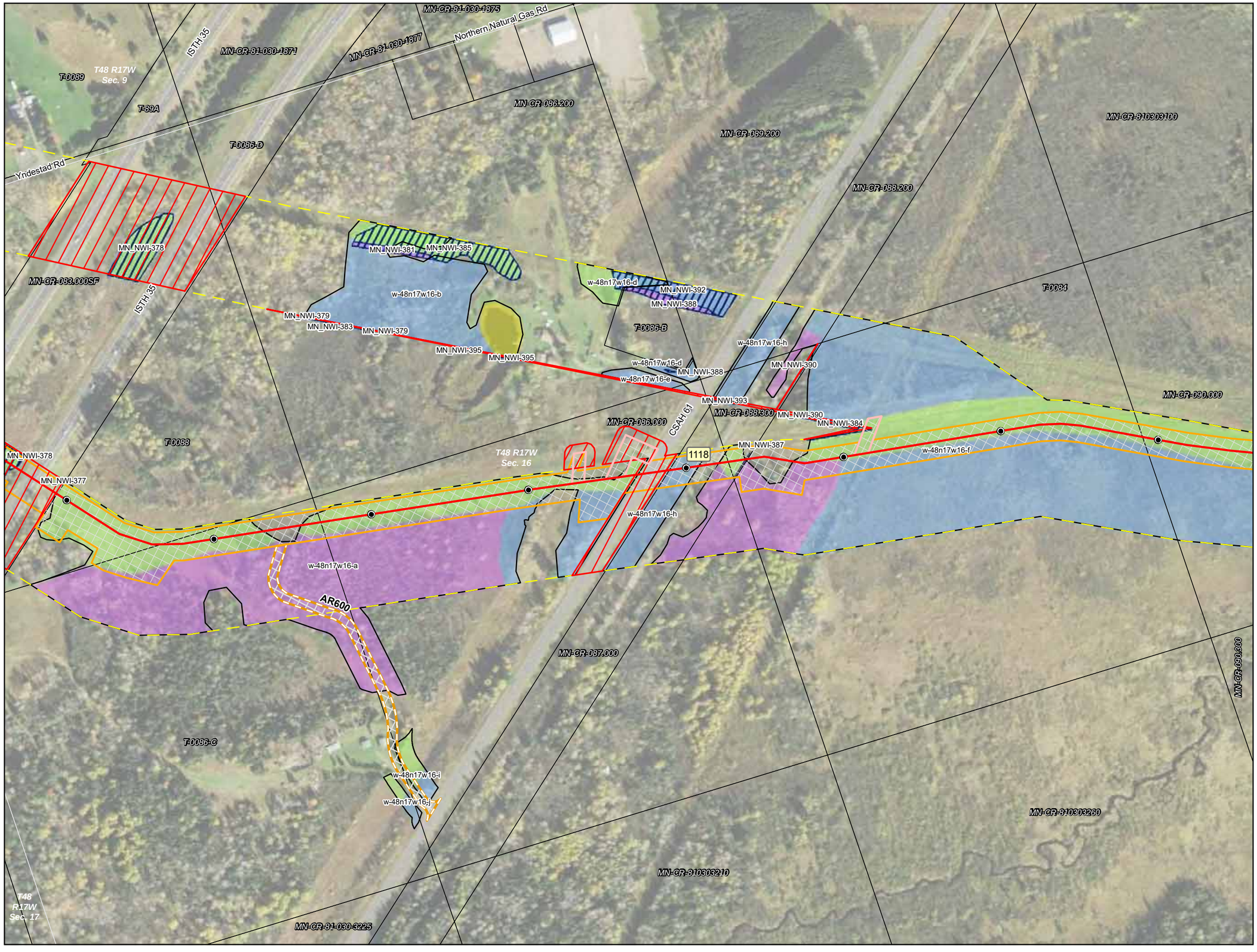

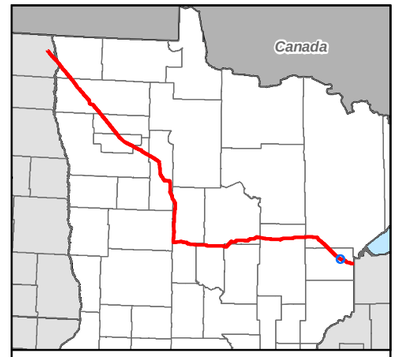

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Carlton County, Minnesota

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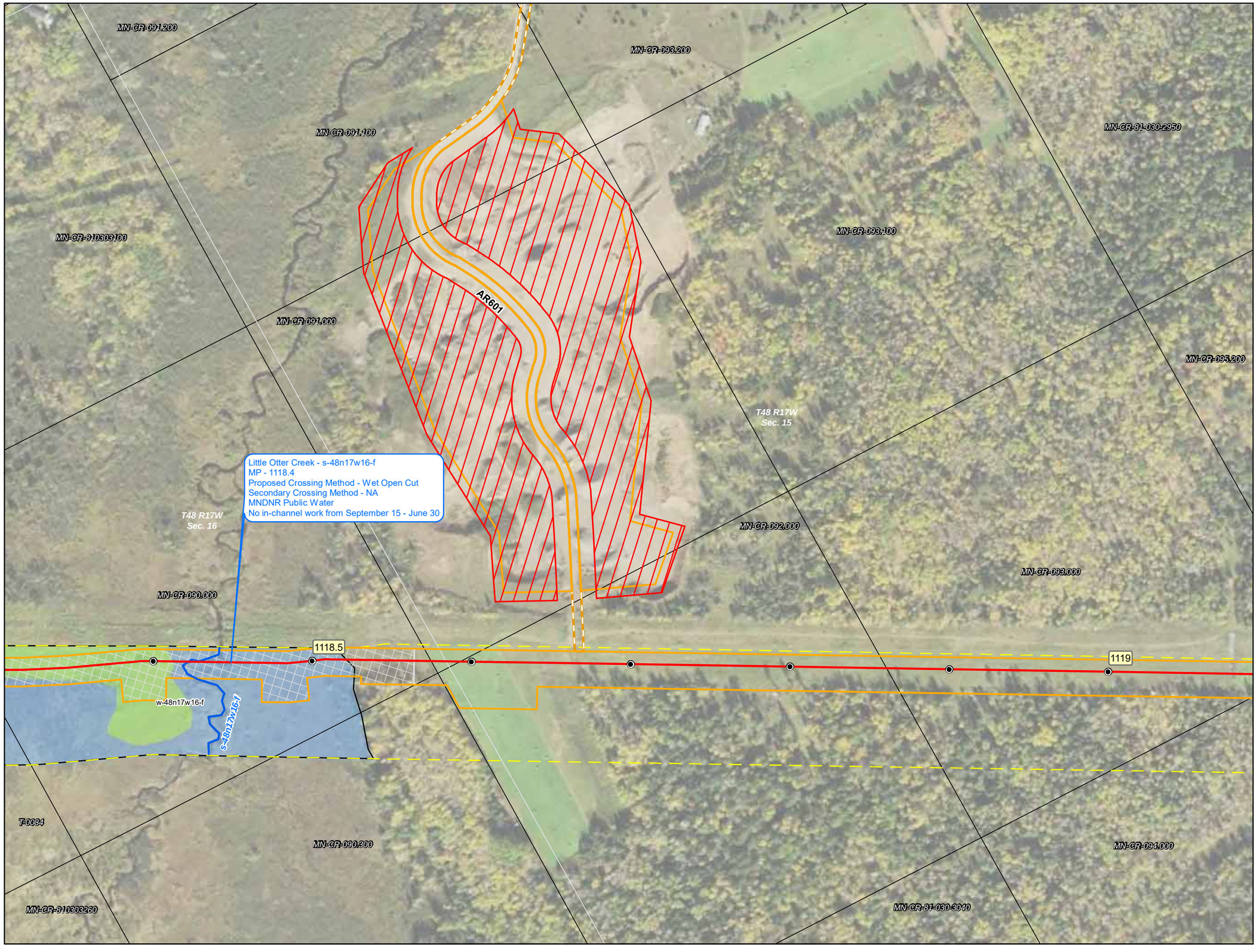

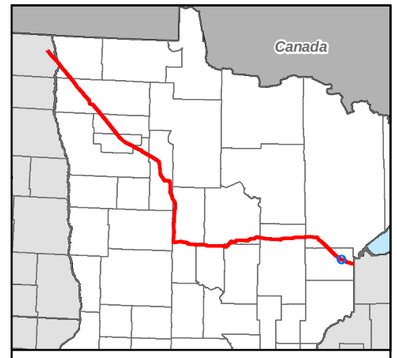

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Carlton County, Minnesota

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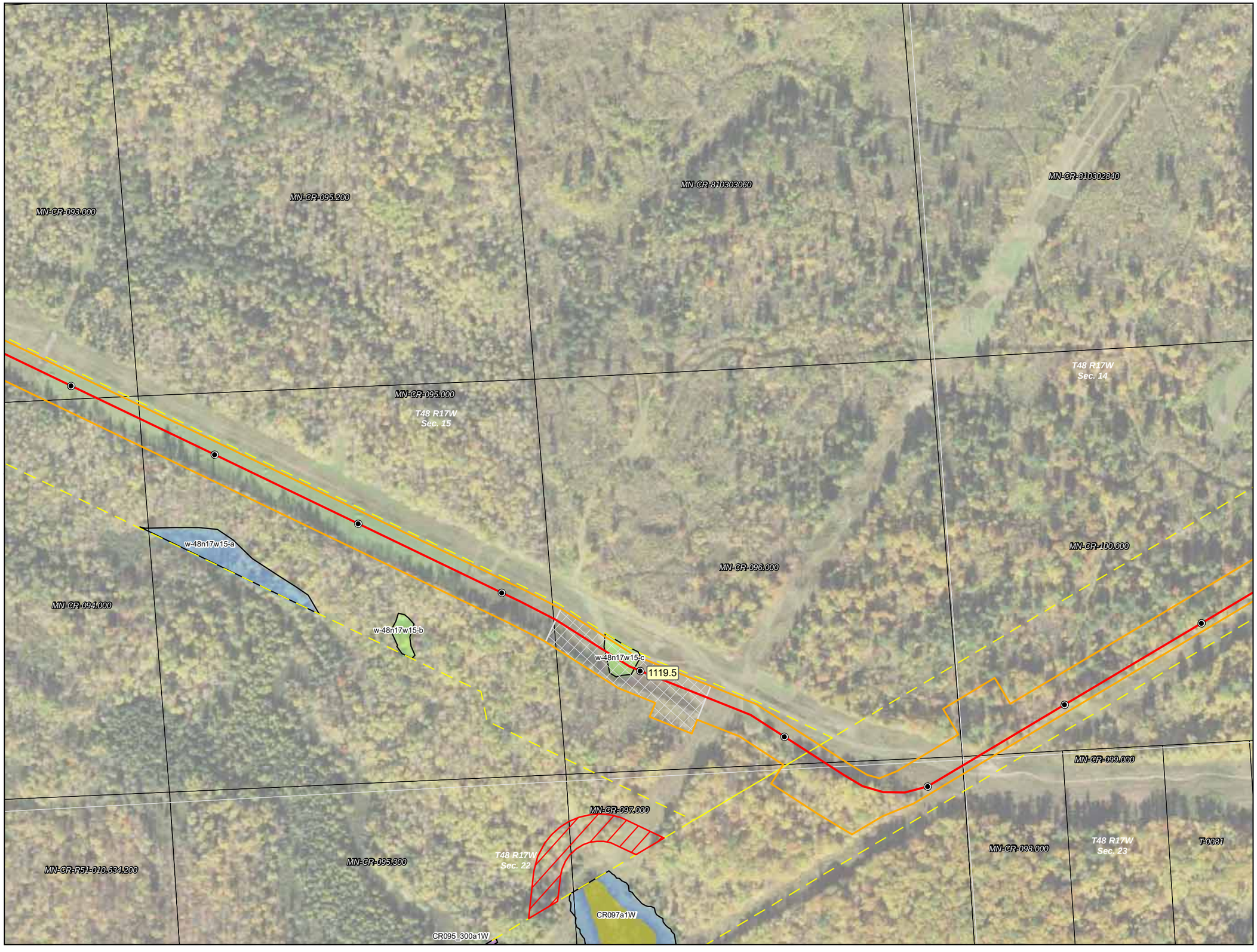

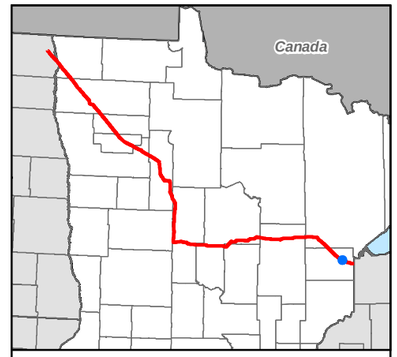

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Detailed Route Maps

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Carlton County, Minnesota

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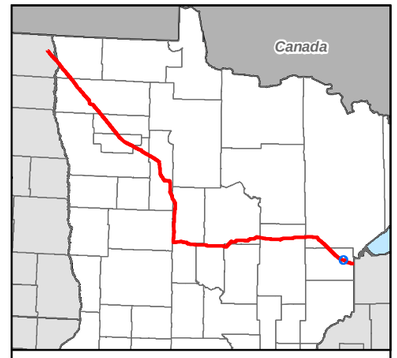

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Carlton County, Minnesota

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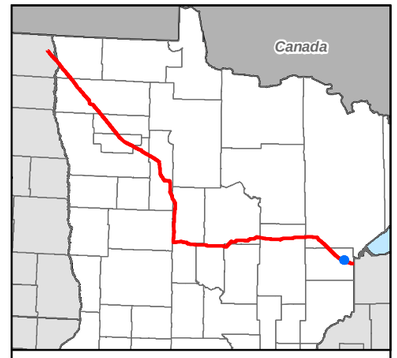

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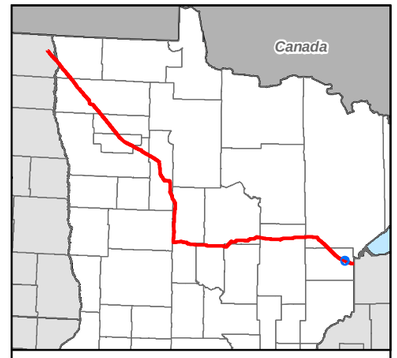

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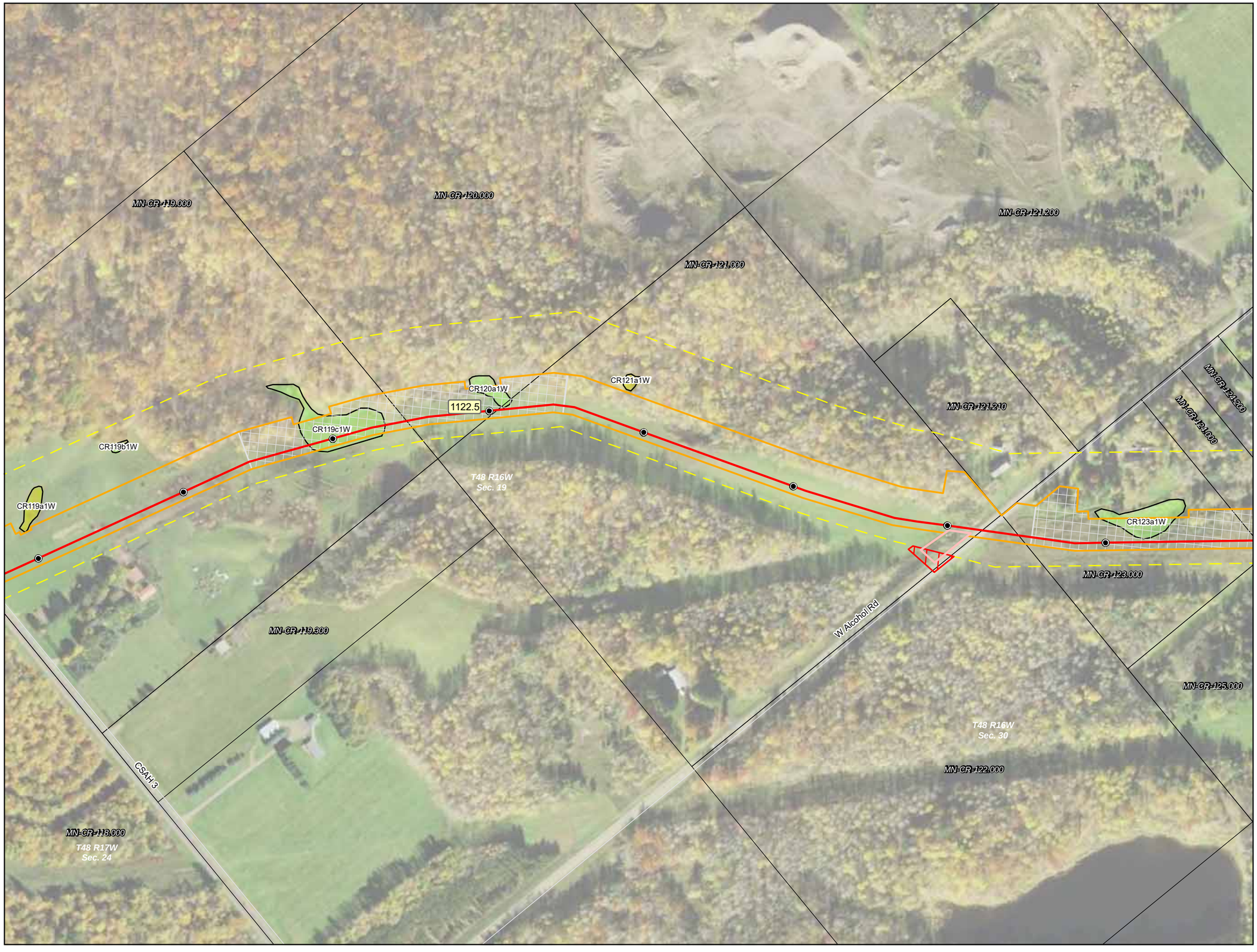

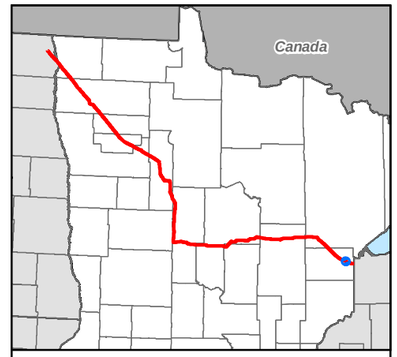

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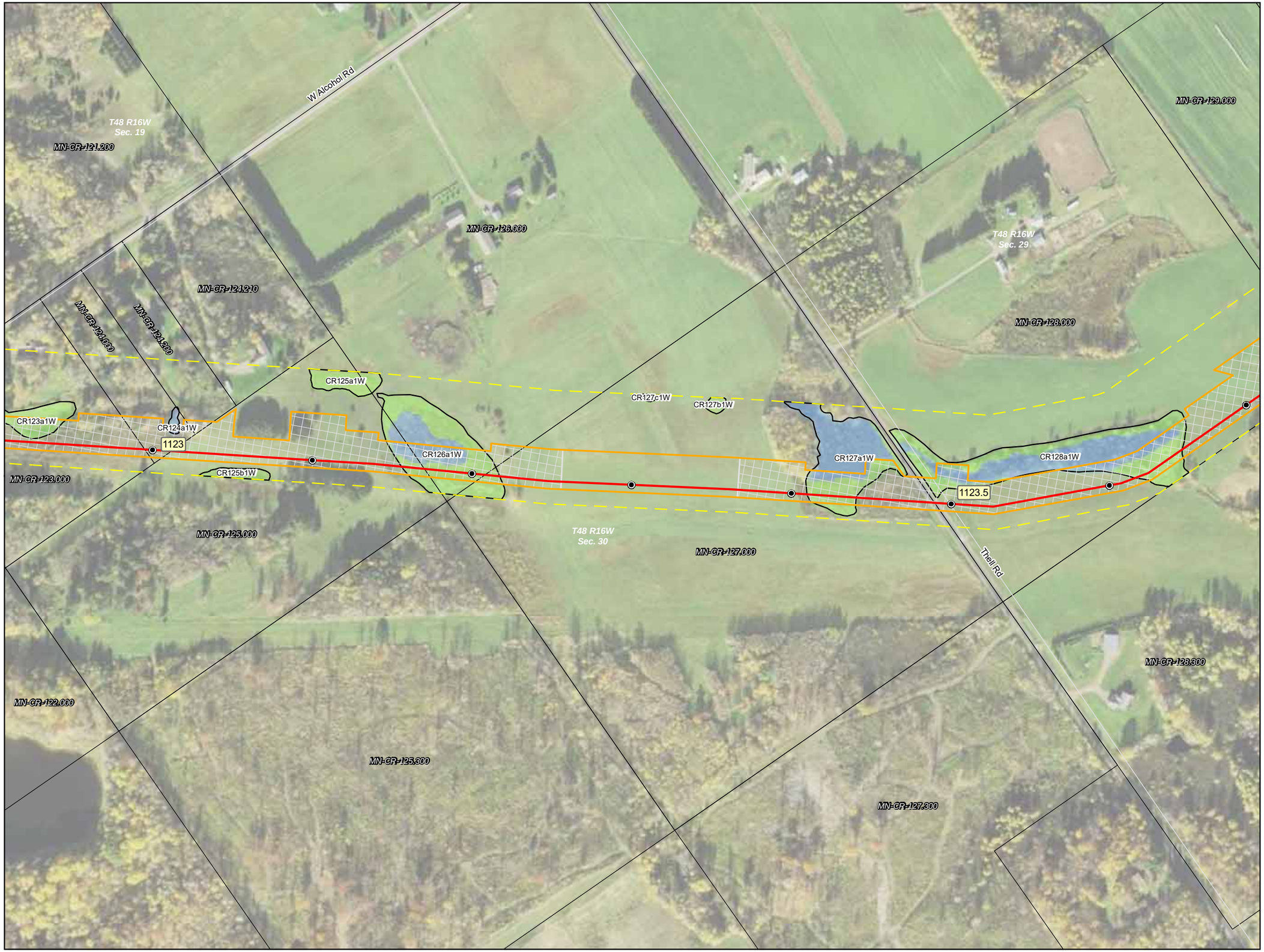

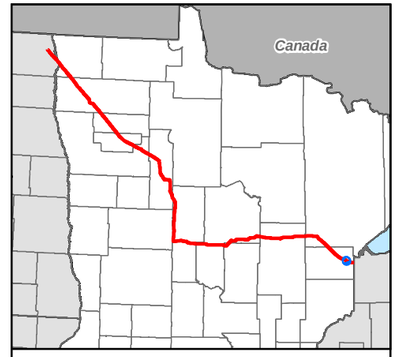

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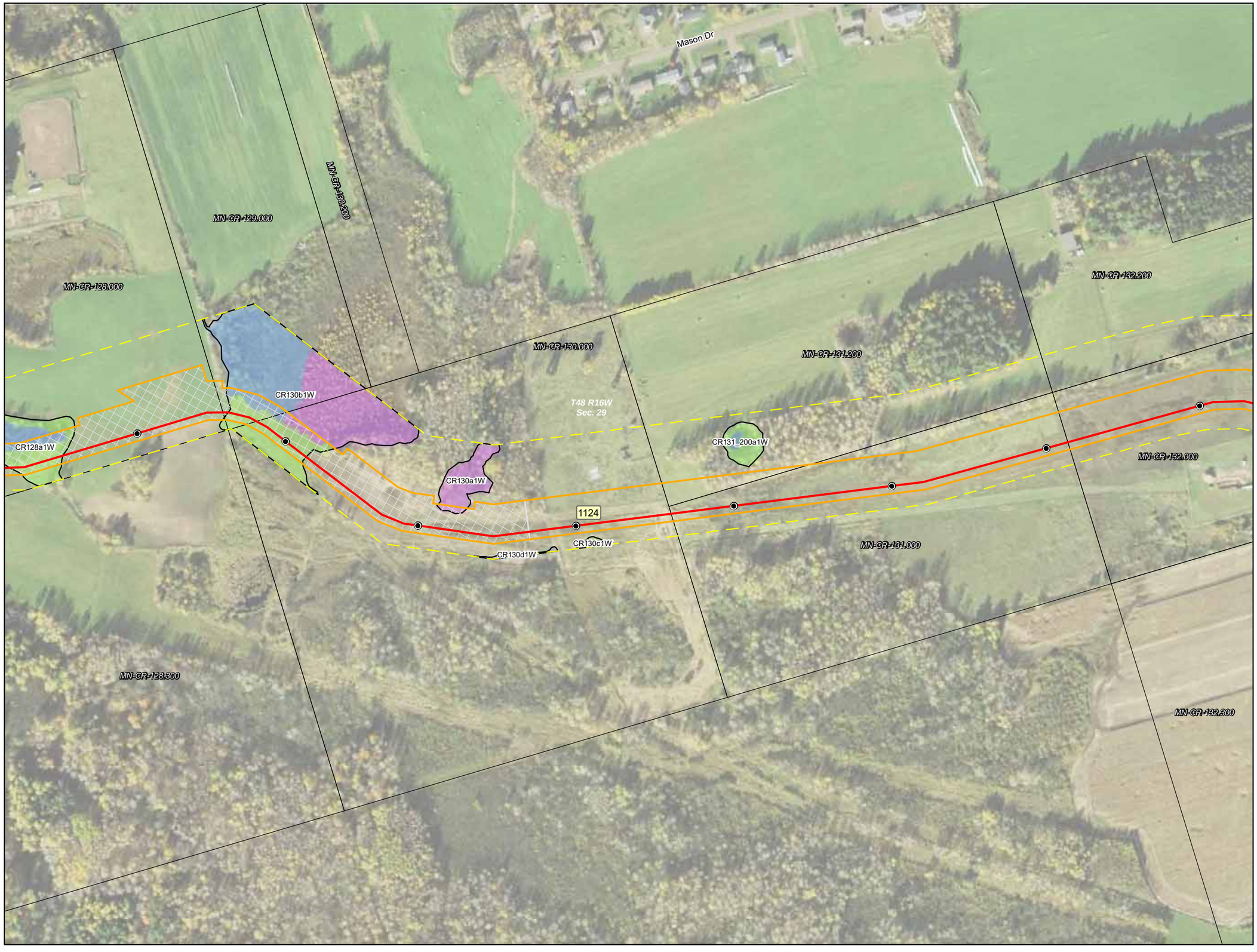

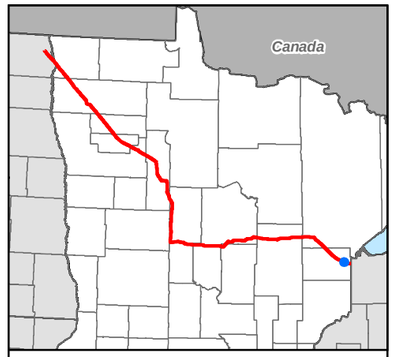

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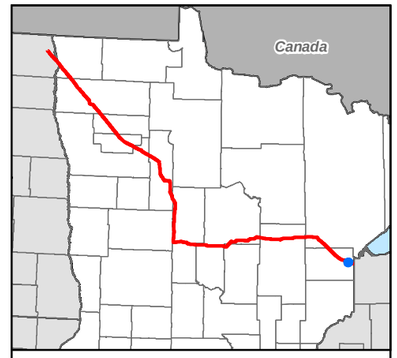

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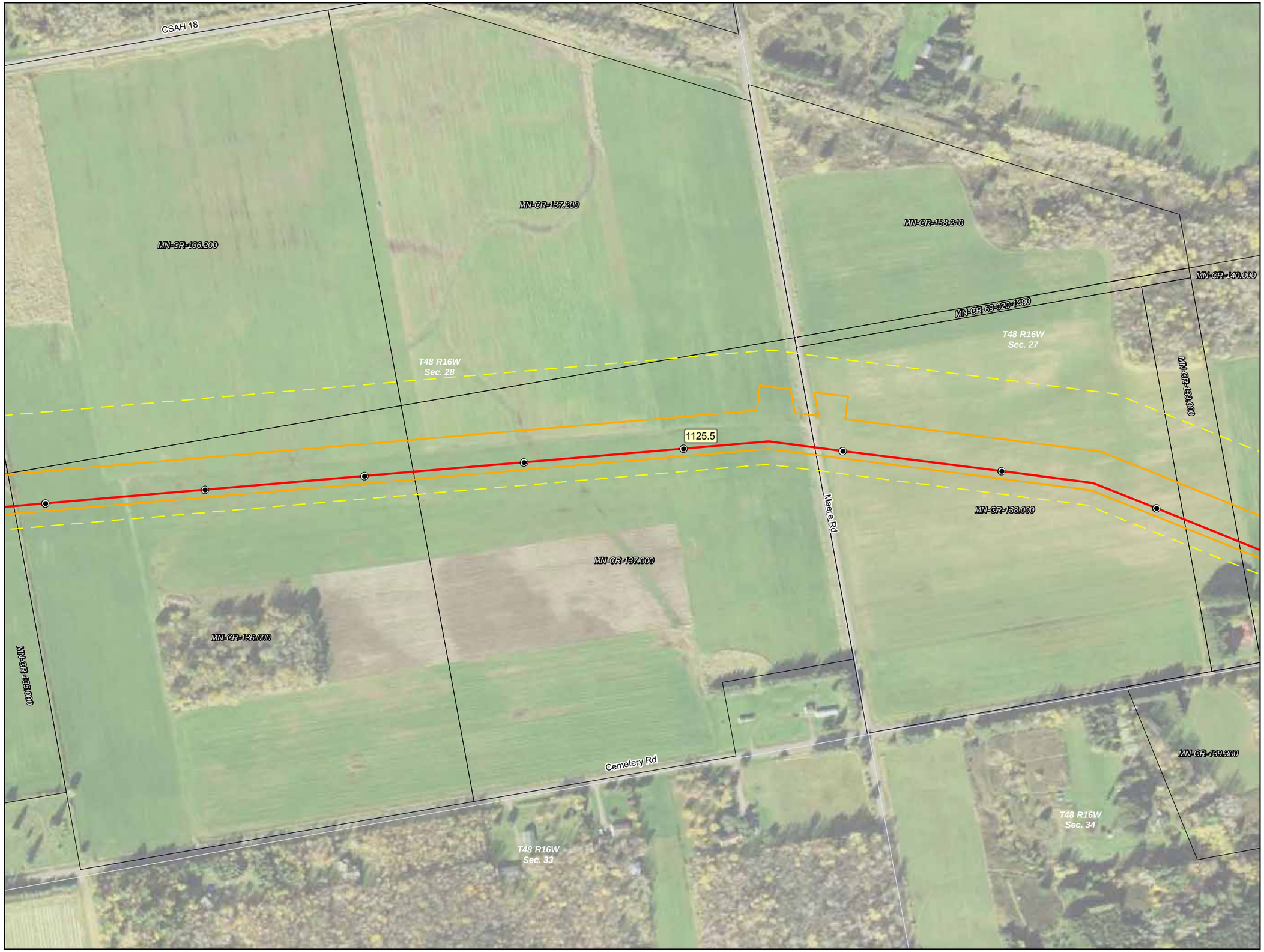

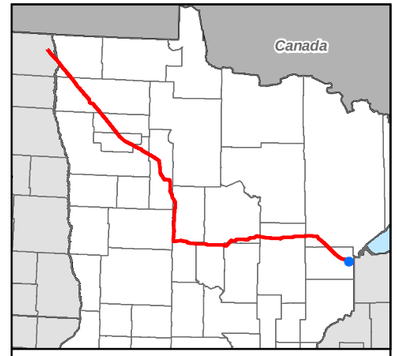

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Carlton County, Minnesota

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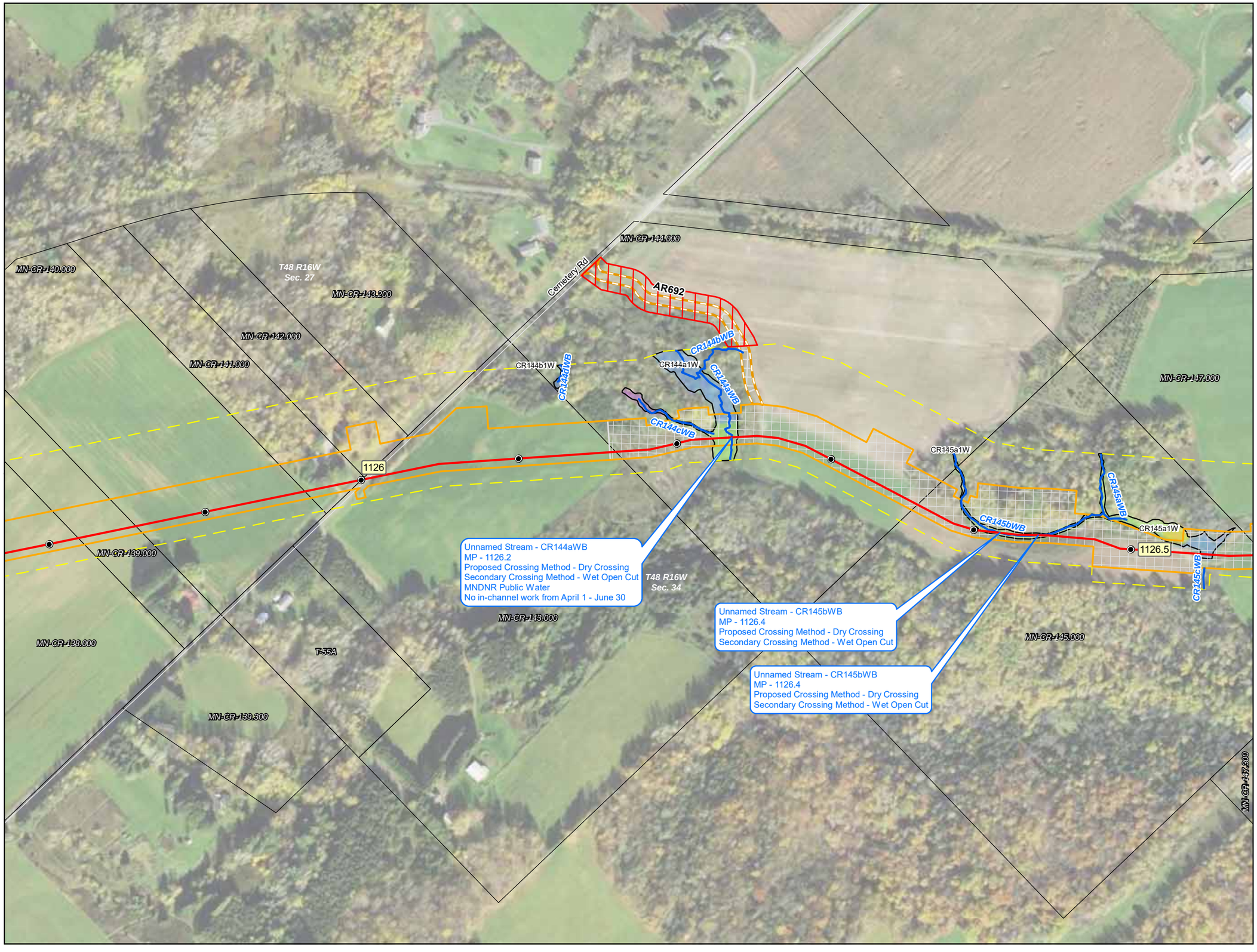
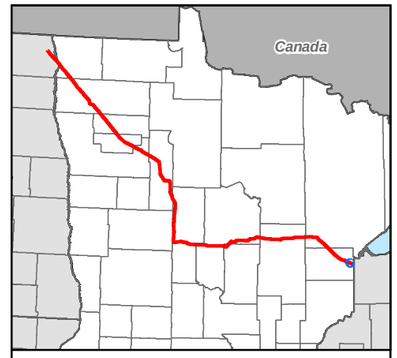
Date: (9/19/2018)





- Milepost
- Line 3 Centerline
- Construction Workspace
- Access Road
- COE Permit Area
- Survey Corridor
- Field Survey Partially or Not Complete
- Parcel Boundary
- County Boundary
- Section Boundary
- Cathodic Protection
- Valve Location
- Pump Station

Environmental Field Data

Wetlands

Field Delineated Wetland	NWI Wetlands
PEM	PEM
PFO	PFO
PSS	PSS
PUB	PUB

Waterbodies

- Field Delineated Waterbody
- NHD Waterbody

NWI Waterbodies

- Lake
- Riverine

0 150 300 Feet

1 inch = 300 feet

Detailed Route Maps

Line 3 Replacement Project

Carlton County, Minnesota

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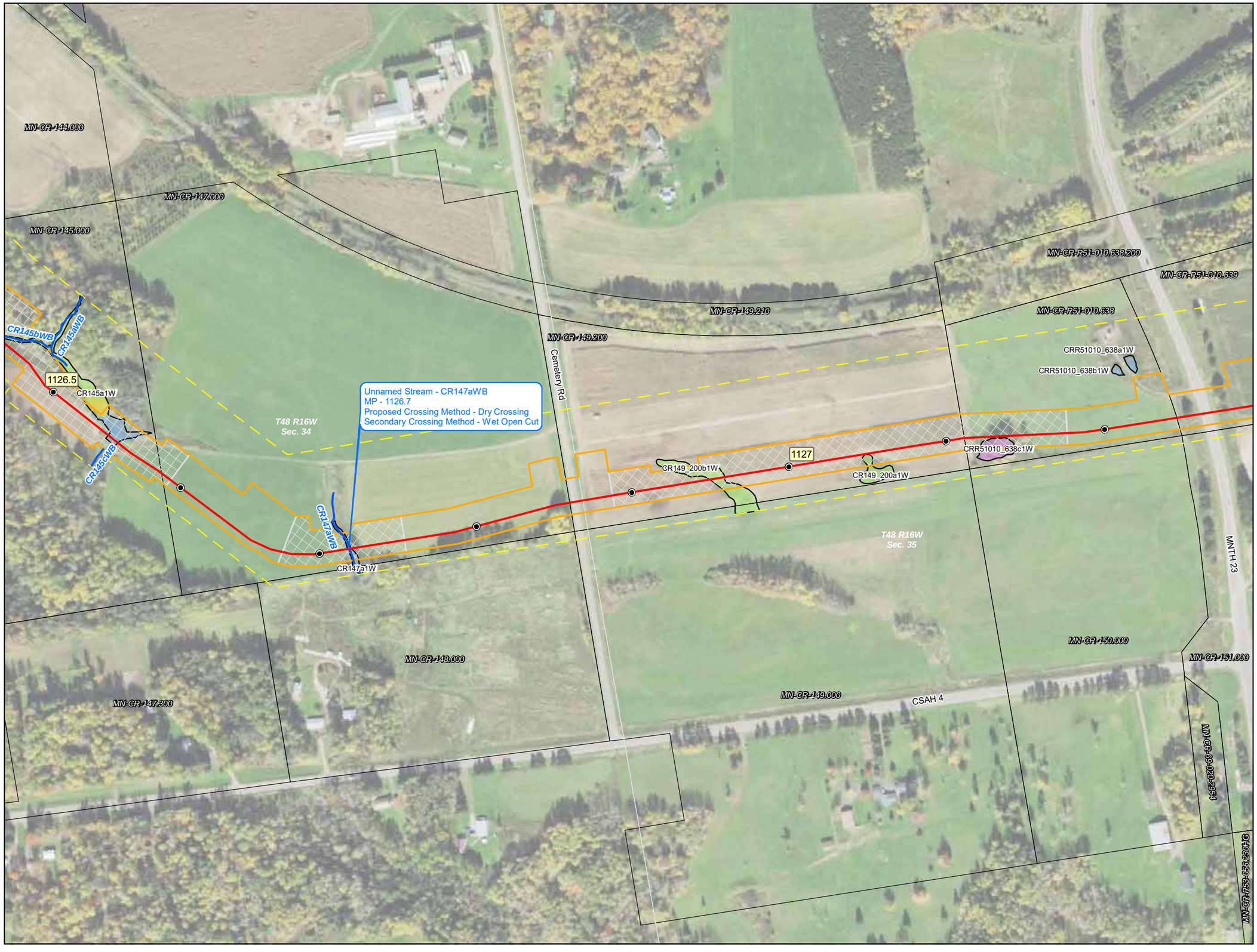

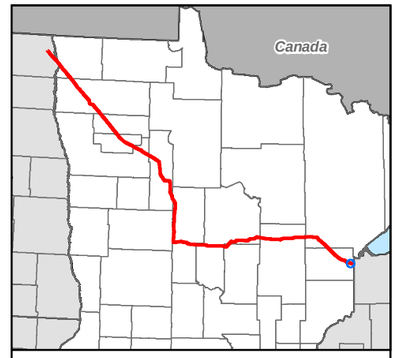

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N E S W

Detailed Route Maps

Line 3 Replacement Project

Carlton County, Minnesota

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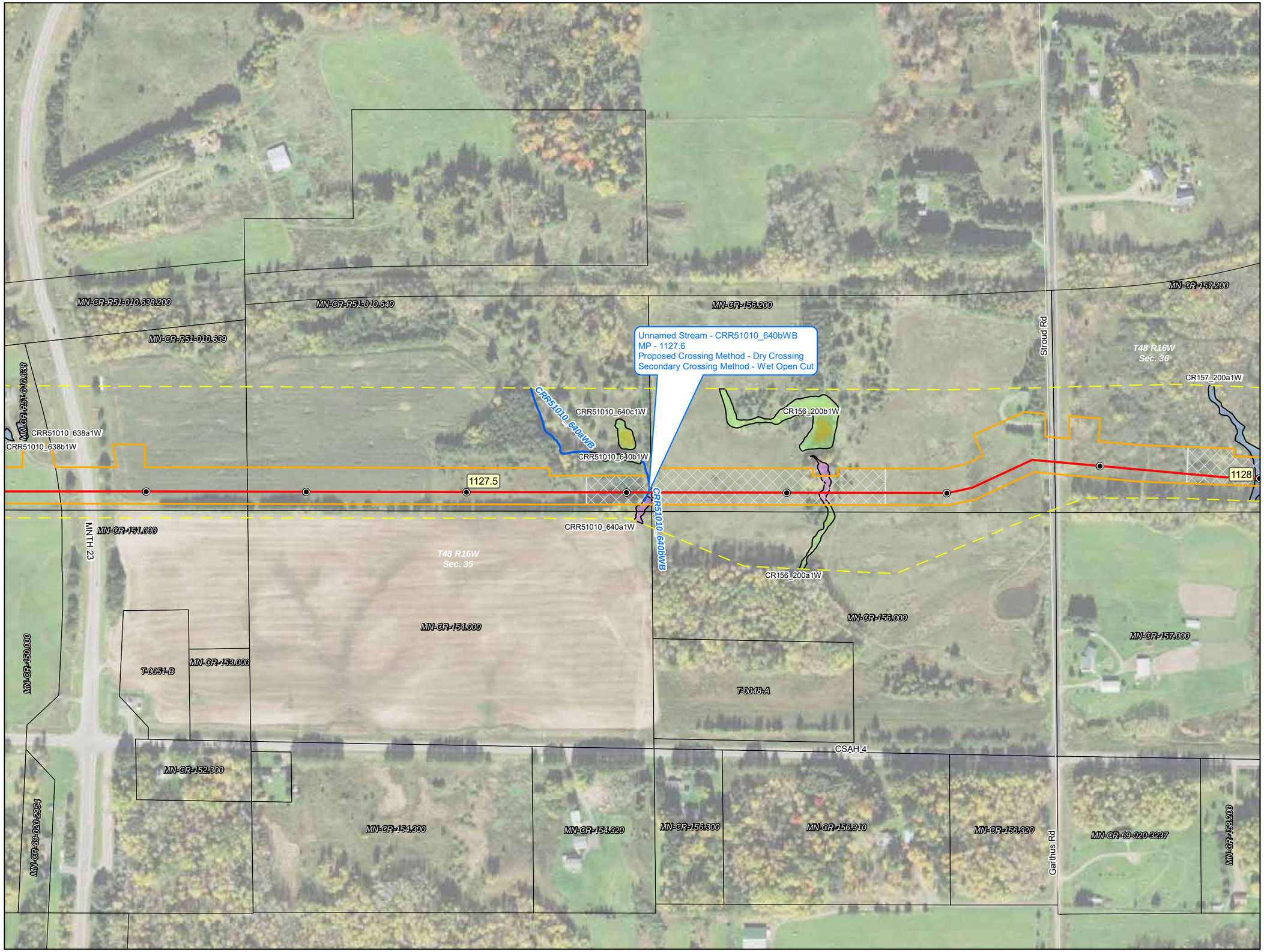

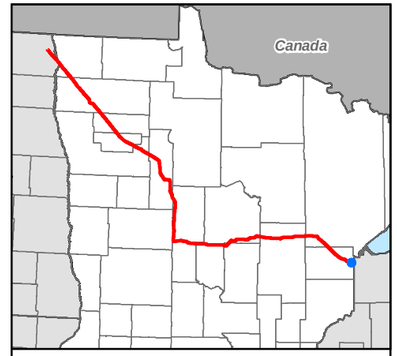

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Detailed Route Maps

Line 3 Replacement Project

Carlton County, Minnesota

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Unnamed Stream - CR157_200a1WB
MP - 1128.1
Proposed Crossing Method - Dry Crossing
Secondary Crossing Method - Wet Open Cut

Unnamed Stream - CR159_200aWB
MP - 1128.1
Proposed Crossing Method - Dry Crossing
Secondary Crossing Method - Wet Open Cut

Unnamed Stream - CR159_200bWB
MP - 1128.2
Proposed Crossing Method - Dry Crossing
Secondary Crossing Method - Wet Open Cut

Unnamed Stream - CR159bWB
MP - 1128.3
Proposed Crossing Method - Dry Crossing
Secondary Crossing Method - Wet Open Cut

Unnamed Stream - CR159_200cWB
MP - 1128.3
Proposed Crossing Method - Dry Crossing
Secondary Crossing Method - Wet Open Cut

MN-CR-161.200
MN-CR-159.200
MN-CR-R51-010.840.210
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MN-CR-158.200
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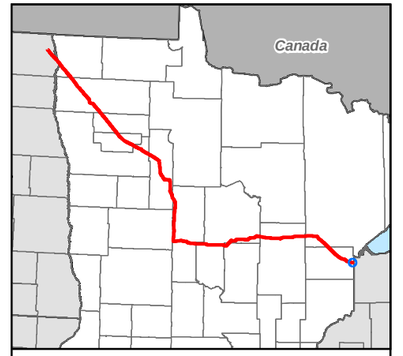
MN-CR-160.000
MN-CR-156.000
MN-CR-156.320
MN-CR-69-020-3237

CR157_200a1W
CR157_200a1WB
CR159_200aWB
CR159_200a1W
CR159_200bWB
CR159_200cWB
CR159bWB
CR159_200b1W
CR160c1W
CR160b1W
CR160d1W

1128
1128.5

T48 R16W
Sec. 36
T48 R16W
Sec. 35

CSAH 4
Stroud Rd
Garthus Rd



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Carlton County, Minnesota

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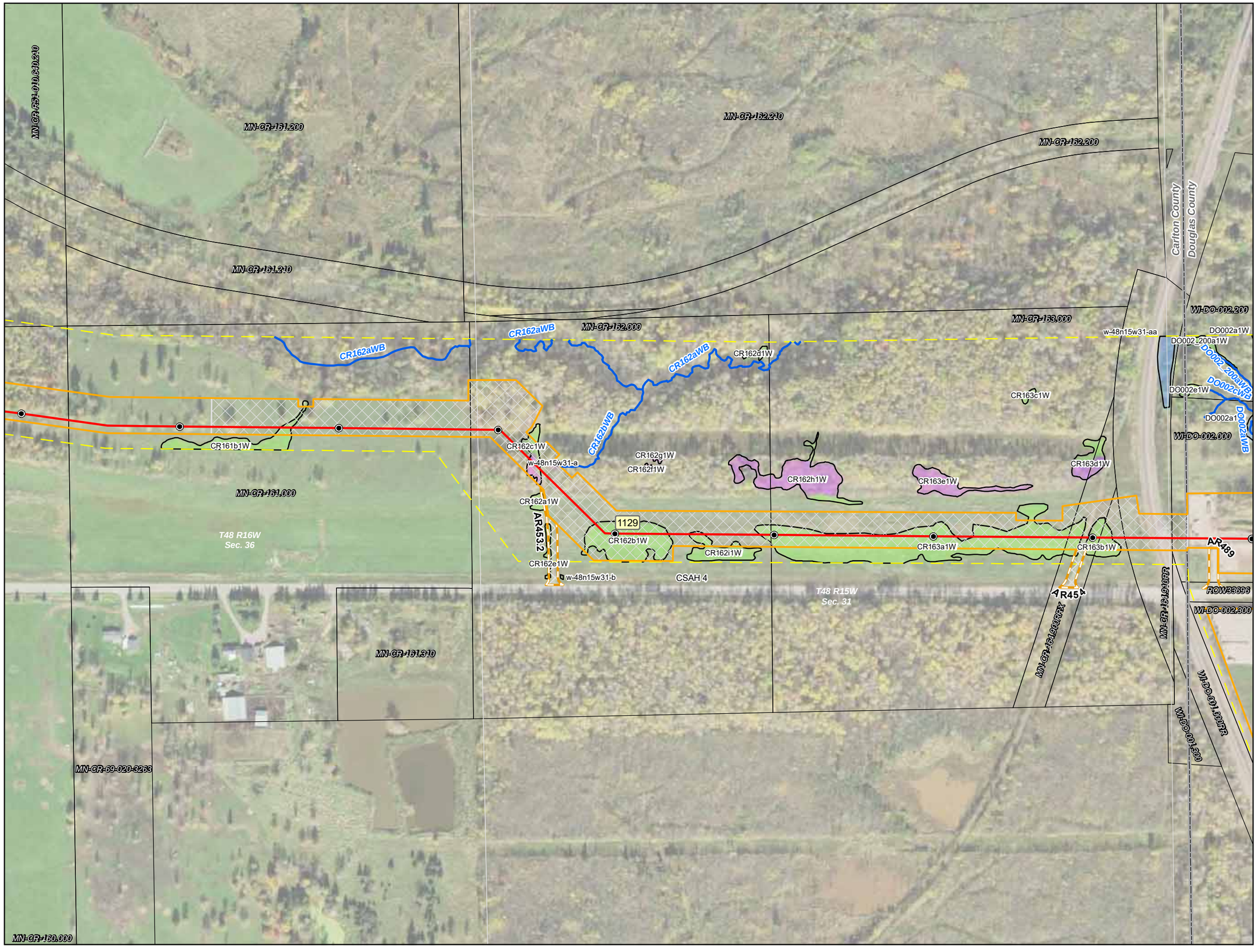
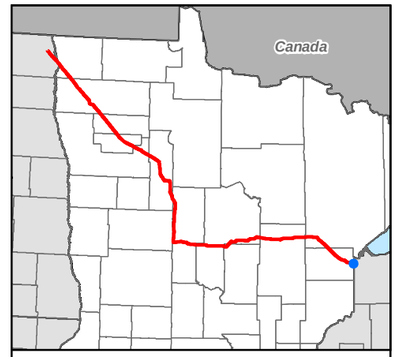
September 2018





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Line 3 Replacement Project

Carlton County, Minnesota

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Attachment B

Summary of Construction Methods and Procedures for Wetland and Waterbody Crossings

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Summary of Construction Methods and Procedures for Wetland & Waterbody Crossings

Enbridge Energy, Limited Partnership • Line 3 Replacement Project

September 2018

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LIST OF TABLES

LIST OF APPENDICES

ACRONYMS AND ABBREVIATIONS

ATWS	additional temporary workspace
EPP	Environmental Protection Plan
HDD	horizontal directional drill

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1.0 INTRODUCTION

This Summary outlines the various construction methods that Enbridge will utilize to construct through wetlands and waterbodies. The discussion of each construction method includes:

- Description of the construction procedures;
- Conditions required to employ the method (applicability of the method);
- Environmental and/or constructability advantages and disadvantages associated with the method; and
- Mitigation measures that Enbridge will implement to avoid or reduce impacts associated with implementing the method.

2.0 PIPELINE CONSTRUCTION THROUGH WETLANDS

Enbridge identified and delineated wetland resources according to the procedures in the U.S. Army Corps of Engineers 1987 Manual and the associated Regional Supplement applicable to the project locations. To facilitate wetland impact assessment, Enbridge classified delineated wetlands into emergent, unconsolidated bottom, scrub-shrub, or forested wetland components (Cowardin Classification System), by the Eggers and Reed Classification System, and Circular 39 Classification System by watershed (8-digit Hydrologic Unit Code).

2.1 CHOOSING A CONSTRUCTION METHOD

Table 2-1 describes the wetland crossing techniques Enbridge intends to utilize during construction. Enbridge and the Contractor will select the method of pipeline installation and post-construction restoration in wetlands that depend on the season, saturation level, and stability of the soils at the time of construction.

Enbridge will typically install the pipelines through wetlands with moderate- to high-bearing strength soils using standard upland crossing methods utilizing timber mats or equivalent to avoid rutting, minimizing disturbance to soils and vegetation, and to ensure safe and stable working surfaces for construction equipment and personnel. Enbridge may install the pipeline through saturated wetlands with low bearing strength peat soils by using push-pull techniques, if practicable, or by using standard upland crossing techniques with frost or ice roads during the winter when conditions allow. Enbridge may install the pipelines through narrow wetlands or ditches adjacent to roads or railroads and sensitive wetlands or riparian wetlands adjacent to waterbody crossings using trenchless techniques such as the auger bore or the horizontal directional drill (“HDD”) method.

2.2 WETLAND AVOIDANCE AND MITIGATION MEASURES

The Environmental Protection Plan (“EPP”) provides additional details on wetland construction, restoration techniques, avoidance and/or minimization measures. Avoidance and/or minimization measures that are generally applicable to all wetland crossings include the following:

- Reduced construction workspace compared to uplands;
- Perform right-of-way clearing using low ground-pressure equipment or operate off timber mats to limit disturbance to the wetland (Section 3.2 of the EPP);

- Locating additional temporary workspace ("ATWS") outside of wetlands to the extent practicable to minimize the area of disturbance (Section 3.3 of the EPP);
- Confine grading to the area of the trench and minimize to the extent practicable (Section 3.4 of the EPP);
- Install and maintain erosion control devices to prevent sediment flow into wetlands (Section 3.4 of the EPP); and
- Strip and segregate up to 1 foot of the organic layer and/or topsoil (i.e., "O" and/or "A" horizons) from the trench line and separate from trench spoil to preserve the native seed stock from wetlands without standing water. In standing water wetlands, the Contractor will attempt to segregate as much of the soil surface as possible based on site and saturation conditions (Section 3.6.1 of the EPP).

TABLE 2-1
Pipeline Wetland Installation Methods

Method (Season)	Description [a]	Applicability	Advantages	Disadvantages
Modified Upland Construction Method (Spring-Fall/non-frozen)	Conduct construction from timber mats or equivalent (refer to Figure 24 from the EPP provided in Appendix A).	Generally suitable in wetlands with unsaturated mineral soils constructed during unfrozen conditions. Generally suitable in saturated wetlands with moderate to high bearing strength, shallow peat soils over mineral substrate, or forested peatlands where roots provide a relatively firm foundation for timber mats or equivalent.	• Relatively quick construction/installation • No need for specialized equipment • Minimizes impacts on soils and vegetation • Facilitates revegetation from seedbank and provides favorable plant growth conditions	• Potential need for wider than normal trench and therefore additional construction workspace to avoid trench sidewall slump in loose, poorly graded sands • Requires additional time for installation of multiple timber mats • Increased disturbance and compaction of the travel lane • Potentially difficult to remove timber mats • Additional restoration efforts of travel lane as compressed surface rebounds • Clearing and brush/stump removal required along travel lane in forested wetlands
Modified Upland Construction Method (Winter/Freeze down)	Conduct construction from frost or ice pad/road, and/or timber mats, or equivalent. Topsoil segregation performed as practicable, but modified dependent on depth of frost and thickness of topsoil. May use a ripper to break up frozen topsoil over the trench line only. Topsoil in spoil storage graded smooth to minimize mixing during backfilling.	Generally suitable for wetlands with unsaturated mineral soils or saturated wetlands with moderate to low strength peat over mineral soils during frozen conditions.	• Relatively quick construction/installation • Minimizes impacts on wetland soils and vegetation • Stable foundations for spoil storage and travel lane • Facilitates revegetation from seedbank and provides favorable plant growth conditions	• Potential need for wider than normal trench and therefore additional construction workspace to avoid trench sidewall slump in loose, poorly graded sands • Susceptible to winter thaw; limited to freezing conditions and contingency required for thawing conditions • Additional safety concerns associated with cold weather work • Potential for mixing of topsoil and subsoil during excavation • Backfilling of frozen spoil piles may result in subsidence of the trench during thaw introducing potential increase in backfill volume and/or additional restoration efforts • If post-thaw restoration is necessary, mats will typically be left in place increasing the period of disturbance • Frost/ice roads often require a water source

TABLE 2-1
Pipeline Wetland Installation Methods

Method (Season)	Description [a]	Applicability	Advantages	Disadvantages
Push-Pull Method: Excavator (Spring-Fall)	Use an excavator to excavate the trench operating from timber mats "walked" down the trenchline. Float and sink the pre-assembled pipe then backfill. May or may not use a travel lane depending on conditions with backfilling occurring from the spoil storage side or the working side.	Generally suitable in saturated wetlands, typically with relatively competent peat soils, shallow peat over mineral soils, or forested peatlands with moderate bearing strength soils.	• Minimizes impacts on wetland soils and vegetation • No specialized equipment needed and allows for construction in unfrozen, saturated wetlands • Little or no travel lane and reduced heavy equipment traffic further reduces impacts on wetland soils and vegetation	• Topsoil segregation typically not practical; inability to maintain a cohesive spoil pile due to liquid nature of soil • Potential for stranding of the excavator if extremely loose, deep peat soils are encountered unexpectedly • Additional workspace required for pipe assembly or pipe may be fabricated off-site and brought in as a drag section • Due to lack of travel lane, additional adjacent workspace required for equipment turnarounds • • May require spread move around.
Push-Pull Method: Swamphoe (Spring-Fall)	Excavate the trench using an excavator mounted on tracked pontoons operating along the trenchline. Float and sink the pre-assembled pipe then backfill. May or may not use a travel lane depending on conditions with backfilling occurring from the spoil storage side or the working side.	Generally suitable in saturated emergent and scrub-shrub wetlands with loose, deep peat soils or floating mat peat, low-bearing strength soils.	• Allows for construction in saturated wetlands during unfrozen conditions • No travel lane and reduced heavy equipment traffic further reduces impacts to wetland soils and vegetation	• Specialized equipment (i.e., swamphoe) required • Topsoil segregation typically not practical; inability to maintain a cohesive spoil pile due to liquid nature of soil • Potential for spoil settlement preventing complete replacement of backfill and potentially resulting in open water along the trenchline • Additional adjacent workspace required for pipe assembly or pipe may be fabricated off-site and brought in as a drag section • Additional adjacent workspace may be required for equipment turnarounds • Slower than normal construction progress in the wetland due to equipment speed. • May require spread move around.

TABLE 2-1
Pipeline Wetland Installation Methods

Method (Season)	Description [a]	Applicability	Advantages	Disadvantages
Auger Bore	Auger bore under wetland from bell hole on one side to bell hole on the other side with or without casing.	Generally suitable for narrow wetlands or ditches adjacent to roads and railroads. Not suitable where there are high water tables, loose sand/gravel substrates, or adjacent steep slopes.	• Avoids disturbance in the wetland or ditch adjacent to the road/railroad feature • No sediment release	• Deep bell holes may require dewatering and sheet-piling • Pump(s) may be required to drain seepage within the bell holes onto surrounding lands • Possibility of sump-water causing sediment release into wetland • Requires additional workspace for bell holes, spoil piles, and sump(s) • Potential for borehole cave-in and/or dewatering • Slower than other crossing techniques • Large excavations required on both sides of the crossing • Increases potential for subsidence
HDD	Place a rig on one side of the wetland and drill a small-diameter pilot-hole under the wetland/waterbody along a prescribed profile. Upon completion of the pilot-hole, the Contractor uses a combination of cutting and reaming tools to accommodate the desired pipeline diameter. Drilling mud is necessary to remove cuttings and maintain the integrity of the hole. The Contractor then pulls the welded pipe section through the drilled hole.	Generally suitable to cross sensitive wetland areas and riparian wetlands adjacent to waterbody crossings. Dependent on site-specific topography and the local geologic substrate. Not feasible in areas with artesian conditions, areas of glacial till or outwash interspersed with boulder and cobbles, fractured bedrock, or non-cohesive coarse sands and gravels.	• Avoids surface ground disturbance in riparian wetlands adjacent to sensitive or large waterbodies • Limits vegetation disturbance to within the permanently maintained easement	• Potential for inadvertent release of drilling fluids in unconsolidated gravel, coarse sand, and fractured bedrock and clays • Requires ATWS on both sides of the crossings to stage construction, fabricate the pipeline, and store materials • Some tree and brush clearing is necessary to install guide wires for monitoring and steering the drill bit • Requires obtaining water to formulate the drilling fluid as well as hydrostatic testing • Success depends on substrate • Requires specialized equipment • May require spread move around

Notes:

[a] For all methods except HDD, vegetation and trees within wetlands will be cut off at ground level along the entire workspace, leaving existing root systems intact; clearing debris will generally be removed from the wetland for disposal. For the HDD method, vegetation and trees within the wetland will be removed along the permanent right-of-way. Hydro-axe debris or similar may be left in the wetland if spread evenly in the construction right-of-way to a depth that allows for normal revegetation as determined by the Environmental Inspector.

3.0 PIPELINE CONSTRUCTION THROUGH WATERBODIES

Table 3-1 describes the waterbody crossing techniques Enbridge intends to utilize during construction. The routing and planning of large pipeline construction projects is an iterative process that is subject to change due to site-specific constraints, public and agency comments, and feasibility studies that may result in changes to the proposed waterbody crossing methods described below.

Refer to Sections 2.1 through 2.4 and 2.6 of the EPP for details regarding construction procedures and mitigative measures for each crossing method. The EPP also details procedures for temporary and permanent stabilization.

3.1 UNFORSEEN CONDITIONS

Enbridge may need to implement alternative crossing methods due to the followings situations, including but not specifically limited to:

- Significant fluctuation in water level (i.e., up or down) at the time of installation and/or significant changes to soil conditions at the time of installation (e.g., trench wall stability);
- Change in time of year of construction (winter construction vs. push-pull method or modified upland construction) due to delays in permit issuance (i.e., timing restrictions);
- Weather conditions at the time of installation;
- Unanticipated issues encountered during trenching or excavation; and
- Failure to install the pipe using the HDD method.

Enbridge identifies a primary and alternative crossing method for all waterbody crossings. In the case where an unforeseen condition makes the primary crossing method not practicable, Enbridge would proceed with the alternative crossing method per the conditions of regulatory approvals and permits.

TABLE 3-1
Pipeline Waterbody Installation Methods

Method	Description	Applicability	Advantages	Disadvantages
Wet Trench	Open-cut crossing technique that involves trenching through the waterbody while water continues to flow across the in-stream work area (refer to Figure 15 from the EPP provided in Appendix A).	Generally suitable for small, non-fishery streams, such as agricultural ditches and intermittent waterways, as well as larger waterbodies where other crossing methods are not practical. In Minnesota, these are primarily waterbodies located within large, saturated wetlands, and waterbodies with beaver dams.	• Rapid construction/installation • No need for specialized equipment • Compatible with granular substrates and some rock • Minimizes period of in-stream activity • Generally maintains streamflow • Maintains fish passage • Relatively short duration of sediment release (<24 hours)	• Requires implementation of erosion and sediment control devises to mitigate potentially high sediment release during excavation and backfilling • In-stream stockpiling of spoil on wide watercourses • May interrupt streamflow
Dry Crossing: Dam and Pump	Create a dry work area by damming the flow up- and downstream of the crossing and pumping water around. Dam materials may include but are not limited to: sand bags, aqua dams, sheet piling, or street plates (refer to Figure 16 from the EPP provided in Appendix A).	Generally suitable for streams with low flow and defined banks where fish passage is not of concern. Generally works best in non-permeable substrate and preferred for crossing meandering channels.	• Limited sediment release • Maintains streamflow • Minimal release and transport of sediment downstream that is not likely to result in negative effects on fish and fish habitat • Relatively dry working conditions • May be adapted for non-ideal conditions • Hose can be routed around area of construction • May reduce trench sloughing and trench width	• Minor sediment release during dam construction, dam removal and as water flushes over area of construction • Slow construction/installation resulting in extended period in-stream and prolonged sediment release • Fish salvage may be required from dried up reach • Short-term barrier to fish movement • Specialized equipment and materials • Slow construction/installation • Hose(s) may impede construction traffic • Seepage may occur in coarse, permeable substrate • Susceptible to mechanical failure of pumps

TABLE 3-1
Pipeline Waterbody Installation Methods

Method	Description	Applicability	Advantages	Disadvantages
Dry Crossing: Flume	Create a dry work area by damming the flow up- and downstream of the crossing and installing flume to convey water. Dam materials may include but are not limited to: sand bags, aqua dams, sheet piling, or street plates (refer to Figure 17 from the EPP provided in Appendix A).	Generally suitable for crossing relatively narrow streams that have straight channels and are relatively free of large rocks and bedrock at the point of crossing where fish passage is of concern. The waterbody should have defined banks and channel with solid, fine-textured substrate.	• Limited sediment release • Maintains streamflow • May allow fish passage • Minimal release and transport of sediment downstream that is not likely to result in negative effects on fish and fish habitat • Allows for flushing of substrates • Relatively dry or no flow working conditions • May be adapted for non-ideal conditions • May reduce trench sloughing and trench width	• Minor sediment release during dam construction, removal and as water flushes over area of construction • Slow construction/installation • Fish salvage may be required from dried up reach • Short-term barrier fish passage if water velocity in culvert is too high • Difficult to trench and lay pipe, especially large diameter pipe, under flume pipe • Work area may not stay dry in coarse, permeable substrate • Seepage may occur in coarse, permeable substrate
Auger Bore	Auger bore under watercourse from bell hole on one side to bell hole on the other side with or without casing.	Generally suitable for fine-textured impermeable soils and deep water table. Used most commonly for road and railroad crossings and can include adjacent ditches. Requires a slightly incised watercourse with approach slopes that are absent or slight.	• No sediment release • No disturbance of streambed or banks • Maintains normal streamflow • Maintains fish passage • Maintains vegetative buffer on either side of watercourse	• Pump(s) may be required to drain seepage within the bell holes onto surrounding lands • Possibility of sump water causing sediment release in watercourse • Requires additional workspace for bell holes, spoil piles, and sump(s) • Potential for borehole cave-in and/or dewatering • Slower than wet trench or dry crossing techniques • Difficult with till or coarse material • Excessive borehole depth on deeply incised watercourses or watercourses with moderate or steeper slopes • Large excavations required both sides of the crossing

TABLE 3-1
Pipeline Waterbody Installation Methods

Method	Description	Applicability	Advantages	Disadvantages
HDD	Place a rig on one side of the waterbody and drill a small-diameter pilot hole under the waterbody along a prescribed profile. Upon completion of the pilot hole, the Contractor uses a combination of cutting and reaming tools to accommodate the desired pipeline diameter. Drilling mud is necessary to remove cuttings and maintain the integrity of the hole. The Contractor then pulls the pipe section through and welds the adjoining sections of pipe on each side of the waterbody (refer to Figure 18 from the EPP provided in Appendix A).	Generally suitable to cross sensitive or particularly deep, wide, or high-flow waterbodies and depends on site-specific topography and the local geologic substrate. Typically drilling is not feasible in areas of glacial till or outwash interspersed with boulder and cobbles, fractured bedrock, or non-cohesive coarse sands and gravels. This method requires a minimum length drill of approximately 1400 feet for 36 inch pipe. That length is dependent on the designed drill depth determined by subsurface geology and topography of the crossing.	• No sediment release unless an inadvertent return occurs • Minimal bank and approach slope disturbance • No streambed disturbance unless an inadvertent return occurs • Maintains normal streamflow • Maintains fish passage • Significantly reduces clean-up and restoration between entry and exit points • May be able to construct during restricted activity windows for sensitive fisheries	• Potential for inadvertent release of drilling fluids in unconsolidated gravel, coarse sand, and fractured bedrock and clays • Requires ATWS on both sides of the crossings to stage construction, fabricate the pipeline, and store materials • Tree and brush clearing is necessary to install guide wires for monitoring and steering the drill bit • Requires obtaining water to formulate the drilling fluid as well as hydrostatic testing • Success depends on substrate and length of crossing • Requires specialized equipment • Limited drilling radius that is allowed for pilot hole based on the pipelines engineering characteristics • Pull string area along the alignment for the same length of the crossing to allow continuous pullback • Drill stem may get “stuck in the hole” and tools can be lost, especially on large diameter reams • No guarantees that drill will be successful • May damage coating or pipe during pullback

Source: Canadian Association of Petroleum Producers, Canadian Energy Pipeline Association, and Canadian Gas Association, 2005.

3.2 BRIDGES

Section 2.4 of the EPP provides details regarding the use of temporary bridges to facilitate equipment passage across waterbodies. Enbridge intends to utilize span (i.e., timber mat, engineered structures, or railroad flat car) with or without in-stream support, or rock flume bridges. Table 3-2 provides details regarding the applicability, advantages, and disadvantages of each technique.

TABLE 3-2
Types of Bridges

Type	Description	Applicability	Advantages	Disadvantages
Typical Span Type Bridge (timber mats, engineered structures or railroad flat cars)	Construction of temporary bridge utilizing native timber mats, an imported engineered portable bridge material or railroad flat cars with or without instream supports (e.g., stacked mats or flume) (refer to Figures 19A and 19B from the EPP provided in Appendix A).	Generally suitable for small- to medium-sized streams with stable banks. Multiple bridge spans and in-stream abutments. This bridge type can be used for large waterbodies. In-stream supports may be required. Regular bridge maintenance required. Preferred bridge type to provide safe crossing for heavy construction equipment.	• Strong, removable, and portable bridge that can be optimally located • Limited in-stream disturbance • Limited sediment release • Maintains streamflow • Maintains fish passage	• Specialized equipment/crew required • Substantial amount of work may be necessary to transport and/or construct • Limited span for timber bridges and cap may be required • Regular maintenance of erosion and sediment controls required • Possible sediment release from bank disturbance or if cap used over timber bridge • May cause interference on navigable waterways • In-stream disturbance and sediment mobilization if in-stream abutments used for multiple spans • Bridges need to be keyed into the banks
Rock Flume	Geotextile fabric would be placed over the stream bed. Non-galvanized steel culvert(s) would be laid parallel to the flow of water to allow continued flow and a ramp would be built over the top of the culvert flumes using rock (refer to Figure 20 from the EPP included in Appendix A).	Primarily used in situations where there are heightened safety concerns with timber mat bridges. Generally suitable for medium- to large-sized streams with defined channel and banks where streamflow and fish passage are of concern.	• Limited sediment release • Maintains streamflow • Maintains fish passage	• Specialized materials may be required to construct • Heavy traffic can crush culverts • Icing in winter may block flow and fish passage • Sediment release during construction of the dam • May require bank grading • Susceptible to washout

Source: Canadian Association of Petroleum Producers, Canadian Energy Pipeline Association, and Canadian Gas Association, 2005.

4.0 REFERENCES

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Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual. Technical Report Y-87-1. U.S. Army Engineer Waterways Experiment station, Vicksburg, MS (on-line edition).

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Appendix A

Construction Typical Drawings

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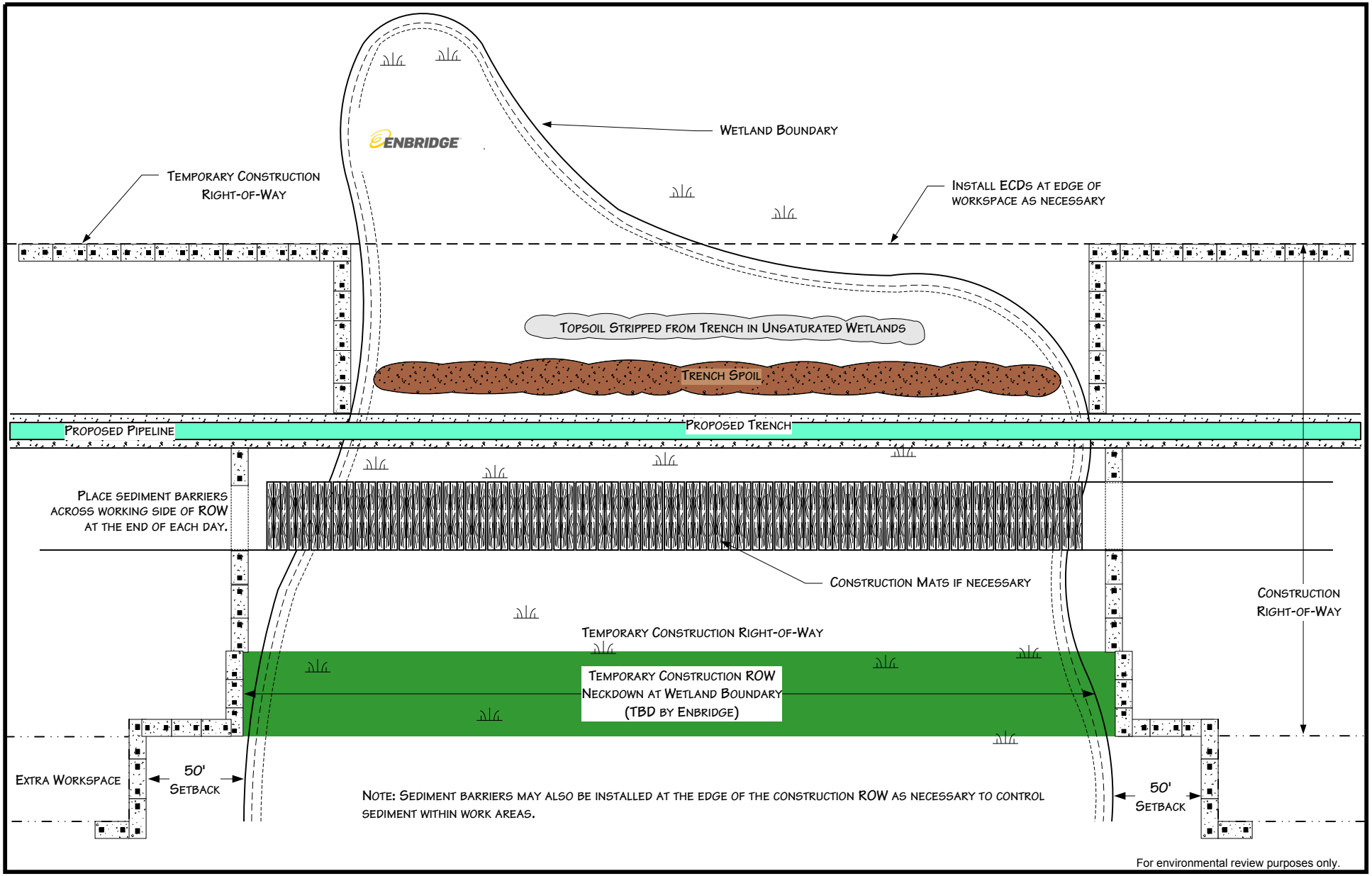


For environmental review purposes only.

ENBRIDGE

Figure 24
Environmental Protection Plan
Typical Wetland Crossing Method

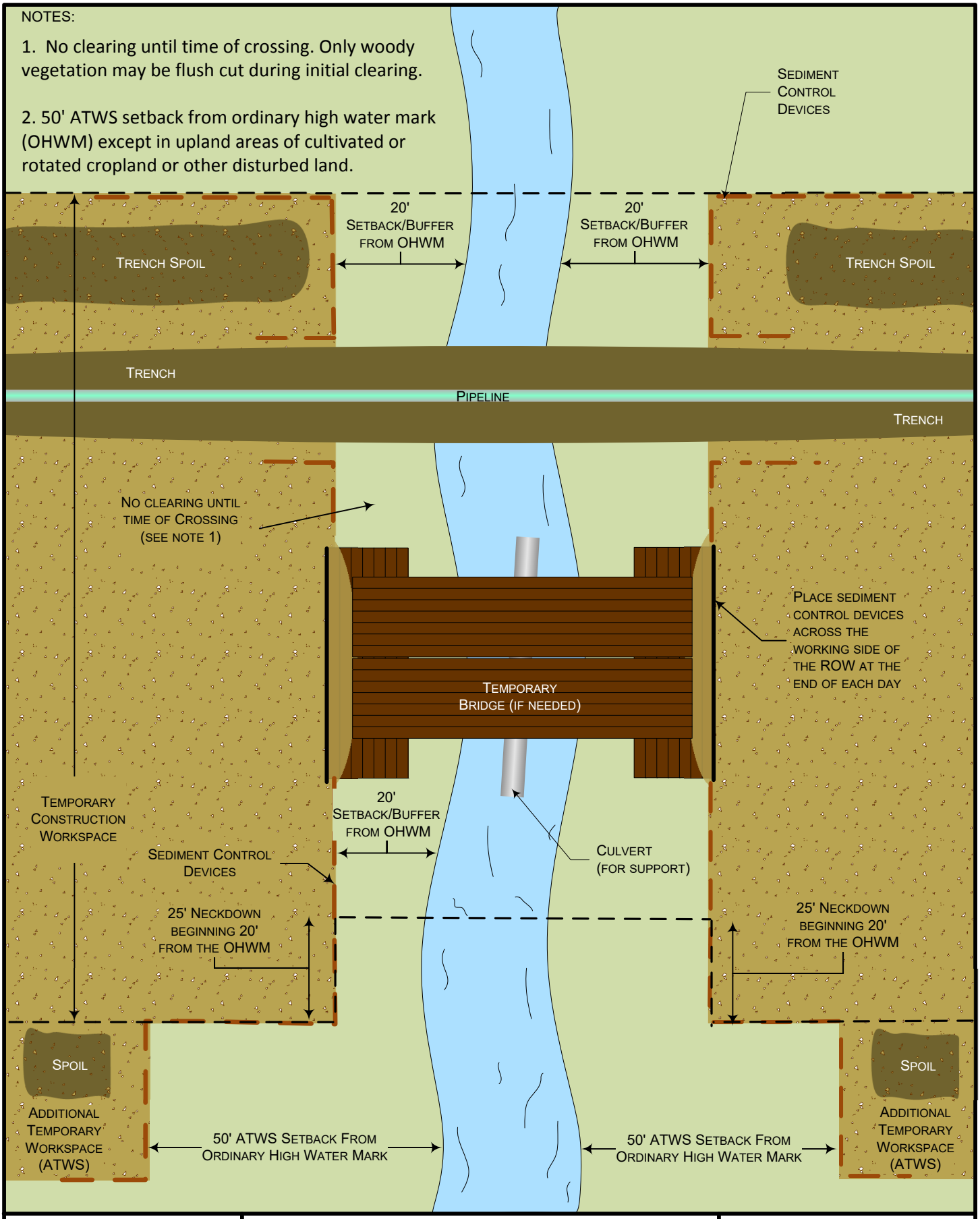
DATE:	5/25/2001
REVISED:	3/14/11
SCALE:	NTS
DRAWN BY:	KMKENDALL

K:_CLIENT_PROJECTS\D-F\EEL\2011-019\FIG_24_WETLAND_CROSSING_METHOD.VSD

NOTES:

1. No clearing until time of crossing. Only woody vegetation may be flush cut during initial clearing.

2. 50' ATWS setback from ordinary high water mark (OHWM) except in upland areas of cultivated or rotated cropland or other disturbed land.

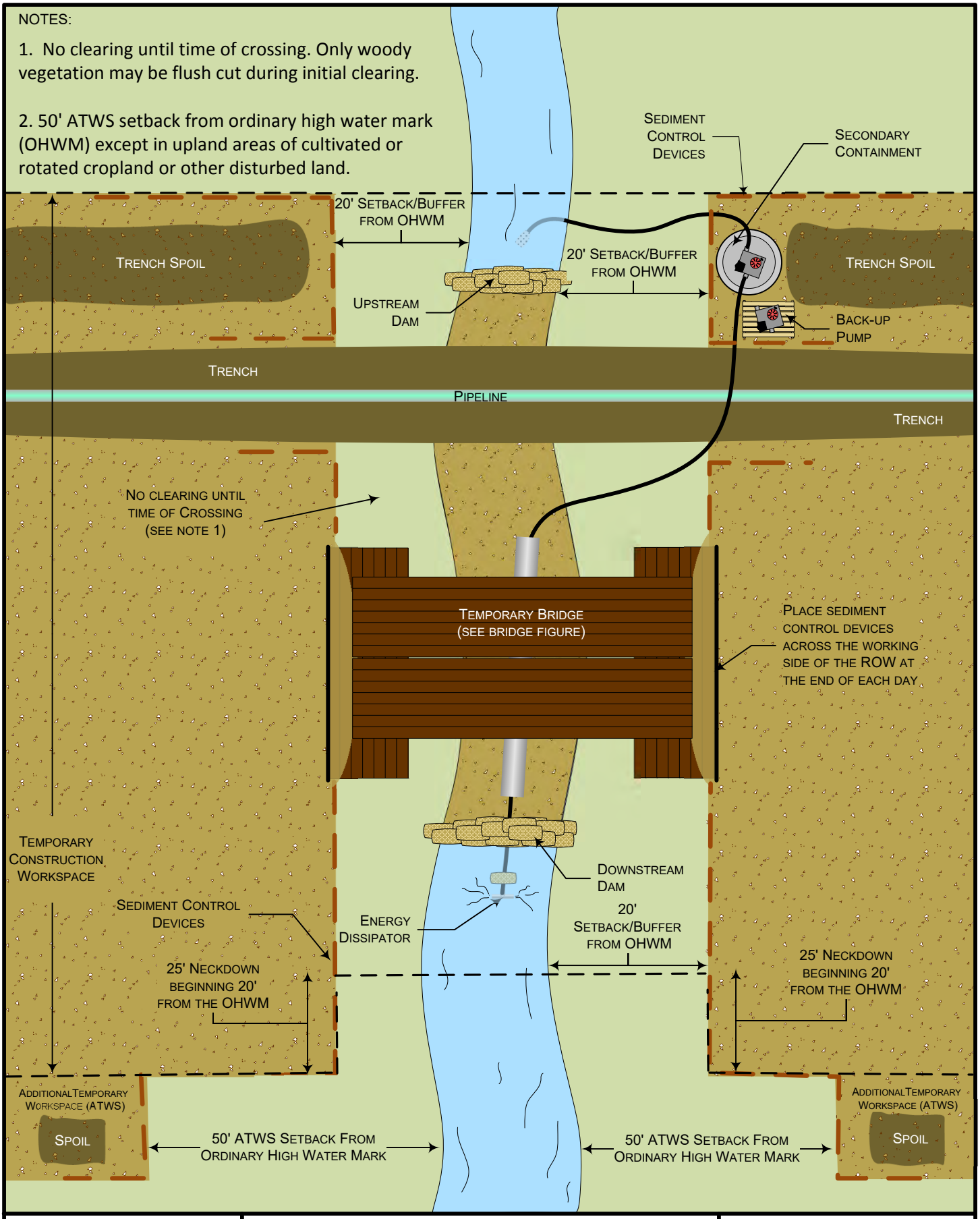


ENBRIDGE

Figure 15
Typical Waterbody Crossing
Open-Cut Wet Trench Method

Environmental Protection Plan

Drawn by: merjent 9/17/2015



ENBRIDGE

Figure 16
Typical Waterbody Crossing
Dam and Pump Method

Environmental Protection Plan

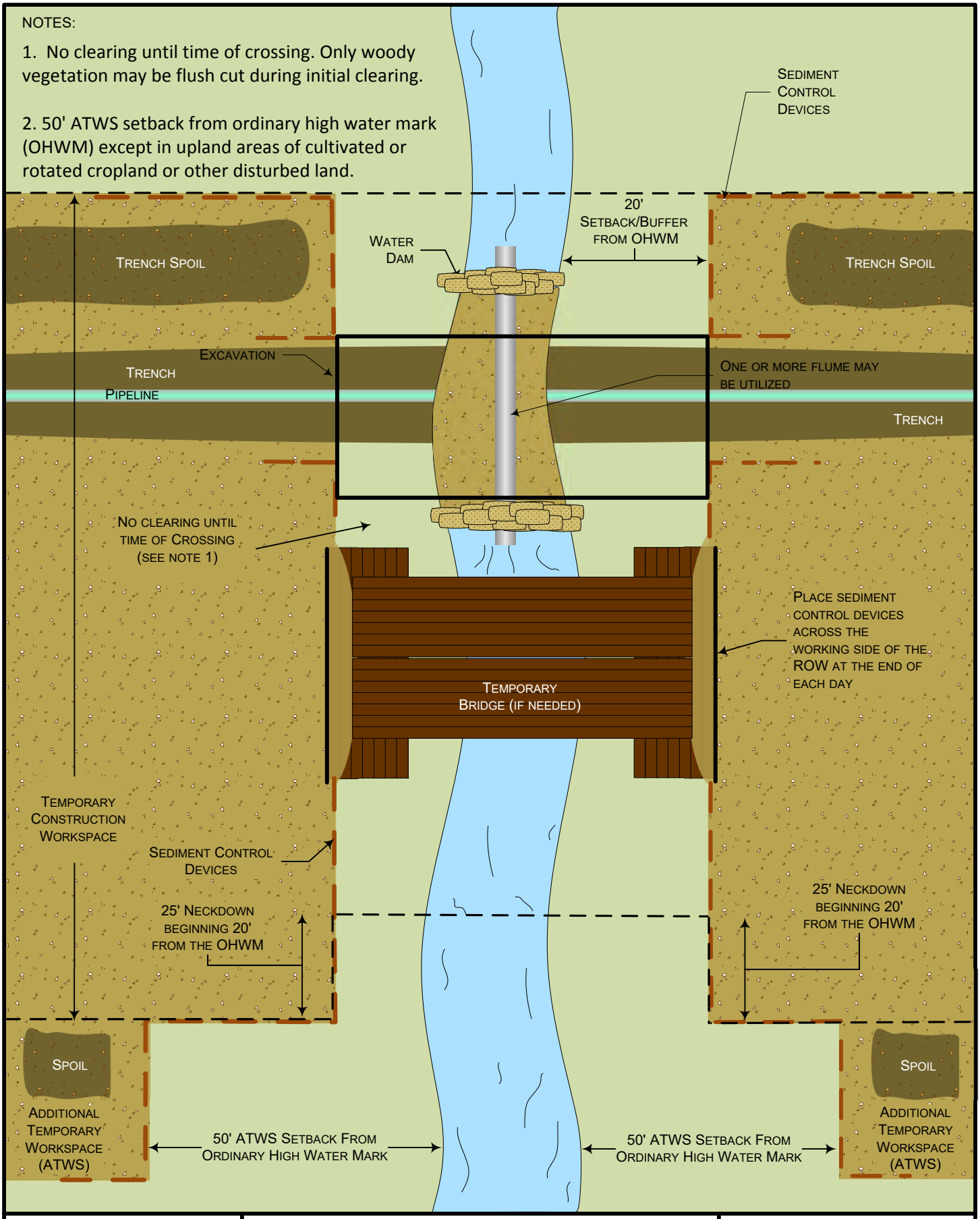
Drawn by: merjent

9/14/2015

NOTES:

1. No clearing until time of crossing. Only woody vegetation may be flush cut during initial clearing.

2. 50' ATWS setback from ordinary high water mark (OHWM) except in upland areas of cultivated or rotated cropland or other disturbed land.

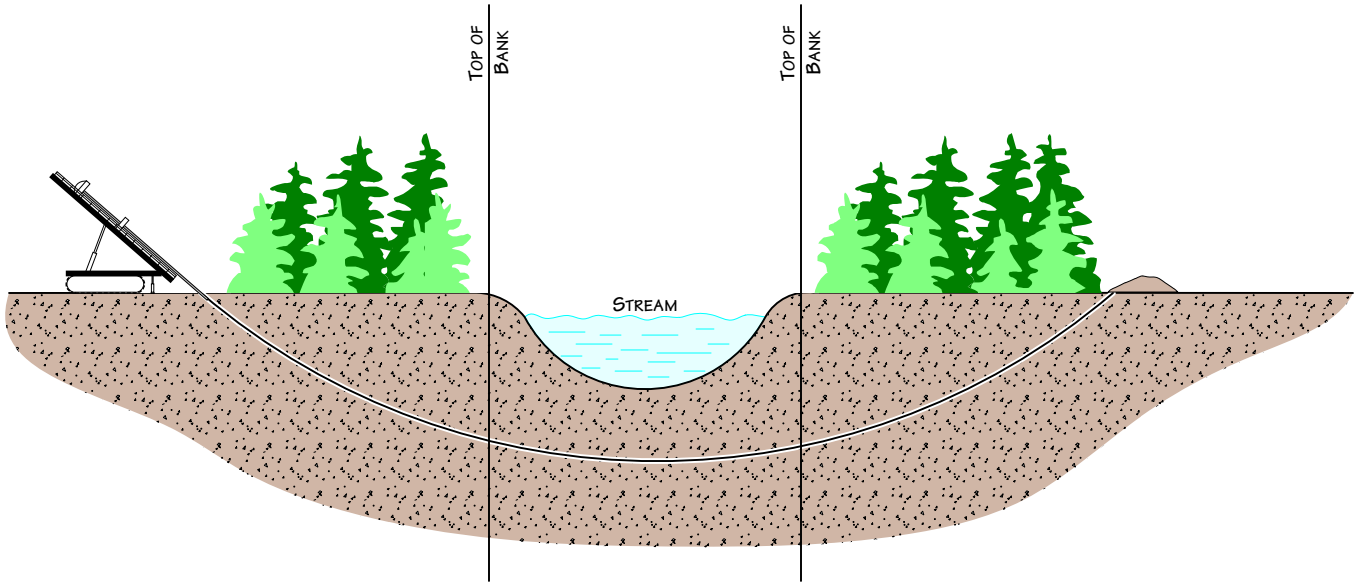


ENBRIDGE

Figure 17
Typical Waterbody Crossing
Flume Method

Environmental Protection Plan

Drawn by: merjent 9/14/2015



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ENBRIDGE

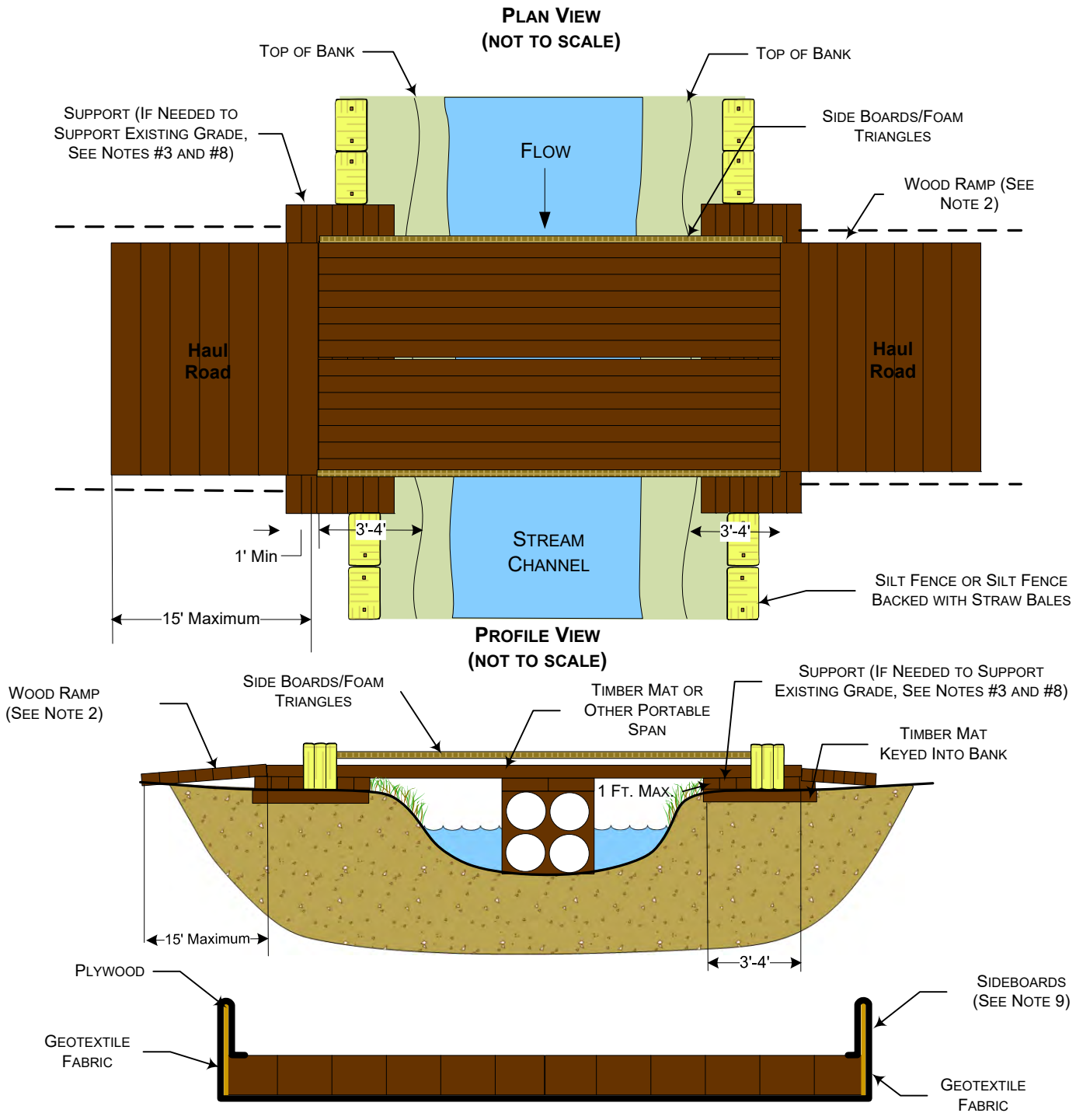
Figure 18

Environmental Protection Plan

Typical Waterbody Crossing
Directional Drill Method

DATE:	7/14/2000
REVISED:	3/11/11
SCALE:	NTS
DRAWN BY:	KMKENDALL

K:_CLIENT_PROJECTS\D-F\EEL\2011-019\FIG_18_WATERBODY_DIRECTIONAL_DRILL.VSD



NOTES:

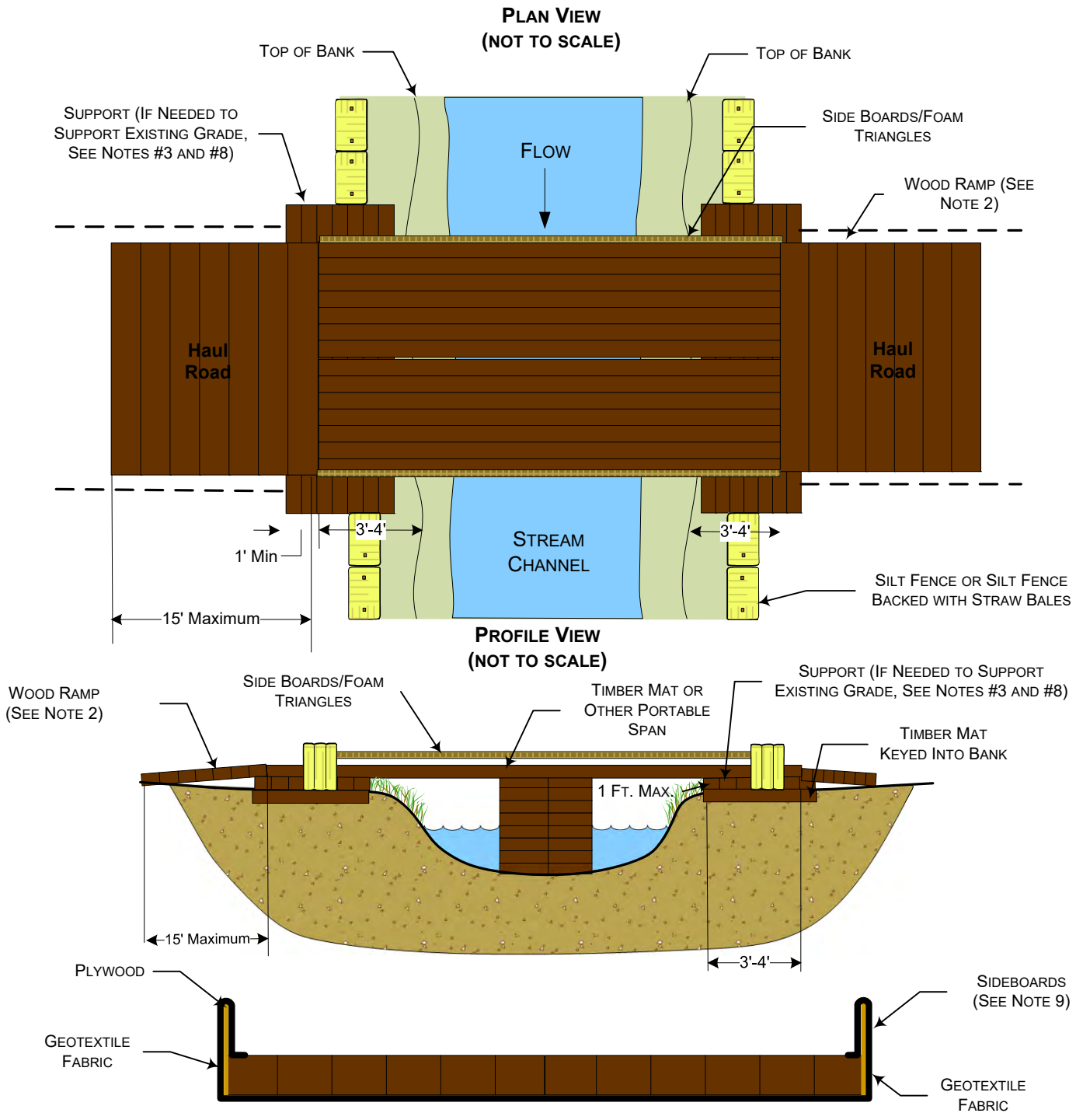
1. INSPECT BRIDGE OPENING PERIODICALLY AND FOLLOWING RAINFALLS OF OVER ½". REMOVE ANY DEBRIS RESTRICTING FLOW AND DEPOSIT IT AT AN UPLAND SITE OUTSIDE OF FLOODPLAIN.
2. IF PHYSICAL CIRCUMSTANCES PROHIBIT WOOD OR METAL RAMPS, EARTHEN RAMPS MAY BE USED AS APPROVED.
3. INSPECT BRIDGE ELEVATION SO BRIDGE REMAINS SUPPORTED ABOVE OHWM.
4. THE CULVERT SUPPORT MUST BE ANCHORED TO THE STREAM BOTTOM AND MAY NOT BE SUPPORTED WITH FILL.
5. EARTHEN RAMP CANNOT BE TALLER THAN 1' AND CANNOT EXTEND FOR MORE THAN 15' ON EITHER SIDE OF THE CROSSING.
6. THE BRIDGE MUST SPAN ABOVE OHWM TO OHWM.
7. ADDITIONAL SUPPORT MUST BE ADDED ON TOP OF BANK AND UNDER SPAN IF THE SPAN IS 12' WIDE OR GREATER, OR IF INITIAL SUPPORT STARTS TO SETTLE.
8. EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSPECTED AND MAINTAINED IN ACCORDANCE WITH THE COMPANY'S ENVIRONMENTAL PROTECTION PLAN.
9. SIDEBOARDS WILL BE INSTALLED ON TEMPORARY BRIDGES TO MINIMIZE THE POTENTIAL FOR SEDIMENT TRANSPORT. SIDEBOARDS MAY BE CONSTRUCTED OUT OF PLYWOOD, OR EQUIVALENT, AND AFFIXED TO THE OUTER SIDES OF THE BRIDGE. GEO-TEXTILE FABRIC, OR EQUIVALENT, MUST ALSO BE ADEQUATELY SECURED TO THE UNDERSIDE OF THE BRIDGE TO PREVENT MATERIAL FROM FALLING THROUGH THE BRIDGE DECK. THE GEO-TEXTILE FABRIC OR AN EQUIVALENT SHOULD BE SECURED TO THE BOTTOM OF THE BRIDGE AND WRAPPED AROUND THE SIDEBOARDS IN A CONTINUOUS FASHION.

ENBRIDGE

Figure 19A
Environmental Protection Plan
Typical Span Type Bridge
With or Without Instream Support (Flume Support)

Environmental Protection Plan

Drawn by: merjent



NOTES:

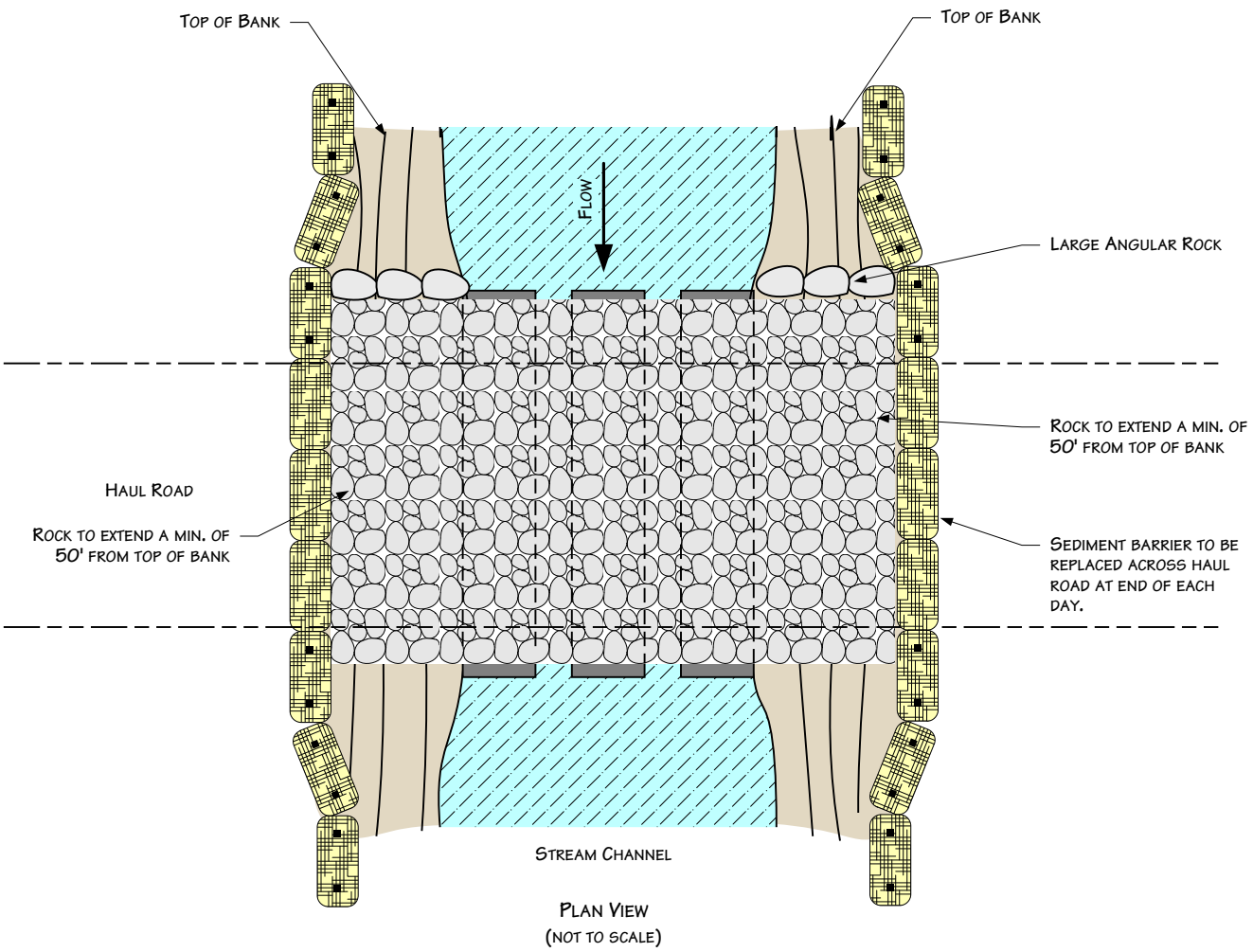
1. INSPECT BRIDGE OPENING PERIODICALLY AND FOLLOWING RAINFALLS OF OVER ½". REMOVE ANY DEBRIS RESTRICTING FLOW AND DEPOSIT IT AT AN UPLAND SITE OUTSIDE OF FLOODPLAIN.
2. IF PHYSICAL CIRCUMSTANCES PROHIBIT WOOD OR METAL RAMPS, EARTHEN RAMPS MAY BE USED AS APPROVED.
3. INSPECT BRIDGE ELEVATION SO BRIDGE REMAINS SUPPORTED ABOVE OHWM.
4. THE CULVERT SUPPORT MUST BE ANCHORED TO THE STREAM BOTTOM AND MAY NOT BE SUPPORTED WITH FILL.
5. EARTHEN RAMP CANNOT BE TALLER THAN 1' AND CANNOT EXTEND FOR MORE THAN 15' ON EITHER SIDE OF THE CROSSING.
6. THE BRIDGE MUST SPAN ABOVE OHWM TO OHWM.
7. ADDITIONAL SUPPORT MUST BE ADDED ON TOP OF BANK AND UNDER SPAN IF THE SPAN IS 12' WIDE OR GREATER, OR IF INITIAL SUPPORT STARTS TO SETTLE.
8. EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSPECTED AND MAINTAINED IN ACCORDANCE WITH THE COMPANY'S ENVIRONMENTAL PROTECTION PLAN.
9. SIDEBOARDS WILL BE INSTALLED ON TEMPORARY BRIDGES TO MINIMIZE THE POTENTIAL FOR SEDIMENT TRANSPORT. SIDEBOARDS MAY BE CONSTRUCTED OUT OF PLYWOOD, OR EQUIVALENT, AND AFFIXED TO THE OUTER SIDES OF THE BRIDGE. GEO-TEXTILE FABRIC, OR EQUIVALENT, MUST ALSO BE ADEQUATELY SECURED TO THE UNDERSIDE OF THE BRIDGE TO PREVENT MATERIAL FROM FALLING THROUGH THE BRIDGE DECK. THE GEO-TEXTILE FABRIC OR AN EQUIVALENT SHOULD BE SECURED TO THE BOTTOM OF THE BRIDGE AND WRAPPED AROUND THE SIDEBOARDS IN A CONTINUOUS FASHION.

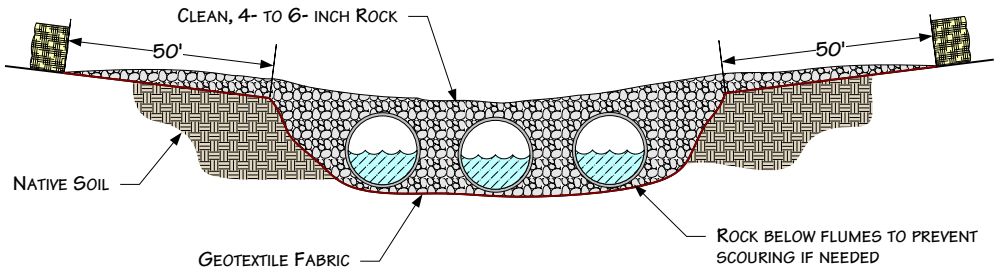
ENBRIDGE

Figure 19B
Environmental Protection Plan
Typical Span Type Bridge
With or Without Instream Support (Timber Matted Support)

Environmental Protection Plan

Drawn by: merjent





NOTES:

1. STEEL FLUME PIPE(S) SIZED TO ALLOW FOR STREAM FLOW AND EQUIPMENT LOAD.
2. STRAW BALES SHALL BE PLACED ACROSS BRIDGE ENTRANCE EVERY NIGHT.
3. ADDITIONAL INFORMATION INCLUDED ON OTHER DRAWINGS.

For environmental review purposes only.

ENBRIDGE

Figure 20

Environmental Protection Plan

Typical Rock Flume Bridge

DATE:	5/25/2001
REVISED:	3/15/11
SCALE:	NTS
DRAWN BY:	KMKENDALL

NATURAL RESOURCE GROUP

K:_CLIENT_PROJECTS\D-F\EEL\2011-019\FIG_20_ROCK_FLUME_BRIDGE.VSD

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Attachment C

Environmental Protection Plan

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Environmental Protection Plan

Enbridge Energy, Limited Partnership • Line 3 Replacement Project

September 2018

ENBRIDGE®

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TABLE OF CONTENTS

FIGURES

APPENDICES

ACRONYMS AND ABBREVIATIONS

ATWS	additional temporary workspace
BMP	best management practices
CLL	Construction Line List
Contactor	construction Contractor
CRP	Conservation Reserve Program
DOT	Department of Transportation
ECD	erosion and sediment control device
EI	environmental inspector
Enbridge	Enbridge Energy, Limited Partnership
EPP	Environmental Protection Plan
HDD	horizontal directional drilling
NFPA	National Fire Protection Association
NRCS	Natural Resources Conservation Service
OHWL	ordinary high water level
OHWM	ordinary high water mark
PLS	Pure Live Seed
ROW	right-of-way
TWS	temporary workspace
UFC	Unified Facilities Criteria

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INTRODUCTION

This Environmental Protection Plan ("EPP") outlines construction-related environmental policies, procedures, and protection measures Enbridge Energy, Limited Partnership ("Enbridge") developed as a baseline for construction. This EPP was developed based on Enbridge's experience implementing Best Management Practices ("BMPs") during construction as well as the Federal Energy Regulatory Commission's Upland Erosion Control, Revegetation, and Maintenance Plan (May 2013 Version) and Wetland and Waterbody Construction and Mitigation Procedures (May 2013 Version). It is intended to meet or exceed federal, state, tribal, and local environmental protection and erosion control requirements, specifications and practices. The EPP is designed to address typical circumstances that may be encountered along the Project. Project-specific permit conditions and/or landowner agreements may supersede the general practices described in this document.

This document includes the following sections:

- Section 1.0 describes general mitigation measures, including soil erosion and sedimentation control procedures, to be implemented during upland construction and upland restoration;
- Section 2.0 describes stream and river construction, crossing, and restoration;
- Section 3.0 describes practices for wetland construction, crossings, and restoration;
- Section 4.0 describes highway, road, and rail crossings;
- Section 5.0 describes construction dewatering;
- Section 6.0 outlines water appropriation practices;
- Section 7.0 addresses revegetation measures;
- Section 8.0 addresses winter construction issues;
- Section 9.0 addresses waste management issues;
- Section 10.0 addresses construction equipment-related spill prevention, containment and controls; and
- Section 11.0 addresses containment, response, and notification procedures for inadvertent releases of drilling fluid.

Alternative construction procedures implemented in lieu of this EPP will provide an equal or greater level of protection to the environment, and will be approved in writing by Enbridge.

Unless otherwise specified, the construction Contractor ("Contractor") is responsible for implementing the requirements of this EPP.

Enbridge will provide appropriate construction oversight to confirm and document compliance with the measures of this EPP and requirements of applicable federal, state, tribal, and local permits. Enbridge's Environmental Inspectors ("EIs") will assist the Contractor in interpreting and implementing the requirements of the EPP, and verify compliance with these procedures for Enbridge. Enbridge will employ experienced EIs to manage unforeseen situations that are not directly addressed by project documents. Enbridge relies on the experience and judgment of the

EIs, through coordination and consultations with project management staff, to address unforeseen situations should they occur in the field. The EIs will be expected to use judgment in the field to interpret environmental conditions and requirements, but will not be authorized to make major modifications or changes without the prior written approval of Enbridge. The EI, in consultation with Enbridge Environment staff, will have the authority to stop activities and order corrective mitigation for actions that are not in compliance with the measures in this EPP, landowner agreements, or environmental permit requirements. The EI will maintain appropriate records to document compliance with these and other applicable environmental permit conditions.

Enbridge has also committed to applicable agencies to fund a comprehensive third-party monitoring program to be deployed during Project construction. Enbridge has constructed numerous projects with the oversight of third-party monitors and accepts the recommendation by state agencies regarding their use. Enbridge will work with the agencies to define the role and qualifications of proposed third-party monitors to ensure they are experienced in the type of construction they will be observing and knowledgeable regarding the resources that may be impacted.

1.0 GENERAL MITIGATION MEASURES

1.1 IDENTIFICATION OF AVOIDANCE AREAS

The EI will post signs for environmental features such as wetlands, waterbodies, drainages/drain tiles, buffer zones, rare plant or ecological community sites, invasive species and noxious weed locations, regulated wildlife habitat, cultural resources, and erosion-prone or steep slopes.

1.2 CONSTRUCTION LINE LIST AND PERMITS

Enbridge will provide the Contractor with a Construction Line List ("CLL") that describes special requirements (e.g., timber salvage, topsoil segregation, restoration measures, fencing requirements) as agreed upon with landowners provided the special requirements conform to project permits. The Contractor will comply with these special requirements and/or permit conditions.

The CLL identifies requirements and comments provided by landowners; however, it is not a comprehensive list of construction requirements. The CLL will be considered in conjunction with other project documents and permits.

1.3 WET WEATHER SHUTDOWN

During construction, certain activities may be suspended in wet soil conditions, based on consideration of the following factors:

- extent of surface ponding;
- extent and depth of rutting and mixing of soil horizons;
- areal extent and location of potential rutting and compaction (i.e., can traffic be rerouted around wet area); and
- type of equipment and nature of the construction operations proposed for that day.

The Contractor will cease work in the applicable area until Enbridge determines that site conditions are such that work may continue. The EIs, in collaboration with Enbridge construction management, will ultimately decide if wet weather shutdown is necessary in a given location.

1.4 RIGHT-OF-WAY ACCESS

Access to the right-of-way ("ROW") will be from public roadways and Enbridge-approved private access roads only. Existing roads are generally in a condition that can accommodate construction traffic without modification or improvement. Some roads will require improvements such as widening and/or grading and the placement of timber mats or gravel.

Enbridge is responsible for posting signs or other methods to identify approved access roads in the field and to ensure that access is confined to only the approved roads. Vehicle tracking of soil from the construction site will be minimized by installation and implementation of BMPs such as stone pads, timber mats, reducing equipment/vehicle access to the construction ROW

where practicable (off-ROW parking), or equivalent. Installation of stone or timber mat access pads will be in accordance with applicable permits and state/federal specifications. If such BMPs are not adequately preventing sediment from being tracked onto public roads, street sweeping, or other equivalent means of collecting sediment, will be used. If soil is tracked onto a roadway, the contractor will remove accumulated material from the road and return it to the construction ROW within an upland area as soon as possible, but in no circumstances more than 24 hours after discovery. In addition, soil on roadways cannot be broomed, washed, and/or graded into the road ditch or onto the shoulder.

After construction, Enbridge will return improved roads to their pre-construction condition unless the landowner or land-managing agency requests that the improvements be left in place. Enbridge will maintain permanent access roads to aboveground facilities (e.g. pump stations, mainline valves) throughout project operation.

1.5 RIGHT-OF-WAY REQUIREMENTS

All construction equipment and vehicles will be confined to the approved construction ROW and additional temporary workspace ("ATWS"). Prior to commencement of clearing operations, the outer limits of the construction ROW and ATWS areas will be marked with distinctive stakes and flagging by Enbridge. Construction activities are restricted to the approved designated areas.

The construction ROW (i.e., construction workspace) for the Project will vary and may include a portion of Enbridge's existing corridor, new permanent corridor, permitted temporary workspace ("TWS"), and site-specific extra workspaces as defined below and shown in Figures 1 through 3. The construction ROW width will be reduced in selected locations (e.g., wetlands, waterbodies, and forested shelterbelts), in accordance with applicable permit conditions, as indicated on the Project construction alignment sheets and in the field by the use of staking.

(a) ROW (Permanent)

Enbridge's existing permanent ROW varies in width. Additional footage may be added, depending on the location of the new pipeline(s) in relation to the existing pipelines. The permanent ROW is maintained to facilitate access and aerial inspection of the pipeline system.

(b) TWS

In addition to the ROW/permanent corridor, construction will require TWS. The TWS will be located adjacent to and contiguous with the proposed ROW/permanent corridor and will be identified on the construction alignment sheets and by distinctive staking of construction limits prior to clearing.

(c) ATWS

Site-specific ATWS locations, (construction work areas beyond the permanent corridor and TWS previously described), will be required at select locations such as steep slopes, road, waterbody, railroad, some wetland crossings, and where it is necessary to cross under the existing pipelines or foreign utilities. ATWS will typically be located in uplands adjacent to the construction ROW and set at least 50-feet back from sensitive resource boundaries where site-specific field conditions allow. However, to complete

work safely, Enbridge may need to locate ATWS within a wetland or within the 50-foot setback from a wetland or waterbody based on site-specific conditions. ATWS adjacent to waterbodies and/or wetlands is addressed further in Sections 2.0 and 3.0, respectively.

1.6 CONTROLLING SPREAD OF UNDESIRABLE SPECIES

It is Enbridge's intent to minimize the potential introduction and/or spread of undesirable species (i.e., invasive species, noxious weeds, or crop diseases) along the construction ROW due to pipeline construction activities. However, it is not practicable for Enbridge to eradicate undesirable species that are adjacent to the construction ROW. Enbridge will minimize the potential for the establishment of undesirable species by minimizing the time duration between final grading and permanent seeding.

In consultation with the applicable agencies, Enbridge will identify plant species that are considered noxious weeds and/or invasive plants that may occur within the counties being crossed by the pipeline corridor (refer to Appendix A).

1.6.1 Prevention and Control Measures

To prevent the introduction of identified noxious weeds and invasive species into the Project areas from other construction sites, construction equipment and mats will be cleaned prior to arriving on site. This cleaning consists of removing visible dirt from the equipment and mats and blowing loose material from equipment using compressed air. Equipment designated for use within waterbodies will be washed and dried prior to use. Purge and clean all pumps before proceeding from one location to the next if designated noxious weeds or invasive plants or infested waters (e.g. zebra mussels, Eurasian milfoil) are known to be present in the area. Known locations of noxious or invasive plant infestations and infested waters will be identified in the appropriate permits. If the EI identifies aquatic invasive species in an area not previously identified as an infested water, the EI will contact the Minnesota Department of Natural Resources. The Contractor(s) will keep logs documenting the cleaning history of each piece of equipment and make the logs available to the EI upon request. Contractors may use the equipment cleaning log provided in Appendix B or an equivalent form approved by Enbridge. Equipment found to be in non-compliance with the cleaning requirement will not be allowed on the Project sites until it has been adequately cleaned.

Prior to clearing and grading of the construction ROW and pending landowner permission, major infestation areas identified during surveys or by Enbridge's EIs may be treated with the herbicides. All proposed herbicides will be reviewed and approved by Enbridge's Environment Department through consultation with Minnesota Department of Agriculture and U.S. Environmental Protection Agency and as recommended through consultation with local authorities prior to use. Selective foliage or basal application will be used when practicable. Alternatively, full construction ROW topsoil segregation may be implemented for weed control to allow equipment to work through the area after topsoil has been stripped, as long as equipment stays on the subsoil (clearing, grading, and restoration equipment will still be cleaned). The Contractor(s) will obtain necessary permits and/or certifications for the use of the applicable herbicides, is responsible to limit off-ROW overspray, and will comply with state laws regarding the use of those herbicides. Contractor(s) will keep proper documentation of the locations where the herbicides have been used and provide such documentation to Enbridge within 3 days of

completing the work. Weed control spraying will be restricted near certified organic farms and prohibited on certified organic farms.

Treatment of known infestation areas will be completed in accordance with applicable chemical contact times (as specified by the manufacturer) in advance of clearing and grading within the construction ROW. Treatment may be restricted in areas that are not readily accessible, such as areas where access is limited by topography or other site conditions such as saturated/inundated soils. In the event that an area is determined to be inaccessible, the EI will be notified and a site-specific alternative treatment method will be developed.

If additional noxious weed infestations are identified subsequent to herbicide applications, mechanical means (scrape down/blow down) may be used to remove weeds from tracked equipment and mats prior to leaving the infested area. High pressure water wash stations may be established in select areas if the above measures do not adequately remove soil and vegetation debris from construction equipment. Enbridge will determine where this practice will be implemented. The Contractor(s) will keep logs documenting the cleaning history of each piece of equipment and make the logs available to the EI or other Enbridge Representative upon request. Any equipment found to be in noncompliance with the cleaning requirement will be removed from the Project sites until it has been adequately cleaned.

To prevent the spread of noxious weeds and invasive species during construction, mulch used on the Project will be composed of weed-free material. Certified weed-free mulch may also be required at site-specific locations. The Contractor(s) will be responsible for identifying and acquiring sources of weed-free and certified weed-free mulch. Sources will be approved by Enbridge prior to purchase. As discussed further in Section 1.8.3, tree stumps outside the ditch line will be ground below normal ground surface or completely removed and hauled off to an approved disposal facility. Stumps within the ditch line will be completely removed, ground, and/or hauled off to an approved disposal facility. Enbridge will consult with the appropriate agency to determine the appropriate treatment for felled infested and diseased trees.

In the case that a healthy oak tree adjacent to the construction ROW is damaged or wounded during construction activities in counties where the oak wilt fungus is present, Enbridge will treat the cut surface with water-based paint, a pruning/wound sealer, or shellac to prevent further spread of the disease. Treated trees will be inspected by the EI.

1.6.2 Pesticide Use and Application

Enbridge does not typically authorize use of pesticides on the construction or permanent ROW or at Enbridge facilities. However, should pesticide use be required to control the spread of undesirable pests and/or at the request of an agency, Enbridge will only utilize those pesticides and methods of application approved by the Minnesota Department of Agriculture, Minnesota Department of Natural Resources, and the U.S. Environmental Protection Agency in the state of Minnesota. Selective foliage or basal application will be used when practicable. All pesticides will be applied in a safe and cautious manner so as not to damage adjacent properties including crops, orchards, tree farms, apiaries, or gardens. Enbridge will contact the landowner or designee to obtain approval for the use of pesticide at least 14 days prior to any application on their property. The landowner may request that there be no application of pesticides on any part of the site within the landowner's property. Enbridge will provide notice of pesticide application to affected landowners and known beekeepers operating apiaries within three miles of the site at least 14 days prior to such application.

1.7 POTHOLING/HYDROVAC SLURRY

Hydrovac excavation is used to positively identify pipelines and other buried utilities. The Contractor will construct an unlined but bermed containment area or identify comparable containment (e.g., open top tank) to hold the hydrovac slurry in an Enbridge and landowner-approved upland area within the construction workspace or dispose of the material off-site at a licensed disposal facility. Once the slurry is drained and dry, it may be incorporated with the subsoil in an Enbridge and landowner-approved upland area within the construction workspace. Discharging hydrovac slurry on to topsoil is not permitted as the material will degrade the quality of the topsoil and potentially affect revegetation.

1.8 UPLAND CLEARING

The initial stage of construction involves the clearing of brush, trees, and tall herbaceous vegetation from the ROW. Clearing may be accomplished with chain saws, mowers, and hydraulic tree-cutting equipment.

1.8.1 Disposal of Non-Merchantable Timber

Unless otherwise directed by Enbridge, non-merchantable timber and slash will be disposed of by mowing, chipping, grinding, and/or hauling off site to an approved disposal facility or used in stabilizing erodible slopes or construction entrances. In non-agricultural, non-wetland areas, chips, mulch, or mechanically cut woody debris may be uniformly broadcast across the ROW where the material would ultimately be incorporated into the topsoil layer during grading activities, with landowner approval (coordinated through Enbridge ROW agents). Burning of non-merchantable wood may be allowed only where the Contractor has acquired all applicable permits and approvals (e.g. agency, tribal, and landowner) and in accordance with all tribal, state, and local regulations. The Contractor will provide Enbridge with copies of these permits and/or approvals prior to initiating burning.

1.8.2 Disposal of Merchantable Timber

All merchantable timber will be managed in accordance with Enbridge contract specifications.

1.8.3 Upland Grading and Stump Removal

To facilitate proper cleanup and restoration in upland areas, tree stumps outside the ditch line will be ground below normal ground surface or completely removed and hauled off to an approved disposal facility. Stumps in the ditch line will be completely removed, ground, and/or hauled off to an approved disposal facility.

1.9 TEMPORARY EROSION AND SEDIMENT CONTROLS

Temporary erosion and sediment control devices (“ECDs”) include, but are not limited to, slope breakers, sediment barriers (silt fence, straw bales, bio-logs, etc.), stormwater diversions, trench breakers, mulch, and revegetation subsequent to seeding of exposed soils (refer to Figures 4 through 11). The Contractor will maintain erosion and sediment control structures as required in the Project construction documents and as required by all applicable permits. Non-functional erosion and sediment controls will be repaired, replaced, or supplemented with functional materials within 24 hours after discovery, or as otherwise specified in project permits. ECDs will

be installed after initial clearing but before grading activities and will be replaced by permanent erosion controls as restoration is completed.

Temporary ECDs will be installed after clearing and prior to grubbing and grading activities at the base of sloped approaches to streams, wetlands, and roads. Temporary ECDs will also be installed at the edge of the construction ROW as needed, and/or in other areas determined by the EI to slow water leaving the site and prevent siltation of waterbodies and wetlands down slope or outside of the construction ROW (e.g., swales and side slopes). Temporary ECDs will be placed across the entire construction ROW at the base of slopes greater than 5 percent where the base of the slope is less than 50 feet from tile line inlets, drainage ways, wetlands, and/or waterbodies until the area is revegetated and there is no potential scouring or sediment transport to surface waters. Adequate room will be available between the base of the slope and the sediment barrier to accommodate ponding of water and sediment deposition.

If silt fence is used, when the depth of sediment reaches about one-third of the height, the sediment will be removed. Non-functional ECDs will be repaired, replaced, or supplemented with functional structures within 24 hours after discovery, or as otherwise specified in project permits.

Temporary ECDs installed across the travel lane may be removed during active daytime construction; however, ECDs will be properly reinstalled after equipment passage, or activities in the area are completed for the day. These ECDs will also be repaired and/or replaced prior to inclement weather when forecasted.

1.9.1 Temporary Stabilization

Installation of temporary seeding, mulch (straw or hydromulch), and erosion control mats may be required by Enbridge in certain locations (including topsoil piles) if there are construction delays within a spread of at least 14 days. The Contractor may be required by Enbridge to install temporary stabilization materials sooner based on site conditions, or as required in project permits.

1.9.2 Erosion Control Blanket

The appropriate class of erosion control blanket will be installed in accordance with manufacture recommendations and/or state Department of Transportation (“DOT”) specifications on slopes greater than 5 percent that would be exposed over the winter and drain to surface waters (refer to Figures 8 and 9). The Contractor will attempt to install erosion control blankets on the exposed slopes prior to snowfall; however, construction progress and/or seasonal weather variations may prevent installation prior to the first snowfall. Installation of erosion control blankets and additional BMPs, as applicable based on site conditions, is required after the first snowfall to protect slopes prior to spring melt and runoff. Erosion control blankets will be installed running parallel (up and down) with the direction of the slope (not perpendicular).

1.9.3 Mulch

Mulch (weed-free straw, wood fiber hydromulch, or a functional equivalent) will be applied to disturbed areas (except for actively cultivated land and wetlands) if requested by the landowner or land managing agency, if specified by the applicable permits or licenses, or as required by Enbridge. Mulch will specifically be required on:

- slopes greater than 5 percent; and
- dry, sandy areas that can blow or wash away (field decision).

Mulch will be free of noxious weeds as listed in applicable state laws. Certified weed-free mulch may also be required at site-specific locations. The Contractor will be responsible for identifying and acquiring sources of weed-free and certified weed-free mulch. Sources will be approved by Enbridge prior to purchase.

Mulch will be applied at a rate of 2 tons per acre to cover at least 75 percent of the ground surface unless otherwise stipulated by permit conditions. Mulch will be uniformly distributed by a mechanical mulch blower, or by hand in areas not accessible to the mulch blower. Mulch will be anchored/crimped using a mulch-anchoring tool or disc set in the straight position to minimize loss by wind and water, as site conditions allow. In areas not accessible to a mulch-anchoring tool or too steep for safe operation, the mulch may be anchored by liquid tackifiers, with advance written approval from Enbridge. The manufacturer's recommended method and rate of application will be followed.

Hydro-mulch and liquid tackifier can be used in place of straw or weed-free hay mulch with prior approval from Enbridge. All hydromulch and liquid tackifier products used will be on the applicable state DOT product list. Application rates will be at the manufacturer's recommended rate, equal to or greater than 2 tons per acre of straw mulch.

1.9.4 Cat Tracking

Cat tracking, also known as horizontal slope grading, may be implemented based on site conditions (sandy or silt soils) to reduce erosion potential. Cat tracking is achieved by driving a bulldozer vertically up and down the slope which results in the tracks being oriented horizontally; creating small speed bumps for water (refer to Figure 11).

1.9.5 Temporary Slope Breakers

Temporary slope breakers will be installed to minimize concentrated or sheet flow runoff in disturbed areas in accordance with the following maximum allowable spacing unless otherwise specified in permit conditions.

Slope (%)	Approximate Spacing (ft)
3-5	250
5-15	200
15-25	150
>25	<100

If the length of the slope is less than the distance of the required spacing, slope breakers are not required unless a sensitive resource area (e.g., wetland or public roadway) is located immediately down slope, or as requested by the EI. Temporary slope breakers may be constructed using earthen subsoil material, silt fence, straw bales, or in non-agricultural land, rocked trenches may be used. On highly erodible slopes, slope breakers in the form of earthen berms will be used whenever possible.

Temporary slope breakers will be constructed according to the following specifications (refer to Figures 4 and 5):

- straw bales used as slope breakers will be trenched in and staked so as to not allow spacing between bales or allow flow underneath the bales;

- the outfall of temporary slope breakers will be directed off the construction ROW into a stable well-vegetated upland area or into an appropriate energy-dissipating sediment control device (e.g., silt fence, straw bales, rock aprons) to prevent the discharge of sediments (refer to Figure 4);

- proper slope breaker outfalls will be established where topsoil segregation and/or grading has created a barrier at the edge of the construction workspace; and

- gaps will be created through spoil piles where necessary to allow proper out letting of temporary berms.

1.10 UPLAND TOPSOIL SEGREGATION

Upland areas where topsoil will be stripped includes cropland, hay fields, pasture, residential areas, and other areas as requested by the landowner or as specified in the project plans, commitments, and/or permits. Topsoil will not be used to construct berms, trench breakers, temporary slope breakers, improving or maintaining roads, or to pad the pipe. Berms used for stacking pipe in pipe yards may be constructed using topsoil if landowner permission and necessary approvals are obtained. Gaps will be left and ECDs installed where stockpiled topsoil and spoil piles intersect with water conveyances (i.e., ditches, swales, and waterways) to maintain natural drainage.

Topsoil Segregation Methods

The following topsoil segregation methods may be employed during construction:

- Full Construction ROW (refer to Figure 1)

- Trench-Line-Only (refer to Figure 2)

- Modified Ditch-Plus-Spoil Side (refer to Figure 3)

The Full Construction ROW topsoil segregation technique will typically be used in active cropland, which will consist of stripping topsoil from the spoil storage area, ditch line, and the primary travel lane. The Trench-Line-Only topsoil segregation method may be used where Enbridge determines that the width of the construction ROW is insufficient for other methods to be used. Enbridge may also use the Trench-Line-Only topsoil segregation method in areas where there is a thick sod layer such as in hay fields, pastures, golf courses, and residential areas, unless otherwise requested by the landowner. Alternative topsoil segregation methods, such as Modified Ditch-Plus-Spoil Side, may be used on a site-specific basis or as requested by the landowner. Topsoil is not typically segregated in standing water wetlands unless specifically requested by the landowner and/or managing land agency in accordance with applicable permit conditions.

Depth of Upland Topsoil Stripping

In deep soils (more than 12 inches of topsoil), topsoil will be stripped to a minimum depth of 12 inches, unless otherwise specified/requested by other plans, permit conditions, or the landowner. Additional space may be needed for spoil storage if more than 12 inches of topsoil are segregated. If less than 12 inches of topsoil are present, the Contractor will attempt to segregate to the depth that is present.

1.11 UPLAND TRENCHING

Trenching in uplands is typically accomplished with a backhoe excavator or a rotary wheel ditching machine. Excavated material will be side cast (stockpiled) within the approved construction ROW separate from topsoil, and stored such that the area subject to erosion is minimized. Enbridge will coordinate with landowners to minimize disruption of access caused by the trench during construction. Where deemed appropriate by Enbridge, the Contractor will leave plugs of subsoil in the ditch or will construct temporary access bridges across the trench for the landowner to move livestock or equipment. Trenches may also be sloped where started and ended to allow ramps for wildlife to escape. Spacing of plugs and ramps will be determined in the field.

1.11.1 Timing

The length of time a trench is left open will be minimized to ensure that installation of the pipe and restoration of the construction ROW occurs in a timely fashion. Therefore, unless otherwise specified by project permits or Enbridge, the Contractor will limit the amount of excavated open trench to a maximum of 3 days of anticipated welding production per spread. This timeframe may be decreased at the discretion of Enbridge based on site conditions. Site-specific activities such as horizontal directional drilling (“HDD”), guided bores, road bores, tie-in points, and valve work may be performed independent of a spread.

1.12 FOAM PILLOW INSTALLATION

Use of foam pillows for pipe protection in the trench will be approved by Enbridge in advance and installed in accordance with applicable project permits, local/state/federal regulations, and manufacturer’s recommendations.

1.13 TRENCH BREAKERS

Trench breakers will be installed as deemed necessary by Enbridge in sloped areas after the pipe has been lowered into the trench. Trench breakers protect against subsurface water flow along the pipe after the trench is backfilled. Trench breakers will be constructed with bags filled with rock-free subsoil or sand. Topsoil will not be used to construct trench breakers.

Use of foam trench breakers will be approved by Enbridge in advance and installed in accordance with applicable project permits, local/state/federal regulations, and manufacturer’s recommendations. Trench breakers will be placed from the bottom of the trench to near the top of the trench, completely surrounding the pipe and will be properly keyed into the undisturbed trench walls (refer to Figures 12 and 13). The location for trench breakers will be based on field conditions including the degree and length of slope, presence of down slope sensitive resource areas such as wetland and waterbodies, and proximity to other features such as roads and/or

railroads. The following conditions apply to the placement and installation of trench breakers unless otherwise directed by Enbridge:

- Trench breakers will be installed on slopes greater than 5 percent adjacent to streams, wetlands, or other waterbodies.

- Where the pipeline exits a wetland towards areas of lower relief, trench breakers will be installed (within the upland) where there is a potential for underground drainage along the pipe in order to prevent wetland or waterbody drainage.

- At all waterbody crossings, as necessary, to prevent diversion of water into upland portions of the pipeline trench and to keep accumulated trench water out of the waterbody.

The actual location of each trench breaker will be selected through coordination between Enbridge's EIs, Enbridge's Craft Inspectors, and the Contractor's Foreman for backfilling activities.

1.14 DRAIN TILE INLET PROTECTION AND TILE REPAIRS

Enbridge will attempt to locate existing drain tile inlets that are located near the construction work area prior to construction. Drain tile inlets will be marked using flags. The Contractor will protect located drain tile inlets with the potential to receive stormwater from construction of the Project using the appropriate ECDs until sources with the potential to discharge have been stabilized. The determination of the specific ECD will be made based on the location of an inlet with respect to the project area, drainage area from the construction work area to the inlet, topography, vegetation, soils, and accessibility to the inlet. Where drain tile inlets are located off of Enbridge's construction ROW, Enbridge may not have authorization to install ECDs at the inlet site. In these cases, sediment control measures (typically silt fence) will be installed along the edge of the construction work area that drains to the inlet structure to minimize sedimentation.

If underground drainage tile is damaged by pipeline construction, it will be repaired in a manner that assures proper tile line operation at the point of repair in accordance with the Agricultural Protection Plan.

1.15 UPLAND BACKFILLING

Backfilling follows pipe installation and consists of replacing the material excavated from the trench. In areas where topsoil has been segregated, the subsoil will be replaced first, and the topsoil will be spread uniformly over the area from which it was removed. Prior to backfilling, the trench will be dewatered in accordance with the methods discussed in Section 5.0 if water obscures the trench bottom.

1.16 CLEANUP AND ROUGH/FINAL GRADING

All waste materials, including litter generated by construction crews, will be disposed of daily by the Contractor. Initial cleanup and rough grading activities may take place simultaneously. Cleanup involves removing construction debris (including litter generated by construction crews and excess rock) and large woody debris. Rough and final grading includes restoring disturbed

areas as near as practicable to preconstruction conditions, returning the topsoil where topsoil has been stripped, preparing a seedbed and de-compacting subsoil (where applicable) for permanent seeding, installing or repairing temporary erosion control measures, repairing/replacing fences, and installing permanent erosion controls.

1.16.1 Timing

The Contractor will begin cleanup and rough grading (including installation of temporary erosion and sediment control measures) within 72 hours after backfilling the trench. The Contractor will attempt to complete this rough cleanup within one week. The Contractor will initiate final grading, topsoil replacement, seeding, and installation of permanent erosion control structures within 14 days after backfilling the trench. If seasonal or other weather conditions prevent compliance with these timeframes, temporary erosion controls will be maintained until conditions allow completion of cleanup.

1.17 PERMANENT EROSION AND SEDIMENT CONTROLS

During final grading, slopes in areas other than cropland will be stabilized with erosion control structures. With exception for actively cultivated areas, permanent berms (diversion dikes or slope breakers) will be installed on all slopes, according to the following maximum spacing requirements unless otherwise specified in permit conditions:

Slope (%)	Approximate Spacing (ft)
3-5	250
5-15	200
15-25	150
>25	<100

Permanent berms will be constructed according to the following specifications:

- Permanent berms will be constructed of compacted earth, stone, or functional equivalent as approved in advance by Enbridge.
- The outfall of berms will be directed toward appropriate energy-dissipating devices, and off the construction ROW if possible.
- Permanent berms will be inspected and repaired as deemed necessary by Enbridge to maintain function and prevent erosion.
- Erosion control blankets (curlex, jute, or equivalent) will be placed on slopes over 30 percent or that are a continuous slope to a sensitive resource area (e.g., wetland or waterway).

1.18 SOIL COMPACTION TREATMENT

Cultivated fields and compacted or rutted areas will be tilled prior to topsoil replacement with a deep tillage device or chisel plowed to loosen compacted subsoils. If subsequent construction and cleanup activities result in further compaction, additional measures will be undertaken to alleviate the soil compaction.

1.19 STONE REMOVAL

A diligent effort will be made to remove excess stones equal to or larger than 4 inches in diameter from the upper 8 inches of subsoil or as specified in permit conditions, contract documents, or landowner agreements. After the topsoil is replaced, stone removal efforts will cease when the size and density of stones on the construction ROW are similar to undisturbed areas adjacent to the construction ROW as determined by the EI. Excess rock will be piled in upland areas where landowner permission has been obtained or will be hauled off-site to an Enbridge approved disposal site.

1.20 REPAIR OF DAMAGED CONSERVATION PRACTICES

The Contractor will restore all soil conservation practices (such as terraces, grassed waterways, etc.) that are damaged by the pipeline construction to preconstruction conditions to the extent practicable.

1.21 LAND LEVELING FOLLOWING CONSTRUCTION

Following the completion of the pipeline, the construction ROW will be restored to its pre-construction conditions as practical. Should uneven settling or documented surface drainage problems occur following the completion of pipeline construction and restoration, Enbridge will take appropriate steps to remedy the issue.

2.0 STREAM AND RIVER CROSSING GENERAL REQUIREMENTS

The procedures in this section apply to streams, rivers, and other waterbodies such as jurisdictional ditches, ponds, and lakes. These procedures require that judgment be applied in the field and will be implemented under the supervision of Enbridge.

Stream crossing requirements, including construction methods, timing, erosion control, and restoration are described in this section and in the stream crossing permits issued by state and federal agencies and by tribal authorities (as applicable). If the contractor considers certain parts of these procedures to be technically impractical due to site-specific engineering constraints, they may submit an on-site modification request to Enbridge for consideration of alternative measures that would provide an equal or greater level of protection to the stream and river ecosystems. Enbridge will review the contractor's alternatives and consult with appropriate regulatory agencies and tribal resource specialists (as applicable). The contractor will receive written approval from Enbridge prior to implementing the alternatives. During wet and high runoff conditions, the EI will determine whether conditions warrant additional considerations for construction activities.

2.1 TIME WINDOW FOR CONSTRUCTION

All in-stream work activities (installation of dams, sheet piling, etc.) will be minimized to the extent practicable on an area and time duration basis. In-stream trenching will be conducted during periods permitted by the appropriate regulatory agencies and applicable permits. Unless otherwise specified in applicable permits and with exception to blasting and other rock breaking measures and directional drill, in-stream construction activities (specifically trenching, pipeline installation, backfill, and restoration of the streambed contours) for wet crossing methods will occur within the following timeframes:

- Minor Waterbodies (all waterbodies less than or equal to 10 feet wide at the water's edge at the time of crossing): 24 hours

- Intermediate Waterbodies (all waterbodies greater than 10 feet wide but less than 100 feet wide at the water's edge at the time of crossing): 48 hours

- Major Waterbodies (all waterbodies greater than 100 feet wide at the time of crossing): As specified by Enbridge or in the applicable permits.

These timeframes apply regardless of the presence or absence of flow. These timeframes also apply to dry crossing methods as a guideline and can be extended based on site-specific conditions with approval from Enbridge Environment staff, Construction Management, and the EI.

Stream crossings will be designed as close to perpendicular to the axis of the stream channel as engineering and routing constraints allow, creating the shortest crossing length.

2.2 CLEARING AND GRADING

The construction ROW width will consist of a 25-foot-wide neck down beginning 20 feet from the ordinary high water mark ("OHWM") / ordinary high water level ("OHWL") on the working side of the ROW (refer to Figures 15 through 17).

2.2.1 Beaver Dam Removal and Prevention of Dam Rebuilding

With landowner approval and in accordance with necessary permits obtained, the Contractor may trap beavers, alter or remove beaver dams in order to attempt to lower the water level prior to construction. For alterations, the Contractor will insert a 12-inch minimum diameter, 20-foot long minimum perforated steel culvert, or an equivalent device, through the dam to allow the water to continually drain. The perforations should be a minimum of 1.5-inch diameter, encompassing the entire circumference and extend for the full length of the culvert.

2.2.2 Impaired Waters

Where discharges of stormwater may occur to waters designated under Section 303(d) of the Clean Water Act as Impaired Waters, additional BMPs will be implemented as specified in the applicable project permits.

2.3 ADDITIONAL TEMPORARY WORKSPACE

ATWS includes work areas outside the boundary of the typical construction ROW. These spaces are typically used to assemble pipe segments and for temporary spoil storage. Clearing of forested and brushy areas for ATWS will be avoided as much as possible. Woody vegetation in wetlands and riparian areas will typically not be cleared for the purpose of ATWS unless approved by appropriate regulatory agencies as stipulated in permits issued for the Project. ATWS will be constructed as follows:

- ATWS will be located at least 50 feet away from the OHWM/OHWL if topographic or other physical conditions such as stream channel meanders allow, except where the adjacent upland consists of cultivated or rotated cropland or other disturbed land (refer to Figures 15 through 17).

- If safe work practices or site conditions do not allow for a 50-foot setback, ATWS should be located no closer than 20 feet from the OHWM/OHWL, subject to site-specific approval by Enbridge.

- ATWS will be limited to the minimum size needed to construct the stream crossing.

2.4 BRIDGES

Temporary equipment bridges will be used on most waterways (upon approval by the appropriate agency), including small waterways such as ditches and intermittent streams, where there is a potential for stormwater runoff or rain events to transport sediment downstream from equipment crossing the waterway. Bridges will be constructed as described below and will be removed as soon as possible during final restoration. Bridges will not typically be installed at directionally drilled waterbodies, unless there is no reasonable alternative that provides an efficient, economical way to transport heavy construction equipment around the waterbody by truck.

With exception to clearing-related equipment, fording of waterways is prohibited (i.e. civil survey, potholing, or other equipment are not permitted to ford waterways prior to bridge placement). Clearing equipment and equipment necessary for installation of equipment bridges

will be allowed a single pass across waterbodies prior to bridge installation, unless restricted by applicable permits.

2.4.1 Types of Bridges

Equipment bridges will be constructed using one of the following techniques:

- Typical Span Type Bridge (timber mats - refer to Figure 19)
- Rock Flume (refer to Figure 20)
- Railroad flat cars
- Flexi-float or other pre-fabricated portable bridges
- Other methods as approved by Enbridge and appropriate agencies

2.4.2 Bridge Design and Maintenance

Bridges will be designed as close to perpendicular to the axis of the stream channel, creating the shortest crossing length and will be built and maintained in accordance with applicable permits. Equipment bridges will be designed to withstand the maximum foreseeable flow of the stream with headers and support structures being placed above the OHWM of the feature. In the event that local jurisdictions require stricter guidelines associated with bridge placement, Enbridge will design the bridge to comply with these requirements. Bridges will not restrict flow or pool water while the bridge is in place, and will be constructed with clean materials. Bridges will be designed and maintained to prevent soil from entering the waterbody. Soil that accumulates on the bridge decking will be removed as needed, or as deemed necessary by the EI.

2.5 STREAM AND RIVER CROSSING CONSTRUCTION METHODS

The following stream and river crossing methods are typically used, subject to further restrictions by Enbridge and applicable permits and subject to modifications as approved by appropriate regulatory agencies and tribal resource specialists (as applicable) during construction.

2.5.1 Wet Trench Method

Installation

The wet trench method will be used to cross streams and rivers not permitted to be flumed, dam and pumped, or directionally drilled (refer to Figure 15). The following procedures will be used during wet trench crossings:

- Sediment control measures will be installed before grading from the 20-foot vegetative buffer left on each stream bank. Spoil containment structures will be installed back from the stream bank so that spoil does not migrate into the stream.

- Grading will be directed away from the waterbody to minimize the potential for sediment to enter the stream. Grading of stream banks will be restricted to the trench line and areas necessary for safe bridge installation.

- After grading, backhoes or draglines will be used to excavate the trench. Where possible, excavating equipment will operate from one or both banks, without entering the stream. If equipment must encroach into the stream, it will operate on clean construction mats. Streambed material will be segregated (e.g., upper one foot and the remaining trench spoil will be stored separately) and placed within a spoil containment structure in approved construction work area limits. Storage of streambed spoil within the stream will only be allowed if expressly approved in the applicable permits.

- Earthen trench plugs (hard plugs) between the stream and the upland trench will be left undisturbed during excavation of the in-stream trench to prevent diversion of the stream flow into the open trench and to prevent water that may have accumulated in the adjacent upland trench from entering the waterbody. Trench plugs will be removed immediately prior to pipe placement, and then replaced when the pipe is in place. Trench water accumulated upslope of trench plugs will be dewatered appropriately prior to trench plug removal.

- Water within the trench will be managed in accordance with Section 5.0

- Backfilling will begin after the pipe is positioned in the trench at the desired depth. Backfill material will consist of the spoil material excavated from the trench and parent streambed unless otherwise specified in state or federal permits. The in-stream trench will be backfilled so that the stream bottom is as near as practicable to its pre-construction condition, with no impediments to normal water flow.

Temporary Stabilization

The Contractor will restore the stream banks as near as practicable to pre-construction conditions unless that slope is determined to be unstable. If Enbridge determines the slope is considered unstable, the Contractor will reshape the banks to prevent slumping. Once the banks have been reshaped, ECDs will be installed within 24 hours of backfilling the crossing. Temporary slope breakers will be installed on all sloped approaches to streams in accordance with the spacing requirements previously specified.

A temporary seed mix (e.g., annual rye or annual oats) and mulch and/or erosion control blankets will be installed within a 50-foot buffer on either side of the stream, with exception to actively cultivated land. Silt fence or functional equivalent as approved in advance by Enbridge will be installed upslope of the temporary seeding area.

2.5.2 Dam and Pump Method

Installation

The dam and pump method is a dry crossing technique that is suitable for low flow streams and is generally preferred for crossing meandering channels. The dam and pump method involves damming of the stream upstream and downstream of the proposed trench before excavation

(refer to Figure 16) and pumping water around the construction area. The following procedures will be used for dam and pump crossings:

- Dams may be constructed of sandbags, inflatable dams, aqua-dams, sheet piling, and/or steel plates. The dams will prevent the stream from flowing into the construction area. The dams will be continuously monitored for a proper seal. Additional sandbags, plastic sheeting, steel plating, or similar materials will be used where necessary to minimize the amount of water seeping around the dams and into the construction work area. The dam will not be removed until after the pipeline has been installed, the trench has been backfilled, and the banks have been stabilized.

- Pumping of the stream across the ROW will commence simultaneously with dam construction to prevent interruption of downstream flow. Stream flow will be pumped across the construction area through a hose and will be discharged to an energy-dissipation device, such as plywood boards, to prevent scouring of the streambed.

- The pumps and fuel containers will be located on the upstream side of the crossing and will be placed in impermeable, sided structures which will act as containment units (refer to Section 10.0). The pumps used for this crossing method will not be placed directly in the stream or on the streambed. Pumps will have a capacity greater than the anticipated stream flow. The pumping operation will be staffed 24 hours a day and pumping will be monitored and adjusted as necessary to maintain an even flow of water across the work area and near-normal water levels upstream and downstream from the crossing.

The pump intake will be suspended to prevent sediment from being sucked from the bottom of stream and will be equipped with a screen, or equivalent device, to prevent fish uptake.

- Where possible, excavating equipment will operate from one or both banks, without entering the stream. If equipment must encroach into the stream, it will operate on clean construction mats (free of soil and plant material prior to being transported onto the construction ROW). Streambed material will be segregated as stated in the wet trench method and will be placed within a spoil containment structure in approved construction work area limits. Storage of streambed spoil within the stream will only be allowed if expressly approved in the applicable permits.

- Earthen trench plugs (hard plugs) between the stream and the upland trench will be left undisturbed during excavation of the in-stream trench to prevent diversion of the stream flow into the open trench and to prevent water that may have accumulated in the adjacent upland trench from entering the waterbody. Trench plugs will be removed immediately prior to pipe placement, and then replaced when the pipe is in place. Trench water accumulated upslope of trench plugs will be dewatered appropriately prior to trench plug removal.

- Standing water that is isolated in the construction area by the dams will be managed in accordance with Section 5.0

- Backfilling will begin after the pipe is positioned in the trench to the desired depth. Backfill material will consist of the spoil material and parent streambed excavated from the trench unless otherwise specified in state or federal permits. The in-stream trench

will be backfilled so that the stream bottom is similar to its pre-construction condition, with no impediments to normal water flow.

Temporary Stabilization

Restoration of the stream banks and the installation of temporary erosion controls will be similar to that described for the wet trench method above but will occur immediately following installation of the pipeline. Once the stream banks have been stabilized, the dams and pump will be removed.

2.5.3 Flume Method

Installation

The flume method is a dry crossing technique that is suitable for crossing relatively narrow streams that have straight channels and are relatively free of large rocks and bedrock at the point of crossing (refer to Figure 17). This method involves placement of flume pipe(s) in the stream bed to convey stream flow across the construction area without introducing sediment to the water. The procedures for using the flume method are described below.

- The flume(s) will be of sufficient diameter to transport the maximum flows anticipated to be generated from the watershed. The flume(s), typically 40 to 60 feet in length, will be installed before trenching and will be aligned so as not to impound water upstream of the flume(s) or cause downstream bank erosion. The flumes will not be removed until after the pipeline has been installed, trench has been backfilled, and the stream banks have been stabilized.

- The upstream and downstream ends of the flume(s) will be incorporated into dams made of sand bags and plastic sheeting (or equivalent). The upstream dam will be constructed first and will funnel stream flow into the flume(s). The downstream dam will prevent backwash of water into the trench and construction work area. The dams will be continuously monitored for a proper seal. Adjustments to the dams will be made where necessary to prevent large volumes of water from seeping around the dams and into the trench and construction work area.

- Where possible, excavating equipment will operate from one or both banks, without entering the stream. If equipment must encroach into the stream, it will operate on clean construction mats. Streambed material will be segregated and placed within a spoil containment structure in approved construction work area limits. Storage of streambed spoil within the stream will only be allowed if expressly approved in the applicable permits.

- Earthen trench plugs (hard plugs) between the stream and the upland trench will be left undisturbed during excavation of the in-stream trench to prevent diversion of the stream flow into the open trench and to prevent water that may have accumulated in the adjacent upland trench from entering the waterbody. Trench plugs will be removed immediately prior to pipe placement, and then replaced when the pipe is in place. Trench water accumulated upslope of trench plugs will be dewatered appropriately prior to trench plug removal.

- If additional trench dewatering is necessary to complete the installation of the pipe, the discharge will be managed in accordance with Section 5.0.

- Backfilling will begin after the pipe is positioned in the trench to the desired depth. Backfill material will consist of the spoil material excavated from the trench and parent streambed unless otherwise specified in state or federal permits. The in-stream trench will be backfilled so that the stream bottom is similar to its pre-construction condition, with no impediments to normal water flow.

Temporary Stabilization

Restoration of the ROW and the installation of temporary erosion controls will be similar to that described for the wet trench method above but will occur immediately following installation of the pipeline. After the stream banks have been stabilized, the dams and flume will be removed from the stream bed allowing water to resume its flow in the channel.

2.5.4 Directional Drill and/or Guided Bore Method

Installation

Installing the pipe underneath a stream will involve placing a drill unit on one side of the stream (refer to Figure 18). A small-diameter pilot hole will be drilled under the stream along a prescribed profile. After the pilot hole has been completed, barrel reams will be used to enlarge the pilot hole to accommodate the desired pipeline diameter. Drilling mud will be necessary to remove cuttings and maintain the integrity of the hole. Water from an Enbridge-approved source will be used to prepare the slurry of drilling mud, and will be appropriated according to applicable permits. The pipe section will be pulled through the hole by the drilling rig and welded to the adjoining sections of pipe on each side of the river.

Drilling Mud

During drilling operations, drilling mud and slurry will be stored back from the waterbody in an earthen berm sediment control structure, in tanks, or by other methods so that it does not flow into the waterbody, adjacent wetlands or off the workspace (refer to Section 11.0 for additional details).

After the pipe is in place, excess drilling mud will be hauled off-site to an Enbridge-approved disposal location or licensed disposal facility.

Temporary Stabilization

The directional drilling/guided bore method normally does not result in the disturbance of the stream banks or riparian vegetation (with exception of extremely limited hand clearing of woody vegetation required to facilitate guide wire placement), which reduces the potential for erosion and sedimentation at the stream crossing. Consequently, temporary erosion control measures that are installed at open-cut crossings typically are not necessary for drilled/bored crossings.

2.6 PERMANENT RESTORATION

Stream/channel banks disturbed during installation of the pipelines will be stabilized with erosion control materials such as an erosion control blanket and seeded in accordance with Section 7.0. Permanent stabilization will be initiated within 24 hours after installation of the crossing using the wet trench method and prior to restoring flow using the dam and pump or flume method, unless site and permit conditions delay permanent installation. Where the banks have been disturbed, the Contractor will restore the slopes as near as practicable to pre-construction conditions unless that slope is determined by Enbridge to be unstable. Where the slope of the banks is determined to be unstable or has the potential to erode or fail, the banks will be reshaped to transition the disturbed areas into the natural stream bank with the intent to stabilize the bank and create a blended, natural appearance.

Berms or other sediment filter devices will be installed at the base of sloped approaches to streams greater than five percent and the outlet of the berm will be directed away from the stream into a well vegetated area. Temporary sediment control devices will remain in place until the area has stabilized and adequate revegetation has established.

2.6.1 Vegetative Bank Restoration

Typically, waterbody banks will be restored as near as practicable to preconstruction conditions after backfilling is complete and will be seeded with an appropriate seed mix as specified in Section 7.0 and covered with an erosion control blanket. Erosion controls, (e.g. straw bales, bio-logs, silt fences, etc.) will be installed as necessary based on site-specific conditions.

2.6.2 Supplemental Bank Stabilization

Unstable soils and/or site-specific factors such as stream velocity and flow direction may require additional restoration efforts, such as installation of rock rip-rap, to stabilize disturbed stream banks. Rock rip-rap will be used only where site-specific conditions require and where applicable permits or approvals have been acquired. Geotextile fabric and rock riprap will be placed according to site and permit conditions (refer to Figure 23). Disturbed soils upslope and on either side of the riprap will be prepared for seeding according to Section 7.0 and other stream bank protection requirements. Bioengineering techniques may also be implemented as determined by Enbridge (refer to Figures 26 through 28).

2.6.3 Bridge Removal

Equipment bridges will be removed during final cleanup or, if access is needed, after final cleanup and permanent seeding. Restoration of the bridge area will be completed upon bridge removal.

2.6.4 Swales

Swales will be restored as near as practicable to original conditions. Swales will be seeded and either mulched with straw or erosion control blankets will be installed to the perceivable top of bank for the width of the construction ROW.

3.0 WETLAND CROSSING GENERAL REQUIREMENTS

The procedures in this section apply to all wetlands that will be affected by the Project. These procedures require that judgment be applied in the field and will be implemented under the supervision of Enbridge and the EI. The intent of these procedures is to minimize construction-related disturbance and sedimentation of wetlands and to restore wetlands as nearly as possible to pre-existing conditions. Additionally, in wetlands that are being farmed at the time of construction, Enbridge will construct the pipeline using standard upland methods. Most seasonally saturated farmed wetlands are used for crop production and topsoil will be segregated in the same manner as topsoil in upland agricultural lands. Pipe stringing and fabrication may occur within the farmed wetland adjacent to the trench, or adjacent to the farmed wetland in a designated ATWS.

Wetland crossing requirements, including construction methods, timing, erosion control, and restoration, are described in this section and in the wetland crossing permits issued by state, federal and/or tribal agencies as applicable. If the contractor considers certain parts of these procedures to be technically impractical due to site-specific engineering constraints, they may submit an on-site modification request to Enbridge for approval of alternative measures. Enbridge will review the contractor's alternatives and consult with appropriate regulatory agencies. The contractor must receive approval from Enbridge prior to implementing the alternatives.

3.1 WETLAND ACCESS

The Contractor will use the construction ROW and only approved roads to access wetland areas.

3.2 CLEARING

Clearing the construction ROW in wetlands will be similar to clearing in uplands. For construction to proceed, obstructions (e.g., trees, brush, and logs) need to be removed. Typically, low ground pressure equipment will be used, limiting disturbance to the wetland. Vegetation and trees within wetlands will be cut off at ground level, leaving existing root systems intact; clearing debris will generally be removed from the wetland for disposal. Hydro-axe debris, or similar can be left in the wetland if spread evenly in the construction ROW to a depth which will allow for normal revegetation, as determined by the EI.

3.3 ADDITIONAL TEMPORARY WORKSPACE IN WETLANDS

In general, Enbridge attempts to locate ATWS outside of wetlands wherever practicable; however, ATWS may be sited in select wetlands where the wetland is adjacent to a waterbody, road, railroads, foreign utility crossings, and/or pipeline cross-over with prior approval from the applicable regulatory agencies. Clearing of forested wetlands for ATWS will be avoided as much as possible.

- Staging areas, additional spoil storage areas, and other ATWS will be located in upland areas at least 50 feet away from wetland boundaries (refer to Figures 24), where safe work practices or site conditions permit, except where the adjacent upland consists of cultivated or rotated cropland or other disturbed land. If site conditions do not permit a 50-foot setback, then these areas will be located as far away from the wetland as is

practicable. Vegetation will not be cleared between these areas and the wetland in any event. No construction activities including vegetation clearing or earthwork will occur between the ATWS and the wetland.

- The size of the ATWS areas will be limited to the minimum needed to construct the wetland crossing.

3.4 GRADING IN A WETLAND

Grading activities will be confined to the area of the trench and will be minimized to the extent practicable. Grading outside the trench will only be allowed where required to ensure safety and restore the construction ROW after backfilling the trench with prior approval from Enbridge.

ECDs will be installed:

1. across the entire construction ROW upslope of the wetland boundary, where necessary, to prevent sediment flow into the wetland;

2. along the edge of the construction ROW as necessary to prevent sediment flow into off-ROW wetlands; and

3. along the edge of the construction ROW as necessary to contain spoil and sediment within the construction ROW through wetlands.

ECDs will be maintained in proper working order to prevent the flow of sediment into wetlands from spoil piles or sloped approaches that are adjacent to the wetlands. .

3.5 RIGHT-OF-WAY STABILIZATION

Tree stumps, brush riprap, imported soil, and rock fill will not be brought in to stabilize the ROW in wetlands. Where low ground pressure equipment is not used, construction equipment will operate from timber construction mats or equivalent means with prior approval from Enbridge (refer to Figure 24). To prevent the spread of noxious and invasive plant species, timber mats will be free of soil and plant material prior to being transported onto the construction ROW and/or moved from one area of the construction ROW to another area. Timber riprap (also known as corduroy road) will not be used without prior written approval from Enbridge and the appropriate regulatory agencies. Pre-existing corduroy roads in wetlands may be used but may not be improved, maintained, restored, or replaced without site-specific authorization from applicable agencies.

Subsoil from the pipeline trench within the immediate wetland may be placed on top of equipment mats for additional stabilization. Timber mats may be placed over the ditch line or on the working side to facilitate trench excavation. All timber mats, construction debris, and larger woody vegetative debris will be removed during cleanup of wetlands.

3.6 TRENCHING

Excavation of the pipeline trench in wetlands typically will be accomplished using backhoe excavators. The Contractor will take reasonable steps to ensure that the duration of open trench in wetlands, including tie-ins, is minimized to the fullest extent possible.

3.6.1 Topsoil Segregation

When constructing in wetland areas without standing water, up to one foot of topsoil (organic layer) will be stripped from the trench line and stockpiled separate from trench spoil to preserve the native seed stock. In standing water wetlands, organic soil segregation is not typically practical; however, the Contractor will attempt to segregate as much of the organic layer as possible based on site/saturation conditions. If normally unsaturated wetlands are saturated at the time of construction, topsoil segregation will be attempted according to Figure 2 and based on recommendations from the EI and appropriate regulatory agencies.

3.6.2 Trench Breakers

Where the EI determines that the pipeline trench has the potential to drain or partially drain a wetland, trench breakers will be installed as necessary to maintain the original wetland hydrology.

3.7 PIPELINE INSTALLATION

The following procedures are intended to minimize siltation and disturbance to wetlands during installation.

3.7.1 Push/Pull Method

Large wetlands with standing water can generally not be crossed with typical crossing methods. In these areas, the pipeline will be assembled in an upland area and positioned in the trench using the “push-pull" and/or "float" techniques.

Usually this fabrication requires use of ATWS adjacent to the construction ROW. A backhoe (or equivalent) supported on timber mats or equivalent low ground pressure equipment will be used to dig the trench. The prefabricated section of pipeline will then be pushed-pulled into position or floated across the wetland. When the pipeline is in position, floats, if used, will be removed and the pipeline will sink into position. The trench will then be backfilled and a backhoe or similar equipment working from construction mats or by low ground pressure equipment will be used restore the wetland.

3.7.2 Temporary Erosion and Sediment Controls

ECDs at approaches to wetlands will be installed as previously described and in accordance with Section 1.0.

3.7.3 Concrete Coating

Concrete will generally be mixed off-site, and concrete coated pipe will be transported to the construction ROW on trucks. If required, pre-fabricated concrete weights and/or saddlebag weights will also be used to provide negative buoyancy. Concrete weights will be manufactured off-site and transported to the ROW. Weights will be strung along the construction ROW, where necessary, until they are placed over the pipe within the excavated ditch. Limited mixing and coating activities may occur on the construction ROW for coating pipe joints and concrete weight repairs according to the concrete usage specifications in Section 10.0. Washing equipment used for mixing, pouring, casting, or coating will not be within 100 feet of any wetland

and will be conducted and contained in a leak-proof containment facility or impermeable liner. The EI will determine where ECDs will be installed down slope of equipment wash areas to capture sediments and minimize erosion from runoff.

3.8 BACKFILLING

Subsequent to pipe installation, backfilling of wetland trenches will take place immediately, or as approved by EI. The Contractor will restore wetlands as near as practicable to pre-construction conditions and will make a reasonable attempt to return the subsoil to its pre-construction density. During backfilling of wetland areas, subsoil material removed from the trench during construction will be replaced so that the material is not mounded above the adjacent ground surface (undisturbed trench wall). Subsoil that exceeds the elevation of the ground adjacent to the trench will be removed from the wetland and disposed of in an upland area or an Enbridge-approved disposal site. After the trench has been backfilled with subsoil, previously segregated topsoil will be spread over the trench area and mounded.

3.9 ROUGH GRADING, CLEANUP, AND TEMPORARY RESTORATION

Cleanup and rough grading activities may take place simultaneously. Cleanup typically involves removing construction debris and replacing fences removed during construction. Rough grading includes restoring original conditions within the disturbed areas (i.e., ditch line, spoil storage areas, and equipment travel lane) and installing or repairing temporary ECDs. Temporary slope breakers will be installed near the boundary between the wetland and adjacent sloped approaches, to prevent sediment flow into the wetland.

3.9.1 Timing

Cleanup and rough grading (including installation of temporary erosion control measures) will begin as soon as practical after the trench is backfilled, weather permitting.

3.9.2 Temporary Stabilization

Where necessary, disturbed wetland areas will be seeded with oats (40 lbs/acre) and/or a temporary seed mix, unless standing water is prevalent or unless permanent planting or seeding with native wetland vegetation is required by applicable permits. No fertilizer, lime, or mulch will be applied in wetlands.

4.0 HIGHWAY, ROAD AND RAIL CROSSINGS

4.1 ADDITIONAL WORKSPACE

Additional workspaces for bored road and railroad crossings and open-cut road crossings will be determined on a site-specific basis. These workspaces will be adjacent to the road or railroad and limited to the size needed to contain spoil, stage equipment, and store supplies for the crossing.

4.2 MAINTENANCE

Roadway crossings will be maintained in a condition that will prevent tracking of mud onto the roadway.

Rock tracking pads, constructed of stone as required by the applicable permits, will be installed adjacent to paved public roads to prevent or minimize the tracking of soil onto the roadway. If the roadside ditch is part of a jurisdictional waterway, a permit will be obtained prior to installing the tracking pad or culvert. If permitted in wetlands, tracking pads will be limited in size to reduce impacts. Tracking pads installed in wetlands will be constructed with clean rock placed on geotextile fabric, as approved by an EI and with approval from applicable regulatory agencies. All rock and fabric will be removed from the wetland during cleanup.

4.3 TEMPORARY EROSION AND SEDIMENT CONTROLS

Temporary ECDs (e.g., silt fence and/or double-staked straw bales) will be installed on sloped approaches to road crossings where vegetation has been disturbed (refer to Figure 25).

5.0 CONSTRUCTION DEWATERING

5.1 TRENCH DEWATERING

Prior to initiating dewatering activities, the EI will approve the water discharge plan to ensure that the BMPs are applied in such a way as to minimize the potential for scour and water containing sediment from reaching a wetland or waterbody. Furthermore, landowner approval is required in advance of placement of dewatering structures outside of the approved construction ROW. The Contractor will assess each water discharge situation to include:

1. **Water Discharge Setting** - This includes:

1. Soil Type - The soil type the discharged water would flow over. The management of discharged water traveling over sandy soil is more likely to soak into the ground as compared to clay soils.

2. Ground Surface - The topography in the area that would influence the surface flow of the discharged water.

3. Adjustable Discharge rate - The flow rate of the discharged water (which may need to vary) can be managed based on the site conditions to minimize instances of water from reaching a sensitive resource area such as a wetland or waterbody. (Example - Water discharged at 500 gallons per minute may soak into the ground while if discharged at a higher flow rate would cause water to flow via overland runoff into a sensitive resource area)

4. Discharge Outfall - The amount of hose and number/size of pumps needed to attempt to discharge water at a location which drains away from waterbodies or wetlands.

2. **Pump Intake** - Use floating suction hose or other similar measures to prevent sediment from being sucked from bottom of trench.

3. **Overwhelming Existing Drainage** - If the discharge (assumed to be clean) enters a stream, the flow added to the stream will not exceed 50 percent of the peak storm event flow (to prevent adding high water volumes to a small stream channel that causes erosion due to imposing high flow conditions on the stream.

4. **Filtering Mechanism –** All dewatering discharges will be directed through a filtering device as indicated below.

1. Well-Vegetated Upland Area – Water can be directed to a well-vegetated upland area through a geotextile filter bag. Geotextile bags need to be sized appropriately for the discharge flow and suspended sediment particle size.

2. Straw Bale Dewatering Structure – Where the dewatering discharge point cannot be located in an upland area due to site conditions and/or distance, the discharge should be directed into a straw bale dewatering structure. The size of the straw bale dewatering structure is dependent on the maximum water discharge rate (refer to

Figure 21). A straw bale dewatering structure should be used in conjunction with a geotextile filter bag to provide additional filtration near sensitive resource areas.

3. Alternative dewatering methods - Alternative methods may be approved by Enbridge on a site-specific basis.

5.1.1 Flow Measurement and Water Sampling

The volume of water discharged from the trench will be recorded as required by the applicable permits. The volume may be determined using a flow meter, or equivalent method, as approved by Enbridge or specified by applicable permit conditions.

Samples of the water discharged will be sampled if required by tribal permits and/or state-issued discharge permits.

5.1.2 Regulatory Notification and Reporting

Enbridge will notify and submit reports to appropriate tribal, state and federal agencies as required by all permits/authorizations.

5.2 HYDROSTATIC TEST DISCHARGES

Hydrostatic testing involves filling the new pipeline segments with water acquired in accordance with applicable permits (refer to Section 6.0), raising the internal pressure level, and holding that pressure for a specific period of time per federal DOT specifications. Hydrostatic testing will be done to verify that there are no flaws in the pipe or welds. Pre-built sections may be hydrostatically tested prior to installation using HDD and/or guided bore techniques. Hydrostatic testing will be conducted in accordance with applicable appropriation and discharge permits obtained by Enbridge. Hydrostatic test waters will not be transferred from one waterbody to another. Chlorinated source water will be used and treated as specified in applicable permits. After the hydrostatic test is complete, the line will be depressurized and the water discharged.

5.2.1 Refueling

The operation and refueling of hydrostatic test equipment will be in accordance with the conditions outlined in Section 10.0.

5.2.2 Siting of Test Manifolds

Hydrostatic test manifolds will be installed where necessary to ensure proper test pressures and incorporates changes due to topography. Where feasible, Enbridge will incorporate minor adjustments to the test manifold locations to avoid placement in wetlands and riparian areas. However, completely avoiding the placement of a test manifold in a wetland may not always be possible. The Contractor will install appropriate erosion control measures where the EI determines they are necessary.

5.2.3 Water Sampling

Water discharged from hydrostatic tests will be sampled as required by state-issued appropriation or discharge permits. Water volumes and flow rates will be recorded using the form provided in Appendix D.

5.2.4 Best Management Practices

Prior to hydrostatic testing the pipeline, Enbridge will prepare the pipe by removing accumulated construction debris, mill scale, dirt, and dust using a cleaning pig. The debris will be collected in a temporary receiver and will be properly disposed off-site of by the Contractor. Upon completion of the cleaning operation, the pipeline will be sealed with the test headers.

Test headers and pigs will be arranged to allow for rinse water to be installed ahead of the fill pigs. Rinse water will be treated and disposed of in accordance with applicable permit conditions.

Following testing, the test section will be depressurized and the water will be discharged to a well-vegetated, upland area with an appropriate dewatering structure such as a geotextile filter bag and/or a hay bale structure that will be lined with geotextile fabric. Direct discharges to surface waters, if allowed by permit, will be directed into an energy dissipation device such as a splash pup.

At no time will the discharge rate exceed the applicable discharge rates specified in state-issued or other discharge permits. In the event no maximum discharge rate is identified, discharges will be monitored and adjusted as necessary to avoid scouring, erosion, or sediment transport from the discharge location.

To minimize the potential for introduction and/or spread of invasive species due to hydrostatic testing activities, Enbridge will discharge water to the same source location from which it was appropriated. If water is used to test multiple test sections, it will be relayed back to the source water through the pipeline for final discharge. Test water will not be discharged to a waterbody other than the appropriation source, unless coordinated and permitted through the applicable agencies.

5.2.5 Flow Measurement

The total volume of water discharged will be determined with a flow meter (or equivalent), or as required by the applicable state permit. The total volume of water discharged will not exceed the volume specified in the applicable permit.

6.0 WATER APPROPRIATION

6.1 GENERAL

Water may be drawn from local sources, such as lakes, streams, and private or municipal wells for construction activities such as dust control, HDD/guided boring, trench dewatering, and hydrostatic testing. The Project will follow applicable permit conditions for the appropriation of water.

The intake hose will be suspended off of the stream or lake bottom and equipped with a screen, or equivalent device, to prevent fish uptake. During withdrawal, adequate waterbody flow rates and volumes will be maintained to protect aquatic life and allow for downstream uses. The volume and rate of withdrawal will be monitoring to comply with applicable permit conditions.

6.2 WATER SOURCES

Water will only be withdrawn from sources approved by Enbridge and in accordance with applicable permits. No additives to the water are permitted unless written approval is received from Enbridge and applicable permits authorize such additives.

If appropriation is scheduled to occur during possible periods of low flow, including frozen conditions, a backup source will be identified.

6.3 FLOW MEASUREMENT

At no time will the withdrawal rate for the water source exceed the rate specified in the applicable permits.

The Contractor will measure the withdrawal rate and total volumes of water appropriated with a flow meter (or equivalent) and provide the data to Enbridge, as required by the applicable permits.

6.4 WATER SAMPLING

Where required by permit conditions, Enbridge will sample the water during appropriation. The Contractor will assist Enbridge in obtaining these samples.

6.5 REGULATORY NOTIFICATION AND REPORTING

Enbridge will notify appropriate agencies of the time of appropriations if required by the state appropriations permits. Enbridge will submit reports regarding the volume and quality of the water withdrawn if required by the applicable permits.

7.0 REVEGETATION & MONITORING

This section was developed in conjunction with Natural Resources Conservation Service ("NRCS") guidelines. Project-specific permit conditions and landowner requests (with exception to wetlands) for specific seed mixes (as indicated in the Project CLL) take precedence over this section.

7.1 PROJECT SEED SPECIFICATIONS

Seed used will be purchased on a "Pure Live Seed" ("PLS") basis for seeding (both temporary and permanent) revegetation areas. Seed tags will identify:

- purity;
- germination;
- date tested;
- total weight and PLS weight;
- weed seed content; and
- seed supplier's name and business information.

Seed will be used within 12 months of testing as required by applicable state rules and regulations. The seed tags on the seed sacks will also certify that the seed is "Noxious Weed Free". Seed rates used on the Project will be based on PLS rate, not actual weight basis. Therefore, to determine the correct application rate if not indicated on the seed tag, a correction calculation will be performed based the purity and germination. For example, a seed mix that has a specified 10 pounds PLS per acre, 95 percent germination rate, and is 80 percent pure needs to be applied at the following rate:

(95% germination × 80% purity)/100 = 76% PLS
10 pounds PLS per acre/.76% PLS = 13.2 pounds per acre actual seeding rate

The species components of individual mixes are subject to availability at the time of purchase. Grass species may be substituted with alternative native or non-invasive species that are included in the NRCS guidelines and subject to approval by Enbridge.

Seed tags will be collected by the contractor and provided to Enbridge during seeding activities. The tags will be reviewed by the EI prior to installation to ensure that the seed mix complies with Enbridge's specifications and that it is being applied to the correct location. If bulk delivery of seed is made, the above information will still be made available to Enbridge. Off-loading/on-loading of seed will not be performed in a designated wetland area.

Legume seed (if used) will be treated with an inoculant specific to the species and in accordance with the manufacturer's recommended rate of inoculant appropriate for the seeding method (broadcast, drill, or hydroseeding). When hydroseeding, four times the manufacturer's recommended rate of inoculant will be used.

7.2 TEMPORARY REVEGETATION

Enbridge's temporary seed mix (refer to Appendix C) was developed based on recommendations from the NRCS. Unless specifically requested by landowners or land

managing agencies, Enbridge does not intend to establish temporary vegetation in actively cultivated land, standing water wetlands, and/or other standing water areas.

7.3 TIMING FOR TEMPORARY VEGETATION

Temporary revegetation will be established in construction work areas where 14 days or more will elapse between:

- the completion of final grading at a site and the establishment of permanent vegetation; and/or,
- where there is a high risk of erosion due to site-specific soil conditions and topography.

Enbridge may require the Contractor(s) to conduct temporary seeding sooner than 14 days at site-specific locations near sensitive resource areas and/or areas prone to wind/water erosion.

Temporary vegetation should be established at any time between **April 1 and September 1**. Attempts at temporary revegetation after this date should be assessed on a site-specific basis and with approval from Enbridge.

7.4 MULCH

Mulch (weed-free straw, wood fiber hydromulch, or a functional equivalent) will be applied to disturbed areas (except for actively cultivated land and wetlands) if requested by the landowner or land managing agency, if specified by the applicable permits or licenses, or as required by Enbridge. Mulch will specifically be required on:

- slopes greater than 5 percent; and
- dry, sandy areas that can blow or wash away (field decision).

Mulch will be free of noxious weeds as listed in applicable state laws. Certified weed-free mulch may also be required at site-specific locations. The Contractor will be responsible for identifying and acquiring sources of weed-free and certified weed-free mulch. Sources will be approved by Enbridge prior to purchase.

Mulch will be applied at a rate of 2 tons per acre to cover at least 75 percent of the ground surface unless otherwise stipulated by permit conditions. Mulch will be uniformly distributed by a mechanical mulch blower, or by hand in areas not accessible to the mulch blower. Mulch will be anchored/crimped using a mulch-anchoring tool or disc set in the straight position to minimize loss by wind and water, as site conditions allow. In areas not accessible to a mulch-anchoring tool or too steep for safe operation, the mulch may be anchored by liquid tackifiers, with advance written approval from Enbridge. The manufacturer's recommended method and rate of application will be followed.

Hydro-mulch and liquid tackifier can be used in place of straw or weed-free hay mulch with prior approval from Enbridge. All hydromulch and liquid tackifier products used will be on the applicable state DOT product list. Application rates will be at the manufacturer's recommended rate, equal to or greater than 2 tons per acre of straw mulch.

7.5 PERMANENT REVEGETATION

Permanent vegetation will be established in areas disturbed within the construction work area (permanent easement, TWS, and ATWS) except in actively cultivated areas and standing water wetlands. The seed mixes for permanent seeding include native seed varieties commonly found and/or available from local seed distributors. Enbridge's seed mixes (refer to Appendix C) were selected to augment revegetation via natural recruitment from native seed stock in the topsoil and are not intended to change the natural species composition. Rates provided are assumed for a drill application and will be adjusted as discussed in Section 7.1.

7.6 UPLAND CONSTRUCTION AREAS

In consulting with the NRCS and other agencies, Enbridge developed standard upland seed mixes for restoring disturbed areas affected by the Project (Appendix C, Tables 1-23). These mixes include species that will provide for effective erosion control and revegetation of the project area. These seed mixes will be used by Enbridge as the standard upland mixes unless an alternate seed mix is specified by a landowner or land managing agency.

7.7 PERMANENT SEEDING OF WETLAND AREAS

7.7.1 Unsaturated Wetland Areas

Non-standing water wetlands in Minnesota will be seeded with the mix provided in Appendix C, Table 17 (MN Seed Mix 3) to provide temporary cover and allowed to revegetate naturally. No unsaturated wetlands will be seeded in North Dakota. The natural revegetation process will be encouraged by the seeds and rhizomes in the topsoil spread back over the ROW after pipe installation. No fertilizer, lime, or mulch will be applied in wetlands.

7.7.2 Saturated/Standing Water Wetlands

Enbridge does not propose to seed saturated or standing water wetland areas. It is widely accepted that the reestablishment of vegetation within standing water wetlands occurs best through natural process without supplemental seeding.

7.7.3 Forested Wetland Restoration

Enbridge proposes to allow natural reforestation of the TWS area within forested wetlands via stump sprouting, root sprouting, and natural recruitment. Specific forested wetland restoration provisions will be followed as indicated in applicable permits issued for the Project.

7.8 PERMANENT SEEDING OF WATERBODY BANKS

Enbridge will reestablish stream bank vegetation in North Dakota using ND Seed Mix 2 (Table 2, Appendix C), and in Minnesota using MN Seed Mix 2 (Table 16 Appendix C) unless an alternate seed mix is requested by applicable agencies. Additional vegetation requirements may also be contained within project-specific permits. Where a waterbody is located within a wetland, the Contractor will re-seed the banks with the applicable wetland seed mix.

7.9 SPECIALIZED SEED MIXES

Enbridge developed specialized seed mixes for restoring these areas:

1. Native prairie in North Dakota and Minnesota;
2. Openings in forested areas in Minnesota;
3. Mixed native prairie/tamed hayland areas and road ditches in North Dakota, and Minnesota;
4. Tame pasture and Conservation Reserve Program ("CRP") lands;
5. North Dakota State School land; and
6. Protected waterbody banks and wetland fringes in Minnesota.

Enbridge will provide other specialized seed mixes upon landowner request on a site-specific basis for:

- Residential Areas: This seed mix will be used to reestablish residential lawns or other types of "turf-type" land cover.
- Wildlife Areas: This seed mix will be used to provide a desirable food source for wildlife, specifically deer.

7.10 CONSERVATION RESERVE PROGRAM PROPERTIES

Enbridge's Land Agents will contact landowners where the construction ROW crosses land enrolled in CRP. Enbridge will work with the respective landowners to identify the parcel-specific CRP seed mixes. CRP lands will be seeded at the direction of the landowner per the site-specific landowner CRP requirements for that parcel and no non-CRP approved seed mix will be planted on CRP lands. CRP parcels will also be seeded with Enbridge's temporary cover seed mix. Seed for CRP seeding will meet the same criteria as other seed described in Section 7.1

7.11 SEED BED PREPARATION AND SEEDING PROCEDURES

After final grading, deep tillage will be performed in actively cultivated areas and in non-agricultural areas (as directed by Enbridge) to relieve soil compaction and promote root penetration. Deep tillage will not be conducted in non-farmed wetlands. The soil will then be tilled with a disc, field cultivator, or chisel plow (or equivalent) to prepare a seedbed, breaking up large clods and firm the soil surface.

Tillage and equipment operations related to seeding and mulching will be performed parallel to ground contours as much as practicable. Fertilizer and other soil amendments will be incorporated into the soil during seedbed preparation as specified by Enbridge in the project-specific CLL requirements and permits. No soil amendments will be applied in wetlands unless directed by the appropriate agencies.

7.12 SEEDING METHODS

Seed will be applied uniformly at specified rates across the prepared construction ROW by drilling, broadcasting, hydroseeding, or air seeding. The EI will suspend seeding activities if conditions are such that equipment will cause rutting of the surface in the designated seeding areas. Enbridge will continue to monitor ROW conditions to resume seeding activities as site conditions improve and according to the general seeding timing restrictions listed in Section 7.15.

7.12.1 Drill Seeding

Seeding equipment will be capable of uniformly distributing the seed and sowing it at the required depth. Drills will be equipped with a feeding mechanism that will provide a uniform flow of seed at the desired application rate. Double-disc furrow openers equipped with depth bands and packer wheels to firm the soil over the seed will be used where practicable.

7.12.2 Broadcast Seeding

Broadcast seeding rate will be double the drill-seeding rate. Seed will be uniformly distributed by a mechanical or hand operated seeder. Following seeding, a cultipacker, harrow, or hand rake will be used to cover the seeds and firm the seedbed as is appropriate for the area.

7.12.3 Hydroseeding

Hydroseeding rate will be double the drill seeding rate, or the same as broadcast seeding rate. Seed will be applied alone or in a seed, fertilizer, and/or hydromulch slurry. If seeding is applied alone, the amount of hydromulch material will be adjusted to the seed slurry to show where seeding has taken place, providing a means to identify uniform cover of the construction ROW. Hydroseeders will provide continuous agitation and be capable of supplying a continuous, non-fluctuating flow of slurry. Enbridge will pre-approve all hydromulch products, which must be on the applicable state DOT product list.

7.13 COMPANION CROPS

A companion crop is an annual that can be planted with the perennial species where soil erosion is a severe hazard. A companion crop may be used for all seed mixes.

Seeding rates for companion crops are lower than normal seeding rates for those crops to reduce competition with the seeded perennial species.

Table 7.13-1
Companion Crops

Seed	Planting Rate
Barley	10 lbs/acre
Oats	10 lbs/acre
Spring wheat	15 lbs/acre
Flax	7 lbs/acre

7.14 SOIL AMENDMENTS

Enbridge will consult with NRCS representatives and review county soil survey information to assess where soil amendments, specifically the application of fertilizer or lime are needed to promote successful revegetation. No fertilizer or lime will be added with native seed mixes. When using non-native species on dry, dry-mesic and mesic sites for permanent seeding a minimum of 150 pounds of 20-10-10, and 2 tons of 80-85 lime or equivalent will be applied, unless otherwise specified or restricted by the landowner, NRCS, or land-managing agency. Soil amendments may be applied to agricultural, pasture, and/or residential lands if requested by landowners and/or land managing agencies. Enbridge will apply phosphate free fertilizers to areas within 100 feet of a waterway if soil amendments are required.

7.15 SEEDING PERIODS

Recommended seeding dates in Table 7.15-1 are based on climatic records, research, and experience; and they also represent optimum periods for the germination of grass and legumes. The dates below provide adequate development of adventurous roots prior to stressful periods.

Table 7.15-1
Recommended Seeding Dates

Species Type and Season of Planting	Recommended Dates
Cool Season Species Spring Late Summer Late fall dormant seeding	Prior to May 20 August 10 to September 1 Typically, November 1 and later
Warm Season Species Spring	May 10 to June 25
Warm/Cool Season Mix Spring	May 1 to June 14

Enbridge will delay seeding during frozen ground conditions until the applicable spring seeding period or will complete dormant seeding where conditions allow (i.e., no snow cover). Enbridge will install temporary erosion controls during frozen conditions.

7.16 TIMING OF FINAL SEEDING

Upon final grading of the construction ROW, and upon the restoration of wetland and waterways, seeding and restoration/stabilization will occur within 48 hours if weather and soils conditionals allow. Other methods of stabilization will be used if temporary seeding is not appropriate due to seasonal conditions (e.g., mulch, erosion control matting).

7.17 EROSION AND SEDIMENT CONTROL

Erosion control blankets, such as sewn straw mats, jute mats, coconut erosion control blankets, or biodegradable synthetic erosion control blankets, as approved by Enbridge, will be used on slopes over 30 percent, on stream banks and ditch banks and as directed by Enbridge.

7.18 DORMANT SEEDING

Dormant seeding is a method used after soil temperatures have cooled to 55 degrees Fahrenheit or cooler to prevent seed germination. Dormant seeding is only practicable if the soil is not frozen and snow is not present. Procedures for applying soil amendments, seedbed preparation, seeding, and mulching are the same as outlined for permanent revegetation in this section.

Where dormant seeding is conducted, one or more of the following temporary erosion and sediment controls will be put in place over the freshly seeded area unless the local soil conservation authority, landowner, or land managing agency specifies otherwise. The temporary measures will be in place within 48 hours of seeding, and are as follows:

- noxious weed-free straw mulch, at not more than 2 tons/acre, anchored;
- hydromulch, at 2 tons/acre, anchored; and/or
- erosion control blanket.

Additional erosion control measures will be applied as requested by the EI.

7.19 MANAGEMENT AND MONITORING

Enbridge will monitor and address all areas where stabilization techniques have been implemented in accordance with conditions identified in the applicable project permits and/or licenses.

8.0 WINTER CONSTRUCTION

Frozen conditions can preclude effective topsoil segregation. When soil is frozen to a depth greater than the depth of topsoil, the soil will come off in thick slabs that contain both topsoil and subsoil, and mixing can result. If top soiling will proceed under these conditions, it should be done at the excavation only. A ripper (deep tillage device or scarifier) should be used to break up the frozen topsoil over the trench line only. Care should be taken to only rip to the actual depth of topsoil or to a maximum depth of 12 inches, whichever is less. Topsoil in the spoil storage area should be graded smooth to minimize mixing during backfilling. Sufficient time is needed to allow the newly graded topsoil to freeze in place prior to trenching.

Summer construction of large diameter pipelines in saturated/standing water wetlands with unconsolidated soils can be difficult and potentially result in greater wetland disturbance including wider trench widths and extensive rutting/surface disturbance. Constructing across these types of wetlands in the winter can result in fewer impacts. Heavy construction equipment use and travel along the construction ROW, which may not be possible in summer conditions due to saturated, unstable soil conditions, can be accomplished in the winter by establishing temporary winter frost/ice roads. These frost/ice roads protect underlying vegetation and upper layers of wetland surfaces from disturbance potentially created during summer construction.

The area of open excavation will be minimized during winter construction to reduce amount of frozen backfill and facilitate restoration to pre-construction contours. If winter conditions preclude final grading and cleanup, the Contractor will stabilize the area and temporary erosion control measures will remain in place until permanent erosion control measures are installed. Depending on site and weather conditions, Enbridge may require the Contractor to install dormant seeding, mulching, and/or installation of erosion control blanket on stream banks or other sensitive locations.

9.0 WASTE MANAGEMENT

The Contractor will properly handle, store, and dispose of all solid and hazardous materials and wastes that are used or generated by the Contractor as a result of the Project. The Contractor will determine if the materials and wastes associated with the Project classify as hazardous materials and/or wastes in accordance with applicable federal and/or state criteria. Upon request by Enbridge, the Contractor will provide documentation to Enbridge to substantiate findings of the regulatory status of materials and/or wastes used and/or generated as a result of the Project.

The Contractor will collect all waste materials, including oil or other waste liquids generated as a result of equipment maintenance, daily in suitable or approved containers (i.e., labeled and meeting any relevant regulatory requirements). On a routine basis, the Contractor will remove the containers of waste from the site and properly dispose of them. Throughout the duration of the Project, the Contractor will cleanup areas to the satisfaction of Enbridge. The Contractor is responsible for proper off-site disposal of all wastes generated during the Project. No wastes are to be left on Enbridge property, along the ROW, or buried in an excavation or otherwise disposed of on Enbridge property or ROW.

9.1 HAZARDOUS WASTES

If a Contractor generates a hazardous waste from materials they have brought on-site (e.g., paint clean-up solvents, waste paints), then the Contractor is responsible for proper waste collection, storage and disposal in accordance with all applicable regulations. The Contractor remains responsible for the proper handling, storage and disposal of the hazardous waste. Any release of the hazardous waste as a result of the improper handling, storage or disposal by the Contractor in this instance is the responsibility of the Contractor to rectify to the satisfaction of Enbridge and all applicable regulatory agencies.

9.2 ABRASIVE BLAST DEBRIS

The Contractor will contain and collect spent abrasive blast materials and place it into appropriate containers. The Contractor is responsible for covering the containers with appropriate means of rainwater and stormwater control to prevent said waters from entering or exiting the container. The Contractor is responsible for disposal of the spent abrasive in accordance with applicable federal, state and local regulatory requirements. The Contractor is responsible for determining if the spent abrasive is classified as a “hazardous” or “special” waste as defined by applicable federal and state regulations. If the spent abrasive is determined to be hazardous waste as a direct result of constituents of an Enbridge facility or equipment, Enbridge will coordinate proper disposal with the Contractor as previously discussed.

10.0 SPILL PREVENTION, CONTAINMENT, AND CONTROL MEASURES

This section describes planning, prevention and control measures to minimize impacts resulting from spills of fuels, petroleum products, or other regulated substances as a result of construction. These measures will be implemented by the Contractor, unless otherwise indicated by Enbridge.

10.1 PLANNING AND PREVENTION

Enbridge requires its Contractors to implement proper planning and preventative measures to minimize the likelihood of spills, and to quickly and successfully clean up a spill should one occur. This section sets forth minimum standards for handling and storing regulated substances and cleaning up spills. Potential sources of construction-related spills include machinery and equipment failure, fuel handling, transfer accidents and storage tank leaks. The Contractor will be responsible for implementing, at a minimum, the following planning and prevention measures.

10.2 ROLES AND RESPONSIBILITIES

10.2.1 Spill Coordinator

A Spill Coordinator will be designated by the Contractor, subject to approval by Enbridge. For all construction related spills, the Spill Coordinator will:

- report all spills to the Enbridge Representative immediately;
- report spills to appropriate federal, state and local agencies as soon as possible (subject to EI verification);
- mobilize on-site personnel, equipment, and materials for containment and/or cleanup commensurate with the extent of the spill;
- assist the Emergency Response Contractor (refer to a list of potential contractors provided in Appendix E) and monitor containment procedures to ensure that the actions are consistent with the requirements of this section;
- in consultation with Enbridge and appropriate agencies, determine when it is necessary to evacuate spill sites to safeguard human health;
- in consultation with Enbridge, coordinate with appropriate agencies the need to contact additional parties or agencies; and
- complete a Spill Report Form (refer to Appendix F) within 24-hours of the occurrence of a spill, regardless of the size of the spill.

10.2.2 Environmental Inspector

The EI will monitor the Contractor's compliance with the provisions of this section to ensure that appropriate agency notifications are made, spill resources are allocated, and clean-up is accomplished in accordance with applicable agency requirements

10.2.3 Authorized Personnel

Authorized Personnel are representatives of the Contractor who are designated to handle fuel, lubricants or other regulated substances. Authorized Personnel will be familiar with the requirements of this section and the consequences of non-compliance.

10.2.4 Construction Superintendent

The Contractor's Construction Superintendent or representative will notify the EI immediately of any spill of a petroleum product or hazardous liquid, regardless of volume.

10.2.5 Construction Personnel

Construction Personnel are representatives of the Contractor involved with the installation of the pipeline. Construction Personnel will notify the crew foreman or Spill Coordinator immediately of any spill of a petroleum product or hazardous liquid, regardless of volume.

10.3 TRAINING

The Contractor will train all employees handling fuels and other regulated substances to follow spill prevention procedures. The Contractor will train all employees who handle fuels and other regulated substances to prevent spills and to quickly and effectively contain and clean up spills that may occur in accordance with applicable regulations. .

10.4 EQUIPMENT

- Each construction crew will have adequate absorbent materials and containment booms on hand, to enable the rapid cleanup of any spill which may occur.

- The Contractor will maintain spill kits containing a sufficient quantity of absorbent and barrier materials to adequately contain and recover foreseeable spills. These kits may include, but are not limited to absorbent pads, straw bales, absorbent clay, sawdust, floor-drying agents, spill containment barriers, plastic sheeting, skimmer pumps, and holding tanks. This equipment will be located near fuel storage areas and other locations as necessary to be readily available to control foreseeable spills.

- Suitable plastic lining materials will be available for placement below and on top of temporarily-stored contaminated soils and materials.

- All fueling vehicles, and where necessary, service vehicles, will carry materials adequate to control foreseeable spills. Such material may include but not be limited to absorbent pads, commercial absorbent material, plastic bags with ties, and shovels.

- The Spill Coordinator will inform the Authorized Personnel, Construction Personnel, and the EIs of the locations of spill control equipment and materials, and have them readily accessible during construction activity. Spill kits should be clearly labeled for quick and easy identification in the field.

- All fuel nozzles will be equipped with functional automatic shut-offs.

- Fuel trucks transporting fuel to on-site construction equipment will travel only on approved access roads.

10.5 SUPERVISION AND INSPECTION

The Contractor will perform a pre-construction inspection and test of all equipment to ensure that it is in good repair. During construction, the Contractor will regularly inspect hoses, pipes, valves, and tanks to ensure equipment is free of leaks. Any equipment that found to be is leaking or in need of repair will be immediately removed from service by Contractor and repaired, prior to resuming work.

10.6 STORAGE AND HANDLING OF FUELS/HAZARDOUS LIQUIDS

10.6.1 Fuel Storage - General

The Contractor will follow proper fuel storage practices, including, but not limited to the following:

- Fuel storage will be at Contractor yards only or as approved by Enbridge.

- Proper signage at and adjacent to fuel storage areas to include “Fuel Storage Area – No smoking within 50 feet.”

- Tools and materials to stop the flow of leaking will be kept on-site. Such equipment may include, but not be limited to, plugs of various sizes, 3M tank patches, a hammer, assorted sizes of metal screws with rubber washers, a screwdriver, and plastic tape.

- Fuels, lubricants, waste oil, and any other regulated substances will be stored in aboveground tanks only.

- Storage tanks and containers will conform to all applicable industry codes (e.g., National Fire Protection Association [NFPA], Unified Facilities Criteria [UFC]).

- A suitable secondary containment structure will be utilized at each fuel storage site. These structures will be lined with suitable plastic sheeting; provide a minimum containment volume equal to 150 percent of the volume of the largest storage vessel.

- Secondary containment areas will not have drains. Precipitation may be drawn off as necessary. If visual inspection indicates that no spillage has occurred in the secondary containment structure, accumulated water may be drawn off and discharged in accordance with Section 5.0. If spillage has occurred in the structure, accumulated waste will be drawn off and pumped into drum storage for disposal.

10.6.2 Refueling

Contractor will make all efforts to dispense fuel by Authorized Personnel during daylight hours. Fuel dispensing operations will be attended by Authorized Personnel at all times. Personnel will be stationed at both ends of the hose during fueling unless both ends are visible and are readily accessible by one person.

10.6.3 Refueling, Maintenance, and Fuel Storage Near Wetlands and Waterbodies

Enbridge requires that the storage of petroleum products, refueling, maintenance, and lubricating operations take place in upland areas that are more than 100 feet from wetlands, streams, and waterbodies (including drainage ditches), and water supply wells. In addition, the Contractor will store hazardous materials, chemicals, fuel and lubricating oils, and perform concrete coating activities outside these areas.

In certain instances, refueling or fuel storage may be unavoidable due to site-specific conditions or unique construction requirements (e.g., continuously operating pumps or equipment on barges). These locations will be approved in advance by the EI. Site-specific precautions, in addition to those practices described above, will be taken when refueling or maintenance activities are required within 100 feet of streams, wetlands or other waterbodies. These precautions include, but are not limited to:

- adequate amounts of absorbent materials and containment booms will be kept on hand by each construction crew to enable the rapid cleanup of any spill which may occur;
- if fuel will be stored within wetlands or near streams for refueling of continuously operating pumps, secondary containment will be used;
- secondary containment structures will be lined with suitable plastic sheeting, provide a containment volume of at least 150 percent of the storage vessel, and allow for at least one foot of freeboard; and
- provide adequate lighting for these locations and activities.

10.6.4 Overnight parking

Overnight parking of equipment (including but not limited to light plants, generators, pumps, and machinery) is not allowed within 100 feet of a wetland or waterbody unless special containment provisions have been implemented and approved by the EI in advance.

10.6.5 Concrete Washout Handling

Concrete wash water, grindings and slurry, will not be discharged to wetlands, waterbodies, and storm sewer systems or allowed to drain onto adjacent properties. Wash water disposal will be limited to a defined area of the site or to an area designated for cement washout. The area(s) will be sufficient to contain the wash water and residual cement. Contractors hired to provide concrete products will provide equipment capable of reclaiming wash water during wash out.

10.7 INITIAL SPILL MANAGEMENT

10.7.1 Immediate Response

Immediately upon learning of any fuel, oil, hazardous material or other regulated substance spill, or upon learning of conditions that will lead to an imminent spill, the person discovering the situation will:

- initiate actions to contain the fluid that has spilled or is about to spill, and initiate action to eliminate the source of the spill to the maximum extent that is safely possible; and
- notify the crew foreman and/or the Spill Coordinator and provide them with the following information:
    - location and cause of the spill;
    - the type of material that has spilled; and
    - whether the spill has reached or is likely to reach any surface water.

Upon learning of a spill or a potential spill the Spill Coordinator will:

- assess the situation and determine the need for further action;
- direct subsequent activities and/or further assign responsibilities to other personnel; and
- notify the EI.

10.7.2 Mobilization

The Spill Coordinator will mobilize on-site personnel, equipment, and materials for containment and/or cleanup commensurate with the extent of the spill. If the Spill Coordinator feels that a spill is beyond the scope of on-site equipment and personnel, the Spill Coordinator will immediately notify the Construction Superintendent that an Emergency Response Contractor is needed to contain and/or clean up the spill. Appendix E contains a list of potential Emergency Response Contractors. The Spill Coordinator will assist the Emergency Response Contractor and monitor containment procedures to ensure that the actions are consistent with the requirements of this Section.

In the event of a suspected Enbridge pipeline spill (or from an adjacent pipeline), Enbridge's Emergency Pipeline Control Center will be notified at 1-800-858-5253 (24-hours/day), as well as the Enbridge EI. Actions requiring emergency response will be coordinated by Enbridge.

10.8 SPILL NOTIFICATION RESPONSIBILITIES

10.8.1 Notification Volumes

The Contractor's Construction Superintendent or representative will notify the Enbridge Representative and the EI immediately of any spill of a petroleum product or hazardous liquid, regardless of volume.

10.8.2 Spill Report Form

The Spill Coordinator will complete a Spill Report Form (Appendix F) for each release of a regulated substance, regardless of volume. The Spill Report Form will be submitted to the EI within 24 hours of the occurrence of a spill. Follow-up written reports, associated laboratory analyses, and other documentation may also be required separately on a site-specific basis as directed by the EI. Documentation is the responsibility of the Contractor.

10.8.3 Agency Notification

The Contractor will report spills to appropriate federal, state and local agencies as soon as possible. A listing of federal, state, and local agencies including reporting thresholds and timeframes is provided in Appendix G.

The Contractor, in coordination with Enbridge and the appropriate federal, state and local agencies will ensure that additional parties or agencies are properly notified. Additionally, the Contractor is responsible for ensuring that all cleanup activities required by a jurisdictional agency are satisfactorily met and provide documentation to Enbridge demonstrating this compliance.

10.9 SPILL CONTAINMENT AND CLEANUP

In the event of a spill, the Contractor will abide by all applicable federal, state and local regulations with respect to cleaning up the spill. All clean-up and other construction related spill activities will be completed by, and costs assumed by the Contractor. Specific cleanup measures for both upland and wetland/waterbody spills are described below.

10.9.1 Spill Control - Upland Areas

- If a spill should occur during refueling operations, STOP the operation until the spill can be controlled and the situation corrected.
- The source of the spill will be identified and contained immediately.
- For large spills on land, the spill will be contained and pumped immediately into tank trucks. The Contractor or, if necessary, an Emergency Response Contractor, will excavate contaminated soil.
- The spilled material and the contaminated soil will be treated and/or disposed of in accordance with all applicable federal, state, and local agency requirements.

- Smaller spills on land will be cleaned up with absorbent materials. Contaminated soil or other materials associated with these releases will also be collected and disposed of in accordance with applicable regulations.

- Flowing spills will be contained and/or absorbed before reaching surface waters or wetlands.

- Absorbent material(s) will be placed over spills to minimize spreading and to reduce its penetration into the soil.

- The Spill Coordinator, in consultation with the EI and appropriate agencies, determine when spill sites will be evacuated as necessary to safeguard human health. Evacuation parameters will include consideration for the potential of fire, explosion, and hazardous gases.

10.10 SPILL CONTROL - WETLANDS AND WATERBODIES

In addition to the above measures, the following conditions apply if a spill occurs near or into a wetland or waterbody, regardless of size:

- If a spill occurs during refueling operations, **STOP** the operation until the spill can be controlled and the situation corrected.

- The Contractor will use absorbent booms and pads to contain and recover released materials in standing water.

- If necessary, for large spills in waterbodies, The Contractor will secure an Emergency Response Contractor to further contain and clean up the spill.

- The Contractor will excavate contaminated soils in wetlands and temporarily place them on plastic sheeting in a bermed area, a minimum of 100 feet away from the wetland. Contaminated soils will be covered with plastic sheeting while being stored temporarily and properly disposed of as soon as possible, in accordance with Section 10.11.

10.11 STORAGE AND DISPOSAL OF CONTAMINATED MATERIALS

- Appendix E lists potential treatment and disposal facilities for contaminated materials, petroleum products, and other construction-related wastes. The Contractor should recycle those wastes, such as motor oil, where there is an established recycling program available. Wastes such as grease or oily rags shall be disposed of in accordance with state requirements.

- The Contractor will store and dispose of all contaminated soils, absorbent materials, and other wastes in accordance with all applicable state and federal regulations.

- Only licensed carriers may be used to transport contaminated material from the site to a disposal facility.

- If it is necessary to temporarily store excavated soils on site, these materials will be placed on, and covered by, plastic sheeting, and the storage area bermed to prevent and contain runoff.

11.0 DRILLING FLUID RESPONSE, CONTAINMENT, AND NOTIFICATION PROCEDURES

Construction of a pipeline may include the use of trenchless methods known as the HDD and guided/road bore methods. Throughout this section, both methods are referred to collectively as "drilling". While the HDD method always includes the use of drilling fluid, the guided or road bore method might use drilling fluid or only use water to power and lubricate the bore. The HDD drilling fluids/mud consists primarily of water mixed with inert bentonite clay. Under certain conditions an additive may need to be mixed with the drilling fluids/mud for viscosity or lubricating reasons. Only non-hazardous additives will be used and a Safety Data Sheet for the drilling fluid will be maintained on-site.

This section elaborates on measures to be implemented by the Contractor if an inadvertent release of drilling fluid occurs despite prevention efforts. Prior to the commencement of drilling operations, the Contractor will inform construction personnel involved as to the responsible party(ies) for release containment and response. The Contractor will ensure that the appropriate response personnel and containment equipment are on site for each drill/bore.

11.1 ON-SITE OBSERVATION DURING CONSTRUCTION

During construction of a drilled crossing, Contractor personnel will monitor the pipeline route throughout the process, as follows:

The Contractor will inform construction observers on what to watch for and will make them aware of the importance of timely detection and response actions to any release of drilling fluid.

- Construction observers will have appropriate, operational communication equipment (e.g., radio and cell phones) available at all times during installation of the directionally drilled crossing, with the ability to communicate directly with the HDD operator.

- The HDD operator will monitor the annular drilling fluid pressures during pilot hole operations.

- If the HDD operator identifies a sustained loss in fluid pressure or loss of circulation:

    - The operator will immediately notify the construction observers of the assumed position of the drill tool; and

    - The Contractor will visually monitor the appropriate portion of the drill path where the drill tool is located to determine if an inadvertent return occurred. The Contractor may perform this monitoring by walking or by using a boat, as appropriate.

- Construction observers, EI(s), or the Enbridge HDD craft inspector have the authority to order installation of containment structures, if needed, and to require additional response measures if deemed appropriate.

11.2 CONTAINMENT, RESPONSE, AND CLEAN-UP EQUIPMENT

Containment, response and clean-up equipment will be available at both sides of an HDD crossing location and one side of a guided or road bore prior to the commencement to assure a timely response in the event of an inadvertent release of drilling fluid. Containment and response equipment includes but is not limited to:

A. straw bales and staking
B. pre-filled sandbags
C. turbidity curtain (not necessary for guided or road bores that do not involve a waterbody)
D. silt fence
E. plastic sheeting and/or geotextile fabric
F. shovels, brooms, buckets, and other appropriate hand tools
G. pumps and sufficient hose
H. fluid storage tanks (may not be necessary for guided or road bores)
I. vacuum truck on 24-hour call
J. one small boat (for larger rivers and open water wetlands)
K. light plant/generator (only necessary where operations are conducted outside of daylight hours)

11.3 RESPONSE

In the event an inadvertent drilling fluid release is observed, the EI and the Contractor will assess to determine the amount of fluid being released and potential for the release to reach sensitive resource areas (e.g., wetlands and waterbodies). Response measures will vary based on location of inadvertent release as discussed below.

11.3.1 Upland Locations

Response measures include the following:

- The EI will evaluate the release to determine if containment structures are warranted and if they will effectively contain the release.

- If the amount of the surface release is not great enough to allow the practical physical collection from the affected area, it will be diluted with clean water and/or the fluid will be allowed to dry and dissipate naturally.

- Earthen or sandbag berms, silt fence, and/or hay bales will be installed to contain small releases and prevent migration of drilling fluid.

- The Contractor will remove excess fluid at a rate sufficient to prevent an uncontrolled release.

- If the amount of the surface release exceeds that which can be completely contained with hand-placed barriers, small collection sumps (less than 5 cubic yards) may be used (with approval from Enbridge) to remove released drilling fluid by the use of portable pumps and hoses.

- The EI will inform the Contractor to initiate immediate suspension of drilling operations if the fluid release cannot be effectively contained.

11.3.2 Wetland and Waterbody Locations

This section also applies to areas immediately adjacent to wetlands and waterbodies, such as stream banks or steep slopes, where drilling fluid releases could quickly reach surface waters.

- In the event of a drilling fluid release in wetlands, waterbodies, or adjacent areas:

    1. The EI will evaluate the release, and the Contractor will implement appropriate containment measures.

    2. The EI and the Contractor will evaluate the recovery measures to determine the most effective collection method.

    3. Enbridge Engineering and the Contractor will review and consider adjusting drill pressures, pump volume rates, and drill profile, based on BMPs, to minimize the extent of the release.

    4. Enbridge will suspend drilling operations if containment measures do not effectively control the release.

- If the amount of the surface release exceeds that which can be contained with hand-placed barriers, small collection sumps (less than 5 cubic yards) may be utilized to collect released drilling fluid for removal by the use of portable pumps and hoses.

- If the amount of the surface release is not great enough to allow the practical physical collection from the affected area without causing additional impacts, with approval from both Enbridge Environmental and Construction Management, the drilling fluid may be diluted with clean water and/or the fluid will be allowed to dry and dissipate naturally.

- Excess fluid will be held within the containment area and removed using pumps or other appropriate measures at a rate sufficient to maintain secure containment.

- Recovered fluid will be stored in a temporary holding tank or other suitable structure out of the floodplain and/or wetland for reuse or eventual disposal in an approved disposal facility

- Enbridge will consult with the appropriate regulatory agencies to evaluate the circumstances of the release, discuss additional containment or cleanup requirements, and determine whether and under what conditions the HDD may proceed.

11.4 NOTIFICATION AND RESUMPTION OF SUSPENDED HDD OPERATIONS

The Contractor will immediately notify the EI of all drilling fluid releases. If the EI determines the release affects wetland or waterbody areas, he or she will immediately notify Enbridge Environment and Construction Management and the appropriate regulatory agencies.

If notifications are necessary during non-business hours they will be done according to prior arrangements made between Enbridge and the regulatory agencies. Follow-up notifications will be made as necessary and practicable.

The conditions under which drilling/boring operations can resume will be discussed with appropriate regulatory agencies and/or field representatives. If containment measures are functioning, and the circumstances and potential impacts of the release are understood, drilling/boring operations will resume.

11.5 CLEAN-UP

The following measures are to be considered as appropriate:

- Drilling fluid will be cleaned up by hand using hand shovels, buckets and soft-bristled brooms as possible without causing extensive ancillary damage to existing vegetation. Clean water washes may also be employed if deemed beneficial and feasible.

- Containment structures will be pumped out and the ground surface scraped to bare topsoil without causing undue loss of topsoil or ancillary damage to existing and adjacent vegetation.

- Material will be collected in containers for temporary storage prior to removal from the site.

- The EI will regularly evaluate the potential for secondary impact from the clean-up process and clean-up activities terminated if physical damage to the site is deemed to exceed the benefits of removal activities. This decision will be made in consultation with the appropriate regulatory agencies and/or Enbridge.

11.6 RESTORATION AND POST-CONSTRUCTION MONITORING

Following cleanup activities, restoration and revegetation of affected areas will be completed in accordance with all applicable local, state, and federal permits in addition to Enbridge's EPP. Enbridge will monitor the release site as appropriate to assure adequate restoration.

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Figures

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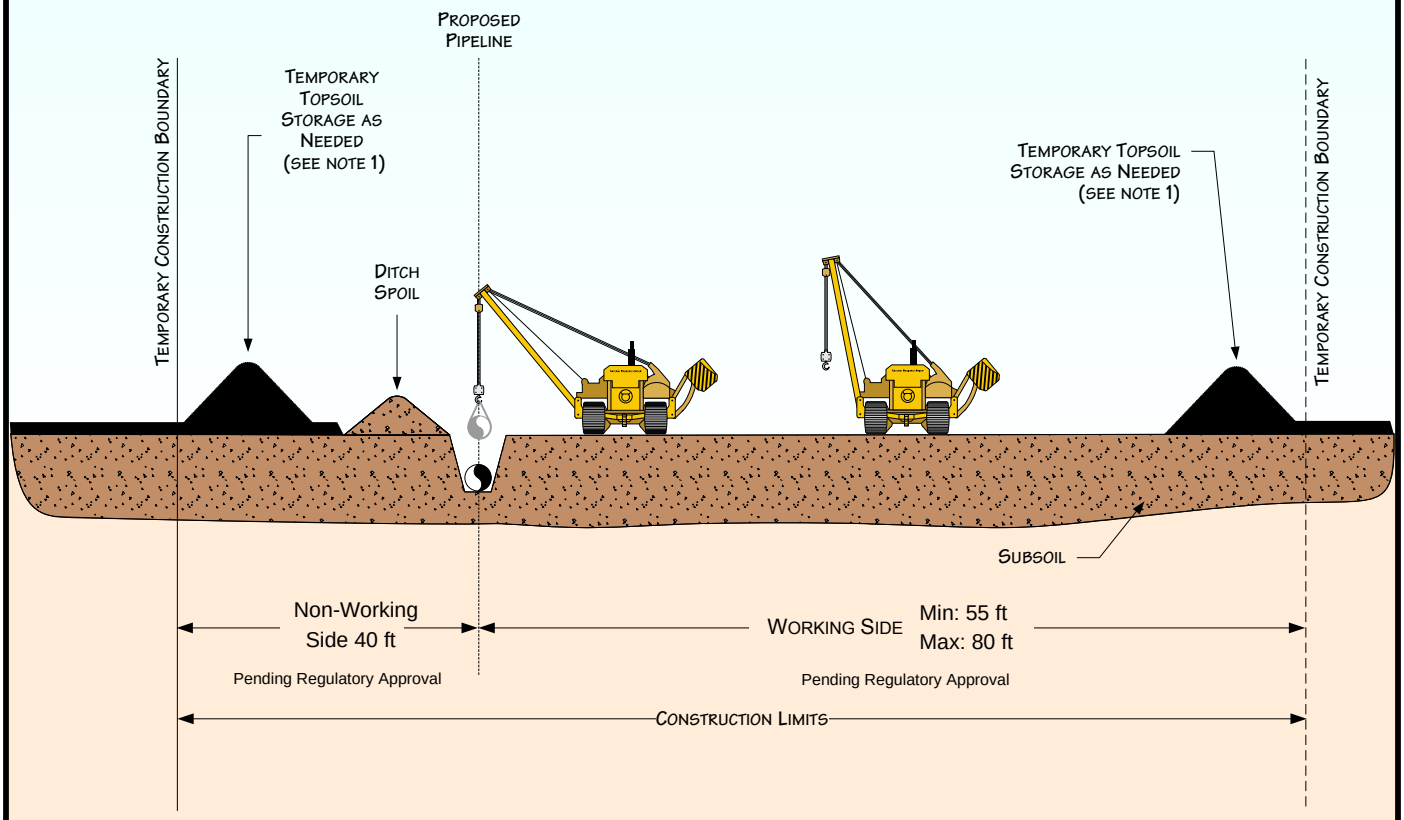


PROFILE

NOTES:

1. STOCKPILE TOPSOIL SEPARATELY FROM DITCH SPOIL AS SHOWN OR IN OTHER CONFIGURATIONS APPROVED BY THE COMPANY.

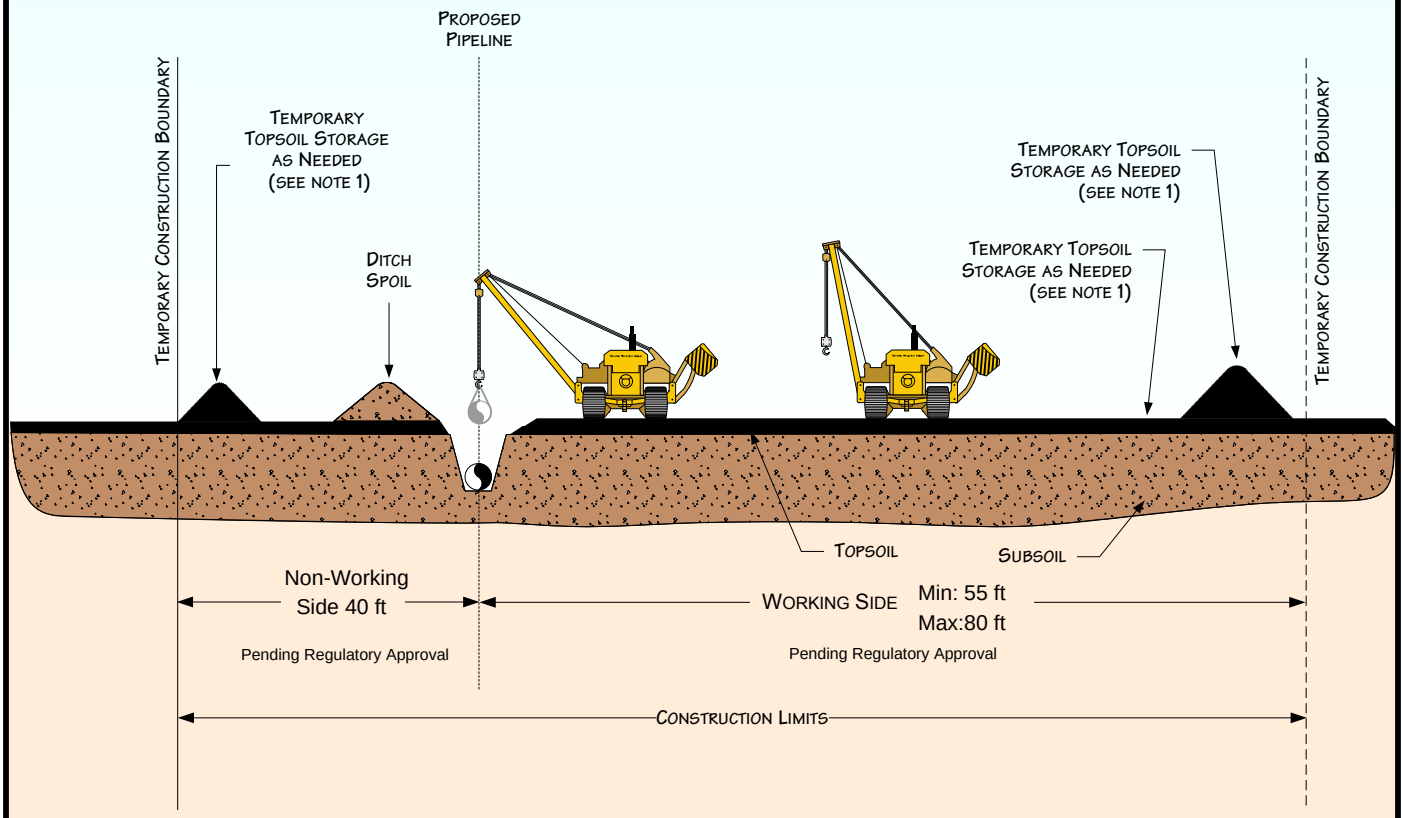
ENBRIDGE

Figure 1

Environmental Protection Plan

Typical Topsoil Segregation - Full Right-of-Way

DATE:	7/9/2001
REVISED:	3/11/2011
SCALE:	NTS
DRAWN BY:	JPBOENTJE
K:_CLIENT_PROJECTS\D-F\EEL\2011-019\FIG_1-3_TYPICAL_TOPSOIL_SEGREGATION.VSD	



PROFILE

NOTES:

1. STOCKPILE TOPSOIL SEPARATELY FROM DITCH SPOIL AS SHOWN OR IN OTHER CONFIGURATIONS APPROVED BY THE COMPANY.

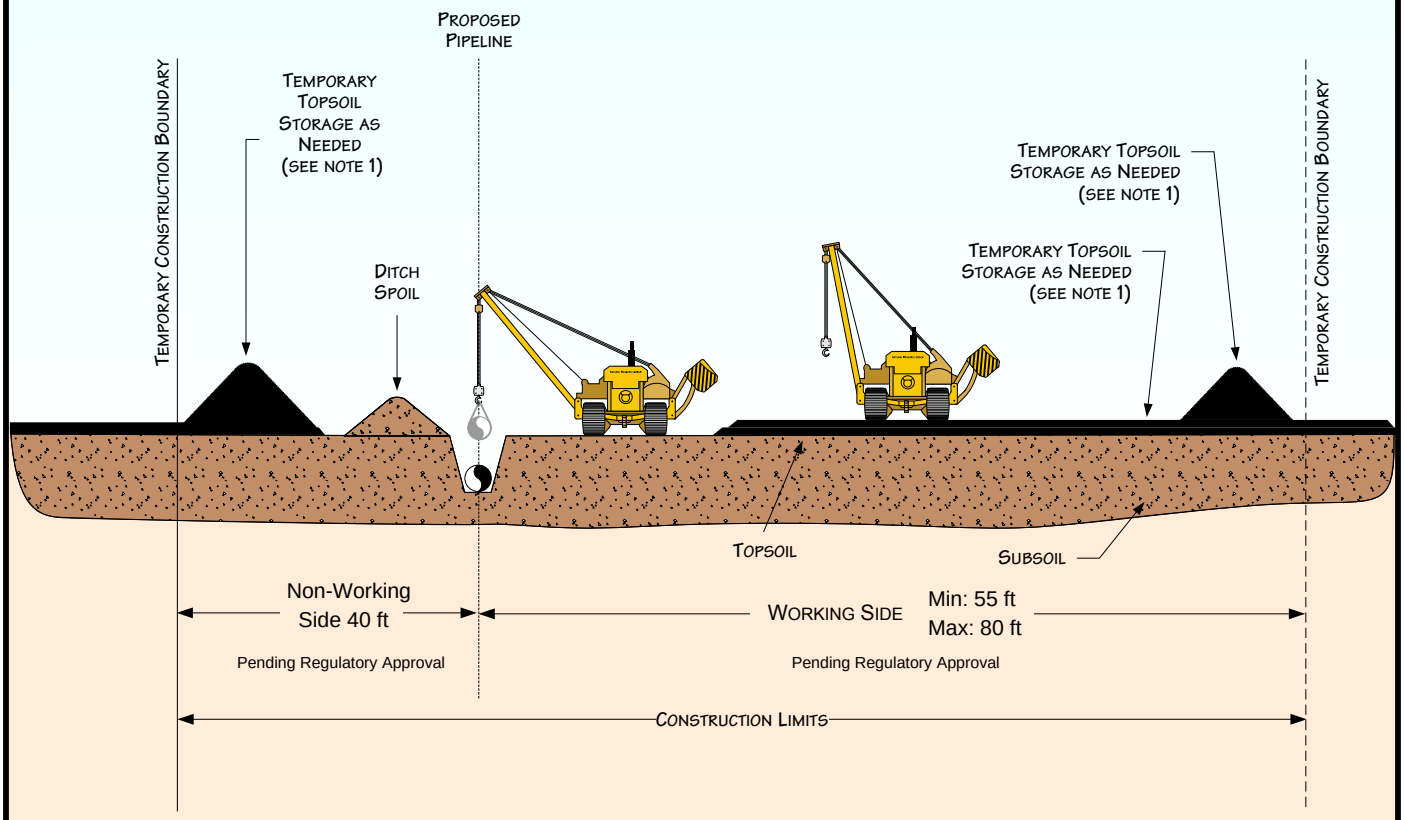
ENBRIDGE

Figure 2

Environmental Protection Plan

Typical Topsoil Segregation – Trench Line Only

DATE:	7/9/2001
REVISED:	3/11/2011
SCALE:	NTS
DRAWN BY:	JPBOENTJE
K:_CLIENT_PROJECTS\D-F\EEL\2011-019\FIG_1-3_TYPICAL_TOPSOIL_SEGREGATION.VSD	



PROFILE

NOTES:

1. STOCKPILE TOPSOIL SEPARATELY FROM DITCH SPOIL AS SHOWN OR IN OTHER CONFIGURATIONS APPROVED BY THE COMPANY.

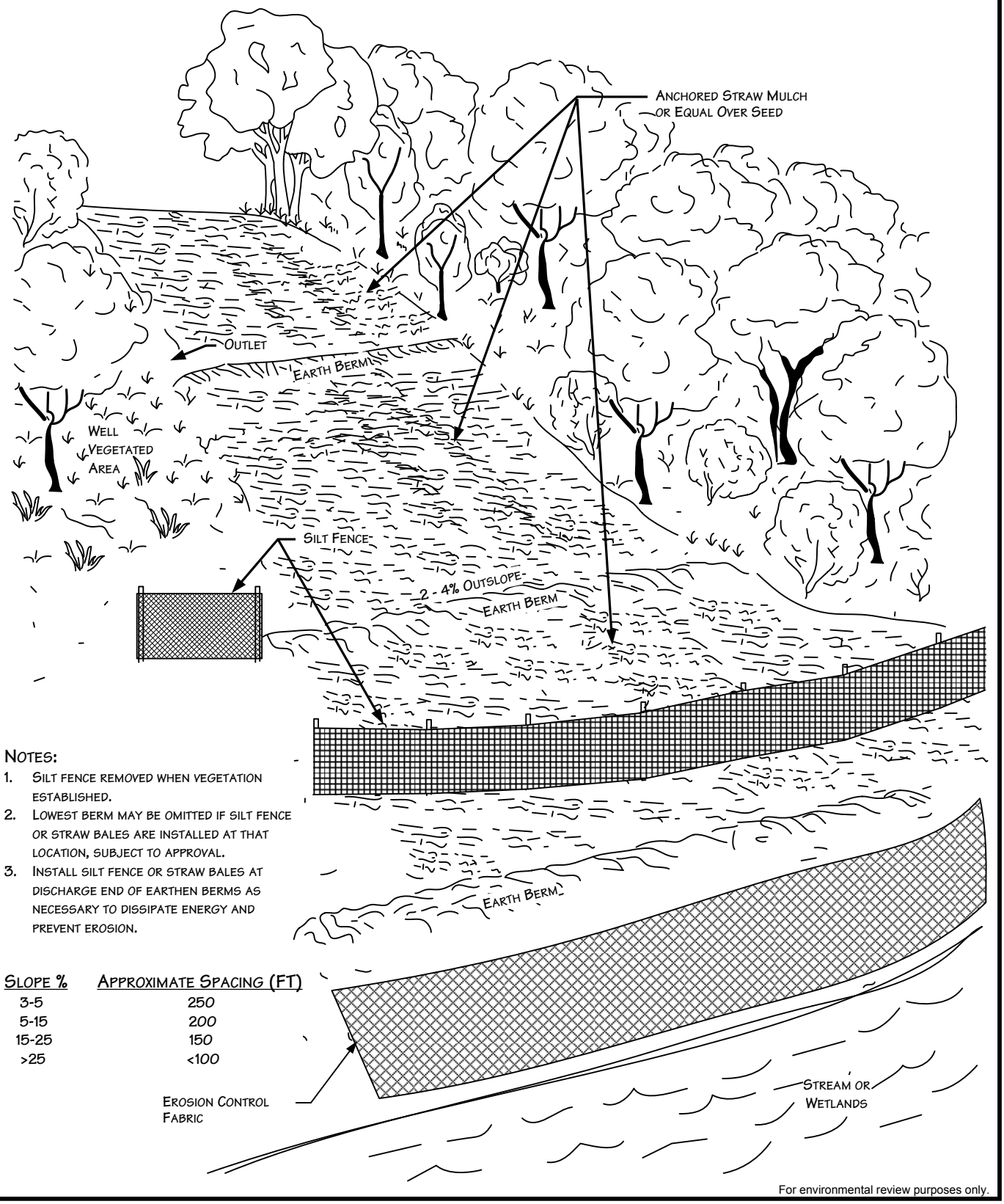
ENBRIDGE

Figure 3

Environmental Protection Plan

Typical Topsoil Segregation –
Modified Ditch Plus Spoil Side

DATE:	7/9/2001
REVISED:	3/11/2011
SCALE:	NTS
DRAWN BY:	JPBOENTJE
K:_CLIENT_PROJECTS\D-F\EEL\2011-019\FIG_1-3_TYPICAL_TOPSOIL_SEGREGATION.VSD	



Notes:

1. Silt fence removed when vegetation established.
2. Lowest berm may be omitted if silt fence or straw bales are installed at that location, subject to approval.
3. Install silt fence or straw bales at discharge end of earthen berms as necessary to dissipate energy and prevent erosion.

Slope %	Approximate Spacing (ft)
3-5	250
5-15	200
15-25	150
>25	<100

For environmental review purposes only.

ENBRIDGE

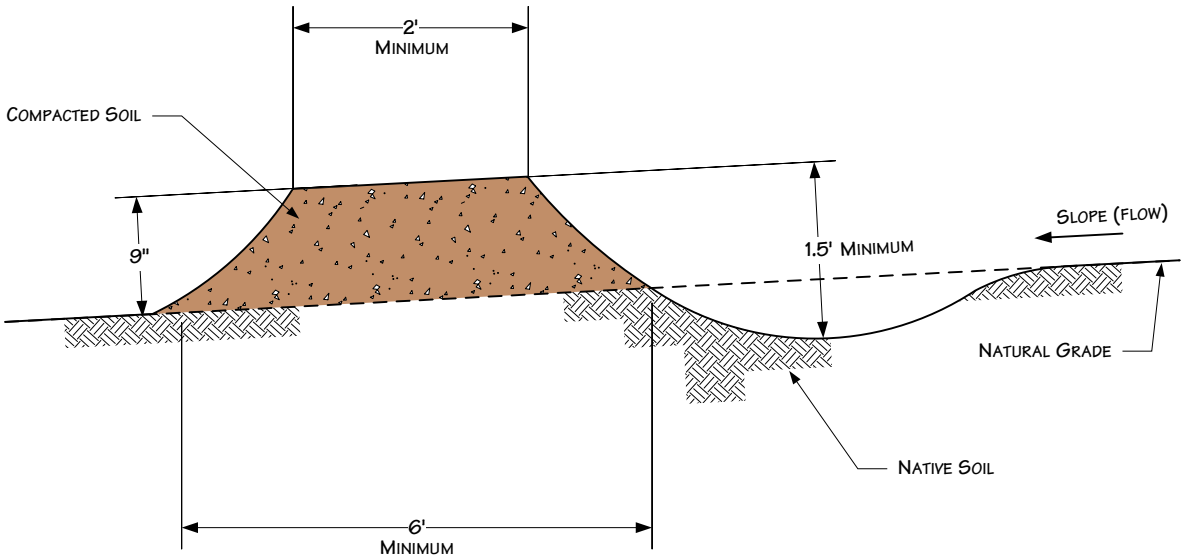
Figure 4

Environmental Protection Plan

Typical Temporary or Permanent Berms
Perspective View

DATE:	11/14/2000
REVISED:	3/11/2011
SCALE:	NTS
DRAWN BY:	KMKENDALL

K:_CLIENT_PROJECTS\D-F\EEL\2011-019\FIG_4_BERMS_PERSPECTIVE_VIEW.VSD



NOTES

1. BERMS SHALL BE CONSTRUCTED WITH 2 TO 4 PERCENT OUTSLOPE.
2. BERMS SHALL BE OUTLETED TO WELL VEGETATED STABLE AREAS, SILT FENCES, STRAW BALES OR ROCK APRONS.
3. BERMS SHALL BE SPACED AS DESCRIBED IN CONSTRUCTION SPECIFICATIONS.
4. ADDITIONAL INFORMATION INCLUDED ON OTHER DRAWINGS.

For environmental review purposes only.

ENBRIDGE

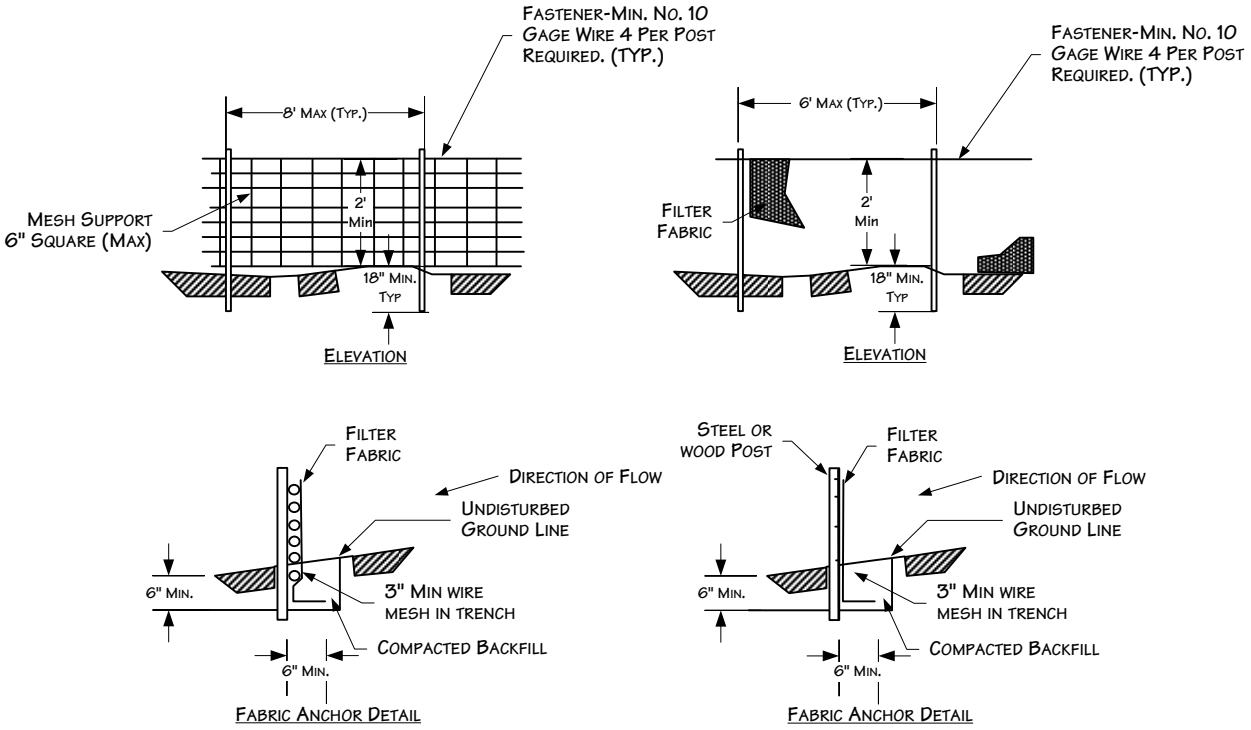
Figure 5

Environmental Protection Plan

Typical Temporary or Permanent Berms
Elevation View

DATE:	5/25/2001
REVISED:	3/11/2011
SCALE:	NTS
DRAWN BY:	KMKENDALL

K:_CLIENT_PROJECTS\D-F\EEL\2011-019\FIG_5_BERMS_ELEVATION_VIEW.VSD



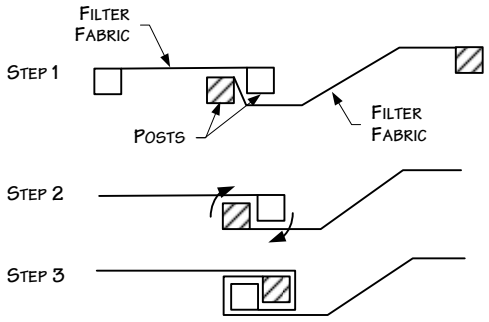
Silt Fence with wire support Plan

Silt Fence Plan

NTS

Notes:

1. Wires of mesh support shall be min. gage no. 12.
2. Filter fabric shall meet the requirements of the specification with equivalent opening size of at least 30 for nonwoven and 50 for woven. (Sieve No.)
3. The posts used to support the silt fence should be hardwood material with a minimum cross sectional area of 4 inches square and 4 feet long. Metal posts should be used in areas that pond water.



Attaching two silt fences

Notes:

1. Place the end post of the second fence inside the end post of the first fence.
2. Rotate both posts at least 180 degrees in a clockwise direction to create a tight seal with the fabric material.
3. Drive both posts a minimum of 18 inches in the ground and bury the flap.

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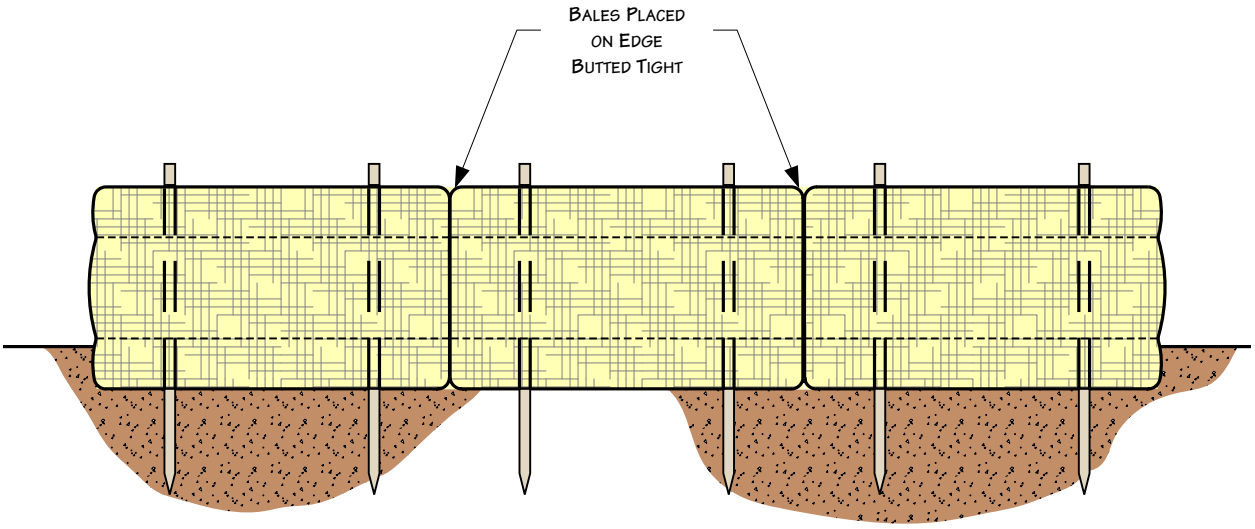
Figure 6

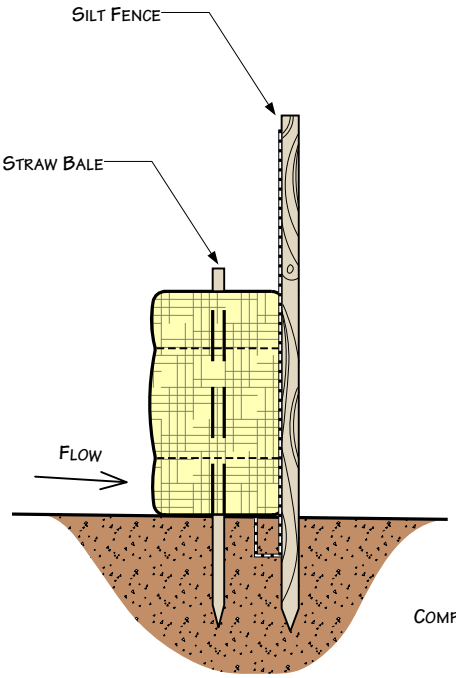
Environmental Protection Plan

Typical Silt Fence Installation

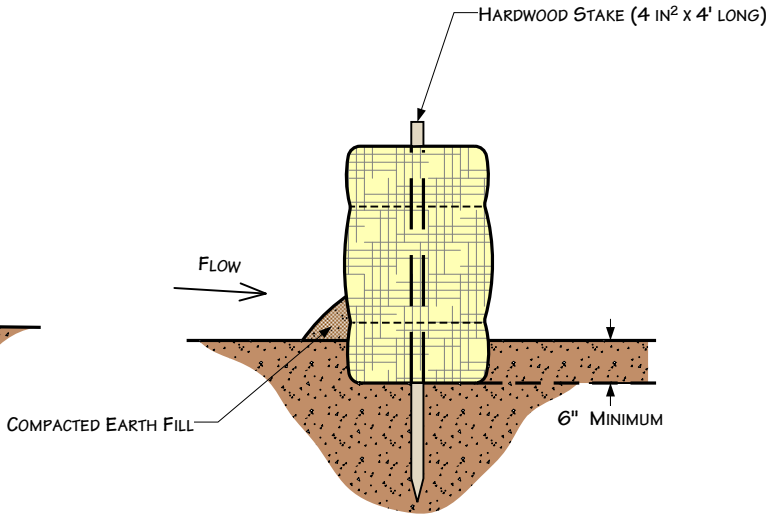
DATE:	5/25/2001
REVISED:	3/23/2011
SCALE:	NTS
DRAWN BY:	KMKENDALL

K:_CLIENT_PROJECTS\D-F\EEL\2011-019\FIG_6_SILT_FENCE_INSTALL.VSD





Straw Bales & Silt Fence



Straw Bales Only

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Figure 7
Environmental Protection Plan
Typical Straw Bale Installation

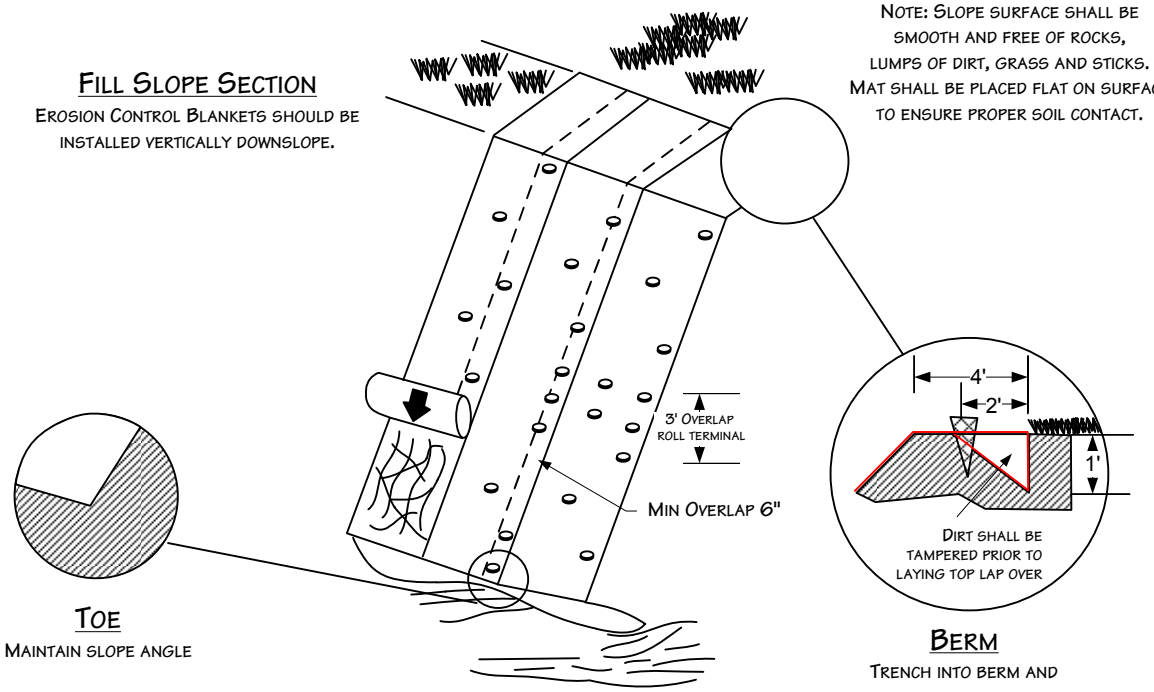
DATE:	5/25/01
REVISED:	3/11/11
SCALE:	Not to Scale
DRAWN BY:	KMKENDALL

K:_CLIENT_PROJECTS\D-F\EEL\2011-019\FIG_7_STRAW_BALE_INSTALL.VSD

Fill Slope Section

Erosion Control Blankets should be installed vertically downslope.

Note: Slope surface shall be smooth and free of rocks, lumps of dirt, grass and sticks. Mat shall be placed flat on surface to ensure proper soil contact.



Toe

Maintain slope angle

Berm

Trench into berm and progress downslope

Stream Channel

Erosion Control Blankets should be installed Horizontally with Stream Flow.

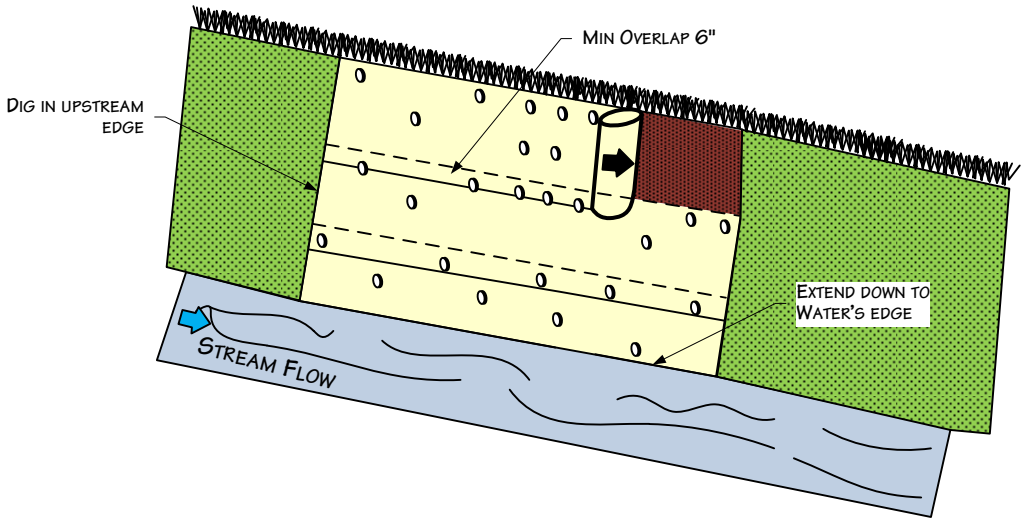


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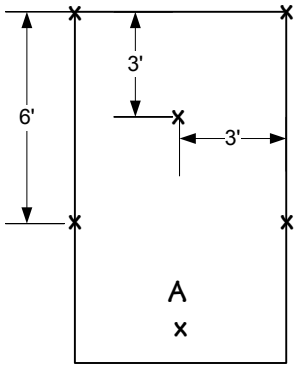
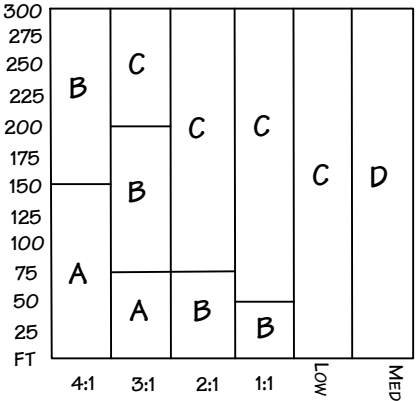
Figure 8
Environmental Protection Plan
Typical Erosion Control Blanket Installation

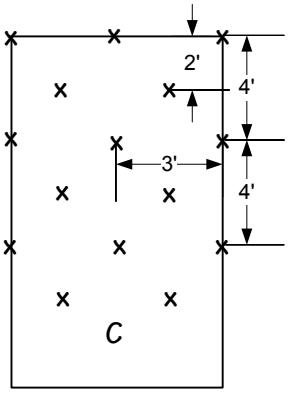
DATE:	5/25/2001
REVISED:	3/23/2011
SCALE:	NTS
DRAWN BY:	KMKENDALL

K:_CLIENT_PROJECTS\D-F\EEL\2011-019\FIG_8_EROSION_CONTROL_BLANKET_INSTALL.VSD

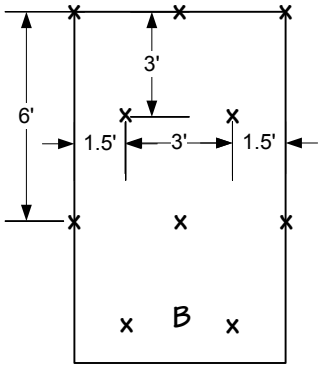


1 Staple Per Sq. Yd



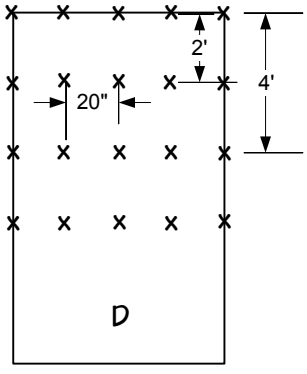


2 Staples Per Sq. Yd



1 ½ Staples Per Sq. Yd

For optimum results, these recommended staple pattern guides must be followed. Suggested anchoring methods vary according to the manufacturer. This chart shows how to slope lengths and how gradients affect sampling patterns.



3 1/2 Staples Per Sq. Yd

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Figure 9
Environmental Protection Plan
Typical Staple Pattern for Erosion Control Fabric

DATE:	5/25/2001
REVISED:	3/24/2011
SCALE:	NTS
DRAWN BY:	KMKENDALL

K:_CLIENT_PROJECTS\D-F\EEL\2011-019\FIG_9_STAPLE_PATTERN_EROSION_CONTROL_FABRIC.VSD

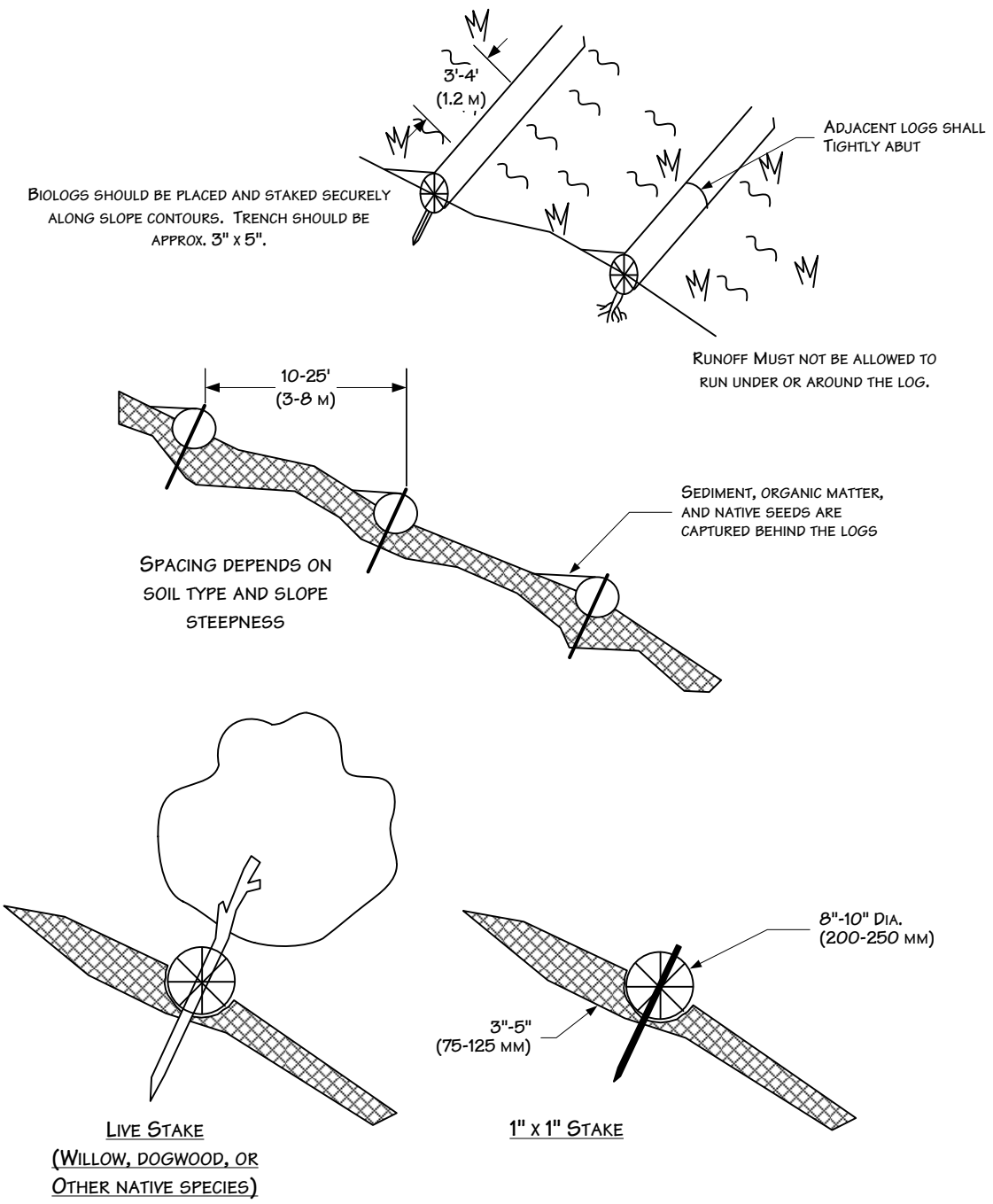

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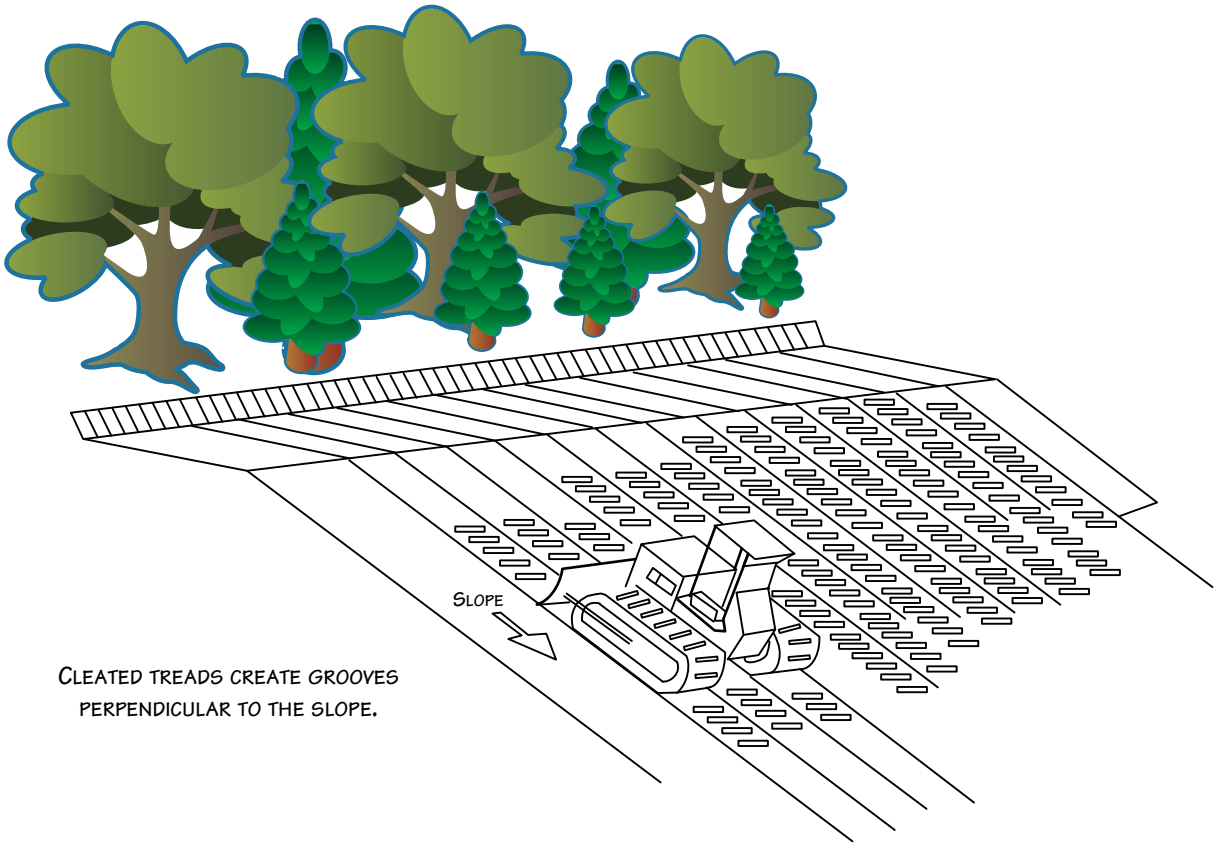
Figure 10
Environmental Protection Plan
Typical Biolog Installation

DATE:	5/25/2001
REVISED:	3/24/2011
SCALE:	NTS
DRAWN BY:	KMKENDALL

K:_CLIENT_PROJECTS\D-F\EEL\2011-019\FIG_10_BIOLOG INSTALL.VSD



CLEATED TREADS CREATE GROOVES PERPENDICULAR TO THE SLOPE.

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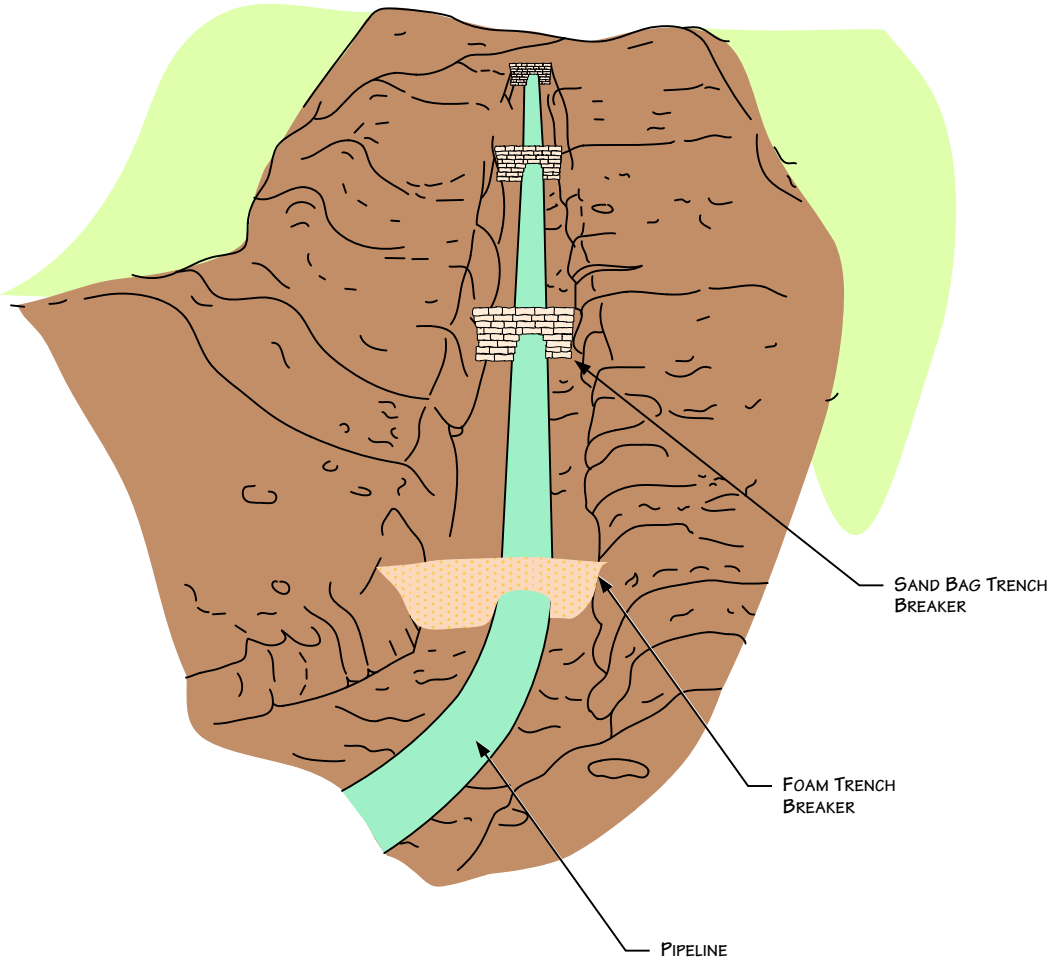
Figure 11
Environmental Protection Plan
Typical Cat Tracking

DATE:	5/25/2001
REVISED:	3/24/2011
SCALE:	NTS
DRAWN BY:	KMKENDALL

K:_CLIENT_PROJECTS\D-F\EEL\2011-019\FIG_11_CAT_TRACKING.VSD



Notes

1. Bags will not be filled with topsoil.
2. Additional information included on other drawings.

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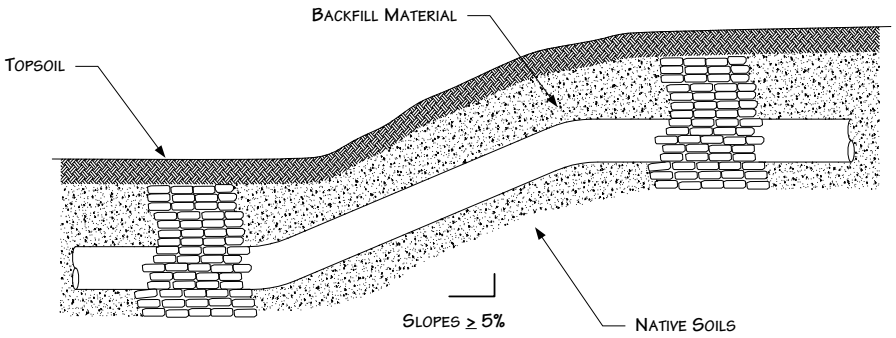
ENBRIDGE

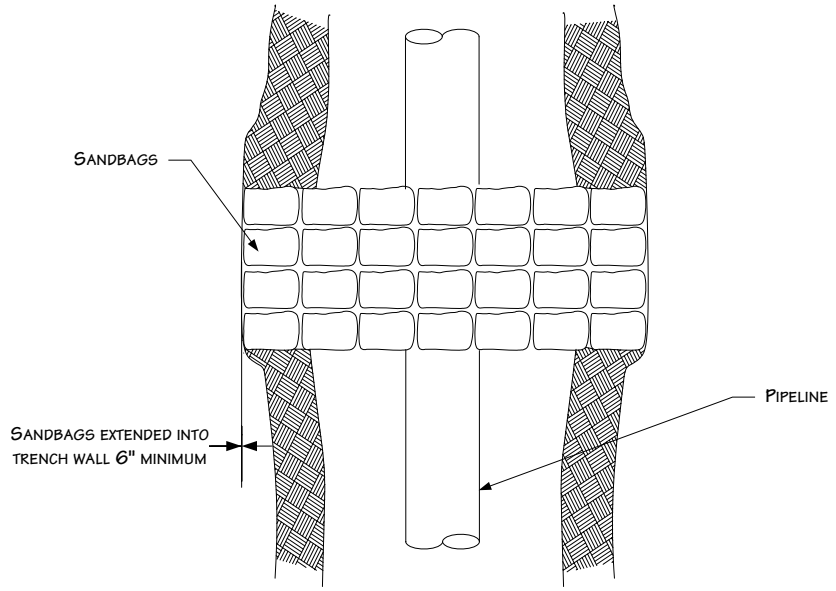
Figure 12
Environmental Protection Plan
Typical Trench Breakers - Perspective View

DATE:	5/25/2001
REVISED:	3/11/11
SCALE:	NTS
DRAWN BY:	KMKENDALL

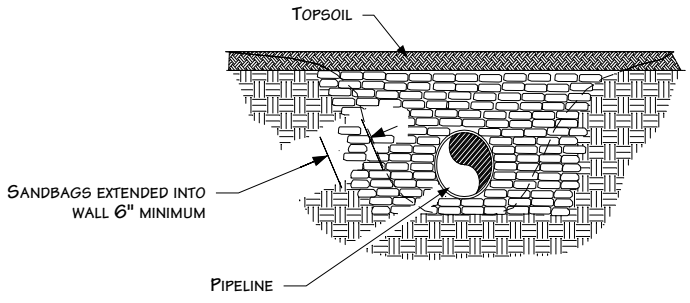
K:_CLIENT_PROJECTS\D-F\EEL\2011-019\FIG_12_TRENCH_BREAKER_PERSPECTIVE_VIEW.VSD



PROFILE VIEW
(NOT TO SCALE)



PLAN VIEW
(NOT TO SCALE)



FACE VIEW
(NOT TO SCALE)

NOTES

1. BAGS WILL NOT BE FILLED WITH TOPSOIL
2. ADDITIONAL INFORMATION INCLUDED ON OTHER DRAWINGS

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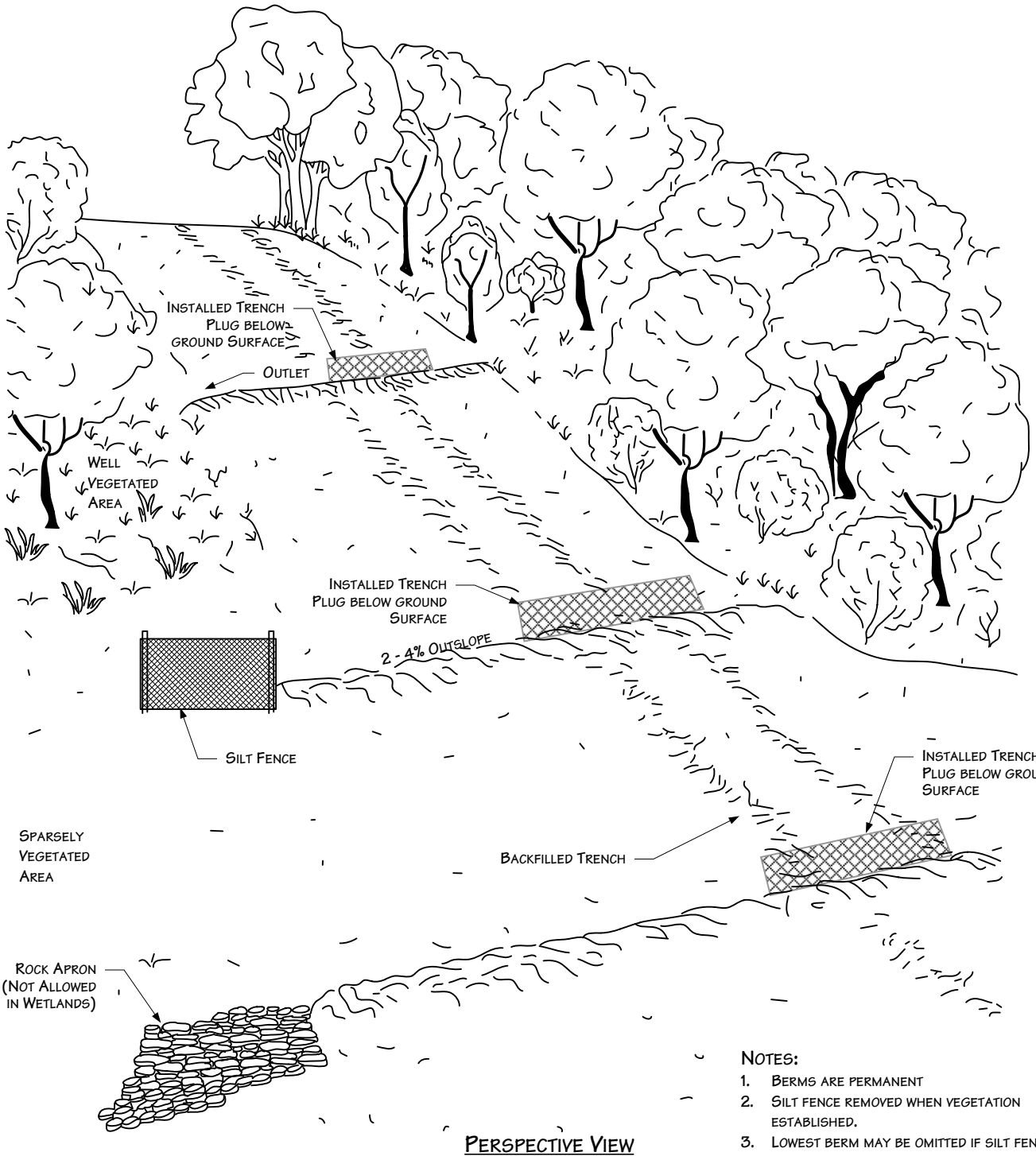
ENBRIDGE

Figure 13
Environmental Protection Plan
Typical Trench Breakers – Plan & Profile View

DATE:	11/15/2000
REVISED:	3/11/11
SCALE:	NTS
DRAWN BY:	KMKENDALL

K:_CLIENT_PROJECTS\D-F\EEL\2011-019\FIG_13_TRENCH_BREAKER_PLAN_PROFILE_VIEW.VSD



Perspective View
(not to scale)

Slope %	Approximate Spacing (FT)
3-5	250
5-15	200
15-25	150
>25	<100

Notes:

1. Berms are permanent
2. Silt fence removed when vegetation established.
3. Lowest berm may be omitted if silt fence or straw bales are installed at that location, subject to approval.
4. Install silt fence or straw bales at discharge end of earthen berms as necessary to dissipate energy and prevent erosion.

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Figure 14

Environmental Protection Plan

Permanent Slope Breakers - Perspective View

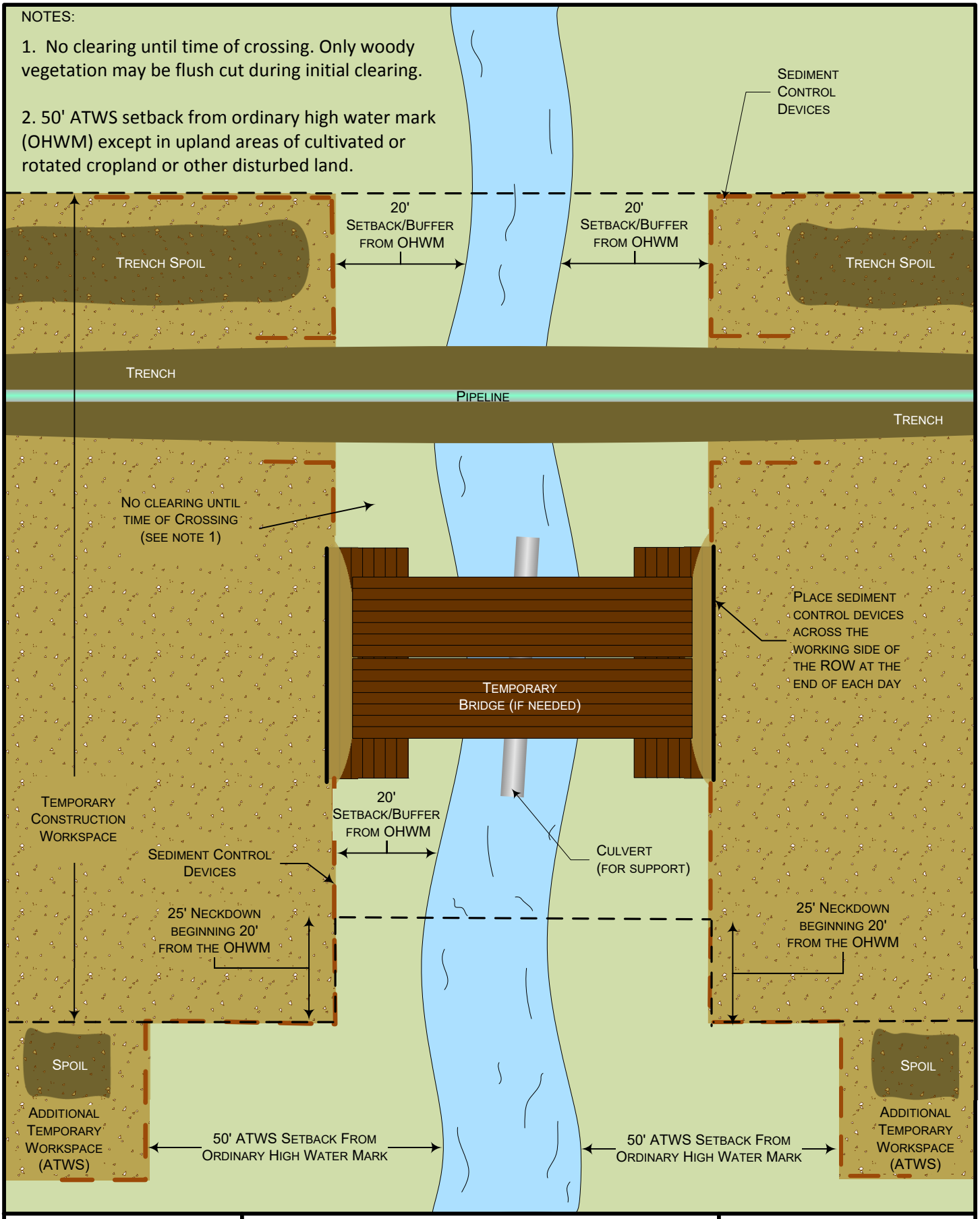
DATE:	5/25/2001
REVISED:	3/11/11
SCALE:	NTS
DRAWN BY:	KMKENDALL

K:_CLIENT_PROJECTS\D-F\EEL\2011-019\FIG_14_SLOPE_BREAKERS_PERSPECTIVE_VIEW.VSD

NOTES:

1. No clearing until time of crossing. Only woody vegetation may be flush cut during initial clearing.

2. 50' ATWS setback from ordinary high water mark (OHWM) except in upland areas of cultivated or rotated cropland or other disturbed land.

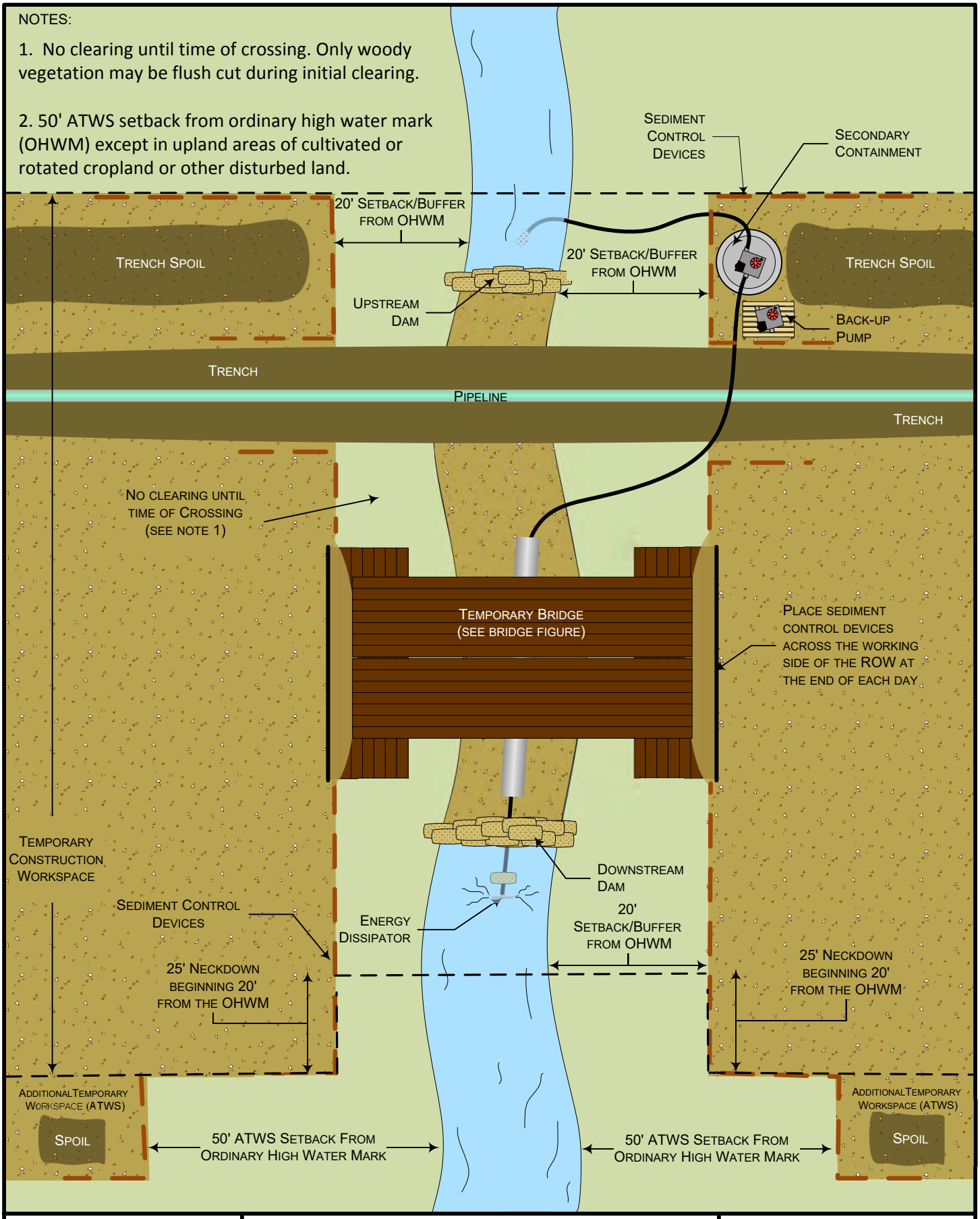


ENBRIDGE

Figure 15
Typical Waterbody Crossing
Open-Cut Wet Trench Method

Environmental Protection Plan

Drawn by: merjent 9/17/2015



ENBRIDGE

Figure 16
Typical Waterbody Crossing
Dam and Pump Method

Environmental Protection Plan

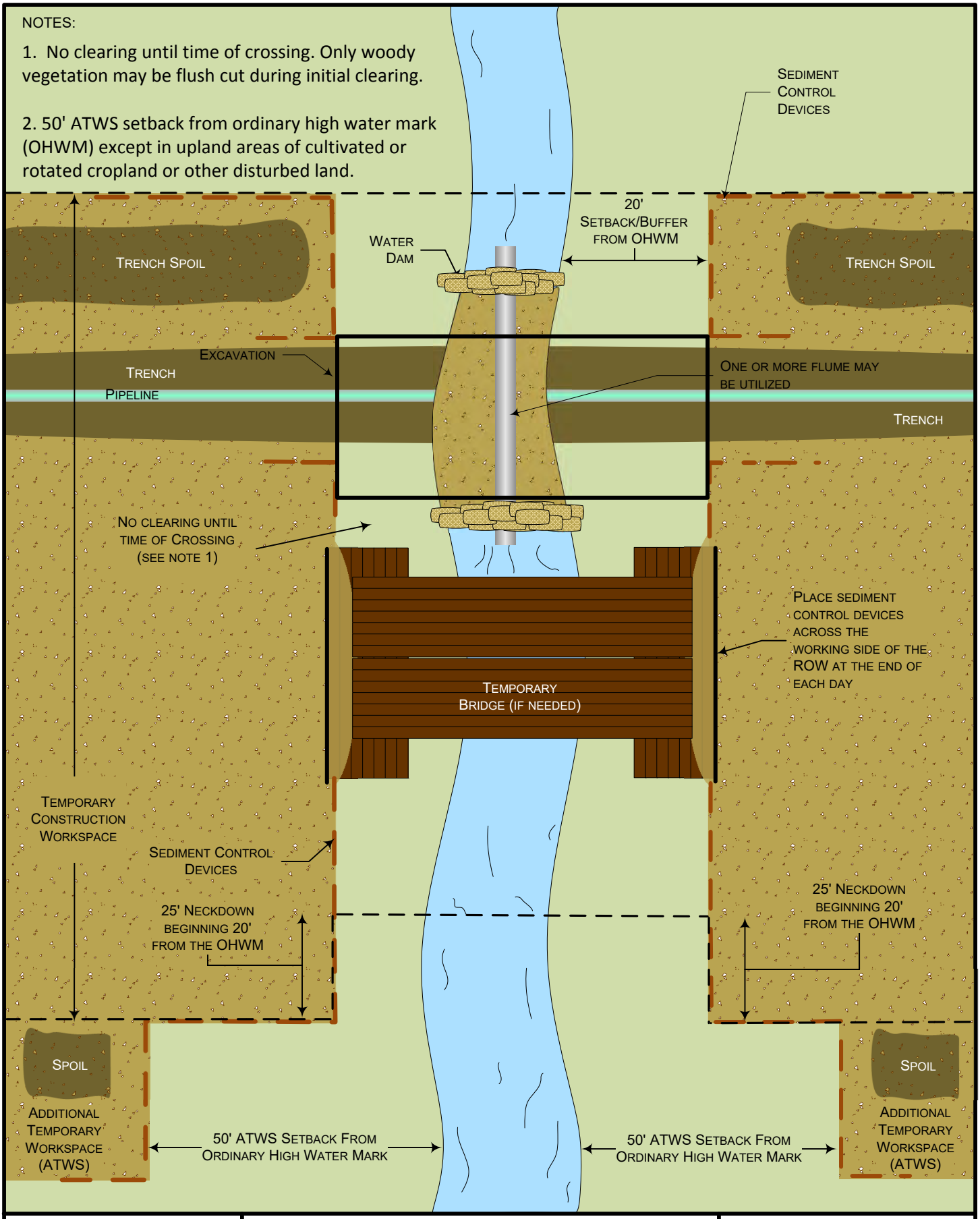
Drawn by: merjent

9/14/2015

NOTES:

1. No clearing until time of crossing. Only woody vegetation may be flush cut during initial clearing.

2. 50' ATWS setback from ordinary high water mark (OHWM) except in upland areas of cultivated or rotated cropland or other disturbed land.

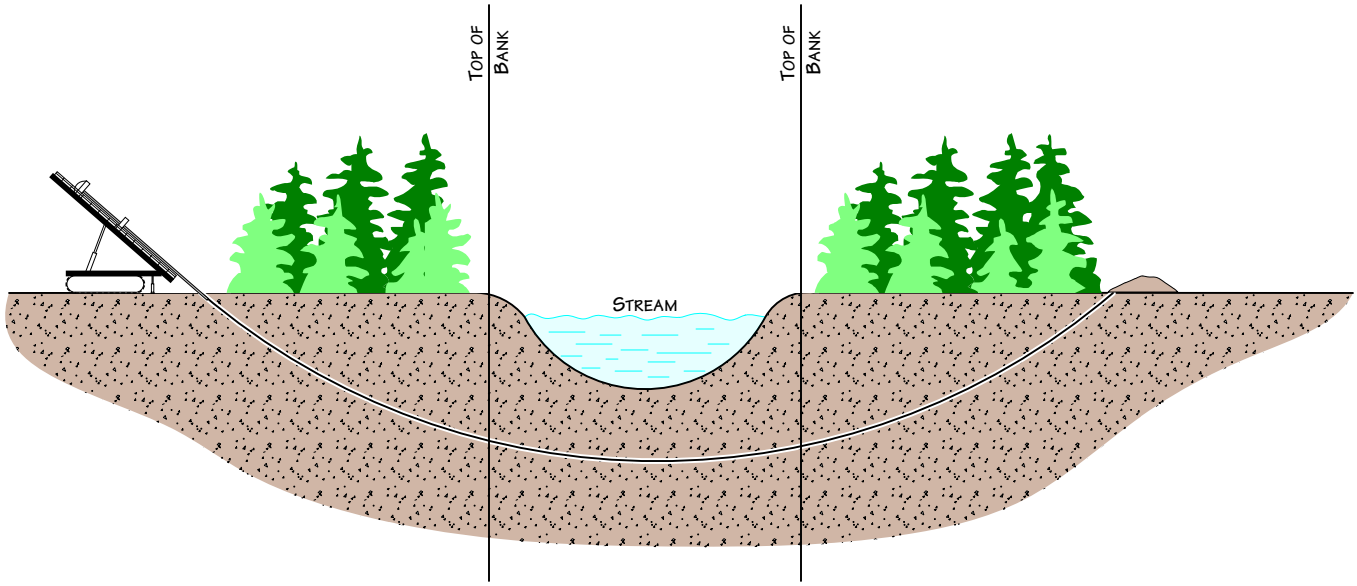


ENBRIDGE

Figure 17
Typical Waterbody Crossing
Flume Method

Environmental Protection Plan

Drawn by: merjent 9/14/2015



For environmental review purposes only.

ENBRIDGE

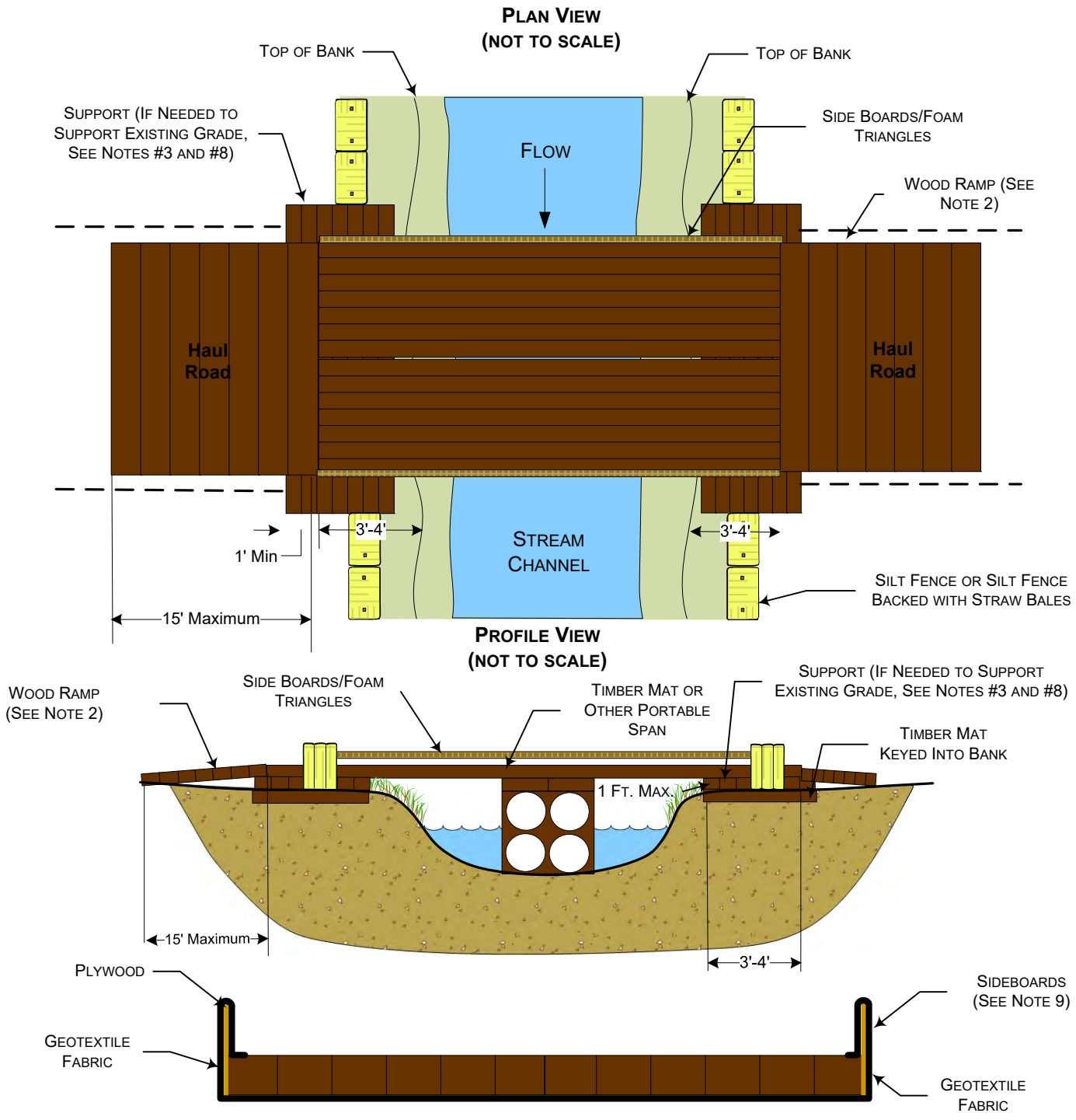
Figure 18

Environmental Protection Plan

Typical Waterbody Crossing
Directional Drill Method

DATE:	7/14/2000
REVISED:	3/11/11
SCALE:	NTS
DRAWN BY:	KMKENDALL

K:_CLIENT_PROJECTS\D-F\EEL\2011-019\FIG_18_WATERBODY_DIRECTIONAL_DRILL.VSD



NOTES:

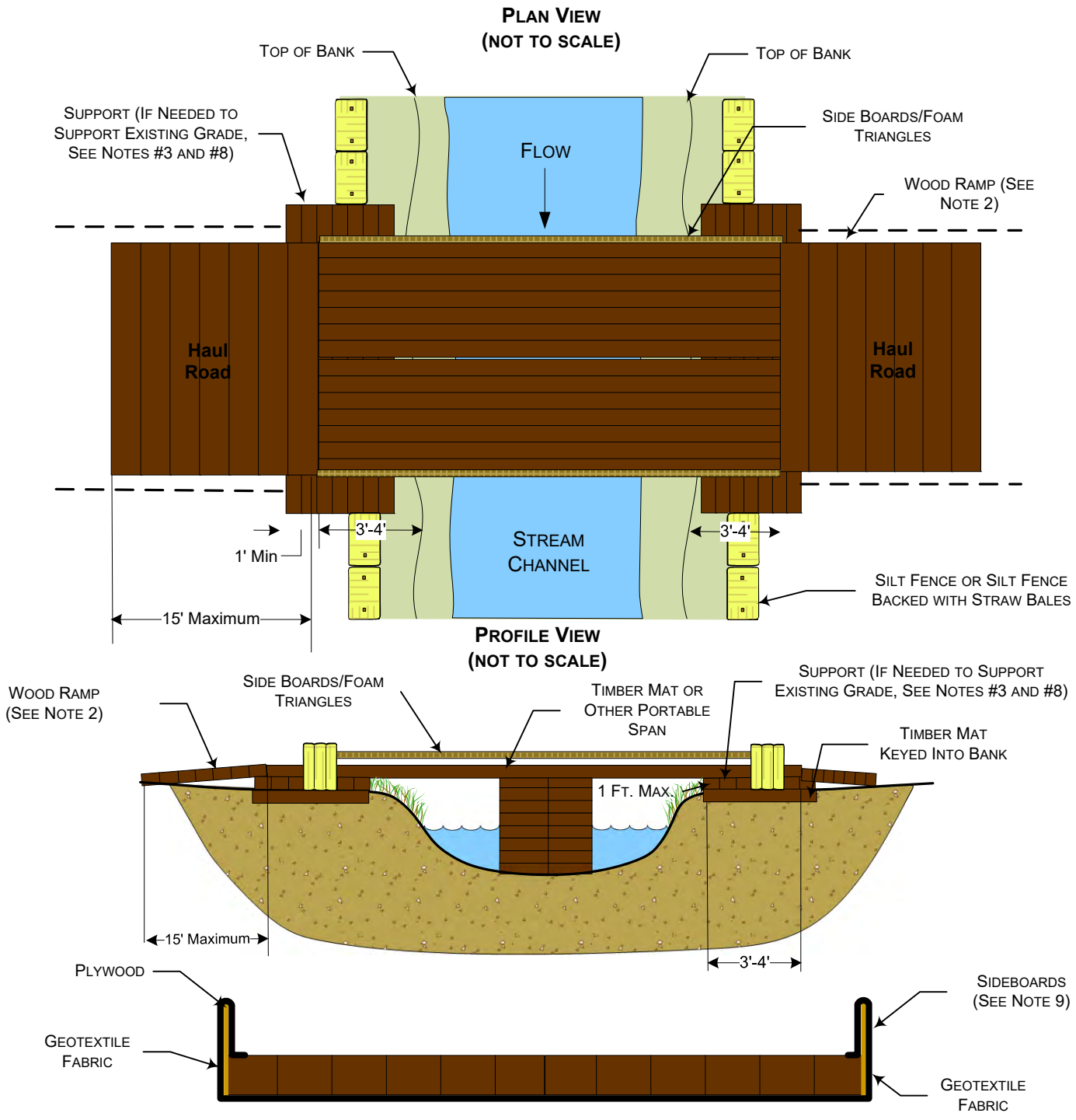
1. INSPECT BRIDGE OPENING PERIODICALLY AND FOLLOWING RAINFALLS OF OVER ½". REMOVE ANY DEBRIS RESTRICTING FLOW AND DEPOSIT IT AT AN UPLAND SITE OUTSIDE OF FLOODPLAIN.
2. IF PHYSICAL CIRCUMSTANCES PROHIBIT WOOD OR METAL RAMPS, EARTHEN RAMPS MAY BE USED AS APPROVED.
3. INSPECT BRIDGE ELEVATION SO BRIDGE REMAINS SUPPORTED ABOVE OHWM.
4. THE CULVERT SUPPORT MUST BE ANCHORED TO THE STREAM BOTTOM AND MAY NOT BE SUPPORTED WITH FILL.
5. EARTHEN RAMP CANNOT BE TALLER THAN 1' AND CANNOT EXTEND FOR MORE THAN 15' ON EITHER SIDE OF THE CROSSING.
6. THE BRIDGE MUST SPAN ABOVE OHWM TO OHWM.
7. ADDITIONAL SUPPORT MUST BE ADDED ON TOP OF BANK AND UNDER SPAN IF THE SPAN IS 12' WIDE OR GREATER, OR IF INITIAL SUPPORT STARTS TO SETTLE.
8. EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSPECTED AND MAINTAINED IN ACCORDANCE WITH THE COMPANY'S ENVIRONMENTAL PROTECTION PLAN.
9. SIDEBOARDS WILL BE INSTALLED ON TEMPORARY BRIDGES TO MINIMIZE THE POTENTIAL FOR SEDIMENT TRANSPORT. SIDEBOARDS MAY BE CONSTRUCTED OUT OF PLYWOOD, OR EQUIVALENT, AND AFFIXED TO THE OUTER SIDES OF THE BRIDGE. GEO-TEXTILE FABRIC, OR EQUIVALENT, MUST ALSO BE ADEQUATELY SECURED TO THE UNDERSIDE OF THE BRIDGE TO PREVENT MATERIAL FROM FALLING THROUGH THE BRIDGE DECK. THE GEO-TEXTILE FABRIC OR AN EQUIVALENT SHOULD BE SECURED TO THE BOTTOM OF THE BRIDGE AND WRAPPED AROUND THE SIDEBOARDS IN A CONTINUOUS FASHION.

ENBRIDGE

Figure 19A
Environmental Protection Plan
Typical Span Type Bridge
With or Without Instream Support (Flume Support)

Environmental Protection Plan

Drawn by: merjent



NOTES:

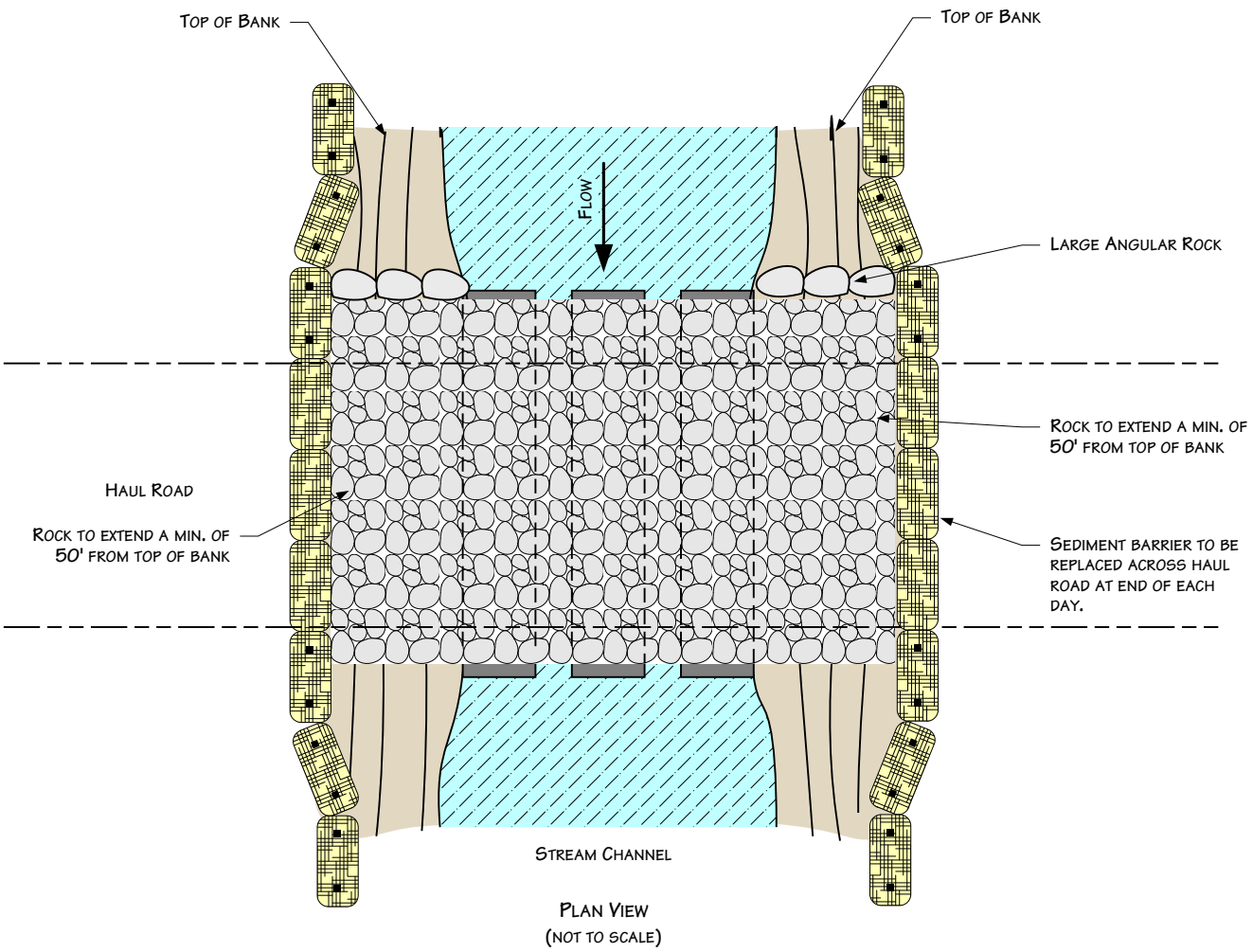
1. INSPECT BRIDGE OPENING PERIODICALLY AND FOLLOWING RAINFALLS OF OVER ½". REMOVE ANY DEBRIS RESTRICTING FLOW AND DEPOSIT IT AT AN UPLAND SITE OUTSIDE OF FLOODPLAIN.
2. IF PHYSICAL CIRCUMSTANCES PROHIBIT WOOD OR METAL RAMPS, EARTHEN RAMPS MAY BE USED AS APPROVED.
3. INSPECT BRIDGE ELEVATION SO BRIDGE REMAINS SUPPORTED ABOVE OHWM.
4. THE CULVERT SUPPORT MUST BE ANCHORED TO THE STREAM BOTTOM AND MAY NOT BE SUPPORTED WITH FILL.
5. EARTHEN RAMP CANNOT BE TALLER THAN 1' AND CANNOT EXTEND FOR MORE THAN 15' ON EITHER SIDE OF THE CROSSING.
6. THE BRIDGE MUST SPAN ABOVE OHWM TO OHWM.
7. ADDITIONAL SUPPORT MUST BE ADDED ON TOP OF BANK AND UNDER SPAN IF THE SPAN IS 12' WIDE OR GREATER, OR IF INITIAL SUPPORT STARTS TO SETTLE.
8. EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSPECTED AND MAINTAINED IN ACCORDANCE WITH THE COMPANY'S ENVIRONMENTAL PROTECTION PLAN.
9. SIDEBOARDS WILL BE INSTALLED ON TEMPORARY BRIDGES TO MINIMIZE THE POTENTIAL FOR SEDIMENT TRANSPORT. SIDEBOARDS MAY BE CONSTRUCTED OUT OF PLYWOOD, OR EQUIVALENT, AND AFFIXED TO THE OUTER SIDES OF THE BRIDGE. GEO-TEXTILE FABRIC, OR EQUIVALENT, MUST ALSO BE ADEQUATELY SECURED TO THE UNDERSIDE OF THE BRIDGE TO PREVENT MATERIAL FROM FALLING THROUGH THE BRIDGE DECK. THE GEO-TEXTILE FABRIC OR AN EQUIVALENT SHOULD BE SECURED TO THE BOTTOM OF THE BRIDGE AND WRAPPED AROUND THE SIDEBOARDS IN A CONTINUOUS FASHION.

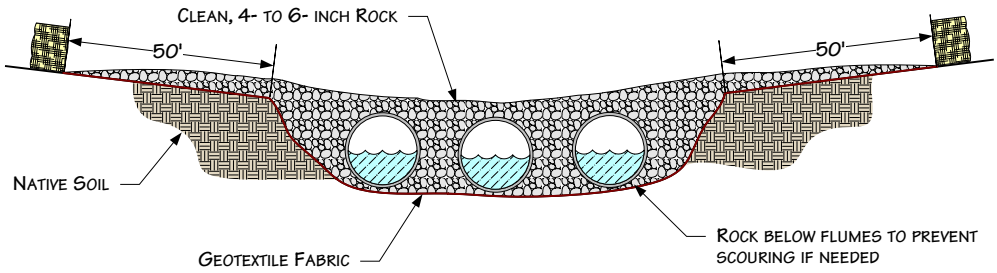
ENBRIDGE

Figure 19B
Environmental Protection Plan
Typical Span Type Bridge
With or Without Instream Support (Timber Matted Support)

Environmental Protection Plan

Drawn by: merjent





NOTES:

1. STEEL FLUME PIPE(S) SIZED TO ALLOW FOR STREAM FLOW AND EQUIPMENT LOAD.
2. STRAW BALES SHALL BE PLACED ACROSS BRIDGE ENTRANCE EVERY NIGHT.
3. ADDITIONAL INFORMATION INCLUDED ON OTHER DRAWINGS.

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ENBRIDGE

Figure 20

Environmental Protection Plan

Typical Rock Flume Bridge

DATE:	5/25/2001
REVISED:	3/15/11
SCALE:	NTS
DRAWN BY:	KMKENDALL

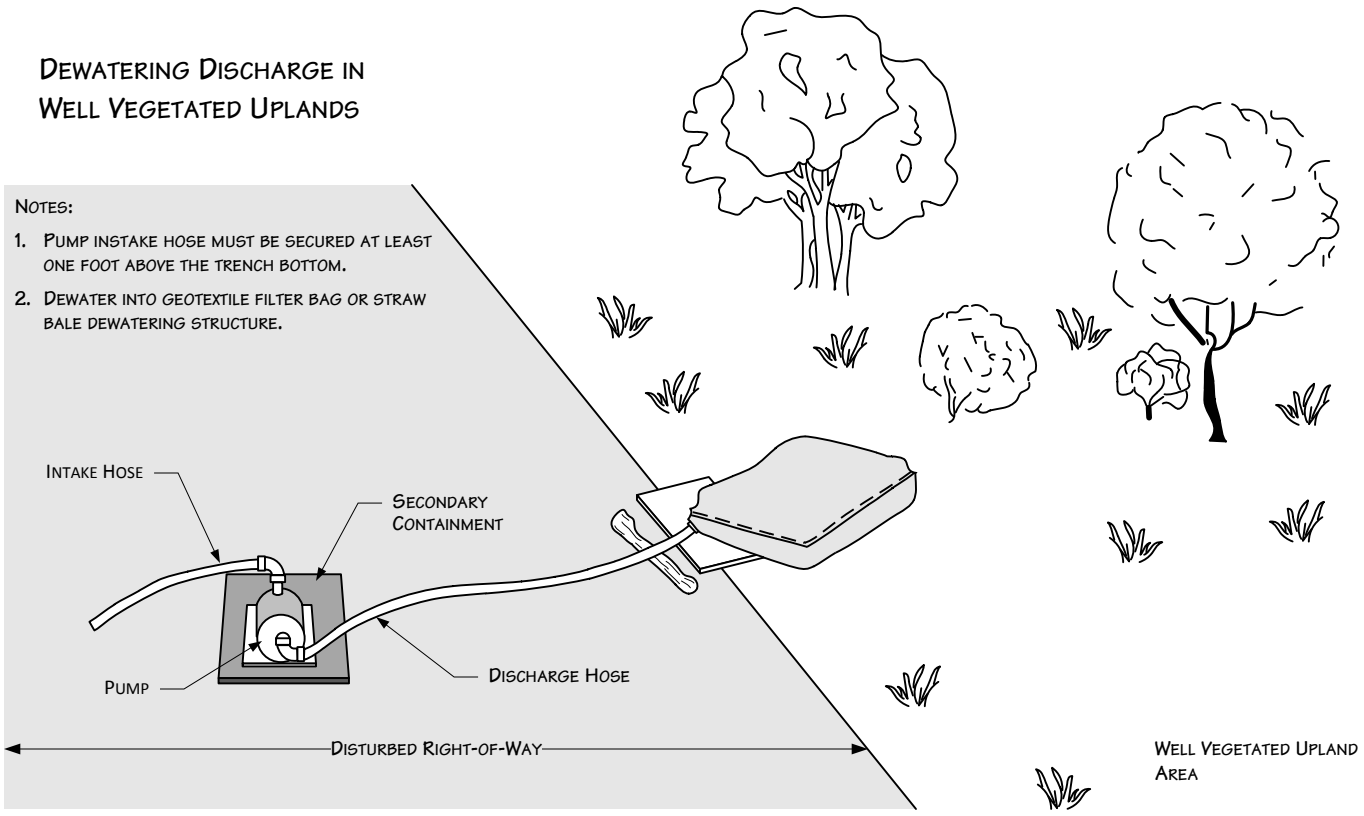
NATURAL RESOURCE GROUP

K:_CLIENT_PROJECTS\D-F\EEL\2011-019\FIG_20_ROCK_FLUME_BRIDGE.VSD

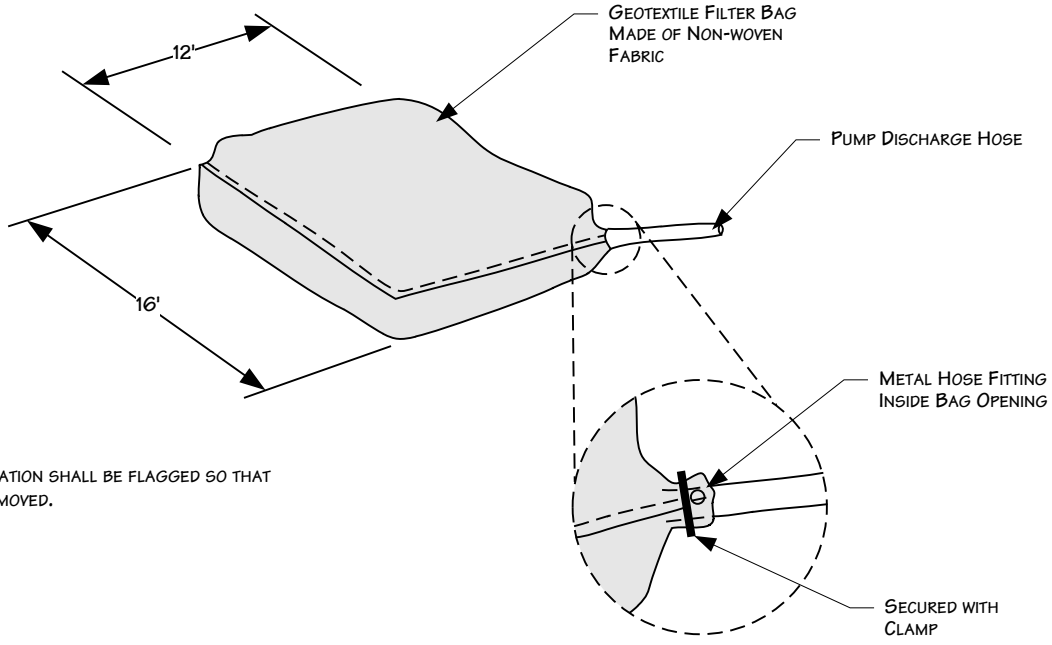
Dewatering Discharge in Well Vegetated Uplands

Notes:

1. Pump instake hose must be secured at least one foot above the trench bottom.
2. Dewater into geotextile filter bag or straw bale dewatering structure.



Geotextile Filter Bag



Note:

1. Filter bag location shall be flagged so that bag can be removed.

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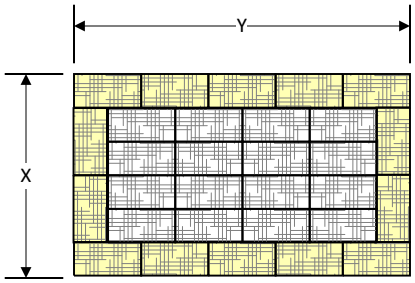
ENBRIDGE

Figure 21
Environmental Protection Plan
Typical Dewatering Measures

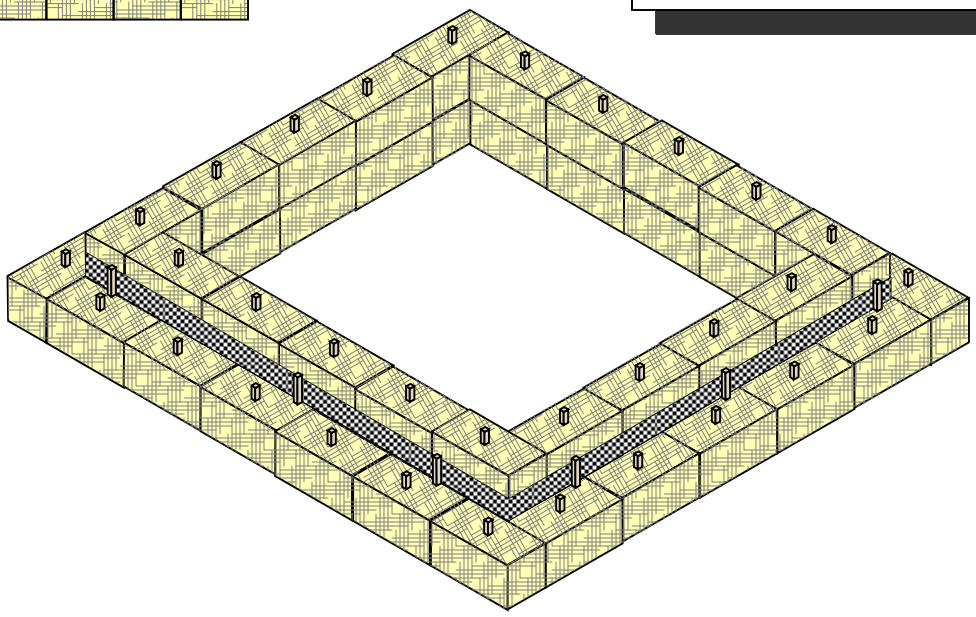
DATE:	5/25/2001
REVISED:	3/15/11
SCALE:	NTS
DRAWN BY:	KMKENDALL

K:_CLIENT_PROJECTS\D-F\EEL\2011-019\FIG_21_DEWATERING_MEASURES.VSD

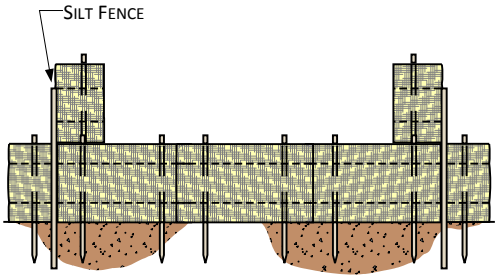


NOTES

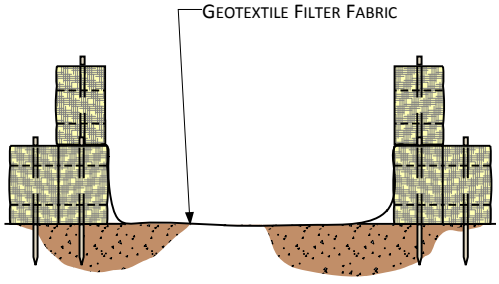
1. ARRANGE THE STRAW BALES TO THE X AND Y DIMENSIONS AS SPECIFICIED BELOW.
2. IF BOTTOM OF STRUCTURE IS NOT LINED WITH STRAW BALES (OPTION 1), LINE ENTIRE STRUCTURE WITH GEOTEXTILE FILTER FABRIC.



PERSPECTIVE VIEW



OPTION 1



OPTION 2

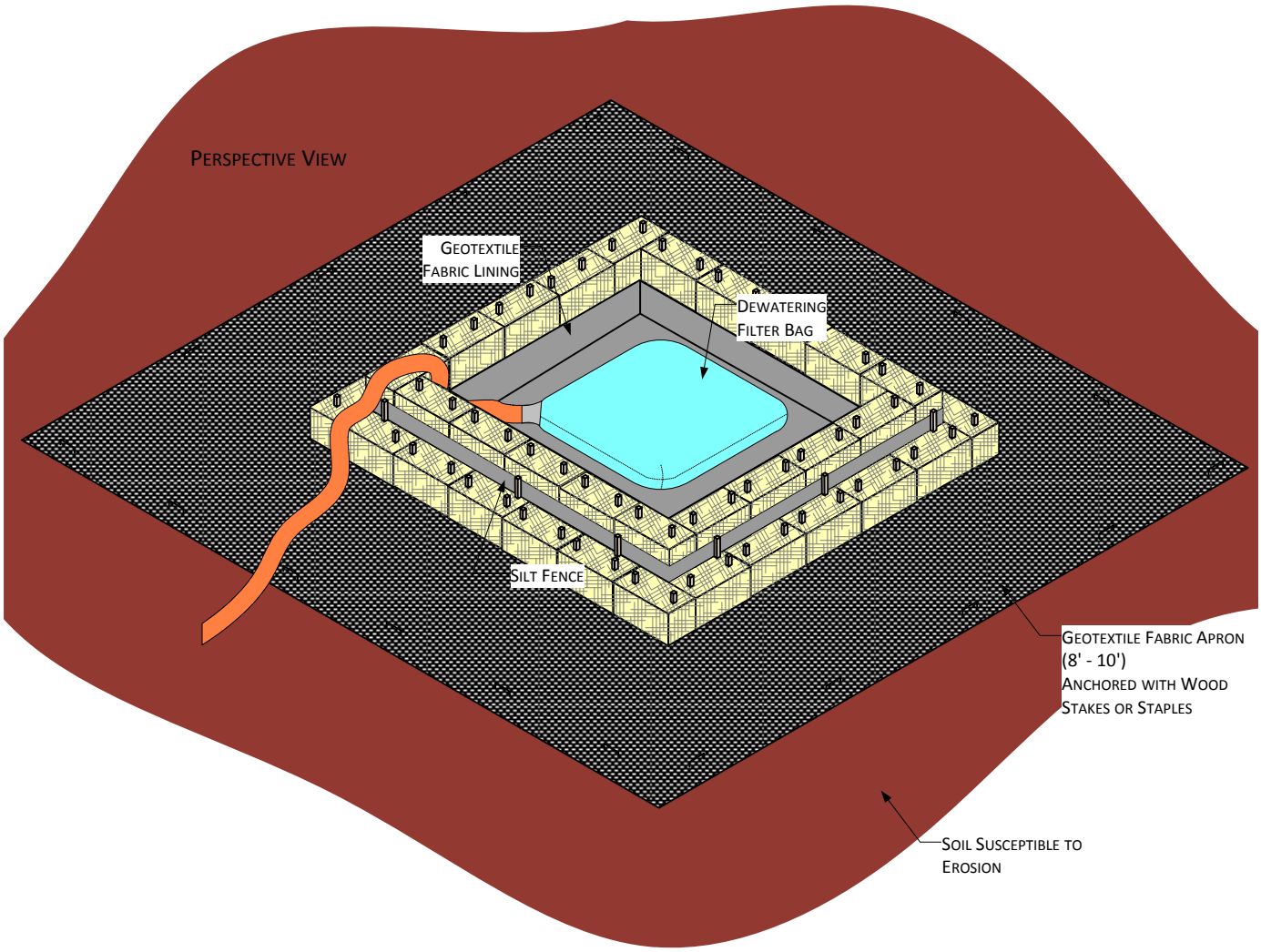
TYPICAL MINIMUM SUMP DIMENSIONS (FEET)		MAXIMUM PUMPING RATE
X	Y	GALLONS PER MINUTE
10	20	300
15	20	350
20	20	400
20	25	450
25	25	500
25	30	550
30	30	660

ENBRIDGE

Figure 22A
Environmental Protection Plan
Straw Bale Dewatering Structure

NATURAL RESOURCE GROUP

K:_CLIENT_PROJECTS\D-F\EEL\2011-019\FIG_22_STRAW_BALE_DEWATERING_STRUCTURE_C.VSD	SCALE: NTS	DATE: 3/11/2003	REVISED: 3/25/2011	DRAWN BY: KJANDERSON



Construct Dewatering Structure to accommodate anticipated pumping rates. See example below.

Example Pumping rate = 200 g.p.m.
Storage volume (c.f.) = 16 x 200 g.p.m. = 3200 c.f.
Height of straw bale structure = 3 feet (2 bales stacked) (based on height of bales, not silt fence)
Inside dimensions of structure = 33 x 33 feet square

Notes:

1. Silt fence ends must be wrapped to join two sections.
2. Install silt fence 2 inches above top of straw bales, and anchor a minimum of 8 inches straight down.
3. Silt fence post staking must be 4 feet or less.
4. Dewatering intake hose supported at least 1 foot from bottom of trench being dewatered.
5. Erosion and sedimentation control measures shall be inspected and maintained in accordance with the company's upland erosion control, revegetation, and maintenance plan.

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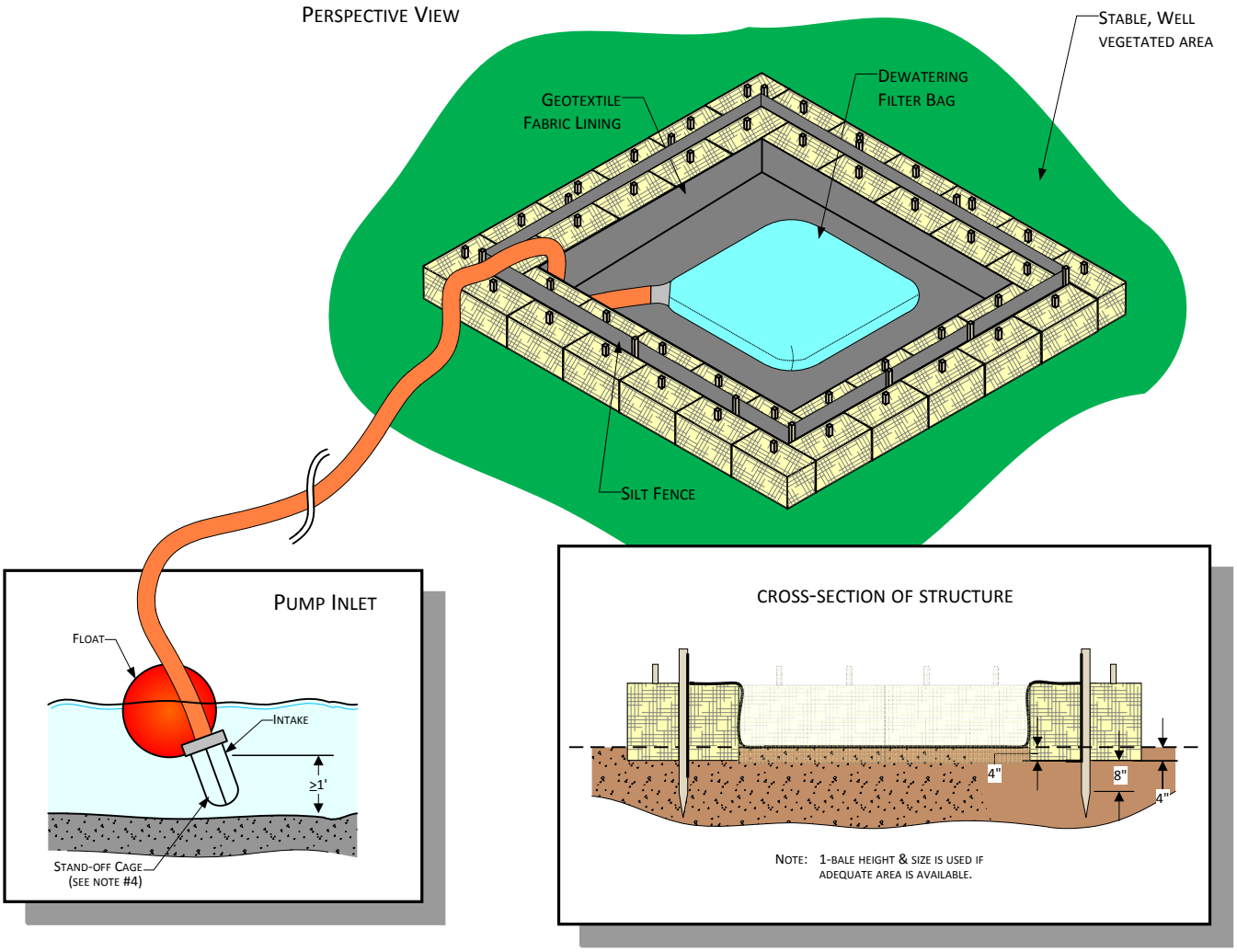
Figure 22B
Environmental Protection Plan
Straw Bale Dewatering Structure

NATURAL RESOURCE GROUP

K:_CLIENT_PROJECTS\D-FEEL\2011-019\FIG_22_STRAW_BALE_DEWATERING_STRUCTURE_C.VSD	SCALE: NTS	DATE: 3/11/2003	REVISED: 3/25/2011	DRAWN BY: KJANDERSON



CONSTRUCT DEWATERING STRUCTURE TO ACCOMMODATE ANTICIPATED PUMPING RATES. SEE EXAMPLE BELOW.

EXAMPLE PUMPING RATE = 200 G.P.M.
STORAGE VOLUME (C.F.) = 16 X 200 G.P.M. = 3200 C.F.
HEIGHT OF STRAW BALE STRUCTURE = 1.5 FEET (1 BALE) (BASED ON HEIGHT OF BALES, NOT SILT FENCE)
INSIDE DIMENSIONS OF STRUCTURE = 46 X 46 FEET SQUARE

NOTES:

1. SILT FENCE ENDS MUST BE WRAPPED TO JOIN TWO SECTIONS.
2. INSTALL SILT FENCE 2 INCHES ABOVE TOP OF STRAW BALE, AND ANCHOR A MINIMUM OF 8 INCHES STRAIGHT DOWN.
3. SILT FENCE POST STAKING MUST BE 4 FEET OR LESS.
4. DEWATERING INTAKE HOSE SUPPORTED AT LEAST 1 FOOT FROM BOTTOM OF TRENCH BEING DEWATERED.
5. USE A FILTER BAG AT THE DISCHARGE HOSE END.
6. EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSPECTED AND MAINTAINED IN ACCORDANCE WITH THE COMPANY'S UPLAND EROSION CONTROL, REVEGETATION, AND MAINTENANCE PLAN.

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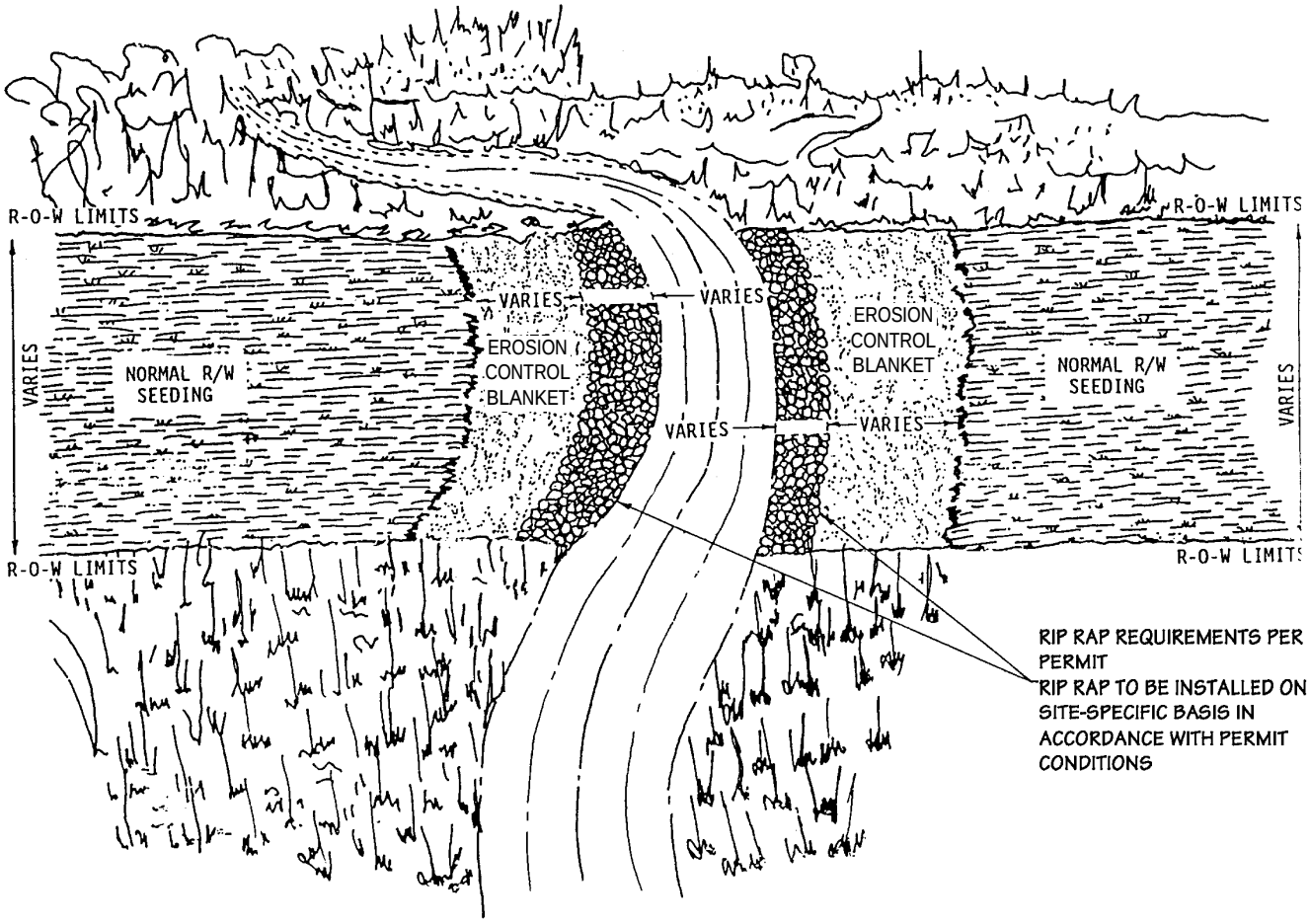
Figure 22C
Environmental Protection Plan
Straw Bale Dewatering Structure

NATURAL RESOURCE GROUP

NOTE: PLACE JUTE BLANKET A MINIMUM OF ONE (1) FOOT UNDER RIP RAP. EXTEND JUTE BLANKET FROM MEAN HIGH WATER LEVEL TO SEVERAL FEET BEHIND HIGH BANK.



For environmental review purposes only.

ENBRIDGE

Figure 23

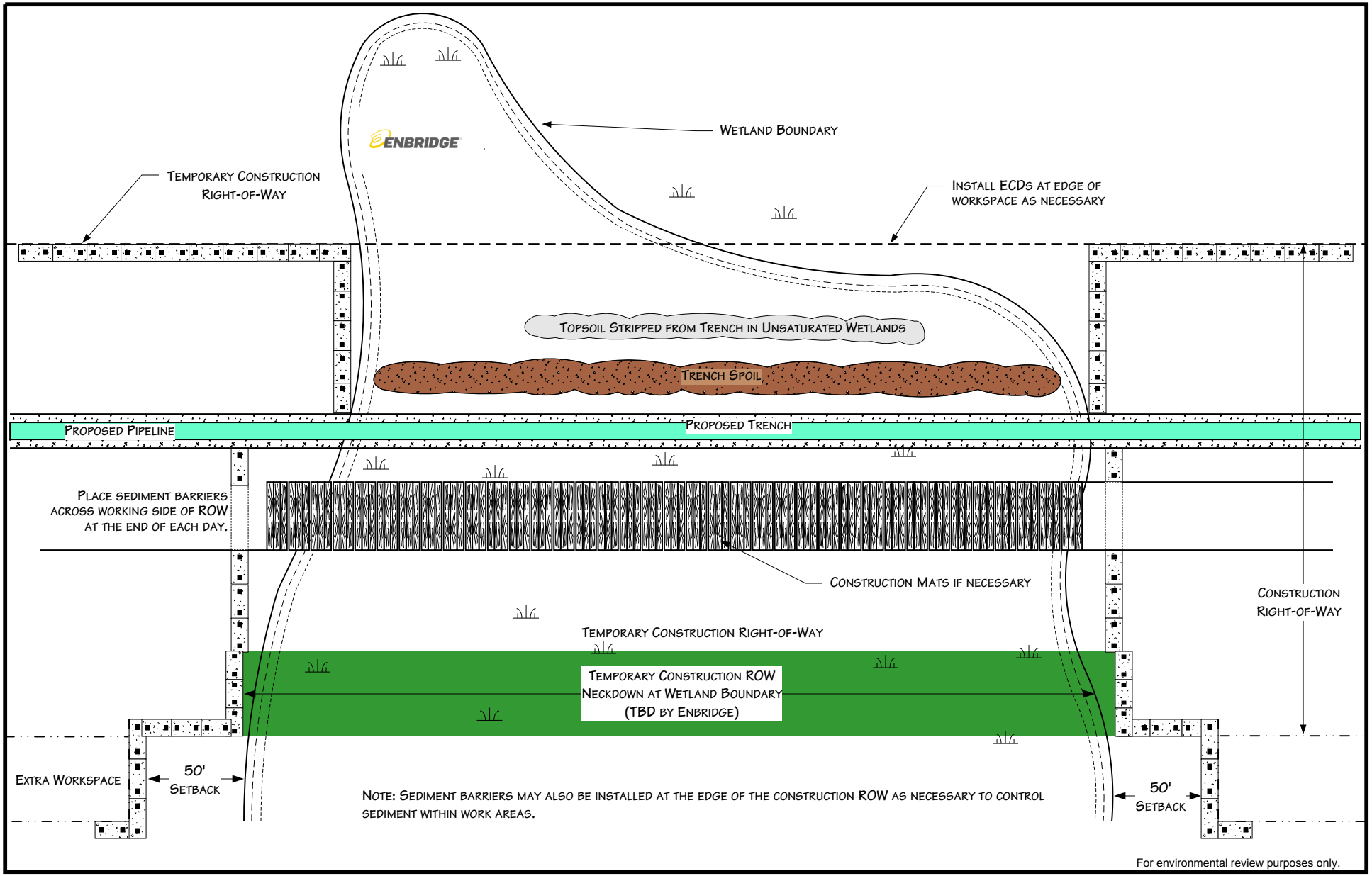
Environmental Protection Plan

Typical Final Stream Bank Stabilization
Rip Rap & Erosion Control

DATE:	7/19/2000
REVISED:	3/14/11
SCALE:	NTS
DRAWN BY:	KMKENDALL

NATURAL RESOURCE GROUP

K:_CLIENT_PROJECTS\D-F\EEL\2011-019\FIG_23_STREAM_BANK_STABILIZATION.VSD



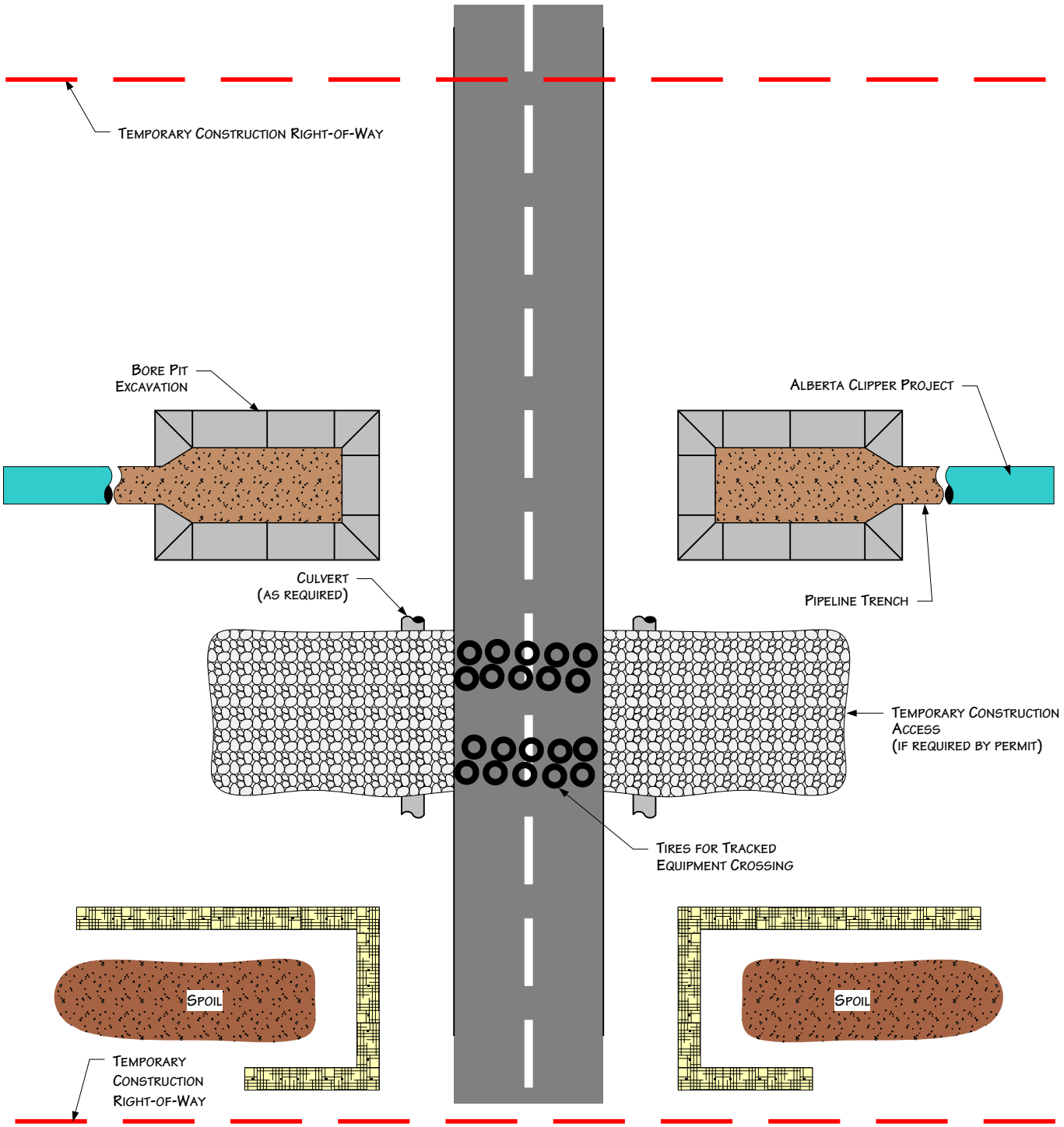
For environmental review purposes only.

ENBRIDGE

Figure 24
Environmental Protection Plan
Typical Wetland Crossing Method

DATE:	5/25/2001
REVISED:	3/14/11
SCALE:	NTS
DRAWN BY:	KMKENDALL

K:_CLIENT_PROJECTS\D-F\EEL\2011-019\FIG_24_WETLAND_CROSSING_METHOD.VSD



Plan View

Notes

1. Procedures shown in this drawing apply to improved roads.
2. Roads must be cleaned after equipment crosses and dirt placed in spoil containment areas.
3. Temporary access materials must be removed upon project completion.
4. Additional information included on other drawings or permits.
5. Construction areas located outside road ROW.

For environmental review purposes only.

ENBRIDGE

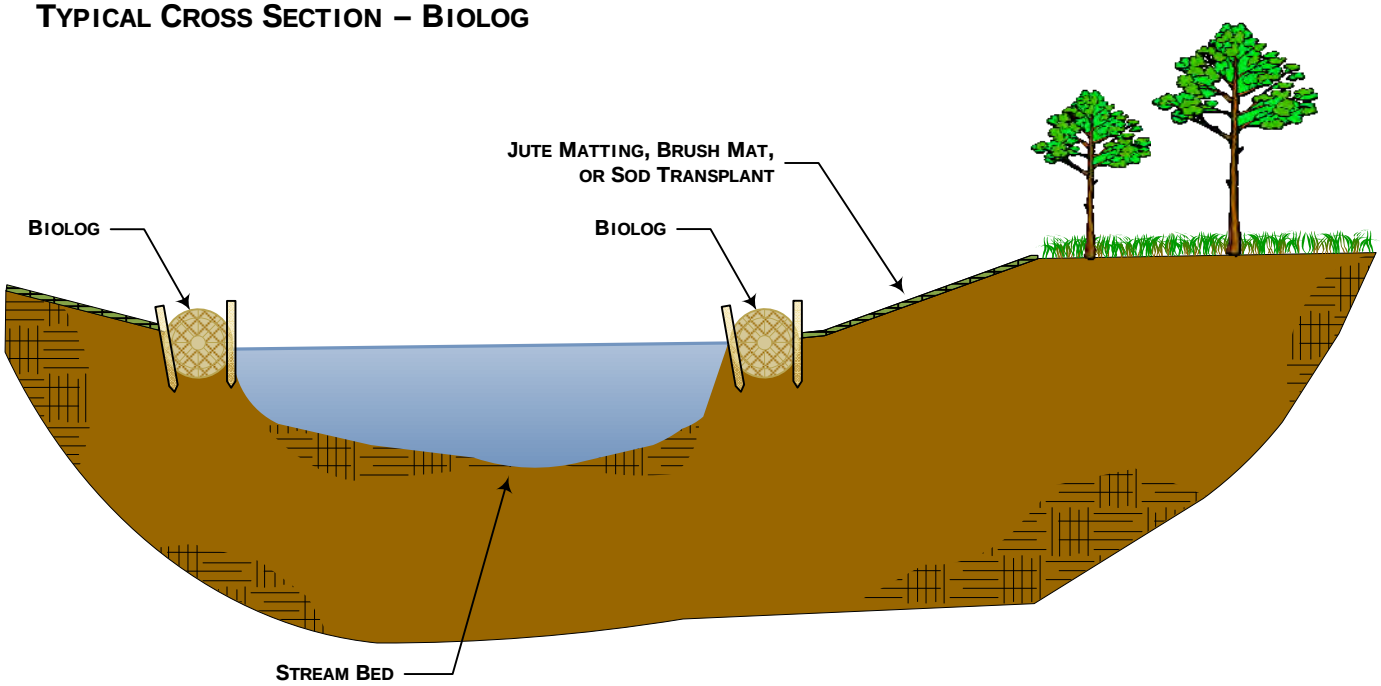
Figure 25
Environmental Protection Plan
Typical Improved Road Crossing
Directional Bore Method

DATE: 7/13/1999
REVISED: 3/14/11
SCALE: NTS
DRAWN BY: KMKENDALL

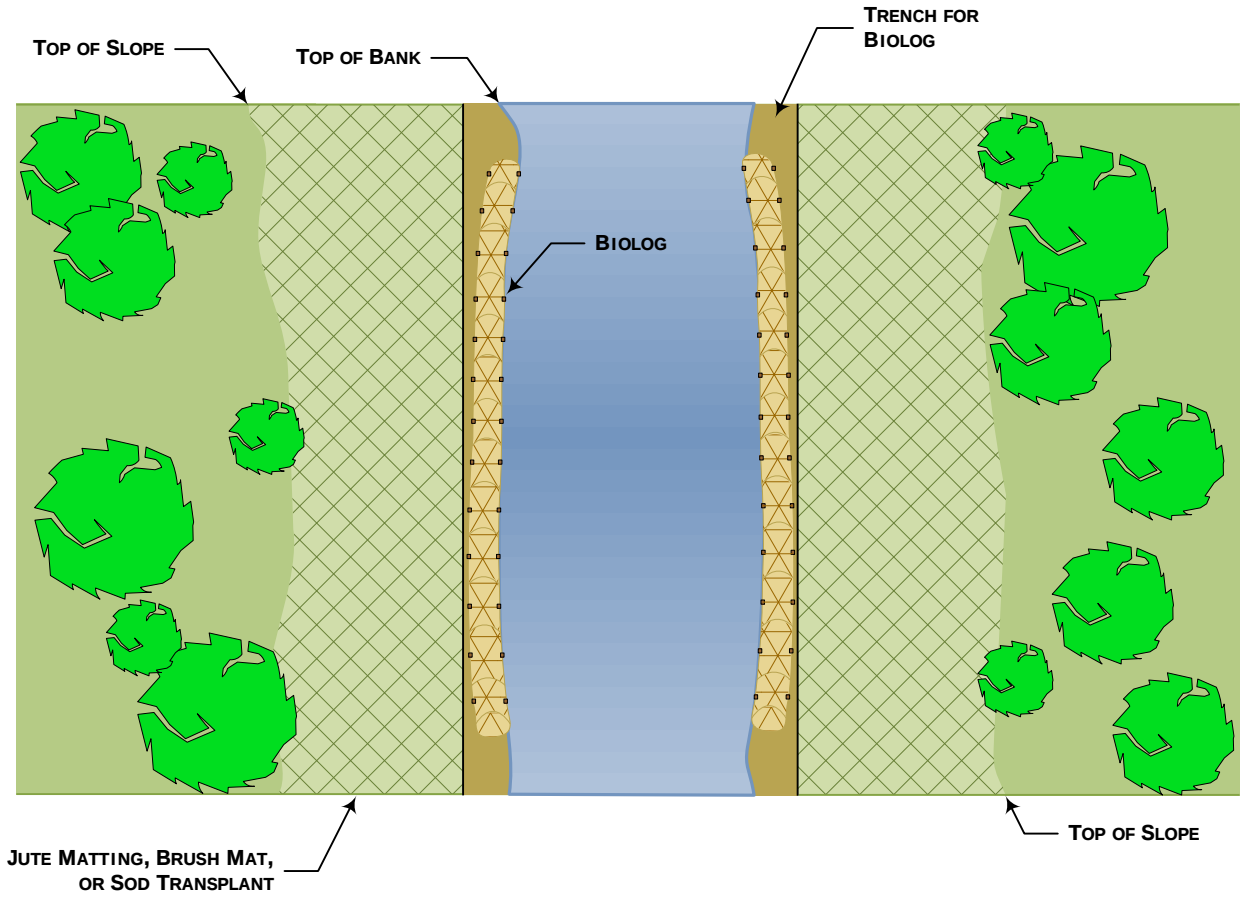
NATURAL RESOURCE GROUP

K:_CLIENT_PROJECTS\D-F\EEL\2011-019\FIG_25_IMPROVED_ROAD_BORE_CROSSING.VSD

TYPICAL CROSS SECTION – BIOLOG



TYPICAL PLAN VIEW – BIOLOG

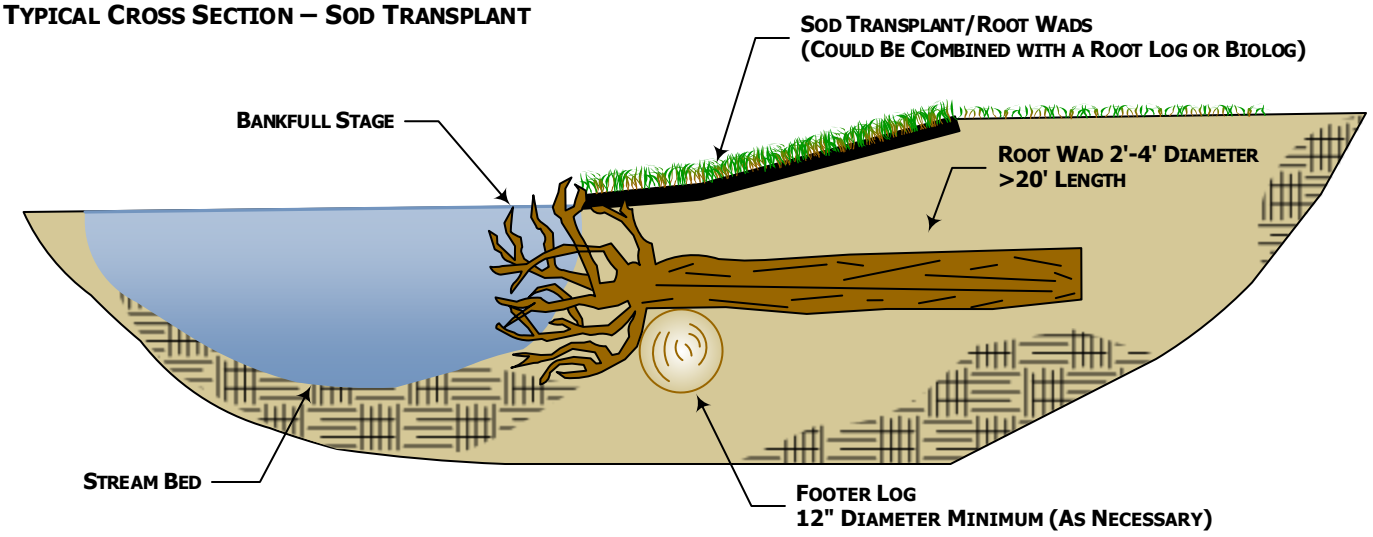


ENBRIDGE

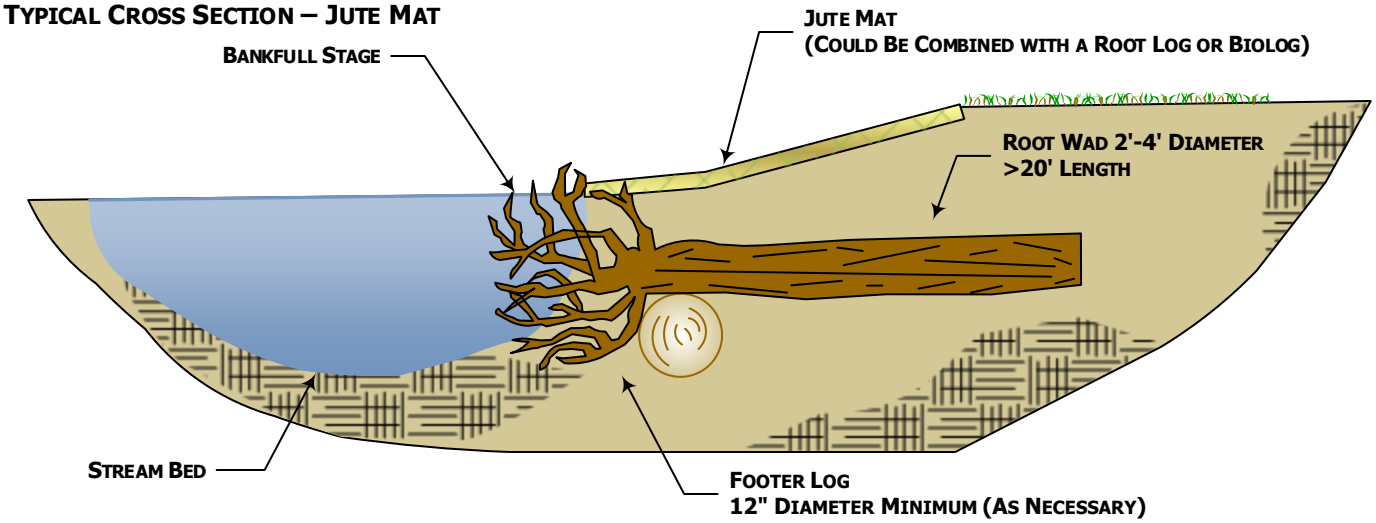
Figure 26
Typical Stream Bank Stabilization
Biolog

04/17/2013

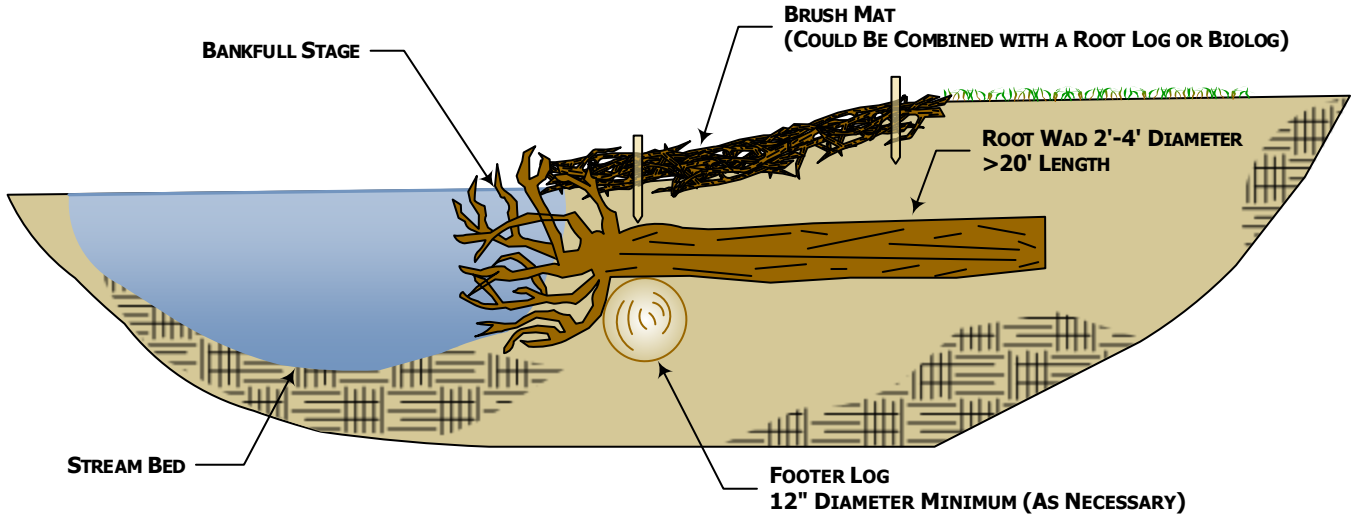
Typical Cross Section – Sod Transplant



Typical Cross Section – Jute Mat



Typical Cross Section – Brush Mat

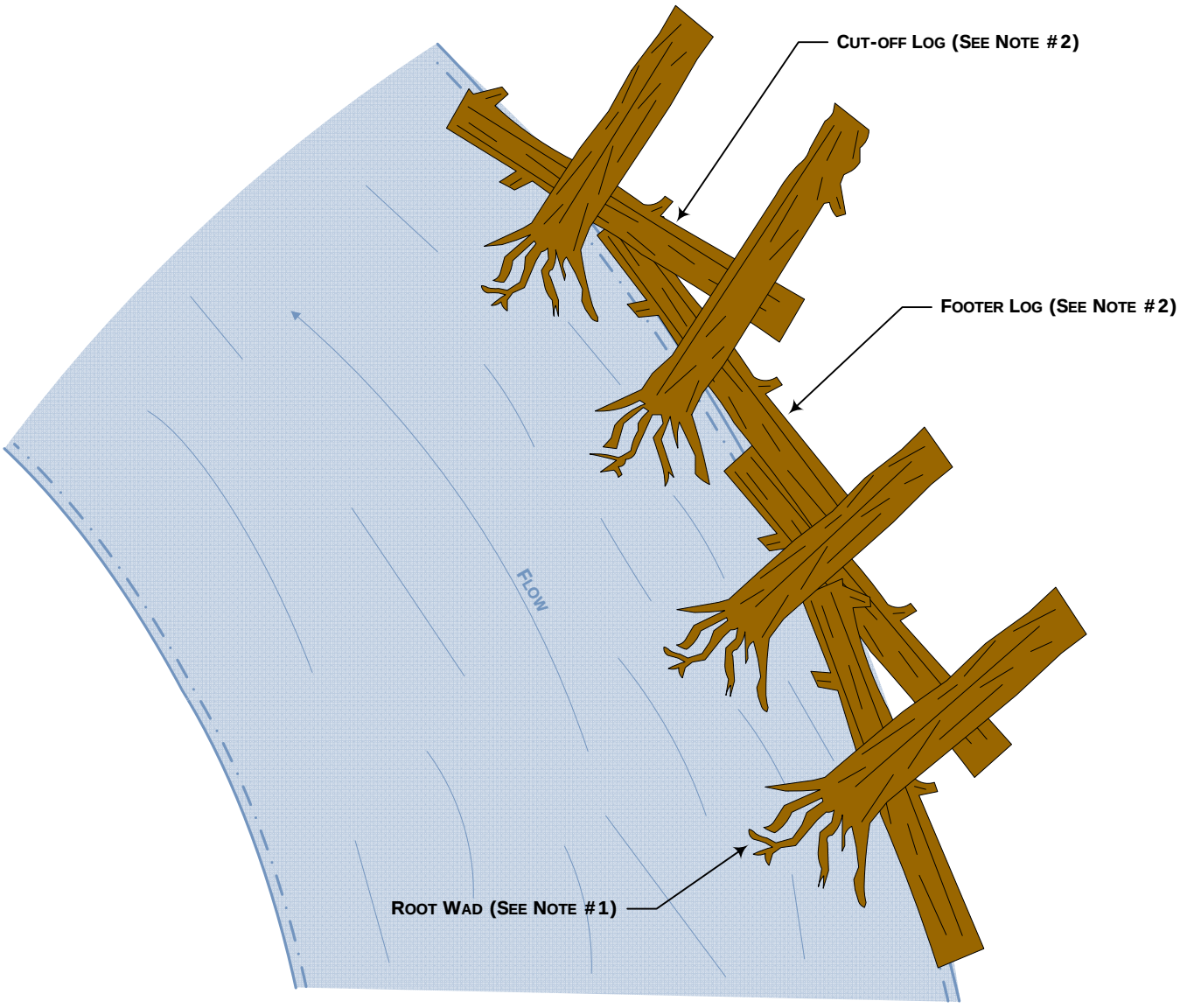


ENBRIDGE

Figure 27
Typical Root Wad

8/25/2015

TYPICAL PLAN VIEW – NATURAL MATERIAL REVETMENT



Notes:

#1 – Root wad logs to be used on steep banks or based on agency recommendations.
#2 - Root wad logs to be anchored appropriately based on site-specific conditions or agency recommendations.

ENBRIDGE

Figure 28
Typical Natural Material Revetment

04/17/2013

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Appendix A
Noxious and Invasive Weed Species

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NOXIOUS AND INVASIVE SPECIES REGULATIONS

Region	*Regulatory Category*	*Agency*[1]	*Reference*
Federal	Federal Noxious Weeds (aquatic and terrestrial plants)	USDA-APHIS	https://plants.usda.gov/java/noxious?rptType=Federal
	Federal Plant Pest Protection Act	USDA-APHIS	https://www.aphis.usda.gov/aphis/ourfocus/planthealth/plant-pest-and-disease-programs/pests-and-diseases
	Interstate Regulations: Pest movement restriction	USDA-APHIS	https://www.aphis.usda.gov/aphis/ourfocus/planthealth/plant-pest-and-disease-programs
North Dakota	State Aquatic Nuisance Species	NDGFD	https://gf.nd.gov/ans/species
	State Noxious Weeds	NDDA	https://www.nd.gov/ndda/plant-industries/noxious-weeds
	County/City Noxious Weeds	Defining County/City	https://www.nd.gov/ndda/sites/default/files/resource/2018%20Feb%20-%20City%20County%20Noxious%20Weeds%20List.pdf
Minnesota	State Prohibited, Regulated, Unregulated Nonnative, and Unlisted Nonnative Invasive Species (wild animals and aquatic plants)	MDNR	https://www.dnr.state.mn.us/invasives/laws.html
	State Prohibited, Restricted, and Specially Regulated Noxious Weeds (terrestrial plants)	MDA	http://www.mda.state.mn.us/plants/pestmanagement/weedcontrol/noxiouslist.aspx
	State Plant Pest Act (insects and terrestrial plants)	MDA	http://www.mda.state.mn.us/plants/pestmanagement/invasivesunit/pestindex.aspx
	State ballast water regulations (aquatic organisms)	MPCA	https://www.pca.state.mn.us/water/vessel-discharge
Wisconsin	State Regulated - Aquatic	WDNR	https://dnr.wi.gov/topic/Invasives/species.asp?filterBy=Aquatic&filterVal=Y
	State Regulated - Terrestrial	WDNR	https://dnr.wi.gov/topic/Invasives/species.asp?filterBy=Terrestrial&filterVal=Y
	State Regulated - Wetland	WDNR	https://dnr.wi.gov/topic/Invasives/species.asp?filterBy=Wetland&filterVal=Y

[1] APHIS: Animal Plant Health Inspection Service
MDA: Minnesota Department of Agriculture
MDNR: Minnesota Department of Natural Resources
MPCA: Minnesota Pollution Control Agency
NDDA: North Dakota Department of Agriculture
NDGFD: North Dakota Game and Fish Department
USDA: United States Department of Agriculture
WDNR: Wisconsin Department of Natural Resources

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Appendix B
Equipment Cleaning Log

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Equipment Cleaning Log

Form Completed By: _____

Date: _____ Time: _____

Location of Equipment (tract & milepost): _____

Equipment Type: _____

Equipment ID (e.g., company, unique ID number): _____

Cleaning Method: (check all that apply)

- ☐ Scrape Down
- ☐ Steam Wash Blow Down (compressed air)
- ☐ Power/Pressure Wash (water)
- ☐ Other (Describe): _____

Comments: _____

_____

_____

_____

_____

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Appendix C
Seed Mixes

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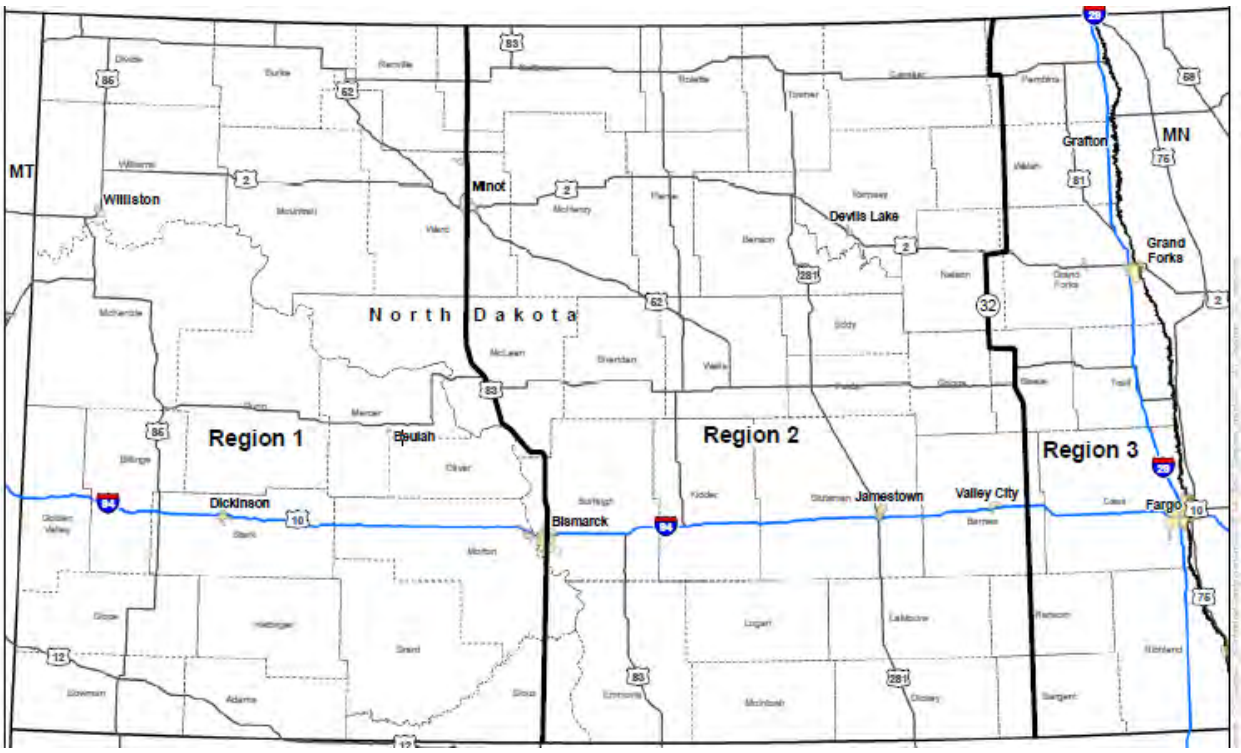
NORTH DAKOTA SEED MIXES

Upon recommendations of the North Dakota Natural Resources Conservation Service, Enbridge divided regional seeding in North Dakota into three regions based on precipitation and general soil types as follows:

- Region 1 is between the Montana state line and Highway 83;
- Region 2 is between Highway 83 and Highway 32; and
- Region 3 is between Highway 32 and the Minnesota state line.



NORTH DAKOTA STATE-WIDE SEED MIXES

Table 1
ND Seed Mix 1 – State-Wide Temporary Cover Crop

Use: Where agency, landowner, or Enbridge requests a cover crop
Seeding rate: 80.0 pounds/acre Pure Live Seed ("PLS") drilled or 160.0 pounds /acre PLS broadcast
Notes: *No species substitutions allowed*

Species: Preferred Varieties (if available)	Pounds/Acre Pure Live Seed (PLS)	Percent of Mix
Oats *if spring or summer seeding,* **OR** Winter Wheat *if dormant (late fall) seeding*	40.0	50.0
Annual Ryegrass or Slender Wheat Grass	40.0	50.0
Total Seed	**80.0**	**100.0**

Table 2
ND Seed Mix 2 – North Dakota State-Wide State School Lands Seed Mix

Use: School Trust Lands and reestablishing stream bank vegetation where the waterbodies are open cut
Seeding Rate: 19.0 pounds/acre PLS drilled or 38.0 pounds/acre PLS broadcast without the companion crop. Double the rate of the companion crop when broadcast seeding
Notes: *No species substitutions allowed*

Species: Preferred Variety (if available)	Pounds/Acre PLS	Percent of Mix
Western wheatgrass: Rodan, Walsh, Flintlock, Rosana, Recovery	8.0	42.1
Slender wheatgrass: Adanac, Pryor, Revenue, Primar, First Strike	5.0	26.3
Green needlegrass: Lodorn, AC Mallard, Fowler	4.0	21.1
Side-oats grama: Killdeer, Pierre, Butte	2.0	10.5
Total	**19.0**	**100.0[1]**
Companion Crop		
Oats (or see Table 4 in Seed Standards and Specifications)	10.0	100.0
Total Seed	**29.0**	**100.0[1]**

[1] May not equal 100 percent due to rounding

NORTH DAKOTA REGION 1 SEED MIXES

Table 3
ND Seed Mix 3 – Region 1 Native Prairie Seed Mix

Use: North Dakota Region 1 on private and state lands (non-school trust) where native and degraded prairie are currently managed as range or hay land
Seeding rate: 11.90 pounds/acre PLS drilled or 23.80 pounds/acre PLS broadcast without the companion crop
Double the rate of the companion crop when broadcast seeding
Notes: *Enbridge Environment must approve substitutions in advance*

Species: Preferred Varieties (if available)	Pounds/Acre PLS	Percent of Mix
Western wheatgrass: Rodan, Walsh, Flintlock, Rosana, Recovery	2.50	21.0
Green needlegrass: Lodorn, AC Mallard, Fowler	2.00	16.8
Slender wheatgrass: Adanac, Pryor, Revenue, Primar, First Strike	1.50	12.6
Little bluestem: Badlands, Itasca	1.00	8.4
Prairie sandreed: Goshen, Bowman, Koch	1.00	8.4
Side oats grama: Killdeer, Pierre, Butte	2.00	16.8
Blue grama: Bad River	0.50	4.2
Prairie cordgrass: Red River	0.50	4.2
Purple prairieclover: Common	0.10	0.8
White prairieclover: Antelope	0.10	0.8
Maximilian sunflower: Medicine Creek	0.10	0.8
Blanket flower: Common	0.20	1.7
Black-eyed Susan: Common	0.05	0.4
Stiff sunflower: Common	0.10	0.8
Canada goldenrod or Missouri goldenrod: Common	0.05	0.4
Lewis flax: Appar, Maple Grove	0.10	0.8
Prairie coneflower: Stillwater	0.10	0.8
Total	**11.90**	**100.0**[1]
Companion Crop		
Oats (or see Table 4 in Seed Standards and Specifications)	10.00	100.0
Total Seed	**21.90**	**100.0**[1]

[1] May not equal 100 percent due to rounding

Table 4
ND Seed Mix 4 – Mixed Hay Land (Converted Prairie) and Open-Cut Road Ditch Seed Mix

Use: North Dakota Region 1 for private land hay land planting and re-establishing road bank/ditch vegetation
Seeding Rate: 11.4 pounds/acre PLS drilled or 22.8 pounds/acre PLS broadcast without the companion crop
Double the rate of the companion crop when broadcast seeding
Notes: *Enbridge Environment must approve s*ubstitutions *in advance*

Species/Preferred Varieties (if available)	Pounds/ Acre PLS	Percent of Mix
Crested wheatgrass: Nordan, RoadCrest, Summit	3.0	26.3
Pubescent: Manska, Greenleaf; **OR** Intermediate wheatgrass: Reliant, Clarke, Slate, Chief, Oahe, Haymaker, Beefmaker, Manifest	4.0	35.1
Alfalfa: Vernal, Ladak	4.0	35.1
Purple prairieclover: Bismarck	0.1	0.9
White prairieclover: Antelope	0.1	0.9
Narrow leaf purple coneflower: Bismarck	0.1	0.9
Stiff sunflower: Bismarck	0.1	0.9
Total	**11.4**	**100.0**[1]
Companion Crop		
Oats (or see Table 4 in Seed Standards and Specifications)	10.0	100.0
Total Seed	**21.4**	**100.0**[1]

[1] May not equal 100 percent due to rounding

Table 5
ND Seed Mix 5 – Tame Pasture Reclamation Seed Mix

Use: North Dakota Region 1 on private tame (improved) pasture planting
Seeding Rate: 14.0 pounds/acre PLS drilled or 28.0 pounds/acre PLS broadcast without the companion crop
Double the rate of the companion crop when broadcast seeding
Notes: *Enbridge Environment must approve s*ubstitutions *in advance*

Species: Preferred Varieties (if available)	Pounds/Acre PLS	Percent of Mix
Crested wheatgrass: Nordan, RoadCrest, Summit	4.0	28.6
Pubescent: Manska, Greenleaf; **OR** Intermediate wheatgrass: Reliant, Clarke, Slate, Chief, Oahe, Haymaker, Beefmaker, Manifest	5.0	35.7
Western wheatgrass: Rodan, Walsh, Flintlock, Rosana, Recovery	5.0	35.7
Total	**14.0**	**100.0**[1]
Companion Crop		
Oats (or see Table 4 in Seed Standards and Specifications)	10.0	100.0
Total Seed	**24.0**	**100.0**[1]

[1] May not equal 100 percent due to rounding

Table 6
ND Seed Mix 6– North Dakota Default Conservation Reserve Program (CRP) Seed Mix

Use: North Dakota Region 1 on tracts enrolled in CRP
Seeding Rate: 8.0 pounds/acre PLS drilled or 16.0 pounds/acre PLS broadcast without the companion crop
Double the rate of the companion crop when broadcast seeding
Notes: *No species substitutions allowed*

Species: Preferred Variety (if available)	Pounds/Acre PLS	Percent of Mix
Tall Wheatgrass: Platt, Orbit	4.4	55.0
Intermediate Wheatgrass: Reliant, Clarke, Slate, Chief, Oahe, Haymaker, Beefmaker, Manifest	1.7	21.3
Slender Wheatgrass: Adanac, Pryor, Revenue, Primar, First Strike	0.5	6.3
Alfalfa: Vernal, Ladak or any with Zone 2 winter hardiness	1.1	13.8
Sweetclover: Common	0.3	3.8
Total	**8.0**	**100.0[1]**
Companion Crop		
Oats (or see Table 4 in Seed Standards and Specifications)	10.0	100.0
Total Seed	**18.0**	**100.0[1]**

[1] May not equal 100 percent due to rounding

NORTH DAKOTA REGION 2 SEED MIXES

Table 7
ND Seed Mix 7 – Native Prairie Seed Mix

Use: North Dakota Region 2 on private and state lands (non-school trust) where native and degraded prairie are currently managed as range or hay land
Seeding Rate: 11.9 pounds/acre PLS drilled or 23.8 pounds/acre PLS broadcast without the companion crop
Double the rate of the companion crop when broadcast seeding
Notes: *Enbridge Environment must approve* substitutions *in advance*

Species: Preferred Varieties (if available)	Pounds/Acre PLS	Percent of Mix
Western wheatgrass: Rodan, Walsh, Flintlock, Rosana, Recovery	2.50	21.0
Green needlegrass: Lodorn, AC Mallard, Fowler	1.50	12.6
Slender wheatgrass: Adanac, Pryor, Revenue, Primar, First Strike	1.50	12.6
Little bluestem: Badlands, Itasca	1.00	8.4
Big Bluestem: Sunnyview, Bison, Bonilla, Bounty	1.00	8.4
Prairie sandreed: Goshen, Bowman, Koch	1.00	8.4
Side oats grama: Killdeer, Pierre, Butte	2.00	16.8
Blue grama: Bad River	0.25	2.1
Switch grass: Dacotah, Forestburg, Sunburst, Summer	0.25	2.1
Purple prairieclover: Common	0.10	0.8
White prairieclover: Antelope	0.10	0.8
Maximilian sunflower: Medicine Creek	0.10	0.8
Blanket flower: Common	0.20	1.7
Black-eyed Susan: Common	0.05	0.4
Stiff sunflower: Common	0.10	0.8
Canada goldenrod or Missouri goldenrod: Common	0.05	0.4
Lewis flax: Appar, Maple Grove	0.10	0.8
Prairie coneflower: Stillwater	0.10	0.8
Total	**11.90**	**100.0**[1]
Companion Crop		
Oats (or see Table 4 in Seed Standards and Specifications)	10.00	100.0
Total Seed	**21.90**	**100.0**[1]

[1] May not equal 100 percent due to rounding

Table 8
ND Seed Mix 8 – Mixed Hay Land (Converted Prairie) and Open-Cut Road Ditch Seed Mix

Use: North Dakota Region 2 on private land mixed hay land planting and re-establishing road bank/ditch vegetation
Seeding Rate: 13.4 pounds/acre PLS drilled or 26.8 pounds/acre PLS broadcast without the companion crop
Double the rate of the companion crop when broadcast seeding
Notes: *Enbridge Environment must approve s*ubstitutions *in advance*

Species: Preferred Varieties (if available)	Pounds/Acre PLS	Percent of Mix
Pubescent: Manska, Greenleaf; **OR** Intermediate wheatgrass: Reliant, Clarke, Slate, Chief, Oahe, Haymaker, Beefmaker, Manifest	3.0	22.4
Meadow Bromegrass: Fleet, Paddock, Regar, Montana, MacBeth, Cache	7.0	52.2
Alfalfa: Vernal, Ladak	3.0	22.4
Purple prairieclover: Bismarck	0.1	0.7
White prairieclover: Antelope	0.1	0.7
Narrow leaf purple coneflower: Bismarck	0.1	0.7
Stiff sunflower: Bismarck	0.1	0.7
Total	**13.4**	**100.0**[1]
Companion Crop		
Oats (or see Table 4 in Seed Standards and Specifications)	10.0	100.0
Total Seed	**23.4**	**100.0**[1]

[1] May not equal 100 percent due to rounding

Table 9
ND Seed Mix 9 – Tame Pasture Reclamation Seed Mix

Use: North Dakota Region 2 on private tame (improved) pasture planting
Seeding Rate: 21.0 pounds/acre PLS drilled or 42.0 pounds/acre PLS broadcast without the companion crop
Double the rate of the companion crop when broadcast seeding
Notes: *Enbridge Environment must approve s*ubstitutions *in advance*

Species: Preferred Varieties (if available)	Pounds/Acre PLS	Percent of Mix
Pubescent: Manska, Greenleaf; **OR** Intermediate wheatgrass: Reliant, Clarke, Slate, Chief, Oahe, Haymaker, Beefmaker, Manifest	6.0	28.6
Meadow bromegrass: Fleet, Paddock, Regar, Montana, MacBeth, Cache	15.0	71.4
Total	**21.0**	**100.0**[1]
Companion Crop		
Oats (or see Table 4 in Seed Standards and Specifications)	10.0	100.0
Total Seed	**31.0**	**100.0**[1]

[1] May not equal 100 percent due to rounding

Table 10
ND Seed Mix 10– North Dakota Default Conservation Reserve Program (CRP) Seed Mix

Use: North Dakota Region 2 on tracts enrolled in CRP
Seeding Rate: 8.0 pounds/acre PLS drilled or 16.0 pounds/acre PLS broadcast without the companion crop
Double the rate of the companion crop when broadcast seeding
Notes: *No species substitutions allowed*

Species: Preferred Variety (if available)	Pounds/Acre PLS	Percent of Mix
Tall Wheatgrass: Platt, Orbit	4.4	55.0
Intermediate Wheatgrass: Reliant, Clarke, Slate, Chief, Oahe, Haymaker, Beefmaker, Manifest	1.7	21.3
Slender Wheatgrass: Adanac, Pryor, Revenue, Primar, First Strike	0.5	6.3
Alfalfa: Vernal, Ladak or any with Zone 2 winter hardiness	1.1	13.8
Sweetclover: Common	0.3	3.8
Total	**8.0**	**100.0[1]**
Companion Crop		
Oats (or see Table 4 in Seed Standards and Specifications)	10.0	100.0
Total Seed	**18.0**	**100.0[1]**

[1] May not equal 100 percent due to rounding

NORTH DAKOTA REGION 3 SEED MIXES

Table 11
ND Seed Mix 11 – Native Prairie Seed Mix

Use: North Dakota Region 3 on private and state lands (non-school trust) where native or degraded prairie currently managed as range or hay land

Seeding Rate: 12.15 pounds/acre PLS drilled or 24.30 pounds/acre PLS broadcast without the companion crop

Double the rate of the companion crop when broadcast seeding

Notes: *Enbridge Environment must approve s*ubstitutions *in advance*

Species: Preferred Varieties	Pounds/Acre PLS	Percent of Mix
Western wheatgrass: Rodan, Walsh, Flintlock, Rosana, Recovery	2.00	16.5
Green needlegrass: Lodorn, AC Mallard, Fowler	2.00	16.5
Slender wheatgrass: Adanac, Pryor, Revenue, Primar, First Strike	1.00	8.2
Canada wildrye: Mandan	1.00	8.2
Big Bluestem: Sunnyview, Bison, Bonilla, Bounty	1.50	12.3
Side oats grama: Killdeer, Pierre, Butte	2.00	16.5
Blue grama: Bad River	0.25	2.1
Switch grass: Dacotah, Forestburg, Sunburst, Summer	0.50	4.1
Indiangrass: Tomahawk	1.00	8.2
Purple prairieclover: Common	0.10	0.8
White prairieclover: Antelope	0.10	0.8
Maximilian sunflower: Medicine Creek	0.10	0.8
Blanket flower: Common	0.20	1.6
Black-eyed Susan: Common	0.05	0.4
Stiff sunflower: Common	0.10	0.8
Canada goldenrod or Missouri goldenrod: Common	0.05	0.4
Lewis flax: Appar, Maple Grove	0.10	0.8
Prairie coneflower: Stillwater	0.10	0.8
Total	**12.15**	**100.0[1]**
Companion Crop		
Oats (or see Table 4 in Seed Standards and Specifications)	10.00	100.0
Total Seed	**22.15**	**100.0[1]**

[1] May not equal 100 percent due to rounding

Table 12
ND Seed Mix 12 –Mixed Hay Land (Converted Prairie) and Open-Cut Road Ditch Seed Mix

Use: North Dakota Region 3 on private land mixed hay land planting and re-establishing road bank/ditch vegetation
Seeding Rate: 15.3 pounds/acre PLS drilled or 30.6 pounds/acre PLS broadcast without the companion crop
Double the rate of the companion crop when broadcast seeding
Notes: *Enbridge Environment must approve s*ubstitutions *in advance*

Species: Preferred Varieties (if available)	Pounds/Acre PLS	Percent of Mix
Meadow Bromegrass: Fleet, Paddock, Regar, Montana, MacBeth, Cache	10.0	65.4
Alfalfa: Vernal, Ladak	5.0	32.7
Purple prairieclover: Bismarck	0.1	0.7
White prairieclover: Antelope	0.1	0.7
Narrow leaf purple coneflower: Bismarck	0.1	0.7
Total	**15.3**	**100.0[1]**
Companion Crop		
Oats (or see Table 4 in Seed Standards and Specifications)	10.0	100.0
Total Seed	**25.3**	**100.0[1]**

[1] May not equal 100 percent due to rounding

Table 13
ND Seed Mix 13 – Tame Pasture Reclamation Seed Mix

Use: North Dakota Region 3 on private tame (improved) pasture planting
Seeding Rate: 21.0 pounds/acre PLS drilled or 42.0 pounds/acre PLS broadcast without the companion crop
Double the rate of the companion crop when broadcast seeding
Notes: *Enbridge Environment must approve s*ubstitutions *in advance*

Species: Preferred Varieties (if available)	Pounds/Acre PLS	Percent of Mix
Pubescent: Manska, Greenleaf; **OR** Intermediate wheatgrass: Reliant, Clarke, Slate, Chief, Oahe, Haymaker, Beefmaker, Manifest	6.0	28.6
Meadow bromegrass: Fleet, Paddock, Regar, Montana, MacBeth, Cache	15.0	71.4
Total	**21.0**	**100.0**[1]
Companion Crop		
Oats (or see Table 4 in Seed Standards and Specifications)	10.0	100.0
Total Seed	**31.0**	**100.0**[1]

[1] May not equal 100 percent due to rounding

Table 14
ND Seed Mix 14 – North Dakota Default CRP Seed Mix

Use: North Dakota Region 3 on tracts enrolled in CRP
Seeding Rate: 10.0 pounds/acre PLS drilled or 20.0 pounds/acre PLS broadcast without the companion crop
Double the rate of the companion crop when broadcast seeding
Notes: *No species substitutions allowed*

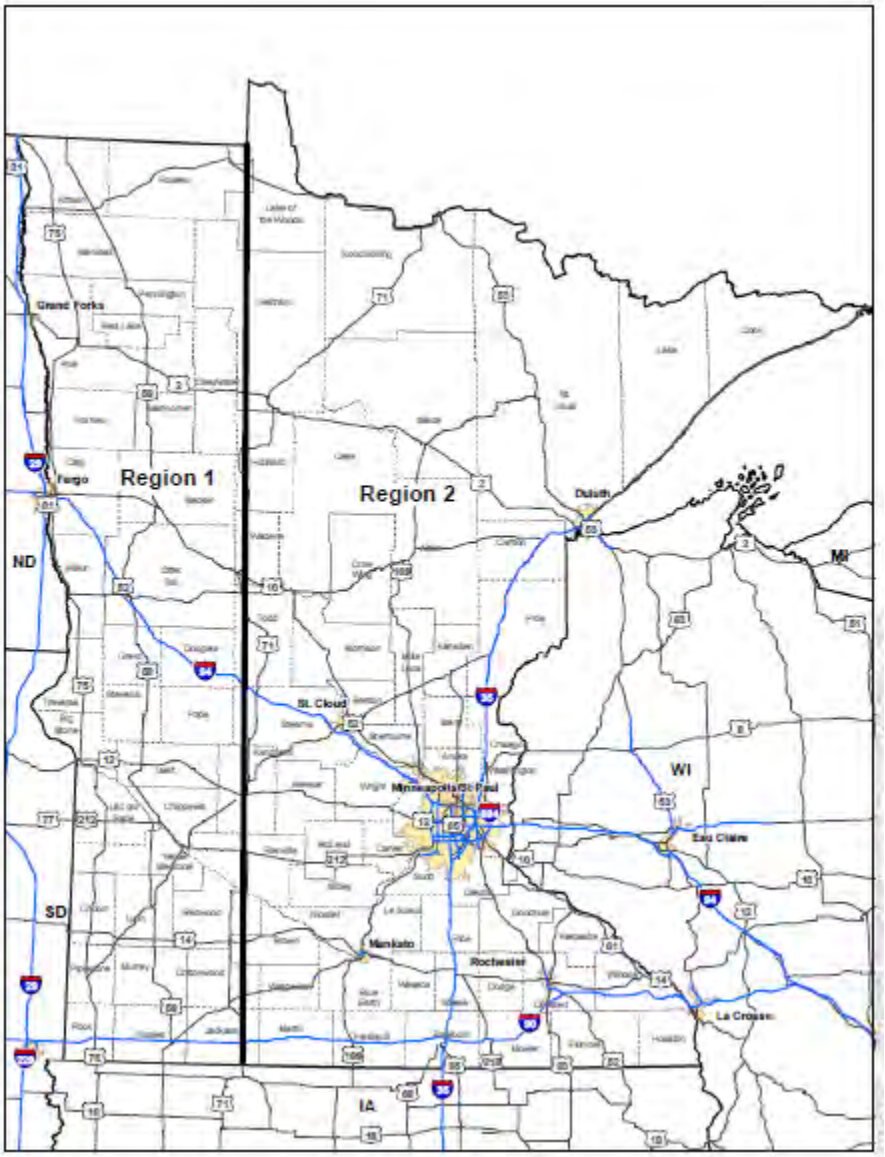
Species: Preferred Variety (if available)	Pounds/Acre PLS	Percent of Mix
Western Wheatgrass: Rodan, Walsh, Flintlock, Rosana, Recovery	2.0	20.0
Intermediate Wheatgrass: Reliant, Clarke, Slate, Chief, Oahe, Haymaker, Beefmaker, Manifest	5.0	50.0
Alfalfa: Any with Zone 2 winter hardiness	2.0	20.0
Sweetclover: Common	1.0	10.0
Total	**10.0**	**100.0**[1]
Companion Crop		
Oats (or see Table 4 in Seed Standards and Specifications)	10.0	100.0
Total Seed	**20.0**	**100.0**[1]

[1] May not equal 100 percent due to rounding

MINNESOTA SEED MIXES

Based on average annual precipitation and temperatures and soil types, Enbridge divided seeding in Minnesota into two regions. These regions have different seed mixes for specific areas.

- Region 1 is between the North Dakota state line and approximately Highway 71; and
- Region 2 is between Highway 71 and the Wisconsin state line.



MINNESOTA STATEWIDE SEED MIXES

Table 15
MN Seed Mix 1 – Minnesota Default CRP Seed Mix

Use: Minnesota state-wide on tracts enrolled in the CRP
Seeding Rate: 12.0 pounds/acre PLS drilled or 24.0 PLS pounds/acre broadcast without the companion crop
Double the rate of the companion crop when broadcast seeding
Notes: *No species substitutions allowed*

Species: Preferred Variety (if available)	Pounds/Acre PLS	Percent of Mix
Big Bluestem: Bison, Bonilla	4.0	33.3
Western Wheatgrass: Rodan	0.5	4.2
Slender Wheatgrass; Revenue	0.9	7.5
Sideoats Grama: Bad River	1.6	13.3
Switchgrass:Dacotah, Forestburg, Sunburst, Nebraska	0.2	1.7
Indiangrass: Tomahawk, Holte	0.5	4.2
Rough Dropseed: Common	0.3	2.5
Yarrow: Common	0.1	0.8
Purple Prairie Clover: Common	2.0	16.7
Ox-eye Sunflower: Common	1.0	8.3
Prairie Cinquefoil: Common	0.1	0.8
Black-eyed Susan Common	0.8	6.7
Total	**12.0**	**100.0[1]**
Companion Crop		
Oats (or see Table 4 in Seed Standards and Specifications)	10.0	100.0
Total Seed	**22.0**	**100.0[1]**

[1] May not equal 100 percent due to rounding

Table 16
MN Seed Mix 2 – Minnesota Protected and Other Waters Seed Mix

Use: Minnesota state-wide on the outer fringe of Public Water Inventory ("PWI") waterbodies and wetlands and all other waterbody banks
Seeding Rate: 8.255 pounds/acre PLS drilled or 16.510 pounds/acre PLS broadcast without the companion crop
Double the rate of the companion crop when broadcast seeding
Notes: *Enbridge Environment must approve s*ubstitutions *in advance*

Species: Preferred Varieties (if available)	Pounds/Acre PLS	Percent of Mix
American slough grass: Common	1.500	18.2
Blue-joint grass: Common	0.100	1.2
Reed manna grass: Common	0.200	2.4
Fowl manna grass: Common	0.100	1.2
Fowl bluegrass: Common	1.800	21.8
Rice cut-grass: Common	0.250	3.0
Annual ryegrass: Common	0.900	10.9
Tussock sedge: Common	0.100	1.2
Fox sedge: Common	0.300	3.6
Green bulrush: Common	0.100	1.2
Wool grass: Common	0.005	0.1
River bulrush: Common	0.250	3.0
Soft-stem bulrush: Common	0.100	1.2
March milkweed: Common	0.100	1.2
Flat-topped aster: Common	0.300	3.6
Joe-pye weed: Common	0.300	3.6
Boneset: Common	0.250	3.0
Sneezeweed: Common	0.250	3.0
Spotted touch-me-not: Common	0.100	1.2
Great blue lobelia: Common	0.100	1.2
Monkey flower: Common	0.100	1.2
Mountain mint: Common	0.100	1.2
Giant goldenrod: Common	0.250	3.0
Blue vervain: Common	0.350	4.2
Ironweed: Common	0.350	4.2
Total	**8.255**	**100.0**[1]
Companion Crop		
Slender wheatgrass: Adanac, Pryor, Revenue, Primar, First Strike	3.000	100.0
Total Seed	**11.255**	**100.0**[1]

[1] May not equal 100 percent due to rounding

Table 17
MN Seed Mix 3 – Minnesota Unsaturated Wetlands Seed Mix

Use: Minnesota state-wide in unsaturated wetland areas
Seeding Rate: 17.0 pounds/acre PLS drilled or 34.0 pounds/acre PLS broadcast
Notes: *No species substitutions allowed*

Species: Preferred Variety (if available)	Pounds/Acre PLS	Percent of Mix
American slough grass: Common	6.0	35.3
Annual ryegrass: Common	8.0	47.1
Flow bluegrass: Common	3.0	17.6
Total Seed	**17.0**	**100.0**[1]

[1] May not equal 100 percent due to rounding

MINNESOTA REGION 1 SEED MIXES

Table 18
MN Seed Mix 4 – Native Prairie Seed Mix

Use: Minnesota Region 1 on private and public land where native or degraded prairie are currently managed as range or hay land
Seeding Rate: 13.0 pounds/acre PLS drilled or 26.0 pounds/acre PLS broadcast without the companion crop
Double the rate of the companion crop when broadcast seeding
Notes: *Enbridge Environment must approve s*ubstitutions *in advance*

Species: Preferred Varieties (if available)	Pounds/Acre PLS	Percent of Mix
Big bluestem: Sunnyview, Bison, Bonilla, Bounty	1.25	9.6
Side-oats grama: Killdeer, Pierre, Butte	1.00	7.7
Fringed bromegrass: Common	1.40	10.8
Canadian wild rye: Mandan	2.00	15.4
Slender wheatgrass: Adanac, Pryor, Revenue, Primar, First Strike	2.50	19.2
Virginia wild rye: Common	2.00	15.4
Switchgrass: Dacotah, Forestburg, Sunburst, Summer	0.75	5.8
Fowl bluegrass: Common	0.60	4.6
Indian grass: Tomahawk	1.00	7.7
Black-eyed Susan: Common	0.10	0.8
Wild bergamont: Common	0.05	0.4
Hoary vervain: Common	0.05	0.4
Partridge pea: Common	0.30	2.3
Total	**13.00**	**100.0[1]**
Companion Crop		
Oats (or see Table 4 in Seed Standards and Specifications)	10.00	100.0
Total Seed	**23.00**	**100.0[1]**

[1] May not equal 100 percent due to rounding

Table 19
MN Seed Mix 5 – Mixed Hay Land (Converted Prairie) and Open-Cut Road Ditches Seed Mix

Use: Minnesota Region 1 on private mixed hay land and for re-establishing road bank/ditch vegetation
Seeding Rate: 15.0 pounds/acre PLS drilled or 30.0 pounds/acre PLS broadcast without the companion crop
Double the rate of the companion crop when broadcast seeding
Notes: *Enbridge Environment must approve s*ubstitutions *in advance*

Species: Preferred Varieties (if available)	Pounds/Acre PLS	Percent of Mix
Meadow bromegrass: Fleet, Paddock, Regar, Montana, MacBeth, Cache	3.75	25.0
Intermediate wheatgrass: Reliant, Clarke, Slate, Chief, Oahe, Haymaker, Beefmaker, Manifest	3.75	25.0
Crested wheatgrass: Nordan, RoadCrest, Summit	3.75	25.0
Tetraploid ryegrass: Common	1.50	10.0
Alfalfa: Any with Zone 2 hardiness	2.25	15.0
Total	**15.00**	**100.0[1]**
Companion Crop		
Oats (or see Table 4 in Seed Standards and Specifications)	10.00	100.0
Total Seed	**25.00**	**100.0[1]**

[1] May not equal 100 percent due to rounding

Table 20
MN Seed Mix 6 – Tame Pasture Reclamation Seed Mix

Use: Minnesota Region 1 on private land tame (improved) pasture planting
Seeding Rate: 20.0 pounds/acre PLS drilled or 40.0 pounds/acre PLS broadcast without the companion crop
Double the rate of the companion crop when broadcast seeding
Notes: *Enbridge Environment must approve s*ubstitutions *in advance*

Species: Preferred Varieties (if available)	Pounds/Acre PLS	Percent of Mix
Alfalfa: Any with Zone 2 hardiness	6.0	30.0
Red clover: Arlington, Astred, Cinnamon , Concord or Marathon	4.0	20.0
Timothy: Climax or Claire	2.0	10.0
Orchard grass: Orion, Hawkeye, Duke, Condor, Albert	3.0	15.0
Smooth bromegrass: Alpha, Badger, Bounty , York	5.0	25.0
Total	**20.0**	**100.0[1]**
Companion Crop		
Oats (or see Table 4 in Seed Standards and Specifications)	10.0	100.0
Total Seed	**30.0**	**100.0[1]**

[1] May not equal 100 percent due to rounding

MINNESOTA REGION 2 SEED MIXES

Table 21
MN Seed Mix 7 – Native Prairie Seed Mix

Use: Minnesota Region 2 on private and public land where native or degraded prairie are currently managed as range or hay land
Seeding Rate: 8.20 pounds/acre PLS drilled or 16.40 pounds/acre PLS broadcast without the companion crop
Double the rate of the companion crop when broadcast seeding
Notes: *Enbridge Environment must approve s*ubstitutions *in advance*

Species: Preferred Varieties (if available)	Pounds/Acre PLS	Percent of Mix
Fringed brome grass: Common	2.00	24.4
Bluejoint grass: Common	0.15	1.8
Poverty grass: Common	0.50	6.1
Canadian (Nodding) wild rye: Manda	1.25	15.2
Slender wheatgrass: Adanac, Pryor, Revenue, Primar, First Strike	2.00	24.4
Fowl Bluegrass: Common	0.85	10.4
False melic grass: Common	0.25	3.0
Stiff golden rod: Common	0.15	1.8
Smooth wild rose: Common	0.15	1.8
Black-eyed susan: Common	0.25	3.0
Smooth aster: Common	0.15	1.8
American vetch: Common	0.50	6.1
Total	**8.20**	**100.0**[1]
Companion Crop		
Oats (or see Table 4 in Seed Standards and Specifications)	10.00	100.0
Total Seed	**18.20**	**100.0**[1]

[1] May not equal 100 percent due to rounding

Table 22
MN Seed Mix 8 – Mixed Hay Land and Open-Cut Road Ditches Seed Mix

Use: Minnesota Region 2 on private mixed hay land and for re-establishing road bank/ditch vegetation
Seeding Rate: 45.00 pounds/acre PLS drilled or 90.00 pounds/acre PLS broadcast without the companion crop
Double the rate of the companion crop when broadcast seeding
Notes: *Enbridge Environment must approve s*ubstitutions *in advance*

Species: Preferred Varieties (if available)	Pounds/Acre PLS	Percent of Mix
Fowl Bluegrass: Common	6.00	13.3
Smooth Bromegrass: Alpha, Badger, Bounty , York	7.75	17.2
Slender Wheatgrass: Adanac, Pryor, Revenue, Primar, First Strike	2.00	4.4
Perennial Rye: Citadel, Mongita, Madera, Pagent, Achiever, SR-4000, Vivid, Linn Perennial Ryegrass, Windstar, and Festulolium hybrid	13.50	30.0
Switchgrass: Kanlow, Blackwell, Shelter, Carthage	1.50	3.3
Timothy: Climax or Claire	1.75	3.9
Alfalfa: Any with Zone 2 hardiness	12.50	27.8
Total	**45.00**	**100.0**[1]
Companion Crop		
Oats (or see Table 4 in Seed Standards and Specifications)	10.00	100.0
Total Seed	**55.00**	**100.0**[1]

[1] May not equal 100 percent due to rounding

Table 23
MN Seed Mix 9 – Tame Pasture Reclamation Seed Mix

Use: Minnesota Region 2 on private land tame (improved) pasture planting
Seeding Rate: 20.0 pounds/acre PLS drilled or 40.0 pounds/acre PLS broadcast without the companion crop
Double the rate of the companion crop when broadcast seeding
Notes: *Enbridge Environment must approve s*ubstitutions *in advance*

Species: Preferred Varieties (if available)	Pounds/Acre PLS	Percent of Mix
Alfalfa: Any with Zone 2 hardiness	6.0	30.0
Red clover: Arlington, Astred, Cinnamon , Concord or Marathon	4.0	20.0
Timothy: Climax or Claire	2.0	10.0
Orchard grass: Orion, Hawkeye, Duke, Condor, Albert	3.0	15.0
Smooth bromegrass: Alpha, Badger, Bounty , York	5.0	25.0
Total	**20.0**	**100.0[1]**
Companion Crop		
Oats (or see Table 4 in Seed Standards and Specifications)	10.0	100.0
Total Seed	**30.0**	**100.0[1]**

[1] May not equal 100 percent due to rounding

WISCONSIN SEED MIXES

Based on precipitation and general soil types the following seed mixes will be used in Wisconsin:

Table 24
WI Seed Mix 1 – Standard Upland Seed Mix

Use: Wisconsin state-wide in upland areas
Seeding Rate: 15.0 pounds/acre PLS drilled or 30.0 pounds/acre PLS broadcast without the companion crop
Double the rate of the companion crop when broadcast seeding
Notes: *Enbridge Environment must approve s*ubstitutions *in advance*

Species: Preferred Varieties (if available)	**Pounds/Acre PLS**	**Percent of Mix**
Perennial Ryegrass	2	17.0
Canada Wild-rye	4	33.0
Switchgrass: unimproved native variety	4	33.0
Timothy	2	17.0
Subtotal	12	100.0[1]
Associated Companion Crop Mix		
Oats for summer seeding; or Winter Wheat for seeding in late fall (dormant) or spring	16	80.0
Annual Ryegrass or Slender Wheat Grass	4	20.0
Companion/Cover Crop Subtotal	20	100.0
GRAND TOTAL (pounds)	**32**	**100.0[1]**

[1] May not equal 100 percent due to rounding

Table 25
WI Seed Mix 2 – Native Sedge/Wet Meadow Mixture (W2)

Use: Wisconsin state-wide in unsaturated Wet Meadow wetland areas
Seeding Rate: See below summary.
Notes: *Enbridge Environment must approve* substitutions *in advance*

Common Name	Botanical Name	Indicator Status	Seeds/oz.	Seeds/ft^2	% of Mix
Brome, fringed	*Bromus ciliata*	*FACW*	10,000	1.5	8.1
Blue-joint grass	*Calamagrostis canadensis*	*OBL*	280,000	8.2	1.6
Wild-rye, Virginia	*Elymus virginicus*	*FACW-*	4,200	3.2	42.3
Manna grass, reed	*Glyceria grandis*	*OBL*	80,000	4.7	3.2
Manna grass, fowl	*Glyceria striata*	*OBL*	160,000	4.7	1.6
Bluegrass, fowl	*Poa palustris*	*FACW+*	118,000	16.7	7.1
Sedge, bottlebrush	*Carex comosa*	*OBL*	30,000	2.2	4.3
Sedge, pointed- broom	*Carex scoparia*	*FACW*	84,000	1.5	1.0
Sedge, tussock	*Carex stricta*	*OBL*	53,000	0.8	0.8
Sedge, Common fox	*Carex stipata*	*OBL*	34,000	2.0	3.2
Sedge, fox	*Carex vulpinoidea*	*OBL*	100,000	5.9	3.2
Rush, slender	*Juncus tenuis*	*FAC*	1,000,000	11.0	0.2
Torry's Rush	*Juncus toryi*	*OBL*	1,600,000	5.9	0.6
Bulrush, green	*Scirpus atrovirens*	*OBL*	460,000	16.9	2.0
Wool grass	*Scirpus cyperinus*	*OBL*	1,700,000	6.2	0.2
Milkweed, marsh	*Asclepias incarnata*	*OBL*	4,800	0.4	5.0
Aster, swamp	*Aster puniceus*	*OBL*	80,000	5.9	4.0
Aster, flat-topped	*Aster umbellatus*	*FACW*	67,000	1.5	1.2
Joe-pye weed	*Eupatorium maculatum*	*OBL*	95,000	0.7	0.4
Boneset	*Eupatorium perfoliatum*	*FACW+*	160,000	1.2	0.4
Goldenrod, grass- leaved	*Euthamia graminifolia*	*FACW-*	350,000	1.0	0.2
Sneezeweed	*Helenium autumnale*	*FACW+*	130,000	0.8	0.3
Sunflower, serrated	*Helianthus grosseserratus*	*FACW-*	15,000	0.2	0.6
Lobelia, great-blue	*Lobelia siphilitica*	*FACW+*	500,000	2.9	0.3
Monkey flower	*Mimulus ringens*	*OBL*	2,300,000	6.8	0.2
Mint, mountain	*Pycnanthemum virginianum*	*FACW+*	220,000	1.3	0.3
Meadow-rue, purple	*Thalicturm dasycarpum*	*FACW*	11,000	0.1	0.4
Vervain, blue	*Verbena hastata*	*FACW+*	93,000	2.2	1.3
Alexanders, Golden	*Zizea aurea*	*FACW*	11,000	1.0	5.0

Recommended Rate: 5.0 (PLS lbs/acre)

SUMMARY

Mix Seeds Per Square Foot	Mix Seeds Per Square Yard	Mix Seeds Per Acre
121	1,093	5,290,320
% by wt. Grasses	**% by wt. Graminoids**	**% by wt. Forbs**
64.0	15.0	21.0
% by Seed Count Grasses	**% by Seed Count Graminoids**	**% by Seed Count Forbs**
32.1	43.2	24.7

Table 26
WI Seed Mix 3 –Native Wet Prairie Mixture (W3)

Use: Wisconsin state-wide in unsaturated Wet Prairie wetland areas
Seeding Rate: See below summary.
Notes: *Enbridge Environment must approve* substitutions *in advance*

Common Name	Botanical Name	Indicator Status	Seeds/oz.	Seeds/ft^2	% of Mix
Bluestem, big	*Andropogon gerardi*	*FAC-*	10,000	3.7	15.3
Brome, fringed	*Bromus ciliata*	*FACW*	10,000	1.8	7.7
Blue-joint grass	*Calamagrostis canadensis*	*OBL*	280,000	6.2	0.9
Wild-rye, Virginia	*Elymus virginicus*	*FACW-*	4,200	2.0	19.9
Manna grass, reed	*Glyceria grandis*	*OBL*	80,000	2.9	1.5
Manna grass, fowl	*Glyceria striata*	*OBL*	160,000	3.5	0.9
Switchgrass	*Panicum virgatum*	*FAC+*	14,000	3.1	9.2
Bluegrass, fowl	*Poa palustris*	*FACW+*	118,000	9.6	3.0
Indian grass	*Sorghastrum nutans*	*FACU+*	12,000	2.0	6.7
Cord grass, prairie	*Spartina pecinata*	*FACW+*	6,600	1.1	6.9
Sedge, tussock	*Carex stricta*	*OBL*	53,000	0.7	0.5
Sedge, fox	*Carex vulpinoidea*	*OBL*	100,000	3.7	1.5
Bulrush, green	*Scirpus atrovirens*	*OBL*	460,000	7.7	0.7
Wool grass	*Scirpus cyperinus*	*OBL*	1,700,000	18.7	0.5
Anemone, Canada	*Anemone canadensis*	*FACW*	8,000	0.09	0.5
Milkweed, marsh	*Asclepias incarnata*	*OBL*	4,800	0.1	1.4
Aster, swamp	*Aster puniceus*	*OBL*	80,000	2.4	1.2
Aster, flat-topped	*Aster umbellatus*	*FACW*	67,000	1.5	0.9
Tic-trefoil, showy	*Desmodium canadense*	*FAC-*	5,500	0.8	6.1
Joe-pye weed	*Eupatorium maculatum*	*OBL*	95,000	1.7	0.8
Boneset	*Eupatorium perfoliatum*	*FACW+*	160,000	2.4	0.6
Goldenrod, grass- leaved	*Euthamia graminifolia*	*FACW-*	350,000	2.0	0.3
Sneezeweed	*Helenium autumnale*	*FACW+*	130,000	2.39	0.8
Sunflower, serrated	*Helianthus grosseserratus*	*FACW-*	15,000	0.3	0.7
Blazingstar, tall	*Liatris pycnostachya*	*FAC-*	11,000	0.1	0.5
Lobelia, great-blue	*Lobelia siphilitica*	*FACW+*	500,000	1.4	0.1
Monkey flower	*Mimulus ringens*	*OBL*	2,300,000	6.4	0.1
Mint, mountain	*Pycnanthemum virginianum*	*FACW+*	220,000	1.2	0.3
Vervain, blue	*Verbena hastate*	*FACW+*	93,000	1.0	0.5
Ironweed	*Veronia fasciculate*	*FACW*	24,000	0.1	0.3
Culver's root	*Veronicastrum virginicum*	*FAC*	800,000	8.8	0.5
Alexander's, golden	*Zizea aurea*	*FAC+*	11,000	2.4	9.2

Recommended Rate: 5.0 (PLS lbs/acre)

SUMMARY

Mix Seeds Per Square Foot	Mix Seeds Per Square Yard	Mix Seeds Per Acre
102	884	4,436,283
% by wt. Grasses	**% by wt. Graminoids**	**% by wt. Forbs**
72.0	3.0	24.0
% by Seed Count Grasses	**% by Seed Count Graminoids**	**% by Seed Count Forbs**
35.0	30.0	35.0

Appendix D
Enbridge Environment Hydrotest Discharge Authorization and Documentation

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Enbridge Environment Hydrotest Discharge Authorization & Documentation - *Instructions*

The purpose of this form is to document and insure that appropriate planning occurs prior to hydrostatic test discharge activities as well as the proper recording of necessary information during the actual discharge event. If the discharge permit specifies the need for a Certified Operator, he/she is responsible for the final section of the form. Otherwise, an Environmental Inspector will be responsible for completion of this form.

Part 1: Basic Discharge Information: All information must be completed. Coordination with Enbridge Engineering is necessary to obtain the exact test section length and volume of water to be discharged. The estimated duration of the discharge must be calculated using the maximum permitted rate (or the anticipated rate, if lower than the permitted rate) and the total volume of water to be discharged. This is critical information and will ensure that any required sampling is conducted at the appropriate frequency specified in the permit.

Part 2: Pre-Discharge Planning Checklist: A pre-discharge planning meeting must be held with the Certified Operator (if required), Contractor, Craft Inspection, Environmental Inspection, and Construction Management staff to review items included in the checklist and any other pertinent information deemed necessary. A full copy of the permit and discharge plan must be provided to all participants. Upon completion of this meeting, all participants must sign the form to indicate that they understand all steps of the discharge process. ***Note: In order to proceed with discharge activities, the Enbridge Construction Manager and Environment Staff assigned to the project, or their designees, must review the information and provide their authorization by signing and dating the form.***

Part 3: Discharge Monitoring: A copy of the permit, discharge plan, and parts one and two of the form must be on-site at all times during the discharge event. In addition to the items specified on the form, the following photographs are required:

- Receiving water before, during, and after the discharge (minimum 3 photos/day)
- Discharge structure/device before and during the discharge (minimum 3 photos/day)

As noted, upon completion of the discharge event, the Certified Operator or Environmental Inspector, Craft Inspector, Contractor Foreman, and Enbridge Construction Manager must sign and date the form. ***The completed form, along with the supplemental photographs, and a copy of the chain of custody for any samples submitted for laboratory analysis must be submitted to the Enbridge Environment Project Manager/Lead within 12 hours of ending the discharge. Any permit violations will be reported to the applicable agencies by the Enbridge Environment Project Manager/Lead within the timeframes specified in the discharge permit.***

Enbridge Environment Hydrotest Discharge Authorization & Documentation

Part 1: Basic Discharge Information

Date: _____

Project Name: _____ Spread: _____ Tract #: _____

Test Section Identification: _____

Pipe Diameter (inches): _____ Test Section Length (feet): _____ Volume to be discharged (gallons): _____

Permitted Discharge Rate (gpm): _____ Est. Duration of Discharge (hours): _____

Receiving Waterbody Name/Nearest Surface Waterbody: _____

Certified Operator Name and Number (if applicable): _____

Part 2: Pre-Discharge Planning Checklist ***Note: All items must be complete prior to initiating discharge activities***

- ☐ Notification to agency(ies) provided (if applicable - attach copy of notification documentation)
- ☐ Flow meter installed and functional in accordance with manufacturers recommendations
- ☐ Sample collection port/tap installed or other positive means of direct sampline of discharge water (only necessary if sampling is required)
- ☐ Review of discharge permit and site-specific plan complete (attach a copy of the permit and approved site specific plan)
- ☐ Discharge structure/BMPs installed according to approved plan
- ☐ Complete the table below, including quantity of samples required in accordance with the permit based on anticipated discharge duration. Add other parameters as specified in the permit:

Parameter	Analytical Method Number	Container type	Container Volume	Preservation	Maximum Holding Times	Permit Limit	Sample Type	Frequency of Analysis Specified in Permit	Number of Samples Required
pH	NA	Polyethylene / Glass	NA	None required	Analyze immediately		Field measurement		
Dissolved Oxygen	NA	Glass bottle and top	NA	None required	Analyze immediately		Field measurement		
TSS	106.2	Polyethylene	500 ml	Cool to 4° C	7 days				
Oil & Grease	1664	Amber Glass	1 liter	Cool to 4° C, HCL or H_2SO_4 to pH <2	28 days				

- ☐ Indicate responsible party for emergency/upset/spill notifications in accordance with the permit:_____
- ☐ Indicate responsible party for to begin flow diversion when change in coloration observed:

All staff involved in hydrostatic test discharge activities must review the above information and print and sign their name below indicating their participation in a pre-job planning meeting and that they understand the discharge plan, permit, and procedures and are prepared to properly implement them. Attach additional sheets as necessary.

Name (print and sign):

Certified Operator or Environmental Inspector Signature: ____

Enbridge Environment and Construction Management staff reviewed the pre-planning information provided and approve the initiation of discharge activities.

Enbridge Environment Staff Signature and Date: ____

Enbridge Construction Manager Signature and Date: ____

Part 3: Discharge Monitoring - attach additional sheets as necessary ***Note: Flow rate must be recorded hourly, sample frequency must be in accordance with the permit specifications***

Date	Time	Recorded/Sampled By	Flow Rate (gpm)	pH	Dissolved Oxygen (mg/l)	TSS Sample Collected?	Oil & Grease Sample Collected?	Other (indicate)

Flow meter manufacturer and model:

Flow meter date of last calibration :

pH/Dissolved Oxygen instrument manufacturer and model:

pH/Dissolved Oxygen instrument date of last calibration:

Date and Time discharge start: Date and Time discharge complete: _____

Equipment, Discharge, and Receiving Water Inspection Notes (minimum 3 enteries per day):

Outfall Observations & Photo Documentation Notes (note presence or absence of any unusual characteristics such as unnatural turbidity, color, oil film, floating solids, foams, settleable solids, suspended solids, or deposits - minimum 3 enteries per day) :

Certified Operator or Environmental Inspector Signature: _____

Enbridge Craft Inspector Signature: _____

Contractor Foreman Signature: _____

Enbridge Construction Manager Signature: _____

Appendix E
Emergency Response Contractors/Disposal and Treatment Facilities

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Emergency Response Contractors

The Contractor will dispose of all wastes according to applicable federal, state, and local requirements. A listing of potential Emergency Spill Response Contractors and is provided below, and waste disposal facilities by state are provided in the pages that follow. This list was developed from state-wide databases. This list represents firms operating at the time the database was produced. The Contractor is responsible for verifying if a contractor or facility is currently operating under appropriate permits or licenses. The Contractor is responsible for ensuring wastes are disposed of properly.

Spill Response Contractors		
Company	**City/State**	**Phone Number**
North Dakota		
Clean Harbors Environmental	Williston, ND	(701) 774-2201 (800) 645-8265
Garner Environmental Services	Williston, ND	(701) 577-1200 (855) 774-1200
Absorbent & Safety Solutions	Watford City, ND	(701) 838-4558
Minnesota Limited	Berthold, ND	(701) 453-3700
Bobs Oilfield Service Inc	Belfield, ND	(701) 575-4666
Keitu Engineers & Consultants, Inc.	Mandan, ND	(701) 667-1800
Minnesota		
Bay West Environmental	St. Paul, MN	(800) 279-0456 (651) 291-0456
West Central Environmental Consultants Inc.	Morris, MN	(800) 422-8356 (888) 923-2778
Minnesota Limited	Bemidji, MN	(218) 755-9595
OSI Environmental	Bemidji, MN	(800) 585-8838
OSI Environmental	Eveleth, MN	(800) 777-8542
Bay West Environmental	Duluth, MN	(800) 279-0456 (218) 740-0110
Wisconsin - *The Contractor should consult with the WDNR Northern Regional Spill Coordinator (John Sager: phone (715) 365-8959) for assistance when selecting a spill response contractor.*		

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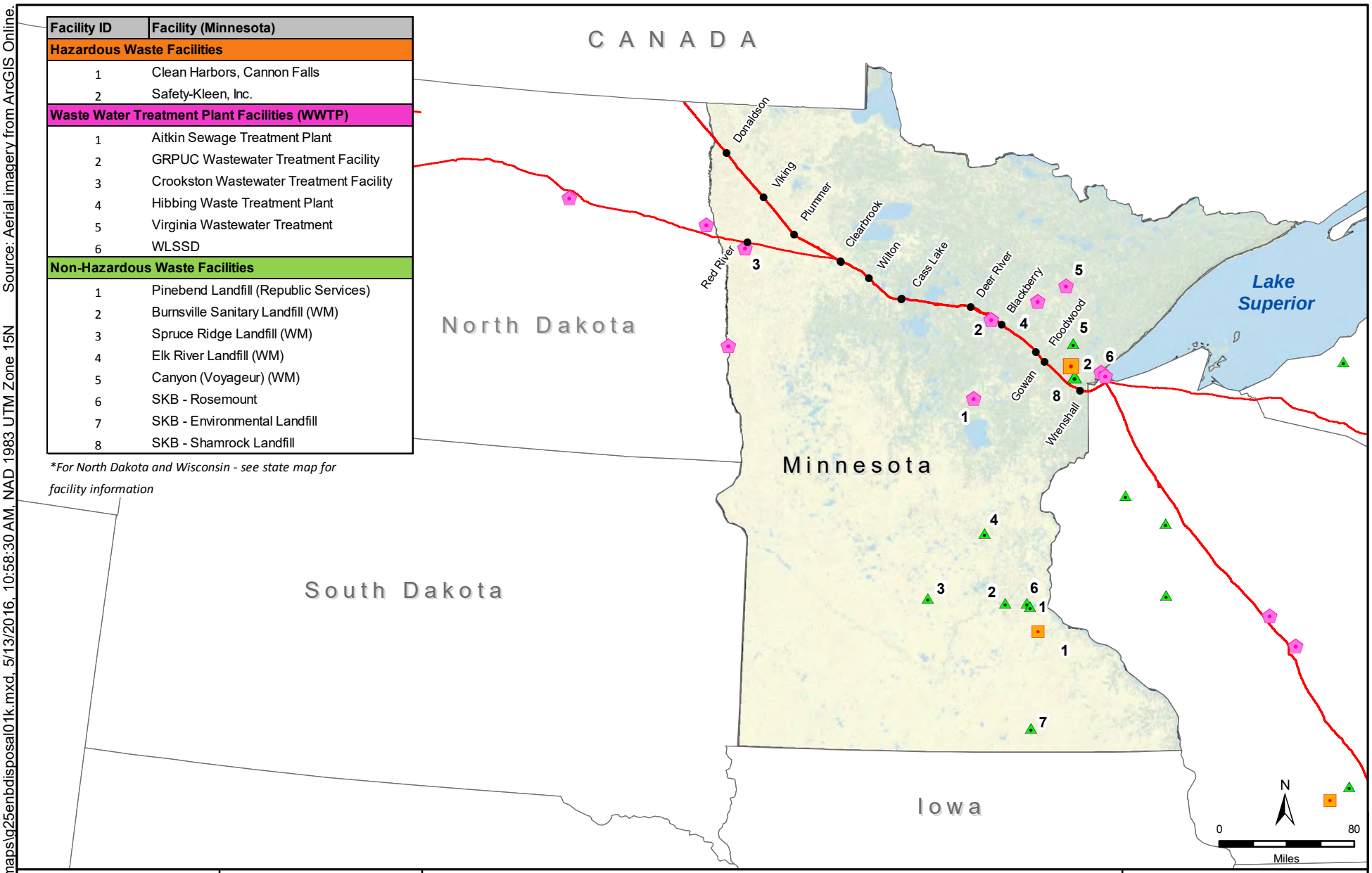
Facility ID	Facility (Minnesota)
Hazardous Waste Facilities	
1	Clean Harbors, Cannon Falls
2	Safety-Kleen, Inc.
Waste Water Treatment Plant Facilities (WWTP)	
1	Aitkin Sewage Treatment Plant
2	GRPUC Wastewater Treatment Facility
3	Crookston Wastewater Treatment Facility
4	Hibbing Waste Treatment Plant
5	Virginia Wastewater Treatment
6	WLSSD
Non-Hazardous Waste Facilities	
1	Pinebend Landfill (Republic Services)
2	Burnsville Sanitary Landfill (WM)
3	Spruce Ridge Landfill (WM)
4	Elk River Landfill (WM)
5	Canyon (Voyageur) (WM)
6	SKB - Rosemount
7	SKB - Environmental Landfill
8	SKB - Shamrock Landfill

**For North Dakota and Wisconsin - see state map for facility information*



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ENBRIDGE

Drawn: LBG 5/13/2016
Approved: LBG 5/13/2016
Project #: Disposal

Map Location

Legend

- Hazardous Waste Facility
- Waste Water Treatment Plant (WWTP)
- Non-Hazardous Waste Facility
- Enbridge Pipeline

WASTE FACILITIES - MINNESOTA

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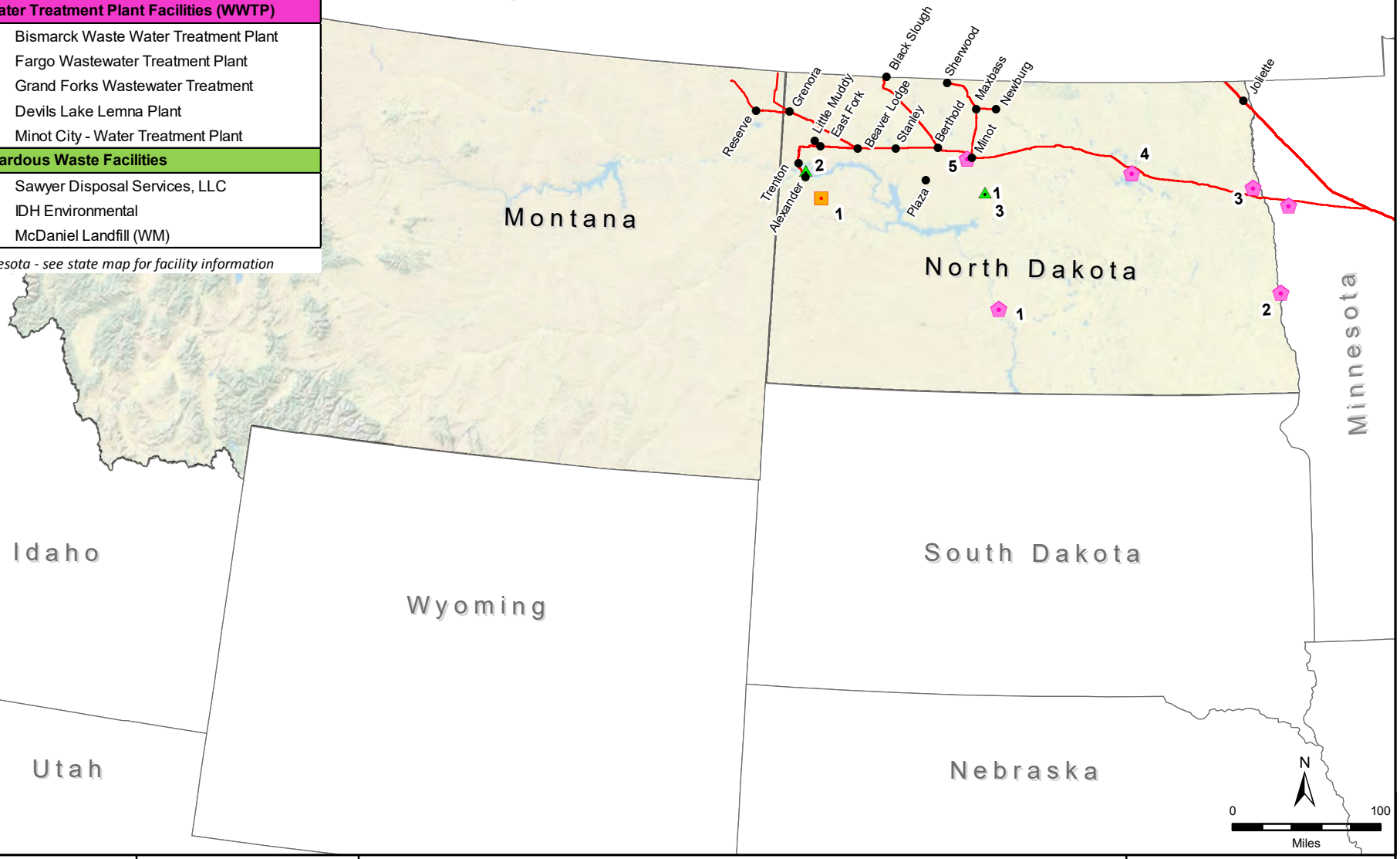
Waste Facilities – Minnesota

Facility ID	Facility (Minnesota)	Waste Type	Address	City	State	Zip	County	Contact Phone
Hazardous Waste Facilities								
1	Clean Harbors, Cannon Falls	Solid & Liquid - Haz	211 Holiday Avenue	Cannon Falls	MN	55009	Goodhue	(507) 263-0252
2	Safety-Kleen, Inc.	Solid & Liquid - Haz	1302 18th Street	Cloquet	MN	55720	Goodhue	(218) 879-2164
Waste Water Treatment Plant Facilities (WWTP)								
1	Aitkin Sewage Treatment Plant	Liquid -WWTP	120 1st Street Northwest	Aitkin	MN	56431	Aitkin	(218) 927-3406
2	GRPUC Wastewater Treatment Facility	Liquid -WWTP	1105 SE 23rd Avenue	Grand Rapids	MN	55744	Itasca	(218) 326-7024
3	Crookston Wastewater Treatment Facility	Liquid -WWTP	County Road 233	Crookston	MN	56716	Polk	(218) 281-5711
4	Hibbing Waste Treatment Plant	Liquid -WWTP	11669 Town Line Road	Hibbing	MN	55746	St. Louis	(218) 362-5999
5	Virginia Wastewater Treatment	Liquid -WWTP	1204 Southern Drive	Virginia	MN	55792	St. Louis	(218) 748-7519
6	WLSSD	Liquid -WWTP	2626 Courtland Street	Duluth	MN	55806	St. Louis	(218) 722-3336
Non-Hazardous Waste Facilities								
1	Pinebend Landfill (Republic Services)	Solid - NonHaz	2495 East 117th Street	Inver Grove Heights	MN	55077	Dakota	(651) 450-2155
2	Burnsville Sanitary Landfill (WM)	Solid - NonHaz	2650 West Cliff Road	Burnsville	MN	55337	Dakota	(952) 890-3248
3	Spruce Ridge Landfill (WM)	Solid - NonHaz	12755 137th Street	Glencoe	MN	55336	McLeod	(320) 864-5503
4	Elk River Landfill (WM)	Solid - NonHaz	22460 Highway 169	Elk River	MN	55330	Sherburne	(763) 441-2464
5	Canyon (Voyageur) (WM)	Solid - NonHaz	6830 Highway 53	Canyon	MN	55717	St. Louis	(218) 345-6302
6	SKB - Rosemount	Solid - NonHaz	13425 Courthouse Blvd	Rosemount	MN	55060	Dakota	(651) 438-1500
7	SKB - Environmental Landfill	Solid - NonHaz	52563 243rd Street	Austin	MN	55912	Mower	(507) 433-8131
8	SKB - Shamrock Landfill	Solid - NonHaz	761 MN Highway 45	Cloquet	MN	55720	Carlton	(218) 878-0112

Facility ID	Facility (North Dakota)
Hazardous Waste Facilities	
1	Clean Harbors Environmental Services, Inc.
Waste Water Treatment Plant Facilities (WWTP)	
1	Bismarck Waste Water Treatment Plant
2	Fargo Wastewater Treatment Plant
3	Grand Forks Wastewater Treatment
4	Devils Lake Lemna Plant
5	Minot City - Water Treatment Plant
Non-Hazardous Waste Facilities	
1	Sawyer Disposal Services, LLC
2	IDH Environmental
3	McDaniel Landfill (WM)

**For Minnesota - see state map for facility information*



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ENBRIDGE

Drawn: LBG 5/13/2016
Approved: LBG 5/13/2016
Project #: Disposal

Map Location

Legend

- Hazardous Waste Facility
- Waste Water Treatment Plant (WWTP)
- Non-Hazardous Waste Facility
- Enbridge Pipeline

WASTE FACILITIES -

NORTH DAKOTA AND MONTANA

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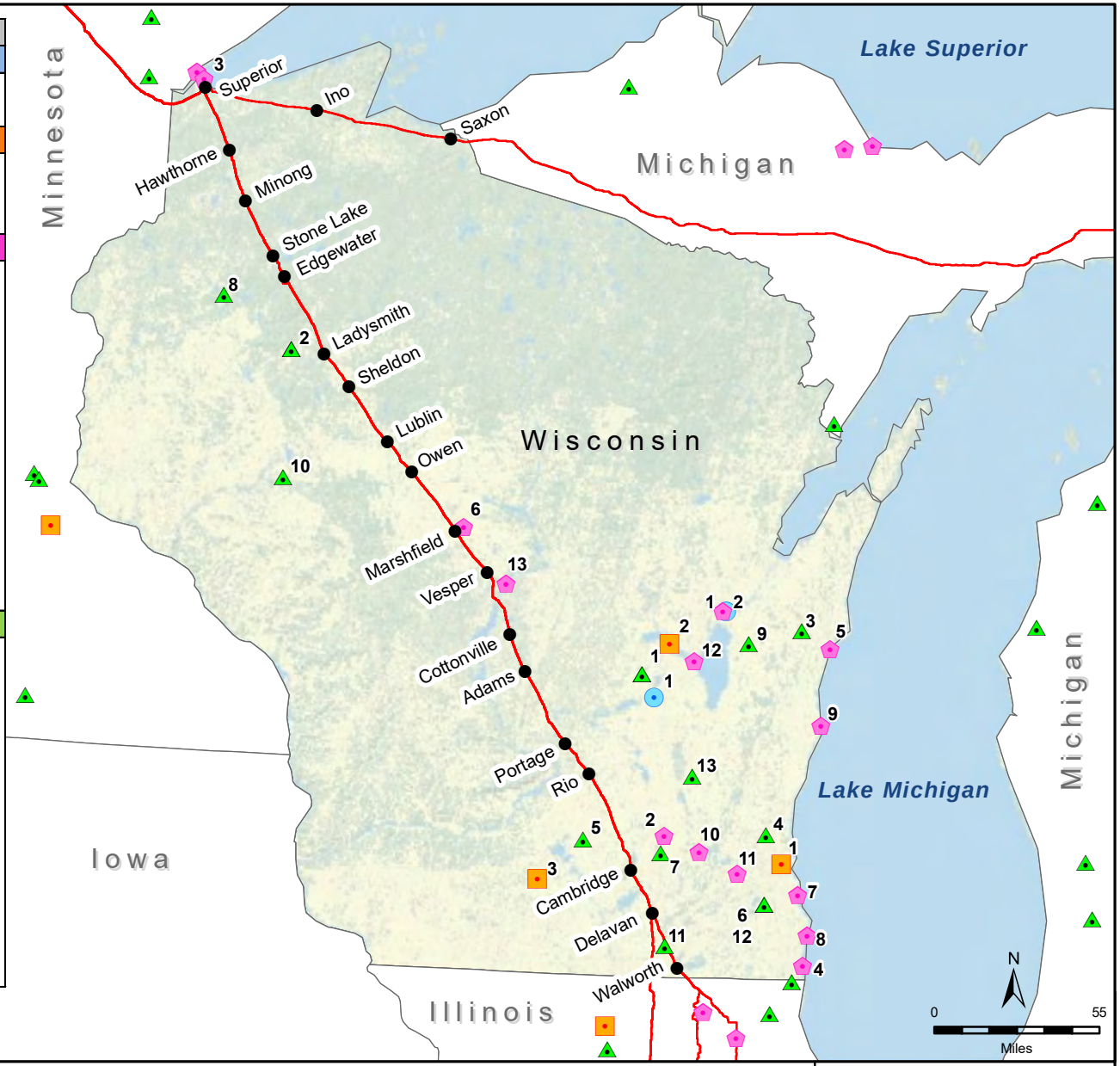
Waste Facilities – North Dakota and Montana

Facility ID	Facility (North Dakota)	Waste Type	Address	City	State	Zip	County	Contact Phone
Hazardous Waste Facilities								
1	Clean Harbors Environmental Services, Inc.	Solid & Liquid - Haz	2541 132nd C Avenue NW	Arnegard	ND	58835	McKenzie	(701) 586-3170
Waste Water Treatment Plant Facilities (WWTP)								
1	Bismarck Waste Water Treatment Plant	Liquid -WWTP	601 London Avenue	Bismarck	ND	58504	Burleigh	(701) 222-6618
2	Fargo Wastewater Treatment Plant	Liquid -WWTP	3400 Broadway North	Fargo	ND	58102	Cass	(701) 241-1454
3	Grand Forks Wastewater Treatment	Liquid -WWTP	3251 North 69th Street	Grand Forks	ND	58203	Grand Forks	(701) 787-9131
4	Devils Lake Lemna Plant	Liquid -WWTP	2815 North Dakota 19	Devils Lake	ND	58301	Ramsey	(701) 662-7623
5	Minot City - Water Treatment Plant	Liquid -WWTP	900 16th Street Southwest	Minot	ND	58701	Ward	(701) 857-4760
Non-Hazardous Waste Facilities								
1	Sawyer Disposal Services, LLC	Solid & Liquid - NonHaz	12400 247th Ave Southeast	Sawyer	ND	58781	Ward	(701) 624-5622
2	IDH Environmental	Solid - NonHaz	14070 43rd Street Northwest	Williston	ND	58801	Williams	(701) 774-8514
3	McDaniel Landfill (WM)	Solid - NonHaz	12300 247th Avenue Southeast	Sawyer	ND	58781	Ward	(701) 624-5250

Facility ID	Facility (Wisconsin)
Liquid Waste Facilities	
1	Covanta Environmental Solutions
2	Covanta Environmental Solutions
Hazardous Waste Facilities	
1	Advanced Waste Services of WI
2	Covanta Environmental Solutions
3	Safety-Kleen, Inc.
Waste Water Treatment Plant Facilities (WWTP)	
1	Appleton Wastewater Treatment Facility
2	Watertown Wastewater Treatment Facility
3	Superior Wastewater Division of Public Works
4	Kenosha Wastewater Treatment Plant
5	Manitowoc Wastewater Treatment Facility
6	Marshfield Wastewater Treatment Facility
7	South Milwaukee Wastewater Treatment Facility
8	Racine Utilities - Wastewater Utility
9	Sheboygan Regional Wastewater Treatment Facility
10	Oconomowoc Wastewater Treatment Facility
11	Waukesha Wastewater Treatment Plant
12	Oshkosh Wastewater Treatment Plant
13	Wisconsin Rapids Wastewater Treatment Plant
Non-Hazardous Waste Facilities	
1	Valley Trail Landfill (WM)
2	Timberline Trail Landfill (WM)
3	Ridgeview (WM)
4	Orchard Ridge (WM)
5	Madison Prairie (WM)
6	Metro (WM)
7	Deer Track Park (WM)
8	Lake Area Landfill (Republic Services)
9	Hickory Meadows Landfill (Advanced Disposal)
10	Seven Mile Creek Landfill (Advanced Disposal)
11	Mallard Ridge Landfill (Advanced Disposal)
12	Emerald Park Landfill (Advanced Disposal)
13	Glacier Ridge Landfill (Advanced Disposal)

**For Minnesota, Illinois, and Michigan - see state map for facility information*



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ENBRIDGE

Drawn: LBG 5/13/2016

Approved: LBG 5/13/2016

Project #: Disposal

Map Location

Legend

- Liquid Waste Facility
- Hazardous Waste Facility
- Waste Water Treatment Plant (WWTP)
- Non-Hazardous Waste Facility
- Enbridge Pipeline

WASTE FACILITIES - WISCONSIN

Waste Facilities – Wisconsin

Facility ID	Facility (Wisconsin)	Waste Type	Address	City	State	Zip	County	Contact Phone
Liquid Waste Facilities								
1	Covanta Environmental Solutions	Liquid	625 Douglas Street	Ripon	WI	54971	Fond du Lac	(920) 582-7596
2	Covanta Environmental Solutions	Liquid	552 Carter Court	Kimberly	WI	54136	Outagamie	(920) 582-7596
Hazardous Waste Facilities								
1	Advanced Waste Services of WI	Solid & Liquid - Haz	3801 West McKinley Avenue	Milwaukee	WI	53208	Milwaukee	(414) 397-6301
2	Covanta Environmental Solutions	Liquid - Haz	210 Tower Road	Winneconne	WI	54986	Winnebago	(920) 582-7596
3	Safety-Kleen, Inc.	Solid & Liquid - Haz	3715 Lexington Avenue	Madison	WI	53714	Dane	(608) 221-0714
Waste Water Treatment Plant Facilities (WWTP)								
1	Appleton Wastewater Treatment Facility	Liquid -WWTP	2006 East Newberry Street	Appleton	WI	54914	Calumet	(920) 832-5945
2	Watertown Wastewater Treatment Facility	Liquid -WWTP	800 Hoffmann Road	Watertown	WI	53094	Jefferson	(920) 262-4085
3	Superior Wastewater Div. Of Public Works	Liquid -WWTP	51 East First Street	Superior	WI	54880	Douglas	(715) 394-0392
4	Kenosha Wastewater Treatment Plant	Liquid -WWTP	7834 3rd Avenue	Kenoshak	WI	53143	Kenosha	(262) 653-4335
5	Manitowoc Wastewater Treatment Facility	Liquid -WWTP	1015 South Lakeview Drive	Manitowoc	WI	54220	Manitowoc	(920) 686-3550
6	Marshfield Wastewater Treatment Facility	Liquid -WWTP	2601 East 34th Street	Marshfield	WI	54449	Marathon	(715) 486-2007
7	South Milwaukee Wastewater Treatment Facility	Liquid -WWTP	3003 5th Avenue	South Milwaukee	WI	53172	Milwaukee	(414) 768-8180
8	Racine Utilities - Wastewater Utility	Liquid -WWTP	2101 S. Wisconsin Avenue	Racine	WI	53403	Racine	(262) 636-9520
9	Sheboygan Regional Wastewater Treatment Facility	Liquid -WWTP	3333 Lakeshore Drive	Sheboygan	WI	53081	Sheboygan	(920) 459-3464
10	Oconomowoc Wastewater Treatment Facility	Liquid -WWTP	900 South Worthington Street	Oconomowoc	WI	53066	Waukesha	(262) 569-2192
11	Waukesha Wastewater Treatment Plant	Liquid -WWTP	600 Sentry Drive	Waukesha	WI	53186	Waukesha	(262) 524-3625
12	Oshkosh Wastewater Treatment Plant	Liquid -WWTP	233 North Campbell Road	Oshkosh	WI	54902	Winnebago	(920) 232-5365
13	Wisconsin Rapids Wastewater Treatment Plant	Liquid -WWTP	2540 1st Street South	Wisconsin Rapids	WI	54494	Wood	(715) 421-8287
Non-Hazardous Waste Facilities								
1	Valley Trail Landfill (WM)	Solid - NonHaz	N9101 Willard Road	Berlin	WI	54923	Green Lake	(920) 361-4995
2	Timberline Trail Landfill (WM)	Solid - NonHaz	N4581 Hutchinson Road	Weyerhaeuser	WI	54895	Rusk	(715) 868-7000
3	Ridgeview (WM)	Solid - NonHaz	6207 Hempton Lake Road	Whitelaw	WI	54247	Manitowoc	(920) 796-6007
4	Orchard Ridge (WM)	Solid - NonHaz	W124 N9355 Boundary Road	Menomonee Falls	WI	53051	Waukesha	(262) 509-5629
5	Madison Prairie (WM)	Solid - NonHaz	6002 Nelson Road	Sun Prairie	WI	53590	Dane	(608) 837-9031
6	Metro (WM)	Solid - NonHaz	10712 South 124th Street	Franklin	WI	53132	Milwaukee	(414) 529-6180
7	Deer Track Park (WM)	Solid - NonHaz	N6756 Waldmann Lane	Watertown	WI	53094	Jefferson	(920) 699-3475
8	Lake Area Landfill (Republic Services)	Solid - NonHaz	W5987 County Road D	Sarona	WI	54870	Washburn	(715) 469-3356
9	Hickory Meadows Landfill (Advanced Disposal)	Solid - NonHaz	W3105 Schneider Road	Hilbert	WI	54129	Calumet	(920) 853-8553
10	Seven Mile Creek Landfill (Advanced Disposal)	Solid - NonHaz	8001 Olson Drive	Eau Claire	WI	54703	Eau Claire	(715) 830-0284
11	Mallard Ridge Landfill (Advanced Disposal)	Solid - NonHaz	W8470 State Road 11	Delavan	WI	53115	Walworth	(262) 724-3257
12	Emerald Park Landfill (Advanced Disposal)	Solid - NonHaz	W124 S10629 South 124th Street	Muskego	WI	53150	Waukesha	(414) 529-1360
13	Glacier Ridge Landfill (Advanced Disposal)	Solid - NonHaz	N7296 County Road V	Horicon	WI	53032	Dodge	(920) 387-0987

Appendix F
Spill Report Form

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Spill Report Form

(The Contractor Spill Coordinator must complete this for any spill, regardless of size, and submit the form to the Enbridge Representative within 24 hours of the occurrence)

Date of Spill:_____ Date of Spill Discovery:_____

Time of Spill:_____ Time of Spill Discovery:_____

Name and Title of Discoverer:_____

Type of material spilled and manufacturer's name:_____

Legal Description of spill location to the quarter section:_____

Directions from nearest community:_____

Estimated volume of spill:_____

Weather conditions:_____

Topography and surface conditions of spill site:_____

Spill medium (pavement, sandy soil, water, etc.):_____

Proximity of spill to surface waters: _____

Did the spill reach a waterbody? _____Yes _____No

If so, was a sheen present? _____Yes _____No

Describe the causes and circumstances resulting in the spill:_____

_____

_____

_____

Describe the extent of observed contamination, both horizontal and vertical (i.e., spill-stained soil in a 5-foot radius to a depth of 1 inch): _____

_____

_____

Describe immediate spill control and/or cleanup methods used and implementation schedule: _____

_____

_____

_____

Current status of cleanup actions:_____

Name and Company for the following:

Construction Superintendent:_____

Spill Coordinator:_____

Enbridge Representative:_____

Person Who Reported the Spill:_____

Environmental Inspector:_____

Form completed by:_____Date:_____

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Appendix G
Spill Reporting-Agency Contacts

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Spill Reporting Contacts						
Agency	**Water**	**Soil**	**Notification Period**	**24-Hour Reporting Hotline**	**Regulation/Code**	**Comments**
Federal Contacts						
National Response Center	Any quantity of discharged oil that violates state water quality standards, causes a film or sheen on water's surface or leaves sludge or emulsion beneath the surface	Release of a hazardous substance in an amount equal to or greater than its reportable quantity under CERCLA	Immediately	1-800-424-8802	40 CFR 302 – Designation, Reportable Quantities, and Notification	
Environmental Protection Agency Region V (MN / WI)	Any quantity of discharged oil that violates state water quality standards, causes a film or sheen on water's surface or leaves sludge or emulsion beneath the surface		Immediately	1-312-353-2000	40 CFR 117 – Determination of Reportable Quantities for Hazardous Substances Clean Water Act § 311 – Oil and Hazardous Substance Liability	

Spill Reporting Contacts						
Agency	**Water**	**Soil**	**Notification Period**	**24-Hour Reporting Hotline**	**Regulation/Code**	**Comments**
Environmental Protection Agency Region VIII (ND)	Any quantity of discharged oil that violates state water quality standards, causes a film or sheen on water's surface or leaves sludge or emulsion beneath the surface		Immediately	1-303-312-6312	40 CFR 117 – Determination of Reportable Quantities for Hazardous Substances Clean Water Act § 311 – Oil and Hazardous Substance Liability	
State Contacts						
Minnesota Pollution Control Agency	Visible Sheen or Emulsion	No minimum quantity for crude oil. Any spill >5 gallons of refined petroleum product. Spills of any quantity of all other chemicals or materials should be reported.	Immediately upon discovery.	Minnesota State Duty Officer 1-800-422-0798 (In State) or (651) 649-5451	Minnesota Statute 115.061	Follow up report established after initial response.

Spill Reporting Contacts						
Agency	**Water**	**Soil**	**Notification Period**	**24-Hour Reporting Hotline**	**Regulation/Code**	**Comments**
North Dakota Department of Health	Visible Sheen or Emulsion	No minimum requirement. All spills that impact or threaten groundwater or surface water or may potentially have adverse effects on human health or the environment are reportable.	Immediately upon discovery.	North Dakota Department of Health 1-701-328-5210 North Dakota Hazardous Materials Emergency Assistance and Spill Reporting 1-800-472-2121 (In State) 1-701-328-5210 (Out of State)	North Dakota Administrative Code NDAC 33-16-02.1-1	Follow up report established after initial response.

Spill Reporting Contacts						
Agency	**Water**	**Soil**	**Notification Period**	**24-Hour Reporting Hotline**	**Regulation/Code**	**Comments**
Wisconsin Department of Natural Resources	Visible Sheen or Emulsion	All spills are reportable unless they meet the following criteria: 1) spill is contained on an impervious surface; 2) <5 gallons of petroleum products on a pervious surface; 3) <1 gallon of gasoline on a pervious surface.	Immediately of any discharge not exempted by the statute.	24-hour WI DNR reporting number 1-800-943-0003	Chapter 292.11 of the Wisconsin Statutes, Chapter NR 706 Wisconsin Administrative Code	Follow up report established after initial response.
County Contacts – Minnesota						
Kittson County Emergency Management	As Needed			Scot Olson (218) 843-2113	Kittson County 2015 Hazard Management Plan	
Marshall County Emergency Services	As Needed			Josh Johnston (218) 745-5841	Marshall County, MN Hazard Mitigation Plan 2016 Update	
Pennington County Emergency Management	As Needed			Erik Beitel (218) 683-7087		
Wadena County Emergency Management	As Needed			Tyler Wheeler (218) 631-7795		

Spill Reporting Contacts						
Agency	**Water**	**Soil**	**Notification Period**	**24-Hour Reporting Hotline**	**Regulation/Code**	**Comments**
Polk County Emergency Management	As Needed			Jody Beauchane, Director (218) 470-8263	Polk County, MN Hazard Mitigation Plan (July 2015)	
Red Lake County Emergency Management	As Needed			Mitch Bernstein (218) 253-2996		
Clearwater County Emergency Management	As Needed		8:00 AM – 4:30 PM Monday – Friday	(218) 694-6226		
Hubbard County Emergency Management	As Needed			Brian Halbasch (218) 732-2588		
Cass County Emergency Management	As Needed			Chad Emery (218) 547-7437	Cass County Hazard Mitigation Plan	
Crow Wing County Emergency Management	As Needed			John Bowen, Director (218) 829-4749		
Aitkin County Emergency Management	As Needed			Dispatch (non-emergency) (218) 927-7400		
Carlton County Emergency Management	As Needed			Steve VanKekerix, Director (218) 384-9539		

Spill Reporting Contacts						
Agency	**Water**	**Soil**	**Notification Period**	**24-Hour Reporting Hotline**	**Regulation/Code**	**Comments**
St Louis County Emergency Management	As Needed			Sheriff's Office Emergency Management Division (218) 336-4340		
County Contacts – North Dakota						
Pembina County Emergency Management	As Needed			Andrew Kirking (701) 265-4849		
County Contacts – Wisconsin						
Douglas County Emergency Management	As Needed		8:00 AM – 4:30 PM Monday – Friday	Keith Kesler, Director (715) 395-1636		

Minnesota

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MINNESOTA SPILL NOTICATION REQUIREMENTS

The Minnesota Department of Public Safety, Division of Emergency Management (DEM) operates a 24-hour State Duty Officer service establishing a one call system for all state reporting requirements. The Duty Officers record all pertinent information and then make the appropriate notifications to the county and state agencies. The 24-Hour spills and leaks hotline can be reached via one of the following telephone numbers:

1-800-422-0798 (In State)

1-651-649-5451 (Out of State)

The Minnesota Pollution Control Agency (MPCA) requires immediate notification upon discovery of any spill of any quantity of crude oil. This includes historical contamination found during environmental investigations.

Every person who has "any substance or material under its control" is required to report. This includes:

- Property owners who discover contamination – Individuals, partnerships, companies, corporations;
- Governmental subdivisions, including officers of these entities;
- Owners of substances being stored or transported by another company; and
- Contractors that are in physical control of a discharged substance.

In addition to MPCA notification, local regulations may require additional notifications.

Additionally, reporting of releases of non-petroleum materials greater than the Reportable Quantity (RQ) is required if the material exceeds the quantity listed in **Table 3** (located at the beginning of this document).

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Minnesota Reporting of Petroleum Releases Guidance Documents

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Reporting leaks and spills

Minn. Stat. §115.061, which has been in effect since 1969, describes the duty of people to notify the Minnesota Pollution Control Agency (MPCA) when spills and leaks occur:

115.061 — Duty to Notify and Avoid Water Pollution

a) Except as provided in paragraph (b), it is the duty of every person to notify the agency immediately of the discharge, accidental or otherwise, of any substance or material under its control which, if not recovered, may cause pollution of waters of the state, and the responsible person shall recover as rapidly and thoroughly as possible such substance or material and take immediately such other action as may be reasonably possible to minimize or abate pollution of waters of the state caused thereby.

b) Notification is not required under paragraph (a) for a discharge of five gallons or less of petroleum, as defined in section 115C.02, subdivision 10. This paragraph does not affect the other requirements of paragraph (a).

The law provides penalties of up to $10,000 per day for violations.

The Minnesota Department of Public Safety, Bureau of Criminal Apprehension, operates a 24 hour service, establishing a one call system for all state reporting requirements.

Reportable spills should be directed to the Minnesota Duty Officer by calling 651-649-5451 or 800-422-0798. The duty officer will record all pertinent information and then make the appropriate notifications to the state agencies.

Spills that must be reported

Report spills that may cause pollution, such as spills of toxic, flammable, corrosive and dangerous industrial chemicals. Also report spills of environmentally damaging materials, including milk, coal, animal parts, batteries, etc.

Reportable quantities

Minnesota has a reporting threshold of greater than five-gallons for petroleum spills. Spills of any quantity of all other chemicals or materials should be reported. If in doubt, report.

Anyone who spills is required to report

EVERY person who has “any substance or material under its control” must report spills and leaks. This includes:

- property owners who discover contamination;
- individuals, partnerships, companies and corporations;
- governmental subdivisions, including officers of these entities;
- owners of substances being stored or transported by another company; and
- contractors who are in physical control of a discharged substance.

Sometimes a fire department, police agency or other local or state agency that responds to a spill or leak chooses to report the incident to the MPCA. In some circumstances, the entity may be required to report the

spill. However, in no case does a report from someone else stand in lieu of your responsibility to report to the MPCA by calling the Minnesota Duty Officer if a substance is under your control.

Be aware that there may be other reporting requirements imposed by local ordinances, state or federal law, or permits. Understanding all reporting requirements is the responsibility of those who handle substances which can pollute.

It is the responsibility of the spiller to ensure an effective cleanup and proper management of all wastes generated. With the exception of used oil, waste generated from petroleum spills that have been reported and cleaned up immediately are exempt from Minnesota's Hazardous Waste Rules. Waste from used oil spills must be sent to a facility for energy recovery.

For more information

For more information on spill prevention, cleanup or disposal, call the MPCA at 651-296-6300 or 800-657-3864 and ask for a member of the Emergency Management Unit or go to https://www.pca.state.mn.us/waste/emergency-response.

More information is also on the U.S. Environmental Protection Agency website at https://www.epa.gov/oilspill/.

Crude oil and unrefined petroleum wastes

Crude oil and related unrefined petroleum wastes present risks to human health and the environment if improperly managed. This fact sheet will discuss the hazardous waste requirements for these wastes administered by the Minnesota Pollution Control Agency (MPCA) and the Metropolitan Counties of Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington (Metro Counties).

What are crude oil and unrefined petroleum wastes?

Crude oil wastes include:

- Spilled crude oil or unrefined petroleum from pipelines, trains, trucks, tanks, and other sources.
- Absorbents, cleanup materials, soil, and water contaminated with crude oil or unrefined petroleum.

Crude oil and unrefined petroleum wastes almost always contain enough benzene and related organic compounds to make them a characteristic hazardous waste. They may also contain hazardous concentrations of heavy metals, including arsenic, cadmium, chromium, lead, mercury, and selenium.

Assume untested crude oil, unrefined petroleum, and any related wastes that will be disposed or burned are hazardous wastes until you evaluate them and document that they are non-hazardous. See MPCA fact sheet #w-hw1-01, Evaluate Waste, at https://www.pca.state.mn.us/sites/default/files/w-hw1-01.pdf.

What are *not* crude oil or unrefined petroleum wastes?

Other wastes may be confused with crude oil and unrefined petroleum wastes, including:

- Manufactured or refined petroleum-based and other-based fuels, such as fuel oil, gasoline, and diesel. Manage these fuel-related wastes as discussed in MPCA fact sheet #w-hw4-19, Fuel-related Wastes, at https://www.pca.state.mn.us/sites/default/files/w-hw4-19.pdf.
- Used oils and related wastes, including lubricating, hydraulic, and cutting oils. Manage these used oil wastes as discussed in MPCA fact sheet #w-hw4-30, Used Oil and Related Wastes, at https://www.pca.state.mn.us/sites/default/files/w-hw4-30.pdf.
- Recovered crude oil or unrefined petroleum that will be managed by refining along with normal process streams at a petroleum refining facility. This material is considered a commodity instead of a regulated waste.

What must I do if crude oil or unrefined petroleum is spilled?

Immediately report all spills of crude oil or unrefined petroleum to the Minnesota Duty Officer. See More information on the page 3. If needed, call 911 to summon emergency responders first.

> Note: The five-gallon exemption in Minnesota's spill reporting law applies only to refined petroleum fuel products, not crude oil or unrefined petroleum-contaminated wastes. All spills of crude oil or unrefined petroleum, regardless of volume, must be reported.

Next, take all reasonable steps to contain the spill and begin to recover as much of the spilled material as possible. Follow any directions given to you by MPCA Emergency Management Unit (EMU) staff.

Finally, document your spill response actions. Submit a written report of transport-related spills to the U.S. Department of Transportation (DOT) within 30 days.

How must crude oil and unrefined petroleum wastes be managed?

- Manage untested wastes and wastes that are not eligible for any of the other options below as fully regulated hazardous wastes. See MPCA fact sheet #w-hw1-06, Treat or Dispose of Hazardous Waste, at https://www.pca.state.mn.us/sites/default/files/w-hw1-06.pdf.
- In certain situations, MPCA EMU staff may allow specific management of crude oil or unrefined petroleum wastes that is different than explained in this fact sheet. If the EMU staff issue a specific allowance, this authorization supersedes the requirements discussed here. EMU authorizations are incident-specific and cannot be used for a different spill.
- Liquids and solids that meet the criteria below may be managed equivalent to off-specification used oil and burned for energy recovery in utility or industrial furnaces and boilers. Crude oil and unrefined petroleum wastes that will be burned for energy recovery equivalent to used oil must contain:
  - 10 parts per million (ppm) or less of arsenic.
  - 0.2 ppm or less of mercury.

  For guidance on management requirements for off-specification used oil, see MPCA fact sheet #w-hw4-30, Used Oil and Related Wastes, at https://www.pca.state.mn.us/sites/default/files/w-hw4-30.pdf.
- Contaminated soil shown to leach less arsenic, cadmium, chromium, lead, mercury, and selenium than the hazardous waste toxicity characteristic levels in MPCA fact sheet #w-hw2-04, Characteristic Hazardous Wastes, at https://www.pca.state.mn.us/sites/default/files/w-hw2-04.pdf, may be transported without a hazardous waste manifest in Minnesota and:
  - Landfilled if soils have been dewatered and the receiving landfill's permit and Industrial Solid Waste Management Plan allow its acceptance. The landfill must be notified prior to shipment and must agree to accept the soil. The landfill may require additional testing before accepting the waste, and may apply specific conditions or limitations to the disposal.
  - Land applied if soil application has been approved by the MPCA's Petroleum Remediation Program (PRP). For information on the PRP approval process, see MPCA fact sheet #c-prp3-03, Land Treatment of Petroleum Contaminated Soil, at https://www.pca.state.mn.us/sites/default/files/c-prp3-03.pdf.
- Contaminated water shown to contain less arsenic, cadmium, chromium, lead, mercury, and selenium than the hazardous waste toxicity characteristic levels in MPCA fact sheet #w-hw2-04, Characteristic Hazardous Wastes, at https://www.pca.state.mn.us/sites/default/files/w-hw2-04.pdf, may be transported without a hazardous waste manifest in Minnesota and:
  - Discharged to a publicly owned treatment works (POTW). The POTW must be notified prior to shipment and must agree to accept the water. The POTW may require additional testing before accepting the waste, and may apply specific conditions or limitations to the discharge.
  - Land applied if water application has been issued a National Pollutant Discharge Elimination System/State Disposal System (NPDES/SDS) Permit for Contaminated Groundwater by the MPCA. For the application process for this permit, see MPCA form #wq-wwprm7-29, Industrial Groundwater Pump-Out Application, at https://www.pca.state.mn.us/sites/default/files/wq-wwprm7-29.doc.

More information

Guidance in this fact sheet was compiled from Minnesota Statutes, Chapter 115, and Minnesota Rules, Chapters 7037 and 7045, and incorporates regulatory interpretation decisions made by the MPCA on April 13, 2016. To review Minnesota laws, visit the Office of the Revisor of Statutes at https://www.revisor.mn.gov/pubs.

For information about waste minimization, contact the Minnesota Technical Assistance Program (MnTAP). The MPCA's Small Business Environmental Assistance Program can offer free, confidential compliance assistance. Immediately report all hazardous waste spills to the Minnesota Duty Officer.

Metro County Hazardous Waste Offices

Anoka 763-422-7093
..... https://www.anokacounty.us/
Carver 952-361-1800
..... http://www.co.carver.mn.us/
Dakota 952-891-7557
..... https://www.co.dakota.mn.us/
Hennepin 612-348-3777
..... http://www.hennepin.us/
Ramsey 651-266-1199
..... https://www.ramseycounty.us/
Scott 952-496-8475
..... http://www.scottcountymn.gov/
Washington 651-430-6655
..... https://www.co.washington.mn.us/

Minnesota Pollution Control Agency

Toll free (all offices) 1-800-657-3864
All offices 651-296-6300
..... https://www.pca.state.mn.us/

Minnesota Duty Officer

Toll free 1-800-422-0798
Metro 651-649-5451

Small Business Environmental Assistance Program

Toll free 1-800-657-3938
Metro 651-282-6143
..... https://www.pca.state.mn.us/sbeap/

Minnesota Technical Assistance Program

Toll free 1-800-247-0015
Metro 612-624-1300
..... http://www.mntap.umn.edu

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Minnesota Pollution Control Agency District Contacts

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Minnesota Pollution Control Agency

520 Lafayette Road North
St. Paul, Mn. 55155-4194
651-296-6300
800-657-3864
www.pca.state.mn.us

Minnesota PCA District office contacts

Brainerd:
7678 College Road
Suite 105
Baxter, MN 56425
218-828-2492
800-657-3864
Fax: 218-828-2594

Detroit Lakes:
714 Lake Ave.
Suite 220
Detroit Lakes, MN 56501
218-847-1519
800-657-3864
Fax: 218-846-0719

Duluth:
525 Lake Ave. S.
Suite 400
Duluth, MN 55802
218-723-4660
800-657-3864
Fax: 218-723-4727

Mankato:
12 Civic Center Plaza
Suite 2165
Mankato, MN 56001
507-389-5977
800-657-3864
Fax: 507-389-5422

Marshall:
504 Fairgrounds Rd
Suite 200
Marshall, MN 56258
507 537-7146
800-657-3864
Fax: 507 537-6001

Rochester:
18 Wood Lake Drive SE
Rochester, MN 55904
507-285-7343
800-657-3864
Fax: 507-280-5513

St. Paul:
520 Lafayette Road N
St. Paul, MN 55155-4194
651-296-6300
800-657-3864,
TTY: use your preferred
telecommunications relay service.

Willmar:
1601 Highway 12 East
Suite 1
Willmar, MN 56201-6002
320-214-3786
800-657-3864
Fax: 320-214-3787

North Dakota

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NORTH DAKOTA SPILL NOTICATION REQUIREMENTS

The North Dakota Department of Health (NDDH) provides regulatory oversight of environmental issues. Specific minimum quantities for spill reporting have not been established. However, the following spills should be reported immediately (Note - All substances are included, not just "hazardous materials'):

- Any incident which may potentially have adverse effects to human health or the environment;
- Any incident or spill which may potentially result in pollution of waters of the state, either surface water or groundwater;
- Any historical contamination discovered during environmental investigations;

All reportable spills must be reported to the NDDH Division of Municipal Facilities or the North Dakota Hazardous Materials Emergency Assistance and Releases Reporting 24-Hour hotline immediately upon discovery. The telephone number for the 24-Hour hotline is:

1-800-472-2121 (In State)

1-701-328-2121 (Out of State)

The notification requirements above apply equally to new releases and historic releases. North Dakota regulations do not distinguish between the two.

Additionally, the reporting of releases of non-petroleum materials greater than the reportable quantity (RQ) is required if the material exceeds the quantity listed in Table 3 (located at the beginning of this document).

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North Dakota Environmental Incident Reports

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North Dakota Department of Health (1.701.328.5210)
North Dakota Oil and Gas Division (1.701.328.8020)
North Dakota Department of Emergency Services (1.701.328.8100) or
(1.800.472.2121 State Radio 24-Hour Hotline - valid only in North Dakota.)

ENVIRONMENTAL INCIDENT REPORTS

Instructions For: | Oilfield Form | General Form | Fish Kill Form |

If there is any question as to proper response call the Department of Health, or the Oil and Gas Division, or the North Dakota Department of Emergency Services and provide all relevant information about the incident.

Oilfield Related Incident Report Form (click to go there) (If the report incident button on this form does not display another form, try adding the URL of the form to the trusted sites on your internet browser.)

This form is only for RCRA-exempt releases in the oilfield. This will generally include:

- Produced fluids such as crude oil, water, or oil/water emulsion before ownership transfer takes place, (i.e. a release from the producer's lease, flow lines, or tank battery before being trucked off-site or going into crude transportation pipeline.)
- Brine water from a commercial disposal facility.
- Condensate from gas lines or gas plant before leaving the gas plant in the transportation pipeline.

Please Note:

- Releases of crude oil or produced water from truck transport are not exempt and should use the General Environmental Incident Report Form link below.
- Releases of crude oil or other non-gaseous petroleum products from transportation pipelines are not exempt and should use the General Environmental Incident Report Form link below .
- Releases of non-oilfield-produced substances, even when released on an oil lease, are not exempt and should use the General Environmental Incident Report Form link below. This would include spills such as fuel for rig motors, acid for well stimulation, etc.

General Environmental Incident (and non-exempt Oilfield Related Incident) Report Form (click to go there)

This form should be used for any environmental incident or release that is not exempt under the RCRA oilfield exemptions. This will generally include:

- Any spill which may potentially have adverse effects to human health or the environment.
- Any incident or spill which may potentially result in pollution of waters of the state, either surface water or ground water.

- Specific minimum quantities for mandatory reporting of spills have not been established. All incidents which may potentially impact human health or safety, waters of the state, either surface water or ground water, or other impacts to the environment, must be reported.
- All substances are included, not just "hazardous materials." Recent examples that a person may not normally think of as having a potential impact to the environment, include "non toxic" substances such as molasses or salt. These may not be immediately harmful to human health, but they may impact aquatic life or soil fertility.

Please Note:

- Sometimes an environmental incident does not actually result in a release to the environment, but should still be reported. Examples might include the loss of a sealed radiation source or a traffic accident involving hazardous chemicals, even if the containers did not break open.
- Releases of crude oil or produced water from truck transport are not exempt and should use the General Environmental Incident Report Form.
- Releases of crude oil or other non-gaseous petroleum products from transportation pipelines are not exempt and should use the General Environmental Incident Report Form.
- Releases of non-oilfield-produced substances, even when released on an oil lease, are not exempt and should use the General Environmental Incident Report Form. This would include spills such as fuel for rig motors, acid for well stimulation, etc.

Fish Kill Report Form (click to go there)

Use this form to report a fish kill even if the cause is not known. If the cause is a known spill then also use one of the Environmental Incident Report Forms shown above.

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NDDH Home Page
NDIC Oil & Gas Division Home Page

Last Updated: Friday, January 29, 2016 10:55:00 AM
Allen Johnson - ND Dept. of Health - ajohnson@nd.gov

North Dakota Department of Health Contacts

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NDDH Office Locations

Main Office - Bismarck

Address
North Dakota Department of Health [Gold Seal Center Map]
Environmental Health Section
918 East Divide Avenue
Bismarck, ND 58501-1947

Phone Numbers
Environmental Health Section – Chief's Office
701.328.5150
Fax
701.328.5200
Air Quality
701.328.5188
Municipal Facilities
701.328.5211
Waste Management
701.328.5166
Water Quality
701.328.5210

Environmental Training Center

Address
Environmental Training Center
[Environmental Training Center Map]
2639 East Main Avenue
Bismarck, ND 58504
Phone: 701.328.6628

Laboratory Services Division - Bismarck

Address
2635 East Main [Laboratory Services Map]
P.O. Box 5520
Bismarck, ND 58506-5520

Phone Numbers
Fax 701.328.6280
Office 701.328.6140

Fargo Field Office

Address
1120 28th Ave N, Suite B [Fargo Map]
Fargo ND 58102

Phone Numbers
Jane Kangas (Air Quality) 701.499.5208
Christine Roob (Waste Management)
701.499.5207
Michael Hargiss (Water Quality)
701.499.5209
Fax: 701.235.7394

Towner Field Office

Address & Phone Number
Heather Duchscherer (Water Quality)
314 Main St. South #2 [Towner Map]
Towner, ND 58788

Phone
701.537.2043
Gwinner - Big Dipper Enterprises Field Office

Address & Phone Numbers
Tracy Lundquist
PO Box 218
7972 129th Ave. SE [Gwinner Map]
Gwinner, ND 58040

Fax 701.678.2083
Office 701.678.2308

Sawyer Disposal Services Field Office

Address & Phone Numbers
Kathleen Kangas
PO Box 168
12400 - 247th Ave. SE [Sawyer Map]
Sawyer, ND 58781

Fax 701.624.5785
Office 701.624.5332

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North Dakota Local Emergency Manager Contacts

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FOR OFFICIAL USE ONLY

County/ Tribal	Title	First Name	Last Name	Work Phone (701)	EOC (701)	Fax (701)	Address	City	Zip	E-mail	Region
Adams	Ms.	Michele	Gaylord	567-4598	567-4598	567-4622	PO Box 589	Hettinger	58639	adams-em@nd.gov	SW
Barnes	Ms.	Sue	Lloyd	845-8510	845-8510	845-8548	230 4th St NW	Valley City	58072	slloyd@barnescounty.us	SE
Benson	Mr.	Scott	Todahl	473-5320		473-5423	Box 184	Minnewaukan	58351	bensondem@gondtc.com	NE
Billings	**Mr.**	**Pat**	**Rummel**	623-4876	623-4323	623-4152	Box 157	Medora	58645	prummel@nd.gov	SW
	Ms.	Frieze	Brenda (Assist EM)							bjfrieze@pioneer.state.nd.us	
Bottineau	Mr.	Rick	Hummel	228-5916	228-2740	228-2364	314 5th St. West	Bottineau	58318	rick.hummel@co.bottineau.nd.us hummelrm@gmail.com	NW
Bowman	Mr.	Dean	Pearson	523-3129	523-4771	**523-4897-EOC 523-5443-Offc**	104 1st Street NW Suite #5	Bowman	58623	dapearson@bowmancountynd.gov	SW
	Ms.	Karla	German	523-4771		**523-4897-EOC 523-5443-Offc**				Kgermann@bowmancountynd.gov	SW
Burke	Mr.	Barry	Jager	377-4911	377-2311	377-4912	PO Box 386	Bowbells	58721	bjager@nd.gov	NW
Burleigh	Ms.	Mary	Senger	222-6727	222-6727	221-6804	221 N 5th St	Bismarck	58501	msenger@nd.gov	SW
Bismarck	Mr.	Gary	Stockert	222-6727	222-6727	221-6804	2301 Univ Dr, Bldg 21	Bismarck	58504	gstockert@bismarcknd.gov	SW
										info@cassfargoem.org	
Cass/ Fargo	Mr.	Leon	Schlafmann - City	476-4069	476-4005	476-4020	4630 - 15th Ave. North	Fargo	58102	LSchlafmann@cityoffargo.com	SE
	Mr.	Jim	**Prochniak**	476-4065 238-6226 (wc)	241-5858					prochniakj@casscountynd.gov	
Cavalier	Ms.	Karen	Kempert	256-3911	256-2555	256-2571	901 Third St, Suite 6	Langdon	58249	kkempert@nd.gov	NE
Dickey	Mr.	Charlie	Russell	320-6299 (c)		349-3960	PO Box 302	Ellendale	58436	crussell@nd.gov	SE
Divide	Mr.	Jody	Gunlock	965-6361		965-6481	PO Box 49	Crosby	58730	jgunlock@nd.gov	NW
Dunn	Ms.	Denise	Brew	573-9959	573-9959	573-9963	205 Owens St	Manning	58642	denise.brew@dunncountynd.org	SW
Eddy	Ms.	Kristy	O'Connor	947-2434 ext 2015	947-2562	947-2279	524 Central Ave	New Rockford	58356	eddycoem@nd.gov	NE
Emmons	Ms.	Mary	Senger	222-6727	254-4411	221-6804	221 N 5th St	Bismarck	58504	msenger@nd.gov	SW
Foster	Ms.	Jessica	Earle	652-2252		652-2173	1030 1st St N	Carrington	58421	jdearle@nd.gov	NE
Golden Valley	Ms.	Rachel	Keohane	872-3917	872-4733	872-4383	P.O. Box 67	Beach	58621	rkeohane@nd.gov	SW
Grand Forks	**Ms.**	**Karise (Kari)**	**Goelz**	**780-8218**	746-2685	746-2536	122 S 5th St #21	Grand Forks	58201	karise.goelz@gfcounty.org Gfcounty.nd.gov | grandforksgov.com	NE
	Ms.	Donna	Anderson	780-8213						donna.anderson@gfcounty.org.	
Grant	Ms.	JoAnn	Ozbun	622-3944	622-3944	622-3343	7050 Hwy 31	Flasher	58535	jmo@westriv.com	SW
Griggs	Mr.	Robert	Hook	797-3911	797-2202	797-3311	Box 574	Cooperstown	58425	robert.hook@griggscountynd.gov	NE
Hettinger	Ms.	Ilene	Hardmeyer	824-4227	824-4227	824-2717	336 Pacific Avenue	Mott	58646	ihardmeyer@nd.gov	SW
Kidder	Mr.	Jim	Albrecht	475-2632 ext 9225	475-2422	475-2202	Box 125	Steele	58482	jaalbrecht@nd.gov	SE
LaMoure	Ms.	Kimberly	Robbins	883-6096	883-5720	883-5833	202 4th Ave NE	LaMoure	58458	krobbins@nd.gov	SE
Logan	Mr.	Daniel	Schwartz	751-6145		701-751-3372	301 - 1st Street NE #202	Mandan	58554	dschwartz@wenck.com	SE
McHenry	Ms.	Kelsey	Siegler	351-0377		537-5969	407 Main St S, #307	Towner	58788	pierceem@nd.gov	NW
McIntosh	Ms.	DeLoris	Rudolph	288-3906		288-3671	Box 326	Ashley	58413	drudolph@drtel.net rudolphdeloris@Gmail.com	SE
McKenzie	Ms.	Karolin	Jappe	444-7483	444-6853	444-4113	201 5th Street NW	Watford City	58854	kjappe@co.mckenzie.nd.us	NW
	Mr.	Jerry	Samuelson	444-6853						jsamuelson@co.mckenzie.nd.us	
McLean	Ms.	Noelle	Kroll	462-8809	462-8103	462-3523	Box 1108	Washburn	58577-1108	nkroll@nd.gov	NW
Mercer	Ms.	Carmen	Reed	745-3302	745-3332	745-3207	Box 39, 1021 Arthur St	Stanton	58571-0039	creed@nd.gov	SW
Morton	**Mr.**	**Tom**	**Doering**	667-3307	667-3307	667-3296	210 2nd Ave NW	Mandan	58554	tom.doering@mortonnd.org	SW
	Mr.	Joel	Rostberg							joel.rostberg@mortonnd.org	

as of: 5/8/2017

County/ Tribal	Title	First Name	Last Name	Work Phone (701)	EOC (701)	Fax (701)	Address	City	Zip	E-mail	Region
Mountrail	Ms.	Lisa	Lee	628-2909	628-2975					lisal@co.mountrail.nd.us	
Nelson	Ms.	Sharon	Young	247-2472		247-2167	210 B Ave W., Suite 302	Lakota	58344	syoung@nd.gov	NE
Oliver	Ms.	Carmen	Reed	745-3302	745-3332	745-3207	Box 39, 1021 Arthur St	Stanton	58571-0039	creed@nd.gov	SW
Pembina	Mr.	Andrew	Kirking	265-4849	265-4849	265-4642	301 Dakota St. W #8	Cavalier	58220	akirking@nd.gov	NE
Pierce	Ms.	Kelsey	Siegler	776-5868 ext 2104	776-5245	776-6942	240 2nd ST SE Suite 9	Rugby	58368	ksiegler@hotmail.com pierceem@nd.gov	NE
Ramsey	Ms.	Kristen	Nelsen	662-7001	662-7002	662-7011	524 4th Ave, # 14 NE	Devils Lake	58301	kristnelsen@nd.gov	NE
Ransom	Ms.	Kirsten	Gilbert	683-6125	683-6125	683-5158	PO Box 1024	Lisbon	58054	kirsten.gilbert@co.ransom.nd.us	SE
Renville	Ms.	Kristy	Titus	756-6288	756-6386	756-7158	PO Box 68	Mohall	58761	ktitus@nd.gov	NW
Richland	Mr.	Brett	Lambrecht	642-7788	642-7777	642-7776	418 2nd Ave N	Wahpeton	58075	blambrecht@co.richland.nd.us	SE
Rolette	Mr.	Mike	Stewart	477-0911 ext152		477-6339	PO Box 939	Rolla	58367	mcstewart@nd.gov	NE
Sargent	Ms.	Sandra	Hanson	724-6241-ext 2		724-6244	Box 177	Forman	58032	sandra.hanson@co.sargent.nd.us	SE
Sheridan	Mr.	Wayne	Houston	363-2368		363-2953	PO Box 545	McClusky	58463	whouston@nd.gov	NE
Sioux	Mr.	Frank	Landeis	854-3481		854-3854	Box L	Fort Yates	58538	flandeis@nd.gov	SW
Slope	Mr.	Dick	Frederick	879-6329 523-5421 PT		879-6278	Rt 2 Box 18	Amidon	58620	outlaw@ndsupernet.com	SW
Stark	**Mr.**	**Bill**	**Fahlsing**	456-7911	456-7600	456-7602	66 Museum Drive West	Dickinson	58601	bfahlsing@starkcountynd.gov	SW
	Ms.	Liz	Okerson (Asst)	456-7609						lokerson@starkcountynd.gov	
Steele	Mr.	Ben	Gates	524-2442	845-8510	524-1715	PO Box 275 201 Washington Ave	Finley	58230	bgates@nd.gov	NE
Stutsman	**Mr.**	**Jerry**	**Bergquist**	252-9093	252-9093	252-7087	LEC 205 6th St SE	Jamestown	58401	jbergqui@nd.gov	SE
	Ms.	Sarah	Van De Velde							svandevelde@nd.gov	
Towner	Ms.	Lori	Beck	968-4366		968-4368	850 9th St	Cando	58324	tchd@gondtc.com	NE
Traill	Mr.	Steve	Hunt	636-4510		636-4308	Box 279	Hillsboro	58045	shunt@nd.gov	NE
Walsh	Mr.	Brent	Nelson	352-2311	352-2311	352-5072	638 Cooper Avenue	Grafton	58237	banelson@nd.gov	NE
	Ms.	Kristle	Kjemhus							krinelson@nd.gov	
Ward	**Ms.**	**Amanda**	**Schooling**	857-6534		857-6564	PO Box 5005	Minot	58702	amanda.schooling@wardnd.com	NW
	Ms.	Julie	Eisenbraun	857-6560						julie.eisenbraun@wardnd.com	
Wells	Ms.	Tammy	Roehrich	547-2537	547-2537	547-3188	600 Railway St N #114	Fessenden	58438	troehric@nd.gov	NE
Williams	Mr.	Mike	Smith	577-7707	577-7707	577-7714	223 East Broadway, Suite #202	Williston	58801	mikesm@co.williams.nd.us	NW
	Ms.	Andrea	Cross							andreac@co.williams.nd.us	
Three Affiliated Tribes	Mr.	Cliff	Whitman	627-4805		627-4818	404 Frontage Road	New Town	58763	cwhitman@mhanation.com	NW
Spirit Lake Sioux	Mr.	Marty	Alex	766-1706		766-1713	PO Box 359	Ft Totten	58335	emdir@spiritlakenation.com	NE
Standing Rock Sioux	Mr.	Elliot	Ward	854-8644		854-7582	PO Box D	Ft Yates	58538	eward@standingrock.org	SW
Turtle Mt Chippewa	Ms.	Anita	Blue	477-2695	550-1664	477-9322	PO Box 900	Belcourt	58316	ablue62@aol.com	NE

as of: 5/8/2017

Wisconsin

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WISCONSIN SPILL NOTICATION REQUIREMENTS

Spill notification requirements in the State of Wisconsin are addressed under Chapter 292.11 (Hazardous Substance Spills) of the Wisconsin Statutes. Commonly referred to as the Wisconsin Spill Law, it specifies the notification requirements for discharges of hazardous substances. As defined in the Statute, hazardous substances cover a broad range of materials including petroleum products.

Besides the Wisconsin Spill Law, Chapter NR 706 Wisconsin Administrative Code establishes "De Minimis" reporting requirements for those spills in which damage to the environment does not occur.

Discharges or spills of gasoline and/or another petroleum product do not require notification if any of the following conditions are met:

- The spill or discharge is completely contained within and on an impervious surface;
- The volume of the spill is less than 1-gallon of gasoline on a pervious surface or runs off an impervious surface; and
- The volume of the spill is less than 5-gallons of petroleum product other than gasoline on a pervious surface or runs off an impervious surface.

The De Minimis reporting requirement can only be applied if the discharged substance:

- Has evaporated or been cleaned up in accordance with NR 700 through 726;
- Does not adversely threaten or impact the air, lands, and waters of the State as either a single discharge or an accumulation of past and present discharges;
- Does not threaten or cause acute or chronic impacts to human health; and
- Does not present a fire, explosion, or other safety hazard.

Additionally, the reporting of releases of non-petroleum materials greater than the reportable quantity (RQ) is required if the material exceeds the quantity listed in Table 3 (located at the beginning of this document).

According to NR 706, "discharges to the environment include recent discharges" and "historic discharges".

If the above bulleted conditions are not met, the Wisconsin Department of Natural Resources (WDNR) must be notified immediately. The 24-Hour spill reporting hotline can be reached at:

1-800-943-0003

A listing of regional WDNR offices is also attached.

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Wisconsin Spill Reporting Code

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Chapter NR 706

HAZARDOUS SUBSTANCE DISCHARGE NOTIFICATION AND SOURCE CONFIRMATION REQUIREMENTS

Note: Corrections made under s. 13.93 (2m) (b) 7., Stats., Register, February, 1997, No. 494.

NR 706.01 Purpose. The purpose of this chapter is to adopt by administrative rule notification requirements for discharges of hazardous substances. This chapter is adopted pursuant to ss. 227.11 (2) and 292.11, Stats.

History: Cr. Register, February, 1997, No. 494, eff. 3−1−97; CR 12−023: am. Register October 2013 No. 694, eff. 11−1−13.

NR 706.02 Applicability. (1) This chapter applies to hazardous substance discharges that are subject to the requirements of s. 292.11, Stats.

(2) Section NR 706.05 applies to all persons who have responsibility under s. 292.11, Stats., for any hazardous substance discharge that may occur. Section NR 706.11 contains additional requirements that only apply to the owners and operators of underground storage tank systems that are subject to regulation under 42 USC 6991 *et seq.* and 40 CFR part 280, or ch. ATCP 93, for hazardous substance discharges that are related to the underground storage tank system.

Note: The definition of "underground storage tank" in s. NR 700.03, which applies to this chapter, is based on the definition of "underground storage tank" in ch. ATCP 93, which includes certain farm and residential motor fuel storage tanks and heating oil tanks that are excluded from the federal UST program definition in 42 USC 6991.

(3) Persons and facilities subject to the release notification requirements in CERCLA section 103 (a), 42 USC 9603(a), or the emergency notification and notification requirements in s. 323.60, Stats., and 42 USC 11004, 11021, 11022 and 11023, are required to comply with those requirements in addition to complying with the notification requirements of this chapter, except that notification of a hazardous substance discharge which is given to the department in compliance with the requirements of this chapter constitutes notification of the division of emergency management as required by s. 323.60, Stats., if the notification contains all of the information specified in 42 USC 11004(b)(2).

History: Cr. Register, February, 1997, No. 494, eff. 3−1−97; correction in (2) made under s. 13.93 (2m) (b) 7., Stats., Register, March, 2001, No. 543; correction in (2), (3) made under s. 13.92 (4) (b) 7., Stats., Register February 2012 No. 674; correction in (3) made under s. 13.92 (4) (b) 7., Stats., Register June 2013 No. 690; CR 12−023: am. (2), (3) Register October 2013 No. 694, eff. 11−1−13; **correction in (2) made under s. 13.92 (4) (b) 7., Stats., Register November 2013 No. 695.**

NR 706.03 Definitions. In this chapter:

(2) "Fertilizer" has the meaning specified in s. 94.64 (1) (e), Stats., except that it does not include nitrates or other forms of nitrogen found in the environment that cannot be attributed to a discharge.

Note: Section 94.64 (1) (e), Stats., defines "fertilizer" to mean "any substance, containing one or more plant nutrients, which is used for its plant nutrient content and which is designed for use or claimed to have value in promoting plant growth, except unmanipulated animal or vegetable manures, marl, liming material, sewage sludge other than finished sewage sludge products, and wood ashes. 'Fertilizer' includes fertilizer materials, mixed fertilizers, custom mixed fertilizers, nonagricultural fertilizers and all other fertilizers or mixtures of fertilizers, regardless of type or form."

(4) "Impervious" means incapable of being penetrated by a discharged substance.

Note: Asphalt and concrete, if intact and undamaged, are considered impervious surfaces. However, if hazardous substances are capable of penetrating asphalt or concrete due to cracks or holes, or repeated discharges, the surface would not be considered impervious.

(5) "Nonhousehold pesticide" has the meaning specified in s. 94.681 (1) (c), Stats., except that it does not include pentachlorophenol, inorganic arsenical wood preservatives and coal tar creosote.

Note: Section 94.681 (1) (c), Stats., defines "nonhousehold pesticide" as "a pesticide that is not a household pesticide or an industrial pesticide." "Household pesticide" is defined in s. 94.681 (1) (a), Stats.

(6) "Pesticide" has the meaning specified in s. 94.67 (25), Stats.

Note: Section 94.67 (25), Stats., defines "pesticide" to mean "any substance or mixture of substances labeled or designed or intended for use in preventing, destroying, repelling or mitigating any pest, or as a plant regulator, defoliant or desiccant."

(7) "Petroleum product" means any refined petroleum based substance or blend intended for use as motor fuel, turbine fuel, heating fuel, a lubricant, a coolant, or for machine cutting.

History: Cr. Register, February, 1997, No. 494, eff. 3−1−97; correction in (5) made under s. 13.93 (2m) (b) 7., Stats., Register, March, 2001, No. 543; CR 12−023: r. (1), (3), am. (7) Register October 2013 No. 694, eff. 11−1−13.

NR 706.05 General requirements for responsible parties. (1) DISCHARGE NOTIFICATION. (a) Unless the discharge is specifically exempted under s. NR 706.07, persons who cause the discharge to the environment of a hazardous substance or who possess or control a hazardous substance which is discharged to the environment shall immediately notify the department of the discharge. Discharges to the environment may include recent discharges, historic discharges, and discharges caused by the long−term application of a substance. A hazardous substance that is "discharged" into a secondary containment structure, that is completely contained and can be recovered with no discharge to the environment, is not subject to the discharge notification requirements in s. 292.11 (2), Stats.

Note: The department believes that the dictionary definition of "immediately", i.e. "occurring at once; next in line," does not lend itself to quantification. An across–the–board time–period can't be specified. In uncomplicated hazardous substance discharge situations, responsible parties are expected to provide notice to the department within a matter of a few minutes after they learned of the discharge. In other situations, especially where emergency action of some kind is being taken by the responsible party or where the responsible party does not have access to a telephone, notification may not be possible for several hours, but would still be considered "immediate" if promptly given.

(b) Hazardous substance discharges shall be immediately reported to the department by telephoning the department–designated 24–hour hotline telephone number. The department may allow alternate notification procedures on a case−by−case basis.

Note: Use of the department−designated 24−hour hotline is for notification of spills. The hotline operated by the division of emergency management in cooperation with the department can be reached at 1–800–943–0003.

(bm) Hazardous substance discharges discovered through soil, water or other analyses may be reported by telefaxing a completed discharge notification form provided by the department, or by alternate notification procedures approved by the department. Laboratory results shall be included with the completed discharge notification form.

Note: Use of the discharge notification form is intended only for notification of discharges typically found through tank closure assessment, phase II environmental assessments, or by other discoveries through soil, water or other media analysis.

The discharge notification form can be obtained at the following web address: http://dnr.wi.gov/files/PDF/forms/4400/4400−225.pdf.

(c) The notification required by this subsection shall contain the following information to the extent practicable or applicable:

1. Name, address, and telephone number of the person reporting the discharge.

2. Name, address, and telephone number of the discharger, or owner and operator of the UST system and any other potentially responsible persons.

3. Date, time, and duration of the discharge.

3m. Location of the discharge including street address, county, town, city or village, if appropriate, quarter−quarter section, township, range, geographic position obtained in accordance with the requirements of s. NR 716.15 (5) (d), and legal description of lot, if located in a platted area.

Note: The provisions in s. NR 716.15 (5) (d) require that all geographic position data shall be obtained and submitted to the department in accordance with the following requirements: 1) for properties that are not more than 200 feet wide or long, a single point geographic position shall be obtained at least 40 feet within the boundaries of the property, or as close to the center of the property as possible if the property is less than 80 feet wide or long. For properties that are more than 200 feet wide or long, coordinates describing the approximate location of the property's boundaries, forming a polygon, shall be obtained: and 2) geographic position data shall be originally collected in Wisconsin Transverse Mercator '91 or projected onto Wisconsin Transverse Mercator '91.

4. Identity, physical state, and quantity of the material discharged.

5. Physical, chemical, hazardous, and toxicological characteristics of the substance.

6. Cause of the discharge.

7. Immediate actions being taken and the name of the contractor or other person performing the action.

8. Source, speed of movement, and destination or probable destination of the discharged hazardous substance.

9. Actual or potential impacts to human health or the environment, including actual or potential impacts to drinking water supplies.

10. Weather conditions existing at the scene, including presence of precipitation and wind direction and velocity.

11. Other agencies on–scene during the discharge incident.

(2) CONTAINMENT, CLEANUP, DISPOSAL, AND RESTORATION. Responsible parties shall comply with the requirements of chs. NR 700 to 754 for response actions to discharges of hazardous substances.

History: Cr. Register, February, 1997, No. 494, eff. 3−1−97; CR 12−023: am. (title), (1) (a), (b), cr. (1) (bm), am. (1) (c) (intro.), 3., cr. (1) (c) 3m., am. (1) (c) 11., (2) Register October 2013 No. 694, eff. 11−1−13.

NR 706.07 Exemptions. The exemptions in this section are limited to notification or penalty provisions. Responsible parties shall comply with the response requirements of s. NR 706.05 (2) for all situations. While notification of the discharge is exempt under this section, a response to the discharge is still required under s. 292.11, Stats. The exemptions are as follows:

(1) STATUTORY NOTIFICATION EXEMPTIONS. The following persons are not required to notify the department of a hazardous substance discharge that falls within any of the following categories:

(a) Any person holding a valid permit under ch. 283, Stats., is exempt with respect to substances discharged within the limits authorized by the permit.

(bm) Any person discharging in conformity with a permit or program approved under chs. 280 to 299, Stats., is exempt with respect to substances discharged within the limits authorized by the permit or program.

(cm) Any person applying a registered pesticide according to the label instructions, or applying a fertilizer at or below normal and beneficial agronomic rates, is exempt with respect to that pesticide or fertilizer application.

(2) DE MINIMIS EXEMPTIONS. (a) Except when reporting is required under par. (b), the following discharges do not require notification to the department:

1. A discharge of gasoline or another petroleum product that is completely contained on an impervious surface.

2. A discharge of gasoline if less than one gallon is discharged onto a surface that is not impervious or runs off an impervious surface.

3. A discharge of a petroleum product other than gasoline if less than 5 gallons is discharged onto a surface that is not impervious or runs off an impervious surface.

4. A discharge of a dry fertilizer if the amount is less than 250 pounds.

5. A discharge of a liquid fertilizer if the amount is less than 25 gallons, unless the reportable quantities listed for chemicals in 40 CFR part 117 or 302 are more restrictive, in which case the values in 40 CFR part 117 or 302 apply.

6. A discharge of pesticides registered for use in Wisconsin if the amount discharged when diluted as indicated on the pesticide label would cover less than one acre of land if applied according to label instructions, unless the reportable quantities listed for chemicals in 40 CFR part 117 or 302 are more restrictive, in which case the values in 40 CFR part 117 or 302 apply.

7. A discharge of substances specifically listed in 40 CFR part 117 or 302 if the amount discharged in any 24 hour period is less than the amount listed in 40 CFR part 117 or 302. If responsible parties are uncertain about how to interpret or apply 40 CFR part 117 or 302, they may report any discharge to the department.

Note: Notification requirements under this rule may not meet the obligations for responsible parties to report hazardous substance releases to the federal government. Questions on federal requirements should be directed to the US EPA Superfund hotline at 1−800−535−0202.

(b) Whenever, in light of site−specific conditions, any of the following criteria apply, hazardous substance discharges which would otherwise be exempt from notification under par. (a) shall be reported as required in s. NR 706.05:

1. The discharged substance has not evaporated or has not been cleaned up in compliance with the requirements of chs. NR 700 to 754.

2. The discharged substance has adversely impacted or threatens to adversely impact the air, lands or waters of the state either as a single discharge or when accumulated with previous discharges, even though the degree of the impact or threatened impact may not have been thoroughly evaluated.

Note: Where there is a sheen on surface water or the discharged substance has entered or is on the verge of entering the waters of the state, typically via a storm sewer, or drainage ditch, the department would consider the discharged substance to adversely impact or threaten to adversely impact the waters of the state.

3. The discharged substance has caused or threatens to cause acute or chronic human health impacts if immediate action, such as evacuation or in−place sheltering, is not taken. If the responsible party is unsure about potential human health effects, the responsible party shall consult with local or state health officials, and the responsible party shall make a notification decision based on that consultation.

4. The discharged substance presents or threatens to present a fire or explosion hazard or other safety hazards, such as slippery conditions on a roadway.

Note: In determining whether a threat exists under subd. 1., 2., 3., or 4., the standard of conduct to which the responsible party must conform is that of a reasonable person under the site−specific circumstances.

(3) EXEMPTION FROM PENALTIES. Law enforcement officers or members of fire departments using hazardous substances in carrying out their responsibility to protect public health, safety or welfare are exempted from the penalty requirements of s. 292.11 (9), Stats., but shall report to the department any dis-

charges of a hazardous substance occurring within the performance of their duties.

History: Cr. Register, February, 1997, No. 494, eff. 3−1−97; CR 12−023: cr. (intro.), am. (1) (title), r. (1) (b), renum. (1) (c) to (1) (bm), (1) (d) to (1) (cm), am. (2) (b) 1., cr. (3) Register October 2013 No. 694, eff. 11−1−13.

NR 706.11 Additional responsibilities for owners or operators of underground storage tank systems.

(2) ADDITIONAL INFORMATION. The owner or operator of an UST system shall document and submit to the department, within 72 hours of the original notification, any additional information that the owner or operator obtains concerning the discharge which was not included at the time of the original notification, unless otherwise directed by the department.

(3) CLOSURE ASSESSMENT REPORTS. The owner or operator of an UST system shall submit to the department any tank closure assessment report that is generated to document compliance with the requirements of ch. ATCP 93, regardless of whether a discharge of a hazardous substance was detected during the site assessment.

(3m) SOURCE AND CAUSE OF DISCHARGES. At the time the owner or operator of an UST system reports a discharge from an UST system, they shall also provide information to the department on the source and cause of the discharge.

Note: Sources may include tanks, piping, dispensers, submersible turbine pump areas, delivery problems, etc. Causes may include spills, overfills, physical or mechanical damage, corrosion, installation problems, etc., and those situations where the cause is unknown.

History: Cr. Register, February, 1997, No. 494, eff. 3−1−97; correction in (3) made under s. 13.93 (2m) (b) 7., Stats., Register, March, 2001, No. 543; correction in (3) made under s. 13.92 (4) (b) 7., Stats., Register February 2012 No. 674; CR 12−023: am. (title), r. (1), cr. (3m), r. (4) Register October 2013 No. 694, eff. 11−1−13; correction in (3) made under s. 13.92 (4) (b) 7., Stats., Register October 2013 No. 694.

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Wisconsin Department of Natural Resources Hazardous Substance Spills Guidance

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Remediation and Redevelopment Program November 2016

Immediate Reporting Required for Hazardous Substance Spills

If you are aware of a hazardous substance spill notify the Department of Natural Resources (DNR). State law requires the IMMEDIATE reporting of hazardous substance spills and other discharges to the environment.

CALL 800-943-0003 TO REPORT SPILLS

Use DNR Form 4400-225 to report other hazardous substance discharges

Other hazardous substance discharges, including historical contamination and contamination caused by an ongoing long-term release, discovered during an environmental assessment or laboratory analysis of soil, sediment, groundwater or vapor samples, should be reported to DNR by filling out and submitting DNR Form 4400-225, "Notification for Hazardous Substance Discharge (Non-Emergency Only)," which is is available at http://dnr.wi.gov/files/pdf/forms/4400/4400-225.pdf.

- ✓ **Report hazardous substance discharges as soon as visual or olfactory evidence confirms a discharge or laboratory data is available to document a discharge. Do not wait to complete a Phase II environmental assessment, or other similar report, to notify DNR.**

Reporting is everyone's responsibility

Individuals and entities that cause a hazardous substance spill or discharge to the environment are required by state law to notify DNR immediately - as soon as the spill or discharge is identified. Individuals and entities that own or control property where the spill or discharge occurred must report the discharge immediately if it is not reported by the person or entity that caused the discharge.

For public health and safety, DNR encourages everyone to report known hazardous substance discharges. Reporting a spill or other discharge, in itself, does not make a person or entity liable for the contamination.

Proper spill containment, cleanup, and disposal is always required

Every person/entity (including lenders and local governments) that causes a hazardous substance discharge, or owns or controls property at which a discharge occurred, must comply with the response action requirements in Wis. Admin. Chs. NR 700 to 754. No spill or discharge is exempt from the duty to properly contain, clean up and dispose of the substance and associated contaminated media, such as soil, water and other affected materials.

Spill reporting exemptions

All spills must be cleaned up, but it is generally not necessary to report recent spills that are:

- less than 1 gallon of gasoline
- less than 5 gallons of any petroleum product other than gasoline
- any amount of gasoline or other petroleum product that is completely contained on an impervious surface
- individual discharges authorized by a permit or program approved under Wis. Stats. Chs. 289 - 299
- less than 25 gallons of liquid fertilizer
- less than 250 pounds of dry fertilizer
- pesticides that would cover less than 1 acre of land if applied according to label instructions
  - NOTE: Reporting is required if the ongoing, long-term release or application of a permitted pesticide, fertilizer or other substance accumulates to levels that exceed current health or safety standards.
- less than the federal reportable quantities listed in 40 C.F.R. §§ 117 or 302
  - NOTE: U.S. EPA (federal) spill reporting requirements are outlined on the internet at https://www.epa.gov/emergency-response/when-are-you-required-report-oil-spill-and-hazardous-substance-release.

Spill reporting exemptions do not apply (and reporting is required) when:

- the spilled substance has not evaporated or been cleaned up in accordance with Wis. Admin. chs. NR 700 - 754
- the spilled substance is a potential fire, explosion or safety hazard
- the spilled substance causes, or threatens to cause, chronic or acute human health concerns
  - NOTE: If you are unsure about potential human health effects, consult with local or state health officials.
- the spilled substance adversely impacts, or threatens to impact, the air, lands or waters of the state (as either a single discharge or when accumulated with past discharges) - even if the degree of the impact has not yet been thoroughly evaluated
  - NOTE: If the substance causes sheen on surface water, has entered or is on the verge of entering the waters of the state, DNR will consider the spilled substance a threat to impact, or to have adversely impacted, waters of the state and reporting is required.

Terms, definitions, statutes and rules

Hazardous substance —Any substance that can cause harm to human health and safety, or the environment, because of where it is spilled, the amount spilled, its toxicity or its concentration. Even common products such as milk, butter, pickle juice, corn, beer, etc., may be considered a hazardous substance if discharged to a sensitive area.

Discharge — Spilling, leaking, pumping, pouring, emitting, emptying, dumping, etc., to land, air or water.

Spill — A discharge that is typically a one-time event or occurrence, and usually inadvertent.

Wis. Stat. § 292.11(2) and Wis. Admin. § NR 706.05 — Require individuals and entities that possess or control a hazardous substance, or that cause the discharge of a hazardous substance to the environment, to notify DNR immediately about the discharge.

Wis. Stat. § 292.99 — Authorizes penalties up to $5,000 for each violation of the notification requirement.

Consult Wis. Stat. Ch. 292 and Wis. Admin. §§ 700 – 754, and http://dnr.wi.gov/topic/Spills/ for further information on hazardous substance spill and discharge reporting, investigation and cleanup.

Regional Spill Coordinators - DNR contacts

Northeast: Rick Joslin **(920) 424-7077**
Northern: John Sager **(715) 392-7822**
Southeast: Trevor Nobile **(414) 263-8524**
South Central: Mike Schmoller **(608) 275-3303**
West Central: Pat Collins **(715) 684-2914 x117**
Spill Team Leader: John Sager **(715) 392-7822**

Wisconsin Department of Natural Resources – Regional Spill Coordinator Contacts

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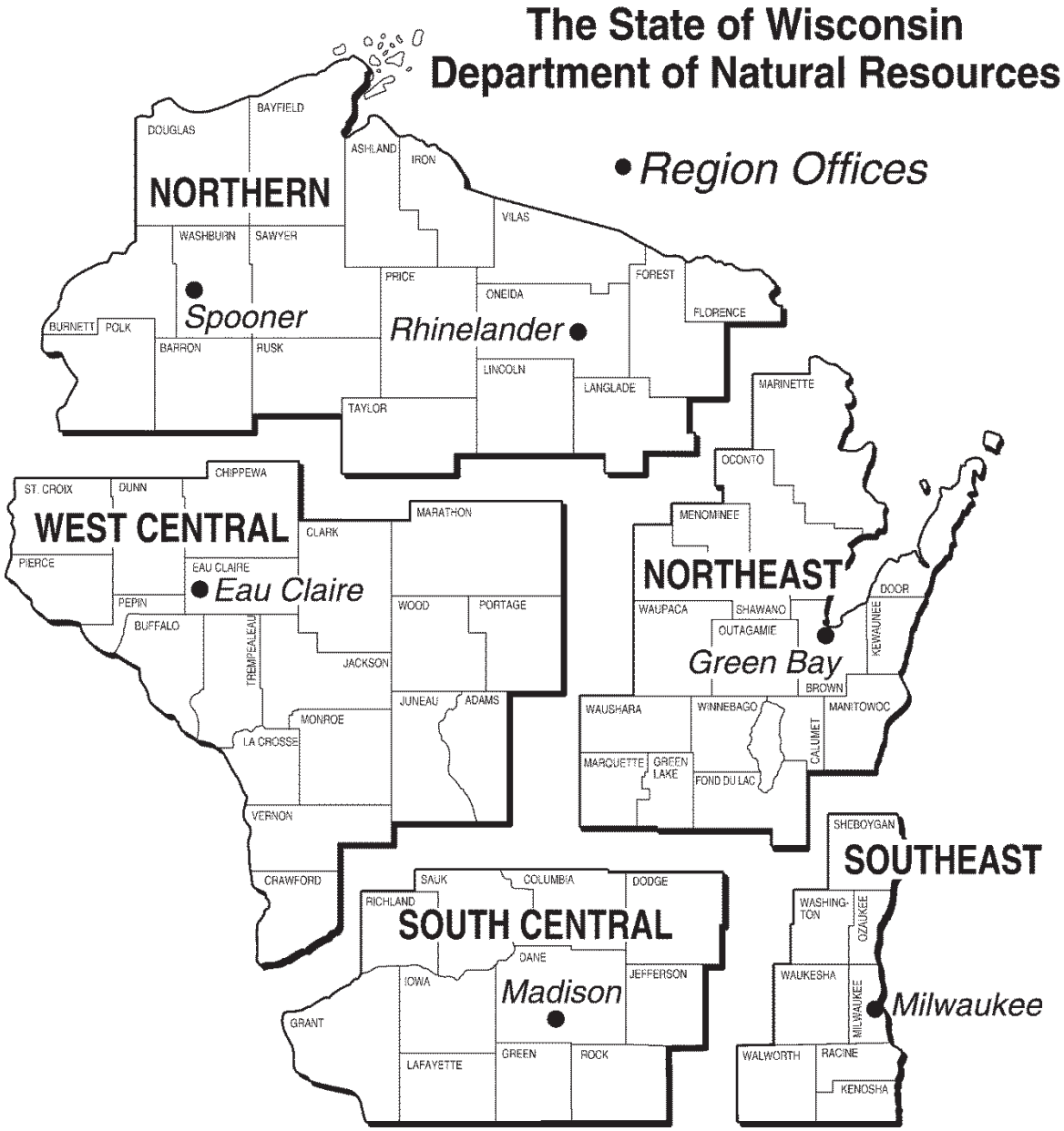
DNR Spill Coordinator Telephone Numbers

Name	Region	Office
24 Hour Hotline	**Statewide**	**800-943-0003**
Rick Joslin	Northeast	920-424-7077
John Sager	Northern	715-392-7822
Mike Schmoller	South Central	608-275-3303
Trevor Nobile	Southeast	414-263-8524
Pat Collins	West Central	715-684-2914 ext.117



Wisconsin Department of Natural Resources
P.O. Box 7921, Madison, WI 53707
dnr.wi.gov, search "spills"

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Attachment D

Waterbodies Crossed by the Line 3 Replacement Project Centerline

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Attachment D
Line 3 Replacement Project
Waterbody Crossing Table

Spread Number	County	Watershed Name	Hydrologic Unit Code (HUC) 8	Milepost	Feature_ID	Waterbody Name	Flow Regime [a]	Survey Date	Top-of-Bank Width (feet)	OHWM Width (feet) [b]	OHWM Depth (feet) [c]	Agency Designation	Approved 2014 Impairment [d]	Proposed Crossing Method [e]	Alternative Crossing Method [f]	Construction Timing Restriction [g]	Bridge Type [h]	Legal Description	Latitude	Longitude	Enbridge Site-Specific Plan	MPCA Classification	MDNR Kittle Number	Agency Permit Required
1	Pembina / Kittson	Middle Red	9020311	801.8	s-160n50w5-a	Red River of the North	P	2014	450.0	220.0	5.0	Section 10, NDSWC Sovereign Land, NDGF Class I Fishery, NDCC Class I stream, NDGF Wildlife Management Area parcel, USDA-NRCS floodplain easement, MN Public Water, 303d Impaired, Canoe Route	Mercury in fish; PCB	HDD	NA	Potential restrictions from NDGF Special Use Permit (no construction before July 15 or after August 29); PWI Cool/ Warm Water Fishery (MN) - No in-channel work from March 15 - June 15	NA	T160N, R50W, S5	48.70529	-97.114806	Yes	1C, 2Bdg, 2C, 3C, 4A, 4B, 5, 6	H-026	COE, NDSWC, NDGF/USDA-NRCS, MPCA, MDNR
1	Kittson	Middle Red	9020311	802.9	s-160n50w10-a	Unnamed Ditch	I	2014	12.0	3.5	0.5			Dry Crossing	Wet Open Cut		Span	T160N, R50W, S10 SESW	48.693183	-97.098769		2Bg, 3C, 4A, 4B, 5, 6		COE, MPCA
1	Kittson	Middle Red	9020311	803.6	s-160n50w15-a	Unnamed Stream	E	2014	6.0	10.0	0.8			Dry Crossing	Wet Open Cut		Span	T160N, R50W, S15 NENE	48.686305	-97.088135		2Bg, 3C, 4A, 4B, 5, 6		COE, MPCA
1	Kittson	Middle Red	9020311	803.9	s-160n50w15-b	Unnamed Stream	E	2014	4.0	8.0	2.5			Dry Crossing	Wet Open Cut		Span	T160N, R50W, S14 SWNW	48.68229	-97.083944		2Bg, 3C, 4A, 4B, 5, 6	MAJ-090218839	COE, MPCA
1	Kittson	Middle Red	9020311	805.4	s-160n50w23-a	Unnamed Stream	P	2014	25.0	12.0	3.0	Public Water		Dry Crossing	Wet Open Cut	PWI Cool/ Warm Water Fishery (MN) - No in-channel work from March 15 - June 15	Span - in stream support	T160N, R50W, S23 NESE	48.665002	-97.066459	Yes	2Bg, 3C, 4A, 4B, 5, 6	H-026-011-001	COE, MPCA, MDNR
1	Kittson	Middle Red	9020311	805.8	s-160n50w25-a	Unnamed Ditch	I	2014	3.0	3.0	1.0			Dry Crossing	Wet Open Cut		Span	T160N, R50W, S25 NWNW	48.660469	-97.060838		2Bg, 3C, 4A, 4B, 5, 6		COE, MPCA
1	Kittson	Middle Red	9020311	807.0	s-160n50w25-b	Unnamed Ditch	I	2014	2.5	3.0	1.3			Bore	Dry Crossing		Span	T160N, R50W, S25 SESE	48.647511	-97.041513		2Bg, 3C, 4A, 4B, 5, 6		COE, MPCA
1	Kittson	Middle Red	9020311	808.4	s-160n49w32-a	Unnamed Ditch	I	2014	8.0	10.0	3.0			Dry Crossing	Wet Open Cut		Span	T160N, R49W, S32 SWSW	48.633174	-97.02015		2Bg, 3C, 4A, 4B, 5, 6		COE, MPCA
1	Kittson	Middle Red	9020311	808.6	s-160n49w32-b	Unnamed Ditch	I	2014	8.0	2.5	0.3			Dry Crossing	Wet Open Cut		Span	T159N, R49W, S5 NWNW	48.631089	-97.017045		2Bg, 3C, 4A, 4B, 5, 6		COE, MPCA
1	Kittson	Middle Red	9020311	809.8	s-159n49w4-a	Unnamed Ditch	I	2014	8.0	3.0	1.0			Dry Crossing	Wet Open Cut		Span	T159N, R49W, S5 SESE	48.619179	-96.999309		2Bg, 3C, 4A, 4B, 5, 6		COE, MPCA
1	Kittson	Middle Red	9020311	810.0	s-159n49w4-b	Unnamed Ditch	I	2014	11.0	3.0	0.8			Bore	Wet Open Cut		Span	T159N, R49W, S4 SWSW	48.617032	-96.996126		2Bg, 3C, 4A, 4B, 5, 6	MAJ-090218980	COE, MPCA
1	Kittson	Middle Red	9020311	810.0	s-159n49w9-a	Unnamed Ditch	I	2014	20.0	5.0	0.5			Bore	Wet Open Cut		Span - in stream support	T159N, R49W, S4 SWSW	48.616847	-96.995863		2Bg, 3C, 4A, 4B, 5, 6	MAJ-090218979	COE, MPCA
1	Kittson	Middle Red	9020311	811.3	s-159n49w9-b	Unnamed Ditch	I	2014	20.0	5.0	0.5			Dry Crossing	Wet Open Cut		Span - in stream support	T159N, R49W, S9 SESE	48.60354	-96.976554		2Bg, 3C, 4A, 4B, 5, 6		COE, MPCA
1	Kittson	Middle Red	9020311	811.5	s-159n49w15-a	Unnamed Ditch	I	2014	12.0	12.0	1.0			Dry Crossing	Wet Open Cut		Span	T159N, R49W, S15 NWNW	48.601867	-96.974131		2Bg, 3C, 4A, 4B, 5, 6	MAJ-090218726	COE, MPCA
1	Kittson	Middle Red	9020311	812.7	s-159n49w15-b	Unnamed Ditch	I	2014	12.0	12.0	1.0			Dry Crossing	Wet Open Cut		Span	T159N, R49W, S15 SESE	48.588437	-96.955139		2Bg, 3C, 4A, 4B, 5, 6		COE, MPCA
1	Kittson	Middle Red	9020311	812.8	s-159n49w23-b	County Ditch No. 7	I	2014	20.0	30.0	6.0			Dry Crossing	Wet Open Cut		Span - in stream support	T159N, R49W, S23 NWNW	48.587288	-96.953827		2Bg, 3C, 4A, 4B, 5, 6	MAJ-090218599	COE, MPCA
1	Kittson	Middle Red	9020311	814.0	s-159n49w23-a	Unnamed Ditch	I	2014	7.0	12.0	1.5			Bore	Dry Crossing		Span	T159N, R49W, S23 SWSE	48.572743	-96.939893		2Bg, 3C, 4A, 4B, 5, 6	MAJ-090218366	COE, MPCA
1	Kittson	Middle Red	9020311	814.0	s-159n49w26-a	Unnamed Ditch	I	2014	10.0	0.3	0.3			Bore	Dry Crossing		Span	T159N, R49W, S26 NWNE	48.572457	-96.939884		2Bg, 3C, 4A, 4B, 5, 6	MAJ-090218366	COE, MPCA

Attachment D
Line 3 Replacement Project
Waterbody Crossing Table

Spread Number	County	Watershed Name	Hydrologic Unit Code (HUC) 8	Milepost	Feature_ID	Waterbody Name	Flow Regime [a]	Survey Date	Top-of-Bank Width (feet)	OHWM Width (feet) [b]	OHWM Depth (feet) [c]	Agency Designation	Approved 2014 Impairment [d]	Proposed Crossing Method [e]	Alternative Crossing Method [f]	Construction Timing Restriction [g]	Bridge Type [h]	Legal Description	Latitude	Longitude	Enbridge Site-Specific Plan	MPCA Classification	MDNR Kittle Number	Agency Permit Required
1	Kittson	Middle Red	9020311	815.6	s-159n49w36-a	Judicial Ditch 10	I	2014	20.0	20.0	6.0	Public Water		Dry Crossing	Wet Open Cut	PWI Cool/ Warm Water Fishery (MN) - No in-channel work from March 15 - June 15	Span - in stream support	T159N, R49W, S25 SESE	48.557517	-96.91262		2Bg, 3C, 4A, 4B, 5, 6	H-026-011	COE, MPCA, MDNR
1	Marshall	Middle Red	9020311	816.9	s-158n48w6-a	Judicial Ditch 3	I	2015	20.0	20.0	4.5			Bore	Wet Open Cut		Span - in stream support	T158N, R48W, S6 NENE	48.543125	-96.893879		2Bg, 3C, 4A, 4B, 5, 6	MAJ-090218759	COE, MPCA
1	Marshall	Middle Red	9020311	821.0	s-158n48w22-a	Unnamed Ditch	I	2014	12.0	12.0	4.0			Dry Crossing	Wet Open Cut		Span	T158N, R48W, S22 NENW	48.499631	-96.836399		2Bg, 3C, 4A, 4B, 5, 6	MAJ-090218433	COE, MPCA
1	Marshall	Middle Red	9020311	821.1	s-158n48w22-b	Unnamed Ditch	I	2014	8.0	8.0	0.5			Dry Crossing	Wet Open Cut		Span	T158N, R48W, S22 NENW	48.49844	-96.83486		2Bg, 3C, 4A, 4B, 5, 6		COE, MPCA
1	Marshall	Middle Red	9020311	825.4	s-157n47w6-a	Unnamed Ditch	I	2014	5.0	3.0	0.5			Dry Crossing	Wet Open Cut		Span	T157N, R47W, S6 NWSW	48.448656	-96.780063		2Bg, 3C, 4A, 4B, 5, 6		COE, MPCA
1	Marshall	Middle Red	9020311	825.7	s-157n47w6-b	Unnamed Ditch	I	2014	8.0	1.0	1.0			Dry Crossing	Wet Open Cut		Span	T157N, R47W, S6 SESW	48.44564	-96.774511		2Bg, 3C, 4A, 4B, 5, 6	MAJ-090218220	COE, MPCA
1	Marshall	Middle Red	9020311	828.5	s-157n47w16-b	Tamarac River	P	2014	30.0	25.0	3.0	Public Water, 303d Impaired	Aquatic macroinvertebrate bioassessments; Fishes bioassessments	HDD	NA	PWI Cool/ Warm Water Fishery (MN) - No in-channel work from March 15 - June 15	NA	T157N, R47W, S16 SWSW	48.415892	-96.732695	Yes	1C, 2Bdg, 2C, 3C, 4A, 4B, 5, 6	H-026-019	COE, MPCA, MDNR
1	Marshall	Middle Red	9020311	831.0	s-157n47w26-c	Unnamed Stream	E	2014	10.0	4.0	1.5			Dry Crossing	Wet Open Cut		Span	T157N, R47W, S26 SWNW	48.391842	-96.690959		2Bg, 3C, 4A, 4B, 5, 6	MAJ-090218249	COE, MPCA
1	Marshall	Middle Red	9020311	831.2	s-157n47w26-d	Unnamed Stream	I	2014	15.0	8.0	0.5			Dry Crossing	Wet Open Cut		Span - in stream support	T157N, R47W, S26 NESW	48.389676	-96.687974		2Bg, 3C, 4A, 4B, 5, 6	MAJ-090218374	COE, MPCA
1	Marshall	Middle Red	9020311	831.4	s-157n47w26-d	Unnamed Stream	I	2014	15.0	8.0	0.5			Dry Crossing	Wet Open Cut		Span - in stream support	T157N, R47W, S26 NESW	48.387886	-96.685664		2Bg, 3C, 4A, 4B, 5, 6	MAJ-090218374	COE, MPCA
1	Marshall	Middle Red	9020311	831.7	s-157n47w26-b	Unnamed Ditch	I	2014	15.0	10.0	0.5			Dry Crossing	Wet Open Cut		Span - in stream support	T157N, R47W, S35 NWNE	48.384349	-96.681183		2Bg, 3C, 4A, 4B, 5, 6	MAJ-090218215	COE, MPCA
1	Marshall	Middle Red	9020311	832.8	s-157n47w36-b	Unnamed Ditch	I	2014	11.0	4.0	0.5			Dry Crossing	Wet Open Cut		Span	T157N, R47W, S36 SESW	48.37332	-96.665754		2Bg, 3C, 4A, 4B, 5, 6		COE, MPCA
1	Marshall	Middle Red	9020311	833.1	s-157n47w36-a	Unnamed Ditch	I	2014	19.0	10.0	1.5			Dry Crossing	Wet Open Cut		Span - in stream support	T157N, R47W, S36 SESW	48.36988	-96.660781		2Bg, 3C, 4A, 4B, 5, 6	MAJ-090218691	COE, MPCA
1	Marshall	Middle Red	9020311	833.6	s-156n47w1-a	Unnamed Ditch	I	2014	15.0	10.0	1.0			Dry Crossing	Wet Open Cut		Span - in stream support	T156N, R47W, S1 SWNW	48.364225	-96.65264		2Bg, 3C, 4A, 4B, 5, 6		COE, MPCA
1	Marshall	Snake	9020309	834.1	s-156n47w1-b	Unnamed Stream	E	2014	32.0	7.0	0.4			Dry Crossing	Wet Open Cut		Span - in stream support	T156N, R47W, S1 NESW	48.359877	-96.64621		2Bg, 3C, 4A, 4B, 5, 6	MAJ-090217643	COE, MPCA
1	Marshall	Snake	9020309	835.0	s-156n47w12-a	Unnamed Ditch	I	2014	20.0	11.0	1.5			Bore	Dry Crossing		Span - in stream support	T156N, R47W, S12 SENE	48.350402	-96.631177		2Bg, 3C, 4A, 4B, 5, 6		COE, MPCA
1	Marshall	Snake	9020309	835.0	s-156n46w7-a	Unnamed Ditch	I	2014	25.0	7.0	1.0			Bore	Dry Crossing		Span - in stream support	T156N, R46W, S7 SWNW	48.350158	-96.630788		2Bg, 3C, 4A, 4B, 5, 6		COE, MPCA
1	Marshall	Snake	9020309	835.2	s-156n46w7-b	Unnamed Ditch	I	2014	25.0	2.5	1.0			Dry Crossing	Wet Open Cut		Span - in stream support	T156N, R46W, S7 SWNW	48.348267	-96.627763		2Bg, 3C, 4A, 4B, 5, 6		COE, MPCA

Attachment D
Line 3 Replacement Project
Waterbody Crossing Table

Spread Number	County	Watershed Name	Hydrologic Unit Code (HUC) 8	Milepost	Feature_ID	Waterbody Name	Flow Regime [a]	Survey Date	Top-of-Bank Width (feet)	OHWM Width (feet) [b]	OHWM Depth (feet) [c]	Agency Designation	Approved 2014 Impairment [d]	Proposed Crossing Method [e]	Alternative Crossing Method [f]	Construction Timing Restriction [g]	Bridge Type [h]	Legal Description	Latitude	Longitude	Enbridge Site-Specific Plan	MPCA Classification	MDNR Kittle Number	Agency Permit Required
1	Marshall	Snake	9020309	835.9	s-156n46w7-c	Middle River	P	2014	45.0	30.0	2.0	NRI, Public Water, 303d Impaired	Dissolved oxygen; Turbidity	HDD	NA	PWI Cool/ Warm Water Fishery (MN) - No in-channel work from March 15 - June 15	NA	T156N, R46W, S7 SWSE	48.341569	-96.617902	Yes	2Bg, 3C, 4A, 4B, 5, 6	H-026-021-004	COE, MPCA, MDNR
1	Marshall	Snake	9020309	837.2	s-156n46w17-a	Unnamed Ditch	I	2014	20.0	10.0	1.0			Dry Crossing	Wet Open Cut		Span - in stream support	T156N, R46W, S17 SWSE	48.327217	-96.598691		2Bg, 3C, 4A, 4B, 5, 6		COE, MPCA
1	Marshall	Snake	9020309	838.0	s-156n46w21-a	Unnamed Ditch	I	2014	26.0	9.0	1.5			Dry Crossing	Wet Open Cut		Span - in stream support	T156N, R46W, S21 NWSW	48.319102	-96.587305		2Bg, 3C, 4A, 4B, 5, 6		COE, MPCA
1	Marshall	Snake	9020309	838.1	s-156n46w21-b	Unnamed Stream	E	2014	37.0	8.0	1.0			Dry Crossing	Wet Open Cut		Span - in stream support	T156N, R46W, S21 NWSW	48.317435	-96.585332		2Bg, 3C, 4A, 4B, 5, 6	MAJ-090217515	COE, MPCA
1	Marshall	Snake	9020309	839.1	s-156n46w28-a	Unnamed Stream	I	2014	12.0	11.0	1.0			Dry Crossing	Wet Open Cut		Span	T156 R46W Sec. 28	48.303405	-96.577012		2Bg, 3C, 4A, 4B, 5, 6	MAJ-090217590	COE, MPCA
1	Marshall	Snake	9020309	842.6	s-155n46w1-a	Unnamed Ditch	I	2014	2.0	2.0	0.5			Dry Crossing	Wet Open Cut		Span	T155N, R46W, S1 NWSW	48.272659	-96.518901		2Bg, 3C, 4A, 4B, 5, 6		COE, MPCA
1	Marshall	Snake	9020309	843.2	s-155n46w12-a	Snake River	P	2014	30.0	25.0	0.5	Public Water, 303d Impaired	Dissolved oxygen	HDD	NA	PWI Cool/ Warm Water Fishery (MN) - No in-channel work from March 15 - June 15	NA	T155N, R46W, S12 NWNE	48.265427	-96.509462	Yes	2Bg, 3C, 4A, 4B, 5, 6	H-026-021	COE, MPCA, MDNR
1	Marshall	Snake	9020309	846.9	s-155n45w21-b	Unnamed Ditch	I	2014	2.5	1.0	0.5			Dry Crossing	Wet Open Cut		Span	T155N, R45W, S21 SWSW	48.225279	-96.454252		2Bg, 3C, 4A, 4B, 5, 6		COE, MPCA
1	Marshall	Snake	9020309	847.2	s-155n45w28-a	South Branch Snake River	P	2014	24.0	20.0	5.0	Public Water, *303d Impaired - proposed*	NA	Dry Crossing	Wet Open Cut	PWI Cool/ Warm Water Fishery (MN) - No in-channel work from March 15 - June 15	Span - in stream support	T155N, R45W, S28 NENW	48.222935	-96.450912	Yes	2Bg, 3C, 4A, 4B, 5, 6	H-026-021-010	COE, MPCA, MDNR
1	Marshall	Snake	9020309	848.2	s-155n45w28-c	Unnamed Ditch	I	2014	10.0	4.0	0.5			Bore	Dry Crossing		Span	T155N, R45W, S28 SESE	48.211234	-96.438924		2Bg, 3C, 4A, 4B, 5, 6		COE, MPCA
1	Marshall	Snake	9020309	848.2	s-155n45w33-a	Unnamed Ditch	I	2014	25.0	10.0	2.0			Bore	Dry Crossing		Span - in stream support	T155N, R45W, S33 NENE	48.210966	-96.438904		2Bg, 3C, 4A, 4B, 5, 6		COE, MPCA
1	Marshall	Snake	9020309	848.9	s-155n45w34-b	Unnamed Stream	E	2014	36.0	6.0	0.5			Dry Crossing	Wet Open Cut		Span - in stream support	T155N, R45W, S34 SENW	48.205327	-96.426261		2Bg, 3C, 4A, 4B, 5, 6		COE, MPCA
1	Marshall	Snake	9020309	849.1	s-155n45w34-c	Unnamed Ditch	I	2014	3.0	2.0	0.5			Dry Crossing	Wet Open Cut		Span	T155N, R45W, S34 NESW	48.203696	-96.424053		2Bg, 3C, 4A, 4B, 5, 6		COE, MPCA
1	Marshall	Snake	9020309	849.4	s-155n45w34-d	Unnamed Stream	E	2014	25.0	2.0	0.5			Dry Crossing	Wet Open Cut		Span - in stream support	T155N, R45W, S34 SWSE	48.199939	-96.418495		2Bg, 3C, 4A, 4B, 5, 6		COE, MPCA
1	Marshall	Grand Marais-Red	9020306	851.1	s-154n45w2-a	Unnamed Ditch	I	2014	12.0	3.0	0.5			Bore	Dry Crossing		Span	T154N, R45W, S2 SESE	48.182344	-96.395017		2Bg, 3C, 4A, 4B, 5, 6		COE, MPCA
1	Marshall	Grand Marais-Red	9020306	851.1	s-154n45w11-b	Unnamed Ditch	I	2014	20.0	8.0	1.5			Bore	Dry Crossing		Span - in stream support	T154N, R45W, S11 NENE	48.182202	-96.394871		2Bg, 3C, 4A, 4B, 5, 6		COE, MPCA
1	Marshall	Grand Marais-Red	9020306	851.4	s-154n45w11-a	Unnamed Ditch	I	2014	17.0	6.0	0.5			Dry Crossing	Wet Open Cut		Span - in stream support	T154N, R45W, S11 SENE	48.178076	-96.390619		2Bg, 3C, 4A, 4B, 5, 6		COE, MPCA
1	Pennington	Red Lake	9020303	852.9	s-154n44w18-a	Unnamed Ditch	I	2014	14.0	10.0	2.0			Dry Crossing	Wet Open Cut		Span - in stream support	T154N, R44W, S18 SWNW	48.162364	-96.368297		2Bg, 3C, 4A, 4B, 5, 6	MAJ-090211537	COE, MPCA

Attachment D
Line 3 Replacement Project
Waterbody Crossing Table

Spread Number	County	Watershed Name	Hydrologic Unit Code (HUC) 8	Milepost	Feature_ID	Waterbody Name	Flow Regime [a]	Survey Date	Top-of-Bank Width (feet)	OHWM Width (feet) [b]	OHWM Depth (feet) [c]	Agency Designation	Approved 2014 Impairment [d]	Proposed Crossing Method [e]	Alternative Crossing Method [f]	Construction Timing Restriction [g]	Bridge Type [h]	Legal Description	Latitude	Longitude	Enbridge Site-Specific Plan	MPCA Classification	MDNR Kittle Number	Agency Permit Required
1	Pennington	Red Lake	9020303	858.7	s-153n44w3-a	Unnamed Ditch	I	2014	30.0	15.0	4.0			Bore	Dry Crossing		Span - in stream support	T153N, R44W, S3 SENE	48.101289	-96.284351		2Bg, 3C, 4A, 4B, 5, 6	MAJ-090211676	COE, MPCA
1	Pennington	Red Lake	9020303	860.1	s-153n44w11-a	Unnamed Ditch	I	2014	40.0	10.0	3.0			Dry Crossing	Wet Open Cut		Span - in stream support	T153N, R44W, S11 SENE	48.08634	-96.263036		2Bg, 3C, 4A, 4B, 5, 6	MAJ-090212356	COE, MPCA
1	Pennington	Red Lake	9020303	861.7	s-153n44w13-a	Unnamed Ditch	I	2014	40.0	25.0	4.0			Dry Crossing	Wet Open Cut		Span - in stream support	T153N, R44W, S13 NESE	48.067929	-96.241293		2Bg, 3C, 4A, 4B, 5, 6	MAJ-090211843	COE, MPCA
1	Pennington	Red Lake	9020303	862.1	s-153n43w18-a	Unnamed Ditch	I	2014	25.0	12.0	1.5			Dry Crossing	Wet Open Cut		Span - in stream support	T153N, R43W, S18 SWSW	48.064113	-96.236588		2Bg, 3C, 4A, 4B, 5, 6		COE, MPCA
1	Pennington	Red Lake	9020303	862.1	s-153n43w19-a	Unnamed Ditch	I	2014	15.0	3.0	1.0			Dry Crossing	Wet Open Cut		Span - in stream support	T153N, R43W, S19 NWNW	48.063948	-96.236355		2Bg, 3C, 4A, 4B, 5, 6		COE, MPCA
1	Pennington	Red Lake	9020303	863.3	s-153n43w19-b	Unnamed Ditch	I	2014	20.0	8.0	1.5			Dry Crossing	Wet Open Cut		Span - in stream support	T153N, R43W, S19 SESE	48.051063	-96.219768		2Bg, 3C, 4A, 4B, 5, 6		COE, MPCA
1	Pennington	Red Lake	9020303	863.3	s-153n43w20-a	Unnamed Ditch	I	2014	20.0	10.0	2.0			Dry Crossing	Wet Open Cut		Span - in stream support	T153N, R43W, S20 SWSW	48.050876	-96.219538		2Bg, 3C, 4A, 4B, 5, 6		COE, MPCA
1	Pennington	Red Lake	9020303	863.4	s-153n43w20-a	Unnamed Ditch	I	2014	20.0	10.0	2.0			Dry Crossing	Wet Open Cut		Span - in stream support	T153N, R43W, S20 SWSW	48.049655	-96.218043		2Bg, 3C, 4A, 4B, 5, 6		COE, MPCA
1	Pennington	Red Lake	9020303	864.3	s-153n43w29-a	Red Lake River	P	2014	230.0	215.0	2.0	Section 10, NRI, Public Water, 303d Impaired, Canoe Route	Mercury in fish	HDD	NA	PWI Cool/ Warm Water Fishery (MN) - No in-channel work from March 15 - June 15	NA	T153N, R43W, S29 Meandered waterbody	48.039535	-96.205976	Yes	1C, 2Bdg, 2C, 3C, 4A, 4B, 5, 6	H-026-030	COE, MPCA, MDNR
1	Pennington	Red Lake	9020303	864.7	s-153n43w32-a	Unnamed Ditch	I	2014	10.0	10.0	2.0			HDD	NA		NA	T153N, R43W, S29 SESE	48.035082	-96.199621		2Bg, 3C, 4A, 4B, 5, 6	MAJ-090211546	COE, MPCA
1	Pennington	Red Lake	9020303	865.1	s-153n43w33-a	Unnamed Ditch	I	2014	18.0	3.0	1.0			Dry Crossing	Wet Open Cut		Span - in stream support	T153N, R43W, S33 NWNW	48.031461	-96.193216		2Bg, 3C, 4A, 4B, 5, 6		COE, MPCA
1	Pennington	Red Lake	9020303	867.4	s-152n43w4-a	Unnamed Ditch	I	2014	40.0	12.0	1.0			Dry Crossing	Wet Open Cut		Span - in stream support	T152N, R43W, S4 SESE	48.006781	-96.161232		2Bg, 3C, 4A, 4B, 5, 6	MAJ-090211530	COE, MPCA
1	Pennington	Red Lake	9020303	869.5	s-152n43w14-a	Unnamed Ditch	I	2014	18.0	3.0	1.0			Dry Crossing	Wet Open Cut		Span - in stream support	T152N, R43W, S14 NWSW	47.983896	-96.132567		2Bg, 3C, 4A, 4B, 5, 6		COE, MPCA
1	Pennington	Red Lake	9020303	869.7	s-152n43w14-b	Unnamed Ditch	I	2014	24.0	12.0	2.0	Public Water		Dry Crossing	Wet Open Cut	PWI Cool/ Warm Water Fishery (MN) - No in-channel work from March 15 - June 15	Span - in stream support	T152N, R43W, S14 NESW	47.981373	-96.129118		2Bg, 3C, 4A, 4B, 5, 6	H-026-030-028	COE, MPCA, MDNR
1	Pennington	Red Lake	9020303	869.7	s-152n43w14-c	Unnamed Ditch	I	2014	35.0	18.0	5.0			Dry Crossing	Wet Open Cut		Span - in stream support	T152N, R43W, S14 SESW	47.981189	-96.128868		2Bg, 3C, 4A, 4B, 5, 6	MAJ-090211654	COE, MPCA
1	Pennington	Red Lake	9020303	870.4	s-152n43w23-a	Unnamed Stream	E	2014	6.0	2.0	1.0			Dry Crossing	Wet Open Cut		Span	T152N, R43W, S23 SENE	47.974036	-96.119151		2Bg, 3C, 4A, 4B, 5, 6		COE, MPCA
1	Pennington	Red Lake	9020303	871.3	s-152n43w24-b	Unnamed Ditch	I	2014	9.0	6.0	1.0			Dry Crossing	Wet Open Cut		Span	T152N, R43W, S24 SWSE	47.964586	-96.106386		2Bg, 3C, 4A, 4B, 5, 6		COE, MPCA
1	Red Lake	Red Lake	9020303	871.3	s-152n43w24-c	Unnamed Ditch	I	2014	20.0	10.0	3.0			Dry Crossing	Wet Open Cut		Span - in stream support	T152N, R43W, S24 SWSE	47.963622	-96.105213		2Bg, 3C, 4A, 4B, 5, 6	MAJ-090211727	COE, MPCA

Attachment D
Line 3 Replacement Project
Waterbody Crossing Table

Spread Number	County	Watershed Name	Hydrologic Unit Code (HUC) 8	Milepost	Feature_ID	Waterbody Name	Flow Regime [a]	Survey Date	Top-of-Bank Width (feet)	OHWM Width (feet) [b]	OHWM Depth (feet) [c]	Agency Designation	Approved 2014 Impairment [d]	Proposed Crossing Method [e]	Alternative Crossing Method [f]	Construction Timing Restriction [g]	Bridge Type [h]	Legal Description	Latitude	Longitude	Enbridge Site-Specific Plan	MPCA Classification	MDNR Kittle Number	Agency Permit Required
1	Red Lake	Red Lake	9020303	872.0	s-152n42w30-a	Unnamed Ditch	I	2014	14.0	4.0	1.0			Dry Crossing	Wet Open Cut		Span - in stream support	T152N, R42W, S30 SWNW	47.956504	-96.096351		2Bg, 3C, 4A, 4B, 5, 6	MAJ-090212509	COE, MPCA
1	Red Lake	Red Lake	9020303	872.4	s-152n42w30-b	Unnamed Ditch	I	2014	20.0	3.0	0.3			Dry Crossing	Wet Open Cut		Span - in stream support	T152N, R42W, S30 SESW	47.952051	-96.091196		2Bg, 3C, 4A, 4B, 5, 6	MAJ-090212455	COE, MPCA
1	Red Lake	Red Lake	9020303	873.3	s-152n42w31-a	Unnamed Ditch	I	2014	12.0	8.0	2.0			Dry Crossing	Wet Open Cut		Span	T152N, R42W, S31 NESE	47.941249	-96.078262		2Bg, 3C, 4A, 4B, 5, 6		COE, MPCA
1	Red Lake	Red Lake	9020303	873.8	s-152n42w32-b	Unnamed Ditch	I	2014	18.0	12.0	2.0			Dry Crossing	Wet Open Cut		Span - in stream support	T152N, R42W, S32 SWSW	47.936308	-96.072213		2Bg, 3C, 4A, 4B, 5, 6	MAJ-090212661	COE, MPCA
1	Red Lake	Red Lake	9020303	873.9	s-152n42w32-a	Unnamed Ditch	I	2014	18.0	1.0	2.0			Dry Crossing	Wet Open Cut		Span - in stream support	T152N, R42W, S32 SWSW	47.934661	-96.070248		2Bg, 3C, 4A, 4B, 5, 6		COE, MPCA
1	Red Lake	Clearwater	9020305	875.4	s-151n42w4-a	Clearwater River	P	2014	70.0	60.0	3.0	Public Water, 303d Impaired	Dissolved oxygen; Mercury in fish; Turbidity	HDD	NA	PWI Cool/ Warm Water Fishery (MN) - No in-channel work from March 15 - June 15	NA	T151N, R42W, S9 NENW	47.91956	-96.048284	Yes	2Bg, 3C, 4A, 4B, 5, 6	H-026-030-019	COE, MPCA, MDNR
1	Red Lake	Clearwater	9020305	882.4	s-151n41w28-c	Unnamed Ditch	I	2014	20.0	12.0	3.0			Dry Crossing	Wet Open Cut		Span - in stream support	T151N, R41W, S28 SWSW	47.864683	-95.923469		2Bg, 3C, 4A, 4B, 5, 6		COE, MPCA
1	Red Lake	Clearwater	9020305	882.8	s-151n41w28-b	Unnamed Ditch	I	2014	18.0	8.0	2.0			Dry Crossing	Wet Open Cut		Span - in stream support	T151N, R41W, S28 SESW	47.862558	-95.916783		2Bg, 3C, 4A, 4B, 5, 6		COE, MPCA
1	Red Lake	Clearwater	9020305	882.8	s-151n41w28-a	Unnamed Ditch	I	2014	20.0	12.0	2.0			Dry Crossing	Wet Open Cut		Span - in stream support	T151N, R41W, S28 SESW	47.862477	-95.916533		2Bg, 3C, 4A, 4B, 5, 6		COE, MPCA
1	Red Lake	Clearwater	9020305	882.8	s-151n41w33-b	Unnamed Ditch	I	2014	20.0	7.0	0.5			Dry Crossing	Wet Open Cut		Span - in stream support	T151N, R41W, S33 NENW	47.862289	-95.915953		2Bg, 3C, 4A, 4B, 5, 6		COE, MPCA
1	Red Lake	Clearwater	9020305	883.5	s-151n41w33-a	Unnamed Ditch	I	2014	13.0	5.0	1.0			Dry Crossing	Wet Open Cut		Span - in stream support	T151N, R41W, S33 SENE	47.857812	-95.902159		2Bg, 3C, 4A, 4B, 5, 6		COE, MPCA
1	Red Lake	Clearwater	9020305	884.7	s-151n41w35-a	Unnamed Ditch	I	2014	60.0	16.0	2.0			Bore	Dry Crossing		Span - in stream support	T151N, R41W, S35 SWSW	47.850696	-95.880092		2Bg, 3C, 4A, 4B, 5, 6	MAJ-090215241	COE, MPCA
1	Red Lake	Clearwater	9020305	885.7	s-150n41w1-a	Unnamed Ditch	I	2014	50.0	15.0	1.5			Bore	Dry Crossing		Span - in stream support	T150N, R41W, S1 NWNW	47.845575	-95.858322		2Bg, 3C, 4A, 4B, 5, 6		COE, MPCA
1	Red Lake	Clearwater	9020305	885.8	s-150n41w1-b	Lost River	P	2014	80.0	50.0	3.0	Section 408, Public Water, *303d Impaired - proposed*	NA	Dry Crossing	Wet Open Cut	PWI Cool/ Warm Water Fishery (MN) - No in-channel work from March 15 - June 15	Span - in stream support	T150N, R41W, S1 NWNW	47.845344	-95.856877		2Bg, 3C, 4A, 4B, 5, 6	H-026-030-019-007	COE, MPCA, MDNR
1	Red Lake	Clearwater	9020305	886.7	s-150n41w1-c	Unnamed Ditch	I	2014	75.0	20.0	1.5			Dry Crossing	Wet Open Cut		Span - in stream support	T150N, R41W, S1 NWSE	47.838192	-95.842189		2Bg, 3C, 4A, 4B, 5, 6	MAJ-090215772	COE, MPCA
1	Polk	Clearwater	9020305	888.0	s-150n40w7-a	Unnamed Ditch	I	2014	25.0	12.0	1.0			Dry Crossing	Wet Open Cut		Span - in stream support	T150N, R40W, S7 SENE	47.829756	-95.816486		2Bg, 3C, 4A, 4B, 5, 6	MAJ-090215951	COE, MPCA
1	Polk	Clearwater	9020305	888.0	s-150n40w8-a	Unnamed Ditch	I	2014	15.0	5.0	0.5			Dry Crossing	Wet Open Cut		Span - in stream support	T150N, R40W, S8 SWNW	47.829678	-95.816248		2Bg, 3C, 4A, 4B, 5, 6		COE, MPCA
1	Polk	Clearwater	9020305	889.6	s-150n40w9-a	Unnamed Ditch	I	2014	20.0	8.0	1.0			Dry Crossing	Wet Open Cut		Span - in stream support	T150N, R40W, S9 SESW	47.819395	-95.784786		2Bg, 3C, 4A, 4B, 5, 6		COE, MPCA

Attachment D
Line 3 Replacement Project
Waterbody Crossing Table

Spread Number	County	Watershed Name	Hydrologic Unit Code (HUC) 8	Milepost	Feature_ID	Waterbody Name	Flow Regime [a]	Survey Date	Top-of-Bank Width (feet)	OHWM Width (feet) [b]	OHWM Depth (feet) [c]	Agency Designation	Approved 2014 Impairment [d]	Proposed Crossing Method [e]	Alternative Crossing Method [f]	Construction Timing Restriction [g]	Bridge Type [h]	Legal Description	Latitude	Longitude	Enbridge Site-Specific Plan	MPCA Classification	MDNR Kittle Number	Agency Permit Required
1	Polk	Clearwater	9020305	889.7	s-150n40w16-a	State Ditch Number Sixtyone	I	2014	60.0	20.0	4.0			Dry Crossing	Wet Open Cut		Span - in stream support	T150N, R40W, S16 NWNE	47.818997	-95.78355		2Bg, 3C, 4A, 4B, 5, 6	MAJ-090214966	COE, MPCA
1	Polk	Clearwater	9020305	890.2	s-150n40w15-a	Unnamed Ditch	I	2014	10.0	4.0	1.0			Dry Crossing	Wet Open Cut		Span	T150N, R40W, S16 NENE	47.815722	-95.773557		2Bg, 3C, 4A, 4B, 5, 6	MAJ-090216211	COE, MPCA
1	Polk	Clearwater	9020305	890.8	s-150n40w15-b	Unnamed Ditch	I	2014	40.0	12.0	2.0			Dry Crossing	Wet Open Cut		Span - in stream support	T150N, R40W, S15 SENW	47.81216	-95.762821		2Bg, 3C, 4A, 4B, 5, 6		COE, MPCA
1	Polk	Clearwater	9020305	890.8	s-150n40w15-c	Unnamed Ditch	I	2014	50.0	20.0	5.0			Dry Crossing	Wet Open Cut		Span - in stream support	T150N, R40W, S15 SWNE	47.812072	-95.76258		2Bg, 3C, 4A, 4B, 5, 6	MAJ-090216518	COE, MPCA
1	Polk	Clearwater	9020305	891.3	s-150n40w14-a	Unnamed Ditch	I	2014	30.0	15.0	1.0			Dry Crossing	Wet Open Cut		Span - in stream support	T150N, R40W, S14 NWSW	47.808611	-95.752094		2Bg, 3C, 4A, 4B, 5, 6		COE, MPCA
1	Polk	Clearwater	9020305	892.4	s-150n40w23-a	Unnamed Ditch	I	2014	35.0	10.0	1.5			Bore	Wet Open Cut		Span - in stream support	T150N, R40W, S23 NENE	47.801758	-95.730794		2Bg, 3C, 4A, 4B, 5, 6		COE, MPCA
1	Polk	Clearwater	9020305	893.3	s-150n39w19-a	Unnamed Ditch	I	2014	14.0	3.0	3.0			Dry Crossing	Wet Open Cut		Span - in stream support	T150N, R39W, S19 NWNW	47.803862	-95.708921		2Bg, 3C, 4A, 4B, 5, 6	MAJ-090215880	COE, MPCA
1	Polk	Clearwater	9020305	893.7	s-150n39w19-c	Unnamed Ditch	I	2014	8.0	6.0	0.5			Dry Crossing	Wet Open Cut		Span	T150N, R39W, S19 NWSW	47.797673	-95.70419		2Bg, 3C, 4A, 4B, 5, 6		COE, MPCA
1	Polk	Clearwater	9020305	894.0	s-150n39w19-d	Unnamed Ditch	I	2014	15.0	12.0	3.0			Dry Crossing	Wet Open Cut		Span - in stream support	T150N, R39W, S19 NESW	47.794172	-95.700493		2Bg, 3C, 4A, 4B, 5, 6		COE, MPCA
1	Polk	Clearwater	9020305	894.3	s-150n39w30-a	County Ditch No. 89	I	2014	15.0	10.0	0.5			Dry Crossing	Wet Open Cut		Span - in stream support	T150N, R39W, S19 SWSE	47.79051	-95.696626		2Bg, 3C, 4A, 4B, 5, 6	MAJ-090216406	COE, MPCA
1	Polk	Clearwater	9020305	894.8	s-150n39w29-a	Unnamed Ditch	I	2014	12.0	8.0	2.0			Dry Crossing	Wet Open Cut		Span	T150N, R39W, S30 SENE	47.783673	-95.687389		2Bg, 3C, 4A, 4B, 5, 6		COE, MPCA
1	Polk	Clearwater	9020305	894.9	s-150n39w29-b	Unnamed Ditch	I	2014	12.0	8.0	2.0			Dry Crossing	Wet Open Cut		Span	T150N, R39W, S30 SENE	47.78361	-95.687179		2Bg, 3C, 4A, 4B, 5, 6		COE, MPCA
1	Polk	Clearwater	9020305	894.9	s-150n39w29-c	Unnamed Ditch	I	2014	12.0	8.0	2.0			Dry Crossing	Wet Open Cut		Span	T150N, R39W, S30 SENE	47.783211	-95.68583		2Bg, 3C, 4A, 4B, 5, 6		COE, MPCA
2	Clearwater	Clearwater	9020305	901.1	s-149n38w7-c	Unnamed Ditch	I	2014	8.0	5.0	1.0			Dry Crossing	Wet Open Cut		Span	T149N, R38W, S7 SWNE	47.742412	-95.567492		2Bg, 3C, 4A, 4B, 5, 6	MAJ-090215927	COE, MPCA
2	Clearwater	Clearwater	9020305	902.0	s-149n38w8-a	Unnamed Ditch	I	2014	8.0	3.0	1.0	Public Water		Dry Crossing	Wet Open Cut	PWI Cool/ Warm Water Fishery (MN) - No in-channel work from March 15 - June 15	Span	T149N, R38W, S8 NESW	47.736602	-95.549381		2Bg, 3C, 4A, 4B, 5, 6	H-026-030-019-007-007	COE, MPCA, MDNR
2	Clearwater	Clearwater	9020305	902.0	s-149n38w8-b	Unnamed Ditch	I	2014	10.0	7.0	1.0			Dry Crossing	Wet Open Cut		Span	T149N, R38W, S8 NESW	47.736514	-95.549103		2Bg, 3C, 4A, 4B, 5, 6		COE, MPCA
2	Clearwater	Clearwater	9020305	902.1	s-149n38w8-c	Unnamed Ditch	I	2014	8.0	5.0	1.0			Dry Crossing	Wet Open Cut		Span	T149N, R38W, S8 NWSE	47.736449	-95.548896		2Bg, 3C, 4A, 4B, 5, 6		COE, MPCA
2	Clearwater	Clearwater	9020305	902.7	s-149n38w9-a	Unnamed Ditch	I	2014	18.0	7.0	1.5			Bore	Wet Open Cut		Span - in stream support	T149N, R38W, S9 SWSW	47.731741	-95.536338		2Bg, 3C, 4A, 4B, 5, 6		COE, MPCA
2	Clearwater	Clearwater	9020305	902.9	s-149n38w16-a	Unnamed Stream	I	2014	18.0	8.0	2.0			Dry Crossing	Wet Open Cut		Span - in stream support	T149N, R38W, S16 NWNW	47.730541	-95.533418		2Bg, 3C, 4A, 4B, 5, 6	MAJ-090214818	COE, MPCA
2	Clearwater	Clearwater	9020305	904.0	s-149n38w15-a	Lost River	P	2014	30.0	18.0	3.0	Public Water		Dry Crossing	Wet Open Cut	PWI Cool/ Warm Water Fishery (MN) - No in-channel work from March 15 - June 15	Span - in stream support	T149N, R38W, S15 NWSW	47.721857	-95.512996	Yes	2Bg, 3C, 4A, 4B, 5, 6	H-026-030-019-007	COE, MPCA, MDNR

Attachment D
Line 3 Replacement Project
Waterbody Crossing Table

Spread Number	County	Watershed Name	Hydrologic Unit Code (HUC) 8	Milepost	Feature_ID	Waterbody Name	Flow Regime [a]	Survey Date	Top-of-Bank Width (feet)	OHWM Width (feet) [b]	OHWM Depth (feet) [c]	Agency Designation	Approved 2014 Impairment [d]	Proposed Crossing Method [e]	Alternative Crossing Method [f]	Construction Timing Restriction [g]	Bridge Type [h]	Legal Description	Latitude	Longitude	Enbridge Site-Specific Plan	MPCA Classification	MDNR Kittle Number	Agency Permit Required
2	Clearwater	Clearwater	9020305	907.1	CL018bWB	Silver Creek	P	2014	20.0	12.0	3.0	Public Water, 303d Impaired	Fecal Coliform	Dry Crossing	Wet Open Cut	PWI Cool/ Warm Water Fishery (MN) - No in-channel work from March 15 - June 15	Span in-stream support	T149N, R38W, S25, SENE	47.698832	-95.456331	Yes	2Bg, 3C, 4A, 4B, 5, 6	H-026-030-019-007-005	COE, MPCA, MDNR
2	Clearwater	Clearwater	9020305	907.4	CL019bWB	Silver Creek	P	2014	22.0	22.0	8.0	Public Water, 303d Impaired	Fecal Coliform	Dry Crossing	Wet Open Cut	PWI Cool/ Warm Water Fishery - No in-channel work from March 15- June 15	Span in-stream support	T149N, R37W, S30, NWSW	47.695855	-95.45092	Yes	2Bg, 3C, 4A, 4B, 5, 6	H-026-030-019-007-005	COE, MPCA, MDNR
2	Clearwater	Clearwater	9020305	907.7	s-149n37w30-a	Silver Creek	P	2014	16.0	12.0	2.0	Public Water, 303d Impaired	Fecal Coliform	Dry Crossing	Wet Open Cut	PWI Cool/ Warm Water Fishery - No in-channel work from March 15- June 15	Span - in stream support	T149N, R37W, S30 NESW	47.693694	-95.444815	Yes	2Bg, 3C, 4A, 4B, 5, 6	H-026-030-019-007-005	COE, MPCA, MDNR
2	Clearwater	Clearwater	9020305	908.4	CL020aWB	Unnamed Ditch	I	2014	1.5	1.5	1.5			Bore	Wet Open Cut		Span	T149N, R37W, S30 SESE	47.689598	-95.431086		2Bg, 3C, 4A, 4B, 5, 6		COE, MPCA
2	Clearwater	Clearwater	9020305	909.2	CL022_200aWB	Unnamed Stream	P	2014	1.5	1.5	1.5			Dry Crossing	Wet Open Cut		Span	T149N, R37W, S29 SWSE	47.689612	-95.415962		2Bg, 3C, 4A, 4B, 5, 6	MAJ-090216465	COE, MPCA
2	Clearwater	Clearwater	9020305	909.8	CL022_200aWB	Unnamed Stream	P	2014	1.5	1.5	1.5			Dry Crossing	Wet Open Cut		Span	T149N, R37W, S29 SWSE	47.689885	-95.416094		2Bg, 3C, 4A, 4B, 5, 6	MAJ-090216465	COE, MPCA
2	Clearwater	Clearwater	9020305	910.9	s-149n37w32-b	Unnamed Stream	P	2014	8.0	8.0	1.0	Public Water		Dry Crossing	Wet Open Cut	PWI Cool/ Warm Water Fishery - No in-channel work from March 15- June 15	Span	T149, R37W, Sec. 32	47.68214	-95.426796		2Bg, 3C, 4A, 4B, 5, 6	H-026-030-019-007-005-001	COE, MPCA , MDNR
2	Clearwater	Clearwater	9020305	911.5	CLC5020_300aWB	Unnamed Stream	I	2013/2014	6.0	3.0	0.5			Dry Crossing	Wet Open Cut		Span	T149, R37W, Sec. 32	47.68112	-95.413752		2Bg, 3C, 4A, 4B, 5, 6	MAJ-090216465	COE, MPCA
2	Clearwater	Clearwater	9020305	915.3	s-148n37w20-a	Unnamed Stream	I	2017	4.0	2.5	0.5			Dry Crossing	Wet Open Cut		Span	T148 R37W Sec. 20	47.628322	-95.400682		2Bg, 3C, 4A, 4B, 5, 6		COE, MPCA
2	Clearwater	Clearwater	09020305	917.1	CLC5018aWB	Unnamed Stream	E	2013	3.0	3.0	1.0			Dry Crossing	Wet Open Cut		Span	T148N, R37W, S29, SESW	47.603846	-95.395001		2Bg, 3C, 4A, 4B, 5, 6		COE, MPCA
2	Clearwater	Clearwater	09020305	922.2	CLC5037aWB	Clearwater River	P	2013	42.0	42.0	2.0	NRI, Public Water, 303d Impaired	Mercury in fish; Dissolved Oxygen	HDD	NA	PWI Cool/ Warm Water Fishery (MN) - No in-channel work from March 15 - June 15	NA	T147N, R37W, S21, NESW	47.532476	-95.374322	Yes	2Bg, 3C, 4A, 4B, 5, 6	H-026-030-019	COE, MPCA, MDNR
2	Clearwater	Clearwater	09020305	922.3	CLC5038aWB	Tributary of Clearwater River	P	2013	12.0	12.0	2.0			HDD	NA		NA	T147N, R37W, S21, NESW	47.532057	-95.373991		2Bg, 3C, 4A, 4B, 5, 6		COE, MPCA
2	Clearwater	Clearwater	09020305	924.2	CLC5048aWB	Walker Brook	P	2013	20.0	20.0	5.0	Public Water, 303d Impaired	Dissolved Oxygen	Wet Open Cut	NA	PWI Cool/ Warm Water Fishery (MN) - No in-channel work from March 15 - June 15	Span in-stream support	T147N, R37W, S34, SWNE	47.508786	-95.350037		2Bg, 3C, 4A, 4B, 5, 6	H-026-030-019-029	COE, MPCA, MDNR
2	Clearwater	Clearwater	09020305	925.4	CLC5051aWB	Unnamed Stream	P	2013	8.0	10.0	4.0	Public Water		Dry Crossing	Wet Open Cut	PWI Cool/ Warm Water Fishery (MN) - No in-channel work from March 15 - June 15	Span	T146N, R37W, S2, SWNW	47.495036	-95.335995		2Bg, 3C, 4A, 4B, 5, 6	H-025-030-019-029-001	COE, MPCA, MDNR

Attachment D
Line 3 Replacement Project
Waterbody Crossing Table

Spread Number	County	Watershed Name	Hydrologic Unit Code (HUC) 8	Milepost	Feature_ID	Waterbody Name	Flow Regime [a]	Survey Date	Top-of-Bank Width (feet)	OHWM Width (feet) [b]	OHWM Depth (feet) [c]	Agency Designation	Approved 2014 Impairment [d]	Proposed Crossing Method [e]	Alternative Crossing Method [f]	Construction Timing Restriction [g]	Bridge Type [h]	Legal Description	Latitude	Longitude	Enbridge Site-Specific Plan	MPCA Classification	MDNR Kittle Number	Agency Permit Required
2	Clearwater	Clearwater	09020305	928.4	s-146n36w8-c	Unnamed Stream	E	2017	6.0	1.0	0.5			Dry Crossing	Wet Open Cut		Span	T146 R36W Sec. 8	47.475601	-95.28773		2Bg, 3C, 4A, 4B, 5, 6		
2	Clearwater	Clearwater	9020305	928.5	s-146n36w8-a	Walker Brook	P	2017	18.0	7.0	4.0	Public Water		Wet Open Cut	NA	PWI Cool/ Warm Water Fishery (MN) - No in-channel work from March 15 - June 15	Span in-stream support	T146 R36W Sec. 8	47.475938	-95.284696		2Bg, 3C, 4A, 4B, 5, 6	H-026-030-019-029	COE, MPCA, MDNR
2	Clearwater	Mississippi River - Headwaters	7010101	931.6	s-146n36w15-b	Unnamed Stream	P	2018	10.0	8.0	3.0			Dry Crossing	Wet Open Cut		Span	T146 R36W Sec. 10	47.464865	-95.232766		2Bg, 3C, 4A, 4B, 5, 6	M-161-004-009	COE, MPCA
2	Clearwater	Mississippi River - Headwaters	7010101	931.7	s-146n36w15-a	Unnamed Stream	P	2017	15.0	9.0	3.0	Public Water		Dry Crossing	Wet Open Cut	PWI Cool/ Warm Water Fishery (MN) - No in-channel work from March 15 - June 15	Span in-stream support	T146 R36W Sec. 15	47.464658	-95.231733	Yes	2Bg, 3C, 4A, 4B, 5, 6	M-161-004-009	COE, MPCA, MDNR
2	Clearwater	Mississippi River - Headwaters	7010101	932.6	s-146n36w23-b	Unnamed Stream	P	2017	10.0	6.0	2.0	Public Water		Dry Crossing	Wet Open Cut	PWI Cool/ Warm Water Fishery (MN) - No in-channel work from March 15 - June 15	Span	T146 R36W Sec. 23	47.45582	-95.221713		2Bg, 3C, 4A, 4B, 5, 6	M-161-004-009	COE, MPCA, MDNR
2	Clearwater	Mississippi River - Headwaters	07010101	940.1	CLC5095aWB	Bear Creek	P	2013	15.0	15.0	3.5	Public Water		Dry Crossing	Wet Open Cut	PWI Cool/ Warm Water Fishery (MN) - No in-channel work from March 15 - June 15	Span in-stream support	T145N, R36W, S26, SENW	47.350412	-95.218902	Yes	2Bg, 3C, 4A, 4B, 5, 6	M-164	COE, MPCA, MDNR
2	Clearwater	Mississippi River - Headwaters	07010101	941.0	CLC5098aWB	Mississippi River	P	2013	13.0	12.5	3.5	Public Water, 303d Impaired, Canoe Route, ORVW	Dissolved Oxygen	HDD	NA	PWI Cool/ Warm Water Fishery (MN) - No in-channel work from March 15 - June 15	NA	T145N, R36W, S35, NWNE	47.338322	-95.210043	Yes	2Bg, 3C, 4A, 4B, 5, 6	M	COE, MPCA, MDNR
2	Hubbard	Mississippi River - Headwaters	07010101	946.0	HUC5002aWB	La Salle Creek	P	2013	13.0	13.0	3.0	Public Water, Trout Stream, Aquatic Management Area		Dry Crossing	Wet Open Cut	PWI COLDWATER FISHERY no in-channel work from September 1- April 15	Span in-stream support	T144N, R35W, S19, SWNW	47.276458	-95.167842	Yes	1B, 2Ag, 2C, 3B, 4A, 4B, 5, 6	M-163	COE, MPCA, MDNR
2	Hubbard	Crow Wing River	07010106	961.4	HUC5070aWB	Unnamed Stream	P	2013	4.0	6.0	3.0			Dry Crossing	Wet Open Cut		Span	T141N, R35W, S5 NENW	47.062956	-95.141998		2Bg, 3C, 4A, 4B, 5, 6	MAJ-070119105_A	COE, MPCA
2	Hubbard	Crow Wing River	07010106	962.2	HUC5074aWB	Unnamed Stream	P	2013	4.0	3.0	1.0	Public Water		Dry Crossing	Wet Open Cut	PWI Cool/ Warm Water Fishery (MN) - No in-channel work from March 15 - June 15	Span	T141N, R35W, S8, NWNE	47.05097	-95.140839		2Bg, 3C, 4A, 4B, 5, 6	M-096-035-002-004-000.5	COE, MPCA, MDNR

Attachment D
Line 3 Replacement Project
Waterbody Crossing Table

Spread Number	County	Watershed Name	Hydrologic Unit Code (HUC) 8	Milepost	Feature_ID	Waterbody Name	Flow Regime [a]	Survey Date	Top-of-Bank Width (feet)	OHWM Width (feet) [b]	OHWM Depth (feet) [c]	Agency Designation	Approved 2014 Impairment [d]	Proposed Crossing Method [e]	Alternative Crossing Method [f]	Construction Timing Restriction [g]	Bridge Type [h]	Legal Description	Latitude	Longitude	Enbridge Site-Specific Plan	MPCA Classification	MDNR Kittle Number	Agency Permit Required
2	Hubbard	Crow Wing River	07010106	963.7	HUC5081aWB	Hay Creek	P	2013	N/A	N/A	N/A	Public Water		HDD	NA	PWI Cool/ Warm Water Fishery (MN) - No in-channel work from March 15 - June 15	NA	T141N, R35W, S17, SENW	47.030611	-95.145041	Yes	2Bg, 3C, 4A, 4B, 5, 6	M-096-035-002	COE, MPCA, MDNR
2	Hubbard	Crow Wing River	07010106	974.2	HUC5122_200aWB	Straight River	P	2013	90.0	90.0	10.0	Public Water, Trout Stream, 303d Impaired	Dissolved Oxygen	HDD	NA	PWI COLDWATER FISHERY - no in-channel work from September 1- April 15	NA	T139N, R35W, S6, NESE	46.882347	-95.143044	Yes	1B, 2A, 2C, 3B, 4A, 4B, 5, 6	M-096-035-002-002	COE, MPCA, MDNR
3	Hubbard	Crow Wing River	07010106	976.6	HUC5130aWB	Shell River	P	2013	24.0	24.0	4.0	Public Water, 303d Impaired	Fishes bioassessments	Dry Crossing	Wet Open Cut	PWI Cool/ Warm Water Fishery (MN) - No in-channel work from March 15 - June 15	Span in-stream support	T139N, R35W, S19, NENE	46.847405	-95.146742	Yes	2Bg, 3C, 4A, 4B, 5, 6	M-096-035-004	COE, MPCA, MDNR
3	Hubbard	Crow Wing River	07010106	981.4	HUC5162aWB	Shell River	P	2013	20.0	20.0	5.0	Public Water, 303d Impaired	Fishes bioassessments	Dry Crossing	Wet Open Cut	PWI Cool/ Warm Water Fishery (MN) - No in-channel work from March 15 - June 15	Span in-stream support	T139N, R35W, S33, NESE	46.811305	-95.105465	Yes	2Bg, 3C, 4A, 4B, 5, 6	M-096-035-004	COE, MPCA, MDNR
3	Hubbard	Crow Wing River	07010106	983.7	HUC5175aWB	Shell River	P	2013	70.0	60.0	6.0	Public Water		HDD	NA	PWI Cool/ Warm Water Fishery (MN) - No in-channel work from March 15 - June 15	NA	T139N, R35W, S36, SWNW	46.814946	-95.057276	Yes	2Bg, 3C, 4A, 4B, 5, 6	M-096-035	COE, MPCA, MDNR
3	Hubbard	Crow Wing River	07010106	985.3	HUC5179_240aWB	Oxbow Pond (Shell River)	P	2013	75.0	70.0	5.0	Public Water		HDD	NA	PWI Cool/ Warm Water Fishery (MN) - No in-channel work from March 15 - June 15	NA	T139N, R34W, S31, NWNE	46.819799	-95.024903	Yes	2Bg, 3C, 4A, 4B, 5, 6	M-096-035	COE, MPCA, MDNR
3	Wadena	Crow Wing River	07010106	991.2	WA002aWB	Shell River	P	2014	400.0	210.0	5.0	NRI, Public Water, 303d Impaired	Dissolved oxygen	HDD	NA	PWI Cool/ Warm Water Fishery (MN) - No in-channel work from March 15 - June 15	NA	T138N, R34W, S1, SWNE	46.799062	-94.918355	Yes	2Bg, 3C, 4A, 4B, 5, 6	M-096-035	COE, MPCA, MDNR
3	Wadena	Crow Wing River	07010106	993.3	WA006aWB	Crow Wing River	P	2014	500.0	210.0	7.0	NRI, Public Water, 303d Impaired, Canoe Route	Mercury in fish	HDD	NA	PWI Cool/ Warm Water Fishery (MN) - No in-channel work from March 15 - June 15	NA	T138N, R33W, S5, NESE	46.794747	-94.875677	Yes	2Bg, 3C, 4A, 4B, 5, 6	M-096	COE, MPCA, MDNR
3	Wadena	Crow Wing River	07010106	996.5	WA017aWB	Unnamed Stream	P	2014	8.0	8.0	6.0			Wet Open Cut	NA		Span	T138N, R33W, S2, SESW	46.790474	-94.809339		2Bg, 3C, 4A, 4B, 5, 6		COE, MPCA
3	Cass	Crow Wing River	07010106	999.1	CAC5001_540bWB	Unnamed Ditch	I	2014	10.0	3.0	3.0			Wet Open Cut	NA		Span	T138N, R33W, S2, SWSE	46.78983	-94.754563		2Bg, 3C, 4A, 4B, 5, 6		COE, MPCA

Attachment D
Line 3 Replacement Project
Waterbody Crossing Table

Spread Number	County	Watershed Name	Hydrologic Unit Code (HUC) 8	Milepost	Feature_ID	Waterbody Name	Flow Regime [a]	Survey Date	Top-of-Bank Width (feet)	OHWM Width (feet) [b]	OHWM Depth (feet) [c]	Agency Designation	Approved 2014 Impairment [d]	Proposed Crossing Method [e]	Alternative Crossing Method [f]	Construction Timing Restriction [g]	Bridge Type [h]	Legal Description	Latitude	Longitude	Enbridge Site-Specific Plan	MPCA Classification	MDNR Kittle Number	Agency Permit Required
3	Cass	Crow Wing River	07010106	999.2	CAC5001_540aWB	Unnamed Ditch	I	2014	10.0	8.0	0.5			Wet Open Cut	NA		Span	T138N, R32W, S5, SESE	46.789814	-94.752729		2Bg, 3C, 4A, 4B, 5, 6		COE, MPCA
3	Cass	Crow Wing River	07010106	999.6	CAC5006aWB	Unnamed Ditch	I	2014	8.0	5.0	1.5			Wet Open Cut	NA		Span	T138N, R32W, S5, SESE	46.789737	-94.743745		2Bg, 3C, 4A, 4B, 5, 6		
3	Cass	Crow Wing River	07010106	1000.5	CAC5007aWB	Big Swamp Creek	P	2013	42.0	42.0	5.0	Public Water		Wet Open Cut	NA	PWI Cool/ Warm Water Fishery (MN) - No in-channel work from March 15 - June 15	Span in-stream support	T138N, R32W, S4, SESE	46.79162	-94.725508		2C, 3C, 4A, 4B, 5, 6	M-096-030	COE, MPCA, MDNR
3	Cass	Crow Wing River	07010106	1001.2	CAC5010aWB	Unnamed Stream	P	2013	4.0	3.0	1.0			Wet Open Cut	NA		Span	T138N, R32W, S3, SWSE	46.79177	-94.710748		2Bg, 3C, 4A, 4B, 5, 6		COE, MPCA
3	Cass	Pine River	07010105	1017.3	CA063aWB	Pine River	P	2013	100.0	100.0	2.0	Public Water, Canoe Route		Dry Crossing	Wet Open Cut	PWI Cool/ Warm Water Fishery (MN) - No in-channel work from March 15 - June 15	Span in-stream support	T138N, R29W, S8, NESW	46.781462	-94.377479	Yes	2Bg, 3C, 4A, 4B, 5, 6	M-106	COE, MPCA, MDNR
3	Crow Wing	Pine River	07010105	1021.4	CW014aWB	Unnamed Stream	P	2013	6.0	6.0	2.0			Dry Crossing	Wet Open Cut		Span	T138N, R29W, S12, NWSW	46.779515	-94.297958		2Bg, 3C, 4A, 4B, 5, 6		COE, MPCA
3	Crow Wing	Pine River	07010105	1022.5	CW021aWB	Unnamed Stream	P	2013	100.0	12.0	1.0			Dry Crossing	Wet Open Cut		Span in-stream support	T138N, R29W, S1, SESE	46.791248	-94.282757		2Bg, 3C, 4A, 4B, 5, 6		COE, MPCA
3	Crow Wing	Pine River	07010105	1023.6	CW027aWB	Unnamed Stream	P	2013	5.0	2.5	2.0			Dry Crossing	Wet Open Cut		Span	T138N, R28W, S6, NWNE	46.80309	-94.2674		2Bg, 3C, 4A, 4B, 5, 6		COE, MPCA
3	Cass	Pine River	07010105	1026.4	CA085aWB	Ada Brook / Blind Lake Creek	P	2013	60.0	50.0	3.5	Public Water		Dry Crossing	Wet Open Cut	PWI Cool/ Warm Water Fishery (MN) - No in-channel work from March 15 - June 15	Span in-stream support	T139N, R28W, S28, NWNE	46.830899	-94.22705		2Bg, 3C, 4A, 4B, 5, 6	M-106-014-002	COE, MPCA, MDNR
3	Cass	Pine River	07010105	1029.1	CA096aWB	Unnamed Stream	P	2013	N/A	10.0	N/A			Wet Open Cut	NA		Span in-stream support	T139N, R28W, S25, NWNW	46.830595	-94.17212		2Bg, 3C, 4A, 4B, 5, 6		COE, MPCA
3	Cass	Leech Lake River	07010102	1030.4	CA104aWB	Unnamed Stream	P	2013	4.0	8.0	2.0			Dry Crossing	Wet Open Cut		Span	T139N, R27W, S19, NWNW	46.842813	-94.150859		2Bg, 3C, 4A, 4B, 5, 6		COE, MPCA
3	Cass	Pine River	07010105	1033.2	CA116aWB	Unnamed Stream	I	2013	3.0	10.0	1.0			Dry Crossing	Wet Open Cut		Span	T139N, R27W, S21, NENE	46.846583	-94.094584		2Bg, 3C, 4A, 4B, 5, 6		COE, MPCA
3	Cass	Pine River	07010105	1033.9	CA118_200aWB	Unnamed Stream	P	2013	14.0	14.0	3.0			Wet Open Cut	NA		Span in-stream support	T139N, R27W, S15, SWSE	46.847839	-94.081512		2Bg, 3C, 4A, 4B, 5, 6	M-106-004-003-001	COE, MPCA
3	Cass	Pine River	07010105	1034.3	CA120_200AWB	Unnamed Stream	I	2013	4.0	2.0	0.5			Dry Crossing	Wet Open Cut		Span	T139, R27W, S15, SESE	46.847837	-94.071432		2Bg, 3C, 4A, 4B, 5, 6		COE, MPCA
3	Cass	Pine River	07010105	1036.0	CA127aWB	Unnamed Stream	P	2013	4.0	3.0	0.5			Dry Crossing	Wet Open Cut		Span	T139N, R27W, S24, NWNE	46.845462	-94.037143		2Bg, 3C, 4A, 4B, 5, 6		COE, MPCA
3	Cass	Pine River	07010105	1037.4	CA133aWB	Dagget Brook	P	2013	50.0	40.0	5.0	Public Water		Wet Open Cut	NA	PWI Cool/ Warm Water Fishery (MN) - No in-channel work from March 15 - June 15	Span in-stream support	T139N, R26W, S19, SENE	46.842638	-94.009346		2Bg, 3C, 4A, 4B, 5, 6	M-106-004	COE, MPCA, MDNR

Attachment D
Line 3 Replacement Project
Waterbody Crossing Table

Spread Number	County	Watershed Name	Hydrologic Unit Code (HUC) 8	Milepost	Feature_ID	Waterbody Name	Flow Regime [a]	Survey Date	Top-of-Bank Width (feet)	OHWM Width (feet) [b]	OHWM Depth (feet) [c]	Agency Designation	Approved 2014 Impairment [d]	Proposed Crossing Method [e]	Alternative Crossing Method [f]	Construction Timing Restriction [g]	Bridge Type [h]	Legal Description	Latitude	Longitude	Enbridge Site-Specific Plan	MPCA Classification	MDNR Kittle Number	Agency Permit Required
4	Cass	Pine River	07010105	1041.2	CA147_525a1WB	Spring Brook	P	2013	15.0	12.5	1.0	Public Water, Trout Stream		Dry Crossing	Wet Open Cut	PWI COLDWATER FISHERY - no in-channel work from September 1- April 15	Span	T139N, R26W, S11, NWSW	46.858012	-93.942329	Yes	1B, 2Ag, 2C, 3B, 4A, 4B, 5, 6	M-106-004-002-001	COE, MPCA, MDNR
4	Cass	Mississippi River - Grand Rapids	07010103	1046.0	CAC5160aWB	Unnamed Stream	P	2013	2.0	2.0	1.0			Dry Crossing	Wet Open Cut		Span	T139N, R25W, S9, NENW	46.873378	-93.850871		2Bg, 3C, 4A, 4B, 5, 6		COE, MPCA
4	Cass	Mississippi River - Grand Rapids	07010103	1046.5	CAC5161aWB	Unnamed Stream	P	2013	8.0	8.0	4.0			Wet Open Cut	NA		Span	T139N, R25W, S4, SESE	46.877568	-93.840821		2Bg, 3C, 4A, 4B, 5, 6		COE, MPCA
4	Cass	Mississippi River - Grand Rapids	07010103	1047.3	CA162aWB	Unnamed Stream	E	2013	4.0	1.0	0.5			Dry Crossing	Wet Open Cut		Span	T139N, R25W, S3, SENW	46.884301	-93.827192		2Bg, 3C, 4A, 4B, 5, 6		COE, MPCA
4	Cass	Mississippi River - Grand Rapids	07010103	1047.9	CA163cWB	Tributary to Moose River	P	2013	6.0	5.0	2.0			Wet Open Cut	NA		Span	T139N, R25W, S2, SWNW	46.883464	-93.815226		2Bg, 3C, 4A, 4B, 5, 6		COE, MPCA
4	Cass	Mississippi River - Grand Rapids	07010103	1048.0	CA163aWB	Moose River	P	2013	25.0	20.0	2.5	NRI, Public Water, 303d Impaired	Dissolved oxygen	Wet Open Cut	NA	PWI Cool/ Warm Water Fishery (MN) - No in-channel work from March 15 - June 15	Span in-stream support	T139N, R25W, S2, SWNW	46.883306	-93.813965		2Bg, 3C, 4A, 4B, 5, 6	M-117-012	COE, MPCA, MDNR
4	Aitkin	Mississippi River - Grand Rapids	07010103	1049.9	AI001aWB	Unnamed Stream	P	2013	20.0	5.0	4.0			Dry Crossing	Wet Open Cut		Span	T51N, R27W, S28, SWNW	46.878301	-93.774265		2Bg, 3C, 4A, 4B, 5, 6		COE, MPCA
4	Aitkin	Mississippi River - Grand Rapids	07010103	1053.4	AI020aWB	Unnamed Stream	P	2013	30.0	25.0	0.0	Public Water		Wet Open Cut	NA	PWI Cool/ Warm Water Fishery (MN) - No in-channel work from April 1 - June 30	Span in-stream support	T51N, R27W, S36, NENE	46.869178	-93.702174		2Bg, 3C, 4A, 4B, 5, 6	M-117-012-002	COE, MPCA, MDNR
4	Aitkin	Mississippi River - Grand Rapids	07010103	1054.6	AI027aWB	Unnamed Stream	P	9/13/2013	5.0	5.0	1.5			Wet - Push pull	NA		Span	T51N, R26W, S32, SWNW	46.866045	-93.677261		2Bg, 3C, 4A, 4B, 5, 6	MAJ-07013171_A	COE, MPCA
4	Aitkin	Mississippi River - Grand Rapids	07010103	1056.3	s-51n26w33-a	Unnamed Stream	I	8/22/2017	4.0	3.0	3.0			Dry Crossing	Wet Open Cut		Span	T51N, R26W, S33, SWNE	46.864171	-93.641105		2Bg, 3C, 4A, 4B, 5, 6		COE, MPCA
4	Aitkin	Mississippi River - Grand Rapids	07010103	1056.5	s-51n26w33-b	Unnamed Stream	P	8/22/2017	6.0	6.0	3.0			Wet - Push pull	NA		Span	T51N, R26W, S33, SENE	46.863426	-93.636975		2Bg, 3C, 4A, 4B, 5, 6	M-117-012-001	COE, MPCA
4	Aitkin	Mississippi River - Grand Rapids	07010103	1066.4	s-51n24w31-b	Willow River	P	8/28/2017	50.0	30.0	5.0	NRI, Public Water		HDD	NA	PWI Cool/ Warm Water Fishery (MN) - No in-channel work from April 1 - June 30	NA	T51N, R24W, S31, SWNE	46.865021	-93.430846	Yes	2Bg, 3C, 4A, 4B, 5, 6	M-117	COE, MPCA, MDNR
4	Aitkin	Mississippi River - Grand Rapids	07010103	1066.9	s-51n24w31-a	Unnamed Stream	I	8/28/2017	10.0	7.0	2.0			Dry Crossing	Wet Open Cut		Span	T51N, R24W, S32, NWNW	46.867939	-93.421145		2Bg, 3C, 4A, 4B, 5, 6	MAJ-07016614_A	COE, MPCA
4	Aitkin	Mississippi River - Grand Rapids	07010103	1067.1	s-51n24w29-a	Unnamed Stream	I	8/28/2017	30.0	15.0	3.0			Dry Crossing	Wet Open Cut		Span in-stream support	T51N, R24W, S29, SWSW	46.869217	-93.416892		2Bg, 3C, 4A, 4B, 5, 6	MAJ-07014751_A	COE, MPCA
4	Aitkin	Mississippi River - Grand Rapids	07010103	1068.5	s-51n24w28-a	Unnamed Stream	P	7/23/2018	30	10	2			Dry Crossing	Wet Open Cut		Span in-stream support	T51N, R24W, S28, NWSE	46.873036	-93.389371		2Bg, 3C, 4A, 4B, 5, 6	MAJ-07013683_A	COE, MPCA

Attachment D
Line 3 Replacement Project
Waterbody Crossing Table

Spread Number	County	Watershed Name	Hydrologic Unit Code (HUC) 8	Milepost	Feature_ID	Waterbody Name	Flow Regime [a]	Survey Date	Top-of-Bank Width (feet)	OHWM Width (feet) [b]	OHWM Depth (feet) [c]	Agency Designation	Approved 2014 Impairment [d]	Proposed Crossing Method [e]	Alternative Crossing Method [f]	Construction Timing Restriction [g]	Bridge Type [h]	Legal Description	Latitude	Longitude	Enbridge Site-Specific Plan	MPCA Classification	MDNR Kittle Number	Agency Permit Required
4	Aitkin	Mississippi River - Grand Rapids	07010103	1069.6	s-51n24w27-a	Mississippi River	P	8/25/2017	200.0	130.0	7.0	Canoe Route, Section 10, 303d Impaired, Public Water, ORVW	Mercury in fish	HDD	NA	PWI Cool/ Warm Water Fishery (MN) - No in-channel work from April 1 - June 30	NA	T51N, R24W, S27	46.873365	-93.365226	Yes	2Bg, 3C, 4A, 4B, 5, 6	M	COE, MPCA, MDNR
4	Aitkin	Mississippi River - Grand Rapids	07010103	1070.8	s-51n24w26-a	Unnamed Stream	P	8/31/2017	15.0	15.0	4.0	PWI Watercourse, Trout Stream		Wet Open Cut	NA	PWI COLDWATER FISHERY - No in-channel work from September 15 - May 15	Span in-stream support	T51N, R24W, S26, NESE	46.873065	-93.339421		2Bg, 3C, 4A, 4B, 5, 6	M-122-001	COE, MPCA, MDNR
4	Aitkin	Mississippi River - Grand Rapids	07010103	1073.7	s-51n23w29-b	Unnamed Stream	P	9/1/2017	5.0	4.0	2.0			Dry Crossing	Wet Open Cut		Span	T51N, R23W, S29, NWSE	46.873165	-93.27926		2Bg, 3C, 4A, 4B, 5, 6	N/A	COE, MPCA
4	Aitkin	Mississippi River - Grand Rapids	07010103	1075.4	s-51n23w27-a	Unnamed Stream	P	9/5/2017	6.0	6.0	4.0	Public Water		Wet - Push pull	NA	PWI Cool/ Warm Water Fishery (MN) - No in-channel work from April 1 - June 30	Span	T51N, R23W, S27, SENW	46.877805	-93.245103		2Bg, 3C, 4A, 4B, 5, 6	M-120-005-001-005	COE, MPCA, MDNR
4	Aitkin	Mississippi River - Grand Rapids	07010103	1076.9	s-51n23w23-a	West Savanna River	P	9/6/2017	6.0	5.0	3.0	Public Water		Dry Crossing	Wet Open Cut	PWI Cool/ Warm Water Fishery (MN) - No in-channel work from April 1 - June 30	Span	T51N, R23W, S23, SWSE	46.885558	-93.217548		2Bg, 3C, 4A, 4B, 5, 6	M-120-005-001	COE, MPCA, MDNR
4	Aitkin	St. Louis River	04010201	1081.4	s-51n22w22-a	Unnamed Stream	P	9/7/2017	15.0	15.0	6.0			Wet Open Cut	NA		Span in-stream support	T51N, R22W, S21, SESE	46.88423	-93.122465		2Bg, 3C, 4A, 4B, 5, 6	S-002-031-004	COE, MPCA
4	Aitkin	St. Louis River	04010201	1084.3	s-51n22w24-a	Unnamed Stream	P	9/7/2017	50.0	60.0	7.0			Wet Open Cut	NA		Span in-stream support	T51N, R22W, S24, SESE	46.883315	-93.060055		2Bg, 3C, 4A, 4B, 5, 6	S-002-031-004-001	COE, MPCA
5	St. Louis	St. Louis River	04010201	1085.9	s-51n21w20-a	East Savanna River	P	9/8/2017	30.0	20.0	6.0	Public Water		HDD	NA	PWI Cool/ Warm Water Fishery (MN) - No in-channel work from April 1 - June 30	Span in-stream support	T51N, R21W, S20, NESW	46.888834	-93.030293	Yes	2Bg, 3C, 4A, 4B, 5, 6	S-002-031	COE, MPCA, MDNR
5	St. Louis	St. Louis River	04010201	1086.5	MN_NHD_24	Unnamed Stream	TBD	TBD	TBD	TBD	TBD			Dry Crossing	Wet Open Cut		Span in-stream support	T51N, R21W, S20, NESE	46.888679	-93.017331		2Bg, 3C, 4A, 4B, 5, 6		COE, MPCA
5	St. Louis	St. Louis River	04010201	1087.5	s-51n21w22-a	Unnamed Stream	P	9/8/2017	8.0	8.0	4.0			Dry Crossing	Wet Open Cut		Span	T51N, R21W, S22, NWSW	46.888531	-92.995937		2Bg, 3C, 4A, 4B, 5, 6	S-002-031-001	COE, MPCA
5	St. Louis	St. Louis River	04010201	1089.5	s-51n21w24-a	Unnamed Stream	I	9/9/2017	20.0	7.0	2.0			Dry Crossing	Wet Open Cut		Span in-stream support	T51N, R21W, S24, NWSW	46.888148	-92.953258		2Bg, 3C, 4A, 4B, 5, 6	S-002-031-000.6	COE, MPCA
5	St. Louis	St. Louis River	04010201	1089.8	s-51n21w24-b	Unnamed Stream	I	9/9/2017	4.0	0.5	0.5			Dry Crossing	Wet Open Cut		Span	T51N, R21W, S24, NESW	46.888098	-92.947573		2Bg, 3C, 4A, 4B, 5, 6		COE, MPCA
5	St. Louis	St. Louis River	04010201	1094.0	s-51n20w27-a	Unnamed Stream	P	9/11/2017	15.0	6.0	3.0	Public Water		Dry Crossing	Wet Open Cut	PWI Cool/ Warm Water Fishery (MN) - No in-channel work from April 1 - June 30	Span in-stream support	T51N, R20W, S27, SWNW	46.877115	-92.866893		2Bg, 3C, 4A, 4B, 5, 6	S-002-028	COE, MPCA, MDNR
5	St. Louis	St. Louis River	04010201	1094.3	s-51n20w27-b	Unnamed Stream	P	9/12/2017	5.0	3.0	1.5			Dry Crossing	Wet Open Cut		Span	T51N, R20W, S27, NESW	46.872852	-92.863128		2Bg, 3C, 4A, 4B, 5, 6	S-002-027.9	COE, MPCA
5	St. Louis	St. Louis River	04010201	1094.8	s-51n20w27-c	Unnamed Stream	I	9/12/2017	3.0	3.0	0.5			Dry Crossing	Wet Open Cut		Span	T51N, R20W, S27, SWSE	46.867942	-92.855118		2Bg, 3C, 4A, 4B, 5, 6		COE, MPCA

Attachment D
Line 3 Replacement Project
Waterbody Crossing Table

Spread Number	County	Watershed Name	Hydrologic Unit Code (HUC) 8	Milepost	Feature_ID	Waterbody Name	Flow Regime [a]	Survey Date	Top-of-Bank Width (feet)	OHWM Width (feet) [b]	OHWM Depth (feet) [c]	Agency Designation	Approved 2014 Impairment [d]	Proposed Crossing Method [e]	Alternative Crossing Method [f]	Construction Timing Restriction [g]	Bridge Type [h]	Legal Description	Latitude	Longitude	Enbridge Site-Specific Plan	MPCA Classification	MDNR Kittle Number	Agency Permit Required
5	St. Louis	St. Louis River	04010201	1095.9	s-51n20w35-a	Unnamed Stream	P	9/12/2017	3.0	3.0	0.5	Public Water		Dry Crossing	Wet Open Cut	PWI Cool/ Warm Water Fishery (MN) - No in-channel work from April 1 - June 30	Span	T51N, R20W, S35, NESW	46.856006	-92.841661		2Bg, 3C, 4A, 4B, 5, 6	S-002-027	COE, MPCA, MDNR
5	St. Louis	St. Louis River	04010201	1096.0	s-51n20w35-b	Unnamed Stream	P	9/12/2017	7.0	6.0	2.0			Dry Crossing	Wet Open Cut		Span	T51N, R20W, S35, SESW	46.855031	-92.839996		2Bg, 3C, 4A, 4B, 5, 6	S-002-027-001	COE, MPCA
5	St. Louis	St. Louis River	04010201	1096.7	s-50n20w2-a	Ahmik River	P	9/13/2017	17.0	12.0	4.0	Public Water		Wet Open Cut	NA	PWI Cool/ Warm Water Fishery (MN) - No in-channel work from April 1 - June 30	Span in-stream support	T50N, R20W, S2, NENE	46.850022	-92.828114		2Bg, 3C, 4A, 4B, 5, 6	S-002-026	COE, MPCA, MDNR
5	St. Louis	St. Louis River	04010201	1102.6	s-50n19w27-a	Unnamed Stream	P	6/27/2018	15.0	12.0	1.0			Wet Open Cut	NA		Span in-stream support	T50N, R19W, S27, NENW	46.793874	-92.733881		2Bg, 3C, 4A, 4B, 5, 6	S-002-017-007-005	COE, MPCA
5	St. Louis	St. Louis River	04010201	1106.5	MN_NHD_15	Unnamed Stream	TBD	TBD	TBD	TBD	TBD			Dry Crossing	Wet Open Cut		Span in-stream support	T49N, R18W, S6, NWSW	46.754775	-92.677764		2Bg, 3C, 4A, 4B, 5, 6	TBD	COE, MPCA
5	Carlton	St. Louis River	04010201	1106.5	MN_NHD_22	Stoney Brook	TBD	TBD	TBD	TBD	TBD	Public Water		Wet Open Cut	NA	PWI Cool/ Warm Water Fishery (MN) - No in-channel work from April 1 - June 30	Span in-stream support	T49N, R18W, S6, NWSW	46.754778	-92.677771		2Bg, 3C, 4A, 4B, 5, 6	TBD	COE, MPCA, MDNR
5	Carlton	St. Louis River	04010201	1106.6	MN_NHD_21	Unnamed Stream	TBD	TBD	TBD	TBD	TBD			Dry Crossing	Wet Open Cut		Span in-stream support	T49N, R18W, S6, SWSW	46.753873	-92.675468		2Bg, 3C, 4A, 4B, 5, 6	TBD	COE, MPCA
5	Carlton	St. Louis River	04010201	1108.8	MN_NHD_17	Unnamed Stream	TBD	TBD	TBD	TBD	TBD			Dry Crossing	Wet Open Cut		Span in-stream support	T49N, R18W, S17, SENE	46.736382	-92.649608		2Bg, 3C, 4A, 4B, 5, 6	TBD	COE, MPCA
5	Carlton	St. Louis River	04010201	1115.6	s-48n17w6-a	Unnamed Stream	P	6/13/2018	10.0	8.0	1.0	Public Water		Dry Crossing	Wet Open Cut	PWI Cool/ Warm Water Fishery (MN) - No in-channel work from April 1 - June 30	Span	T48N, R17W, S6, SWSE	46.664023	-92.542012		2Bg, 3C, 4A, 4B, 5, 6	S-002-009-001-002	COE, MPCA, MDNR
5	Carlton	St. Louis River	04010201	1117.0	s-48n17w8-a	Unnamed Stream	P	9/16/2017	7.0	5.0	2.0	Public Water [i]		Wet Open Cut	NA	PWI Cool/ Warm Water Fishery (MN) - No in-channel work from April 1 - June 30	Span	T48N, R17W, S8, NESE	46.653071	-92.517132		2Bg, 3C, 4A, 4B, 5, 6	S-002-009-001-001	COE, MPCA
5	Carlton	St. Louis River	04010201	1118.4	s-48n17w16-f	Little Otter Creek	P	9/18/2017	12.0	8.0	4.0	Public Water, Trout Stream		Wet Open Cut	NA	PWI COLDWATER FISHERY - No in-channel work from September 15 - June 30	Span	T48N, R17W, S16, SENE	46.642983	-92.493728		1B, 2Ag, 3B, 4A, 4B, 5, 6	S-002-009-001	COE, MPCA, MDNR
5	Carlton	Nemadji River	04010301	1126.2	CR144aWB	Unnamed Stream	P	2013	7.0	7.0	4.0	Public Water		Dry Crossing	Wet Open Cut	PWI Cool/ Warm Water Fishery (MN) - No in-channel work from April 1 - June 30	Span	T48N, R17W, S31, NWNW	46.60328	-92.352596	Yes	2Bg, 3C, 4A, 4B, 5, 6	S-001.5-007	COE, MPCA, MDNR
5	Carlton	Nemadji River	04010301	1126.4	CR145bWB	Unnamed Stream	E	2013	2.0	2.0	1.5			Dry Crossing	Wet Open Cut		Span	T48N, R16W, S34 NWNE	46.600968	-92.350905		2Bg, 3C, 4A, 4B, 5, 6		COE, MPCA
5	Carlton	Nemadji River	04010301	1126.4	CR145bWB	Unnamed Stream	E	2013	2.0	2.0	1.5			Dry Crossing	Wet Open Cut		Span	T48N, R16W, S34 NWNE	46.600713	-92.350562		2Bg, 3C, 4A, 4B, 5, 6		COE, MPCA

Attachment D
Line 3 Replacement Project
Waterbody Crossing Table

Spread Number	County	Watershed Name	Hydrologic Unit Code (HUC) 8	Milepost	Feature_ID	Waterbody Name	Flow Regime [a]	Survey Date	Top-of-Bank Width (feet)	OHWM Width (feet) [b]	OHWM Depth (feet) [c]	Agency Designation	Approved 2014 Impairment [d]	Proposed Crossing Method [e]	Alternative Crossing Method [f]	Construction Timing Restriction [g]	Bridge Type [h]	Legal Description	Latitude	Longitude	Enbridge Site-Specific Plan	MPCA Classification	MDNR Kittle Number	Agency Permit Required
5	Carlton	Nemadji River	04010301	1126.7	CR147aWB	Unnamed Stream	E	2013	2.5	2.0	0.5			Dry Crossing	Wet Open Cut		Span	T48N, R16W, S34, SENE	46.598198	-92.346299		2Bg, 3C, 4A, 4B, 5, 6		COE, MPCA
5	Carlton	St. Louis River	04010201	1127.6	CRR51010_640bWB	Unnamed Stream	E	2015	3.0	1.5	1.0			Dry Crossing	Wet Open Cut		Span	T48N, R16W, S35, SWNE	46.598116	-92.327517		2Bg, 3C, 4A, 4B, 5, 6	S-001.7	COE, MPCA
5	Carlton	St. Louis River	04010201	1128.1	CR157_200a1WB	Unnamed Stream	E	2014	2.0	2.0	1.0			Dry Crossing	Wet Open Cut		Span	T48N, R16W, S36 SWNW	46.598171	-92.317993		2Bg, 3C, 4A, 4B, 5, 6		COE, MPCA
5	Carlton	St. Louis River	04010201	1128.1	CR159_200aWB	Unnamed Stream	E	2015	4.0	4.0	0.5			Dry Crossing	Wet Open Cut		Span	T48N, R16W, S36 SWNW	46.598148	-92.31723		2Bg, 3C, 4A, 4B, 5, 6		COE, MPCA
5	Carlton	St. Louis River	04010201	1128.2	CR159_200bWB	Unnamed Stream	E	2014	4.0	4.0	0.5			Dry Crossing	Wet Open Cut		Span	T48N, R16W, S36, NESW	46.597848	-92.314461		2Bg, 3C, 4A, 4B, 5, 6		COE, MPCA
5	Carlton	St. Louis River	04010201	1128.3	CR159_200cWB	Unnamed Stream	E	2015	3.0	3.0	0.5			Dry Crossing	Wet Open Cut		Span	T48N, R16W, S36, NESW	46.597727	-92.313218		2Bg, 3C, 4A, 4B, 5, 6	S-001.7-003	COE, MPCA
5	Carlton	St. Louis River	04010201	1128.3	CR159bWB	Unnamed Stream	E	2015	3.0	1.0	0.3			Dry Crossing	Wet Open Cut		Span	T48N, R16W, S36, NESW	46.597666	-92.312579		2Bg, 3C, 4A, 4B, 5, 6		COE, MPCA

NA = Not Applicable
a P = Perennial flow; I = Intermittent flow; E = Ephemeral flow
b Width of the channel in feet between the Ordinary High Water Mark (OHWM) on both channel banks.
c Estimated or measured channel depth in feet from the OHWM to the channel bed.
d Impairments based on MPCA's 2014 EPA-approved Inventory of Impaired Waters per CWA Section 303(d).

e Proposed waterbody crossing methods are based on engineering investigations, constructability, and environmental constraints. Generally if the waterbody has perceptible flow at the time of crossing Enbridge will utilize a dry open cut crossing method (i.e., flume or dam and pump), otherwise a wet trench open cut method will be used. Refer to Enbridge's EPP for further detail.

f It is possible that an HDD or bore may encounter subsurface objects that prevents the drill from being successfully completed. If this occurs, Enbridge will attempt a slightly adjusted drill path to avoid the object. If boulders or hard bedrock interferes with the adjusted drill path, Enbridge will abandon the drill aer two attempts and cross the waterbody using the alternative method aer obtaining agency approval (if applicable).
g Timing restrictions are based on anticipated state agency permit conditions.
h Bridges may consist of timber construction mats, rail car decks, other bridge decking and may or may not be supported by flumes, clean rock or other supports in the water column. Sediment control for bridging is described in the EPP.
i Unnamed Stream s-48n17w8-a is treated as a PWI because it is a tributary to a designated trout stream.

Attachment E

Blasting Plan

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Blasting Plan

Enbridge Energy, Limited Partnership • Line 3 Replacement Project

September 2018

ENBRIDGE®

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TABLE OF CONTENTS

ACRONYMS AND ABBREVIATIONS

CFR	Code of Federal Regulations
Enbridge	Enbridge Energy, Limited Partnership
L3R or Project	Line 3 Replacement Project
MDNR	Minnesota Department of Natural Resources
Plan	Blasting Plan
PPV	peak particle velocity

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1.0 INTRODUCTION

This Blasting Plan ("Plan") describes the procedures and conditions that Enbridge Energy, Limited Partnership ("Enbridge") would use where blasting is required for the Line 3 Replacement Project ("L3R" or "Project"). Blasting activities would follow the general guidance and specifications in this Plan as well as the site-specific plans to be prepared by Enbridge's blasting contractor(s).

2.0 PURPOSE OF BLASTING PLAN

Conventional trenching techniques would typically be used to bury the pipeline below existing grade; however, survey and desktop data have identified a location of shallow bedrock from about mileposts 1118.1 to 1118.6 where blasting may be necessary (see Figure 2.0-1), which includes Little Otter Creek (milepost 1118.4) (see Section 4.4). No blasting would occur on the nearby Willard Munger Trail or within its Minnesota Department of Natural Resources ("MDNR") trail easement. Shallow bedrock may also be encountered in other locations along the Project route during the course of construction.

This Plan provides guidelines and general conditions for all blasting activities that may occur during the Project. In addition, Enbridge's blasting contractor(s) will be required to develop their own overall blasting procedures and site-specific blasting plans for each blasting location

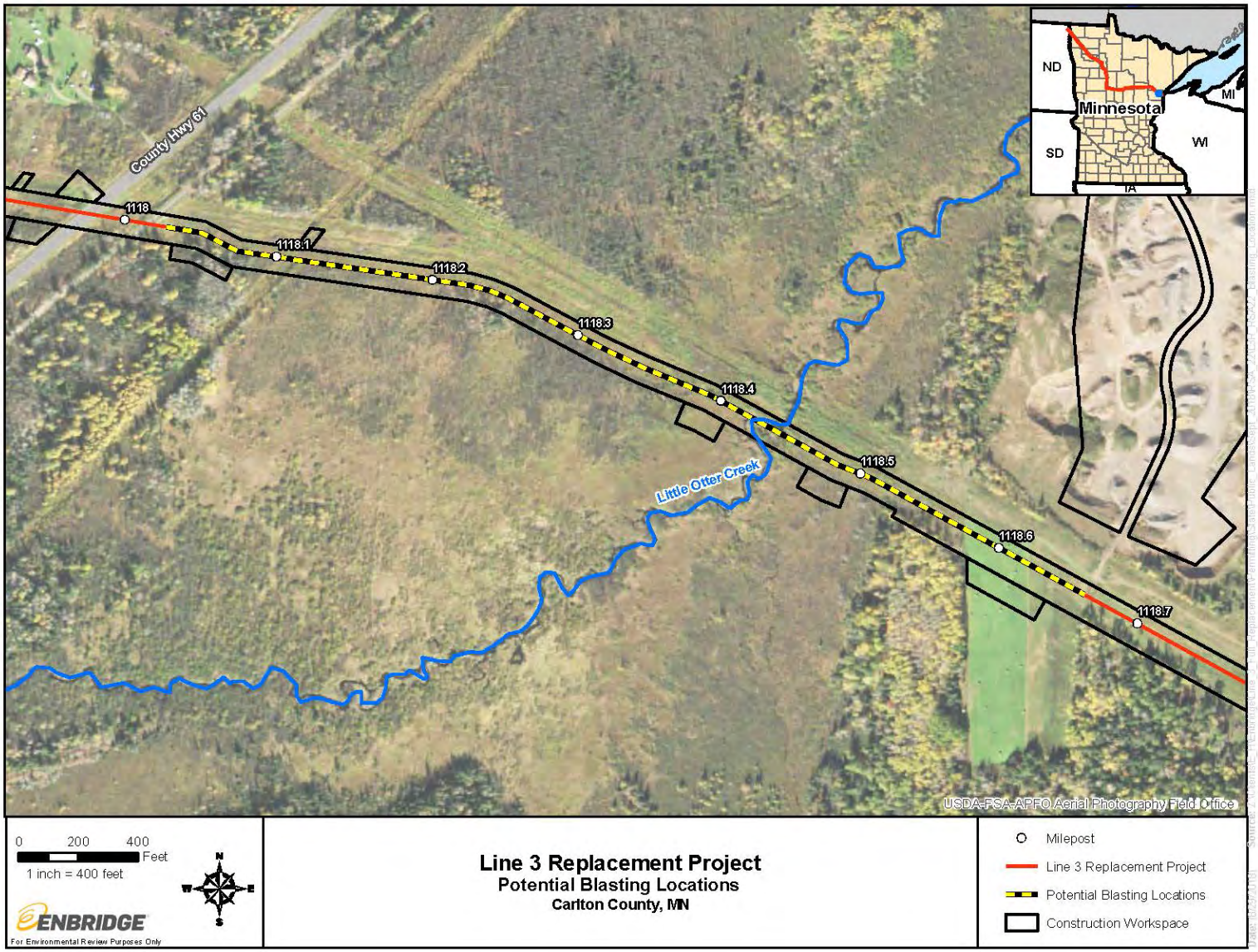
This Plan is intended to identify blasting procedures, including safety, use, storage, and transportation of explosives that are consistent with minimum safety requirements as defined by federal, state, and local regulations (e.g., Title 27 Code of Federal Regulations ["CFR"] 181 - Commerce in Explosives; Title 49 CFR 177 - Carriage by Public Highway; Title 29 CFR 1926.900 et seq. Sub-part U - Safety and Health Regulations for Construction - Blasting and Use of Explosives; Title 29 CFR 1910.109 – Explosives and Blasting Agents; 29 CFR 1926.900-General Provisions and sections 901, 902, and 904-911; Minnesota Administrative Rules Chapter 7500, Explosives, Blasting Agents, Firearms; and applicable parts of Minnesota Administrative Rules Chapter 6130, Ferrous Metallic Mineral Mining. Additionally, this plan is intended to address environmental aspects of blasting activities and to identify areas of concern along the proposed pipeline route.

3.0 GENERAL BLASTING REQUIREMENTS

Blasting operations must be conducted by or under the direct and constant supervision of personnel legally licensed and certified to perform such activity in the jurisdiction where blasting occurs. Prior to any blasting activities, the blasting contractor(s) will provide Enbridge with appropriate information documenting the experience, licenses, and permits associated with blasting personnel.

Blasting-related operations, including obtaining, transporting, storing, handling, loading, detonating, and disposing of blasting material; drilling; and ground-motion monitoring shall comply with applicable federal, state, and local regulations; permit conditions; and the construction contract.

Figure 2.0-1 Potential Blasting Locations



Blasting for grade or trench excavation must be used where deemed necessary by a construction expert after examination of the site and in other locations only after other reasonable means of excavation have been used and are unsuccessful in achieving the required results. Enbridge may specify locations (e.g., foreign line crossings, near structures) where consolidated rock must be removed by approved mechanical equipment such as rock-trenching machines, rock saws, hydraulic rams, or jack hammers in lieu of blasting.

Before blasting, site-specific blasting plans consistent with the provisions of this Plan must be submitted by the blasting contractor(s) to Enbridge for approval and review by a licensed Enbridge engineer. The engineer will analyze the data to determine the combined stress level of each affected pipeline and will make recommendations and/or forward approval to Enbridge before blasting may commence.

Drilling and blasting must be conducted with an Enbridge Environmental Inspector present.

4.0 SITE-SPECIFIC BLASTING PLANS

The blasting contractor(s) will create a site-specific blasting plan for any area determined to require blasting, which must include at a minimum the following information:

- Blasting contractor's name, company, copy of license, and statement of qualifications; seismograph company, names, equipment and sensor location;
- Site location (milepost and stationing), applicable alignment sheet numbers, and associated rock type and geological structure (e.g., solid, layered, or fractured);
- Copies of all required federal, state, and local permits;
- Methods and materials including explosive type, product name and size, weight per unit, and density; stemming material; tamping method; blasting sequence; use of non-electrical initiation systems for all blasting operations; magazine type; and locations for storage of explosives and detonating caps;
- Site dimensions, including explosive depth, distribution, and maximum charge and weight per delay, and hole depth, diameter, and pattern, and number of holes per delay;
- Dates and hours of conducting blasting, distance and orientation to nearest aboveground and underground structures, and schedule identifying when blasting would occur within each waterbody greater than 10 feet wide or within any designated coldwater fishery; and
- Blasting procedures for:
    - Storing, handling, transporting, loading, and firing explosives;
    - Prevention of misfires, flyrock, fire prevention, noise, and stray current accidental-detonation;
    - Signs, flagmen, and warning signals prior to each blast;
    - Those locations where the pipeline route:
        - Parallels or crosses an electrical transmission corridor, cable, or pipeline;
        - Parallels or crosses a highway or road;
        - Is within or adjacent to treed areas;

- Approaches within 200 feet of a water well or spring; or
- Approaches within 1,000 feet of any residence, building or occupied structure;

o Local notification;

o Inspections after each blast; and

o Disposal of waste blasting material.

5.0 PRE-BLASTING REQUIREMENTS

Prior to the initiation of blasting operations, the blasting contractor(s) must comply with the following:

- Obtain all required federal, state, and local permits relating to the transportation, storage, handling, loading, and detonation of explosives.
- Make all necessary “one calls” notifications 48 hours prior to construction where one-call systems are in place.
- Be responsible for the protection of existing underground facilities.
- Before performing any work on or accessing the right-of-way, verify to Enbridge that all property owners have been notified of the impending construction.
- Submit to the Enbridge representative its site-specific Blasting Plan for approval prior to execution of blasting activity.

6.0 MONITORING

During blasting operations, the blasting contractor(s) will be required to monitor operations in the following manner:

- Provide seismographic equipment to measure the peak particle velocity (“PPV”) of all blasts in the vertical, horizontal, and longitudinal directions. Seismic monitoring can only be discontinued if 1) the blasting schedule and blasting performance consistently produce PPVs at the pipeline that are lower than the maximum allowable limit, and 2) an Enbridge representative provides written authorization.
- Measure the PPV at the adjacent pipeline, any water wells or potable springs, and any aboveground structure within 200 feet of the blasting.
- Complete a Blasting Log Record immediately after each blast and submit a copy to an Enbridge representative.

7.0 SAFETY

7.1 PROTECTION OF ABOVEGROUND AND UNDERGROUND STRUCTURES

Where blasting is required, Enbridge will identify any municipal water mains proposed for crossing and will consult the local water authority. Reports of identified crossings will include location by milepost, owner, and status and results of contacts with the water authority.

The blasting contractor(s) will exercise control to prevent damage to aboveground and underground structures, including buildings, pipelines, utilities, springs, and water wells. The Contractor will implement the following procedures:

- Any water well or potable springs within 150 feet of the temporary construction right-of-way where blasting would occur would be tested for yield and water quality before blasting. If the water well or spring is damaged, the well or spring will be repaired or otherwise restored or the well owner will be compensated for damages. Enbridge will provide an alternative potable water supply to the landowner until repairs occur. Locations of water wells or systems within 150 feet of the temporary construction right-of-way where blasting would occur will be indicated on Enbridge's construction alignment sheets.
- If blasting occurs within 200 feet of any aboveground structures, the blasting contractor(s) and an Enbridge representative will inspect structures before and after blasting. In the unlikely event that damage occurs to the aboveground structure, the owner will be compensated.
- The blasting contractor(s) is responsible for the ultimate resolution of all damage claims resulting from blasting. Such liability is not restricted by the 200-foot inspection requirement cited above.
- Blasting will not be allowed within 15 feet of an existing pipeline, unless specifically authorized by Enbridge.
- Holes that have contained explosive material shall not be re-drilled. Holes must not be drilled where danger exists of intersecting another hole containing explosive material.
- Blasting mats or padding shall be used on all shots where necessary to prevent scattering of loose rock onto adjacent property and to prevent damage to nearby structures and overhead utilities.
- Blasting cannot begin until occupants of nearby buildings, stores, residences, places of business, places of public gathering, and farmers have been notified by the blasting contractor(s) sufficiently in advance to protect personnel, property, and livestock. The blasting contractor(s) must notify all such parties at least 48 hours prior to blasting.
- Blasting in or near environmentally sensitive areas such as streams and wildlife areas may include additional restrictions.
- All blasting is subject to the following limitations.
    - Maximum PPV of 12.0 inches per second in any of three mutually perpendicular axes, measured at the lesser distance of the nearest facility or the edge of the permanent easement.
    - Maximum drill size must be 2.5 inches unless approved by Enbridge.
    - Maximum quantity of explosive per delay is governed by the recorded measurements as influenced by work site conditions.
    - Explosive agents and ignition methods shall be approved by Enbridge. Ammonium nitrate-fuel oil and other free flowing explosives and blasting agents are not acceptable and cannot be used.
    - Drill holes cannot be left loaded overnight.
    - Good stemming material is to be used in all holes.

- The drilling pattern must be set in a manner to achieve smaller rock fragmentation (maximum 1 foot in diameter) in order to use as much as possible of the blasted rock as backfill material after the pipe has been padded in accordance with the specifications. The blasting contractor(s) must submit the proposed drilling pattern to Enbridge for approval.
- Under pipeline crossings and all other areas where drilling and blasting is required within 15 feet of existing facilities:
    - Drill holes must be reduced to a maximum of 2 inches or less in diameter.
    - The number of holes shot at one time is limited to three unless otherwise approved by Enbridge.
    - Appropriate delay between charges to attain desired fragmentation.

7.2 PROTECTION OF PERSONNEL

The blasting contractor(s) must include in its procedures all federal, state, county, and local safety requirements for blasting. The blasting contractor's procedures must address, at a minimum, the following requirements:

- Only authorized, qualified, and experienced personnel can handle explosives.
- All blasting activities must be conducted only during daylight hours.
- No explosive materials can be located where they may be exposed to flame, excessive heat, sparks, or impact. Smoking, firearms, matches, open flames, and heat- and spark-producing devices shall be prohibited in or near explosive magazines or while explosives are being handled, transported, or used.
- A code of blasting signals must be established, posted in conspicuous places, and utilized during blasting operations. Employee training shall be conducted on the use and implementation of the code.
- The blasting contractor(s) must use every reasonable precaution to ensure personnel safety, including but not limited to visual and audible warning signals, warning signs, flag person, and barricades.
- Warning signs, with lettering a minimum of 4 inches in height on a contrasting background, will be erected and maintained at all approaches to the blast area.
- Flaggers will be stationed on all roadways passing within 1,000 feet of the blast area to stop all traffic during blasting operations.
- All personnel not involved in the actual detonation must stand back at least 1,000 feet and workers involved in the actual detonation must stand back at least 650 feet from the time the blast signal is given until the "ALL CLEAR" has been sounded.
- No loaded holes can be left unattended or unprotected. No explosives or blasting agent can be abandoned.
- In the case of a misfire, the blaster must provide proper safeguards for personnel until the misfire has been re-blasted or safely removed.
- The exposed areas of the blast will be matted wherever practicable. In cases where such a procedure is not deemed to be feasible, the blasting contractor(s) will submit an alternative procedure for review by Enbridge and the site in question must be visited and examined by the consultant before any approval is granted.

- Enbridge may employ two-way radios for communication between vehicles and office facilities. The blasting contractor(s) must advise Enbridge and other pipeline contractors of any need to cease use of such equipment during blasting activities.
- All loading and blasting activity must cease and personnel in and around the blast area will retreat to a position of safety during the approach and progress of an electrical storm irrespective of the type of explosives or initiation system used. **THIS IS A MAJOR SAFETY PRECAUTION AND WILL ALWAYS BE OBSERVED.** All explosive materials, all electrical initiation systems, and all non-electric initiation systems are susceptible to premature initiation by lightning.
- Previous blast areas must be inspected to verify the absence of misfires. No drilling may commence until such inspection occurs. If a misfire occurs adjacent to a hole to be drilled, the misfire will be cleared by the blaster using whatever techniques are called for by the situation prior to commencement of drilling. If a misfire occurs at some distance from the drilling area, drilling may be stopped while clearing preparations are underway. When the misfire is to be cleared by re-shooting, drilling will be shut down and personnel evacuated to a place of safety prior to detonation.
- All transportation of explosives will be in accordance with applicable federal, state, and local laws and regulations. Vehicles used to transport explosives must be in proper working condition and equipped with tight wooden or non- sparking metal floor and sides. If explosives are carried in an open-bodied truck, they will be covered with a waterproof and flame-resistant tarpaulin. Wiring will be fully insulated to prevent short-circuiting and at least two fire extinguishers will be carried onboard. The truck will be plainly marked to identify its cargo so that the public may be adequately warned. Metal, flammable, or corrosive substances will not be transported in the same vehicle with explosives. There will be no smoking, and unauthorized or unnecessary personnel will not be allowed in the vehicle. Competent, qualified personnel will load and unload explosives into or from the vehicle.
- No sparking metal tools will be used to open kegs or wooden cases of explosives. Metallic slitters will be used to open fiberboard cases, provided the metallic slitter does not come in contact with the metallic fasteners of the case. There will be no smoking, no matches, no open lights, or other fire or flame nearby while handling or using explosives. Explosives will not be placed where they are subject to flame, excessive heat, sparks, or impact. Partial cases or packages of explosives will be re-closed after use. No explosives will be carried in the pockets or clothing of personnel. The wires of an electric blasting cap shall not be tampered with in any way. Wires will not be uncoiled. The use of electric blasting caps will not be permitted during dust storms or near any other source of large charges of static electricity. Uncoiling of the wires or use of electric caps will not be permitted near radio-frequency transmitters. The firing circuit will be completely insulated from the ground or other conductors.
- No blast will be fired without a positive signal from the person in charge. This person will have made certain that all surplus explosives are in a safe place; all persons, vehicles, and/or boats are at a safe distance; and adequate warning has been given. Adequate warning of a blast will consist of but not be limited to the following:
    - Notification to nearby homeowners and local agencies if necessary;
    - Stop vehicular and/or pedestrian traffic near the blast site; and
    - Signal given by an air horn, whistle, or similar device using standard warning signals.

- Only authorized and necessary personnel will be present where explosives are being handled or used.
- Condition of the hole will be checked with a wooden tamping pole prior to loading. Surplus explosives will not be stacked near working areas during loading. Detonating fans will be cut from spool before loading the balance of charge into the hole. No explosives will be forced into a bore hole past an obstruction. Loading will be done by a blaster holding a valid license or by personnel under his direct supervision.
- Fly-rock leaving the right-of-way must be collected immediately and disposed of at disposal sites approved by Enbridge. This work shall not be left to the cleanup crew.

7.3 PROTECTION OF THREATENED AND ENDANGERED SPECIES

Enbridge has consulted with state and federal agencies regarding sensitive habitats or where species are known to occur and will continue these consultations. Areas identified as containing sensitive habitats or species, as directed by the appropriate agencies, will be staked and flagged. Little Otter Creek, proposed for in-stream blasting, is a known trout stream (see Section 8.0). A qualified project biologist will survey the proposed blasting zone identified by the pipeline blasting contractor(s) immediately in advance of any drilling or blasting. Areas will be checked before and after blasting for the presence of sensitive species, and disturbance to species and habitats will be resolved in accordance with guidance provided by the appropriate agencies.

7.4 LIGHTNING HAZARD

A risk of accidental detonation caused by lightning strikes exists at any time the workplace is experiencing an electrical storm and there are loaded holes on site. If this hazard is judged to exist by the Enbridge representative, work will discontinue at all operations and workers will be moved to secure positions away from the loaded holes. Furthermore, workers cannot return to the work site until the storm has passed and the Enbridge representative has indicated it is clear to return.

Enbridge's blasting contractor(s) must have on site approved lightning detectors (model SD-2508 manufactured by Electronics Div. of S.D.I. International, Model 350 manufactured by Thomas Instruments Inc., Skyscan Lighting Detector manufactured by Skyscan Technologies or equivalent) capable of measuring the degree of electrical activity as a storm approaches, and the distance to the storm front from the instrument on the right-of-way.

8.0 IN-WATER BLASTING

In-stream blasting is currently proposed at Little Otter Creek (MP 1118.4), a Minnesota Public Water and trout stream. Enbridge is consulting with the MDNR and appropriate agencies regarding this crossing to determine the presence and quality of local fisheries. No in-stream work or blasting will occur during the work exclusion dates established by the MDNR to allow for fish spawning and migration. Blasting in this area previously occurred during construction of Enbridge's Alberta Clipper Project (Line 67) and no significant long-term impacts have been identified. The type of explosive, size of charges, sequence of firing, etc. will be selected to minimize shock wave stresses on aquatic life adjacent to the blasting area.

Where specified, the blasting contractor(s) will furnish the necessary labor and equipment to employ air bubble curtains for the protection of existing pipelines, wildlife or other facilities. Any

necessary blasting operations will be carried out in such a manner that they conform in all respects with the limitations, requirements and procedures required by the authority having jurisdiction. Explosives used for crossings must be non-sympathetically propagating explosives and shall be approved by Enbridge.

Notifications will be made to all appropriate resource agencies prior to blasting activities.

9.0 STORAGE REQUIREMENTS

All explosives, blasting agents, and initiation devices must be stored in locked magazines that have been located, constructed, approved, and licensed in accordance with local, state, and federal regulations. Magazines must be dry, well-ventilated, reasonably cool (painting of the exterior with a reflective color), bullet and fire resistant, and clean.

Initiation devices cannot be stored in the same box, container, or magazine with other explosives. Explosives, blasting agents or initiation devices cannot be stored in wet or damp areas; near oil, gasoline, or cleaning solvents; or near sources of heat radiators, steam pipes, stoves, etc. No metal or metal tools can be stored in the magazine. There can be no smoking, matches, open lights, or other fire or flame inside or within 50 feet of storage magazines or explosive materials. The loading and unloading of explosive materials into or out of the magazine will be done in a business-like manner with no loitering, horseplay, or prank playing.

Magazines will be kept locked at all times unless explosives are being delivered or removed by authorized personnel. Admittance will be restricted to the magazine keeper, blasting supervisor, or licensed blaster. Magazine construction shall meet the requirements of Bureau of Alcohol, Tobacco and Fire Arms P5400.7 “Explosives Law and Regulations” and be in accordance with local, state, or federal regulations and the Blaster’s Handbook.

Accurate and current records must be kept of the explosive material inventory to ensure that oldest stocks are utilized first, satisfy regulatory requirements, and facilitate immediate notification of any loss or theft. Magazine records will reflect the quantity of explosions removed, the amount returned, and the net quantity used at the blasting site.

When explosive materials are taken from the storage magazine, they must be kept in the original containers until used. Small quantities of explosive materials may be placed in day boxes, powder chests, or detonator boxes. Any explosive material not used at the blast site must be returned to the storage magazine and replaced in the original container as soon as possible.

Magazine locations must be in accordance with local, state, or federal regulations. Where no regulations apply, magazines shall be located in accordance with the latest edition of the 175th Anniversary Edition of the Blaster’s Handbook and ATF P5400-7 Explosives Law and Regulations.

Magazines will be marked in minimum 3-inch high letters with the words “**DANGER - EXPLOSIVES**” prominently displayed on all sides and roof.

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Attachment F

Wetlands Crossed by the Line 3 Replacement Project

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Attachment F
Line 3 Replacement Project
Wetland Table

County	Major Watershed	Hydologic Unit Code (HUC) 8	Bank Service Area (BSA)	Feature ID	Survey Date	Approx. Milepost	Cowardin [a]	Eggers and Reed [a]	Circular 39 [a]	Crossing length (feet) b	Crossing length (miles) b	Temporary Impacts (acres) c	Permanent Conversion (acres) d	Permanent Fill (acres)	Total Impacts (acres)	Township	Range	Section	Quarter-Quarter Section	Latitude	Longitude
Pembina	Red River of the North - Tamarac River	09020311	3	w-160n50w5-b [e]	7/22/2014	801.4	PEM	Wet to Wet-Mesic Prairies	Type 2	1,835.6	0.35	5.36	-	-	5.36	160	50	5	NWSW	48.710163	-97.120372
Pembina	Red River of the North - Tamarac River	09020311	3	w-160n50w5-b [e]	7/22/2014	801.8	PSS	Shrub Carr	Type 6	43.8	0.01	-	0.05	-	0.05	160	50	5	NWSW	48.70572	-97.115103
Kittson	Red River of the North - Tamarac River	09020311	3	w-160n50w9-a [e]	7/29/2014	801.8	PEM	Fresh (wet) Meadow	Type 2	808.4	0.15	3.85	-	-	3.85	160	50	4, 9	NWNE, SESE	48.704523	-97.115566
Kittson	Red River of the North - Tamarac River	09020311	3	w-160n50w9-a [e]	7/29/2014	801.9	PFO	Floodplain Forests	Type 1	258.0	0.05	-	0.30	-	0.30	160	50	4, 9	NWNE, SESE	48.704395	-97.114197
Kittson	Red River of the North - Tamarac River	09020311	3	w-160n50w10-a	6/26/2014	802.4	PEM	Fresh (wet) Meadow	Type 2	12.2	0.00	0.02	-	-	0.02	160	50	10	SWNW	48.698309	-97.106611
Kittson	Red River of the North - Tamarac River	09020311	3	w-160n50w10-c	6/27/2014	803.1	PEM	Shallow Marshes	Type 3	354.8	0.07	1.01	-	-	1.01	160	50	10	SWSE, SESW	48.6919	-97.096809
Kittson	Red River of the North - Tamarac River	09020311	3	w-160n50w10-d	6/27/2014	803.3	PEM	Shallow Marshes	Type 3	722.9	0.14	2.15	-	-	2.15	160	50	10, 15	NWNE, NENE, SWSE	48.689651	-97.093305
Kittson	Red River of the North - Tamarac River	09020311	3	w-160n50w14-a	6/30/2014	803.9	PEM	Fresh (wet) Meadow	Type 2	13.6	0.00	0.04	-	-	0.04	160	50	14	SWNW	48.683182	-97.084645
Kittson	Red River of the North - Tamarac River	09020311	3	w-160n50w23-a	7/2/2014	805.1	PEM	Seasonally Flooded Basins	Type 1	-	-	0.04	-	-	0.04	160	50	23	SWNE	48.668952	-97.07027
Kittson	Red River of the North - Tamarac River	09020311	3	w-160n50w23-e	7/29/2014	805.4	PEM	Sedge Meadows	Type 2	181.2	0.03	0.44	-	-	0.44	160	50	23	NESE	48.664878	-97.066346
Kittson	Red River of the North - Tamarac River	09020311	3	w-160n50w23-d	7/2/2014	805.6	PEM	Fresh (wet) Meadow	Type 2	-	-	0.04	-	0.01	0.05	160	50	23	SESE	48.662263	-97.063125
Kittson	Red River of the North - Tamarac River	09020311	3	w-160n49w30-a	6/23/2014	807.2	PEM	Fresh (wet) Meadow	Type 2	28.0	0.01	0.09	-	-	0.09	160	49	30	SWSW	48.646656	-97.040179
Kittson	Red River of the North - Tamarac River	09020311	3	w-160n49w31-a	7/1/2014	807.2	PEM	Fresh (wet) Meadow	Type 2	15.5	0.00	0.03	-	-	0.03	160	49	31	NWNW	48.645847	-97.039268
Kittson	Red River of the North - Tamarac River	09020311	3	w-160n49w31-b	7/1/2014	808.4	PEM	Fresh (wet) Meadow	Type 2	12.7	0.00	0.02	-	-	0.02	160	49	31	SESE	48.633434	-97.020417
Kittson	Red River of the North - Tamarac River	09020311	3	w-159n49w5-a	7/2/2014	809.3	PEM	Seasonally Flooded Basins	Type 1	21.5	0.00	0.05	-	-	0.05	159	49	5	NWSE, SWNE	48.623986	-97.006546
Kittson	Red River of the North - Tamarac River	09020311	3	w-159n49w5-b	7/7/2014	809.7	PFO	Hardwood Swamps	Type 7	-	-	-	0.06	-	0.06	159	49	5	SESE	48.620076	-97.000935
Kittson	Red River of the North - Tamarac River	09020311	3	w-159n49w5-b	7/7/2014	809.7	PEM	Fresh (wet) Meadow	Type 2	213.8	0.04	0.70	-	-	0.70	159	49	5	SESE	48.619908	-97.000441
Kittson	Red River of the North - Tamarac River	09020311	3	w-159n49w9-a	7/7/2014	810.5	PEM	Seasonally Flooded Basins	Type 1	26.2	0.00	0.07	-	-	0.07	159	49	9	SENW	48.612006	-96.98882
Kittson	Red River of the North - Tamarac River	09020311	3	w-159n49w10-b	7/30/2014	811.3	PEM	Fresh (wet) Meadow	Type 2	15.2	0.00	0.04	-	-	0.04	159	49	10	SWSW	48.603371	-96.976319
Kittson	Red River of the North - Tamarac River	09020311	3	w-159n49w10-a	7/30/2014	811.4	PEM	Seasonally Flooded Basins	Type 1	94.5	0.02	0.18	-	-	0.18	159	49	10	SWSW	48.602936	-96.975584
Kittson	Red River of the North - Tamarac River	09020311	3	w-159n49w15-a	7/29/2014	812.7	PEM	Fresh (wet) Meadow	Type 2	31.9	0.01	0.07	-	-	0.07	159	49	15	SESE	48.588652	-96.955388
Kittson	Red River of the North - Tamarac River	09020311	3	w-159n49w23-g	7/2/2014	812.8	PEM	Fresh (wet) Meadow	Type 2	41.8	0.01	0.10	-	-	0.10	159	49	23	NWNW	48.587291	-96.953892
Kittson	Red River of the North - Tamarac River	09020311	3	w-159n49w26-a	6/28/2014	814.4	PEM	Shallow Marshes	Type 3	5.7	0.00	0.01	-	-	0.01	159	49	26	NENE, SENE	48.568941	-96.933282
Kittson	Red River of the North - Tamarac River	09020311	3	w-159n49w25-d	6/28/2014	814.4	PEM	Shallow Marshes	Type 3	15.3	0.00	0.01	-	0.09	0.10	159	49	25	NWNW, SWNW	48.569308	-96.933044
Kittson	Red River of the North - Tamarac River	09020311	3	w-159n49w36-a	6/27/2014	815.7	PEM	Shallow Marshes	Type 3	20.8	0.00	0.04	-	-	0.04	159	49	36	NENE	48.556788	-96.911643
Kittson	Red River of the North - Tamarac River	09020311	3	w-159n48w31-g	6/27/2014	815.7	PEM	Shallow Marshes	Type 3	15.0	0.00	0.03	-	-	0.03	159	49	36	NENE	48.556572	-96.91135
Kittson	Red River of the North - Tamarac River	09020311	3	w-159n48w31-f	6/26/2014	816.5	PEM	Seasonally Flooded Basins	Type 1	164.2	0.03	0.44	-	-	0.44	159	48	31	NWSE	48.54777	-96.899536

Attachment F
Line 3 Replacement Project
Wetland Table

County	Major Watershed	Hydrologic Unit Code (HUC) 8	Bank Service Area (BSA)	Feature ID	Survey Date	Approx. Milepost	Cowardin [a]	Eggers and Reed [a]	Circular 39 [a]	Crossing length (feet) b	Crossing length (miles) b	Temporary Impacts (acres) c	Permanent Conversion (acres) d	Permanent Fill (acres)	Total Impacts (acres)	Township	Range	Section	Quarter-Quarter Section	Latitude	Longitude
Kittson	Red River of the North - Tamarac River	09020311	3	w-159n48w31-e	6/26/2014	816.6	PEM	Seasonally Flooded Basins	Type 1	127.4	0.02	0.23	-	-	0.23	159	48	31	NWSE, SWSE	48.546876	-96.898136
Marshall	Red River of the North - Tamarac River	09020311	3	w-158n48w6-d	7/27/2016	817.0	PEM	Fresh (wet) Meadow	Type 2	29.7	0.01	0.06	-	-	0.06	158	48	6	NENE	48.542163	-96.892015
Marshall	Red River of the North - Tamarac River	09020311	3	w-158n48w6-c	7/7/2015	817.1	PEM	Fresh (wet) Meadow	Type 2	10.8	0.00	0.02	-	-	0.02	158	48	6	NENE	48.542119	-96.891542
Marshall	Red River of the North - Tamarac River	09020311	3	w-158n48w6-b	7/7/2015	817.1	PEM	Fresh (wet) Meadow	Type 2	32.0	0.01	0.07	-	-	0.07	158	48	6	NENE	48.542082	-96.891155
Marshall	Red River of the North - Tamarac River	09020311	3	w-158n48w6-a	6/23/2014	817.1	PEM	Fresh (wet) Meadow	Type 2	9.5	0.00	0.01	-	-	0.01	158	48	5, 6	NWNW, NENE	48.541995	-96.889672
Marshall	Red River of the North - Tamarac River	09020311	3	w-158n48w5-c	6/23/2014	818.0	PEM	Fresh (wet) Meadow	Type 2	12.3	0.00	0.02	-	-	0.02	158	48	5	NESW	48.532548	-96.87903
Marshall	Red River of the North - Tamarac River	09020311	3	w-158n48w5-a	6/23/2014	818.0	PEM	Fresh (wet) Meadow	Type 2	12.1	0.00	0.03	-	-	0.03	158	48	5	NWSE, NESW	48.532401	-96.878939
Marshall	Red River of the North - Tamarac River	09020311	3	w-158n48w5-b	6/23/2014	818.3	PEM	Fresh (wet) Meadow	Type 2	42.3	0.01	0.07	-	-	0.07	158	48	5	SWSE	48.52895	-96.874346
Marshall	Red River of the North - Tamarac River	09020311	3	w-158n48w8-b	6/26/2014	818.3	PEM	Fresh (wet) Meadow	Type 2	23.6	0.00	0.05	-	-	0.05	158	48	8	NWNE	48.528673	-96.874049
Marshall	Red River of the North - Tamarac River	09020311	3	w-158n48w8-a	6/26/2014	818.8	PEM	Fresh (wet) Meadow	Type 2	22.8	0.00	0.05	-	-	0.05	158	48	8	SENE	48.523916	-96.867826
Marshall	Red River of the North - Tamarac River	09020311	3	w-158n48w9-c	6/25/2014	818.8	PEM	Shallow Marshes	Type 3	-	-	0.00	-	-	0.00	158	48	9	SWNW	48.523545	-96.867593
Marshall	Red River of the North - Tamarac River	09020311	3	w-158n48w9-b	6/25/2014	818.9	PEM	Fresh (wet) Meadow	Type 2	72.6	0.01	0.15	-	-	0.15	158	48	9	SWNW	48.522587	-96.866069
Marshall	Red River of the North - Tamarac River	09020311	3	w-158n48w9-a	6/25/2014	819.0	PEM	Fresh (wet) Meadow	Type 2	23.1	0.00	0.11	-	-	0.11	158	48	9	NWSW, SWNW	48.521604	-96.864983
Marshall	Red River of the North - Tamarac River	09020311	3	w-158n48w16-a	6/25/2014	819.6	PEM	Fresh (wet) Meadow	Type 2	25.7	0.00	0.05	-	-	0.05	158	48	16	NWNE	48.514176	-96.855265
Marshall	Red River of the North - Tamarac River	09020311	3	w-158n48w15-b	6/25/2014	820.3	PEM	Sedge Meadows	Type 2	20.7	0.00	0.06	-	-	0.06	158	48	15	NWSW, SWNW	48.50698	-96.845692
Marshall	Red River of the North - Tamarac River	09020311	3	w-158n48w15-a	6/23/2014	820.9	PEM	Fresh (wet) Meadow	Type 2	16.7	0.00	0.04	-	-	0.04	158	48	15	SESW	48.499871	-96.836786
Marshall	Red River of the North - Tamarac River	09020311	3	w-158n48w22-a	6/23/2014	821.6	PEM	Fresh (wet) Meadow	Type 2	30.7	0.01	0.05	-	-	0.05	158	48	22	SENE	48.492635	-96.827429
Marshall	Red River of the North - Tamarac River	09020311	3	w-158n48w22-c	6/23/2014	821.8	PEM	Fresh (wet) Meadow	Type 2	-	-	0.01	-	-	0.01	158	48	22	NESE	48.490255	-96.824106
Marshall	Red River of the North - Tamarac River	09020311	3	w-158n48w22-b	6/23/2014	821.8	PEM	Fresh (wet) Meadow	Type 2	-	-	0.02	-	-	0.02	158	48	22	NESE	48.490051	-96.824108
Marshall	Red River of the North - Tamarac River	09020311	3	w-158n48w23-a	6/23/2014	822.3	PEM	Shallow Marshes	Type 3	13.2	0.00	0.02	-	-	0.02	158	48	23	SESW	48.485503	-96.81812
Marshall	Red River of the North - Tamarac River	09020311	3	w-158n48w26-a	6/23/2014	822.3	PEM	Fresh (wet) Meadow	Type 2	7.6	0.00	0.02	-	-	0.02	158	48	23, 26	NENW, SESW	48.48532	-96.818011
Marshall	Red River of the North - Tamarac River	09020311	3	w-158n48w26-b	6/26/2014	822.9	PEM	Fresh (wet) Meadow	Type 2	-	-	0.01	-	-	0.01	158	48	26	SWNE	48.478258	-96.811536
Marshall	Red River of the North - Tamarac River	09020311	3	w-158n48w36-a	7/28/2014	824.7	PEM	Fresh (wet) Meadow	Type 2	13.3	0.00	0.03	-	-	0.03	158	48	36	SWSE	48.456635	-96.789054
Marshall	Red River of the North - Tamarac River	09020311	3	w-158n48w36-b	7/29/2014	824.7	PEM	Fresh (wet) Meadow	Type 2	7.8	0.00	0.02	-	-	0.02	158	48	36	SWSE	48.456405	-96.788815
Marshall	Red River of the North - Tamarac River	09020311	3	w-157n48w1-a	7/29/2014	825.4	PEM	Fresh (wet) Meadow	Type 2	28.6	0.01	0.05	-	-	0.05	157	48	1	NESE	48.448785	-96.780298
Marshall	Red River of the North - Tamarac River	09020311	3	w-157n47w6-a	7/29/2014	826.0	PEM	Fresh (wet) Meadow	Type 2	35.6	0.01	0.15	-	-	0.15	157	47	6	SWSE	48.442282	-96.768384
Marshall	Red River of the North - Tamarac River	09020311	3	w-157n47w7-a	7/29/2014	826.1	PEM	Fresh (wet) Meadow	Type 2	-	-	0.00	-	-	0.00	157	47	7	NWNE	48.441981	-96.768097

Attachment F
Line 3 Replacement Project
Wetland Table

County	Major Watershed	Hydologic Unit Code (HUC) 8	Bank Service Area (BSA)	Feature ID	Survey Date	Approx. Milepost	Cowardin [a]	Eggers and Reed [a]	Circular 39 [a]	Crossing length (feet) b	Crossing length (miles) b	Temporary Impacts (acres) c	Permanent Conversion (acres) d	Permanent Fill (acres)	Total Impacts (acres)	Township	Range	Section	Quarter-Quarter Section	Latitude	Longitude
Marshall	Red River of the North - Tamarac River	09020311	3	w-157n47w7-b	7/29/2014	826.1	PEM	Fresh (wet) Meadow	Type 2	20.2	0.00	0.03	-	-	0.03	157	47	7	NWNE	48.441973	-96.767709
Marshall	Red River of the North - Tamarac River	09020311	3	w-157n47w16-f [e]	8/20/2014	828.3	PEM	Shallow Marshes	Type 3	39.5	0.01	0.05	-	-	0.05	157	47	16	NWSW	48.419484	-96.732948
Marshall	Red River of the North - Tamarac River	09020311	3	w-157n47w16-d [e]	8/19/2014	828.4	PEM	Fresh (wet) Meadow	Type 2	13.1	0.00	0.02	-	-	0.02	157	47	16	NWSW	48.417749	-96.732777
Marshall	Red River of the North - Tamarac River	09020311	3	w-157n47w16-c [e]	8/19/2014	828.5	PEM	Fresh (wet) Meadow	Type 2	3.9	0.00	0.01	-	-	0.01	157	47	16	SWSW	48.415958	-96.7327
Marshall	Red River of the North - Tamarac River	09020311	3	w-157n47w16-b [e]	7/30/2014	828.5	PEM	Fresh (wet) Meadow	Type 2	223.9	0.04	0.25	-	-	0.25	157	47	16	SWSW	48.415528	-96.732675
Marshall	Red River of the North - Tamarac River	09020311	3	w-157n47w21-b	7/30/2014	829.4	PEM	Fresh (wet) Meadow	Type 2	26.7	0.01	0.06	-	-	0.06	157	47	21	NENE, SENE	48.409703	-96.715115
Marshall	Red River of the North - Tamarac River	09020311	3	w-157n47w22-a	7/31/2014	829.4	PEM	Fresh (wet) Meadow	Type 2	22.8	0.00	0.05	-	-	0.05	157	47	22	SWNW	48.409278	-96.714714
Marshall	Red River of the North - Tamarac River	09020311	3	w-157n47w22-b	7/31/2014	830.4	PEM	Fresh (wet) Meadow	Type 2	12.0	0.00	0.01	-	-	0.01	157	47	27	NWNE	48.398939	-96.700762
Marshall	Red River of the North - Tamarac River	09020311	3	w-157n47w27-a	7/30/2014	830.5	PEM	Seasonally Flooded Basins	Type 1	71.7	0.01	0.11	-	-	0.11	157	47	27	NWNE	48.398169	-96.699487
Marshall	Red River of the North - Tamarac River	09020311	3	w-157n47w36-a	8/1/2014	832.4	PEM	Seasonally Flooded Basins	Type 1	-	-	0.03	-	-	0.03	157	47	36	NWSW	48.376846	-96.670987
Marshall	Red River of the North - Tamarac River	09020311	3	w-157n47w36-c	8/4/2014	832.8	PEM	Fresh (wet) Meadow	Type 2	260.6	0.05	0.60	-	-	0.60	157	47	36	SESW	48.372609	-96.664824
Marshall	Red River of the North - Tamarac River	09020311	3	w-157n47w36-b	8/1/2014	833.1	PEM	Fresh (wet) Meadow	Type 2	143.8	0.03	0.35	-	-	0.35	157	47	2, 36	NWNE, SESW	48.370139	-96.66118
Marshall	Red River of the North - Tamarac River	09020311	3	w-156n47w2-a	8/4/2014	833.6	PEM	Seasonally Flooded Basins	Type 1	14.4	0.00	0.03	-	-	0.03	156	47	1	SWNW	48.364389	-96.652862
Marshall	Red River of the North - Tamarac River	09020311	3	w-156n47w1-a	8/5/2014	833.7	PEM	Shallow Marshes	Type 3	221.7	0.04	0.55	-	-	0.55	156	47	1	SWNW	48.363783	-96.651823
Marshall	Red River of the North - Tamarac River	09020311	3	w-156n47w1-b	8/5/2014	833.8	PEM	Seasonally Flooded Basins	Type 1	161.1	0.03	0.49	-	-	0.49	156	47	1	NWSW, SWNW	48.362684	-96.650381
Marshall	Snake River	09020309	3	w-156n47w1-c	8/12/2014	834.4	PEM	Seasonally Flooded Basins	Type 1	-	-	0.06	-	-	0.06	156	47	1	SWSE	48.356823	-96.641288
Marshall	Snake River	09020309	3	w-156n47w12-a	8/12/2014	834.7	PEM	Seasonally Flooded Basins	Type 1	31.2	0.01	0.07	-	-	0.07	156	47	12	NWNE, NENE	48.353713	-96.636708
Marshall	Snake River	09020309	3	w-156n46w7-c [e]	8/13/2014	835.8	PFO	Hardwood Swamps	Type 7	68.1	0.01	-	0.07	-	0.07	156	46	7	SWSE	48.342439	-96.618825
Marshall	Snake River	09020309	3	w-156n46w17-a	8/13/2014	836.5	PEM	Seasonally Flooded Basins	Type 1	-	-	0.09	-	0.02	0.11	156	46	17	SWNW	48.334788	-96.609166
Marshall	Snake River	09020309	3	w-156n46w17-b	8/13/2014	837.0	PEM	Fresh (wet) Meadow	Type 2	-	-	0.08	-	-	0.08	156	46	17	SESW	48.329688	-96.602421
Marshall	Snake River	09020309	3	w-156n46w17-c	8/13/2014	837.1	PEM	Sedge Meadows	Type 2	-	-	0.00	-	-	0.00	156	46	17	SESW	48.328302	-96.600513
Marshall	Snake River	09020309	3	w-156n46w17-e	8/14/2014	837.2	PEM	Fresh (wet) Meadow	Type 2	445.7	0.08	0.97	-	-	0.97	156	46	17	SWSE, SESW	48.327629	-96.599289
Marshall	Snake River	09020309	3	w-156n46w20-a	8/14/2014	837.4	PEM	Seasonally Flooded Basins	Type 1	111.3	0.02	0.31	-	-	0.31	156	46	20	NWNE	48.325094	-96.59571
Marshall	Snake River	09020309	3	w-156n46w20-b	8/15/2014	838.0	PEM	Fresh (wet) Meadow	Type 2	30.6	0.01	0.05	-	-	0.05	156	46	21	NWSW, SWNW	48.319288	-96.587525
Marshall	Snake River	09020309	3	w-156n46w21-a	8/21/2014	838.1	PEM	Seasonally Flooded Basins	Type 1	75.9	0.01	0.16	-	-	0.16	156	46	21	NWSW	48.317374	-96.585294
Marshall	Snake River	09020309	3	w-156n46w21-c	8/21/2014	838.3	PEM	Sedge Meadows	Type 2	526.3	0.10	1.17	-	-	1.17	156	46	21	NWSW, NESW, SWSW	48.316022	-96.582995
Marshall	Snake River	09020309	3	w-156n46w21-d	8/21/2014	838.3	PEM	Shallow Marshes	Type 3	46.4	0.01	0.10	-	-	0.10	156	46	21	NESW, SWSW, SESW	48.315504	-96.582043
Marshall	Snake River	09020309	3	w-156n46w21-e	8/21/2014	838.4	PEM	Shallow Marshes	Type 3	31.4	0.01	0.07	-	-	0.07	156	46	21	SESW	48.315155	-96.581763

Attachment F
Line 3 Replacement Project
Wetland Table

County	Major Watershed	Hydologic Unit Code (HUC) 8	Bank Service Area (BSA)	Feature ID	Survey Date	Approx. Milepost	Cowardin [a]	Eggers and Reed [a]	Circular 39 [a]	Crossing length (feet) b	Crossing length (miles) b	Temporary Impacts (acres) c	Permanent Conversion (acres) d	Permanent Fill (acres)	Total Impacts (acres)	Township	Range	Section	Quarter-Quarter Section	Latitude	Longitude
Marshall	Snake River	09020309	3	w-156n46w21-g	7/8/2015	838.4	PEM	Fresh (wet) Meadow	Type 2	-	-	0.01	-	-	0.01	156	46	21	NESW, SESW	48.315514	-96.580875
Marshall	Snake River	09020309	3	w-156n46w21-f	8/21/2014	838.6	PEM	Fresh (wet) Meadow	Type 2	8.8	0.00	0.02	-	-	0.02	156	46	28	NENW	48.311785	-96.57796
Marshall	Snake River	09020309	3	w-156n46w28-c	6/24/2014	838.6	PEM	Fresh (wet) Meadow	Type 2	10.7	0.00	0.03	-	-	0.03	156	46	28	NENW	48.311591	-96.577441
Marshall	Snake River	09020309	3	w-156n46w28-b	6/24/2014	839.3	PEM	Fresh (wet) Meadow	Type 2	45.6	0.01	0.10	-	-	0.10	156	46	28	SESW	48.300694	-96.577026
Marshall	Snake River	09020309	3	w-156n46w28-a	6/24/2014	839.5	PEM	Fresh (wet) Meadow	Type 2	13.8	0.00	0.03	-	-	0.03	156	46	33	NENW	48.297298	-96.577088
Marshall	Snake River	09020309	3	w-156n46w33-a	6/24/2014	839.5	PEM	Seasonally Flooded Basins	Type 1	10.4	0.00	0.02	-	-	0.02	156	46	33	NENW	48.297126	-96.577039
Marshall	Snake River	09020309	3	w-156n46w33-c	9/16/2014	839.5	PSS	Shrub Carr	Type 6	-	-	0.04	-	-	0.04	156	46	33	NENW	48.296843	-96.57763
Marshall	Snake River	09020309	3	w-156n46w33-c	9/16/2014	839.5	PEM	Seasonally Flooded Basins	Type 1	-	-	0.10	-	-	0.10	156	46	33	NENW	48.296822	-96.577661
Marshall	Snake River	09020309	3	w-156n46w33-f	9/16/2014	839.6	PEM	Seasonally Flooded Basins	Type 1	-	-	0.01	-	-	0.01	156	46	33	NENW	48.294801	-96.576953
Marshall	Snake River	09020309	3	w-156n46w33-e	9/16/2014	839.6	PEM	Seasonally Flooded Basins	Type 1	-	-	0.01	-	-	0.01	156	46	33	NENW	48.294723	-96.57727
Marshall	Snake River	09020309	3	w-156n46w33-g	9/16/2014	839.7	PEM	Seasonally Flooded Basins	Type 1	-	-	0.07	-	-	0.07	156	46	33	SENW	48.292896	-96.577011
Marshall	Snake River	09020309	3	w-156n46w33-h	9/16/2014	839.8	PEM	Seasonally Flooded Basins	Type 1	6.3	0.00	0.02	-	-	0.02	156	46	33	SENW	48.292121	-96.577286
Marshall	Snake River	09020309	3	w-156n46w33-i	9/16/2014	839.9	PEM	Fresh (wet) Meadow	Type 2	24.0	0.00	0.04	-	-	0.04	156	46	33	NESW	48.289195	-96.577223
Marshall	Snake River	09020309	3	w-156n46w33-k	9/17/2014	840.1	PEM	Fresh (wet) Meadow	Type 2	4.8	0.00	0.02	-	-	0.02	156	46	33	SWSE	48.286401	-96.574948
Marshall	Snake River	09020309	3	w-156n46w33-l	9/17/2014	840.2	PEM	Fresh (wet) Meadow	Type 2	-	-	0.00	-	-	0.00	156	46	33	SWSE	48.285254	-96.573371
Marshall	Snake River	09020309	3	w-156n46w33-m	9/17/2014	840.3	PEM	Fresh (wet) Meadow	Type 2	205.5	0.04	0.25	-	-	0.25	156	46	33	SWSE	48.283795	-96.571695
Marshall	Snake River	09020309	3	w-155n46w3-a	9/17/2014	840.7	PEM	Fresh (wet) Meadow	Type 2	21.1	0.00	0.05	-	-	0.05	155	46	4	SENE	48.278665	-96.565665
Marshall	Snake River	09020309	3	w-155n46w3-d	6/3/2015	841.3	PEM	Seasonally Flooded Basins	Type 1	40.7	0.01	0.09	-	-	0.09	155	46	3	NWSE	48.275171	-96.550721
Marshall	Snake River	09020309	3	w-155n46w2-f	6/5/2015	842.0	PEM	Fresh (wet) Meadow	Type 2	261.7	0.05	0.69	-	-	0.69	155	46	2	NWSE, NESW	48.27524	-96.533809
Marshall	Snake River	09020309	3	w-155n46w2-f	6/5/2015	842.0	PSS	Shrub Carr	Type 6	177.5	0.03	0.12	0.19	-	0.31	155	46	2	NWSE, NESW	48.275245	-96.533423
Marshall	Snake River	09020309	3	w-155n46w2-f	6/5/2015	842.0	PFO	Hardwood Swamps	Type 7	-	-	-	0.01	-	0.01	155	46	2	NESW	48.275233	-96.533228
Marshall	Snake River	09020309	3	w-155n46w2-c	7/31/2014	842.4	PEM	Fresh (wet) Meadow	Type 2	12.7	0.00	0.03	-	-	0.03	155	46	2	NESE	48.275316	-96.522427
Marshall	Snake River	09020309	3	w-155n46w2-d	8/1/2014	842.4	PEM	Fresh (wet) Meadow	Type 2	16.3	0.00	0.03	-	-	0.03	155	46	1	NWSW	48.27527	-96.522234
Marshall	Snake River	09020309	3	w-155n46w1-b	8/1/2014	842.7	PEM	Fresh (wet) Meadow	Type 2	-	-	0.08	-	-	0.08	155	46	1	NWSW, SWSW	48.271954	-96.518268
Marshall	Snake River	09020309	3	w-155n46w1-c	8/1/2014	842.7	PEM	Fresh (wet) Meadow	Type 2	-	-	0.08	-	-	0.08	155	46	1	SWSW	48.271636	-96.517489
Marshall	Snake River	09020309	3	w-155n46w1-a	8/1/2014	842.9	PEM	Sedge Meadows	Type 2	-	-	0.01	-	-	0.01	155	46	1	SESW	48.268331	-96.513682
Marshall	Snake River	09020309	3	w-155n46w12-a	8/1/2014	843.0	PEM	Fresh (wet) Meadow	Type 2	17.8	0.00	0.03	-	-	0.03	155	46	12	NENW	48.26813	-96.513361
Marshall	Snake River	09020309	3	w-155n46w12-d [e]	8/14/2015	843.1	PEM	Fresh (wet) Meadow	Type 2	-	-	0.03	-	-	0.03	155	46	12	NWNE	48.268112	-96.507904
Marshall	Snake River	09020309	3	w-155n46w12-c [e]	8/1/2014	843.1	PEM	Fresh (wet) Meadow	Type 2	-	-	0.00	-	-	0.00	155	46	12	NWNE	48.268123	-96.50776

Attachment F
Line 3 Replacement Project
Wetland Table

County	Major Watershed	Hydrologic Unit Code (HUC) 8	Bank Service Area (BSA)	Feature ID	Survey Date	Approx. Milepost	Cowardin [a]	Eggers and Reed [a]	Circular 39 [a]	Crossing length (feet) b	Crossing length (miles) b	Temporary Impacts (acres) c	Permanent Conversion (acres) d	Permanent Fill (acres)	Total Impacts (acres)	Township	Range	Section	Quarter-Quarter Section	Latitude	Longitude
Marshall	Snake River	09020309	3	w-155n46w12-b [e]	8/1/2014	843.2	PEM	Fresh (wet) Meadow	Type 2	67.3	0.01	0.04	-	-	0.04	155	46	12	NWNE	48.265716	-96.509832
Marshall	Snake River	09020309	3	w-155n46w12-b [e]	8/1/2014	843.2	PFO	Floodplain Forests	Type 1	173.3	0.03	-	0.24	-	0.24	155	46	12	NWNE	48.265588	-96.509844
Marshall	Snake River	09020309	3	w-155n46w12-f	8/2/2014	843.7	PEM	Fresh (wet) Meadow	Type 2	28.8	0.01	0.05	-	-	0.05	155	45	7	NWSW	48.259668	-96.500804
Marshall	Snake River	09020309	3	w-155n45w7-a	8/2/2014	843.7	PEM	Fresh (wet) Meadow	Type 2	31.3	0.01	0.08	-	-	0.08	155	45	7	NWSW	48.259507	-96.500581
Marshall	Snake River	09020309	3	w-155n45w7-c	8/2/2014	844.1	PEM	Shallow Marshes	Type 3	468.3	0.09	0.88	-	-	0.88	155	45	7, 18	NWNW, NENW, SWSW, SESW	48.25509	-96.496526
Marshall	Snake River	09020309	3	w-155n45w7-c	8/2/2014	844.1	PSS	Shrub Carr	Type 6	-	-	0.28	0.03	-	0.31	155	45	7	SWSW	48.254732	-96.496257
Marshall	Snake River	09020309	3	w-155n45w18-b	8/4/2014	844.9	PEM	Fresh (wet) Meadow	Type 2	353.3	0.07	0.74	-	-	0.74	155	45	18	NWSE	48.245299	-96.486457
Marshall	Snake River	09020309	3	w-155n45w18-c	8/4/2014	844.9	PEM	Seasonally Flooded Basins	Type 1	20.1	0.00	0.05	-	-	0.05	155	45	18	NWSE	48.245253	-96.484644
Marshall	Snake River	09020309	3	w-155n45w18-e	8/4/2014	845.2	PEM	Fresh (wet) Meadow	Type 2	22.9	0.00	0.05	-	-	0.05	155	45	18	NESE	48.244833	-96.479205
Marshall	Snake River	09020309	3	w-155n45w17-a	8/4/2014	845.2	PSS	Shrub Carr	Type 6	60.2	0.01	0.12	0.07	-	0.19	155	45	17, 20	NWSW, NENW, SESW	48.244695	-96.478952
Marshall	Snake River	09020309	3	w-155n45w17-a	8/4/2014	845.2	PEM	Fresh (wet) Meadow	Type 2	2,189.3	0.41	4.66	-	-	4.66	155	45	17, 20	NWSW, NENW, SWSW, SESW	48.244208	-96.478683
Marshall	Snake River	09020309	3	w-155n45w20-a	8/6/2014	845.7	PEM	Fresh (wet) Meadow	Type 2	871.5	0.17	1.72	-	-	1.72	155	45	20	NENW	48.239244	-96.471971
Marshall	Snake River	09020309	3	w-155n45w20-a	8/6/2014	845.7	PSS	Shrub Carr	Type 6	-	-	0.34	0.00	-	0.34	155	45	20	NENW	48.239061	-96.471512
Marshall	Snake River	09020309	3	w-155n45w20-b	8/7/2014	846.0	PEM	Fresh (wet) Meadow	Type 2	-	-	0.01	-	-	0.01	155	45	20	NWNE	48.236094	-96.466083
Marshall	Snake River	09020309	3	w-155n45w20-d	8/22/2014	846.2	PEM	Deep Marshes	Type 4	45.8	0.01	0.06	-	-	0.06	155	45	20	SWNE	48.234498	-96.464011
Marshall	Snake River	09020309	3	w-155n45w20-f	8/22/2014	846.3	PEM	Fresh (wet) Meadow	Type 2	289.4	0.05	0.58	-	-	0.58	155	45	20	SWNE, SENE	48.233484	-96.462485
Marshall	Snake River	09020309	3	w-155n45w20-f	8/22/2014	846.3	PFO	Hardwood Swamps	Type 7	-	-	-	0.04	-	0.04	155	45	20	SWNE, SENE	48.233271	-96.46247
Marshall	Snake River	09020309	3	w-155n45w20-g	8/22/2014	846.4	PEM	Fresh (wet) Meadow	Type 2	73.7	0.01	0.16	-	-	0.16	155	45	20	NESE, SENE	48.232216	-96.460418
Marshall	Snake River	09020309	3	w-155n45w20-g	8/22/2014	846.4	PFO	Hardwood Swamps	Type 7	-	-	-	0.01	-	0.01	155	45	20	NESE	48.231885	-96.46045
Marshall	Snake River	09020309	3	w-155n45w20-h	8/22/2014	846.8	PEM	Fresh (wet) Meadow	Type 2	18.9	0.00	0.15	-	-	0.15	155	45	20	SESE	48.227146	-96.457025
Marshall	Snake River	09020309	3	w-155n45w20-h	8/22/2014	846.8	PFO	Hardwood Swamps	Type 7	-	-	-	0.00	-	0.00	155	45	20	SESE	48.226947	-96.456939
Marshall	Snake River	09020309	3	w-155n45w21-a	8/25/2014	847.0	PEM	Fresh (wet) Meadow	Type 2	20.6	0.00	0.05	-	-	0.05	155	45	21	SWSW	48.225083	-96.454037
Marshall	Snake River	09020309	3	w-155n45w28-a	8/25/2014	847.0	PEM	Fresh (wet) Meadow	Type 2	20.5	0.00	0.04	-	-	0.04	155	45	28	NWNW	48.224917	-96.453821
Marshall	Snake River	09020309	3	w-155n45w28-b	8/25/2014	847.2	PEM	Fresh (wet) Meadow	Type 2	106.0	0.02	0.17	-	-	0.17	155	45	28	NWNW, NENW	48.222949	-96.451038
Marshall	Snake River	09020309	3	w-155n45w28-b	8/25/2014	847.2	PFO	Floodplain Forests	Type 1	-	-	-	0.10	-	0.10	155	45	28	NWNW, NENW	48.222875	-96.451066
Marshall	Snake River	09020309	3	w-155n45w28-c	8/25/2014	847.4	PEM	Seasonally Flooded Basins	Type 1	15.4	0.00	0.04	-	-	0.04	155	45	28	SENW	48.220858	-96.447844
Marshall	Snake River	09020309	3	w-155n45w28-e	9/18/2014	847.7	PEM	Seasonally Flooded Basins	Type 1	-	-	0.07	-	-	0.07	155	45	28	NWSE	48.21748	-96.442868
Marshall	Snake River	09020309	3	w-155n45w28-h	9/18/2014	848.0	PEM	Shallow Marshes	Type 3	260.0	0.05	0.56	-	-	0.56	155	45	28	SESE	48.213838	-96.439336
Marshall	Snake River	09020309	3	w-155n45w33-a	9/23/2014	848.4	PEM	Fresh (wet) Meadow	Type 2	-	-	0.00	-	-	0.00	155	45	33	NENE	48.209942	-96.434354

Attachment F
Line 3 Replacement Project
Wetland Table

County	Major Watershed	Hydologic Unit Code (HUC) 8	Bank Service Area (BSA)	Feature ID	Survey Date	Approx. Milepost	Cowardin [a]	Eggers and Reed [a]	Circular 39 [a]	Crossing length (feet) b	Crossing length (miles) b	Temporary Impacts (acres) c	Permanent Conversion (acres) d	Permanent Fill (acres)	Total Impacts (acres)	Township	Range	Section	Quarter-Quarter Section	Latitude	Longitude
Marshall	Snake River	09020309	3	w-155n45w34-a	9/23/2014	848.4	PEM	Fresh (wet) Meadow	Type 2	4.7	0.00	0.01	-	-	0.01	155	45	34	NWNW	48.20983	-96.434123
Marshall	Snake River	09020309	3	w-155n45w34-b	9/23/2014	848.4	PEM	Seasonally Flooded Basins	Type 1	-	-	0.01	-	-	0.01	155	45	34	NWNW	48.209616	-96.433251
Marshall	Snake River	09020309	3	w-155n45w34-c	9/23/2014	848.8	PEM	Seasonally Flooded Basins	Type 1	45.6	0.01	0.08	-	-	0.08	155	45	34	SENW	48.206361	-96.427724
Marshall	Snake River	09020309	3	w-155n45w34-e	9/23/2014	848.9	PEM	Fresh (wet) Meadow	Type 2	15.0	0.00	0.07	-	-	0.07	155	45	34	SENW	48.204815	-96.425677
Marshall	Snake River	09020309	3	w-155n45w34-g	9/23/2014	849.1	PEM	Fresh (wet) Meadow	Type 2	12.8	0.00	0.03	-	-	0.03	155	45	34	NESW	48.203696	-96.42409
Marshall	Snake River	09020309	3	w-155n45w34-h	9/24/2014	849.3	PEM	Seasonally Flooded Basins	Type 1	207.6	0.04	0.23	-	-	0.23	155	45	34	NWSE	48.201618	-96.420935
Marshall	Snake River	09020309	3	w-155n45w34-l	9/24/2014	849.5	PEM	Seasonally Flooded Basins	Type 1	-	-	0.06	-	-	0.06	155	45	34	SWSE, SESE	48.199784	-96.418391
Marshall	Snake River	09020309	3	w-155n45w34-k	9/24/2014	849.6	PEM	Seasonally Flooded Basins	Type 1	-	-	0.06	-	-	0.06	155	45	34	SESE	48.197996	-96.415252
Marshall	Snake River	09020309	3	w-155n45w34-m	9/24/2014	849.8	PEM	Seasonally Flooded Basins	Type 1	96.0	0.02	0.24	-	-	0.24	155	45	34	SESE	48.196787	-96.41374
Marshall	Snake River	09020309	3	w-154n45w3-a	9/24/2014	849.8	PEM	Shallow Marshes	Type 3	-	-	0.00	-	-	0.00	154	45	3	NENE	48.196464	-96.413351
Marshall	Snake River	09020309	3	w-155n45w35-a	9/24/2014	849.8	PEM	Fresh (wet) Meadow	Type 2	-	-	0.01	-	-	0.01	155	45	35	SWSW	48.196614	-96.413048
Marshall	Snake River	09020309	3	w-154n45w2-a	9/24/2014	849.8	PEM	Shallow Marshes	Type 3	278.5	0.05	0.55	-	-	0.55	154	45	2	NWNW	48.196435	-96.412997
Marshall	Red River of the North - Grand Marais Creek	09020306	3	w-154n45w2-c	9/25/2014	850.4	PEM	Seasonally Flooded Basins	Type 1	-	-	0.17	-	-	0.17	154	45	2	SENW	48.190507	-96.403982
Marshall	Red River of the North - Grand Marais Creek	09020306	3	w-154n45w2-e	9/25/2014	850.6	PEM	Seasonally Flooded Basins	Type 1	768.2	0.15	1.98	-	-	1.98	154	45	2	NWSE, SWSE	48.187576	-96.400351
Marshall	Red River of the North - Grand Marais Creek	09020306	3	w-154n45w11-a	9/25/2014	851.3	PEM	Seasonally Flooded Basins	Type 1	69.0	0.01	0.27	-	-	0.27	154	45	11	NENE	48.179707	-96.392302
Marshall	Red River of the North - Grand Marais Creek	09020306	3	w-154n45w12-d	7/24/2014	851.6	PEM	Seasonally Flooded Basins	Type 1	36.7	0.01	0.16	-	-	0.16	154	45	12	SWNW	48.175555	-96.388022
Pennington	Red River of the North - Grand Marais Creek	09020306	3	w-154n45w13-a	7/24/2014	852.5	PEM	Seasonally Flooded Basins	Type 1	31.6	0.01	0.09	-	-	0.09	154	45	13	NWNE	48.166933	-96.374934
Pennington	Red Lake River	09020303	3	w-154n44w18-i	9/25/2014	853.0	PEM	Fresh (wet) Meadow	Type 2	678.4	0.13	1.47	-	-	1.47	154	44	18	SWNW	48.161738	-96.367356
Pennington	Red Lake River	09020303	3	w-154n44w18-a	8/23/2014	853.2	PEM	Fresh (wet) Meadow	Type 2	498.8	0.09	1.04	-	-	1.04	154	44	18	NWSW, SWNW	48.159928	-96.364552
Pennington	Red Lake River	09020303	3	w-154n44w18-a	8/23/2014	853.2	PSS	Shrub Carr	Type 6	-	-	0.03	-	-	0.03	154	44	18	NWSW, SWNW	48.15998	-96.364462
Pennington	Red Lake River	09020303	3	w-154n44w18-b	8/23/2014	853.5	PEM	Seasonally Flooded Basins	Type 1	117.2	0.02	0.16	-	-	0.16	154	44	18	NESW	48.156792	-96.36027
Pennington	Red Lake River	09020303	3	w-154n44w18-f	8/23/2014	853.6	PSS	Shrub Carr	Type 6	-	-	0.04	0.00	-	0.04	154	44	18	SWSE, SESW	48.155731	-96.358321
Pennington	Red Lake River	09020303	3	w-154n44w18-f	8/23/2014	853.6	PEM	Shallow Marshes	Type 3	892.5	0.17	1.91	-	-	1.91	154	44	18	SWSE, SESW	48.155578	-96.358246
Pennington	Red Lake River	09020303	3	w-154n44w18-g	8/25/2014	853.9	PSS	Shrub Carr	Type 6	25.1	0.00	0.02	0.03	-	0.05	154	44	18	SWSE	48.15253	-96.353899
Pennington	Red Lake River	09020303	3	w-154n44w18-g	8/25/2014	853.9	PEM	Shallow Marshes	Type 3	-	-	0.00	-	-	0.00	154	44	18	SWSE	48.152527	-96.353576
Pennington	Red Lake River	09020303	3	w-154n44w19-a	9/26/2014	853.9	PSS	Shrub Carr	Type 6	18.5	0.00	0.02	0.02	-	0.04	154	44	19	NWNE	48.15237	-96.353605
Pennington	Red Lake River	09020303	3	w-154n44w19-a	9/26/2014	853.9	PEM	Fresh (wet) Meadow	Type 2	350.1	0.07	0.99	-	-	0.99	154	44	19	NWNE, NENE	48.151662	-96.353417
Pennington	Red Lake River	09020303	3	w-154n44w19-c	9/26/2014	854.1	PEM	Fresh (wet) Meadow	Type 2	628.4	0.12	1.47	-	-	1.47	154	44	19	NENE, SENE	48.149323	-96.350602
Pennington	Red Lake River	09020303	3	w-154n44w19-c	9/26/2014	854.2	PFO	Hardwood Swamps	Type 7	-	-	-	0.05	-	0.05	154	44	19	NENE, SENE	48.14884	-96.350202
Pennington	Red Lake River	09020303	3	w-154n44w19-c	9/26/2014	854.2	PSS	Shrub Carr	Type 6	-	-	0.04	-	-	0.04	154	44	19	SENE	48.148442	-96.349622
Pennington	Red Lake River	09020303	3	w-154n44w20-c	9/26/2014	854.4	PEM	Fresh (wet) Meadow	Type 2	33.3	0.01	0.08	-	-	0.08	154	44	20	SWNW	48.147203	-96.347332

Attachment F
Line 3 Replacement Project
Wetland Table

County	Major Watershed	Hydologic Unit Code (HUC) 8	Bank Service Area (BSA)	Feature ID	Survey Date	Approx. Milepost	Cowardin [a]	Eggers and Reed [a]	Circular 39 [a]	Crossing length (feet) b	Crossing length (miles) b	Temporary Impacts (acres) c	Permanent Conversion (acres) d	Permanent Fill (acres)	Total Impacts (acres)	Township	Range	Section	Quarter-Quarter Section	Latitude	Longitude
Pennington	Red Lake River	09020303	3	w-154n44w20-b	9/26/2014	854.5	PEM	Sedge Meadows	Type 2	689.8	0.13	1.93	-	-	1.93	154	44	20	NWSW, NESW, SWNW	48.145804	-96.345438
Pennington	Red Lake River	09020303	3	w-154n44w20-ac	6/23/2016	854.8	PEM	Fresh (wet) Meadow	Type 2	103.7	0.02	0.35	-	-	0.35	154	44	20	NESW, SESW	48.142281	-96.34045
Pennington	Red Lake River	09020303	3	w-154n44w20-ab	6/23/2016	855.0	PEM	Fresh (wet) Meadow	Type 2	12.0	0.00	0.03	-	-	0.03	154	44	20	SWSE	48.140195	-96.337313
Pennington	Red Lake River	09020303	3	w-154n44w20-ad	6/23/2016	855.1	PEM	Seasonally Flooded Basins	Type 1	69.7	0.01	0.17	-	-	0.17	154	44	20	SWSE	48.139539	-96.336308
Pennington	Red Lake River	09020303	3	w-154n44w20-aa	6/23/2016	855.3	PEM	Fresh (wet) Meadow	Type 2	20.5	0.00	0.04	-	-	0.04	154	44	20	SWSE	48.137617	-96.333597
Pennington	Red Lake River	09020303	3	w-154n44w20-ae	6/23/2016	855.3	PEM	Fresh (wet) Meadow	Type 2	20.1	0.00	0.04	-	-	0.04	154	44	20	SWSE	48.137386	-96.333271
Pennington	Red Lake River	09020303	3	w-154n44w29-aa	6/23/2016	855.4	PEM	Fresh (wet) Meadow	Type 2	40.2	0.01	0.28	-	-	0.28	154	44	29	NENE	48.135984	-96.331033
Pennington	Red Lake River	09020303	3	w-154n44w29-ab	6/23/2016	855.7	PEM	Fresh (wet) Meadow	Type 2	23.4	0.00	0.06	-	-	0.06	154	44	29	NENE, SENE	48.133376	-96.32714
Pennington	Red Lake River	09020303	3	w-154n44w28-aa	6/23/2016	855.7	PEM	Fresh (wet) Meadow	Type 2	417.3	0.08	1.21	-	-	1.21	154	44	28, 29	SWNW, SENE	48.133085	-96.326933
Pennington	Red Lake River	09020303	3	w-154n44w28-aa	6/23/2016	855.8	PFO	Hardwood Swamps	Type 7	-	-	-	0.44	-	0.44	154	44	28	SWNW	48.132585	-96.326602
Pennington	Red Lake River	09020303	3	w-154n44w28-b	9/27/2014	856.1	PEM	Fresh (wet) Meadow	Type 2	1,827.3	0.35	3.60	-	-	3.60	154	44	28	NWSW, NESW, SWSE, SESW	48.129412	-96.321986
Pennington	Red Lake River	09020303	3	w-154n44w28-b	9/27/2014	856.1	PFO	Hardwood Swamps	Type 7	-	-	-	0.32	-	0.32	154	44	28	NWSW, NESW, SESW	48.129175	-96.32193
Pennington	Red Lake River	09020303	3	w-154n44w28-b	9/27/2014	856.2	PSS	Shrub Carr	Type 6	-	-	0.04	-	-	0.04	154	44	28	NESW, SESW	48.128188	-96.320701
Pennington	Red Lake River	09020303	3	w-154n44w28-e	9/27/2014	856.6	PEM	Fresh (wet) Meadow	Type 2	330.5	0.06	0.69	-	-	0.69	154	44	28	SWSE	48.123509	-96.314656
Pennington	Red Lake River	09020303	3	w-154n44w28-f	9/27/2014	856.7	PEM	Fresh (wet) Meadow	Type 2	20.5	0.00	0.04	-	-	0.04	154	44	28	SWSE	48.12282	-96.313826
Pennington	Red Lake River	09020303	3	w-154n44w33-u	9/23/2014	856.7	PEM	Sedge Meadows	Type 2	44.5	0.01	0.10	-	-	0.10	154	44	33	NWNE	48.122488	-96.313442
Pennington	Red Lake River	09020303	3	w-154n44w33-cc	9/24/2014	856.9	PEM	Fresh (wet) Meadow	Type 2	-	-	0.05	-	-	0.05	154	44	33	NENE	48.12033	-96.310623
Pennington	Red Lake River	09020303	3	w-154n44w33-a	9/15/2014	857.2	PEM	Fresh (wet) Meadow	Type 2	11.5	0.00	0.02	-	-	0.02	154	44	33	SENE	48.116784	-96.305676
Pennington	Red Lake River	09020303	3	w-154n44w34-a	9/15/2014	857.2	PEM	Fresh (wet) Meadow	Type 2	16.5	0.00	0.03	-	-	0.03	154	44	34	SWNW	48.116639	-96.305476
Pennington	Red Lake River	09020303	3	w-154n44w34-d	9/24/2014	857.4	PEM	Seasonally Flooded Basins	Type 1	13.1	0.00	0.04	-	-	0.04	154	44	34	NWSW	48.114902	-96.302841
Pennington	Red Lake River	09020303	3	w-154n44w34-e	9/25/2014	857.6	PFO	Hardwood Swamps	Type 7	387.6	0.07	-	0.79	-	0.79	154	44	34	NWSW, NESW, SESW	48.113361	-96.300564
Pennington	Red Lake River	09020303	3	w-154n44w34-e	9/25/2014	857.6	PEM	Fresh (wet) Meadow	Type 2	567.4	0.11	0.91	-	-	0.91	154	44	34	NWSW, NESW, SESW	48.113142	-96.300301
Pennington	Red Lake River	09020303	3	w-154n44w34-g	9/25/2014	857.9	PEM	Fresh (wet) Meadow	Type 2	24.0	0.00	0.05	-	-	0.05	154	44	34	SESW	48.109279	-96.295165
Pennington	Red Lake River	09020303	3	w-154n44w34-h	9/25/2014	858.1	PEM	Seasonally Flooded Basins	Type 1	27.2	0.01	0.07	-	-	0.07	154	44	34	SWSE	48.108064	-96.292989
Pennington	Red Lake River	09020303	3	w-153n44w3-a	9/26/2014	858.2	PEM	Fresh (wet) Meadow	Type 2	802.5	0.15	1.25	-	-	1.25	153	44	3	NWNE, NENE	48.106473	-96.291217
Pennington	Red Lake River	09020303	3	w-153n44w3-c	9/26/2014	858.2	PEM	Seasonally Flooded Basins	Type 1	-	-	0.04	-	-	0.04	153	44	3	NWNE	48.106547	-96.290869
Pennington	Red Lake River	09020303	3	w-153n44w3-a	9/26/2014	858.3	PFO	Hardwood Swamps	Type 7	-	-	-	0.11	-	0.11	153	44	3	NWNE	48.106188	-96.290887
Pennington	Red Lake River	09020303	3	w-153n44w3-d	9/26/2014	858.3	PEM	Seasonally Flooded Basins	Type 1	-	-	0.02	-	-	0.02	153	44	3	NWNE, NENE	48.105767	-96.289884

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Wetland Table

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Pennington	Red Lake River	09020303	3	w-153n44w3-g	9/26/2014	858.4	PEM	Wet to Wet-Mesic Prairies	Type 2	127.0	0.02	0.32	-	-	0.32	153	44	3	NENE, SENE	48.104025	-96.288036
Pennington	Red Lake River	09020303	3	w-153n44w3-l	9/27/2014	858.6	PFO	Hardwood Swamps	Type 7	-	-	-	0.06	-	0.06	153	44	3	SENE	48.102739	-96.286361
Pennington	Red Lake River	09020303	3	w-153n44w2-d	7/8/2015	859.4	PEM	Seasonally Flooded Basins	Type 1	16.3	0.00	0.11	-	-	0.11	153	44	2, 11	NWNE, SWSE, SESW	48.093323	-96.274234
Pennington	Red Lake River	09020303	3	w-153n44w11-b	7/9/2015	859.5	PEM	Shallow Marshes	Type 3	181.8	0.03	0.33	-	-	0.33	153	44	11	NWNE	48.092969	-96.273317
Pennington	Red Lake River	09020303	3	w-153n44w11-b	7/9/2015	859.5	PSS	Shrub Carr	Type 6	148.0	0.03	0.13	0.12	-	0.25	153	44	11	NWNE	48.092617	-96.273078
Pennington	Red Lake River	09020303	3	w-153n44w11-a	9/29/2014	859.5	PEM	Shallow Marshes	Type 3	-	-	0.01	-	-	0.01	153	44	11	NWNE	48.092902	-96.27121
Pennington	Red Lake River	09020303	3	w-153n44w11-c	7/8/2015	859.7	PEM	Fresh (wet) Meadow	Type 2	666.9	0.13	1.28	-	-	1.28	153	44	11	NWNE	48.090807	-96.270113
Pennington	Red Lake River	09020303	3	w-153n44w11-c	7/8/2015	859.7	PFO	Hardwood Swamps	Type 7	27.1	0.01	-	0.20	-	0.20	153	44	11	NWNE	48.090404	-96.269416
Pennington	Red Lake River	09020303	3	w-153n44w11-d	9/30/2014	859.9	PEM	Fresh (wet) Meadow	Type 2	64.8	0.01	0.26	-	-	0.26	153	44	11	SENE	48.088596	-96.266444
Pennington	Red Lake River	09020303	3	w-153n44w11-e	9/30/2014	859.9	PSS	Shrub Carr	Type 6	-	-	0.01	-	-	0.01	153	44	11	SENE	48.088122	-96.266196
Pennington	Red Lake River	09020303	3	w-153n44w12-b	9/30/2014	860.6	PEM	Shallow Marshes	Type 3	36.9	0.01	0.12	-	-	0.12	153	44	12	SESW	48.080571	-96.256478
Pennington	Red Lake River	09020303	3	w-153n44w12-b	9/30/2014	860.6	PUB	Shallow Open Water	Type 5	139.8	0.03	0.29	-	-	0.29	153	44	12	SESW	48.080836	-96.255941
Pennington	Red Lake River	09020303	3	w-153n44w12-c	9/30/2014	860.8	PEM	Shallow Marshes	Type 3	23.0	0.00	0.05	-	-	0.05	153	44	12	SESW	48.078723	-96.253565
Pennington	Red Lake River	09020303	3	w-153n44w13-a	9/30/2014	860.8	PEM	Shallow Marshes	Type 3	29.4	0.01	0.06	-	-	0.06	153	44	13	NENW	48.078442	-96.253348
Pennington	Red Lake River	09020303	3	w-153n44w13-b	10/1/2014	861.5	PEM	Seasonally Flooded Basins	Type 1	49.8	0.01	0.11	-	-	0.11	153	44	13	NESE	48.071101	-96.244923
Pennington	Red Lake River	09020303	3	w-153n44w13-c	10/1/2014	861.7	PEM	Seasonally Flooded Basins	Type 1	22.9	0.00	0.06	-	-	0.06	153	44	13	NESE	48.068168	-96.241678
Pennington	Red Lake River	09020303	3	w-153n43w29-a	9/23/2014	863.5	PEM	Fresh (wet) Meadow	Type 2	34.5	0.01	0.08	-	-	0.08	153	43	29	NWNW	48.048697	-96.216869
Pennington	Red Lake River	09020303	3	w-153n43w29-c	9/23/2014	863.7	PEM	Seasonally Flooded Basins	Type 1	-	-	0.01	-	-	0.01	153	43	29	NENW	48.046243	-96.213828
Pennington	Red Lake River	09020303	3	w-153n43w29-b	9/23/2014	863.7	PEM	Fresh (wet) Meadow	Type 2	10.1	0.00	0.02	-	-	0.02	153	43	29	NENW, SENW	48.046005	-96.213443
Pennington	Red Lake River	09020303	3	w-153n43w29-d	9/24/2014	863.8	PEM	Wet to Wet-Mesic Prairies	Type 2	18.9	0.00	0.04	-	-	0.04	153	43	29	SENW	48.045685	-96.21325
Pennington	Red Lake River	09020303	3	w-153n43w29-e	7/8/2015	864.0	PEM	Fresh (wet) Meadow	Type 2	23.9	0.00	0.03	-	-	0.03	153	43	29	NESW, SENW	48.04261	-96.209442
Pennington	Red Lake River	09020303	3	w-153n43w29-f	9/24/2014	864.1	PEM	Fresh (wet) Meadow	Type 2	79.7	0.02	0.12	-	-	0.12	153	43	29	NWSE	48.041268	-96.20815
Pennington	Red Lake River	09020303	3	w-153n43w29-g	9/24/2014	864.2	PEM	Fresh (wet) Meadow	Type 2	148.5	0.03	0.29	-	-	0.29	153	43	29	NWSE	48.040944	-96.208211
Pennington	Red Lake River	09020303	3	w-153n43w29-j [e]	9/25/2014	864.4	PFO	Hardwood Swamps	Type 7	82.5	0.02	-	0.09	-	0.09	153	43	29	SWSE	48.03892	-96.205105
Pennington	Red Lake River	09020303	3	w-153n43w29-i [e]	9/25/2014	864.4	PFO	Hardwood Swamps	Type 7	57.3	0.01	-	0.06	-	0.06	153	43	29	SWSE	48.03864	-96.204658
Pennington	Red Lake River	09020303	3	w-153n43w29-h [e]	9/25/2014	864.4	PFO	Hardwood Swamps	Type 7	44.7	0.01	-	0.05	-	0.05	153	43	29	SWSE	48.038398	-96.204323
Pennington	Red Lake River	09020303	3	w-153n43w29-k [e]	9/25/2014	864.5	PFO	Hardwood Swamps	Type 7	50.1	0.01	-	0.06	-	0.06	153	43	29	SWSE	48.037964	-96.203723
Pennington	Red Lake River	09020303	3	w-153n43w29-l [e]	9/25/2014	864.5	PFO	Hardwood Swamps	Type 7	0.6	0.00	-	0.02	-	0.02	153	43	29	SESE	48.03744	-96.202883
Pennington	Red Lake River	09020303	3	w-153n43w29-n [e]	9/25/2014	864.6	PFO	Hardwood Swamps	Type 7	89.4	0.02	-	0.11	-	0.11	153	43	29	SESE	48.036446	-96.201636
Pennington	Red Lake River	09020303	3	w-153n43w33-a	9/26/2014	865.6	PEM	Shallow Marshes	Type 3	-	-	0.05	-	-	0.05	153	43	33	NWSE	48.026391	-96.18645
Pennington	Red Lake River	09020303	3	w-153n43w33-b	9/26/2014	865.7	PEM	Fresh (wet) Meadow	Type 2	153.4	0.03	0.33	-	-	0.33	153	43	33	NWSE	48.02539	-96.185271
Pennington	Red Lake River	09020303	3	w-153n43w33-c	9/26/2014	865.8	PEM	Seasonally Flooded Basins	Type 1	-	-	0.06	-	-	0.06	153	43	33	NWSE, SWSE	48.024157	-96.183798
Pennington	Red Lake River	09020303	3	w-153n43w33-d	9/26/2014	866.1	PEM	Fresh (wet) Meadow	Type 2	14.1	0.00	0.03	-	-	0.03	153	43	33	SESE	48.020517	-96.180558
Pennington	Red Lake River	09020303	3	w-152n43w5-b	9/26/2014	866.1	PEM	Fresh (wet) Meadow	Type 2	10.9	0.00	0.02	-	-	0.02	152	43	5	NENE	48.020274	-96.180355

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Wetland Table

County	Major Watershed	Hydologic Unit Code (HUC) 8	Bank Service Area (BSA)	Feature ID	Survey Date	Approx. Milepost	Cowardin [a]	Eggers and Reed [a]	Circular 39 [a]	Crossing length (feet) b	Crossing length (miles) b	Temporary Impacts (acres) c	Permanent Conversion (acres) d	Permanent Fill (acres)	Total Impacts (acres)	Township	Range	Section	Quarter-Quarter Section	Latitude	Longitude
Pennington	Red Lake River	09020303	3	w-152n43w5-a	9/26/2014	866.2	PEM	Fresh (wet) Meadow	Type 2	14.5	0.00	0.03	-	-	0.03	152	43	5	NENE	48.019521	-96.179469
Pennington	Red Lake River	09020303	3	w-152n43w4-a	9/26/2014	866.2	PEM	Seasonally Flooded Basins	Type 1	53.0	0.01	0.12	-	-	0.12	152	43	4	NWNW	48.018991	-96.178663
Pennington	Red Lake River	09020303	3	w-152n43w4-b	9/27/2014	866.4	PEM	Seasonally Flooded Basins	Type 1	20.4	0.00	0.04	-	-	0.04	152	43	4	NWNW, SWNW	48.017105	-96.176042
Pennington	Red Lake River	09020303	3	w-152n43w4-c	9/27/2014	866.5	PEM	Seasonally Flooded Basins	Type 1	77.0	0.01	0.26	-	-	0.26	152	43	4	SWNW, SENW	48.016051	-96.174421
Pennington	Red Lake River	09020303	3	w-152n43w4-d	9/27/2014	866.6	PEM	Seasonally Flooded Basins	Type 1	-	-	0.15	-	-	0.15	152	43	4	SENW	48.015048	-96.172803
Pennington	Red Lake River	09020303	3	w-152n43w4-f	9/27/2014	866.8	PEM	Seasonally Flooded Basins	Type 1	170.5	0.03	0.25	-	-	0.25	152	43	4	NESW	48.01314	-96.170038
Pennington	Red Lake River	09020303	3	w-152n43w9-a	9/29/2014	867.6	PEM	Wet to Wet-Mesic Prairies	Type 2	2.7	0.00	0.02	-	-	0.02	152	43	9	NENE	48.004666	-96.158436
Pennington	Red Lake River	09020303	3	w-152n43w9-b	9/29/2014	867.6	PEM	Wet to Wet-Mesic Prairies	Type 2	14.0	0.00	0.03	-	-	0.03	152	43	9, 10	NWNW, NENE	48.004574	-96.158235
Pennington	Red Lake River	09020303	3	w-152n43w10-a	9/29/2014	868.1	PEM	Fresh (wet) Meadow	Type 2	21.2	0.00	0.05	-	-	0.05	152	43	10	NESW, SENW	47.999419	-96.151275
Pennington	Red Lake River	09020303	3	w-152n43w10-b	9/29/2014	868.2	PEM	Seasonally Flooded Basins	Type 1	18.1	0.00	0.04	-	-	0.04	152	43	10	NESW	47.99766	-96.149548
Pennington	Red Lake River	09020303	3	w-152n43w10-c	9/29/2014	868.3	PEM	Seasonally Flooded Basins	Type 1	14.4	0.00	0.04	-	-	0.04	152	43	10	NESW	47.99633	-96.148518
Pennington	Red Lake River	09020303	3	w-152n43w10-d	9/29/2014	868.4	PEM	Shallow Marshes	Type 3	-	-	0.00	-	-	0.00	152	43	10	SWSE	47.995652	-96.147722
Pennington	Red Lake River	09020303	3	w-152n43w10-e	9/29/2014	868.4	PEM	Fresh (wet) Meadow	Type 2	99.9	0.02	0.18	-	-	0.18	152	43	10	SWSE	47.995258	-96.147533
Pennington	Red Lake River	09020303	3	w-152n43w10-f	9/30/2014	868.5	PSS	Shrub Carr	Type 6	-	-	0.08	-	-	0.08	152	43	10	SWSE	47.994492	-96.147169
Pennington	Red Lake River	09020303	3	w-152n43w10-f	9/30/2014	868.6	PEM	Fresh (wet) Meadow	Type 2	378.0	0.07	0.88	-	-	0.88	152	43	10	SWSE	47.993414	-96.145472
Pennington	Red Lake River	09020303	3	w-152n43w15-a	9/30/2014	868.7	PEM	Seasonally Flooded Basins	Type 1	13.8	0.00	0.03	-	-	0.03	152	43	15	NWNE	47.991926	-96.143514
Pennington	Red Lake River	09020303	3	w-152n43w15-b	9/30/2014	868.8	PEM	Seasonally Flooded Basins	Type 1	26.2	0.00	0.06	-	-	0.06	152	43	15	NENE	47.99058	-96.141596
Pennington	Red Lake River	09020303	3	w-152n43w15-c	9/30/2014	868.9	PEM	Seasonally Flooded Basins	Type 1	-	-	0.00	-	-	0.00	152	43	15	NENE	47.989401	-96.139857
Pennington	Red Lake River	09020303	3	w-152n43w15-d	9/30/2014	869.0	PEM	Seasonally Flooded Basins	Type 1	14.9	0.00	0.03	-	-	0.03	152	43	15	SENE	47.988454	-96.138852
Pennington	Red Lake River	09020303	3	w-152n43w15-e	9/30/2014	869.1	PEM	Fresh (wet) Meadow	Type 2	19.3	0.00	0.03	-	-	0.03	152	43	15	SENE	47.987757	-96.137862
Pennington	Red Lake River	09020303	3	w-152n43w15-f	10/1/2014	869.1	PEM	Wet to Wet-Mesic Prairies	Type 2	-	-	0.01	-	-	0.01	152	43	14	SWNW	47.987536	-96.137654
Pennington	Red Lake River	09020303	3	w-152n43w14-a	10/1/2014	869.7	PEM	Fresh (wet) Meadow	Type 2	70.6	0.01	0.19	-	-	0.19	152	43	14	NESW	47.981536	-96.129453
Pennington	Red Lake River	09020303	3	w-152n43w14-c	10/8/2014	869.8	PEM	Fresh (wet) Meadow	Type 2	2.7	0.00	0.01	-	-	0.01	152	43	14	SESW	47.979985	-96.127307
Pennington	Red Lake River	09020303	3	w-152n43w23-a	10/8/2014	870.0	PEM	Seasonally Flooded Basins	Type 1	128.4	0.02	0.16	-	-	0.16	152	43	14, 23	NWNE, SWSE	47.977761	-96.124275
Pennington	Red Lake River	09020303	3	w-152n43w24-a	10/8/2014	870.7	PEM	Seasonally Flooded Basins	Type 1	25.6	0.00	0.08	-	-	0.08	152	43	24	NWSW, SWNW	47.970567	-96.114604
Pennington	Red Lake River	09020303	3	w-152n43w24-b	10/8/2014	870.8	PEM	Fresh (wet) Meadow	Type 2	60.9	0.01	0.23	-	-	0.23	152	43	24	NWSW, SWSE, SESW	47.969024	-96.112643
Pennington	Red Lake River	09020303	3	w-152n43w24-b	10/8/2014	871.2	PFO	Hardwood Swamps	Type 7	-	-	-	0.03	-	0.03	152	43	24	SESW	47.964999	-96.107169
Pennington	Red Lake River	09020303	3	w-152n43w24-c	10/8/2014	871.3	PEM	Fresh (wet) Meadow	Type 2	60.2	0.01	0.14	-	-	0.14	152	43	24	SWSE	47.96458	-96.106365

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Line 3 Replacement Project
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County	Major Watershed	Hydologic Unit Code (HUC) 8	Bank Service Area (BSA)	Feature ID	Survey Date	Approx. Milepost	Cowardin [a]	Eggers and Reed [a]	Circular 39 [a]	Crossing length (feet) b	Crossing length (miles) b	Temporary Impacts (acres) c	Permanent Conversion (acres) d	Permanent Fill (acres)	Total Impacts (acres)	Township	Range	Section	Quarter-Quarter Section	Latitude	Longitude
Red Lake	Red Lake River	09020303	3	w-152n43w25-a	9/29/2014	871.5	PEM	Seasonally Flooded Basins	Type 1	-	-	0.03	-	-	0.03	152	43	25	NWNE	47.961678	-96.102656
Red Lake	Red Lake River	09020303	3	w-152n42w30-b	9/27/2014	872.6	PEM	Fresh (wet) Meadow	Type 2	12.0	0.00	0.02	-	-	0.02	152	42	30	SESW	47.949258	-96.087913
Red Lake	Red Lake River	09020303	3	w-152n42w31-b	9/27/2014	872.6	PEM	Fresh (wet) Meadow	Type 2	8.5	0.00	0.02	-	-	0.02	152	42	30, 31	NENW, SESW	47.949086	-96.087707
Red Lake	Red Lake River	09020303	3	w-152n42w31-a	9/29/2014	873.4	PEM	Seasonally Flooded Basins	Type 1	230.2	0.04	0.36	-	-	0.36	152	42	31	NESE	47.940489	-96.077342
Red Lake	Red Lake River	09020303	3	w-152n42w32-a	9/29/2014	873.5	PEM	Fresh (wet) Meadow	Type 2	10.7	0.00	0.03	-	-	0.03	152	42	32	NWSW	47.938988	-96.075395
Red Lake	Red Lake River	09020303	3	w-151n42w5-a	9/30/2014	873.9	PEM	Fresh (wet) Meadow	Type 2	13.7	0.00	0.05	-	-	0.05	151	42	5	NWNW, NENW	47.934508	-96.070293
Red Lake	Red Lake River	09020303	3	w-151n42w5-b	9/30/2014	874.3	PEM	Seasonally Flooded Basins	Type 1	-	-	0.10	-	-	0.10	151	42	5	SWNE	47.930631	-96.063987
Red Lake	Red Lake River	09020303	3	w-151n42w5-c	9/30/2014	874.5	PEM	Seasonally Flooded Basins	Type 1	39.2	0.01	0.05	-	-	0.05	151	42	5	SWNE	47.928908	-96.061484
Red Lake	Red Lake River	09020303	3	w-151n42w5-d	9/30/2014	874.6	PEM	Seasonally Flooded Basins	Type 1	-	-	0.05	-	-	0.05	151	42	5	SWNE	47.928044	-96.060252
Red Lake	Red Lake River	09020303	3	w-151n42w5-e	9/30/2014	874.6	PEM	Fresh (wet) Meadow	Type 2	-	-	0.05	-	-	0.05	151	42	5	NWSE, NESE	47.927282	-96.059354
Red Lake	Red Lake River	09020303	3	w-151n42w5-e	9/30/2014	874.7	PUB	Shallow Open Water	Type 5	-	-	0.00	-	-	0.00	151	42	5	NESE	47.927193	-96.059254
Red Lake	Clearwater River	09020305	3	w-151n42w4-a [e]	10/1/2014	875.4	PEM	Fresh (wet) Meadow	Type 2	20.8	0.00	0.02	-	-	0.02	151	42	9	NWNW, NENW	47.919639	-96.048459
Red Lake	Clearwater River	09020305	3	w-151n42w4-a [e]	10/1/2014	875.4	PFO	Floodplain Forests	Type 1	5.8	0.00	-	0.01	-	0.01	151	42	9	NWNW	47.919574	-96.048462
Red Lake	Clearwater River	09020305	3	w-151n42w9-a [e]	10/1/2014	875.4	PEM	Fresh (wet) Meadow	Type 2	616.6	0.12	0.66	-	-	0.66	151	42	9	NENW	47.919188	-96.046794
Red Lake	Clearwater River	09020305	3	w-151n42w9-a [e]	10/1/2014	875.5	PFO	Floodplain Forests	Type 1	136.9	0.03	-	0.21	-	0.21	151	42	9	NENW	47.919059	-96.046593
Red Lake	Clearwater River	09020305	3	w-151n42w9-b [e]	10/1/2014	875.7	PEM	Fresh (wet) Meadow	Type 2	12.0	0.00	0.02	-	-	0.02	151	42	9	NWNE	47.917914	-96.042236
Red Lake	Clearwater River	09020305	3	w-151n42w9-c [e]	10/1/2014	875.7	PEM	Fresh (wet) Meadow	Type 2	17.5	0.00	0.02	-	-	0.02	151	42	9	NWNE	47.917821	-96.041905
Red Lake	Clearwater River	09020305	3	w-151n42w9-e [e]	10/1/2014	875.7	PEM	Fresh (wet) Meadow	Type 2	14.4	0.00	0.03	-	-	0.03	151	42	9	NWNE	47.918242	-96.040981
Red Lake	Clearwater River	09020305	3	w-151n42w9-d [e]	10/1/2014	875.8	PEM	Shallow Marshes	Type 3	30.2	0.01	0.03	-	-	0.03	151	42	9	NWNE	47.917554	-96.040929
Red Lake	Clearwater River	09020305	3	w-151n42w9-g	10/3/2014	875.9	PEM	Fresh (wet) Meadow	Type 2	3,291.5	0.62	7.92	-	-	7.92	151	42	9, 10	NWSW, NESE, SWNW, SWNE, SWSW, SENE, SESW	47.916058	-96.037802
Red Lake	Clearwater River	09020305	3	w-151n42w9-j	10/3/2014	876.0	PEM	Fresh (wet) Meadow	Type 2	-	-	0.06	-	-	0.06	151	42	9	SENE	47.916287	-96.035716
Red Lake	Clearwater River	09020305	3	w-151n42w9-i	10/2/2014	876.2	PEM	Fresh (wet) Meadow	Type 2	-	-	0.17	-	-	0.17	151	42	9	SENE	47.915328	-96.032347
Red Lake	Clearwater River	09020305	3	w-151n42w9-g	10/3/2014	876.2	PSS	Shrub Carr	Type 6	993.1	0.19	2.15	1.25	-	3.40	151	42	9, 10	NWSW, NESE, SWSW, SENE, SESW	47.913131	-96.033172
Red Lake	Clearwater River	09020305	3	w-151n42w9-g	10/3/2014	876.4	PUB	Shallow Open Water	Type 5	-	-	0.04	-	-	0.04	151	42	10	NWSW	47.911657	-96.030967
Red Lake	Clearwater River	09020305	3	w-151n42w15-n	10/1/2014	876.9	PEM	Fresh (wet) Meadow	Type 2	14.2	0.00	0.03	-	0.04	0.07	151	42	15	NENW	47.905489	-96.025107
Red Lake	Clearwater River	09020305	3	w-151n42w15-y	10/2/2014	877.2	PEM	Fresh (wet) Meadow	Type 2	-	-	0.01	-	-	0.01	151	42	15	NWNE	47.903021	-96.020465

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County	Major Watershed	Hydologic Unit Code (HUC) 8	Bank Service Area (BSA)	Feature ID	Survey Date	Approx. Milepost	Cowardin [a]	Eggers and Reed [a]	Circular 39 [a]	Crossing length (feet) b	Crossing length (miles) b	Temporary Impacts (acres) c	Permanent Conversion (acres) d	Permanent Fill (acres)	Total Impacts (acres)	Township	Range	Section	Quarter-Quarter Section	Latitude	Longitude
Red Lake	Clearwater River	09020305	3	w-151n42w15-hh	10/3/2014	877.4	PSS	Shrub Carr	Type 6	-	-	0.03	-	-	0.03	151	42	15	NWNE	47.905396	-96.015952
Red Lake	Clearwater River	09020305	3	w-151n42w15-ii	10/8/2014	877.7	PEM	Fresh (wet) Meadow	Type 2	19.7	0.00	0.04	-	-	0.04	151	42	14, 15	SWNW, SENE	47.899167	-96.010156
Red Lake	Clearwater River	09020305	3	w-151n42w14-d	10/8/2014	878.5	PEM	Fresh (wet) Meadow	Type 2	17.8	0.00	0.04	-	-	0.04	151	42	14	SWSE	47.891254	-95.997844
Red Lake	Clearwater River	09020305	3	w-151n42w23-a	10/8/2014	878.5	PEM	Fresh (wet) Meadow	Type 2	20.8	0.00	0.05	-	-	0.05	151	42	23	NWNE	47.891092	-95.997589
Red Lake	Clearwater River	09020305	3	w-151n42w23-c	10/8/2014	878.5	PEM	Fresh (wet) Meadow	Type 2	54.1	0.01	0.35	-	-	0.35	151	42	23	NWNE	47.890497	-95.996785
Red Lake	Clearwater River	09020305	3	w-151n42w23-b	10/8/2014	878.6	PEM	Fresh (wet) Meadow	Type 2	980.2	0.19	2.14	-	-	2.14	151	42	23	NWNE, NENE	47.889683	-95.995318
Red Lake	Clearwater River	09020305	3	w-151n42w23-b	10/8/2014	878.7	PFO	Hardwood Swamps	Type 7	-	-	-	0.01	-	0.01	151	42	23	NWNE, NENE	47.889009	-95.994046
Red Lake	Clearwater River	09020305	3	w-151n42w24-a	10/10/2014	879.1	PEM	Fresh (wet) Meadow	Type 2	13.4	0.00	0.03	-	-	0.03	151	42	24	SWNW	47.885633	-95.98836
Red Lake	Clearwater River	09020305	3	w-151n42w24-b	10/10/2014	879.1	PEM	Fresh (wet) Meadow	Type 2	10.1	0.00	0.02	-	-	0.02	151	42	24	SWNW	47.885583	-95.988136
Red Lake	Clearwater River	09020305	3	w-151n42w24-f	10/11/2014	879.2	PEM	Fresh (wet) Meadow	Type 2	11.7	0.00	0.02	-	-	0.02	151	42	24	SWNW	47.884787	-95.985488
Red Lake	Clearwater River	09020305	3	w-151n42w24-i	10/11/2014	879.4	PSS	Shrub Carr	Type 6	-	-	0.03	-	-	0.03	151	42	24	NESW	47.88319	-95.980431
Red Lake	Clearwater River	09020305	3	w-151n42w24-i	10/11/2014	879.5	PEM	Fresh (wet) Meadow	Type 2	979.1	0.19	2.04	-	-	2.04	151	42	24	NESW	47.882998	-95.980262
Red Lake	Clearwater River	09020305	3	w-151n42w24-j	10/14/2014	879.6	PEM	Fresh (wet) Meadow	Type 2	300.2	0.06	0.68	-	-	0.68	151	42	24	NWSE, NESW	47.882097	-95.977603
Red Lake	Clearwater River	09020305	3	w-151n42w24-n	10/14/2014	879.7	PEM	Fresh (wet) Meadow	Type 2	22.4	0.00	0.04	-	-	0.04	151	42	24	NWSE	47.881703	-95.976189
Red Lake	Clearwater River	09020305	3	w-151n42w24-o	10/14/2014	879.8	PSS	Shrub Carr	Type 6	-	-	0.03	-	-	0.03	151	42	24	NWSE, NESE	47.880825	-95.973112
Red Lake	Clearwater River	09020305	3	w-151n42w24-o	10/14/2014	879.9	PEM	Fresh (wet) Meadow	Type 2	258.9	0.05	0.47	-	-	0.47	151	42	24	NWSE, NESE	47.88068	-95.97281
Red Lake	Clearwater River	09020305	3	w-151n41w19-a	10/15/2014	880.2	PEM	Shallow Marshes	Type 3	21.7	0.00	0.05	-	-	0.05	151	41	19	SWSW	47.878568	-95.966493
Red Lake	Clearwater River	09020305	3	w-151n41w19-d	10/16/2014	880.3	PEM	Fresh (wet) Meadow	Type 2	-	-	0.12	-	-	0.12	151	41	19	SWSW	47.877894	-95.964083
Red Lake	Clearwater River	09020305	3	w-151n41w19-f	10/16/2014	880.4	PFO	Hardwood Swamps	Type 7	-	-	-	0.09	-	0.09	151	41	19	SWSW, SESW	47.877367	-95.962437
Red Lake	Clearwater River	09020305	3	w-151n41w19-b	10/15/2014	880.5	PEM	Fresh (wet) Meadow	Type 2	15.4	0.00	0.05	-	-	0.05	151	41	19	SWSW, SESW	47.876862	-95.961699
Red Lake	Clearwater River	09020305	3	w-151n41w29-a	10/17/2014	881.3	PEM	Fresh (wet) Meadow	Type 2	8.0	0.00	0.02	-	-	0.02	151	41	29	SWNW	47.871778	-95.945509
Red Lake	Clearwater River	09020305	3	w-151n41w29-c	10/17/2014	881.3	PEM	Fresh (wet) Meadow	Type 2	10.7	0.00	0.01	-	-	0.01	151	41	29	SWNW	47.871629	-95.945266
Red Lake	Clearwater River	09020305	3	w-151n41w28-b	10/16/2014	882.5	PEM	Seasonally Flooded Basins	Type 1	272.4	0.05	0.65	-	-	0.65	151	41	28	SWSW	47.864333	-95.922314
Red Lake	Clearwater River	09020305	3	w-151n41w34-f	10/14/2014	883.5	PEM	Fresh (wet) Meadow	Type 2	11.7	0.00	0.02	-	-	0.02	151	41	34	SWNW	47.857779	-95.901916
Red Lake	Clearwater River	09020305	3	w-151n41w34-e	10/14/2014	883.8	PEM	Seasonally Flooded Basins	Type 1	270.3	0.05	0.75	-	-	0.75	151	41	34	SWNW	47.856333	-95.897451
Red Lake	Clearwater River	09020305	3	w-151n41w34-d	10/14/2014	883.9	PEM	Seasonally Flooded Basins	Type 1	229.6	0.04	0.41	-	-	0.41	151	41	34	NESW, SENW	47.855397	-95.893701
Red Lake	Clearwater River	09020305	3	w-151n41w34-d	10/14/2014	884.0	PSS	Shrub Carr	Type 6	-	-	0.17	0.00	-	0.17	151	41	34	NESW, SENW	47.855352	-95.893489
Red Lake	Clearwater River	09020305	3	w-151n41w34-d	10/14/2014	884.0	PFO	Hardwood Swamps	Type 7	-	-	-	0.01	-	0.01	151	41	34	NESW	47.855029	-95.892483
Red Lake	Clearwater River	09020305	3	w-151n41w34-c	10/14/2014	884.2	PEM	Seasonally Flooded Basins	Type 1	74.2	0.01	0.21	-	-	0.21	151	41	34	NWSE	47.853768	-95.889817
Red Lake	Clearwater River	09020305	3	w-151n41w34-b	10/14/2014	884.3	PEM	Seasonally Flooded Basins	Type 1	-	-	0.02	-	-	0.02	151	41	34	NWSE	47.853035	-95.887797
Red Lake	Clearwater River	09020305	3	w-151n41w34-a	10/14/2014	884.3	PEM	Seasonally Flooded Basins	Type 1	21.6	0.00	0.31	-	-	0.31	151	41	34	NWSE	47.852842	-95.886747

Attachment F
Line 3 Replacement Project
Wetland Table

County	Major Watershed	Hydrologic Unit Code (HUC) 8	Bank Service Area (BSA)	Feature ID	Survey Date	Approx. Milepost	Cowardin [a]	Eggers and Reed [a]	Circular 39 [a]	Crossing length (feet) b	Crossing length (miles) b	Temporary Impacts (acres) c	Permanent Conversion (acres) d	Permanent Fill (acres)	Total Impacts (acres)	Township	Range	Section	Quarter-Quarter Section	Latitude	Longitude
Red Lake	Clearwater River	09020305	3	w-151n41w35-b	10/14/2014	884.8	PEM	Seasonally Flooded Basins	Type 1	562.5	0.11	0.90	-	-	0.90	151	41	35	SWSW	47.849788	-95.877526
Red Lake	Clearwater River	09020305	3	w-151n41w35-a	10/13/2014	885.1	PEM	Wet to Wet-Mesic Prairies	Type 2	16.0	0.00	0.03	-	-	0.03	151	41	35	SESW	47.848125	-95.87238
Red Lake	Clearwater River	09020305	3	w-150n41w2-c	10/13/2014	885.1	PEM	Fresh (wet) Meadow	Type 2	17.7	0.00	0.04	-	-	0.04	150	41	2	NENW	47.847973	-95.871911
Red Lake	Clearwater River	09020305	3	w-150n41w2-b	10/13/2014	885.6	PEM	Seasonally Flooded Basins	Type 1	37.9	0.01	0.13	-	-	0.13	150	41	2	NENE	47.846024	-95.861564
Red Lake	Clearwater River	09020305	3	w-150n41w2-a	10/13/2014	885.7	PEM	Fresh (wet) Meadow	Type 2	18.7	0.00	0.04	-	-	0.04	150	41	2	NENE	47.845684	-95.858817
Red Lake	Clearwater River	09020305	3	w-150n41w1-c	10/2/2014	885.9	PEM	Fresh (wet) Meadow	Type 2	15.4	0.00	0.05	-	-	0.05	150	41	1	NWNW	47.845167	-95.855554
Red Lake	Clearwater River	09020305	3	w-150n41w1-f	10/2/2014	886.0	PSS	Shrub Carr	Type 6	-	-	0.01	-	-	0.01	150	41	1	SWNW	47.844231	-95.853218
Red Lake	Clearwater River	09020305	3	w-150n41w1-h	10/2/2014	886.1	PEM	Fresh (wet) Meadow	Type 2	202.1	0.04	0.50	-	-	0.50	150	41	1	SENW	47.84295	-95.850949
Red Lake	Clearwater River	09020305	3	w-150n41w1-h	10/2/2014	886.1	PFO	Hardwood Swamps	Type 7	-	-	-	0.00	-	0.00	150	41	1	SENW	47.84299	-95.850667
Polk	Clearwater River	09020305	3	w-150n40w8-a	10/3/2014	889.0	PEM	Seasonally Flooded Basins	Type 1	26.1	0.00	0.10	-	-	0.10	150	40	8	NESE	47.823202	-95.796528
Polk	Clearwater River	09020305	3	w-150n40w16-b	10/3/2014	890.2	PEM	Fresh (wet) Meadow	Type 2	163.1	0.03	0.28	-	-	0.28	150	40	16	NENE	47.815919	-95.77417
Polk	Clearwater River	09020305	3	MN_NWI-290	TBD	891.2	PEM	TBD	TBD	-	-	0.01	-	-	0.01	150	40	14	NWSW, SWNW	47.812053	-95.75228
Polk	Clearwater River	09020305	3	w-150n40w23-b	10/4/2014	891.9	PEM	Fresh (wet) Meadow	Type 2	1,168.3	0.22	2.50	-	-	2.50	150	40	14, 23	NWNE, SWSE, SESW	47.805191	-95.741439
Polk	Clearwater River	09020305	3	w-150n40w23-b	10/4/2014	892.0	PSS	Shrub Carr	Type 6	-	-	0.02	-	-	0.02	150	40	23	NWNE	47.804239	-95.738337
Polk	Clearwater River	09020305	3	w-150n40w23-a	10/4/2014	892.2	PFO	Hardwood Swamps	Type 7	-	-	-	0.00	-	0.00	150	40	23	NENE	47.803111	-95.734927
Polk	Clearwater River	09020305	3	w-150n40w23-a	10/4/2014	892.2	PEM	Fresh (wet) Meadow	Type 2	235.8	0.04	0.54	-	-	0.54	150	40	23	NENE	47.802935	-95.734925
Polk	Clearwater River	09020305	3	w-150n40w24-a	10/3/2014	892.4	PEM	Sedge Meadows	Type 2	17.8	0.00	0.04	-	-	0.04	150	40	24	NWNW	47.801785	-95.730411
Polk	Clearwater River	09020305	3	w-150n40w24-c	10/3/2014	892.6	PEM	Fresh (wet) Meadow	Type 2	-	-	0.11	-	-	0.11	150	40	24	NWNW	47.802326	-95.725595
Polk	Clearwater River	09020305	3	w-150n40w24-e	10/6/2014	893.0	PSS	Shrub Carr	Type 6	86.8	0.02	0.18	0.09	-	0.27	150	40	24	NWNE	47.80355	-95.717968
Polk	Clearwater River	09020305	3	w-150n40w24-g	10/6/2014	893.0	PEM	Fresh (wet) Meadow	Type 2	12.3	0.00	0.11	-	-	0.11	150	40	24	NWNE	47.803954	-95.715559
Polk	Clearwater River	09020305	3	w-150n40w24-h	10/6/2014	893.2	PEM	Fresh (wet) Meadow	Type 2	852.8	0.16	1.83	-	-	1.83	150	40	24	NENE	47.803942	-95.712382
Polk	Clearwater River	09020305	3	w-150n39w19-a	10/4/2014	893.3	PEM	Fresh (wet) Meadow	Type 2	13.2	0.00	0.03	-	-	0.03	150	39	19	NWNW	47.803892	-95.708993
Polk	Clearwater River	09020305	3	w-150n39w19-b	10/6/2014	893.4	PEM	Fresh (wet) Meadow	Type 2	7,237.4	1.37	15.69	-	-	15.69	150	39	19, 30	NWNW, NWNE, NWSW, NESW, SWNW, SWSE, SESW	47.802763	-95.707287
Polk	Clearwater River	09020305	3	w-150n39w30-a	10/10/2014	894.6	PEM	Fresh (wet) Meadow	Type 2	1,585.7	0.30	4.21	-	-	4.21	150	39	30	SWNE, SENE	47.785254	-95.693361
Polk	Clearwater River	09020305	3	w-150n39w30-a	10/10/2014	894.6	PSS	Shrub Carr	Type 6	-	-	0.00	-	-	0.00	150	39	30	SENE	47.785015	-95.692354
Polk	Clearwater River	09020305	3	w-150n39w29-a	10/10/2014	894.9	PEM	Fresh (wet) Meadow	Type 2	3,865.4	0.73	8.05	-	-	8.05	150	39	29	NWSE, NWSW, NESW, SWNW, SWSE	47.783431	-95.686424
Polk	Clearwater River	09020305	3	w-150n39w29-a	10/10/2014	895.0	PSS	Shrub Carr	Type 6	-	-	0.16	-	-	0.16	150	39	29	NWSW, NESW	47.782544	-95.684088
Polk	Clearwater River	09020305	3	w-150n39w29-a	10/10/2014	895.2	PFO	Hardwood Swamps	Type 7	-	-	-	0.15	-	0.15	150	39	29	NWSE, NESW, SWSE	47.780969	-95.678595

Attachment F
Line 3 Replacement Project
Wetland Table

County	Major Watershed	Hydologic Unit Code (HUC) 8	Bank Service Area (BSA)	Feature ID	Survey Date	Approx. Milepost	Cowardin [a]	Eggers and Reed [a]	Circular 39 [a]	Crossing length (feet) b	Crossing length (miles) b	Temporary Impacts (acres) c	Permanent Conversion (acres) d	Permanent Fill (acres)	Total Impacts (acres)	Township	Range	Section	Quarter-Quarter Section	Latitude	Longitude
Polk	Clearwater River	09020305	3	w-150n39w34-a	10/11/2014	897.9	PEM	Fresh (wet) Meadow	Type 2	48.0	0.01	0.12	-	-	0.12	150	39	34	SWSE, SESE	47.762804	-95.628491
Polk	Clearwater River	09020305	3	w-150n39w34-a	10/11/2014	897.9	PSS	Shrub Carr	Type 6	-	-	0.03	-	-	0.03	150	39	34	SWSE, SESE	47.762705	-95.628403
Polk	Clearwater River	09020305	3	w-150n39w34-a	10/11/2014	897.9	PFO	Hardwood Swamps	Type 7	-	-	-	0.00	-	0.00	150	39	34	SESE	47.76261	-95.628184
Polk	Clearwater River	09020305	3	w-149n39w2-a	10/10/2014	898.7	PEM	Seasonally Flooded Basins	Type 1	-	-	0.03	-	-	0.03	149	39	2	NENW, SENW	47.757107	-95.613502
Polk	Clearwater River	09020305	3	w-149n39w2-e	10/11/2014	899.3	PEM	Fresh (wet) Meadow	Type 2	75.3	0.01	0.17	-	-	0.17	149	39	2	SENE	47.753826	-95.602922
Polk	Clearwater River	09020305	3	w-149n39w1-a	10/11/2014	899.4	PSS	Shrub Carr	Type 6	-	-	0.06	0.03	-	0.08	149	39	1	NWSW	47.752807	-95.599897
Polk	Clearwater River	09020305	3	w-149n39w1-a	10/11/2014	899.4	PEM	Shallow Marshes	Type 3	144.2	0.03	0.25	-	-	0.25	149	39	1	NWSW	47.752806	-95.599918
Polk	Clearwater River	09020305	3	w-149n39w1-c	10/11/2014	899.7	PEM	Fresh (wet) Meadow	Type 2	709.2	0.13	1.67	-	-	1.67	149	39	1	NWSE, NESW, SWSE, SESW	47.75066	-95.593429
Polk	Clearwater River	09020305	3	w-149n39w1-d	10/13/2014	900.1	PEM	Seasonally Flooded Basins	Type 1	19.2	0.00	0.07	-	-	0.07	149	39	1	SWSE	47.748545	-95.586542
Polk	Clearwater River	09020305	3	w-149n39w1-e	10/13/2014	900.2	PEM	Seasonally Flooded Basins	Type 1	60.1	0.01	0.19	-	-	0.19	149	39	1	SWSE, SESE	47.747851	-95.58497
Clearwater	Clearwater River	09020305	3	w-149n39w1-g	10/13/2014	900.5	PEM	Fresh (wet) Meadow	Type 2	16.4	0.00	0.04	-	-	0.04	149	38	6	SWSW	47.746268	-95.579471
Clearwater	Clearwater River	09020305	3	w-149n38w6-a	10/13/2014	900.5	PEM	Fresh (wet) Meadow	Type 2	37.9	0.01	0.09	-	-	0.09	149	38	6, 7	NWNW, SWSW	47.746119	-95.578902
Clearwater	Clearwater River	09020305	3	w-149n38w7-a	10/14/2014	900.5	PEM	Fresh (wet) Meadow	Type 2	63.2	0.01	0.15	-	-	0.15	149	38	7	NWNW	47.74574	-95.577915
Clearwater	Clearwater River	09020305	3	w-149n38w7-b	10/14/2014	900.8	PEM	Shallow Marshes	Type 3	308.6	0.06	0.70	-	-	0.70	149	38	7	NENW	47.744213	-95.573221
Clearwater	Clearwater River	09020305	3	w-149n38w7-e	10/14/2014	901.3	PEM	Fresh (wet) Meadow	Type 2	195.2	0.04	0.38	-	-	0.38	149	38	7	SENE	47.74118	-95.563851
Clearwater	Clearwater River	09020305	3	w-149n38w7-f	10/15/2014	901.4	PEM	Fresh (wet) Meadow	Type 2	205.2	0.04	0.37	-	-	0.37	149	38	7	SENE	47.740609	-95.561704
Clearwater	Clearwater River	09020305	3	w-149n38w7-g	10/15/2014	901.4	PEM	Fresh (wet) Meadow	Type 2	79.9	0.02	0.16	-	-	0.16	149	38	7	SENE	47.740199	-95.560646
Clearwater	Clearwater River	09020305	3	w-149n38w8-a	10/15/2014	901.6	PEM	Fresh (wet) Meadow	Type 2	167.2	0.03	0.37	-	-	0.37	149	38	8	SWNW	47.739484	-95.558673
Clearwater	Clearwater River	09020305	3	w-149n38w8-a	10/15/2014	901.6	PSS	Shrub Carr	Type 6	-	-	0.04	-	-	0.04	149	38	8	SWNW	47.739473	-95.55872
Clearwater	Clearwater River	09020305	3	w-149n38w8-a	10/15/2014	901.6	PFO	Hardwood Swamps	Type 7	-	-	-	0.02	-	0.02	149	38	8	SWNW	47.739249	-95.558095
Clearwater	Clearwater River	09020305	3	w-149n38w8-b	10/15/2014	901.7	PEM	Fresh (wet) Meadow	Type 2	10.9	0.00	0.06	-	-	0.06	149	38	8	NWSW	47.738637	-95.555936
Clearwater	Clearwater River	09020305	3	w-149n38w8-d	10/16/2014	902.4	PEM	Fresh (wet) Meadow	Type 2	57.4	0.01	0.12	-	-	0.12	149	38	8	SESE	47.734395	-95.542809
Clearwater	Clearwater River	09020305	3	w-149n38w16-a	10/10/2014	902.7	PEM	Fresh (wet) Meadow	Type 2	18.4	0.00	0.04	-	-	0.04	149	38	9, 16	NWNW, SWSW	47.731522	-95.535949
Clearwater	Clearwater River	09020305	3	w-149n38w16-j	7/9/2015	902.8	PEM	Fresh (wet) Meadow	Type 2	-	-	0.00	-	-	0.00	149	38	9, 16	NWNW, SWSW	47.731544	-95.535158
Clearwater	Clearwater River	09020305	3	w-149n38w16-c	10/10/2014	903.0	PEM	Fresh (wet) Meadow	Type 2	38.0	0.01	0.08	-	-	0.08	149	38	16	NENW	47.729904	-95.531868
Clearwater	Clearwater River	09020305	3	w-149n38w16-e	10/11/2014	903.1	PEM	Fresh (wet) Meadow	Type 2	133.4	0.03	0.26	-	-	0.26	149	38	16	NENW	47.728583	-95.528701
Clearwater	Clearwater River	09020305	3	w-149n38w16-e	10/11/2014	903.1	PSS	Shrub Carr	Type 6	-	-	0.02	-	-	0.02	149	38	16	NENW	47.728477	-95.528794
Clearwater	Clearwater River	09020305	3	w-149n38w16-f	10/11/2014	903.2	PSS	Shrub Carr	Type 6	-	-	0.01	-	-	0.01	149	38	16	SWNE	47.727694	-95.526893
Clearwater	Clearwater River	09020305	3	w-149n38w16-f	10/11/2014	903.2	PEM	Fresh (wet) Meadow	Type 2	35.0	0.01	0.08	-	-	0.08	149	38	16	SWNE	47.727761	-95.526706
Clearwater	Clearwater River	09020305	3	w-149n38w16-g	10/13/2014	903.5	PSS	Shrub Carr	Type 6	-	-	0.01	-	-	0.01	149	38	16	SENE	47.725592	-95.521768
Clearwater	Clearwater River	09020305	3	w-149n38w16-g	10/13/2014	903.5	PEM	Fresh (wet) Meadow	Type 2	33.4	0.01	0.08	-	-	0.08	149	38	16	SENE	47.725612	-95.521627
Clearwater	Clearwater River	09020305	3	w-149n38w16-h	10/13/2014	903.7	PEM	Fresh (wet) Meadow	Type 2	104.1	0.02	0.20	-	-	0.20	149	38	16	NESE	47.724054	-95.517553

Attachment F
Line 3 Replacement Project
Wetland Table

County	Major Watershed	Hydrologic Unit Code (HUC) 8	Bank Service Area (BSA)	Feature ID	Survey Date	Approx. Milepost	Cowardin [a]	Eggers and Reed [a]	Circular 39 [a]	Crossing length (feet) b	Crossing length (miles) b	Temporary Impacts (acres) c	Permanent Conversion (acres) d	Permanent Fill (acres)	Total Impacts (acres)	Township	Range	Section	Quarter-Quarter Section	Latitude	Longitude
Clearwater	Clearwater River	09020305	3	w-149n38w15-b	10/14/2014	904.0	PEM	Fresh (wet) Meadow	Type 2	383.8	0.07	0.73	-	-	0.73	149	38	15	NWSW	47.722055	-95.513653
Clearwater	Clearwater River	09020305	3	w-149n38w15-c	10/14/2014	904.0	PEM	Fresh (wet) Meadow	Type 2	-	-	0.00	-	-	0.00	149	38	15	NWSW	47.721651	-95.51385
Clearwater	Clearwater River	09020305	3	w-149n38w15-d	10/14/2014	904.3	PEM	Fresh (wet) Meadow	Type 2	124.6	0.02	0.25	-	-	0.25	149	38	15	SESW	47.719539	-95.506666
Clearwater	Clearwater River	09020305	3	w-149n38w15-e	10/16/2014	904.6	PEM	Fresh (wet) Meadow	Type 2	23.2	0.00	0.07	-	-	0.07	149	38	15	SWSE	47.717809	-95.502587
Clearwater	Clearwater River	09020305	3	w-149n38w22-a	10/16/2014	904.6	PSS	Shrub Carr	Type 6	20.4	0.00	0.04	0.03	-	0.07	149	38	15, 22	NWNE, SWSE	47.717294	-95.501531
Clearwater	Clearwater River	09020305	3	w-149n38w22-b	10/16/2014	904.7	PEM	Fresh (wet) Meadow	Type 2	-	-	0.01	-	-	0.01	149	38	22	NWNE	47.717124	-95.501186
Clearwater	Clearwater River	09020305	3	w-149n38w22-c	10/16/2014	904.7	PEM	Fresh (wet) Meadow	Type 2	-	-	0.01	-	-	0.01	149	38	22	NENE	47.717123	-95.500618
Clearwater	Clearwater River	09020305	3	w-149n38w22-d	10/16/2014	904.7	PEM	Sedge Meadows	Type 2	-	-	0.02	-	-	0.02	149	38	22	NENE	47.716718	-95.50024
Clearwater	Clearwater River	09020305	3	w-149n38w22-e	10/18/2014	904.8	PEM	Shallow Marshes	Type 3	276.5	0.05	0.63	-	-	0.63	149	38	22	NENE	47.715811	-95.497972
Clearwater	Clearwater River	09020305	3	CL013_200l1W	6/7/2014	905.1	PEM	Sedge Meadows	Type 2	80.5	0.02	0.31	-	-	0.31	149	38	23	NWNW, SWNW	47.713892	-95.492699
Clearwater	Clearwater River	09020305	3	CL013_200l1W	6/7/2014	905.1	PUB	Deep Marshes	Type 4	65.4	0.01	0.05	-	-	0.05	149	38	23	NWNW, SWNW	47.713747	-95.492505
Clearwater	Clearwater River	09020305	3	CL013_200d1W	6/4/2014	905.5	PEM	Shallow Marshes	Type 3	327.7	0.06	0.72	-	-	0.72	149	38	23	SENW	47.711068	-95.486237
Clearwater	Clearwater River	09020305	3	CL013_200d1W	6/4/2014	905.5	PSS	Shrub Carr	Type 6	179.7	0.03	0.22	0.13	-	0.35	149	38	23	SENW	47.710863	-95.486067
Clearwater	Clearwater River	09020305	3	w-149n38w23-b	10/17/2014	905.7	PEM	Fresh (wet) Meadow	Type 2	-	-	0.05	-	-	0.05	149	38	23	NWSE	47.709467	-95.481981
Clearwater	Clearwater River	09020305	3	w-149n38w23-c	10/17/2014	905.8	PEM	Sedge Meadows	Type 2	168.5	0.03	0.42	-	-	0.42	149	38	23	NWSE	47.708629	-95.480476
Clearwater	Clearwater River	09020305	3	CL016a1W	8/25/2015	905.9	PEM	Sedge Meadows	Type 2	3,074.0	0.58	5.78	-	-	5.78	149	38	23	NWSE, NESE, SWSE, SESE	47.70643	-95.479399
Clearwater	Clearwater River	09020305	3	CL016a1W	7/1/2016	905.9	PSS	Shrub Carr	Type 6	-	-	0.28	0.01	-	0.29	149	38	23	SWSE, SESE	47.705669	-95.479902
Clearwater	Clearwater River	09020305	3	w-149n38w23-a	10/16/2014	905.9	PEM	Sedge Meadows	Type 2	103.8	0.02	0.22	-	-	0.22	149	38	23	NESE	47.707615	-95.477921
Clearwater	Clearwater River	09020305	3	w-149n38w23-a	10/16/2014	905.9	PFO	Hardwood Swamps	Type 7	-	-	-	0.02	-	0.02	149	38	23	NESE	47.707552	-95.477951
Clearwater	Clearwater River	09020305	3	CL016a1W	10/16/2014	906.1	PUB	Shallow Open Water	Type 5	463.6	0.09	1.43	-	-	1.43	149	38	23, 24	NESE, SWSW, SESE, SESW	47.706629	-95.475207
Clearwater	Clearwater River	09020305	3	CL016a1W	10/16/2014	906.6	PFO	Coniferous Swamps	Type 7	-	-	-	0.36	-	0.36	149	38	25	NENW	47.702391	-95.465435
Clearwater	Clearwater River	09020305	3	CL018a1W	10/16/2014	907.1	PEM	Fresh (wet) Meadow	Type 2	11.3	0.00	0.07	-	-	0.07	149	38	25	SENE	47.69889	-95.456465
Clearwater	Clearwater River	09020305	3	CL019b1W	6/1/2013	907.5	PEM	Seasonally Flooded Basins	Type 1	236.1	0.04	0.97	-	-	0.97	149	37	30	NWSW, NESW, SWNW	47.69561	-95.450225
Clearwater	Clearwater River	09020305	3	w-149n37w29-b	6/2/2015	908.4	PEM	Fresh (wet) Meadow	Type 2	7.1	0.00	0.01	-	-	0.01	149	37	29	SWSW	47.689551	-95.430749
Clearwater	Clearwater River	09020305	3	w-149n37w29-a	8/22/2013	908.8	PEM	Shallow Marshes	Type 3	2,256.0	0.43	4.00	-	0.05	4.05	149	37	29	NWSE, NESE, SWSE, SESW	47.68897	-95.422623
Clearwater	Clearwater River	09020305	3	w-149n37w29-a	10/6/2014	909.0	PFO	Hardwood Swamps	Type 7	261.6	0.05	-	0.43	-	0.43	149	37	29	SWSE	47.689662	-95.418257
Clearwater	Clearwater River	09020305	3	CL024_200a1W	8/23/2013	909.4	PEM	Fresh (wet) Meadow	Type 2	-	-	-	-	0.36	0.36	149	37	28, 29	NWSW, NESE	47.692556	-95.409195
Clearwater	Clearwater River	09020305	3	CL024_200b1W	10/7/2014	909.4	PEM	Fresh (wet) Meadow	Type 2	-	-	0.04	-	0.22	0.26	149	37	29	NESE	47.693582	-95.410324
Clearwater	Clearwater River	09020305	3	w-149n37w29-c	10/7/2014	909.4	PEM	Fresh (wet) Meadow	Type 2	-	-	-	-	1.20	1.20	149	37	29	NESE	47.692708	-95.409925
Clearwater	Clearwater River	09020305	3	CL024_200b1W	10/7/2014	909.5	PSS	Shrub Carr	Type 6	-	-	0.01	0.00	-	0.01	149	37	29	NESE	47.692865	-95.41327
Clearwater	Clearwater River	09020305	3	w-149n37w29-a	10/6/2014	909.5	PSS	Shrub Carr	Type 6	11.6	0.00	0.14	0.03	-	0.16	149	37	29	NWSE, NESE, SWSE, SESW	47.692659	-95.413988
Clearwater	Clearwater River	09020305	3	CL021a1W	8/22/2013	910.4	PEM	Fresh (wet) Meadow	Type 2	20.3	0.00	0.05	-	-	0.05	149	37	29	SWSW	47.688412	-95.427967
Clearwater	Clearwater River	09020305	3	w-149n37w32-f	10/13/2015	910.4	PEM	Fresh (wet) Meadow	Type 2	277.1	0.05	0.65	-	-	0.65	149	37	32	NWNW	47.687294	-95.42776

Attachment F
Line 3 Replacement Project
Wetland Table

County	Major Watershed	Hydologic Unit Code (HUC) 8	Bank Service Area (BSA)	Feature ID	Survey Date	Approx. Milepost	Cowardin [a]	Eggers and Reed [a]	Circular 39 [a]	Crossing length (feet) b	Crossing length (miles) b	Temporary Impacts (acres) c	Permanent Conversion (acres) d	Permanent Fill (acres)	Total Impacts (acres)	Township	Range	Section	Quarter-Quarter Section	Latitude	Longitude
Clearwater	Clearwater River	09020305	3	CL021_300b1W	10/13/2015	910.9	PEM	Fresh (wet) Meadow	Type 2	161.9	0.03	0.35	-	-	0.35	149	37	32	SWNW	47.682042	-95.426558
Clearwater	Clearwater River	09020305	3	CL021_310a1W	9/5/2013	911.1	PEM	Fresh (wet) Meadow	Type 2	-	-	0.11	-	-	0.11	149	37	32	SENW	47.680993	-95.421277
Clearwater	Clearwater River	09020305	3	CL021_310a1W	9/5/2013	911.1	PFO	Hardwood Swamps	Type 7	31.0	0.01	-	0.05	-	0.05	149	37	32	SENW	47.681133	-95.421186
Clearwater	Clearwater River	09020305	3	CL021_310c1W	9/5/2013	911.4	PFO	Hardwood Swamps	Type 7	883.4	0.17	-	1.92	-	1.92	149	37	32	SWNE, SENE	47.681083	-95.415292
Clearwater	Clearwater River	09020305	3	CLC5020_300d1W	5/23/2014	911.7	PFO	Hardwood Swamps	Type 7	-	-	-	0.00	-	0.00	149	37	32	NESE	47.679474	-95.411334
Clearwater	Clearwater River	09020305	3	CLC5020_300a1W	9/6/2013	911.7	PSS	Shrub Carr	Type 6	61.1	0.01	0.07	0.05	-	0.12	149	37	32	NESE	47.678724	-95.411336
Clearwater	Clearwater River	09020305	3	CLC5020_300a1W	5/23/2014	911.7	PEM	Fresh (wet) Meadow	Type 2	27.3	0.01	0.06	-	-	0.06	149	37	32	NESE	47.678554	-95.411061
Clearwater	Clearwater River	09020305	3	CLC5020_300b1W	9/6/2013	911.8	PEM	Sedge Meadows	Type 2	-	-	0.03	-	-	0.03	149	37	32	NESE	47.677458	-95.411154
Clearwater	Clearwater River	09020305	3	CLC5020_310a1W	9/6/2013	911.9	PFO	Hardwood Swamps	Type 7	322.2	0.06	-	0.53	-	0.53	149	37	32	SESE	47.676197	-95.410888
Clearwater	Clearwater River	09020305	3	CLC5020_310a1W	9/6/2013	911.9	PSS	Shrub Carr	Type 6	116.2	0.02	0.23	0.15	-	0.38	149	37	32	SESE	47.675691	-95.410611
Clearwater	Clearwater River	09020305	3	CLC5020_310a1W	10/15/2015	912.0	PEM	Shallow Marshes	Type 3	-	-	0.05	-	-	0.05	149	37	32	SESE	47.675831	-95.410542
Clearwater	Clearwater River	09020305	3	CLC5020_310c1W	9/6/2013	912.1	PFO	Hardwood Swamps	Type 7	18.8	0.00	-	0.11	-	0.11	149	37	32	SESE	47.673891	-95.410483
Clearwater	Clearwater River	09020305	3	CLC5020_310c1W	9/6/2013	912.1	PEM	Fresh (wet) Meadow	Type 2	32.5	0.01	0.05	-	-	0.05	149	37	32	SESE	47.673753	-95.410456
Clearwater	Clearwater River	09020305	3	CLC5004o1W	9/6/2013	912.1	PSS	Shrub Carr	Type 6	181.0	0.03	0.58	0.18	-	0.76	149	37	6, 32	NWNE, NENE, SESE	47.673498	-95.410411
Clearwater	Clearwater River	09020305	3	CLC5004o1W	9/6/2013	912.1	PEM	Fresh (wet) Meadow	Type 2	106.6	0.02	0.22	-	-	0.22	149	37	6, 32	NENE, SESE	47.673494	-95.410183
Clearwater	Clearwater River	09020305	3	CLC5004o1W	9/6/2013	912.2	PFO	Hardwood Swamps	Type 7	292.3	0.06	-	0.51	-	0.51	148	37	6	NENE	47.672057	-95.409975
Clearwater	Clearwater River	09020305	3	CLC5004s1W	9/7/2013	912.4	PEM	Fresh (wet) Meadow	Type 2	-	-	0.03	-	-	0.03	148	37	6	SENE	47.669554	-95.409931
Clearwater	Clearwater River	09020305	3	CLC5004k1W	9/7/2013	912.4	PEM	Fresh (wet) Meadow	Type 2	-	-	0.08	-	-	0.08	148	37	6	SENE	47.668837	-95.409823
Clearwater	Clearwater River	09020305	3	CLC5004k1W	6/27/2013	912.5	PSS	Shrub Carr	Type 6	270.0	0.05	0.08	0.29	-	0.37	148	37	6	SENE	47.668213	-95.409128
Clearwater	Clearwater River	09020305	3	CLC5004m1W	6/27/2013	912.5	PSS	Shrub Carr	Type 6	-	-	0.07	-	-	0.07	148	37	6	SENE	47.667449	-95.408778
Clearwater	Clearwater River	09020305	3	CLC5004n1W	6/27/2013	912.6	PEM	Fresh (wet) Meadow	Type 2	-	-	0.04	-	-	0.04	148	37	6	SENE	47.667055	-95.408579
Clearwater	Clearwater River	09020305	3	CLC5005a1W	6/27/2013	912.6	PFO	Hardwood Swamps	Type 7	119.0	0.02	-	0.30	-	0.30	148	37	6	NESE	47.666309	-95.407981
Clearwater	Clearwater River	09020305	3	CLC5005a1W	6/27/2013	912.6	PEM	Fresh (wet) Meadow	Type 2	-	-	0.00	-	-	0.00	148	37	6	NESE	47.666313	-95.407857
Clearwater	Clearwater River	09020305	3	CLC5005b1W	6/28/2013	912.7	PEM	Shallow Marshes	Type 3	-	-	0.00	-	-	0.00	148	37	6	NESE	47.665718	-95.407572
Clearwater	Clearwater River	09020305	3	CLC5005c1W	6/28/2013	912.7	PEM	Seasonally Flooded Basins	Type 1	58.3	0.01	0.06	-	-	0.06	148	37	6	NESE	47.664731	-95.407243
Clearwater	Clearwater River	09020305	3	CLC5005d1W	6/28/2013	912.8	PSS	Shrub Carr	Type 6	411.6	0.08	0.54	0.48	-	1.02	148	37	6	NESE, SESE	47.663824	-95.407401
Clearwater	Clearwater River	09020305	3	CLC5006a1W	6/28/2013	913.0	PEM	Fresh (wet) Meadow	Type 2	36.0	0.01	0.11	-	-	0.11	148	37	6	SESE	47.660444	-95.407226
Clearwater	Clearwater River	09020305	3	CLC5006a1W	6/28/2013	913.0	PFO	Hardwood Swamps	Type 7	196.6	0.04	-	0.39	-	0.39	148	37	6	SESE	47.660164	-95.40707
Clearwater	Clearwater River	09020305	3	CLC5007a1W	6/28/2013	913.1	PEM	Shallow Marshes	Type 3	105.7	0.02	0.50	-	-	0.50	148	37	7	NENE	47.659372	-95.407069
Clearwater	Clearwater River	09020305	3	CLC5007c1W	6/28/2013	913.3	PSS	Shrub Carr	Type 6	412.7	0.08	0.42	0.47	-	0.89	148	37	7	NENE, SENE	47.656445	-95.406253
Clearwater	Clearwater River	09020305	3	CLC5007e1W	5/22/2014	913.4	PSS	Shrub Carr	Type 6	78.4	0.01	0.01	0.08	-	0.09	148	37	7	SENE	47.654655	-95.406131
Clearwater	Clearwater River	09020305	3	CLC5008e1W	6/29/2013	913.5	PEM	Seasonally Flooded Basins	Type 1	24.0	0.00	0.08	-	-	0.08	148	37	8	SWNW	47.654062	-95.405283
Clearwater	Clearwater River	09020305	3	CLC5008f1W	6/29/2013	913.5	PEM	Fresh (wet) Meadow	Type 2	34.6	0.01	0.04	-	-	0.04	148	37	8	SWNW	47.653682	-95.405035
Clearwater	Clearwater River	09020305	3	CLC5009b1W	6/29/2013	913.7	PFO	Hardwood Swamps	Type 7	-	-	-	0.65	-	0.65	148	37	8	NWSW, SWSW	47.651025	-95.404681
Clearwater	Clearwater River	09020305	3	CLC5009b1W	6/29/2013	913.8	PEM	Fresh (wet) Meadow	Type 2	1,647.1	0.31	2.25	-	-	2.25	148	37	8	NWSW, SWSW	47.649926	-95.404607
Clearwater	Clearwater River	09020305	3	CLC5009b1W	6/29/2013	914.0	PSS	Shrub Carr	Type 6	-	-	0.75	0.14	-	0.89	148	37	8	SWSW	47.64719	-95.404138
Clearwater	Clearwater River	09020305	3	CLC5011a1W	7/8/2013	914.1	PEM	Fresh (wet) Meadow	Type 2	323.5	0.06	0.86	-	-	0.86	148	37	17	NWNW	47.644813	-95.403946

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Wetland Table

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Clearwater	Clearwater River	09020305	3	CLC5012b1W	5/23/2014	914.5	PEM	Fresh (wet) Meadow	Type 2	887.6	0.17	1.56	-	-	1.56	148	37	17	NWSW, SWNW	47.639511	-95.401131
Clearwater	Clearwater River	09020305	3	CLC5012b1W	5/23/2014	914.5	PUB	Shallow Open Water	Type 5	36.8	0.01	0.14	-	-	0.14	148	37	17	SWNW	47.639497	-95.401139
Clearwater	Clearwater River	09020305	3	CLC5012b1W	5/23/2014	914.5	PSS	Shrub Carr	Type 6	42.4	0.01	0.44	0.08	-	0.52	148	37	17	NWSW, NESW, SWNW	47.639458	-95.401029
Clearwater	Clearwater River	09020305	3	CLC5012b1W	7/11/2013	914.8	PFO	Hardwood Swamps	Type 7	-	-	-	0.07	-	0.07	148	37	17	NWSW	47.63672	-95.401146
Clearwater	Clearwater River	09020305	3	CLC5012g1W	7/11/2013	914.8	PFO	Hardwood Swamps	Type 7	44.1	0.01	-	0.13	-	0.13	148	37	17	NWSW	47.635851	-95.401293
Clearwater	Clearwater River	09020305	3	CLC5012f1W	7/11/2013	914.8	PEM	Fresh (wet) Meadow	Type 2	-	-	0.01	-	-	0.01	148	37	17	NWSW	47.635924	-95.400663
Clearwater	Clearwater River	09020305	3	CLC5012g1W	7/11/2013	914.8	PEM	Fresh (wet) Meadow	Type 2	75.8	0.01	0.08	-	-	0.08	148	37	17	NWSW, NESW	47.635387	-95.400486
Clearwater	Clearwater River	09020305	3	CLC5013a1W	7/11/2013	914.9	PEM	Fresh (wet) Meadow	Type 2	105.8	0.02	0.24	-	-	0.24	148	37	17	SESW	47.633943	-95.400133
Clearwater	Clearwater River	09020305	3	CLC5013b1W	7/11/2013	915.0	PEM	Sedge Meadows	Type 2	474.0	0.09	1.07	-	-	1.07	148	37	17, 20	NWNW, SWSW, SESW	47.632715	-95.399928
Clearwater	Clearwater River	09020305	3	CLC5013c1W	6/20/2017	915.2	PEM	Fresh (wet) Meadow	Type 2	50.2	0.01	0.07	-	-	0.07	148	37	17, 20	NWNW, SWSW	47.631186	-95.400754
Clearwater	Clearwater River	09020305	3	w-148n37w20-a	6/20/2017	915.3	PFO	Hardwood Swamps	Type 7	17.5	0.00	-	0.04	-	0.04	148	37	20	NWNW	47.628928	-95.400551
Clearwater	Clearwater River	09020305	3	w-148n37w20-b	6/20/2017	915.3	PFO	Hardwood Swamps	Type 7	58.0	0.01	-	0.09	-	0.09	148	37	20	NWNW	47.628393	-95.400611
Clearwater	Clearwater River	09020305	3	CLC5015c1W	6/20/2017	915.4	PEM	Deep and Shallow Marshes	Type 3	149.2	0.03	0.25	-	-	0.25	148	37	20	NWNW, SWNW	47.627218	-95.400844
Clearwater	Clearwater River	09020305	3	CLC5015c1W	6/20/2017	915.4	PFO	Hardwood Swamps	Type 7	1,143.6	0.22	-	2.76	-	2.76	148	37	20	NWNW, NESW, SWNW, SENW	47.627111	-95.400898
Clearwater	Clearwater River	09020305	3	w-148n37w20-a	7/16/2015	916.0	PEM	Fresh (wet) Meadow	Type 2	-	-	0.00	-	-	0.00	148	37	20	SWSW	47.618955	-95.405664
Clearwater	Clearwater River	09020305	3	CLC5016b1W	7/10/2013	916.0	PEM	Sedge Meadows	Type 2	597.2	0.11	1.45	-	-	1.45	148	37	20, 29	NENW, SESW	47.619132	-95.397453
Clearwater	Clearwater River	09020305	3	w-148n37w20-b	7/16/2015	916.0	PEM	Fresh (wet) Meadow	Type 2	-	-	0.01	-	-	0.01	148	37	20	SWSW	47.618562	-95.404691
Clearwater	Clearwater River	09020305	3	w-148n37w20-b	7/16/2015	916.0	PSS	Shrub Carr	Type 6	-	-	0.00	-	-	0.00	148	37	20	SWSW	47.618558	-95.404709
Clearwater	Clearwater River	09020305	3	w-148n37w20-e	7/17/2015	916.0	PEM	Fresh (wet) Meadow	Type 2	-	-	0.01	-	-	0.01	148	37	20	SWSW	47.618719	-95.401681
Clearwater	Clearwater River	09020305	3	w-148n37w20-c	7/16/2015	916.1	PEM	Fresh (wet) Meadow	Type 2	-	-	0.01	-	-	0.01	148	37	20	SWSW	47.618159	-95.403665
Clearwater	Clearwater River	09020305	3	CLC5015a1W	7/10/2013	916.1	PFO	Hardwood Swamps	Type 7	38.5	0.01	-	0.07	-	0.07	148	37	20	SESW	47.618449	-95.397182
Clearwater	Clearwater River	09020305	3	CLC5017b1W	7/12/2013	916.6	PEM	Fresh (wet) Meadow	Type 2	168.4	0.03	0.36	-	-	0.36	148	37	29	SENW	47.610462	-95.396009
Clearwater	Clearwater River	09020305	3	CLC5017b1W	7/12/2013	916.6	PSS	Shrub Carr	Type 6	-	-	0.07	-	-	0.07	148	37	29	SENW	47.610265	-95.396188
Clearwater	Clearwater River	09020305	3	CLC5017c1W	7/12/2013	916.7	PFO	Hardwood Swamps	Type 7	-	-	-	0.01	-	0.01	148	37	29	NESW	47.608624	-95.396569
Clearwater	Clearwater River	09020305	3	CLC5017c1W	7/12/2013	916.8	PEM	Fresh (wet) Meadow	Type 2	348.1	0.07	0.75	-	-	0.75	148	37	29	NESW	47.608296	-95.395899
Clearwater	Clearwater River	09020305	3	CLC5017c1W	7/12/2013	916.8	PUB	Shallow Open Water	Type 5	558.7	0.11	1.27	-	-	1.27	148	37	29	NESW	47.60716	-95.395524
Clearwater	Clearwater River	09020305	3	w-148n37w29-aa	7/21/2016	916.9	PEM	Fresh (wet) Meadow	Type 2	-	-	0.03	-	-	0.03	148	37	29	NESW	47.606977	-95.398378
Clearwater	Clearwater River	09020305	3	CLC5018c1W	7/13/2013	917.1	PEM	Fresh (wet) Meadow	Type 2	-	-	0.04	-	-	0.04	148	37	29	SESW	47.604329	-95.395014
Clearwater	Clearwater River	09020305	3	CLC5018c1W	7/13/2013	917.1	PFO	Hardwood Swamps	Type 7	234.7	0.04	-	0.53	-	0.53	148	37	29	SESW	47.604153	-95.395243
Clearwater	Clearwater River	09020305	3	CLC5018f1W	7/13/2013	917.2	PEM	Fresh (wet) Meadow	Type 2	261.5	0.05	0.47	-	-	0.47	148	37	29	SESW	47.601973	-95.394986
Clearwater	Clearwater River	09020305	3	CLC5019a1W	7/15/2013	917.4	PEM	Fresh (wet) Meadow	Type 2	-	-	0.23	-	-	0.23	148	37	32	NENW	47.599675	-95.394845
Clearwater	Clearwater River	09020305	3	CLC5019a1W	7/15/2013	917.4	PSS	Shrub Carr	Type 6	-	-	0.08	0.02	-	0.11	148	37	32	NWNE, NENW	47.599258	-95.394667

Attachment F
Line 3 Replacement Project
Wetland Table

County	Major Watershed	Hydologic Unit Code (HUC) 8	Bank Service Area (BSA)	Feature ID	Survey Date	Approx. Milepost	Cowardin [a]	Eggers and Reed [a]	Circular 39 [a]	Crossing length (feet) b	Crossing length (miles) b	Temporary Impacts (acres) c	Permanent Conversion (acres) d	Permanent Fill (acres)	Total Impacts (acres)	Township	Range	Section	Quarter-Quarter Section	Latitude	Longitude
Clearwater	Clearwater River	09020305	3	CLC5025a1W	7/10/2013	919.0	PFO	Hardwood Swamps	Type 7	265.6	0.05	-	0.41	-	0.41	147	37	5	SWSE	47.575425	-95.392915
Clearwater	Clearwater River	09020305	3	CLC5027c1W	5/24/2014	919.7	PFO	Hardwood Swamps	Type 7	13.2	0.00	-	0.07	-	0.07	147	37	8	SWNE	47.566383	-95.391891
Clearwater	Clearwater River	09020305	3	CLC5031a1W	9/6/2013	921.2	PFO	Hardwood Swamps	Type 7	-	-	-	0.51	-	0.51	147	37	16, 17	SESE, SESW	47.545272	-95.384215
Clearwater	Clearwater River	09020305	3	CLC5031a1W	7/9/2013	921.2	PEM	Fresh (wet) Meadow	Type 2	408.2	0.08	0.44	-	-	0.44	147	37	17	SESE	47.545197	-95.3841
Clearwater	Clearwater River	09020305	3	CLC5035a1W	9/6/2013	921.4	PEM	Fresh (wet) Meadow	Type 2	2,159.3	0.41	2.28	-	-	2.28	147	37	21	NWNW, SENW	47.541961	-95.381476
Clearwater	Clearwater River	09020305	3	CLC5035a1W	9/6/2013	921.5	PFO	Coniferous Swamps	Type 7	26.1	0.00	-	2.09	-	2.09	147	37	21	NWNW, SWNW, SENW	47.542307	-95.381722
Clearwater	Clearwater River	09020305	3	CLC5035a1W	9/6/2013	921.5	PSS	Shrub Carr	Type 6	-	-	0.48	0.12	-	0.60	147	37	21	NWNW, SWNW, SENW	47.541657	-95.381236
Clearwater	Clearwater River	09020305	3	CLC5037a1W [e]	9/6/2013	921.9	PEM	Fresh (wet) Meadow	Type 2	1,118.1	0.21	1.91	-	-	1.91	147	37	21	NESW	47.536293	-95.377094
Clearwater	Clearwater River	09020305	3	CLC5037a1W [e]	9/6/2013	921.9	PFO	Hardwood Swamps	Type 7	-	-	-	0.10	-	0.10	147	37	21	NESW	47.536294	-95.377039
Clearwater	Clearwater River	09020305	3	CLC5037a1W [e]	7/24/2014	922.1	PSS	Shrub Carr	Type 6	65.6	0.01	0.01	0.07	-	0.08	147	37	21	NESW	47.533597	-95.375575
Clearwater	Clearwater River	09020305	3	CLC5038c1W [e]	9/10/2013	922.3	PEM	Fresh (wet) Meadow	Type 2	77.1	0.01	0.09	-	-	0.09	147	37	21	SESW	47.531058	-95.373203
Clearwater	Clearwater River	09020305	3	CLC5038a1W [e]	9/7/2013	922.4	PEM	Fresh (wet) Meadow	Type 2	322.4	0.06	0.38	-	-	0.38	147	37	21	SWSE, SESW	47.530627	-95.372912
Clearwater	Clearwater River	09020305	3	CLC5038a1W [e]	9/7/2013	922.4	PSS	Shrub Carr	Type 6	139.4	0.03	-	0.15	-	0.15	147	37	21	SWSE	47.529881	-95.372283
Clearwater	Clearwater River	09020305	3	CLC5038d1W [e]	9/10/2013	922.5	PSS	Shrub Carr	Type 6	34.1	0.01	-	0.04	-	0.04	147	37	28	NWNE	47.529434	-95.371921
Clearwater	Clearwater River	09020305	3	CLC5040_000RRa1W [e]	7/28/2016	922.5	PEM	Fresh (wet) Meadow	Type 2	19.6	0.00	0.02	-	-	0.02	147	37	28	NWNE	47.529206	-95.371742
Clearwater	Clearwater River	09020305	3	CLC5042a1W	9/16/2013	922.7	PEM	Fresh (wet) Meadow	Type 2	-	-	0.00	-	-	0.00	147	37	28	NWNE	47.527257	-95.369784
Clearwater	Clearwater River	09020305	3	CLC5045a1W	7/1/2015	923.7	PEM	Fresh (wet) Meadow	Type 2	136.3	0.03	0.44	-	-	0.44	147	37	27	SESW	47.515325	-95.356125
Clearwater	Clearwater River	09020305	3	CLC5045_900CRa1W	5/29/2014	923.7	PEM	Fresh (wet) Meadow	Type 2	33.6	0.01	0.03	-	-	0.03	147	37	34	NENW	47.514883	-95.355947
Clearwater	Clearwater River	09020305	3	CLC5046c1W	10/4/2013	923.9	PFO	Hardwood Swamps	Type 7	-	-	-	0.01	-	0.01	147	37	34	NENW	47.512342	-95.353377
Clearwater	Clearwater River	09020305	3	CLC5046c1W	10/4/2013	924.0	PEM	Shallow Marshes	Type 3	16.8	0.00	0.02	-	-	0.02	147	37	34	NENW	47.512155	-95.35349
Clearwater	Clearwater River	09020305	3	CLC5046a1W	10/4/2013	924.0	PFO	Hardwood Swamps	Type 7	-	-	-	0.03	-	0.03	147	37	34	NENW	47.511833	-95.352996
Clearwater	Clearwater River	09020305	3	CLC5047a1W	7/9/2013	924.1	PEM	Sedge Meadows	Type 2	1,342.0	0.25	2.47	-	-	2.47	147	37	34	NWSE, SWNE, SENW	47.51085	-95.352007
Clearwater	Clearwater River	09020305	3	CLC5047a1W	9/7/2013	924.1	PFO	Hardwood Swamps	Type 7	539.6	0.10	-	1.40	-	1.40	147	37	34	NWSE, SWNE, SENW	47.510271	-95.351379
Clearwater	Clearwater River	09020305	3	CLC5047a1W	9/7/2013	924.2	PSS	Alder Thickets	Type 6	286.2	0.05	0.46	0.32	-	0.78	147	37	34	NWSE, SWNE	47.509225	-95.350202
Clearwater	Clearwater River	09020305	3	CLC5049f1W	7/16/2013	924.8	PFO	Hardwood Swamps	Type 7	7.2	0.00	-	0.10	-	0.10	147	37	34	SESE	47.502623	-95.343568
Clearwater	Clearwater River	09020305	3	CLC5049e1W	7/16/2013	924.8	PSS	Shrub Carr	Type 6	51.0	0.01	0.06	0.04	-	0.11	147	37	34	SESE	47.50235	-95.34325
Clearwater	Clearwater River	09020305	3	CLC5049c1W	7/16/2013	924.9	PEM	Fresh (wet) Meadow	Type 2	46.2	0.01	0.12	-	-	0.12	147	37	34	SESE	47.50143	-95.342353
Clearwater	Clearwater River	09020305	3	CLC5051d1W	7/16/2013	925.2	PEM	Fresh (wet) Meadow	Type 2	-	-	0.00	-	-	0.00	146	37	2	NWNW	47.496775	-95.337887
Clearwater	Clearwater River	09020305	3	CLC5051b1W	7/16/2013	925.3	PSS	Alder Thickets	Type 6	17.8	0.00	0.17	0.07	-	0.24	146	37	2	NWNW	47.496505	-95.337263
Clearwater	Clearwater River	09020305	3	w-146n37w2-a1	10/1/2014	925.3	PSS	Shrub Carr	Type 6	-	-	0.03	-	-	0.03	146	37	2	NENW	47.499584	-95.330604
Clearwater	Clearwater River	09020305	3	w-147n37w35-a1	10/1/2014	925.3	PSS	Shrub Carr	Type 6	-	-	0.02	-	-	0.02	146	37	2	NENW	47.499611	-95.330512
Clearwater	Clearwater River	09020305	3	CLC5051b1W	7/16/2013	925.3	PEM	Shallow Marshes	Type 3	141.1	0.03	0.09	-	-	0.09	146	37	2	NWNW	47.496365	-95.337369
Clearwater	Clearwater River	09020305	3	w-146n37w2-b1	10/1/2014	925.4	PSS	Shrub Carr	Type 6	-	-	0.01	-	-	0.01	146	37	2	NENW	47.49722	-95.332657
Clearwater	Clearwater River	09020305	3	CLC5051a1W	7/15/2013	925.4	PSS	Shrub Carr	Type 6	66.8	0.01	0.14	0.07	-	0.21	146	37	2	SWNW	47.495339	-95.336284
Clearwater	Clearwater River	09020305	3	CLC5051a1W	7/15/2013	925.4	PEM	Shallow Marshes	Type 3	235.2	0.04	0.32	-	-	0.32	146	37	2	SWNW	47.495133	-95.335884
Clearwater	Clearwater River	09020305	3	w-146n37w2-a	7/23/2015	925.4	PEM	Fresh (wet) Meadow	Type 2	-	-	0.01	-	-	0.01	146	37	2	NENW	47.497262	-95.330704

Attachment F
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Wetland Table

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Clearwater	Clearwater River	09020305	3	w-146n37w2-b	7/23/2015	925.4	PEM	Deep and Shallow Marshes	Type 3	-	-	0.00	-	-	0.00	146	37	2	NENW	47.497073	-95.330501
Clearwater	Clearwater River	09020305	3	CLC5053e1W	7/15/2013	925.7	PEM	Fresh (wet) Meadow	Type 2	52.5	0.01	0.02	-	-	0.02	146	37	2	NESW	47.491078	-95.331999
Clearwater	Clearwater River	09020305	3	CLC5053d1W	7/15/2013	925.8	PSS	Shrub Carr	Type 6	201.1	0.04	0.25	0.20	-	0.45	146	37	2	NESW	47.49027	-95.331127
Clearwater	Clearwater River	09020305	3	CLC5053d1W	7/15/2013	925.8	PEM	Shallow Marshes	Type 3	13.2	0.00	0.03	-	-	0.03	146	37	2	NESW	47.490283	-95.331252
Clearwater	Clearwater River	09020305	3	CLC5053a1W	7/15/2013	926.0	PEM	Fresh (wet) Meadow	Type 2	44.9	0.01	0.05	-	-	0.05	146	37	2	SWSE	47.488263	-95.329173
Clearwater	Clearwater River	09020305	3	CLC5054c1W	7/13/2013	926.1	PEM	Fresh (wet) Meadow	Type 2	87.1	0.02	0.09	-	-	0.09	146	37	2	SWSE	47.48701	-95.327911
Clearwater	Clearwater River	09020305	3	CLC5054a1W	7/13/2013	926.1	PSS	Shrub Carr	Type 6	-	-	-	0.00	-	0.00	146	37	2	SWSE	47.486172	-95.326857
Clearwater	Clearwater River	09020305	3	CLC5055k1W	7/13/2013	926.2	PEM	Fresh (wet) Meadow	Type 2	-	-	0.03	-	-	0.03	146	37	11	NWNE	47.485542	-95.325727
Clearwater	Clearwater River	09020305	3	CLC5055h1W	7/12/2013	926.3	PEM	Fresh (wet) Meadow	Type 2	34.6	0.01	0.05	-	-	0.05	146	37	11	NWNE, NENE	47.484078	-95.32411
Clearwater	Clearwater River	09020305	3	CLC5055f1W	7/12/2013	926.4	PFO	Hardwood Swamps	Type 7	43.1	0.01	-	0.08	-	0.08	146	37	11	NENE	47.483305	-95.323426
Clearwater	Clearwater River	09020305	3	CLC5055g1W	7/12/2013	926.4	PEM	Fresh (wet) Meadow	Type 2	87.9	0.02	0.13	-	-	0.13	146	37	11	NENE	47.482852	-95.322775
Clearwater	Clearwater River	09020305	3	CLC5055j1W	7/13/2013	926.5	PEM	Fresh (wet) Meadow	Type 2	-	-	0.01	-	-	0.01	146	37	11	SENE	47.481987	-95.322134
Clearwater	Clearwater River	09020305	3	CLC5055e1W	7/12/2013	926.5	PSS	Shrub Carr	Type 6	59.1	0.01	0.10	0.07	-	0.17	146	37	11	SENE	47.48159	-95.321616
Clearwater	Clearwater River	09020305	3	CLC5055e1W	7/12/2013	926.6	PFO	Hardwood Swamps	Type 7	21.2	0.00	-	0.15	-	0.15	146	37	11	SENE	47.480861	-95.320848
Clearwater	Clearwater River	09020305	3	CLC5055b1W	7/11/2013	926.7	PFO	Hardwood Swamps	Type 7	-	-	-	0.01	-	0.01	146	37	11	SENE	47.479882	-95.319486
Clearwater	Clearwater River	09020305	3	CLC5055_210a1W	7/11/2013	926.8	PFO	Hardwood Swamps	Type 7	9.7	0.00	-	0.04	-	0.04	146	37	12	SWNW	47.479095	-95.318541
Clearwater	Clearwater River	09020305	3	w-146n37w12-i	9/13/2013	926.9	PEM	Fresh (wet) Meadow	Type 2	270.1	0.05	0.85	-	-	0.85	146	37	12	NWSW, NESW	47.47817	-95.316407
Clearwater	Clearwater River	09020305	3	w-146n37w12-i	7/27/2018	926.9	PSS	Shrub Carr	Type 6	-	-	0.26	0.01	-	0.27	146	37	12	NWSW	47.478278	-95.315928
Clearwater	Clearwater River	09020305	3	w-146n37w12-i	7/27/2018	927.0	PFO	Hardwood Swamps	Type 7	439.3	0.08	-	1.29	-	1.29	146	37	12	NWSW, NESW	47.478455	-95.314101
Clearwater	Clearwater River	09020305	3	w-146n37w12-l	7/27/2018	927.4	PEM	Fresh (wet) Meadow	Type 2	-	-	0.00	-	-	0.00	146	37	12	NWSE	47.47863	-95.307146
Clearwater	Clearwater River	09020305	3	w-146n37w12-m	7/27/2018	927.4	PEM	Fresh (wet) Meadow	Type 2	36.6	0.01	0.11	-	-	0.11	146	37	12	NWSE, SWNE	47.478676	-95.306378
Clearwater	Clearwater River	09020305	3	w-146n37w12-p	7/27/2018	927.5	PEM	Fresh (wet) Meadow	Type 2	34.3	0.01	0.10	-	-	0.10	146	37	12	SWNE	47.479572	-95.30331
Clearwater	Clearwater River	09020305	3	w-146n37w12-r	7/27/2018	927.6	PEM	Fresh (wet) Meadow	Type 2	101.0	0.02	0.26	-	-	0.26	146	37	12	SENE	47.47945	-95.301573
Clearwater	Clearwater River	09020305	3	w-146n37w12-s	7/27/2018	927.6	PEM	Seasonally Flooded Basins	Type 1	-	-	0.01	-	-	0.01	146	37	12	SENE	47.479593	-95.301898
Clearwater	Clearwater River	09020305	3	w-146n37w12-t	7/27/2018	927.7	PEM	Fresh (wet) Meadow	Type 2	133.5	0.03	0.23	-	-	0.23	146	37	12	SENE	47.479646	-95.299275
Clearwater	Clearwater River	09020305	3	w-146n37w12-t	7/27/2018	927.7	PFO	Hardwood Swamps	Type 7	54.1	0.01	-	0.14	-	0.14	146	37	12	SENE	47.479521	-95.298735
Clearwater	Clearwater River	09020305	3	w-146n36w7-k	7/28/2018	927.8	PFO	Hardwood Swamps	Type 7	59.1	0.01	-	0.23	-	0.23	146	36	7	NESE, SENE	47.479021	-95.297249
Clearwater	Clearwater River	09020305	3	w-146n36w7-h	6/19/2017	927.9	PEM	Sedge Meadows	Type 2	-	-	0.01	-	-	0.01	146	36	7	NESE	47.477618	-95.296032
Clearwater	Clearwater River	09020305	3	w-146n36w7-e	6/19/2017	928.0	PFO	Hardwood Swamps	Type 7	228.5	0.04	-	0.52	-	0.52	146	36	7	NESE	47.477335	-95.294949
Clearwater	Clearwater River	09020305	3	w-146n36w7-c	6/17/2017	928.2	PFO	Seasonally Flooded Basins	Type 1	-	-	-	0.03	-	0.03	146	36	7	NESE	47.476524	-95.291452
Clearwater	Clearwater River	09020305	3	w-146n36w8-b	6/17/2017	928.3	PFO	Seasonally Flooded Basins	Type 1	29.2	0.01	-	0.09	-	0.09	146	36	8	NWSW	47.475653	-95.288267
Clearwater	Clearwater River	09020305	3	w-146n36w8-a	6/17/2017	928.5	PFO	Hardwood Swamps	Type 7	122.4	0.02	-	0.28	-	0.28	146	36	8	NWSW	47.475881	-95.284947
Clearwater	Clearwater River	09020305	3	w-146n36w8-a	6/16/2017	928.5	PEM	Fresh (wet) Meadow	Type 2	666.3	0.13	1.45	-	-	1.45	146	36	8	NWSW, NESW	47.476021	-95.284398
Clearwater	Mississippi River - Headwaters	07010101	5	w-146n36w9-c	6/16/2017	929.5	PEM	Fresh (wet) Meadow	Type 2	55.3	0.01	0.11	-	-	0.11	146	36	9	NWSW	47.476889	-95.264204

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Clearwater	Mississippi River - Headwaters	07010101	5	w-146n36w9-c	6/16/2017	929.5	PFO	Hardwood Swamps	Type 7	215.3	0.04	-	0.59	-	0.59	146	36	9	NWSW	47.476886	-95.264164
Clearwater	Mississippi River - Headwaters	07010101	5	w-146n36w15-b	7/28/2018	931.6	PSS	Shrub Carr	Type 6	191.8	0.04	0.12	0.19	-	0.31	146	36	15	SWNE	47.465043	-95.232807
Clearwater	Mississippi River - Headwaters	07010101	5	w-146n36w15-b	7/28/2018	931.6	PFO	Hardwood Swamps	Type 7	419.6	0.08	-	0.96	-	0.96	146	36	15	SWNE	47.464776	-95.232772
Clearwater	Mississippi River - Headwaters	07010101	5	w-146n36w14-a	6/15/2017	932.5	PFO	Hardwood Swamps	Type 7	-	-	-	0.04	-	0.04	146	36	14	SWSW	47.456143	-95.221869
Clearwater	Mississippi River - Headwaters	07010101	5	w-146n36w14-a	6/15/2017	932.6	PEM	Fresh (wet) Meadow	Type 2	78.2	0.01	0.12	-	-	0.12	146	36	14	SWSW	47.456079	-95.221728
Clearwater	Mississippi River - Headwaters	07010101	5	w-146n36w23-c	6/15/2017	932.6	PSS	Shrub Carr	Type 6	113.2	0.02	0.12	0.13	-	0.25	146	36	23	NWNW	47.455713	-95.221705
Clearwater	Mississippi River - Headwaters	07010101	5	w-146n36w23-a	6/15/2017	933.1	PEM	Deep and Shallow Marshes	Type 3	716.6	0.14	1.58	-	-	1.58	146	36	23	NWSW, SWNW	47.448861	-95.221615
Clearwater	Mississippi River - Headwaters	07010101	5	w-146n36w23-a	6/15/2017	933.2	PSS	Alder Thickets	Type 6	272.2	0.05	0.26	0.31	-	0.57	146	36	23	NWSW	47.446703	-95.221482
Clearwater	Mississippi River - Headwaters	07010101	5	w-146n36w23-a	6/15/2017	933.3	PFO	Hardwood Swamps	Type 7	247.4	0.05	-	0.58	-	0.58	146	36	23	NWSW	47.445959	-95.22139
Clearwater	Mississippi River - Headwaters	07010101	5	w-146n36w26-a	6/15/2017	934.3	PFO	Hardwood Swamps	Type 7	246.2	0.05	-	0.43	-	0.43	146	36	26	NWSW	47.431504	-95.224771
Clearwater	Mississippi River - Headwaters	07010101	5	w-146n36w26-a	6/15/2017	934.3	PSS	Shrub Carr	Type 6	138.8	0.03	0.29	0.15	-	0.44	146	36	26	NWSW, SWSW	47.431183	-95.22461
Clearwater	Mississippi River - Headwaters	07010101	5	w-146n36w35-g	6/14/2017	935.0	PSS	Shrub Carr	Type 6	30.3	0.01	0.08	0.04	-	0.12	146	36	35	SWNW	47.422068	-95.224639
Clearwater	Mississippi River - Headwaters	07010101	5	w-146n36w35-g	6/14/2017	935.0	PFO	Hardwood Swamps	Type 7	626.3	0.12	-	1.55	-	1.55	146	36	35	NWSW, SWNW	47.420978	-95.2248
Clearwater	Mississippi River - Headwaters	07010101	5	w-146n36w35-e	6/14/2017	935.4	PFO	Hardwood Swamps	Type 7	21.0	0.00	-	0.04	-	0.04	146	36	35	SWSW	47.416102	-95.224782
Clearwater	Mississippi River - Headwaters	07010101	5	w-146n36w35-d	6/14/2017	935.4	PEM	Sedge Meadows	Type 2	-	-	0.08	-	-	0.08	146	36	35	SWSW	47.415502	-95.224719
Clearwater	Mississippi River - Headwaters	07010101	5	w-146n36w35-a	6/14/2017	935.6	PFO	Hardwood Swamps	Type 7	11.6	0.00	-	0.05	-	0.05	146	36	35	SWSW	47.412822	-95.224649
Clearwater	Mississippi River - Headwaters	07010101	5	w-145n36w2-q	6/14/2017	935.6	PEM	Fresh (wet) Meadow	Type 2	28.6	0.01	0.13	-	-	0.13	145	36	2	NWNW	47.412463	-95.224808
Clearwater	Mississippi River - Headwaters	07010101	5	w-145n36w2-q	6/14/2017	935.6	PFO	Hardwood Swamps	Type 7	-	-	-	0.00	-	0.00	145	36	2	NWNW	47.412437	-95.224618
Clearwater	Mississippi River - Headwaters	07010101	5	w-145n36w2-n	6/14/2017	935.8	PEM	Sedge Meadows	Type 2	28.0	0.01	0.11	-	-	0.11	145	36	2	NWNW	47.40972	-95.223184
Clearwater	Mississippi River - Headwaters	07010101	5	w-145n36w2-n	6/14/2017	935.8	PFO	Hardwood Swamps	Type 7	98.4	0.02	-	0.12	-	0.12	145	36	2	NWNW	47.409613	-95.223026
Clearwater	Mississippi River - Headwaters	07010101	5	w-145n36w2-m	6/14/2017	935.9	PEM	Fresh (wet) Meadow	Type 2	33.7	0.01	0.08	-	-	0.08	145	36	2	NWNW, SWNW	47.409019	-95.222252
Clearwater	Mississippi River - Headwaters	07010101	5	w-145n36w2-k	6/14/2017	936.0	PFO	Hardwood Swamps	Type 7	-	-	-	0.01	-	0.01	145	36	2	SWNW	47.407913	-95.22049
Clearwater	Mississippi River - Headwaters	07010101	5	w-145n36w2-h	8/2/2018	936.2	PEM	Deep and Shallow Marshes	Type 3	468.6	0.09	1.03	-	-	1.03	145	36	2	NWSW, SWNW	47.405665	-95.22048
Clearwater	Mississippi River - Headwaters	07010101	5	w-145n36w2-h	6/13/2017	936.2	PSS	Shrub Carr	Type 6	171.4	0.03	0.18	0.20	-	0.38	145	36	2	NWSW, SWNW	47.405316	-95.220524
Clearwater	Mississippi River - Headwaters	07010101	5	w-145n36w2-f	6/13/2017	936.5	PEM	Fresh (wet) Meadow	Type 2	45.7	0.01	0.10	-	-	0.10	145	36	2	SWSW	47.400818	-95.220439
Clearwater	Mississippi River - Headwaters	07010101	5	w-145n36w2-c	6/12/2017	936.6	PEM	Fresh (wet) Meadow	Type 2	54.1	0.01	0.09	-	-	0.09	145	36	2	SWSW	47.399236	-95.220341
Clearwater	Mississippi River - Headwaters	07010101	5	w-145n36w2-a	6/12/2017	936.6	PEM	Deep and Shallow Marshes	Type 3	43.1	0.01	0.07	-	-	0.07	145	36	2	SWSW	47.398833	-95.22052

Attachment F
Line 3 Replacement Project
Wetland Table

County	Major Watershed	Hydrologic Unit Code (HUC) 8	Bank Service Area (BSA)	Feature ID	Survey Date	Approx. Milepost	Cowardin [a]	Eggers and Reed [a]	Circular 39 [a]	Crossing length (feet) b	Crossing length (miles) b	Temporary Impacts (acres) c	Permanent Conversion (acres) d	Permanent Fill (acres)	Total Impacts (acres)	Township	Range	Section	Quarter-Quarter Section	Latitude	Longitude
Clearwater	Mississippi River - Headwaters	07010101	5	w-145n36w11-h	6/12/2017	936.7	PFO	Hardwood Swamps	Type 7	119.2	0.02	-	0.34	-	0.34	145	36	11	NWNW	47.397893	-95.220057
Clearwater	Mississippi River - Headwaters	07010101	5	w-145n36w11-h	6/12/2017	936.7	PSS	Alder Thickets	Type 6	142.1	0.03	0.21	0.16	-	0.36	145	36	11	NWNW	47.397808	-95.220061
Clearwater	Mississippi River - Headwaters	07010101	5	w-145n36w11-g	6/12/2017	936.9	PEM	Fresh (wet) Meadow	Type 2	-	-	0.02	-	-	0.02	145	36	11	NWNW	47.394855	-95.220525
Clearwater	Mississippi River - Headwaters	07010101	5	w-145n36w11-f	6/12/2017	937.0	PEM	Fresh (wet) Meadow	Type 2	121.8	0.02	0.10	-	-	0.10	145	36	11	SWNW	47.392794	-95.220251
Clearwater	Mississippi River - Headwaters	07010101	5	w-145n36w11-f	6/12/2017	937.0	PFO	Hardwood Swamps	Type 7	-	-	-	0.10	-	0.10	145	36	11	SWNW	47.392808	-95.220204
Clearwater	Mississippi River - Headwaters	07010101	5	w-145n36w11-b	6/12/2017	937.5	PSS	Shrub Carr	Type 6	46.8	0.01	0.08	0.05	-	0.14	145	36	11	SWSW	47.386498	-95.220127
Clearwater	Mississippi River - Headwaters	07010101	5	w-145n36w11-c	6/12/2017	937.6	PSS	Shrub Carr	Type 6	-	-	0.03	0.02	-	0.05	145	36	11	SWSW	47.385344	-95.221453
Clearwater	Mississippi River - Headwaters	07010101	5	w-145n36w11-a	6/12/2017	937.7	PFO	Hardwood Swamps	Type 7	149.8	0.03	-	0.47	-	0.47	145	36	11	SWSW	47.384534	-95.221275
Clearwater	Mississippi River - Headwaters	07010101	5	w-145n36w11-a	6/12/2017	937.7	PEM	Sedge Meadows	Type 2	16.7	0.00	0.09	-	-	0.09	145	36	11	SWSW	47.383945	-95.220919
Clearwater	Mississippi River - Headwaters	07010101	5	w-145n36w14-c	6/10/2017	937.7	PEM	Fresh (wet) Meadow	Type 2	95.9	0.02	0.10	-	-	0.10	145	36	14	NWNW	47.38343	-95.221329
Clearwater	Mississippi River - Headwaters	07010101	5	w-145n36w14-c	6/10/2017	937.8	PFO	Hardwood Swamps	Type 7	548.4	0.10	-	1.15	-	1.15	145	36	14	NWNW, NWSW, SWNW	47.382172	-95.221133
Clearwater	Mississippi River - Headwaters	07010101	5	w-145n36w14-c	6/10/2017	937.9	PSS	Alder Thickets	Type 6	322.8	0.06	0.33	0.37	-	0.70	145	36	14	NWNW	47.381613	-95.221013
Clearwater	Mississippi River - Headwaters	07010101	5	w-145n36w14-e	6/10/2017	938.0	PSS	Shrub Carr	Type 6	-	-	0.01	-	-	0.01	145	36	14	SWNW	47.379207	-95.220544
Clearwater	Mississippi River - Headwaters	07010101	5	w-145n36w14-d	6/10/2017	938.1	PFO	Hardwood Swamps	Type 7	-	-	-	0.06	-	0.06	145	36	14	SWNW	47.378354	-95.220622
Clearwater	Mississippi River - Headwaters	07010101	5	w-145n36w14-b	6/10/2017	938.4	PFO	Hardwood Swamps	Type 7	389.4	0.07	-	0.69	-	0.69	145	36	14	NWSW, SWSW	47.373713	-95.221191
Clearwater	Mississippi River - Headwaters	07010101	5	w-145n36w14-b	6/10/2017	938.4	PEM	Fresh (wet) Meadow	Type 2	-	-	0.02	-	-	0.02	145	36	14	NWSW	47.373731	-95.221349
Clearwater	Mississippi River - Headwaters	07010101	5	w-145n36w14-b	6/10/2017	938.5	PSS	Shrub Carr	Type 6	219.6	0.04	0.23	0.25	-	0.48	145	36	14	NWSW, SWSW	47.372802	-95.220989
Clearwater	Mississippi River - Headwaters	07010101	5	CLC5092b1W	7/18/2013	939.4	PEM	Fresh (wet) Meadow	Type 2	248.0	0.05	0.45	-	0.06	0.51	145	36	23, 26	NWNW, NWSW, SWSW	47.359059	-95.222856
Clearwater	Mississippi River - Headwaters	07010101	5	CLC5092b1W	7/18/2013	939.5	PFO	Coniferous Swamps	Type 7	532.4	0.10	-	1.44	0.00	1.45	145	36	23	NWSW, SWSW	47.358652	-95.222943
Clearwater	Mississippi River - Headwaters	07010101	5	CLC5094a1W	7/22/2013	939.8	PEM	Fresh (wet) Meadow	Type 2	466.5	0.09	1.12	-	-	1.12	145	36	26	NWNW, NENW, SENW	47.354541	-95.221626
Clearwater	Mississippi River - Headwaters	07010101	5	CLC5094a1W	7/22/2013	940.0	PFO	Hardwood Swamps	Type 7	-	-	-	0.01	-	0.01	145	36	26	NENW	47.352126	-95.219879
Clearwater	Mississippi River - Headwaters	07010101	5	CLC5094a1W	7/22/2013	940.0	PSS	Shrub Carr	Type 6	364.4	0.07	0.54	0.36	-	0.90	145	36	26	NENW, SENW	47.351603	-95.219721
Clearwater	Mississippi River - Headwaters	07010101	5	CLC5095a1W	7/22/2013	940.3	PFO	Coniferous Swamps	Type 7	21.2	0.00	-	0.45	-	0.45	145	36	26	NESW, SENW	47.347884	-95.217306
Clearwater	Mississippi River - Headwaters	07010101	5	CLC5095a1W	7/22/2013	940.3	PSS	Shrub Carr	Type 6	304.1	0.06	0.04	0.21	-	0.26	145	36	26	NESW, SENW	47.347751	-95.217278
Clearwater	Mississippi River - Headwaters	07010101	5	CLC5096a1W [e]	7/22/2013	940.8	PFO	Coniferous Swamps	Type 7	41.0	0.01	-	0.64	-	0.64	145	36	26	SWSE	47.341346	-95.213433
Clearwater	Mississippi River - Headwaters	07010101	5	CLC5096a1W [e]	7/22/2013	940.8	PEM	Sedge Meadows	Type 2	452.8	0.09	0.54	-	-	0.54	145	36	26	SWSE	47.341112	-95.213726

Attachment F
Line 3 Replacement Project
Wetland Table

County	Major Watershed	Hydrologic Unit Code (HUC) 8	Bank Service Area (BSA)	Feature ID	Survey Date	Approx. Milepost	Cowardin [a]	Eggers and Reed [a]	Circular 39 [a]	Crossing length (feet) b	Crossing length (miles) b	Temporary Impacts (acres) c	Permanent Conversion (acres) d	Permanent Fill (acres)	Total Impacts (acres)	Township	Range	Section	Quarter-Quarter Section	Latitude	Longitude
Clearwater	Mississippi River - Headwaters	07010101	5	CLC5096a1W [e]	7/22/2013	940.8	PSS	Shrub Carr	Type 6	52.1	0.01	0.42	0.10	-	0.52	145	36	26	SWSE	47.340981	-95.212941
Clearwater	Mississippi River - Headwaters	07010101	5	CLC5098a1W [e]	7/22/2013	940.9	PEM	Fresh (wet) Meadow	Type 2	953.9	0.18	1.21	-	-	1.21	145	36	35	NWNE, NENE, SENE	47.339972	-95.212272
Clearwater	Mississippi River - Headwaters	07010101	5	CLC5098a1W [e]	7/22/2013	940.9	PFO	Hardwood Swamps	Type 7	561.9	0.11	-	1.04	-	1.04	145	36	35	NWNE, NENE, SENE	47.339783	-95.212064
Clearwater	Mississippi River - Headwaters	07010101	5	CLC5098a1W [e]	7/22/2013	940.9	PSS	Shrub Carr	Type 6	406.1	0.08	0.69	0.45	-	1.14	145	36	35	NWNE, NENE, SENE	47.339297	-95.211401
Clearwater	Mississippi River - Headwaters	07010101	5	CLC5100c1W	9/10/2013	941.6	PFO	Hardwood Swamps	Type 7	-	-	-	0.07	-	0.07	145	36	36	NWSW	47.332317	-95.202964
Clearwater	Mississippi River - Headwaters	07010101	5	CLC5100a1W	9/10/2013	942.0	PEM	Sedge Meadows	Type 2	152.9	0.03	0.29	-	-	0.29	145	36	36	SWSW	47.327069	-95.199069
Clearwater	Mississippi River - Headwaters	07010101	5	CLC5100a1W	9/10/2013	942.0	PFO	Hardwood Swamps	Type 7	-	-	-	0.02	-	0.02	145	36	36	SWSW	47.326937	-95.198951
Clearwater	Mississippi River - Headwaters	07010101	5	CLC5102a1W	7/22/2013	942.1	PSS	Shrub Carr	Type 6	12.9	0.00	0.08	0.03	-	0.11	144	36	2	NWNE	47.325318	-95.198056
Clearwater	Mississippi River - Headwaters	07010101	5	CLC5102a1W	7/22/2013	942.1	PEM	Fresh (wet) Meadow	Type 2	117.1	0.02	0.22	-	-	0.22	144	36	2	NWNE	47.325289	-95.198018
Clearwater	Mississippi River - Headwaters	07010101	5	CLC5103a1W	7/7/2015	942.2	PFO	Hardwood Swamps	Type 7	-	-	-	0.03	-	0.03	144	36	2	NWNE	47.323713	-95.197111
Clearwater	Mississippi River - Headwaters	07010101	5	CLC5105c1W	7/20/2013	943.0	PEM	Fresh (wet) Meadow	Type 2	55.0	0.01	0.04	-	-	0.04	144	36	2	SESE	47.313199	-95.191991
Clearwater	Mississippi River - Headwaters	07010101	5	CLC5105b1W	7/20/2013	943.0	PEM	Fresh (wet) Meadow	Type 2	-	-	0.02	-	-	0.02	144	36	2	SESE	47.312495	-95.191711
Clearwater	Mississippi River - Headwaters	07010101	5	CLC5105a1W	7/20/2013	943.1	PEM	Seasonally Flooded Basins	Type 1	-	-	0.01	-	-	0.01	144	36	2	SESE	47.311526	-95.191255
Clearwater	Mississippi River - Headwaters	07010101	5	CLC5111a1W	7/20/2013	943.8	PSS	Shrub Carr	Type 6	117.1	0.02	0.13	0.14	-	0.27	144	36	12	NWSW	47.30218	-95.185999
Clearwater	Mississippi River - Headwaters	07010101	5	CLC5111a1W	7/20/2013	943.8	PEM	Shallow Marshes	Type 3	189.2	0.04	0.40	-	-	0.40	144	36	12	NWSW	47.301869	-95.18582
Clearwater	Mississippi River - Headwaters	07010101	5	CLC5122c1W	7/20/2013	943.9	PEM	Sedge Meadows	Type 2	87.1	0.02	0.31	-	-	0.31	144	36	12	SWSW, SESW	47.3001	-95.185199
Clearwater	Mississippi River - Headwaters	07010101	5	CLC5112b1W	7/20/2013	944.0	PEM	Seasonally Flooded Basins	Type 1	-	-	0.00	-	-	0.00	144	36	12	SESW	47.29928	-95.184813
Clearwater	Mississippi River - Headwaters	07010101	5	CLC5113a1W	7/20/2013	944.2	PFO	Hardwood Swamps	Type 7	69.3	0.01	-	0.14	-	0.14	144	36	13	NENW	47.296593	-95.183334
Clearwater	Mississippi River - Headwaters	07010101	5	CLC5115a1W	6/6/2014	944.8	PEM	Shallow Marshes	Type 3	-	-	0.01	-	-	0.01	144	36	13	NESW	47.288803	-95.180628
Clearwater	Mississippi River - Headwaters	07010101	5	CLC5122a1W	7/22/2013	945.6	PFO	Hardwood Swamps	Type 7	2,652.4	0.50	-	7.73	-	7.73	144	36	19, 24	NENE, NESW, SENW, SENE, SESW	47.280515	-95.172713
Hubbard	Mississippi River - Headwaters	07010101	5	CLC5122a1W	7/22/2013	946.0	PEM	Fresh (wet) Meadow	Type 2	322.2	0.06	0.87	-	-	0.87	144	35	19	SENW, SESW	47.276535	-95.16798
Hubbard	Mississippi River - Headwaters	07010101	5	CLC5122a1W	10/3/2013	946.5	PSS	Alder Thickets	Type 6	573.1	0.11	0.51	0.66	-	1.17	144	35	19	SESW	47.27042	-95.164712
Hubbard	Mississippi River - Headwaters	07010101	5	HUC5005a1W	7/23/2013	946.6	PFO	Hardwood Swamps	Type 7	42.1	0.01	-	0.11	-	0.11	144	35	19	SWSE	47.268931	-95.163668
Hubbard	Mississippi River - Headwaters	07010101	5	HUC5007a1W	7/22/2013	947.4	PEM	Shallow Marshes	Type 3	-	-	0.00	-	-	0.00	144	35	30	NESE	47.25864	-95.15534
Hubbard	Mississippi River - Headwaters	07010101	5	HUC5009a1W	7/22/2013	947.6	PEM	Seasonally Flooded Basins	Type 1	84.0	0.02	0.16	-	-	0.16	144	35	29	SWSW	47.255879	-95.152774
Hubbard	Mississippi River - Headwaters	07010101	5	HUC5010a1W	7/22/2013	948.0	PSS	Shrub Carr	Type 6	30.7	0.01	0.10	0.04	-	0.14	144	35	32	NWNW	47.251444	-95.149126

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Line 3 Replacement Project
Wetland Table

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Hubbard	Mississippi River - Headwaters	07010101	5	HUC5010a1W	7/22/2013	948.0	PEM	Sedge Meadows	Type 2	90.8	0.02	0.23	-	-	0.23	144	35	32	NWNW	47.251415	-95.149087
Hubbard	Mississippi River - Headwaters	07010101	5	HUC5011a1W	7/22/2013	948.1	PFO	Hardwood Swamps	Type 7	-	-	-	0.01	-	0.01	144	35	32	SWNW	47.250323	-95.148176
Hubbard	Mississippi River - Headwaters	07010101	5	HUC5012a1W	7/22/2013	948.3	PFO	Hardwood Swamps	Type 7	-	-	-	0.03	-	0.03	144	35	32	SENW	47.247751	-95.146048
Hubbard	Mississippi River - Headwaters	07010101	5	HUC5013b1W	7/22/2013	948.5	PSS	Shrub Carr	Type 6	54.3	0.01	-	0.03	-	0.03	144	35	32	NESW	47.245111	-95.144182
Hubbard	Mississippi River - Headwaters	07010101	5	HUC5019a1W	7/23/2013	949.8	PSS	Shrub Carr	Type 6	-	-	0.12	0.02	-	0.14	143	35	5	NESE, SESE	47.228399	-95.134816
Hubbard	Mississippi River - Headwaters	07010101	5	HUC5019a1W	7/23/2013	949.8	PEM	Sedge Meadows	Type 2	255.3	0.05	0.35	-	-	0.35	143	35	5	NESE, SESE	47.228393	-95.135118
Hubbard	Mississippi River - Headwaters	07010101	5	HUC5019a1W	7/23/2013	949.9	PFO	Coniferous Swamps	Type 7	76.2	0.01	-	0.26	-	0.26	143	35	5	SESE	47.225834	-95.134927
Hubbard	Mississippi River - Headwaters	07010101	5	HUC5023a1W	7/23/2013	950.3	PSS	Shrub Carr	Type 6	127.4	0.02	0.22	0.13	-	0.35	143	35	8	SENE	47.220629	-95.135142
Hubbard	Mississippi River - Headwaters	07010101	5	HUC5023a1W	7/23/2013	950.3	PEM	Sedge Meadows	Type 2	-	-	0.10	-	-	0.10	143	35	8	SENE	47.220141	-95.135042
Hubbard	Mississippi River - Headwaters	07010101	5	HUC5023b1W	7/23/2013	950.5	PFO	Hardwood Swamps	Type 7	3.2	0.00	-	0.03	-	0.03	143	35	8	SENE	47.217969	-95.134771
Hubbard	Mississippi River - Headwaters	07010101	5	HUC5023b1W	7/23/2013	950.5	PEM	Fresh (wet) Meadow	Type 2	55.2	0.01	0.03	-	-	0.03	143	35	8	SENE	47.21792	-95.134923
Hubbard	Mississippi River - Headwaters	07010101	5	HUC5024a1W	7/23/2013	950.5	PEM	Fresh (wet) Meadow	Type 2	-	-	0.04	-	-	0.04	143	35	8	NESE	47.217266	-95.134594
Hubbard	Mississippi River - Headwaters	07010101	5	HUC5024b1W	7/23/2013	950.7	PEM	Sedge Meadows	Type 2	361.5	0.07	0.61	-	-	0.61	143	35	8	NESE	47.215088	-95.13463
Hubbard	Mississippi River - Headwaters	07010101	5	HUC5024b1W	7/23/2013	950.7	PSS	Shrub Carr	Type 6	-	-	0.08	0.02	-	0.10	143	35	8	NESE	47.214645	-95.134647
Hubbard	Mississippi River - Headwaters	07010101	5	HUC5026a1W	7/23/2013	951.4	PFO	Hardwood Swamps	Type 7	31.5	0.01	-	0.09	-	0.09	143	35	17	SENE	47.20521	-95.133788
Hubbard	Mississippi River - Headwaters	07010101	5	HUC5026a1W	7/23/2013	951.4	PEM	Fresh (wet) Meadow	Type 2	137.2	0.03	0.14	-	-	0.14	143	35	17	SENE	47.205035	-95.133856
Hubbard	Mississippi River - Headwaters	07010101	5	HUC5027a1W	7/24/2013	951.5	PEM	Fresh (wet) Meadow	Type 2	85.5	0.02	0.07	-	-	0.07	143	35	17	NESE, SENE	47.202981	-95.13375
Hubbard	Mississippi River - Headwaters	07010101	5	HUC5027a1W	7/24/2013	951.5	PSS	Shrub Carr	Type 6	42.6	0.01	0.04	0.04	-	0.08	143	35	17	NESE, SENE	47.202905	-95.133503
Hubbard	Mississippi River - Headwaters	07010101	5	HUC5027b1W	7/24/2013	951.7	PEM	Fresh (wet) Meadow	Type 2	-	-	0.07	-	-	0.07	143	35	17	NESE	47.199876	-95.13361
Hubbard	Mississippi River - Headwaters	07010101	5	HUC5027b1W	7/24/2013	951.8	PFO	Hardwood Swamps	Type 7	255.1	0.05	-	0.32	-	0.32	143	35	17	NESE	47.19972	-95.133347
Hubbard	Mississippi River - Headwaters	07010101	5	HUC5029_200a1W	6/29/2015	952.1	PFO	Hardwood Swamps	Type 7	61.1	0.01	-	0.12	-	0.12	143	35	20, 21	NWNW, NENE	47.195015	-95.131562
Hubbard	Mississippi River - Headwaters	07010101	5	HUC5034_200a1W	6/29/2015	952.9	PFO	Hardwood Swamps	Type 7	79.3	0.02	-	0.11	-	0.11	143	35	21	SWSW	47.184489	-95.129879
Hubbard	Mississippi River - Headwaters	07010101	5	HUC5034_200a1W	6/29/2015	952.9	PSS	Alder Thickets	Type 6	-	-	0.04	0.03	-	0.06	143	35	21	SWSW	47.184465	-95.130122
Hubbard	Mississippi River - Headwaters	07010101	5	HUC5037e1W	9/9/2014	953.1	PEM	Sedge Meadows	Type 2	57.0	0.01	0.07	-	-	0.07	143	35	20	SESE	47.181411	-95.13296
Hubbard	Mississippi River - Headwaters	07010101	5	HUC5037d1W	9/9/2014	953.2	PSS	Shrub Carr	Type 6	80.9	0.02	0.07	0.08	-	0.14	143	35	29	NENE	47.18009	-95.13378
Hubbard	Mississippi River - Headwaters	07010101	5	HUC5037c1W	7/26/2013	953.4	PEM	Sedge Meadows	Type 2	73.4	0.01	0.10	-	-	0.10	143	35	29	NENE	47.178094	-95.134454
Hubbard	Mississippi River - Headwaters	07010101	5	HUC5037c1W	7/26/2013	953.4	PSS	Shrub Carr	Type 6	87.6	0.02	0.20	0.09	-	0.29	143	35	29	NENE	47.1781	-95.134217

Attachment F
Line 3 Replacement Project
Wetland Table

County	Major Watershed	Hydrologic Unit Code (HUC) 8	Bank Service Area (BSA)	Feature ID	Survey Date	Approx. Milepost	Cowardin [a]	Eggers and Reed [a]	Circular 39 [a]	Crossing length (feet) b	Crossing length (miles) b	Temporary Impacts (acres) c	Permanent Conversion (acres) d	Permanent Fill (acres)	Total Impacts (acres)	Township	Range	Section	Quarter-Quarter Section	Latitude	Longitude
Hubbard	Mississippi River - Headwaters	07010101	5	HUC5037a1W	7/25/2013	953.4	PEM	Fresh (wet) Meadow	Type 2	875.2	0.17	1.81	-	-	1.81	143	35	29	NESE, SENE	47.177044	-95.134234
Hubbard	Mississippi River - Headwaters	07010101	5	HUC5037a1W	7/25/2013	953.5	PSS	Shrub Carr	Type 6	124.8	0.02	0.33	0.19	-	0.52	143	35	29	NESE, SENE	47.176382	-95.133971
Hubbard	Mississippi River - Headwaters	07010101	5	w-143n35w29-d	7/17/2015	953.6	PEM	Fresh (wet) Meadow	Type 2	-	-	0.00	-	-	0.00	143	35	29	SENE	47.174553	-95.134564
Hubbard	Mississippi River - Headwaters	07010101	5	HUC5038g1W	7/25/2013	953.7	PEM	Sedge Meadows	Type 2	194.3	0.04	0.44	-	-	0.44	143	35	29	NESE	47.17311	-95.134431
Hubbard	Mississippi River - Headwaters	07010101	5	HUC5038d1W	7/25/2013	953.9	PEM	Sedge Meadows	Type 2	149.8	0.03	0.30	-	-	0.30	143	35	29	NESE, SESE	47.170637	-95.135316
Hubbard	Mississippi River - Headwaters	07010101	5	HUC5038d1W	7/25/2013	953.9	PUB	Shallow Open Water	Type 5	76.9	0.01	0.19	-	-	0.19	143	35	29	NESE, SESE	47.170498	-95.135386
Hubbard	Mississippi River - Headwaters	07010101	5	HUC5038c1W	7/25/2013	954.0	PFO	Hardwood Swamps	Type 7	-	-	-	0.03	-	0.03	143	35	29	SESE	47.169541	-95.135512
Hubbard	Mississippi River - Headwaters	07010101	5	w-143n35w29-b	7/17/2015	954.0	PFO	Hardwood Swamps	Type 7	-	-	-	0.02	-	0.02	143	35	29	SESE	47.169414	-95.133572
Hubbard	Mississippi River - Headwaters	07010101	5	HUC5039e1W	7/25/2013	954.1	PEM	Sedge Meadows	Type 2	303.2	0.06	0.73	-	-	0.73	143	35	29	SWSE	47.167517	-95.136185
Hubbard	Mississippi River - Headwaters	07010101	5	w-143n35w32-a	7/18/2015	954.2	PEM	Fresh (wet) Meadow	Type 2	-	-	0.00	-	-	0.00	143	35	29, 32	NWNE, SWSE	47.166779	-95.136383
Hubbard	Mississippi River - Headwaters	07010101	5	HUC5039d1W	7/25/2013	954.2	PEM	Sedge Meadows	Type 2	173.7	0.03	0.22	-	-	0.22	143	35	32	NENE	47.166221	-95.135695
Hubbard	Mississippi River - Headwaters	07010101	5	HUC5040b1W	7/25/2013	954.3	PEM	Sedge Meadows	Type 2	919.7	0.17	2.38	-	-	2.38	143	35	32	NWSE, NENE, NESE, SWNE, SENE	47.165159	-95.135701
Hubbard	Mississippi River - Headwaters	07010101	5	HUC5040b1W	7/25/2013	954.3	PUB	Shallow Open Water	Type 5	-	-	0.04	-	-	0.04	143	35	32	NENE	47.165073	-95.135456
Hubbard	Mississippi River - Headwaters	07010101	5	HUC5040b1W	7/24/2013	954.4	PFO	Hardwood Swamps	Type 7	-	-	-	0.00	-	0.00	143	35	32	SENE	47.162605	-95.135504
Hubbard	Mississippi River - Headwaters	07010101	5	w-143n35w32-aa	7/8/2016	954.5	PEM	Fresh (wet) Meadow	Type 2	-	-	0.28	-	-	0.28	143	35	32	SENE	47.161338	-95.132416
Hubbard	Mississippi River - Headwaters	07010101	5	HUC5039a1W	7/24/2013	954.6	PEM	Sedge Meadows	Type 2	-	-	0.05	-	-	0.05	143	35	32	SWNE	47.160722	-95.136218
Hubbard	Mississippi River - Headwaters	07010101	5	HUC5039a1W	7/18/2015	954.6	PSS	Shrub Carr	Type 6	-	-	0.03	-	-	0.03	143	35	32	SWNE	47.160502	-95.136639
Hubbard	Mississippi River - Headwaters	07010101	5	w-143n35w33-ac	7/22/2016	954.7	PEM	Fresh (wet) Meadow	Type 2	-	-	0.01	-	-	0.01	143	35	33	NWSW	47.158187	-95.127755
Hubbard	Mississippi River - Headwaters	07010101	5	w-143n35w33-ae	7/22/2016	954.9	PFO	Hardwood Swamps	Type 7	-	-	-	0.00	-	0.00	143	35	33	SWSW	47.155778	-95.13076
Hubbard	Mississippi River - Headwaters	07010101	5	w-143n35w33-ad	7/22/2016	954.9	PFO	Hardwood Swamps	Type 7	-	-	-	0.11	-	0.11	143	35	33	NWSW, SWSW	47.155844	-95.13012
Hubbard	Mississippi River - Headwaters	07010101	5	HUC5040a1W	7/24/2013	954.9	PSS	Alder Thickets	Type 6	17.2	0.00	0.12	0.04	-	0.17	143	35	32	NWSE, NESE, SWSE	47.156286	-95.136303
Hubbard	Mississippi River - Headwaters	07010101	5	w-143n35w33-af	7/22/2016	954.9	PEM	Seasonally Flooded Basins	Type 1	-	-	0.02	-	-	0.02	143	35	32	SESE	47.155618	-95.131214
Hubbard	Mississippi River - Headwaters	07010101	5	HUC5040a1W	7/24/2013	954.9	PEM	Sedge Meadows	Type 2	258.1	0.05	0.41	-	-	0.41	143	35	32	NWSE, NESE, SWSE	47.156087	-95.136236
Hubbard	Mississippi River - Headwaters	07010101	5	HUC5041b1W	10/1/2013	955.0	PFO	Hardwood Swamps	Type 7	-	-	-	0.03	-	0.03	143	35	32	SWSE	47.154715	-95.136446
Hubbard	Mississippi River - Headwaters	07010101	5	HUC5041a1W	10/1/2013	955.1	PEM	Sedge Meadows	Type 2	201.0	0.04	0.40	-	-	0.40	143	35	32	SWSE	47.153584	-95.13674
Hubbard	Mississippi River - Headwaters	07010101	5	HUC5042a1W	7/24/2013	955.1	PEM	Shallow Marshes	Type 3	253.9	0.05	0.67	-	-	0.67	143	35	5, 32	NWNE, SWSE	47.152841	-95.137084

Attachment F
Line 3 Replacement Project
Wetland Table

County	Major Watershed	Hydologic Unit Code (HUC) 8	Bank Service Area (BSA)	Feature ID	Survey Date	Approx. Milepost	Cowardin [a]	Eggers and Reed [a]	Circular 39 [a]	Crossing length (feet) b	Crossing length (miles) b	Temporary Impacts (acres) c	Permanent Conversion (acres) d	Permanent Fill (acres)	Total Impacts (acres)	Township	Range	Section	Quarter-Quarter Section	Latitude	Longitude
Hubbard	Mississippi River - Headwaters	07010101	5	HUC5042c1W	7/24/2013	955.2	PFO	Hardwood Swamps	Type 7	72.9	0.01	-	0.15	-	0.15	142	35	5	NWNE	47.151111	-95.137063
Hubbard	Mississippi River - Headwaters	07010101	5	HUC5042c1W	7/24/2013	955.2	PEM	Fresh (wet) Meadow	Type 2	51.3	0.01	0.05	-	-	0.05	142	35	5	NWNE	47.151087	-95.137274
Hubbard	Mississippi River - Headwaters	07010101	5	HUC5042_002b1W	7/24/2013	955.3	PFO	Hardwood Swamps	Type 7	-	-	-	0.01	-	0.01	142	35	5	NWNE	47.150697	-95.136402
Hubbard	Crow Wing River	07010106	5	HUC5042e1W	7/25/2013	955.3	PEM	Fresh (wet) Meadow	Type 2	70.3	0.01	0.06	-	-	0.06	142	35	5	NWNE	47.150063	-95.137215
Hubbard	Crow Wing River	07010106	5	HUC5042d1W	7/24/2013	955.4	PFO	Hardwood Swamps	Type 7	-	-	-	0.01	-	0.01	142	35	5	NWNE	47.149214	-95.136836
Hubbard	Crow Wing River	07010106	5	HUC5043a1W	7/25/2013	955.4	PEM	Sedge Meadows	Type 2	141.9	0.03	0.40	-	-	0.40	142	35	5	SWNE	47.148486	-95.136881
Hubbard	Crow Wing River	07010106	5	HUC5043a1W	7/25/2013	955.4	PSS	Alder Thickets	Type 6	-	-	0.09	0.00	-	0.09	142	35	5	SWNE	47.148293	-95.136978
Hubbard	Crow Wing River	07010106	5	HUC5043e1W	7/25/2013	955.5	PEM	Fresh (wet) Meadow	Type 2	29.0	0.01	0.02	-	-	0.02	142	35	5	SWNE	47.147084	-95.137262
Hubbard	Crow Wing River	07010106	5	HUC5043d1W	7/25/2013	955.6	PEM	Fresh (wet) Meadow	Type 2	24.0	0.00	0.03	-	-	0.03	142	35	5	SWNE	47.145717	-95.137662
Hubbard	Crow Wing River	07010106	5	HUC5044a1W	7/25/2013	955.7	PEM	Fresh (wet) Meadow	Type 2	-	-	0.01	-	-	0.01	142	35	5	NWSE	47.14479	-95.137942
Hubbard	Crow Wing River	07010106	5	HUC5044b1W	7/25/2013	955.7	PEM	Fresh (wet) Meadow	Type 2	131.0	0.02	0.26	-	-	0.26	142	35	5	NWSE	47.14441	-95.137777
Hubbard	Crow Wing River	07010106	5	HUC5004c1W	7/26/2013	955.8	PEM	Sedge Meadows	Type 2	224.0	0.04	0.48	-	-	0.48	142	35	5	NWSE	47.142611	-95.138431
Hubbard	Crow Wing River	07010106	5	HUC5044g1W	7/31/2013	955.9	PFO	Hardwood Swamps	Type 7	-	-	-	0.03	-	0.03	142	35	5	NWSE, SWSE	47.141626	-95.138492
Hubbard	Crow Wing River	07010106	5	HUC5044g1W	7/31/2013	955.9	PEM	Sedge Meadows	Type 2	38.8	0.01	0.15	-	-	0.15	142	35	5	NWSE, SWSE	47.141603	-95.138602
Hubbard	Crow Wing River	07010106	5	HUC5044h1W	7/31/2013	956.0	PEM	Sedge Meadows	Type 2	33.5	0.01	0.07	-	-	0.07	142	35	5	SWSE	47.141043	-95.138686
Hubbard	Crow Wing River	07010106	5	HUC5044i1W	7/31/2013	956.0	PEM	Fresh (wet) Meadow	Type 2	34.2	0.01	0.02	-	-	0.02	142	35	5	SWSE	47.140738	-95.138926
Hubbard	Crow Wing River	07010106	5	HUC5044l1W	7/31/2013	956.0	PEM	Fresh (wet) Meadow	Type 2	79.2	0.02	0.11	-	-	0.11	142	35	5	SWSE	47.140104	-95.139104
Hubbard	Crow Wing River	07010106	5	HUC5044m1W	7/31/2013	956.1	PSS	Shrub Carr	Type 6	-	-	0.00	-	-	0.00	142	35	5	SWSE	47.139509	-95.138945
Hubbard	Crow Wing River	07010106	5	HUC5044n1W	7/31/2013	956.1	PEM	Shallow Marshes	Type 3	131.8	0.02	0.21	-	-	0.21	142	35	5	SWSE	47.138204	-95.139337
Hubbard	Crow Wing River	07010106	5	HUC5045a1W	7/26/2013	956.2	PFO	Hardwood Swamps	Type 7	45.8	0.01	-	0.17	-	0.17	142	35	8	NWNE	47.137395	-95.1394
Hubbard	Crow Wing River	07010106	5	HUC5045a1W	7/26/2013	956.2	PEM	Shallow Marshes	Type 3	-	-	0.02	-	-	0.02	142	35	8	NWNE	47.13733	-95.139168
Hubbard	Crow Wing River	07010106	5	HUC5045d1W	7/30/2013	956.3	PFO	Hardwood Swamps	Type 7	3.8	0.00	-	0.11	-	0.11	142	35	8	NWNE	47.135523	-95.13955
Hubbard	Crow Wing River	07010106	5	HUC5045e1W	7/30/2013	956.4	PEM	Fresh (wet) Meadow	Type 2	-	-	0.00	-	-	0.00	142	35	8	NWNE	47.135227	-95.139728
Hubbard	Crow Wing River	07010106	5	HUC5047c1W	7/25/2013	956.7	PEM	Open Bogs	Type 8	46.7	0.01	0.09	-	-	0.09	142	35	8	NWSE	47.130111	-95.140345
Hubbard	Crow Wing River	07010106	5	HUC5047c1W	7/25/2013	956.7	PSS	Shrub Carr	Type 6	-	-	0.02	0.01	-	0.03	142	35	8	NWSE	47.130019	-95.140371
Hubbard	Crow Wing River	07010106	5	HUC5048b1W	7/24/2013	956.9	PEM	Fresh (wet) Meadow	Type 2	-	-	0.01	-	-	0.01	142	35	8	NWSE, NESW	47.127615	-95.141087
Hubbard	Crow Wing River	07010106	5	HUC5052f1W	6/12/2014	957.4	PEM	Shallow Marshes	Type 3	26.0	0.00	0.08	-	-	0.08	142	35	17	NENW	47.120691	-95.14221
Hubbard	Crow Wing River	07010106	5	HUC5052f1W	6/12/2014	957.4	PFO	Hardwood Swamps	Type 7	33.5	0.01	-	0.07	-	0.07	142	35	17	NENW	47.120691	-95.142196
Hubbard	Crow Wing River	07010106	5	HUC5052e1W	6/12/2014	957.4	PFO	Hardwood Swamps	Type 7	72.3	0.01	-	0.11	-	0.11	142	35	17	NENW, SENW	47.119922	-95.142405
Hubbard	Crow Wing River	07010106	5	HUC5052d1W	7/26/2013	957.5	PEM	Sedge Meadows	Type 2	355.2	0.07	0.64	-	-	0.64	142	35	17	SENW	47.118533	-95.142645
Hubbard	Crow Wing River	07010106	5	HUC5052d1W	7/26/2013	957.5	PSS	Shrub Carr	Type 6	59.5	0.01	0.14	0.06	-	0.20	142	35	17	SENW	47.118501	-95.142624
Hubbard	Crow Wing River	07010106	5	HUC5052a1W	7/26/2013	957.7	PEM	Sedge Meadows	Type 2	127.7	0.02	0.31	-	-	0.31	142	35	17	NESW	47.115393	-95.143304
Hubbard	Crow Wing River	07010106	5	HUC5052a1W	7/26/2013	957.7	PFO	Hardwood Swamps	Type 7	34.4	0.01	-	0.15	-	0.15	142	35	17	NESW	47.115217	-95.143452
Hubbard	Crow Wing River	07010106	5	HUC5053c1W	7/25/2013	958.0	PFO	Hardwood Swamps	Type 7	-	-	-	0.03	-	0.03	142	35	17	SESW	47.111142	-95.144079
Hubbard	Crow Wing River	07010106	5	HUC5053c1W	7/25/2013	958.0	PEM	Fresh (wet) Meadow	Type 2	33.1	0.01	0.03	-	-	0.03	142	35	17	SESW	47.111152	-95.1443
Hubbard	Crow Wing River	07010106	5	HUC5053a1W	7/25/2013	958.1	PFO	Hardwood Swamps	Type 7	-	-	-	0.03	-	0.03	142	35	17	SESW	47.110132	-95.144247
Hubbard	Crow Wing River	07010106	5	HUC5059a1W	7/30/2013	958.6	PFO	Hardwood Swamps	Type 7	-	-	-	0.05	-	0.05	142	35	20	SWNW, SENW	47.102929	-95.145895
Hubbard	Crow Wing River	07010106	5	HUC5058g1W	7/31/2013	958.9	PEM	Sedge Meadows	Type 2	248.0	0.05	0.55	-	-	0.55	142	35	20	NWSW	47.098713	-95.147107
Hubbard	Crow Wing River	07010106	5	w-142n35w20-aa	8/2/2018	959.2	PEM	Fresh (wet) Meadow	Type 2	-	-	-	-	0.01	0.01	142	35	20	SWSW	47.094487	-95.149885
Hubbard	Crow Wing River	07010106	5	HUC5060c1W	7/31/2013	959.2	PSS	Shrub Carr	Type 6	-	-	-	-	0.01	0.01	142	35	20	SWSW	47.094536	-95.146469

Attachment F
Line 3 Replacement Project
Wetland Table

County	Major Watershed	Hydologic Unit Code (HUC) 8	Bank Service Area (BSA)	Feature ID	Survey Date	Approx. Milepost	Cowardin [a]	Eggers and Reed [a]	Circular 39 [a]	Crossing length (feet) b	Crossing length (miles) b	Temporary Impacts (acres) c	Permanent Conversion (acres) d	Permanent Fill (acres)	Total Impacts (acres)	Township	Range	Section	Quarter-Quarter Section	Latitude	Longitude
Hubbard	Crow Wing River	07010106	5	HUC5062h1W	8/26/2014	959.2	PEM	Sedge Meadows	Type 2	-	-	-	-	0.06	0.06	142	35	20	SWSW	47.09439	-95.149936
Hubbard	Crow Wing River	07010106	5	HUC5062g1W	8/26/2014	959.2	PEM	Fresh (wet) Meadow	Type 2	-	-	-	-	0.00	0.00	142	35	20, 29	NWNW, SWSW	47.094353	-95.150934
Hubbard	Crow Wing River	07010106	5	HUC5062_200d1W	9/2/2014	959.3	PEM	Fresh (wet) Meadow	Type 2	-	-	-	-	0.00	0.00	142	35	29	NENW	47.093319	-95.145252
Hubbard	Crow Wing River	07010106	5	HUC5062a1W	7/31/2013	959.3	PEM	Fresh (wet) Meadow	Type 2	-	-	0.01	-	0.00	0.01	142	35	29	NWNW	47.093162	-95.146128
Hubbard	Crow Wing River	07010106	5	HUC5062c1W	7/31/2013	959.5	PSS	Shrub Carr	Type 6	20.3	0.00	0.03	0.02	-	0.05	142	35	29	SWNW	47.089892	-95.146862
Hubbard	Crow Wing River	07010106	5	HUC5062c1W	7/31/2013	959.6	PEM	Sedge Meadows	Type 2	376.8	0.07	0.83	-	-	0.83	142	35	29	SWNW	47.089356	-95.14672
Hubbard	Crow Wing River	07010106	5	HUC5062d1W	7/31/2013	959.6	PSS	Shrub Carr	Type 6	-	-	0.05	0.02	-	0.07	142	35	29	SWNW	47.088368	-95.14639
Hubbard	Crow Wing River	07010106	5	HUC5062l1W	8/26/2014	959.7	PEM	Fresh (wet) Meadow	Type 2	-	-	0.00	-	-	0.00	142	35	29	SWNW	47.087299	-95.147792
Hubbard	Crow Wing River	07010106	5	HUC5062o1W	8/27/2014	959.7	PEM	Sedge Meadows	Type 2	-	-	0.00	-	-	0.00	142	35	29	SWNW	47.08736	-95.146918
Hubbard	Crow Wing River	07010106	5	HUC5062e1W	7/31/2013	959.7	PEM	Open Bogs	Type 8	111.7	0.02	0.27	-	-	0.27	142	35	29	NESW	47.086753	-95.145778
Hubbard	Crow Wing River	07010106	5	HUC5063a1W	8/1/2013	959.8	PEM	Fresh (wet) Meadow	Type 2	-	-	0.02	-	-	0.02	142	35	29	NESW	47.085714	-95.145449
Hubbard	Crow Wing River	07010106	5	HUC5064_200c1W	8/1/2013	960.1	PEM	Sedge Meadows	Type 2	-	-	0.02	-	-	0.02	142	35	29	SESW	47.081632	-95.144716
Hubbard	Crow Wing River	07010106	5	HUC5067a1W	7/30/2013	960.5	PEM	Shallow Marshes	Type 3	-	-	0.02	-	-	0.02	142	35	32	SENW	47.075568	-95.144208
Hubbard	Crow Wing River	07010106	5	HUC5067a1W	7/30/2013	960.5	PFO	Hardwood Swamps	Type 7	-	-	-	0.17	-	0.17	142	35	32	SENW	47.075517	-95.144259
Hubbard	Crow Wing River	07010106	5	w-142n35w32-e	7/17/2015	960.6	PEM	Deep and Shallow Marshes	Type 3	-	-	0.00	-	-	0.00	142	35	31	SENE	47.074175	-95.151482
Hubbard	Crow Wing River	07010106	5	w-142n35w32-d	7/17/2015	960.6	PEM	Sedge Meadows	Type 2	-	-	0.01	-	-	0.01	142	35	31	SENE	47.074109	-95.151488
Hubbard	Crow Wing River	07010106	5	w-142n35w32-d	7/17/2015	960.6	PSS	Alder Thickets	Type 6	-	-	0.00	-	-	0.00	142	35	31	SENE	47.074106	-95.151306
Hubbard	Crow Wing River	07010106	5	w-142n35w32-b	7/17/2015	960.6	PEM	Deep and Shallow Marshes	Type 3	-	-	0.01	-	-	0.01	142	35	32	SWNW	47.073454	-95.150157
Hubbard	Crow Wing River	07010106	5	w-142n35w32-c	7/17/2015	960.6	PSS	Alder Thickets	Type 6	-	-	0.01	-	-	0.01	142	35	32	SWNW	47.07349	-95.15029
Hubbard	Crow Wing River	07010106	5	w-142n35w32-b	7/17/2015	960.6	PSS	Alder Thickets	Type 6	-	-	0.01	-	-	0.01	142	35	32	SWNW	47.073396	-95.15015
Hubbard	Crow Wing River	07010106	5	w-142n35w32-a	7/17/2015	960.7	PSS	Alder Thickets	Type 6	-	-	0.02	-	-	0.02	142	35	32	SWNW	47.072699	-95.147548
Hubbard	Crow Wing River	07010106	5	w-142n35w32-a	7/17/2015	960.7	PEM	Deep and Shallow Marshes	Type 3	-	-	0.00	-	-	0.00	142	35	32	SWNW	47.07269	-95.147488
Hubbard	Crow Wing River	07010106	5	HUC5070a1W	7/31/2013	961.4	PFO	Coniferous Swamps	Type 7	71.8	0.01	-	0.19	-	0.19	141	35	5	NENW	47.063491	-95.14204
Hubbard	Crow Wing River	07010106	5	HUC5070a1W	7/31/2013	961.4	PEM	Fresh (wet) Meadow	Type 2	457.9	0.09	0.90	-	-	0.90	141	35	5	NENW, SENW	47.06283	-95.1418
Hubbard	Crow Wing River	07010106	5	HUC5071_200a1W	7/7/2015	961.6	PFO	Hardwood Swamps	Type 7	512.4	0.10	-	0.79	-	0.79	141	35	5	SENW	47.059882	-95.141967
Hubbard	Crow Wing River	07010106	5	HUC5071_200a1W	7/7/2015	961.7	PSS	Shrub Carr	Type 6	29.5	0.01	-	0.05	-	0.05	141	35	5	SENW	47.059182	-95.141947
Hubbard	Crow Wing River	07010106	5	HUC5072a1W	7/30/2013	961.7	PFO	Coniferous Swamps	Type 7	183.5	0.03	-	0.35	-	0.35	141	35	5	NESW, SENW	47.058588	-95.141806
Hubbard	Crow Wing River	07010106	5	HUC5072a1W	7/30/2013	961.7	PEM	Fresh (wet) Meadow	Type 2	35.6	0.01	0.10	-	-	0.10	141	35	5	NESW, SENW	47.058579	-95.141899
Hubbard	Crow Wing River	07010106	5	HUC5072b1W	7/30/2013	961.9	PFO	Coniferous Swamps	Type 7	20.4	0.00	-	0.06	-	0.06	141	35	5	NESW	47.055434	-95.141475
Hubbard	Crow Wing River	07010106	5	HUC5072b1W	7/30/2013	961.9	PEM	Fresh (wet) Meadow	Type 2	934.6	0.18	2.07	-	-	2.07	141	35	5	NESW, SWSE, SESW	47.055213	-95.14149
Hubbard	Crow Wing River	07010106	5	HUC5072b1W	7/30/2013	962.0	PSS	Shrub Carr	Type 6	276.1	0.05	0.50	0.27	-	0.77	141	35	5	SESW	47.054363	-95.141345
Hubbard	Crow Wing River	07010106	5	HUC5074a1W	7/30/2013	962.2	PEM	Fresh (wet) Meadow	Type 2	217.2	0.04	0.23	-	-	0.23	141	35	5, 8	NWNE, NENW, SWSE, SESW	47.051354	-95.140904
Hubbard	Crow Wing River	07010106	5	HUC5074a1W	7/30/2013	962.2	PFO	Hardwood Swamps	Type 7	-	-	-	0.28	-	0.28	141	35	5, 8	NWNE, SWSE	47.051354	-95.140805
Hubbard	Crow Wing River	07010106	5	HUC5079a1W	7/30/2013	962.8	PEM	Sedge Meadows	Type 2	220.1	0.04	0.43	-	-	0.43	141	35	8	NESW	47.043673	-95.141763
Hubbard	Crow Wing River	07010106	5	HUC5079a1W	7/30/2013	962.8	PFO	Coniferous Swamps	Type 7	1,011.4	0.19	-	2.39	-	2.39	141	35	8	NESW, SESW	47.041915	-95.142822
Hubbard	Crow Wing River	07010106	5	HUC5080a1W [e]	7/30/2013	963.5	PEM	Sedge Meadows	Type 2	1,561.1	0.30	1.70	-	-	1.70	141	35	17	NENW, SENW	47.034006	-95.144784
Hubbard	Crow Wing River	07010106	5	HUC5080a1W [e]	7/30/2013	963.5	PFO	Coniferous Swamps	Type 7	162.8	0.03	-	0.32	-	0.32	141	35	17	NENW, NESW, SENW	47.034009	-95.144699
Hubbard	Crow Wing River	07010106	5	HUC5080a1W [e]	7/30/2013	963.5	PSS	Alder Thickets	Type 6	254.5	0.05	-	0.25	-	0.25	141	35	17	NENW, SENW	47.033265	-95.144765

Attachment F
Line 3 Replacement Project
Wetland Table

County	Major Watershed	Hydologic Unit Code (HUC) 8	Bank Service Area (BSA)	Feature ID	Survey Date	Approx. Milepost	Cowardin [a]	Eggers and Reed [a]	Circular 39 [a]	Crossing length (feet) b	Crossing length (miles) b	Temporary Impacts (acres) c	Permanent Conversion (acres) d	Permanent Fill (acres)	Total Impacts (acres)	Township	Range	Section	Quarter-Quarter Section	Latitude	Longitude
Hubbard	Crow Wing River	07010106	5	HUC5082a1W	7/30/2013	964.0	PEM	Fresh (wet) Meadow	Type 2	84.7	0.02	0.14	-	-	0.14	141	35	17	NWSW, NESW	47.026634	-95.145677
Hubbard	Crow Wing River	07010106	5	HUC5082b1W	7/30/2013	964.1	PEM	Fresh (wet) Meadow	Type 2	73.6	0.01	0.38	-	-	0.38	141	35	17	SWSW, SESW	47.024657	-95.145532
Hubbard	Crow Wing River	07010106	5	HUC5085a1W	7/30/2013	964.3	PSS	Shrub Carr	Type 6	151.2	0.03	0.35	0.17	-	0.52	141	35	20	NWNW	47.021415	-95.146403
Hubbard	Crow Wing River	07010106	5	HUC5085a1W	7/30/2013	964.3	PEM	Sedge Meadows	Type 2	-	-	0.07	-	-	0.07	141	35	20	NWNW	47.021345	-95.145833
Hubbard	Crow Wing River	07010106	5	HUC5083a1W	7/30/2013	964.4	PEM	Sedge Meadows	Type 2	462.9	0.09	1.21	-	-	1.21	141	35	20	NWNW	47.020288	-95.146
Hubbard	Crow Wing River	07010106	5	HUC5083a1W	7/30/2013	964.4	PSS	Shrub Carr	Type 6	73.7	0.01	0.57	0.08	-	0.65	141	35	20	NWNW	47.02028	-95.146369
Hubbard	Crow Wing River	07010106	5	HUC5086b1W	7/31/2013	964.6	PSS	Shrub Carr	Type 6	-	-	0.08	-	-	0.08	141	35	20	SWNW	47.017727	-95.146628
Hubbard	Crow Wing River	07010106	5	HUC5084b1W	7/31/2013	964.8	PEM	Sedge Meadows	Type 2	33.0	0.01	0.09	-	-	0.09	141	35	20	SWNW	47.015347	-95.146634
Hubbard	Crow Wing River	07010106	5	w-141n35w20-b	6/9/2017	964.8	PSS	Shrub Carr	Type 6	-	-	-	-	0.01	0.01	141	35	20	NWSW	47.014651	-95.149492
Hubbard	Crow Wing River	07010106	5	w-141n35w20-a	6/9/2017	964.8	PSS	Shrub Carr	Type 6	-	-	0.04	-	-	0.04	141	35	20	NWSW	47.014586	-95.149299
Hubbard	Crow Wing River	07010106	5	HUC5087a1W	7/31/2013	965.2	PEM	Sedge Meadows	Type 2	817.8	0.15	1.74	-	-	1.74	141	35	20, 29	NWNW, SWSW	47.008273	-95.146608
Hubbard	Crow Wing River	07010106	5	HUC5087a1W	7/31/2013	965.3	PSS	Shrub Carr	Type 6	-	-	0.05	0.00	-	0.05	141	35	29	NWNW	47.006863	-95.146507
Hubbard	Crow Wing River	07010106	5	HUC5089a1W	7/31/2013	965.6	PEM	Fresh (wet) Meadow	Type 2	-	-	0.01	-	-	0.01	141	35	29	SWNW	47.003059	-95.14664
Hubbard	Crow Wing River	07010106	5	HUC5089c1W	7/31/2013	965.8	PUB	Shallow Open Water	Type 5	-	-	0.04	-	-	0.04	141	35	29	SWNW	47.000859	-95.146895
Hubbard	Crow Wing River	07010106	5	HUC5089c1W	7/31/2013	965.8	PSS	Shrub Carr	Type 6	66.7	0.01	0.14	0.05	-	0.19	141	35	29	SWNW	47.000866	-95.147038
Hubbard	Crow Wing River	07010106	5	HUC5089d1W	8/1/2013	965.8	PEM	Fresh (wet) Meadow	Type 2	51.9	0.01	0.05	-	-	0.05	141	35	29	SWNW	47.000449	-95.147198
Hubbard	Crow Wing River	07010106	5	HUC5090b1W	8/1/2013	966.0	PEM	Sedge Meadows	Type 2	-	-	0.08	-	-	0.08	141	35	29	NWSW	46.99764	-95.147872
Hubbard	Crow Wing River	07010106	5	HUC5090b1W	8/1/2013	966.0	PSS	Alder Thickets	Type 6	177.2	0.03	0.22	0.21	-	0.42	141	35	29	NWSW	46.99727	-95.147976
Hubbard	Crow Wing River	07010106	5	HUC5090c1W	8/1/2013	966.1	PEM	Sedge Meadows	Type 2	-	-	0.09	-	-	0.09	141	35	29	SWSW	46.995535	-95.148627
Hubbard	Crow Wing River	07010106	5	w-141n35w29-aa	7/22/2016	966.2	PEM	Fresh (wet) Meadow	Type 3	-	-	0.11	-	-	0.11	141	35	29	Meandered waterbody	46.994079	-95.146382
Hubbard	Crow Wing River	07010106	5	HUC5090d1W	8/1/2013	966.2	PEM	Sedge Meadows	Type 2	-	-	0.00	-	-	0.00	141	35	29	SWSW	46.994363	-95.148768
Hubbard	Crow Wing River	07010106	5	HUC5092a1W	8/1/2013	966.4	PSS	Shrub Carr	Type 6	39.6	0.01	0.14	0.08	-	0.22	141	35	31, 32	NWNW, NENE	46.992148	-95.149467
Hubbard	Crow Wing River	07010106	5	HUC5092a1W	8/1/2013	966.4	PEM	Shallow Marshes	Type 3	207.0	0.04	0.30	-	-	0.30	141	35	31, 32	NWNW, NENE	46.99198	-95.149496
Hubbard	Crow Wing River	07010106	5	HUC5093a1W	8/1/2013	966.5	PEM	Sedge Meadows	Type 2	365.2	0.07	0.47	-	-	0.47	141	35	31	NENE	46.990926	-95.1499
Hubbard	Crow Wing River	07010106	5	HUC5093a1W	8/1/2013	966.5	PSS	Shrub Carr	Type 6	208.6	0.04	0.51	0.29	-	0.79	141	35	31	NENE	46.990351	-95.150074
Hubbard	Crow Wing River	07010106	5	HUC5094a1W	8/1/2013	966.7	PSS	Shrub Carr	Type 6	81.5	0.02	0.18	0.11	-	0.29	141	35	31	SENE	46.98762	-95.150769
Hubbard	Crow Wing River	07010106	5	HUC5094a1W	8/1/2013	966.7	PEM	Fresh (wet) Meadow	Type 2	155.6	0.03	0.37	-	-	0.37	141	35	31	SENE	46.987647	-95.15056
Hubbard	Crow Wing River	07010106	5	HUC5094c1W	8/1/2013	966.8	PEM	Fresh (wet) Meadow	Type 2	-	-	0.02	-	-	0.02	141	35	31	SENE	46.986151	-95.150536
Hubbard	Crow Wing River	07010106	5	HUC5095b1W	8/2/2013	966.9	PSS	Shrub Carr	Type 6	-	-	0.11	0.03	-	0.14	141	35	31	NESE	46.984726	-95.149976
Hubbard	Crow Wing River	07010106	5	HUC5095c1W	8/2/2013	966.9	PEM	Fresh (wet) Meadow	Type 2	48.0	0.01	0.05	-	-	0.05	141	35	31	NESE	46.984356	-95.150145
Hubbard	Crow Wing River	07010106	5	HUC095d1W	8/2/2013	966.9	PEM	Sedge Meadows	Type 2	44.1	0.01	0.04	-	-	0.04	141	35	31	NESE	46.983873	-95.150039
Hubbard	Crow Wing River	07010106	5	HUC5095g1W	8/2/2013	967.0	PUB	Shallow Open Water	Type 5	1.2	0.00	0.14	-	-	0.14	141	35	31	NESE	46.982609	-95.149659
Hubbard	Crow Wing River	07010106	5	HUC5095g1W	8/2/2013	967.1	PEM	Fresh (wet) Meadow	Type 2	366.2	0.07	0.67	-	-	0.67	141	35	31	NESE	46.982594	-95.149722
Hubbard	Crow Wing River	07010106	5	HUC5095h1W	8/2/2013	967.3	PEM	Sedge Meadows	Type 2	160.9	0.03	0.36	-	-	0.36	141	35	32	SWSW	46.978746	-95.148828
Hubbard	Crow Wing River	07010106	5	w-141n35w31-a	7/15/2015	967.3	PEM	Fresh (wet) Meadow	Type 2	-	-	0.05	-	-	0.05	141	35	31	SESE	46.978622	-95.149457
Hubbard	Crow Wing River	07010106	5	w-141n35w31-a	7/15/2015	967.3	PSS	Shrub Carr	Type 6	-	-	0.01	-	-	0.01	141	35	31	SESE	46.978603	-95.149518
Hubbard	Crow Wing River	07010106	5	HUC096a1W	8/3/2013	967.5	PFO	Hardwood Swamps	Type 7	-	-	-	0.05	-	0.05	140	35	6	NWNE, NENE	46.976587	-95.14861
Hubbard	Crow Wing River	07010106	5	HUC5098a1W	8/3/2013	967.6	PEM	Sedge Meadows	Type 2	1,046.8	0.20	1.17	-	-	1.17	140	35	6	SWNE, SENE	46.974616	-95.148782
Hubbard	Crow Wing River	07010106	5	HUC5098a1W	8/3/2013	967.7	PFO	Coniferous Swamps	Type 7	-	-	-	1.20	-	1.20	140	35	6	SENE	46.973429	-95.148437
Hubbard	Crow Wing River	07010106	5	HUC5099g1W	8/3/2013	968.0	PEM	Fresh (wet) Meadow	Type 2	16.6	0.00	0.02	-	-	0.02	140	35	6	NESE	46.96925	-95.148436

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Line 3 Replacement Project
Wetland Table

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Hubbard	Crow Wing River	07010106	5	HUC5099c1W	8/3/2013	968.0	PFO	Hardwood Swamps	Type 7	72.5	0.01	-	0.18	-	0.18	140	35	6	NESE, SESE	46.968044	-95.148121
Hubbard	Crow Wing River	07010106	5	HUC5099b1W	8/3/2013	968.1	PEM	Sedge Meadows	Type 2	-	-	0.04	-	-	0.04	140	35	6	SESE	46.967296	-95.148336
Hubbard	Crow Wing River	07010106	5	HUC5100a1W	8/1/2013	968.3	PEM	Seasonally Flooded Basins	Type 1	55.6	0.01	0.20	-	-	0.20	140	35	7	NENE	46.96402	-95.148081
Hubbard	Crow Wing River	07010106	5	HUC5100b1W	8/1/2013	968.4	PEM	Seasonally Flooded Basins	Type 1	58.8	0.01	0.15	-	-	0.15	140	35	7	NENE	46.962465	-95.147801
Hubbard	Crow Wing River	07010106	5	HUC5100c1W	8/1/2013	968.5	PEM	Seasonally Flooded Basins	Type 1	-	-	0.01	-	-	0.01	140	35	7	NENE	46.961195	-95.147667
Hubbard	Crow Wing River	07010106	5	HUC5100d1W	8/1/2013	968.6	PEM	Seasonally Flooded Basins	Type 1	103.7	0.02	0.23	-	-	0.23	140	35	7	SENE	46.95934	-95.147815
Hubbard	Crow Wing River	07010106	5	HUC5107_200a1W	8/1/2013	970.4	PEM	Sedge Meadows	Type 2	-	-	0.08	-	-	0.08	140	35	20	NWNW	46.935162	-95.143185
Hubbard	Crow Wing River	07010106	5	HUC5107_200b1W	6/13/2014	970.5	PEM	Sedge Meadows	Type 2	30.3	0.01	0.06	-	-	0.06	140	35	20	NWNW	46.934153	-95.141244
Hubbard	Crow Wing River	07010106	5	HUC5107_200b1W	6/13/2014	970.5	PSS	Alder Thickets	Type 6	207.9	0.04	0.06	0.17	-	0.23	140	35	20	NWNW	46.934059	-95.141069
Hubbard	Crow Wing River	07010106	5	HUC5114c1W	9/10/2014	971.9	PEM	Fresh (wet) Meadow	Type 2	-	-	0.03	-	-	0.03	140	35	29	SWNW	46.914543	-95.139483
Hubbard	Crow Wing River	07010106	5	HUC5121a1W [e]	8/1/2013	974.0	PEM	Sedge Meadows	Type 2	309.7	0.06	0.36	-	-	0.36	139	35	6	NESE, SENE	46.884941	-95.142759
Hubbard	Crow Wing River	07010106	5	HUC5121a1W [e]	8/1/2013	974.0	PSS	Shrub Carr	Type 6	466.8	0.09	-	0.53	-	0.53	139	35	6	NESE, SENE	46.884579	-95.142781
Hubbard	Crow Wing River	07010106	5	HUC5121a1W [e]	8/1/2013	974.0	PFO	Hardwood Swamps	Type 7	243.1	0.05	-	0.28	-	0.28	139	35	6	NESE, SENE	46.884534	-95.142809
Hubbard	Crow Wing River	07010106	5	MN_NWI-017 [e]	TBD	974.2	PSS	TBD	TBD	238.0	0.05	-	0.28	-	0.28	139	35	6	NESE	46.881896	-95.143094
Hubbard	Crow Wing River	07010106	5	HUC5124b1W	8/2/2013	974.8	PEM	Sedge Meadows	Type 2	309.7	0.06	0.49	-	-	0.49	139	35	7	SENE	46.872667	-95.144076
Hubbard	Crow Wing River	07010106	5	HUC5124b1W	8/2/2013	974.9	PUB	Shallow Open Water	Type 5	80.6	0.02	0.19	-	-	0.19	139	35	7	SENE	46.87239	-95.144116
Hubbard	Crow Wing River	07010106	5	HUC5124b1W	8/2/2013	974.9	PSS	Alder Thickets	Type 6	-	-	0.27	0.02	-	0.29	139	35	7	SENE	46.871795	-95.144302
Hubbard	Crow Wing River	07010106	5	HUC5124a1W	8/2/2013	975.0	PEM	Fresh (wet) Meadow	Type 2	-	-	0.03	-	-	0.03	139	35	7	SENE	46.871131	-95.144528
Hubbard	Crow Wing River	07010106	5	HUC5126d1W	8/2/2013	975.3	PUB	Shallow Open Water	Type 5	59.0	0.01	0.14	-	-	0.14	139	35	7	SESE	46.86604	-95.143694
Hubbard	Crow Wing River	07010106	5	HUC5126d1W	8/2/2013	975.3	PEM	Open Bogs	Type 8	49.5	0.01	0.12	-	-	0.12	139	35	7	SESE	46.866065	-95.14368
Hubbard	Crow Wing River	07010106	5	HUC5126c1W	8/2/2013	975.4	PEM	Fresh (wet) Meadow	Type 2	8.8	0.00	0.02	-	-	0.02	139	35	7	SESE	46.865243	-95.143843
Hubbard	Crow Wing River	07010106	5	HUC5126a1W	8/1/2013	975.5	PEM	Fresh (wet) Meadow	Type 2	82.6	0.02	0.07	-	-	0.07	139	35	7	SESE	46.863974	-95.144013
Hubbard	Crow Wing River	07010106	5	HUC5126a1W	8/1/2013	975.5	PFO	Hardwood Swamps	Type 7	-	-	-	0.06	-	0.06	139	35	7	SESE	46.863939	-95.143915
Hubbard	Crow Wing River	07010106	5	HUC5127a1W	8/2/2013	976.0	PEM	Fresh (wet) Meadow	Type 2	273.1	0.05	0.51	-	-	0.51	139	35	18	SENE	46.856146	-95.145087
Hubbard	Crow Wing River	07010106	5	HUC5129a1W	8/2/2013	976.0	PEM	Fresh (wet) Meadow	Type 2	67.4	0.01	0.11	-	-	0.11	139	35	18	NESE	46.85531	-95.145083
Hubbard	Crow Wing River	07010106	5	HUC5129a1W	8/2/2013	976.1	PSS	Shrub Carr	Type 6	-	-	0.17	-	-	0.17	139	35	18	NESE	46.855238	-95.145001
Hubbard	Crow Wing River	07010106	5	HUC5129b1W	8/2/2013	976.3	PFO	Hardwood Swamps	Type 7	13.2	0.00	-	0.07	-	0.07	139	35	18	SESE	46.851831	-95.145664
Hubbard	Crow Wing River	07010106	5	HUC5129c1W	8/2/2013	976.3	PSS	Shrub Carr	Type 6	-	-	0.05	0.01	-	0.06	139	35	18	SESE	46.851261	-95.14574
Hubbard	Crow Wing River	07010106	5	HUC5129c1W	8/2/2013	976.3	PEM	Fresh (wet) Meadow	Type 2	97.5	0.02	0.10	-	-	0.10	139	35	18	SESE	46.851259	-95.145851
Hubbard	Crow Wing River	07010106	5	HUC5129d1W	8/3/2013	976.4	PEM	Fresh (wet) Meadow	Type 2	253.7	0.05	0.71	-	-	0.71	139	35	18, 19	NENE, SESE	46.850187	-95.146062
Hubbard	Crow Wing River	07010106	5	HUC5129d1W	8/3/2013	976.4	PFO	Hardwood Swamps	Type 7	-	-	-	0.34	-	0.34	139	35	18	SESE	46.850001	-95.146012
Hubbard	Crow Wing River	07010106	5	HUC5129d1W	8/3/2013	976.5	PSS	Shrub Carr	Type 6	888.3	0.17	1.50	0.92	-	2.42	139	35	18, 19	NENE, SESE	46.849038	-95.146129
Hubbard	Crow Wing River	07010106	5	HUC5133a1W	8/3/2013	976.8	PFO	Hardwood Swamps	Type 7	-	-	-	0.01	-	0.01	139	35	19	NENE	46.845283	-95.147045
Hubbard	Crow Wing River	07010106	5	HUC5133a1W	8/3/2013	976.8	PEM	Sedge Meadows	Type 2	120.4	0.02	0.09	-	-	0.09	139	35	19	NWNE, NENE	46.845292	-95.14728
Hubbard	Crow Wing River	07010106	5	HUC5133a1W	8/3/2013	976.8	PSS	Shrub Carr	Type 6	-	-	0.07	0.05	-	0.12	139	35	19	NENE	46.845175	-95.14713
Hubbard	Crow Wing River	07010106	5	HUC5135a1W	8/3/2013	977.1	PEM	Fresh (wet) Meadow	Type 2	50.7	0.01	0.08	-	-	0.08	139	35	19	NWSE	46.84037	-95.148564
Hubbard	Crow Wing River	07010106	5	HUC5135a1W	8/3/2013	977.1	PSS	Shrub Carr	Type 6	91.2	0.02	0.17	0.11	-	0.28	139	35	19	NWSE	46.840292	-95.14852

Attachment F
Line 3 Replacement Project
Wetland Table

County	Major Watershed	Hydologic Unit Code (HUC) 8	Bank Service Area (BSA)	Feature ID	Survey Date	Approx. Milepost	Cowardin [a]	Eggers and Reed [a]	Circular 39 [a]	Crossing length (feet) b	Crossing length (miles) b	Temporary Impacts (acres) c	Permanent Conversion (acres) d	Permanent Fill (acres)	Total Impacts (acres)	Township	Range	Section	Quarter-Quarter Section	Latitude	Longitude
Hubbard	Crow Wing River	07010106	5	HUC5135b1W	8/3/2013	977.1	PEM	Fresh (wet) Meadow	Type 2	29.5	0.01	0.02	-	-	0.02	139	35	19	NWSE	46.839928	-95.148675
Hubbard	Crow Wing River	07010106	5	HUC5136a1W	8/3/2013	977.4	PEM	Fresh (wet) Meadow	Type 2	-	-	0.00	-	-	0.00	139	35	19	SWSE	46.835623	-95.148688
Hubbard	Crow Wing River	07010106	5	HUC5136a1W	8/3/2013	977.4	PSS	Shrub Carr	Type 6	108.8	0.02	0.13	0.12	-	0.24	139	35	19	SWSE	46.835432	-95.148755
Hubbard	Crow Wing River	07010106	5	HUC5145a1W	8/2/2013	978.6	PEM	Sedge Meadows	Type 2	-	-	0.00	-	-	0.00	139	35	31	NENE	46.818907	-95.146915
Hubbard	Crow Wing River	07010106	5	HUC5145b1W	8/2/2013	978.8	PSS	Shrub Carr	Type 6	-	-	0.27	0.01	-	0.27	139	35	31	NWNE, SWNE	46.816148	-95.148172
Hubbard	Crow Wing River	07010106	5	HUC5145b1W	8/2/2013	978.8	PEM	Sedge Meadows	Type 2	-	-	0.01	-	-	0.01	139	35	31	NWNE	46.815869	-95.148098
Hubbard	Crow Wing River	07010106	5	HUC5151a1W	8/2/2013	979.5	PSS	Shrub Carr	Type 6	86.8	0.02	0.12	0.09	-	0.21	139	35	31	NESE, SESE	46.808611	-95.144496
Hubbard	Crow Wing River	07010106	5	HUC5151a1W	8/2/2013	979.5	PEM	Sedge Meadows	Type 2	270.0	0.05	0.51	-	-	0.51	139	35	31	NESE, SESE	46.808626	-95.143788
Hubbard	Crow Wing River	07010106	5	HUC5157a1W	8/5/2013	980.1	PSS	Shrub Carr	Type 6	157.0	0.03	0.07	0.18	-	0.24	139	35	32	SWSE	46.808551	-95.130508
Hubbard	Crow Wing River	07010106	5	HUC5157a1W	8/5/2013	980.1	PEM	Sedge Meadows	Type 2	135.8	0.03	0.39	-	-	0.39	139	35	32	SWSE	46.808548	-95.130206
Hubbard	Crow Wing River	07010106	5	HUC5157b1W	8/5/2013	980.3	PEM	Fresh (wet) Meadow	Type 2	96.9	0.02	0.41	-	-	0.41	139	35	32	SWSE, SESE	46.808683	-95.126876
Hubbard	Crow Wing River	07010106	5	HUC5161b1W	8/5/2013	981.2	PSS	Shrub Carr	Type 6	101.2	0.02	-	0.09	-	0.09	139	35	33	NWSE	46.810788	-95.108394
Hubbard	Crow Wing River	07010106	5	HUC5161a1W	8/5/2013	981.3	PSS	Shrub Carr	Type 6	60.6	0.01	0.05	0.05	-	0.10	139	35	33	NWSE	46.810756	-95.10765
Hubbard	Crow Wing River	07010106	5	HUC5161a1W	8/5/2013	981.3	PEM	Sedge Meadows	Type 2	44.0	0.01	0.15	-	-	0.15	139	35	33	NWSE	46.81089	-95.107434
Hubbard	Crow Wing River	07010106	5	HUC5162a1W	8/5/2013	981.4	PEM	Fresh (wet) Meadow	Type 2	169.2	0.03	0.36	-	-	0.36	139	35	33	NWSE, NESE	46.811114	-95.105781
Hubbard	Crow Wing River	07010106	5	HUC5162a1W	8/5/2013	981.4	PSS	Shrub Carr	Type 6	172.7	0.03	0.17	0.20	-	0.37	139	35	33	NESE	46.811267	-95.104935
Hubbard	Crow Wing River	07010106	5	HUC5165a1W	9/12/2013	981.7	PEM	Fresh (wet) Meadow	Type 2	-	-	0.01	-	-	0.01	139	35	34	SWNW	46.812691	-95.098154
Hubbard	Crow Wing River	07010106	5	HUC5171a1W	9/30/2013	982.4	PEM	Sedge Meadows	Type 2	83.7	0.02	0.08	-	-	0.08	139	35	34	SWNE	46.814916	-95.08507
Hubbard	Crow Wing River	07010106	5	HUC5174b1W	9/30/2013	982.6	PFO	Coniferous Swamps	Type 7	1,197.5	0.23	-	2.98	-	2.98	139	35	34, 35	SWNW, SENW, SENE	46.814947	-95.080149
Hubbard	Crow Wing River	07010106	5	HUC5174b1W	9/30/2013	982.7	PEM	Sedge Meadows	Type 2	-	-	0.00	-	-	0.00	139	35	35	SWNW	46.81514	-95.077642
Hubbard	Crow Wing River	07010106	5	HUC5174b1W	9/30/2013	982.8	PSS	Alder Thickets	Type 6	942.8	0.18	0.66	1.10	-	1.76	139	35	35	SWNW, SENW	46.814911	-95.076277
Hubbard	Crow Wing River	07010106	5	HUC5174a1W [e]	8/6/2013	983.5	PFO	Hardwood Swamps	Type 7	279.1	0.05	-	0.33	-	0.33	139	35	35, 36	SWNW, SENE	46.814988	-95.060383
Hubbard	Crow Wing River	07010106	5	HUC5174a1W [e]	8/6/2013	983.6	PSS	Shrub Carr	Type 6	556.6	0.11	-	0.63	-	0.63	139	35	35, 36	SWNW, SENE	46.814977	-95.059456
Hubbard	Crow Wing River	07010106	5	HUC5174a1W [e]	8/6/2013	983.7	PEM	Sedge Meadows	Type 2	420.3	0.08	0.48	-	-	0.48	139	35	36	SWNW	46.814953	-95.057771
Hubbard	Crow Wing River	07010106	5	HUC5179a1W	8/6/2013	985.1	PFO	Hardwood Swamps	Type 7	1,222.3	0.23	-	1.40	-	1.40	139	34	31	NENW, NENE	46.819851	-95.030131
Hubbard	Crow Wing River	07010106	5	HUC5179a1W	8/6/2013	985.1	PEM	Shallow Marshes	Type 3	922.0	0.17	1.07	-	-	1.07	139	34	31	NWNE, NENW	46.819844	-95.029697
Hubbard	Crow Wing River	07010106	5	HUC5179a1W	8/6/2013	985.1	PSS	Shrub Carr	Type 6	1,053.1	0.20	-	1.21	-	1.21	139	34	31	NWNE, NENW, NENE	46.819835	-95.028642
Hubbard	Crow Wing River	07010106	5	HUC5183a1W	8/5/2013	986.2	PEM	Fresh (wet) Meadow	Type 2	-	-	0.01	-	-	0.01	139	34	32	NWNE	46.819727	-95.006445
Hubbard	Crow Wing River	07010106	5	HUC5183b1W	8/5/2013	986.4	PEM	Fresh (wet) Meadow	Type 2	-	-	0.11	-	-	0.11	139	34	32	NWNE	46.819678	-95.002712
Hubbard	Crow Wing River	07010106	5	HUC5184a1W	8/5/2013	987.0	PEM	Fresh (wet) Meadow	Type 2	488.8	0.09	1.20	-	-	1.20	139	34	33	NWNW, NENW, SWNW, SENW	46.816703	-94.991307
Hubbard	Crow Wing River	07010106	5	HUC5184a1W	8/5/2013	987.0	PSS	Shrub Carr	Type 6	31.3	0.01	0.17	0.03	-	0.19	139	34	33	NWNW	46.816505	-94.991339
Hubbard	Crow Wing River	07010106	5	HUC5187b1W	8/5/2013	987.5	PEM	Seasonally Flooded Basins	Type 1	-	-	0.01	-	-	0.01	139	34	33	SWNE	46.812597	-94.983042
Hubbard	Crow Wing River	07010106	5	MN_NWI-013	TBD	988.2	PEM	TBD	TBD	127.6	0.02	0.43	-	-	0.43	139	34	34	NWSW, NESW, SENW	46.812399	-94.969606
Hubbard	Crow Wing River	07010106	5	MN_NWI-022	TBD	988.2	PSS	TBD	TBD	706.7	0.13	0.60	0.81	-	1.41	139	34	34	NWSW, NESW	46.81238	-94.969467
Wadena	Crow Wing River	07010106	5	WA006a1W [e]	9/8/2014	993.3	PFO	Floodplain Forests	Type 1	11.1	0.00	-	0.01	-	0.01	138	33	5	NESE	46.794738	-94.876094
Wadena	Crow Wing River	07010106	5	WA006b1W [e]	9/8/2014	993.3	PSS	Shrub Carr	Type 6	138.7	0.03	-	0.16	-	0.16	138	33	5	NESE	46.794761	-94.87475
Wadena	Crow Wing River	07010106	5	WA006b1W [e]	9/8/2014	993.3	PFO	Floodplain Forests	Type 1	164.0	0.03	-	0.19	-	0.19	138	33	5	NESE	46.794759	-94.874554
Wadena	Crow Wing River	07010106	5	WA017a1W	9/13/2014	995.7	PSS	Shrub Carr	Type 6	144.6	0.03	0.13	0.16	-	0.28	138	33	2	SWSW	46.791098	-94.826038
Wadena	Crow Wing River	07010106	5	WA017a1W	9/13/2014	995.7	PEM	Shallow Marshes	Type 3	69.1	0.01	0.16	-	-	0.16	138	33	2	SWSW	46.791146	-94.826089

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Wetland Table

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Wadena	Crow Wing River	07010106	5	WA017b1W	9/13/2014	995.9	PEM	Sedge Meadows	Type 2	3,466.1	0.66	7.50	-	-	7.50	138	33	1, 2	SWSE, SWSW, SESE, SESW	46.790613	-94.820451
Wadena	Crow Wing River	07010106	5	WA017b1W	9/13/2014	996.2	PSS	Shrub Carr	Type 6	528.8	0.10	0.39	0.60	-	0.99	138	33	2	SWSE, SESE	46.790551	-94.814173
Wadena	Crow Wing River	07010106	5	w-138n33w11-ab	7/25/2016	996.4	PEM	Fresh (wet) Meadow	Type 2	-	-	0.04	-	-	0.04	138	33	11	NENE	46.786347	-94.81042
Wadena	Crow Wing River	07010106	5	WA020a1W	9/12/2014	997.2	PEM	Sedge Meadows	Type 2	-	-	0.05	-	-	0.05	138	33	1	SWSE	46.790156	-94.793444
Wadena	Crow Wing River	07010106	5	WA021a1W	9/12/2014	997.2	PSS	Shrub Carr	Type 6	688.1	0.13	0.64	0.76	-	1.40	138	33	1	SWSE, SESE	46.790273	-94.793032
Wadena	Crow Wing River	07010106	5	w-138n33w1-ab	7/25/2016	997.4	PSS	Deep and Shallow Marshes	Type 3	-	-	0.06	-	-	0.06	138	33	1	SESE	46.79299	-94.788726
Wadena	Crow Wing River	07010106	5	w-138n33w1-aa	7/25/2016	997.5	PEM	Shrub Carr	Type 6	-	-	0.03	-	-	0.03	138	33	1	SESE	46.793023	-94.788237
Wadena	Crow Wing River	07010106	5	WA021a1W	9/12/2014	997.5	PEM	Fresh (wet) Meadow	Type 2	0.0	0.00	0.18	-	-	0.18	138	33	1	SESE	46.789866	-94.787372
Wadena	Crow Wing River	07010106	5	w-138n33w1-ac	7/25/2016	997.5	PEM	Shrub Carr	Type 6	-	-	0.00	-	-	0.00	138	33	1	SESE	46.79293	-94.787123
Cass	Crow Wing River	07010106	5	CAC5001_500a1W	9/19/2014	997.5	PEM	Deep Marshes	Type 4	107.6	0.02	0.32	-	-	0.32	138	32	6	SWSW	46.790111	-94.786414
Cass	Crow Wing River	07010106	5	CAC5001_500a1W	9/19/2014	997.6	PSS	Shrub Carr	Type 6	164.6	0.03	0.22	0.18	-	0.40	138	32	6	SWSW	46.789856	-94.786651
Cass	Crow Wing River	07010106	5	CAC5001_510a1W	9/19/2014	998.2	PFO	Hardwood Swamps	Type 7	899.2	0.17	-	2.00	-	2.00	138	32	6	SWSE, SESE	46.789984	-94.77305
Cass	Crow Wing River	07010106	5	CAC5001_510a1W	9/19/2014	998.3	PSS	Shrub Carr	Type 6	161.9	0.03	0.17	0.20	-	0.37	138	32	6	SESE	46.789962	-94.770411
Cass	Crow Wing River	07010106	5	CAC5001_510a1W	9/19/2014	998.4	PEM	Shallow Marshes	Type 3	905.8	0.17	1.98	-	-	1.98	138	32	6	SESE	46.789947	-94.768315
Cass	Crow Wing River	07010106	5	CAC5001_520a1W	9/19/2014	998.5	PEM	Fresh (wet) Meadow	Type 2	8.1	0.00	0.03	-	-	0.03	138	32	5	SWSW	46.789918	-94.765786
Cass	Crow Wing River	07010106	5	CAC5001_520a1W	9/19/2014	998.6	PSS	Shrub Carr	Type 6	149.5	0.03	0.27	0.17	-	0.44	138	32	5	SWSW	46.789922	-94.765477
Cass	Crow Wing River	07010106	5	CAC5001_520a1W	9/19/2014	998.6	PFO	Hardwood Swamps	Type 7	134.9	0.03	-	0.29	-	0.29	138	32	5	SWSW	46.78967	-94.765286
Cass	Crow Wing River	07010106	5	CAC5001_540a1W	9/20/2014	999.0	PEM	Fresh (wet) Meadow	Type 2	2,236.7	0.42	4.90	-	-	4.90	138	32	4, 5	SWSE, SWSW, SESE, SESW	46.789848	-94.756643
Cass	Crow Wing River	07010106	5	CAC5001_540a1W	9/20/2014	999.0	PFO	Hardwood Swamps	Type 7	310.8	0.06	-	0.75	-	0.75	138	32	5	SWSE, SESW	46.789841	-94.75617
Cass	Crow Wing River	07010106	5	CAC5001_540a1W	9/20/2014	999.1	PSS	Shrub Carr	Type 6	142.0	0.03	0.18	0.17	-	0.35	138	32	4, 5	SWSE, SWSW	46.789702	-94.754236
Cass	Crow Wing River	07010106	5	CAC5010b1W	8/21/2013	1000.3	PFO	Hardwood Swamps	Type 7	1,922.4	0.36	-	3.32	-	3.32	138	32	3, 4	SWSE, SESE, SESW	46.791441	-94.730186
Cass	Crow Wing River	07010106	5	CAC5010b1W	8/21/2013	1000.3	PSS	Shrub Carr	Type 6	81.4	0.02	0.46	0.11	-	0.57	138	32	3, 4	SWSE, SESE	46.791533	-94.729884
Cass	Crow Wing River	07010106	5	CAC5010b1W	8/21/2013	1000.3	PEM	Fresh (wet) Meadow	Type 2	4,490.4	0.85	9.82	-	-	9.82	138	32	3, 4	SWSE, SWSW, SESE, SESW	46.791582	-94.72934
Cass	Crow Wing River	07010106	5	CAC5010c1W	8/21/2013	1001.3	PSS	Alder Thickets	Type 6	-	-	0.01	-	-	0.01	138	32	3	SWSE	46.791213	-94.709179
Cass	Crow Wing River	07010106	5	CAC5010a1W	8/21/2013	1001.5	PSS	Shrub Carr	Type 6	-	-	0.00	-	-	0.00	138	32	3	SESE	46.790685	-94.705582
Cass	Crow Wing River	07010106	5	CAC5010a1W	7/13/2015	1001.5	PEM	Fresh (wet) Meadow	Type 2	-	-	0.10	-	-	0.10	138	32	3	SESE	46.790583	-94.704893
Cass	Crow Wing River	07010106	5	CAC5010a1W	8/21/2013	1001.6	PFO	Hardwood Swamps	Type 7	-	-	-	0.01	-	0.01	138	32	3	SESE	46.790953	-94.703064
Cass	Crow Wing River	07010106	5	CA011cW	8/16/2013	1001.6	PEM	Fresh (wet) Meadow	Type 2	-	-	0.13	-	-	0.13	138	32	2	SWSW	46.79169	-94.702168
Cass	Crow Wing River	07010106	5	CA011cW	8/16/2013	1001.6	PSS	Shrub Carr	Type 6	295.4	0.06	0.24	0.34	-	0.58	138	32	2	SWSW	46.791648	-94.701859
Cass	Crow Wing River	07010106	5	CA011bW	8/16/2013	1002.1	PSS	Shrub Carr	Type 6	-	-	0.02	-	-	0.02	138	32	2	SWSE	46.791816	-94.691285
Cass	Crow Wing River	07010106	5	CA011aW	8/16/2013	1002.2	PSS	Shrub Carr	Type 6	288.3	0.05	0.21	0.33	-	0.54	138	32	2	SWSE	46.791988	-94.689298
Cass	Crow Wing River	07010106	5	CA011aW	8/16/2013	1002.3	PFO	Hardwood Swamps	Type 7	117.3	0.02	-	0.36	-	0.36	138	32	2	SWSE	46.791855	-94.688981
Cass	Crow Wing River	07010106	5	CA012bW	8/16/2013	1002.4	PEM	Fresh (wet) Meadow	Type 2	63.1	0.01	0.13	-	-	0.13	138	32	2	SESE	46.79202	-94.685909
Cass	Crow Wing River	07010106	5	CA012bW	8/16/2013	1002.4	PSS	Shrub Carr	Type 6	529.4	0.10	0.52	0.61	-	1.12	138	32	2	SESE	46.791902	-94.684767
Cass	Crow Wing River	07010106	5	CA012aW	8/16/2013	1002.6	PSS	Shrub Carr	Type 6	17.2	0.00	0.01	0.01	0.01	0.03	138	32	2	SESE	46.79205	-94.681395
Cass	Crow Wing River	07010106	5	CA012aW	8/16/2013	1002.6	PEM	Fresh (wet) Meadow	Type 2	-	-	0.00	-	-	0.00	138	32	2	SESE	46.791888	-94.681392
Cass	Crow Wing River	07010106	5	CA013aW	8/17/2013	1002.6	PSS	Shrub Carr	Type 6	1,278.0	0.24	1.36	1.38	-	2.75	138	32	1, 2	SWSW, SESE, SESW	46.791945	-94.681244
Cass	Crow Wing River	07010106	5	CA013aW	8/17/2013	1002.7	PEM	Fresh (wet) Meadow	Type 2	202.4	0.04	0.47	-	-	0.47	138	32	1	SWSW	46.791953	-94.680175
Cass	Crow Wing River	07010106	5	CA014bW	8/17/2013	1003.1	PEM	Seasonally Flooded Basins	Type 1	59.6	0.01	0.15	-	-	0.15	138	32	1	SWSE, SESW	46.792044	-94.670666

Attachment F
Line 3 Replacement Project
Wetland Table

County	Major Watershed	Hydrologic Unit Code (HUC) 8	Bank Service Area (BSA)	Feature ID	Survey Date	Approx. Milepost	Cowardin [a]	Eggers and Reed [a]	Circular 39 [a]	Crossing length (feet) b	Crossing length (miles) b	Temporary Impacts (acres) c	Permanent Conversion (acres) d	Permanent Fill (acres)	Total Impacts (acres)	Township	Range	Section	Quarter-Quarter Section	Latitude	Longitude
Cass	Crow Wing River	07010106	5	CA014aW	8/17/2013	1003.6	PEM	Fresh (wet) Meadow	Type 2	16.9	0.00	0.04	-	-	0.04	138	32	1	SESE	46.792148	-94.660098
Cass	Crow Wing River	07010106	5	CA015aW	8/17/2013	1003.6	PEM	Fresh (wet) Meadow	Type 2	18.2	0.00	0.04	-	-	0.04	138	31	6	SWSW	46.79215	-94.659899
Cass	Crow Wing River	07010106	5	CA017gW	8/17/2013	1004.3	PEM	Fresh (wet) Meadow	Type 2	67.5	0.01	0.19	-	-	0.19	138	31	6	SWSE	46.792424	-94.645157
Cass	Crow Wing River	07010106	5	CA017hW	8/17/2013	1004.4	PEM	Sedge Meadows	Type 2	-	-	0.01	-	-	0.01	138	31	6	SESE	46.792266	-94.643339
Cass	Crow Wing River	07010106	5	CA017fW	8/17/2013	1004.5	PEM	Sedge Meadows	Type 2	-	-	0.01	-	-	0.01	138	31	6	SESE	46.792268	-94.640882
Cass	Crow Wing River	07010106	5	CA017cW	8/17/2013	1004.5	PEM	Sedge Meadows	Type 2	-	-	0.01	-	-	0.01	138	31	6	SESE	46.792464	-94.640597
Cass	Crow Wing River	07010106	5	CA017dW	8/17/2013	1004.6	PEM	Fresh (wet) Meadow	Type 2	-	-	0.09	-	-	0.09	138	31	6	SESE	46.792199	-94.639937
Cass	Crow Wing River	07010106	5	CA017aW	8/17/2013	1004.6	PEM	Fresh (wet) Meadow	Type 2	-	-	0.00	-	-	0.00	138	31	6	SESE	46.792112	-94.639382
Cass	Crow Wing River	07010106	5	CA018iW	8/16/2013	1004.6	PFO	Hardwood Swamps	Type 7	-	-	-	0.03	-	0.03	138	31	5	SWSW	46.792228	-94.639212
Cass	Crow Wing River	07010106	5	CA018jW	8/16/2013	1004.6	PFO	Hardwood Swamps	Type 7	-	-	-	0.01	-	0.01	138	31	5	SWSW	46.792312	-94.639037
Cass	Crow Wing River	07010106	5	CA018fW	8/16/2013	1004.7	PFO	Hardwood Swamps	Type 7	31.2	0.01	-	0.08	-	0.08	138	31	5	SWSW	46.791948	-94.637942
Cass	Pine River	07010105	5	CA018dW	8/16/2013	1004.8	PFO	Hardwood Swamps	Type 7	-	-	-	0.05	-	0.05	138	31	5	SWSW	46.790828	-94.635347
Cass	Pine River	07010105	5	CA019iW	8/16/2013	1004.9	PEM	Sedge Meadows	Type 2	217.3	0.04	0.54	-	-	0.54	138	31	5	SWSW, SESW	46.790418	-94.634323
Cass	Crow Wing River	07010106	5	w-138n31w5-a1	10/11/2014	1005.0	PSS	Shrub Carr	Type 6	-	-	0.01	-	-	0.01	138	31	5	NENE	46.802442	-94.620379
Cass	Pine River	07010105	5	CA019gW	8/16/2013	1005.0	PSS	Alder Thickets	Type 6	48.8	0.01	0.11	0.06	-	0.17	138	31	5, 8	NENW, SESW	46.789381	-94.631193
Cass	Pine River	07010105	5	CA019gW	8/16/2013	1005.1	PEM	Sedge Meadows	Type 2	160.7	0.03	0.29	-	-	0.29	138	31	8	NENW	46.789185	-94.630876
Cass	Pine River	07010105	5	CA019dW	8/16/2013	1005.1	PEM	Sedge Meadows	Type 2	152.5	0.03	0.44	-	-	0.44	138	31	8	NENW	46.788601	-94.629495
Cass	Pine River	07010105	5	CA019fW	8/16/2013	1005.2	PFO	Hardwood Swamps	Type 7	-	-	-	0.07	-	0.07	138	31	8	NWNE	46.787655	-94.627577
Cass	Pine River	07010105	5	CA019eW	8/16/2013	1005.3	PUB	Shallow Open Water	Type 5	332.2	0.06	0.75	-	-	0.75	138	31	8	NWNE	46.787138	-94.626085
Cass	Pine River	07010105	5	CA019aW	8/16/2013	1005.6	PUB	Shallow Marshes	Type 3	-	-	0.01	-	-	0.01	138	31	8	SENE	46.784883	-94.621017
Cass	Pine River	07010105	5	CA019aW	8/16/2013	1005.6	PEM	Shallow Marshes	Type 3	-	-	0.09	-	-	0.09	138	31	8	SENE	46.784964	-94.620899
Cass	Pine River	07010105	5	CA019bW	8/16/2013	1005.6	PEM	Sedge Meadows	Type 2	27.8	0.01	0.03	-	-	0.03	138	31	8	SENE	46.784863	-94.620357
Cass	Pine River	07010105	5	CA020aW	9/16/2013	1006.0	PEM	Fresh (wet) Meadow	Type 2	75.1	0.01	0.12	-	-	0.12	138	31	9	NWSW, SWNW	46.782404	-94.614399
Cass	Pine River	07010105	5	CA020bW	9/16/2013	1006.2	PEM	Seasonally Flooded Basins	Type 1	-	-	0.03	-	-	0.03	138	31	9	NESW	46.780369	-94.610399
Cass	Pine River	07010105	5	CA020dW	9/16/2013	1006.2	PEM	Shallow Marshes	Type 3	-	-	0.12	-	-	0.12	138	31	9	NESW	46.780185	-94.609499
Cass	Pine River	07010105	5	CA020gW	9/19/2013	1006.5	PEM	Shallow Marshes	Type 3	178.4	0.03	0.40	-	-	0.40	138	31	9	NWSE	46.780208	-94.604387
Cass	Pine River	07010105	5	CA020iW	9/19/2013	1006.6	PUB	Shallow Open Water	Type 5	152.8	0.03	0.35	-	-	0.35	138	31	9	NWSE	46.780192	-94.602846
Cass	Pine River	07010105	5	CA020iW	9/19/2013	1006.6	PEM	Shallow Marshes	Type 3	24.1	0.00	0.05	-	-	0.05	138	31	9	NWSE	46.780324	-94.602811
Cass	Pine River	07010105	5	CA020kW	9/20/2013	1006.6	PEM	Fresh (wet) Meadow	Type 2	-	-	0.01	-	-	0.01	138	31	9	NESE	46.780375	-94.601968
Cass	Pine River	07010105	5	CA020lW	9/20/2013	1006.7	PFO	Hardwood Swamps	Type 7	-	-	-	0.02	-	0.02	138	31	9	NESE	46.780141	-94.600863
Cass	Pine River	07010105	5	CA020qW	9/20/2013	1006.7	PEM	Fresh (wet) Meadow	Type 2	-	-	0.01	-	-	0.01	138	31	9	NESE	46.78036	-94.600515
Cass	Pine River	07010105	5	CA020pW	9/20/2013	1006.7	PEM	Fresh (wet) Meadow	Type 2	-	-	0.01	-	-	0.01	138	31	9	NESE	46.780338	-94.599335
Cass	Pine River	07010105	5	CA020oW	9/20/2013	1006.8	PEM	Sedge Meadows	Type 2	-	-	0.06	-	-	0.06	138	31	9	NESE	46.780131	-94.598063
Cass	Pine River	07010105	5	CA021lW	9/20/2013	1006.9	PEM	Fresh (wet) Meadow	Type 2	125.1	0.02	0.19	-	-	0.19	138	31	10	NWSW	46.780259	-94.596215
Cass	Pine River	07010105	5	CA021mW	9/20/2013	1006.9	PEM	Fresh (wet) Meadow	Type 2	32.9	0.01	0.03	-	-	0.03	138	31	10	NWSW	46.780174	-94.594885
Cass	Pine River	07010105	5	CA021mW	9/20/2013	1006.9	PFO	Hardwood Swamps	Type 7	1.9	0.00	-	0.03	-	0.03	138	31	10	NWSW	46.780113	-94.594836
Cass	Pine River	07010105	5	CA021iW	9/20/2013	1007.4	PEM	Fresh (wet) Meadow	Type 2	205.4	0.04	0.28	-	-	0.28	138	31	10	NWSE, NESW	46.781603	-94.586622
Cass	Pine River	07010105	5	CA021iW	9/20/2013	1007.4	PUB	Deep Marshes	Type 4	-	-	0.08	-	-	0.08	138	31	10	NWSE	46.781532	-94.586237
Cass	Pine River	07010105	5	CA021fW	9/20/2013	1007.5	PEM	Shallow Marshes	Type 3	-	-	0.02	-	-	0.02	138	31	10	NWSE	46.780955	-94.584516

Attachment F
Line 3 Replacement Project
Wetland Table

County	Major Watershed	Hydologic Unit Code (HUC) 8	Bank Service Area (BSA)	Feature ID	Survey Date	Approx. Milepost	Cowardin [a]	Eggers and Reed [a]	Circular 39 [a]	Crossing length (feet) b	Crossing length (miles) b	Temporary Impacts (acres) c	Permanent Conversion (acres) d	Permanent Fill (acres)	Total Impacts (acres)	Township	Range	Section	Quarter-Quarter Section	Latitude	Longitude
Cass	Pine River	07010105	5	CA021eW	9/20/2013	1007.6	PFO	Hardwood Swamps	Type 7	-	-	-	0.06	-	0.06	138	31	10	NWSE	46.781052	-94.582895
Cass	Pine River	07010105	5	CA021bW	9/20/2013	1007.6	PEM	Shallow Marshes	Type 3	90.4	0.02	0.21	-	-	0.21	138	31	10	NWSE, NESE	46.780928	-94.581798
Cass	Pine River	07010105	5	CA021bW	9/20/2013	1007.6	PUB	Shallow Open Water	Type 5	101.8	0.02	0.21	-	-	0.21	138	31	10	NWSE, NESE	46.780925	-94.581545
Cass	Pine River	07010105	5	CA021dW	9/20/2013	1007.7	PEM	Sedge Meadows	Type 2	-	-	0.03	-	-	0.03	138	31	10	NESE	46.780819	-94.579563
Cass	Pine River	07010105	5	CA021aW	9/20/2013	1007.9	PEM	Fresh (wet) Meadow	Type 2	-	-	0.00	-	-	0.00	138	31	10, 11	NWSW, NESE	46.780454	-94.576195
Cass	Pine River	07010105	5	CA021aW	9/20/2013	1007.9	PFO	Hardwood Swamps	Type 7	96.2	0.02	-	0.12	-	0.12	138	31	10, 11	NWSW, NESE	46.78052	-94.576179
Cass	Pine River	07010105	5	CA022gW	8/15/2013	1008.0	PFO	Hardwood Swamps	Type 7	169.3	0.03	-	0.34	-	0.34	138	31	11	NWSW	46.780633	-94.574476
Cass	Pine River	07010105	5	CA022gW	8/15/2013	1008.0	PEM	Sedge Meadows	Type 2	-	-	0.04	-	-	0.04	138	31	11	NWSW	46.780447	-94.574336
Cass	Pine River	07010105	5	CA022fW	8/15/2013	1008.1	PFO	Hardwood Swamps	Type 7	130.8	0.02	-	0.26	-	0.26	138	31	11	NWSW	46.780494	-94.572587
Cass	Pine River	07010105	5	CA022fW	8/15/2013	1008.1	PSS	Alder Thickets	Type 6	154.2	0.03	0.21	0.19	-	0.40	138	31	11	NWSW	46.780479	-94.572045
Cass	Pine River	07010105	5	CA022fW	8/15/2013	1008.1	PEM	Fresh (wet) Meadow	Type 2	165.5	0.03	0.35	-	-	0.35	138	31	11	NWSW	46.78047	-94.571682
Cass	Pine River	07010105	5	CA022dW	8/15/2013	1008.2	PEM	Fresh (wet) Meadow	Type 2	21.2	0.00	0.05	-	-	0.05	138	31	11	NESW	46.78044	-94.568902
Cass	Pine River	07010105	5	CA022dW	8/15/2013	1008.3	PFO	Hardwood Swamps	Type 7	62.1	0.01	-	0.12	-	0.12	138	31	11	NESW	46.780561	-94.568472
Cass	Pine River	07010105	5	CA022cW	8/15/2013	1008.4	PFO	Hardwood Swamps	Type 7	142.3	0.03	-	0.38	-	0.38	138	31	11	NWSE	46.78054	-94.565102
Cass	Pine River	07010105	5	CA022cW	8/15/2013	1008.5	PSS	Alder Thickets	Type 6	314.2	0.06	0.34	0.36	-	0.70	138	31	11	NWSE	46.780398	-94.564081
Cass	Pine River	07010105	5	CA022cW	8/15/2013	1008.5	PEM	Fresh (wet) Meadow	Type 2	386.2	0.07	0.83	-	-	0.83	138	31	11	NWSE	46.780383	-94.562711
Cass	Pine River	07010105	5	CA023aW	8/15/2013	1008.8	PEM	Fresh (wet) Meadow	Type 2	98.4	0.02	0.17	-	-	0.17	138	31	11, 12	SWSW, SESE	46.780272	-94.556157
Cass	Pine River	07010105	5	CA023aW	8/15/2013	1008.8	PFO	Coniferous Swamps	Type 7	1,083.7	0.21	-	2.25	-	2.25	138	31	11, 12	NWSW, NESE, SWSW, SESE	46.780365	-94.555812
Cass	Pine River	07010105	5	CA023aW	8/15/2013	1008.9	PSS	Alder Thickets	Type 6	168.3	0.03	0.18	0.21	-	0.39	138	31	11, 12	NWSW, NESE, SWSW	46.780466	-94.555279
Cass	Pine River	07010105	5	CA024aW	8/15/2013	1009.3	PUB	Shallow Open Water	Type 5	-	-	0.02	-	-	0.02	138	31	12	SESW	46.780166	-94.546492
Cass	Pine River	07010105	5	CA024aW	8/15/2013	1009.3	PEM	Fresh (wet) Meadow	Type 2	58.8	0.01	0.06	-	-	0.06	138	31	12	SESW	46.780286	-94.546404
Cass	Pine River	07010105	5	CA025b1W	8/15/2013	1009.6	PEM	Shallow Marshes	Type 3	156.6	0.03	0.15	-	-	0.15	138	31	12	SWSE, SESE	46.780129	-94.540774
Cass	Pine River	07010105	5	CA025a1W	8/15/2013	1009.7	PEM	Fresh (wet) Meadow	Type 2	-	-	0.07	-	-	0.07	138	31	12	NESE, SESE	46.78031	-94.537504
Cass	Pine River	07010105	5	CA027_200aW	8/15/2013	1010.1	PSS	Alder Thickets	Type 6	256.8	0.05	0.25	0.28	-	0.54	138	30	7	SWSW, SESW	46.780045	-94.530228
Cass	Pine River	07010105	5	CA027_200aW	8/15/2013	1010.1	PEM	Sedge Meadows	Type 2	114.4	0.02	0.29	-	-	0.29	138	30	7	SWSW, SESW	46.780184	-94.530058
Cass	Pine River	07010105	5	CA028_200aW	8/15/2013	1010.3	PEM	Sedge Meadows	Type 2	205.1	0.04	0.36	-	-	0.36	138	30	7	SWSE, SESW	46.779983	-94.524744
Cass	Pine River	07010105	5	CA028_200aW	8/15/2013	1010.3	PSS	Alder Thickets	Type 6	116.1	0.02	0.22	0.14	-	0.36	138	30	7	SWSE, SESW	46.78015	-94.524419
Cass	Pine River	07010105	5	CA040aW	8/14/2013	1012.6	PEM	Shallow Marshes	Type 3	225.0	0.04	0.38	-	-	0.38	138	30	9	NWSE	46.780814	-94.478013
Cass	Pine River	07010105	5	w-138n30w10-aa	9/21/2017	1013.4	PEM	Sedge Meadows	Type 2	-	-	0.57	-	-	0.57	138	30	10	NWSE	46.779135	-94.460226
Cass	Pine River	07010105	5	w-138n30w10-ab	9/21/2017	1013.4	PUB	Shallow Open Water	Type 5	-	-	0.01	-	-	0.01	138	30	10	Meandered waterbody	46.778968	-94.460175
Cass	Pine River	07010105	5	CA050aW	8/13/2013	1014.4	PEM	Sedge Meadows	Type 2	-	-	0.05	-	-	0.05	138	30	11	NESW	46.782668	-94.440199
Cass	Pine River	07010105	5	CA059aW	8/12/2013	1016.6	PEM	Fresh (wet) Meadow	Type 2	-	-	0.00	-	-	0.00	138	29	7	NWSE	46.782286	-94.392705
Cass	Pine River	07010105	5	CA062bW	8/12/2013	1017.3	PSS	Alder Thickets	Type 6	11.3	0.00	0.02	0.01	-	0.03	138	29	8	NESW	46.781469	-94.377664
Cass	Pine River	07010105	5	CA064bW	8/10/2013	1017.3	PSS	Alder Thickets	Type 6	28.6	0.01	0.03	0.03	-	0.06	138	29	8	NESW	46.781584	-94.377254
Cass	Pine River	07010105	5	CA064aW	8/10/2013	1017.5	PEM	Sedge Meadows	Type 2	-	-	0.02	-	-	0.02	138	29	8	NWSE	46.781246	-94.373366
Cass	Pine River	07010105	5	CA065bW	8/10/2013	1017.8	PEM	Fresh (wet) Meadow	Type 2	117.9	0.02	0.22	-	-	0.22	138	29	8	NESE	46.781009	-94.366854
Crow Wing	Pine River	07010105	5	CW005aW	8/10/2013	1019.7	PEM	Fresh (wet) Meadow	Type 2	196.8	0.04	0.45	-	-	0.45	138	29	15	NWNE	46.77474	-94.329101
Crow Wing	Pine River	07010105	5	CW005aW	8/10/2013	1019.8	PUB	Shallow Marshes	Type 3	30.0	0.01	0.16	-	-	0.16	138	29	15	NWNE	46.774323	-94.328553
Crow Wing	Pine River	07010105	5	CW007aW	8/3/2013	1020.1	PUB	Shallow Marshes	Type 3	368.6	0.07	0.71	-	-	0.71	138	29	14	NWNW	46.773484	-94.321007

Attachment F
Line 3 Replacement Project
Wetland Table

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Crow Wing	Pine River	07010105	5	CW007aW	8/3/2013	1020.2	PEM	Fresh (wet) Meadow	Type 2	298.1	0.06	0.75	-	-	0.75	138	29	14	NWNW	46.77332	-94.319366
Crow Wing	Pine River	07010105	5	CW007aW	8/3/2013	1020.3	PSS	Shrub Carr	Type 6	79.9	0.02	0.10	0.07	-	0.17	138	29	14	NWNW	46.773438	-94.318272
Crow Wing	Pine River	07010105	5	CW011aW	8/3/2013	1020.6	PEM	Fresh (wet) Meadow	Type 2	349.9	0.07	0.81	-	-	0.81	138	29	14	NWNE, NENW	46.773243	-94.3121
Crow Wing	Pine River	07010105	5	CW011bW	8/3/2013	1020.7	PEM	Fresh (wet) Meadow	Type 2	83.2	0.02	0.11	-	-	0.11	138	29	14	NWNE	46.773199	-94.308866
Crow Wing	Pine River	07010105	5	CW012aW	8/3/2013	1020.9	PFO	Hardwood Swamps	Type 7	57.4	0.01	-	0.11	-	0.11	138	29	14	NENE	46.774389	-94.304857
Crow Wing	Pine River	07010105	5	CW012aW	8/3/2013	1020.9	PEM	Fresh (wet) Meadow	Type 2	-	-	0.02	-	-	0.02	138	29	14	NENE	46.774385	-94.304495
Crow Wing	Pine River	07010105	5	w-138n29w14-a	10/7/2014	1021.0	PEM	Fresh (wet) Meadow	Type 2	-	-	0.00	-	-	0.00	138	29	14	NENE	46.776269	-94.30625
Crow Wing	Pine River	07010105	5	w-138n29w14-b	10/7/2014	1021.0	PEM	Fresh (wet) Meadow	Type 2	-	-	0.00	-	-	0.00	138	29	14	NENE	46.776369	-94.306344
Crow Wing	Pine River	07010105	5	CW013aW	8/5/2013	1021.1	PEM	Sedge Meadows	Type 2	-	-	0.03	-	-	0.03	138	29	14	NENE	46.776193	-94.302167
Crow Wing	Pine River	07010105	5	CW014aW	8/5/2013	1021.3	PEM	Fresh (wet) Meadow	Type 2	67.9	0.01	0.25	-	-	0.25	138	29	12	SWSW	46.778654	-94.299264
Crow Wing	Pine River	07010105	5	CW014bW	8/5/2013	1021.4	PEM	Fresh (wet) Meadow	Type 2	-	-	0.02	-	-	0.02	138	29	12	SWSW	46.779471	-94.297915
Crow Wing	Pine River	07010105	5	CW014bW	8/5/2013	1021.4	PFO	Hardwood Swamps	Type 7	70.8	0.01	-	0.12	-	0.12	138	29	12	SWSW	46.779523	-94.297973
Crow Wing	Pine River	07010105	5	CW015cW	8/6/2013	1021.6	PEM	Fresh (wet) Meadow	Type 2	-	-	0.08	-	-	0.08	138	29	12	NWSW, NESW	46.781037	-94.295917
Crow Wing	Pine River	07010105	5	CW015cW	10/18/2013	1021.6	PFO	Hardwood Swamps	Type 7	102.8	0.02	-	0.10	-	0.10	138	29	12	NWSW	46.781154	-94.296079
Crow Wing	Pine River	07010105	5	CW016aW	8/6/2013	1021.6	PEM	Fresh (wet) Meadow	Type 2	-	-	0.01	-	-	0.01	138	29	12	NESW	46.781688	-94.295023
Crow Wing	Pine River	07010105	5	CW016aW	8/6/2013	1021.6	PFO	Hardwood Swamps	Type 7	57.4	0.01	-	0.12	-	0.12	138	29	12	NESW	46.781813	-94.294987
Crow Wing	Pine River	07010105	5	CW016bW	8/6/2013	1022.0	PEM	Fresh (wet) Meadow	Type 2	259.8	0.05	0.58	-	-	0.58	138	29	12	SWNE, SENW	46.785566	-94.290741
Crow Wing	Pine River	07010105	5	CW018aW	8/6/2013	1022.1	PEM	Fresh (wet) Meadow	Type 2	363.2	0.07	0.40	-	-	0.40	138	29	12	NWNE, SWNE	46.786851	-94.288397
Crow Wing	Pine River	07010105	5	CW019cW	8/6/2013	1022.2	PFO	Hardwood Swamps	Type 7	62.2	0.01	-	0.11	-	0.11	138	29	12	NWNE	46.788034	-94.286981
Crow Wing	Pine River	07010105	5	CW019cW	8/6/2013	1022.2	PEM	Sedge Meadows	Type 2	-	-	0.04	-	-	0.04	138	29	12	NWNE	46.787995	-94.286891
Crow Wing	Pine River	07010105	5	CW020aW	8/7/2013	1022.4	PFO	Hardwood Swamps	Type 7	114.3	0.02	-	0.27	-	0.27	138	29	1, 12	NENE, SESE	46.790632	-94.283773
Crow Wing	Pine River	07010105	5	CW021aW	8/7/2013	1022.5	PEM	Fresh (wet) Meadow	Type 2	133.6	0.03	0.29	-	-	0.29	138	29	1	SESE	46.791012	-94.283064
Crow Wing	Pine River	07010105	5	CW021aW	8/7/2013	1022.5	PUB	Shallow Marshes	Type 3	88.6	0.02	0.18	-	-	0.18	138	29	1	SESE	46.791163	-94.28286
Crow Wing	Pine River	07010105	5	CW021bW	8/7/2013	1022.7	PSS	Shrub Carr	Type 6	44.9	0.01	0.33	0.05	-	0.37	138	29	1	SESE	46.79344	-94.27992
Crow Wing	Pine River	07010105	5	CW021bW	8/7/2013	1022.7	PEM	Fresh (wet) Meadow	Type 2	362.8	0.07	0.75	-	-	0.75	138	29	1, 6	NWSW, SWSW, SESE	46.793702	-94.279642
Crow Wing	Pine River	07010105	5	CW021bW	8/7/2013	1022.8	PUB	Shallow Marshes	Type 3	136.7	0.03	0.29	-	-	0.29	138	28	6	NWSW, SWSW	46.794205	-94.279136
Crow Wing	Pine River	07010105	5	CW023aW	8/7/2013	1023.0	PEM	Sedge Meadows	Type 2	32.6	0.01	0.04	-	-	0.04	138	28	6	NWSW	46.796196	-94.276266
Crow Wing	Pine River	07010105	5	CW025aW	8/7/2013	1023.0	PEM	Fresh (wet) Meadow	Type 2	466.9	0.09	1.09	-	-	1.09	138	28	6	NWSW, SENW	46.797017	-94.275448
Crow Wing	Pine River	07010105	5	CW025aW	8/8/2013	1023.1	PFO	Hardwood Swamps	Type 7	245.1	0.05	-	0.82	-	0.82	138	28	6	NWSW, NESW, SENW	46.797156	-94.275138
Crow Wing	Pine River	07010105	5	CW025bW	8/8/2013	1023.3	PEM	Sedge Meadows	Type 2	180.8	0.03	0.13	-	-	0.13	138	28	6	SENW	46.799985	-94.271325
Crow Wing	Pine River	07010105	5	CW027aW	8/8/2013	1023.5	PFO	Hardwood Swamps	Type 7	-	-	-	0.30	-	0.30	138	28	6	NWNE	46.802415	-94.268571
Crow Wing	Pine River	07010105	5	CW027aW	8/8/2013	1023.6	PEM	Fresh (wet) Meadow	Type 2	178.0	0.03	0.33	-	-	0.33	138	28	6	NWNE	46.803028	-94.267435
Crow Wing	Pine River	07010105	5	CA075aW	8/8/2013	1023.7	PEM	Fresh (wet) Meadow	Type 2	1,459.7	0.28	3.37	-	-	3.37	138	28	6, 31, 32	NWNE, NWSW, NESE, SESE	46.804756	-94.265593
Cass	Pine River	07010105	5	w-139n28w31-aa	7/27/2016	1023.8	PSS	Shrub Carr	Type 6	-	-	0.06	-	-	0.06	139	28	31	SWSE, SESW	46.807294	-94.269758

Attachment F
Line 3 Replacement Project
Wetland Table

County	Major Watershed	Hydologic Unit Code (HUC) 8	Bank Service Area (BSA)	Feature ID	Survey Date	Approx. Milepost	Cowardin [a]	Eggers and Reed [a]	Circular 39 [a]	Crossing length (feet) b	Crossing length (miles) b	Temporary Impacts (acres) c	Permanent Conversion (acres) d	Permanent Fill (acres)	Total Impacts (acres)	Township	Range	Section	Quarter-Quarter Section	Latitude	Longitude
Crow Wing	Pine River	07010105	5	CA075aW	8/8/2013	1023.8	PSS	Shrub Carr	Type 6	1,303.4	0.25	1.42	1.39	-	2.80	138	28	6, 31, 32	NWNE, NWSW, SWSE, SESE	46.805034	-94.265166
Cass	Pine River	07010105	5	CA075aW	8/8/2013	1024.4	PFO	Hardwood Swamps	Type 7	64.1	0.01	-	0.12	-	0.12	139	28	32	NWSW	46.811626	-94.256609
Cass	Pine River	07010105	5	CA076dW	8/2/2013	1024.5	PEM	Fresh (wet) Meadow	Type 2	140.8	0.03	0.13	-	-	0.13	139	28	32	SWNW	46.81236	-94.255591
Cass	Pine River	07010105	5	CA076cW	8/2/2013	1024.5	PFO	Hardwood Swamps	Type 7	-	-	-	0.04	-	0.04	139	28	32	SWNW	46.812997	-94.254708
Cass	Pine River	07010105	5	CA077eW	8/2/2013	1024.6	PEM	Fresh (wet) Meadow	Type 2	-	-	0.01	-	-	0.01	139	28	32	SENW	46.813625	-94.253646
Cass	Pine River	07010105	5	CA077cW	8/2/2013	1024.7	PEM	Fresh (wet) Meadow	Type 2	12.6	0.00	0.02	-	-	0.02	139	28	32	SENW	46.81509	-94.251782
Cass	Pine River	07010105	5	CA077bW	8/2/2013	1024.7	PEM	Fresh (wet) Meadow	Type 2	95.6	0.02	0.21	-	-	0.21	139	28	32	SENW	46.815443	-94.251655
Cass	Pine River	07010105	5	CA077aW	8/2/2013	1024.8	PEM	Fresh (wet) Meadow	Type 2	40.2	0.01	0.03	-	-	0.03	139	28	32	NENW, SENW	46.815821	-94.250841
Cass	Pine River	07010105	5	CA078aW	8/2/2013	1024.9	PEM	Fresh (wet) Meadow	Type 2	726.5	0.14	1.64	-	-	1.64	139	28	32	NWNE, NENW	46.816818	-94.249659
Cass	Pine River	07010105	5	CA079cW	8/2/2013	1025.1	PFO	Hardwood Swamps	Type 7	87.6	0.02	-	0.16	-	0.16	139	28	32	NWNE	46.818783	-94.247122
Cass	Pine River	07010105	5	CA079bW	8/2/2013	1025.1	PEM	Fresh (wet) Meadow	Type 2	-	-	0.01	-	-	0.01	139	28	32	NWNE	46.819066	-94.246598
Cass	Pine River	07010105	5	CA080fW	7/31/2013	1025.1	PSS	Shrub Carr	Type 6	-	-	0.05	-	-	0.05	139	28	29	SWSE	46.819644	-94.246299
Cass	Pine River	07010105	5	CA080aW	7/31/2013	1025.2	PEM	Sedge Meadows	Type 2	79.2	0.02	0.09	-	-	0.09	139	28	29	SWSE	46.820275	-94.245322
Cass	Pine River	07010105	5	CA080aW	7/31/2013	1025.2	PSS	Shrub Carr	Type 6	77.2	0.01	0.19	0.11	-	0.31	139	28	29	SWSE	46.820401	-94.245229
Cass	Pine River	07010105	5	CA082aW	7/31/2013	1025.3	PSS	Alder Thickets	Type 6	158.2	0.03	0.04	0.18	-	0.21	139	28	29	NESE, SESE	46.821617	-94.243405
Cass	Pine River	07010105	5	CA082aW	7/31/2013	1025.4	PEM	Fresh (wet) Meadow	Type 2	1,132.9	0.21	2.61	-	-	2.61	139	28	29	NESE, SESE	46.822445	-94.242566
Cass	Pine River	07010105	5	CA082aW	7/31/2013	1025.6	PFO	Hardwood Swamps	Type 7	-	-	-	0.04	-	0.04	139	28	29	NESE	46.824402	-94.240137
Cass	Pine River	07010105	5	CA083aW	7/31/2013	1025.8	PEM	Fresh (wet) Meadow	Type 2	-	-	0.04	-	-	0.04	139	28	28	NWSW	46.826293	-94.237258
Cass	Pine River	07010105	5	CA082dW	7/31/2013	1025.8	PFO	Hardwood Swamps	Type 7	8.3	0.00	-	0.10	-	0.10	139	28	28	NWSW, SWNW	46.826702	-94.23692
Cass	Pine River	07010105	5	CA082dW	7/31/2013	1025.8	PSS	Shrub Carr	Type 6	153.7	0.03	0.17	0.16	-	0.33	139	28	28	SWNW	46.827209	-94.23643
Cass	Pine River	07010105	5	CA082dW	7/31/2013	1025.8	PEM	Fresh (wet) Meadow	Type 2	-	-	0.02	-	-	0.02	139	28	28	SWNW	46.827099	-94.236201
Cass	Pine River	07010105	5	CA084cW	8/1/2013	1025.9	PFO	Hardwood Swamps	Type 7	-	-	-	0.05	-	0.05	139	28	28	SWNW	46.828126	-94.23529
Cass	Pine River	07010105	5	CA084jW	8/1/2013	1026.1	PFO	Hardwood Swamps	Type 7	10.6	0.00	-	0.08	-	0.08	139	28	28	SWNW, SENW	46.829624	-94.233133
Cass	Pine River	07010105	5	w-139n28w28-aa	8/4/2018	1026.2	PSS	Shrub Carr	Type 6	-	-	0.11	-	-	0.11	139	28	28	NENW	46.833864	-94.230281
Cass	Pine River	07010105	5	CA085cW	8/30/2013	1026.4	PEM	Fresh (wet) Meadow	Type 2	232.1	0.04	0.47	-	-	0.47	139	28	28	NWNE	46.831029	-94.226972
Cass	Pine River	07010105	5	CA085cW	8/1/2013	1026.4	PSS	Alder Thickets	Type 6	249.3	0.05	0.26	0.28	-	0.54	139	28	28	NWNE	46.831024	-94.226001
Cass	Pine River	07010105	5	CA087aW	8/1/2013	1026.8	PSS	Shrub Carr	Type 6	122.6	0.02	0.03	0.14	-	0.16	139	28	28	NENE	46.83094	-94.218209
Cass	Pine River	07010105	5	CA087aW	8/1/2013	1026.8	PFO	Hardwood Swamps	Type 7	-	-	-	0.12	-	0.12	139	28	28	NENE	46.830987	-94.218117
Cass	Pine River	07010105	5	CA088bW	8/1/2013	1027.0	PSS	Shrub Carr	Type 6	-	-	0.02	-	-	0.02	139	28	27	NWNW	46.830981	-94.214479
Cass	Pine River	07010105	5	CA088cW	8/1/2013	1027.1	PSS	Shrub Carr	Type 6	133.3	0.03	0.06	0.12	-	0.18	139	28	27	NWNW, NENW	46.830823	-94.212427
Cass	Pine River	07010105	5	CA088cW	8/1/2013	1027.1	PEM	Fresh (wet) Meadow	Type 2	-	-	0.04	-	-	0.04	139	28	27	NWNW, NENW	46.830763	-94.212248
Cass	Pine River	07010105	5	CA089aW	8/2/2013	1027.1	PEM	Fresh (wet) Meadow	Type 2	76.2	0.01	0.28	-	-	0.28	139	28	27	NENW	46.830815	-94.210911
Cass	Pine River	07010105	5	CA089aW	8/2/2013	1027.2	PSS	Shrub Carr	Type 6	-	-	0.00	-	-	0.00	139	28	27	NENW	46.830997	-94.210391
Cass	Pine River	07010105	5	CA089_300a1W	7/15/2014	1027.4	PFO	Hardwood Swamps	Type 7	43.8	0.01	-	0.09	-	0.09	139	28	27	SWNE, SENW	46.829781	-94.207024
Cass	Pine River	07010105	5	CA091g1W	7/15/2014	1027.4	PEM	Fresh (wet) Meadow	Type 2	-	-	0.00	-	-	0.00	139	28	27	SWNE	46.829855	-94.206097
Cass	Pine River	07010105	5	CA091d1W	7/15/2014	1027.6	PFO	Hardwood Swamps	Type 7	39.2	0.01	-	0.06	-	0.06	139	28	27	SWNE, SENE	46.829646	-94.201547

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Wetland Table

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Cass	Pine River	07010105	5	CA091d1W	7/15/2014	1027.6	PSS	Alder Thickets	Type 6	191.9	0.04	0.15	0.22	-	0.37	139	28	27	SENE	46.829738	-94.200983
Cass	Pine River	07010105	5	CA091d1W	7/15/2014	1027.7	PEM	Fresh (wet) Meadow	Type 2	-	-	0.01	-	-	0.01	139	28	27	SENE	46.829866	-94.200617
Cass	Pine River	07010105	5	CA091_300c1W	7/15/2014	1027.7	PEM	Fresh (wet) Meadow	Type 2	69.6	0.01	0.16	-	-	0.16	139	28	27	SENE	46.829775	-94.199446
Cass	Pine River	07010105	5	CA091_300b1W	7/15/2014	1027.8	PEM	Fresh (wet) Meadow	Type 2	-	-	0.02	-	-	0.02	139	28	27	SENE	46.829665	-94.198692
Cass	Pine River	07010105	5	CA091_300a1W	7/14/2014	1027.8	PFO	Hardwood Swamps	Type 7	375.1	0.07	-	0.76	-	0.76	139	28	26, 27	SWNW, SENE	46.829763	-94.197589
Cass	Pine River	07010105	5	CA093f1W	7/14/2014	1028.1	PEM	Fresh (wet) Meadow	Type 2	165.0	0.03	0.33	-	-	0.33	139	28	26	SWNW	46.829257	-94.191593
Cass	Pine River	07010105	5	CA093g1W	7/14/2014	1028.1	PEM	Fresh (wet) Meadow	Type 2	-	-	0.04	-	-	0.04	139	28	26	SENW	46.829084	-94.190386
Cass	Pine River	07010105	5	CA093d1W	7/14/2014	1028.2	PEM	Fresh (wet) Meadow	Type 2	161.1	0.03	0.38	-	-	0.38	139	28	26	SENW	46.829387	-94.189364
Cass	Pine River	07010105	5	CA093d1W	7/14/2014	1028.2	PSS	Shrub Carr	Type 6	100.9	0.02	0.02	0.11	-	0.13	139	28	26	SENW	46.829444	-94.189239
Cass	Pine River	07010105	5	CA093b1W	7/14/2014	1028.3	PEM	Fresh (wet) Meadow	Type 2	14.1	0.00	0.09	-	-	0.09	139	28	26	NENW	46.830398	-94.187928
Cass	Pine River	07010105	5	CA093aW	8/1/2013	1028.4	PEM	Seasonally Flooded Basins	Type 1	-	-	0.00	-	-	0.00	139	28	26	NENW	46.830862	-94.186679
Cass	Pine River	07010105	5	CA094aW	8/1/2013	1028.4	PEM	Shallow Marshes	Type 3	750.8	0.14	1.60	-	-	1.60	139	28	26	NWNE, NENW	46.83085	-94.185691
Cass	Pine River	07010105	5	CA094aW	8/1/2013	1028.6	PSS	Shrub Carr	Type 6	63.7	0.01	0.12	0.07	-	0.19	139	28	26	NWNE	46.830788	-94.182547
Cass	Pine River	07010105	5	CA095eW	7/30/2013	1028.7	PSS	Shrub Carr	Type 6	21.8	0.00	0.06	0.02	-	0.08	139	28	26	NENE	46.830653	-94.179941
Cass	Pine River	07010105	5	CA095eW	7/30/2013	1028.7	PEM	Fresh (wet) Meadow	Type 2	-	-	0.01	-	-	0.01	139	28	26	NENE	46.830583	-94.179823
Cass	Pine River	07010105	5	CA095dW	7/30/2013	1028.7	PEM	Fresh (wet) Meadow	Type 2	-	-	0.00	-	-	0.00	139	28	26	NENE	46.830816	-94.178974
Cass	Pine River	07010105	5	CA095bW	7/30/2013	1028.8	PEM	Sedge Meadows	Type 2	132.5	0.03	0.44	-	-	0.44	139	28	26	NENE	46.830581	-94.178361
Cass	Pine River	07010105	5	CA095bW	7/30/2013	1028.8	PFO	Hardwood Swamps	Type 7	124.5	0.02	-	0.32	-	0.32	139	28	26	NENE	46.830648	-94.178232
Cass	Pine River	07010105	5	CA095cW	7/30/2013	1028.9	PSS	Shrub Carr	Type 6	45.8	0.01	0.05	0.05	-	0.10	139	28	26	NENE	46.830614	-94.175525
Cass	Pine River	07010105	5	CA095cW	7/30/2013	1028.9	PFO	Hardwood Swamps	Type 7	-	-	-	0.00	-	0.00	139	28	26	NENE	46.830796	-94.175398
Cass	Pine River	07010105	5	CA096bW	7/30/2013	1029.0	PEM	Fresh (wet) Meadow	Type 2	32.4	0.01	0.15	-	-	0.15	139	28	25	NWNW	46.830739	-94.173634
Cass	Pine River	07010105	5	CA096aW	7/30/2013	1029.1	PEM	Fresh (wet) Meadow	Type 2	709.4	0.13	1.47	-	-	1.47	139	28	25	NWNW, NENW	46.830595	-94.171873
Cass	Pine River	07010105	5	CA096aW	7/30/2013	1029.1	PSS	Shrub Carr	Type 6	35.8	0.01	0.04	0.03	-	0.07	139	28	25	NWNW	46.830612	-94.170675
Cass	Pine River	07010105	5	CA097gW	7/29/2013	1029.2	PEM	Fresh (wet) Meadow	Type 2	51.2	0.01	0.10	-	-	0.10	139	28	25	NENW	46.830572	-94.168254
Cass	Pine River	07010105	5	CA097cW	7/29/2013	1029.3	PFO	Hardwood Swamps	Type 7	91.4	0.02	-	0.13	-	0.13	139	28	25	NENW	46.831017	-94.166793
Cass	Pine River	07010105	5	CA097cW	7/29/2013	1029.4	PEM	Fresh (wet) Meadow	Type 2	58.6	0.01	0.10	-	-	0.10	139	28	25	NENW	46.831395	-94.166549
Cass	Pine River	07010105	5	CA097aW	7/29/2013	1029.4	PEM	Fresh (wet) Meadow	Type 2	217.8	0.04	0.45	-	-	0.45	139	28	25	NWNE, NENW	46.831837	-94.165611
Cass	Pine River	07010105	5	CA097aW	7/29/2013	1029.4	PFO	Hardwood Swamps	Type 7	205.4	0.04	-	0.41	-	0.41	139	28	25	NWNE, NENW	46.831935	-94.16563
Cass	Pine River	07010105	5	CA097aW	7/29/2013	1029.4	PSS	Shrub Carr	Type 6	40.8	0.01	0.06	0.09	-	0.15	139	28	25	NWNE, NENW	46.83225	-94.165214
Cass	Pine River	07010105	5	CA099jW	7/27/2013	1029.6	PFO	Hardwood Swamps	Type 7	-	-	-	0.02	-	0.02	139	28	24	SWSE	46.833743	-94.163475
Cass	Pine River	07010105	5	CA099eW	7/27/2013	1029.6	PFO	Hardwood Swamps	Type 7	119.0	0.02	-	0.31	-	0.31	139	28	24	SWSE	46.833983	-94.163141
Cass	Pine River	07010105	5	CA099eW	7/27/2013	1029.7	PSS	Shrub Carr	Type 6	-	-	-	0.04	-	0.04	139	28	24	SWSE	46.834296	-94.162284
Cass	Pine River	07010105	5	CA099bW	7/27/2013	1029.8	PEM	Fresh (wet) Meadow	Type 2	-	-	0.05	-	-	0.05	139	28	24	SWSE	46.836013	-94.159965
Cass	Pine River	07010105	5	CA099bW	7/27/2013	1029.8	PSS	Alder Thickets	Type 6	207.5	0.04	0.12	0.19	-	0.31	139	28	24	SWSE	46.836142	-94.160091
Cass	Pine River	07010105	5	CA100aW	7/26/2013	1029.8	PEM	Fresh (wet) Meadow	Type 2	-	-	0.00	-	-	0.00	139	28	24	SWSE, SESE	46.836417	-94.1594
Cass	Pine River	07010105	5	CA100aW	7/26/2013	1029.8	PFO	Hardwood Swamps	Type 7	89.7	0.02	-	0.18	-	0.18	139	28	24	SWSE, SESE	46.836517	-94.159414
Cass	Pine River	07010105	5	CA101dW	7/26/2013	1029.9	PFO	Hardwood Swamps	Type 7	2.7	0.00	-	0.06	-	0.06	139	28	24	SESE	46.836874	-94.158998

Attachment F
Line 3 Replacement Project
Wetland Table

County	Major Watershed	Hydologic Unit Code (HUC) 8	Bank Service Area (BSA)	Feature ID	Survey Date	Approx. Milepost	Cowardin [a]	Eggers and Reed [a]	Circular 39 [a]	Crossing length (feet) b	Crossing length (miles) b	Temporary Impacts (acres) c	Permanent Conversion (acres) d	Permanent Fill (acres)	Total Impacts (acres)	Township	Range	Section	Quarter-Quarter Section	Latitude	Longitude
Cass	Pine River	07010105	5	CA101cW	7/26/2013	1029.9	PUB	Deep Marshes	Type 4	-	-	0.01	-	-	0.01	139	28	24	NESE	46.837765	-94.158345
Cass	Pine River	07010105	5	CA101bW	7/26/2013	1029.9	PEM	Seasonally Flooded Basins	Type 1	-	-	0.03	-	-	0.03	139	28	24	NESE	46.837706	-94.158075
Cass	Pine River	07010105	5	CA102aW	7/25/2013	1030.0	PSS	Shrub Carr	Type 6	469.0	0.09	0.51	0.53	-	1.03	139	28	24	NESE	46.83818	-94.15754
Cass	Pine River	07010105	5	CA102aW	7/25/2013	1030.0	PEM	Fresh (wet) Meadow	Type 2	75.3	0.01	0.11	-	-	0.11	139	28	24	NESE	46.838433	-94.156956
Cass	Leech Lake River	07010102	5	CA101aW	7/25/2013	1030.2	PEM	Fresh (wet) Meadow	Type 2	-	-	0.01	-	-	0.01	139	28	24	NESE	46.839935	-94.154645
Cass	Leech Lake River	07010102	5	CA101aW	7/25/2013	1030.2	PFO	Hardwood Swamps	Type 7	243.8	0.05	-	0.43	-	0.43	139	28	24	NESE, SENE	46.840268	-94.154519
Cass	Leech Lake River	07010102	5	CA104bW	7/26/2013	1030.3	PFO	Hardwood Swamps	Type 7	6.3	0.00	-	0.02	-	0.02	139	27	19	SWNW	46.841504	-94.152532
Cass	Leech Lake River	07010102	5	CA104cW	7/26/2013	1030.4	PFO	Hardwood Swamps	Type 7	58.1	0.01	-	0.15	-	0.15	139	27	19	SWNW	46.842795	-94.150905
Cass	Leech Lake River	07010102	5	CA105aW	7/26/2013	1030.5	PEM	Fresh (wet) Meadow	Type 2	-	-	0.00	-	-	0.00	139	27	19	SENW	46.843695	-94.149528
Cass	Pine River	07010105	5	CA106eW	7/26/2013	1030.6	PEM	Fresh (wet) Meadow	Type 2	-	-	0.27	-	-	0.27	139	27	19	NENW	46.844587	-94.148802
Cass	Pine River	07010105	5	CA106dW	7/26/2013	1030.7	PFO	Hardwood Swamps	Type 7	61.6	0.01	-	0.13	-	0.13	139	27	19	NENW	46.844657	-94.147328
Cass	Pine River	07010105	5	CA106cW	7/26/2013	1030.7	PFO	Hardwood Swamps	Type 7	-	-	-	0.05	-	0.05	139	27	19	NENW	46.844512	-94.146249
Cass	Pine River	07010105	5	CA106aW	7/25/2013	1030.8	PFO	Hardwood Swamps	Type 7	-	-	-	0.02	-	0.02	139	27	19	NENW	46.844471	-94.145
Cass	Pine River	07010105	5	CA106bW	7/26/2013	1030.8	PFO	Hardwood Swamps	Type 7	28.4	0.01	-	0.06	-	0.06	139	27	19	NENW	46.844409	-94.144643
Cass	Pine River	07010105	5	CA107fW	7/25/2013	1030.8	PEM	Seasonally Flooded Basins	Type 1	52.6	0.01	0.16	-	-	0.16	139	27	19	NWNE	46.844406	-94.143803
Cass	Pine River	07010105	5	CA107eW	7/25/2013	1030.9	PFO	Hardwood Swamps	Type 7	-	-	-	0.01	-	0.01	139	27	19	NWNE	46.844478	-94.143366
Cass	Pine River	07010105	5	CA107cW	7/25/2013	1030.9	PEM	Sedge Meadows	Type 2	78.5	0.01	0.19	-	-	0.19	139	27	19	NWNE	46.844503	-94.142434
Cass	Pine River	07010105	5	CA107cW	7/25/2013	1030.9	PFO	Hardwood Swamps	Type 7	-	-	-	0.08	-	0.08	139	27	19	NWNE	46.844453	-94.142026
Cass	Pine River	07010105	5	CA108bW	7/25/2013	1031.0	PFO	Hardwood Swamps	Type 1	289.6	0.05	-	0.66	-	0.66	139	27	19	NWNE, NENE	46.844479	-94.140968
Cass	Pine River	07010105	5	CA108bW	7/25/2013	1031.0	PEM	Sedge Meadows	Type 2	268.3	0.05	0.57	-	-	0.57	139	27	19	NWNE, NENE	46.844704	-94.140028
Cass	Pine River	07010105	5	CA109aW	7/24/2013	1031.4	PEM	Fresh (wet) Meadow	Type 2	-	-	0.08	-	-	0.08	139	27	20	NWNW	46.845059	-94.132428
Cass	Pine River	07010105	5	CA109aW	7/24/2013	1031.4	PFO	Hardwood Swamps	Type 7	281.6	0.05	-	0.75	-	0.75	139	27	20	NWNW	46.845207	-94.131364
Cass	Pine River	07010105	5	CA109aW	7/24/2013	1031.5	PSS	Shrub Carr	Type 6	-	-	0.02	-	-	0.02	139	27	20	NWNW	46.845466	-94.129685
Cass	Pine River	07010105	5	CA113a1W	7/24/2013	1031.8	PFO	Hardwood Swamps	Type 7	260.3	0.05	-	0.89	-	0.89	139	27	20	NWNE, NENW, NENE	46.845737	-94.12392
Cass	Pine River	07010105	5	CA113a1W	7/24/2013	1031.8	PEM	Sedge Meadows	Type 2	243.5	0.05	0.47	-	-	0.47	139	27	20	NWNE, NENE	46.845759	-94.122913
Cass	Pine River	07010105	5	CA113aW	7/23/2013	1032.4	PFO	Hardwood Swamps	Type 7	220.3	0.04	-	0.43	-	0.43	139	27	21	NWNW	46.845556	-94.111637
Cass	Pine River	07010105	5	CA113aW	8/17/2013	1032.5	PEM	Fresh (wet) Meadow	Type 2	903.0	0.17	2.00	-	-	2.00	139	27	21	NWNW	46.845561	-94.110529
Cass	Pine River	07010105	5	CA114aW	7/23/2013	1032.6	PFO	Hardwood Swamps	Type 7	74.3	0.01	-	0.16	-	0.16	139	27	21	NENW	46.845648	-94.10738
Cass	Pine River	07010105	5	CA114bW	7/23/2013	1032.8	PFO	Hardwood Swamps	Type 7	18.5	0.00	-	0.03	-	0.03	139	27	21	NENW	46.845823	-94.103469
Cass	Pine River	07010105	5	CA114bW	7/23/2013	1032.8	PEM	Fresh (wet) Meadow	Type 2	-	-	0.00	-	-	0.00	139	27	21	NENW	46.845909	-94.103413
Cass	Pine River	07010105	5	CA115bW	7/24/2013	1032.9	PFO	Hardwood Swamps	Type 7	-	-	-	0.08	-	0.08	139	27	21	NWNE	46.845739	-94.101479
Cass	Pine River	07010105	5	CA115bW	8/17/2013	1032.9	PEM	Fresh (wet) Meadow	Type 2	169.0	0.03	0.34	-	-	0.34	139	27	21	NWNE	46.845787	-94.100916
Cass	Pine River	07010105	5	CA115eW	7/24/2013	1032.9	PSS	Shrub Carr	Type 6	-	-	0.00	-	-	0.00	139	27	21	NWNE	46.845683	-94.100043
Cass	Pine River	07010105	5	CA115aW	7/24/2013	1033.0	PEM	Sedge Meadows	Type 2	-	-	0.14	-	-	0.14	139	27	21	NWNE	46.845694	-94.098129
Cass	Pine River	07010105	5	CA115aW	7/24/2013	1033.0	PFO	Hardwood Swamps	Type 7	122.1	0.02	-	0.26	-	0.26	139	27	21	NWNE	46.845811	-94.098047
Cass	Pine River	07010105	5	CA116fW	8/17/2013	1033.1	PEM	Fresh (wet) Meadow	Type 2	-	-	0.02	-	-	0.02	139	27	21	NENE	46.846905	-94.095672
Cass	Pine River	07010105	5	CA116dW	8/17/2013	1033.3	PFO	Hardwood Swamps	Type 7	-	-	-	0.00	-	0.00	139	27	21	NENE	46.846663	-94.091977
Cass	Pine River	07010105	5	CA117_200bW	8/9/2013	1033.5	PFO	Hardwood Swamps	Type 7	-	-	-	0.00	-	0.00	139	27	15	SWSW	46.847587	-94.08809
Cass	Pine River	07010105	5	CA117_200dW	8/9/2013	1033.6	PFO	Hardwood Swamps	Type 7	-	-	-	0.04	-	0.04	139	27	15	SWSW	46.847995	-94.087019
Cass	Pine River	07010105	5	CA118_200aW	8/9/2013	1033.6	PSS	Shrub Carr	Type 6	58.6	0.01	0.06	0.07	-	0.13	139	27	15	SESW	46.847929	-94.086075
Cass	Pine River	07010105	5	CA118_200cW	8/9/2013	1033.7	PSS	Shrub Carr	Type 6	41.8	0.01	0.02	0.04	-	0.06	139	27	15	SESW	46.847784	-94.08467

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Wetland Table

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Cass	Pine River	07010105	5	CA118_200dW	8/13/2013	1033.8	PFO	Hardwood Swamps	Type 7	394.1	0.07	-	0.97	-	0.97	139	27	15	SWSE, SESE, SESW	46.847794	-94.082394
Cass	Pine River	07010105	5	CA118_200dW	8/13/2013	1033.9	PEM	Sedge Meadows	Type 2	401.5	0.08	0.78	-	-	0.78	139	27	15	SWSE, SESW	46.847825	-94.081897
Cass	Pine River	07010105	5	CA120_200bW	8/13/2013	1034.3	PFO	Hardwood Swamps	Type 7	377.5	0.07	-	0.93	-	0.93	139	27	15	SESE	46.847791	-94.073396
Cass	Pine River	07010105	5	CA121_200aW	8/12/2013	1034.5	PEM	Sedge Meadows	Type 2	333.4	0.06	0.73	-	-	0.73	139	27	14	SWSW	46.847799	-94.067916
Cass	Pine River	07010105	5	CA122_200aW	8/12/2013	1034.6	PEM	Sedge Meadows	Type 2	358.9	0.07	0.77	-	-	0.77	139	27	14	SESW	46.847731	-94.064918
Cass	Pine River	07010105	5	CA122_200aW	8/12/2013	1034.8	PFO	Hardwood Swamps	Type 7	85.3	0.02	-	0.18	-	0.18	139	27	14	SESW	46.847675	-94.062645
Cass	Pine River	07010105	5	CA123_200aW	8/12/2013	1034.8	PFO	Hardwood Swamps	Type 7	154.7	0.03	-	0.34	-	0.34	139	27	14	SWSE, SESW	46.847609	-94.06087
Cass	Pine River	07010105	5	CA123_200aW	8/12/2013	1034.9	PEM	Shallow Marshes	Type 3	250.5	0.05	0.56	-	-	0.56	139	27	14	SWSE	46.847476	-94.058459
Cass	Pine River	07010105	5	CA124_200dW	8/12/2013	1035.0	PSS	Shrub Carr	Type 6	492.5	0.09	0.49	0.56	-	1.05	139	27	14	SWSE, SESE	46.847404	-94.056338
Cass	Pine River	07010105	5	CA124_200dW	8/12/2013	1035.0	PFO	Hardwood Swamps	Type 7	55.6	0.01	-	0.12	-	0.12	139	27	14	SWSE	46.847379	-94.056366
Cass	Pine River	07010105	5	CA124_200cW	8/9/2013	1035.2	PEM	Sedge Meadows	Type 2	63.4	0.01	0.11	-	-	0.11	139	27	14	SESE	46.847261	-94.052737
Cass	Pine River	07010105	5	CA124_200bW	8/9/2013	1035.3	PEM	Sedge Meadows	Type 2	152.0	0.03	0.30	-	-	0.30	139	27	14	SESE	46.847186	-94.051778
Cass	Pine River	07010105	5	CA124_200aW	8/9/2013	1035.3	PEM	Sedge Meadows	Type 2	63.4	0.01	0.09	-	-	0.09	139	27	14	SESE	46.847124	-94.050726
Cass	Pine River	07010105	5	CA124_200aW	8/9/2013	1035.3	PFO	Hardwood Swamps	Type 1	-	-	-	0.02	-	0.02	139	27	14	SESE	46.847284	-94.050561
Cass	Pine River	07010105	5	CA125_200aW	8/9/2013	1035.5	PEM	Sedge Meadows	Type 2	137.2	0.03	0.32	-	-	0.32	139	27	13	SWSW	46.84714	-94.047271
Cass	Pine River	07010105	5	CA126_200aW	8/9/2013	1035.6	PEM	Fresh (wet) Meadow	Type 2	44.9	0.01	0.20	-	-	0.20	139	27	13	SESW	46.847113	-94.044323
Cass	Pine River	07010105	5	CA126_200aW	8/9/2013	1035.6	PSS	Open Bogs	Type 8	287.7	0.05	0.25	0.32	-	0.58	139	27	13	SESW	46.847117	-94.043786
Cass	Pine River	07010105	5	CA127bW	8/9/2013	1035.9	PEM	Fresh (wet) Meadow	Type 2	142.5	0.03	0.29	-	-	0.29	139	27	24	NWNE, NENW	46.846187	-94.039735
Cass	Pine River	07010105	5	CA127aW	8/9/2013	1036.0	PEM	Sedge Meadows	Type 2	-	-	0.10	-	-	0.10	139	27	24	NWNE	46.8455	-94.037037
Cass	Pine River	07010105	5	CA127aW	7/20/2013	1036.0	PSS	Alder Thickets	Type 6	205.5	0.04	0.19	0.13	-	0.32	139	27	24	NWNE	46.845436	-94.036954
Cass	Pine River	07010105	5	CA129aW	7/19/2013	1036.1	PEM	Fresh (wet) Meadow	Type 2	447.7	0.08	1.08	-	-	1.08	139	27	19, 24	NWNW, NWNE, NENE	46.845516	-94.035154
Cass	Pine River	07010105	5	CA129aW	7/19/2013	1036.1	PFO	Hardwood Swamps	Type 7	936.3	0.18	-	2.27	-	2.27	139	27	19, 24	NWNW, NWNE, NENE	46.845452	-94.035051
Cass	Pine River	07010105	5	CA129aW	8/18/2015	1036.5	PSS	Shrub Carr	Type 6	276.1	0.05	0.24	0.32	-	0.55	139	26	19	NWNW	46.846314	-94.026182
Cass	Pine River	07010105	5	CA129aW	7/19/2013	1036.6	PSS	Alder Thickets	Type 6	103.5	0.02	0.11	0.12	-	0.23	139	26	19	NWNW	46.846223	-94.025419
Cass	Pine River	07010105	5	CA130aW	7/19/2013	1036.8	PEM	Fresh (wet) Meadow	Type 2	315.3	0.06	0.73	-	-	0.73	139	26	19	NENW	46.84514	-94.021113
Cass	Pine River	07010105	5	CA131aW	7/19/2013	1036.9	PSS	Shrub Carr	Type 6	109.3	0.02	0.14	0.11	-	0.25	139	26	19	NWNE, NENW	46.844677	-94.019011
Cass	Pine River	07010105	5	CA131aW	7/19/2013	1036.9	PEM	Sedge Meadows	Type 2	118.4	0.02	0.28	-	-	0.28	139	26	19	NWNE, NENW	46.844636	-94.019028
Cass	Pine River	07010105	5	CA131aW	7/19/2013	1036.9	PFO	Coniferous Bogs	Type 8	265.9	0.05	-	0.53	-	0.53	139	26	19	NWNE	46.844557	-94.018311
Cass	Pine River	07010105	5	CA134dW	7/18/2013	1037.3	PSS	Shrub Carr	Type 6	194.9	0.04	0.10	0.15	-	0.24	139	26	19, 20	SWNW, SENE	46.842989	-94.010352
Cass	Pine River	07010105	5	CA134dW	7/19/2013	1037.4	PEM	Shallow Marshes	Type 3	356.2	0.07	0.92	-	-	0.92	139	26	19, 20	SWNW, SENE	46.842824	-94.009576
Cass	Pine River	07010105	5	CA134cW	7/19/2013	1037.5	PSS	Shrub Carr	Type 6	133.0	0.03	0.06	0.10	-	0.16	139	26	20	SWNW	46.84223	-94.007418
Cass	Pine River	07010105	5	CA134cW	7/19/2013	1037.5	PEM	Fresh (wet) Meadow	Type 2	-	-	0.00	-	-	0.00	139	26	20	SWNW	46.842115	-94.0072
Cass	Pine River	07010105	5	w-139n26w20-aa	7/27/2016	1037.6	PSS	Shrub Carr	Type 6	-	-	0.02	-	-	0.02	139	26	20	SWNW	46.840592	-94.005258
Cass	Pine River	07010105	5	CA135gW	7/19/2013	1037.7	PEM	Fresh (wet) Meadow	Type 2	21.4	0.00	0.02	-	-	0.02	139	26	20	SENW	46.84136	-94.003427
Cass	Pine River	07010105	5	CA135aW	7/19/2013	1037.7	PSS	Shrub Carr	Type 6	-	-	0.00	-	-	0.00	139	26	20	SENW	46.841547	-94.003267
Cass	Pine River	07010105	5	w-139n26w20-ac	8/2/2016	1037.7	PEM	Fresh (wet) Meadow	Type 2	-	-	0.03	-	-	0.03	139	26	20	NWSW, NESW	46.839208	-94.003657
Cass	Pine River	07010105	5	CA135bW	7/19/2013	1037.9	PEM	Sedge Meadows	Type 2	46.6	0.01	0.04	-	-	0.04	139	26	20	SENW	46.840861	-93.999827
Cass	Pine River	07010105	5	CA138aW	7/23/2013	1038.5	PEM	Shallow Open Water	Type 3	168.4	0.03	0.40	-	-	0.40	139	26	21	SWNW	46.842482	-93.98577
Cass	Pine River	07010105	5	CA139aW	7/18/2013	1038.8	PEM	Fresh (wet) Meadow	Type 2	-	-	0.00	-	-	0.00	139	26	21	SENW	46.842978	-93.979243
Cass	Pine River	07010105	5	CA139bW	7/19/2013	1038.9	PFO	Hardwood Swamps	Type 7	-	-	-	0.01	-	0.01	139	26	21	SENW	46.843046	-93.978821
Cass	Pine River	07010105	5	w-139n26w21-d	10/8/2014	1038.9	PSS	Alder Thickets	Type 6	-	-	0.00	-	-	0.00	139	26	21	SENW	46.841811	-93.976997

Attachment F
Line 3 Replacement Project
Wetland Table

County	Major Watershed	Hydologic Unit Code (HUC) 8	Bank Service Area (BSA)	Feature ID	Survey Date	Approx. Milepost	Cowardin [a]	Eggers and Reed [a]	Circular 39 [a]	Crossing length (feet) b	Crossing length (miles) b	Temporary Impacts (acres) c	Permanent Conversion (acres) d	Permanent Fill (acres)	Total Impacts (acres)	Township	Range	Section	Quarter-Quarter Section	Latitude	Longitude
Cass	Pine River	07010105	5	CA141aW	7/18/2013	1038.9	PFO	Coniferous Swamps	Type 7	742.9	0.14	-	1.48	-	1.48	139	26	21	NWNE, NENW, SWNE, SENW	46.843369	-93.977245
Cass	Pine River	07010105	5	CA141aW	7/18/2013	1038.9	PEM	Sedge Meadows	Type 2	-	-	0.11	-	-	0.11	139	26	21	SWNE, SENW	46.843205	-93.977219
Cass	Pine River	07010105	5	w-139n26w21-b	10/8/2014	1039.1	PSS	Alder Thickets	Type 6	-	-	0.02	-	-	0.02	139	26	21	SWNE	46.842646	-93.974323
Cass	Pine River	07010105	5	CA142bW	7/18/2013	1039.3	PEM	Sedge Meadows	Type 2	11.8	0.00	0.03	-	-	0.03	139	26	21	NENE	46.844082	-93.969105
Cass	Pine River	07010105	5	CA142aW	7/18/2013	1039.3	PEM	Fresh (wet) Meadow	Type 2	-	-	0.02	-	-	0.02	139	26	21	NENE	46.844324	-93.968922
Cass	Pine River	07010105	5	CA143cW	7/18/2013	1039.5	PEM	Sedge Meadows	Type 2	48.2	0.01	0.23	-	-	0.23	139	26	22	NWNW	46.844664	-93.965212
Cass	Pine River	07010105	5	CA143kW	7/18/2013	1039.7	PSS	Shrub Carr	Type 6	-	-	0.01	-	-	0.01	139	26	22	NWNW	46.845198	-93.960484
Cass	Pine River	07010105	5	CA143nW	7/18/2013	1039.8	PEM	Fresh (wet) Meadow	Type 2	-	-	0.01	-	-	0.01	139	26	22	NENW	46.845328	-93.958275
Cass	Pine River	07010105	5	CA143qW	7/18/2013	1039.9	PSS	Shrub Carr	Type 6	50.6	0.01	0.01	0.05	-	0.05	139	26	22	NENW	46.845553	-93.95734
Cass	Pine River	07010105	5	CA143rW	7/18/2013	1039.9	PSS	Shrub Carr	Type 6	14.3	0.00	0.00	0.02	-	0.02	139	26	22	NENW	46.846364	-93.957056
Cass	Pine River	07010105	5	CA144bW	7/17/2013	1040.1	PFO	Hardwood Swamps	Type 7	-	-	-	0.04	-	0.04	139	26	15	SESW	46.84811	-93.956434
Cass	Pine River	07010105	5	CA144aW	7/17/2013	1040.1	PFO	Hardwood Swamps	Type 7	-	-	-	0.14	-	0.14	139	26	15	SESW	46.848999	-93.95624
Cass	Pine River	07010105	5	CA144aW	7/17/2013	1040.1	PEM	Shallow Marshes	Type 3	-	-	0.03	-	-	0.03	139	26	15	SESW	46.848824	-93.956315
Cass	Pine River	07010105	5	CA145aW	7/17/2013	1040.2	PFO	Hardwood Swamps	Type 7	74.5	0.01	-	0.52	-	0.52	139	26	15	NESW, SESW	46.850593	-93.955667
Cass	Pine River	07010105	5	CA145dW	7/17/2013	1040.4	PFO	Hardwood Swamps	Type 7	-	-	-	0.08	-	0.08	139	26	15	NESW	46.852414	-93.954848
Cass	Pine River	07010105	5	CA147aW	6/8/2017	1040.7	PEM	Fresh (wet) Meadow	Type 2	-	-	0.01	-	-	0.01	139	26	15	SWNE	46.85651	-93.952914
Cass	Pine River	07010105	5	w-139n26w15-s	6/8/2017	1040.7	PEM	Fresh (wet) Meadow	Type 2	56.6	0.01	0.11	-	-	0.11	139	26	15	SWNE	46.857112	-93.952311
Cass	Pine River	07010105	5	CA148a1W	8/28/2014	1040.9	PSS	Shrub Carr	Type 6	-	-	0.01	-	-	0.01	139	26	15	NWNE	46.858085	-93.949715
Cass	Pine River	07010105	5	CA148_300a1W	8/28/2014	1040.9	PFO	Hardwood Swamps	Type 7	44.4	0.01	-	0.04	-	0.04	139	26	15	NENE	46.857965	-93.94908
Cass	Pine River	07010105	5	CA148_300b1W	8/28/2014	1041.1	PFO	Hardwood Swamps	Type 7	-	-	-	0.05	-	0.05	139	26	15	NENE	46.857939	-93.945824
Cass	Pine River	07010105	5	CA147_525b1W	8/30/2014	1041.2	PFO	Hardwood Swamps	Type 7	78.5	0.01	-	0.24	-	0.24	139	26	14	NWNW	46.858004	-93.942848
Cass	Pine River	07010105	5	CA147_525b1W	8/30/2014	1041.2	PSS	Shrub Carr	Type 6	77.4	0.01	0.09	0.09	-	0.18	139	26	14	NWNW	46.858051	-93.942307
Cass	Pine River	07010105	5	CA147_525a1W	8/30/2014	1041.3	PFO	Hardwood Swamps	Type 7	46.1	0.01	-	0.08	-	0.08	139	26	14	NWNW	46.858021	-93.940418
Cass	Pine River	07010105	5	CA147_530b1W	8/29/2014	1041.6	PFO	Hardwood Swamps	Type 7	-	-	-	0.07	-	0.07	139	26	14	NENW	46.859718	-93.936189
Cass	Pine River	07010105	5	CA147_530c1W	8/29/2014	1041.7	PFO	Hardwood Swamps	Type 7	2.7	0.00	-	0.08	-	0.08	139	26	14	NENW	46.860845	-93.934416
Cass	Pine River	07010105	5	CA147_530c1W	8/29/2014	1041.7	PSS	Alder Thickets	Type 6	131.5	0.02	0.16	0.15	-	0.30	139	26	11, 14	NENW, SWSE, SESW	46.861175	-93.934206
Cass	Pine River	07010105	5	CA153p1W	8/29/2014	1041.8	PSS	Shrub Carr	Type 6	-	-	0.00	-	-	0.00	139	26	11	SWSE	46.862345	-93.932943
Cass	Pine River	07010105	5	CA153l1W	8/29/2014	1041.9	PFO	Hardwood Swamps	Type 7	36.5	0.01	-	0.13	-	0.13	139	26	11	SWSE	46.863363	-93.931546
Cass	Pine River	07010105	5	CA153n1W	8/29/2014	1041.9	PFO	Hardwood Swamps	Type 7	-	-	-	0.09	-	0.09	139	26	11	SWSE	46.863784	-93.931087
Cass	Pine River	07010105	5	CA153f1W	8/29/2014	1042.0	PEM	Sedge Meadows	Type 2	80.5	0.02	0.16	-	-	0.16	139	26	11	SWSE	46.864724	-93.929717
Cass	Pine River	07010105	5	CA153cW	7/15/2013	1042.1	PEM	Fresh (wet) Meadow	Type 2	-	-	0.07	-	-	0.07	139	26	11	NWSE, NESE	46.865189	-93.928856
Cass	Pine River	07010105	5	CA153d1W	7/15/2013	1042.1	PEM	Sedge Meadows	Type 2	47.9	0.01	0.09	-	-	0.09	139	26	11	NESE	46.865067	-93.928108
Cass	Pine River	07010105	5	CA153bW	7/16/2013	1042.3	PEM	Sedge Meadows	Type 2	230.8	0.04	0.62	-	-	0.62	139	26	11, 12	NWSW, NESE	46.865011	-93.925137
Cass	Pine River	07010105	5	CA153bW	7/16/2013	1042.3	PFO	Hardwood Swamps	Type 7	951.5	0.18	-	2.07	-	2.07	139	26	11, 12	NWSW, NESE	46.865203	-93.925011
Cass	Pine River	07010105	5	CA153bW	7/28/2016	1042.3	PSS	Shrub Carr	Type 6	-	-	0.40	-	-	0.40	139	26	11, 12	SWSW, SESE	46.864831	-93.923645
Cass	Pine River	07010105	5	CA155eW	7/16/2013	1042.5	PFO	Hardwood Swamps	Type 7	-	-	-	0.10	-	0.10	139	26	12	NWSW	46.865134	-93.920835
Cass	Pine River	07010105	5	CA155cW	7/26/2013	1042.6	PEM	Sedge Meadows	Type 2	405.1	0.08	0.86	-	-	0.86	139	26	12	NWSW, NESW	46.865066	-93.918355
Cass	Pine River	07010105	5	CA155aW	7/26/2013	1042.7	PSS	Alder Thickets	Type 6	99.1	0.02	0.07	0.10	-	0.18	139	26	12	NWSE, NESW	46.865215	-93.914699
Cass	Pine River	07010105	5	CA155aW	7/26/2013	1042.8	PEM	Sedge Meadows	Type 2	446.3	0.08	1.01	-	-	1.01	139	26	12	NWSE, NESW	46.865217	-93.913778
Cass	Pine River	07010105	5	CA155gW	7/28/2016	1042.8	PEM	Deep and Shallow Marshes	Type 3	196.6	0.04	0.74	-	-	0.74	139	26	12	NWSE, NESW	46.8669	-93.913572
Cass	Pine River	07010105	5	CA155kW	7/26/2013	1043.0	PSS	Alder Thickets	Type 6	197.5	0.04	0.21	0.23	-	0.44	139	26	12	NWSE	46.865222	-93.910265
Cass	Pine River	07010105	5	CA155kW	7/26/2013	1043.0	PEM	Fresh (wet) Meadow	Type 2	-	-	0.02	-	-	0.02	139	26	12	NWSE	46.865031	-93.910033
Cass	Pine River	07010105	5	CA155fW	7/27/2013	1043.0	PEM	Sedge Meadows	Type 2	-	-	0.01	-	-	0.01	139	26	12	NWSE, NESE	46.865028	-93.908392
Cass	Pine River	07010105	5	CA155fW	7/27/2013	1043.1	PSS	Alder Thickets	Type 6	37.2	0.01	0.02	0.03	-	0.05	139	26	12	NWSE	46.865093	-93.908332

Attachment F
Line 3 Replacement Project
Wetland Table

County	Major Watershed	Hydologic Unit Code (HUC) 8	Bank Service Area (BSA)	Feature ID	Survey Date	Approx. Milepost	Cowardin [a]	Eggers and Reed [a]	Circular 39 [a]	Crossing length (feet) b	Crossing length (miles) b	Temporary Impacts (acres) c	Permanent Conversion (acres) d	Permanent Fill (acres)	Total Impacts (acres)	Township	Range	Section	Quarter-Quarter Section	Latitude	Longitude
Cass	Pine River	07010105	5	CA155hW	7/27/2013	1043.3	PEM	Sedge Meadows	Type 2	506.0	0.10	1.09	-	-	1.09	139	26	12	NESE	46.865906	-93.903178
Cass	Pine River	07010105	5	CA156aW	7/29/2013	1043.4	PEM	Sedge Meadows	Type 2	-	-	0.01	-	-	0.01	139	25	7	NWSW	46.865045	-93.901452
Cass	Pine River	07010105	5	CA156aW	7/29/2013	1043.4	PSS	Shrub Carr	Type 6	120.1	0.02	0.24	0.13	-	0.37	139	25	7	NWSW	46.865107	-93.901229
Cass	Pine River	07010105	5	w-139n25w18-ad	7/29/2016	1043.4	PEM	Deep and Shallow Marshes	Type 3	-	-	0.11	-	-	0.11	139	25	18	SWNW	46.856941	-93.901023
Cass	Pine River	07010105	5	CA156bW	7/29/2013	1043.5	PSS	Alder Thickets	Type 6	30.7	0.01	0.07	0.03	-	0.10	139	25	7	NWSW	46.865808	-93.899763
Cass	Pine River	07010105	5	w-139n25w18-ac	7/29/2016	1043.5	PEM	Seasonally Flooded Basins	Type 1	-	-	0.01	-	-	0.01	139	25	18	NWSW	46.853042	-93.898854
Cass	Pine River	07010105	5	CA156bW	7/29/2013	1043.5	PEM	Sedge Meadows	Type 2	65.3	0.01	0.17	-	-	0.17	139	25	7	NWSW	46.865106	-93.897808
Cass	Pine River	07010105	5	CA156cW	7/29/2013	1043.6	PEM	Fresh (wet) Meadow	Type 2	70.6	0.01	0.07	-	-	0.07	139	25	7	NWSW, NESW	46.865133	-93.897
Cass	Pine River	07010105	5	CA156eW	7/30/2013	1043.8	PFO	Hardwood Swamps	Type 7	315.0	0.06	-	1.08	-	1.08	139	25	7	NWSE, NESW	46.865245	-93.892055
Cass	Pine River	07010105	5	CA156eW	7/30/2013	1043.8	PEM	Fresh (wet) Meadow	Type 2	678.4	0.13	1.19	-	-	1.19	139	25	7	NWSE, NESW	46.865083	-93.892024
Cass	Pine River	07010105	5	w-139n25w18-ab	7/27/2016	1043.9	PSS	Shrub Carr	Type 6	-	-	0.08	-	-	0.08	139	25	18	SWSE	46.848094	-93.889952
Cass	Pine River	07010105	5	w-139n25w19-aa	7/27/2016	1043.9	PEM	Fresh (wet) Meadow	Type 2	-	-	0.01	-	-	0.01	139	25	18, 19	NWNE, SWSE	46.846661	-93.889785
Cass	Pine River	07010105	5	w-139n25w19-aa	7/27/2016	1043.9	PSS	Shrub Carr	Type 6	-	-	0.01	-	-	0.01	139	25	18	SWSE	46.846875	-93.88951
Cass	Pine River	07010105	5	w-139n25w18-af	8/2/2016	1044.0	PSS	Shrub Carr	Type 6	-	-	0.18	-	-	0.18	139	25	18	NWSE	46.851178	-93.888704
Cass	Pine River	07010105	5	CA156fW	7/30/2013	1044.0	PFO	Hardwood Swamps	Type 7	-	-	-	0.02	-	0.02	139	25	7	NWSE	46.866164	-93.887883
Cass	Pine River	07010105	5	w-139n25w18-ag	8/2/2016	1044.1	PSS	Shrub Carr	Type 6	-	-	0.01	-	-	0.01	139	25	18	NWSE	46.851683	-93.887113
Cass	Pine River	07010105	5	w-139n25w18-ah	8/2/2016	1044.1	PEM	Fresh (wet) Meadow	Type 2	-	-	0.00	-	-	0.00	139	25	18	NWSE	46.85168	-93.886977
Cass	Pine River	07010105	5	w-139n25w18-ag	8/2/2016	1044.1	PFO	Hardwood Swamps	Type 7	-	-	-	0.01	-	0.01	139	25	18	NWSE	46.852003	-93.886853
Cass	Pine River	07010105	5	CA156gW	7/30/2013	1044.1	PSS	Shrub Carr	Type 6	373.2	0.07	0.02	0.35	-	0.37	139	25	7	NESE	46.865216	-93.885764
Cass	Pine River	07010105	5	w-139n25w18-ai	8/2/2016	1044.1	PSS	Alder Thickets	Type 6	-	-	0.02	-	-	0.02	139	25	18	SENE	46.854068	-93.885637
Cass	Pine River	07010105	5	CA156gW	7/30/2013	1044.1	PFO	Hardwood Swamps	Type 7	-	-	-	0.39	-	0.39	139	25	7	NESE	46.865249	-93.885508
Cass	Pine River	07010105	5	CA156hW	7/30/2013	1044.2	PFO	Hardwood Swamps	Type 7	-	-	-	0.03	-	0.03	139	25	7	NESE	46.865963	-93.883629
Cass	Pine River	07010105	5	w-139n25w18-aj	8/2/2016	1044.2	PEM	Fresh (wet) Meadow	Type 2	-	-	0.02	-	-	0.02	139	25	18	SENE	46.855818	-93.883245
Cass	Pine River	07010105	5	CA156kW	7/30/2013	1044.2	PEM	Fresh (wet) Meadow	Type 2	65.0	0.01	0.14	-	-	0.14	139	25	7	NESE	46.865111	-93.88305
Cass	Pine River	07010105	5	CA156iW	7/30/2013	1044.2	PFO	Hardwood Swamps	Type 7	-	-	-	0.02	-	0.02	139	25	7	NESE	46.86579	-93.883069
Cass	Pine River	07010105	5	CA157aW	7/31/2013	1044.3	PEM	Fresh (wet) Meadow	Type 2	-	-	0.02	-	-	0.02	139	25	7, 8	NWSW, NESE	46.865062	-93.881692
Cass	Pine River	07010105	5	CA157aW	7/31/2013	1044.3	PFO	Hardwood Swamps	Type 7	150.6	0.03	-	0.29	-	0.29	139	25	7, 8	NWSW, NESE	46.865122	-93.881645
Cass	Pine River	07010105	5	w-139n25w18-al	8/2/2016	1044.3	PEM	Seasonally Flooded Basins	Type 1	-	-	0.02	-	-	0.02	139	25	8, 17	NWNW, SWSW	46.861082	-93.881108
Cass	Pine River	07010105	5	w-139n25w8-an	8/2/2016	1044.4	PEM	Fresh (wet) Meadow	Type 2	-	-	0.02	-	-	0.02	139	25	8	SWSW	46.862938	-93.879316
Cass	Pine River	07010105	5	w-139n25w8-ak	8/2/2016	1044.5	PEM	Fresh (wet) Meadow	Type 2	-	-	0.04	-	-	0.04	139	25	8	SWSW	46.863961	-93.878349
Cass	Pine River	07010105	5	CA157cW	7/31/2013	1044.5	PEM	Fresh (wet) Meadow	Type 2	122.6	0.02	0.32	-	-	0.32	139	25	8	NWSW, NESW	46.865081	-93.878133
Cass	Pine River	07010105	5	CA157cW	7/31/2013	1044.5	PSS	Shrub Carr	Type 6	713.8	0.14	0.93	0.70	-	1.64	139	25	8	NWSW, NESW	46.865127	-93.876839
Cass	Pine River	07010105	5	w-139n25w8-ao	8/4/2016	1044.7	PEM	Seasonally Flooded Basins	Type 1	-	-	0.00	-	-	0.00	139	25	8	NESW	46.86738	-93.874263
Cass	Pine River	07010105	5	w-139n25w8-ap	8/4/2016	1044.7	PSS	Shrub Carr	Type 6	-	-	0.06	-	-	0.06	139	25	8	NESW, SENW	46.868054	-93.873555
Cass	Pine River	07010105	5	w-139n25w8-ar	8/4/2016	1044.7	PEM	Fresh (wet) Meadow	Type 2	-	-	0.02	-	-	0.02	139	25	8	SENW	46.868206	-93.872555
Cass	Pine River	07010105	5	w-139n25w8-at	8/4/2016	1044.8	PSS	Shrub Carr	Type 6	-	-	0.02	-	-	0.02	139	25	8	SENW	46.868275	-93.870891
Cass	Pine River	07010105	5	CA157fW	7/31/2013	1044.8	PFO	Hardwood Swamps	Type 7	-	-	-	0.01	-	0.01	139	25	8	NESW	46.865084	-93.8709
Cass	Pine River	07010105	5	w-139n25w8-as	8/4/2016	1044.8	PSS	Alder Thickets	Type 6	-	-	0.04	-	-	0.04	139	25	8	NWSE, SWNE, SENW	46.86836	-93.87058

Attachment F
Line 3 Replacement Project
Wetland Table

County	Major Watershed	Hydologic Unit Code (HUC) 8	Bank Service Area (BSA)	Feature ID	Survey Date	Approx. Milepost	Cowardin [a]	Eggers and Reed [a]	Circular 39 [a]	Crossing length (feet) b	Crossing length (miles) b	Temporary Impacts (acres) c	Permanent Conversion (acres) d	Permanent Fill (acres)	Total Impacts (acres)	Township	Range	Section	Quarter-Quarter Section	Latitude	Longitude
Cass	Pine River	07010105	5	w-139n25w8-au	8/4/2016	1044.9	PSS	Shrub Carr	Type 6	-	-	0.03	-	-	0.03	139	25	8	NWSE, SWNE	46.868116	-93.870195
Cass	Pine River	07010105	5	CA157gW	7/31/2013	1045.0	PEM	Sedge Meadows	Type 2	64.0	0.01	0.10	-	-	0.10	139	25	8	NWSE	46.865244	-93.866803
Cass	Pine River	07010105	5	w-139n25w8-av	8/4/2016	1045.2	PEM	Fresh (wet) Meadow	Type 2	-	-	0.19	-	-	0.19	139	25	8	NESE, SWNE, SENE	46.868212	-93.864992
Cass	Pine River	07010105	5	CA157hW	7/31/2013	1045.2	PEM	Sedge Meadows	Type 2	-	-	0.02	-	-	0.02	139	25	8	NESE	46.866612	-93.86299
Cass	Pine River	07010105	5	CA157hW	7/31/2013	1045.2	PFO	Hardwood Swamps	Type 7	48.0	0.01	-	0.07	-	0.07	139	25	8	NESE	46.866753	-93.863138
Cass	Pine River	07010105	5	w-139n25w8-aw	8/4/2016	1045.3	PSS	Shrub Carr	Type 6	-	-	0.18	-	-	0.18	139	25	8	SENE	46.86962	-93.863396
Cass	Pine River	07010105	5	CA158aW	7/31/2013	1045.3	PEM	Fresh (wet) Meadow	Type 2	266.7	0.05	0.70	-	-	0.70	139	25	8, 9	NESE, SWNW, SENW, SENE	46.867333	-93.861491
Cass	Pine River	07010105	5	CA158aW	7/31/2013	1045.4	PSS	Alder Thickets	Type 6	536.1	0.10	0.60	0.70	-	1.30	139	25	8, 9	NESE, SWNW, SENW	46.867934	-93.860404
Cass	Pine River	07010105	5	CA158aW	7/16/2013	1045.4	PFO	Hardwood Swamps	Type 7	1,049.1	0.20	-	2.06	-	2.06	139	25	8, 9	SWNW, SENW, SENE	46.868431	-93.85946
Cass	Mississippi River - Grand Rapids	07010103	5	w-139n25w5-aa	8/4/2016	1045.6	PSS	Shrub Carr	Type 6	-	-	0.03	-	-	0.03	139	25	5	SESE	46.875865	-93.864116
Cass	Mississippi River - Grand Rapids	07010103	5	CA160aW	7/16/2013	1046.0	PFO	Hardwood Swamps	Type 7	162.5	0.03	-	0.38	-	0.38	139	25	9	NENW	46.873437	-93.850759
Cass	Mississippi River - Grand Rapids	07010103	5	CA160cW	7/16/2013	1046.1	PFO	Hardwood Swamps	Type 7	177.2	0.03	-	0.34	-	0.34	139	25	9	NWNE, NENW	46.873958	-93.848696
Cass	Mississippi River - Grand Rapids	07010103	5	CA160dW	7/16/2013	1046.2	PEM	Fresh (wet) Meadow	Type 2	-	-	0.03	-	-	0.03	139	25	9	NWNE	46.874473	-93.84697
Cass	Mississippi River - Grand Rapids	07010103	5	CA160dW	7/16/2013	1046.2	PSS	Alder Thickets	Type 6	108.4	0.02	0.12	0.10	-	0.23	139	25	9	NWNE	46.874616	-93.846813
Cass	Mississippi River - Grand Rapids	07010103	5	CA160eW	6/25/2013	1046.4	PEM	Fresh (wet) Meadow	Type 2	-	-	0.04	-	-	0.04	139	25	4	SWSE	46.876047	-93.843775
Cass	Mississippi River - Grand Rapids	07010103	5	CA160eW	6/25/2013	1046.4	PFO	Hardwood Swamps	Type 7	133.3	0.03	-	0.23	-	0.23	139	25	4	SWSE	46.876225	-93.843861
Cass	Mississippi River - Grand Rapids	07010103	5	CAC5161b1W	6/24/2013	1046.5	PEM	Fresh (wet) Meadow	Type 2	-	-	0.00	-	-	0.00	139	25	4	SESE	46.876814	-93.842193
Cass	Mississippi River - Grand Rapids	07010103	5	w-139n25w4-aa	8/3/2016	1046.5	PFO	Hardwood Swamps	Type 7	-	-	-	0.26	-	0.26	139	25	4	SESE	46.876432	-93.840654
Cass	Mississippi River - Grand Rapids	07010103	5	CAC5161a1W	6/24/2013	1046.5	PEM	Shallow Marshes	Type 3	371.7	0.07	0.75	-	-	0.75	139	25	4	SESE	46.877654	-93.840615
Cass	Mississippi River - Grand Rapids	07010103	5	w-139n25w4-aa	8/3/2016	1046.6	PSS	Shrub Carr	Type 6	-	-	0.44	-	-	0.44	139	25	4	SESE	46.876703	-93.83903
Cass	Mississippi River - Grand Rapids	07010103	5	CAC5161d1W	6/26/2013	1046.7	PEM	Fresh (wet) Meadow	Type 2	-	-	0.04	-	-	0.04	139	25	4	SESE	46.878488	-93.838635
Cass	Mississippi River - Grand Rapids	07010103	5	CAC5162e1W	6/26/2013	1046.7	PEM	Fresh (wet) Meadow	Type 2	-	-	0.00	-	-	0.00	139	25	3	SWSW	46.878879	-93.837985
Cass	Mississippi River - Grand Rapids	07010103	5	CAC5162f1W	6/26/2013	1046.7	PEM	Fresh (wet) Meadow	Type 2	-	-	0.00	-	-	0.00	139	25	3	NWSW	46.879302	-93.837123
Cass	Mississippi River - Grand Rapids	07010103	5	CAC5162d1W	6/26/2013	1046.8	PFO	Hardwood Swamps	Type 7	-	-	-	0.02	-	0.02	139	25	3	NWSW	46.88003	-93.8362
Cass	Mississippi River - Grand Rapids	07010103	5	CAC5162g1W	6/27/2013	1046.8	PFO	Hardwood Swamps	Type 7	58.9	0.01	-	0.09	-	0.09	139	25	3	NWSW	46.880034	-93.835801
Cass	Mississippi River - Grand Rapids	07010103	5	CAC5162g1W	6/27/2013	1046.8	PEM	Fresh (wet) Meadow	Type 2	13.0	0.00	0.02	-	-	0.02	139	25	3	NWSW	46.879983	-93.835789
Cass	Mississippi River - Grand Rapids	07010103	5	CAC5162h1W	6/27/2013	1046.9	PEM	Sedge Meadows	Type 2	58.7	0.01	0.08	-	-	0.08	139	25	3	NWSW	46.880581	-93.834577
Cass	Mississippi River - Grand Rapids	07010103	5	CAC5162c1W	6/26/2013	1046.9	PFO	Hardwood Swamps	Type 7	37.4	0.01	-	0.13	-	0.13	139	25	3	NWSW	46.881089	-93.834032
Cass	Mississippi River - Grand Rapids	07010103	5	CAC5162c1W	6/26/2013	1046.9	PEM	Sedge Meadows	Type 2	14.6	0.00	0.08	-	-	0.08	139	25	3	NWSW	46.881003	-93.834193

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Wetland Table

County	Major Watershed	Hydrologic Unit Code (HUC) 8	Bank Service Area (BSA)	Feature ID	Survey Date	Approx. Milepost	Cowardin [a]	Eggers and Reed [a]	Circular 39 [a]	Crossing length (feet) b	Crossing length (miles) b	Temporary Impacts (acres) c	Permanent Conversion (acres) d	Permanent Fill (acres)	Total Impacts (acres)	Township	Range	Section	Quarter-Quarter Section	Latitude	Longitude
Cass	Mississippi River - Grand Rapids	07010103	5	CAC5162j1W	6/27/2013	1047.0	PEM	Fresh (wet) Meadow	Type 2	-	-	0.01	-	-	0.01	139	25	3	NWSW	46.881074	-93.833545
Cass	Mississippi River - Grand Rapids	07010103	5	CAC5162k1W	6/27/2013	1047.0	PFO	Hardwood Swamps	Type 7	-	-	-	0.03	-	0.03	139	25	3	NWSW	46.881543	-93.833073
Cass	Mississippi River - Grand Rapids	07010103	5	CA162tW	7/13/2013	1047.0	PFO	Hardwood Swamps	Type 7	173.9	0.03	-	0.46	-	0.46	139	25	3	NWSW, NESW	46.8816	-93.832779
Cass	Mississippi River - Grand Rapids	07010103	5	CA162tW	6/28/2013	1047.1	PEM	Fresh (wet) Meadow	Type 2	60.7	0.01	0.08	-	-	0.08	139	25	3	NESW	46.882034	-93.831625
Cass	Mississippi River - Grand Rapids	07010103	5	CAC5162m1W	6/28/2013	1047.1	PFO	Hardwood Swamps	Type 7	19.6	0.00	-	0.07	-	0.07	139	25	3	NESW, SENW	46.882631	-93.830714
Cass	Mississippi River - Grand Rapids	07010103	5	CAC5162o1W	6/28/2013	1047.2	PFO	Hardwood Swamps	Type 7	-	-	-	0.05	-	0.05	139	25	3	SENW	46.882918	-93.830119
Cass	Mississippi River - Grand Rapids	07010103	5	CAC5162n1W	6/28/2013	1047.2	PEM	Fresh (wet) Meadow	Type 2	28.0	0.01	0.03	-	-	0.03	139	25	3	SENW	46.883013	-93.829699
Cass	Mississippi River - Grand Rapids	07010103	5	CAC5162r1W	6/29/2013	1047.2	PEM	Fresh (wet) Meadow	Type 2	-	-	0.00	-	-	0.00	139	25	3	SENW	46.883394	-93.828791
Cass	Mississippi River - Grand Rapids	07010103	5	CAC5162r1W	6/29/2013	1047.3	PFO	Hardwood Swamps	Type 7	373.2	0.07	-	0.70	-	0.70	139	25	3	SWNE, SENW	46.883767	-93.828246
Cass	Mississippi River - Grand Rapids	07010103	5	CA162fW	7/12/2013	1047.4	PFO	Hardwood Swamps	Type 7	-	-	-	0.02	-	0.02	139	25	3	SWNE	46.884981	-93.82651
Cass	Mississippi River - Grand Rapids	07010103	5	CA162eW	7/12/2013	1047.5	PEM	Sedge Meadows	Type 2	60.2	0.01	0.06	-	-	0.06	139	25	3	SWNE	46.884452	-93.823196
Cass	Mississippi River - Grand Rapids	07010103	5	CA162dW	7/12/2013	1047.6	PFO	Hardwood Swamps	Type 7	103.5	0.02	-	0.17	-	0.17	139	25	3	SWNE	46.884386	-93.822477
Cass	Mississippi River - Grand Rapids	07010103	5	CA162dW	7/12/2013	1047.6	PEM	Fresh (wet) Meadow	Type 2	-	-	0.03	-	-	0.03	139	25	3	SWNE	46.88432	-93.822475
Cass	Mississippi River - Grand Rapids	07010103	5	CA163aW	7/10/2013	1047.9	PFO	Hardwood Swamps	Type 7	61.1	0.01	-	0.14	-	0.14	139	25	2	SWNW	46.883605	-93.815176
Cass	Mississippi River - Grand Rapids	07010103	5	CA163aW	7/10/2013	1048.0	PEM	Fresh (wet) Meadow	Type 2	231.9	0.04	0.48	-	-	0.48	139	25	2	SWNW	46.883487	-93.814401
Cass	Mississippi River - Grand Rapids	07010103	5	CA163bW	7/10/2013	1048.1	PSS	Shrub Carr	Type 6	-	-	0.08	0.03	-	0.11	139	25	2	SWNW	46.883182	-93.811936
Cass	Mississippi River - Grand Rapids	07010103	5	CA163dW	7/11/2013	1048.2	PFO	Hardwood Swamps	Type 7	-	-	-	0.01	-	0.01	139	25	2	SENW	46.88292	-93.809659
Cass	Mississippi River - Grand Rapids	07010103	5	CA163fW	7/11/2013	1048.3	PEM	Fresh (wet) Meadow	Type 2	51.5	0.01	0.07	-	-	0.07	139	25	2	NESW	46.882518	-93.807787
Cass	Mississippi River - Grand Rapids	07010103	5	CA165aW	7/11/2013	1049.2	PEM	Seasonally Flooded Basins	Type 1	-	-	0.01	-	-	0.01	139	25	1	NESW	46.88036	-93.789226
Cass	Mississippi River - Grand Rapids	07010103	5	CA165dW	7/11/2013	1049.2	PEM	Seasonally Flooded Basins	Type 1	-	-	0.00	-	-	0.00	139	25	1	NESW	46.880322	-93.788872
Cass	Mississippi River - Grand Rapids	07010103	5	CA165fW	7/11/2013	1049.2	PEM	Sedge Meadows	Type 2	4.7	0.00	0.02	-	-	0.02	139	25	1	NESW	46.879971	-93.78781
Cass	Mississippi River - Grand Rapids	07010103	5	CA165fW	7/11/2013	1049.3	PFO	Hardwood Swamps	Type 1	90.9	0.02	-	0.22	-	0.22	139	25	1	NESW	46.880013	-93.787555
Cass	Mississippi River - Grand Rapids	07010103	5	CA166aW	7/11/2013	1049.4	PEM	Fresh (wet) Meadow	Type 2	-	-	0.26	-	-	0.26	139	25	1	NWSE, NESE, NESW	46.879686	-93.785712
Cass	Mississippi River - Grand Rapids	07010103	5	CA166aW	7/11/2013	1049.4	PFO	Coniferous Swamps	Type 7	1,452.9	0.28	-	2.89	-	2.89	139	25	1	NWSE, NESE, NESW	46.879703	-93.785688
Cass	Mississippi River - Grand Rapids	07010103	5	CA166cW	7/12/2013	1049.7	PEM	Fresh (wet) Meadow	Type 2	451.9	0.09	0.91	-	-	0.91	139	25	1, 28	NENW, NESE, SESE	46.878765	-93.777587
Aitkin	Mississippi River - Grand Rapids	07010103	5	AI001aW	9/21/2013	1049.9	PFO	Floodplain Forests	Type 7	51.2	0.01	-	0.15	-	0.15	51	27	28	NENW	46.878446	-93.774374
Aitkin	Mississippi River - Grand Rapids	07010103	5	AI001aW	9/21/2013	1049.9	PEM	Fresh (wet) Meadow	Type 2	-	-	0.01	-	-	0.01	51	27	28	NENW	46.878245	-93.774302

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Wetland Table

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Aitkin	Mississippi River - Grand Rapids	07010103	5	AI002cW	8/21/2013	1050.0	PEM	Fresh (wet) Meadow	Type 2	-	-	0.08	-	-	0.08	51	27	28	NWSE, SWNE	46.877881	-93.771369
Aitkin	Mississippi River - Grand Rapids	07010103	5	AI002cW	8/21/2013	1050.0	PFO	Hardwood Swamps	Type 7	133.1	0.03	-	0.18	-	0.18	51	27	28	NWSE, SWNE	46.877957	-93.771427
Aitkin	Mississippi River - Grand Rapids	07010103	5	AI002bW	8/22/2013	1050.1	PFO	Hardwood Swamps	Type 7	116.0	0.02	-	0.19	-	0.19	51	27	28	NWSE, NESE, SWNE	46.877916	-93.769907
Aitkin	Mississippi River - Grand Rapids	07010103	5	AI002bW	8/22/2013	1050.1	PEM	Fresh (wet) Meadow	Type 2	-	-	0.05	-	-	0.05	51	27	28	NWSE, NESE	46.877708	-93.769927
Aitkin	Mississippi River - Grand Rapids	07010103	5	AI003bW	8/21/2013	1050.2	PSS	Shrub Carr	Type 6	132.1	0.03	0.12	0.15	-	0.27	51	27	28	NWSE	46.877515	-93.767993
Aitkin	Mississippi River - Grand Rapids	07010103	5	AI003bW	8/21/2013	1050.2	PEM	Sedge Meadows	Type 2	-	-	0.00	-	-	0.00	51	27	28	NWSE	46.877416	-93.76775
Aitkin	Mississippi River - Grand Rapids	07010103	5	AI003aW	8/21/2013	1050.3	PEM	Sedge Meadows	Type 2	155.6	0.03	0.27	-	-	0.27	51	27	28	NESE	46.87731	-93.765382
Aitkin	Mississippi River - Grand Rapids	07010103	5	AI004eW	8/21/2013	1050.5	PUB	Shallow Open Water	Type 5	7.3	0.00	0.02	-	-	0.02	51	27	28	NESE	46.87685	-93.762465
Aitkin	Mississippi River - Grand Rapids	07010103	5	AI004eW	8/21/2013	1050.5	PEM	Sedge Meadows	Type 2	44.3	0.01	0.11	-	-	0.11	51	27	27, 28	NWSW, NESE	46.876918	-93.762401
Aitkin	Mississippi River - Grand Rapids	07010103	5	AI004cW	8/21/2013	1050.9	PEM	Sedge Meadows	Type 2	39.3	0.01	0.12	-	-	0.12	51	27	27	NESW	46.875907	-93.754301
Aitkin	Mississippi River - Grand Rapids	07010103	5	AI004aW	8/21/2013	1050.9	PEM	Sedge Meadows	Type 2	-	-	0.11	-	-	0.11	51	27	27	NWSE, NESW	46.875507	-93.752554
Aitkin	Mississippi River - Grand Rapids	07010103	5	AI004aW	8/21/2013	1051.0	PFO	Hardwood Swamps	Type 7	293.4	0.06	-	0.41	-	0.41	51	27	27	NWSE, NESW	46.875552	-93.752425
Aitkin	Mississippi River - Grand Rapids	07010103	5	AI005cW	8/21/2013	1051.1	PEM	Shallow Marshes	Type 3	1,050.6	0.20	2.18	-	-	2.18	51	27	26, 27	NWSE, NWSW, NESE, SWSW, SESE	46.874987	-93.74835
Aitkin	Mississippi River - Grand Rapids	07010103	5	AI005cW	8/21/2013	1051.2	PFO	Hardwood Swamps	Type 7	124.2	0.02	-	0.25	-	0.25	51	27	26, 27	NWSE, SWSW	46.875142	-93.748293
Aitkin	Mississippi River - Grand Rapids	07010103	5	AI005cW	8/21/2013	1051.2	PSS	Shrub Carr	Type 6	536.8	0.10	0.31	0.61	-	0.92	51	27	27	NWSE, NESE	46.874992	-93.747437
Aitkin	Mississippi River - Grand Rapids	07010103	5	AI005cW	8/21/2013	1051.4	PUB	Shallow Open Water	Type 5	151.7	0.03	0.52	-	-	0.52	51	27	26, 27	NWSW, NESE, SWSW	46.87438	-93.742184
Aitkin	Mississippi River - Grand Rapids	07010103	5	AI005dW	8/20/2013	1051.6	PEM	Fresh (wet) Meadow	Type 2	-	-	0.00	-	-	0.00	51	27	26	SWSW	46.87386	-93.739627
Aitkin	Mississippi River - Grand Rapids	07010103	5	AI006bW	8/20/2013	1051.8	PEM	Fresh (wet) Meadow	Type 2	-	-	0.03	-	-	0.03	51	27	26	SESW	46.873258	-93.734724
Aitkin	Mississippi River - Grand Rapids	07010103	5	AI008bW	8/19/2013	1052.0	PFO	Hardwood Swamps	Type 7	93.1	0.02	-	0.20	-	0.20	51	27	26	SWSE, SESW	46.873021	-93.731451
Aitkin	Mississippi River - Grand Rapids	07010103	5	AI008bW	8/19/2013	1052.0	PEM	Sedge Meadows	Type 2	-	-	0.00	-	-	0.00	51	27	26	SWSE, SESW	46.872821	-93.731458
Aitkin	Mississippi River - Grand Rapids	07010103	5	AI014aW	8/19/2013	1052.1	PSS	Shrub Carr	Type 6	-	-	0.01	-	-	0.01	51	27	26	SWSE	46.872553	-93.727534
Aitkin	Mississippi River - Grand Rapids	07010103	5	AI016bW	8/19/2013	1052.4	PFO	Hardwood Swamps	Type 7	-	-	-	0.01	-	0.01	51	27	26	SESE	46.872144	-93.723126
Aitkin	Mississippi River - Grand Rapids	07010103	5	AI016bW	8/19/2013	1052.4	PEM	Sedge Meadows	Type 2	27.2	0.01	0.04	-	-	0.04	51	27	26	SESE	46.87197	-93.72309
Aitkin	Mississippi River - Grand Rapids	07010103	5	AI017cW	8/19/2013	1052.6	PEM	Wet to Wet-Mesic Prairies	Type 2	2.3	0.00	0.02	-	-	0.02	51	27	25	SWSW	46.871282	-93.7191
Aitkin	Mississippi River - Grand Rapids	07010103	5	AI017eW	8/19/2013	1052.7	PEM	Sedge Meadows	Type 2	41.0	0.01	0.05	-	-	0.05	51	27	25	SWSW, SESW	46.870827	-93.715585
Aitkin	Mississippi River - Grand Rapids	07010103	5	AI018bW	8/20/2013	1052.8	PFO	Hardwood Swamps	Type 7	-	-	-	0.06	-	0.06	51	27	25	SESW	46.870888	-93.714499

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Wetland Table

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Aitkin	Mississippi River - Grand Rapids	07010103	5	AI019bW	9/21/2013	1052.8	PEM	Sedge Meadows	Type 2	-	-	0.00	-	-	0.00	51	27	25	SESW	46.87065	-93.714289
Aitkin	Mississippi River - Grand Rapids	07010103	5	AI019aW	9/21/2013	1052.9	PEM	Sedge Meadows	Type 2	-	-	0.01	-	-	0.01	51	27	36	NENW	46.870474	-93.712792
Aitkin	Mississippi River - Grand Rapids	07010103	5	AI018cW	9/21/2013	1053.0	PFO	Hardwood Swamps	Type 7	440.2	0.08	-	0.76	-	0.76	51	27	36	NWNE, NENW	46.870379	-93.710586
Aitkin	Mississippi River - Grand Rapids	07010103	5	AI018cW	9/21/2013	1053.0	PEM	Fresh (wet) Meadow	Type 2	-	-	0.20	-	-	0.20	51	27	36	NWNE, NENW	46.870194	-93.710477
Aitkin	Mississippi River - Grand Rapids	07010103	5	AI018cW	9/21/2013	1053.0	PSS	Shrub Carr	Type 6	96.6	0.02	-	0.11	-	0.11	51	27	36	NWNE	46.870002	-93.708963
Aitkin	Mississippi River - Grand Rapids	07010103	5	AI020bW	8/21/2013	1053.3	PSS	Alder Thickets	Type 6	195.5	0.04	0.20	0.23	-	0.43	51	27	36	NENE	46.869467	-93.703402
Aitkin	Mississippi River - Grand Rapids	07010103	5	AI020bW	8/21/2013	1053.4	PEM	Fresh (wet) Meadow	Type 2	666.0	0.13	1.27	-	-	1.27	51	27	36	NENE	46.869289	-93.702008
Aitkin	Mississippi River - Grand Rapids	07010103	5	AI021aW	8/21/2013	1053.6	PEM	Fresh (wet) Meadow	Type 2	-	-	0.07	-	-	0.07	51	26	31	NWNW	46.868817	-93.698311
Aitkin	Mississippi River - Grand Rapids	07010103	5	AI021bW	8/21/2013	1053.6	PEM	Fresh (wet) Meadow	Type 2	107.5	0.02	0.15	-	-	0.15	51	26	31	NWNW	46.868627	-93.697936
Aitkin	Mississippi River - Grand Rapids	07010103	5	AI022aW	8/21/2013	1053.9	PEM	Fresh (wet) Meadow	Type 2	106.6	0.02	-	-	0.37	0.37	51	26	31	NENW	46.86794	-93.691941
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n26w31-p	8/31/2017	1053.9	PEM	Fresh (wet) Meadow	Type 2	-	-	-	-	0.31	0.31	51	26	31	NENW	46.869539	-93.690867
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n26w31-p	8/31/2017	1054.0	PFO	Hardwood Swamps	Type 7	-	-	-	-	3.65	3.65	51	26	31	NWNE, NENW	46.86944	-93.689571
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n26w31-o	8/30/2017	1054.2	PSS	Alder Thickets	Type 6	-	-	-	-	0.13	0.13	51	26	31	NWNE	46.869003	-93.684791
Aitkin	Mississippi River - Grand Rapids	07010103	5	AI025aW	8/30/2017	1054.2	PFO	Hardwood Swamps	Type 7	593.2	0.11	-	1.31	0.39	1.70	51	26	31	NWNE, NENE	46.868725	-93.684413
Aitkin	Mississippi River - Grand Rapids	07010103	5	AI025bW	8/21/2013	1054.3	PFO	Hardwood Swamps	Type 7	-	-	-	0.08	-	0.08	51	26	31	SWNE, SENE	46.866897	-93.682951
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n26w31-n	8/30/2017	1054.3	PSS	Alder Thickets	Type 6	-	-	-	-	0.01	0.01	51	26	31	NENE	46.870618	-93.681619
Aitkin	Mississippi River - Grand Rapids	07010103	5	MN_NWI-535	TBD	1054.3	PSS	TBD	TBD	-	-	-	-	0.04	0.04	51	26	31, 32	NWNW, NENE	46.870722	-93.681466
Aitkin	Mississippi River - Grand Rapids	07010103	5	AI025aW	8/30/2017	1054.4	PSS	Shrub Carr	Type 6	-	-	-	-	0.16	0.16	51	26	31	NENE	46.870283	-93.681107
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n26w29-a	7/20/2018	1054.5	PEM	Fresh (wet) Meadow	Type 2	-	-	0.00	-	-	0.00	51	26	29	SWSW	46.87221	-93.677641
Aitkin	Mississippi River - Grand Rapids	07010103	5	AI025aW	9/13/2013	1054.5	PEM	Fresh (wet) Meadow	Type 2	12.5	0.00	0.05	-	-	0.05	51	26	31	SENE	46.86619	-93.678981
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n26w29-b	7/20/2018	1054.5	PEM	Fresh (wet) Meadow	Type 2	-	-	0.02	-	-	0.02	51	26	29	SWSW	46.872033	-93.676946
Aitkin	Mississippi River - Grand Rapids	07010103	5	AI027aW	9/14/2013	1054.6	PEM	Fresh (wet) Meadow	Type 2	178.4	0.03	0.41	-	-	0.41	51	26	31, 32	SWNW, SENE	46.866184	-93.677695
Aitkin	Mississippi River - Grand Rapids	07010103	5	AI027aW	9/14/2013	1054.6	PSS	Shrub Carr	Type 6	271.9	0.05	0.28	0.31	-	0.59	51	26	31, 32	SWNW, SENE	46.86628	-93.67764
Aitkin	Mississippi River - Grand Rapids	07010103	5	MN_NWI-557	TBD	1054.6	PSS	TBD	TBD	-	-	0.18	-	-	0.18	51	26	20	NESW, SENW	46.892355	-93.669272
Aitkin	Mississippi River - Grand Rapids	07010103	5	AI027aW	8/19/2017	1054.6	PFO	Hardwood Swamps	Type 7	97.5	0.02	-	0.20	-	0.20	51	26	32	SWNW	46.865919	-93.675674
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n26w32-a	8/21/2017	1054.8	PFO	Hardwood Swamps	Type 7	1,028.6	0.19	-	2.36	-	2.36	51	26	32	SWNW, SENW	46.865646	-93.67287
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n26w32-a	8/21/2017	1055.0	PEM	Fresh (wet) Meadow	Type 2	70.7	0.01	0.20	-	-	0.20	51	26	32	SWNE, SENW	46.86523	-93.669337

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County	Major Watershed	Hydologic Unit Code (HUC) 8	Bank Service Area (BSA)	Feature ID	Survey Date	Approx. Milepost	Cowardin [a]	Eggers and Reed [a]	Circular 39 [a]	Crossing length (feet) b	Crossing length (miles) b	Temporary Impacts (acres) c	Permanent Conversion (acres) d	Permanent Fill (acres)	Total Impacts (acres)	Township	Range	Section	Quarter-Quarter Section	Latitude	Longitude
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n26w32-f	7/19/2018	1055.0	PFO	Hardwood Swamps	Type 7	-	-	-	0.00	-	0.00	51	26	32	SENW	46.866585	-93.668087
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n26w32-e	7/19/2018	1055.0	PFO	Hardwood Swamps	Type 7	-	-	-	0.00	-	0.00	51	26	32	SENW	46.866576	-93.667856
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n26w32-j	7/19/2018	1055.1	PFO	Hardwood Swamps	Type 7	-	-	-	0.01	-	0.01	51	26	32	NWNE	46.867744	-93.666616
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n26w32-g	7/19/2018	1055.1	PFO	Seasonally Flooded Basins	Type 1	-	-	-	0.00	-	0.00	51	26	32	SWNE	46.866203	-93.666262
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n26w32-g	7/19/2018	1055.1	PSS	Shrub Carr	Type 6	-	-	0.01	-	-	0.01	51	26	32	SWNE	46.866147	-93.666149
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n26w32-a	8/21/2017	1055.1	PSS	Alder Thickets	Type 6	157.9	0.03	0.16	0.20	-	0.36	51	26	32	SWNE	46.865183	-93.665874
Aitkin	Mississippi River - Grand Rapids	07010103	5	MN_NWI-559	TBD	1055.2	PSS	TBD	TBD	-	-	0.02	-	-	0.02	51	26	20	SWSE	46.886109	-93.66331
Aitkin	Mississippi River - Grand Rapids	07010103	5	MN_NWI-560	TBD	1055.2	PUB	TBD	TBD	-	-	0.15	-	-	0.15	51	26	20	SWSE	46.886209	-93.663313
Aitkin	Mississippi River - Grand Rapids	07010103	5	MN_NWI-556	TBD	1055.2	PSS	TBD	TBD	-	-	0.32	-	-	0.32	51	26	20, 29	NWNE, SWSE	46.885469	-93.662746
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n26w32-b	8/21/2017	1055.2	PFO	Hardwood Swamps	Type 7	225.5	0.04	-	0.42	-	0.42	51	26	32	SWNE	46.865125	-93.663849
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n26w32-b	8/21/2017	1055.2	PEM	Fresh (wet) Meadow	Type 2	-	-	0.03	-	-	0.03	51	26	32	SWNE	46.865021	-93.66369
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n26w32-l	7/20/2018	1055.3	PSS	Shrub Carr	Type 6	-	-	0.14	-	-	0.14	51	26	32	NWNE, NENE	46.868231	-93.661996
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n26w32-c	8/21/2017	1055.3	PFO	Hardwood Swamps	Type 7	459.8	0.09	-	1.29	-	1.29	51	26	32, 33	SWNE, SENW, SENE	46.865075	-93.661867
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n26w32-c	8/21/2017	1055.3	PEM	Fresh (wet) Meadow	Type 2	2,092.4	0.40	4.97	-	-	4.97	51	26	32, 33	SWNW, SWNE, SENW, SENE	46.864958	-93.661933
Aitkin	Mississippi River - Grand Rapids	07010103	5	MN_NWI-553	TBD	1055.3	PFO	TBD	TBD	-	-	-	0.01	-	0.01	51	26	29	NENE	46.88218	-93.660147
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n26w32-m	7/20/2018	1055.4	PFO	Hardwood Swamps	Type 7	-	-	-	0.08	-	0.08	51	26	32	NENE	46.867502	-93.659316
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n26w33-t	7/20/2018	1055.6	PFO	Hardwood Swamps	Type 7	-	-	-	0.19	-	0.19	51	26	32, 33	NWNW, NENE, SWNW, SENE	46.86706	-93.656462
Aitkin	Mississippi River - Grand Rapids	07010103	5	MN_NWI-554	TBD	1055.6	PSS	TBD	TBD	-	-	0.37	-	-	0.37	51	26	28	NWSW	46.875591	-93.655101
Aitkin	Mississippi River - Grand Rapids	07010103	5	MN_NWI-551	TBD	1055.6	PEM	TBD	TBD	-	-	1.37	-	-	1.37	51	26	28, 33	NWSW, NENW, SWSW	46.874612	-93.654341
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n26w33-u	7/20/2018	1055.7	PFO	Hardwood Swamps	Type 7	-	-	-	0.03	-	0.03	51	26	33	NWNW, SWNW	46.867012	-93.653776
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n26w33-u	7/20/2018	1055.8	PSS	Shrub Carr	Type 6	-	-	0.06	-	-	0.06	51	26	33	NWNW, SWNW	46.867026	-93.652305
Aitkin	Mississippi River - Grand Rapids	07010103	5	MN_NWI-558	TBD	1055.8	PSS	TBD	TBD	-	-	0.38	-	-	0.38	51	26	28, 33	NWNW, NENW, SWSW	46.870865	-93.651428
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n26w33-y	7/21/2018	1055.8	PSS	Shrub Carr	Type 6	-	-	0.04	-	-	0.04	51	26	33	NENW	46.86856	-93.65087
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n26w33-v	7/21/2018	1055.9	PSS	Shrub Carr	Type 6	-	-	0.00	-	-	0.00	51	26	33	NENW	46.868654	-93.649784
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n26w33-w	7/21/2018	1055.9	PEM	Deep and Shallow Marshes	Type 3	-	-	0.00	-	-	0.00	51	26	33	NENW	46.868744	-93.649734
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n26w32-c	7/21/2018	1055.9	PSS	Shrub Carr	Type 6	154.0	0.03	0.18	0.18	-	0.36	51	26	33	NENW	46.868472	-93.649645

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Line 3 Replacement Project
Wetland Table

County	Major Watershed	Hydrologic Unit Code (HUC) 8	Bank Service Area (BSA)	Feature ID	Survey Date	Approx. Milepost	Cowardin [a]	Eggers and Reed [a]	Circular 39 [a]	Crossing length (feet) b	Crossing length (miles) b	Temporary Impacts (acres) c	Permanent Conversion (acres) d	Permanent Fill (acres)	Total Impacts (acres)	Township	Range	Section	Quarter-Quarter Section	Latitude	Longitude
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n26w33-x	7/21/2018	1055.9	PFO	Hardwood Swamps	Type 7	-	-	-	0.01	-	0.01	51	26	33	NENW	46.867708	-93.648938
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n26w33-x	7/21/2018	1055.9	PEM	Fresh (wet) Meadow	Type 2	-	-	0.06	-	-	0.06	51	26	33	NENW	46.867637	-93.648904
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n26w33-x	7/21/2018	1055.9	PSS	Shrub Carr	Type 6	-	-	0.03	-	-	0.03	51	26	33	NENW, SENW	46.867063	-93.648458
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n26w33-a	7/21/2018	1056.0	PSS	Shrub Carr	Type 6	438.8	0.08	0.53	0.51	-	1.03	51	26	33	SENW	46.866148	-93.647737
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n26w33-a	7/21/2018	1056.0	PEM	Fresh (wet) Meadow	Type 2	-	-	0.02	-	-	0.02	51	26	33	SENW	46.865673	-93.647374
Aitkin	Mississippi River - Grand Rapids	07010103	5	MN_NWI-539	TBD	1056.1	PSS	TBD	TBD	-	-	0.76	-	-	0.76	51	26	33	NWSE, SWNE, SENW	46.863939	-93.646127
Aitkin	Mississippi River - Grand Rapids	07010103	5	MN_NWI-533	TBD	1056.2	PSS	TBD	TBD	-	-	1.16	-	-	1.16	51	26	33	NWSE, SWSE, SESE	46.860674	-93.643549
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n26w33-b	8/22/2017	1056.4	PFO	Hardwood Swamps	Type 7	2,205.2	0.42	-	5.90	-	5.90	51	26	33, 34	NWSW, NESW, SWNW, SWNE, SENW, SENE	46.863787	-93.639338
Aitkin	Mississippi River - Grand Rapids	07010103	5	MN_NWI-532	TBD	1056.4	PSS	TBD	TBD	-	-	0.26	-	-	0.26	50	26	4	NENE	46.854674	-93.63894
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n26w33-b	8/22/2017	1056.5	PEM	Deep and Shallow Marshes	Type 3	695.0	0.13	1.57	-	-	1.57	51	26	33, 34	SWNW, SWNE, SENW, SENE	46.863505	-93.63784
Aitkin	Mississippi River - Grand Rapids	07010103	5	MN_NWI-499	TBD	1056.5	PEM	TBD	TBD	-	-	0.56	-	-	0.56	50	26	4	NENE, SENE	46.852509	-93.637225
Aitkin	Mississippi River - Grand Rapids	07010103	5	MN_NWI-536	TBD	1056.6	PSS	TBD	TBD	-	-	3.82	-	-	3.82	50	26	3, 4, 10	NWSW, NENW, SWNW, SWSW, SENW, SENE, SESW	46.85015	-93.635462
Aitkin	Mississippi River - Grand Rapids	07010103	5	MN_NWI-515	TBD	1056.8	PFO	TBD	TBD	-	-	-	0.37	-	0.37	50	26	10	NWSE, SWNE	46.834099	-93.623001
Aitkin	Mississippi River - Grand Rapids	07010103	5	MN_NWI-537	TBD	1056.8	PSS	TBD	TBD	-	-	0.80	-	-	0.80	50	26	10	SWNE, SENW	46.835222	-93.623866
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n26w33-b	8/23/2017	1057.1	PSS	Alder Thickets	Type 6	306.3	0.06	0.31	0.36	-	0.67	51	26	34	SWNE, SENW	46.864014	-93.625397
Aitkin	Mississippi River - Grand Rapids	07010103	5	MN_NWI-511	TBD	1057.3	PFO	TBD	TBD	-	-	-	0.18	-	0.18	50	26	10	NWSE	46.83274	-93.621942
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n26w34-a	8/23/2017	1057.3	PEM	Fresh (wet) Meadow	Type 2	-	-	0.39	-	-	0.39	51	26	34	SWNE, SENE	46.863722	-93.619691
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n26w34-a	8/23/2017	1057.3	PFO	Coniferous Swamps	Type 7	1,526.3	0.29	-	3.14	-	3.14	51	26	34	SWNE, SENE	46.863784	-93.619643
Aitkin	Mississippi River - Grand Rapids	07010103	5	MN_NWI-498	TBD	1057.4	PEM	TBD	TBD	-	-	2.46	-	-	2.46	50	26	10, 15	NWSE, NENE, SWSE, SESE	46.8312	-93.620806
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n26w35-a	8/24/2017	1057.6	PEM	Fresh (wet) Meadow	Type 2	1,509.1	0.29	3.34	-	-	3.34	51	26	35, 36	NWSE, NWSW, NESE, NESW, SWNW, SWNE, SENW	46.863628	-93.613599

Attachment F
Line 3 Replacement Project
Wetland Table

County	Major Watershed	Hydologic Unit Code (HUC) 8	Bank Service Area (BSA)	Feature ID	Survey Date	Approx. Milepost	Cowardin [a]	Eggers and Reed [a]	Circular 39 [a]	Crossing length (feet) b	Crossing length (miles) b	Temporary Impacts (acres) c	Permanent Conversion (acres) d	Permanent Fill (acres)	Total Impacts (acres)	Township	Range	Section	Quarter-Quarter Section	Latitude	Longitude
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n26w35-a	8/24/2017	1057.6	PSS	Shrub Carr	Type 6	1,177.6	0.22	1.52	1.37	-	2.89	51	26	35, 36	NWSE, NWSW, NESE, NESW, SWNW, SWNE, SENW	46.863566	-93.612576
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n26w35-a	8/24/2017	1057.8	PFO	Coniferous Swamps	Type 7	1,421.4	0.27	-	3.12	-	3.12	51	26	35	NWSE, NESE, NESW, SWNW, SENW	46.863497	-93.610437
Aitkin	Mississippi River - Grand Rapids	07010103	5	MN_NWI-273	TBD	1058.4	PSS	TBD	TBD	-	-	1.28	-	-	1.28	51	26	25, 26	NWSW, NESE, SWSW, SESE	46.87422	-93.596856
Aitkin	Mississippi River - Grand Rapids	07010103	5	MN_NWI-267	TBD	1058.4	PFO	TBD	TBD	-	-	-	0.31	-	0.31	51	26	26	NESE, SESE	46.874231	-93.596982
Aitkin	Mississippi River - Grand Rapids	07010103	5	MN_NWI-216	TBD	1058.6	PEM	TBD	TBD	-	-	0.17	-	-	0.17	51	26	25	SWSW	46.870976	-93.592192
Aitkin	Mississippi River - Grand Rapids	07010103	5	MN_NWI-278	TBD	1058.6	PSS	TBD	TBD	-	-	0.14	-	-	0.14	51	26	25, 36	NWNW, SWSW	46.870608	-93.592131
Aitkin	Mississippi River - Grand Rapids	07010103	5	MN_NWI-219	TBD	1058.6	PFO	TBD	TBD	-	-	-	0.40	-	0.40	51	26	36	NWNW	46.869254	-93.591911
Aitkin	Mississippi River - Grand Rapids	07010103	5	MN_NWI-264	TBD	1058.7	PFO	TBD	TBD	-	-	-	0.26	-	0.26	51	26	36	SWNW	46.864681	-93.591054
Aitkin	Mississippi River - Grand Rapids	07010103	5	MN_NWI-276	TBD	1059.1	PSS	TBD	TBD	-	-	0.38	-	-	0.38	51	26	25	NWSE, NESW, SWSE, SESW	46.874204	-93.582353
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n26w36-a	8/24/2017	1059.2	PSS	Alder Thickets	Type 6	811.0	0.15	0.87	0.83	0.17	1.87	51	26	31, 32, 36	NWSE, NESE, NESW	46.862581	-93.579565
Aitkin	Mississippi River - Grand Rapids	07010103	5	MN_NWI-230	TBD	1059.2	PFO	TBD	TBD	-	-	-	0.13	-	0.13	51	26	25	NWSE, SWSE	46.874153	-93.578735
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n26w36-a	8/24/2017	1059.3	PFO	Coniferous Swamps	Type 7	5,274.1	1.00	-	11.86	-	11.86	51	26	31, 32, 36	NWSE, NWSW, NESE, NESW	46.862527	-93.578044
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n26w36-a	8/24/2017	1059.3	PEM	Sedge Meadows	Type 2	4,804.6	0.91	10.51	-	-	10.51	51	26	31, 32, 36	NWSE, NWSW, NESE, NESW	46.862383	-93.577444
Aitkin	Mississippi River - Grand Rapids	07010103	5	MN_NWI-217	TBD	1059.7	PEM	TBD	TBD	-	-	0.41	-	-	0.41	51	25	30	SWSW	46.871264	-93.569572
Aitkin	Mississippi River - Grand Rapids	07010103	5	MN_NWI-229	TBD	1059.8	PFO	TBD	TBD	-	-	-	0.02	-	0.02	51	25	31	NWNW	46.869474	-93.568384
Aitkin	Mississippi River - Grand Rapids	07010103	5	MN_NWI-272	TBD	1059.8	PSS	TBD	TBD	-	-	0.15	-	-	0.15	51	25	31	NWNW	46.868362	-93.567727
Aitkin	Mississippi River - Grand Rapids	07010103	5	MN_NWI-538	TBD	1059.9	PSS	TBD	TBD	-	-	0.09	-	-	0.09	51	25	31	SWNW	46.866082	-93.565657
Aitkin	Mississippi River - Grand Rapids	07010103	5	MN_NWI-534	TBD	1060.0	PSS	TBD	TBD	-	-	0.11	-	-	0.11	51	25	31	SENW	46.86405	-93.56362
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n25w33-e	8/22/2017	1061.7	PEM	Fresh (wet) Meadow	Type 2	-	-	0.04	-	-	0.04	51	25	33	NWSW	46.860797	-93.528099
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n25w33-a	8/22/2017	1061.8	PEM	Fresh (wet) Meadow	Type 2	312.0	0.06	0.69	-	-	0.69	51	25	33	NWSW, NESW	46.860857	-93.525578
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n25w33-a	8/22/2017	1061.8	PSS	Alder Thickets	Type 6	-	-	0.04	-	-	0.04	51	25	33	NWSW	46.860988	-93.525224
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n25w33-a	8/22/2017	1061.9	PFO	Hardwood Swamps	Type 7	636.7	0.12	-	1.32	-	1.32	51	25	33	NWSW, NESW	46.860821	-93.524326
Aitkin	Mississippi River - Grand Rapids	07010103	5	MN_NWI-051	TBD	1062.0	PFO	TBD	TBD	-	-	-	0.14	-	0.14	51	25	33	NESW	46.860869	-93.521875
Aitkin	Mississippi River - Grand Rapids	07010103	5	MN_NWI-048	TBD	1062.0	PFO	TBD	TBD	1,276.6	0.24	-	2.66	-	2.66	51	25	33	NESW	46.860699	-93.520466

Attachment F
Line 3 Replacement Project
Wetland Table

County	Major Watershed	Hydrologic Unit Code (HUC) 8	Bank Service Area (BSA)	Feature ID	Survey Date	Approx. Milepost	Cowardin [a]	Eggers and Reed [a]	Circular 39 [a]	Crossing length (feet) b	Crossing length (miles) b	Temporary Impacts (acres) c	Permanent Conversion (acres) d	Permanent Fill (acres)	Total Impacts (acres)	Township	Range	Section	Quarter-Quarter Section	Latitude	Longitude
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n25w35-e	8/30/2017	1062.2	PFO	Coniferous Swamps	Type 7	6,141.5	1.16	-	12.45	-	12.45	51	25	33, 34, 35	NWSE, NWSW, NESE, NESW	46.860583	-93.516777
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n25w35-e	8/30/2017	1062.3	PEM	Fresh (wet) Meadow	Type 2	295.1	0.06	2.55	-	-	2.55	51	25	33, 34, 35	NWSE, NWSW, NESE, NESW	46.860464	-93.516251
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n25w35-e	8/30/2017	1062.4	PSS	Alder Thickets	Type 6	1,826.0	0.35	1.79	1.91	-	3.70	51	25	33, 34	NWSE, NWSW, NESE	46.860503	-93.513226
Aitkin	Mississippi River - Grand Rapids	07010103	5	MN_NWI-510	TBD	1063.1	PFO	TBD	TBD	-	-	-	0.91	-	0.91	51	25	34	NWSE, NESE, NESW	46.859615	-93.497632
Aitkin	Mississippi River - Grand Rapids	07010103	5	MN_NWI-238	TBD	1063.6	PFO	TBD	TBD	-	-	-	0.15	-	0.15	51	25	34	NESE	46.858982	-93.487076
Aitkin	Mississippi River - Grand Rapids	07010103	5	MN_NWI-270	TBD	1063.7	PSS	TBD	TBD	-	-	1.55	-	-	1.55	51	25	2, 35	NWNW, SWNW, SWSW	46.856151	-93.486314
Aitkin	Mississippi River - Grand Rapids	07010103	5	MN_NWI-281	TBD	1063.7	PSS	TBD	TBD	-	-	0.23	-	-	0.23	51	25	35	SWSW	46.855723	-93.486299
Aitkin	Mississippi River - Grand Rapids	07010103	5	MN_NWI-215	TBD	1063.7	PEM	TBD	TBD	-	-	4.58	-	-	4.58	50	25	2, 11, 14	NWNW, NWSW, SWNW, SWSW	46.848852	-93.486147
Aitkin	Mississippi River - Grand Rapids	07010103	5	MN_NWI-287	TBD	1063.8	R5U	TBD	TBD	-	-	0.00	-	-	0.00	50	25	14	NWNW	46.825731	-93.485686
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n25w35-d	8/29/2017	1063.9	PEM	Fresh (wet) Meadow	Type 2	-	-	0.01	-	-	0.01	51	25	35	NWSW	46.859381	-93.48183
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n25w35-b	8/29/2017	1064.1	PFO	Hardwood Swamps	Type 7	366.0	0.07	-	0.79	-	0.79	51	25	35	NWSE, NESW	46.859304	-93.476311
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n25w35-a	8/29/2017	1064.5	PEM	Fresh (wet) Meadow	Type 2	48.1	0.01	0.08	-	-	0.08	51	25	35	NESE	46.858976	-93.469075
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n25w36-a	8/29/2017	1064.5	PSS	Alder Thickets	Type 6	597.7	0.11	0.59	0.68	-	1.27	51	25	35, 36	NESE, NESW	46.859071	-93.46812
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n25w36-a	8/29/2017	1064.6	PEM	Sedge Meadows	Type 2	-	-	0.57	-	-	0.57	51	25	35, 36	NWSW, NESE, NESW	46.858916	-93.467511
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n25w36-a	8/29/2017	1064.6	PFO	Coniferous Bogs	Type 8	1,785.3	0.34	-	3.37	-	3.37	51	25	35, 36	NWSW, NESE, NESW	46.859015	-93.46741
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n24w31-a [e]	8/29/2017	1065.2	PFO	Hardwood Swamps	Type 7	6,263.6	1.19	-	11.50	-	11.50	51	25	31, 32, 36	NWNW, NWNE, NWSE, NWSW, NENE, NESE, NESW, SWNW, SENE	46.858659	-93.454957
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n24w31-a [e]	8/29/2017	1065.2	PEM	Fresh (wet) Meadow	Type 2	68.6	0.01	2.02	-	-	2.02	51	25	31, 36	NWNE, NWSE, NWSW, NENE, NESE, NESW, SWNW, SWNE	46.858507	-93.454912
Aitkin	Mississippi River - Grand Rapids	07010103	5	MN_NWI-284 [e]	TBD	1066.3	R3U	TBD	TBD	-	-	0.01	-	0.01	0.02	51	24	31	SWNE	46.861876	-93.431661
Aitkin	Mississippi River - Grand Rapids	07010103	5	MN_NWI-236 [e]	TBD	1066.3	PFO	TBD	TBD	-	-	-	0.04	0.08	0.12	51	24	31	SWNE	46.861878	-93.430855
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n24w32-a	8/28/2017	1067.0	PFO	Hardwood Swamps	Type 7	1,053.1	0.20	-	2.33	-	2.33	51	24	32	NWNW	46.868497	-93.419016

Attachment F
Line 3 Replacement Project
Wetland Table

County	Major Watershed	Hydologic Unit Code (HUC) 8	Bank Service Area (BSA)	Feature ID	Survey Date	Approx. Milepost	Cowardin [a]	Eggers and Reed [a]	Circular 39 [a]	Crossing length (feet) b	Crossing length (miles) b	Temporary Impacts (acres) c	Permanent Conversion (acres) d	Permanent Fill (acres)	Total Impacts (acres)	Township	Range	Section	Quarter-Quarter Section	Latitude	Longitude
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n24w28-a	8/28/2017	1067.1	PFO	Hardwood Swamps	Type 7	5,820.3	1.10	-	12.72	-	12.72	51	24	28, 29	NWSE, NWSW, NESE, NESW, SWSE, SWSW, SESE, SESW	46.869432	-93.416351
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n24w28-a	8/28/2017	1067.3	PEM	Sedge Meadows	Type 2	516.1	0.10	1.98	-	-	1.98	51	24	28, 29	NWSE, NWSW, NESE, NESW, SESW	46.870506	-93.412488
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n24w28-a	8/28/2017	1067.4	PSS	Shrub Carr	Type 6	1,542.6	0.29	2.10	1.78	-	3.88	51	24	28, 29	NWSW, NESE, NESW, SWSE, SESE, SESW	46.870733	-93.410924
Aitkin	Mississippi River - Grand Rapids	07010103	5	MN_NWI-525	TBD	1068.0	PFO	TBD	TBD	-	-	-	0.10	-	0.10	51	24	28, 29	SWSW, SESE	46.869969	-93.400187
Aitkin	Mississippi River - Grand Rapids	07010103	5	MN_NWI-547	TBD	1068.0	R5U	TBD	TBD	-	-	0.01	-	-	0.01	51	24	28, 29	SWSW, SESE	46.869309	-93.400201
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n24w28-d	7/23/2018	1068.5	PSS	Shrub Carr	Type 6	-	-	0.00	-	-	0.00	51	24	28, 33	NWNE, SWSE	46.869181	-93.389409
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n24w28-b	7/23/2018	1068.5	PEM	Fresh (wet) Meadow	Type 2	-	-	0.00	-	-	0.00	51	24	28	SWSE	46.869744	-93.389276
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n24w28-c	7/23/2018	1068.5	PSS	Shrub Carr	Type 6	-	-	0.00	-	-	0.00	51	24	28	SWSE	46.869228	-93.389224
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n24w28-e	7/23/2018	1068.5	PEM	Fresh (wet) Meadow	Type 2	41.2	0.01	0.83	-	-	0.83	51	24	28	NWSE	46.873014	-93.388397
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n24w28-e	7/23/2018	1068.5	PFO	Hardwood Swamps	Type 7	224.0	0.04	-	0.31	-	0.31	51	24	28	NWSE	46.873066	-93.388182
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n24w27-d [e]	8/26/2017	1069.1	PFO	Hardwood Swamps	Type 7	1,205.5	0.23	-	2.75	0.20	2.95	51	24	27	NWSW, NESW	46.873514	-93.377314
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n24w27-d [e]	8/26/2017	1069.1	PEM	Fresh (wet) Meadow	Type 2	122.0	0.02	0.34	-	-	0.34	51	24	27	NWSW, NESW	46.873394	-93.375756
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n24w27-b [e]	8/25/2017	1069.5	PFO	Floodplain Forests	Type 7	289.9	0.05	-	0.33	-	0.33	51	24	27	NWSE, NESW	46.873396	-93.368307
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n24w27-c [e]	8/25/2017	1069.6	PFO	Floodplain Forests	Type 7	129.0	0.02	-	0.15	-	0.15	51	24	27	NWSE	46.873376	-93.366239
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n24w27-a [e]	8/25/2017	1069.6	PEM	Fresh (wet) Meadow	Type 2	17.1	0.00	0.02	-	-	0.02	51	24	27	Meandered waterbody	46.873367	-93.365494
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n24w27-g [e]	8/30/2017	1069.6	PEM	Fresh (wet) Meadow	Type 2	13.4	0.00	0.02	-	-	0.02	51	24	27	Meandered waterbody	46.873361	-93.364782
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n24w26-a	8/30/2017	1070.1	PSS	Shrub Carr	Type 6	986.4	0.19	0.94	1.13	-	2.07	51	24	26	NWSW, NESW	46.873237	-93.354236
Aitkin	Mississippi River - Grand Rapids	07010103	5	MN_NWI-074	TBD	1070.3	PSS	TBD	TBD	506.9	0.10	1.05	0.58	-	1.63	51	24	26	NESW	46.873206	-93.351121
Aitkin	Mississippi River - Grand Rapids	07010103	5	MN_NWI-054	TBD	1070.4	PFO	TBD	TBD	-	-	-	0.52	-	0.52	51	24	26	NWSE, NESW	46.873844	-93.348072
Aitkin	Mississippi River - Grand Rapids	07010103	5	MN_NWI-073	TBD	1070.6	PSS	TBD	TBD	252.0	0.05	0.24	0.29	-	0.53	51	24	26	NWSE	46.873147	-93.343882
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n24w26-aa	8/31/2017	1070.7	PSS	Shrub Carr	Type 6	196.6	0.04	0.32	0.29	-	0.61	51	24	25, 26	NWSW, NESE	46.873125	-93.341692
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n24w26-aa	8/31/2017	1070.7	PEM	Fresh (wet) Meadow	Type 2	132.6	0.03	0.51	-	-	0.51	51	24	26	NESE	46.873327	-93.341593
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n24w26-aa	8/31/2017	1070.8	PFO	Hardwood Swamps	Type 7	654.0	0.12	-	2.24	-	2.24	51	24	26	NESE	46.873518	-93.341441
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n24w26-aa	8/31/2017	1070.8	PUB	Shallow Open Water	Type 5	35.9	0.01	0.08	-	-	0.08	51	24	26	NESE	46.873065	-93.339413

Attachment F
Line 3 Replacement Project
Wetland Table

County	Major Watershed	Hydrologic Unit Code (HUC) 8	Bank Service Area (BSA)	Feature ID	Survey Date	Approx. Milepost	Cowardin [a]	Eggers and Reed [a]	Circular 39 [a]	Crossing length (feet) b	Crossing length (miles) b	Temporary Impacts (acres) c	Permanent Conversion (acres) d	Permanent Fill (acres)	Total Impacts (acres)	Township	Range	Section	Quarter-Quarter Section	Latitude	Longitude
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n24w26-bb	7/14/2018	1070.9	PSS	Shrub Carr	Type 6	-	-	0.04	-	-	0.04	51	24	26	SESE	46.870441	-93.338554
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n24w25-o	7/14/2018	1071.0	PEM	Deep and Shallow Marshes	Type 4	-	-	0.14	-	-	0.14	51	24	25, 26	SWSW, SESE	46.870802	-93.336644
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n24w25-o	7/14/2018	1071.0	PUB	Shallow Open Water	Type 5	-	-	0.01	-	-	0.01	51	24	25	SWSW	46.871524	-93.336199
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n24w25-o	7/14/2018	1071.0	PFO	Hardwood Swamps	Type 7	-	-	-	0.16	-	0.16	51	24	25	SWSW	46.871819	-93.33608
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n24w25-n	7/14/2018	1071.1	PSS	Shrub Carr	Type 6	-	-	0.09	-	-	0.09	51	24	25	SWSW	46.872074	-93.333925
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n24w25-n	7/14/2018	1071.1	PFO	Hardwood Swamps	Type 7	-	-	-	0.04	-	0.04	51	24	25	SWSW	46.872099	-93.333545
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n24w25-m	7/14/2018	1071.2	PEM	Deep and Shallow Marshes	Type 4	-	-	0.01	-	-	0.01	51	24	25	SWSW	46.871906	-93.33245
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n24w25-l	7/14/2018	1071.3	PEM	Seasonally Flooded Basins	Type 1	-	-	0.01	-	-	0.01	51	24	25	SESW	46.871759	-93.33085
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n24w25-c	8/31/2017	1071.4	PEM	Fresh (wet) Meadow	Type 2	-	-	0.00	-	-	0.00	51	24	25	NESW	46.872821	-93.327767
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n24w25-k	7/14/2018	1071.4	PFO	Seasonally Flooded Basins	Type 1	-	-	-	0.02	-	0.02	51	24	25	SESW	46.871119	-93.326823
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n24w25-d	8/31/2017	1071.5	PEM	Deep and Shallow Marshes	Type 3	92.2	0.02	0.20	-	-	0.20	51	24	25	NWSE, NESW	46.872946	-93.326189
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n24w25-i	7/14/2018	1071.5	PFO	Seasonally Flooded Basins	Type 1	-	-	-	0.00	-	0.00	51	24	25	SWSE	46.871155	-93.325763
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n24w25-e	8/31/2017	1071.6	PSS	Alder Thickets	Type 6	89.1	0.02	0.15	0.10	-	0.26	51	24	25	NWSE	46.872902	-93.324283
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n24w25-h	7/14/2018	1071.6	PEM	Fresh (wet) Meadow	Type 2	-	-	0.21	-	-	0.21	51	24	25	SWSE	46.871449	-93.323943
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n24w25-f	9/1/2017	1071.9	PFO	Coniferous Bogs	Type 8	1,288.4	0.24	-	3.01	-	3.01	51	24	25, 30	NWSW, NESE	46.87326	-93.316926
Aitkin	Mississippi River - Grand Rapids	07010103	5	MN_NWI-282	TBD	1072.0	PSS	TBD	TBD	-	-	0.01	-	-	0.01	51	23	30	SWNW	46.879689	-93.313036
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n24w25-f	9/1/2017	1072.0	PEM	Sedge Meadows	Type 2	71.3	0.01	0.15	-	-	0.15	51	23	30	NWSW	46.872668	-93.314862
Aitkin	Mississippi River - Grand Rapids	07010103	5	MN_NWI-283	TBD	1072.2	PSS	TBD	TBD	-	-	0.07	-	-	0.07	51	23	30	NWNW, SWNW	46.879694	-93.311572
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n23w30-a	9/1/2017	1072.3	PEM	Fresh (wet) Meadow	Type 2	-	-	0.03	-	-	0.03	51	23	30	NESW	46.872608	-93.30847
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n23w30-b	9/1/2017	1072.5	PFO	Hardwood Swamps	Type 7	703.0	0.13	-	1.51	-	1.51	51	23	30	NWSE, NESW	46.872687	-93.304478
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n23w30-b	9/1/2017	1072.5	PSS	Alder Thickets	Type 6	-	-	0.00	-	-	0.00	51	23	30	NESW	46.872537	-93.304128
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n23w30-b	9/1/2017	1072.6	PEM	Deep and Shallow Marshes	Type 3	-	-	0.01	-	-	0.01	51	23	30	NWSE	46.872525	-93.302104
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n23w30-d	9/1/2017	1072.7	PFO	Hardwood Swamps	Type 7	106.2	0.02	-	0.34	-	0.34	51	23	30	NWSE	46.872618	-93.300487
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n23w30-d	9/1/2017	1072.7	PEM	Fresh (wet) Meadow	Type 2	-	-	0.01	-	-	0.01	51	23	30	NWSE	46.872507	-93.300521
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n23w30-e	9/1/2017	1072.7	PFO	Coniferous Bogs	Type 8	557.5	0.11	-	1.14	-	1.14	51	23	30	NWSE, NESE	46.872759	-93.299663
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n23w30-e	9/1/2017	1072.8	PEM	Deep and Shallow Marshes	Type 3	-	-	0.07	-	-	0.07	51	23	30	NWSE, NESE	46.872496	-93.299395
Aitkin	Mississippi River - Grand Rapids	07010103	5	MN_NWI-245	TBD	1072.9	PFO	TBD	TBD	-	-	-	0.01	-	0.01	51	23	30	SENE	46.878937	-93.297209

Attachment F
Line 3 Replacement Project
Wetland Table

County	Major Watershed	Hydrologic Unit Code (HUC) 8	Bank Service Area (BSA)	Feature ID	Survey Date	Approx. Milepost	Cowardin [a]	Eggers and Reed [a]	Circular 39 [a]	Crossing length (feet) b	Crossing length (miles) b	Temporary Impacts (acres) c	Permanent Conversion (acres) d	Permanent Fill (acres)	Total Impacts (acres)	Township	Range	Section	Quarter-Quarter Section	Latitude	Longitude
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n23w30-f	9/1/2017	1072.9	PEM	Seasonally Flooded Basins	Type 1	-	-	0.01	-	-	0.01	51	23	30	NESE	46.87246	-93.296446
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n23w30-g	9/1/2017	1072.9	PEM	Sedge Meadows	Type 2	-	-	0.02	-	-	0.02	51	23	30	NESE	46.872479	-93.29556
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n23w30-g	9/1/2017	1072.9	PFO	Hardwood Swamps	Type 7	67.1	0.01	-	0.12	-	0.12	51	23	30	NESE	46.872582	-93.295481
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n23w30-h	9/1/2017	1073.0	PEM	Sedge Meadows	Type 2	-	-	0.01	-	-	0.01	51	23	29, 30	NWSW, NESE	46.872628	-93.293639
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n23w30-h	9/1/2017	1073.0	PSS	Shrub Carr	Type 6	-	-	0.01	0.01	-	0.02	51	23	29	NWSW	46.872707	-93.293424
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n23w29-a	9/1/2017	1073.1	PSS	Shrub Carr	Type 6	29.2	0.01	0.04	0.04	-	0.08	51	23	29	NWSW	46.8732	-93.292153
Aitkin	Mississippi River - Grand Rapids	07010103	5	MN_NWI-221	TBD	1073.1	PFO	TBD	TBD	135.5	0.03	-	0.36	-	0.36	51	23	29	NWSW	46.873365	-93.291916
Aitkin	Mississippi River - Grand Rapids	07010103	5	MN_NWI-246	TBD	1073.2	PFO	TBD	TBD	-	-	-	0.11	-	0.11	51	23	30	SENE	46.879078	-93.295295
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n23w30-k	7/13/2018	1073.2	PEM	Fresh (wet) Meadow	Type 2	-	-	0.05	-	-	0.05	51	23	29, 30	SWNW, SENE	46.878886	-93.293549
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n23w29-c	9/1/2017	1073.3	PFO	Hardwood Swamps	Type 7	300.8	0.06	-	0.66	-	0.66	51	23	29	NWSW, NESW	46.873794	-93.288571
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n23w29-b	9/1/2017	1073.4	PFO	Hardwood Swamps	Type 7	96.9	0.02	-	0.22	-	0.22	51	23	29	NWSE, NESW	46.873889	-93.286201
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n23w29-d	9/1/2017	1073.5	PFO	Seasonally Flooded Basins	Type 1	-	-	-	0.00	-	0.00	51	23	29	NESW	46.873986	-93.284288
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n23w29-f	9/2/2017	1074.0	PSS	Shrub Carr	Type 6	609.0	0.12	0.66	0.70	-	1.36	51	23	28, 29	NWSW, NESE	46.872767	-93.274133
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n23w29-f	9/2/2017	1074.0	PFO	Coniferous Bogs	Type 8	203.5	0.04	-	0.42	-	0.42	51	23	28, 29	NWSW, NESE	46.872719	-93.273389
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n23w29-f	9/2/2017	1074.3	PEM	Deep and Shallow Marshes	Type 3	135.7	0.03	0.23	-	-	0.23	51	23	28	NWSW	46.872726	-93.26815
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n23w28-f	7/13/2018	1074.4	PFO	Hardwood Swamps	Type 7	-	-	-	0.01	-	0.01	51	23	28	NESW	46.874181	-93.264519
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n23w28-g	7/13/2018	1074.4	PFO	Hardwood Swamps	Type 7	-	-	-	0.00	-	0.00	51	23	28	NESW	46.874273	-93.264493
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n23w28-b	9/2/2017	1074.5	PFO	Hardwood Swamps	Type 7	232.2	0.04	-	0.52	-	0.52	51	23	28	NESW	46.872661	-93.263999
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n23w28-c	9/2/2017	1074.6	PEM	Fresh (wet) Meadow	Type 2	915.7	0.17	1.75	-	-	1.75	51	23	28	NWSE	46.872698	-93.261565
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n23w28-i	7/13/2018	1074.6	PEM	Deep and Shallow Marshes	Type 3	-	-	0.04	-	-	0.04	51	23	28	SENW	46.876262	-93.262832
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n23w28-j	7/13/2018	1074.7	PEM	Fresh (wet) Meadow	Type 2	-	-	0.00	-	-	0.00	51	23	28	SENW	46.876022	-93.262173
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n23w28-l	7/13/2018	1074.7	PSS	Shrub Carr	Type 6	-	-	0.01	-	-	0.01	51	23	28	SWNE	46.876003	-93.261278
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n23w28-c	9/2/2017	1074.8	PUB	Shallow Open Water	Type 5	120.6	0.02	0.28	-	-	0.28	51	23	28	NWSE	46.873793	-93.2581
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n23w28-m	7/13/2018	1074.8	PEM	Deep and Shallow Marshes	Type 3	-	-	0.00	-	-	0.00	51	23	28	SWNE	46.875954	-93.259626
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n23w28-n	7/13/2018	1074.8	PFO	Hardwood Swamps	Type 7	-	-	-	0.02	-	0.02	51	23	28	SWNE	46.875968	-93.257926
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n23w28-d	9/2/2017	1074.8	PEM	Sedge Meadows	Type 2	446.8	0.08	1.04	-	-	1.04	51	23	28	NWSE	46.874576	-93.256842
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n23w28-o	7/13/2018	1074.9	PEM	Deep and Shallow Marshes	Type 4	-	-	0.04	-	-	0.04	51	23	28	SWNE, SENE	46.875937	-93.256922

Attachment F
Line 3 Replacement Project
Wetland Table

County	Major Watershed	Hydrologic Unit Code (HUC) 8	Bank Service Area (BSA)	Feature ID	Survey Date	Approx. Milepost	Cowardin [a]	Eggers and Reed [a]	Circular 39 [a]	Crossing length (feet) b	Crossing length (miles) b	Temporary Impacts (acres) c	Permanent Conversion (acres) d	Permanent Fill (acres)	Total Impacts (acres)	Township	Range	Section	Quarter-Quarter Section	Latitude	Longitude
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n23w28-q	7/13/2018	1075.0	PSS	Alder Thickets	Type 6	-	-	0.00	-	-	0.00	51	23	28	SENE	46.876154	-93.255108
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n23w28-e	9/2/2017	1075.0	PFO	Coniferous Bogs	Type 7	271.2	0.05	-	0.56	-	0.56	51	23	28	NESE, SENE	46.875104	-93.25373
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n23w28-e	9/2/2017	1075.0	PEM	Sedge Meadows	Type 2	-	-	0.04	-	-	0.04	51	23	28	NESE, SENE	46.875076	-93.253581
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n23w28-r	7/13/2018	1075.0	PSS	Alder Thickets	Type 6	-	-	0.01	-	-	0.01	51	23	28	SENE	46.876264	-93.253987
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n23w27-a	9/5/2017	1075.1	PFO	Hardwood Swamps	Type 7	14.6	0.00	-	0.07	-	0.07	51	23	27	SWNW	46.876115	-93.250998
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n23w27-c	9/5/2017	1075.3	PFO	Hardwood Swamps	Type 7	397.6	0.08	-	0.86	-	0.86	51	23	27	SWNW	46.876824	-93.248286
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n23w27-c	9/5/2017	1075.3	PSS	Shrub Carr	Type 6	142.0	0.03	0.15	0.17	-	0.32	51	23	27	SWNW	46.877121	-93.247268
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n23w27-e	9/5/2017	1075.4	PEM	Fresh (wet) Meadow	Type 2	365.8	0.07	0.79	-	-	0.79	51	23	27	SENW	46.877719	-93.245531
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n23w22-a	7/11/2018	1075.5	PSS	Shrub Carr	Type 6	-	-	0.05	-	-	0.05	51	23	22, 27	NWNE, NENW, SWSE, SESW	46.882214	-93.245561
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n23w27-f	9/5/2017	1075.6	PFO	Hardwood Swamps	Type 7	881.2	0.17	-	2.23	-	2.23	51	23	27	NWNE, NENW, NENE, SENW	46.878528	-93.242619
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n23w27-f	9/5/2017	1075.6	PEM	Fresh (wet) Meadow	Type 2	1,110.8	0.21	2.47	-	-	2.47	51	23	27	NWNE, NENW, SENW	46.878477	-93.242552
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n23w22-b	7/11/2018	1075.6	PFO	Hardwood Swamps	Type 7	-	-	-	0.30	-	0.30	51	23	27	NWNE, NENW	46.882133	-93.244402
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n23w22-b	7/11/2018	1075.7	PSS	Shrub Carr	Type 6	-	-	0.03	-	-	0.03	51	23	27	NENW	46.882124	-93.242906
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n23w22-a	7/11/2018	1075.7	PEM	Sedge Meadows	Type 2	-	-	0.26	-	-	0.26	51	23	22, 27	NWNE, NENW, NENE, SESE, SESW	46.882191	-93.242871
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n23w22-a	7/11/2018	1075.9	PFO	Hardwood Swamps	Type 7	-	-	-	0.04	-	0.04	51	23	27	NWNE	46.882108	-93.237521
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n23w22-b	7/11/2018	1075.9	PEM	Fresh (wet) Meadow	Type 2	-	-	0.12	-	-	0.12	51	23	22, 27	NWNE, NENE, SESE	46.882018	-93.236259
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n23w27-g	9/6/2017	1076.1	PEM	Deep and Shallow Marshes	Type 3	-	-	0.05	-	-	0.05	51	23	27	NENE	46.881648	-93.232398
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n23w27-g	9/6/2017	1076.1	PFO	Coniferous Bogs	Type 8	370.6	0.07	-	0.80	-	0.80	51	23	22, 23, 27	NENE, SWSW, SESE	46.881893	-93.232005
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n23w23-a	9/6/2017	1076.2	PFO	Hardwood Swamps	Type 7	68.1	0.01	-	0.15	-	0.15	51	23	23	SWSW	46.882508	-93.229971
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n23w23-o	7/11/2018	1076.4	PFO	Hardwood Swamps	Type 7	-	-	-	0.01	-	0.01	51	23	23	SWSW	46.884431	-93.228003
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n23w23-c	9/6/2017	1076.4	PFO	Hardwood Swamps	Type 7	1,118.8	0.21	-	2.53	-	2.53	51	23	23	SWSW, SESW	46.883472	-93.227026
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n23w23-n	7/11/2018	1076.5	PEM	Deep and Shallow Marshes	Type 4	-	-	0.02	-	-	0.02	51	23	23	NESW, SESW	46.885523	-93.225018
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n23w23-c	9/6/2017	1076.5	PSS	Alder Thickets	Type 6	178.7	0.03	0.12	0.19	-	0.31	51	23	23	SESW	46.884324	-93.22377
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n23w23-n	7/11/2018	1076.7	PFO	Hardwood Swamps	Type 7	-	-	-	0.17	-	0.17	51	23	23	NWSE, NESW	46.886081	-93.222214
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n23w23-m	7/11/2018	1076.8	PUB	Shallow Open Water	Type 5	-	-	0.01	-	-	0.01	51	23	23	NWSE	46.887073	-93.217806

Attachment F
Line 3 Replacement Project
Wetland Table

County	Major Watershed	Hydrologic Unit Code (HUC) 8	Bank Service Area (BSA)	Feature ID	Survey Date	Approx. Milepost	Cowardin [a]	Eggers and Reed [a]	Circular 39 [a]	Crossing length (feet) b	Crossing length (miles) b	Temporary Impacts (acres) c	Permanent Conversion (acres) d	Permanent Fill (acres)	Total Impacts (acres)	Township	Range	Section	Quarter-Quarter Section	Latitude	Longitude
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n23w23-d	9/6/2017	1076.9	PEM	Deep and Shallow Marshes	Type 3	416.6	0.08	0.91	-	-	0.91	51	23	23	NWSE, NESE, SWSE, SESE	46.885657	-93.216892
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n23w23-d	9/6/2017	1076.9	PUB	Shallow Open Water	Type 5	-	-	0.01	-	-	0.01	51	23	23	NWSE	46.885696	-93.217419
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n23w23-e	7/11/2018	1077.0	PSS	Shrub Carr	Type 6	455.6	0.09	0.70	0.43	-	1.13	51	23	23	NESE	46.886303	-93.214102
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n23w23-e	7/11/2018	1077.1	PEM	Fresh (wet) Meadow	Type 2	6.2	0.00	0.90	-	-	0.90	51	23	23, 24	NESE, SWSW, SESE	46.887572	-93.213311
Aitkin	St. Louis River	04010201	1	w-51n23w23-k	7/11/2018	1077.1	PFO	Seasonally Flooded Basins	Type 1	-	-	-	0.01	-	0.01	51	23	23	SENE	46.89031	-93.21274
Aitkin	St. Louis River	04010201	1	w-51n23w23-j	7/11/2018	1077.1	PFO	Hardwood Swamps	Type 7	-	-	-	0.02	-	0.02	51	23	23	SENE	46.890413	-93.212353
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n23w23-h	7/11/2018	1077.2	PFO	Seasonally Flooded Basins	Type 1	-	-	-	0.00	-	0.00	51	23	23	SENE	46.892017	-93.210582
Aitkin	St. Louis River	04010201	1	w-51n23w23-e	9/6/2017	1077.2	PFO	Hardwood Swamps	Type 7	1,786.7	0.34	-	4.09	-	4.09	51	23	23, 24	NWSW, NESE, NESW, SWSW, SESE, SESW	46.885587	-93.210402
Aitkin	St. Louis River	04010201	1	w-51n23w24-y	6/26/2018	1077.4	PFO	Hardwood Swamps	Type 7	-	-	-	0.00	-	0.00	51	23	24	NWNW	46.894538	-93.205805
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n23w24-z	6/26/2018	1077.5	PEM	Sedge Meadows	Type 2	-	-	0.02	-	-	0.02	51	23	24	NENW	46.895607	-93.20374
Aitkin	Mississippi River - Grand Rapids	07010103	5	w-51n23w13-i	6/26/2018	1077.5	PEM	Fresh (wet) Meadow	Type 2	-	-	0.04	-	-	0.04	51	23	13, 24	NENW, SESW	46.896232	-93.203284
Aitkin	St. Louis River	04010201	1	w-51n23w13-i	6/26/2018	1077.6	PFO	Hardwood Swamps	Type 7	-	-	-	0.18	-	0.18	51	23	13	SESW	46.897642	-93.202078
Aitkin	St. Louis River	04010201	1	w-51n23w13-h	6/26/2018	1077.6	PSS	Shrub Carr	Type 6	-	-	0.00	-	-	0.00	51	23	13	SESW	46.899293	-93.201294
Aitkin	St. Louis River	04010201	1	w-51n23w13-g	6/26/2018	1077.6	PFO	Hardwood Swamps	Type 7	-	-	-	0.01	-	0.01	51	23	13	NESW, SESW	46.899779	-93.201068
Aitkin	St. Louis River	04010201	1	w-51n23w24-a	9/6/2017	1077.6	PFO	Hardwood Swamps	Type 7	317.1	0.06	-	0.75	-	0.75	51	23	24	SWSE, SESW	46.885328	-93.200707
Aitkin	St. Louis River	04010201	1	w-51n23w13-e	6/26/2018	1077.8	PFO	Hardwood Swamps	Type 7	-	-	-	0.01	-	0.01	51	23	13	NWSE	46.90046	-93.197093
Aitkin	St. Louis River	04010201	1	w-51n23w13-f	6/26/2018	1077.8	PFO	Hardwood Swamps	Type 7	-	-	-	0.00	-	0.00	51	23	13	NWSE	46.900364	-93.197233
Aitkin	St. Louis River	04010201	1	w-51n23w24-a	9/6/2017	1077.8	PEM	Sedge Meadows	Type 2	-	-	0.02	-	-	0.02	51	23	24	SWSE	46.885171	-93.196772
Aitkin	St. Louis River	04010201	1	w-51n23w13-d	6/26/2018	1078.0	PFO	Hardwood Swamps	Type 7	-	-	-	0.00	-	0.00	51	23	13	NESE	46.900741	-93.193777
Aitkin	St. Louis River	04010201	1	w-51n23w13-c	6/26/2018	1078.0	PFO	Hardwood Swamps	Type 7	-	-	-	0.00	-	0.00	51	23	13	NESE	46.900828	-93.193485
Aitkin	St. Louis River	04010201	1	w-51n23w24-c	9/7/2017	1078.0	PEM	Sedge Meadows	Type 2	-	-	0.01	-	-	0.01	51	23	24	SESE	46.885127	-93.193293
Aitkin	St. Louis River	04010201	1	w-51n23w24-c	9/7/2017	1078.0	PFO	Hardwood Swamps	Type 7	152.1	0.03	-	0.30	-	0.30	51	23	24	NESE, SESE	46.885346	-93.193267
Aitkin	St. Louis River	04010201	1	w-51n22w18-h	6/26/2018	1078.0	PEM	Fresh (wet) Meadow	Type 2	-	-	0.04	-	-	0.04	51	22	18	NWSW	46.9009	-93.189393
Aitkin	St. Louis River	04010201	1	MN_NWI-254	TBD	1078.0	PFO	TBD	TBD	-	-	-	0.10	-	0.10	51	22	13, 18	NESE, SESE	46.899716	-93.189522
Aitkin	St. Louis River	04010201	1	MN_NWI-279	TBD	1078.0	PSS	TBD	TBD	-	-	0.35	-	-	0.35	51	22	13, 18	SWSW, SESE	46.899047	-93.189467
Aitkin	St. Louis River	04010201	1	w-51n22w18-g	6/26/2018	1078.0	PSS	Shrub Carr	Type 6	-	-	0.01	-	-	0.01	51	22	13, 18	NESE	46.901088	-93.189499
Aitkin	St. Louis River	04010201	1	MN_NWI-225	TBD	1078.2	PFO	TBD	TBD	-	-	-	0.28	-	0.28	51	22	19	SWNW	46.886672	-93.189056
Aitkin	St. Louis River	04010201	1	w-51n23w24-d	9/7/2017	1078.2	PFO	Hardwood Swamps	Type 7	-	-	-	0.22	-	0.22	51	22	19	NWSW, SWSW	46.885556	-93.189028
Aitkin	St. Louis River	04010201	1	MN_NWI-075	TBD	1078.2	PSS	TBD	TBD	-	-	0.04	-	-	0.04	51	22	19	SWSW	46.884738	-93.189014
Aitkin	St. Louis River	04010201	1	MN_NWI-285	TBD	1078.5	R4S	TBD	TBD	-	-	0.01	-	-	0.01	51	22	19	SWNW	46.891224	-93.18798
Aitkin	St. Louis River	04010201	1	w-51n22w19-a	9/7/2017	1078.5	PEM	Fresh (wet) Meadow	Type 2	1,082.2	0.20	2.41	-	-	2.41	51	22	19	SWSE, SWSW, SESW	46.884979	-93.183629
Aitkin	St. Louis River	04010201	1	MN_NWI-257	TBD	1078.5	PFO	TBD	TBD	-	-	-	0.17	-	0.17	51	22	18	SWSW	46.896199	-93.186591
Aitkin	St. Louis River	04010201	1	w-51n22w18-e	6/26/2018	1078.5	PSS	Shrub Carr	Type 6	-	-	0.00	-	-	0.00	51	22	18	NWSW	46.900794	-93.184797
Aitkin	St. Louis River	04010201	1	w-51n22w18-f	6/26/2018	1078.5	PSS	Shrub Carr	Type 6	-	-	0.04	-	-	0.04	51	22	18	NWSW	46.90072	-93.18471
Aitkin	St. Louis River	04010201	1	MN_NWI-227	TBD	1078.6	PFO	TBD	TBD	-	-	-	0.23	-	0.23	51	22	18	SWSW	46.896236	-93.181664
Aitkin	St. Louis River	04010201	1	w-51n22w18-c	6/26/2018	1078.6	PFO	Hardwood Swamps	Type 7	-	-	-	0.00	-	0.00	51	22	18	NWSW	46.900791	-93.181694
Aitkin	St. Louis River	04010201	1	w-51n22w18-d	6/26/2018	1078.6	PFO	Hardwood Swamps	Type 7	-	-	-	0.19	-	0.19	51	22	18	NWSW, NESW	46.900716	-93.181107
Aitkin	St. Louis River	04010201	1	w-51n22w19-a	9/7/2017	1078.6	PFO	Hardwood Swamps	Type 7	1,823.4	0.35	-	4.77	-	4.77	51	22	19	NWSW, NESW, SWSE, SWSW, SESW	46.885101	-93.181866

Attachment F
Line 3 Replacement Project
Wetland Table

County	Major Watershed	Hydologic Unit Code (HUC) 8	Bank Service Area (BSA)	Feature ID	Survey Date	Approx. Milepost	Cowardin [a]	Eggers and Reed [a]	Circular 39 [a]	Crossing length (feet) b	Crossing length (miles) b	Temporary Impacts (acres) c	Permanent Conversion (acres) d	Permanent Fill (acres)	Total Impacts (acres)	Township	Range	Section	Quarter-Quarter Section	Latitude	Longitude
Aitkin	St. Louis River	04010201	1	w-51n22w18-c	6/26/2018	1078.8	PEM	Fresh (wet) Meadow	Type 2	-	-	0.02	-	-	0.02	51	22	18	NESW	46.900784	-93.178105
Aitkin	St. Louis River	04010201	1	w-51n22w18-b	6/26/2018	1078.8	PFO	Hardwood Swamps	Type 7	-	-	-	0.01	-	0.01	51	22	18	NESW	46.900616	-93.175759
Aitkin	St. Louis River	04010201	1	w-51n22w18-a	6/26/2018	1078.9	PFO	Hardwood Swamps	Type 7	-	-	-	0.01	-	0.01	51	22	18	NESW	46.900744	-93.175496
Aitkin	St. Louis River	04010201	1	MN_NWI-232	TBD	1079.0	PFO	TBD	TBD	-	-	-	0.03	-	0.03	51	22	19	NWSE	46.885726	-93.172501
Aitkin	St. Louis River	04010201	1	w-51n22w19-b	9/7/2017	1079.2	PEM	Fresh (wet) Meadow	Type 2	93.4	0.02	0.33	-	-	0.33	51	22	19	SESE	46.884815	-93.168367
Aitkin	St. Louis River	04010201	1	w-51n22w8-a	6/23/2018	1079.2	PEM	Fresh (wet) Meadow	Type 2	-	-	0.21	-	-	0.21	51	22	17, 18	NWNW, SENE	46.906048	-93.167177
Aitkin	St. Louis River	04010201	1	w-51n22w17-z	6/23/2018	1079.3	PFO	Hardwood Swamps	Type 7	-	-	-	0.20	-	0.20	51	22	17, 18	NWNW, NENW, NENE, SENE	46.906504	-93.165626
Aitkin	St. Louis River	04010201	1	w-51n22w17-z	6/23/2018	1079.3	PEM	Fresh (wet) Meadow	Type 2	-	-	0.00	-	-	0.00	51	22	18	SENE	46.906614	-93.165365
Aitkin	St. Louis River	04010201	1	MN_NWI-233	TBD	1079.3	PFO	TBD	TBD	-	-	-	0.14	-	0.14	51	22	19	SENE	46.890946	-93.165688
Aitkin	St. Louis River	04010201	1	w-51n22w19-b	9/7/2017	1079.3	PFO	Coniferous Bogs	Type 7	1,249.8	0.24	-	2.54	-	2.54	51	22	19, 20	SWSW, SESE	46.884889	-93.166127
Aitkin	St. Louis River	04010201	1	w-51n22w8-a	6/23/2018	1079.3	PFO	Coniferous Swamps	Type 7	-	-	-	0.18	-	0.18	51	22	17, 18	NWNW, NENE, SENE	46.906929	-93.164988
Aitkin	St. Louis River	04010201	1	MN_NWI-506	TBD	1079.5	PFO	TBD	TBD	-	-	-	0.54	-	0.54	51	22	17	NWSW	46.902298	-93.162335
Aitkin	St. Louis River	04010201	1	MN_NWI-508	TBD	1079.5	PFO	TBD	TBD	-	-	-	0.36	-	0.36	51	22	17	NWSW, SWSW	46.900599	-93.161626
Aitkin	St. Louis River	04010201	1	MN_NWI-256	TBD	1079.6	PFO	TBD	TBD	-	-	-	0.58	-	0.58	51	22	17, 20	NWNW, SWSW	46.896919	-93.160918
Aitkin	St. Louis River	04010201	1	MN_NWI-234	TBD	1079.6	PFO	TBD	TBD	-	-	-	0.44	-	0.44	51	22	20	NWNW, NWSW, SWNW	46.894504	-93.160942
Aitkin	St. Louis River	04010201	1	w-51n22w8-a	6/23/2018	1079.6	PSS	Shrub Carr	Type 6	-	-	0.20	-	-	0.20	51	22	8	SWSW	46.910756	-93.159747
Aitkin	St. Louis River	04010201	1	MN_NWI-255	TBD	1079.6	PFO	TBD	TBD	-	-	-	0.63	-	0.63	51	22	20	NWSW	46.887065	-93.160646
Aitkin	St. Louis River	04010201	1	w-51n22w20-a	9/7/2017	1079.6	PFO	Hardwood Swamps	Type 7	2,633.8	0.50	-	5.79	-	5.79	51	22	20	SWSE, SWSW, SESE, SESW	46.884752	-93.159691
Aitkin	St. Louis River	04010201	1	w-51n22w17-z	6/23/2018	1079.8	PSS	Shrub Carr	Type 6	-	-	0.02	-	-	0.02	51	22	17	NENW	46.910701	-93.156013
Aitkin	St. Louis River	04010201	1	w-51n22w20-a	9/7/2017	1080.0	PEM	Fresh (wet) Meadow	Type 2	-	-	0.23	-	-	0.23	51	22	20, 21	SWSE, SWSW, SESE	46.884529	-93.151067
Aitkin	St. Louis River	04010201	1	w-51n22w8-b	6/23/2018	1080.1	PEM	Sedge Meadows	Type 2	-	-	0.06	-	-	0.06	51	22	8	SWSE, SESE	46.910737	-93.148735
Aitkin	St. Louis River	04010201	1	MN_NWI-269	TBD	1080.3	PFO	TBD	TBD	-	-	-	1.63	-	1.63	51	22	17	NENE	46.910173	-93.144215
Aitkin	St. Louis River	04010201	1	w-51n22w17-y	6/23/2018	1080.3	PEM	Fresh (wet) Meadow	Type 2	-	-	0.02	-	-	0.02	51	22	17	NENE	46.910577	-93.143726
Aitkin	St. Louis River	04010201	1	w-51n22w9-b	6/23/2018	1080.4	PSS	Shrub Carr	Type 6	-	-	0.12	-	-	0.12	51	22	8, 9	SWSW, SESE	46.910714	-93.143407
Aitkin	St. Louis River	04010201	1	w-51n22w9-a	6/23/2018	1080.5	PFO	Hardwood Swamps	Type 7	-	-	-	0.34	-	0.34	51	22	9, 16	NWNW, NWNE, NENW, NENE, SWSW, SESE	46.910704	-93.139458
Aitkin	St. Louis River	04010201	1	w-51n22w16-z	6/23/2018	1080.8	PFO	Hardwood Swamps	Type 7	-	-	-	0.08	-	0.08	51	22	16	NWNE, NENW	46.910614	-93.133282
Aitkin	St. Louis River	04010201	1	w-51n22w21-a	9/7/2017	1080.9	PFO	Hardwood Swamps	Type 7	306.4	0.06	-	0.63	-	0.63	51	22	21	SWSE, SESW	46.884379	-93.132883
Aitkin	St. Louis River	04010201	1	w-51n22w21-a	9/7/2017	1081.0	PEM	Fresh (wet) Meadow	Type 2	-	-	0.01	-	-	0.01	51	22	21	SWSE	46.884262	-93.131828
Aitkin	St. Louis River	04010201	1	w-51n22w9-a	6/23/2018	1081.1	PEM	Fresh (wet) Meadow	Type 2	-	-	0.10	-	-	0.10	51	22	16	NWNE, NENE	46.91077	-93.126939
Aitkin	St. Louis River	04010201	1	MN_NWI-250	TBD	1081.2	PFO	TBD	TBD	-	-	-	1.96	-	1.96	51	22	15, 16	NWSW, NESE, SWSW, SENE, SESW	46.903828	-93.125936
Aitkin	St. Louis River	04010201	1	w-51n22w22-a	9/7/2017	1081.2	PFO	Hardwood Swamps	Type 7	19,105.5	3.62	-	44.14	-	44.14	51	22	21, 22, 23,	NWSE, NESE, SWSE, SWSW, SESE, SESW	46.884336	-93.125555

Attachment F
Line 3 Replacement Project
Wetland Table

County	Major Watershed	Hydologic Unit Code (HUC) 8	Bank Service Area (BSA)	Feature ID	Survey Date	Approx. Milepost	Cowardin [a]	Eggers and Reed [a]	Circular 39 [a]	Crossing length (feet) b	Crossing length (miles) b	Temporary Impacts (acres) c	Permanent Conversion (acres) d	Permanent Fill (acres)	Total Impacts (acres)	Township	Range	Section	Quarter-Quarter Section	Latitude	Longitude
Aitkin	St. Louis River	04010201	1	w-51n22w22-a	9/7/2017	1081.3	PEM	Deep and Shallow Marshes	Type 3	837.9	0.16	4.57	-	-	4.57	51	22	19, 21, 24	NESE, SWSW, SESE, SESW	46.884167	-93.124639
Aitkin	St. Louis River	04010201	1	w-51n22w16-y	6/23/2018	1081.3	PEM	Fresh (wet) Meadow	Type 2	-	-	0.04	-	-	0.04	51	22	15, 16	NWNW, NENE	46.91076	-93.122751
Aitkin	St. Louis River	04010201	1	w-51n22w16-y	6/23/2018	1081.5	PSS	Shrub Carr	Type 6	-	-	0.11	-	-	0.11	51	22	15	NWNW	46.91077	-93.119657
Aitkin	St. Louis River	04010201	1	MN_NWI-237	TBD	1081.7	PFO	TBD	TBD	-	-	-	3.79	-	3.79	51	22	15, 22	NWNE, NENW, NENE, SWNE, SENE, SESW	46.89644	-93.114788
Aitkin	St. Louis River	04010201	1	w-51n22w15-z	6/25/2018	1081.8	PSS	Shrub Carr	Type 6	-	-	0.10	-	-	0.10	51	22	14, 15	NWNW, NWNE, NENW	46.910756	-93.113171
Aitkin	St. Louis River	04010201	1	w-51n22w10-a	6/25/2018	1081.8	PSS	Shrub Carr	Type 6	-	-	0.21	-	-	0.21	51	22	10, 11, 15	NWNE, NENW, NENE, SWSW, SESE	46.910831	-93.113106
Aitkin	St. Louis River	04010201	1	w-51n22w10-a	6/25/2018	1082.1	PFO	Coniferous Swamps	Type 7	-	-	-	0.11	-	0.11	51	22	0, 11, 14, 1	NWNW, NWNE, NENW, NENE, SWSE, SWSW, SESE	46.910836	-93.107225
Aitkin	St. Louis River	04010201	1	MN_NWI-241	TBD	1082.2	PFO	TBD	TBD	-	-	-	1.33	-	1.33	51	22	22	NESE, SENE, SESE	46.889587	-93.105095
Aitkin	St. Louis River	04010201	1	MN_NWI-226	TBD	1082.2	PFO	TBD	TBD	-	-	-	0.00	-	0.00	51	22	22	NESE	46.888446	-93.104611
Aitkin	St. Louis River	04010201	1	w-51n22w22-a	9/7/2017	1082.4	PSS	Shrub Carr	Type 6	2,515.0	0.48	3.41	2.89	-	6.30	51	22	20, 22, 23,	NWSW, NESE, SWSW, SESE	46.883935	-93.102145
Aitkin	St. Louis River	04010201	1	w-51n22w15-z	6/25/2018	1082.4	PFO	Coniferous Swamps	Type 7	-	-	-	0.05	-	0.05	51	22	14, 15	NWNW, NENW, NENE	46.910763	-93.101364
Aitkin	St. Louis River	04010201	1	MN_NWI-258	TBD	1082.4	PFO	TBD	TBD	-	-	-	0.28	-	0.28	51	22	14, 15, 22	NENE, SWSW, SESE	46.896264	-93.101302
Aitkin	St. Louis River	04010201	1	MN_NWI-249	TBD	1082.5	PFO	TBD	TBD	-	-	-	0.60	-	0.60	51	22	14	SWSW	46.898314	-93.098277
Aitkin	St. Louis River	04010201	1	MN_NWI-280	TBD	1082.6	PSS	TBD	TBD	-	-	1.31	-	-	1.31	51	22	14	NWSW, NESW, SWSW	46.899384	-93.09701
Aitkin	St. Louis River	04010201	1	MN_NWI-251	TBD	1082.7	PFO	TBD	TBD	-	-	-	1.94	-	1.94	51	22	14	NESE, NESW, SENW, SESE	46.90329	-93.093748
Aitkin	St. Louis River	04010201	1	w-51n22w14-y	6/25/2018	1082.8	PFO	Hardwood Swamps	Type 7	-	-	-	0.06	-	0.06	51	22	14	NENW	46.910748	-93.092719
Aitkin	St. Louis River	04010201	1	w-51n22w11-b	6/25/2018	1082.8	PFO	Hardwood Swamps	Type 7	-	-	-	0.00	-	0.00	51	22	14	NENW	46.91082	-93.09152
Aitkin	St. Louis River	04010201	1	w-51n22w11-a	6/22/2018	1082.9	PSS	Shrub Carr	Type 6	-	-	0.15	-	-	0.15	51	22	11	SWSE, SESW	46.911054	-93.090119
Aitkin	St. Louis River	04010201	1	w-51n22w14-z	6/22/2018	1082.9	PFO	Hardwood Swamps	Type 7	-	-	-	0.04	-	0.04	51	22	11	SWSE, SESW	46.910987	-93.090068
Aitkin	St. Louis River	04010201	1	MN_NWI-260	TBD	1082.9	PFO	TBD	TBD	-	-	-	0.30	-	0.30	51	22	14	NWNE, SWNE	46.907356	-93.089406
Aitkin	St. Louis River	04010201	1	w-51n22w11-a	6/22/2018	1083.0	PFO	Coniferous Swamps	Type 7	-	-	-	0.03	-	0.03	51	22	11	SWSE	46.912289	-93.086887
Aitkin	St. Louis River	04010201	1	MN_NWI-224	TBD	1083.1	PFO	TBD	TBD	-	-	-	1.55	-	1.55	51	22	14	NESE, SWNE, SENE	46.906003	-93.085573
Aitkin	St. Louis River	04010201	1	w-51n21w17-z	6/22/2018	1083.3	PFO	Coniferous Swamps	Type 7	-	-	-	0.27	-	0.27	51	22	3, 14, 17, 1	NWNW, NWNE, NENW, NENE	46.910721	-93.081362
Aitkin	St. Louis River	04010201	1	w-51n21w7-a	6/22/2018	1083.3	PFO	Coniferous Swamps	Type 7	-	-	-	0.06	-	0.06	51	22	14	NENE	46.910786	-93.081003
Aitkin	St. Louis River	04010201	1	MN_NWI-259	TBD	1083.4	PFO	TBD	TBD	-	-	-	0.63	-	0.63	51	22	14, 23	NENE, SESE	46.896734	-93.080517
Aitkin	St. Louis River	04010201	1	MN_NWI-223	TBD	1083.4	PFO	TBD	TBD	-	-	-	1.13	-	1.13	51	22	23	NENE, NESE, SENE	46.893669	-93.080452
Aitkin	St. Louis River	04010201	1	w-51n21w7-a	6/22/2018	1083.4	PEM	Deep and Shallow Marshes	Type 3	-	-	0.17	-	-	0.17	51	22	13, 14, 18	NWNW, NWNE, NENW, NENE	46.910744	-93.079773
Aitkin	St. Louis River	04010201	1	MN_NWI-248	TBD	1083.4	PFO	TBD	TBD	-	-	-	1.34	-	1.34	51	22	23	NESE, SENE, SESE	46.890067	-93.080374
Aitkin	St. Louis River	04010201	1	MN_NWI-253	TBD	1083.4	PFO	TBD	TBD	-	-	-	0.08	-	0.08	51	22	23	NESE, SESE	46.885563	-93.080283

Attachment F
Line 3 Replacement Project
Wetland Table

County	Major Watershed	Hydologic Unit Code (HUC) 8	Bank Service Area (BSA)	Feature ID	Survey Date	Approx. Milepost	Cowardin [a]	Eggers and Reed [a]	Circular 39 [a]	Crossing length (feet) b	Crossing length (miles) b	Temporary Impacts (acres) c	Permanent Conversion (acres) d	Permanent Fill (acres)	Total Impacts (acres)	Township	Range	Section	Quarter-Quarter Section	Latitude	Longitude
St. Louis	St. Louis River	04010201	1	MN_NWI-464	TBD	1084.6	PEM	TBD	TBD	-	-	1.34	-	-	1.34	51	21	19	SWSW, SESW	46.882901	-93.054172
St. Louis	St. Louis River	04010201	1	MN_NWI-475	TBD	1084.8	PFO	TBD	TBD	-	-	-	19.64	-	19.64	51	21	19, 30	NWNE, NENW, SWSE, SESE, SESW	46.882142	-93.051269
Aitkin	St. Louis River	04010201	1	w-51n21w17-z	6/22/2018	1085.3	PSS	Shrub Carr	Type 6	-	-	0.12	-	-	0.12	51	22	13, 17, 18	NWNW, NWNE, NENW, NENE	46.910514	-93.060198
St. Louis	St. Louis River	04010201	1	MN_NWI-430	TBD	1085.3	PFO	TBD	TBD	-	-	-	0.00	-	0.00	51	21	20	SWSW	46.884734	-93.03844
St. Louis	St. Louis River	04010201	1	MN_NWI-440	TBD	1085.5	PSS	TBD	TBD	-	-	0.52	-	-	0.52	51	21	19	NESE, SENE	46.890179	-93.038621
St. Louis	St. Louis River	04010201	1	w-51n21w20-a [e]	6/16/2018	1085.5	PSS	Shrub Carr	Type 6	1,027.0	0.19	0.50	1.17	0.01	1.68	51	21	20	NWSW	46.889245	-93.038212
St. Louis	St. Louis River	04010201	1	w-51n21w20-a [e]	6/16/2018	1085.5	PFO	Coniferous Swamps	Type 7	928.2	0.18	-	2.55	0.17	2.72	51	21	20	NWSW	46.88897	-93.038075
St. Louis	St. Louis River	04010201	1	MN_NWI-423	TBD	1085.6	PEM	TBD	TBD	-	-	2.67	-	-	2.67	51	21	20	NWNW	46.895618	-93.034933
St. Louis	St. Louis River	04010201	1	w-51n21w20-a [e]	9/8/2017	1085.8	PEM	Sedge Meadows	Type 2	78.9	0.01	0.09	-	-	0.09	51	21	20	NESW	46.888834	-93.030572
St. Louis	St. Louis River	04010201	1	w-51n21w8-a	6/22/2018	1085.8	PEM	Fresh (wet) Meadow	Type 2	-	-	0.01	-	-	0.01	51	21	17	NWNE, NENW	46.911208	-93.030135
St. Louis	St. Louis River	04010201	1	w-51n21w22-a [e]	9/8/2017	1085.9	PFO	Floodplain Forests	Type 7	2,432.9	0.46	-	4.75	0.46	5.21	51	21	20, 21, 22	NWSE, NWSW, NESE, NESW	46.888826	-93.029431
St. Louis	St. Louis River	04010201	1	w-51n21w22-a [e]	9/8/2017	1085.9	PSS	Shrub Carr	Type 6	9,498.2	1.80	8.49	10.67	2.01	21.17	51	21	20, 21, 22	NWSE, NWSW, NESE, NESW	46.888816	-93.028398
St. Louis	St. Louis River	04010201	1	w-51n21w22-a [e]	9/8/2017	1086.0	PEM	Fresh (wet) Meadow	Type 2	1,231.5	0.23	2.63	-	0.46	3.09	51	21	20, 22	NWSE, NWSW, NESE, NESW	46.88875	-93.027977
St. Louis	St. Louis River	04010201	1	MN_NWI-496	TBD	1087.5	R2U	TBD	TBD	-	-	0.01	-	-	0.01	51	21	22	NWNW, SWNW	46.893869	-92.995724
St. Louis	St. Louis River	04010201	1	MN_NWI-474	TBD	1087.5	PFO	TBD	TBD	-	-	-	1.53	-	1.53	51	21	22	NWNW, NWSW, SWNW	46.891319	-92.995715
St. Louis	St. Louis River	04010201	1	MN_NWI-489	TBD	1087.5	PSS	TBD	TBD	-	-	0.32	-	-	0.32	51	21	15, 22	NWNW, NWSW, SWSW	46.897985	-92.995588
St. Louis	St. Louis River	04010201	1	w-51n21w23-a	9/8/2017	1088.5	PFO	Hardwood Swamps	Type 7	3,449.6	0.65	-	8.18	-	8.18	51	21	22, 23	NWSE, NWSW, NESE, NESW	46.888368	-92.974516
St. Louis	St. Louis River	04010201	1	w-51n21w23-a	9/8/2017	1088.6	PEM	Deep and Shallow Marshes	Type 3	507.6	0.10	1.58	-	-	1.58	51	21	23	NWSE, NWSW, NESE, NESW	46.8882	-92.971586
St. Louis	St. Louis River	04010201	1	w-51n21w23-a	9/8/2017	1089.3	PSS	Shrub Carr	Type 6	1,092.4	0.21	1.54	1.25	-	2.79	51	21	23	NESE	46.888341	-92.956277
St. Louis	St. Louis River	04010201	1	MN_NWI-470	TBD	1089.3	PEM	TBD	TBD	-	-	0.02	-	-	0.02	51	21	23	SENE	46.891705	-92.957728
St. Louis	St. Louis River	04010201	1	MN_NWI-472	TBD	1089.3	PFO	TBD	TBD	-	-	-	0.01	-	0.01	51	21	23	SENE	46.891893	-92.957449
St. Louis	St. Louis River	04010201	1	w-51n21w24-a	9/9/2017	1089.6	PFO	Hardwood Swamps	Type 7	339.9	0.06	-	0.88	-	0.88	51	21	24	NWSW	46.888136	-92.952221
St. Louis	St. Louis River	04010201	1	w-51n21w24-b	9/9/2017	1089.7	PEM	Fresh (wet) Meadow	Type 2	1,541.8	0.29	4.28	-	-	4.28	51	21	19, 24	NWSE, NWSW, NESW, SWSE, SWSW, SESE, SESW	46.888077	-92.949632
St. Louis	St. Louis River	04010201	1	w-51n21w24-b	9/9/2017	1089.7	PSS	Shrub Carr	Type 6	2,636.8	0.50	2.63	2.97	-	5.60	51	21	19, 24	NWSE, NWSW, NESW, SWNE, SWSE, SESE	46.888153	-92.948872
St. Louis	St. Louis River	04010201	1	w-51n21w24-b	6/18/2018	1089.9	PFO	Coniferous Swamps	Type 7	3,764.7	0.71	-	7.71	-	7.71	51	21	19, 24	NWSE, SWSW, SENW	46.890207	-92.9428

Attachment F
Line 3 Replacement Project
Wetland Table

County	Major Watershed	Hydologic Unit Code (HUC) 8	Bank Service Area (BSA)	Feature ID	Survey Date	Approx. Milepost	Cowardin [a]	Eggers and Reed [a]	Circular 39 [a]	Crossing length (feet) b	Crossing length (miles) b	Temporary Impacts (acres) c	Permanent Conversion (acres) d	Permanent Fill (acres)	Total Impacts (acres)	Township	Range	Section	Quarter-Quarter Section	Latitude	Longitude
St. Louis	St. Louis River	04010201	1	MN_NWI-433	TBD	1090.1	PFO	TBD	TBD	-	-	-	0.57	-	0.57	51	21	24	NWSE, SWNE	46.889665	-92.939366
St. Louis	St. Louis River	04010201	1	MN_NWI-442	TBD	1090.1	PSS	TBD	TBD	-	-	0.18	-	-	0.18	51	21	24	SWNE	46.889968	-92.938816
St. Louis	St. Louis River	04010201	1	MN_NWI-434	TBD	1090.2	PSS	TBD	TBD	-	-	0.17	-	-	0.17	51	21	24	NWSE	46.888155	-92.937548
St. Louis	St. Louis River	04010201	1	MN_NWI-432	TBD	1090.3	PFO	TBD	TBD	-	-	-	0.33	-	0.33	51	21	24	NWSE	46.887034	-92.93758
St. Louis	St. Louis River	04010201	1	MN_NWI-449	TBD	1090.5	PSS	TBD	TBD	-	-	0.00	-	-	0.00	51	21	24	NESE	46.887701	-92.932309
St. Louis	St. Louis River	04010201	1	MN_NWI-447	TBD	1090.5	PSS	TBD	TBD	-	-	0.01	-	-	0.01	51	21	24	NESE	46.887107	-92.932321
St. Louis	St. Louis River	04010201	1	MN_NWI-446	TBD	1090.5	PFO	TBD	TBD	-	-	-	0.55	-	0.55	51	20	19	NWSW, SWSW	46.886062	-92.93208
St. Louis	St. Louis River	04010201	1	MN_NWI-448	TBD	1090.5	PSS	TBD	TBD	-	-	0.02	-	-	0.02	51	20	19	NWSW	46.885606	-92.932112
St. Louis	St. Louis River	04010201	1	w-51n20w20-a	9/11/2017	1091.6	PEM	Fresh (wet) Meadow	Type 2	979.6	0.19	2.17	-	-	2.17	51	20	20	SWSW	46.881978	-92.910683
St. Louis	St. Louis River	04010201	1	w-51n20w20-a	9/11/2017	1091.8	PSS	Alder Thickets	Type 6	386.6	0.07	0.40	0.44	-	0.85	51	20	20	SWSE, SWSW	46.881812	-92.907317
St. Louis	St. Louis River	04010201	1	w-51n20w20-a	9/11/2017	1091.8	PFO	Coniferous Bogs	Type 8	1,791.4	0.34	-	3.86	-	3.86	51	20	20	SWSE, SWSW, SESE, SESW	46.881811	-92.906471
St. Louis	St. Louis River	04010201	1	w-51n20w21-w	6/21/2018	1092.7	PFO	Hardwood Swamps	Type 7	-	-	-	0.06	-	0.06	51	20	21	SWSW	46.884383	-92.889549
St. Louis	St. Louis River	04010201	1	w-51n20w21-y	6/20/2018	1092.9	PEM	Fresh (wet) Meadow	Type 2	11.5	0.00	0.02	-	-	0.02	51	20	21	SWSW, SESW	46.884288	-92.884952
St. Louis	St. Louis River	04010201	1	w-51n20w21-y	6/20/2018	1093.0	PFO	Hardwood Swamps	Type 7	968.9	0.18	-	2.10	-	2.10	51	20	21	SWSE, SESW	46.884288	-92.882625
St. Louis	St. Louis River	04010201	1	w-51n20w21-z	6/20/2018	1093.3	PFO	Hardwood Swamps	Type 7	121.4	0.02	-	0.28	-	0.28	51	20	21	SWSE	46.884337	-92.877631
St. Louis	St. Louis River	04010201	1	w-51n20w21-e	6/20/2018	1093.3	PEM	Fresh (wet) Meadow	Type 2	326.2	0.06	0.81	-	-	0.81	51	20	21, 28	NENE, SWSE, SESE	46.884369	-92.87649
St. Louis	St. Louis River	04010201	1	w-51n20w21-e	6/20/2018	1093.4	PSS	Shrub Carr	Type 6	480.1	0.09	0.48	0.57	-	1.05	51	20	21, 28	NENE, SWSE, SESE	46.882818	-92.874496
St. Louis	St. Louis River	04010201	1	w-51n20w28-a	9/11/2017	1093.6	PFO	Hardwood Swamps	Type 7	-	-	-	0.25	-	0.25	51	20	28	NENE	46.880871	-92.872208
St. Louis	St. Louis River	04010201	1	w-51n20w28-a	9/11/2017	1093.7	PSS	Shrub Carr	Type 6	-	-	0.71	0.00	-	0.72	51	20	28	NENE	46.880267	-92.871163
St. Louis	St. Louis River	04010201	1	w-51n20w28-a	9/11/2017	1093.7	PEM	Fresh (wet) Meadow	Type 2	1,751.3	0.33	2.70	-	-	2.70	51	20	27, 28	NWNW, NENE, SWNW	46.879991	-92.870626
St. Louis	St. Louis River	04010201	1	w-51n20w27-a	9/11/2017	1094.0	PSS	Shrub Carr	Type 6	98.4	0.02	0.10	0.11	-	0.21	51	20	27	SWNW	46.877092	-92.866939
St. Louis	St. Louis River	04010201	1	w-51n20w27-y	6/20/2018	1094.1	PEM	Fresh (wet) Meadow	Type 2	-	-	0.01	-	-	0.01	51	20	27	SWNW	46.876365	-92.864583
St. Louis	St. Louis River	04010201	1	w-51n20w27-b	9/12/2017	1094.2	PEM	Fresh (wet) Meadow	Type 2	239.1	0.05	0.80	-	-	0.80	51	20	27	SWNW	46.874391	-92.865382
St. Louis	St. Louis River	04010201	1	w-51n20w27-c	9/12/2017	1094.2	PEM	Deep and Shallow Marshes	Type 3	412.3	0.08	0.83	-	-	0.83	51	20	27	NWSW, NESW	46.87387	-92.86437
St. Louis	St. Louis River	04010201	1	w-51n20w27-c	9/12/2017	1094.2	PSS	Shrub Carr	Type 6	-	-	0.12	-	-	0.12	51	20	27	NWSW, NESW	46.873773	-92.864372
St. Louis	St. Louis River	04010201	1	w-51n20w27-d	9/12/2017	1094.5	PEM	Fresh (wet) Meadow	Type 2	-	-	0.01	-	-	0.01	51	20	27	NESW	46.871061	-92.860966
St. Louis	St. Louis River	04010201	1	w-51n20w27-g	9/12/2017	1094.8	PSS	Shrub Carr	Type 6	54.6	0.01	0.09	0.06	0.01	0.16	51	20	27	SWSE	46.867604	-92.854823
St. Louis	St. Louis River	04010201	1	w-51n20w34-b	9/12/2017	1095.2	PEM	Fresh (wet) Meadow	Type 2	101.0	0.02	0.16	-	-	0.16	51	20	34	NENE	46.863982	-92.850293
St. Louis	St. Louis River	04010201	1	w-51n20w35-c	9/12/2017	1095.9	PEM	Deep and Shallow Marshes	Type 3	56.5	0.01	0.12	-	-	0.12	51	20	35	NESW, SESW	46.856005	-92.841723
St. Louis	St. Louis River	04010201	1	w-51n20w35-d	9/12/2017	1096.0	PEM	Fresh (wet) Meadow	Type 2	133.9	0.03	0.30	-	-	0.30	51	20	35	SESW	46.855029	-92.840089
St. Louis	St. Louis River	04010201	1	w-51n20w35-e	9/12/2017	1096.2	PEM	Fresh (wet) Meadow	Type 2	105.9	0.02	0.23	-	-	0.23	51	20	35	SWSE	46.853112	-92.836735
St. Louis	St. Louis River	04010201	1	w-50n20w2-a	9/13/2017	1096.4	PEM	Fresh (wet) Meadow	Type 2	298.6	0.06	0.86	-	-	0.86	50	20	2	NWNE, NENE	46.851829	-92.834304
St. Louis	St. Louis River	04010201	1	w-50n20w2-a	9/13/2017	1096.4	PSS	Shrub Carr	Type 6	-	-	0.21	-	-	0.21	50	20	2	NWNE, NENE	46.851603	-92.83419
St. Louis	St. Louis River	04010201	1	w-50n20w2-b	9/13/2017	1096.7	PSS	Shrub Carr	Type 6	-	-	0.23	0.05	-	0.28	50	20	1, 2	NWNW, NENE, SWNW	46.849793	-92.828085
St. Louis	St. Louis River	04010201	1	w-50n20w2-b	9/13/2017	1096.7	PEM	Fresh (wet) Meadow	Type 2	669.9	0.13	1.26	-	-	1.26	50	20	1, 2	NWNW, NENE, SWNW	46.849802	-92.827891

Attachment F
Line 3 Replacement Project
Wetland Table

County	Major Watershed	Hydologic Unit Code (HUC) 8	Bank Service Area (BSA)	Feature ID	Survey Date	Approx. Milepost	Cowardin [a]	Eggers and Reed [a]	Circular 39 [a]	Crossing length (feet) b	Crossing length (miles) b	Temporary Impacts (acres) c	Permanent Conversion (acres) d	Permanent Fill (acres)	Total Impacts (acres)	Township	Range	Section	Quarter-Quarter Section	Latitude	Longitude
St. Louis	St. Louis River	04010201	1	w-50n20w1-a	9/13/2017	1097.0	PEM	Fresh (wet) Meadow	Type 2	111.5	0.02	0.23	-	-	0.23	50	20	1	SWNW	46.847304	-92.824245
St. Louis	St. Louis River	04010201	1	w-50n20w1-b	9/13/2017	1097.2	PEM	Fresh (wet) Meadow	Type 2	555.8	0.11	1.18	-	-	1.18	50	20	1	NESW, SENW	46.845086	-92.820471
St. Louis	St. Louis River	04010201	1	w-50n20w1-b	9/13/2017	1097.2	PFO	Hardwood Swamps	Type 7	-	-	-	0.00	-	0.00	50	20	1	NESW	46.84453	-92.819921
St. Louis	St. Louis River	04010201	1	w-50n20w1-c	9/13/2017	1097.5	PEM	Fresh (wet) Meadow	Type 2	207.0	0.04	0.45	-	-	0.45	50	20	1	NWSE	46.84197	-92.815347
St. Louis	St. Louis River	04010201	1	w-50n20w1-d	9/13/2017	1097.6	PEM	Fresh (wet) Meadow	Type 2	65.4	0.01	0.16	-	-	0.16	50	20	1	SWSE	46.841035	-92.813804
St. Louis	St. Louis River	04010201	1	w-50n20w1-d	9/13/2017	1097.6	PSS	Alder Thickets	Type 6	-	-	0.00	-	-	0.00	50	20	1	SWSE	46.840873	-92.813844
St. Louis	St. Louis River	04010201	1	w-50n20w1-e	9/13/2017	1097.9	PSS	Shrub Carr	Type 6	-	-	0.10	0.01	-	0.12	50	20	1, 12	NENE, SESE	46.838323	-92.809726
St. Louis	St. Louis River	04010201	1	w-50n20w1-e	9/13/2017	1097.9	PEM	Fresh (wet) Meadow	Type 2	531.7	0.10	1.01	-	-	1.01	50	20	1, 12	NENE, SESE	46.838363	-92.809538
St. Louis	St. Louis River	04010201	1	w-50n19w6-a	7/12/2018	1098.2	PEM	Fresh (wet) Meadow	Type 2	-	-	1.03	-	-	1.03	50	19	6	NENE, NESE, SENE	46.85056	-92.785882
St. Louis	St. Louis River	04010201	1	w-50n19w7-a	9/13/2017	1098.2	PEM	Deep and Shallow Marshes	Type 3	680.4	0.13	1.22	-	-	1.22	50	19	7	NWNW, NENW, SWNW, SENW	46.835191	-92.804124
St. Louis	St. Louis River	04010201	1	w-50n19w7-a	9/13/2017	1098.3	PFO	Coniferous Bogs	Type 8	-	-	-	0.26	-	0.26	50	19	7	NWNW, SWNW	46.834745	-92.803682
St. Louis	St. Louis River	04010201	1	w-50n19w5-a	7/12/2018	1098.5	PFO	Hardwood Swamps	Type 7	-	-	-	0.04	-	0.04	50	19	6	NESE, SESE	46.841807	-92.786241
St. Louis	St. Louis River	04010201	1	w-50n19w7-o	7/12/2018	1098.5	PSS	Shrub Carr	Type 6	-	-	0.64	-	-	0.64	50	19	6	NESE, SESE	46.842557	-92.786277
St. Louis	St. Louis River	04010201	1	w-50n19w7-c	9/13/2017	1098.5	PFO	Hardwood Swamps	Type 7	32.8	0.01	-	0.34	-	0.34	50	19	7	SENW	46.832195	-92.799464
St. Louis	St. Louis River	04010201	1	w-50n19w7-c	9/13/2017	1098.6	PSS	Shrub Carr	Type 6	-	-	0.27	0.01	-	0.27	50	19	7	NWSE, SENW	46.831797	-92.798962
St. Louis	St. Louis River	04010201	1	w-50n19w7-c	9/13/2017	1098.6	PUB	Shallow Open Water	Type 5	313.6	0.06	0.75	-	-	0.75	50	19	7	NWSE, SENW	46.831852	-92.798586
St. Louis	St. Louis River	04010201	1	w-50n19w7-c	9/13/2017	1098.6	PEM	Deep and Shallow Marshes	Type 3	1,181.8	0.22	2.11	-	-	2.11	50	19	7	NWSE, SWNE, SENW	46.831567	-92.798341
St. Louis	St. Louis River	04010201	1	w-50n19w7-o	6/19/2018	1098.7	PEM	Fresh (wet) Meadow	Type 2	-	-	0.00	-	-	0.00	50	19	6, 7	NENE, SESE	46.837945	-92.786557
St. Louis	St. Louis River	04010201	1	MN_NWI-462	TBD	1098.8	PEM	TBD	TBD	-	-	0.11	-	-	0.11	50	19	7	NWSE	46.830277	-92.795342
St. Louis	St. Louis River	04010201	1	w-50n19w7-l	6/19/2018	1098.9	PSS	Shrub Carr	Type 6	-	-	0.01	-	-	0.01	50	19	7, 8	NWNW, NENE, NESE, SENE	46.834673	-92.786483
St. Louis	St. Louis River	04010201	1	w-50n19w7-m	6/19/2018	1098.9	PSS	Shrub Carr	Type 6	-	-	0.04	-	-	0.04	50	19	7	NENE	46.836854	-92.786718
St. Louis	St. Louis River	04010201	1	w-50n19w7-n	6/19/2018	1098.9	PEM	Fresh (wet) Meadow	Type 2	-	-	0.03	-	-	0.03	50	19	7	NENE	46.836452	-92.786587
St. Louis	St. Louis River	04010201	1	w-50n19w7-m	6/19/2018	1098.9	PFO	Hardwood Swamps	Type 7	-	-	-	0.17	-	0.17	50	19	7	NENE, SENE	46.834481	-92.786667
St. Louis	St. Louis River	04010201	1	w-50n19w7-d	9/13/2017	1099.0	PEM	Fresh (wet) Meadow	Type 2	81.8	0.02	0.18	-	-	0.18	50	19	7	NWSE	46.828228	-92.792636
St. Louis	St. Louis River	04010201	1	w-50n19w7-m	6/19/2018	1099.0	PEM	Fresh (wet) Meadow	Type 2	-	-	0.06	-	-	0.06	50	19	7	NESE, SENE	46.830949	-92.788258
St. Louis	St. Louis River	04010201	1	w-50n19w7-j	6/19/2018	1099.1	PSS	Shrub Carr	Type 6	-	-	0.02	-	-	0.02	50	19	7	NESE	46.829432	-92.788474
St. Louis	St. Louis River	04010201	1	w-50n19w7-k	6/19/2018	1099.1	PEM	Fresh (wet) Meadow	Type 2	-	-	0.04	-	-	0.04	50	19	7	NESE	46.828673	-92.788905
St. Louis	St. Louis River	04010201	1	w-50n19w7-e	9/15/2017	1099.1	PEM	Fresh (wet) Meadow	Type 2	70.1	0.01	0.13	-	-	0.13	50	19	7	SESE	46.826771	-92.790079
St. Louis	St. Louis River	04010201	1	w-50n19w7-e	9/15/2017	1099.1	PSS	Shrub Carr	Type 6	-	-	0.01	-	-	0.01	50	19	7	SESE	46.826634	-92.790167
St. Louis	St. Louis River	04010201	1	w-50n19w7-g	6/19/2018	1099.3	PSS	Shrub Carr	Type 6	-	-	0.00	-	-	0.00	50	19	7	SESE	46.825819	-92.787739
St. Louis	St. Louis River	04010201	1	w-50n19w8-a	9/15/2017	1099.4	PUB	Shallow Open Water	Type 5	-	-	0.03	-	-	0.03	50	19	8	SWSW	46.824377	-92.785998
St. Louis	St. Louis River	04010201	1	w-50n19w8-a	9/15/2017	1099.4	PEM	Sedge Meadows	Type 2	155.3	0.03	0.29	-	-	0.29	50	19	8	SWSW	46.824223	-92.786056
St. Louis	St. Louis River	04010201	1	w-50n19w17-q	7/12/2018	1099.4	PSS	Shrub Carr	Type 6	-	-	0.02	-	-	0.02	50	19	17	NWNW	46.822592	-92.786211
St. Louis	St. Louis River	04010201	1	w-50n19w17-r	7/12/2018	1099.4	PFO	Hardwood Swamps	Type 7	-	-	-	0.06	-	0.06	50	19	17	NWNW	46.822409	-92.78638

Attachment F
Line 3 Replacement Project
Wetland Table

County	Major Watershed	Hydologic Unit Code (HUC) 8	Bank Service Area (BSA)	Feature ID	Survey Date	Approx. Milepost	Cowardin [a]	Eggers and Reed [a]	Circular 39 [a]	Crossing length (feet) b	Crossing length (miles) b	Temporary Impacts (acres) c	Permanent Conversion (acres) d	Permanent Fill (acres)	Total Impacts (acres)	Township	Range	Section	Quarter-Quarter Section	Latitude	Longitude
St. Louis	St. Louis River	04010201	1	w-50n19w17-q	7/12/2018	1099.4	PFO	Hardwood Swamps	Type 7	-	-	-	0.02	-	0.02	50	19	17	NWNW	46.822308	-92.786208
St. Louis	St. Louis River	04010201	1	w-50n19w17-f	9/15/2017	1099.5	PSS	Alder Thickets	Type 6	-	-	0.22	0.11	-	0.33	50	19	8, 17	NWNW, SWSW	46.823603	-92.784914
St. Louis	St. Louis River	04010201	1	w-50n19w17-f	9/15/2017	1099.5	PFO	Coniferous Bogs	Type 7	-	-	-	0.22	-	0.22	50	19	8, 17	NWNW, NENW, SWSW	46.823536	-92.784819
St. Louis	St. Louis River	04010201	1	w-50n19w17-f	9/15/2017	1099.5	PEM	Deep and Shallow Marshes	Type 3	974.2	0.18	1.37	-	-	1.37	50	19	8, 17	NWNW, NENW, SWSW	46.823647	-92.784652
St. Louis	St. Louis River	04010201	1	w-50n19w17-f	9/15/2017	1099.6	PUB	Shallow Open Water	Type 5	-	-	0.24	-	-	0.24	50	19	17	NWNW, NENW	46.822534	-92.781922
St. Louis	St. Louis River	04010201	1	w-50n19w17-p	7/12/2018	1099.7	PSS	Shrub Carr	Type 6	-	-	0.03	-	-	0.03	50	19	17	NWNW	46.820297	-92.782696
St. Louis	St. Louis River	04010201	1	w-50n19w17-o	7/12/2018	1099.7	PFO	Hardwood Swamps	Type 7	-	-	-	0.00	-	0.00	50	19	17	NWNW	46.820094	-92.782826
St. Louis	St. Louis River	04010201	1	w-50n19w17-n	7/12/2018	1099.7	PSS	Shrub Carr	Type 6	-	-	0.23	-	-	0.23	50	19	17	NWNW, SWNW, SENW	46.820109	-92.781804
St. Louis	St. Louis River	04010201	1	w-50n19w17-m	7/12/2018	1099.9	PSS	Shrub Carr	Type 6	-	-	0.06	-	-	0.06	50	19	17	SENW	46.818788	-92.778584
St. Louis	St. Louis River	04010201	1	w-50n19w17-l	7/12/2018	1100.0	PSS	Shrub Carr	Type 6	-	-	0.00	-	-	0.00	50	19	17	SENW	46.818145	-92.77716
St. Louis	St. Louis River	04010201	1	w-50n19w17-e	9/14/2017	1100.0	PSS	Shrub Carr	Type 6	106.3	0.02	0.23	0.11	-	0.35	50	19	17	SWNE	46.819198	-92.775073
St. Louis	St. Louis River	04010201	1	w-50n19w17-k	7/12/2018	1100.0	PSS	Shrub Carr	Type 6	-	-	0.00	-	-	0.00	50	19	17	SENW	46.817276	-92.776878
St. Louis	St. Louis River	04010201	1	w-50n19w17-j	7/12/2018	1100.1	PSS	Shrub Carr	Type 6	-	-	0.00	-	-	0.00	50	19	17	SWNE	46.817424	-92.775276
St. Louis	St. Louis River	04010201	1	w-50n19w17-i	7/12/2018	1100.1	PSS	Shrub Carr	Type 6	-	-	0.00	-	-	0.00	50	19	17	SWNE	46.817375	-92.775135
St. Louis	St. Louis River	04010201	1	w-50n19w17-e	9/14/2017	1100.1	PFO	Hardwood Swamps	Type 7	-	-	-	0.02	-	0.02	50	19	17	SWNE	46.818117	-92.773063
St. Louis	St. Louis River	04010201	1	w-50n19w17-e	9/14/2017	1100.1	PEM	Fresh (wet) Meadow	Type 2	829.3	0.16	1.71	-	-	1.71	50	19	17	SWNE, SENE	46.818222	-92.772901
St. Louis	St. Louis River	04010201	1	w-50n19w17-h	7/12/2018	1100.2	PFO	Hardwood Swamps	Type 7	-	-	-	0.00	-	0.00	50	19	17	SWNE	46.81685	-92.77366
St. Louis	St. Louis River	04010201	1	w-50n19w17-h	7/12/2018	1100.2	PSS	Shrub Carr	Type 6	-	-	0.00	-	-	0.00	50	19	17	NWSE, SWNE	46.816777	-92.773479
St. Louis	St. Louis River	04010201	1	w-50n19w17-c	9/14/2017	1100.3	PEM	Fresh (wet) Meadow	Type 2	-	-	0.07	-	-	0.07	50	19	17	NESE	46.816618	-92.769662
St. Louis	St. Louis River	04010201	1	w-50n19w17-b	9/14/2017	1100.4	PEM	Fresh (wet) Meadow	Type 2	138.6	0.03	0.29	-	-	0.29	50	19	17	NESE	46.815688	-92.768566
St. Louis	St. Louis River	04010201	1	w-50n19w17-a	6/18/2018	1100.6	PFO	Hardwood Swamps	Type 7	-	-	-	0.01	-	0.01	50	19	16	NWSW	46.813634	-92.76561
St. Louis	St. Louis River	04010201	1	w-50n19w17-a	6/18/2018	1100.6	PEM	Fresh (wet) Meadow	Type 2	63.7	0.01	0.12	-	-	0.12	50	19	16	NWSW	46.813631	-92.765285
St. Louis	St. Louis River	04010201	1	w-50n19w16-b	6/18/2018	1100.7	PFO	Coniferous Bogs	Type 8	-	-	-	0.31	-	0.31	50	19	16	SWSW	46.812673	-92.764165
St. Louis	St. Louis River	04010201	1	w-50n19w16-b	6/18/2018	1100.7	PEM	Deep and Shallow Marshes	Type 3	656.2	0.12	1.30	-	-	1.30	50	19	16	SWSW	46.812212	-92.763206
St. Louis	St. Louis River	04010201	1	w-50n19w16-b	6/18/2018	1100.7	PSS	Alder Thickets	Type 6	-	-	0.18	-	-	0.18	50	19	16	SWSW	46.812315	-92.763597
St. Louis	St. Louis River	04010201	1	w-50n19w16-a	6/18/2018	1100.9	PEM	Fresh (wet) Meadow	Type 2	309.3	0.06	0.67	-	-	0.67	50	19	16	SWSW, SESW	46.810866	-92.761182
St. Louis	St. Louis River	04010201	1	w-50n19w21-d	9/14/2017	1101.1	PEM	Fresh (wet) Meadow	Type 2	194.4	0.04	0.65	-	-	0.65	50	19	21	NWNE, NENW	46.808751	-92.75792
St. Louis	St. Louis River	04010201	1	w-50n19w21-d	9/14/2017	1101.2	PFO	Hardwood Swamps	Type 7	-	-	-	0.02	-	0.02	50	19	21	NWNE, NENW	46.807383	-92.756097
St. Louis	St. Louis River	04010201	1	w-50n19w21-b	9/14/2017	1101.3	PEM	Fresh (wet) Meadow	Type 2	554.6	0.11	1.08	-	-	1.08	50	19	21	NWNE, SWNE	46.806808	-92.754709
St. Louis	St. Louis River	04010201	1	w-50n19w21-b	9/14/2017	1101.4	PSS	Shrub Carr	Type 6	-	-	0.09	-	-	0.09	50	19	21	SWNE	46.80611	-92.754166
St. Louis	St. Louis River	04010201	1	w-50n19w21-a	9/14/2017	1101.5	PSS	Alder Thickets	Type 6	-	-	0.08	0.03	-	0.11	50	19	21	SWNE	46.804984	-92.752324
St. Louis	St. Louis River	04010201	1	w-50n19w21-a	9/14/2017	1101.5	PEM	Deep and Shallow Marshes	Type 3	1,944.7	0.37	3.97	-	-	3.97	50	19	21	NESE, SWNE, SENE	46.804719	-92.751697
St. Louis	St. Louis River	04010201	1	w-50n19w21-a	9/14/2017	1101.6	PFO	Coniferous Swamps	Type 7	-	-	-	0.24	-	0.24	50	19	21	SENE	46.803973	-92.750424
St. Louis	St. Louis River	04010201	1	w-50n19w21-a	9/14/2017	1101.6	PUB	Shallow Open Water	Type 5	91.4	0.02	0.13	-	-	0.13	50	19	21	SENE	46.803647	-92.749484
St. Louis	St. Louis River	04010201	1	w-50n19w22-h	7/5/2018	1102.2	PFO	Hardwood Swamps	Type 7	-	-	-	0.24	-	0.24	50	19	22	NWSE, SWNE	46.806173	-92.730201
St. Louis	St. Louis River	04010201	1	w-50n19w22-i	7/5/2018	1102.2	PFO	Hardwood Swamps	Type 7	-	-	-	0.02	-	0.02	50	19	22	SWNE	46.806914	-92.728932
St. Louis	St. Louis River	04010201	1	w-50n19w22-h	7/5/2018	1102.2	PSS	Shrub Carr	Type 6	-	-	0.92	-	-	0.92	50	19	22	NWSE, SWNE, SWSE, SENE	46.80687	-92.728563
St. Louis	St. Louis River	04010201	1	MN_NWI-420	TBD	1102.3	PSS	TBD	TBD	-	-	0.13	-	-	0.13	50	19	22	SESW	46.798079	-92.738831

Attachment F
Line 3 Replacement Project
Wetland Table

County	Major Watershed	Hydologic Unit Code (HUC) 8	Bank Service Area (BSA)	Feature ID	Survey Date	Approx. Milepost	Cowardin [a]	Eggers and Reed [a]	Circular 39 [a]	Crossing length (feet) b	Crossing length (miles) b	Temporary Impacts (acres) c	Permanent Conversion (acres) d	Permanent Fill (acres)	Total Impacts (acres)	Township	Range	Section	Quarter-Quarter Section	Latitude	Longitude
St. Louis	St. Louis River	04010201	1	MN_NWI-414	TBD	1102.3	PEM	TBD	TBD	-	-	0.12	-	-	0.12	50	19	22	SESW	46.797921	-92.738911
St. Louis	St. Louis River	04010201	1	MN_NWI-416	TBD	1102.3	PFO	TBD	TBD	-	-	-	0.37	-	0.37	50	19	22	SESW	46.798054	-92.738413
St. Louis	St. Louis River	04010201	1	w-50n19w22-g	7/5/2018	1102.3	PSS	Shrub Carr	Type 6	-	-	0.14	-	-	0.14	50	19	22	SENE	46.805781	-92.725035
St. Louis	St. Louis River	04010201	1	w-50n19w22-f	7/3/2018	1102.3	PFO	Hardwood Swamps	Type 7	-	-	-	0.00	-	0.00	50	19	22, 23	SWNW, SENE	46.805818	-92.722957
St. Louis	St. Louis River	04010201	1	w-50n19w22-f	7/3/2018	1102.3	PSS	Shrub Carr	Type 6	-	-	0.08	-	-	0.08	50	19	22, 23	SWNW, SENE	46.805812	-92.723104
St. Louis	St. Louis River	04010201	1	w-50n19w22-g	7/5/2018	1102.3	PFO	Hardwood Swamps	Type 7	-	-	-	0.02	-	0.02	50	19	22	SENE	46.805767	-92.72491
St. Louis	St. Louis River	04010201	1	w-50n19w22-a	6/27/2018	1102.3	PFO	Hardwood Swamps	Type 7	2,250.5	0.43	-	8.09	-	8.09	50	19	2, 26, 27, 3	NWNW, NWNE, NWSE, NENW, NESE, SWNE, SWSW, SENW, SESE, SESW	46.796979	-92.738403
St. Louis	St. Louis River	04010201	1	w-50n19w22-a	6/27/2018	1102.4	PSS	Shrub Carr	Type 6	766.4	0.15	4.26	1.00	-	5.27	50	19	22, 27	NWNE, NWSE, NENW, NESE, SWNE, SENE, SESW	46.796845	-92.7382
St. Louis	St. Louis River	04010201	1	w-50n19w22-a	6/27/2018	1102.4	PEM	Fresh (wet) Meadow	Type 2	5,642.1	1.07	8.98	-	-	8.98	50	19	26, 27, 35	NWNW, NWNE, NWSW, NENW, NESE, SWNE, SWSW, SENE, SESE	46.795793	-92.736579
St. Louis	St. Louis River	04010201	1	w-50n19w23-q	7/18/2018	1102.5	PEM	Fresh (wet) Meadow	Type 2	-	-	0.06	-	-	0.06	50	19	23	SWNW	46.804732	-92.720909
St. Louis	St. Louis River	04010201	1	w-50n19w23-q	7/18/2018	1102.6	PSS	Shrub Carr	Type 6	-	-	0.22	-	-	0.22	50	19	23	NWSW, SWNW	46.804771	-92.72086
St. Louis	St. Louis River	04010201	1	w-50n19w23-b	7/2/2018	1102.6	PFO	Hardwood Swamps	Type 7	-	-	-	0.12	-	0.12	50	19	23	NWSW	46.804179	-92.718582
St. Louis	St. Louis River	04010201	1	w-50n19w23-a	7/2/2018	1102.7	PFO	Hardwood Swamps	Type 7	-	-	-	0.12	-	0.12	50	19	23	NWSW, NESW	46.803685	-92.717806
St. Louis	St. Louis River	04010201	1	w-50n19w23-c	7/2/2018	1102.7	PFO	Hardwood Swamps	Type 7	-	-	-	0.08	-	0.08	50	19	23	NWSW, NESW	46.803511	-92.717641
St. Louis	St. Louis River	04010201	1	w-50n19w23-f	7/3/2018	1102.9	PEM	Sedge Meadows	Type 2	-	-	0.08	-	-	0.08	50	19	23	NESW	46.801891	-92.714183
St. Louis	St. Louis River	04010201	1	w-50n19w26-e	7/2/2018	1102.9	PFO	Hardwood Swamps	Type 7	-	-	-	0.22	-	0.22	50	19	23	NESW, SWSE	46.801485	-92.713134
St. Louis	St. Louis River	04010201	1	w-50n19w26-e	7/2/2018	1103.0	PSS	Shrub Carr	Type 6	-	-	0.24	-	-	0.24	50	19	23, 26	NWNE, NWSE, NESW, SWSE, SESW	46.801015	-92.712321
St. Louis	St. Louis River	04010201	1	w-50n19w23-e	7/3/2018	1103.0	PSS	Shrub Carr	Type 6	-	-	0.04	-	-	0.04	50	19	23	NESW, SESW	46.800994	-92.712422
St. Louis	St. Louis River	04010201	1	MN_NWI-419	TBD	1103.0	PSS	TBD	TBD	-	-	0.01	-	-	0.01	50	19	27	NWSE, NESE	46.789718	-92.728195
St. Louis	St. Louis River	04010201	1	w-50n19w23-d	7/3/2018	1103.1	PFO	Hardwood Swamps	Type 7	-	-	-	0.09	-	0.09	50	19	23	SWSE, SESW	46.798962	-92.712283
St. Louis	St. Louis River	04010201	1	w-50n19w26-e	7/2/2018	1103.1	PEM	Fresh (wet) Meadow	Type 2	-	-	0.01	-	-	0.01	50	19	23	SWSE	46.798577	-92.712178
St. Louis	St. Louis River	04010201	1	w-50n19w26-g	7/2/2018	1103.2	PSS	Shrub Carr	Type 6	-	-	0.00	-	-	0.00	50	19	23	SWSE	46.79734	-92.712255
St. Louis	St. Louis River	04010201	1	w-50n19w26-d	7/2/2018	1103.2	PFO	Hardwood Swamps	Type 7	-	-	-	0.00	-	0.00	50	19	26	NWNE	46.797198	-92.711562
St. Louis	St. Louis River	04010201	1	w-50n19w26-c	7/2/2018	1103.3	PEM	Fresh (wet) Meadow	Type 2	-	-	0.01	-	-	0.01	50	19	26	NWNE	46.797292	-92.710087
St. Louis	St. Louis River	04010201	1	w-50n19w26-a	7/2/2018	1103.4	PSS	Shrub Carr	Type 6	-	-	0.11	-	-	0.11	50	19	26	NWNE, NENE	46.797327	-92.707158
St. Louis	St. Louis River	04010201	1	MN_NWI-398	TBD	1103.4	PEM	TBD	TBD	-	-	0.02	-	-	0.02	50	19	26	SENW	46.791305	-92.715308
St. Louis	St. Louis River	04010201	1	MN_NWI-413	TBD	1103.5	PUB	TBD	TBD	-	-	0.00	-	-	0.00	50	19	26	NESW	46.788768	-92.715746
St. Louis	St. Louis River	04010201	1	MN_NWI-415	TBD	1103.5	PFO	TBD	TBD	-	-	-	0.00	-	0.00	50	19	26	NESW	46.788268	-92.716268
St. Louis	St. Louis River	04010201	1	MN_NWI-418	TBD	1103.5	PSS	TBD	TBD	-	-	0.01	-	-	0.01	50	19	26	NESW	46.788243	-92.716335
St. Louis	St. Louis River	04010201	1	MN_NWI-400	TBD	1103.5	PFO	TBD	TBD	-	-	-	0.00	-	0.00	50	19	26	NESW	46.788089	-92.716484
St. Louis	St. Louis River	04010201	1	MN_NWI-410	TBD	1103.5	PSS	TBD	TBD	-	-	0.02	-	-	0.02	50	19	26, 35	NWNE, NESW	46.788296	-92.715998
St. Louis	St. Louis River	04010201	1	w-50n19w35-a	7/4/2018	1103.9	PSS	Shrub Carr	Type 6	-	-	0.07	-	-	0.07	50	19	35	NWNE	46.782014	-92.71198
St. Louis	St. Louis River	04010201	1	w-50n19w35-a	7/4/2018	1103.9	PFO	Hardwood Swamps	Type 7	-	-	-	0.07	-	0.07	50	19	35	NWNE	46.782765	-92.710785

Attachment F
Line 3 Replacement Project
Wetland Table

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St. Louis	St. Louis River	04010201	1	w-50n19w35-c	7/4/2018	1104.0	PFO	Hardwood Swamps	Type 7	-	-	-	0.06	-	0.06	50	19	35	NWNE	46.782853	-92.709286
St. Louis	St. Louis River	04010201	1	w-50n19w35-a	7/4/2018	1104.0	PEM	Deep and Shallow Marshes	Type 3	-	-	0.09	-	-	0.09	50	19	35	NWNE	46.780505	-92.712006
St. Louis	St. Louis River	04010201	1	w-50n19w35-d	7/4/2018	1104.1	PFO	Hardwood Swamps	Type 7	-	-	-	0.00	-	0.00	50	19	35	NWNE	46.782803	-92.708041
St. Louis	St. Louis River	04010201	1	w-49n19w1-a	7/18/2018	1104.1	PSS	Shrub Carr	Type 6	2,229.9	0.42	2.41	2.45	0.00	4.85	50	19	1, 35, 36	NESE, SWNE, SWSW, SENW, SESE	46.778526	-92.712312
St. Louis	St. Louis River	04010201	1	w-49n19w1-a	6/29/2018	1104.1	PEM	Sedge Meadows	Type 2	4,424.2	0.84	9.49	-	0.00	9.49	50	19	35	SWNE	46.778589	-92.712053
St. Louis	St. Louis River	04010201	1	w-50n19w35-c	7/4/2018	1104.1	PSS	Shrub Carr	Type 6	-	-	0.29	-	-	0.29	50	19	26, 35	NWNE, NENE, SESE	46.782879	-92.707586
St. Louis	St. Louis River	04010201	1	w-49n19w1-a	6/29/2018	1104.1	PFO	Hardwood Swamps	Type 7	464.1	0.09	-	2.46	-	2.46	50	19	1, 35	NWSE, NESE, SWNE, SESE	46.778279	-92.711701
St. Louis	St. Louis River	04010201	1	w-50n19w35-e	7/4/2018	1104.2	PFO	Hardwood Swamps	Type 7	-	-	-	0.04	-	0.04	50	19	26, 35	NENE, SESE	46.783276	-92.703829
St. Louis	St. Louis River	04010201	1	MN_NWI-399	TBD	1104.9	PFO	TBD	TBD	-	-	-	0.09	-	0.09	50	19	36	SWSW	46.770978	-92.701314
St. Louis	St. Louis River	04010201	1	MN_NWI-406	TBD	1104.9	PSS	TBD	TBD	484.4	0.09	0.41	0.53	-	0.94	50	19	36	SWSW	46.770636	-92.700713
St. Louis	St. Louis River	04010201	1	MN_NWI-412	TBD	1105.0	PSS	TBD	TBD	799.3	0.15	0.82	0.92	-	1.74	50	19	1, 36	SWSW	46.769483	-92.699062
Carlton	St. Louis River	04010201	1	w-49n19w1-a	6/29/2018	1105.5	PUB	Shallow Open Water	Type 5	344.5	0.07	0.71	-	-	0.71	49	19	1	NWNE, NENW	46.763835	-92.691374
Carlton	St. Louis River	04010201	1	MN_NWI-407	TBD	1106.4	PSS	TBD	TBD	667.2	0.13	1.05	0.77	-	1.82	49	18	6	NWSW, SWSW	46.755248	-92.678211
Carlton	St. Louis River	04010201	1	MN_NWI-396	TBD	1106.5	R2U	TBD	TBD	40.0	0.01	0.09	-	-	0.09	49	18	6	NWSW, SWSW	46.754611	-92.677219
Carlton	St. Louis River	04010201	1	MN_NWI-408	TBD	1106.5	PSS	TBD	TBD	97.0	0.02	0.40	0.11	-	0.51	49	18	6	NWSW, SWSW	46.754527	-92.677139
Carlton	St. Louis River	04010201	1	MN_NWI-461	TBD	1106.5	PSS	TBD	TBD	-	-	0.00	-	-	0.00	49	18	6	NWSW, SWSW	46.754517	-92.676891
Carlton	St. Louis River	04010201	1	MN_NWI-304	TBD	1106.5	PSS	TBD	TBD	611.6	0.12	5.11	0.70	-	5.82	49	18	6, 7, 12	NWNW, NWSE, NENE, NESW, SWNW, SWSW, SENW	46.752602	-92.678806
Carlton	St. Louis River	04010201	1	w-49n18w6-a	6/30/2018	1106.6	PEM	Fresh (wet) Meadow	Type 2	2,998.1	0.57	4.78	-	-	4.78	49	18	6, 7	NWNE, NENW, SWNE, SWSW, SENE, SESW	46.753729	-92.674699
Carlton	St. Louis River	04010201	1	w-49n18w6-a	6/30/2018	1106.6	PSS	Shrub Carr	Type 6	1,809.0	0.34	1.89	2.37	-	4.26	49	18	6, 7, 8	NWNE, NWSW, NESE, SWNE, SWSW, SENE, SESW	46.75361	-92.674697
Carlton	St. Louis River	04010201	1	w-49n18w6-a	6/30/2018	1106.7	PFO	Coniferous Swamps	Type 7	1,154.7	0.22	-	5.18	-	5.18	49	18	6, 7, 8	NWSW, NESE, SWSW, SENE, SESW	46.752442	-92.672551
Carlton	St. Louis River	04010201	1	MN_NWI-299	TBD	1106.7	PFO	TBD	TBD	-	-	-	0.00	-	0.00	49	18	7	SWNW	46.746785	-92.679117
Carlton	St. Louis River	04010201	1	MN_NWI-293	TBD	1106.9	PFO	TBD	TBD	3.7	0.00	-	0.13	-	0.13	49	18	7	NWNE, NENW	46.750808	-92.669723
Carlton	St. Louis River	04010201	1	MN_NWI-300	TBD	1106.9	PFO	TBD	TBD	66.0	0.01	-	0.06	-	0.06	49	18	7	NWNE, NENW	46.750808	-92.669622
Carlton	St. Louis River	04010201	1	MN_NWI-306	TBD	1107.3	PSS	TBD	TBD	69.2	0.01	0.24	0.10	-	0.35	49	18	7	SWNE, SENE	46.747262	-92.66545
Carlton	St. Louis River	04010201	1	MN_NWI-298	TBD	1107.3	PFO	TBD	TBD	224.6	0.04	-	0.33	-	0.33	49	18	7	SWNE, SENE	46.747264	-92.665204
Carlton	St. Louis River	04010201	1	w-49n18w7-a	7/10/2018	1107.4	PSS	Shrub Carr	Type 6	-	-	0.07	-	-	0.07	49	18	7	NWSE	46.742076	-92.669815
Carlton	St. Louis River	04010201	1	w-49n18w7-a	7/10/2018	1107.4	PFO	Hardwood Swamps	Type 7	-	-	-	0.49	-	0.49	49	18	7, 18	NWNE, NWSE, NENE, SWSE	46.74085	-92.669839
Carlton	St. Louis River	04010201	1	w-49n18w7-a	7/10/2018	1107.6	PEM	Deep and Shallow Marshes	Type 3	-	-	0.03	-	-	0.03	49	18	7, 18	NWNE, SWSE	46.736748	-92.66999

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Wetland Table

County	Major Watershed	Hydrologic Unit Code (HUC) 8	Bank Service Area (BSA)	Feature ID	Survey Date	Approx. Milepost	Cowardin [a]	Eggers and Reed [a]	Circular 39 [a]	Crossing length (feet) b	Crossing length (miles) b	Temporary Impacts (acres) c	Permanent Conversion (acres) d	Permanent Fill (acres)	Total Impacts (acres)	Township	Range	Section	Quarter-Quarter Section	Latitude	Longitude
Carlton	St. Louis River	04010201	1	w-49n18w17-x	7/10/2018	1107.6	PSS	Shrub Carr	Type 6	-	-	0.15	-	-	0.15	49	18	17, 18	NWNW, NWNE, NENW, NENE	46.736511	-92.6701
Carlton	St. Louis River	04010201	1	w-49n18w18-a	7/9/2018	1107.7	PFO	Coniferous Swamps	Type 7	-	-	-	0.36	-	0.36	49	18	18	NENW, NESW, SENW	46.73471	-92.670384
Carlton	St. Louis River	04010201	1	w-49n18w18-a	7/9/2018	1107.7	PSS	Shrub Carr	Type 6	-	-	0.09	-	-	0.09	49	18	18	NESW, SENW	46.732471	-92.670452
Carlton	St. Louis River	04010201	1	w-49n18w18-b	7/10/2018	1107.9	PFO	Hardwood Swamps	Type 7	-	-	-	0.09	-	0.09	49	18	17, 18	NWNW, NENE	46.736628	-92.663354
Carlton	St. Louis River	04010201	1	w-49n18w18-b	7/10/2018	1107.9	PSS	Shrub Carr	Type 6	-	-	0.35	-	-	0.35	49	18	17, 18	NWNW, NENE	46.736635	-92.661506
Carlton	St. Louis River	04010201	1	MN_NWI-323	TBD	1108.0	PSS	TBD	TBD	747.2	0.14	0.74	0.86	-	1.60	49	18	8	SESW	46.73899	-92.653098
Carlton	St. Louis River	04010201	1	MN_NWI-309	TBD	1108.1	PEM	TBD	TBD	-	-	0.00	-	-	0.00	49	18	17	NWNW, NENW	46.736564	-92.654392
Carlton	St. Louis River	04010201	1	MN_NWI-341	TBD	1108.1	PUB	TBD	TBD	-	-	0.08	-	-	0.08	49	18	17	NWNW, NENW	46.736549	-92.654383
Carlton	St. Louis River	04010201	1	MN_NWI-327	TBD	1108.3	PSS	TBD	TBD	33.0	0.01	0.34	0.22	-	0.56	49	18	8, 17	NWNE, NENW, SWNE, SENE, SESW	46.736842	-92.650053
Carlton	St. Louis River	04010201	1	MN_NWI-338	TBD	1108.3	PUB	TBD	TBD	23.1	0.00	0.01	-	-	0.01	49	18	17	NENW	46.736542	-92.649784
Carlton	St. Louis River	04010201	1	w-49n18w17-x	7/10/2018	1108.3	PEM	Deep and Shallow Marshes	Type 3	282.4	0.05	0.62	-	-	0.62	49	18	17	NWNE, NENW	46.736191	-92.649435
Carlton	St. Louis River	04010201	1	MN_NWI-328	TBD	1108.4	PSS	TBD	TBD	79.9	0.02	0.07	0.09	-	0.15	49	18	17	NWNE	46.735839	-92.648904
Carlton	St. Louis River	04010201	1	w-49n18w17-x	7/10/2018	1108.4	PFO	Hardwood Swamps	Type 7	-	-	-	0.00	-	0.00	49	18	17	NWNE, NENW	46.735765	-92.64914
Carlton	St. Louis River	04010201	1	w-49n18w20-a	7/9/2018	1108.4	PSS	Shrub Carr	Type 6	-	-	0.17	-	-	0.17	49	18	19, 20	NWNE, NENW	46.722598	-92.668946
Carlton	St. Louis River	04010201	1	w-49n18w20-a	7/9/2018	1108.4	PFO	Hardwood Swamps	Type 7	-	-	-	0.62	-	0.62	49	18	19, 20	NWNW, NWNE, NENW, NENE	46.722574	-92.667103
Carlton	St. Louis River	04010201	1	MN_NWI-292	TBD	1108.4	PFO	TBD	TBD	-	-	-	0.09	-	0.09	49	18	18	SESW	46.72339	-92.670722
Carlton	St. Louis River	04010201	1	MN_NWI-314	TBD	1108.4	PFO	TBD	TBD	681.2	0.13	-	1.49	-	1.49	49	18	17	NWNE	46.735087	-92.647812
Carlton	St. Louis River	04010201	1	MN_NWI-317	TBD	1108.5	PFO	TBD	TBD	1,076.0	0.20	-	1.75	-	1.75	49	18	17	NWNE, SWNE, SENE	46.733861	-92.645549
Carlton	St. Louis River	04010201	1	MN_NWI-334	TBD	1108.6	PSS	TBD	TBD	-	-	0.07	0.01	-	0.08	49	18	17	NWNE	46.733488	-92.645002
Carlton	St. Louis River	04010201	1	MN_NWI-313	TBD	1108.7	PFO	TBD	TBD	362.0	0.07	-	0.80	-	0.80	49	18	17	SENE	46.732057	-92.643241
Carlton	St. Louis River	04010201	1	MN_NWI-331	TBD	1108.8	PSS	TBD	TBD	488.0	0.09	0.48	0.56	-	1.03	49	18	17	SENE	46.731145	-92.642205
Carlton	St. Louis River	04010201	1	MN_NWI-316	TBD	1108.9	PFO	TBD	TBD	-	-	-	0.32	-	0.32	49	18	17	SENE	46.730368	-92.641222
Carlton	St. Louis River	04010201	1	MN_NWI-308	TBD	1108.9	PEM	TBD	TBD	-	-	0.04	-	-	0.04	49	18	20	NWNE, NENW	46.722323	-92.649049
Carlton	St. Louis River	04010201	1	MN_NWI-315	TBD	1109.1	PFO	TBD	TBD	-	-	-	0.00	-	0.00	49	18	20	NWNE	46.722245	-92.646949
Carlton	St. Louis River	04010201	1	MN_NWI-330	TBD	1109.3	PSS	TBD	TBD	154.8	0.03	0.15	0.18	-	0.33	49	18	16	NWSW, SWSW	46.726055	-92.63472
Carlton	St. Louis River	04010201	1	MN_NWI-322	TBD	1109.4	PFO	TBD	TBD	279.3	0.05	-	0.59	-	0.59	49	18	16	SWSW	46.725553	-92.634166
Carlton	St. Louis River	04010201	1	w-49n18w16-f	6/12/2018	1109.5	PEM	Sedge Meadows	Type 2	323.8	0.06	0.66	-	-	0.66	49	18	16	SESW	46.724352	-92.632286
Carlton	St. Louis River	04010201	1	w-49n18w16-a	6/12/2018	1109.7	PFO	Seasonally Flooded Basins	Type 1	-	-	-	0.02	-	0.02	49	18	16	SESW	46.722598	-92.629822
Carlton	St. Louis River	04010201	1	w-49n18w21-h	6/12/2018	1109.8	PFO	Hardwood Swamps	Type 7	-	-	-	0.25	-	0.25	49	18	21	NWNE	46.72093	-92.627754
Carlton	St. Louis River	04010201	1	w-49n18w21-h	6/12/2018	1109.8	PEM	Sedge Meadows	Type 2	108.0	0.02	0.15	-	-	0.15	49	18	21	NWNE	46.721053	-92.627414
Carlton	St. Louis River	04010201	1	w-49n18w21-e	6/12/2018	1110.2	PSS	Shrub Carr	Type 6	427.2	0.08	0.39	0.35	-	0.74	49	18	21	NESE, SWNE, SENE	46.715889	-92.623372
Carlton	St. Louis River	04010201	1	w-49n18w21-e	6/12/2018	1110.2	PEM	Sedge Meadows	Type 2	90.3	0.02	0.45	-	-	0.45	49	18	21	NESE, SWNE, SENE	46.716039	-92.623231
Carlton	St. Louis River	04010201	1	w-49n18w21-e	6/12/2018	1110.2	PFO	Coniferous Bogs	Type 8	-	-	-	0.12	-	0.12	49	18	21	SWNE, SENE	46.715747	-92.623313
Carlton	St. Louis River	04010201	1	w-49n18w21-c	6/12/2018	1110.3	PEM	Fresh (wet) Meadow	Type 2	406.4	0.08	1.05	-	-	1.05	49	18	21	NESE	46.71465	-92.622693
Carlton	St. Louis River	04010201	1	w-49n18w21-c	6/12/2018	1110.4	PSS	Shrub Carr	Type 6	294.3	0.06	0.39	0.29	-	0.68	49	18	21	NESE	46.713847	-92.621445
Carlton	St. Louis River	04010201	1	w-49n18w21-b	6/12/2018	1110.5	PFO	Hardwood Swamps	Type 7	-	-	-	0.04	-	0.04	49	18	21	NESE	46.712985	-92.618785
Carlton	St. Louis River	04010201	1	w-49n18w21-b	6/12/2018	1110.5	PSS	Alder Thickets	Type 6	-	-	0.14	-	-	0.14	49	18	21	NESE	46.712949	-92.618549

Attachment F
Line 3 Replacement Project
Wetland Table

County	Major Watershed	Hydologic Unit Code (HUC) 8	Bank Service Area (BSA)	Feature ID	Survey Date	Approx. Milepost	Cowardin [a]	Eggers and Reed [a]	Circular 39 [a]	Crossing length (feet) b	Crossing length (miles) b	Temporary Impacts (acres) c	Permanent Conversion (acres) d	Permanent Fill (acres)	Total Impacts (acres)	Township	Range	Section	Quarter-Quarter Section	Latitude	Longitude
Carlton	St. Louis River	04010201	1	w-49n18w21-a	6/12/2018	1110.6	PEM	Fresh (wet) Meadow	Type 2	28.7	0.01	0.07	-	-	0.07	49	18	21	NESE	46.711817	-92.618172
Carlton	St. Louis River	04010201	1	w-49n18w22-a	6/11/2018	1110.6	PEM	Sedge Meadows	Type 2	918.7	0.17	1.52	-	-	1.52	49	18	21, 22	NWSW, NESE, SWSW	46.71161	-92.617853
Carlton	St. Louis River	04010201	1	w-49n18w22-a	6/11/2018	1110.6	PFO	Coniferous Bogs	Type 8	331.0	0.06	-	1.08	-	1.08	49	18	22	NWSW, SWSW	46.711379	-92.617718
Carlton	St. Louis River	04010201	1	w-49n18w27-b	6/11/2018	1111.0	PEM	Sedge Meadows	Type 2	1,188.4	0.23	1.83	-	-	1.83	49	18	22, 27	NENW, SESW	46.708042	-92.611177
Carlton	St. Louis River	04010201	1	w-49n18w27-b	6/11/2018	1111.0	PFO	Coniferous Bogs	Type 8	-	-	-	0.46	-	0.46	49	18	22, 27	NENW, SESW	46.707886	-92.611192
Carlton	St. Louis River	04010201	1	w-49n18w27-b	6/11/2018	1111.1	PSS	Shrub Carr	Type 6	226.3	0.04	0.60	0.26	-	0.86	49	18	27	NENW	46.707024	-92.609808
Carlton	Kettle River	07030003	6	MN_NWI-364	TBD	1111.2	PSS	TBD	TBD	-	-	0.01	-	-	0.01	49	18	27, 28	NWSW, NESE	46.700344	-92.617991
Carlton	St. Louis River	04010201	1	MN_NWI-360	TBD	1111.3	PSS	TBD	TBD	186.8	0.04	0.18	0.22	-	0.40	49	18	27	NWNE, NENW	46.705839	-92.607661
Carlton	Kettle River	07030003	6	w-49n18w27-h	7/4/2018	1111.3	PSS	Shrub Carr	Type 6	-	-	0.01	-	-	0.01	49	18	27	NWSW, NESW	46.700341	-92.612921
Carlton	Kettle River	07030003	6	w-49n18w27-g	7/4/2018	1111.4	PSS	Shrub Carr	Type 6	-	-	0.00	-	-	0.00	49	18	27	NESW	46.700412	-92.612257
Carlton	St. Louis River	04010201	1	MN_NWI-347	TBD	1111.4	PEM	TBD	TBD	215.9	0.04	0.57	-	-	0.57	49	18	27	NWNE, SWNE	46.704578	-92.605635
Carlton	St. Louis River	04010201	1	MN_NWI-371	TBD	1111.4	PSS	TBD	TBD	114.9	0.02	0.15	0.15	-	0.30	49	18	27	NWNE	46.704277	-92.605248
Carlton	St. Louis River	04010201	1	w-49n18w27-a	6/11/2018	1111.4	PFO	Hardwood Swamps	Type 7	442.2	0.08	-	1.20	-	1.20	49	18	27	SWNE	46.703884	-92.60519
Carlton	Kettle River	07030003	6	w-49n18w27-e	7/4/2018	1111.5	PFO	Coniferous Swamps	Type 7	-	-	-	0.01	-	0.01	49	18	27	NESW	46.700406	-92.609599
Carlton	Kettle River	07030003	6	w-49n18w27-f	7/4/2018	1111.5	PFO	Coniferous Swamps	Type 7	-	-	-	0.02	-	0.02	49	18	27	NESW	46.700328	-92.608517
Carlton	Kettle River	07030003	6	w-49n18w27-d	7/4/2018	1111.5	PSS	Shrub Carr	Type 6	-	-	0.00	-	-	0.00	49	18	27	NWSE	46.700326	-92.606917
Carlton	St. Louis River	04010201	1	w-49n18w27-a	6/11/2018	1111.5	PSS	Shrub Carr	Type 6	213.3	0.04	0.20	0.32	-	0.53	49	18	27	SWNE	46.703452	-92.603628
Carlton	St. Louis River	04010201	1	MN_NWI-366	TBD	1111.6	PSS	TBD	TBD	571.7	0.11	0.65	0.66	-	1.32	49	18	27	SWNE, SENE	46.702877	-92.602545
Carlton	St. Louis River	04010201	1	MN_NWI-349	TBD	1111.7	PFO	TBD	TBD	117.8	0.02	-	0.23	-	0.23	49	18	27	SENE	46.701284	-92.600092
Carlton	St. Louis River	04010201	1	MN_NWI-356	TBD	1111.8	PFO	TBD	TBD	765.8	0.15	-	2.27	-	2.27	49	18	26, 27	NWSW, NESE, SENE	46.700432	-92.599072
Carlton	St. Louis River	04010201	1	MN_NWI-345	TBD	1111.9	PEM	TBD	TBD	402.1	0.08	1.07	-	-	1.07	49	18	26, 27	NWSW, NESE	46.699897	-92.598373
Carlton	St. Louis River	04010201	1	MN_NWI-355	TBD	1112.0	PFO	TBD	TBD	-	-	-	0.08	-	0.08	49	18	27	NESE, SESE	46.696933	-92.597982
Carlton	St. Louis River	04010201	1	MN_NWI-363	TBD	1112.0	PSS	TBD	TBD	-	-	0.02	-	-	0.02	49	18	27	SESE	46.696575	-92.597815
Carlton	St. Louis River	04010201	1	MN_NWI-372	TBD	1112.1	PUB	TBD	TBD	105.8	0.02	0.18	-	-	0.18	49	18	26	NWSW	46.697786	-92.595686
Carlton	St. Louis River	04010201	1	MN_NWI-354	TBD	1112.1	PFO	TBD	TBD	-	-	-	0.09	-	0.09	49	18	26	SWSW	46.696592	-92.596552
Carlton	Kettle River	07030003	6	w-49n18w26-e	6/9/2018	1112.3	PSS	Seasonally Flooded Basins	Type 1	-	-	0.00	0.02	-	0.02	49	18	26	SWSW	46.695566	-92.592361
Carlton	Kettle River	07030003	6	w-49n18w26-a	6/8/2018	1112.3	PEM	Deep and Shallow Marshes	Type 3	894.0	0.17	1.76	-	-	1.76	49	18	26	SWSW, SESW	46.695287	-92.592207
Carlton	Kettle River	07030003	6	w-49n18w26-a	6/8/2018	1112.4	PFO	Hardwood Swamps	Type 7	-	-	-	0.00	-	0.00	49	18	26	SESW	46.694676	-92.59149
Carlton	St. Louis River	04010201	1	w-49n18w26-a	6/8/2018	1112.5	PSS	Shrub Carr	Type 6	-	-	0.26	0.01	-	0.28	49	18	26	SESW	46.693805	-92.590168
Carlton	Kettle River	07030003	6	MN_NWI-353	TBD	1112.5	PFO	TBD	TBD	266.3	0.05	-	0.72	-	0.72	49	18	35	NENW	46.693151	-92.589735
Carlton	St. Louis River	04010201	1	MN_NWI-358	TBD	1112.6	PFO	TBD	TBD	436.7	0.08	-	0.69	-	0.69	49	18	35	NENW	46.692374	-92.588393
Carlton	St. Louis River	04010201	1	w-49n18w35-n	7/6/2018	1112.7	PSS	Shrub Carr	Type 6	-	-	0.08	-	-	0.08	49	18	35	NWNE	46.693092	-92.58321
Carlton	St. Louis River	04010201	1	w-49n18w35-o	7/6/2018	1112.7	PSS	Shrub Carr	Type 6	-	-	0.00	-	-	0.00	49	18	35	NWNE	46.693045	-92.583289
Carlton	Kettle River	07030003	6	w-49n18w35-c	6/6/2018	1112.8	PEM	Deep and Shallow Marshes	Type 3	2,060.2	0.39	4.90	-	-	4.90	49	18	35	NWNE, NESE, SWNE, SENE	46.690398	-92.586106
Carlton	Kettle River	07030003	6	w-49n18w35-c	6/6/2018	1112.8	PFO	Coniferous Bogs	Type 8	-	-	-	0.03	-	0.03	49	18	35	NWNE, SWNE	46.690054	-92.585914
Carlton	Kettle River	07030003	6	w-49n18w35-c	6/6/2018	1112.9	PUB	Shallow Open Water	Type 5	389.0	0.07	0.81	-	-	0.81	49	18	35	NESE, SWNE	46.689024	-92.584731
Carlton	St. Louis River	04010201	1	MN_NWI-357	TBD	1113.0	PFO	TBD	TBD	-	-	-	0.02	-	0.02	49	18	35	SENE	46.689914	-92.578613
Carlton	St. Louis River	04010201	1	w-49n18w35-l	7/6/2018	1113.0	PEM	Sedge Meadows	Type 2	-	-	0.15	-	-	0.15	49	18	35	SENE	46.689853	-92.578282
Carlton	St. Louis River	04010201	1	MN_NWI-370	TBD	1113.0	PSS	TBD	TBD	-	-	0.00	-	-	0.00	49	18	35	SENE	46.689922	-92.577968
Carlton	Kettle River	07030003	6	w-49n18w36-d	6/7/2018	1113.5	PEM	Deep and Shallow Marshes	Type 3	773.8	0.15	1.51	-	-	1.51	49	18	35, 36	NWSW, NESE, SWSW	46.682785	-92.576166
Carlton	Kettle River	07030003	6	w-49n18w36-d	6/7/2018	1113.6	PSS	Shrub Carr	Type 6	119.7	0.02	0.49	0.21	-	0.69	49	18	36	SWSW	46.68153	-92.573715
Carlton	Kettle River	07030003	6	w-49n18w36-c	6/7/2018	1113.8	PEM	Seasonally Flooded Basins	Type 1	-	-	0.06	-	-	0.06	49	18	36	SWSW, SESW	46.680643	-92.570944
Carlton	Kettle River	07030003	6	w-49n18w36-c	6/7/2018	1113.8	PFO	Seasonally Flooded Basins	Type 1	-	-	-	0.01	-	0.01	49	18	36	SWSW, SESW	46.680589	-92.570921

Attachment F
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Carlton	Kettle River	07030003	6	w-49n18w36-a	6/7/2018	1113.9	PEM	Sedge Meadows	Type 2	317.3	0.06	0.63	-	-	0.63	49	18	36	SESW	46.67964	-92.568554
Carlton	Kettle River	07030003	6	w-49n18w36-a	6/7/2018	1113.9	PUB	Shallow Open Water	Type 5	88.6	0.02	0.21	-	-	0.21	49	18	36	SESW	46.6794	-92.568305
Carlton	Kettle River	07030003	6	w-49n18w36-a	6/7/2018	1113.9	PSS	Shrub Carr	Type 6	-	-	0.03	0.01	-	0.04	49	18	36	SESW	46.679539	-92.568605
Carlton	St. Louis River	04010201	1	w-48n18w1-a	6/5/2018	1114.1	PEM	Fresh (wet) Meadow	Type 2	232.3	0.04	0.55	-	-	0.55	48	18	1	NWNE	46.677576	-92.564119
Carlton	St. Louis River	04010201	1	w-48n18w1-a	6/5/2018	1114.2	PSS	Shrub Carr	Type 6	-	-	0.01	-	-	0.01	48	18	1	NWNE	46.677245	-92.563722
Carlton	St. Louis River	04010201	1	w-48n18w1-b	6/5/2018	1114.7	PSS	Alder Thickets	Type 6	941.9	0.18	0.93	1.09	-	2.02	48	18	1, 6	SWNW, SENE	46.672852	-92.555998
Carlton	St. Louis River	04010201	1	w-48n18w1-b	6/5/2018	1114.7	PFO	Hardwood Swamps	Type 7	-	-	-	0.10	-	0.10	48	18	1, 6	SWNW, SENE	46.672599	-92.55584
Carlton	St. Louis River	04010201	1	w-48n17w6-d	6/5/2018	1114.9	PFO	Hardwood Swamps	Type 7	71.9	0.01	-	0.17	-	0.17	48	17	6	NWSW	46.670119	-92.552555
Carlton	St. Louis River	04010201	1	w-48n17w6-d	6/5/2018	1114.9	PSS	Shrub Carr	Type 6	483.0	0.09	0.64	0.55	-	1.19	48	17	6	NWSW	46.669819	-92.552066
Carlton	St. Louis River	04010201	1	w-48n17w6-b	6/9/2018	1115.0	PEM	Fresh (wet) Meadow	Type 2	44.2	0.01	0.10	-	-	0.10	48	17	6	NWSW	46.668937	-92.55121
Carlton	St. Louis River	04010201	1	MN_NWI-380	TBD	1115.0	PFO	TBD	TBD	38.4	0.01	-	0.08	-	0.08	48	17	6	NWSW	46.668667	-92.55096
Carlton	St. Louis River	04010201	1	w-48n17w6-a	6/4/2018	1115.1	PSS	Alder Thickets	Type 6	-	-	0.02	-	-	0.02	48	17	6	NWSW	46.668161	-92.551015
Carlton	St. Louis River	04010201	1	w-48n17w6-a	6/4/2018	1115.1	PFO	Coniferous Swamps	Type 7	-	-	-	1.19	-	1.19	48	17	6	NWSW, SWSW, SESW	46.667937	-92.550466
Carlton	St. Louis River	04010201	1	w-48n17w6-a	6/4/2018	1115.1	PEM	Deep and Shallow Marshes	Type 3	1,325.8	0.25	2.17	-	-	2.17	48	17	6	NWSW, NESW, SWSW, SESW	46.668053	-92.550145
Carlton	St. Louis River	04010201	1	w-48n17w6-a	6/4/2018	1115.3	PUB	Shallow Open Water	Type 5	-	-	0.04	-	-	0.04	48	17	6	SESW	46.666306	-92.54717
Carlton	St. Louis River	04010201	1	w-48n17w6-z	6/13/2018	1115.6	PSS	Alder Thickets	Type 6	144.5	0.03	0.15	0.17	-	0.32	48	17	6	SWSE	46.66409	-92.542157
Carlton	St. Louis River	04010201	1	w-48n17w8-h	7/12/2018	1116.1	PEM	Fresh (wet) Meadow	Type 2	-	-	0.02	-	-	0.02	48	17	8	SWNW	46.65974	-92.532504
Carlton	St. Louis River	04010201	1	MN_NWI-458	TBD	1116.1	PSS	TBD	TBD	-	-	0.00	-	-	0.00	48	17	8	SWNW	46.659143	-92.532858
Carlton	St. Louis River	04010201	1	w-48n17w8-a	7/12/2018	1116.1	PEM	Deep and Shallow Marshes	Type 3	1,080.1	0.20	2.06	-	-	2.06	48	17	8	SWNW, SENW	46.659622	-92.53241
Carlton	St. Louis River	04010201	1	w-48n17w8-a	9/15/2017	1116.1	PSS	Shrub Carr	Type 6	-	-	0.21	-	-	0.21	48	17	8	SWNW	46.659274	-92.532296
Carlton	St. Louis River	04010201	1	w-48n17w8-h	7/12/2018	1116.1	PSS	Shrub Carr	Type 6	-	-	0.02	-	-	0.02	48	17	8	SWNW	46.659681	-92.53234
Carlton	St. Louis River	04010201	1	w-48n17w8-a	9/15/2017	1116.2	PFO	Coniferous Swamps	Type 7	-	-	-	0.24	-	0.24	48	17	8	SWNW, SENW	46.658652	-92.530768
Carlton	St. Louis River	04010201	1	w-48n17w8-i	7/12/2018	1116.3	PSS	Shrub Carr	Type 6	-	-	0.05	-	-	0.05	48	17	8	SWNW, SENW	46.658181	-92.528492
Carlton	St. Louis River	04010201	1	w-48n17w8-b	9/15/2017	1116.5	PEM	Deep and Shallow Marshes	Type 3	2,326.9	0.44	3.81	-	-	3.81	48	17	8	NWSE, NESE, NESW, SENW, SESE	46.656539	-92.524546
Carlton	St. Louis River	04010201	1	w-48n17w8-b	9/15/2017	1116.6	PSS	Shrub Carr	Type 6	450.0	0.09	0.77	0.53	-	1.30	48	17	8	NWSE, NESW	46.655937	-92.523556
Carlton	St. Louis River	04010201	1	w-48n17w8-b	9/16/2017	1116.9	PFO	Hardwood Swamps	Type 7	252.5	0.05	-	1.60	-	1.60	48	17	8	NWSE, NESE, SESE	46.653912	-92.518933
Carlton	St. Louis River	04010201	1	MN_NWI-378	TBD	1117.5	PEM	TBD	TBD	117.5	0.02	0.26	-	-	0.26	48	17	16	NWNW	46.64688	-92.510676
Carlton	St. Louis River	04010201	1	MN_NWI-377	TBD	1117.6	PEM	TBD	TBD	-	-	0.00	-	-	0.00	48	17	16	NWNW	46.646461	-92.509976
Carlton	St. Louis River	04010201	1	w-48n17w16-a	9/16/2017	1117.6	PEM	Fresh (wet) Meadow	Type 2	1,842.3	0.35	3.87	-	-	3.87	48	17	16	NWNW, SWNW, SENW	46.645895	-92.509873
Carlton	St. Louis River	04010201	1	w-48n17w16-a	9/16/2017	1117.6	PFO	Coniferous Swamps	Type 7	-	-	-	0.94	-	0.94	48	17	16	NWNW, SWNW, SENW	46.645605	-92.509781
Carlton	St. Louis River	04010201	1	w-48n17w16-i	6/19/2018	1117.8	PEM	Fresh (wet) Meadow	Type 2	-	-	0.04	-	-	0.04	48	17	16	SWNW, SENW	46.64306	-92.506836
Carlton	St. Louis River	04010201	1	w-48n17w16-i	6/19/2018	1117.8	PSS	Shrub Carr	Type 6	-	-	0.02	-	-	0.02	48	17	16	SENW	46.642757	-92.50672
Carlton	St. Louis River	04010201	1	w-48n17w16-a	9/16/2017	1117.9	PSS	Alder Thickets	Type 6	-	-	0.33	0.00	-	0.33	48	17	16	SENW	46.644971	-92.504178
Carlton	St. Louis River	04010201	1	w-48n17w16-h	6/19/2018	1118.0	PSS	Shrub Carr	Type 6	110.0	0.02	0.11	0.13	-	0.24	48	17	16	SENW	46.644818	-92.502168
Carlton	St. Louis River	04010201	1	w-48n17w16-f	6/19/2018	1118.0	PFO	Hardwood Swamps	Type 7	110.6	0.02	-	0.54	-	0.54	48	17	16	SWNE, SENW	46.644676	-92.501701
Carlton	St. Louis River	04010201	1	w-48n17w16-f	6/19/2018	1118.0	PEM	Fresh (wet) Meadow	Type 2	1,798.8	0.34	3.01	-	-	3.01	48	17	16	SWNE, SENW, SENE	46.64477	-92.501569
Carlton	St. Louis River	04010201	1	MN_NWI-387	TBD	1118.0	PFO	TBD	TBD	0.3	0.00	-	0.00	-	0.00	48	17	16	SWNE, SENW	46.644629	-92.501512
Carlton	St. Louis River	04010201	1	MN_NWI-384	TBD	1118.1	PEM	TBD	TBD	-	-	0.00	-	-	0.00	48	17	16	SWNE	46.644675	-92.499642

Attachment F
Line 3 Replacement Project
Wetland Table

County	Major Watershed	Hydologic Unit Code (HUC) 8	Bank Service Area (BSA)	Feature ID	Survey Date	Approx. Milepost	Cowardin [a]	Eggers and Reed [a]	Circular 39 [a]	Crossing length (feet) b	Crossing length (miles) b	Temporary Impacts (acres) c	Permanent Conversion (acres) d	Permanent Fill (acres)	Total Impacts (acres)	Township	Range	Section	Quarter-Quarter Section	Latitude	Longitude
Carlton	St. Louis River	04010201	1	w-48n17w16-f	9/18/2017	1118.2	PSS	Alder Thickets	Type 6	576.8	0.11	1.76	0.95	-	2.70	48	17	16	SWNE, SENE	46.644189	-92.498398
Carlton	Nemadji River	04010301	1	w-48n17w15-c	9/18/2017	1119.5	PEM	Fresh (wet) Meadow	Type 2	114.5	0.02	0.21	-	-	0.21	48	17	15	SESE	46.635489	-92.474224
Carlton	Nemadji River	04010301	1	CR101a1W	6/10/2014	1120.2	PSS	Shrub Carr	Type 6	50.6	0.01	-	0.05	-	0.05	48	17	14	SESW	46.637276	-92.461364
Carlton	Nemadji River	04010301	1	CR103b1W	6/9/2014	1120.3	PFO	Hardwood Swamps	Type 7	23.6	0.00	-	0.04	-	0.04	48	17	14	SWSE	46.637594	-92.457994
Carlton	Nemadji River	04010301	1	CR103c1W	6/9/2014	1120.4	PFO	Hardwood Swamps	Type 7	-	-	-	0.00	-	0.00	48	17	14	SWSE	46.637577	-92.45765
Carlton	Nemadji River	04010301	1	CR104a1W	7/15/2013	1120.5	PSS	Shrub Carr	Type 6	96.4	0.02	0.00	0.11	-	0.11	48	17	14	SWSE, SESE	46.637841	-92.454296
Carlton	Nemadji River	04010301	1	CR104a1W	7/15/2013	1120.5	PEM	Shallow Marshes	Type 3	53.0	0.01	0.06	-	-	0.06	48	17	14	SWSE, SESE	46.637873	-92.454231
Carlton	Nemadji River	04010301	1	CR117a1W	7/15/2013	1121.6	PFO	Hardwood Swamps	Type 7	-	-	-	0.02	-	0.02	48	17	24	SWNE	46.629929	-92.437332
Carlton	Nemadji River	04010301	1	CR117b1W	7/22/2014	1121.6	PSS	Shrub Carr	Type 6	-	-	-	0.00	-	0.00	48	17	24	SWNE	46.62978	-92.436739
Carlton	Nemadji River	04010301	1	w-48n17w24-a	6/7/2017	1121.9	PEM	Deep and Shallow Marshes	Type 3	-	-	0.02	-	-	0.02	48	17	24	Meandered waterbody	46.623137	-92.436226
Carlton	Nemadji River	04010301	1	w-48n17w24-a	6/7/2017	1121.9	PUB	Deep and Shallow Marsh	Type 4	-	-	0.01	-	-	0.01	48	17	24	Meandered waterbody	46.623106	-92.436237
Carlton	Nemadji River	04010301	1	CR119c1W	6/13/2013	1122.4	PEM	Sedge Meadows	Type 2	259.9	0.05	0.58	-	-	0.58	48	16	19	NWSW	46.624366	-92.422923
Carlton	Nemadji River	04010301	1	CR120a1W	6/13/2013	1122.5	PEM	Fresh (wet) Meadow	Type 2	-	-	0.09	-	-	0.09	48	16	19	NESW, SESW	46.623675	-92.42111
Carlton	Nemadji River	04010301	1	CR123a1W	6/13/2013	1122.9	PEM	Fresh (wet) Meadow	Type 2	-	-	0.23	-	-	0.23	48	16	30	NWNE	46.619038	-92.415565
Carlton	Nemadji River	04010301	1	CR124a1W	6/2/2014	1123.0	PSS	Shrub Carr	Type 6	-	-	0.02	-	-	0.02	48	16	30	NWNE	46.618239	-92.414077
Carlton	Nemadji River	04010301	1	CR126a1W	6/13/2013	1123.2	PEM	Fresh (wet) Meadow	Type 2	326.1	0.06	0.49	-	-	0.49	48	16	30	NWNE, NENE	46.616927	-92.41184
Carlton	Nemadji River	04010301	1	CR126a1W	6/13/2013	1123.2	PSS	Shrub Carr	Type 6	-	-	0.29	0.01	-	0.30	48	16	30	NWNE, NENE	46.616877	-92.411745
Carlton	St. Louis River	04010201	1	CR127a1W	6/14/2013	1123.4	PSS	Shrub Carr	Type 6	-	-	0.11	-	-	0.11	48	16	30	SENE	46.61449	-92.407305
Carlton	St. Louis River	04010201	1	CR127a1W	6/14/2013	1123.4	PEM	Fresh (wet) Meadow	Type 2	162.8	0.03	0.44	-	-	0.44	48	16	30	SENE	46.614353	-92.407458
Carlton	St. Louis River	04010201	1	CR128a1W	6/14/2013	1123.5	PEM	Fresh (wet) Meadow	Type 2	182.3	0.03	0.59	-	-	0.59	48	16	29, 30	SWNW, SENE	46.613912	-92.406357
Carlton	St. Louis River	04010201	1	CR128a1W	6/14/2013	1123.5	PSS	Shrub Carr	Type 6	-	-	0.33	-	-	0.33	48	16	29	SWNW	46.613902	-92.406015
Carlton	St. Louis River	04010201	1	CR130b1W	6/14/2013	1123.8	PEM	Fresh (wet) Meadow	Type 2	302.4	0.06	0.58	-	-	0.58	48	16	29	NESW, SWNW, SENW	46.612795	-92.401135
Carlton	St. Louis River	04010201	1	CR130b1W	6/14/2013	1123.8	PSS	Shrub Carr	Type 6	-	-	0.16	-	-	0.16	48	16	29	NESW, SENW	46.612894	-92.400793
Carlton	St. Louis River	04010201	1	CR130b1W	6/14/2013	1123.8	PFO	Coniferous Bogs	Type 8	-	-	-	0.08	-	0.08	48	16	29	NESW, SENW	46.612657	-92.400364
Carlton	St. Louis River	04010201	1	CR130a1W	6/14/2013	1123.9	PFO	Hardwood Swamps	Type 7	-	-	-	0.04	-	0.04	48	16	29	NESW	46.611416	-92.398643
Carlton	St. Louis River	04010201	1	CR132_210a1W	5/20/2014	1124.6	PEM	Fresh (wet) Meadow	Type 2	12.8	0.00	0.03	-	-	0.03	48	16	29	NESE	46.609754	-92.385478
Carlton	St. Louis River	04010201	1	CA133a1W	6/12/2013	1124.8	PEM	Seasonally Flooded Basins	Type 1	162.5	0.03	0.45	-	-	0.45	48	16	28	NWSW	46.609225	-92.380665
Carlton	Nemadji River	04010301	1	CR135a1W	5/19/2014	1124.9	PEM	Fresh (wet) Meadow	Type 2	702.8	0.13	1.20	-	-	1.20	48	16	28	SESW	46.608881	-92.377882
Carlton	Nemadji River	04010301	1	CR144a1W	6/12/2013	1126.2	PEM	Fresh (wet) Meadow	Type 2	87.2	0.02	0.17	-	-	0.17	48	16	34	NWNE	46.603345	-92.352662
Carlton	Nemadji River	04010301	1	CR144a1W	6/12/2013	1126.2	PSS	Shrub Carr	Type 6	-	-	0.05	-	-	0.05	48	16	34	NWNE	46.603447	-92.352471
Carlton	Nemadji River	04010301	1	CR145a1W	6/12/2013	1126.4	PEM	Fresh (wet) Meadow	Type 2	232.1	0.04	0.19	-	-	0.19	48	16	34	SWNE	46.600888	-92.35071
Carlton	Nemadji River	04010301	1	CR145a1W	6/12/2013	1126.5	PUB	Shallow Open Water	Type 5	-	-	0.02	-	-	0.02	48	16	34	SWNE	46.599808	-92.349237
Carlton	Nemadji River	04010301	1	CR145a1W	6/12/2013	1126.5	PSS	Shrub Carr	Type 6	41.2	0.01	0.11	0.05	-	0.15	48	16	34	SWNE	46.599649	-92.349025
Carlton	Nemadji River	04010301	1	CR147a1W	6/21/2013	1126.7	PSS	Shrub Carr	Type 6	11.1	0.00	0.01	0.02	-	0.03	48	16	34	SENE	46.598192	-92.346273
Carlton	Nemadji River	04010301	1	CR149_200b1W	6/2/2014	1126.9	PEM	Fresh (wet) Meadow	Type 2	49.8	0.01	0.16	-	-	0.16	48	16	35	SWNW	46.598327	-92.341516
Carlton	Nemadji River	04010301	1	CR149_200a1W	5/29/2014	1127.0	PEM	Fresh (wet) Meadow	Type 2	-	-	0.02	-	-	0.02	48	16	35	SWNW	46.598247	-92.339355
Carlton	Nemadji River	04010301	1	CRR51010_638c1W	5/31/2014	1127.1	PFO	Hardwood Swamps	Type 7	-	-	-	0.08	-	0.08	48	16	35	SENW	46.598159	-92.337643

Attachment F
Line 3 Replacement Project
Wetland Table

County	Major Watershed	Hydologic Unit Code (HUC) 8	Bank Service Area (BSA)	Feature ID	Survey Date	Approx. Milepost	Cowardin [a]	Eggers and Reed [a]	Circular 39 [a]	Crossing length (feet) b	Crossing length (miles) b	Temporary Impacts (acres) c	Permanent Conversion (acres) d	Permanent Fill (acres)	Total Impacts (acres)	Township	Range	Section	Quarter-Quarter Section	Latitude	Longitude
Carlton	St. Louis River	04010201	1	CRR51010_640a1W	6/15/2015	1127.6	PFO	Hardwood Swamps	Type 7	-	-	-	0.02	-	0.02	48	16	35	SWNE, SENE	46.598027	-92.327545
Carlton	St. Louis River	04010201	1	CR156_200a1W	5/20/2014	1127.7	PFO	Hardwood Swamps	Type 7	29.5	0.01	-	0.05	-	0.05	48	16	35	SENE	46.598106	-92.325209
Carlton	St. Louis River	04010201	1	CR156_200a1W	9/19/2014	1127.7	PEM	Fresh (wet) Meadow	Type 2	-	-	0.00	-	-	0.00	48	16	35	SENE	46.598008	-92.325185
Carlton	St. Louis River	04010201	1	CR157_200a1W	9/20/2014	1128.0	PSS	Alder Thickets	Type 6	39.0	0.01	0.03	0.04	-	0.07	48	16	36	SWNW	46.598344	-92.319518
Carlton	St. Louis River	04010201	1	CR159_200a1W	5/31/2014	1128.3	PFO	Hardwood Swamps	Type 7	-	-	-	0.04	-	0.04	48	16	36	NESW, SENW	46.597977	-92.313986
Carlton	St. Louis River	04010201	1	CR161b1W	9/19/2014	1128.8	PEM	Sedge Meadows	Type 2	36.6	0.01	0.05	-	-	0.05	48	16	36	NESE	46.596928	-92.303529
Carlton	St. Louis River	04010201	1	CR162c1W	5/29/2014	1128.9	PEM	Fresh (wet) Meadow	Type 2	35.7	0.01	0.08	-	-	0.08	48	15	31	NWSW	46.596728	-92.300415
Carlton	St. Louis River	04010201	1	CR162c1W	6/26/2015	1128.9	PFO	Hardwood Swamps	Type 7	32.7	0.01	-	0.06	-	0.06	48	15	31	NWSW	46.596551	-92.300274
Carlton	St. Louis River	04010201	1	w-48n15w31-a	10/9/2014	1128.9	PFO	Hardwood Swamps	Type 7	-	-	-	0.01	-	0.01	48	15	31	NWSW	46.596573	-92.30003
Carlton	St. Louis River	04010201	1	CR162a1W	6/26/2015	1128.9	PEM	Fresh (wet) Meadow	Type 2	-	-	0.01	-	-	0.01	48	15	31	NWSW	46.596294	-92.300168
Carlton	St. Louis River	04010201	1	CR162e1W	6/25/2015	1129.0	PEM	Fresh (wet) Meadow	Type 2	-	-	0.03	-	-	0.03	48	15	31	NWSW	46.595877	-92.300083
Carlton	St. Louis River	04010201	1	CR162b1W	6/13/2013	1129.0	PEM	Sedge Meadows	Type 2	255.3	0.05	0.70	-	-	0.70	48	15	31	NWSW	46.595901	-92.29956
Carlton	St. Louis River	04010201	1	CR162i1W	6/29/2015	1129.1	PEM	Fresh (wet) Meadow	Type 2	48.8	0.01	0.06	-	-	0.06	48	15	31	NWSW	46.595886	-92.298006
Carlton	St. Louis River	04010201	1	CR163a1W	6/13/2013	1129.1	PEM	Fresh (wet) Meadow	Type 2	1,005.8	0.19	1.55	-	-	1.55	48	15	31	NWSW, NESW	46.595978	-92.297279
Carlton	St. Louis River	04010201	1	CR163b1W	8/1/2016	1129.3	PEM	Fresh (wet) Meadow	Type 2	81.3	0.02	0.18	-	-	0.18	48	15	31	NESW	46.595715	-92.293016
									TOTAL	**413,452.1**	**78.31**	**587.26**	**459.24**	**10.78**	**1,057.27**						

[a] PEM = Palustrine Emergent; PSS=Palustrine Scrub Shrub; PFO = Palustrine Forested; PUB = Palustrine Unconsolidated Bottom (Cowardin et al, 1979). Eggers, S. D. and D. M. Reed. 1987. Wetland Plants and Communities of Minnesota and Wisconsin. St. Paul. U.S. Army Corps of Engineers.

[b] Crossing length of proposed pipeline centerline across wetlands. No crossing length indicates the wetland is within the construction workspace, but is not crossed by the proposed pipeline.

[c] Area of wetland impact within the construction design workspace based typically on a 95-foot-wide workspace, including temporary dredge and fill areas, travel lanes, and staging areas.

[d] Permanent conversion impacts include PFO wetland impacts within the construction workspace and the area where PSS wetlands occur within the new permanent easement where the pipeline corridor will be maintained by periodic clearing activities.

[e] All or part of wetland crossing is included within a segment associated with a horizontal direction drill where no trenching activities will occur.

Attachment G

Additional Temporary Workspace within Wetlands

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Attachment G
Line 3 Replacement Project
Additional Temporary Workspace within Wetlands

County	Milepost	Wetland Feature ID	Cowardin [a]	Temporary Impacts (acres)	Permanent Conversion (acres) b
Kittson	801.8	w-160n50w9-a	PEM	2.54	-
Marshall	828.6	w-157n47w16-b	PEM	0.00	-
Marshall	839.5	w-156n46w33-c	PSS	0.04	-
Marshall	839.5	w-156n46w33-c	PEM	0.10	-
Marshall	845.2	w-155n45w17-a	PEM	2.17	-
Marshall	845.7	w-155n45w20-a	PSS	0.29	-
Marshall	845.7	w-155n45w20-a	PEM	0.76	-
Pennington	855.8	w-154n44w28-aa	PEM	0.61	-
Pennington	855.8	w-154n44w28-aa	PFO	-	0.44
Pennington	860.6	w-153n44w12-b	PEM	0.07	-
Pennington	864.2	w-153n43w29-g	PEM	0.15	-
Red Lake	875.7	w-151n42w9-e	PEM	0.01	-
Red Lake	876.0	w-151n42w9-j	PEM	0.06	-
Red Lake	876.2	w-151n42w9-i	PEM	0.17	-
Polk	894.6	w-150n39w30-a	PEM	2.38	-
Clearwater	913.1	CLC5007a1W	PEM	0.36	-
Clearwater	914.1	CLC5011a1W	PEM	0.48	-
Clearwater	914.8	CLC5012b1W	PFO	-	0.07
Clearwater	914.8	CLC5012g1W	PFO	-	0.08
Clearwater	927.5	w-146n37w12-p	PEM	0.06	-
Clearwater	936.7	w-145n36w11-h	PFO	-	0.20
Clearwater	936.7	w-145n36w11-h	PSS	0.21	-
Clearwater	937.7	w-145n36w11-a	PEM	0.07	-
Clearwater	940.8	CLC5096a1W	PSS	0.42	-
Clearwater	941.2	CLC5098a1W	PFO	-	0.41
Clearwater	941.3	CLC5098a1W	PSS	0.69	-
Clearwater	945.6	CLC5122a1W	PFO	-	4.57
Hubbard	964.1	HUC5082b1W	PEM	0.30	-
Hubbard	964.3	HUC5085a1W	PEM	0.07	-
Hubbard	964.4	HUC5083a1W	PEM	0.69	-
Hubbard	966.2	w-141n35w29-aa	PEM	0.11	-
Wadena	997.5	WA021a1W	PEM	0.16	-
Cass	997.5	CAC5001_500a1W	PEM	0.19	-
Cass	997.6	CAC5001_500a1W	PSS	0.22	-
Cass	998.6	CAC5001_520a1W	PFO	-	0.14
Cass	1001.6	CA011cW	PSS	0.24	-
Cass	1013.4	w-138n30w10-aa	PEM	0.57	-
Cass	1013.4	w-138n30w10-ab	PUB	0.01	-
Cass	1029.9	CA101cW	PUB	0.01	-
Cass	1037.7	w-139n26w20-ac	PEM	0.03	-
Cass	1039.9	CA143qW	PSS	0.01	-
Aitkin	1056.4	w-51n26w33-b	PFO	-	3.36

Attachment G
Line 3 Replacement Project
Additional Temporary Workspace within Wetlands

County	Milepost	Wetland Feature ID	Cowardin [a]	Temporary Impacts (acres)	Permanent Conversion (acres) b
Aitkin	1067.4	w-51n24w28-a	PSS	2.10	-
Aitkin	1070.3	MN_NWI-074	PSS	0.62	-
Aitkin	1070.7	w-51n24w26-aa	PEM	0.25	-
Aitkin	1072.0	w-51n24w25-f	PEM	0.08	-
Aitkin	1072.7	w-51n23w30-e	PFO	-	0.51
Aitkin	1077.1	w-51n23w23-e	PEM	0.72	-
Aitkin	1078.0	w-51n22w18-g	PSS	0.01	-
Aitkin	1079.2	w-51n22w8-a	PEM	0.06	-
Aitkin	1079.6	w-51n22w8-a	PSS	0.00	-
Aitkin	1080.3	MN_NWI-269	PFO	-	1.63
Aitkin	1080.3	w-51n22w17-y	PEM	0.02	-
St. Louis	1084.6	MN_NWI-464	PEM	1.16	-
St. Louis	1084.8	MN_NWI-475	PFO	-	18.66
St. Louis	1085.3	MN_NWI-430	PFO	-	0.00
St. Louis	1085.5	w-51n21w20-a	PSS	0.50	-
St. Louis	1085.6	MN_NWI-423	PEM	2.67	-
St. Louis	1086.0	w-51n21w22-a	PSS	8.49	-
St. Louis	1089.3	w-51n21w23-a	PSS	1.54	-
St. Louis	1091.7	w-51n20w20-a	PEM	1.04	-
St. Louis	1093.3	w-51n20w21-e	PEM	0.32	-
St. Louis	1093.6	w-51n20w28-a	PFO	-	0.22
St. Louis	1094.5	w-51n20w27-d	PEM	0.01	-
St. Louis	1096.4	w-50n20w2-a	PSS	0.21	-
St. Louis	1099.7	w-50n19w17-o	PFO	-	0.00
St. Louis	1102.3	MN_NWI-420	PSS	0.13	-
St. Louis	1102.3	MN_NWI-414	PEM	0.12	-
St. Louis	1102.3	MN_NWI-416	PFO	-	0.37
St. Louis	1103.2	w-50n19w26-e	PFO	-	0.01
St. Louis	1103.2	w-50n19w26-e	PSS	0.13	-
St. Louis	1104.1	w-49n19w1-a	PSS	2.41	-
St. Louis	1104.1	w-49n19w1-a	PFO	-	1.85
Carlton	1106.5	MN_NWI-304	PSS	1.02	-
Carlton	1109.8	w-49n18w21-h	PFO	-	0.25
Carlton	1109.8	w-49n18w21-h	PEM	0.05	-
Carlton	1110.3	w-49n18w21-c	PEM	0.53	-
Carlton	1110.5	w-49n18w21-b	PFO	-	0.04
Carlton	1110.5	w-49n18w21-b	PSS	0.14	-
Carlton	1111.1	w-49n18w27-b	PSS	0.60	-
Carlton	1111.5	w-49n18w27-a	PFO	-	0.76
Carlton	1112.5	MN_NWI-353	PFO	-	0.45
Carlton	1112.9	w-49n18w35-c	PUB	0.36	-
Carlton	1113.6	w-49n18w36-d	PSS	0.49	-

Attachment G
Line 3 Replacement Project
Additional Temporary Workspace within Wetlands

County	Milepost	Wetland Feature ID	Cowardin [a]	Temporary Impacts (acres)	Permanent Conversion (acres) b
Carlton	1114.9	w-48n17w6-d	PSS	0.64	-
Carlton	1115.1	w-48n17w6-a	PSS	0.02	-
Carlton	1115.1	w-48n17w6-a	PFO	-	1.00
Carlton	1116.1	MN_NWI-458	PSS	0.00	-
Carlton	1117.6	w-48n17w16-a	PEM	1.82	-
Carlton	1117.6	w-48n17w16-a	PFO	-	0.48
Carlton	1121.9	w-48n17w24-a	PEM	0.02	-
Carlton	1121.9	w-48n17w24-a	PUB	0.01	-
Carlton	1123.5	CR128a1W	PSS	0.33	-
Carlton	1129.0	CR162b1W	PEM	0.41	-
			TOTAL	**43.28**	**35.49**

[a] PEM = Palustrine Emergent; PSS=Palustrine Scrub Shrub; PFO = Palustrine Forested; PUB = Palustrine Unconsolidated Bottom (Cowardin et al, 1979).

[b] Permanent conversion impacts include PFO wetland impacts within the construction workspace.

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Attachment H

Unanticipated Discoveries Plan

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Unanticipated Discoveries Plan

Enbridge Energy, Limited Partnership • Line 3 Replacement Project

September 2018

ENBRIDGE®

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TABLE OF CONTENTS

APPENDICES

ACRONYMS AND ABBREVIATIONS

ACHP	Advisory Council on Historic Preservation
CFR	Code of Federal Regulations
EI	Environmental Inspector
Enbridge	Enbridge Energy, Limited Partnership
MIAC	Minnesota Indian Affairs Council
Minn. Stat.	Minnesota Statute
NDAC	North Dakota Administrative Code
NDCC	North Dakota Century Code
NPS	National Park Service
NRHP	National Register of Historic Places
OSA	Office of the State Archaeologist
Project	Line 3 Replacement Project
RFA	Responsible Federal Agency
SHPO	State Historic Preservation Office
TCP	Traditional Cultural Property
TCR	Traditional Cultural Resources
THPO	Tribal Historic Preservation Office
UDP	Unanticipated Discoveries Plan
USACE	United States Army Corps of Engineers

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DEFINITIONS

"Consulting Tribe," means a Tribe included in the National Historic Preservation Act Section 106 consultation for this Project.

"Traditional Cultural Properties" ("TCPs"), means a subtype of historic properties recognized as eligible for listing on the Minnesota State and/or NRHP, as further defined in National Register Bulletin #38, "Guidelines for Evaluating and Documenting Traditional Cultural Properties" and other federal guidance.

"Traditional Cultural Landscapes," means a subtype of historic properties recognized as eligible for listing on the Minnesota State and/or NRHP, as further defined by National Park Service Preservation Brief 36, "Protecting Cultural Landscapes: Planning, Treatment and Management of Historic Landscapes" and other federal guidance.

"Traditional Cultural Resources Survey" ("TCR") Survey, which will be conducted in accordance with existing state and federal guidance and requirements, is intended to comply with the Enbridge's federal, state, and contracted obligations to conduct a survey of tribal historic properties and other cultural resources that may be affected by the Project, and must include: field surveys to identify Tribal Sites along the entire length of any approved route that identify (preserving confidentiality of sites) (sic); literature review; the results of Tribal consultation; and other matters.

"Tribal Cultural Resources," is an umbrella term to refer to all historic properties of importance to tribes (including but not limited to both TCPs and Traditional Cultural Landscapes) and any other cultural resources of importance to tribes.

"Tribal Monitor," means a monitor the Permittee is required to hire to represent the interests of Tribes in the field during construction and as provided under certain permit conditions.

"Tribe," means a federally recognized Indian tribe.

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1.0 INTRODUCTION

Enbridge Energy, Limited Partnership ("Enbridge") is proposing to construct the Line 3 Replacement Project ("Project"), a maintenance-driven project that would replace the existing Line 3 in its entirety within Minnesota, from the North Dakota border to Enbridge's existing Clearbrook Terminal then continuing to the Wisconsin border.

This Unanticipated Discoveries Plan ("UDP") sets forth the guidelines to be used in the event archaeological resources (includes both prehistoric and historical resources) or human skeletal remains are discovered during construction activities. These measures were developed by Enbridge in accordance with applicable state and federal guidelines. Early and frequent communications are essential in meeting both the spirit and law of those guidelines; therefore, Appendix A shows the most current list of relevant contacts in the event of an unanticipated discovery during construction.

2.0 UNANTICIPATED DISCOVERY CONDITIONS

Pipeline construction excavations have the potential to uncover previously unknown archaeological sites and human skeletal remains, as well as many other cultural and natural elements such as modern refuse and faunal remains. While extensive environmental surveys can effectively eliminate most discoveries during construction, Enbridge is aware that project planning should anticipate even the remote possibility of a discovery.

Enbridge will have the primary responsibility of distinguishing discoveries of significant archaeological sites or human skeletal remains from those that are neither. The former would require ceasing construction activities at the find location followed by a coordinated consultation effort among Enbridge, permitting agencies, landowners, and other interested parties. Identification of the latter (neither significant archaeological sites nor human skeletal remains) would not mean ceasing construction activities or initiation of the consultation process; however, documentation of the event must be made.

When possible archaeological materials or suspected human skeletal remains are identified during ground disturbing activities within the construction corridor, the construction contractor will immediately notify Enbridge's onsite lead Environmental Inspector ("EI") of the discovery.

1. Immediately following notification of the discovery, the lead EI shall:

   (a) Establish and delineate a 25-foot buffer around the edge of the discovery (using flagging and/or fencing), advise the on-site construction manager to halt all ground-disturbing activities within the buffered area until otherwise notified by Enbridge Environment, and implement measures to protect the discovery from looting and vandalism, including a 24-hour watch, if necessary; and

   (b) Contact a qualified Professional Archaeologist (possible archaeological materials) and/or Physical Anthropologist (suspected human skeletal remains) to conduct an assessment of the discovery. The Professional Archaeologist should meet the qualification standards outlined in 36 Code of Federal Regulations ("CFR") Part 61 in order to conduct the assessment. The Physical Anthropologist must be acknowledged as competent to positively identify human skeletal remains.

2. When contacted by the lead EI, the Professional Archaeologist shall gather additional information from the discovery area and assess the potential significance and condition and integrity of the discovery according to the guidelines established by the National Park Service ("NPS") in Bulletin 15 and its amendments:

   (a) The Professional Archaeologist will determine whether or not the discovery is an archaeological site or cultural resource over 45 years of age. If the discovery is an archaeological site or cultural resource greater than 45 years of age, the Professional Archaeologist will record as much information as possible to secure a Smithsonian Trinomial Number from the appropriate state agency. The lead EI would then notify Enbridge Environment to initiate the process outlined in Section 3.0 below.

   (b) If the discovery is not an archaeological site or cultural resource greater than 45 years of age, the Professional Archaeologist will document the discovery for the record and Enbridge's lead EI will advise the on-site construction manager to restart ground-disturbing activities.

3. When contacted by the lead EI, the Physical Anthropologist shall investigate the site to make an assessment of the likely nature of the remains:

   (a) If the remains are likely human, then the lead EI would notify Enbridge Environment to initiate the process outlined in Section 4.0 below.

   (b) If the discovery does not represent human skeletal remains, the Physical Anthropologist will document the discovery for the record and Enbridge's lead EI will advise the on-site construction manager to restart ground-disturbing activities.

3.0 DISCOVERY OF HISTORIC PROPERTIES

Upon the discovery of an archaeological site or cultural resource greater than 45 years of age, the Professional Archaeologist will advise Enbridge Environment of the proper agency notification procedure and recommend a plan of action for the discovery area.

(a) If the discovery area is under the jurisdiction of a federal permit and/or approval, or otherwise subject to federally mandated conditions, Enbridge Environment will advise the Responsible Federal Agency ("RFA") of the resource and provide information regarding its significance and condition and integrity (see Section 3.1 below).

(b) If the discovery is on state land, Enbridge Environment will first advise the land-managing agency of the resource and provide information regarding its significance, condition and integrity and, if directed by the land-managing agency, advise the appropriate State Archaeologist (see Section 3.2 below).

(c) If the discovery is on private land, its disposition will still be subject to the authority of the appropriate state routing agency. Enbridge Environment will advise the state routing agency of the resource and provide information regarding its significance, condition and integrity (see Section 3.3 below).

3.1 FEDERAL AGENCY JURISDICTION

(a) Enbridge Environment will notify the RFA of the resource and provide information regarding its significance and condition and integrity.

(b) Within 24 hours of notification, the RFA shall provide notice of the discovery to other parties who may wish to participate in consultation, including but not limited to the appropriate State Historic Preservation Office ("SHPO"), State Archaeologist, Native American tribal officials (such as the Minnesota Indian Affairs Council ["MIAC"] or Tribal Historic Preservation Office ["THPO"]), state routing authority, state agencies (such as the MPUC), land-managing agencies, or private landowner(s), as applicable.

(c) The RFA shall have 5 calendar days following notification to determine the discovery's eligibility for listing on the National Register of Historic Places ("NRHP") in consultation with the appropriate SHPO and other consulting parties. The RFA may extend the review period by an additional 7 calendar days by providing written notice to consulting parties prior to the expiration of the 5-day calendar period.

(d) For properties determined eligible for listing on the NRHP pursuant to (c) above, Enbridge Environment shall notify the RFA and other consulting parties of Enbridge's proposed treatment measures to resolve adverse effects to the discovered resource. The consulting parties shall comment on the proposed treatment measures within 48 hours. The RFA shall ensure that the recommendations of the consulting parties are considered prior to granting approval of Enbridge-proposed treatment measures. Once approval has been granted by the RFA, Enbridge Environment shall carry out the approved treatment measures and, after doing so, Enbridge may resume construction.

(e) In the event of any disagreements between the consulting parties regarding the NRHP eligibility of the newly discovered property or the treatment measures proposed to mitigate adverse effects to the property, the RFA shall seek and take into account the recommendations of the Advisory Council on Historic Preservation ("ACHP"). Within 48 hours of receipt of a request, ACHP shall provide the RFA with recommendations on how to resolve the dispute.

(f) If, after consultation, the RFA determines that the discovery does not represent an NRHP-eligible resource, the RFA will direct Enbridge Environment to resume ground-disturbing activities at the discovery location at its discretion.

3.2 STATE LANDS

(a) Enbridge Environment will notify the land-managing agency of the resource and provide information regarding its significance and integrity. If directed by the land-managing agency to do so, Enbridge Environment will advise the appropriate State Archaeologist. The State Archaeologist has the discretion to notify Native American tribal officials, state routing authority, and other state agencies as appropriate.

(b) The land-managing agency will have 5 calendar days following notification to consult with the appropriate state archaeologist and other consulting parties, as necessary, about the assessment of the discovery. NPS criteria of eligibility for listing on the NRHP may be considered as a guideline to determine the significance of the find and SHPO may be consulted during the assessment, but the state agency is not obliged to apply NPS standards in making its decision. The land-managing agency may assume the resource

is eligible for listing on the NRHP while consultation occurs and may require avoidance, impact minimization, or mitigation.

(c) For properties determined eligible for listing on the NRHP, Enbridge Environment shall notify the land-managing agency and other consulting parties of the treatment measures it proposes for resolving adverse effects to the resource. The consulting parties shall provide their views on the proposed treatment measures to Enbridge Environment, the land-managing agency and other consulting parties within 48 hours. The land-managing agency shall ensure that the recommendations of the consulting parties are considered prior to granting approval of Enbridge's proposed treatment measures. Once approval has been granted by the land-managing agency, Enbridge Environment shall carry out the approved treatment measures and, after doing so, Enbridge may resume construction.

(d) If, after consultation, the land-managing agency determines that the discovery does not represent an NRHP-eligible or otherwise important resource, the land-managing agency will direct Enbridge Environment to resume ground-disturbing activities, at its discretion, at the discovery location.

3.3 PRIVATE LANDS SUBJECT TO STATE ROUTING AUTHORITY JURISDICTION

(a) Enbridge Environment will notify the state routing authority of the resource and provide information regarding its significance and integrity.

(b) Within 24 hours of notification, the state routing authority shall provide notice of the resource to other parties, including, but not limited to, the appropriate SHPO, the appropriate State Archaeologist, Native American tribal officials, state agencies, and private landowner(s), as applicable.

(c) The state routing authority will have 5 calendar days following notification to consult with the appropriate SHPO and other consulting parties, as necessary, about assessing the discovery. Criteria for eligibility for listing on the NRHP may be considered as a guideline to determine the significance of the find and SHPO may be consulted during the assessment, but the state routing authority is not obliged to apply the standards in making its decision. The state routing authority may assume the resource is eligible for listing on the NRHP while consultation occurs and may require avoidance, impact minimization, or mitigation.

(d) For properties eligible for listing on the NRHP, Enbridge Environment shall notify the state routing authority and other consulting parties of the treatment measures it proposes to resolve impacts to the resource. The consulting parties shall provide their views on the proposed treatment measures within 48 hours. The state routing authority shall ensure that the recommendations of the consulting parties are considered prior to granting approval of Enbridge's proposed treatment measures. Once approval has been granted by the state routing authority, Enbridge Environment shall carry out the approved treatment measures and, after doing so, Enbridge may resume construction.

(e) If, after consultation, the state routing authority determines that the discovery does not represent an NRHP-eligible or otherwise important resource, the state routing authority will direct Enbridge Environment to resume ground-disturbing activities, at its discretion, at the discovery location.

4.0 DISCOVERY OF HUMAN SKELETAL REMAINS

1. When unmarked human burial or skeletal remains are encountered during construction activities, Enbridge will comply with all applicable laws, specifically:

    a) North Dakota's "Protection of human burial sites, human remains, and burial goods – Unlawful acts – Penalties – Exceptions" law (North Dakota Century Code ["NDCC"] §23-06-27) and its accompanying administrative rules (North Dakota Administrative Code ["NDAC"] §40-02-03);

    b) Minnesota's "Private Cemeteries Act" (Minnesota Statute ["Minn. Stat."] §307.08); and

    c) Wisconsin Statute §157.70. In Wisconsin, in the case of accidental discoveries, state law does not distinguish between historic or prehistoric burials in the requirements for initial notifications or disinterment.

2. In the event a human burial or skeletal remains are encountered during ground-disturbing construction activity, all construction shall immediately cease in the vicinity, and Enbridge Environment will implement the following notification procedures:

    a) North Dakota – notify the local law enforcement agency (county sheriff) and the State Historical Society of North Dakota (which includes SHPO) as required by NDCC §23-06-27. Pursuant to NDAC §40-02-03-03, upon receiving notification of the discovery of human skeletal remains, a human burial, or burial goods, the local law enforcement agency shall, as soon as practicable, report the receipt of such notification to State Historical Society of North Dakota and the North Dakota State Department of Health and Consolidated Laboratories. These two state agencies shall commence the initial examination of the discovery within 24 hours of notification.

    b) Minnesota – notify the local law enforcement agency (county sheriff). As required by Minn. Stat. §307.08 Enbridge Environment will also notify the Office of the State Archaeologist ("OSA") of the find.

    c) Wisconsin – notify the local law enforcement agency (county sheriff) and SHPO as stipulated by Wisconsin Statute §157.70.

3. Enbridge Environment also shall promptly notify the RFA, land-managing agency, or state routing authority of the find and consult regarding the appropriate measures to handle the discovery.

After permission to resume construction has been issued by the RFA, land-managing agency, or state routing authority, Enbridge's lead EI will advise the on-site construction manager to restart ground-disturbing activities.

5.0 TRAINING OF CONSTRUCTION PERSONNEL

Prior to construction, Enbridge will train workers about the need to avoid archaeological, historic and cultural properties, how to identify archaeological, historic, and cultural properties, and procedures to follow if undocumented archaeological, historic and cultural properties, including human burials and gravesites, are found during construction.

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Appendix A

North Dakota, Minnesota, and Wisconsin Contact Lists

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Contact Lists North Dakota, Minnesota, and Wisconsin		
State/County/Agency	**Contact**	**Address/Telephone**
FEDERAL		
U.S. Army Corps of Engineers	Brad Johnson, St. Paul District Archaeologist	Contact info U.S. Army Corps of Engineers Centre 180 5th Street East St. Paul, MN 55101-1638 Telephone: (651) 290-5201 E-mail: brad.a.johnson@usace.army.mil
U.S. Army Corps of Engineers	Nancy Komulainen-Dillenburg, St. Paul District Archaeologist	Contact info U.S. Army Corps of Engineers Centre 180 5th Street East St. Paul, MN 55101-1638 Telephone: (651) 290-5201 E-mail: Nancy.S.Komulainen-Dillenburg@usace.army.mil
Bureau of Indian Affairs	Richard Berg, Midwest Regional Office Archaeologist	Contact info 5600 American Blvd W, Ste 500 Bloomington, MN 55437 Telephone: (612) 713-4400, ext. 1145 E-mail: richard.berg@bia.gov
Fond du Lac Band of Lake Superior Chippewa Reservation Business Committee ("RBC")	Kevin DuPuis, Chairman	1720 Big Lake Road, Cloquet, MN 55720 Telephone: (218) 879-4593 Fax: (218) 879-4146 E-mail: kevindupuis@fdlrez.com
Fond du Lac Band of Lake Superior Chippewa Tribal Historic Preservation Officer ("THPO")	Jill Hoppe, THPO	1720 Big Lake Road, Cloquet, MN 55720 Telephone: (218) 878-7124 E-mail: JillHoppe@fdlrez.com
Minnesota Indian Affairs Council	Melissa Cerda, Cultural Resource Director	161 St. Anthony Ave, Suite 919 St. Paul, MN 55103 Telephone: (651) 276-2797 E-mail: melissa.cerda@state.mn.us
NORTH DAKOTA		
Enbridge	TBD, Lead Environmental Inspector	Cellphone: TBD E-mail: TBD
State Historical Society of North Dakota	Fern Swenson, Deputy SHPO	State Historical Society of North Dakota 612 East Boulevard Avenue Bismarck, ND 58505-0830 Telephone: (701) 328-2666 Fax: (701) 328-3710 E-mail: fswenson@nd.gov
North Dakota Geological Survey	Edward C. Murphy, State Geologist	North Dakota Industrial Commission, Department of Mineral Resources, North Dakota Geological Survey 1016 East Calgary Ave. Bismarck, ND 58503 Telephone: (701) 328-8000
Pembina County	Terry Meidinger, County Sheriff	308 Courthouse Drive Cavalier, ND 58220 Telephone: (701) 265-4122
MINNESOTA		
Enbridge	TBD, Lead Environmental Inspectors	Cellphone: TBD E-mail: TBD
Minnesota State Historic Preservation Office	Amy Spong, Deputy SHPO	Minnesota State Historic Preservation Office Minnesota Historical Society 345 Kellogg Boulevard West St. Paul, MN 55102-1903 Telephone: (651) 259-3466 E-mail: amy.spong@mnhs.org

Contact Lists North Dakota, Minnesota, and Wisconsin		
State/County/Agency	**Contact**	**Address/Telephone**
Office of the State Archaeologist	Amanda Gronhovd, Minnesota State Archaeologist	Office of the State Archaeologist Fort Snelling History Center 200 Tower Avenue St. Paul, MN 55111 Telephone: (612) 725-2411 E-mail: Amanda.Gronhovd@state.mn.us
Minnesota Geological Survey	Harvey Thorleifson, Director	Minnesota Geological Survey 2642 University Ave. St. Paul, MN 55114-1057 Telephone: (612) 627-4780, ext. 224
Minnesota Department of Natural Resources	TBD	500 Lafayette Rd., St. Paul, MN 55155 Telephone: E-mail:
Minnesota Public Utilities Commission	TBD	121 7th Place E, Suite 350 Saint Paul, MN 55101 Telephone: E-mail:
Kittson	Steve Porter, County Sheriff	410 5th Street South Suite 102 Hallock, MN 56728 Telephone: (218) 843-3535
Marshall	Jason Boman, County Sheriff	208 East Colvin Avenue Suite #1 Warren, MN 56762 Telephone: 218-745-5411 Fax: (218) 745-9203
Pennington	Ray D. Kuznia, County Sheriff	102 1st Street West PO Box 484 Thief River Falls, MN 56701 Telephone: 218-681-6161 Fax: (218) 683-7006
Red Lake	Mitch Bernstein, County Sheriff	124 Langevin Avenue, PO Box 367 Red Lake Falls, MN 56750 Telephone: (218) 253-2996
Polk	Barb Erdman, County Sheriff	600 Bruce Street P.O. Box 416 Crookston, MN 56716 Telephone: (218) 281-0431
Clearwater	Darin Halverson, Chief Deputy	213 Main Avenue North Bagley, MN 56621 Telephone: (218) 694-6226
Hubbard	Cory Aukes, County Sheriff	301 Court Ave. Park Rapids, MN 56470 Telephone: (218) 737-3331
Wadena	Mike Carr, County Sheriff	415 So Jefferson St Wadena, MN 56482 Telephone: (218) 631-7600
Cass	Tom Burch, County Sheriff	303 Minnesota Avenue Walker, MN 56484 Telephone: (218) 547-1424, ext. 309
Crow Wing	Todd Dahl, County Sheriff	304 Laurel St. Brainerd, MN 56401 Telephone: (218) 829-4749
Aitkin	Scott Turner, County Sheriff	217 2nd St. NW, Room 185 Aitkin, MN 56431 Telephone: (218) 927-7435

Contact Lists North Dakota, Minnesota, and Wisconsin		
State/County/Agency	**Contact**	**Address/Telephone**
St. Louis	Ross Litman	100 N 5th Avenue W Room 103 Duluth, MN 55802 Telephone: (218) 726-2340
Carlton	Kelly Lake, County Sheriff	317 Walnut Avenue Carlton, MN 55718 Telephone: (218) 384-3236
WISCONSIN		
Enbridge	Rob Mickelson, Lead Environmental Inspector	Cellphone: (704) 607-8788 E-mail: rmickelson@merjent.com
Wisconsin Historical Society	John Broihahn, State Archaeologist, SHPO	Wisconsin Historical Society, Division of Historic Preservation 816 State Street Madison, WI 53706-1488 Telephone: (608) 264-6500
Wisconsin Geological and Natural History Survey	Ken Bradbury, State Geologist	Wisconsin Geological and Natural History Survey 3817 Mineral Point Road Madison, WI 53705-5100 Telephone: (608) 263-7921
Douglas County	Tom Dalbec, County Sheriff	1316 North 14th Street Superior, WI 54880 Telephone: (715) 395-1371

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Appendix B

Unanticipated Discovery Flow Charts

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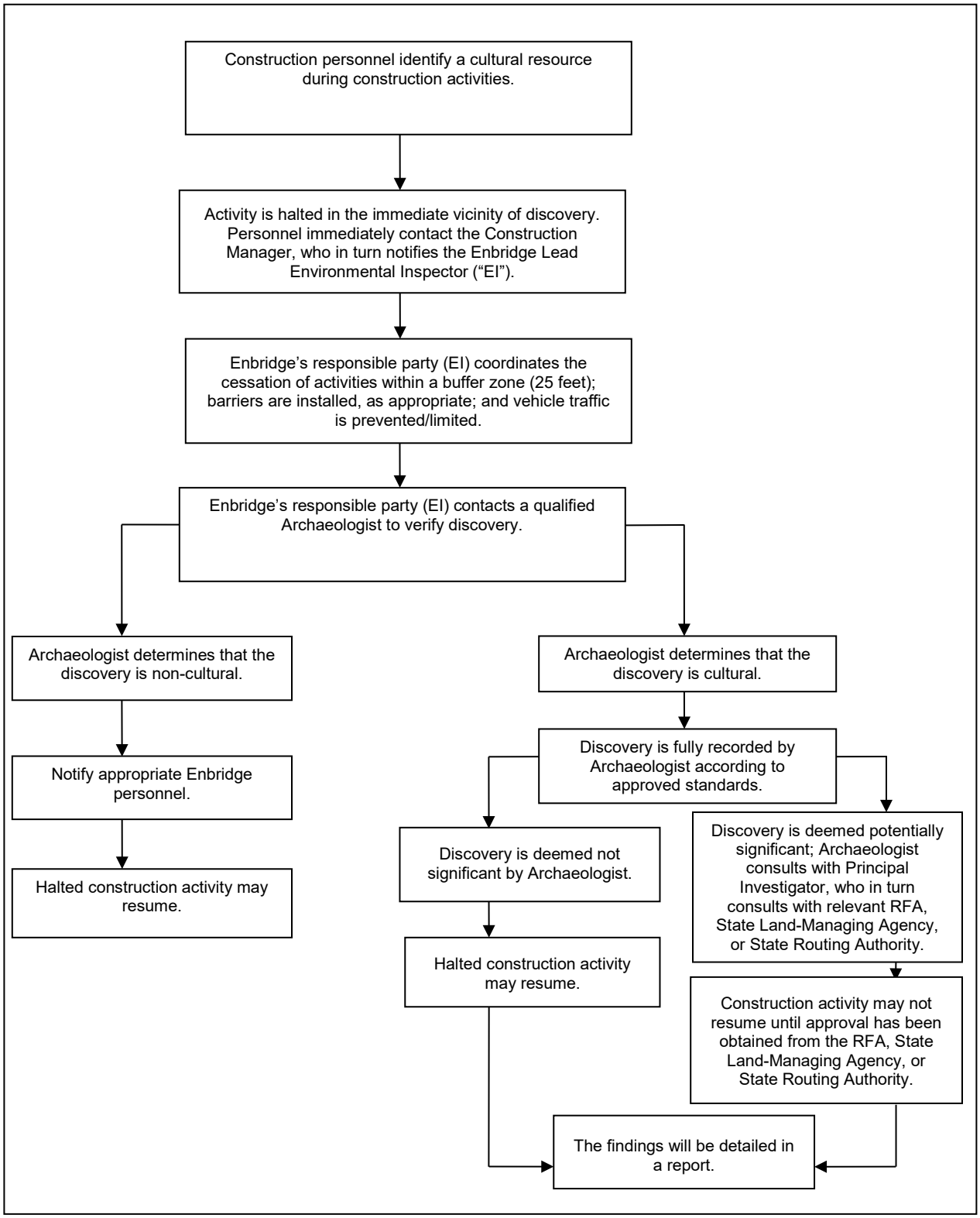
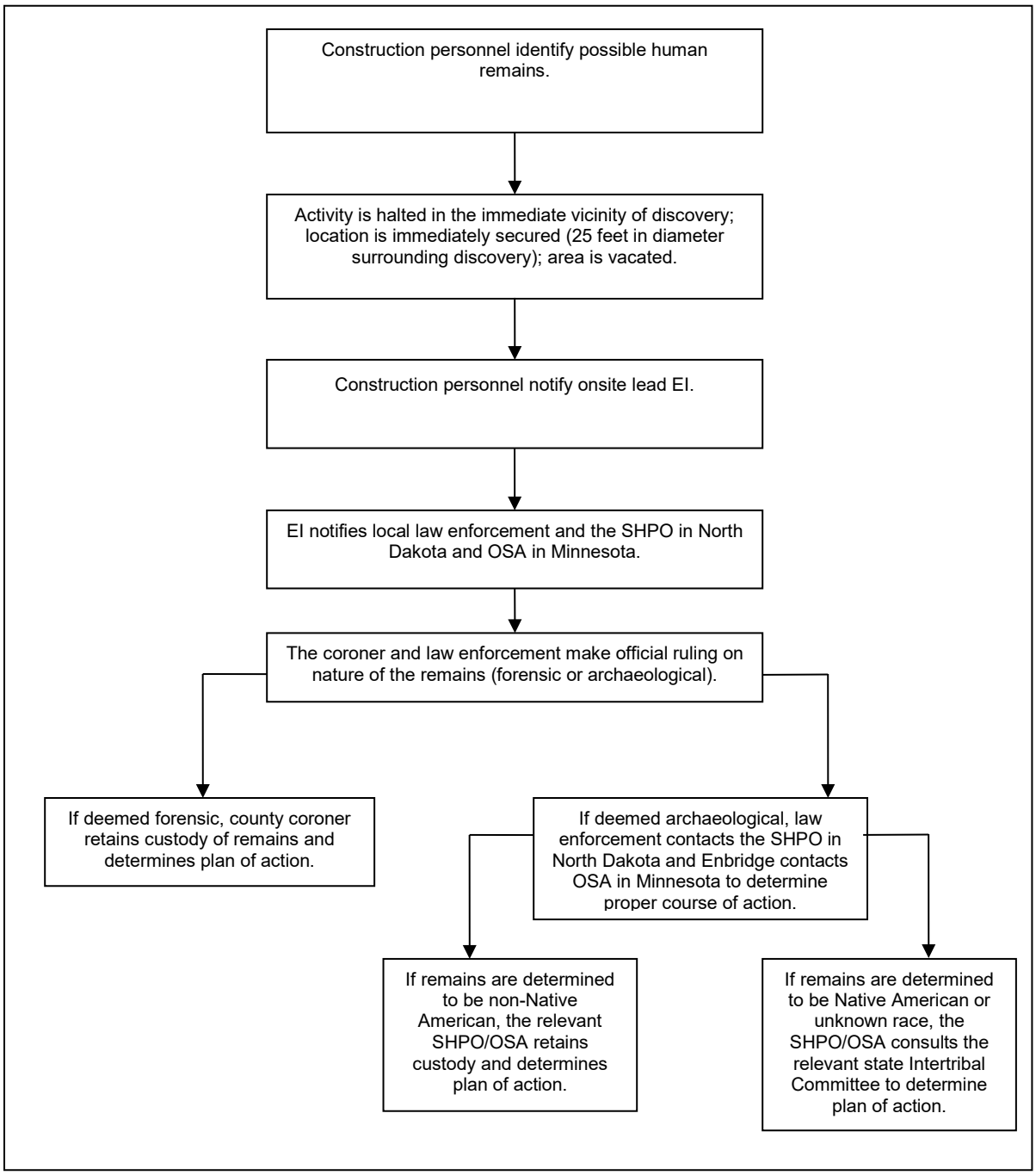
Discovery of Historic Properties Flow Chart



Unanticipated Discovery of Human Remains Flow Chart



Attachment I

Adjacent Property Owners along Waterbodies and Wetlands Crossed by the Line 3 Replacement Project

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Line 3 Replacement Project
U.S. Army Corps of Engineers - St. Paul District Permit Application
Adjacent Landowner List - MN

POC	Address1	Address2	City	State	Zip code (5 digits only)
A Affordable Bail Bond Co Inc	10457 County 32		Park Rapids	MN	56470
Aakre-Duffy Family Revocable Living Trust	17066 Clearwater Lake Road		Clearbrook	MN	56634
Aaron Ikola and Amber Tobeck	2459 County Road 142		Mahtowa	MN	55707
Aaron S White and Stacy B White	1040 8th Street SW		Wadena	MN	56482
Abel Revocable Living Trust	9035 N Sedona Place		Tucson	AZ	85742
Adam E Fradenburgh	1120 Park Avenue NW		Bemidji	MN	56601
Adam P O'Connor	9715 Summit Place		Chaska	MN	55318
Adam P Swanson and Katie L Swanson	3315 Ditchbank Road		Cloquet	MN	55720
Adam Schminski	10644 Highway 2	PO Box 169	Floodwood	MN	55736
Adelia E M Lipponen	411 Granite Street		Cloquet	MN	55720
Adolph and Mary Hapka Farmland Trust Agreement	4973 Lamia Way		Oceanside	CA	92056
Adrian P Badger	7019 W Mud Lake Road		Tamarack	MN	55787
Aitkin County, Minnesota (Land Department)	209 2nd Street NW	Room 206	Aitkin	MN	56431
Alan Breeggemann and Lisa Breeggemann	24151 W Cedar Lake Drive		New Prague	MN	56071
Alan C Nelson and Denise M Nelson	11558 500th Street		Gonvick	MN	56644
Alan Marshall Jr	5007 Norwood Street		Duluth	MN	55840
Alanna J Soukkala and Ross T Soukkala	2357 Overlie Road		Carlton	MN	55718
Albert C Johnson	4324 County Road 4		Mahtowa	MN	55707
Albert H Wallace	6640 4th Avenue S		Richfield	MN	55423
Albert Virgil Louks	13000 109th Avenue		Park Rapids	MN	56470
Alen S Szczepanski and Patricia G Szczepanski	35897 340th Avenue NW		Argyle	MN	56713
Alesha M Oster and Christopher Oster	111 Springbrook Street		Springbrook	ND	58843
Alex Anderson	854 5th Street		Stephen	MN	56757
Alice Burnett	4126 County Road 56		Pine River	MN	56474
Alice J Lake and Alice Jeanette Olson	1353 Award Boulevard		Wright	MN	55798
Alice Peterson	24153 300th Street NW		Argyle	MN	56713
Alice Rowland	3923 County Road 56		Pine River	MN	56474
Alice Sedenquist	1878 210th Street		Hallock	MN	56728
Alicia M Arnold and Matthew J Arnold	4034 County Road 4		Barnum	MN	55707
Alison Tisdell and Garrett Tisdell	11222 400th Street		Laporte	MN	56461
Allan D and Christine A Fisher	150 Albert Street		Loretto	MN	55357
Allan Danielson and Terri Danielson	11870 506th Street		Gonvick	MN	56644
Allan J Graff	12004 Moen Road		Wright	MN	55798
Allan M Anderson and Nancy M Anderson	17084 20th Street NW		South Haven	MN	55382

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Allan M Troyer and Rosa Troyer	48886 County 7		Gonvick	MN	56644
Allan P Glad	15348 Wren Street NW		Andover	MN	55304
Allan Stawarski and Rita Ann Stawarski	58179 Osprey Avenue		Swatara	MN	55785
Allan W Peterson and Julie K Peterson	PO Box 93		Clearbrook	MN	56634
Allen Erickson and Terry Erickson	28373 Great Eastern		Warren	MN	56762
Allen Graff	12004 Moen Road		Wright	MN	55798
Allen Houck and Debra Houck	1250 Sjogren Road		Wright	MN	55798
Allen J St Germain and Joann St Germain	1707 Crosby Court SE	#15	Bemidji	MN	56601
Allen L O'Brien and Raymond H O'Brien	PO Box 64		Outing	MN	56662
Allen L Paulson and Julie Paulson	32488 Dahlberg Lake Road		Shevlin	MN	56676
Allen Lee Lundin	18398 Golf View Lane		Bagley	MN	56621
Allen P Caza and Laura Caza	115 Parade Drive		San Antonio	TX	78213
Allen R Arvig and Carmen L Arvig	160 2nd Avenue SW		Perham	MN	56573
Allete, Inc	30 W Superior Street		Duluth	MN	55802
Allis R Grandstrand	5431 Madison Street NE		Fridley	MN	55421
Allison Renae Liedberg and Jerad Dean Liedberg	194 S 5th Street		Warren	MN	56762
Allyson Engelstad and Mark L Engelstad	12255 170th Avenue NE		Thief River Falls	MN	56701
Aloysius J Frederick and Mary L Frederick	15475 Tungsten Street NE		Ramsey	MN	55303
Alton Rask	1015 Tyler Avenue SE		Isanti	MN	55040
Alvin Nygard and Ruby Nygard	16907 130th Avenue NW		Thief River Falls	MN	56701
Alvin Oien and Nancy Oien	21407 340th Street		Bagley	MN	56621
Alyssa Stenson and Roger D Stenson	13936 Leo Lane NE		Bemidji	MN	56601
Amanda L Bergin and Brandon Bergin	39039 115th Avenue		Laporte	MN	56461
Amber L Little	10655 109th Avenue		Menahga	MN	56464
Ambrose H Beaudoin and Susan P Beaudoin	30560 250th Street SE		Brooks	MN	56715
Amie Bergeron	PO Box 86		Argyle	MN	56713
Amie Bergeron	26502 Street Highway 1 NW		Warren	MN	56762
Amie Bergeron and Maria Teresa Bergeron	13411 E 37th Place		Yuma	AZ	85367
Amity Gray	26575 US 71		Park Rapids	MN	56470
Amundsen Farms Inc	1405 N 9th Avenue E		Duluth	MN	55805
Amy E Decaigny and Matthew W Decaigny	PO Box 62		Sawyer	MN	55780
Amy Fong-Christianson	3315 Northview Lane		Woodbury	MN	55125
Amy Houlihan and Paul Houlihan	PO Box 520		Descansco	CA	91916

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POC	Address1	Address2	City	State	Zip code (5 digits only)
Amy L Thomes	301 E Adams Street		Arlington	MN	55307
Amy M Rosenholm	117 Puline Road		Esko	MN	55733
Amy Muhs and Gregory J Muhs	105 Carver Creek Circle		Carver	MN	55315
Anderson Family Trust	4808 5th Street NE		Columbia Heights	MN	55421
Andrea A Kiehl and Curtis A Kiehl	2944 Town Road 120		Cloquet	MN	55720
Andrea M Schroeder	4855 Eifer Trail		Stacy	MN	55079
Andrea R Otto and Robert S Otto	1545 59th Avenue NW		Willmar	MN	56201
Andresen Properties	1351 75th Avenue NE		Fridley	MN	55432
Andrew Ankrum and Kristina M Ankrum	2216 Thell Road		Wrenshall	MN	55797
Andrew D Bramer and Ana D Bramer	33110 240th Street SE		Trail	MN	56684
Andrew F Anderson and Gretchen W Anderson	PO Box 1165		Bloomington	IL	61702
Andrew Hiscox and Catherine Hiscox	7500 Erie Avenue		Chanhassen	MN	55317
Andrew O Skaar (Trustee of) Trust	17742 120th Avenue NW		Thief River Falls	MN	56701
Andrew Steven Clark	1700 52nd Street N		Great Falls	MT	59405
Andrew T Ankrum and Kristina M Ankrum	2216 Thell Road		Wrenshall	MN	55797
Andrew Wright	317 Mineral Springs		McHenry	IL	60050
Angela K Judd	19410 661st Avenue		Buffalo Lake	MN	55314
Angela M Bouvette Pioro and Robert Pioro	2201 Hutchinson Road		Duluth	MN	55811
Angela M Jensen	12254 State Highway 1 NW		Thief River Falls	MN	56701
Angelique Holm and Robert W Holm	2243 Holm Road		Cromwell	MN	55726
Angelo E Kostanshek and Jennifer M Kostanshek	16440 257th Avenue NW		Big Lake	MN	55309
Angie Stine	PO Box 35		Gully	MN	56646
Angleen Maki	1340 Minnesota Street N		Plummer	MN	56748
Anh Van Hasnedl and Jeremiah Charles Hasnedl	12276 150th Avenue SE		Saint Hilaire	MN	56754
Anita Swenson and Gerald Swenson	421 Cornell Avenue		Oakley	KS	67748
Ann M Ulrich and Ryan L Ulrich	14338 Center Avenue N		Thief River Falls	MN	56701
Ann Sweeney	2194 8th Street SW		Backus	MN	56435
Anna Eilertson	7705 Ridgeview Way		Chanhassen	MN	55317
Anna Eilertson	13428 109th Avenue		Park Rapids	MN	56470
Anna M Sandstrom	12145 Garrett Road		Floodwood	MN	55736
Anna Willborg	PO Box 598		Bagley	MN	56621
Anne H Morgan	11059 County 14		Park Rapids	MN	56470
Anne Lundstrom and Edward L Lundstrom	12324 Laurie Road		Floodwood	MN	55736
Anne M Johnson and Galen K Johnson	15918 150th Street SE		Red Lake Falls	MN	56750

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Annette Chello Isaacson	7807 E Apache Trail	Lot 29	Mesa	AZ	85207
Annette J Rentola	3466 County Road 4		Barnum	MN	55707
Anthony A Thompson and Linda L Thompson	1706 Big Horn Basin Drive		Ballwin	MO	63011
Anthony David Thelen	10836 Impression Road		Park Rapids	MN	56470
Anthony E Guscetti and Jody M Guscetti	1411 Fremont Avenue N		Minneapolis	MN	55411
Anthony Johnson	8998 N River Road		Danbury	WI	54830
Anthony L Windschitl	10815 County 6		Park Rapids	MN	56470
Anthony Vescio and Patricia Vescio	3948 Calle Valle Vista		Newbury Park	CA	91320
Anthony W Erickson and Anne L Jensen	340 Brunswick Avenue S		Golden Valley	MN	55416
Antoinette M Knutson	15643 Float Court		Apple Valley	MN	55124
Anton J Bergee and Melora L Bergee	12279 State Highway 32 NE		Thief River Falls	MN	56701
Appaloosa Rising Trust	26576 250th Street		Shevlin	MN	56676
April L Grover and Seth O Grover	1884 Douglas Road		Carlton	MN	55718
Ardelle M Thornton and Edward D Thornton	1271 Nendick Road		Carlton	MN	55718
Ardelle Olson and George Olson	28666 220th Street SE		Oklee	MN	56742
Ardith Olson and Raymond S Olson	15648 200th Street NW		Thief River Falls	MN	56701
Arin M Olson and Tobi L Olson	727 Seboe Road		Wrenshall	MN	55797
Arlen R Erickson and Lois M Erickson	PO Box 195		Kennedy	MN	56733
Arlene Brandt Trust	235 27th Avenue S		Grand Forks	ND	58201
Arlene C Hanson	15705 5th Street SE		Blanchard	ND	58009
Arlene M Novak and Gerald H Novak	13429 County 18		Park Rapids	MN	56470
Arlene M Strom and Robert W Strom (Trustees); Yvonne Ekdahl	1909 Deer Hill Court		Wayzata	MN	55391
Arlene Voller	1240 Cypress Drive W		Annandale	MN	55302
Arlo Dupont and Jean Dupont	743 County Road 143		Canon City	CO	81212
Arne Leonard Kleppe	13600 Street Lake Drive		Gonvick	MN	56644
Arnette Borowicz and Kenneth Ray Borowicz	PO Box 344		Stephen	MN	56757
Arnold A Nauer and Albert J and Girard	24070 Hogan Avenue		Hampton	MN	55031
Arnold C Kuznia and Donalda Kuznia	26267 410th Street NW		Stephen	MN	56757
Arnold J Lindstrom and Lynette A	14501 Cottontail Drive		Park Rapids	MN	56470
Arnold J Parviainen and Holly M Parviainen	2140 Town Road 172		Barnum	MN	55707
Art and Lee's Legacy LP	14471 Barnes Drive		Detroit Lakes	MN	56501
Arthur B and Jane S Hamel Hamel Revocable Trust	1640 Monrovia Avenue	Unit 120	Costa Mesa	CA	92627
Arthur Bakke and Jane Bakke	21111 Dolores Street	Space 58	Carson	CA	90745

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POC	Address1	Address2	City	State	Zip code (5 digits only)
Arthur C Moen	420 River Avenue	PO Box 84	Middle River	MN	56737
Arthur Hill and Carole Hill	5680 Art Hill Road		Cromwell	MN	55726
Arthur L Simpson	1502 Pfeifer Road		Carlton	MN	55718
Ashley Gryskiewicz and Perry Gryskiewicz	12 Oxford Court		Voorhees	NJ	8043
Ashley Halvorson and Joseph B Halvorson	17500 130th Avenue NW		Thief River Falls	MN	56701
Aspen Heights Holdings LLC	2911 Benjamin Street NE		Minneapolis	MN	55418
Audrey A Watt and Philip G Watt	24755 County 2		Shevlin	MN	56676
Audrey Foldoe	1825 Crosson Avenue		Fairbanks	AK	99701
Audrey L Zeller and Richard L Zeller	20572 Forest Park Drive		Park Rapids	MN	56470
Austin Deroo	407 Pleasant Street W		Nevis	MN	56467
Austman-Jones, Inc	319 W Watson		Forrest	IL	61741
Autumn Roman and Todd Banks	1316 Hillcrest Court		Fergus Falls	MN	56537
Bachand Farms LLC	24557 275th Avenue SE		Brooks	MN	56715
Bachand Inc Charles and Carol	24059 275th Avenue SE		Brooks	MN	56715
Baptist Cemetery	30900 380th Street NW		Stephen	MN	56757
Barbara A Carlson	10076 Meade Lane		Eden Prairie	MN	55347
Barbara A Svenkerud	30160 US Highway 71		Park Rapids	MN	56470
Barbara Anderson	24053 County 2		Shevlin	MN	56676
Barbara C Melby and Clifton D Melby	PO Box 217		Oklee	MN	56742
Barbara DeLovely	960 Cary Road		Cloquet	MN	55720
Barbara Helen McLain and Richard W McLain	PO Box 852		Isle	MN	56342
Barbara J Brown and Mark T Brown	1855 W Chub Lake Road		Carlton	MN	55718
Barbara J Kennedy	2592 Strandberg Road		Barnum	MN	55707
Barbara J Kuznia	280 Stephen Avenue		Stephen	MN	56757
Barbara J Liimatainen	2065 Kiehl Road		Carlton	MN	55718
Barbara J Nelson and Barbara Nelson Revocable Trust	3181 County Road 4		Carlton	MN	55718
Barbara J Olson and James A Olson	1010 11th Street NE		Watertown	SD	57201
Barbara K Fischer and Richard Fischer	327 Alex Moore Street		Sauk Centre	MN	56378
Barbara K Jesness	PO Box 268		Bagley	MN	56621
Barbara L Johnson and Danny Lee Johnson	611 Holly Street		Brainerd	MN	56401
Barbara Murray	1846 Cliff Lake Court		Eagan	MN	55122
Barbara Swanso and Jean Wright	404 E Washington Street		Le Roy	IL	61752
Barbara Witt	44956 Glover Trail		Pine River	MN	56474
Barbra A Nelson and Gary L Nelson	15587 110th Avenue NW		Thief River Falls	MN	56701

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Barry E Nyquist	1020 Ryde Street		Saint Paul	MN	55103
Barry H Wain and Taka K Wain	1817 W Chub Lake Road		Carlton	MN	55718
Barry Martinsen and Rhonda L Martinsen	14958 132nd Avenue NE		Thief River Falls	MN	56701
Barry Nelson and Cindy Sue Nelson	101 Cross Avenue NE		Crosby	MN	56441
Bayle Bellefy	22688 320th Street		Bagley	MN	56621
Beata A Ertz and Robert M Ertz	32387 Beaver Claw Road		Brook Park	MN	55007
Beaver Tails Inc	1510-50 Avenue NE		Sauk Rapids	MN	56379
Beavercreek Trust	PO Box 163		Atwater	MN	56209
Becky Cornell and James R Cornell	5540 164th Lane NW		Ramsey	MN	55303
Alice M Hammett	34602 US 71		Laporte	MN	56461
Benjamin E Nilsen and Laura A Nilsen	1952 E Chub Lake Road		Carlton	MN	55718
Benjamin J Meyer	10533 132nd Avenue SE		Saint Hilaire	MN	56754
Benjamin J Rimolde	111 Kellogg Boulevard E	Apartment 1B	Saint Paul	MN	55101
Benjamin P Groeschl	1569 County Road 5		Carlton	MN	55718
Benjamin Rambow	34610 Quinton Avenue		Center City	MN	55012
Berg Lake LLC	32507 Dahlberg Lake Road		Shevlin	MN	56676
Bergen Real Estate LLC	801 Willow Street W		Detroit Lakes	MN	56501
Bergen Real Estate LLC	11385 State 34		Park Rapids	MN	56470
Berlyn Rietveld and Paul Rietveld	42815 105th Avenue		Lake Hattie	MN	56435
Bernadine C Ettle Trust	24634 County Road 17		Freeport	MN	56331
Bernard A Glasby and Tina Glasby	1222 Norwood Street		Brainerd	MN	56401
Bernard Blawat and Stacy Blawat	17750 274th Street NE		Thief River Falls	MN	56701
Bernard F Lees	3261 Eagle Lake Drive SW		Backus	MN	56435
Bernard J Bermel and Deborah D Bermel	9723 80th Avenue SE		Clear Lake	MN	55319
Bernard J Laubach	2447 Highway 23		Wrenshall	MN	55797
Bernard V Fallon and Renee G Fallon	20706 165th Street SE		Plummer	MN	56748
Bernice Berget	11798 400th Avenue SE		Trail	MN	56684
Bernis M Eliason and James E Ingvaldson	PO Box 512		Bagley	MN	56621
Beth Bailey and Carrie Johnson	4893 Highway 73		Floodwood	MN	55736
Belinda G Donley and Brian C Donley	29278 US Highway 71		Park Rapids	MN	56470
Beth Kockelman and Todd Kockelman	2030 Olene Avenue N		Stillwater	MN	55082
Beth Kristin House and John E House	1241 Alcohol Road		Wrenshall	MN	55797
Beth L Kroulik and Mark A Kroulik	283 Stephen Avenue		Stephen	MN	56757
Beth M Prouty	2438 Garthus Road		Wrenshall	MN	55797
Bradley J Binder and Carrie A Binder	35131 Timber Drive		Bagley	MN	56621
Betty A Malm Revocable Trust	18382 446th Street		Clearbrook	MN	56634

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Betty E Smith	2987 Jarvinen Road		Cloquet	MN	55720
Betty J Surdez	23845 320th Street		Bagley	MN	56621
Betty J Thomas and Larry Virgil Thomas	19281 County Road 15		Elk River	MN	55330
Betty Lou Julin	2510 Fox Drive NW		Bemidji	MN	56601
Betty M Kvande	2215 E 97th Drive		Thornton	CO	80229
Betty Voytilla	29509 Great Eastern		Warren	MN	56762
Bev Osborn	18067 Judicial Way S		Lakeville	MN	55044
Beverly Erickson and Robert Erickson	105 E Nelson Avenue		Warren	MN	56762
Beverly G Olsen	3543 County Road 4		Barnum	MN	55707
Beverly J Gaines	1471 State Highway 6		Remer	MN	56672
Beverly O Pahlen Trust and Jodi Harbott, Trustee	20483 165th Street SE		Plummer	MN	56748
Big Lake Storage LLC	1693 Airport Road		Cloquet	MN	55720
Bill Tulenchik	2556 County Road 17 SW		Pequot Lakes	MN	56472
Bill Tulenchik and Tracy Tulenchik	957 Oak Court		Nisswa	MN	56468
Billie Jo Grund and Brandon L Grund	3178 Magney Drive		Cloquet	MN	55720
Black Bear Lodge LLC	812 2nd Avenue N		Sartell	MN	56377
Blake Sustad	5436 6th Avenue N		Grand Forks	ND	58203
Blandin Paper Company	115 SW 1st Street		Grand Rapids	MN	55744
BNSF Railway Company	2650 Lou Menk Drive		Fort Worth	TX	76131
Bobbi Jo Bergeron	1834 W Chub Lake Road		Carlton	MN	55718
Bobby R Hall and Betty J Hall	345 Monroe Street SE		Hutchinson	MN	55350
Bonita Alafouzos and George Alafouzos	2805 Heron Avenue		Wausau	WI	54401
Bonita L Pettersen and Edward J Pettersen	25956 350th Avenue SE		Trail	MN	56684
Bonneville Properties LLC	2254 County Road 61		Carlton	MN	55718
Bonnie Joan Paquin	PO Box 76		Clearbrook	MN	56634
Bonnie K Riley	10916 Meadowlark Lane		Hibbing	MN	55746
Bonnie Nygaard and Brent Jay Nygaard	3567 Aurora Road		Aurora	MN	55705
Bonnie S Oraskovich and Kenneth J Oraskovich	18495 470th Street		Clearbrook	MN	56634
Bradley Blawat	30255 Pembina Trail NW		Viking	MN	56760
Bradley C Elkin and Sarah V Elkin	2036 Timmy Street		Mendota Heights	MN	55120
Bradley D Bunge and Lori A Bunge	248 County Road 4		Wrenshall	MN	55797
Bradley J Ludwig Revocable Trust	3500 50th Street SE		Delano	MN	55328
Bradley J Tutch	4013 W 131st Street		Savage	MN	55378
Bradley Matlack and Mary Matlack	1908 Pineywood Lane		Carlton	MN	55718
Bradley Ness	2248 E Main Avenue		West Fargo	ND	58078

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Bradley Nygaard	6164 Garden Drive		Gilbert	MN	55741
Bradley R Norman and Lynda J Norman	3842 Lauhala Road		Hibbing	MN	55746
Bradley R Norman and Thea M Norma	3842 Lauhala Road		Hibbing	MN	55746
Bradley Savage	Box 21		Sawyer	MN	55780
Bradley Snyder and Marlene Snyder	PO Box 86		Menahga	MN	56464
Bradley Sustad	803 State Avenue N		Thief River Falls	MN	56701
Brady M Bakken and Cejae C Peterson	12605 150th Avenue SE		Saint Hilaire	MN	56754
Brandon J Suonvieri and Jennifer Suonvieri	11118 Mirbat Road		Floodwood	MN	55736
Brandon Morenz	2060 Sutter Street		San Francisco	CA	94115
Brenda J Cid	2001 Kiehl Road		Carlton	MN	55718
Brenda L Kreuger	26475 Independence Avenue		Morristown	MN	55052
Brenda M Scherer and Douglas Scherer	27067 661st Avenue		Gibbon	MN	55335
Brenda O Peterson	13471 Hosta Drive		Baxter	MN	56425
Brenda Scherer	27067 661st Avenue		Gibbon	MN	55335
Brenda Sexton and Lanita Sexton	433 Carl Miller Drive		Antioch	TN	37013
Brent Henning and Megan Henning	2445 Holy Name Drive		Wayzata	MN	55391
Brent Stadick	1537 Lee Avenue		New Ulm	MN	56073
Brett D Peterson and Rachel R Peterson	2245 County Road 5		Carlton	MN	55718
Brett David Carter and Wendy Dawn Carter	22275 Walkerbrook Drive		Bagley	MN	56621
Brett Dukek	20827 340th Street		Bagley	MN	56621
Brian A Stadick	20983 196th Road		Hutchinson	MN	55350
Brian J Jensen and Betsy R Jensen	41439 330th Avenue NW		Stephen	MN	56757
Brian and Jennifer Galbraith	51241 332nd Street		Salol	MN	56756
Brian D Leitch and Heather Leitch	11291 390th Street		Laporte	MN	56461
Brian D'Arcy	14114 Manor Road		Leawood	KS	66224
Brian E Hamilton	PO Box 26312		St Louis Park	MN	55426
Brian Emmel	47845 State 92		Clearbrook	MN	56634
Brian G Gustafson	549 County Road 4		Wrenshall	MN	55797
Brian G Lind	418 N Ugstad Road		Proctor	MN	55810
Brian Hapka	29635 330th Avenue NW		Argyle	MN	56713
Brian J Angell	1805 Carlton Avenue		Cloquet	MN	55720
Bruce M Johnson and Susan Marie	4388 County Road 4		Mahtowa	MN	55707
Brian J Paulsen	55 Mayhill Road N		Maplewood	MN	55119
Brian K Haluptzok	2369 Highway 210		Cloquet	MN	55720
Brian K Larson and Melissa Larson	2449 177th Avenue NE		Ham Lake	MN	55304
Brian K Ramsrud and Susan M Ramsrud	1046 Sirius Drive NW		Bemidji	MN	56601
Brian L Erdmann and Wendy L Erdmann	10100 Sucker Creek Road		Rice	MN	56367

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Brian L Jadeke and Stephanie Jadeke	913 N 2nd Street		Warren	MN	56762
Brian Michael St Germain	243 Ridgewater Way		Mount Juliet	TN	37122
Brian Peterson	405 Oak Street		Oklee	MN	56742
Brian S Barth and Crystal Barth	23006 61st Avenue SE		Woodinville	WA	98072
Brian Sheridan	2216 Yndestad Road		Carlton	MN	55718
Brian T Calverley	3427 County Road 4		Mahtowa	MN	55707
Brian T Cummings	2772 Strand Road		Cloquet	MN	55720
Brian T Meyers	623 Cresthaven Drive		Saint Paul	MN	55075
Bridget M Schrier and Joey C Schrier	2026 Moorhead Road		Cloquet	MN	55720
Britney Linn and Gustav A Linn	PO Box 192		Roscoe	SD	57471
Brittani Emmel	43828 181st Avenue		Clearbrook	MN	56634
Brothers Ptr Lundberg	PO Box 154		Kennedy	MN	56733
Bruce A Olson and Valerie A Olson	10737 160th Street NW		Thief River Falls	MN	56701
Bruce A Paulson	PO Box 61		Kenmare	ND	58746
Bruce A Peddle and Kimberly L Peddle	1168 W Alcohol Road		Wrenshall	MN	55797
Bruce and Mary and Jacob Burkman	11090 110th Street		Menahga	MN	56464
Bruce and Mary Mortenson	1487 210th Avenue		Kennedy	MN	56733
Bruce C Johnson and Janet Carol Johnson	10600 150th Street NW		Thief River Falls	MN	56701
Bruce D Peterson	4627 W 124th Street		Savage	MN	55378
Bruce E Kaufman	21114 Oak Grove Drive		Pine City	MN	55063
Bruce H Erickson and Dianne M Erickson	6529 E Mud Lake Road		Wright	MN	55798
Bruce H Olson and Cindy Lea Olson	15490 Estate Circle		Pine City	MN	55063
Bruce Hanson and Margo Nygaard Hanson	1011 Trout Lake Road		Bovey	MN	55709
Bruce J Eveland and Karen M Eveland	260 44th Avenue SW		Backus	MN	56435
Bruce L Patton	13737 109th Avenue		Park Rapids	MN	56470
Bruce M Roles and Teresa A Roles	21853 Quincy Street NE		Cedar	MN	55011
Bruce Madsen	5463 Adams Street		Mounds View	MN	55112
Bruce Mortenson and Mary Mortenson	1487 210th Avenue		Kennedy	MN	56733
Bruce O and Marilyn E Nelson (Trustees of) Nelson Family Trust	43425 181st Avenue		Clearbrook	MN	56634
Bruce Paulson	11085 160th Street NW		Thief River Falls	MN	56701
Bruce Treas Peterson	8241 W Rondeau Lake Drive		Forest Lake	MN	55025
Bruce W Snyder	PO Box 112		Carlton	MN	55718
Bryan A Kalm and Tara Kalm	2725 2nd Street		Barnum	MN	55707
Bryan A Kalm and Tara Kalm	3775 County Road 4		Mahtowa	MN	55707
Bryan Conklin	2220 8th Street SW		Backus	MN	56435
Bryan E Olson and Polly J Olson	31051 Valley View Road		Frazee	MN	56544

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Bryan K Ridgley	10954 Inland Drive		Park Rapids	MN	56470
Bryan Lagergren	49 5th Street		Proctor	MN	55810
Bryan T Nelson and Eva M Nelson	20173 340th Street		Bagley	MN	56621
Burdell M Engen	20530 280th Street NW		Viking	MN	56760
Bureau of Indian Affairs (BIA)	522 Minnesota Avenue NW		Bemidji	MN	56601
Burlington Northern Railroad and Property Tax Department	PO Box 961089		Fort Worth	TX	76161
Busch (Trustee of) Hedin Family Trust Terri	819 Portland Avenue		Saint Paul	MN	55104
Byland LLC	1335 W River Street	Unit 30	Monticello	MN	55362
Byland LLC	6898 22nd Street Loop N		Saint Cloud	MN	56303
Byron R Nelson	21252 Clearwater Lake Road		Clearbrook	MN	56634
Byron S Goranson and Jennifer L Goranson	1933 W Chub Lake Road		Carlton	MN	55718
C and G Gift Estate Trust	527 Tower Street NW		Clearbrook	MN	56634
Cajetan Enterprises LLC	925 State 6 NE		Outing	MN	56662
Calvin A Hakala	One Horn Estates	PO Box 333	Floodwood	MN	55736
Calvin Marc Bristow Jr and Bonnie Bristow	1775 26th Avenue SW		Backus	MN	56435
Calvin P Johnson and Marcella Lazebnik	PO Box 3665		Mankato	MN	56002
Canadian Pacific Railroad	11306 Franklin Avenue		Franklin Park	IL	60131
Cap Investment Partnership LLLP	PO Box 490		Bismarck	ND	58502
Carey H Sandstrom	12145 Garrett Road		Floodwood	MN	55736
Carl B Anderson and Tammy L Anderson	370 County Road 4		Wrenshall	MN	55797
Carl Christofferson	27258 310th Street		Shevlin	MN	56676
Carl Jr Gornowicz and Linda Gornowicz	27874 260th Avenue NW		Warren	MN	56762
Carl Kreller	822 N River Road SW		Backus	MN	56435
Carl R Christofferson	27258 310th Street		Shevlin	MN	56676
Carl V Stenson	1399 N Finn Road		Tamarack	MN	55787
Carl Weberg	101 State Highway 92 W	PO Box 36	Trail	MN	56684
Carlton County	1575 Chub Lake Park Road		Carlton	MN	55718
Carlton County (Auditor)	301 Walnut Avenue		Carlton	MN	55718
Carmella J Aker	33682 N Oak Drive		Pequot Lakes	MN	56472
Carmen Beauclair and Shaun Beauclair	146 3rd Street S		Stephen	MN	56757
Carmen M Nielsen	4647 Penkwe Way		Eagan	MN	55122
Carmen Martin	5977 Stenberg Road		Cromwell	MN	55726
Carol A Hagstrom	34730 US 71		Laporte	MN	56461
Carol A Harmon and Stephen Harmon	2457 Highway 70		Braham	MN	55006
Carol A Spychala and Charles J Spychala	29028 County Road 2		Shevlin	MN	56676

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POC	Address1	Address2	City	State	Zip code (5 digits only)
Carol Andrea Hagstrom	HCR 70 Box 19B		Laporte	MN	56461
Carol E Hauck	3828 County Road 4		Mahtowa	MN	55707
Carol J Gehrke	3260 Boundary Road		Mahtowa	MN	55707
Carol J Koskinen	2244 Lydia Avenue E		Maplewood	MN	55109
Carol J Scott	4996 Highway 73		Floodwood	MN	55736
Carol Jean Swenson	PO Box 515		Hallock	MN	56728
Carol Kay Anderson and George Richard Anderson	252 County Road 4		Wrenshall	MN	55797
Carol M Clark and Richard A Clark	15055 130th Street NE		Thief River Falls	MN	56701
Carol Tulibaski	28132 Great Eastern		Warren	MN	56762
Carol Tulibaski and Thomas T Tulibaski	34481 290th Street NW		Warren	MN	56762
Carole J Euerle and Merlyn A Euerle	PO Box 141		Richmond	MN	56368
Caroline L Smith and Edward Smith	10099 130th Street		Park Rapids	MN	56470
Carolyn and Sheldon Johnson	16562 US Highway 10		Lake Park	MN	56554
Carolyn E Neill	5401 Sherman Street	Apartment 314	Wausau	WI	54401
Carolyn E Sutherland	1517 County Road 5		Carlton	MN	55718
Carrie E Foley	6045 Eagle Lake Road		Cromwell	MN	55726
Casandra M Crider and Matthew R Crider	3141 County Road 4		Carlton	MN	55718
Casey James Fering	49911 Tallwood Trail		Bemidji	MN	56601
Casey O'Beirne	26011 310th Street		Shevlin	MN	56676
Casey O'Beirne	26011 310th Street		Shevlin	MN	56676
Cash Trust	1515 11th Avenue N		Grand Forks	ND	58203
Cass County	PO Box 3000		Walker	MN	56484
Cass County, Minnesota (Auditor)	303 Minnesota Avenue W		Walker	MN	56484
Cass County, Minnesota (Land	PO Box 25		Backus	MN	56435
Catherine A Johnson and Richard A Johnson	110 Tristen Circle		Buffalo	MN	55313
Catherine Josephine Croce	112 3rd Street NE		Saint Michael	MN	55376
Catherine N Hall	2105 Yndestad Road		Carlton	MN	55718
Cathryn J and Richard E Kari	13862 67th Avenue N		Maple Grove	MN	55311
Cathy Rae Pihlaja	6051 Country Road 129		Kettle River	MN	55757
Cecily Erickson	14679 190th Avenue SE		Plummer	MN	56748
Cedric Theel and Mary Theel	10240 N Azure Vista Trail		Fountain Hills	AZ	85268
Cedrik P Gustafson	200 Robert Street NE		Clearbrook	MN	56634
Chad A Lindgren	14248 W Nike Loop		Rapid City	SD	57701
Chad Dahlke	40819 191st Avenue		Clearbrook	MN	56634
Chad Eischens and Kristine Eischens	17450 109th Avenue		Park Rapids	MN	56470

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Chad L Clough and Kimberly J Clough	3112 County Road 4		Carlton	MN	55718
Chad Richard Anderson and Brandon J	15619 N Eden Drive		Eden Prairie	MN	55346
Chad Rogers	10710 200th Street		Park Rapids	MN	56470
Chad Rogers and Melinda M Rogers	12228 County 110		Menahga	MN	56464
Chad W Vernon and Toni Marie Vernon	1874 W Chub Lake Road		Carlton	MN	55718
Chamberlain Family Trust	1469 Valcartier Drive		Sunnyvale	CA	94087
Charity James Lynn	10340 150th Street		Park Rapids	MN	56470
Charity Veone Anderson and Christopher Anderson	2803 Watersedge Lane SE		Mandan	ND	58554
Christine Anderson and Olin M Anderson	29127 County Road 2		Shevlin	MN	56676
Charlene Rahkola and John A Rahkola	2410 Highway 210		Cloquet	MN	55720
Charles A Bernu and Colleen M H Bernu	2463 Highway 210		Cloquet	MN	55720
Charles A Carlson and Irene L Carlson	1135 Gisler Road		Wright	MN	55798
Charles A Johnson	17384 Leonard Road		Clearbrook	MN	56634
Charles and Janette Mortenson	1767 200th Avenue		Kennedy	MN	56733
Charles B Ratz and Sharon A Ratz	PO Box 203		Longville	MN	56655
Charles Calverley and Susan A Calverley	3747 County Road 4		Mahtowa	MN	55707
Charles E and Shelley A Compton	11685 Redwood Street NW		Coon Rapids	MN	55448
Charles E Bordenkircher and Marie Bordenkircher	14 Twixt Hills Road		Ridgefield	CT	6877
Charles E Frank and Ronay Frank	1763 Big Lake Road		Cloquet	MN	55720
Charles Eldon Burns Jr	11690 Norway Drive		Laporte	MN	56461
Charles F Hanson	2271 Thell Road		Wrenshall	MN	55797
Charles H Brandon and Sissel T Brandon	32016 Little Mantrap Drive		Park Rapids	MN	56470
Charles H Tydlacka and Julie A Tydlacka	51833 Bonfire Lane NE		Waskish	MN	56685
Charles J Holm and Laurie Holm	PO Box 72		Hill City	MN	55748
Charles Kenneth Hobbs	1618 County Road 5		Carlton	MN	55718
Charles M Doppler	12683 120th Street NE		Thief River Falls	MN	56701
Charles M Kinler	119 Lake Forest Circle		Bull Shoals	AZ	72619
Charles R Porter	3109 County Road 4		Carlton	MN	55718
Charles Spychala	28029 County 2		Shevlin	MN	56676
Charles Swenson and Elaine Swenson	15368 210th Street NW		Viking	MN	56760
Charles W Thomas	6559 Tabako Road		Wright	MN	55798
Charles Wayt and Jane Wayt	16111 Tamarac Trail		Brainerd	MN	56401
Charlie A Johnson and Lora Johnson	16819 290th Avenue SE		Oklee	MN	56742
Charlie Groetsch	32138 County Road 10		Albany	MN	56307

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Chelsey Ann Pletschett and Kevin	40504 State Highway 92		Gully	MN	56646
Chelsey R Grandstrand	11160 Quincy Boulevard NE		Blaine	MN	55434
Cheryl A Ankrum	1164 Alcohol Road		Wrenshall	MN	55797
Cheryl A Demenge	827 Salmi Road		Cloquet	MN	55720
Cheryl A Kalla and Ronald J Kalla	35297 Tower Road		Albany	MN	56307
Cheryl D Schupbach	25589 330th Street		Shevlin	MN	56676
Cheryl Engelstad and Murray D Engelstad	15179 130th Street NE		Thief River Falls	MN	56701
Cheryl Gunvalson and John Gunvalson	11617 506th Street		Gonvick	MN	56644
Cheryl Peters and Jerome Peters	PO Box 112		Viking	MN	56760
Cheryl R Mitchell	39451 115th Avenue		Laporte	MN	56461
Cheryl R O'Neill and Leslie J O'Neill	31093 220th Street SE		Oklee	MN	56742
Chester Thomas	6559 Tabako Road		Wright	MN	55798
Cheyanne Fleury and Fleury Sam	33259 221st Avenue		Bagley	MN	56621
Chippewa Indian Fond Du Lac Band of and United States of America in Trust	1720 Big Lake Road		Cloquet	MN	55720
Chris Anderson and Sheri Anderson	9350 Lynn Wood Road		Waconia	MN	55387
Chris Hapka	411 11th Street N		Moorhead	MN	56560
Christensen Revocable Living Trust	23874 210th Street SE		Plummer	MN	56748
Christine A Larson and Scott Larson and Kimberly M Lidbeck	17561 Weaver Lake Drive		Maple Grove	MN	55311
Christine Ann Stolpe	5041 Highway 73		Floodwood	MN	55736
Christine M Sandstrom and William P Sandstrom	1184 Alcohol Road		Wrenshall	MN	55797
Christopher Bricker	1482 E Valley Road	#123	Santa Barbara	CA	93108
Christopher D Gendreau	11028 Jade Rose Drive		Park Rapids	MN	56470
Christopher D Lind	936 Center Road		Wright	MN	55798
Christopher Drennan and Megan Drennan	3083 Aadland Avenue NE		Buffalo	MN	55313
Christopher G Gross and Mindy R Gross	3855 Neal Avenue S		Afton	MN	55001
Christopher J Brauhn and Kelly N Brauhn	20929 280th Street N		Ulen	MN	56585
Christopher J Ellison and Nicolle K Ellison	14649 140th Street NE		Thief River Falls	MN	56701
Christopher J Wall Trust	2950 Northridge Lane NE		Owatonna	MN	55060
Christopher Kemper	620 Main Avenue N		Bagley	MN	56621
Christopher M Marciniak	1330 Hohensee Road		Cloquet	MN	55720
Christopher M Stavig	7211 Willow Lane		Minneapolis	MN	55430
Christopher W Hansen	13397 Brass Pkwy		Rosemount	MN	55068
CHS Inc	5500 Cenex Drive		Inver Grove Heights	MN	55077

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CHS Inc	PO Box 64089		Saint Paul	MN	55164
Cindy Doe	1564 County Road 5		Carlton	MN	55718
Cindy E Wishard and Jamie L Wishard	48285 229th Avenue		Clearbrook	MN	56634
Cindy J Walsh	12424 Tamarack Road		Floodwood	MN	55736
Cindy Miksa	4955 Highway 73		Floodwood	MN	55736
Cindy Ose	1019 Elizabeth Avenue N		Thief River Falls	MN	56701
Citizens National Bank Park Rapids	300 1st Street W	PO Box 231	Park Rapids	MN	56470
City of Bagley, Clearwater County, Minnesota	PO Box 178		Bagley	MN	56621
City of Clearbrook, Clearwater County, Minnesota	PO Box 62		Clearbrook	MN	56634
City of Floodwood, St Louis County, Minnesota - Joanne Polo, Clerk	111 W 8th Avenue	PO Box 348	Floodwood	MN	55736
City of Oklee	PO Box 190		Oklee	MN	56742
City of Oklee, Red Lake County, Minnesota	PO Box 190		Oklee	MN	56742
Clare Tveit and David Tveit	10887 Highway 2		Floodwood	MN	55736
Clarence A Dau and Marlene Dau	747 Division Street N		Warren	MN	56762
Clarence Rautio and Nancy Rautio	11532 Highway 2		Floodwood	MN	55736
Clarice E Westcott and Daniel T Westcott	329 N Avenue	PO Box 92	Carlton	MN	55718
Clarice Floberg	22158 290th Street NW		Viking	MN	56760
Clarissa Lerol	1132 Highway 2		Floodwood	MN	55736
Clarissa M Dowhower and Paul A Dowhower	8124 Birch Haven Court NE		Bemidji	MN	56601
Claudia J Finzen	4510 Chickadee Lane		Deephaven	MN	55391
Claudia Peippo and Leslie W Peippo	11198 Highway 2		Floodwood	MN	55736
Clay Young and Kellee Young	11021 Lindstrom Road		Floodwood	MN	55736
Clayton W Nass	5121 Highway 73		Floodwood	MN	55736
Clearwater County	213 Main Avenue N	Department	Bagley	MN	56621
Clearwater County	213 Main Avenue N	Department	Bagley	MN	56621
Clearwater County, Minnesota (Auditor)	213 Main Avenue N	Department	Bagley	MN	56621
Cliff Melby	219 PO Box		Oklee	MN	56742
Clinton D Bauer	11246 State Highway 1 NW		Thief River Falls	MN	56701
Clinton S Hotchkiss and Della R Hotchkiss	40357 191st Avenue		Clearbrook	MN	56634
Cloquet Area Chamber of Commerce	225 Sunnyside Drive		Cloquet	MN	55720
Clover Township	9545 Little Mantrap Lane		Park Rapids	MN	56470
Clyde A Sletten and Leah E Sletten	27557 County Road 2		Shevlin	MN	56676
Clyde and Karen Koch	11030 320th Street		Park Rapids	MN	56470

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Clyde Fering and Valorie Fering	903 7th Street NE		Red Lake Falls	MN	56750
Clyde N Koch and Karen K Koch	11030 320th Street		Park Rapids	MN	56470
Cole A Carlson and Mary K Carlson	2272 Matten Road		Wrenshall	MN	55797
Cole Nymann	24742 160th Street SE		Plummer	MN	56748
Cole Robert Bernier	411 Bourden Street		Oklee	MN	56742
Colleen Gartner	15247 119th Avenue		Park Rapids	MN	56470
Colleen M Arfman and Colleen M Arfman Trust	11648 Blackwood Road		Floodwood	MN	55736
Colleen M Johnson	26687 Garden Lane		Wyoming	MN	55092
Colleen S Calhoun	2420 Bromfield Road		Carlton	MN	55718
Colleen Solseng and Elton Solseng	2027 166th Avenue SE		Horwood	ND	58042
Collin E Mooney and Stacie A Mooney	11916 120th Street NE		Thief River Falls	MN	56701
Connie K Parks and Ronald A Parks	2177 Yndestad Road		Carlton	MN	55718
Connie M Eck and Gregory L Eck	25155 350th Avenue SE		Trail	MN	56684
Conrad Dahl and Dahl Trus Carpenter	11405 Hickman Mills Drive		Kansas City	MO	64134
Conrad Hapka Jr and Kari Hapka	456 Burdick Court		Grand Forks	ND	58201
Conrad J Gorsuch and Deloris L Gorsuch	521 Diamond Lake Lane		Minneapolis	MN	55419
Conway D Olson and Kimberly A Olson	29381 220th Street SE		Oklee	MN	56742
Corder Thomas M (as Trustee) and Thomas Corder Revocable Trust	8821 Ochoa Avenue NE		Elk River	MN	55330
Coreen E Pederson	7640 550th Street		Dumont	MN	56236
Corey L Bustrom and Virginia J Bustrom	33696 Xenon Drive NW		Princeton	MN	55371
Corey Raymond Mumm	3635 31st Street SE		Saint Cloud	MN	56304
Corey W Ness	2248 Main Avenue E		West Fargo	ND	58078
Corey Westrum and Sue Westrum	PO Box 7		Clearbrook	MN	56634
Corina S Keefe	31929 243rd Avenue		Shevlin	MN	56676
Corrinne H Anderson	16125 470th Street		Clearbrook	MN	56634
Cory A Mord and Ora A Mord	50380 101st Avenue		Gonvick	MN	56644
Cory Alvin Borman and Pamela Lynn Thornton	589 48th Avenue SW		Backus	MN	56435
Cory J Johnson	6053 Charles Road		Saginaw	MN	55779
Cory R Carlson and Lori K Carlson	26701 380th Avenue SE		Trail	MN	56684
Cory Stadick and Jessica Lee Stadick	26536 County Road 15		Saint Peter	MN	56082
County Memorial Forest	6582 Franks Road		Wright	MN	55798
County of Carlton	PO Box 130		Carlton	MN	55718
Court G Hanson and Arlene C Hanson	15705 5th Street SE		Blanchard	ND	58009
Craig A Kvamme	2716 15th Street SW		Bemidji	MN	56601

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Craig Augustin and Melissa Augustin	7167 Sand Lake Road		Britt	MN	55710
Craig Brandon and Brandon Hope	1560 8th Street NE		Pine River	MN	56474
Craig D Bakken and Debra K Bakken	697 Bluffview Road		South Haven	MN	55382
Craig Jerde and Patricia A Jerde	6706 Elaine Drive NW		Williams	MN	56686
Craig Jerde and Patricia Ann Jerde	1525 14th Avenue NW		New Brighton	MN	55112
Craig L Sunnarborg and Judith Y Sunnarborg	10 E Palkie Road		Esko	MN	55733
Craig Nathan	8986 Sugarberry Creek		Brainerd	MN	56401
Craig Sawyer and Kay Sawyer	828 5th Avenue NW		Melrose	MN	56352
Crooked Lake Township, Cass County, Minnesota	PO Box 5		Outing	MN	56662
Crow Wing County, Minnesota	326 Laurel Street		Brainerd	MN	56401
CST Land Company	23600 Old Mill Road		Osage	MN	56570
Curtis A Klever and Kristina R Klever	1825 W Chub Lake Road		Carlton	MN	55718
Curtis A Toll	38519 Cass Line Road		Sebeka	MN	56477
Curtis Drellack and Gina Drellack	33333 221st Avenue		Bagley	MN	56621
Curtis Forsland and Sara Forsland	19200 School Forest Drive		Bagley	MN	56621
Curtis Hawks	10483 150th Street		Park Rapids	MN	56470
Curtis J Asleson and Curtis J Asleson Living Trust	20389 County Road 13		New Ulm	MN	56073
Curtis L Hall	46598 179th Avenue		Clearbrook	MN	56634
Curtis W Hendrickson and Sandra K Hendrickson	15314 225th Avenue		New Richland	MN	56072
Cynthia Erickson	13657 Stoney Lake Drive		Gonvick	MN	56644
Cynthia Johnson	3228 Boundary Road		Mahtowa	MN	55707
Cynthia Lee Urbaniak	308 2nd Avenue S	Apartment 1	Ellendale	ND	58436
Cynthia M Nyquist and Daryl G Nyquist	16 Coronado Circle		Hot Springs Village	AR	71909
Cynthia M O'Bryan and James G O'Bryan	PO Box 705		Bagley	MN	56621
Cynthia M Richards and John C Richards	1251 Gisler Road		Wright	MN	55798
Cynthia Melby and Jacob P Melby	12557 500th Street		Gonvick	MN	56644
Cynthia Schultz and David W Schultz	2476 Lone Eagle Trail		Saint Paul	MN	55129
Cynthia Solum	74 Party Time Place		Las Cruces	NM	88005
D Jeffrey Stenberg	27602 230th Street SE		Oklee	MN	56742
Dahlberg, Leo L Trust U/A Dahlberg, Leo L	6684 Highway 210		Wright	MN	55798
Dale A Koop and Gladee K Koop (Trustees) DGKRTA	11213 140th Street NE		Thief River Falls	MN	56701
Dale A Wolf	PO Box 237		Wrenshall	MN	55797

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Dale Allen Fisher and Debra A Fisher	16055 Arbor Road		Menahga	MN	56464
Dale and Barbara Price Trust	38167 330th Avenue NW		Stephen	MN	56757
Dale Anderson and Irene Anderson	2551 County Road 4		Carlton	MN	55718
Dale D Cote and Bonnie B Cote	30348 State Highway 92 SE		Trail	MN	56684
Dale G Lange	20578 317th Street		Avon	MN	56310
Dale G Morrow and Arlene E Morrow	10941 County 6		Park Rapids	MN	56470
Dale H Larson	7855 State 87 SW		Backus	MN	56435
Dale M Brendalen	4510 Timber Shores Court		Alexandria	MN	56308
Dale M Nelson and Denice M Nelson	10367 140th Street NW		Thief River Falls	MN	56701
Dale M Swanson	434 S McKinley	Apartment 110	Warren	MN	56762
Dale Probasco and Dale Probasco Revocable Trust	925 32nd Avenue SW		Backus	MN	56435
Dale R and Debra A Fisher	16386 Arbor Road		Menahga	MN	56464
Dale R Grover and Shirley A Grover	2396 County Road 5		Carlton	MN	55718
Dale R Olson	17108 200th Street NW		Thief River Falls	MN	56701
Dale R Price	38167 330th Avenue NW		Stephen	MN	56757
Dale R Sand and Mary A Sand	29003 Kepler Circle		Cold Spring	MN	56320
Dale Schneider	15611 27th Avenue N		Plymouth	MN	55447
Dale T Vian	4019 County Road 56		Pine River	MN	56474
Dale Vian and Debra J Vian	3851 County Road 56		Pine River	MN	56474
Dale W Zylka and Lori A Zylka	2102 Yndestad Road		Carlton	MN	55718
Dallis Miliander and Laurel A Miliander	2322 NE 27th Avenue		Grand Rapids	MN	55744
Dan Bergsven and Kari Bergsven	51112 County 29		Bemidji	MN	56601
Dan J Vuicich and Linda D Vuicich	3276 Ditchbank Road		Cloquet	MN	55720
Dana Boen	624 1st Avenue		Gonvick	MN	56644
Dana Dfflt Flesche	PO Box 9798		Fargo	ND	58106
Dana J Flesche Family Trust	822 Macintosh Drive		Magnolia	TX	77354
Daniel A Groth	6907 Hana Road		Edison	NJ	8817
Daniel A Moss	5836 Admiral Lane N		Brooklyn Center	MN	55429
Daniel and Deborah Ann and Bryanna Vigness	28497 200th Avenue NW		Viking	MN	56760
Daniel B Madland	1200 Mule Lake Drive NE		Outing	MN	56662
Daniel Damiani and Freda L Newhouse	PO Box 113		Monticello	MN	55362
Daniel E Williams and Mary Lou A Williams	11004 210th Street		Park Rapids	MN	56470
Daniel Freeman and Vicki Freeman	1031 Pennsylvania Avenue N		Golden Valley	MN	55427
Daniel H and Beverly M Gendreau	PO Box 588		Park Rapids	MN	56470

POC	Address1	Address2	City	State	Zip code (5 digits only)
Daniel Herbert Wait Jr and Dora Jean Wilkinson Wait	2410 Sahlman Avenue		Cloquet	MN	55720
Daniel J Golen	5785 Old Miller Trunk Hwy		Duluth	MN	55811
Daniel J Hughes and Josephine Z Hughes	4655 Emerson Avenue S		Minneapolis	MN	55419
Daniel J Laudenbach and Susan M Laudenbach	6092 County Road 136		Saint Cloud	MN	56301
Daniel J Paulson and Tina M Paulson	40379 295th Street SE		Gully	MN	56646
Daniel J Richards	31391 310th Street		Worthington	MN	56187
Daniel K Rautio and Patricia Y Ralidak	6860 Highway 29		Meadowlands	MN	55765
Daniel Kemnitz	4364 County Road 4		Barnum	MN	55707
Daniel Klasen and Katherine Klasen	28447 210th Street SE		Oklee	MN	56742
Daniel L Donofrio	120 Pine Ridge Road		Esko	MN	55733
Daniel L Gaither and Jami Gaither	1933 Darling Heights Place		Alexandria	MN	56308
Daniel L Gaither and Jami Gather	25288 County Road 2		Shevlin	MN	56676
Daniel L Kemnitz and Sharon Kemnitz	4364 County Road 4		Mahtowa	MN	55707
Daniel L Sustad and Donna M Sustad	22501 180th Avenue NW		Viking	MN	56760
Daniel Leroy Parrott	5758 Seville Road		Hermantown	MN	55811
Daniel Lidbeck and Kimberly M Lidbeck	18930 37th Place N		Minneapolis	MN	55446
Daniel M Griffin	8286 Taylor Stone		Spring Lake Park	MN	55432
Daniel M Griffin and Dale M Griffin	8021 158th Lane NW		Ramsey	MN	55303
Daniel M Thompson and Janet A	8400 Thompson Court NW	Apartment 2	Bemidji	MN	56601
Daniel N Eischens and Shelby L Eischens	47437 209th Street		Aurora	SD	57002
Daniel R Gronseth and Debbie Gronseth	17272 N 77th Way		Scottsdale	AZ	85255
Daniel R Szmiot and Sandra Szmiot	4260 Reiland Lane		Shoreview	MN	55126
Daniel Sustad and Donna Sustad	22501 180th Avenue NW		Viking	MN	56760
Daniel T Zimmermann	PO Box 417		Cold Spring	MN	56320
Daniel Traun	18407 251st Avenue		Shevlin	MN	56676
Daniel W Pflugshaupt	911 32nd Avenue SW		Backus	MN	56435
Daniel W Schug	1241 90th Street		Hamburg	MN	55339
Daniel Zutz and Larae Zutz	1234 4th Street N		Fargo	ND	58102
Danielle E Hanson	16796 127th Street SE		Saint Hilaire	MN	56754
Danita Johnston and Dustin Johnston	4209 Broken Bend Boulevard		Fort Worth	TX	76244
Dannie J Borntrager and Mary J Borntrager	49239 County 7		Gonvick	MN	56644
Danny Basher and Karen Marie Basher	2891 State Highway 172 NW		Baudette	MN	56623
Danny Hoeper	33236 270th Avenue NW		Argyle	MN	56713
Dany Jack Ekre Jr and Elizabeth K Ekre	19892 350th Street		Bagley	MN	56621

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Daran Kent Butler	28051 206th Street		Shevlin	MN	56676
Darcie K Dalager and Nathan P Dalager	12539 140th Avenue SE		Saint Hilaire	MN	56754
Darcy L Erickson	5272 Nelmark Avenue NE		Saint Michael	MN	55376
Darin Krenz and Jessica Krenz	17933 Griswold Avenue		Norcross	MN	56274
Darin O Larson	7530 Bittern Road NE		Bemidji	MN	56601
Darin Rothstein and R Martini Cd	1305 4th Avenue N		Sartell	MN	56377
Darlene Lanning and Ryan Lanning	PO Box 271		Floodwood	MN	55736
Darlene M Williams	10520 County 48		Park Rapids	MN	56470
Darline Broten	28267 230th Avenue NW		Viking	MN	56760
Darrel and Peter Johnson	2224 190th Avenue		Hallock	MN	56728
Darrel Berry	3810 Pine Street		Barnum	MN	55707
Darrel Johnson	9255 Military Road		Cottage Grove	MN	55016
Darrel L Anderson and Renee L Anderson	10575 County 14		Park Rapids	MN	56470
Darrell M Voytilla	25551 County Road 38 NW		Viking	MN	56760
Darrell Royseth and Dustin J Royseth	3213 Zimmerman Road		Duluth	MN	55804
Darren Laesch and Rebecca Laesch	32292 County 2		Shevlin	MN	56676
Darren Snobeck and Cynthia Snobeck	247 Robert Street NE		Clearbrook	MN	56634
Daryl and Debra Nelson Irrevocable Asset Protection Trust	43632 181st Avenue		Clearbrook	MN	56634
Daryl Capistran	3701 Pleasant Avenue	Apartment 2	Minneapolis	MN	55409
Daryl L Olson and Renee K Olson	1065 7th Street N		Warren	MN	56762
Dave Hemmila and Tani Hemmila	3025 Maple Street		Kettle River	MN	55757
David A Borntrager and Naomi C Borntrager	11183 490th Street		Gonvick	MN	56644
David A Ehnstrom and Mary Jo Ehnstrom	8055 Claymore Avenue		Inver Grove Heights	MN	55076
David A Golen and Margorie Golen	1017 Cary Road		Cloquet	MN	55720
David A Nieland	1729 County Road 61		Carlton	MN	55718
David A Vocelka and Karen K Vocelka	17301 109th Avenue		Park Rapids	MN	56470
David and Jolene Conway Clark and Janean Huser	PO Box 287		Stephen	MN	56757
David and Mary Lynn Bachand Inc	706 Minnesota 222		Oklee	MN	56742
David Benson and Linda Benson	4145 Wild Meadows Drive		Medina	MN	55340
David Bieniski	21820 Great Eastern		Warren	MN	56762
David Black	PO Box 455		Gibbon	MN	55335
David Bourque	22276 270th Avenue SE		Brooks	MN	56715
David Bristol	4149 Midway Road		Hermantown	MN	55811
David Broten and Mary Broten	2724 Walnut Circle		Moorhead	MN	56560

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David C and Cindy J Peckat	9940 260th Street		Park Rapids	MN	56470
David C and Linda J Benson	21097 Fir Trail		Park Rapids	MN	56470
David C Flatland and Kerri J Flatland	10041 140th Avenue NE		Saint Hilaire	MN	56754
David C Krube and Rhonda R Krube	3167 Ditchbank Road		Cloquet	MN	55720
David Cameron	13132 110th Avenue NE		Thief River Falls	MN	56701
David Clark and Kimberly Clark	PO Box 287		Stephen	MN	56757
David Douglas and Watt S Douglas	1802 Douglas Road		Carlton	MN	55718
David E and Avis M Sucher (Trustees of) Living Trust	24857 Old Church Road		Red Wing	MN	55066
David E and Mavis L Smith Trust	78833 Tamarind Pod Court		Palm Desert	CA	92211
David E Dyrdal and Barbara J Dyrdal	16220 130th Avenue NW		Thief River Falls	MN	56701
David E Parks	24178 320th Street		Bagley	MN	56621
David A Zinniel and Stacie A Zinniel	14126 County Road 18		Park Rapids	MN	56470
David Erickson	1225 Hartzog Loop		North Pole	AK	99705
David Erler and Michelle Thornton	3105 Victoria Street N		Roseville	MN	55113
David F Marjama and Donna L Marjama	58702 County Highway 40		Menahga	MN	56464
David Field	1043 Griggs Avenue		Grafton	ND	58237
David G Foldoe and Mary L Foldoe	34418 215th Avenue		Bagley	MN	56621
David G Hilgendorf	13627 110th Street		Menahga	MN	56464
David Gregory and Susan Julin	17837 450th Street		Clearbrook	MN	56634
David H Watzl	15608 Red Oaks Road		Prior Lake	MN	55372
David Hanson Howard	9341 Kimberly Lane N		Maple Grove	MN	55311
David Harmon and Kathleen M Harmon	1746 Forssa Way		Eagan	MN	55122
David J Garthus	9569 Inverness Trail Road		Cheboygan	MI	49721
David J Hendrickson	26179 Raleigh Hill Road		Shevlin	MN	56676
David J Konkol and Kimberly S Konkol	17248 57th Street SE		Becker	MN	55308
David J Schmidt and Barbara F Schmidt	PO Box 3		Crosby	MN	56441
David Jr and Kim Sheley	437 48th Avenue SW		Backus	MN	56435
David K Keller	3136 Magney Drive		Cloquet	MN	55720
David L Anderson and Deanna Anderson	23651 370th Avenue SE		Trail	MN	56684
David L Connor	748 265th Avenue NE		Isanti	MN	55040
David L Dahlberg and Karleen K Dahlberg	15242 460th Street		Clearbrook	MN	56634
David L Hanson and Tereasa D Hanson	PO Box 273		Bagley	MN	56621
David L Hellriegel and Linda K Hellriegel	16110 Halsey Avenue		Carver	MN	55315
David L Johnson	5950 Herranen Road		Cromwell	MN	55726
David L Rambow	23751 267th Avenue		Shevlin	MN	56676

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David L Walli	5865 Highway 210		Wright	MN	55798
David M Acker and Marily I Acker	3919 County Road 4		Mahtowa	MN	55707
David M Hutchins and Krista J Hutchins	265 Elm Drive		Foley	MN	56329
David Machaj and Sandra Kay Machaj	17489 Kodiak Avenue		Lakeville	MN	55044
David Martini	10881 300th Street		Park Rapids	MN	56470
David Olmscheid	10651 Kimdall Avenue NW		Annandale	MN	55302
David P Sorensen and Kimberly Sorensen	6700 235th Avenue NE		Stacy	MN	55079
David R Bouldin	1317 Central Hall Road		Cloquet	MN	55720
David R Chambers and Shanna D Thompson	6635 Highway 210		Wright	MN	55798
David R Douglas	1802 Douglas Road		Carlton	MN	55718
David R Jr Nyhus	3189 Linden Circle NW		Prior Lake	MN	55372
David R Stevens	5447 County Road 4		Crowmwell	MN	55726
David R Swanda and Laura E	10456 County Road 32		Park Rapids	MN	56470
David W Eller and Jody B Eller	3720 County Road 4		Mahtowa	MN	55707
David W Schultz	9307 12th Avenue S		Bloomington	MN	55425
Dawn Bourdeaux and Family Revocable Li David D Erie Trustees of the Erie-	31187 151st Street NW		Princeton	MN	55371
Dean A Christianson and Karleen D Christianson	20161 210th E Avenue		Plummer	MN	56748
Dean A Hamnes and Jamie E Hamnes	48257 Taflin Lake Road		Gonvick	MN	56644
Dean C and E A Klicker Trust	14233 Eagle Pointe Drive		Park Rapids	MN	56470
Dean Dahl and Mary Dahl	12478 State Highway 1 NW		Thief River Falls	MN	56701
Dean G Holtan and Susan K Holtan	17912 US Highway 59 NE		Thief River Falls	MN	56701
Dean Heikkila	30232 S Elk Drive		Colton	OR	97017
Dean Hooker and Monica M Hooker	12172 400th Street		Laporte	MN	56461
Dean Liimatainen	2226 Cowern Place E		North Saint Paul	MN	55109
Dean Merlyn Nelson Jr and Margaret Ann Nelson	806 County Road 18		Wrenshall	MN	55797
Dean Stengrim	43498 US Highway 75 NW		Stephen	MN	56757
Dean W Hansen and Virginia R Hansen	3323 Ditchbank Road		Cloquet	MN	55720
Dean Wayne Liimatainen	2226 Cowern Place E		North Saint Paul	MN	55109
Deann Dyrdahl	18102 460th Street		Clearbrook	MN	56634
Debbi June Slater	4508 County Road 4		Mahtowa	MN	55707
Debbie Keil and Gary L Keil	PO Box 139		Floodwood	MN	55736
Debbie L Keil and Dusty Keil	11558 Highway 2		Floodwood	MN	55736

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Deborah A Becker and Tracy Becker	13501 146th Street		Park Rapids	MN	56470
Deborah Ann Vigness	28497 200th Avenue NW		Viking	MN	56760
Deborah B Altepeter and Joseph Altepeter	30220 180th Street SW		Euclid	MN	56722
Deborah J Klemmetsen and Mark T Klemmetsen	PO Box 556		Bagley	MN	56621
Deborah K Bullion	1622 Trishia Court NW		Swisher	IA	52338
Deborah R Solem	C/O Kevin Stangret	15006 Jackson	Ham Lake	MN	55304
Deborah Swanson and Howard D Swanson	434 S McKinley	Apartment 110	Warren	MN	56762
Debra A Reed and Joel F Reed	2237 Nendick Road		Carlton	MN	55718
Debra Bahen and Joe Bahen	3161 County Road 104		Barnum	MN	55707
Debra Harmon	PO Box 39		Bagley	MN	56621
Debra J Stadick and Edwin A Stadick Jr	1537 Lee Avenue		New Ulm	MN	56073
Debra K Kraklau	13519 Thompson Road		Brainerd	MN	56401
Debra L Edelman and Lyle E Edelman	3208 US Highway 87 E		Billings	MT	59101
Debra Lorshbough and Jack Lorshbough	16268 Grange Road NW		Pinewood	MN	56676
Debra Murray and Richard J Murray	520 S Pine Street		Lusk	WY	82225
Debra Rieland	40693 191st Avenue		Clearbrook	MN	56634
Debra Shaw and William A Shaw	PO Box 340		Moorhead	MN	56561
Deeann Egeland Revocable Living Trust	3823 21st Avenue S		Moorhead	MN	56560
Delbert Erickson and Katherine Erickson	138 S 5th Street		Warren	MN	56762
Delores Strandlien	26865 310th Street		Shevlin	MN	56676
Denise C Ristinen and Terry L Ristinen	10233 US 71		Menahga	MN	56464
Denise Manthey	14677 Cottontail Drive		Park Rapids	MN	56470
Dennis C Bolton and Eileen L Bolton	13137 189th Avenue		Park Rapids	MN	56470
Dennis E Riggs and Sheryl L Riggs	28236 230th Street		Shevlin	MN	56676
Dennis E Roggeman	809 Meadow Circle		Belle Plaine	MN	56011
Dennis J Enright	1721 Stone Lake Road SW		Bemidji	MN	56601
Dennis J Lengyel and Mary P Lengyel	5922 Elder Avenue NW		Maple Lake	MN	55358
Dennis J Lundin and Dee Ann Lundin	1439 Heather Lane		Cromwell	MN	55726
Dennis Knutson and Patrica M Knutson	10817 260th Street		Park Rapids	MN	56470
Dennis L Huwe and Kathryn Huwe	38155 221st Avenue		Bagley	MN	56621
Dennis M Powers and Sandra J Powers	591 Cemetery Road		Wrenshall	MN	55797
Dennis P Waller and Kathy D Waller	2080 Yndestad Road		Carlton	MN	55718
Dennis R Bergerson	47862 County 7		Gonvick	MN	56644
Dennis R Johnson	760 State 84 SW		Pine River	MN	56474

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Dennis Sandstrom	12145 Garrett Road		Floodwood	MN	55736
Dayna Melvie and Kraig Melvie	21738 165th Avenue NW		Viking	MN	56760
Dennis Wilkens	13557 110th Street SE		Saint Hilaire	MN	56754
Dennis Winge	1074 270th Avenue		Kennedy	MN	56733
Derek G Merrier	1187 Alcohol Road		Wrenshall	MN	55797
Derek Kringen	6620 Queens Lane NW		Bemidji	MN	56601
Derek L Olson	1321 4th Avenue		Anoka	MN	55303
Derwin Broten and Pauline L Broten	155 S 5th Street		Warren	MN	56762
Deserie A Bremer and Donald H Bremer	2335 County Road 5		Carlton	MN	55718
Dewey Samuel Dupuis and Maria Delores Dupuis	3359 Ditchbank Road		Cloquet	MN	55720
Diana Pihlaja	13221 Johannasburg Circle		Menahga	MN	56464
Diana S Wilson	2006 Gillogly Road		Carlton	MN	55718
Diane C Johnson and James E Johnson	49440 Taflin Lake Road		Gonvick	MN	56644
Diane D Larson Rev Trust	3771 Pirate Point Road		Helena	MT	59602
Diane F Waggoner and Tracy L Waggoner	1000 3rd Street SE		Bemidji	MN	56601
Diane G Nyquist	PO Box 95		Carlton	MN	55718
Diane Gilmer	18th Street S		Saint Cloud	MN	56301
Diane Grandstrand and Winslow D Grandstrand	355 Macalester Street		Saint Paul	MN	55105
Diane H Killian and Lawrence M Killian	PO Box 24		Plummer	MN	56748
Diane Hanson Stevens and Ronald	317 Kansas Street		Winona	MN	55987
Diane Hull	PO Box 24		Clearbrook	MN	56634
Diane J Schoon	16190 120th Avenue NW		Thief River Falls	MN	56701
Diane Kolstoe and Thomas S Kolstoe	27536 180th Street SE		Oklee	MN	56742
Diane L Gaughan and Thomas M Gaughan	15291 Big Buck Drive		Menahga	MN	56464
Diane M Evans and Donald J Evans	20260 Yttrium Street NW		Anoka	MN	55301
Diane M Vrana and Lyle Vrana	25279 134th Street		Zimmerman	MN	55398
Diane R Lapinoj and Amanda M Lapinoja	38385 Cass Line Road		Sebeka	MN	56477
Diane Silvis and Douglas W Silvis	30615 149th Street NW		Princeton	MN	55371
Diane Stevens Hanson	317 Kansas Street		Winona	MN	55987
Diane Y Larson	PO Box 13591		Grand Forks	ND	58203
Dianne Huseth-Godtland	50852 101st Avenue		Gonvick	MN	56644
Dinah M Tveit	11300 Highway 2		Floodwood	MN	55736
Don R Murray and Idell J Murray	PO Box 197		Donaldson	MN	56720

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Don R Murray and Idell J Murray	1709 25th Avenue S	Apartment 218	Fargo	ND	58103
Donald A Devries	14035 252nd Avenue NW		Zimmerman	MN	55398
Donald and Bonita Cash (Trustees of) Revocable Living Trust	1515 11th Avenue N		Grand Forks	ND	58203
Donald and Mary Huot	504 14th Avenue S		Cold Spring	MN	56320
Donald Bernard and Barbara Bernard	28048 220th Street SE		Oklee	MN	56742
Donald Berry	PO Box 241		Oklee	MN	56742
Donald C Tschudi	38257 Bad Medicine Resort		Ponsford	MN	56575
Donald Edward Arro	4866 Hingeley Road		Floodwood	MN	55736
Donald Gryskiewicz and Janice Gryskiewicz	36878 310 Avenue NW		Stephen	MN	56757
Donald Howe and Kaye Howe	6935 4th Street SW		Backus	MN	56435
Donald J and Diane M Evans	20260 Yttrium Street NW		Anoka	MN	55303
Donald J Berry	PO Box 241		Oklee	MN	56742
Donald J Hagen and Constance R Hagen	14811 US Highway 59 SE		Plummer	MN	56748
Donald J Lehner	4224 Highway 33 N		Cloquet	MN	55720
Donald J Stcynske and Donna J Stcynske	PO Box 16		Outing	MN	56662
Donald Kantola	29591 Sunset Road		Bovey	MN	55709
Donald Kathman	1011 Lincoln Avenue		Argyle	MN	56713
Donald Konickson and Karen Konickson	19504 160th Street SE		Plummer	MN	56748
Donald L Johnson	39452 285th Street SE		Gully	MN	56646
Donald L Kjelland and Marlene F Kjelland	26559 115th Avenue		Park Rapids	MN	56470
Donald Mattevi	539 County Road 4		Wrenshall	MN	55797
Donald P Ducote and Kathleen R Ducote	17103 460th Street		Clearbrook	MN	56634
Donald Paul Charpentier	10190 Arcola Trail N		Stillwater	MN	55082
Donald R Anderson and Patricia Ann Anderson	2125 Old Atkinson Road		Carlton	MN	55718
Donald Redes Brown and Gail Brown	1916 W Chub Lake Road		Carlton	MN	55718
Donald Vorderbruggen and Carolyn Vorderbruggen	19913 350th Street		Bagley	MN	56621
Donald W Hesse Jr	18273 Naples Street NW		Elk River	MN	55330
Donald Warner	606 W 11th Street		Albert Lea	MN	56007
Donald Yutrzenka and Gail Yutrzenka	32656 320th Street NW		Argyle	MN	56713
Donavan L Erlandson and Verla D Erlandson	18636 110th Avenue NW		Thief River Falls	MN	56701
Donita Harris	2170 8th Street SW		Backus	MN	56435
Donna Brevik	2380 State Highway 11		Kennedy	MN	56733

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Donna Cota and Leslie Cota	14287 Center Avenue N		Thief River Falls	MN	56701
Donna Drangstveit and Mike Drangstveit	22919 300th Avenue NE		Goodridge	MN	56725
Donna J Franks and Michael D Franks	20954 350th Avenue NW		Warren	MN	56762
Donna Jane Pfeiffer and Steven Pfeiffer	26932 579th Avenue		Warroad	MN	56763
Donna K Flesher	3140 Magney Drive		Cloquet	MN	55720
Donna Laudal and Larry Laudal	24943 State Highway 1 NW		Warren	MN	56762
Donna M Eveland Revocable Trust	403 44th Avenue SW		Backus	MN	56435
Donna M Williams (Life Est) and Chris E Williams	10360 235th Street		Park Rapids	MN	56470
Donna Mae Hall	101 N Palo Verde	#713	Henderson	NV	89074
Donna Thornton and Edward S Thornton	N 7909 986th Street		River Falls	WI	54022
Donovan D Dulski and Judith C Dulski	12207 110th Street		Menahga	MN	56464
Donovan D Dyrdal and Anna M Dyrdal DRLT	13142 180th Street NW		Thief River Falls	MN	56701
Dennis W Danielson and Barbara A	35130 Timber Drive		Bagley	MN	56621
Donovan Slusar	2980 122nd Avenue NW		Coon Rapids	MN	55433
Doreen Laveau and Duane Laveau	508 Cemetery Road		Wrenshall	MN	55797
Doris M Glover	44967 Glover Trail		Pine River	MN	56474
Dorothy Ann George	115 SE 2nd Avenue		Rice	MN	56367
Donovan M Rostollan and Vicki B Rostollan	1933 E Chub Lake Road		Carlton	MN	55718
Dorothy L Nelson and Leroy D Nelson	13365 110th Avenue NE		Thief River Falls	MN	56701
Douglas A Rasch	43003 191st Avenue		Clearbrook	MN	56634
Douglas Bannister	7240 Humboldt Avenue N		Brooklyn Center	MN	55430
Douglas J Soukkala	2837 County Road 4		Carlton	MN	55718
Douglas John Brostrom Trust	5367 County Road 56		Pine River	MN	56474
Douglas O Tull and Lois R McBride	5180 Andrus Lake Road NE		Outing	MN	56662
Douglas P Delaney	2575 Highway 210		Cloquet	MN	55720
Douglas P Paggen	16002 County Road 17		Holdingford	MN	56340
Douglas R Falk and Kathryn J Falk	43651 351st Lane		Aitkin	MN	56431
Douglas R Haffield and Kelly M Haffield	2420 Stroud Road		Wrenshall	MN	55797
Dorothy Evelyn Long Revocable Trust	28088 US 71		Park Rapids	MN	56470
Douglas W Becker and Patricia J Becker	12824 112th Street NE		Thief River Falls	MN	56701
Douglas W Brown	26633 260th Street		Shevlin	MN	56676
Douglas W Kraklau and Debra K Kraklau	13519 Thompson Road		Brainerd	MN	56401
Douglas Wonnenberg	PO Box 490		Bismarck	ND	58502

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Douglas Wonnenberg and Robyn Wonnenberg	3921 Trenton Drive		Bismarck	ND	58503
Dow A Rychlak and Rhonda M Rychlak	1902 Sheils Road		Carlton	MN	55718
Duane A Berthiaume	1151 Reponen Road		Cloquet	MN	55720
Duane A Olson and Janice A Olson	120 Spruce Avenue N		Thief River Falls	MN	56701
Duane Anderson and Sandra R Anderson	2386 Highway 23		Wrenshall	MN	55797
Douglas Schindele and Jane Schindele	33866 400th Street NW		Stephen	MN	56757
Duane C Johnson	3651 Axtell Road		Cloquet	MN	55720
Duane Haukland and Geraldine Haukland	4056 Monroe Street NE		Columbia Heights	MN	55421
Duane Hillesheim and Romnee Hillesheim	13266 181st Lane NW		Elk River	MN	55330
Duane J Biehn	28198 320th Street		Shevlin	MN	56676
Duane L Rieck	929 W Arrowhead Road		Duluth	MN	55811
Duane M Olsen	92270 Lake 12 Road		Sturgeon Lake	MN	55783
Duane R Ziebarth and Lisa Ziebarth	11 Broadway		Wrenshall	MN	55797
Duane Tischer and Carol Tischer	1771 County Road 61		Carlton	MN	55718
Duane W and Diane C Wallace	PO Box 445		Park Rapids	MN	56470
Duane W Mattson and Laura Muriel	1107 30th Street		Cloquet	MN	55720
Duane W Sandage	617 Duff Avenue		Ames	IA	50010
Duane W Wallace	11423 190th Street		Park Rapids	MN	56470
Dustin C Edelman and Ava Rose L	31722 US 71		Park Rapids	MN	56470
Dustin M Carlson and Cortney E Carlson	1947 W Chub Lake Road		Carlton	MN	55718
Dwayne M Fry and Jennifer L Fry	2542 Ziehl Road		Carlton	MN	55718
Dwight H Johnson	PO Box 253		Kennedy	MN	56733
Dwight R Olson	5879 Herranen Road		Cromwell	MN	55726
Dwight Thompson and Phyllis Thompson	506 4th Avenue NE		Dilworth	MN	56529
Dylan J Goudge and Sarah J Goudge	309 West Street SW		Clearbrook	MN	56634
Dyrdal Revocable Living Trust	13142 180th Street NW		Thief River Falls	MN	56701
Dyr-Valley Enterprises, Ltd	12744 180th Street NW		Thief River Falls	MN	56701
E Robert and Trustee Paul R Harris	5330 Beacon Hill Road	Apartment 324	Minnetonka	MN	55345
Earl Hoefer and Eileen Hoefer	12203 110th Avenue NW		Thief River Falls	MN	56701
Earl J Myhre	709 Carefree		Venice	FL	34285
Earl J Myhre Estate	60 Crystal Creek Road		Orono	MN	55356
Earl Pederson	3077 County Highway 42		Bejou	MN	56516
Earl R Erickson	2922 County Road 4		Carlton	MN	55718
Earl R McGregor Revocable Living Trust	25464 270th Street NW		Warren	MN	56762

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Earl Shongo and Judy Shongo	2688 Sandy Loam Court		Sebring	FL	33875
Earl W Heikkila and Ann Heikkila	6911 Highway 210		Wright	MN	55798
Edmund Safranski	425 E 2nd Street		Argyle	MN	56713
Edward A Barbo-Barkos	2447 Waller Road		Carlton	MN	55718
Edward and Caroline Smith	10099 130th Street		Park Rapids	MN	56470
Edward C White and Anne C White	35586 Falcon Avenue		North Branch	MN	55056
Edward D Jaakola and Wendy S Jaakola	3270 Ditchbank Road		Cloquet	MN	55720
Edward Eskeli	22363 165th Street SE		Plummer	MN	56748
Edward J Kavanaugh and Jane Kavanaugh	1926 E Chub Lake Road		Carlton	MN	55718
Edward J Walsh	917 Randolph Avenue		Saint Paul	MN	55102
Edward J Watzl	15608 Red Oaks Road		Prior Lake	MN	55372
Edward M Johnson and Regina C Johnson	216 21st Street NW		Minot	ND	58703
Edward R Clos	6514 E Mud Lake Road		Wright	MN	55798
Edward T Clark and Rhonda Clark	19233 Lander Street NW		Elk River	MN	55330
Edwin C and Michele D Ruonavaara	10750 159th Avenue		Menahga	MN	56464
Eileen K Benesh and Frankie J Benesh	620 Main Avenue N		Bagley	MN	56621
Eileen Mae Schantz-Hansen Trust	2140 Gillogly Road		Carlton	MN	55718
Einevoll Family Trust	9 Corte Lado Court		Oakley	CA	94561
Eischens Family Trust	31419 Mallard Bay		Park Rapids	MN	56470
El Rio Wishard Family Trust	26876 340th Avenue SE		Trail	MN	56684
Elaine Benson	2606 13th Avenue S	Apartment 201	Grand Forks	ND	58201
Elden J Elseth	23862 Great Eastern		Warren	MN	56762
Elden J Elseth and Robert Elseth	32738 240th Street NW		Warren	MN	56762
Eldon Burstad and Joan Burstad	1012 Schneider Lane		Menomonie	WI	54751
Eleanor Ahlbrecht	19406 661st Avenue		Buffalo Lake	MN	55314
Eleanor Kuznia	2230 River Road NW	Apartment 106	East Grand Forks	MN	56721
Elim Luth Brethren of Clearbrook	PO Box 66		Clearbrook	MN	56634
Elim Lutheran Brethren of Clearbrook	PO Box 66		Clearbrook	MN	56634
Elizabeth J Seeger	18129 324th Avenue		Detroit Lakes	MN	56501
Elizabeth Kortie and Paul Kortie	314 8th Street		Cloquet	MN	55720
Elizabeth Lizakowski and Jay M Lizakowski	18740 144th Avenue NW		Thief River Falls	MN	56701
Elizabeth Mahour Trust	2704 E Friess Drive		Phoenix	AZ	85032
Elizabeth Pawloski and Rodney Pawloski	3427 Dailey Street		Phoenix	AZ	85053

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Ellen L Fredericks and Gary R Fredericks	294 County Road 4		Wrenshall	MN	55797
Ellen Mikkola	1220 Villa Vista Court		Cromwell	MN	55726
Elmer Etal Halvorson	29093 410th Avenue SE		Gully	MN	56646
Elmer Leppi	4611 Kruger Road		Duluth	MN	55811
Elmer Steven	1856 E Chub Lake Road		Carlton	MN	55718
Elso G Ryks	948 County Road 43		Pine River	MN	56474
Emil Kuznia and Florence Kuznia	306 Washington Avenue W	Apartment 124	Karlstad	MN	56732
Enbridge Energy Limited Partnership	PO Box 2629		Addison	TX	75001
Enbridge Energy Limited Partnership	1100 Louisiana Street		Houston	TX	77002
Enbridge Energy, LP	119 N 25th Street E		Superior	WI	54880
Enbridge Partnership Energy	14850 Quorum Drive Street		Dallas	TX	75254
Garett W Envall Trust	6023 Eagle Lake Road		Cromwell	MN	55726
Eric Bakken and Melanie Bakken	603 Barker Street		Hartland	MN	56042
Duane Arthur Long Revocable Trust	28088 US Highway 71		Park Rapids	MN	56470
Eric Colsen and Traci Colsen	38538 259th Avenue		Menahga	MN	56464
Erica S Lutz	539 County Road 4		Wrenshall	MN	55797
Eric C Foldoe	34417 215th Avenue		Bagley	MN	56621
Erik Nymann and Melissa M Nymann	15495 250th Avenue SE		Plummer	MN	56748
Erika Chebor and Ron Chebor	2271 Amanisoti Drive		Carlton	MN	55718
Erin Andrus Haefele and Ryan Haefele	1570 Hickory Drive		Minnetrista	MN	55359
Erin C Grandstrand	1511 California Street NE		Minneapolis	MN	55413
Erin J Juidici and Scott A Juidici	836 W 47th Street		Hibbing	MN	55746
Ernest K and Barbara A Svenkerud	30160 US 71		Park Rapids	MN	56470
Ervin E Peterson and Shirley E Peterson	3401 Boundary Road		Mahtowa	MN	55707
Ervin Morken and Marjorie Morken	26271 235th Avenue NW		Warren	MN	56762
Erwin Melvie	905 1st Street W		Thief River Falls	MN	56701
Esp Christensen and Melanie S	23874 210th Street SE		Plummer	MN	56748
Estate of Alice Sedenquist	1878 210th Street		Hallock	MN	56728
Estate of Earl Dahl	18395 Golf View Lane		Bagley	MN	56621
Ethan A Johnson	2636 County Road 3		Wrenshall	MN	55797
Ethel M Olson	23365 280th Street NW		Viking	MN	56760
Ethel M Olson	406 N 3rd Street	Apartment 26	Warren	MN	56762
Eugene A Teigland and Suzanne M Teigland	978 Grant Hills Road SW		Bemidji	MN	56601
Eugene C Litzau and Wanda L Litzau	1314 15th Street E		Glencoe	MN	55336

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Eugene C Maves	10968 190th Street		Park Rapids	MN	56470
Eugene C Maves	19544 109th Avenue		Park Rapids	MN	56470
Eugene C Vanhoever and Patricia Vanhoever	1876 Gillogly Road		Carlton	MN	55718
Eugene E Youngbauer	2647 Midway Road		Duluth	MN	55810
Eugene Invie and Patricia Invie	5325 226th Avenue NE		Bethel	MN	55005
Eugene V Sitzman	2666 10th Street		Wyandotte	MI	48192
Eugene Vorderbruggen	15945 480th Street		Clearbrook	MN	56634
Eugenia B Halverson	3387 County Road 56		Pine River	MN	56474
Evangelical Free Church of 3rd and Kendal Streets of Thief River Falls MN	1425 3rd Street E		Thief River Falls	MN	56701
Evangeline K Goldschmitz	679 Watson Avenue		Saint Paul	MN	55102
Evelyn E Taylor	19320 394th Street		Park Rapids	MN	56470
Evelyn M Fowler and Timothy L Fowler	10436 119th Avenue		Menahga	MN	56464
Evelyn Mortenson and Harris E Mortenson	412 Forest Avenue SE		Hallock	MN	56728
Everett C Schroeder	731 8th Avenue S		South Saint Paul	MN	55075
Excavating Plummer	PO Box 38		Plummer	MN	56748
Faith McDonald and Jeffery E McDonald	18870 250th Street		Park Rapids	MN	56470
Faldet Revocable Trust James R and Virginia L Faldet	10760 500th Street		Gonvick	MN	56644
Farmers Coop Co	1938 Center Road		Wright	MN	55798
Faye Foss and William Foss	201 Red River Avenue N		Cold Spring	MN	56320
Fella D Drevlow and Loretta L Drevlow	11752 State Highway 32 NE		Thief River Falls	MN	56701
Fella Drevlow and Loretta Drevlow	501 Duluth Avenue S		Thief River Falls	MN	56701
Fern M Crocker	30558 N US Highway 71		Park Rapids	MN	56470
Field GP Brothers	38177 390th Street NW		Stephen	MN	56757
Finance of America Reverse LLC	10858 Jade Rose Drive		Park Rapids	MN	56470
Finn-Pac Inc	12550 E Road		Side Lake	MN	55781
Floodwood Area Credit Union	11521 Blackwood Road		Floodwood	MN	55736
Florence Kalenius	620 5th Avenue SW		Pine City	MN	55063
Florian Joseph Jurek and Florian Joseph Jurek Revocable Trust Agr	2616 Strandberg Road		Barnum	MN	55707
Floyd E Novack and Theresa M Novack	3183 Magney Drive		Cloquet	MN	55720
Fond Du Lac Band of Lake Superior Chippewa	1720 Big Lake Road		Cloquet	MN	55720
Francis C and Debra L Freund	13354 Becker Line Road		Park Rapids	MN	56470

POC	Address1	Address2	City	State	Zip code (5 digits only)
Francis Hamerlinck and Jeanette Hamerlinck	215 9th Street E		Thief River Falls	MN	56701
Francis R Anderson and Marlys M Anderson	12281 State Highway 1 NW		Thief River Falls	MN	56701
Francis W Crowley	1769 Snelling Avenue N		Saint Paul	MN	55113
Franciscus R Goedhart and Joy L Goedhart	2509 Harvest Moon Drive		Barnum	MN	55707
Frank A Menart	2545 Menart Road		Wrenshall	MN	55797
Frank D Williams	10520 County Road 48		Park Rapids	MN	56470
Frank Dyrdahl and Deann Dyrdahl	18102 460th Street		Clearbrook	MN	56634
Frank J Mitchell Trust	2121 48th Avenue SW		Pine River	MN	56474
Frank R and Joan L Thompson	26451 US 71		Park Rapids	MN	56470
Frank R and Marcella Cieklinski Revocable Living Trust	37229 580th Avenue		Warroad	MN	56763
Frank Warzecha	12296 20th Street		Bowlus	MN	56314
Frank Zahl	10517 260th Street		Park Rapids	MN	56470
Franklin J Svoboda and Joan L Svoboda	22752 County Road 7		Hutchinson	MN	55350
Franklin W Newell	4404 Oakhurst Avenue		Vadnais Heights	MN	55127
Fred J Higgins	10834 Impression Road		Park Rapids	MN	56470
Fred Sorensen Jr. and Roxanne Sorensen	17205 140th Avenue SE		Red Lake Falls	MN	56750
Fred W Hensel	30409 US 71		Park Rapids	MN	56470
Fred W Lake	6201 N Carrie Street		Wasilla	AK	99654
Frederick C Lambrecht	32184 Fern Trail		Stacy	MN	55079
Frederick D Barg and Melissa K Barg	6696 253rd Avenue NE		Stacy	MN	55079
Frederick P Rondeau	18285 184th Avenue		Big Lake	MN	55309
Frederick W Muhs and Mary S Muhs	1351 County Road 2319		Pittsburg	TX	75686
Fredrick S Johnson and Christy R Johnson	17329 450th Street		Clearbrook	MN	56634
Fredrick W Muhs and Mary S Muhs	943 Inverness Circle		Highland Village	TX	75077
Friborg and Dukek Trust-Paul Friborg and Shirley Dukek	37817 Fairground Road		Bagley	MN	56621
Fructuoso R La	11385 Hubbard Line Road		Menahga	MN	56464
Gail Anderson and Linda Anderson	7816 County Road 13		Nisswa	MN	56468
Gail Lake Township, Crow Wing County, Minnesota	3071 Clough Road		Backus	MN	56435
Gail M Friborg Family Trust	37817 Fairground Road		Bagley	MN	56621
Gail Township Lake	3304 County Road 56		Pine River	MN	56474
Gale B Cook and Marylou Cook	21381 270th Street NW		Viking	MN	56760

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Galen K Johnson and Anne M Johnson	15918 150th Street SE		Red Lake Falls	MN	56750
Garrett Tisdell and Alison Tisdell	11222 400th Street		Laporte	MN	56461
Garrett W Envall	6023 Eagle Lake Road		Cromwell	MN	55726
Garrit B Winge and Staci Winge	1317 240th Avenue		Kennedy	MN	56733
Garth J Kruger and Richelle L Kruger	29337 310th Avenue NW		Warren	MN	56762
Garth Kaste and Colleen A Kaste	11773 410th Street SE		Fertile	MN	56540
Gary A Bonik and Deborah D Bonik	37049 Fairground Road		Bagley	MN	56621
Gary A Kinney	49847 109th Avenue		Gonvick	MN	56644
Gary and Kathy Grundstrom	7760 Burning Tree Drive		Franktown	CO	80116
Gary and Pamela Burak Family Revocable Living Trust	5901 140th Street		Milaca	MN	56353
Gary D Molden	PO Box 113		Clearbrook	MN	56634
Gary D Wait	3369 Boundary Road		Mahtowa	MN	55707
Gary E Hughes and Jason E Hughes	2564 Stark Street		Little Canada	MN	55117
Gary Ergen and Paula Ergen	3871 Emerson Avenue NW		Maple Lake	MN	55358
Gary Everhart and Pam Everhart	20637 340th Street		Bagley	MN	56621
Gary Fitzgerald	2554 County Road 61		Carlton	MN	55718
Gary Grundstrom	7760 Burning Tree Drive	PO Box 567	Franktown	CO	80116
Gary J Geske and Lisa M Geske	10779 130th Street NE		Thief River Falls	MN	56701
Gary L Dahl and Linda L Dahl	446 County Road 4		Wrenshall	MN	55797
Gary L Halverson	3806 County Road 4		Mahtowa	MN	55707
Gary L Holmgren	10340 150th Avenue SE		Saint Hilaire	MN	56754
Gary L Johnsrud	10761 140th Avenue SE		Saint Hilaire	MN	56754
Gary L Keil	PO Box 139		Floodwood	MN	55736
Gary L Reinitz	1608 Ives Avenue N		Glencoe	MN	55336
Gary Long	10638 Inland Drive		Park Rapids	MN	56470
Gary M Kray and Ann M Kray	10616 Grouse Street NW		Coon Rapids	MN	55433
Gary Moreland	4020 County Road 4		Mahtowa	MN	55707
Gary O Olmscheid and Carrie L Olmscheid	7468 County Road 47		Saint Cloud	MN	56301
Gary Peter Everhart and Pamela K	20637 340th Street		Bagley	MN	56621
Gary Peters	17185 225th Street NW		Viking	MN	56760
Gary Quam	2934 Labore Road		Little Canada	MN	55109
Erie-Bourdeaux Family Trust	31187 151st Street NW		Princeton	MN	55760
Gary Rock	5187 1st Avenue		Duluth	MN	55803
Gary W and Susan Anderson	PO Box 143		Stephen	MN	56757
Gary Ward	29949 Clearline Road		Solway	MN	56678

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Gary Wayne Hammer and Kristine L Hammer	PO Box 394		Becker	MN	55308
Gayle Field	PO Box 193		Stephen	MN	56757
Gayle Field and Pat Field	306 3rd Street		Stephen	MN	56757
Gaylen Revocable Trust Agreement Gaylen, Eldon B	1792 W Chub Lake Road		Carlton	MN	55718
Gene Haiar	5711 Rancho Hills Drive		San Diego	CA	92139
Gene M Suvanto	234 3rd Street NW		Menahga	MN	56464
Genea S Patton	10739 109th Avenue		Menahga	MN	56464
Genevieve A Gertken	PO Box 722		Pine River	MN	56474
George Anderson and Ida Anderson	1518 County Road 5		Carlton	MN	55718
George B Rudquist	27793 Hubbard Line Road		Menahga	MN	56464
George E Bjorklund	PO Box 934		Lakeville	MN	55044
George H Olson	3231 Boundary Road		Mahtowa	MN	55707
George M Kinzel and Jeanne M Kinzel	24398 Turner Lake Drive		Crosby	MN	56441
George Olson and Ardelle Olson	28666 220th Street SE		Oklee	MN	56742
George Saarela and Mary Saarela	3080 County Road 4		Carlton	MN	55718
Gerald and Dolores Linn and Murphy, Lois et al	16298 283rd Avenue		Paynesville	MN	56362
Gerald D Johnson	3131 Ditchbank Road		Cloquet	MN	55720
Gerald D Shoberg and Dawn C Shoberg	1845 W Chub Lake Road		Carlton	MN	55718
Gerald J Schroeder and Matthew T Schroeder	15173 63rd Street NE		Spicer	MN	56288
Gerald K Smith (Trustee of the) Gerald K Smith Revocable Trust Agreement	32786 County Road 7		Bagley	MN	56621
Gerald M Starkey and Betty L Starkey	2470 Overlie Road		Carlton	MN	55718
Gerald N and Linda M Imdieke	430 Walker Avenue S		New York Mills	MN	56567
Gerald Schultz	32928 US 71		Park Rapids	MN	56470
Geraldine A Olesiak	3171 County Road 4		Carlton	MN	55718
Geraldine E Tollefsrud	3312 County Road 56		Pine River	MN	56474
Gerard Zierden and Diane Zierden	26965 County Road 23		Richmond	MN	56368
Gina L Aukes and Roger L Aukes	11525 150th Street		Park Rapids	MN	56470
Gina M Walkup and Kim K Walkup	31682 County 2		Shevlin	MN	56676
Gladys Devriendt and Henry P Devriendt	1994 County Road 3		Wrenshall	MN	55797
Gladys Kautzman and John Kautzman	1768 Charleswood Estate		West Fargo	ND	58078
Glen A Halverson	3887 County Road 56		Pine River	MN	56474

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Glen A Weihrauch and Penelope A Weihrauch	2350 12th Street SE		Saint Cloud	MN	56304
Glen Nesland	14504 110th Avenue NE		Thief River Falls	MN	56701
Glenda L Burns	5108 State 87 SW		Backus	MN	56435
Glenda Lee Burns and Glenda L Burns	263 76th Avenue SW		Backus	MN	56435
Glenn E Johnson and Ruth Ann Johnson	1024 7th Street N		Warren	MN	56762
Glenn E Mechelke and Patricia J Mechelke	5292 Lake Washburn Road		Outing	MN	56662
Glenn H Huseth	501 High Ridge Court	PO Box 351	Wright	WY	82732
Glenn Leeson	10903 Far Portage Drive		Park Rapids	MN	56470
Glenn V Meyer and Susan Meyer	15794 120th Avenue NW		Thief River Falls	MN	56701
Glenna J Tillman and Kurt H Tillman	7323 E Miller Road		Durand	MI	48429
Gloria A Mink	620 Wild Trail NE		Pine River	MN	56474
Gloria Deleva	PO Box 3370		Palos Verdes	CA	90274
Gloria Malwitz and Kevin Jay Malwitz	1780 Minnesota Street		Plummer	MN	56748
Gloria Wash and Wilton L Wash	2013 Deep Rock Loop SW	# 29	Bemidji	MN	56601pe
Goran Jansson	2870 Carlson Road		Carlton	MN	55718
Gordon A Granmoe	11898 Evergreen Road		Floodwood	MN	55736
Gordon A Gubrud and Ruth M Gubrud	6615 Golden Ridge Drive		Eden Prairie	MN	55344
Gordon A Sather	2757 County Road 4		Carlton	MN	55718
Gordon C Wetterlund Jr	23819 280 Avenue NW		Warren	MN	56762
Gordon D Hagen and Kathy S Hagen	18372 450th Street		Clearbrook	MN	56634
Gordon Kohout	2536 S Coon Creek Drive		Andover	MN	55304
Gordon Marjama	PO Box 207		Menahga	MN	56464
Gordon V Aanerud	1913 E Chub Lake Road		Carlton	MN	55718
Grace I Grider and Timothy G Grider	5617 13th Avenue S		Minneapolis	MN	55417
Grandpas Hunting Camp LLC	807 4th Avenue N		Wheaton	MN	56296
Grant E Heikkila and Eileen F Heikkila	4927 Mirbat Junction Road		Floodwood	MN	55736
Grant W Johnson and Dorothy E Johnson (Trustees) Harlow C Johnson (Trustee) JLT	735 20th Street		Windom	MN	56101
Great Lakes Gas Transmission Company	PO Box 2168		Houston	TX	77252
Great River Energy	12300 Elm Creek Boulevard N		Maple Grove	MN	55369
Greg A Magnuson	13326 Park Street		Baxter	MN	56425
Greg Johnson and Kathleen Kraulik	660 N 2nd Street	#140	Minneapolis	MN	55401
Greg L Merschman	32999 221st Avenue		Bagley	MN	56621
Gregory A Burk and Carolyn S Burk	1192 4th Street NW		Pine River	MN	56474
Gregory Allen Mattson and Debra K	107 Larson Road		Esko	MN	55733

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Gregory F Butler	825 28th Street S	Unit E	Fargo	ND	58103
Gregory Grover	1671 County Road 4		Carlton	MN	55718
Gregory Guy	108 34th Avenue N		Saint Cloud	MN	56303
Gregory J Brosseau and Ann M Brosseau	11091 State Highway 1 NW		Thief River Falls	MN	56701
Gregory J Peterson and Joanne V Peterson	5180 County Road 4		Cromwell	MN	55726
Gregory J Piekarski and Dian L Piekarski	7609 Babcock Trail		Inver Grove Heights	MN	55077
Gregory Knutson	14855 Aberdeen St NE		Ham Lake	MN	55304
Gregory Kolinski and Toni Kolinski	13339 Eidelweiss Street NW		Andover	MN	55304
Gary R Long and Pamela S Long	2516 Aho Road		Mahtowa	MN	55707
Gregory Muhs	105 Carver Creek Circle		Carver	MN	55315
Gregory P Giese and Linda J Giese	5737 Auto Club Road		Minneapolis	MN	55437
Gregory P Sorensen	39762 River Oaks Drive		Roseau	MN	56751
Gregory Revocable Trust The Decedent's Trust	12000 N 90th Street	#1028	Scottsdale	AZ	85260
Gregory Sebenaler	4131 Bunker Lake Boulevard		Ham Lake	MN	55304
Greta M Redmond	1991 Manning Avenue N		Lake Elmo	MN	55042
Gronseth Daniel	17272 N 77th Way		Scottsdale	AZ	85255
Gloria Ann Gostanzik and Stanley John Gostanzik	29218 350th Street NW		Argyle	MN	56713
Guardian Charitable Trust Paul Farm Management	2020 War Memorial Drive W	Suite 202A	Peoria	IL	61614
Gunilla Jansson and Goran Jansson	2870 Carlson Road		Carlton	MN	55718
Gustafson and Goudge Holdings, LLC	PO Box 28		Clearbrook	MN	56634
Gustav A Linn	PO Box 192		Roscoe	SD	57471
Guy L Rolfson and Deborah K Rolfson	20102 340th Street		Bagley	MN	56621
H Doug Wise	3751 Highway 210		Sawyer	MN	55780
Harlan E Kingsley	PO Box 70		Hill City	MN	55748
Harlan O Family LLLP Haugrud	3331 130th Street		Rothsay	MN	56579
Harley Borntreger and Elizabeth Borntreger	48948 County 7		Gonvick	MN	56644
Harlow C Johnson (Trustee) and Gloria A Johnson (Trustee)	11861 139th Avenue NE		Thief River Falls	MN	56701
Harold E Ankrum and Cheryl Ankrum	1164 Alcohol Road		Wrenshall	MN	55797
Harold L Jobe	2977 County Road 4		Carlton	MN	55718
Harold L Moose	1007 230th Avenue		Stephen	MN	56757
Harold McCollum	27501 12th Avenue S		Hawley	MN	56549
Harold O Pohjola	9865 Niemi Road		Brookston	MN	55711
Harold Solseng and Karin Solseng	PSC 3 Box 2407		APO	AE	9201

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Harold T Evink and Mary C Evink	14405 119th Avenue		Park Rapids	MN	56470
Harry Hutchens III and Renee Hutchens	46433 State 92		Clearbrook	MN	56634
Harry Machesky	22162 Ridgeview Drive		Saint Augusta	MN	56301
Harvey D Johnson	1510 Orwell Avenue N		Stillwater	MN	55082
Harvey J Delage and Rose Anne Delage	727 Crocker Avenue S		Thief River Falls	MN	56701
Hay Pribyl and Straw Pribyl	21607 165th Street SE		Plummer	MN	56748
Headwaters Housing Development	PO Box 906		Bemidji	MN	56619
Heath A Hauck and Rita M Hauck	3828 County Road 4		Barnum	MN	55707
Hedin Family Trust	819 Portland Avenue		Saint Paul	MN	55104
Heidi A Gist	3653 County Road 140		Barnum	MN	55707
Heidi A Weiss Putney and Mason J Weiss Putney	2465 County Road 7		Mahtowa	MN	55707
Heidi D Syverson	42867 181st Avenue		Clearbrook	MN	56634
Heidi L Gustafson	3130 Pine Grove Drive		Cloquet	MN	55720
Heidi Zegan and Ross Zegan	705 28th Street		Cloquet	MN	55720
Helen A Douglas	1641 Douglas Road		Carlton	MN	55718
Helen A Haugrud Family Trust	3327 130th Street		Rothsay	MN	56579
Helen M Anderson	19106 390th Street		Bagley	MN	56621
Henrietta Neumayer	10706 County 48		Park Rapids	MN	56470
Henry and Charlotte Chennaux	10559 320th Street		Park Rapids	MN	56470
Henry Peter Mavencamp and Jomarie Mavencamp	416 Pond View Road NW		Saint Michael	MN	55376
Her Tou and Rosalyn Yang	908 Johnson Parkway		Saint Paul	MN	55106
Hilda Benjamin Trust	16017 Discovery Circle		Park Rapids	MN	56470
Hilmar Stefansen	952 W 10th Avenue		Eugene	OR	97402
Hiscox Family Trust	7500 Erie Avenue		Chanhassen	MN	55317
Hjeldness, Michael and Monna Rae Hjeldness Trust	321 10th Avenue SE		Elbow Lake	MN	56531
Holly Beth Lundquist and Steven M Lundquist	3172 County Road 3		Wrenshall	MN	55797
Hooker Logging Inc	40109 County Road 3		Laporte	MN	56461
Hope Brandon and Craig Brandon	1560 8th Street NE		Pine River	MN	56474
Hope E Gronseth	2501 Quebec Avenue S		Saint Louis Park	MN	55426
Hopperstad Steven and Ricki and Kerry D Hopperstad	PO Box 250		Red Lake Falls	MN	56750
Horace E Peek Living Trust	10569 Purdey Road		Eden Prairie	MN	55347

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Gregory M Schminski and Elaine M Schminski	5272 Highway 73		Floodwood	MN	55736
Howard Bruce Widing and Jeannine Lynn Widing	5270 Andrus Lake Road NE		Outing	MN	56662
Howard W Rengo	80 Juntunen Road		Esko	MN	55733
Hubbard County, Minnesota	301 Court Avenue		Park Rapids	MN	56470
Hubert Iii Reinarz and Darlene E Reinarz	PO Box 182		Clearbrook	MN	56634
Huls Sisters, LLC	2249 Chelmsford Lane		Saint Cloud	MN	56301
Hvidsten Farms Inc	PO Box 329		Stephen	MN	56757
Hvidsten, Richard L L, Trust and Norma Kaye Hvidsten Trust	1555 Main Street NW	Apartment 311	Coon Rapids	MN	55448
Ian E Bullion and Deborah K Bullion	1622 Trishia Court NW		Swisher	IA	52338
Imanuel Cemetery Association	16822 460th Street		Clearbrook	MN	56634
Ind School District 91	3765 County Road 140		Barnum	MN	55707
Indian Land	3254 Magney Drive		Cloquet	MN	55720
Indian Land	3333 Ditchbank Road		Cloquet	MN	55720
International Mining Co	10000 Stockdale Highway	Suite 300	Bakersfield	CA	93311
Iona Berry	401 Oak Street		Oklee	MN	56742
Iona D Arndt	601 Village Drive	Apartment 350	Marshall	MN	56258
Irene L Bjorklund	6012 Strenberg Road		Cromwell	MN	55726
Irene L Wishard Family Trust	27321 350th Avenue SE		Trail	MN	56684
Irene L Wishard Trust	27321 350th Avenue SE		Trail	MN	56684
Isaac H Bertram	5685 County Road 4		Cromwell	MN	55726
Itasca Cemetery Association	23242 State Highway 200		Shevlin	MN	56676
Ivan B Kroulik and Mary Jane Kroulik	402 5th Avenue NW		Kasson	MN	55944
Ivan Hesse	15753 170th Avenue SE		Red Lake Falls	MN	56750
Iverson Inn, Inc	979 Cary Road		Cloquet	MN	55720
J K Dickinson and S M Burlingame	10929 State Highway 34		Park Rapids	MN	56470
Jack Brewster	PO Box 161		Park Rapids	MN	56470
Jack D Dahl and Janice M Dahl	2276 Thell Road		Wrenshall	MN	55797
Jack E Reddick and Brenda K Reddick	33404 221st Avenue		Bagley	MN	56621
Jack T Jarc and Kimberly Jarc	4993 Highway 73		Floodwood	MN	55736
Jaclyn Elizabeth Fering	3070 Times Square Court		Grand Forks	ND	58201
Jacob D Willborg	PO Box 598		Bagley	MN	56621
Jacob Elzen and Stephanie Elzen	3187 County Road 4		Carlton	MN	55718
Jacob Kenneth John Malwitz	115 Woodland Court		Thief River Falls	MN	56701
Jacob Kirk Lassen	24439 Hillcrest Drive		Cohasset	MN	55721

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Jacob M Hallerstrom	10866 Insbrook Drive		Park Rapids	MN	56470
Jacob Opheim and Jennifer L Opheim	6372 Marx Avenue NE		Otsego	MN	55301
Jacob P Melby and Cynthia Melby	12557 500th Street		Gonvick	MN	56644
Jacob W Fluck	2581 County Road 4		Carlton	MN	55718
Jacqueline Klein	5242 Genew Road		Floodwood	MN	55736
Jacqueline L Schreder and Steven Schreder	12865 Laurie Road		Floodwood	MN	55736
Jacqueline Lemieux	3126 Berg Road		Cloquet	MN	55720
Jacqueline Marie Klein	5242 Genew Road		Floodwood	MN	55736
Jacquelyn Schloesser and Richard Schloesser	117 19th Avenue N		Fargo	ND	58102
Jacques and Kerry Johnson Trust	902 Orange Street		Lino Lakes	MN	55014
Jaime D Paggen	32943 221st Avenue		Bagley	MN	56621
Jake Edwards	5153 County Road 56		Pine River	MN	56474
Jake H Mast and Priscilla N Mast	15111 470th Street		Clearbrook	MN	56634
James A Jauss and Shari L Jauss	1931 E 2nd Street		Duluth	MN	55812
James A Klemz	5676 Haven Road SE		Saint Cloud	MN	56304
James A McFarland	814 SE Parkway Drive		Stuart	FL	34996
James and Jeanne Koepsell	10373 County 32		Park Rapids	MN	56470
James and Sandra Bordenkircher and	PO Box 1980		Fargo	ND	58107
James B Larson	2585 County Road 35		Mahtowa	MN	55707
James Casperson	5365 County Road 4		Cromwell	MN	55726
James D and Julia Emry	10641 129th Avenue		Menahga	MN	56464
James D Haley	3041 County Road 4		Carlton	MN	55718
James D Kumpula and Krystal K Kumpula	318 3rd Avenue SE		Clearbrook	MN	56634
James D Sinclair Trust	1522 E Shore Drive		Detroit Lakes	MN	56501
James E Connolly	3935 Vera Cruz Avenue N		Minneapolis	MN	55422
James E Ingvaldson and Bernis Eliason	PO Box 512		Bagley	MN	56621
James E Johnson	49440 Taflin Lake Road		Gonvick	MN	56644
James F Mills	4915 Arnold Road		Duluth	MN	55803
James G Gallus and Ann E Gallus	10400 17th Circle		Becker	MN	55308
James G Latterner and Susan M Latterner	542 92nd Avenue SW		Menahga	MN	56464
James Gilmer	1307 18th Street S		Saint Cloud	MN	56301
James Gould and Shirley Gould	59582 State Highway 65		Jacobson	MN	55752
James J Entgelmeier and Nancy Entgelmeier	11144 Norway Drive		Laporte	MN	56461

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James J Remington and Lynn M	1144 Mule Lake Drive NE		Outing	MN	56662
James J Thell	2162 Thell Road		Wrenshall	MN	55797
James K Dickinson	10929 State Highway 34		Park Rapids	MN	56470
James Knott and Carol Knott	13173 120th Avenue SW		Red Lake Falls	MN	56750
James L Halvorson	29463 420th Avenue SE		Gonvick	MN	56644
James L Wynn	90 72nd Avenue SW		Backus	MN	56435
James M Bradac and Jenifer C Bradac	1293 County Road I		Hudson	WI	54016
James M Huhta	2251 Holm Road		Cromwell	MN	55726
James M Perrygo	14807 Wannas Drive		Accokeek	MD	20607
James M Sawatzke	5412 County Road 12 N		Buffalo	MN	55313
James O'Bryan and Cynthia O'Bryan	PO Box 705		Bagley	MN	56621
James Olson and Barbara Olson	1010 11th Street NE		Watertown	SD	57201
James R Anderson	5263 Halden Road		Floodwood	MN	55736
James R Bordenkircher and Sandra Bordenkircher	15622 SE Thorville Avenue		Milwaukie	OR	97267
James R Marshall and Patricia A Marshall	2100 Benson Lane		Grand Rapids	MN	55744
James R Rondeau	5716 21st Avenue S		Minneapolis	MN	55417
James S Schminski	4856 Highway 73		Floodwood	MN	55736
James Schiefert and Sherry Schiefert	PO Box 83		Plummer	MN	56748
James Schumer and Patricia I Schumer	2456 County Road 142		Mahtowa	MN	55707
James T Sporrong and Terri A Sporrong	2700 Urbandale Lane N		Plymouth	MN	55447
James V Olson	1228 6th Street SW	Unit 2	Wadena	MN	56482
James W Heikkila	2210 County Road 61		Carlton	MN	55718
James W Johnson	1747 PO Box		Bemidji	MN	56619
James Wright and Carole Wright	19350 240th Avenue SE		Plummer	MN	56748
Jami Nelson and Jeffrey Charles Nelson	PO Box 495		Stephen	MN	56757
Jamie A Wishard and Jeremiah L Wishard	33021 125th Avenue SE		Mentor	MN	56736
Jamie D Freeman	26566 330th Street		Shevlin	MN	56676
Jamie Denne and Tina Denne	45065 Jackson Road		Madison	SD	57042
Jamie K Nelson	23636 180th Avenue NW		Viking	MN	56760
Gross Christopher and Theresa Leffler and	3855 Neal Avenue S		Afton	MN	55001
Jamie L Duke and Kathy A Duke	11851 204th Avenue NE		New London	MN	56273
Jane E Mortensen and Orville E Mortensen	5235 County Road 12 S		Montrose	MN	55363
Jane Ida Urvig	10876 110th Street		Menahga	MN	56464
Jane Luann Abel	15453 Plantation Oaks Drive	Apartment 7	Tampa	FL	33647

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Jane S Christensen	5709 Glen Avenue		Minnetonka	MN	55345
Janelle Hapka	823 Burlington Drive NW		East Grand Forks	MN	56721
Janelle Sanford	2255 Yndestad RD		Carlton	MN	55718
Janelle Sundby	725 Potato Patch Road	#237	Stephen	MN	56757
Janet Beck	2085 102nd Avenue NW		Coon Rapids	MN	55433
Janet E Wiese	188 Division Street W		Pine River	MN	56474
Janet F Olson and Marlin L Olson	PO Box 157		Clearbrook	MN	56634
Janet Graff Metso	PO Box 175		Floodwood	MN	55736
Janet Johnson Carol and Bruce C Johnson	10600 150th Street NW		Thief River Falls	MN	56701
Janet K Hhamerlinck	5241 Elliot Avenue		Minneapolis	MN	55417
Janet Koski	1828 W Chub Lake Road		Carlton	MN	55718
Janet L Cooper	223 PO Box		Clearbrook	MN	56634
Janet M Paavola	4852 Lavaque Road		Duluth	MN	55811
Janet Marie Anton and Jon Anton	14451 110th Avenue NE		Thief River Falls	MN	56701
Janet Metso Graff	PO Box 175		Floodwood	MN	55736
Janet R Longfors	1425 Madison Avenue		Detroit Lakes	MN	56501
Janet Sedenquist Thies and Michael Thies	3900 Honeysuckle Road		Wayzata	MN	55391
Janice A Klein	PO Box 339		Hallock	MN	56728
Janice E Hanson	17 2nd Street NE		Hallock	MN	56728
Janice E Hanson	513 10th Street SE	Apartment	Hallock	MN	56728
Janice M Peterson	15211 590th Avenue		Litchfield	MN	55355
Janice Proulx and John Proulx	15878 210th Avenue SW		Red Lake Falls	MN	56750
Jason and Susan Cadieux	1878 230th Street		Hallock	MN	56728
Jason Fick and Janelle Fick	21200 270th Street NW		Viking	MN	56760
Jason J and Kimberly A McCollum	11013 260th Street		Park Rapids	MN	56470
Jason J Huschle	18631 418th Street		Clearbrook	MN	56634
Jason L Meyers	PO Box 696		Pine River	MN	56474
Jason L Meyers	623 Cresthaven Drive		South Saint Paul	MN	55075
Jason M Berg	6470 Game Farm Road E		Minnetrista	MN	55364
Jason M Cordle and Michelle R Cordle	12397 Balsam Road		Floodwood	MN	55736
Jason Malwitz and Rebecca Malwitz	22010 180th Street SE		Plummer	MN	56748
Jason P Smith and Olive E Smith	614 1st Street SW		Bemidji	MN	56601
Jason R Espeseth	18647 63rd Avenue N		Maple Grove	MN	55311
Jason S Grinnen	13626 253rd Avenue		Spirit Lake	IA	51360
Jason Thomas Mitchell and Kimberly Mitchell	2491 Highway 210		Cloquet	MN	55720

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POC	Address1	Address2	City	State	Zip code (5 digits only)
Jason Youngstrand	24196 300th Street NW		Argyle	MN	56713
Jay A Arvig	160 2nd Avenue SW		Perham	MN	56573
Jay Alan Geinert	1517 12th Avenue NW		Backus	MN	56435
Jay L Munson and Joanne L Munson	12413 160th Street		Milaca	MN	56353
Jay M Gerdes	3430 County Road 131		Kettle River	MN	55757
Jay M Thompson	3853 Oak Street		Cloquet	MN	55720
Jay Opdahl	12275 State Highway 32 NE		Thief River Falls	MN	56701
Jay Thomas Hauer	2441 Garthus Road		Wrenshall	MN	55797
Jayme A Bork	2542 Ziehl Road		Carlton	MN	55718
Jayne A Warner and Brianna Horton	8912 Tewsbury Gate		Maple Grove	MN	55311
Howard and Astrid Ratzer Revocable Trust	4171 County Road 4		Barnum	MN	55707
Jean C Lindow and Timothy W Lindow	26610 County Road 2		Shevlin	MN	56676
Jean M Reponen	2980 Jarvinen Road		Cloquet	MN	55720
Jean T Kovacs	2405 Oak Street		White Bear Lake	MN	55110
Jeana C Anderson	1495 N Finn Road		Tamarack	MN	55787
Jeanette Boedigheimer	405 Barbara Circle		Cloquet	MN	55720
Jeanette Carlson and Joel L Carlson	2723 W Moorhead Road		Cloquet	MN	55720
Jeanette J Jestus	1031 Cary Road		Cloquet	MN	55720
Jeanine C Grandstrand and Wesley D Grandstrand	5431 Madison Street NE		Fridley	MN	55421
Jeanine E Mikus and Keith M Mikus	17302 109th Avenue		Park Rapids	MN	56470
Jeanne M Hilgendorf and David G Hilgendorf	13627 110th Street		Menahga	MN	56464
Jeannie O'Neill and Larry O'Neill	22210 313th Avenue SE		Oklee	MN	56742
Jed Eric Bandle	1115 Alcohol Road		Wrenshall	MN	55797
Jeff Lane and James Hahn	18848 210th Street NE		Thief River Falls	MN	56701
Jeff Libbesmeier and Jennifer L Libbesmeier	1760 Richard Circle		West Saint Paul	MN	55118
Jeff Sawyer and Karen Sawyer	828 5th Avenue NW		Melrose	MN	56352
Jeffery A Jones and Karen M Jones	2449 177th Avenue NE		Ham Lake	MN	55304
Jeffery A Maker	3587 Jones Road		Wright	MN	55798
Jeffery P Ketchum and Julie A Ketchum	2238 County Road 1		Wrenshall	MN	55797
Jeffery V Johnson	47462 155th Avenue		Clearbrook	MN	56634
Jeffrey A and Yalonda K Fix	11593 110th Street		Menahga	MN	56464
Jeffrey A Basinger and Wendy M Basinger	321 W Street SW		Clearbrook	MN	56634
Jeffrey A Katnis and Julie M Marcotte	18681 Yakima Street NW		Anoka	MN	55303

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Jeffrey A Olson and Julie D Olson; Duane A Olson	116 Belleville Court		Thief River Falls	MN	56701
Jeffrey A Porter and Theresa L Porter	48454 179th Avenue		Clearbrook	MN	56634
Jeffrey A Schuette	166 Sand Street		Shakopee	MN	55379
Jeffrey A Weeks and Arne L Weeks	4307 N County 12		Buffalo	MN	55313
Jeffrey B Obrycki and Terrie J Obrycki	1180 Mule Lake Drive NE		Outing	MN	56662
Jeffrey Bachand	20827 Pine Ridge Circle SE		Erskine	MN	56535
Jeffrey C Nelson and Jami L Nelson	PO Box 495		Stephen	MN	56757
Jeffrey D Hamerlinck and Julie A Hamerlinck	262 N 5th Street		Laramie	WY	82072
Jeffrey D Ramsey and Mary M Vanhouse	2102 Kelly Avenue		Cloquet	MN	55720
Jeffrey D Sherar and Sherar J Wilkes	2301 Nokomis Avenue		Saint Paul	MN	55119
Jeffrey D Spiering and Tina M Spiering	15406 110th Street SE		Saint Hilaire	MN	56754
Jeffrey E Suhonen	796 Center Road		Wright	MN	55798
Jeffrey Everhart	3017 Buchanan Avenue SW		Bemidji	MN	56601
Jeffrey Hamerlinck	215 9th Street E	Apartment 308	Thief River Falls	MN	56701
Jeffrey Kamrud	10158 109th Avenue		Menahga	MN	56464
Jeffrey M Godtland	1886 E Sonora Road		Palm Springs	CA	92264
Jeffrey Melander and Linda Melander	PO Box 114		Big Stone City	SD	57216
Jeffrey Nyblom	3453 County Road 4		Mahtowa	MN	55707
Jeffrey P Pruitt	1409 Riverside Drive N		Hudson	WI	54016
Jeffrey P Pruitt	1220 Garden Court N		Mound	MN	55364
Jeffrey Pickett and Kristine Pickett	30789 County 89		Park Rapids	MN	56470
Jeffrey R Clifton and Linette F Clifton	615 Spruce Street N		Plummer	MN	56748
Jeffrey R Gryskiewicz and Mary J Gryskiewicz	31382 360th Street NW		Argyle	MN	56713
Jeffrey Randolph Hammer and Lynda Hammer	818 Bryan Place		Fort Lauderdale	FL	33312
Jeffrey Randolph Hammer and Lynda Hammer	1100 Crystal Drive		Princeton	MN	55371
Jeffrey Stelmach and Nicole Stelmach	509 Broadway Street		Osseo	MN	55369
Jeffrey T Puhl and Wendy Puhl	33847 Chestnut Circle		Moose Lake	MN	55767
Jeffrey V Johnson	7000 Merrill Avenue	Box 40	Chino	CA	91710
Jeffrey W Francis and Nancy L Francis	35497 211th Avenue		Bagley	MN	56621
Jeffrey W Mayer and Mary Kay Mayer	1331 Hohensee Road		Cloquet	MN	55720

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Jeffry A Schwartz (Trustee of) Revocable Trust	24754 County 2		Shevlin	MN	56676
Jennie O Turkey Store Inc	1 Hormel Place Tax Dept		Austin	MN	55912
James E Dorfner	3047 Painted Lane		Carlton	MN	55718
Jennifer G Gytri Trust	19952 US Highway 71		Park Rapids	MN	56470
Jennifer G Gytri Trust	PO Box 432		Park Rapids	MN	56470
Jennifer K Heiskari	627 Toogood Court SW		Rochester	MN	55902
Jennifer K Tollefson and Jeffrey Pletschett	11641 500th Street		Gonvick	MN	56644
Jennifer L Roepke	22112 190th Street		Hutchinson	MN	55350
Jennifer M Pomp and Jonathan J Pomp	20679 350th Street		Bagley	MN	56621
Jennifer S Jackson	3103 Homestead Road		Cloquet	MN	55720
Jeremiah C Hasnedl	12276 150th Avenue SE		Saint Hilaire	MN	56754
Jeremiah Johnson	32418 180th Street SE		Oklee	MN	56742
Jeremy D Nelson and Melanie A Nelson	2676 Chloe Lane		Carlton	MN	55718
Jeremy G Halverson	2392 Bromfield Road		Carlton	MN	55718
Jeremy J Bakken	PO Box 45		Clearbrook	MN	56634
Jeremy K Lassen and Lisa Lassen	PO Box 3134		Carefree	AZ	85377
Jeremy Kirk Lassen and Lisa Ann Lassen	24439 Hillcrest Drive		Cohasset	MN	55721
Jeremy Koivisto and Sarah Koivisto	12807 Laurie Road		Floodwood	MN	55736
Jeremy Koivisto and Sarah Koivisto	5702 Riverside Park Drive		Floodwood	MN	55736
Jeremy McDougall	13311 165th Avenue SE		Saint Hilaire	MN	56754
Jeremy N Jatkola	17826 Fielding Way		Lakeville	MN	55044
Jeri S Johanning	10675 County 11		Park Rapids	MN	56470
Jerod J Hanson	1952 175th Avenue		Hallock	MN	56728
Jerod J Hanson	9447 35th Street SE		Jamestown	ND	58401
Jerold Fix	26573 US 71		Park Rapids	MN	56470
Jerome Gerardy	15684 US Highway 59 SE		Plummer	MN	56748
Jerome Hapka	25860 320th Street NW		Argyle	MN	56713
Jerome Schroeder and Darla Schroeder	4855 Eifer Trail		Stacy	MN	55079
Jerome Winge and Maureen G Winge	1245 Charlton Street		West Saint Paul	MN	55118
Jerrod Gorder	1914 Selmser Avenue		Cloquet	MN	55720
Jerry C Hasnedl and Ruth S Hasnedl	821 Taft Street E		Thief River Falls	MN	56701
Jerry D Jorgensen and Julie A Jorgensen	20543 340th Street		Bagley	MN	56621
Jerry Diane Crenshaw	402 68th Avenue SW		Backus	MN	56435

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Jerry Elmer Axtell and Debra Jean Axtell	800 County Road 18		Wrenshall	MN	55797
Jerry F Vittorio	4995 Mirbat Junction Road		Floodwood	MN	55736
Jerry Freitag	PO Box 155		Plummer	MN	56748
Jerry Fuhrer and Shawna Fuhrer	PO Box 290		Pine River	MN	56474
Jerry L Bahmiller	6871 Redwing Lane		Chanhassen	MN	55317
Jerry L Dahlke and Roxanne L Dahlke	201 W Street SW		Clearbrook	MN	56634
Jamie L Bashore-Watts and Roger G Watts	1581 Sharon Drive N		Mankato	MN	56003
Jerry R Fruetel and Rosalind E Johnson Trustees of the Rosalind E Johnson Living Trust	9184 Vincent Circle S		Bloomington	MN	55431
Jess D Pollard	3512 Freeman Road		Cloquet	MN	55720
Jesse A Anderson	6737 Pacific Avenue		Wright	MN	55798
Jesse J Lee	1949 Cardinal Drive		Shakopee	MN	55379
Jesse J Miller	5089 Genew Road		Floodwood	MN	55736
Jesse R Hensel and Mary B Hensel	10156 County 48		Park Rapids	MN	56470
Jesse R Klein	3559 O'Rourke Road		Hibbing	MN	55746
Jestin Gagner and Lindsey Jo Gagner	16184 255th Street SE		Mentor	MN	56736
Jewell H Ehnstrom	8055 Claymore Avenue		Inver Grove Heights	MN	55076
Jill Adolphson and Merle Adolphson	PO Box 93		Argyle	MN	56713
Jill Gran and Russell Dean Gran	1733 Baker Road		Barnum	MN	55707
Jill M Holten	3126 38 1/2 Avenue S		Fargo	ND	58104
Jill Stewman	22298 Twin Pond Circle		Farmington	MN	55024
Jim A Seibel and Renae M Seibel	13002 112th Street NE		Thief River Falls	MN	56701
Jimmie L Potucek and Linda K Potucek	26568 270th Street NW		Warren	MN	56762
Joan A Anderson and John A Anderson	34700 203rd Avenue		Bagley	MN	56621
Joan Katherine Musil	13857 Kendall Street NE		Forest Lake	MN	55025
Joan Mellema	31917 Wolf Lake Road		Cass Lake	MN	56633
Joanie R Simpson and Patrick Charles Simpson	290 Central Avenue W		Plummer	MN	56748
Joann Nelson	40828 181st Avenue		Clearbrook	MN	56634
Joann Zutz and Marvin Zutz	1008 6th Street NE		Red Lake Falls	MN	56750
Jodel M Rondorf and Ronald D Rondorf	11701 120th Avenue NE		Thief River Falls	MN	56701
Jodi A Matarelli	1865 Sheils Road		Carlton	MN	55718
Jodi Ann Engelstad and Michael J Engelstad	6071 Chinkapin Drive		Columbus	IN	47201
Jodie L Haefs and Thomas L Haefs	5541 Oldfield Avenue		Oak Park Heights	MN	55082

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Jody Knute Hegna	20682 Grouse Road		Little Falls	MN	56345
Jody Moorhouse and Kenneth Moorhouse	25824 County 89		Park Rapids	MN	56470
Jennie K Hanson	620 Center Road		Wright	MN	55798
Joe Fournier and Nikki Fournier	6219 Maple Grove Road		Duluth	MN	55810
Joe O Ennen	15217 92nd Place N		Maple Grove	MN	55369
Joel Abel	12361 Graff Road		Wright	MN	55798
Joel Christian Anderson	5263 Halden Road		Floodwood	MN	55736
Joel D Olson and Rhonda Olson	32323 US Highway 59 NW		Newfolden	MN	56738
Joel K Paggen and Jaime D Paggen	32943 221st Avenue		Bagley	MN	56621
Joel L Carlson and Jeanette Carlson	471 Brookston Road		Cloquet	MN	55720
Joel M Erickson and Lara A Erickson	3613 Chelsea Road W		Monticello	MN	55362
Joel Nelson	PO Box F		Thief River Falls	MN	56701
Joel Olson	32323 US Highway 59 NW		Newfolden	MN	56738
Joel S Kortuem and Kathryn Kortuem	2303 Overlie Road		Carlton	MN	55718
Joette N Tilbury	2019 Bice Avenue NW		Buffalo	MN	55313
Joey C Schrier and Bridget M Schrier	2026 Moorhead Road		Cloquet	MN	55720
Joey P Erickson	PO Box 1275		Watford City	ND	58854
Joey Potucek and Kristina Potucek	27995 260th Avenue NW		Warren	MN	56762
John A Friborg and Rebecca M Friborg	38896 State Highway 92		Bagley	MN	56621
John A Gerbracht and Sheri M Gerbracht	1500 Central Street W		Bagley	MN	56621
John A Grimsbo and Tanya Grimsbo	25369 590th Street		Palisade	MN	56469
John A Hess	23885 300th Street NW		Argyle	MN	56713
John A Jensen and Jane S Jensen	PO Box 8		Stephen	MN	56757
John A Kroll	4859 Hermantown Road		Hermantown	MN	55811
John A Kunkel and Anne E Kunkel	1839 Heuer Road SW		Pine River	MN	56474
John A Tuttle and Virginia M Tuttle	175 Thomson Road		Esko	MN	55733
John A Tuttle Jr and Jessica L Tuttle	1412 John Road		Cloquet	MN	55720
John Allen Grimsbo	25369 590th Street		Palisade	MN	56469
John and Cheryl Gunvalson Land Holdings LLLP	11617 506th Street		Gonvick	MN	56644
John B Decker	4121 County Road 4		Mahtowa	MN	55707
John B Koepp and Susanne Koepp	25720 Raven Road		Belle Plaine	MN	56011
John C Hertzog	PO Box 321		Winsted	MN	55395
John C Notsch and Mary L Notsch	2622 Ulysses Street NE		Minneapolis	MN	55418
John C Richards and Cynthia M Richards	1251 Gisler Road		Wright	MN	55798
John C Vernon and Virginia D Vernon	1571 Coach Lane		Carlton	MN	55718

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John D Angell and Karen Angell	2870 Strand Road		Cloquet	MN	55720
John D Boltz	5450 Highway 73		Floodwood	MN	55736
John F Foley and Carrie E Foley	6045 Eagle Lake Road		Cromwell	MN	55726
John F Laveau	1243 Gault Road		Wrenshall	MN	55797
John F Schowalter	1478 Laurel Avenue		Saint Paul	MN	55071
John G Bjerke and Sara L Bjerke	17864 450th Street		Clearbrook	MN	56634
John G Taplin and Marsha A Taplin	PO Box 455		Nelson	MN	56355
John H Godtland and Terri K Godtland	10464 510 Street		Gonvick	MN	56644
John J Blake and Brenda J Blake	141 Oak Circle		Big Lake	MN	55309
John J Field and Shanna Field	5679 W Prairiewood Drive		Grand Forks	ND	58201
John Jensen	PO Box 8		Stephen	MN	56757
John Kemper	11669 Highway 8		Floodwood	MN	55736
John Krisko and Deborah M Krisko	1191 Strawberry Lane		Glendora	CA	91740
John L Landers and Beverly A Landers	7181 Sunrise Drive		Circle Pines	MN	55014
John Love	11099 Highway 2		Floodwood	MN	55736
Jennifer Dawn Asproth and John E Asproth	4042 County Road 4		Barnum	MN	55707
John M Shunk	123 PO Box		Saint Clair	MN	56080
John P Kulaszewicz	1356 Lawrence Road		Cloquet	MN	55720
John P Webster	2430 140th Street		Kennedy	MN	56733
John Paul Wiita	18365 Leyte Street NE		Wyoming	MN	55092
John Q Rolfson and Sandra K Rolfson (Trustees of) Rolfson Revocable Trust	19664 340th Street		Bagley	MN	56621
John R and Carla Jo (Trustees of) Fisher Trust Agreement	9240 Oliver Road NW		Bemidji	MN	56601
John R Solien and John F Solien	170 Ripple River Drive		Aitkin	MN	56431
John S Le and Robin L Le	2300 113th Avenue NW		Coon Rapids	MN	55433
John T Sandland and Susan K Sandland	12729 500th Street		Gonvick	MN	56644
John T Schmitt and Mary J Schmitt	23063 County Road 137		Nisswa	MN	56468
John V Erickson and Darcy Lynne Erickson	24038 Rivers Edge Road		Rogers	MN	55374
John W Brenton and Theresa A Brenton	46227 State Highway 92		Clearbrook	MN	56634
John W Manninen and Joyce C Manninen	6351 E Mud Lake Road		Wright	MN	55798
John W McMahon and Lynda W McMahon	4539 County Road 4		Cromwell	MN	55726
John Walsh and Joyce Walsh	5094 Hwy 73		Floodwood	MN	55736
John Wonnenberg	PO Box 490		Bismarck	ND	58502
Johnnie P Eargle	PO Box 918		Barnum	MN	55707
Johnson Family Trusts	39452 285th Street SE		Gully	MN	56646
Joleen R Mittelholtz	25874 Upper Rice Lake Road		Shevlin	MN	56676

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POC	Address1	Address2	City	State	Zip code (5 digits only)
Jolene Conway and Thomas Conway	PO Box 283		Argyle	MN	56713
Jolynn A Kuyava and Jeffery J Kuyava	1122 E 3rd Street		Duluth	MN	55805
Jon A Anton	14451 110th Avenue NE		Thief River Falls	MN	56701
Jon Gunderson and Teresa Shannon	11955 Schultz Lane		Dalton	MN	56324
Jon Hanson and Deborah Hanson	20460 290th Street NW		Viking	MN	56760
Jon McDonald	2338 State Highway 210		Breckenridge	MN	56520
Jon Stavig and Theresa T Stavig	PO Box 1462		Cordova	AK	99574
Jon V Lee and Janel C Lee	1028 Riverside Drive SE		Saint Cloud	MN	56304
Jonathan Anderson	46680 State Highway 92		Clearbrook	MN	56634
Jonathan L Brenna	12428 Tamarack Road		Floodwood	MN	55736
Jonathan L Dahlke and Sara M Dahlke	17014 460th Street		Clearbrook	MN	56634
Jonathan P Langen and Katherine Langen	PO Box 144		Kennedy	MN	56733
Jonathan P Watne	PO Box 224		Gonvick	MN	56644
Jonathan Pream and Rachel Pream	17503 120th Avenue NW		Thief River Falls	MN	56701
Jonathan V Bergmann	1984 Norway Lake Road		Pine River	MN	56474
Jonette Corrow and Scott Corrow	535 Jackson Street SW		Hutchinson	MN	55350
Joni Anderson	PO Box 221		Kennedy	MN	56733
Joni Ranstrom and Ron Ranstrom	217 Nelson Avenue E		Warren	MN	56762
Joseph Altepeter and Deborah Altepeter	30220 180th Street SW		Euclid	MN	56722
Joseph B Larson and Heidi M Larson	21148 350th Street		Bagley	MN	56621
Joseph C Isaacson and Linda R Isaacson	2225 Yndestad Road		Carlton	MN	55718
Joseph D Amundson	20276 Clearline Road NW		Leonard	MN	56652
Joseph E Bouvette and Sandra C Bouvette	127 5th Street NE		Hallock	MN	56728
Joseph Efta	32587 270th Avenue NW		Argyle	MN	56713
Joseph F Schweitzer	11402 260th Street		Park Rapids	MN	56470
Joseph M Rotz	10428 302nd Avenue		Princeton	MN	55371
Joseph M Rotz	13677 247th Avenue NW		Zimmerman	MN	55398
Joseph M Schmitz	26609 US 71		Park Rapids	MN	56470
Joseph Rambow and Jennifer Rambow	34940 Quinlan Avenue		Center City	MN	55012
Joseph Robert Able	5612 Highway 73		Floodwood	MN	55736
Joseph S Grisamore	14218 Chippewa Loop		Park Rapids	MN	56470
Joseph T Dahl and Mary Jo Dahl	11740 160th Street NW		Thief River Falls	MN	56701
Josephine Matlock and Lawrence Matlock	1543 Circle Drive		Burnsville	MN	55378
Josh and Billy Jo Mehrer	21363 Naples Street NW		Elk River	MN	55330
Joshua A Jordahl and Tawnielle E Hjermstad	10431 County 14		Park Rapids	MN	56470
Joshua E Hendricks	20827 340th Street		Bagley	MN	56621

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Joshua M Davis	PO Box 780		Bagley	MN	56621
Joshua M Loucks and Sara Loucks	2651 Chloe Lane		Carlton	MN	55718
Joshua Swenson and Ashley Swenson	PO Box 42		Park River	ND	58270
Jovita M Hapka	942 Arnold Avenue N		Thief River Falls	MN	56701
Joy Ann Wetenkamp	45638 181st Avenue		Clearbrook	MN	56634
Joy Marie Hedquist	505 Mason Drive		Wrenshall	MN	55797
Joyce Kuznia and Rodney Kuznia	25151 440 Street NW		Strandquist	MN	56758
Judith A Isola and Russell A Isola	4325 Martin Road		Duluth	MN	55803
Judith A Seidel and Robert L Seidel	PO Box 631		Eureka	MT	59917
Judith L Tollefson	204 Oak Street		Clearbrook	MN	56634
Judith M Martin and Kenneth J Martin	1546 County Road 5		Carlton	MN	55718
Julia A Kramp	3246 County Road 56		Pine River	MN	56474
Julia E Weems	512 Brook Avenue NE		Clearbrook	MN	56634
Julianne Price Gause	618 N 24th Street		Grand Forks	ND	58201
Julie A Welsh	2304 Queens Court		Bettendorf	IA	52722
Julie Ann Hobbs	1642 County Road 5		Carlton	MN	55718
Julie Ann Tillman	2605 Highway 73		Cromwell	MN	55726
Jerry L Peery and Jean A	13431 80th Street NW		Annandale	MN	55302
Jody Moorhouse and Kenneth Moorhouse	28696 US 71 N		Park Rapids	MN	56470
Julie L Zinniel and Robert L Zinniel	1025 Peony Lane		Plymouth	MN	55447
Julie M Huseth	726 County Road 5 NW		Hackensack	MN	56452
Julie Pawloski	PO Box 263		Stephen	MN	56757
Julie Welin and Lloyd E Welin	26409 320th Street NW		Argyle	MN	56713
Julieann M Lohse and Ronnie Lohse	5461 Mule Lake Lane NE		Outing	MN	56662
Justin A Rognstad and Nicole R Rognstad	3900 Irvine Avenue NW	Trailer 837	Bemidji	MN	56601
Justin Jokinen and Ahna Jokinen	206 15th Street		Cloquet	MN	55720
Justin R Brown	10545 109th Avenue		Menahga	MN	56464
Justine W Keppers and Beverly Jean Keppers	5760 County Road 129		Cromwell	MN	55726
Karen Braun and Terrance Braun	10230 Deerwood Avenue N		Champlin	MN	55316
Karen D Larson and Laverne N Larson	875 Cary Road		Cloquet	MN	55720
Karen E Schroeder and Peter John Schroeder	8885 Inman Avenue S		Cottage Grove	MN	55016
Karen F Shoutz	10480 102nd Street		Waconia	MN	55387
Karen L Halvorson	PO Box 395		Bagley	MN	56621
Karen L Loss	2650 Cutters Grove Circle		Anoka	MN	55303
Karen Lindholm and Michael Lindholm	PO Box 88		Thief River Falls	MN	56701

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POC	Address1	Address2	City	State	Zip code (5 digits only)
Karen Riopelle and Robert Riopelle	PO Box 41		Argyle	MN	56713
Karen Sue Chamberlain	518 Ironwood Terrace	Apartment 4	Sunnyvale	CA	94086
Karen V Mattson	2082 Swede Lake Road		Cromwell	MN	55726
Kari L Roles	19500 Towering Oaks Trail		Prior Lake	MN	55372
John L Palmquist	139 Glen Creek Road NE		Fridley	MN	55432
Karl J Urbaniak and Paula J Urbaniak	306 Canton Avenue W		Canton	MN	55922
Karla J Massman and Backes Kelly J	34284 Peach Drive		Albany	MN	56307
Karla Marjo Kiheri and William Charles Kiheri	2510 Highway 73		Cromwell	MN	55726
Karleen Christianson	PO Box 96		Plummer	MN	56748
Karolyn K Nelson	15 N William Street		Little Falls	NY	13365
Kasey K Dreke	17726 Wendigo Road		Grand Rapids	MN	55744
Katherine L Erickson	1175 Davidson Street		Sioux City	IA	51403
Katherine M Kvalvog and Raymond P Kvalvog	323 48th Avenue SW		Moorhead	MN	56560
Kathi Grandbois	44532 310th Avenue SE		Fosston	MN	56542
Kathleen A Huls and The Kathleen A Huls Revocable Trust	2249 Chelmsford Lane		Saint Cloud	MN	56301
Kathleen A Melby	7412 4th Street SW		Backus	MN	56435
Kathleen Crews	319 9th Street NE		Buffalo	MN	55313
Kathleen G Olson and Dwight R Olson	5879 Herranen Road		Cromwell	MN	55726
Kathleen M Olmscheid Trust	29323 County Road 181		Paynesville	MN	56362
Kathleen Melancon	1137 Reponen Road		Cloquet	MN	55720
Kathleen Melby and Adamson Melby T	7412 4th Street SW		Backus	MN	56435
Kathleen Pettit and Kathleen J Pettit Trust	9278 Hyland Creek Road		Bloomington	MN	55437
Kathryn A Stine	103 Stine Drive		Trail	MN	56684
Julie Hapka and Roger Hapka	30130 360th Street NW		Argyle	MN	56713
Kathy A Jutz and Michael A Jutz	11473 Terrace Road		Blaine	MN	55434
Kathy L Johnsen and Mark A Johnsen	4641 Nelson Road		Brookston	MN	55711
Kay E Henninger	3002 County Road 4		Carlton	MN	55718
Kay L Granley	PO Box 71		Clearbrook	MN	56634
Kaycee R Garza	2803 Moorhead Road		Cloquet	MN	55720
Kayla J Rogahn	13986 110th Street		Menahga	MN	56464
Kayla M Bruggeman and Ryan L Bruggeman	16657 120th Avenue NW		Thief River Falls	MN	56701
KBC-80, LLC	PO Box 181		Stephen	MN	56757

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Keith A Lindgren Estate	PO Box 374		Hallock	MN	56728
Keith A Szczepanski and Stacy Szczepanski	35897 340th Avenue NW		Argyle	MN	56713
Keith A Wanttaja and Janel A Wanttaja	14912 Pheasant Run Court		Prior Lake	MN	55372
Keith Amborn	7682 Albert Road		Saginaw	MN	55779
Keith D Demaris	21343 Clearline Road		Shevlin	MN	56676
Keith E Beal and Dana L Beal	324 Compo Lane		Esko	MN	55733
Keith Ettle	1516 8th Street NE		Pine River	MN	56474
Keith G Melby and Lisa M Melby	165 72nd Avenue SW		Backus	MN	56435
Keith J and Krystal L Johnson	75376 100th Avenue		Blooming Prairie	MN	55917
Keith J Fitzpatrick and Dawn M Fitzpatrick	5360 Andrus Lake Road NE		Outing	MN	56662
Keith Laine and Carole Laine	6014 Eagle Lake Road		Cromwell	MN	55726
Keith M and Jeanine E Mikus	17302 109th Avenue		Park Rapids	MN	56470
Keith M Johnson and Tiffany L Johnson	2505 County Road 144		Carlton	MN	55718
Keith Peterson	1264 Sjogren Road		Wright	MN	55798
Keith T Klemmetsen	PO Box 556		Bagley	MN	56621
Keith W Morrison and Kelly M Morrison	1060 Cary Road		Cloquet	MN	55720
Keith Wolf	1574 Schafter Drive		Carlton	MN	55718
Kelley J Foy and Wade R Foy	39459 115th Avenue		Laporte	MN	56461
Kelly A Olson	19481 Airport Drive		Bagley	MN	56621
Kelly J and Laurie M Elsner	12616 110th Street		Menahga	MN	56464
Kelly Jesme Thygeson and Bruce	12440 180th Street NE		Thief River Falls	MN	56701
Kelly L Bandle and Richard R Bandle	1120 Alcohol Road		Wrenshall	MN	55797
Kelly Larson and Paul J Larson	1559 County Road 5		Carlton	MN	55718
Kelly R Erickson	706 4th Street SE		Hallock	MN	56728
Kelly Ray Brekke and Betsy Ann Brekke	27342 230th Street SE		Oklee	MN	56742
Kelly Susan Vavra and Mark Aaron Vavra	4828 Oak Ridge Drive		Hermantown	MN	55811
Kelly V McAllister	22387 105th Avenue		Wadena	MN	56482
Ken A Rosenholm	5079 Halden Road		Floodwood	MN	55736
Ken Kalin	44502 US Highway 75 NW		Stephen	MN	56757
Ken Suominen	405 Barbara Circle		Cloquet	MN	55720
Kendall D Jensen and Renae L Jensen	17253 Center Avenue N		Thief River Falls	MN	56701
Kenneth and Rose Price Trust	PO Box 472		Stephen	MN	56757
Kenneth Bjorn and Lieta Bjorn	10239 150th Street		Park Rapids	MN	56470
Kenneth Djernes and Ramona Djernes	18132 450th Street		Clearbrook	MN	56634
Julie L Zinniel and Robert L Zinniel	14126 County Road 18		Park Rapids	MN	56470
Kenneth E Lundgren	8744 Portland Avenue S		Minneapolis	MN	55420

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Kenneth E Paetzel and Sara E Paetzel	1950 Rishworth Lane		White Bear Lake	MN	55110
Kenneth F Haskins	11517 Hubbard Line Road		Menahga	MN	56464
Kenneth G Casperson and Ruth Casperson	211 4th Avenue S		Buffalo	MN	55313
Kenneth Gartner and Tammy Gartner	16974 170th Street		Park Rapids	MN	56470
Kenneth Geske	17254 Center Street E		Thief River Falls	MN	56701
Kenneth J Oraskovich and Bonnie S Oraskovich	18495 470th Street		Clearbrook	MN	56634
Kenneth Kangas and Alyce Kangas	2470 Granlund Road		Cromwell	MN	55726
K and K Trucking	21738 165th Avenue NW		Viking	MN	56760
Kenneth L Thompson and Mary M Thompson	19743 281st Avenue		Shevlin	MN	56676
Kenneth Moorhouse and Moorhouse Children Trust	58694 State Highway 34		Park Rapids	MN	56470
Kenneth R Borowicz and Arnette P Borowicz	128 Riverside Drive		Stephen	MN	56757
Kenneth S Gartner	505 Court Avenue		Park Rapids	MN	56470
Kenneth W Koestler and Laurie A Koestler	7310 W 195th Street		Jordan	MN	55352
Kent A Eveland	528 48th Avenue SW		Backus	MN	56435
Kent Broten and Robert Broten	28749 230th Avenue NW		Viking	MN	56760
Kent E Karc	1214 2nd Street S		Moorhead	MN	56560
Kent P Benitt and Loretta A Benitt	309 4th Street N		Warren	MN	56762
Kermit I Genereux and Peggy Skjerven Genereux	PO Box 385		Thief River Falls	MN	56701
Kerry A White and Robert J White	20480 394th Street		Park Rapids	MN	56470
Kerry K Kalli and Connie C Kalli	1527 County Road 5		Carlton	MN	55718
Kerwin E Bujarski and Marcia K Bujarski	20843 Clearline Road		Shevlin	MN	56676
Kevin Beck and Stacey Beck	1798 W Chub Lake Road		Carlton	MN	55718
Kevin Christensen	1027 Idaho Avenue W		Saint Paul	MN	55117
Kevin D and Jane I Urvig	10876 110th Street		Menahga	MN	56464
Kevin D Prosser	PO Box 195		Clearbrook	MN	56634
Kevin D Weber and Sharon K Weber	PO Box 222		Brownton	MN	55312
Kevin D Yaggie	139 Fern Road		Thief River Falls	MN	56701
Kevin Devriendt	1944 County Road 3		Wrenshall	MN	55797
Kevin Dietz	1803 Fairway Drive		Glencoe	MN	55336
Kevin J Allenson and Denise L Allenson	13280 Hummingbird Street		Coon Rapids	MN	55448
Kevin K Stokke and Billie Jo Stokke	PO Box 283		Floodwood	MN	55736
Kevin Malwitz	115 Woodland Court		Thief River Falls	MN	56701

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Kevin Maurstad	24926 320th Street NW		Argyle	MN	56713
Kevin R Larson and Keith A Larson	4927 Highway 73		Floodwood	MN	55736
Kevin R Melvie	21638 165th Avenue NW		Viking	MN	56760
Kevin S Price	1850 Valleywood Road		McLean	VA	22101
Kevin Sundby	PO Box 237		Stephen	MN	56757
Kimberly A Kyllonen	898 Cary Road		Cloquet	MN	55720
Kimberly Broten and Steven Broten	11103 280th Street NW		Newfolden	MN	56738
Kimberly D Dotta and Matthew E Dotta	84869 State Route 70		Beckwourth	CA	96129
Kimberly Hope Wait	PO Box 55		Moose Lake	MN	55767
Kimberly J Sonnek and Todd A Sonnek	PO Box 24		Shevlin	MN	56676
Kimberly K Truman-Bastie	3447 W County Road 4		Barnum	MN	55707
Katherine Barbara Rondorf	415 Arnold Avenue S	Apartment 53	Thief River Falls	MN	56701
Kimberly Sawyer	946 143rd Avenue NW		Andover	MN	55304
Kirk D Smith and Dee A Lindeman Smith	1242 County 155 NE		Outing	MN	56662
Kathryn Matvey	5261 S Savanna Road		Floodwood	MN	55736
Kittson County, Minnesota	401 2nd Street SW		Hallock	MN	56728
Klemmetsen Timothy and (Trustee of) Revocable Trust	1954 Norway Pine Road		East Gull Lake	MN	56401
Kretzschmar Revocable Trust	33338 221st Avenue		Bagley	MN	56621
Kris M Lippo	13679 145th Avenue		Foreston	MN	56330
Krista Marie Stadick and Thomas Stadick	321 S Jefferson Street		New Ulm	MN	56073
Kristi Johnson and Lynn C Johnson	PO Box 418		Drayton	ND	58228
Kristi Lent	1156 Alcohol Road		Wrenshall	MN	55797
Kristie K Anderson	25716 170th Avenue NW		Viking	MN	56760
Kristie R Laveau	624 County Road 4		Wrenshall	MN	55797
Kristin A Krone and Adam G Maurer	10613 Oliver Avenue NW		South Haven	MN	55382
Kristin K Neff and Terry B Neff	43719 351st Lane		Aitkin	MN	56431
Kristina K Juaire and Timothy S Juaire	35857 County Road 4		Saint Joseph	MN	56374
Kristine L Nelson and Kyle S Nelson	12027 Moen Road		Prairie Lake Township	MN	55798
Krohn Revocable Trust	6460 Hermanas Road SW		Deming	NM	88030
Kurt Demaris and Robin Demaris	20979 Clearline Road		Shevlin	MN	56676
Kurt N Ness	42553 151st Avenue		Clearbrook	MN	56634
Kurt Thomas Billmeier	6939 Oakland Avenue S		Richfield	MN	55423
Kurtis J Redmond and Greta M Redmond	1991 Manning Avenue N		Lake Elmo	MN	55042
Kyle Cusey and Marney Cusey	1222 26th Avenue NW		Backus	MN	56435

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Kyle D Lafriniere	22365 Walkerbrook Drive		Bagley	MN	56621
Kyle Lundeen and Nicole Lundeen	21371 180th Street SE		Plummer	MN	56748
Kyle Oraskovich and Mariana Oraskovich	45319 181st Avenue		Clearbrook	MN	56634
Kyle Robert Nygaard	2621 7th Avenue S		Escanaba	MI	49829
L Etal Pettersen Bonita	25956 350th Avenue SE		Trail	MN	56684
L Winfield Johnson and Margaret Johnson	605 Gill Lane		Northfield	MN	55057
Lake Township Crooked and Clerk Glenn Mechelke	5292 Lake Washburn Road NE		Outing	MN	56662
Lance N Lundin and Cathy A Lundin	2603 Highway 73		Cromwell	MN	55726
Lane B Loeslie and Diane L Loeslie	25499 170th Street NW		Warren	MN	56762
Larry A Hamren	1446 5th Street		Wright	MN	55798
Kenneth E and Katherine E Kehoe Trust	31540 County Road 2		Shevlin	MN	56676
Larry D Zimmermann	10041 Brookside Avenue		Bloomington	MN	55431
Larry G Bakka	919 8th Street		Cloquet	MN	55720
Larry J Djernes and Karen Djernes	43347 191st Avenue		Clearbrook	MN	56634
Larry J Wolfe and Linda S Wolfe	9410 Keystone Avenue		Skokie	IL	60076
Larry Kraft and Bonnie Kraft	13668 State Highway 1 NW		Thief River Falls	MN	56701
Larry L Dalbec and Mary A Dalbec	26549 US 71		Park Rapids	MN	56470
Larry L Pietz and Penni L Pietz	58085 320th Place		Palisade	MN	56469
Larry Laudal and Donna Laudal	24943 State Highway 1 NW		Warren	MN	56762
Larry O'Neill and Jeanne O'Neill	22210 313th Avenue SE		Oklee	MN	56742
Larry Randa	2313 14th Street		Cloquet	MN	55720
Laura A Ehnstrom and Mark R Ehnstrom	13266 Hunters Breeze		San Antonio	TX	78230
Kimberly M Randall and Philip J Randall	5602 County Road 4		Cromwell	MN	55726
Laura S Teske	10830 County 32		Park Rapids	MN	56470
Laura Vettleson	107 State Hwy 59 N		Plummer	MN	56748
Laurel A Olson	2256 County Road 1		Wrenshall	MN	55797
Lauretta G Blomker and Roy W Blomker	17543 143rd Avenue NW		Thief River Falls	MN	56701
Laurie A Marek	6333 Highway 210		Wright	MN	55798
Laverne N Larson and Karen D Larson	875 Cary Road		Cloquet	MN	55720
Lavonne Anderson	1371 430th Avenue		Karlstad	MN	56732
Lavonne Lindberg Larson and D and M	36719 Avenida Del Sol		Cathedral City	CA	92234
Lavonne Weihrauch	1601 Mulberry Road		Saint Cloud	MN	56303
Lawrence A Grimm	PO Box 187		Moose Lake	MN	55767
Lawrence and Maxine Line Trust	6596 Highway 210		Wright	MN	55798
Lawrence Anthony Grimm and Jenifer D Grimm	2689 County Road 61		Mahtowa	MN	55707

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Lawrence Hohensee and Patricia A Hohensee	1360 Hohensee Road		Cloquet	MN	55720
Lawrence J Andresen	29155 170th Street		Detroit Lakes	MN	56501
Lawrence J Laubach	520 County Road 4		Wrenshall	MN	55797
Lawrence Killian	16631 210th Avenue SE		Plummer	MN	56748
Lawrence L Anderson	953 Goodrich Avenue	#108	Saint Paul	MN	55105
Lawrence M Gregg and Janie M Gregg	1410 Hohensee Road		Cloquet	MN	55720
Lawrence Muehlenbein and Sandra Muehlenbein	PO Box 1196		Faribault	MN	55021
Lawrence P Vettleson and Lon R Vettleson	39391 270th Street SE		Gully	MN	56646
Leah D Halberg and Timothy W Halberg	26593 230th Street		Shevlin	MN	56676
Leahnna J Chesley	396 County Road 4		Wrenshall	MN	55797
Leanne K Petersen	9130 194th Lane NW		Elk River	MN	55330
Leanne Walberg and Stanley Walberg	46300 199th Avenue		Clearbrook	MN	56634
Lee E Schmitz and Nancy Jo Schmitz	21736 190th Street SE		Plummer	MN	56748
Lee M Rubitschung	616 State 84 SW		Pine River	MN	56474
Leeann L Vettleson	42794 181st Avenue		Clearbrook	MN	56634
Leibnitzer Trust	573 Orange Avenue		Sebastian	FL	32958
Leland B Oien	17196 390th Street		Bagley	MN	56621
Leland D Johnson	12475 Laurie Road		Floodwood	MN	55736
Leland V Larson	2336 Edith Lane		Carlton	MN	55718
Leo M Hensel	12002 Hay Creek Drive		Park Rapids	MN	56470
Leo Olson and Debra Olson	101 7th Avenue		Oklee	MN	56742
Leo Witt	729 State Highway 84 SW		Pine River	MN	56474
Leon C Rogers	10862 County 14		Park Rapids	MN	56470
Leon H Fuchs and Brad R Binek; Norman S Schwieters	19831 Apple Trail		Grey Eagle	MN	56336
Leon Schwartz	4700 NW 2nd Avenue	Suite 104	Boca Raton	FL	33431
Leonard Domek and Donna Domek	6 Crossway Drive		Circle Pines	MN	55014
Leonard G Geske and Margaret J Geske	12814 130th Street NE		Thief River Falls	MN	56701
Leonard Jacobson	710 Hedquist Avenue		Argyle	MN	56713
Leonard Jr Goodwin	42498 181st Avenue		Clearbrook	MN	56634
Leonard M Schutz	5648 40th Avenue S		Minneapolis	MN	55417
Leonard Wilminko	4966 Genew Road		Floodwood	MN	55736
Leroy Duane Larson and Judith Ann Larson	1503 County Road 5		Carlton	MN	55718
Leroy E Swenson Family Trust	3032 37th Avenue S		Fargo	ND	58104
Leroy O Mitchell and Kathy M Mitchell	30665 County 89		Park Rapids	MN	56470

POC	Address1	Address2	City	State	Zip code (5 digits only)
Leslie A Berg	28029 420th Avenue SE		Gully	MN	56646
Leslie Cota and Donna Cota	14287 Center Avenue N		Thief River Falls	MN	56701
Leslie H Dale and Nancy J Dale	3887 County Road 4		Mahtowa	MN	55707
Leslie J Anderson	10324 County 48		Park Rapids	MN	56470
Leslie R Ellesson	12155 Panama Avenue N		Stillwater	MN	55082
Lesser Irrevocable Trust	PO Box 151457		Grand Rapids	MI	49515
Lewis G Castle and Virginia Korte Castle	2175 Gillogly Road		Carlton	MN	55718
Lewis Norlander	PO Box 434		Bagley	MN	56621
Leyla J Skidmore	2636 Brandt Road		Barnum	MN	55707
Lien Family Farm LLC	1135 Oakview Lane N		Plymouth	MN	55441
Lila L Severs and Ronald W Severs	PO Box 116		Sawyer	MN	55780
Lila M Angell	2947 Strand Road		Cloquet	MN	55720
Linda C Senn	523 180th Avenue		Somerset	WI	54025
Linda D Helland	2706 Reagan Street	Apartment 101	Dallas	TX	75219
Linda L Robak	9650 160th Avenue NE		Foley	MN	56329
Linda M Ostrom	PO Box 61		Clearbrook	MN	56634
Linda M Sawatzke	5412 County Road 12 N		Buffalo	MN	55313
Linda Mickelson and Winton Mickelson	21886 270th Avenue SE		Oklee	MN	56742
Linda N Lindberg and William L Lindberg	1449 220th Avenue		Kennedy	MN	56733
Linda Rasmussen	717 Island View Drive		Bemidji	MN	56601
Lindgren Trust Agreement and Darrell K Lindgren, Trustee	8824 Hollywood Boulevard		Los Angeles	CA	90069
Link International Investments LLC	701 Houston Avenue		Minong	WI	54859
Lisa A Hellerud	4806 Hamilton Road		Minnetonka	MN	55345
Lisa C Miller	5089 Genew Road		Floodwood	MN	55736
Lisa J Coborn	12563 County 40		Park Rapids	MN	56470
Lisa M Marlow	3315 N View Lane		Woodbury	MN	55125
Lisa M Thompson	23016 190th Street SE		Plummer	MN	56748
Lloyd C Gertken and Genevieve A Gertken	PO Box 722		Pine River	MN	56474
Lloyd C Schmitz and Ellen E Schmitz	1599 Schmitz Road		Carlton	MN	55718
Lloyd Neisen and Amanda Midbo Neisen	325 Pine Street NE		Clearbrook	MN	56634
Lloyd W Crist and Bonnie S Crist	PO Box 41		Floodwood	MN	55736
Loeslie, Family B Trust of the Family Rev Trust	PO Box 13118		Grand Forks	ND	58208
Lois A Grisamore Rev Trust and J E and L A Grisamore	21230 250th Street		Park Rapids	MN	56470

POC	Address1	Address2	City	State	Zip code (5 digits only)
Lois A Grisamore Trust	1392 Legend Drive		Clive	IA	50325
Lois F Olson	1940 E Chub Lake Road		Carlton	MN	55718
Lola J Hakala	PO Box 195		Cromwell	MN	55726
Lola Kvalvog and Phil Kvalvog	17920 320th Street NE		Middle River	MN	56737
Long Family Trust and Marvin C and Dorothy M Long	28503 US 71		Park Rapids	MN	56470
Loran W Hillesheim and Janet Beck Hillesheim	2085 102nd Avenue NW		Coon Rapids	MN	55433
Loren and Deborah and Ronnie Zutz	23470 State Highway 1 NW		Warren	MN	56762
Loretta Nikula	6053 Warren Avenue		New Port Richey	FL	34653
Lori Kjellberg and Scott Kjellberg	37739 115th Avenue		Saint Joseph	MN	56374
Kitti J Jones	58505 270th Avenue		Palisade	MN	56469
Lorraine Etal Brinkman	2329 Montana Avenue E		Maplewood	MN	55119
Lorraine G Simpson and Ronald D	3639 Getchell Road		Hermantown	MN	55811
Lorraine J Hennum	1305 Soo Street		Enderlin	ND	58027
Louise M Solseng	16270 130th Avenue NW		Thief River Falls	MN	56701
Lowell and Melissa Koebernick	13021 110th Street		Menahga	MN	56464
Lowell Bring and Muriel Bring	33443 390 Street NW		Stephen	MN	56757
Lowell Lindemoen Marital Trust	32416 160th Avenue NW		Newfolden	MN	56738
Luann M Erie	2677 County Road 61		Mahtowa	MN	55707
Lucas Martin Johnson	4088 County Road 4		Barnum	MN	55707
Lucia Brovold	37410 410th Street SE		Fosston	MN	56542
Lucia C Rood and Michael G Rood	619 4th Street NE		Fosston	MN	56542
Luke Adam Potter and Kimberly Susan Potter	10511 County 6		Park Rapids	MN	56470
Luke J Tellin	27340 Felton Avenue		Wyoming	MN	55092
Lund Revocable Trust	1504 S Highway 33		Cloquet	MN	55720
Lupe Moorhouse	13381 Marty Lane		Garden Grove	CA	92843
Lutheran Cemetery	208 E Colvin Avenue	Suite 11	Warren	MN	56762
Lutheran Church Norden	16657 120th Avenue NW		Thief River Falls	MN	56701
Lydia Pietruszewski	25744 310th Street		Shevlin	MN	56676
Lyle Bjerknes	PO Box 232		Gonvick	MN	56644
Lyle C Tate and Cheryl A Tate	2130 Yndestad Road		Carlton	MN	55718
Lyle Childs	9385 4th Street SW		Menahga	MN	56464
Lyle E and Debra L Edelman	3208 US Highway 87 E		Billings	MT	59101
Lyle Morken and Sheryl Morken	111 Springbrook Street		Spring Brook	ND	58843
Lyle S and Coreen E Pederson	7640 550th Street		Dumont	MN	56236

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Lynae Nesland	14504 11th Avenue NE		Thief River Falls	MN	56701
Lynda Nygaard and Miles Peter Nygaard	604 Indiana Avenue		Gilbert	MN	55741
Lynden Marc Langen and Stacy P Langen	3267 170th Street		Kennedy	MN	56733
Lynell Wayne and Robert Wayne	15760 140th Street NE		Thief River Falls	MN	56701
Lynette H Andeen and Douglas Gilchrist	3520 Snowberry Loop		Show Low	AZ	85901
Lynn C and Kristi Johnson	PO Box 418		Drayton	ND	58225
Lynn D Smith	1461 Spring Lake Road		Cloquet	MN	55720
Lynn Isaacson and Amy Isaacson	1540 11th Avenue		Newport	MN	55055
Lynn Korpela-Swatek	5863 County Road 129		Cromwell	MN	55726
Lynn M Bellefy and Mark L Bellefy	22960 320th Street		Bagley	MN	56621
Lynn O Ostrom and Linda M Ostrom	PO Box 61		Clearbrook	MN	56634
Larry Blasing	34600 US 71		Laporte	MN	56461
Lorie S Earlywine	3430 County Road 4		Barnum	MN	55707
Machinewell Inc	PO Box 157		Grygla	MN	56727
Marc E Walter and D Walter Roger	14063 190th Avenue SE		Plummer	MN	56748
Marc Lynden and Stacy Langen Lynden	3267 170th Street		Kennedy	MN	56733
Marc Walter and Alyssa Walter	15038 190th Avenue SE		Plummer	MN	56748
Marcia K Klatt and Kenneth A Klatt	3125 Berg Road		Cloquet	MN	55720
Marcille Y Ennen	3333 County Road 4		Barnum	MN	55707
Margaret E Olson and Scott G Olson	16395 110th Avenue NW		Thief River Falls	MN	56701
Margaret Gartner	16974 170th Street		Park Rapids	MN	56470
Margaret Gartner	9964 County Road 32		Park Rapids	MN	56470
Margaret Greenwood	6995 Sunburst Avenue		Firestone	CO	80504
Margaret Lund and Robert A Lund	1075 Reponen Road		Cloquet	MN	55720
Margaret Schmidt	2555 Ziehl Road		Carlton	MN	55718
Margarethe Ferguson	2899 County Road 4		Carlton	MN	55718
Margie A Wellma	5 Sheffield Lane		Marine Street Crx	MN	55047
Marie J Linnan and Terrance D Linnan	10705 Baylark Avenue		Las Vegas	NV	89134
Marie M Fjerstad	1854 Sheils Road		Carlton	MN	55718
Marilyn A Pehl and Ralph R Pehl	16670 E Lake Netta Drive NE		Ham Lake	MN	55304
Marilyn R Sparks	4515 County Road 4		Mahtowa	MN	55707
Marilyn S Lindahl	PO Box 644		Hallock	MN	56728
Marion E Linn II and Sandra D Linn	1651 8th Street NE		Pine River	MN	56474
Marion E Linn III and Christina J Linn	1091 8th Street NE		Pine River	MN	56474
Marjorie Pohjola	9865 Niemi Road		Brookston	MN	55711
Mark A Dahlman and Linda E Dahlman	887 W Road		Wright	MN	55798

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Mark A Latourelle and Julie A Latourelle	5687 Chalstrom Drive		Saginaw	MN	55779
Mark A Thune	12781 112th Street NE		Thief River Falls	MN	56701
Mark Allan Herzog	15301 County 6		Park Rapids	MN	56470
Mark and Laurie and Don and Gail Yutrzenka	32639 320th Street NW		Argyle	MN	56713
Mark Blawat	21370 290th Street NW		Viking	MN	56760
Mark D Harrington	10327 Dellwood Road N		Stillwater	MN	55082
Mark D Manning and Patricia A Manning	2140 Thell Road		Wrenshall	MN	55797
Mark D Reiff and Mary Kay Reiff	2520 Murray Avenue		Saint Anthony	MN	55418
Mark Demenge	41357 230th Avenue		McGregor	MN	55760
Mark E Hegman and Jacqueline B Hegman	4913 E Sunnyslope Road		Edina	MN	55424
Mark Hapka and Mimi Hapka	1270 141st Lane NW		Andover	MN	55302
Mark J Falls and Roxanne M Falls	685 28th Avenue SW		Backus	MN	56435
Mark J Fehn	9020 60th Street NE		Saint Michael	MN	55376
Mark L Bellefy and Lynn Bellefy	22960 320th Street		Bagley	MN	56621
Mark L Kemper and Leann Kemper	2655 Woodside Lane		Saint Cloud	MN	56301
Mark McGregor and Laura McGregor	34435 390th Street NW		Stephen	MN	56757
Mark R Anderson	2533 1/2 Minnesota Avenue		Duluth	MN	55802
Mark R Petron and Cynthia R Petron	15245 Barley Road NW		Royalton	MN	56373
Mark S Lien	48652 County Road 7		Gonvick	MN	56644
Mark Swan	1281 Stone Ridge Road		Sauk Rapids	MN	56379
Mark T Nadeau	3374 Eagle Lake Drive SW		Backus	MN	56435
Mark Tollerud	804 26th Street		Cloquet	MN	55720
Mark Tschida	2199 Douglynn Lane		Saint Paul	MN	55119
Mark W Groth	PO Box 85		Wright	MN	55798
Mark W Herwig and Terri M Reischl	1958 Florence Street		White Bear Lake	MN	55110
Mark W Netland and Elaine M Netland	21235 350th Street		Bagley	MN	56621
Mark W Surdez and Rose Surdez	23845 320th Street		Bagley	MN	56621
Mark W Yungner and Wendy L Yungner	6643 Quantico Lane N		Maple Grove	MN	55311
Mark Wright	1340 Minnesota Street N		Plummer	MN	56748
Marlayne M Haider	2791 W Medici Drive		Tucson	AZ	85741
Marlen Harris and Donita Harris	2170 8th Street SW		Backus	MN	56435
Marlene Barg	411 Lawn St		Park Rapids	MN	56470
Marlin L Olson and Janet F Olson	PO Box 157		Clearbrook	MN	56634
Marlys Maki	280 Ash Street N		Plummer	MN	56748
Marni Knutson	51134 101st Avenue		Gonvick	MN	56644

POC	Address1	Address2	City	State	Zip code (5 digits only)
Martha Joy Roberts	6220 Idylwood Lane		Edina	MN	55436
Martha Roberts Joy	2501 Quebec Avenue S		Saint Louis Park	MN	55426
Martin L Larson and Dawn L Larson	1558 Pfeifer Road		Carlton	MN	55718
Marvin L Kading and Delores Kading	15145 127th Street SE		Saint Hilaire	MN	56754
Marvin W Berg and Rhoda L Berg	51735 State Highway 92 SE		Gully	MN	56646
Marvin W Lee	21850 Drake Street NW		Oak Grove	MN	55011
Mary A Gerbracht	20405 340th Street		Bagley	MN	56621
Mary A Juhl	PO Box 455		Red Lake Falls	MN	56750
Mary Alyce Radtke and Terrance Lee Radtke	1868 W Chub Lake Road		Carlton	MN	55718
Mary Ann LaCoursiere	438 W Monterey Avenue		Mesa	AZ	85210
Mary B Parran	5630 Woods Drive	#213	Willoughby	OH	44094
Mary B Vandell	8069 Braddock Avenue NE		Monticello	MN	55362
Mary Dawn Swanson	48 Chinook Drive Calgary		Canada		
Mary E Paetzel Trust	1950 Rishworth Lane		White Bear Lake	MN	55110
Mary E Yaggie and Michael D Yaggie	PO Box 550		Wahpeton	ND	58075
Mary J Dummer	55997 330th Street		Lafayette	MN	56054
Mary J Eveland and Richard Holmberg	555 44th Avenue SW		Backus	MN	56435
Mary J Hopp	2070 County Road 3		Wrenshall	MN	55797
Mary Jane Stevens	414 9th Street S		Waite Park	MN	56387
Mary Johnson and Ryan Johnson	1411 23rd Avenue S		Moorhead	MN	56560
Mary Kay Hohensee	1331 Hohensee Road		Cloquet	MN	55720
Mary L Jeske	9763 Wedgewood Circle		Woodbury	MN	55125
Mary L Risacher	11321 Vessey Circle		Bloomington	MN	55437
Mary L Ruyman Lee	7876 Lent Trail		Stacy	MN	55079
Mary M Lloyd	1832 E Shore Drive		Maplewood	MN	55109
Mary S Muhs Fredrick W and Gregory J Muhs Fredrick W	29942 County 2		Shevlin	MN	56676
Mary Theel	1544 Buccaneer Place		Bismarck	ND	58504
Marye L Carlson	646 1st Street E		Shevlin	MN	56676
Mason Bergeron and Stephanie Bergeron	1834 W Chub Lake Road		Carlton	MN	55718
Mathew E Dotta and Kimberly D Dotta	26626 US 71		Park Rapids	MN	56470
Mathew Hogan and Rachel Hogan	10473 US 71		Menahga	MN	56464
Matt T Matalamaki	11473 Kosonen Road		Floodwood	MN	55736
Matthew J Thienes	2942 Hemingway Avenue N		Oakdale	MN	55128
Matthew K Cage and Debra A Cage	22565 Walkerbrook Drive		Bagley	MN	56621

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Matthew Martin	5956 Stenberg Road		Cromwell	MN	55726
Matthew McGivney and Rhonda F	2928 Lothair Way		Long Beach	IL	46360
Matthew S Rondorf	216 Merriam Avenue S		Thief River Falls	MN	56701
Matthew W Decaigny and Amy E Decaigny	PO Box 100		Sawyer	MN	55780
Maureen D Opsahl and James S Nelson	14761 110th Avenue NW		Thief River Falls	MN	56701
Maureen G Winge and Jerome Winge	1245 Charlton Street		West Saint Paul	MN	55118
Maurice E McAllister and Alice M Schultz	1743 48th Avenue SW		Backus	MN	56435
Maurstad Revocable Living Trust	31937 250th Avenue NW		Argyle	MN	56713
Mavis Anderson	Route 2, Box 290		Clearbrook	MN	56634
Mavis Halvorson and Calvin Marcus	15953 75th Street SW		Prinsburg	MN	56281
Maynard W Peterson	42085 360 Avenue NW		Stephen	MN	56757
Mayva M Boranian	5250 Grandview Square	Unit 2311	Edina	MN	55436
McKeever Properties LLC	2637 15th Avenue SE		Watertown	SD	57201
McKinley Township, Cass County, Minnesota	8731 16th Street SW		Backus	MN	56435
Megan Huschle	702 E River Drive		Park Rapids	MN	56470
Mehrkens Farms Inc	13290 120th Avenue NE		Thief River Falls	MN	56702
Melford Grundyson	PO Box 144		McIntosh	MN	56556
Melissa A Ennen	3371 County Road 4		Barnum	MN	55707
Melissa Polo and Richard Polo	4452 Hingeley Road		Floodwood	MN	55736
Melissa Seykora	7716 129th Avenue SE		Lisbon	ND	58054
Melvin C and Janet L Larson	4443 E Pleasant View Road		Superior	WI	54880
Melvin Hjulberg	5660 259th Street		Wyoming	MN	55092
Melvin Hjulberg and Melvin R Hjulberg	PO Box 145		Wyoming	MN	55092
Meredith Badenoch	221 Birch Avenue NW		Saint Michael	MN	55376
Meridan Minerals Co	PO Box 2197		Houston	TX	77252
Merlyn A Euerle and Carole J Euerle	PO Box 141		Richmond	MN	56368
Merlyn D Nelson	808 County Road 18		Wrenshall	MN	55797
Mervin H Bakke and Lynette D Bakke	51339 State 92		Gonvick	MN	56644
Michael A Bienek	PO Box 65		Warren	MN	56762
Michael and Audrey Bachand Inc	24557 275th Avenue SE		Brooks	MN	56715
Michael Coborn and Rhonda L Coborn	21 S Willowgreen Court		Mason City	IA	50401
Michael D Franks and Donna J Franks	20954 350th Avenue NW		Warren	MN	56762
Michael E Volk	7642 28th Street SW		Staples	MN	56479
Michael Goffin	10060 County 6		Park Rapids	MN	56470

POC	Address1	Address2	City	State	Zip code (5 digits only)
Michael Hanson and Naomi Hanson	5350 Mac Drive		Grand Forks	ND	58201
Michael J and Diane L Tchida	12226 Manhattan Point		Crosslake	MN	56442
Michael J Burke	16 1/2 W Highway Street		Dodge Center	MN	55927
Michael J Cooper and Stacy M Cooper	38105 Fairground Road		Bagley	MN	56621
Michael J Fasteland and Marna C Butler Fasteland	2011 Gillogly Road		Carlton	MN	55718
Michael J Neault and Linda J Neault	2440 County Road 139		Barnum	MN	55707
Michael J Peterson	2427 Broomfield Road		Carlton	MN	55718
Michael J Rathbone and Cynthia A Rathbone	2667 Woodside Lane		Saint Cloud	MN	56301
Michael J Rodgers and Danielle T Rodgers	1802 County Road 142		Mahtowa	MN	55707
M Brook Redd and Kristin L Redd	11608 State Highway 32 NE		Thief River Falls	MN	56701
Michael John Cooper and Stacy Maree Cooper	38105 Fairground Road		Bagley	MN	56621
Michael K Wiebolt and Jani Wiebolt	11429 Snake Trail SW		Motley	MN	56466
Michael L Bakken	43613 181st Avenue		Clearbrook	MN	56634
Michael L Stenseng	41410 191st Avenue		Clearbrook	MN	56634
Michael L Terry and Kathleen A Terry	5207 County Road 4		Cromwell	MN	55726
Michael L Wagman	1814 W Chub Lake Road		Carlton	MN	55718
Michael Laing	20114 Minnikahda Road		Avon	MN	56310
Michael Lee	3757 Lyon Yellow Medicine		Wood Lake	MN	56297
Michael Lindholm and Eileen Helmer	PO Box 88		Thief River Falls	MN	56701
Michael Makela and Andrea Makela	13115 110th Street		Menahga	MN	56464
Michael Malterud and Ashley Malterud	41425 181st Avenue		Clearbrook	MN	56634
Michael P Hamerlinck and Rosemary H Hamerlinck	1981 Princeton Avenue		Saint Paul	MN	55105
Michael P Osowski and Shayla A Osowski	30685 County 89		Park Rapids	MN	56470
Michael P Riley and Bonnie K Riley	10916 Meadowlark Lane		Hibbing	MN	55746
Michael R Buesing and Roxanne J Buesing	324 W Front		Saint Clair	MN	56080
Michael R Munn	9465 Division Street W		Menahga	MN	56464
Michael R Nelson and Susan K Nelson	15735 112th Street NW		South Haven	MN	55382
Michael R Olson	6717 W 82nd Street		Bloomington	MN	55438
Michael S Hill	8354 177th Lane NE		Forest Lake	MN	55025
Michael S Walsh	12424 Tamarack Road		Floodwood	MN	55736
Michael Schowalter	7345 Creekwood Lane		Prior Lake	MN	55372
Michael W Jevning	PO Box 266		Waseca	MN	56093

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Michael Wicks	28701 224th Street SE		Oklee	MN	56742
Michael Yaggie and Mary Yaggie	PO Box 550		Wahpeton	ND	58074
Micheal K Walli	2073 S Finn Road		Tamarack	MN	55787
Michele K Esposito	2226 Halter Lane		Reston	VA	20191
Michelle A Cartwright	3031 Jarvinen Road		Cloquet	MN	55720
Michelle Audette and Randall Audette	18945 240th Street NW		Viking	MN	56760
Michelle Hendrickson	886 Center Road		Wright	MN	55798
Michelle Richmond	8907 O'Brien Avenue NE		Elk River	MN	55330
Mike L Anderson	21237 180th Avenue NW		Viking	MN	56760
Mike Skjerven	730 Spruce Street N		Plummer	MN	56748
Mike Skjerven	PO Box 676		Thief River Falls	MN	56701
Miles Gibson	10858 Jade Rose Drive		Park Rapids	MN	56470
Millie Miller	40671 County 3		Laporte	MN	56461
Milo J Hughes and Julie A Hughes	17247 Echo Road		Westfield	IA	51062
Milton G Bakken	18814 144th Avenue NW		Thief River Falls	MN	56701
Mindy M Dufault and Peter B Dufault	703 152nd Avenue NE		Ham Lake	MN	55304
Minn Pipe Line Co	PO Box 2900		Wichita	KS	67201
Minnesota Department of Natural Resources -Forestry-Other	10201 159th Avenue		Menahga	MN	56464
Minnesota Department of Natural Resources -Forestry-Other	16433 Arbor Road		Menahga	MN	56464
Minnesota Department of Natural Resources -Parks and Recreation and Itasca State Park Accts Payable	36750 Main Park Drive		Park Rapids	MN	56470
Minnesota Department of Transportation	3920 Highway 2 W		Bemidji	MN	56601
Minnesota Pipeline Company	PO Box 2256		Wichita	KS	67201
Minnie Bryan Breza	941 70th Avenue		Roberts	WI	54023
Minnkota Power Cooperative Inc	PO Box 13200		Grand Forks	ND	58208
Matthew Baltes and Stacey Baltes	620 Central Avenue W		Plummer	MN	56748
Mitchell J Anderson	1306 S Darling Drive NW		Alexandria	MN	56308
Mitchell V Engelstad and Renae Engelstad	16915 130th Street NE		Thief River Falls	MN	56701
MJC Real Estate LLC	12226 Rudolph Road		Floodwood	MN	55736
Michael J Tykwinski	6761 PO Box		Minneapolis	MN	55406
Moose Creek Township, Clearwater County, Minnesota	25862 330th Street		Shevlin	MN	56676
Moose Township Creek	27997 320th Street		Shevlin	MN	56676
Mose Yoder and Betty Yoder	49542 Taflin Lake Road		Gonvick	MN	56644

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Murray D Engelstad and Arnold L	15179 130th Street NE		Thief River Falls	MN	56701
Myron M Fiemeye and Joan M Fiemeye	121 Stony Point Road		Courtland	MN	56021
Minnesota Department of Natural	500 Lafayette Road N		Saint Paul	MN	55155
Nancy A Solem-Reisinger	975 Trettle Lane		Cloquet	MN	55720
Nancy Erickson and Richard E Erickson	2134 8th Avenue NW	Apartment 106	East Grand Forks	MN	56721
Nancy J Ware	16 Roger Drive		Esko	MN	55733
Nancy J Ware and Robin E Ware Jr	3843 County Road 4		Mahtowa	MN	55707
Nancy Krohn	6460 Hermanas Road SW		Deming	NM	88030
Nancy Mae Mathews and Bonita Marie Anderson	5185 Highway 73		Floodwood	MN	55736
Nancy Vorderbruggen	116 Lomond Drive NW		Bagley	MN	56621
Nandor LLC	5225 Minnehaha Boulevard		Edina	MN	55424
Natalie A Pavek	9483 Woodridge Way		Savage	MN	55378
Nathan A Alvar and Renee M Alvar	1187 Alcohol Road		Wrenshall	MN	55797
Nathan Burns and Isaac Burns	4271 Haddix Circle NW		Backus	MN	56435
Mitchell G Watts	1581 Sharon Drive N		North Mankato	MN	56003
Nathan N Oien	PO Box 138		Clearbrook	MN	56634
Nathan R Graftaas and Melissa M Graftaas	1493 County Road 5		Carlton	MN	55718
Nathaniel R Olson and Kelly A Olson	19481 Airport Drive		Bagley	MN	56621
Neal P and Elizabeth J Seeger	18129 324th Avenue		Detroit Lakes	MN	56501
Neal Pederson	3077 County Highway 42		Bejou	MN	56516
Neil D Peterson and Nicole E Peterson	13500 150th Avenue SE		Saint Hilaire	MN	56754
Neil Erickson and Theresa Meger	192 County Road 4		Wrenshall	MN	55797
Neil K Hanson and Deanne L (Gregerson) Hanson	10892 140th Avenue SE		Saint Hilaire	MN	56754
Neil R Johnson	11549 Paakonen Road		Floodwood	MN	55736
Nelson Family Trust	43425 181st Avenue		Clearbrook	MN	56634
Ness Tri-County Farms LLC	1201 Mayer Road		Hudson	WI	54016
Nickolas D Hanninen and Nicole E Hanninen	1573 Coach Lane		Carlton	MN	55718
Nicola E Monnens	20545 Dublin Drive		Farmington	MN	55024
Nicolle K Ellison	14649 140th Street NE		Thief River Falls	MN	56701
Nolan Baratono	909 Riverside Drive		International Falls	MN	56649
Nolan Knutson and Lacey Stennes Knutson	20366 270th Street NW		Viking	MN	56760
Norden Congregation of Trustees	17025 130th Avenue NE		Thief River Falls	MN	56701
Norma Kaye Hvidsten Trust	1555 Main Street NW	Apartment 311	Coon Rapids	MN	55448

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Norman C Koch and Mary M Koch	11080 320th Street		Park Rapids	MN	56470
Norman L Hendrickson and Jill A Hendrickson	45578 State 92		Clearbrook	MN	56634
Norman R Halvorson	39513 285th Street SE		Gully	MN	56646
Norman W Niesen and Pamela S Niesen	3196 Boundary Road		Mahtowa	MN	55707
North Country Holdings LLC	16445 Kingswood Court		Lakeville	MN	55044
Northeast Property Management LLC	94394 E Frontage Road		Moose Lake	MN	55767
Northern Natural Gas Co	PO Box 3330		Omaha	NE	68103
Northstar Materials, Inc	PO Box 40		Bemidji	MN	56601
Northview Bank	PO Box 257		Finlayson	MN	55735
Northwest Minnesota Multi County Housing and Redevelopment Authority	PO Box 205		Mentor	MN	56736
Northwestern Management Farm	301 S O'Connell Street		Marshall	MN	56258
NSR Land Management Inc	26593 230th Street		Shevlin	MN	56676
Nymann Welding Inc	15495 250th Avenue SE		Plummer	MN	56748
Obert and Kaye Einevoll (Trustee of) Einevoll Famly Trust	2621 Sutter Street		Oakley	CA	94561
O'Brien Properties of Backus, LLC	7100 Sunwood Drive NW		Ramsey	MN	55303
Moorhouse Children Trust	28696 U.S Highway 71		Park Rapids	MN	56470
Orlin Holm	18105 Golf View Lane		Bagley	MN	56621
Orvin J Haugen	28107 400th Avenue SE		Gully	MN	56646
Otter Tail Power Co	PO Box 496		Fergus Falls	MN	56538
Otter Tail Power Company	215 S Cascade Street		Fergus Falls	MN	56537
Palmer A Drews	1515 Nunaka Drive		Anchorage	AK	99504
Pamela A Cheney and Steven J Cheney	14025 23rd Avenue N		Plymouth	MN	55447
Pamela A Jones	40 Parkview Circle		Grand Forks	ND	58201
Pamela Ann O'Neill and Robert O'Neill	31245 220th Street SE		Oklee	MN	56742
Pamela Hodgden Sue	10817 Hwy 71		Menahga	MN	56464
Pamela J Severance	2595 County Road 4		Carlton	MN	55718
Pamela M Hvidsten	1218 340th Avenue		Karlstad	MN	56732
Nadene N Lopez and Victor R Lopez	2055 Yndestad Road		Carlton	MN	55718
Patricia A Knutson and Rodney Knutson	8781 127th Avenue NE		Mountain	ND	58262
Patricia A Litchy and Thomas L Litchy	31654 166th Avenue		Avon	MN	56310
Patricia A Moorhouse	10697 Jade Rose Drive		Park Rapids	MN	56470
Patricia Anne Broady	APDO Post 21 Puerto Vallarta				
Patricia Bernhoft	6600 Lyndale Avenue S	Unit 805	Richfield	MN	55423

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POC	Address1	Address2	City	State	Zip code (5 digits only)
Patricia C Altrichter and Wayne K Altrichter	5111 Crow Wing Lake Road		Fort Ripley	MN	56449
Patricia E Brekke and Robert D Brekke	29182 410th Avenue SE		Gully	MN	56646
Patricia J Nevala and The Patricia J Nevala 2008 Revocable Trust	11512 Hubbard Line Road		Menahga	MN	56464
Patricia L Malme	1205 Pine Street		Crookston	MN	56716
Patricia M Kroulik and Theodore W Kroulik	900 Lincoln Avenue	Apartment 104	Stephen	MN	56757
Patricia Wekseth and Randy L Wekseth	3529 County Road 4		Barnum	MN	55707
Patrick and Linda Faltersack	112 Goldfinch Lane		Clearwater	MN	55320
Patrick D Keefe	31929 243rd Avenue		Shevlin	MN	56676
Patrick D O'Bryan and Sharon K Dyrdahl-O'Bryan Revocable Trust	41846 211th Avenue		Bagley	MN	56621
Patrick M and Mary J Dummer	55997 330th Street		Lafayette	MN	56054
Patrick Wichterman and Bonnie Wichterman	18497 170th Street SE		Plummer	MN	56748
Patsy L Sumpter	7095 Bunker Court		Eden Prairie	MN	55346
Patti Ann Peroni	11302 Norway Drive		Laporte	MN	56461
Patti Lea Sheff	1217 Summit Avenue		Cloquet	MN	55720
Paul A Kostrzewski	33400 390th Street NW		Stephen	MN	56757
Paul A Kostrzewski	14724 504th Street		Verndale	MN	56481
Nathan Kantola	5261 S Savannah Road		Floodwood	MN	55736
Paul A Strom and Linda L Strom	205 Borgstrom Street		Upsala	MN	56384
Paul E and Margie K Netland	29501 201st Avenue		Bagley	MN	56621
Paul E Meyer	22165 Great Eastern		Warren	MN	56762
Paul F Dahl and Carrie W Dahl	4983 Genew Road		Floodwood	MN	55736
One Horn Estates Inc	One Horn Estates		Floodwood	MN	55736
Paul J Boche	13245 15th Street S		Afton	MN	55001
Paul J Witta	9469 W Virta Road		Mountain Iron	MN	55768
Paul L Shuster and Sharon L Shuster	10819 Jade Rose Drive		Park Rapids	MN	56470
Paul M and Genea S Patton	10739 109th Avenue		Menahga	MN	56464
Paul M Hanson Trust	24208 Rum River Boulevard		Saint Francis	MN	55070
Paul Meyer	6186 County Road 15A		Grafton	ND	58237
Paul Morken and Linda Morken	26639 235th Avenue NW		Warren	MN	56762
Paul Potucek	421 W Cross Avenue		Warren	MN	56762
Paul R Dunker and Zena M Dunker	17976 410th Street		Clearbrook	MN	56634
Paul T Dove and Patricia A Dove	11700 Island Lake Drive		Park Rapids	MN	56470
Paul T Gregoire and Stacy A Gregoire	15831 Fleet Trail		Apple Valley	MN	55124

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Paul W Ehlers and Chelsey R Ehlers	18667 Leonard Road		Clearbrook	MN	56634
Paulette Holt and Thomas A Holt	5927 Wargin Road		Duluth	MN	55810
Pauline Bjorgaard	30894 200th Avenue NW		Newfolden	MN	56738
Pauline Swenson and Richard Swenson	5201 W Camel Back Road / E-		Phoenix	AZ	85031
PDS Services Tax and Wells Fargo Bank	PO Box 13519		Arlington	TX	76094
Peggy Jean Gray and Thomas Gerald Gray	2865 Lund Road		Kettle River	MN	55757
Peggy L Morenz and Thomas E Morenz	3935 Demarc Court		Cincinnati	OH	45248
Penni Anderson and Travis Anderson	PO Box 203		Argyle	MN	56713
Penni S Cairns and Steve D Cairns	17098 Lilly Lane		Bagley	MN	56621
Penny Demenge	2031 Hwy 33 S		Cloquet	MN	55720
Perry Gryskiewicz	12 Oxford Court		Voorhees	NJ	8043
Pete C Carlson and Debra M Carlson (Trustees) PDCT	15764 120th Avenue NE		Thief River Falls	MN	56701
Peter Donald Measner and Angela Marie Measner	5418 County Road 4		Cromwell	MN	55726
Peter J Krause and Rebecca J Krause	428 W Redwing St		Duluth	MN	55803
Peter Sinclair	PO Box 16		Stephen	MN	56757
Peter T Walchuk and Debra Walchuk	43043 191st Avenue		Clearbrook	MN	56634
Philip Hess and Jessica Hess	26006 340th Avenue SE		Trail	MN	56684
Philip L Cyphers	10500 County 32		Park Rapids	MN	56470
Philip L Cyphers	19210 County Highway 39		Underwood	MN	56586
Philip M Hayden and Bonita J Hayden	2313 130th Avenue NW		Coon Rapids	MN	55448
Philip W and Frederick P and James R Rondeau	24036 167th Street NW		Big Lake	MN	55309
Phyllis Lorraine Broberg and Phyllis Lorraine Broberg Revocable Living Trust	1603 Trail Drive		Cloquet	MN	55720
Phyllis T Gramlich	629 Sexton Road		Sebastopol	CA	95472
Pink Tanner and Brandie Tanner	18631 418th Street		Clearbrook	MN	56634
Piper Rae Kneen Wick and Robert P Wick	5525 91st Crescent N		Brooklyn Park	MN	55443
Plummer City	PO Box 128		Plummer	MN	56748
Porcupine Ridge Outdoors Club	5938 Mallond Pond Drive		White Bear Lake	MN	55110
Potlatch Lake States Timberlands	601 W 1st Avenue	Suite 1600	Spokane	WA	99201
Potlatch Minnesota Timberlands LLC	105 Arch Street		Cloquet	MN	55720
Prairie Lake Township, St. Louis County, Minnesota	4104 Rasmussen Road		Wright	MN	55798
Previs Properties	69327 340th Avenue Box 64		Hill City	MN	55748

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Quinn R Arro and Cheryl L Arro	10959 US Highway 2		Floodwood	MN	55736
R and L Thull Family Trust	11228 860th Avenue		Granite Falls	MN	56241
Paul A Simone	4170 County Road 4		Mahtowa	MN	55707
Rachel M Mack and William H Mack	10470 190th Street		Park Rapids	MN	56470
Rae Johnson and Lyn Johnson	1804 Doddridge Avenue		Cloquet	MN	55720
Ralph H and Kathryn M Herseth	707 1/2 11th Avenue SE		Roseau	MN	56751
Paul G Gustafson and Megan N Gustafson	7248 Irvine Avenue NW		Bemidji	MN	56601
Ramona R Miske	2271 Knoll Drive		Mounds View	MN	55112
Ranaye L Kluenenberg	3480 County Road 4		Barnum	MN	55707
Randal W Loeslie	1998 Prairie Rose Court		Grand Forks	ND	58201
Randall Audette and Michele Audette	18945 240th Street NW		Viking	MN	56760
Randall Flom and Nancy Nygaard Flom	PO Box 753		Swansboro	NC	28584
Randall J Vanderbeek	8191 Custer Trail		Inver Grove Heights	MN	55076
Randall J Zaviska	12551 120th Avenue NE		Thief River Falls	MN	56701
Randall Jack Eudy and Patty Jo Eudy	1091 Alcohol Road		Wrenshall	MN	55797
Randall L Twistol	710 Labree Avenue N		Thief River Falls	MN	56701
Randall Mayer	1517 Aqua Vista Road		Richmond	CA	94805
Randolph Kraulik	1434 340th Avenue		Kennedy	MN	56733
Randy Bruce Matten	3197 County Road 4		Carlton	MN	55718
Randy G Black and Vicki L Black	7123 Highway 210		Tamarack	MN	55787
Randy G Olson and Annamary Olson	988 32nd Avenue SW		Backus	MN	56435
Randy Klug	110 Serenity Court		Avon	MN	56310
Randy Strobush and Nancy Strobush	830 River Lane		Anoka	MN	55303
Randy Wayne Anderson	40710 181st Avenue		Clearbrook	MN	56634
Ratana Sripad	4411 Veterans Boulevard		Del Rio	TX	78840
Raymond A Walter Trust	285 Healy Avenue W		Plummer	MN	56748
Raymond C Lindgren and Nita S Lingren	11875 Highway 25 NE		Foley	MN	56329
Raymond D Schmitz and Patti L Schmitz	1019 Cary Road		Cloquet	MN	55720
Raymond Kvalvog and Kathie Kvalvog	323 48th Avenue SW		Moorhead	MN	56560
Raymond S Olson and Ardith Olson	15648 200th Street NW		Thief River Falls	MN	56701
Raymond W Ball and Connie M Ball	10119 160th Street		Park Rapids	MN	56470
Raymond Walter	285 Healy Avenue W		Plummer	MN	56748
Rebecca J Sczepanski and William Sczepanski	PO Box 473		Stephen	MN	56757
Rebecca L Johnson and Mark Ostlund	3003 Village Green Drive W		Moorhead	MN	56560
Rebecca M Patterson and Belinda K Virgillo	2025 Innsbruck Pkwy		Columbia Heights	MN	55421

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Rebecca Ronning and Terry Ronning	24498 Daniel Lake Lane		Bagley	MN	56621
Red Lake County, Minnesota	204 7th Street SE		Red Lake Falls	MN	56750
Regents of the University of Minnesota	424 Don Howe Building 319 -		Minneapolis	MN	55455
Rena J Collins	16935 230th Street NW		Viking	MN	56760
Rene Deonne Steffer	6811 Pacific Avenue		Wright	MN	55798
Renee P Schroeder	38725 12th Avenue	Trailer 1	North Branch	MN	55056
Renee Rongen and Thomas Rongen	10601 390th Street SE		Fertile	MN	56540
RGGS Land and Minerals Ltd LP	100 Waugh Drive Suite 400		Houston	TX	77007
Ric Ward Schoenroc and Patrick Doege	1920 Firemans Lodge Road		Alexandria	MN	56308
Richard A Anderson and Jean F Anderson	4808 5th Street NE		Columbia Heights	MN	55421
Richard A Denny and Jeffrey M Denny	11312 170th Street		Wadena	MN	56482
Richard A Raymond and Margie S Raymond	2762 76th Avenue SW		Staples	MN	56479
Richard A Reigel	2970 Jarvinen Road		Cloquet	MN	55720
Richard and Audrey Zeller	20572 Forest Park Drive		Park Rapids	MN	56470
Richard and Barbara Yaggie Family Limited Partners	1708 4th Street N		Wahpeton	ND	58075
Richard and Diane Moen (Trustees) and R and D Moen Revocable Trust Agreement	45936 181st Avenue		Clearbrook	MN	56634
Richard and Diane Moen Revocable Trust Agreement	45936 181st Avenue		Clearbrook	MN	56634
Richard and E Treadwell Trust	10221 294th Street		Park Rapids	MN	56470
Richard B Sundberg and Janelle E Sundberg	1755 Pilgrim Point Road NW		Alexandria	MN	56308
Paul Gostanczik	29218 350th Street NW		Argyle	MN	56713
Richard C McGregor	24387 270th Street NW		Warren	MN	56762
Richard C Smith and Terry L Smith	1491 Award Boulevard		Wright	MN	55798
Richard Clark	15055 130th Street NE		Thief River Falls	MN	56701
Richard E Klevorn	1111 Reponen Road		Sawyer	MN	55780
Richard Elander and Karen Elander	37202 Scenic Hwy		Bovey	MN	55709
Richard G Lough	12332 Graff Road		Wright	MN	55798
Richard G Scheuble and Shirley M Scheuble	2770 115th Street SW		Montrose	MN	55363
Richard G Watson	3486 County Road 4		Barnum	MN	55707
Richard Harold Snodgrass Trust	343 102nd Street NE		Monticello	MN	55362
Richard J Helmowski	620 Conklin Avenue	Apartment 4	Grand Forks	ND	58203
Richard M Mattson	1407 Billy Jon Road		Cloquet	MN	55720

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Richard M McAllister	1209 48th Avenue SW		Backus	MN	56435
Richard Martell	23463 280th Avenue SE		Oklee	MN	56742
Richard McGregor	249 E Holmaas Avenue		Newfolden	MN	56738
Richard P Mortenson	PO Box 67		Kennedy	MN	56733
Richard R Bandle and Kelly L Bandle	1120 Alcohol Road		Wrenshall	MN	55797
Richard R Carr and Susan Johnson	6661 Pacific Avenue		Wright	MN	55798
Richard Rick Fyle	12305 Balsam Road		Floodwood	MN	55736
Richard Schlichting and Marlene	1939 160th Street NW		Rice	MN	56367
Richard T Nadeau	3355 Eagle Lake Drive SW		Backus	MN	56435
Richard W Lukanen	2208 Parkview Road NE		Alexandria	MN	56308
Richard W Schell	1166 Sjogren Road		Wright	MN	55798
Richard Yaggie and Barbara Yaggie	1708 4th Street N		Wahpeton	ND	58075
Richard Yonke	14640 Center Avenue N		Thief River Falls	MN	56701
Rick L Lang and Barbara A Lang	12443 Estes Avenue NW		Clearwater	MN	55320
Rick Vorderbruggen and Nancy Vorderbruggen	116 Lomond Drive NW		Bagley	MN	56621
Rickie Alvin Paulson and Susan Paulson	1153 Cross Country Lane SW		Alexandria	MN	56308
Ricky A Stockman and Stacy M Stockman	10636 Cameo Circle		Glencoe	MN	55336
Ricky Dewayne Wait	197 Lumly Drive		Grand Junction	CO	81503
Ricky J Reese and Sharon L Reese	12514 150th Avenue SE		Saint Hilaire	MN	56754
Ricky Moore and Dianne Moore	46945 159th Avenue		Clearbrook	MN	56634
Rita G Hammond and Willard W Hammond	26627 County 89		Park Rapids	MN	56470
R D Offutt Company	700 7th Street S	PO Box 7160	Fargo	ND	58103
Rivard Revocable Living Trust	4506 65th Street S		Fargo	ND	58104
River Bend Farms Inc	10617 130th Avenue NE		Thief River Falls	MN	56701
Road Offutt Company	PO Box 7160		Fargo	ND	58109
Robby Farbo and Jill Farbo	14749 Center Street E		Saint Hilaire	MN	56754
Robert A and Margaret R Abraham and Lake Itasca #3	34510 US 71		Laporte	MN	56461
Robert A Gartner and Colleen Gartner	15247 119th Avenue		Park Rapids	MN	56470
Robert A Lund and Margaret Lund	1075 Reponen Road		Cloquet	MN	55720
Robert and Frances Fetrow Trust	7061 Hickory Drive NE		Fridley	MN	55432
Robert and Sharon Tervola Trust	12823 113th Place		Live Oak	FL	32060
Robert Bishop and Shawnee Bishop	339 Crystal Road		Fairbanks	AK	99712
Robert Brandenburg and Sara A Brandenburg	16130 Arbor Road		Menahga	MN	56464

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Robert C Emerson and Maren H Emerson	1802 W Chub Lake Road		Carlton	MN	55718
Ramona L Laveau	560 County Road 4		Wrenshall	MN	55797
Robert D Ayers	16656 120th Avenue NW		Thief River Falls	MN	56701
Robert D Bester	4467 8th Street SW		Backus	MN	56435
Robert D Murray	1034 W Bank Road		Glenwood Springs	CO	81601
Robert Dockendorf	2928 Carlson Road		Carlton	MN	55718
Robert Dukek and Shirley Dukek	39932 Lone Lake Road		Bagley	MN	56621
Robert E Bermel	16801 102nd Street SE		Becker	MN	55308
Robert E Bermel and Tamara D Bermel	14461 98th Street		Becker	MN	55308
Robert E Brandenburg	15908 Arbor Road		Menahga	MN	56464
Robert E Gregory	12000 N 90th Street	Unit 1028	Scottsdale	AZ	85260
Robert E Matarelli and Jodi A Matarelli	1865 Sheils Road		Carlton	MN	55718
Robert E Miller and Phyllis D Miller (Life Estate); Darcy L Nelson	1201 Somerset Drive		Thief River Falls	MN	56701
Robert F and Joyce L Larson	31447 408th Avenue		Roseau	MN	56751
Robert F Lawrence	5155 Highway 33		Saginaw	MN	55779
Robert Fjerstad and Marie Fjerstad	1854 Sheils Road		Carlton	MN	55718
Robert Fox and Laurie Brown	1992 E Chub Lake Road		Carlton	MN	55718
Robert G McPherson and Susan J Ozmun	315 N Lakeside		Bayport	MN	55003
Robert Gartner and Colleen Gartner	15427 119th Avenue		Park Rapids	MN	56470
Robert H Johnson	16312 470th Street		Clearbrook	MN	56634
Robert H Strand and Edward Paradise Strand	6649 Parkwood Road		Edina	MN	55436
Robert Hapka	11819 400th Avenue NW		East Grand Forks	MN	56721
Robert J Bernhardt	5315 County Road 56		Pine River	MN	56474
Robert J Bjorgaard Revocable Trust Agreement	23625 145th Avenue NW		Viking	MN	56760
Robert J Peterson and Sandra R Peterson	59057 Great River Road		Palisade	MN	56469
Robert J Schmidt	2760 Mt Nelson Road		Barnum	MN	55707
Robert J Schmidt	2555 Ziehl Road		Carlton	MN	55718
Robert J Whit	20480 394th Street		Park Rapids	MN	56470
Robert L Krepps and Micheal D Krepps	2335 Edith Lane		Carlton	MN	55718
Robert Lee Beaird	24190 300th Street NW		Argyle	MN	56713
Robert Lewis Jambor and Tracy Ann Lundeen	26600 Half Circle Court	Trailer 110	Wyoming	MN	55092
Robert M and N C Wasson Trust	30710 Aurora Del Mar		Carmel	CA	93923
Robert O'Neill and Pamela O'Neill	31245 220th Street SE		Oklee	MN	56742

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Robert Proulx and Jennifer Proulx	16124 210th Avenue SW		Red Lake Falls	MN	56750
Robert Ray Peterson and B O Peterson	13471 Hosta Drive		Baxter	MN	56425
Robert Riopelle and Karen Riopelle	13265 Wildwood Road NE		Bemidji	MN	56601
Robert Roy Wait	2410 Sahlman Avenue		Cloquet	MN	55720
Robert S Hellerud and Lisa A Hellerud	4806 Hamilton Road		Minnetonka	MN	55345
Robert Strassburg	9807 Niemi Road		Brookston	MN	55711
Robert T Phenow and Paul A Phenow	109 3rd Avenue NE		Osseo	MN	55369
Robert Thomas	600 Bluffs Road NW		Alexandria	MN	56308
Robert W Elseth	32738 240th Street NW		Warren	MN	56762
Robert W Kent and Robert W Kent Revocable Trust	741 Seboe Road		Wrenshall	MN	55797
Robert W Robson and Kristine L Robson	14507 110th Street SE		Saint Hilaire	MN	56754
Roberta Bartczak	1807 W Chub Lake Road		Carlton	MN	55718
Roderic Hennen and Shawna D Hennen	217 N Ash Avenue		Hallock	MN	56728
Rodger Johnson	1237 S 36th Street		Grand Forks	ND	58201
Rodney D Porter	3067 County Road 4		Carlton	MN	55718
Rodney L Day	PO Box 31		Menahga	MN	56464
Rodney Porter	2610 County Road 61		Carlton	MN	55718
Rodney Soukkala	1822 W Chub Lake Road		Carlton	MN	55718
Rodney W Gerbracht and Mary A Gerbracht	20405 340th Street		Bagley	MN	56621
Roering Troy and Eric Eickhoff and Eric Stocker	1210 Stonebrook Drive		Albany	MN	56307
Roger A Arro	5577 Highway 73		Floodwood	MN	55736
Roger Allen Kadrlik and Denise Marie Kadrlik	6871 Hillcrest Street SE		Prior Lake	MN	55372
Roger Champagne	21595 Minnetonka Boulevard		Greenwood	MN	55331
Roger D Johnsrud and Denise R Johnsrud	16409 110th Street SE		Saint Hilaire	MN	56754
Roger D Salo Revocable Trust	36723 Indian Point Road		Cohasset	MN	55721
Roger D Walter and Janel F Walter	13445 Hwy 92 SE		Plummer	MN	56748
Roger E Lawson	120 5th Street N		Brownton	MN	55312
Roger Hanson and Sue Hanson	3701 77th Avenue N		Brooklyn Park	MN	55443
Roger Hill and James Pavlek	12739 Laurie Road		Floodwood	MN	55736
Roger Irish	518 32nd Avenue SW		Backus	MN	56435
Roger Kvande and Pamela Kvande	2215 E 97th Drive		Thornton	CO	80229
Roger L and Gina L Aukes	11525 150th Street		Park Rapids	MN	56470

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Roger L Crane and Gail M Crane	PO Box 32		Gonvick	MN	56644
Roger L Massie and Darlene T Massie	3859 County Road 4		Mahtowa	MN	55707
Roger Lawson Trust	120 N 5th Street		Brownton	MN	55312
Roger Malchow and Malchow E	24355 Highway 65 NE	Trailer 32	East Bethel	MN	55005
Roger O Peterson and Anette E Peterson	3625 148th Street W		Rosemount	MN	55068
Roger S Peterson and Janice M Peterson	15211 590th Avenue		Litchfield	MN	55355
Roger Schmit	338 285th Street SE		Gully	MN	56646
Roger Skjerven and Charlotte Skjerven	PO Box 65		Plummer	MN	56748
Roger V Abramowski	3917 Brandon Road		Brookston	MN	55711
Rogue Bear LLC	PO Box 698		Watertown	MN	55388
Roland C Olson	1551 N Finn Road		Tamarack	MN	55787
Rolfson Revocable Trust	19664 340th Street		Bagley	MN	56621
Rollyn C Rediske and Donna M Rediske	9708 6th Street NE		Blaine	MN	55434
Romayne C Howard	6166 N Morningside Lane		Stone Lake	WI	54876
Ron M Siltman and Pam S Siltman	4471 County Road 56		Pine River	MN	56474
Ronald A and Ellen K Hegge Trust	2004 Northrop Avenue		Thief River Falls	MN	56701
Ronald A Saar and Kathleen M Saar	1609 37th Street S		Saint Cloud	MN	56301
Ronald and Verna Griffith	11196 160th Street		Park Rapids	MN	56470
Ronald B Ferch	4577 Johnson Road		Brookston	MN	55711
Ronald D and Meoldy R Monson (Trustees) Revocable Living Trust	11127 510th Street		Gonvick	MN	56644
Ronald D Simpson and Lorraine G	3639 Getchell Road		Hermantown	MN	55811
Ronald E Maus	582 State 84 SW		Pine River	MN	56474
Ronald E Oines and Virginia K Oines	11241 260th Street		Park Rapids	MN	56470
Ronald E Potter and Bonnie Lou Potter	1809 Meadow Creek Drive		Crowley	TX	76036
Ronald Edwards	4107 County Road 56		Pine River	MN	56474
Ronald F Koetter and Christine R Weir-Koetter	5200 Sherman Drive NE		Bemidji	MN	56601
Ronald Griffith and Verna Griffith	11196 160th Street		Park Rapids	MN	56470
Ronald J Kalla and Cheryl Kalla	35297 Tower Road		Albany	MN	56307
Ronald L Burns	263 76th Avenue SW		Backus	MN	56435
Ronald L Carnell Sr	13433 County 13		Park Rapids	MN	56470
Ronald Lien and Dorothy Lien	2715 121st Street		Westbrook	MN	56183
Ronald M Magnusson and Julie	PO Box 291		Argyle	MN	56713
Ronald Rondorf and Jodel Rondorf	11701 120th Avenue NE		Thief River Falls	MN	56701
Ronnie E Lohse	3270 197th Avenue NW		Oak Grove	MN	55303

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Ronnie Zutz	23547 State Highway 1 NW		Warren	MN	56762
Rosalind E Johnson Trust	9184 Vincent Circle S		Bloomington	MN	55431
Rosalind E Johnson Trust	47462 155th Avenue		Clearbrook	MN	56634
Rose Alajoki	13196 109th Avenue		Park Rapids	MN	56470
Rose M Bale (Trustee of the) Rose M Bale Revocable Trust Agreement	PO Box 851		Eyota	MN	55934
Rosemarie A Blaede and Stephen W Blaede	1896 W Chub Lake Road		Carlton	MN	55718
Rowland Beatrice and Leroy and Lynn (Rowland) Lee	1462 180th Street		Perley	MN	56574
Roxanne A Hoskins	2909 Wicken Lane NW		Alexandria	MN	56308
Roy Holmes and Kim Holmes	PO Box 54		Plummer	MN	56748
Roy Marlow	PO Box 15026		Duluth	MN	55815
Roylee A Beck	1344 Beck Road		Wright	MN	55798
Rudolph Holzinger and Shirley L Holzinger	10665 W River Road		Brooklyn Park	MN	55443
Rudy Brandt Revocable Living Trust Under Trust	235 27th Avenue S		Grand Forks	ND	58201
Rueben Hansen	161 Lexington Pkwy N		Saint Paul	MN	55104
Russell A Isola	4325 Martin Road		Duluth	MN	55803
Raymond Norman and Norman Char	3771 Highway 73		Hibbing	MN	55746
Russell C Ullery	10648 320th Street		Park Rapids	MN	56470
Russell D Gran	1733 Baker Road		Barnum	MN	55707
Russell D James	7112 Shad Avenue		Hugo	MN	55038
Russell E Vandell	8069 Braddock Avenue NE		Monticello	MN	55362
Russell G Anderson	49350 County Road 7		Gonvick	MN	56644
Russell Kapping and Huls Kapping Devin	24204 270th Street NW		Warren	MN	56762
Russell O Heittola and Myron T Heittola	990 State 210 SW		Brainerd	MN	56401
Russell R Stewart	23 W Central Entrance	#357	Duluth	MN	55811
Ruth A Magnusson	1011 N 7th Street		Warren	MN	56762
Ruth A Magnusson Estate	30654 300th Street NW		Argyle	MN	56713
Ryan G Haugen	12958 108th Street SE		Saint Hilaire	MN	56754
Ryan J Klemmetsen	33138 201st Avenue		Bagley	MN	56621
Ryan Klug	711 Wild Trail NE		Pine River	MN	56474
Ryan Lanning	PO Box 271		Floodwood	MN	55736
Rylie Helweg and Stephen Helweg	27604 County 2		Shevlin	MN	56676
Robert C Zobel	5271 Highway 73	#254	Floodwood	MN	55736
Sandra Bordenkircher	PO Box 1980		Fargo	ND	58107

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POC	Address1	Address2	City	State	Zip code (5 digits only)
Sandra C Bouvette	127 5th Street NE		Hallock	MN	56728
Sandra J Netland	25935 County 2		Shevlin	MN	56676
Sandra K Livgard	2630 Aho Road		Mahtowa	MN	55707
Sandra Lindgren and Steve Lindgren	2148 150th Street		Kennedy	MN	56733
Sandra Schweitzer and Joseph F Schweitzer	11336 260th Street		Park Rapids	MN	56470
Sarah E Strassburg	11750 506th Street		Gonvick	MN	56644
Sarah Ellen Waisanen	222 Minnesota Avenue E		Minnesota Lake	MN	56068
Schantz-Hansen Revocable Trust	2140 Gillogly Road		Carlton	MN	55718
School Distrct 162 (Bagley, Minnesota)	202 Bagley Avenue NW		Bagley	MN	56621
School District 627	PO Box 100		Oklee	MN	56742
Scott A Thoreson and Virginia M Thoreson	31607 136th Street		Princeton	MN	55371
Scott Berger and Rhonda Jo Bouvette Berger	1229 Terrace Court		Alexandria	MN	56308
Scott C Miles	5013 Wellington Avenue		Mounds View	MN	55112
Scott Edward Carstens	5213 Lake Washburn Road		Outing	MN	56662
Scott G Olson and Margaret E Olson	16395 110th Avenue NW		Thief River Falls	MN	56701
Scott Horien	27673 230th Avenue NW		Viking	MN	56760
Scott J Bennett and Kathryn S Bennett	12635 249th Avenue NW		Zimmerman	MN	55398
Scott J Stimler and Carol M Stimler	6907 34th Avenue N		Crystal	MN	55427
Scott Johnston	11010 Highway 2		Floodwood	MN	55736
Scott Klein	1946 200th Street		Hallock	MN	56728
Scott Kraulik	39548 450th Street NW		Stephen	MN	56757
Scott L Elmore	190 68th Avenue SW		Backus	MN	56435
Scott L Solum	PO Box F		Argyle	MN	56713
Scott Leffler and Theresa Leffler	705 Park Street		Anoka	MN	55303
Scott M Reed and Anne M Reed	13609 Atwood Trail		Rosemount	MN	55068
Scott Mathwig and Rick Mathwig	101 Albion Avenue	Apartment 301	Fairmont	MN	56031
Scott O Seeger	1708 5th Street S		Moorhead	MN	56560
Scott P Peters and Charmaine R Peters	16935 230th Street NW		Viking	MN	56760
Scott R Anderson	25716 170th Avenue NW		Viking	MN	56760
Scott R Seglem and Sherry L Seglem	630 Cemetery Road		Wrenshall	MN	55797
Selma Olson Wendling	5775 Little Marais Road		Finland	MN	55603
Serge Jarosz and Anthony M Jarosz	5221 Regent Avenue N		Crystal	MN	55429
Seth L Molden	435 1st Avenue SW		Clearbrook	MN	56634
Seth O Grover and April L Grover	1884 Douglas Road		Carlton	MN	55718

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POC	Address1	Address2	City	State	Zip code (5 digits only)
Shari Yaggie	18875 State Street		Corona	CA	92881
Sharilyn Seter	17976 Dayspring Drive		Park Rapids	MN	56470
Sharon A Class	2595 Strandberg Road		Barnum	MN	55707
Sharon A Johnson	9065 Division Street W		Menahga	MN	56464
Sharon Dyrdahl-O'Bryan	41846 211th Avenue		Bagley	MN	56621
Sharon Linn	4450 8th Street SW		Backus	MN	56435
Sharon Lou Cook	25598 County Road 37		Badger	MN	56714
Shawn A Durm	561 Snell Avenue		Pine River	MN	56474
Shawn D Hanson	9447 35th Street SE		Jamestown	ND	58401
Shawn M Bernhardt	1943 Misty Meadow Lane		Carlton	MN	55718
Shawn P Peterson and Josephine O Peterson	51207 109th Avenue		Gonvick	MN	56644
Shawna D Hennen and Chad A Lindgren	217 N Ash Avenue		Hallock	MN	56728
Shawnee Bishop	339 Crystal Road		Fairbanks	AK	99712
Sherri L Gottsman-Schmidt	13416 109th Avenue		Park Rapids	MN	56470
Sherri Mix and Kenneth Mix	10655 109th Avenue		Menahga	MN	56464
Sherry L Halberg and Steven J Halberg	27072 County Road 2		Shevlin	MN	56676
Shirley A Evenstad and Earl T Evenstad	7335 18th Avenue S		Minneapolis	MN	55423
Shirley J Hunkins	734 7th Street S		Breckenridge	MN	56520
Shirley J Johnson	11513 Spiik Road		Floodwood	MN	55736
Shirley J Nyquist and Diane G Nyquist	510 W Webbeking Drive		Carlton	MN	55718
Shirley Solheim and Warren Solheim	48499 State 92		Clearbrook	MN	56634
Silver Creek Cemetery	213 Main Avenue N	Department	Bagley	MN	56621
Silver Creek Cemetery	PO Box 69		Clearbrook	MN	56634
Sonlife Community Church	PO Box 153		Wrenshall	MN	55797
Soo Line Railroad	120 S 6th Street	Suite 900	Minneapolis	MN	55402
St Louis County Public Works	300 Missabe Bldg		Duluth	MN	55802
St Louis County, Minnesota (Land Department)	320 W 2nd Street		Duluth	MN	55802
St Louis County, Minnesota (Property Management)	100 N 5th Avenue W	Room 515	Duluth	MN	55802
St Louis County, Minnesota (Public Works Department)	4787 Midway Road		Duluth	MN	55811
St Regis LLC	PO Box 161361		Duluth	MN	55816
Stacey Beck and Kevin Beck	1798 W Chub Lake Road		Carlton	MN	55718
Stacie L Parks	24178 320th Street		Bagley	MN	56621

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POC	Address1	Address2	City	State	Zip code (5 digits only)
Stacy Halvorson and Terry S Halvorson	40592 290th Street SE		Gully	MN	56646
Stacy Smith	1407 Verkovich Road		Wright	MN	55798
Russell Albert Pollak and Kari Joy C Pollak	3048 Painted Lane		Carlton	MN	55718
Stanley Hultgren and Darlene Hultgren	2655 County Road 4		Carlton	MN	55718
Stanley J Tvedt and Francella Tvedt	19462 US Highway 59 SE		Plummer	MN	56748
Stanley R Erickson and Mariesther	59531 240th Avenue		Jacobson	MN	55752
Samuel J Asperheim and Phyllis R	4387 County Road 4		Mahtowa	MN	55707
State of Minnesota	6258 State 87 SW		Backus	MN	56435
State of Minnesota	4611 Krueger Road		Duluth	MN	55811
State of Minnesota	59421 State Highway 65		Jacobson	MN	55752
State of Minnesota	5861 Lake Washburn Road		Outing	MN	56662
State of Minnesota	1828 State 6 NE		Remer	MN	56672
State of Minnesota	100 Rev Martin Luther King Jr		Saint Paul	MN	55155
State of Minnesota	577 Cemetery Road		Wrenshall	MN	55797
State of Minnesota Admin Bldg and Fiscal Services Dept Real Estate and Construction Services	50 Sherburne Avenue	Suite 309	Saint Paul	MN	55155
State of Minnesota and Commissioner of Natural Resources Bureau of Land	PO Box 30		Saint Paul	MN	55146
State of Minnesota and Division of Lands and Minerals	Tax Specialist	#45	Saint Paul	MN	55155
State of Minnesota Department of Natural Resources	PO Box 52		Saint Paul	MN	55155
State of Minnesota Department of Transportation MS631	395 John Ireland Boulevard		Saint Paul	MN	55155
State Forest, Wadena County, Minnesota	415 Jefferson S		Wadena	MN	56482
State of Minnesota, Department of Natural Resources (MNDNR)	2115 Birchmount Beach Road NE		Bemidji	MN	56601
State of Minnesota, Department of Natural Resources (MNDNR)	1201 E Highway 2		Grand Rapids	MN	55744
State of Minnesota DNR and Bureau of Real Estate Management	500 Lafayette Road	#30	Street Paul	MN	55155
State of Minnesota, Department of Transportation (MNDOT)	3920 Highway 2 W		Bemidji	MN	56601

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POC	Address1	Address2	City	State	Zip code (5 digits only)
State of Minnesota, Department of Transportation (MNDOT)	1123 Mesaba Avenue		Duluth	MN	55811
State of Minnesota, In Trust for Taxing Districts	PO Box 25		Backus	MN	56435
State of MN C278 L35	11456 Highway 2		Floodwood	MN	55736
State Pit	1923 County Road 3		Carlton	MN	55718
State Tax Land	213 Main Avenue N	Department	Bagley	MN	56621
Stephanie Hanson	1952 175th Avenue		Hallock	MN	56728
Stephanie Klamm and Theodore Klamm	19742 240th Avenue SE		Plummer	MN	56748
Stephanie L Anderson	41066 191st Avenue		Clearbrook	MN	56634
Stephen A Gast	24709 320th Street NW		Argyle	MN	56713
Stephen C Foster	1414 S 195th Street		Omaha	NE	68130
Stephen L Snyder	4893 Anderson Road		Hermantown	MN	55811
Stephen Morenz and Susan E Morenz	10735 Orange Park Boulevard		Orange	CA	92869
Stephen S Rosen	3319 Ditchbank Road		Cloquet	MN	55720
Stephen V Kuhl	PO Box 515		Mimbres	NM	88049
Stephen W Blaede and Rosemarie A Blaede	1896 W Chub Lake Road		Carlton	MN	55718
Steve C Haugen	PO Box 453		Bagley	MN	56621
Steve D Cairns and Penni S Cairns	17098 Lilly Lane		Bagley	MN	56621
Steve E McMahon and Sandi J McMahon	2040 E Mullholland Drive		Fort Mohave	AZ	86426
Steve Lent and Kristi Lent	1156 Alcohol Road		Wrenshall	MN	55797
Steve Lindgren	2148 150th Street		Kennedy	MN	56733
Steven A and Lanette M Brown	9199 Old Highway Road S		Saint Cloud	MN	56301
Steven A Hook	1308 Duluth Avenue N		Thief River Falls	MN	56701
Steven B Jacksie	3117 Magney Drive		Cloquet	MN	55720
Steven D Bailey and Beth K Bailey	4934 Highway 73		Floodwood	MN	55736
Steven F Kracht and Mary T Kracht	1884 Cedar Drive		New Brighton	MN	55112
Steven F Smith and Susan E Smith	20758 County 2		Shevlin	MN	56676
Steven Hagen and Joni Hagen	47394 209th Avenue		Clearbrook	MN	56634
Steven J Fall	2245 Thell Road		Wrenshall	MN	55797
Steven J Gregory	10634 Highway 2		Floodwood	MN	55736
Steven J Johnson and Mary C Johnson	5700 Russell Avenue S		Minneapolis	MN	55410
Steven J Kuriatnyk	10950 County 32		Park Rapids	MN	56470
Steven J Pfeiffer and Donna J Pfeiffer	26932 579th Avenue		Warroad	MN	56763

POC	Address1	Address2	City	State	Zip code (5 digits only)
Steven John Schafter and Sharon L Schafter	PO Box 62		Carlton	MN	55718
Steven Johnson	5700 Russell Avenue S		Minneapolis	MN	55410
Steven L and Roxanne A Hoskins	2909 Wicken Lane NW		Alexandria	MN	56308
Steven N Eskeli	22363 165th Street SE		Plummer	MN	56748
Steven Olson and Sherri Olson	17542 143rd Avenue NW		Thief River Falls	MN	56701
Steven R Rautio	3882 County Road 4		Mahtowa	MN	55707
Steven R Sorvig and Roxane R Sorvig	10369 132nd Avenue SE		Saint Hilaire	MN	56754
State of Minnesota, Department of Natural Resources (MNDNR)	500 Lafayette Road		Saint Paul	MN	55155
Steven Sebenaler	29048 220th Street SE		Oklee	MN	56742
Steven Sterling and Denise Sterling	12905 Melody Lane		Minnetonka	MN	55305
Steven W Hall and Bonnie Jo Schminski Hall	10722 Highway 2		Floodwood	MN	55736
Steven W Sipper and Virginia D Sipper	30209 220th Street SE		Oklee	MN	56742
Steven W Sogla	28484 315th Avenue SE		Trail	MN	56684
Stokke Farms LLC	13047 Hadley Road		Gregory	MI	48137
Steven R Weston and Lynn V Weston	58509 270th Avenue		Palisade	MN	56469
Sue Jensen Saunder Jacqulyn and Robert Jensen Chris	PO Box 576		Wyoming	MN	55092
Sundrud Family Hunting Land Trust	31384 350th Avenue SE		Fosston	MN	56542
Susan J Mahrer and Tracy J Mahrer	2556 Heikkila Road		Cromwell	MN	55726
Susan K Johnson-Paulson and Rickie Alvin Paulson	1153 Cross Country Lane SW		Alexandria	MN	56308
Susan R Haugen	PO Box 453		Bagley	MN	56621
Susanne Smythe	10238 County 14		Park Rapids	MN	56470
Svea Township, Kittson County, Minnesota	1302 230th Avenue		Kennedy	MN	56733
Swamp Creek Partnership	3104 Mayhew Lake Road NE		Sauk Rapids	MN	56379
Sylvia A Scott Revocable Trust Agreement	100 N Minnesota Street		New Ulm	MN	56073
Tamara Jo Demaria-Taylor and Robert D Taylor	2431 NE 2nd Street		Blue Springs	MO	64014
Tammy L Garding and Any S Theis	16275 County Road 49		Cold Spring	MN	56320
Tammy Lee Wait	1825 Graysolon Road		Duluth	MN	55812
Tammy Lynn Popoe	37360 175th Street		Frazee	MN	56544
Tammy Nelson Sundby	PO Box 207		Argyle	MN	56713
Tani M Hemmila and David Hemmila	3925 Maple Street		Kettle River	MN	55757

POC	Address1	Address2	City	State	Zip code (5 digits only)
Tanner and Amanda Samuelson	1979 175th Avenue		Hallock	MN	56728
Tanya M Harbott and Travis D Harbott	10743 140th Street NE		Thief River Falls	MN	56701
Tara Long and Terry Long	349 Western Avenue N		Park Rapids	MN	56470
Tax Forfeited Crow Wing County Auditor	326 Laurel Street		Brainerd	MN	56401
Taylor Investment Corporation	43 Main Street SE	Suite 506	Minneapolis	MN	55414
Terence D Blacklance and Tammie A Blacklance	11750 State Highway 32 NE		Thief River Falls	MN	56701
Terence M Demenge and Penny T Demenge	2031 Highway 33 S		Cloquet	MN	55720
Teresa Catudal	46144 179th Avenue		Clearbrook	MN	56634
Teresa Hakamaki and Timothy M	5940 Highway 210		Wright	MN	55798
Terrance D Linnan and Marie J Linnan	PO Box 312		Thermopolis	WY	82443
Terrance G Johnson and Colleen M Johnson	26687 Garden Lane		Wyoming	MN	55092
Stuart P Peterson and Margaret J Peterson	11608 US Highway 59 SE		Thief River Falls	MN	56701
Terrance L Picha and Katherine A Picha	14906 Williams Lane		Minnetonka	MN	55345
Terrance L Radtke and Mary A Radtke	1868 W Chub Lake Road		Carlton	MN	55718
Terrance S Novak	10732 County 14		Park Rapids	MN	56470
Terri Lynn Wittwer	11050 Bush Road		Floodwood	MN	55736
Terri Smith	611 77th Avenue NW		Moorhead	MN	56560
Terry A Dalbec and Brenda K Dalbec	1002 Northwood Drive		Delano	MN	55328
Terry and Sharilyn Seter	17976 Dayspring Drive		Park Rapids	MN	56470
Terry Hapka and Tim Hapka	1917 33rd Street S		Moorhead	MN	56560
Terry J Kipk and Beverly A Kipk	212 5th Street S		Sauk Rapids	MN	56379
Terry Jesness and Barbara K Jesness	PO Box 268		Bagley	MN	56621
Terry L Maaning and Judith L Maaning	16320 364th Street		Menahga	MN	56464
Terry Lodoen and Williams-Lodoen Farm #19825	PO Box 542016		Omaha	NE	68154
Terry Nowacki	32908 310th Avenue NW		Argyle	MN	56713
Terry R Kalow and Paul D Kalow	21385 Dalton Avenue		Faribault	MN	55021
Terry Ronning and Rebecca Ronning	24498 Daniel Lake Lane		Bagley	MN	56621
Terry S Finzen and Claudia J Finzen	4510 Chickadee Lane		Wayzata	MN	55391
Terry S Waggoner and Roxane L Waggoner	33403 243rd Avenue		Bagley	MN	56621
Tervola Family Revocable Trust - Robert S and Sharon L	12823 113th Place		Live Oak	FL	32060

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TFL-County	10076 County 32		Park Rapids	MN	56470
TFL-County	10517 260th Street		Park Rapids	MN	56470
TFL-County	40881 105th Avenue		Park Rapids	MN	56470
The Becker Family Farm Trust	1809 13th Avenue S		Fargo	ND	58103
The Kathleen M Saar Trust	1609 37th Street S		Saint Cloud	MN	56301
The Kenner Family Fund, LLC	PO Box 193		Stephen	MN	56757
The Sell Lake Norsk Evangelisk Luthersk Menighed	213 Main Avenue N	Department 205	Bagley	MN	56621
The Shack Hunting	11210 County 77 SW		Nisswa	MN	56468
Thea M Norman	3842 Lauhala Road		Hibbing	MN	55746
Theodore S Klamm and Stephanie E	20654 240th Avenue SE		Plummer	MN	56748
Theodore W and Pat Kroulik	900 Lincoln Avenue	Apartment 104	Stephen	MN	56757
Terrance L Levinski and Eleanory Y Levinski	344 County Road 4		Wrenshall	MN	55797
Theresa L Suhonen	796 Center Road		Wright	MN	55798
Thomas A Anderson	16125 470th Street		Clearbrook	MN	56634
Thomas A Class and Sharon Class	2595 Strandberg Road		Barnum	MN	55707
Thomas A DeLovely	3053 Jarvinen Road		Cloquet	MN	55720
Thomas A Duray and Jacelyn Duray	2540 Edgerton Street		Saint Paul	MN	55117
Thomas Braaten and Janette Jr Braaten	PO Box 42		Plummer	MN	56748
Thomas C Healy	312 Spring Street	Apartment 312	Saint Paul	MN	55102
Thomas Corder	8821 Ochoa Avenue NE		Elk River	MN	55330
Thomas Duane Finn	4918 Paupores Road		Brookston	MN	55711
Thomas E Brosseau	16969 110th Avenue NE		Thief River Falls	MN	56701
Theresa Hapka	30130 360th Street NW		Argyle	MN	56713
Thomas E Dore	527 E High Street		Hennepin	IL	61327
Thomas F Solomon	3201 S Avenue		Barnum	MN	55707
Thomas G Gray	147 Maine Street		Saint Martin	MN	56376
Thomas G Gray and Peggy Gray	2865 Lund Road		Kettle River	MN	55757
Thomas J Jr (Trustee) Hammer, Jeffrey R Hammer and Gary W; Stephen P Hammer	7378 43rd Avenue SE		Saint Cloud	MN	56304
Thomas J Kopilchak	20859 County Road 30		Crosby	MN	56441
Thomas J Sloan and Janelle K Sloan	2419 27th Street S		Saint Cloud	MN	56301
Thomas Kolstoe and Diane Kolstoe	27536 180th Street SE		Oklee	MN	56742
Thomas L and Patricia A Litchy	31654 166th Avenue		Avon	MN	56310
Thomas L Parks and Kay Lynn Mueller	806 Hollinger Street		Park Rapids	MN	56470

POC	Address1	Address2	City	State	Zip code (5 digits only)
Thomas M and Diane Gaughan	15291 Big Buck Drive		Menahga	MN	56464
Thomas M Miller and Janet M Schimmele-Miller	1589 W 1000 N		Huntington	IN	46750
Thomas O Thackery	3550 County Road 4		Mahtowa	MN	55707
Thomas P Underdahl and Anna M Underdahl	5121 Grove Street		Edina	MN	55436
Thomas Rongen and Renee Rongen	10719 390th Street SE		Fertile	MN	56540
Thomas S Anderson Sr and Laurel L Anderson	1945 County Road 3		Carlton	MN	55718
Thomas Sczepanski Trust	3209 Galleria	Unit 1001	Edina	MN	55435
Thomas Tulibaski and Carol Tulibaski	34481 290th Street NW		Warren	MN	56762
Thomas Vorderbruggen and Wendy Vorderbruggen	PO Box 84		Bagley	MN	56621
Thompson Land Company LLP	2904 Winter Street		Superior	WI	54880
Thorvold Andresen	1303 Maple Wood Court		De Witt	IA	52742
Tim A and Lupe Moorhouse	13381 Marty Lane		Garden Grove	CA	92843
Tim M Matasovsky and Lori C Matasovsky	PO Box 191		Clearbrook	MN	56634
Tim Stevens	2283 Amanisoti Drive		Carlton	MN	55718
Timothy A Yliniemi and Michelle M Yliniemi	28863 US 71		Park Rapids	MN	56470
Timothy D and Jeri S Johanning	10675 County 106		Park Rapids	MN	56470
Timothy D Jensen and Debbie G Jensen	518 32nd Avenue SW		Backus	MN	56435
Timothy Duncanson	6363 Delaney Avenue		Inver Grove Heights	MN	55076
Timothy H Solomon and Judy M Solomon	3170 County Road 4		Carlton	MN	55718
Timothy Halling and Krista Halling	16129 127th Street SE		Saint Hilaire	MN	56754
Timothy Hammerlund and Jo Anne Hammerlund	5010 Highway 73		Floodwood	MN	55736
Timothy J Bloomquist	1722 130th Street		Drayton	ND	58225
Timothy J DeLovely	988 Cary Road		Cloquet	MN	55720
Timothy L Hart	11086 Highway 2		Floodwood	MN	55736
Timothy M Huseby	27669 Tee Lake Road		Vergas	MN	56587
Timothy M Welsh and Julie A Welsh Revocable Trust	2304 Queens Court		Bettendorf	IA	52722
Timothy P Miller and Jane R Miller (Trustees of) Revocable Living Trust	20832 322nd Avenue		Rochert	MN	56578
Timothy Pearson	17007 County Road 18		Park Rapids	MN	56470
Timothy Pettit	7665 Partridge Point Drive NE		Longville	MN	56655

POC	Address1	Address2	City	State	Zip code (5 digits only)
Timothy R Gunderson and Kelly Gunderson	135 Ulmer Drive		Lino Lakes	MN	55014
Timothy R Walsh and Sherri L Walsh	958 Woodview Circle		Carver	MN	55315
Timothy S Lewis	PO Box 243		Newfolden	MN	56738
Timothy Teigland	26576 250th Street		Shevlin	MN	56676
Timothy W Rock and Sandra K Rock	5187 1st Avenue Bear Island		Duluth	MN	55803
Thomas E Church and Joanne L Young	13636 Krestwood Drive		Burnsville	MN	55337
To He and Rosalyn Yang He	PO Box 943		Park Rapids	MN	56470
Tobey M Vanguilder	2270 County Road 1		Wrenshall	MN	55797
Todd A Sonnek and Kimberly J Sonnek	PO Box 24		Shevlin	MN	56676
Todd A Vohnoutka and Caroline M Vohnoutka	360 S Sutton Lake Boulevard		Jordan	MN	55352
Todd and Karen Strom	1642 200th Avenue		Kennedy	MN	56733
Todd Bjorkman	28533 Lakeside Trail		Lindstrom	MN	55045
Todd D Rudquis and Rachel N Rudquis	27373 Hubbard Line Road		Menahga	MN	56464
Todd Henrickson and Shirley Henrickson	PO Box 138		Stephen	MN	56757
Todd J Ament	16575 1st Street		Riverton	MN	56455
Todd J Payne and Kelly J Payne	35726 Dinner Lake Loop		Park Rapids	MN	56470
Todd M Hanson and Andrea R McQuade	2613 Northside Road		Calder	ID	83808
Todd M Johnson and Tammy L Johnson	10042 140th Avenue NE		Saint Hilaire	MN	56754
Todd Nelson	404 Lomond Loop		Bagley	MN	56621
Todd V Sanquist and Melissa L Sanquist	10253 160th Street		Park Rapids	MN	56470
Todd W Pensak	8721 Kantonen Road		Cloquet	MN	55720
Tom C Sjoberg	2370 Maere Road		Wrenshall	MN	55797
Tom Derby	PO Box 221		Bagley	MN	56621
Toni L Schmidt	10273 129th Avenue		Menahga	MN	56464
Tony A Angell	2895 Strand Road		Cloquet	MN	55720
Tony D Nordlund	11079 Autumn Drive NW		Bemidji	MN	56601
Tony Marciniak	10014 Elm Avenue N		Brooklyn Park	MN	55443
Town of Floodwood	PO Box 371		Floodwood	MN	55736
Town of Prairie Lake	12826 W Balsam Road		Wright	MN	55798
Tracey Fanfulik	10967 160th Street NW		Thief River Falls	MN	56701
Tracy A Hoglo and Cindy A Hoglo	18456 144th Avenue NW		Thief River Falls	MN	56701
Tracy Baresh	1142 Marshall Avenue		Saint Paul	MN	55104
Tracy Becker	13501 146th Street		Park Rapids	MN	56470
Tracy L Waggoner and Diane R Waggoner	1000 3rd Street SE		Bemidji	MN	56601
Travis D Harbott and Tanya M Harbott	10743 140th Street NE		Thief River Falls	MN	56701

POC	Address1	Address2	City	State	Zip code (5 digits only)
Travis D Loree and Crystal L Loree	3195 County Road 4		Carlton	MN	55718
Travis G Anderson and Penni J Anderson	PO Box 203		Argyle	MN	56713
Trent J Lorenzen	7009 Kentucky Avenue N		Brooklyn Park	MN	55428
Trenton J Fisher	611 44th Avenue SW		Backus	MN	56435
Trevor A Schwab and Jacqueline A	29507 Lindbergh Lane		Avon	MN	56310
Trevor L Nelson and Kelly R Myers	3022 129th Lane NE		Blaine	MN	55449
Troy D Arndt and Annette M Arndt	13559 478th Avenue		Vernon Center	MN	56090
Troy D Kinnunen	5817 Elm Street N		Moorhead	MN	56560
Troy Ferguson and Nicole Ferguson	105 Birch Avenue W		Plummer	MN	56748
Troy Gregg	1388 Hohensee Road		Cloquet	MN	55720
Thomas R Andresen and Nadyne C	14320 252nd Avenue NW		Zimmerman	MN	55398
Troy M Powers and Kari L Powers	613 Cemetery Road		Wrenshall	MN	55797
Troy P Friedrich and Janelle M Friedrich	18699 144th Avenue NW		Thief River Falls	MN	56701
Troy Paumen and Paumen Seth Wallin	17254 85th Street SE		Becker	MN	55308
Tru Enterprises LLC	38055 Ox Lake Landing		Crosslake	MN	56442
Tyler J Larson and Britta R	3721 County Road 4		Mahtowa	MN	55707
Tyler P Moenkedick and Claire S Moenkedick	32516 US 71		Park Rapids	MN	56470
Tyler Price Irrevocable Trust and Tyler Price	2407 24th Avenue S		Fargo	ND	58103
Tyrone Demenge	3060 County Road 104		Barnum	MN	55707
Underbakke Farms LLC	5380 Union Terrace Lane N		Plymouth	MN	55442
Undivided Interest	3804 County Road 56		Pine River	MN	56474
University of Minnesota	319 15th Avenue SE	Suite 424	Minneapolis	MN	55455
University of Minnesota Regents	100 Church Street SE	Suite 335	Minneapolis	MN	55455
US Bureau Indian Affairs (BIA)	1849 C Street NW		Washington	DC	20240
Valerian B Kuechle and Carolyn H Kuechle	2339 16th Terrace NW		Saint Paul	MN	55112
Valorie Fering	Veann Wright 903 7th Street		Red Lake Falls	MN	56750
Vanessa Appel and Steve Appel	17207 130th Avenue NW		Thief River Falls	MN	56701
Vanity A Jarc	4954 Highway 73		Floodwood	MN	55736
Vaughn W Stelmach	1505 Albany Avenue		Saint Paul	MN	55108
Veann Wright	102 Lorena Avenue NE		Red Lake Falls	MN	56750
Verne C Spengler and Catherine Spengler (Trustee) RTA	15772 190th Street NE		Thief River Falls	MN	56701
Vernon F Shoutz	10480 102nd Street		Waconia	MN	55387

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POC	Address1	Address2	City	State	Zip code (5 digits only)
Vernon J Shields	5861 Lake Washburn Road		Outing	MN	56662
Vernon P Rosenholm	5399 Robinson Road		Floodwood	MN	55736
Vernon Williams and Colleen Murphy Williams	5312 Andrus Lake Road NE		Outing	MN	56662
Veronique C Jokinen	1733 County Road 61		Carlton	MN	55718
Tina M Johnson and Troy W Johnson	5140 County Road 4		Cromwell	MN	55726
Vincent B Boe	4401 Monroe St NE		Columbia Heights	MN	55421
Vincent S Bailey and Kimberly A Bailey	4715 Paupores Road		Brookston	MN	55711
Vivian Bruggeman	11182 State Highway 32 NE		Thief River Falls	MN	56701
Wade Cota and Jamie Cota	914 31st Avenue W		West Fargo	ND	58078
Wade Grinde	407 W Main Street		Spring Grove	MN	55974
Troy Johnson and Patrick M Walsh Trust	5140 County Road 4		Cromwell	MN	55726
Wait Pamela and Mark Roger Wait	339 W 14th Street		Salida	CO	81201
Wall Christopher and Beth Trust and (Trustees of) Chris Wall Living Trust	2950 Northridge Lane NE		Owatonna	MN	55060
Wallace W Cash	1218 12th Avenue SE		East Grand Forks	MN	56721
Walter Novacinski	1405 Jane Road		Cloquet	MN	55720
Walter W Hackensmith and Teri L Hackensmith	1034 Alcohol Road		Wrenshall	MN	55797
Warren A Tvedt and Lisa M Tvedt	20637 170th Avenue SE		Red Lake Falls	MN	56750
Warren J McGinnis and Arlis McGinnis	28565 Junco Drive		Nevis	MN	56467
Warren Lee Peterson and Suzanne Renee Thompson Peterson	1937 Misty Meadow Lane		Carlton	MN	55718
Watkins Family Trust	4633 Cedar Drive		Sierra Vista	AZ	85635
Wayne A Helgeson	PO Box 84		Shevlin	MN	56676
Wayne G Johnson and Sheila K Johnson	10339 150th Avenue SE		Saint Hilaire	MN	56754
Wayne J Kohn and Sheryl A Kohn	1201 86th Avenue N		Brooklyn Park	MN	55444
Wayne Langen and Katheryn Rynning	PO Box 133		Kennedy	MN	56733
Wayne Lee	1462 180th Street		Perley	MN	56574
Wayne Peters and Joann Peters	302 S Main Street		Viking	MN	56760
Wayne Torgerson and Sheryll Torgerson	160 Robert Street NE		Clearbrook	MN	56634
Wendy Lynn Jantz	130 96th Avenue SW		Menahga	MN	56464
Wesley B Oien and Mary Alice Oien	1925 W Chub Lake Road		Carlton	MN	55718
Wesley D Autio and C Kelly Autio	4650 Hingeley Road		Floodwood	MN	55736
Wesley Edelman and Angela Edelman	39203 115th Avenue		Laporte	MN	56461

POC	Address1	Address2	City	State	Zip code (5 digits only)
Wesley G Renneberg Revocable Trust	16340 590th Avenue		Menahga	MN	56464
Westley Mink and Gloria Mink	620 Wild Trail NE		Pine River	MN	56474
Wiater Estates LLC	4514 N Stevens Street		Spokane	WA	99205
Wilferd Welin	31492 280th Avenue NW		Argyle	MN	56713
Willard Ii Nelson	853 Lyndhurst Bay Drive		Cloquet	MN	55720
Willard W and Rita G Hammond Trust	29500 Forest Boulevard N		Stacy	MN	55079
William A Buscko	1606 Lind Road		Cloquet	MN	55720
William A Suominen and Susan Suominen	802 Cary Road		Cloquet	MN	55720
William C Rath	603 22nd Avenue S		Grand Forks	ND	58201
William Carney	6301 Hill Top Drive		Groveland	NY	14462
William D Ferguson	1509 Lake Ralphia Drive		Carlton	MN	55718
William E Dane and M A Russell	901 19th Avenue SE		Minneapolis	MN	55414
William Foss and Faye Foss	201 Red River Avenue N		Cold Spring	MN	56320
William H and Rachel M Mack+2:2779	10470 190th Street		Park Rapids	MN	56470
William H Dawson and Joanne M Dawson	4580 Hingeley Road		Floodwood	MN	55736
William Hess and Carol J Hess	33348 310th Avenue SE		McIntosh	MN	56556
William J Dorry	5242 Highway 73		Floodwood	MN	55736
William J Kennedy and Barbara J Kennedy	2592 Strandberg Road		Barnum	MN	55707
William J Warneke and James Warneke	4043 County Road 4		Mahtowa	MN	55707
William L Johnson Living Trust	785 Clearbrook Lane		Vadnais Heights	MN	55127
William L Korman	1128 Mule Lake Drive NE		Outing	MN	56662
William L Lindberg Irrevocable Trust	1449 220th Avenue		Kennedy	MN	56733
William L Werner and Lorri M Werner	3172 Magney Drive		Cloquet	MN	55720
William N Frisby and Elizabeth J Frisby Decker	11710 Highway 2		Floodwood	MN	55736
William Phillip Witz	2635 County Road 35		Barnum	MN	55707
William R Gehrke	26537 260th Street		Shevlin	MN	56676
William Sczepanski	833 Street Avenue		Stephen	MN	56757
Williams and Aandal Pa	PO Box 159		Warren	MN	56762
Williard Lindholm	5625 County Road 4		Cromwell	MN	55726
Willis A Johnson and Joyce M Johnson	19449 270th Street NW		Viking	MN	56760
Winfield L Johnson and Margaret Torgerson-Johnson	605 Gill Lane		Northfield	MN	55057
Winnemucca Farms Inc	700 S 7th Street		Fargo	ND	58103
Witt Living Trust	729 Street 84 SW		Pine River	MN	56474

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POC	Address1	Address2	City	State	Zip code (5 digits only)
Wm and Mary M Lloyd	1832 E Shore Drive		Maplewood	MN	55109
Wyatt Dickerson and Charlene Dickerson	23380 County 2		Shevlin	MN	56676
Wylie C Jones	2552 Ziehl Road		Carlton	MN	55718
Zachery Waggoner and Alyssa Dee Waggoner	PO Box 63		Bagley	MN	56621