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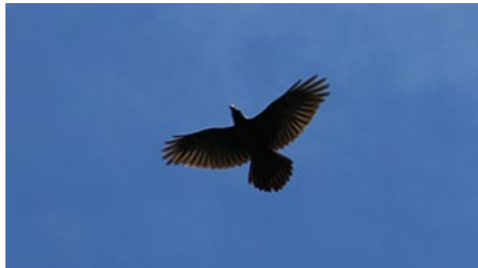
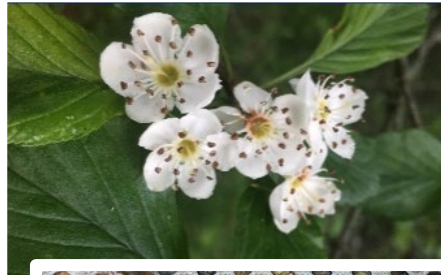
Species at Risk

Project Management

Environmental Impact Assessment

Water and Wastewater Engineering

Environmental Site Inspection / Construction Monitoring



# Environmental Justification Report

## Mine Connector Merchant Transmission Line Class EA

### Wawa

Prepared for Batchewana First Nation

AEC Project No. 23-028 | November 2025



Environmental Assessments & Approvals

November 13, 2025

AEC 23-028

Batchewana First Nation  
c/o Aboriginal Business Network  
1340 Terrace Ridge Drive  
Carp, Ontario K0A 1L0

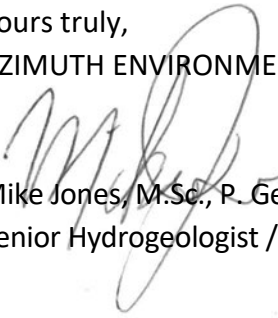
Re: **Environmental Justification Report for Batchewana First Nation Class EA for a 115kv  
Transmission Line, Wawa, Ontario**


Chief McCoy:

Azimuth Environmental Consulting, Inc. was retained to provide an Environmental Justification report for a proposed 115kV transmission line corridor between the Wawa Transmission Line near the Hollingsworth Dam, Hawk Junction, and Alamos Gold mine lands in Dubreuilville, Ontario. The purpose of this report is to provide decision-makers with an understanding how the municipal Class Environmental Assessment for Transmission Facilities (Class EA)(2024) process was completed.

Should you have any questions or require additional information please do not hesitate to contact the undersigned.

Yours truly,  
AZIMUTH ENVIRONMENTAL CONSULTING, INC.

  
Mike Jones, M.Sc., P. Geo., FGC  
Senior Hydrogeologist / Legacy President

  
Jordan Wrobel, B.Sc.  
Terrestrial Ecologist



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- Appendix C: Transmission Line Consultation Information



## **1.0 INTRODUCTION**

This Environmental Justification Report (EJR) has been prepared to support the Class Environmental Assessment (EA) process for the proposed Mine Connector Merchant Transmission Line Project (referred to as “the Project”). The purpose of this report is to provide a comprehensive summary for the Project from an ecological perspective, demonstrating that potential environmental effects have been identified, assessed, and appropriately mitigated, and adequate stakeholder consultation occurred; and the Project is proceeding. The information here is mainly taken from the Class EA Report, along with additional information regarding how the study was undertaken.

The Project is being developed by 1000757443 LP (a limited partnership of Batchewana First Nation (BFN) in collaboration with Alamos Gold Inc. (Alamos). The proposed Project involves the construction of a 115 kV transmission line between the Hollingsworth Transmission Station and Island Gold Mine lands near Dubreuilville, Ontario (Ecoregion 3E).

The EJR is prepared in accordance with the requirements of the Ontario *Environmental Assessment Act*, 1990; and is intended to assist decision-makers in understanding the Project’s requirements, alternatives considered, public consultation program, environmental field program, potential environmental effects, and recommendations and proposed mitigation measures.

## **2.0 PROJECT OVERVIEW**

### **2.1 Project Description**

The Island Gold and Magino mines operated by Alamos are located approximately 15km southeast of Dubreuilville, Ontario within the traditional lands of BFN. The mines are connected to the “#4” circuit of Algoma Power Inc. (API) at 44kV. The LP wishes to develop a new 115kV transmission line from the Hydro One network to the mining areas, thus serving the long-term electrical power requirements of the combined mining entity for the life of mines.

A short-list of four alternative solutions between Hollingsworth Tap Point (west of the Michipicoten River) and the AGI mine site were considered (Figure 1 in Appendix A). The alternative solutions were chosen due to their proximity to existing access opportunities (*i.e.*, roads, trails, railway), terrain, minimized environmental impacts, directness of route, minimize number of structures and avoidance of waterbodies.



In accordance with the Class EA process, the alternative sites were considered, and a preferred solution was recommended based on a suite of evaluation criteria. Evaluation of the alternative solutions is based on scientific background, field and traditional knowledge data collected over the course of biophysical (*i.e.*, natural heritage and hydrogeological) and engineering investigations, as well as on consideration of transportation and access logistics, and public and environmental safety criteria. The do nothing and four (4) alternative solutions included:

1. Route 1 (Blue) Alternative Solution – proposed 136 structures and 44 km long
2. Route 2 (Magenta) Alternative Solution – proposed 534 structures and 48 km long
3. Route 3 (Orange) Alternative Solution – proposed 499 structures and 44 km long
4. Route 4 (Green) Alternative Solution – proposed 143 structures and 43 km long
5. Do nothing

The purpose of the Class EA is to:

1. Describe the alternative solutions based on a scoped field program;
2. Evaluate each solution based on specific criteria to recommend a preferred route;
3. Assess the potential for environmental impacts associated with construction of the transmission line along the preferred route; and
4. Identify a Preferred Solution to be implemented.

## **2.2 Project Construction**

To construct the transmission line, the Project will require:

- Vegetation and tree removal for a corridor up to 100m wide for approximately 45km. Mechanized clearing will be used in most areas. Exceptions to this are within 30m of water features and in areas where tracked or wheeled machines cannot reach, such as cliffs and rock out crops. These areas will be cleared manually.
- Construction of pole infrastructure to service the mine sites from the Hydro One Hollingsworth Tap Point. These components include crib foundations, culverts, rock blasted foundations, and support structures. Generally, structures are single poles of composite (FRP) construction supported with guy wires. The electrical cables will primarily be strung by air which reduces ground requirements for access.
- Creation of one water crossing and improvements to bridges, roads and/or trails to access various areas along the corridor.
- Reoccurring post-construction maintenance of the transmission corridor vegetation. Maintenance of the route access points will also be completed as required to facilitate all required maintenance activities.



### **2.3 Project Rationale**

The transmission facility is required to provide electrical service to Alamos mine sites for existing operations and to facilitate future expansion. Currently, an on-site compressed natural gas (CNG) power plant is used to supplement the available electrical capacity. The expansion of mining activities will exceed the capacity of the existing 44kV supply. The proposed transmission facility represents an expansion of large industrial customer facilities with direct connection to Ontario's transmission network. This line is estimated to initially supply approximately 47 MW, with the design of transmission line able to carry up to 80 MW total peak load.

With the proposed facility, the use of the on-site CNG power plant will cease, significantly reducing the consumption of fossil fuels for mining equipment, and will promote the use of electrical vehicles and equipment for mining activities. Overall, it will result in a significant reduction of carbon and greenhouse gas emissions.

### **3.0 CLASS EA PROCESS SUMMARY**

A Class Environmental Assessment (Class EA) is an environmental planning process approved under Ontario's *Environmental Assessment Act* (EAA) for certain classes (groups) of projects that have predictable and manageable environmental effects. The Class EA for Transmission Facilities applies to certain transmission facilities (lines and stations, other than those associated with certain listed generation facilities) and was originally developed by the former Ontario Hydro and approved under the EAA by Order-in-Council in 1980. It has undergone several revisions since that time. The current version of the document approved by the Minister of the Environment, Conservation and Parks (MECP), is the Class EA for Transmission Facilities (February 2024). A proponent who receives approval for a project planned in accordance with a Class EA (provided the project is eligible to follow that process) does not need to obtain separate approval under the EAA.

The Class EA process follows a rigorous, science-based process that reviews and identifies potential impacts associated with the proposed undertaking. It involves an evaluation of the alternative routes based on the avoidance of conditions that might create environmental constraints to the proposed undertaking. The documentation of existing conditions and the proposed impacts was completed (as described below) during a four-season field undertaking that included documentation of existing conditions and the potential impacts from the proposed undertaking.



The Wawa connector line was evaluated on the basis of four potential routes for the transmission facilities. Each route was evaluated on the basis of environmental factors to determine the preferred route. The review of routes was considered on the basis of input from MECP and MNR as well as consultation with five First Nations and the public. Consultation occurred through direct meetings and seven consultation events that transpired over a year-long period.

The site evaluations considered the habitat the vegetation communities, habitat for breeding birds, amphibians and reptiles, fish habitat, habitat for wildlife, wetlands and species at risk as well as potential impacts related to physical conditions such as hydrogeology, drainage and excess soils or contaminate soils. Factors including climate change, air quality, noise, dust and vibration, archaeology and traditional First Nation knowledge were also considered. After the factors were utilized to identify a Preferred Solution, it was evaluated against the screening criteria that are part of the Class EA process. The screening mechanism is based on 16 criteria related to:

1. *environmental goals, objectives, plans, standards, policy statements or guidelines;*
2. *significant effects on persons or property*
3. *the irreversible commitment of any significant amount of non-renewable resources,*
4. *Pre-empt the use, or potential use, of a significant natural resource for any other purpose,*
5. *a significant detrimental effect on air or water quality or on ambient noise levels for adjacent areas*
6. *Cause significant interference with the movement of any resident or migratory fish, wildlife species, species at risk, or their respective habitats*
7. *Establish a precedent or involve a new technology, either of which is likely to have significant environmental effects now or in the future*
8. *a pre-condition to the implementation of another larger and more environmentally significant project that is subject to a comprehensive environmental assessment*
9. *generate significant secondary effects, directly caused by the proponent's activities, which will adversely affect the environment*
10. *. Block pleasing views or significantly affect the aesthetic image of the surrounding area;*
11. *Significantly change the social structure or demographic characteristics of the surrounding neighbourhood or community*
12. *Overtax existing community services or facilities*
13. *Result in undesired or inappropriate access to previously inaccessible areas*
14. *Create the removal of a significant amount of timber resources*
15. *Result in significant effects to natural heritage resources*
16. *. Result in significant effects to cultural heritage resources*



The project and the Preferred routing were evaluated against these criteria and found that that they did not trigger further evaluation. As a result, the proposed project was determined to be exempt from the conditions of Environmental Assessment Act (EAA). The Class EA Report was submitted to the MECP in January 2025 and accepted in February 2025.

## **4.0 ENVIRONMENTAL IMPACT SUMMARY**

### **4.1 Policy Context**

Azimuth has prepared the Class EA report in accordance to both federal and provincial policies to provide a comprehensive approach in relation to Key Natural Heritage Features (KNHFs) associated with the alternative solutions. The following federal and provincial planning policies with potential applicability to the study areas include:

- Provincial Policy Statement (MMAH, 2024);
- Endangered Species Act, 2007 (ESA);
- Federal Species at Risk Act, 2002 (SARA); and,
- Federal Fisheries Act.

### **4.2 Environmental Field Program Summary**

Prior to the completion of the field program, Azimuth completed background review and research for the proposed alternative solutions. This research included reviewing previous applicable reports from Alamos Gold for the study area, and reviewing online databases to aid in the characterizations of natural heritage features and functions potentially associated with each alternative solution. Databases utilized in the background review include Ministry of Natural Resources (MNR) Natural Heritage Information Centre (NHIC) and other applicable databases, Ontario Forest Resource Inventory (FRI), DFO mapping, and Land Information Ontario (LIO) mapping sources. The review also included a review of traditional knowledge relating to natural heritage.

To characterize the biophysical environment at the four alternative solutions, natural heritage wildlife, fish, and vegetation field data were collected by Azimuth ecologists in 2023 and 2024 along the four alternative solutions (see Table 1 below for field data summary). The scope of the field program was approved by the BFN Natural Resources Department on January 12, 2023.



The Project included over 750 man-hours related to field work over the course of the four-season field program completed by Azimuth, as described in Table 1. A detailed summary of the field program is provided in the Class EA report (Appendix A).

**Table 1: Azimuth’s Field Program**

Site Visit	Rationale	Date	Number of Staff
Spring 2023	High Level ELC <sup>1</sup> , Evening Calling Amphibian surveys, Turtle Visual Encounter Surveys, Review Aquatic features during high flow conditions	May 8-12, 2023	2
Summer 2023	ELC and Vascular Plant Inventory, Dawn Breeding Bird Survey, Review aquatic features during low flow conditions	July 3-7, 2023	2
Fall 2023	ELC and Vascular Plant Inventory, General Physical Survey, SAR and SWH review	September 25-29, 2023	2
Winter 2023/2024	Wildlife Camera Survey, Incidental Wildlife Tracking	December 19-21, 2023 to January 8-10, 2024	2
Early Spring 2024	General field investigations with FACTS, Fish Habitat Investigations	May 13-16, 2024	1
Late Spring 2024	Dawn Breeding Bird Survey, Turtle Visual Encounter Surveys, Fish Sampling	June 10-13, 2024	2
Summer 2024	Dawn Breeding Bird Survey, Fish Habitat Investigations	July 2-4, 2024	2

<sup>1</sup>ELC = Ecological Land Classification of vegetation communities by community type, includes vegetation community mapping and plant species inventory list (including wetlands)

### 4.3 Summary of the Alternative Solutions

A summary of the alternative solutions (excluding the ‘Do Nothing’ alternative) considered in the Class EA is provided in Table 2. A detailed description of the alternative solutions is provided in Section 8 of the Class EA report (Appendix A).



**Table 2: Summary of Alternative Solution #1 to #4.**

Alternative Solution	Footprint Size	Number of Structures	Access Logistics	Structure Types Required	Forest Removal	Wetland Removal	Fish Habitat
#1 (Blue)	~100m x 44km	136	Limited existing access	12- crib foundations 43- direct embedment 81- rock bore/blasting foundation	388ha	38ha	-36 waterbody crossings -25 coldwater systems
#2 (Magenta)	~100m x 48km	534	Historical logging and creational trails present	77- crib foundations 252- direct embedment 202- rock bore/blasting foundation	402ha	58ha	-42 waterbody crossings -25 coldwater systems
#3 (Orange)	~100m x 44km	499	Limited existing access	108- crib foundations 161- direct embedment 230- rock bore/blasting foundation	288ha	46ha	-50 waterbody crossings -runs parallel to McVeigh Creek for 21km
#4 (Green)	~100m x 43km	143	Historical logging and creational trails present	11- crib foundations 88- direct embedment 44- rock bore/blasting foundation	361ha	38ha	-53 waterbody crossings -45 coldwater systems



#### 4.4 Evaluation Components

BFN does not currently have a formal environmental standards policy framework to assess and determine the best option for infrastructure projects such as this. Consequently, the approach of using an environmental standards policy framework based on meeting the more stringent of the existing Provincial or Federal policies/legislation was adopted. Based on this information, Azimuth developed a ranking system appropriate for the project to assess the proposed alternative solutions. As outlined in Section 8.6 of the appended Class EA report, the following ranking criteria were considered:

- Suitability for the Mine's Needs
- Public Safety
- Route Length
- Pole Requirements
- Pole Foundation Requirements
- Access logistics
- Number/extent of natural heritage features/functions with potential for impact:
  - Fish and Fish Habitat Areas
  - SAR and SAR Habitat
  - Significant Wildlife Habitat types
  - Extent of Forest Removal/Impact
  - Extent of Wetland Removal/Impact

Although a number of these criteria are not environmental specific in nature, they can have environmental implications. For example, Access Logistics influences the type and quantity of equipment, machinery, and labour requirements; which in turn can be associated with higher disturbance and vegetation removal, and increased risk of environmental contamination. Pole foundation requirements relates to the type of foundation that is needed for each pole, and whether there are locations in water features or wetlands, or on rock outcrop that would require blasting. Some of the criteria are also complex, such as Fish and Fish Habitat considered the type and nature of water crossings as well as orientation and thermal regime.

Medicinal plant value was considered for use as a criterion, however, medicinal plants were found to occur broadly throughout the Regional Study Area. Consequently, medicinal plants were not used as a specific ranking criteria, as they would not provide a differentiating mechanism between the routes.



Analysis, interpretation and documentation of findings from the field programmes, and complete criteria-specific calculations to compare alternatives was completed over a period of 340 man-hours. Azimuth's time commitment over the duration of the project was approximately 1,800 hours. Significant, additional commitment was provided by BFN, Alamos, Bestech Engineering and AB Network, showing the importance given to the project.

#### **4.5 Project Findings**

Each alternative solution was ranked based on a colour-coded scale to provide a simplified visual comparison. The ranking of each route and raking rationales are presented in Table 9 of the Class EA report in Appendix A. In regards to the colour-coded system, green cell colouration represents the preferred option, as it will address key concerns, but result in the lowest impact to KNHFs. An orange cell indicates the potential impact is moderate or acceptable. A red cell colouration is indicative of the least preferred option due to the high potential for impacts to KNHFs. The alternative solution with the highest proportion of green criteria's is considered the preferred solution.

Based on the ranking results, the Alternative Solution #4 received the largest proportion of green coloured cells (low impact) and no red coloured cells (high impact), and therefore, was identified as the preferred solution. Alternative Solutions #1 was ranked as acceptable, and Alternative Solution #2, #3, and #5 (Do Nothing) were ranked as least preferred (Table 9 in Appendix A).

Overall, the incorporation of the mitigation measures described in Section 8 of the Class EA (and summarized below) are anticipated to limit negative impacts to KNHF and their ecological functions associated with the preferred solution.

#### **4.6 Mitigation Measures**

Mitigation measures were recommended for the Project to further minimize potential impacts and included:

- SAR training for all on-site workers to identify SAR with potential to occur in the study area;
- SAR turtle considerations;
- Timing restriction windows with respect to SAR, SWH, and migratory breeding birds;
- Sediment and erosion controls;
- Operation considerations;
- Utilizing Fisheries Best Management Practices (BMPs) and DFO Codes of Practice; and,



- Completion of a Fisheries Screening Report and potential permitting review at detailed design.

## 5.0 CONSULTATION AND ENGAGEMENT

### 5.1 Initial Project Description

An Initial Project Description (IPD) for the Project was prepared during early stages of the evaluation. The IPD provides a high level overview of the Project’s goals, objectives, and key components, and serves as an early-stage planning document prepared before the completion of works. The IPD is utilized to help reviewers, regulators, Indigenous communities, and the public understand the basic nature, need, and scope of the Project before detailed environmental analysis is completed.

The IPD was completed in June 2024, and submitted to relative agencies (including the Ministry of Energy and Electrification) and made available for review to interested stakeholders. A copy of the IPD is provided in Appendix B of this report.

### 5.2 Public and Agency Consultation

#### 5.2.1 Consultation Efforts

Consultation with stakeholders was a key component of the project and commenced in January 2023 by clearing a Terms of Reference for the scope of the field program, and continued after the finalization of the Class EA report in December 2024. A detailed list of Project related consultation, and meetings Azimuth attended is detailed in Table 3. Meetings for other Project team members that pertained to their disciplines occurred over the course of the Project; for instance, weekly engineering and construction tele-conferences occurred for the Project, as well as participation of proponent representatives in all consultation activities.

**Table 3: Project Consultation and Meetings**

Task	Information	Date	Azimuth Staff
Terms of Reference	Consulted with BFN to approve a scope of work for the Class EA	January 12, 2023	n/a
MNR Consultation	NHIC Restricted Species Information Request	January 20, 2023	n/a
Project Team Meeting	Virtual meeting with the project team regarding Class EA	August 4, 2023	1
Project Team Meeting	Virtual meeting with the project team regarding Class EA	October 18, 2023	1



Project Team Meeting	Virtual meeting with BFN, Alamos, Azimuth, and other consultants	January 24, 2024	2
Project Team Meeting	Virtual meeting with the project team regarding Class EA	January 29, 2024	2
Project Team Meeting	Virtual meeting with the project team regarding Class EA	February 16, 2024	2
Project Team Meeting	Virtual meeting with the project team regarding Class EA	February 29, 2024	1
MNR Consultation	Information requests to Chapleau-Wawa MNR District Office (Northeast Region)	March 22, 2024	n/a
Project Team Meeting	Virtual meeting with the project team regarding Class EA	April 17, 2024	2
Project Team Meeting	Virtual meeting with the project team regarding Class EA	April 29, 2024	2
MNR License Submission	License to Collect Fish for Scientific Purposes	May 6, 2024	n/a
MECP Consultation	In-person Meeting at MECP office in Toronto to discuss status and findings of Class EA, particularly related to review of field studies scope and SAR investigations	May 7, 2024	3
Project Team Meeting	Virtual meeting with the project team regarding Class EA	May 27, 2024	2
MECP Consultation	Phone call with MECP regarding project clarification	May 27, 2024	n/a
Project Team Meeting	Virtual meeting with project team regarding permitting and field work	June 6, 2024	2
Project Team Meeting	Virtual meeting with BFN, Alamos, Azimuth regarding consultation and PIC	June 25, 2024	2
PIC Meeting	Town of Wawa	July 2, 2024	2
PIC Meeting	Town of Dubreuilville	July 3, 2024	2
Project Team Meeting	Virtual meeting with the project team regarding Class EA	October 28, 2024	1
MNR Consultation	Meeting with MNR and project team regarding Class EA review	October 30, 2024	2
Project Team Meeting	Virtual meeting with BFN, Alamos, Azimuth	November 21, 2024	3
MECP Review	Project team received MECP comments following a submission/review request	November 19, 2024	n/a
PIC Meeting	Town of Wawa	December 4, 2024	1
PIC Meeting	Town of Dubreuilville	December 5, 2024	1



MECP Consultation	Virtual Meeting with MECP and project team	December 6, 2024	3
PIC Meeting	Batchewana First Nation-Delta Hotel	December 11, 2024	1
Project Team Meeting	Virtual meeting with project team regarding permitting and field work	December 17, 2024	2
First Nation Consultation	With Red Sky Metis Independent Nation	Winter 2025	n/a
PIC Meeting	Garden River	January 28, 2025	1
PIC Meeting	Batchewana First Nation- Rankin Arena	January 30, 2025	1

In addition, a record of BFN (Co-Proponent) specific outreach and consultation efforts are provided in a table in Appendix C, and include the following First Nations and stakeholders:

- Michipicoten First Nation
- Missanabe Cree First Nation
- Garden River First Nation
- Brunswick House First Nation
- Metis Nation of Ontario
- Red Sky Metis Independent Nation
- Town of Dubreuilville
- Town of Wawa

### 5.2.2 Review Agencies Engagement

Throughout various stages of the Class EA project, consultation with the Ministry of Environment, Conservation, and Parks (MECP) occurred as identified in Table 3. This consultation included in-person and virtual meetings, phone calls, and formal report submission to gain a comprehensive understanding of MECP's views on the Project and to incorporate MECP's recommendations. For instance, following an in-person meeting with MECP staff in May 2024, concern was expressed regarding the occurrence of additional SAR within the study area. As such, the field program was expanded to incorporate additional assessments in spring/summer 2024 (as listed in Table 1), and the Class EA report was expanded to incorporate these considerations.

Consultation with the MNR commenced in January 2023 and continued throughout the duration of the Class EA process, as summarized in Table 3. Engagement with the MNR involved the exchange of information requests, license applications, and technical meetings to ensure that MNR's expertise and input were fully considered and incorporated into the development of the Class EA report.



### 5.2.3 Public Information Centre Meetings

Public Information Centre (PIC) meetings were formal public events held between July 2024 through January 2025 during the Class EA process. The main objective of the PIC meetings were to share information, present alternative solutions, identify potential environmental effects, gather input and concerns from stakeholders, and incorporate feedback into the final project design. These objectives were accomplished by preparing and presenting a set of project poster boards and various project related documents to meeting attendees; and allowing opportunities for questions and submission of comment forms. The Class EA poster boards presented during the meetings are provided in Appendix C.

Seven (7) PIC meetings occurred over a 7-month period, as outlined in Table 3. Attendance sheets (which only included individuals comfortable providing their personal information) for the PIC meetings and associated comment forms are provided in Appendix C. The meetings were held in person with various project team members (*i.e.*, Alamos, BFN, Azimuth, Bestech Engineering) in attendance. The location of the PIC meetings were selected based on the proximity to the study area and considerations of previous public and stakeholder interest in the Project, and to simplify access for stakeholders to encourage participation.

The PIC meetings were advertised through various means to increase engagements. These methods include radio advertisements, public postings, online announcements, and direct communications with Indigenous communities as exhibited in Appendix C.

## 6.0 DECISION RATIONALE

### 6.1 Compliance with Class EA Requirements

The environmental conditions for the proposed transmission facility have been reviewed for four possible routes as well as a “Do Nothing” option. The Project has followed the Class EA process, including a screening Process. Based on comparative factors, Route 4 was identified as the preferred route. Route 4 was evaluated against 16 screening factors described in Section 3.3 of the Class EA for Transmission Facilities (2024) and is successfully meets all screening criteria, and therefore the Project is exempt from the EAA requirements.

### 6.2 Rationale for Proceeding

Based on the evaluation of alternatives, consultation outcomes, and implementation of recommendations and mitigation measures; the proposed Project is not expected to result in a negative impact on KNHFs and their ecological functions. In addition, the Class EA report was accepted by review agencies, including MECP. Based on these findings, the Project is environmentally justified to proceed to detailed design and construction. The project fulfills the



intent and procedural requirements of the Municipal Class EA and aligns with the principles of sustainable development and minimizing environmental impacts while addressing essential infrastructure needs for Alamos.

## **7.0 CONCLUSION**

The EJR provides a summary of the environmental, technical, and consultation aspects associated with the proposed Project. This assessment confirms the requirement for the Project to provide reliable and efficient electrical connection to support Alamos gold current and future energy needs. The preferred route was selected following a thorough evaluation of feasible alternatives, balancing technical requirements, land use compatibility, KNHFs, and stakeholders input.

Potential environmental impacts, such as those related to vegetation clearing, wildlife habitat disturbance, species at risk habitat, waterbody crossings, and land use compatibility were identified, assessed, and addressed; the section of Alternative Solution #4 as the preferred solution and through the application of best management practices and mitigation measures, potential environmental impacts are mitigated.

Overall, the this EJR demonstrated the Project can proceed with respect to environmental considerations. The proponents remain committed to ongoing engagement with stakeholders, regulatory authorities, Indigenous communities; and adaptive management strategies throughout the Projects lifecycle.

## **8.0 REFERENCES**

Azimuth Environmental Consulting Inc. 2024a. Mine Connector Merchant Transmission Line Class EA.

Azimuth Environmental Consulting Inc. 2024b. Mine Connector Merchant Transmission Line Initial Project Description.



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## APPENDICES

**Appendix A:** Transmission Line Class EA Report

**Appendix B:** Initial Project Description

**Appendix C:** Transmission Line Consultation Information

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**APPENDIX A**

**Transmission Line Class EA Report**

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**APPENDIX B**

**Initial Project Description**

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**1000757443 LP**

**Mine Connector Merchant Transmission Line**

**Initial Project Description**

Prepared for:  
Batchewana First Nation (Co-proponent) and Alamos Gold Inc. (Co-proponent)  
For Submission to  
Batchewana First Nation  
and Ministry of Energy and Electrification

Prepared by:  
Azimuth Environmental Consulting Inc.,

June 2024

AEC 23-028



Environmental Assessments & Approvals

June 16 2024

AEC 23-028

Batchewana First Nation  
c/o Aboriginal Business Network  
1340 Terrace Ridge Drive  
Carp, Ontario  
K0A 1L0

Attention: Chief Mark McCoy

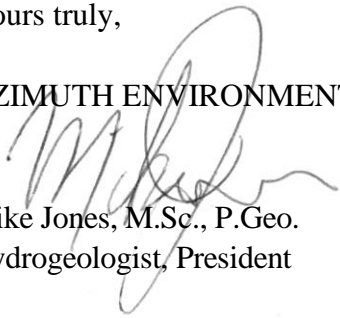
Re: **Batchewana First Nation  
Mine Connector Merchant Transmission Line Project  
Initial Project Description**

Dear Chief McCoy:

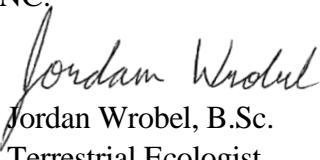
Azimuth Environmental Consulting, Inc. (Azimuth) is pleased to provide an initial project description for the aforementioned project. The initial project description is part of the early engagement process with the Batchewana First Nation and the Community. If you have any questions, please do not hesitate to contact the undersigned.

Yours truly,

AZIMUTH ENVIRONMENTALCONSULTING, INC.



Mike Jones, M.Sc., P.Geo.  
Hydrogeologist, President



Jordan Wrobel, B.Sc.  
Terrestrial Ecologist



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## **NOTICE TO READERS**

This report has been prepared and the work referred to in this report has been undertaken by Azimuth Environmental Consulting Inc. (Azimuth) for the exclusive use of 1000757443 LP (a limited partnership of Batchewana First Nation (the Co-proponent) and Alamos Gold (Co-proponent)), who have been party to the development of the scope of work and understand its limitations. The methodology, findings, conclusions, and recommendations in this report are based solely upon the approved scope of work and are subject to time considerations described in the proposal and/or contract to which this report was issued.

The findings, conclusions, and recommendations in this report have been developed in a manner consistent with the level of skill normally exercised by professionals currently practicing under similar conditions in the area, and reflect Azimuth's best judgment based on information available at the time of preparation of this report. The findings and conclusions contained in this report are valid only as of the date of this report and may be based, in part, upon information provided by others. If any of the information is inaccurate, new information is discovered, site conditions change, or applicable standards are amended, modifications to this report may be necessary.

The contents of this report are proprietary. Other than by the Proponents, use of or reliance on the information contained herein, in whole or in part, is not permitted without the express written permission of 1000757443 LP, the Co-proponents and Azimuth.



## ACRONYMS AND ABBREVIATIONS

Alamos	Alamos Gold Inc.
BFN	Batchewana First Nation
DFO	Fisheries and Oceans Canada
EA	Environmental Assessment
EAP	Engagement and Accommodation Plan
EPP	Environmental Protection Plans
ESA	<i>Endangered Species Act, 2007</i>
FRP	Fibre-reinforced Polymer
FWCA	<i>Fish and Wildlife Conservation Act</i>
Ha	Hectare
IPD	Initial Project Description
km	Kilometre
kV	Kilovolt
LP	1000757443 LP
MNRF	Ministry of Natural Resources and Forestry of Ontario
MTO	Ministry of Transportation of Ontario
SARA	<i>Species at Risk Act</i>
SWH	Significant Wildlife Habitat
ToR	Terms of Reference
KNHF	Key Natural Heritage Feature



## 1.0 INTRODUCTION

### Project Name and Proponent Contact Information

**Project Name:** 1000757443 LP  
Mine Connector Merchant Transmission Line Project

**Proponent:** 1000757443 LP

#### Proponent Contact:

Batchewana First Nation  
Mr. Danny Sayers Jr, Director Lands and Economic Development  
236 Frontenac Street/ Rankin Reserve 15D  
Batchewana First Nation, Ontario  
P6A 6Z1  
[dannysayersjr@batchewana.ca](mailto:dannysayersjr@batchewana.ca)

#### Executive Summary

This initial project description (IPD) provides information currently available regarding the proposed mine connector merchant transmission line project (the “Project”). The site includes two gold mines; the Magino mine previously owned by Argonaut Gold Inc. (Argonaut) and the adjacent Island Gold mine owned by Alamos Gold Inc. (Alamos). In July 2024, it is anticipated that Alamos will complete the acquisition of the Magino mine from Argonaut in a friendly merger that was announced earlier this year.

The mines are located approximately 15 kilometre (km) southeast of Dubreuilville, Ontario within the traditional lands of Batchewana First Nation (BFN). The mines are connected to the “#4” circuit of Algoma Power Inc. (API) at 44kV. Both mines are undergoing significant developments that are projected to exhaust the practical operating limits of the #4 circuit. The combined electrical load of the two mines is expected to reach a peak load of approximately 47 Megawatts (MW) by 2026. The LP wishes to develop a new 115kV transmission line from the Hydro One network to the mining areas, thus serving the long-term electrical power requirements of the combined mining entity for the life of mines.

Four alternative solutions are being considered from Key Natural Heritage Feature (KNHF), site logistics/safety, hydrogeological/hydrological/geological, economical, and traditional knowledge perspectives as potential routes for the transmission line.



To construct the transmission line, the project will require:

- Vegetation and tree removal for a corridor up to 100m wide for approximately 45-50km;
- Construction of pole infrastructure to service the mines site from the Hydro One Hollingsworth Tap Point;
- Creation or improvements to roads and/or trails to access various areas along the corridor; and,
- Reoccurring post-construction maintenance of the transmission corridor vegetation. Maintenance of the route access points will also be completed as required to facilitate all required maintenance activities.

The Class Environmental Assessment for a Minor Transmission Line (Class EA) will provide the methodological framework for the project. An environmental evaluation is underway as part of the project. Assessment of the alternative corridors in support of the Project is facilitated by BESTECH Canada Limited (Bestech) for the engineering and project design work and Azimuth Environmental Consulting, Inc. (Azimuth) for the environmental aspects of the Project.

## **Early Engagement**

### **1.1.1 Project Notification to BFN**

Proponents of a proposed development project are recommended to discuss the project proposal with the Lands Department prior to submitting an IPD. This preliminary consultation engagement will inform how the development proposal is affected by BFN legislation, policies and guidelines. To date, early engagement activities have involved the transmission line consulting team, BFN, and Alamos. No public engagement has yet occurred but is planned for the early summer. Early engagement serves to identify potential issues, constraints, and study requirements.

## **Other Agencies Having Jurisdiction or Project Interest**

### **1.1.2 Ontario Energy Board (OEB)**

BFN, on behalf of the LP, has engaged with the OEB to ensure that it fully understood the rules for implementing a project of this nature. BFN and the OEB met on multiple occasions and the OEB provided guidance on the regulatory requirements for a merchant line to a single mining customer. BFN has followed the guidance of the OEB in developing the Project.



#### 1.1.3 Independent Electricity Supply Operator (IESO)

BFN and Alamos, as co-proponents have engaged with the IESO to ensure that the project meets all of the requirements for connectivity. A System Impact Assessment was completed by the IESO and that information is being used to assist with the all aspects of the Project.

#### 1.1.4 Ontario Ministry of Natural Resources and Forestry

Each alternative solution considered would cross Provincial Crown land for a portion of the proposed corridor. The Proponents have initiated consultation with the MNR in regards to Land Use Permits.

#### 1.1.5 Hydro One

Electrical power will be provided through the Hydro One network. Hydro One would be responsible for the construction of a 1.1km interconnection at the Hollingworth tap point northwest of the Michipicoten River to the BFN / Alamos 115kV Switching Station. The Proponents are in discussion with Hydro One.

#### 1.1.6 Ontario Ministry of Transportation

Permits may be required for the preferred solution segments that transects or occur adjacent to existing infrastructure. The Proponents are in discussion with the Ontario Ministry of Transportation.

#### 1.1.7 Local Forest Licensee

Alternative solutions under consideration occur on private lumber corporations' lands and require access by existing private logging trails for portions of the proposed corridor. The Proponents will require approval from the local forestry licensee, and discussion have initiated with the licensees.

#### 1.1.8 Other Interested Parties

In addition to the aforementioned agencies, others who may have interest in the project (*i.e.* in use of the private logging road) include hunters, snowmobile clubs, anglers, and trappers. Since these individuals may not have a centralized point of contact, they can be informed about the project through BFN website posting and/or during the engagement process.



## **2.0 PROJECT RATIONALE**

Submission of an IPD provides formal project documentation and is the first step in an EA process. The IPD provides a general description of the project and additional information that has been identified through the project notification and early engagement process.

The rationale for the Project is to construct a 115 Kilovolt (kV) transmission line from the Hydro One network to support Alamos long term electrical power requirements (Appendix A). The project involves evaluating a series of alternative corridor sites based on a set criterion to choose a preferred solution in accordance with the EA Law. Locations of four alternative solutions are outlined below in Section 5.0 and shown in Appendix A.

Evaluation of the alternative solutions is based on scientific background, field and traditional knowledge data collected over the course of biophysical (*i.e.*, natural heritage and hydrogeological) and engineering investigations, as well as on consideration of transportation and access logistics, and public and environmental safety criteria. A detailed evaluation of alternatives and an impact assessment is being prepared concurrently.

## **3.0 PROJECT COMPONENTS**

The proposed project involves several physical project components to facilitate the construction of the transmission corridor.

### **Land Requirements**

The proposed work involves the construction of an estimated 45km transmission line with an average width of 40-60m, however may reach up to 100m wide in segments. At this time the maximum extent of impacted area (~100m) is utilized to gain a comprehensive understanding of the “worst case scenario”. As such, the corridor is an estimated footprint of approximately 450ha (100m x 45km) crossing Crown, MTO, Agawa Canyon Railroad, Hydro One, and private forest licensee lands.

The Proponents will require the corresponding access, entrance, lease, crossing, and easement permits or agreements to implement the proposed infrastructure and work is well underway to ensure all of the necessary instruments are in place in support of the project prior to construction beginning this fall.



### **Site Access and Road Improvement**

Where possible the Project will utilize existing road, logging trails, and/or railways to access the transmission line and facilitate the movement of equipment and resources, in order to minimize environmental impacts. It is anticipated improvements will be required to portions of existing access points to ensure safe and reliable access for all equipment, material, and personnel during construction and post-construction activities (*i.e.* widening of trails, replacement / repair of culverts or bridges). For example, there are multiple in-service span bridges along Hawk Junction Road in relatively poor condition that should be assessed for adequacy prior to the onset of construction.

In addition, due to the remote nature and length of the transmission line, new access trails will be required to access various segments along the corridor. The location of these access trails will be determined with environmental and engineering consideration and input from professionals, as to minimize impacts on sensitive communities and species within the study area.

Temporary infrastructure, such as refueling stations, and stockpile sites may also be required during construction.

### **Vegetation and Tree Removal**

The entirety of the transmission corridor (with the exception to waterbodies) will require the clearing and grubbing of vegetation and trees. This work will include the removal, disposal and/or chipping of cut woody debris. In addition, during post-construction the transmission corridor will require regular monitoring and vegetation removal (estimated every 5 years) to manage regrowth within the corridor. The implementation of Best Management Practices (BMPs) and avoiding clearing of vegetation during the active season for migratory birds and SAR bats will be required for these components of the project.

### **Infrastructure Requirements**

The Project will be comprised of various infrastructural components to support the physical construction of the transmission line. It is anticipated that majority of the structures will be single poles of composite (FRP) construction supported with guy wires. However, there are segments (*e.g.*, changes in direction) that will require additional pole installation to provide added structural support and guying points. Appendix B provides examples of the general appearance and types of structures proposed for the transmission line according to BESTECH (2023) report.



The electrical cables will be primarily strung via helicopter to reduce ground access requirements and disturbance. Current design considerations allow the pole locations to avoid placements in water bodies or larger wetlands.

Furthermore, there are three proposed foundation types to support pole installation; these include crib foundations, rock blasted foundations, and direct-embedment foundations. Foundation requirements will be determined at detail design based on the available substrate type; moist organic soils (wetland), exposed bedrock, or deep stable soils at the location of each pole. As such, rock bore/blasting will be required at locations with rock blasted foundation types.

## **4.0 PROJECT PHASES**

Indicated below are the anticipated project phases for the Wawa transmission line project.

### **Preliminary Environmental Investigations**

The following preliminary environmental investigations have been completed or are anticipated as part of the ongoing baseline study phase of the project:

- Geology and hydrogeology evaluations;
- Clear a Terms of Reference with BFN for natural heritage assessments
- Natural heritage assessments (aquatic, terrestrial, Species at Risk, Significant Wildlife Habitat);
- Archaeology;
- Initial Engagement and Consultation; and,
- Initial engineering studies.

### **Detail Design Stage of Preferred Solution**

The following activities are anticipated during detailed design:

- Land agreements;
- Completion of detailed engineering studies;
- Additional natural heritage assessments for the preferred solution;
- Development of environmental protection plans;
- Community engagement meetings;
- Receipt of permits and approvals; and,
- Hiring and procurement.



## **Construction**

The following activities are anticipated to occur during construction:

- Implementation of sediment and erosion control measures;
- Implementation of Best Management Practices (BMP);
- Continuing engagement activities;
- Use of existing local roads (as needed);
- Construction and use of new access roads (as needed);
- Clearing and grubbing of vegetation including, removal, disposal, and/or chipping;
- Movement of equipment and materials;
- Construction of switching station and substation;
- Rock bore/blasting for pole embedment in bedrock;
- Installation of hydro poles and associated foundation types;
- Stringing of wire via helicopter

## **Operations**

The following activities are anticipated to occur during operations:

- Visual inspections of the structures
- Operational maintenance (including switching and substation)
- Vegetation and tree management control within corridor

## **5.0 SITE ALTERNATIVES, BIOPHYSICAL ENVIRONMENT AND TRADITIONAL KNOWLEDGE**

A short-list of four alternative solutions between Hollingsworth Tap Point (west of the Michipicoten River) and the Alamos Gold Inc mine site are being considered (Appendix A). The alternative solutions were chosen due to their proximity to existing access opportunities (*i.e.*, roads, trails, railway). In accordance with the Class EA process, the alternative sites are considered and a preferred solution is recommended based on evaluation criteria. The four alternative solutions include:

1. Route 1 (Blue) Alternative Solution;
2. Route 2 (Magenta) Alternative Solution;
3. Route 3 (Orange) Alternative Solution; and,
4. Route 4 (Green) Alternative Solution

Table 1 on the next page summarizes the four alternative solutions under consideration.



## Transmission Line Alternative Solutions

**Table 1:**

Alternative Solution	Location	Number of Structures	Footprint Size
#1 (Blue)	Originates from Alamos Gold/Argonaut Gold mine following Goudreau Road Westerly to the CN railway crossing. Continues southward to Hawk Junction, then extends adjacent to Highway 547 and 101 to the Hollingworth tap point (Michipicoten River).	136	~100m x 44km
#2 (Magenta)	Originates from Alamos Gold/Argonaut Gold mine extending southward adjacent to Hawk Junction Road to Hawk Junction. Continues southward adjacent to Highway 547 and 101 to the Hollingworth tap point (Michipicoten River).	534	~100m x 48km
#3 (Orange)	Originates from Alamos Gold/Argonaut Gold mine following Goudreau Road Westerly to the CN railway crossing. Continues southward following the railway towards Hawk Junction, then extends along Highway 547 and 101 to the Hollingworth tap point (Michipicoten River).	499	~100m x 44km
#4 (Green)	Originates from Alamos Gold/Argonaut Gold mine extending southward to Hawk Junction. Continues southward and adjacent to Highway 547 and 101 to the Hollingsworth tap point (Michipicoten River).	143	~100m x 43km



To characterize the biophysical environment at the four alternative solutions natural heritage wildlife, fish, and vegetation field data were collected by Azimuth ecologists in 2023 and 2024 along the four alternative solutions (see Table 2 below for field data summary). The field program was approved by the BFN Natural Resources Department on January 12, 2023.

**Table 2: Natural Heritage Field Surveys Completed by Azimuth**

<b>Field Schedule</b>	<b>All Alternative Solutions</b>
May 2023	High level ELC <sup>1</sup>
	Evening calling amphibians
	Turtle visual encounter surveys
	Review of aquatic features during high flow conditions
July 2023	ELC and plant inventory
	Dawn Breeding Birds
	Review of aquatic features during low flow conditions
	General physical survey (topography)
September 2023	ELC and plant inventory
	General physical survey (topography)
	SAR habitat
	Significant Wildlife Habitat
December 2023/January 2024	Wildlife Camera deployment
	Incidental Wildlife tracking
June-July 2024	SAR Habitat, Dawn Breeding Birds, review of aquatic features during low flow conditions

<sup>1</sup> ELC = Ecological Land Classification of vegetation communities by community type, includes vegetation community mapping and plant species inventory list (including wetlands)

At a high level, the biophysical environment of the four alternative solutions are all comprised of extensive deciduous and coniferous woodlands, wetlands, rock barrens, waterbodies (*i.e.*, lakes, rivers, streams), and disturbed areas. Background mapping data/information [*e.g.*, Species at Risk (SAR) records for plants, wildlife and fish, presence of Provincially Significant Wetlands, *etc.*] will be provided as part of the EA, and included in the assessment of impacts on natural heritage features and functions.

A hydrogeological assessment by Azimuth based on field data collected in 2023 and desktop mapping will be used to characterize the biophysical environment more fully and inform selection of the preferred solution for the transmission line.



### **5.1 Batchewana Traditional Knowledge**

BFN traditional knowledge data has been used to inform the route selection process by ensuring that the routing does not impact areas of traditional use including areas for gathering, hunting, fishing, medicines or berries. BFN has provided Azimuth with a detailed list of plants of significance as well as protocols for dealing with two specific species.

BFN is committed to undertaking additional work with the elders who make use of the lands as the design phase continues and will commission a further study once the engineering and design work is 80% complete.

BFN has some of the information available in GIS/CAD format as well as other maps that have been produced over many years. Permission from BFN, in the form of a Traditional Knowledge and Data Sharing Agreement would be required to use traditional knowledge data in the Class EA report, if required. Traditional knowledge data would be overlaid onto environmental Figures and used to help evaluate site and transmission corridor alternatives.

## **6.0 PUBLIC SAFETY AND ENVIRONMENTAL STEWARDSHIP**

Elements of public safety to be considered in the project include the transmission line proximity to existing residential dwellings and infrastructure (*i.e.* highways, snow snowmobile trails, hydro lines).

Public safety and environmental stewardship are top of mind and priority for BFN and Alamos. The Proponents are committed to the safety of all employees and people that could be affected by this project, and to ensuring that its assets are built and operated in a safe and environmentally responsible manner. Through all phases of the project, the Proponents will promote a positive safety culture to eliminate or reduce risk to the public, workers, and the environment.

This provides a consistent approach that meets or exceeds industry codes and specifications and draws on the most recent standard available for the design and construction of transmission corridors, switching stations, and substations. To help prevent the potential for accidents, public safety and environmental protection measures are being incorporated into the design of the project. It also incorporates the most current practices for quality assurance, environmental mitigation, and operations management.

For example, in preparing for construction, the Proponents will develop an overarching safety management program that will be supported by a series of site-specific



construction safety plans. Environmental Protection Plans (EPPs) are also being developed for construction. Preliminary EPPs will be appended to the impact statement for the Project. Final EPPs will be completed prior to construction.

## **7.0 ENGAGEMENT AND ACCOMMODATION PLAN**

The purpose of the Engagement and Accommodation Plan (EAP) is to provide guidance to the project team regarding working with First Nations' communities to help ensure that the project runs smoothly and has a successful outcome. The EAP outlines an approach for creating and maintaining open and transparent communication with the BFN Lands Department and Community throughout the project so that the culture and traditions of BFN are respected.

The EAP will include a summary of all engagement conducted prior to the IPD and outline the Proponent's engagement for the project, including their preferred engagement tools and strategies. Engagement includes virtual and in-person meetings (*i.e.*, Community Engagement Meetings) with the BFN, Alamos Gold, and the public, as well as email and phone communications. At this time, it is our understanding there will be scheduled open engagement meeting in Wawa and Dubreuilville during the Class EA process. The EAP will be conducted according to the BFN Engagement and Accommodation Protocol.

The initiation of the IPD engagement process will begin by providing all available information to members and other interested parties for comment. A summary of issues and engagement will be provided to the Proponents, members and other interested parties addressing how the comments and issues received were characterized and are to be considered by the proponent.

## **8.0 INITIAL PREFERRED SOLUTION**

BFN does not currently have a formal environmental standards policy framework to assess and determine the best option for infrastructure projects such as this. As such, Azimuth developed a ranking system incorporating environmental and engineering considerations (briefly described in Section 2.0). At this time, Alternative Solution #4 has been identified as the preferred solution, as the routes traditional transmission line characteristics and location ultimately minimizes removal and impacts to woodlands and wetland communities; while minimizing the number of poles and the complexity of access.



A detailed summary of the alternative solutions ranking criteria and ranking rationale is incorporated into the associated Environmental Study report (Class EA for a Minor Transmission Line).

## **9.0 INITIAL RECOMMENDATIONS AND MITIGATION**

It is recommended that the BFN Lands Department and Community review the IPD and provide feedback, as part of the engagement process, and to ensure the proposed project conforms to engagement procedures and respects the BFN regulatory framework. Feedback will be used to inform development of the EA and mitigate potential impacts to natural heritage features and functions associated with the proposed transmission line. Mitigation of the proposed infrastructure, would be recommended to be based on existing BMPs and relevant provincial/federal legislation, policies and procedures.

## **10.0 CONCLUSIONS**

To service the Alamos gold mines; the LP is working to establish a merchant transmission line for future servicing long term requirements. The alternative solutions are in the process of being evaluated as per the EA Law. Selection of the preferred solution for the transmission system is based on engineering, scientific background, biophysical and traditional knowledge data, as well as access logistics, and public and environmental safety factors. At this time, Alternative Solution #4 is the preferred solution based on the EA ranking criteria.

## **11.0 REFERENCES**

BESTECH Canada Limited and Warrior Engineering Ltd (BESTECH). 2023. Shaft Right of Way Selection Trade Off Report. Document No. 2023.0068.02-MRPT-01



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## **LIST OF APPENDICES**

- Appendix A: Proposed Alternative Solutions Study Areas**  
**Appendix B: Proposed Pole Types**
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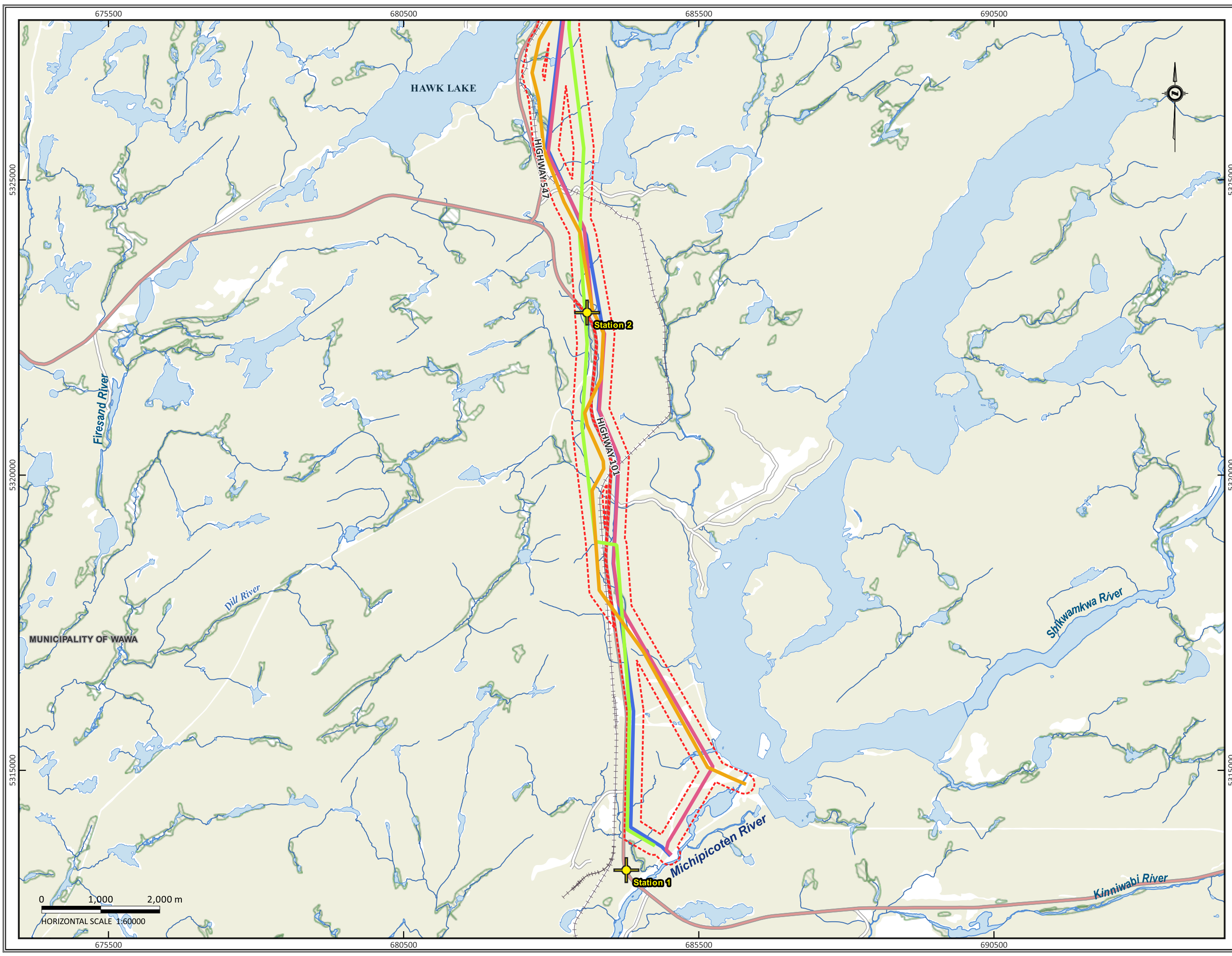
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## **Appendix A**

### **Proposed Alternative Solutions Study Areas**

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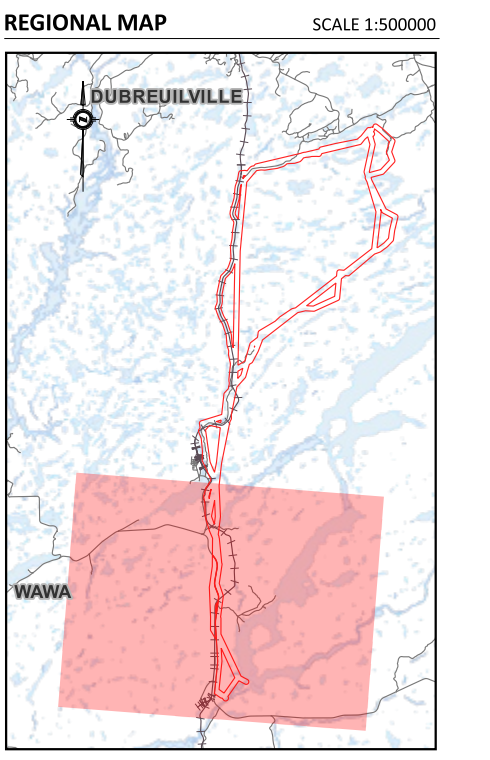


**LEGEND**

- - - Study Area
- ▨ Unevaluated Wetland
- ▨ Permanent Watercourse
- ▨ Waterbody
- ▨ Wooded Area
- Road
- Highway
- Rail
- + Stations

**Proposed Alternative Solutions**

- Alternative Solution #1
- Alternative Solution #2
- Alternative Solution #3
- Alternative Solution #4



**AZIMUTH ENVIRONMENTAL CONSULTING, INC.**  
 ENVIRONMENTAL ASSESSMENTS & APPROVALS

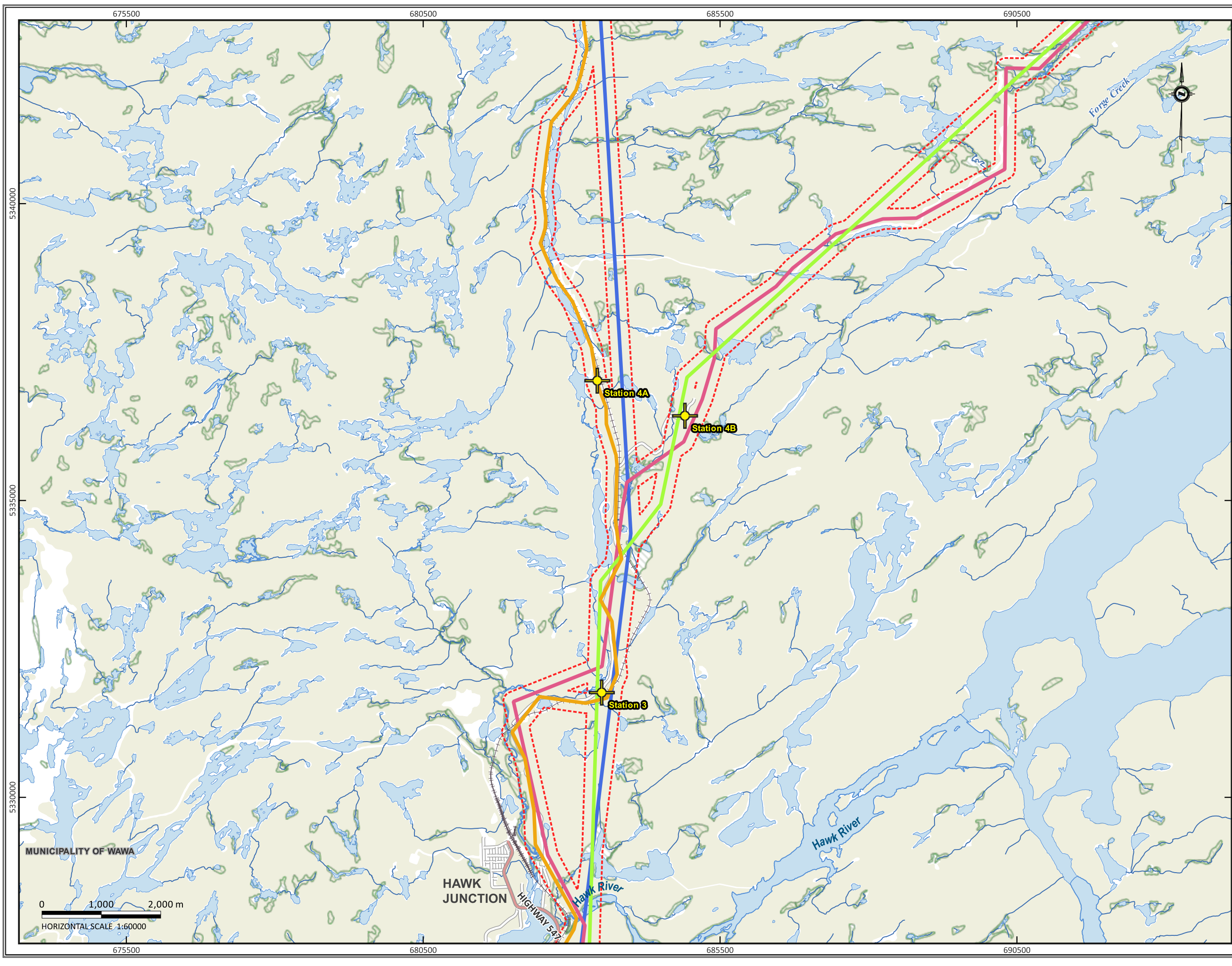
**STUDY AREA**

TRANSMISSION SYSTEM PROJECT  
 WAWA, ON

DATE ISSUED:	MAY 2024	<b>DRAWING NO.:</b> <b>1-01</b>
CREATED BY:	A.L.	
PROJECT NO.:	23-028	
BASE MAP:	MNRF	

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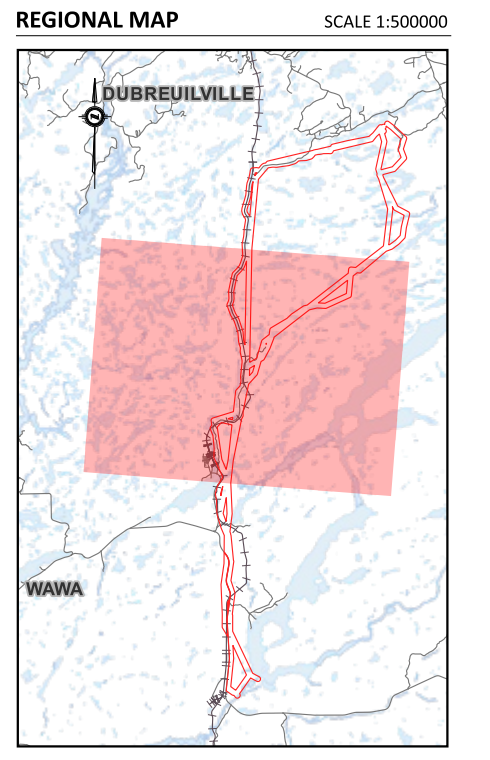


**LEGEND**

- Study Area
- Unevaluated Wetland
- Permanent Watercourse
- Waterbody
- Wooded Area
- Road
- Highway
- Rail
- + Stations

**Proposed Alternative Solutions**

- Alternative Solution #1
- Alternative Solution #2
- Alternative Solution #3
- Alternative Solution #4

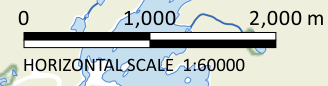


**STUDY AREA**

TRANSMISSION SYSTEM PROJECT  
WAWA, ON

DATE ISSUED:	MAY 2024	<b>DRAWING NO.:</b>  <b>1-02</b>
CREATED BY:	A.L.	
PROJECT NO.:	23-028	
BASE MAP:	MNRF	

File: Q:\23 Projects\23-028 Wawa Transmission Station Class EA (BPN)\04.0 - Drafting\23-028.dwg



675500 680500 685500 690500

5340000 5335000 5330000

MUNICIPALITY OF WAWA

HAWK JUNCTION

HAWK RIVER

HIGHWAY 547

Forge Creek

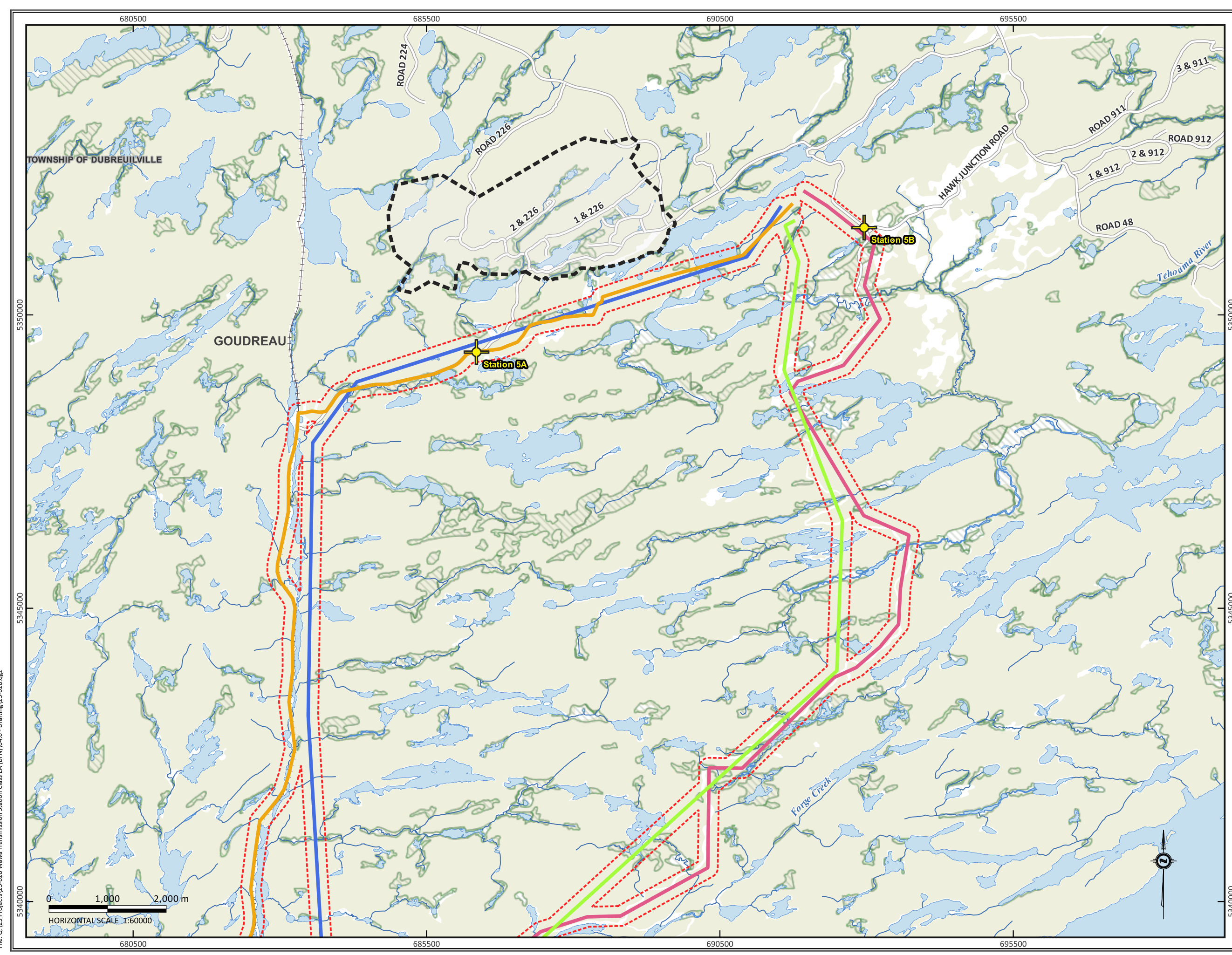
Station 4A

Station 4B

Station 3

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5330000 5335000 5340000

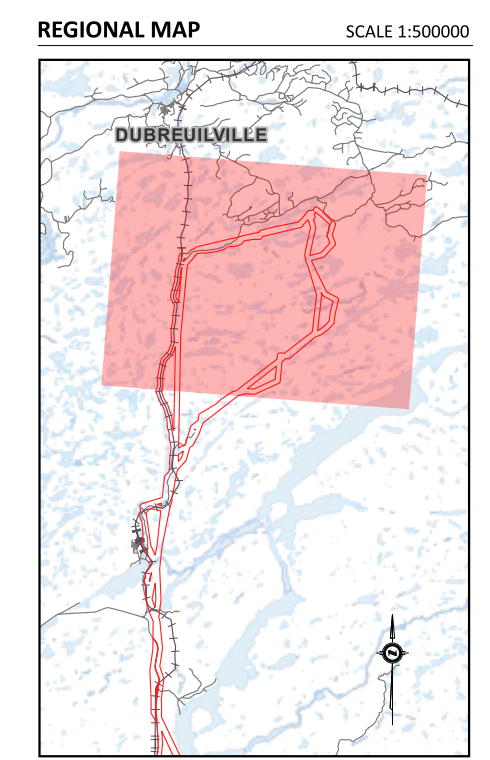


**LEGEND**

- - - Study Area
- Unevaluated Wetland
- Permanent Watercourse
- Waterbody
- Wooded Area
- Road
- Rail
- + Stations
- Mine Site

**Proposed Alternative Solutions**

- Alternative Solution #1
- Alternative Solution #2
- Alternative Solution #3
- Alternative Solution #4

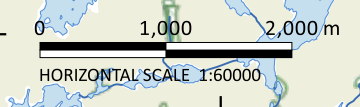


**STUDY AREA**

TRANSMISSION SYSTEM PROJECT  
WAWA, ON

DATE ISSUED: MAY 2024	DRAWING NO.:
CREATED BY: A.L.	<b>1-03</b>
PROJECT NO.: 23-028	
BASE MAP: MNRF	

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**Appendix B**

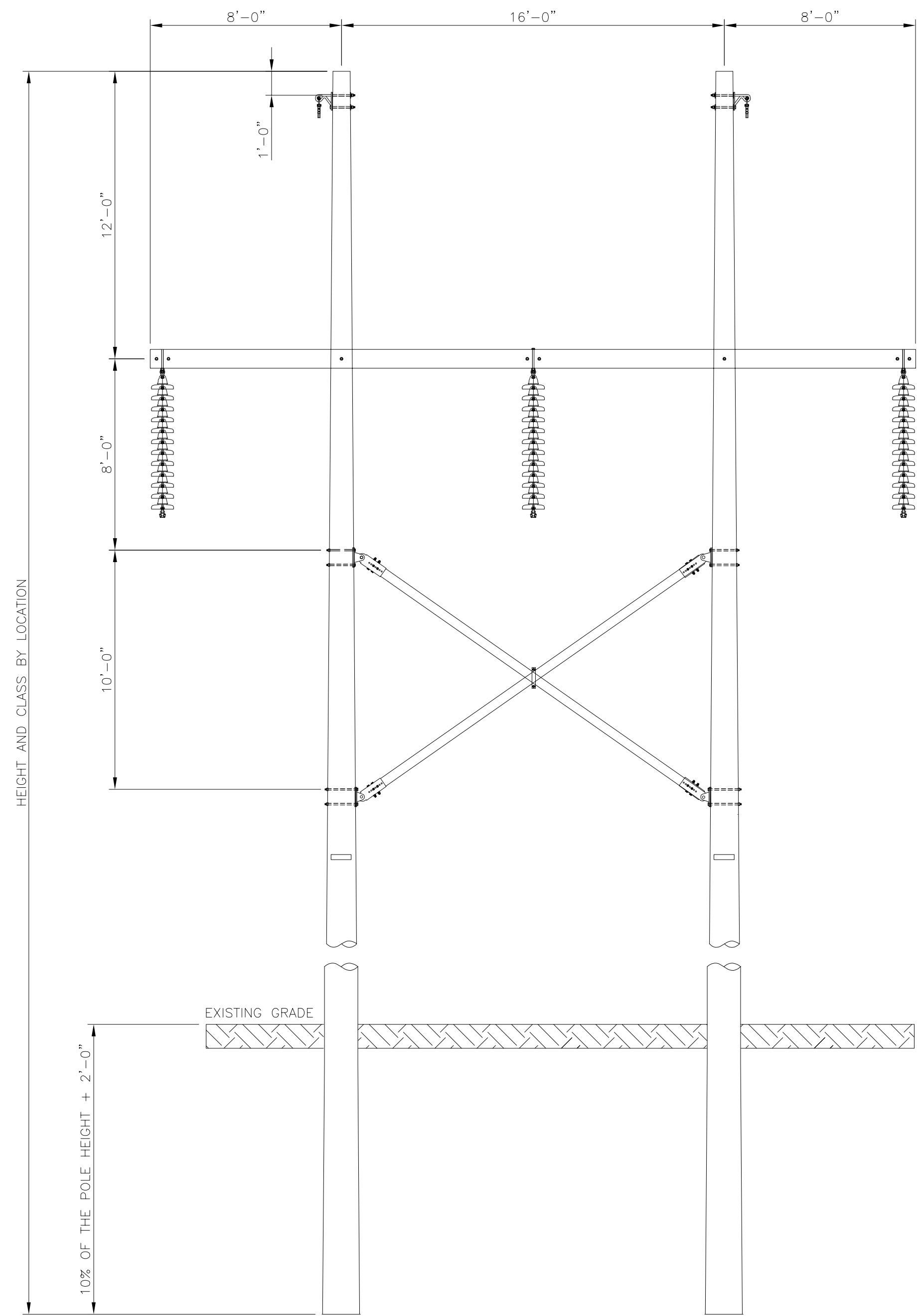
**Proposed Pole Types**

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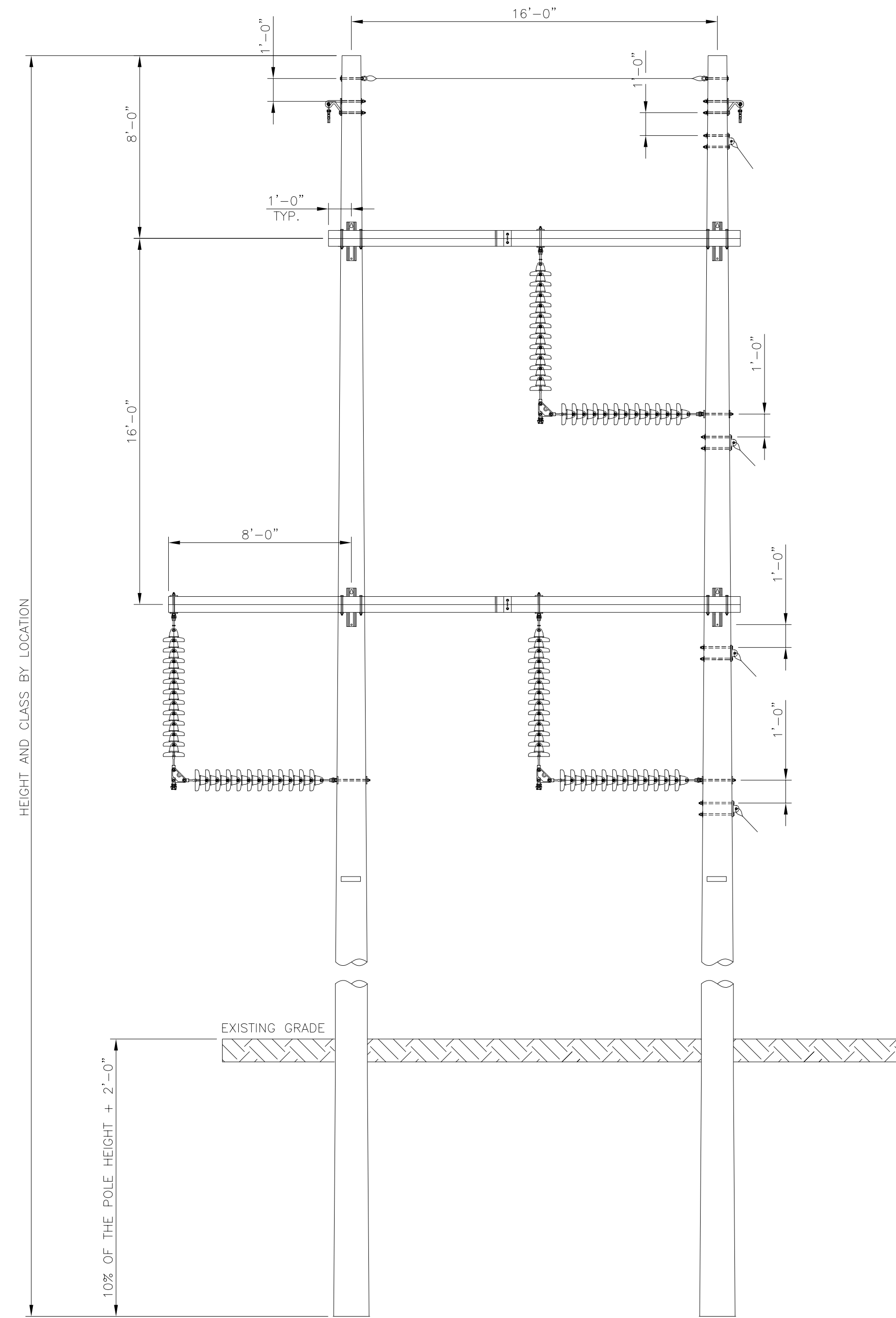
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H-FRAME TANGENT STRUCTURE  
1/4"=1'-0"



MEDIUM ANGLE 2-POLE STRUCTURE  
1/4"=1'-0"



ALAMOS GOLD  
115KV TRANSMISSION POWER LINE PROJECT

TYPICAL STRUCTURE FAMILIES



CLIENT

Scale 1/4" = 1'-0"		SKETCH 3				
Off. Code	Proj. Code	Area Code	Disc. Code	Doc. Type	Unique No.	Sheet No.
						1 OF 1 A

Rev.	Date	Description	Drawn	Checked	Reviewed
A	2023-06-30	ISSUED FOR REVIEW	A.G.C.	A.L.	R.R.

Drawing No.	Description
	Reference Drawings



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**APPENDIX C**

**Transmission Line Consultation Information**

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**BFN Record of Consultation**

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**Batchewana First Nation - Mine Connector Project Record of Consultation**

Consultation Date	Consultation Activitiy	Michipicoten First Nation	Missanabe Cree First Nation	Garden River First Nation	Brunswick House First Nation	Metis Nation of Ontario	Red Sky Metis Independent Nation	Town of Dubreilville	Town of Wawa	Sault Ste Marie	
						Not included on the Consultation Delegation List					
May 28, 2024	Informal Meeting Request	Email correspondence between Chiefs									
June 25, 2024	Provide Environmental Assessment Report and Interim Project Description	Couriered to Chief Tangee	Couriered to Chief Gauthier	Couriered to Chief Bell				Couriered to Mayor Nantel	Couriered to Mayor Pilon		
July 2-3, 2024	Open House, advertised on BFN website, also radio adverts on CJWA-FM							July 3, 2024	July 2, 2024		
July 16, 2024	Offer to Conduct Open House or Administrative Meeting	Couriered to Chief Tangee	Couriered to Chief Gauthier	Couriered to Chief Bell							
August 12, 2024	Provide Additional Updated Environmental Assessment Information	Couriered to Chief Tangee	Couriered to Chief Gauthier	Couriered to Chief Bell				Couriered to Mayor Nantel	Couriered to Mayor Pilon		
August 28, 2024	Email: Garden River FN Asking for meeting to discuss project			Email Correspondence requesting meeting Between Batchewana and Garden River							
September 16, 2024	Provide Environmental Assessment Fisheries Update, Maps and Field Notes	Couriered to Chief Tangee	Couriered to Chief Gauthier	Couriered to Chief Bell				Couriered to Mayor Nantel	Couriered to Mayor Pilon		
October 9, 2024	Inquiry to the project via telephone	John Kim Bell and Chief Mark McCoy									
October 9, 2024	Email Forwarded to BFN project Lead from Garden River First Nation meeting request			Email Correspondence Danny Sayers Jr, Matthias Nunno, and Amanda Harten							
October 10, 2024	Phone Call Project inquiry	John Kim Bell and Amanda Harten									
October 15, 2024	Provide Environmental Assessment Fisheries Update, Maps and Field, project description, assessment report and Notes	Couriered to John Kim Bell									
October 23, 2024	Project inquiry discussion: Face to face meeting	ALAMOS office: BFN, MFN, ALAMOS									
					Consultation Deligation list						
October 10, 2024						Couriered to Chief Renae Vanbuskirk					
November 6, 2024						Meeting with Kevin Tangle in Toronto					
November 14, 2024	Email	Email Coorespondence with the two chiefs									
November 19, 2024	Telephone & follow-up email			Dates set for First Nations Technical meeting held in Batchewana on December 10th 2024 and two Community Open houses first on December 17th and Second one January 2025 (Had to rescedule to the New Year)		Facilitating the open houses dates and techical meeting					
November 21, 2024						Attept to coordinate dates for the technical and open house meetings					
December 4-5, 2024	Open House, advertised on BFN website, BFN Newsletter, also radio adverts on CJWA-FM							December 5, 2024	December 4, 2024		
						Informed that new Chief and Council has been elected					
December 9, 2024						Meeting with Matthias Nunno to discuss the project and dates for the open house in the community					
December 11, 2024	Open House, advertised as posters, on BFN website, BFN Newsletter									Batchewana First Nation- Delta Hotel	



# Confirmation



CJWA FM  
 Labbe Media Incorporated  
 32 Third Ave, PO Box 1447  
 Wawa, Ontario  
 P0S 1K0

Phone: 705-856-4555  
 Toll Free: 1-888-465-2592  
 Website: <https://jjamfm.live>  
 Email: [ceojjam@bellnet.ca](mailto:ceojjam@bellnet.ca)  
 NewsEmail:  
[jjamfmnews@bellnet.ca](mailto:jjamfmnews@bellnet.ca)

Contract # 2562  
 Date Entered 06/24/2024  
 Sales Person Rick Labbe  
 Billing Cycle Broadcast  
 Conflict 1 GENERAL CLEAR ALL.  
 Product Radio-Public Notice of Open House Meetings  
 P.O. # Radio- Public Notice of Open House Meetings  
 Contract 06/25/2024 - 07/02/2024  
 Comment "We warrant that the broadcast information shown on this invoice was taken from the program logs."

CHIEF MARK MCCOY  
 ATTN WAYNE GREER  
 BATCHEWANA FIRST NATION  
 236 FRONTENAC STREET  
 BATCHEWANA FIRST NATION ON P6A 6Z1

Station	Date Range	Time Range	Len	Schedule	Repeated	Rate	Qty	Total
1	CJWA-FM	06/24/2024-06/30/2024	06:00:00-22:00:00	01:30	0,6,6,6,6,8,8	22.00	40	880.00
2	CJWA-FM	07/01/2024-07/02/2024	06:00:00-18:00:00	00:30	10,10,0,0,0,0,0	10.00	20	200.00
<b>Total</b>								<b>1080.00</b>

HST#863484242

Projected Billing	Count	Gross	Net
June	2024	40	880.00
July	2024	20	200.00
		<b>60</b>	<b>1080.00</b>

Open Houses on December 4 and 5, 2024 were also advertised on radio. Spot tapings available on request

Customer \_\_\_\_\_ Sales Person \_\_\_\_\_



**BATCHEWANA FIRST NATION OF OJIBWAYS**

*Rankin Reserve 15D - Goulais Bay Reserve 15A- Obadjiwan Reserve 15E - Whitefish Island 15*

Administrative Office: Rankin Reserve 15D  
236 Frontenac Street  
Batchewana First Nation, ON  
P6A 6Z1  
PH: (705) 759-0914 / FAX: (705) 759-9171  
[www.batchewana.ca](http://www.batchewana.ca)

**Public Notice of Open House Meetings**

1000757443 LP, a business venture between Batchewana First Nation and Alamos Gold will be holding Open Houses on **December 4th in Wawa, at the Royal Canadian Legion Branch 429, 51 Broadway Avenue from 6:00 – 8:00 PM** and **on December 5th in Dubreuilville at the Town Offices, 23 Pine Street from 6:00 – 8:00 PM.**

The purpose of these meetings is to allow the public the opportunity to learn about a proposed 115 kilovolt transmission line that will provide power to the Island Gold and Magino Gold sites. This project will allow for expansion at both mine sites and will provide long-term reliable grid connected power that will eliminate the use of fossil fuel generated power at Magino Gold.

These Open Houses are being held in compliance with the Ontario Ministry of the Environment, Conservation and Parks Class Environmental Assessment for Minor Transmission Projects. The Notice of Commencement was filed with the Ministry on June 21, 2024, and we are looking to gather public input into the Class Environmental Assessment and to provide an overall update on the project from an engineering and design perspective.

There will be representatives of the environmental consulting firm Azimuth Environmental, Batchewana First Nation, Alamos Gold and Bestech Engineering who will be present to answer your questions and to record any comments you might have about the project.

We look forward to seeing at these meetings and if you need further information, you can contact Danny Sayers, Director, Lands and Economic Development, Batchewana First Nation at [dannysayerjr@batchewana.ca](mailto:dannysayerjr@batchewana.ca) or (705) 759-0914.

# OPEN HOUSE



## ANNOUNCEMENT



# Merchant Line 115kv Project

### Locations:

**Township of Dubreuilville: on December 5th, 2024 6-8pm**

**Location: Town Hall**

**Address: 23 Pine Street, Dubreuilville, ON**

**Municipality of WAWA: on December 4th 2024 6-8pm**

**Location: Legion**

**Address: 51 Broadway Ave, Wawa, ON POS 1K0**

**City of Sault Ste Marie: December 11th 2024 6-8pm**

**Location: Delta Hotel**

**Address: 208 St. Mary's Dr, Sault Ste Marie**



ALAMOS GOLD INC.

### For more information contact:

**Amanda Harten: [amanda.harten@batchewana.ca](mailto:amanda.harten@batchewana.ca)**

**or**

**Dave Bucar: [DBucar@alamosgold.com](mailto:DBucar@alamosgold.com)**

OPEN HOUSE  
ANNOUNCEMENT  
115 KV MERCHANT TRANSMISSION LINE  
COMPLETION OF CLASS ENVIRONMENTAL ASSESSMENT  
IN SUPPORT OF  
ALAMOS GOLD ISLAND DISTRICT GOLD MINE

BATCHEWANA FIRST NATION IS PLEASED TO ANNOUNCE A PROJECT INITIATIVE OF WITH ALAMOS GOLD IN SUPPORT OF THE EXPANSION OF ISLAND DISTRICT GOLD MINE.

OPEN HOUSE TO TAKE PLACE:  
WEDNESDAY DECEMBER 11, 2024  
6:00 – 8:00 PM  
DELTA HOTEL, 208 ST. MARY'S DRIVE

COME OUT AND LEARN ALL ABOUT THE PROJECT, SPEAK WITH REPRESENTATIVES OF BATCHEWANA FIRST NATION AND ALAMOS GOLD AND GET INFORMATION FROM THE CONSULTING TEAMS WORKING ON THIS VERY IMPORTANT REGIONAL PROJECT.

EVERYONE WELCOME

REFRESHMENTS PROVIDED.

FOR MORE INFORMATION CONTACT:  
[amanda.harten@batchewana.ca](mailto:amanda.harten@batchewana.ca) or  
[dbucar@alamosgold.com](mailto:dbucar@alamosgold.com)



ALAMOS GOLD INC.

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## **Public Meetings Information**

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## Public Meetings

Public meetings (Open Houses) occurred between July 2, 2024 and January 30, 2025 to inform the public and other interested parties on the Mine Connector Merchant Transmission Line project. The locations and dates of these meetings are provided in the table below.

<b>Date of Public Meeting</b>	<b>Location</b>
July 2 2024	Wawa
July 3 2024	Dubreuilville
December 4 2024	Wawa
December 5 2024	Dubreuilville
December 11 2024	Sault St. Marie
January 28 2025	Sault St. Marie (Garden River)
January 30 2025	Sault St. Marie (Rankin)

A summary of the Class EA process and identification of a preferred solution was presented via an electronic presentation and/or story boards. Representatives from parties involved on the project (*e.g.*, Azimuth, Bestech, Alamos, BFN) attended the meetings to provide additional information and answer questions. The sign in sheets and submitted public comment forms are provided below. The January 28, 2025 sign in sheet was not included in this document as no interested parties attended the meeting.







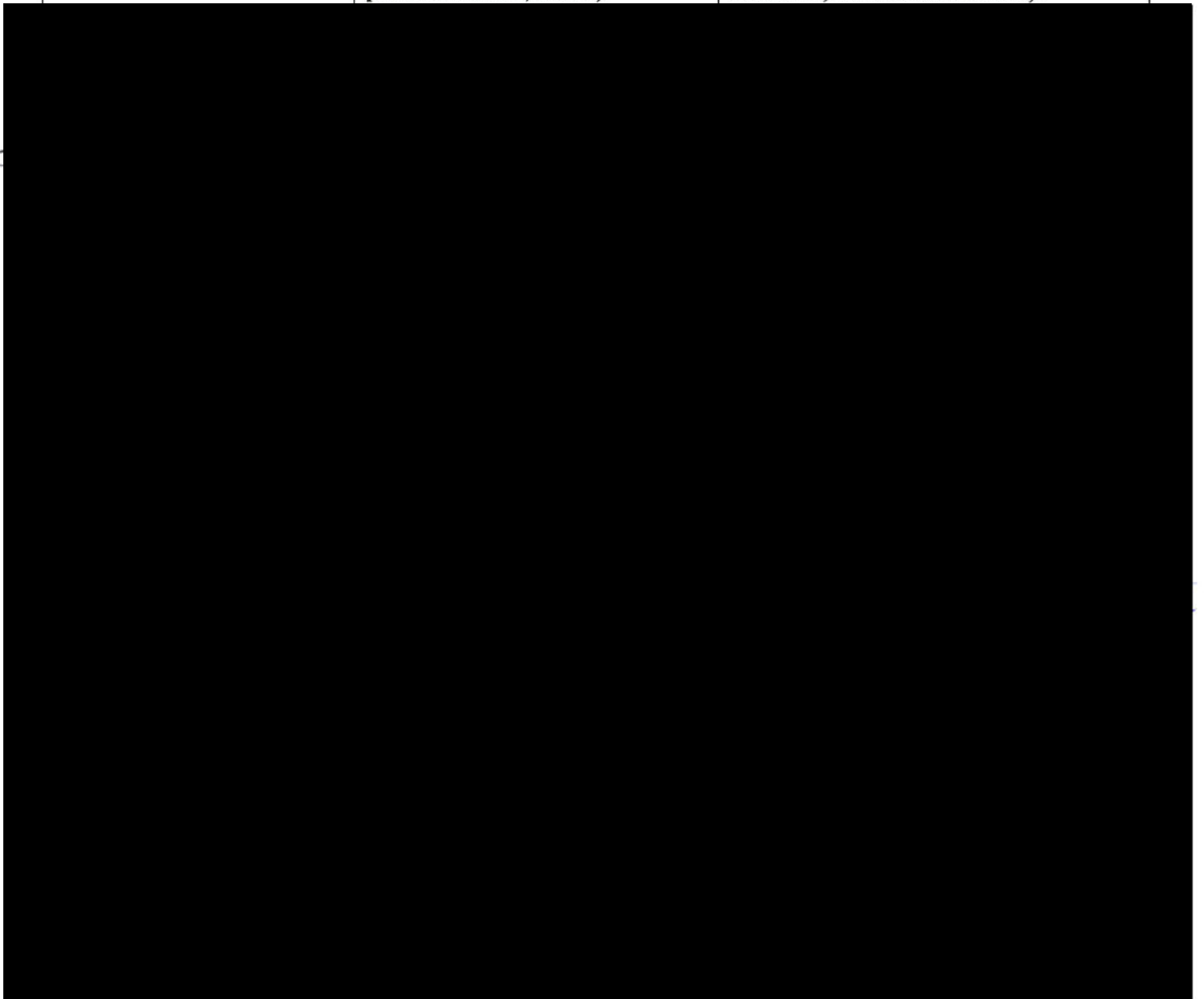


**Mine Connector Merchant Transmission Line Project**  
**A First Nation Class EA Project**

**Open House**  
**December 11, 2024**

**Sign In Sheet**

<b>Name:</b>	<b>Contact Information (<i>i.e.</i>, phone number, email)</b>	<b>Interest (<i>i.e.</i> Landowner, Group Member, Interested Citizen):</b>
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# Mine Connector Merchant Transmission Line Project

## A First Nation Class EA Project

Open House  
December 4, 2024

### Public Comment Form

Please complete this comment form and leave in the comment form box or with Azimuth staff in attendance.

**1. What is your interest in this study?**

Affected Landowner \_\_\_\_\_ Interested Citizen \_\_\_\_\_  
Interested Group Member \_\_\_\_\_ Government Representative \_\_\_\_\_  
First Nation Batchewana Other (please specify) \_\_\_\_\_

**2. Do you have any concerns regarding the location of any of the alternative transmission line routes?**

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**3. Do you have any concerns regarding the selection of the preliminary preferred route and how it may affect your property, livelihood, and/or traditional land use?**

protect Mother Earth as much as needed

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(Please complete other side of form)

4. Do you have any concerns regarding the construction of the proposed transmission line?

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5. Do you have any other concerns about the project that you would like to bring to our attention?

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6. Do you want us to contact you to discuss your concerns?

Yes \_\_\_\_\_ No, adequately addressed at meeting \_\_\_\_\_

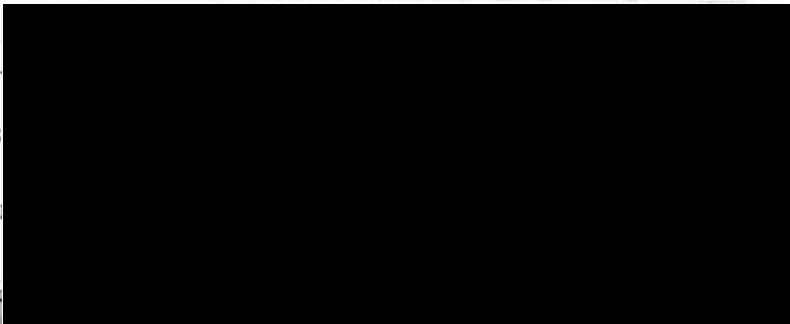
If yes, please provide your full mailing address, telephone number, and/or email so we can contact you.

Name -

Address

Telephone

Email -



7. Do you want to receive a copy of the Class EA Report that will be submitted to the Ministry of Environment, Conservation and Parks for review?

Yes \_\_\_\_\_ No \_\_\_\_\_

(If yes ensure complete mailing address completed above)

8. Do you want your contact information on this comment form kept confidential?

Yes \_\_\_\_\_ No  \_\_\_\_\_

**Mine Connector Merchant Transmission Line Project**  
**A First Nation Class EA Project**

**Open House**  
**December 4, 2024**

**Public Comment Form**

---

Please complete this comment form and leave in the comment form box or with Azimuth staff in attendance.

---

**1. What is your interest in this study?**

Affected Landowner \_\_\_\_\_ Interested Citizen   X   \_\_\_\_\_  
Interested Group Member \_\_\_\_\_ Government Representative \_\_\_\_\_  
First Nation \_\_\_\_\_ Other (please specify) \_\_\_\_\_

**2. Do you have any concerns regarding the location of any of the alternative transmission line routes?**

  No   \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**3. Do you have any concerns regarding the selection of the preliminary preferred route and how it may affect your property, livelihood, and/or traditional land use?**

  No   \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

4. Do you have any concerns regarding the construction of the proposed transmission line?

*None at all*

5. Do you have any other concerns about the project that you would like to bring to our attention?

*We need the powerline as soon as possible. This line will bring much needed electrical capacity to our region and communities*

6. Do you want us to contact you to discuss your concerns?

Yes

No, adequately addressed at meeting

If yes, please provide your full mailing address, telephone number, and/or email so we can contact you.

Name -

Address

Telephone

Email -

7. Do you want to receive a copy of the Class EA Report that will be submitted to the Ministry of Environment, Conservation and Parks for review?

Yes

No

(If yes ensure complete mailing address completed above)

8. Do you want your contact information on this comment form kept confidential?

Yes

No

**Mine Connector Merchant Transmission Line Project**  
**A First Nation Class EA Project**

**Open House**  
**Jan 30, 2025**

**Public Comment Form**

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Please complete this comment form and leave in the comment form box or with Azimuth staff in attendance.

---

**1. What is your interest in this study?**

Affected Landowner \_\_\_\_\_ Interested Citizen \_\_\_\_\_  
Interested Group Member \_\_\_\_\_ Government Representative \_\_\_\_\_  
First Nation ✓ \_\_\_\_\_ Other (please specify) \_\_\_\_\_

**2. Do you have any concerns regarding the location of any of the alternative transmission line routes?**

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Great Presentation Display

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**3. Do you have any concerns regarding the selection of the preliminary preferred route and how it may affect your property, livelihood, and/or traditional land use?**

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(Please complete other side of form)

**4. Do you have any concerns regarding the construction of the proposed transmission line?**

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**5. Do you have any other concerns about the project that you would like to bring to our attention?**

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**6. Do you want us to contact you to discuss your concerns?**

Yes \_\_\_\_\_ No, adequately addressed at meeting \_\_\_\_\_

**If yes, please provide your full mailing address, telephone number, and/or email so we can contact you.**

Name - \_\_\_\_\_

Address - \_\_\_\_\_

Telephone - \_\_\_\_\_

Email - \_\_\_\_\_

**7. Do you want to receive a copy of the Class EA Report that will be submitted to the Ministry of Environment, Conservation and Parks for review?**

Yes \_\_\_\_\_ No \_\_\_\_\_

(If yes ensure complete mailing address completed above)

**8. Do you want your contact information on this comment form kept confidential?**

Yes \_\_\_\_\_ No \_\_\_\_\_

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**Public Meetings Presentation**

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**Mine Connector Merchant Transmission Line  
First Nation Class EA  
Batchewana First Nation – Alamos Gold**



## Project Overview

- The proposed infrastructure is a 115kV transmission line
- Need - to support Island Gold and Magino mines long-term electrical power requirements
- Located north of Michipicoten River to the mine sites (15km south of Dubreuilville)
- Five Alternative Solutions were evaluated (4 routes, 1 “Do Nothing” approach)





## General Structure Requirements



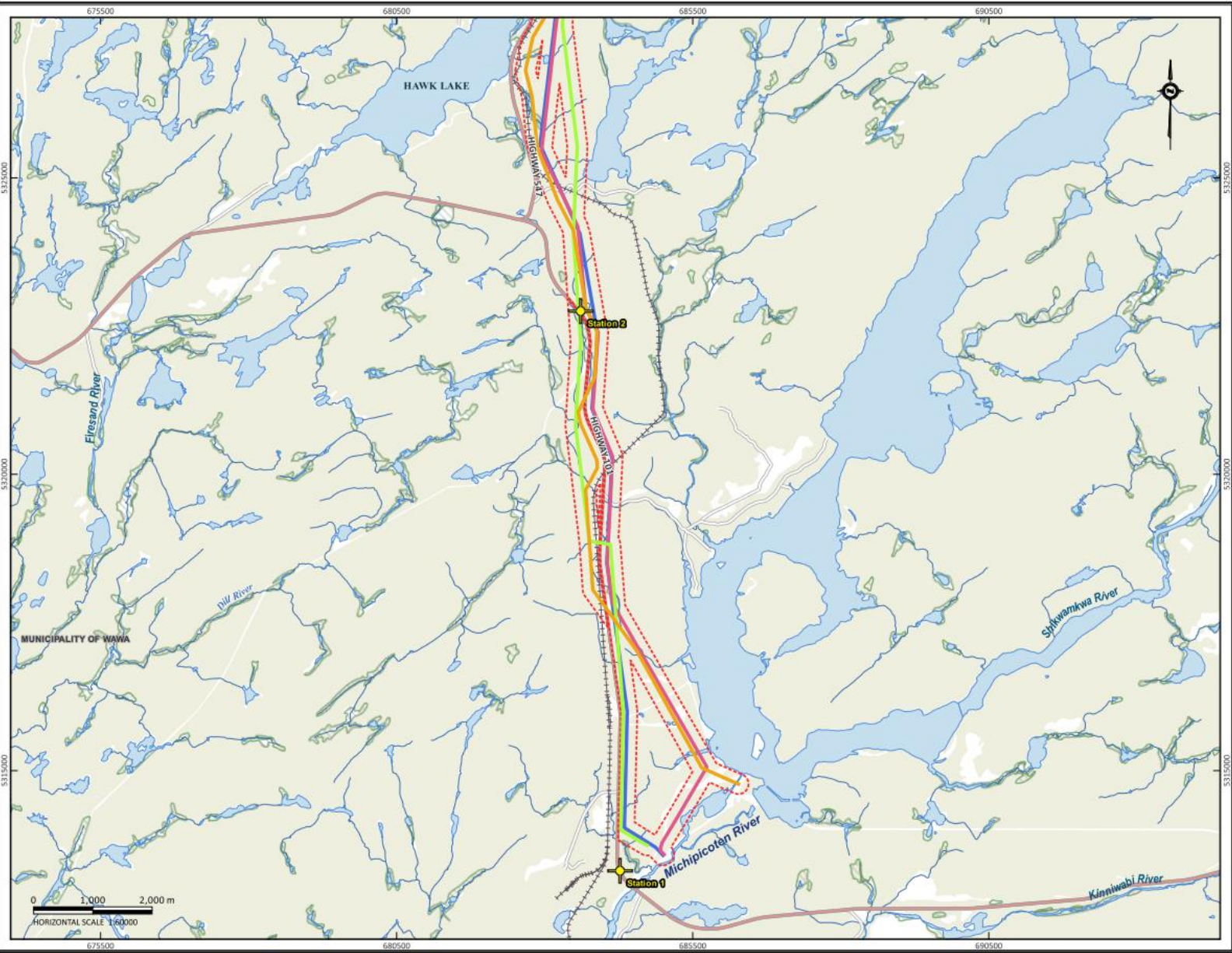
3 Pole Structure



Structure Spanning  
River



Monopole Structure



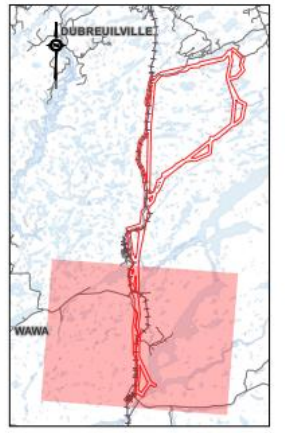
**LEGEND**

- Study Area
- Unevaluated Wetland
- Permanent Watercourse
- Waterbody
- Wooded Area
- Road
- Highway
- Rail
- Stations

**Proposed Alternative Solutions**

- Alternative Solution #1
- Alternative Solution #2
- Alternative Solution #3
- Alternative Solution #4

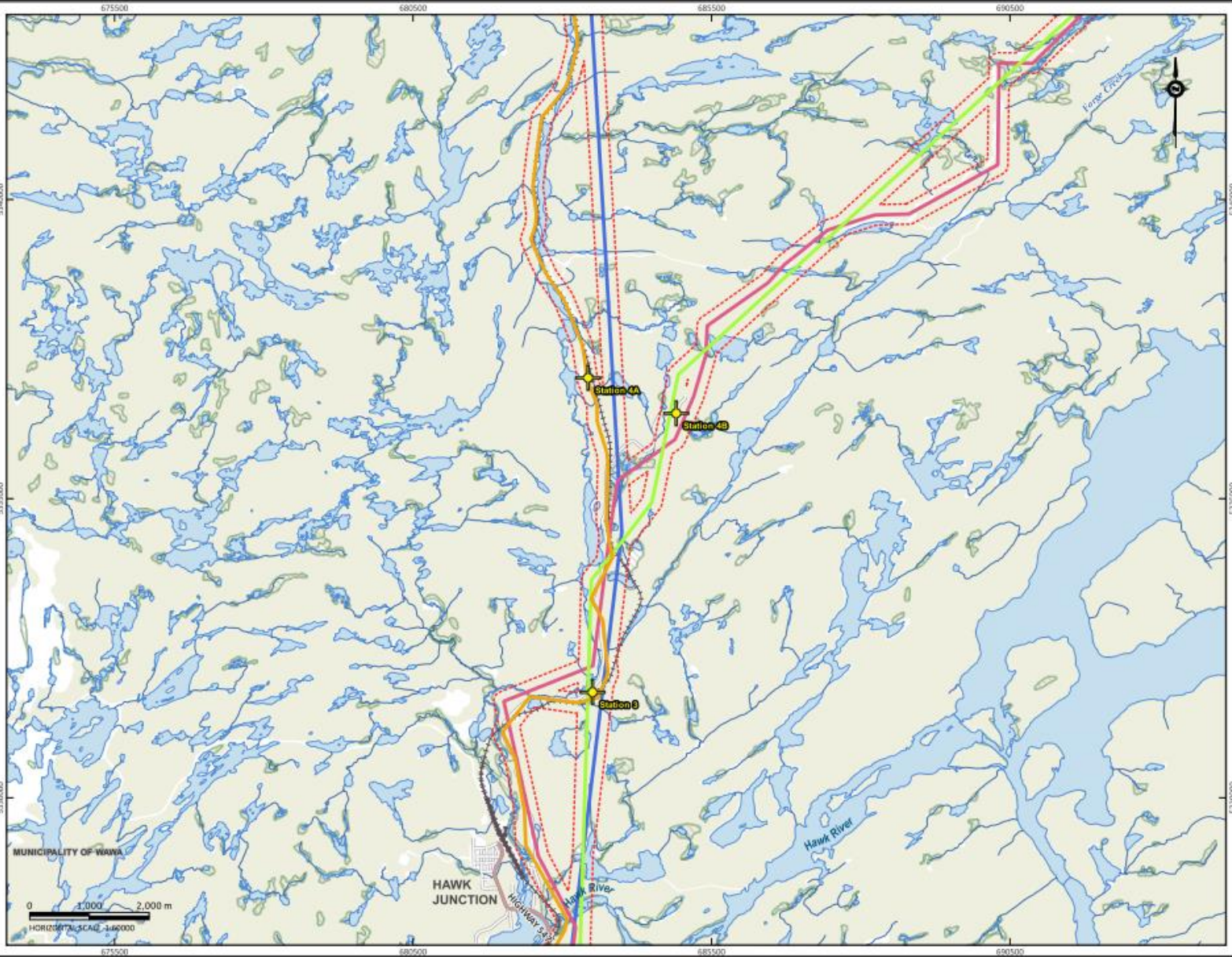
**REGIONAL MAP** SCALE 1:50000



**STUDY AREA**

WAWA TRANSMISSION LINE  
WAWA, ON

DATE ISSUED: FEBRUARY 2024	DRAWING NO.:
CREATED BY: A.L.	<b>1-01</b>
PROJECT NO.: 23-028	
BASE MAP: MNRP	

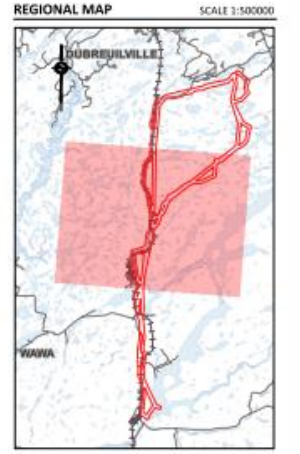


**LEGEND**

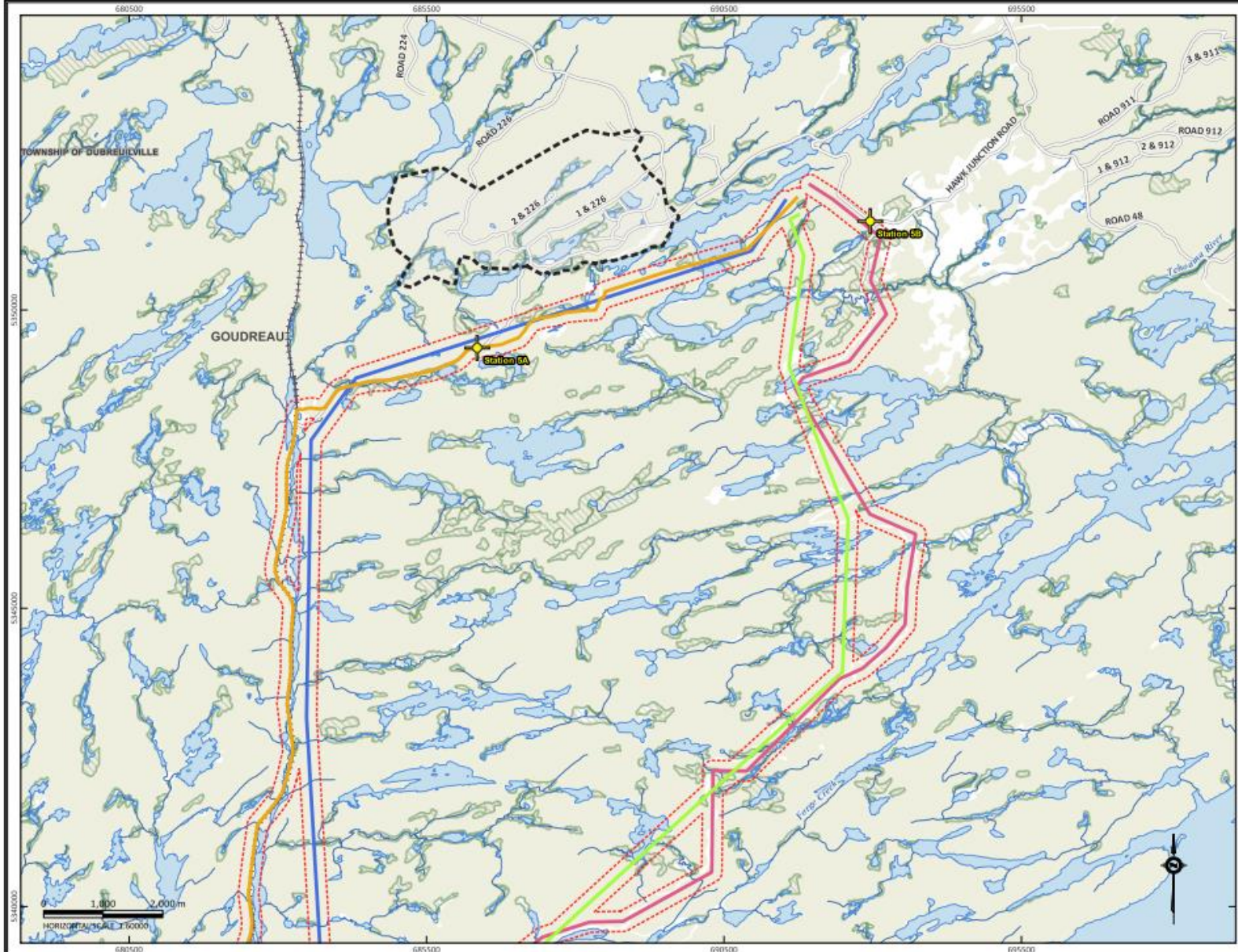
- Study Area
- Unevaluated Wetland
- Permanent Watercourse
- Waterbody
- Wooded Area
- Road
- Highway
- Rail
- Stations

**Proposed Alternative Solutions**

- Alternative Solution #1
- Alternative Solution #2
- Alternative Solution #3
- Alternative Solution #4



<b>STUDY AREA</b>	
WAWA TRANSMISSION LINE WAWA, ON	
DATE ISSUED: FEBRUARY 2024	DRAWING NO.:
CREATED BY: A.L.	<b>1-02</b>
PROJECT NO.: 23-028	
BASE MAP: MNRP	

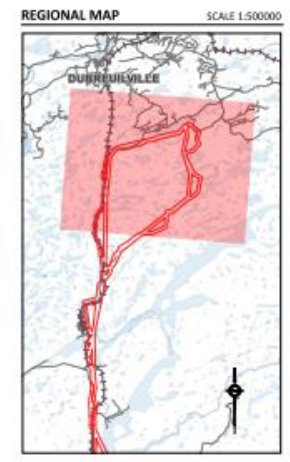


**LEGEND**

- Study Area (Red dashed line)
- Unevaluated Wetland (Green hatched area)
- Permanent Watercourse (Blue line)
- Waterbody (Blue area)
- Wooded Area (Light green area)
- Road (Grey line)
- Rail (Black line with cross-ticks)
- Stations (Yellow star symbol)
- Mine Site (Black square with cross-hatch)

**Proposed Alternative Solutions**

- Alternative Solution #1 (Blue line)
- Alternative Solution #2 (Red line)
- Alternative Solution #3 (Orange line)
- Alternative Solution #4 (Green line)



**AZIMUTH ENVIRONMENTAL CONSULTING, INC.**  
ENVIRONMENTAL ASSESSMENT & SERVICES

<b>STUDY AREA</b>		
WAWA TRANSMISSION LINE WAWA, ON		
DATE ISSUED: FEBRUARY 2024	CREATED BY: A.L.	DRAWING NO: <b>1-03</b>
PROJECT NO: 23-028	BASE MAP: MNP	



## Study Approach

Fieldwork focused on natural heritage features at pre-determined survey stations along the alternatives. Fieldwork included:

- Delineate vegetation communities using Central Ontario ELC
- Two plant inventories
- Evening calling amphibian survey
- Turtle visual encounter surveys
- Dawn breeding bird surveys
- A review of aquatic features and potential fish habitat
- Deploy wildlife camera's and conduct wildlife tracking
- Record incidental wildlife observations





ELC NAME	DESCRIPTION
G165N	Open Rock Barren
G164T	Rock Barren (Low Treed)
G142N	Mineral Meadow Marsh (Not Woody)
G136T	Sparse Treed Fen (Low Treed)
G134S	Mineral Thicket Swamp (Shrub)
G128T	Organic Intermediate Conifer Swamp (Tall Treed)
G128T	Organic Intermediate Conifer Swamp (Low Treed)
G070T	Moss, Coarse: Aspen - Birch Hardwood (Tall Treed)
G066T	Moss, Coarse: Cedar Conifer (Tall Treed)
G055T	Dry to Fresh, Coarse: Aspen - Birch Hardwood (Tall Treed)
G055T	Dry to Fresh, Coarse: Aspen - Birch Hardwood (Low Treed)
G052T	Dry to Fresh, Coarse: Spruce - Fir Conifer (Tall Treed)
G050T	Dry to Fresh, Coarse: Pine - Black Spruce Conifer (Tall Treed)
G050T	Dry to Fresh, Coarse: Pine - Black Spruce Conifer (Low Treed)
G012T	Very Shallow, Dry to Fresh: Pine - Black Spruce Conifer (Tall Treed)
G012T	Very Shallow, Dry to Fresh: Pine - Black Spruce Conifer (Low Treed)
DA	Disturbed Area



**LEGEND**

- Study Area
- Mapped Watercourse
- Waterbody
- Unevaluated Wetland
- Stations
- Turtle Survey

**Waterbody Crossings - Fish Habitat & Thermal Regime**

- Direct Coolwater

**ELC Communities**

- Upland ELC Communities
- Wetland ELC Communities

**Proposed Alternative Solutions**

- Alternative Solution #1
- Alternative Solution #3

**Potential Infrastructure Areas**

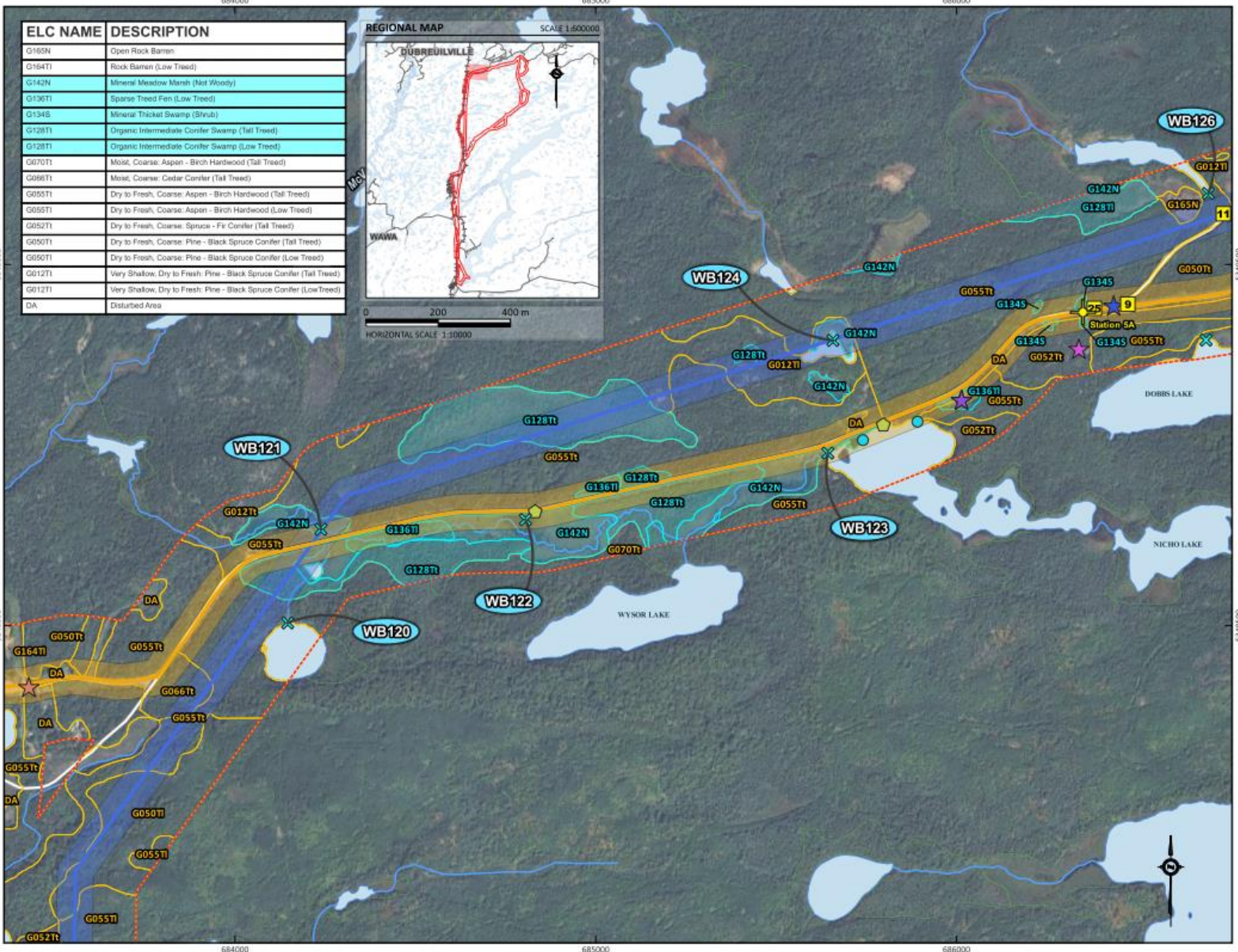
- Infrastructure Area #1
- Infrastructure Area #3
- Wildlife Camera Location

**Direct Wildlife Observations - i.e., Visual or Auditory Confirmation**

- Hermit Thrush
- Red Squirrel
- Sandhill Crane
- Spring Peeper
- Wood Frog

**Indirect Wildlife Observations - i.e., Tracks, Scat, Beaver Lodges**

- Beaver

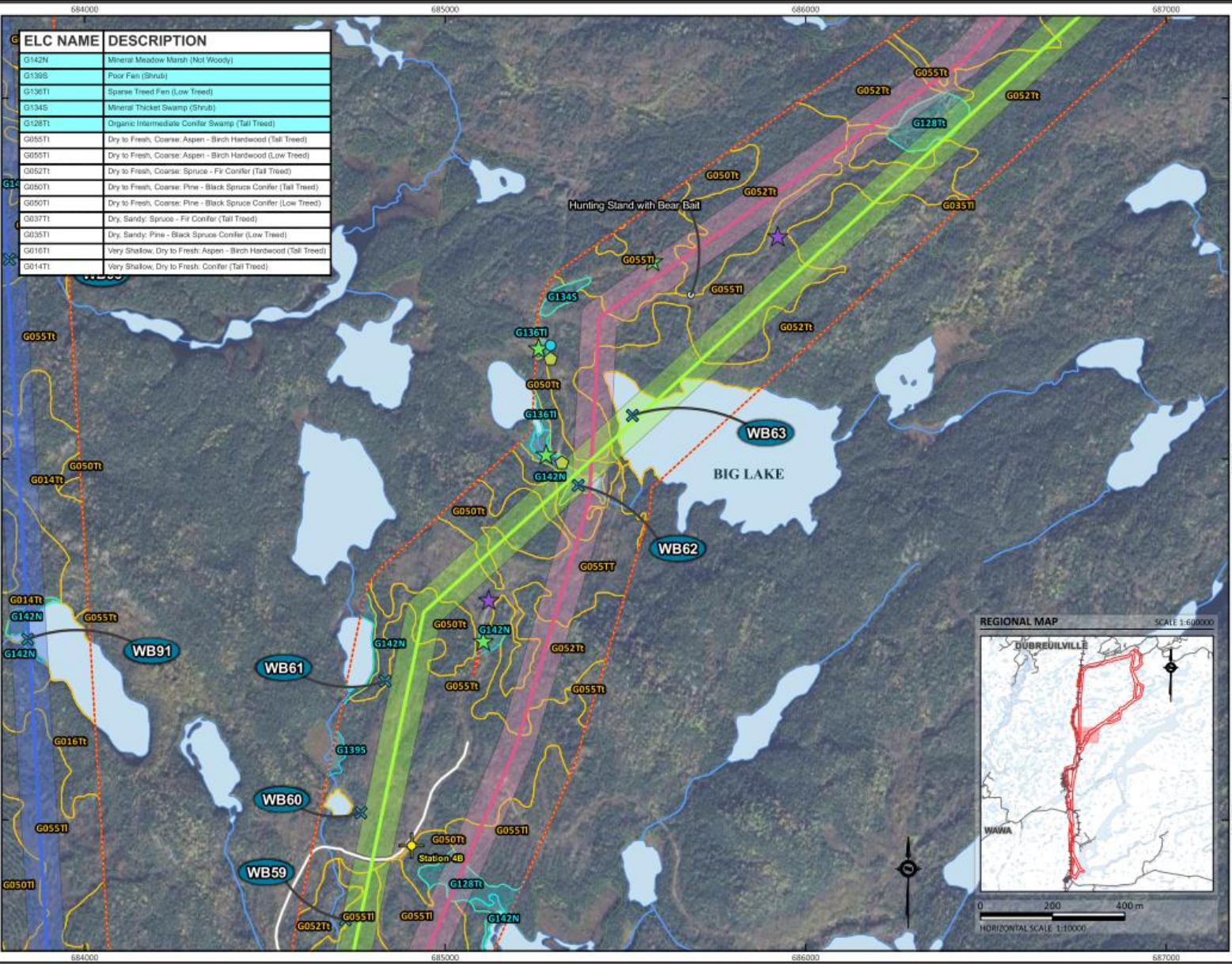


**AZIMUTH ENVIRONMENTAL CONSULTING, INC.**  
WETLAND/ECOLOGICAL ASSESSMENTS & SERVICES

**EXISTING CONDITIONS AND PROPOSED ROUTES**

WAWA TRANSMISSION LINE  
 WAWA, ON

DATE ISSUED: FEBRUARY 2024	DRAWING NO.:
CREATED BY: A.L.	<b>2-15</b>
PROJECT NO.: 23-028	
BASE MAP: MNRF	



ELC NAME	DESCRIPTION
G142N	Mineral Meadow Marsh (Not Woody)
G1395	Floor Fen (Shrub)
G136T	Sparse Treed Fen (Low Treed)
G1345	Mineral Thicket Swamp (Shrub)
G128T	Organic Intermediate Conifer Swamp (Tall Treed)
G050T	Dry to Fresh, Coarse: Aspen - Birch Hardwood (Tall Treed)
G055T	Dry to Fresh, Coarse: Aspen - Birch Hardwood (Low Treed)
G052T	Dry to Fresh, Coarse: Spruce - Fir Conifer (Tall Treed)
G050T	Dry to Fresh, Coarse: Pine - Black Spruce Conifer (Tall Treed)
G050T	Dry to Fresh, Coarse: Pine - Black Spruce Conifer (Low Treed)
G037T	Dry, Sandy: Spruce - Fir Conifer (Tall Treed)
G035T	Dry, Sandy: Pine - Black Spruce Conifer (Low Treed)
G016T	Very Shallow, Dry to Fresh: Aspen - Birch Hardwood (Tall Treed)
G014T	Very Shallow, Dry to Fresh: Conifer (Tall Treed)

**LEGEND**

- Study Area
- Mapped Watercourse
- Waterbody
- Unevaluated Wetland
- Stations
- Turtle Survey

**Waterbody Crossings - Fish Habitat & Thermal Regime**

- Direct Coldwater

**ELC Communities**

- Upland ELC Communities
- Wetland ELC Communities

**Proposed Alternative Solutions**

- Alternative Solution #1
- Alternative Solution #2
- Alternative Solution #4

**Potential Infrastructure Areas**

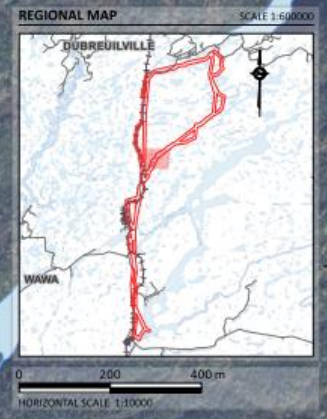
- Infrastructure Area #1
- Infrastructure Area #2
- Infrastructure Area #4

**Direct Wildlife Observations - i.e., Visual or Auditory Confirmation**

- Spring Peeper
- Wood Frog

**Indirect Wildlife Observations - i.e., Tracks, Scat, Beaver Lodges**

- Beaver



**AZIMUTH ENVIRONMENTAL CONSULTING, INC.**  
(INCORPORATED, QUALIFIED & APPROVED)

**EXISTING CONDITIONS AND PROPOSED ROUTES**

WAWA TRANSMISSION LINE  
 WAWA, ON

DATE ISSUED: FEBRUARY 2024	DRAWING NO.:
CREATED BY: AL	<b>2-18</b>
PROJECT NO.: 23-028	
BASE MAP: MNRF	



## Hydrogeology

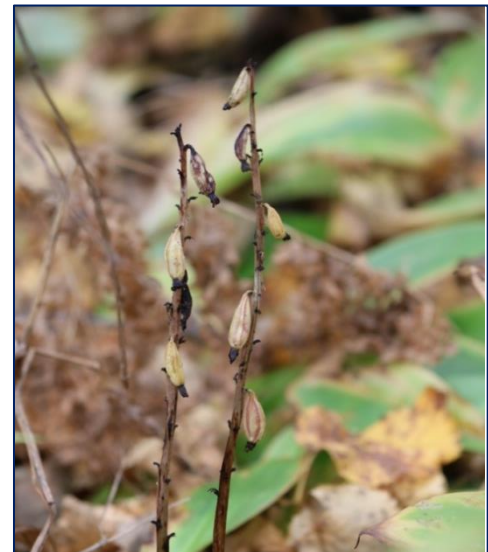
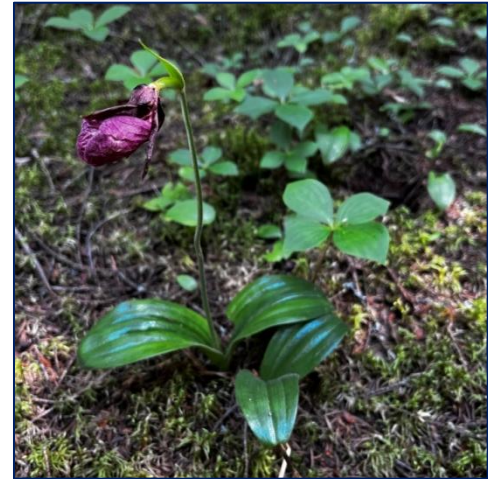
- Negligible impact as individual installations are small in area and near-surface so no changes to groundwater flow or flow direction
- Geology primarily shallow granular overburden over Precambrian bedrock, with organic deposits where drainage is poor
- Minimal influence as a parameter to compare Alternatives





## Vegetation Communities

- 222 vascular plants species were identified
- 81% of species are considered native
- 51 vegetation communities were documented, with:
  - 25 forest communities
  - 23 wetlands communities
  - 2 rock barrens types
- No PSW is mapped within the study area
- Many woodland communities are in various states of regeneration following historical logging
- MNRF's NHIC database has a record for Spatulate Moonwort (S-Rank 3)





## Wildlife

- 66 bird species were identified, including SAR:
  - Canada Warbler
  - Wood Thrush
  - Evening Grosbeak
  - Rusty Blackbird
- Amphibians observed at survey stations, include:
  - Norther Spring Peeper
  - Wood Frog
  - Boreal Chorus Frog
- Eastern Gartersnake and Painted Turtle were observed





## Mammal Monitoring

Table A: Number of Wildlife Camera Image Captures and Documented Tracks

Wildlife Species	Number of Image Captures	Number of Tracks observed During Camera Deployment/Retrieval*
American Marten	1	6
Canada Lynx	3	1
Grey Wolf	23	16
Moose	2	n/a
Red Fox	11	17
Red Squirrel	n/a	16
River otter	n/a	2
Snowshoe Hare	1	29
Mouse sp.	n/a	9
Grouse sp.	n/a	4



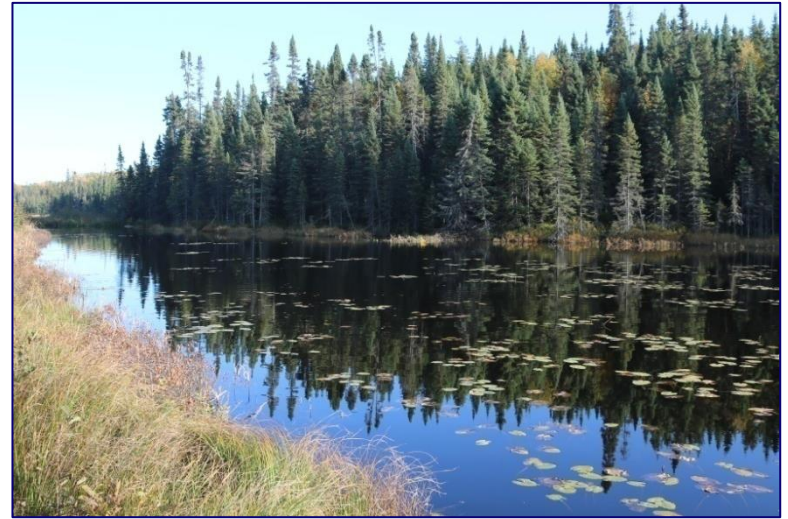
## Wildlife Camera Highlights





## Fish and Fish Habitat

- 130 waterbodies are located in the study area:
  - Alternative #1: 36 waterbody crossings
  - Alternative #2: 43 waterbody crossings
  - Alternative #3: 50 waterbody crossings
  - Alternative #4: 53 waterbody crossings
- Primarily Coldwater or coolwater habitat
- Considerations for waterbodies running parallel to an alternative occurred
  - E.g., McVeigh Creek run parallel to alternative #3 for 21km





## Species at Risk

Table B: Species at Risk with the potential to occur in the Regional Study Area.

Species	Provincial Status (ESA)	Federal Status (SARA)
Eastern Small-footed Myotis	END	No Status
Eastern Red Bat	END*	No Status
Hoary Bat	END*	No Status
Little Brown Myotis	END	END
Northern Myotis	END	END
Silver-haired Bat	END*	No Status
Tri-colored Bat	END	END
Blanding's Turtle	THR	END
Wood Turtle (low potential)	END	THR
Lesser Yellowlegs	THR	No Status
Short-eared Owl	THR	THR
Canada Warbler	SC	THR
Common Nighthawk	SC	THR
Eastern Whip-poor-will	SC*	THR
Evening Grosbeak	SC	SC
Olive-sided Flycatcher	SC	THR
Rusty Blackbird	SC	SC
Wood Thrush	SC	THR
Snapping Turtle	SC	SC

\*Indicates new status for species as of January 31, 2025; as indicated by MECP.



## Significant Wildlife Habitat

There are 18 SWH confirmed and/or have the potential to occur in the study area. Including:

- Denning Sites
- Rock Barrens
- Bat Maternity Colonies
- Waterfowl Nesting Area
- Amphibian Breeding Habitat
- Woodland Raptor Nesting Habitat
- Bald Eagle and Osprey Nesting Habitat

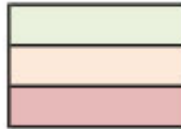




# Ranking Criteria

Criteria for Proposed Alternative Solutions	Alt. Sol. #1	Alt. Sol. #2	Alt. Sol. #3	Alt. Sol. #4	Alt. Sol #5 (Do Nothing)
Suitability for Mine's Needs*	Low Impact	Low Impact	Low Impact	Low Impact	High Impact
Public Safety**	Low Impact	Low Impact	Low Impact	Low Impact	Low Impact
Route Length	Low Impact	Moderate Impact	Low Impact	Low Impact	N/A
Pole Requirements	Low Impact	High Impact	High Impact	Low Impact	N/A
Pole Foundation Requirements	Moderate Impact	High Impact	High Impact	Low Impact	N/A
Access logistics	High Impact	Low Impact	Moderate Impact	Low Impact	N/A
<b>Summary of Ranking:</b>	<b>Acceptable</b>	<b>Least Preferred</b>	<b>Least Preferred</b>	<b>Preferred</b>	<b>Least Preferred</b>

Low Impact (Preferred Solution)  
 Moderate Impact  
 High Impact (Least Preferred Solution)

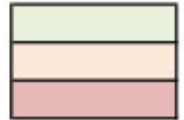




# Ranking Criteria

Criteria for Proposed Alternative Solutions	Alt. Sol. #1	Alt. Sol. #2	Alt. Sol. #3	Alt. Sol. #4	Alt. Sol. #5 (Do Nothing)
Fish/Fish Habitat Areas	Moderate Impact	Low Impact (Preferred Solution)	High Impact (Least Preferred Solution)	Moderate Impact	Low Impact (Preferred Solution)
SAR/SAR Habitat	Low Impact (Preferred Solution)	Low Impact (Preferred Solution)	Low Impact (Preferred Solution)	Low Impact (Preferred Solution)	Low Impact (Preferred Solution)
Candidate Significant Wildlife Habitat	Low Impact (Preferred Solution)	Low Impact (Preferred Solution)	Low Impact (Preferred Solution)	Low Impact (Preferred Solution)	Low Impact (Preferred Solution)
Extent of Forest Removal/Impact	Moderate Impact	High Impact (Least Preferred Solution)	Low Impact (Preferred Solution)	Moderate Impact	Low Impact (Preferred Solution)
Extent of Wetland Removal/Impact	Low Impact (Preferred Solution)	High Impact (Least Preferred Solution)	Moderate Impact	Low Impact (Preferred Solution)	Low Impact (Preferred Solution)
<b>Summary of Ranking:</b>	<b>Acceptable</b>	<b>Least Preferred</b>	<b>Least Preferred</b>	<b>Preferred</b>	<b>Least Preferred</b>

Low Impact (Preferred Solution)  
 Moderate Impact  
 High Impact (Least Preferred Solution)





## Preferred Alternative

### Alternative Solution #4:

- Shortest corridor (~43km)
- Lowest pole installation requirements
- Requirement for crib and/or rock blasting foundations are low
- Existing logging trails are available
- Minimizes woodland removal
- Reduces impacts to wetland





## Recommendations

- Worker training for SAR encounters
- Avoiding vegetation removal between March 5 and September 30 for:
  - Bat active period
  - Migratory breeding birds
  - Bald Eagle and Osprey Nesting
  - Woodland Raptor Nesting
  - Turtles
- Implementation of sediment and erosion controls

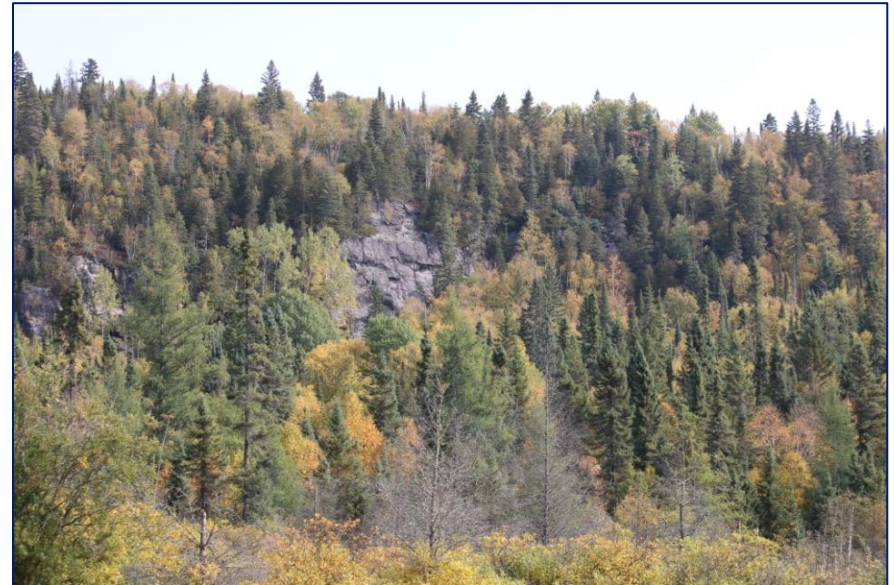




## Recommendations

Utilizing Best Management Practices and DFO's Code of Conduct while working within or near water, including:


- Minimizing riparian vegetation removal
- Following in-water timing windows
- Machinery maintenance/refueling >30m from NHF
- Utilize existing trails and crossing when possible
- Disposing material in a timely manner





## Design Engineering Optimization

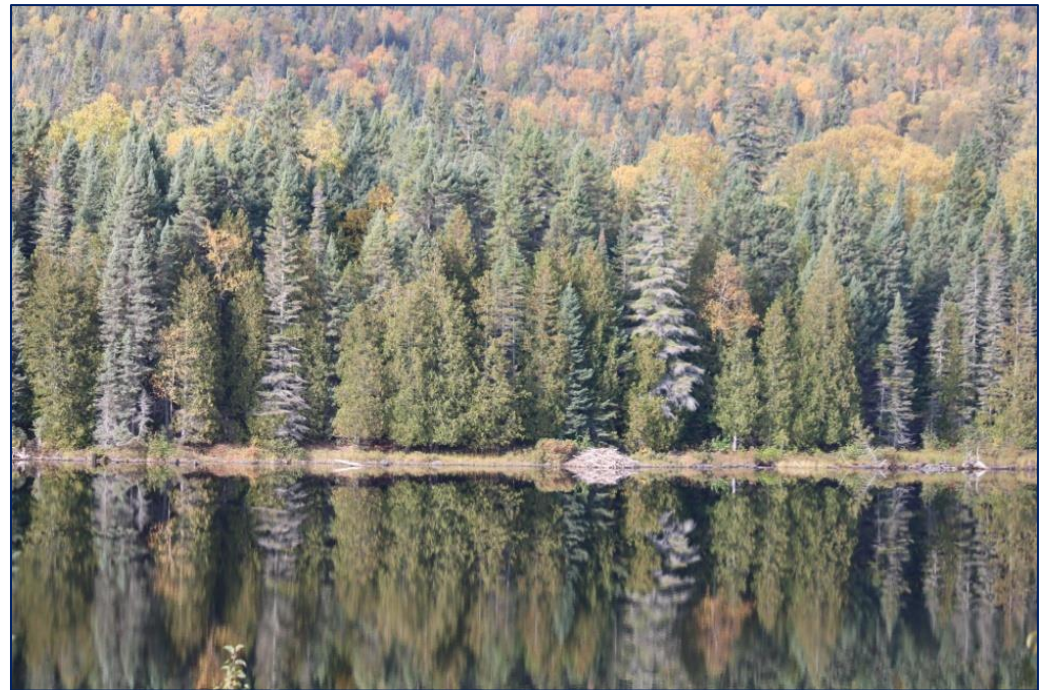
Route 4 will accommodate the following BMP's:

- No pole locations that are within water bodies
  - Minimizes locations associated with organic soils and avoid sensitive wetlands
  - Minimize use of crib foundations and rock blasting
  - Follows existing routes where possible
  - Minimize ROW width where possible
  - Bringing poles and installing line by air
- 
- Take advantage of existing trails, water crossings and access paths; creating significantly less disturbance
  - Access points designed to avoid wetland / water crossings



## Conclusion

- Alternative #4 is the preferred route
- Mitigation measures are anticipated to avoid negative impacts to NHF's and their ecological functions
- No fish or fish habitat are expected to be impacted negatively





Thank you!



Questions?



Comments?

