# DORION ROAD HILL RECONSTRUCTION
# PROJECT NO. 20-1046D

## PROJECT FILE
## MUNICIPAL CLASS ENVIRONMENTAL ASSESSMENT
## SCHEDULE B PROJECT FILE

## WORKING DRAFT

**PREPARED FOR:** **TOWN OF MATTAWA**
**160 WATER STREET**
**MATTAWA, ONTARIO P0H 1V0**

**PREPARED BY:** **Jp2g CONSULTANTS INC.**
**ENGINEERS · PLANNERS · PROJECT MANAGERS**

**NOVEMBER 26, 2021**

Jp2g Consultants Inc.
ENGINEERS • PLANNERS • PROJECT MANAGERS
12 International Drive, Pembroke, ON, K8A 6W5
T 613-735-2507, F 613-735-4513, www.jp2g.com

# DORION ROAD HILL RECONSTRUCTION
# CLASS B ENVIRONMENTAL ASSESSMENT
# SCHEDULE B PROJECT FILE

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## 1.0 BACKGROUND/EXISTING CONDITION

Dorion Road Hill is located at the eastern limit of the Town of Mattawa adjacent to the Township of Papineau Cameron connecting Dorion Road (formerly known as Wood Street) to Highway 17 a distance of approximately 440 meters. Total Project Area including directly related material storage and drainage extends approximately 750 meters.

The proposed Dorion Road Hill Reconstruction Project Area and project components are shown on Figure 1 hereto.

Dorion Road is a low volume rural collector road (approximately 200 AADT); but it provides an important connection route for residences and businesses south of Dorion Road to Highway 17, the Town of Mattawa and the Township of Papineau Cameron. Subsequent to reconstruction, Dorion Road Hill will provide improved access to the Town of Mattawa Light Industrial Park as well as support future development of approximately 97 hectares/240 acres of town owned land adjacent to Dorion Road.

Dorion Road Hill currently has a 12% to 14% vertical grade, narrow surface width, minimal gravel shoulders and poor drainage. See Figures 2A and 2B (site photos).

The project site is vacant land containing a sparsely wooded aspen and birch forest in a predominately bedrock environment.

Adjacent development is limited to Bell Mobility communication tower, vacant privately held land and Town owned land, all as shown on Figure 1.

The existing condition of the Dorion Road Hill is as follows

| | |
|---|---|
| Existing Surface Width | 6.5 meters |
| Shoulder Width | 0 to 1 meter |
| Surface Condition | Poor |
| Drainage | None |

The top of the Dorion Road Hill has a non-compliant horizontal curve and the bottom of the hill has a non-compliant intersection grade approach to Highway 17.

Significant level of effort is required by Town Public Works forces on an on-going basis to maintain the Dorion Road Hill roadway, particularly in the winter and spring.

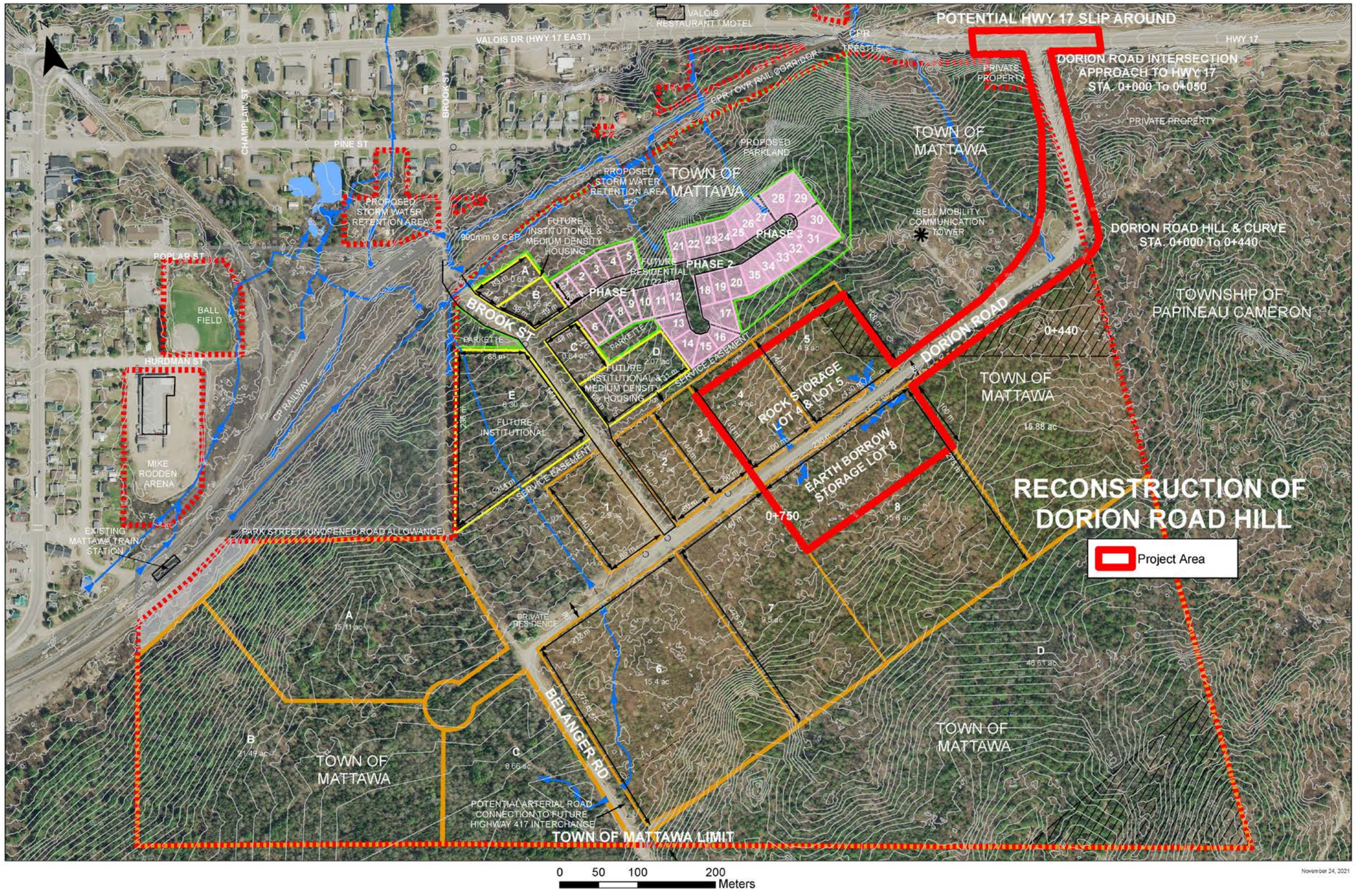
Level of Service and public perception of safety on Dorion Road Hill is very low.

The improvement of Dorion Road Hill, particularly the potential of reducing the existing vertical grade to provide more acceptable access for trucks serving the proposed Town of Mattawa Light Industrial Park has been under serious consideration since 2013.

In the Spring of 2013 J. L. Richards & Associates in conjunction with LVM/Merlex and Tulloch Environmental prepared a Phase 1 Environmental Assessment Report for the Town of Mattawa Light Industrial Park area and a Schedule B Municipal Class Environmental Assessment; both of which, on completion, contemplated the reconstruction of Doron Road Hill to provide vehicular access to the proposed Town of Mattawa Light Industrial Park.

The reconstruction of Dorion Road Hill is a priority in the current Town of Mattawa Asset Management Plan 2021 Working Draft.

## Figure 1
## Dorion Road Hill Reconstruction
## Project Area



Subsequent to J. L. Richards review of various alternatives including the Null alternative the preferred solution in 2013 was determined to be reconstruction of Dorion Road Hill to an 8% grade; but the Project did not proceed because of the high construction costs associated with significant amounts of rock excavation required to achieve a grade reduction and lack of funding.

The 2013 Schedule B Municipal Class Environmental Assessment Project Record included

- A copy of a Notice of Project Commencement and Public Information Center (PIC)
- Presentation Boards for PIC #1
- Project Drawings
- Phase 1 Environmental Site Assessment Report by LVM/Merlex
- Stage 1 Archaeological Assessment by Golder Associates
- Natural Environment Assessment by Tulloch Environmental
- Preliminary Design Brief by J. L. Richards & Associates

LVM/Merlex reported that in general the results of their Environmental Site Assessment did not identify “any significant environmental concerns or liability associated with the site”.

The Natural Environment Study conducted by Tulloch Environmental reported “no species at risk or significant wildlife habitat were observed during field investigations”.

The Stage 1 Archaeological Assessment conducted by Golder Associates did not identify any potential for either pre-European aboriginal contact or historical material within the study area and concluded “no further archaeological investigations are required for this project.”

Copies of these previously completed studies have been filed at the Town of Mattawa Municipal Office and are summarized hereto as part of the current 2021 Schedule B Municipal Class Environmental Assessment Project File (see Appendix A).

In May 2019 the Town of Mattawa made an application for funding to reconstruct Dorion Road Hill under the Infrastructure Canada Improvement Program (ICIP) for a total of $4,784,000.

The funding was approved in April 2020 and the Town of Mattawa is in the process of implementing the proposed undertaking as described in the ICIP funding application (see Appendix B).

This updated Schedule B Municipal Class Environmental Assessment will assist the Town of Mattawa Council in selecting a preferred alternative and providing instructions to the Consultant Engineer for the preparation of the final design and construction specifications for the Dorion Road Hill Reconstruction Project.

**Figure 2A**
**Dorion Road Hill looking South to proposed new curve**


**Figure 2B**
**Dorion Road Hill looking North to Highway 17 Intersection**

## 2.0 PURPOSE OF THE UNDERTAKING

The proposed Dorion Road Hill Reconstruction Project is intended to address public safety and improve level of service by incorporating approved engineering design geometrics to improve Highway 17/Dorion Road intersection, reduce the grade on Dorion Road Hill and provide a new horizontal curve alignment at the top of Dorion Road Hill; all of which will improve the function of Dorion Road Hill as an important route for the travelling public and support its role as a "truck route" to the proposed Town of Mattawa Light Industrial Park currently under development on Dorion Road. The undertaking also includes temporary storage of blast rock and excess fill within the Project Area.

The successful implementation of the proposed undertaking will also support the future development of 97 hectares/240 acres of Town of Mattawa owned lands adjacent to Dorion Road and Bélanger Road and will be a candidate for an on ramp/off ramp interchange to any future Highway 417 alignment located south of the Town of Mattawa.

## 3.0 ENVIRONMENTAL ASSESSMENT PROCESS

A Class Environmental Assessment (Class EA) conducted under the requirements of the Environmental Assessment Act (EA Act) includes those projects which are approved subject to compliance with an approved planning and design process with respect to a class of undertakings. The "Municipal Class Environmental Assessment" document dated June 2000 as amended 2015, is an approved planning and design process prepared by the Municipal Engineer's Association. The Municipal Class EA applies to municipal infrastructure projects including roads, water and wastewater projects, and describes the process municipalities are to follow in order to satisfy the requirements of the EA Act.

The planning and design of the Dorion Road Hill Reconstruction Project will address the Municipal Class EA requirements.

The Municipal Class EA process incorporates five (5) basic phases as summarized as follows:

**Phase 1** Identify the **Problem or Opportunity**

**Phase 2** Identify the **Alternative Solutions** to address the problem and establish the preferred solution or solutions. At this point, determine the appropriate Schedule for the project.

**Phase 3** Examine **Alternative Design Concepts for Implementing the Preferred Solution(s)** based upon anticipated environmental effects and minimizing negative effects and maximizing positive effects.

**Phase 4** Document in an **Environmental Study Report or Project File** the planning, design and consultation process.

**Phase 5** Complete **Contract Drawings and Documents** and proceed to construction and environmental monitoring.

The Class EA process is self-directed by the Proponent and it is the Municipality's responsibility to ensure that the planning and design process as established in the Municipal Class EA document is undertaken. Within the phases there are decision-making points where the Municipality is to confirm the applicable Class EA Schedule. It is also noted that throughout the planning and design process there are various opportunities for public review, consultation and if decisions are unacceptable there is an appeal process.

This Schedule B Environmental Assessment process will provide the basis for the Council of the Town of Mattawa to select the preferred solution for the Dorion Road Hill Reconstruction undertaking through the Municipal Class EA planning and design process.

## 4.0 PHASE 1 PROBLEM STATEMENT

The Dorion Road Hill in its existing condition is not in conformance with current engineering standards, MTO Geometric Design Guidelines or Transportation Association of Canada Guidelines for vertical grade, horizontal alignment, surface condition or drainage; all of which result in a hazard to public safety, low level of service and high maintenance costs.

The existing roadway is not suitable for providing vehicular access to existing or proposed land use for 97 hectares/240 acres of Town owned land in the southeast sector of the Town of Mattawa.

The temporary storage and ultimate disposal of blast rock and excess soil in an environmentally acceptable and cost effective manner must be addressed.

## 5.0 PHASE 2 IDENTIFY ALTERNATIVE SOLUTIONS

The original 2013 Municipal Class Environmental Assessment Schedule B for Dorion Road looked at four (4) options for providing access to the Town of Mattawa Proposed Light Industrial Park; which is adjacent to and serviced by Dorion Road

| | |
|---|---|
| Option 1 | Reconstruct Dorion Road Hill 480 meters to 8% grade |
| Option 2 | Reconstruct Dorion Road 300 meters to 5% grade |
| Option 3 | Extend Brook Street through unopened road allowance to Belanger Road |
| Option 4 | Extend Brook Street on new alignment to Dorion Road |

Subsequent to the work carried out in conjunction with the 2013 Municipal Class EA including a Public Information Center held April 2, 2013 concluded the "preferred alternative" solution was Option 1 Reconstruct Dorion Road [Hill] 480 meters to 8% grade.

Jp2g Consultants Inc., Engineers · Planners · Project Managers has updated the Municipal Class Environmental Assessment Schedule B to 2021 including a review of additional alternatives for the Dorion Road Hill Reconstruction Project as follows

| | |
|---|---|
| Alternative 1 | Do Nothing/Null Alternative |
| Alternative 2 | Realign Dorion Road Hill roadway easterly |
| Alternative 3 | Realign Dorion Road Hill roadway westerly |
| Alternative 4 | Reconstruct Dorion Road Hill 440 meters to 8% grade |
| Alternative 5 | Reconstruct Dorion Road Hill 440 meters to 9% grade |
| Alternative 6 | Reconstruct Dorion Road Hill 440 meters to 10% grade |

## 6.0 RATIONALE FOR A SCHEDULE B ASSESSMENT

The Dorion Road Hill Reconstruction Project is being undertaken as a Schedule B Project in accordance with the Municipal Engineers Association Municipal Class Environmental Assessment process for existing facilities.

Given the proposed construction of a new curve at the top of Dorion Road Hill and the need for extensive rock excavation throughout the project length there is potential for some adverse environmental impacts and therefore the Town Council has decided this undertaking should proceed through a Municipal Class Environmental Assessment Schedule B including substantial and fully informed consultation with those who may be affected.

A Schedule B Municipal Class Environmental Assessment requires

- A Project File to be maintained showing traceability of actions and decisions
- Mandatory Agency consultation
- Mandatory Public Meeting
- Notice of Project Commencement
- Notice of Project Completion
- 30 day Review Period

This Schedule B Environmental Assessment does not preclude the need for a Transportation Environmental Study Report (TESR) which may ultimately be required for “slip-around” works on Highway 17.

This Schedule B Project File for the Dorion Road Hill Reconstruction Project will be maintained at

Town of Mattawa Municipal Office
160 Water Street
Mattawa, Ontario

## 7.0 NOTICE OF STUDY COMMENCEMENT/PUBLIC MEETING (PIC)

A Notice of Study Commencement and Public Meeting will be provided twice in the Mattawa Recorder and posted on the Town of Mattawa website www.mattawa.ca as per Figure 3A hereto.

**Figure 3A**
**Notice of Study Commencement and Public Meeting**

**THE CORPORATION OF THE TOWN OF MATTAWA**

**SCHEDULE B**
**CLASS ENVIRONMENTAL ASSESSMENT**
**RECONSTRUCTION OF DORION ROAD HILL**
**IN THE TOWN OF MATTAWA**

**NOTICE OF STUDY COMMENCEMENT & PUBLIC INFORMATION CENTER**

The Corporation of the Town of Mattawa has been awarded funding under the Investing in Canada Infrastructure Program (ICIP), Rural and Northern Funding Stream for the reconstruction of Dorion Road Hill.

This work will extend approximately 440 meters southerly from Highway 17 and will involve reduction of the existing Dorion Road Hill grade from approximately 12% to approximately 8% and will incorporate a new curve alignment at the top of the hill and improvements at the Highway 17 intersection.

The project is being planned under **Schedule B** of the **Municipal Class Environmental Assessment**. Public and review agency input and comments are invited for incorporation into the planning and design of this project. A Public Information Center is planned to provide further information to the public on the proposal and to receive input and comment from interested persons:

Public Information Center (Open House format)
Date: Saturday, December 4, 2021
Time: 1:00 PM to 3:00 PM
There will be a short presentation by Project team at 2:00 PM which will be video-taped and posted on the Town of Mattawa website.
Location: Town of Mattawa Municipal Office
160 Water Street, Mattawa, Ontario
Telephone: 705-744-5611
www.mattawa.ca

Subject to comments received and the receipt of necessary approvals, the Town of Mattawa intends to proceed with the design and implementation of this project to be completed by August 30, 2024.

For further information on this project or to provide your comments in writing, please contact

Ms. Francine Desormeau
Chief Administrative Officer/Treasurer
Town of Mattawa
160 Water Street, Mattawa, Ontario P0H 1V0
Telephone: 705-744-5611, Ext. 205
e-mail: francine.desormeau@mattawa.ca

or

Mr. James Hunton, BES, MCIP
Senior Vice President
Jp2g Consultants Inc.
Engineers · Planners · Project Managers
12 International Drive, Pembroke, Ontario K8A 6W5
Telephone: 613-735-2507, Ext. 122
e-mail: jhunton@jp2g.com

This Notice issued November __, 2021

Francine Desormeau
Chief Administrative Officer/Treasurer
Town of Mattawa

## 8.0 NOTICE OF STUDY COMPLETION

Subsequent to the Public Meeting (PIC) and public input received through the Schedule B Environmental Assessment consultation process the Town of Mattawa will finalize design drawings, construction specifications and related documents and will issue a Notice of Completion as per Figure 3B.

For Schedule B projects, a person or party with a concern should bring it to the attention of the Town during the Environmental Assessment planning process. If a concern is not resolved through discussions, the person or party raising the objection may request the proponent to voluntarily elevate a Schedule B project to Schedule C or an individual environmental assessment.

If the proponent declines to elevate the Assessment Schedule and the person or party with the concern wishes to pursue the matter, they may write to the Minister of the Environment and request a Part II Order. These requests shall be copied to the proponent at the same time that they are submitted to the Minister.

Contact: Minister of the Environment
Office of the Minister
777 Bay Street, 5th Floor
Toronto, Ontario M4A 2J3

For Schedule B projects, a Part II Order request form must be submitted to the Minister within the 30 calendar day review period after the Notice of Completion which will include information on the process has been issued.

Requests made or received after the 30 calendar day review period subsequent to Notice of Completion will not be considered.

The Notice of Completion will provide an additional 30 day period to receive comments and will clearly set out how to communicate concerns or objections.

A request to the Minister must be in writing and must address the following issues as they relate to the identified concerns:

- environmental impacts of the project and their significance
- the adequacy of the planning process
- the availability of other alternatives to the project
- the adequacy of the public consultation program and the opportunities for public participation
- the involvement of the person or party in the planning of the project
- the nature of the specific concerns which remain unresolved
- details of any discussions held between the person or party and the proponent
- the benefits of requiring the proponent to undertake an individual environmental assessment
- any other important matters considered relevant

Requests which are clearly made with the intent of delaying project planning and implementation, or which do not contain a reasonable amount of information, may be denied by the Minister on the basis of being unsubstantiated.

## Figure 3B
## Notice of Study Completion

**THE CORPORATION OF THE TOWN OF MATTAWA**
**SCHEDULE B**
**CLASS ENVIRONMENTAL ASSESSMENT**
**RECONSTRUCTION OF DORION ROAD HILL**
**IN THE TOWN OF MATTAWA**

**NOTICE OF STUDY COMPLETION**

The Corporation of the Town of Mattawa has completed a Municipal Class Environmental Assessment Schedule B to determine the preferred approach to the reconstruction of Dorion Road Hill.

The Project Area will extend approximately 750 meters southerly from Highway 17 and will involve reduction of the existing Dorion Road Hill grade from approximately 12% to approximately 8% and will incorporate a new curve alignment at the top of the hill and improvements at the Highway 17 intersection and temporary storage of blast rock and excess soil.

The Study Report documenting the planning and evaluation process was approved by Council on _____, 2022.

By this Notice the Report is being placed on the Public Record for a 30 day review period beginning ____, 2022 and ending _____, 2022 in accordance with the requirements of the Class EA. The report is available for viewing in person during normal business hours at

Town of Mattawa Municipal Office
160 Water Street, Mattawa, Ontario P0H 1V0
Telephone: 705-744-5611

or on line at www.mattawa.ca

Subject to comments received and the receipt of necessary approvals, the Town of Mattawa intends to proceed with the implementation of this project to be completed by August 30, 2024.

For further information on this project or to provide your comments in writing, please contact

Ms. Francine Desormeau
Chief Administrative Officer/Treasurer
Town of Mattawa
160 Water Street, Mattawa, Ontario P0H 1V0
Telephone: 705-744-5611, Ext. 205
e-mail: francine.desormeau@mattawa.ca

or

Mr. James Hunton, BES, MCIP
Senior Vice President
Jp2g Consultants Inc. Engineers · Planners · Project Managers
12 International Drive, Pembroke, Ontario K8A 6W5
Telephone: 613-735-2507, Ext. 122
e-mail: jhunton@jp2g.com

If there are outstanding concerns that cannot be resolved in discussion with the Municipality or concerns regarding potential adverse impacts to constitutionally protected Aboriginal and treaty rights, a request for an order requiring a higher level of study or conditions on those matters should be addressed in writing to the Minister of the Environment and the Director of the Environmental Assessment Branch. Requests should include the requester's contact information and full name for the Ministry. The request should be sent by 4:30 PM on ____, 2022 in writing or by e-mail to:

Minister of the Environment, Conservation and Parks
Ministry of the Environment, Conservation and Parks
777 Bay Street, 5th Floor
Toronto, Ontario M7A 2J3
minister.mecp@ontario.ca

Director, Environmental Assessment Branch
Ministry of the Environment, Conservation and Parks
135 St. Clair Avenue West, 1st Floor
Toronto Ontario M4V 1P5
EABDirector@ontario.ca

For further information regarding Municipal Class EA and Part II Order Requests:https://www.ontario.ca/page/class-environmental-assessments-part-ii-order

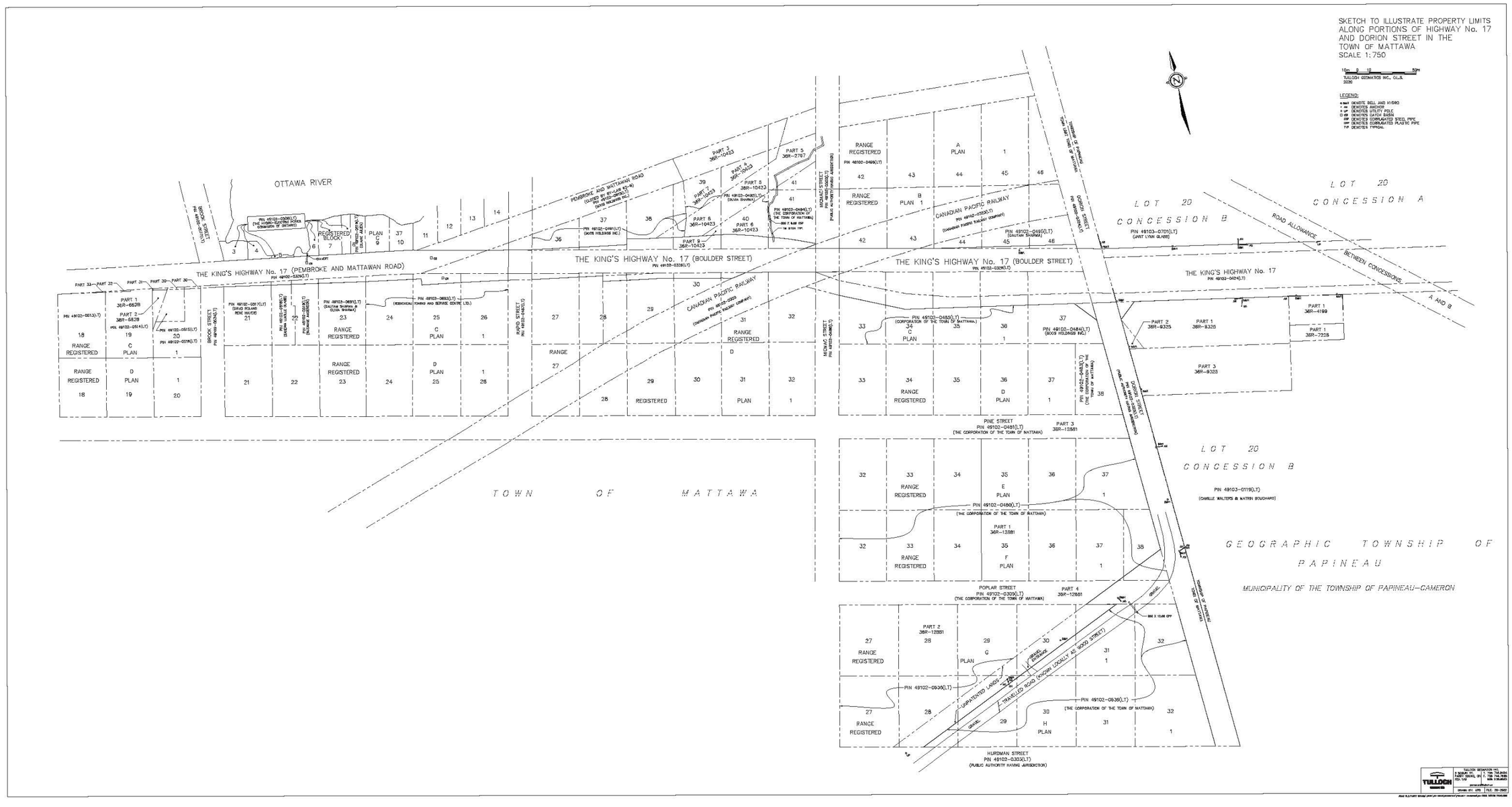
## 9.0 PUBLIC CONSULTATION

Private property owners and business operators adjacent to the proposed Dorion Road Hill Reconstruction Project area will be notified individually by regular mail.

A template copy of Municipal Class Environmental Assessment correspondence with private property owners and business operators is provided in Appendix F.

An updated streetscape plan has been prepared by Tulloch Geomatics Ontario Land Surveyors and is attached hereto as Figure 4.

**Figure 4**
**Dorion Road Hill Reconstruction**
**Streetscape Plan**



## 10.0 ABORIGINAL CONSULTATION

The proposed undertaking is located in Algonquin Traditional Territory; which is currently under formal Algonquin Land Claim Treaty Negotiations between the Algonquins of Ontario, the Government of Canada and the Province of Ontario.

The Aboriginal contact list for this Municipal Class Environmental Assessment is summarized in Figure 5.

**Figure 5**
**Dorion Road Hill Reconstruction**
**Aboriginal Contact List**

| Agency | Contact/Title | Telephone/e-mail |
|---|---|---|
| Algonquins of Ontario<br>Consultation Office<br>31 Riverside Drive, Suite 101<br>Pembroke, Ontario K8A 6W4 | Daniel Charbonneau<br>Executive Director | 613-735-3759<br>dcharbonneau@tanakiwin.com |
| Mattawa North Bay Algonquin First Nation<br>318 Main Street<br>P.O. Box 1330<br>Mattawa, Ontario P0H 1V0 | Chief Clifford Bastien Jr. | 705-744-3361<br>clifford.bastien@sympatico.ca |
| Antoine Algonquin First Nation<br>Hwy. 17 East, 45 Labelle Road, Box 420, Mattawa, Ontario<br>P0H 1V0 | Chief Davie Joanisse | 705-744-5695<br>chiefjoanisse@rogers.com |
| Metis Nation of Ontario<br>380 Main Street, Unit 2<br>Mattawa, Ontario P1H 1V0 | | 705-744-2227 |

Copies of Schedule B Class Environmental Assessment correspondence including ICIP approval regarding Aboriginal Consultation is provided in Appendix G.

The Algonquins of Ontario have indicated their support for the Dorion Road Hill Reconstruction Project but will require a Stage 2 Archaeological Study when the Light Industrial Park development is advanced.

## 11.0 AGENCY CONSULTATION

A Municipal Class Environmental Assessment Schedule B has certain mandatory requirements for agency circulation.

The Town of Mattawa has supplemented the mandatory list in order to include all potential agency “stakeholders” that may have an interest in this matter.

A summary of agency contacts notified as part of this Municipal Class Environmental Assessment Schedule B is provided in Figure 6.

Copies of Municipal Class Environmental Assessment Schedule B correspondence regarding Agency consultation is provided in Appendix H.

**Figure 6**
**Dorion Road Hill Reconstruction**
**Agency Contact List**

| Agency | Contact/Title | Telephone/e-mail |
|---|---|---|
| Township of Papineau Cameron<br>4861 Highway 17 West, P.O. Box 630<br>Mattawa, Ontario P0H 1V0 | Mayor & Council | 705-744-5610<br>clerk@papineaucameron.ca |
| Minister's Office<br>Ministry of Environment, Conservation and Parks<br>College Park, 5th Floor, 777 Bay Street<br>Toronto, Ontario M7A 2J3 | Minister of Environment | minister.mecp@ontario.ca |
| Ministry of Environment, Conservation and Parks<br>Environmental Assessment & Approvals Branch<br>135 St. Clair Avenue West, 1st Floor<br>Toronto, Ontario M4V 1P5 | Director, Environmental Assessment Branch | enviropermission@ontario.ca |
| Ministry of Environment, Conservation and Parks<br>Regional EA Coordinator<br>199 Larch Street, Suite 1201<br>Sudbury, Ontario P3E 5P9 | Regional EA Coordinator | 705-564-3237 |
| Ministry of Environment, Conservation and Parks<br>North Bay Area Office<br>191 Booth Road<br>North Bay, Ontario P1A 4K3 | | 705-497-6865 |
| Ministry of Natural Resources & Forestry<br>North Bay Region Office<br>3301 Trout Lake Road<br>North Bay, Ontario P1A 4L7 | | 705-475-5550 |
| North Bay-Mattawa Conservation Authority<br>15 Janey Avenue<br>North Bay, Ontario P1C 1N1 | Director, Planning & Development<br>Deputy CAO | 705-474-5420, Ext. 2007 |
| Ministry of Transportation<br>Northeastern Region<br>447 McKeown Avenue<br>North Bay, Ontario P1B 9S9 | Regional Director | 705-472-7900 |
| Ministry of Energy, Northern Development & Mines<br>933 Ramsay Lake Road<br>Sudbury, Ontario P3E 6B5 | | 705-670-5755 |
| Ministry of Infrastructure<br>Intergovernmental Policy Branch 777<br>Bay Street, 4th Floor, Suite 425<br>Toronto, Ontario M5G 2E5 | Director<br>Intergovernmental Branch | 1-877-424-1300 |
| Ministry of Agriculture, Food & Rural Affairs<br>Rural Programs Branch<br>1 Stone Road West, 4th Floor NW<br>Guelph, Ontario N1G 4Y2 | Director<br>Rural Programs Branch | |

| Agency | Contact/Title | Telephone/e-mail |
|---|---|---|
| Industry Canada<br>1100-180 Kent Street<br>Ottawa, Ontario K1P 0B6 | | |
| Environment Canada<br>Environmental Assessment Section<br>867 Lakeshore Boulevard<br>Burlington, Ontario L7R 4A6 | | |
| Ministry of Northern Development, Mines & Forestry<br>North Bay and Area<br>447 McKeown Avenue, Suite 203<br>North Bay, Ontario P1B 8S9 | Growth Plan for Northern Ontario | 1-705-494-4045 |
| FedNor – Industry Canada<br>107 Shirreff Avenue, Suite 202<br>North Bay, Ontario P1B 7K8 | Initiatives Officer | 705-494-4221 |
| Ontario Provincial Police Mattawa Detachment<br>867 Gormanville Road<br>North Bay, Ontario P1B 8G3 | Detachment Commander | 705-744-5503 |
| Mattawa Fire Department<br>160 Water Street, P.O. Box 390<br>Mattawa, Ontario P0H 1V0 | Fire Chief | 705-471-6861 |
| Hopital de Mattawa Hospital<br>217 Turcotte Park Road,<br>P.O. Box 270<br>Mattawa, Ontario P0H 1V0 | President and CEO | 705-744-5511 |
| Near North District School Board<br>963 Airport Road, P.O. Box 3110<br>North Bay, Ontario P1B 8H1 | Superintendent of Business | 705-472-8170 |
| Conseil Scolaire Public du Nort-Est De l'Ontario<br>C.P. 3600, 820 Promenade Lakeshore<br>North Bay, Ontario P1B 9T5 | Secretary | |
| Conseil Scolaire Catholique Franco-Nord<br>681 Chippewa Street West<br>North Bay, ON P1B 6G8 | Secretary | |
| Nipissing-Parry Sound<br>Catholic District School Board<br>1000 High Street<br>North Bay, Ontario P1B 6S6 | Secretary | |
| Hydro One Networks Inc.<br>500 Barrydowne Road<br>Sudbury, Ontario P3A 3T3 | Lines Customer Support Clerk – Projects, Northern Region Distribution Work Management | Marnie.Dawson@HydroOne.com<br>705-566-8955<br>Ext. 2318 |
| Bell Canada<br>1 Carrefour Alexander Graham Bell<br>Building A, 4th Floor<br>Verdun, Quebec H3E 3B3 | | |

| Agency | Contact/Title | Telephone/e-mail |
|---|---|---|
| Bell Mobility Inc.<br>Region 1 & 2<br>5099 Creekbank Road, Bldg. "D", 6th Floor<br>Mississauga, Ontario L4W 5N2 | Landlord Relations Specialist | 1-800-667-5263<br>Option 1<br>sabirah.gafoor@bell.ca |
| Bell Canada<br>North Bay, Ontario | Network Specialist | 705-474-6063<br>706-840-3658<br>terry.hurd@bell.ca |
| East Nipissing Planning Board<br>P. O. Box 31<br>Mattawa, Ontario P0H 1V0 | Secretary | |
| Ministry of Municipal Affairs & Housing<br>Northeastern Municipal Services Office<br>Suite 401, 159 Cedar Street<br>Sudbury, Ontario P3E 6A5 | Regional Director | |
| Ottawa Valley Railway<br>445 Oak Street East<br>North Bay, Ontario P1B 1A3 | Secretary | |
| Union Gas Limited<br>P.O. Box 2001<br>Chatham, Ontario N7M 5M1 | Secretary | |

## 12.0 RECOMMENDED DESIGN CRITERIA

This Municipal Class Environmental Assessment contemplates a Rural Undivided Low Volume Road (approximately 200 AADT) with provision for accommodating local industrial traffic including truck traffic as the Town of Mattawa Light Industrial Park develops. The main access to the Light Industrial Park will eventually be via Brook Street extension from Highway 17.

### Part A – Highway 17 "Slip-Around" (Westbound)

The criteria used for Part A Highway 17 "Slip-Around" is Ministry of Transportation Ontario Geometric Design Standards for Roadway Surface Works and Signage; as well as Ministry of Transportation Guidelines for Drainage Works.

The proposed "slip-around" has been preliminary designed by Jp2g Consultants Senior Project Engineer and peer reviewed by the RAQs certified Highway Design Engineer on the Jp2g Consultants Inc. Project Team. See Preliminary Engineering Design Drawings Appendix D.

The proposed "slip-around" includes the following design criteria:

| | |
|---|---|
| Right turn taper eastbound Highway 17 at Dorion Road | 70 meters |
| Intersection radius to satisfy tractor trailer turning sweep | 20 meters to 110 meters |

The Ministry has previously indicated a willingness, subject to a formal agreement with the Town of Mattawa, to consider deferring "slip-around" work on Highway 17 until the Industrial Park development starts to produce truck traffic and this possibility will be pursued as outlined in subsequent sections of this report.

### Part B – Dorion Road Highway 17 Intersection (Station 10+000 to Station 10+050)

The centerline grade of the Dorion roadway approaching Highway 17 (1.00%) is too steep and will be reconstructed in accordance with MTO Geometric Design Guidelines (0.5%). This work will also include improvements to intersection turning radius and drainage.

| | |
|---|---|
| Lane Width on Tangent | 3.50 meters |
| Shoulder Width | 1.50 meters paved shoulder |
| Shoulder Rounding | 0.50 meters |
| Intersection Radius | 20-110 meters |
| Surface Course Asphalt | 40 mm (to be confirmed by Golder Associates) |
| Binder Course Asphalt | 60 mm (to be confirmed by Golder Associates) |
| Granular 'A' | 150 mm (to be confirmed by Golder Associates) |
| Granular 'B' | 150 mm to 300 mm including grade point backfill |
| Approach Grade to Hwy. | 1% for 14.5 meters (allow for 2 cars or 1 tractor trailer) |

**Part C – Dorion Road Hill and New Curve (Station 10+050 to Station 10+450)**

The overall design guideline for this portion of the project is based on Transportation Association of Canada (TAC) Guidelines and AASHTO Guidelines for low volume roads.

Jp2g is proposing that the Dorion Road Hill be reconstructed to a cross section suitable for local industrial traffic with a 50 km/hr design speed as follows:

| | |
|---|---|
| Lane Width on Tangent | 3.50 meters |
| Lane Width on Curve | 4.50 meters |
| Shoulder Width | 1.50 meters paved shoulder |
| Shoulder Rounding | 0.50 meters |
| Surface Course Asphalt | 40 mm (to be confirmed by Golder) |
| Binder Course Asphalt | 60 mm (to be confirmed by Golder) |
| Granular 'A' | 150 mm (to be confirmed by Golder) |
| Granular 'B' | 150 mm to 300 mm including grade point backfill |

The existing vertical grade of 10% to 14% on Dorion Road Hill is considered too steep and it is the major objective of this undertaking to reduce the grade to maximize utility for accommodating future truck traffic to the Town of Mattawa Light Industrial Park.

The final design of the project undertaking will also include management of surface water drainage and rock face maintenance considerations; as well as safety considerations related to height of excavation, signage, fencing and streetlighting.

**Part D – Storage of Blast Rock and Excess Soil (Station 10+550 to Station 10+750)**

Storage of blast rock and excess soil also form a fundamental component of the undertaking. Clearing operations for material storage and the road right-of-way will take place outside of bird breeding season April 15 to August 15 to comply with Provincial guidelines.

## 13.0 ALTERNATIVE SOLUTIONS

**Alternative 1 Do Nothing/Null Alternative**

The option of simply resurfacing the existing roadway on Dorion Road Hill was considered as a Null Alternative; but discarded as it did not address any safety concerns or Level of Service objectives.

**Alternative 2 Realign Dorion Road Hill Roadway Easterly**

Realigning Dorion Road easterly was rejected because it would then be located on private property in an adjacent Municipality.

**Alternative 3 Realign Dorion Road Hill Roadway Westerly**

The option of realigning the Dorion Road Hill westerly was also rejected due to private property constraints at the Highway 17 intersection as well as an inordinate amount of rock excavation, proximity to Bell Mobility Radio Tower and potential impacts on existing Highway 17 drainage system.

**Alternatives 4, 5 and 6 Grade Reduction (8%, 9%, 10%)**

Based on preliminary engineering work completed to date and this Environmental Screening process the preferred solution remains reconstruction of the Dorion Road Hill; but alternatives still remain for establishing the proposed grade. Profiles for 8%, 9% and 10% grades are provided in Figure 7.

Any decision on final grade and other project components of the Dorion Road Hill Reconstruction Project will be based on

Public Safety
Geometric Design Standards
Engineering Best Practice
Level of Service
Maintenance Effort
Value for Money
Budget Constraints
Aesthetics

With regard to grade it is important to note that Transportation Association of Canada guidelines indicate that 8% is the maximum road grade in order for "long truck" traffic to function effectively; especially for a stop condition or downhill movement under winter conditions.

A 9% grade is considered marginal but tolerable for passenger vehicle traffic only.

A 10% grade is not recommended.

Based on preliminary engineering completed to date, under any alternative, the Dorion Road Hill Reconstruction project extend approximately 750 meters southerly from Highway 17 and consists of four (4) components:

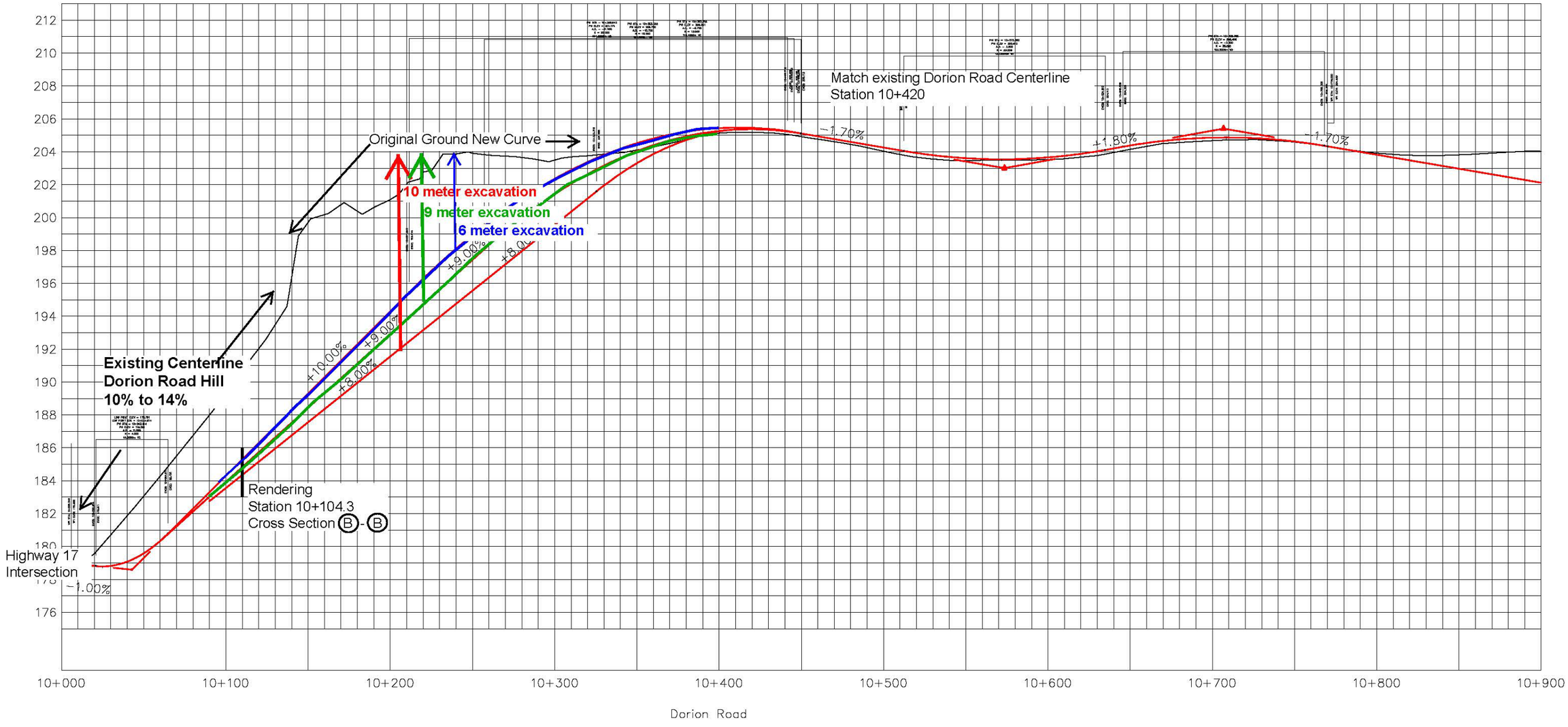
Part A Highway 17 "Slip Around" (westbound)
Part B Dorion Road Highway 17 Intersection Approach Improvements
Station 10+000 to Station 10+050
Part C Dorion Road Hill Reconstruction including grade reduction and new curve from
Station 10+050 to Station 10+450
Part D Temporary Storage of Blast Rock and Excavated Earth
Station 10+550 to Station 10+750

The project will also include surface water drainage improvements, safety fencing and, subject to budget availability, street lighting.

It is apparent that Alternatives 4, 5 and 6 related to grade reduction share many of the same environmental effects and mitigation measures. Final selection of the Preferred Alternative as per this current Screening Process will be related to

Amount of Rock Excavation/Blasting
Risk
Level of Service
Capital Cost
Aesthetics

**Figure 7**
**Dorion Road Hill Reconstruction**
**Alternative Final Road Grades**



For general context and reader convenience Figure 8 provides a before photo and an "artist's rendering" of the alternative solution (Alternative 4, being 8% gradient or Alternative 5, being 9% gradient). Both the photo and the rendering are taken midway up the existing Dorion Road Hill approximately 104 meters south of the Highway 17 intersection looking south towards the proposed "new curve" at the top of Dorion Road Hill.

**Figure 8**
**Dorion Road Hill**
**Before Photo and After Artist's Rendering**


Note: The "new curve" and extent of rock excavation are well represented; but the final grade will be steeper than it appears in both the "before" photo and the "after" illustration due to viewer perspective.

## 14.0 ISSUES AND RISKS

Based on 90% completion of the engineering design, the following is a summary of Issues and Risks associated with the Dorion Road Hill Reconstruction Project.

### 1. Risk Vertical Gradient

The existing grade on Dorion Road Hill should be reduced from over 12% to approximately 8%; which is acceptable for "long trucks" under Transportation Association of Canada Design Guidelines and which will improve marketability of the proposed Light Industrial Park and other Town owned lands adjacent to Dorion Road. This will still be a significant grade that must be clearly communicated to all parties (eg: for comparison purposes Gravelle Road immediately east of Dorion Road or the proposed Brook Street Extension between the CPR tracks and Dorion Road are both is 8%). It may be necessary to increase the grade to avoid property acquisition requirements and reduce capital cost to address ICIP approved budget envelope. Council may decide to consider 9% or 10% grade due to Covid related construction cost increases and ICIP budget constraints. **Jp2g Consultants recommends 8% for consideration as the preferred design grade for the Dorion Road Hill Reconstruction Project.**

### 2. Risk Rock Excavation

There will be significant height of rock cut on completion of the Dorion Road Hill Reconstruction project (varies between 3 meters/10 ft. and 10 meters/32 ft.) as currently proposed in preliminary engineering design. Geotechnical design requirements for "step back" on the rock face and provision of a "catchment area" at the base of the "rock face" will result in the need to relocate three (3) recently installed Bell poles along the east limit of Dorion Road Hill at the Highway 17 intersection Station 10+00 southerly approximately 100 meters.

There will therefore potentially be a need to negotiate permission or an easement to provide relocation of Bell poles and/or rock face "benching" on either private property in Papineau Township or Town property adjacent to Dorion Road at cross-sections AA, BB and CC (3 poles).

**Jp2g Consultants recommends focusing westerly, thereby locating substantially on existing Town of Mattawa property.**

Farm fence should be provided as a safety measure at the top of all excavation exceeding 3 meters in height.

### 3. Risk Potential Impact of Construction on Existing Bell Poles/Hydro Lines

The recently installed Bell poles along the east limit of Dorion Road Hill (6 poles) and the existing hydro line north side of Dorion Road will be addressed in final engineering design to confirm if pole relocation or raising or lowering of wires is required.

Cost increases due to COVID 19 for relocation of poles or raising or lowering of wires represent an additional risk to the approved ICIP budget envelope.

**4. Risk Potential Impact of Construction (Rock Blasting) on Bell Mobility Radio Tower**

The final engineering design for the proposed curve at the top of the hill will be coordinated with Bell Mobility under provision of the Bell Mobility Radio Tower lease to determine any concerns Bell may have regarding potential impacts of excavation/ blasting on the Bell Mobility Communication Tower.

Legal advice will be obtained regarding potential constraints on implementing the proposed undertaking arising from Bell Mobility Radio Tower Lease.

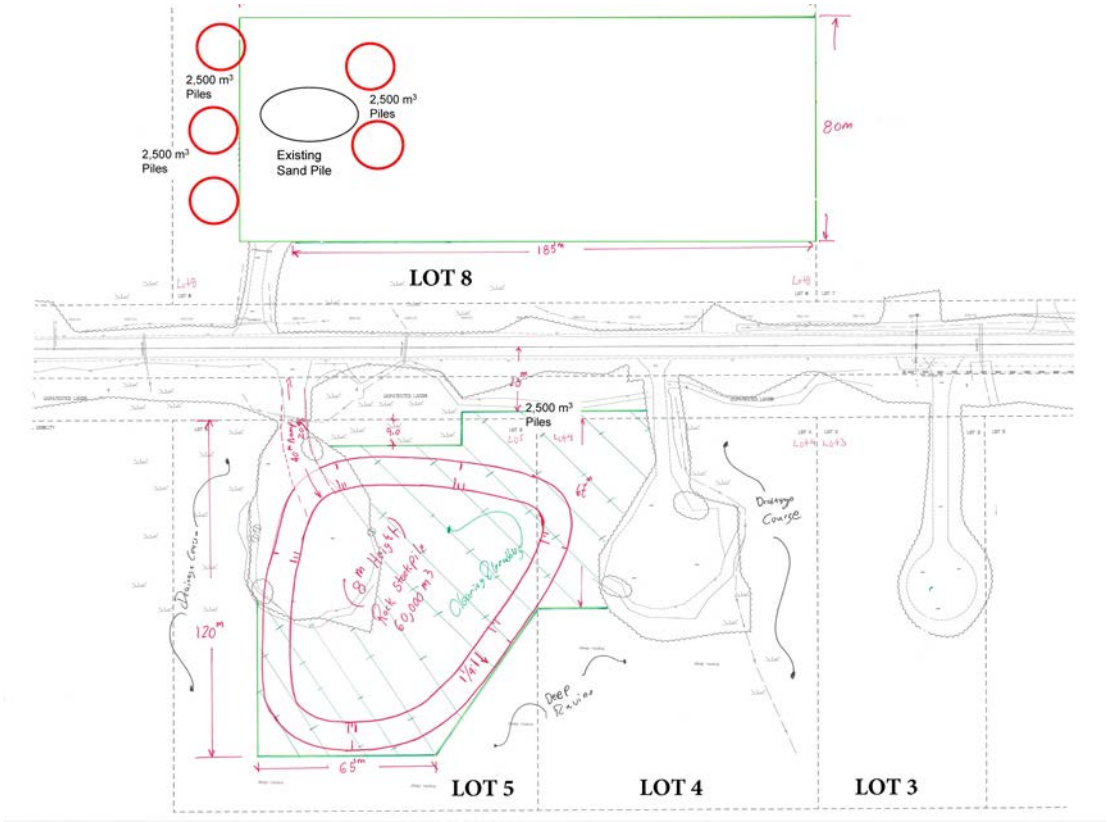
A requirement for vibration monitoring during blasting will be incorporated into the construction specifications.

**5. Risk Storage of Blast Rock/Excess Soil**

It is suggested that contractor tender cost could be reduced if blast rock and excess soil can be stored within the project area.

Jp2g Consultants Inc. recommend Lot 4 and 5 be prepared for storage of blast rock and subsequent crushing operation. Lot 8 to be utilized for temporary storage of earth borrow and Lot 3 clearing be extended to allow for temporary storage of brush.

**Figure 9**
**Temporary Material Storage Areas**



### 6. Risk Capital Cost/Funding Budget

The original construction cost estimate and subsequently ICIP approved budget envelope for Dorion Road Hill Reconstruction and the Highway 17 "Slip-Around" was prepared in May 2019 as follows

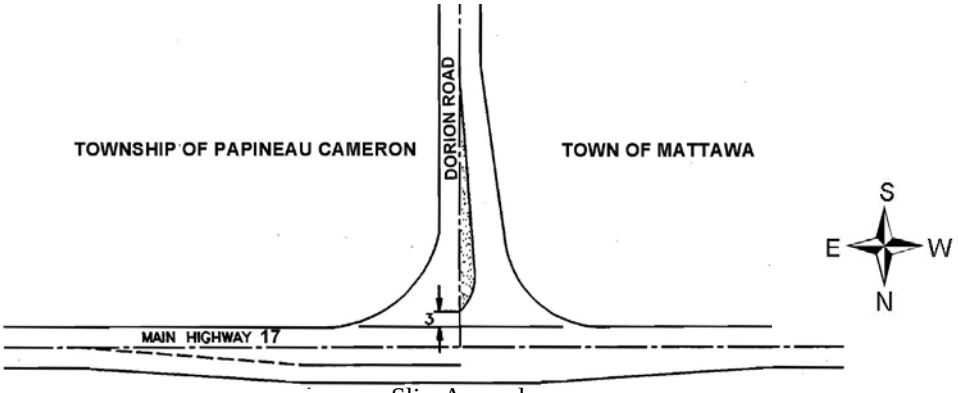
| | |
|---|---|
| Construction Part A, B and C | $3,500,000 |
| Engineering, Planning & Project Management | $525,000 |
| Technical Support Subconsultants | $60,000 |
| Relocate Utilities | $75,000 |
| Contingencies | $624,000 |
| Total Project Cost | $4,784,000 |

While we remain confident in the original Engineering, Planning and Project Management budgets; as well as the Technical Support budget (eg: Geotechnical, OLS, Environmental Assessment, Aboriginal Consultation) noted above, we are concerned with the COVID 19 impact on the originally approved construction related budgets of $3,500,000 (road construction) and $75,000 (utilities) respectively.

### 7. Risk MTO Highway 17 Westbound "Slip-Around"

If MTO maintains a requirement for a westbound "slip-around" on Highway 17 this will trigger a variety of risks in addition to COVID 19 related increases in capital costs. **Firstly**, notwithstanding their correspondence of May 13, 2013 and September 30, 2014, MTO may eventually require a Transportation Environmental Study Report (TESR). **Secondly**, Highway 17 work related to the "slip-around" in Phase 1 will require extra effort and costs associated with engineering surveys, RAQS certified peer review, extra geotechnical survey and potential additional drainage requirements. The phasing of the "slip-around" requirement will impact the work program schedule and budget.

**Figure 10**
**MTO Westbound "Slip-Around" Schematic**

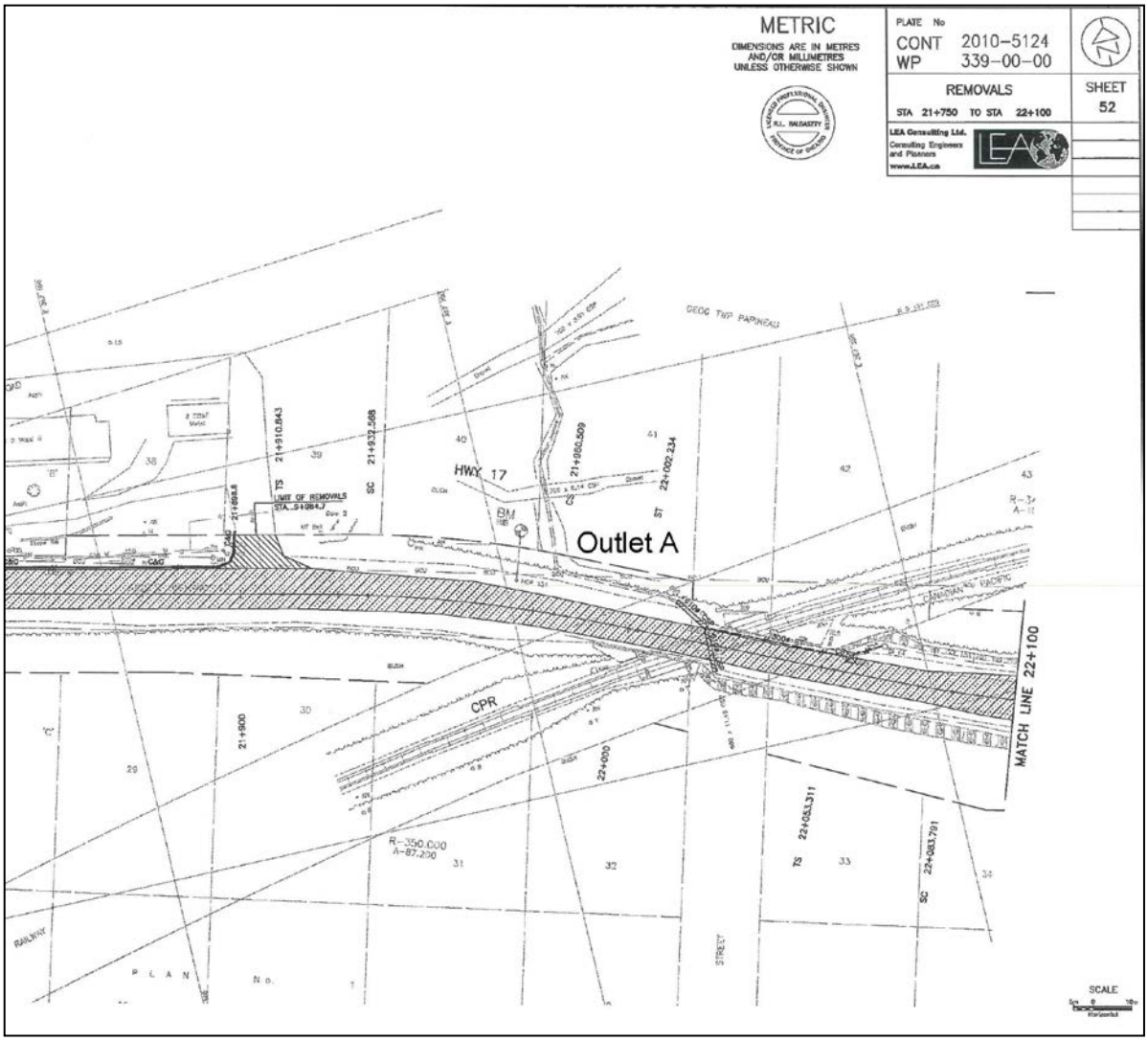



Slip-Around

## 8. Risk Downstream Drainage Highway 17 Outlet

Drainage Outlet A immediately west of CPR trestle at Valois Motel located on Highway 17 provides the drainage outlet from Dorion Road Hill to the Ottawa River. Improvements to Outlet A; as well as consolidation and control of watercourses and hillside springs on Dorion Road Hill draining onto Highway 17 will require MTO approval. See Figure 11.

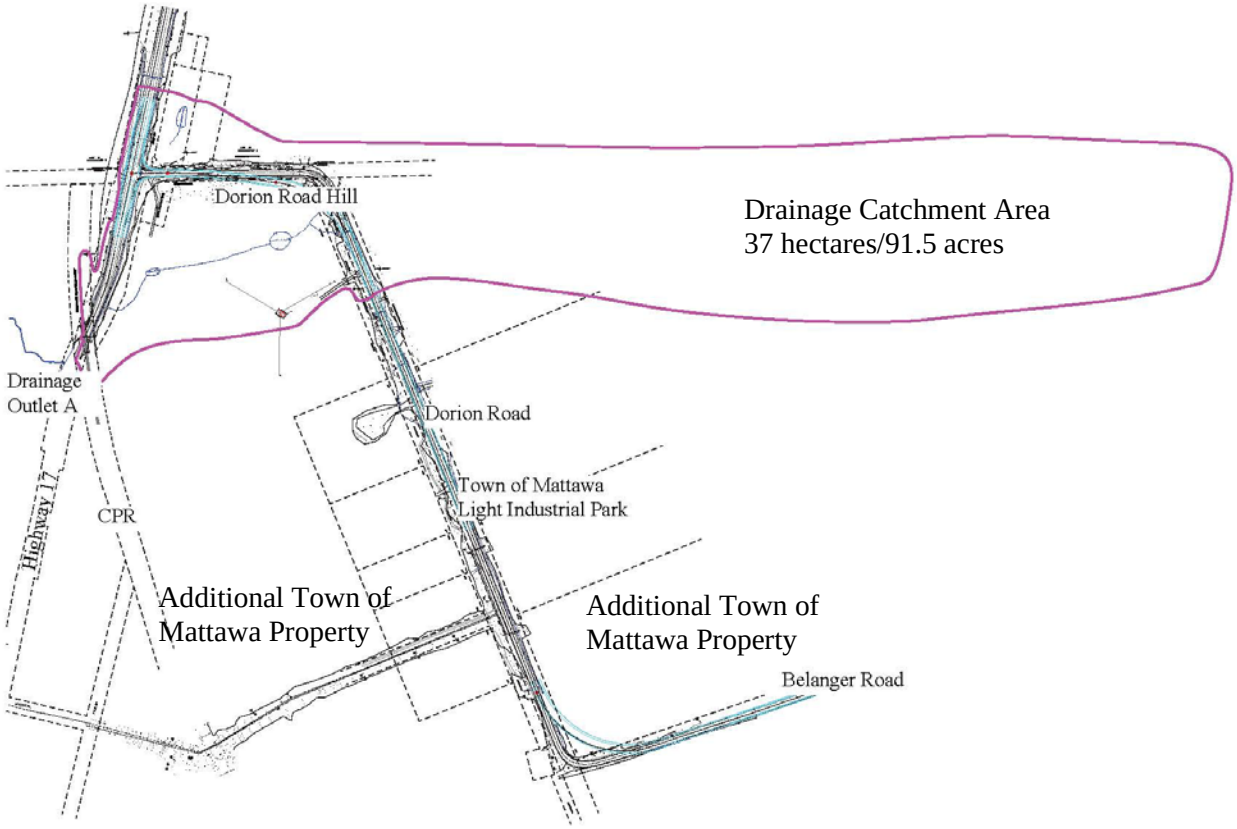
**Figure 11**
**Highway 17 Drainage Outlet A**



Surface water drainage will be in accordance with MTO Design Guidelines and will include removal of existing road crossing CSP culverts and replacement with 500 mm dia. polymer laminated culverts and surface water mitigation measures.

The Dorion Road Hill drainage catchment area as shown on Figure 12 has been established by Jp2g Consultants Senior Design Engineer field visit during spring run-off April 2021.

**Figure 12**
**Dorion Road Hill**
**Drainage Catchment Area**



### 9. Risk Potential Historic Dump Site

There is a possibility that an abandoned dump site or portion thereof exists under part of the proposed curve at the top of the Dorion Road Hill. This could have implications for extent of excavation and relocation of dump material.

**Figure 13**
**Dorion Road Hill**
**Potential Historic Dump Area**


### 10. Risk Class Environmental Assessment

The proposed work plan and budget originally contemplated a Schedule A Project (eg: Notice only); however, Town Council has determined that, given the new curve realignment at the top of the hill, a potential requirement for a Bell Canada pole easement adjacent to the Dorion Road Hill and potential work related to the MTO "slip-around", a Schedule B Class Environmental Assessment should be completed.

### 11. Risk Clearing and Grubbing Operations

The "close cut clearing" of the proposed Bell pole relocation easement (Contract A) and the clearing and grubbing of the Dorion Road right-of-way and temporary material storage areas (Contracts B and C) will comply with Provincial Guidelines which generally preclude tree cutting operations in bird breeding season (between April 15 and August 15) unless a breeding bird survey is completed by a qualified professional within five (5) days of vegetation removal and the survey identifies no nesting activity in the vicinity of the work area.

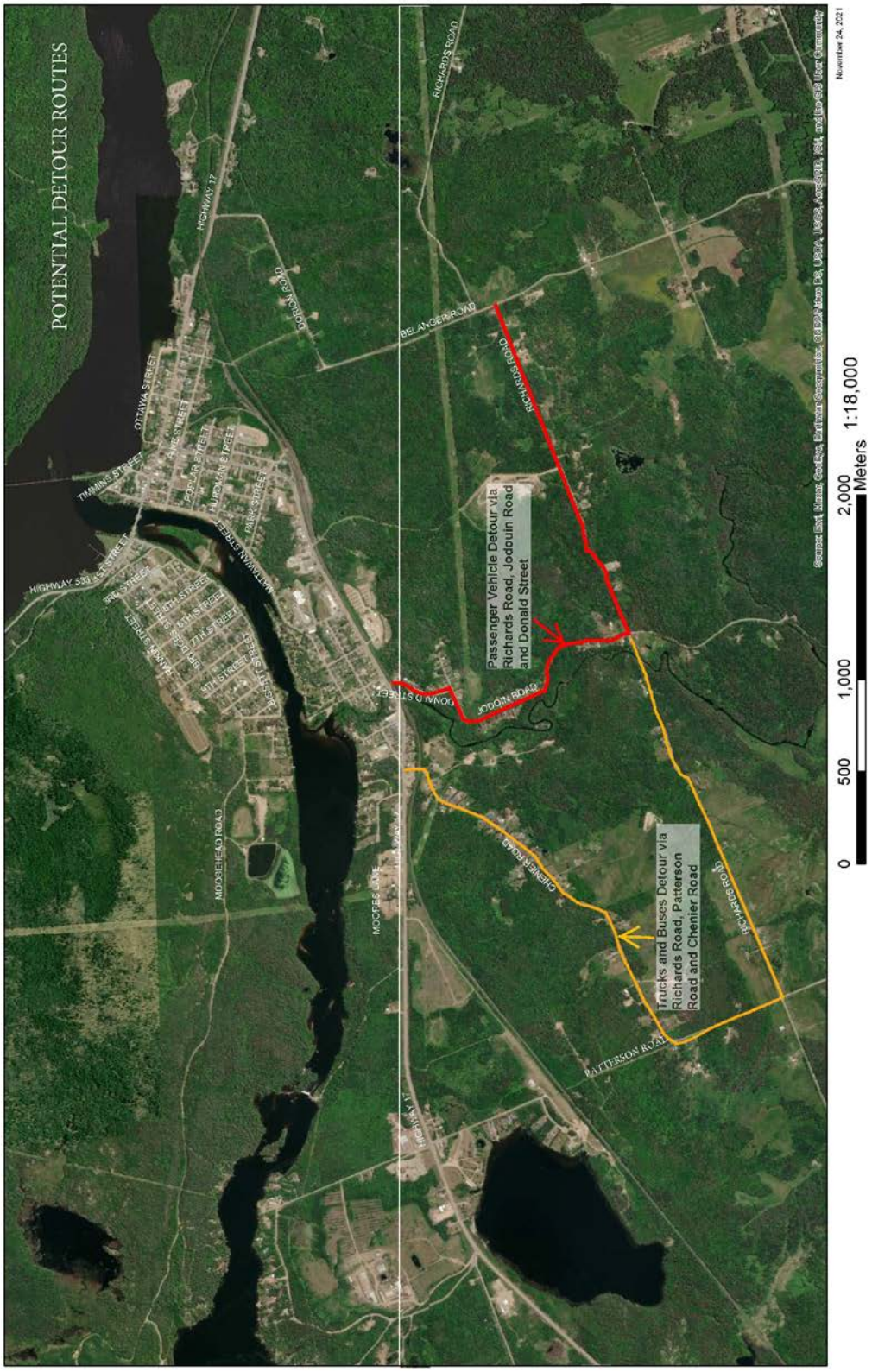
**12. Risk Emergency Response (Fire, Medical, Police) during Construction**

Jp2g Consultants Project Manager will work with Town of Mattawa Public Works Department and Emergency Measures to **firstly** determine a formal detour route and **secondly** provide a protocol for access to Dorion Road and Belanger Road residences on a priority basis during any emergency situation that may arise during construction.

**13. Risk Traffic Disruption during Construction Work**

Jp2g engineering design staff will work with Town of Mattawa to develop a protocol for keeping a lane of traffic open during construction to the maximum extent possible by providing construction specifications that specifically address construction operations. There will, however, be times when detour(s) will have to be in effect (see Figure 10). Subject to contractor's scheduling of blasting work, Dorion Road Hill may be able to be opened for the winter between construction seasons. Based on Preliminary Engineering Site Review a "split detour" route utilizing Richards Road, Jodouin Road and Donald Street for cars and Richards Road and Chenier Road for trucks and buses should be considered. See Figure 14.

**Figure 14**
**Potential Detour Routes**



## 15.0 PHASE 3 NET ENVIRONMENTAL EFFECTS AND POTENTIAL MITIGATION ALTERNATIVE DESIGN CONCEPTS

Jp2g Consultants Inc. Biologist conducted an updated site review and Species at Risk assessment of the Dorion Road Hill Reconstruction Project Area on May 26, 2021. No Species at Risk were identified.

Certain mitigation measures to protect watercourses/drainage were recommended and will be included in the construction specifications.

The net environmental effect of individual items related to implementation of the Dorion Road Hill Reconstruction Project and potential mitigation measures for all alternatives offered for consideration in this Municipal Class Environmental Assessment Schedule B are summarized in Figure 15.

## Figure 15
## Dorion Road Hill Reconstruction
## Evaluation of Preliminary Design Alternatives, Net Environmental Effects and Potential Mitigation

| ENVIRONMENTAL CRITERIA | ALTERNATIVE 1: Do Nothing/Null Alternative Existing Grade 10% to 14% | ALTERNATIVE 2: Realign Dorion Road Hill Roadway Easterly | ALTERNATIVE 3: Realign Dorion Road Hill Roadway Westerly | ALTERNATIVE 4: Part A Intersection Improvements Part B Reduce Grade to 8% Part C Construct New Curve Part D Provide Temporary Material Storage Area | ALTERNATIVE 5: Part A Intersection Improvements Part B Reduce Grade to 9% Part C Construct New Curve Part D Provide Temporary Material Storage Area | ALTERNATIVE 6: Part A Intersection Improvements Part B Reduce Grade to 10% Part C Construct New Curve Part D Provide Temporary Material Storage Area | MITIGATION |
|---|---|---|---|---|---|---|---|
| **PUBLIC HEALTH & SAFETY** | | | | | | | |
| 1. Provides safe operations for vehicular traffic | Does not address the problem | Major Negative Impact re: compliance with MTO Geometrics and Transportation Association of Canada Guidelines | Major Negative Impact re: compliance with MTO Geometrics and Transportation Association of Canada Guidelines | Moderate Negative Alternative 4 and Alternative 5 Impact to be resolved in Engineering Design | | Major Negative Impact 10% grade is considered too steep, particularly in winter conditions | |
| 2. Provides safe intersection at Dorion Road/ Hwy 17 in accordance with MTO Guidelines | Does not address the problem | Major Negative Impact re: compliance with MTO Geometrics and Transportation Association of Canada Guidelines | Major Negative Impact re: compliance with MTO Geometrics and Transportation Association of Canada Guidelines | Alternative 4, Alternative 5 and Alternative 6 will comply with MTO Intersection Requirements on implementation of Part A Intersection Improvements Dorion Road Hill Reconstruction | | | Design Drawings and Specifications to comply with MTO Geometrics |
| 3. Accommodates safe pedestrian movement/cycling route | Does not address the problem | Active transportation could only be accommodated at substantial cost | Active transportation could only be accommodated at substantial cost | Moderate Positive Impact. 1.5 m “safe zone” complete with line painting will be provided on paved shoulder of new road platform | | | Provide Safety Fence along top of all excavation exceeding 3 m. Provide streetlights where possible. Provide line painting. |
| 4. Emergency Measures during Construction | N/A | No Impact. Existing Dorion Road Hill would remain operational. | No Impact. Existing Dorion Road Hill would remain operational. | Moderate Negative Impact if detour routes and emergency access protocols are established and communicated early as part of Environmental Assessment process. | | | Establish Emergency Measures Contact List and Protocol |
| **NATURAL ENVIRONMENT** | | | | | | | |
| 5. Geology and Soils | No impact | Major Negative Impact. Substantial geotechnical survey would be required. | Major Negative Impact. Substantial geotechnical survey would be required. | Moderate Negative Impact due to excavation requirements to achieve design grade. | | | |
| 6. Existing Watercourse/Drainage | No impact | Major Negative Impact on existing drainage system. | Major Negative Impact on existing drainage system. | Minor Negative Impact due to storm water management of surface water run-off Dorion Road Hill. | | | |
| 7. Air Quality | No impact | Moderate Negative Impact. Alternatives 2 to 6 do not reduce greenhouse gas emissions | | | | | |
| 8. Impact on Wildlife Habitat | No impact | Moderate Negative Impact due to clearing of trees | Moderate Negative Impact due to clearing of trees | Minor Negative Impact due to clearing of trees for new curve alignment. No Species At Risk significant habitat identified Spring 2021. | | | Conducted updated Biophysical Habitat Survey to identify Species at Risk May 26, 2021 |
| 9. Breeding Birds Protection | No impact | Minor Negative Impact due to minimal clearing of trees | Major Negative Impact due to extensive clearing of trees | Moderate Negative Impact due to clearing of trees for new curve alignment. | | | Clearing operations to be conducted before April 15 and after August 15 (breeding season) |
| **SOCIO-ECONOMIC ENVIRONMENT** | | | | | | | |
| 10. Future Land Use Industrial/ Residential/ Institutional | Poor access limits Industrial, Residential and Institutional growth on Dorion Road | All Alternatives will improve opportunity for Future Industrial, Residential and Institutional Development on Town of Mattawa owned property 240 acres Dorion Road/Brook Street area | | | | | |
| 11. Impact on Heritage Resources | Existing condition. No impact. | No impact | No impact | No impact | No impact | No impact | |
| 12. Impact on Aboriginal Interests | Existing condition. No impact. | No impact | No impact | No impact | No impact | No impact | Contact Aboriginal Groups |
| 13. Impact on Adjacent Businesses | Potential impact on growth | Moderate Positive effect resulting from contractor use of local material, labour, restaurant facilities and accommodations | | | | | Initiate contact with adjacent businesses directly as per EA Process |
| 14. Impact on Adjacent Private Property | Existing condition. No impact. | Major Negative Impact. Private property acquisition required easterly. | Major Negative Impact. Private property acquisition required westerly. | Moderate Negative Impact. Alternatives 4, 5 and 6 may require easement or agreement for Bell pole relocation on private property adjacent to Dorion Road Hill. | | | Initiate contact with adjacent property owners directly as per EA Process |

## Figure 15 (Cont'd)
## Dorion Road Hill Reconstruction
## Evaluation of Preliminary Design Alternatives, Net Environmental Effects and Potential Mitigation

| ENVIRONMENTAL CRITERIA | ALTERNATIVE 1: Do Nothing/Null Alternative Existing Grade 10% to 14% | ALTERNATIVE 2: Realign Dorion Road Hill Roadway Easterly | ALTERNATIVE 3: Realign Dorion Road Hill Roadway Westerly | ALTERNATIVE 4: Part A Intersection Improvements Part B Reduce Grade to 8% Part C Construct New Curve Part D Provide Temporary Material Storage Area | ALTERNATIVE 5: Part A Intersection Improvements Part B Reduce Grade to 9% Part C Construct New Curve Part D Provide Temporary Material Storage Area | ALTERNATIVE 6: Part A Intersection Improvements Part B Reduce Grade to 10% Part C Construct New Curve Part D Provide Temporary Material Storage Area | MITIGATION |
|---|---|---|---|---|---|---|---|
| **TECHNICAL CONSIDERATIONS** | | | | | | | |
| 15. Impact on Infrastructure and Utilities (Bell, Hydro) | Existing condition. No impact. | Moderate negative impact. Private property is avoided. Adjacent Municipality. | Minor impact. Need to relocate is on Town property. | Major Negative Impact. Three (3) Bell Telephone poles need to be relocated. Hydro line at new curve may have to be relocated and/or raised. | | | Initiate contact Bell Canada, Bell Mobility and Ontario Hydro. |
| 16. Ability to accommodate truck traffic per Transportation Association of Canada Guidelines | Does not address the problem | TBD | TBD | Meets TAC Guidelines | Not compliant with TAC Guidelines but "tolerable" | Not compliant. Not recommended. | |
| 17. Ability to address stormwater run-off quality and quantity from roadway | Moderate Negative Impact Existing surface water run-off from hillside problematic in Spring. | TBD | TBD | Minor Negative Impact. Surface water run-off from Dorion Road Hill to be mitigated. | | | Provide properly designed ditches with adequate cross-section and mitigation. |
| 18. Blasting and rock face requirements | Not applicable. No blasting. | Moderate rock excavation. | Major rock excavation. Negative Impact on Industrial Lot driveways. | 10 meter high rock excavation required on new curve at top of Dorion Road Hill as per Figure 7 Profile. | 9 meter high rock excavation required on new curve at top of Dorion Road Hill as per Figure 7 Profile. | 6 meter high rock excavation required on new curve at top of Dorion Road Hill as per Figure 7 Profile. | Provide rock excavation cross-section as per Geotechnical Report. Establish blasting protocols as per Geotechnical Report and construction specifications. Conduct pre-blast surveys. Conduct vibration monitoring during blasting. |
| 19. Rock Excavation $m^3$ | Not applicable | TBD | TBD | 42,636 $m^3$ | 35,800 $m^3$ | 31,100 $m^3$ | Benchmark cost \$54.50/$m^3$ Rock Excavation |
| 20. Blast Rock Storage | Not applicable | TBD | TBD | 63,954 $m^3$ | 53,700 $m^3$ | 46,650 $m^3$ | |
| 21. Excess Soil | Not applicable | TBD | TBD | 11,446 $m^3$ | 10,700 $m^3$ | 9,200 $m^3$ | Benchmark cost \$13.80/$m^3$ Earth Excavation Excess Soil Management to comply with O. Reg. 409/19 |
| 22. Level of Service | Does not address current low level of service. | Major Potential Positive Impact. Final Engineering Design of preferred alternative will address both Technical and Stakeholder Level of Service | | | | | |
| 23. Noise | Existing condition. No impact. | Major Negative Impact due to proximity of residences. | Major Negative Impact due to proximity of residences. | Moderate Negative Impact due to operation of construction equipment. | | | Establish hours of operation in construction specification. |
| 24. Traffic Disruption during Construction | N/A | No Impact. Existing Dorion Road Hill would remain operational. | No Impact. Existing Dorion Road Hill would remain operational. | Major Negative Impact due to length of detour. | | | Notify public agencies and general public of construction schedule. Consult with Council and general public to establish detour route (eg: Public Information Center) |
| 25. Tree Clearing | N/A | Minor Negative Impact due to clearing of trees | Major Negative Impact due to clearing of trees | Moderate Negative Impact due to clearing of trees for<br>Contract A Bell Canada Easement<br>Contract B Dorion Road Curce<br>Contract C Material Storage Area | | | Tree clearing operations to be conducted before April 15 and after August 15 (bird breeding season) unless a breeding bird survey conducted within five (5) days of vegetation removal indicates no nesting activity. |
| 26. Operation and Maintenance Requirements | High maintenance effort | TBD | TBD | Moderate Negative Impact due to winter maintenance efforts and potential rock fall events. | | | |

## Figure 15 (Cont'd)
## Dorion Road Hill Reconstruction
## Evaluation of Preliminary Design Alternatives, Net Environmental Effects and Potential Mitigation

| ENVIRONMENTAL CRITERIA | ALTERNATIVE 1: Do Nothing/Null Alternative Existing Grade 10% to 14% | ALTERNATIVE 2: Realign Dorion Road Hill Roadway Easterly | ALTERNATIVE 3: Realign Dorion Road Hill Roadway Westerly | ALTERNATIVE 4: Part A Intersection Improvements Part B Reduce Grade to 8% Part C Construct New Curve Part D Provide Temporary Material Storage Area | ALTERNATIVE 5: Part A Intersection Improvements Part B Reduce Grade to 9% Part C Construct New Curve Part D Provide Temporary Material Storage Area | ALTERNATIVE 6: Part A Intersection Improvements Part B Reduce Grade to 10% Part C Construct New Curve Part D Provide Temporary Material Storage Area | MITIGATION |
|---|---|---|---|---|---|---|---|
| **FINANCIAL CONSIDERATIONS** | | | | | | | |
| 27. ICIP Construction Budget $3,500,000 Capital Costs Part A, B, C and D | Not Applicable | $ TBD | $ TBD<br>Major Negative Impact. High volume rock excavation would be required. | $4,174,703 | $3,633,001 | $3,326,151 | Infrastructure Ontario to be contacted re: implications of potential budget exceedance |
| Part A Highway 17 Slip-Around (Westbound) ICIP Budget $400,000 | NIL | Part A Slip-Around Budget would be exceeded. | Part A Slip-Around Budget would be exceeded. | Slip-Around Budget TBD not updated $400,000 pending MTO discussion | | | Engage with MTO re: possible deferral of Hwy. 17 "slip-around" requirement |
| Part B Intersection Improvements Sta. 10+00 to Sta. 10+50 ICIP Budget $433,806 | NIL | Part B Hwy. 17 Intersection Improvements Budget would be exceeded. | Part B Hwy. 17 Intersection Improvements Budget would be exceeded. | $446,982 | $353,882 | $353,882 | Final Design to comply with MTO Geometric Design Standards. |
| Part C Reduce Grade on Hill and New Curve ICIP Budget $2,689,821 | NIL | Part C Reduce Grade Budget would be exceeded. | Part C Reduce Grade Budget would be exceeded. | $3,327,721 | $2,879,119 | $2,572,269 | Final Design to comply with Transportation Association of Canada Guidelines. |
| Part D Blast Rock Storage/Excess Soil Storage included in Part B and Part C budgets and contingency allowance | NIL | | | | | | |
| 28. Maintenance Costs | Major Negative Impact due to high maintenance effort. | Moderate Negative Impact increases with increase in gradient | | | | | Engineering Design to provide adequate shoulders and ditches to accommodate surface water run-off and snow removal. |

## 16.0 PHASE 4 RECOMMENDED PREFERRED SOLUTION

**WITH MITIGATION MEASURES NOTED IN FIGURE 15 NET ENVIRONMENTAL EFFECT IS ANTICIPATED TO BE MINIMIZED FOR THE DORION ROAD HILL RECONSTRUCTION PROJECT UNDER ALTERNATIVE 4: REDUCE GRADIENT TO 8%.**

**BASED ON THE SCREENING PROCESS CARRIED OUT FOR THIS SCHEDULE B MUNICIPAL CLASS ENVIRONMENTAL ASSESSMENT INCLUDING PUBLIC, AGENCY AND ABORIGINAL CONSULTATION AND PRELIMINARY ENGINEERING COMPLETED TO DATE AND THIS SCREENING PROCESS, Jp2g CONSULTANTS INC. ENGINEERS · PLANNERS · PROJECT MANAGERS RECOMMENDS THAT THE COUNCIL OF THE TOWN OF MATTAWA CONSIDER THE FOLLOWING APPROACH TO THE DORION ROAD HILL RECONSTRUCTION PROJECT:**

1. **FORMALLY REQUEST HIGHWAY 17 WESTBOUND "SLIP-AROUND" BE DEFERRED TO FUTURE PHASE 2 BASED ON FORMAL AGREEMENT WITH MTO.**

2. **UNDERTAKE INTERSECTION IMPROVEMENTS DORION ROAD/HIGHWAY 17 STATION 10+000 TO STATION 10+050 TO COMPLY WITH MTO DESIGN GUIDELINES AS PER Jp2g CONSULTANTS INC. PRELIMINARY DESIGN DRAWINGS APPENDIX D.**

3. **UNDERTAKE RECONSTRUCTION OF DORION ROAD HILL TO APPROXIMATELY 8% GRADE FROM STATION 10+050 TO STATION 10+450 INCLUDING PROVISION OF A NEW CURVE COMPLETE WITH ROAD CROSS-SECTION AND SAFETY FEATURES AS PER RECOMMENDED DESIGN CRITERIA SECTION 11.0 AND Jp2g CONSULTANTS INC. PRELIMINARY DESIGN DRAWINGS APPENDIX D.**

4. **PROVIDE TEMPORARY STORAGE FOR BLAST ROCK, EXCESS SOIL AND BRUSH MATERIAL WITHIN THE PROJECT SITE ON LOT 3, 4, 5 AND 8 OF THE PROPOSED LIGHT INDUSTRIAL PARK EXTENDING TO STATION 10+750 AS PER PRELIMINARY DESIGN DRAWINGS APPENDIX D..**

**THE FINAL SELECTION OF THE PREFERRED SOLUTION THAT WILL PROCEED TO CONSTRUCTION WILL BE SUBJECT TO THE RESULTS OF THE SCHEDULE B ENVIRONMENTAL ASSESSMENT PROCESS, INCLUDING PUBLIC MEETING, CIRCULATION TO AGENCIES AND PROPERTY OWNERS, ABORIGINAL CONSULTATION AND NOTICE OF PROJECT COMPLETION ALL AS DESCRIBED HEREIN.**

## 17.0 FOLLOW UP ITEMS

The following items require consideration and action preparatory to finalizing this Municipal Class Environmental Assessment Schedule B process and completing Final Engineering Design Drawings/Specifications preparatory to implementing the Dorion Road Hill Reconstruction Project

**Figure 16**
**Dorion Road Hill Reconstruction**
**Follow up Items**

| | |
|---|---|
| **Action 1** | Continue to monitor alternative options for proposed grade 8% versus 9% versus 10% having regard for future use, level of service, aesthetics and cost to construct. Provide the Jp2g Consultants Design Team instructions as to preferred grade for "issued for construction" drawings. |
| **Action 2** | Continue to engage with ICIP Funding Agency to determine implications and alternative approach to potential construction cost and/or schedule exceedance. |
| **Action 3** | Engage with Bell Canada to negotiate relocation and potential cost sharing of relocation of three (3) Bell poles along east limit of Dorion Road Hill Station 10+000 to Station 10+104. |
| **Action 4** | Advise Bell Mobility of need for Bell Canada pole easement on Town owned land as Bell Mobility on Lease lands west side Dorion Road. |
| **Action 5** | Provide notice to Bell Canada re: proposed construction including rock blasting in the vicinity of the Bell Mobility Radio Tower. |
| **Action 6** | Commission close cut clearing proposed Bell pole easement west side Dorion Road. |
| **Action 7** | Engage with Ministry of Transportation to negotiate potential deferral of Highway 17 "Slip-Around" including formal deferral agreement and potential cost sharing |
| **Action 8** | Commission clearing and grubbing and grading contract for Light Industrial Park Lots 4 and 5 preparatory to providing a blast rock storage area and future gravel crushing operation. |
| **Action 9** | Confirm protocols for temporary storage of blast rock and excess soil. |
| **Action 10** | Commission clearing and grubbing of Dorion Road right-of-way including new curve Spring 2022 to mitigate breeding bird nesting constraints April 15 to August 15. To be completed by April 15, 2022. |
| **Action 11** | Coordinate review and approvals Traffic Control, Detour Routes and Emergency Measures protocols. |
| **Action 12** | Discuss extent of street lighting, if any, as a separate contract subject to budget envelope availability. |

## 18.0 PHASE 5 PROJECT COMPLETION

Once the Municipal Class EA process is complete a final selection of the Preferred Alternative will be confirmed by Council Resolution and a Notice of Completion will be placed in the Mattawa Recorder and posted on the Town of Mattawa website providing a 30 day period for public and agency review and comment.

A Schedule B Project File will be deposited at the Town Office which will include a record of all contacts, as well as enquiries and comments received during the course of the review period.

Notice of Study Completion will be sent directly to mandatory agencies; as well as property owners and business owners adjacent to the Dorion Road Hill Reconstruction project area.

Final design drawings/specifications and construction will be in accordance with the provisions of this Municipal Class Environmental Assessment Schedule B.

# APPENDIX A

# PREVIOUS STUDIES
# 2013 SCHEDULE B ENVIRONMENTAL ASSESSMENT

# APPENDIX B

# INFRASTRUCTURE CANADA IMPROVEMENT PROGRAM (ICIP FUNDING APPLICATION)

# APPENDIX C

# DORION ROAD HILL RECONSTRUCTION DESIGN BRIEF

# APPENDIX D

# PRELIMINARY ENGINEERING DESIGN DRAWINGS

# APPENDIX E

# CAPITAL COST ESTIMATE ALTERNATIVE GRADIENTS

# APPENDIX F

# TEMPLATE CORRESPONDENCE
# PRIVATE PROPERTY OWNERS AND BUSINESS OPERATORS

# APPENDIX G

# CORRESPONDENCE ABORIGINAL CONSULTATION

# APPENDIX H

# CORRESPONDENCE AGENCY CONSULTATION