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PROJECT FILE REPORT

Peel Region

Watermain Replacement from Highway 50 to Hardwick Road in the Town of Caledon Municipal Class Environmental Assessment

MARCH 2025

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REVISIONS PAGE

Watermain Replacement from Highway 50 to Hardwick Road in the Town of Caledon Municipal Class Environmental Assessment	
Client:	Engineer:
Peel Region	Associated Engineering (Ont.) Ltd.

Revision/ Issue	Date	Description	Prepared by/ Reviewed by	Client Review
1	2024-11-13	Project File Report – v1	AL/SB	
2	2025-03-14	Project File Report – v2 (final)	AL/SB	

EXECUTIVE SUMMARY

INTRODUCTION

Associated Engineering (Ont.) Ltd. (Associated) was retained by Peel Region (Peel) to assist with the completion of a Municipal Class Environmental Assessment (MCEA) for the *Watermain Replacement from Highway 50 to Hardwick Road* (the Study) in the Town of Caledon. The Study developed and evaluated a variety of watermain alignment alternatives to improve water quality and reliability of the water system while considering accessibility of the infrastructure, impacts on the natural environment, property requirements and coordination with ongoing and future projects. In accordance with the Municipal Engineers Association's (MEA) Municipal Class Environment Assessment process, this Study follows the planning process for a Schedule B.

The Study Area, as shown in Figure E-1-1, encompasses Highway 50 (from the Highway 50 bridge to beyond), Hardwick Road, the CP Rail Corridor, and various private properties.

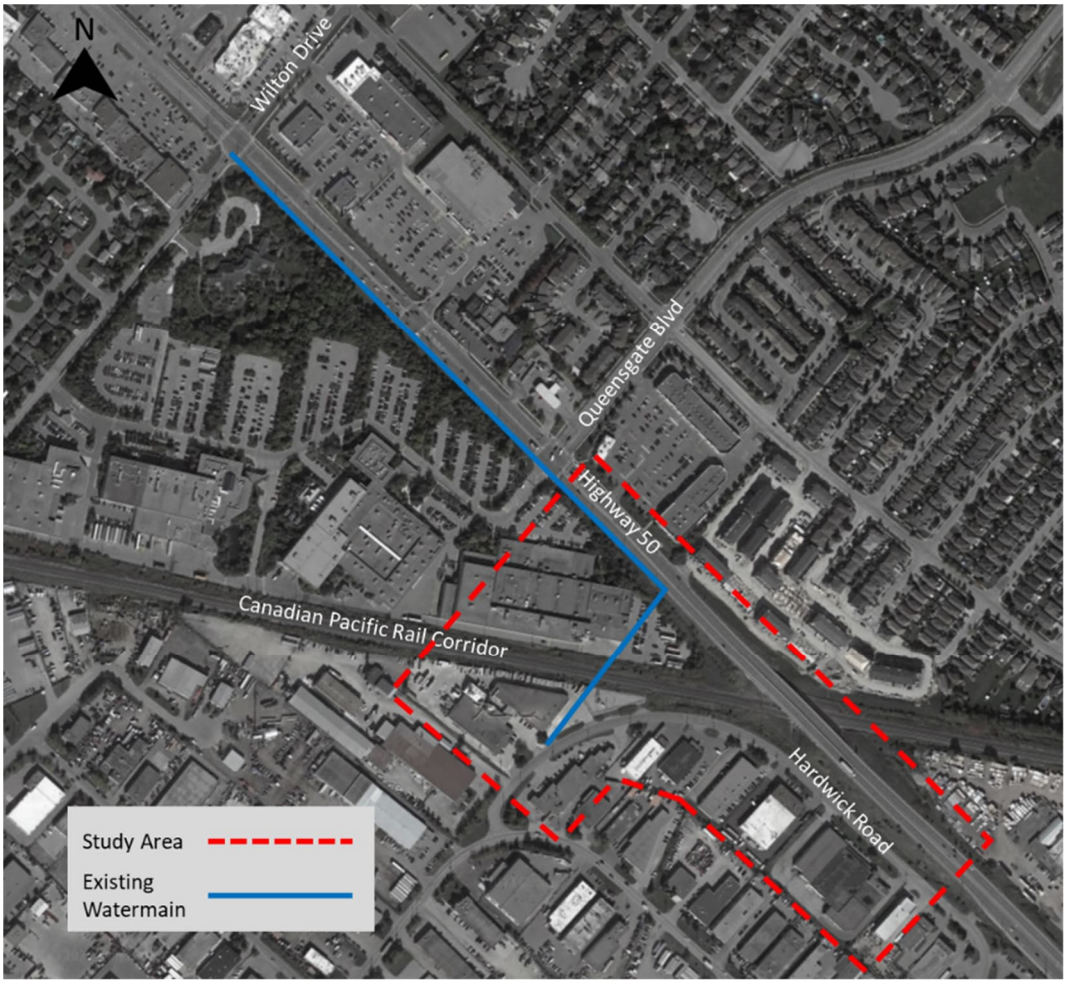

Figure E-1-1: Study Area

STUDY OBJECTIVES

The purpose of this Study was to develop alternative watermain alignments and determine the preferred solution in addressing water quality and system reliability while considering accessibility of the infrastructure, impacts on the natural environment, property requirements and coordination with ongoing and future projects in accordance with the MEA MCEA guidelines. In developing alternatives, the Study team took into consideration the objectives of the Study:

- Minimize or avoid impacts to private property with the watermain replacement; and
- Avoid impacts to the Highway 50 bridge structure and planned bridge rehabilitation project.

The alternatives proposed to achieve the study objectives are outlined in Section 5 as are the evaluation of alternatives and identification of the preferred alternative.

PHASE I: IDENTIFICATION OF PROBLEM AND OPPORTUNITIES

The Problem and Opportunity Statement provides a clear statement of the problem and opportunities that need to be addressed for a specific undertaking. The various analyses (e.g. archaeological assessment, cultural heritage assessment, natural environment assessment) and existing conditions provide input for and contribute to the identification and description of the problem or opportunity. The prevailing deficiencies within the Study Area can be summarized by the following statement.

Problem and Opportunity Statement

The existing 300mm diameter ductile iron watermain along Highway 50 from Wilton Drive to 150m south of Queensgate Boulevard and along the Highway 50/Hardwick Road easement requires replacement due to age and to improve water quality and reliability of the system. The easement carries the existing watermain across private property, under the footing of an existing building, and the Canadian Pacific (CP) Rail corridor. The watermain replacement is anticipated to be installed via trenchless technologies and will require new property easement(s) for the crossing of private property and/or the CP Rail corridor to connect to Hardwick Road. Through the completion of this Municipal Class Environmental Assessment, watermain alignment alternatives will be developed and evaluated taking into consideration accessibility needs, impact on the natural environment, property requirements, coordination with ongoing and future projects and financial implications.

PHASE II: IDENTIFICATION AND EVALUATION OF ALTERNATIVE SOLUTIONS

The Alternative Solutions that have been developed for the *Watermain Replacement from Highway 50 to Hardwick Road* MCEA Study include:

- Alternative 1: Do Nothing
- Alternative 2: New Alignment Through Husky Property
- Alternative 3: Maintain Similar Watermain Alignment
- Alternative 4: Alignment Crossing CP Rail Prior to Highway 50 Bridge

Each of these alternatives are discussed and evaluated in Section 5.

Evaluation of Alternatives

The following evaluation criteria (Table E-1-1-1) have been identified and further broken down to comparatively assess the alternatives in a qualitative manner and select the best alternative to address the Problem Statement outlined in Section 3.

Table E-1-1-1: Evaluation Criteria

Evaluation Criteria	Performance Measure
Technical Environment	• Constructability and complexity of implementation • Future operation and maintenance • Impact on existing utilities and infrastructure • Impact to ongoing bridge rehabilitation project • Addresses Study Problem
Natural Environment	• Impacts on significant wildlife and their habitat, including Species at Risk (SAR) • Impacts on vegetation communities • Surface water impacts • Groundwater impacts
Social Environment	• Impacts to private properties • Impacts of construction on the public • Nuisance impacts (vibration, dust and noise issues during construction)
Cultural Environment	• Disruption of built and cultural heritage features • Impact on areas of archaeological potential
Economic Environment	• Construction Capital Costs • Land acquisition and/or easement requirements

Details of the evaluation process are provided in Section 5.2.

Selection of Preferred Solution

Based on the evaluation completed, *Alternative 2: New Alignment Through Husky Property*, is identified as the recommended preferred solution for the Highway 50 watermain replacement in the Town of Caledon. This alternative was chosen as it maintains a safe distance from both the Husky building and the Highway 50 bridge structure and minimizes the impacts to the high-traffic areas within the Husky Technologies property. Alternatives 3 and 4 have significant constructability concerns related to impacts to existing structures and utilities, accessibility and impact to high-traffic areas within the Husky property.

Full details of the preferred solution are provided in Section 7.

Potential Impacts and Proposed Mitigation Measures

Mitigation of potential effects was considered throughout the MCEA process, however, despite efforts to reduce effects, not all can be avoided. Table E-1-2 provides a summary of potential environmental impacts that may occur during the construction phase and proposed measures to mitigate any adverse impacts.

Table E-1-2: Construction Considerations

Construction Impacts	Proposed Mitigation Measures
Traffic Delays within private property	• Prepare construction phasing plan/detour plan and review with Husky Technologies
Increased construction activity within Town of Caledon ROW (Hardwick Road)	• Prepare construction phasing plan; communicate and coordinate with Town to secure Road Occupancy Permit
Air quality impacts from construction equipment	• Develop a dust control plan, use water, and dust suppressants during construction, keep idling of construction equipment to a minimum, address and monitor air quality complaints
Noise disturbance to adjacent land uses	• Develop a noise control plan, construction must conform to Municipal Noise By-Laws, keep idling of equipment to a minimum, address and monitor noise complaints
Impacts to surface water quality due to sedimentation and introduction of deleterious substances to storm collection system/natural environment	• Develop an Erosion and Sediment Control Plan (ESCP), include measures for managing water flows into and out of the site, manage fuel, excess materials, and debris appropriately
Disruption of water service and restricted access to adjacent properties	• Communication and coordination with commercial properties to minimize water service impacts; maintain access to all properties including temporary driveways if required

Further details of the potential impacts and proposed mitigation measures are provided in Section 8.

Public Consultation

Throughout the project, stakeholders, including the public and property owners, Indigenous communities, authorities, agencies and utilities, were given a variety of opportunities to review and comment on the project process, key

findings, proposed alternatives and recommended solution. Numerous consultation activities were undertaken as part of the Study, including:

- Development of a stakeholder contact list, which was updated throughout the Study;
- Communication with Indigenous communities by mail and/or email;
- Development of a study page on Peel Region's website with Study updates and contact information (https://www.peelregion.ca/public-works/environmental-assessments/caledon/Hwy50.asp);
- Project notices;
- An Online Public Information Centre (PIC);
- Consultation with key stakeholders; and
- Public release of this Project File Report.

Key concerns and considerations that were raised as part of the public consultation process are summarized in Table E-1-3.

Table E-1-3: Summary of Key Concerns and Considerations from Consultation

Public/Stakeholder/Indigenous Group	Comment/Question	Study Team Response
Emma Benko – TRCA	The study area does not fall within TRCA regulated area; remove TRCA from contact list	Noted; contact list updated
Town of Caledon	Update contact information for CAO – Nathan Hyde	Noted; contact list updated
Peel Region	Include Asha Saddi to contact list; main communication contact for Transportation	Noted; contact list updated
Trevor Bell – MECP	Provided acknowledgement letter and supporting documents	Noted and considered during study
Hydro One	Have existing infrastructure within Study Area; need to continue to be involved to understand potential impacts	Noted; will coordinate throughout design
Liam Smythe – Ministry of Citizenship and Multiculturalism	Provided acknowledgement of study and information regarding archaeological and heritage requirements	Noted; ongoing communication and sharing of necessary documents with Ministry throughout study
Karla Barboza – Ministry of Citizenship and Multiculturalism	Provided clarification to ASI's inquiry if any heritage concern within Study Area	Actionable information for ASI to consider in completion of Heritage Assessment
Sammy Bayefsky – Ontario Heritage Trust	Provided clarification to ASI's inquiry if any heritage concern within Study Area	Actionable information for ASI to consider in completion of Heritage Assessment

Public/Stakeholder/Indigenous Group	Comment/Question	Study Team Response
Denny Simon – Peel Region	Add Denny Simon and Alex Tyotyunnik to contact list and remove Jamie Reinders	Noted; contact list updated
Peel Region – Transportation Planning	The subject land is located along Highway 50, which are identified in the Region's Strategic Goods Movement Network (SGMN) as a Primary and Connector Truck Route support better connectivity for trucks in the future. There is an existing Regional Road Pedestrian Network along Highway 50 where the replacement watermain is proposed, including some portions with sidewalks on both sides and some on one side. We look forward to reviewing a traffic impact assessment capturing requirements for streets, vehicular movements, and pedestrian networks. We recommend alternative solutions to minimize disruptions to the truck route and pedestrian network during the construction phase.	Noted and shared with design team; ongoing coordination with Transportation Group will occur prior to and during construction
SNGR – Dawn LaForme	Remove Robbin from contact list; update with Peter Graham, Consultation Supervisor	Noted; contact list updated and information provided to new contact
HDI	Remove Wayne Hill from HDI's contact list	Noted; contact list updated
Huron-Wendat – Mario Gros-Louis	Acknowledged and asked to be kept updated on Study and Stage 1 Archaeological Assessment results; reviewed and confirmed no comments on Stage 1 Archaeological Assessment Report	Sent Stage 1 Archaeological Assessment Report asking for review and comment
SNGR – Peter Graham	Acknowledged and asked to be kept updated on Study and Stage 1 Archaeological Assessment results	Sent Stage 1 Archaeological Assessment Report asking for review and comment
Hiawatha First Nation – Sean Davison	Study is outside of Williams Treaty Settlement Area – Hiawatha will not focus efforts outside of treaty area	Noted; contact list updated

Public/Stakeholder/Indigenous Group	Comment/Question	Study Team Response
HDI	Requesting information be shared with all ongoing MCEA studies being completed by Peel (overall Peel and HDI relationship building; not study specific)	Ongoing communication and engagement will be occurring between Peel and HDI to share details

Details of public and stakeholder consultation and communication throughout the Study are provided in Section 6.

CONCLUSIONS AND RECOMMENDATIONS

The preferred solution includes replacing the existing watermain with a new alignment further east within the Husky property. Key considerations for the preferred solution include:

- Watermain alignment will be located further away from Husky building, thereby eliminating potential structural concerns associated with constructing a shaft and watermain close to the building;
- Alignment will mitigate the impact on vehicular traffic by specifically avoiding high-traffic areas (access roadway parallel with CP Rail corridor on south side of building) identified by Husky within their property;
- The open-cut construction method will necessitate the temporary closure of portions of the Husky parking lot;
- Watermain alignment provides minimal impact to vegetated area adjacent to Highway 50;
- New permanent and temporary construction easements from Husky required for watermain alignment;
- Permission to Enter (PTE) required for construction access through Husky property;
- Proposed launch shaft for jack and bore crossing of CP Rail corridor will be situated in a confined area in proximity to hydro poles;
- Open cut installation and associated traffic impacts across Hardwick Road will be required to connect to existing watermain; and
- Proximity of watermain alignment with Highway 50 bridge structure provides no concern for structural impacts.

Preliminary design of the new watermain has been prepared for the preferred solution. Following completion of the MCEA study, detailed design, permitting, land acquisition and construction will be undertaken to implement the preferred solution and remedy the identified problems.

During the MCEA study, recommendations for additional works and implementation measures were identified. These items should be taken into consideration during the detailed design and include, but are not limited to, the following items:

- Finalize watermain alignment and all associated appurtenances;
- Identify potential detour routes and construction staging/phasing of the proposed works;
- Confirm preferred construction methodologies and viable trenchless technologies to be utilized;
- Confirm and obtain required approvals and necessary permits;
- Coordinate with Peel's Highway 50 bridge rehabilitation project for timing and to mitigate potential scheduling and work conflicts;

- Coordinate with key stakeholders CP Rail and Husky Technologies to ensure final design details and construction staging are agreed by all parties;
- Finalize property needs (permanent and temporary easements) and secure prior to construction;
- Finalize capital cost estimate(s) of the project; and
- Ensure construction is coordinated with other planned and ongoing activities in the vicinity of the Study Area by the Town of Caledon and Peel Region.

Prior to construction, Peel will inform the public and adjacent landowners of the upcoming construction works including construction schedule, construction staging and implementation.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS

AC – Asbestos Cement

APEC – Areas of Potential Environmental Concern

APU – Assessment of Past Uses

BHRs - Built Heritage Resources

CHLs - Cultural Heritage Landscapes

CP Rail – Canadian Pacific Rail

CTC - Credit Valley Conservation –Toronto and Region Conservation – Central Lake Ontario Conservation

DI – Ductile Iron

EAA – Environmental Assessment Act

EBAs - Event-based Modelling Areas

ESCP – Erosion and Sediment Control Plan

ESR – Environmental Study Report

GHG – Greenhouse Gas

HCCC – Haudenosaunee Confederacy Chiefs Council

HDD – Horizontal directional drilling

HDI – Haudenosaunee Development Institute

HH - Halton Hamilton

HVA - Highly Vulnerable Aquifers

ICAs - Issues Contributing Areas

IPZ - Intake Protection Zones

MCEA – Municipal Class Environmental Assessment

MEA – Municipal Engineers Association

MECP - Ministry of the Environment, Conservation and Parks

MCFN - Mississauga of the Credit First Nation

PCA – Potentially Contaminating Activities

PCoCs – Potential Contaminants of Concern

PIC – Public Information Centre

PFR – Project File Report

PPS – Provincial Planning Statement

PTE – Permission to Enter

PUCC – Public Utility Coordinating Committee

ROW – Right-of-Way

SAP – Sampling and Analysis Plan

SAR – Species at Risk

SCR – Soil Characterization Report

SGBLS - South Georgian Bay –Lake Simcoe

SGRA - Significant Groundwater Recharge Areas

SNGR – Six Nations of the Grand River Territory

TRCA - Toronto and Region Conservation Authority

WHPA - Wellhead Protection Areas

1 INTRODUCTION

Associated Engineering (Ont.) Ltd. (Associated) was retained by Peel Region (Peel) to assist with the completion of a Municipal Class Environmental Assessment (MCEA) for the *Watermain Replacement from Highway 50 to Hardwick Road* (the Study) in the Town of Caledon. As part of Peel's 2023 Water Linear State of Good Repair program, the watermain along Highway 50 from Wilton Drive to 150m south of Queensgate Boulevard and along the Highway 50/Hardwick Road easement requires replacement. Currently, the easement carries the existing 300mm diameter ductile iron watermain across the Husky Injection Molding Plant (Husky Technologies) property and Canadian Pacific (CP) Rail corridor to Hardwick Road. Anticipating easement(s) will be required for the new watermain installation from CP Rail and possibly private property owner(s), a MCEA Study has been conducted to determine the preferred alignment solution and support property negotiations. The Study developed and evaluated a variety of watermain alignment alternatives to improve water quality and reliability of the water system while considering accessibility of the infrastructure, impacts on the natural environment, property requirements and coordination with ongoing and future projects. In accordance with the Municipal Engineers Association's (MEA) Municipal Class Environment Assessment process, this Study follows the planning process for a Schedule B.

1.1 Description of Study Area

While the project area for the watermain replacement encompasses Highway 50 from Wilton Drive to the Highway 50 bridge, Hardwick Road, the CP Rail corridor and various private properties, the Study Area for the MCEA Study will encompass only Highway 50 (from the Highway 50 bridge to beyond), Hardwick Road, the CP Rail corridor and various private properties. Figure 1-1 illustrates the proposed Study Area.

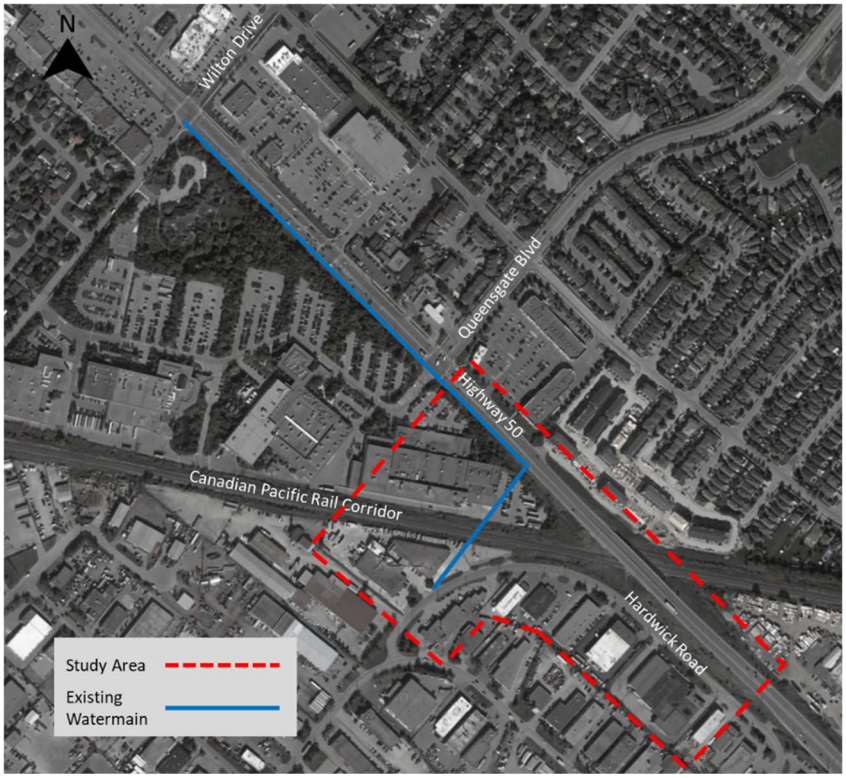

Figure 1-1: Study Area

1.2 Study Objectives

The purpose of this Study was to develop alternative watermain alignments and determine the preferred solution in addressing water quality and system reliability while considering accessibility of the infrastructure, impacts on the natural environment, property requirements and coordination with ongoing and future projects in accordance with the MEA MCEA guidelines. In developing alternatives, the Study team took into consideration the objectives of the Study:

- Minimize or avoid impacts to private property with the watermain replacement; and
- Avoid impacts to the Highway 50 bridge structure and planned bridge rehabilitation project.

The alternatives proposed to achieve the study objectives are outlined in Section 5 as are the evaluation of alternatives and identification of the preferred alternative.

1.3 Planning and Policy Context

1.3.1 Peel Region Official Plan (2022)

Peel Region's Official Plan (April 2022) provides Regional Council with a long-term policy framework for decision making. It sets the Regional context for more detailed planning by protecting the environment, managing resources and directing growth and sets the basis for providing Regional services in an efficient and effective manner.

From our review of Peel's Official Plan, relevant information regarding the study area has been summarized below.

Natural Heritage System

The natural heritage system as mapped by the conservation authorities identifies lands in existing natural cover and lands with the potential to be restored or enhanced and provides a science-based foundation for the implementation of natural heritage system planning by the local municipalities. Peel's Official Plan indicates that no natural heritage systems, natural areas, or Greenland systems occur within the Study Area, as per Figures 6 through 8 and Schedule C-1 (of the Official Plan). Furthermore, the Study Area is outside of the Oak Ridges Moraine Conservation Plan Area (Schedule B-3) and Greenbelt Area (Schedule B-5).

Therefore, it is not anticipated that the MCEA study alternatives and implementation of the preferred solution will negatively impact the natural heritage system or key Provincial Plan areas.

Water Resource System

Water resources are comprised of complex interrelated systems, features and areas such as aquifers, ground water recharge and discharge areas, seepage areas and springs, rivers, streams, ponds, wetlands, lakes, and stormwater. These systems depend on the hydrological cycle of precipitation, ground water infiltration, evapotranspiration and surface runoff. The ground water features and areas, surface water features and areas, and their associated hydrologic functions make up Peel's Water Resource System. As part Schedule A-1 (of the Official Plan), there are no water resource system features or areas within the Study Area.

Source Water Protection

In Peel Region, the Credit Valley Conservation –Toronto and Region Conservation – Central Lake Ontario Conservation (CTC), South Georgian Bay –Lake Simcoe (SGBLS) and Halton Hamilton (HH) Source Protection Committees have led the preparation of source water protection plans, all of which apply to various portions of the

Region. The applicable land use planning policies have been incorporated into Peel's Official Plan. These policies must be read in conjunction with the applicable source protection plans and local municipal official plans.

The Study Area is part of the CTC Region Source Protection Plan area, as per Schedule A-4. As per Schedule A-2, the Study Area is within a highly vulnerable aquifer (Figure 1-2). Impacts of the proposed work will be considered when determining the preferred solution and mitigation measures will be identified.

Figure 1-2: Highly Vulnerable Aquifers (Schedule A-2, Peel Official Plan)

Regional Structure

The Study Area is within the Urban System of the Regional Structure as per Schedule E-1 of the Official Plan. Lands within the Regional Urban Boundary are identified as the Urban System. Furthermore, the Study Area is within the Built-Up Area, where development is concentrated and which has a mix of land uses, as shown in Schedule E-3 of the Official Plan.

1.3.2 Town of Caledon Official Plan (2024)

The Town of Caledon's Official Plan is a statement of principles, goals, objectives and policies intended to guide future land use, physical development and change, and the effects on the social, economic, and natural environment within the Town of Caledon. It is the intention of the Town to exercise its responsibility for land use regulation, the provision of infrastructure and the delivery of services in a manner consistent with achieving a balance between preserving, protecting, and enhancing natural physical features; improving the health and well-being of residents, employees, landowners, and businesses; and achieving fiscal sustainability.

From our review of the Town's Official Plan, relevant information regarding the Study Area has been summarized below.

Designations

A hierarchy of settlements has been established to implement the Town's growth management strategy by defining the role and function of various types of settlements and allocating growth accordingly. Central to this hierarchy are the three Rural Service Centres as shown in Schedule A-1, including Bolton, which the Study Area is located within. Based on the Town's Growth Plan Policy (Figure 1 of the Official Plan), the Study Area lies within the Delineated Built-Up Area.

The land use designation within the Study Area is primarily prestige and general industrial, with high density residential identified on the northeast side of Highway 50, as part of the Bolton South Hill Land Use Plan (Figure 1-3).

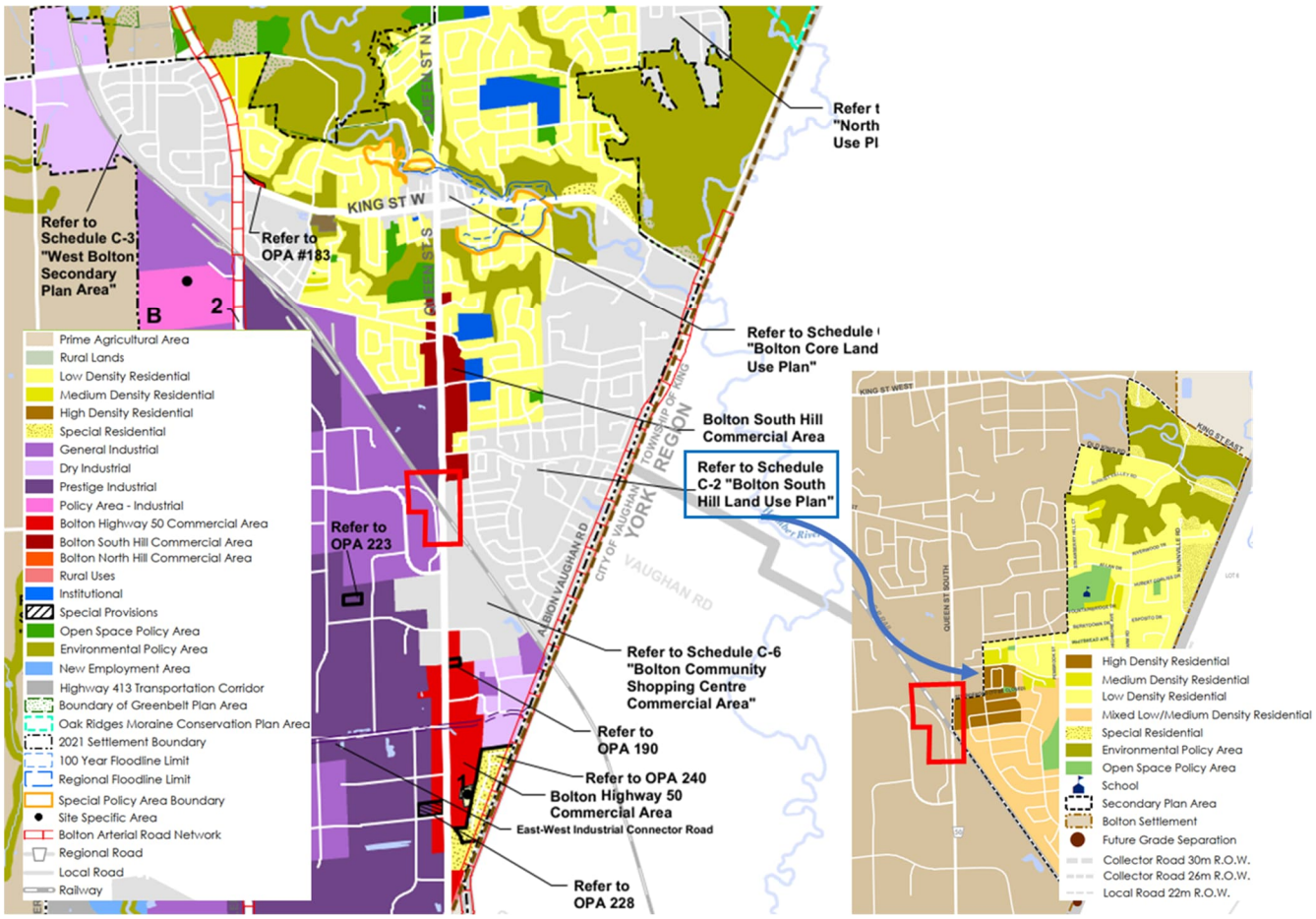

Figure 1-3: Land Use Plan (Schedule C and C-2, Town Official Plan)

Natural Heritage System

The sustained integrity of the natural environment in Caledon is essential to the continued social and economic well-being of the Town. Therefore, an ecosystem-based planning and management approach is required to guide the land use decision-making process. This approach must emphasize that development not only protect and steward ecosystems but also strive to enhance and restore ecosystems in an appropriate manner.

As noted in Peel's Official Plan and confirmed within the Town's Official Plan, there are no natural heritage systems, natural areas, or Greenland systems within the Study Area. Therefore, it is not anticipated that the MCEA study

alternatives and implementation of the preferred solution will negatively impact the natural heritage system or key Provincial Plan areas.

1.3.3 Provincial Planning Statement (2024)

The Provincial Planning Statement (PPS) (2024) provides policy direction on matters of provincial interest related to land use planning and development. As a key part of Ontario's policy-led planning system, the PPS sets the policy foundation for regulating the development and use of land province-wide, helping achieve the provincial goal of meeting the needs of a fast-growing province while enhancing the quality of life for all Ontarians.

Chapter 3 of the PPS provides direction to municipalities regarding infrastructure and public service facilities. Key policies state that infrastructure "shall be provided in an efficient manner while accommodating projected needs." Policies 3.1.2 and 3.1.3 state that the use of existing infrastructure should be optimized before consideration is given to developing new infrastructure and infrastructure should be strategically located to support effective and efficient delivery of emergency management services.

With respect to water, key sections of Policy 3.6.1 state that planning for water services shall:

- Ensure that these systems are provided in a manner that i) can be sustained by the water resources upon which such services rely; ii) is feasible and financially viable over the lifecycle, and iii) protects human health and safety, and the natural environment;
- Promote water conservation and water use efficiency; and
- Integrate servicing and land use considerations at all stages of the planning process.

Chapter 4 provides for the protection of natural heritage, water, agricultural, mineral and cultural heritage and archaeological resources for their economic, environmental and social benefits. Policy 4.1 Natural Heritage identifies that natural features and areas shall be protected for the long term. Specifically, site alteration shall not be permitted in or adjacent to significant wetlands, significant woodlands and valleylands, significant wildlife habitat and significant areas of natural and scientific interest unless the ecological features and areas have been evaluated and it has been demonstrated that there will be no negative impacts on the natural features or on their ecological functions. Mitigation measures may be considered to protect, improve or restore sensitive surface water features, sensitive ground water features and their hydrologic functions.

2 STUDY PROCESS

The *Watermain Replacement from Highway 50 to Hardwick Road* MCEA is considered to be a Schedule 'B' undertaking pursuant to the Municipal Class Environment Environmental Assessment (MCEA) document (MEA, 2000 as amended in 2007, 2011, 2015, 2023 and 2024). The MCEA process is a process used for the planning of municipal infrastructure projects (roads, water and wastewater, and transit) to ensure that project planning and predesign proceeds in accordance with the *Environmental Assessment Act* (EAA). A Schedule 'B' project includes public and review agency consultation, an evaluation of alternatives, an assessment of the impacts of the preferred solution, and identification of measures to mitigate any adverse impacts. Figure 2-1 is an excerpt from the MCEA document and illustrates the process followed in the typical planning and design of projects covered by a MCEA. A further description of the MCEA process is provided in subsequent sections.

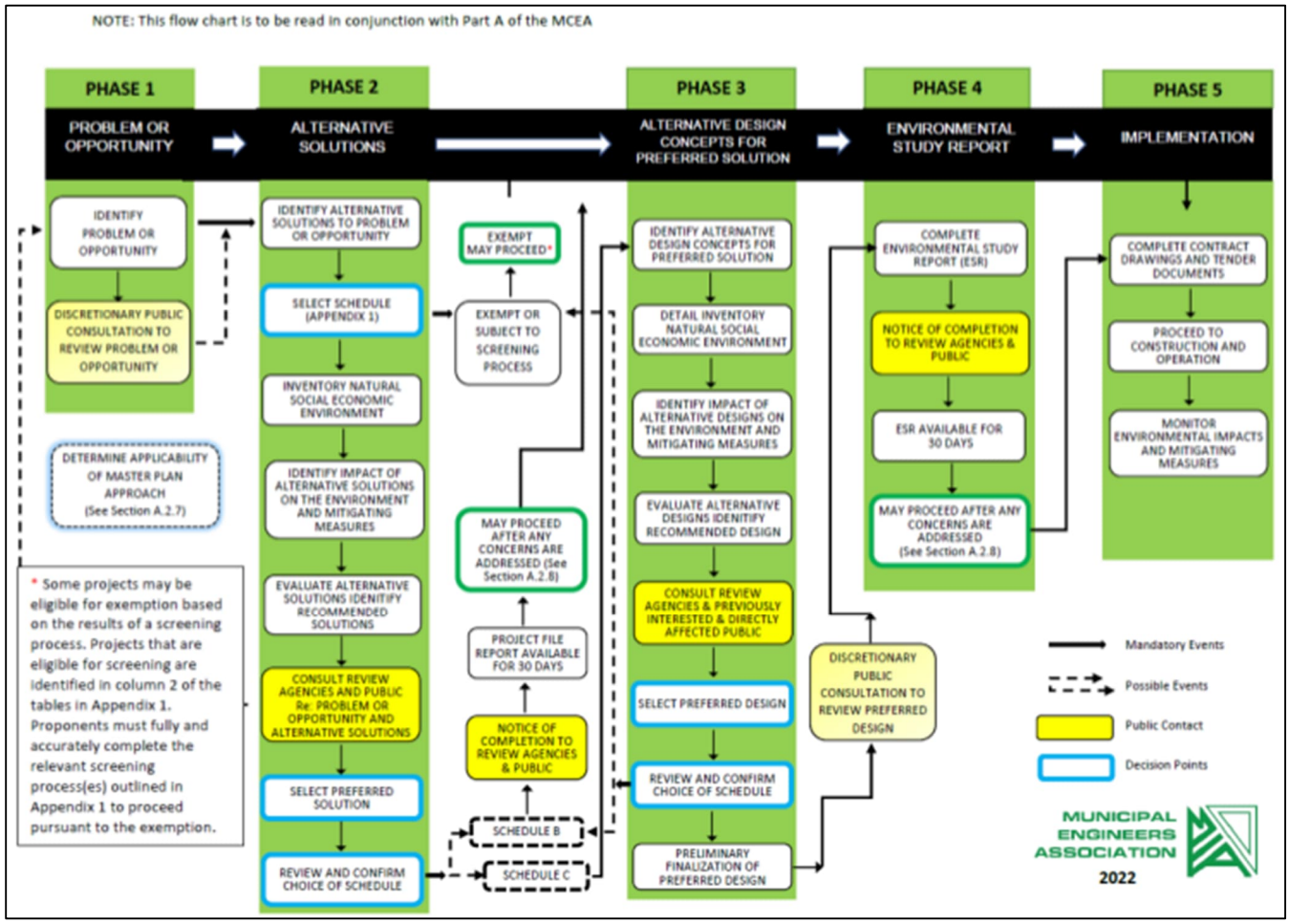

Figure 2-1: MEA MCEA Process

2.1 The Municipal Class Environmental Assessment Process

Every municipality in Ontario is subject to the provisions of the EAA and its requirements to conduct an Environmental Assessment for most public works projects. The MEA's MCEA document provides municipalities with a five-phase planning procedure approved under the EAA which provides direction on how to plan and undertake all municipal projects that recur frequently, are usually limited in scale, and have a predictable range of environmental impacts.

Projects considered by the MCEA process include municipal roads and bridges, wastewater, storm water management, water, and transit. The MCEA document also requires that the decision-making process followed by the municipalities in the planning and implementation of infrastructure is transparent and provides opportunity for public and stakeholder involvement.

Table 2-1 illustrates the steps followed in the planning and design of projects covered under the MCEA process. This table summarizes steps considered essential for compliance with the requirements of the EAA. With increasing complexity and higher likelihood for adverse environmental impacts, projects are required to complete additional planning steps, termed 'Phases' by the MCEA document, prior to obtaining approval to proceed with a proposed project. The MCEA document provides the following description of the five phases potentially requiring completion before MCEA projects can be approved.

Table 2-1: Phases of the MCEA Process

Phase	Description
Phase 1	Identify the problem (deficiency) or opportunity.
Phase 2	Identify alternative solutions to address the problem or opportunity by taking into consideration the existing environment, and establish the preferred solution considering public, Indigenous Community, and review agency input.
Phase 3	Examine alternative methods of implementing the preferred solution, based upon the existing environment, public, Indigenous Community, and review agency input, anticipated environmental effects and methods of minimizing negative effects and maximizing positive effects.
Phase 4	Document, in an Environmental Study Report a summary of the rationale, and the planning, design and consultation process of the project as established through the above Phases and make such documentation available for review by agencies, Indigenous Communities, and the public.
Phase 5	Complete contract drawings and documents and proceed to construction and operation, monitor construction for adherence to environmental provisions and commitments. Where special conditions dictate, also monitor the operation of the completed facilities.

Based on the MCEA document, projects are classified as either exempt (previously classified as Schedule 'A' or 'A+'), Schedule 'B' or 'C' projects. Each of these classifications require a different level of review to complete the requirements of the MCEA, and thus comply with the EAA, as noted below.

Exempt projects are limited in scale and have minimal adverse environmental effects. These projects are pre-approved and may proceed directly to Phase 5 for implementation without following the other phases. However, the public is to be advised prior to project implementation.

Schedule 'B' projects have the potential for some adverse environmental effects. The proponent (i.e. Peel Region in the case of this MCEA) is required to undertake a screening process involving mandatory contact with directly affected public, Indigenous groups and relevant government agencies to ensure that they are aware of the project and that their concerns are addressed. A Schedule 'B' activity requires the proponent to conduct two mandatory points of public contact: two in Phase 2. Additionally, the proponent may elect to undertake a discretionary public consultation at the end of Phase 1 to review and present the problem or opportunity identified.

Phases 1 and 2 of the MCEA process must be followed and a Project File Report (PFR) must be prepared and submitted for review by the public. A Notice of Completion must be submitted to Indigenous communities, review agencies and the public and a period of at least 30 calendar days is provided for comment and input on the PFR.

As long as there are no outstanding concerns raised by the public and/or relevant government agencies, the proponent may proceed to project implementation. However, should a person or party have a concern or objection, they are expected to consult with the proponent to try to resolve the concern.

Schedule 'C' projects are those that have the potential for significant adverse environmental effects and must proceed under the full planning and documentation procedures (Phases 1 to 5) specified in the MCEA document. A Schedule 'C' project is required to complete an Environmental Study Report (ESR), as opposed to a PFR for Schedule 'B' undertakings.

The proponent is required to undertake consultation during multiple phases during the MCEA involving mandatory contact with directly affected public, Indigenous groups and relevant government agencies to ensure that they are aware of the project and that their concerns are addressed. Schedule 'C' projects involve 3 points of mandatory public contact: once during Phase 2, once during Phase 3 and again during Phase 4 after the ESR document is placed on public record. Schedule 'C' projects require that an ESR be prepared and submitted for review by the public. Similar to Schedule 'B' undertakings, should a person or party have a concern or objection, they are expected to consult with the proponent to try to resolve the concern.

2.2 Study Documentation

This PFR documents the planning and design process followed to determine the recommended undertaking and environmentally significant aspects for the *Watermain Replacement from Highway 50 to Hardwick Road* Study, in accordance with the procedures for Schedule 'B' projects, setting out the planning and decision-making process, including consultation with interested and affected parties and technical agencies, which has been followed to arrive at the preferred solution. The PFR also sets out the mitigating measures proposed to avoid or minimize environmental impacts.

The PFR is organized chronologically in such a way as to clearly demonstrate that the appropriate steps in Phases 1 and 2 have been followed. The report is intended to be a traceable and easily understood record of the proponent's decision-making process. The PFR generally describes the following:

- The problem or opportunity and other background information;
- A description/inventory of the environment;
- The alternative solutions considered, and the evaluation process followed to select the preferred solution;
- The mitigating measures and follow-up commitments, which will be undertaken to minimize environmental impacts including any monitoring necessary during construction; and
- The consultation process and an explanation of how concerns raised by interested and affected parties have been addressed in developing the project.

2.3 30 Day Public Review and Section 16(6) Order

Public, review agency and Indigenous consultation is a key part of the MCEA process. In a Schedule 'B' project, such as the replacement of a watermain requiring property acquisition considered under this MCEA Study, the proponent is required to provide opportunity for the public to be consulted about the proposed project. Consultation is intended to inform interested and affected parties about the proposed project, the various alternative solutions considered and

their anticipated environmental impacts, as well as the preliminary preferred solution. It is also intended that the public be given opportunity to provide input or raise concerns prior to completion of the MCEA process. It is intended that issues be identified early into the project by means of public involvement and that resolutions between the proponent and the person or party with the objection be achieved through consultation.

It is incumbent on the public that concerns about the environmental effects of a proposed project, or the planning process being followed are brought to the attention of the proponent early in the planning process, when the proponent has greater flexibility to accommodate changes in the project development and the process. Interested persons may provide written comments to the proponent at any point during the study process and up to 30 calendar days from issuance of Notice of Completion.

In addition, a request may be made to the Ministry of the Environment, Conservation and Parks (MECP) for an order requiring a higher level of study (i.e.: requiring an individual/comprehensive EA approval before being able to proceed), or that conditions be imposed (e.g.: require further studies), only on the grounds that the requested order may prevent, mitigate, or remedy adverse impacts on constitutionally protected Aboriginal and treaty rights. Requests on other grounds will not be considered. Requests should include the requester contact information and full name for the MECP.

Requests should specify what kind of order is being requested (request for additional conditions or a request for an individual/comprehensive environmental assessment), how an order may prevent, mitigate, or remedy those potential adverse impacts, and any information in support of the statements in the request. This will ensure that the MECP is able to efficiently begin reviewing the request.

The request should be sent in writing or by email to:

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

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

Leo Chen
Project Manager
Peel Region
10 Peel Centre Drive
Brampton, ON L6T 4B9
leo.chen@peelregion.ca

Visit the MECP's website for more information on requests for orders under Section 16 of the *Environmental Assessment Act* at: https://www.ontario.ca/page/class-environmental-assessments-section-16-order

2.4 Study Organization and Study Team

Peel Region retained Associated to conduct the *Watermain Replacement from Highway 50 to Hardwick Road* MCEA Study. The Study team, as outlined in Table 2-2 consisted of Peel staff, Associated staff, and sub-consultants providing

specific knowledge and expertise to address the requirements for this project in accordance with the *Environmental Assessment Act*.

Table 2-2: Study Team

Team Member	Role	Organization
Leo Chen	Project Manager	Peel Region
Cian McDermott, P.Eng.	Prime Consultant (Project Manager)	Associated Engineering (Ont.)
Suzie Bizarro, P.Eng.	Project Engineer	Associated Engineering (Ont.)
Andrea LaPlante, P.Eng.	Environmental Assessment Lead	Associated Engineering (Ont.)
Lisa Merritt, M.Sc.	Archaeologist	Archaeological Services Inc. (ASI)
Lindsay Graves, MA	Cultural Heritage Specialist	Archaeological Services Inc. (ASI)
Reza Mahdavi, P.Eng.	Geotechnical Engineer	Englobe

2.5 Study Schedule and Consultation Process

As part of the planning process, several steps have been completed to inform government agencies, Indigenous groups, affected landowners and the local community/general public of the nature and scope of the project and to solicit any comments.

Table 2-3 outlines the key milestone dates of the project to date and projected to completion, including dates of notification to interested and affected parties and agencies. Further consultation process details are provided within Section 6 of this report.

Table 2-3: Key Milestone Dates

Schedule Item	
Initiate MCEA Study	August 2023
Notice of Study Commencement	September 14, 2023
Notice of Online Public Information Centre	October 4, 2024
Online Public Information Centre	October 7 to October 21, 2024
Completion of Project File Report	March 2025
Notice of Study Completion	March 24, 2025
Project File Report 30 Day Review Period	March 24 to April 23, 2025
Detailed Design	Spring 2025
Construction	Fall 2025

PHASE I: IDENTIFICATION OF PROBLEM AND OPPORTUNITIES

3 PROBLEM AND OPPORTUNITY STATEMENT

The Problem and Opportunity Statement provides a clear statement of the problem and opportunities that need to be addressed for a specific undertaking. The various analyses (e.g. archaeological assessment, cultural heritage assessment, natural environment assessment) and existing conditions provide input for and contribute to the identification and description of the problem or opportunity. The prevailing deficiencies within the Study Area can be summarized by the following statement.

Problem and Opportunity Statement

The existing 300mm diameter ductile iron watermain along Highway 50 from Wilton Drive to 150m south of Queensgate Boulevard and along the Highway 50/Hardwick Road easement requires replacement due to age and to improve water quality and reliability of the system. The easement carries the existing watermain across private property, under the footing of an existing building, and the Canadian Pacific (CP) Rail corridor. The watermain replacement is anticipated to be installed via trenchless technologies and will require new property easement(s) for the crossing of private property and/or the CP Rail corridor to connect to Hardwick Road. Through the completion of this Municipal Class Environmental Assessment, watermain alignment alternatives will be developed and evaluated taking into consideration accessibility needs, impact on the natural environment, property requirements, coordination with ongoing and future projects and financial implications.

PHASE II: IDENTIFICATION & EVALUATION OF ALTERNATIVE SOLUTIONS

4 EXISTING CONDITIONS

4.1 Linear Infrastructure

The existing watermain infrastructure subject to replacement in the Town of Caledon is along Highway 50 from Wilton Drive to 150m south of Queensgate Boulevard and along the Highway 50/Hardwick Road easement. The existing 300mm diameter asbestos cement (AC) and metallic ductile iron (DI) watermain, is found on the west side of Highway 50 (Queen Street), adjacent to the Husky Technologies property. The existing watermain along Highway 50 (Queen Street) is connected with an existing 300mm diameter polyvinyl chloride (PVC) watermain at the intersection of Highway 50 (Queen Street) and Queensgate Boulevard. An existing 300mm diameter DI watermain crosses through the Husky property within an existing easement and then crosses the Canadian Pacific (CP) Rail corridor, connecting to an existing 300mm diameter watermain on Hardwick Road. The Husky Technologies property is serviced off of the existing 300mm diameter watermain on Highway 50 (Queen Street) in two locations, one south of Queensgate Boulevard and one north of Queensgate Boulevard.

The easement carries the existing 300mm diameter ductile iron watermain across the Husky Injection Molding Plant property and Canadian Pacific (CP) Rail corridor to Hardwick Road (Figure 4-1).

Figure 4-1: Existing Water Infrastructure

In addition to the existing watermain infrastructure there is existing storm and sanitary infrastructure within the Study Area. Existing sanitary sewers are found on both the east and west side of Highway 50 (Queen Street). The sanitary sewers are varying in size, ranging between 350mm and 675mm diameter and the materials are reinforced concrete or asbestos cement. An abandoned 200mm diameter sanitary forcemain is found on the west side of Highway 50 (Queen Street) within the Husky Technologies property. Existing storm sewers are found on both the east and west side of Highway 50 (Queen Street). The storm sewers are high-density polyethylene (HDPE) material and are varying in size, ranging between 375mm and 600mm diameter.

4.2 Subsurface Information

4.2.1 Geotechnical Investigation

Englobe (formerly Terraprobe Inc.) was engaged to complete the geotechnical investigation to support the MCEA and design of the preferred solution and additional watermain along Highway 50. Fieldwork was completed in November 2023 and March 2024 to conduct the drilling and collection of soil samples within thirteen (13) boreholes.

It is anticipated that the watermain will be installed within the Study Area via Jack and Bore for the crossing of the CP railway corridor, and conventional open-cut and/or Horizontal Directional Drilling (HDD) for the remaining watermain. The findings of the geotechnical investigation indicate that the proposed watermain installation via Jack and Bore will traverse through till materials and native clay, while the open-cut and/or HDD installation will traverse through moist cohesive soil including clay, silty clay, sandy clay and clay with sand. No difficulties are anticipated for the installation of the pipe based on soil condition results from the geotechnical investigation.

Furthermore, based on water level observations within the three (3) monitoring wells installed, it is not anticipated that extensive dewatering techniques will be required during construction.

The geotechnical findings and recommendations can be referenced in the *Geotechnical Investigation Report* prepared by Englobe (June 2024) found in Appendix A.

4.2.2 Excess Soil Planning

Englobe (formerly Terraprobe Inc.) was engaged to complete the excess soil planning, including completion of Assessment of Past Uses (APU), Sampling and Analysis Plan (SAP) and Soil Characterization Report (SCR), to satisfy the intent of the requirements, methodology, and practices described in Section B (Excess Soil Reuse Planning) of the document titled "*Rules for Soil Management and Excess Soil Quality Standards*" and dated December 8, 2020 (Soil Rules Document), that was adopted in reference to Ontario Regulation (O.Reg.) 406/19 – On-site and Excess Soil Management.

Assessment of Past Use (APU)

Based on the records reviewed and the site inspection, four (4) Areas of Potential Environmental Concern (APECs) were identified as outlined in Table 4-1.

Table 4-1: Areas of Potential Environmental Concern (APEC)

Area of Potential Environmental Concern	APEC Location at Project Area	Potentially Contaminating Activities (PCAs)	Potential Contaminants of Concern (PCoCs)
On-Site PCAs			
APEC 1	Entire Property	#30 – Importation of Fill Material of Unknown Quality	Metals and Inorganics, VOCs, BTEX/PHCs, PAHs, and PCBs
APEC 2	Southern Portion near Hardwick Road	#46 – Rail Yards, Tracks, and Spurs	Metals and Inorganics, VOCs, BTEX/PHCs, PAHs, and PCBs
Off-Site PCAs			
APEC 3	Central Portion near Queensgate Boulevard	#28 – Gasoline and Associated Products Storage in Fixed Tanks NA[2] – Ontario Spill	VOCs, and BTEX/PHCs

Area of Potential Environmental Concern	APEC Location at Project Area	Potentially Contaminating Activities (PCAs)	Potential Contaminants of Concern (PCoCs)
APEC 4	Southern Portion, Hardwick Road	NA[1] – Waste Generator NA[3] – PCB Storage Site	Metals and Inorganics, VOCs, BTEX/PHCs, PAHs, and PCBs

M&I – Metals and Inorganics
VOCs – Volatile Organic Compounds
PHCs – Petroleum Hydrocarbons (F1 – F4)
BTEX – Benzene, Toluene, Ethylbenzene, Xylene
PAHs – Polycyclic Aromatic Hydrocarbons
PCBs - Polychlorinated Biphenyl PCBs

The *Assessment of Past Uses* prepared by Terraprobe Inc. (December 2023) is provided in Appendix B.

Sampling and Analysis Plan (SAP)
A SAP was prepared to outline the soil samples and chemical testing parameters required for the Project Area based on an anticipated excess soil volume of 2400m^3. The excess soil planning findings and recommendations can be referenced in the *Sampling and Analysis Plan* prepared by Terraprobe Inc. (December 2023) and found in Appendix B.

Soil Characterization Report (SCR)
A SCR was prepared to characterize the soil within the project scope to determine if on-site reuse is suitable and/or disposal options for the excess soils from construction activity.

The SCR findings concluded all of the estimated excess soil volume of 2,400m^3 found on-site should be suitable for reuse based on O.Reg 406/19. The findings and recommendations can be referenced in the *Excess Soil Management – Soil Characterization Report* prepared by Englobe (July 2024) provided in Appendix B.

4.3 Socio-Economic Environment

4.3.1 Land Use and Ownership

The land use designation within the Study Area is primarily prestige and general industrial, with high density residential identified on the northeast side of Highway 50, as part of the Bolton South Hill Land Use Plan (refer to Figure 1-3). The existing watermain is located within the Town of Caledon's Highway 50 road right-of-way (ROW) as well as easements on Husky Technologies property and across the CP Rail corridor. The new watermain will maintain its location along Highway 50 ROW. To connect water servicing from Highway 50 to Hardwick Road, new easements will be required from private property owners and/or CP Rail. Depending on the new watermain alignment, there may be an opportunity to dissolve existing easements, if no longer required for the new watermain servicing. Figure 4-2 identifies the various property parcels within the Study Area.

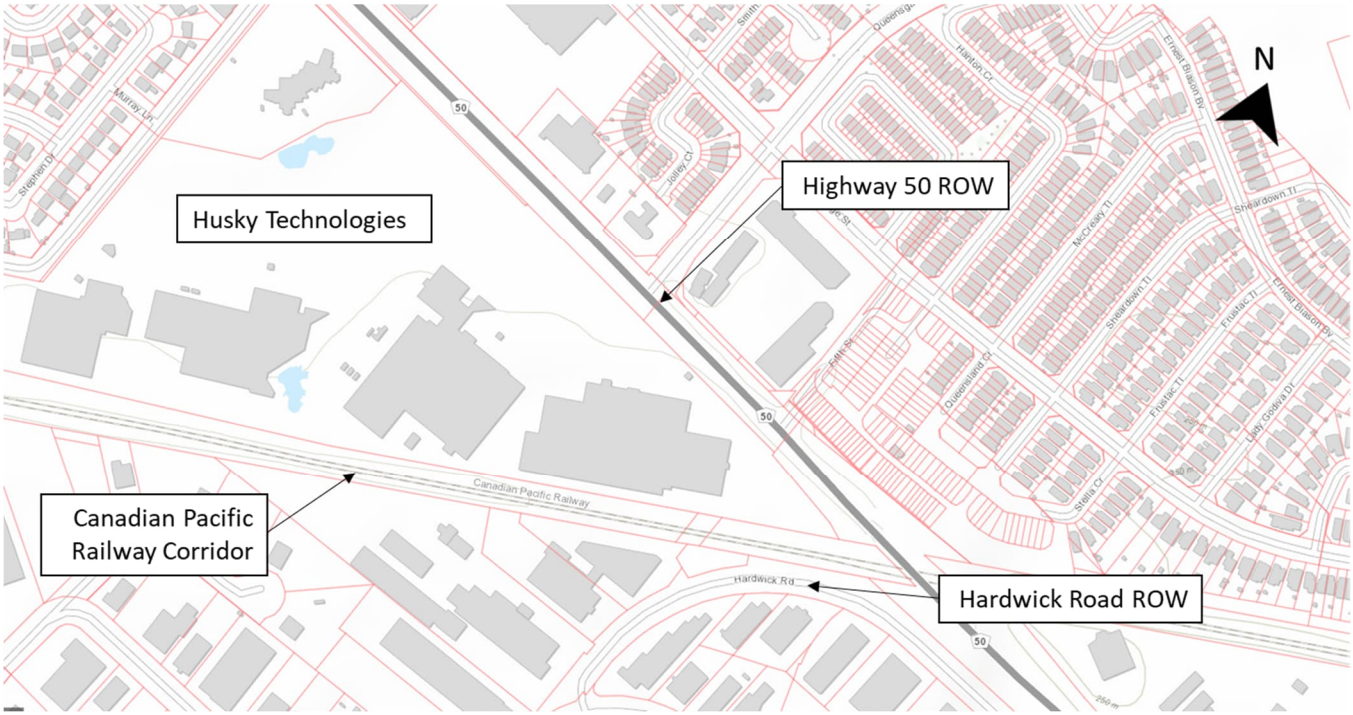

Figure 4-2: Property Parcels

4.4 Source Water Protection

The *Clean Water Act* (2006) aims to protect existing and future sources of drinking water. To achieve this, several types of vulnerable areas have been delineated around surface water intakes and wellheads for every municipal residential drinking water system that is located in a source protection area. These vulnerable areas are known as a Wellhead Protection Areas (WHPAs) and surface water Intake Protection Zones (IPZs). Other vulnerable areas that have been delineated under the *Clean Water Act* include Highly Vulnerable Aquifers (HVAs), Significant Groundwater Recharge Areas (SGRAs), Event-based modelling areas (EBAs), and Issues Contributing Areas (ICAs). Source protection plans have been developed that include policies to address existing and future risks to sources of municipal drinking water within these vulnerable areas.

In Peel Region, the Credit Valley Conservation –Toronto and Region Conservation – Central Lake Ontario Conservation (CTC), South Georgian Bay –Lake Simcoe (SGBLS) and Halton Hamilton (HH) Source Protection Committees have led the preparation of source water protection plans, all of which apply to various portions of the Region. The Study Area is part of the CTC Region Source Protection Plan area and is within a highly vulnerable aquifer (as shown in Figure 1-2). Impacts of the proposed work will be considered when determining the preferred solution and mitigation measures will be identified.

4.5 Natural Environment

The Study Area associated with this project is within Toronto and Region Conservation Authority (TRCA) boundaries. The Study Area, however, has no TRCA regulated areas that will require specific mitigations and/or permitting from TRCA (Figure 4-3).

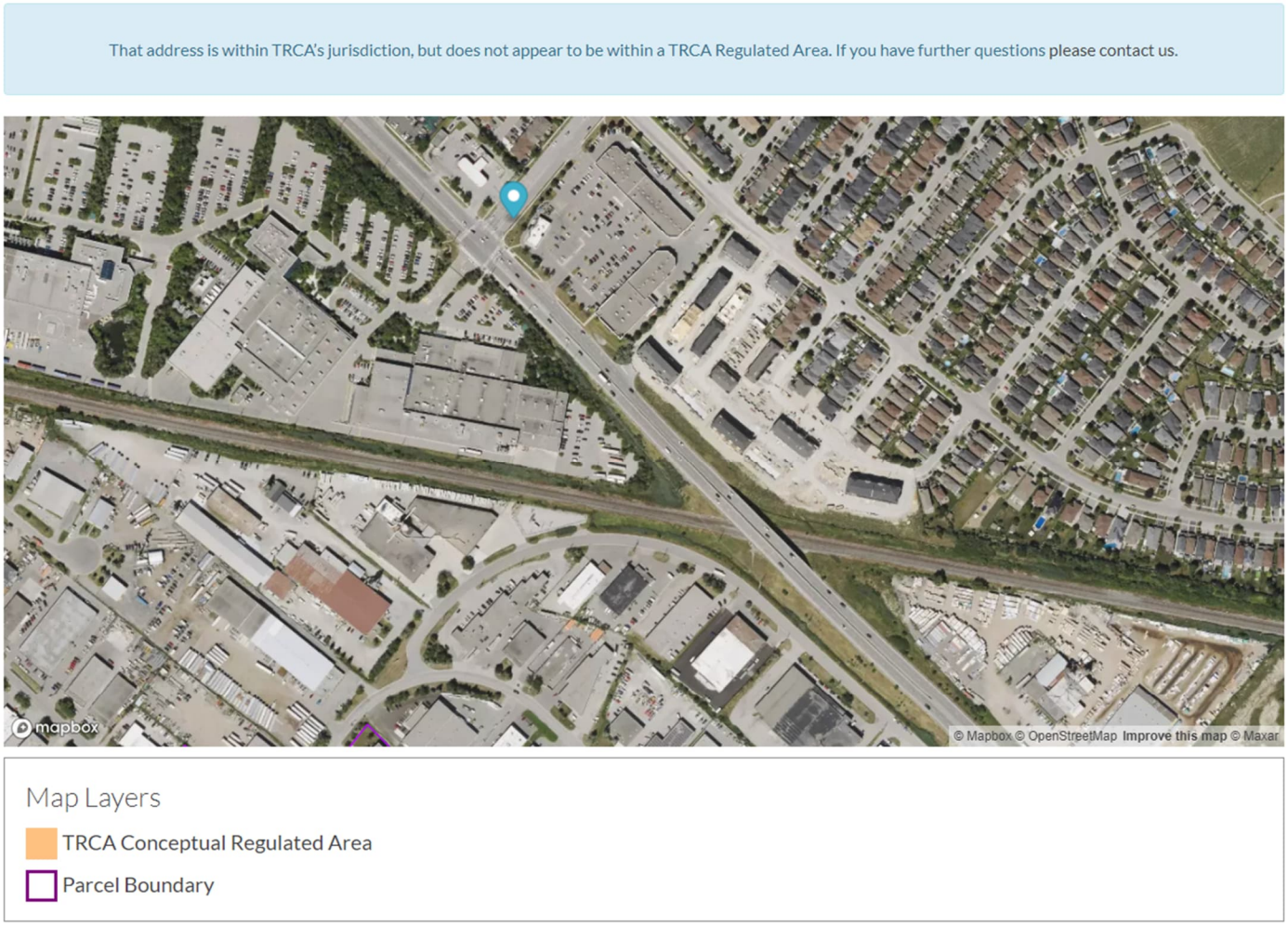

Figure 4-3: TRCA Regulated Areas

There are no environmentally sensitive areas within the Study Area. Vegetation is limited to roadside vegetation and landscape trees within the Husky Technologies property.

4.6 Cultural Environment

4.6.1 Archaeological Assessment (Stage 1)

Archaeological Services Inc. (ASI) was contracted to conduct a Stage 1 Archaeological Assessment for the *Watermain Replacement from Highway 50 to Hardwick Road MCEA*. The archaeological field work was completed in November 2023, to gain first-hand knowledge of the geography, topography, and current conditions and to evaluate and map archaeological potential of the Study Area. The Study Area meets the following criteria indicative of archaeological potential: previously identified archaeological sites (AIGw-55); early settlements within 100 metres (one farmstead); and early historic transportation routes within 100 metres (Queen Street/Highway 50).

The property inspection determined that the entirety of the Study Area does not retain archaeological potential and will not require further archaeological assessment (Figure 4-4). Based on the findings, the following recommendations are made:

- The entirety of the Study Area does not retain archaeological potential on account of deep and extensive land disturbance or being previously assessed. These lands do not require further archaeological assessment; and,
- Should the proposed work extend beyond the current Study Area, further archaeological assessment should be conducted to determine the archaeological potential of the surrounding lands.

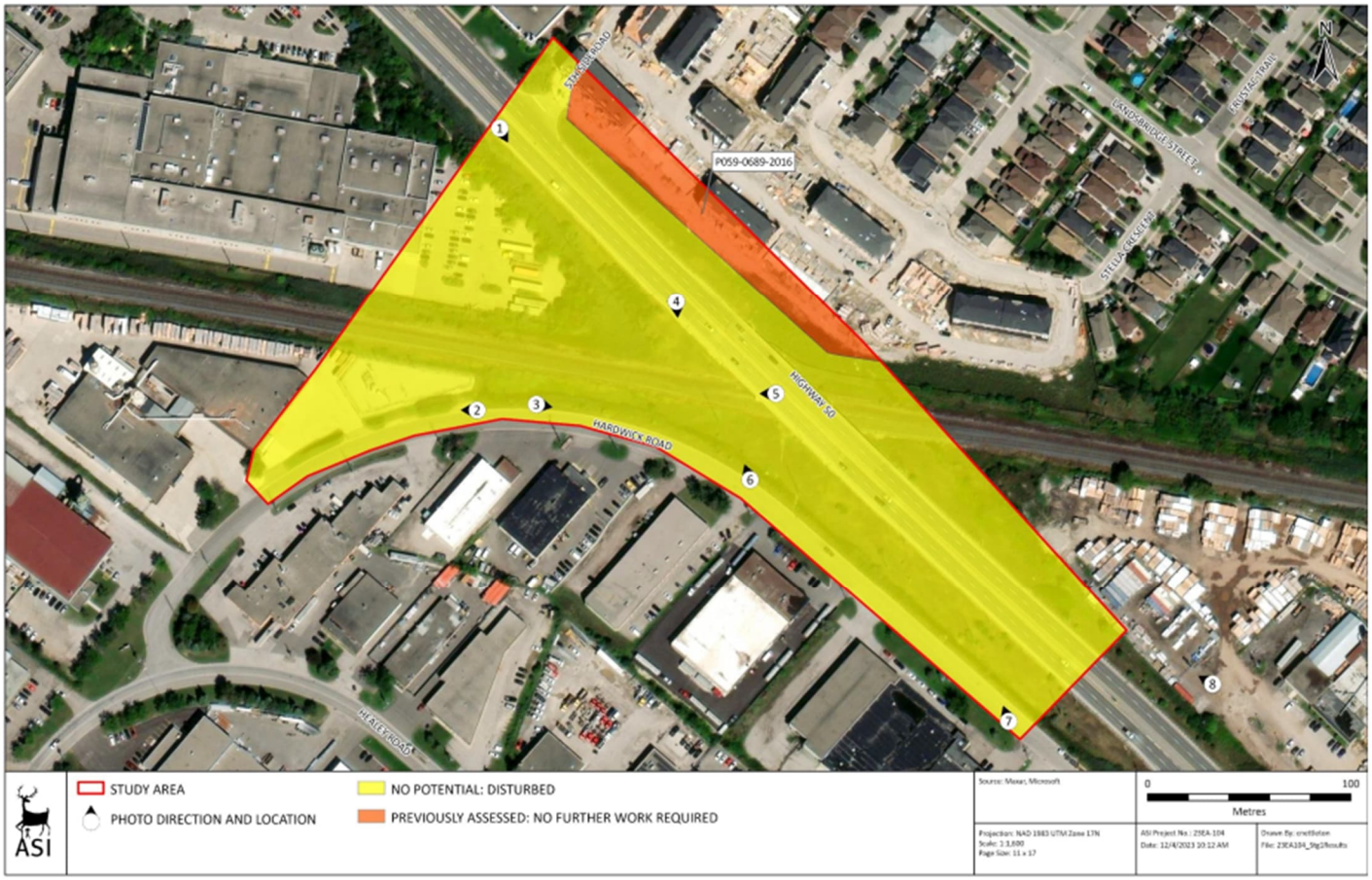

Figure 4-4: Results of Archaeological Assessment Stage 1

The Stage 1 Archaeological Assessment Report prepared by ASI is provided in Appendix C.

4.6.2 Cultural Heritage Assessment

Archaeological Services Inc. (ASI) was also contracted to conduct a Cultural Heritage Report to support the MCEA. Fieldwork was completed in November 2023 with subsequent reporting to provide a summary of the inventory of known and potential built heritage resources (B.H.R.s) and cultural heritage landscapes (C.H.L.s), identify existing conditions of the project Study Area, provide a preliminary impact assessment, and propose appropriate mitigation measures.

No known built heritage resources (B.H.R.s) and cultural heritage landscapes (C.H.L.s) were identified within the Study Area. No additional potential B.H.R.s or C.H.L.s were identified during the background information review and fieldwork. Based on the results of the assessment, the following recommendations have been developed:

- Should future work require an expansion of the Study Area then a qualified heritage consultant should be contacted in order to confirm the impacts of the proposed work on potential B.H.R.s and C.H.L.s.
- The Cultural Heritage Report should be submitted to heritage planning staff at the Town of Caledon, the Region of Peel, and the Ministry of Citizenship and Multiculturalism for review and comment.

The Cultural Heritage Report prepared by ASI is provided in Appendix D.

5 ALTERNATIVE SOLUTIONS

5.1 Identification of Alternative Solutions

Under Phase 2 of the MCEA planning and design process, reasonable and feasible solutions to address the needs, opportunities, and problem (as summarized in Section 3) are identified and examined. Alternative solutions are different ways of potentially solving the problem or addressing the opportunity.

Considering the Problem and Opportunity statement, three (3) watermain alignments have been identified (Figure 5-1) and evaluated for this MCEA. The alternatives for the MCEA study include:

- Alternative 1: Do Nothing
- Alternative 2: New Alignment Through Husky Property
- Alternative 3: Maintain Similar Watermain Alignment
- Alternative 4: Alignment Crossing CP Rail Prior to Highway 50 Bridge

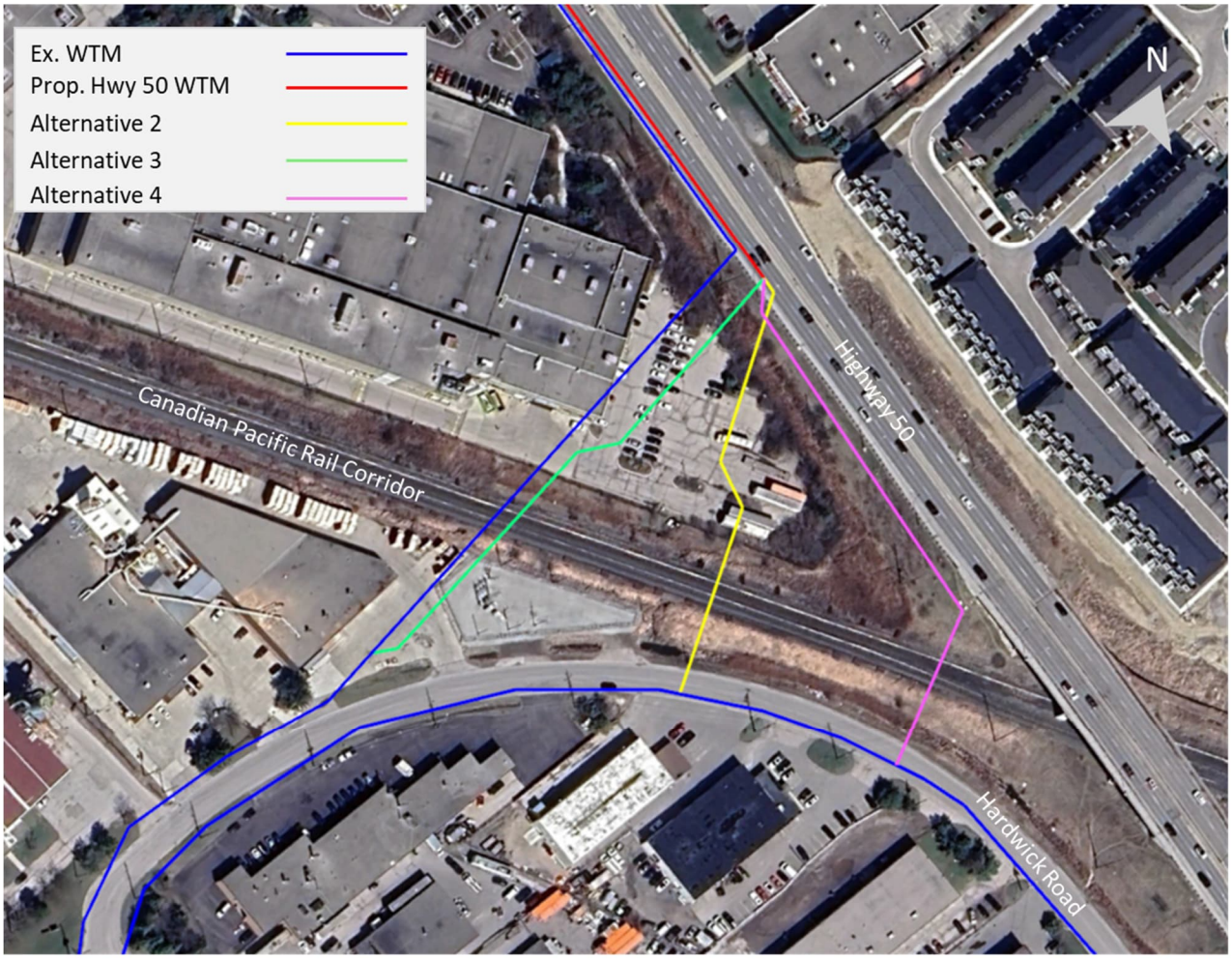

Figure 5-1: Study Alternatives – Watermain Alignment Options

Each of these alternatives are discussed and evaluated in the following sections.

5.1.1 Alternative 1: Do Nothing

The *Environmental Assessment Act* (EAA) requires the consideration of the "Do Nothing" alternative. This alternative is included to provide a baseline scenario in which to compare all other alternatives and consider what will happen if no action is taken and no watermain replacement is completed. This assumes the existing watermain alignment remains in place and will be maintained. No improvements are proposed to remedy the need for a new watermain to address material and supply integrity and reliability. It is also noted that the existing easement for the watermain is under the footing of the building and is not officially recorded. Therefore, a new easement would be required to ensure legal and operational compliance regardless of whether the watermain is replaced or not.

5.1.2 Alternative 2: New Alignment Through Husky Property

Alternative 2 provides a new alignment for the 300mm diameter watermain further east within the Husky Technologies property. The new 300mm diameter watermain will connect with the new 400mm diameter watermain on Highway 50 (Queen Street South) traverse through the Husky parking lot to a shaft on the north side of the CP Rail corridor, cross under the rail corridor via jack and bore installation and ultimately connect with the existing 300mm diameter watermain on Hardwick Road, as shown in Figure 5-2.

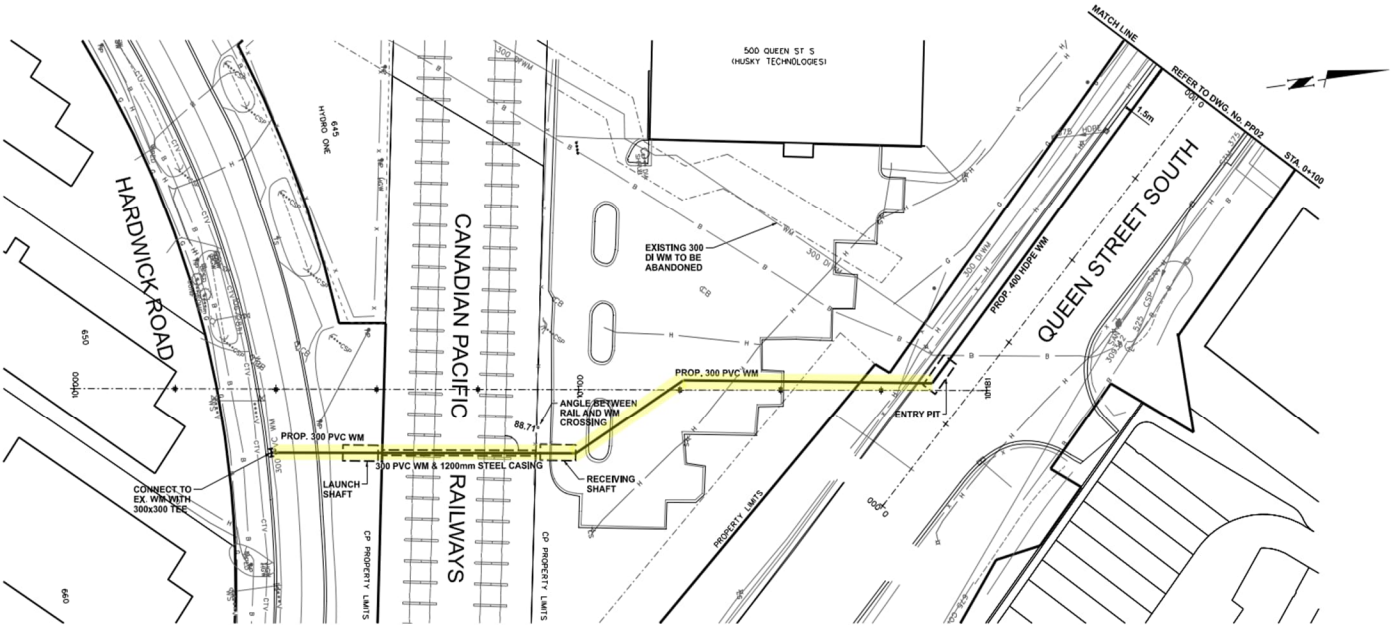

Figure 5-2: Alternative 2 Alignment

Considerations for Alternative 2 include:

- Watermain alignment will be located further away from Husky building, thereby eliminating potential structural concerns associated with constructing a shaft and watermain close to the building;
- Alignment will mitigate the impact on vehicular traffic by specifically avoiding high-traffic areas (access roadway parallel with CP Rail corridor on south side of building) identified by Husky within their property;
- The open-cut construction method will necessitate the temporary closure of portions of the Husky parking lot;
- Watermain alignment provides minimal impact to vegetated area adjacent to Highway 50;
- New permanent and temporary construction easements from Husky required for watermain alignment;
- Permission to Enter (PTE) required for construction access through Husky property;

- Proposed launch shaft for jack and bore crossing of CP Rail corridor will be situated in a confined area in proximity to hydro poles;
- Open cut installation and associated traffic impacts across Hardwick Road will be required to connect to existing watermain; and
- Proximity of watermain alignment with Highway 50 bridge structure provides no concern for structural impacts.

The existing 300mm diameter watermain within the Husky Technologies property will be abandoned and the existing easement will be dissolved.

Refer to Appendix E - Easement Option #1 for plan and profile of Alternative 2 alignment.

5.1.3 Alternative 3: Maintain Similar Watermain Alignment

Alternative 3 provides a new alignment for the 300mm diameter watermain in close proximity to the existing 300mm diameter watermain within the Husky Technologies property. The new 300mm diameter watermain will connect with the new 400mm diameter watermain on Highway 50 (Queen Street South) traverse through the Husky parking lot to a shaft on the north side of the CP Rail corridor, cross under the rail corridor via jack and bore installation and ultimately connect with the existing 300mm diameter watermain within private property on the west side of Hardwick Road, as shown in Figure 5-3.

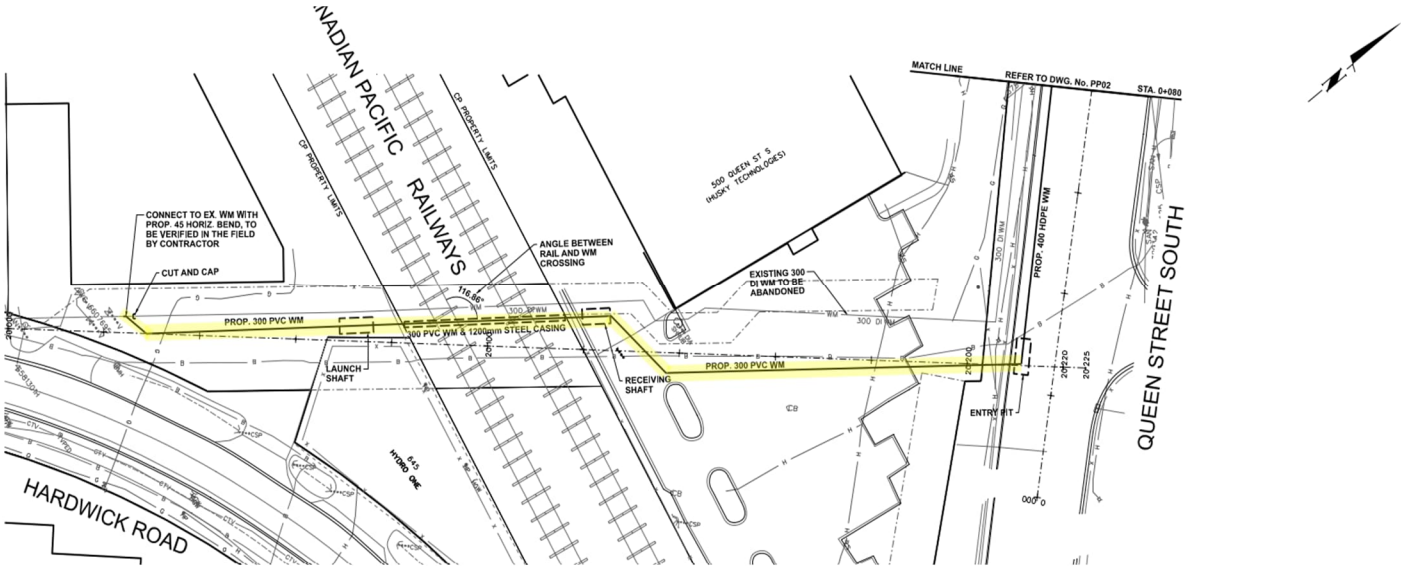

Figure 5-3: Alternative 3 Alignment

Considerations for Alternative 3 include:

- The proximity of the watermain alignment to existing structures mandates a thorough assessment of potential impacts, including the requirement for additional settlement monitoring and specialized geotechnical investigations focused on foundation stability;
- Watermain alignment will have significant impact on vehicular traffic within the Husky property as construction will impede the high-traffic areas (access roadway parallel with CP Rail corridor on south side of building);

- Watermain alignment presents substantial implications for the parking lot, with construction activities necessitating a complete closure of the area, affecting overall site operations;
- Watermain alignment provides minimal impact to vegetated area adjacent to Highway 50;
- Watermain connection within existing easement south of CP Rail crossing and as such, minimal impacts to Hardwick Road;
- New permanent and temporary construction easements from Husky required for watermain alignment;
- Permission to Enter (PTE) required for construction access through Husky property;
- Open cut installation within private property on Hardwick Road will be required to connect to existing watermain, which will impact parking lot and potentially business operations;
- The connection to the existing watermain infrastructure on Hardwick Road is relatively simple, although there is potential complexity in commissioning since the existing watermain crossing the CP Rail would need to be isolated for the connection; and
- Proximity of watermain alignment with Highway 50 bridge structure provides no concern for structural impacts.

The existing 300mm diameter watermain within the Husky Technologies property will be abandoned and the existing easement will be dissolved.

Refer to Appendix E – Easement Option #2 for plan and profile of Alternative 3 alignment.

5.1.4 Alternative 4: Alignment Crossing CP Rail Prior to Highway 50 Bridge

Alternative 4 provides a new alignment for the 300mm diameter watermain further east outside the Husky Technologies property. The new 300mm diameter watermain will connect with the new 400mm diameter watermain on Highway 50 (Queen Street South) traverse east along Highway 50 to the south of the bridge structure within the bridge embankments to a shaft on the north side of the CP Rail corridor, cross under the rail corridor via jack and bore installation and ultimately connect with the existing 300mm diameter watermain on Hardwick Road, as shown in Figure 5-4.

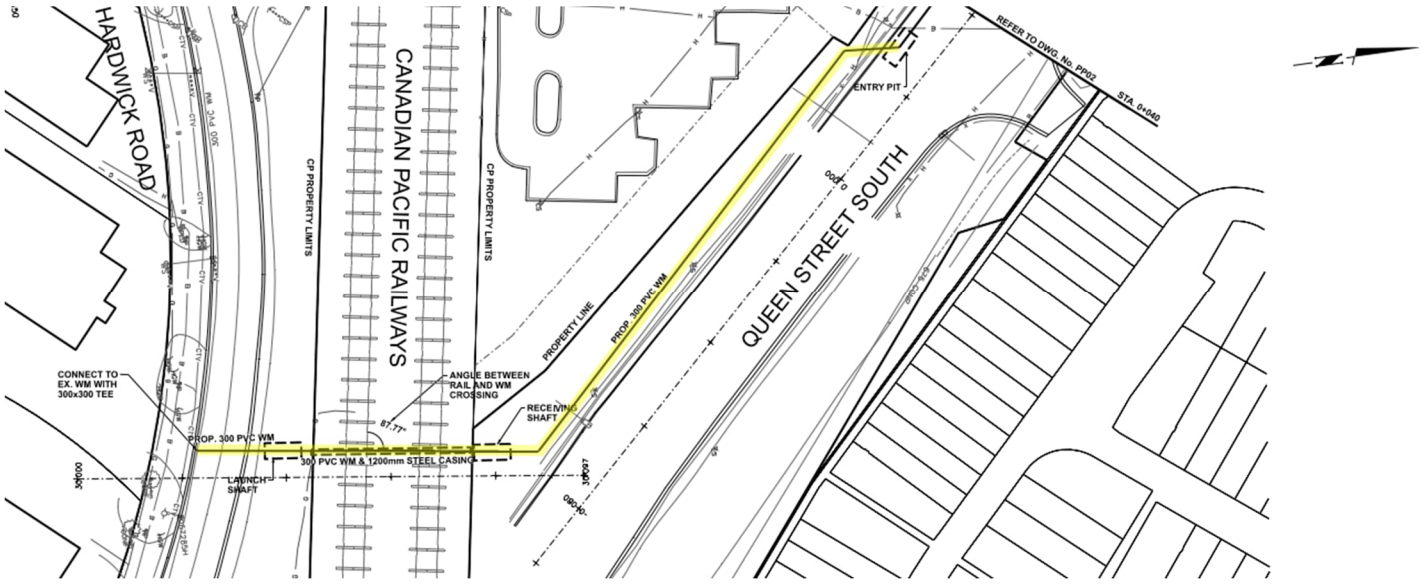

Figure 5-4: Alternative 4 Alignment

Considerations for Alternative 4 include:

- Watermain alignment provides complete avoidance of property requirements within Husky, except for the abandonment of the existing watermain and easement;
- Watermain alignment presents a high degree of complexity in terms of constructability due to constructing the watermain along the sloped area of the bridge structure adjacent to Highway 50;
- Watermain alignment introduces significant challenges due to working parallel to hydro lines and managing difficult access for construction vehicles;
- Watermain alignment will have substantial impact to vegetated area adjacent to Highway 50;
- Watermain connection south of CP Rail corridor requires open cut crossing of Hardwick Road, and associated traffic measures;
- Permission to Enter (PTE) still required for construction access through Husky property to complete abandonment of watermain;
- Proposed launch shaft for jack and bore crossing of CP Rail corridor will be in close proximity to existing gas main;
- Open cut installation and associated traffic across Hardwick Road will be required to connect to existing watermain; and
- Proximity of watermain alignment with Highway 50 bridge structure raises concerns with potential impacts to the structure and conflict with the ongoing bridge rehabilitation project being carried out by the Region.

The existing 300mm diameter watermain within the Husky Technologies property will be abandoned and the existing easement will be dissolved.

Refer to Appendix E – Easement Option #3 for plan and profile of Alternative 4 alignment.

5.2 Evaluation Process

5.2.1 Evaluation Criteria and Process

The following evaluation criteria (Table 5-1) have been identified and further broken down to comparatively assess the alternatives in a qualitative manner and select the best alternative to address the Problem Statement outlined in Section 3.

Table 5-1: Evaluation Criteria

Evaluation Criteria	Performance Measure
Technical Environment	• Constructability and complexity of implementation • Future operation and maintenance • Impact on existing utilities and infrastructure • Impact to ongoing bridge rehabilitation project • Addresses Study Problem
Natural Environment	• Impacts on significant wildlife and their habitat, including Species at Risk (SAR) • Impacts on vegetation communities • Surface water impacts • Groundwater impacts
Social Environment	• Impacts to private properties

Evaluation Criteria	Performance Measure
	• Impacts of construction on the public • Nuisance impacts (vibration, dust and noise issues during construction)
Cultural Environment	• Disruption of built and cultural heritage features • Impact on areas of archaeological potential
Economic Environment	• Construction Capital Costs • Land acquisition and/or easement requirements

A numerical or weighted ranking system was not used; instead, the evaluation focused on the strengths and weaknesses of each alternative to identify the best possible solution. Although set weightings of criteria were not specifically assigned, all evaluation criteria are not necessarily created equal and professional judgement and knowledge of the area, and issues were used to understand preferences. The process requires considering trade-offs to select the preferred alternative, which needs to take into consideration whether potential impacts can be mitigated or not.

The selection of the preferred alternative is based on the relative advantages and disadvantages of each alternative within the natural environment, social environment, technical and economic evaluation criteria and includes consideration of mitigation measures. The ranking of each alternative solution relative to the specific evaluation criterion was conducted using a colour-coded system as shown in Table 5-2.

Table 5-2: Evaluation Scale

Rating	Colour Code
Preferred	
Less Preferred	
Least Preferred	

5.2.2 Evaluation Matrix

The comparison of each criterion was made horizontally (within a category such as natural environment) between the alternatives and then vertically (between categories such as natural, technical environments) to derive the recommended solution. A summary row is provided where the alternatives are compared against each other within the five categories of natural, social, cultural, technical, and economic environments. The summary rows are then compared to determine the preferred alternative solution based on all aspects of the environment. The alternative solution which demonstrated the greatest number of “most” preferred boxes and/or the fewest “least” preferred boxes relative to their potential environmental effects would likely be the preferred alternative. However, this was dependent on the extent of potential effects and whether they could be mitigated.

The comparative evaluation for each alternative is provided in the Evaluation Matrix provided as Table 5-3.

Table 5-3: Evaluation Matrix

CRITERIA		Alternative 1: Do Nothing	Alternative 2: New Alignment Through Husky Property	Alternative 3: Maintain Similar Watermain Alignment	Alternative 4: Alignment Crossing CP Rail Prior to Highway 50 Bridge
Technical Environment	Constructability and Complexity of Implementation	• In the absence of watermain construction, no constructability concerns	• Reduced impact on high-traffic areas within Husky site enhancing operational efficiency • Alignment allows construction of watermain away from Husky building and critical areas	• Proximity of alignment to existing structures will require additional settlement monitoring and specialized geotechnical investigations focused on foundation stability • Alignment has significant impact on high-traffic areas within Husky site impacting site operations • Potential complexity in commissioning of watermain since existing watermain crossing the CP Rail would need to be isolated for connection	• High degree of complexity due to constructing watermain along embankment area of the bridge structure • Construction access will be difficult due to sloped ground and hydro lines parallel to watermain alignment
	Future operation and maintenance	• In the absence of watermain construction, reliability of the existing watermain system integrity is a concern and will require additional and ongoing maintenance	• Alignment will provide minor impact to Husky property during future maintenance with only minor parking lot impacts	• Alignment will impact Husky property during future maintenance with potential impact to high-traffic areas	• Access for future maintenance will be difficult due to bridge embankment and existing utilities
	Impact on existing utilities and infrastructure	• In the absence of watermain construction, no impacts on existing utilities and infrastructure	• Alignment eliminates potential structural concerns associated with shaft and watermain construction near building	• No anticipated impacts to utilities • Impacts on existing watermain during commissioning and	• Potential impact on hydro lines parallel to Highway 50 and watermain alignment

CRITERIA		Alternative 1: Do Nothing	Alternative 2: New Alignment Through Husky Property	Alternative 3: Maintain Similar Watermain Alignment	Alternative 4: Alignment Crossing CP Rail Prior to Highway 50 Bridge
			• Launch shaft will be within confined area in proximity of hydro poles	connection and Husky building(s)	• Launch shaft will be in proximity to existing gas main • Potential impact on bridge structure
	Impact on ongoing bridge rehabilitation project	• In the absence of watermain construction, no impacts on bridge rehabilitation project	• No impacts on bridge rehabilitation project	• No impacts on bridge rehabilitation project	• Proximity of alignment with Highway 50 bridge structure raises concerns with potential impacts to the structure and conflict with the ongoing bridge rehabilitation project
	Addresses Study Problem	• Does not address study problem of needing to replace the existing watermain	• Addresses study problem with new watermain infrastructure	• Addresses study problem with new watermain infrastructure	• Addresses study problem with new watermain infrastructure
Natural Environment	Impacts on significant wildlife and their habitat, including Species at Risk (SAR)	• In the absence of watermain construction, no impacts on wildlife, SAR, and their habitat	• No significant wildlife, habitat or SAR are anticipated; therefore, no impacts	• No significant wildlife, habitat or SAR are anticipated; therefore, no impacts	• No significant wildlife, habitat or SAR are anticipated; therefore, no impacts
	Impacts on vegetation communities	• In the absence of watermain construction, no impacts on vegetation communities	• Minimal impact to vegetated area adjacent to Highway 50	• Minimal impact to vegetated area adjacent to Highway 50	• Substantial impact to vegetated area adjacent to Highway 50
	Surface water impacts	• In the absence of watermain construction, no potential impacts on surface water	• Active construction will require sediment and erosion controls to minimize impact to surface water outlets	• Active construction will require sediment and erosion controls to minimize impact to surface water outlets	• Active construction will require sediment and erosion controls to minimize impact to surface water outlets

	CRITERIA	Alternative 1: Do Nothing	Alternative 2: New Alignment Through Husky Property	Alternative 3: Maintain Similar Watermain Alignment	Alternative 4: Alignment Crossing CP Rail Prior to Highway 50 Bridge
	Groundwater impacts	• In the absence of watermain construction, no water taking/ dewatering anticipated	• Extensive dewatering techniques not anticipated during construction	• Extensive dewatering techniques not anticipated during construction	• Extensive dewatering techniques not anticipated during construction
Social Environment	Impacts to private properties	• In absence of watermain construction, no impacts to private property during construction; however, due to lack of reliability of existing watermain could impact private properties' water supply	• Minor impact on traffic flow within Husky property • Temporary closure of portions of the Husky parking lot will be required	• Significant impact on high-traffic areas within Husky property • Temporary closure of entire Husky parking lot will be required • Impact to parking lot and potentially business operations at 643 Hardwick Road during watermain installation and connection	• Only PTE will be required from Husky to facilitate abandonment of watermain
	Impacts of construction on the public	• In absence of watermain construction, no impacts on the public	• Minor impact to public during installation of watermain across Hardwick Road	• No impact to public during construction as all works within private property	• Minor impact to public during installation of watermain across Hardwick Road
	Nuisance impacts (vibration, dust and noise issues during construction)	• In absence of watermain construction, no nuisance impacts during construction	• Noise, dust and other nuisance impacts during construction can be mitigated through measures identified in design	• Noise, dust and other nuisance impacts during construction can be mitigated through measures identified in design	• Noise, dust and other nuisance impacts during construction can be mitigated through measures identified in design
Cultural	Disruption of built and cultural heritage features	• No potential built heritage resources or cultural heritage landscapes will be impacted	• No potential built heritage resources or cultural heritage landscapes will be impacted	• No potential built heritage resources or cultural heritage landscapes will be impacted	• No potential built heritage resources or cultural heritage landscapes will be impacted

CRITERIA		Alternative 1: Do Nothing	Alternative 2: New Alignment Through Husky Property	Alternative 3: Maintain Similar Watermain Alignment	Alternative 4: Alignment Crossing CP Rail Prior to Highway 50 Bridge
	Impact on areas of archaeological potential	• No archaeological resources will be impacted	• No archaeological resources will be impacted	• No archaeological resources will be impacted	• No archaeological resources will be impacted
Economic Environment	Construction Capital Costs	• No capital cost in the absence of watermain construction; however, will have greater maintenance costs due to age of watermain	• High capital cost	• Higher capital cost due to longer watermain installation and additional measures required to mitigate impacts of construction (settlement monitoring, foundation analysis, extensive site traffic management)	• Higher capital cost due to longer watermain installation and complexity of installation due to embankment and utilities
	Land acquisition and/or easement requirements	• No land acquisition or easements required	• New temporary and permanent easements will be required from Husky and CP Rail • PTE required for construction access through Husky property	• New temporary and permanent easements will be required from Husky, CP Rail and 643 Hardwick Road • PTE required for construction access through Husky property	• New permanent easement will be required from CP Rail • PTE required for construction access through Husky property for abandonment of existing watermain only
SUMMARY					
Technical Environment		• Does not address Study problem	• Addresses Study problem with impacts to Husky property which can be mitigated	• Addresses Study problem with significant constructability concerns related to proximity of watermain to building and impact to high-traffic areas	• Addresses Study problem with significant constructability concerns related to accessibility and proximity to bridge structure and utilities
Natural Environment		• No construction impacts	• Construction impacts with some vegetation removal	• Construction impacts with some vegetation removal	• Construction impacts with significant removal of vegetation

CRITERIA	Alternative 1: Do Nothing	Alternative 2: New Alignment Through Husky Property	Alternative 3: Maintain Similar Watermain Alignment	Alternative 4: Alignment Crossing CP Rail Prior to Highway 50 Bridge
Social Environment	• Due to lack of reliability of existing watermain could impact private properties' water supply	• Minor impact on traffic flow within Husky site and along Hardwick Road for watermain installation	• Significant impact on traffic flow and parking lot within Husky site as well as within 643 Hardwick Road	• Impact on Husky property for abandonment work only • Minor impact along Hardwick Road
Cultural Environment	• No impact	• No impact	• No impact	• No impact
Economic Environment	• No capital cost; will have higher maintenance costs due to age of watermain	• High capital cost	• Higher capital cost	• Higher capital cost
OVERALL RANKING	NOT RECOMMENDED • Does not address study problem and existing watermain will require significant maintenance to ensure adequate reliability	RECOMMENDED • Maintains safe distance from Husky building and minimizes impact on high-traffic areas within Husky site	NOT RECOMMENDED • Significant impact to Husky site with proximity to building and impediment to high-traffic areas	NOT RECOMMENDED • Considerable constructability concerns with proximity to bridge structure and existing utilities

5.2.3 Preferred Solution

Based on the evaluation completed and summarized in Table 5-3, *Alternative 2: New Alignment Through Husky Property*, is identified as the recommended preferred solution for the Highway 50 watermain replacement in the Town of Caledon. This alternative was chosen as it maintains a safe distance from both the Husky building and the Highway 50 bridge structure and minimizes the impacts to the high-traffic areas within the Husky Technologies property. Alternatives 3 and 4 have significant constructability concerns related to impacts to existing structures and utilities, accessibility and impact to high-traffic areas within the Husky property.

6 CONSULTATION AND COMMUNICATIONS

Public and stakeholder consultation is a key feature of the MCEA process. Through an effective consultation program, the proponent can generate meaningful dialogue between the project planners and the public, property owners, Indigenous communities, authorities, and agencies allowing an exchange of ideas and the broadening of the information base, leading to better decision-making.

6.1 Summary of Consultation Activities

Throughout the project, stakeholders, including the public and property owners, Indigenous communities, authorities, agencies and utilities, were given a variety of opportunities to review and comment on the project process, key findings, proposed alternatives and recommended solution. Numerous consultation activities were undertaken as part of the Study, including:

- Development of a stakeholder contact list, which was updated throughout the Study;
- Communication with Indigenous communities by mail and/or email;
- Development of a study page on Peel Region's website with Study updates and contact information (https://www.peelregion.ca/public-works/environmental-assessments/caledon/Hwy50.asp);
- Project notices;
- An Online Public Information Centre (PIC);
- Consultation with key stakeholders; and
- Public release of this Project File Report.

6.2 Project Notices

6.2.1 Notice of Study Commencement

The Notice of Study Commencement was prepared and issued on September 14, 2023. The Notice was posted on Peel's website. Contact letters including the Notice were mailed/emailed directly to relevant stakeholders including Indigenous communities, regulatory agencies, authorities, conservation authorities and local businesses.

The purpose of the Notice was to introduce the project (purpose and objectives), outline the MCEA process, request public involvement and identify contact persons. Contact information for Peel's Project Manager and Associated's Environmental Assessment Coordinator were made available to the public to elicit any initial feedback on the project.

Several comments were received from interested parties following the distribution of the Notice (refer to Table 6-1). A summary list of the stakeholder register, Notice of Commencement published and circulated, and a sample copy of the cover letter sent to stakeholders are provided in Appendix F. Received comments and study team responses are summarized in Table 6-1 and provided in Appendix G.

6.2.2 Notice of Online Public Information Centre (PIC)

A Notice of Online Public Information Centre (PIC) was prepared and issued on October 4, 2024. The Notice was posted on Peel's website. Contact letters including the Notice were mailed/emailed directly to relevant stakeholders including Indigenous communities, regulatory agencies, authorities, conservation authorities, and local businesses.

The Notice provided a description of the project, details of the Online PIC, and included a request for comments and input. Contact information for Peel's Project Manager and Associated's Environmental Assessment Coordinator were made available to the public to encourage the submission of comments.

The Notice of Online PIC published and circulated, and a sample copy of the cover letter sent to stakeholders are provided in Appendix F.

6.2.3 Notice of Completion

The Notice of Study Completion was prepared and issued on March 24, 2025. The Notice was posted on Peel's website. Contact letters including the Notice were mailed/emailed directly to relevant stakeholders including Indigenous communities, regulatory agencies, authorities, conservation authorities, and local businesses.

The Notice informs the public and stakeholders of the completion of the MCEA and provides the locations where interested parties can review the completed Project File Report (PFR). The notice also informs the public of the 30-day review period associated with the conclusion of the MCEA process.

Subject to comments received as a result of the Notice and the receipt of all necessary approvals, Peel intends to proceed with the implementation as documented in this PFR.

The Notice of Completion published and mailed to all residents/property owners, and a sample copy of the cover letter sent to stakeholders are provided in Appendix F.

6.3 Public Engagement

The main opportunities for consultation during Phases 1 and 2 of the Study process included:

- Online Public Information Centre (PIC);
- Release of information on project website; and
- Distribution of notices, letters, and emails at key milestones.

Comments received from the public were compiled and considered in the completion of the Study. Comments received and study team responses are summarized in Table 6-1 and provided in Appendix G.

6.3.1 Online Public Information Centre (PIC)

An online PIC took place between October 7 and October 21, 2024, with material uploaded to Peel's website (https://www.peelregion.ca/public-works/environmental-assessments/caledon/Hwy50.asp). The online PIC consisted of display material, transcript and recorded presentation being provided for a period of two (2) weeks. During the two (2) week review period members of the public and stakeholders could view the study material and submit questions and comments to the study team via direct email to a member of the study team.

The online PIC presented the following elements:

- Purpose of the Study and PIC;
- Information on the MCEA process;
- Problem/Opportunity being considered for the Study;
- Description of the existing conditions;
- Description of alternative solutions;
- Evaluation criteria and process;
- Recommended preferred solution and mitigation measures; and
- Next steps in the MCEA process.

A copy of the online PIC material is provided in Appendix H.

Received comments during the comment period are summarized in Table 6-1 and provided in Appendix G.

6.3.2 Comment Summary

Received comments and study team responses during the course of the Study are summarized in Table 6-1 and provided in Appendix G.

Table 6-1: Comment Summary for Study

Public/Stakeholder Group	Comment/Question	Study Team Response
Emma Benko – TRCA	The study area does not fall within TRCA regulated area; remove TRCA from contact list	Noted; contact list updated
Town of Caledon	Update contact information for CAO – Nathan Hyde	Noted; contact list updated
Peel Region	Include Asha Saddi to contact list; main communication contact for Transportation	Noted; contact list updated
Trevor Bell – MECP	Provided acknowledgement letter and supporting documents	Noted and considered during study
Hydro One	Have existing infrastructure within Study Area; need to continue to be involved to understand potential impacts	Noted; will coordinate throughout design
Liam Smythe – Ministry of Citizenship and Multiculturalism	Provided acknowledgement of study and information regarding archaeological and heritage requirements	Noted; ongoing communication and sharing of necessary documents with Ministry throughout study
Karla Barboza – Ministry of Citizenship and Multiculturalism	Provided clarification to ASI's inquiry if any heritage concern within Study Area	Actionable information for ASI to consider in completion of Heritage Assessment
Sammy Bayefsky – Ontario Heritage Trust	Provided clarification to ASI's inquiry if any heritage concern within Study Area	Actionable information for ASI to consider in completion of Heritage Assessment
Denny Simon – Peel Region	Add Denny Simon and Alex Tyotyunnik to contact list and remove Jamie Reinders	Noted; contact list updated
Peel Region – Transportation Planning	The subject land is located along Highway 50, which are identified in	Noted and shared with design team; ongoing coordination with

Public/Stakeholder Group	Comment/Question	Study Team Response
	the Region's Strategic Goods Movement Network (SGMN) as a Primary and Connector Truck Route support better connectivity for trucks in the future. There is an existing Regional Road Pedestrian Network along Highway 50 where the replacement watermain is proposed, including some portions with sidewalks on both sides and some on one side. We look forward to reviewing a traffic impact assessment capturing requirements for streets, vehicular movements, and pedestrian networks. We recommend alternative solutions to minimize disruptions to the truck route and pedestrian network during the construction phase.	Transportation Group will occur prior to and during construction

6.4 Stakeholder Consultation

Several key stakeholder groups were identified for this Study including Canadian Pacific (CP) Rail and Husky Technologies. These stakeholders were notified of the Study and provided the opportunity to give feedback and input on the existing issues in the study area and study alternatives.

6.4.1 Canadian Pacific Rail

An initial consultation meeting was held with CP Rail on June 29, 2023 to introduce the project and team to CP Rail, discuss project scope and timelines, and identify CP Rail requirements and permitting/approval process. Meeting minutes in the form of an email summary were distributed on July 6, 2023 (provided in Appendix G). In general, CP Rail had no concerns with the project, with further consultation required once a preferred watermain alignment is determined and design has begun to progress.

6.4.2 Husky Technologies

An initial consultation meeting was held between Associated's design team and Husky Technologies on June 28, 2023 to discuss the scope of the planned watermain replacement works, potential Husky property impacts, the need for easements and project timelines. Meeting minutes in the form of an email summary were distributed on July 5, 2023 (provided in Appendix G). During the site meeting, it was noted that the existing location of the watermain is in close proximity to the Husky building and future construction at this location must ensure minimal impacts to the 24-hour operation of the facility and movement of heavy truck traffic to and from site. Husky noted there is one yearly maintenance shut down period of a few days.

At a subsequent meeting, Husky Technologies noted there is 24/7 truck traffic turn around route (Figure 6-1) within the back corridor of the property. The existing watermain is found within this area. The proposed alignment must ensure that the required space for the staging area and construction will not impact Husky's truck route.

Ongoing discussions with Husky will occur during design to ensure minimal impact during construction. In addition to the temporary and permanent easements required for the staging area and watermain alignment respectively, a Permission to Enter (PTE) will be required to allow construction vehicles and personnel to access the site through Husky's main entrance off of Wilton Dr.

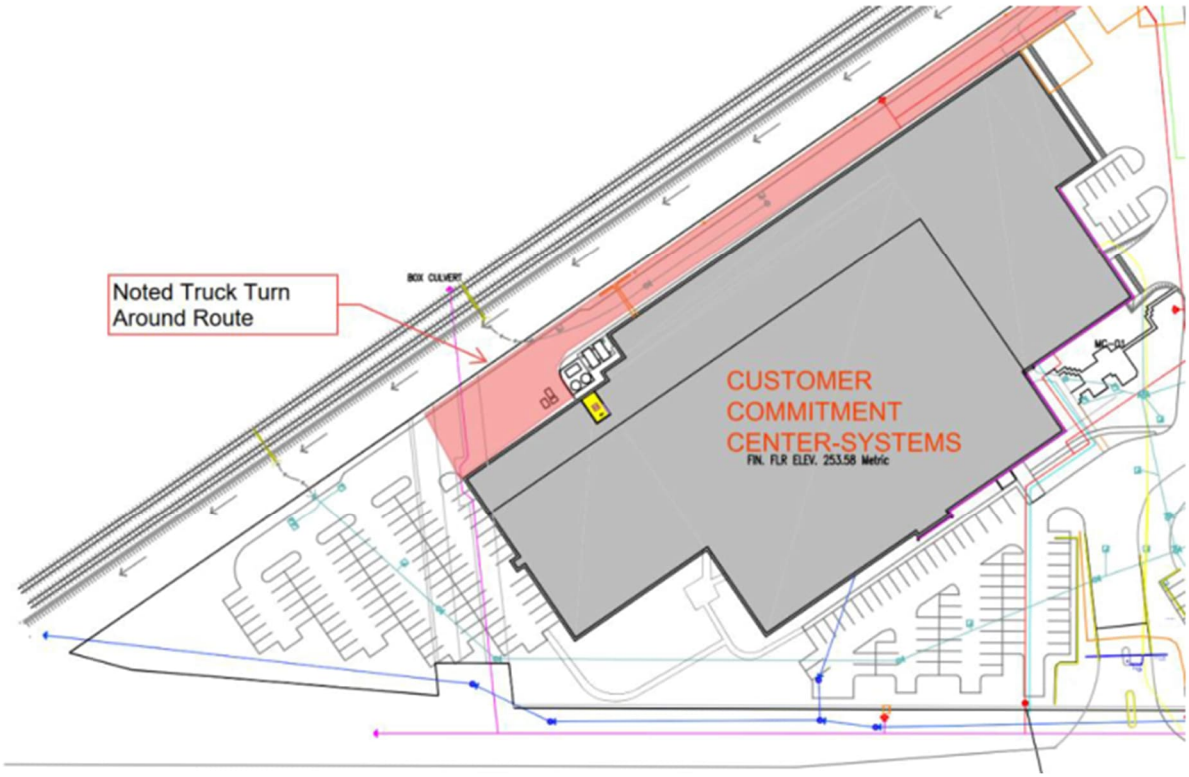

Figure 6-1: Husky Truck Route

6.5 Consultation with the Ministry of the Environment, Conservation and Parks

An acknowledgement letter was provided from the MECP in response to the Notice of Commencement provided to the MECP Central Region. Several areas of interest were provided for consideration and have been included in this Project File Report. The draft Project File Report was circulated to the MECP for review and comment prior to finalizing the MCEA Study.

MECP correspondence is provided in Appendix G.

6.6 Indigenous Communities Consultation

As required as part of the MCEA process, to satisfy the Crown's legal duty to consult Aboriginal communities, Indigenous communities were contacted at project initiation with the Notice of Commencement. As per the acknowledgement letter provided by the MECP, Indigenous Communities contacted included Mississauga of the

Credit First Nation (MCFN) and Huron-Wendat. Additional Indigenous Communities contacted included Six Nations of the Grand River Territory (SNGR), Haudenosaunee Confederacy Chiefs Council (HCCC), Haudenosaunee Development Institute (HDI), Metis Nation of Ontario, and Hiawatha First Nation.

Table 6-2 provides a summary of consultation with Indigenous Communities for the Study.

Table 6-2: Indigenous Communities Consultation Summary

Indigenous Community	Comment/Question	Study Team Response
SNGR – Dawn LaForme	Remove Robbin from contact list; update with Peter Graham, Consultation Supervisor	Noted; contact list updated and information provided to new contact
HDI	Remove Wayne Hill from HDI's contact list	Noted; contact list updated
Huron-Wendat – Mario Gros-Louis	Acknowledged and asked to be kept updated on Study and Stage 1 Archaeological Assessment results; reviewed and confirmed no comments on Stage 1 Archaeological Assessment Report	Sent Stage 1 Archaeological Assessment Report asking for review and comment
SNGR – Peter Graham	Acknowledged and asked to be kept updated on Study and Stage 1 Archaeological Assessment results	Sent Stage 1 Archaeological Assessment Report asking for review and comment
Hiawatha First Nation – Sean Davison	Study is outside of Williams Treaty Settlement Area – Hiawatha will not focus efforts outside of treaty area	Noted; contact list updated
HDI	Requesting information be shared with all ongoing MCEA studies being completed by Peel (overall Peel and HDI relationship building; not study specific)	Ongoing communication and engagement will be occurring between Peel and HDI to share details

Correspondence with Indigenous Communities did not lead to the identification of any specific or comprehensive claims or litigation that materially affected the project. The identified communities will be notified of the PFR release, and Peel is committed to working with Indigenous Communities should any issues arise. Continued communication with the identified communities will occur during detailed design and into implementation as required.

All correspondence to the Indigenous communities along with communication log are provided in Appendix I.

7 IMPLEMENTATION OF THE PREFERRED SOLUTION

Based on the feedback received during the Online PIC and from stakeholder groups, the recommended preferred solution was confirmed and will be progressed to detailed design and construction. This section provides a summary of the key design features and considerations of the preferred solution.

7.1 Design Features of Preferred Solution

The preferred solution is to install a replacement watermain for the existing watermain along Highway 50 and the new alignment within Husky property. This is a part of Peel's ongoing state of good repair program to ensure watermains are in good standing to avoid potential breaks and service disruptions. Replacing the existing watermain will include the following:

- New watermain alignment for the 300mm diameter watermain will be further east within the Husky property;
- The new 300mm diameter watermain will connect with the new 400mm diameter watermain on Highway 50 (Queen Street South) traverse through the Husky parking lot to a shaft on the north side of the CP Rail corridor. The new 300mm diameter watermain will cross under the rail corridor via jack and bore installation and ultimately connect with the existing 300mm diameter watermain on Hardwick Road;
- The open-cut construction method through the Husky property will necessitate the temporary closure of portions of the Husky parking lot;
- Jack and bore crossing of CP Rail corridor complete with steel liner casing pipe;
- Open cut installation and associated traffic impacts across Hardwick Road will be required to connect to existing watermain; and
- The existing 300mm watermain within the Husky Technologies property, across CP Rail and connection to Hardwick Road will require grouting for means of abandonment and new service connections to the existing 300mm watermain will be installed.

During detailed design, Horizontal Directional Drilling (HDD) or jack and bore may be explored as a viable installation technology to further minimize impacts within the Husky property.

The existing 300mm diameter watermain within the Husky Technologies property will be abandoned and the existing easement will be dissolved.

Preliminary design drawings of the preferred solution are provided in Appendix J.

7.2 Property Requirements

As identified in Section 4.3, there are permanent easements along the existing watermain alignment. These easements will be dissolved, and new easements will be secured to facilitate the installation of the new watermain. Easements will be required from Husky Technologies and CP Rail. Based on the preferred solution it is anticipated that a permanent easement within Husky property of approximately 750m^2 will be required. In addition to the permanent easement required for the watermain, a Temporary Working Easement will be required within Husky property to facilitate the construction of the proposed watermain. Additionally, a Permission to Enter will be required to allow construction vehicles and personnel to access the working area.

Final easement location and size will be identified during detailed design and secured with the appropriate entity. Draft property impact plans (PIP) for the proposed alignment of the watermain, which includes information on the temporary easement, permanent easement and PTE required are provided in Appendix K.

7.3 Approval Requirements

Table 7-1 below summarizes anticipated approval and permitting requirements prior to implementation of the proposed works.

Table 7-1: Approval Requirements

Agency	Approval Mechanism	Details
Peel Region/ MECP	Drinking Water Works Permit	• Completion of Form 1 Record of Watermains to support watermain works
Town of Caledon	Road Occupancy Permit	• Facilitate construction on Hardwick Road
Husky Technologies	Permission to Enter Easements (Temporary/Permanent)	• Facilitate construction within private property
CP Rail	Crossing Agreement	• Facilitate installation of watermain crossing under rail corridor
Peel Region	Public Utility Coordinating Committee (PUCC)	• Utility impacts associated with construction

7.4 Proposed Construction Schedule and Cost Estimate

Upon completion of the MCEA study, the following schedule has been tentatively identified:

- Detailed Design – 2024/25
- Project Tendering –Summer 2025
- Construction –Fall 2025

The preliminary high level cost estimate to implement the preferred solution is approximately $6.5 million. This estimate includes major infrastructure works; however, excludes property acquisition. It is estimated that property acquisition for the permanent easement is $450,000 based on Peel estimated cost per acre. See Appendix L for details of the preliminary cost estimate.

7.5 Detailed Design Commitments and Consideration

This section provides a list of specific commitments to be carried forward into Phase 5 of the MCEA process - Implementation Phase (i.e. completion of contract drawings and tender documents, construction and operation and the monitoring for environmental provisions and commitments). Additional works to be completed during the detail design phase of this project, prior to construction, include but are not limited to, the following:

- Finalize watermain alignment and all associated appurtenances;
- Identify potential detour routes and construction staging/phasing of the proposed works;
- Confirm preferred construction methodologies and viable trenchless technologies to be utilized;
- Confirm and obtain required approvals and necessary permits;
- Coordinate with Peel's Highway 50 bridge rehabilitation project for timing and to mitigate potential scheduling and work conflicts;

- Coordinate with key stakeholders CP Rail and Husky Technologies to ensure final design details and construction staging are agreed by all parties;
- Finalize property needs (permanent and temporary easements) and secure prior to construction;
- Finalize capital cost estimate(s) of the project; and
- Ensure construction is coordinated with other planned and ongoing activities in the vicinity of the Study Area by the Town of Caledon and Peel Region.

8 POTENTIAL IMPACTS AND PROPOSED MITIGATION MEASURES

This section describes the potential effects on the environment as a result of the undertaking and the mitigation measures and commitments made to either minimize or offset these effects. Mitigation of potential effects was considered throughout the MCEA process; however, despite efforts to reduce effects, not all can be avoided. It is expected that the recommended mitigation measures will be further refined during detailed design of the project.

8.1 Private Property and Adjacent Land Use

During construction there will be some nuisance effects, such as noise, odour and dust. As well, construction access and construction activities will be required on property owned by Husky Technologies and CP Rail. During detailed design, property owners will be contacted to discuss potential construction impacts. Peel Region will secure permanent and/or temporary easements along the watermain alignment to facilitate construction. Impacts to these properties will be minimized with all restoration requirements agreed upon with the owner and included in the contract package.

8.2 Natural Environment

The most adverse effects to terrestrial ecology come from the removal of trees and vegetation. While the preferred alignment is located entirely within Urban areas, there will be minor roadside vegetation and tree removal required between the Husky Technologies property and Highway 50. Coordination with Husky Technologies will be required during detailed design to confirm restoration agreements including tree and vegetation replacement.

8.2.1 Air Quality, Dust and Noise

Impacts of air quality during project construction are not considered to be significant. Although dust impacts from heavy construction equipment may impact air quality, this is not a recurring activity as it will be limited to the construction period. Contract provisions will minimize impacts to adjacent properties during construction. Therefore, the impacts from construction on air quality are not considered significant.

Provisions to minimize air quality impacts during construction include removal of construction-caused debris and dust through regular cleaning and maintenance of construction sites and access roads; dust suppression using non-chloride dust suppressants on unpaved areas, subject to the area being free of sensitive plant, water, or other ecosystems that may be affected by dust suppression chemicals; and prompt cleaning of paved streets/roads where tracking of soil, mud or dust has occurred.

There will be construction noise generated during the installation works due to the required use of heavy machinery and other construction equipment. Measures will be taken to manage construction noise including maintaining equipment to prevent unnecessary noise. Any initial noise complaint will trigger verification that noise control measures are in effect. If persistent noise complaints occur, alternative noise control measures will be considered. Mitigation measures to minimize the potential for construction noise impacts will be written into the contract documentation for the contractor and include:

- There should be explicit indication that Contractors are expected to comply with all applicable requirements of the contract and local noise by-laws.
- All equipment should be properly maintained to limit noise emissions. As such, all construction equipment should be operated with effective muffling devices that are in good working order.

- Monitor and maintain haul routes to minimize movement over rough ground and potholes which in turn can generate noise.
- All equipment shall be kept in good working order as deterioration may increase equipment sound levels. A documented, regular inspection and maintenance program must be implemented.
- Vehicle on-site speed limits must be met and will be enforced.
- Idling vehicles will be kept to a minimum.
- In the presence of persistent noise complaints, all construction equipment should be verified to comply with MOE NPC-115 guidelines.

8.2.2 Surface Water

During construction there is a potential impact to surface water quality due to sedimentation and through the introduction of harmful substances to the storm collection system. To mitigate this construction impact, an erosion and sediment control plan (ESCP) will be developed. This plan will include measures for managing fuel, excess materials, debris, and water flows into and out of the construction site(s) appropriately.

8.3 Socio-Economic and Cultural Environment

8.3.1 Utilities

During detailed design utility companies will be contacted to confirm the presence and location of existing infrastructure within the study area. It is not anticipated that the proposed works will impact any utility locations. All existing utilities located within the study area will require protection during construction to ensure the infrastructure is not damaged by construction works.

8.3.2 Archaeological Potential

Based on the Stage 1 Archaeological Assessment, implementation of the preferred solution should not impact areas identified having archaeological potential. During construction, in the event that archaeological resources or remains are found, alteration of the site must cease immediately, and a licenced consultant archaeologist must be notified to carry out archaeological fieldwork, in compliance with sec. 48(1) of the Ontario Heritage Act.

More information is provided in the completed Stage 1 Archaeological Assessment report in Appendix C.

8.4 Climate Change Considerations

Climate change is an issue that has and continues to evolve on a global scale. Governments at all levels are acknowledging the need to take actions that reduce greenhouse gas (GHG) emissions into the atmosphere to mitigate the effects of climate change. There is also a recognition that climate change is impacting community infrastructure systems. This requires a consideration of adaption measures to mitigate the impact of climate change on levels of service these systems were originally designed to deliver.

Project impacts and resiliency to climate change were taken into consideration during the study. Considering how a project contributes to climate change, through its greenhouse gas emissions or its effects on the natural environment, is important to the planning process as it allows proponents to consider climate mitigation measures to avoid, minimize, or offset such effects. As well, considering how climate change may affect a project, such as through increased flooding or drought, is also critical to the planning process through enabling proponents to make informed decisions around how to design a project to withstand such environmental conditions. Approaches for considering and

addressing climate change in project planning are through 1) Reducing a project's effect on climate change; and 2) Increasing the project's resilience to climate change.

Upon review of this Study's undertaking, it is determined that the project is minor in scale and will not have significant climate change impact. However, key elements that were/will be factored into the linear infrastructure improvements that could serve to reduce the overall effect on climate change include GHG reduction initiatives including reduced use of GHG producing materials, specifying local materials to reduce related fuel consumption, and inclusion of recycled materials, where feasible. Furthermore, the watermain will be designed and constructed to Peel's design and construction specifications which consider climate change impacts with respect to operations and construction.

8.5 Construction Considerations

In summary, the following potential environmental impacts may occur during the construction phase. As such, the following measures detailed in Table 8-1 are proposed to mitigate any adverse impacts.

Table 8-1: Construction Considerations

Construction Impacts	Proposed Mitigation Measures
Traffic Delays within private property	• Prepare construction phasing plan/detour plan and review with Husky Technologies
Increased construction activity within Town of Caledon ROW (Hardwick Road)	• Prepare construction phasing plan; communicate and coordinate with Town to secure Road Occupancy Permit
Air quality impacts from construction equipment	• Develop a dust control plan, use water, and dust suppressants during construction, keep idling of construction equipment to a minimum, address and monitor air quality complaints
Noise disturbance to adjacent land uses	• Develop a noise control plan, construction must conform to Municipal Noise By-Laws, keep idling of equipment to a minimum, address and monitor noise complaints
Impacts to surface water quality due to sedimentation and introduction of deleterious substances to storm collection system/natural environment	• Develop an Erosion and Sediment Control Plan (ESCP), include measures for managing water flows into and out of the site, manage fuel, excess materials, and debris appropriately
Disruption of water service and restricted access to adjacent properties	• Communication and coordination with commercial properties to minimize water service impacts; maintain access to all properties including temporary driveways if required

8.6 Monitoring and Maintenance

The mitigation measures identified in this report shall be written into the contract specifications. During construction, Peel's contract administrator shall ensure that full-time monitoring/inspection of the project works be undertaken to

ensure that all environmental commitments identified in this report are adhered to by the Contractor(s) and other subsequent agency approvals are met. After a period of one year following completion of the construction (i.e. post construction), a final inspection should be undertaken to ensure the effectiveness of the identified mitigation measures.

Recommended effects monitoring during the construction period includes:

- Monitoring of traffic flow within private property to ensure the minimization of delays;
- Public complaints monitoring and follow-up regarding construction disturbances;
- Monitoring of vegetation removal; and
- Monitoring of the effectiveness of stormwater controls to ensure erosion and sedimentation effects are minimized.

9 CONCLUSIONS AND RECOMMENDATIONS

This study was carried out as a Schedule B project under the Municipal Class Environmental Assessment (MCEA) for Municipal Water and Wastewater Projects and is subject to the requirements of the *Environmental Assessment Act*. This document provides relevant information with respect to Phases I and II of the Environmental Assessment Process. Subsequent phases of the process will involve completion of contract drawings and documents for all proposed works together with appropriate monitoring requirements.

9.1 Conclusions

As part of Peel's 2023 Water Linear State of Good Repair program, the watermain along Highway 50 from Wilton Drive to 150m south of Queensgate Boulevard and along the Highway 50/Hardwick Road easement requires replacement. Currently, the easement carries the existing 300mm diameter ductile iron watermain across the Husky Injection Molding Plant (Husky Technologies) property and Canadian Pacific (CP) Rail corridor to Hardwick Road. Anticipating easement(s) will be required for the new watermain installation from CP Rail and possibly private property owner(s), a MCEA Study has been conducted to determine the preferred alignment solution and support property negotiations.

Peel Region initiated a MCEA to develop and evaluate a variety of watermain alignment alternatives to improve water quality and reliability of the water system while considering accessibility of the infrastructure, impacts on the natural environment, property requirements and coordination with ongoing and future projects.

The preferred solution includes replacing the existing watermain with a new alignment further east within the Husky property. The new 300mm diameter watermain will connect with the new 400mm diameter watermain on Highway 50 (Queen Street South) traverse through the Husky parking lot to a shaft on the north side of the CP Rail corridor, cross under the rail corridor via jack and bore installation and ultimately connect with the existing 300mm diameter watermain on Hardwick Road. Key considerations for the preferred solution include:

- Watermain alignment will be located further away from Husky building, thereby eliminating potential structural concerns associated with constructing a shaft and watermain close to the building;
- Alignment will mitigate the impact on vehicular traffic by specifically avoiding high-traffic areas (access roadway parallel with CP Rail corridor on south side of building) identified by Husky within their property;
- The open-cut construction method will necessitate the temporary closure of portions of the Husky parking lot;
- Watermain alignment provides minimal impact to vegetated area adjacent to Highway 50;
- New permanent and temporary construction easements from Husky required for watermain alignment;
- Permission to Enter (PTE) required for construction access through Husky property;
- Proposed launch shaft for jack and bore crossing of CP Rail corridor will be situated in a confined area in proximity to hydro poles;
- Open cut installation and associated traffic impacts across Hardwick Road will be required to connect to existing watermain; and
- Proximity of watermain alignment with Highway 50 bridge structure provides no concern for structural impacts.

Preliminary design of the new watermain has been prepared for the preferred solution (Appendix J). Following completion of the MCEA study, detailed design, permitting, land acquisition and construction will be undertaken to implement the preferred solution and remedy the identified problems.

9.2 Recommendations

During the MCEA study, recommendations for additional works and implementation measures were identified. These items should be taken into consideration during the detailed design and include, but are not limited to, the following items:

- Finalize watermain alignment and all associated appurtenances;
- Identify potential detour routes and construction staging/phasing of the proposed works;
- Confirm preferred construction methodologies and viable trenchless technologies to be utilized;
- Confirm and obtain required approvals and necessary permits;
- Coordinate with Peel's Highway 50 bridge rehabilitation project for timing and to mitigate potential scheduling and work conflicts ;
- Coordinate with key stakeholders CP Rail and Husky Technologies to ensure final design details and construction staging are agreed by all parties;
- Finalize property needs (permanent and temporary easements) and secure prior to construction;
- Finalize capital cost estimate(s) of the project; and
- Ensure construction is coordinated with other planned and ongoing activities in the vicinity of the Study Area by the Town of Caledon and Peel Region.

Prior to construction, Peel will inform the public and adjacent landowners of the upcoming construction works including construction schedule, construction staging and implementation.

CLOSURE

This report was prepared for the Peel Region to satisfy the requirements of the MCEA process and *Environmental Assessment Act* and to set the stage for the detailed design and construction of the Preferred Solution for the Study Area discussed herein.

The services provided by Associated Engineering (Ont.) Ltd. in the preparation of this report were conducted in a manner consistent with the level of skill ordinarily exercised by members of the profession currently practising under similar conditions. No other warranty expressed or implied is made.

Respectfully submitted,

Associated Engineering (Ont.) Ltd.

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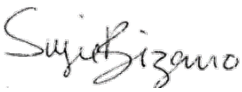

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