Bolton Water and Wastewater Capacity Improvements

Schedule ‘C’ Class Environmental Assessment

Public Information Centre (PIC) No. 2

Albion Bolton Community Centre – Room C

150 Queen Street South, Bolton ON, L7E 1E3

Date: Wednesday, June 12, 2024

Time: 5 – 7 p.m.

BluePlan ENGINEERING
A GEI Company

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Why are we here?

Public Information Centre (PIC) No. 2

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Key Dates

June 12, 2024

PIC No. 2 materials posted to project website (access via link or scan the QR code with a smart-phone):

https://www.peelregion.ca/public-works/environmental-assessments/caledon/bolton.asp

June 12 to June 28, 2024

If you have any questions or wish to provide your input, please speak with one of the project team members, and/or contact the Region of Peel Project Manager at **Italia.Ponce@peelregion.ca**

July 24, 2024

Responses to questions and comments related to PIC No. 2 posted to project website.

Public Information Centre (PIC) Objectives

- **Provide study update and outline next steps in the environmental assessment process.**
- **Present the evaluation process and the preliminary preferred water and wastewater servicing strategy including infrastructure siting and alignments.**
- **Receive feedback on the study process and preliminary preferred servicing strategy.**

This is the second of three PICs for this study.

Stay Engaged!

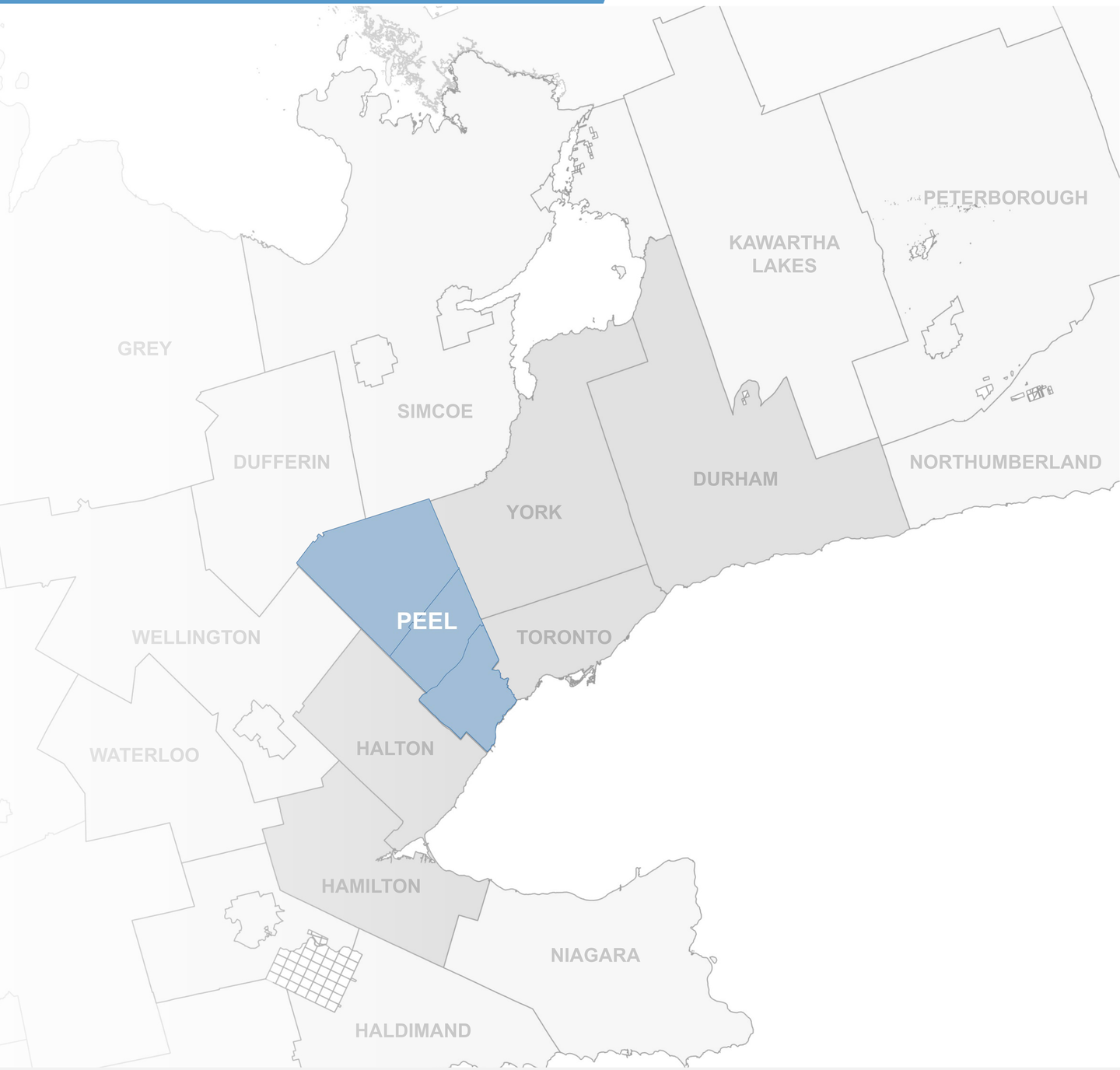
- ✓ Please sign in and take a comment sheet.
- ✓ Have a look at the project information on display and chat with the Project Team.
- ✓ Provide your feedback regarding the information presented.

Land Acknowledgement

We would like to begin by acknowledging the land on which we gather, and which the Region of Peel operates, is part of the Treaty Lands and Territory of the Mississaugas of the Credit. For thousands of years, Indigenous peoples inhabited and cared for this land, and continue to do so today.

In particular we acknowledge the territory of the Anishinabek, Huron-Wendat, Haudenosaunee and Ojibway/Chippewa peoples; the land that is home to the Metis; and most recently, the territory of the Mississaugas of the Credit First Nation who are direct descendants of the Mississaugas of the Credit.

We are grateful to have the opportunity to work on this land, and by doing so, give our respect to its first inhabitants.



Background and Study Objectives

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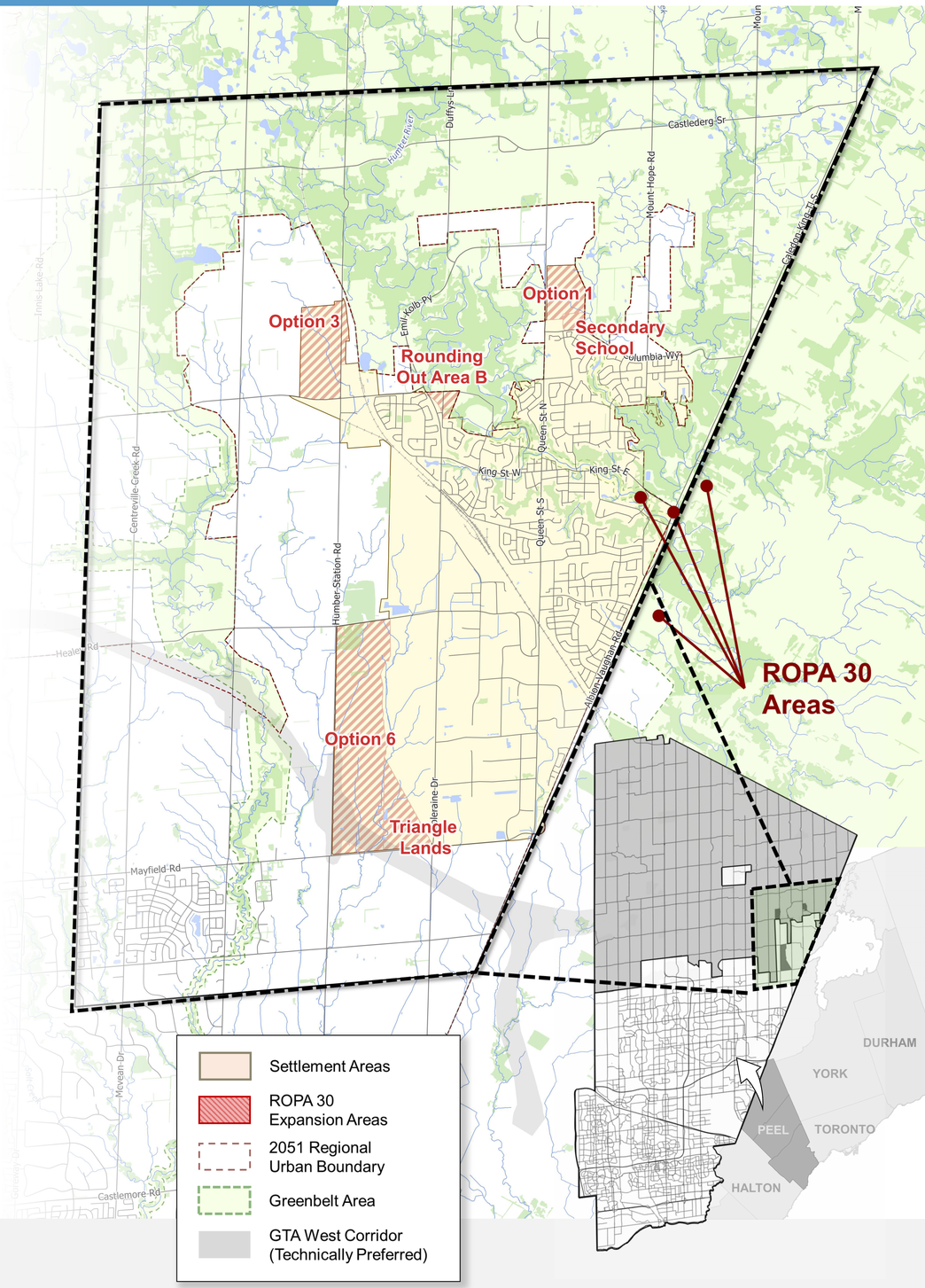
The Region of Peel completed a **Water and Wastewater Master Servicing Plan Update (2020)** which identified the need to construct new water and wastewater linear distribution and collection pipes and pumping facilities to service future planned population growth in the community of Bolton.

The **Bolton Water and Wastewater Capacity Improvements Schedule 'C' Class Environmental Assessment (EA)** will develop, evaluate, and identify the optimal water and wastewater servicing solutions through the Class EA process to meet existing needs and growth.

Key Strategic Goals:

1. Satisfy the Schedule 'C' Municipal Class Environmental Assessment Process.
2. Effectively engage with Indigenous Communities.
3. Consult with Stakeholders, Agencies, and the Public.
4. Ensure a balanced and informed decision-making process.
5. Review previous study recommendations and provide an integrated servicing solution that supports previously planned servicing strategies and concurrent design and construction.
6. Consider unique opportunities and challenges for water and wastewater servicing.
7. Solutions are required to provide continued servicing to the existing community.
8. Ensure that the solution supports a long-term holistic servicing strategy.
9. Protect the environment.



What is this study about?

Bolton Class EA Study Overview

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The **Bolton Water and Wastewater Capacity Improvements Schedule 'C' Class Environmental Assessment (EA)** builds off the Feasibility Study–recently completed by the Region and covered under the ongoing 2025 Master Plan–that outlines conceptual projects to support additional development proposed within both the intensification and greenfield growth areas in the community of Bolton.

The study will fulfill the Class EA requirements for a specific set of projects but also follows a Master Plan approach that considers and ensures integration with the long-term servicing strategy for the broader service area and long-term planning horizon.

This Class EA study investigates alternative water and wastewater strategies for the Bolton area and has two (2) key components:

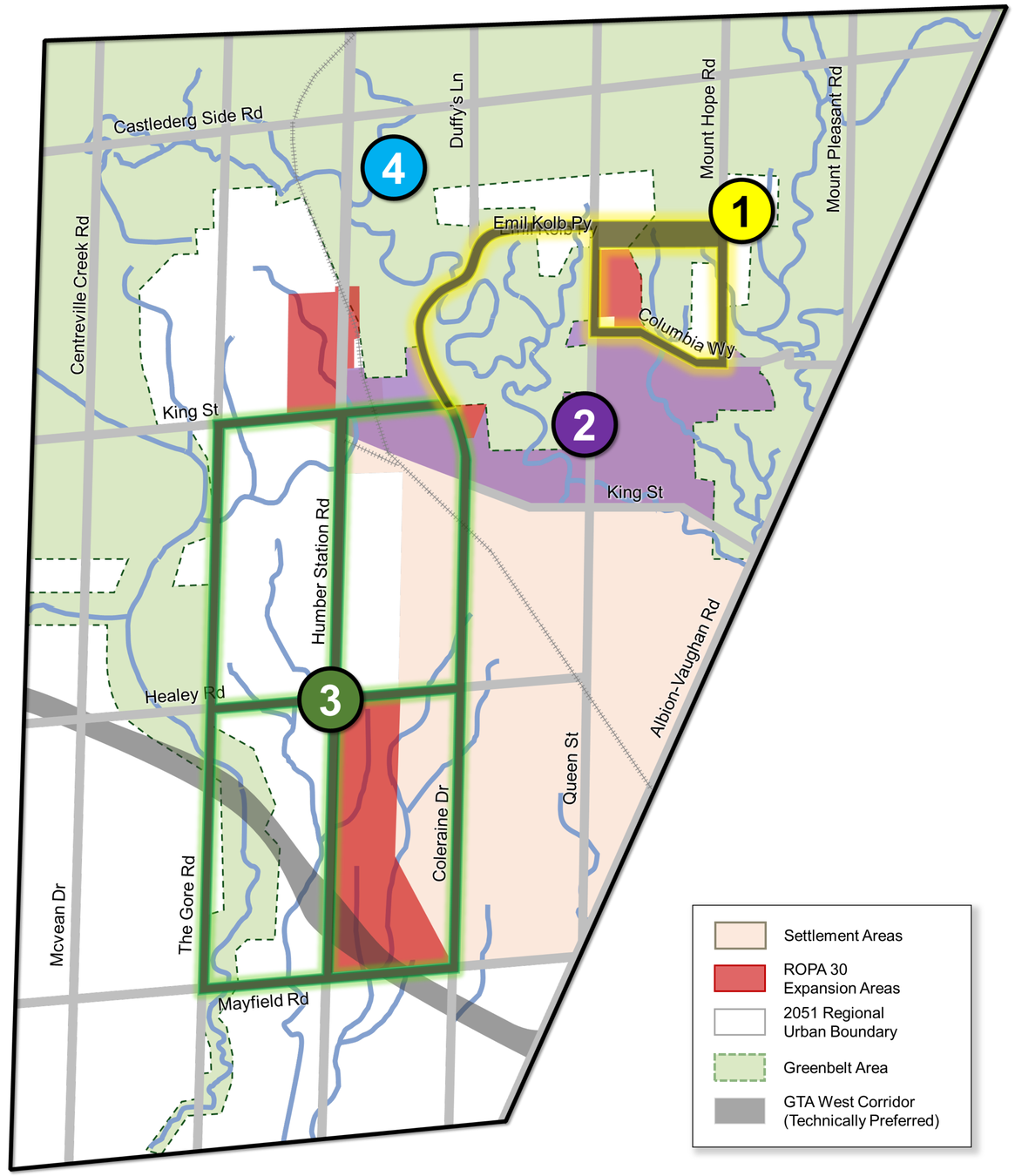
Focus Area 1 – New Sanitary Pumping Station, forcemains, sewers and watermains to service new growth.

Focus Area 2 – Optimization of the existing service areas including Inflow and Infiltration (I&I) reduction, decommissioning and replacing sanitary forcemains, water pressure zone optimization.

The Class EA strategy recommended through this study must be integrated with projects that have previously fulfilled study requirements and are currently under design or construction and future projects requiring further study outside of this Class EA but are integral to the overall Bolton servicing strategy.

Area 3 – Projects previously fulfilled and under design include New Zone 7 Water Booster Pumping Station and watermains and new sanitary sewers.

Area 4 – Future water storage facilities and transmission requiring study fulfilment outside of this Class EA.



What is being evaluated within this study?

Water and Wastewater Servicing Strategies

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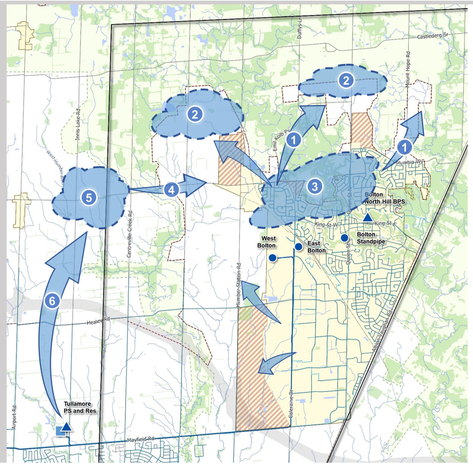
Conceptual Servicing Solutions

The objective of the recently completed Feasibility Study, was to develop high-level long and short-term water / wastewater conceptual servicing solutions to support additional development in the community of Bolton.

Water System



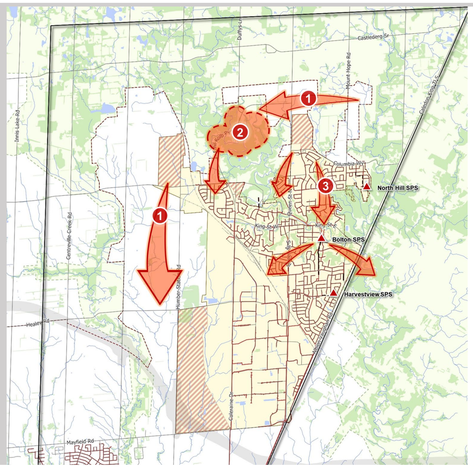
Reviewed in Feasibility Study

- Conceptual Booster Pumping Station Locations and associated Transmission Main Alignment(s).
- Long Term Conceptual Facility needs and Locations (5E, 7E, 7B).

Water System Servicing

1. Conceptual Zone 7B Transmission Main.
2. Zone 7B Storage.
3. Conceptual Zone 7E / 7B Pumping Station (s).
4. Conceptual Zone 6 and Zone 7 Transmission Main.
5. Conceptual Zone 5E Storage and Zone 6E / 7E Pumping Station.
6. Conceptual Zone 5E Transmission Main.

Wastewater System



Reviewed in Feasibility Study

- Conceptual Flow strategies:
  - South to existing Bolton SPS and associated downstream upgrade needs.
  - West along Emil Kolb Parkway, Potential new SPS and Forcemain.
- Conceptual North-South Flow and capacity needs for growth areas along Humber Station Road and The Gore Road.

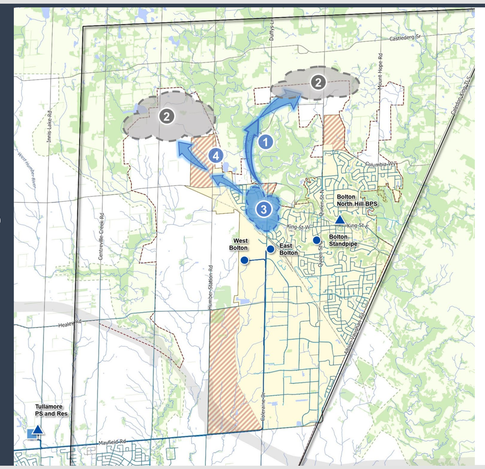
Wastewater System Servicing

1. Wastewater conveyance.
2. Conceptual Sanitary Pumping Station (SPS) and Forcemain.
3. Wastewater conveyance to existing Bolton Sanitary Pumping Station.

Development of Servicing Strategy

The conceptual servicing solutions that resulted from the Feasibility Study, set the foundation for the water / wastewater servicing strategies to be developed through the completion of this Class EA Study and the 2025 Master Plan.

Water System



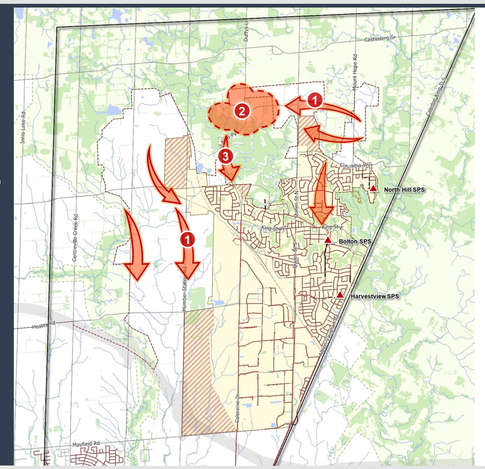
Key Components in the Bolton Class EA

- Refined Booster Pumping Station (SPS) Location.
- Zone 7B Feedermain alignments and construction methodologies along with potential shaft compound location(s).
- Zone 7E Feedermain / Distribution Mains.

Water System Servicing

1. Review and refine Zone 7B Transmission Main alignment.
2. Zone 7B Storage not evaluated in this EA.
3. Review and refine Zone 7E / 7B Booster Pumping Station location and EA exemption eligibility based on the results of an archaeological screening process.
4. Review of Zone 7E Water Transmission Main / Distribution.

Wastewater System



Key Components in the Bolton Class EA

- Detailed wastewater drainage strategies for areas north of Columbia Way.
- Refined Sanitary Pumping Station (SPS) Location.
- Forcemain alignments and construction methodologies along with potential shaft compound location(s).
- Sewer alignments and flow strategies for area north of King Street.

Wastewater System Servicing

1. Drainage and sewer strategy.
2. Review and refine of Sanitary Pumping Station (SPS) location.
3. Review and refine forcemain and gravity sewer alignment.

How is the study being conducted?

Municipal Class Environmental Assessment Process

The **Bolton Water and Wastewater Capacity Improvements Study** is being undertaken as a Schedule 'C' Class Environmental Assessment (EA), satisfying Phases 1 to 4 of the Municipal Class Environmental Assessment (MCEA) process (October 2000, as amended in 2007, 2011, 2015, and 2023).

We are currently within Phase 2 of the study to review and evaluate the identified alternatives in order to select the preferred water and wastewater servicing strategy.

PHASE 1	PHASE 2	PHASE 3	PHASE 4	PHASE 5
Problem or Opportunity	Alternative Solutions	Alternative Design Concepts for Preferred Solution	Environmental Study Report (ESR)	Implementation
Identify Problem or Opportunity	Identify Alternative Solutions to Problem or Opportunity	Identify Alternative Solutions to Problem or Opportunity	Complete Environmental Study Report (ESR)	Complete Contract Drawings and Tender Documents
Discretionary Public Consultation to Review Problem or Opportunity	Inventory Natural, Social, Economic Environment	Detail Inventory Natural, Social, Economic Environment	Notice of Completion to Review Agencies and Public	Proceed to Construction and Operation
	Engagement. RE: Problem or Opportunity and Conceptual Solutions. **(PIC 1)**	Identify Impact of Alternative Designs on Environment, and Mitigating Measures	Copy of Notice of Completion to Ministry of Environment Environmental Assessment Branch	Monitor for Environmental Provisions and Commitments
	Identify Impact of Alternative Solutions on the Environment, and Mitigating Measures	Evaluate Alternative Designs: Identify Recommended Solutions	Environmental Study Report Placed on Public Record	
	Evaluate Alternative Solutions: Identify Recommended Solutions	Consult Review Agencies and Previously Interested and Directly Affected Public. **(PIC 3)**	Opportunity to Request Minister Within 30 Days of Notification to Request and Order	
	Consult Review Agencies and Previously Interested and Directly Affected Public. (PIC 2)	Select Preferred Design		
	Select Preferred Solution	Preliminary Finalization of Preferred Design		

We are here!

Water and Wastewater Evaluation Process

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The Bolton EA evaluation process followed a multi-step approach to cover study components and ensure solutions are selected in an integrated manner.

1. Establish evaluation criteria.
2. Generate / collect a Natural Environment, Social and Economic inventory of the study area.
3. Develop and evaluate alternative water and wastewater servicing concepts for the study area.
4. Select a preferred water and wastewater servicing concept for the study area.
5. Establish water and wastewater servicing focus areas.
6. Develop and evaluate alternative water and wastewater servicing strategies for each focus area.
7. Select a preliminary preferred water and wastewater servicing strategy for each focus area.
8. Ensure focus area strategies are integrated and provide a long-term holistic servicing strategy for the overall study area.

Completed Investigations and Studies

- Natural Environment Desktop
- Land use Planning Review
- Stage 1 Archaeological Assessment
- Indigenous Community Engagement
- Geotechnical and Hydrogeological Desktop
- Cultural Heritage Screening

Evaluation Criteria

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Evaluating the Options

With input from Indigenous Rights-holders and Interest-holders, key stakeholders, the public, and review agencies (Ministries), the following criteria supported the selection of the preliminary preferred servicing strategies for each study component.

- Land use, land size, availability and location.
- Permit requirements.
- Ownership, legal and jurisdictional considerations.
- Compliance with applicable planning and special land use policies.

- Community (residents and local businesses) and traffic considerations.
- Public accessibility during construction and operation.
- Noise, vibration, dust and odour considerations.
- Cultural heritage resources.
- Archaeological resources.

- Climate Change.
- Environmental crossing consideration.
- Minimize impacts to environmental features, protected areas, species at risks, water features / resources, air quality, natural features and trees.
- Geology, hydrogeology, contamination considerations.

- Ease of construction.
- Compatibility with existing / planned infrastructure.
- Minimize environmental and infrastructure crossings.
- Minimize conflicts with existing utilities.
- Provides ability to meet existing / future servicing standards.
- Available servicing capacity for future growth.
- Ease of access to maintain.
- Operation and maintenance considerations.
- Flexibility of system operations and operational security.

- Capital needs costs.
- Operation and maintenance costs.
- Lifecycle cost consideration.
- Consideration of potential financial risk during construction.

Bolton Class EA – Focus Area 1

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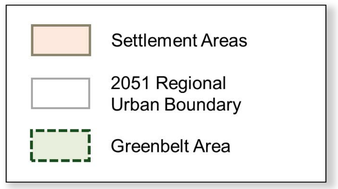

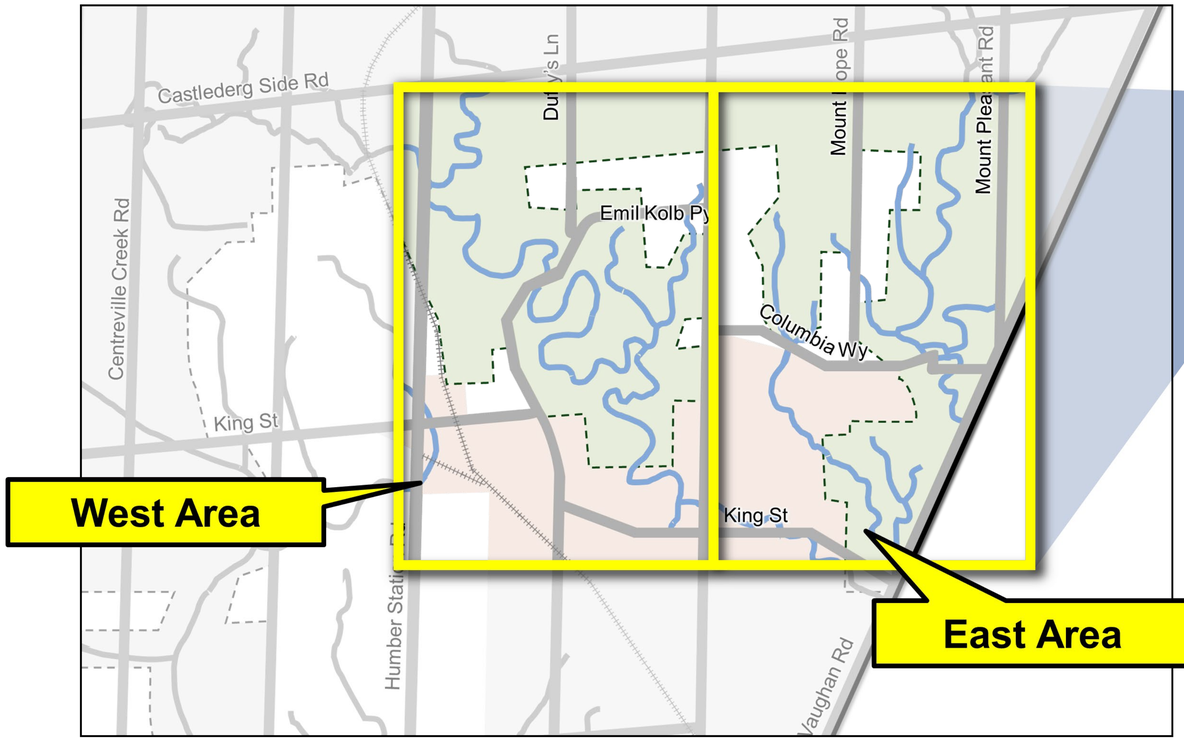

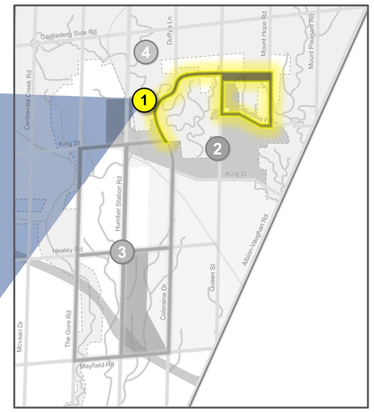

Focus Area 1

New Sanitary Pumping Station, forcemains, sewers and watermains to service new growth.

- Focus Area 1 was split into East and West areas to develop, evaluate and select the preliminary preferred strategies.
- The evaluation process was undertaken in sequential steps, starting with the East to inform the selection of the West.

The following boards details the alternatives evaluation process and results that lead to the development of a holistic water and wastewater servicing solution for Focus Area 1.

Alternatives Evaluation Results

East Lands – Wastewater Alternatives

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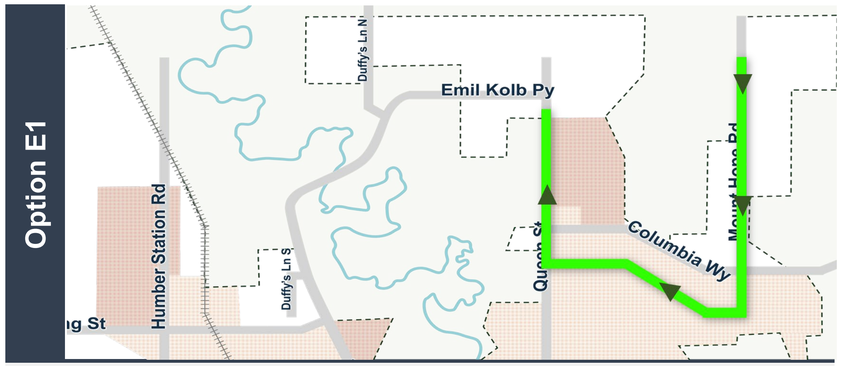
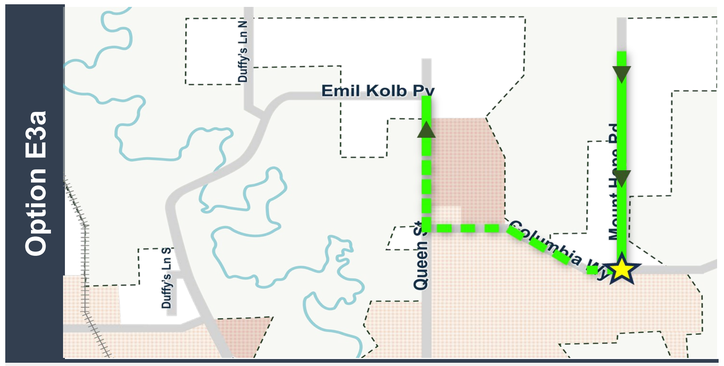


All Gravity Solution via Road Right-of-Ways (ROW)

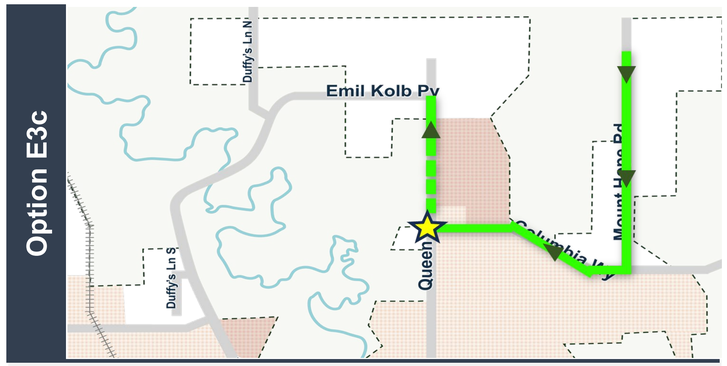
Gravity solution avoiding need for a new SPS, reducing operation / maintenance costs. Does not require emergency overflow associated with SPS reducing environmental risk. Increased construction complexity and shaft compounds required for deep sewer but minimizes surface disturbance during construction. Minimizes jurisdictional risk by maximizing construction within ROW.

Carried Forward – Second Choice.



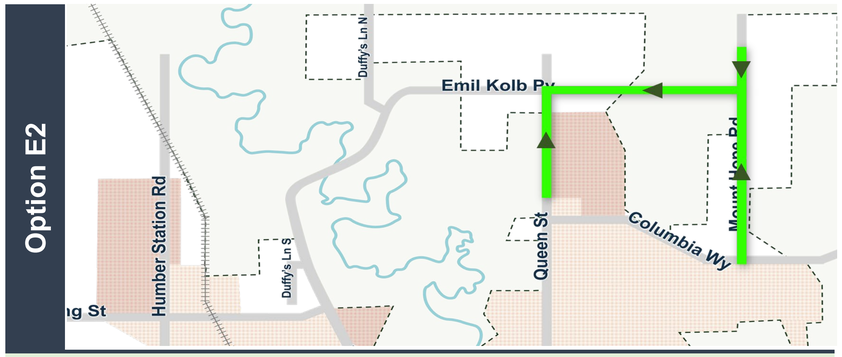
New SPS at Mount Hope and Columbia

Land acquisition required for new SPS. Increased construction challenges and operational and maintenance costs associated with SPS. Increased potential impact to the natural environment associated with overflow facility required for SPS. Increased open cut construction with increased community and traffic impacts. (Similar impacts to E3b and E3c). **Screened Out.**



New SPS at Hwy 50 and Columbia

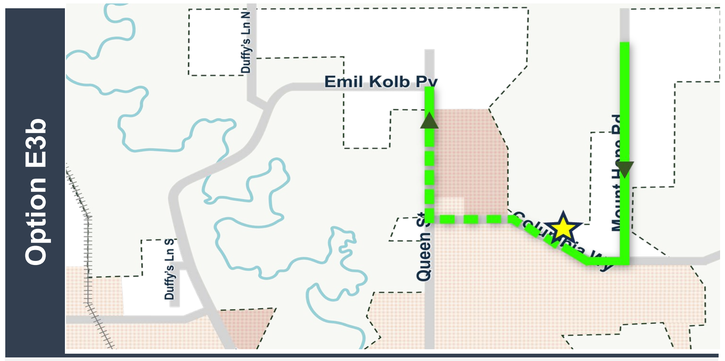
Land acquisition required for new SPS. Increased construction challenges and operational and maintenance costs associated with SPS. Increased potential impact to the natural environment associated with overflow facility required for SPS. Increased open cut construction with increased community and traffic impacts. (Similar impacts to E3a and E3b). **Screened Out.**



All Gravity Solution via ROW and new easement

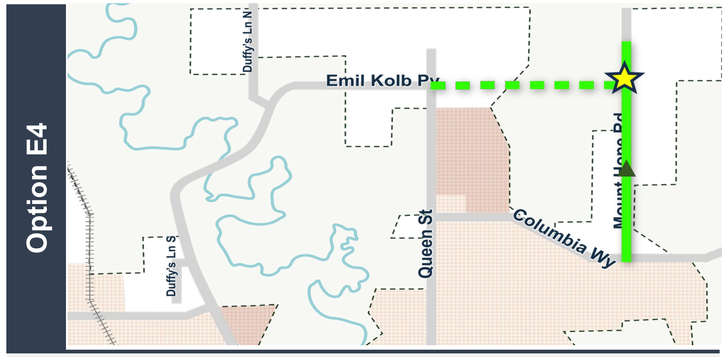
Gravity solution avoiding need for a new SPS reducing operation/maintenance costs. Does not require emergency overflow associated with SPS reducing environmental risk. Opportunity to bundle water and wastewater construction across future easement. Opportunity to align with future road. Sewer construction tunneled minimizing community impact, local traffic disruption, surface disturbance.

Carried Forward – Selected as preliminary preferred strategy.



New SPS at Humber River Tributary

Land acquisition required for new SPS. Increased construction challenges and operational and maintenance costs associated with SPS. Increased potential impact to the natural environment associated with overflow facility required for SPS. Increased open cut construction with increased community and traffic impacts. (Similar impacts to E3a and E3c). **Screened Out.**



New SPS at Mount Hope and new easement

Land acquisition required for new SPS. Increased construction challenges and operational and maintenance costs associated with SPS. Increased potential impact to the natural environment associated with overflow facility required for SPS. Opportunity to bundle construction with watermain along new easement and to service low elevation lands.

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Proposed Alternatives

- Proposed Sanitary Pumping Station
- Proposed Forcemain Solution
- Proposed Gravity Solution

West Lands – Wastewater Alternatives

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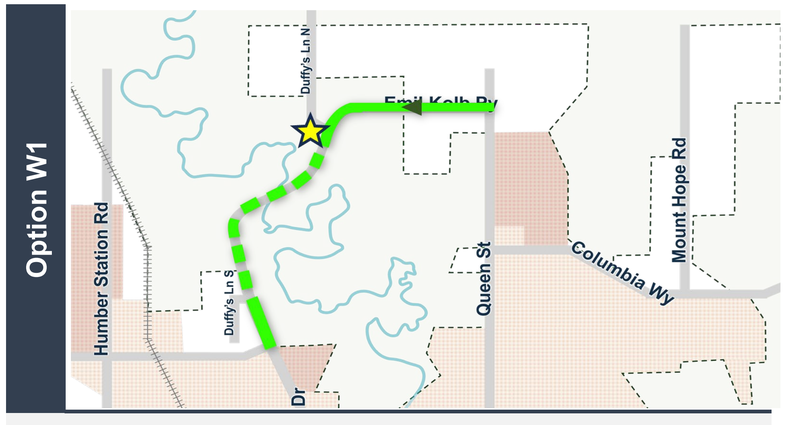
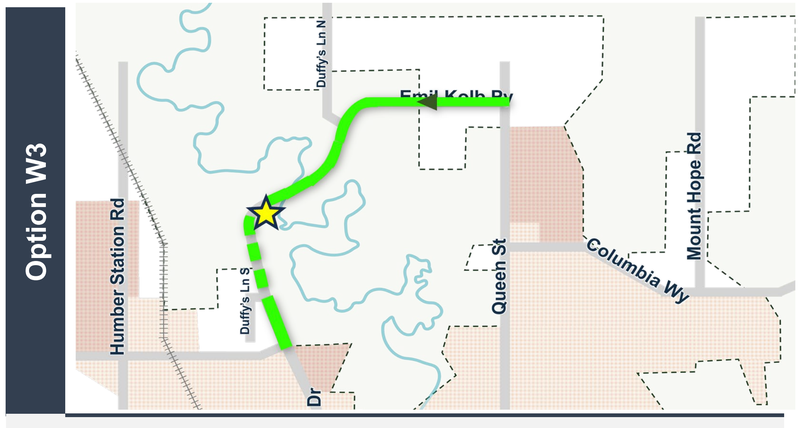


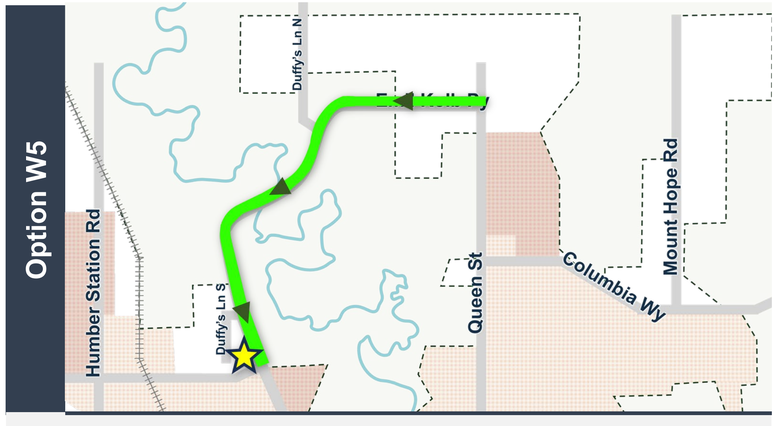
New SPS at Duffy's Lane North

Deep wet well and forcemains required. Construction access road and compound required at Humber Crossing in addition to SPS at Duffy's Lane. Potential additional costs for longer emergency overflow. **Screened Out.**



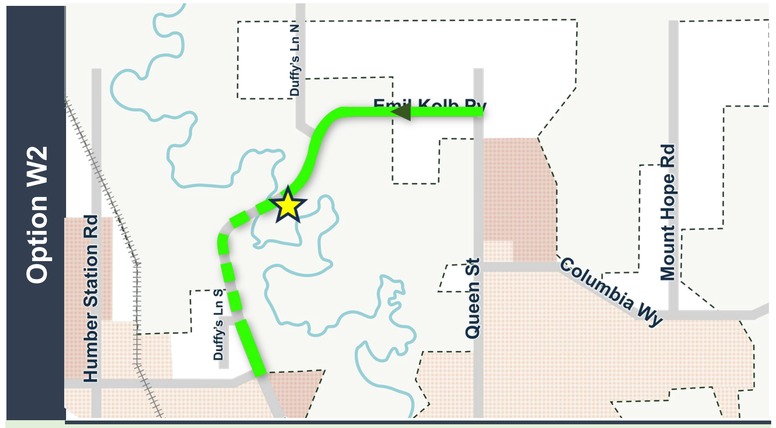
New SPS Southwest of Humber River

Potential technical and construction challenges for site west of Humber River creek crossing. Increased surface disturbance, impacts to trails and natural features. Long term operation and maintenance access issues at site. **Screened Out.**



New SPS at Emil Kolb and King Street

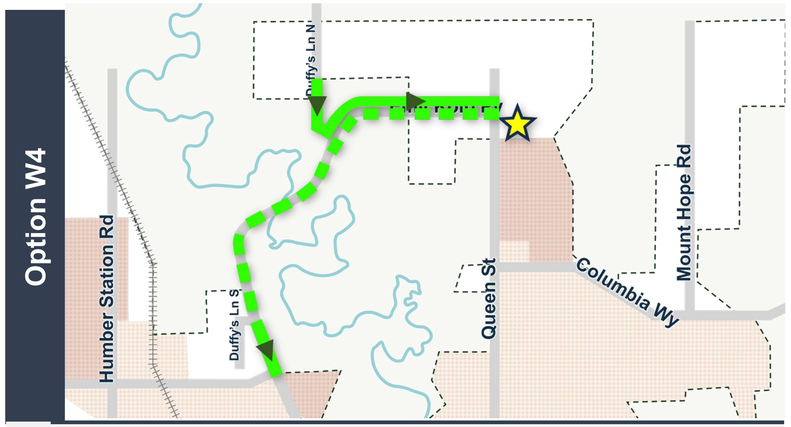
Limited land availability at SPS Site. Increased cost and technical and operational challenges due to sewer and SPS depth. Additional long-term operational and maintenance consideration required. **Screened Out.**



New SPS Southeast of Humber River

Optimal technical, construction and operational option. Sufficient land availability for tunnel compounds. Surface disturbance, facility and long term Region access contained mainly to area east of Humber River.

Carried Forward – selected as preliminary preferred strategy.



New SPS at Hwy 50 and Emil Kolb Pkwy

Limited land availability for SPS. Construction access road and compound required at Humber Crossing in addition to SPS at Duffy's Lane. Increased length of forcemain required. Potential additional costs for longer emergency overflow.

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Proposed Alternatives

- Proposed Sanitary Pumping Station
- Proposed Forcemain Solution
- Proposed Gravity Solution

East Lands – Water Alternatives

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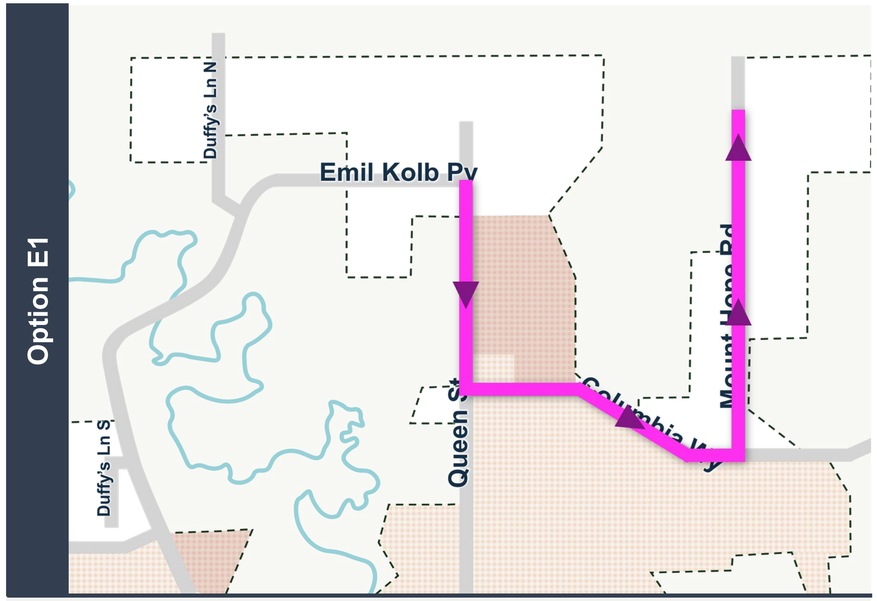

Single Feed via Road Right-of-Ways (ROW)

Technical and operational challenges associated with single feed to new service area. Water quality issues and increased service risk. Strategy supports connections to existing watermains on Columbia Way and supports promotion within existing pressure zone to optimize service. Alternative minimizes risks through construction in ROW only.

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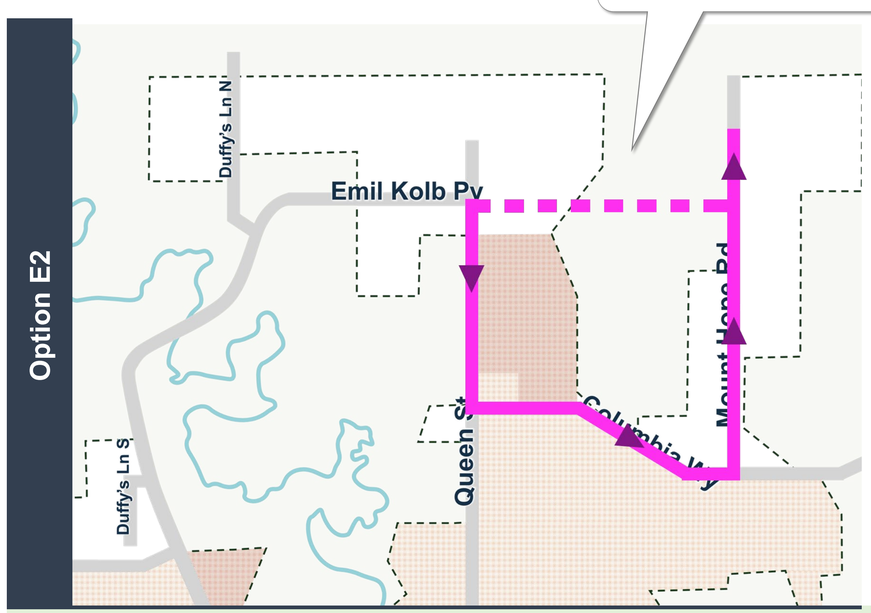
Alignment and design to be confirmed through Phase 3 of the study.



Looped System via Road ROW and new easement

Improved technical and operational strategy associated with looped feed to new service area. Minimizes water quality issues and reduces service risk, increasing system resiliency. Strategy supports connections to existing watermains on Columbia Way and supports promotion within existing pressure zone to optimize service. Alternative requires construction outside of existing ROW, opportunity to minimize risk and impact through construction methodology (i.e tunnelling). Opportunity to bundle construction with the wastewater infrastructure. Opportunity to align with future road construction. Strategy requires a new easement, selection requires further study to refine location, define potential impacts and mitigation measures.

Carried Forward – selected as preliminary preferred strategy.

Proposed Alternatives

- Watermain Alignment To Be Confirmed
- Proposed Watermain Solution

What could the solution look like?

Preliminary Servicing Solution

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Emil Kolb Pkwy

Conceptual Shaft Location

Alignments shown as conceptual.
Sewer and Watermain alignment and design to be confirmed through Phase 3 of the study.

50 Hwy

Columbia Wy

Mount Hope Rd

New Sanitary Pumping Station and access road north-east of the Humber River.

Image Source: Caledon, Town (2024)

Proposed Alternatives

- Proposed Forcemain Solution
- Proposed Gravity Solution
- Proposed Watermain Solution

Considering Different Construction Methodologies

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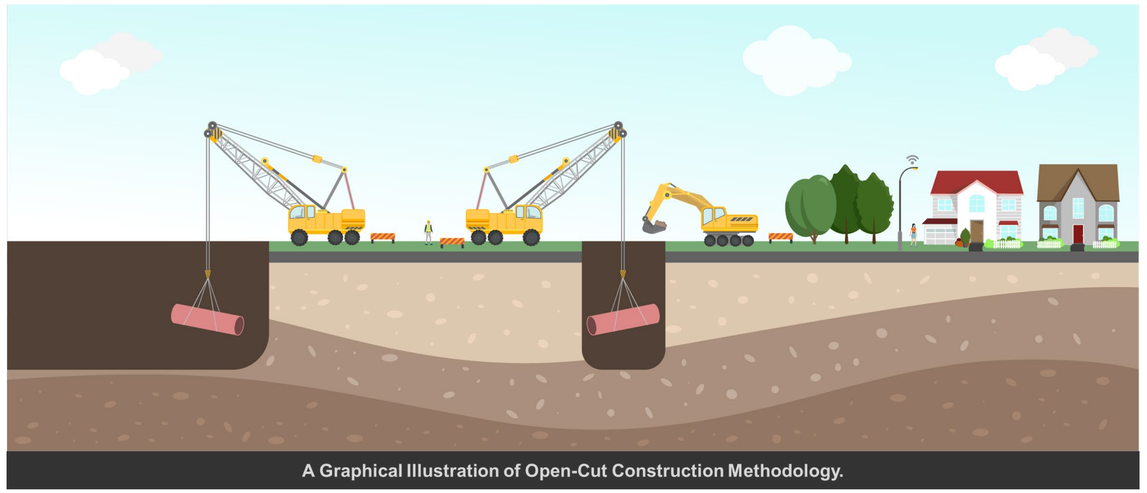
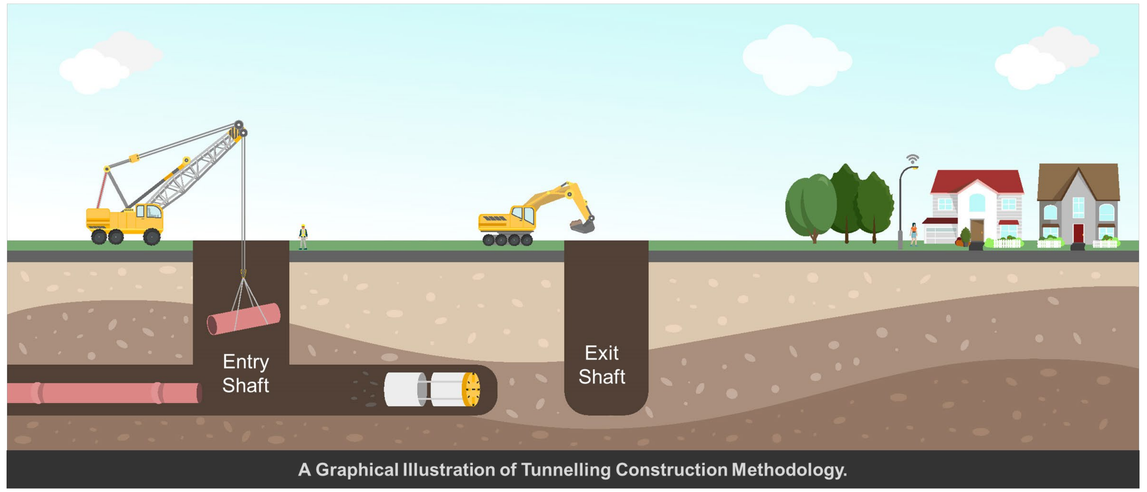
When evaluating servicing solutions for the **Bolton Water and Wastewater Capacity Improvements Study**, various construction methodologies will be considered including:

Open-Cut Construction: involves digging a trench to facilitate the installation of linear infrastructure (e.g., watermains). Because construction occurs on the surface over a stretch of time, open cut construction has the potential to increase traffic impacts and inconvenience to local residents and businesses.



A Graphical Illustration of Open-Cut Construction Methodology.

Tunnelling Construction: involves digging shafts and using special equipment to tunnel underground between shafts. It is less intrusive than open cutting minimizing traffic disruptions and impacts to local residents and businesses. The only surface works for tunnelled construction are the entry and exit shafts located between tunnel drive lengths that could vary between 0.2 km and 2.1 km apart depending on the technology used.



A Graphical Illustration of Tunnelling Construction Methodology.

Thank you!

How to Stay Involved

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What are we doing next?

- Review and incorporate responses from PIC No. 2.
- Complete additional supporting technical studies including archaeological, natural environment, cultural heritage etc.
- Moving forward to Phase 3 Alternative Design Concepts.
- Engagement with Indigenous Rights and Interest Holders.
- Consultation with affected / directly impacted parties, public review agencies, and other interested stakeholders.
- Prepare for PIC No. 3.

Project Overview:

- Summer 2024 – confirm preferred servicing strategies and commence Phase 3 Alternative Design Concepts.
- Fall / Winter 2024 - PIC No. 3 is anticipated in late Fall 2024 to present the preliminary preferred design concepts for the preferred solution.
- Winter / Spring 2025 - A detailed costing, phasing and implementation plan will be developed. Notice of Study Completion anticipated Winter / Spring 2025.

Stay Engaged!

- ✓ Please sign in and take a comment sheet.
- ✓ Have a look at the project information on display and chat with the Project Team.
- ✓ Provide your feedback regarding the information presented.

Do you have any questions, comments, or want to stay up to date?

Please contact us anytime!

Italia Ponce, P.Eng.
Project Manager, Regional Municipality of Peel
10 Peel Centre Drive
Brampton, ON L6T 4B9
905-791-7800 ext. 4583
M: 647-248-3785
Italia.ponce@peelregion.ca

Additional project information can be found on the project website, which can be accessed by scanning the QR code with your smartphone.

Please note that information related to this study will be collected in accordance with the *Freedom of Information and Protection of Privacy Act*. All comments received will become part of the public record and may be included in the study documentation prepared for public review.

If you need any accommodations to provide comments and/or feedback for this study, please contact the Project Manager.