



**WELCOME!
PUBLIC INFORMATION CENTRE**

Wastewater Capacity Improvements in Central Mississauga

Municipal Class Environmental Assessment

PIC No. 1

Mississauga Valley Community Centre

1275 Mississauga Valley Boulevard

Date: Tuesday, March 10th, 2020

Time: 5:00 pm to 7:30 pm

Why Are We Here?

Public Information Centre No. 1

Welcome!

Here are the objectives for today's Public Information Centre:



Present the study area and objectives



Present the environmental assessment process



Provide a clear and transparent evaluation process for the evaluation of alternatives



Receive feedback on the evaluation process and preliminary preferred solution

Get 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

Why Is This Study Being Completed?

Background and Study Purpose

Project History and Timeline



The **Region of Peel Water and Wastewater Master Plan Update (MP 2020)** identified preferred wastewater servicing strategies to support existing servicing needs and projected growth within the Region.

The MP 2020 identified proposed trunk sewers for the Central Mississauga area to be further investigated through a Class Environmental Assessment (EA).

Study Purpose

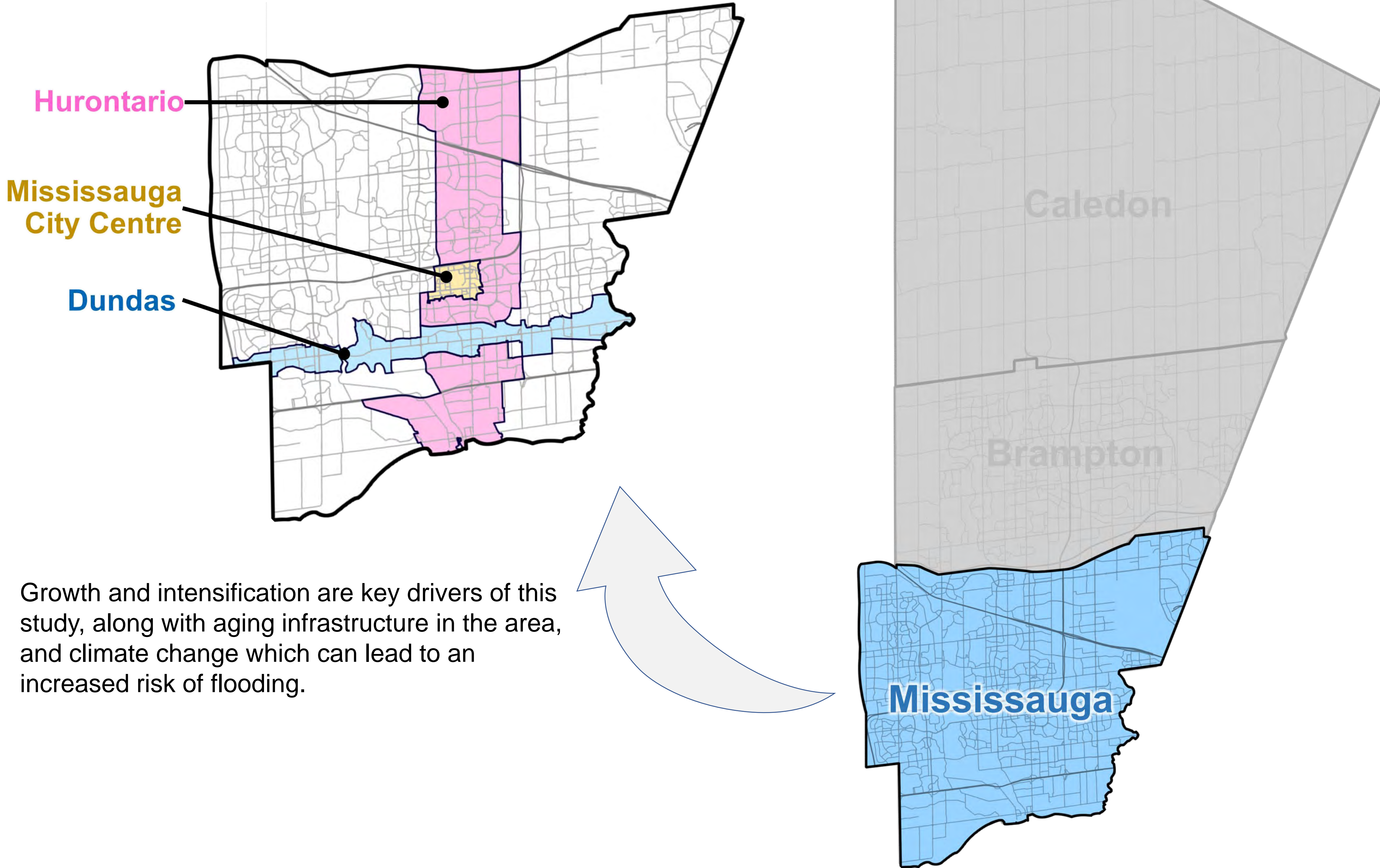
The purpose of the *Wastewater Capacity Improvements in the Central Mississauga Class Environmental Assessment* is to increase the conveyance capacity of key trunk sewers to service future growth and ensure alignment with the Region's long-term plan for providing wastewater services within the Mississauga City Centre, Hurontario Corridor and Dundas Corridor areas.

Key Servicing Strategy Objectives:

- 1- Increase system capacity to service future growth
- 2- Ensure the best use and enhancement of the existing wastewater infrastructure
- 3- Provide operational flexibility for sewer maintenance, inspection and emergency
- 4- Reduce potential risk of sewer surcharging
- 5- Reduce potential for sanitary overflows into rivers and the environment

What Are The Contributing Factors? Strategic Planning

Intensification Corridors



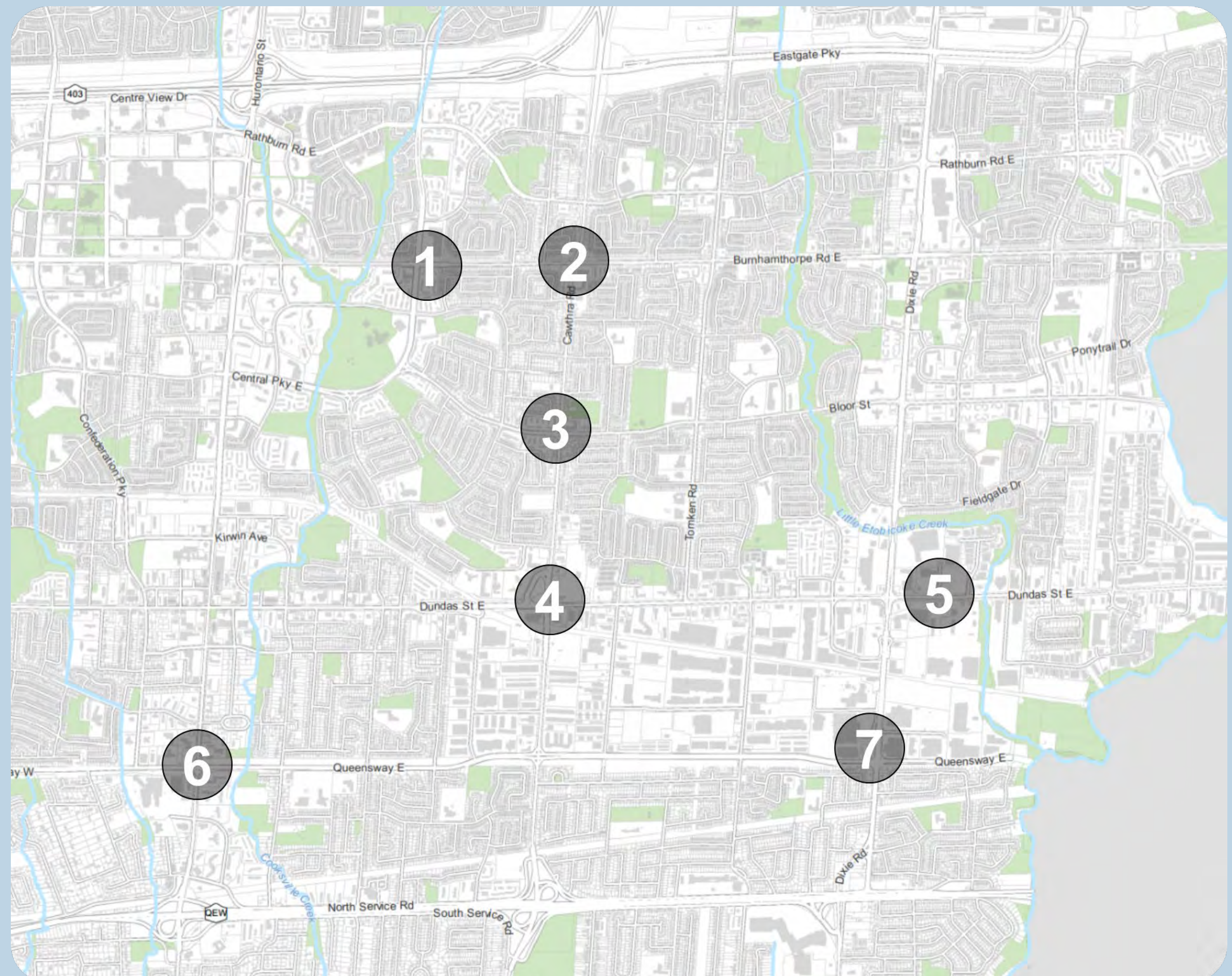
Growth and intensification are key drivers of this study, along with aging infrastructure in the area, and climate change which can lead to an increased risk of flooding.

This study considers the following projects planned within the study area:

1. Burnhamthorpe Rd Road Reconstruction and Watermain Improvements
2. Cawthra Rd Sanitary Sewer Installation (along Burnhamthorpe Rd and Cawthra Rd)
3. Cawthra Rd Road Improvements and Watermain Construction
4. Dundas St Road Rehabilitation
5. Sanitary Sewer & Watermain Improvements near Mattawa Ave
6. Hurontario Light Rail Transit
7. Dixie Rd Watermain Installation and Roads /Sanitary Sewer Improvements

The Region is also looking at “big picture” infrastructure planning, with the following Region-wide projects currently in progress:

- Water and Wastewater Master Plan Update
- Stormwater Servicing Plan for Regional Roads




Where Is The Study Located?

Study Area


Existing Wastewater System


The Central Mississauga study area includes 6 existing key trunk sewers. The Cawthra Rd Trunk Sewer is currently under construction and once in operation, will also be a key trunk sewer in this area. Wastewater from the key trunk sewers flows to the G.E. Booth Wastewater Treatment Plant (WWTP) for treatment.

General Features

 Study Area Boundary

Existing Wastewater Infrastructure


 Wastewater Treatment Plant (WWTP)


 Sanitary Pumping Stations (SPS)

 Sanitary Trunk Sewer


 Sanitary Local Sewer


Existing Key Trunk Sewers

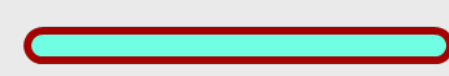
 1 – Upper Cooksville Creek

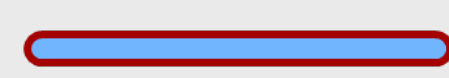
 2 – Lower Cooksville Creek

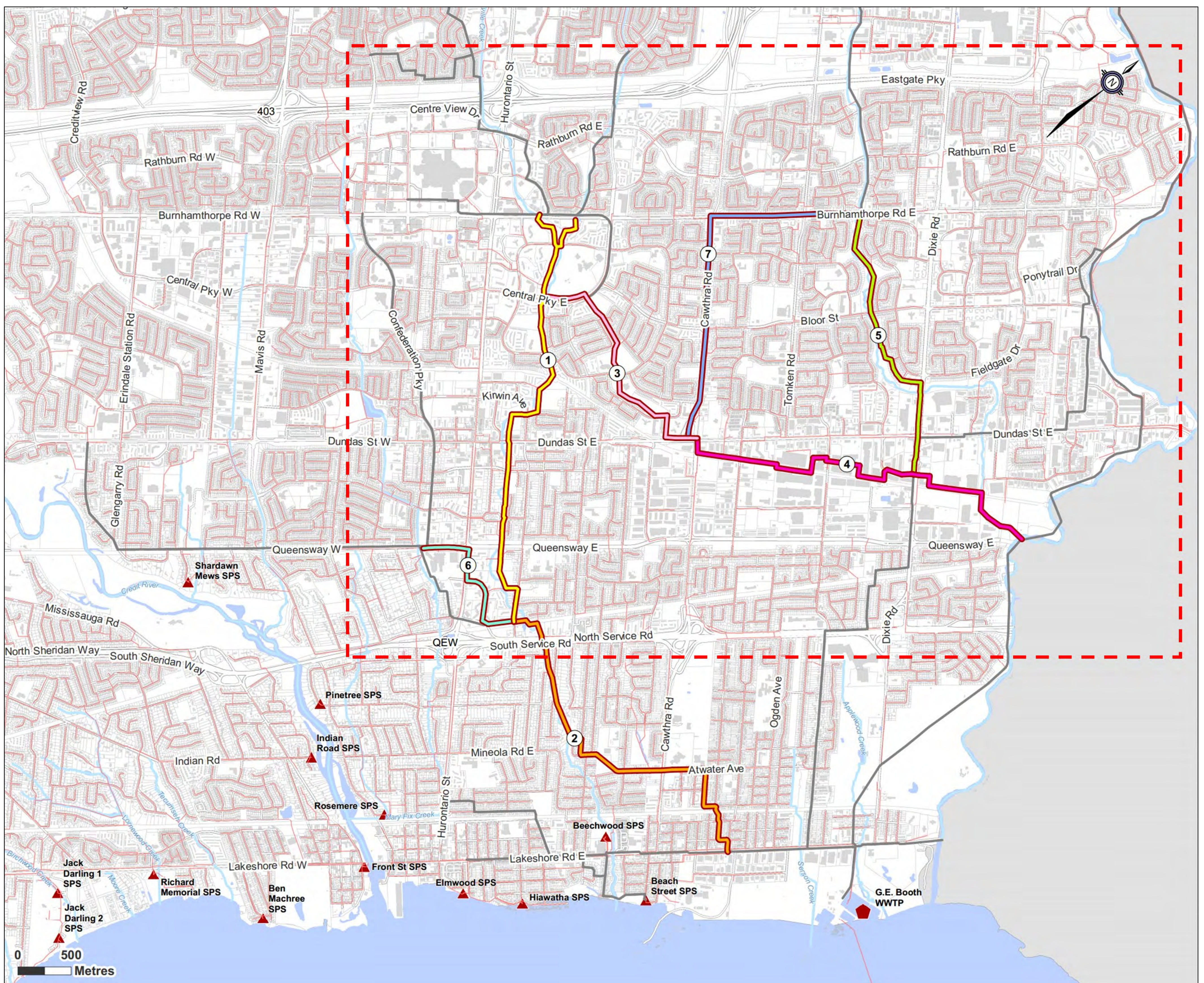
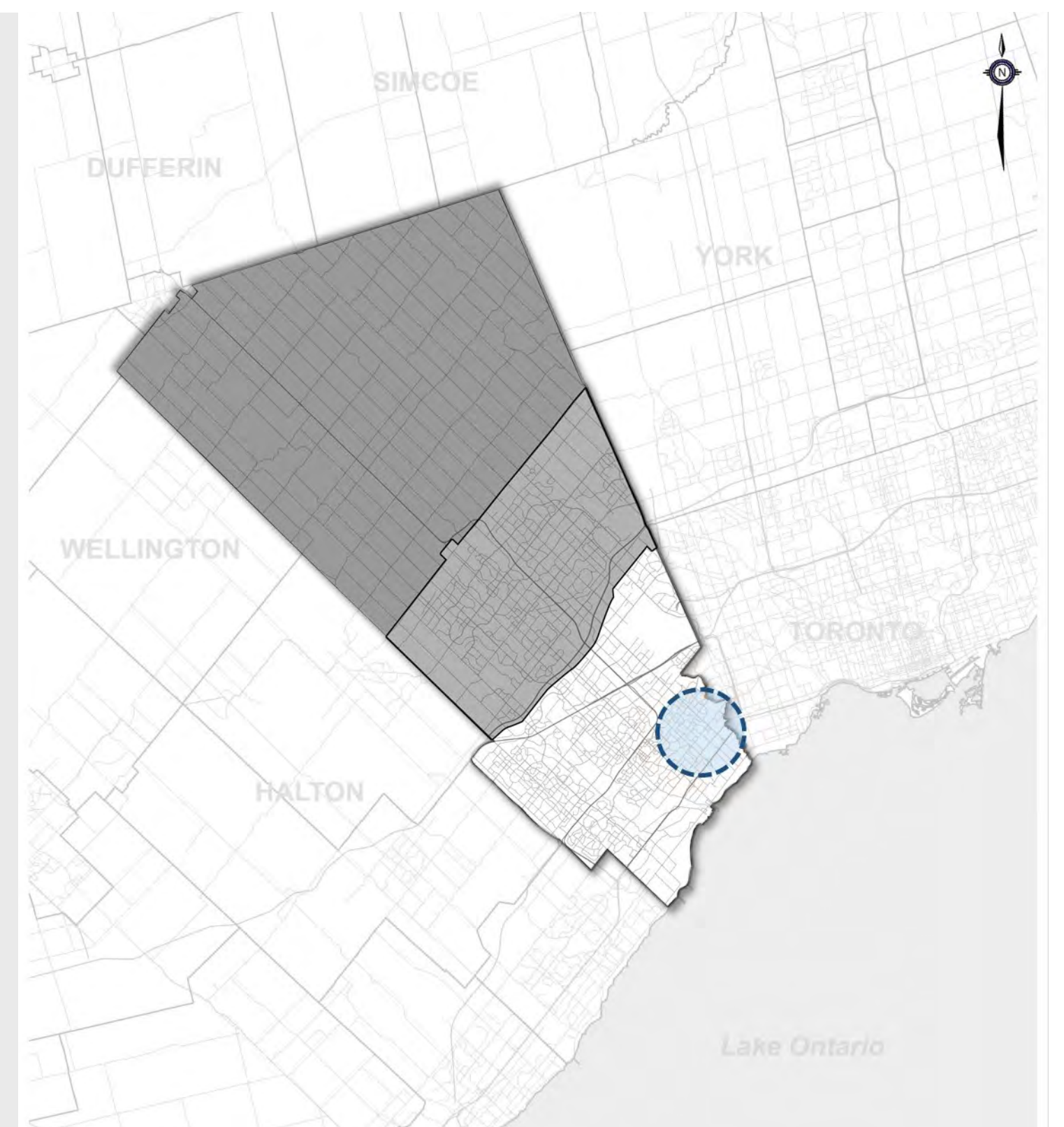
 3 – Upper CPR

 4 – Lower CPR

 5 – Little Etobicoke Creek

 6 – Queensway

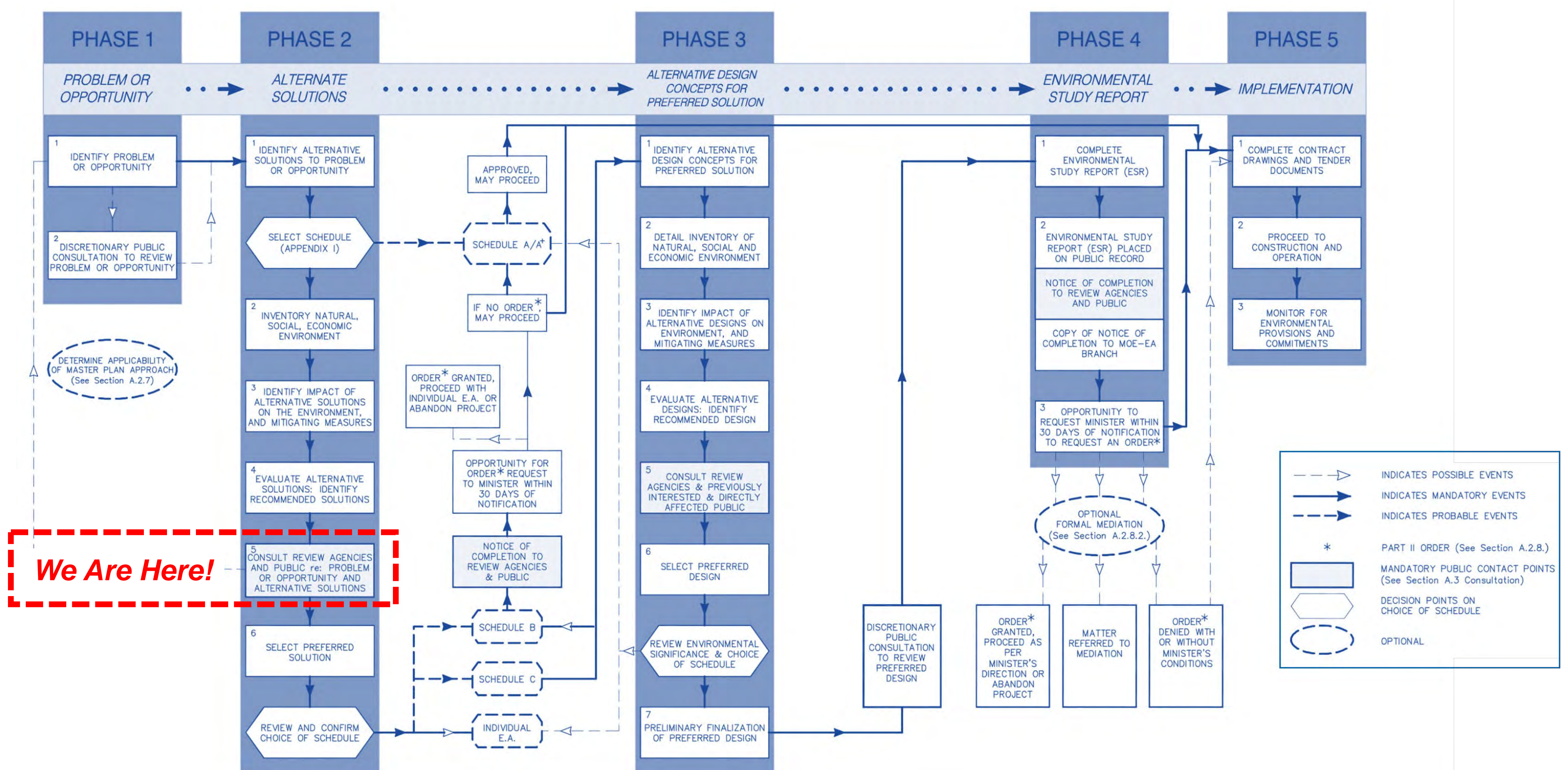
 7 – Cawthra Rd (under construction / planned)



Where Are We in the Study Process?

Process and Consultation

This Study is being undertaken as a Schedule 'C' Class EA and will satisfy Phases 1 to 5 of the Municipal Class Environmental Assessment.



Source: MEA Municipal Class Environmental Assessment

Project Schedule Timeline

Phase 1

Identify & Describe the Problem / Opportunity Statement

Notice of Commencement
May 2019

Phase 2

Complete Study Area Inventory & Identify / Evaluate Alternative Solutions

PIC NO. 1
We Are Here!
Public Consultation / Review Agency Contact Point
March 2020

Phase 3

Complete Preferred Solution Inventory & Identify / Evaluate Alternative Design Concepts

PIC NO. 2
Public Consultation / Review Agency Contact Point
Fall 2020

Phase 4

Complete the Environmental Study Report

Notice of Completion (Mandatory Contact Point)
March 2021

Phase 5

Develop Implementation Plan for Preferred Solution

March 2021

This Study is being undertaken as a Schedule 'C' Class Environmental Assessment, satisfying all phases in accordance with the Municipal Class Environmental Assessment process (October 2000, as amended in 2007, 2011 and 2015), which is an approved process under the Ontario Environmental Assessment Act.

What Are The Study Area Features?

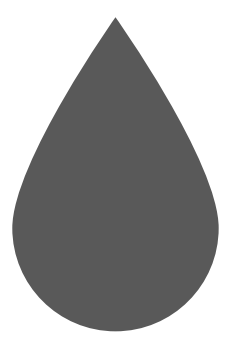
Natural Environment

The following technical investigations for natural environment have been completed for the study area:



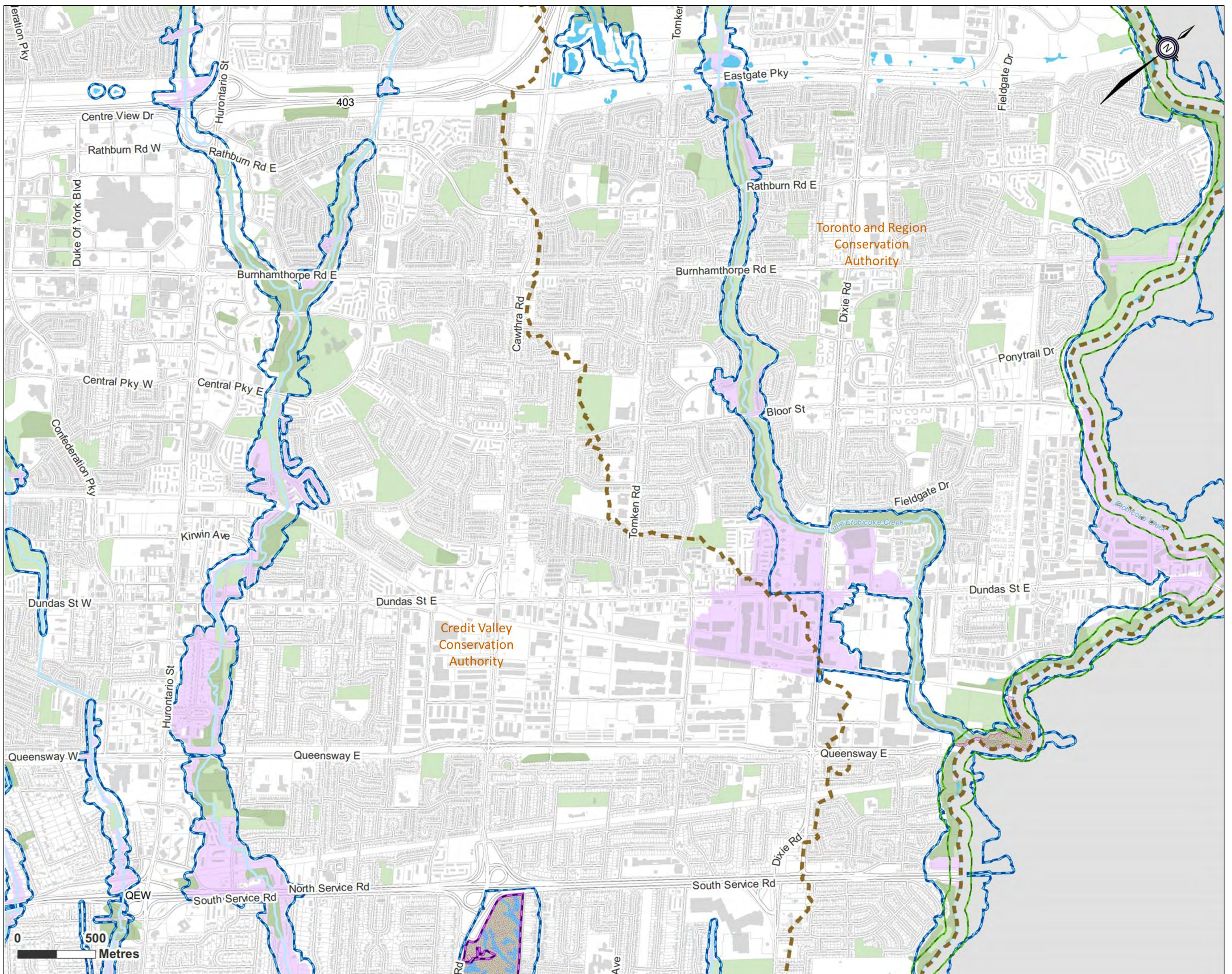
Natural Environment

- Inventory of Species at Risk, significant natural features, wildlife habitats, and City parks within the study area, to determine the potential impacts of this project and any mitigation measures required



Hydrogeological

- Desktop review of hydrogeological conditions and Source Water Protection policy areas



Environmental Features

- | | | |
|---|-----------|----------------------------|
| Environmentally Sensitive Areas (ESA) | Wetlands | Watercourses |
| Areas of Natural and Scientific Interest (ANSI) | Woodlands | Conservation Area Boundary |
| Regulation Limits | Parks | |
| Floodplains | | |
| Greenbelt Boundary | | |

What Are The Study Area Features?

Socio-Economic & Cultural

The following technical investigations for socio-economic and cultural heritage have been completed for the study:



Socio-Economic

- Identification of the existing and future land uses within the study area



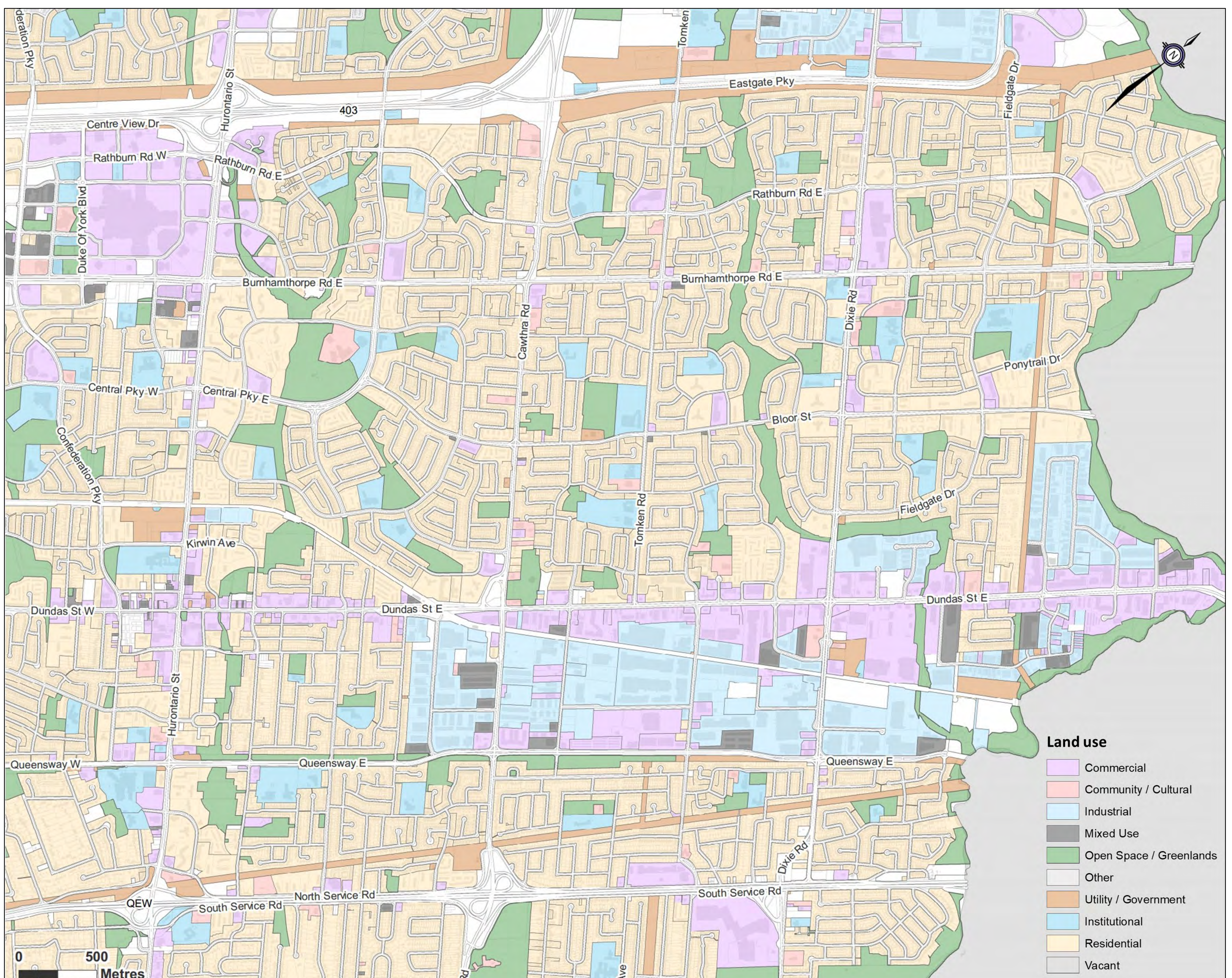
Archaeological

- Assessment of archaeological potential within the study area based on its historic use and potential for early Canadian and pre-contact Aboriginal occupation



Cultural Heritage

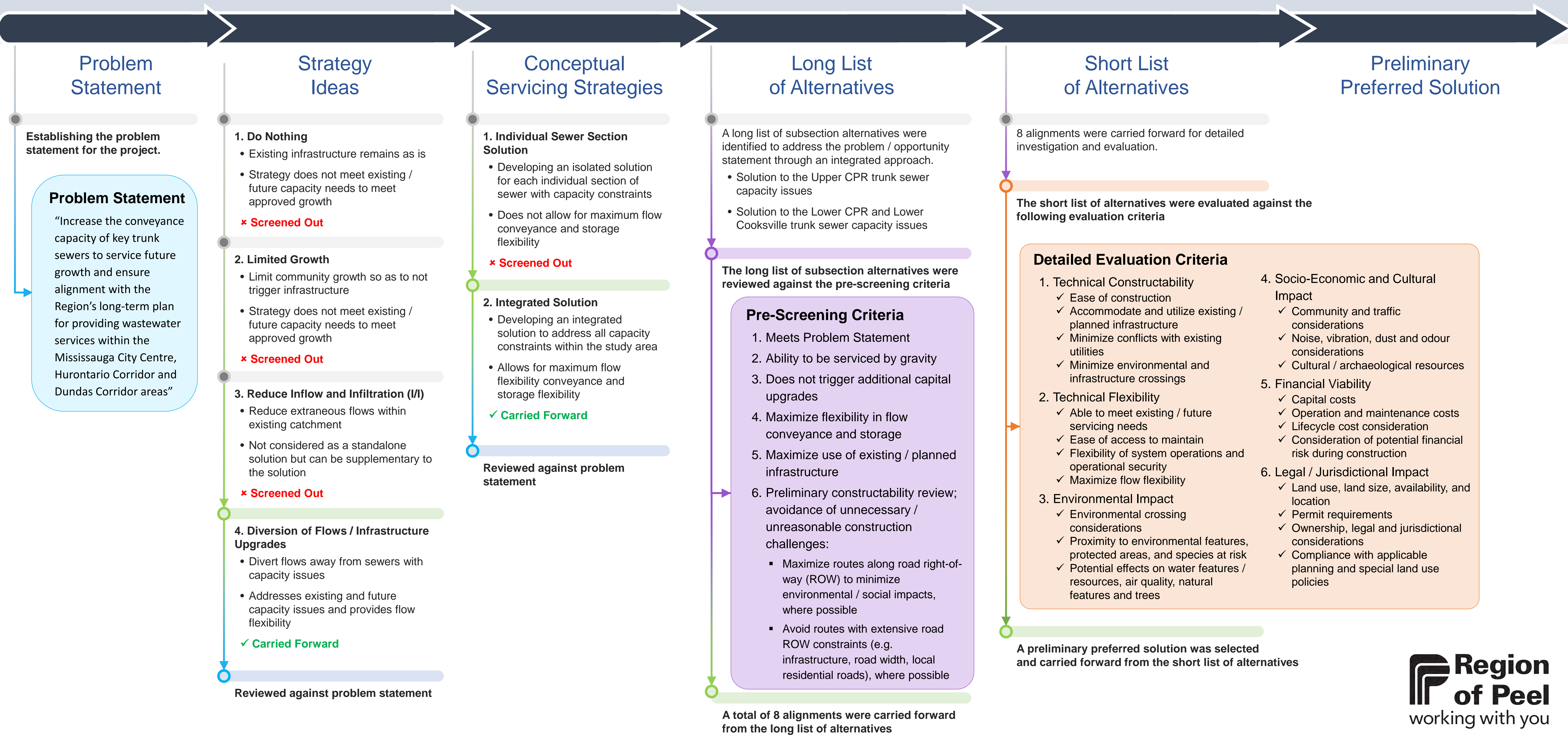
- Identification of properties within the study area with cultural heritage classification or potential, their constraints, and recommendations for further investigations or studies



What is the decision-making process?

Environmental Assessment (EA) Process Overview

Project Environmental Assessment Process



Long List To Short List Evaluation Pre-Screening Criteria

Project EA Process

Problem Statement

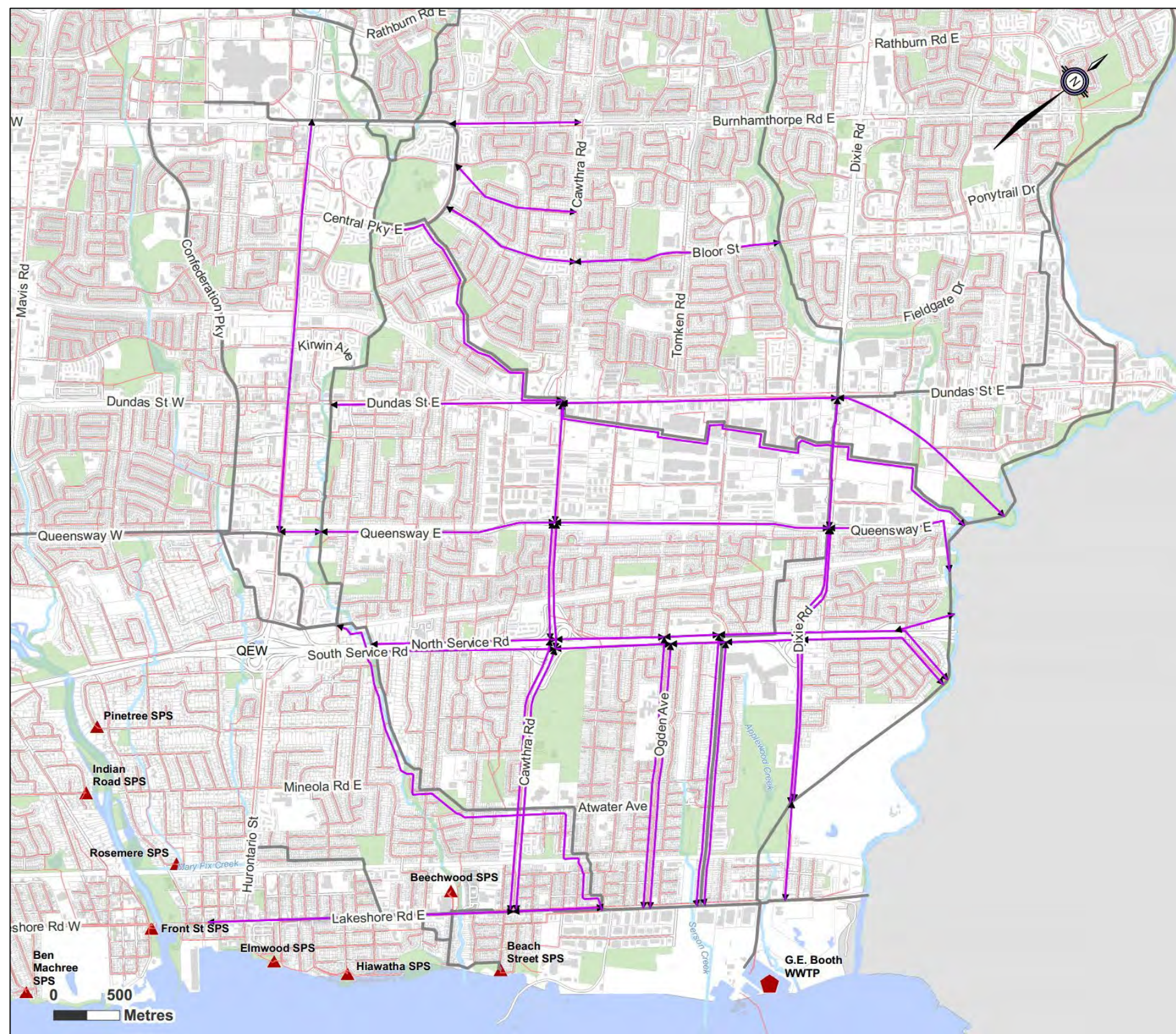
Strategy Ideas

Conceptual Servicing Strategies

Long List of Alternatives

Short List of Alternatives

Preliminary Preferred Solution

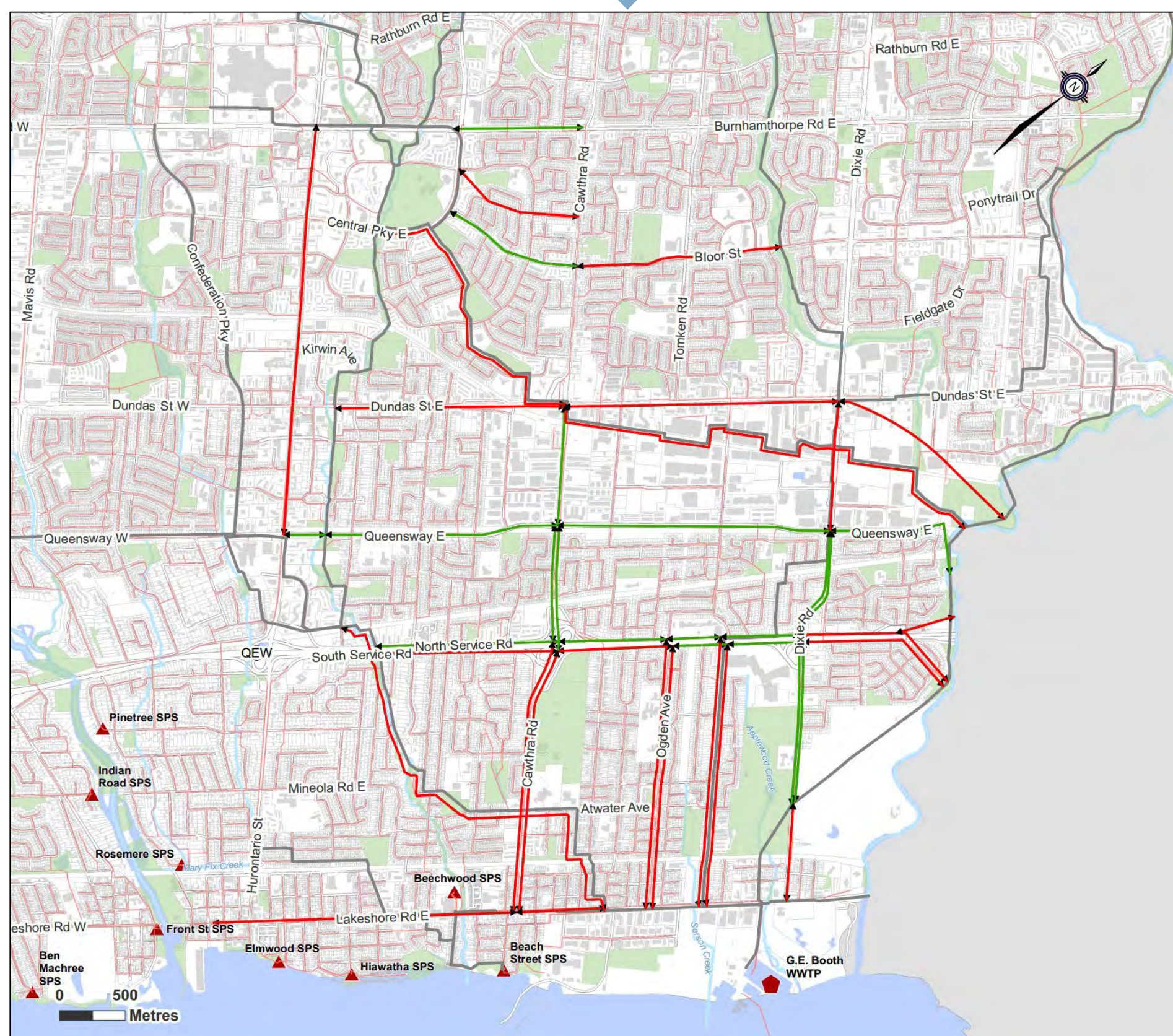


A long list of subsection alternatives were identified to address the problem / opportunity statement through an integrated approach:

1. Solution to the Upper CPR trunk sewer capacity issues
2. Solution to the Lower CPR and Lower Cooksville trunk sewer capacity issues

Wastewater Infrastructure

- ▶ Long-list Alignment Alternatives
- Existing Sanitary Trunk Sewers
- Existing Sanitary Local Sewer

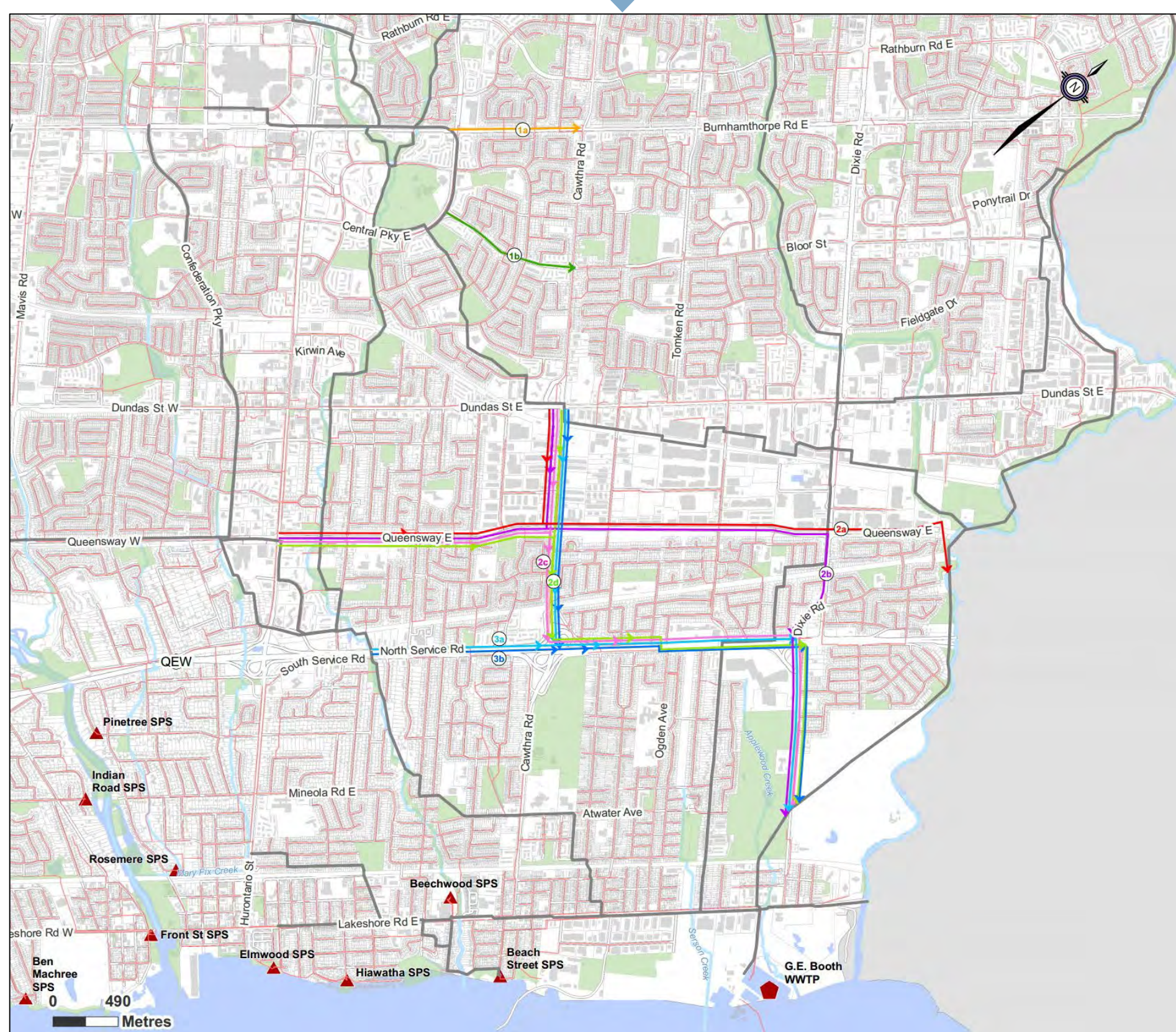


The following screening criteria were used to evaluate the long list of subsection alternatives

1. Meets problem statement
2. Ability to service by gravity
3. Does not trigger additional capital upgrades
4. Maximize flexibility in flow conveyance and storage
5. Maximize use of existing / planned infrastructure
6. Preliminary constructability review; avoidance of unnecessary/unreasonable construction challenges:
 - a. Maximize routes along road right-of-way (ROW) to minimize environmental/social impacts, where possible
 - b. Avoid routes with extensive road ROW constraints (e.g. infrastructure, road width, local residential roads), where possible

Wastewater Infrastructure

- ▶ Short-list Alignment Alternatives
- ▶ Screened-out Alignments
- Existing Sanitary Trunk Sewers
- Existing Sanitary Local Sewer



Through the pre-screening evaluation of the 43 long list of subsection alternatives, 8 alignments were carried forward for a detailed investigation and evaluation

Short-list Alternatives

- ▶ Burnhamthorpe Rd – 1a
- ▶ Bloor St – 1b
- ▶ Queensway – 2a
- ▶ Queensway – 2b
- ▶ Queensway – 2c
- ▶ Queensway – 2d
- ▶ North Service Rd – 3a
- ▶ North Service Rd – 3b
- Existing Sanitary Trunk Sewers
- Existing Sanitary Local Sewer

Short List Evaluation Evaluation Criteria

Project EA Process

Problem Statement

Strategy Ideas

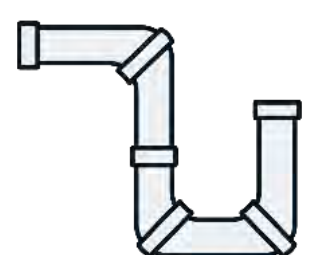
Conceptual
Servicing StrategiesLong List
of AlternativesShort List
of AlternativesPreliminary
Preferred Solution

The following criteria were used to evaluate the short list of alternatives and select a preliminary preferred solution



TECHNICAL CONSTRUCTABILITY

- ✓ Ease of construction
- ✓ Accommodates and utilizes existing infrastructure
- ✓ Compatibility with existing / planned infrastructure
- ✓ Minimize environmental and infrastructure crossings
- ✓ Minimize conflicts with existing utilities



TECHNICAL FLEXIBILITY

- ✓ Technical viability through ability to meet existing / future servicing needs
- ✓ Ease of access to maintain
- ✓ Flexibility of system operations and operational security
- ✓ Maximize flow flexibility



ENVIRONMENTAL

- ✓ Environmental crossing consideration
- ✓ Proximity to environmental features, protected areas, and species at risk
- ✓ Potential impacts to water features/resources, air quality, natural features and trees
- ✓ Geology, hydrogeology, contamination considerations



SOCIO-ECONOMIC AND CULTURAL

- ✓ Community and traffic considerations
- ✓ Noise, vibration, dust and odour considerations
- ✓ Cultural heritage resources
- ✓ Archaeological resources



FINANCIAL

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



LEGAL / JURISDICTIONAL

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

Short List Evaluation Evaluation Rating System

Project EA Process



Evaluation of the Alternative Solutions for the Upper CPR Trunk Sewer Capacity Issues

Factor	Evaluation Criteria	1a. Burnhamthorpe Rd from Central Pkwy to Cawthra Rd	1b. Bloor St from Central Pkwy to Cawthra Rd
Technical	Constructability	Green	Yellow
	Compatibility with existing / planned infrastructure	Green	Red
	Impacts on existing utilities	Green	Green
	Accessibility	Green	Green
	Ability to meet existing / future servicing needs	Green	Green
Environmental	Impact on environmentally sensitive features	Green	Green
	Impact on water features / resources and hydrogeology	Green	Green
	Impact on trees	Green	Green
Social / Cultural	Impact to Species at Risk	Green	Green
	Impact on traffic conditions	Yellow	Red
	Cultural heritage / archaeological considerations	Green	Green
Financial	Potential impact on community	Yellow	Red
	Capital costs	Green	Yellow
	Operation and maintenance costs	Green	Green
Legal / Jurisdictional	Lifecycle costs	Green	Yellow
	Property acquisition	Green	Green
Legal / Jurisdictional	Compliance with applicable planning policies	Green	Green
	Key Factors	<ul style="list-style-type: none"> ✓ Low potential for environmental impact ✓ Good opportunity for shaft locations ✓ Existing land use further from road right of way, higher potential to buffer surrounding land use during construction ✓ Potential opportunity to integrate with planned infrastructure upgrades 	<ul style="list-style-type: none"> ✓ Low potential for environmental impact ✗ Shaft size options more constrained ✗ Existing land use closer to road right of way, moderate potential to buffer during construction ✗ Does not maximize planned infrastructure upgrades
Overall Score		Most Preferred	Least Preferred

Evaluation Rating System

Most Preferred

Less Preferred

Least Preferred

Evaluation of the Alternative Solutions for the Lower CPR and Lower Cooksville Trunk Sewer Capacity Issues

Factor	Evaluation Criteria	2a. Queensway from Hurontario St to East Trunk	2b. Queensway from Hurontario St to East Trunk – Dixie Rd	2c. Queensway from Hurontario St to East Trunk – North Service Rd & Dixie Rd	2d. Queensway from Hurontario St to East Trunk – North/South Service Rd & Dixie Rd	3a. North Service Rd from Lower Cooksville to East Trunk – Dixie Rd	3b. North Service Rd from Lower Cooksville to East Trunk – South Service Rd
Technical	Constructability	Yellow	Yellow	Red	Red	Red	Red
	Compatibility with existing / planned infrastructure	Green	Red	Red	Red	Red	Red
	Impacts on existing utilities	Green	Green	Green	Green	Green	Green
	Accessibility	Green	Green	Yellow	Yellow	Yellow	Yellow
	Ability to meet existing / future servicing needs	Green	Green	Green	Green	Green	Green
Environmental	Impact on environmentally sensitive features	Yellow	Green	Green	Green	Green	Green
	Impact on water features / resources and hydrogeology	Yellow	Green	Green	Green	Green	Green
	Impact on trees	Green	Green	Green	Green	Green	Green
Social / Cultural	Impact to Species at Risk	Yellow	Green	Green	Green	Green	Green
	Impact on traffic conditions	Green	Yellow	Red	Red	Red	Red
	Cultural heritage / archaeological considerations	Green	Green	Green	Green	Green	Green
Financial	Potential impact on community	Green	Yellow	Red	Red	Red	Red
	Capital costs	Green	Green	Red	Red	Red	Red
	Operation and maintenance costs	Green	Green	Red	Red	Red	Red
Legal / Jurisdictional	Lifecycle costs	Green	Yellow	Red	Red	Red	Red
	Property acquisition	Green	Yellow	Red	Red	Red	Red
Legal / Jurisdictional	Compliance with applicable planning policies	Green	Green	Green	Green	Green	Green
	Key Factors	<ul style="list-style-type: none"> ✓ Good opportunity for shaft locations ✓ Hydraulic benefit due to straight alignment ✓ Larger road right of way with higher potential to buffer surrounding land use during construction ✗ Requires two water feature crossings (Cooksville Creek & Etobicoke Creek) 	<ul style="list-style-type: none"> ✓ Moderate opportunity for shaft locations ✓ Requires one water feature crossing (Cooksville Creek) ✗ QEW road crossing ✗ Conflicts with Ministry of Transportation planned projects at Dixie Rd and QEW ✗ Hydraulic disadvantage due to alignment turns/curves ✗ Increased property / acquisition requirements for connection to existing sewer (Dixie Rd) 	<ul style="list-style-type: none"> ✓ Requires one water feature crossing (Cooksville Creek) ✗ Limited opportunity for shaft locations ✗ QEW road crossing ✗ Conflicts with Ministry of Transportation planned projects at Dixie Rd and QEW ✗ Hydraulic disadvantage due to alignment turns/curves ✗ Sections of constrained road right of way with low potential to buffer surrounding land use during construction ✗ Increased property / acquisition requirements for connection to existing sewer (Dixie Rd) 			
Overall Score		Most Preferred	Less Preferred	Least Preferred			

Preliminary Preferred Solution Conceptual Sewer Alignment

Project EA Process

Problem Statement

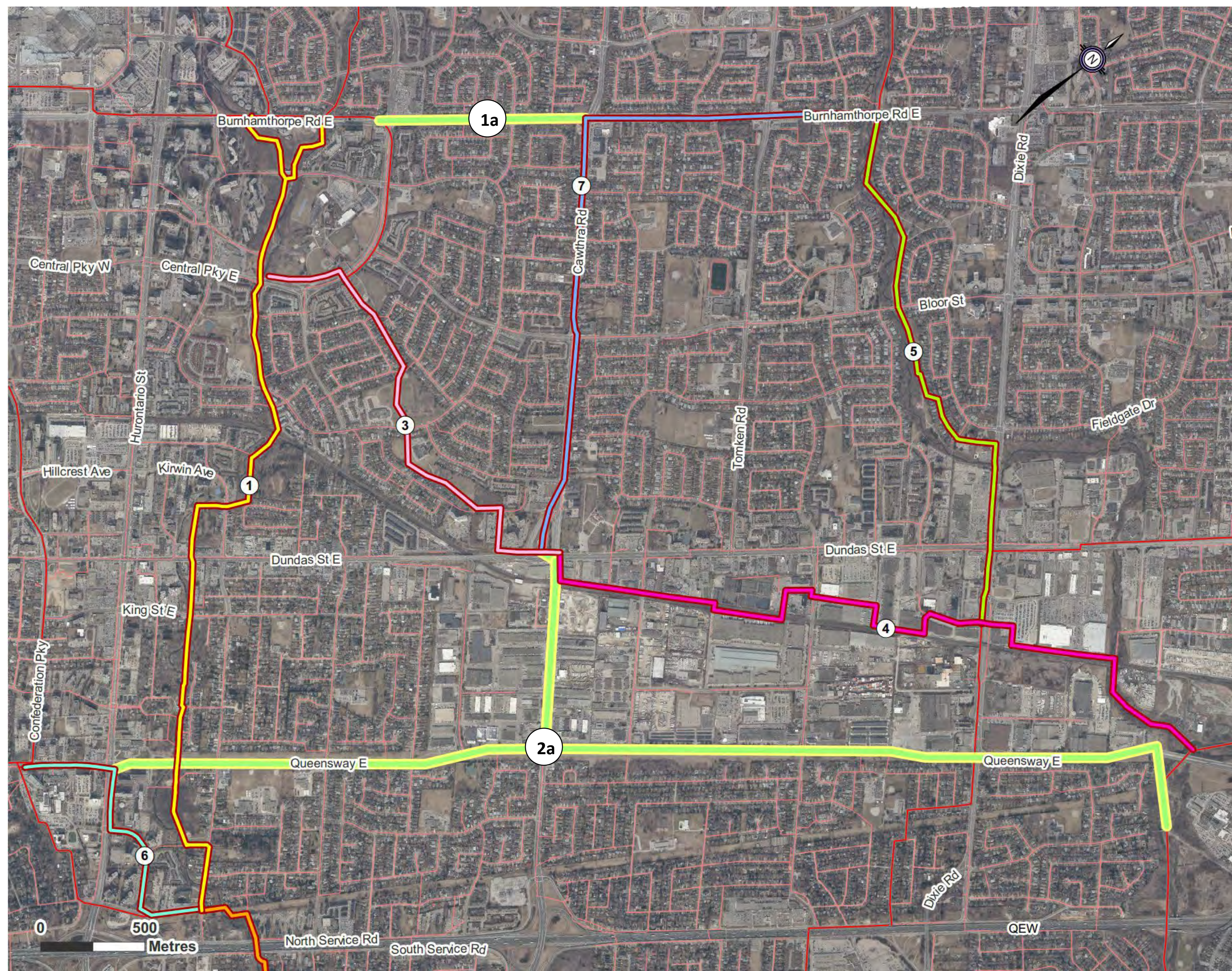
Strategy Ideas

Conceptual Servicing Strategies

Long List of Alternatives

Short List of Alternatives

Preliminary Preferred Solution



Burnhamthorpe Rd Alignment Opportunities (1a)

- ✓ Low potential for environmental impact
- ✓ Existing land use further from road right of way, higher potential to buffer surrounding land use during construction
- ✓ Potential opportunity to integrate with planned infrastructure upgrade (Wilcox Rd sanitary sewer upgrades)

Queensway Alignment Opportunities (2a)

- ✓ Larger road right of way with higher potential to buffer surrounding land use during construction
- ✓ Hydraulic benefit due to the straight alignment
- ✓ Less overall constructability risk
- ✓ Allows for maximum sanitary sewer connection points
- ✓ Lower capital and overall lifecycle costs

Key Trunk Sewers

- 1 – Upper Cooksville Creek Trunk Sewer
- 2 – Lower Cooksville Creek Trunk Sewer
- 3 – Upper CPR Trunk Sewer
- 4 – Lower CPR Trunk Sewer
- 5 – Little Etobicoke Creek Trunk Sewer
- 6 – Queensway Trunk Sewer
- 7 – Cawthra Road Trunk Sewer (under construction / planned)

Wastewater Sewer

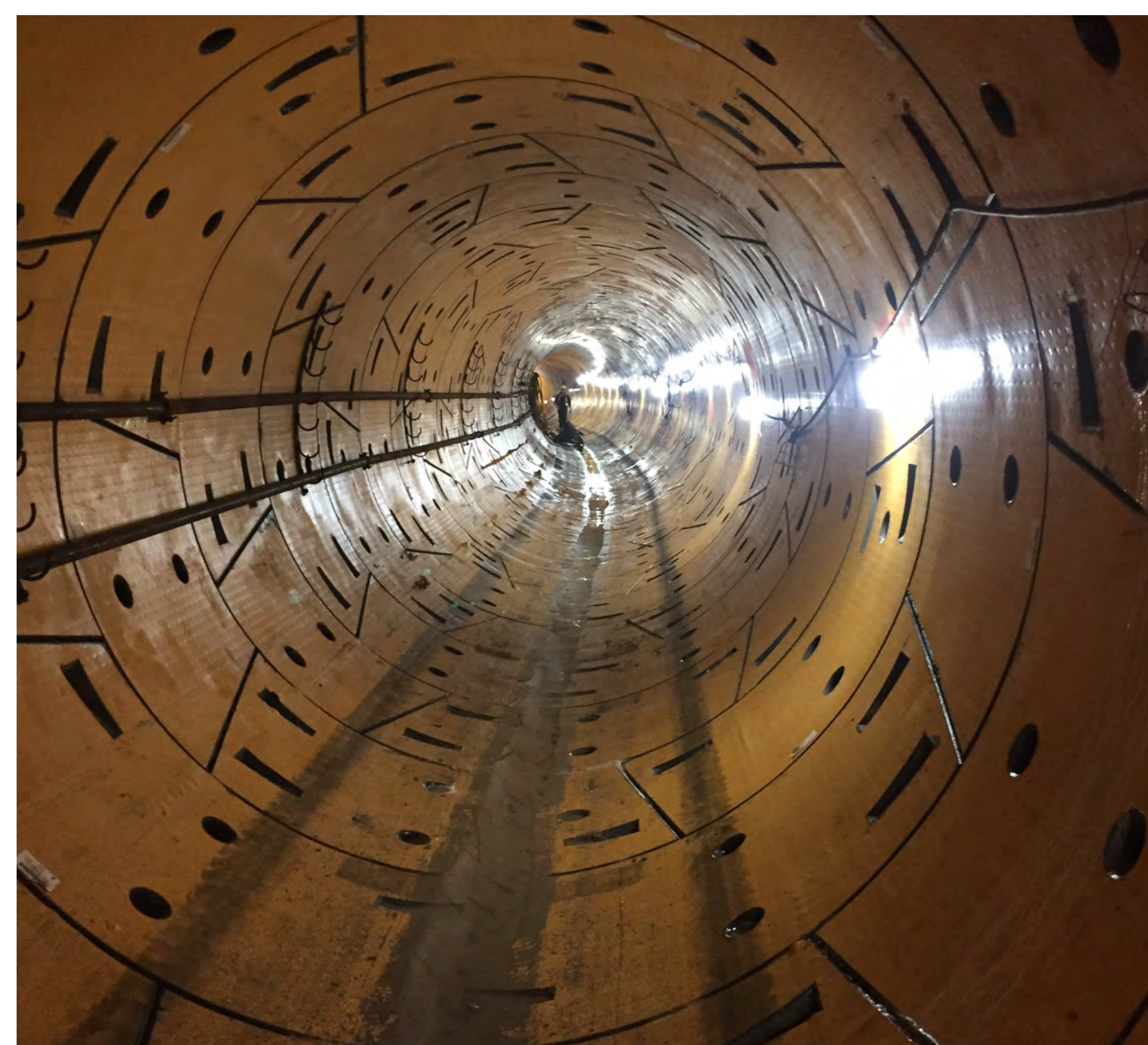
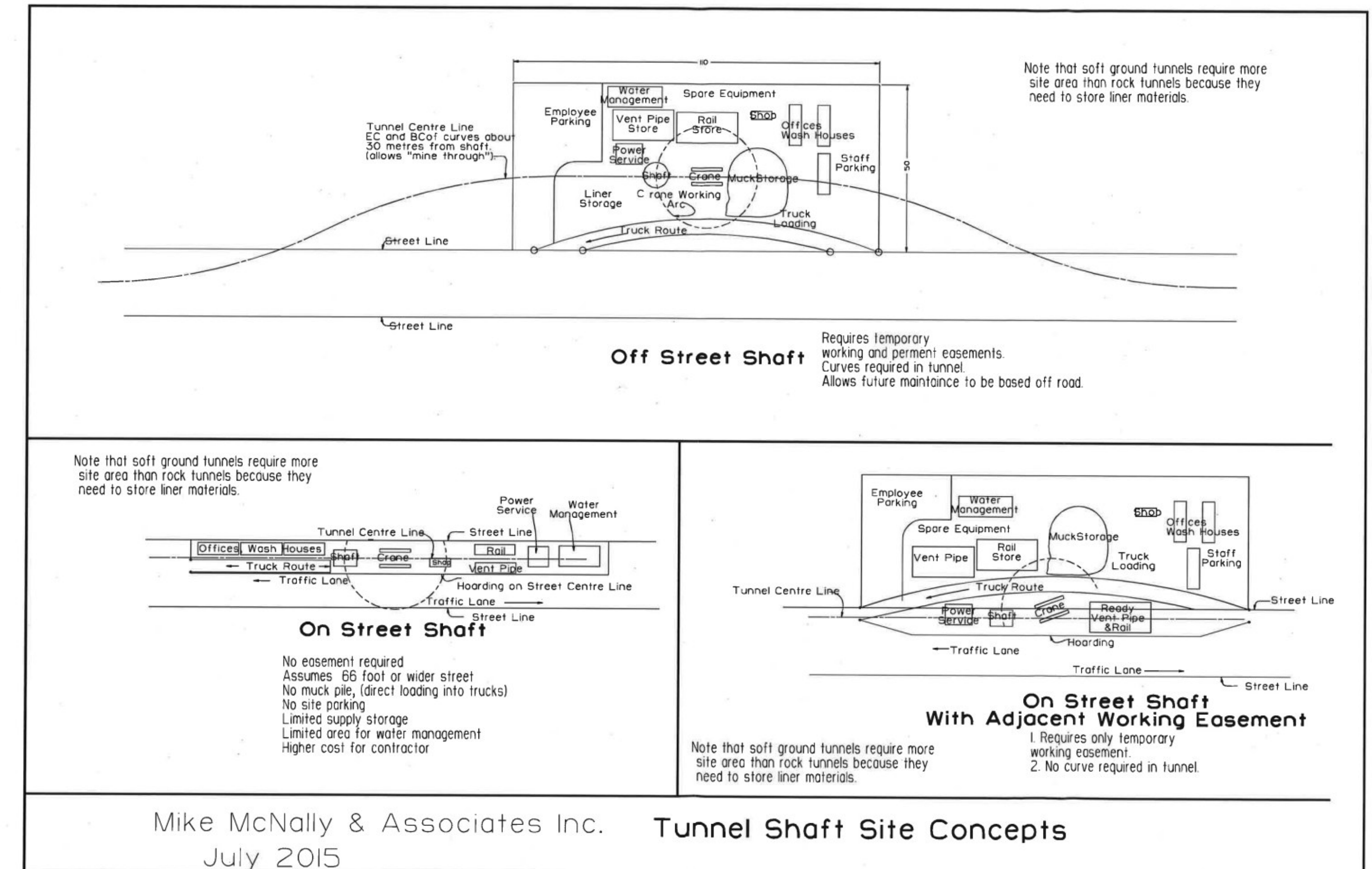
- Trunk Sewer (> 600mm)
- Local Sewer (< 600 mm)

Preferred Alignment

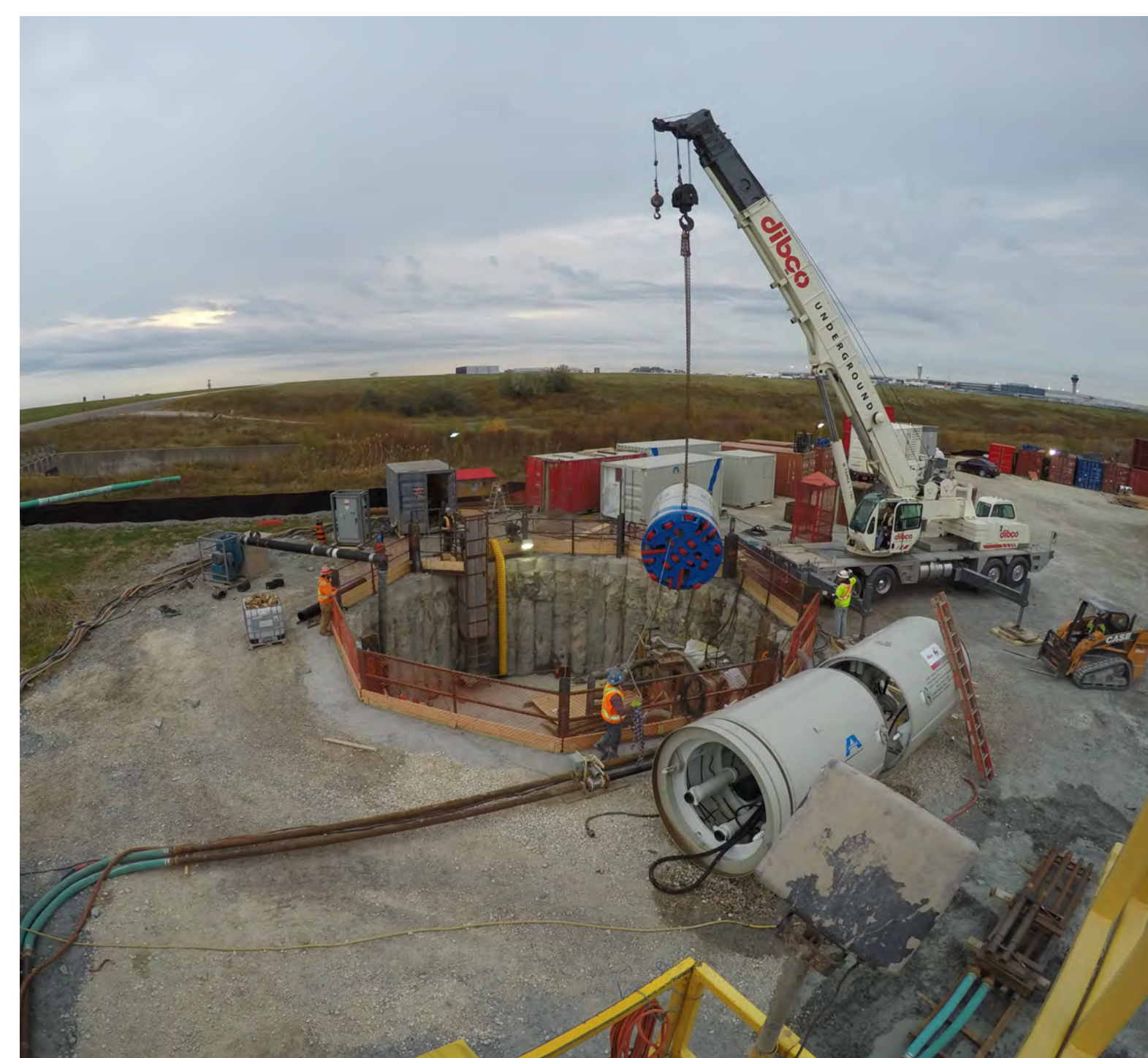
- Preferred Alignments

Preliminary Preferred Solution Construction Methodology & Assumptions

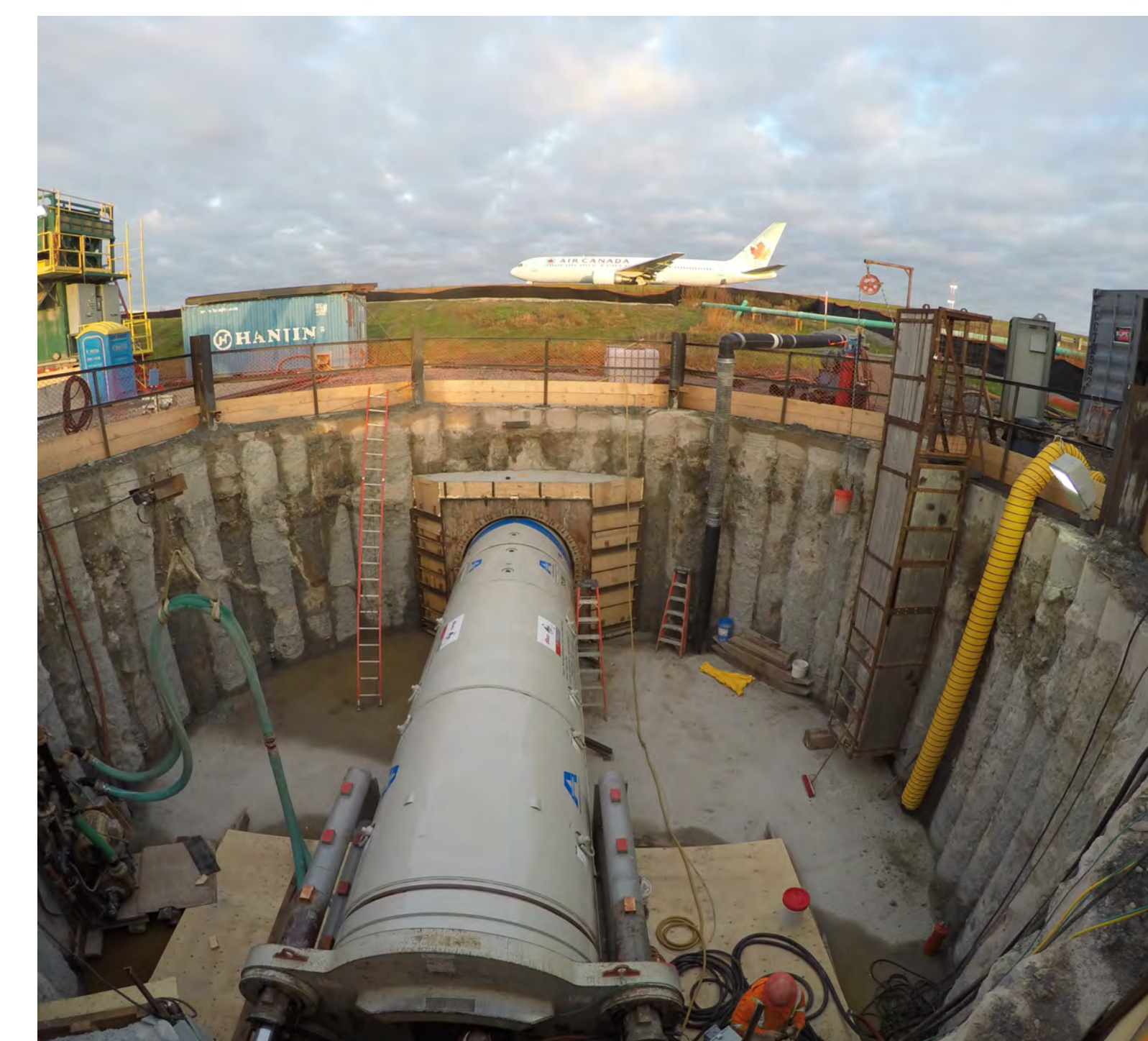
- The depth of the proposed sewer alignments require the use of tunneling as opposed to open cut method
 - Sewer depth driven by key connection points
 - Sewer depth will avoid impacts to natural features
- The only surface works involved with tunnel construction are entrance/exit shafts located between tunnel drive lengths
 - Each access shaft will require a staging area where construction equipment can be stored and excavated material can be brought to the surface to be hauled from the site in trucks
 - Staging areas will measure approximately 50 m x 50 m and will be fenced off
 - Shaft site locations are selected based on the availability of land including open spaces, vacant lots and greenspaces
 - The proposed alignment will require a minimum of 8 shaft locations
 - Once tunneling is completed, the staging area will be restored to its original condition or better



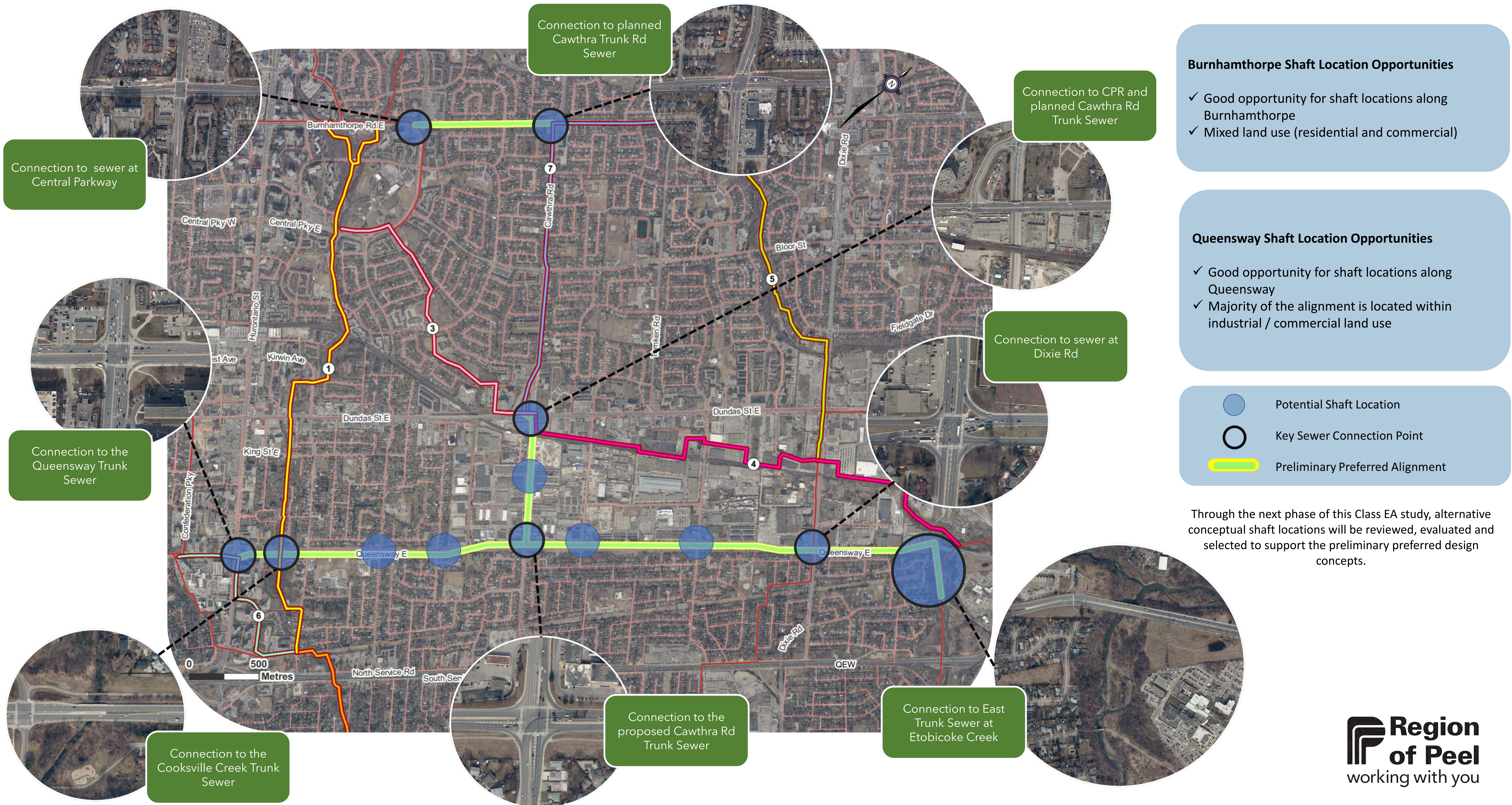
Tunnel for the twinning of the West Trunk Sanitary Sewer Contract 2



Shaft site for the twinning of the Etobicoke Creek Sanitary Trunk Sewer under Runway 23 at Lest B. Pearson International Airport



Preliminary Preferred Solution Conceptual Shaft Locations



Burnhamthorpe Shaft Location Opportunities

- ✓ Good opportunity for shaft locations along Burnhamthorpe
- ✓ Mixed land use (residential and commercial)

Queensway Shaft Location Opportunities

- ✓ Good opportunity for shaft locations along Queensway
- ✓ Majority of the alignment is located within industrial / commercial land use

- Potential Shaft Location
- Key Sewer Connection Point
- Preliminary Preferred Alignment

Through the next phase of this Class EA study, alternative conceptual shaft locations will be reviewed, evaluated and selected to support the preliminary preferred design concepts.

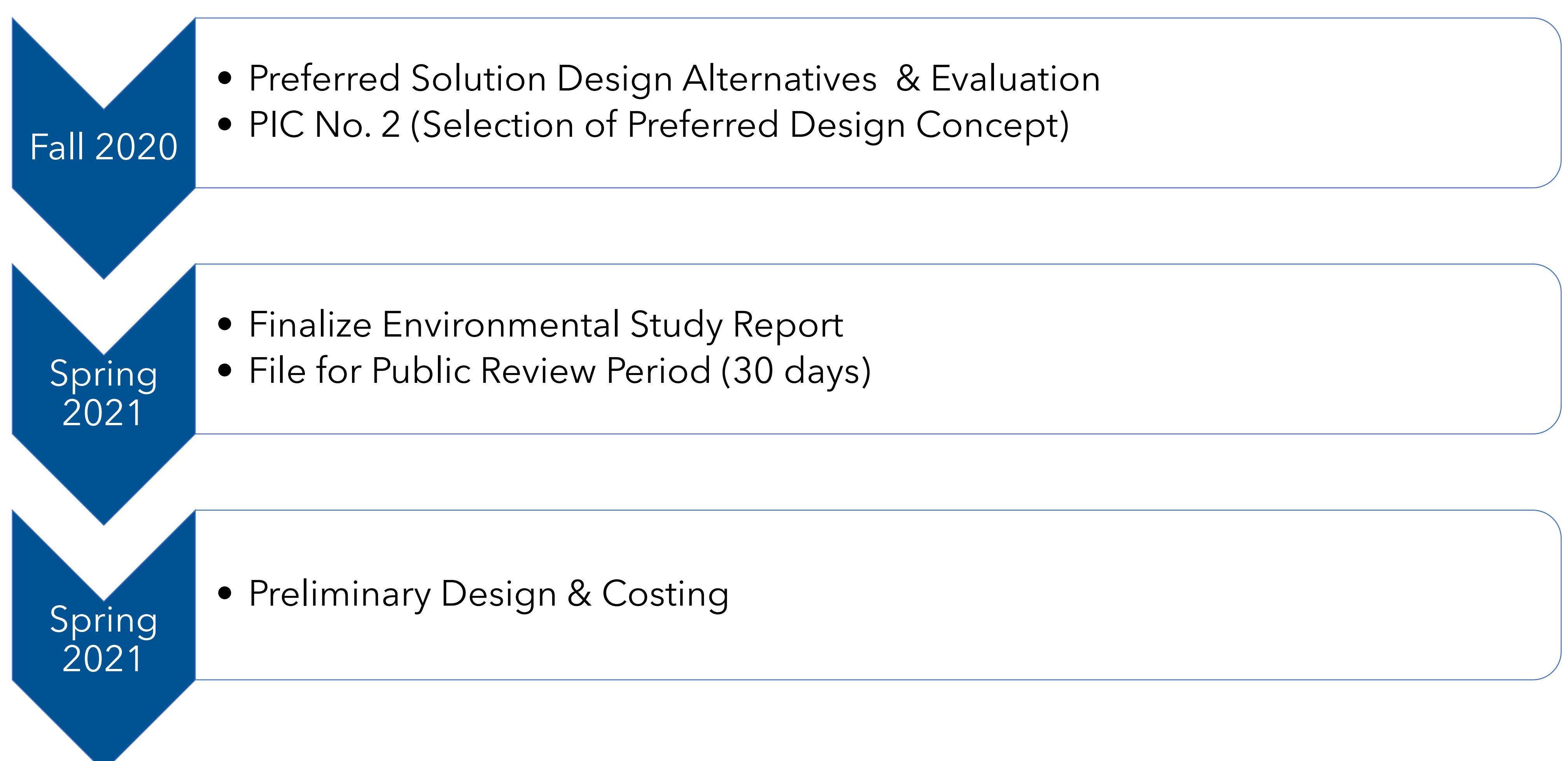
What are the next steps?

Class EA Process

Next Steps:

- ❖ Review comments from PIC No. 1
- ❖ Confirm preferred solution
- ❖ Evaluate and select the preferred design concept
 - Preliminary design
 - Shaft and property requirements
 - Detailed Implementation Plan
- ❖ Prepare for PIC No. 2
- ❖ Complete additional technical studies on the preferred solution / design concept which may include:
 - Stage 2 Archaeological Assessment
 - Natural Features Assessment
 - Agricultural Impact Assessment
 - Geotechnical Study
 - Phase One Environmental Site Assessment
 - Hydrogeomorphology Study
- ❖ Continue to consult with review and approval agencies and other key stakeholders

Schedule:



Please Stay Engaged

Thank You for Participating!

Following this Public Information Centre (PIC), the project team will:

- Review and consider your input received during and following the PIC
- Confirm and refine the Preliminary Preferred Solution
- Move forward with Phase 3 evaluation and selection of the preferred design concept

How to Stay Involved

- Fill out the questionnaire and comment sheet
- We want to know if you are interested in active involvement or prefer to participate through project information updates



Do you have any questions, comments, or want to stay up to date? Please contact us anytime.

Justin Lee, P.Eng.

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Justin.Lee@peelregion.ca

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.