Welcome

Public Information Centre No. 1

Walter Gretzky Municipal Golf Course

18 January 2024, 5-7pm

Why are we here?
Public Information Centre (PIC) No. 1

Key Dates

Notice of Commencement – April 13, 2023

PIC No. 1 – January 18, 2024

PIC No. 2 – Summer, 2024

Notice of Completion – End of 2024

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.

Public Information Centre (PIC) Objectives

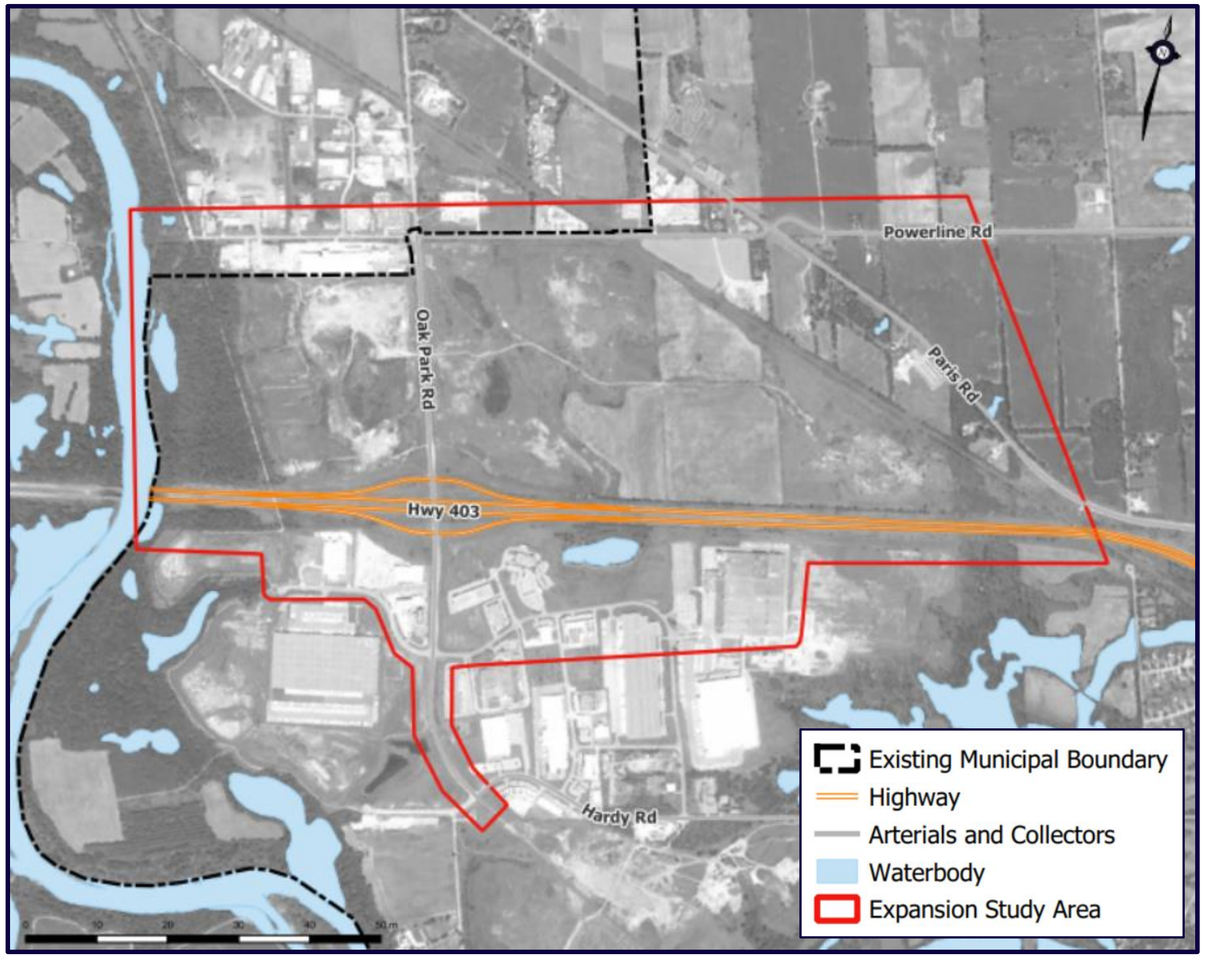
- **Present the study area and objectives.**
- **Present the environmental assessment process.**
- **Present environmental and technical background relevant to the development of servicing alternatives.**
- **Receive feedback on the study process and servicing opportunities and constraints.**

Additional project information can be found on the project website: Brantford.ca/NWServicesExpansion

Northwest Municipal Services Expansion Environmental Assessments

The City of Brantford (the City) has long-term growth plans which identified critical municipal infrastructure required to service the City's Northwest Expansion lands, as outlined in the Master Servicing Plan (MSP), and the Transportation Master Plan (TMP). This critical infrastructure corridor will connect the City's existing water, wastewater, stormwater, and transportation infrastructure to the City's Northwest Expansion Lands, and development lands north of Highway 403.

The City is undertaking seven (7) Municipal Class Environmental Assessment (MCEA) Studies to identify and consider alternative solutions to expand the municipal services to the study area.



How is this study being conducted?
Municipal Class Environmental Assessment Process

The Northwest Services Expansion Environmental Assessments (EA) project is comprised of the following Schedule B (Phases 1-2) and Schedule C (Phases 1-4) EA projects:

- Schedule B Projects
  - Oak Park Road Trunk Watermain
  - Powerline Road Trunk Watermain
  - Oak Park Road Trunk Sewer
  - Powerline Road Trunk Sewer**
  - Stormwater Management in Grand River Northwest Catchment
- Schedule C Projects
  - Oak Park Road Widening
  - Powerline Road Widening

**The Powerline Road Trunk Sewer project was added following Notice of Commencement to encourage development efficiencies north of Highway 403.

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 2)**	Opportunity to Request Minister Within 30 Days of Notification to Request and Order	
	Consult Review Agencies and Previously Interested and Directly Affected Public	Select Preferred Design		
	Select Preferred Solution	Preliminary Finalization of Preferred Design		

We are here!

PIC 1 Objectives

Project Name	Project MCEA Schedule	PIC 1 Objective					
		Opportunity & Constraints	Evaluation Methodology	Alternatives	Preferred Alternative	Design Concepts	Preferred Design Concepts
Oak Park Road Trunk Watermain	B	✓	✓	✓	✓		
Powerline Road Trunk Watermain	B	✓	✓	✓	X		
Oak Park Road Trunk Sewer	B	✓	✓	✓	✓		
Powerline Road Trunk Sewer	B	✓	✓	✓	X		
Stormwater Management in Grand River Northwest Catchment	B	✓	✓	✓	X		
Oak Park Road Widening	C	✓	✓	✓	✓	X	X
Powerline Road Widening	C	✓	✓	✓	✓	X	X

Project Problem & Opportunity Statement

Northwest Municipal Services Expansion

The Northwest Municipal Services Expansion Municipal Class Environmental Assessment (MCEA) studies will develop an optimized long-term municipal infrastructure strategy that supports existing users and future residential and employment growth opportunities in Brantford's northwest lands and that minimize potential impacts to the environment, existing utilities, and future land uses. There are opportunities to consider water, wastewater and transportation infrastructure improvements in an integrated manner through the seven (7) MCEA studies.

- Oak Park Road Trunk Watermain
- Powerline Road Trunk Watermain
- Oak Park Road Trunk Sewer
- Powerline Road Trunk Sewer
- Stormwater Management in Grand River Northwest Catchment
- Oak Park Road Widening
- Powerline Road Widening

Supporting Studies

Natural Heritage

- The desktop study identified natural heritage features within the study area, including but not limited to Provincially Significant Wetlands, Species at Risk, and potential for rare vegetation. The results are used to guide the evaluation process.

Stage 1 Archeology

- The Stage 1 background study identified previously registered archaeological sites which have no further archaeological potential within 50 m. The background study also identified parts of the Study Area exhibit archaeological potential; if impacted by project implementation, a Stage 2 archeological assessment will be conducted prior to construction of these identified areas.

Cultural Heritage

- The desktop study identified two built heritage resources and five cultural heritage landscapes within the study area. The results are used to guide the evaluation process and effort will be made to avoid negative impacts to the identified.

Geotechnical & Hydrogeological

- The desktop geotechnical and hydrogeological studies identified areas of bedrock, and the general subsurface material. The information provided are used to guide the evaluation process. A geotechnical and hydrogeological investigation is undertaken to support the preliminary design.

Project Opportunities and Constraints

Highway 403

- Highway 403 presents a major constraint for water / wastewater servicing. There is currently no water / wastewater infrastructure north of Highway 403. To expand services to the Northwest Expansion area, A water / wastewater infrastructure crossing of Highway 403 is required.
  - Water and wastewater infrastructure should avoid the highway interchange footprints
  - Water and Sewer infrastructure must be 5 m below ground surface (bottom of ditch) under MTO right-of-way; and will need to be constructed via tunneled method.
  - Construction work areas must be 14 m away from MTO right-of-way, with potential exception for integration of stormwater drainage infrastructure.
- Interchange upgrades required in order to accommodate growth and improve traffic operations

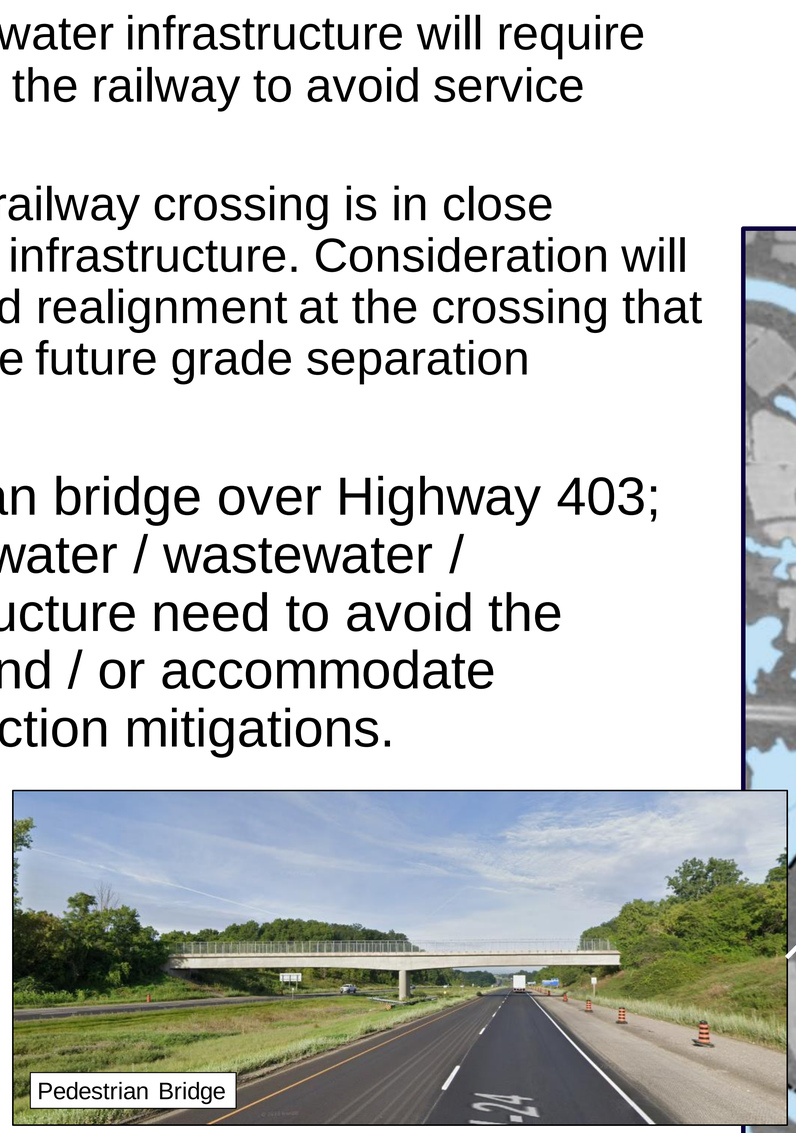
Powerline Road – Hydro Corridor

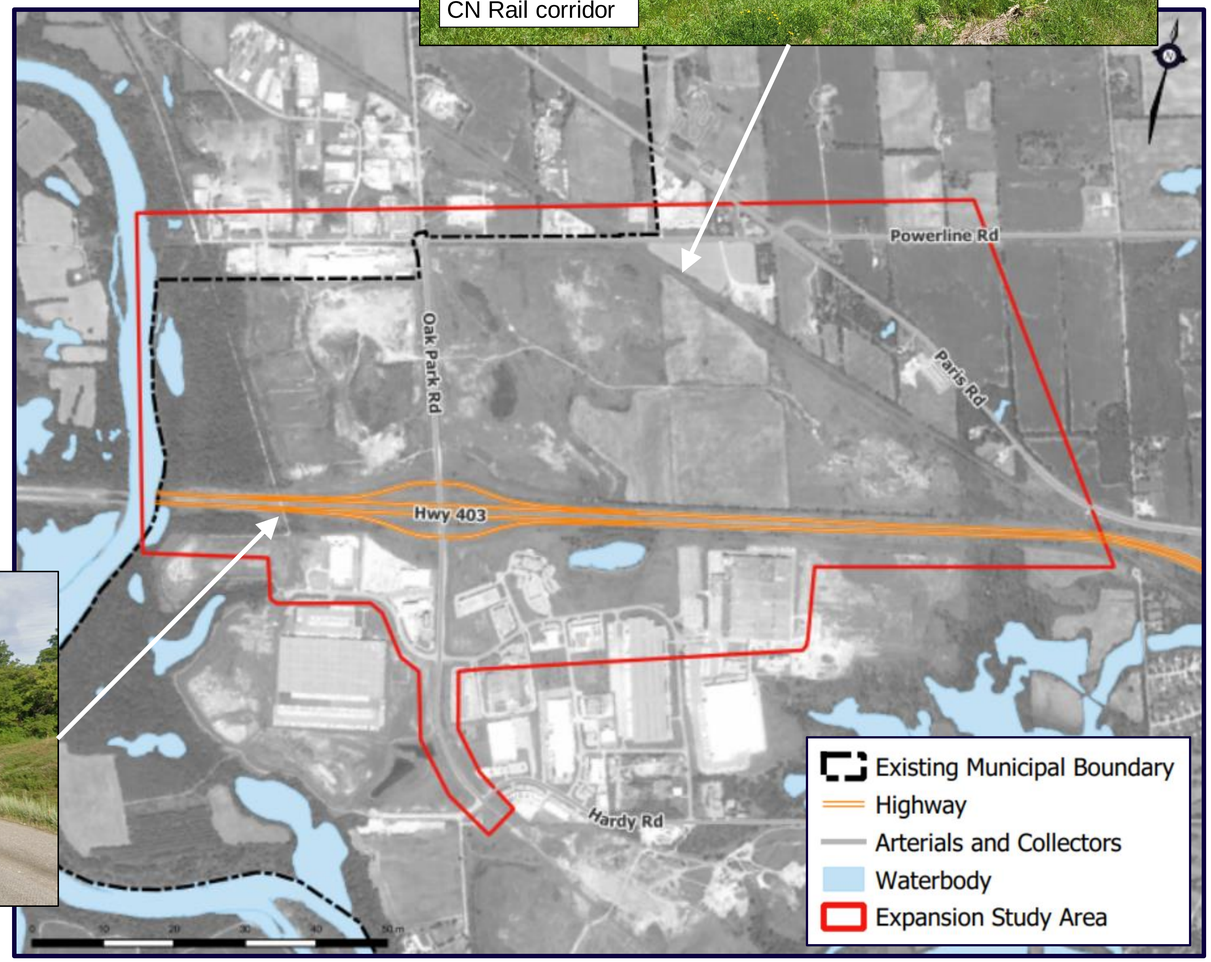
- Powerline Road is a constrained hydro corridor with infrastructure from Hydro One and Grand Bridge Energy on the north and south sides of the road.
- It is costly to move the hydro infrastructure, therefore presenting challenges for road widening and construction of water / wastewater infrastructure.
  - Hydro towers require a 10 m radial construction setback, and 15 m radial maintenance setback
  - Hydro poles require a 3 m setback
- To minimize the interaction with hydro infrastructure, the Powerline Road watermain and trunk sewer projects will follow the preferred road alignment.

Other Infrastructure

- The Canadian National Railway (CN Rail) runs through the study area.
  - The water / wastewater infrastructure will require tunneling beneath the railway to avoid service disruption.
  - Existing at-grade railway crossing is in close proximity to hydro infrastructure. Consideration will be made for a road realignment at the crossing that may accommodate future grade separation protection.
- There is a pedestrian bridge over Highway 403; construction of the water / wastewater / Stormwater infrastructure need to avoid the pedestrian bridge and / or accommodate appropriate construction mitigations.

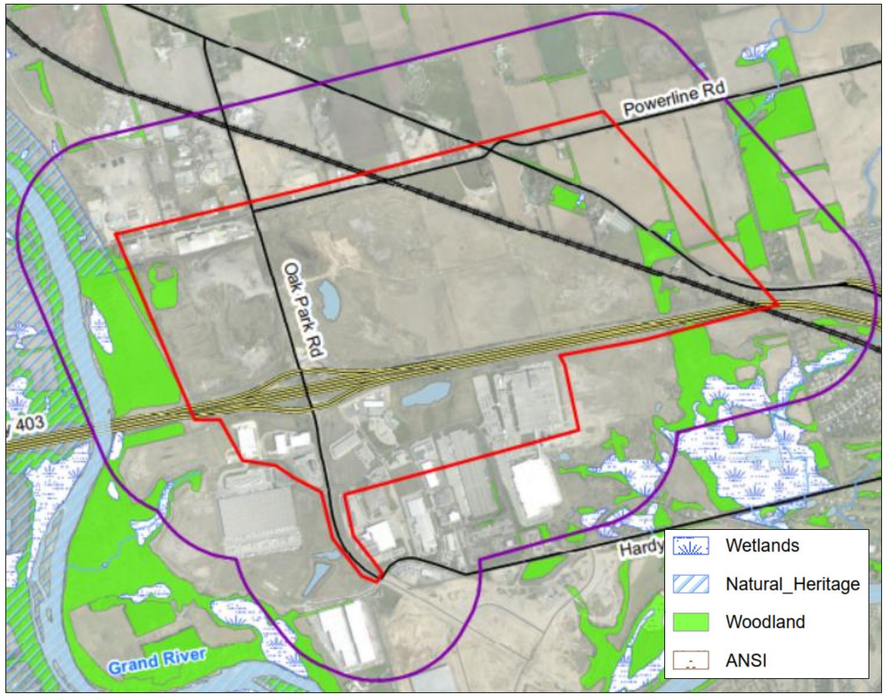

CN Rail corridor


Pedestrian Bridge



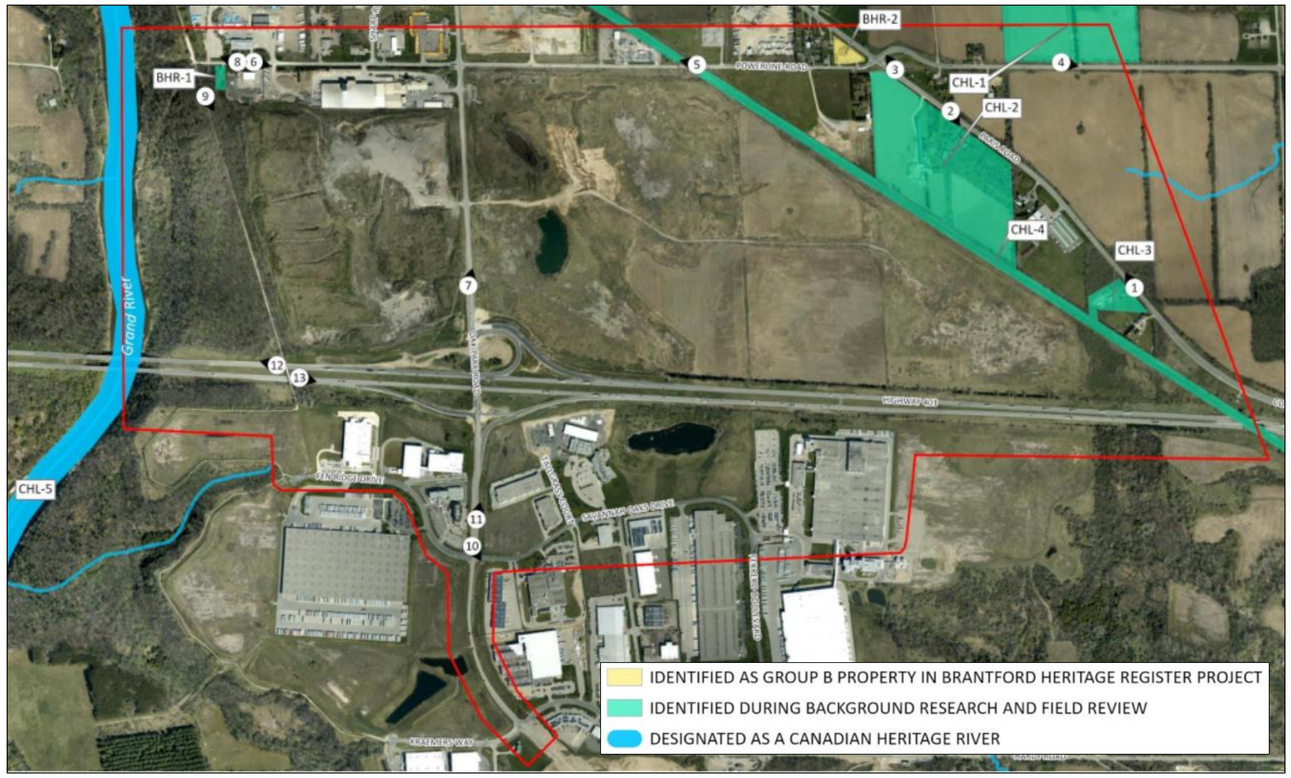
Natural Environment

- Study area is a former gravel pit, with no stormwater servicing north of Highway 403; all water infiltrates on the undeveloped site.
- The study area is within a vulnerable aquifer and a high groundwater recharge area. It is in close proximity to several Provincially Significant Wetlands to the west and southeast of the site.
- There is Grand River Conservation Authority land on the west side of the site, to the east of the Grand River. This land also represents a Provincially Significant Woodland.
- Stormwater solution will provide quantity and quality controls, and ensure adequate erosion protection.



Cultural Heritage

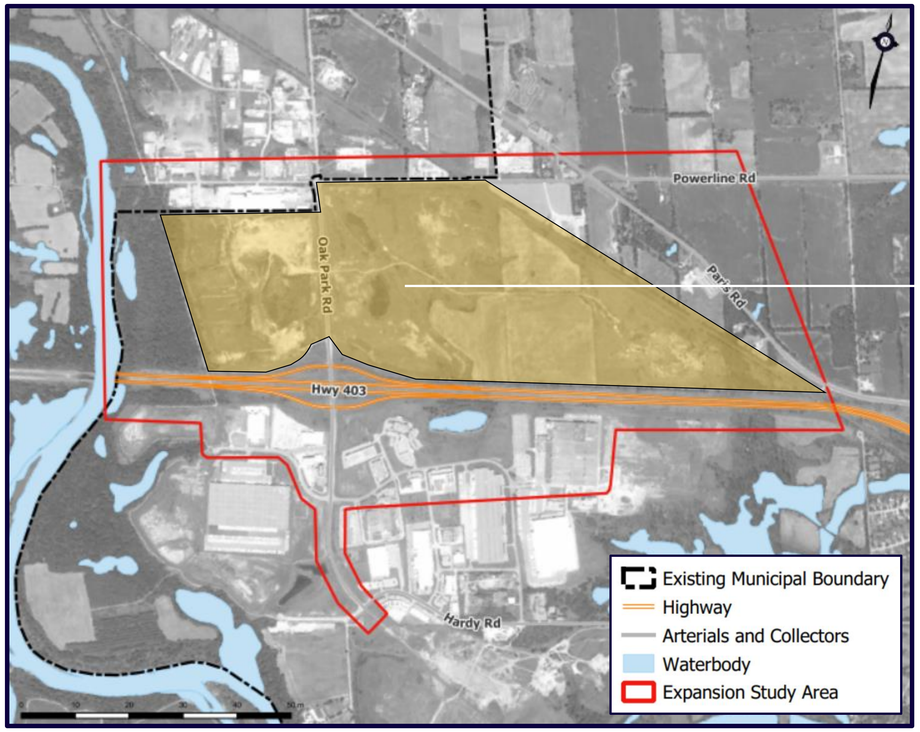
- Cultural heritage features include the SC Johnson Trail, the Grand River, the CN Rail, and a Built Heritage Resource on Powerline Road near the SC Johnson Trail.
- Majority of the study area has no archaeological potential, with the exception of the GRCA lands and some properties near the intersection of Paris Road and Powerline Road.




Grand River

Study Area Conditions

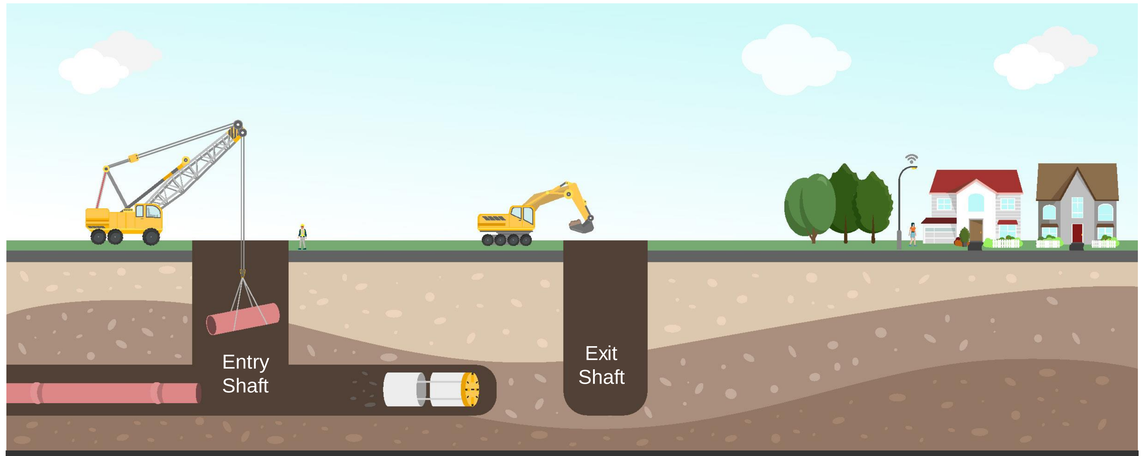
- The site is a former gravel pit, with all stormwater currently infiltrating on site. There is significant regrading activities ongoing to enable future development of the site.
- Stormwater runoff from the new development and lands to the north, including County of Brant lands, will be managed; this will involve the introduction of a new stormwater outlet.
- There is currently no water / wastewater servicing north of Highway 403 for this Development.
- There are no transit routes or active transportation facilities in the study area.



Construction Considerations

- A variety of construction methods may be employed for water / sewer infrastructure, including both open-cut and tunneled construction.
- Tunneling will be used under significant infrastructure (Highway 403 and CN Rail)
- When sewer depths exceed 10 m below ground surface, tunneling may be used as open-cut construction becomes difficult and expensive beyond 10 m.
- Development requires identification of an appropriate management strategy to safely manage stormwater flows while addressing watershed quantity and quality requirements
  - Private grading and drainage integration through development
  - Identifying appropriate outlet location; downstream impacts, needs for external stormwater infrastructure, land acquisition

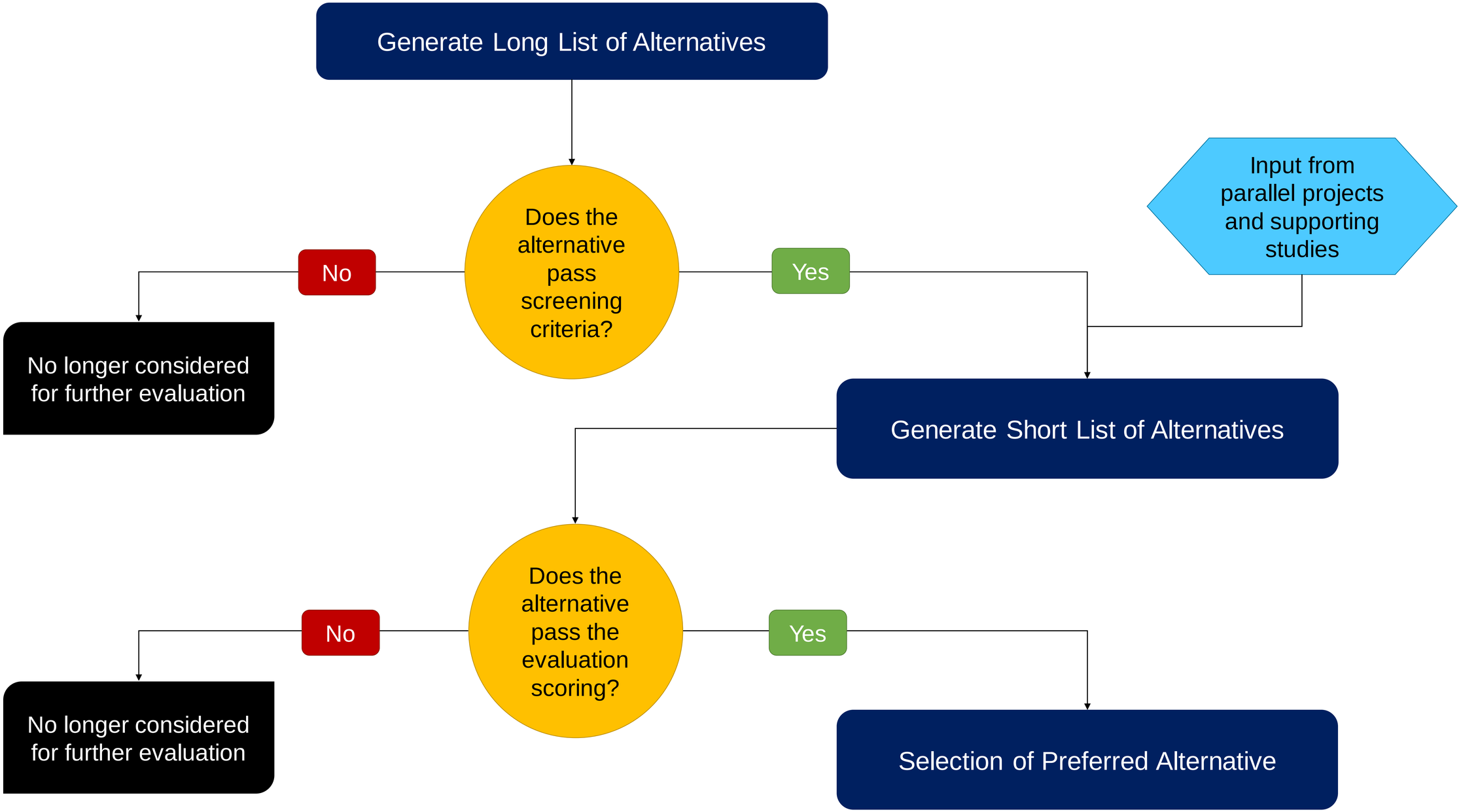
A Graphical Illustration of Open-Cut Construction Methodology.



A Graphical Illustration of Tunnelling Construction Methodology.

Evaluation Process

Evaluation Process Overview



Water / Wastewater Projects

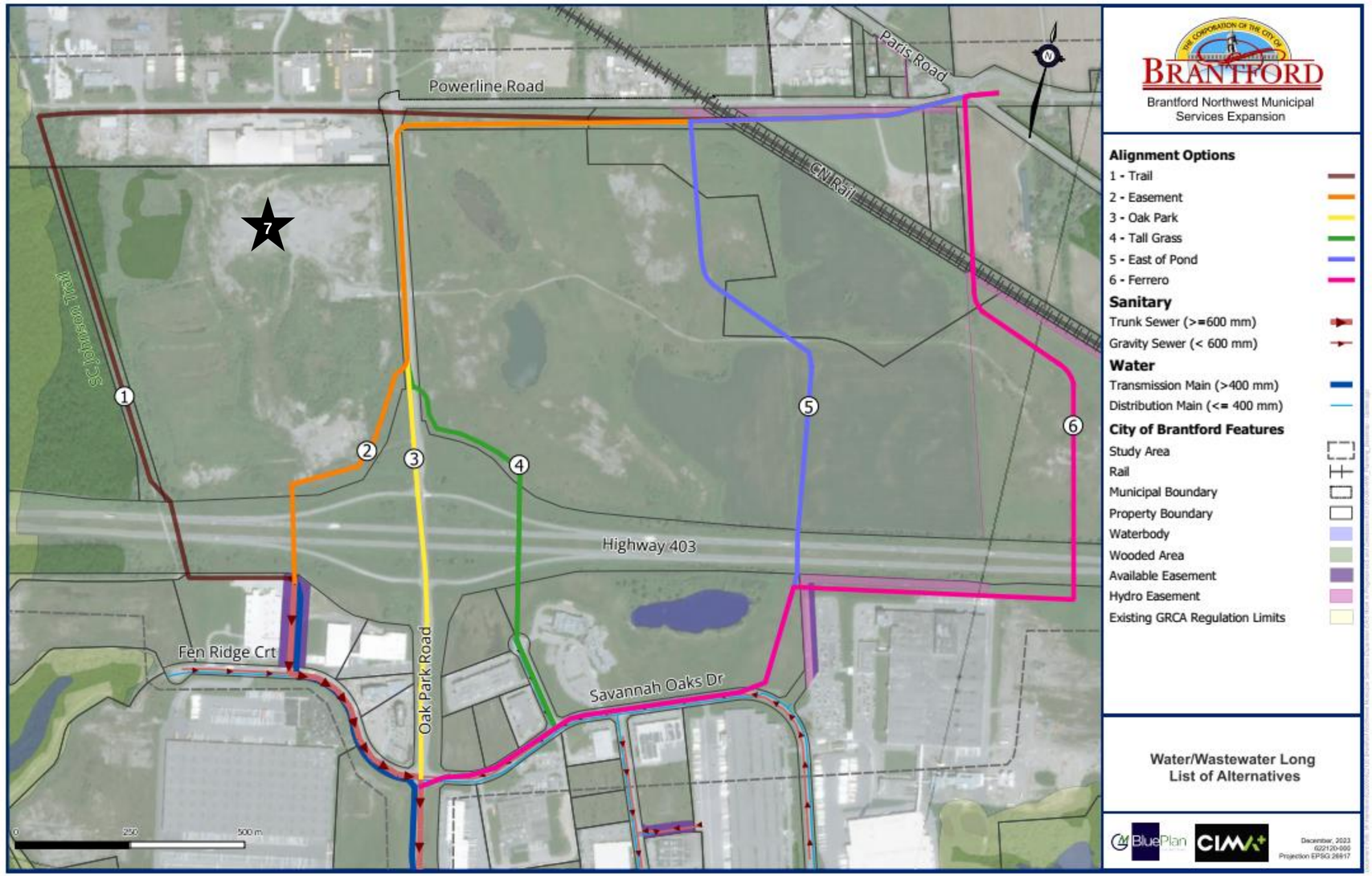
Water / Wastewater
Problem & Opportunity Statements

Northwest Municipal Services Expansion

Oak Park Road Trunk Watermain	Powerline Road Trunk Watermain	Oak Park Road Trunk Sewer	Powerline Road Trunk Sewer	Stormwater Management in Grand River Northwest Catchment	Oak Park Road Widening	Powerline Road Widening
Identify and develop the preferred trunk watermain alignment that will provide the core water servicing link connecting the existing water system south of Highway 403 to the northwest lands, with consideration for potential future trunk water infrastructure and water system improvements, service area expansions, and the potential impacts of climate change on future water needs.	Identify and develop the preferred trunk watermain alignment that will support growth in the Northwest Expansion Lands with consideration for potential future trunk water infrastructure and water system improvements, service area expansions, and the potential impacts of climate change on future water needs.	Identify and develop the preferred trunk wastewater sewer alignment that will provide the core wastewater servicing link to the existing wastewater system south of Highway 403 to the northwest lands, with consideration for potential future service area expansions, and the potential impacts of climate change on future wastewater flows.	Identify and develop the preferred trunk watermain alignment that will support growth in the Northwest Expansion Lands with consideration for potential future trunk sewer infrastructure and wastewater system improvements, service area expansions, and the potential impacts of climate change on future wastewater flows.			

Water / Wastewater Long List of Alternatives – Oak Park Road and Powerline Road Projects

- Watermain and sewer alignments are coupled for construction and phasing synergies
- Long list alignments provide a high-level representation of the general alignment
- Oak Park Road projects were screened based on Highway 403 crossing location
- Options 1-6 show alternative alignments
- Option 7 considers a new WWTP (Wastewater Alternatives)



Water / Wastewater Screening Criteria & Results – Oak Park Road Projects

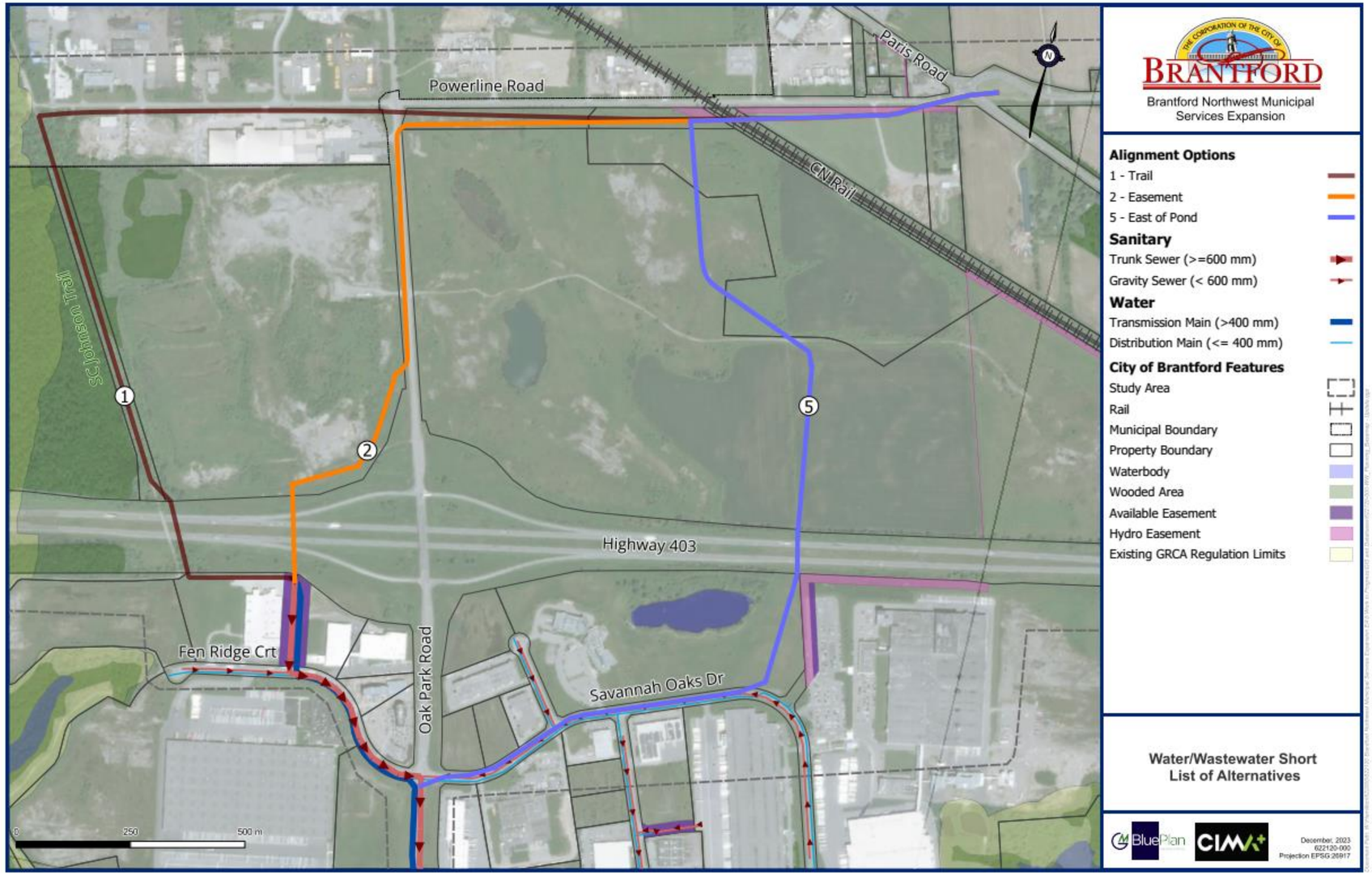
Screening Criteria

- ✓Feasibility of Highway 403 Crossing
- ✓Adequately Supports External Servicing
- ✓Minimizes Property and Easement Requirements
- ✓Feasibility of Connection to Existing Trunk Infrastructure
- ✓Minimizes Construction Impacts
- ✓Minimizes Environmental Impacts
- ✓Supports Internal Servicing
- ✓Limits Disruption to External Infrastructure

Alternative	Screening Result
1 – Trail	**Carried Forward**
2 - Easement	**Carried Forward**
3 – Oak Park	**Not Carried Forward**: Highway 403 crossing through Oak Park Road interchange; Significant construction impacts
4 – Tall Grass	**Not Carried Forward**: Highway 403 crossing through Oak Park Road interchange
5 – East of Pond	**Carried Forward**
6 - Ferrero	**Not Carried Forward**: Significant property and easement requirements, difficult connection to existing trunk infrastructure, challenging to service internal site
7 – New WWTP	**Not Carried Forward**: Significant property and easement requirements, significant construction and environmental impacts

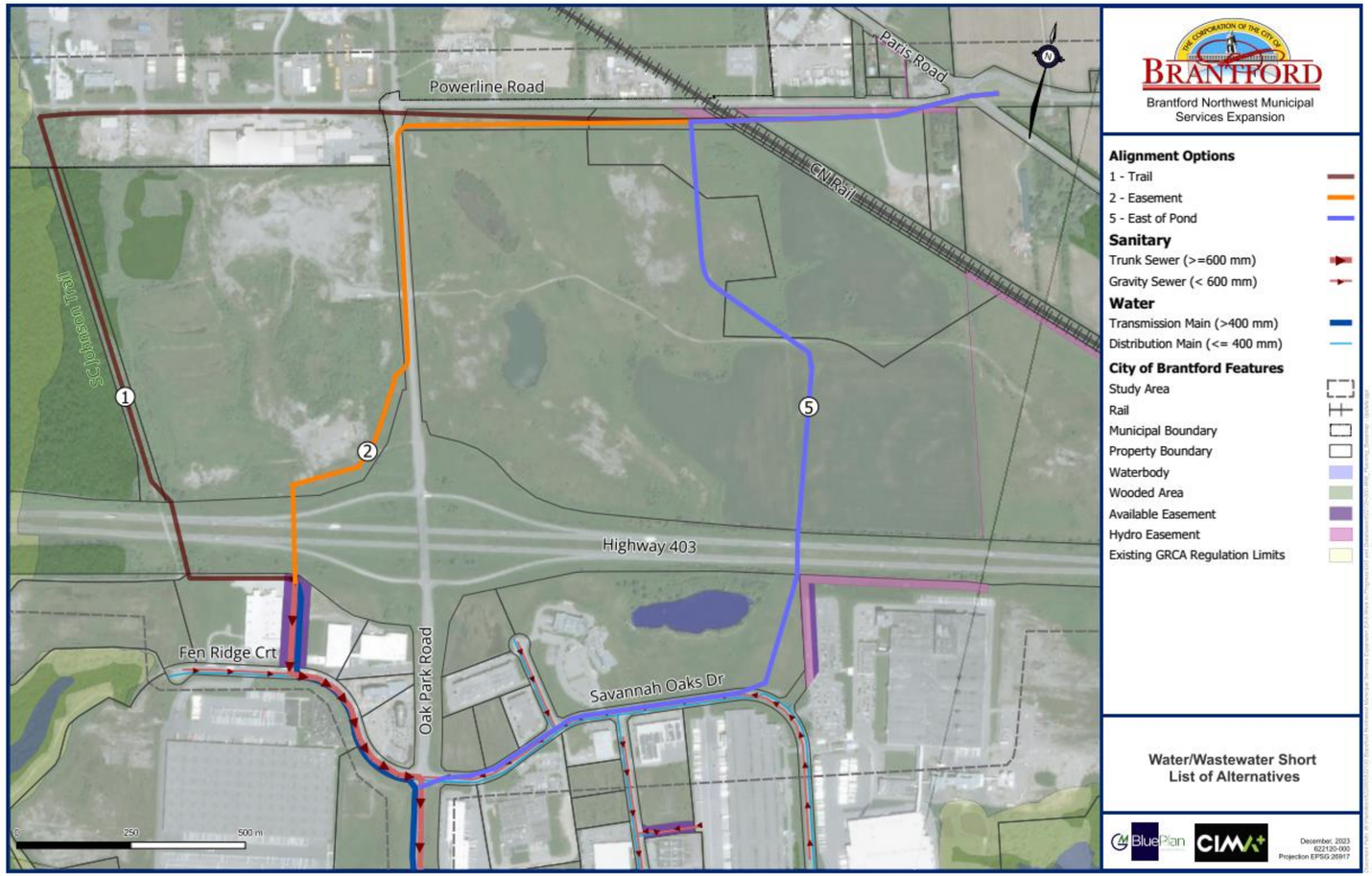
Water / Wastewater Short List of Alternatives – Oak Park Road Projects

- The water and wastewater alignments evaluations considered the joint impacts and construction as they will be constructed together (construction phasing, etc.).
- Alignments shown represent the entirety of water and wastewater infrastructure for both the Oak Park Road and Powerline Road projects.
- An evaluation of the full combined water and wastewater alignment was completed to identified the preferred alternative.
- Constraints along Powerline Road were common to all alternatives and the preferred alignment is highly depended on the outcomes of the Powerline Road Widening. Whereas the Highway 403 constraints for each alignment are independent.
- The Powerline Road Trunk Sewer project was added following Notice of Commencement, and group with the Powerline Road Trunk Watermain to encourage development efficiencies north of Highway 403.
- The Oak Park Road water and wastewater projects are being completed first to encourage development north of Highway 403 to occur expeditiously.
- Following the identification of the preferred Powerline Road design concept, the Powerline Road water and wastewater alignments will be finalized in order to align with the new Powerline Road design.
- At this PIC, the preferred alternatives are shown for the Oak Park Road Trunk Watermain and Oak Park Road Trunk Sewer. The Powerline Road Trunk Watermain and Powerline Road Trunk Sewer will be further developed following the identification of the preferred Powerline Road design concept.



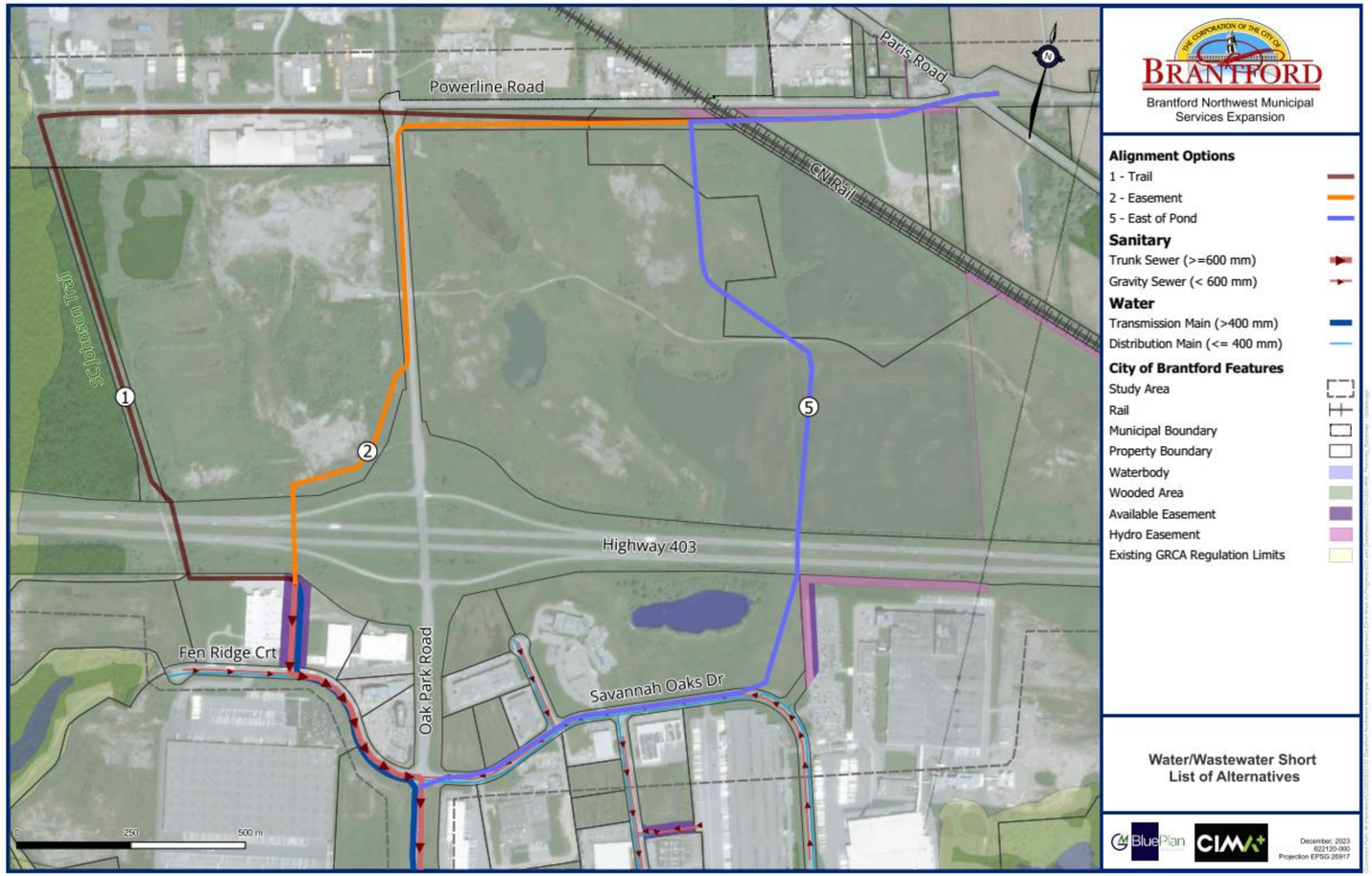
Water / Wastewater Alternative 1 – Oak Park Road Projects

	Advantages	Disadvantages
Water		• Requires alignment along SC Johnson Trail • Significant easement requirements • Difficulty in achieving 14m setback from MTO ROW • Significant environmental impacts due to alignment through Provincially Significant Woodland • Tree clearing required along SC Johnson Trail • Higher potential to affect Species at Risk • Requires closure of the SC Johnson Trail • Construction within areas of cultural significance and archaeological potential • Impact to businesses along Fen Ridge Crt • Highest cost due to length and tunnel requirements
Wastewater		• Requires alignment along SC Johnson Trail • Significant easement requirements • Difficulty in achieving 14m setback from MTO ROW • Siphon required under Highway 403 • Significant environmental impacts due to alignment through Provincially Significant Woodland • Tree clearing required along SC Johnson Trail • Higher potential to affect Species at Risk • Requires closure of the SC Johnson Trail • Construction within areas of cultural significance and archaeological potential • Impact to businesses along Fen Ridge Crt • Highest cost due to length and tunnel requirements



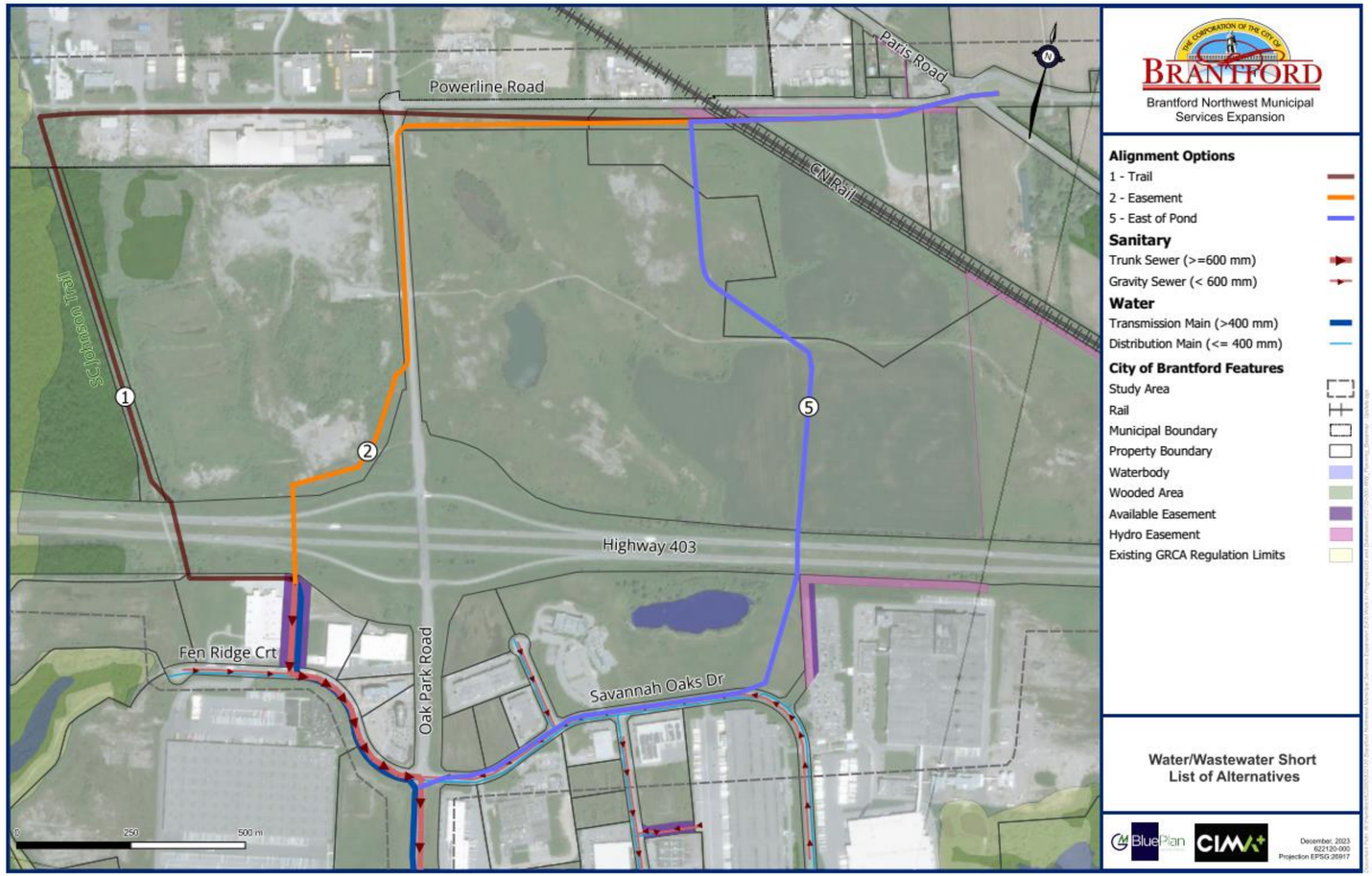
Water / Wastewater Alternative 2 – Oak Park Road Projects

	Advantages	Disadvantages
Water	• Shortest possible route alignment • Lowest impact to environmental features • Avoids areas of cultural significance and archaeological potential • Lowest cost due to shortest distance	
Wastewater	• Shortest possible route alignment • Lowest impact to environmental features • Avoids areas of cultural significance and archaeological potential • Shortest length decreases cost	• Siphon required under Highway 403



Water / Wastewater Alternative 5 – Oak Park Road Projects

	Advantages	Disadvantages
Water	• Avoids areas of cultural significance and archaeological potential	• Conflicts with existing infrastructure on Savannah Oaks Drive • Proximity to existing pond south of Highway 403 • Impact to businesses along Savannah Oaks Drive • Increase in cost compared to Alternative 2 due to length
Wastewater	• Avoids areas of cultural significance and archaeological potential • Opportunity for open-cut construction through Development lands decreases cost	• Proximity to existing pond south of Highway 403 • Conflicts with existing infrastructure on Savannah Oaks Drive • Impact to businesses along Savannah Oaks Drive • Potential for additional required pumping to service Development lands



Water / Wastewater Evaluation Criteria – Oak Park Road Projects

The short-listed water and wastewater alignment were evaluated according to the criteria shown, with each category being considered equally. The highest score identifies the preferred option.

Social / Cultural

- Minimizes impacts to residents
- Minimizes impacts to businesses
- Manages and minimizes construction impacts
- Protects cultural heritage features
- Protects archeological features

Technical Feasibility

- Meets existing and future servicing needs
- Provides ease of connection to County of Brant
- Aligns with planned system strategy and configuration
- Provides reliable servicing
- Minimizes conflict with existing infrastructure and utilities
- Ease of property / land acquisition
- Minimizes and manages construction risk

Environmental Impacts

- Protects environmental and natural heritage features
- Protects wildlife and Species at Risk
- Minimizes climate change impacts

Financial Feasibility

- Low lifecycle cost, including capital and operating & maintenance

Oak Park Road Trunk Watermain Evaluation

Evaluation Category	1 – Trail	2 – Easement	5 – East of Pond
Technical Feasibility	• Requires alignment along SC Johnson Trail • Significant easement requirements • Difficulty in achieving 14m setback from MTO ROW	• Shortest possible route alignment	• Conflicts with existing infrastructure on Savannah Oaks Drive • Does not align with development servicing strategy
Environmental Impacts	• Significant environmental impacts due to alignment through Provincially Significant Woodland • Tree clearing required along SC Johnson Trail • Higher potential to affect Species at Risk	• Lowest impact to environmental features	• Proximity to existing pond south of Highway 403
Social / Cultural Impacts	• Requires closure of the SC Johnson Trail • Construction within areas of cultural significance and archaeological potential • Impact to businesses along Fen Ridge Court	• Shortest possible route alignment • No impact to businesses along Savannah Oaks Drive • Avoids areas of cultural significance and archaeological potential	• Impact to businesses along Savannah Oaks Drive • Avoids areas of cultural significance and archaeological potential
Financial Viability	• Increase in cost compared to Alternative 2 due to length	• Lowest cost due to shortest distance	• Increase in cost compared to Alternative 2 due to length
Evaluation Result	**Not Carried Forward**	**Carried Forward: Preferred Alternative**	**Not Carried Forward**

	Minimal impacts
	Moderate impacts
	Significant impacts

Oak Park Road Trunk Sewer Evaluation

Evaluation Category	1 – Trail	2 – Easement	5 – East of Pond
Technical Feasibility	• Requires alignment along SC Johnson Trail • Significant easement requirements • Difficulty in achieving 14m setback from MTO ROW	• Shortest possible route alignment	• Conflicts with existing infrastructure on Savannah Oaks Drive • Does not align with development servicing strategy
Environmental Impacts	• Significant environmental impacts due to alignment through Provincially Significant Woodland • Tree clearing required along SC Johnson Trail • Higher potential to affect Species at Risk	• Lowest impact to environmental features	• Proximity to existing pond south of Highway 403
Social / Cultural Impacts	• Requires closure of the SC Johnson Trail • Construction within areas of cultural significance and archaeological potential • Impact to businesses along Fen Ridge Court	• Shortest possible route alignment • No impact to businesses along Savannah Oaks Drive • Avoids areas of cultural significance and archaeological potential	• Impact to businesses along Savannah Oaks Drive • Avoids areas of cultural significance and archaeological potential
Financial Viability	• Increase in cost compared to Alternative 2 due to length	• Lowest cost due to shortest distance	• Increase in cost compared to Alternative 2 due to length
Evaluation Result	**Not Carried Forward**	**Carried Forward: Preferred Alternative**	**Not Carried Forward**

	Minimal impacts
	Moderate impacts
	Significant impacts

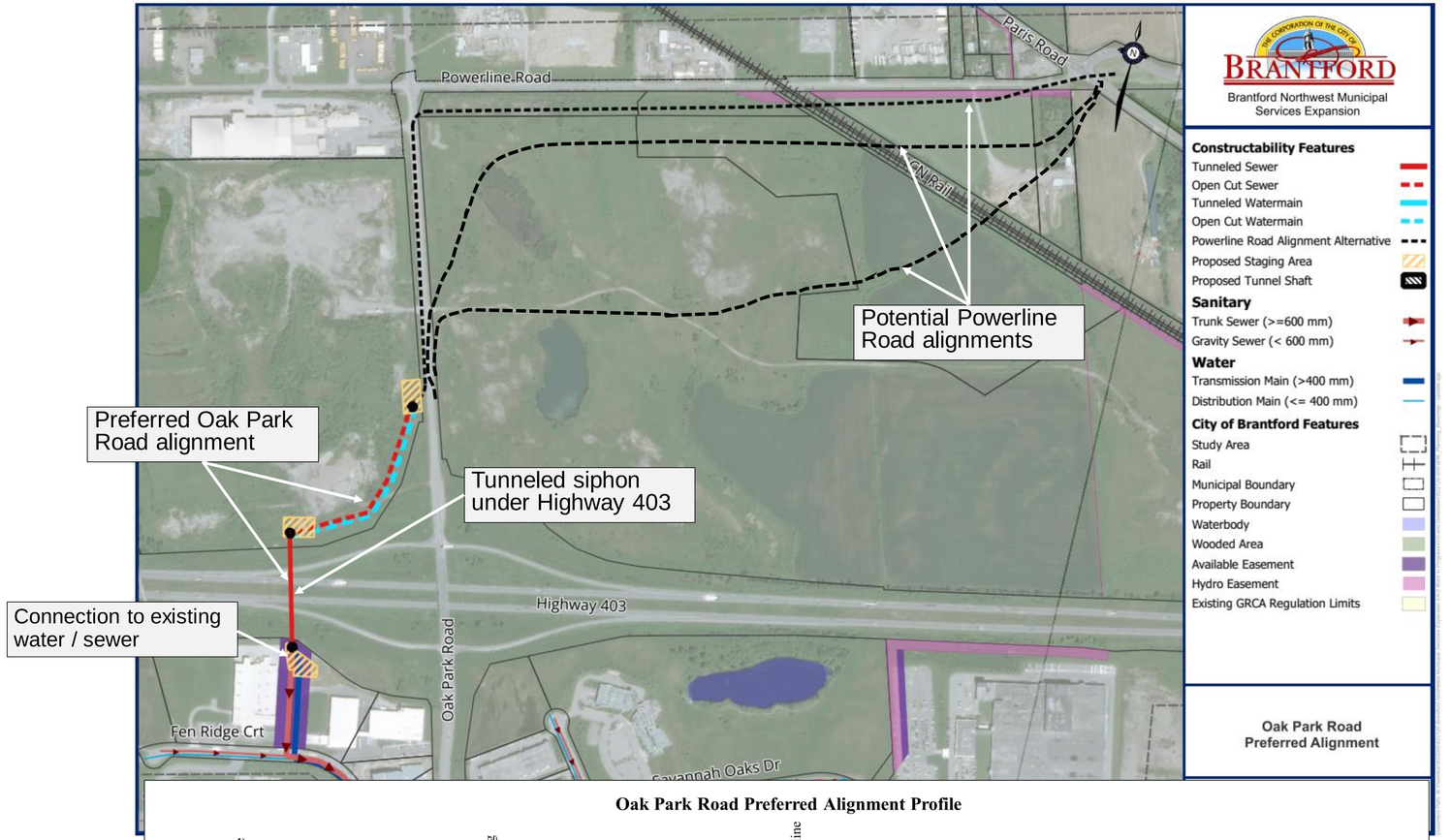
Water / Wastewater Preferred Alternative – Oak Park Road Projects

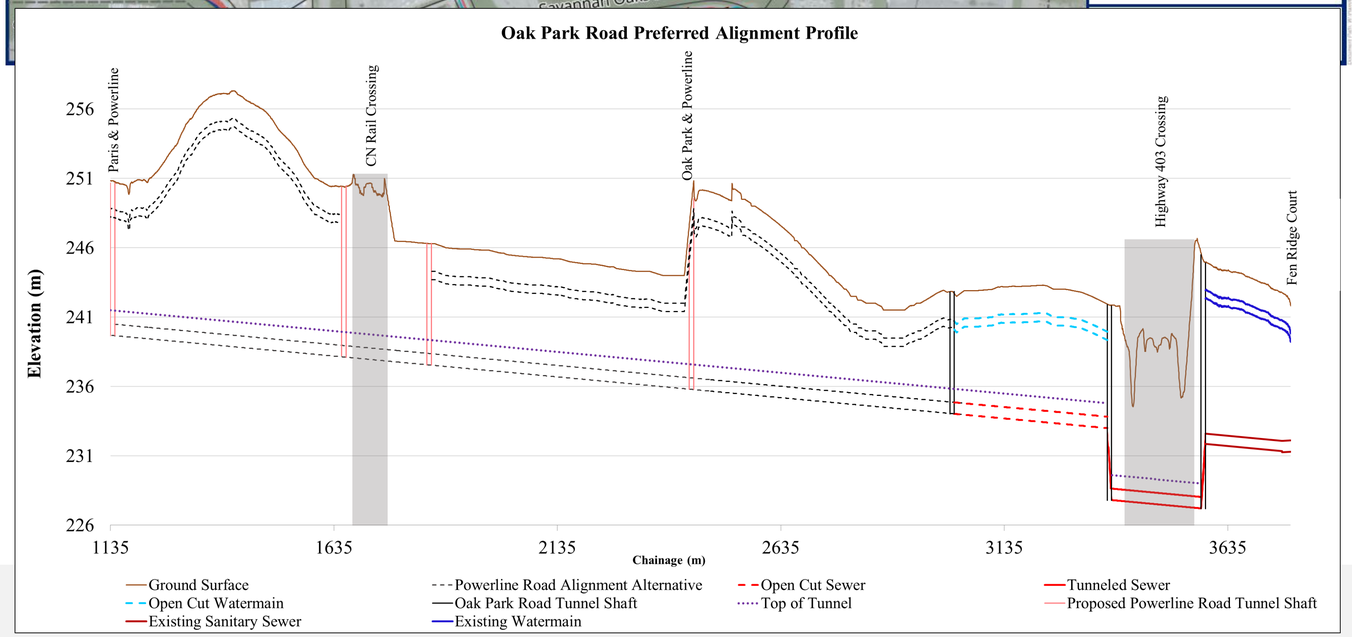
Preferred Alternative

- The preferred alternative alignment and profile for the Oak Park Road Trunk Watermain and Oak Park Road Trunk Sewer is shown to the right.

Next Steps

- The Powerline Road Trunk Watermain and Powerline Road Trunk sewer potential alignments are also shown. The final alignment for the Powerline Road projects will be determined in conjunction with the Powerline Road Widening project.
- Oak Park Road Widening and Powerline Road Widening projects will undergo review of alternative design concepts. When the preferred design concept has been determined, the Powerline Road Trunk Watermain and Powerline Road Trunk Sewer projects will be finalized.





Stormwater Project

Stormwater
Problem & Opportunity Statement

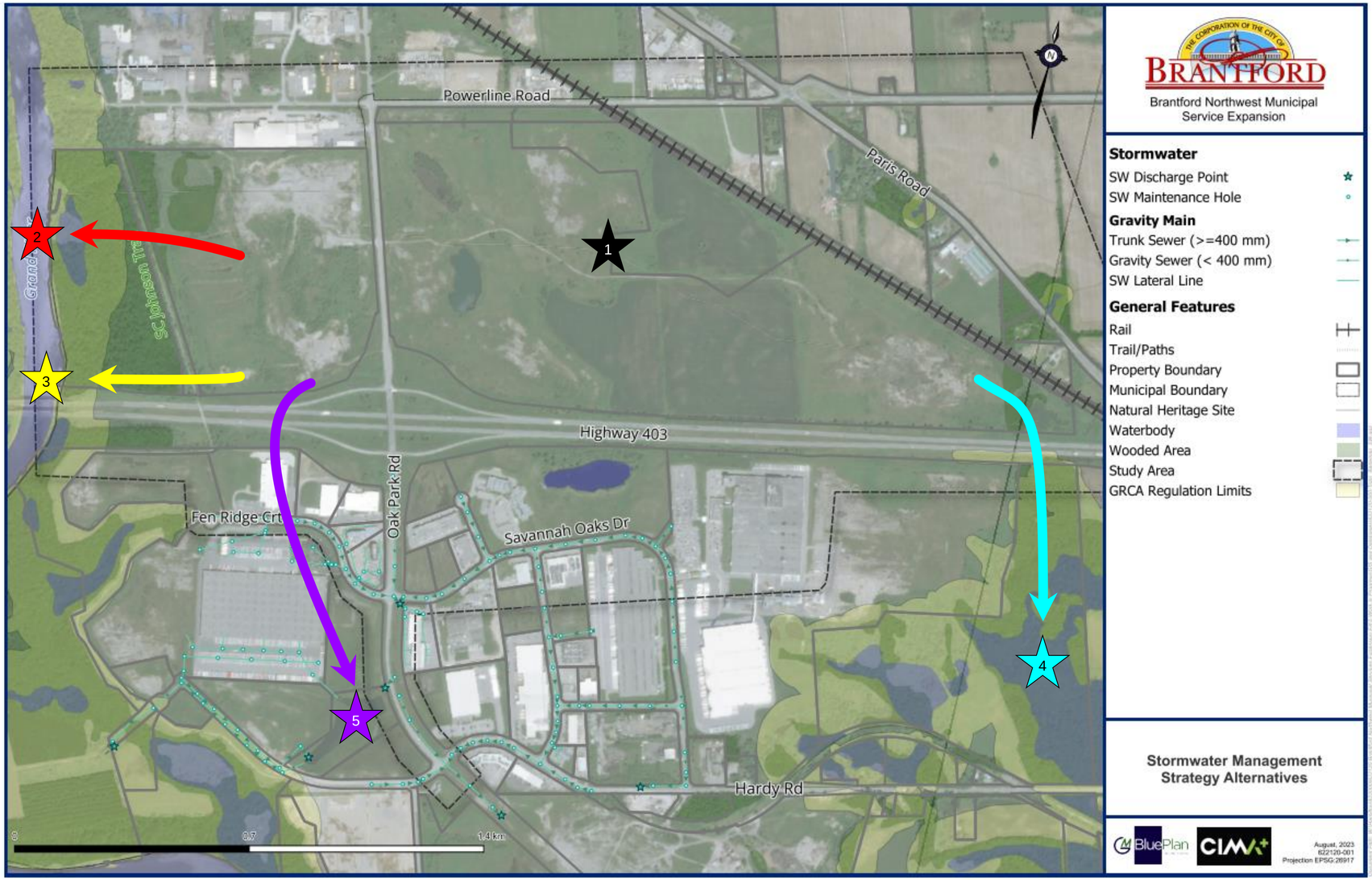
Northwest Municipal Services Expansion

- Oak Park Road Trunk Watermain
- Powerline Road Trunk Watermain
- Oak Park Road Trunk Sewer
- Powerline Road Trunk Sewer
- Stormwater Management in Grand River Northwest Catchment
- Oak Park Road Widening
- Powerline Road Widening

Identify and develop a holistic stormwater management strategy for the lands in the City's Grand River Northwest Catchment with consideration for stormwater flows, water quality, groundwater recharge, source water protection, risk management, and the potential impact of climate change on storm characteristics.

Stormwater Long List of Alternatives

- Future development requires identification of an appropriate management strategy to safely manage stormwater flows while addressing watershed quantity and quality requirements.
- Focus of the stormwater solution is to provide an appropriate outlet for storm flows which can manage flows from the development and upstream County of Brant lands.
    1. No outlet – all water infiltrates
    2. Outlet to the Grand River on the north side of the study area
    3. Outlet to the Grand River on the south side of the study area, utilizing a Highway 403 drainage ditch
    4. Outlet to the wetland southeast of the study area
    5. Outlet to an existing stormwater management pond, requiring crossing of Highway 403



Water / Wastewater Screening Criteria & Results – Oak Park Road Projects

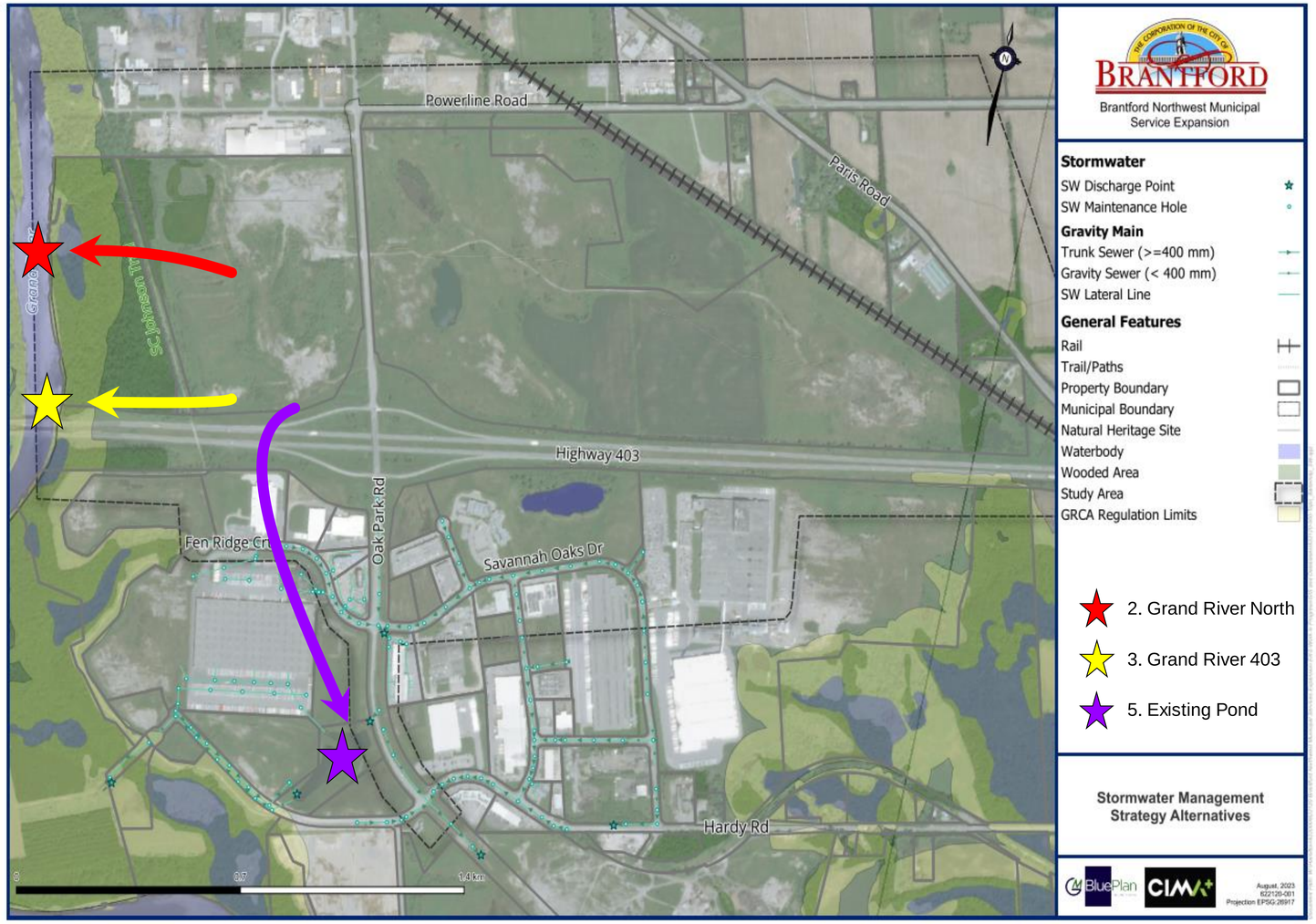
Screening Criteria

- ✓Addresses Flooding Risk
- ✓Outlet Capacity and Management Requirements
- ✓Maintains Existing Hydrology
- ✓Integration with Internal (Private) Servicing
- ✓Integration with External Servicing
- ✓Minimizes External Property and Easement Requirements
- ✓Construction Impacts and Complexity
- ✓Minimizes Environmental and Cultural Impacts

Alternative	Screening Result
1 – No Outlet	**Not Carried Forward**: Unlikely to provide adequate flooding protection
2 – Grand River North	**Carried Forward**
3 – Grand River 403	**Carried Forward**
4 – Southeast Wetland	**Not Carried Forward**: Limited outlet capacity, significant regrading required, environmental and cultural impacts
5 – Existing Pond	**Carried Forward**

Stormwater Short List of Alternatives

	Advantages	Disadvantages
Option 2	• Provides adequate flooding protection • No constraints regarding outlet capacity • Limited construction impacts	• Additional investigation required to inform the mechanism to maintain hydrologic balance • Potential environmental and cultural impacts due to outlet to Grand River
Option 3	• Provides adequate flooding protection • No constraints regarding outlet capacity	• Additional investigation required to inform the mechanism to maintain hydrologic balance • Easement required for construction, particularly along Highway 403 • Potential environmental and cultural impacts due to outlet to Grand River
Option 5	• Provides adequate flooding protection • Limited environmental and cultural impacts due to use of existing infrastructure • Potential synergies with W/WW crossing	• Further investigation required to determine outlet capacity • Construction impacts south of Highway 403



Stormwater Evaluation Criteria

Social / Cultural

- Minimizes impacts to residents and businesses
- Manages and minimizes construction impacts
- Protects cultural heritage features
- Protects archeological features

Technical Feasibility

- Meets existing and future servicing needs
- Aligns with planned system strategy and configuration
- Provides adequate flooding protection
- Maintains baseflow needs
- Minimizes impacts downstream of outlet
- Minimizes conflict with existing infrastructure and utilities
- Optimizes useable land while limiting additional infrastructure and / or regrading
- Minimizes and manages construction risk

Environmental Impacts

- Protects environmental and natural heritage features
- Protects wildlife and Species at Risk
- Minimizes climate change impacts

Financial Feasibility

- Low lifecycle cost, including capital and operating & maintenance

Stormwater Next Steps

- Completion of the 12-month groundwater monitoring program in July
- Continued discussions with stakeholders, including Grand River Conservation Authority
- Further investigation into the feasibility of connecting to the existing City stormwater management pond south of Highway 403
- Identification of preferred alternative, including outlet location, downstream impacts, needs for external stormwater infrastructure, and land acquisition
- Presentation of preferred alternative at PIC 2

Transportation Projects

Transportation
Problem & Opportunity Statements

Northwest Municipal Services Expansion

- Oak Park Road Trunk Watermain
- Powerline Road Trunk Watermain
- Oak Park Road Trunk Sewer
- Powerline Road Trunk Sewer
- Stormwater Management in Grand River Northwest Catchment
- Oak Park Road Widening
- Powerline Road Widening

Oak Park Road Widening

Identify and develop the proposed Oak Park Road improvement strategy to support the north-south arterial link and highway connection to the future development lands north of Highway 403, with consideration for the Citywide transportation strategy, including traffic capacity and operational needs, active transportation, goods movement, opportunities for transit improvements and benefit to existing and future users.

Powerline Road Widening

Identify and develop the proposed Powerline Road improvement strategy to support the east-west arterial link and access to the future development lands north of Highway 403, with consideration for the Citywide transportation strategy including traffic capacity and operational needs, active transportation and goods movement, opportunities for transit improvements, as well as considering constraints such as the railway crossing, hydro corridors along Powerline Road and the associated hydro substations.

Existing Conditions – Transportation
Oak Park Road

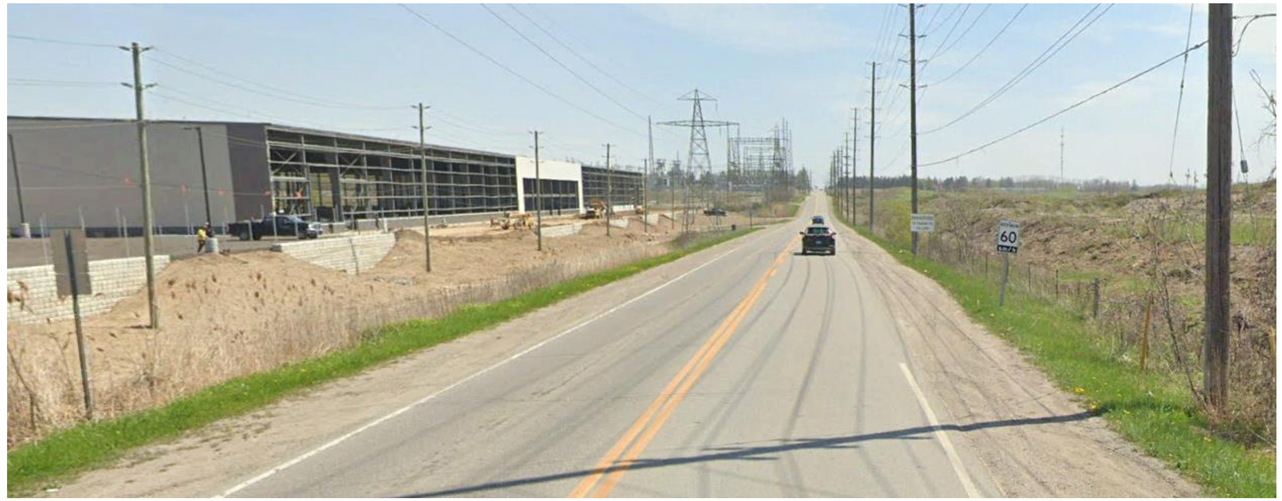
- Study area is approximately 2.0 km from Powerline Road to Hardy Road.
- Existing ROW: 30m north of Highway 403 and 60m south of Highway 403.
- Designated as a north-south minor arterial road connecting County of Brant to City of Brantford.
- Posted Speed Limit 70km/h north of the interchange, 60km/h south of the interchange.
- Two lanes cross section (except in the vicinity of the interchange with Highway 403 to accommodate interchange movements).
- 4 intersections within study area (3 signalized, 1 unsignalized).
- No current transit routes, no active transportation facilities.

Oak Park Road at overpass bridge over Highway 403, looking north

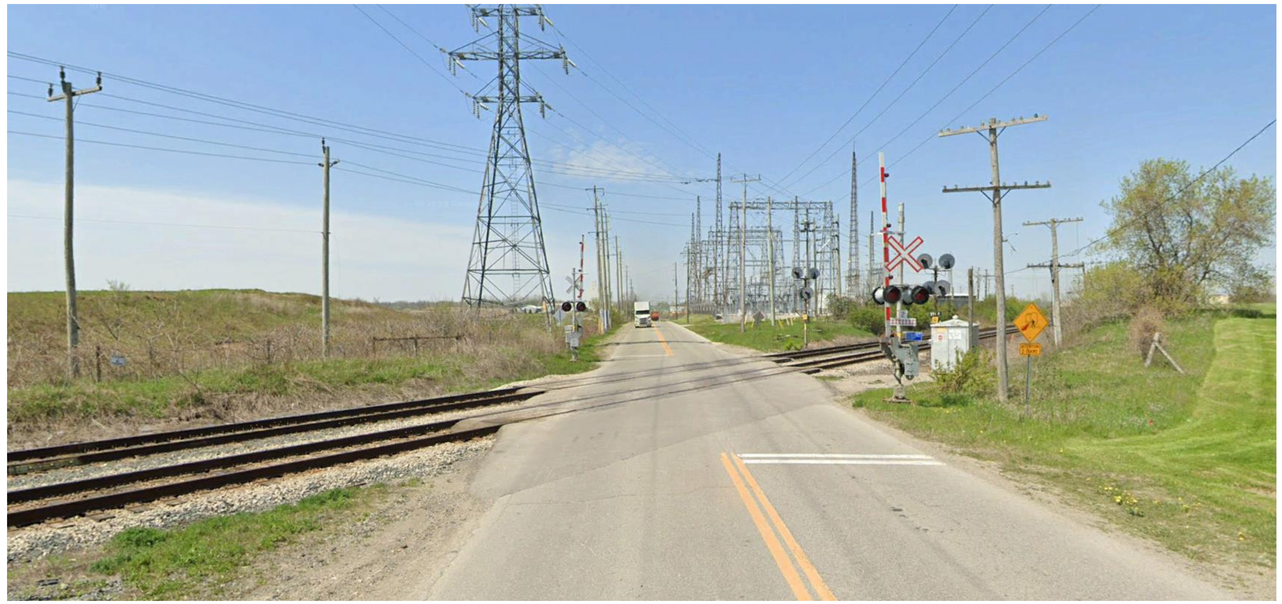
Oak Park Road at Powerline Road, looking south

Existing Conditions – Transportation
Powerline Road

- Study area is approximately 1.25km from Oak Park Road to Paris Road.
- Existing ROW varies: generally at 19m west of the rail crossing and 27m east of the rail crossing.
- Designated as an east-west major arterial road across the City of Brantford.
- Skewed CN railway crossing.
- Posted Speed Limit 60km/h on the west stretch of Powerline Road, changes to 70km/h approaching the railway crossing.
- Two lane, bi-directional cross section.
- 2 intersections within study area (1 signalized, 1 unsignalized).
- Major utilities on both sides within ROW (Hydro One transmission towers, GrandBridge Energy distribution poles, and two transformer substations).
- No current transit routes, no active transportation facilities.



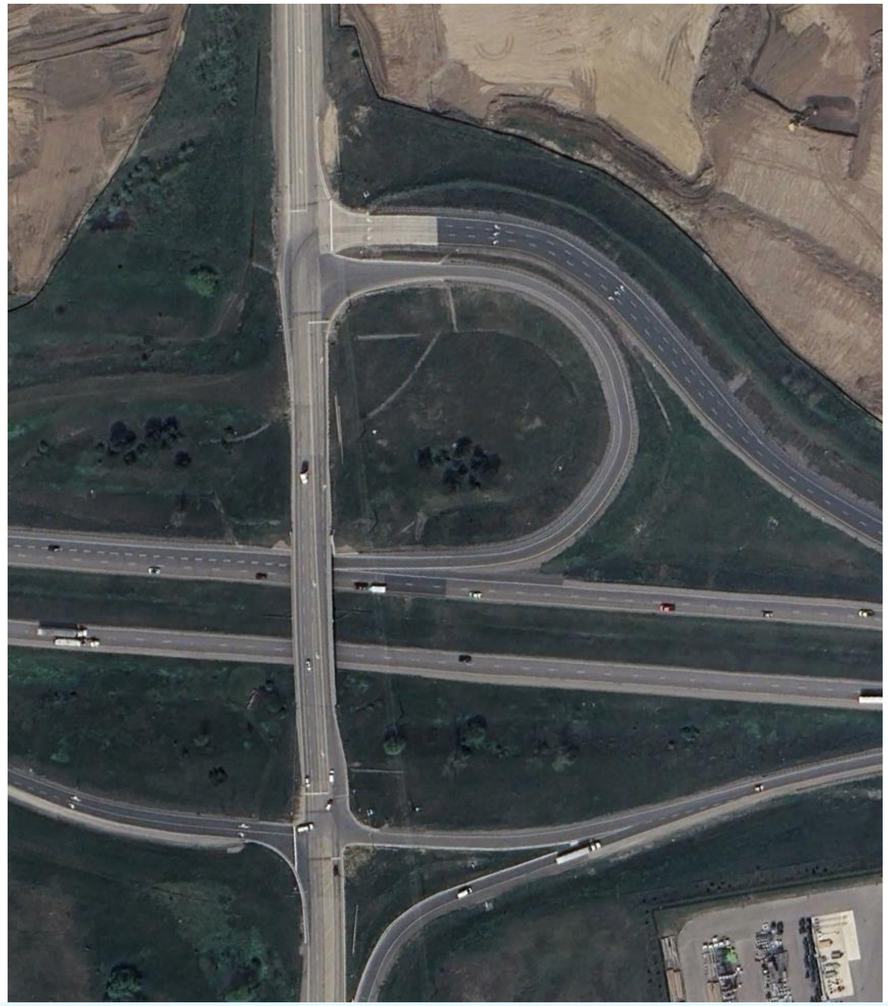
Powerline Road at Oak Park Road, looking east



Powerline Road west of Paris Road, looking west

Transportation Analysis

- City of Brantford Transportation Master Plan (year) considered overall travel demand and identified that 4-lanes are required on both Oak Park Road (short term) and Powerline Road (mid term) to accommodate growth.
- In an EA completed in 2006 by the Ministry of Transportation, the interchange at Oak Park Road and Highway 403 was proposed to have an ultimate design of a Parclo A4. This interchange was recently improved as per the image on the right.
- In our traffic analysis, we took a closer look at the study area of Oak Park Road and Powerline Road to better understand future needs in the 18-year (2041) and 28-year horizon (2051).
- By 2051, all study area intersections are expected to operate over capacity with long delays and queues exceeding the available storage lengths.
- Traffic analysis confirmed the need for four lanes, updated intersection control and some interchange upgrades to accommodate growth and improve traffic operations in the future.



Oak Park Road, Highway 403 interchange

Alternative Solutions – Oak Park Road

1. **Do Nothing:** maintain existing conditions of Oak Park Road.

2. **Intersection Improvements Only:** improve existing intersection controls as well as adding storage facilities if needed/feasible.

3. **Upgrade Parallel Road:** upgrade parallel road beyond planned improvements such as Paris Road.

4. **Widening with AT:** widen Oak Park Road from 2 to 4 lanes, provide active transportation facilities, without any interchange improvements.

5. **Widening with AT and Interchange Improvements:** widen Oak Park Road, provide active transportation facilities, with interchange improvements per previously approved MTO EA Study.

Alternative Solutions – Powerline Road

1. **Do Nothing:** maintain existing conditions of Powerline Road.

2. **Intersection Improvements Only:** improve existing intersection controls as well as adding storage facilities if needed/feasible.

3. **Upgrade Parallel Road:** upgrade parallel road beyond planned improvements such as Hardy Road.

4. **New East-West Road:** provide a new east-west road on a different corridor between Oak Park Road and Paris Road, south of Powerline Road.

5. **Widening with AT:** widen Powerline Road from 2 to 4 lanes and provide active transportation facilities.

Factors for Assessment and Evaluation - Transportation

Social / Cultural

- Consistency with City Planning and Policies
- Potential to impact archaeological resources
- Potential to impact built heritage resources or cultural heritage landscapes
- Indigenous Community interests and rights
- Community input and feedback
- Opportunities for streetscape enhancements

Technical Feasibility

- Maintain or improve traffic operations and road safety
- Ability to accommodate active transportation facilities and improve network continuity and accessibility
- Consideration of tie-in with new municipal services
- Potential impact to utilities, specifically Hydro One transmission towers and GrandBridge Electric distribution poles.

Environmental Impacts

- Climate change considerations
- Potential impact to fish and fish habitat
- Potential to impact significant natural features
- Potential to impact significant wildlife, wildlife habitat and Species at Risk (SAR)

Financial Feasibility

- Potential property impacts
- Capital, operating and maintenance costs

Alternative Solutions Evaluation – Oak Park Road

Alternative Solutions	Key Considerations	Addresses Problems and Opportunities?
Alternative 1: Do Nothing	• Not consistent with City planning policies • Does not address the capacity needs within the study area	✗
Alternative 2: Intersection Improvements Only	• Improves efficiency and safety of transportation network • However, intersections would still operate with long delays and queues in future without capacity improvements	✗
Alternative 3: Upgrade Parallel Road	• Parallel roads do not provide the same function and Hwy 403 connectivity as Oak Park Road • Does not address future transportation needs on Oak Park Road	• Already being implemented through other City programs and initiatives
Alternative 4: Widening with AT	• Addresses transportation needs by providing additional capacity on Oak Park Road • However, does not address turning movement capacity at the Hwy 403 interchange	✗
Alternative 5: Widening with AT and Interchange Improvements	• Addresses transportation needs by providing additional capacity on Oak Park Road and Hwy 403 interchange improvements	✓

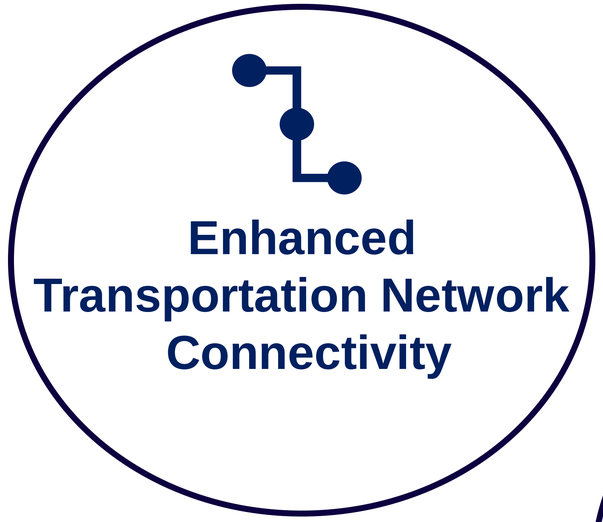
Alternative Solutions Evaluation – Powerline Road

Alternative Solutions	Key Considerations	Addresses Problems and Opportunities?
Alternative 1: Do Nothing	• Does not align with City planning • Does not address the capacity needs within the study area	✗
Alternative 2: Intersection Improvements Only	• Improves efficiency and safety of transportation network • However, intersections would still operate with long delays and queues in future without capacity improvements	✗
Alternative 3: Upgrade Parallel Road	• Parallel roads do not provide the same function and east-west connectivity as Powerline Road • Does not address future transportation needs on Powerline Road	✗
Alternative 4: New East-West Road	• New east-west road would not have the same connectivity across the City as Powerline Road	✗
Alternative 5: Widening with AT	• Addresses need by providing additional capacity on Powerline Road to accommodate increasing travel demand due to growth of surrounding community	✓

Recommended Planning Solution – Transportation

The recommended planning alternatives for Oak Park Road and Powerline Road are **Alternative 5**:

- Widen from 2 to 4 lanes to provide additional travel lanes
- Improved connection to Hwy 403
- Provide facilities for pedestrians, cyclists, mobility devise users and other non-vehicular travel including meeting current design and accessibility requirements
- Improve intersections to enhance operations and efficiency, including the provision of turn lanes
- Widened roadways provide opportunity for enhanced streetscape



Design Considerations – Transportation

Design Alternatives will be developed and evaluated in the next phase of the EA Study. Design considerations are as follows:

Technical

- Minimize impacts to utilities
- Conform to setbacks and standards
- Minimize impact to Hwy 403 bridge
- Minimize impact to interchange
- Improve capacity and flow of traffic

Social / Cultural

- Minimize impacts to private property (existing and future development)
- Create an efficient cycling and pedestrian environment including at intersections
- Conserve significant built heritage resources, cultural heritage landscapes, and archaeological resources

Design and Maintenance

- Meet all current standards (design, accessibility, safety, etc.)
- Future maintenance and cost of all components including cycling facilities, sidewalks, streetscape
- Stormwater management and integration with development
- Future maintenance requirements for water and wastewater servicing

Access Management

- Consider access to substations and utilities
- Integrate with future and existing development (e.g. access needs)

How to Stay Involved

Project Next Steps

- Continued discussions with stakeholders
- Selection of preferred design concept for Oak Park Road Widening and Powerline Road Widening
- Selection of preferred alternative for Stormwater Management in Grand River Northwest Catchment project
- Finalization of Powerline Road Trunk Watermain and Powerline Road Trunk Sewer projects

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!

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Additional project information can be found on the project website:
Brantford.ca/NWServicesExpansion