

Case Study Presentation of the Downtown Brampton Flood Protection Class EA

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Presentation Outline

- Project overview
- Problems and Opportunities
- Key challenges
- EA approach
- Coordinated planning



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Project overview – Parallel project planning and co-proponency

Downtown Brampton Flood Protection Project EA (DBFP EA) is a critical first, foundational step toward achieving the City of Brampton's **Riverwalk Project** and contribute to the larger Brampton 2040 Vision.

While the DBFP EA is focused on providing a flood protection solution to Downtown Brampton, it will consider, be informed by, and work in parallel with the City's Riverwalk project.

Given the confluence of jurisdiction, expertise and land ownership, the DBFP EA is being undertaken as a co-proponency between the Toronto and Region Conservation Authority (TRCA) and the City of Brampton.

Similar foundational, parallel planning approaches have been undertaken by TRCA and Waterfront in the West Don Lands and Lower Don Lands, whereby the development of a preferred alternative for flood protection formed the basis for community intensification and revitalization.

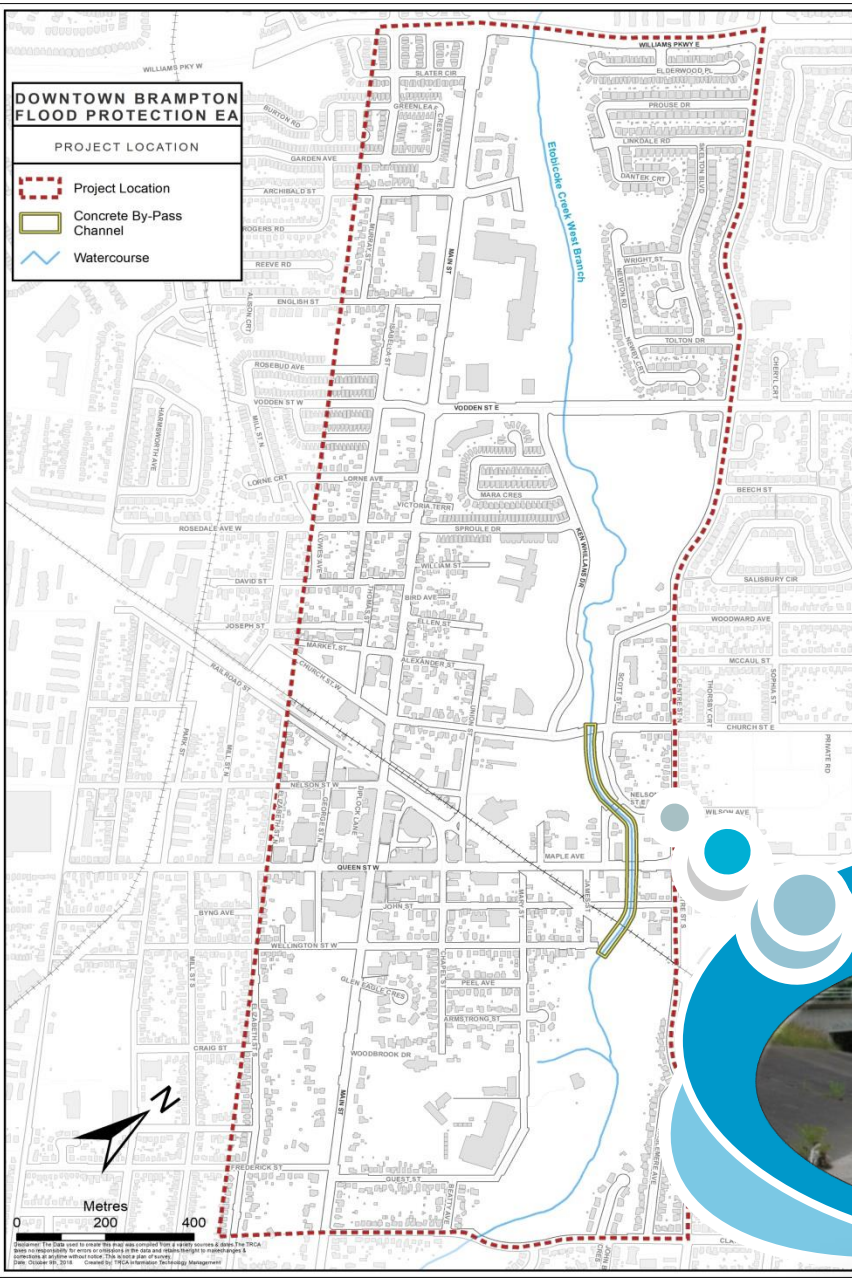
-  Dominion Skate Development (2018 to 2022)
-  Ryerson Academic Building (2020 to 2022)
-  Centre for Innovation (2020 to 2023)
-  Metrolinx Surface Parking Lot (2018 to 2020)
-  Heritage Theatre Block (2020 to 2022)
-  Rose Garden Residences (Post 2022)
-  Downtown Reimagined (2019/20 to 2022)



Project overview – Regional context



Project overview – Study location



Existing flood protection (a concrete-lined bypass channel), cannot convey the current **Regulatory Flood** nor accommodate potential increases in flooding due to climate or upstream land use change.

DBFP will consider alternatives to remove existing flood risk and provide additional capacity to address uncertainty in order to unlock the potential for revitalization of the Downtown Core.

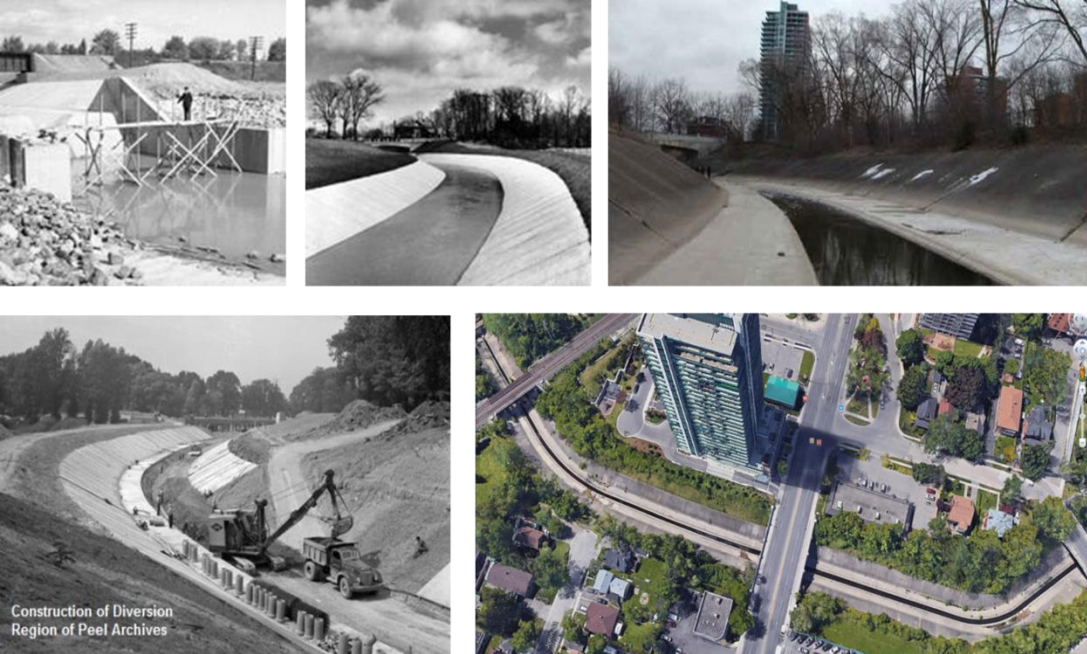
Regulatory Flood

In Ontario, this is the extent of the floodplain that is used to regulate development and define risk. It is based on rainfall from Hurricane Hazel – the largest storm of record in the area.

bypass channel



Project overview – A history of flooding Downtown Brampton



Historically, Downtown Brampton experienced frequent flooding until a concrete by-pass channel was built, in 1952.

600m long, the by-pass channel conveys flows from Church St downstream to Centennial Park.

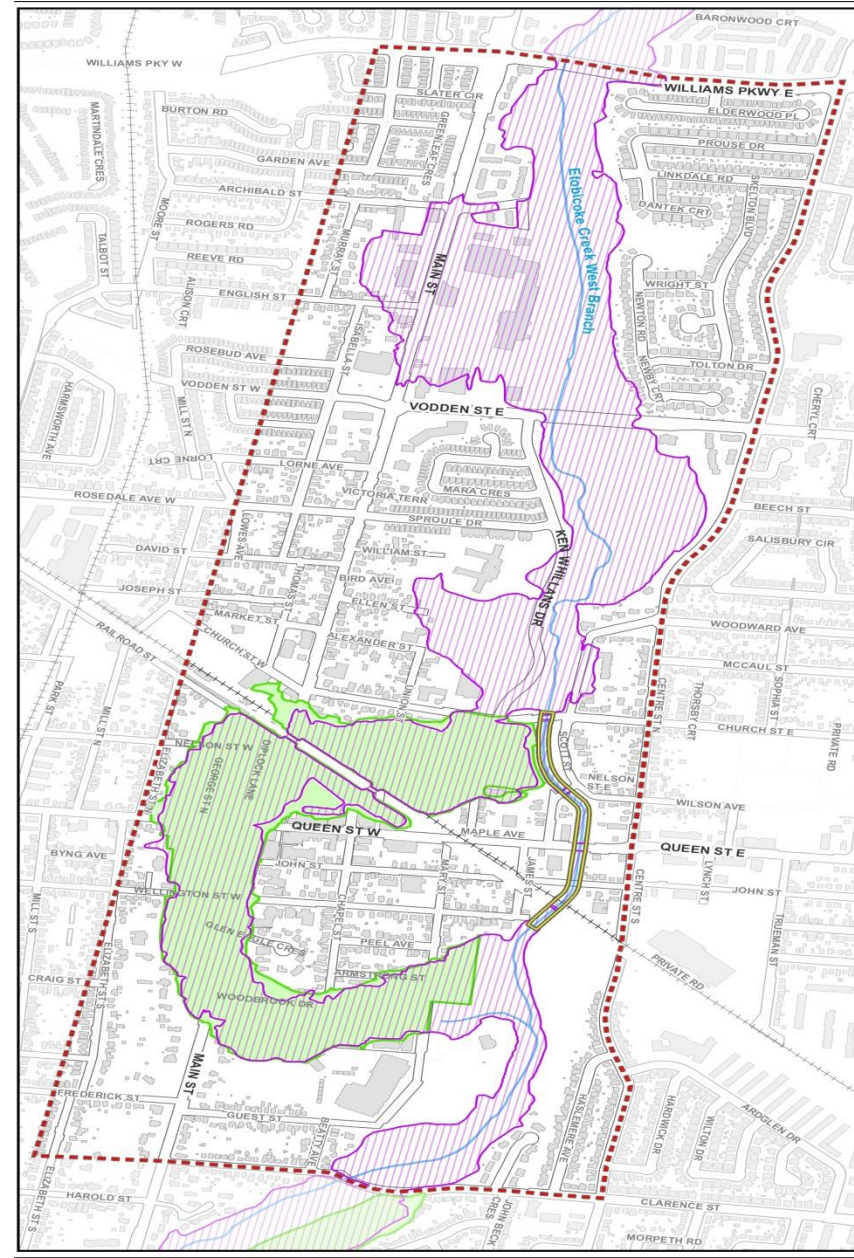
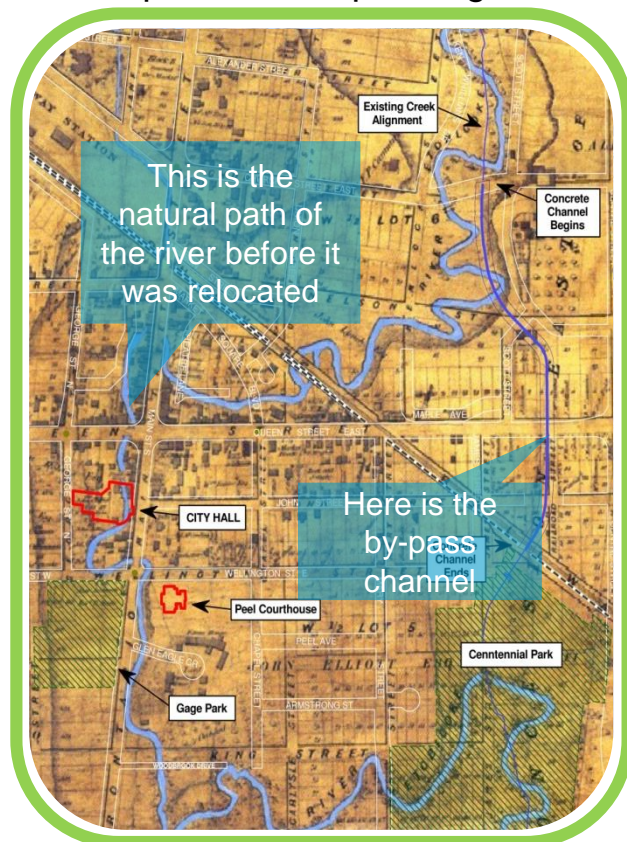
The by-pass channel played a major role in preventing significant damage, and loss of life in downtown Brampton during Hurricane Hazel in 1954.

Despite the by-pass channel, 31 hectares of downtown Brampton remain vulnerable to flooding during the regulatory flood event.

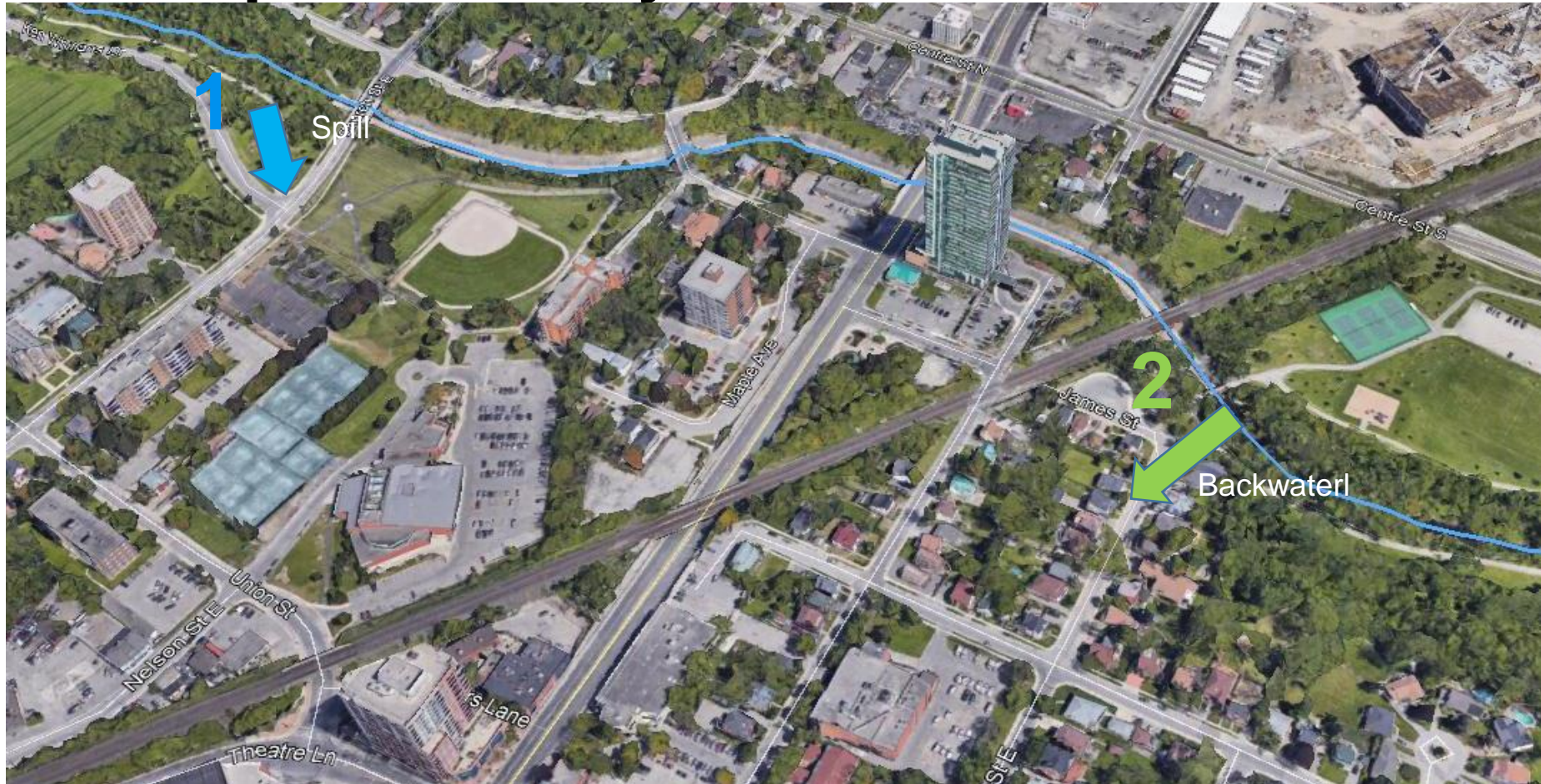
Project overview – Flooding and the SPA

A Special Policy Area (SPA) acknowledges that development already exists in a flood vulnerable area and that to prevent any new expansion of existing uses could negatively impact the local economy.

While the SPA will not allow for land use intensification, it does provide flexibility for individual land owners to use and expand their existing uses by a finite amount, often with lot-specific flood-proofing measures.



Problem – Two routes of flooding and public safety



* **Secondary Problem** – Existing bypass channel is a major defining feature in Downtown Brampton. Yet, despite having 3 road crossings, 1 rail crossing and 1 pedestrian crossing, **public safety considerations** has largely resulted in this major feature representing a major void in the public open space system and for ecological function, since 1952.

Opportunity – Alleviating existing flood risk and facilitating intensification

NOW - 31 hectares of land at risk to flooding currently includes residential, commercial, and institutional land uses, including City Hall.

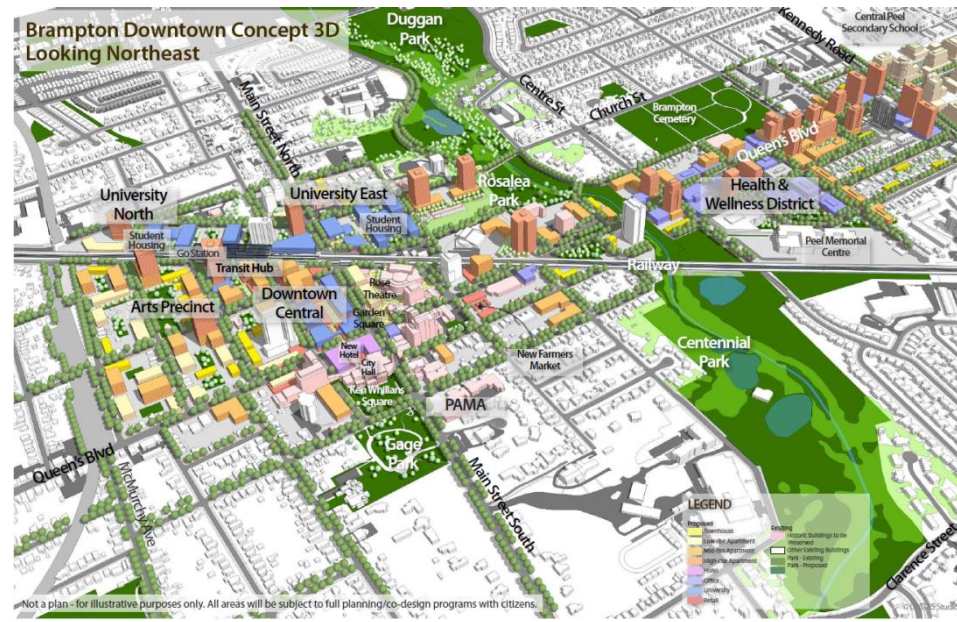
- Flood protection would alleviate risk to many of these existing areas.

FUTURE - Development is restricted in Downtown Brampton because of flood risk.

- Removing flood risk to areas within the SPA allows for revitalization of the downtown core

Riverwalk Parallel Planning Opportunity – Consideration of flood protection options, will also provide opportunities to reconnect the public with the river, to enhance associated open spaces and to improve ecological function.

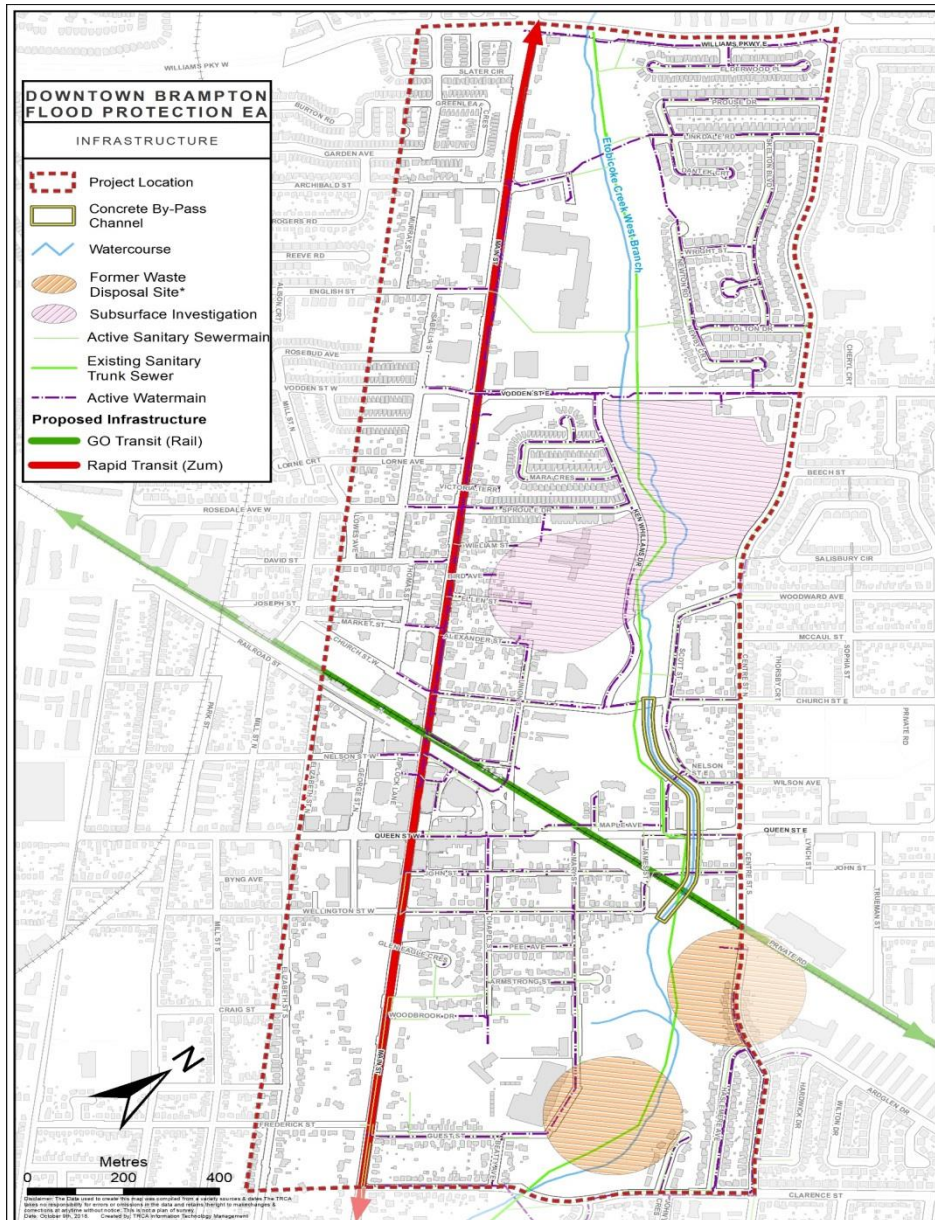
- Opportunities will be fully explored in the broader, parallel Downtown Brampton Riverwalk Planning process.



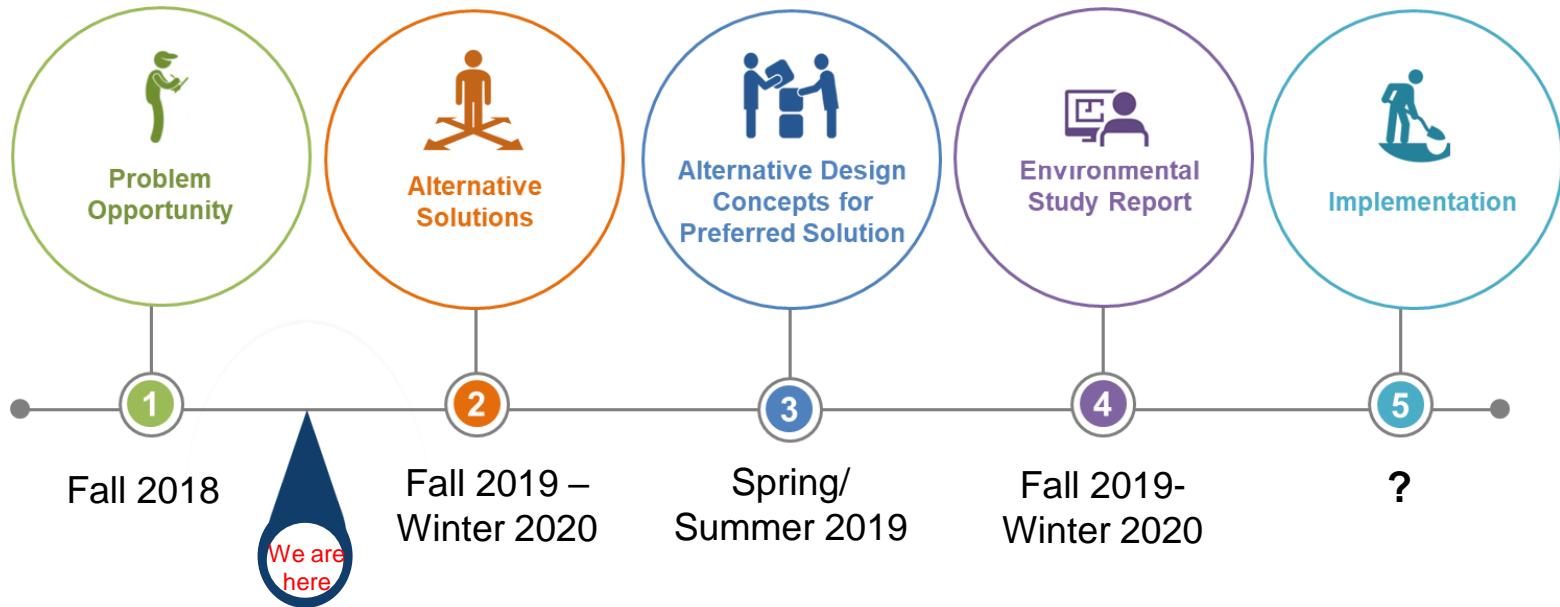
Key challenges – a legacy of infrastructure and land use

Development and evaluation of alternatives must consider:

- 1) Existing roads, rail and bridges in the area
- 2) Future construction plans in development for bridges and transit, including the railway corridor
- 3) Existing stormsewers, sanitary sewers, watermains and utilities in the area
- 4) Historical waste disposal areas
- 5) Existing parks, open spaces and ecological areas
- 6) How to modify existing concrete bypass channel while maintaining current levels of flood protection during construction
- 7) Identified heritage resources within the Study Location, including a cemetery
- 8) City of Brampton aspirations for the Riverwalk project and Brampton 2040 Vision



Municipal Class EA



- Vast majority of works required for achieving flood protection involve the planning, modification, or relocation of existing or municipal infrastructure.
- While opportunities will be provided for public realm, open space and ecological enhancements, those will be defined in the parallel, broader scoped, Riverwalk planning process led by the City of Brampton.
- Thus, the DBFP will be undertaken using a 'Schedule C' procedures pursuant to the Municipal Class EA

Coordinated planning process

DBFP Class EA

- Consolidate findings of past hydraulic modeling feasibility studies
- Define a reasonable short list of alternative solutions from work completed to date
- Develop evaluation criteria to select a preliminary preferred solution
- Select preliminary preferred solution
- **City of Brampton Riverwalk Process** initiates on basis of preliminary preferred solution
- Design Alternatives are developed the **Riverwalk team** based on preliminary preferred solution, with input from DBFP team
- DBFP team further refines evaluation criteria to reflect Alternative Design details
- Select preferred design alternative for flood protection for the DBFP EA
- **City of Brampton Riverwalk** process continues to refine public realm design elements and brings into the broader design process for the rest of the Downtown Brampton.
- The DBFP EA team develops and submits the ESR for approval.

* **NOTE:** coordinated public, stakeholder, agency and Indigenous engagement will be provided throughout the EA process.

External Project Coordination

Planning in the Downtown Brampton area is extensive. DBFP team will also work with the following agencies and their associated projects:

- Metrolinx – railway corridor expansion
- City of Brampton – light rapid transit planning
- City of Brampton – Ken Willans Class EA
- City of Brampton – Official Plan and Secondary Plan updates



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