Welcome to the Brampton LRT Virtual Open House



BRAMPTON **FOR**

Virtual Open House Outline

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- Corridor Segmentation
- Long List Options
- Short List Options
- Potential Stations
- Next Steps

Introduction

Welcome

Welcome to the Virtual Open House for the Brampton LRT Extension

The City of Brampton is working hard to protect the health and wellbeing of our community.

To help protect the health and safety of residents during the COVID-19 pandemic, and following the advice of Ontario's Chief Medical Officer of Health, this open house is being held using a virtual format.

The commenting period for this Open House will be open from June 22, 2020 to July 21, 2020.

Comments can also be emailed to compton.bobb@brampton.ca. or call Tel 905-874-2581 and leave a voice mail.

Introduction About Project

Extending the planned Hurontario LRT from the Brampton Gateway Terminal at Steeles Avenue to the Brampton GO station is a key transit priority and city-building project for the City of Brampton.

Much more than a way to get from A to B, this LRT project will play an important role in the longterm rapid transit network in Brampton and is essential for supporting the sustainable growth and evolution of the Downtown Core and Central Area.

The Study involves evaluating alternative LRT routes along Main Street. In May 2019, the LRT Extension Study was updated to consider three **options**:

- The 2014 Hurontario-Main LRT approved surface route
- A Main-George Street one-way surface loop
- A tunnel from Nanwood Drive to the Brampton GO Station

These **options** will be evaluated for their potential to best address Brampton's current and future needs. This process is now underway.



An option is the combination of LRT route and street cross-sections to be considered for the Brampton LRT Extension.



Study Process

The evaluation of alternative LRT routes is a multi-level process that will occur over the course of the study.

The flow chart below is an overview of the study process. Through the three-level process, the long list of LRT options will be evaluated and narrowed down to a short list. The short list will be evaluated and presented to City Council. City Council will select a preferred option which will be taken through the Transit Project Assessment Process (TPAP), if necessary.



Study Process Continued

The City has identified an initial long list of LRT options and is recommending that a number of options be carried forward for further analysis. The purpose of this online public open house is to present the evaluation of the long list LRT options and receive feedback from the public on the resulting short list.

All comments and input will be considered. A report on what was heard through this online public open house will be published and placed on the project website.

What is the Long List of Options?

The long list of options are all the possible ways to extend the LRT from the Brampton Gateway Terminal at Steeles Avenue to the Brampton GO Station. The long list is evaluated using high-level criteria to select a short list for further analysis.

What is the Short List of Options?

The short list of options are the remaining combination of LRT alignment and roadway crosssections that will be considered for further analysis in the next phase of the study. The remaining short list of options will be evaluated using the Metrolinx Business Case Framework.

Policy Direction

The following policy documents* were reviewed and considered to guide the planning of the Brampton LRT Extension Study.

Municipal Policy

- Official Plan
- Transportation Master Plan Update
- Brampton 2040 Vision

Regional Policy

- Regional Official Plan
- Long Range Transportation Plan
- Healthy Development Assessment
- Sustainable Transportation Strategy
- Vision Zero Road Safety Strategic Plan
- Goods Movement Strategic Plan
- Regional Road Characterization Study
- Freight Travel Demand Management (TDM) Study

Provincial Policy

- Provincial Policy Statement
- A Place to Grow, Growth Plan for the Greater Golden Horseshoe
- Metrolinx 2041 Regional Transportation Plan
- Metrolinx Business Case Framework

^{*} The above is not an exhaustive list of all policy documents reviewed and represents a highlight of relevant policies.

TPAP Environmental and Technical Studies

An important part of the study is assessing the potential impacts to the environment. The Transit Project Assessment Process (TPAP) is a Provincial environmental assessment process developed specifically for the approval of public transit projects. Proponents must complete the prescribed steps of the process within specified time frames. The following environmental components will be considered as part of the Transit Project Assessment Process (TPAP):

- cultural heritage and archaeology
- natural heritage (aquatic and terrestrial)
- contamination
- hydrogeology
- air quality
- noise and vibration

The outcome of these technical studies will be shared with the public at subsequent open houses.

02 Evaluation

Vision and Goals

Vision Statement

The LRT Extension will contribute to a safer and more integrated transportation system to serve the City of Brampton, encouraging civic sustainability, emphasizing transit use and other modes of transportation over traditional automobiles, and supporting the revitalization of Downtown Brampton into an aesthetically beautiful, place-making destination. The vision for the LRT Extension reflects the transportation vision and actions set out in the Brampton 2040 Vision (2018).



Metrolinx Business Case Framework

The long list have been evaluated using the Metrolinx Business Case Framework. Business cases are the high level evaluation categories used by Metrolinx to determine if a transit project is viable for funding. The following is a description of each Metrolinx business case:



Draft Long List Evaluation

The purpose of the evaluation is to identify at least one surface, loop, and underground option to carry forward to the short list.

The draft criteria will be used to evaluate the long list options. The criteria considers all aspects of the environment and aligns with the typical criteria used by the City of Brampton and Metrolinx. Each criteria will be evaluated based on a set of indicators. This evaluation will form the basis of the recommendations for the project.



03 Corridor Segmentation

Study Corridor



Segment C: Wellington to Brampton GO

Segment B: Nanwood to Wellington

Segment A2: Charolais to Nanwood

Segment A1: Shoppers World to Charolais

The study corridor's characteristics are unique and dynamic. In order to better preserve and accommodate the existing conditions of Main Street, the study corridor was divided into segments. Each segment will have its own set of options.



Segment A1: Shoppers World to Charolais







ROW Existing: 35m Planned: 36m Official Plan: 36m

Cross Section Elements Number of lanes: 6 Boulevards: 4-12m Left Turn Lanes



Shoppers Worldsignificant redevelopment site



Segment A2: Charolais to Nanwood







Archdekin Park – 'green' gateway



Retail with large parking lot frontage

ROW Existing: 35m Planned: 36m Official Plan: 36m

Cross Section Elements Number of lanes: 5 Boulevards: 4-12m

Archdekin Park along most of the western edge-'green' gateway.

Back lotted residential development along most of the eastern edge.



Apartment buildings with large setbacks and landscaping



Segment B: Nanwood to Wellington





ROW Existing: 20m Planned: 20m Official Plan: 26-30m

Cross Section Elements Number of lanes: 4 Boulevards: 2.5-4m

Grade separated trail crossing at Nanwood.







Apartment buildings with large front setbacks with driveway and parking



Segment C: Wellington to Station







ROW Existing: 20m Planned: 20m Official Plan: 26-30m

Cross Section Elements Number of lanes: 4* *2 lanes of on-street parking during off-peak hours Boulevards: 2.5-4m

Fine grained building frontages with ground floor retail/ commercial uses contributing to a 'downtown' character.



 Garden Square- Downtown landmark

04 Long List Options

Long List Options

There are three (3) families of options:

- Surface
- Loop
- Underground

The purpose of the evaluation is to identify <u>at</u> <u>least one</u> surface, loop, and underground option to carry forward to the short list.



Surface Options

Surface Options - Segment A: Cross-Section





All boulevard configurations shown are subject to change based on the next phase of the project. Cycling facilities will be considered for all segments.

Surface Options - Segment B: Cross-Sections



The following cross-sections were considered for Segment B:





 Boulevard 2.7m
 Roadway 14.6m

 1.8m Pedestrian Clearway
 7.0m 2 Travel Lanes (3.5m each)

 0.9m Edge Zone
 7.6m 2 LRT Lanes (3.8m each)

Boulevard 2.7m 1.8m Pedestrian Clearway 0.9m Edge Zone

Boulevard Pavement Cycle Track Dedicated LRT Shared LRT Setback/Park/Front Yard

> All boulevard configurations shown are subject to change based on the next phase of the project. Consideration for an active transportation facility in Segment B will be made during the next phase of the project.

LRT in Mixed Traffic

LRT in Dedicated Lanes

	20m ROW	20m RGW
Segment B: Evaluation The options are compared against one another using the following scale: Better Comparable Worse	Bollevart Tám Tavel Lanes (3.5m 8.3.65m) 1.5m - 2.5m Pudestrian Clearway 0m - 2.0m Furnishing Zone	Normalization Normalization Normalization Normalization Normalization Normalization Normalization Normalization Demicidate Zone Normalization Normalization Normalization
Strategic Case	 Longer transit travel time Shorter auto travel time More potential conflicts for drivers with LRT Options are comparable for all other strategic case criteria 	 Shorter transit travel time Longer auto travel time Fewer potential conflicts for drivers with LRT Options are comparable for all other strategic case criteria
Economic Case	Options are comparable for all economic cases crite	• Options are comparable for all economic case criteria
Financial Case	Options are comparable in terms of capital cost	Options are comparable in terms of capital cost
Deliverability & Operations Case	Fewer long term impacts on traffic, access and emergency services	 More long term impacts on traffic, access and emergency services – precludes left turns at intersections, all accesses become right-in-right-out, single lane for garbage removal and winter maintenance, and emergency services
Summary	Carry Forward √	Carry Forward √

Surface Options - Segment C: Cross-Sections



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Segment

The following cross-sections were considered for Segment C:



All boulevard configurations shown are subject to change based on the next phase of the project. Cycling facilities will be considered for all segments.

Segment C: Evaluat	io Right	LRT in Mixed Traffic (Two Lanes)	LRT in Single Dedicated Lane (3 Lanes)
following scale: Better Comparable Worse			
	0 0 0 0 Boulevard 3.4m* Roadway 13.15m* Boulevard 3.45m* 2.4m Podemic Clasmay 6.5m 2.127 Lanes (3.25m acb) 2.4m 2.4m 1.5m Edge Zone 6.5m 2.127 Lanes (1.15m & 3.5m) 2.4m 2.4m	Construction C	Booleward 4.9m Readwary 10.4m Booleward 4.8m 2.1m Periodinian Claurence 6.0m 2 Trived Lame (0.3m each) 2.1m Periodinian Claurence 2.1m Furnishing Zone 3.8m LRT Lare 2.1m Furnishing Zone
Strategic Case	 Shorter transit travel time Shorter auto travel time Less potential conflict for drivers with LRT Shorter transfer distance between LRT Shorter transfer distance between LRT and Brampton GO Shorter transfer distance between LRT and Bus Terminal More potential for conflicts with cyclists Does not incorporate Downtown Reimagined Streetscape elements More cultural heritage features potentially affected Options are comparable for all other strategic case criteria 	Longer transit travel time Longer auto travel time More potential conflict for drivers with LRT Shorter transfer distance between LRT and Brampton GO Shorter transfer distance between LRT and Bus Terminal Less potential for conflicts with cyclists Incorporates Downtown Reimagined Streetscape elements More cultural heritage features potentially affected Options are comparable for all other strategic case criteria	 LRT and Brampton GO Longer transfer distance between LRT and Bus Terminal
Economic Case	Options are comparable for all economic case criteria	Options are comparable for all economic case criteria	Options are comparable for all economic case criteria
Financial Case	Higher capital cost (two vehicle lanes and two LRT lanes)	Higher capital cost (two vehicle lanes and two LRT lanes)	Lower capital cost
Deliverability & Operations Case	 Long term impacts to access due to curbside LRT in dedicated lanes Most preferred from an LRT operations • perspective due to LRT in dedicated lanes 	Fewer long term impacts to access as LRT is in mixed traffic lanes Less preferred from an LRT operations perspective due to LRT in mixed traffic – potential reliability issues	 curbside LRT in dedicated lane (west side) Least preferred from an LRT operations perspective due to single track operation – potential reliability issues
Summary	Carry Forward √	Carry Forward √	Do Not Carry Forward X

Loop Options

Loop Options: Cross-Sections

Legend

Boulevard Pavement

Cycle Track

Shared LRT

Dedicated LRT

Setback/Park/Front Yard

Segment



The following cross-section is to be considered for Segment C:



All boulevard configurations shown are subject to change based on the next phase of the project. Cycling facilities will be considered for all segments.

Loop Options: Alignments

Segment C



The following alignments were considered for Segment C:



Note:

LRT in curbside mixed traffic lanes on Nelson, George, and Wellington St.

Loop Options: Evaluation

The options are compared against one another using the following scale:

Better	Comparable	Worse
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Strategic Case	 Shorter transit travel time Longer transfer distance between LRT and Brampton GO Longer transfer distance between LRT and Bus Terminal Fewer cultural heritage features potentially affected Options are comparable for all other strategic case criteria 	 Longer transit travel time Shorter transfer distance between LRT and Brampton GO Shorter transfer distance between LRT and Bus Terminal More cultural heritage features potentially affected Options are comparable for all other strategic case criteria
Economic Case	Options are comparable for all economic case criteria	Options are comparable for all economic case criteria
Financial Case	Lower capital cost	Higher capital cost (longer length and underground section)
Deliverability & Operations Case	 More desirable LRT alignment Fewer short term and long term construction impacts Fewer impacts on access 	 Less desirable LRT alignment due to tight curves and slow operating speed in underground section Requires tunnel under CN Rail, may have temporary construction impacts Requires long portals in existing Brampton GO parking lot and on Railroad Street – long term impacts on access
Summary	Carry Forward √	Do Not Carry Forward X

Underground Options

Underground Options: Cross-Sections



The following cross-sections are to be considered for Segment B and C:



Note: The LRT runs at the surface in Segment A and underground in Segment B and C.

Underground Options: Alignments



The following alignments were considered for the Underground Options (Segment C):





Note:

The LRT runs at the surface in Segment A and underground in Segment B and C.

Underground Options: Evaluation

The options are compared against one another using the following scale:

Better	Comparable	Worse
Dellei	Comparable	10130





Summary	Carry Forward √	Carry Forward √
Deliverability & Operations Case	 Potential major underground utility impacts along Main Street between Wellington Street and the Brampton GO Potential to be extended north in the future 	 Avoids potential major underground utility impacts along Main Street between Wellington Street and the Brampton GO Potential to be extended north in the future
Financial Case	Higher capital cost because of additional underground station at Wellington; however, would be comparable otherwise	Lower capital cost without additional underground station at Wellington; however, would be comparable otherwise
Economic Case	Options are comparable for all economic case criteria	Options are comparable for all economic case criteria
Strategic Case	 Alignment does not preclude a station at Main/Wellington Street; therefore, serves more people and jobs Longer transfer distance between LRT and Brampton GO Longer transfer distance between LRT and Bus Terminal Options are comparable for all other strategic case criteria 	 Alignment precludes a station at Main/Wellington Street; therefore, serves fewer people and jobs Shorter transfer distance between LRT and Brampton GO Shorter transfer distance between LRT and Bus Terminal Options are comparable for all other strategic case criteria

05 Short List Options

Short List Options

The purpose of the evaluation is to identify <u>at</u> <u>least one</u> surface, loop, and underground option to carry forward to the short list.

Based on the evaluation of the long list, the following are the short list options to be carried forward for further analysis.



Short List: Surface Options













 Boulevard 2.7m
 Roadway 14.6m

 1.8m Pedestrian Clearway
 7.0m 2 Travel Lanes (3.5m each)

 0.9m Edge Zone
 7.6m 2 LRT Lanes (3.8m each)

Boulevard 2.7m 1.8m Pedestrian Clearway 0.9m Edge Zone



All boulevard configurations shown are subject to change based on the next phase of the project. Cycling facilities will be considered for all segments.

Short List: Loop Options





2.1m Pedestrian Clearway 6.6m 2 Travel Lanes (3.3m each) 2.1m Pedestrian Clearway 2.7m Furnishing Zone 2.7m Furnishing Zone 3.8m LRT Lane

20m ROV

Roadway 14.15m*

anes (3.5m & 3.65m)

7.0m 2 Shared LRT Lanes (3.5m each

5m-2.5m

Note: LRT in curbside mixed traffic lanes on Nelson, George, and Wellington St.





All boulevard configurations shown are subject to change based on the next phase of the project. Cycling facilities will be considered for all segments.

Short List: Underground Options









All boulevard configurations shown are subject to change based on the next phase of the project. Cycling facilities will be considered for all segments.

06 Station Locations

Potential Station Locations: Surface/Loop Options



This map represents the area within a 500 m (5 minute) walk of the potential station locations.

The number of stations and the location of stations are subject to change based on further design.

Potential Station Locations: Underground Options



This map represents the area within a 500 m (5 minute) walk of the potential station locations.

The number of stations and the location of stations are subject to change based on further design.

Proposed Underground Station

500m Walkshed

07 Next Steps

Thank you for attending the Brampton LRT **Extension Virtual Open House!**

To provide comments on the materials presented as part of the Virtual Open House, you can fill in the feedback questions within the virtual open house website. Comments can also be emailed to compton.bobb@brampton.ca or call Tel 905-874-2581 and leave a voice mail. The commenting period for this Open House will be open from June 22, 2020 to July 21, 2020.

NEXT STEPS

- Following this virtual open house, the project team will move into the next phase of the study which includes:
- Reviewing public feedback and confirming the recommended short list
- Preparing more detailed designs for each short listed option
- Evaluating the short list and preparing a preliminary design business case (PDBC) to ultimately select a preferred option
- Presenting the evaluation of short list at the next public open house

Your input is very valuable to us!

Visit our website to get information about the study or sign-up for our mailing list and study notifications.

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