METROLINX

Durham-Scarborough Bus Rapid Transit

Welcome

Thank you for attending **Public Information Centre #1** for the Durham-Scarborough Bus Rapid Transit Project.

www.metrolinxengage.com/dsbrt

dsbrt@metrolinx.com

METROLINX Durham Region Transit DURHAM REGION IBI PARSONS

What do you want to know?

Look for these symbols and colours to find related content:

- Project Information
- Initial Business Case
- Bus Rapid Transit
- Technical Information
- Environmental Studies

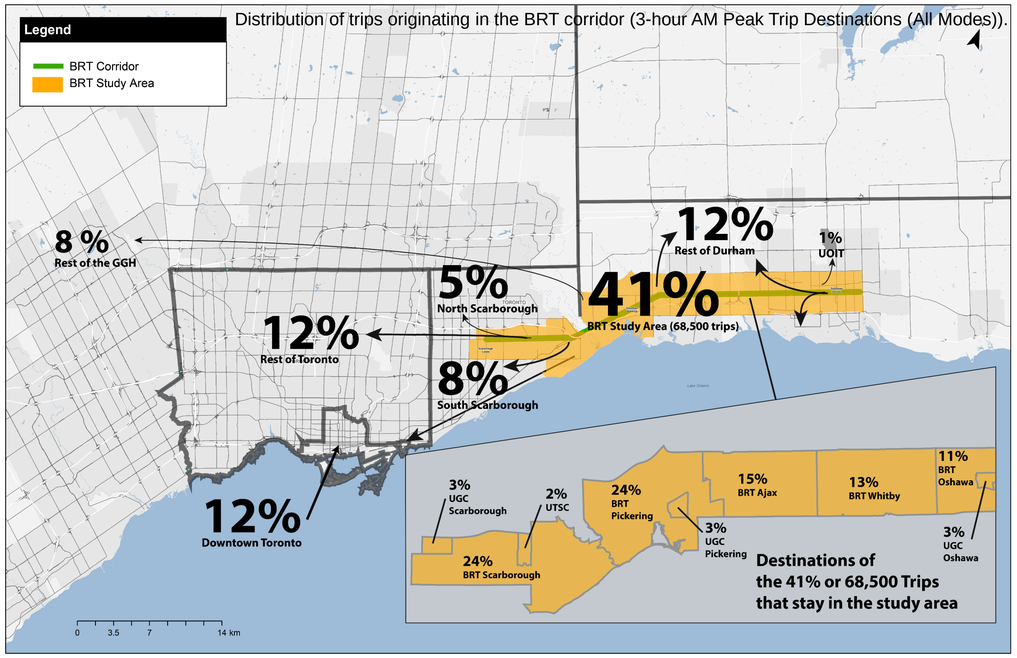
What is the Durham-Scarborough BRT?

The Durham-Scarborough Bus Rapid Transit project proposes approximately 36 kilometres of dedicated transit infrastructure, connecting downtown Oshawa, Whitby, Ajax, Pickering and Scarborough. This project builds on the existing PULSE service and will provide more dedicated transit infrastructure along Highway 2 and Ellesmere Road to connect into Scarborough Centre.

Problem and Opportunity Statement:

The Highway 2 Bus Rapid Transit corridor is a crucial transportation corridor connecting people through the Region of Durham and Scarborough. The corridor has varied traffic, land use conditions and constraints.

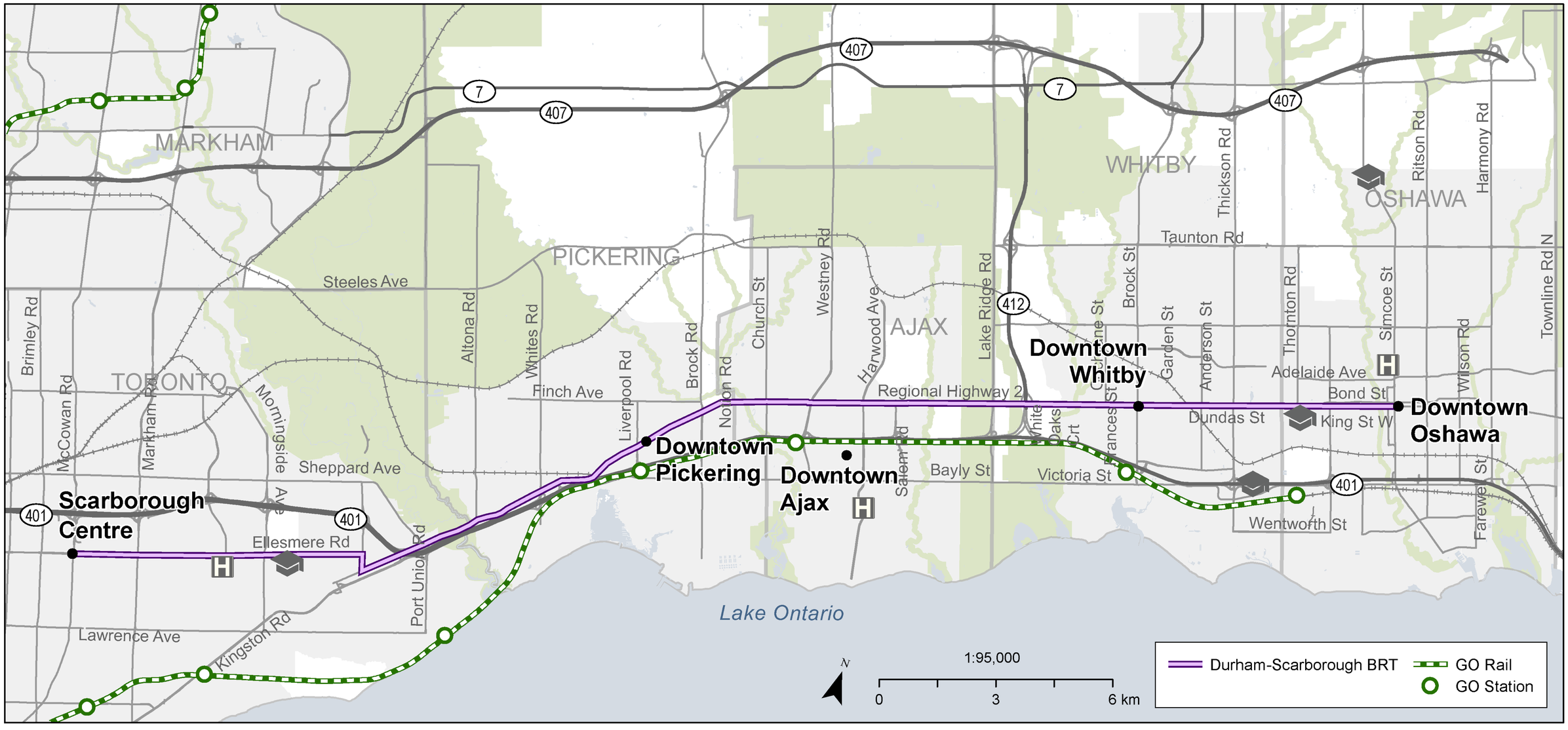
With rapid growth in the past decade and an expectation for this growth to continue into the future, demand for travel along the corridor will continue to increase and a higher capacity form of transit will be needed to link communities and employment on both sides of the Toronto-Durham boundary.



Source: 2011 Transportation Tomorrow Survey, Durham-Scarborough BRT Initial Business Case 2018

Tell us your thoughts on the Problem and Opportunity Statement by filling out your comment sheet.

Durham-Scarborough Bus Rapid Transit Corridor



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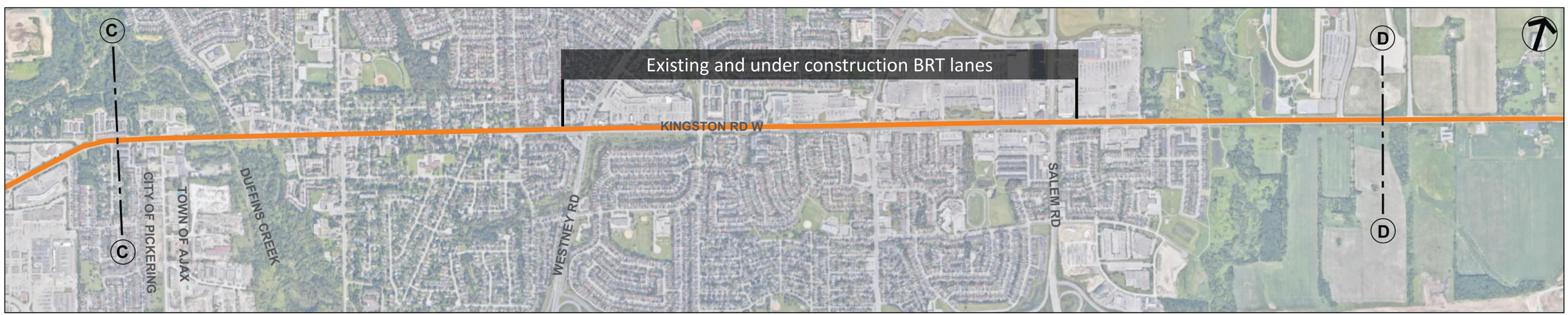
Study Area


SCARBOROUGH TOWN CENTRE
MCCOWAN RD
MARKHAM RD
HIGHLAND CREEK
NEILSON RD
MORNINGSIDE AVE
A
A
A
A
ELLESMERE RD
MEADOWVALE RD
KINGSTON RD
HIGHWAY 2A
ROUGE RIVER
KINGSTON RD
HIGHWAY 401
CITY OF TORONTO
LITTLE ROUGE CREEK
ROUGE RIVER
CITY OF PICKERING
B
B

Study Area


Existing curbside BRT lanes
Existing curbside BRT lanes
Existing curbside BRT lanes
KINGSTON RD
KINGSTON RD
SHEPPARD AVE
DIXIE RD
WHITES RD
HIGHWAY 401
BROCK RD
B
B
C
C


Existing and under construction BRT lanes
KINGSTON RD W
CITY OF PICKERING
TOWN OF AJAX
DUFFINS CREEK
WESTNEY RD
SALEM RD
C
C
D
D

Study Area

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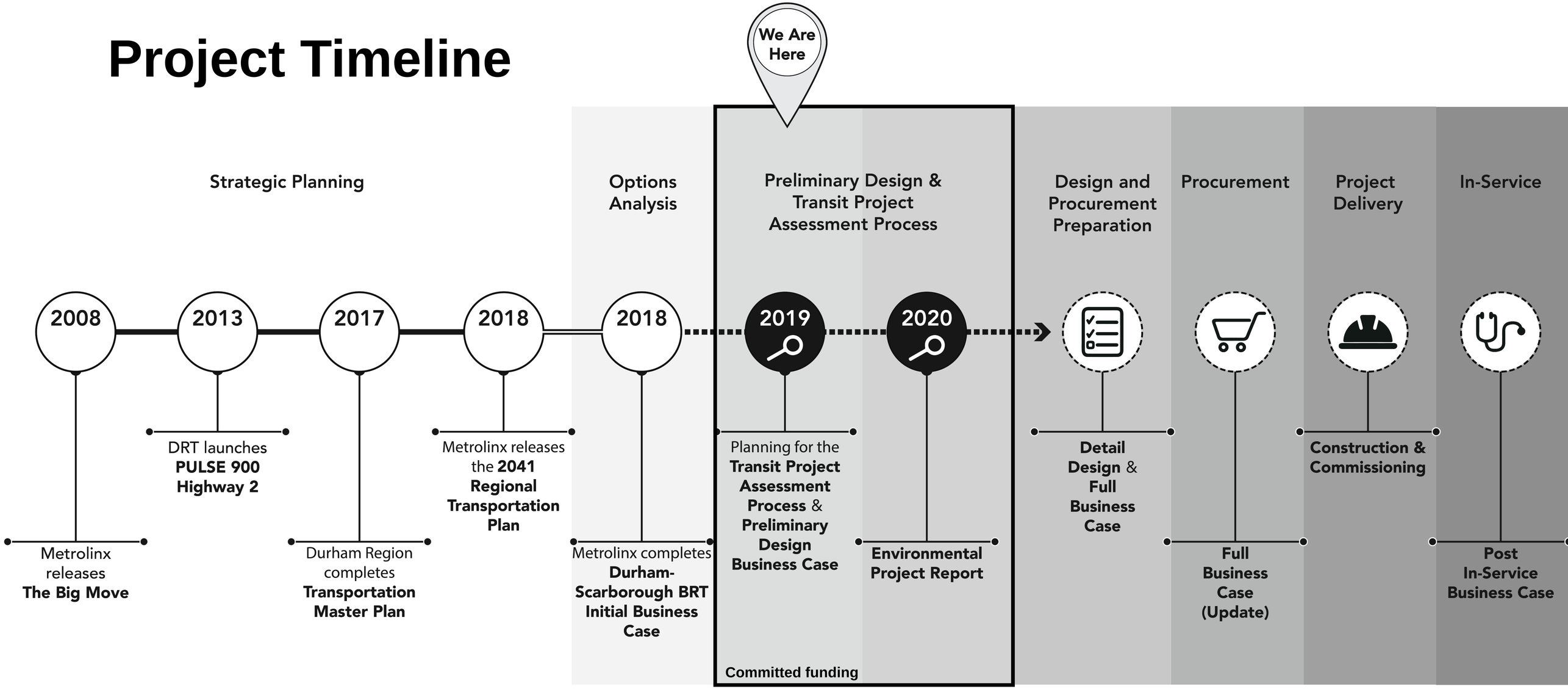
Project Timeline



What is an Initial Business Case?

As required by Metrolinx's Business Case Policy for capital infrastructure investments above $50 million, an Initial Business Case was developed for the Durham-Scarborough BRT project.

The Initial Business Case sets out the rationale for why an investment should be implemented to solve a problem or address an opportunity. It analyzes options for addressing that problem or opportunity and provides a recommendation to further refine in the next business case, the Preliminary Design Business Case.

Business Cases provide evidence to decision-makers, stakeholders and the public as a crucial part of transparent and evidence-based decision making processes.

Initial Business Case Findings

This corridor is expected to host approximately 215,000 more residents and 66,000 more jobs in 2041. Higher capacity transit is needed to link communities and employment.

Investing in rapid transit will generate significant benefits to the Region, providing quality transit services to access destinations across Durham Region and the City of Toronto.

The Durham-Scarborough BRT Initial Business Case is available on the Metrolinx website.

162
Kilotonnes of CO^2 Reduced

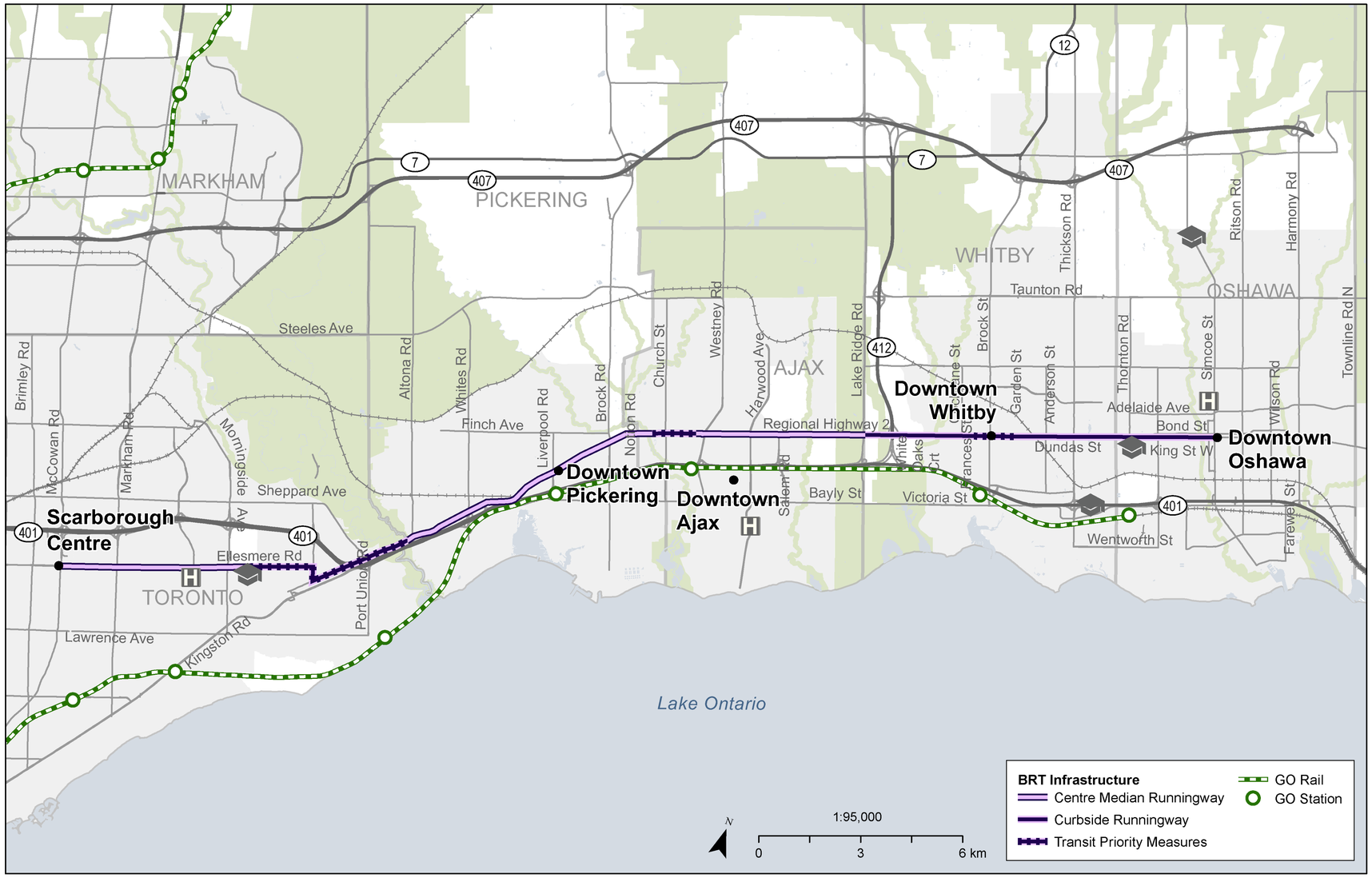
9.5
Minutes Saved Per Rider

208
Fewer Traffic Related Injuries or Deaths

686
Millions of Dollars of Economic Benefits

1.29
Benefit to Cost Ratio

Initial Business Case Recommended Option



Initial Business Case Recommended Option

The recommended hybrid option is a mix of centre-median lanes, curbside lanes and transit priority measures, as shown on the map on the previous board.

Transit priority measures will be designed through specific “pinch points” to maintain reliability of BRT service along the corridor.

Transitions between the different right-of-way options will be evaluated to determine the solution that best provides transit priority while maintaining traffic flow.

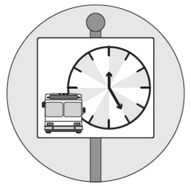
The map is the starting point for more detailed analysis that will be completed as part of this project.

The Preliminary Design Business Case will refine this recommended option, clarify the scope and cost of the project, and is the next step towards procurement and construction funding for the project.

Bus routing options

Identified Highway 2 and Ellesmere Road as the optimal transit route.

Bus service options

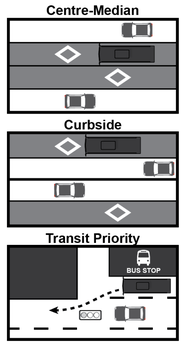


Recommended buses every 5 minutes in Durham Region, and a bus every 2 minutes in Scarborough.

Stop spacing options

Recommended average stop spacing of 700 to 800 m.

Right-of-way options



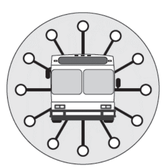
Recommended a hybrid option, with a mix of centre-median lanes, curbside lanes, and transit priority measures.

What is Bus Rapid Transit?

Dedicated lanes for buses, where feasible, resulting in shorter travel times and more reliable transit service.

Frequent service with a bus every 5 minutes or less during peak hours.

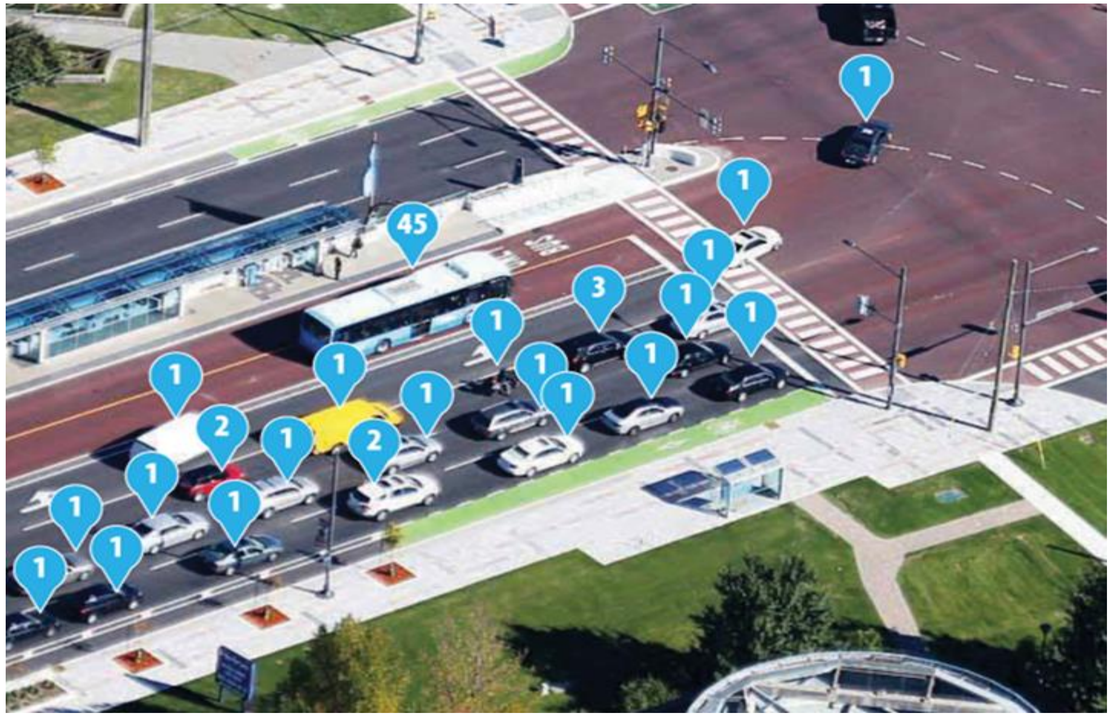
Smart signals on Highway 2 are already installed and will adapt to support smoother traffic flow for all commuters – on buses, in personal vehicles, and on bicycles.



Better connections: TTC, DRT and GO Transit routes can use the dedicated lanes and share the same stops, making it easier to travel throughout the region.

Reliable service with buses that are separated from general traffic in most areas.

Dedicated lanes for buses will be needed in the future.

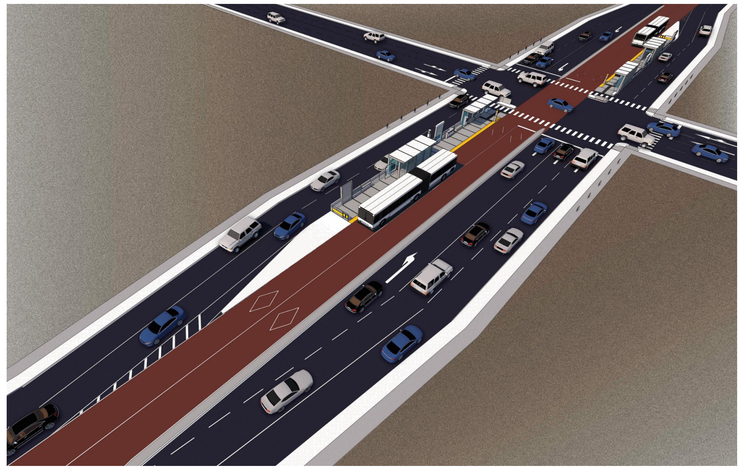


VIVA Rapidway in York Region.

Source: www.vivanext.com

BRT Lane Options

Centre-median bus lanes



- Dedicated transit lanes in the centre of the road.
- Stops in the centre of the road at signalized intersections.
- Centre raised island restricts left-turns into and out of unsignalized side streets and driveways.

Curbside bus lanes

- Dedicated transit lanes on the outside of the road.
- Stops on the side of the road at signalized intersections.

In general, dedicated transit lanes are preferred, where feasible:

✓ **Reliable**

High quality and most reliable Rapid Transit service.

✓ **Wise Investment**

Multiple service providers can use the lanes, supporting improved network integration.

✓ **Safe**

Fewer conflict points between turning traffic and transit.

✓ **Walkable**

More opportunities for streetscaping in between Rapid Transit stops.

✓ **Future proof**

Dedicated lanes are more flexible to future uses such as LRT.

BRT Vehicles

PULSE bus

Vehicles are accessible with low-floor entry and visual and audio guidance.

Vehicles are high capacity carrying up to 90 people.


Articulated TTC bus

Source: NGT news

Articulated VIVA bus

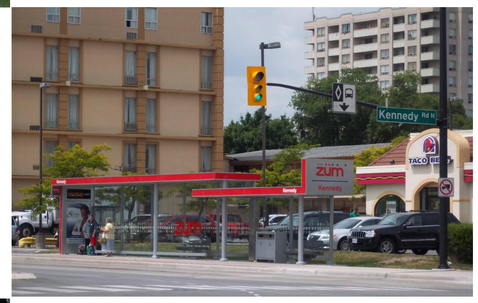
Vehicles run primarily in dedicated lanes and have priority through intersections to maintain service reliability.

Transit agencies are researching alternative energy systems.

BRT Stops

Rendering of proposed centre median Bus Rapid Transit stop in London, Ontario.

Bus Rapid Transit curbside stop in Brampton, Ontario.



Bus Rapid Transit curbside stop in Durham Region.

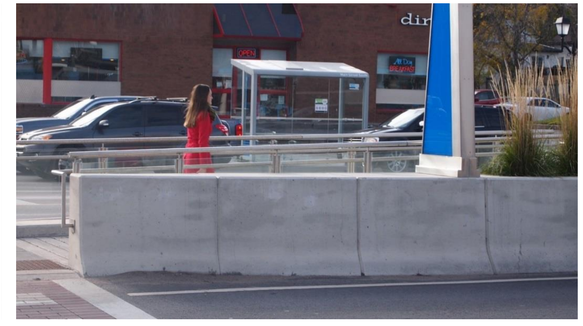
Rendering of centre median Bus Rapid Transit stop in Ottawa, Ontario.

Accessing Centre Median Stops

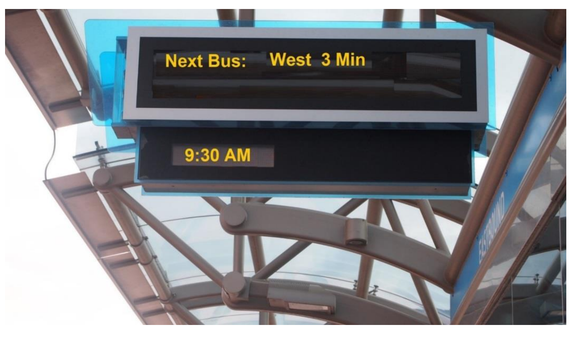
1 Jane arrives at her stop and pushes the “push to walk” button.

2 …and waits to cross the street.

3 When the walk sign goes on, Jane crosses one direction of traffic to get to the westbound platform – her direction of travel.

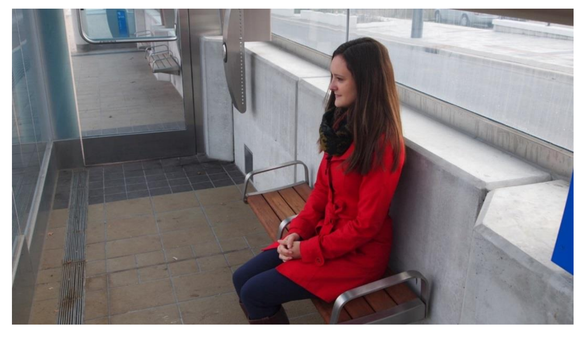


4 Jane gets to the stop platform and walks toward the boarding area.

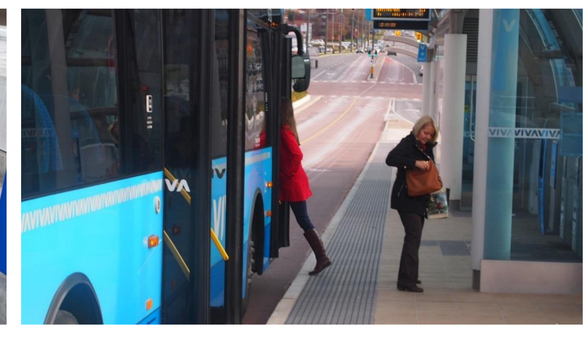


5 She checks the bus arrival information and sees that her bus will arrive in 3 minutes.

6 Great! That’s enough time for her to pay her fare using her PRESTO card before she boards the bus.

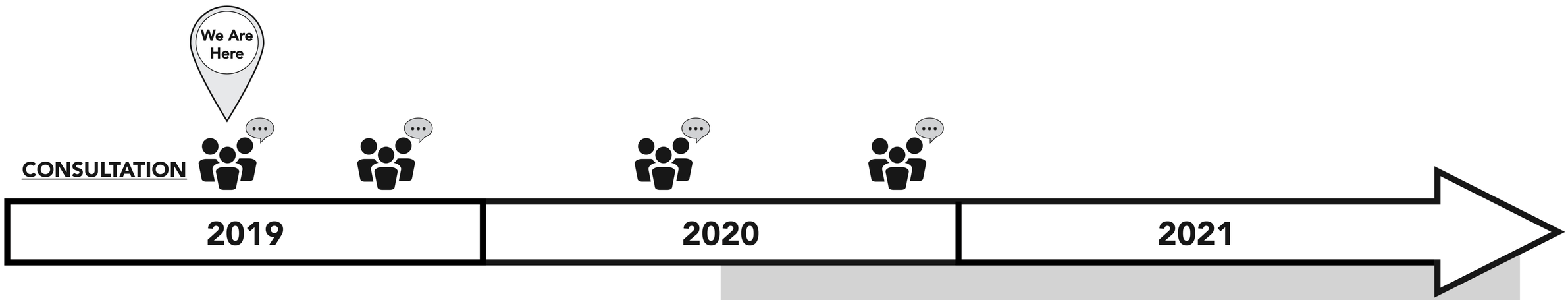


7 Jane waits for her bus on the bench in the platform shelter.



8 Shortly after, her bus arrives, and she’s on her way.

Study Process



PRE-PLANNING

- Complete Environmental Studies
- Develop Alternative Designs
- Consult with agencies, Indigenous Communities, stakeholders and the public
- Assess Impacts and Mitigation
- Develop Preliminary Engineering Design
- Complete Preliminary Design Business Case
- Draft Environmental Project Report (EPR)

TRANSIT PROJECT ASSESSMENT PROCESS

- **Notice of Commencement**
- 120 days
  - Consult with agencies, Indigenous communities, stakeholders and the public on Draft EPR and Preliminary Engineering Design
  - Document findings in Final EPR
- **Notice of Completion**
- 30 days
  - Public Review of Final EPR and opportunity for objections and comments
- 35 days
  - Minister's Review & Decision
- **Statement of Completion**

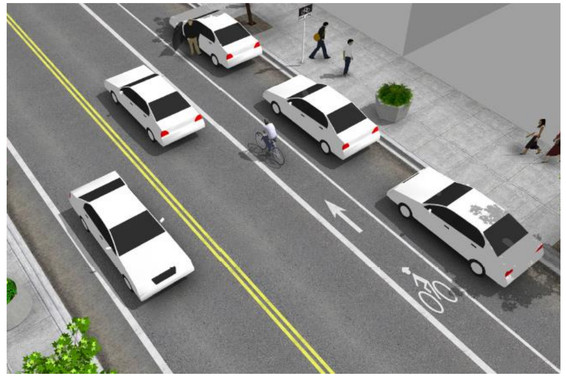
What is Preliminary Design?

During preliminary design, the following elements will be decided:

- Number and locations of stops
- Transitions between transit lane options
- Intersection layouts and lane configurations
- Location and type of sidewalks, bike lanes and streetscaping
- Bridge and structural design

The following roadway elements will be reviewed:

- Driveways and property impacts
- Traffic and parking operations and impacts
- Utility relocations, where needed
- Tree planting opportunities



Bike lane with parking

Cycle track with physical barrier

Street trees in planters

Street trees in grates

Pinch Points along the Corridor

There are a number of constrained locations on the corridor, which will require more detailed design and analysis:

- Ellesmere Road – east of Military Trail
- Pickering Village (in Ajax)
- Downtown Whitby
- Downtown Oshawa
- CN and CP bridge locations

This study will focus on options to improve and maintain transit reliability.

The design and operation of the transition points will focus on maintaining reliability of BRT service through these sections, while minimizing impacts to the character of these neighbourhoods and providing transitions that are easily understood by all road users.

Ellesmere Road – East of Military Trail

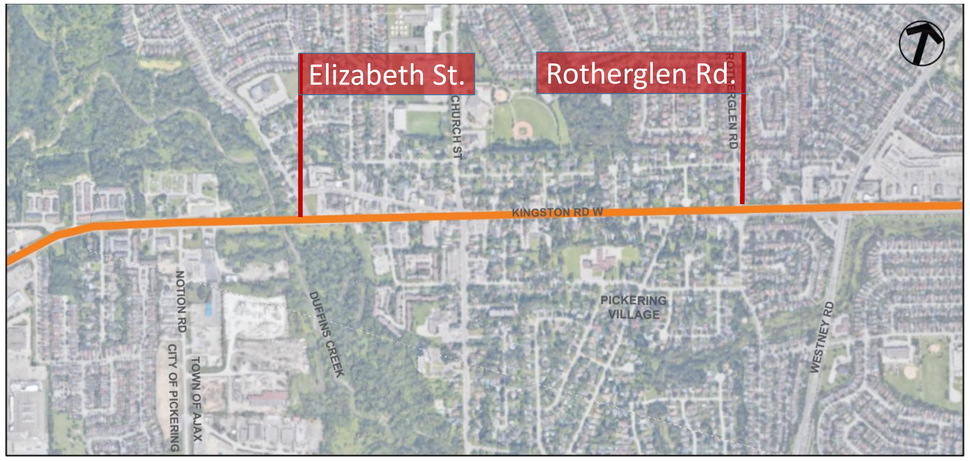
- 4-lane, undivided roadway
- Predominantly a residential area with local side street and driveway accesses
- Limited capacity for widening
- Focus on options to improve transit priority

Tell us your thoughts on the pinch points and route ends by filling out your comment sheet or by adding sticky notes to the map.

Pinch Points along the Corridor

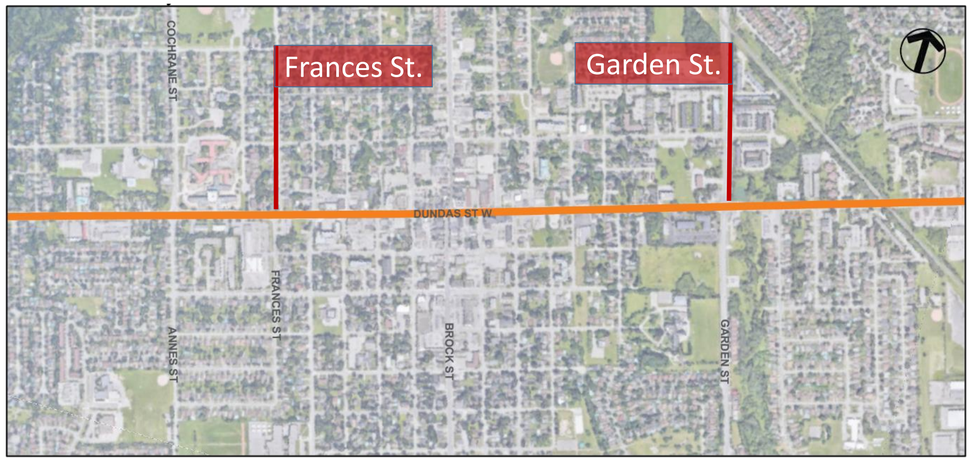
Pickering Village (in Ajax)

- Historic downtown with narrow right-of-way between Elizabeth Street and Rotherglen Road.
- Transition to dedicated lanes will happen beyond the limits of the Village.
- No on-street parking that can be converted.
- Potential solutions identified in the IBC included transit queue jump lanes and traffic signal optimization.



Downtown Whitby

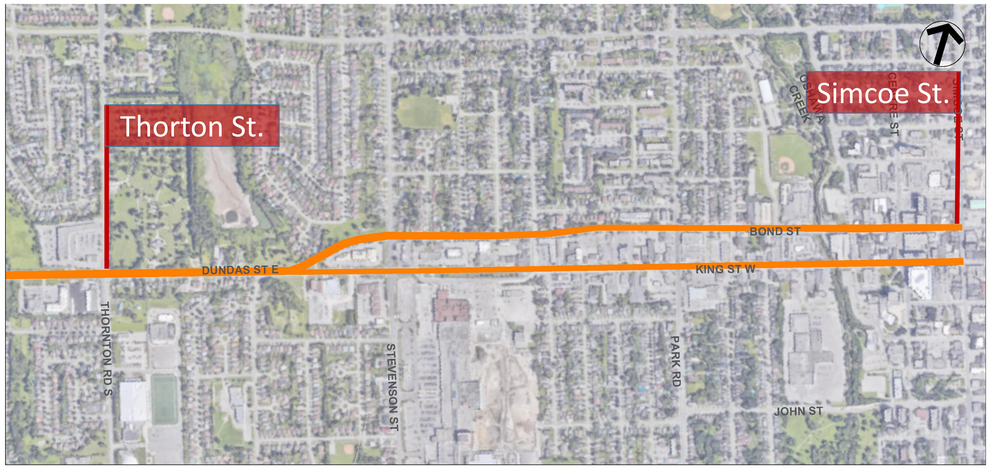
- Downtown with narrow right-of-way between Frances St. and Garden St.
- Transition to dedicated lanes will happen beyond the limits of the downtown area.
- The current on-street parking in downtown Whitby will be considered in the analysis.
- Potential solutions identified in the IBC included transit queue jump lanes and traffic signal optimization.



Pinch Points along the Corridor

Downtown Oshawa

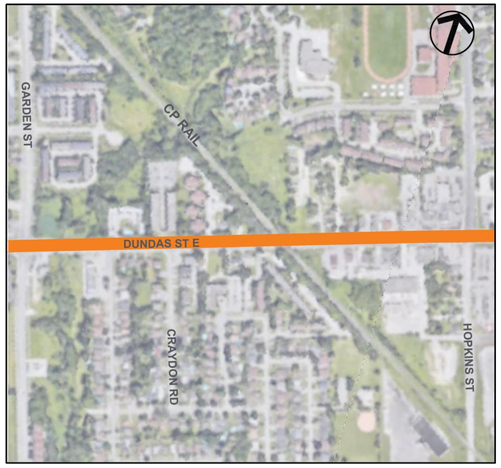
- The IBC recommended BRT operation through Oshawa on the one-way couplet.
- Potential options identified in the IBC included curbside bus lanes in the same direction as, or opposite to, general traffic.



CN and CP bridge locations

- CN Pickering crosses over the roadway on a single-track bridge.
- An Environmental Assessment has been completed to construct a new bridge to accommodate dedicated transit lanes and bike lanes.

- CP Whitby bridge crosses over the roadway on a two-track bridge (with only one operational track).



West and East Ends of the Corridor

West End of the corridor is at Scarborough Centre:

- Buses will serve the new Scarborough Centre Station.
- How the buses loop into and out of the station is being developed jointly with the Scarborough Subway team.
- Stop placement, traffic control, transfers and bus movements will be reviewed to find the optimal solution.

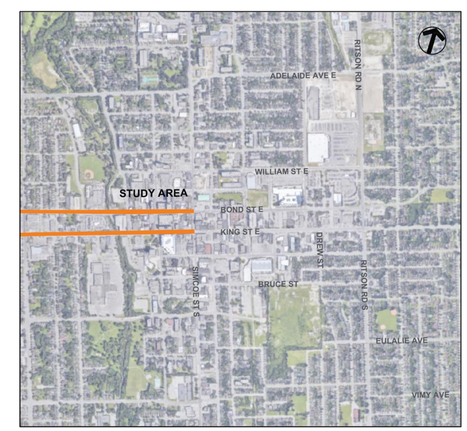
Tell us your thoughts on the pinch points and route ends by filling out your comment sheet or by adding sticky notes to the map.

East End of the corridor is near Simcoe Street in Oshawa:

- Connections to future rapid transit on Simcoe Street are critical for good service and a good transfer to the route serving Durham College / Ontario Tech University.
- Stop placement, traffic control, transfers and bus movements will be reviewed to find the optimal solution.

West End

East End



Draft Evaluation Criteria

The following draft criteria will be used to evaluate the design options. The criteria consider all aspects of the environment and align with the typical criteria used by the City of Toronto and Durham Region.

Each criteria will be evaluated based on a set of indicators. This evaluation will form the basis of the recommendations for the project.

Compatible with Adjacent Communities
- Noise, vibration and air quality
- Community character
- Area business viability
- Development incentives

Protect Historical, Cultural and Archaeological Resources
- Archaeological resources
- Cultural heritage resources
- Protection of public open spaces

Protect, Improve and Restore the Natural Environment
- Surface water and groundwater
- Aquatic and terrestrial habitat
- Flora and Fauna
- Ecological linkages

Increase Transit Ridership, Quality and Access
- Connectivity with other transit services
- Quality and reliability of transit service
- Accessibility to transit
- Safety and security

Support A Sustainable Transportation System
- Pedestrian and cycling networks
- Transportation system capacity
- Goods movement

Connect Major Facilities and Support Lands Designated for Development
- Catchment potential
- Transit-oriented development

Provide a Wise Investment
- Existing and future infrastructure investments
- Capital costs
- Operation and maintenance costs
- Land acquisition costs

Tell us your thoughts on the evaluation criteria by filling out your comment sheet.

Construction and Deliverability

- Construction is planned to occur in phases. Areas with existing congestion should be prioritized.
- The existing curbside lanes already in place through Pickering and Ajax have been constructed to minimize additional construction costs.
- Construction timing will depend on funding, property acquisition, permits and approvals.
- The corridor design will consider potential future conversion to LRT.

Environmental Studies

To support the environmental assessment process, which will follow the Transit Project Assessment Process, a number of background studies will be completed to document the existing conditions in the corridor and assess any potential impacts the BRT project could have.

The studies will also document the potential mitigation measures that could be applied to reduce or eliminate any potential impacts.

Work is just beginning on these background studies, and field teams will be in the corridor throughout 2019 collecting and assembling the data.

Data collection work is underway, gathering background information from a variety of sources including the Conservation Authorities, various government agencies and existing databases. Previous studies in the corridor are also being reviewed.

The findings will be presented at future public meetings. Mitigation measures proposed through the studies will be used by the design team to review and improve the design.

The following studies will be undertaken to assess all aspects of the environment:

Natural Environment Studies

- Natural Environment Study
- Tree Inventory
- Noise and Vibration Assessment
- Air Quality Assessment

Social Environment Studies

- Stage 1 Archaeological Assessment
- Cultural Heritage Resource Assessment
- Socio-economic and Land Use Study

Geotechnical Studies

- Geotechnical Assessment
- Phase 1 Environmental Site Assessment

Technical studies will form part of the Environmental Project Report that will be posted for public review.

Providing Feedback

Thank you for attending. We appreciate your feedback.
Please let us know your thoughts by:

- Completing a comment sheet and dropping it in a comment box.
- Talking to a project team member.
- Emailing or mailing your comment sheet to the project team, at dsbrt@metrolinx.com or the address listed below.
- Filling out the online survey on the project website.

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Next Steps

- All information from today's meeting will be available on the project website.
- The project team will continue to work on technical studies.
- The next round of public meetings are planned for fall 2019.

Stay up to date by:

- Signing-up for the project mailing list: dsbrt@metrolinx.com
- Visiting the project website: www.metrolinxengage.com/dsbrt

Information collected will be used in accordance with the Freedom of Information and Protection of Privacy Act. With the exception of personal information, all comments will become part of the public record.