# Durham-Scarborough Bus Rapid Transit

METROLINX

TOWN OF WHITBY – SPECIAL COUNCIL MEETING
APRIL 22, 2021

# Study Area


APRIL 22, 2021

## Why Bus Rapid Transit?

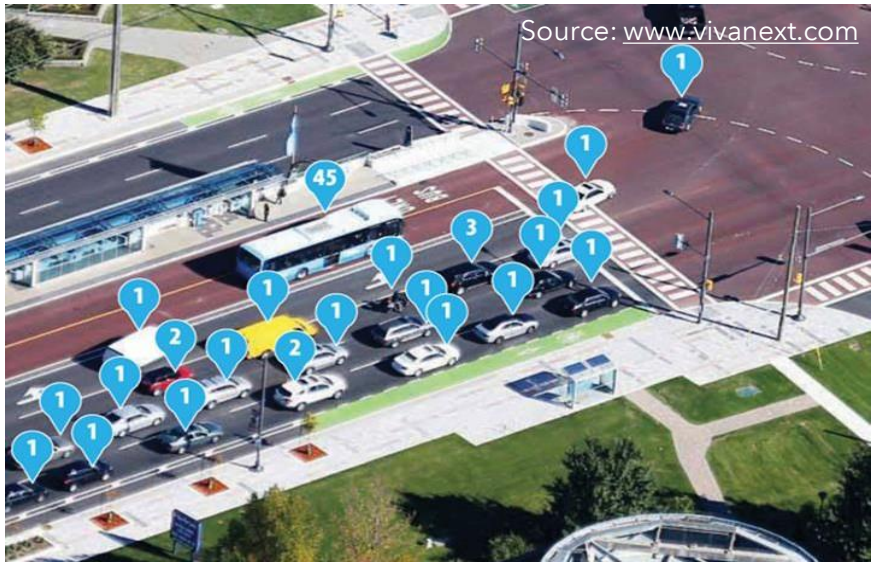
- To support the projected future growth along the corridor, approximately 215,000 more residents and 66,000 more jobs by 2041, more dedicated transit infrastructure is needed.
- Higher capacity transit is needed to link communities and employment centres across the Toronto and Durham Boundary.
- Dedicated transit lanes will improve DRT and TTC service reliability, increasing ridership and attracting more transit-oriented communities.

## Why is Dundas Street the preferred route?

- Future projected population and employment density and growth.
- Connections to downtowns/centres in Toronto, Pickering, Ajax, Whitby and Oshawa.
- High existing and future projected transit ridership.

## Why not maintain the status quo?

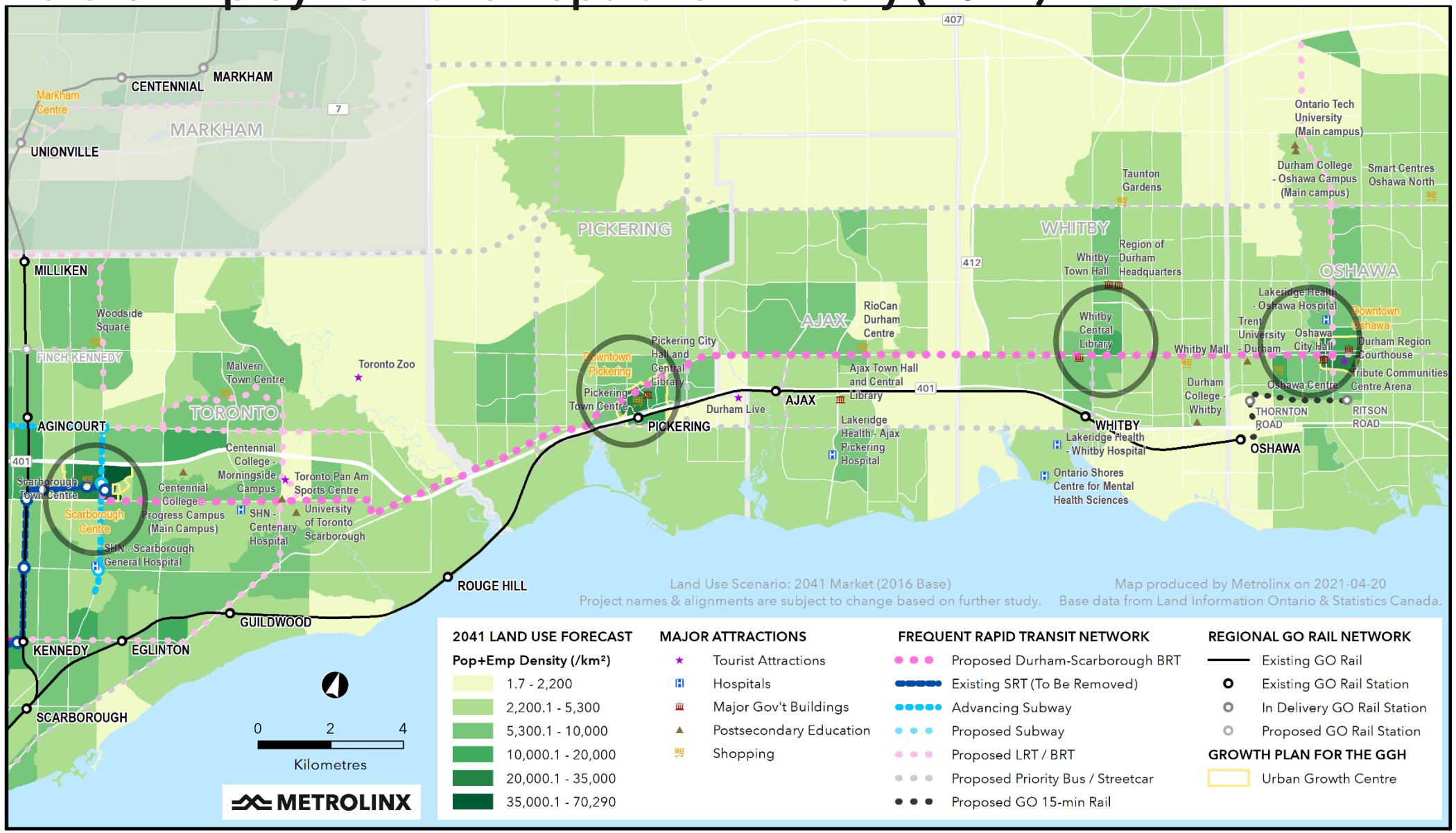
- Roads are nearing capacity in some areas and congestion will worsen unless the Region can move more people more efficiently.





Represents the number of people carried per vehicle.

# Future Employment and Population Density (2041)



# Initial Business Case (2018) Results

**686**
Millions of Dollars of Economic Benefits

**1.29**
Benefit to Cost Ratio

As part of the Initial Business Case (IBC), a benefit to cost ratio (BCR) was calculated by assessing the relative economic benefits of the project compared to the costs.

With a BCR higher than 1, the Durham-Scarborough BRT will generate more benefits than it costs to build and operate.

## Benefits of the Durham-Scarborough BRT

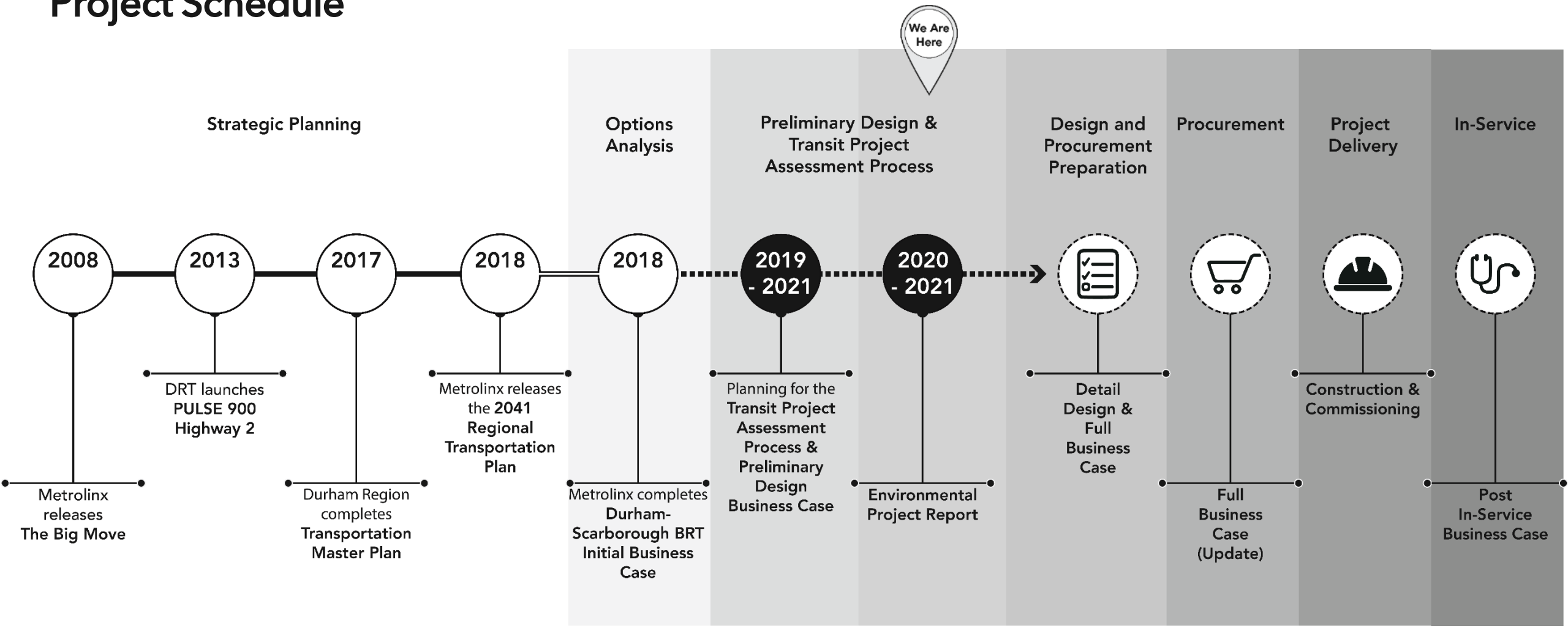
**162**
Kilotonnes of $CO^2$ Reduced

**9.5**
Minutes Saved Per Rider

**208**
Fewer Traffic Related Injuries or Deaths

**85%**
Reduction in average bus delays

# Project Schedule




*Timelines to be confirmed.

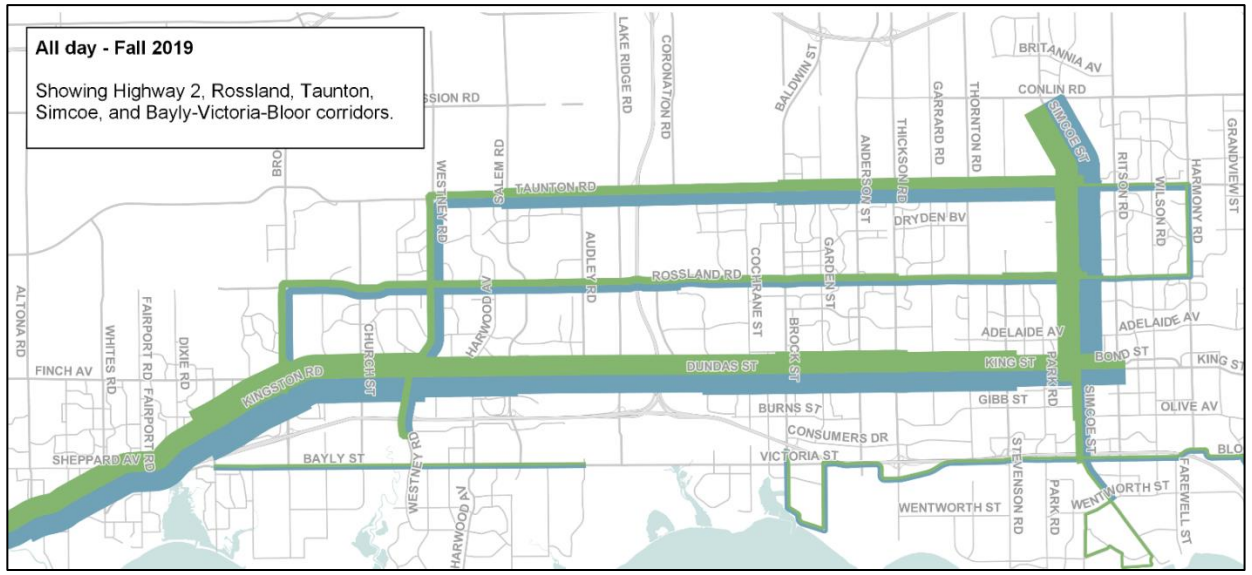
Construction of the western portion of the Town of Whitby may begin in 2023 to 2025, subject to EA approvals.

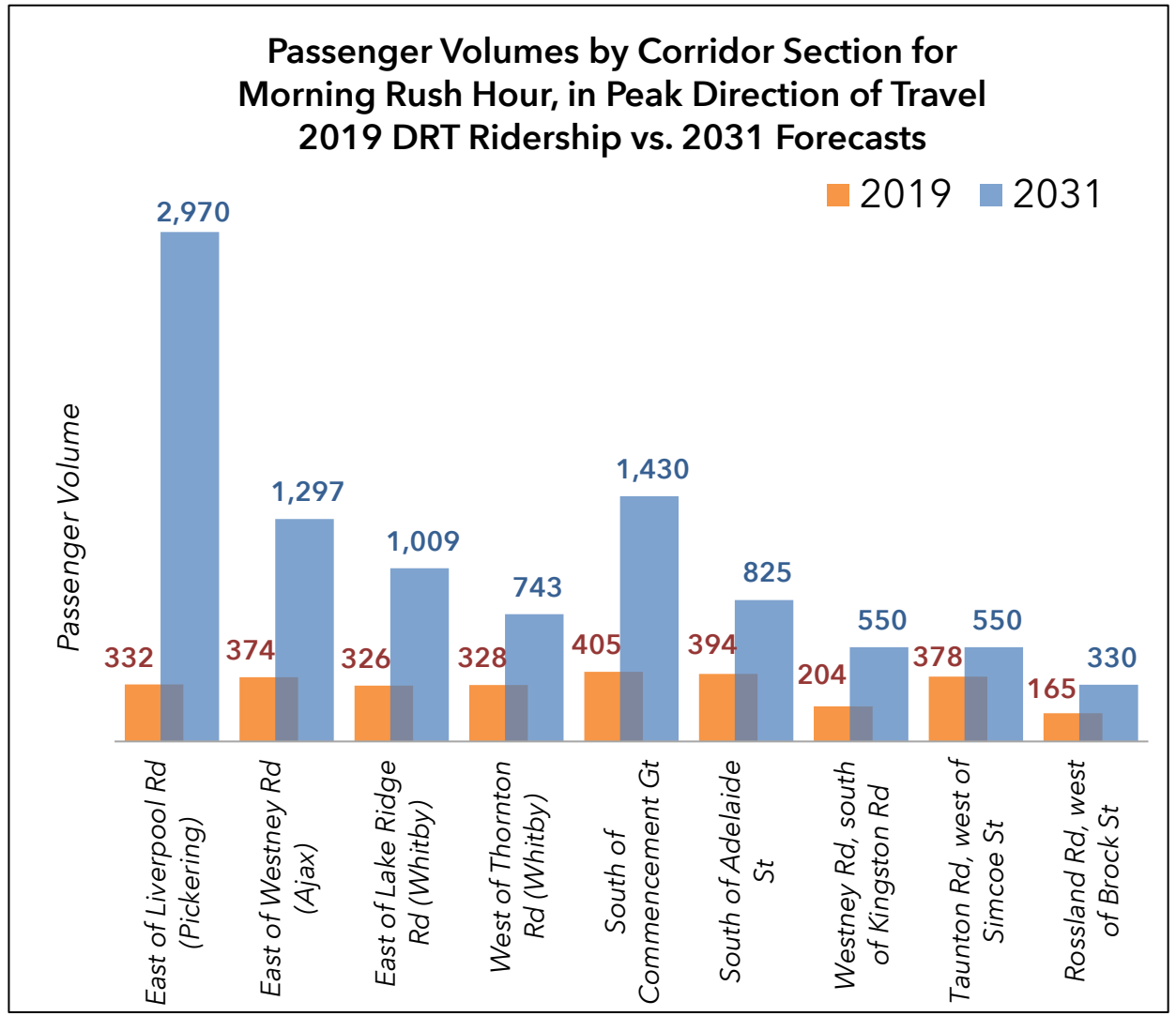
# Existing and Future Transit Ridership

Highway 2 Transit Usage:

- 10,000 daily riders on DRT PULSE in 2019
- 38,400 daily riders projected on the corridor by 2041

Projections show higher passenger volumes on DRT PULSE than routes along Taunton (905 and 915) and along Rossland (916) by 2031.



# Consultation to Date

**June 2019**
**Public Information Centre (PIC) #1**

- **80** attended our open houses
- **74** comments received
- **3** meetings with the Stakeholder and Technical Advisory Groups

**November 2019**
**PIC #2**

- **200** attended our open houses
- **40** comments received
- **3** meetings with the Stakeholder and Technical Advisory Groups

**November 2020**
**PIC #3**

- **2** public meetings, including one hosted by Mayor Mitchell
- **1** meeting with the business community (Downtown Whitby BIA)
- **3** meetings with the Stakeholder and Technical Advisory Groups
- **163** registered for January public meeting; **103** attended; **239** questions/comments received
- **4,866** website visitors; **2,549** unique interactive map visitors; **528** views of the narrated Whitby design video
- **141** comments received

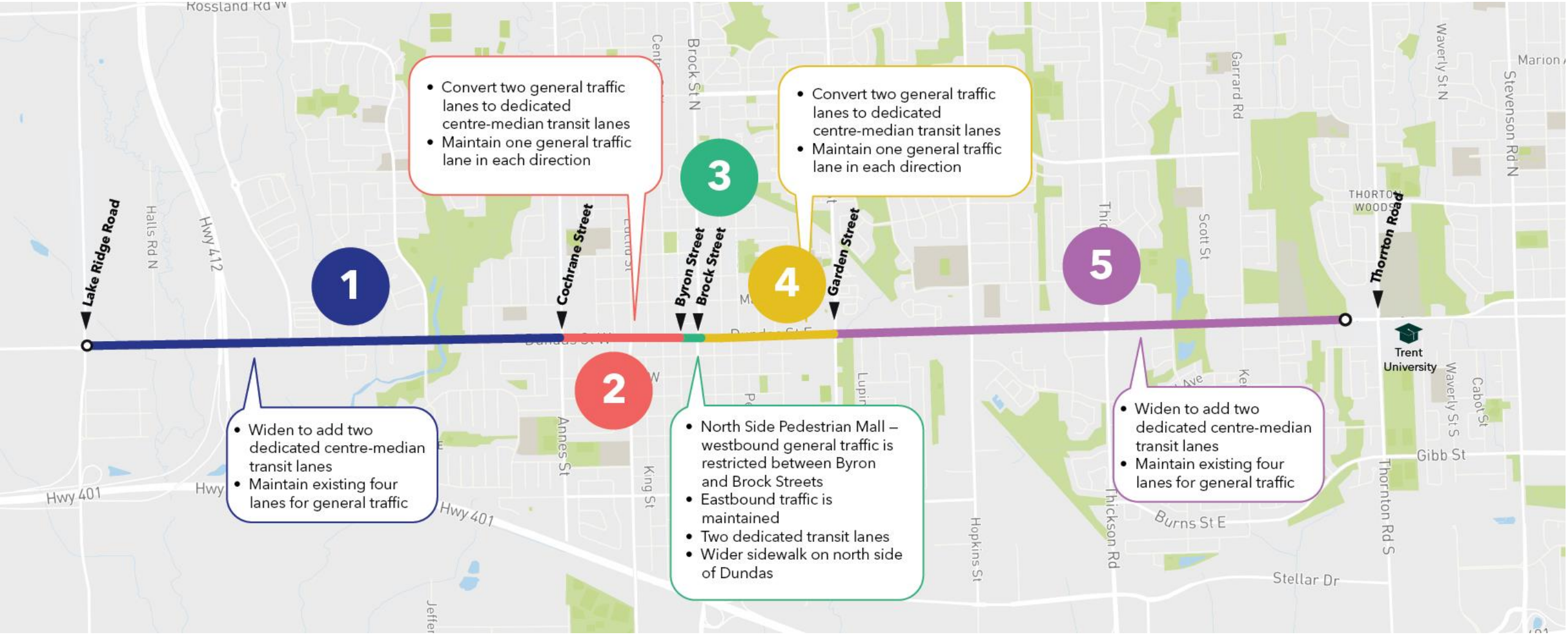
**February 2021**
**Continued Engagement**

- **122** registered for live public meeting, **58** attended and **72** questions/comments received
- **1** design workshop with Town of Whitby Councillors and staff
- **2** meetings with the business community (Downtown Whitby BIA and Whitby Chamber of Commerce members)
- **4** presentations to Whitby Advisory Committees
- **1** presentation to Downtown Whitby DSC

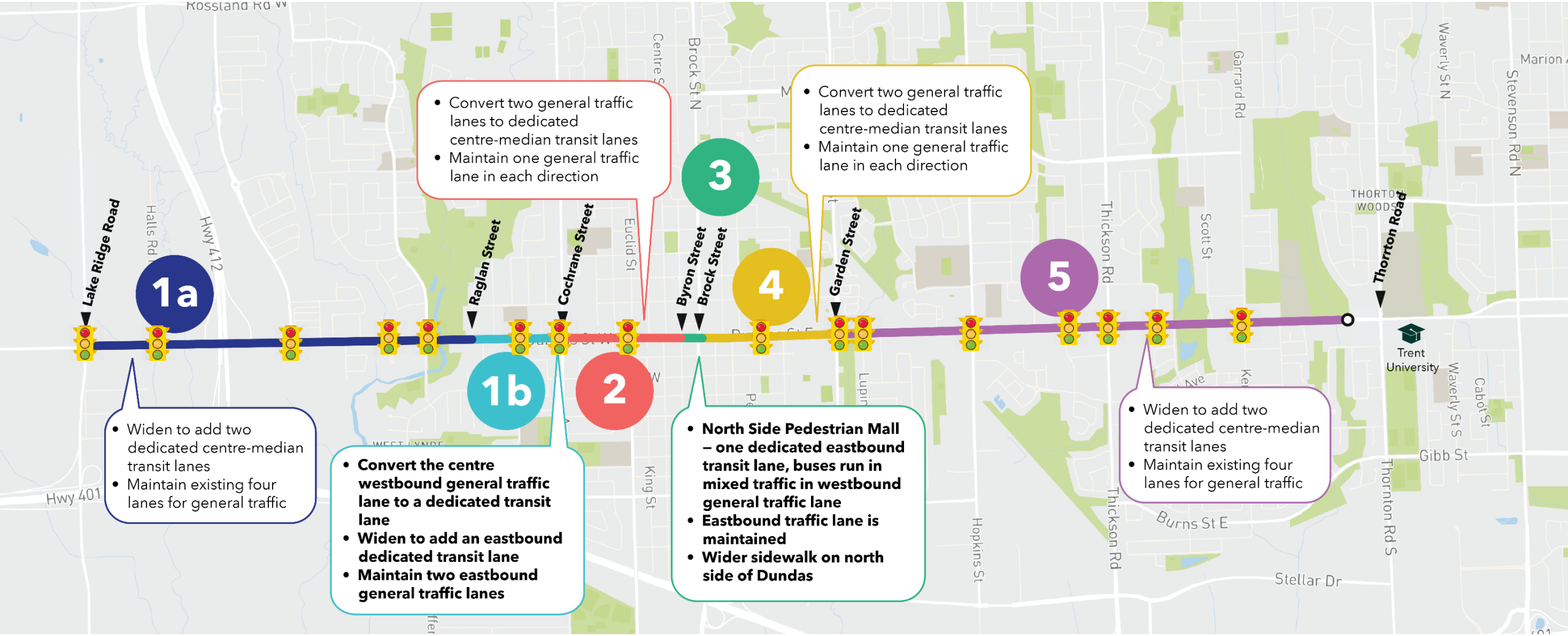
**Next Public Meeting on May 20th**

We have presented at previous council meetings and have had meetings with MPP Coe, Mayor Mitchell, Regional and Local Councillors in the lead up to today.

# Town of Whitby – Winter 2021 Design (Previous)



# Town of Whitby – Spring 2021 Refined Design (Current)

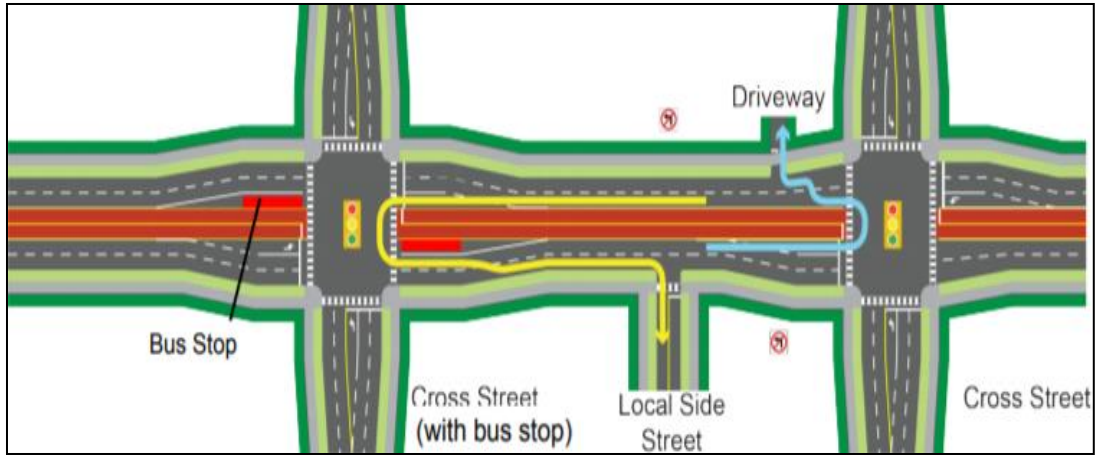



Indicates where left-turns and U-turns will be permitted.

# Safety Benefits of Centre-Median Lanes

In line with Region's Strategic Road Safety Action Plan, which incorporates Vision Zero, to reduce the number and severity of collisions in the Region, the project will improve safety for all road users:

- ✓ **Improves the pedestrian experience** through upgraded, continuous sidewalks
- ✓ **Protects transit users** through raised and barrier-protected platforms
- ✓ **Improves safety of cyclists** with grade-separated cycling facilities




- ✓ **Prevents collisions for drivers** by incorporating a raised median and restricting mid-block left turns. Left-turns and U-turns will be permitted at signalized intersections during a protected phase to increase safety. York Region saw 51%-74% fewer collisions along rapidways, likely due to eliminating midblock left turns across traffic (YRRTC Annual Report, 2019).

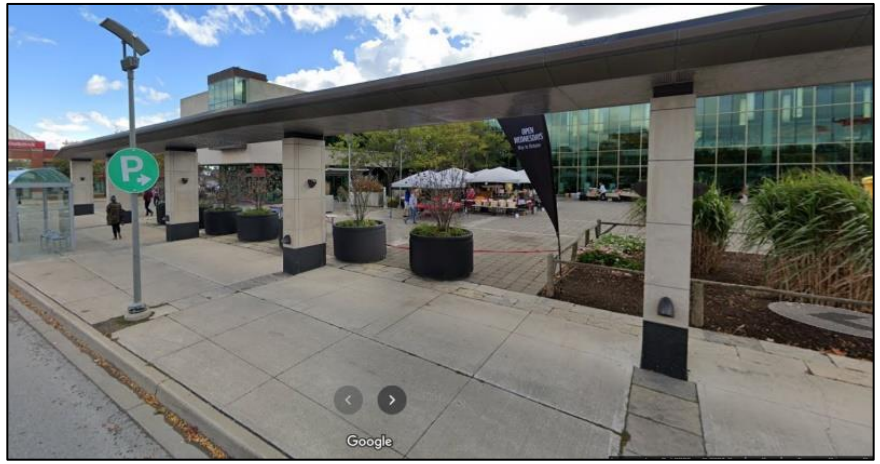
# Segments 1a and 1b (Ajax Border to Annes/Cochrane)

- Today, this segment carries upwards of 1,400 vehicles/hr in each direction during rush hour.
- By 2041, traffic volumes are expected to increase as growth occurs along the corridor by 20% or more.
- In 2041 with BRT, traffic volumes are expected to be 1,600 to 1,800 vehicles/hr in each direction during rush hour. This is more traffic than one lane can carry per direction.
- **6 lanes are recommended between Ajax Border and Raglan**
  (2 general traffic lanes and 1 transit lane per direction)
- **5 lanes are recommended between Raglan and Cochrane/Annes**
  (2 eastbound general traffic lanes, 1 westbound general traffic lane and 2 transit lanes)

# Segment 2 (Cochrane to Byron): Celebration Square and Urban Filter

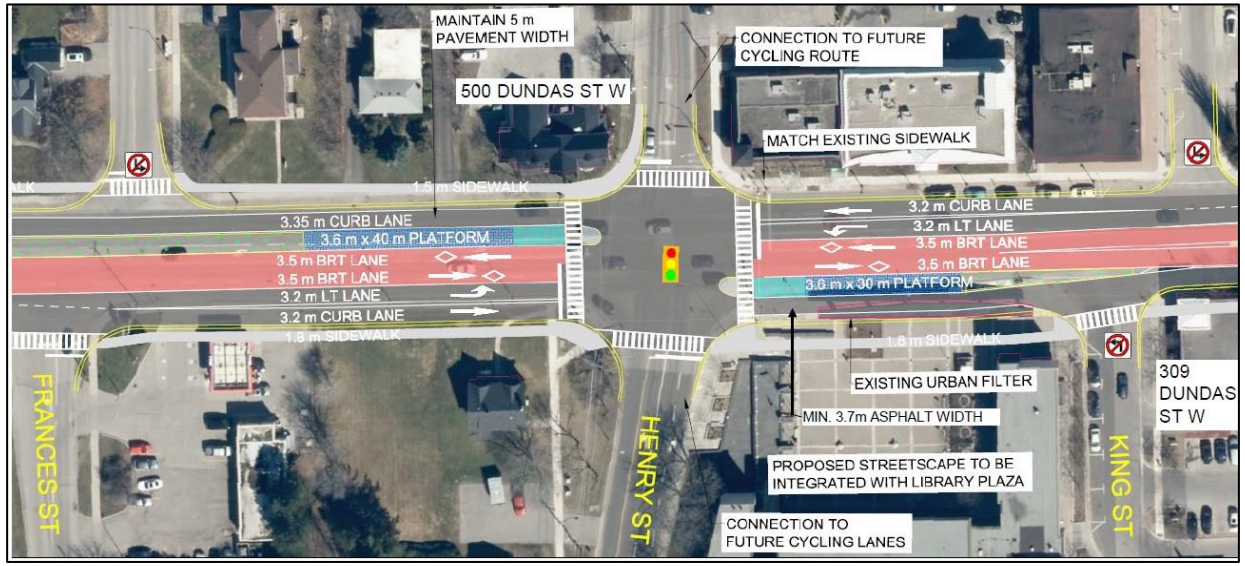
The Whitby Central Library is designated as a cultural heritage resource under Part V of the *Ontario Heritage Act*.

5 design options were developed, analyzed and evaluated.




**Of the 5 options, a far side median platform design is recommended:**

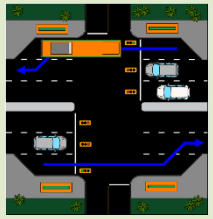
- ✗ Requires relocation of Urban Filter to the south, approximately 3 to 5 metres
- ✓ Avoids impacts to heritage building at 500 Dundas Street West
- ✓ Offers the highest degree of road safety
- ✓ Maintains eastbound left-turn movements in both directions
- ✓ Preserves reliable, accessible, and convenient service for transit users



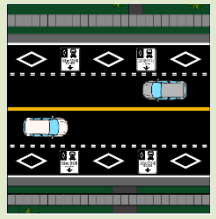
# Segment 3 (Byron to Brock): Previous Designs

## 2018 Options

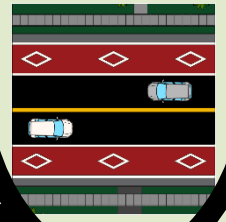
Transit Priority



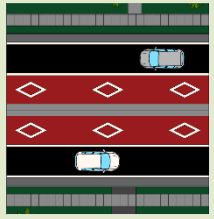
HOV Lanes



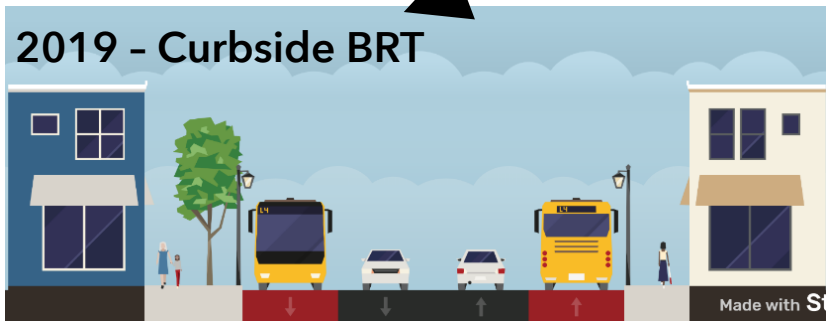
Curbside BRT



Median BRT



## 2019 – Curbside BRT




## 2020 – Transit Mall


## 2021 – North Side Pedestrian Mall

# Segment 3 Refined Design – Three-Lane Mixed Traffic Westbound

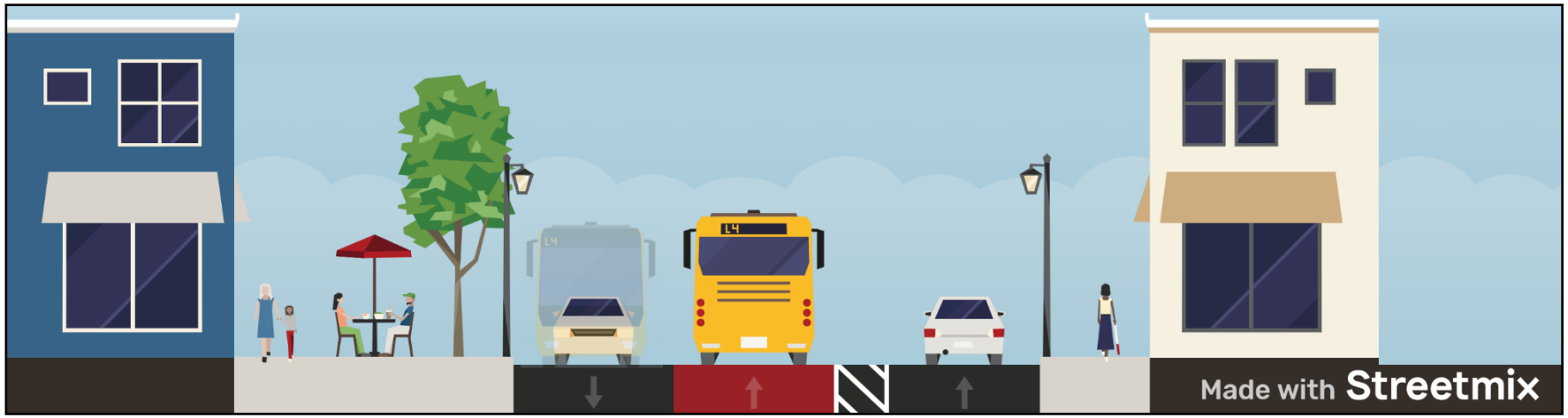
The design was refined to address key questions and concerns asked by stakeholders and the broader community since the last option was presented. This design will:

- ✓ **Maintain continuous eastbound and westbound general traffic** lanes on Dundas
- ✓ **Minimize neighbourhood infiltration** and keep school buses, trucks, large vehicles on Dundas
- ✓ **Improve** pedestrian, transit, and driving **access to businesses** and support step-free access
- ✓ **Provide more space for streetscaping** and enhance the public realm on the north side of Dundas
- ✓ **Maintain the character** of Downtown Whitby
- ✓ **Relocate all 31 on-street parking spaces**, through an expanded parking lot at Elm and Byron

# Segment 3 Refined Design: Three-Lane Mixed Traffic Westbound

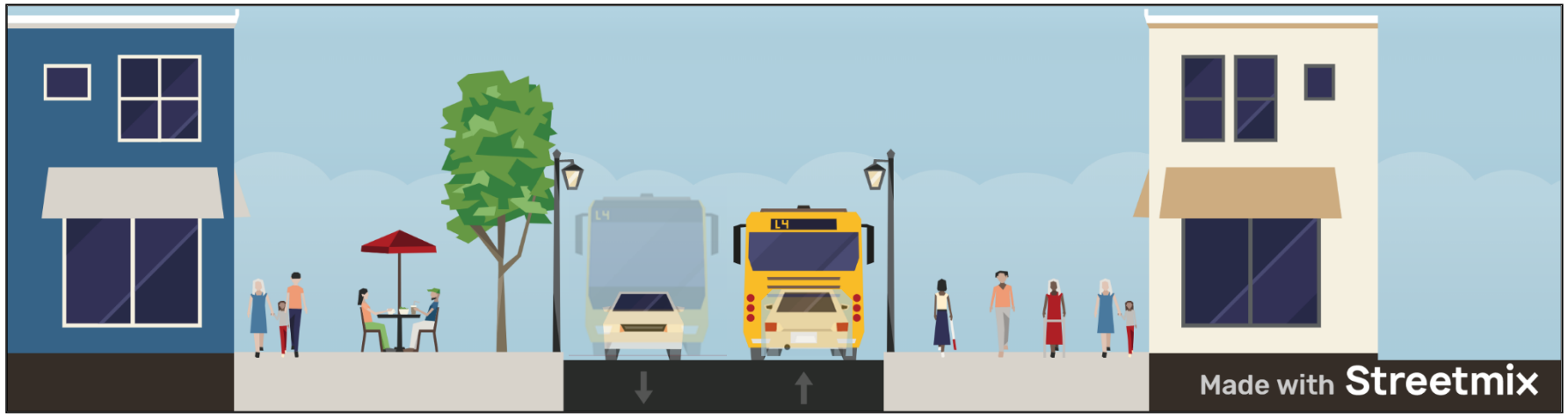
Eastbound – Buses and traffic have one lane each

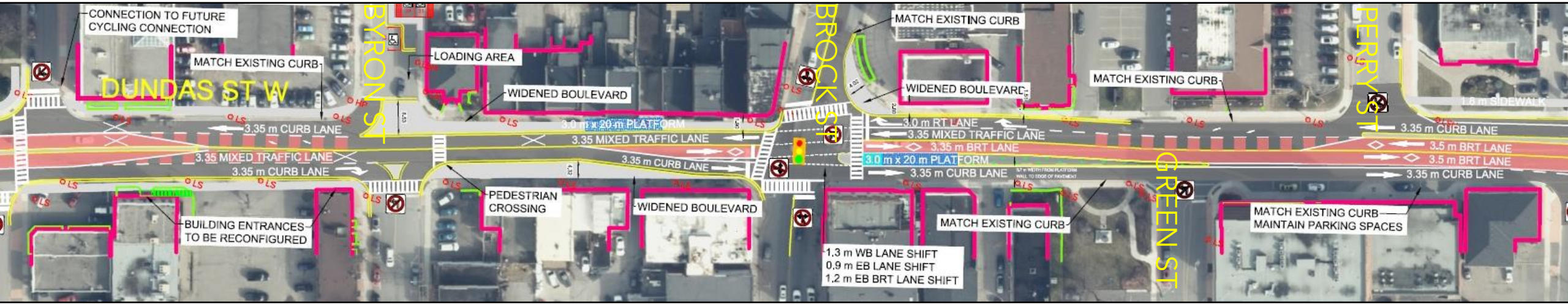
Westbound – Buses and traffic share one lane between Perry and Byron




# Segment 3 Other Options Considered: Two-Lane Mixed Traffic Both Directions

Eastbound – Buses and traffic share one lane between Brock and Byron
Westbound – Buses and traffic share one lane between Perry and Byron



# Segment 3 Other Options Considered

**Reversible Traffic Lanes**: lane use changes over the course of the day

- Major safety risks and issues due to changing lane configuration
- Challenge for people to understand where they are allowed to be
- Enforcement and transit priority difficult to maintain
- Requires significant signage with negative impacts to heritage character

**Reversible lanes in Salt Lake City, Utah**

**Single Reversible BRT Lane:**

- Prevents a stop at Brock Street
- Atypical intersection could create confusion and safety issues for drivers
- Higher risk of delays for transit riders

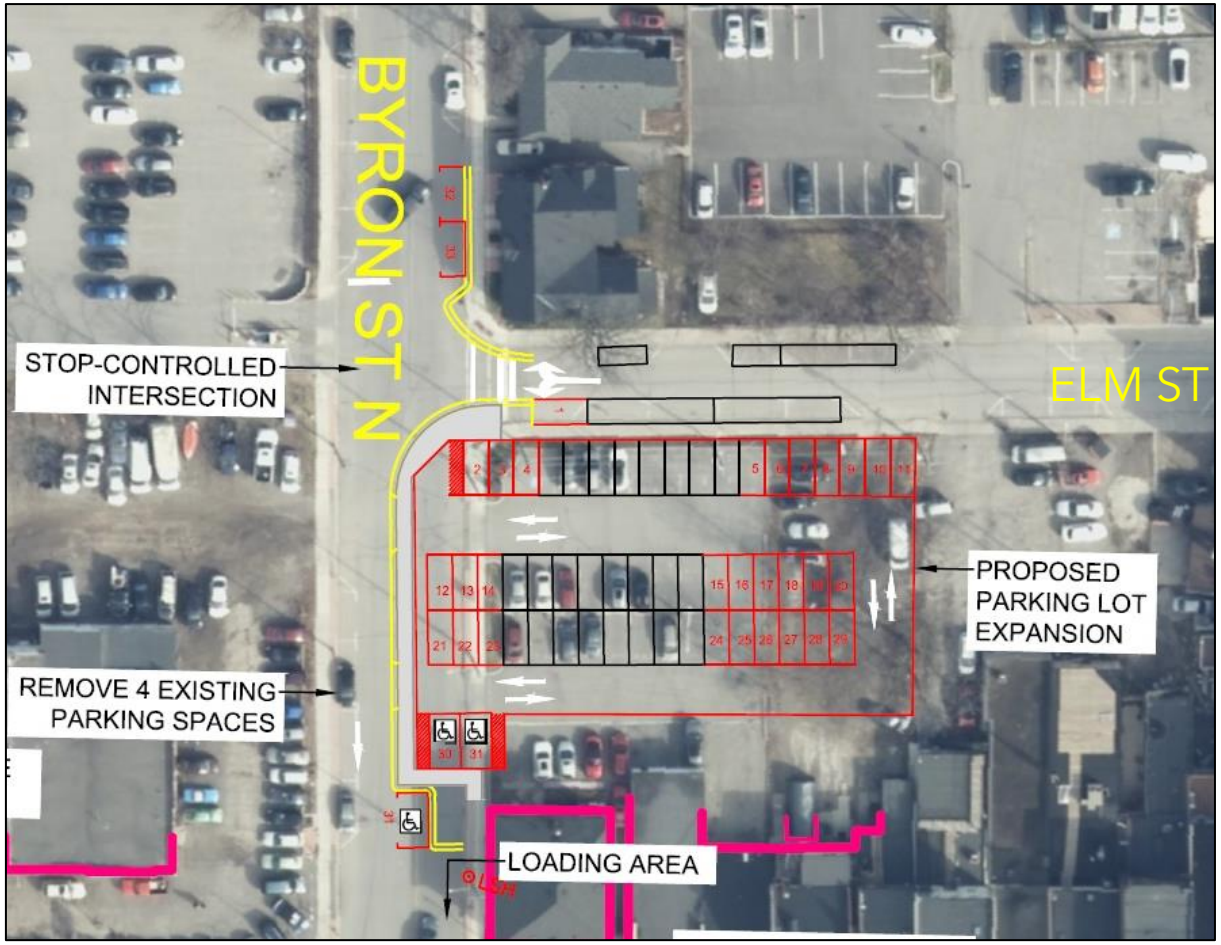
**Bidirectional lane in Eugene, Oregon**

Source: http://www.pivotarchitecture.com/projects/emx/?cat=transit

# Segment 3 Refined Design: Parking

All the proposed options impact on-street parking, with most designs removing 31 on-street spaces from Dundas.

- ✓ **The 31 parking spaces can be replaced with off-street spaces near Elm and Byron.**
- ✓ **Access to rear of businesses will be maintained.**



# Segment 3 Refined Design: Traffic Impacts

Overall, delivering the BRT will remove cars off the road by making transit a more attractive option.

With the 3-lane solution, large trucks, school buses, emergency services will continue to use Dundas through Downtown.

**Providing an eastbound general traffic lane and a westbound mixed traffic lane will reduce infiltration compared to the Transit Mall option:**

- **by 65% eastbound in the rush hour** –out of 1,250 cars in 2041:
  - 800 cars stay on Dundas
  - 250 cars use Regional road alternatives (such as Taunton or Rossland)
  - 115 cars use collector roads (such as Burns or Bonacord)
  - 85 cars use local streets (such as Dunlop or Mary)
- **by 60% westbound in the rush hour** –out of 800 cars in 2041:
  - 500 cars stay on Dundas
  - 160 cars use Regional road alternatives (such as Taunton or Rossland)
  - 80 cars use collector roads (such as Burns or Bonacord)
  - 60 cars use local streets (such as Mary or Dunlop)

Pre-COVID (2019), local roads in Downtown Whitby carried up to 400 vehicles per hour per direction during the morning and afternoon rush. By 2041, with population and employment growth, this is expected to increase to 450 vehicles per hour. By 2041 with Bus Rapid Transit, more people will choose to take transit. This means traffic volumes on local streets are expected to remain about the same, as without the BRT.

# Segments 4 and 5 (Brock to Oshawa Border)

- Today, this segment carries between 800 and 1,400 vehicles/hour in each direction during rush hour.

- In 2041 with BRT, traffic volumes are expected to be 1,000 to 1,500 vehicles/hour in each direction during rush hour.

- **4 lanes are recommended between Brock and Garden**
  (1 general traffic lane and 1 transit lane per direction)

- **6 lanes are recommended between Garden and Oshawa border**
  (2 general traffic lanes and 1 transit lane per direction)

# Next Steps


- Spring 2021:
  - Refine the design in consultation with stakeholders
  - Prepare draft Environmental Project Report
  - Mail-out to Whitby residents
  - Whitby Public Meeting on May 20th

- Summer 2021:
  - Commence the Transit Project Assessment Process (TPAP)
  - Notify property owners, stakeholders and the public through a Notice of TPAP Commencement
  - Public Information Centre #4 with information focused on environmental impacts and mitigation

- Consultation will continue during detailed design and construction stages

**Visit the project website (www.metrolinxengage.com/dsbrt) for information on the project.**

**To stay informed on upcoming public engagements, or to submit questions and comments, please email DSBRT@metrolinx.com**

# QUESTIONS?