

# Welcome

## Stage 2 ION: Light Rail Transit (LRT) from Kitchener to Cambridge Public Consultation Centre (PCC) No. 5

### Please Sign-in

Preston Memorial Auditorium	November 19 – 4-8 pm
Sunbridge Hotel and Conference Centre	November 20 – 4-8 pm
Cambridge City Hall (Bowman Room)	November 21 – 2-8 pm



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# What is the purpose of today?

- Present the preliminary design and answer questions
- Hear your feedback

**Individual property impacts have been identified at a preliminary level, and are subject to change. Any property impacts shown or noted here may be refined through future design work.**



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# How will my input be used?

Your comments are important and will be used to:

- Validate study area conditions as input to reducing impacts
- Identify issues that need further consideration during future design work

Please provide feedback by:

- Speaking with a project team member
- Submitting your comments at this PCC
- Sending an email to [ION@regionofwaterloo.ca](mailto:ION@regionofwaterloo.ca)

Feedback must be received by **December 6, 2019**



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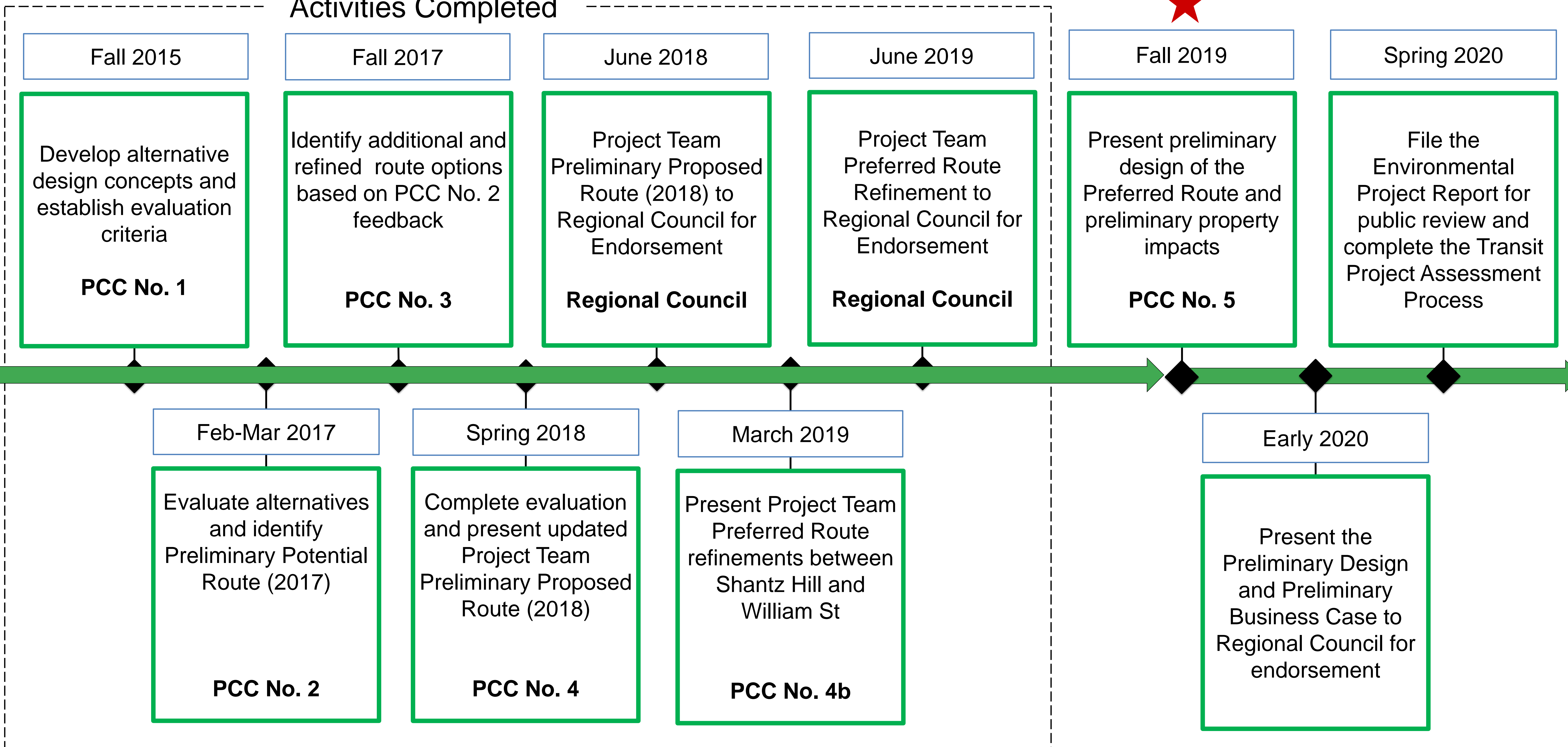


# Study Timeline

We are here



## Activities Completed



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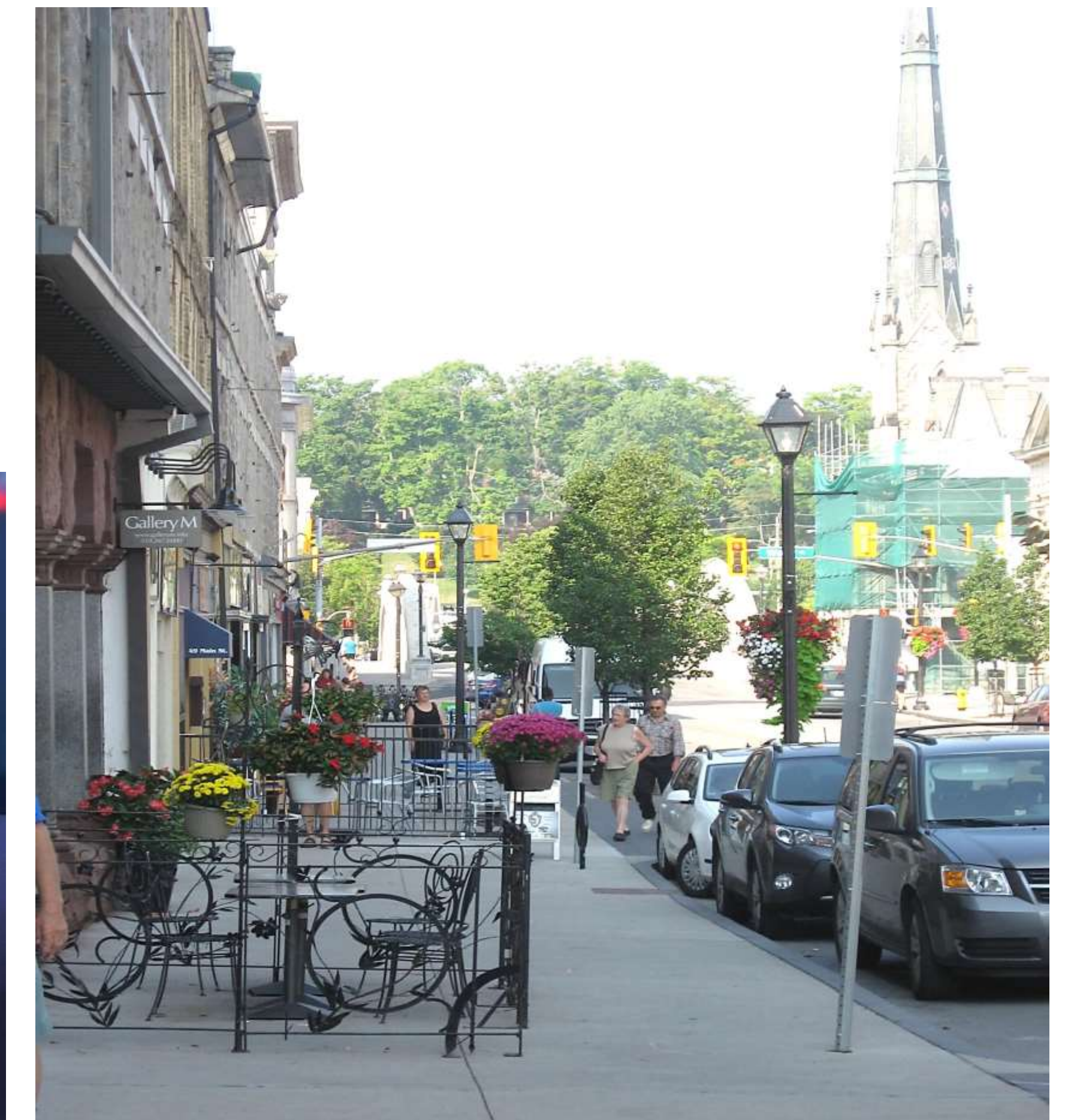
# Why LRT?

ION is the foundation for the Regional Official Plan objectives:



## LRT will:

- Help contain urban sprawl
- Protect environmentally-sensitive areas
- Preserve farmland and the rural lifestyle
- Move people; create transportation choice



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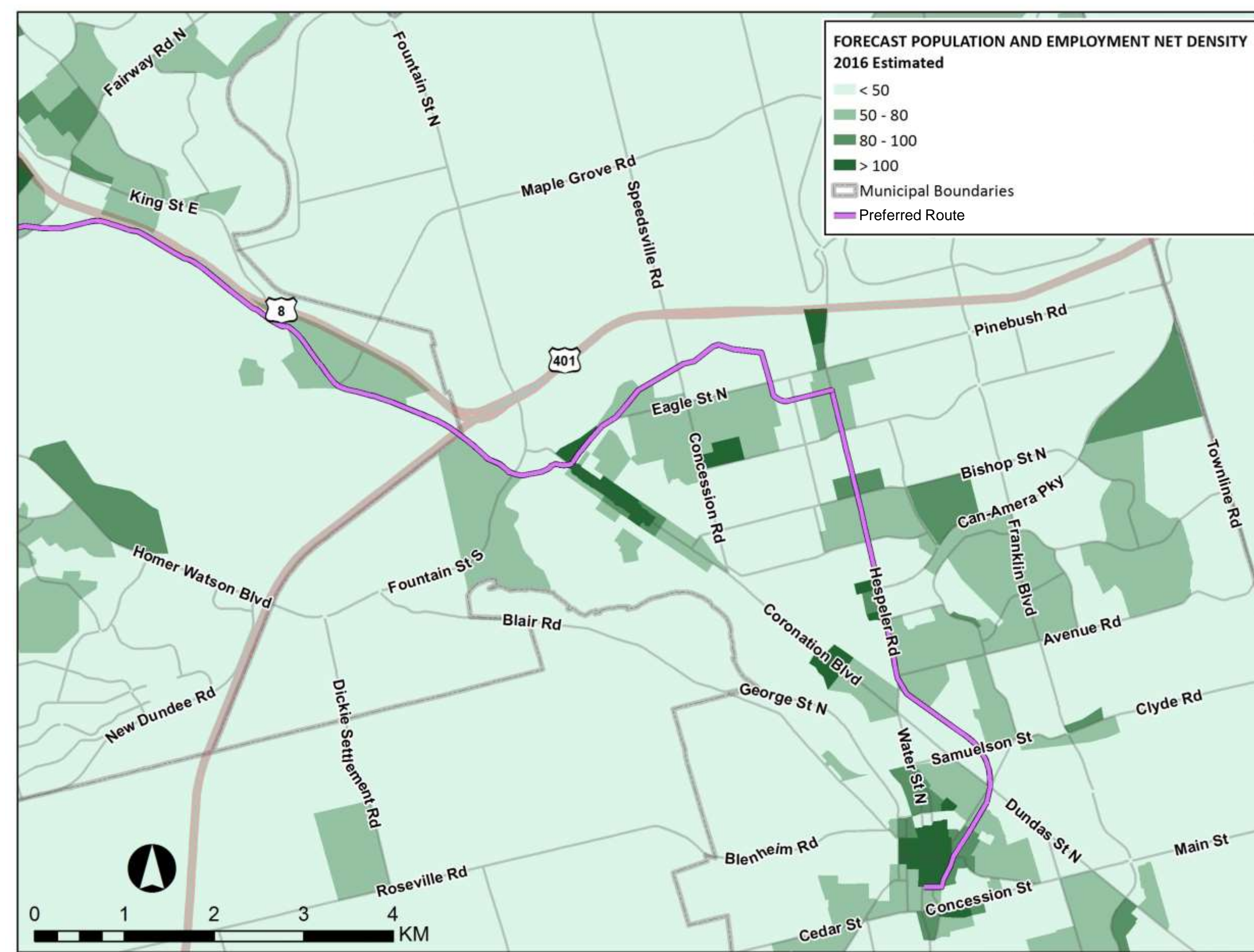
# How will LRT shape our community?

As the Region of Waterloo grows there will be greater demand for more housing options, and supporting facilities, amenities and services.

Building more compact, higher density communities is key to accommodating growth while making efficient use of existing infrastructure, preserving natural areas, and protecting farm land and drinking water.

LRT requires a mix of land uses with medium to high density. Stage 2 ION will support the concentration of existing and planned residents and jobs. Below are maps showing the density of people and jobs per hectare:

2016



2041

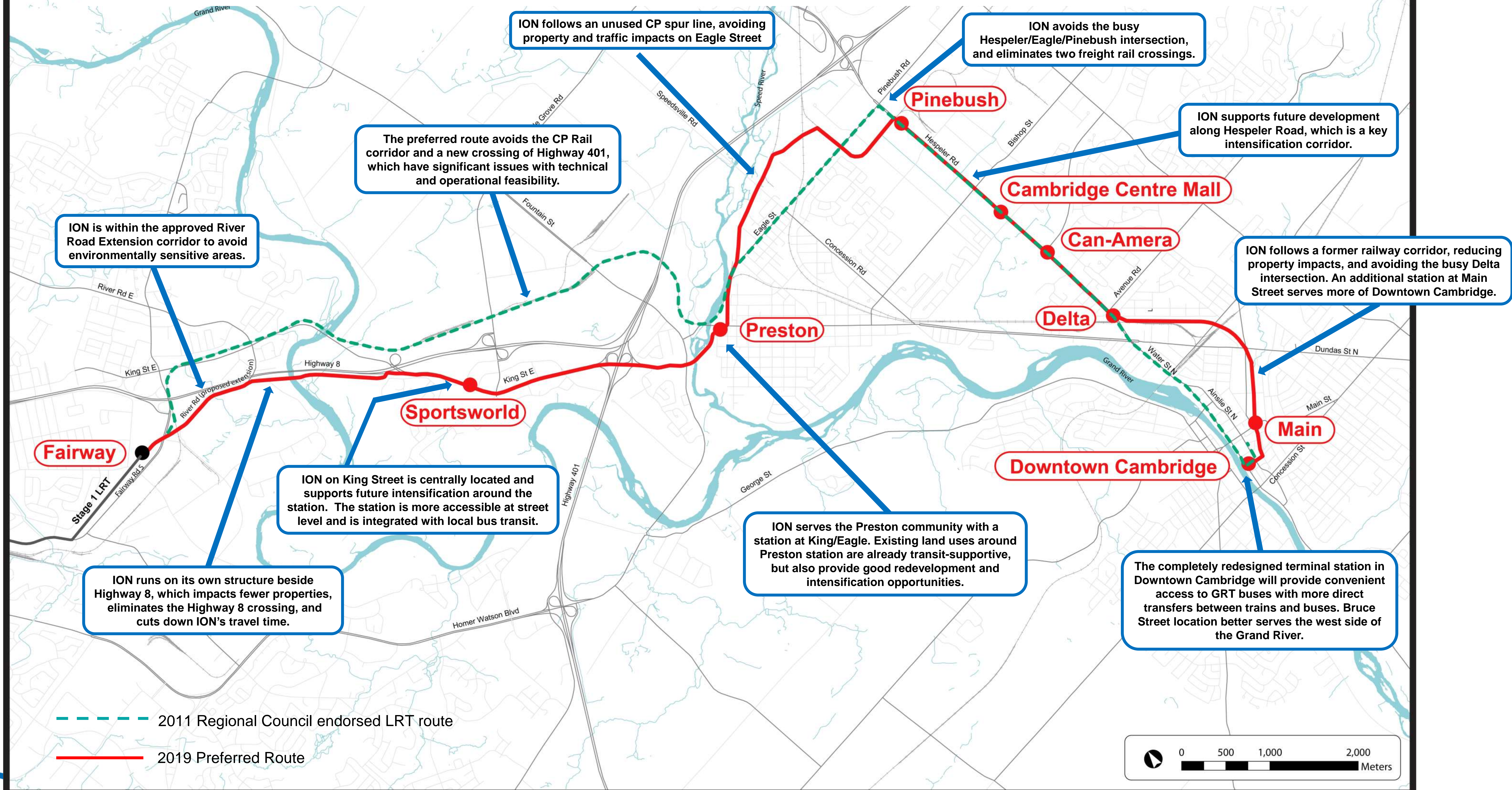


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# How does the Preferred Route compare to the 2011 Regional Council Endorsed Route?



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# Stage 1 ION – Opened June 2019



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# Stage 1 ION – Opened June 2019

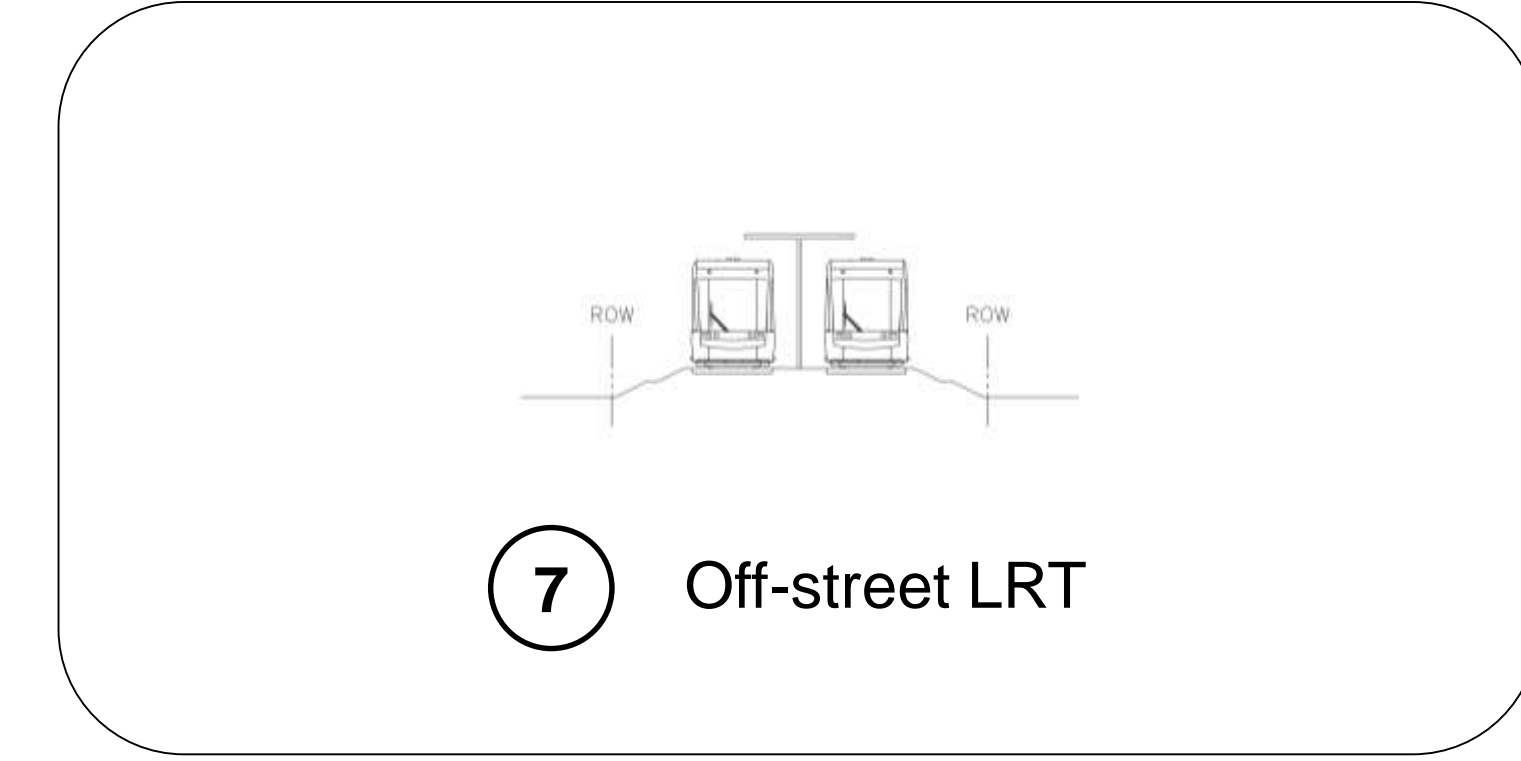
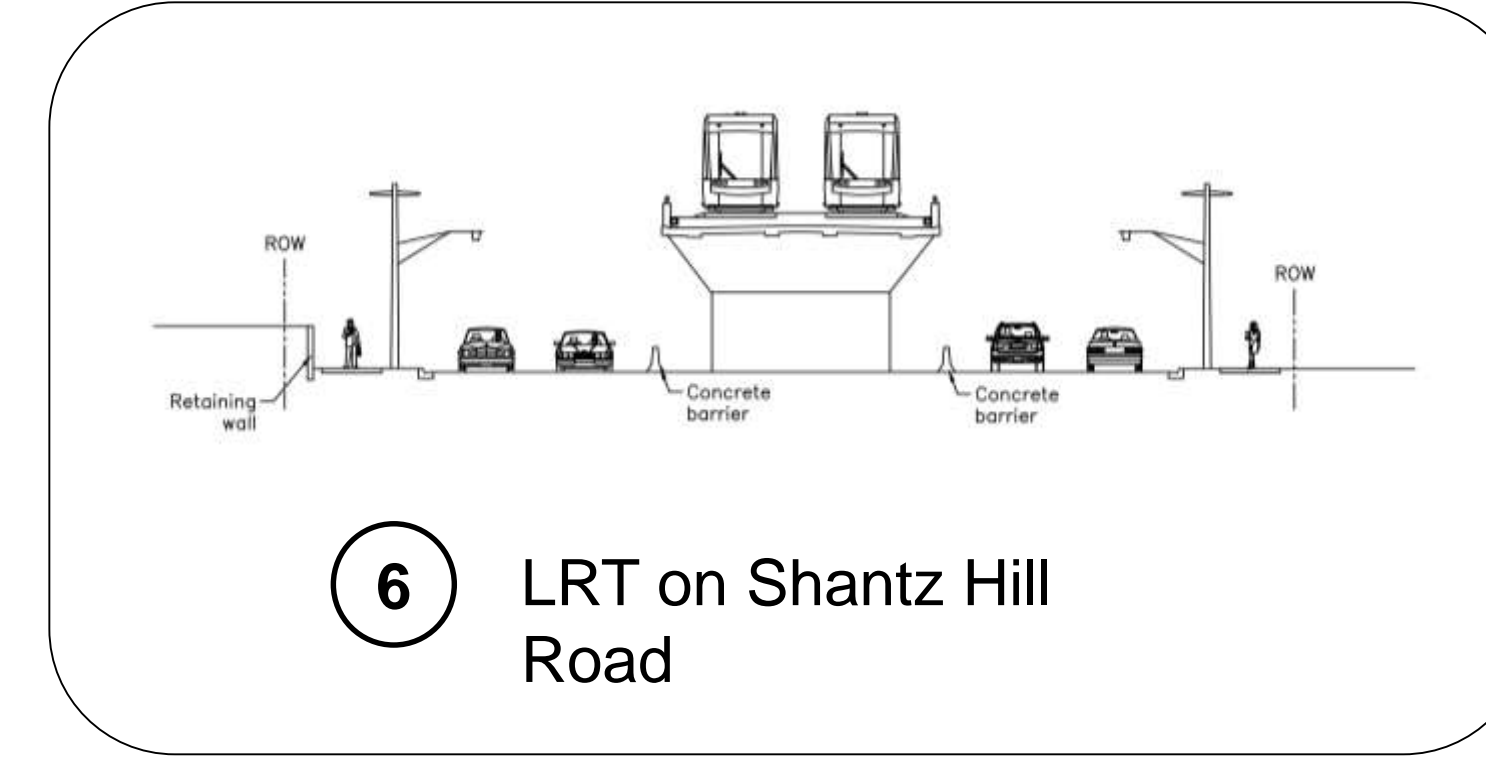
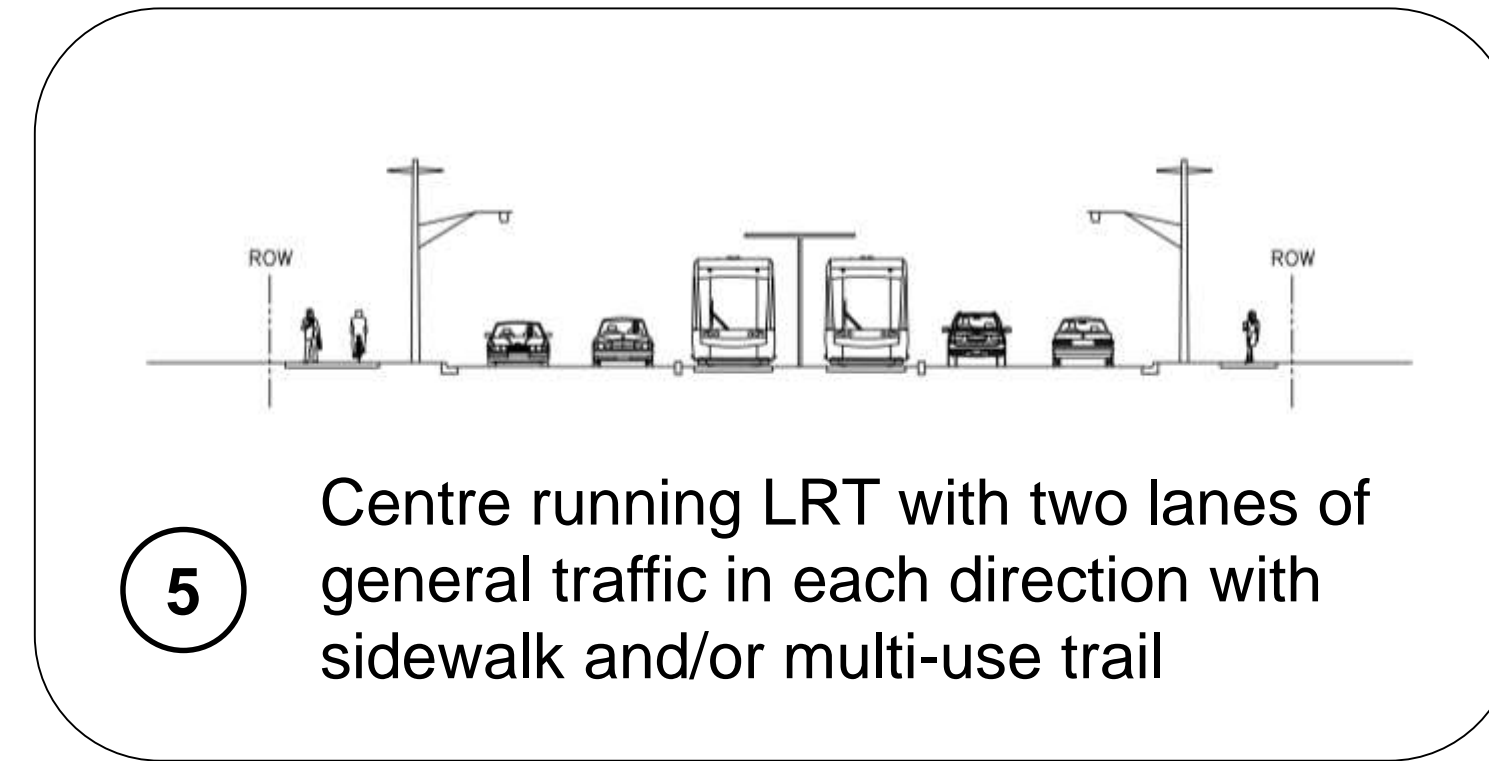
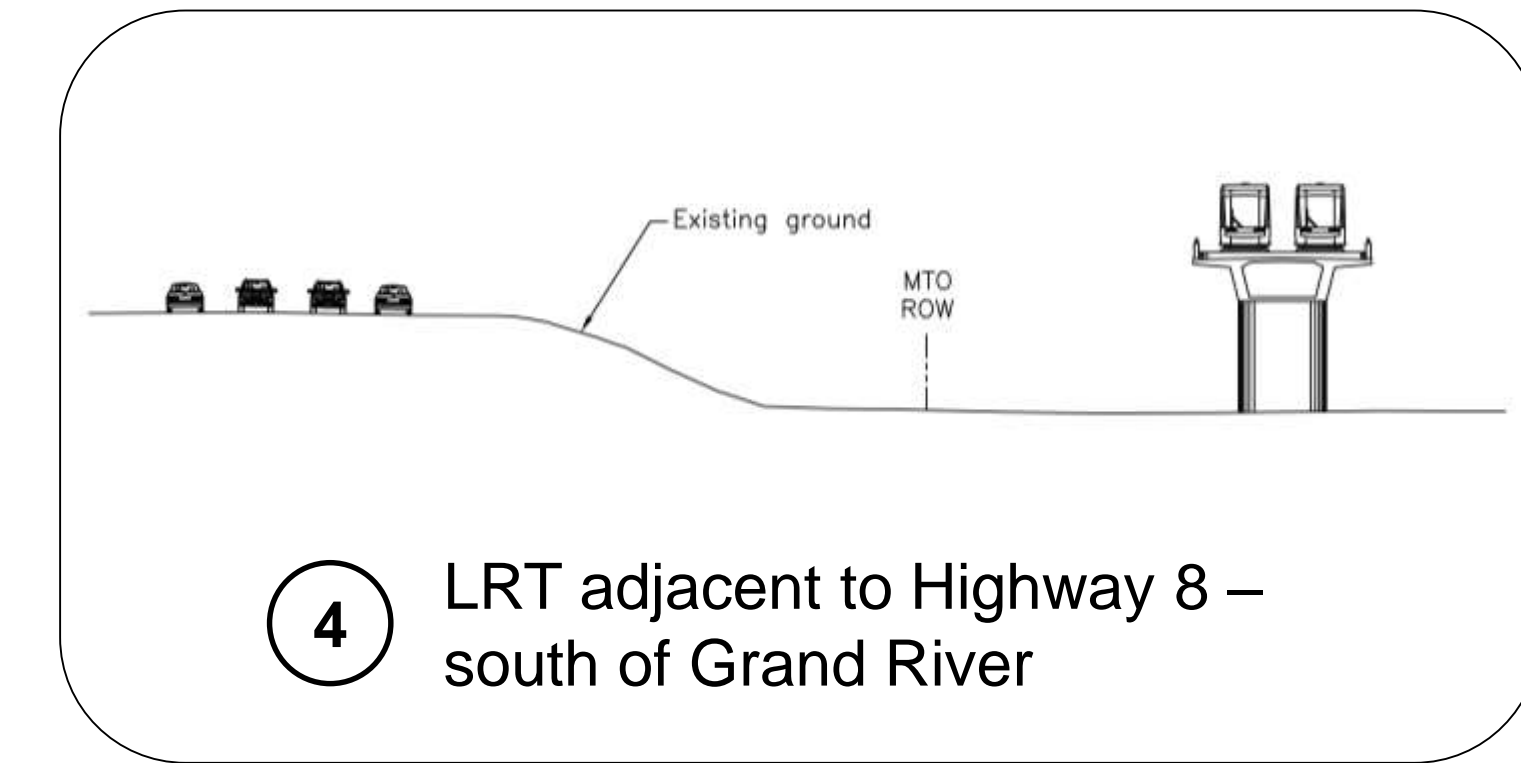
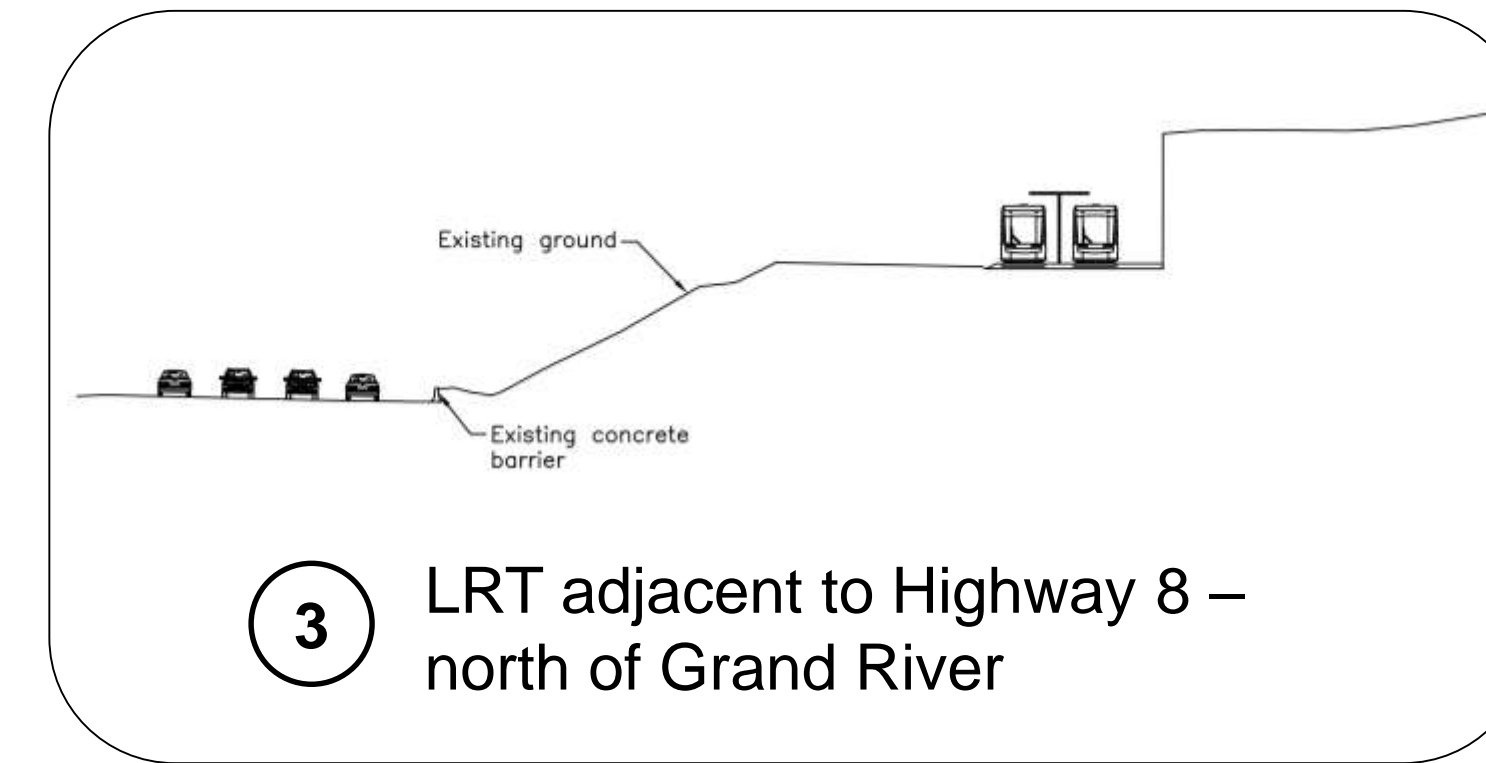
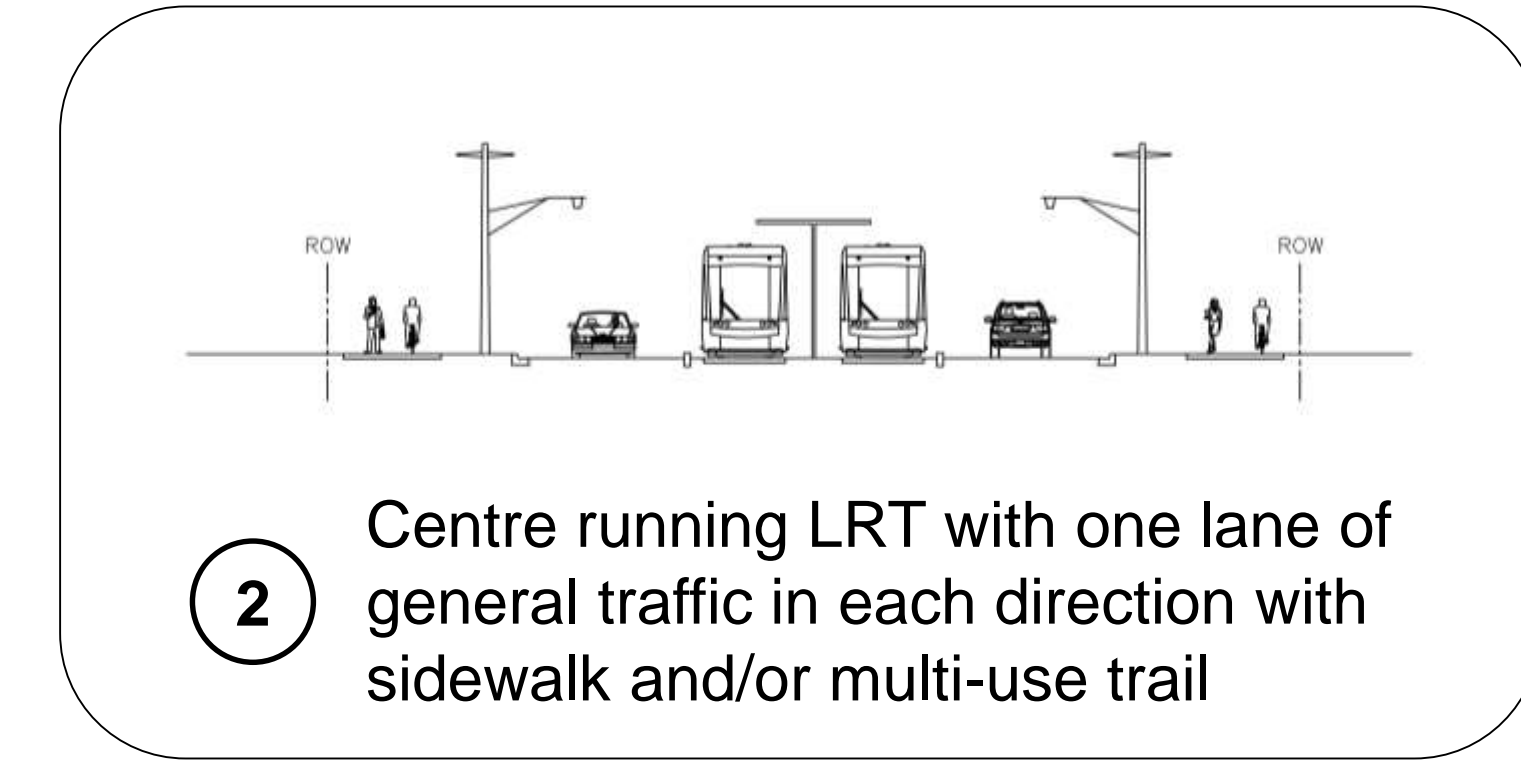
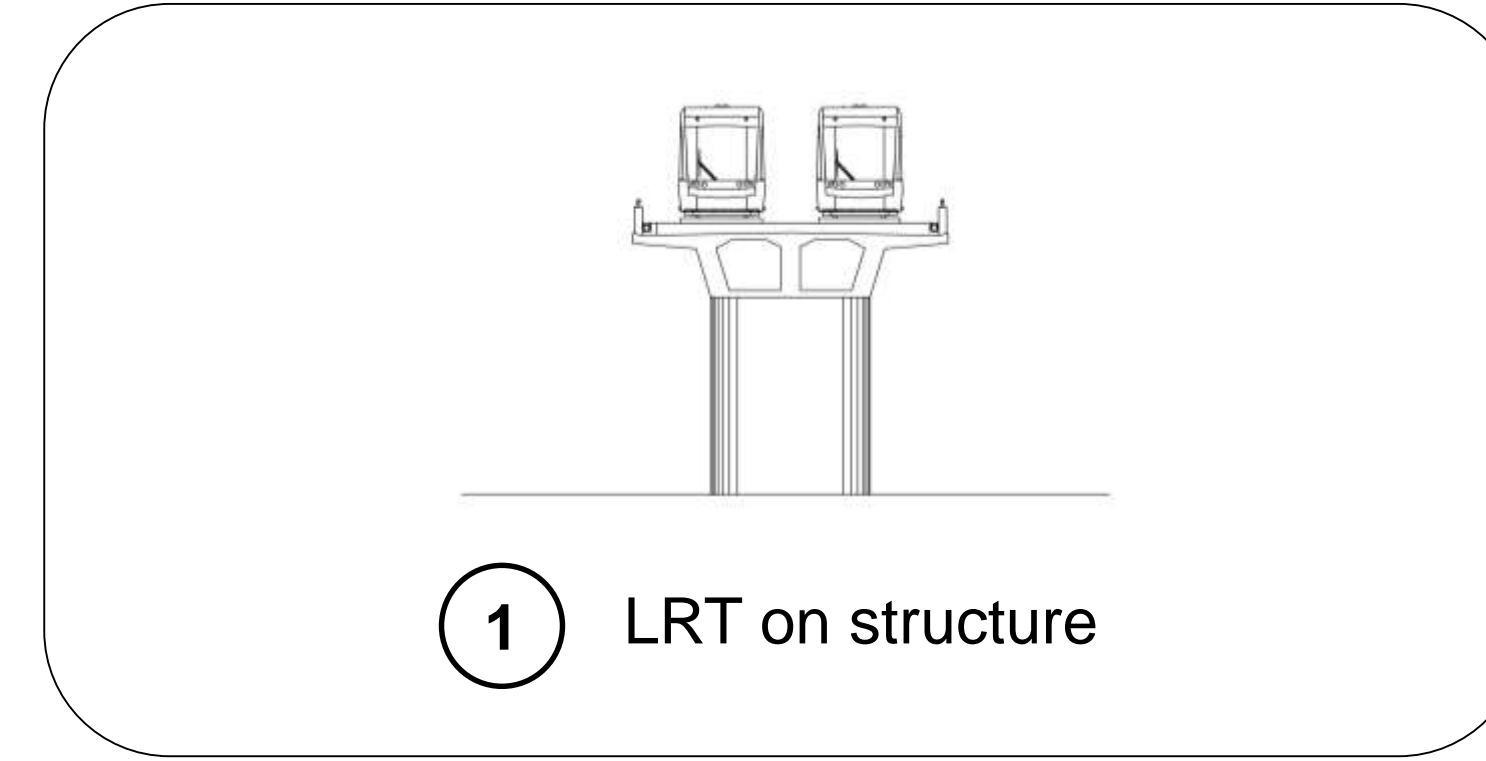
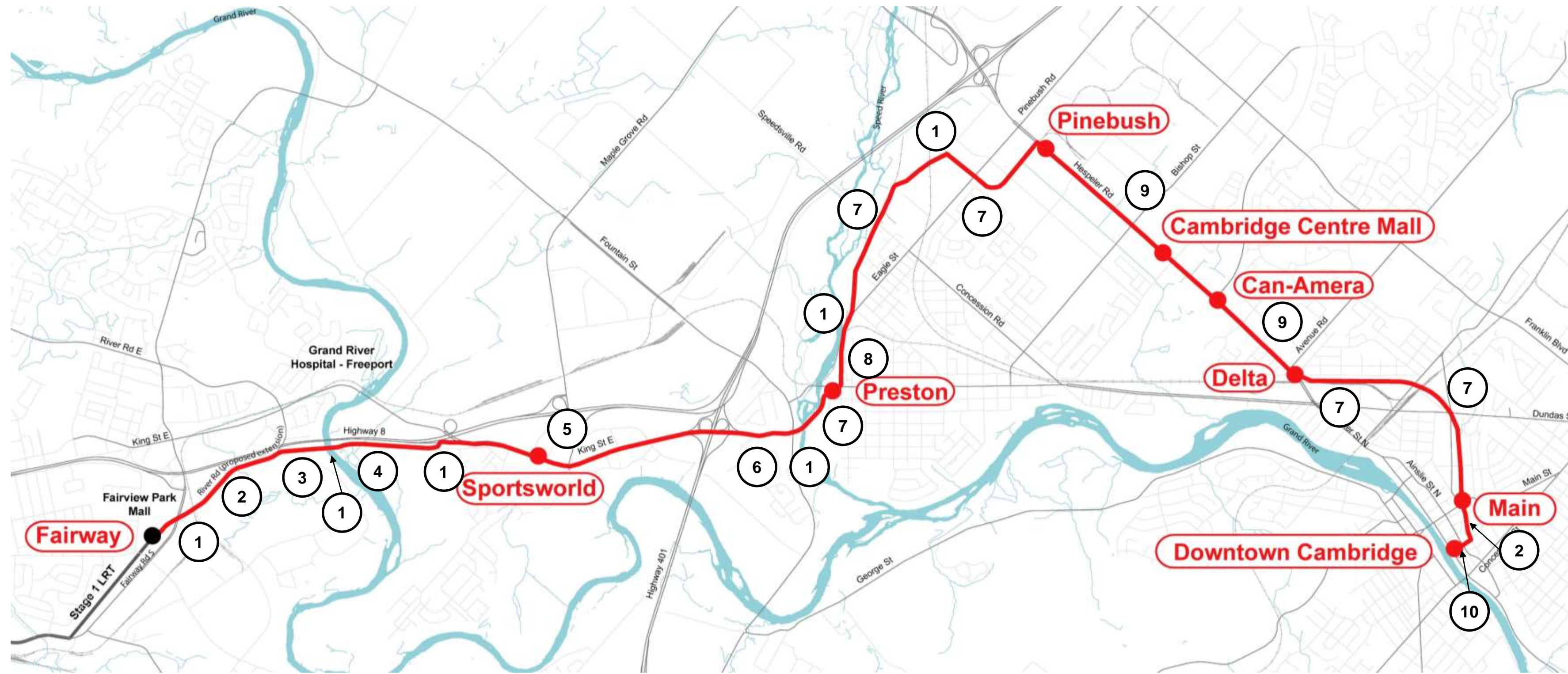


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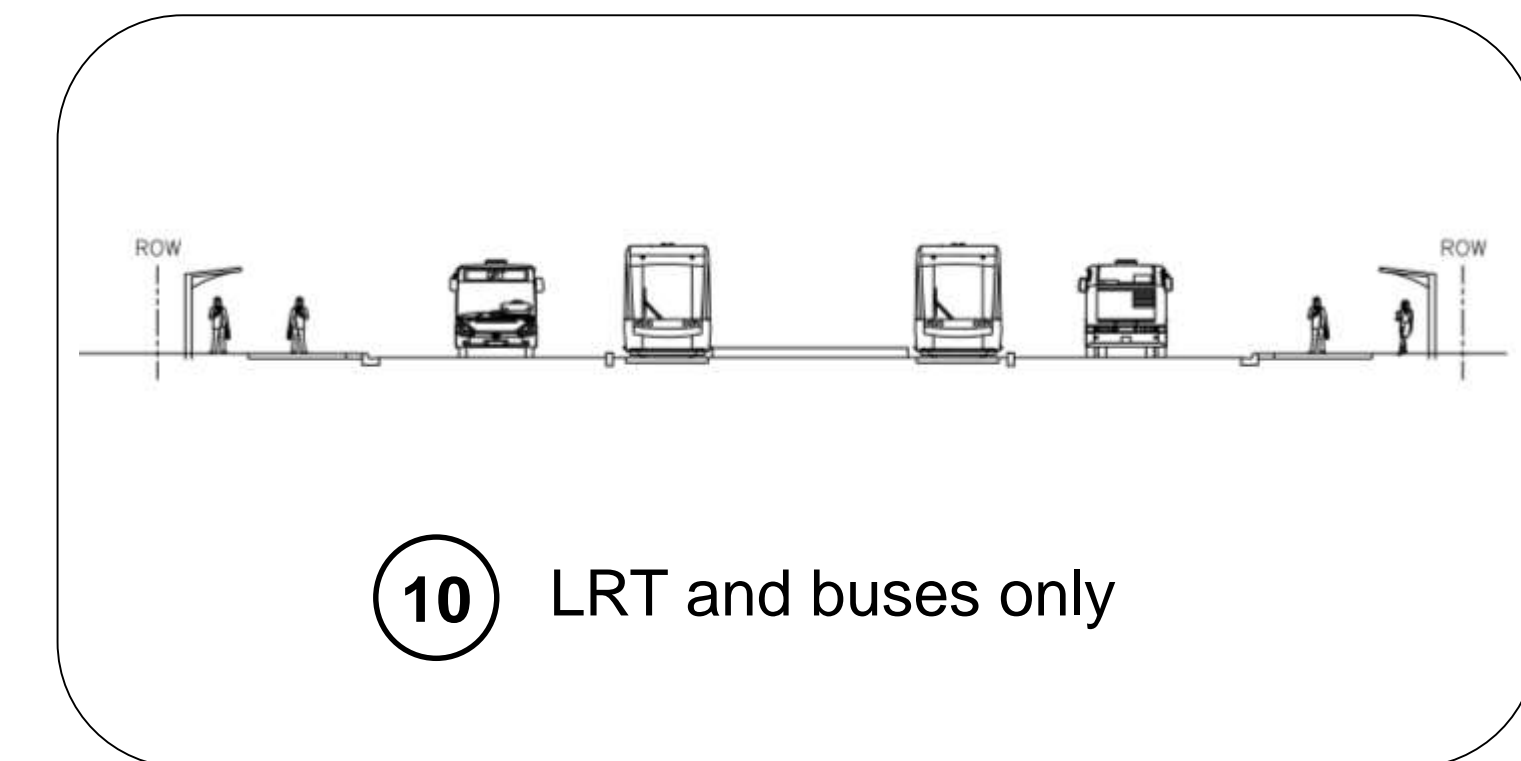
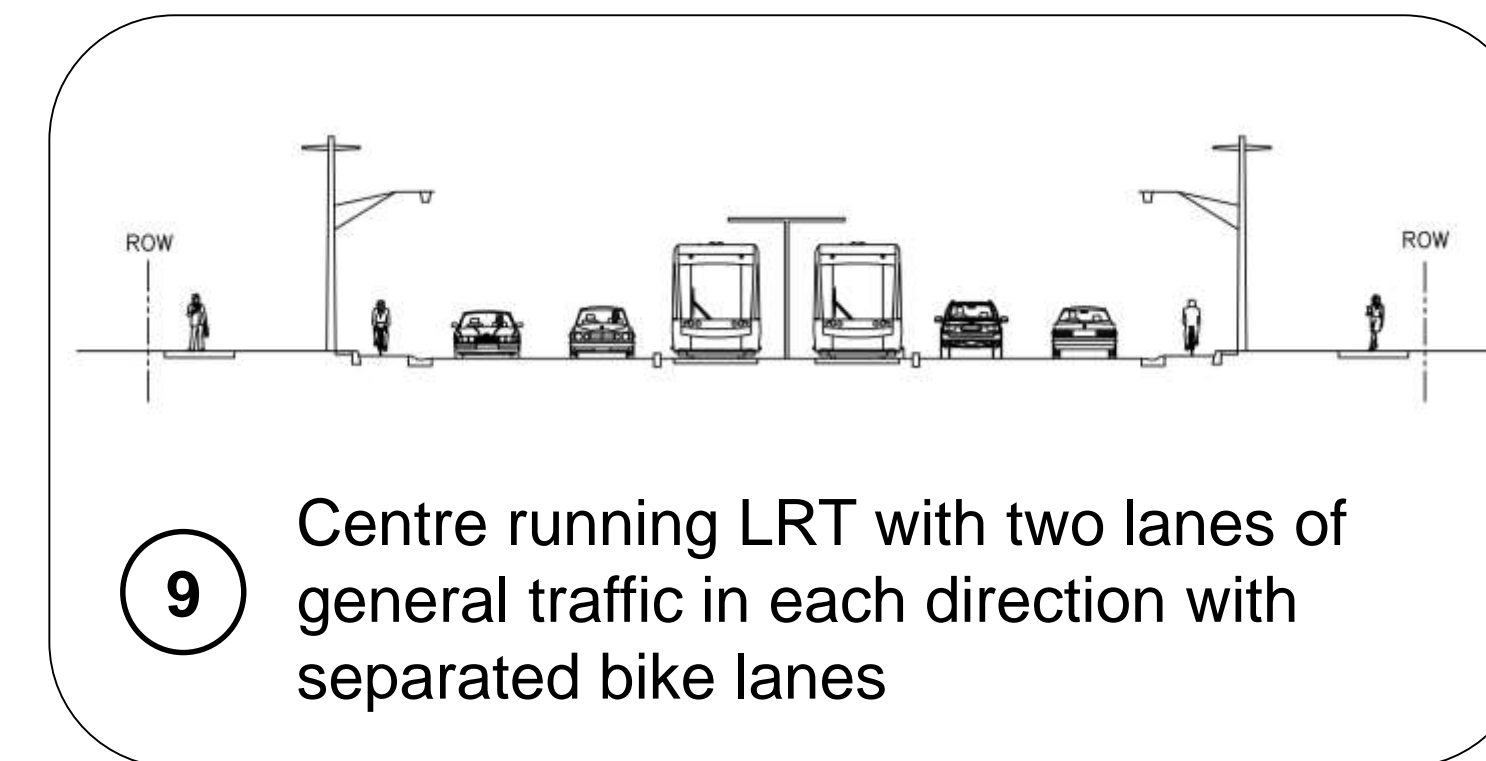
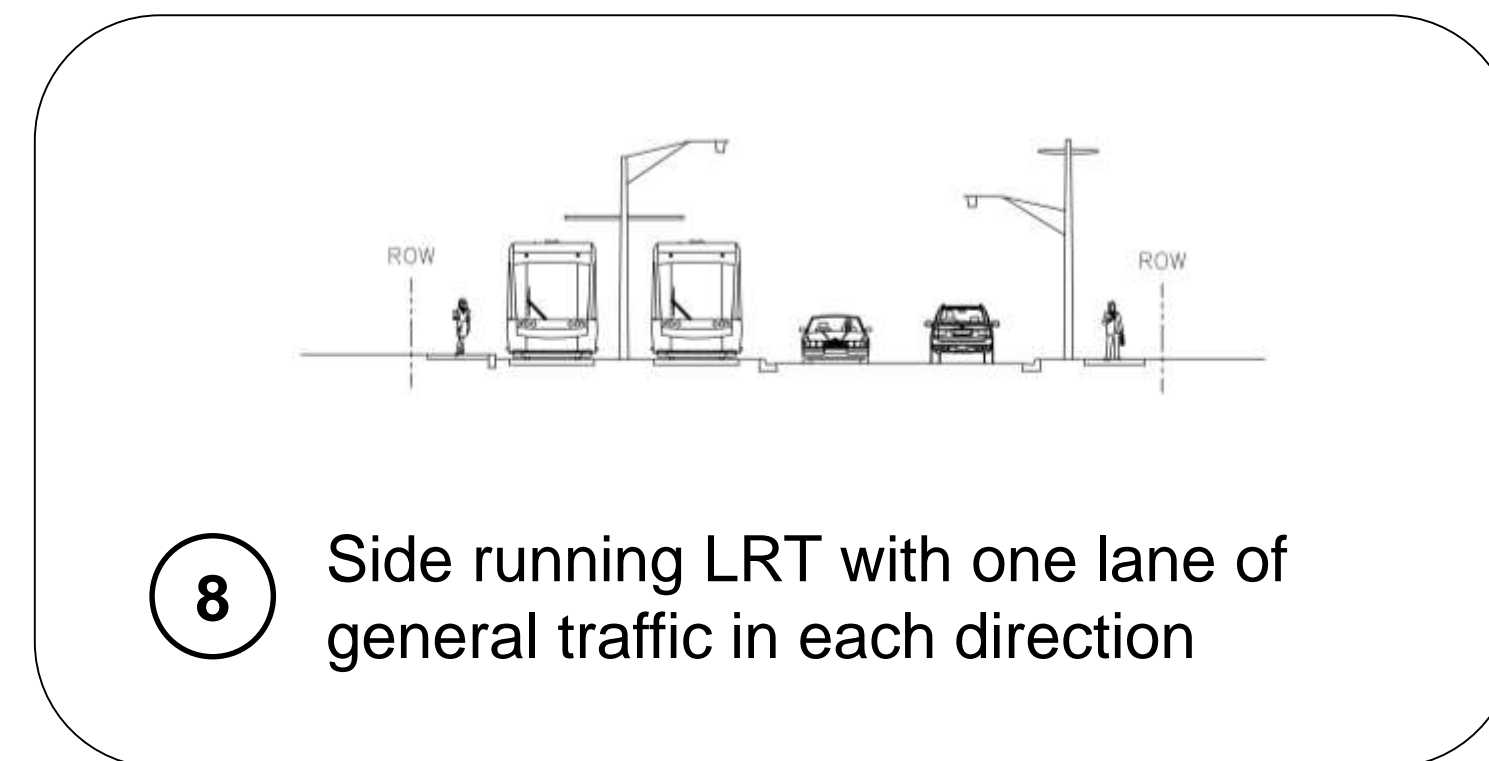


# What would it look like at street level?



6 Rendering of ION at Shantz Hill Road/Fountain Street

Note:  
Final cross-sections and dimensions will be confirmed during the design process.  
Not all roadway elements are shown here (e.g. utilities, landscaping, bus shelters).



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# Potential effects and proposed mitigation

## CULTURAL ENVIRONMENT

Properties with confirmed or potential heritage value will be directly impacted (displaced/altered) or indirectly impacted (e.g. effects on landscaping or visual aesthetic).



### Archaeological Resources

- Stage 1 Archaeological Assessment has been completed.
- Stage 2 Archaeological Assessment will be undertaken for areas with potential to retain archaeological resources.
- Should construction activities extend beyond the current footprint, further archaeological investigation may be required.



### Built Heritage and Cultural Landscapes

- Impacts have been avoided, where possible.
- Screening and impact assessment has been completed. Cultural Heritage Evaluation Reports will be prepared for impacted properties with confirmed or potential cultural heritage value.
- Additional heritage reporting will be completed during detail design.

## SOCIO-ECONOMIC ENVIRONMENT

No socio-economic environment impacts of provincial importance are anticipated. Other impacts are anticipated and proposed mitigation measures are outlined below.



### Property

- Preliminary property impacts are shown on the plan displays.
- The project will also result in temporary impacts during construction (i.e. landscaping, reinstating driveways) at some locations. This will be further defined in detail design.
- The Region's property acquisition process is shown on the "Property impact identification" and "Property buyout process" boards.



### Air Quality / Noise / Vibration

- Noise/vibration and air quality impact studies are underway for the preferred route.
- Any mitigation recommended from these studies will be incorporated into the final preliminary design and further explored in detail design.
- Standard construction practices will be employed to minimize dust emissions and will be in accordance with noise by-laws.



### Traffic, Transit & Active Transportation

- Construction will be staged to minimize impacts to businesses and residents.
- Traffic management plans (TMPs) will be developed for temporary road closures and detours.
- GRT bus service will be maintained along impacted corridors during construction.
- The TMPs will pay special attention to maintaining safe pedestrians and cyclist access through construction zones.
- Access to residences and businesses will be maintained during construction.



### Utilities

- Utility relocations will be identified and coordinated during detail design.
- Residents and businesses will be kept informed of utility construction activities.
- Utility relocations and related service interruptions will be minimized.
- Construction will be staged to minimize impacts to businesses and residents.
- On most streets along the route, utilities will be located outside of the rapidway to ensure continuity of LRT service in the event of utility failure or replacement.



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# Potential effects and proposed mitigation

## NATURAL ENVIRONMENT

No natural environment impacts of provincial importance are anticipated. Other impacts are anticipated and proposed mitigation measures are outlined below. The Natural Environment, Drainage and Stormwater Management and Contamination studies will be included in the Environmental Project Report.



### Storm Water

- A drainage and stormwater management study has been completed to identify changes in flow and runoff along the ION corridor.
- Generally, existing drainage patterns will be maintained.
- Bridges have been designed to convey flow without increased flooding.
- Drainage will be collected, managed and treated such that the existing drainage system and watercourses are not negatively affected, using a combination of best management practices.



### Fish and Fish Habitat

- The Fisheries and Oceans Canada (DFO) self-assessment process will be undertaken for watercourse crossings during detail design to determine any impacts and develop mitigation measures.
- Species at risk have been identified in the Grand River and Speed River. Bridges have been designed to fully span watercourses.
- Standard mitigation measures include timing restrictions and sediment control.
- Species-specific mitigation measures, if required, will be identified in detail design and reviewed with MNR and DFO.



### Vegetation/ Wetlands

- Sensitive vegetation has been identified within the study area and the design refined to minimize impacts.
- Edge management techniques for forest and wetland areas will be further developed in detail design.
- Compensation for the removal of wetland and forest communities will be determined in consultation with agencies during detail design.
- Butternut Health Assessment will be undertaken during detail design and any further design refinements or mitigation measures investigated on that basis.



### Wildlife

- Wildlife surveys have been undertaken and more detailed species surveys will be completed during detail design.
- Species at risk have been identified in the study area and the design has been refined to minimize impacts.
- Species-specific mitigation measures will be identified in detail design and reviewed with MNR (e.g. Jefferson Salamander).
- Bird-nesting protective measures will be used, for example avoiding tree removal in nesting season).



### Soils

- Erosion and sediment control measures will be required to protect watercourses, wetlands and properties in areas where ION is on a dedicated alignment.
- A detailed Erosion and Sediment Control Plan will be prepared in advance of construction.



### Contamination

- A Contamination Overview Study has been completed to identify areas on the ION corridor with potential contamination.
- Environmental Site Assessments will be completed during detail design for properties with potential contamination that will be acquired for the project, to determine the need for remediation.
- Mitigation measures during construction include stockpiling and equipment refueling away from watercourses, dust mitigation and appropriate management of excess materials.



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# Potential effects and proposed mitigation

## IMPACT CONCLUSIONS

Measures have been developed to minimize and/or mitigate impacts as a result of the project. The Environmental Project Report will include further details on specific mitigation measures and issues to be addressed in detail design. The EPR and the supporting technical reports will be available for public review during the TPA Process.

## MONITORING PROCESS

An impact monitoring plan will be developed to ensure compliance with relevant legislation and details for the Construction and Operations phases. This will be addressed in the Environmental Project Report and further developed in detail design. This will include:

### Construction Compliance

- Address commitments in the Environmental Project Report and conditions of any permits and approvals.
- Develop summary reports documenting compliance with the plan.

### Operational Compliance

- Identify problems and evaluate effectiveness of controls.
- Confirm that technology and system operates as designed and determine any remedial improvements.
- Report on results and take appropriate follow-up action.

## COMMITMENTS TO FURTHER WORK

The Region will undertake future design phases building upon the functional design plans to further refine the route alignment, stations, maintenance and storage facility and other specifications.

The Region will continue to engage with the public, agencies, stakeholders and Indigenous communities.



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# What happens next?

- Update the preliminary design with any new information gained from stakeholder and public input
- Prepare the business case for the project
- Present preliminary design to Regional Council for endorsement and final authority to initiate the formal Transit Project Assessment Process (Early 2020)

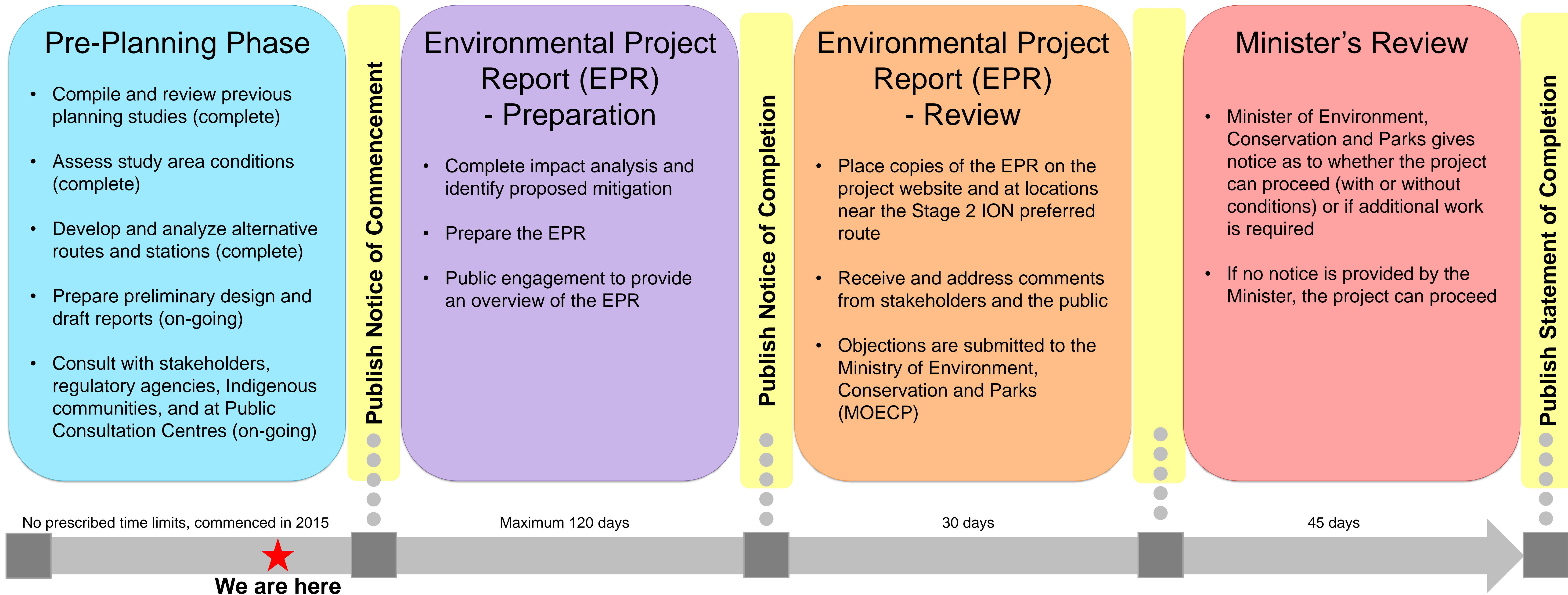


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# The Transit Project Assessment (TPA) Process



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# Future steps following the TPA Process

- Submit Provincial and Federal funding applications
- Complete further design (LRT and stations, roadways, pedestrian and cycling facilities and utility relocations)
- Initiate property acquisition
- Establish the schedule for final design and construction
- Plan for bus network changes to integrate with ION



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# Property impact identification

- Impacts to individual properties are preliminary and are illustrated on the drawings
- Property impacts can include partial buyout, full buyout, or an easement (right to use or gain access)
- Efforts to acquire property will start only after Council has endorsed the preliminary design of the recommended route
- Property requirements will continue to be refined as the design is advanced



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# Property acquisition process

- When ready to buy property, Region staff will meet with property owners, the goal is to reach a fair and equitable agreement for both the property owner and the Region
- Such an agreement will provide compensation for the fair market value of the lands and address the project impacts (e.g. repairing or replacing landscaping, fencing, paving)
- Compensation is based on fair market value (not MPAC assessed value) at the time of buyout
- Typically over 90% of all required lands and interests are acquired through the negotiation process and not by expropriation
- Refer to the Information Package for more information about the property acquisition and expropriation process



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# Thank You for Attending

Your opinion matters!

Please provide feedback by **December 6, 2019**

**E-mail:** [ION@regionofwaterloo.ca](mailto:ION@regionofwaterloo.ca)

**Website:** [stage2ION.ca](http://stage2ION.ca)

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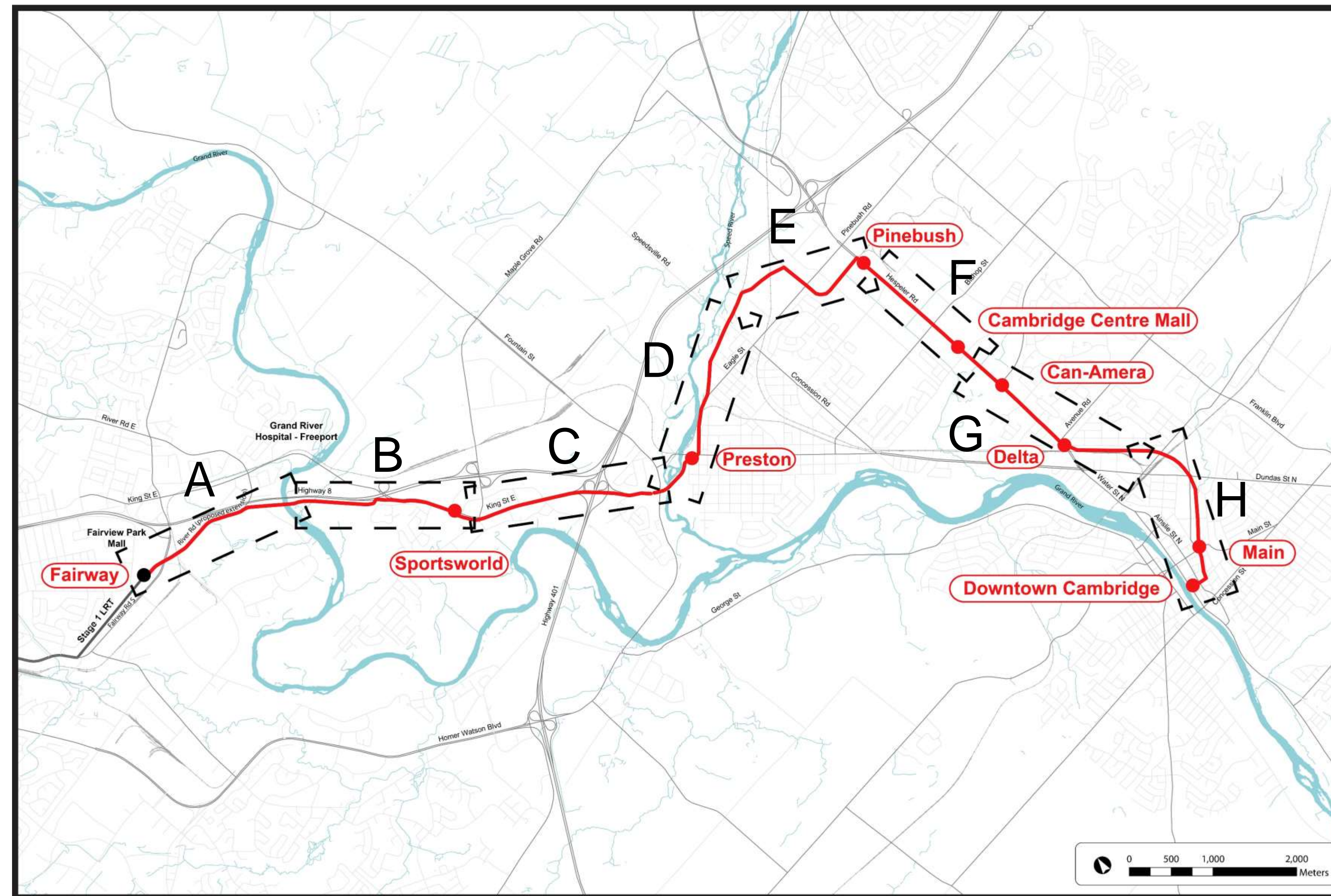
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# Preliminary Design Plans

The preliminary design for ION from Kitchener to Cambridge is presented on the next 8 display panels. The key map below shows the area covered on each board.



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