



**GRAND RIVER TRANSIT**

# **Stage 2 ION: Light Rail Transit (LRT) from Kitchener to Cambridge**

**Public Consultation Centre No. 3  
Cambridge City Hall, November 21, 2 – 8 p.m.  
Preston Memorial Auditorium, November 28, 4 – 8 p.m.**

## **Public Information Package**





# Table of contents

| Section  | Page |
|--|------|
| 1 .....Light Rail Transit in Waterloo Region.....              | 1    |
| 2 .....Why are we here? .....                                  | 1    |
| 3 .....How will my input be used? .....                        | 1    |
| 4 .....What we heard at Public Consultation Centre No. 2 ..... | 2    |
| 5 .....Development of new route alternatives .....             | 3    |
| 5.1 .....South Kitchener .....                                 | 3    |
| 5.2 .....North Cambridge .....                                 | 3    |
| 5.3 .....South Cambridge and Downtown Cambridge Terminal ..... | 7    |
| 6 .....What are the next steps?.....                           | 8    |
| 6.1 .....Public consultation .....                             | 8    |
| 7 .....How do I stay involved? .....                           | 9    |
| 8 .....Contact information .....                               | 9    |

## Appendices:

- A – Evaluation process and criteria
- B – Study timeline
- C – Preliminary potential route, February 2017
- D – Route alternative maps

## List of maps:

- Map C-1: Preliminary potential route as presented at PCC No. 2 (February-March 2017)
- Map D-1: South Kitchener – Route alternative
- Map D-2: North Cambridge – Route suggestions
- Map D-3: North Cambridge – Route alternatives
- Map D-4: North Cambridge – Route challenges
- Map D-5: South Cambridge – Route alternatives





# Stage 2 ION: LRT from Kitchener to Cambridge

Public Consultation Centre No. 3

## Public Information Package

### 1.0 Light Rail Transit in Waterloo Region

In June 2011, Region of Waterloo Council approved a staged approach to implement light rail transit (LRT) from Waterloo to Cambridge. In 2014, Regional Council awarded GrandLinq the contract to design, build, finance, operate and maintain Stage 1 ION LRT. Stage 1 ION (currently in testing phase) includes LRT from Waterloo to Kitchener and Bus Rapid Transit (BRT) from Kitchener to Cambridge (launched September 2015). Stage 1 LRT service is expected to launch in 2018.

Stage 2 ION will see BRT service replaced by LRT, creating a continuous LRT system across the Region's three urban centres.

For more information on the background and history of rapid transit in the Region please refer to The ION Story handout, available at this Public Consultation Centre and online [www.regionofwaterloo.ca/rapidtransit](http://www.regionofwaterloo.ca/rapidtransit).

### 2.0 Why are we here?

In February and March 2017, the Region held its second Public Consultation Centre (PCC No. 2) for Stage 2 ION to present the evaluation results and the Preliminary Potential Route from Kitchener to Cambridge. The Region received significant feedback on the North Cambridge segment between Sportsworld and Hespeler Road (see Map C-1). In response to that feedback, the Region is examining additional alternatives for this segment. Since March 2017, the Region has also developed new routes for Downtown Cambridge and explored the option of using part of Highway 8 in South Kitchener (see Map D-1).

Public input is important to the Region and there are several opportunities for you to comment on the project. The purpose of this Public Consultation Centre (PCC) is to:

- Summarize the comments received at PCC No. 2 and how these comments have influenced the route selection process
- Present new routes for South Kitchener, North Cambridge and South Cambridge
- Describe how all of these routes are being evaluated
- Hear your feedback

### 3.0 How will my input be used?

Feedback received at PCC No. 2 has helped shape the direction of this study and has resulted in the examination of new routes for ION. Your comments will be used as input to the evaluation of these route alternatives.



#### 4.0 What we heard at Public Consultation Centre No. 2 (PCC No. 2)

Public Consultation Centre No. 2 was held in February and March 2017. Approximately 350 people attended the PCCs. Local residents were notified of the PCCs through emails, letters, on-street advertising, social media posts, and newspaper advertising. Around 380 written submissions were received during and after the PCCs. Of the comments received, several common themes were identified.

Of the comments that were generally supportive of the Preliminary Potential Route, residents most often cited these reasons:

- **Coverage:** Residents were in favour of the areas serviced by light rail transit (LRT) including commercial or residential areas, the connections to transit hubs, or site specific areas such as Preston, Galt, Fairview Park Mall, Sportsworld and Hespeler Road. They were also in favour of the regional connection the route would provide – connecting residents of Cambridge to Kitchener and Waterloo.
- **Environmental Benefits:** Residents identified the environmental benefits that LRT would bring, such as pollution reduction by providing a more sustainable transportation option, as a reason for supporting the Stage 2 route.
- **Redevelopment Potential:** A number of residents were in favour of the growth and development that LRT would attract, included transit-oriented development that focuses on walking, cycling, and transit-friendly communities.

- **Transportation:** Residents approved of the Preliminary Potential Route avoiding busy intersections such as King Street at Fairway Road, Hespeler Road at Pinebush Road and at the Delta. Residents support an alternative to automobile travel with increasingly congested roads in the Region. The affordability of a stronger transit network in comparison to automobile travel was identified as well.

Most of the comments that identified challenges or concerns were area-specific. Of these area-specific concerns, a majority were focused on the Preliminary Potential Route segment in the Preston community (N3). The most frequently cited concerns with N3 included:

- The extent of property acquisition (primarily residential) to accommodate LRT on Moore Street and Eagle Street
- Effects on the character of the community along Moore Street and Eagle Street
- Impacts to existing traffic, as well as additional auto and/or freight traffic
- Heritage conservation
- Potential intrusion into natural areas, and the need to relocate or realign walking and cycling trails
- Noise and aesthetic impacts.





## 5.0 Development of new route alternatives

### 5.1 South Kitchener

#### Why examine an additional route alternative?

The Preliminary Potential Route, named F2a-K2, was presented at PCC No. 2 and is shown in Map C-1. While this alternative has fewer property and traffic impacts than the other alternatives, there were some drawbacks:

- A new Grand River crossing with First Nation interests and impacts on the natural environment
- Relatively higher travel time, and
- The need for a more complex bridge for River Road over Highway 8

The F2a-K2 route was initially preferred because of the potential for a stop at Grand River Hospital's Freeport campus, which was noted in a number of comments at PCC No. 2. However, since the hospital is located on a steep hill relative to King Street, it will be difficult for many people to comfortably make the connection to ION. Grand River Transit has studied the area, consulted with management at Grand River Hospital, and concluded that the hospital can be better served by frequent bus service directly from the Fairway LRT station.

The Region is now working with the Ministry of Transportation to explore the opportunity of following the Highway 8 right-of-way for LRT. This option would significantly improve travel time for the overall LRT network.

#### What options are being considered?

Map D-1 shows the new LRT route alternative along the west side of Highway 8 (F2b-K3b). The Project Team explored options on both sides of Highway 8, and in the median. Options on the west side of Highway 8 have fewer engineering challenges. Locating LRT close to the existing highway will minimize environmental impacts, but it must have a minimum clearance from, and be independent of, the existing highway.

### 5.2 North Cambridge

#### Why examine additional route alternatives?

At the first PCC for this project in November 2015 (PCC No. 1), the most frequent comment was support for an LRT stop in Preston. The evaluation process that resulted in the Preliminary Potential Route showed there are significant ridership benefits to having an LRT stop in the North Cambridge area (Preston). A stop in Preston is also the most supportive of the Region of Waterloo Official Plan and City of Cambridge Official Plan and the Province's Growth Plan policies.

At PCC No. 2 in early 2017 support continued for an extension of LRT to Cambridge, but several concerns were raised about the section of the Preliminary Potential Route through Preston (Map C-1, K2-N3). The most frequent concern was the impact of the route on residential properties along Moore Street and Eagle Street. The comments received from the public in February and March 2017 confirmed that while Preston has the greatest transportation and supportive land use opportunities, it also has some of the greatest impacts.



Property impacts in Preston along the Preliminary Potential Route can be reduced, but not completely avoided. One way to significantly reduce impacts is to consider different routes in this area, recognizing that these may create new impacts elsewhere, increase travel time, reduce access to LRT and reduce opportunities for intensification and revitalization. Another way is to consider a mixed traffic design (streetcar running) along Moore Street and Eagle Street, west of King Street.

As a result of the comments received, the Project Team is exploring refinements to routes N3 and C1a from the King Street/ Highway 401 area to the Eagle Street/ Industrial Road (CN spur) area. The goal is to identify routes that reduce impacts to property, traffic, floodplain and the natural environmental without compromising the project's overall objectives.

A range of additional route alternatives have been identified based on suggestions and submissions from the public during the previous PCC.

### What are the new alternative routes?

The route alternatives under consideration and which will be carried forward for evaluation are shown in Map D-3 and represent a combination of on- and off-street alignments. These routes are variations of the Preliminary Potential Route. The Preliminary Potential Route, as presented at PCC No. 2, is included in the evaluation and comparison process, as is a mixed traffic alternative along the same streets (N3a). Alternatives previously evaluated but not preferred (K1, N1, N2) are not being reconsidered as part of this process.

### How were the new alternative routes developed?

The Project Team started the process by reviewing all of the routes suggested by the public (Map D-2 in Appendix D), including comment sheets, the Engage Waterloo online submissions, emails, letters and Council delegation presentations. Based on feedback received the Project Team identified additional routes which are consistent with Provincial, Regional and City planning policy, including growth management, density and intensification objectives.

To be considered for evaluation, route alternatives must be an improvement in one or more criteria by increasing benefits or reducing impacts. Route alternatives may be better in one metric, and worse in another, but each route must offer a reasonable and worthwhile tradeoff. The development of new route alternatives was guided, in part, by a series of questions, summarized as follows:

- **Does the route offer a direct connection to proposed stops?** The Region is considering alternative routes between Sportsworld Drive and Hespeler Road. However, the Council Endorsed Route from 2011 continues to guide station locations. Sportsworld was identified as a significant employment and retail node and four stops were identified along Hespeler Road. The City of Cambridge identifies Hespeler Road as an intensification corridor in its Official Plan. A stop in Preston, approximately 400 metres from the King Street and Eagle Street intersection, was also endorsed in 2011. This remains a requirement of the evaluation and a 500 metre maximum walking distance from King and Eagle Street is recommended as a guideline.



- **Do the potential corridors meet railway requirements?** Alternatives utilizing the CP and CN Rail corridors must meet the railway's design standards, avoid impacting railway operations, and minimize impacts to rail infrastructure. Any routes that cross or utilize a railway corridor will be subject to the railway company's approval.
- **Is there reurbanization potential around the LRT stop area?** The City of Cambridge Official Plan has growth management policies to encourage the continued development of higher intensity and mix of land uses in the Preston Towne Centre ("Preston"). Preston is also identified as a Regeneration Area, where a transition to transit supportive densities and compatible multi-unit residential development is encouraged. Regional Council also identified the stop location in 2011. Preston continues to offer the greatest opportunity for ridership given the urban form, population and employment density, retail and recreational land uses.
- **Are there constraints such as established neighbourhoods or environmentally sensitive areas that would restrict opportunities to develop stop areas?** Alignments should reduce the estimated number of properties impacted as compared to the previously identified Preliminary Potential Alternative, K2-N3. Alternatives must also seek to minimize natural environment impacts, including crossing watercourses at locations where disturbance and/or impacts to species at risk can be minimized through bridge design.

### Why is the Maple Grove Road (K2-N2) alternative not being reconsidered?

Following PCC No. 2, several members of the public and community groups voiced their preference for the K2-N2 alternative following Maple Grove Road and Speedsville Road, in comparison to the Preliminary Potential Route K2-N3 following King Street and Eagle Street. Although there were advantages and disadvantages to each alternative, the evaluation determined that the K2-N2 route would not support the Region's community development goals and objectives. The full details of the evaluation can be found in the Information Package from PCC No. 2, which is available online at [www.Stage2ION.ca](http://www.Stage2ION.ca).

The challenges with the K2-N2 route alternative are as follows:

- **There are limited opportunities for intensification and revitalization along the K2-N2 alternative.** The primary land use surrounding the K2-N2 route is industrial. Industrial land uses generally have lower densities and are protected by the Provincial Growth Plan as well as Region and City of Cambridge Official Plans which are designed to ensure that current and future generations have access to a variety of employment options. The Provincial Growth Plan includes a minimum required average density of 160 residents and jobs (combined) per hectare around LRT stops. The Toyota plant, for example, has an estimated density less than 55 employees/hectare, roughly one-third of the Province's target.



- The K2-N2 alternative has the longest travel time due to the extra length of the route. Maintaining a rapid travel time with LRT is a vital criterion in evaluating alternative routes due to its direct correlation with ridership. The longer the trip via LRT, the less attractive LRT will be, resulting in fewer residents choosing LRT.
- The K2-N2 alternative has the fewest potential riders. Two significant factors that affect ridership include density and travel time. With primarily low-density industrial and future residential land uses along the route, limited opportunities for intensification and revitalization, and the longest travel time out of the route options considered, the K2-N2 alternative has the lowest potential riders. The lower the ridership, the less feasible it becomes to develop the infrastructure.
- The K2-N2 alternative is the most expensive to build and operate. The K2-N2 route costs more to build and operate because it is a longer route. The cost to build and operate is a key factor in creating a business case that compares the benefits to the costs. The business case is the main document which supports the Region's funding applications to higher levels of government.
- The K2-N2 alternative is the least supportive of regional and local transit and pedestrian goals and policies. The Region of Waterloo is one of the fastest growing regions in the country. In order to manage this growth, the Region developed a Regional Growth Management Strategy (RGMS) that was adopted by council in June 2003. The Growth Strategy has 6 goals: enhancing the natural environment, building vibrant urban places, providing greater transportation choice, protecting the countryside, fostering a strong economy, and ensuring overall coordination and communication. To support these goals, the RGMS established a Central Transit Corridor (CTC) anchored by higher order transit. The CTC would not only support rapid transit implementation, but allow for the appropriate intensification and revitalization needed to accommodate population growth and to create pedestrian-friendly communities. The Regional Official Plan outlined an Urban Area Boundary, which delineates developable from non-developable lands. The K2-N2 route would reach the edges of this boundary – meaning development would not be possible in some areas of the route.





### 5.3 South Cambridge and Downtown Cambridge Terminal

#### Why are we examining additional route alternatives?

The S3 alternative was selected as the Preliminary Potential Route between Dundas Street and Downtown Cambridge. However, it was noted in the PCC No. 2 information package that further examination of alignments for S3 would be carried out, including alternatives along Beverly Street and along the former railway corridor adjacent to Mill Creek. In addition, in discussion with Grand River Transit, options for the terminus of LRT service in Downtown Cambridge have been explored.

These additional alternatives have now been developed, and are presented for comment.



#### What options are being considered?

Three key alternatives have been developed between Dundas Street and Main Street, with three options for the Downtown Cambridge terminal. These options are shown in Map D-5, and include:

- Between Dundas Street and Main Street:
  - Following Beverly Street in a dedicated corridor in the centre of the street (S3a)
  - Following Beverly Street, converting Beverly Street to one-way travel for northbound vehicles, and locating LRT on one side of the street (S3b)
  - Following the former railway alignment adjacent to Mill Creek, maintaining the multi-use pathway in a similar location (S3c), or relocating the path to the opposite side of Mill Creek (S3d)
- In Downtown Cambridge:
  - On Wellington Street to the existing Ainslie Street Terminal (T1)
  - On Wellington Street to Bruce Street, with a new terminal located near Water Street (T2)
  - On Wellington Street to a new terminal location near Concession Road (T3)



## 6.0 What are the next steps?

Following this PCC, the Project Team will review all feedback received. Comment sheets may be submitted until December 31, 2017. Any new information will be considered. Using input from the technical team, stakeholders and the public, the Project Team will evaluate the additional route alternatives in the Kitchener, North Cambridge and South Cambridge segments using the approved evaluation criteria (Appendix A). Based on the evaluation results a preferred route will be then identified. The Project Team anticipates presenting the findings of this evaluation at the next round of public consultation in Spring 2018.

Pending the results of the evaluation and the feedback received at PCC No. 4 in spring 2018, the Project Team will bring a route recommendation to Regional Council.

The overall study process is shown in Appendix B.



## 6.1. Public Consultation

Feedback from the public is an important part of this project. The public consultation process provides an opportunity for the public to provide input regarding the study, and ask the Project Team questions about Stage 2 ION and about the Environmental Assessment process.

Three Public Consultation Centres have been held to date, and two additional rounds of public consultation have been introduced between now and the completion of the study, as follows:

- The fourth public consultation opportunity will be held in spring 2018 to review the evaluation results for the additional alternatives in the Kitchener, North Cambridge and South Cambridge areas, and to confirm the Preferred Route
- The fifth public consultation opportunity will be held in early 2019 to present the preliminary design of the Preferred Route, including property requirements and the Business Case

Following completion of the public consultation program and receipt of comments, the Project Team will compile and summarize all of the methods of public consultation from the start of the study in to an Environmental Project Report (EPR). Once complete, the EPR will be filed and made available for public review and comment for a 30-day period, following which any comments received will be addressed.



## 7.0 How do I stay involved?

Sign-in tonight or sign-up at the website [www.stage2ION.ca](http://www.stage2ION.ca) to be notified of future meetings. There will be additional PCCs held during the study. Feedback can also be provided by:

- Speaking with a Project Team member
- Submitting your thoughts via comment sheet on online

Stage 2 ION documents are available at [www.stage2ION.ca](http://www.stage2ION.ca). If you would like to have your name added to the project mailing list, please sign-up online at [www.stage2ION.ca](http://www.stage2ION.ca), or provide your name, postal address, email address and any group affiliation to:

## 8.0 Contact information

Rapid Transit  
Region of Waterloo  
50 Queen Street North, Suite 830  
Kitchener, Ontario N2H 6P4  
Phone: 519-575-4400  
Fax: 519-7454-4040 TTY: 519-575-4608  
Email: [ION@regionofwaterloo.ca](mailto:ION@regionofwaterloo.ca)





**Appendices**

NORTH  
CAMBRIDGE

CENTRAL  
CAMBRIDGE

SOUTH  
CAMBRIDGE



## Appendix A – Evaluation process and criteria

Following confirmation of the routes to be compared in the three areas under review (Kitchener, North Cambridge, South Cambridge), the evaluation process will be undertaken. Separately within each of the three areas, the alternatives will be compared with each other, and with the previously identified Preliminary Potential Route.

For example, routes in the North Cambridge area will be compared with other routes in the North Cambridge area, and with the previously identified Preliminary Potential Route (K2-N3).

The evaluation criteria that will be used are the same as those used previously. The criteria are based on the Regional Official Plan community and transportation objectives and fall under four categories as shown below:

| Category                           | Criteria  | Description  |
|------------------------------------|---|--|
| <b>Transportation</b>              | Ability to Serve Multi-Modal Nodes                | Are there good opportunities for connections between LRT, Grand River Transit (GRT), and GO services, as well as Park-and-Ride lots?   |
|                                    | Impact on Traffic Operations                      | How many new signalized intersections are required? How many existing intersections have capacity issues and would be further impacted by LRT?   |
|                                    | Engineering Challenges                            | How many freight rail, MTO interchange or highway crossings are there? How compatible or constrained are they?   |
|                                    | Potential Ridership                               | How many local transit riders use existing bus stops within 800 m of proposed LRT stops? What is the estimated LRT travel time for the segment based on length, geometry, crossings, stops, and traffic signals? |
| <b>Social/Cultural Environment</b> | Destinations Served                               | Are there major commercial, industrial, office, or leisure destinations within 800 m of proposed LRT stops? How many hospitals, schools or other institutional uses are there within 800 m of the stops?         |
|                                    | Properties Impacted                               | How many residential, commercial, industrial or institutional properties are impacted and how many of those could potentially require full buy-out?  |
|                                    | Transit and Pedestrian Supportive Land Use Policy | Does the route fit with existing planning policy, such as the Provincial Growth Plan, Official Plan, Transportation Master Plan or Zoning By-Laws?   |
|                                    | Cultural Heritage Impacts                         | How many heritage properties and buildings are there along the route?  |



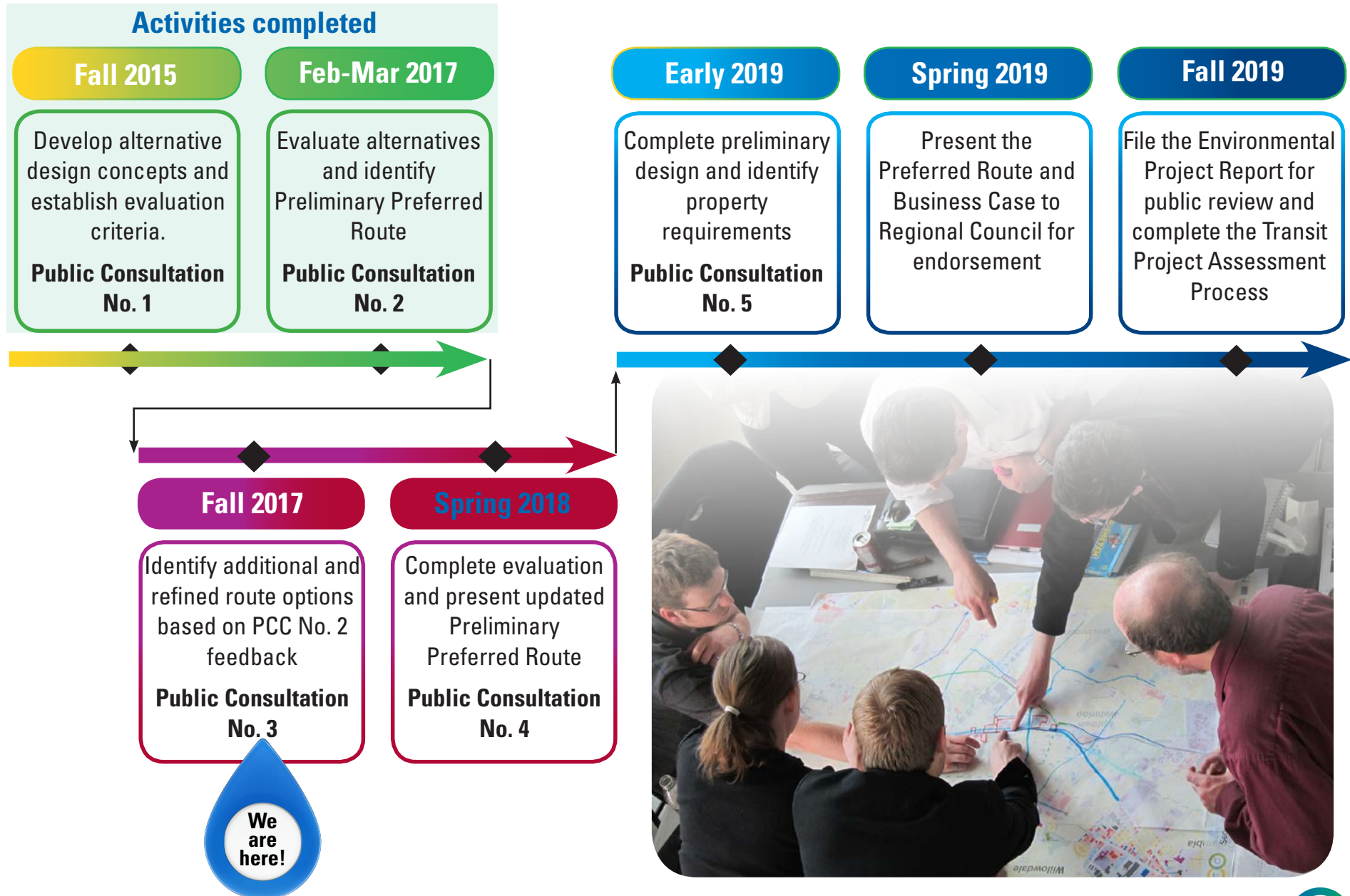
| Category                    | Criteria   | Description  |
|-----------------------------|--|--|
| <b>Natural Environment</b>  | Impact on Floodplains                              | What area of floodplain does the route cross?  |
|                             | Impact to Significant Natural Features             | Does the route cross or impact any significant natural features such as wetlands, forests, watercourses or habitat for endangered/at risk species?             |
| <b>Economic Environment</b> | Ability to Serve Concentrations of Employment      | Will the stops provide access to existing employment areas? Is there potential for new or infill employment development within 800 m of the proposed LRT stop? |
|                             | Opportunity for Intensification and Revitalization | Will the stops serve areas that can benefit from revitalization? Is there potential for residential intensification close to the stops?                        |
|                             | Cost (Capital and Operating)                       | What is the estimated cost (in \$2016) to design and build, then operate and maintain every year?  |

The Project Team, which includes specialized technical and environmental experts from a variety of fields, will analyze how well each route meets the evaluation criteria objectives. The results of the analysis will be used to compare routes within segments. The analysis and draft evaluation summary will be reviewed by the Technical Advisory Committee consisting of staff and departments from the Region including Grand River Transit, as well as the Cities of Kitchener and Cambridge, Ministry of Transportation and Grand River Conservation Authority. The Project Team will also incorporate input from the Region's Senior Management Team and the Rapid Transit Steering Committee, which includes four Regional Councillors and the Regional Chair.

Based on the evaluation results and the input received, the Project Team, in cooperation with the Technical Advisory Committee, will identify a route considered to be preferred for each segment. These recommendations will be presented to the public for comment at the next public consultation event, anticipated in spring 2018.

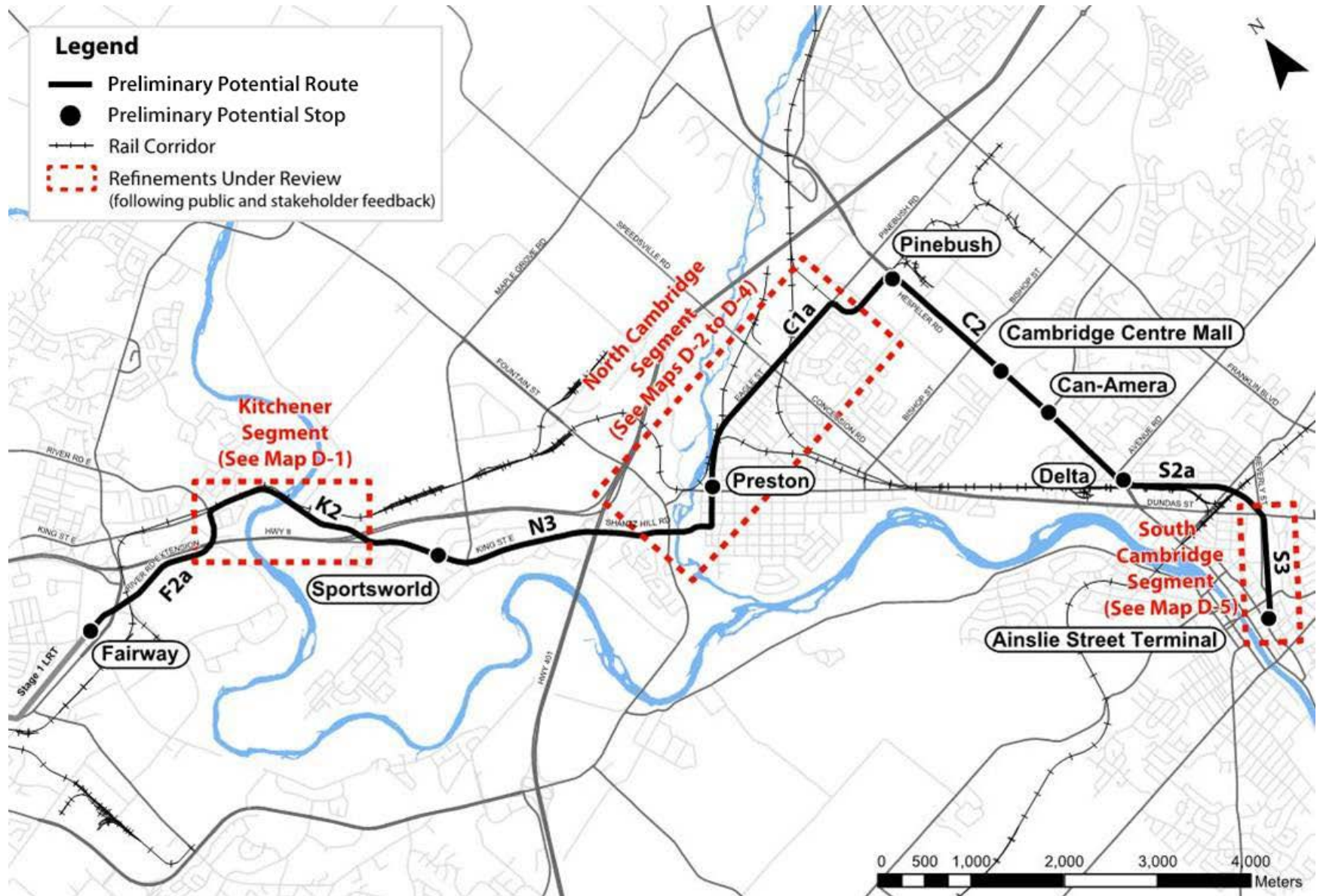
Once the Preferred Route is confirmed, the Project Team will proceed with preliminary design and identify property requirements, complete the Business Case and prepare the Environmental Project Report. Another opportunity for public input on the preliminary design and property requirements will be held in early 2019, prior to finalizing the project documentation.

## Appendix B – Study Process



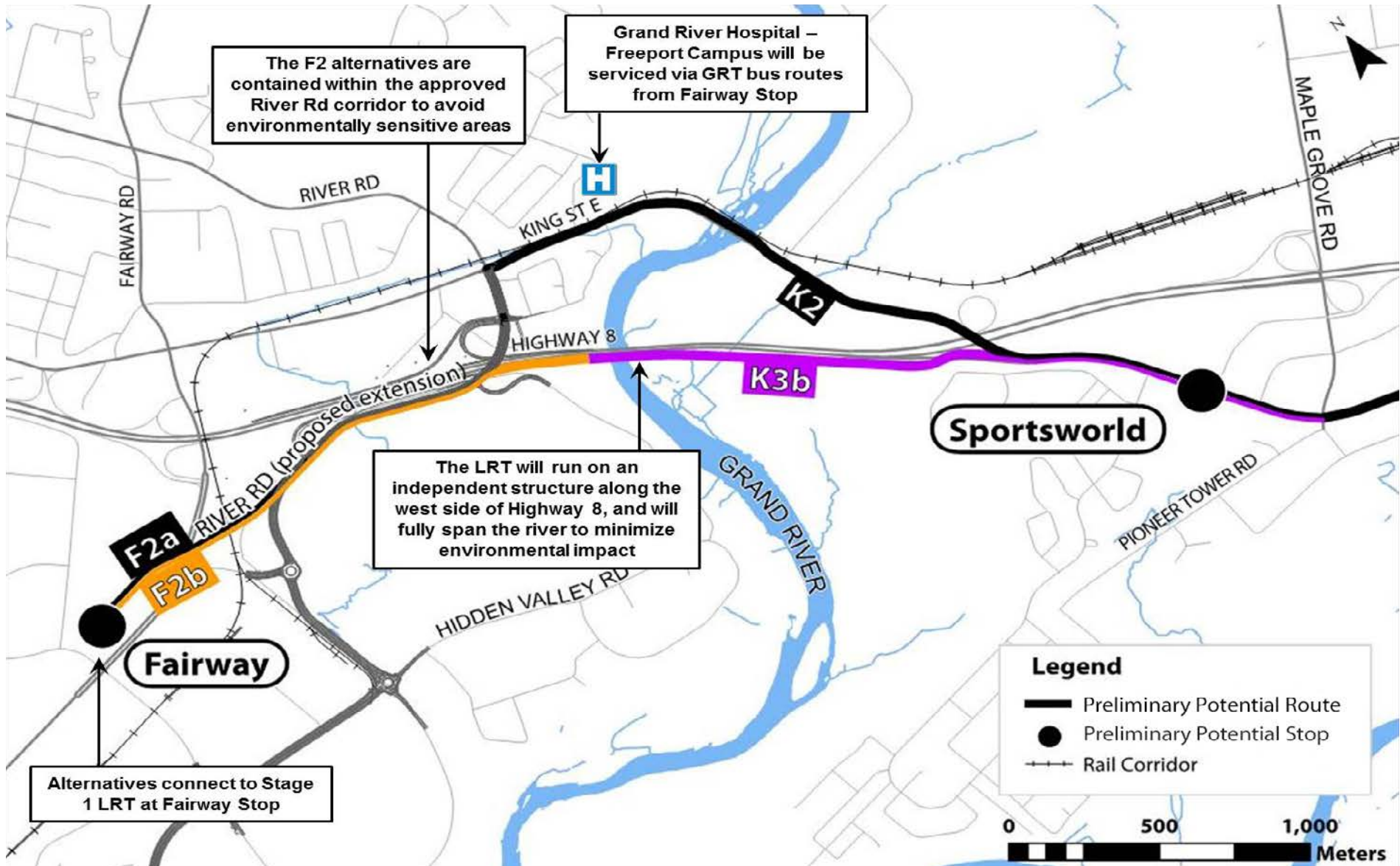
## Appendix C – Preliminary Potential Route

Map C-1: Preliminary Potential Route as presented at PCC No. 2 (February-March 2017)

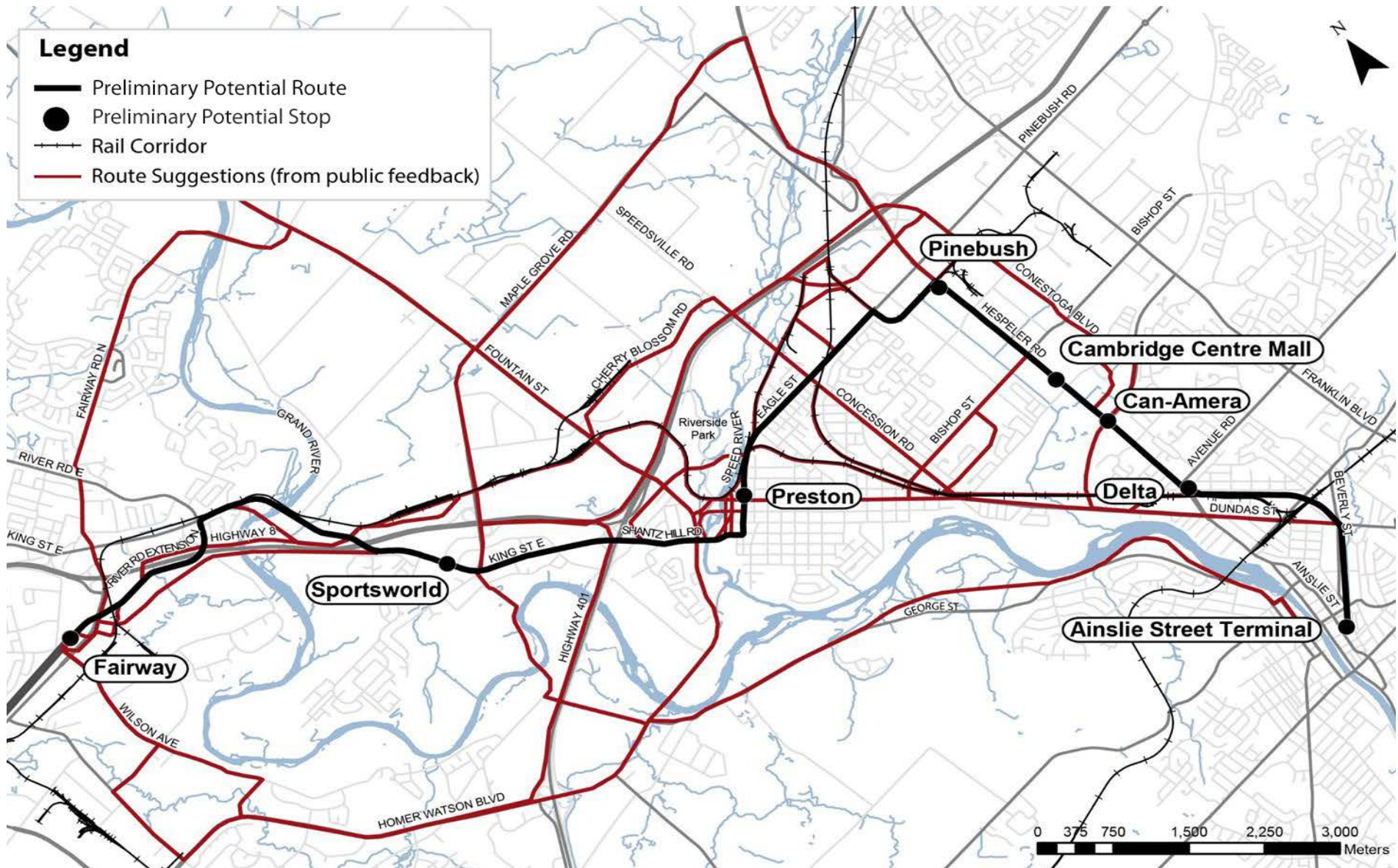


## Appendix D – Route Alternative Maps

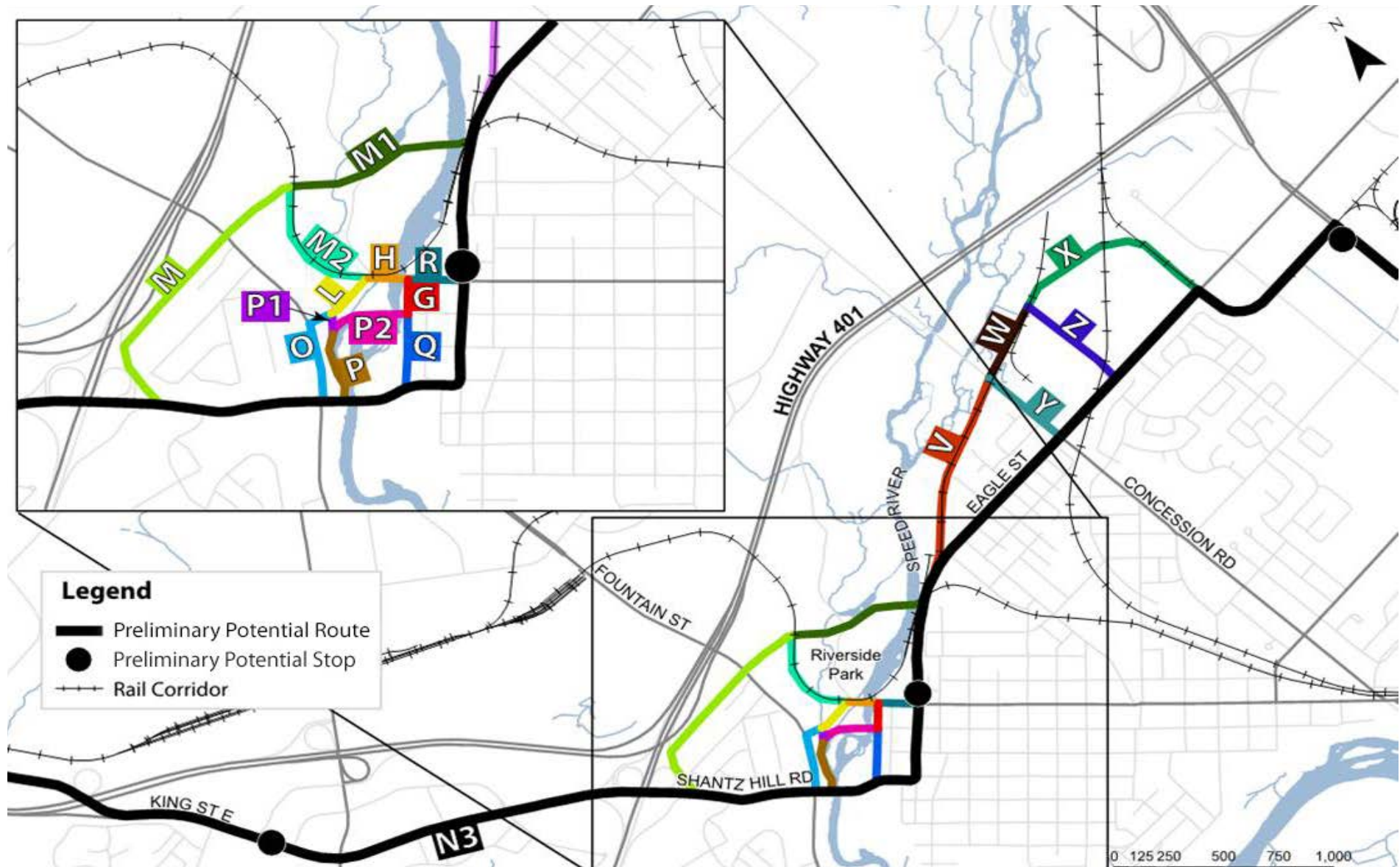
Map D-1: South Kitchener – Route alternative



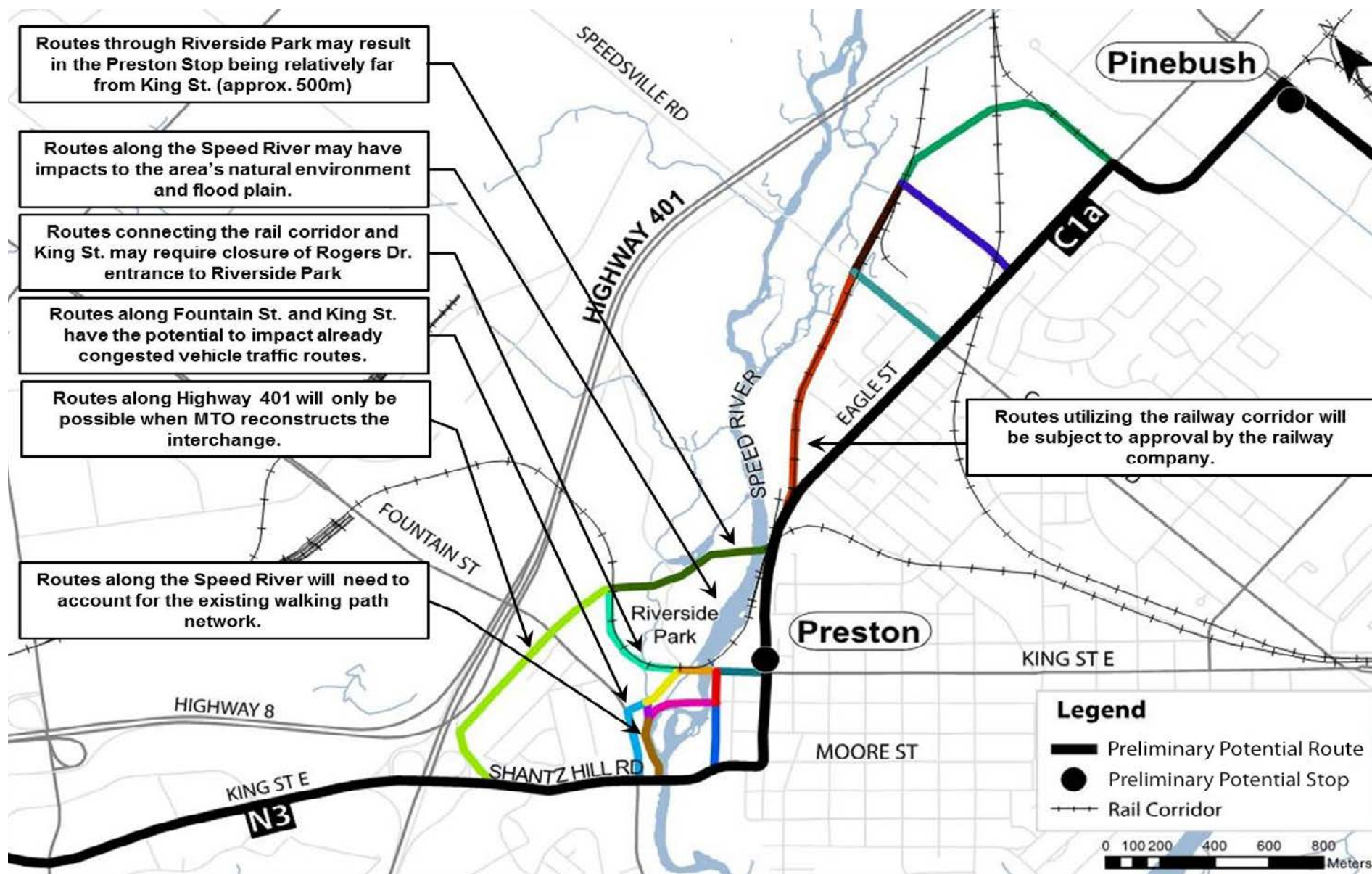
## Map D-2: North Cambridge – Route suggestions



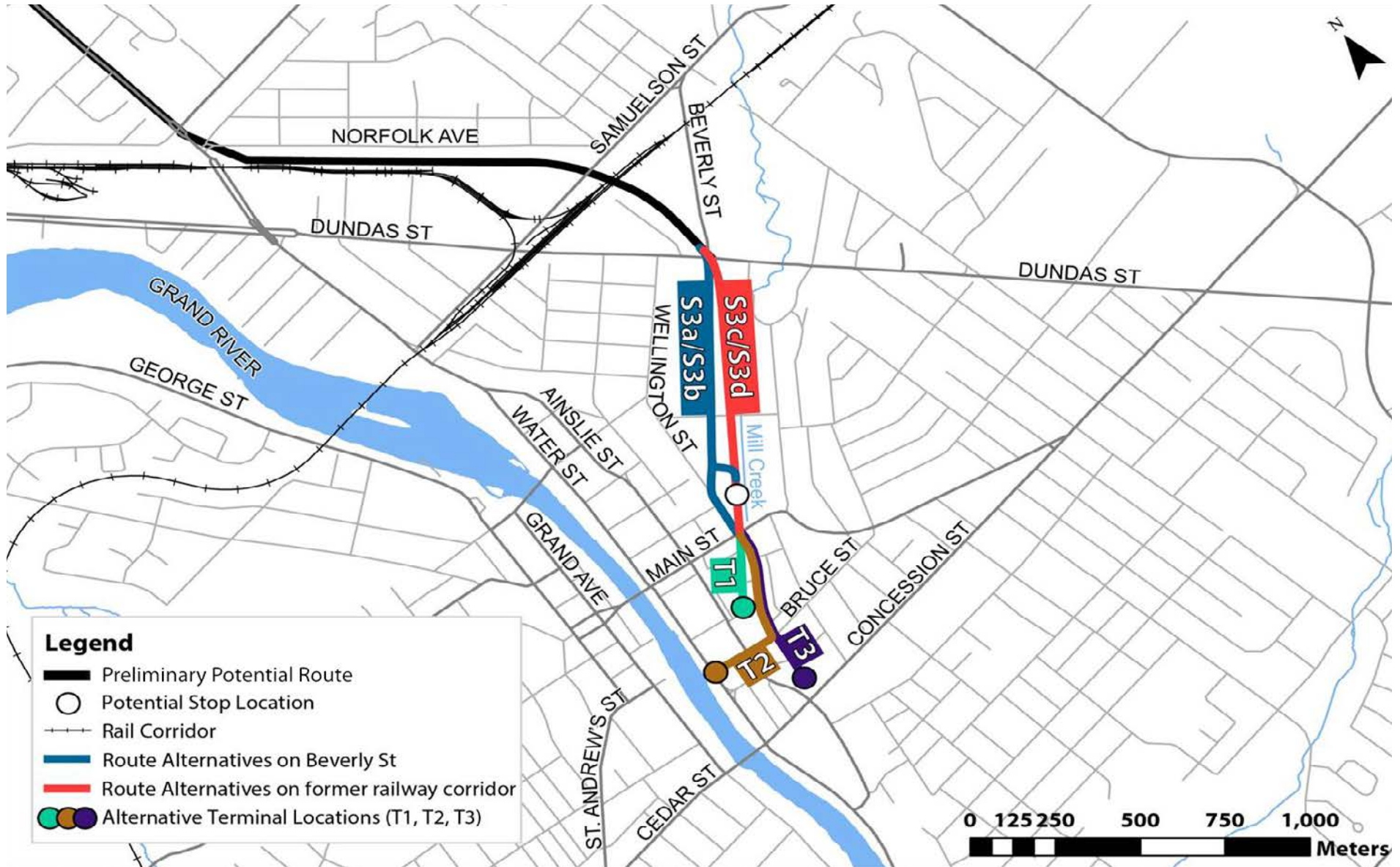
## Map D-3: North Cambridge – Route alternatives



## Map D-4: North Cambridge – Route challenges



## Map D-5: South Cambridge – Route alternatives





- ION project website: [regionofwaterloo.ca/rapidtransit](http://regionofwaterloo.ca/rapidtransit)
- Phone: **519-575-4400 ext. 3462**
- TTY: **519-575-4608**
- Email: [ION@regionofwaterloo.ca](mailto:ION@regionofwaterloo.ca)

- Stage 2 website: [www.stage2ION.ca](http://www.stage2ION.ca)
-  [facebook.com/rideION](https://facebook.com/rideION)
-  [@rideIONrt](https://twitter.com/rideIONrt)
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