

# Welcome

## Stage 2 ION: Light Rail Transit (LRT) from Kitchener to Cambridge Transit Project Assessment (TPA) Process

Public Consultation Centre (PCC) No.1

November 18, 2015

November 19, 2015

### Join the Conversation!



# Purpose of Today

- Introduce the planning and approvals process that Stage 2 ION will follow
- Present the endorsed route and new study area of Stage 2 ION
- Present the potential criteria used to evaluate route alternatives
- Receive public input on the various LRT routes and stop locations

## What is ION?

- Approved by Council in 2011, ION will bring LRT to Waterloo Region in two stages:
  - Stage 1 ION includes LRT from Waterloo to Kitchener and Bus Rapid Transit (BRT) from Kitchener to Cambridge
  - Stage 1 ION LRT is currently under construction, while BRT was completed in 2015 and is now operational
  - Stage 2 ION will see BRT replaced by LRT, creating a continuous LRT system
- ION is the foundation for the direction of the Regional Official Plan:



# Why Light Rail Transit?

- LRT will:
  - Help contain urban sprawl
  - Protect environmentally-sensitive areas
  - Preserve farmland and the rural lifestyle
  - Move people; create transportation choice
- Without LRT, the Region will require:
  - 500 new lane kilometres of roadways at a cost of \$1.4 billion
    - ION reduces the need for new roads by 40% or \$500 million



# ION Timeline

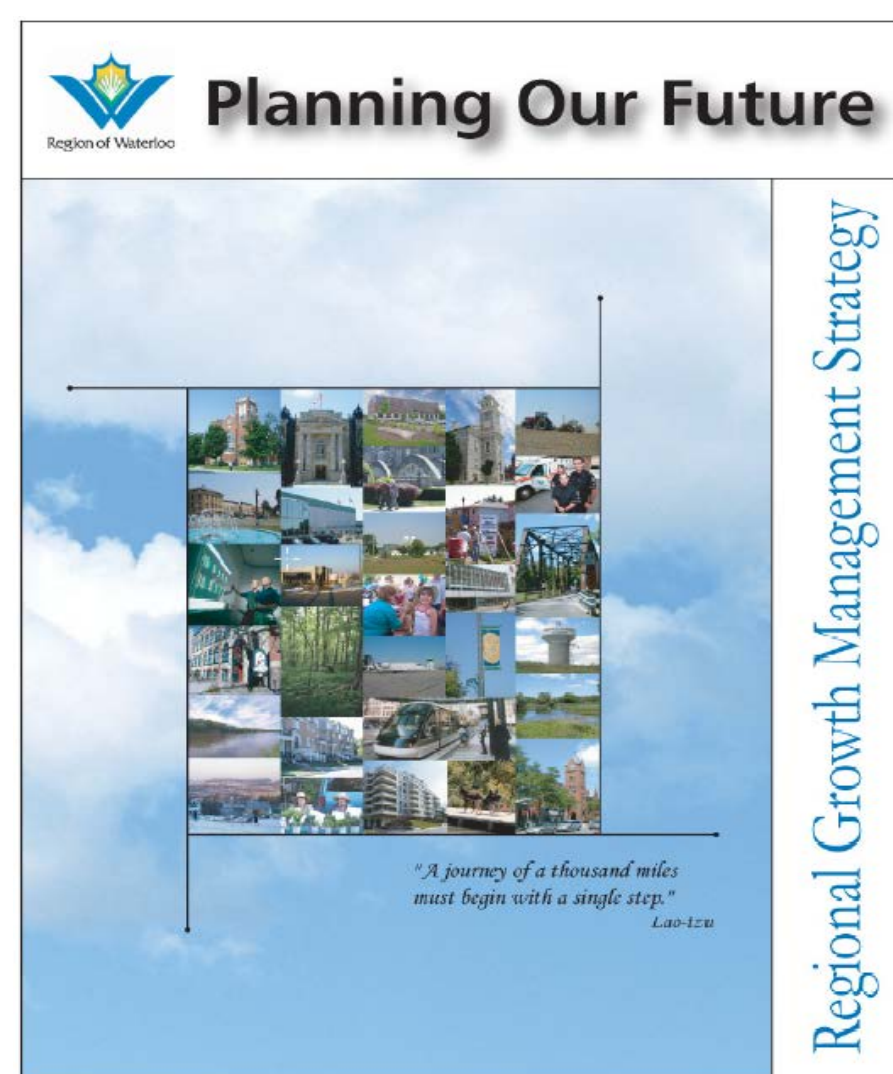


**1970's**  
Rapid Transit  
Initial Idea

**2004**  
Planning/EA  
Studies  
Initiated

**2012**  
Stage 1 LRT  
and BRT  
Ministry of  
Environment  
Approval

**2015**  
Stage 1 BRT  
Operational



**2003**  
Regional  
Growth  
Management  
Strategy  
Adopted

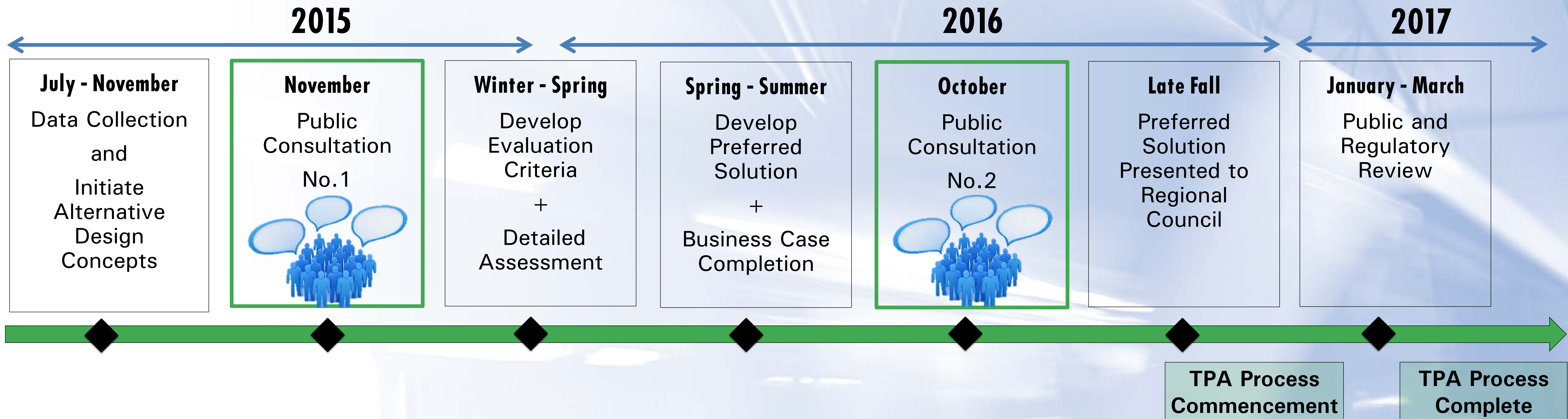
**2011**  
Regional  
Council  
Endorsed  
Route for  
Stage 1 LRT  
& BRT and  
Stage 2 LRT

**2014**  
Stage 1 LRT  
& BRT  
construction  
begins

**2015**  
Stage 2 LRT  
Planning/EA  
Study Begins



# Stage 2 TPA Process Timeline



Transit Project Assessment (TPA) Process consists of various steps and requirements. It is a focused impact assessment process that includes consultation, an assessment of potential positive and negative impacts, and assessment of measures to mitigate negative impacts, and documentation.

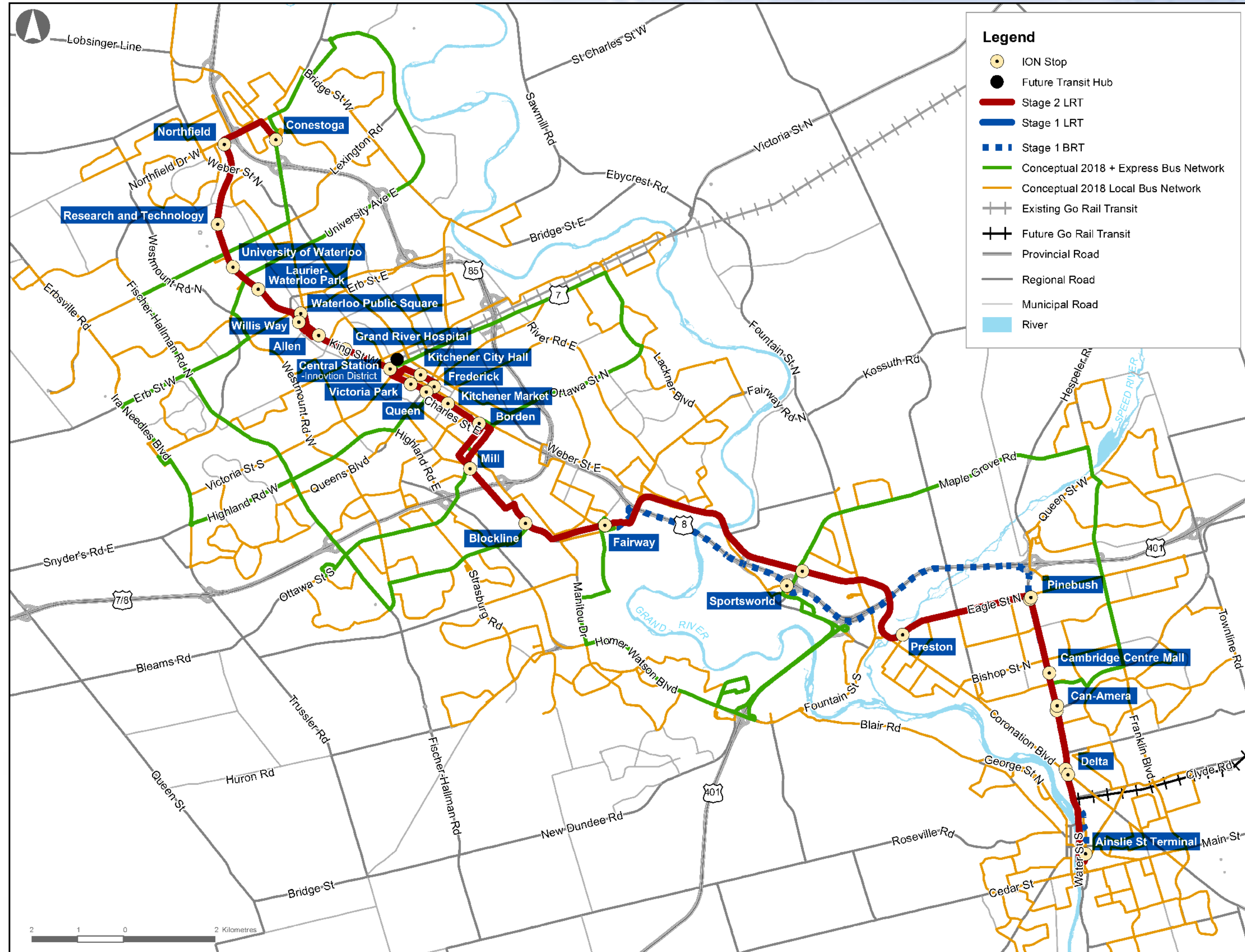


# Why Re-examine the 2011 Route?

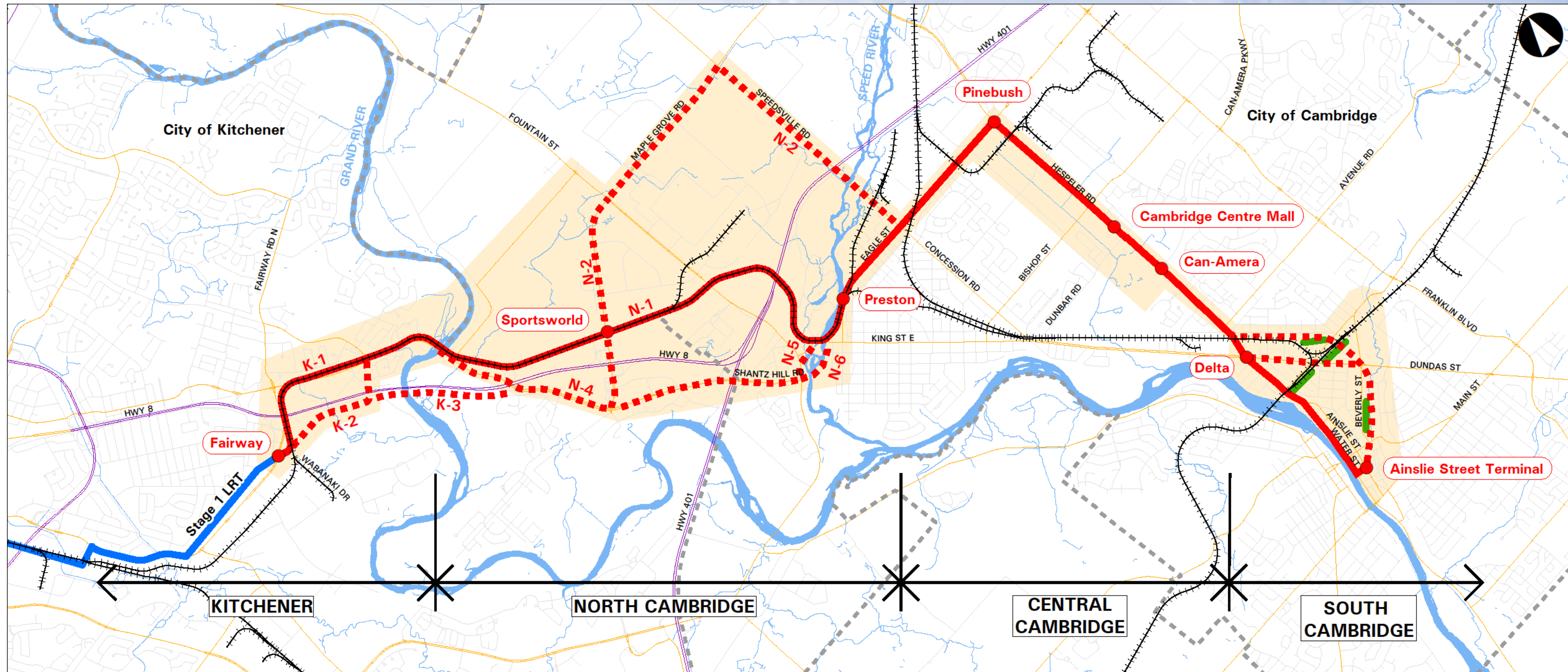
- **Canadian Pacific (CP) Rail Challenges**
  - Now identified that 2011 route requires lengthy track relocation and grade separation
  - Route options will be considered to minimize impact on rail operations and avoid grade separations
- **Updated Data Collection**
  - Updated data and condition analysis is being completed to examine past findings taking into account any new challenges and opportunities
- **Maximize Ridership, Minimize Operating Costs**
  - Confirmed 2011 route maximizes the opportunity for transit-supportive development and creates the most cost-effective solution (both in terms of construction and the operating costs)
- **GO Rail Service**
  - Increased interest and support for a future GO Rail service into Southern Cambridge
  - Possible locations for a high quality, convenient GO-LRT hub connection will need to be identified and evaluated
- **Planning Opportunities**
  - Confirm and validate the feasibility of the preferred route, taking into account recent development, redevelopment and intensification initiatives
- **Natural Environment Considerations**
  - Costly construction and invasive construction may be required for the 2011 route which crosses and runs along the Speed River
  - Route options should be explored to minimize impacts and provide mitigation



# 2011 Council Endorsed Plan



# Stage 2 Study Area



## Legend

- |  |                         |  |                    |  |                        |
|--|-------------------------|--|--------------------|--|------------------------|
|  | Endorsed* LRT Stop      |  | Potential LRT Stop |  | Potential GO Station   |
|  | Endorsed* Stage 2 Route |  | Alternative Route  |  | Potential GO Rail Line |
|  | Study Area Boundary     |  | Rail Corridor      |  | Municipal Border       |

**Stage 2 ION:  
LRT from Kitchener to Cambridge  
Alternative Routes**

\* Endorsed by Regional Council in June 2011

# Kitchener/North Cambridge



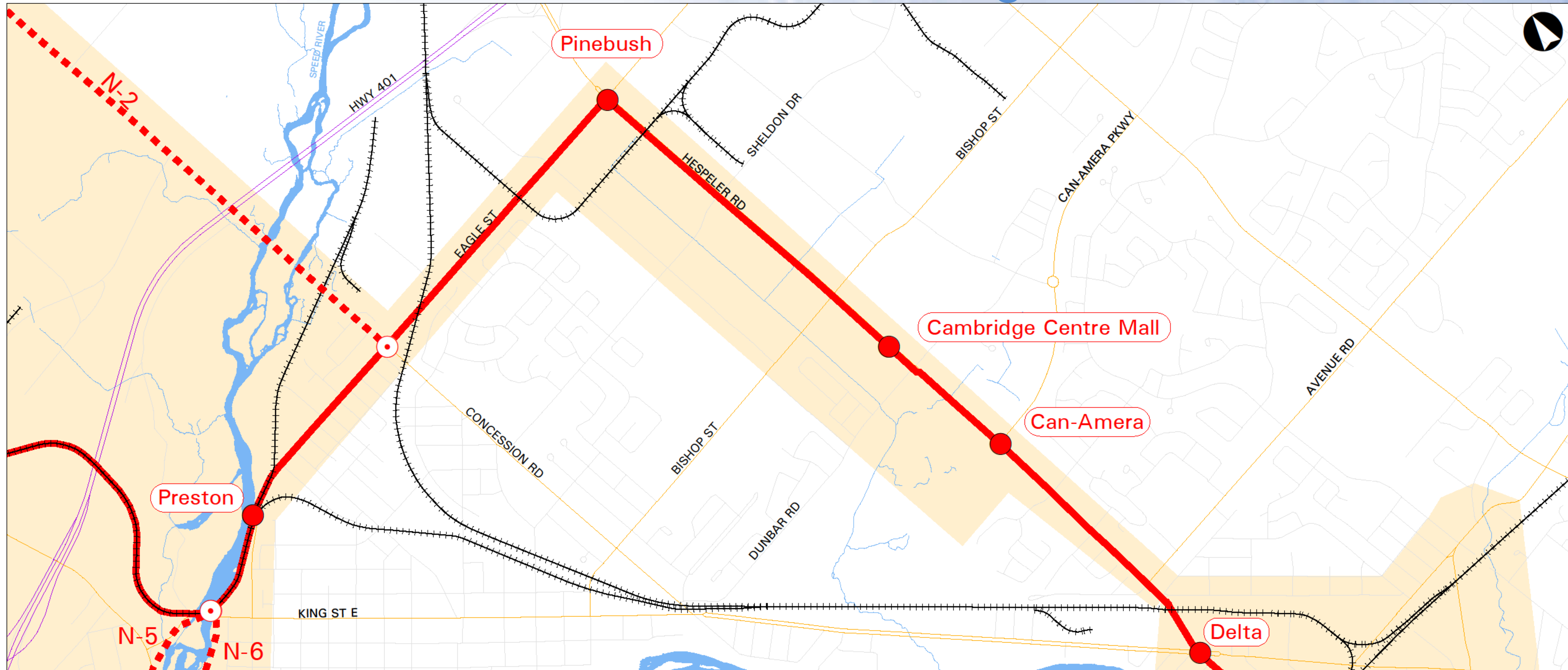
## Legend

- |  |                         |  |                    |  |                        |
|--|-------------------------|--|--------------------|--|------------------------|
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**Stage 2 ION:**  
**LRT from Kitchener to Cambridge**  
 Alternative Routes  
 Kitchener/North Cambridge

\* Endorsed by Regional Council in June 2011

# Central Cambridge



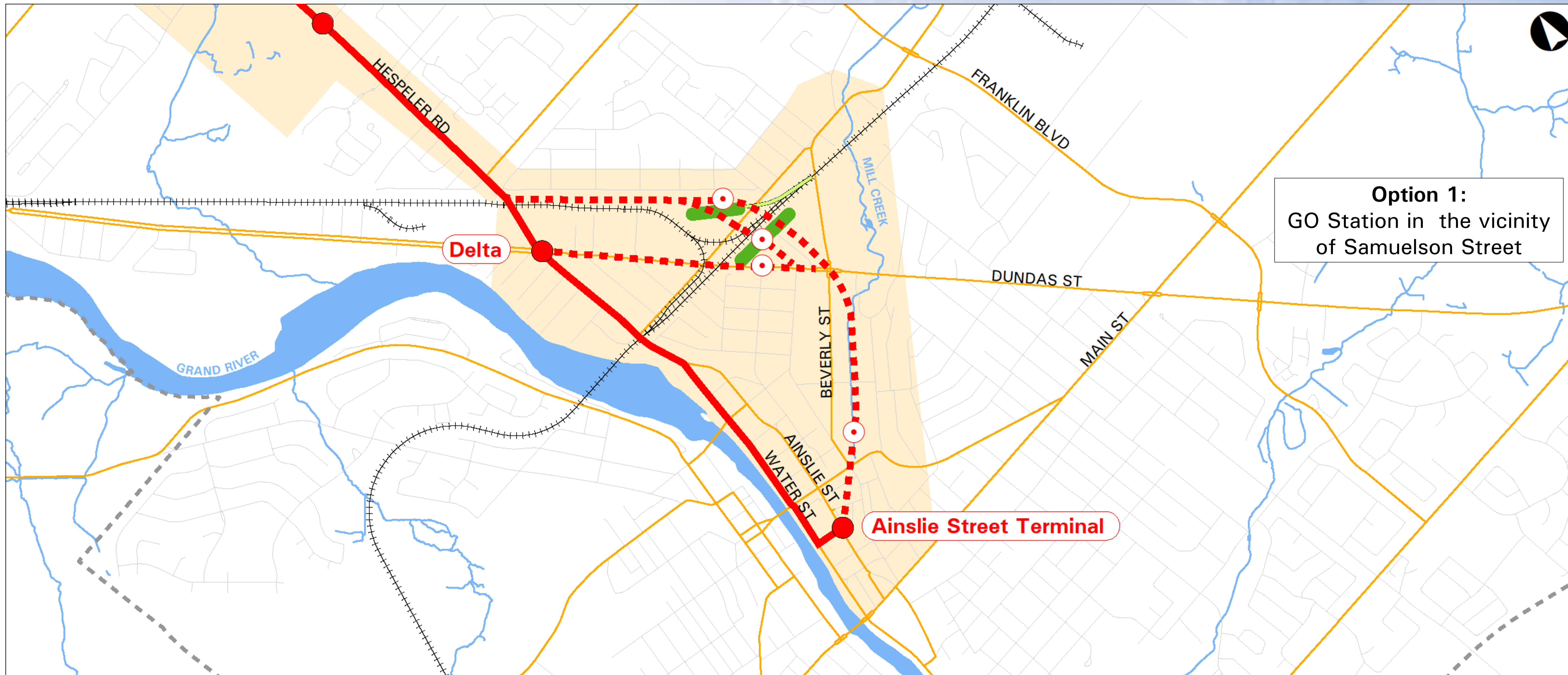
### Legend

- Endorsed\* LRT Stop
- Potential LRT Stop
- Potential GO Station
- Endorsed\* Stage 2 Route
- - - Alternative Route
- Potential GO Rail Line
- Study Area Boundary
- Rail Corridor
- Municipal Border

**Stage 2 ION:**  
**LRT from Kitchener to Cambridge**  
 Alternative Routes  
 Central Cambridge

\* Endorsed by Regional Council in June 2011

# South Cambridge – Option 1



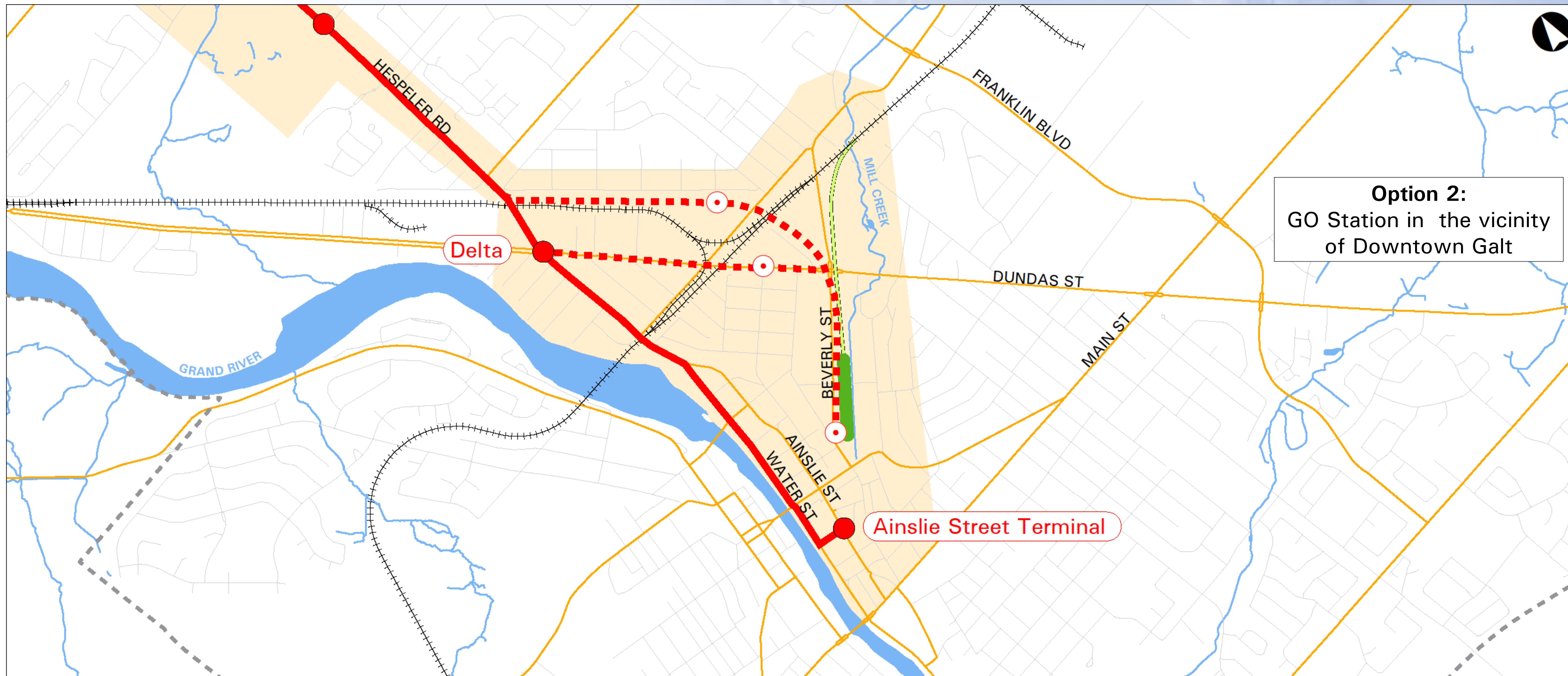
## Legend

- |  |                         |  |                    |  |                        |
|--|-------------------------|--|--------------------|--|------------------------|
|  | Endorsed* LRT Stop      |  | Potential LRT Stop |  | Potential GO Station   |
|  | Endorsed* Stage 2 Route |  | Alternative Route  |  | Potential GO Rail Line |
|  | Study Area Boundary     |  | Rail Corridor      |  | Municipal Border       |

**Stage 2 ION:**  
**LRT from Kitchener to Cambridge**  
 Alternative Routes  
 South Cambridge  
 CPR Corridor GO Station Option

\* Endorsed by Regional Council in June 2011

# South Cambridge - Option 2



**Option 2:**  
GO Station in the vicinity of Downtown Galt

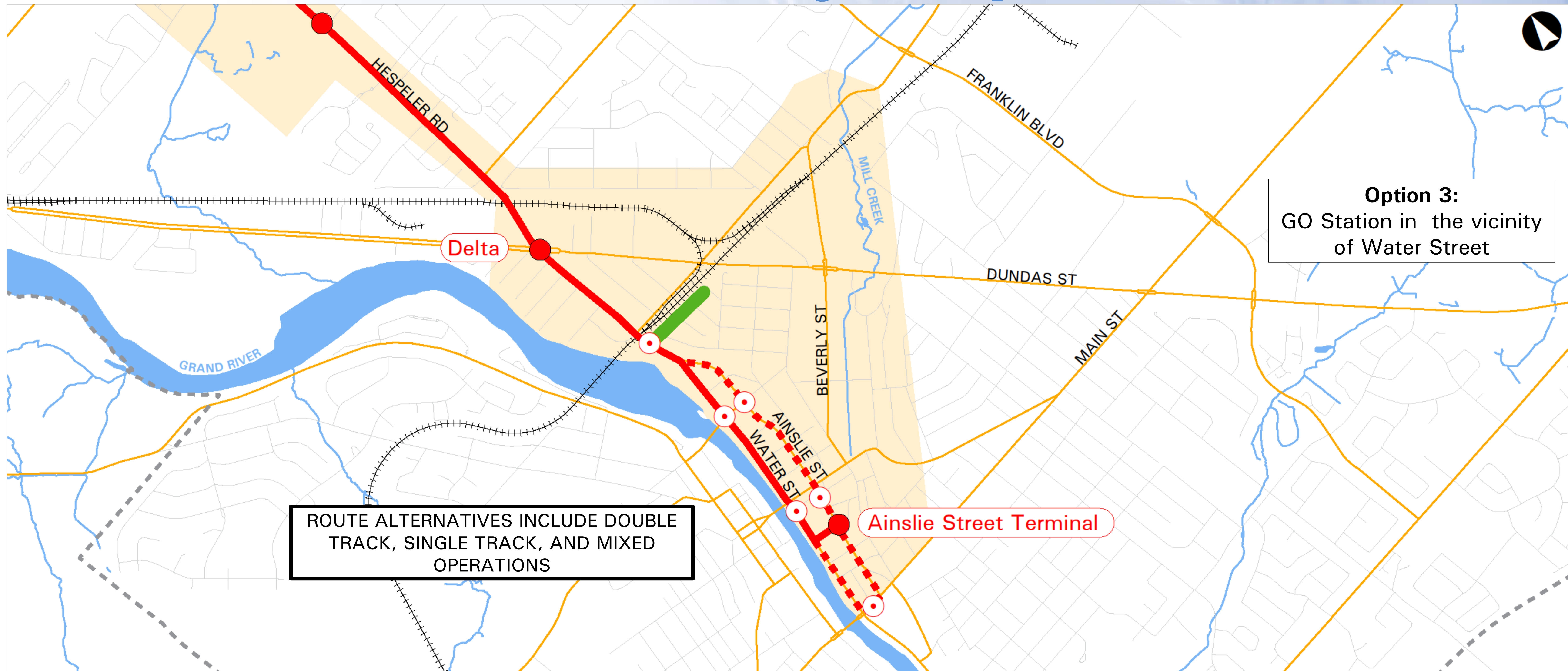
## Legend

- |  |                         |  |                    |  |                        |
|--|-------------------------|--|--------------------|--|------------------------|
|  | Endorsed* LRT Stop      |  | Potential LRT Stop |  | Potential GO Station   |
|  | Endorsed* Stage 2 Route |  | Alternative Route  |  | Potential GO Rail Line |
|  | Study Area Boundary     |  | Rail Corridor      |  | Municipal Border       |

**Stage 2 ION:**  
**LRT from Kitchener to Cambridge**  
Alternative Routes  
South Cambridge  
Downtown GO Station Option

\* Endorsed by Regional Council in June 2011

# South Cambridge – Option 3



ROUTE ALTERNATIVES INCLUDE DOUBLE TRACK, SINGLE TRACK, AND MIXED OPERATIONS

**Option 3:**  
GO Station in the vicinity of Water Street

**Ainslie Street Terminal**

## Legend

- |  |                         |  |                    |  |                        |
|--|-------------------------|--|--------------------|--|------------------------|
|  | Endorsed* LRT Stop      |  | Potential LRT Stop |  | Potential GO Station   |
|  | Endorsed* Stage 2 Route |  | Alternative Route  |  | Potential GO Rail Line |
|  | Study Area Boundary     |  | Rail Corridor      |  | Municipal Border       |

**Stage 2 ION:**  
**LRT from Kitchener to Cambridge**  
Alternative Routes  
South Cambridge  
Water St GO Station Option

\* Endorsed by Regional Council in June 2011

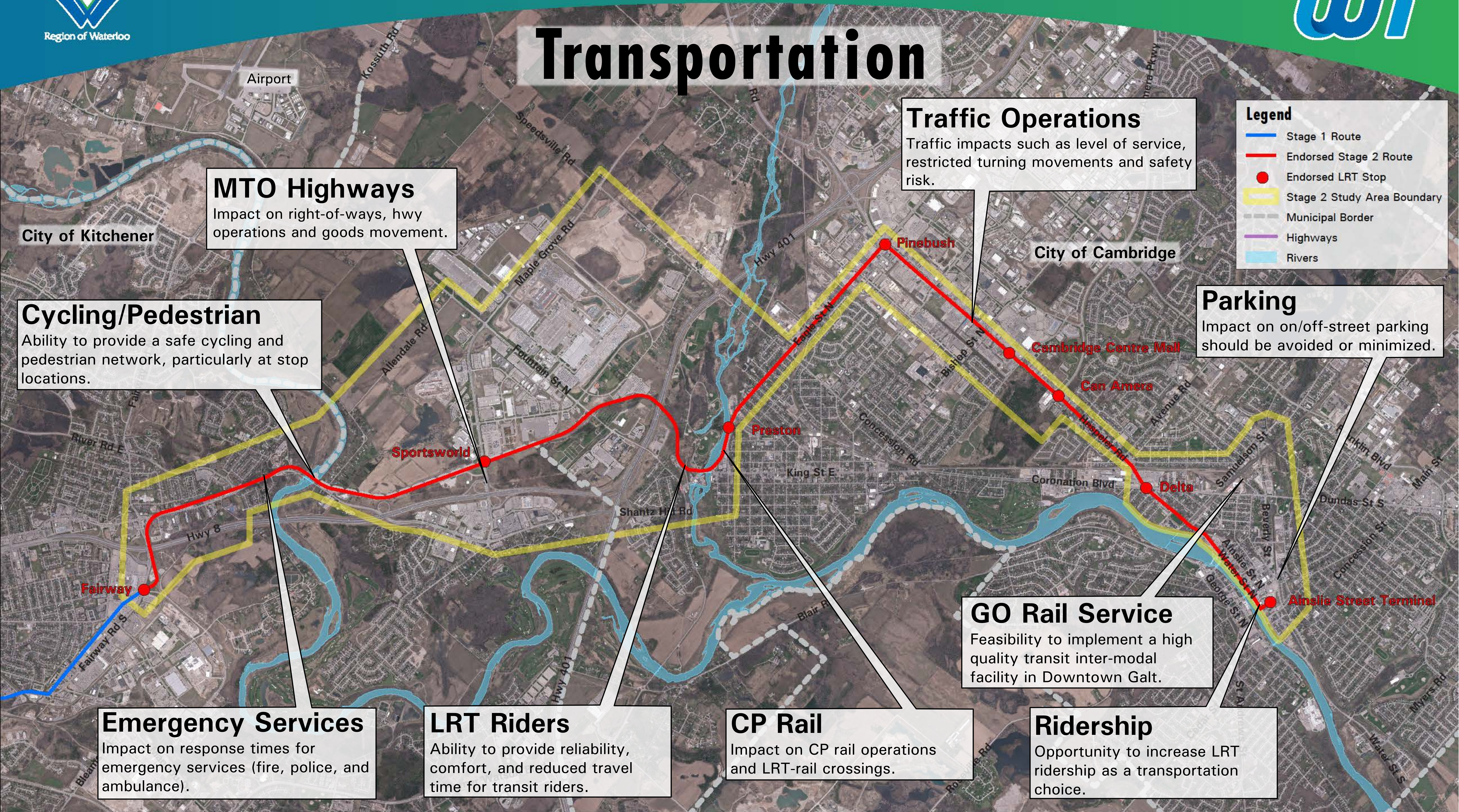
# Evaluation Criteria

Criteria are categorized into four groups:

- Transportation
- Social and Cultural Environment
- Natural Environment
- Economic Impact

The following four boards illustrate examples of criteria in each group

# Transportation



**MTO Highways**  
Impact on right-of-ways, hwy operations and goods movement.

**Cycling/Pedestrian**  
Ability to provide a safe cycling and pedestrian network, particularly at stop locations.

**Traffic Operations**  
Traffic impacts such as level of service, restricted turning movements and safety risk.

**Legend**

- Stage 1 Route
- Endorsed Stage 2 Route
- Endorsed LRT Stop
- Stage 2 Study Area Boundary
- Municipal Border
- Highways
- Rivers

**Parking**  
Impact on on/off-street parking should be avoided or minimized.

**GO Rail Service**  
Feasibility to implement a high quality transit inter-modal facility in Downtown Galt.

**Emergency Services**  
Impact on response times for emergency services (fire, police, and ambulance).

**LRT Riders**  
Ability to provide reliability, comfort, and reduced travel time for transit riders.

**CP Rail**  
Impact on CP rail operations and LRT-rail crossings.

**Ridership**  
Opportunity to increase LRT ridership as a transportation choice.

City of Kitchener

Airport

City of Cambridge

Sportsworld

Preston

Pinebush

Cambridge Centre Mall

Can Amers

Delta

Ainslie Street Terminal

Fairway

Hwy 8

Shantz Hwy Rd

Blair Rd

Coronation Blvd

Avenue Rd

Samuelson St

Dundas St S

Concession St

Water St S

George St N

Beverly St

Concession St

Water St S

Fairway Rd S

Hwy 8

Aliendale Rd

Fourtrain St N

King St E

Concession Rd

Bishop St N

Hesperia Rd

Avenue Rd

Prinkin Blvd

Dundas St S

Concession St

Water St S

George St N

Beverly St

Concession St

Water St S

Kossuth Rd

Speedsville Rd

Maple Grove Rd

Hwy 401

Leeds St N

Bishop St N

Merara Pkwy

River Rd E

Fairway Rd S

Fairway Rd S

Fairway Rd S

Fairway Rd S

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Fairway Rd S

# Social and Cultural Environment

**Legend**

- Stage 1 Route
- Endorsed Stage 2 Route
- Endorsed LRT Stop
- Stage 2 Study Area Boundary
- Municipal Border
- Highways
- Rivers

**Archaeology**  
Archaeological sites are valuable resources, loss or disturbance should be minimized.

**Property**  
Impacts on residences, businesses, and local facilities should be minimized.

**Business Support**  
Support existing businesses by minimizing impacts, such as goods movement and accessibility.

**Built Heritage/  
Cultural Landscape**  
Valuable community resources such as built heritage and cultural landscapes, (e.g. Grand River bridge) should be preserved.

City of Kitchener

City of Cambridge

**Contamination**  
Avoid or minimize property acquisition with potential subsurface environmental concerns.

**Economic Development**  
Transit investment should support the economic vitality of urban growth centres, consistent with the Region's and City's Official Plan.

**Noise/Vibration**  
Projected noise/vibration levels, during construction or as result of changed traffic conditions should be considered.

**Parks/Open Space**  
Parks and open spaces are vital to the local community. Impacts should be avoided or minimized.



# Natural Environment

## Natural Heritage Features

Endangered species and important ecosystems, such as provincially significant wetlands, need to be protected.

## Wildlife

Wildlife habitat are valuable resources, loss or disturbance should be avoided or minimized.

## Legend

- Stage 1 Route
- Endorsed Stage 2 Route
- Endorsed LRT Stop
- Stage 2 Study Area Boundary
- Municipal Border
- Highways
- Rivers

## Grand/Speed Rivers

Constructing in-water or in the vicinity of rivers, should be minimized. Potential issues include: soil erosion, flood level increases, aquatic habitat fisheries, navigable waters requirements, and First Nations consultation.

City of Kitchener

City of Cambridge

## Vegetation

Vegetation loss or disturbance, in particular mature trees and woodlots, should be minimized.

## Hydrology

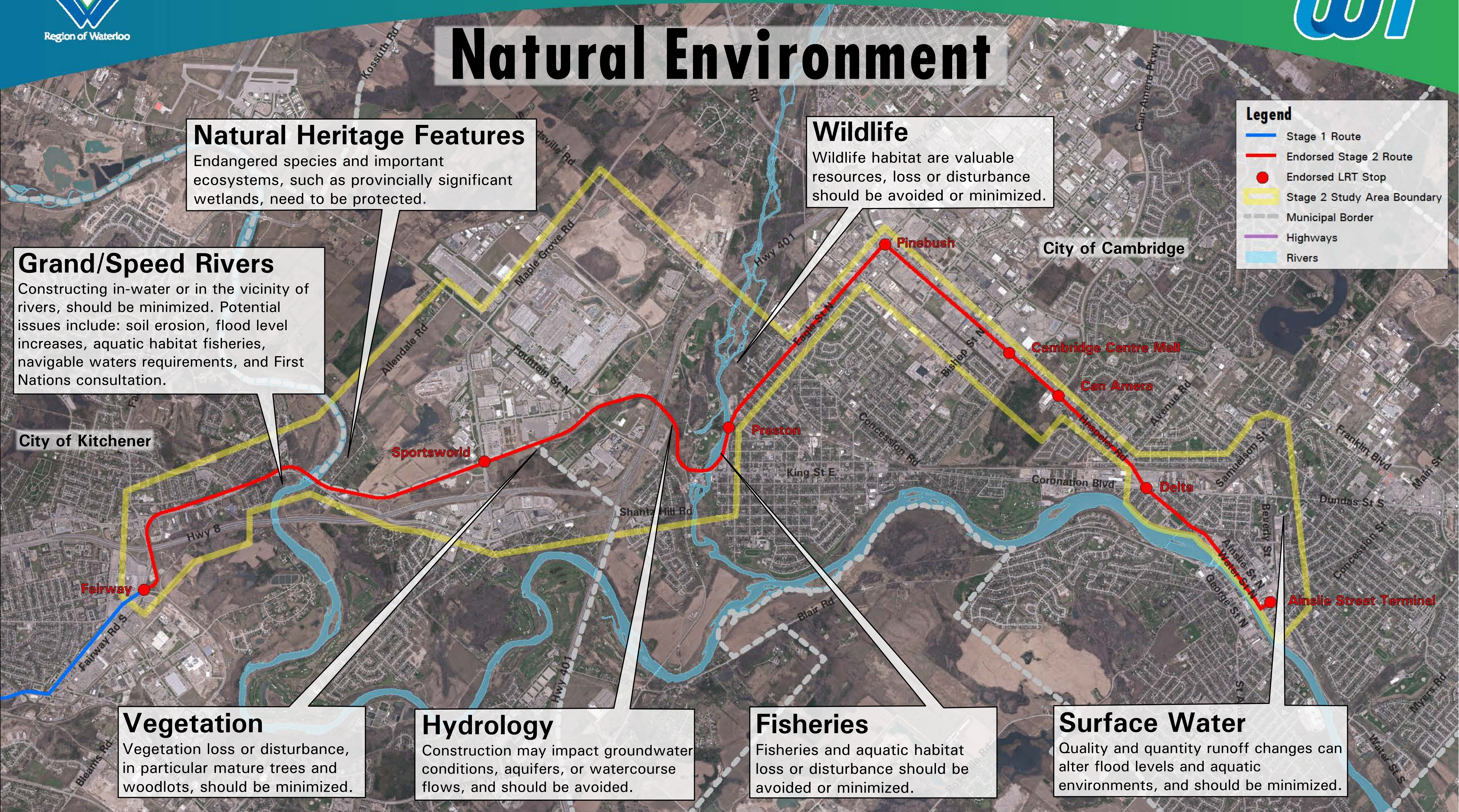
Construction may impact groundwater conditions, aquifers, or watercourse flows, and should be avoided.

## Fisheries

Fisheries and aquatic habitat loss or disturbance should be avoided or minimized.

## Surface Water

Quality and quantity runoff changes can alter flood levels and aquatic environments, and should be minimized.



# Economic Impact

## CP Disruption

Conflict with CP rail should be minimized to reduce cost of construction and operational impacts.

## Maintenance Cost

Maintenance cost represent a major investment, and therefore should be considered.

City of Kitchener

City of Cambridge

### Legend

- Stage 1 Route
- Endorsed Stage 2 Route
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- Highways
- Rivers

Fairway

Sportsworld

Preston

Pinebush

Cambridge Centre Mall

Can Amers

Delta

Ainslie Street Terminal

## Construction Cost

Construction cost should be minimized.

## Property

Property acquisition for the LRT right-of-way should be minimized.

## Major Utilities

Utility relocation costs within an LRT right-of-way should be considered and minimized.

## Operations Cost

Operation cost represent a major investment, and therefore should be considered.

## What's Next?

- December 2015 to June 2016 – Incorporate comments from the first round of public consultation, undertake detailed assessment and preliminary selection of the preferred design concept
- April to June 2016 – Business case completion
- Fall 2016 – Second public round of consultation to present the preferred route, evaluation, impacts and proposed mitigation
- Late Fall 2016 – Preferred option presented to Regional Council for endorsement
- October 2016 – Commence TPA Process
- March 2017 – Completion of TPA Process (Notice of Completion, Environmental Project Report published for public review)

# Contact Info / Get Involved

Your opinion matters!

Provide comments on comment sheet  
to help shape decisions!

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