



Region of Waterloo

Cambridge to Union Passenger Rail Connection

Initial Business Case and Concept Design

Presentation to City of Cambridge Council
May 14, 2024



Land Acknowledgement

The land on which we gather today are the lands traditionally cared for by the Haudenosaunee (Ho-den-o-show-nee), Anishinaabe (Ah-nish-nah-bey), Neutral and Chonnonton (Chi-nawn-ton) People.

Agenda

- Introductions
- Presentation
 - Project Background and Context
 - Initial Business Case Overview
 - Next Steps
- Q&A



Region of Waterloo



Project Background

A Brief History and Context



Project History

2009-2014

Cambridge to GTA Rail
 Passenger Feasibility Study
 Business Case
 Exploring a connection from
 south Cambridge to Milton

2018 - 2021

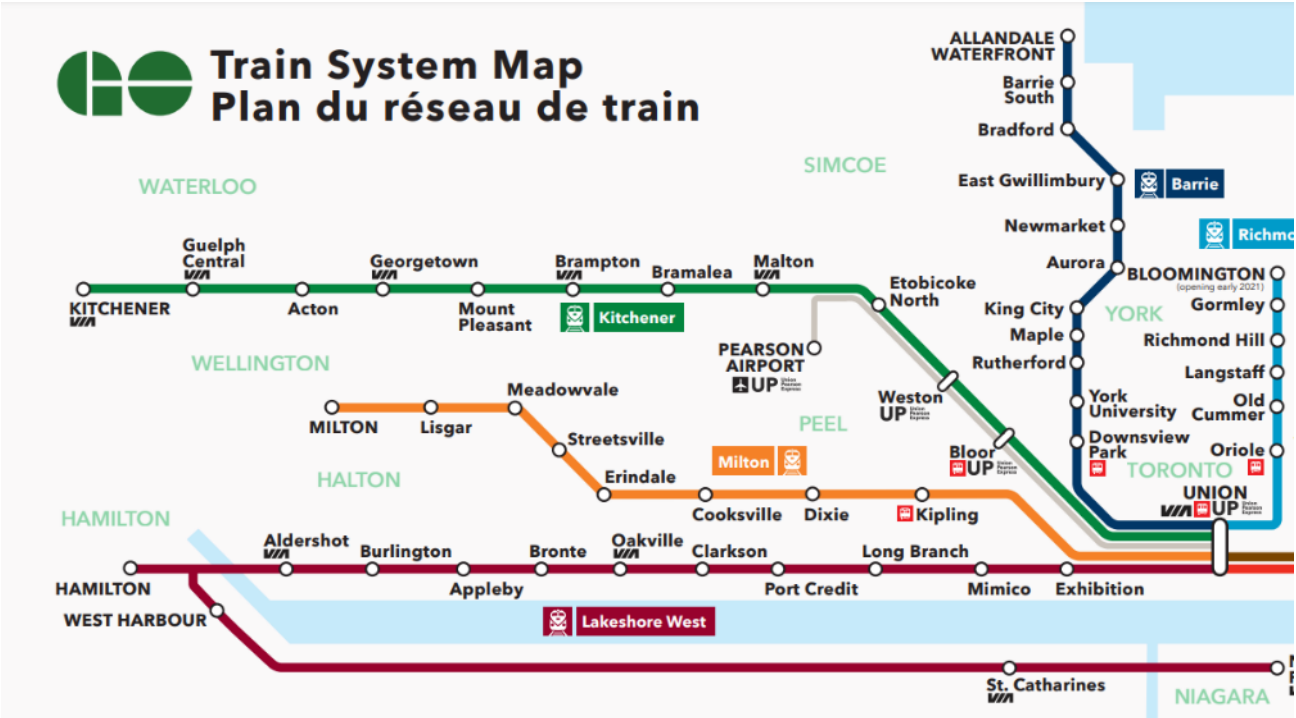
Cambridge to Union
 GO Rail Feasibility Study (Phase 1 and 2)

2023

Cambridge Passenger Rail
 Initial Business Case and
 Concept Design

Cambridge on the GO
 Brochure

2015



Why this project?



Region of Waterloo

Strategic Alignment: Region of Waterloo Strategic Plan 2023-2027



Equitable Services and Opportunities

- Ensure services are inclusive, accessible, culturally safe and appropriate
- Design equitable Regional services that meet local community needs
- Explore new models of service through community collaboration and partnerships



Homes for All

- Move quickly to create affordable, accessible, and equitable housing



Climate Aligned Growth

- Use a climate adaptation lens to re-imagine infrastructure, land and services for growth
- Foster car alternative options through complete streets and extended alternative transportation networks

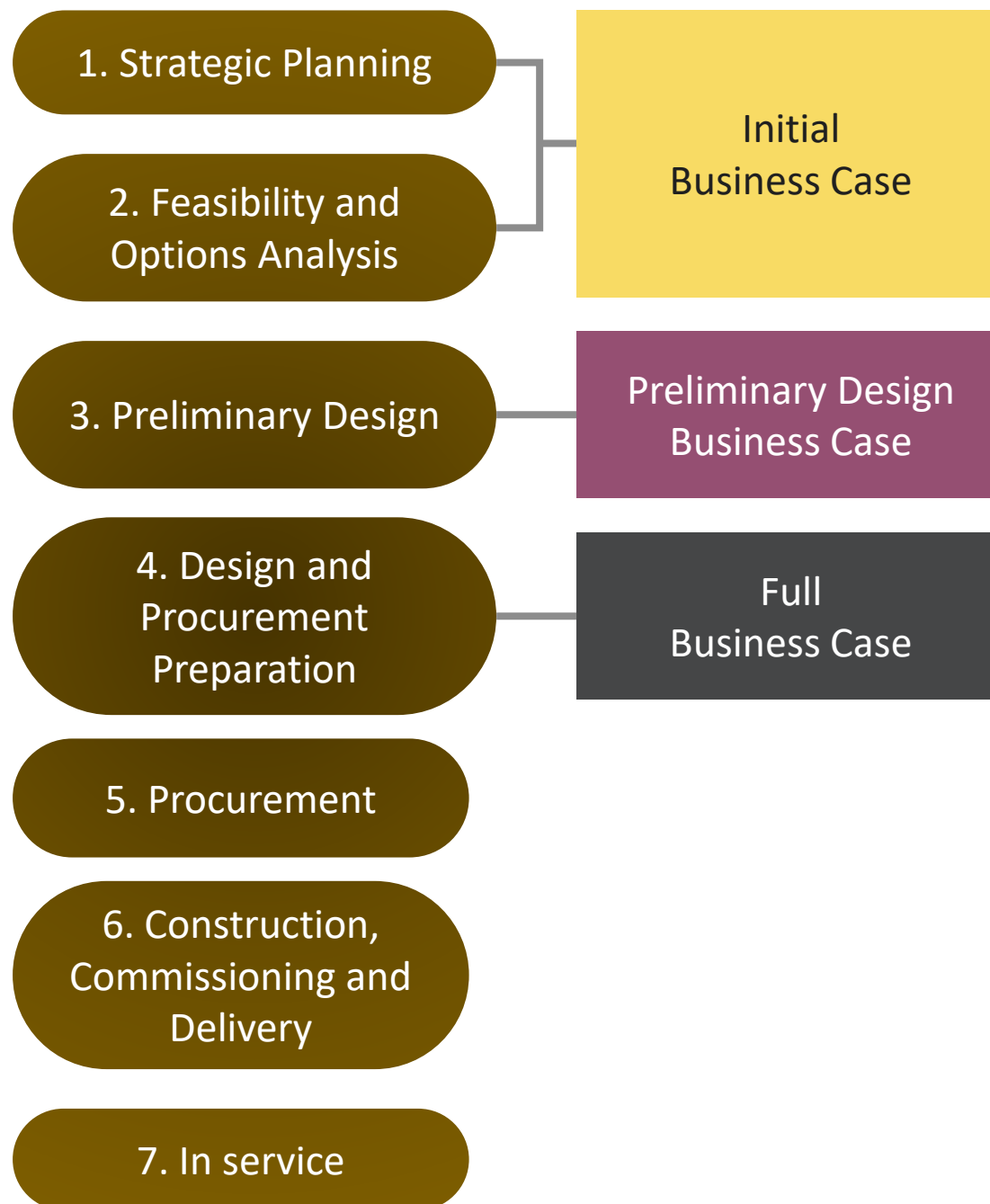
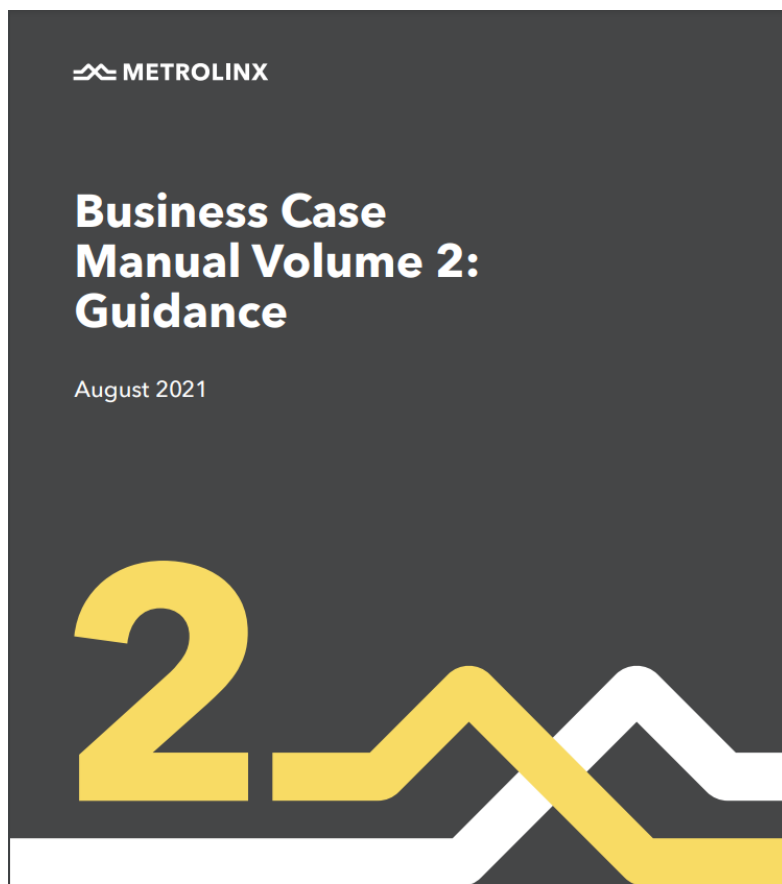


Resilient and Future Ready Organization

- Explore new service models and partnerships to achieve fiscal resilience and better service

Initial Business Case Framework

What goes into it?



Initial Business Case Framework

Purpose and Components

- Update to the 2021 Study
- Recent developments in GO Service, community policies and plans around GO Transit Stations
- Concept designs for the service between Cambridge and Guelph
 - Fergus spur line
 - Integration at planned Pinebush ION Station
 - Integration at Guelph Central Station
- Stakeholder Roundtable – Staff from Region of Waterloo, City of Cambridge, City of Guelph, Wellington County, and Guelph/Eramosa Township



Strategic Case

Detailed review of the strategic benefits of providing a GO Rail connection to and from Cambridge



Economic Case

Overall economic benefits, including both the tangible components like construction costs and intangible like time savings, as well as impacts to the broader community and environment



Financial Case

Costs of delivering the service as well as revenue made, and projection of financing costs to determine how much funding is required



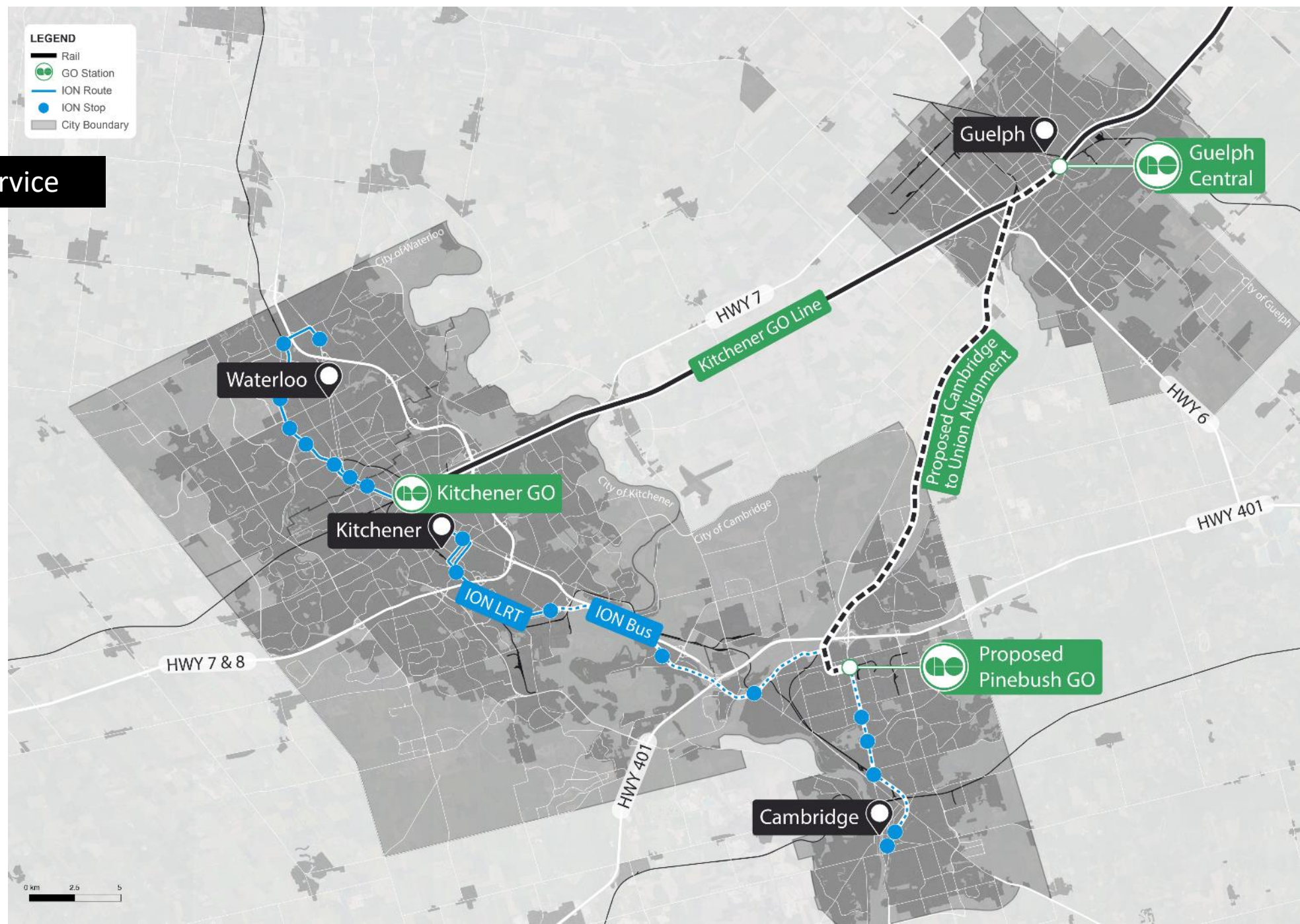
Deliverability and Operations

Risks and issues related to project delivery, service plans, operations and maintenance requirements

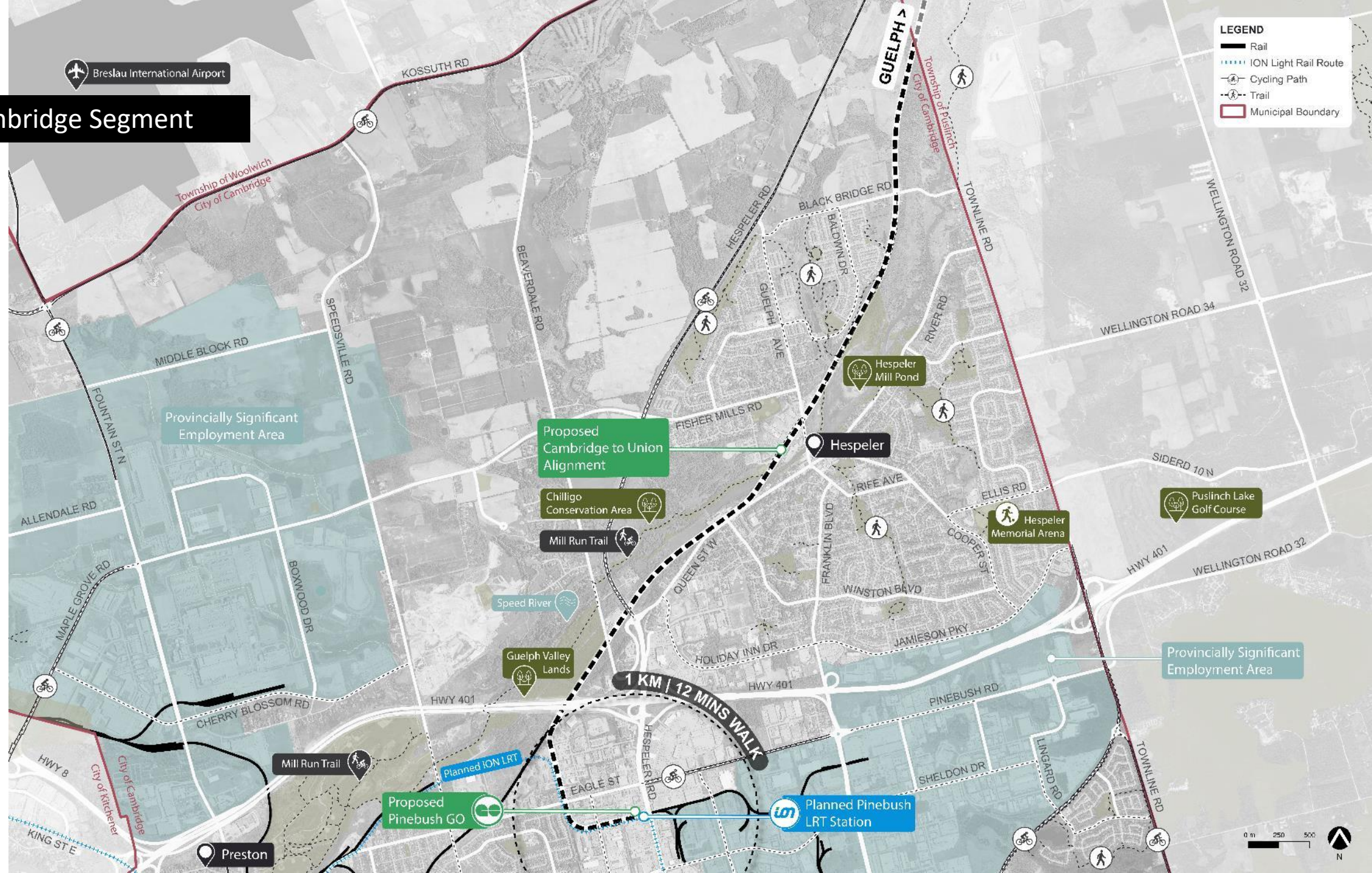
Overview of the Service



Overview of the Service



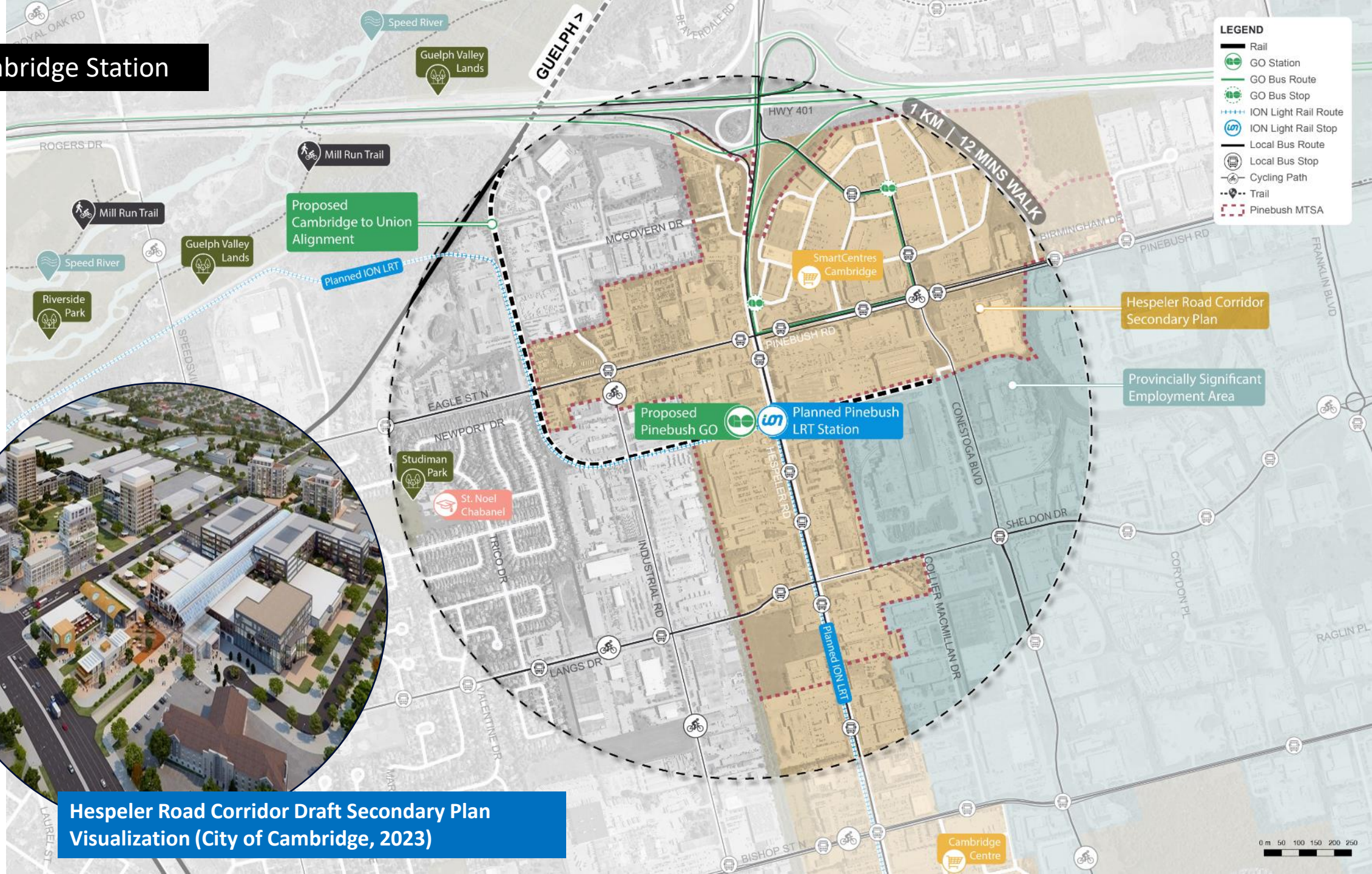
Cambridge Segment



Cambridge Station

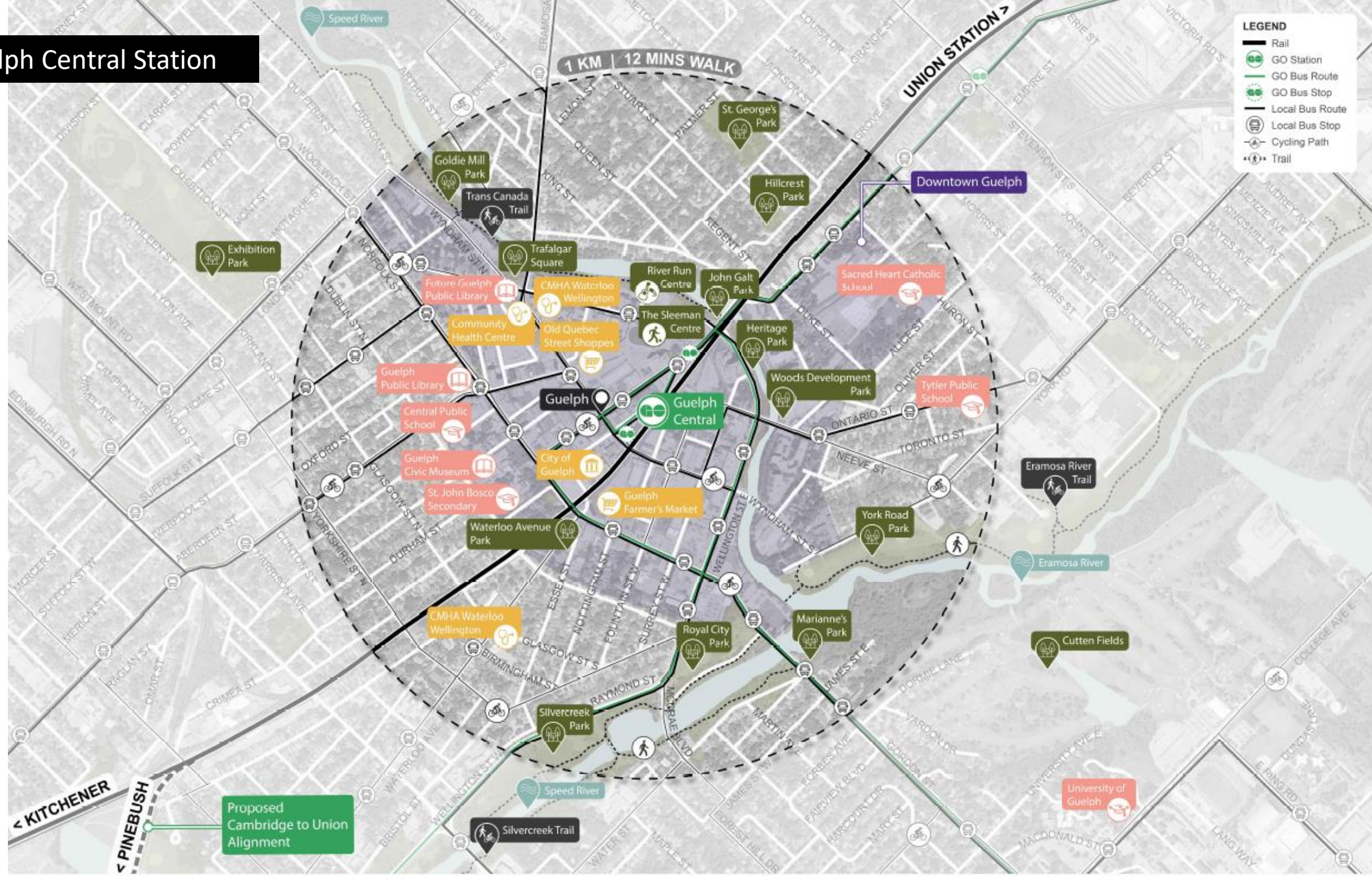


Hespeler Road Corridor Draft Secondary Plan Visualization (City of Cambridge, 2023)



- LEGEND**
- Rail
 - GO Station
 - GO Bus Route
 - GO Bus Stop
 - ION Light Rail Route
 - ION Light Rail Stop
 - Local Bus Route
 - Local Bus Stop
 - Cycling Path
 - Trail
 - Pinebush MTSA

Guelph Central Station





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Understanding the Initial Business Case

Objectives and Key Elements

Initial Business Case Highlights

Strategic Case

	Strategic Pillars	Benefits
	Complete the Network in Southwest Ontario	<ul style="list-style-type: none"> • Support future regional transportation network • Improve access to GO Transit • Minimize bus traffic in key transit corridors • Leverage transit investments on the Kitchener Line and the Region of Waterloo ION Network
	Improve Equity and Livability in Cambridge and Guelph	<ul style="list-style-type: none"> • Improve access to transit • Improve quality of life and public health
	Support Labour Mobility and Economic Productivity	<ul style="list-style-type: none"> • Connect commuters to jobs • Catalyze urban land and economic development • Support local innovation and prosperity
	Support a Sustainable Region	<ul style="list-style-type: none"> • Minimize GHG emissions • Support the UN's Sustainable Development Goals • Protect and maintain natural heritage and rural lands
	Support Regional Housing Demand Goals	<ul style="list-style-type: none"> • Support the planned intensification of key corridors and to enable development of transit-oriented communities

Initial Business Case Highlights

Deliverability and Operations Case

- Architectural and Track Design Brief completed to support future post IBC work
- Project is deliverable and can be a model for other incremental regional rail projects in Ontario

CAMBRIDGE STOP



- Concept Design Developed for Pinebush ION Station & future integration with ION LRT alignment

Travel along the Fergus Subdivision



- Consistent service - hourly or better. Service every 30-60 minutes
- Analysis of Existing At-Grade Crossings Completed
- Preliminary Track Layout completed with achievable speeds, geometry, and signalling upgrade requirements
- Rail Simulation run to establish reasonable end-to-end travel time of approximately 15min.
- Rolling Stock options further evaluated for more detailed cost and deliverability (EBMU appears preferable)

GUELPH STOP



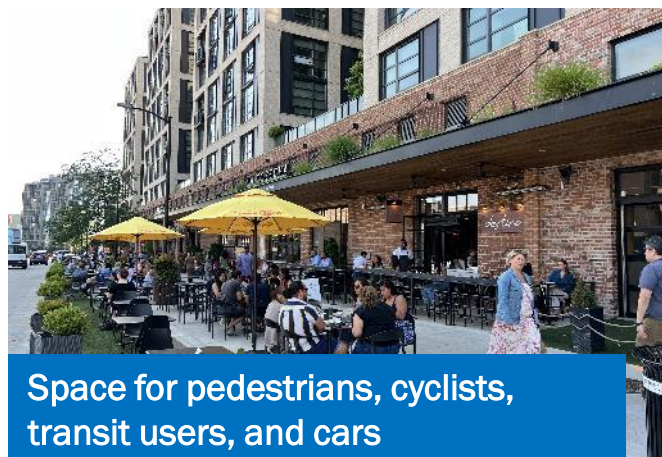
- Concept Design developed for feasibility of integration with Guelph GO Station South Platform

Initial Business Case Highlights

Visualizing the Future



Space for pedestrians, cyclists, transit users, and cars



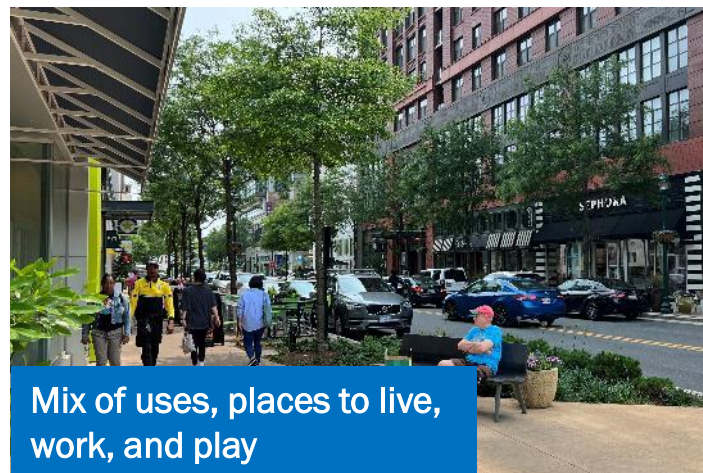
Space for pedestrians, cyclists, transit users, and cars



Multi-modal access to the Station – reducing car travel



Lively and comfortable public spaces



Mix of uses, places to live, work, and play



Integration with local transit

Initial Business Case Highlights

Investment Options

BAU: Business as Usual

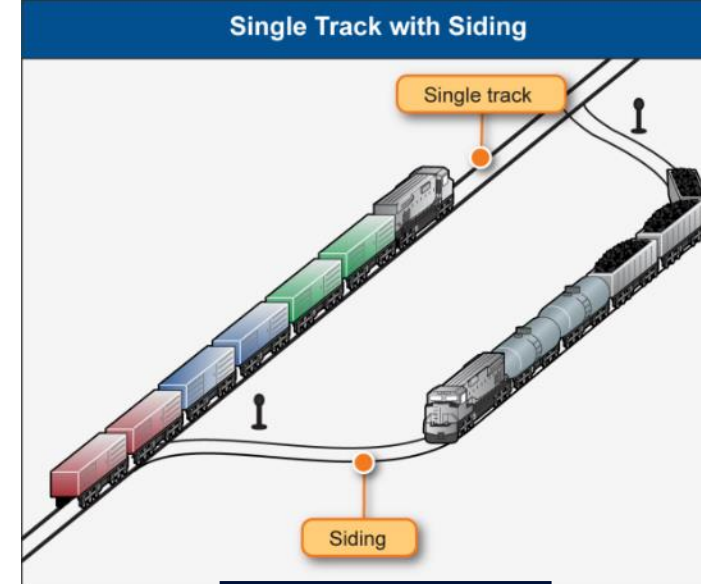
Business as Usual: No service between Cambridge and Guelph

OPTION 1A

Single track, with a frequency of 1 train per hour, and track upgrades to allow an average trip speed of 75km/hr (16 min trip time)

OPTION 1B

Single track, with a frequency of 1.5 trains per hour, and track upgrades to allow an average trip speed of 78km/hr (15 min trip time)



OPTION 2A

Single track with siding allowing for two trains to pass each other, with a frequency of 2 trains per hour, and track upgrades to allow an average trip speed of 69km/hr (17 min trip time)

OPTION 2B

Single track with siding allowing for two trains to pass each other, with a frequency of 2 trains per hour, and track upgrades to allow an average trip speed of 71km/hr (under 17 min trip time)

Initial Business Case Highlights

Economic Case

Net benefits are **positive**, and benefit-cost-ratios are greater than 1.

		Net Economic Benefits	Total Economic Costs
BAU: Business as Usual	Business as Usual: No service between Cambridge and Guelph	\$ 0M	\$ 0M
OPTION 1A	Single track, 1 train per hour, average trip speed of 75km/hr	\$ 470M	\$ 370M
OPTION 1B	Single track, 1.5 trains per hour, average trip speed of 78km/hr	\$ 460M	\$ 400M
OPTION 2A	Single track with siding, frequency of 2 trains per hour, average trip speed of 69km/hr	\$ 550M	\$ 530M
OPTION 2B	Single track with siding, frequency of 2 trains per hour, average trip speed of 71km/hr	\$ 560M	\$ 540M

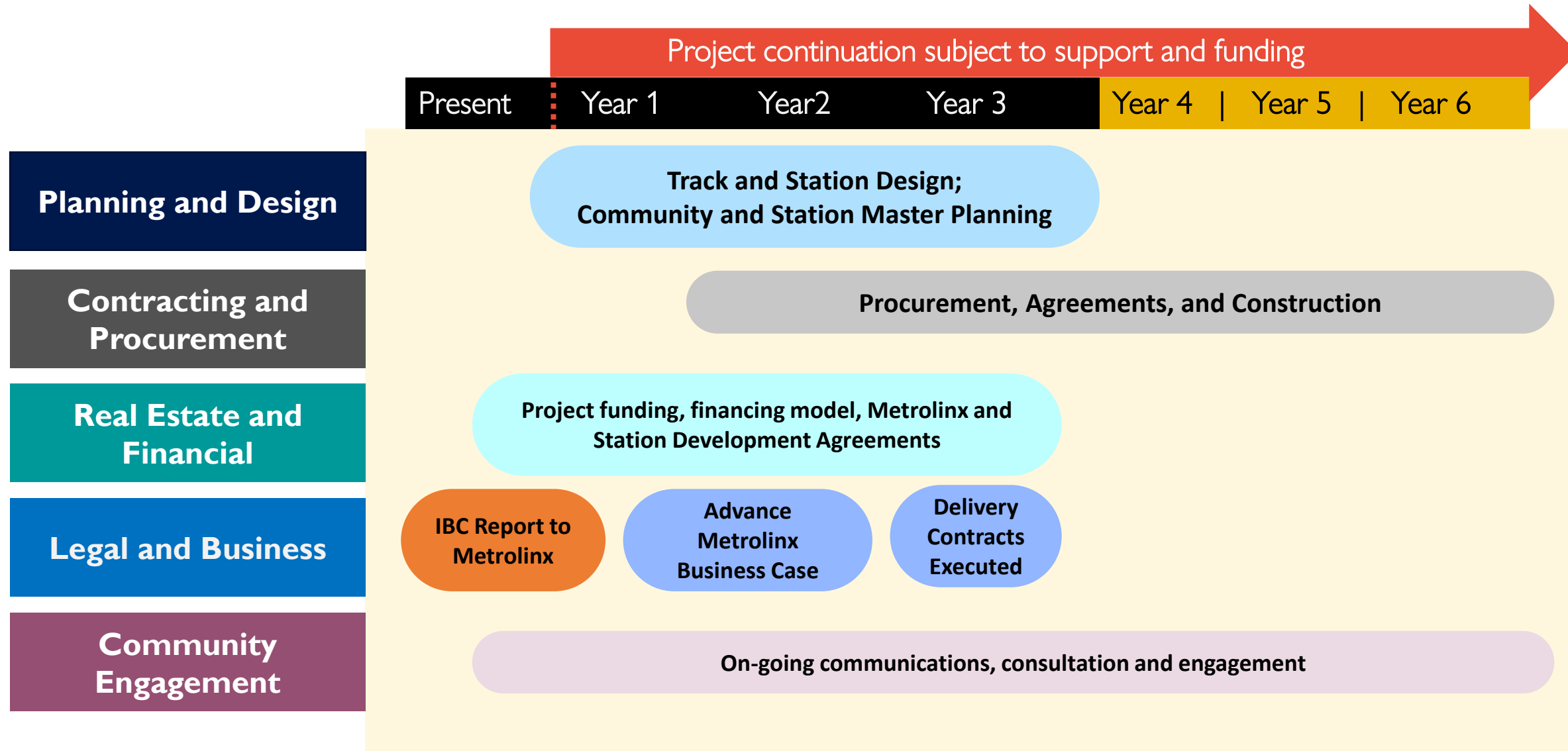
Initial Business Case Highlights

Financial Case

* Very conservative estimate. Greater ridership expected for Option 2A & 2B

	Capital Costs (NPV)	Operating & Maintenance Costs (NPV)	Revenue (NPV)
BAU: Business as Usual	-		
OPTION 1A	\$440M	\$100M	\$ 110M
OPTION 1B	\$460M	\$100M	\$ 120M
OPTION 2A	\$540M	\$150M	\$ 140M *
OPTION 2B	\$550M	\$150M	\$ 150M *

Project Roadmap



Engagement Approach

Region and Municipal Staff

- Project Roundtables and Discussions: City of Cambridge, City of Guelph, Wellington County, Township of Guelph Eramosa, and Region staff
- Coordination on community engagement

Public Engagement

- Cambridge In-Person Session: March 18th, Cambridge City Hall
- Virtual Public Consultation Centre: March 19th, over Zoom
- Guelph In-Person Session: March 21st, Guelph City Hall
- Online Survey: March 18th to April 7th

Next Steps

Upcoming and Future

- Communications with Metrolinx
- Ongoing coordination with Municipal partners
- Final Report to Regional Council (early Fall)

Stay in Touch!

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Thank You!



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Q&A