Separated Cycling Network Improvements and Expansions in the Cities of Waterloo and Kitchener

Public Meeting

November 16, 2023

Region of Waterloo

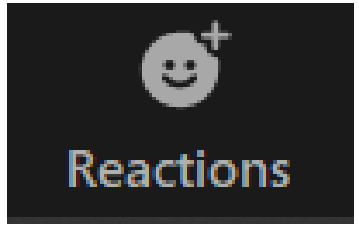
Agenda

1. Introductions
2. Project Overview
3. Project Timeline
4. Connections to the Existing and Future Cycling Network
5. Evaluation Criteria
6. Preferred Design Alternative
7. Question and Answer Session
8. Conclusion and Next Steps

Zoom How-To

Cameras will automatically be turned off during the meeting.

Use the **Chat** button to type a comment or question to the group, or private message a member of the project team.



If you would like to speak, please use the **Reactions** button to **“Raise your hand”.** A member of the project team will unmute you.

Introductions

Introductions – Region of Waterloo

Kornel Mucsi, Transportation Planning Manager – Active Transportation

Tom Humphries, Project Manager, Transportation Planning

Introductions – WSP

Dave McLaughlin, Project Manager

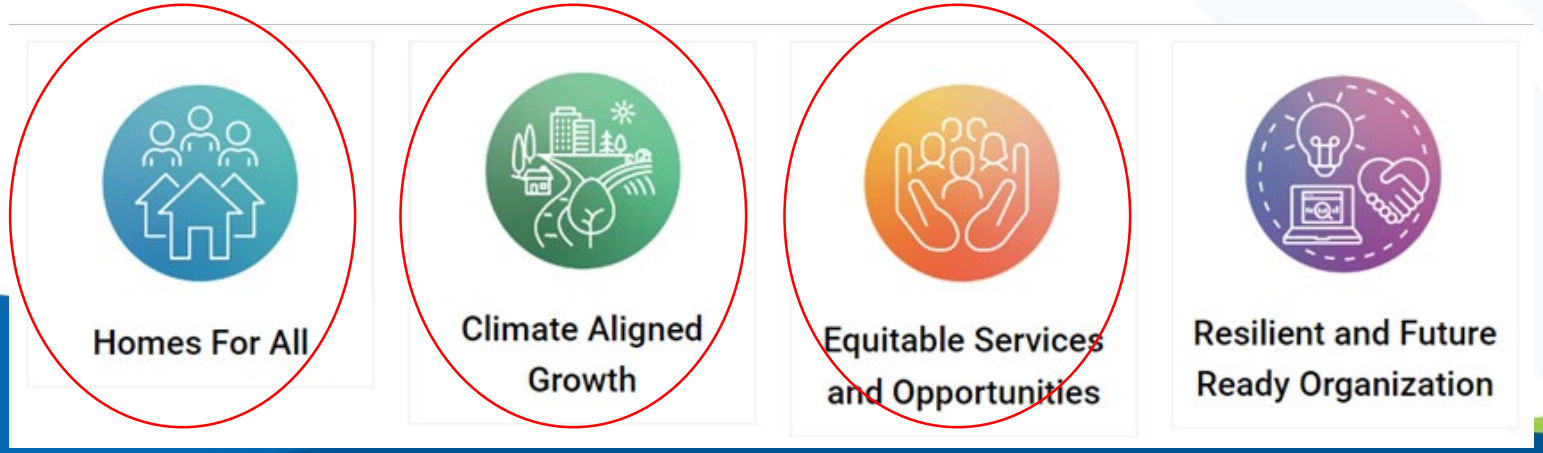
James Schofield, Complete Streets Design

Justin Jones, Consultation Lead

Project Overview

Strategic Plan 2023-2027

- **Foster car-alternative options through complete streets and extended alternative transportation networks**



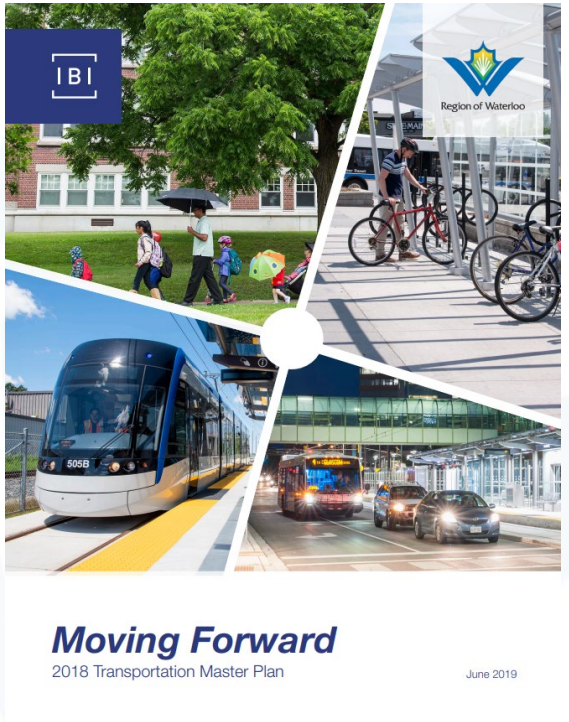
https://www.regionofwaterloo.ca/en/regional-government/strategic-plan-2023-2027.aspx

Existing Regional Policy Direction

Moving Forward 2018 Transportation Master Plan

"Waterloo Region will be a prosperous, sustainable, and healthy community, with viable transportation choices for people of all ages and abilities, and for the goods supporting our economy."

- Strategy 1: Build a transportation network that supports **all modes of travel**
- Strategy 2: Promote a healthy community
  - Upgrade active transportation (AT) facilities - separation from traffic
  - Identify opportunities for, and implement, crossings of major barriers
  - Enhance AT network connections
  - Enhance walk and bike access to transit



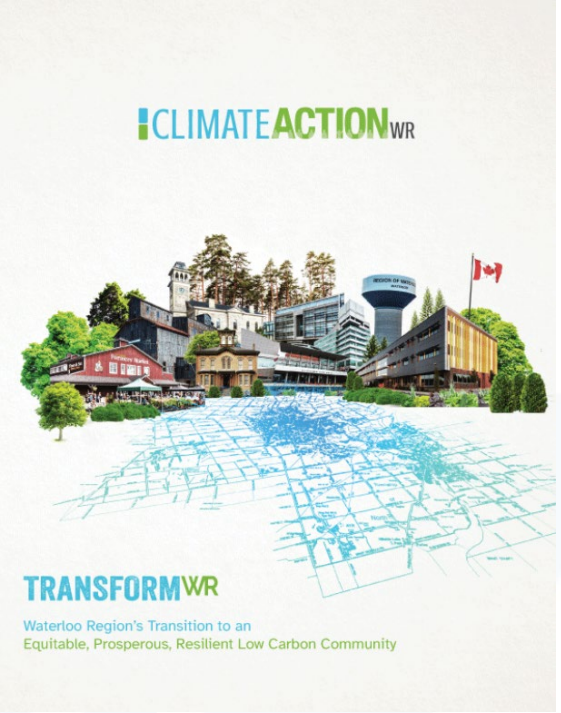
Existing Regional Policy Direction

Transform Waterloo Region – Climate Action Strategy 2021

“Our region is a leader in climate action in Canada. And people across the community take pride in this.”

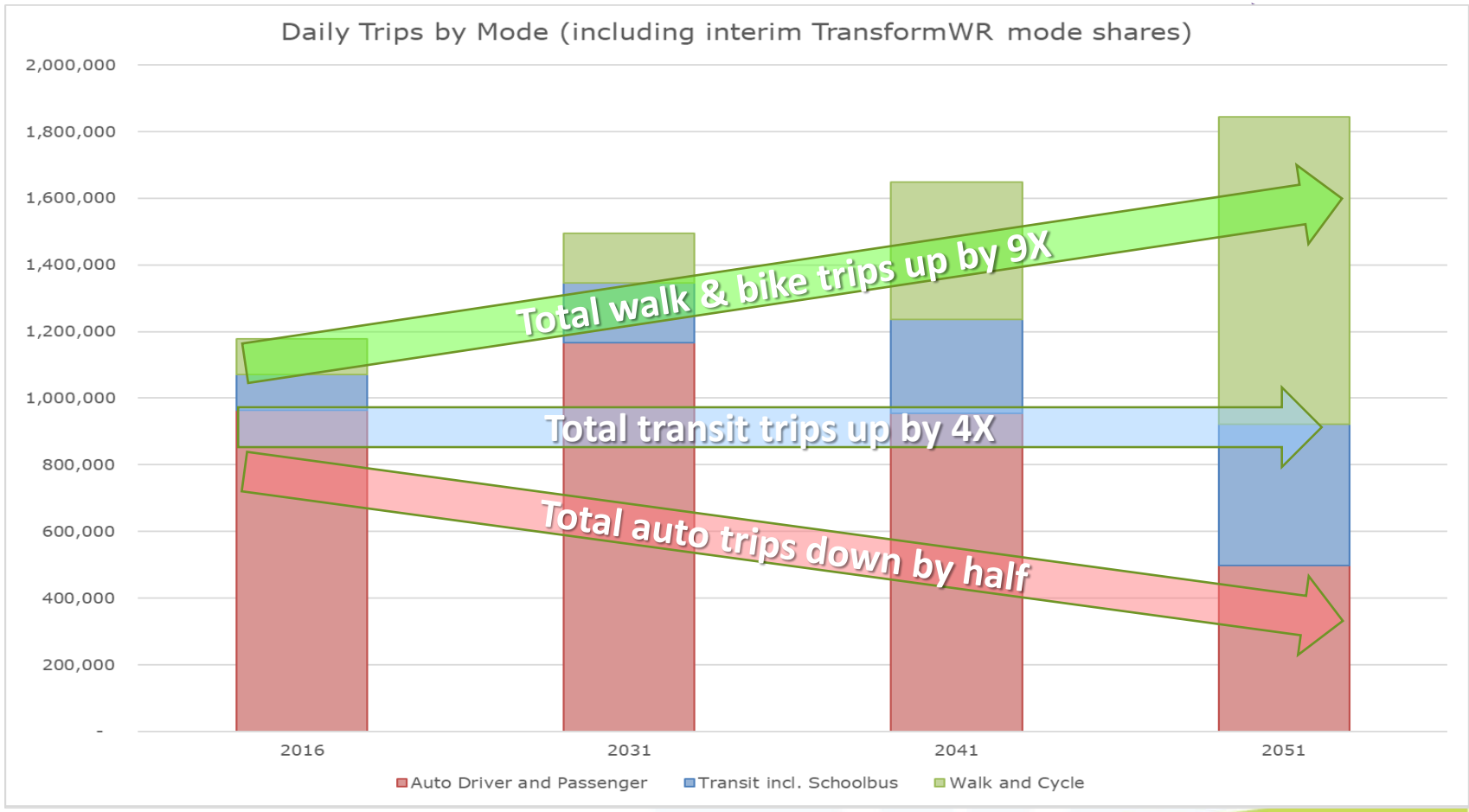
By 2050, **most trips are taken using active transportation**, with the support of a robust **public transit system**

- Redesign and rebuild our transportation system to prioritize active transportation for all ages and abilities (AAA)
- Plan a network for walking and rolling
- Maintenance to ensure year-round access, safety, and comfort



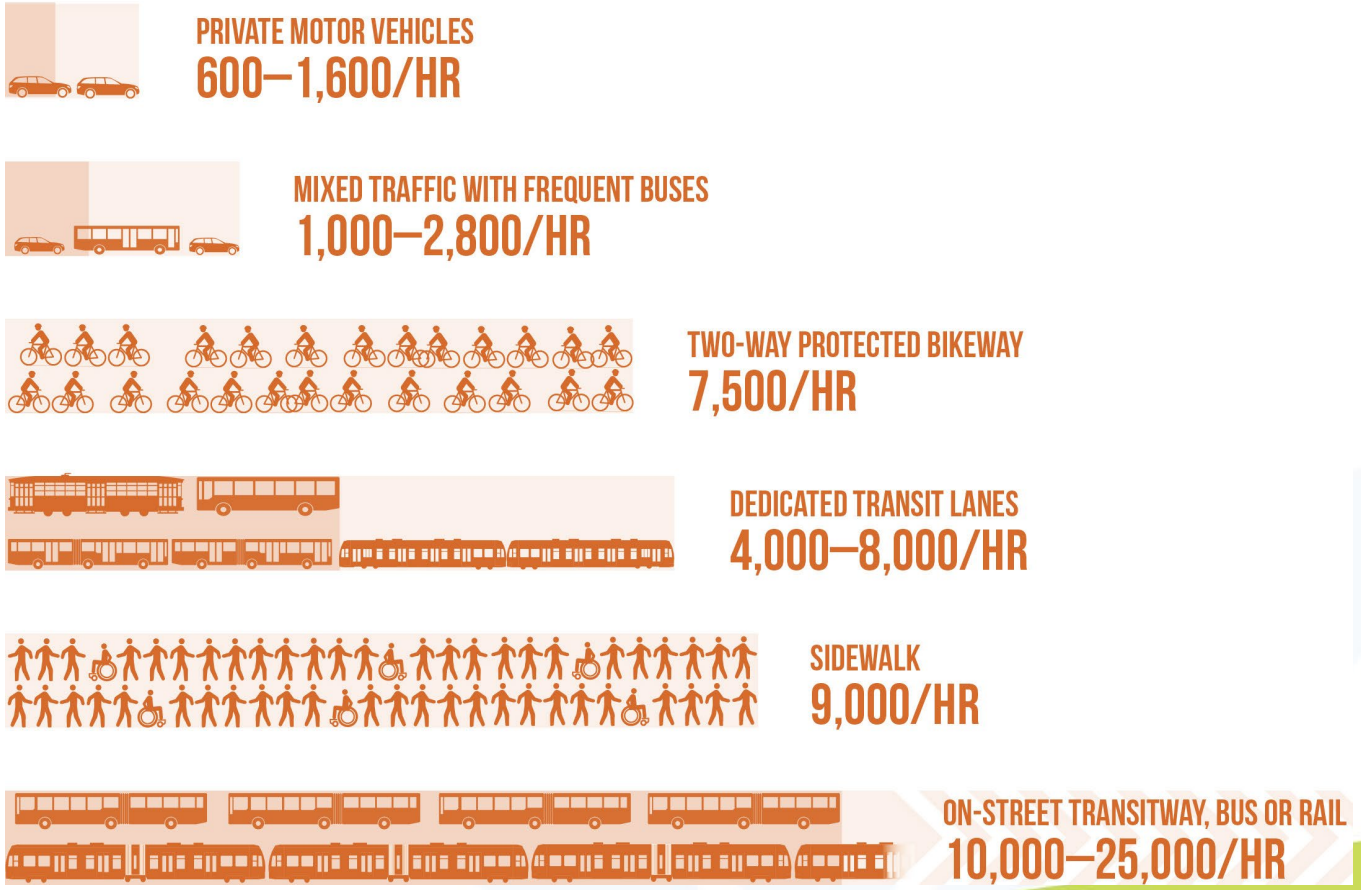
Community Growth Means Changes to Travel

- Total daily trips ↑ with population
- By 2051:
  - Car trips ↓ by half
  - Transit trips ↑ to 4x
  - Walk/ bike trips ↑ to 9x
- All this within a generation



Designing to Move People

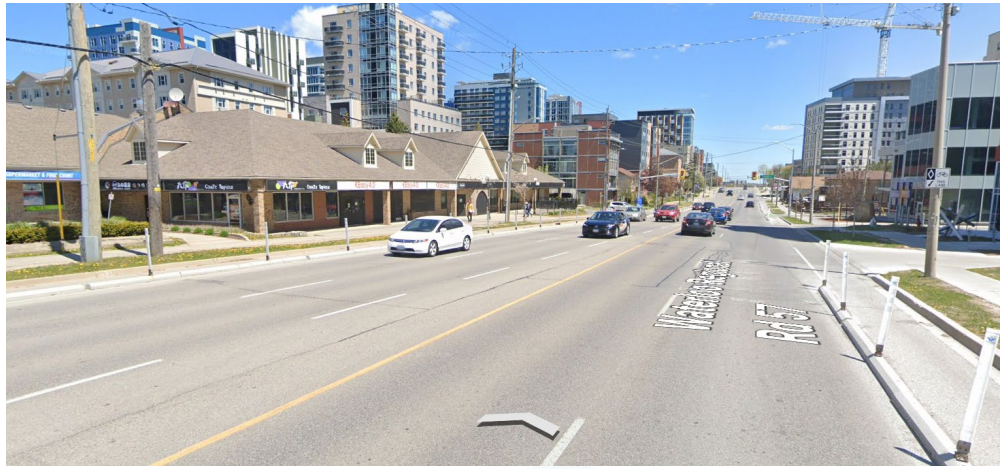
- Street performance conventionally measured by vehicle volume
- Measuring the number of people presents a more complete picture



Project Background

Separated Cycling Facility Pilot Project

- 5 sections of road in the City of Waterloo in 2019
- Active for 18 months, including 2 winter seasons
- **57% increase in overall cycling ridership**, including over **100% increase** during morning and peak periods on some corridors
- Public feedback showed a preference for flexible bollards on concrete curbs but significant maintenance challenges



Based on the results of the pilot, **Regional Council decided to convert the temporary facilities that were part of the regional network to permanent facilities and expand the network in some locations**

Why Separated Cycling Facilities?

- Most streets were designed for car travel and cycling on these streets is undesirable due to collision risk
- Motorists are concerned about colliding with cyclists on the road
- A significant percentage of short trips (under 5 km) are currently being taken by car, few cyclists (3-5%) are willing to cycle in mixed lanes

- 50-70% of population is interested in cycling **if they are separated from cars**
- Physically separating cyclists from motor vehicles is the **most effective tool** to increase safety and cycling volumes
- A network of separated cycling facilities also allows for safe winter cycling
- Separated cycling facilities decrease the pressure on the roads as more people move into the area

Road Diets in 2018 Regional Transportation Master Plan

- “Road diets” : reduction in motorized-vehicle travel lanes, often to accommodate other transportation infrastructure such as cycling facilities, enhanced pedestrian space, or dedicated transit lanes

- 2018 TMP:
  - Bridgeport Road/Caroline St
  - Erb St West

Project Scope

Conversion

Study will be looking at the conversion of the existing temporary designs to **permanent designs**

- King Street from University Avenue to Columbia Street
- University Avenue from Albert Street to Seagram Drive
- Erb Street from Caroline Street North to Peppler Street

Expansion

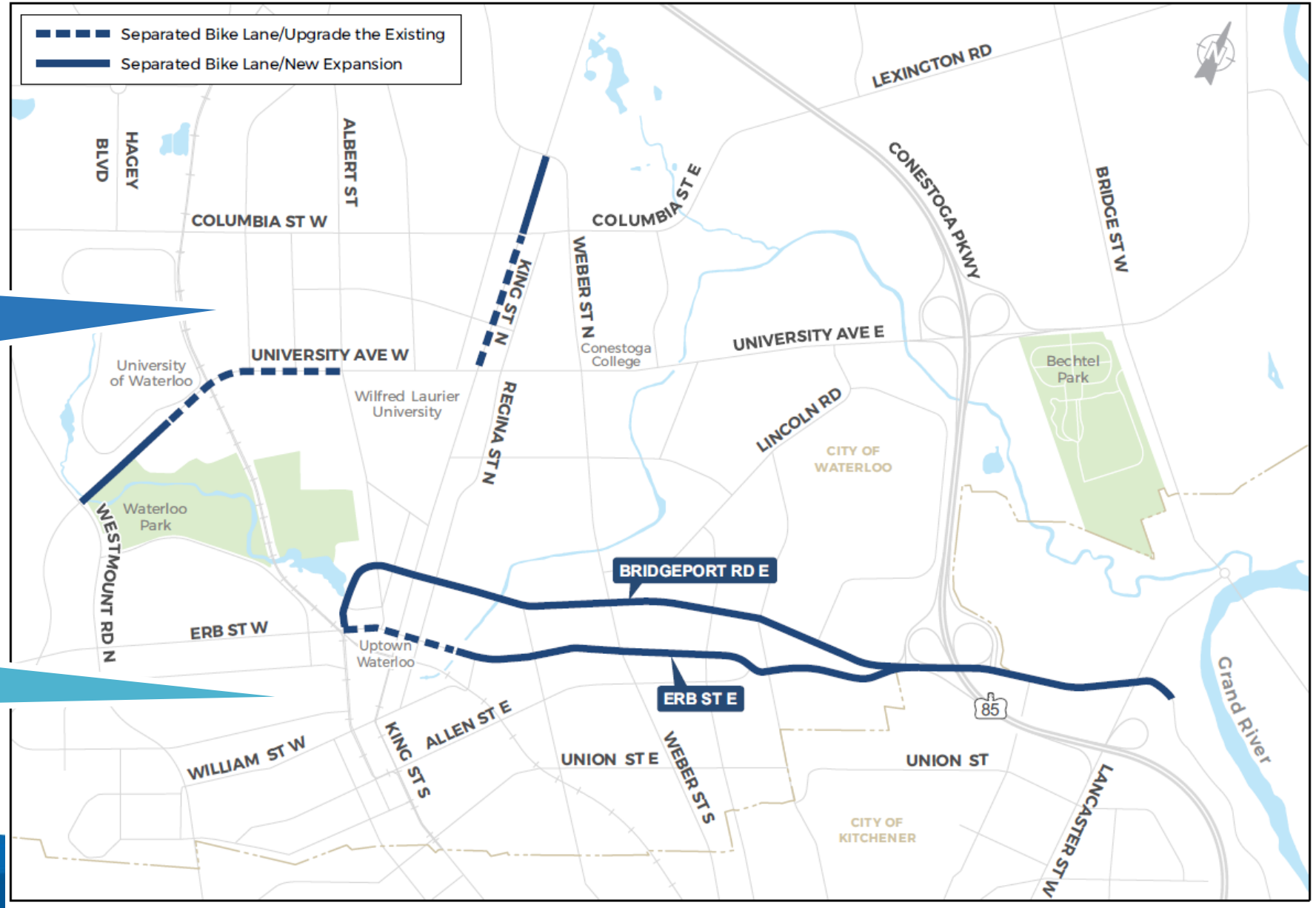
A **feasibility study** to examine temporary and permanent facility alternatives is being undertaken for:

- King Street from Columbia Street to Weber Street
- University Avenue from Seagram Drive to Westmount Road
- Erb Street from Peppler Street to Bridgeport Road
- Bridgeport Road from Albert Street to Riverbend Drive
- Caroline Street from Albert Street to Erb Street

Study Area

Separated cycle tracks on King Street and University Avenue produce few design challenges and options.

Bridgeport Road and Erb Street corridors present multiple design options.



Key Project Milestones

Project Initiation*
Spring 2022

Feasibility Study*
Summer / Fall 2022

Public Consultation Centre (PCC) and Survey
Fall 2022

Preliminary Design
Winter 2022/2023

Final Design
Summer 2023

Public Consultation Centre (PCC)
November 16, 2023

Council Approval
Winter 2024

Implement
TBD

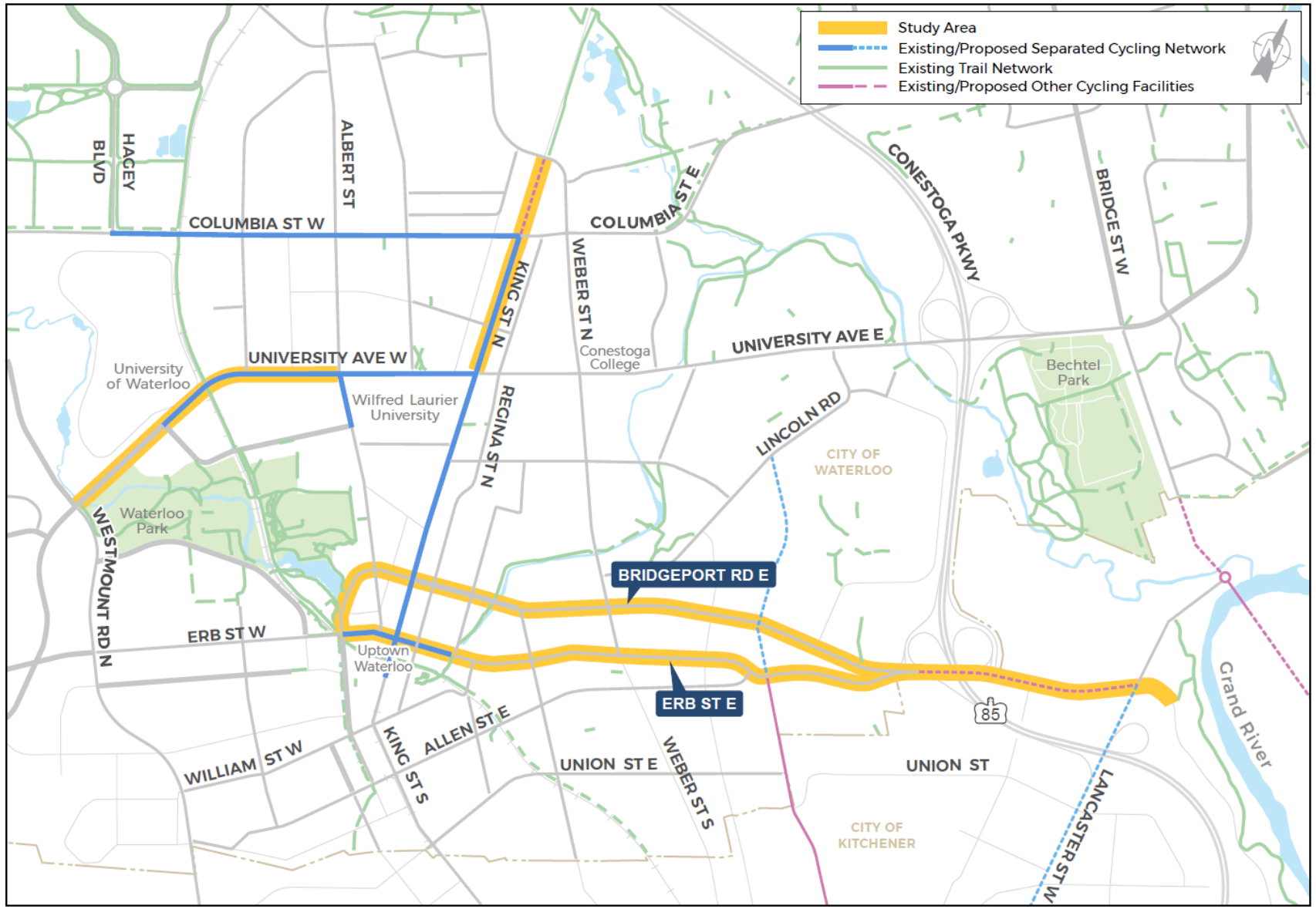
We are here!

*Project Website and Notice Published **www.engagewr.ca/waterloocycling**

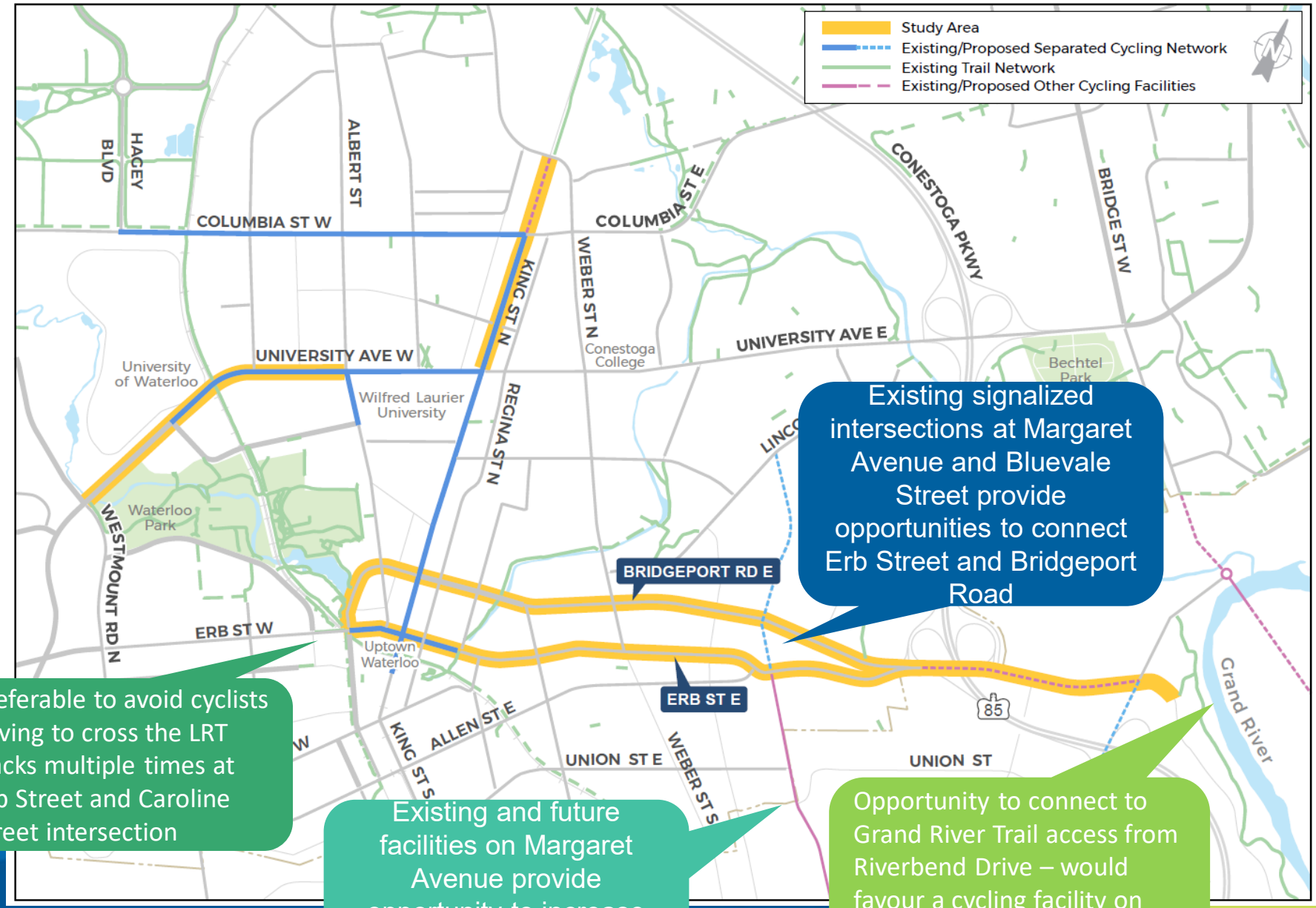
Connections to the Existing and Future Cycling Network

Key Connections

- Laurel Trail / Grand River Trail
- King Street
- Margaret Avenue
- University Avenue
- Columbia Street
- Lancaster Street



Key Considerations



Existing signalized intersections at Margaret Avenue and Bluevale Street provide opportunities to connect Erb Street and Bridgeport Road

Preferable to avoid cyclists having to cross the LRT tracks multiple times at Erb Street and Caroline Street intersection

Existing and future facilities on Margaret Avenue provide opportunity to increase connectivity within the cycling network

Opportunity to connect to Grand River Trail access from Riverbend Drive – would favour a cycling facility on the north side of Bridgeport (east of interchange)

Evaluation Process

Evaluation Process

Step 1	Step 2	Step 3	Step 4	Step 5
Determine the **facility type** for each corridor	Assess whether the cycling facilities will be **bidirectional or unidirectional**	Assess whether the cycling facilities will be on the **north side, south side or both sides** of each corridor	Identify and assess the location of any **connecting facilities** between the cycling corridors	Identify and **mitigate potential impacts** of each design alternative

Unidirectional vs. Bidirectional Facilities

	Unidirectional Facilities	Bidirectional Facilities
Pros	• Reduces risk of cyclist/motor vehicle collisions at intersections and driveways	• Provides additional mobility options
Cons	• Reduces mobility options • Increases risk of people cycling the wrong way on a corridor • Requires more space/construction, leading to higher costs and disruption	• Increases risk of cyclist/motor vehicle collisions at intersections and driveways, requiring more complex design countermeasures

Separated Facility Types

Separated facilities are **physically separated** from motor vehicle travel lanes by horizontal and/or vertical elements

Separated bike lanes
(within the roadway)

Cycle tracks
(above the curb, exclusive for cyclists)

Multi-use paths
(above the curb, shared with pedestrians)

Evaluation Criteria

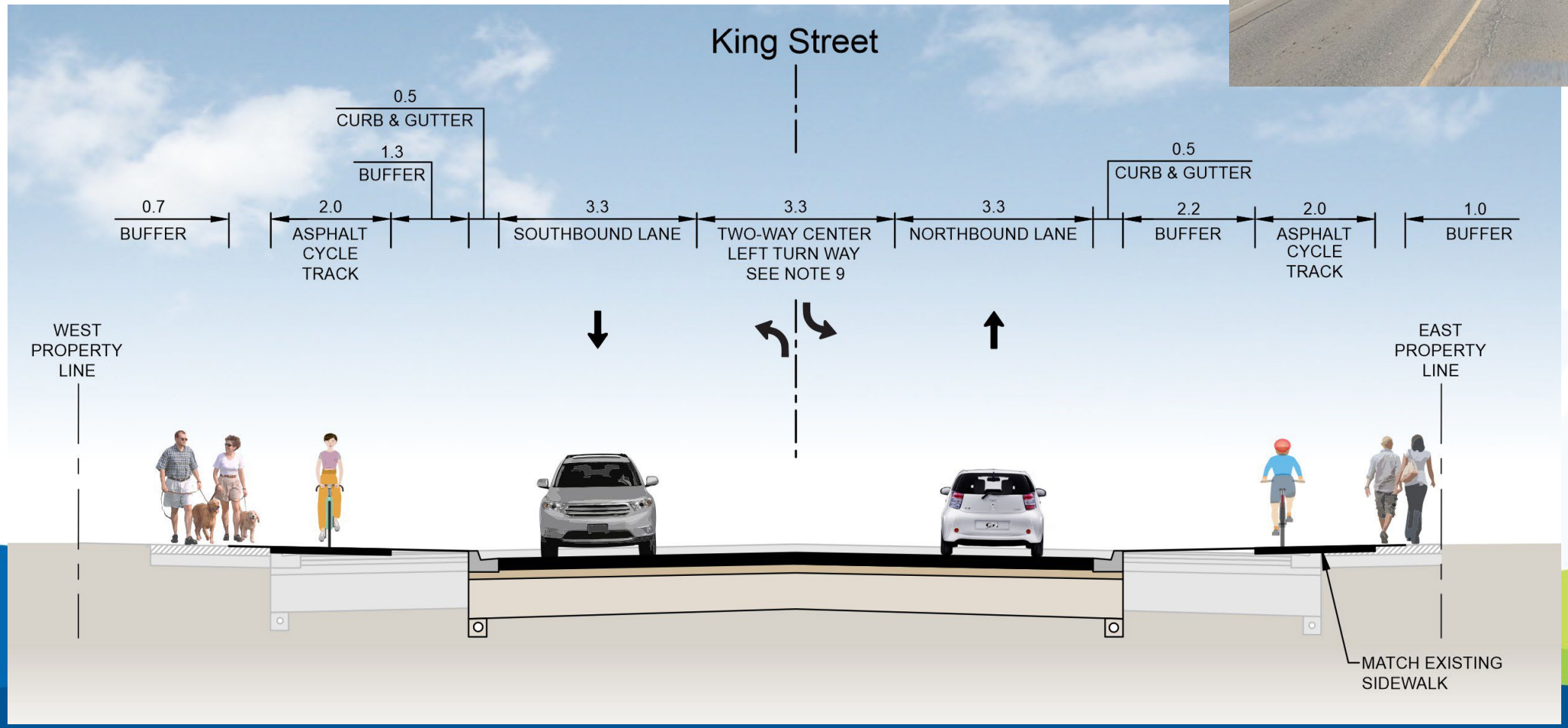
Each segment of each corridor was assessed using the following criteria:

Criteria	Description / Considerations
Traffic and Transportation	• Cycling mode share and shifts in long-term travel behaviour • Motor vehicle delays and queues • Cycling network • Noise and air quality
Safety / Conflict Mitigation	• Conflicts between cyclists and vehicles (and mitigations) • Conflicts between cyclists and transit (and mitigations) • Conflicts at interchange crossings (and mitigations)
Utilities	• Utility impacts
Constructability	• Level of effort • Complexity of implementation
Cost (only includes cycle features)	• Cost to implement facility (excludes costs for utility and tree relocations) • Cost to operate and maintain facility

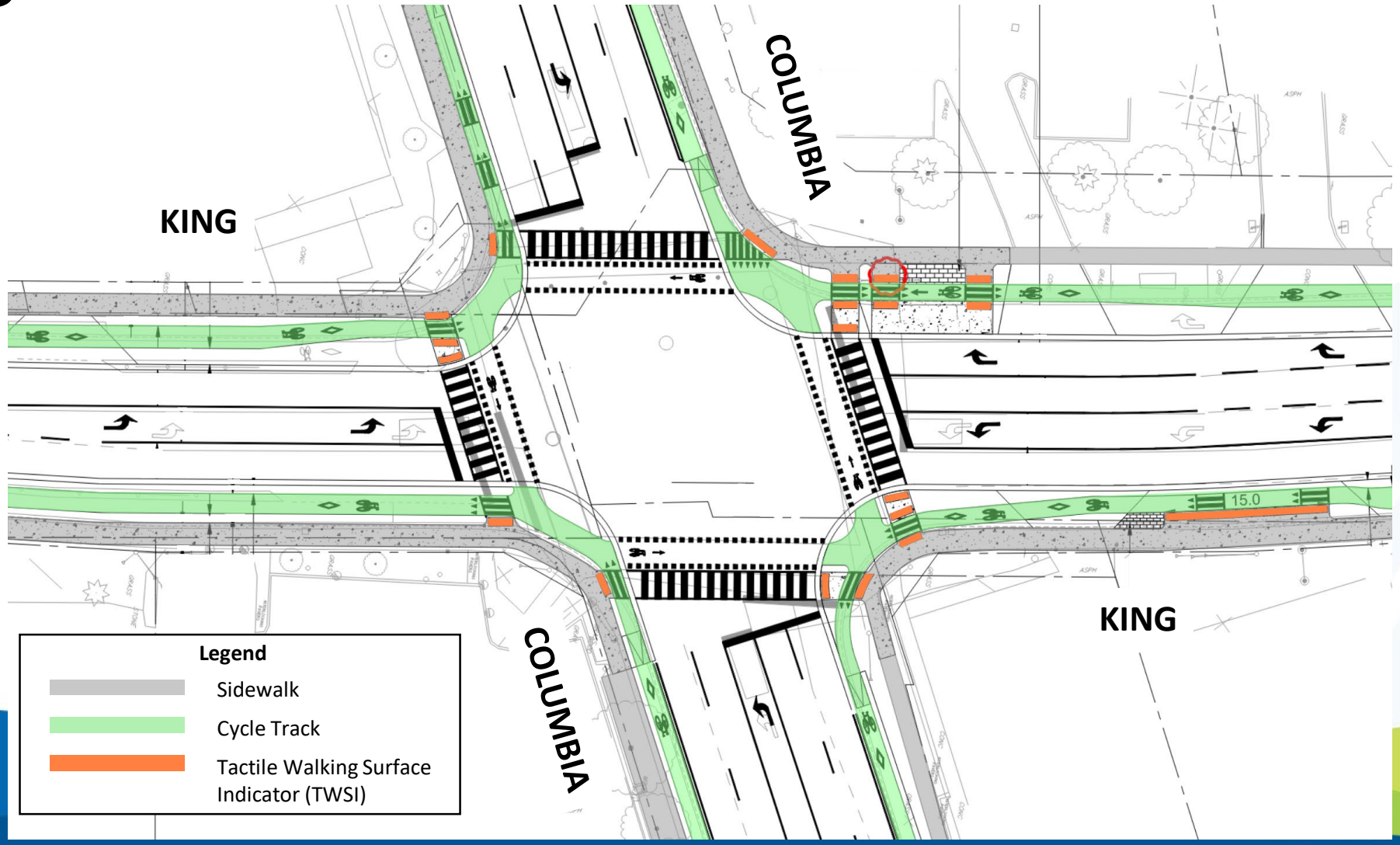
Proposed Design Alternatives

King Street

- Unidirectional facilities on the east and west side (continuation of the existing facility)



King Street


KING
COLUMBIA
COLUMBIA
KING
15.0
Legend
Sidewalk
Cycle Track
Tactile Walking Surface Indicator (TWSI)

King Street

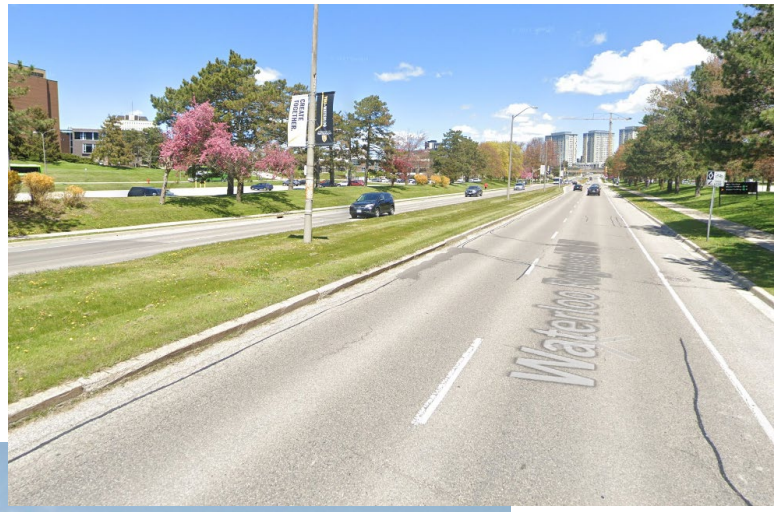
Existing
King St. north of Hickory – Looking south

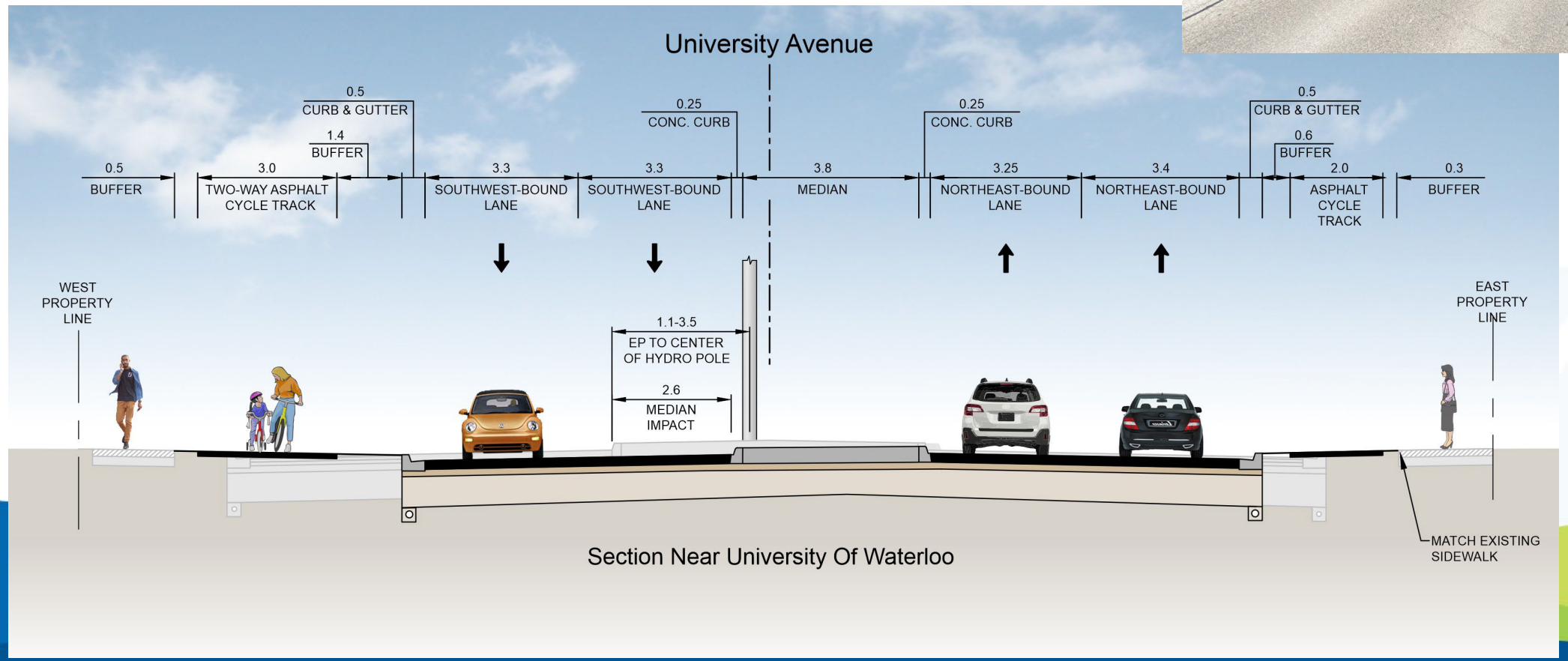
Proposed
King St. north of Hickory – Looking south

University Avenue

Seagram Drive to Westmount Road

- Unidirectional facility on the south side and bidirectional facility on the north side

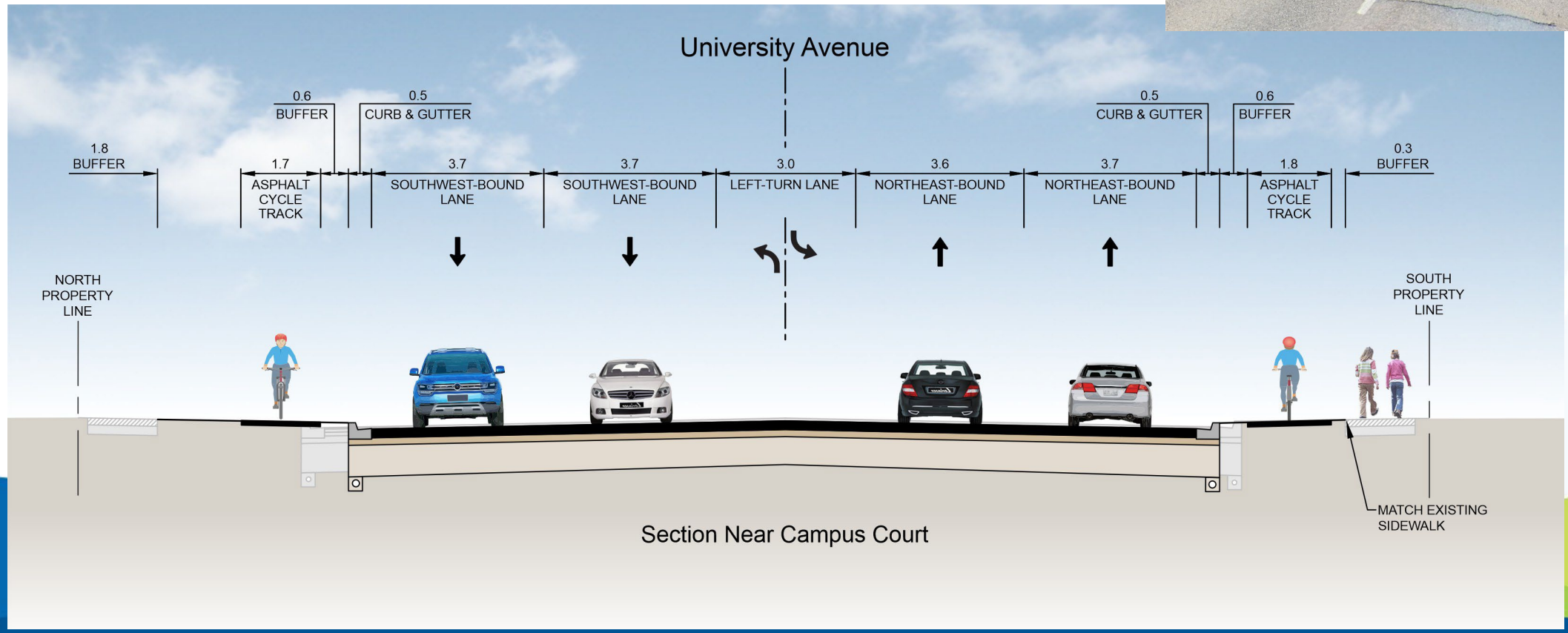




University Avenue

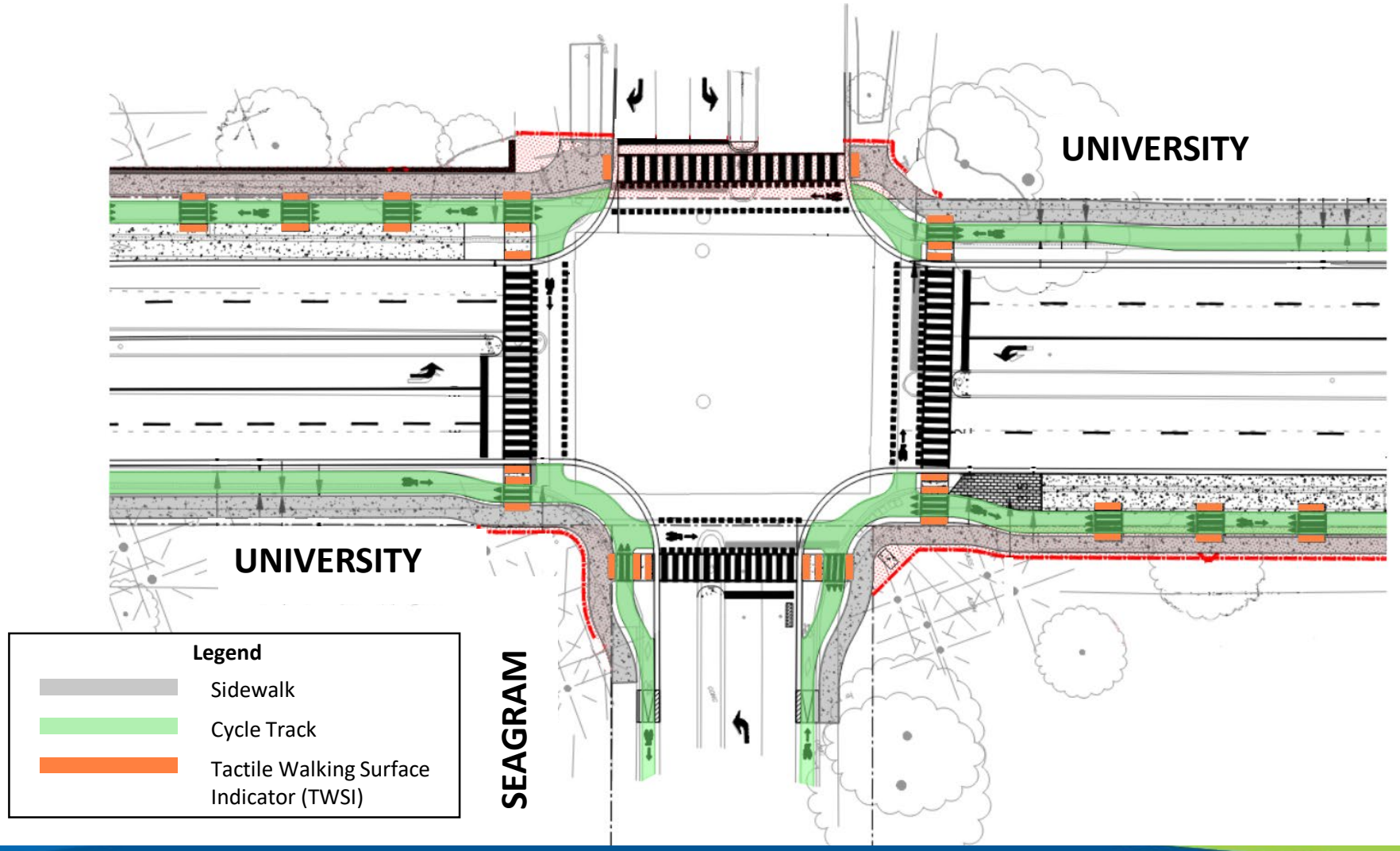
Albert Street to Seagram Drive

- Unidirectional facilities on the north and south side (continuation of the existing facility)



Section Near Campus Court

University Avenue



University Avenue

Existing
University Ave. south of Seagram – Looking north

Proposed
University Ave. south of Seagram – Looking north

1

Corridor Option 1: Bidirectional Facilities on Erb and Bridgeport (north side of Bridgeport east of interchange)

2

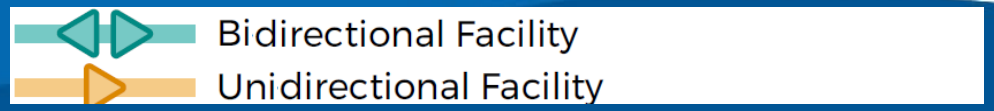
Corridor Option 2: Bidirectional Facilities on Erb and Bridgeport (south side of Bridgeport east of interchange)

3

Corridor Option 3: Unidirectional Facilities on Erb and Bridgeport

4

Corridor Option 4: Centre Running Cycling Facility through Interchange



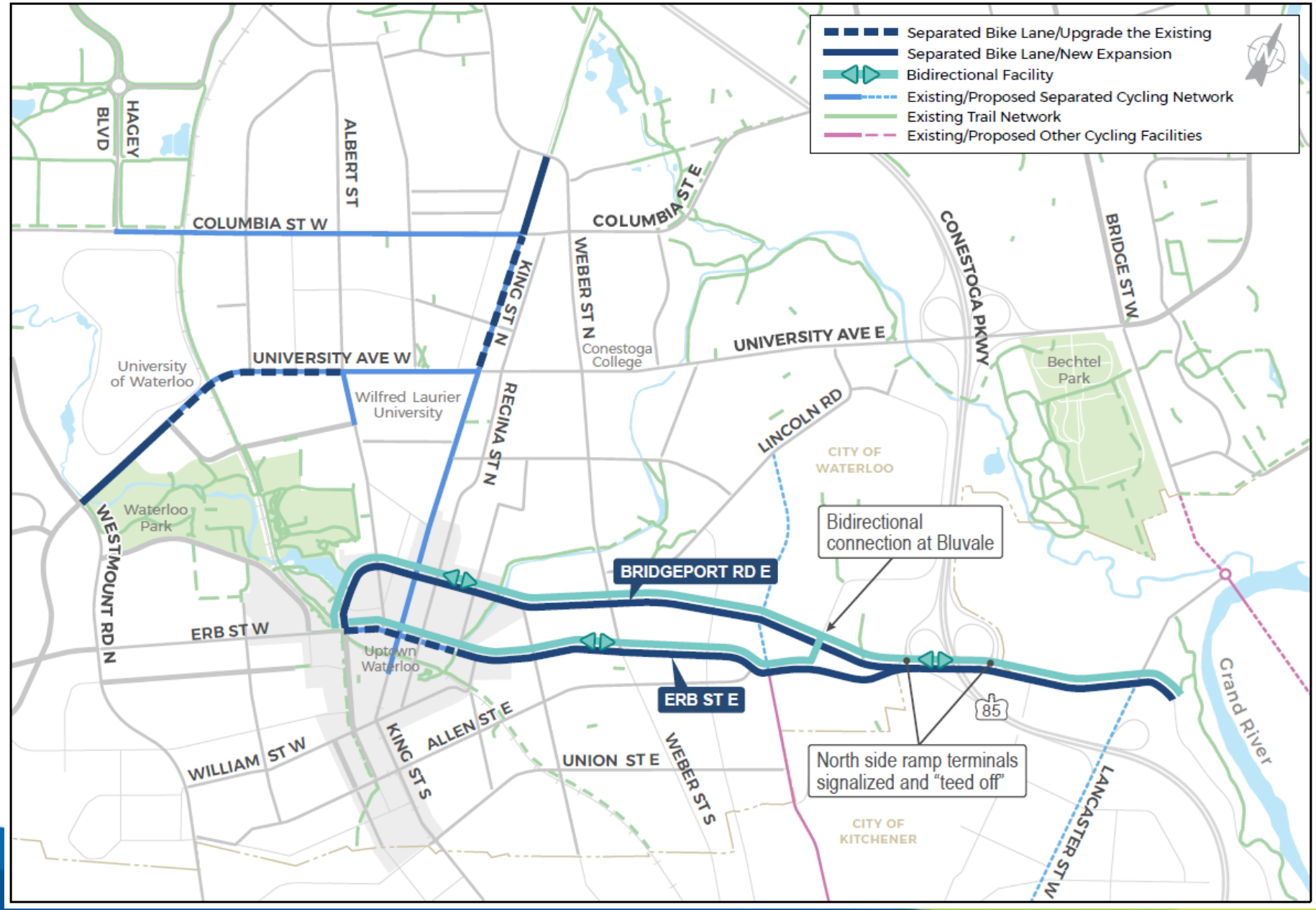
Summary of Design Alternatives

Corridor **Options 1 and 2** score the highest and are recommended to be carried forward

Corridor Option	Alignment with Vision	Natural / Cultural Environment	Traffic / Transportation	Conflict Mitigation	Utilities	Constructability / Cost	Carry Forward?
1	● 4	● 4	◕ 3	◕ 3	◕ 3	◕ 3	✓
2	● 4	● 4	◕ 3	◕ 3	◕ 3	◕ 3	✓
3	● 4	● 4	◑ 2	◑ 2	◕ 3	◑ 2	✗
4	● 4	● 4	◕ 3	◕ 3	◕ 3	◑ 2	✗

Corridor Option 1

Bidirectional Facilities on Erb and Bridgeport (north side of Bridgeport east of interchange)



Corridor Option 1

Bidirectional Facilities on Erb and Bridgeport (north side east of interchange)

Pros

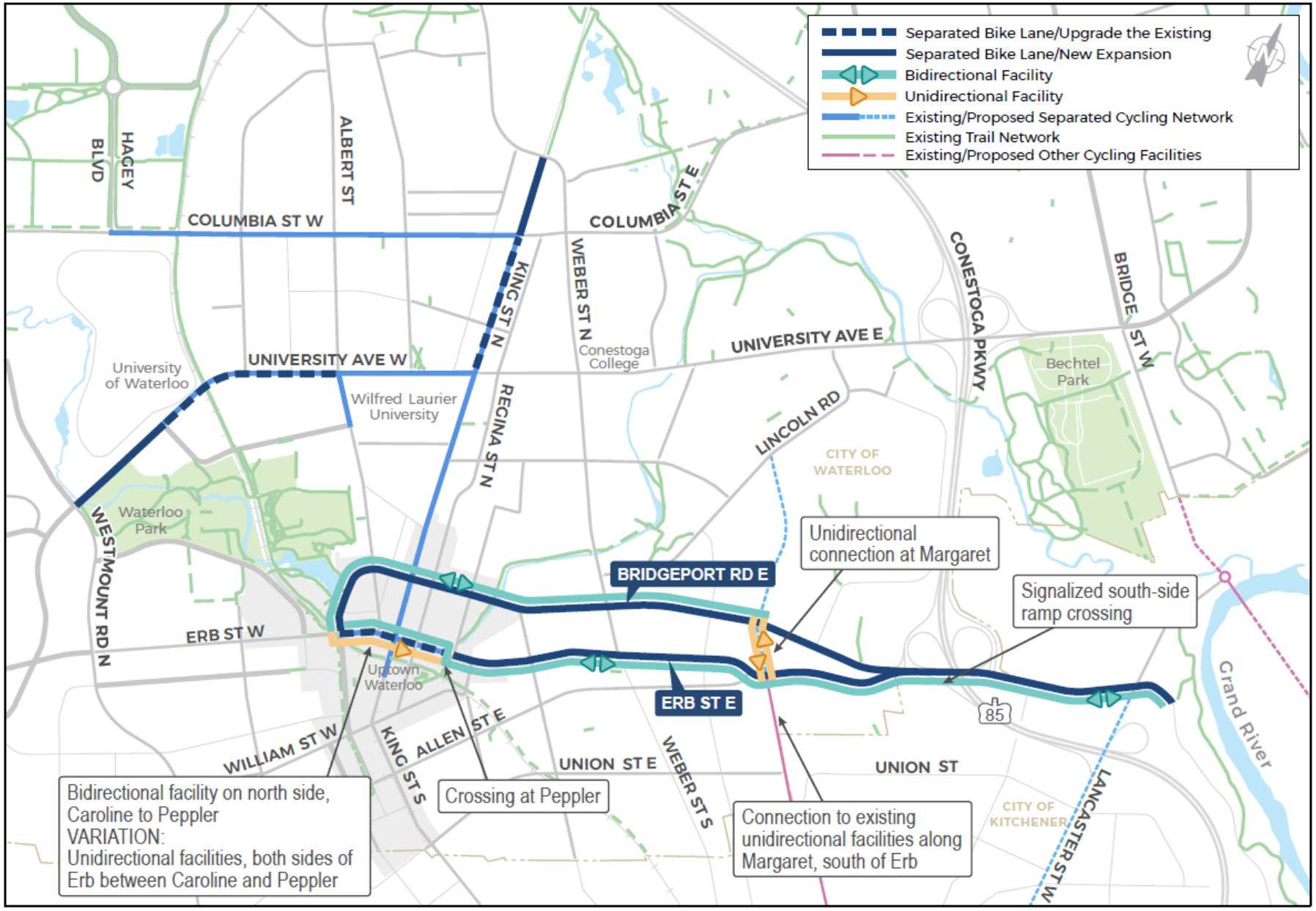
- Complete Streets approach
- East-west cycling connection
- Intersection operation
- Cyclist safety due to physical separation
- **Cost**
- No impacts to the natural or cultural heritage environment or utilities

Cons

- Potential conflicts between transit and cyclists along Bridgeport
- Risk for cyclist/motor vehicle collisions at intersections and driveways, requiring more complex design countermeasures
- Delay for motor vehicles

Corridor Option 2

Bidirectional Facilities on Erb and Bridgeport, south side of Bridgeport east of interchange



Corridor Option 2

Bidirectional Facilities on Erb and Bridgeport (south side of Bridgeport east of Interchange)

Pros

- Complete Streets approach
- East-west cycling connection
- Intersection operation
- Cyclist safety due to physical separation
- No impacts to the natural or cultural heritage environment or utilities
- **Right-side cycling facility may be safer, compared to left-side**

Cons

- Potential conflicts between transit users and cyclists
- Risk for cyclist/motor vehicle collisions at intersections and driveways, requiring more complex design countermeasures
- Delay for motor vehicles
- **Potential for "wrong-way" cycling on different corridors due to uni-directional facility**

Why Option 1?

What we heard

Technical Stakeholder Feedback

- **Ontario Ministry of Transportation (MTO)** initial preference is Option 1 design – but yet to be confirmed
- **City of Waterloo Active Transportation Advisory Committee** voted in favour of Option 1 as the preferred option

Public Feedback

- Clear preference for Option 1 as it will:
  - **Increase sense of comfort** for cyclists due to separation
  - **Provide connections** to other existing facilities
  - **Reduce the number of driveways** that need to be crossed
  - **Improve safety** at the Highway 85 interchange for all users
  - Help to **slow traffic**
  - Avoid cyclists having to cross Bridgeport and Erb to use cycling facilities – **reducing conflicts** between cyclists and motor vehicles

Public Engagement Feedback

Three quarters of respondents emphasized support for the study and are excited to see separated cycling facilities added within the Region

One quarter noted concerns about the project as a whole – specifically about safety, traffic delays and disruptions for commuters, low cyclist volumes on existing cycling facilities, and a lack of focus on transit

1 Feedback emphasized a **strong preference for Corridor Option 1**, with some seeing benefits of Corridor Option 2 as well

Public Engagement Feedback

Participants supported Corridor Option 1 as it will:

- Increase the sense of comfort for cyclists
- Provide connections to existing facilities in the Region
- Reduce the number of driveways that need to be crossed
- Improve safety at the Highway 85 interchange
- Help to slow traffic
- Avoid cyclists having to cross Bridgeport and Erb to use cycling facilities – reducing conflicts between cyclists and motor vehicles

Participants would like to the project team to consider:

- How cyclists can safely interact with motor vehicles (at intersections, driveways, etc.)
- Winter maintenance
- How to delineate space for cyclists vs. pedestrians
- Traffic / roadway configuration impacts
- Transit impacts and integration

Bridgeport Road

Existing
Bridgeport Rd. E east of Weber – Looking east

Proposed
Bridgeport Rd. E east of Weber – Looking east

Bridgeport Road and Highway 85

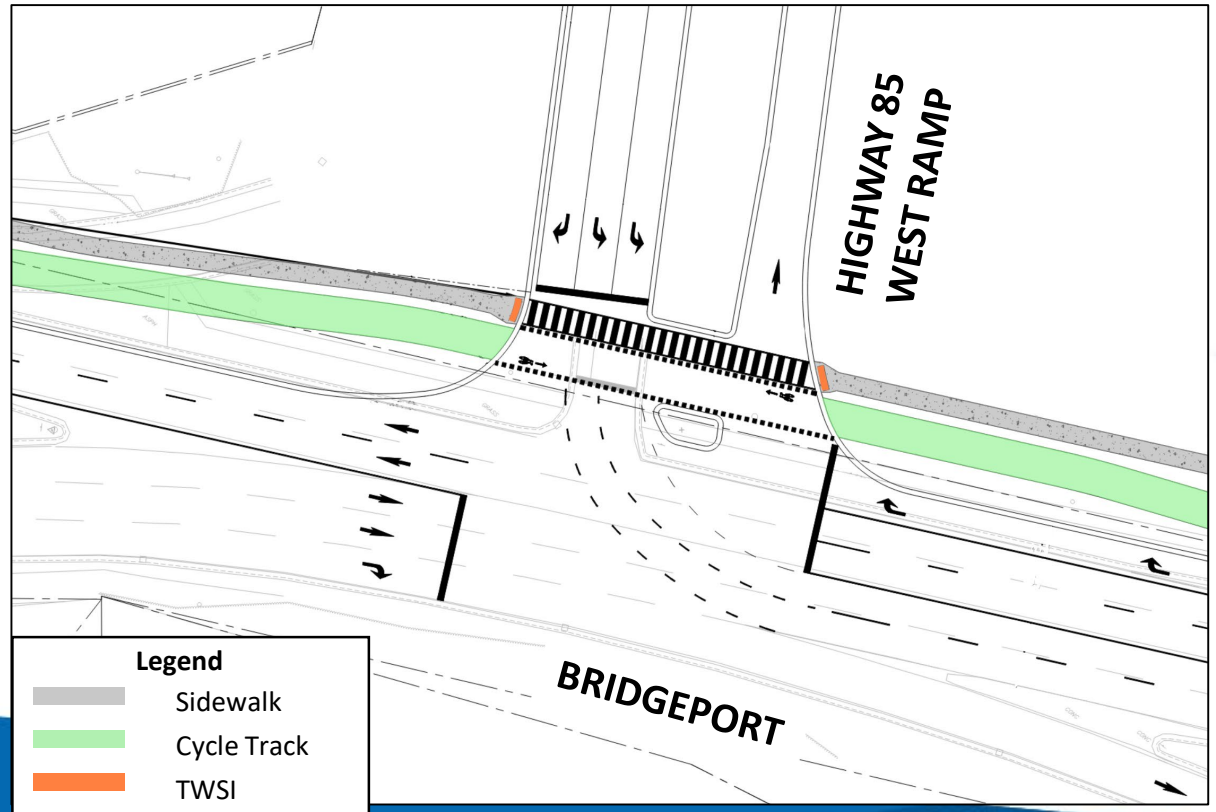
Existing
Bridgeport Rd. and Hwy 85 E – Looking east

Proposed
Bridgeport Rd. and Hwy 85 E – Looking east

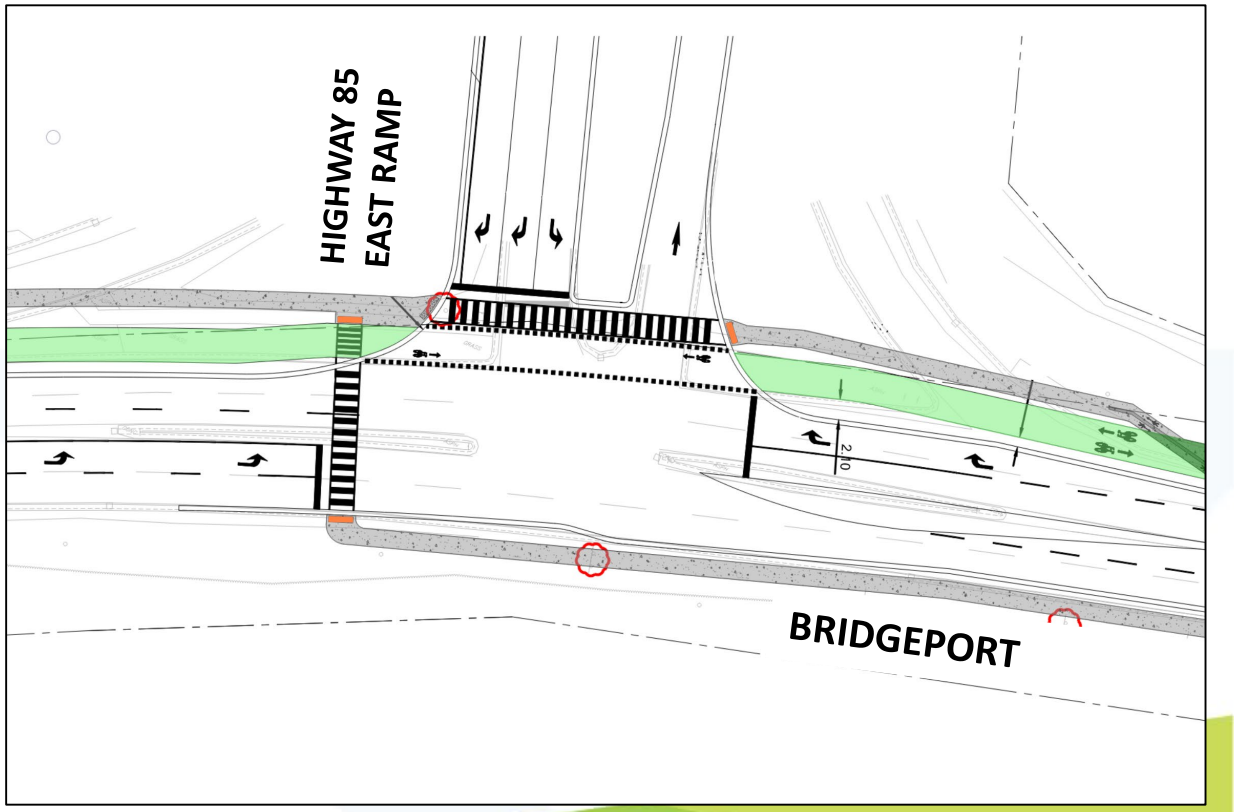
Corridor Option 1 – Subject to MTO Approval

North Side Highway 85 Crossings

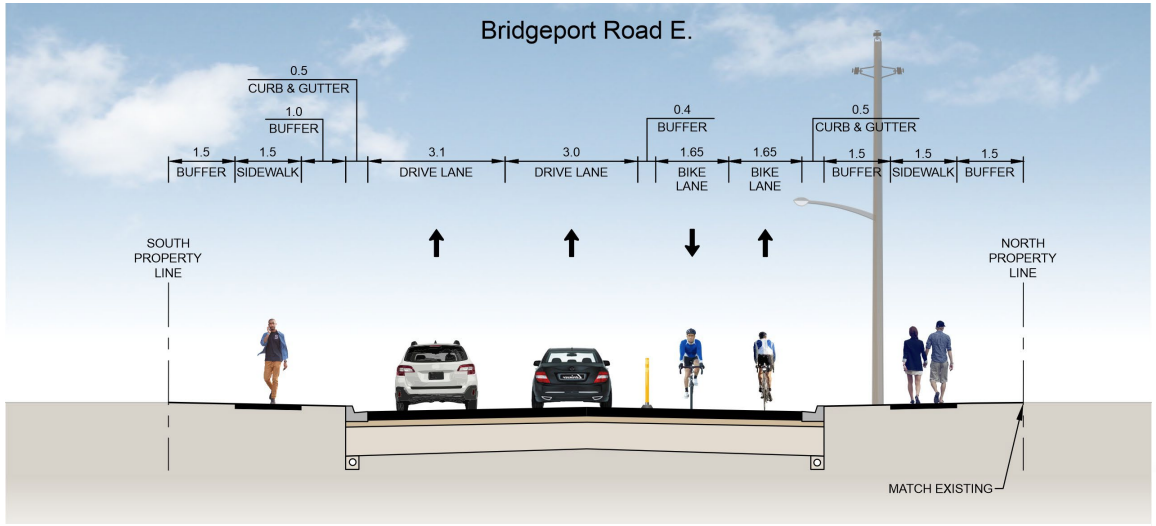
Highway 85 West Interchange



Highway 85 East Interchange



Interim Corridor Design

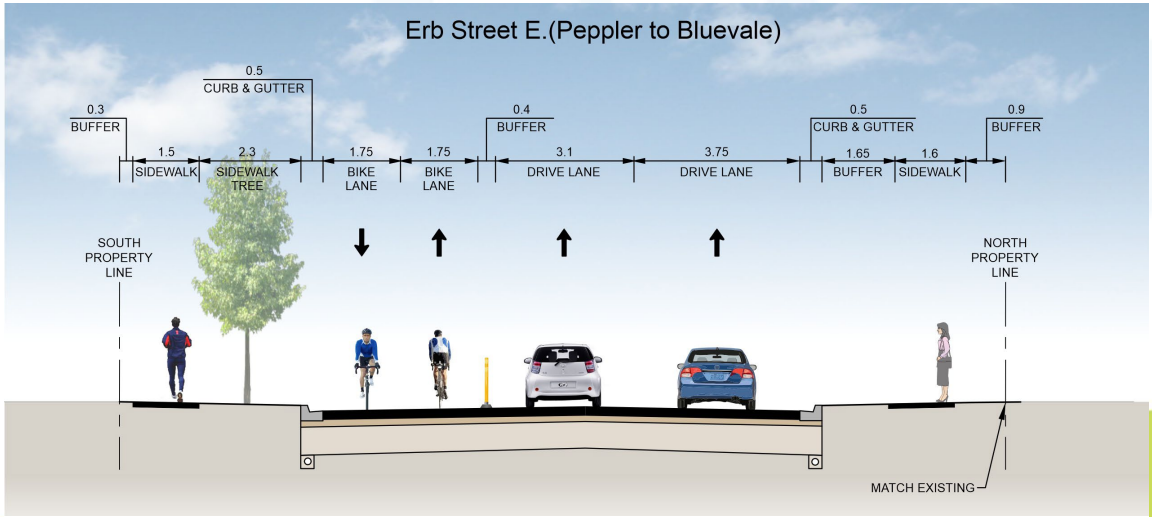


Proposed

Bridgeport Rd. E – Looking west

Existing

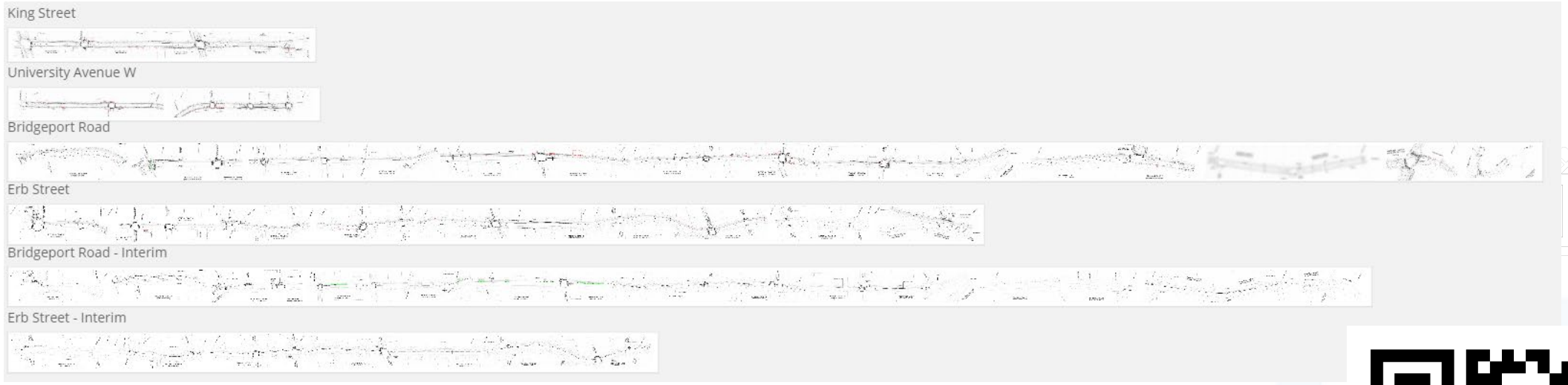
Erb St. E (Caroline to Peppler) – Looking west



Proposed

Erb St. E (Peppler to Bluevale) – Looking west

Miro Board



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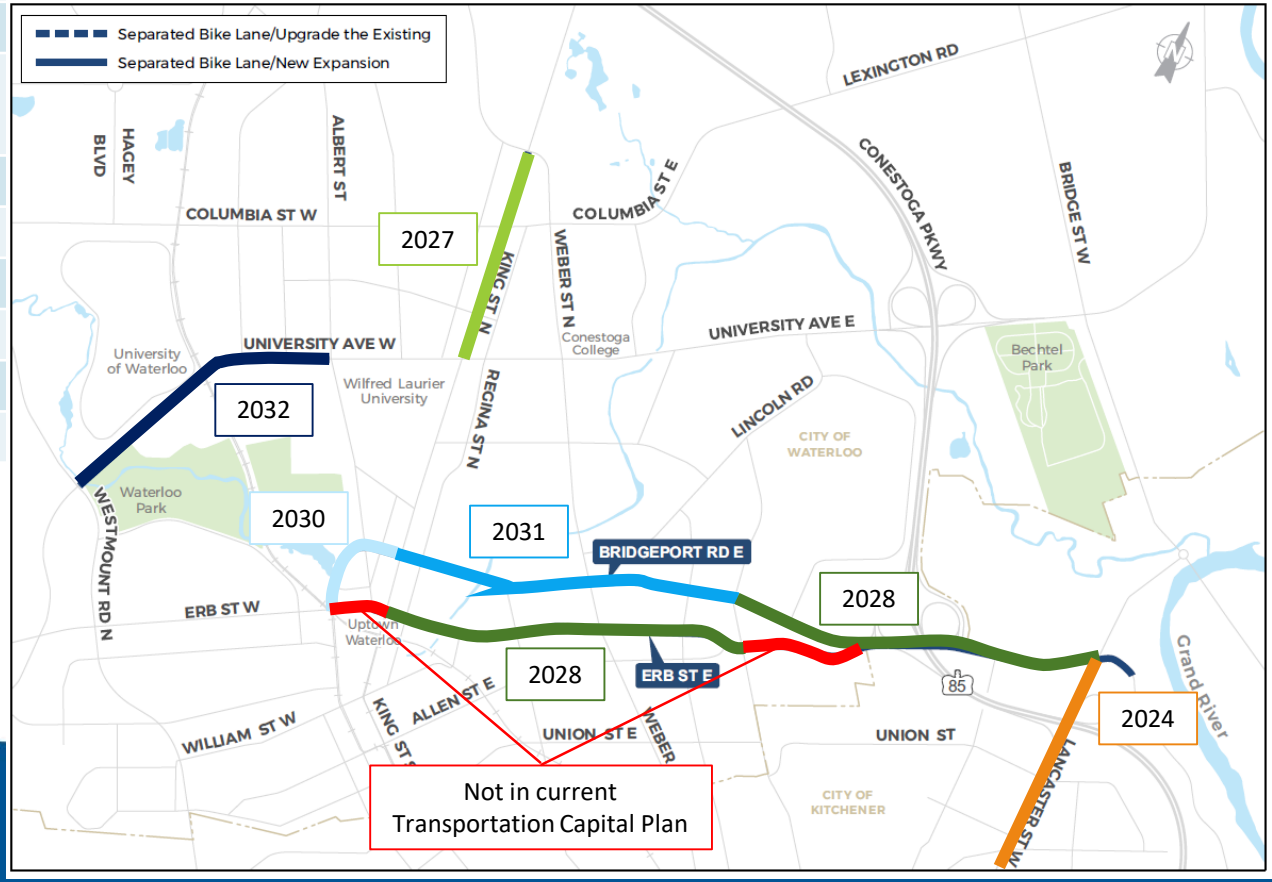
Reconstruction Timelines

Road	Section	Construction Year (2023 TCP)
Bridgeport Rd	Lancaster St to Margaret Ave	2028
Bridgeport Rd	Margaret Ave to Weber St	2031
Bridgeport Rd	Weber St to King St	2031
Bridgeport Rd / Caroline St	King St to Erb St	2030
Erb St	Bridgeport Rd to Margaret Ave	-
Erb St	Margaret Ave to King St	2028
Erb St	King St to Caroline St	-
King St	University Ave to Weber St	2027
University Ave	Albert St to Westmount Rd	2032
Lancaster St	Wellington St to Bridgeport Rd	2024



Conclusion and Next Steps

Engagement Opportunities & Next Steps

Post comments on the Miro board about the proposed design for each corridor

Watch a recording of this meeting on the project website

Subscribe to the project website to receive project updates and information about future opportunities to participate

Thank you!

Please visit the project website - **www.engagewr.ca/waterloocycling** - or contact a member of the project team if you have additional questions:

Tom Humphries, Project Manager
Region of Waterloo
150 Fredrick Street
Kitchener, ON, N2G 4J3
THumphries@regionofwaterloo.ca

James Schofield, Project Manager
WSP Canada
100 Commerce Valley Dr W
Thornhill, ON, L3T 0A1
James.Schofield@wsp.com

Question and Answer Session

Question & Answer

Do you have any **questions or comments** about the study? Please…

Raise your hand

and / or

Type them in the chat box