

City of Barrie
Class Environmental Assessment for:
Bradford Street Corridor

**Active Transportation Facility
Planning Approach**



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Study Introduction

- > This is a **long-range corridor planning** study to confirm future multi-modal needs on Bradford Street, including:
 - > Overall corridor operations for 2031, 2041 and 2051 for all road users (pedestrians, cyclists, transit and vehicles)
 - > Opportunities to improve traffic operations and pedestrian safety at the intersections of Tiffin Street / Bradford Street and Tiffin Street / Lakeshore Drive
 - > Streetscape improvements and guidance for developments
 - > Property needs to accommodate future improvements

Currently, **no immediate capital works** are planned.

The study may identify opportunities for short-term or accelerate capital improvements, as well as potential need for additional studies.



Study Process & Schedule

- > The **Municipal Class Environmental Assessment (Class EA)** is a planning and approval process for municipal infrastructure that follows Ontario's Environmental Assessment Act. This study follows a '**Schedule C**' Class EA process:



Purpose of this Presentation

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- > The City's Transportation Master Plan (TMP) (2019) proposed cycle tracks on Bradford Street.
- > Ontario Traffic Manual (OTM) Book 18 Cycling Facilities has been updated as of June 2021 to reflect current design guidelines and best practices.
- > We are now confirming the original TMP recommendation against the current OTM Book 18, with respect to cycling facility type on Bradford Street.



- > All ages and abilities design requires low stress facilities with research showing that the **majority of participants would be more comfortable in physically separated bikeways**

How Do We Select a Cycling Facility...

Step 1

- Pre-select facility type options

Step 2

- Detailed & contextual evaluation

Step 3

- Document & justify rationale

OTM Book 18; June 2021 . Adapted from Figure 5.1
Three Step Facility Selection Flow Chart

Who Will be Using the Facility...

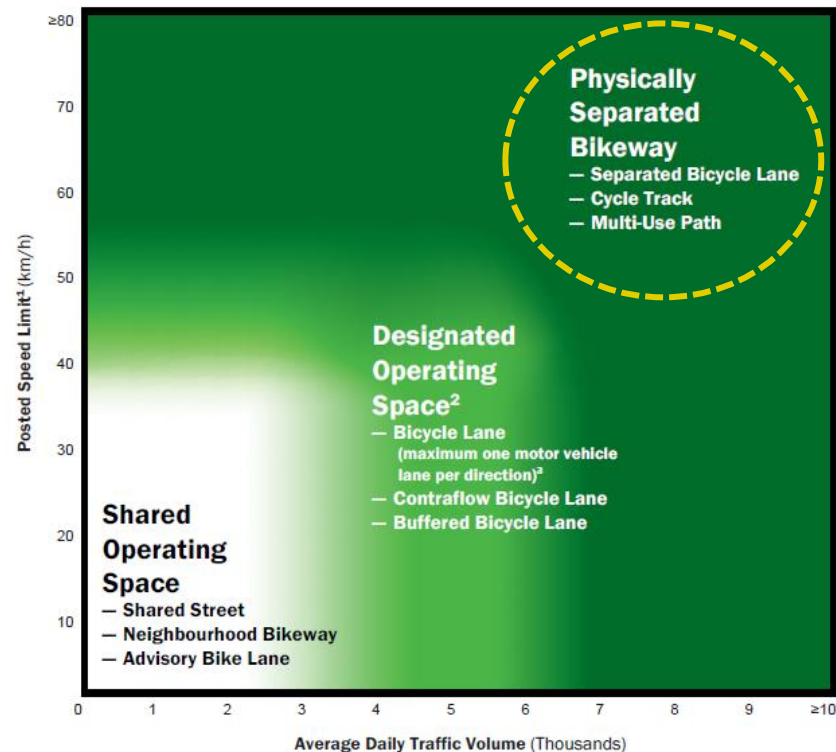
DESIGN CYCLIST		
Interested but Concerned	Somewhat Confident	Highly Confident
• Strong preference for separated cycling facilities or very low-volume and low-speed streets • Cycling frequency depends heavily on having a network of low-stress facilities • Can generally negotiate simple low-speed interactions with motor vehicles at intersections	• Comfortable cycling on-street and interacting with moderate-speed traffic • Preference for separated cycling facilities or low-volume and low-speed streets • Cycling frequency increases as network of low-stress facilities expands	• Comfortable cycling on-street and interacting with higher-speed traffic • Preference for cycling facilities that allow for easy overtaking and efficient movement • Cycling frequency not necessarily affected by network
Lower stress tolerance Higher stress tolerance		
% of population	• 51–56%	• 5–9%
		• 4–7%

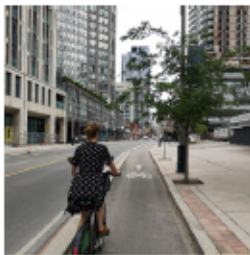
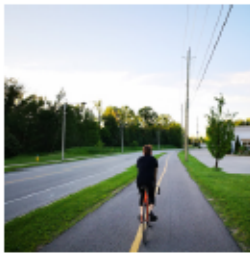
OTM Book 18; June 2021 . Excerpt from Table 2.1
Types of Cyclists

- > **Step 1: Pre-select Facility Type Options**
(OTM Book 18 Section 5.2.3)
- > **Streets with two or more through lanes in each direction** should at a minimum have a buffered bike lane or buffered paved shoulder, with **physical separation being preferred**

Recommendation:
Physically Separated Bikeway

OTM Book 18; June 2021 . Figure 5.5 Desirable Cycling Facility Pre-Selection Nomograph Urban / Suburban Context (Step 1)



Physically Separated Bikeways		
Physically Separated Cycling Lanes (Section 4.3.2)		A portion of a roadway which has been designated for the exclusive use of cyclists, and which is separated from adjacent motor vehicle lanes by a horizontal buffer and separation elements that restrict encroachment of traffic. Separation techniques are detailed in Section 4.3.1 .
Cycle Tracks (Section 4.3.3)		A physically separated bikeway that is horizontally and vertically separated from the travelled portion of the roadway by a curb and buffer. Cycle tracks are designated exclusively for use by people riding bikes, and often travel parallel to a sidewalk.
In-Boulevard Multi-Use Paths (Section 4.3.4)		A two-way path that is horizontally and vertically separated from the travelled portion of the roadway by a curb and buffer. Multi-use paths are shared by cyclists and pedestrians . In-boulevard multi-use paths are distinct from multi-use trails, which run in a dedicated corridor separate from the road right-of-way.

- > Cycle track proposed on Bradford Street in TMP
- > North of Bradford Street:
 - > **Transition from cycle track to signed bike route north of Dunlop Street**
 - > The Great Trail is part of Trans Canada Trail connecting Essa Township in the south to Springwater Township in the north. Trail connects to the waterfront multi-use trail and off-road trail at South Shore Park.
- > South of Bradford Street
 - > In-boulevard pathway on Essa Road & bike lane on Tiffin Street
 - > **Consider continuation of cycle track on Essa Road south of intersection at Tiffin Street or alternate access to GO Station**

*Excerpt from TMP Map ES1 –
Draft Cycling and Multi-use
Trail Network (2019)*

Existing Facilities

- Waterfront Multi-use Trail
- In-Boulevard Pathway
- Buffered Bike Lane
- Bike Lane
- Paved Shoulder
- Signed Bike Route
- Off-road Trail

Proposed Facilities

- In-Boulevard Pathway
- Cycle Track
- Buffered Bike Lane
- Bike Lane
- Paved Shoulder
- Urban Shoulder
- Signed Bike Route
- Off-road Trail

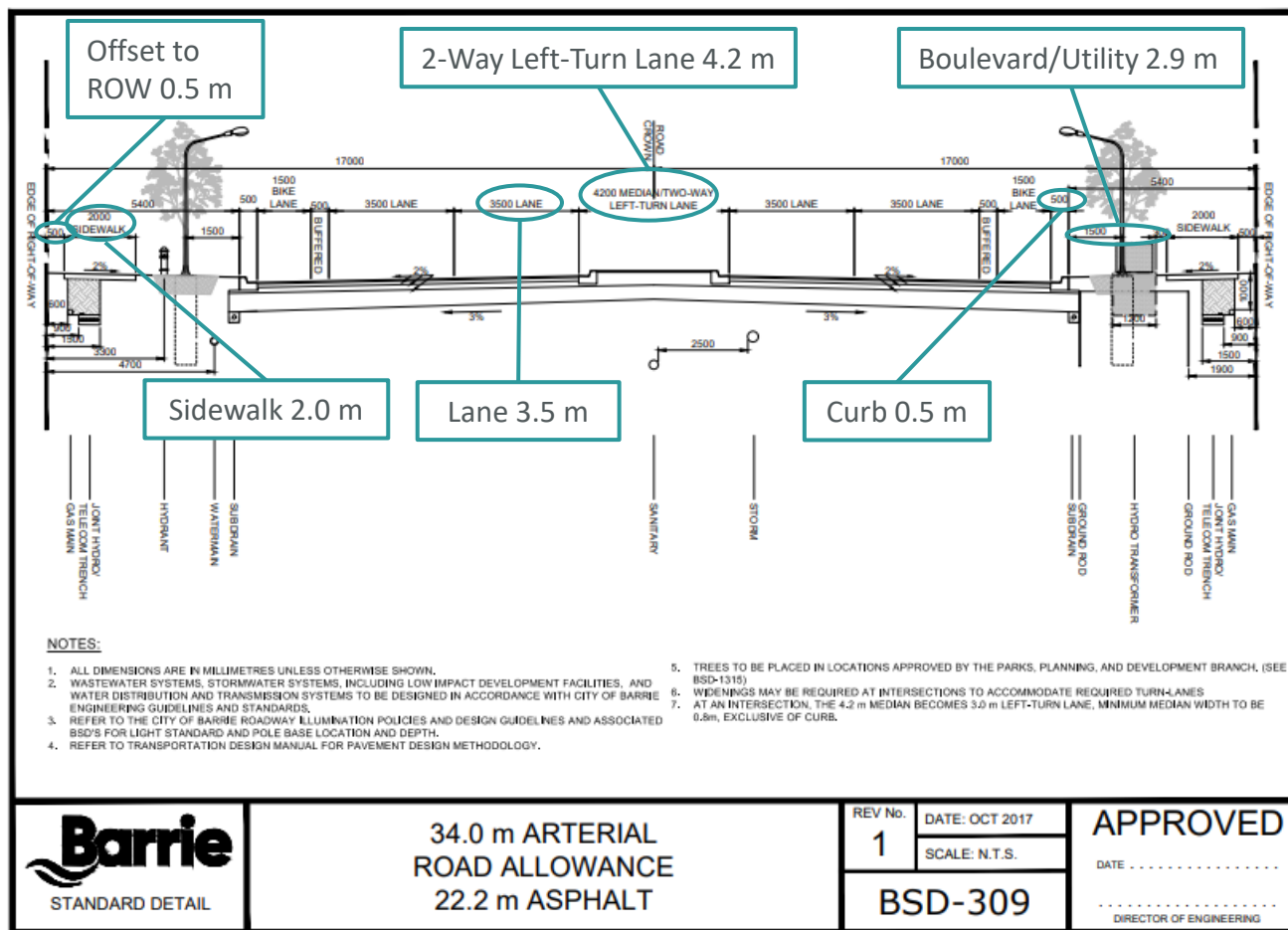
Trail Systems

- Province-Wide Cycling Network
- The Great Trail

Transportation Features

- GO Station
- Barrie Bus Terminal

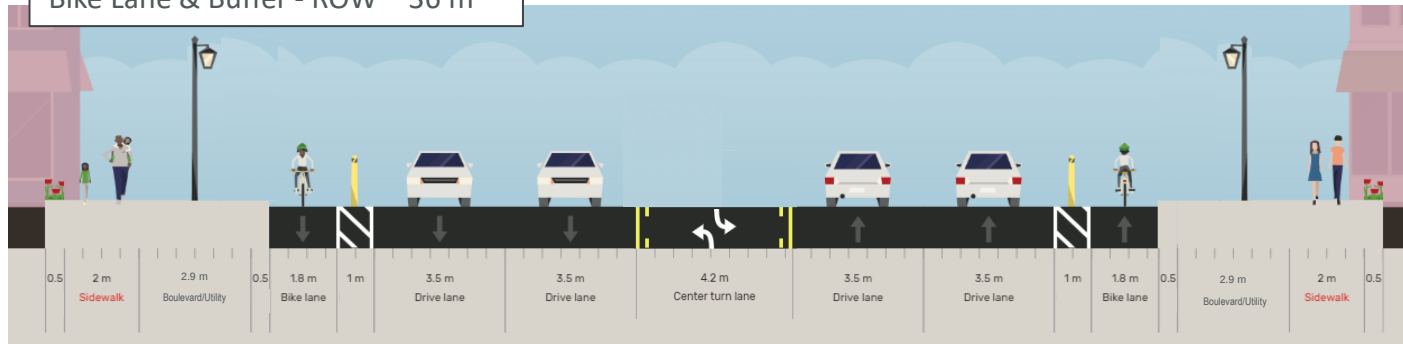




Physically Separated Bicycle Lane Options

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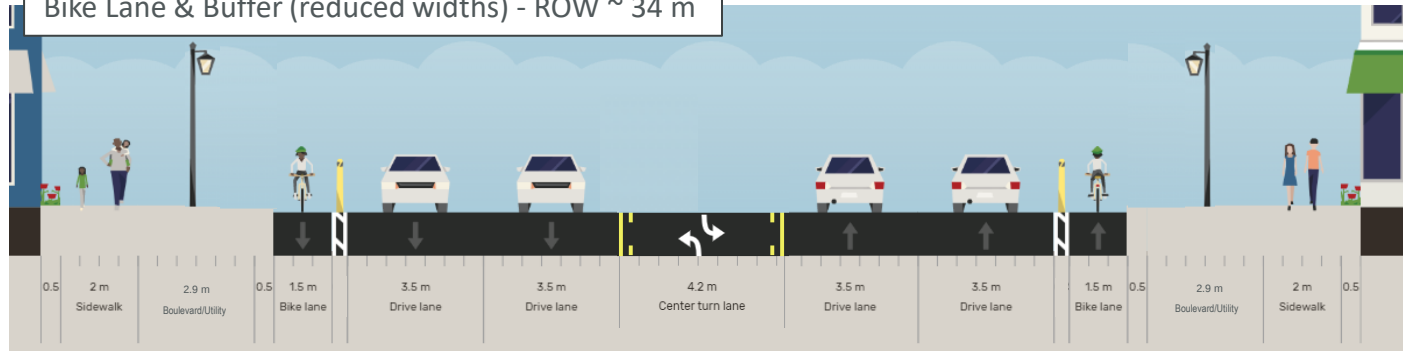
Bike Lane & Buffer - ROW ~ 36 m



Bicycle Lane Physically Separated by Bollards and Planters, Toronto



Bike Lane & Buffer (reduced widths) - ROW ~ 34 m



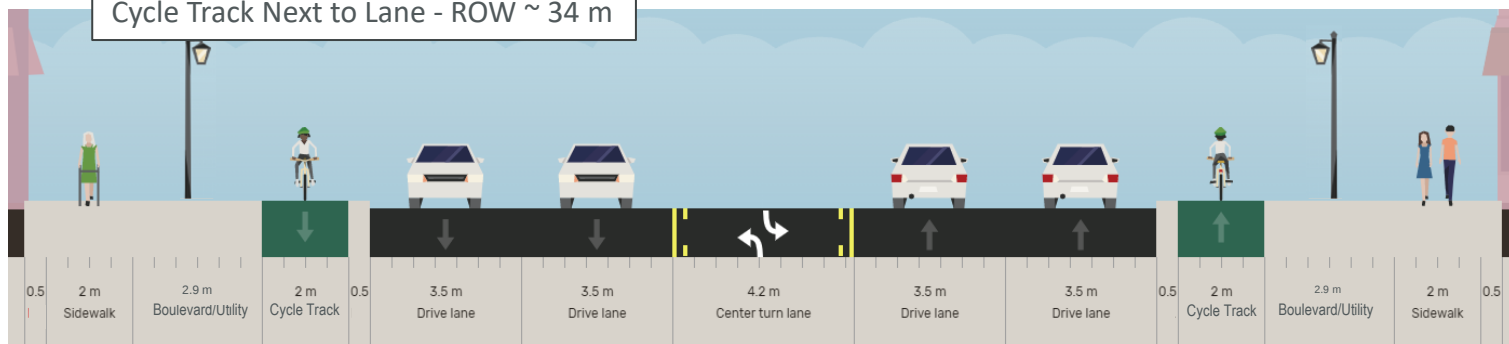
Bicycle Lane Physically Separated by Bollards, Markham



Cycle Track Options

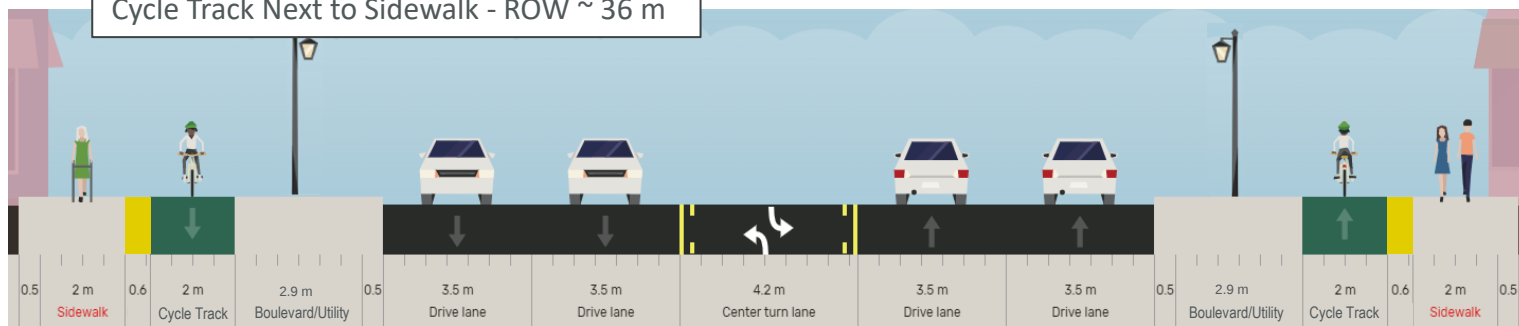
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Cycle Track Next to Lane - ROW ~ 34 m

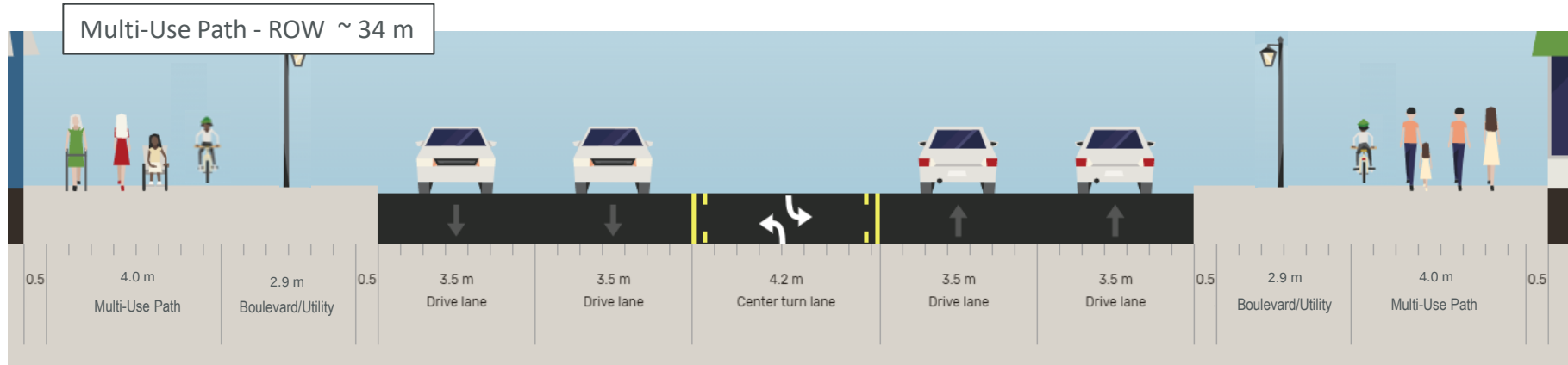


Cycle Track Separated by Mountable Curb, Waterloo

Cycle Track Next to Sidewalk - ROW ~ 36 m



Cycle Track Separated by Barrier Curb and Buffer, Ottawa



Multi-Use Path Separated by Grassy Boulevard, Waterloo

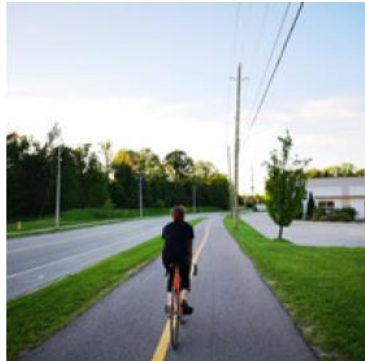


Image from OTM Book 18; June 2021

Multi-Use Path Separated by Grassy Boulevard, Richmond Hill



Image from richmondhill.ca

Multi-Use Path Separated by Grassy Boulevard, Newmarket

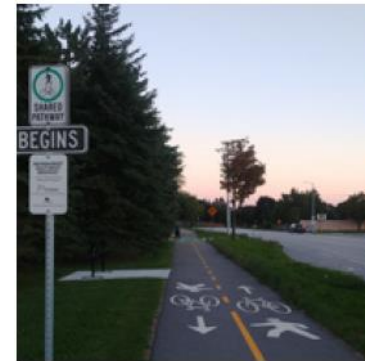
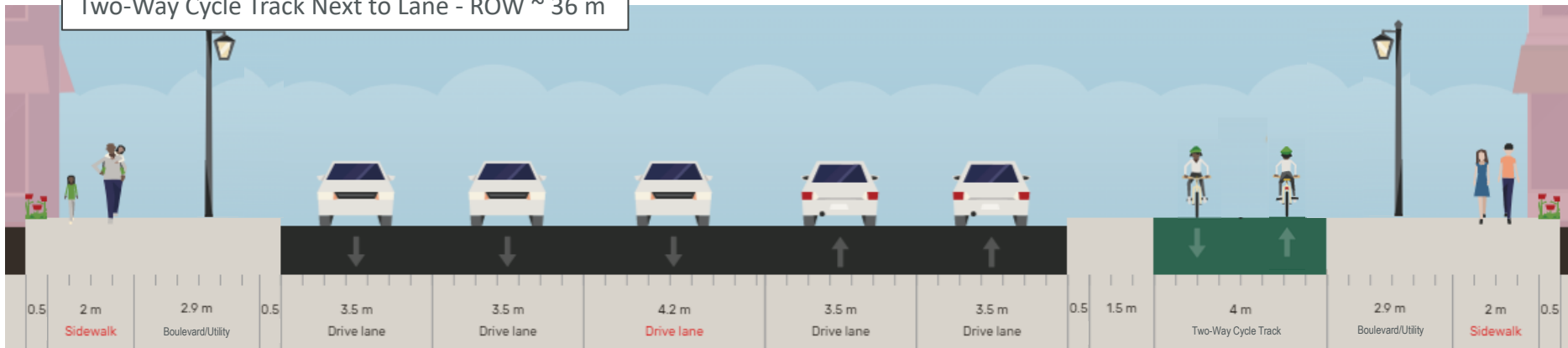


Image from OTM Book 18; June 2021

Two-Way Cycle Track Option

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Two-Way Cycle Track Next to Lane - ROW ~ 36 m

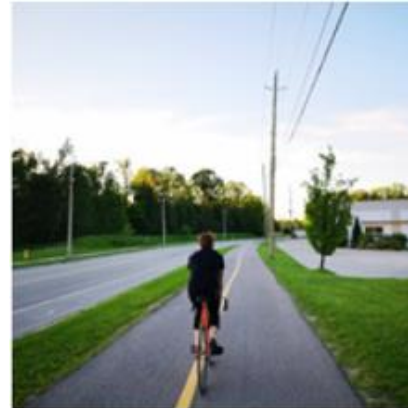


Two-Way Cycle Track Separated by Grassy Boulevard, York Region



Image from OTM Book 18; June 2021

- > Gather your feedback on cycling facility options
- > Present cycling facility options to the public at Public Information Centre #1 (to be scheduled shortly)
- > Investigate cycling facility option in more detail considering specific site conditions on Bradford Street, at intersections, and access to the Allandale Waterfront GO Station
- > Recommend a preferred cycling facility type
- > Review / confirm recommendation with stakeholders and the public at Public Information Centre #2



DISCUSSION