



Report: TES-TRP-17-04

Region of Waterloo

Transportation and Environmental Services

Transportation

To: Chair Tom Galloway and Members of the Planning and Works Committee

Date: April 4, 2017

File Code: T13-40/7440

Subject: Separated Cycling Network Pilot Project

Recommendation:

That Regional Council direct staff to undertake a feasibility and design study for a pilot network of separated bike lanes, as outlined in Report TES-TRP-17-04, dated April 4, 2017.

Summary:

Staff recommend undertaking a study to examine the feasibility of installing a network of separated bike lanes as a pilot project. This pilot project would aim to increase the cycling mode share in the Region, and would follow the experiences of other Canadian municipalities. Subject to Council approval, the pilot project implementation would be scheduled for 2018.

A separated bike lane is an exclusive facility for a cyclist that is physically separated from both motor vehicles and pedestrians. Separated bike lanes offer a high level of comfort and appeal to “Interested but Concerned” cyclists, people who are interested in cycling but have significant concerns that limit their desire and commitment to cycling. This group represents about 60% of the population.

Separated bike lanes would be piloted by identifying roadways with adequate capacity and reallocating existing travel lanes and/or parking lanes on these roadways. Temporary materials would be used and “hard” changes to the road would be avoided.

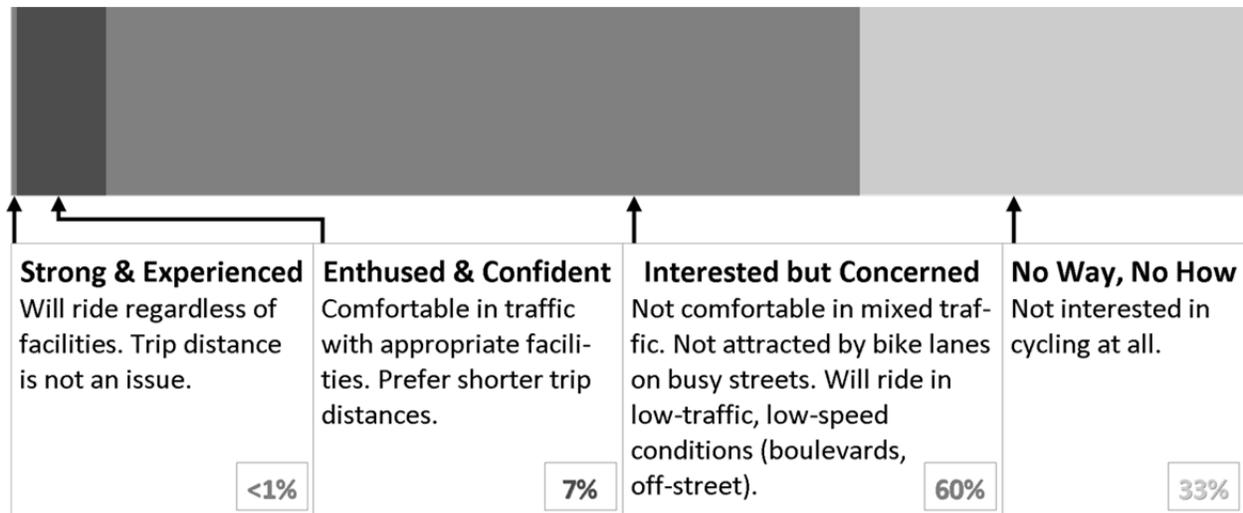
The recommended separated cycling network would consist of a grid of Regional and/or Area Municipal roads. The network would connect to multiple neighbourhoods and destinations, instead of only providing a cycling facility along one roadway corridor. The pilot project would serve as a case study to help the Region decide if separated bike lanes should be installed elsewhere.

Report:

1. Background

An objective of the 2010 Regional Transportation Master Plan (RTMP) is to increase the cycling mode share to 3% by 2031. The 2014 Active Transportation Master Plan (ATMP) determined there was considerable potential to increase cycling in Waterloo Region, as over 65% of trips in the Region are less than 5 km in length. However, as only about 0.7% of daily trips in the Region are currently made by bike, it is clear that distance is not the only factor. Feedback from the public consistently cites concerns about safety, comfort and convenience as key factors in their decision to cycle.

Generally, cyclists can be divided into four categories based on their comfort level while riding on a roadway with traffic, as illustrated below. About 60% of the population is “Interested but Concerned”: they are interested in cycling as part of their regular travel needs, but have significant concerns that limit their desire and commitment to cycling.



Studies across Canada have consistently shown that the primary barrier to cycling for the “Interested but Concerned” group is motor vehicle traffic volumes and speeds. Painted on-road bike lanes are available throughout the Region, but busy streets with high volumes of traffic can be intimidating for some people, especially the “Interested but Concerned” cyclists. Various Canadian municipalities have attempted to address this barrier by implementing separated bike lanes, which provide physical separation between motor vehicle traffic and cyclists, to improve comfort and address concerns about safety.

2. What is a Separated Bike Lane?

A separated bike lane is a designated, on-street bicycle lane that is separated from motor vehicle traffic and pedestrians by a physical barrier such as curbs, parked cars, delineators, or other street treatments. Separated bike lanes:

- Physically separate bicycles from vehicles;
- Make cycling a more attractive transportation option for those who are not used to riding their bikes regularly;
- Increase the comfort level and feeling of safety by 'separating' people on bikes from traffic and car doors opening;
- Increase the comfort of driving by making the movement of people on bikes more predictable; and
- Increase the comfort for people walking by reducing sidewalk riding.

Examples of separated bike lanes in Ontario are illustrated below.



3. Project Description

The Region's urban neighbourhoods are complex. Getting the right balance between traffic, pedestrian, transit and cyclist circulation, parking location and availability, and business success is a part of that complexity. While there is confidence from experiences in other cities that separated bike lanes can be beneficial to the overall success of urban areas, each project is unique and must balance the overall needs of the street and area.

Rather than committing to permanent infrastructure at the start, many municipalities have chosen to "pilot" separated bike lanes to evaluate their effectiveness. The table in Appendix A outlines the Canadian municipalities that have chosen to pilot separated bike lanes. In addition to the cities listed, permanent separated bike lanes have been built for years in Montreal and Vancouver. Accordingly, these two cities are achieving some of the highest cycling mode shares in Canada.

Regional staff recommend implementing a separated bike lane pilot project to:

- Support the ATMP's recommendations for separated cycling facilities in some corridors;
- Evaluate the effectiveness of different types of separated cycling infrastructure;
- Encourage more people to cycle;
- Connect cycling infrastructure to destinations; and
- Consult with a broad range of stakeholders.

4. Project Team

This study would be directed by a Project Team consisting of staff from the Transportation Division, as well as staff or individuals from the following:

- Community Planning;
- Transit Services;
- Design and Construction;
- Public Health;
- Rapid Transit (if applicable);
- Regional Councillors, identified based on network location; and
- Regional and Area Municipal Stakeholders, identified based on network location.

As the project progresses, staff from other divisions within the Region and Area Municipalities would be consulted as required. The Region's Active Transportation Advisory Committee (ATAC), and its counterparts at the Area Municipal level, would also be consulted throughout the project.

5. How Would Separated Bike Lanes Be Piloted?

Separated bike lanes would be piloted by identifying roadways with adequate capacity and reallocating existing travel lanes and/or parking lanes on these roadways. Temporary materials would be used and more permanent "hard" changes to the road would be avoided.

Subject to Council's approval to initiate this pilot project, a feasibility and design study would begin in April 2017, and is expected to be completed by Winter 2017. The feasibility and design study would:

- Identify road network alternatives for the pilot, with at least one alternative in each of the Cities of Cambridge, Kitchener, and Waterloo, consisting of a grid of Regional and/or Area Municipal roads;
- Evaluate the alternative networks and identify the preferred pilot network;
- Consult with the public and other stakeholders on the preferred pilot network;
- Identify possible road cross-sections and intersection configurations to

- accommodate separated bike lanes;
- Identify an extensive monitoring component and maintenance plan;
- Assess the capital and operating costs for the separated bike lane network; and
- Satisfy all necessary Environmental Assessment requirements.

Staff would report back to Council with the recommendations from the feasibility and design study, and outlining next steps in the pilot project, by the end of 2017.

Implementation of the separated bike lanes would be planned for Spring 2018, subject to Council approval. The lanes would be kept open for two summer seasons to provide an extended monitoring period. Staff would report back to Council in Fall 2019 with a recommendation on whether the separated lanes should be implemented on a permanent basis, and on the potential to expand the network.

Corporate Strategic Plan

This project is directly related to the Sustainable Transportation Focus Area, and in particular, the following Strategic Objectives:

- 2.3: Build infrastructure for, and increase participation in, active forms of transportation (cycling and walking); and
- 2.4: Optimize road capacity to safely manage traffic and congestion.

It also influences the other Focus Areas, namely:

- Thriving Economy;
- Environment and Sustainable Growth; and
- Healthy, Safe and Inclusive Communities.

Financial Implications:

The 2017 Ten Year Transportation Capital Program includes a total budget of \$100,000 in 2017 for this study, to be funded from the Development Charge Reserve Fund. This amount would accommodate the expected expenses for this year. Additional funding would be required in the year 2018 for construction and maintenance of the project, subject to Council approval. Detailed capital and annual operating cost estimates would be developed in the feasibility and design study.

It is staff's intention to apply for funding from the Municipalities for Climate Innovation Program (MCIP). MCIP is a new five-year, \$75-million program designed to encourage municipalities to better prepare for and adapt to climate change, as well as reduce greenhouse gas emissions. The program is offered by the Federation of Canadian Municipalities (FCM). Available grants include the Plans and Studies Grant and the Demonstration Projects Grant.

The Plans and Studies Grant would provide up to \$175,000 to develop plans and studies to reduce greenhouse gas emissions and help communities adapt to the impacts of climate change. The Demonstration Projects Grant would provide up to \$1 million to assist municipalities to implement climate change initiatives on a small scale. Both grants could fund up to 80% of eligible costs. FCM is now accepting applications for the Plans and Studies Grant. The Demonstration Projects Grant should be available starting in Spring 2017.

Other Department Consultations/Concurrence:

Nil

Attachments

Appendix A – Pilot Projects for Separated Bike Lanes in Other Canadian Municipalities

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Approved By: Thomas Schmidt, Commissioner, Transportation and
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Pilot Projects for Separated Bike Lanes in Other Canadian Municipalities

City	Capital Cost	Length of Separated Bike Lanes Installed	Status	Project Statistics
Saskatoon	\$225,000	2.0 km	Pilot project ongoing	n/a
Hamilton	\$867,200	3.0 km	Pilot project ongoing	- More than 500 bicycle trips per day on average
Toronto	\$500,000	2.9 km	Approved for permanent installation	- 36% increase to cycling volumes - 18% cycling mode share
Ottawa	\$1,300,000	1.4 km	Approved for permanent installation	- Over 1.25 million bike trips counted since opening of lanes - Cycling mode share increase from 4% to 7%
Calgary	\$5,450,000	6.5 km	Approved for permanent installation	- 1.2 million bicycle trips recorded - 40% increase in cycling mode share - 90 seconds: longest delay to motorists
Edmonton	\$7,528,000	7.0 km	Approved for permanent installation – network planned for construction in April 2017	n/a