



Report: E-14-114

Region of Waterloo

Transportation and Environmental Services

Transportation

To: Chair Jim Wideman and Members of the Planning and Works Committee

Date: September 30, 2014 **File Code:** T13-01

Subject: Planned Region of Waterloo Cycling Enhancement Pilot Programs

Recommendation:

For information

Summary:

Nil

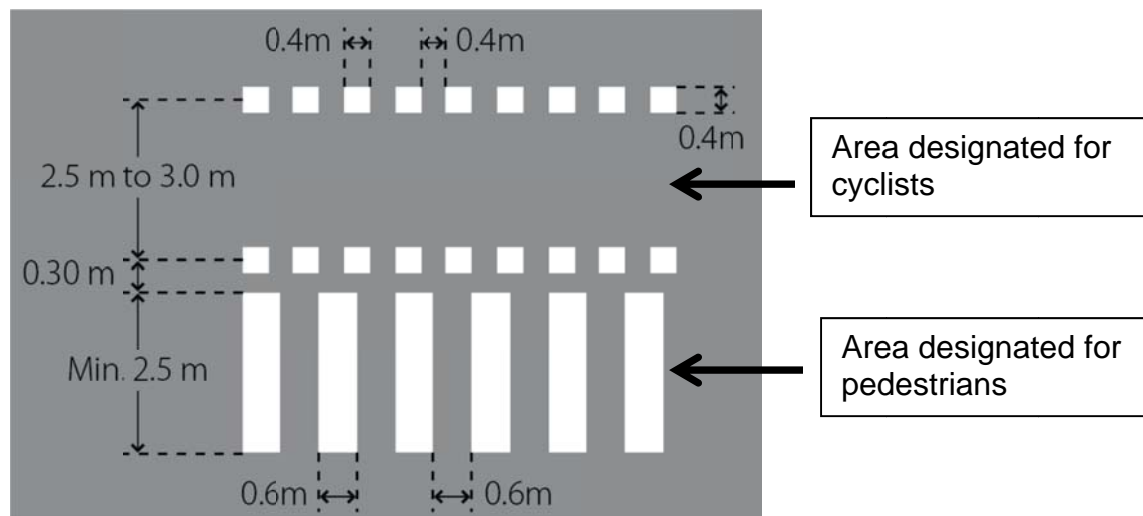
Report:

The Region of Waterloo Transportation Division is responsible for the design, installation, operation and maintenance of traffic signals, pavement markings and traffic signs on Regional Roads. Staff continuously strives to find innovative solutions to improve safety performance and mobility using best practice design standards. Staff is planning to embark on two new pilot programs in 2014 and 2015 to investigate potential improvements to cycling safety and mobility on Regional roads and to support the City of Waterloo and their cycling network enhancement program. The two new pilot programs are consistent with the objectives of the Active Transportation Master Plan and include the installation of crossrides at two locations and sharrows at one location.

Crossrides

A crossride application is essentially a modified crosswalk that designates a specific area alongside a crosswalk for cyclists to cross without having to dismount their bicycle. There are 3 standard crossride applications summarized in Ontario Traffic Manual Book 18 – Cycling Facilities. Figure 1 illustrates an example of a crossride.

Figure 1 – Crossride

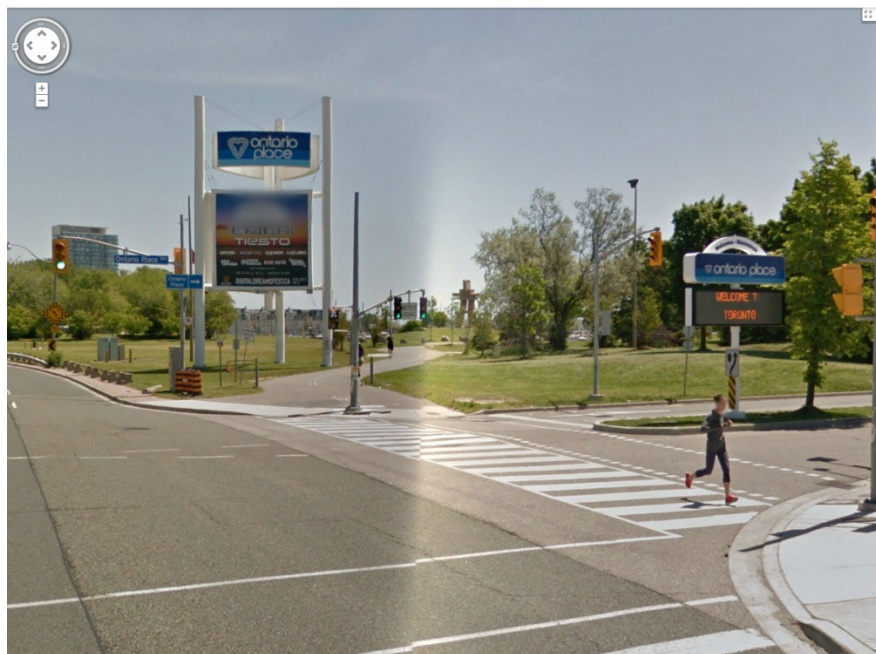


A crossride, depending on the facility type, may or may not be supplemented with bicycle traffic signals. Currently, law in Ontario as legislated by the Highway Traffic Act prohibits cyclists from riding their bicycle within or alongside a crosswalk at traffic signals. Cyclists are required to dismount their bicycle and walk across such crosswalks. The advent of the crossride is intended to remove this barrier however it is not fully supported by law just yet. Bill 173 as summarized in Report E-14-052 proposes to eliminate this prohibition however the recent Provincial election has temporarily sidelined this Bill. MTO approval was therefore obtained to pilot crossrides in the Region of Waterloo. While crossrides may improve cyclist mobility, their location and layout must be carefully selected to avoid compromising cyclist safety.

Region of Waterloo cycling collision data indicates that 52% of all cycling collisions (316 of 604) occurred in crosswalks between 2009 and 2013. Numbers also indicate that a disproportionate number of cyclists who rode into crosswalks going against traffic represented the overwhelming majority of cyclists hit (231 collisions). Measures that can encourage cyclists to ride in the direction of traffic are being explored to help reduce the number of cyclist collisions.

Other municipalities have piloted crossrides in their respective jurisdictions. The City of Toronto has piloted a number of locations and expressed concerns regarding the implementation of one particular crossride at the intersection of Lakeshore Boulevard and Newfoundland Drive as collisions involving cyclists have increased from 0 collisions in 5 years before installation to 5 collisions in 4 years after installation. The following figure is a picture of the crossride at this location.

Figure 2 – Lakeshore Boulevard and Newfoundland Drive/Ontario Place



The City of Mississauga advised the Region that they have limited the installation of their crossrides to all-way stop locations and very low volume roadways. They have expressed concerns regarding installing crossrides at signalized locations where turning traffic volumes would be higher and therefore increase the potential for turning conflicts with cyclists who ride directly into the crosswalks.

Staff has considered the installation of crossrides at signalized locations very carefully as crossrides essentially enable cyclists to ride freely into crosswalks. Based on our understanding of how collisions with cyclists occur on our roadways and the experience of other jurisdictions, the Region of Waterloo will limit the installation of crossride pilot projects to existing midblock signalized locations and intersections where potential turning conflicts are limited or removed. Two locations that the Region and City of Waterloo have agreed to pilot crossrides at include:

1. University Avenue at the Trans Canada Trail; and
2. Erb Street and Pepler Street.

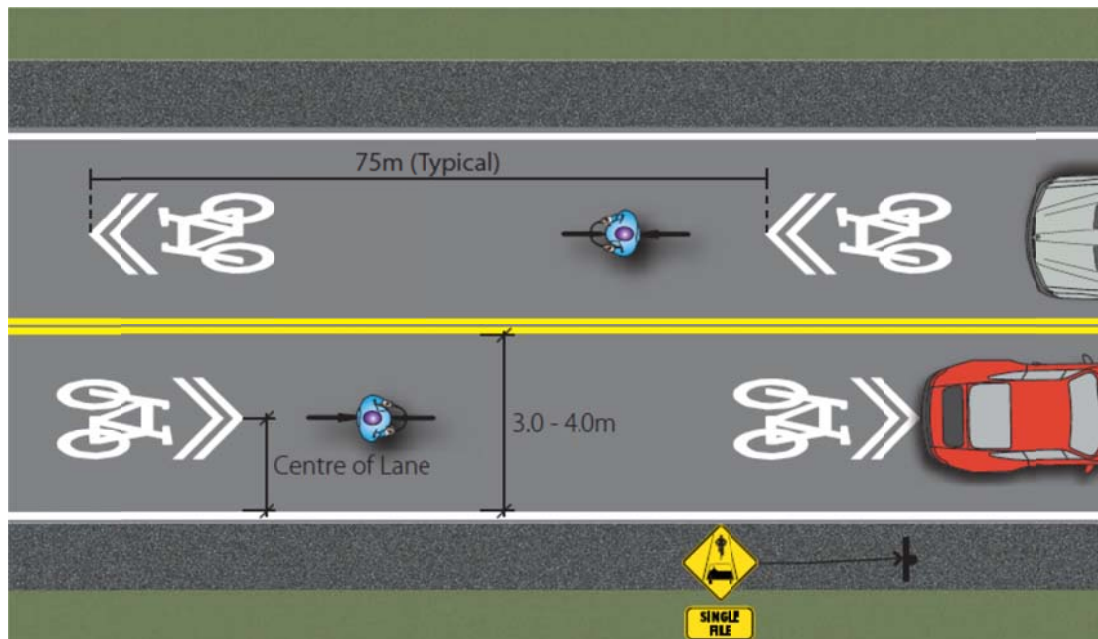
In both cases, there will be no motorized vehicle turning conflicts and the signals have to be activated by a cyclist or pedestrian.

Sharrows

A sharrow is a term or name for an optional pavement marking treatment intended to help guide cyclists as to where they should ride within a travel lane shared by both

motorists and cyclists. Sharrows may also provide additional warning to motorists to expect cyclists. All Regional roadways are traversable by cyclists and cyclists have the right to use all Regional roads. The presence or absence of a sharrow does not alter this. The application of sharrows is optional and context sensitive depending on the roadway width. Figure 3 illustrates a potential application which is an optional treatment that practitioners can consider. Installation needs to be carefully considered as overuse or application where few cyclists would be encountered can lead to driver complacency and or public credibility concerns.

Figure 3 – Optional Sharrow Application



The safety benefits of sharrows have not yet been determined. Staff will pilot sharrow pavement markings based on a request from the Active Transportation Advisory Committee to install them on Bridge Street over the Grand River where lane widths are too narrow to sufficiently accommodate cyclists and motorists side by side. The pilot project will implement sharrows in the centre of the lane in each direction over the bridge as well as install warning signs on the approaches to the bridge. The installation of these devices is intended to signify to both motorists and cyclists that cyclists may be present in the centre of the lane over the bridge.

The Region's Traffic Coordinating Committee which includes representation from all local municipalities and the Waterloo Regional Police Services has been advised of the Region's intended pilot programs and has no concerns with the pilot locations chosen.

The Region's Active Transportation Advisory Committee is also aware of the Region's intent to pilot these projects and is in support of these initiatives.

The Region intends to monitor these pilot projects over the next 1 to 2 years and may expand the number of pilot projects where appropriate. More specifically the Region will monitor the impacts on safety as well as compliance with the devices. Staff will report

back to the Planning and Works committee should these pilot projects yield any notable data. In addition to the pilot projects, the Region has recently installed bike boxes at the intersection of Bridge Street and Lexington Road in the City of Waterloo to further support enhancements to the cycling network. Staff is planning to present a report in early 2015 to the Planning and Works Committee regarding installation criteria for bike boxes at traffic signals on Regional roads.

Corporate Strategic Plan:

These pilot projects meet the Region's goal to develop, promote and integrate active forms of transportation (cycling and walking) Strategic Objective 3.2.

Financial Implications:

The cost to the Region to install a crossride at University Avenue and the Trans Canada Trail is approximately \$30,000 and will be constructed concurrently with Grandling works. The cost to install a crossride at Erb Street and Pepler Street is approximately \$12,000 and will be cost shared as agreed to between the Region and City of Waterloo. The cost to fund the sharrow pavement markings and signing on the bridge over the Grand River is approximately \$3,300. Sufficient funding is available in the Region's 2014 Transportation Capital Program to cover the cost of these projects.

Other Department Consultations/Concurrence:

Nil

Attachments

Nil

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Services