



**Transportation Department**

**TO: Development & Infrastructure Committee**

**SUBJECT: On-road Bike Lanes on Lakeshore Road, east of Downtown**

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Report Number: TS-36-12

File Number(s): 130-02, 750-07, 930-03

Report Date: November 23, 2012

Ward(s) Affected: 1  2  3  4  5  6  All

Date to Committee: December 3, 2012

Date to Council: December 10, 2012

**Recommendation:** Direct the Director of Transportation Services to conduct a trial re-marking of Lakeshore Road between west of Torrance Street and Guelph Line to provide on-road bike lanes by eliminating the centre two way left turn lane per Report TS-36-12 and report the results to Council before the scheduled 2013 final road resurfacing; and,

Direct the Director of Transportation Services to conduct a trial re-marking of Lakeshore Road between Guelph Line and Walkers Line to provide on-road bike lanes by eliminating the centre two way left turn lane per Report TS-36-12 as soon as weather permits in the Spring of 2013 and report the results to Council in Fall 2013.

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**Purpose:**

- Address goal or action in strategic plan
- Establish new or revised policy or service standard
- Respond to legislation
- Respond to staff direction
- Address other area of responsibility

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**Reference to Strategic Plan:**

- Vibrant Neighbourhoods
- Prosperity
- Excellence in Government
- N/A

This report has been prepared in accordance with the following initiatives:

Increase the number of people who cycle, walk, and use public transit for recreation and transportation; promote walking and cycling-friendly neighbourhoods to ensure community safety and accessibility; and, to develop a common vision and co-ordinated plan to decrease reliance on vehicles

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**Background:**

In July 2009, Burlington City Council approved the Cycling Master Plan (CMP). The plan was adopted as a guide for City staff in creating a network of on-road bikeways and multi-use pathways

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throughout Burlington, along with supportive policies, practices and programs to encourage more people to cycle.

Council has directed staff as follows:

“Transportation Services staff, in collaboration with the Engineering Department be directed to investigate the feasibility of widening Lakeshore Road from Burloak Drive to Downtown Burlington in order to accommodate on-road bike lanes and median refuge islands where possible while maintaining two narrowed travel lanes and a narrowed two-way left turn lane”; and,

“Staff be instructed to begin preparatory design work on implementing the recommended Lakeshore Road cycling program between Martha Street and Guelph Line and report back to Council with an integrated financial, communications and implementation plan.”

The Council approved CMP identifies Lakeshore Road as a candidate for on-road bike lanes and identifies the need for future improvements to the existing south side multi-use path.

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## **Discussion:**

Lakeshore Road east of the downtown is challenged with the competing goals of providing residential property access, a transportation route from the QEW in the west to Oakville in the east, a home to the Waterfront Trail and connections to parks and vistas on to Lake Ontario. The inherent conflict created by the necessary compromise between these purposes tends to generate very polarized opinions about any changes to the existing operation.

Lakeshore Road is classified as an arterial roadway in the Official Plan. The existing curb-to-curb width varies from approximately 9.6 metres (Figure 1) immediately east of the downtown to 10.8 metres east of Guelph Line. Today, the pavement is marked with one lane for each direction and a centre lane for left-turning vehicles. There is an existing sidewalk on the north side and a paved multi-use path on the south side of the road.

Current daily flows are approximately 16,500 vehicles and 115 bicycles. During the busy weekday pm peak hour, it operates at about capacity with vehicular traffic reaching 850 vehicles in one direction.

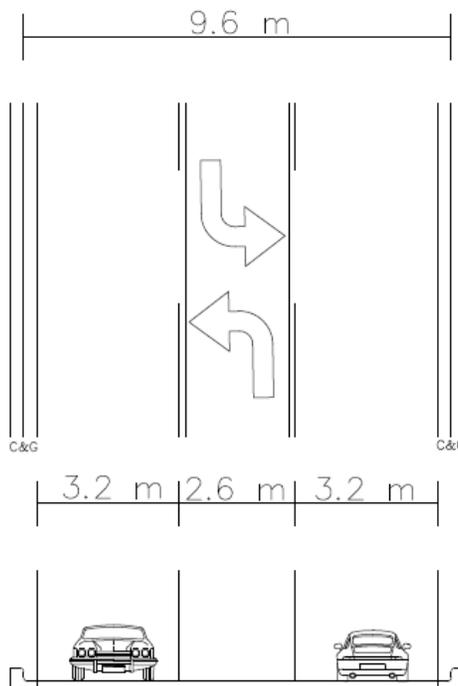
It is important to note though that origin/destination studies have shown that in the range of 20 to 25 per cent of traffic in the peak period does not have a local purpose, but rather is “through” traffic destined to or from neighbouring communities or highways.

It is likely that if more capacity existed on Lakeshore Road, the peak hour flows would be even higher.

A review of motor vehicle collisions between January 2008 and October 2011 indicates that 48 vehicle collisions have occurred between Martha Street and Guelph Line. Approximately 70 per cent occurred away from the signalized intersections, 50 per cent were “rear-end”, and 30 per cent were “angle or turning movement” and 8 per cent were “sideswipe” types. The segment of Lakeshore Road between Guelph Line and Walkers Line has an almost identical collision record. This pattern suggests a high degree of driver inattentiveness and aggressive driving. In addition, the Transportation Services Department has received reports of aggressive motorists using the centre two way left turn lane to pass slower vehicles.

Figure 1: Existing Lakeshore Road Lane Configuration  
Typical Midblock Lane Dimensions west of Guelph Line

Note: Gutter is 0.3m wide on both sides



#### On-road Bicycle Lane Options:

There are two basic options for providing on-road cycling lanes on Lakeshore Road:

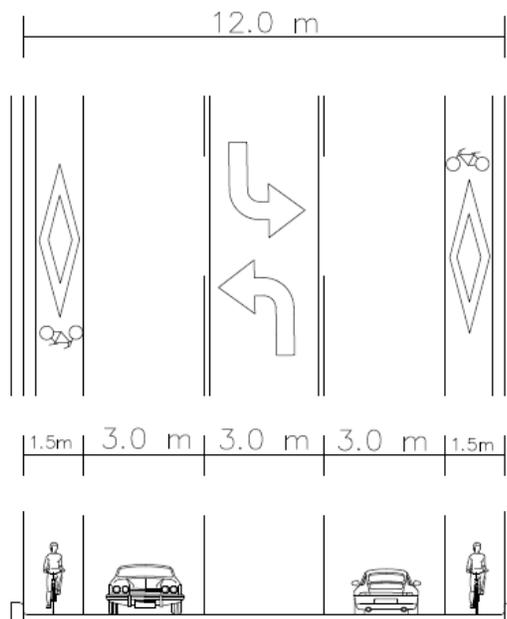
- Widen the roadway to add cycling lanes and maintain the existing vehicular lanes; or,
- Re-stripe the existing roadway pavement to provide the cycling lanes and reduce the space allocated to vehicles

Option1 (Widening):

Engineering staff undertook a preliminary cost estimate for widening Lakeshore Road by approximately 3 metres in width over the eight kilometres length between Burloak Drive and the downtown (Figure 2). This estimate produced an order of magnitude of \$9.6 Million. This cost includes relocation of curbs and utilities, and the removal of a number of very large trees. Property acquisition would also be necessary in some locations. It is important to note that significant detailed design work and refinement of all the cost components would be required should Council wish to consider this option further.

Based on the significant estimated cost and impact on the existing streetscape, staff does not recommend moving forward with a widening of Lakeshore Road.

Figure 2: Lakeshore Road – Potential Lane Configuration  
With On-Road Bike Lanes  
Note: Gutter is 0.3m wide on both sides



Option 2 (Re-marking):

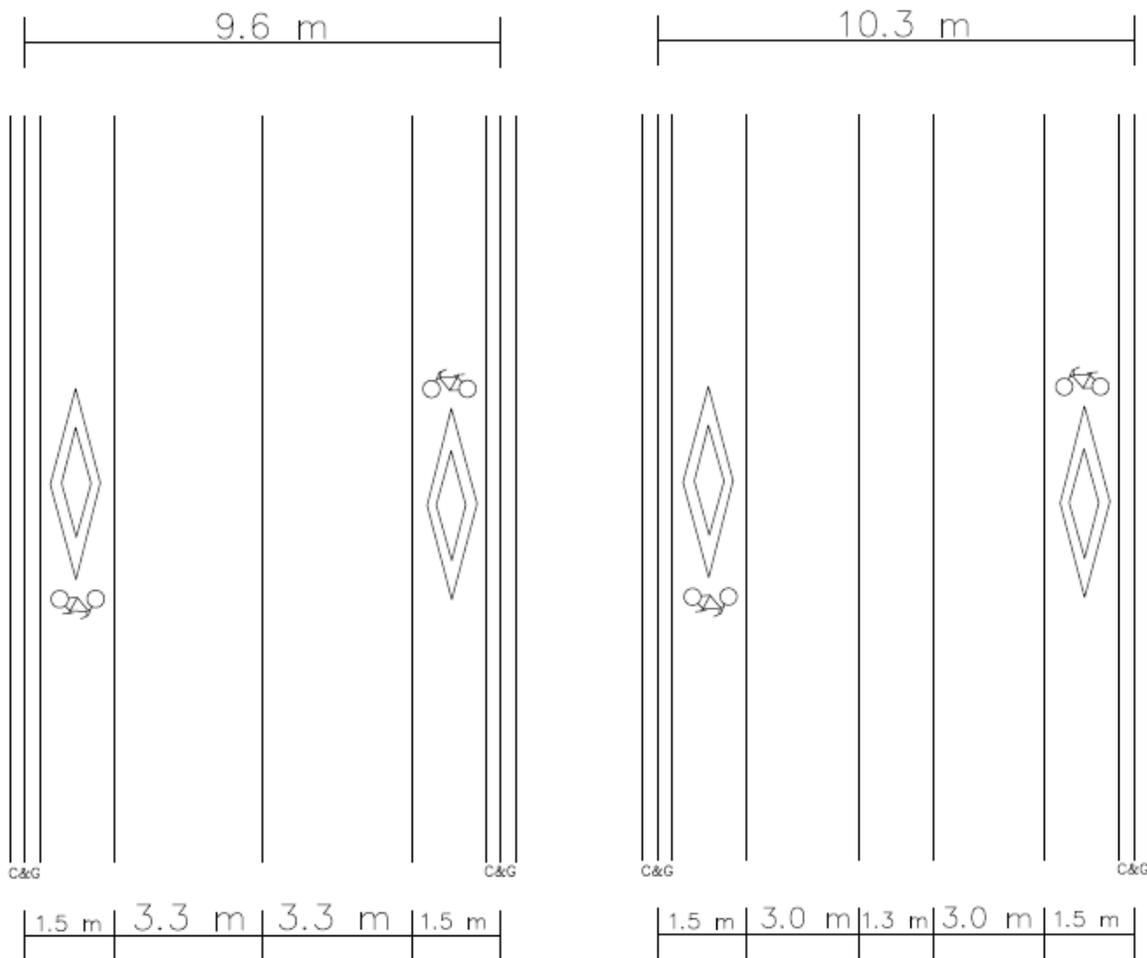
Figures 3 and 4 show a re-marking of the existing pavement for the narrow section west of Guelph Line and the similar treatment on a typical section east of Guelph Line.

The existing width of Lakeshore Road is sufficient to allow for the implementation of two on-road bike lanes and two vehicular lanes; however, the center two way left turn lane will have to be eliminated. Left turn lanes would be retained at the signalized intersections and the on-road bike lanes would be replaced with sharrows on the intersection approaches.

As a result, vehicles turning left from Lakeshore Road will tend to cause more delay and slower movement for through traffic. This could exacerbate the current capacity challenges in the weekday pm peak period, but it may also make the route less attractive to “through” vehicle trips. The traffic flows for the great majority of the day outside the peak periods should not be significantly delayed.

Figure 3: On-Road Bike Lanes  
Lakeshore Road  
West of Guelph Line

Figure 4: On-Road Bike Lanes  
Lakeshore Road  
East of Guelph Line



### Opportunity to Pilot the Change and Collect Data

In early 2013, the Region of Halton will undertake a watermain replacement project in this area. After the completion of this work, Lakeshore Road from Torrance Street to Guelph Line and the multi-use path on the south side will be resurfaced. City staff is planning a Public Information Center (PIC) in January 2013 with respect to this work.

This presents the opportunity to re-mark the pavement before the new final surface is in place to gain experience and collect data about the performance of the roadway without a centre two way left turn lane. The trial would be limited to a few weeks in late

summer/early fall 2013 following the watermain work. Should Council approve this very brief trial approach to implement bike lanes, this could be presented to the public at the January 2013 PIC. If approved, vehicle count and delay data will be collected and compared for the before and after scenarios and presented to a PIC and Council before a decision is made about the final surface markings.

Councillor Dennison has suggested that in order to create a more significant trial that the segment of Lakeshore Road from Guelph Line to Walkers Line also be re-marked in the same manner. This has the advantage of connecting the existing bike lanes on Walkers Line, in addition to those on Guelph Line, to the proposed Lakeshore lanes to create a continuous 3.5 km link to downtown.

Also, this section of Lakeshore Road is not scheduled for re-surfacing and therefore the re-marking could be done as soon as weather permits in late spring. This would allow a longer time for motorists to adjust their travel behaviour in response to the changes. However if the trial is not successful, there would be additional cost to remove the bike lanes and re-instate markings on this section.

### **Financial Matters:**

The cost to collect traffic flow data, hold public information centres and re-mark Lakeshore Road between west of Torrance Street and Guelph Line (1.4 km) to include on-road bike lanes is estimated at \$35,000. Funds are available in the approved Capital Budget Project SW0055. If the trial is not successful, the re-surfacing project would return the markings to include the existing centre left turn lane at no additional cost.

The cost to re-mark Lakeshore Road between Guelph Line and Walkers Line (2.1 km) is estimated at \$40,000. If the trial is unsuccessful, it would cost an additional \$40,000 to re-instate the existing markings. Funds in the approved Capital Budget and in the 2013 Capital Budget request are sufficient to cover both the installation and, if necessary, the reinstatement.

### **Environmental Matters:**

The benefits of cycling are significant to individuals, our community and the environment. Cycling is an efficient, affordable, healthy and non-polluting form of transportation. Providing a safe and efficient cycling network encourages an alternative mode of transportation to the automobile and reduces pollution and green house gas emissions.

### **Communication Matters:**

The Burlington Cycling Committee has been briefed on the contents of this report and has indicated support for implementing the bike lanes on Lakeshore Road.

Should the staff recommendations be approved, this project will follow the Class Environmental Assessment Process, Schedule B.

In order to involve the public in these projects, direct notice would be mailed to property owners in the study area, as well advertisements would be placed in the Burlington Post, City Talk, and on both the City of Burlington's Twitter and Facebook pages.

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**Conclusion:**

The implementation of on-road bike lanes on Lakeshore Road is consistent with Council's approved Cycling Master Plan and the 2011-2014 Strategic Plan objective of promoting a cycling friendly community.

The widening of Lakeshore Road between the downtown and Burloak Drive to add on-road bike lanes to the existing lane configuration is not advisable given the cost and impact on the existing streetscape.

Re-marking Lakeshore Road to provide on-road bike lanes by eliminating the centre two-way left turn lane is physically feasible but the degree to which existing vehicle trips will be delayed or re-routed to alternate roadways is difficult to predict.

A cost-effective opportunity exists to conduct a brief trial and data collection of the re-marking following a watermain replacement project prior to the final re-surfacing of Lakeshore Road between west of Torrance Street and Guelph Line in 2013. This trial could be significantly enhanced by extending the limits east to Walkers Line and implementing the Guelph Line to Walkers Line segment earlier in the year.

Should neither of the two options presented in this report for on-road bike lanes be suitable to Council and the community, the Cycling Master Plan should be amended to reflect this during the Transportation Master Plan review in 2013.

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Respectfully submitted,

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**Notifications:**  
(after Council decision)

Name	Mailing or E-mail Address
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Mitch Zamojc, Commissioner of Public Works Halton Region	Mitch.Zamojc@halton.ca

**Approvals:**

\*required

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\*Department

\_\_\_\_\_  
City Treasurer

\_\_\_\_\_  
General Manager

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City Manager

	To be completed by the Clerks Department
Committee Disposition & Comments	
	01-Approved 02-Not Approved 03-Amended 04-Referred 06-Received & Filed 07-Withdrawn
Council Disposition & Comments	
	01-Approved 02-Not Approved 03-Amended 04-Referred 06-Received & Filed 07-Withdrawn