

## **BURLINGTON CYCLING COMMITTEE**

Chris Ariens, Co-Vice-Chair

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Delegation to Committee of the Whole  
November 27, 2017

### **Summary - Recommendations To Council**

1. Support staff recommendation to include cycle tracks on New Street between Guelph Line and Burloak Drive in the 2019 to 2028 Capital Budget and forecast and pursue senior level government funding for the implementation costs.
2. Standardize design for “All Ages and Abilities (AAA)” cycle tracks as part of Cycling Master Plan.
3. Regular, dedicated funding for Cycling Master Plan to be included in capital budget.
4. Do not depend on senior levels of government to execute Burlington's strategic plan.

### Evaluation of the pilot project

Issue	Findings in Staff Report	Analysis
Traffic Flow	<ul style="list-style-type: none"> <li>1m 33 sec. increase westbound PM peak</li> <li>16 sec. increase westbound business day</li> <li>4 sec. increase eastbound PM peak</li> <li>1 sec increase eastbound business day</li> </ul>	<ul style="list-style-type: none"> <li>As expected. Insignificant impact outside of evening rush in one direction.</li> </ul>
Traffic Volumes	<ul style="list-style-type: none"> <li>Approx. 500 vehicles/day increase on Rexway and Spruce combined.</li> <li>No data for changes in New Street traffic volumes</li> </ul>	<ul style="list-style-type: none"> <li>Impact well within tolerances for parallel roads.</li> </ul>
Safety	<ul style="list-style-type: none"> <li>No data provided on collisions or travel speeds.</li> </ul>	<ul style="list-style-type: none"> <li>Expected decrease in speeding not measured.</li> <li>Expected improvement in safety – data inconclusive.</li> </ul>
Transit Operations	<ul style="list-style-type: none"> <li>No data provided on impacts to transit schedules or operations</li> </ul>	<ul style="list-style-type: none"> <li>Frequent Transit Network would likely be more efficient with 4 lane configuration.</li> </ul>
Cycling Volumes	<ul style="list-style-type: none"> <li>Increase from 60 to 80 cyclists per day (33%)</li> </ul>	<ul style="list-style-type: none"> <li>Expected little increase in short term due to: <ul style="list-style-type: none"> <li>- Lanes not completed to intersection</li> <li>- Not connected to other facilities</li> <li>- Lack of protection</li> <li>- Construction impacts</li> <li>- Long-term nature of change</li> </ul> </li> </ul>
Resident Feedback	<ul style="list-style-type: none"> <li>Negative feedback to staff, Council and Cycling Committee outweighed positive.</li> <li>Majority of feedback was consistent prior to and during pilot.</li> </ul>	<ul style="list-style-type: none"> <li>Achieving public support for remainder of New Street configuration highly unlikely.</li> <li>Media and public perception of cycling impacted outcomes.</li> </ul>

**Conclusion: Political realities outweighed the data. "Road Diet" technically successful but perceived negatively overall.**

### Benefits of Cycle Tracks

1. AAA (All Ages and Abilities) facilities can form main segments of a network. Mode share will increase over time as network grows.
2. Greater protection from automobile traffic attracts more users.
3. More than 5x as safe as street with shared use lane or on-road bicycle lane.
4. Less expensive than on-road facilities for new installations.

### Concerns re: Cycle Tracks

1. Cost – Can reduce the amount of the network that can be completed with a given level of funding.
2. Design – greater separation requires special attention to ensure safety and visibility of bicycle riders.
3. Maintaining roads designed to optimize vehicular travel speed results in little safety benefit for other road users.

### BICE Study – Preference vs. Safety

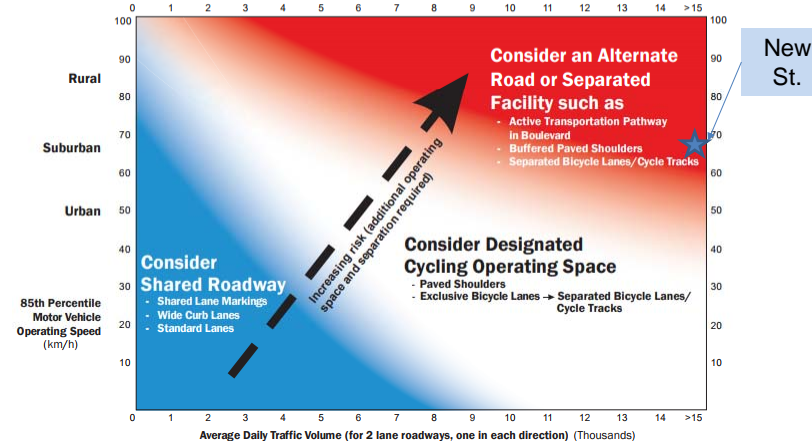


From: Route Infrastructure and the Risk of Injuries to Bicyclists: A Case-Crossover Study. School of Population & Public Health, University of British Columbia

**Cycle Tracks are optimal for safety and for user comfort**

## Book 18 (Ontario) Guidance

Desirable Cycling Facility Pre-selection Nomograph



New Street cycle facilities should be protected.

## NACTO (United States) Guidance

Contextual Guidance for Selecting All Ages & Abilities Bikeways

Roadway Context				
Target Motor Vehicle Speed:	Target Max. Motor Vehicle Volume (ADT)	Motor Vehicle Lanes	Key Operational Considerations	All Ages & Abilities Bicycle Facility
Any		Any	Any of the following: high curbside activity, frequent buses, motor vehicle congestion, or turning conflicts <sup>1</sup>	Protected Bicycle Lane
< 10 mph	Less relevant	No centerline, or single lane one-way	Pedestrians share the roadway	Shared Street
≤ 20 mph	≤ 1,000 – 2,000		< 50 motor vehicles per hour in the peak direction at peak hour	Bicycle Boulevard
	≤ 500 – 1,500			Conventional or Buffered Bicycle Lane, or Protected Bicycle Lane
	≤ 1,500 – 3,000	Single lane each direction, or single lane one-way	Low curbside activity, or low congestion pressure	Buffered or Protected Bicycle Lane
≤ 25 mph	≤ 3,000 – 6,000			Protected Bicycle Lane
	Greater than 6,000	Multiple lanes per direction		
	Any	Single lane each direction	Low curbside activity, or low congestion pressure	Protected Bicycle Lane, or Reduce Speed
Greater than 26 mph <sup>1</sup>	≤ 6,000	Multiple lanes per direction		Protected Bicycle Lane, or Reduce to Single Lane & Reduce Speed
	Greater than 6,000	Any	Any	Protected Bicycle Lane, or Bicycle Path
High-speed limited access roadways, natural corridors, or geographic edge conditions with limited conflicts			High pedestrian volume	Bike Path with Separate Walkway or Protected Bicycle Lane
			Low pedestrian volume	Shared-Use Path or Protected Bicycle Lane

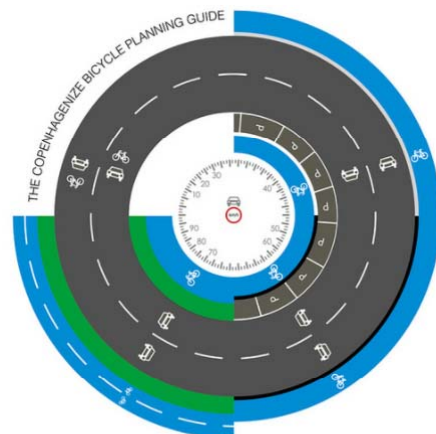
<sup>1</sup> While posted or 85th percentile motor vehicle speed are commonly used design speed targets, 95th percentile speed captures high-end speeding, which causes greater stress to bicyclists and more frequent passing events. Setting target speed based on this threshold results in a higher level of bicycling comfort for the full range of riders.

<sup>2</sup> Setting 25 mph as a motor vehicle speed threshold for providing protected bikeways is consistent with many cities' traffic safety and Vision Zero policies. However, some cities use a 30 mph posted speed as a threshold for protected bikeways, consistent with providing Level of Traffic Stress level 2 (LTS 2) that can effectively reduce stress and accommodate more types of riders.<sup>3</sup>

<sup>3</sup> Operational factors that lead to bikeway conflicts are reasons to provide protected bike lanes regardless of motor vehicle speed and volume.

New Street cycle facilities should be protected.

## Copenhagenize Design guidance



DANISH BEST PRACTICE: 10-30KM/H NO SEPARATION, 40KM/H PAINTED LANES, 50-60KM/H CURB SEPARATED LANES, 70-130KM/H FULLY SEPARATED BY A MEDIAN. BICYCLE INFRASTRUCTURE IS PLACED ON THE RIGHT SIDE OF PARKED CARS. BI-DIRECTIONAL ONLY OFF-STREET THANK YOU.

**New Street cycle facilities should be separated by a curb or median.**

From: Route Infrastructure and the Risk of Injuries to Bicyclists: A Case-Crossover Study. School of Population & Public Health, University of British Columbia

## CROW Manual (Netherlands) guidance

Road category	Max. speed of motorized traffic (km/h)		Motorized traffic intensity (pcu/day)	Cycle network category		
				Basic network ( $I_{\text{bicycle}} > \text{work } 750/\text{day}$ )	Cycle route ( $I_{\text{bicycle}} 500\text{-}2500/\text{day}$ )	Main Cycle route ( $I_{\text{bicycle}} > 2000/\text{day}$ )
	n/a		0	Solitary track		
Estate access road	Walking pace or 30 km/h		1 – 2,500	Combined traffic		Cycle street or cycle lane (with right of way)
			2,000 – 5,000			
			>4,000	Cycle lane or cycle track		
District access road	50 km/h	2x1 lanes	irrelevant			
		2x2 lanes				
	70 km/h			Cycle track or parallel road		
			Cycle track, moped/cycle track or parallel road			

New St.

**Cycle tracks are appropriate facility for New Street.**

### Importance of New Street in a Cycling Network

New Street is a central east-west spine which connects the southern half of Burlington from Downtown to the Oakville border.

Connects existing bike lanes on Guelph Line, Walkers Line and Appleby Line to the south (although still gaps approaching intersection to be closed)

5 schools along the length of New Street – heavily used by students.

Seniors buildings (Marantha Gardens) and higher densities near Guelph Line & Appleby Line.

Drury Lane (collector) & Appleby Line (major arterial) connect New Street with GO stations and mobility hubs approx. 1km to the north.

Centennial Path works as alternative only for segment near Guelph Line / Rossmore / Cumberland. Further east not a direct option for significant # of trips.

**A safe and comfortable facility on New Street is a requirement to deliver on increased cycling mode share**

### Funding for cycling infrastructure

Current programs:

Ontario: Climate Change Action plan - \$150MM - \$225MM over 5 years.

Burlington proportional share is \$2.04MM – \$3.06MM. Includes installation of bike lockers at commuter parking lots and bike rooms @ Appleby and Burlington GO stations.

Federal: Public Transit Infrastructure Fund (primarily geared to transit projects, with some cycling and pedestrian infrastructure upgrades included).

Burlington received \$2.4 million in 2017.  
\$930K towards multi-use pathway construction (Hydro Corridor and Elgin Promenade)

Potential new programs:

Federal: Private member's bill re: National Cycling Strategy

**Despite continued progress in development of cycling investment from Provincial and Federal government, likelihood of political change means we cannot count on this funding to be there when needed.**

## Conclusions

1. We support the recommendations, however advise Council to ensure the cycle tracks are included (not just “for consideration”) as part of the \$293 million 10 year Capital Budget expenditure for roadways.
2. Road diet would be an acceptable lower-cost alternative to cycle tracks, however residents remain opposed to reducing vehicular lanes and extending the road diet is politically untenable.
3. Cycle tracks offer significant safety benefits and would enable quicker achievement of Burlington’s goals to increase non-automobile mode share.
4. Protected bike lanes are the appropriate facility for New Street based on guidance from transportation professionals.
5. New Street is a critical component in the city’s transportation system for any mode of travel (including cycling).
6. Reliance on senior government funding will not achieve the goals of Burlington’s strategic plan.