THE CORPORATION OF THE CITY OF WINDSOR
PROCEDURE

Service Area:	**Office of the Commissioner of Infrastructure Services**	Procedure No.:	
Department:	**Public Works Operations**	Approval Date:	**April 19, 2021**
Division:	Transportation Planning	Approved By:	**CR167/2021**
		Effective Date:	**April 19, 2021**
Subject:	**Bikeways Traffic Calming Procedure**	Policy Ref.:	Traffic Calming Policy
		Pages:	Replaces:
Prepared By:	L. Ash, Policy Analyst	8	Date:

1. PURPOSE

1.1. This procedure is intended to provide details for implementing traffic calming support developing the All Ages and Abilities (AAA) cycling network recommended in the City's Active Transportation Master Plan.

2. SCOPE

2.1. This procedure provides the details of how traffic calming is to be implemented with the goal of reducing traffic speeds and/or volumes on streets identified as a local street bikeway.

3. RESPONSIBILITY

3.1. Responsibility for implementing this procedure is outlined in the Traffic Calming Policy.

4. PROCEDURE

4.1. Administration will review the City's cycling network on an on-going basis to identify streets that may be classified as a local street bikeway to develop the All Ages and Abilities (AAA) network recommended in the Active Transportation Master Plan Traffic (ATMP).

- Local street bikeways are streets with low traffic speeds and volumes that have been optimized for bicycle travel through treatments such as traffic calming and traffic reduction by means of signage and pavement markings, as well as intersection crossing treatments, to allow through movements for cyclists while discouraging similar through trips by non-local motorized traffic (Ontario Traffic Manual Book 18).

4.2. To support implementing a local street bikeway, Administration may develop a Traffic Calming Plan for the street identified using the Bikeways Traffic Calming Toolbox provided in **Attachment A**.

- **Table A-1** provides a brief description of the different traffic calming measures.
- **Table A-2** provides cost estimate ranges used for each measure.

4.3. Other measures may also be considered at critical locations where local bikeways intersect with major roads or other bikeways to minimize conflicts between motor vehicles and cyclists/pedestrians. Examples of crossing treatments include median islands, pedestrian corridors, signals and sensors.

4.4. Administration will continue to explore new traffic calming measures and may test different measures as pilot projects to determine if they are suitable for temporary or permanent installation.

4.5. Applicable policies, guidelines and master plans should be considered during the review, including the City's Active Transportation Master Plan (ATMP), School Neighbourhood Policy, the Transportation Association of Canada (TAC) Canadian Guide to Traffic Calming and the Ontario Traffic Manual (OTM) Book 18. Any traffic calming construction work shall meet the requirements on the City of Windsor Development Manual and any relevant City of Windsor Engineering Standard Drawings.

4.6. Other affected agencies, such as emergency services, the Windsor Accessibility Advisory Committee (WAAC), the Windsor Bicycling Committee (WBC), Bus Kids, any affected Business Improvement Areas (BIA) and the Windsor-Essex County Health Unit (WECHU) may be invited to provide comments and feedback.

4.7. Projects will be put forward based on the prioritization criteria provided in the Active Transportation Master Plan. The number of projects put forward in any given year will depend on associated implementation cost and available budget. The length of time a project has been waiting for implementation funding will not influence whether it is constructed in the coming season. Practical considerations may affect the selection of projects, some of which include the availability of funds restricted to specific activities or areas, the potential to coordinate with other projects and the availability of alternate funding sources.

4.8. Administration will present a report to Council for approval to fund and implement the Traffic Calming Plan. Other methods for presenting the results to Council may include an annual presentation as a part of the capital budgeting process.

4.9. Administration will notify the public when a Traffic Calming Plan is to be presented to Council for approval. Notification may be provided by any of the following means:

- A notice provided to adjacent households and commercial properties;
- A notice posted at the location of the concern; or
- Information posted on the City's website, local newspaper or other media.

4.10. Opportunities to include traffic calming measures on residential streets with designated bikeways should be considered prior to road reconstruction projects.

4.11. The Active Transportation Master Plan encourages pedestrian connectivity for people walking and cycling when considering dead end streets as a traffic calming measure.

5. RECORDS, FORMS, AND ATTACHMENTS

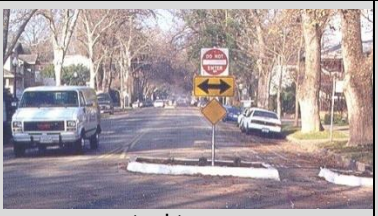
5.1. Records for this policy shall be prepared and retained in accordance with Records Retention By-Law 21-2013, as amended.

5.2. Attachment A – Bikeways Traffic Calming Toolbox

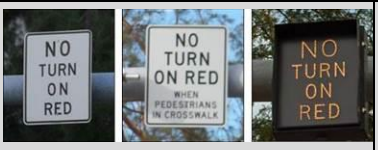
ATTACHMENT A – Bikeways Traffic Calming Toolbox

Table A-1: Bikeways Traffic Calming Measures

Item #	Measure	Example	Description	Est. Cost Range	Est. Annual Maint. Cost
1	Speed Hump[1]	 www.fhwa.dot.gov	Speed humps provide a vertical, tactile alert to drivers, encouraging lower speeds.	$ - $$	$ - $$
2	Speed Table[1]	 www.surrey.ca	Speed tables serve a similar function as speed humps but allow for slightly higher speeds and are generally preferred by emergency services over speed humps.	$$	$
3	Traffic Circle or Roundabout	 google.com/maps (35th & Raleigh St., Denver, CO)  google.com/maps (Sandwich St., Windsor)	Traffic circles and roundabouts require drivers to slow their approach and yield to traffic while transitioning through the intersection. May be designed to be traversable for larger vehicles and emergency response vehicles.	$$ - $$$$$	$

4	Right-in/Right-out Island	 www.fhwa.dot.gov	Right in/right out islands restrict vehicle flow to help eliminate left turn movements into and out of driveways lowering the potential for conflicts.	$$	$
5	Chicanes	 en.wiktionary.org/wiki/chicane	Bump-outs on opposite sides of the road require drivers to slow down to zigzag through the roadway configuration.	$$	$
6	Road Diet	 Roadsbridges.com	Reconfiguration of a roadway to allocate reclaimed road width for other uses, such as turning lanes, bike lanes, pedestrian refuge islands or parking.	$$$	N/A
7	Directional (Half) Closure	 www.stocktongov.com	Partially restricts the flow of vehicles along the street. This measure is strictly for volume control and has little impact on driver speeds.	$ - $$$	$
8	Full Closure	 www.victoria.ca	A full closure or cul-de-sac eliminates through traffic for motor vehicles at one end of a road, serving as a volume control measure.	$$$$	$

9	Diagonal Diverter	 www.sanantonio.gov  google.com/maps (Monmouth Rd., Windsor)	Diagonal diverters allow some traffic to flow through the intersection in restricted ways to discourage (not necessarily eliminate) through traffic.	$$$	$
10	Raised Median Through Intersection	 www.pedbikesafe.org	Raised medians through an intersection prohibits cross traffic in one direction. This helps reduce or eliminate through traffic in one direction. Small gaps may be included to allow bicycle and other non-motorized traffic to pass through.	$$	$ - $$
11	Traffic Calming Curbs	 facebook.com/MunicipalityofLeamington (Talbot St. W. at Queens Ave., Leamington)	Precast concrete slabs used to create curb extensions, traffic circle centre islands, chicanes or protected bicycle lanes.	$ - $$	$ - $$

		 google.com/maps (McKenzie Towne Gate, Calgary)  google.com/maps (Erin Woods Blvd., Calgary)			
12	Turn Prohibition (signed)	 www.fhwa.dot.gov	Turn prohibitions should serve a similar purpose as directional closures or diagonal diverters.	$	$
13	Through Traffic Prohibition (signed)	 www.fhwa.dot.gov	Through traffic prohibitions should serve a similar purpose as full closures, diagonal diverters, or raised medians through intersections.	$	$

Note 1 – In general, it is recommended that large, bolt-in traffic calming measures such as speed cushions not be installed at the same location for more than two years. Beyond this point, the pavement damage can be severe enough that the anchors may not be able to keep the cushions secured to the pavement.

Table A-2: Estimated Cost Range

Symbol	Estimated Cost Range
$	$0 - $5,000
$$	$5,000 - $20,000
$$$	$20,000 - $50,000
$$$$	$50,000 - $100,000
$$$$$	> $100,000