

9.3 TRAFFIC CALMING

The volume and speed of vehicular traffic on roads has an impact on the safety and comfort of pedestrians and cyclists. A variety of physical features, described below, can be implemented on a street to limit either the speed or the volume of vehicles that use it.

These types of measures should be considered on regional streets with:

- Two vehicular travel lanes (one travel lane per direction)
- Relatively high volumes of pedestrians and/or cyclists
- Operating speeds that exceed posted speeds

Based on the street typologies defined in the Designing Great Streets manual and reflected in these guidelines, the Main Street and Rural Hamlet types are the most appropriate types for consideration of traffic calming interventions. Traffic calming may not be desirable on wider street types designed to carry higher volumes of traffic (both active transportation and motor vehicle traffic), such as: City Centre Streets, Avenues, Connectors, or Rural Roads.

Streets can be designed to bring operating speeds closer to the desired speed limit through a variety of design considerations discussed throughout the Designing Great Streets manual (corner radii, lateral friction and reduced vehicular lane widths).

The traffic-calming potential of the above measures can be further enhanced through the systematic use of measures such as:

- | | |
|--|--|
| <ul style="list-style-type: none"> • Vertical deviation <ul style="list-style-type: none"> - Speed humps - Raised crossing - Raised intersections | <ul style="list-style-type: none"> • Horizontal deviation <ul style="list-style-type: none"> - Curb extensions - Chicanes - Median islands - Traffic circles |
|--|--|

These measures are described in more detail in Exhibit 9-6.

Note that measures that entail a vertical deviation of the vehicle, namely speed humps, raised crossings, and raised intersections, cannot currently be implemented on streets served by York Region Transit (YRT) route, and may impact emergency services. Therefore, any traffic calming measures planned for Regional roads must be subject to internal consultation and design modifications to accommodate specific design vehicles.

Exhibit 9-6. Common traffic calming measures

		POTENTIAL APPLICATIONS		BENEFITS			
MEASURE	DESCRIPTION	RURAL HAMLET ROAD	MAIN STREET	SPEED	VOLUME	CONFLICTS	COST
Vertical deviation (refer to Exhibit 3)							
Speed hump	Speed humps are raised sections of the roadway designed to discourage motor vehicle drivers from travelling at excessive speeds	May be considered where speeding is a major concern (subject to review)		●	◐	◐	\$1,000- \$5,000
Raised crossing	Raised crossing are pedestrian crossings placed atop a speed hump	May be along intersections with side streets (subject to review)		●	◐	◐	\$2,000- \$5,000
Raised intersection	A raised intersection is one that is constructed at a higher elevation than the adjacent roadway. Pedestrian crossings are placed atop the raised part of the intersection.	Likely not warranted due to lower anticipated pedestrians & cycling volumes	May be considered at the central intersection of the main street (subject to review)	◐	○	◐	\$50,000- \$180,000
Horizontal deviation (refer to Exhibit 4)							
Curb extensions	A curb extension is a horizontal intrusion of the curb into the roadway, resulting in a narrower cross-section. If combined with a pedestrian crossing, it increases the visibility of pedestrians preparing to cross and reduces the distance over which pedestrians are exposed to vehicles	✓	✓	◐	○	●	\$15,000- \$50,000
Raised median islands	Traffic Islands have the effect of narrowing the road and reducing the speed of passing traffic. They are not intended for pedestrians, as they have no dropped curbs and tactile paving.	✓	✓	◐	○	◐	\$5,000- \$15,000
Chicane	A chicane is a series of curb extensions or traffic islands on alternate sides of a roadway that narrow it and require drivers to steer from one side to the other when traveling through	✓	✓	●	◐	◐	\$50,000- \$100,000
Traffic circles	A traffic circle is a raised island located in the centre of an unsignalized intersection. Vehicles must travel through the intersection in a counter-clockwise direction around the island. It used to calm roads with relatively low volumes of traffic.	✓	Likely not appropriate due to higher anticipated traffic volumes	●	◐	○	\$15,000- \$50,000

Source: Adapted from the Traffic Calming Guide for the City of Toronto (2016) & the Canadian Guide to Neighbourhood Traffic Calming Guide (1998)

Exhibit 9-7. Vertical deviation traffic calming measures

Speed hump



Source: IBI Group

Raised Crossing



Source: NACTO

Raised intersection



Source: HUB Surface Systems

Exhibit 9-8. Horizontal deviation traffic calming measures

Curb extension



Source: NACTO

Raised Median Island



Source: IBI Group

Chicane



Source: NACTO

Traffic Circle



Source: IBI Group

The horizontal deviation measures described above can also be accomplished through inexpensive, temporary measures involving the use of bollards, planters, and precast curbs and other moveable objects (Exhibit 9-9).

Exhibit 9-9. Choke point created with flexible bollards (Aurora, ON)



Source: Town of Aurora