

## *Primer on*

# **Traffic Calming**

### ***Introduction***

Traffic calming is the broad term used to describe the process and measures applied by road authorities to address concerns about the behaviour of motor vehicle drivers travelling on streets within their jurisdictions. Often described as “speeding”, “infiltration”, and/or “shortcutting”, inappropriate actions by motorists can have a detrimental impact on the quality of life or livability of a community.

The term “traffic calming” applies to actions which are intended to slow traffic on local and collector roads, reallocate inappropriate traffic away from local streets, and reduce speeds on arterial roads. The objective and challenge for those implementing a traffic calming plan is to determine the best combination of measures that result in a net improvement (both real and perceived) in the quality of life and community safety at a reasonable cost.

### ***Purpose of Traffic Calming***

The purpose of traffic calming is to restore streets to their desired function. This function is to provide both mobility and access, but in differing combinations, depending on the specific location, role and classification of the street.

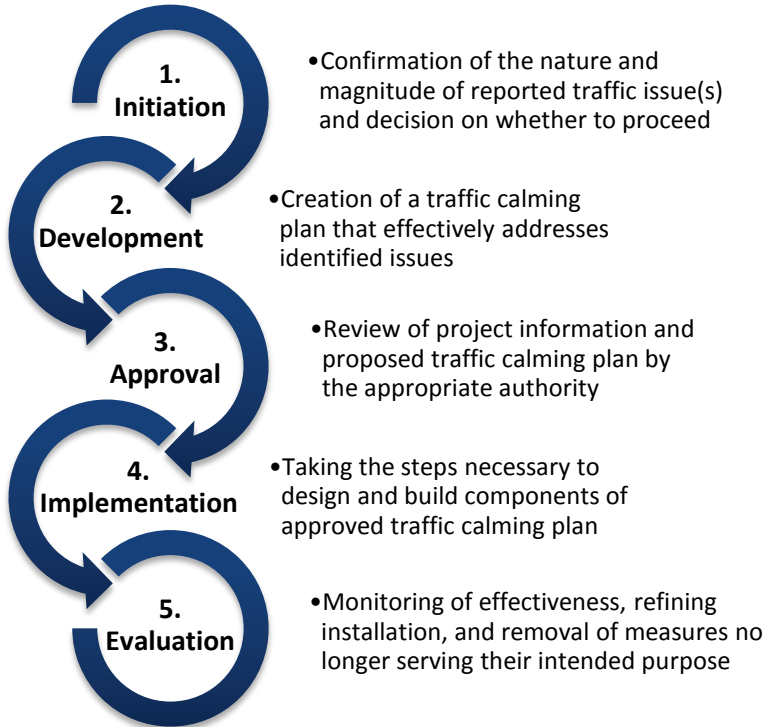
On local and collector streets, traffic calming is intended to reduce vehicular speeds, discourage shortcutting, minimize conflicts between street users, and improve the neighbourhood environment. Traffic calming for urban and rural arterial roads requires a different approach than for urban local and collector streets. The primary purpose of traffic calming on these roads is to reduce excessive vehicle speeds, alleviate conflicts between road users, and eliminate inappropriate driver behaviour.

### ***Issues Affecting Traffic Calming***

Practitioners should recognize that there are other issues that could affect the feasibility or effectiveness of a traffic calming plan. A broad range of elements, including relevant legislation and regulations, liability, accessibility, enforcement, emergency services, maintenance and operations, modes of transportation, and compatibility with municipal land use and transportation plans can have a direct impact on applicability or effectiveness.

## Traffic Calming Process and Procedures

A model process and the procedures for developing and implementing a traffic calming plan in response to community traffic concerns is organized in a five stage, thirteen step process. The model process allows for the consistent implementation of traffic calming throughout a community, while recognizing that not every study is “typical”. The five stages are:



## Selecting Traffic Calming Measures

The *Canadian Guide to Traffic Calming-Second Edition* provides information about the applicability of various traffic calming and speed management measures including a simplified visual comparison of the potential benefits and disbenefits. This general overview assists practitioners in selecting appropriate measures to address specific transportation problems, and helps to avoid undesirable disbenefits of inappropriate measures for a particular application. Final selection of measures should consider all information presented in the detailed descriptions and designs for each measure provided in the subsequent sections of the chapter.

## Types of Traffic Calming Measures

A total of forty-six measures are described in the *Canadian Guide to Traffic Calming-Second Edition*, most of which have been used by at least one Canadian municipality to calm traffic or manage speeds. Some of these measures are generally intended for other purposes, and any traffic calming benefits which



these provide are secondary to the primary function of the measure. These measures have been included to identify the benefits and implications of their use as potential traffic calming measures, and to identify more effective alternatives.

Below is a list of the traffic calming measures included in the Guide:

Vertical Deflection	<ul style="list-style-type: none"> <li>• Raised Crosswalk</li> <li>• Raised Intersection</li> <li>• Speed Cushion</li> <li>• Speed Hump / Speed Table</li> </ul>
Horizontal Deflection	<ul style="list-style-type: none"> <li>• Chicane</li> <li>• Curb Radius Reduction</li> <li>• Lateral Shift</li> <li>• Speed Kidney</li> <li>• Traffic Circle / Traffic Button / Mini-Roundabout</li> </ul>
Roadway Narrowing	<ul style="list-style-type: none"> <li>• Curb Extension / Neckdown / Choker</li> <li>• Lane Narrowing</li> <li>• On-street Parking</li> <li>• Raised Median Island</li> <li>• Road Diet</li> <li>• Vertical Centreline Treatment</li> </ul>
Surface Treatment	<ul style="list-style-type: none"> <li>• Sidewalk Extension / Textured Crosswalk</li> <li>• Textured Pavement</li> <li>• Transverse Rumble Strips</li> </ul>
Pavement Markings	<ul style="list-style-type: none"> <li>• Converging Chevrons</li> <li>• Dragon Teeth</li> <li>• Full-lane Transverse Bars</li> <li>• On-Road 'Sign' Pavement Markings</li> <li>• Peripheral Transverse Bars</li> </ul>
Access Restriction	<ul style="list-style-type: none"> <li>• Directional Closure</li> <li>• Diverter</li> <li>• Full Closure</li> <li>• Intersection Channelization</li> <li>• Raised Median through Intersection</li> <li>• Right-in / Right-out Island</li> </ul>
Design Elements	<ul style="list-style-type: none"> <li>• Gateway</li> <li>• Shared Space</li> </ul>
Enforcement	<ul style="list-style-type: none"> <li>• Aircraft / Drone Radar Enforcement</li> <li>• Fixed Speed Enforcement</li> <li>• Mobile Speed Enforcement</li> <li>• Speed Watch' Program</li> </ul>
Education	<ul style="list-style-type: none"> <li>• Active and Safe Routes to School Program</li> <li>• Pace Car Program</li> <li>• Speed Display Devices</li> <li>• Targeted Education Campaign</li> <li>• Vehicle Activated Signs (VAS)</li> </ul>
Emerging Technologies and Measures	<ul style="list-style-type: none"> <li>• LED Pavement Markings</li> <li>• Optical Illusion Pavement Markings</li> <li>• Rest-on-Red Signal Phasing</li> <li>• Section Control</li> <li>• Variable Speed Limits (VSL)</li> </ul>

### More Information

This primer is based on the *Canadian Guide to Traffic Calming (Second Edition)*, which readers can purchase from TAC's online bookstore at [www.tac-atc.ca](http://www.tac-atc.ca).

### Disclaimer

Every effort has been made to ensure that this primer is accurate and up-to-date. The Transportation Association of Canada assumes no responsibility for errors or omissions. The primer does not reflect a technical or policy position of TAC.

**Transportation Association of Canada**  
401-1111 Prince of Wales Dr, Ottawa, ON K2C 3T2  
Tel. (613) 736-1350 ~ Fax (613) 736-1395  
[www.tac-atc.ca](http://www.tac-atc.ca)

