

## POLICY DIRECTIVE NO. F-13

SUBJECT: TRAFFIC CALMING

APPROVAL DATE: November 6, 2000 LAST REVIEW DATE: May 7, 2024

REFERENCE: \_\_\_\_\_

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### A. **PURPOSE**

The Traffic Calming Policy has been enacted for the purpose of establishing and maintaining a consistent procedure for traffic calming applications in the City of Chilliwack. Additionally, this document provides some basic information regarding traffic calming solutions and when they can be effectively implemented.

### B. **DEFINITION**

Traffic calming is the implementation of engineering measures to influence driver behaviours on a road to address speeding or safety issues. The goal of traffic calming is to improve safety and the quality of life of a neighbourhood without unduly compromising the accesses to residents' homes and businesses. These measures can come in various forms to suit each unique scenario and problem, including horizontal deflection (curb extensions, traffic circles, etc), signs and signals (right on red restrictions, left turn phasing, etc) and obstructions (raised medians, right-in/right-out islands, etc).

### C. **OBJECTIVE**

All road users are prone to error and that must be accounted for in the City's transportation system. Roads should be safe for all street users including pedestrians, cyclists, and drivers. Traffic calming measures are intended to reduce the number of conflicts or risk of conflicts between users, and when conflicts occur, reduce the harm of the conflict. The objective of this policy is to reduce excessive vehicle speeds and introduce safety buffers through engineering measures.

### D. **APPLICATION**

This policy shall be used for traffic calming requests on City owned streets within the boundaries of the City of Chilliwack. Traffic calming measures shall be consistent with the measures identified below, and where direction is not explicitly given, shall follow best practices such as the Transportation Association of Canada's (TAC) Canadian Guide to Neighbourhood Traffic Calming or the Province of British Columbia's BC Community Road Safety Toolkit.

## **E. POLICY AND GUIDING PRINCIPLES**

The traffic calming policy will be dictated by the following guiding principles which will be applicable to all traffic calming measures. They will ensure that all cases are analyzed based on the same criteria.

### **1. Identify the Real Problem**

It is essential to thoroughly analyze each situation independently and determine the root of the problem. Traffic networks are complex, therefore collecting and carefully reviewing reliable data is essential to have an informed decision-making process. Addressing the immediate concern without this detailed review could exacerbate the original problem.

### **2. Road Classification**

While traffic calming measures will be considered on all roads in the City, the majority of calming installations will take place on local or collector roads to ensure sufficient emergency response times can be maintained Citywide. The City's road classifications can be found on the online GIS map at [maps.chilliwack.com](http://maps.chilliwack.com). Traffic calming measures should be carefully considered on certain roads, such as high demand truck routes, arterial routes, agricultural routes, transit routes, emergency response routes and major roads leading to fire stations and police stations. The types of traffic calming measures that are recommended for the various classifications of roads can be seen in Table 1 below.

### **3. Area Wide Traffic Calming Consideration**

Traffic calming measures shall not be considered for individual streets until the impact on adjacent streets are first examined. The entire neighbourhood network that is affected by the proposed traffic calming measures should be clearly defined and considered for spillover effects, otherwise the issue may simply shift to other streets. Traffic calming will only be considered on individual locations when a neighborhood-wide traffic calming plan is deemed inappropriate. Additionally, nearby higher classification routes will be analyzed for possible improvements that may alleviate the traffic safety concern.

### **4. Road Network Connectivity**

To maintain road network connectivity, major neighbourhood accesses and egresses should not be fully restricted to ensure minimal impact to residents, emergency vehicles, and other community stakeholders.

5. Pedestrians and Cyclists Considerations

Any improved safety measures should not in any way impede or slow other non-motorized modes of transportation such as cycling and walking. Improvements are to be in accordance with the City's Active Transportation Plan and Cycle Vision Plan.

6. Data Driven Improvements

Most traffic calming policies in other municipalities require a petition and/or a minimum threshold of public support and a clearly defined warrant before a project will be implemented. This policy does not utilize a petition-based process; however, several warrants will be considered as part of the traffic calming study and plan. Although resident support is a factor in determining priorities, this is to reduce the politicization of safety measures and to ensure that resources go to where they are most impactful.

7. Focus on Horizontal Deflection and Obstruction Based Calming

Although vertical deflection such as speed cushions, speed tables, raised crosswalks, and speed humps may be effective in certain circumstances, their positive impacts are limited due to the requirement for sufficient emergency services response times and resident feedback about noise, discomfort, and some drivers travelling more dangerously over speed humps than before. With this in mind, the City is focusing its traffic calming efforts on horizontal deflection, road diets, and obstructions to calm traffic. Current permitted traffic calming tools are listed below. To account for changing best practices, staff may add additional traffic calming tools throughout the life of the policy. Further information about each calming method can be found by clicking on the link attached to each title or by visiting the Pedestrian Safety Guide and Countermeasure Selection System at <http://www.pedbikesafe.org/PEDSAFE/countermeasures.cfm>

**Table 1: Potential Traffic Calming Measures Based on Road Classification**

	Traffic Calming Method	Local Roads	Major and Minor Collector Roads	Major and Minor Arterial Roads
<b>Horizontal Deflection</b>	<a href="#">Choker / Chicane – One Lane</a>	✓		
	<a href="#">Choker / Chicane – Two Lane</a>	✓	✓	★
	<a href="#">Curb Extension</a>	✓	✓	★
	<a href="#">Curb Radius Reduction</a>	✓	✓	★
	<a href="#">On Street Parking</a>	✓	✓	★
	<a href="#">Raised Median Island</a>	✓	✓	✓
	<a href="#">Traffic Circle / Roundabout</a>	✓	✓	✓
	Cycle Lane / Multi -Use Pathway	★	✓	✓
	<a href="#">Traffic Button</a>	✓	✓	
	<a href="#">Road Diets</a>	✓	✓	★
	<a href="#">Gateways</a>		★	✓
	<b>Vertical Deflection</b>	<a href="#">Speed Humps / Bumps</a>		
<a href="#">Raised Crosswalk</a>				
<a href="#">Speed Cushions</a>				
<a href="#">Raised Intersection</a>				
<a href="#">Left Turn Calming</a>		★	✓	✓
<b>Signals and Signs</b>	<a href="#">Right Turn on Red Restriction</a>	★	★	★
	<a href="#">Left Turn Phasing</a>	★	★	✓
	<a href="#">Rectangular Rapid Flashing Beacon (RRFB) Crossings</a>	★	✓	✓
	<a href="#">Leading Pedestrian Intervals</a>	★	★	★
	<a href="#">Speed Reader Boards</a>	★	✓	✓
	<b>Obstruction</b>	<a href="#">Intersection Channelization</a>	✓	✓
<a href="#">Right In / Right Out Island</a>		★	✓	✓
<a href="#">Diagonal Diverter</a>		✓	★	
<a href="#">Vegetation / Trees</a>		✓	✓	✓
<a href="#">Bollards</a>		✓	✓	✓

✓ : Typical Practice

★: Implemented Under Special Conditions

**F. FINANCE**

Projects will be prioritized and implemented based on annual budget allocations; however, additional funding may also come as a part of other capital improvements when there are shared goals. Projects will be prioritized based on the criteria described further in the next section. In addition to individual traffic calming projects, traffic calming measures can be implemented as part of project development standards. When a new development is planned, the developer may be required to provide certain neighbourhood improvements at the discretion of the Director of Engineering.

**G. PROCEDURE**

The procedure for a traffic calming request can be split into the following phases, further described below:

- Determine if study will be initiated;
- Initiate the study;
- Identify the issues;
- Develop a plan; and,
- Implement the plan.

1. Determine if study will be initiated

Should a resident have traffic calming concerns within their neighbourhood, the requestor shall submit a traffic calming request to the City's Engineering Department by phone, email, or in person. Engineering Staff will follow up with the resident to gather all relevant information and share further information about the City's traffic calming policy.

Many requests stem from individual or unique circumstances. Staff will determine whether additional study is required and respond to the resident accordingly to inform them of how the City will proceed.

2. Initiate a study

Once the request is determined to fall within the conditions of the guiding principles of the policy, an initial traffic calming study will be initiated to determine whether traffic calming may be implemented. Timing of this initial study will depend on staff capacity and the volume of requests.

Traffic volumes and speed data will be collected to warrant further analysis for traffic calming. Although there is no minimum traffic volume required to warrant review, roads with daily traffic volumes of greater than 1000 vehicles per day and 85<sup>th</sup> percentile speeds that exceed the posted speed by 10km/h or more will have greatest priority.

Note: 85<sup>th</sup> percentile speed is the speed that 85% of vehicles are travelling at or below and is a standard measure for speeding.

### 3. Identify the Issues

An engineering analysis will be performed on the location by Engineering staff once a requested location has satisfied the above conditions. In this step, information and data will be collected to input during the engineering analysis, such as traffic volumes, speed, and collision history.

Part of this process will be used to determine the extent of traffic calming measures that will be implemented for the project. For example, in some cases providing traffic calming measures on one street may exacerbate the issue on another adjacent street. In this case, the traffic calming solution may require a more comprehensive neighbourhood traffic calming plan or improvements to the major road network.

### 4. Determine if Project is Warranted

The factors that go into determining whether a project is warranted are complex and difficult to fully quantify, therefore there is no scoring identified to determine whether a project meets the threshold of being warranted. Potential projects will be analyzed based on the following criteria, ranked in no specific order:

- Traffic speeds (85<sup>th</sup> percentile speed, percentage of speeders);
- Traffic, pedestrian and cyclist volumes;
- ICBC collision history;
- Impact to emergency service response times;
- Implementation cost vs benefit;
- Connection to long term plans such as Active Transportation Plan, Cycle Vision Plan, or the Transportation Plan;
- Potential for inclusion as part of other DCC or capital projects;
- Current and future land use;
- Road classification;
- Proximity to public transit;
- Proximity to schools, parks, and other community amenities;
- Proximity to vulnerable populations such as seniors, persons with disabilities, and children;
- Existing traffic calming treatments
- Presence of sidewalks or multi-use paths
- Cut-through traffic from a higher classification or capacity roadway;
- Sightlines;
- Nearby improvements; and,
- Traffic diversion potential.

### 5. Develop a Plan

Once a traffic calming project is determined to be warranted, the prioritization of traffic calming projects is determined based on the aforementioned criteria.

The highest ranked projects will be provided with a high level (Class D) cost estimate, in some cases identifying multiple solutions. The top ranked projects that are planned for the current or upcoming capital year will have a preliminary design completed.

Study analysis results and the preliminary design may be sent out to affected residents, informing them of the proposed traffic calming measures in their neighbourhood. It should contain some general information on the proposed traffic calming measure, a map of where they will be implemented, the design speed, and basic dimensions.

The communications will encourage residents to provide feedback on the preliminary design and encourage a response if they are in support or opposed to the recommendations. If the public is overwhelmingly opposed to the project, then the traffic calming measure may not be implemented and further public consultation with alternative designs may be initiated.

### 6. Implement the Plan

Residents will have 45 days after the date on the initial notice to respond to the City's Engineering department with concerns. As long as the area residents aren't significantly opposed to the proposed actions, the final design will be completed and submitted for implementation with the allotted funding. Soon after implementation, City staff will visit the site to evaluate the success of the traffic calming measures.

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Chief Administrative Officer