



SAINT JOHN

CITY OF SAINT JOHN TRAFFIC CALMING POLICY

VERSION: 1.0
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Pedestrians, Cyclists and Motorists Sharing Street Spaces

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INTRODUCTION

Neighbourhood streets attempt to serve two roles. Firstly, these are used to move vehicle traffic to and from homes. Some streets are designated as Arterial or Collector streets and are meant to move larger volumes of vehicle traffic, sometimes at the expense of separating a neighbourhood. Other streets designated as Local carry fewer vehicles. Secondly, many streets are integral parts of a neighbourhood, used by children and families for cycling, walking and other community activities. Although these two street functions can sometimes conflict, ultimately both must be satisfied. To this end, special steps may sometimes need to be taken to regain an appropriate balance through an overall City of Saint John Traffic Calming Policy and a specific Traffic Calming Plan for a neighbourhood.

Traffic Calming, as defined by the Institute of Transportation Engineers, is *"the combination of mainly physical measures that reduce the negative effects of motor vehicle use, alter driver behavior and improve conditions for non-motorized street users."*

POLICY GOAL

The goal of this Traffic Calming Policy is to reduce vehicular traffic speed on City streets to within the posted speed limit and/or reduce vehicle traffic volume on a Local street to 1000 vehicles per day or less to improve community and road users' safety.

POLICY OBJECTIVES

The goal of this Traffic Calming Policy is supported with the following objectives:

1. Consider a Traffic Calming Plan when there is measured evidence of excessive vehicle speed, traffic volumes higher than levels typically acceptable for a neighbourhood street, or in combination with potential conflict between pedestrians and motorists.
2. Prioritize implementation of Traffic Calming Plans via criteria identified herein by recognizing that demand for such plans could exceed available resources,
3. Coordinate implementation of Traffic Calming Plans in conjunction with the Neighbourhood Planning process established in PlanSJ or pre-planned Capital projects where possible,
4. Ensure input on a Traffic Calming Plan is received from the neighbourhood as a whole,
5. Obtain input on a Traffic Calming Plan from Saint John Transit and the three Emergency Services,
6. Use sound engineering judgment and industry best practices, such as the Transportation Association of Canada's "Canadian Guide to Neighbourhood Traffic Calming" (TAC's Guide) in developing Traffic Calming Measures (described later in document) to be included as part of an overall Plan,

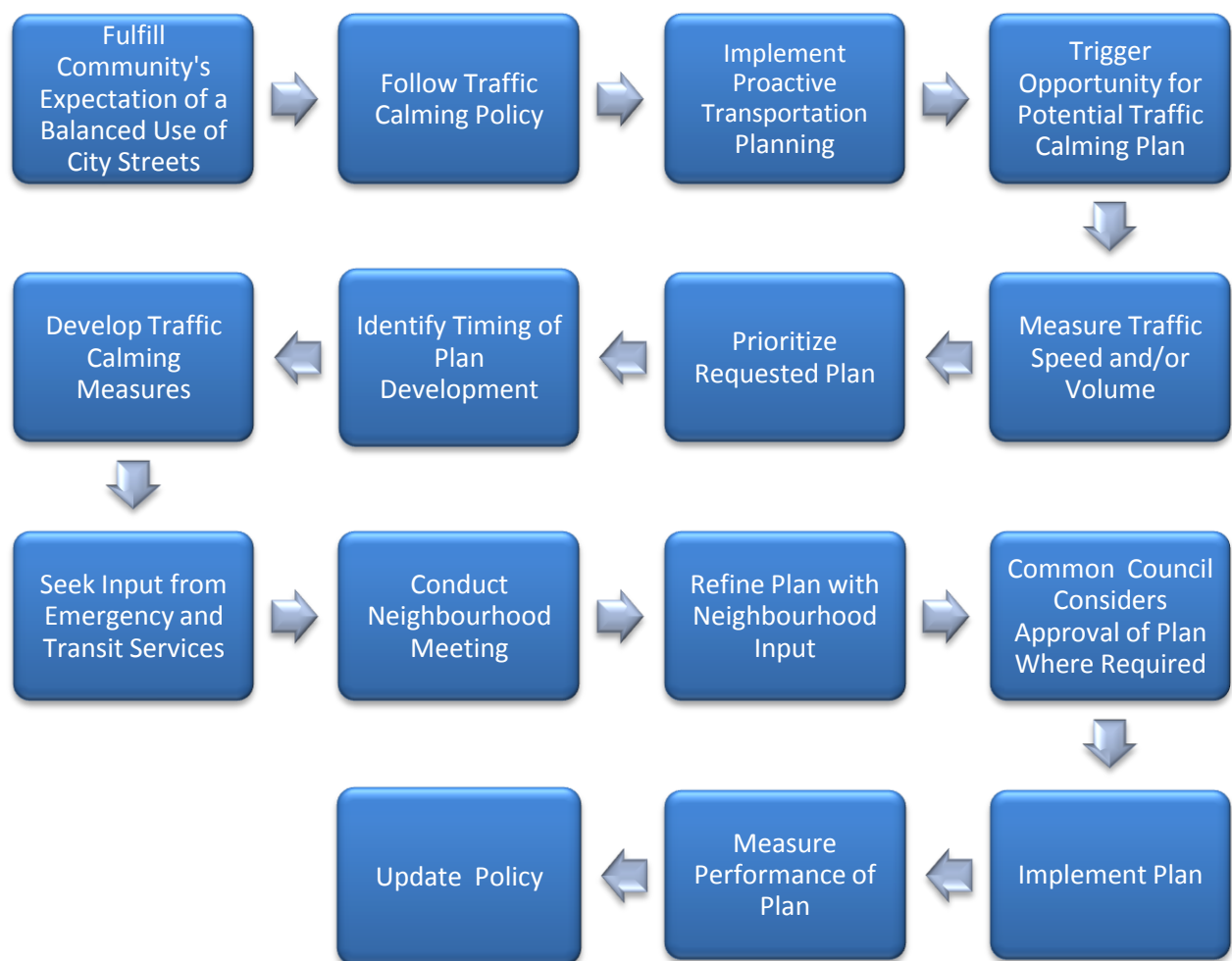
7. Install Multi-Way Stop intersections where there are collision problems or traffic flow improvement opportunities and where the installation of the multi-way stop is warranted based on sound engineering criteria and judgment but not as a solution to a traffic speed problem, and
8. Evaluate the performance of implemented Traffic Calming measures to continuously improve the Policy and future Plans.

GUIDING PRINCIPLE

All neighbourhoods that request Traffic Calming Plans shall be treated fairly, equitably and transparently through a consistently applied **Traffic Calming Policy**.

TRAFFIC CALMING PLAN IMPLEMENTATION PROCESS

Each Traffic Calming Plan will follow the same process:



The remainder of this Policy document describes each step in this process.

FULFILL COMMUNITY'S EXPECTATION OF A BALANCED USE OF CITY STREETS

Through this Policy and the investigation and development of each Traffic Calming Plan, the community's expectation and understanding of a balanced use of City streets is respected.

FOLLOW TRAFFIC CALMING POLICY

As such, when there is a concern of higher than desirable vehicle traffic speed or volume on a street, or a concern about potential conflict between pedestrians and motorists, this Traffic Calming Policy provides a consistent and equitable avenue to investigate such a concern and mitigate it if required.

IMPLEMENT PROACTIVE TRANSPORTATION PLANNING

The most effective means of Traffic Calming is a proactive approach when a residential or other development is in its initial planning stages. Potential vehicle traffic speed or volume issues can be prevented before subdivisions and neighbourhoods are constructed through effective planning and design. A Municipal Plan that identifies the strong inter-relationship between land development and the transportation network is key in this regard. To that end:

It is vital and considered policy that potential vehicle traffic speed or volume issues are considered and mitigated during the planning stage of a residential or other development.

TRIGGER OPPORTUNITY FOR POTENTIAL TRAFFIC CALMING PLAN

At times, proactive land development planning cannot go far enough, resulting in a potential need for a Traffic Calming Plan. An opportunity for such a Plan can be triggered in one of four ways, with each opportunity documented in the City's Work Request system:

1. Request from citizen(s) of a neighbourhood,
2. Inclusion within an overall Neighbourhood Plan resulting from the City's Municipal Plan (PlanSJ),
3. Inclusion within a planned Capital project, or
4. Request from the Saint John Police Force.

MEASURE TRAFFIC SPEED AND/OR VOLUME

Regardless of the means by which a potential Traffic Calming Plan is triggered, measured evidence of high speed and/or volume is required to justify the investment of resources required to develop and implement a Traffic Calming Plan. Streets are designed to carry an appropriate volume of vehicle traffic and those vehicles are permitted to drive up to (but not over) the posted speed limit. Investing resources where there is no measured problem impedes finding solutions where real problems exist.

A traffic survey, using specialized equipment to measure speed and/or volume of the vehicle traffic, shall be completed on behalf of the Traffic Engineer. The results of this survey shall be analyzed and one of the three following criteria must be satisfied:

Where the neighbourhood is concerned about the speed of vehicle traffic, the average speed of vehicles must be equal to or greater than 2 KM/H below the current or appropriate¹ posted speed limit for the Plan to be considered further.

Where the neighbourhood is concerned about the volume of vehicle traffic on a Local street, there must be more than an average of 1000 vehicles per day counted over the length of the traffic survey for the Plan to be considered further. Traffic Calming Plans will not be considered on Collector or Arterial streets when the concern is vehicle traffic volume as such streets are expected to service higher volumes, including through traffic.

Where the neighbourhood is concerned about conflicts between vehicles and pedestrians, there must be no sidewalks on the street, the street must be classified as Local and either (1) the average speed of vehicles must be equal to or greater than 5 KM/H below the current or appropriate posted speed or (2) there must be more than an average of 500 vehicles per day counted over the length of the traffic survey for the Plan to be considered further.

The requesting citizen, Planning Staff (in the case of a Neighbourhood Plan), Capital project coordinator or Police Force (depending upon the means by which the potential opportunity was triggered) shall be notified of the results of the survey and whether the results indicate the Plan would continue to the next phase in this process based on the above criteria.

PRIORITIZE TRAFFIC CALMING PLAN

The number of Traffic Calming Plans that are warranted to reduce higher than desirable vehicle traffic speed and/or volume is often greater than the number that can be designed and implemented within one year based on existing resources. Criteria are to be used to prioritize each Plan so that the most critical Plans get implemented first. The criteria and point system on the following page are used to weigh and prioritize the list of outstanding Plans:

¹ As determined by the Traffic Engineer, the suitability of the posted speed limit on a street may be reviewed when the concern is vehicle speed. TAC's "Canadian Guide for Establishing Posted Speed Limits" will be referenced in these instances to determine if a more appropriate (than currently posted) speed limit is warranted. In cases where such a review results in a recommended change to the posted speed limit, the new appropriate speed limit will be referenced in the place of the currently posted speed limit against the actual surveyed speeds. The new speed limit will be considered as part of the Traffic Calming Plan and would result in a staff-recommended amendment to the *Traffic By-Law* (to be considered by Common Council). A review of the speed limit is intensive in the traffic engineering resources required to complete the assessment, and therefore this analysis will occur at the discretion of the Traffic Engineer.

CRITERIA	WEIGHTING
Street is within a Neighbourhood Intensification Area, as defined within the Municipal Plan	0 or 1
Street has no sidewalks physically separating pedestrians from vehicles	0 or 1
Stopping sight distance for motorist's view of pedestrians at marked or unmarked crosswalks can be brought within acceptable levels at the posted speed limit	0 or 1
Street has no painted bike lanes or separated bike trails separating cyclists from vehicles	0 or 1
Street is within 500 m walking distance from a daycare, pre-school, elementary school or middle school	0 or 2
Street is within 500 m walking distance from a park, place of worship, hospital, or community centre	0 or 2
Average speed of vehicles measured is equal to or greater than 5 km/h over the speed limit during the traffic survey	0 or 1
Over 1500 vehicles per day are counted on a local street during the traffic survey	0 or 1
TOTAL	/10

IDENTIFY TIMING OF PLAN DEVELOPMENT

The timing of development of a Traffic Calming Plan will be influenced by its Priority relative to other Plans, a neighbourhood's willingness to fund the Traffic Calming project, timing of a planned Capital project or timing of an overall Neighbourhood Plan through PlanSJ.

A neighbourhood group can, at their expense, engage an engineering consultant to develop a Traffic Calming Plan based on this Policy. The Traffic and City Engineer shall consider this option in context of this Policy if this avenue was chosen by a neighbourhood group.

A Traffic Calming Plan on a street planned for reconstruction within a Capital project will be developed and implemented as the Capital project timeline unfolds.

A Traffic Calming Plan included within an area encompassing a future Neighbourhood Plan requires coordination with the PlanSJ team:

If development of a Traffic Calming Plan is anticipated to be within 10 years of planned completion of a larger Neighbourhood Plan, a Short Term Phase and a Long Term Phase of the Traffic Calming Plan shall be developed. The Short Term Phase of the Traffic Calming Plan with minor and less costly investments shall be developed and implemented in a time dictated by the Plan's Priority relative to other Traffic Calming Plans or by a neighbourhood group's willingness to pay. The Long Term Phase with more significant investment shall be developed and implemented in coordination with the completion of the Neighbourhood Plan.

If development of a Traffic Calming Plan is anticipated to not be within 10 years of planned completion of a larger Neighbourhood Plan, the entire Traffic Calming Plan (Short and/or Long Term Phases) shall be developed and implemented in a time dictated by the Plan's Priority relative to other Traffic Calming Plans or by a neighbourhood group's willingness to pay.

In all other cases, Traffic Calming Plans shall be developed and implemented in a time dictated by the Plan's Priority relative to other Traffic Calming Plans.

DEVELOP TRAFFIC CALMING MEASURES

When it is time to develop the Traffic Calming Plan, street-specific Traffic Calming Measures will be developed by the Traffic Engineer, Capital Engineering (in the case of a pre-planned Capital project), or an engineering consultant engaged by a neighbourhood group. Measures used will be unique to the differing issues of each neighbourhood. Given the documented effectiveness, physical traffic calming measures will be incorporated into most Traffic Calming Plans, with support of other steps such as signage enhancements. Although a wide range of physical and other measures are available, including those detailed in TAC's Guide, the following will be generally given consideration first:

Speed Limit Enforcement

The Police Force enforces speed limits and other traffic regulations. Enforcement along busier arterial streets is typically given priority, limiting availability of resources on neighbourhood streets. Speed limit enforcement is considered a short term solution.

Land Use Planning Opportunities

In some instances vehicles generated by a land use near a neighbourhood street will influence characteristics of traffic on the street. Collaboration with City Planners to identify opportunities to modify land use will occur in these instances.

Transportation System Improvements

Excessive volume of cut-through traffic on neighbourhood streets may be diverted back onto arterial or collector streets if motorists perceive the alternative as being a shorter-route option through improvements to traffic flow.

Speed Humps

Speed humps are similar to speed bumps but are wider for speeds expected on a street and can effectively reduce vehicle speed. These cause a vehicle to rise and fall over a portion of a street giving a sense of speed to the motorist when travelling too fast. Variations of the speed hump are possible depending on street type and situations where emergency vehicle speed should not be negatively impacted.



Raised Crosswalk

Raised crosswalks are similar to speed humps, but are located at crosswalks to both slow vehicle speed and to enhance the visibility of pedestrians to motorists.



Street Narrowing

Narrowing a street puts roadside features such as curbing, sidewalks, trees, etc. as well as vehicles approaching from the other direction closer to a motorist, causing a motorist to perceive less lateral room to travel and thus to slow down. This measure can be costly.



Traffic Circle or Roundabout

Traffic Circles and Roundabouts are circular street intersections where vehicles travel counter-clockwise through them until reaching the street they intend to travel. They can improve traffic flow and safety at an intersection.



They force vehicles to slow down as they navigate around the circle. Traffic circles, being smaller, can be retrofit into an existing intersection, can be less expensive but both are considerably more expensive than most other options.

Painted White/Yellow Lines

Painting white or yellow lines on a street is an economical alternative to street narrowing. White lines adjacent to the edge of the street and/or a yellow line along its centre create narrowed vehicle travel lanes. The space between the street edge and the white line can also be a bike lane where such facilities are deemed appropriate.



Directional Closure

A directional closure involves converting a street from 2-way to one-way traffic, often with physical changes to one end of the street. This measure is used to reduce vehicle volume.



Change to Posted Speed Limit

Speed limits should reflect the physical characteristics of the street and potential use by other users such as cyclists or pedestrians. The posted speed limit will be reviewed in some cases using TAC's "Canadian Guide for Establishing Posted Speed Limits". Common Council would be asked to consider staff recommended changes on a case-by-case basis.

Amendment to the Traffic By-Law is required – to add subsections 3 and 4 to section 18 and to add Schedule M-3 (30 KM/H Speed Limits) and M-4 (40 KM/H Speed Limits) - as some local streets warrant a 30 KM/H or 40 KM/H posted speed limit as opposed to existing 50 KM/H or higher limits.

Speed Display Signs

Electronic signs that measure and display vehicle speeds provide a visual cue to motorists (to compliment their own speedometer) when travelling over the posted speed limit. These signs could be temporary or permanent, but are costly.



School Zone Signs

In 2007 the Province of New Brunswick amended its *Motor Vehicle Act* to allow issued fines for speeding in a clearly marked School Zone between the hours of 7:30 a.m. and 4:00 p.m. to be doubled. Within a municipality the speed limit in a School Zone is also 50 KM/H within these times regardless of the posted limit on the street outside the Zone. Such penalties seek to discourage speeding in School Zones where there are young children. A clearly marked School Zone requires florescent yellow-green "School Zone" and "School Zone End" signs. These zones also need to be listed in the City's *Traffic By-Law*. In appropriate instances a reduced speed limit for the School Zone would also be considered. Common Council would be asked to consider staff recommended changes on a case-by-case basis.



TAC has guidelines and will be referenced when establishing the location of School Zones.

Amendment to the Traffic By-Law is required – to amend Section 23 and to add Schedule S (School Zones) and S-1 (School Zones having a 40 km/h rate of speed).

Brighter Crosswalk Signs

Florescent crosswalk signs replace standard signs in school areas and at some busier crosswalks. Such signs may be placed where crosswalks are part of a Traffic Calming Plan only in very limited instances where a heightened awareness of a crosswalk by motorists is required.



Pedestrian or Traffic Signals

Signals that give clear right-of-way to pedestrians and motorists are suggested in instances outlined by TAC guidelines and may be considered as part of an overall Traffic Calming Plan.



Multi-Way Stop Intersections

Installation of Stop signs at all approaches of an intersection can be effective where there is a history of collisions associated with turning vehicles and where installation of the signs are warranted based on engineering criteria and judgment. Traffic flow improvement is possible in some cases. A different TAC guide² provides warrants in these situations. Multi-Way Stop intersections **will not** be considered as a solution to a vehicle traffic speed problem because of their documented ineffectiveness.



SEEK INPUT FROM EMERGENCY AND TRANSIT SERVICES

Physical traffic calming measures that reduce the speed of vehicle traffic may also reduce the speed and response time of Emergency Service vehicles. Physical measures may also impact Transit vehicles. The proposed Traffic Calming Measures shall be distributed to the Emergency Services (Fire, Police and Ambulance) as well as to Saint John Transit for input with potential changes to the proposed measures made based on input received from these services. Some measures, such as speed humps with open wheel paths for the wider Emergency vehicles, can be considered for example. Ultimately, the overall safety of a neighbourhood needs to be considered by balancing a need to reduce vehicle speed with ensuring Emergency Services can respond to an incident within an acceptable time frame and with operational requirements of Saint John Transit.

CONDUCT NEIGHBOURHOOD MEETING

A neighbourhood meeting will be chaired jointly by the Traffic Engineer (or his/her designate) and the citizen who raised the original concern (or that person's designate), and be supported by the Saint John Police Force. The primary purposes of this meeting are:

1. To educate the neighbourhood of the *Traffic Calming Policy* and the benefits and limitations of Traffic Calming plans and measures,
2. Clarify the concerns of the neighbourhood, and
3. Review the intended Traffic Calming Measures with the neighbourhood to ensure they address the concerns where possible and seek support for the intended measures or obtain suggestions for alternate measures.

² Manual of Uniform Traffic Control Devices for Canada

In the case of an approved Capital project, this neighbourhood meeting will be coordinated by the project coordinator as part of a larger project meeting. In the case of a Traffic Calming Plan being developed through funding by a neighbourhood group, the engineering consultant shall coordinate the meeting with the neighbourhood and City's Traffic Engineer. In the case where implementation of a Traffic Calming Plan is within ten years of a proposed Neighbourhood Plan, the discussion of more significant and costly traffic calming measures (Long Term Phase) shall be incorporated into community meetings for the Neighbourhood Plan.

REFINE PLAN WITH NEIGHBOURHOOD INPUT

The Traffic Engineer, Capital project coordinator, or consultant will consider adjustments to the Traffic Calming plan and/or measures based on the feedback at the Neighbourhood Meeting where possible.

COMMON COUNCIL CONSIDERS APPROVAL OF PLAN WHERE REQUIRED

Some Traffic Calming Plans, including less costly measures in a Short Term Phase of a Plan, can be implemented within the scope of the Operating budget. In such a case City staff will schedule completion of the Plan. Isolated physical measures such as speed humps, raised crosswalks, and painted lines, as well as posting of speed limit, speed display and School Zone signs are often within the scope of the Operating budget.

In other cases, where the Plan for a neighbourhood is outside the scope of the Operating budget, staff will present to Common Council for consideration of approving the plan, including the resources required for implementation of the Plan within a future year Transportation Capital or Operating budget.

More costly traffic calming measures (Long Term Phase) to be incorporated into a Neighbourhood Plan will follow the approval process of the Neighbourhood Plan.

IMPLEMENT PLAN

The Traffic Calming measures are implemented within the neighbourhood when the Plan is approved and/or appropriate level of resources is available.

MEASURE PERFORMANCE OF PLAN

Measuring the performance of implemented Traffic Calming Plans is key to assuring success and to learn toward continuous improvement of future Plans, as well as for updates to this *Traffic Calming Policy*. Key Performance Measures to be considered shall include:

1. Comparison of the vehicle traffic speed and/or volume before and after the implementation;
and
2. Cost of the design and installation of an implemented Plan.

UPDATE TRAFFIC CALMING POLICY

This policy is a living document; to be updated periodically, as required through opportunities learned in developing a Traffic Calming Plan or other strategic plans such as implementation of the Municipal Plan or the Transportation Strategic Plan. Such updates will continuously improve this Policy and subsequent Plans. Recommended policy updates will be presented to Common Council for consideration.