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## Purpose

The purpose of this policy is to provide guidelines, procedures and criteria for the initiation, investigation, and implementation of traffic calming measures within residential neighbourhoods to address safety concerns primarily related to speeding, but with consideration of excessive traffic volume, in a fair and consistent manner. Guidelines included in this policy are intended for local and collector roadways primarily within residential neighbourhoods. This policy does not apply to arterial roadways.

While similar traffic related issues may exist on higher order roadways, their primary function is to move traffic efficiently. Traffic calming procedures and devices that may be considered for use on residential streets may not be suitable for use on arterial roadways.

### 1 1.1 What is Traffic Calming

Traffic calming is defined as “the combination of mainly physical measures that reduce the negative effects of motor vehicle use, alter driver behaviour and improve conditions for non-motorized street users”.<sup>1</sup> Traffic calming measures can be effective in addressing issues related to vehicle speed, excessive traffic volume, noise pollution and overall neighbourhood safety and comfort. Traffic calming measures combined with engineering, educational and enforcement tools, can significantly improve the liveability and safety of neighbourhoods.

Traffic calming measures can be a combination of vertical and horizontal deflections, road narrowing and access restriction. Commonly utilized traffic calming measures may include speed humps, traffic circles, curb extensions, curb radius reduction and raised median islands.

### Traffic Calming Advantages & Disadvantages

Traffic calming measures can have a number of positive and negative impacts. This policy attempts to provide a balance such that the improvements recognized exceed the negative impacts of added costs and potential inconvenience for street users.

Some advantages that may result from implementation of traffic calming measures include:

- Reduced motor vehicle speeds
- Reduced traffic volume
- Discouraged through vehicular traffic
- Improved roadside aesthetic by using attractive materials
- Reduced noise pollution
- Reduced air pollution
- Improved neighbourhood livability
- Reduced conflict between roadway users

- Increased travel speed between traffic calming features
- Reduced ease of vehicular access in and out of neighbourhoods
- Increased vehicular travel time and trip length
- Increased emergency vehicle response time
- Diverted vehicular traffic onto neighbouring roadways
- Decreased roadside aesthetic by using unattractive materials
- Increased noise pollution
- Cost considerations

### **Objectives**

To address undesirable traffic conditions such as speeding or excessive volume on local and collector roadways, the specific objectives of traffic calming are to:

#### **Increase the Safety of Neighbourhoods**

Through the use of measures to alter driver behaviour, traffic calming can improve safety on neighbourhood streets. The resulting reduction in speed and volume can promote a safer environment for all street users.

#### **Improve the Liveability of Neighbourhoods**

Traffic calming is intended to uphold and restore the liveability and sense of community within neighbourhoods by minimizing the speed and volume of through traffic. With the appropriate selection of traffic calming measures, negative impacts such as excessive noise, air pollution, visual presence of numerous vehicles, and potential safety hazards can be minimized. In addition, when attractively designed, traffic calming measures can enhance the aesthetics of a neighbourhood and improve streetscapes.

#### **Restore Streets to their Intended Function**

The intended function of a local roadway is to facilitate vehicle traffic into and out of residential neighbourhoods at low speeds. Local roadways provide vehicle access to residences that typically front onto these roads. Through traffic should be encouraged to utilize collector roadways to reach destinations outside of residential neighbourhoods instead of shortcutting through local streets.

#### **Preserve Access and Minimize Impact to Emergency & Maintenance Services**

The operational impacts to emergency and maintenance services need to be balanced against the need to slow and/or reduce traffic. Consultation with impacted services is important in the selection of suitable traffic calming measures for the context of the location.

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Traffic calming measures have a direct impact on neighbourhoods and the residents living in them. An integral part of a traffic calming program includes resident education, communication and feedback. Good community involvement can enhance understanding of specific local traffic issues and tends to lead to solutions that fit the identified concerns. Effective communication with residents provides staff with the opportunity to explain to residents the benefits of traffic calming measures while deterring them from less effective countermeasures.

### **Guidelines**

The following guidelines will be taken into consideration when investigating, selecting, and implementing traffic calming measures. This will ensure that the appropriate measures are considered fully, and the potential negative impacts are minimized. Following these guidelines, will maximize the effectiveness of traffic calming while building community acceptance and support for the final recommendations.

Traffic calming measures will:

- Be considered only after education or enforcement efforts have failed to produce the desired results.
- Be considered when there is a demonstrated safety, speed or short-cutting traffic concern and acceptable alternative measures have been exhausted.
- Include consideration as to whether an area-wide plan versus a street-specific plan is more suitable: an area wide plan should be considered if a street-specific plan would likely result in displacement of traffic onto adjacent streets.
- Not impede non-motorized, alternative modes of transportation and be designed to ensure pedestrian and cycling traffic is unaffected.
- Not impede Emergency services access unless alternate measures are agreed upon.
- Maintain reasonable automobile access to WHRM roadways.
- Only be installed after engineering staff has investigated existing traffic conditions and the necessary approvals have been received.
- Be monitored; follow-up studies will be completed to assess effectiveness and the results may be communicated to the community and Council.

### **Appropriate Streets for Traffic Calming**

This policy defines the types of roadways that are suitable for traffic calming in WHRM. Traffic calming will only be considered on local and collector streets where WHRM is the road authority. This policy does not include roads that are under Provincial or on arterial roadways in WHRM.

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Through application of this policy and by applying good engineering judgment, installed traffic calming measures will be done in a manner which will ensure that they provide the most effective solutions while continuing to support the intended function of the roadway.

### Local Roadways

Local Roadway examples:

- Underwood Drive
- Tremain Crescent
- Centennial Drive

### Collector Roadways

Collector roadways balance access to adjacent properties with the need to collect and distribute residential traffic travelling into and out of a neighbourhood. Collector roadways carry traffic volumes in the range of 1,000-7,000 vehicles per day. Collectors help circulate traffic within individual neighbourhoods.

Collector Roadway examples:

- Payzant Drive
- College Road
- Wiley Avenue
- Riverview Road
- Holmes Hill Road

## 2 Traffic Calming Process

The following process will be used when proceeding with a request for traffic calming. An established and formal process for investigating roads provides consistency and equality in the determination of traffic calming. A key component of the process is community engagement and effective communication with residents. Keeping residents informed of the results and decisions made within each stage of the process will help establish buy-in and support for the program.

The steps within the traffic calming process are presented in Figure 1 and described further in the following sub-sections.



Resident(s) or a councillor, on behalf of a resident(s), with traffic related concerns are instructed to submit a written request to investigate traffic calming within their neighbourhood to WHRM. The WHRM Traffic Calming Request Form can be found in Appendix A.

### Initial Screening Criteria

When requests are received, a review of the roadway(s) is made to determine if the following initial screening criteria are met:

- a) Must be a local or collector roadway through a primarily residential area;
- b) Vehicle 85<sup>th</sup> percentile speeds:
  - 85<sup>th</sup> percentile speed must exceed the posted speed limit by 15% to consider traffic calming in this policy;
- c) Daily traffic volumes exceeding:

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- 500 vehicles per day Annual Average Daily Traffic (AADT) for residential local streets;
  - 5,000 vehicles per day AADT for a collector roadway;
  - Where the 85<sup>th</sup> percentile speeds are 15 km/hr or more over the posted speed, there will be no minimum volume requirement;
- e) The roadway must be owned and maintained by WHRM;
  - f) The roadway must not be a multi-lane roadway;
  - g) The roadway shall not provide direct access to an emergency services building;
  - h) The zoning should be primarily residential in nature; and
  - i) The requested street or section of street must be a minimum of 150m in length.

Following this initial review, the Municipal will inform the residents as to whether or not their location meets the initial screening criteria. Residents with requests that meet the above-noted initial screening criteria will receive information about the traffic calming process, as well as a copy of WHRM's Neighbourhood Traffic Calming Petition. The residents will appoint a neighbourhood liaison that will be responsible for coordinating the petition and returning to WHRM. Roadways that do not meet the above-noted criteria may still be eligible for other mitigating measures and/or police enforcement initiatives.

### **Neighbourhood Traffic Calming Petition**

Restoring neighbourhood streets to their intended function and improving overall liveability are primary objectives of traffic calming. In order to achieve this goal, community involvement and support is paramount.

Throughout the process, residents are encouraged to participate in the development of the traffic calming plan suitable to the neighbourhood and the concerns within it.

Communication with residents is made at various stages throughout the process as the traffic calming plan is developed and implemented. Traffic calming plans should be developed with an understanding of current and historical traffic patterns within the area under investigation. For a traffic calming program to be successful, the community must support and be committed to the solution. The only means of gaining this commitment is to involve the residents by informing them of the study location being considered for traffic calming measures.

The benefit of community involvement is that it generates support for a traffic calming program and assists in the implementation of a plan without significant opposition upon completion. Community involvement also enhances the credibility of the traffic calming program, particularly when it is eventually presented to Council for approval.

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In order to obtain a working partnership with the community, meetings will be scheduled, and surveys delivered by the neighbourhood liaison to residents affected by the implementation of traffic calming measures. These forms of contact will provide the community with opportunities to offer input into the development of the plan, as well as to publicize and increase the awareness of the study.

The review and implementation of traffic calming measures can be a time consuming and expensive process requiring many resources. Without public support, the traffic calming measures intended to alleviate traffic concerns, could be met with negative public opinion, and as a result, jeopardizing the outcome and potential positive impacts to affected neighbourhoods.

After it has been determined that the requested location meets the initial screening criteria, the proponent will be informed and required to complete the Neighbourhood Traffic Calming (NTC) Petition. Staff will provide a copy of the petition to the neighbourhood liaison which can also be found in Appendix A. The focus of the petition will centre on whether or not there is neighbourhood support for WHRM to initiate an investigation into the need for traffic calming on the requested roadway.

The petition must contain an indication of support from at least 67% of the households with direct frontage or flankage onto the section of roadway that has been identified as the location for the potential implementation of traffic calming measures, as defined by Public Works Staff. Each household is represented by one signature, regardless of the number of people in the household. This step in the process is crucial in determining the level of concern from the residents.

### **Data Collection**

If the requested location meets the initial screening criteria and petition results indicate that there is at least 67% support, data collection and analysis will commence. The collection of traffic data, as deemed necessary by Public Works Staff, will serve to provide a better understanding of the current traffic conditions and to prioritize locations for the investigation of traffic calming.

WHRM Staff will conduct the necessary traffic studies to quantify and qualify the traffic concerns within a neighbourhood. The data collected may include vehicle volume, vehicle speed (85<sup>th</sup> percentile), collisions, pedestrian activity, origin/destination study (if request relates to short-cutting traffic), and historical site-specific information. Standard traffic engineering data collection methods will be used for the collection of data.

Once traffic data is collected, it is assessed against assessment criteria (Section 2.1.1) to determine whether traffic calming measures are warranted on the subject roadway.

If the criteria are met, then the next step is to develop a traffic calming plan; otherwise, the traffic calming process will be discontinued. WHRM staff may decide to first consider engagement and enforcement techniques to determine if the identified concern can be addressed without investing the time, money, and resources into the development of a traffic calming plan.

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## Education and Enforcement Program

WHRM staff conduct an education and/or enforcement program over a period of one to six months and monitor the effectiveness of the techniques used in the program in addressing the identified issue.<sup>1</sup> Some education and enforcement techniques identified within the Canadian Guide to Traffic Calming include:

- **Active and Safe Routes to School Program** – “a community-based initiative that promotes the use of active transportation for the daily trip to school while addressing traffic safety issues.”
- **Pace Car Program** – “a community awareness strategy where drivers sign a pledge to drive within the speed limit, effectively becoming mobile traffic calming devices. Bumpers are placed on the vehicles to alert other drivers of their presence in the community.”

**Vehicle activated signs** – “are electronic roadside warning signs equipped with radar speed detectors and an illuminated display... The purpose is to alert drivers with the aim that they reduce their travel speed as they approach specific conditions or hazards ahead.”

- **Targeted education campaigns** – “are initiatives to raise awareness of road safety issues. Education campaigns can address multiple types of driver awareness, including speeding
- (other types include impaired driving, distracted driving, seatbelt awareness, aggressive driving, etc.)”
- **Mobile speed enforcement** – “involves radar photography units that are mounted in a mobile vehicle or trailer that can be moved depending on the need for speed enforcement.”

If data collection results indicate that the issue was not resolved through education and/or enforcement techniques, then the traffic calming process continues to the Traffic Calming Plan Development stage.

## Traffic Calming Plan Development

The data collected combined with site visits, historical information, future maintenance, and

construction plans, as well as resident feedback will be taken into consideration to determine potential traffic calming measures.

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Appropriate traffic calming measures will be determined based on the list of traffic calming measures outlined in the TAC/ITE Canadian Guide to Neighbourhood Traffic Calming. The traffic calming design could include one or more different types of traffic calming techniques. The proposed traffic calming measures will be in accordance with the design guidelines outlined in the Canadian Guide to Neighbourhood Traffic Calming and the engineering judgement and experience of staff.

WHRM Staff will prepare concept drawings outlining the traffic calming measures. Once WHRM Staff have prepared concept drawings of the traffic calming measures, consultation with emergency and maintenance services is conducted to solicit feedback to identify any concerns relating to how the plan may impact their operational requirements. Modifications to the plan are made to address concerns. If the concerns cannot be remedied, the traffic calming process will be discontinued.

### **Public Meeting(s)**

WHRM Staff will host a public information meeting or open house to present the traffic calming plan and explain the rationale behind the proposed traffic calming treatment(s). The public meeting provides residents with an opportunity to become involved in the process, learn more about the proposed traffic calming treatment(s) and to provide their feedback.

Modifications to the plan may be made to address feedback received from the public. If major changes are made to the plan, additional consultation with emergency and maintenance services and another public meeting may be required.

### **Neighbourhood Support Survey**

Using the proposed concept design, a community support survey will be completed to determine the level of support for the traffic calming design and to provide an opportunity for the most directly affected residents to support or oppose any modifications to the road. It is intended to measure the support of the preferred design proposed to the residents.

Using summarized comments from the submitted petition and preliminary information about the roadway and surrounding area, staff will define the survey canvas area. As part of this process, surrounding roads may be identified as part of the investigation. As a minimum, households with direct frontage onto the roadway to be investigated will be surveyed, in addition to each property whose side yard abuts the subject roadway section. Households that do not directly front the subject roadway, but who have no other option but to use the section of roadway where traffic calming is being proposed (e.g. in the case of a cul-de-sac), will receive the survey.

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### Survey Scope

Surveys will be delivered by registered mail and at a minimum, will contain:

- A brief description of traffic calming, including its advantages and disadvantages;
- The results of the traffic studies undertaken by staff;
- A survey question asking if residents are in favour, opposed or neutral to the implementation of traffic calming measures in the identified location(s);
- The preferred traffic calming design;
- A request for comments and feedback; and

### Measuring Community Support

In order for the process to continue, a minimum of **51%** of total surveys delivered must be in favour of implementation the traffic calming measures<sup>2</sup>. This reinforces that community support is vital for the ultimate success of traffic calming.

If this support rate is not met, the process will cease and a notification of failure to meet the community support levels will be sent to the residents on the mailing list.

### Finalize Traffic Calming Plan

Using technical data, community feedback, and in keeping with the goals, objectives and principles set out in this policy, staff will finalize the preferred traffic calming design to be put forward as the recommended preferred traffic calming plan. In finalizing the preferred traffic calming plan, general consideration will be given to the various aspects of road design such as utility placement, landscaping, sign requirement and drainage.

### Detailed Traffic Calming Design

With a recommended preferred traffic calming plan in hand, detailed engineering drawings are required. These drawings will provide a high level of detail taking into consideration but not limited to the following:

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<sup>2</sup> Canadian Guide to Neighbourhood Traffic Calming (1998) recommends minimum of 50-70% support from respondents, Page 2-6.

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- Surface drainage
  - Sub base requirements (i.e. granular type and thickness)
  - Roadway Grade
  - Driveway and intersection locations
  - Adherence to Guide to Neighbourhood Traffic Calming, Transportation Association of Canada, Standard Municipal Specifications
  - Utility locations or relocations
  - Surface type (asphalt, concrete, decorative concrete)
  - Sightlines and sight distances
  - Cost considerations
  - Requirements for warning signs and pavement markings

At this point, the preferred traffic calming measures will be evaluated in detail. If, during the detailed design stage, limitations are identified which challenge the feasibility of the plan, alternatives will need to be considered. This may include alterations to location of devices or a re-development of the preferred plan. If significant or major changes to the plan are required due to design constraints, residents on the mailing list will be notified of the required changes. If staff believe that the required modifications to create the detailed design result in a significantly different final design from that which was presented to residents as part of the survey, staff may recommend additional consultation, another survey and/or public meeting.

### **Approval**

With design of the plan and information on construction cost estimates available, a report recommending the implementation of the recommended preferred traffic calming measures will be submitted to the WHRM Council for approval.

If the Traffic Calming plan is not approved by WHRM Council, WHRM Staff should await direction from Council.

If approved, installation of the traffic calming measures is completed; otherwise, the traffic calming process is discontinued.

### **Resident Notification and Implementation**

Notices will be delivered to residents to inform them that traffic calming has been either approved or not approved by the WHRM Council on the subject roadway. The notice will be sent to the same mailing list used to deliver the traffic calming survey and any other persons having requested notification throughout the process.

If the traffic calming plan is approved, the notice will include information about the traffic calming review process for the subject roadway and will include a copy of the approved Traffic Calming Plan clearly showing locations of treatments as well as the anticipated implementation timeframe.

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## Installation & Monitoring

Traffic calming measures are installed. WHRM Staff may decide to utilize interim and/or temporary treatments (e.g. pavement markings, flexible bollards, planters, jersey barriers, etc.) based on budget constraints and/or to provide time to examine the impacts of the measures prior to permanent installation.

Monitoring of traffic calming treatments is conducted to determine the effectiveness and impact to the subject road and surrounding road network. Monitoring programs may include, but are not limited to, assessments of:

- Before and after 85<sup>th</sup> percentile speed and traffic volumes on the subject road;
- Traffic diversion to other local and/or collector roadways;
- Before and after traffic noise levels;
- Before and after collision frequency and severity;
- Before and after active transportation user activity;
- Impacts to emergency and maintenance services; and,
- Resident feedback.

If data collection results indicate that traffic calming objectives (e.g. reduction in traffic speed) were not met, WHRM Staff may consider implementing additional measures and/or discuss potential enforcement alternatives with police services, if deemed appropriate.

If traffic calming objectives are met and there were no associated operational and/or safety impacts, no further action is required if permanent installations were already implemented. If temporary treatments were installed, permanent installations can be pursued.

Removal of the measures may be warranted if the installation of traffic calming measures resulted in unforeseen operational and/or safety impacts and/or there is support for removal from residents in the associated neighbourhood.

## TRAFFIC CALMING MEASURES

The Canadian Guide to Neighbourhood Traffic Calming identifies traffic calming techniques that are commonly used in Canada. However, the Guide notes that not all measures that have been used for traffic calming purposes are appropriate as traffic calming measures. Some measures, such as stop signs and maximum speed signs, for example, should not be used for traffic calming purposes. Although effective for other purposes, these measures have proven to be less effective for traffic calming and are therefore not recommended for use as traffic calming techniques in WHRM.

WHRM Staff will provide a list of techniques that may be appropriate to consider for the street or area.

Appendix A –



WEST HANTS REGIONAL MUNICIPALITY  
TRAFFIC CALMING POLICY

RCOPW-002.00

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Traffic Calming Request: Resident Petition

Approved by:

I, Deanna Snair, Executive Assistant/Clerk of the West Hants Regional Municipality, in the Province of Nova Scotia, do hereby certify that this is a true copy of the Policy as adopted by the Council of the West Hants Regional Municipality at a meeting duly called and held on the 25<sup>th</sup> day of January, 2022.

*Deanna Snair*

*Deanna Snair, Executive Assistant/Clerk*

Adoption	
Notice to Council	September 28, 2021
Approval	January 25, 2022
Description: Initial approval of WHRM Traffic Calming Policy RCOPW-002.00	



Department of Public Works

**Traffic Calming Request Form (Residents Petition)**

\*Neighbourhood Liaison: \_\_\_\_\_

Phone: \_\_\_\_\_

Address: \_\_\_\_\_

Date: \_\_\_\_\_

Specific Location (i.e. streets) and Summary of Traffic Concern:

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*\*The “**Neighbourhood Liaison**” is the person in a particular neighbourhood who has shown a willingness to play a leadership role and liaise with Municipal staff relative to the traffic calming issue.*

The attached petition should be circulated by the Neighbourhood Liaison to **all** residents living adjacent to the street segment noted above. Residents who are not at home should be contacted by the **Neighbourhood Liaison** for signatures prior to submitting the petition to WHRM. Properties without signatures shall be counted as “**no**” responses.

The completed petition should be submitted to: **Troy Burgess, Manager of Operations, West Hants Regional Municipality Department of Public Works at:**

**PO Box 3000, 100 King Street  
Windsor, NS  
B0N 2T0**



## **Traffic Calming Request Form (Residents Petition)**

**Each resident who signs this petition should recognize the following:**

1. To qualify for traffic calming, the street in question shall meet at least the following established traffic calming guidelines:
  - Must be a local or collector roadway through a primarily residential area
  - Vehicle 85<sup>th</sup> percentile speeds:
    - i. 85<sup>th</sup> percentile speed must exceed the posted speed limit by 15% to consider traffic calming in this policy
  - Daily traffic volumes exceeding:
    - i. 500 vehicles per day (vpd) for residential local streets
    - ii. 5000 vehicles per day (vpd) for residential collector streets
    - iii. Where the 85<sup>th</sup> percentile speeds are 15 km/h or more over the posted speed, there will be no minimum volume requirement
  - The posted speed limit shall not be greater than 50 km/h
  - The roadway must be owned and maintained by West Hants Regional Municipality (WHRM)
  - The roadway must not be a multi-lane roadway
  - The roadway shall not provide direct access to an emergency services building
  - Zoning should be primarily residential in nature
  - Requested street or section of street must be a minimum of 150 m in length
2. If a street meets the established traffic calming guidelines (based on preliminary traffic studies performed by WHRM), one or more traffic calming devices may be recommended, including associated pavement markings and signage.
3. Traffic calming devices and/or signs may be installed at the locations deemed most feasible, based on studies performed by WHRM. It should be understood that a traffic calming project may be terminated if too many residents do not agree to traffic calming devices fronting their property.

4. This petition must be signed with a “Yes” vote by a minimum of two thirds (67%) of the neighbourhood street residents (**one signature per household**) before WHRM moves forward with a preliminary traffic study to determine if the street (s) in question meets the established guidelines for traffic calming.
5. If it is determined that the street(s) meet the established guidelines for traffic calming, WHRM will proceed with a detailed traffic calming study which will include public consultation as part of the process. The preferred design will be presented to neighbourhood residents, where the most affected residents will have the opportunity to support or oppose the recommended traffic calming plan. This will be accomplished through a Community Support Survey. In order for the process to continue, a minimum of 50% of total surveys delivered must be returned with a minimum of 60% of these supporting the proposed traffic calming plan. If this support rate is not met, the process will cease and a notification of failure to meet the community support levels will be sent to the residents on the mailing list.
6. Using technical data, community feedback and in keeping with the goals, objectives and principles set out in this policy, staff will finalize the preferred traffic calming design to be put forward as the recommended preferred traffic calming plan.
7. With the design of the plan and information on construction cost estimates, a report recommending the implementation of the recommended preferred traffic calming measures will be submitted to WHRM Council for approval.
8. Notices will be delivered to residents to inform them that traffic calming has been either approved or not approved by WHRM Council on the subject roadway.

### **Traffic Calming Request Form (Residents Petition)**

**Question 1:** Do you agree that traffic calming devices should be considered for your neighbourhood? (67% of residents must respond “yes”)

**Question 2:** Do you agree to have traffic calming devices fronting your resident?



Name: Address: Telephone: Signature: Date:	Question 1: ___ Yes ___ No  Question 2: ___ Yes ___ No
Name: Address: Telephone: Signature: Date:	Question 1: ___ Yes ___ No  Question 2: ___ Yes ___ No
Name: Address: Telephone: Signature: Date:	Question 1: ___ Yes ___ No  Question 2: ___ Yes ___ No
Name: Address: Telephone: Signature: Date:	Question 1: ___ Yes ___ No  Question 2: ___ Yes ___ No
Name: Address: Telephone: Signature: Date:	Question 1: ___ Yes ___ No  Question 2: ___ Yes ___ No
Name: Address: Telephone: Signature: Date:	Question 1: ___ Yes ___ No  Question 2: ___ Yes ___ No
Name: Address: Telephone: Signature: Date:	Question 1: ___ Yes ___ No  Question 2: ___ Yes ___ No
Name: Address: Telephone: Signature: Date:	Question 1: ___ Yes ___ No  Question 2: ___ Yes ___ No