Town of Whitby Policy

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Policy Statement

The Town of Whitby supports the use of Traffic Calming as a means of reducing motor vehicle speeding, decreasing shortcutting, decreasing traffic volumes, and encouraging safe driver behaviour on roads in residential areas.

Purpose

The purpose of this policy is to establish a transparent, standardized process for assessing and responding to citizen requests for Traffic Calming and set out the method and criteria to identify and prioritize locations for Traffic Calming measures on roads under the jurisdiction of the Town of Whitby. The policy also provides criteria for the introduction of 40 km/h Neighbourhood Speed Limits.

The policy aims to improve road safety and enhance community livability by reducing the negative effects of motor vehicle use, altering driver behaviour, and improving conditions for pedestrians and cyclists. Calming traffic also aligns with broader municipal objectives to foster accessibility, support active travel (walking and cycling), promote public health, and enrich “quality of life” – to name a few – demonstrating the interdependence between street design and strong, vibrant neighbourhoods.

When properly used, Traffic Calming can help reduce:

- Motor vehicle speeds;
- Neighbourhood traffic infiltration;
- Traffic volumes;
- Pedestrian crossing distances and times;
- Conflicts between roadway users; and
- The risk and severity of motor vehicle collisions.

While offering potential benefits, some Traffic Calming measures can be costly and time-consuming to install and if used inappropriately can also:

- Increase emergency vehicle response and transit operating times;
- Impede resident access to neighbourhoods;
- Divert traffic problems to other roads;
- Escalate costs for snow clearing, curbside waste collection, and other maintenance functions; and
- Intensify vehicle emissions and/or noise pollution.

Careful consideration and proper planning help to avoid unintended consequences and ensure successful implementation.

Scope

This policy applies to the implementation of Traffic Calming measures on Local Roads, Collector Roads, and select Type C Arterial Roads under the jurisdiction of the Town of Whitby in accordance with the criteria and process established in this policy. Collector Roads and Type C Arterial Roads that operate similarly to higher-order arterial roads may be limited by the traffic calming elements considered for implementation. The policy does not apply to roads under the jurisdiction of the Regional Municipality of Durham (Regional Roads), the Province of Ontario (Provincial Highways), or private roads.

The Town primarily applies Traffic Calming measures (and 40 km/h Neighbourhood Speed Limits) in residential areas of the municipality. Traffic Calming may also be used on rural roads in select locations.

This policy is intended to be a living document and will be reviewed and updated periodically to reflect emerging best practices and program outcomes.

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1. Definitions

1.1. **40 km/h Neighbourhood Speed Limit** means an area designated by municipal by-law to have a legal speed limit of 40 km/h for all roads within the defined boundaries, lower than the default 50 km/h speed limit prescribed in the *Highway Traffic Act*.

1.2. **85th Percentile Speed** means the speed at or below which 85% of motor vehicle drivers are traveling, with 15% of motorists traveling faster than this speed. It represents the speed at which the majority of motorists travel. The 85th Percentile Speed is used to determine if motorist are travelling at an excessive speed along a road.

1.3. **Average Daily Traffic (ADT)** means the average of daily traffic volumes over two or more days, but less than a year.

1.4. **Collector Road** means a road designated on Schedule "D" (Transportation) of the Town of Whitby Official Plan which is designed primarily to facilitate traffic movements within and between Residential areas and Central Areas (as designated in the Town of Whitby Official Plan), and between these areas and the overall arterial roadway network.

1.5. **Education and Enforcement** means techniques and strategies intended to raise awareness and influence motorist behaviour (education) or use the force of law to deter unsafe driving practices and ensure compliance with traffic regulations (enforcement). These measures do not change the design and/or configuration of the roadway (Traffic Calming).

1.6. **Horizontal Deflection** means a Traffic Calming measure that shifts the driving path, forcing the motorist to slow the vehicle to comfortably navigate the change in direction.

1.7. **Local Road** means a road designated on Schedule "D" (Transportation) of the Town of Whitby Official Plan which is designed to allow direct access to fronting properties and to allow for appropriate active transportation facilities.

1.8. **Operating Speed** means the observed speed at which motor vehicles generally operate on that road.

1.9. **Shortcutting Traffic** means motor vehicle traffic not destined for a road or the immediate area, which uses the neighbourhood street to by-pass congestion or delay on the arterial road network, or to make use of a more direct route.

1.10. **Speeding** means the act of driving a motor vehicle at rates of speed exceeding posted limits or driving too fast for conditions.

1.11. **Town** means The Corporation of the Town of Whitby.

1.12. **Traffic Calming** means the process and measures applied by road authorities to address concerns about the behavior of motorists travelling on streets within their jurisdictions. The measures applied change the design and/or

configuration of the roadway with the aim of forcing motorists to slow down or select different routes. This approach tends to be “self-enforcing”, reducing reliance on enforcement techniques to ensure compliance.

1.13. **Type C Arterial Road** means a road designated on Schedule “D” (Transportation) of the Town of Whitby Official Plan which is designed to move lower volumes of traffic at slower speeds (when compared to Type A and Type B Arterial Roads) over relatively short distances.

1.14. **Vertical Deflection** means a Traffic Calming measure that raises the height of the road surface, forcing the motorist to slow the vehicle to comfortably navigate the change in profile.

2. Responsibilities

2.1. Director of Engineering, or their delegate to:

- Approve adjustments to the Traffic Calming Policy and programs as required.
- Ensure adherence to this policy and any respective procedures.

2.2. Transportation Services to:

- Administer Council approved Traffic Calming programs and budget accordingly.
- Review Traffic Calming requests to assess conformity to the eligibility criteria.
- Advise the resident(s)/neighbourhood of the status of their request.
- Maintain the priority list of locations for future Traffic Calming installation.
- Liaise with other Town Departments and external agencies in the consideration of Traffic Calming requests.

3. Application of Traffic Calming Measures

3.1. The Town will consider the installation of Traffic Calming measures on Local Roads, Collector Roads, and select Type C Arterial Roads with demonstrated Speeding and/or excessive Shortcutting Traffic volumes at locations meeting the criteria set out in this policy. Engineering judgment will be applied to Collector Roads and Type C Arterial Roads that are operating similar to higher-order arterial roads, which may affect the Traffic Calming elements considered.

3.2. The Town will consider Education and Enforcement as a first step as traffic calming measures are being evaluated and if thresholds are not satisfied.

3.3. The Town will typically install Traffic Calming measures in a permanent manner. Permanent installation tends to:

- Eliminate on-going operational costs and resource requirements;
- Result in similar or lower overall implementation costs;
- Achieve greater effectiveness and better acceptance by residents;
- Improve aesthetics; and
- Reduce degradation of roadway surfaces, particularly if trial or seasonal measures are anchored into the roadway.

3.4. Before considering Traffic Calming measures on any road, the Town will explore methods to improve the surrounding road network operation, such as signal timing optimization, to alleviate identified traffic concerns, where possible.

3.5. The Town will implement Traffic Calming measures on an area-wide basis, as opposed to a single road (particularly for Collector Roads and Type C Arterial Roads), if traffic from the subject street is likely to divert to adjacent neighbourhood roads or roads not under municipal jurisdiction.

3.6. The Town will not entertain requests for Traffic Calming measures on unassumed roads in new subdivisions.

4. Trial and Seasonal Installations

4.1. The Town may implement Traffic Calming measures on a trial basis to:

- Assess the effectiveness of the measures and allow for refinement of the Traffic Calming Plan prior to permanent installation;
- Stage or defer full implementation (particularly for more costly measures); and/or
- Gauge community reaction.

4.2. The Town may implement Traffic Calming measures seasonally to:

- Alleviate anticipated operational or maintenance concerns (e.g., snow and ice removal in winter); and/or
- Target conditions specific to certain times of year (e.g., school area).

5. Removal of Traffic Calming Measures

5.1. The Town may remove Traffic Calming measures installed for at least three (3) years at the request of neighbourhood residents. The Town requires a

petition signed by at least 51% of households (dwelling units) directly fronting the subject street to initiate the process. Requests to eliminate part of a Traffic Calming Plan may necessitate removal of the entire plan.

5.2. The Town will assess the potential implications of removing the subject Traffic Calming Plan. If removal would not present a safety risk or create undesirable consequences, the Town will survey neighbourhood residents to assess support for removing the Traffic Calming Plan. The survey will describe the requested actions and any alternatives if more than one option exists.

5.3. Removal requests not receiving broad-based neighbourhood support (defined as a minimum of 60% support from at least 50% of all eligible households (dwelling units) within the study area) will not proceed. If multiple options are presented to the public, the minimum response rate must still be met and the option with the majority of respondents in agreement will be carried forward. If the Town considers the plan worthy to retain despite lack of resident support, it may choose to keep the Traffic Calming measures based on a clear need to address specific traffic safety issues or at the direction of Town Council.

5.4. If the Town removes Traffic Calming measures from a road(s), residents of the subject street must wait at least five (5) years before submitting another request for Traffic Calming.

5.5. The Town reserves the right to remove Traffic Calming measures deemed to be ineffective or that pose a safety risk, or if the measures have created unintended consequences that cannot be rectified. This may include the unintended diversion of traffic onto an adjacent residential street. The Town will notify households directly fronting the subject street if considering the removal of Traffic Calming measures.

6. Traffic Calming for New Development

6.1. The Town may require the provision of Traffic Calming measures on streets in new developments through the development approval process (generally as a condition of approval for Plan of Subdivision and Site Plan Control applications). Measures may also be requested on existing roads to mitigate anticipated traffic impacts on nearby communities.

6.2. Achieving calm streets in new developments may require deviations from typical Town standards and other traditional engineering design guidelines. Documentation submitted through the development approval process summarizing the proposed variances and potential risks should also confirm that the Traffic Calming measures will not adversely impact road user safety, emergency vehicle access, or transit movements.

7. Traffic Calming for Road Reconstruction Projects

7.1. The Town may implement Traffic Calming measures on streets that are prioritized for traffic calming through planned road, water, and sewer reconstruction projects. This approach offers potential financial benefits (e.g., minimize throwaway costs for interim solutions, lower prices for Traffic Calming measures through economies of scale) and helps to minimize construction impacts on the community. The Town will base the Traffic Calming Plan on current characteristics, constraints, and context of the subject street, and consultation with the community as needed.

8. Use of Regulatory Signs for Traffic Calming

8.1. The Town will not install All-Way Stop Control (stop signs on all approaches to an intersection) for the sole purpose of Traffic Calming. *Ontario Traffic Manual (OTM) Book 5 – Regulatory Signs* recommends against the use of these traffic control devices to discourage Speeding or deter the movement of through traffic in a residential area. Installing all-way stops at locations not meeting the warrants specified in *OTM Book 5* can cause several issues, including poor motorist compliance, a false sense of security for pedestrians, Speeding between intersections, longer emergency response times, and noise and air pollution. Even when justified, all-way stops can increase the risk of rear-end and fixed object collisions.

8.2. The Town may install regulatory signs intended to reduce vehicle speeds (i.e., maximum speed limit and Community Safety Zone) and/or restrict traffic movement (i.e., turn prohibition and one-way street) to reinforce desired driver behaviour but not for the sole purpose of Traffic Calming. These traffic control devices often require enforcement to ensure motorist compliance and effectiveness.

A Community Safety Zone means a designated stretch of highway, recognized under provincial and municipal legislation, marked with designated signs allowing the doubling of fines.

9. Traffic Calming Study Process

9.1. The Town's Traffic Calming Study process comprises five steps. Refer to Appendix 1 for the sequence of activities.

Step 1 – Request

9.2. Residents with traffic-related concerns initiate the Traffic Calming Study process by submitting a request to the Town's Transportation Services Section using the Traffic Calming Request Form in Appendix 2 along with a petition signed by residents of the subject street. The Mayor and Councillors can also request studies on behalf of their constituents. A minimum of 50% of households (dwelling units) living in the study area must sign the petition.

Step 2 – Initial Screening

9.3. The Town will conduct an initial assessment of the request using the screening criteria listed in Appendix 3 to determine if the subject street meets the threshold for Traffic Calming.

9.4. As part of this process, the Town will conduct speed surveys, traffic counts, and/or origin-destination surveys, unless recent data (typically collected within the last three (3) years) is available. New data will typically be collected in the spring, summer, and/or fall season. Requests received in the winter season may be investigated the following spring.

9.5. Requests on roads that do not meet the screening criteria set out in Appendix 3 will be denied. The Town will inform the originator that the subject street does not qualify for Traffic Calming but may be a candidate for Education and Enforcement measures subject to resource availability.

9.6. During screening, the Town will also consider the subject street and surrounding area for a 40 km/h Neighbourhood Speed Limit based on the criteria specified in Appendix 4. The review will include the following three (3) categories of roads in the subject neighbourhood:

- Category 1: Local Roads with No Traffic Infiltration – Implementation usually effective on Local Roads where most motorists live in the area.
- Category 2: Local Roads with Traffic Infiltration – Implementation may not be effective on Local Roads with significant volumes of Shortcutting Traffic using signs alone.
- Category 3: Collector Roads – Implementation not typically effective on Collector Roads without Traffic Calming measures.

Implementation of eligible locations will be prioritized and included in the Town's Annual Budget.

Step 3 – Technical Assessment

9.7. For requests satisfying the initial screening, the Town will conduct a technical assessment to evaluate the potential benefit of installing Traffic Calming measures and prioritize the subject street against other eligible locations in the Town for implementation. The assessment process involves assigning a point score to the warrant criteria set out in Appendix 5 using data on existing traffic and road conditions, with the maximum score based on this methodology being 100 points.

9.8. Locations scoring more than 35 points for Local Roads, 40 points for Collector Roads, or 50 points Type C Arterial Roads will qualify for Traffic Calming,

subject to any local considerations. The Town may consider Education and Enforcement measures for locations not meeting these criteria, as appropriate.

Step 4 – Plan Development

9.9. If Education and Enforcement proves ineffective, the Town will develop a Traffic Calming Plan (or options, if appropriate) to address identified traffic concerns. The Toolkit contained in the Town's **Traffic Calming Guidelines** (provided separately) and the Transportation Association of Canada's *Canadian Guide to Traffic Calming* will provide the basis for selecting the Traffic Calming measures and preparing the design concept(s).

9.10. The Town will define the study area for Traffic Calming Plan development. The study area will typically comprise the properties with direct frontage on the subject street but may be expanded to capture potentially impacted households on other roads, especially if Shortcutting Traffic is the primary concern and traffic diversion is a possible outcome.

9.11. The Town will invite input on the proposed Traffic Calming Plan(s) from residents and stakeholders in the study area. Typical stakeholders include emergency services (Town Fire and Emergency Services, Durham Regional Police Service, and Region of Durham Paramedic Services), Durham Region Transit, and Town Divisions. In some cases, stakeholders may also include Town committees and school boards.

9.12. The Town will refine the Traffic Calming Plan to address input received from residents and stakeholders. This process could be iterative, depending on the extent of issues and type of feedback received.

9.13. After finalizing the design concept(s), the Town will survey neighbourhood residents on the proposed Traffic Calming Plan. The survey may also identify the preferred alternative if more than one plan option exists.

9.14. Proposed Traffic Calming Plans not receiving broad-based neighbourhood support (defined as a minimum of 60% support from at least 50% of all eligible households (dwelling units) within the study area) may be modified or re-examined. If multiple options are presented to the public, the minimum response rate must still be met and the option with the majority of respondents in agreement will be carried forward. If the Town considers the plan worthy for implementation despite lack of resident support, it may choose to proceed based on a clear need to address specific traffic safety issues or at the direction of Town Council.

Step 5 – Implementation

9.15. The Town may identify Traffic Calming installation locations for the coming year as part of annual Capital Budget preparation. Locations will be selected from the list of completed Traffic Calming Plans based on the priority ranking

calculated through the technical assessment (Step 3). Some locations may require the preparation of detailed design and tender documents prior to construction.

9.16. In some circumstances, the Town may decide to install the Traffic Calming Plan on a trial basis (for a period of up to 24 months) or implement the Traffic Calming measures on a seasonal basis, following the guidance set out in Section 4. The Town will evaluate the success of the trial or seasonal implementation and identify potential refinements prior to considering permanent installation. The evaluation should be consistent with the investigations conducted prior to installation to allow “before/after” or “cause/effect” comparisons. The evaluation should also consider operations during winter conditions.

9.17. Following implementation, the Town may monitor traffic conditions on the subject street (or broader study area in some cases) to assess the effectiveness of the Traffic Calming Plan and its impact on the surrounding road network. As noted in Section 5, the Town may remove Traffic Calming measures deemed to be ineffective or to pose a safety risk, or if the treatments have created unintended consequences that cannot be rectified. However, as mentioned in Section 5, the residents of the subject street must wait at least five (5) years before submitting another request for Traffic Calming.

Appendices

Appendix 1 Traffic Calming Study Process

Appendix 2 Traffic Calming Request Form

Appendix 3 Screening Criteria

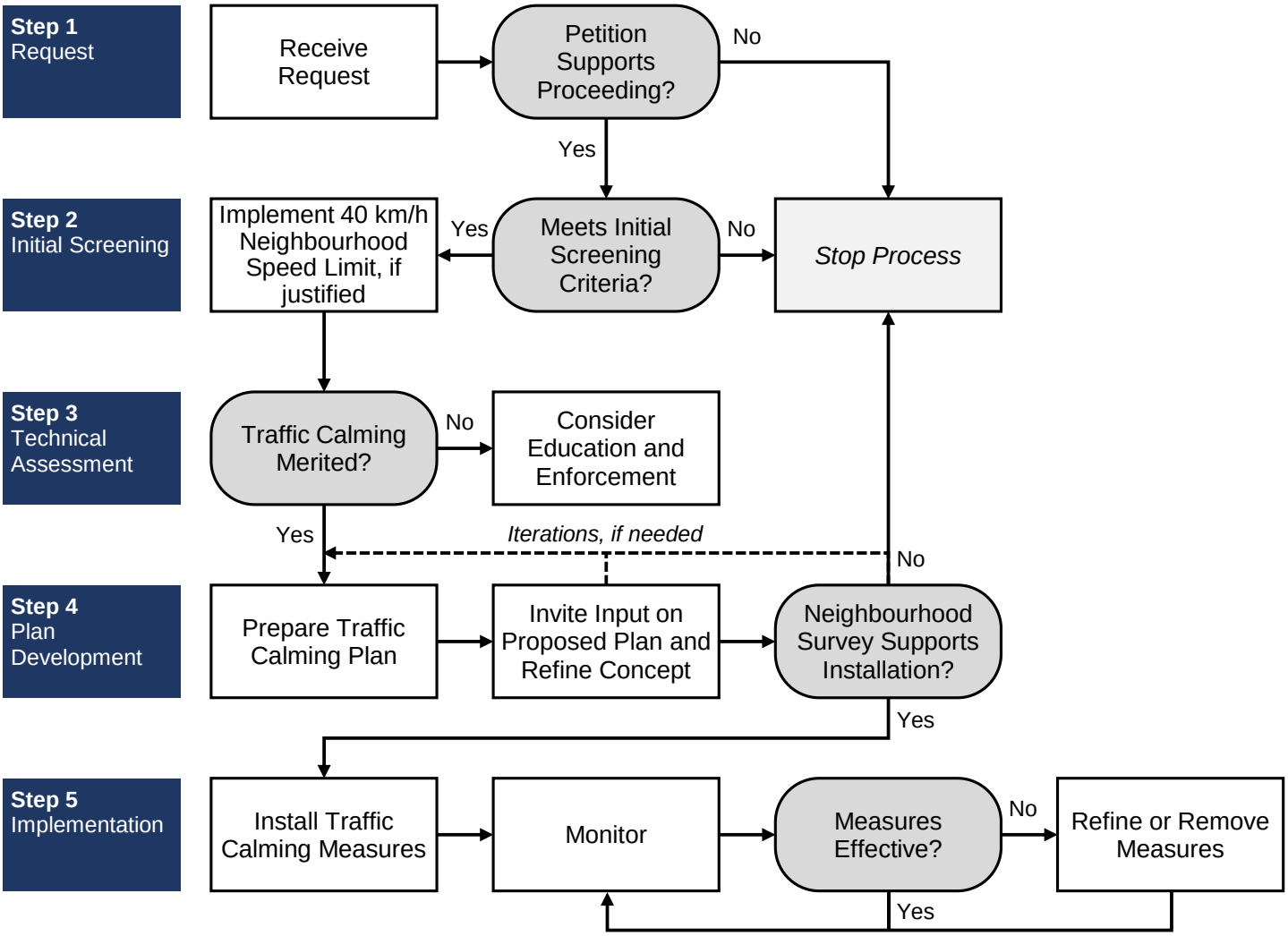
Appendix 4 40 km/h Neighbourhood Speed Limit Criteria

Appendix 5 Warrant Criteria

Appendix 6 Process for Estimating Shortcutting Traffic

This Policy is hereby approved by Council Resolution # Resolution Number from Council Meeting Minutes on this Day Number day of Month, 20Last Two Digits of Year Number.

Appendix 1 – Traffic Calming Study Process



Appendix 2 – Traffic Calming Request Form

What location (street) are you requesting a Traffic Calming Review for?

_____

Which of the following applies to you?

- ☐ I live on this street
- ☐ I work on this street
- ☐ My kids go to school on this street
- ☐ I live nearby and use this street frequently
- ☐ Other (please specify): _____

Please select the primary traffic concerns for the street in question:

- ☐ Speeding
- ☐ Shortcutting traffic
- ☐ Vehicle volumes
- ☐ Pedestrian and cyclist safety
- ☐ Other (please specify): _____

Is there a specific time of day when traffic is an issue?

- ☐ Morning
- ☐ Noon
- ☐ Afternoon
- ☐ Evening
- ☐ Overnight
- ☐ All day

Please provide any further comments:

_____

_____

Name: _____ Date: _____

Email: _____ Phone: _____

Address: _____

Preferred method of contact: ☐ Email ☐ Phone

Thank you for your Traffic Calming Review request. You will receive a confirmation email or phone call once your application has been processed. By initialing this request, you authorize your personal information to be shared with Durham Regional Police Service (DRPS) or Regional Municipality of Durham staff, as appropriate for the purpose of investigating this request. To address your request, traffic data collection may be undertaken in the area indicated above; if undertaken, data collection and evaluation can take up to six months. You will be notified of the outcome of the review.

Appendix 3 – Screening Criteria

Criteria	Traffic calming may be considered if:		
All criteria must be met:			
Previously Requested	The Town has not denied a request for Traffic Calming on the subject street in the past three (3) years.		
Measures Removed	The Town has not removed Traffic Calming measures from the subject street in the past five (5) years.		
Roadway Classification	The subject street is designated as a Local Road, Collector Road, or Type C Arterial Road on Schedule "D" (Transportation) of the Town of Whitby Official Plan.		
Speed Limit	The posted speed limit of the subject street is 50 km/h or less.		
Road Grade	The grade of the subject street is less than 8%.		
At least one criterion must be met:			
	Local Road	**Collector Road**	**Type C Arterial Road**
Operating Speed[1]	The 85th Percentile Speed is above the posted speed limit by more than 5 km/h	The 85th Percentile Speed is above the posted speed limit by more than 10 km/h	The 85th Percentile Speed is above the posted speed limit by more than 10 km/h
Shortcutting Traffic[2]	The percentage of Shortcutting Traffic is more than 30%	The percentage of Shortcutting Traffic is more than 60%	The percentage of Shortcutting Traffic is more than 60%

Notes:

1. The 85th Percentile Speed is calculated from data collected using automated traffic recorders (or similar units) over a minimum 24-hour period.
2. See Appendix 6 to estimate the percentage of Shortcutting Traffic.

Appendix 4 – 40 km/h Neighbourhood Speed Limit Criteria

Criteria	A 40 km/h Neighbourhood Speed Limit may be considered if:		
All criteria must be met:			
Previously Requested	The Town has not denied a request for a 40 km/h Neighbourhood Speed Limit for the subject neighbourhood in the past three (3) years.		
Defined Neighbourhood	The subject neighbourhood is bound by major roads (Collector Roads and/or arterial roads) and has defined entry/exit points.		
Speed Limit	The current posted speed limit for all Local Roads in the subject neighbourhood is 50 km/h or less.		
All criteria must be met for the applicable condition:			
	Category 1 Local Roads with No Traffic Infiltration	**Category 2 Local Roads with Traffic Infiltration**	**Category 3 Collector Roads**
Roadway Classification	Local Road	Local Road	Collector Road
Extent of Shortcutting Traffic[1]	Little to None (< 30%)	Significant (> 30%)	N/A
Key Characteristics: • Pedestrian Generator[2] within Walking Distance (400 metres or less) • Roadway Geometrics (vertical/horizontal curves) • Presence of Pedestrian Crossover(s) • Lack of Pedestrian Facilities (sidewalk, multi-use path)	N/A	At least two (2) characteristics present	At least three (3) characteristics present

Notes:

1. See Appendix 6 to estimate the percentage of Shortcutting Traffic.
2. Includes recreation centre, park/playground, place of worship, seniors' centre or residence, school, shopping area, library, transit route.

Appendix 5 – Warrant Criteria

Factor	Factor Scoring			Maximum Points
	Local Road	Collector Road	Type C Arterial Road	
Vulnerable Road Users	5 points for each adjacent pedestrian generator (e.g., recreation centre, park/playground, place of worship, seniors' centre or residence, school, shopping area, library, transit route)			20
Pedestrian Facilities	5 points if no sidewalks on either side	5 points if sidewalk on only one side	5 points if sidewalk on only one side	5
Cycling Facilities	5 points for on-road designated facilities			5
Residential Frontage	5 points for primarily residential frontage (> 10 entrances per km)			5
Speed Differential[1]	2 points for every 1 km/h the 85th Percentile Speed exceeds the posted speed limit	1 point for every 1 km/h the 85th Percentile Speed exceeds the posted speed limit	1 point for every 1 km/h the 85th Percentile Speed exceeds the posted speed limit	25
Excessive Speed[1]	5 points if the 85th Percentile Speed exceeds the posted speed limit by 20 km/h			5
Total Traffic Volume[2]	1 point for every 50 vpd over 1,000 vpd	1 point for every 100 vpd over 3,500 vpd	1 point for every 250 vpd over 5,000 vpd	15
Shortcutting Traffic[3]	5 points if more than 30% plus 5 points for each 10% increment thereafter	5 points if more than 60% plus 5 points for each 10% increment thereafter	5 points if more than 60% plus 5 points for each 10% increment thereafter	15
Collision History[4]	1 point for each qualifying collision over the last three (3) years			5
Maximum Total Score				**100**

Notes:

1. The 85th Percentile Speed is calculated from data collected using automated traffic recorders (or similar units) over a minimum 24-hour period.
2. Traffic volumes used in the evaluation are two-way ADT volumes over a 24-hour period (vehicles per day or vpd). Volume thresholds consistent with guidance contained in the Transportation Association of Canada's *Geometric Design Guide for Canadian Roads*, Table 2.6.5: Characteristics of Urban Roads.
3. See Appendix 6 to estimate the percentage of Shortcutting Traffic.
4. Includes all collisions along the subject street except for collisions occurring at intersections with arterial roads and collisions involving animals.

Appendix 6 – Process for Estimating Shortcutting Traffic

The percentage of Shortcutting Traffic on the subject street will be estimated using one of the following three methods, which are listed in order from least to most complex/ resource intensive/accurate. Select the technique providing the necessary level of precision for the least effort, with Method #1 or Method #2 typically used earlier in the review process (Step 2 – Initial Screening, Step 3 – Technical Assessment, and Step 4 – Plan Development) and Method #3 in the later stages for monitoring Step 5 – Implementation):

Method #1 – Simplified Trip Generation Calculation

Approximate the percentage of Shortcutting Traffic in predominately residential areas using the following formula:

$$Percentage\ Shortcutting\ Traffic = \frac{ADT - (10\ x\ Dwellings)}{ADT}$$

where,

ADT = Average Daily Traffic volume recorded (vehicles per day)
Dwellings = Number of houses on the subject street

Each dwelling on the subject street is assumed to generate 10 vehicle trips per day, roughly the weekday trip generation rate for a single-family detached dwelling cited in the Institute of Transportation Engineers (ITE) *Trip Generation Manual*.

Method #2 – Detailed Trip Generation Calculation

Determine the daily or peak hour trip generation potential based on ITE *Trip Generation Manual* rates. Compare the projected volume of trips to the recorded ADT or peak hour traffic counts to calculate the percentage of Shortcutting Traffic. Similar in approach to Method #1, this method can be used in areas that feature a mix of land uses, like residential, commercial, schools and parks, for example, or to provide a more precise estimate of Shortcutting Traffic.

The table below summarizes applicable trip generation rates from the ITE *Trip Generation Manual* (12th Edition). These values may change over time as the Manual is updated. Rates from the most current edition should be used. Additional dwelling units may increase the expected number of trips.

Land Use		Trip Generation Rate			
Description	ITE Manual Code	AM Peak Hour	PM Peak Hour	Daily	Variable
Detached House	210	0.70	0.94	9.34	per unit
Low-Rise Residential (Townhouse/Condominium/ Apartment) (2-3 floors)	220	0.40	0.51	6.74	per unit
Mid-Rise Residential (4 to 10 floors)	221	0.37	0.39	4.54	per unit
High-Rise Residential (more than 10 floors)	222	0.27	0.32	4.54	per unit
Elementary School	520	0.74	0.16	2.27	per student
High School	525	0.52	0.14	1.94	per student
Day Care Centre	565	0.78	0.79	4.09	per student

Method #3 – Origin-Destination Study

Record vehicle license plates at all entry and exit points to the study area manually or using digital technology. Match the license plates of vehicles entering and exiting to determine the percentage of vehicles passing through compared to those that begin or end their trip within the area.