TOWNSHIP OF ESSA
TRAFFIC ADVISORY COMMITTEE

TUESDAY, April 2, 2024 – 3:15 p.m.
ZOOM MEETING
MINUTES

In attendance:

Michael Mikael, CAO
Rick Foley, Ward 2 Committee Representative
Nottawasaga OPP
Vanessa Kupch, Secretary
John Kolb, Roads Supervisor
Christian Meile, County of Simcoe
Claire Walker, County of Simcoe
Mike Owen, Ward 1 Committee Representative

Regrets: Mayor Sandie Macdonald, Chair
Councillor Henry Sander
Dan tucker, Ward 3 Committee Representative

1. OPENING OF THE MEETING

Michael Mikael, CAO opened the meeting at 3:15 p.m.

2. APPROVAL OF AGENDA

Moved by: **Owen** **Seconded by:** **Kolb**

Be it resolved that the Agenda as presented be approved.

3. ADOPTION OF MINUTES OF PREVIOUS MEETING

Moved by: **Kolb** **Seconded by:** **Foley**

Be it resolved that the minutes of the Traffic Advisory Committee meeting dated January 9, 2024, be approved as printed.

4. BUSINESS ARISING FROM PREVIOUS MEETING

4.1 Transportation Master-Plan

Draft Traffic Calming Policy (Attachment No. 1)

4.2 Rectangular Rapid Flashing Beacon (RRFB attachment No. 2)

5. NEW BUSINESS

5.1 Resident Concerns:

DATE	CONCERN LOCATION:	CONCERN:
January 12, 2024	Park Road	Resident is concerned with numerous of vehicles parking along the resident's ditch during school hours. The resident is requesting for no parking signs or other resolutions to prevent further damage to their lawn Resident is requesting for the speed limit to be dropped to 30 km or 40 km along Greenwood Drive.
January 12, 2024	10th Sideroad	Resident is requesting for stop signs to be placed on Scotch Line to the corner of 10th Sideroad and 3rd Line. The resident is very concerned with speeding and dangerous driving along the 10th Sideroad and has noted that they have almost been hit numerous of times backing out of their driveway.
February 17, 2024	County Road 21	Resident is very concerned of having a safe access to her driveway from all directions as the roundabout currently only provides access from the east.
February 22, 2024	Mill Street	Resident is requesting for painted arrows and/or overhead turning lane signs to be placed at the intersections of Mill Street, King Street and Pine River Road to prevent an accident.
February 26, 2024	Algonquin Heights Court	Resident is requesting for Algonquin Heights Court to be included in the Community Safety Zone. The resident has also requested for the speed camera to be placed at the top of the hill on the 25th Sideroad and 9th Line as she believes the speed cameras have made a big difference in our community.
December 23, 2023	County Road 27	Resident has concerns regarding the County Road 27 widening and potential traffic calming measures.

6. OTHER BUSINESS

6.1 Round Table Comments/Questions.

PIC will be addressed in late fall; the County of Simcoe will be issuing notices in the next couple of months. Although construction is not planned until 2029.

A Committee member requested to have wider lanes implemented North of County Road 21 and County Road 27, with rumble strips.

A Committee member would also like to see Trout Creek more protected once road widening is implemented.

RRFB will include Centre Street in the Traffic Calming budget.

Speed camera will be placed back on the 25th Sideroad soon, another location will be added.

Simcoe County is interested in including a speed camera in Baxter.

A Committee member has requested more enforcement or a red-light camera on Barrie Street and Robert Street to add to traffic calming measures.

7. ESTABLISH DATE AND TIME OF NEXT MEETING

The next Traffic Advisory Committee meeting will be scheduled virtually for June 4, 2024, at 3:15 p.m.

Thank you to everyone for their attendance and input during this term of Council.

9. ADJOURNMENT

Moved by: **Owen** **Seconded by:** **Kolb**

Be it resolved that this meeting of the Traffic Advisory Committee of the Township of Essa adjourn at 3:40 PM.

Township of Essa
Transportation and Trails Master Plan

Draft

October 2023

Traffic Calming Policy

Table of Contents

1 INTRODUCTION

The Township of Essa is planning for future growth and change within their transportation planning practices. Through the Transportation Master Plan, the Township aims to ensure that the transportation system is tailored to the needs of all community members and allows safe, accessible, and well-connected transportation options. In September of 2018, the Township adopted a traffic calming policy which outlines traffic calming measures, guidelines, and monitoring requirements. The policy contains a series of recommendations that largely align with those identified in the 2017 TAC ITE guide and industry best practices. As the Township has continued to grow and traffic calming guidelines have continued to evolve, it is necessary to update policies to reflect community needs and evolving understandings of best practices. With that understanding in mind, the Township is advised to adopt the following update to the existing Traffic Calming Policy to better suit the Township of Essa's current context and expected growth.

1.1 PURPOSE

The purpose of this policy is to provide staff with a guideline and procedure for the initiation, investigation and implementation of traffic calming measures for roadways within the Township of Essa.

This policy also ensures that there is a formal process defined by which all sites/traffic calming requests can be evaluated against using consistent screening and criteria.

Note: This policy does not apply to arterial roads, as they are intended to serve higher traffic volumes.

2 TRAFFIC CALMING

2.1 WHAT IS TRAFFIC CALMING?

Traffic calming is defined as the combination of measures that alter driver behavior to reduce the potential of negative effects of motor vehicle use and improve conditions for alternate modes of transportation. Traffic calming measures are frequently physical measures, which can be combined with educational and enforcement tools to improve the safety and comfort of neighbourhood streets.

2.2 OBJECTIVES OF TRAFFIC CALMING

To address undesirable traffic conditions such as poor sight lines, speeding, and excessive volume on local and collector roads, the specific objectives of traffic calming and this guide are to:

A) Increase the Safety in Neighbourhoods

Through the use of physical measures to alter driver behavior, traffic calming can improve safety on neighbourhood streets. The resulting reduction in volume and speed creates a safer environment for all residents including pedestrians and cyclists.

B) Improve the Livability in Neighbourhoods

Traffic calming is intended to uphold and restore the livability and sense of community within neighbourhoods by minimizing the volume and speed of through traffic. As a result, negative impacts from traffic such as excessive noise, air pollution, visual presence of numerous vehicles and potential safety hazards are minimized. In addition, attractively designed traffic calming measures can enhance the aesthetics of a neighbourhood and improve streetscapes by adding additional opportunities to incorporate vegetation, public artwork and more.

C) Restore Streets to Their Intended Function

The intended function of a local road is to accommodate low to moderate volumes of traffic travelling at lower speeds in and out of neighbourhoods or from points of origin to the collector road system. Local roads provide direct vehicle access to residences that typically front onto these roads. Through traffic should be discouraged from using local roads. The Township of Essa's collector roads are intended to provide access to properties as well as to provide linkages between local roads and other collector and arterial roads. When these roads serve as through streets, the risk of negative outcomes is elevated due to the high number of potential conflicts along these roads.

D) Maintain Access Routes for Emergency Services, Public Transit & Maintenance Services

The potential impacts to these services have been considered in the development of this guide and will continue to be considered throughout the implementation of traffic calming measures. The needs of these services will be balanced against the need to slow and/or reduce traffic. In addition, this guide outlines the process through which all potentially impacted services will have the opportunity to comment on any proposed plans before implementation.

E) Promote Public Participation and Community Support

Traffic calming measures have a direct impact on neighbourhoods and the residents living in them. As such, an integral part of the process includes resident communication and feedback. Good community involvement leads to solutions to specific local traffic issues. 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.

2.3 ADVANTAGES AND DISADVANTAGES

Traffic calming measures introduce a number of trade-offs which need to be considered when selecting and implementing measures. In general, the advantages of a well-executed traffic calming policy are:

- Reductions in motor vehicle speeds, particularly ‘top-end’ speeding (95th to 99th percentile speeds);
- Reductions in traffic volumes on traffic calmed streets;
- Reduced levels of cut-through traffic on residential streets;
- Improvements in overall road safety outcomes for all users;
- Improvements in neighbourhood livability due to reduced noise and traffic risk; and
- Reductions in conflicts between road users.

Traffic calming measures need to be carefully considered to respect the context of the neighbourhoods in which they are being implemented. Some of the potential disadvantages that practitioners should be mindful of when installing traffic calming measures are:

- Increases in emergency vehicle response time associated with some horizontal deflection measures such as speed humps;
- reduced ease of access in and out of neighbourhoods;

- Traffic diversion onto adjacent roads where traffic calming measures have not been implemented; and
- Increases in maintenance costs such as snow clearing or garbage pick-up associated with some measures.

3 TRAFFIC CALMING MEASURES

As per the Institute of Transportation Engineers (ITE) *Traffic Calming: State of the Practice*, physical traffic calming measures are classified as either speed control measures or volume control measures.

3.1 SPEED CONTROL MEASURES

Speed control measures are intended to reduce travel speeds and may include:

- Speed bumps / humps (rounded, raised areas placed across the roadway);
    - Not to be considered unless upon urban curb and gutter streets
    - Not to be considered in winter months
    - Could be considered in school zones
    - Consider through trial periods only with community feedback
- Speed tables (flat-topped speed humps);
- Speed cushions (similar to a speed hump, but with channels that permit vehicles with wider wheelbases, such as transit vehicles and fire trucks, to travel through at speed.)
- Raised intersections (flat raised areas covering entire intersection, with ramps on all approaches and often with brick or other textured materials on the flat section);
- Traffic circles (raised island, placed in intersections, around which traffic circulates);
- Roundabouts (larger than traffic circles and typically have raised splitter islands to channel approaching traffic to the right and are used on higher volume streets);
- Chokers (curb extensions at midblock locations that narrow a street);
- Realigned intersections (changes in alignment that convert T-intersections with straight approaches into curving streets that meet at right angles);
- Neck downs (curb extensions at intersections that reduce roadway width curb to curb);
- Centre island narrowing (placement of a raised island located along the centreline of a street that narrows the travel lanes at that location);
- Chicane (Two-Lane) Lateral Shift (consists of curb extensions placed on alternating sides of the road);

- Lane narrowing through collapsible bollards; and
- Intersection centreline hardening (placement of bollards or concrete/rubber curbs to prevent drivers from cutting across intersections).

3.1.1 SPEED LIMIT CHANGES

In line with other cities in Ontario and the industry trend to reduce speed limits on local streets to improve safety, the default speed limit in urban areas of the Township should be posted at 40km/hr. Additional measures need to be taken to induce behavioral change to comply with the speed limit. Measures should include:

- Public awareness campaigns to alert residents of the speed limit;
- Existing roads should be painted with white edge lines and a centre yellow line to ensure each travel lane is 3m; and
- Revisit road standards for new road construction to narrow travel lanes and design new streets for lower speeds.

3.2 VOLUME CONTROL MEASURES

Volume control measures are intended to reduce traffic volumes and include:

- Full or partial street closures (full street closures are barriers placed across a street to close the street completely to through traffic, usually leaving only sidewalks or bicycle paths open, whereas half closures are barriers that block travel in one direction for a short distance on otherwise two-way streets);
- Diagonal diverters (barriers placed diagonally across an intersection blocking through movement);
- Median barriers (raised islands located along the centreline of a street and continuing through an intersection to block through movements at a cross street); and forced turn islands (raised islands that block certain movements on approaches to an intersection); and
- Directional closures (a curb extension or vertical barrier that extends to around the centerline of a roadway, effectively blocking one direction of traffic). When used in conjunction with other measures within a neighborhood, directional closures discourage short-cutting traffic.
    - Apply to local streets with high levels of cut-through traffic that may abut onto collector or arterial roads.

3.3 EDUCATION MEASURES

Education can be utilized to support other traffic calming measures but should not be implemented without physical changes to the roadways. The education of motorists, bicyclists, and pedestrians are beneficial as it requires lower levels of investment than physical measures, making them easier to implement. Education campaigns can also be community specific and combined with other approaches to encourage long-term behavioral shifts in transportation and result in safer roadways for all users. Some measures as determined in the TAC guide include:

- Active and Safe Routes to School Programs:
- Pace Car Programs;
- Speed Display Devices;
- Vehicle Activated Signs (VAS);
- Targeted Education Campaigns to educate and inform drivers on responsible and safe behaviors on the road;
- Speed enforcement campaigns across the municipality in effort to raise awareness to the issue of speeding in the municipality;
- Expand Community Safety and School Zones: Work with schoolboards and community members to establish safe school zones that restrict vehicle movement around schools to encourage higher uptake of active transportation to school; and
- Active and Safe Routes to School Program.

3.4 ENFORCEMENT MEASURES

Enforcement is another tool for non-physical traffic calming measures. Enforcement can aid in achieving intended outcomes of traffic calming measures, especially when fixed enforcement tools are deployed.

Some measures as recommended by TAC include:

- Fixed speed enforcement;
- Mobile speed enforcement;
- Speed Watch Programs;
- Speed enforcement (police enforcement); and

- Redlight cameras on high-volume roads, particularly in commercial areas to passively enforce speed limits.

4 TRAFFIC CALMING MEASURES GUIDELINES

4.1 RECOMMENDED MEASURES

In consideration of the Township's objectives in implementing a Traffic Calming Policy, and recognizing a large extent of the Township's road system includes urban, semi-urban and rural roads, the following traffic calming measures have been considered as viable options to implement:

- **Speed Control Measures**
  - Speed bumps / humps / cushions
  - Speed tables
  - Curb extensions
  - Lane narrowing via pavement markings
  - Lane narrowing via flexible bollards
  - Centre medians
  - Temporary centre medians
  - Traffic circles
  - Chicane (two lane) lateral shift
  - Intersection centreline hardening
  - Transverse lane markings (transverse bars or chevron pavement markings on a travel lane)
- **Volume Control Measures**
  - Diverters / modal filters / directional closures
- **Education Measures**
  - Community Safety Zones
  - School Zones
  - Radar speed display signs
  - Active and safe routes to school programs

- Targeted education campaigns

- **Enforcement Measures**
  - Police enforcement
  - Red light cameras
  - Automated speed enforcement

Descriptions of each of the measures proposed for the Township are included below.

4.2 SPEED CONTROL MEASURES

4.2.1 SPEED BUMPS/HUMPS AND CUSHIONS

Speed bumps / humps are defined as a raised area of the road, which deflects both the wheels and frame of a traversing vehicle. They may be paved as a permanent feature or temporary, removable rubber mounds for seasonal use.

Typically, 80mm high and 4.0m wide (in the direction of travel), spaced 125m to 225m apart. In more dense urban locations, speed humps can be located as close as 60m apart. Speed humps are used on residential (local) streets and collector roads.

On roads that are frequently travelled by transit vehicles or emergency services vehicles, speed cushions may be a preferred alternative to speed humps. Speed cushions are similar to a speed hump, but with channels that permit vehicles with wider wheel-bases, such as transit vehicles and fire trucks, to travel through at speed, minimizing the impact on travel times for these larger vehicles.

Advantages

- Relatively cost-efficient
- Easy to construct
- Deters cut-through traffic
- Reduces vehicle speeds

Disadvantages

- Speed humps May delay emergency vehicles
- May divert traffic to alternate routes that could negatively affect other roads
- Possible noise from braking/acceleration
- May cause discomfort to drivers with disabilities
- Impacts to snowplows and trucks
- Resources needed to install/remove seasonally

Estimated Cost

- $2,000 to $3,000 each
- $7,000 for a modular speed hump

4.2.2 SPEED TABLES

Speed tables are flat-topped asphalt or rubber mounds that cover the full width of the roadway. The ramps of the speed table are more gently sloped than speed humps and thus speed tables are less jarring than a standard speed hump and can allow larger vehicles (emergency vehicles, trucks and snowploughs) to cross with reduced disruption. As such, speed tables are typically not removed seasonally.

For an 85th percentile speed of approximately 40 km/h, the speed table should be 80 mm high and 6.5 metres long in the direction of travel (2 metre ramps at the ends and a 2.5 metre plateau which is typically long enough to accommodate the entire wheelbase of a passenger car).

Advantages

- Relatively cost-efficient
- Easy to construct
- Deters cut-through traffic
- Reduces vehicle speeds
- Lesser impacts to larger vehicles as compared to speed humps
- Can be applied in both directions on two-way streets

Disadvantages

- May delay emergency vehicle response times
- May divert traffic to alternate routes that could negatively affect other roads
- Possible noise created by braking/acceleration
- May cause discomfort to drivers with disabilities
- Potential impacts to snowplows and trucks
- May require additional maintenance responsibilities

Estimated Cost

- $3,000 to $5,000 each
- $10,000 for a modular speed table

4.2.3 CURB EXTENSIONS

Also known as “bump- outs”, curb extensions are horizontal extensions of a curb into a road, resulting in a narrower road section. These may be used to provide high visibility of pedestrians, shorter walking distances to cross the road, and to slow motorists down.

Advantages

- Interrupts straight line curbs and slows traffic
- Reduces turning radii to slow turning speed
- Improves pedestrian safety

Disadvantages

- May reduce on-street parking
- Large vehicles may need to cross centerline to negotiate turns
- May interrupt bike lanes if not designed

Estimated Cost

- $5,000 to $20,000 Each

- Improves sightlines at intersections by providing additional daylighting
- No impacts to emergency services

with adequate consideration

- Increased snow removal costs and operation time

4.2.4 LANE NARROWING THROUGH PAVEMENT MARKINGS

This measure narrows the travel lanes to a minimum width of 3.0 metres through the use of pavement markings (centreline and edge lines). Reduced lane widths provide a feeling of constraint and should cause drivers to reduce their travel speed. Any remaining road width would be designated as shoulder.

Advantages

- Provides additional space for shoulders, which may be used for other road users (particularly in absence of sidewalks)
- Low cost
- No impact to emergency vehicles and snowplows
- Can be readily implemented
- Does not affect vehicle operations

Disadvantages

- Lane narrowing reduces separation between oncoming vehicles
- Pavement markings require maintenance and are not visible during winter months

Estimated Cost

- $1,000 to $2,000 per km of pavement marking and mobilization

- Provides guidance during low light conditions through reflectivity

4.2.5 LANE NARROWING THROUGH COLLAPSIBLE BOLLARDS

Lane narrowing is a technique used to reduce lane widths and influence driver behavior. By making lanes narrower, drivers perceive the road as less comfortable at higher speeds, leading to reduced operating speeds.

Collapsible bollards can be used. Strategically place collapsible bollards to create temporary narrow lanes. They create both physical and visual cue for drivers to slow down.

Source: Municipality of Leamington

Advantages

- Flexible and adaptable measure to implement
- Low-cost initiative that can be placed in existing right of ways
- Provision of both physical and visual cue

Disadvantages

- May require more detailed maintenance considerations

Estimated Cost

- $1,000 to $1,200 per set of three bollards

4.2.6 CENTRE MEDIAN

A centre median is a raised island installed in the centre of a road to reduce the overall width of the travelled lanes. They help slow traffic without affecting the capacity of the road.

Raised median islands can be combined with curb extensions and/or textured crosswalks to further improve pedestrian safety. This measure may be considered on both local and collector roads.

Advantages

- provides refuge for pedestrians
- Increases motorist awareness
- Can be designed to prohibit left-turns thereby reducing cut-through traffic

Disadvantages

- May reduce on-street parking
- Restricts driveway access
- Speeds may increase due to lack of left turns
- Additional maintenance if landscaped
- Potential conflict with snow clearing operations

Estimated Cost

- $4,000 for 2.0m x 5.0m median with no landscaping

4.2.7 TEMPORARY CENTRE MEDIAN

Similar to the centre median, the temporary centre median is installed in the centre of a road using flexible delineator posts to create reduced travelled lane widths. They help slow traffic without affecting the capacity of the road and are removable for winter snow clearing operations.

Advantages

- Increases motorist awareness
- Can be designed to prohibit left-turns thereby reducing cut-through traffic
- Removable for snow clearing operations

Disadvantages

- May reduce on-street parking
- Restricts driveway access
- Speeds may increase due to lack of left turns
- Required to be set up each year

Estimated Cost

- $1,000 for signage and flexible posts

4.2.8 TRAFFIC CIRCLES

A “traffic circle” is not the same as a modern day “roundabout”. They are much smaller and serve a different purpose for the intersection, which is simply to reduce speed rather than to control high traffic volumes through an intersection.

Circular island about 3m to 6m in diameter, is placed at intersections of residential streets, around which traffic circulates in a counter-clockwise direction.

Advantages

- Reduces speeds through intersections
- Provides visual breaks
- Reduces collisions
- Provides landscaping opportunities
- Provide yield control for motor vehicles

Disadvantages

- Increased maintenance cost if landscaped
- Potential conflict with snow clearing operations
- Learning curve for drivers when first installed
- Restricted access for trucks and longer school buses

Estimated Cost

- $8,000 to $25,000 each

4.2.9 CHICANE (TWO LANE) LATERAL SHIFT

A chicane is a traffic calming measure consisting of curb extensions placed on alternating sides of a road. These extensions narrow the roadway, requiring drivers to steer from one side to the other as they pass through the chicane.

Chicanes can discourage drivers from taking shortcuts or using the road for through traffic, as well as to reduce overall speeds by forcing vehicles to shift laterally while passing through the chicane.

Source: Wikimedia Commons. Credit: Richard Drdull

Advantages

- Discourage drivers from taking short-cuts
- Reduce overall speeds
- Provides visual traffic calming effect

Disadvantages

- May require removal of on street parking
- May require curb alignment

Estimated Cost

- $5,000 to $20,000 each

4.2.10 INTERSECTION CENTRELINE HARDENING

Intersection centerline hardening entails using either bollards or rubber/concrete curbs to prevent drivers from cutting across intersections at a diagonal. They are beneficial in reducing conflicts among pedestrians/cyclists and motor vehicles.

Source: City of Toronto

Advantages

- Forces drivers to turn slowly at a right angle
- Can decrease vehicle and pedestrian conflicts by 70%

Disadvantages

- Required to be set up each year

Estimated Cost

- $1,200 to $1,900 per location

4.2.11 TRANSVERSE LANE MARKINGS

Full-Lane Transverse Bars include parallel pavement markings which extend across the width of the road. The markings can be placed closer together with distance to create the illusion that a vehicle's speed is increasing and to encourage the driver to slow down.

Advantages

- Reduced vehicle speeds
- Quick to implement
- No impacts to emergency vehicles, transit, maintenance vehicles, etc.

Disadvantages

- Pavement markings will require regular maintenance
- Potential increase in costs if placed in wheel path of vehicles
- Visibility of pavement markings may be reduced in winter months and from significant upstream distances

Estimated Cost

- $500 per location

4.3 VOLUME CONTROL MEASURES

4.3.1 DIVERTERS AND MODAL FILTERS (DIRECTIONAL CLOSURES)

A diverter / modal filter / directional closure is a raised barrier or sign placed at an intersection that forces traffic to turn and prevents traffic from proceeding straight through the intersection. Diverters can incorporate gaps for pedestrians, wheelchairs and bicycles and can be mountable by emergency vehicles.

Modal filters can also be implemented as a directional closure at an intersection – restricting through movements on a local street through a curb extension or physical barrier on the far side of the intersection.

Source: Wikimedia Commons. Credit: Richard Drdull

Advantages

- Appropriate for local and collector streets
- Can permit passage of by emergency vehicles through mountable elements
- Can be implemented as a part of overall network policy or comprehensive system

Disadvantages

- Can be unsatisfactory to through cyclists who may be exposed to unsuspecting traffic on both sides of the diverter (depending on the diverter geometry and cyclist manoeuvre)

Estimated Cost

- $500 - $8,000 depending on construction measures selected

4.4 EDUCATION MEASURES

4.4.1 COMMUNITY SAFETY AND SCHOOL ZONES

Community Safety Zone signs inform drivers they are entering a zone that the community has designated as an area where the safety of its

children/citizens is paramount. Traffic related offences committed within the zone are subject to increased fines (many set fines are doubled such as speeding and traffic signal related offences) through a special designation under the Highway Traffic Act

Community Safety Zones may include roadways near day care centers, playgrounds, parks, and senior citizen residences. Community Safety Zones can also be deployed in areas with an extensive collision history within the community.

Community Safety Zones should include areas that extend for two blocks in all directions from schools, parks and senior citizen residences. Community Safety Zones should be prioritized for reduced speed limits to 40km/h, with School Zones being reduced to 30km/h on all residential streets within 2 blocks of the school. Under current provincial legislation, Automated speed enforcement can only be used within Community Safety Zones. The Township is eligible to use automated speed enforcement in appropriately designated Community Safety Zones.

Advantages

- Effective as a temporary speed reduction measure.
- Permits the use of Automatic Speed Enforcement

Disadvantages

- Limited efficacy without regular enforcement or physical measures

Estimated Cost

- $250 includes sign and posts installation

4.4.2 RADAR SPEED DISPLAY SIGN

Radar speed display signs are portable or permanent radar activated signs that instantaneously display approaching speeds for individual vehicles. They can also be programmed to flash when motorists are exceeding the speed assigned within the sign. The signs can be solar powered to reduce environmental impact.

These devices create a sense of being monitored to the driver and provide an instant notification that the speed limit is being exceeded (if such is the case).

Advantages

- Educational tool, good public relations, effective as a temporary speed
- Collect data relating to speed, traffic volume, etc.
- Inexpensive, and easy to install

Disadvantages

- Relies on motorist to voluntarily comply, duration of effectiveness is limited, not accurate on roads with multiple lanes per direction (too much traffic).
- Staff time consuming, requires to be moved to different locations.

Estimated Cost

- $4,500 for sign

4.5 ENFORCEMENT MEASURES

4.5.1 POLICE ENFORCEMENT

Speeding is an infraction of the Highway Traffic Act enforceable by the OPP. It is often used with other traffic calming devices to regulate behaviour and is proven quite effective in reducing travel speeds, but requires the presence of an officer to provide the benefits.

Advantages	Disadvantages	Estimated Cost
• Effective in getting drivers' attention • No impact to emergency vehicles and snowplows • Can be implemented immediately, when resources permit • Does not affect vehicle operations	• May be costly as additional revenue for tickets does not pay for officer work time • Does not provide for a continuous and consistent solution (i.e. not present for 24 hours per day and 7 days a week) • Competing priorities	• Varies

4.5.2 RED LIGHT CAMERAS

A red light camera is a device that detects vehicles that run a red light at an intersection. The camera takes a photo of the vehicle, its license plate and the traffic signal when the violation occurs. The photo is used as evidence to issue a fine to the registered owner of the vehicle. Red light cameras are intended to improve road safety by deterring drivers from running red lights, which can cause serious collisions and injuries.

Advantages	Disadvantages	Estimated Cost
• 24/7 monitoring allows for continuous enforcement • Enhances road safety at all times including late night and early morning • Red light camera funds can be used to support road safety enhancements	• Initial setup and maintenance costs can be substantial • Many signalized intersections are within Simcoe County jurisdiction	• Varies depending on the model of implementation

4.5.3 AUTOMATED SPEED ENFORCEMENT

Automated Speed Enforcement (ASE) is a system that uses a camera and speed measurement device to enforce speed limits in identified areas. If a vehicle exceeds the posted speed limit in an automated speed enforcement area, the automated speed enforcement system captures an image which is reviewed by a provincial offences officer. An image of the offence, license plate and ticket with an associated fine will be mailed within the next 30 days.

Source: Region of Durham

Advantages

- 24/7 monitoring allows for continuous enforcement
- Enhances road safety at all times including late night and early morning

Disadvantages

- Initial setup and maintenance costs can be substantial
- Municipalities are unable to recover any costs as revenue is collected by courts

Estimated Cost

- Varies depending on the model of implementation

5 TRAFFIC CALMING MEASURES GUIDELINES

5.1 CONSIDERATION FOR TRAFFIC CALMING

Traffic calming measures will:

- Be considered when there is a demonstrated safety, speed or short-cutting traffic concern and acceptable alternative measures have been exhausted.
- Be considered after focus is placed first on improvements to the arterial road network, such as signal timing optimization.
- Be considered as part of an area-wide plan as opposed to a street-specific plan unless there is a demonstrated rationale for why a street-specific plan is more preferred.
- Be predominantly restricted to two lane roads (one lane of through traffic in each direction).
- Not impede non-motorized, alternative modes of transportation and be designed to ensure pedestrian and cycling traffic is unaffected.
- Not impede Emergency and Transit services access unless alternate measures are agreed upon with the affected Departments.
- Maintain reasonable automobile access to Township roads.
- Prioritize areas that feature high-rates of pedestrian-vehicle conflicts and ensure measures match road typology.
- Where applicable, passively enforce speed limits and generate revenue that can be allocated towards additional traffic calming measures.
- Prioritize areas that should receive traffic calming measures through utilizing staff and resources to survey and confirm with traffic counts where cut-through traffic is prevalent on residential roads.
- Prioritize rolling out low-cost interventions including signage along residential streets and abutting intersections to restrict cut-through traffic in residential areas.
- Build awareness around the positive effects of traffic calming measures throughout the municipality in efforts to increase momentum behind enacting other measures.
- Consider collision data to determine where additional calming needs should be implemented annually.

- Include considerations of Council and staff recommendations for appropriate locations allowing for more agile efforts.
- Consider parking removal on a project-by-project basis. Parking needs of residents should be balanced with the equally important functions of traffic, emergency vehicle access, transit, bicycle, and pedestrian movement.
- Only be installed after staff has investigated existing traffic conditions and the necessary approvals have been received.
- Be monitored; follow-up assessment and report will be completed to confirm effectiveness and the results will be communicated to area residents and Council.

A note on Stop Signs:

It is important to note that stop signs are not to be used for speed control. In accordance with the Ministry of Ontario (MTO) Traffic Manual Book 5 (Regulatory Signs) unwarranted stop signs increase vehicular speeds between stop signs and encourage rolling stops (stop signs only affect speeds within approximately 40 metres of the stop sign). An excessive number of stop signs, particularly those that are not warranted, encourage disrespect for stop control signs and other traffic control devices.

5.2 COMMUNITY INVOLVEMENT

Restoring neighbourhood streets to their intended function and improving overall livability 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 a 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 neighbourhood 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 and the proposed solution.

The benefit of neighbourhood involvement is that it generates support for a traffic calming program and assists in the implementation of a plan without significant opposition upon completion. Neighbourhood involvement also enhances the credibility of the traffic calming program, particularly when it is eventually presented to Committee or Council for approval. In order to obtain a working partnership with the committee or residents, a description of the study will be issued in a notice along with a survey delivered to residents affected by the implementation of the proposed traffic calming measures.

These forms of contact will provide the affected residents with opportunities to offer input into the development of the plan, as well as publicize and increase the awareness of the study.

The review and implementation of traffic calming measures is 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 as a result, jeopardizing the outcome and potential positive impacts to affected neighbourhoods.

Neighbourhood support, enforcement, education of motorists, bicyclists and pedestrians, appropriate engineering applications and economics typically determine the success of any traffic calming endeavor. A cooperative partnership between the affected residents and the Township is essential to the success of the project.

In some cases, it may be found that traffic calming measures are warranted and a majority of affected residents would prefer some form of mitigation, but there is a wide range of conflicting opinions regarding the type of mitigation etc. Pending comments received from the residents regarding the notification and survey, the Township may offer to host a Public Open House to discuss potential options for traffic calming measures.

5.3 CLASS ENVIRONMENTAL ASSESMENT PROCESS

Traffic calming is exempt from the Ontario Environmental Assessment Act and is not an undertaking subject to the Municipal Engineers Association Municipal Class Environmental Assessment (October 2000, as amended). Where appropriate, public consultation elements of the Municipal Class EA for a Schedule B project (including the potential public meeting when warranted as noted above) have been incorporated in this policy as a best practice.

The manner in which the public is informed throughout this policy will serve as the preferred method of public notification for any traffic calming measures that involve the retirement of existing road facilities.

6 TRAFFIC CALMING IMPLEMENTATION PROCESS

The following process will be used when proceeding with a request for traffic calming measures within the Township of Essa. An established and formal process for investigating roads provides consistency and equality in the determination of need and suitability of traffic calming measures.

To address concerns and feedback brought forward by those who travel and live within Essa three streams for implementing traffic calming measures are included:

1. Community-wide
2. Request based
3. Collision hotspot correction

These streams vary in the initiation method, process, implementation timeline and funding sources. Collectively they will result in slower traffic and increased safety in Essa. The strategy includes traffic calming as part of community-wide initiatives, new development, capital infrastructure projects, and modification to existing neighborhoods.

6.1 COMMUNITY-WIDE APPROACH

The community approach is a holistic implementation across Essa by lowering the default speed limit from 50km/hr to 40km/hr. Having the default speed limit of 40 km/hr be posted throughout the urban areas of Essa will play and important role in traffic calming. The posted speed limit will send a message to motorists about the expected behaviours on the road and speed is a significant factor related to the frequency and severity of collisions.

As of 2018, the Ontario Highway Traffic Act (Section 128 (2.1)) allows municipalities to set a posted speed limit less than 50 km/h for roads under the municipalities' jurisdiction. With this recent change to the HTA, other municipalities have implemented the default speed limit of 40 km/h in Ontario: Toronto, Hamilton, Ottawa, London, Mississauga, Waterloo, Prescott, Oakville (pilot), and Kitchener (pilot).

6.2 REQUEST-BASED APPROACH

Residents, staff, and Council can submit a request for traffic calming in on a roadway. The residents can contribute with the local knowledge of daily traffic conditions and identify safety concerns. The following approach evaluates requests to determine if action will be taken and what the suitable treatment is.

6.2.1 PROCESS

There are four stages of the traffic calming request stream: initiation, data collection and assessment, implementation, and evaluation.

Stage 1: Initiation

Traffic Calming Requests

Residents with traffic related concerns are instructed to complete the form in **Appendix A** of this Policy and submit their written request to investigate traffic calming on their road or within their neighbourhood to the Township of Essa Public Works Department.

Screening Criteria

Initial screening criteria to determine eligibility for consideration for traffic calming measures have been established.

With respect to the road or road section in question, it must:

- Be a local or collector road assumed and maintained by the Township of Essa;
- Have a minimum length of 150m

In addition, the following must also be satisfied:

- Zoning should be primarily residential, institutional or recreational (parklands).

For roads or road sections with restricted horizontal and/or vertical alignment, and hence restricted sight lines, traffic calming measures could be considered in conjunction with reduced speed limits and adequate warning signs.

The requestor should be notified of the screening results.

Stage 2: Data Collection and Assessment

Data Collection

If the requested location meets the initial screening criteria, data collection and analysis will commence. The collection of traffic data, as deemed necessary by Township staff, will serve to provide a better understanding of the current traffic conditions and to prioritize locations for the investigation of traffic calming.

Staff will conduct the necessary traffic studies (or outsource such studies) to quantify and qualify the submitted traffic concerns. The data collected may include traffic volumes and composition (cars and trucks), vehicle speeds, collisions, sight lines related to deficient horizontal and/or vertical alignment and stopping distance, pedestrian activity, an origin/destination study (third party study), if the request relates to shortcutting traffic, and historical site-specific information.

For vehicle speeds, it is not prudent to consider the highest speed at which motorists travel. Rather, the 85th percentile speed will be considered, which is the speed at which

85% of the total traffic volume on a road is travelling at or below. In considering the need for traffic calming, the 85th percentile speed must exceed the posted speed limit by a minimum of 10 km/h as per the values provided in **Table 1**.

Table 1: 85th Percentile Speed Considerations

Posted Speed Limit	85th Percentile Speed
40 km/h	50 km/h
50 km/h	60 km/h
60 km/h	70 km/h

With respect to sight distances and the need for traffic calming to reduce travel speeds upon approach to intersections, the existing sight distances at intersections must be less than the distances outlined in **Table 2** for traffic calming to be warranted. For lower speed roads (e.g. posted speed of 50 km/h or less), the design speed is typically taken as 10 km/h over the posted speed, whereas for higher speed roads (e.g. posted speed of 60 km/h or more), design speed is typically 20 km/h greater than posted speed.

Table 2: Stopping Sight Distance Considerations

Design Speed	Minimum Stopping Sight Distance
40 km/h	45 m
50 km/h	65 m
60 km/h	85 m
70 km/h	110 m

The above distances in metres (m) at each design speed are the “minimum stopping sight distances on wet pavement” as outlined in the MTO Geometric Design Standards.

Once collected and summarized, the data will be utilized in the overall assessment to determine the need for traffic calming and assist in setting priority for locations of consideration.

Basis for Assessment

The data assessment is a screening process focused on the various attributes of a road in order to quantify its potential need for traffic calming. By means of assigning weighted points based on the severity of certain road attributes (e.g. 85th percentile speed), this process will bring to the forefront roads requiring consideration while quantifying the current conditions. A basis for assessment has been prepared in consideration of comparable traffic calming policies in effect throughout the area (refer to Appendix B for

the assessment worksheet). Only road sections that achieve the minimum required points as specified in Appendix B will be reviewed further in the next steps of the process.

Should the minimum required points be met for a request, depending on funding availability, locations for implementation will be selected based on the point system, with those locations with the highest points implemented first. If funding does not permit all locations to be implemented in one year, roads will be carried forward to the next year when they will then be re-prioritized to include any new locations.

Assessment Thresholds

The minimum number of points required to proceed with the investigation of traffic calming measures differs based on the classification of road. In keeping with the objective of restoring roads to their intended function, local and collector roads are designed and expected to convey varying levels of traffic volume. This, in turn, has a bearing on the minimum point value required to proceed, as traffic volume is a major consideration. Based on this, the following are minimum point values for each road type, as can be seen in **Appendix B**:

- Local road minimum 35 points
- Collector road minimum 52 points

Stage 3: Implementation

During implementation, a letter will be provided to affected residents notifying them of the proposed plan, including the objective, rationale on the selected device and the intended outcome of the installation. In addition, the Mayor and members of Council will be advised. The final design will include the location of the implementation, spacing, specifications of the treatment, and estimated cost.

Implementation of ‘quick build’ measures will be prioritized where capital projects in the study areas are not feasible or desired. Quick-build measures such as temporary speed cushions, flexible bollards, line painting, radar speed display signs and temporary curb extensions allow for evaluation and iteration in the traffic calming process, helping to build support for future measures.

Once the traffic calming measure has been installed, it is recommended that the Township continue to engage with the impacted community. Township staff should provide information on how to provide feedback through mail drops to residents along the affected corridor as well as through the Township’s website and social media platforms. Engagement efforts should provide participants will an opportunity to provide feedback on how the traffic calming installations are operating, and if any adjustments should be considered. It is important to note that consultation should not act as a barrier to implementing traffic calming measures, but instead help to inform how they can be adjusted going forward to ensure they are effective.

Stage 4: Evaluation and Reporting

Township staff should continually monitor and evaluate the implemented traffic calming measure to ensure it is achieving its purpose without causing any additional negative impacts. Through the monitoring process, the Township can determine whether design and/or location adjustments and any additional efforts are required.

To assess the effectiveness of the measure, Township staff should monitor traffic data, similar to pre-installation data collection during Stage 2 of the process. Township staff should compare this data to the pre-installation data from Stage 2 to determine whether the measure is achieving objectives effectively. The measure should be monitored after sufficient time has elapsed in order to allow traffic patterns to stabilize and road users to become familiar with the measure (e.g., three to six months after installation). When conducting traffic volume data collection, it should be noted that adjacent roadways may have increased volume from traffic diversion. This should be considered to ensure that by installing traffic calming in one place does not create an issue somewhere elsewhere.

If installed permanently, the measure should also be monitored during the winter to ensure it is effective under all potential circumstances. The Township should also engage with residents or key stakeholders to obtain feedback about the effectiveness of the measures and to identify any potential concerns.

The Township should prepare and publish reports online detailing the monitoring and evaluation, including any recommended adjustments or removal of the measure based on key findings from the monitoring and evaluation process.

6.3 COLLISION HOTSPOT CORRECTION PROCESS

As the Township collects and analyzes safety and collision data, certain locations may begin to emerge as collision ‘hot spots’. These locations account for a significant percentage of the injury and fatality collisions on the Township’s roadways, and should be identified and addressed through the measures listed in this policy as soon as possible.

Through the process of the development of the Transportation Master Plan (2023), a collision history map was generated to identify the intersections and corridors with the most significant collision history. This analysis should be reviewed annually, with plans developed to mitigate the conditions that are leading to these elevated levels of collisions.

The process for the Collision Hotspot Correction stream of traffic calming is for staff to identify the hotspots based on an annual review of collision data, updating the collision heatmap included in **Appendix C** of this report. Regardless of other screening factors, the top 5 intersections or corridors should be reviewed through a Road Safety Analysis process, and safety measures should be reviewed and implemented as soon as possible to address the known safety issues with these areas of the Township.

Ongoing evaluation of the efficacy of the measures should be performed, with additional measures implemented if there is not a significant change in collision history where treatments are applied.

APPENDIX A – TRAFFIC CALMING REQUEST FORM

Appendix A: Traffic Calming Request Form

Application date: _____

Description of Location:

_____

_____

_____

Email request to: @essatownship.on.ca

-OR-

Mail, Fax or Drop off to: Township of Essa, 5786 County Road 21
Utopia, ON L0M 1T0 Fax# 705-424-2367

Name: _____
Address: _____
Contact phone #: _____
Email address: _____

Why are additional traffic signage and/or mitigation / traffic calming measures being requested at this location? (Provide pictures if available.)

_____

_____

_____

_____

_____

_____

_____

OFFICE USE ONLY	
Staff Review:	Date:
Council Review:	Date:
Council Review:	Date:
Approved/ Bylaw:	

APPENDIX B – ASSESSMENT OF TRAFFIC CALMING NEED

Appendix B: Assessment of Traffic Calming Need

Road Section:_____	Prepared By:_____
Road Class:_____	Prepared On:_____

Traffic Data			
Feature	**Range**	**Criteria**	**Score**
1. Speed	0 to 35	5 points for every 2 km/h that the 85th percentile speed is greater than 10 km/h over the posted speed limit	
2. Volume	0 to 20	Local Roadways: 5 points per 500 ADT Collector Roads: 5 points per 1000 ADT	
3. Short-Cutting Traffic	0 to 15	5 points if there is a presence of 25% or more shortcutting traffic, additional 5 points for every 10% increment above 25%	
4. Collisions	0 to 10	1 point for every collision/year over a 3-year period	
Road Characteristics			
Feature	Range	Criteria	Score
1. Sidewalks	0 to 5	5 points for no sidewalks with evidence of pedestrian activity	
2. Pedestrian Generators	0 to 15	5 points for each nearby (must have direct connection to subject roadway) pedestrian generator such as school, playground, community centre, libraries, retail, etc.	
3. Sight Lines	0 to 10	0 points for excellent sight lines, 5 points impaired sight lines, 10 points for very poor sight lines	
4. Road Allowance Limitations Paved Width ≤6m	0 to 5	5 points for limited paved surface and/or boulevard width	
Overall Assessment			
Does the location meet the minimum requirement:			**Total Score:**
35 Points		**Local Road**	
52 points		**Collector Road**	


STOP FOR PEDESTRIANS
PUSH BUTTON TO TURN ON WARNING LIGHTS
WE'VE GOT YOUR LUMBER.
Windows
Flooring