

Title: Road Safety Initiatives
Date Prepared: September 26, 2019
Report To: His Worship the Mayor and Members of Council
Councillor/Theme: Debbie Hanlon - Transportation
Ward: All

Decision/Direction Required:

Direction is required to approve the recommended approach to implementing Road Safety Initiatives.

Discussion – Background and Current Status:

The City of St. John's undertakes several programs to improve safety and create a balanced road network. These existing programs include:

- **Annual traffic calming program**

\$50,000 budget approved annually

The City's Traffic Calming Policy (approved May 3, 2011) evaluates streets throughout the City to determine if there are issues with excessive speed or volume of traffic. Streets are ranked in this process and a pooled fund is maintained to implement traffic calming projects starting with those ranked as highest need.

- **Annual accessible pedestrian signal program**

\$50,000 budget approved annually

This program funds the equipment needed and installation of accessible pedestrian signals at intersection across the City. Intersections are identified in partnership with the CNIB.

- **Annual sidewalk repair program**

\$700,000 budget approved annually

Public Works currently completes repair and/or replacement of sidewalks throughout the City each year. Replacement and repair work reinstates prior conditions in a like-for-like manner and does not include changes to existing design. Some improvements to curb ramp accessibility are included when possible.

ST. JOHN'S

- **Annual pedestrian crossing program**

\$50,000 budget approved annually

This program identifies pedestrian crossings that warrant infrastructure improvements. Projects completed under this fund may include intersection reconfigurations, curb extensions or medians, addition of signals, and similar work at locations of high pedestrian volume.

In the 2019 - 2021 Capital Budget Council approved the creation of three new programs.

- **Annual intersection safety program**

proposed \$200,000 annual funding, subject to approval

The City has begun a review of collision data to identify higher risk locations on our road network that will establish the foundation of this program. The program will fund the implementation of countermeasures at these locations in a targeted road safety improvement approach.

- **Annual sidewalk infill program**

\$451,000 allocated from 2019 Capital, ongoing annual allocation to be determined

This new program allows the City to be proactive by constructing new sidewalks where they are missing or insufficient today. Street segments with no sidewalks are ranked under this program and capital funding used to complete those found to be most important. The evaluation system considers factors such as proximity to schools and transit; traffic on the adjacent street; closure of gaps in the sidewalk network among others.

- **Road Safety Initiatives**

\$300,000 allocated from 2019 Capital, ongoing annual allocation to be determined

This new program is the subject of this decision note. Each of the programs described above have clear criteria by which projects are selected and implemented. There are, however, many community concerns raised that do not qualify under any of the programs above. This program is intended to target those concerns.

Road Safety Initiatives Program

A wide variety of concerns within the scope of road safety are also commonly raised by residents of the City. These can be roughly divided into two main themes:

Active Transportation Based Concerns	Vehicle Based Concerns
<ul style="list-style-type: none">• Desire for improving or enhancing a crosswalk to feel safer crossing a street• Improving accessibility of our transportation network, particularly parking and sidewalks• Difficulty getting around as a pedestrian, particularly in the winter• Attitudes toward different travel modes and public health	<ul style="list-style-type: none">• Perceived high speeds, particularly on residential roads• Perceived dangerous driving, particularly by those believed to live outside the area concerned• Behaviour of detouring drivers during street construction projects• Adherence to regulatory signs / traffic control

Several different approaches to address these and other general road safety concerns are outlined in the three sections below:

1. Enforcement

Enforcing laws of the Highway Traffic Act (HTA) that keep the road system safe is critical to ensuring road safety. The City's role in enforcing this act is limited to parking violations pursuant to a Delegation of Authority by the Provincial Government. Within the City, the Royal Newfoundland Constabulary (RNC) is responsible for enforcing the HTA.

RNC Traffic Enforcement

The RNC is responsible for enforcing moving violations within the City of St. John's. The City maintains open lines of communication with the RNC to collaborate on traffic concerns.

Photo Enforcement Legislation

The Department of Transportation and Works has begun exploring the capabilities of the technology and has completed a pilot project that used photo radar to track driver speeds in construction zones on Provincial highways. Photo enforcement of traffic laws has not been tested in the City. Several legislative amendments are required at the provincial level to link speed and red-light monitoring technology with automatic ticketing of offending motorists. Many provinces across the country have taken this step introducing legislation to allow photo enforcement and adopting programs to reinvest increased ticketing revenue back into road safety projects.

The province has announced work on photo enforcement legislation and introduced the concept in the first session of the 49th General Assembly on June 10, 2019. It is expected that the necessary amendments to the Highway Traffic Act will be debated in the upcoming fall session. If approved the necessary legislative regulations would then be drafted to enable photo enforcement within the province.

Once legislation is introduced, the City may have the opportunity to support a Provincial program that uses this technology to enforce speed limits and/or red lights on City streets. It is anticipated that support would be limited to facilitating installation of infrastructure only and not include maintenance of the infrastructure or enforcement of moving violations.

It is recommended that the City continue to collaborate with the RNC. Additionally, that the City work with the Province to support a Provincial photo enforcement initiative.

2. Education and Programming

Educational or awareness campaigns and municipal policies can be used to change the attitudes and culture of road users. These initiatives foster community engagement and participation and can promote the positive values of road safety.

Walking School Bus Program

A walking school bus is a form of coordinated supervision for a group of children walking to school through their neighbourhood along a set route. The concept began as a grass roots effort to promote safe active transportation for children and has taken off into established programs across Canada.

Programs are typically spearheaded by community partners including parents, schools, and not-for-profit organizations. They offer a valuable service to parents of children living within walking distance of their schools who do not qualify for bus service. Walking School Bus programs offer safety, physical activity, convenience, and social benefits.

Municipalities are generally not directly involved in Walking School Bus programs for liability, privacy, and logistical reasons. School administration is responsible for managing and protecting student information. This information is important for setting up a successful program and is not shared with the City. While the City currently supports walk-to-school safety through the crossing guard program, these trained City employees

are not directly responsible for the ongoing care of the students and student information is not required.

It is therefore recommended that the City explores ways in which support for Walking School Bus initiatives could be offered indirectly (not a City lead program) to organizations, groups, or individuals interested in establishing a program.

Neighbourhood Pace Car Program

A neighbourhood pace car program is an awareness campaign where interested drivers make a personal pledge to drive at or below the posted speed limit, driving with courtesy and respect of other road users, and to display a decal or sticker on their vehicle. The intent of the program is to calm traffic by encouraging positive driving behaviour and speed awareness. Many drivers who would participate in the program are already practicing good driver behaviour. By displaying a pace car decal, it is hoped that others will be reminded and encouraged to do the same.

The City could consider implementing a program for residents to commit to acting as a neighbourhood pace car driver. If a pace car program is implemented, decals could be made available at public City facilities for those interested to pick up.

Parachute, a national Canadian charitable organization, has developed pace car programming and resources available to Canadians. Many municipalities have chosen to use these available resources rather than developing their own. They provide an online version of a pace car 'pledge' and provide removable window cling decals free of charge for interested organizations to distribute. The City should be cautious in how it implements such a program to ensure that it is not creating an expectation that the City is in any way evaluating, testing or representing that these drivers are safe.



Parachute Window Decal

Speed Feedback Signs

A radar speed feedback sign is an interactive sign that displays a message to the driver as the vehicle approaches. Existing feedback signs in the City display the speed to the motorist but other jurisdictions have used alternatives such as short text messages or simple graphic displays. The City has a total of 32 digital speed feedback signs in operation. Of these signs, 18 are installed at permanent locations, 12 are semi-permanent and can be periodically relocated to different pole locations, and two are on

trailers and can be easily moved from site to site for temporary deployment at suitable locations. While this sign equipment is managed by transportation engineering, their purpose is one of education and awareness for drivers. Temporary locations selected for these displays are generally areas where traffic calming is warranted but implementation of other countermeasures hasn't yet been completed or where a temporary targeted awareness campaign is appropriate.

Research indicates that without a perception of enforcement, drivers may disregard these devices over time and that the effectiveness of these signs is limited. Each pair of permanently installed feedback signs (one facing each direction) costs approximately \$40,000 not including ongoing maintenance costs. It is noted that this is about the same price as a small roadway infrastructure installation, such as a raised crosswalk or curb extension, which offer additional proven safety benefits. For this reason, physical improvements to slow traffic are preferable.

It is recommended that the City coordinate a neighbourhood pace car program and explore possible opportunities to support Walking School Bus initiatives lead by external organizations. Funding requirements to pursue these initiatives are relatively low and would be covered under the general Road Safety Initiatives budget.

3. City Policy, Priorities, and Maintenance

A number of City policies and maintenance programs support ongoing road safety. In particular, snow clearing, and sidewalk maintenance play a big role in keeping our streets safe.

Sidewalk Repair

As previously noted, the City completes an annual sidewalk repair/replacement program. This program is currently limited to replacing the sidewalk as it previously existed and does not include making significant changes to the sidewalks.

Although most of the sidewalk repairs completed as part of this program are limited to small sections or very localized spot repairs, an opportunity exists to coordinate small scale improvements with this ongoing work. For example, if repairs are needed next to a commercial driveway the sidewalk could be extended across to improve pedestrian safety and experience and potentially save in future on driveway entrance grind and patch work.

There may also be opportunities to increase the number of curb ramps replaced with a more accessible treatment. Additional small improvements could include removing small obstacles from the sidewalk such as fire hydrants or traffic sign posts (where these can be relocated). Costs to complete these improvements will depend on the scope and number of improvements that can be coordinated with the planned repairs. The approximate cost to extend driveway across a 10m access is \$6,000, relocating a fire hydrant is about \$3,000, and installing a new accessible curb ramp is under \$2,000.

Allocating a portion of the Road Safety Initiatives budget to cover the additional expense of incorporating small sidewalk improvements into the existing program creates an opportunity for efficiency and systematic improvement.

Snow Clearing Priorities / Resources

The City's Public Works Department is responsible for maintaining over 1,400 lane kilometres of roadways. This includes clearing over 170 kilometres of sidewalk in the winter. Winter road maintenance contributes directly to the safety of all road users and is critical for maintaining the accessibility of the road network. How principles of road safety for all users could affect snow clearing practice is beyond the scope of this initiative.

Pavement Markings

The ongoing maintenance of pavement markings ensures the continued safe operation of our streets. Historical hard-copy records are kept of these paint line layouts with new lane and intersection layouts being digitized and consolidated when possible. This fragmented record system creates inconsistencies and inefficiencies. In addition, there are opportunities to make the pavement markings we specify more efficient to place and maintain.

A single updated digital record of all City pavement markings would facilitate successful management of this infrastructure. Having a single accurate resource for this information would improve efficiency, allow for streamlined review and implementation of potential changes, and ultimately help ensure that the correct markings are being painted on the streets.

It is estimated that up to \$100,000 could be required to undertake this initiative and convert all historical records to digital format using an external contractor.

Wear and replacement of these markings also poses a significant maintenance task. While a digitized record of pavement markings would help with re-painting, the City is also exploring more durable marking materials that could extend the life of markings

through multiple seasons. These alternative techniques could not only reduce overall maintenance requirements but could also improve pavement marking visibility and road safety particularly in the late winter and spring.

Once a suitable durable pavement marking technology has been selected, consideration could be given to allocating capital funds to help purchase equipment and supplies required to test and/or implement these new methods and materials.

District Speed

The concept of district speed or neighbourhood speed limits simply describe a decrease in posted speed limits through neighbourhoods. While many municipalities are currently debating the merits of this approach and considering implementation, academic research completed to date has not yet supported the practice. Studies have found that simply reducing a posted speed limit without any increase in enforcement or physical changes to the road environment has very little, if any, impact on drivers' operating speed. The most successful cases of district speed implementation were coupled with on-street traffic calming and targeted enforcement campaigns. Changing a posted speed limit is not considered a traffic calming tool.

When a posted speed limit changes there is a corresponding change in public perception and expectation of lower speeds. By only changing the posted limit on a street, this expectation is set without any supporting countermeasures. This could create a scenario of risk compensation or a false sense of security, where road users expect a safer lower-speed environment and behave less cautiously on a street where the operating speeds have not actually decreased.

The speed limit on City streets is 50 km/hr unless otherwise posted. There are many streets with lower posted speed limits including Elementary school zones and areas where the road geometry requires a lower operating speed. To create a district speed area signage must be posted on each entry and exit to that area. Estimated costs start at \$400 per gateway transition. The number of gateways required for a zone depends on the roadway network and zone boundaries selected but generally increases in areas with denser street networks.

In addition to an implementation cost, creating district speed areas would directly impact the City's current traffic calming policy. The existing policy's screening criteria considered the measured operating speeds on a street compared to the posted speed limit. By changing the posted speed limit baseline of streets, all of the street rankings completed prior to changes would have to be updated and re-ranked. The ranked priority of streets would change and streets that are currently at the top of the list that

have been in line for traffic calming implementation could be ranked below streets with adjusted speed limits. The sensitivity of the screening criteria to speed would be significantly increased and other factors would be minimized by comparison. This policy would need to be reviewed and re-evaluated to determine how the ranking system would need to be recalibrated for streets with lower than warranted posted speeds.

It is recommended that the City does not pursue a district speed approach at this time. Staff will continue to monitor best practices around this approach and the idea could be revisited once more studies and information is available on how a district speed limit can be successfully implemented.

Vision Zero

Vision Zero is a road safety investment strategy that specifically targets the reduction of serious injury and fatal car crashes in a road network with the long-term goal of eliminating them entirely and improving road safety for all users. The success of a Vision Zero policy is fundamentally linked to a corresponding investment in road safety.

Public safety is the most important concern of transportation engineering and the Road Safety Initiatives program will help contribute to Vision Zero values. While the City does not have a formal Vision Zero policy, the City's annual intersection safety program will contribute directly to a Vision Zero approach by implementing targeted countermeasures to address locations with higher than expected collision history.

If Council wishes to adopt a formal Vision Zero policy, the initiative would require an external consultant to conduct an audit of City policy and programs to develop recommendations aimed at improving practices to support a Vision Zero goal.

Temporary Traffic Calming (Construction)

Traffic patterns in areas of major construction projects are temporarily impacted by lane closures and detours. Projects that require longer-term traffic interruptions can result in drivers avoiding the area and taking different nearby routes sometimes through residential streets. When this happens, the City receives requests from residents of the nearby streets experiencing a temporary increase in traffic for measures to mitigate the change.

Each construction project and location are unique. The ultimate impact on travel patterns depends significantly on the duration of the work, the level of delay caused by the work zone, and the available alternate routes in the area. The traffic control

requirements for many projects continuously change as work progresses and potential detour routes may also change and adjust accordingly.

Installation of traffic calming measures may not be supported by neighbourhood residents and may result in displacing construction traffic to another route. Furthermore, most construction work including roadwork is completed seasonally. This creates a limited timeframe for the work to occur, ensuring that traffic interruptions will also be limited. Installation of temporary traffic calming measures on potential alternate routes is therefore not practical for most projects.

The City could consider reviewing the need for temporary traffic calming on alternate routes impacted by major projects that may cause significant ongoing traffic disruption in areas with residential streets impacted by detouring traffic. If implemented this practice would need to be considered as part of the traffic control plan for each project to ensure that any measures taken are coordinated with the timing of traffic interruptions and are appropriate for the project context. Contract costs can be expected to increase commensurate with requirements for temporary traffic calming measures.

Transportation Master Plan

The St. John's Transportation Study prepared in 1998 is the most recent city-wide review of transportation in St. John's. Since the study was completed two decades ago, the recommended transportation infrastructure improvements included in the report have largely been completed and the City has continued to grow and develop. To evaluate the existing transportation system and to develop a comprehensive and sustainable long-term transportation strategy, a Transportation Master Plan for the City of St. John's is required.

A Transportation Master Plan (TMP) is a guiding strategic document that establishes how a municipality will address its current and future transportation needs based on a vision and values established early in the project. Preparing a TMP involves quantifying and modelling existing travel demands and patterns, forecasting future transportation demands, and considering public and stakeholder feedback to define transportation policy and determine an appropriate infrastructure program.

The City has begun collecting data as the first phase of this process. Once sufficient data is compiled an external consultant will be required to move forward with the next steps of modelling and forecasting travel patterns. The final phase of this project will involve engaging stakeholders and the public in project consultation, assessing and recommending infrastructure improvements, developing supportive municipal policy.

This comprehensive review offers another opportunity to address transportation policy and practices and could include a review of road safety issues identified in this report.

It is recommended that a portion of the Road Safety Initiatives budget be allocated to supplement the annual sidewalk repair program and allow for the coordination of small improvements where possible.

Updating and digitizing the City's pavement markings master file would contribute to road safety through improved maintenance and would also improve the efficiency of the pavement marking program. The funds necessary to do so could be allocated from the existing Road Safety Initiatives budget or provided through a targeted capital expenditure.

4. Engineering

Making physical changes to road infrastructure is one of the most effective ways to change road user behaviour. There are proven safety countermeasures to address roadway departure, intersection, and pedestrian and bicycle crashes. These infrastructure changes can be used to reduce driver speeds, improve visibility of road users, signal a change in the street environment, and eliminate potential vehicle conflicts at intersections. They are proven effective through academic research and are endorsed by national and international agencies. Examples of these countermeasures include, but are not limited to, the following:

- Vertical Deflections - A "bump" designed to make driving fast uncomfortable. Common tools include speed humps, speed cushions, and raised crosswalks
Approximately cost: \$3,000-\$5,000 per installation
- Crosswalk Curb Extensions - Moving the curb closer to the centre of the road and narrowing the travel lanes creates a short distance for pedestrians to cross. These treatments have added benefits of improving the visibility of pedestrians approaching the crosswalk and reducing driver speeds.
Approximate cost: \$20,000-\$40,000 per installation (assuming no stormwater or other infrastructure is impacted)
- Medians and Pedestrian Crossing Islands – A median, the area between opposing lanes of traffic, can be raised with a curb to limit access and turning movements along a busy stretch of roadway (reducing potential conflicts) and can also be used to provide a protected refuge area in the centre of a road for crossing pedestrians.
Approximate cost: \$2,000 + \$500 per linear metre for 3m wide sod median

- Rapid Rectangular Flashing Beacons (RRFBs) – Flashing LED beacon signs mounted at the side of the roadway that are activated by crossing pedestrians. These treatments help get drivers' attention and improve yield compliance to pedestrians at the crossing and are appropriate for locations where a traffic signal is not needed but an enhancement to a marked crossing is warranted.
Approximate cost: \$30,000 for solar powered installation

Engineering countermeasures are selected based on the underlying risk and context of the improvement location. Some of these tools are also used as part of traffic calming projects, the difference is that a traffic calming project uses countermeasures as part of a comprehensive strategy for a street or area rather than at an individual location to address an identified risk.

Numerous requests for infrastructure changes to improve road safety at locations throughout the City are received each year. Some of these concerns are address through other established improvement and repair programs or strategies previously discussed while others fall outside these programs or do not qualify based on set program criteria.

Project Candidate List

City staff have compiled resident and Council feedback to identify locations of concern, the majority of which are regarding pedestrian crossing exposure and safety at crosswalks. These locations are listed as candidates for potential improvements below.

Road Safety Initiatives: Project Candidate List

Primary projects (recommended for evaluation / prioritization)	
Newfoundland Drive, crosswalk at Civic 333-312	Ward 1
Newfoundland Drive, crosswalk at Cheshire Street	Ward 1
Newfoundland Drive, crosswalk at Civic 338/St Paul's Jr High	Ward 1
Larkhall Street, crosswalk at Vinnicombe Street/Larkhall Academy & Leary's Brook Jr. High	Ward 4
Canada Drive, crosswalk at Civic 115-116/Cowan Heights Elem.	Ward 3
Mundy Pond Road, crosswalk at St Teresa's Elementary	Ward 3
Ennis Avenue, crosswalk at Hutton Rd/Vanier Elementary	Ward 1
Middleton Street, crosswalk at Virginia Park Elementary	Ward 1
Ladysmith Drive, crosswalk at Ariel Place (Kenmount Terrace Community Centre)	Ward 4
Teakwood Drive, crosswalk at Southlands Boulevard	Ward 5
Doyle's Road, crosswalk at Goulds Elementary	Ward 5
Golf Avenue, crosswalk at St. Clare Avenue (the long one)	Ward 2

Pennywell Road, crosswalk(s) at Bishop Abraham Elementary	Ward 2
Newtown Road, crosswalk at Howley Avenue	Ward 2
Bond Street, crosswalk at Bishop Field Elementary	Ward 2
University Avenue, crosswalk at St. Andrews Elementary	Ward 4
Teakwood Drive, crosswalk at Palm Drive/Southlands Community Centre	Ward 5
Military Road, crosswalk at Carew Street	Ward 2
Smithville Crescent, crosswalk at Long Pond Rd/Strawberry Marsh Road	Ward 4
Cowan Avenue, crosswalks at Frecker Drive intersection	Ward 3
Blackhead Road, crosswalk at Linegar Avenue/Jordan Place	Ward 5

An engineering evaluation of each location will be completed as the next step of this program. The candidate projects will be assessed and prioritized based on existing field conditions including crossing distance, desire lines, sightlines, proximity to schools, and vehicle speeds. Locations where improvements can be coordinated with upcoming planned road work will be identified to take advantage of project efficiencies.

Appropriate countermeasures for the locations will be selected, designs will be developed, and costs for implementation will be estimated. Based on the anticipated project costs, a tender for work at the prioritized locations will be prepared and issued for the 2020 construction season.

Screened-Out Projects

Some of the locations considered would require significant intersection reconfiguration to address, were not deemed feasible, or were found to not have supporting justification from a road safety standpoint. These locations are listed as secondary projects or projects that are not recommended to proceed.

Road Safety Initiatives: Screened-out Project List

Secondary projects (not recommended at this time)	
Hamlyn Road at Village Mall/Civic 470 commercial access	Ward 3
Empire Avenue Westbound Route at Rennie's Mill Rd intersection	Ward 2/4
Harvey Road/Military Road/Bonaventure Avenue/Garrison Hill intersection	Ward 2
Torbay Road/Logy Bay Road intersection	Ward 1/2

Exeter Avenue at Elizabeth Avenue	Ward 4
Prince of Whales/Adams Avenue/Pennywell Rd intersections	Ward 2
Hamilton Avenue/Albany Street/Shaw Street intersections	Ward 3
Project not justified / feasible (not recommended for further consideration)	
Macbeth Drive between Otter Drive and Gairlock Street	Ward 1
Bay Bulls Road at Old Bay Bulls Road	Ward 5


Some of the projects that would require intersection reconfiguration, including a westbound route at Empire Avenue at Rennie's Mill Road and the Torbay Road/Logy Bay Road intersection, would also require further external study and design. Given that the estimated cost and scope required to address these locations would far exceed the allocated budget, they are listed as secondary projects and are not recommended to be completed at this time as part of this program.

The concerns raised regarding the corner of Macbeth Drive between Otter Drive and Gairlock Street were reviewed as part of this list. This review found that measured operating speeds around the corner were not excessive. The request to potentially close Gairlock Street at Macbeth Drive was also considered. City right-of-way needed to create a turnaround suitable for accommodating maintenance vehicles is not available and property acquisition would be required. Furthermore, closing the street connection would not reduce the number of vehicles travelling along Macbeth Drive. The project will therefore not be given further consideration.

Concerns regarding potential northbound road departure at the intersection of Bay Bulls Road and Old Bay Bulls Road (south) were also assessed. Collision records for the location were reviewed and no significant incidence of this collision type was found.

Downtown Accessible Parking

In addition to infrastructure countermeasures, there is an opportunity to improve safety and accessibility of our City parking by adding and/or improving the curb ramps associated with our 'blue zone' parking. Where necessary, curb ramp improvements can be funded from this program to improve parking safety and accessibility, particularly on street and in the downtown.



It is recommended that the majority of the Road Safety Initiatives budget be allocated to implement small infrastructure countermeasures at suitable locations to improve overall road safety based on the list above.

Accessibility improvements for parking will also be included as part of the Road Safety Initiatives program.

Key Considerations/Implications:

1. Budget/Financial Implications

In the 2019 Capital Budget process Council has allocated \$300,000 to fund these initiatives.

Funding to update and digitize the City's pavement marking master file could be completed under this program or provided through a targeted capital expenditure. It is estimated \$100,000 could be required to undertake this initiative and convert all historical records to digital format using an external contractor.

2. Partners or Other Stakeholders

n/a

3. Alignment with Strategic Directions/Adopted Plans

This initiative falls under the City's strategic direction of "A City That Moves" and contributes to Goal M2.6 "Implement small traffic and road improvement projects throughout the city to address concerns of residents and improve road safety".

4. Legal or Policy Implications

The Legal Department will participate as requested in this initiative.

5. Privacy Implications

n/a

6. Engagement and Communications Considerations

Feedback from residents was used to identify candidate improvement locations.

Infrastructure work that is completed as part of this program will be accompanied by typical public notices for road work.

A pace car program would rely on advertising to notify the public of the program.

In the future, if photo enforcement were to be implemented, it would require an extensive public awareness campaign.

Transportation Engineering will meet with Marketing and Communications to review the initiatives and identify areas to be developed further through comprehensive advertising and public relations strategies.

7. Human Resource Implications

Staff time will be required to implement this program.

8. Procurement Implications

Any purchasing would adhere to Procurement legislation and policy.

9. Information Technology Implications

n/a

10. Other Implications

n/a

Recommendations:

The following approach to implementing Road Safety Initiatives is recommended:

I. Enforcement

Continue to collaborate with the RNC and work with the Province to support a Provincial photo enforcement initiative.

II. Education & Programming

Coordinate a neighbourhood pace car program and explore possible opportunities to support walking school bus initiatives lead by external organizations

III. City Policy, Priorities, and Maintenance

Incorporate small improvements as part of the annual sidewalk repair program.

Update and digitize the City's pavement markings master file by either funding the work through:

- (a) the Road Safety Initiatives budget; **OR**,
- (b) a separate targeted capital expenditure.

IV. Engineering

Implement targeted infrastructure countermeasures at suitable crosswalk locations. Locations will be assessed and prioritized prior to a tender being issued for the work.

Improve accessibility of parking through small infrastructure projects.

Prepared by/Date:

Anna Snook, Transportation System Engineer

Signature: _____

Approved by/Date:

Garrett Donaher, Manager – Transportation Engineering

Signature: _____

Attachments: n/a