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Item No. 3
Halifax Regional Council
March 26, 2013

TO: Mayor Savage and Members of Halifax Regional Council

Original Signed by Director

SUBMITTED BY:

Ken Reashor, P. Eng., Director, Transportation and Public Works
Original Signed

Deputy Chief Bill Moore, A/Chief of Police

DATE: March 4, 2013

SUBJECT: Pedestrian Safety Interim Report

INFORMATION REPORT

ORIGIN

Item 11.3 raised at the January 29, 2013 meeting of Halifax Regional Council.

MOVED by Councillor Craig, seconded by Councillor Outhit that Halifax Regional Council request a staff report which:

1. Prior to the end of fiscal 2012-2013, to provide an interim report that:
 - provides the current understanding of how HRM focuses and performs all factors related to pedestrian safety – HRM engineering, public education, law enforcement, public engagement and evaluation;
 - identifies HRM pedestrian safety statistics and how HRM statistics compare relative to other municipalities; and
 - identifies a short-term HRM action plan to address pedestrian safety and any impacts on the 2013-2014 budget.

2. During fiscal 2013-2014, to develop and present for consideration by Halifax Regional Council, a long-term comprehensive pedestrian safety action plan to help ensure, and to be seen as ensuring, overall pedestrian safety for HRM residents based on:
 - the analysis of factors which may be contributing to pedestrian accidents;
 - provides options considering both process and organization structure that focuses on engineering, education, enforcement, public engagement, such as a Crosswalk Safety Advisory Committee, overall evaluation, policy and legislation, interagency/departmental coordination and cooperation elements;
 - provides a mechanism for continuous reporting and evaluation of the foregoing; and
 - identifies ongoing budget impacts to the proposed action plan.

In addition, that the Mayor, on behalf of Halifax Regional Council, correspond immediately with the provincial Minister of Transportation and Infrastructure Renewal to request an update regarding a recommendation from the 2007 Crosswalk Safety Task Force which stated that “the departments responsible for collecting and analyzing collision data do so in a timely, comprehensive, consistent and accurate manner.”

LEGISLATIVE AUTHORITY

Section 21 (1) of the Halifax Regional Municipality Charter regarding the establishment of special committees.

BACKGROUND

In 2007 a Crosswalk Safety Task Force was appointed jointly by the Minister of Transportation and Infrastructure Renewal and the Mayor of Halifax Regional Municipality. The objective of the Task Force was to identify strategies and measures to improve crosswalk safety. The Task Force released a report which outlined a series of 42 recommendations.

Those recommendations will be used as the framework to respond to how HRM focuses and performs all factors related to pedestrian safety (PART I of this report).

PART II of this report details a pedestrian collision statistics comparison.

PART III of this report will identify the short-term HRM action plan to address pedestrian safety and the impacts on the 2013-2014 Budget.

DISCUSSION

PART I – Progress and Results

The recommendations of the Task Force and the achievements are listed by category below:

Road Safety

1. The Road Safety Advisory Committee must support the Department of Health Promotion and Protection’s (HPP) alcohol strategy by dedicating a member to assist with the development and implementation of an alcohol impaired driving strategy.

Defer to the Road Safety Advisory Committee

Pedestrian Collision Statistics

2. Government must undertake a review of the current method of collision data collection to improve the accuracy and reliability of that data.

HRM Traffic Services relies on Service Nova Scotia (SNS) for its collision data. As the collision data from SNS is over five years old, Halifax Regional Police and the RCMP are assisting HRM Traffic Services by providing collision data upon request. Also, see point 26.

Engineering

3. Provincial and Municipal Traffic Authorities should meet on a regular basis to discuss among other traffic engineering topics, pedestrian and crosswalk safety.

Since the Pedestrian Crosswalk Safety Task Force, there have been three meetings between the Provincial and Municipal Traffic Authorities. Any further meetings between the Provincial and Municipal Traffic Authorities would need to be arranged by the Provincial Traffic Authority.

4. To ensure consistent and uniformity across the Province in the installation of marked crosswalk treatments, the province and municipalities must use a consistent approach, based on technical merit.

HRM Traffic Services uses the Transportation Association of Canada's (TAC) Manual of Uniform Traffic Control Devices for Canada (MUTCDC) and the TAC Pedestrian Crossing Control Manual. These manuals are the nationally accepted guidelines and standards for installation of traffic control devices including marked crosswalks.

5. The road authority must require the assessment of existing marked crosswalks when refurbishing highways and roadways to ensure they reflect current traffic situations, guidelines and standards. Where existing marked crosswalks are not warranted they must be removed due to potential safety hazards.

Various roadways are refurbished every year through a series of micro-surfacing, road repaving and asphalt overlay capital contracts. Traffic Services receives a list of proposed roadway resurfacing projects from the TPW Design and Construction Services in winter prior to the construction season. The candidate roadways are reviewed to determine if any pavement marking changes are required. If a marked crosswalk is identified on a candidate roadway Traffic Services will conduct a pedestrian and vehicle count for one hour during the AM and PM peak. Results of the traffic count are evaluated with the criteria for a marked crosswalk found in the TAC Pedestrian Crossing Control Manual. If the pedestrian and vehicle volume requirements are not met the crosswalk is evaluated based on engineering judgement. The crosswalk would be removed if the technical and engineering criteria were not met.

For example, in 2011, prior to the resurfacing of Pleasant Street there were eight marked crosswalks within 800 metres between Cameron Street and Acadia Street. Following a review of the eight crosswalks it was determined that four should be removed and one relocated. Staff took the opportunity to include these changes as part of the resurfacing project. Marked crosswalks were not reinstated on Pleasant Street at Prince Arthur Avenue, Cuisack Street, Chadwick Street and Renfrew Street. As well, the existing crosswalk at the North Woodside Community Centre was relocated to Marvin Street where sight distance and lighting was better and where improvements to pedestrian ramps were made.

6. Prior to construction, designers of highways, roadways, and streetscapes must examine the needs of all road users to ensure that the final product provides appropriate and safe facilities for all road users.

All road users including pedestrians and cyclists are considered in the planning and design of roadways.

HRM's Design and Construction Services follows these guidelines during preliminary design of all projects. In addition, they provide their pre-tender drawings for review by HRM Traffic Services who provides feedback and/or guidance on pavement markings, lane widths, signage, traffic signal placement, sidewalks, pedestrian facilities, and bike lanes.

For example, on sidewalk renewal projects HRM Traffic Services recommends that two (2) pedestrian ramps are installed at every intersection where space permits. It is also our policy to maintain a sidewalk on one side of the street during construction where both sides are being rebuilt. Where an intersection is being rehabilitated, sidewalks are reviewed to determine if they can be reconfigured to improve pedestrian/motorist safety. For example, sidewalks were reconfigured at Bedford Highway and Windsor Street to become more consistent with other sidewalks at channelized right turns and to improve safety for pedestrians.

Two recent capital projects included upgrades to improve pedestrian facilities. On Main Street in Dartmouth, the pedestrian activated beacons and marked crosswalk were relocated from mid-block Main Street to the intersection of Cherry Brook Road. The new location is a more direct route across Main Street from Graham Creighton Junior High School. On Cole Harbour Road the pedestrian activated beacons and marked crosswalk were relocated from John Stewart Drive to Bissett Road and a right turn median constructed for Cole Harbour Road at Bissett Road. This enhanced pedestrian safety by shortening the crossing distance while at the same time improving the pedestrian and cyclist connection to the Shearwater Trails further south on Bissett Road.

Bicycle facilities are considered on all road resurfacing projects if the roadway is wide enough to support vehicle and bicycle traffic and the roadway is designated as a bicycle route in the Active Transportation Plan. Bicycle facilities have been installed at various on-road locations including on Lower Water Street, Bedford Highway, Caldwell Road, Main Street in Dartmouth, Waverley Road, Herring Cove Road, Purcells Cove Road, Washmill Lake Drive, Dunbrack Street and the Hammonds Plains Road. Where traffic volumes and speed are not consistent with on-road bicycle facilities or where road widths are not adequate; bicycle facilities are considered off road. A shared off-road pathway was recently constructed on Burnside Drive from Highway 111 to Commodore Drive and is planned to be extended towards Akerley Drive over the next construction season. Another shared pathway was recently completed on Barrington Street and various pathways were constructed in the Portland Hills subdivision.

7. The Province and municipalities must stay current in their knowledge of new crosswalk and pedestrian control devices and monitor the success of these devices. The Province must encourage and approve pilot projects prior to the use of the device to determine its durability, installation and maintenance requirements, effectiveness and feasibility.

In 2013 a new TAC Pedestrian Crossing Control Manual was released. As part of its development, jurisdictional surveys and research of several devices were conducted and results are published in the technical report. Also, see point 9.

8. Municipalities interested in conducting a pilot project must seek approval from the Office of the Provincial Traffic Authority, as all pilot projects must be subject to an approval process.

As part of the consultation process during the development of the Crosswalk Safety Task Force Report, HRM received approval to conduct a pilot project to add side mounted flashing lights to some existing Ra-5 locations.

9. The Province and municipalities provide fixed funding to be allocated for the purposes of research and pilot testing of crosswalk devices.

In 2010, Nova Scotia Transportation and Infrastructure Renewal (NSTIR) previously allocated funding for 50% of the cost to upgrade pedestrian activated beacons from 200 mm lenses to 300 mm lenses and to test side mounted amber flashers at several crosswalks with existing overhead pedestrian activated beacons. See point 34 for more details.

The results from the side mounted amber flasher study are included as an attachment to this report (Attachment A-1).

HRM also permitted local residents to pilot test crosswalk flags at various crosswalks along Waverley Road. Based on TAC's response that crosswalk flags were not a traffic control device and would not be considered for inclusion in the MUTCDC, the Traffic Authority was not prepared to endorse or allow continuation of the program within the HRM right-of-way. The flags were to be removed by July 31, 2009.

In addition, Halifax Regional Municipality provided funding and had a member on the TAC Project Steering Committee for the development of the new Pedestrian Crossing Control Manual released in 2013.

33. a) The Province and municipalities must remain consistent with the Manual of Uniform Traffic Control Devices for Canada (MUTCDC) and install crosswalk treatments according to MUTCDC practices.

- b) Municipalities in Nova Scotia using signs other than those prescribed by the MUTCDC for crosswalks should change those signs to conform to the manual.

HRM Traffic Services follows the guidelines in the MUTCDC for installation of all traffic control devices. All crosswalk signage in HRM currently meets those prescribed by the MUTCDC and the TAC Pedestrian Crossing Control Manual.

34. Pedestrian activated beacons continue to follow the national standard. In an effort to add conspicuity to pedestrian activated beacons, municipalities and the Province should consider introducing a program to upgrade amber pedestrian beacons to 300 mm (12") LED lenses.

Prior to 2010, all pedestrian activated beacons at overhead flashing crosswalks were 200 mm (8") incandescent lenses. The MUTCDC indicates that a 300 mm lens yields a maximum

luminance in the centre of the lens, which is two or more times higher than that of a 200 mm lens. NSTIR allocated funding for 50% of the cost of upgrading pedestrian activated beacon installations on Provincial Highways and former cost shared streets. As a result, HRM and NSTIR established a three year funding program to upgrade the pedestrian activated beacons at 44 locations to 300 mm LED lenses (Attachment A-2 contains the list of 44 locations). The remaining beacons will be upgraded to 300 mm lenses when regular maintenance is required at each location.

35. Municipalities and the Province should undertake a program to update pedestrian activated beacon installations to enable the extension of the signal when the pedestrian button is re-activated. Priority should be given to those installations where frequent pedestrian crossings are anticipated.

Pedestrian activated beacons at marked crosswalks must be manually activated by push button. Once activated, the typical flasher timing is based on a calculation using width of the roadway and the average walking speed of 1.2 metres per second, plus an additional 6 or 7 seconds allowance for perception/reaction time. Where seniors constitute a significant proportion of pedestrian crossings, a slower walking speed of one metre per second is used in the calculation. If another pedestrian re-activates the push button while the beacons are flashing, the crossing time is not extended and the beacons will cease flashing at the original calculated time interval. In this situation a pedestrian may be unaware that the beacons are inactive while they attempt their crossing.

Since 2007, all new pedestrian activated beacon locations permit extension of the flasher timing when a pedestrian re-activates the push button. Forty-four (44) locations were upgraded as part of the NSTIR/HRM joint funded project. Older locations without this feature require a traffic signal controller upgrade. These older locations are upgraded as regular maintenance is required at each location. Of the remaining RA-5 crosswalk light locations that require this upgrade, approximately 40% have been completed.

36. Further pilot studies should be conducted to determine the long term effects of advance yield markings and signs on driver yielding distance and the compliance at crosswalks on multi-lane approaches.

An advance yield line is pavement marking which indicates the point at which drivers approaching a crosswalk must yield to pedestrians in the crosswalk. It is used in advance of a marked and signed crosswalk that crosses multiple travel lanes as a means of discouraging motorists from yielding too closely to the crosswalk. Motorists yielding too closely to a crosswalk can place pedestrians at risk by blocking the view of drivers approaching in other lanes. Previously, a small study in Dartmouth noted a small increase in driver yielding behaviour where advance yield markings and signage was present (Van Houten, 2001 "*Advance Yield Markings: Reducing Motor Vehicle-Pedestrian Conflicts at Multilane Crosswalks with Uncontrolled Approach.*"). The new TAC Pedestrian Crossing Control Guide released in 2013 indicates advance yield lines are a desirable component of a marked crosswalk location as they have the potential to improve the overall system performance, however; they are not essential for effective system operation.

Traffic Services will review multi-lane crossings to determine if advance yield lines would be appropriate based on developed criteria. It should be noted neither the MUTCDC nor the Pedestrian Crossing Control Guide indicate or prescribe signage for advance yield lines.

37. Crosswalk markings should be maintained by the Municipality and/or the Province to keep them as legible as is practical.

HRM service standards dictate that all pavement markings are repainted once per year. The traffic paint and glass beads used by HRM and their pavement marking contractors must meet the Canadian General Standards Board (CGSB) standards.

38. Pedestrian specific signs should be considered to provide pedestrians with feedback and reminders to cross safely. These devices should only be installed where there are pedestrian control devices (i.e., walk/don't walk signals, pedestrian activated beacons) and where they have been determined to have technical merit.

HRM installs pedestrian specific signage at traffic signals and at locations with flashing beacons with push button activation. The basic sign used at locations with flashing beacons simply indicates to the pedestrian to push the button in order to cross. At new traffic signals, improved signage is being installed which explains the walk, flashing don't walk and don't walk indicators. At older locations, the improved signage may be installed as each signal undergoes regular maintenance checks. (Attachments A-3 for signage images).

39. Municipalities and TIR should consider installing raised pedestrian refuges for new and redesigned highways when those highways have more than two lanes in each direction. Refuges should be constructed to allow ample space to wheelchairs, etc. to wait for a crossing opportunity.

Installations of raised medians have been shown to improve pedestrian safety when crossing multi-lane facilities high traffic volume and where there are high volumes of senior and children pedestrians. Raised medians have been found to reduce motor vehicle crashes by 15%, decrease delays for motorists while demonstrating a 46% reduction in crashes at marked crosswalks (US Department of Transportation Federal Highway Administration, 2010 "*Safety Benefits of Raised Medians and Pedestrian Refuge Areas*"). During intersection rehabilitation, medians are constructed where feasible. For example, a raised median was constructed at Connaught Ave and Almon Street and Horseshoe Lake Drive at the Chain of Lakes Trail.

There are certain situations where raised medians are not recommended or possible. At some intersections the constraint is the lack of space available for adding a raised median. Raised medians are typically 2m in width which may only be possible with property acquisition or by removing or narrowing a travel lane. At locations with high volumes of trucks, raised medians are not recommended as they may interfere with turning movements which causes safety and maintenance concerns.

40. The Province and municipalities must adopt HRM's current pedestrian ramp design as a provincial standard.

No action required.

41. Municipalities and the Province must follow the Transportation Association of Canada (TAC) Guidelines for Understanding, Use and Implementation of Accessible Pedestrian Signals (APS) when considering accessible pedestrian signals to ensure uniformity and consistency.

When a new traffic signal is proposed, it is evaluated against the TAC guidelines for APS which is based on factors including: pedestrian usage, proximity to pedestrian trip generators and transit, traffic conditions, vehicle speeds, intersection layout and if pedestrians would have difficulty crossing the road without APS. In addition, HRM consults with The Canadian National Institute for the Blind (CNIB) and the Visually Impaired Safe Travel Advocates (VISTA) committee, to assist in determining where accessible devices would be beneficial.

Traffic Services has a budget for upgrading existing intersections with APS and can typically upgrade four to six intersections per year.

Education

10. Parents, family members, and others who help care for young children need support through the provision of appropriate educational resources to help them develop and encourage safe crosswalk behaviour in this vulnerable age group.

HRM has completed the following crosswalk safety and educational programs:

- 2005 – Produced and aired TV ads on Global.
- 2006 – Produced and aired new TV ads on Global.
- 2007 – Produced and aired new TV ads on Global, produced radio ads aired on all Metro Radio Group radio stations, produced crosswalk safety booklet which was sent to EVERY household in HRM.
- 2008 – Re-aired television ads on Global.
- 2009 – Partnered with the Province (NSTIR) on a safety campaign that included re-airing existing TV ads on both Global / CTV and production and airing of new radio ads.
- 2010 – Partnered with the Province (NSTIR) on a safety campaign that included production and airing of new radio ads, Easlink TV guide channel ads, newspaper ads and posters for busses (inside the bus, outside the bus and bus shelters).
- 2011 – Crosswalk safety booklet updated and reissued to HRM Customer Service Centres, Libraries, Community Centres and organizations requesting copies.
- 2012 – Halifax Regional Police created a social media presence dedicated to traffic safety, with an officer from the HRP/RCMP Integrated Traffic Unit managing the social media sites and serving as the voice of traffic safety in our community. This social media presence serves to provide spaces for citizens to post questions about traffic laws, discuss traffic-related issues and talk about ways to keep our

roadways safe. This campaign is bolstered by the HRP/RCMP Integrated Traffic Unit providing both education and enforcement at intersections which have the highest number of pedestrian-involved collisions based on a six-year picture from the Computer Aided Dispatch system.

- 2012 – Social media focussed campaign on HRM website, Facebook page, Twitter feed and HRM Parent on-line blog.

Additionally, HRP and RCMP issue monthly news releases with a traffic theme of the month, monthly news releases with impaired driving statistics, handout literature at traffic points about pedestrian safety and other road safety initiatives. This material is also provided on the HRP website and HRP social media sites. School Officers also deliver traffic safety presentations to school-aged youth in schools across HRM.

11. The Department of Education (DOE) designate a person to join the Road Safety Advisory Committee (RSAC) to provide support and expertise on road safety education issues related to school age children and youth to ensure the curriculum incorporates crosswalk safety education.

Defer to Department of Education.

12. The Departments of Transportation and Infrastructure Renewal (TIR) and Health Promotion and Protection (HPP) should support DoE in revising existing areas of curriculum where injury and safety is a focus, and where crosswalk safety education is an area of concern.

Defer to Departments of Transportation and Infrastructure Renewal and Health Promotion and Protection.

13. Review Nova Scotia's Crossing Guard training program to create a standard program that clarifies the crossing guards' role in crosswalk safety education for children.

Halifax Regional Police provides annual training to School Crossing Guards. Training personnel use the following manuals - Crosswalk Safety in HRM: Take Charge of Your Own Safety (published by HRM) and Nova Scotia Crossing Guard Handbook (published by Province of Nova Scotia).

14. The RSAC member departments should consider age-related changes to driving ability and driver competency when developing a provincial road safety strategy.

Defer to RSAC.

15. The RSAC member departments should consult with the Department of Seniors, and other seniors organizations to identify opportunities for driver-education to support older adults to continue to drive safely and reinforce the rules of crosswalk safety

Defer to RSAC.

16. The RSAC member departments continue to research crosswalk safety and conduct pilot projects for crosswalk safety education where promising practices exist.

Defer to RSAC.

17. Service Nova Scotia and Municipal Relations (SNSMR) and TIR should examine existing education resources for new drivers, particularly youth, around areas of driver behaviour that relate to pedestrian safety.

Defer to Service Nova Scotia and Municipal Relations and Department of Transportation and Infrastructure Renewal.

18. SNSMR ensure driving school instructors are knowledgeable about crosswalk safety, and that it be made a mandatory component of their classroom curriculum and in their in-vehicle instruction.

Defer to Service Nova Scotia and Municipal Relations.

Enforcement

19. The provincial police service (RCMP) Traffic Services Division and Municipal Police Agencies, are encouraged to meet on a regular basis to discuss traffic enforcement matters; ensuring front-line law enforcement officers are represented.

The Nova Scotia Department of Justice hosts monthly traffic related meetings, known as the Minister's Forum on Traffic Safety Initiatives, with agencies that include, but are not limited to: RCMP, Military Police, Cape Breton Regional Police, Halifax Regional Police (HRP), HRP/RCMP Integrated Summary Offence Ticket Services, Registry of Motor Vehicles, The Department of Justice, New Glasgow Police Service, Motor Vehicle Inspections for vehicles and the commercial inspectors for buses.

Additionally, HRP, RCMP and the Registrar met in December 2012 to discuss the collection of traffic accident data and potential options to improve the quality and analysis. A potential option to improve the data collection from source and provide enhanced analytics is presently being scoped out.

The HRP and the RCMP maintain an HRM Integrated Traffic Unit and work together daily.

Further, Halifax Regional Police Divisional Commanders and the HRM Integrated Traffic Unit Traffic Sergeant and RCMP members meet every second month with HRM Traffic Services representatives to discuss traffic related issues in HRM to identify possible solutions which can be implemented with resources from Police and Traffic Services.

20. The Province is encouraged to identify a department and assign an individual responsible for coordinating traffic service division forums and maintaining regular communication with law enforcement officers regarding road safety matters, including pedestrian and crosswalk safety.

Defer to Provincial Authorities.

21. TIR, SNSMR, and the Department of Justice (DOJ) should explore and take any opportunities to enhance and clarify the Motor Vehicle Act (MVA) to enable law enforcement officers to enforce the Act effectively. The Task Force is advancing two areas of priority:
- a) TIR and SNSMR should jointly pursue amendments to legislation and regulations to reintroduce all vehicles (personal and commercial) to require both front and rear license plates.
 - b) TIR and DOJ should jointly pursue amendments to the legislation and regulations to enable law enforcement officers to issue summary of offence tickets based on license plate identification alone.

Defer to TIR, SNSMR and DOJ.

22. TIR, DOJ and SNMR explore the feasibility of amending legislation and regulations to provide legislative authority for Electronic Summary Offence Tickets (E-SOT).

Electronic Summary Offence tickets (eSOTS) went live for the HRP and the RCMP Halifax District in late October 2012.

23. The RCMP and municipal police agencies publicly and formally identify speeding as a public safety priority and explore methods of enhancing their enforcement efforts.

Halifax Regional Police Divisional Commanders review speeding concerns submitted by HRM Councillors and/or citizens and utilize the Speed Sentry to gather data on the number of vehicles, speeds and specific times vehicles are traveling on the roadway to determine if vehicles are actually speeding or whether it is a perception of speeding. When data support that vehicles are speeding, the HRP/RCMP Integrated Traffic Unit and the Community Response Officers are advised of the street and specific times when the majority of the speeding is occurring and follow up with targeted enforcement. Depending on the nature of the speeding complaints, Watch Members are also advised.

Chronic speeding area complaints are monitored on a periodic basis with radar by members in the HRP/RCMP Integrated Traffic Unit, Community Response Officers and Watch Members.

HRP Divisional Commanders also assign school zone speeding, stop sign complaints, red light running complaints, not stopping for school buses, crosswalk safety, and other traffic concerns identified by HRM Councillors and/or citizens to the HRP/RCMP Integrated Traffic Unit, Community Response Officers or the Watch Members depending on the complaint. This list of concerns is amended on a continual basis based on feedback from both citizens and Councillors.

In 2012, Halifax Regional Police officers wrote a total of 11, 035 tickets for speeding infractions. The breakdown is as follows:

4,604 tickets for exceeding posted speed limit by 1 to 15 km/h
5,535 tickets for exceeding posted speed limit by 16 to 30 km/h
812 tickets for exceeding posted speed limit by 31 km/h or more
84 tickets for other speeding related offences (eg. speeding in a temporary work area)

In the fiscal year 2012-2013 the Halifax District RCMP adapted a new approach to motor vehicle collisions within the HRM. The Halifax District RCMP gathered data from the last year which provided the highest collision areas and times when the highest amount of collisions occurred within these areas. These areas and times became a policing priority to the RCMP. Considerable enforcement efforts were placed at these locations during specified times with the goal to reduce injury motor vehicle collisions by 5% for the fiscal year. The majority of locations selected based on the previous year data were at intersections allowing RCMP to increase their enforcement at intersections as well.

In this way, the RCMP endeavours to determine problem locations and increase enforcement at these locations during specific times. This process is still underway and will be evaluated in April 2013 to determine whether or not it has been effective.

24. Speeding counter measures should be developed and include public awareness campaigns combined with concentrated enforcement of speeding with the objective of reducing the average traveling speed, incidents of speeding, and zero tolerance for speeding in school zones.

The Integrated Traffic Unit (ITU) focuses enforcement on speeding and a number of other traffic-related issues each month. Other themes include: driver distraction and the illegal use of cell phones; speed in school zones and crosswalk safety; safe sharing of our roadways by motorists, cyclists and pedestrians; driving for weather conditions; school bus safety, etc. Citizens are made aware of these themes via media releases which are posted on ITU's website and on social media sites.

At the beginning of the 2012-2013 school year, the RCMP conducted a campaign to ensure drivers were aware of the new 30 km/h speed limits in school zones. During the first month, RCMP police officers were placed at various schools throughout the HRM at the beginning and end of the school day with the primary goal to educate drivers on the new school zone speeds that were implemented. Pamphlets were handed out and many drivers were spoken to personally when either dropping off or picking up their kids.

25. The Province and municipalities identify the staffing of traffic services positions as a provincial road safety priority.

HRP and Halifax District RCMP have jointly created an Integrated Traffic Unit to focus solely on traffic enforcement within HRM boundaries.

26. The RCMP and Municipal Police Agencies communicate to frontline law enforcement officers the importance of completing pedestrian collision reports in an accurate and timely manner.

The limitation on data entry is a result of the traffic accident report (58-A) being a paper based document. There are a number of data fields but the document is a handwritten form, of which only a portion of the data is transcribed into the Records Management System. This limits the ability to analyze. Options are presently being explored by the Halifax Regional Police to improve data accuracy at source, reduce input time and improve analytical capability.

Pedestrian collision reports for collisions in RCMP territory are monitored by the RCMP Sergeant (Sgt) on each watch whose role is quality assurance. Each Sgt from each watch is responsible to review every file in Halifax District RCMP. Pedestrian motor vehicle incidents are part of the monitoring that is conducted by the Watch Sgt. who ensures that the collision reports are done in a timely and accurate manner.

Once the collision reports are entered, the RCMP use the data to determine problem locations (see number 23). All collision reports are sent to the Motor Vehicle Branch in Nova Scotia.

27. The RCMP and Municipal Police Agencies review the role of their school liaison officers in traffic and crosswalk safety education to determine the most efficient use of their abilities and time.

The Halifax area RCMP employs both school liaison officers and community liaison officers within their districts. These liaison officers oversee numerous programs throughout the year to educate people of all ages with respect to crosswalk and traffic safety. Some examples of these programs include Stop on Red Kids Ahead, Reduction of speed in school zones, assisting with the pace car program.

In the calendar year of 2012, the Community Relations / Crime Prevention office of Halifax Regional Police was involved in delivering 25 presentations on pedestrian safety. Some of these presentations were delivered strictly as “crosswalk safety”; however, many of them were presentations in which crosswalk safety was one of the topics covered along with other safety topics such as Halloween safety, general traffic safety, etc.

28. Policing agencies must explore the feasibility of publishing a reference manual that consolidates all speeding and crosswalk violations.

Each year the uniformed police officers of Halifax Regional Police and Halifax District RCMP receive a small booklet, produced by HRP/RCMP Integrated Summary Offence Ticket Services, which summarizes all Summary Offence Violations in Nova Scotia allowing police officers to have a quick and easy reference guide providing them with the required information to issue the proper summary offence ticket to the violator.

Halifax Regional Police Officers are provided instruction and direction on an ongoing basis.

29. The government, RCMP and municipal police agencies must dedicate funding towards traffic enforcement to promote, educate and enforce traffic and crosswalk safety effectively.

The HRP/RCMP Integrated Traffic Unit was launched in 2005. The Unit consists of ten officers from both HRP and RCMP, patrols six divisions throughout HRM (Central, East, West, Lower Sackville, Cole Harbour and Tantallon) in patrol vehicles and on motorcycles. The primary goals of the Traffic Unit are to improve traffic safety in HRM and address chronic traffic complaints. These goals are achieved by identifying the primary concerns of HRM residents and focussing on education and direct enforcement. Its mandate is to educate through enforcement. The Traffic Unit develops campaigns during the year when traffic violations may increase such as 'Operation School Zone' in September, 'Operation Slowdown' in the summer months and 'Operation Christmas' during the holiday season.

HRP has created a social media presence dedicated to traffic safety. The sites are managed by a member of Traffic Unit, and are spaces for citizens to post questions about traffic laws, discuss traffic-related issues and talk about ways to keep our roadways safe.

The Halifax District RCMP contribute to this by providing two police officers to the Integrated Traffic Unit, by dedicating resources to education and prevention through the use of Community Liaison Officers, School Liaison Officers and General Duty Patrol Officers. Further, it creates a monthly theme and targets education and enforcement surrounding that particular rule of the road. This monthly theme is communicated to media, public and elected officials at the beginning of each month.

Halifax Regional Police and Halifax District RCMP both assign officers to the Integrated Traffic Unit (8 HRP officers and 2 Halifax District RCMP officers) and also dedicate resources to education and prevention through the use of Community Liaison Officers, School Liaison Officers and General Duty Patrol Officers.

The greatest enforcement tools available to police are photo radar and red light cameras. At a recent meeting of the HRM Board of Police Commissioners, Halifax Regional Police and Halifax District RCMP were asked to explore the feasibility of the implementation of photo radar and red light cameras in HRM. This feasibility study will begin forthwith.

Evaluation

30. The RSAC member departments and relevant agencies improve their systems and processes to collect, analyze, and share the data critical to understand and address crosswalk safety.

Defer to RSAC.

31. RSAC ensure formal evaluations of programs, policies and strategies related to crosswalk safety are conducted.

Defer to RSAC.

32. RSAC ensure an annual report regarding the implementation status of the recommendations is released to the public; and after five years, a formal review of crosswalk safety programs, policies, and strategies is conducted.

Defer to RSAC.

Concluding Observations

42. The departments responsible for enhancing road safety must develop a comprehensive road safety strategy that is evidence-based and combines engineering, education, and enforcement countermeasures. The Province must dedicate funding and resources to enhance, support, and maintain road safety initiatives and encourage Nova Scotians to accept road and crosswalk safety as a shared responsibility.

HRM Traffic Services is currently enhancing road safety through engineering and education. See items 4, 5, 6, 7, 8, 9, 10, 33, 34, 35, 36, 37, 38, 39, 40 and 41.

HRP and RCMP are currently enhancing road safety through enforcement measures and education. See items 19, 22, 23, 24, 25, 26, 27, 29 and 29.

PART II

Pedestrian Collision Statistics Comparison

The table below is taken from a presentation by the City of Toronto and shows the pedestrian collision rates for several major cities in Canada in 2011. The HRM collision rate shown is from 2005 because an accurate number of recent pedestrian collisions is not available at this time from the Province of Nova Scotia.

City	Population	Pedestrian Collisions	Pedestrian Collision Rate/100,000 Population
Vancouver	642,843	532	83
Toronto	2,712,900	2,167	80
Montreal	1,978,066	1,435	73
Calgary	1,090,936	506	46
Halifax (2005)	370,000(est)	~160	43.31 ¹
Hamilton	519,949	221	43
Edmonton	793,000	316	40
Ottawa	923,000	350	38
Winnipeg	691,800	241	35

(Source: City of Toronto http://www.toronto.ca/transportation/publications/brochures/2011_ped.pdf Accessed Feb 12, 2013)

¹ Source: April 4, 2007 presentation to Halifax Regional Council.

PART III

Action Plan

Currently, Transportation and Public Works, the Integrated Traffic Unit (HRP/RCMP) and HRM Corporate Communications are involved in a marketing campaign to address crosswalk safety. The campaign will focus on the shared responsibility between motorists and pedestrians and involve print ads, radio ads, transit ads and television ads. The campaign will run from March 4th to March 22nd with one element (bus boards) running until from March 11th to April 17th.

Print ads will appear in the Metro, The Chronicle Herald and The Coast. Ads will be ¼ page and will appear weekly in the Metro and The Coast while appearing once on a Saturday in section A of the Chronicle Herald. Print ads will also appear on Metro Transit buses and posters will be placed at high schools and universities. See Attachment A-4 for preliminary print ad designs.

Television ads will appear on CBC and CTV during a mix of day and night times.

Radio ads will run during drive times and appear on C100, The Bounce 101.3, Q104 and Kool 96.5.

Digital ads will run on HRM's YouTube channel and on The Chronicle Herald website. A specific website; www.DistractionsKill.ca will remain online for some months during and after the campaign. The website will have stories, tips and videos specific to the message: "Distractions Kill. Crossing the street is a shared responsibility".

The ad campaign is aiming to change motorist and pedestrian behaviour, not just to bring awareness to pedestrian safety issues. A before and after survey will be performed to determine the effectiveness of the campaign.

HRP began a pedestrian safety campaign on February 6, 2013.

FINANCIAL IMPLICATIONS

The estimated budget for the campaign is \$75,000. Funds are available in the 2012/13 Operating budget from the following cost centres:

Transportation and Public Works - \$63,000 from R100 - 6919

Halifax Regional Police - \$2,000 from P120- 6912

Corporate Communications - \$10,000 from A620- 6912

COMMUNITY ENGAGEMENT

Community engagement was not deemed to be necessary in this process because decisions were based on operational procedures.

ATTACHMENTS

- A-1 Side-mount flashers memo
- A-2 List of 44 upgraded RA-5 locations
- A-3 Signage installed for pedestrians at signals
- A-4 Examples of print ads

A copy of this report can be obtained online at <http://www.halifax.ca/council/agendasc/cagenda.html> then choose the appropriate meeting date, or by contacting the Office of the Municipal Clerk at 490-4210, or Fax 490-4208.

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M E M O R A N D U M

TO: Ken Reashor, P.Eng., Manager of Traffic and Right of Way

FROM: Alan Taylor, P.Eng., Transportation Planner

DATE: June 1, 2009

SUBJECT: Side Mounted Flashing Beacons for RA-5 Crosswalks Trial Installations Report

One of the recommendations of the Crosswalk Safety Task Force was to look at ways to increase the conspicuity of RA-5 crosswalks. Public comment has been that the flashing lights mounted overhead are out of the line-of-sight of approaching drivers and lower-level side-mounted flashing lights would add conspicuity and driver compliance to these crosswalks. Therefore a trial of five locations within Halifax Regional Municipality was done.

Another recommendation of the Crosswalk Safety Task Force was to increase to size of the existing standard flashing beacons from 200mm diameter to 300mm diameter. Halifax Regional Municipality has adopted this recommendation therefore so that a change from 200mm to 300mm beacons not affect the results of a trial of side-mounted beacons, the trial locations were all converted to the new size at least a month before any measurements of driver compliance were made.

The procedure was to measure driver compliance by actuating the flashing beacons at a known minimum distance from the crosswalk, in both the before (no side-mounts) and after (with side-mounts) condition. Fifty approaching drivers were tested in each direction at each location.

In Nova Scotia generally, and in the Halifax area particularly, driver compliance is already quite good, so to achieve a meaningful difference required that drivers be stressed in their responses. Pre-trial testing showed that activating the beacons at the stopping sight distance resulted in a 100 percent compliance with the existing 200 mm overhead beacons. Thus, any new crosswalk arrangements could never show any improvements. It was decided to try one-half the stopping sight distance to see if that showed some drivers not stopping and yet not require extreme driver maneuvers and make the potential for rear-end collisions.

The tests were all done on dry pavement in daylight, non-peak hours. Only drivers of automobiles and light trucks (pickups, vans) were tested. Four of the test sites had 50 kph speed limits, so the one-half stopping sight distance there was 35 metres. One site had a 60 kph speed limit so the one half stopping sight distance there was 42.5 metres. (Stopping sight distance is applicable to wet pavement but was used in this test to give some guidance in choosing comparable numbers between two different speed limit locations. The tests were done on dry pavement.)

The surveyors were in teams of two persons, one observer and one pedestrian. Before the tests began, the test distances were inconspicuously marked or noted on the street. The pedestrian would loiter near the crosswalk but attempt to appear not about to cross until the approaching target driver was at the test distance when the pedestrian would actuate the signal by pressing the button. The pedestrian would then

stand at the curbside as if to cross. Once drivers had stopped, the pedestrian would cross the road. After that group of stopped drivers had cleared, as well as any nearby drivers who had seen the actuation, the pedestrian would repeat the test for the other approach direction. (The purpose of waiting was so drivers in the distance would not see a steady cycle of actuations and be primed to stop.)

The tests were done before the side-mounted beacons were installed, and then at least four weeks after they were installed.

The compliance results were as follows:

	compliance	compliance
location	before	after
Bedford Highway at Mount St Vincent University (north)	71%	88%
Dunbrack Street at Clayton Park Drive (60 kph)	96%	98%
Herring Cove Road at Drysdale Road	91%	96%
Titus Street at Evans Avenue	96%	95%
Pleasant Street at Dartmouth General Hospital (midblock)	92%	89%

The Bedford Highway at Mount St. Vincent location showed a large increase in compliance while the other locations showed either relatively small increases or essentially no change. It should also be noted that at all these locations, the compliance when the pedestrian actuation was when the driver was further away, or in other words, if compliance was measured applicable to drivers further away when the beacons were actuated was essentially 100%. At the Mount Saint Vincent location, compliance was retested at 75 metres. The compliance results were 97 percent compliance, slightly less than the expected 100 percent.

An interesting sidelight was noted at every location. Lone drivers, i.e. drivers of vehicles not part of platoons, were more likely not to stop than the lead drivers of platoons.

Ra-5 Locations (Eligible for cost sharing)**Region**

Bedford Highway/MSVU	West
Nantucket Avenue/Green Road	East
Titus Street Evans Avenue	West
Dunbrack Street/Clayton Park Drive	West
Herring Cove Road/Drysdale Road	West
Pleasant Street/Dartmouth General Hospital	East
Young Street/Monaghan Drive	West
Bedford Highway/McDonald's Civic 1496	Central
Bedford Highway/Nelsons Landing Boulevard	Central
Dartmouth Road/North Street/Wardour Street	Central

Year 1 (2009/2010)

Alderney Drive/Alderney Manor/Park Avenue	East
Alderney Drive/Prince Street	East
Waverley Road/Maple Street	East
Pleasant Street/Mayfield Drive	East
Pleasant Street/Mount Hope Avenue	East
Prince Albert Road/Lakeview Point Road	East
Prince Albert Road/Sinclair Street	East
Windmill Road/Jamieson Street	East
Wyse Road/Dawson Street	East
Wyse Road/Faulkner Street	East
Wyse Road/Sportsplex	East
Wyse Road/Thistle Street	East
Bedford Highway/Tremont Drive	West
Bedford Highway/Seton Drive	West
Chebucto Road/Connolly Street/Elm Street	West
Chebucto Road/Phillip Street	West
Cogswell Street/Central Commons	West

Year 1 (2010/2011)

Connaught Avenue/Chisholm Avenue	West
Connaught Avenue/Regent Street	West
Connaught Avenue/Liverpool Street	West
Dunbrack Street/Ross Street	West
Dunbrack Street/Birkdale Crescent	West
Herring Cove Road/Arthur Street	West
Herring Cove Road/McMullen Drive	West
Herring Cove Road/Spry Avenue/Circle Drive	West
Herring Cove Road/Sussex Street	West
Herring Cove Road/Purcells Cove Road	West
Kearney Lake Road/Wedgewood Avenue/Grosvenor Road	West
Purcells Cove Road/Anchor Drive	West
Quinpool Road/Northwest Arm	West
Quinpool Road/Quinn Street	West
Robie Street/Charles Street	West
Robie Street/Cherry Street	West
Robie Street/Shirley Street	West

SIGNAGE AT TRAFFIC SIGNALS AND FLASHING BEACONS

SIGNAGE AT RA-5s (PEDESTRIAN ACTIVATED BEACONS) SOME TRAFFIC SIGNALS

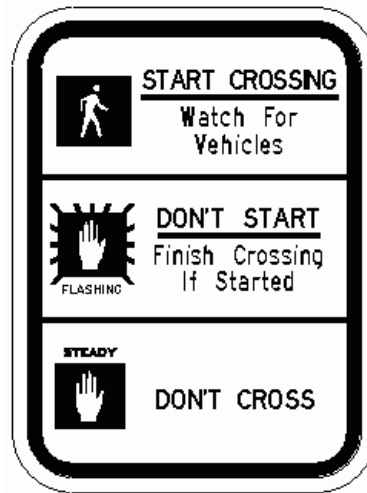


SIGNAGE AT NEW TRAFFIC SIGNALS

SIGNALS WITH PUSH BUTTONS



SIGNALS WITHOUT PUSH BUTTONS



Print Ads



Busboard



DISTRACTIONS
KILL

Crossing the street is a shared responsibility

Don't be a statistic.
Stay alert and watch out for each other.
Visit DistractionsKill.ca

