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**Item No. 12.1.2**  
**Transportation Standing Committee**  
**February 25, 2016**

**TO:** Chair and Members of (Name of Community Council or Board)

Original Signed

**SUBMITTED BY:**

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Bruce Zvaniga, P. Eng., Director Transportation & Public Works

Original Signed

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Jane Fraser, Director Operations Support

**DATE:** January 13, 2016

**SUBJECT:** Installation of Side Guards on HRM vehicles

**ORIGIN**

Transportation Standing Committee request a staff report, to investigate the implications of installing side guards on city-owned and contracted vehicles, specifically addressing the following items; a) the cost of installing side guards on all city-owned heavy trucks, plows, and other heavy equipment, b) the cost and legal authority of requiring long-term contractors (such as garbage collection and snow removal) to install side guards on all heavy vehicles, c) the cost and legal authority of requiring all city-contracted (including hourly/daily jobs) vehicles to be equipped with side guards, and d) the cost of including side guards on all newly-purchased city vehicles.

**LEGISLATIVE AUTHORITY**

*Halifax Regional Municipality Charter ("HRM Charter")*, subsection 61(3) "The property vested in the Municipality, absolutely or in trust, is under the exclusive management and control of the Council, unless an Act of the Legislature provides otherwise."

*HRM Charter*, subsection 75(1) "The Municipality may agree with any person for the provision of a service or a capital facility that the Municipality is authorized to provide."

**RECOMMENDATION**

It is recommended that the Transportation Standing Committee take no further action respecting the implementation of side guards on HRM owned and contractor vehicles.

## **BACKGROUND**

The Active Transportation Advisory Committee believes that truck side guards have been shown to reduce the risk of serious injury or death to cyclists and pedestrians involved in side-on collisions with heavy trucks. The cities of Montreal and Boston have begun installing side guards on all city-owned and contracted trucks. The Transportation Standing Committee felt there is merit in exploring the idea of side guards for city-owned vehicles in Halifax and passed a motion as noted above.

Side guards cover the gap between a truck's front and rear wheels, have long been mandatory on most large trucks in Europe and Japan, but they're not required in North America. The guards help prevent cyclists and pedestrians from falling beneath a truck during a collision and getting crushed under the rig's wheels.

## **DISCUSSION**

### United Kingdom

In the United Kingdom, side guards on trucks were introduced in 1986 through a National Law. These devices, intended to sweep aside a pedestrian or cyclist in a side-impact crash rather than being swept underneath the vehicle, are installed on large trucks. These are said to protect cyclists and pedestrians from falling underneath the vehicle, and helped reduce cyclist fatalities by 61% and pedestrian fatalities by 20% in side-impact crashes with trucks since their implementation.

Heavy duty vehicles exempt from the use of side guards include snow removal trucks, military vehicles, specialized road cleaning trucks and garbage trucks.

### Boston

In 2012, Boston experienced five bicycle fatalities, four which occurred with either a large truck or bus.

As the first of its kind in the nation, the Truck Side Guard ordinance championed by Mayor Walsh applies to motor vehicles weighing over 10,000 lbs. and semi-trailers with a total weight exceeding 26,000 lbs. The ordinance requires city agencies to contract only with vendors that have properly installed the following: sideguards, convex mirrors, cross-over mirrors, and blind-spot awareness decals. These features are intended to reduce the risk of unprotected road users from falling under the sides of vehicles and getting caught under the rear wheels. The ordinance does not apply to several types of large vehicles, such as agricultural trailers, fire engines, and trucks used exclusively for snow removal.

Since launch, two other major fleet companies in Boston have already invested in vehicle side guards and other fleet managers have attended a demonstration of the additions. The City of Cambridge, who attended an event, has also committed to outfitting its fleet with side guards.

In the spring of 2014, the City of Boston required waste hauling vendors with city contracts to install side guards on their fleet. One crash with a side-guard equipped trash vehicle was reported in the summer of 2014, the cyclist was injured but the crash did not result in a fatality.

The pilot has led to a city-wide ordinance requiring side guards and blind spot mirrors on all large trucks holding city contracts as of spring 2015.

### Ontario

On June 18<sup>th</sup>, 2012, the Ontario's chief coroner's made 14 recommendations upon the completion of a review of 129 cyclists' deaths since 2006 in Ontario. One of those recommendations was for trucks to be required to have side guards, which he believed would prevent further deaths and injuries. Side guards are also used to improve aerodynamics of trucks.

In 2012, Canada's transport regulator rejected the motion to make side guards mandatory despite the

Ontario's chief coroner's recommendation.

In April 2013, New Democrat MP Olivia Chow renewed her call for Ottawa to make side guards mandatory on big trucks, lauding an Ontario garbage-truck manufacturer that had taken the rare step of voluntarily outfitting its vehicles with this safety tool.

#### Transport Canada

Transport Canada, however, has re-stated the evidence on the effectiveness of side guards is not definitive. The transportation regulator has commissioned studies of guards and of aerodynamic skirts, which also cover a truck's side gap but are not specifically designed to make streets safer. In both instances, Transport Canada opted against moving forward with further testing.

It has also been documented by the National Research Council of Canada (Side Guards for Trucks and Trailers, Phase 1: Background Investigation, March 2010) that Side guards are only part of the solution to reducing severe injury caused by heavy truck and Vulnerable Road Users (VRUs) such as pedestrians and cyclists, collision incidents. It is not clear if side guards will reduce deaths and serious injury or if the guards will simply alter the mode of death and serious injury. For example, VRUs may strike the guards and then be ejected or diverted into another lane of traffic to suffer a serious injury as part of secondary event with another vehicle or with the road/sidewalk surface.

Side guards alone will not eliminate serious injuries. City buses have lower built-in side skirting than side guards found on most trailers yet there are still incidences of pedestrians and passengers being killed as they slip and fall under the wheels of moving city buses.

At present there is no way to accurately quantify the potential reduction in VRU deaths or serious injuries as a result of side guard installation.

#### Halifax

Corporate Fleet Services has contacted members of CAMFM (Canadian Association of Municipal Fleet Managers) and found only a few municipalities have taken the initiative to install side guards. These cities are St. John's, City of Guelph and a few in Quebec. There are concerns around the installation of sideguards as Transport Canada has not supported the use of sideguards.

In December 2015 and updated survey was circulated by CAMFM. The results are below:

CAMFM Survey: Does your City use Side Guards on Heavy Vehicles?

Date Survey sent: 18 December 2015

City	Use of Sideguard	Comments
Edmonton	No	
Fredericton	No	
Gatineau	No	
Halifax	No	Council actively inquiring
Hamilton	No	
Kamloops	No	
Kawartha Lakes	No	
Kelowna	No	
Lethbridge	No	Council directed to install on new units in future where possible
London	No	

Moncton	No	
Niagara Region	No	
Oshawa	No	
Ottawa	No	Council actively inquiring
Port Coquitlam	No	
Saskatoon	No	
Thunder Bay	No	
Toronto	No	
Vancouver	No	
Woodstock	No	
York Region	No	

### Cost Estimates

Approximately 100 heavy duty vehicles would need to be retrofitted, at an expected cost of \$3,500 to \$4,000 per vehicle, there would be a one-time fit-up cost of \$350,000 - \$400,000. There would also be increased annual maintenance costs due to the installation of the sideguards. The amount of the maintenance costs is unknown at this time, as there is no data available on the life expectancy or durability of the sideguards.

### FINANCIAL IMPLICATIONS

There are no financial implications associated with this report. However, if the Transportation Standing Committee and Regional Council were to approve the addition of sideguards to HRM's fleet, the resulting costs would be \$350,000 to \$400,000 for initial fit-up, plus annual maintenance costs. These funds are not within current budget.

### COMMUNITY ENGAGEMENT

This report is based on potential changes to internal operational procedures, therefore community engagement was not included in this process.

### ENVIRONMENTAL IMPLICATIONS

Implications not identified.

### ALTERNATIVES

Transportation Standing Committee could recommend that Regional Council:

1. Direct staff to begin piloting the use of sideguards on heavy equipment; and approve an increase to the 2016/17 proposed capital budget of \$400,000 to install sideguards on HRM vehicles.  
OR
2. Direct staff to explore other technologies such as aftermarket blind spot warning system.

If sideguards were to be required for HRM contractors, staff would recommend that it only apply to new contracts with the Municipality. Cost have not been included for this consideration.

**ATTACHMENTS:**

None

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A copy of this report can be obtained online at <http://www.halifax.ca/commcoun/index.php> then choose the appropriate Community Council and meeting date, or by contacting the Office of the Municipal Clerk at 902.490.4210, or Fax 902.490.4208.

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