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Info item No. 2
Transportation Standing Committee
April 23, 2019

TO: Chair and Members of Transportation Standing Committee

SUBMITTED BY: **ORIGINAL SIGNED**

Brad Anguish, Director, Transportation and Public Works

ORIGINAL SIGNED

Jacques Dubé, Chief Administrative Officer

DATE: March 27, 2019

SUBJECT: **Status Update – Side Guard Protection Implementation**

INFORMATION REPORT

ORIGIN

At its meeting of June 21, 2016, Halifax Regional Council passed the following motion:

- 1) Direct staff to require side guard protection to achieve an approximate maximum ground clearance of 350mm, except where impractical, on:
 - a) vehicles over 4500kg purchased or leased by Halifax Regional Municipality after April 1, 2017; and
 - b) contracted service provider vehicles over 4500kg on contracts awarded after April 1, 2017; and
- 2) Direct staff to include sufficient funding in the preliminary 2017-18 Budget and Business Plan to acquire side guard protection on all appropriate vehicles purchased by, leased by, or contracted to deliver service to Halifax Regional Municipality; and
- 3) Direct staff to submit a report to Transportation Standing Committee in mid-2018 detailing:
 - a) the status of side guard protection implementation at that time; and
 - b) recommendations on a retrofit program to complete the implementation of fleet vehicles not subject to replacement by 2022; and,
- 4) Request that Halifax Water Commission review and report to Regional Council on the application of side guard protection to their fleet and contracted vehicles for 2017 and beyond.

LEGISLATIVE AUTHORITY

Halifax Regional Municipality 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.”

Halifax Regional Municipality Charter, subsection 79(1): “The Council may expend funds required by the Municipality for ... (z) acquisition of equipment, materials, vehicles, machinery apparatus, implements and plant for a municipal purpose;”

BACKGROUND

Side guards are designed to protect vulnerable road users (such as cyclists and pedestrians) from being caught and dragged under large commercial vehicles. According to a US Department of Transportation study approximately half of all cyclist fatalities involved making first contact with the side of the truck and 37% specifically hit the right side of the truck. Another study from the 2015 Canadian National Collision Data Base (NCDB) revealed 22% of fatal pedestrian and cyclist incidents involved first making contact with the truck side.

The January 2018 Transport Canada report on side guards states, "Evidence suggests there is little, if any effect; however, an analysis of vehicles that are exempt from applying side guard technology, suggests that side guards have a significant effect on both reducing the frequency of such collisions and on reducing the severity of injuries when collisions occur."

Council passed a motion on June 21, 2016 directing staff to require side guards on all contracted vehicles over 4500kg except where impractical and to have all HRM fleet vehicles fitted with side guards through a replacement and retrofit program by 2022. The following report fulfills Regional Council's request to provide a mid-2018 report to the Transportation Standing Committee.

DISCUSSION

HRM Corporate Vehicles

Through market research, HRM Corporate Fleet Services determined that Airflow Detector Inc. was the only side guard manufacture/provider which has developed and certified standards around their products. In November 2016, Airflow Detector Inc. traveled to HRM to install test products on two (2) units and the product was tested and deemed acceptable to HRM. In 2017, a follow up review was completed on both installs and it was determined that the side guards had help up.

In conjunction with Airflow Detector Inc. and HRM procurement, a standing offer was created (2090009337) with Airflows Detector Inc.'s local provider (Parts for Trucks) to supply and install side guard units as required. From this standing offer, another five (5) fleet vehicles have been outfitted since 2017. Another five (5) fleet vehicles are in the process of being delivered, once on site, the vehicles will be reviewed to see if side guards can be installed without impacting the vehicles' intended use.

Various units have been identified for retrofit for side guards and Fleet Services has been researching different styles and means of installation. The desired application must provide functionality of the side guard with ability to access areas of inspection and maintenance. Others may have utility boxes installed to provide further functionality. The retro fit program has been assigned to Municipal Fleet Supervisors.

Fleet Services is working on fabrication of standard bracketry and cross guards to try and keep the job as simple and cost effective as possible. Some vehicles may need to be completed outside due to workload

within the fleet bays and as mentioned above; some may have or will have a tool/cargo box installed. This may include a combination of contracted and in-house installation.

Fleet Services estimates that it will cost approximately \$3,000 - \$4,000 per unit to have side guards installed externally. By completing this work in-house, Fleet staff is hopeful to reduce the cost by 30-40%. This may not be possible for all applications/combinations. Fleet staff estimates that to complete all fleet vehicles by 2022, 30 to 40 vehicles will require side guard protection installation in 2019/20, with an additional 30 to 40 in 2020/21 (could vary depending on body style and equipment required). Estimated costs, therefore, would range from \$58,500 to \$104,000 in both 2019/20 and 2020/21 and these funds will be requested in the budget submissions for those years.

Appendix A contains photographs of the fleet outfitted vehicles.

Solid Waste Vehicles

A November 27, 2018 report titled, “**Side Guards on Source Separated Solid Waste Collection Vehicles**” was presented and approved at Regional Council (Appendix B) and based on the funding detailed in the report, it is anticipated that contracted Solid Waste collection vehicles will be outfitted with side guards by early spring 2019.

The approved November 27, 2018 Council Report on **Side Guards on Source Separated Solid Waste Collection Vehicles** identified a cost estimate of \$238,229 (net HST included) to outfit 91 Solid Waste collection vehicles.

Construction Industry

Over the past two years, several meetings were held between HRM, Nova Scotia Road Builders Association (NSRBA), Construction Association of Nova Scotia (CANS) and the Truckers Association of Nova Scotia (TANS) to discuss side guard requirements. The industry expressed concerns about complying with the installation of side guards on all vehicles in excess of 4500kg, except where “impractical”. Their concerns were founded on the practicality and cost associated with outfitting industry fleet with side guards; estimated at some 2000 vehicles and an investment of over \$7,000,000. Many of the industry contracted vehicles are used on and off-road. Side guards would prevent those vehicles from operating safely for their intended use off-road.

Based on the meetings held with industry, the requirements for side guards and the term “impractical” have been better defined by HRM to include an exemption to vehicles routinely used off-road and to vehicles that have a combination of tool boxes, fuel tanks or steps which function as a de facto side guard. As a result, procurement staff has confirmed the following language has been added to the Unit Price RFSO (request for standing offer) and RFQ (request for quotation) templates to be used as required.

Side Guard Protection:

All vehicles over 4500 kg are required to have side guard protection installed between the front and rear wheel, except where impractical as follows:

Vehicles such as road graders, loaders, planers, compactors and other similar equipment, and vehicles which routinely operate off-road on uneven terrain and require greater ground clearance between axles than the side guards permit are exempt at this time;

Construction fleet vehicles only intended and used for on-road activity are required to comply unless previously exempted due to outriggers, etc.;

Acceptable side underride protection can be provided by any combination of vehicle fuel tanks, tag axles, tool boxes, or purpose-built side guards that achieve the goal of shielding vulnerable road users from being swept underneath the vehicles rear wheels

HRM contractors, including snow removal contractors, have reviewed their existing fleet and concluded that, based on the clarification, a large portion of their commercial vehicles are exempt or they include trucks with the type of underride protection described above. The remainder of their vehicles are being assessed, and contractors are embarking on a retro-fit program that will continue over the next several seasons and beyond. Continued discussions will be held with industry on the retro-fit program.

Based on the information provided from NSRBA, to date over 30 industry vehicles have been outfitted with side guards and an even larger number have a combination of tool boxes, fuel tanks and steps that would not allow for the installation of side guards. Only a small percentage of industry vehicles will require side guards. Appendix C provides examples of exempted construction industry vehicles.

It is assumed that industry costs associated with side guard installation will be passed onto HRM through increased unit rates.

FINANCIAL IMPLICATIONS

Future financial requirements will be brought forward through operating budget discussions.

COMMUNITY ENGAGEMENT

HRM staff have met with members of the Truckers Association of Nova Scotia, Nova Scotia Road Builders Association, and the Construction Association of Nova Scotia.

ATTACHMENTS

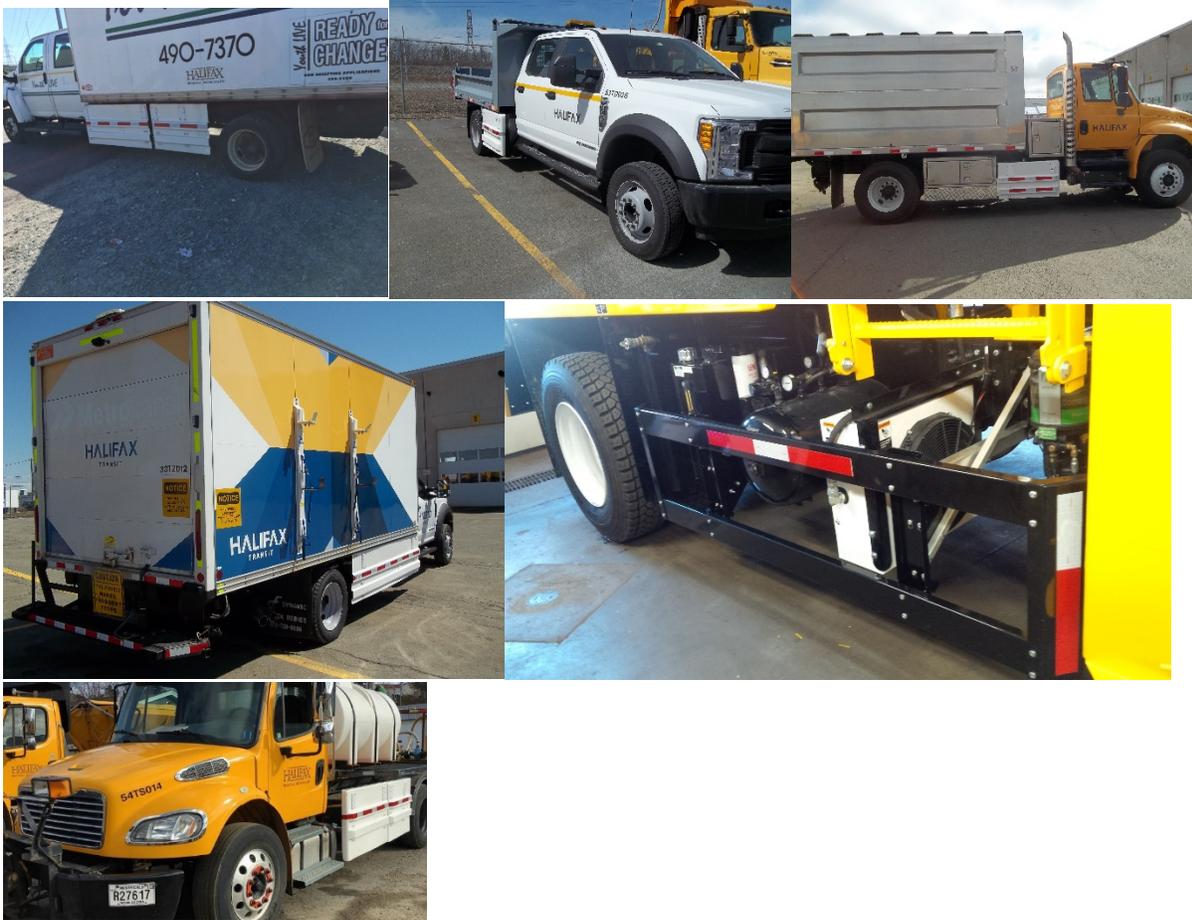
- Appendix A: HRM Corporate Fleet Side Guarded Vehicles
- Appendix B: Side Guards on Source Separated Solid Waste Collection Vehicles
- Appendix C: Exempted Construction Industry Vehicles

A copy of this report can be obtained online at halifax.ca or by contacting the Office of the Municipal Clerk at 902.490.4210.

Report Prepared by: Beverley Audet, Manager, Road Operations and Construction, 902.490.4673

APPENDIX A

HRM FLEET SIDE GUARD VEHICLES



P.O. Box 1749
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Item No. 14.1.2
Halifax Regional Council
November 27, 2018

TO: Mayor Savage and Members of Halifax Regional Council

SUBMITTED BY:

Original Signed by 

Jacques Dubé, Chief Administrative Officer

DATE: September 25, 2018

SUBJECT: **Side Guards on Source Separated Solid Waste Collection Vehicles**

ORIGIN

At the June 5, 2018 session, Council approved the following motion:

THAT Halifax Regional Council:

1. Exercise its option to extend the municipal curbside solid waste collection contracts and their respective standing offer agreements for a two-year period as per the terms and conditions outlined in the staff report dated April 27, 2018; and
2. Direct staff to negotiate the installation of sideguards for the municipal curbside solid waste collection fleet and return to Council outlining the total project cost and a funding source.

LEGISLATIVE AUTHORITY

Clause 79(1) (an) of the *Halifax Regional Municipality Charter* provides that “Council may expend money required by the Municipality for ... collecting, removing, managing and disposing of solid waste”.

Section 41 of HRM’s Procurement Policy provides that “the exercising of any option under a contract is subject to the identification and availability of sufficient funds approved by Council through the business planning and budget process” and that Council may approve any such contractually defined option, including an option to extend a contract.

RECOMMENDATION

It is recommended that Halifax Regional Council:

1. Approve the installation of side guards on the contracted curbside solid waste collection fleet with funding as provided for in the Financial Implications section of this report;
2. Exercise its option to extend the existing condominium collection contracts for garbage, organics and recyclables (and their existing standing offer agreements) for a two-year period as provided for by the terms and conditions outlined in this report;
3. Approve the installation of side guards on the contracted condominium solid waste collection fleet with funding as provided for in the Financial Implications section of this report.

BACKGROUND

The existing curbside collection contracts for garbage, organics and recyclables (RFP No. 14-336) have an expiration date of June 30, 2021.

The existing condominium collection contracts for garbage, organics and recyclables (Tender No. 16-073) have an expiration date of October 31, 2019 (with an option, at the Municipality's sole discretion for two (2) additional separate one (1) year extensions with a CPI adjustment mechanism).

DISCUSSION

Council directed staff to initiate discussions with the collection contractors for the installation of side guards on the solid waste collection fleet. Staff gathered information regarding side guard suppliers and designs from the contracted service providers. Based on review with TPW staff, the various side guards proposed by Solid Waste contractors meet industry standards.

The table below provides an estimate for the installation of side guards on the curbside collection fleet in use by the four collection contractors servicing the eight collection areas within the Municipality. This includes regular fleet for garbage/organics and recyclables collection and fleet for seasonal peaks and weekly summer organics collection.

Service – Curbside Solid Waste Collection	Cost for Side Guard Installation (Parts & Labour)
Estimate 83 total trucks	Estimate \$193,005
10% Contingency	\$19,300
Subtotal	\$212,305
Total (inc. net HST)	\$221,405

Tender No. 16-073, Collection of Solid Waste from Condominiums provides for the collection of garbage, organics and recyclables in three collection areas within the Municipality. The contracts for these services commenced November 1, 2016 for an initial three-year period to October 31, 2019. The Municipality has the right and option to extend the tender and contracts for two additional one-year periods. During the extension, the same terms and conditions of the tender apply, subject to the application of CPI (all items, for Canada, preceding twelve-month period) to the monthly and other unit prices as contained in the tender responses.

The scope, terms and conditions that apply in the tender extension period with the two service providers in three collection areas are summarized as follows:

Parties	HRM and Contracted Service Providers: GFL Environmental – Areas A & B, S/O# 2090009088 REgroup – Area C, S/O# 2090009089
Services	Condominium collection – garbage, organics & recyclables
Extension Duration	Year one (November 1, 2019 to October 31, 2020) Year two (November 1, 2020 to October 31, 2021)
Pricing	- The schedule of monthly and other unit pricing increases by CPI in the first extension year (in comparison to the Nov. 1, 2018 to Oct. 31, 2019 schedule of prices) - The schedule of monthly and other unit pricing increases by CPI in the second extension year (in comparison to the Nov. 1, 2019 to Oct. 31, 2020 schedule of prices)

Terms and Conditions	<ul style="list-style-type: none"> - Municipality's sole option to extend the contract for the first year and second year with a minimum three-month notice period prior to the end of each term - New buildings added are addressed through unit pricing at the time that the service is required - Fuel escalation clause, as applicable - Contractors to provide sufficient and reliable equipment to ensure completion of the required collection services at the designated locations on the assigned days and within the required collection time period
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Solid Waste is currently drafting the RFP for organics management. An option available for vendors is establishing an anaerobic digestion (AD) system which can create renewable natural gas (RNG) from organics cart material. If RNG was produced, it may be able to be used in the condominium collection fleet. A contract extension will provide staff the ability to investigate possibly integrating RNG fueled fleet into the condominium collection system. Extending the condominium collection contracts is fiscally prudent. Historically, price increases for condominium collection contracts have varied (but tend to increase). However, in 2016, for this current Tender No. 16-073, the first-year cost decreased for condominium collection by an average of approximately 26.9% less than the average of the previous monthly prices total for these services. The extension price adjustment is limited to CPI each year which is estimated to be approximately 2%. Extending the contract will secure the historically low collection rate for an additional two years.

The existing condominium collection contracts do not require haulers to have side guards, however, the contracts contemplate that they could be added to the fleet at the request of the Municipality (and at the Municipality's cost).

The table below provides an estimate for the installation of side guards on the condominium collection fleet in use by the two collection contractors servicing the three condominium collection areas within the Municipality. This includes all fleet for garbage/organics and recyclables collection.

Service – Condominium Solid Waste Collection	Cost for Side Guard Installation (Parts & Labour)
Estimate 8 total trucks	Estimate \$14,665
10% Contingency	\$1,467
Subtotal	\$16,132
Total (inc. net HST)	\$16,824

FINANCIAL IMPLICATIONS

Funding for condominium collection is included within the annual Solid Waste operating budget account R322-6399. The table below provides the list of contractors servicing the three condominium collection areas and the estimated collection costs in each area for the extension years using a CPI estimate of 2% in each 12 months as the increase.

Condominium Area	Contractor	Nov 1/19 – Oct 31/20	Nov 1/20 – Oct 31/21
A – Halifax/Western	GFL Environmental	\$220,343	\$224,749
B–Dartmouth/Cole Harbour	GFL Environmental	\$93,520	\$95,391
C – Bedford/Sackville	REgroup	\$61,754	\$62,989

Note 1: Prices above exclude net HST.

Funding for the installation of side guards is estimated to cost \$221,405 for the curbside collection fleet and \$16,824 for the condominium collection fleet for a total estimated cost of \$238,229 (net HST included). Costs will be applied to Solid Waste operating account R322-6399 Collections. This initiative was not

contemplated during the development of the 2018/19 budget. Based on current projections, this cost can be accommodated within Solid Waste's overall budget allocation as a result of additional diversion credit funding provided by Divert NS, revenue generated through regional partnerships in recycling operations and lower residential tonnage at Otter Lake.

RISK CONSIDERATION

The risks associated with these recommendations are low.

COMMUNITY ENGAGEMENT

N/A

ENVIRONMENTAL IMPLICATIONS

N/A

ALTERNATIVES

Council may direct staff to install side guards on only the curbside solid waste collection fleet.

Council may direct staff to not extend the condominium collection contracts and wait for the next condominium collection tender to add the requirement for side guards.

ATTACHMENTS

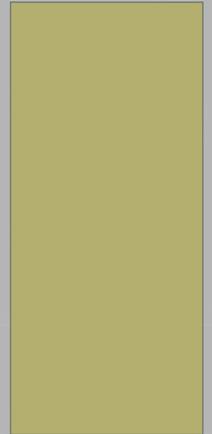
N/A

A copy of this report can be obtained online at halifax.ca or by contacting the Office of the Municipal Clerk at 902.490.4210.

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SIDEGUARD PROTECTION FOR HRM CONTRACTS

EXEMPTED VEHICLE EXAMPLES



TWIN STEER TRUCK WITH DEF & FUEL TANKS



TWIN STEER TRUCK WITH TOOL BOX, FUEL & HYDRAULIC TANKS



TWIN STEER TRUCK WITH AUXILIARY STEPS & FUEL TANKS



TANDEM DUMP TRUCK

Fuel Tank & Battery Box/Steps



Fuel Tank with
DEF & Battery Box



TANDEM DUMP TRUCK WITH AIR CANS / AUTO-GREASER



WATER TRUCKS

Fuel Tank & Intake/Discharge
Fittings & Piping



Fuel Tank & Intake/Discharge
Fittings & Piping



BOOM TRUCK / CRANE WITH OUTRIGGERS

Boom Truck with Outriggers



Mobile Crane with Outriggers



SERVICE TRUCKS

Fuel Service and Tool Boxes



Step, Tool Box & Water Discharge



SERVICE TRUCKS

Tool Box / Battery Boxes



Fuel Service / Water Service



BELLY DUMP TRAILERS

Dolly Legs & Discharge Chutes



Dolly Legs & Discharge Chutes



B-TRAIN BELLY DUMPS & LIVE FLOOR TRAILERS WITH ROLL-OVER TARP



LIVE FLOOR TRAILERS WITH DOLLY LEGS & ROLL-OVER TARPS



DISTRIBUTOR TRUCKS

Air Cans & Tool Boxes



Distributor Controls, DEF Tank & Tool Boxes



TILT-DECK TRUCKS

Crane & Sliding Tilt-Deck With
Underslung Tanks / Tool Boxes



Outrigger Stabilizers &
Underslung Tanks / Tool Boxes



SERVICE / UTILITY VEHICLES

1-Ton Dump With Tool Box



Service Truck with Tool Box

