Ontario Association of Fire Chiefs

Briefing Note and Position Paper: Intermittent Blue Lights on Fire Apparatus

September 27, 2017

INTRODUCTION

A member of the Ontario Association of Fire Chiefs (OAFC), Chief Gord Weir, Clarington, has raised and championed the issue of blue lights on fire trucks in an effort to improve the safety of firefighters responding to emergencies, especially when conditions (i.e. snow, fog) limit motorists' visibility. Chief Weir noted in correspondence with the Ministry of Transportation (MTO) that over the last few years, with increases in traffic and changing weather conditions, his department has had several near misses and some minor collisions along the 115/35 Highway. In response to Chief Weir's request, the MTO reached out to the OAFC, requesting further consultations to discuss this matter.

Currently, only police vehicles are permitted under the *Highway Traffic Act* (HTA) to have intermittent or flashing blue lights on vehicles. This was accomplished in 2007 through Bill 203, the *Safer Roads for a Safer Ontario Act*. Multiple research studies have found that blue lights are more visible to the human eye at night. Several other studies – specific to emergency vehicle markings, reveal that blue lights also improve the ability of drivers to determine a vehicle's motion.

Using this evidence, the Police Association of Ontario (PAO) successfully lobbied the provincial government to amend the HTA through Bill 203, giving police vehicles exclusive permission to have blue flashing lights on vehicles. Other classes of emergency vehicles were not included in the provision at that time. However, the OAFC supports any measure that increases the level of safety for first responders. And further, while the fire service has been fortunate to not experience the number of traffic-related tragedies as the police service, we want to avoid such fatalities in future – at all costs, and blue intermittent lights are one method that is evidenced to decrease those odds.

Since the Ministry of Community Safety and Correctional Services (MCSCS), which governs both the police and fire service, enacted this Bill to better protect police officers, the OAFC believes the same protection should be extended to the fire service. Furthermore, by permitting blue intermittent lights to be installed on *all* classes of emergency vehicles, the MCSCS would ensure **equal** health and safety precautions are applied and available to all first responders. This provision would demonstrate the Ministry's commitment to the improved safety of each and every "frontline" emergency response worker.

BACKGROUND

In 2007, Bill 203 was passed. It included amendments to the HTA and the *Remedies for Organized Crime and Other Unlawful Activities Act, 2001*, as well as consequential amendments to other Acts. The amendments included a new HTA provision, allowing police department vehicles to exclusively use intermittent blue flashing lights. The PAO pursued this Bill after a police officer was struck and killed at an accident scene during foggy conditions, noting also that between 1994 and 2007, two-thirds of police officer deaths in Ontario were the result of traffic-related accidents.

Through Bill 203, the HTA was amended as follows:

- *(1) Subsection 62 (14) of the Act is amended by striking out "Subject to subsection (15)" at the beginning and substituting "Subject to subsections (14.1) and (15)".*
- *(2) Section 62 of the Act is amended by adding the following subsection:*

  Red and blue lights to the front restricted

- *(14.1) In addition to the lighting requirements in this Part, a police department vehicle may carry lamps that cast red and blue lights, but no other motor vehicle shall carry any lamp that casts red and blue lights to the front.*

- *Subsection 62 (32) of the Act is repealed and the following substituted:*

  Restriction on use of flashing blue light

  - *(32) No person shall operate a lamp that produces intermittent flashes of blue light on a highway except,*

    - *(a) a person operating a road service vehicle in the circumstances described in subsection (31); or*

    - *(b) a person operating a police department vehicle, together with a lamp that produces intermittent flashes of red light, as permitted by subsection (14.1).*

- *Subsection 159 (1) of the Act is amended by striking out the portion before clause (a) and substituting the following:*

  Fire department vehicles, etc., approaching

  - *The driver of a vehicle, upon the approach of a police department vehicle upon which a bell or siren is sounding or upon which a lamp is producing intermittent flashes of red light or red and blue light, or upon the approach of an ambulance, fire department vehicle or public utility emergency vehicle upon which a bell or siren is sounding or upon which a lamp is producing intermittent flashes of red light, shall immediately bring such vehicle to a standstill,*

- *Subsection 159.1 (1) of the Act is amended by striking out "intermittent flashes of red light" and substituting "intermittent flashes of red light or red and blue light".*

Explanatory Note from the HTA – Use of flashing coloured lights

Section 62 restricts the use of different coloured lights to various classes of vehicles. Currently, flashing red lights are permitted to a number of classes of vehicles (e.g. police department vehicles, ambulances) listed in subsection 62 (15) and green flashing lights are permitted to firefighters only. The section is amended as follows: to allow that further classes of vehicles, to be prescribed by the regulations, may use red flashing lights; to give police department vehicles the exclusive right to use red and blue flashing lights; and to allow volunteer medical responders, to be prescribed by the regulations, to use green flashing lights. Consequential amendments are made to sections 144, 159 and 159.1.

OVERVIEW

Section 62 of the HTA restricts the use of different coloured flashing lights to various classes of vehicles. Red lights are permitted for a number of classes of vehicles (e.g. police department vehicles, ambulances, fire trucks), green flashing lights are permitted for volunteer firefighter vehicles only, and with the passing of Bill 203, blue flashing lights are permitted for police vehicles only. Prior to the passing of Bill 203, Ontario was the only jurisdiction in North America that did not permit the use of blue flashing lights on police vehicles.

The OAFC remains unsure as to why the permission to install blue flashing lights was restricted to only police vehicles when the HTA was amended in 2007. However, extensive evidence reveals the benefits of installing blue flashing lights on all classes of emergency vehicles to improve the safety of first responders attending to roadside emergencies. The United Kingdom has adopted a model where **flashing** blue lights are permitted on all emergency response vehicles, including fire apparatus, ambulances and police vehicles, and **static** blue lights are permitted only on police vehicles.

Under low light conditions, vision is shifted substantially toward shorter wavelengths, which appear as blue or violet, and away from longer wavelengths, which appear as red. This means that a vehicle equipped with blue lights is better able to draw drivers' attention to its presence, even when other road users are not actively looking for it (Cook et. al., 1999). Ultimately, during the night time, blue surfaces become more visible (Flannagan and Devonshire, 2007).

More specific to this proposal, the Florida Highway Patrol conducted a study of effective police vehicle emergency lighting in 2003 and 2004. This study revealed that blue is the best colour of lighting to improve visibility at night. Blue also gives the truer perception of the vehicle's motion than red, as it stands out against the predominantly red background provided by other vehicles.

Similarly, in 2008, the University of Michigan Transportation Institute studied the effects of warning lamp colour and intensity on driver vision. Blue markings were the most easily distinguishable by participants. The 2002 Arizona Blue Ribbon Panel Study also had similar findings. Tests showed that the human eye is more sensitive to blue lights at night, and red lights during the daytime.

RECOMMENDATION

The OAFC recommends that intermittent blue lights be permitted for installation on the front and rear of fire apparatus to improve the safety of firefighters responding to roadside emergencies, with a further recommendation to allow the same permissions for all emergency vehicles under the HTA.

CLOSING STATEMENT

The continued safety and wellbeing of members of the fire service, as well as those who make up the broader emergency services system, is of paramount importance to the OAFC. The installation of blue flashing lights on the front and rear of fire apparatus presents a simple, evidence-based solution that will help to prevent future tragedies within our ranks, while making Ontario's roadways safer.

The OAFC will continue to monitor this issue as it develops.