

**TO:** CHAIR AND MEMBERS  
PUBLIC SAFETY COMMITTEE

**DATE:** 2017 July 04

**FROM:** DIRECTOR ENGINEERING

**FILE:** 38000 20  
*Ref: Traffic Safety*

**SUBJECT: REVIEW OF PEDESTRIAN CROSSWALKS AT FOUR LOCATIONS**

**PURPOSE:** To review existing crosswalk operations at North Fraser Way/Fraserton Ct, North Fraser Way/Fraserwood Ct, Eastlake Rd/Centaurus Dr, and Halifax/Augusta Ave.

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**RECOMMENDATION:**

1. **THAT** the Committee recommend to Council the installation of roadside mounted special crosswalks at four existing marked crosswalks as detailed in this report.

**REPORT**

**BACKGROUND**

In response to requests for improvements, a traffic engineering review has been completed for four existing crosswalks in the City of Burnaby. This review assessed the need for potential upgrades following the Canadian standard methodology from the Transportation Association of Canada (TAC). The findings and recommendations are summarized in this report.

**SITE LOCATION**

The review presented in this report covers the following four existing crosswalks:

- i) North Fraser Way/ Fraserton Ct;
- ii) North Fraser Way/ Fraserwood Ct;
- iii) Eastlake Dr/ Centaurus Dr; and
- iv) Halifax St/ Augusta Ave.

Figures 1 to 4 illustrate the location of these existing crosswalks. All of these crosswalks are simple marked crosswalks located at unsignalized intersections, and have zebra pavement markings and roadside signs. The two crosswalks on North Fraser Way at Fraserton Ct and at Fraserwood Ct serve employees and transit users within the industrial park. The crosswalk on Eastlake Dr at Centaurus Dr is at the entrance to Burnaby Mountain Secondary School and a multi-family residential community across the street. The fourth location on Halifax St is at Augusta Ave approximately halfway between Duthie and Phillips Ave. This crosswalk serves a large seniors' complex. All four crosswalk locations have transit bus stop on both side of the main road (i.e. North Fraser Way, Eastlake Rd, and Halifax St).



**Figure 1: Existing Crosswalk at North Fraser Way/ Fraserton Ct/ Northbrook Ct**



**Figure 2: Existing Crosswalk at North Fraser Way/ Fraserwood Ct**

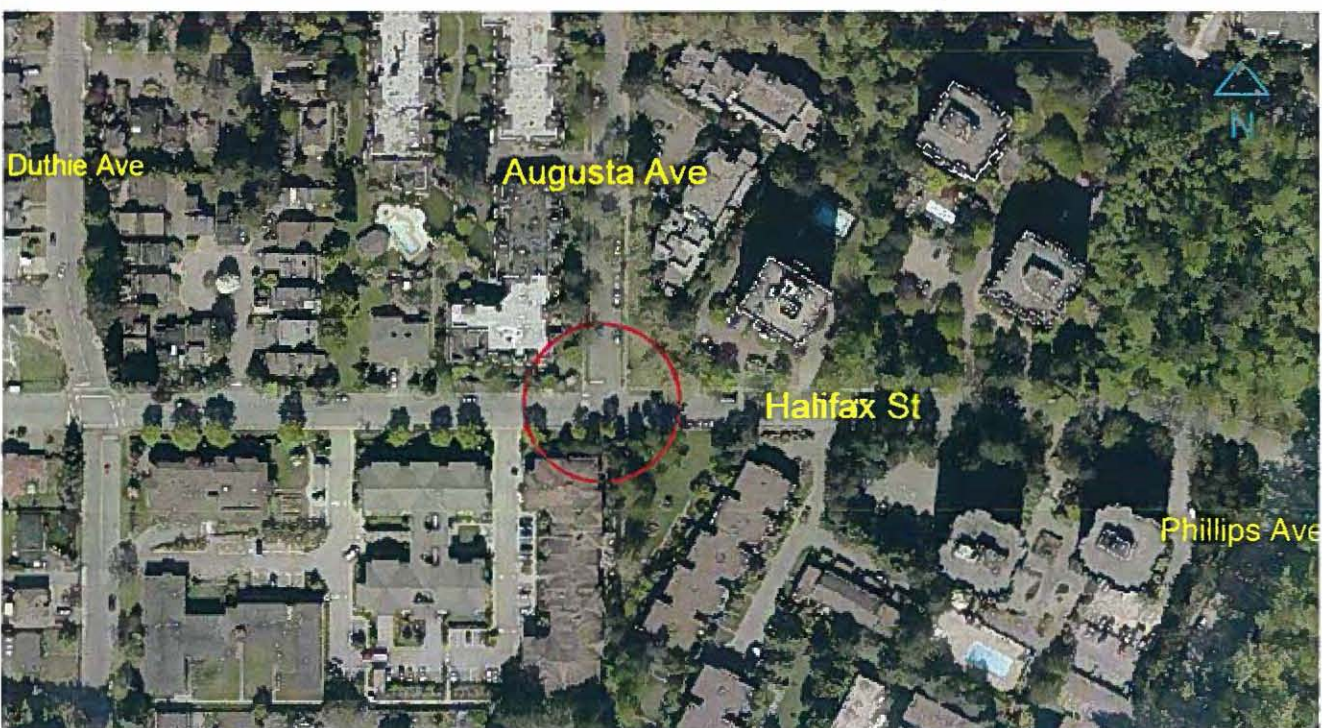




**Figure 3: Existing Crosswalk at Eastlake Dr/ Centaurus Dr**



**Figure 4: Existing Crosswalk at Halifax St/ Augusta Ave**





## **EXISTING CONDITIONS**

Simple marked crosswalks are the basic form of crosswalk installed at lower demand locations as warranted based on the TAC methodology. As pedestrian and vehicular traffic volumes increase, such crosswalks may be upgraded if required to enhance safety. Traffic counts and historical safety data help capture such increase in demand and any interaction between pedestrians and vehicular traffic.

The four marked crosswalks were reviewed from a traffic engineering and safety point of view applying new traffic count data collected specifically for the purpose of this review.

## **CROSSWALK WARRANT ANALYSIS**

The City follows the standard crosswalk warrant analysis procedure from the Transportation Association of Canada (TAC). The methodology takes into account a number of factors including pedestrian crossing demands, vehicular traffic volumes, roadway geometrics, crash history, nearby traffic controls and crossing features. This procedure ensures consistency throughout the City, addresses the safety of pedestrians, and meets driver expectations. A crosswalk warrant analysis was undertaken for each of the four locations to assess the need for an upgrade to the next level of crosswalk which is a special pedestrian actuated crosswalk with either roadside or overhead flashing beacons.

Based on the analysis, all four locations meet the minimum hourly and daily volume thresholds to justify a marked crosswalk with zebra pavement markings and roadside signs which currently exist. The warrant for a special crosswalk with overhead flashing beacons was not satisfied at this time. However, considering the wide crossing distance (11 – 14 meters) and vehicular operating speeds greater than 50 km/h, the installation of roadside flashing beacons to reinforce the existing roadside signs is justifiable. The special crosswalk with roadside flashing beacons will be similar to the special crosswalk on Beta Ave at Brentwood Mall entrance and Brentwood Dr as shown on Figure 5, but without a centre median. Another difference would be the use of Rectangular Rapid Flashing Beacons (RRFB) now approved by TAC to replace the circular beacons. The RRFB is a newer technology that provides a higher intensity light that flashes rapidly to notify drivers of crossing pedestrians. They are more cost effective compared to the overhead flashing beacons and appropriate for roads with two travel lanes with a posted speed limit of 50 km/h. The four recommended locations will be the first to use this technology in Burnaby.

**Figure 5: Existing Roadside-mounted Special Crosswalk at Beta Ave/Brentwood Dr**



## CONCLUSIONS

Based on a traffic engineering review upgrades are recommended at four existing marked crosswalks in Burnaby. Each of the following four crosswalks will be upgraded to special crosswalk with the addition of roadside mounted RRFBs:

- i) North Fraser Way/ Fraserton Ct;
- ii) North Fraser Way/ Fraserwood Ct;
- iii) Eastlake Dr/ Centaurus Dr; and
- iv) Halifax St/ Augusta Ave.

The improvements will help enhance the safety of pedestrians crossing the road by making them more conspicuous to approaching motorists. The upgrades will include yellow rapidly flashing rectangular beacons, new AC power supply, new poles with support bases, and pedestrian push buttons. The cost to implement the above work is estimated to be \$120,000 and funding is available from the Annual Capital Budget for Minor Traffic Management Projects (EMF.0063). Staff will also apply for funding contributions from the ICBC's Road Improvement Program and TransLink's Transit Related Road Improvement Program.

A handwritten signature in black ink, appearing to read 'Leon A. Gous'.

Leon A. Gous, P. Eng., MBA  
DIRECTOR ENGINEERING

MH/DL/ac

Copied to: City Manager