

**TO:** CHAIR AND MEMBERS  
TRANSPORTATION COMMITTEE

**DATE:** 2016 May 25

**FROM:** DIRECTOR ENGINEERING

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

**SUBJECT:** MARINE DR AT NELSON AVE

**PURPOSE:** To recommend the installation of a traffic signal at the intersection of Marine Drive and Nelson Avenue.

---

**RECOMMENDATION:**

1. **THAT** the Committee recommend to Council the installation of a traffic signal at the intersection of Marine Dr and Nelson Ave at an estimated cost of \$300,000 funded from the 2016 - 2020 Annual Financial Plan (Traffic Signals EMF.0041 and EMF.0050).

**REPORT**

**1.0 BACKGROUND**

Staff has been monitoring the intersection of Marine Dr and Nelson Ave for several years, after receiving public feedback about increasing traffic congestion at that location. Both streets are classified as Major Collector roadways under the Burnaby Transportation Plan. While traffic volumes along Marine Dr have remained relatively consistent over the years, they have been increasing along Nelson Ave. The intersection was recently reviewed again to determine the need for any changes.

**2.0 DISCUSSION**

The intersection of Marine Dr and Nelson Ave is currently controlled by 4-way stop signs as shown in Figure 1. As previously noted, traffic volumes along Marine Drive have remained consistent at about 10-12,000 vehicles per day over the last 20 years. On the other hand, traffic volumes along Nelson Ave have doubled to about 10,000 vehicles per day during that same time period. Part of this can be attributed to the general growth of the City, and to Nelson being one of the more direct routes from Marine Way up to the Kingsway ridge and Metrotown.

To: Transportation Committee

From: Director Engineering

Re: Marine Dr and Nelson Ave

2016 May 25 ..... Page 2

The increase in traffic volume has led to considerable delay and queuing on Nelson in both approach directions, but particularly in the northbound direction during the peak period. Northbound queues have been noted to extend 450m south to Marine Way. Any queues onto Marine Way would create safety concerns because of the higher speed limit (80kph) of that road. The current queues limit the accessibility of adjacent properties which include the Riverway Sports Complex and Garden Works.

The most recent traffic analysis showed that the installation of a traffic signal at Marine Dr and Nelson Ave is warranted given the current traffic conditions. A full traffic signal would help to alleviate the long queues that develop during peak periods and address the high number of collisions at the intersection by more clearly assigning the right-of-way. Within the last five years (2009-2013) there was an average of 16 collisions per year which is double what is found in other similar intersections controlled by 4-way stop signs. The majority of these collisions were rear-ends; however, there were no reported collisions involving pedestrians or cyclists.

City-wide, the majority of two intersecting Major Collectors are signalized including the nearby intersection of Nelson Ave and Rumble St. The current classification of Nelson Ave as a Major Collector confirms the important role of the street in providing north-south access within Burnaby's South Slope area. In fact, it is only one of three streets that connect Marine Way to the rest of Burnaby's road network to the north, the other two being Boundary Rd and Byrne Rd, both Primary Arterials. Boundary and Byrne Roads will continue to carry more traffic than Nelson Ave because both have multiple lanes in each direction, compared to Nelson Ave's single lane design. The Transportation Plan indicates that Nelson will continue to have one lane in either direction which will restrain the number of vehicles that can use this street.

### **3.0 INTERSECTION DESIGN**

In order for the proposed new signal to operate effectively, the north and south approaches to the intersection need to be modified slightly to allow through traffic to by-pass any vehicles waiting to turn left. This can be accomplished by shifting the centreline of Nelson Ave by about 1.5 metres to the east to create a widened southbound approach lane. The northbound approach lane would also need to be widened by shifting the asphalt curb to the east by about 3.5 metres. Fortunately, there is adequate boulevard space on the east side to accommodate this. At the same time, an interim sidewalk is proposed to provide a better pedestrian connection between the southeast corner of the intersection and Garden Works' parking lot where pedestrian activity has created a well-worn path. Additional street lighting at the intersection is also planned as part of the traffic signal work.

To: Transportation Committee  
From: Director Engineering  
Re: Marine Dr and Nelson Ave  
2016 May 25 ..... Page 3

#### 4.0 RECOMMENDATION

Based on a recent review of traffic volumes and safety conditions, the installation of a full traffic signal at the intersection of Marine Dr and Nelson Ave is recommended to help to better regulate traffic, reduce congestion and enhance safety. The signal and associated civil works are estimated to cost \$300,000 and funding is available in the 2016 – 2020 Annual Financial Plan under projects EMF.0041 and EMF.0050. There is sufficient availability on these projects to complete this work with no additional unknown commitments. Funding contributions from ICBC's Road Improvement Program will also be sought to help offset costs to the City. The installation of the signal is anticipated to be completed by the end of the year.



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

EJ/DL/ac

Attachment

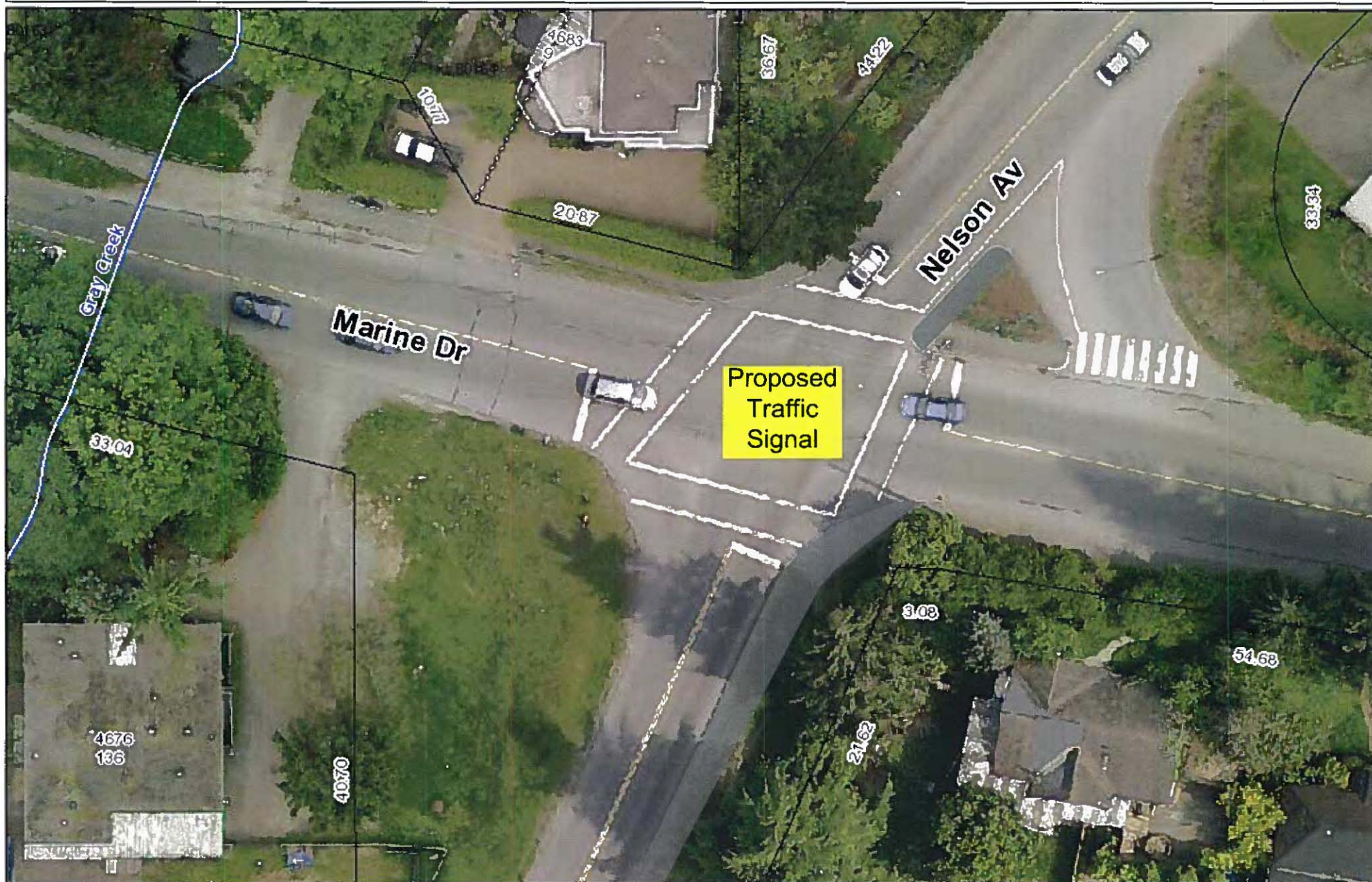
Copied to: City Manager  
Director of Planning and Building  
Director of Finance



# Figure 1 Marine Dr - Nelson Ave

May 27, 2016

1:400



The information has been gathered and assembled on the City of Burnaby's computer systems. Data provided herein is derived from a number of sources with varying levels of accuracy. The City of Burnaby disclaims all responsibility for the accuracy or completeness of information contained herein.

