

DATE OF MEETING 2018-JUN-13

AUTHORED BY JAMIE ROSE, MANAGER OF TRANSPORTATION

SUBJECT **BOXWOOD ROAD TRAFFIC CALMING**

## **OVERVIEW**

### **Purpose of Report**

To provide the Public Works and Engineering Committee with information on the Council motion for Staff to report back on traffic calming and pedestrian safety options on Boxwood Road.

### **Recommendation**

That the Public Works and Engineering Committee receive the report titled "Boxwood Road Traffic Calming", dated 2018-JUN-13, for information.

## **Background**

Boxwood Road is a major road, which serves the light industrial area bounded by Meredith Road, Bowen Road, and East Wellington Road. The light industrial zoning in the area creates a diverse combination of businesses, ranging from truss manufacturing to retail. These businesses have equally diverse transportation needs. There are also gymnastic and dance studios in the neighbourhood, which create localized pedestrian activity at the intersections of Island Diesel Way and Bollinger Road. Through the Nanaimo Transportation Master Plan Boxwood Road has been identified as a key future active transportation corridor linking the Country Club, Hospital, and Vancouver Island University Mobility Hubs.

## **Current Conditions**

Boxwood Road has been developing since 1995, and over that time traffic demands have increased steadily. In recent years Staff have received several requests for traffic calming and sidewalks. Some requests have explicitly identified speed humps, however it has been made clear that the City's Traffic Calming Guidelines, which were developed based on nationally accepted best practices, do not support the installation of speed humps on Major Roads. Instead, recommend that traffic calming on major roads be addressed through better lane delineation or narrowing of traffic lanes.

In response to requests from the community and a motion from Council, Staff have undertaken a traffic study on the Boxwood Corridor. In addition to gathering technical data, a notice was circulated to area businesses to seek feedback on a potential option. The study was intended to generate a recommendation for traffic calming and opportunities to enhance pedestrian mobility, however as information has been gathered it has become evident that the issues are complex and require careful planning to ensure that short term solutions compliment long term plans.

The following information has been gathered through the study:

- The 85<sup>th</sup> percentile speed (or the speed that the majority of traffic is traveling below) is 61 km/h.
- There are approximately 4000 vehicles per day traveling on Boxwood Road.
- Area businesses support efforts to calm traffic but are very concerned about any loss of parking.
- Typical Parking Occupancy on the west side of the street is 42%.
- Typical Parking Occupancy on the east side of the street is 50%.
- Sidewalk will be constructed through building permit requirements at the undeveloped properties of 1885, 1925, 1955, and 1965 Boxwood Road.

### **Future Needs**

Boxwood Road is one of the few, continuous north south transportation corridors in Central Nanaimo that is not an arterial road or Provincial Highway. With this in mind, it is anticipated that upon completion of the Boxwood Connector, it will become a highly desirable route for cyclists and pedestrians traveling north and south. For this reason, Boxwood was identified through the Transportation Master Plan as the “Off Bowen Bike Way”. Planning a transportation corridor for both heavy vehicles and cyclists requires a delicate balance of traffic calming features and road design that can accommodate large vehicles.

### **Options for Current and Future Conditions**

When considering options to address the current concerns of speeding and pedestrian mobility, staff are considering a variety of options. Physical traffic calming features, such as a traffic circle were considered first, but were discounted as they could not accommodate the movement of large vehicles. Staff then explored options to create a complete street cross section. This would not only address traffic calming concerns, but would also provide the added benefit of adding either cycling or pedestrian facilities. The complete street options, which provide the greatest benefit for traffic calming and active transportation mobility, would require the removal of parking from one side of the road, which the area businesses have expressed concern over.

Options Being Considered:

**Option 1** - Create a buffered multiuse path on the west side of Boxwood Road.

Creating a buffered multiuse path on the current parking lane on the west side of Boxwood Road between Dufferin Crescent and Tulsa Road will reduce travel lane widths, which will have a traffic calming effect and will provide a walking and cycling connection between Dufferin Crescent and Tulsa Road until such time as sidewalk can be constructed. This option would allow for the multi use trail to evolve into a bidirectional cycle track once the sidewalk has been constructed (through development). The drawbacks of this option are that parking will be eliminated from the west side of Boxwood Road and that sections of travel lanes will be limited to 3.4m. It is anticipated that parking will operate at 85% capacity, which is considered acceptable, however 3.4m wide travel lanes are at the lowest end of the acceptable range to accommodate large vehicles. This option has been estimated at approximately \$340,000.

**Option 2** - Create a buffered multiuse path on the east side of Boxwood Road.

Creating a buffered multiuse path on the current parking lane on the east side of Boxwood Road between Dufferin Crescent and Tulsa Road will reduce travel lane widths, which will have a traffic calming effect and will provide a walking and cycling connection between Dufferin Crescent and Tulsa Road until such time as sidewalk can be constructed. This option would allow for the multi use trail to evolve into a bidirectional cycle track once the sidewalk has been constructed (through future development). The drawbacks of this option are that parking will be eliminated from the east side of Boxwood Road and that travel lanes will be limited to 3.4m. It is anticipated that parking will operate at 100% capacity, which will result in parked vehicles being displaced into the adjacent neighbourhood, and 3.4m wide travel lanes are at the lowest end of the acceptable range to accommodate large vehicles. This option has been estimated at approximately \$340,000.

**Option 3** - Create Bike Lanes with Curb Extensions at intersections.

The creation of north and south bound bike lanes, with curb extensions at the intersections of Tulsa Road, Island Diesel Way, and Bollinger Road will reduce travel lane widths to 3.6m, which will have a traffic calming effect, and will provide cyclists with a conventional cycling facility. This option does not provide any immediate benefit to the pedestrian network, but is a familiar type of cycling facility which would be consistent with the portion of Boxwood Road south of Dufferin Crescent. The drawbacks of this option are the lack of pedestrian facility and that this type of cycling facility provides little separation between heavy vehicles and cyclists. The lack of separation will make this facility unappealing for novice riders and therefore limit future use. This option has been estimated at \$425,000.

**Option 4** - Construct sidewalk on the west side of Boxwood Road and mark a road centerline.

Continuing the road centerline on Boxwood Road between Tulsa Road and Dufferin Crescent and constructing sidewalk on the west side will provide a higher level of service to pedestrians along the corridor and will have some traffic calming benefits during high demand parking periods. Outside of business hours when parking demand is low, traffic calming will be insignificant and vehicle speeds will likely remain unchanged. Constructing sidewalk on the west side of Boxwood Road (ahead of development) will require the relocation of multiple utility poles and landscaping which will result in a high cost of construction. This option does not provide any benefit to cyclists and would require one of the other options to be constructed in the future to support the future needs of the corridor. This option has been estimated at \$550,000.

**Summary**

Staff have identified four potential options for work on Boxwood Road to address the current speeding and pedestrian mobility concerns. Options 1 and 2 could provide significant short and long term benefits for traffic calming and pedestrian or cyclist mobility. The drawbacks of these options are constrained lane widths, which may be challenging for large vehicles, and a loss of parking on one side of the road which is a concern of area businesses. Option 3 would provide traffic calming benefits without impacting large vehicle movements, but would not provide benefit to pedestrians now, and would not provide a cycling facility that would be appealing for riders of all skill levels. Option 4 will provide a sidewalk, which supports pedestrian mobility; however, it is not expected to result in any noticeable reduction in vehicle speeds.

This report is being presented for information and to advise the committee that once staff have identified an option for recommendation, a decision report will be brought forward.

### **SUMMARY POINTS**

- The 85<sup>th</sup> percentile speed on Boxwood Road between Dufferin Crescent and Tulsa is 61 km/h.
- Approximately 4000 vehicles per day travel on Boxwood Road.
- Boxwood Road does not currently have pedestrian or cycling facilities.
- Boxwood Road provides access for large heavy vehicles to the industrial businesses.
- Loss of on street parking would be a concern of the businesses.

#### **Submitted by:**

Jamie Rose  
Manager of Transportation

#### **Concurrence by:**

Poul Rosen  
Senior Manager of Engineering