

TRAFFIC SAFETY COMMITTEE

*HIS WORSHIP, THE MAYOR
AND COUNCILLORS*

**SUBJECT: BRETLAWN DRIVE BETWEEN WILLINGDON AVENUE AND
DELTA AVENUE**

RECOMMENDATIONS:

1. THAT Council approve the installation of 4-way stop signs at Brentlawn Drive and Beta Avenue.
2. THAT a copy of this report be sent to Mr. Matthew Senf, 4811 Brentlawn Drive, Burnaby, BC, V5C 3V4, and other residents along Brentlawn Drive.

REPORT

The Traffic Safety Committee, at its meeting held on 2014 July 08, received and adopted the *attached* report to review and respond to traffic safety concerns along Brentlawn Drive.

Respectfully submitted,

Councillor S. Dhaliwal
Chair

Councillor A. Kang
Vice Chair

Councillor P. Calendino
Member

Copied to:	City Manager Director Engineering Director Planning and Building OIC, C/Supt. RCMP – Burnaby Detachment
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TO: CHAIR AND MEMBERS
TRAFFIC SAFETY COMMITTEE

DATE: 2014 June 03

FROM: DIRECTOR ENGINEERING

FILE: 38000 20
Ref: Traffic Safety

SUBJECT: BRENTLAWN DR BETWEEN WILLINGDON AVE AND DELTA AVE

PURPOSE: To review and respond to traffic safety concerns along Brentlawn Dr.

RECOMMENDATIONS:

1. **THAT** the Committee recommend to Council the installation of 4-way stop signs at Brentlawn Dr and Beta Ave.
2. **THAT** a copy of this report be sent to Mr. Matthew Senf, 4811 Brentlawn Dr, Burnaby, BC, V5C 3V4, and other residents along Brentlawn Dr.

REPORT**BACKGROUND**

On 2013 November 05, Mr. Matthew Senf appeared as a delegation to the Traffic Safety Committee and expressed concerns regarding traffic safety on Brentlawn Dr between Willingdon Ave and Delta Ave. He made a presentation on behalf of residents along Brentlawn Dr requesting:

- The removal of the #134 bus route from Brentlawn Dr
- The installation of speed humps as a traffic calming measure, and
- The installation of four way stop signs at the intersection of Beta Ave and Brentlawn Dr.

In support of his request, Mr. Senf presented the Committee with a report with background information and data that he had gathered. The Committee referred his concerns to staff for review and report back.

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EXISTING CONDITIONS

Brentlawn Dr between Willingdon Ave and Delta Ave is located at the southern edge of the Brentwood Park neighbourhood, immediately north of the Brentwood Town Centre Area. It is classified as a Local Collector street in a neighbourhood consisting of single family dwellings. The road is about 8.5 meters wide and is finished to a final standard with concrete curb and gutter, and abutting concrete sidewalks on both sides of the street. All intersections along the street are stop sign controlled as shown in Figure 1, and a pedestrian/bus signal exists at the intersection of Brentlawn Dr and Willingdon Ave.

Traffic volume counts were most recently collected in April 2014 and May 2013 along Brentlawn Dr. Average two-way weekday traffic volumes were found to be about 1,960 vehicles per day. This is about the same as the counts completed in 2006 where the volumes were about 2,100 vehicles per day. Both counts are well below the maximum threshold of 3,000 vehicles per day for a Local Residential street and 5,000 vehicles per day for a Local Collector street. Traffic volumes were highest during the afternoon peak period (3-6 pm).

Speed counts were conducted in April 2014 in the two blocks between Fairlawn Dr and Delta Ave. The average weekday 85th percentile speed (the speed at which 85% of all vehicles travel at or below) was found to be 52 km/h for eastbound traffic and 51km/h for westbound traffic. In 2006, the 85th percentile speed of traffic on Brentlawn Dr was found to be 47 km/h. While there has been a slight increase in speeds, they are typical for local residential streets. In 2012, the RCMP also undertook some speed enforcement along Brentlawn Dr and observed that most drivers were driving within the speed limit and that the narrowness of the road may lead one to incorrectly perceive that many drivers are exceeding the speed limit.

REVIEW OF CONCERNS AND REQUESTS

Removal of Bus Route #134 from Brentlawn Dr

The current bus route #134 travels along Brentlawn Dr as shown in Figure 2. A past review of this route that the Transportation Committee received on 2006 March 8 demonstrated that the route is being used by neighbourhood residents. Since then, in response to a request by Council, Coast Mountain Bus Company (CMBC) has replaced full-sized buses with community shuttle buses on weekends when demand is lower.

If bus route #134 is relocated north to Willingdon Ave and Parker St as proposed by Mr. Senf, there would be a service reduction for residents in the vicinity of Delta Ave and Brentlawn Dr as shown by the shaded area in Figure 2. This area is home to about 1,000 people who would then have to walk an unreasonably long distance (more than 400 metres) to access transit service. At the same time, the shift to Willingdon Ave and Parker St does not fill any existing service deficiencies along that corridor due to existing bus routes.

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Alternatively, a shift to Fairlawn Dr would create a similar service reduction for residents, but the area impacted would be smaller. Also, Fairlawn Dr, in comparison to Brentlawn Dr, offers no technical advantages in that the street conditions are almost identical with 8.5m road widths abutting single family homes. One significant disadvantage is that all property owners who purchased a home on Fairlawn Dr, or any other similar street in the neighbourhood, do not expect and would likely object to a bus route along their street to simply relieve concerns along Brentlawn Dr which has had a bus route since the neighbourhood was first constructed.

An alternative route along Delta Ave between Lougheed Hwy and Parker St was also considered. It provides similar transit service area coverage and is along a designated local collector street. Unfortunately, the steep grades along Delta Ave between Lougheed Hwy and Ridgelawn Dr cannot be managed by buses and therefore it is not a viable alternative.

The safe operation of buses is a high priority for CMBC as well as the City. At some locations, the conditions may not be ideal due to narrower than desired roadways, but these are often considered safe if traffic volumes are relatively low. As noted above, traffic volumes along Brentlawn Dr have remained unchanged in the last 8 years and there are no identified safety concerns that would require the route to be relocated from Brentlawn Dr. Due to concerns expressed about buses damaging parked cars along Brentlawn Dr, Coast Mountain Bus Company reviewed their crash records and found 8 bus-related contacts over the last 10 years (i.e. less than one per year). While no contact is desirable, the low rate relative to the total number of bus trips made along Brentlawn Dr and relative to other locations (some of which have contact rates that are more than 10 times higher), bus operations along Brentlawn Dr are considered safe.

Based on all of the above, it is recommended that the current bus routing for #134 be maintained.

Installation of Speed Humps along Brentlawn Dr

Traffic calming measures, specifically speed humps, have been requested by Mr. Senf along Brentlawn Dr to address traffic safety concerns. Similar requests for speed humps in the past have not been supported for two reasons: the presence of bus route #134 and the road's classification as a Local Collector. Both these conditions remain unchanged. The above review of bus route #134 shows that Brentlawn Dr is the best route for the neighbourhood. Also, the designation of Brentlawn Dr as a Local Collector within the *Burnaby Transportation Plan* is still reasonable given its location and function as part of the overall neighbourhood street network: it is the only continuous street in the neighbourhood extending from Willingdon Ave to Delta Ave, and thus provides entry to the neighbourhood from both the east and west. It is recognized that the pavement width of Brentlawn Dr does not meet the prescribed standard of 11.0m for a Local Collector; however, the *Plan* was intended to identify the ultimate preferred condition to be pursued over time, as opposed to its current condition. While there are no current plans to widen Brentlawn Dr at this time, it remains a possibility in the longer term.

Other Traffic Calming Measures

The installation of other traffic calming measures such as diverters, traffic circles, road closures and turn restrictions along Brentlawn Dr are also challenging due to the presence of the bus route #134 and the Local Collector designation of the street. The installation of any diversionary measures will limit legitimate local access along Brentlawn Dr and could negatively impact surrounding local streets by diverting traffic there. Because of this, significant public consultation would be required and, based on past experiences, neighbourhood consensus would be difficult to achieve.

In response to traffic concerns along Graveley St west of Willingdon Ave, a right turn only restriction (3-6 pm weekdays) for eastbound traffic at Willingdon Ave was approved by Council on 2014 May 12 and subsequently installed. This should also help to reduce traffic along Brentlawn Dr during the afternoon weekday rush hours because a significant proportion of traffic (about 200 vehicles over a three hour period) previously continued east across Willingdon Ave to Brentlawn Dr. In anticipation of potential rerouting of traffic to other streets, turn restrictions further afield were considered. One such consideration was the restriction of eastbound left turns at the intersection of Halifax St and Willingdon Ave. However, this was not recommended because it would cause significant traffic disruptions to general traffic patterns in the area and would be ineffectual in addressing traffic concerns along Brentlawn Dr. Some of the implications are described below:

- Halifax is classified as a Major Collector carrying up to 1,000 vehicles per hour, with approximately 240 eastbound vehicles turning left during the pm peak hour (the majority of which are not destined to Brentwood Dr).
- Eastbound left turn restriction will likely divert left turning traffic to Lougheed and Willingdon where there is already traffic congestion during peak periods, to other less appropriate local streets, or through the Brentwood Mall site.

Rather than speculate on how traffic patterns may change as a result of the new turn restrictions on Graveley St, staff will monitor traffic conditions and take further action if necessary.

Traffic Safety

Traffic safety concerns were addressed by undertaking a detailed review of the ICBC crash data along Brentlawn Dr. ICBC statistics show that 80 crashes occurred within eight years (2004-2011) on Brentlawn Dr between Willingdon Ave and Delta Ave. Most of these (63) occurred at the signalized intersection of Willingdon Ave, as expected, where the volume of traffic is much higher. Details from the remaining 17 crashes suggest that half were not related to speeds but driver error such as single-vehicle crashes in people's driveway. The remaining half, representing about one crash per year over a three block length, may or may not have been related to speeds, but there is not enough available information to make a determination. There are a number of additional midblock crashes involving parked vehicles along Brentlawn Dr above the 80 crashes identified above, but the location of these types of crashes are not clearly identified making analysis difficult (e.g. some parking lot crashes at Brentwood Mall are

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included). It can be assumed that midblock crashes along Brentlawn Dr would likely be higher than some local streets, in proportion and relative to the volume and speed of traffic (i.e. a lower volume street with slower speeds would likely have less midblock crashes). A review of the available crash data did not reveal any problems requiring immediate attention.

Installation of Four-Way Stop Signs at Brentlawn Dr and Beta Ave

The installation of multi-way stop signs is determined using national standards to maintain consistency amongst all municipalities and to prevent the inappropriate use of stop signs which may actually decrease safety. Factors considered include frequency of right-angle crashes, the volume of traffic, and the average delay to traffic entering the intersection from the minor road. A review at Brentlawn Dr and Beta Ave shows that multi-way stop signs are not required at this time. The intersection's crash rate between 2004-2011 is approximately 1 per year which is not unusual and the delay to traffic on Beta Ave is not significant.

On the other hand, Beta Ave south of Brentlawn Dr is also classified as a Local Collector and does carry traffic volumes similar to Brentlawn Dr because it provides community access to Brentwood Mall and to the signalized intersection of Lougheed Hwy and Beta Ave. As Brentwood Mall redevelops, it is anticipated that a 4-way stop sign may be required in the near future. Therefore, to address community concerns, it is recommended that 4-way stops be installed now at Brentwood Dr and Beta Ave, prior to any redevelopments.

In addition, field observations at the intersection identified visual obstruction concerns due to parked cars on Brentlawn Dr in combination with the horizontal and vertical curves of the road. In response, parking restrictions were recently installed to improve visibility at this intersection.

Other Mitigations

While traffic volumes along Brentlawn Dr appear to be unchanged within the last eight years, traffic concerns in general due to major nearby developments are understandable. To help maintain safe and efficient operation of the road network, the City is undertaking a number of initiatives that are worth noting:

- As part of the proposed redevelopment of Brentwood Town Centre and Brentwood Mall, detailed traffic studies are completed to identify potential future impacts and mitigation measures. These measures aim to keep through traffic on the major streets and out of single-family neighbourhoods.
- The completion of two parallel roads to Lougheed Hwy, namely Dawson St and Still Creek Ave, are planned. These will be continuous roads between Boundary Rd and Douglas Ave, and will help to alleviate some congestion on Lougheed Hwy at Willingdon Ave by providing an alternate route for east-west traffic. This, in turn, lessens the tendency for drivers to divert onto single-family local residential streets.

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- A left turn lane from eastbound Lougheed Hwy to northbound Delta Ave (also classified as a Local Collector) is being considered. This left turn (prohibited today) would provide an alternative access into the neighbourhood and reduce the need for local traffic to rely on Brentlawn Dr.
- An update to the *Burnaby Transportation Plan* will be underway in the near future. This update will review all road classifications (including Brentlawn Dr) and modes of transport (including transit) throughout Burnaby. Public input will be sought and encouraged as part of the update.

CONCLUSION

A review of safety issues was completed along Brentlawn Dr between Willingdon Ave and Delta Ave. Brentlawn appears to be functioning appropriately in terms of traffic volumes and speeds. A review of collision data did not reveal any unusual trends or patterns. The current routing of bus #134 along Brentlawn Dr was found to be safe and beneficial in terms of serving the community. The installation of speed humps along Brentlawn Dr cannot be accommodated due to the presence of bus route #134 and the road's classification as a Local Collector.

The previously approved installation of a right turn only restriction (3-6pm weekdays) for eastbound traffic along Graveley St at Willingdon Ave will help to reduce traffic along Brentlawn Dr during the afternoon weekday rush hours. It is recommended that four-way stop signs be installed at Brentlawn Dr and Beta Ave in advance of the redevelopment at Brentwood Mall. Both these measures will help to address some of the traffic concerns along Brentlawn Dr while respecting its current role as a Local Collector and bus route.

A number of other initiatives are also being pursued to address traffic concerns in the surrounding neighbourhood with respect to developments within the Brentwood Town Centre area. These include enhancements to the street network along Lougheed Hwy, Dawson St, and Still Creek Ave. As the area develops, traffic conditions will be reassessed to determine if any further measures are required to maintain safety.

It is recommended that a copy of this report be sent to Mr. Matthew Senf, 4811 Brentlawn Dr, Burnaby, BC, V5C 3V4, and other residents along Brentlawn Dr.


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

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Attachments

Copied: City Manager
Director Planning and Building
Burnaby RCMP – OIC Chief Supt. Dave Critchley



BRENTLAWN BETWEEN WILLINGDON AND DELTA

FIGURE - 1



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.

LEGEND
 — STOP SIGNS ALONG BRENTLAWN



Figure 2 – Reduction of Bus Service Area if Bus Route #134 Re-Routed to Willingdon/Parker

