

TO: CHAIR AND MEMBERS
PUBLIC SAFETY COMMITTEE **DATE:** 2018 Sep 12

FROM: DIRECTOR ENGINEERING **FILE:** 38000-20

SUBJECT: TRAFFIC CONCERNS ALONG DUTHIE AVE,
NORTH OF HASTINGS ST

PURPOSE: To review and recommend measures to address traffic concerns along
Duthie Ave north of Hastings St

RECOMMENDATIONS:

1. **THAT** the Committee recommend that Council approve the traffic management measures outlined in this report to address traffic concerns along Duthie Ave north of Hastings St.
2. **THAT** a copy of this report be sent to Audrey Flagel and Anne Van Akker for information.

REPORT

INTRODUCTION

On 2018 May 15 the Public Safety Committee received a delegation from Audrey Flagel and Anne Van Akker as well as a letter with an attached petition from Audrey Flagel regarding traffic concerns along Duthie Ave between Hastings St and Inlet Dr via Ridge Dr. Specific concerns include the high volume and speed of commuter traffic that increases noise, air pollution and safety hazards for the community. A request was made to close access to Inlet Dr from Ridge Dr, or another form of traffic control to help resolve the concern. The Committee referred the concerns to staff for review and report back.

Figure 1 shows the street network in the surrounding area and roadway classifications. Duthie Ave between Hastings St and Ridge Dr, and Ridge Dr between Duthie Ave and Inlet Dr are classified as Local Collectors. The 5-legged intersection of Duthie Ave, Ridge Dr and Barnet Rd is controlled by a roundabout. The intersection of Inlet Dr and Ridge Dr is controlled by a pedestrian signal with southbound left turn restrictions during AM and PM weekday peak periods, and mandatory right turns for all westbound vehicles. The intersection of Hastings St and Duthie Ave is controlled by a traffic signal

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with the westbound left turn bay restricted to buses only during the AM weekday peak period.

Figure 1: Site Location Map – Duthie Avenue from Hastings St to Inlet Dr



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POLICY SECTION

Goal

- A Safe Community
 - Transportation safety –
Make City streets, pathways, trails and sidewalks safer

TRAFFIC SPEEDS

Speed data along Duthie Ave between Hastings St and Ridge Dr was collected in 2018 and compared to data collected in 2014. The 85th percentile speed of traffic (which represents the speed at which the majority of vehicles travel at or below) was found to be largely unchanged. For northbound vehicles the 85th percentile speed in 2018 and 2014 was found to be 54 km/h and 53 km/h, respectively. For southbound vehicles the 85th percentile speed in 2018 and 2014 was found to be 51 km/h and 50 km/h, respectively. The range of speed is normal and is not considered problematic. The slightly higher speeds in the northbound direction are likely due to the slight downhill grade of Duthie Ave in the northbound direction (about 5% at the northern end near Ridge Dr). Observations show that the existing roundabout is very effective in slowing vehicles approaching it from all directions.

CRASH DATA

Crash data from ICBC was reviewed for the most recent 5 year period along the Duthie Ave between Hastings St and Ridge Dr and no concerns were identified in terms of the number of crashes or unusual patterns. Past concerns regarding visibility at the intersection of Duthie Ave and Pandora St resulted in the installation of parking restrictions in 2015 at the intersection to aid pedestrians and vehicles crossing Duthie Ave.

TRAFFIC VOLUMES

Traffic volume data along Duthie Ave between Hastings St and Ridge Dr was also collected in 2018 and compared to data collected in 2014. The results show that 2-way daily traffic volumes have remained the same, averaging about 3,000 vehicles per day. This volume of traffic is within expected levels for a Local Collector Street (typically between 3,000 – 5,000 vehicles per day). While there is no increase in traffic volumes over the past four years, there is some commuter traffic using Duthie Ave to access Inlet Dr from Hastings St. This can be attributed to the fact that it provides a more direct connection for northbound vehicles along Duthie Ave from destinations south of

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Hastings St, and the congestion that exists at the intersection of Hastings St and Inlet Dr during peak periods.

The closure of the access to Inlet Dr from Ridge Dr to resolve the commuter traffic concerns is not recommended for several reasons. Closure of the access will cause inconvenience for residents and visitors, particular those going to or coming from the north. It would concentrate and reroute all local traffic from Ridge Dr to both Duthie Ave and Barnet Rd north of Hastings. It could create additional congestion along Hastings St after traffic patterns adjust to the change. It would require further community consultations and could be a divisive issue. Lastly, Duthie Ave remains a relatively safe street with stable traffic volumes within the expected range for a Local Collector.

DISCUSSION

To address the concerns about commuter traffic volumes along Duthie Ave north of Hastings, the following measures are recommended:

1. Incorporate several curb bulges in the planned reconstruction of Ridge Dr between Inlet Dr and Duthie Ave. The reconstruction work is being planned for next year and will include new road pavement along with curb, gutter, sidewalk and boulevard. As part of the design, several curb bulges are recommended to be incorporated to reduce the width of the road to encourage slower speeds and better define where on street parking is allowed.
2. Add signalized westbound left turns at the intersection of Inlet Dr and Ridge Dr. This change will improve egress out of the neighbourhood for residents and visitors, and reduce some southbound traffic volumes that currently use either Barnet Rd or Duthie Ave. The existing southbound left turn restriction at the intersection is to remain and will need periodic enforcement by the RCMP to increase its effectiveness. Recent field observations revealed some violations (about 5 per hour) during the peak period.
3. Provide a northbound left turn lane at the intersection of Duthie Ave and Hastings St by reconfiguring lane markings. This should encourage northbound traffic on Duthie Ave to turn left onto Hastings St to access Inlet Dr northbound, instead of using Ridge Dr. Signal timings may also be adjusted to further facilitate this movement.
4. Allow unrestricted westbound left turns at the intersection of Hastings St and Duthie Ave. Observations show that some westbound vehicles circumvent the current AM peak left turn restriction at the intersection by turning right (north) onto Duthie Ave and making a U-turn mid-block to head south on Duthie Ave. Others turn left at the next block onto Maureen Cr and shortcut through the local street to continue southbound on Duthie Ave. Lastly, many vehicles were also observed turning left contrary to the turn restriction. These left turn movements do not appear to result in

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any noticeable safety or operational problem. The option of additional regular ongoing enforcement was considered, but on balance, the removal of the left turn restriction was found to be the better solution.

The westbound left turn restriction on Hastings St at Duthie Ave was installed in the late 1990's when Burnaby Mountain Parkway was constructed due to a concern about traffic volumes increasing along Duthie Ave south of Hastings St. The restriction was to encourage morning commuters to continue west on Hastings St and turn left at either Sperling Ave or Kensington Ave. It has been observed that left turns at these two intersections are already very busy during the AM peak period from westbound traffic coming from Inlet Dr, and that left turns at Sperling Ave causes delays and rear-end crash potentials for westbound vehicles along Hastings St because there is no left turn bay at that location. Also, Duthie Ave south of Hastings St is classified as a Major Collector which is the same classification as Sperling Ave and Kensington Ave. Therefore all three streets should be treated equally from a network perspective where turns from an Arterial Street to a Major Collector should not be restricted. Lastly, the westbound left turn restriction at Hastings St and Duthie Ave is uncommon where left turns are being banned from a left turn bay for a portion of the day, thus causing some confusion for those that are not familiar with it. In summary, the relatively high non-compliance and the several unintended consequences outlined above suggests that removal of the left turn restriction is the better solution, and will help to reduce traffic volumes on Duthie Ave north of Hastings St.

The one advantage of the westbound left turn restriction at Hastings St and Duthie Ave is that it provides priority for transit buses during the AM peak period. To mitigate this impact, it is proposed that the left turn bay be extended and an advance left turn signal be installed. Coast Mountain Bus Company will be consulted on this change prior to proceeding.

If approved, all four of the above recommendations can be budgeted for and implemented in 2019. The recommendations are generally focussed on improving the operation of higher classification streets to encourage their use over lower classification streets. Future opportunities to improve traffic operations along major streets or at major intersections in the area will continue to be sought to protect local streets.

Figure 2 summarizes the location of the four recommended traffic management measures.

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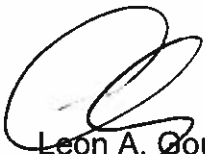
Figure 2: Location of Recommended Traffic Management Measures



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CONCLUSION / RECOMMENDATIONS

In response to traffic concerns along Duthie Ave north of Hastings Street, it was determined that the speed and volume of traffic along the street are within normal expectations. Comparisons with data from previous years show that the speed and volume of traffic has remained unchanged. A review of crash data also did not identify any particular safety concern. Nevertheless, some "through" traffic was found to using Duthie Ave and Ridge Dr north of Hastings St to access Inlet Dr. To manage this flow and address concerns raised, four traffic measures are recommended in this report and will be budgeted for implementation in 2019. Request for funding contributions from ICBC's Traffic Safety Program will also be sought to help offset some of the costs.



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