

TO: CHAIR AND MEMBERS
PUBLIC SAFETY COMMITTEE

DATE: 2017 November 01

FROM: DIRECTOR ENGINEERING

FILE: 38000 20
Ref: Traffic Safety

SUBJECT: TRAFFIC CONTROL UPGRADE AT PARKER STREET & GILMORE AVENUE

PURPOSE: To assess the need for a new traffic signal at the existing stop-controlled intersection at Parker Street and Gilmore Avenue.

RECOMMENDATION:

1. **THAT** the Committee recommend to Council the installation of a new traffic signal at the intersection of Parker St and Gilmore Ave as detailed in this report.

REPORT

BACKGROUND

The City has received a number of complaints over the years about recurring congestion at the intersection of Parker Street/Gilmore Avenue. Under the current all-way stop controlled operation, delays are experienced by traffic on both intersecting streets. The situation is likely to deteriorate in the near future due to prolonged pipeline construction works planned by Fortis Gas along Lougheed Highway. In response, a traffic engineering review was completed based on the standard warrant analysis procedure from the Transportation Association of Canada (TAC) and the findings are summarized herein.

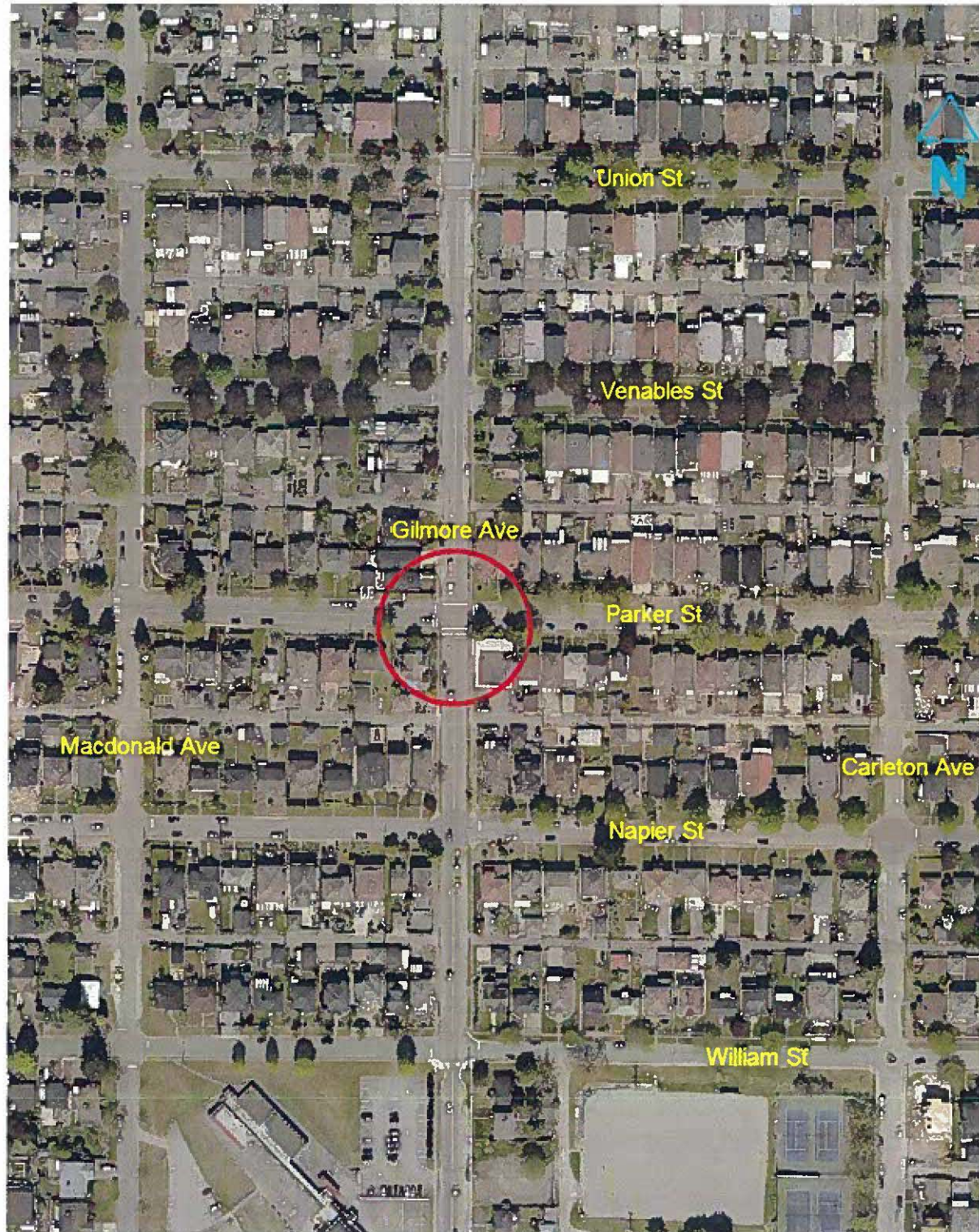
SITE LOCATION

Figure 1 shows the location of the existing unsignalized intersection of Parker St/Gilmore Ave. It is 800 metres to the west of the signalized intersection of Parker St /Willingdon Ave.

With the exception of the southeast corner of the intersection, where a small neighbourhood commercial development is located, the surrounding area predominantly consists of single family residential developments. Approximately 200 metres to the south on Gilmore Ave is Kitchener Elementary School as well as the Willingdon Heights Park and Community Centre.

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Figure 1: Location of Parker Street/Gilmore Avenue Intersection



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EXISTING TRAFFIC CONDITIONS

Both Parker St and Gilmore Ave are classified as Major Collector Secondary streets providing access to single family residential areas and major activity centres. Gilmore Ave is also a transit bus route serving Route # 129 that traverses between Edmonds and Patterson SkyTrain stations.

Both Parker St and Gilmore Ave currently have a single travel lane in each direction plus on-street parking on both sides of the street. The posted speed limit is 50 km/h for both streets. Parker St carries up to 920 vehicles two-way in the peak hour compared to Gilmore Ave carrying 750 vehicles two-way in the peak hour. In the north-south direction 17 pedestrians/ hour on average cross Parker St and in the east-west direction 8.0 pedestrians/hour on average cross Gilmore Ave.

The stop-controlled intersection of Parker St/ Gilmore Ave experiences significant delays during the a.m. and p.m. peak periods and results in queuing of over 150 metres.

Based on the ICBC crash database, there is an average of about 8 crashes per year at this intersection in the most recent five-year period (2011-2015).

WARRANT ANALYSIS

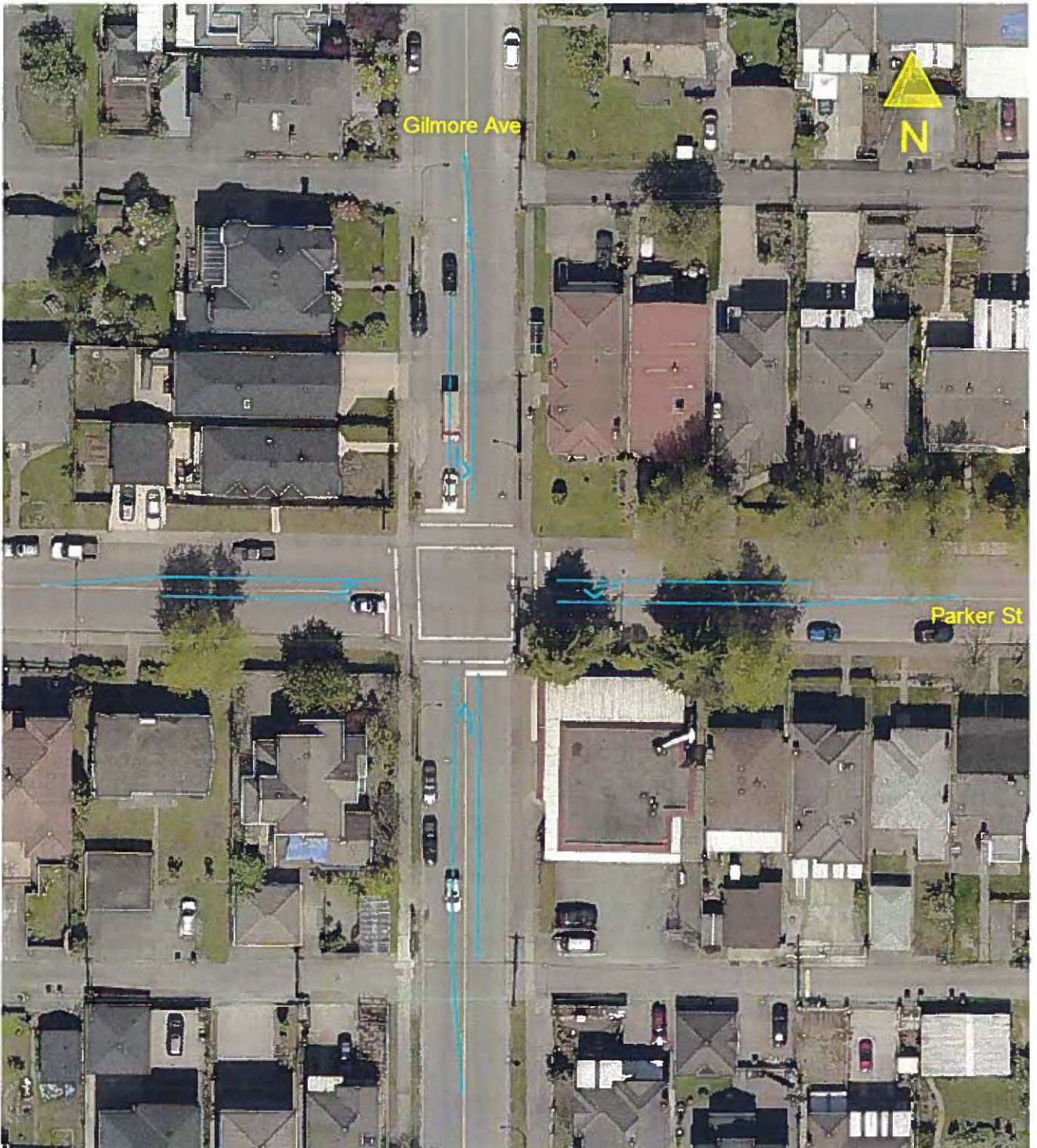
The City follows the Transportation Association of Canada's (TAC) standard intersection traffic control warrant analysis procedure. These methodologies take into account traffic and pedestrian volumes, roadway geometrics, crash history, nearby traffic control, and network connectivity. This ensures consistency across the City, and addresses the safety of all road users and meets driver expectations. Applying the recent traffic count data and roadway configurations, the completed warrant analysis shows that a traffic signal is justifiable primarily because of the relatively high volume of traffic along both intersecting streets.

RECOMMENDED IMPROVEMENTS

A traffic signal is recommended at the intersection of Parker St and Gilmore Ave with separate left turn lanes on all four approaches. This upgrade will improve the level of service and reduce delays and queueing experienced on a regular basis. This will also enhance the safety of pedestrians and transit buses that travel north-south through this intersection. The south and east legs of the intersection experiences higher volumes of traffic and should include slightly longer left turn bays. Therefore, parking will need to be prohibited within 50 metres of the intersection for the east and south legs, and 40 metres for the west and north legs. Figure 2 shows the recommended intersection geometry.

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Figure 2: Recommended Intersection Geometry



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The recommended upgrades are estimated to cost approximately \$300,000 and will be included in the 2018 Capital Budget for installation in 2018. Funding contributions from other sources such as the ICBC Road Improvement Program will be sought to help offset some of the City's cost.

A handwritten signature in black ink, appearing to read 'Leon A. Gous', is written over the printed name.

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

MH/ac

Copied to: City Manager