

**Report to
Rapport au:**

**Transportation Committee
Comité des transports
15 August 2018 / 15 août 2018**

**and Council
et au Conseil
29 August 2018 / 29 août 2018**

**Submitted on August 8, 2018
Soumis le 8 août 2018**

**Submitted by
Soumis par:
Councillor / Conseiller Shad Qadri**

**Contact Person
Personne ressource:
Councillor / Conseiller Shad Qadri
613-580-2476, *Shad.Qadri@ottawa.ca***

Ward: STITTSVILLE (6)

File Number: ACS2018-CCS-TRC-0011

**SUBJECT: Dedicated eastbound Left-Turn Traffic Signal at the intersection of
Hazeldean Road and Carp Road**

**OBJET: Flèche verte de virage à gauche, en direction est, à l'angle des
chemins Hazeldean et Carp**

REPORT RECOMMENDATION

That Transportation Committee recommend to Council that an advanced left turn arrow be installed to provide a permitted-protected left turn from Hazeldean Road eastbound to Carp Road northbound.

RECOMMANDATION DU RAPPORT

Que le Comité des transports recommande au Conseil d'approuver l'ajout d'une flèche permettant le virage à gauche prioritaire et sécuritaire des véhicules, du chemin Hazeldean en direction est, au chemin Carp en direction nord.

BACKGROUND

Residents have been expressing their concerns regarding the safety of the intersection of Carp Road and Hazeldean Road since 2014. Some of their concerns include collisions, near collisions, visibility, speed, and volume. This intersection is off set and the slope presents visibility challenges.

In 2015, this intersection ranked 167th of 955 signalized intersections for accidents in the City with a total of 10 collisions.

The existing Carp southbound left-turn arrow (turning East onto Hazeldean) is permissive-protective. It is present due to the significant volume of southbound left-turn vehicles competing with the constant flow of northbound straight-through vehicles.

Carp Road has two signal phases at the Hazeldean intersection:

- Southbound left-turn vehicles turn on the green arrow; then the amber arrow clears these left-turn vehicles from the intersection. This whole while, northbound is stopped with a red-ball display and southbound straight-through vehicles proceed on the green-ball display.
- All northbound and southbound vehicles are then presented with a green-ball display and may proceed (turn left, turn right, go straight) when it is safe to do so.

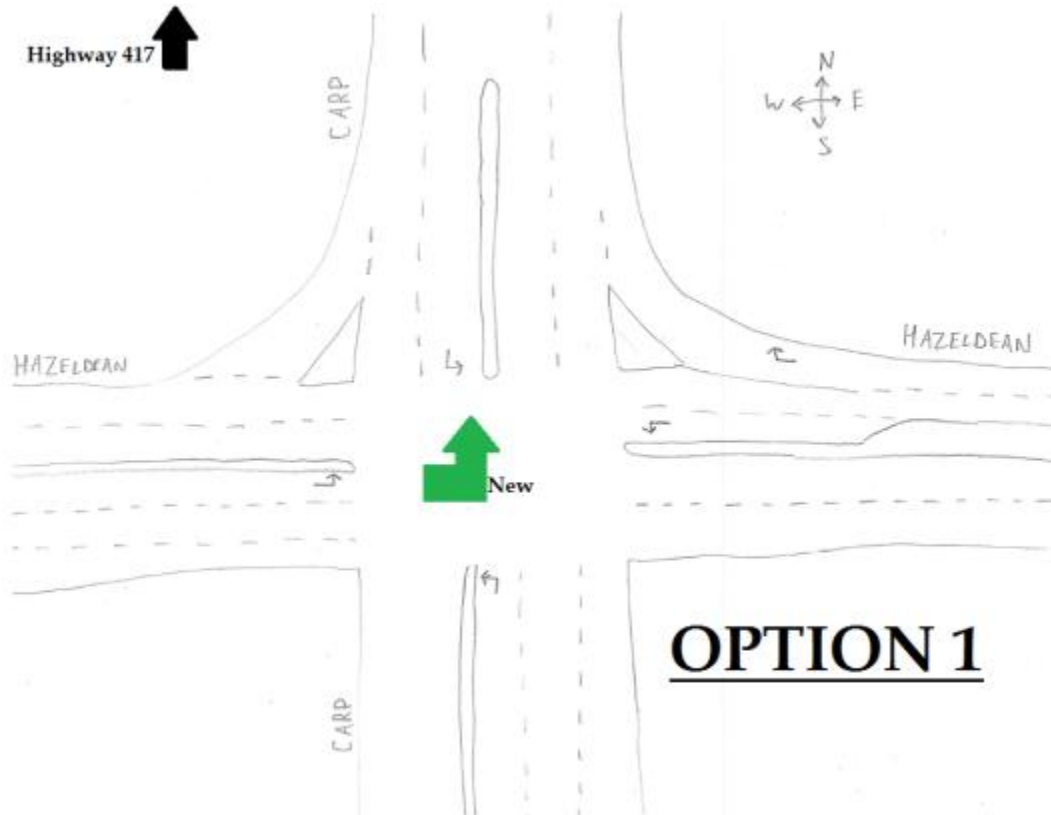
Working with staff in December 2017, I presented through my e-newsletter a poll for the residents on options that might be feasible to pursue further with staff.

Vehicles are cutting through the Sobeys Mall parking lot in order to avoid the intersection, which in itself creates safety concerns.

Vehicles are also travelling through the Timbermere neighborhood to get to the Carp and Kittiwake intersection, which causes speeding related concerns from residents of that community.

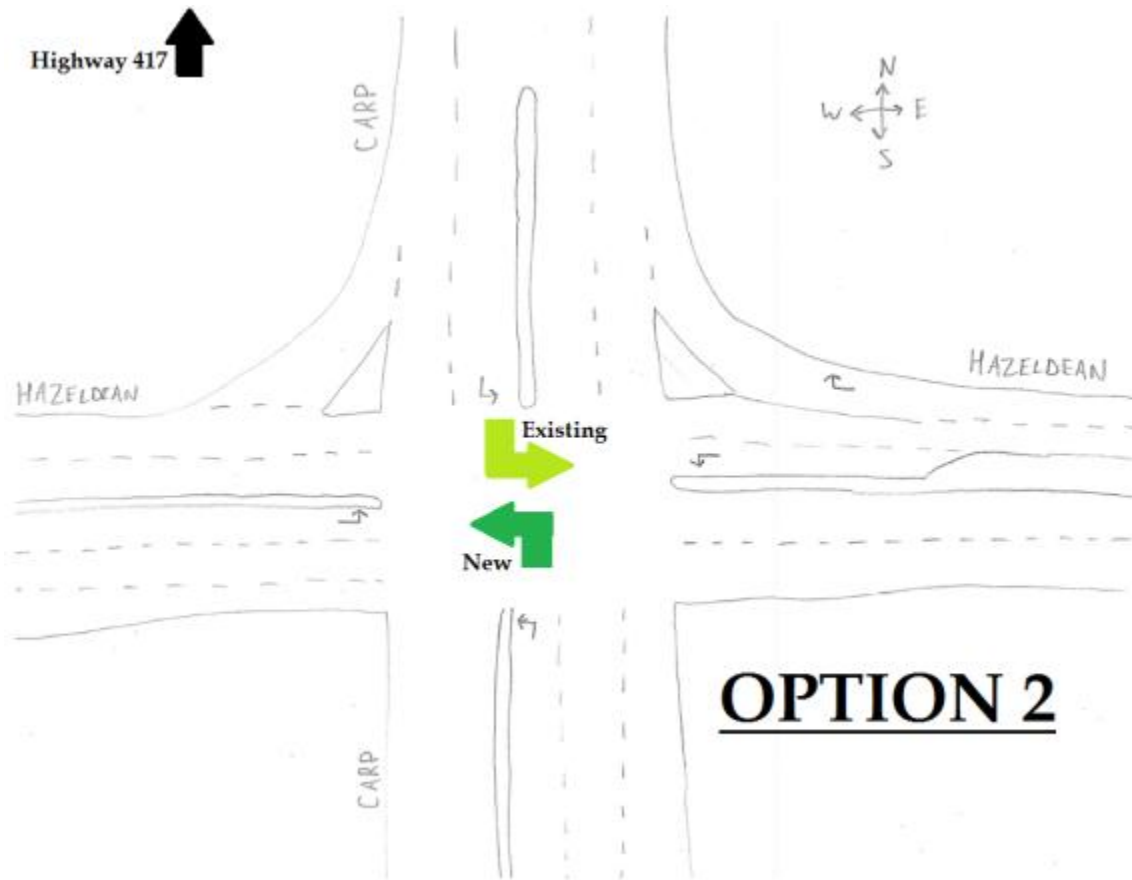
Since we have a viable intersection Hazeldean and Carp the community feels strongly that we should use that intersection to its full potential. By installing the requested left turn arrow this will be achieved.

Option 1 – Eastbound Hazeldean advance left traffic light



- Westbound Hazeldean will remain without advance left traffic light
- Traffic staff conducted a review of 12 hours of footage during morning rush hour over 2-month period
 - Concluded that while high, traffic does not spill out of the left turn storage lane
 - Low volume of west bound traffic to interfere with eastbound left turns
- Because a collision trend is not over-represented, intervention may create new unforeseen problems

Option 2 – Northbound (new) and Southbound (existing) Carp simultaneous advance left traffic lights



- The future proposed northbound left-turn arrow and southbound left-turn arrow will be fully-protected. Carp Road will have two signal phases at the Hazeldean intersection:
 - Northbound left-turn and southbound left-turn vehicles turn on the green arrow; then the amber arrow clears these left-turn vehicles from the intersection. This whole while, northbound straight-through has a red-ball display and southbound straight-through has a red-ball display.
 - Northbound left-turn vehicles and southbound-left turn vehicles are presented with a red-ball display and may not proceed at all. Northbound straight-through vehicles and southbound straight-through vehicles are presented with a green-ball display and may proceed (turn right, go straight).

- Modeling of this intersection indicates that with the proposed fully protected left turn operation, delays for vehicles wishing to turn left will increase between 40 and 50 seconds.

The poll was opened to Dec 10, 2017.

The survey was conducted in order to revisit the matter with Traffic staff so that a better understanding of residents' views on the intersection could be communicated with real numbers and comments in an approachable manner.

Results:



In total, 747 votes were collected over a period of three and a half weeks. As can be seen through these results, an impressive 78.85 % of residents voted in support of a Northbound Carp Advance Left to run simultaneous with the Existing Southbound Advance Left, with 61.85% of residents in support of an Eastbound Hazeldean Advance Left. 5.89% of residents did not support either option.

In Spring, 2018, I advised residents that traffic staff did not recommend changes to the intersection as doing so could result in potentially longer wait delays or create new unforeseen problems and increased collisions.

DISCUSSION

Hazeldean Road is an arterial road that provides an east/west connection between Highway 7 in the west to Eagleson Road in the east. Carp Road is also an arterial road. It provides a north/south artery between Stittsville Main Street and Galetta Side Road. The intersection of Hazeldean Road at Carp Road is located two kilometers south of the Queensway.

Traffic Services staff have completed a review of the Hazeldean Road at Carp Road intersection for the installation of a dedicated eastbound left turn signal and have concluded that the intersection does not meet the warrant criteria.

RURAL IMPLICATIONS

There are no rural implications associated with this report or its recommendations.

CONSULTATION

Transportation Services Comment:

Traffic Services reviews all requests for the installation of dedicated left turn signals in a consistent manner. Dedicated left turn signals are only installed when the staff review confirms that such a measure is warranted by meeting specific criteria. The city's dedicated left turn signal warrant criteria is based on past practices of former municipalities; it also aligns with guidelines and regulations identified in the Ontario Traffic Manuals.

The City of Ottawa considers the installation of an advanced left turn phase when the following four warrant conditions are met:

1. a dedicated left turn lane is present to permit detection of left turning vehicles within the lane waiting to turn left;
2. the provision of the left turn phase would not significantly impact the overall level of service of the intersection in a negative manner;
3. the average left turn volume is at least two vehicles per cycle of the signals;
and,
4. more than 50% of vehicles waiting to turn left must wait more than one cycle of the traffic signals.

Traffic Services staff have completed a review of the Hazeldean Road at Carp Road intersection and have concluded that it does not meet the warrant criteria to install a dedicated left turning arrow.

The review of the intersection included the completion of six field studies to gather information for analysis. The field studies were completed on:

- April 10, 2014 during the am peak, between the hours 6:30-8:30;

- February 10, 2015 during the am peak, between the hours 6:45-8:45;
- June 15, 2016 during the am peak, between the hours 6:45-8:45;
- October 25, 2016 during the pm peak, between the hours 16:00-18:00;
- September 20, 2017 during the am peak, between the hours 7:30-9:30; and,
- September 20, 2017 during the pm peak, between the hours 16:00-18:00.

An analysis of data collected during the six studies identified that:

- There is an average of 5.9 vehicles per signal cycle in the heaviest hour for all times of day; and,
- An average of 99% of the motorists were able to complete the left turning movement on their cycle of arrival during the heaviest hour for all times of day.

In addition to the six studies, staff also performed a review of the history of reported collisions at this intersection. The review found that turning movement collisions are not disproportionately high at this location; more specifically, they are not currently statistically over-represented. As such, engineering intervention is unlikely to result in collision reductions.

It is staff's experience that the implementation of an unwarranted dedicated left turn signal at the Hazeldean Road and Carp Road intersection may result in:

- A reduction of the capacity of the intersection;
- Longer cycle lengths;
- Increased vehicle queuing;
- Increased vehicle stopping;
- Increased vehicle delays;
- Increased pedestrian delays due to overall increase in vehicle delay; and,
- High traffic congestion during the afternoon peak period in the southbound direction.

Staff estimate that the cost to implement a permitted-protected left turn signal at this location will be approximately \$11,000 and that the cost would be accommodated within

the existing budget for Traffic Services Life Cycle Renewal Program – Traffic Control Signals.

COMMENTS BY THE WARD COUNCILLOR(S)

Usually I work with City staff with this kind of concern. Because of an overwhelming response to our survey from our community, I am requesting the Committee to approve the community's request.

ADVISORY COMMITTEE(S) COMMENTS

This has not been considered by Advisory Committees.

LEGAL IMPLICATIONS

There are no legal impediments to implementing the recommendation in this report.

RISK MANAGEMENT IMPLICATIONS

There are no risk management implications associated to this report.

FINANCIAL IMPLICATIONS

Funding for the estimated cost of \$11,000, to implement a permitted-protected left turn signal, is available within the existing capital budget.

ACCESSIBILITY IMPACTS

There are no accessibility impacts associated with the recommendations of this report.

TERM OF COUNCIL PRIORITIES

The recommendation of this report aligns to the 2015-2018 Strategic Priority – Transportation and Mobility, specifically Strategic Objective TM4 – Improve safety for all road users.

DISPOSITION

The Transportation Services Department will take appropriate action based on the recommendations made by the Committee and Council.