

**Subject: Eastbound Permissive-Protected Left Turn Phase to Mosque on
Innes Road East of Tenth Line Road**

File Number: ACS2023-OCC-CCS-0113

Report to Transportation Committee on 28 September 2023

and Council 11 October 2023

Submitted on September 19, 2023 by M. Luloff, Councillor

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Ward: Orléans (1)

**Objet : Phase de virage à gauche protégé et permis au feu de signalisation
sur le chemin Innes en direction est, à l'est du chemin Tenth Line,
pour accéder à la mosquée**

Dossier : ACS2023-OCC-CCS-0113

Rapport au Comité des transports

le 28 septembre 2023

et au Conseil le 11 octobre 2023

Soumis le 19 septembre 2023 par M. Luloff, Conseiller

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REPORT RECOMMENDATION(S)

**That Transportation Committee recommend that Council approve the installation
of a permissive-protected left turn phase (advance left-turn arrow) at the entrance
to the Mosque on Innes Road east of Tenth Line Road, and approve that the 2023
Ward 1 Temporary Traffic Calming Budget be used to fund the associated costs.**

RECOMMANDATION(S) DU RAPPORT

Que le Comité des transports recommande au Conseil d'approuver l'ajout d'une phase au feu de signalisation permettant et protégeant les virages à gauche (flèche de virage à gauche précyclique) à l'entrée de la mosquée sur le chemin Innes, à l'est du chemin Tenth Line, et d'approuver l'utilisation du budget 2023 du quartier 1 pour l'installation de dispositifs temporaires de modération de la circulation en vue de financer les coûts connexes.

BACKGROUND

Safely navigating this intersection has been a point of concern for residents, local business owners, and members of the Masjid Bilal Mosque for many years. This intersection is located on Innes Road, a busy arterial street, and connects with commercial plazas on both sides. On the North side of Innes, is the Masjid Bilal Mosque that requires a left turn at the intersection for vehicles coming from the west, and a commercial shopping plaza that requires a U-turn at the intersection if coming from the same direction. Members of the Mosque, have reported being unable to turn safely or efficiently into the Mosque parking lot, especially during their weekly Prayer service on Friday's at noon, when the area is particularly busy. Many members of the Mosque typically opt to park across the street in the grocery store parking lot and walk over to the Mosque to avoid having to wait at the light to be able to make the left turn. Business owners and shoppers in the commercial plaza have reported similar concerns about the required u-turn movement that currently makes it very difficult for vehicles to access the plaza safely and comfortably.

DISCUSSION

The studies for left-turn signals do not always account for the impacts on a driver's comfort level and feeling of safety. The implementation of an eastbound left turn signal at this intersection will aid in facilitating seamless and safe traffic movements to the Mosque and the commercial plaza on the North side of Innes, especially during peak travel periods. The addition of this advanced left turn signal will not create significant delays for the other movements at the intersection, but instead will make the intersection safer and more comfortable for all road users. Having consulted over many months with the Mosque President, dozens of Mosque members, as well as other residents and business owners who regularly frequent the plazas in question, it is clear the implementation of this left-turn signal will be beneficial for the intersection and community as a whole. The required funds are available in my ward's 2023 Temporary Traffic Calming Program budget, and would be put to good use by funding this advanced signal.

FINANCIAL IMPLICATIONS

There are no financial implications associated with the report recommendation.

LEGAL IMPLICATIONS

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

COMMENTS BY THE WARD COUNCILLOR(S)

As the Councillor bringing this report forward, I am aware and supportive of the report.

CONSULTATION

Public Works Department Comment:

The intersection of Innes Road and 240 metres east of Tenth Line Road is controlled through a traffic signal. All directions have a green ball whereby any left-turning vehicles must wait for a gap in opposing traffic to safely turn left.

Staff Position/Recommendation:

A protected permissive left turn arrow provides for a left turn arrow at the start of the green phase, if there are left-turning vehicles in the left turn lanes, followed by a green ball so that any left turning vehicles approaching the intersection can safely turn left when there is a gap in opposing traffic.

At this time Traffic Services **does not** support the implementation of an additional permissive-protected left turn signal display in the eastbound direction at the intersection of Innes Road and 240 meters east of Tenth Line Road. The location does not meet the necessary criteria established as part of the warranting process for the installation of these traffic signal operation features. Further, this type of engineering intervention is unlikely to result in collision reductions or safety improvements.

Staff recommend that the traffic signal-controlled intersection continue to be monitored and that signal operations continue to be adjusted to balance overall intersection performance. Further, staff will continue to assess changes in traffic volumes in the area and if they meet warrants in the future, staff will install the permissive-protected left turn signal displays.

Should Council approve the report, funds from Councillor Luloff's 2023 Temporary Traffic Calming (TTC) Ward budget will be used to implement the signal change.

Rationale

Traffic Services reviews all requests for the installation of dedicated left turn signals in a consistent manner. Permissive-protected left turn signals are only installed when the staff review confirms that such a measure is warranted by meeting specific criteria. The city's permissive-protected left turn signal warrant criteria aligns with guidelines and regulations identified in the Ministry of Transportation's Ontario Traffic Manuals.

The City of Ottawa considers the installation of a permissive-protected 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 signal's phase change.

Traffic Services staff regularly monitor, evaluate, and adjust signal operations based on formal infield studies, infield observations, and through the Traffic Control Center's traffic monitoring cameras which show vehicle movements in real time. Over the years, Traffic Services staff have completed multiple reviews of the Innes Road and 240 meters east of Tenth Line intersection and have concluded that the data indicates that this location does not meet the warrant criteria to install any permissive-protected left signals. Over the last 8 months, staff have completed three formal field studies of the eastbound left turn operation at the intersection, all within the Friday off-peak periods. These field studies were completed on:

- February 24, 2023
- June 9, 2023; and on,
- September 15, 2023.

An analysis of data collected during the three studies identifies that the eastbound left turn movement at this intersection is operating at a very high level of service. According to the analysis, between 96% and 98% of left turning vehicles able to complete their turn within one green signal cycle. Included in Table 1 below are the average left turn volume movements based on staff's review of available traffic volume data at the intersection:

Table 1 – Average Left Turn Volume and Opposing Through-Traffic Volume

Movement	Off-Peak Left Turn Traffic Volume	Off-Peak Opposing Through- Traffic Volume
Eastbound Left	135	816

In addition to the three studies conducted to review warrant criteria, staff also performed a review of the history of reported collisions at the Innes Road and 240 meters east of Tenth Line Road intersection to determine whether there were any collision trends that would raise safety concerns. Staff's review of the collision data found that turning movement collisions are not disproportionately high at this location; more specifically, they are not currently statistically over-represented. As such, they are not on the list of locations Traffic Services is currently reviewing through the Road Safety Action Plan for over-represented locations as engineering intervention is unlikely to result in collision reductions or safety improvements.

Through the course of the additional staff review in 2023, it was determined that enhancements to the current pavement markings at the intersection, along with changes to the pedestrian signal timing, and the addition of a traffic monitoring camera would provide for improvements in the user experience. Ladder markings will be added to the pedestrian crosswalks on the east, west, and south legs of the intersection as part of the 2023 (September) annual refresh cycle. An alternate walk time was adjusted to capture the duration of the highest pedestrian crossing periods on Fridays mid-day, while a 5s leading pedestrian interval/advanced walk for the north/south pedestrian crossings was added for all times of day. A traffic camera was subsequently installed this year (March 2023) to monitor the specific intersection operations and help determine required operational changes should there be a need.

It is staff's experience that the implementation of an unwarranted permissive-protected left turn signal at of the Innes Road and 240 meter east of Tenth Line Road intersection may result in an overall:

- Reduction of the capacity of the intersection;
- Increased vehicle queuing;
- Increased vehicle stopping;
- Increased vehicle delays; and,
- Increased resident complaints.

If the signal change is implemented, staff anticipate increased resident complaints on the overall operation of the traffic control signals for reasons identified in the bulleted list above. Currently, drivers can effectively complete left turn movements at the intersection within one cycle of signal phasing given gaps in opposing traffic.

Cost Estimate

Staff estimate that the cost to implement the permitted-protected left turn signal at this location will be approximately \$9,000. The cost includes labour, materials, fleet, and Ottawa Police Services to manage traffic as the work is completed.

Councillor Luloff has indicated that if Council approves the installation of the left turn arrow, the installation will be funded through the Ward 1 2023 Temporary Traffic Calming (TTC) budget. Traffic Services can confirm that the Councillor's 2023 TTC budget can accommodate the \$9,000 cost for the installation. It is staff's understanding that as part of Council's approval of this report, that approval is also granted for Councillor Luloff to use the Ward 1 2023 TTC budget to fund the implementation of the signal change.

For Awareness

The Temporary Traffic Calming Measures Program Update Information Report (ACS2023-PWD-TRF-005) was brought to Transportation Committee in June 2023. The report provided information on the measures that have been used to target specific behaviours. Please see Table 2 below for further details.

Table 2 - 2022-2026 Term of Council Temporary Traffic Calming Measures

Measures	Targeted Behaviour
Flexible Stakes	Reduce speeding
Cyclo-Zone Delineators	Safe cycling, reduce speeding
Combination Flexible Stakes and Delineators	Reduce speeding, safe cycling
Bulb-Outs with Delineators	Reduce speeding, parking issues
Temporary Median Island (with Delineators)	Reduce speeding
Speed Pavement Markings	Reduce speeding
Slow Pavement Markings	Reduce speeding
School Pavement Markings	Reduce speeding, reinforce warning signage
No Exit Pavement Markings	Reinforce regulatory signage
Stop Ahead Pavement Markings	Increase compliance with stop sign
Edgeline Markings	Reduce speeding
Thermoplastic Symbols	Reinforce regulatory/warning signage
Speed Display Boards	Reduce speeding
Community Entrance Signage	Reduce speeding
Slow Down for Us signs (Permanent)	Reduce speeding
Gateway Speed Limit Signage	Regulatory signage
Planter Boxes	Reduce speeding
Pedestrian Crossovers (Warranted)	Safe pedestrian crossing
Minor Roadway Deficiency Improvements	Improve roadway deficiencies
Permanent Speed Humps*	Reduce speeding
Median Island/Pedestrian Refuge*	Reduce speeding

* The measure implementation requires a petition.

ACCESSIBILITY IMPACTS

No specific accessibility impacts have been identified.

RISK MANAGEMENT IMPLICATIONS

No specific risk implications have been identified.

RURAL IMPLICATIONS

The proposed changes occur at an intersection in a rural ward.

TERM OF COUNCIL PRIORITIES

Not applicable

DISPOSITION

Staff will take appropriate action based on the recommendations made by the Committee and Council.