



Council Report

Report Number: ENG2024-023
Meeting Date: August 27, 2024
Title: Request for Streetlight – Cottingham Road and Highway 7
Description: Request to re-establish lighting delineation on an unwarranted intersection
Author and Title: Joseph Kelly, Traffic Management Supervisor

Recommendation(s):

That Report ENG2024-023, **Request for Streetlight – Cottingham Road and Highway 7**, be received.

Department Head: _____

Financial/Legal/HR/Other: _____

Chief Administrative Officer: _____

Background:

At the Council meeting of January 30, 2024, Council adopted the following resolution:

CR2024-018

That the Memorandum from Councillor Richardson, regarding a Joint Venture between the City of Kawartha Lakes and the Ministry of Transportation to Re-establish the Street Light at 929 Cottingham Road, Township of Emily be received; and that Staff report back by Q2, 2024.

This report addresses this direction. The council memo is featured in Appendix A.

The existing streetlight is not a municipal asset so little information is available. It appears to consist of a small mast with a relatively low wattage bulb. It is located on the west side of Highway 7 approximately 15 metres north of the north pavement edge of Cottingham Road. It was likely first installed at a time when Hydro would facilitate installing private streetlights on Hydro utility poles. The resident was then charged a rate for the operation of the light. If the resident no longer wished to pay the rate, the streetlight would be disconnected, as is the case with the subject light.

It should be noted that the stated rationale in the Councillors' memo to address "a safety concern for motorists and pedestrians" and to "adequately illuminate the exit off of Highway 7" is not technically feasible by way of re-establishing the existing light fixture. The location and type of light would not have adequately illuminated the intersection, only act as a beacon for those familiar to the intersection.

Rationale:

Policy

Although CKL Policy CP2018-010, Streetlight Warrant Policy, does not include provisions for installing streetlights on MTO right of ways, it does provide warrant criteria from the Transportation Association of Canada's "Guide for the Design of Roadway Lighting". Staff had previously applied the warrants in the policy at this location. A minimum score of 240 warrants full illumination, a minimum score of 120 warrants partial or delineation lighting. This intersection scored 94 (Appendix B).

Lighting Type

When considering re-establishing the discontinued light it should be evaluated if current standards can be met. When the TAC warrant is met, there are three types of intersection illumination to consider based on comparing the point-score obtained from the warrant.

Full Intersection Lighting – Full intersection lighting denotes lighting covering an intersection in a uniform manner over the traveled portion of the roadway.

Partial Intersection Lighting – Partial intersection lighting refers to the lighting of key decision areas, potential conflict point, and/or hazard in and on the approach to an intersection. Partial lighting may also guide a driver from one key point to the next, and (if sufficient luminaires are used) place the road user on a safe heading after leaving an illuminated area.

Delineation Lighting – Delineation lighting refers to “beacon” lighting that marks an intersection location for approaching traffic. It can light vehicles on a cross street or light a median crossing.

Full and partial illumination require specific illuminance and light uniformity levels based on pavement type, road classification, and pedestrian volumes. This is achieved through the design process to ensure the combination of placement of poles, spacing, type of light, wattage, and mounting height produce the required results.

Delineation lighting has no recommended illumination level requirements as its purpose is to mark or delineate the intersection as opposed to provide full or partial lighting. (TAC, 2006). For roads with fewer than four lanes, it is recommended that a single luminaire with 150-watt to 250-watt high-intensity discharge source be used at 9m to 10m mounting height.

The location of the discontinued light does not provide any illumination to the intersection itself and acted as a beacon only.

Figure 1: Picture of private light, facing west on Highway 7 – Google, Dec. 2022



MTO Jurisdiction

The Ministry of Transportation Ontario (MTO) have jurisdiction over the lighting on their highways. MTO have their own lighting warrant process based on identifying night time operational concerns, mainly the number of collisions that could be improved by the installation of illumination.

Many intersections between CKL and MTO would meet CKL policy for illumination if they were under CKL jurisdiction, however, the criteria of the MTO warrant are not usually met by a typical intersection with a rural local road. It would be under extraordinary circumstances to meet the MTO warrant.

The difficulty in meeting the MTO light warrant leaves many residents dissatisfied. MTO advises residents that they support a municipal initiative to install illumination at intersections within their jurisdiction. However, the full cost of the installation and maintenance would be the responsibility of the municipality and it would be required to meet MTO standards. Meeting MTO standards would likely require a more optimal placement of the light, introducing design and installation costs for a new utility pole with specific crash design specifications.

Delineation Lighting

Options to avoid the requirement of meeting MTO standards for a light in which they would not install themselves include simply utilizing the existing hydro owned utility poles. Doing so would make it difficult to meet the requirements for full or partial illumination but much more cost effective to establish (or re-establish) delineation lighting. It should not be Councils intent to re-establish sub-standard illumination. Any direction from Council to re-establish illumination here should be clear that it is for the continuation of the delineation that local residents had previously enjoyed and not to provide additional safety measures through lighting.

Other Alternatives Considered:

All viable alternatives are listed under "Financial Impacts".

Alignment to Strategic Priorities

Providing life safety and protection, is a priority objective of the City under the Council Adopted Strategic Plan Goal of An Exceptional Quality of Life.

Financial/Operation Impacts:

Do nothing

This is the preferred option. The Recommendation(s) as currently written reflect that.

Partial Illumination

Should Council wish to establish partial illumination of this intersection, a new design for pole placement that meets MTO approval would be required. Estimated costs of design and installation is \$40, 000.

For this option, the Recommendation(s) section would need to be replaced with:

“That Report ENG2024-023 Request for Streetlight – Cottingham Road and Highway 7 be received; and

That staff be directed to design and submit a lighting proposal for MTO approval for the partial illumination at the intersection of Highway 7 and Cottingham Road.”

Delineation Lighting

Should Council wish to re-establish the delineation lighting on the existing hydro pole, while having regard to modern recommendations for height and wattage, the cost of a new arm with a 150-250 watt or LED equivalent would cost approximately \$3000. This cost assumes proper connections are in place and safety requirements for the install can be met. Costs can increase if the current configuration prohibits a safe install.

If the limit of approach is within acceptable standards, maintenance costs would be minimal and absorbed into the current Public Works light maintenance budget. If the limit of approach is outside the acceptable standard, outside contractors with the required credentials and equipment to work in the space would be needed. This will introduce additional maintenance costs.

Usage rate can be absorbed into the current contract with Hydro.

For this option, the Recommendation(s) would need to be replaced with:

“That Report ENG2024-023 **Request for Streetlight – Cottingham Road and Highway 7**, be received; and

That staff be directed to establish delineation lighting at the intersection at Highway 7 and Cottingham Road by installing a new light fixture with consultation and approval from Hydro.”

Consultations:

Supervisor – Technical Roads Operations, CKL Public Works

Ministry of Transportation Ontario

Attachments:

Appendix A – Council Memo



Adobe Acrobat
Document

Appendix B – Intersection Lighting Warrant



Adobe Acrobat
Document

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Department Head: Juan Rojas, Director of Engineering & Corporate Assets

Department File: Engineering and Corporate Assets