





TO: GENERAL COMMITTEE


SUBJECT: UPDATE TO THE ROADWAY ILLUMINATION POLICIES AND DESIGN GUIDELINES

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CHIEF ADMINISTRATIVE OFFICER APPROVAL: C. LADD 
CHIEF ADMINISTRATIVE OFFICER

RECOMMENDED MOTION

1. The updated Roadway Illumination Policies and Design Guidelines and ancillary documentation dated May 2015 be adopted and implemented.
2. That the Director of Engineering be authorized to approve future revisions required to clarify or update references within the roadway illumination policy and design guidelines and ancillary documentation.
3. That major policy decisions be presented to Council for consideration.

PURPOSE & BACKGROUND

4. Staff recognize the importance of maintaining infrastructure policies and design guidelines that strive to meet the needs of our community and strategic goals. Public awareness of environmental issues such as sustainable development requires an evolutionary approach to developing and maintaining municipal policies and design guidelines.
5. Council under motion 15-G-021 authorized staff to amend the City of Barrie street light standards to require Light Emitting Diode (LED) technology only, for future street lighting installations.
6. Council under motion 15-G-021 authorized the removal and disposal of the existing sodium street lights, and the installation of the LED street lights, to be completed by December 31, 2015.
7. The timing of the updated Roadway Illumination Policies and Design Guidelines and ancillary documentation correlates with the commencement of the project outlined in motion 15-G-021.
8. The updated Roadway Illumination Policies and Design Guidelines and ancillary documentation is available for review in the Councillors' Lounge.

ANALYSIS

9. The current City of Barrie Roadway Illumination Policies and Design Guidelines has not been updated since 2002. Roadway Illumination has evolved since that time, particularly in regard to energy efficiency.

10. The recommended policies and guidelines are intended to assist developers, consulting engineers and other designers in designing roadway illumination systems in the City of Barrie by providing a basis of design expectation including minimum acceptable servicing levels. These policies and guidelines are intended to cohesively integrate with other municipal policies.
11. It is anticipated that the conversion to LED technology will add some minor financial burden to the development industry because of the material cost difference from that of traditional sodium fixtures. The Barrie Land Developers (BLD) representatives, the Barrie Construction Association (BCA) and the Simcoe County Heavy Construction Association were circulated the draft update documents for review. Positive comments were received back from the Simcoe County Heavy Construction Association, indicating their support for the proposed changes. No response was received from BLD or BCA.
12. As noted in staff report FCT002-15 it is anticipated that the Corporation will benefit \$11,300,000 in cost avoidance over the next ten years in energy and maintenance costs with the new LED technology.
13. The typical life-cycle of LED technology is 400 times that of traditional roadway lighting technology.
14. The updated Roadway Illumination Policies and Design Guidelines includes the following key changes:
 - Approved manufacturers' products list for illumination appurtenances;
 - New standard detail drawings;
 - Updated construction specifications;
 - Removal of references to high pressure sodium fixtures;
 - Removal of reference to luminance method for calculating lighting levels; and
 - Inclusion of light emitting diodes (LED) as the required type of fixture for both roadway and decorative lighting.

ENVIRONMENTAL MATTERS

15. The following environmental matter was considered in the development of the recommendation of Staff Report FCT002-15:
 - a) A reduction of an estimated 5,413,464 kWh which is equivalent to a reduction in GHG emissions of 542 metric tonnes.

ALTERNATIVES

16. The following Alternative is available for consideration by General Committee:

Alternative #1

General Committee could choose not to adopt the update to the roadway illumination policy and design guideline.

This Alternative is not recommended as the existing Roadway Illumination Policies and Design Guidelines are out of date with current industry standards and corporate sustainability goals.

FINANCIAL

17. There are no direct financial implications associated with the recommended motion. However, updating infrastructure policies and design guidelines generally influence design parameters which in turn can impact capital project budgets for the applicable works. Policy and design guideline updates generally result in lower total overall lifecycle and ownership costs for the City.

LINKAGE TO 2010 – 2014 COUNCIL STRATEGIC PLAN

18. The recommendation(s) included in this Staff Report support the following goals identified in the 2014-2018 Strategic Plan:
- Responsible Spending
19. The updated policies and guidelines would help to ensure appropriate design and construction of the illumination assets. Also, there are life-cycle cost benefits of the inclusion of LED technology.