

Illumination Study

An Illumination Study demonstrates that a proposed development will not have any negative impact on adjacent parcels and roadways in terms of lighting and demonstrates compliance with Dark Sky Policies.

An Illumination Study comprises a lighting plan, which demonstrates the location, height, and type of lighting fixtures on the site and proposed buildings, including the location of electrical supply, and a photometric plan, which demonstrates the lighting fixture locations and illumination levels.

Required by Legislation

The Ontario Planning Act.

Who should prepare this study?

An Illumination Study must be completed by an engineer qualified in exterior, roadway, and parking lot lighting. All reports and drawings must be stamped, signed, and dated by a qualified professional, licensed in the Province of Ontario.

Why do we need this study?

An Illumination Study is required to reduce lighting pollution within the municipality and to ensure lighting does not negatively impact surrounding properties.

How should this study be prepared?

An Illumination Study should at a minimum contain:

Introduction

- › Address of the property
- › General site location of the subject property
- › Applicant and owner's contact information
- › Author name, title, qualifications, company name and appropriate stamp
- › Overview of the study area
- › Purpose of the study
- › Location and context map

Proposal Description and Context

- › A description of the proposal, development stats such as: number of units, site area, type of development proposed, height, parking areas, access points, location of amenity areas, proposed phasing
- › A description of the existing on-site conditions as well as surrounding areas, roads, natural areas, buildings, parking areas
- › Concept Plan for the development including building location, parking, access, amenity areas, grading and natural features and any natural hazards.

How should this study be prepared? (continued)

Investigation/Evaluation**Lighting Plan:**

- › The location of all existing and proposed exterior lighting fixtures
- › The mounting height of all existing and proposed fixtures (from adjacent grade to underside of the fixture)
- › The site areas and/or building elements intended to be illuminated
- › That the lighting fixtures, electrical conduit, and areas to be illuminated do not conflict with existing or proposed vegetation
- › Notations that all exterior lighting fixtures are full cut-off to direct illumination downward and dark sky compliant to reduce light pollution, sky glare, and light trespass onto neighbouring properties
- › Manufacturer's data demonstrating the specifications for all proposed lighting fixtures, including the photometric data, designation as IESNA "full cut-off" fixtures, and other descriptive information related to the fixtures.

Photometric Plan:

- › Provide all illumination levels in lux
 - › Demonstrate illumination levels of 0.0 lux measured at all property lines
 - › Provide readings that extend 6.0m beyond the property lines of the subject site.
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Impacts and Mitigation Measures

- › Not applicable.
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Recommendations

- › Not applicable.
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Drawings and Supporting Information

- › See above requirements.
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What else should we know?

The scope of the study should be discussed with the community planner and or other staff or agencies as part of the pre-consultation process.

The information on the lighting plan must be coordinated with all other required submission materials and drawings and must follow the standards as outlined in the Illuminating Engineering Society (IES) Standards.

Additional Terms

To be identified by the local municipality where proposed development is located.

Study Submission Instructions

To be identified by the local municipality where proposed development is located.

What other resources are there?

[International Dark-Sky Association](#)

About these Terms of Reference

These Terms of Reference were developed as a joint effort with participation by representatives from all York Region municipalities and the Region. The Terms of Reference are in widespread use across the Region, with local requirements added as prescribed by each municipality at the pre-consultation stage.

The need and scope for this study will be decided by a municipality during initial pre-consultation process with input from partner agencies. This pre-consultation process may include:

- Determination if this study is applicable
 - Confirmation of criteria within these Terms of Reference that are appropriate for your development project
 - Identification of specific technical components that need to be addressed
 - Identification of detailed standards to be met
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Notes:

If the proposed development is revised, the study/report shall reflect the revisions by an updated report or letter from the author indicating the changes and whether or not the recommendations and conclusions are the same (Note: this is subject to the extent of the revisions).

A peer review may be required. The cost of the peer review will be borne by the applicant.

If the submitted study is incomplete, is authored by an unqualified individual or does not contain adequate analysis, the applications will be considered incomplete and returned to the applicant.