



Terms of Reference

Illumination Study

PURPOSE/DESCRIPTION

A lighting study or lighting plan is a document intended to demonstrate the lighting and illumination properties of a proposed development and their impacts on adjacent properties and surrounding uses. The lighting study or plan should establish the location, height, and type of lighting fixtures to be installed on the site and on the site's proposed structures.

As part of the lighting study or plan, a photometric plot plan should also be included to illustrate the illumination levels and light fixture locations on the site. This drawing will demonstrate compliance with appropriate municipal standards.

RATIONALE

Appropriate design of outdoor lighting is important in order to reduce the negative impacts of light on adjacent properties, sensitive environmental features, and decrease light pollution and to control for urban sky glow. The selection of proper siting and type of light fixture creates a safer space for pedestrians, reduces energy costs and demand, protects flora and fauna from the negative effects of artificial light, and lowers human health risks caused by excessive artificial lighting. As well, poorly designed site lighting can have a number of detrimental safety impacts. This can include areas of poor lighting transition that may create glare levels that can be a detriment to drivers, pedestrians and neighbouring properties, and insufficient or uneven distribution of lighting of pedestrian paths.

A lighting plan and photometric plot plan are required to demonstrate a proposed development's conformity with the applicable policies of the Official Plan, regulations of Town by-laws and adherence to relevant urban design guidelines, standards and feedback provided at the preconsultation meeting.

POLICY

Official Plan Section 9.12.3

WHEN REQUIRED

Site Plan Control

QUALIFIED PERSONS

A lighting study or plan and photometric plot plan should be completed by a qualified professional engineer, registered architect or registered landscape architect with experience in exterior lighting plans.

CONTENT

Depending on the size or complexity of the development proposal, requested lighting information may be provided on a separate lighting plan, or the information may be included on the site plan, landscape plan and elevation drawings. In either case, the following is required:

- 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
- provide additional level of detail in the Lighting Plan for applications that include heritage considerations. These plans are to be cross referenced with plans approved under the Ontario Heritage Act

Photometric Plan

- In addition to the requirement for a lighting plan, a photometric plot plan may be required for development proposals located adjacent to sensitive land uses and/or other contexts. The photometric plot plan should include the following information:
 - 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

Additional Information

Full Cut-Off Fixtures: These fixtures are independently certified by the manufacturers, and do not allow light to be emitted above the fixture.