

§ 470-704. Outdoor lighting.

A. Purpose.

These regulations are intended to provide specific standards for lighting in order to maximize the effectiveness of site lighting, to enhance public safety and welfare, to raise public awareness of energy conservation, to reduce public and personal expenses through energy conservation, to avoid unnecessary upward illumination, indirect lighting and illumination of adjacent properties, and to reduce glare.

B. Applicability.

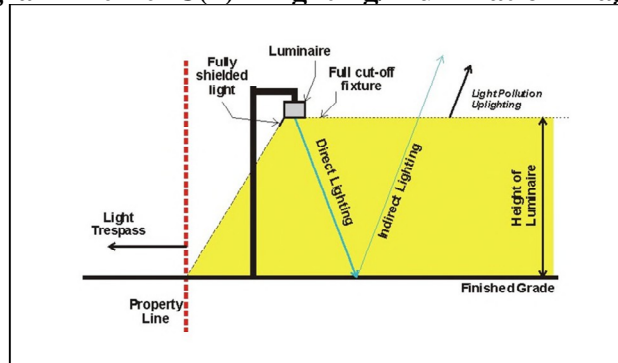
- (1) Except as herein provided, these regulations shall apply to any outdoor lighting fixtures installed, modified, refurbished, repaired or serviced within the following:
 - (a) Business Districts
 - (b) Industrial Districts
 - (c) Municipal Community Public Facilities Districts
 - (d) Design Districts
 - (e) Design Village Districts

C. Standards.

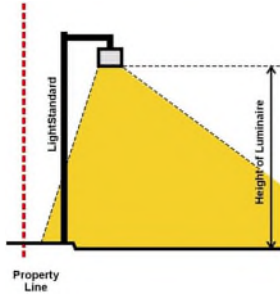
- (1) All exterior lights and illumination shall be designed, located, installed, and directed in such a manner as to:
 - (a) Prevent direct or objectionable glare, light trespass, spill light, or obtrusive light;
 - (b) Be shielded (full cutoff);
 - (c) Employ soft, transitional light levels which are consistent from area to area;
 - (d) Minimize contrast between light sources, lit areas, and dark surroundings; and
 - (e) Be confined within the target area.
- (2) No externally mounted direct light source shall be visible at the lot line at ground level or above. The illumination measured at the lot line shall be zero footcandles, excluding driveway entrances.
- (3) Lighting shall include timers, dimmers and/or sensors to reduce unnecessary light levels during non-business hours to a minimum level required for overnight security.
- (4) The height of luminaires, except streetlights in public rights-of-way, shall be the minimum height necessary to provide adequate illumination, but shall not exceed a height of 15 feet. The height of a luminaire shall be measured from the finished grade (not the top of a supporting concrete base) to the bottom of the luminaire.
- (5) Light standards within a parking lot shall be located within landscaped islands or buffer strips and shall be set back two feet from any parking space unless wheel-stops are provided.

- (6) Parking lots, sidewalks, and other areas accessible to pedestrians and automobiles shall be illuminated to uniform and adequate intensity. Typical standards to achieve uniform and adequate intensity are:
 - (a) average horizontal maintained illumination shall not be more than 0.2 foot-candles
 - (b) maximum-to-minimum ratio shall be between 6:1 and 10:1, but not more than 10:1.
- (7) In reviewing and approving outdoor lighting, the Commission may utilize recommendations for lighting levels as issued by the Illuminating Engineering Society of North America, the International Dark-Sky Association,
- (1) The use of utility poles for outdoor lighting is prohibited.
- (8) Any light, or illumination not in compliance with these regulations shall constitute a violation.
- (9) A professional photometric survey shall be submitted as part of any site plan that demonstrates compliance with these standards. Such photometric survey shall depict the location of all outdoor lighting fixtures (including building-mounted), demonstrate a maximum ten-foot by ten-foot grid of both the initial and maintained lighting levels on the site, and show both business hour and non-business hour lighting plans in accordance with § 470-712.
 - (a) The following items shall be provided in addition to the information required by the Site Plan Checklist (Appendix 1.3 Site Plan Application)”
 - i. the location of all outdoor lighting fixtures (including building-mounted)
 - ii. a maximum ten-foot by ten-foot grid of both the initial and maintained lighting levels on the site
 - iii. both business hour and non-business hour lighting plans in accordance with § 470-712
 - iv. lamp types, lamp color rating, and lumen output ratings, which shall conform to the following criteria:
 - light sources shall have a maximum correlated color temperature (CCT) of 2700K as rated on the manufacturer’s specification sheet.)
 - areas adjacent to waterways or nature preserves, only lights with a CCT rating of 2000K, 1800K, or less, or amber shall be used.
 - v. a description of how the project lighting plan has been coordinated with any associated landscaping plan to prevent site planning conflicts
 - vi. any other information necessary to ensure that the proposed lighting complies with the provisions of these requirements as determined by the Commission.

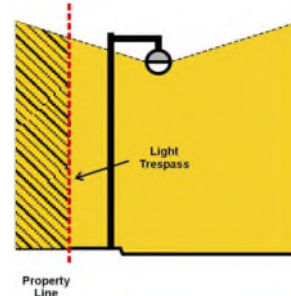
Diagram 470-704C(1) - Lighting/Illumination Diagrams



Luminaire Shielded



Luminaire Nonshielded



D. Exemptions and modifications.

- (1) Temporary holiday lighting is exempt from these regulations, for a period of time to be commensurate with the holiday being celebrated, but in no event shall such lighting exceed a duration of 45 days annually in the aggregate.
- (2) Temporary lighting used by the Police Department, Fire Department, or emergency services in connection with the performance of their official duties is exempt from these regulations.
- (3) Lighting of the American Flag when it is the sole object being illuminated by the lighting fixtures employed for that purpose, provided that:
 - (a) Lighting designed to highlight flagpoles shall be low level (the minimum necessary to illuminate the flag) and shall be targeted and focused directly on the flag.
- (4) The Commission may, by Special Permit, allow lighting that does not comply with the

requirements of this section provided the Commission determines, in its sole discretion, that such proposed lighting is consistent with the purpose of these regulations and the criteria of Section 470-902.E. The following considerations are provided as examples of situations where a Special Permit may be considered:

- (a) Extraordinary need for security exists because of a history of vandalism or other objective reasons;
 - (b) In traveled ways or areas, conditions hazardous to the public exist, such as steep embankments or stairs;
 - (c) It would be unreasonable to require replacement of an entire lighting installation because a minor change is proposed to an existing nonconforming lighting installation;
 - (d) Special lighting is indicated for historic buildings. The Commission may take into consideration advisory comments from the Town Historian, Canton Center, and Collinsville Historic Districts Commissions, or other knowledgeable sources;
 - (e) That ornamental up-lighting of sculpture, buildings, or landscape features when those features are the sole objects being illuminated by the lighting fixtures employed for that purpose;
 - (f) For use of strips of light intended to outline or highlight a structure, whether composed of linear light tubes or a sequence of individual illumination sources
 - (g) and
 - (h) Such lighting is necessary for special outdoor events and for playing fields. Field lighting, unless modified by the Commission as part of the Special Permit, is required to:
 - i. Not exceed 25 footcandles at any one location;
 - ii. be reduced by at least 75% one hour after the conclusion of each game or post-game activities and be turned off within two hours after the conclusion of the game or activities;
 - iii. have the ability to be activated at reduced power, with a timer and auto-off functionality for non-organized use of the facility.
- (5) The Commission may modify the requirements of § 470-704 for a temporary use approved under these regulations.

E. Prohibited

- (1) While any form of lighting or illumination not specifically permitted by these regulations is prohibited, for clarity, the following types of lights are specifically listed as being prohibited in all districts:
- (a) light sources that oscillate or vary in intensity or color to the degree that the modulation is perceptible to the human eye
 - (b) lasers
 - (c) searchlights other than for emergency purposes

(d) illumination of entire buildings

LIGHTING/ILLUMINATION-RELATED TERMS [See Diagram 470-704C(1)]

Add the following terms to Lighting/ Illumination Terms under Section 202

Correlated Color Temperature (CCT) – A specification of the color appearance of light emitted by a light source, measured in degrees Kelvin (K). Higher Kelvin ratings appear bluer in color, while lower Kelvin ratings appear more amber in color. For comparison purposes, candle light has a color temperature of approximately 1800 Kelvin.

Dimmer – A dimmer is a device connected to a light fixture and used to lower the brightness of the light.

Foot-candle – A unit of illuminance. One footcandle is one lumen per square foot (lm/ft²).

Timer – A light-switch timer is an electronic mechanism that controls lighting within any environment. Often installed to save energy, they can be controlled either manually or electronically through a digital interface.

Motion-Sensor Device – A motion-sensor device is programmed to turn on when motion is detected and to turn off after a specified period without activity.