

ARTICLE 24 OUTDOOR LIGHTING

35.2900 Legislative findings

The Common Council makes the following legislative findings relating to outdoor lighting:

- (1) Light pollution would detract from the character of the City of Manitowoc.
- (2) Excessive lighting wastes energy.
- (3) Glare from nonvehicular light sources can pose a threat to the safety of drivers and pedestrians.
- (4) Light trespass can intrude on the enjoyment of private property.
- (5) The regulations in this chapter relating to outdoor lighting are intended to provide nighttime safety, utility, security, and productivity.
- (6) Regulations in this chapter relating to outdoor lighting are adopted to promote the public health, safety, and general welfare of city residents.

35.2901 Compliance

All outdoor lighting, except lighting that is specifically exempted in § 35.2902, must comply with this article as applicable and all applicable building and electrical codes. If any project increases the number of existing luminaires on a property by 25 percent or more, all existing luminaires on that property must be made to comply with this article or be removed.

35.2902 Exemptions

The following types of outdoor lighting are exempt from this article:

- (1) Street lights and other lighting located within a public right-of-way.
- (2) Emergency lighting when used by police, firefighters, medical personnel, public works, and other responders for the duration of the emergency.
- (3) The lighting of flags of the United States, State of Wisconsin, City of Manitowoc, and any other flag adopted or sanctioned by an elected legislative body of competent jurisdiction, provided such lighting does not trespass onto another property.
- (4) Holiday lighting but not more than 90 days
- (5) Lighting on a tower when required by a regulating authority.
- (6) Airport lighting when required by a regulating authority.
- (7) Underwater lighting used for the illumination of swimming pools and fountains.
- (8) Temporary lighting used for construction activities, provided (i) the fixtures are shielded, (ii) the light does not project past the property boundary line, and (iii) the lighting is only used during hours with active construction.

35.2903 General requirements

- A. **Overhead lines prohibited.** Overhead wiring for outdoor lighting is prohibited, except when the Zoning Administrator determines underground installation is not possible due to existing infrastructure or natural conditions.
- B. **Mercury vapor fixtures.** Mercury vapor lighting fixtures are specifically prohibited.
- C. **Parking lot lights.** A lighting standard in a parking area must be placed (1) at least 3 feet outside of the paved area, (2) within a landscape island, (3) on a concrete pedestal that is at least 24 inches but not more than 36 inches high above the pavement, or (4) protected by other means as may be approved by

the zoning administrator. Lighting along internal drives and for parking lots must be of similar light source type, color temperature, and style.

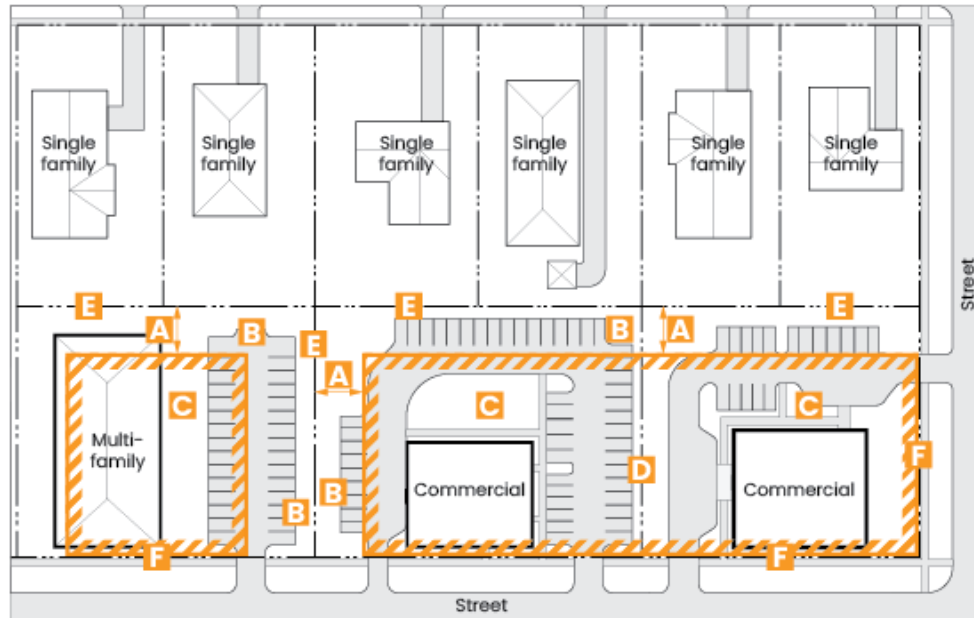
- D. Lighting for canopies.** Canopy lights for a vehicle fuel station, drive-throughs, and other similar situations must be recessed or shielded so that no light source is visible from or causes glare on a public right-of-way or adjacent property.
- E. Lighting for elevated objects.** When illuminating objects positioned higher than 6 feet above the surrounding grade, such as flags, statues, and entranceways, upward-directed lighting may be used only in the form of one or two narrow-cone spotlights, which confine the illumination to the object of interest; provided, that the lighting is restricted to an angle of not less than 75 degrees up from horizontal.
- F. Lighting in buffer.** Light poles must not be placed within a required buffer, except for pedestrian lighting along a sidewalk or other pedestrian way.
- G. Specific standards.** Outdoor lighting must be designed to comply with the standards in Table 24-1. Key features of a parking lot are depicted in Exhibit 24-1.

Table 24-1. Specific lighting requirements

	Single family, duplex, and twin home	Multi-family (3 or more dwelling units)	Commercial, industrial, and institutional	Athletic fields and public outdoor venues
Fixture type [1]	No limitation	1,000 lumens or less – no limitation More than 1,000 lumens – cutoff or shielded	1,000 lumens or less – no limitation More than 1,000 lumens – cutoff or shielded	No limitation
Architectural lighting	No limitation	Uplighting on the face of an exterior wall is allowed provided the light does not extend above the height of the wall face.	Uplighting on the face of an exterior wall is allowed provided the light does not extend above the height of the wall face.	NA
Light trespass [2, 3]	The intensity of illumination projected onto another property may not exceed 0.5 footcandle.	The intensity of illumination projected onto a residential property may not exceed 0.1 footcandle and 0.2 footcandles onto another commercial, industrial, or institutional use.	The intensity of illumination projected onto a residential property may not exceed 0.1 footcandle and 0.2 footcandles onto another commercial, industrial, or institutional use.	The intensity of illumination projected onto a residential property may not exceed 0.1 footcandle and 0.5 footcandles on a commercial, industrial, or institutional use.
Maximum height of freestanding luminaire [4]	No limitation	Parking lots – 25 feet or 16 feet if located within 50 feet of a residential zoning district Pedestrian lighting – 12 feet	Parking lots – 25 feet or 16 feet if located within 50 feet of a residential zoning district (Exhibit 19-1) Pedestrian lighting – 12 feet	No limitation
Minimum lighting levels	NA	NA	0.2 footcandles for parking lots, loading areas, and similar use areas	NA
Correlated color temperature (CCT)	NA	2,700 to 3000 kelvins	2,700 to 4500 kelvins	NA
Light curfew	NA	None	On-site lighting levels in parking lots reduced by at least 50 percent by 10:00 pm or 45 minutes after the close of business for the day, whichever is later	Lights to be turned off no later than 1 hour after the end of the event

Notes:

- See § 35.2904 for special provisions for security lighting.
- Stated levels are above ambient lighting conditions on a cloudless night.
- The zoning administrator may exercise discretion regarding light trespass onto a public right-of-way if it is determined to be beneficial to safe lighting conditions of adjacent sidewalks or other public areas.
- The height of a freestanding luminaire is measured from the ground directly below the center line of the luminaire to the lowest part of the luminaire that emits light.

Exhibit 24-1. Key features for lighting in a parking lot**Key:**

- A** 50 feet from side and rear lot line (to establish height of parking lot fixtures)
- B** Maximum height of parking lot light fixture is 16 feet
- C** Maximum height of parking lot light fixture is 25 feet
- D** Maximum at commercial lot line is 0.2 footcandles
- E** Maximum at residential lot line is 0.1 footcandles
- F** Maximum lighting level a front line is 0.5 footcandles

No scale

35.2904 Special provisions for security lights

Security lights are permitted provided:

- (1) the luminaire is top-shielded or located below an eave;
- (2) the lamp is rated less than 2,000 lumens; ^[1]
- (3) lights are directed so as to limit direct glare onto adjacent properties;
- (4) light switching is automated (e.g., motion sensor); and
- (5) when the lamp is activated, the illumination level at a distance of 25 feet does not exceed 0.5 footcandles.

Editorial notes:

- [1] Examples of lamp types of less than 2,000 lumens include a 100-watt standard incandescent, a 15-watt cool fluorescent, a 15-watt compact fluorescent, and an 18-watt low pressure sodium lamp.

35.2905 Lighting plan

- A. General.** A lighting plan must be submitted for review and approval consistent with the requirements for a site plan set forth in Article 5 for new projects and when existing lighting is substantially modified.
- B. Content.** A lighting plan must include the following:
 - (1) A description of all existing and proposed luminaires, including name of manufacturer, product number, lamp type, mounting height, and lumen output. This may include manufacturer's catalog cut sheets.
 - (2) A photometric plan indicating the location of all existing and proposed luminaires, mounting and/or installation height in feet, the overall illumination levels (in footcandles) and uniformities on the site,

and the illumination levels (in footcandles) at the property boundary lines. This may be accomplished by means of an isolux curve or computer printout projecting the illumination levels.

(3) Other information the zoning administrator deems necessary to ensure compliance with this article.

- C. Amendment of an approved lighting plan.** The zoning administrator may upon petition approve an amendment to an approved lighting plan based on a finding that the amendment is minor and otherwise complies with the requirements of this article in effect at the time. Any proposed amendment that the zoning administrator determines to be substantial, requires a new approval and all procedures and requirements in place at the time must be followed.

35.2906 through 35.2999 reserved