

## Article 26. Outdoor Lighting

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### 26-1 PURPOSE

To require and set minimum standards for outdoor lighting to:

- A. Provide a safe environment for use of outdoor public places.
- B. Protect drivers and pedestrians from the glare of non-vehicular light sources that impair safe traverse.
- C. Protect neighbors and the night sky from nuisance glare and stray light.
- D. Provide outdoor lighting that is dark sky friendly (outdoor luminaires that minimize glare while reducing light trespass and skyglow).
- E. Protect and retain the established character of the County.

### 26-2 APPLICABILITY

- A. Outdoor illumination is required for safety and personal security for uses where there is public assembly and/or significant on-site pedestrian and/or vehicle circulation.
- B. The glare control requirements of this section apply to the uses in item A above as well as, but not limited to, sign, architectural, landscape, recreational, and marine facility illumination.
- C. Compliance with the purpose in Section 26-1 is required for vehicular and pedestrian access.
- D. The following are exempt from these outdoor lighting requirements:
  - 1. Temporary use of low wattage luminaires for public festivals, celebrations, and seasonal or holiday observances.
  - 2. Temporary emergency illumination used by a public safety agency during an emergency.
  - 3. Temporary illumination for community celebrations or events.
  - 4. Temporary illumination for county or state public works projects.
  - 5. Outdoor illumination for single-family detached dwellings.
  - 6. Temporary illumination used for private emergencies.
  - 7. Temporary illumination used for construction with an approved building permit.
  - 8. Flagpole illumination, provided it is not a safety hazard. All lighting shall be directed upward upon the flag and extinguished when a flag is not present.
  - 9. Luminaires used for emergency or signaling purposes.
  - 10. Emergency illumination as required by the Calvert County Building Code.
- E. In this section, temporary is defined as lasting no longer than 180 days.

## 26-3 STANDARDS

### A. Illumination Levels

1. Lighting, where required or permitted by these regulations, shall have intensities and uniformity ratios in accordance with the current recommended practices of the Illuminating Engineering Society of North America (IESNA) as contained in the IESNA Lighting Handbook or separately in IESNA Recommended Practices.
2. As the County recognizes future editions, amendments, or updates to said IESNA Lighting Handbook/recommended practices of the IESNA, any outdoor luminaires or luminaire installation that was installed in conformance with the IESNA Lighting Handbook that was in effect at the time will become a nonconforming site element and is subject to Section 32-5.C.3 of this Ordinance.
3. The minimum candle provided shall be 0.3 except along boundaries where it should taper to 0.1 in accordance with Section 26-4.A.3 below.

### B. Luminaire Design

1. Luminaires shall be of a type and design appropriate to the lighting application.
2. For illuminating roadways, sidewalks, paths, entrances and parking areas, luminaires shall be aimed straight down, shall have flat lenses, and meet IESNA full cutoff criteria, and, if applicable, meet the design standards of the Town Center Zoning Ordinances.
3. Luminaires shall be equipped with light directing and/or shielding devices such as shields, visors, skirts, or hoods to redirect offending light distribution and/or to reduce direct or reflected glare. Glare control may include but is not limited to refractive globes and internal cutoff reactors.
4. NEMA-head (National Electrical Manufacturers Association) luminaires, a.k.a. barn luminaires/dusk-to-dawn luminaires/security yard luminaries, that are non-cutoff or wall packs that are non-cutoff are prohibited except for use in agricultural activities.
5. NEMA-head luminaires that are full cutoff and wall packs that are full cutoff are permitted.

### C. Control of Nuisance and Disabling Glare

1. In no case can the illumination cast by a source or sources onto an adjacent residential property exceed 0.1 horizontal footcandle measured line-of-site from any point on the adjacent residential property.
2. All outdoor luminaires on commercial, industrial, county government, recreational, institutional property, or residential developments for multi-family dwellings or single-family attached dwellings or used for marine facilities shall be aimed, located, designed, fitted, and maintained so as not to present a hazard to drivers, pedestrians, or boat operators by impairing their ability to safely traverse and so as not to create a nuisance by projecting or reflecting light onto a neighboring use or property. All outdoor luminaires shall be full cutoff except as noted in item B above.
3. All outdoor luminaires that illuminate the area under outdoor canopies shall be flat lens so that no illumination is emitted above a horizontal plane passing through the lowest point of the light-emitting element, so that direct illumination emitted above the horizontal plane is eliminated. In addition, luminaires mounted beneath canopies shall be recessed so that the lens cover is recessed or flush with the bottom of the surface (ceiling) of the canopy and/or shielded by the luminaire or the edge of the canopy so that illumination is cut-off at less than 90 degrees. Luminaires cannot be mounted on the top or sides (fascias) of the canopy, and the sides (fascias) of the canopy cannot be illuminated. Outdoor canopies include, but are not limited to, the following applications:
  - a. Fuel Island canopies associated with service stations and convenience stores
  - b. Exterior canopies above storefronts in shopping centers and malls
  - c. Exterior canopies above driveways and building entrances
  - d. Pavilions and gazebos

4. Externally illuminated signs and billboards shall be illuminated by luminaires mounted at the top of the sign and aimed downward or can be ground-mounted provided that they have glare shields. All such luminaires shall be so designed or fitted to concentrate the illumination output onto and not beyond the sign or billboard.
5. Directional luminaires, e.g., floodlights or spotlights, for such applications as facade, fountain, feature, recreational and landscape illumination shall be aimed so as not to project their output beyond the objects intended to be illuminated.
6. Vegetation screens cannot be employed to serve as the primary means for controlling glare. Rather, glare control shall be achieved through the use of such means as cutoff luminaires, shields, and baffles, and appropriate application of luminaire mounting height, wattage, aiming angle, and luminaire placement.

#### **D. Installation**

1. Electrical feeds for luminaires mounted on poles shall run underground, not overhead, except for temporary illumination as specified in Section 26-2.D above.
2. Poles supporting luminaires for the illumination of parking areas and located directly behind parking spaces, shall be placed a minimum of five feet outside paved area, curbing, or tire stops, or on concrete pedestals at least 30 inches high above the pavement or suitably protected by other approved means.
3. The top of luminaires meeting IESNA full-cutoff criteria shall not be mounted in excess of 32.5 feet above finished grade. The top of luminaires meeting IESNA cutoff criteria cannot be mounted in excess of 16 feet above grade. Sports field and sports court illumination is exempt from these height restrictions.

#### **E. Maintenance**

Luminaires and ancillary equipment shall be maintained so as to meet the requirements of these regulations.

### **26-4 PLAN SUBMISSION**

**A.** For applications where site lighting is required or proposed, lighting plans shall be submitted to the Department of Planning & Zoning for review and approval with the detailed site development plan, plot plan, or building permit, and shall include:

1. A site plan, complete with all structures, parking spaces, building entrances, traffic areas (both vehicular and pedestrian), vegetation that might interfere with lighting, and adjacent uses that might be adversely impacted by the lighting, and a layout of all proposed luminaires by location, mounting height, and type. The submittal shall include in addition to area lighting, architectural lighting, building-entrance lighting, landscape lighting, etc.
2. A description of the proposed equipment, including luminaire catalog cuts, photometrics, glare reduction devices, lamps, on/off control devices, mounting heights, pole foundation details and mounting methods. A pole foundation detail shall be provided on the plan.
3. Ten feet by ten feet point-by-point illuminance-grid plot (also known as the photometric plan) of maintained footcandles, carried out to 0.1 footcandles, which demonstrates compliance with the light trespass, intensity, and uniformity requirements as set forth in these regulations. The maintenance (light-loss) factor used in calculating the illuminance levels shall be documented on the plan.

**B.** Within Town Centers or the Rural Commercial zoning district, luminaires shall be reviewed and approved by the applicable Architectural Review Committee or its designee, prior to submittal of the detailed site development or plot plan.

**C.** Post-approval alterations to lighting plans or intended substitutions for approved lighting equipment shall be either:

1. Submitted to the Department of Planning & Zoning for review and approval prior to the alteration or substitution.
2. The applicant shall submit a statement from the manufacturer certifying compliance of construction and performance of the specified luminaires. Substitutions shall comply with these outdoor lighting regulations. A note to that effect shall be placed on the lighting plan.

#### **26-5 POST-INSTALLATION INSPECTION**

The County reserves the right to conduct a post-installation nighttime inspection to verify compliance with the requirements of these regulations, and if appropriate, to require remedial action at no expense to the County. A note to that effect shall be placed on the lighting plan.

#### **26-6 MODIFICATIONS**

**A.** Where in the case of a particular lighting application, it can be shown that strict compliance with the IESNA lighting intensities, light trespass, and uniformity ratios cannot be met because of unusual topography, shape of the parcel, specialized use, existing lighting, or other such non-self-inflicted condition the applicant may apply for a modification or waiver. Any modification or waiver shall be the minimum necessary to afford relief from these regulations. The Planning Commission or its designee may grant modifications or waivers on a case-by-case basis and only if they are consistent with the purpose in Section 26-1. In granting modifications or waivers, the Planning Commission or its designee may require such conditions, that in its judgment, secure substantially the objectives of the requirements so waived or modified.

**B.** The use of floodlighting, spotlighting, wall-mounted luminaires, internally illuminated decorative globes and spheres, and other luminaires not meeting IESNA full-cutoff criteria, shall be permitted only with the approval of the Planning Commission or its designee on a case-by-case basis and shall be consistent with the purpose in Section 26-1.

#### **26-7 MEASUREMENT INSTRUMENT**

The light meter used for verification of illuminance levels shall be certified by the manufacturer as meeting National Institute of Standards and Technology (N.I.S.T.) standards for light meters.