

PROPOSED
OUTDOOR LIGHTING ORDINANCE
FOR INCLUSION IN
THE HARFORD COUNTY CODE

DEVELOPED BY:
Friends of Harford, Inc.

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This document is based on the
Model Outdoor Lighting Ordinance for Inclusion in Zoning Ordinances,
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OUTDOOR LIGHTING ORDINANCE
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- A. Purpose – To require and set minimum standards for outdoor lighting to:
1. Provide for and control outdoor lighting for public health, safety and welfare
 2. Protect drivers and pedestrians from the glare of non-vehicular light sources
 3. Protect nearby residents, farmers, and others from glare and light trespass from improperly selected, placed, aimed, applied, maintained or shielded light sources
 4. Promote energy efficient lighting design and operation, and
 5. Protect and retain the intended visual character of the County
- B. Applicability
1. All uses within the County where there is interior or exterior lighting that creates a nuisance or hazard as viewed from outside, or exterior lighting that creates a nuisance when viewed from inside, including but not limited to, residential, commercial, industrial, public and private recreational/sports and institutional uses, and sign, billboard, architectural and landscape lighting.
 2. The County may require lighting be incorporated for other uses, applications and locations or may restrict lighting in any of the above uses or applications when light trespass interferes with relaxation, rest, sleep or otherwise jeopardizes health, safety and welfare.
 3. The glare-control requirements herein contained apply to lighting in all uses, applications and locations.
 4. Emergency lighting, as may be required by any public agency while engaged in the performance of their duties, or for illumination of the path of egress during an emergency as described in NFPA 75 and NFPA 101, are exempt from the requirements of this Ordinance.
- C. Definitions
1. Footcandle – Unit of light density incident on a plane, and measurable with an illuminance meter, a.k.a. light meter. One (1.0) foot-candle shall be considered the equivalent of 10.8 lux.
 2. Full Cutoff – Attribute of a luminaire from which no light is emitted at or above a horizontal plane drawn through the lowest light-emitting portion of the luminaire and no more than 10% of the lamp’s intensity is emitted at or above an angle 10° below that horizontal plane, at all lateral angles around the luminaire. A full-cutoff luminaire, by definition, also is “fully shielded.”
 3. Fully Shielded – Attribute of a luminaire from which no light is emitted at or above a horizontal plane drawn through the lowest light-emitting portion of the luminaire.
 4. Glare – Excessive brightness in the field of view that is sufficiently greater than that to which the eyes are adapted, to cause annoyance or loss in visual performance and visibility, so as to jeopardize health, safety or welfare
 5. Illuminance – Quantity of incident light, measured in footcandles
 6. Light Trespass – Light emitted by a luminaire or installation, which is cast beyond the boundaries of the property on which the lighting installation is sited.
 7. Lumen – As used in the context of this Ordinance, the light-output rating of a lamp (light bulb).
 8. Shielded – A luminaire from which no direct glare is visible at normal viewing angles by virtue of its being properly aimed, oriented, and located and properly fitted with such devices as shields, barn doors, baffles, louvers, skirts or visors.
- D. Criteria
1. Illumination Levels – Lighting, where required by this Ordinance, or otherwise required or allowed by the County or other applicable jurisdiction, shall have illuminances, uniformities and glare control in accordance with the recommended practices of the Illuminating Engineering Society of North America (IES), unless otherwise directed by the County.
 2. Luminaire Design
 - a. Luminaires shall be of a type and design appropriate to the lighting application and shall be aesthetically acceptable to the County.
 - b. For the lighting of predominantly horizontal surfaces such as, but not limited to parking areas, roadways, vehicular and pedestrian passage areas, merchandising and storage areas, automotive-fuel dispensing facilities, automotive sales areas, loading docks, cul-de-sacs, active and passive recreational areas, building entrances, sidewalks, bicycle and pedestrian paths, and site entrances, luminaires shall be

aimed straight down and shall meet IESNA full-cutoff criteria. Luminaires with an aggregate rated lamp output not exceeding 500 lumens, e.g., the rated output of a standard non-directional 40-watt incandescent or 10-watt compact fluorescent lamp, are exempt from the requirements of this paragraph. In the case of decorative street lighting, the County may approve the use of luminaires that are fully shielded or comply with IES cutoff criteria rather than full cutoff.

c. For the lighting of predominantly non-horizontal surfaces such as, but not limited to, facades, landscaping, signs, billboards, fountains, displays and statuary, when their use is specifically permitted by the County, luminaires shall be shielded and shall be installed and aimed so as to not project their output into the windows of neighboring residences, adjacent uses, past the object being illuminated, skyward or onto a public roadway. Luminaires with an aggregate rated lamp output not exceeding 500 lumens, e.g., the rated output of a standard non-directional 40-watt incandescent or 10-watt compact fluorescent lamp, are exempt from the requirements of this paragraph.

3. Lamps – Light sources shall have a color temperature that does not exceed 3700° Kelvin

4. Control of Glare

a. All lighting shall be aimed, located, designed, fitted and maintained so as not to present a hazard to drivers or pedestrians by impairing their ability to safely traverse and so as not to create a nuisance by projecting or reflecting objectionable light onto a nearby use or property.

b. Directional luminaires such as floodlights and spotlights, when their use is specifically approved by the County, shall be so shielded, installed and aimed that they do not project their output onto the properties of nearby residences, adjacent uses, past the object being illuminated, skyward or onto a public roadway or pedestrian way. Floodlights installed above grade on residential properties, except when motion-sensor actuated, shall not be aimed out more than 45° from straight down. When a floodlight creates glare as viewed from an adjacent property, the floodlight shall be required to be reaimed and/or fitted with a shielding device to block the view of the glare source from that property.

c. Illumination for signs, billboards, building facades and/or surrounding landscapes for decorative, advertising or aesthetic purposes is prohibited between 11:00 p.m. and dawn, except that such lighting situated on the premises for a commercial establishment may remain illuminated while the establishment is actually open for business, and until no more than one-half hour after closing. Such lighting shall be automatically extinguished using a programmable controller and with timing not affected by a power outage.

d. “Barn lights,” aka “dusk-to-dawn lights,” when a source of glare as viewed from an adjacent residential use, shall not be permitted unless effectively shielded as viewed from the adjacent property.

e. The use of floodlights and wall-mounted luminaires (wall packs) to illuminate parking areas, shall not be permitted unless it can be proven to the satisfaction of the County that the employment of no other means of lighting is possible.

f. Parking facility and vehicular and pedestrian-way lighting (except for safety and security applications and all-night business operations), for commercial, industrial and institutional uses shall be automatically extinguished no later than one-half hour after the close of business or facility operation. When safety or security lighting is proposed for after-hours illumination, it shall not be in excess of twenty-five (25) percent of the number of luminaires or illumination level required or permitted for illumination during regular business hours.

g. Luminaires shall be automatically controlled through the use of a programmable controller with battery power-outage reset, which accommodates daily and weekly variations in operating hours, annual time changes and seasonal variations in hours of darkness. The use of photocells is permitted when in combination with the programmable controller to turn luminaires on at dusk and also for all-night safety/security dusk-to-dawn luminaire operation when such lighting is specifically approved by the County. The use of motion detectors is permitted.

h. Vegetation screens shall not be employed to serve as the primary means for controlling glare. Rather, glare control shall be achieved primarily 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.

i. The illumination projected from any use onto a residential use shall at no time exceed 0.1 footcandle, measured line-of-sight at any time and from any point on the receiving residential property.

j. The illumination projected from any property onto a non-residential use shall at no time exceed 1.0 initial footcandle, measured line-of-sight from any point on the receiving property.

k. Except as permitted for certain recreational lighting and permitted elsewhere in this paragraph, luminaires shall not be mounted in excess of twenty (20) feet above finished grade of the surface being illuminated. Luminaires not meeting full-cutoff criteria, when their use is specifically allowed by the County, shall not be mounted in excess of 16’ AFG. Mounting height shall be defined as the distance from

the finished grade of the surface being illuminated to the optical center of the luminaire. Where proposed parking lots consist of 100 or more contiguous spaces, the County may, at its sole discretion, based partially on mitigation of potential off-site impacts, allow a luminaire mounting height not to exceed 25' AFG. For recreational lighting maximum mounting height requirements, refer to "Recreational Uses" elsewhere in the Ordinance.

l. Only the United States and the state flag shall be permitted to be illuminated past 11:00 p.m. Flag lighting sources shall not exceed 7,000 aggregate lamp lumens per flagpole. The light source shall have a beam spread no greater than necessary to illuminate the flag and shall be shielded so the light source (lamp and reflector) is not visible at normal viewing angles. Only one flagpole per property shall be allowed.

m. Under-canopy lighting for such applications as gas/service stations, hotel/theater marquees, fast-food/bank/drugstore drive-ups, shall be accomplished using flat-lens full-cutoff luminaires aimed straight down and shielded in such a manner that the lowest opaque edge of the luminaire shall be below the light source and its light-directing surfaces, at all lateral angles around the luminaire. The average maintained illumination in the area directly below the canopy shall not exceed 20 initial footcandles, with no value exceeding 30 initial footcandles.

5. Maintenance – Luminaires and ancillary equipment shall be maintained so as to always meet the requirements of this Ordinance.

6. Billboards and Signs – The lighting of new or relighting of existing billboards and signs, whether from an internal or external lighting source, shall require a Building Permit, which shall be granted when the County is satisfied that excessive illumination, light pollution, glare and light trespass have been adequately mitigated.

E. Recreational Uses – The nighttime illumination of outdoor recreational facilities including but not limited to sports such as baseball, basketball, soccer, lacrosse, tennis, track and field, and football typically necessitate higher than normally allowed luminaire mounting heights and aiming angles, utilize very high-wattage lamps and potentially produce unacceptable levels of light trespass and glare when located near residential properties. Permission to illuminate such facilities shall be granted by a variance, and only when the County is satisfied that the health, safety and welfare rights of nearby property owners and the County as a whole have been properly protected. When recreational uses are specifically permitted by the County for operation during hours of darkness, the following requirements shall apply:

1. Race tracks and such recreational venues as golf driving ranges and trap-shooting facilities that necessitate the horizontal or near horizontal aiming of luminaires and projection of illumination, shall not be permitted to be artificially illuminated.

2. Recreational facilities for basketball, baseball, football, soccer, lacrosse, miniature golf, tennis or track shall not be illuminated if located within a residential district or sited on a nonresidential property located within 1,000 feet of a property containing a residential use.

3. Sporting events shall be timed to end at such time that all lighting in the sports facility, other than lighting for safe exit of patrons, shall be extinguished by ten (10:00) p.m., regardless of such occurrences as extra innings or overtimes.

4. The County reserves the right to limit the number of illuminated sporting events per week or season.

5. Maximum mounting heights for recreational lighting shall be in accordance with the following:

a.	Basketball		20'
b.	Football	70'	
c.	Soccer		70'
d.	Lacrosse		70'
e.	Little League Baseball		
	1) 200' Radius		60'
	2) 300' Radius		70'
f.	Miniature Golf	20'	
g.	Swimming Pool Aprons	20'	
h.	Tennis		20'
i.	Track		20'

6. To assist the County in determining whether the potential impacts of proposed lighting have been suitably managed, applications for illuminating recreational facilities shall be accompanied not only with the information required under Section G. below but also by a visual impact plan that contains the following:

a. Plan views containing a layout of the recreational facility and showing pole locations and the location of residences on adjoining properties.

b. Elevations containing pole and luminaire mounting heights, horizontal and vertical aiming angles and luminaire arrays for each pole location

c. Elevations containing initial vertical illuminance plots at the boundary of the site, taken at a height of 5' line-of-sight

- d. Elevations containing initial vertical illuminance plots at the property lines of all buildings facing and adjacent to the recreational facility. Such plots shall demonstrate compliance with the light trespass and glare control requirements of this Ordinance.
- e. Proposed frequency of use of the facility during hours of darkness on a month-by-month basis and proposed time when the sports lighting will be extinguished.
- f. A narrative describing the measures proposed to achieve minimum off-site disturbance.

F. Plan Submission – Where site lighting is required by this Ordinance, is otherwise required by the County or is proposed by Applicant, lighting plans shall be submitted for County review and approval for Preliminary Plans, Variance, Building Permit and Special Exception applications. The submitted information shall include the following:

1. A plan or plans of the site, complete with all structures, parking spaces, building entrances, traffic areas (both vehicular and pedestrian), existing and proposed trees, and adjacent uses that might be adversely impacted by the lighting. The lighting plan shall contain a layout of all proposed and existing luminaires, including but not limited to area, architectural, building entrance, canopy, soffit, landscape, flag, sign, etc., by location, orientation, aiming direction, mounting height, lamp, photometry and type.
2. A 10'x10' illuminance grid (point-by-point) plot of maintained horizontal footcandles overlaid on the site plan, plotted out to 0.0 footcandles, which demonstrates compliance with the light trespass, illuminance and uniformity requirements as set forth in this Ordinance or as otherwise required by the County. When the scale of the plan, as judged by the County, makes a 10'x10' grid plot illegible, a more legible grid spacing may be permitted.
3. Light-loss factors, IES candela test-filename, initial lamp-lumen ratings and specific lamp manufacturer's lamp ordering nomenclature, used in calculating the plotted illuminance levels
4. Description of the proposed equipment, including luminaire catalog cuts, photometrics, glare reduction devices, lamps, lamp color temperature, on/off control devices, mounting heights, pole foundation details, pole protection means and mounting methods.
5. Landscaping plans shall contain luminaire locations, demonstrating that the site lighting and landscaping have been coordinated to minimize conflict between vegetation and intended light distribution, both initially and at vegetation maturity
6. When requested by the County, Applicant shall also submit a visual-impact plan that demonstrates appropriate steps have been taken to mitigate potential consequences of on-site and off-site glare and to retain the intended character of the County. This plan may require the inclusion of initial vertical footcandle values at specific off-site venues, e.g., bedroom windows of adjacent residential uses.
7. Plan Notes – The following notes shall appear on the Lighting Plan:
 - a. Post-approval alterations to lighting plans or intended substitutions for specified lighting equipment on the approved plan shall be submitted to the County for review and approval prior to installation. Requests for substitutions shall be accompanied by catalog cuts of the proposed equipment that demonstrate the proposed substitution is equal to or exceeds the optical quality and maintainability of the specified luminaires; and accompanied by a lighting plan, including a point-by-point plot, which demonstrates that proposed substitutions will result in a lighting design that equals or exceeds the quality of the lighting on the approved plan.
 - b. The County reserves the right to conduct post-installation inspections to verify compliance with Ordinance requirements and approved Lighting Plan commitments, and if deemed appropriate by the County, to require remedial action at no expense to the County. The County shall determine compliance with the Lighting Plan at any time upon receipt of a written request from any member of the public.
 - c. All exterior lighting, including building-mounted lighting, shall meet IESNA full-cutoff or fully-shielded criteria unless otherwise specifically approved by the County.
 - d. Installer shall notify County to arrange for inspection and approval of all exterior lighting, including building-mounted lighting, prior to its installation.

G. Compliance Monitoring

1. Safety Hazards
 - a. If a County official judges a lighting installation creates a safety hazard, the person(s) responsible for the lighting shall be notified and required to take remedial action.
 - b. If appropriate corrective action has not been effected within fifteen (15) days of notification, the Harford County Sheriffs Office shall order the offending lighting to be turned off or be disconnected at the owner's sole expense. A one-time extension of an additional 15 days may be granted. If noncompliance continues, fines of up to \$10,000 per day may be imposed.
2. Nuisance Glare and Excessive Illumination Levels
 - a. When the Harford County Sheriffs Office judges an installation produces unacceptable levels of nuisance glare, skyward light, excessive illumination levels or otherwise varies from this Ordinance, that

Office shall notify the person(s) responsible for the lighting and require appropriate remedial action.

b. Upon written request of any member of the public, the Harford County Sheriffs Office shall investigate and determine whether a grandfathered or other property violates the requirements of this ordinance. If it does, the property owner shall be informed that the problem must be corrected and a reasonable date specified by which corrective actions must be completed. A short, appropriate extension may be granted based on extenuating circumstances. If the owner does not complete the corrections on time, the Sheriffs Office shall either impose fines as in G.1.b. above or shall arrange for the corrections and charge the property owner for all expenses related thereto.

H.. Nonconforming Lighting – Any luminaire or lighting installation existing on the effective date of this Ordinance that does not conform with the requirements of this Ordinance, shall be considered as a lawful nonconformance.

1. A nonconforming luminaire or lighting installation shall be made to conform with the requirements of this Ordinance when one or more of the following apply:

a. Minor corrective action, such as reaiming or shielding can achieve conformity with the applicable requirements of this Ordinance

b. It is deemed by the County to create a safety hazard

c. It is replaced by another luminaire or luminaires, is abandoned for more than 6 months, or is relocated

d. The number of existing luminaires is increased by 10% or more

e. There is a change in use

2. Regardless of the requirements of Section H.1. above, when requested by the County, nonconforming luminaires and lighting installations shall be made to conform with the requirements of this Ordinance or removed within three (3) years from the effective date of this Ordinance.