

ORDINANCE No. 2007 - 04

AN ORDINANCE AMENDING THE SCHUYLKILL TOWNSHIP ZONING
ORDINANCE of 1955 AS AMENDED IS HEREBY AMENDED AS FOLLOWS:

Section I. Amending Article II, Section 200. *Meaning of Words Herein.*

Footcandle – Unit of light density incident on a plane (assumed to be horizontal unless otherwise specified), and measurable with an illuminance meter, a.k.a. light meter.

Full Cutoff – Attribute of a lighting fixture from which no light is emitted at or above a horizontal plane drawn through the bottom of the fixture 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 fixture.

Fully Shielded – Attribute of a lighting fixture provided with internal and/or external shields and louvers to prevent brightness from lamps, reflectors, refractors and lenses from causing glare at normal viewing angles.

Glare – Excessive brightness in the field of view that is sufficiently greater than the brightness to which the eyes are adapted, to cause annoyance or loss in visual performance and visibility, so as to jeopardize health, safety or welfare.

Illuminance – Quantity of light, measured in footcandles.

Light Trespass – Light emitted by a lighting fixture or installation, which is cast beyond the boundaries of the property on which the lighting installation is sited.

Lumen – As used in the context of this Ordinance, the light-output rating of a lamp (light bulb).

Section II. Amending Article XVIII, Section 1808. *Performance Standards.*

1. Section 1808.A and 1808.D are hereby repealed.
2. Section 1808.B becomes Section 1808.A; Section 1808.C becomes Section 1808B; and Section 1808.E becomes Section 1808.D
3. Section 1808.C Outdoor Lighting is enacted as follows:
 - A. Purpose – To Require and set minimum standards to:
 1. Provide for and control lighting in outdoor public places where public health, safety and welfare are potential concerns
 2. Protect drivers and pedestrians from the glare of non-vehicular light sources
 3. Protect neighbors, the environment and the night sky from nuisance glare and light trespass
 4. Promote energy efficient lighting design and operation
 5. Protect and retain the intended visual character of the various venues of Schuylkill Township
 - B. Applicability
 1. All uses within Schuylkill Township where there is interior or exterior lighting that creates a nuisance or hazard as viewed from outside, including, but not limited to, residential, commercial, industrial, public and private recreational/sports and institutional uses, and sign, billboard, architectural and landscape lighting.

2. Temporary seasonal decorative lighting and emergency lighting are exempt from all but the glare-control requirements of this Ordinance.
3. Emergency lighting, as may be required by any public agency while engaged in the performance of their duties, is exempt from the requirements of this Ordinance.

C. Criteria

1. Illumination Levels – Lighting, where required by this Ordinance, or otherwise required or allowed by Schuylkill Township, shall have illuminances, uniformities and glare control in accordance with the most current edition of the Illuminating Engineering Society of North America (IESNA) *Lighting Handbook* and the Recommended Practice *Lighting for Exterior Environments* (RP-33). The following current values are provided as examples for a few typical uses and tasks:

<u>Use/Task</u>	<u>Maintained</u>
<u>Uniformity</u>	
<u>Footcandles</u>	<u>Ratio</u>
Parking	
Multifamily residential	
Low vehicular/pedestrian activity	0.2 Min 4:1 Avg:Min
Medium vehicular pedestrian activity	0.6 Min 4:1 Avg:Min
Industrial/commercial/institutional	
Low activity, e.g., neighborhood shopping, industrial employment, schools, churches	0.2 Min 4:1 Avg:Min
Medium activity, e.g., community shopping, office parks, hospitals, commuter lots, cultural/civic/recreational events	0.6 Min 4:1 Avg:Min
High activity, e.g., regional shopping, fast food, major event venues	0.9 Min 4:1 Avg:Min
Gas Stations + Convenience Stores	
Fueling positions	20 Avg., 30 Max
Pedestrian path to store	10 Avg., 15 Max

2. Lighting Fixture Design
 - a. Fixtures shall be of a type and design appropriate to the lighting application.
 - 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, fixtures shall be aimed straight down and shall be fully shielded or meet IESNA full-cutoff criteria.
For decorative street lighting applications, the Township may, at its sole discretion, permit the use of fixtures meeting IESNA cutoff criteria rather than full-cutoff criteria, even if not in conformity with this paragraph.

Fixtures, except those containing directional lamps, with an aggregate rated lamp output not exceeding 1200 lumens, e.g., the rated output of a standard non-directional 100-watt incandescent lamp, are exempt from the requirements of this paragraph.

- c. For the lighting of predominantly non-horizontal surfaces such as, but not limited to, facades, landscaping, signs, billboards, fountains, displays and statuary, fixtures shall be fully 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. Fixtures, except those containing directional lamps, with an aggregate rated lamp output not exceeding 500 lumens, e.g., the rated output of a standard non-directional 40-watt incandescent lamp, are exempt from the requirements of this paragraph.
- d. "Barn lights," aka "dusk-to-dawn lights," visible from an adjacent property, shall not be permitted unless fully shielded as viewed from that property.

3. 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 light onto a neighboring use or property.
- b. Directional fixtures such as floodlights and spotlights shall be so shielded, installed and aimed that they do not project their output into the windows of neighboring residences, adjacent uses, past the object being illuminated, skyward or onto a public roadway or pedestrian way.
- c. 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 fixtures or illumination level required or permitted for illumination during regular business hours.
- d. 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 one-half hour after closing.

- e. 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 fixtures, shields and baffles, and appropriate application of fixture mounting height, wattage, aiming angle and fixture placement.
 - f. The illumination projected from any use onto a residential use shall at no time exceed 0.1 footcandle, measured line-of-sight from any point on the receiving residential property.
 - g. The illumination projected from any property onto a non-residential use shall at no time exceed 1.0 footcandle, measured line-of-sight from any point on the receiving property.
 - h. Except as might be permitted by the Township for certain recreational lighting, fixtures not meeting IESNA full-cutoff criteria, when their use is specifically permitted by the Township, shall not be mounted in excess of sixteen (16) feet above finished grade. Fixtures meeting IESNA full-cutoff criteria shall not be mounted in excess of twenty (20) feet above finished grade.
 - i. Only the United States and the state flag shall be permitted to be illuminated from dusk till dawn. All other flags shall not be illuminated past 11:00 p.m. Flag lighting sources shall not exceed 7,000 lamp lumens per flagpole. The light source shall have a beam spread no greater than necessary to illuminate the flag and shall be adequately shielded.
 - j. 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 fixtures aimed straight down and shielded in such a manner that the lowest opaque edge of the fixture shall be below the light source at all lateral angles.
4. Installation
- a. New electrical feeds for lighting standards shall be run underground, not overhead.
 - b. Poles supporting lighting fixtures for the illumination of parking areas and located directly behind parking spaces, or where they could be hit by snow plows, shall be placed a minimum of five (5) feet outside paved area or tire stops, or placed on concrete pedestals at least thirty (30) inches high above the pavement, or suitably protected by other Municipality-approved means.
 - c. Pole mounted fixtures for lighting horizontal tasks shall be aimed straight down and poles shall be plumb.
5. Maintenance – Lighting fixtures and ancillary equipment shall be maintained so as to always meet the requirements of this Ordinance.
6. Signs – The lighting of new or relighting of existing signs shall require a Building Permit, which may be granted if Schuylkill Township is satisfied that excessive illumination, light pollution, glare and light

trespass have been adequately mitigated, and shall be subject to the following requirements:

- a. Externally illuminated signs shall have fixtures mounted at the top of the sign and aimed downward. The fixtures shall be designed, fitted and aimed to shield the source from off-site view and to place the light output onto and not beyond the sign or billboard. At no point on the face of the sign or billboard and at no time shall the illumination exceed 30-vertical footcandles during hours of darkness.
 - b. The illumination of billboards, where their use is specifically permitted by the Township, shall not be located within 400' of a residential use or district.
 - c. Off-premises signs shall be extinguished automatically by a programmable controller by no later than 11:00 each evening until dawn, except that signs for establishments (not companies) that operate or remain open past 11:00 p.m. may remain on no later than ½ hour past the close of the establishment.
 - d. Rotating, traveling, pulsing, flashing or oscillating light sources, lasers, beacons, searchlights or strobe lighting shall not be permitted.
 - e. Electronic signs (containing LED lighting) shall only be permitted in commercial districts, shall be static and shall not be allowed to operate between 11:00 p.m. and dawn when located where visible from a residential district or use.
- D. Recreational Lighting – Permission to illuminate recreational facilities shall be granted only when Schuylkill Township is satisfied that the health, safety and welfare rights of nearby property owners and Schuylkill Township as a whole have been properly protected. When recreational uses are specifically permitted by the Township 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 projection of illumination, shall not be permitted to be artificially illuminated.
 2. Recreational facilities for basketball, baseball, football, soccer, 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 eleven (11:00) p.m., regardless of such occurrences as extra innings or overtimes.
 4. Fixture mounting heights shall not exceed those necessary to achieve light trespass criteria elsewhere in this Ordinance.
- E. Plan Submission – Where site lighting is required by this Ordinance, is otherwise required by Schuylkill Township or is proposed by Applicant,

lighting plans shall be submitted for Township review and approval for Variance, Building Permit and Special Exception applications. The submitted information shall contain the following:

1. A plan or plans of the site, 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. The lighting plan shall contain a layout of all proposed fixtures by location, orientation, aiming direction, mounting height and type. The submission shall include, in addition to existing and proposed area lighting, all other exterior lighting, e.g., architectural, building-entrance, landscape, flag, sign, etc.
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 Schuylkill Township. When the scale of the plan, as judged by Schuylkill Township, makes a 10'x10' grid plot illegible, a larger grid spacing may be permitted.
3. The maintenance (light-loss) factors, IES candela file nomenclature, lamp-lumen ratings and specific lamp manufacturer's lamp ordering nomenclature, used in calculating the presented illuminance levels
4. Description of the proposed equipment, including fixture catalog cuts, photometrics, glare reduction devices, lamps, on/off control devices, mounting heights, pole foundation details and mounting methods
5. When landscaping plans are involved, they shall contain the lighting fixture locations and shall demonstrate 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 Schuylkill Township, Applicant shall also submit a visual-impact plan that demonstrates appropriate steps have been taken to mitigate the potential consequences of on-site and off-site glare and to retain the intended character of Schuylkill Township. 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 approved lighting equipment shall be submitted to Schuylkill Township for review and approval.
 - b. Schuylkill Township reserves the right to conduct post-installation inspections to verify compliance with the Ordinance requirements and approved Lighting Plan commitments, and if deemed appropriate by Schuylkill Township, to require remedial action at no expense to Schuylkill Township.
 - c. All exterior lighting shall meet IESNA full-cutoff criteria unless otherwise approved by Schuylkill Township.


- d. Installer shall notify the Township to arrange for inspection and approval of all exterior lighting, including building-mounted lighting, prior to its installation.
- F. Compliance Monitoring
- 1. Safety Hazards
 - a. If Schuylkill Township 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, Schuylkill Township may take appropriate legal action.
 - 2. Nuisance Glare and Inadequate Illumination Levels
 - a. When Schuylkill Township judges an installation produces unacceptable levels of nuisance glare, skyward light, excessive or insufficient illumination levels or otherwise varies from this Ordinance, the Township may cause notification of the person(s) responsible for the lighting and require appropriate remedial action.
 - b. If the infraction so warrants, Schuylkill Township may act to have the problem corrected as in F.1.b. above.
- G. Nonconforming Lighting
- 1. Any lighting fixture or lighting installation existing on the effective date of this Ordinance that does not conform with the requirements of this Ordinance, shall be required to achieve conformance when:
 - a. Minor corrective action, such as re-aiming or shielding can achieve conformity with the applicable requirements of this Ordinance
 - b. It is deemed by Schuylkill Township to create a safety hazard
 - c. It is replaced by another fixture or fixtures or abandoned or relocated
 - d. There is a change in use
 - 2. Regardless of the requirements of Section I.1. above, nonconforming lighting fixtures 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.
 - 3. When fixtures are added to a site and the number of fixtures added amounts to 50% or more of the existing fixtures, all existing exterior lighting on the site shall be made to conform to this Ordinance.

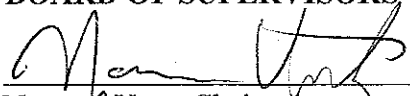
This Ordinance shall become effective immediately upon enactment.

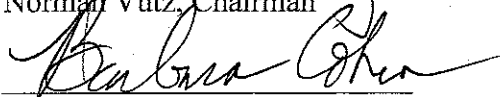
ENACTED and ORDAINED this 5th day of September, 2007.

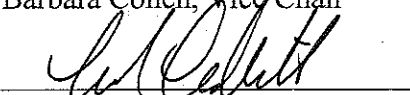
**SCHUYLKILL TOWNSHIP
BOARD OF SUPERVISORS**

Attest:

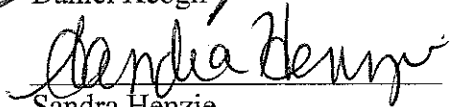

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