

ARTICLE 54 - LIGHTING
DRAFT 08/08/2019

54.10 INTENT

A. Statement of purpose. The purpose of this Article is to regulate the placement and arrangement of lighting within the Township. These regulations are intended to:

1. Protect the public health, safety and general welfare by regulating lighting levels;
2. Control light spillover and glare;
3. Minimize the detrimental effect of urban sky glow;
4. Encourage lighting systems which conserve energy and costs;
5. Preserve community character and enhance the appearance of the Township;
6. Provide for nighttime safety, and security.

B. Objectives. Outdoor lighting shall satisfy the following objectives.

1. Avoid excessive light spillover onto any adjacent premises;
2. Be shielded, and downward directed so that the light intensity or brightness will not interfere with the enjoyment, health, safety, and welfare of surrounding properties;
3. Control illumination of vertical architectural surfaces.
4. Provide for uniform lighting within sites.
5. Enable the fair and consistent enforcement of these regulations.

54.20 APPLICABILITY

Except as is otherwise provided below, these lighting requirements shall apply to all lighting installed on any property within the Township. Any lighting legally in existence before the effective date of this Ordinance that does not comply with these requirements shall be considered legal nonconforming and may remain, except as detailed in Section 54.80 and subject to the following provisions:

A. Alterations to existing lighting.

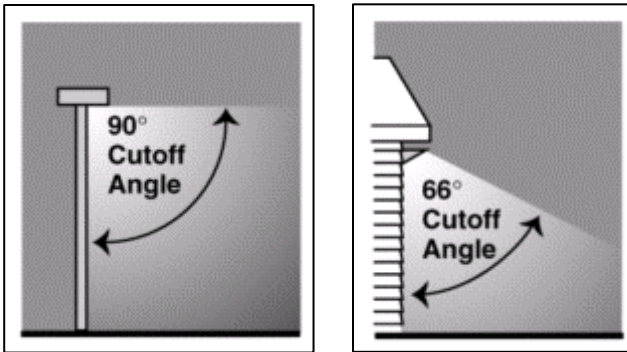
1. When poles and support structures are destroyed or removed, they must be replaced with poles and supports that comply with all of the provisions of this Article.
2. When luminaries are destroyed or removed, they must be replaced with luminaries that comply with all provisions of this Article.

- B. New parking lots or parking lot additions. When a new parking lot or addition to an existing parking lot is constructed, the new lot or lot addition must be provided with lighting in compliance with this Article.
- C. New structures, additions, or replacements. When a site is improved with new structures, or additions to, or replacements of existing structures, the lighting for the new structure, addition, or replacement on the site must meet the requirements of this Article.

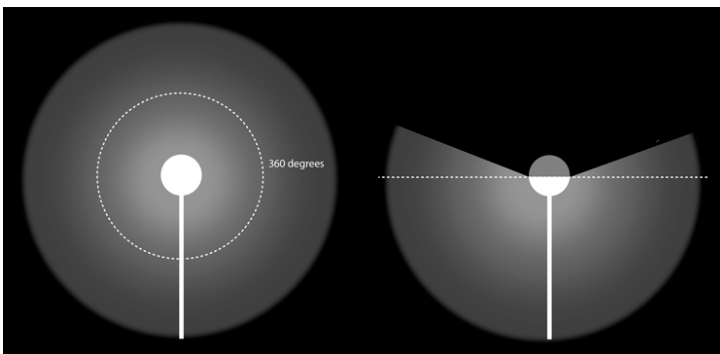
54.30 DEFINITIONS

- A. Ambient lighting - The general overall level of lighting in an area.
- B. Baffle or light shield - An opaque or translucent element to screen a light source from direct view.
- C. Building canopy - A portion of the building, whether structural or architectural in character, that projects outward.
- D. Bulb or lamp - The source of electric light. The term "bulb or lamp" is to be distinguished from the whole assembly (see Luminaire).
- E. Canopy structure - An overhead structure which is designed to allow vehicles or pedestrians to pass under it.
- F. Color rendering index (CRI) - a scale from 0 to 100 percent measuring a light source's ability to show object colors "realistically" or "naturally" compared to a familiar reference source, either incandescent light or daylight.
- G. Encased – a lamp obscured by translucent sheathing.
- H. Existing lighting - Any and all lighting installed prior to the effective date of this Ordinance.
- I. Exterior lighting - Temporary or permanent lighting that is installed, located, or used in such a manner to emit light outside. Fixtures that are installed indoors that are intended to draw attention to the exterior of the building from the outside are considered exterior lighting for the purposes of this Article.
- J. Fixture - The assembly that holds a lamp and may include an assembly housing, a mounting bracket or pole socket, a lamp holder, a ballast, a reflector or mirror, and a refractor or lens.

- K. Fixture, cutoff – A fixture that allows no emissions above the horizontal plane passing through the lowest point on the fixture from where light is emitted.



- L. Fixture, non-cutoff – A fixture that allows light to emit beyond the horizontal plane of the lowest point of the fixture and/or allows light emissions in all directions.



- M. Foot-candle - A unit of measurement for quantifying the brightness of illumination produced on a surface. One foot-candle is equal to one lumen per square foot.
- N. Glare - Harsh, uncomfortably brilliant light caused by the ability to see an unshielded light source.
- O. Kelvin rating – A unit to measure the color temperature of a light source, the higher the Kelvin rating (expressed in K), the whiter the light source.
- P. Lamp - The component of a luminaire that produces the light.
- Q. Light pole - The structure to support and elevate a luminaire.
- R. Light trespass - Light that is unnecessarily emitted beyond the boundaries of the property on which the luminaire is located.
- S. Lighting ratio - The ratio of foot-candles from the minimum to the maximum point calculations or readings for a given area. This ratio is an indicator of lighting uniformity. The lower the ratio the better the uniformity.
- T. Luminaire – The complete lighting system, including the lamp and light fixture.

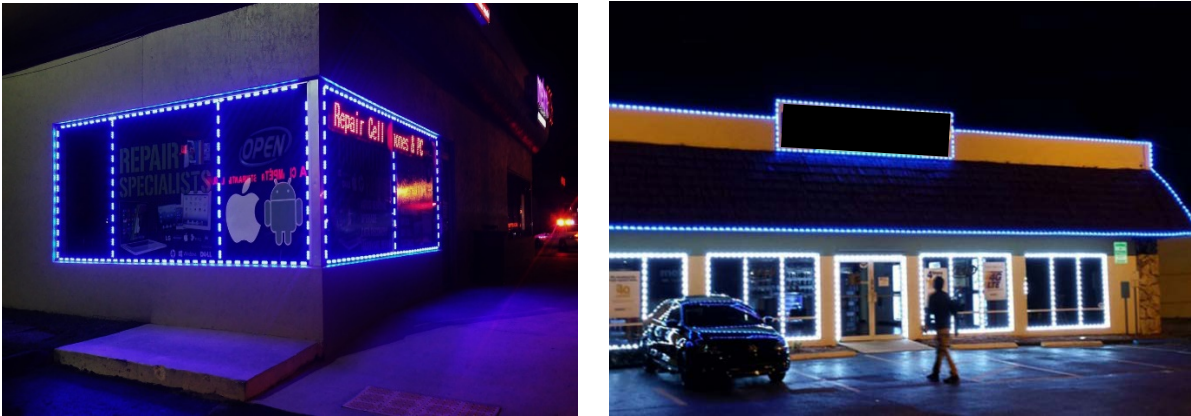
- U. Lumen - A unit of measurement for quantifying the amount of light energy emitted by a light source (power of the light radiated by the light source).
- V. Photometric plan - A diagram prepared by a lighting professional that is certified by the National Council on Qualifications for the Lighting Professions (NCQLP), or a state licensed professional engineer, architect, or landscape architect showing predicted maintained lighting levels produced by the proposed lighting fixtures, including any freestanding and building mounted lighting.
- W. Recessed - When a light is built into a structure or portion of a structure such that the light is fully cut off by the structure to which it is attached.
- X. Shielded - A bulb or lamp concealed by a baffle or light shield.
- Y. Spotlight - A luminaire designed to light only a small, well defined area or object.
- Z. Urban sky glow - The brightening of the night sky due to manmade lighting.
- AA. Visibility - Being perceived by the human eye.

54.40 EXEMPTIONS

- A. Emergency lighting necessary to conduct rescue operations, support public safety, provide emergency medical treatment, to illuminate emergency means of egress, or address any other emergency situation.
- B. Lighting operated by a public utility or agency during the course of constructing, repairing, or replacing public utilities and infrastructure.
- C. Temporary construction lighting, provided it is discontinued daily immediately upon completion of the work.
- D. Temporary holiday decorative lighting, from November 15th through January 5th.
- E. Lights on communication towers and other hazards to aerial navigation as may be required by the Federal Aviation Administration.
- F. Lighting used to illuminate a flag of the United States, subject to Section 54.60.D.
- G. Lighting associated with Department of Agriculture recognized agricultural activities.
- H. Typical residential light fixtures on residential buildings and associated accessory buildings, which do not violate Section 54.50, are exempt from the cut-off requirement when mounted at a height of eight feet or less.
- I. All outdoor light fixtures existing and legally installed prior to the effective date of this Ordinance.

54.50 PROHIBITED LIGHTING

- A. Lighting of a blinking, flashing, rotating, or fluttering nature, including changes in light intensity, brightness or color except for public safety purposes.
- B. Beacon and/or search lights except for public safety purposes.
- C. Fixtures that direct light upward unless permitted by this Article.
- D. Roof mounted lighting.
- E. Lighting of an intensity or brightness that interferes with enjoyment, health, safety, and welfare of surrounding properties.
- F. Unshielded luminous tube, LED, incandescent, or fluorescent lighting as an architectural detail on the exterior of any structure or the interior of any windows; including but not limited to rooflines, cornices, eaves, windows, and door openings.



(Examples of unshielded tube lighting)

54.60 OUTDOOR LIGHTING STANDARDS

- A. General Provisions
 - 1. Cut-Off Fixtures. All luminaires are required to be cut-off fixtures, unless otherwise permitted in this Article.
 - 2. Security Lighting. Security or flood lighting shall be attached to buildings and controlled by motion sensors, which extinguish within 10 minutes of activation.
 - 3. Direction of Lighting. Lighting plans shall be designed to direct light into the development and away from adjacent property.
 - 4. Light Levels at Property Line. Site and area lighting of nonresidential properties shall be designed such that light levels do not exceed 0.1 foot-candles at any point along the perimeter of the

property adjacent to residential zoning or uses and 0.5 foot-candles adjacent to all other zoning and uses.

5. Shared Parking Lots. Lighting designed to illuminate shared parking lots that span two or more parcels shall be exempt from the 0.5 foot-candle requirement at the shared property line only.
6. Parking Lot and Drive Aisle Lighting Ratio. To provide for uniformity of lighting, the ratio of maximum to minimum levels of light within the parking lot and drive aisle areas of a nonresidential property shall not exceed 20:1. Exception shall be made for those areas along the perimeter of the property where a significant reduction in lighting is expected in order to comply with the provisions of the subsection above.
7. Reduced Lighting. Lighting shall be significantly reduced during non-operational building hours, allowing only lighting necessary for security purposes. Lighting installations should include timers, dimmers, and/or sensors to reduce overall energy consumption and eliminate unneeded lighting that affects urban sky glow. The lighting plan shall note when and how this reduction in lighting will occur.
8. Color Temperature and Rendering. Lighting for all nonresidential developments shall have a minimum color rendering index (CRI) of 65 and a Kelvin rating between 4000-5000k.

B. Pole-Mounted Lighting

1. All pole-mounted luminaires shall be affixed horizontally and angled parallel to the ground.
2. No more than two luminaires shall be allowed per pole.
3. Luminaire height of 15 feet or less shall not exceed 12,000 lumens per luminaire and shall be spaced a minimum of 30 feet apart.
4. Luminaire height greater than 15 feet and not exceeding 25 feet shall not exceed 20,000 lumens per luminaire and shall be spaced a minimum of 40 feet apart.
5. Luminaire height exceeding 25 feet shall be subject to approval by the reviewing body. The applicant must prove, to the reviewing body's satisfaction, that pole heights exceeding 25 feet are needed to ensure public health, safety, and welfare. If permitted, such lighting shall not exceed 40,000 lumens per luminaire and shall be spaced a minimum of 50 feet apart.

C. Building-Mounted Lighting

1. Pedestrian walkways and doorways
 - a. Shall not exceed 14-feet in height.
 - b. Each luminaire shall not exceed 8,000 lumens and shall be spaced so the lighting for pedestrian walkways does not exceed 2.0 foot-candles and entryways do not exceed 6.0 foot-candles.

2. Luminaires used for the sole purpose of illuminating a building façade:
 - a. May be up to 1.5 foot-candles averaged over the building façade.
 - b. May be located on the building or be ground-mounted.
 - c. Light generated from said fixtures shall be appropriately shielded so that no light is emitted beyond the building facade.
3. Architectural features. The use of architectural features on the building, such as a canopy, which prevent the projection of light beyond the architectural feature may satisfy the intent of this Section and allow the use of noncut-off fixtures, subject to the approval of the reviewing body.

D. Landscape Features and Green Belt Lighting

1. Landscape luminaires may include uplighting, which is specifically directed at the landscape or plant feature.
2. Shall be equipped with shields to help direct light to the landscape or plant feature and to help eliminate light spillover and glare.
3. Shall not exceed 300 lumens per luminaire.
4. Shall not exceed a height of 18-inches above grade.

E. Special Uses

1. Service station/fuel sales canopy structure
 - a. Luminaires shall be recessed so that the lens cover is flush with the lower surface of the canopy and shielded by a fixture or the edge of the canopy so that light is directed downward.
 - b. As an alternative, indirect lighting may be used where uplighting is reflected from the underside of the canopy. When this method is used, luminaires must be shielded so that direct light is focused exclusively on the underside of the canopy.
 - c. Luminaires shall not be mounted on the top or sides (fascia) of a canopy.
 - d. Internally illuminated signs in compliance with the Sign Ordinance may be placed on the fascia of the canopy.
 - e. The total light output directly below the canopy shall not exceed 30 foot-candles.
2. Outdoor dining areas
 - a. Decorative unshielded lighting may be used in outdoor dining areas as long as the lighting does not exceed 1.5 foot-candles and is designed to control light spillover and reduce glare to adjacent properties.

- b. Lighting in outdoor dining areas adjacent to residentially zoned or used land must be extinguished by 11:00 pm or when the business closes, whichever is first.

54.70 INTERIOR LIGHTING

Where interior lighting and/or lighting displays are located within 10 feet of a bay of windows, glass doors, or other transparent areas of a building facade, walls, or roof (e.g., skylights), the lighting shall be shielded or screened to reduce visibility and prevent glare to patrons, individuals on adjacent and nearby properties, and/or motorists on adjacent streets.

54.80 EXISTING LIGHTING

All lighting established prior to this Ordinance shall be so arranged as to avoid glare or direct illumination onto any portion of any adjacent rights-of-way or onto any adjacent premises.

54.90 ADMINISTRATION

A site lighting plan for uses requiring Site Plan review shall be submitted, in compliance with this Article, and shall provide the following information:

- A. Proposed location on premises of all outdoor light fixture(s), including all building-mounted lighting, architectural lighting, and landscape lighting.
- B. Manufacturer specification sheets, cut-sheets, or other manufacturer provided information for all proposed luminaires that provides a description of the illumination devices, fixtures, lamps, supports, reflectors, and other devices, including lumens produced.
- C. The height of all luminaires and poles.
- D. A photometric plan showing foot-candle readings every ten feet within the subject site and ten feet beyond the property lines, including lighting ratios.
- E. If building elevations are proposed for illumination, drawings shall be provided for all relevant building elevations showing the fixtures, the portions of the elevations to be illuminated, the illuminance levels of the elevations, and the aiming point for any remote light fixture.