

Takeaways from a review of the present and proposed Radnor lighting ordinances as well as a brief examination of outdoor lighting language in comparable municipalities.

The existing Radnor outdoor lighting rules are referenced throughout the code. The primary sections that regulate approved lighting uses cover:

General Regulations

Design Review

Energy Conservation

Area and height regulations

Required improvements

The Wayne Business Overlay District

The Garrett Hill Zoning District

The Garrett Avenue in the Garrett Avenue Mixed-Use District

The Garrett Avenue in the Garrett Avenue Neighborhood District

The Public Land Use District (PLU)

The Agricultural-Conservation District

The PA Planned Apartment District

Planned Institutional District

Signs

Streetlights

Parking facilities

Off-street parking

Crosswalks

Off-street loading facilities

Wireless Communications Systems

The role of the Zoning Hearing Board

Applications and Plan Requirements

Guaranties and Contract

The pros and cons of the present setup: Con: The outdoor lighting code is not in one place. The pro: The lighting code specifically fits many of Radnor's profile and use needs, this is particularly evident in the language related to the neighborhood, mixed-use, overlay and special use districts.

The proposed ordinance is boilerplate. The "IES Lighting Handbook" refers to several ordinance examples and the proposed ordinance before us is a generic, best-practice model endorsed by the Illuminating Engineering Society. It is not specific to Radnor Township. It does not cover any special uses or districts or overlays.

The proposed ordinance is overwritten, laden with technical references in the glossary. It is, in parts, pure gobbledygook.

To wit:

Light - Radiant energy that is capable of exciting the retina and producing a visual sensation. The visible portion of the electromagnetic spectrum extends from about 380 to 770 nanometers.

Light Loss Factor (LLF) - The ratio of illuminance for a given area to the value that would occur if lamps operated at their initial rated lumen output and if no system variation or depreciation had occurred.

Luminaire, Cutoff - A luminaire whose candlepower per 1000 lumens does not numerically exceed 25 (2.5%) at an angle of 90 above nadir (horizontal), and 100 (10%) at a vertical angle of 80 above nadir.

Luminous Intensity - The luminous flux per unit solid angle in the direction in question. May be expressed in candelas or lumens per steradian (lm/sr).

Steradian (sr. unit of solid angle) – The solid angle subtended at the center of a sphere by an area on the surface of the sphere equal to the square of the sphere radius.

Specifically, the present and proposed ordinances stack up this way:

GENERAL REGULATIONS

Present code: All outside lighting, including sign lighting, shall be directed in such a way as not to create a nuisance in any agricultural, institutional or residential district, and in every district all such lighting shall be arranged so as to protect the street or highway and adjoining property from direct glare or hazardous interference of any kind. Any luminary shall be equipped with some type of glare shielding device approved by the Township Engineer. The height of any luminary shall not exceed 25 feet.

Proposed code: Adequate and effective lighting of streets, buildings, parking lots and other facilities is important for comfort, safety and commerce. The Township wishes to manage outdoor lighting so that its safety, security and economic benefits are maintained while minimizing dangerous glare, energy waste, light pollution and light trespass. Outdoor lighting should be used only where needed; used only when needed; and only that type of lighting which is necessary and proper should be used. This Ordinance is intended to implement these principles of good lighting design by regulating the shielding, height, illumination levels, and other aspects of outdoor lighting so that Township residents may continue to enjoy the highest quality of life. Fixtures shall be of a type and design appropriate to the lighting application and aesthetically acceptable to the Township. The use of searchlights, flashing strobe lights, and laser lights is prohibited. Electrical feeds for lighting standards shall be run underground. Fixtures and ancillary equipment shall be maintained so as always to meet the requirements of this Section.

GLARE

Present code: Light fixtures shall be shielded to reduce light spillage beyond the extent of the property line.

Proposed code: All lighting fixtures shall meet IES full cutoff criteria. No lighting shall be permitted that results in glare beyond an angle of thirty (30) degrees from the vertical plane, measured from the light source or results in glare beyond the property boundaries upon which the luminaire is located. Floodlights and spotlights, when permitted, shall be installed and/or aimed so that they do not project their output at neighboring residences, adjacent uses, directly skyward, or onto a roadway. Except as otherwise permitted in this Section, fixtures meeting IES full cutoff criteria shall not be mounted in excess of twenty (20) feet above finished grade. Fixtures not meeting IES "full cutoff" criteria shall not be mounted in excess of sixteen (16) feet above grade. 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.

LIGHT STANDARD HEIGHT

Present code: Maximum height of the sports field light standard shall not exceed 85 feet.

Proposed code: Lighting directed upon the field, court, rink, etc. to illuminate the sports/recreational activity taking place upon/within that facility. The maximum permitted post height for the Performance Area Lighting is sixty (60) feet. Post height shall be limited to minimum height necessary to meet the Performance Area Lighting needs of that specific sports/recreational use as determined by the Township.

ILLUMINATION

Present code: Lights shall not exceed a maximum footcandle reading at the property line in excess of 0.2 fc (footcandles) unless otherwise approved by the Board of Commissioners.

Proposed code: The intensity of illumination projected onto any non-residential property from another property shall not exceed 0.2 vertical foot candles, measured at grade at the common property line, and the intensity of illumination projected onto a residential property from another property shall not exceed 0.1 vertical foot candles, measured at grade at the common property line.

LIGHT DIRECTION

Present code: Light fixtures shall be positioned so that the emanating light does not shine into streets in such a manner as to interfere with or distract a driver's vision and/or directly onto adjacent properties.

Proposed code: All outdoor 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, (i.e., blinding or disabling glare), and so as not to create a nuisance by projecting or reflecting objectionable light onto a neighboring use or property.

RECREATIONAL LIGHTING

Present code: Recreational lighting shall be turned on no earlier than dusk and turned off no later than 10:30 p.m., unless otherwise approved by the Township.

Proposed code: All outdoor sports and recreation lighting shall be extinguished between 9:00 p.m. and 7 a.m. on Sunday through Thursday nights and between 10:00 p.m. and 9 a.m. on Friday and Saturday nights and nights preceding Federal Holidays. In addition, the Performance Area Lighting shall be turned off no more than thirty (30) minutes after the end of the event or use of the sports/recreational facility.

NOTICE

Present code: Notice of any proposed field lighting project shall be provided to adjacent property owners within 500 feet of the subject site.

Proposed code: No reference

PARKING FACILITIES

Present code: Parking facilities: All common parking areas shall be adequately lighted during after-dark operating hours. All lighted standards shall be located on raised parking islands and not on the parking surface. All artificial lighting used to illuminate any parking space or spaces shall be so arranged that no direct rays from such lighting shall fall upon any neighboring property or streets, nor shall any high-brightness surface of the luminaries be visible from neighboring residential properties or from a public street.

Proposed code: All fixtures used to illuminate parking areas shall not be mounted in excess of sixteen (16) feet above grade. Lighting standards to the rear of the parking spaces shall be placed a minimum of five (5) feet outside paved areas; on concrete pedestals at least thirty (30) inches above the pavement; or suitably protected by other means approved by the Township.

OFF-STREET PARKING

Present code: Off-street parking: All lighting on subject premises must be kept in proper working order and lighted during the lighted period when the subject premises or any portion thereof is being used by the holder, or when the subject premises or any portion thereof is open for business. The authorized official may require the holder of any subject premises to reduce outdoor lighting after business hours.

Proposed code: No reference.

DESIGN REVIEW

Present code: Design Review Board hearing: Covering building design, including: Exterior lighting to be used for walkways, drives and parking lot, including signs and light cast from the buildings interior which is or will be visible from surrounding properties.

Proposed code: No reference.

IMPROVEMENTS

Present code: Required improvements to streetlights: Where appropriate, the developer shall install or cause to be installed, at the developer's expense, metal or fiberglass pole streetlights serviced by underground conduit in accordance with a plan to be prepared by the developer's engineer and approved by the Board of Commissioners and by the Philadelphia Electric Company. The equipment of metal or fiberglass poles may be waived in such instances as approved by the Board of Commissioners due to the existence of wooden poles already in place. Provisions shall be made for energizing said lighting after 50% or more of the dwellings in a given subdivision or land development or section of a subdivision or land development have been occupied. The developer shall be responsible for all costs involved in lighting the streets until such time that the streets are accepted or condemned as public streets by the Township.

Proposed code: No reference.

SIGNS

Present code: It shall be unlawful for any person, firm or corporation to erect any of the following signs within the Township of Radnor: Illuminated tubing or strings of lights which outline rooflines, doors, windows or wall edges when used for advertising purposes, but excluding temporary signs for traditional seasonal decorations. Beacon lights.

The following signs shall be allowed without a sign permit and shall not be included in the determination of type, number, colors or area of permanent signs allowed within a zoning district: Changeable copy, repainting, cleaning and other normal maintenance and repair of a sign unless the sign structure, design, color or lighting is altered.

The following types of signs shall be permitted within Commercial Office (CO) and Commercial (C-1, C-2, C-3) Zoning Districts:

Marquee signs. Theater or movie marquee signs containing changeable copy shall be permitted in addition to the otherwise permitted sign area for the use, provided that the total sign area shall not exceed 200 square feet. Such signs shall be required at all times to maintain a minimum vertical clearance of 10 feet.

The following restrictions and regulations shall be applicable to all permanent signs as permitted by this article, unless otherwise specified:

Illumination. Where permitted, signs shall be illuminated only as authorized in an appropriate sign permit by a steady, stationary light of reasonably minimal intensity. Light sources shall be shielded from all adjacent properties and streets and shall not be of such intensity as to cause glare hazardous to pedestrians or motorists. Signs using internal illumination shall be designed so that when illuminated at night, only the letters and logos of the sign are visible. No light shall emanate through the background, the borders, sides or any other surface of the sign or its supporting structure. Individual, solid letters with internal lighting tubes which backlight a wall in a halo effect shall be permitted.

Electrical connections. The electrical supply to all exterior signs, whether to the sign itself or to lighting fixtures positioned to illuminate the sign, shall be provided by means of concealed electrical cables. Electrical supply to freestanding signs shall be provided by means of underground cables. Applications for electrical permits shall be filed at the time of the sign permit application.

Proposed code: The requirements of this subsection apply to all outdoor lighting installations employed for nighttime illumination of signs, billboards, the facades of buildings and structures, fountains, trees, shrubs, vegetation, and the like.

Use of Glare Shields Required For Non-Cutoff Luminaire Types. Where non- cutoff luminaires such as floodlights are used to meet the lighting design objectives for outdoor sign, billboard,

façade, and/or landscape lighting, the luminaires shall be equipped with glare shields, visors, barn doors, and other similar shielding accessories as required to ensure that the candlepower distribution from all lighting installations shall be cut off at all angles beyond those required to restrict direct illumination to within the perimeter of the sign or billboard being illuminated.

Externally illuminated signs, billboards, and facades shall be lighted by fixtures mounted at the top of the sign and aimed downward.

Fixtures used for architectural lighting, e.g., façade, fountain, feature and landscape lighting, shall be designed, fitted and aimed so as not to project their output beyond the objects intended to be illuminated.

All outdoor lighting falling under the requirements of this Subsection shall be extinguished between 11:00 p.m. and 7 a.m. This restriction does not apply to non-residential uses that are open between the hours of 11:00 p.m. and 7 a.m., in which case the lighting must be extinguished when the non-residential use is closed. Unless the Board of Commissioners specifically approves all-night lighting, (e.g., for safety or security), all outdoor lighting shall be controlled by automatic switching devices such as time clocks or combination motion detectors and photocells, to permit extinguishing lighting between 11 p.m. and 7 a.m.

Where all-night safety or security lighting is to be provided, the lighting intensity levels shall not exceed 25% of the levels normally permitted by this Ordinance for the use. All-night safety or security lighting includes the following:

- Lighting essential for the deterrence of break-ins. This type of lighting is limited to exterior door locations
- Lighting controlled by motion sensors/detectors. This type of lighting is to be used to deter vandalism and theft and shall be placed in locations where the sensors will not be tripped on a reoccurring basis and shall be installed and/or aimed so that they do not project their output at neighboring residences, adjacent uses, directly skyward or onto a roadway.
- Lighting used in conjunction with surveillance cameras. This type of lighting is limited to illuminating automatic teller machines, deposit boxes, building entrances, and parking lot/driveway entrances. Fixtures used for this type of lighting shall be designed, fitted, and aimed so as not to project their output beyond the objects intended to be illuminated.

ENERGY CONSERVATION

Present code: Certain documents on file in the office of the Secretary of the Township of Radnor, being marked and designated as the 2009 International Energy Conservation Code, are hereby adopted as the Energy Conservation Code of Radnor Township, Delaware County, in the Commonwealth of Pennsylvania, for the purpose of establishing minimum regulations governing the design, installation and construction of energy efficient building envelopes and the

installation of energy efficient mechanical, lighting, and power systems as herein provided; and each and all of the provisions, penalties, conditions and terms of the 2009 International Energy Conservation Code are hereby referred to, adopted and made a part hereof as if fully set forth in this chapter with the additions, insertions, deletions and changes prescribed in this chapter.

Proposed code: Wasteful, inefficient lighting is a significant environmental problem. Excessive lighting wastes energy; intrudes upon neighboring properties; is a nuisance to pedestrians, cyclists, and motorists on adjacent roadways; disturbs wildlife habitats; impairs human experience of the night sky; and negatively affects the quality of life of our communities.

WIRELESS COMMUNICATION FACILITIES

Present ordinance: Wireless communication facilities shall not be artificially lighted, unless required by the FAA or other applicable authority. If lighting is required, the lighting alternatives and design chosen shall cause the least disturbance to the surrounding views.

Proposed ordinance: No reference.

VIOLATIONS AND PENALTIES

Proposed code: Violations and penalties: Any person, corporation, or organization who violates or permits a violations of this chapter shall, upon being found liable therefore in a civil enforcement proceeding commenced by Radnor Township before a Magisterial District Judge, pay a fine of not more than \$1,000, plus court costs and reasonable attorney fees incurred by Radnor Township in the enforcement of this chapter. Each day of violation shall constitute a separate offense. Upon notice of a violation, a property owner shall have twenty (20) days to bring its property into compliance before the commencement of a civil enforcement proceeding before a Magisterial District Justice. In addition to the foregoing enforcement actions, Radnor Township may seek any and all legal or equitable relief, including an injunction to enforce compliance with this chapter.

Present code: No reference

CONCLUSION

Radnor's present lighting ordinances, despite the fact that they are spread throughout the code, are quite comprehensive. They are very specific in their treatment of our niche areas, such as the Wayne Business overlay and the Garrett Hill Districts, which is quite vital to keeping an effective code. None of that attention to detail exists in the proposed ordinance.

The existing lighting ordinances also are written in plain English, are digestible and understandable to the layman. The proposed ordinance is not.

There is also an issue with the technical specificity in the proposed ordinance. Experts seem to agree that the technology around outdoor lighting is changing and updating at a very high rate of speed. A lighting code should be written in a way that technological adjustments can be introduced without rewriting the entire code. The present ordinance leaves some flexibility for our township engineer to adjust to newer and better lighting standards as they come to the fore.

Enforcement is also an issue that cannot be cavalierly dealt with. Is the township adequately staffed to carry out the policing and legal actions called out in the proposed ordinance? The \$1,000 fine also seems onerous.

A review of lighting ordinances for Lower Merion Township, Swathmore Borough, Upper Merion Township, Newtown Township and Haverford Township revealed a range of depth and detail.

Lower Merion is about as comprehensive as Radnor; Swarthmore is very succinct and generic; Haverford basically does not have an outdoor lighting ordinance; Upper Merion is fairly detailed.

I have included attachments for each muni.

LOWER MERION

[Exterior lighting.](#)

Exterior lighting shall be designed to limit both light trespass onto adjacent residential properties and light pollution into the sky. The illumination level shall be no more than 0.3 footcandle measured either vertically or horizontally at a height of five feet above grade from adjacent residential properties. Lighting shall be designed to shield the source of illumination and to prevent glare on adjacent residential properties through the use of either "cutoff" or "full cutoff" type luminaires and low brightness light sources.

[Outdoor lighting directing light onto residential properties.](#)

In residence districts, or commercial districts where exterior lighting equipment casts significant light onto residential properties, any permitted illumination of buildings, structures, tennis courts, pools, signs, or other open areas shall be subject to the following regulations:

[A.](#) Outdoor lighting shall be selected, located and focused so that only the building, structure, sign, or other open area on the lot is illuminated. Signs, if lighted, shall be externally illuminated only from directly above the face of the sign. The internal lighting limitation shall not apply to approved commercial signs in a commercial zoning district where signs are permitted to be internally illuminated.

[B.](#) Outdoor lighting shall be aimed and/or shielded so that the light shall not be directed onto any adjacent lot, public street or public right-of-way. If any exterior luminaire (light fixture) exceeds the following lamp wattage limits, then the source of illumination shall be fully shielded in order to prevent glare and off-site migration of light onto adjacent properties. The following limits shall apply to the total lamp wattage per luminaire.

[\(1\)](#) Incandescent: 100 watts.

[\(2\)](#) Halogen (quartz or tungsten halogen): 75 watts.

[\(3\)](#) Halogen infrared reflecting (infrared-conserving): 60 watts.

[\(4\)](#) High-pressure sodium (HPS): 50 watts.

[\(5\)](#) Pulse start metal halide (PSMH) or ceramic metal halide (CMH): 40 watts.

[\(6\)](#) Compact fluorescent (CFL): 26 watts.

[\(7\)](#) Straight (linear) fluorescent: 32 watts.

[\(8\)](#) Low voltage (12 to 24 volts) landscape lighting utilizing either an incandescent or halogen lamp: 25 watts.

[\(9\)](#) LED: reserved.

[C.](#) Outdoor lighting shall not result in a measurable light level greater than one-half of one (0.5) footcandle at the property line or lot line, measured either vertically, horizontally, or line of sight at an elevation of five feet above grade.

[D.](#) No decorative, sign or floodlighting, except low-intensity (low-brightness) safety or security lighting, which exceeds the lamp wattages as listed above shall be permitted to operate after 11:00 p.m. and until dawn. Lighting controlled by an automatic motion sensor, with daylight detection plus automatic turnoff and adjusted for a maximum "on" duration of not more than 10 minutes, shall be exempt from the 11:00 p.m. time limit.

[Injury to light fixtures or street signs unlawful.](#)

It shall be unlawful for any person to, within the Township of Lower Merion, willfully, maliciously or negligently injure, pull down or break any lamppost, bracket or fixture, any gas or electric lamp or any street sign; or carry away, diminish or reduce the oil, gasoline, naphtha, gas or electricity supplied to any public lamp or light; or extinguish any such light or turn off, wholly or partly, the supply of oil, gasoline, naphtha, gas or electricity to such lamp or light; or injure, break, deface or daub any mantle, globe or shade; or screen or otherwise obscure any public light, lamp, globe or any street sign.

[Illumination of parking and walking areas.](#)

A. All multiple dwelling buildings shall be provided with illumination to values of 1.0 footcandle, average, with proper uniformity measured on the parking and walking surface surrounding the building. The lighting fixture shall be provided with a vapor cover or a cover of equal break-resistant material.

B. All parking areas under or within multiple-dwelling buildings shall be provided with illumination to values of not less than 2.0 footcandles, average, with proper uniformity measured at the parking or walking surface. The lighting fixture shall be provided with a vapor cover or a cover of equal break-resistant material.

[Guarding excavations and obstructions.](#)

It shall be the duty of the permittee to furnish to the traveling public suitable protection surrounding the location of all openings, excavations, stored materials and buildings or other structures within the permit area by means of suitable flags and barricades, supplemented, where necessary, by flashing amber lights, which shall be kept lighted from sunset to sunrise, or to provide such other means of protection, including one or more flagmen to direct traffic, as may be required by the Director.

[Exemptions from standards and chapter.](#)

The provisions of the National Electrical Code and this chapter shall not apply to:

A. The replacement of light bulbs or fuses or other minor repair work.

B. The connection of any portable electrical appliance to any permanently installed electrical receptacle.

[Illumination of exterior doors.](#)

All exterior doors, excluding ground mounted basement doors, shall be provided with illumination which is maintained to a value of not less than 2.0 footcandles, measured at the walking surface on the outside of the building. The lighting fixture shall be equipped with a vapor cover or a cover of equal break-resistant material.

[Illumination of parking lots.](#)

All buildings having parking lots and access thereto providing more than 10 parking spaces shall be provided with illumination to values of not less than 2.0 footcandles, average, with proper

uniformity measured at the parking areas and adjacent walking surface. The lighting fixtures shall be provided with a vapor cover or a cover of equal break-resistant material.

Exterior illumination.

All buildings shall be provided with exterior illumination to values of not less than 1.0 footcandle, average, with proper uniformity measured at the walking surface. The lighting fixture shall be provided with a vapor cover or a cover of equal break-resistant material. There shall be a minimum of 1.0 footcandle throughout a ten-foot-radius of any exterior door.

General regulations.

The following restrictions and regulations shall be applicable to all permanent signs permitted by this article, unless otherwise specified:

C. Illumination. Where permitted, signs shall be illuminated only by indirect lighting or by a steady, stationary light of reasonable intensity. Light sources shall be shielded from all adjacent buildings and streets and shall not be of such intensity as to cause glare hazardous to pedestrians or motor vehicle drivers or create a nuisance to adjacent properties.

Sign permits.

It shall be unlawful for any person, firm or corporation to erect, alter, repair, relocate or maintain any sign within the Township of Lower Merion without first obtaining a sign permit, unless such sign is specifically exempt from the permit requirements.

A. Application for permit. Application for sign permits shall be made upon forms provided by the Director of Building and Planning and shall contain and/or have attached the following, information and materials:

[Amended 1-19-2002 by Ord. No. 3631]

(b) The design of each sign face and sign structure with the dimensions, total area, sign height, depth, structural details, materials, lighting scheme and proposed location.

Public toilets.

Every person who shall provide a toilet for the use of employees, patrons or members, or available to the public, shall maintain such toilet at all times in a clean, well lighted, ventilated and sanitary condition. An adequate supply of clean toilet paper shall be provided at all times. The floor of any such toilet room shall be impervious to moisture and properly drained. No drinking cup, towel, hairbrush or comb shall be provided for common use in any such toilet or in a washroom, rest room or locker room adjacent thereto. The owner of a building or his agent in charge thereof, wherein two or more tenants shall have common use of a toilet or shower, shall be responsible for the maintenance and repair of such toilet or shower and keep it in a clean and sanitary condition.

Signs in residence districts.

The following types of signs, and no others, shall be permitted within residence districts, except as provided for otherwise within this chapter:

B. Signage for estates, farms, churches, educational facilities, hospitals, recreation areas and other permitted nonresidential uses, provided that:

(2) The signs may be lighted by indirect lighting only. Illuminated signs are prohibited.

D. Real estate signs, provided that:

(2) Signs may be lighted by indirect lighting only. Illuminated signs are prohibited.

(4) Illumination. Illumination of billboards shall be allowed only upon grant of a special exception by the Zoning Hearing Board, subject to the following requirements:

(a) The illumination of billboards within 500 feet of a residential zoning district or residential use shall not be permitted.

(b) All illumination shall be external, shielded, and shall be mounted directly above each illuminated face of the billboard.

(c) The location, luminaire type, wattage, and illumination patterns, and the means of control shall be specified. The lighting shall be designed to prevent the direct off-site transmission of light directly from the light source, to shield the source of illumination and to prevent glare as viewed from off-site.

(d) The source of illumination shall be screened from view from vehicles on adjacent roadways and from adjacent properties.

(e) No light source emanating from behind, within or on the face of the billboard shall be permitted.

(f) Rotating, flashing, pulsing, moving or oscillating light sources, lasers, light emitting diodes (LEDs), organic LEDs, beacons or strobe lighting shall not be permitted.

(d) Externally lit walls signs are permitted. External lighting must directly light the wall sign from above.

(11) All sign lighting must comply with the Energy Code adopted under the Pennsylvania Uniform Construction Code.

(4) Methods of illumination shall be limited to the following:

(a) Natural lighting.

(b) External lighting, lit from above.

(c) Halo-lit or backlit letters.

G. Illumination of signs.

(1) Halo-lit or backlit letters are permitted.

(2) Any others signs authorized in these districts may be illuminated only by natural light or external lighting mounted above the sign. External lighting shall be shielded from adjacent properties and public roadways or public rights-of-way by the use of either cutoff or full cutoff luminaires, or the use of external shields if necessary.

H. Awnings and canopies. Awnings and canopies are roof-like structures, above storefront windows or entries, sometimes containing a mark or signature of a tenant. The following standards shall apply:

(4) Illumination. Natural lighting only; backlit awnings are not permitted.

J. Street address plaque. The following standards shall apply:

(4) Illumination: Natural lighting only is permitted, except for halo-lit or backlit letters.

Signs in commercial, manufacturing and industrial districts.

The following types of signs shall be permitted within commercial, manufacturing and industrial districts:

(6) Temporary advertising signs. Advertising signs, including flags, balloons, banners or displays constructed of cloth, light fabric or similar materials. Such signs shall not exceed the sign area permitted for permanent signs or be in a position or of a color that presents a hazard to pedestrians or motorists. A sign permit must be obtained prior to the installation of a temporary advertising sign.

Prohibited signs.

Except as may be hereinafter specifically permitted, it shall be unlawful for any person, firm or corporation to erect any of the following signs within the Township of Lower Merion:

L. Any illuminated tubing or strings of lights which outline roof lines, doors, windows, wall edges or rows of vehicles when used for advertising purposes, with the exception of temporary lights erected to celebrate a holiday. Temporary lights must cease to be operated within 60 days of installation.

F. A medical marijuana grower/processor and any medical marijuana grower/processor accessory uses when authorized as a conditional use in accordance with Article [XXV](#), § [155-141.2](#), subject to the following:

(10) A plan shall be provided demonstrating that all external and internal lighting, including light for nighttime growing, is shielded in such a manner to not allow light to be emitted skyward or onto adjoining properties.

Fire protection equipment: fire alarm systems. [1]

The following requirements for an approved fire alarm system are hereby established and are in addition to the requirements of the International Fire Code, Life Safety Code of the National Fire Protection Association and the requirements of the Department of Labor and Industry of the Commonwealth of Pennsylvania, the provisions of which are incorporated herein by reference. Additional requirements may be imposed by either the Fire Marshal or the Director of the Department of Building and Planning when more stringent regulations are deemed necessary.

(7) In certain situations, strobe lights may be required, in addition to bells, for the hearing impaired.

Development design standards.

- A. Purpose. The purpose of this section is to require pedestrian-oriented buildings and to require building entrances to be oriented toward the streets and pedestrian ways. Windows must facilitate views into and out of buildings. Requirements for orientation and primary entrances are intended to:

(f) No reflective glass shall be permitted. Tinted windows shall allow a minimum of 85% light penetration into the building.

Conversion of buildings.

A. The Zoning Hearing Board may authorize as a special exception the conversion of a building used as a single-family dwelling into a two-family dwelling or an apartment house in R AA, R A, R 1, R 2, R 3, R 4, R 5 and R 6 Residence Districts, subject to the following requirements:

(10) Outdoor lighting shall be restricted to prohibit glare onto surrounding properties.

City Avenue District - Bala Village (BV).

The Bala Village zoning is designed to preserve the existing retail character of the area.

(4) Architectural design standards. (NOTE: Appendix to be included in future amendments.) The architectural design standards have been incorporated into this district to ensure that the character of new buildings relates to the scale and character of the existing commercial buildings and creates a pedestrian-friendly environment.

(a) Buildings with active uses, including wrapped garages.

[1] The visual mass of all buildings shall be deemphasized through the use of architectural and landscape elements, including form, architectural features and materials, to reduce their apparent bulk and volume, to enhance visual quality and contribute to human-scale development.

[2] The ground floor of the primary front facade shall contain a minimum of 60% clear windows and doors. Smoked, reflective, tinted or black glass in windows is prohibited. Glass shall have a minimum light transmittance of 0.75.

[4] Second story and above of primary front facades, shall contain a minimum of 20% of the facade as clear windows. Glazing shall have a minimum light transmittance of 0.75.

Site disturbance regulations.

In addition to the requirements of Chapter 135, Subdivision and Land Development, § 135-39, Grading, and Chapter 121, Stormwater Management and Erosion Control, § 121-5, Erosion control requirements, the conservation measures listed below shall be taken during site preparation activities. At the discretion of the Township and in addition to the measures listed below, the Township may require a prior-to-construction meeting with the applicant or site contractor to further determine methods to minimize environmental damage.

A. Protection of vegetation from mechanical injury and grading change.

(4) Trees shall not be used for roping, cables, signs, fencing or lighting. Nails and spikes shall not be driven into trees.

Wireless communication facilities.

In recognition of the quasi-public nature of wireless communication systems, the following special regulations shall apply:

(4) Support structures shall meet all Federal Aviation Administration (FAA) regulations. No support structure may be artificially lighted except when required by the FAA.

NEWTOWN OUTDOOR LIGHTING CODE

[Amended 11-13-1978 by Ord. No. 1978-10; 7-12-1993 by Ord. No. 1993-3]

[Chapter 172 Zoning Article XXIII Outdoor Lighting](#)

[§ 172-128 Compliance required.](#)

[§ 172-129 Exterior lighting standards.](#)

[§ 172-130 Construal of provisions.](#)

[§ 172-128 Compliance required.](#)

Outdoor lighting hereafter erected or maintained in the Township shall conform with the provisions of this article and the provisions of the Township Building Code^[1] and all applicable ordinances and regulations of the Township.

[\[1\]](#)

Editor's Note: See Ch. [69](#), Art. [I](#), Building Code, and Ch. [79](#), Construction Code, Uniform.

[§ 172-129 Exterior lighting standards.](#)

[Amended 9-11-2000 by Ord. No. 2000-05]

[A.](#)

Definitions. As used in this section, the following terms shall have the meanings indicated:

[CUTS](#)

The manufacturer's catalog sheets, including photographs or pictures showing the design of the fixture and the performance data for the luminaires. The cuts also show lighting fixture supports, poles and the light standards which are proposed with applicable notes.

[FOOTCANDLE \(FC\)](#)

A quantitative unit for measuring illumination equivalent to the illumination produced by a plumber's candle (standard source), measured at a distance of one foot; one lumen per square foot.

[ILLUMINATION](#)

The density of luminous flux on a surface.

[ISOLUX DIAGRAM](#)

A line plotted on any appropriate set of coordinates which shows all the points of a surface where the illumination is the same as an isolux (isofootcandle) line. When a series of such lines for various illumination levels is plotted on the same set of coordinates, an isolux diagram is formed.

[LUMINAIRES](#)

A complete lighting unit, lighting unit assembly (including reflectors, glassware, socket, etc.) and accessories for mounting.

[REFLECTOR](#)

A surface or element of a luminaire designed to direct light in a desired direction.

[B.](#)

Plan requirements.

[\(1\)](#)

Final lighting plan. The location and type of all proposed exterior lighting fixtures for parking areas shall be indicated on the final lighting plan, along with the expected hours of operation.

On all pedestrian and vehicular use areas indicated on the lighting plan, an isolux diagram shall be drawn to sufficiently indicate the illumination levels furnished by each luminaire and the

pattern of coverage on these areas. Reproduction of the cuts shall be transferred to the lighting plan for each type and configuration of proposed exterior lighting.

[\(2\)](#)

Final landscape plan. The location and type of all proposed exterior lighting fixtures shall be indicated on the final landscape plan to ensure that there is no conflict between the location of light standards and the location of trees and that trees will not adversely affect lighting patterns. Lighting fixture locations shall be indicated on the plan by symbol.

[C.](#)

Design standards. Lighting for safety purposes to illuminate parking and/or pedestrian areas shall conform to the following:

[\(1\)](#)

Lighting shall be designed so that the illumination does not appear beyond the property line on which the lighting originates at levels above 0.2 footcandle.

[\(2\)](#)

Parking areas shall be lighted using support poles or lighting standards. The fixtures shall be located within or adjacent to parking areas, in raised traffic islands, parking bay separators or adjacent landscape areas. Parking areas shall not be lighted by means of floodlighting attached to buildings. Poles or standards shall be located so as not to be damaged by automobiles being parked (front overhang: minimum 39 inches; rear overhang: minimum 60 inches).

[\(3\)](#)

The maximum height of outdoor lighting standards and fixtures shall not exceed 20 feet in height, measured from the ground level to the top of the fixture.

[\(4\)](#)

All light fixtures shall be of the shielded type and provided with deflector light cutoff shields.

[\(5\)](#)

Site lighting shall not be lighted by means of floodlights attached to buildings, except for single-family dwelling units.

[D.](#)

Other lighting.

[\(1\)](#)

Design standards for athletic fields and other similar lighting not included in Subsection [C](#) above shall be permitted by special exception. The height and design of the lighting array shall be determined on a case-by-case basis considering the following issues:

[\(a\)](#)

Spill light.

[\(b\)](#)

Glare.

[\(c\)](#)

Sky glow.

[\(d\)](#)

Definitions. As used in this section, the following terms shall have the meanings indicated:

[GLARE](#)

A subjective effect from the highest amount of light from the brightest source of light which must be masked by reflects or other devices to be reduced.

SKY GLOW

The bright aura in the night sky which requires reflections be controlled.

SPILL LIGHT

The footcandles measured beyond the area you are trying to illuminate. In no event shall footcandles exceed 0.2 at the property line.

(2)

The applicant shall formulate their design based on requirements of the Illumination Engineering Society, the NCAA and the requirements of the various sports groups or similar criteria for lighting in excess of 20 inches in height.

(3)

All lighting must be directed onto the field in question to the maximum extent possible. The height shall be determined by this factor in conjunction with Subsection D(1) and (2) above.

E.

Applicability. The submission requirements under this section shall be part of the submission of any subdivision and land development applications, where applicable. Any application for subdivision or land development, which includes the installation of outdoor lighting, shall not be considered complete unless accompanied by the appropriate submittals as outlined in this section.

§ 172-130 Construal of provisions.

Nothing in this article shall be construed to be applied retroactively to existing lighting. When more than 50% of the lighting fixtures on a property are replaced, the new lighting fixtures shall conform to this section.

Radnor light ordinance references in the present code

General Regulations

[§ 280-105 Access and highway frontage.](#)

In order to minimize traffic congestion and hazard, control street access in the interest of public safety and encourage the appropriate development of street or highway frontage, the following shall apply:

[E.](#)

All outside lighting, including sign lighting, shall be directed in such a way as not to create a nuisance in any agricultural, institutional or residential district, and in every district all such lighting shall be arranged so as to protect the street or highway and adjoining property from direct glare or hazardous interference of any kind. Any luminary shall be equipped with some type of glare shielding device approved by the Township Engineer. The height of any luminary shall not exceed 25 feet.

[§ 280-86 Area and height regulations.](#)

[E.](#) No building or structure shall exceed three stories or 38 feet, except for sports field lighting on Township property which has been approved by the Board of Commissioners, at its discretion, and is subject to the following:

[\(1\)](#) Maximum height of the light standard shall not exceed 85 feet.

[\(2\)](#) Lights shall not exceed a maximum footcandle reading at the property line in excess of 0.2 fc (footcandles) unless otherwise approved by the Board of Commissioners.

[\(3\)](#) Light fixtures shall be shielded to reduce light spillage beyond the extent of the property line.

[\(4\)](#) Light fixtures shall be positioned so that the emanating light does not shine into streets in such a manner as to interfere with or distract a driver's vision and/or directly onto adjacent properties.

[\(5\)](#) Lights shall be turned on no earlier than dusk and turned off no later than 10:30 p.m., unless otherwise approved by the Township.

[\(6\)](#) Notice of any proposed field lighting project shall be provided to adjacent property owners within 500 feet of the subject site.

F. Accessory building exception. The regulations applicable to building placement shall apply to accessory buildings, except when authorized as a special exception by the Zoning Hearing Board in the case of a small accessory building which is incidental to the permitted use.

§ 255-29 **Parking facilities**

(18)

All common parking areas shall be adequately lighted during after-dark operating hours. All lighted standards shall be located on raised parking islands and not on the parking surface.

(19)

All artificial lighting used to illuminate any parking space or spaces shall be so arranged that no direct rays from such lighting shall fall upon any neighboring property or streets, nor shall any high-brightness surface of the luminaries be visible from neighboring residential properties or from a public street.

Parking Off-Street

§ 206-4 Regulations for maintenance.

Any owner of a subject premises shall comply with the following regulations:

E.

All lighting on subject premises must be kept in proper working order and lighted during the lighted period when the subject premises or any portion thereof is being used by the holder, or when the subject premises or any portion thereof is open for business. The authorized official may require the holder of any subject premises to reduce outdoor lighting after business hours.

§ 255-39 **Crosswalks**

B.

Such crosswalks shall have an easement width of not less than 20 feet and a paved walk of not less than four feet. They shall be clearly marked by bollards, paving material, signing, lights or similar provisions to ensure their visibility to motorists.

§ 255-30 **Off-street loading facilities**

F.

The lighting requirements of § 255-29A(19) shall be met, if applicable.

Design Review

§ 150-6 Application.

A.

All applications before the Design Review Board shall be in writing and filed with the Department of Community Development upon a form provided by the Department. Upon receipt of the application, the Director shall be responsible for reviewing it to certify that all required information has been submitted. Incomplete applications shall be rejected and returned to the

applicant. The application shall contain the name and address of the applicant, the owner of the land, a property description, street address, basis for filing of the application, description of the work and any other information, where relevant, which the Director may require in order to process the application.

[\(2\)](#)

Building design, including:

[\(e\)](#)

Exterior lighting to be used for walkways, drives and parking lot, including signs and light cast from the buildings interior which is or will be visible from surrounding properties.

[§ 150-2 Design Review Definitions](#)

[MATERIAL CHANGE](#)

Any modification to the architectural style or general design of the exterior of an existing building or structure, including but not limited to the type and texture of building materials, building facades, style of all windows, doors, exterior light fixtures and other appurtenant features, such as walks, fences, landscaping, awnings, parking areas, driveways and areas for pedestrian movement. All activities which affect the exterior of property and require Township approval or a permit shall be included within this definition.

Required improvements

[§ 255-49 Streetlights.](#)

Where appropriate, the developer shall install or cause to be installed, at the developer's expense, metal or fiberglass pole streetlights serviced by underground conduit in accordance with a plan to be prepared by the developer's engineer and approved by the Board of Commissioners and by the Philadelphia Electric Company. The equipment of metal or fiberglass poles may be waived in such instances as approved by the Board of Commissioners due to the existence of wooden poles already in place. Provisions shall be made for energizing said lighting after 50% or more of the dwellings in a given subdivision or land development or section of a subdivision or land development have been occupied. The developer shall be responsible for all costs involved in lighting the streets until such time that the streets are accepted or condemned as public streets by the Township.

Wayne Business Overlay District

[§ 255-76 Streetlight and parking lot light standards.](#)

[A.](#)

Streetlights shall be installed as follows

[\(1\)](#)

Madison-style streetlight black fluted poles, shall be 15 feet in height, and shall be installed and maintained, along with the "Acorn ACN-1" post-top luminaire and "modern finial."

[\(2\)](#)

Streetlights shall be spaced 60 feet to 90 feet apart in an alternating arrangement along both sides of streets.

[B.](#)

Parking lot lights shall be installed as follows:

[\(1\)](#)

Shoobox light fixtures shall be used to direct light downwards. Fixture height shall not reach higher than 15 feet.

[\(2\)](#)

For lighting that abuts a residential property, a shield shall be used to deflect light away from the property.

[C.](#)

Exterior lights attached to buildings. External lighting is restricted to that which is necessary for minimum safety and security levels. Light standards shall be low profile and shall have a sharp cutoff shield and directed downward to reduce dispersal of ambient light to the night sky.

Sodium vapor lights shall not be allowed.

Garrett Hill Zoning District

[B.](#)

Parking lot lights shall be installed as follows:

[\(1\)](#)

Full cutoff light fixtures shall be used to direct light downwards. For the GH-N, GH-GA, GH-CR, GH-OS Districts, fixture height shall not be higher than 12 feet. Fixture height shall be limited to 20 feet in the GH-BC District.

[\(2\)](#)

Shields shall be used to deflect light away from adjacent properties so that no direct light from the filament, bulb or lens is visible from outside the property.

[C.](#)

Exterior lights attached to buildings:

[\(1\)](#)

External lighting shall be restricted to that which is necessary for minimum safety and security levels. Light standards shall be low profile and shall have a sharp cut-off shield and directed downward to reduce dispersal of ambient light to the night sky. Sodium vapor lights shall not be allowed.

[§ 280-49.14 Projecting signs.](#)

In addition to the sign requirements of Article [XXI](#) of Chapter [280](#), § [280-121](#), Signs in residential and similar districts, and § [280-122](#), Signs in commercial districts, projecting signs attached perpendicular to the facade shall be permitted subject to the following requirements:

[J.](#) Prohibited materials shall include:.

[\(3\)](#) Neon lighting.

Garrett Avenue in the Garrett Avenue Mixed-Use District.

[\(1\)](#)

Lights in bulbouts according to the Garrett Hill Master Plan design shall be required.

[\(2\)](#)

The installation of light fixtures in the front yard is hereby encouraged. Fixtures shall be six feet high and meet Illuminating Engineering Society of North America "cutoff" or "full-cutoff" criteria.

Garrett Avenue in the Garrett Avenue Neighborhood District:

[\(1\)](#)

Lights in bulbouts according to the Garrett Hill Master Plan design are hereby encouraged.

[\(2\)](#)

The installation of light fixtures in the front yard shall be encouraged. Fixtures shall be six feet high and meet Illuminating Engineering Society of North America "cutoff" or "full-cutoff" criteria.

[§ 255-103 Site amenity standards.](#)

The following standards shall apply to all new or redeveloped properties in the GHZD:

[A.](#)

Conestoga Road (without front yard parking)

[\(5\)](#)

Lights within 24 inches of the curblin.

[B.](#)

Conestoga Road (perpendicular parking in the front yard). (See Figure 6.)^[2]

[\(3\)](#)

Lights within 24 inches of the curblin.

Public Land Use District (PLU)

[E.](#)

Building height. No building or structure shall exceed three stories or 38 feet, except for sports field lighting on Township property which has been approved by the Board of Commissioners, at its discretion, and is subject to the following:

[Amended 2-25-2013 by Ord. No. 2012-11]

[\(1\)](#)

Maximum height of the light standard shall not exceed 85 feet.

[\(2\)](#)

Lights shall not exceed a maximum footcandle reading at the property line in excess of 0.2 fc (footcandles) unless otherwise approved by the Board of Commissioners.

[\(3\)](#)

Light fixtures shall be shielded to reduce light spillage beyond the extent of the property line.

[\(4\)](#)

Light fixtures shall be positioned so that the emanating light does not shine into streets in such a manner as to interfere with or distract a driver's vision and/or directly onto adjacent properties.

[\(5\)](#)

Lights shall be turned on no earlier than dusk and turned off no later than 10:30 p.m., unless otherwise approved by the Township.

[\(6\)](#)

Notice of any proposed field lighting project shall be provided to adjacent property owners within 500 feet of the subject site.

[§ 255-37 Sidewalks and pedestrian paths.](#)

[E.](#)

Sidewalks and pedestrian paths shall be adequately lighted, if required by the Board of Commissioners.

Wayne Business Overlay District

[§ 255-76 Streetlight and parking lot light standards.](#)

[A.](#)

Streetlights shall be installed as follows:

[\(1\)](#)

Madison-style streetlight black fluted poles, shall be 15 feet in height, and shall be installed and maintained, along with the "Acorn ACN-1" post-top luminaire and "modern finial."

[\(2\)](#)

Streetlights shall be spaced 60 feet to 90 feet apart in an alternating arrangement along both sides of streets.

[B.](#)

Parking lot lights shall be installed as follows:

[\(1\)](#)

Shoobox light fixtures shall be used to direct light downwards. Fixture height shall not reach higher than 15 feet.

[\(2\)](#)

For lighting that abuts a residential property, a shield shall be used to deflect light away from the property.

[C.](#)

Exterior lights attached to buildings. External lighting is restricted to that which is necessary for minimum safety and security levels. Light standards shall be low profile and shall have a sharp cutoff shield and directed downward to reduce dispersal of ambient light to the night sky.

Sodium vapor lights shall not be allowed.

[§ 255-87 Site amenity standards.](#)

The following standards shall apply to all new or redeveloped properties in the WBOD:

A.

Setback zero to 35 feet

(1)

Lights and street trees at curblines (trees shall be in grates in accordance with § [255-75](#)).

B.

Setback 25 to 45 feet, parallel parking in front

(1)

Lights and street trees at curblines (trees shall be in grates in accordance with § [255-75](#)).

C.

Setback 45 to 60 feet, angled parking in front

(3)

Lights and street trees at curblines (trees shall be in grates in accordance with § [255-75](#)).

D.

Setback 36 feet and greater, parking in side and rear

(1)

Lights at curblines.

PA Planned Apartment District

[§ 280-38 Use regulations.](#)

A building or unified group of buildings may be created or used and a lot may be used or occupied for any of the following purposes:

C.

Accessory structures and uses on the same lot and customarily incidental to the foregoing permitted uses, which shall include:

[Amended 10-26-1998 by Ord. No. 98-09]

(4)

Swimming pools and tennis courts, subject to the following requirements:

(a)

No swimming pool or tennis court shall be located within the front yard setback or closer than 75 feet to any side or rear property line.

(b)

Light standards for illumination shall not exceed a height of 20 feet and shall be equipped with a shielding device to protect streets and adjoining property from glare or hazardous interference.

A lighting plan shall be submitted and approved by the Township Engineer prior to installation.

Signs

[§ 280-119 Prohibited signs.](#)

Except as may be hereinafter specifically permitted, it shall be unlawful, after the effective date of this article or any amendment thereto, for any person, firm or corporation to erect any of the following signs within the Township of Radnor:

[L.](#)

Illuminated tubing or strings of lights which outline rooflines, doors, windows or wall edges when used for advertising purposes, but excluding temporary signs for traditional seasonal decorations.

[W.](#)

Beacon lights.

[§ 280-120 Exempt signs.](#)

The following signs shall be allowed without a sign permit and shall not be included in the determination of type, number, colors or area of permanent signs allowed within a zoning district.

[H.](#)

Changeable copy, repainting, cleaning and other normal maintenance and repair of a sign unless the sign structure, design, color or lighting is altered.

[§ 280-122 Signs in commercial districts.](#)

The following types of signs shall be permitted within Commercial Office (CO) and Commercial (C-1, C-2, C-3) Zoning Districts:

[\(4\)](#)

Marquee signs. Theater or movie marquee signs containing changeable copy shall be permitted in addition to the otherwise permitted sign area for the use, provided that the total sign area shall not exceed 200 square feet. Such signs shall be required at all times to maintain a minimum vertical clearance of 10 feet. Marquee signs shall be exempt from the lighting requirements as set forth in [§ 280-125D](#).

[§ 280-125 General regulations.](#)

The following restrictions and regulations shall be applicable to all permanent signs as permitted by this article, unless otherwise specified:

[D.](#)

Illumination. Where permitted, signs shall be illuminated only as authorized in an appropriate sign permit by a steady, stationary light of reasonably minimal intensity. Light sources shall be shielded from all adjacent properties and streets and shall not be of such intensity as to cause glare hazardous to pedestrians or motorists. Signs using internal illumination shall be designed

so that when illuminated at night, only the letters and logos of the sign are visible. No light shall emanate through the background, the borders, sides or any other surface of the sign or its supporting structure. Individual, solid letters with internal lighting tubes which backlight a wall in a halo effect shall be permitted.

E.

Electrical connections. The electrical supply to all exterior signs, whether to the sign itself or to lighting fixtures positioned to illuminate the sign, shall be provided by means of concealed electrical cables. Electrical supply to freestanding signs shall be provided by means of underground cables. Applications for electrical permits shall be filed at the time of the sign permit application.

§ 280-127 Off-premises signs.

[Added 5-26-2009 by Ord. No. 2009-12^[1]]

I.

Lighting. Off-premises signs shall conform to the lighting standards as set forth in § 280-125D.

§ 280-128 Permits.

(4)

Two copies of a plan drawn to scale depicting:

(b)

Design of each sign face and sign structure with dimensions, total area, sign height, depth, color scheme, structural details, materials, lighting scheme and proposed location.

Agricultural-Conservation District

§ 280-9 Use regulations.

A building may be erected or used and a lot may be used or occupied for any of the following purposes:

(7)

Private swimming pools, tennis courts and similar uses, when illuminated by lighting fixtures attached to or mounted on freestanding poles or standards, subject to the following standards:

[Amended 12-13-1991 by Ord. No. 91-52]

(a)

The pool or tennis court is not located within the front yard setback or closer than 25 feet to any side or rear property line.

(b)

Lighting fixtures are not located within the front yard setback and are a minimum distance of 25 feet from any side or rear property line.

[\(c\)](#)

The lighting fixture, including standards for mounting, do not exceed a height of 16 feet above grade.

[\(d\)](#)

Prior to installation, a lighting plan is prepared and submitted to the Township Engineer for approval. Such plan shall be prepared in accordance with generally accepted engineering standards and shall not provide for lighting intensity at any property line in excess of 0.10 footcandles.

[\(e\)](#)

The lighting fixtures are approved by the Township Engineer and are designed, mounted and shielded in such a manner as to prevent the light source from being visible off the property. Such lighting shall also be located and positioned in such a manner as to not illuminate adjacent properties.

[\(f\)](#)

Lights shall be turned off by 11:00 p.m.

Energy Conservation

[§ 158-1 Adoption of code by reference.](#)

Certain documents on file in the office of the Secretary of the Township of Radnor, being marked and designated as the 2009 International Energy Conservation Code, are hereby adopted as the Energy Conservation Code of Radnor Township, Delaware County, in the Commonwealth of Pennsylvania, for the purpose of establishing minimum regulations governing the design, installation and construction of energy efficient building envelopes and the installation of energy efficient mechanical, lighting, and power systems as herein provided; and each and all of the provisions, penalties, conditions and terms of the 2009 International Energy Conservation Code are hereby referred to, adopted and made a part hereof as if fully set forth in this chapter with the additions, insertions, deletions and changes prescribed in this chapter.

General Regulations

[§ 280-105 Access and highway frontage.](#)

In order to minimize traffic congestion and hazard, control street access in the interest of public safety and encourage the appropriate development of street or highway frontage, the following shall apply:

[E.](#)

All outside lighting, including sign lighting, shall be directed in such a way as not to create a nuisance in any agricultural, institutional or residential district, and in every district all such lighting shall be arranged so as to protect the street or highway and adjoining property from direct glare or hazardous interference of any kind. Any luminary shall be equipped with some

type of glare shielding device approved by the Township Engineer. The height of any luminary shall not exceed 25 feet.

Wireless Communications Systems

[§ 280-165 Facilities within the right-of-way.](#)

Wireless communication facilities located within the right-of-way shall be subject to the following requirements:

[A.](#)

Wireless communication facilities shall be limited to base stations attached to utility poles, light poles, mast arms or other structures. Such facilities shall be permitted within all zoning districts upon approval by Radnor Township, subject to the applicable standards of this article and following requirements:

[§ 280-166 Information required of applicants.](#)

Applicants shall meet the requirements of this section and provide the following information, where applicable, for the installation of a wireless communication facility:

[K.](#)

Wireless communication facilities shall not be artificially lighted, unless required by the FAA or other applicable authority. If lighting is required, the lighting alternatives and design chosen shall cause the least disturbance to the surrounding views.

Zoning Hearing Board

[§ 280-145 Standards for review of special exceptions and variances.](#)

[Amended 4-10-1989 by Ord. No. 89-18]

[H.](#)

Conditions are being imposed on the grant of the request necessary to ensure that the general purpose and intent of this chapter is complied with and that the use of the property adjacent to the area included in the proposed change or modification is adequately safeguarded with respect to harmonious design of buildings, aesthetics, planting and its maintenance as a sight or sound screen, landscaping, hours of operation, lighting, numbers of persons involved, allied activities, ventilation, noise, sanitation, safety, smoke and fume control and the minimizing of noxious, offensive or hazardous elements.

Planned Institutional District

[D.](#)

Regulations.

[\(1\)](#)

Subordinate use regulations. A building, a structure, or a combination of buildings and structures may be erected, used, or occupied for any one or more of the following purposes as part of a CICD when approved as a conditional use by the Board of Commissioners in

accordance with Article [XXIII](#) of this chapter. All of the proposed subordinate uses within a CICD shall meet all of the specific standards and regulations set forth in this section.

[\(g\)](#)

Site lighting. Light fixtures shall be shielded to reduce light spillage beyond the property line of the campus; provided, however, that at no point shall any light trespass onto adjacent residential properties or exceed 0.5 footcandles at the residential property line. All proposed exterior site and building-mounted lighting shall meet the International Dark-Sky Association (IDA) full cutoff requirements.

Applications and Plan Requirements

[§ 255-21 Final plan for major subdivision.](#)

[\[7\]](#)

Location and size of all drainage structures, sidewalks, public utilities, lighting standards, street trees and street name signs.

Guaranties and Contracts

[§ 255-66 Written agreements; dedication of improvements.](#)

[\(1\)](#)

To construct or cause to be constructed, at his own expense, all streets; roadways; cartways; driveways; monuments; street signs and street names; off-street parking/parking lots; curbs; sidewalks; street tree and buffer plantings; lighting; fire hydrants; water mains; sanitary sewer, including capped sewers; storm sewers; drainage and erosion control improvements, including but not limited to stormwater detention and/or retention basins and other related facilities; recreation facilities; open space improvements; tree protection and preservation; and other improvements shown on the approved subdivision or land development plan, all in strict accordance with the standards and specifications of the Township and within the time specified in said agreement.

[Amended 9-19-1994 by Ord. No. 94-21]

SWARTHMORE BOROUGH

1293.08 OUTDOOR LIGHTING REQUIREMENTS.

(a) Applicability.

(1) Outdoor lighting shall be required for safety and personal security for uses that operate during hours of darkness where there is public assembly and/or traverse, including, but not limited to the following uses: commercial, industrial, public-recreational, institutional and multifamily residential developments.

(2) Borough Council may require lighting to be incorporated for other uses and locations than those identified above or may restrict lighting in any of the uses or locations identified above, as deemed necessary.

(3) Street lights are regulated elsewhere in the Borough of Swarthmore Subdivision and Land Development Regulations (see Section 1288.16) and are specifically excluded from these regulations.

(4) Temporary lighting is exempt from the requirements of this section. Such lighting shall be discontinued immediately upon completion of the construction work.

(5) Nothing in this section shall apply to lighting required by the Federal Aviation Administration (FAA) or any other Federal regulatory authority.

(b) Illumination Levels and Lighting Fixture Design.

(1) Lighting shall have intensities and uniformity ratios in accordance with the recommended practices of the Illuminating Engineering Society of North American (IESNA) as contained in the most current edition of the IESNA Handbook, or as contained in current publications of the IESNA Recommended Practices or Design Guides.

(2) The intensity of illumination projected onto a residential property from another property shall not exceed 0.1 vertical foot candle measured line-of-site from any point on the adjacent residential property.

(3) Fixtures shall be of a type and design appropriate to the lighting application and aesthetically acceptable to the Borough.

(4) Fixtures must be installed so as to minimize light trespass, backlight, uplight, and glare, as defined by current standards from the IESNA. This includes, but is not limited to, lighting used for parking areas, buildings, building overhangs, canopies, signs, displays, and landscaping.

(5) Lighting shall conform to current American Society for Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) criteria for energy efficiency.

(c) Installation.

(1) Electrical feeds for fixtures mounted on poles shall be run underground, not overhead.

(2) Lighting standards at the rear of parking spaces shall be placed a minimum of five feet outside the paved area, curbing or tire stops, or on concrete pedestals at least thirty inches high above the pavements, or suitably protected by other approved means.

(d) Recreational Lighting. When facilities for outdoor recreational activities are permitted by the Borough to operate during hours of darkness, excluding recreational accessory uses which are permitted on properties in residential zoning districts, the following lighting requirements shall apply:

(1) Lighting shall be approved by the Borough based on suitable control of backlight, upright, and glare.

(2) Lighting shall be timed to be extinguished by 11:00 p.m. (lighting may be left on to finish a game or event in progress that was scheduled to be over by that time but has been extended due to overtime, weather delay, or other unforeseen events.)

(3) Outdoor recreational activities shall not be illuminated if located within any residential zoning district or sited on a nonresidential property within 1,200 feet of a residential use.

(4) The maximum mounting heights for recreational lighting shall be seventy feet.

(5) The permissible illumination for lights at recreational venues shall not exceed IESNA standards and shall be suited to the intended purpose of the recreational facility, both in terms of activity and class of play.

(Ord. 1044. Passed 8-8-11.)

UPPER MERION

Outdoor lighting.

A.

Intent.

(1)

The intent of this section is to require and set standards for temporary and permanent outdoor lighting in places where public health, safety and welfare are potential concerns. The outdoor lighting ordinance shall protect drivers and pedestrians from the glare of nonvehicular light sources that shine into their eyes and thereby impair safe traverse and protect neighbors and the night sky from nuisance glare and stray light from poorly aimed, placed, applied, maintained or shielded light sources.

(2)

The enforcement of this section is intended to be primarily, but not solely, on a complaint basis.

B.

Applicability.

(1)

The requirements herein apply to outdoor lighting for uses including the following: business, personal service, multifamily residential, commercial, industrial, public recreational and institutional; except Subsections E and G, which apply to all uses.

(2)

The Township may require lighting to be incorporated for other uses or locations, as deemed necessary.

(3)

The requirements contained herein apply to lighting in all above-mentioned uses as well as, but not limited to, sign, architectural, and landscape lighting.

(4)

The requirements herein do not apply to streetlights and traffic lights located in the public right-of-way and owned by Upper Merion Township.

(5)

Emergency lighting, as may be required by any public agency or utility company while engaged in the performance of their duties, is exempt from the requirements of this section.

(6)

Seasonal holiday lighting or illumination of the American and state flags shall be exempt from the requirements of this section, provided that such lighting does not produce glare on roadways and neighboring residential properties.

C.

Definitions. As used in this section, the following terms shall have the meanings indicated:

ARCHITECTURAL LIGHTING

A lighting arrangement primarily used to highlight a building, landscape feature, facade, or other feature, and is not used for pedestrian or vehicular traverse.

FOOTCANDLE

A unit of light intensity stated in lumens per square foot and measurable with an illuminance meter, a.k.a. footcandle or light meter.

GLARE

The sensation produced by lighting that causes annoyance, discomfort or loss in visual performance and visibility to the eye.

IESNA FULL CUTOFF

A lighting fixture standard whereby the fixture is shielded in such a manner that no light is emitted above a horizontal plane passing through the lowest point of the light-emitting element, so that direct light emitted above the horizontal plane is eliminated.

IESNA

Illuminating Engineering Society of North America.

ILLUMINANCE

The quantity of light measured in footcandles or lux.

ILLUMINATION TRESPASS

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

LUMENS

As used in the context of this section, the light-output rating of a lamp (light bulb) or light source.

LUMINAIRE

A complete lighting unit.

MOUNTING HEIGHT

The distance from the finished face of the surface being illuminated to the optical center of the luminaire.

OUTDOOR ATHLETIC FACILITY LIGHTING FIXTURE

A lighting fixture used to illuminate the air space and playing surface of a planned and engineered facility approved by the Township in which organized athletic events are performed in an open-air and outdoor field, court, rink, track, pool or other similar setting.

D.

Plan submission.

(1)

Lighting plans shall be submitted for review and approval of any installation of lighting in connection with a land development application for any use identified in Subsection B of this section. Lighting plans shall include the following:

(a)

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, containing a layout of all proposed fixtures by location and type.

(b)

Description of the proposed equipment shall be included, including fixture catalog cuts, photometrics, glare-reduction devices, lamps, and mounting heights.

(c)

When requested by appropriate officers or agents of the Township, the applicant shall also submit a visual-impact plan that demonstrates appropriate steps have been taken to mitigate on-site and off-site glare, including but not limited to a plot plan with a matrix of the calculated footcandles with measurements 10 feet into the neighboring properties, including those on the opposite side of a public right-of-way or public roadway, at five feet above ground.

[\(2\)](#)

Notification must be sent to the Township Planner before any post-approval alterations to lighting plans or intended substitutions for approved lighting equipment are made. Post-approval alterations or intended substitutions to the approved lighting plan must meet the requirements of the originally approved plan.

[E.](#)

Design standards.

[\(1\)](#)

All lighting fixtures for off-street parking areas, off-street loading areas, driveways, and for safety of persons and property must meet IESNA full cutoff.

[\(2\)](#)

All fixtures for pedestrian areas and walkways must meet IESNA full cutoff.

[\(3\)](#)

The maximum height of light fixtures, including the mounting base, is as follows:

[\(a\)](#)

Full-cutoff fixtures with 44,000 lumen lamps maximum, in parking lots: 20 feet AFG.

[\(b\)](#)

Full-cutoff fixtures with 115,000 lumen lamps maximum shall be permitted only in large (100 spaces or more) commercial, institutional and industrial parking lots, except when the facility is adjacent to a residential district or use or an environmentally sensitive area: not less than 25 feet nor more than 30 feet AFG.

[\(c\)](#)

Mounting heights of 25 feet to 30 feet shall not be permitted when located less than 100 feet from a residential district or use.

[\(d\)](#)

Decorative, cutoff or fully shielded fixtures with 17,500 lumen lamps maximum: 16 feet AFG.

[\(e\)](#)

Fully shielded bollard fixtures with 6,200 lumen lamps maximum: 42 inches AFG.

[\(4\)](#)

Recreational light fixtures shall comply with the standards and regulations set forth by Subsection [H](#) of this section.

[F.](#)

Performance standards.

[\(1\)](#)

All lighting shall be effectively shielded and shall be installed and/or aimed so as to shield nearby public or private properties from direct glare that may create a safety hazard.

[\(2\)](#)

Illumination trespass standards from one property to another shall be as follows:

[\(a\)](#)

In no case shall illumination exceed 0.5 footcandle, when measured, line of sight, at the property line of an aggrieved property of nonresidential use.

[\(b\)](#)

In no case shall illumination exceed 0.3 footcandle, when measured, line of sight, at the property line of an aggrieved property of residential use, except between properties that share a lot line with no required setback, in which case it shall not exceed two footcandles.

[\(3\)](#)

The use of floodlights and wall-mounted luminaries shall not be permitted to illuminate parking areas unless it can be proven to the satisfaction of the Township that the employment of no other means is possible.

[\(4\)](#)

Architectural lighting, as defined by this section, shall be aimed or directed so as to preclude light projection beyond the immediate object or objects intended to be illuminated. All such lighting shall be extinguished between the hours of 11:00 p.m. and 6:00 a.m.

[\(5\)](#)

Glare control shall be accomplished primarily through the proper selection and application of lighting equipment. Only after those means have been exhausted shall vegetation, fences, and similar screening methods be considered acceptable for reducing glare.

[\(6\)](#)

Under-canopy lighting for such applications as gas/service stations, hotel/theater marquees, and fast-food/bank/drugstore drive-ups shall be accomplished using flat-lens full-cutoff luminaries aimed straight down and shielded in such a manner that the lowest opaque edge of the luminaries shall be below the light source and its light-directing surfaces, at all lateral angles round the luminaries.

[G.](#)

Enforcement and compliance.

[\(1\)](#)

The landowner is responsible if not compliant to the lighting plan approved by the Board of Supervisors. The Township may conduct a post-installation inspection to verify compliance of the approved plan. After installation, the Township, by way of an authorized enforcement officer, may require the landowner, at the landowner's expense, to make adjustments, remedial measures, or other means to comply with the approved lighting plan.

[\(2\)](#)

Notwithstanding the installation date or preexisting conditions of a lighting fixture or arrangement, if the Township determines that the standards set forth in Subsection [F](#) are not met, the Township, by way of an authorized enforcement officer, may require the landowner, at the landowner's expense, to make adjustments, remedial measures, or other means to comply with the lighting standards.

[\(3\)](#)

Notwithstanding the above regulations of this section, if at any time the Township deems a lighting fixture or arrangement to be a potential safety hazard or nuisance, it may, at the landowner's expense, require the landowner to make adjustments, remedial measures, or other

means to mitigate or prevent the potential hazard or nuisance. In determining a potential nuisance, the authorized officer of the Township must take the following into consideration:

[\(a\)](#)

The measurement of the amount of illuminance, in footcandles, at the spot where the lighting fixture or arrangement is causing the potential nuisance.

[\(b\)](#)

Whether the suspect lighting fixture or arrangement complies with the standards set forth in Subsection [E](#).

[H.](#)

Special regulations for outdoor athletic facilities.

[\(1\)](#)

Proposed outdoor athletic facility lighting fixtures, as defined by this section, are permitted as a conditional use in any zoning district, subject to the condition that the applicant can demonstrate to the Board of Supervisors that the neighboring properties can be sufficiently protected from any adverse effects.

[\(2\)](#)

Whenever outdoor athletic facility lighting fixtures are proposed, the Board of Supervisors may require additional screening and buffering requirements to protect the neighboring properties from glare.

[\(3\)](#)

Outdoor athletic facility lighting fixtures approved by the Township are exempt from the design and performance restrictions of Subsections [E](#) and [F](#) of this section.

[\(4\)](#)

Outdoor athletic facility lighting fixtures may only be turned on for official games or practices of a duly registered team in an organized league recognized by the Township, and only for the specific playing fields being used.

[\(5\)](#)

Outdoor athletic facility lighting fixtures shall be extinguished between the hours of 11:00 p.m. and 6:00 a.m.