

ARTICLE 13

LIGHTING

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SECTION 13.01 INTENT

The intent of this section is to establish standards to provide adequate outdoor lighting for the safety, security and visibility of non-residential properties; to minimize light pollution; to maintain safe nighttime driver performance on public roadways; to preserve the restful quality of the night by eliminating intrusive artificial light and lighting that unnecessarily contributes to "sky glow"; to reduce light pollution and light trespass onto adjacent properties; to prevent degradation of the natural nighttime visual environment, and to enhance community appearance through quality lighting design.

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SECTION 13.02 LIGHTING PLAN REQUIREMENTS

The following information must be provided on all site plan submissions:

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A. Location of all free-standing, building-mounted and canopy light fixtures on the site plan and/or building elevations.

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B. Photometric grid overlaid on the proposed site plan, indicating the overall light intensity throughout the site (in foot-candles) and ten feet beyond the parcel lines. The Planning Commission may waive the requirement for small sites with parking lots of ten (10) spaces or less, if the site is not adjacent to residentially zoned property.

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C. Specifications and details for the type of fixture being proposed, including the initial lumen rating, type of lamp, method of shielding, type of lens and all applicable accessories. The details shall include a depiction of the lighting pattern and light levels applicable for the proposed pole height.

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SECTION 13.03 FREESTANDING POLE LIGHTING

A. Fixture Design.

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1. Exterior lighting shall be a full cut-off fixture or a fully shielded fixture, downward directed with a flat lens to prevent glare.

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2. Metal halide, incandescent, florescent, or mercury vapor fixtures shall be used in an effort to maintain a unified lighting standard throughout the Township and prevent light pollution. Sodium vapor fixtures may be used but only with color corrected lamps.

3. The Planning Commission may approve decorative or historic light fixtures as an alternative to shielded fixtures when it can be shown that there will be no off-site glare through the use of low wattage lamps and the proposed fixtures will be more consistent with the character of the site.

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B. Lighting Levels.

1. The intensity of light at the base of a light fixture pole shall not exceed twenty (20) foot-candles during business hours and ten (10) foot-candles after business hours.
2. Properties adjacent to residential properties shall be designed and maintained such that illumination levels shall not exceed one-tenth (0.1) foot-candle along property lines. Lighting for uses adjacent to non-residential properties shall be designed and maintained such that illumination levels do not exceed one (1.0) foot-candle along property lines.
3. Parking lot illumination shall average the following intensities over the entire area measured five (5) feet above the surface:

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<u>Parking Lot Size</u>	<u>Parking Lot Minimum Illumination During Business Hours (foot-candles)</u>	<u>Parking Lot Maximum Illumination During Business Hours (foot-candles)</u>	<u>Parking Lot Maximum Illumination After Business Hours (foot-candles)</u>
Small (5-10 spaces)	0.4	6	1
Medium (11-99 spaces)	0.6	8	1.5
Large (100+ spaces)	0.8	10	2

- C. **Height.** The maximum height of a base, a pole and fixtures shall be twenty-five (25) feet. The Planning Commission may permit a maximum height of thirty (30) feet in an industrial district where fixtures are no closer than two hundred (200) feet to any residential district.

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- D. **Duration.** All outdoor lighting fixtures, existing or hereafter installed and maintained upon private property, shall be turned off or reduced in lighting intensity between 11:00 p.m. and sunrise except as follows:

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1. Where the Planning Commission finds that greater lighting levels are necessary for security or safety purposes; or

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2. Where permissible commercial or industrial uses such as sales, assembly and repair operate after 11:00 p.m., in which case the lighting levels shall be turned off or reduced after the use ceases for that day.
3. The Planning Commission may approve lighting plans for twenty-four (24) hour operations subject to the condition that many of the fixtures shall be turned off after 11:00 p.m.

SECTION 13.04 BUILDING-MOUNTED LIGHTING

Building-mounted lighting for the purpose of lighting entrances, adjacent sidewalks, parking areas and loading areas is permitted subject to the following restrictions:

- A. Building-mounted lighting shall be a full cutoff fixture or fully shielded and directed downward to prevent glare. The intensity of light shall not exceed twenty (20) foot-candles during business hours and ten (10) foot candles after business hours at the ground level for any fixture mounted up to a maximum height of twenty (20) feet. Light shall not exceed one-tenth (0.1) foot-candle along zoned or existing residential property lines and one (1) foot-candle along non-residential property lines.
- B. Metal halide, incandescent, florescent, or mercury vapor fixtures shall be used in an effort to maintain a unified lighting standard throughout the Township and prevent light pollution. Sodium vapor fixtures may be used but only with color corrected lamps.
- C. The Planning Commission may approve decorative or historic light fixtures as an alternative to shielded fixtures when it can be proven that there will be no off-site glare through the use of low wattage lamps and the proposed fixtures will be more consistent with the character of the site.

SECTION 13.05 ARCHITECTURAL LIGHTING OF BUILDING FACADES

The lighting of a building façade for architectural, aesthetic, or decorative purposes is permitted subject to the following restrictions:

- A. All building façade lighting shall be low intensity, with a fixture rating of less than nine hundred (900) lumens. All building façade lighting shall be fully shielded and fully confined from projecting into the sky by eaves, roofs or overhangs, and mounted as flush to the wall as possible.
- B. Luminaries with fixture ratings exceeding nine hundred (900) lumens shall be downward directed and fully shielded, mounted as flush to the wall as possible.
- C. The maximum illumination of any vertical surface or angular roof surface shall not exceed three (3) foot candles.

- 5 D. Luminous tube and exposed bulb florescent lighting may be permitted as an architectural detail on all buildings, such as along the roof line and eaves, and around windows. The Planning Commission may approve internally illuminated architectural bands or external lighting directed on buildings where it can be shown that the treatment will serve a legitimate function and will not adversely impact neighboring properties.

10 **SECTION 13.06 SIGN/CANOPY LIGHTING**

- 10 A. Sign lighting may be directed upward, downward or may be internal to the sign.
- 15 B. Downward and upward directed sign lighting shall illuminate only the sign and meet the following conditions:
- 15 1. Light trespass shall not exceed one (1) foot-candle along non-residential property lines, and one-tenth (0.1) foot-candle along residential property lines.
- 20 2. The light level on the sign shall not exceed ten (10) foot candles.
- 20 3. The light source shall not be more than ten (10) feet from the sign.
- 25 4. Shields or other techniques to focus the light and prevent glare may be required to be installed after the fixture(s) has been installed and operating and found to be in violation of this requirement.
- 30 C. All internal sign lighting shall illuminate the sign only. Reflected sign illumination intensity shall not exceed one and five-tenths (1.5) foot-candles as measured ten (10) feet from the face of the sign.
- 30 D. All internally lit translucent or fabric awnings shall be prohibited within any zoning district.

35 **SECTION 13.07 FLAGPOLE LIGHTING**

A flagpole may be illuminated by one of the following methods:

- 40 A. With one upward aimed spotlight fixture, fully shielded and directed away from streets, shining only on the flag and minimizing light spill into the dark night sky. The fixture rating shall not exceed three thousand five hundred (3,500) lumens. The fixture shall be placed as close to the base of the flagpole as reasonably possible.
- 45 B. With one downward aimed light fixture, fully shielded and directed away from streets, shining only on the flag and minimizing light spill into the dark night sky. The fixture rating shall not exceed three thousand five hundred (3,500) lumens.

- C. Flagpole placement and height are subject to regulation under Section 8.03 Area, Height and Use Exceptions.

5 **SECTION 13.08 PROHIBITED LIGHTING TYPES**

The following lighting types are prohibited within the Charter Township of Highland:

- 10 A. The use of search lights or any similar high intensity light for outdoor advertisement or entertainment.
- B. Flashing, moving or intermittent type lighting.
- 15 C. Exterior exposed luminous tube lighting except neon lighting used for signage or lighting approved by the Planning Commission as an element of the building façade under Section 13.05D.

20 **SECTION 13.09 EXEMPTIONS**

The following are exempt from the lighting requirements of this Section, except that the Zoning Administrator may require a lighting and photometric plan when deemed necessary to protect the public health, safety and welfare.

- 25 A. Sports fields.
- B. Swimming pools serving the public or private club members.
- 30 C. Holiday decorations.
- D. Three (3) foot high, shielded pedestrian walkway lighting.
- E. Ornamental low voltage lighting (twelve (12) volts or less), low wattage ornamental landscape lighting fixtures, and solar operated light fixtures having self-contained rechargeable batteries, where any single light fixture does not exceed one hundred (100) lumens.
- 35 F. Street lights or lights within a public or private road right-of-way.

40 **SECTION 13.10 LAMP OR FIXTURE SUBSTITUTION**

Should any light fixture or the type of lamp therein regulated under this Article be changed after the permit has been issued, a change request must be submitted to the Zoning Administrator for administrative approval, together with adequate information to assure compliance with the Zoning Ordinance, which must be received prior to substitution. Fixtures and lamps that match

the original fixture type and number as part of regular maintenance are not required to submit this request.

5 **SECTION 13.11 RESIDENTIAL AND AGRICULTURAL LIGHTING**

All outdoor lighting for residential and agricultural uses shall be a full cut off fixture or a fully shielded fixture or directed downward in a manner which reduces glare and prevents light trespass to neighboring properties.

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