

MARQUETTE CHARTER TOWNSHIP  
**OUTDOOR LIGHTING ORDINANCE** (Adopted: 8-5-2015)

(To be added to ARTICLE XVIII – PERFORMANCE REQUIREMENTS, SECTION 18.21 OUTDOOR LIGHTING)

**SECTION 18.21: OUTDOOR LIGHTING**

**A. PURPOSE**

This section of the ordinance is intended to:

- 1) Promote energy-efficient and sustainable lighting practices and luminaries;
- 2) Protect residents and the surrounding environment from the adverse effects of light pollution;
- 3) Minimize adverse off-site impacts from new and existing lighting installations;
- 4) Permit reasonable uses of outdoor lighting for safety, security, productivity, commerce and enjoyment;
- 5) Protect the existing, unique qualities of Marquette Charter Township’s dark sky for astronomy and enjoyment purposes and to continue to attract tourism and commerce.
- 6) Pertains to commercial, multi-family, subdivision and street lighting only.
- 7) Comply with the *Energy Independence and Security Act of 2007*, as amended.

**B. APPLICABILITY**

Exterior lighting shall be installed in such a manner that the light source will be sufficiently obscured to prevent glare on public roads, and light trespass in commercial or residential areas. Exterior lighting shall be comprised of a light source and reflector so that, acting together, the light beam is controlled, directed downward, not aimed up or across a property line and is compatible with the surrounding environment. Sodium vapor lighting shall not be permitted.

- 1) New Installations. All exterior lighting installed after the effective date of this ordinance shall conform to the standards set forth herein.
- 2) Existing Installations. All outdoor lighting installed prior to the effective date of this ordinance shall be considered grand-fathered. All exterior light fixtures must be replaced or retrofitted to bring it into compliance with the applicable standards of this ordinance upon the application of zoning compliance or a building permit for any modification, repair, improvement and/or alteration to a structure, fixture, building, property and/or use.
  - a) When more than 50% of existing, on-site lamp fixtures are to be replaced, repaired or modified; all existing, on-site lamp fixtures shall result in full-compliance of this ordinance.
  - b) Any fixture which provides a mean of aiming or glare control shall be re-aimed or retrofitted to bring it into compliance immediately.
  - c) Owners of grand-fathered fixtures and installations may be asked to bring said fixtures and installations into compliance at any time if subject fixture is deemed to be a nuisance.

**C. DEFINITIONS (To be added to ARTICLE II – DEFINITIONS)**

**Dark Sky** – Ability to visually identify, without aid, zodiacal light, a prominently bright defined Milky Way, bright star clusters in our galaxy and bright galaxies.

**International Dark Sky Association (IDA)** – Established in 1988 as an educational, environmental 501(c) (3) nonprofit dedicated to protecting and preserving the nighttime environment and the

heritage of dark skies through quality outdoor lighting. With thousands of members in more than 70 countries, IDA is the leading authority regarding problems and solutions related to light pollution.

**Light, Direct** – Visible light emitted directly from the lamp, off of the reflector or reflector diffuser, or through the refractor or diffuser lens, of a luminaire.

**Light Fixture, Full Cut-Off Type** – A luminaire or light fixture that, by design of the housing, does not allow any light dispersion or direct glare to shine above a 90-degree horizontal plane from the base of the luminaire.

**Light, Fully Shielded** – Fully shielded luminaire light fixture which can control the glare in any direction.

**Light, Indirect** – Direct light that has been reflected or has scattered off of surfaces other than those associated with the light fixture.

**Light Pollution** – Reflected light that is emitted into the atmosphere above the 90-degree horizontal plane from the luminaire, and which can or does cause unwanted sky glow or which can be or is seen from an abutting property.

**Light Trespass** – When spill light from a light fixture, street light or flood light enters a window and illuminates an indoor area.

**Lighting, Outdoor** – The nighttime illumination of an outside area or object by any manufactured device located outdoors that produces light by any means.

**Lighting, Street** – Lighting provided for highway, major, collector, and local roads where pedestrians and cyclists are generally present. The primary purpose of street lighting is to help the motorist identify obstacles, provide adequate visibility of pedestrians and cyclists, and assist in visual search tasks, both on and adjacent to the roadway.

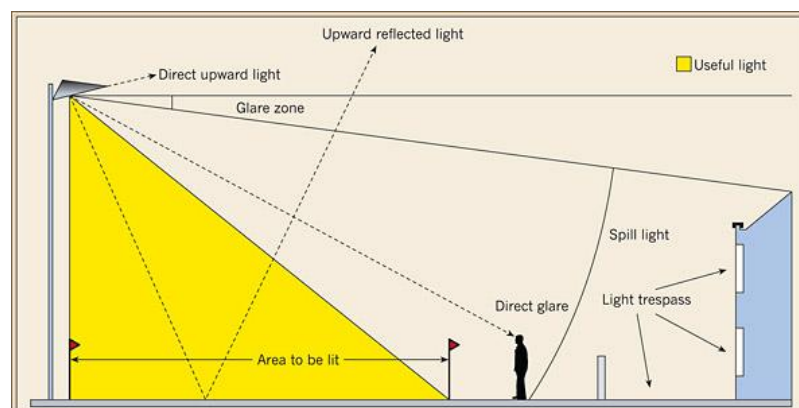
**Luminaire** – A complete lighting system, including a light source component (lamp or lamps that produce the actual light) and a fixture.

**Luminaire, Height of** – The vertical distance from the ground directly below the centerline of the luminaire to the lowest direct-light-emitting part of the luminaire.

**Spill Light** – Focused light sources that are not useful, e.g., producing lighting where it is not wanted.

**Target Area** – The location of the target area which is intended to be illuminated by the light source.

**Uplighting** – Any light source that distributes illumination above a 90-degree horizontal plane.



## **D. GENERAL STANDARDS**

With the exception of a residential dwelling used exclusively for single-family occupancy, all new, retrofitted and/or modified outdoor lighting that is installed in Marquette Township shall be the minimum necessary, in both number of luminaries and intensity of light, to achieve the intended purpose of the lighting, and shall meet the following standards, as relevant:

- 1) All exterior lights and sign illumination shall be designed, located, installed and directed in such a manner as to:
  - a) Prevent glare or light trespass; and
  - b) Be shielded to the extent possible so as to confine the light within the target area.
- 2) In all areas adjacent to residential property, no externally mounted, direct light source shall cause light trespass (*as defined in Section C*) at the property line.
- 3) To reduce off-site glare, lighting fixtures for all parking and pedestrian areas shall be:
  - a) Full cut-off type fixtures, or
  - b) Fully shielded/recessed fixtures where the lens is recessed or flush with the bottom surface.
- 4) Lighting fixtures for building security or aesthetics and any display purposes shall be:
  - a) Top downward (not upward or sideways), and
  - b) Full cut off or fully shielded/recessed.
- 5) Lighting for site security shall be configured for motion or infrared sensor operation, except in the case of lighting required by state or federal safety standards.
- 6) Where outdoor playing fields or other special outdoor activity areas are to be illuminated, lighting fixtures shall be specified, mounted and aimed so that:
  - a) The lighting fixture's beams fall within the primary playing area, immediate surroundings, or other site amenities.
- 7) The height of luminaries, except streetlights in public rights-of-way, shall be the minimum necessary to provide adequate illumination. Luminaries attached to the building shall be limited to the height necessary for illumination of entrances or locations not served by pole lighting.
- 8) All non-security exterior lighting shall be controlled by either a timer or photoelectric switch to be turned off during hours when a business is unoccupied.

## **E. WATERFRONT LIGHTING**

Outdoor lighting in and around the ponds, lakes, rivers, and other waters of Marquette Township, with the exception of lighting located below the mean high water mark of coastal areas, shall not

be installed or maintained so as to create a hazard or nuisance to other property owners and shall comply with the following:

- 1) Lights on docks shall be no more than three (3) feet above the dock, shall be directed downward and be full cut off fixtures.
- 2) Lights illuminating paths, stairs, decks, etc. shall not be directed towards the water and shall not direct light upwards.
- 3) All exterior lighting shall be located, mounted and shielded, so that direct illumination is not focused towards the water surface more than twenty (20) feet from shore.

**F. ARCHITECTURAL & LANDSCAPE LIGHTING**

- 1) All fixtures shall be aimed and/or shielded to illuminate only the target area such that no stray light from the luminaire passes above the horizontal plane.
- 2) Upward aimed facade and building lighting shall be fully shielded and fully confined from projecting into the sky by the building eaves, roofs, overhangs or structures and shall be mounted as flush with the illuminated wall as possible.
- 3) All lighting not required for safety or by the Marquette County Building Code shall be controlled by either a timer or photoelectric switch to be turned off during the hours when a business is unoccupied.

**G. CANOPY & SERVICE LIGHTING**

Outdoor sales and gas station service canopy lighting shall be aimed downward and installed such that the center of the fixture's luminous opening is flush with or recessed into the canopy ceiling. All lighting from the canopy must be substantially confined to the ground area directly beneath the perimeter of the canopy. All exterior lighting for canopies and/or service areas shall be of an indirect nature, emanating only from fixtures located under canopies, under eaves on the principal building or at ground level in the landscaping. Exterior lighting shall be arranged and shielded so there shall be no glare or reflections onto adjacent properties or street rights-of-way.

**H. SIGNAGE LIGHTING**

In addition to the requirements of this ordinance, all signs shall also comply with the provisions of Article XXI of the Zoning Ordinance, as applicable. The Zoning Administrator or designated official shall determine compliance with the provisions of this ordinance.

- 1) Lighting used for sign illumination may be mounted at any height to a maximum of fifteen (15) feet.
- 2) Illuminated signs shall not cause glare distracting to drivers, nor shall they be in such a position or such color as will hamper the readability of traffic lights or traffic signs.
- 3) Signs may be illuminated externally by a downward-directed stationary light. Sign lighting shall not be directed upwards unless the sign is affixed to the side of the building and is fully shielded and fully confined from projecting into the sky.

- 4) The requirements of this section are for the lighting of signs only. Article XXI of the Marquette Township Zoning Ordinance regulates signs and should be used in conjunction with this section.

**I. FLAGPOLE LIGHTING**

Flagpole lighting may be utilized as up-lighting but shall be shielded.

**J. PUBLIC ROAD & SUBDIVISION LIGHTING**

Marquette Township shall ensure that the installation, operation and maintenance of public road and subdivision lighting within the municipal boundaries of the Township occur in the following manner, or as determined by the Zoning Administrator. (Note: Annually, the Township Board will review and approve a street lighting plan as part of the Marquette Township Capital Improvement Plan.)

- 1) Public Road Lighting
  - a) At the intersection of two or more public roads, and at the entrance to a public cul-de-sac from a public road.
  - b) At the apex or apogee of any curve on a public road estimated to be greater than forty (40) degrees. *This requirement may be waived by the Township if the curve is within two hundred (200) feet of a lighted intersection.*
  - c) At hills or short-sight distances and near land forms on a public road that may limit vision, as may be determined by the Township.
  - d) Half way between platted blocks or as close to half way, as determined by the Marquette Board of Light & Power and/or Zoning Administrator; regarding the utilization of existing utility poles. At no time shall a light fixture be installed in the platted area with a distance greater than 300 feet between fixtures.
  - e) At the terminus of dead-end streets.
  - f) The final location of the public road light will be determined by the Township in conjunction with the supplying power utility, the County Road Commission and/or the Michigan Department of Transportation in regards to the availability of service and set-back requirements, respectively.
- 2) Standard Lamp and Fixture
  - a) Each designated public local road light location shall have a downcast, shielded LED fixture on a pole.
  - b) The light fixture shall be a shielded, LED style unit with the optics flush to the fixture, as provided by the Marquette Board of Light and Power or other designated lighting contractor. At an intersection, the arm fixture shall be aimed towards that intersection point.
- 3) Existing Public Road Lights
  - a) Existing street lights operated by the Township that do not meet the standards as set forth within this document will be “grand-fathered” into

the requirements provided herein and may be replaced by shielded, downcast LED fixtures at such time as may be determined by the Township.

4) Subdivision Street Lighting

- a) The proprietor-developer of a subdivision shall, at the time of submitting the final plat to the Township Board for approval, submit a street lighting plan and cost estimate prepared by a professional engineer for the area proposed to be subdivided. The street lighting plan shall have the minimum lighting requirements as set forth by the Township for public streets, including the same standards for lamps, fixtures, attachments, poles and their placement.
- b) The proprietor/developer shall deposit with the Township, at the time the final plat is submitted, a cash or other security acceptable to the Township in an amount equal to the estimated cost of construction of such street lighting plan. Costs shall be obtained from the Board of Light and Power or other approved lighting contractor or supplier.
- c) Upon completion of the street lighting by the proprietor/developer, in accordance with the plan submitted as approved by the Township, and upon the assignment of such lighting to the Township, the cash deposit or other security shall be refunded to the proprietor/developer.

**K. ENFORCEMENT**

This ordinance shall be enforced by the Marquette Township Zoning Administrator or designated official, per the provisions in Article XXV – Administration & Enforcement of this Zoning Ordinance. The Zoning Administrator or designated official shall investigate suspected violations and issue notices of violation requiring corrective action, and shall have the ability to assign penalties for non-compliance. The Zoning Administrator or designated official shall also have the ability to use the services of an outside expert or lighting consultant to determine if a light fixture or lighting array is in compliance with the provisions of this ordinance; in the event of a violation of the ordinance, the cost of the expert who undertook the lighting evaluation shall be passed onto the owner of the property determined to be in violation.

**L. ORDINANCE INTERPRETATION & APPEALS**

An individual aggrieved by an action of the Zoning Administrator may appeal any interpretations of this Ordinance to the Township Zoning Board of Appeals for their review and final determination. The factual basis for the appeal must be specific, in writing and filed with the Township Clerk within seven (7) days after the date of the decision of the Zoning Administrator. An appeal shall stay action on the issue in question.