OUTDOOR LIGHTING

1: PURPOSE:

The purposes of this ordinance are to:

A. Encourage outdoor lighting practices that will minimize light pollution, glare, light trespass and sky glow in order to preserve the natural dark of the night sky and to prevent lighting nuisances on properties.

B. Promote energy conservation.

C. Maintain nighttime safety, utility and security.

D. Encourage minimal lighting and adequately shaded light.

E. Maintain the rural atmosphere and village character of the town.

2: DEFINITIONS:

For the purpose of this ordinance, certain words, phrases and terms used herein shall have the meanings assigned to them by this section:

ACCENT OR ARCHITECTURAL LIGHTING: Lighting of building surfaces, landscape features, statues and similar items for the purpose of decoration or ornamentation; or lighting that does not contribute to the safety or security of residents, guests, employees or customers on a property.

CORRELATED COLOR TEMPERATURE (CCT): A specification of the color appearance of the light emitted by a lamp, relating its color to the color of light from a reference source when heated to a particular temperature, measured in degrees kelvin (K).

DEVELOPED ACRE: Property altered from its natural state by construction or by installation.

DIRECT ILLUMINATION: Illumination resulting from light emitted directly from a lamp, light bulb, light fixture, luminary or reflector. This does not include light reflected from other surfaces, such as the ground or building faces.

FLOODLIGHT: A fixture or lamp designed to "flood" an area with light. A specific form of lamp or fixture designed to direct its output in a specific direction. Such lamps are often designated by the manufacturer and are commonly used in residential outdoor lighting.

FULL CUTOFF FIXTURE/ FULLY SHIELDED : An outdoor light fixture designed so that the installed fixture emits no light above the horizontal plane. Full cutoff light fixtures must be shielded in and of themselves. Surrounding structures, like canopies, are not to be considered when determining if the fixture is full cutoff. Full cutoff fixtures must be appropriately mounted so that the shielding prevents light from escaping above the horizontal and all light is directed downward.

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INTERNALLY ILLUMINATED: As it relates to signs, any sign which has a light source entirely enclosed within the sign and not directly visible to the eye.

LIGHT POLLUTION: Any adverse effect of manmade light. Often used to denote "sky glow" from cities or towns, but also includes glare, light trespass, visual clutter and other adverse effects of lighting.

LIGHT POST: A post supporting an outdoor light fixture.

LIGHT SOURCE: The part of a lighting fixture that produces light, e.g., the bulb.

LIGHT TRESPASS: Light falling where it is not wanted or needed. Spill light falling over property lines that illuminates adjacent grounds or buildings in an objectionable manner and is considered a nuisance.

LUMENS: Lumen means a unit of luminous flux equal to the light emitted by a uniform point source of one candle intensity. Lumens refers to the amount of light emitted by a bulb (more lumens equates to brighter light).

Common Brightness in Lumens Standard Halogen[1]

Brightness in Lumens	220+	400+	700+	900+	1300+
Standard	25W	40W	60W	75W	100W
Halogen	18W	28W	42W	53W	70W
CFL	6W	9W	12W	15W	20W
LED	4W	6W	10W	13W	18W

MANUFACTURER'S CATALOG CUTS: A publication or other printed material of a lamp or lighting manufacturer offering visual and technical information about a lighting fixture or lamp.

OUTDOOR LIGHT FIXTURE: An outdoor illuminating lamp or similar device used for lighting structures, parking lots, pathways, service canopies, recreational areas, signs or other similar outdoor lighting uses.

RECREATIONAL LIGHTING: Lighting used to illuminate sports fields, ball courts, playgrounds or similar outdoor recreational facilities.

SECURITY LIGHTS: Lighting designed to illuminate a property or grounds for the purpose of visual security.

SPOTLIGHT: A fixture or lamp designed to light a small area very brightly. See definition of Floodlight.

TOWER: Any monopole, antenna or the like that exceeds eighteen feet (18') in height.

UNSHIELDED FIXTURE: A fixture that allows light to be emitted above the horizontal either directly from the lamp or indirectly from the fixture or reflector. Any fixture not full cutoff.

[1] Source: CITY OF MOAB ORDINANCE #2019-03, https://moabtimes.com/wp-content/uploads/2019/08/ORD-CC-2019-03.pdf

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3: SCOPE AND APPLICABILITY:

A. Compliance: All exterior outdoor lighting installed after the effective date hereof in all zones in the town shall conform to the requirements established by this ordinance. Light trespass from interior lighting that negatively impacts adjacent properties is also prohibited.

B. Nonconforming Uses: All existing outdoor lighting that does not meet the requirements of this ordinance and is not exempted by this ordinance shall be considered a nonconforming use. The town will encourage property owners to bring all lighting into compliance with this ordinance. Where appropriate, the town may also provide assistance and expertise to property owners in bringing their exterior lighting fixtures into compliance with this ordinance. All property owners will be in compliance within two years of the ordinance being enacted, set for January 1, 2020. Date of compliance will be December 31, 2021.

C. Modifications: Compliance Through Building Permit Process: The town shall require exterior lighting fixtures to be brought into compliance, through the building permit process, if substantial modifications are made to the exterior of the building or if the footprint of the structure is enlarged.

D. Change Of Ownership: Properties that change ownership must bring exterior lighting into compliance with this ordinance. At point of sale, the property must be brought into compliance.

E. Conflicts: Should this ordinance be found to be in conflict with other ordinances of the town, the more restrictive shall apply.

4: APPLICATION AND REVIEW PROCEDURE:

A. Lighting Plans Required: All sign permit applications, building permit applications, and Level II Site Plan applications shall include a lighting plan that shows evidence that the proposed lighting fixtures and light sources will comply with this ordinance and shall include the following:

1. Plans or drawings indicating the proposed location of lighting fixtures, height of lighting fixtures on the premises, and type of illumination devices, lamps, supports, shielding and reflectors used and installation and electrical details.

2. For commercial and industrial uses, photometric diagrams of proposed lighting fixtures are also required. In the event photometric diagrams are not available, the applicant must provide sufficient information regarding the light fixture, bulb wattage and shielding mechanisms for the planning commission to be able to determine compliance with the provisions of this ordinance.

3. A table showing the total amount of proposed exterior lights, by fixture type, wattage, lumens and lamp type.

B. Approval Procedure:

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1. The lighting plan for all new development shall be submitted for approval concurrent with the associated application process.

2. A certificate of occupancy shall not be issued until such time as the property is subject to a post-installation lighting inspection by the building inspector.

5: FULL CUTOFF FIXTURE REQUIREMENTS:

A. Required: Unless specifically exempted by this ordinance, all outdoor lighting shall use full cutoff fixtures that are designed and constructed so that no light is emitted from the top or sides of the fixture. Lighting must be placed at a location, angle or height to prevent direct illumination outside the property boundaries where the light fixtures are located.

B. Characteristics: In order to qualify as a "full cutoff" fixture, a light fixture must have the top and sides made of completely opaque material such that light only escapes through the bottom of the fixture. Fixtures with translucent or transparent sides, or sides with perforations or slits, do not qualify as full cutoff. Any glass or diffuser on the bottom of the fixture must be flush with the fixture (no drop lenses). Merely placing a light fixture under an eave, canopy, patio cover or other similar cover does not qualify as full cutoff.

1. Samples of acceptable and unacceptable fixtures (courtesy of International Dark Sky Association):

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Examples of Acceptable / Unacceptable Lighting Fixtures

C. Restrictions On Total Amount Of Unshielded Lighting: Outdoor lighting that is not subject to the shielding requirement in subsection 6C of this ordinance shall not exceed five thousand (5000) lumens per net acre for commercial properties, and one thousand (1000) lumens per net acre for residential properties.

D. Exemptions To Full Cutoff Fixture Requirements:

1. Fixtures having a total light output less than one thousand (1000) lumens (approximately equal to a 60 watt incandescent bulb or a 15 watt compact fluorescent) are exempted from the full cutoff requirement provided one of the following criteria are met:

    a. The fixture has a top that is completely opaque such that no light is directed upward, and it is partially shielded. OR

b. The fixture has sides that completely cover the light source and are made of opaque or semiopaque material. Fixtures with opaque sides may have incidental decorative perforations that emit small amounts of light. Semiopaque material, such as dark tinted glass or translucent plastic, may be used if the light source is not discernable behind the material. Completely transparent materials, such as clear glass, are not allowed.

2. Spotlights controlled by motion sensors having a light output less than one thousand (1000) lumens per lamp (allowing a maximum of a 60 watt incandescent or a 15 watt compact fluorescent bulb) are exempt from the full cutoff requirement, provided that all of the following criteria are met:

    a. The fixture is a spotlight or other type of directed light that shall be directed at a forty five degree (45°) angle or less, where the zero angle is pointing straight down.

    b. The fixture must not be placed in such a manner that results in illumination being directed outside the property boundaries where the light fixtures are located.

    c. The fixture must be hooded or shielded to the extent necessary to prevent glare on adjacent properties or roadways.

    d. The fixture must be set on a 15 minute or less time limit.

3. Pathway lights less than eighteen inches (18") in height are exempted from the full cutoff fixture requirement, if the total light output from each pathway light is less than three hundred (300) lumens and the lights have opaque caps that direct light downward.

6: CONDITIONS AND STANDARDS GENERALLY:

A. Minimum Necessary: Outdoor lighting should be the minimum necessary to provide for safety and functionality. The lowest wattage light source necessary for a lighting application should be used.

B. Maximum Color Temperature Of All Lighting Fixtures: The correlated color temperature of any outdoor lighting fixture shall not exceed three thousand degrees kelvin (3000°K).

C. Maximum Lighting Allowed in Residential Zones: The total amount of outdoor lighting, whether shielded or partially shielded, shall not exceed five thousand (5000) lumens per developed acre for residential properties. Residential parcels smaller than 1 acre shall be permitted five thousand (5000) lumens per developed acre regardless of parcel size. Motion-activated lights do not count towards the maximum lumens per acre for commercial, industrial, or residential properties.

D. Maximum Lighting Allowed in Commercial Zones: The total amount of outdoor lighting, whether shielded or partially shielded, shall not exceed the following lumens per developed square acre: twenty-five thousand (25,000) in Commercial-1 (C-1), thirty-five thousand (35,000) in Commercial-2 (C-2), and forty-five thousand (45,000) in Commercial-3 (C-3). Parcels smaller than 1 acre shall be permitted a maximum number of lumens proportional to the developed acreage.

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E. Maximum Lighting Allowed in Industrial Zones: The total amount of outdoor lighting, whether shielded or partially shielded, shall not exceed twenty thousand (25000) lumens per developed acre for industrial properties.

F. Maximum Lighting Allowed in all other zones: The total amount of outdoor lighting, whether shielded or partially shielded, shall not exceed three thousand (3000) lumens per developed acre for all other zones.

G. Allowable Applications: Outdoor lighting shall only be allowed in the following applications:

1. To illuminate the entrances to buildings (including garage entrances).

2. To illuminate pathways and walkways.

3. To illuminate parking areas and parking area access lanes.

4. To illuminate outdoor gathering areas, such as patios, pool and hot tub areas, outdoor dining areas and recreation areas.

5. For security purposes, provided all the following conditions are met:

    a. The lighting is activated by motion sensors and shuts off fifteen (15) minutes after each disturbance or when the activity involved is completed.

    b. The lighting is placed and directed such that no direct illumination falls outside the property boundaries where the security lighting is placed.

6. To illuminate signage.

7. For architectural lighting, provided all of the following conditions are met:

    a. The property where the architectural lighting is placed is on a property designated as commercial by the town.

    b. The architectural lighting is compatible with the purposes of this ordinance as determined by the planning and zoning commission.

    c. All architectural lighting is mounted on and directed onto the front of a commercial building facing the street.

    d. The architectural lighting is sufficiently shielded such that the light source is not visible beyond the property boundaries.

    e. The architectural lighting is directed such that all light falls on the front of the building, and not on the adjacent ground or into the night sky.

    f. The architectural lighting uses low wattage light sources.

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g. The architectural lighting is not used to illuminate landscape, statues or other similar features.

8. To illuminate outdoor water features, provided all of the following conditions are met:

a. The lighting is angled below the horizontal plane.

b. The lighting is placed underneath or behind the water such that the water diffuses the light from all points where the light is visible.

c. Each light source has a total light output of one thousand (1000) lumens or less and the total lighting is not greater than necessary to achieve the desired artistic effect.

H. Light Curfews:

1. Commercial establishments shall turn off all outdoor lighting, except that listed below, by one hour after closing. For the purposes of this section, motels and hotels are considered open around the clock when they are open for the season. Exemptions to the lighting curfew include:

a. Lighting to illuminate the entrance to the commercial establishment.

b. Parking lot and pathway lighting required for the safety of guests.

2. Recreational lighting (residential and commercial) shall be turned off by ten o'clock (10:00) P.M., except to conclude a community event that is underway.

7: SPECIALIZED OUTDOOR LIGHTING:

A. Gas Station Canopies: Gas station canopies may be illuminated, provided all light fixtures are mounted on the undersurface of the canopy, all light fixtures are full cutoff and diffusers are not visible from locations off the property. Except for directed beam lighting, merely placing the fixtures on the underside of the canopy does not qualify as fully shielding the light fixture. Directed beam lighting mounted under the canopy is allowed, provided the light source cannot be seen from outside the property boundaries.

B. Roadway/Street Lights: Streetlights are allowable as recommended by the town engineer or town council. All street lights shall utilize lamp types that are energy efficient and minimize sky glow and other negative impacts of artificial lighting.

C. Parking Lots:

1. Spot or flood lighting of parking lots from a building or other structure is prohibited.

2. The overall height of any light post used to illuminate parking lots in commercial zones shall not exceed fourteen feet (14'). All post mounted parking lot lights shall be set back from property lines a distance of ten feet (10’).

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3. The overall height of any light post used to illuminate parking lots in residential zones shall not exceed six feet (6').

4. All parking lot lighting shall use full cutoff fixtures.

D. Recreational Lighting:

1. The planning and zoning commission shall review all requests for new recreational lighting fixtures for fields or courts. The planning commission shall approve such requests only after finding:

    a. The recreational lighting has provisions for minimizing glare, spill light and uplight by the use of louvers, hoods or shielding.

    b. The recreational lighting does not exceed illumination levels for class IV sports lighting set by the Illuminating Engineering Society Of North America.

    c. The recreational lighting will only illuminate the field or court area and shall be shielded to prevent illumination falling outside of those areas.

    d. The light source for the recreational light will not be visible from adjacent properties.

2. Pole mounted recreational lighting shall be limited to eighteen feet (18') in height. Pole mounted recreational lighting must be set back an appropriate distance from neighboring properties as determined in consultation with the planning and zoning commission.

3. The lighting for nonfield and noncourt areas shall conform to all provisions of this ordinance.

E. Amphitheater Lighting: Outdoor amphitheaters may use illumination to light the performance area of the amphitheater and for the safety of the public. The following standards apply to all amphitheater lighting:

1. Lighting used to illuminate the performance area must be either directed spotlighting or full cutoff lighting. If directed spotlighting, the light source must be located and designed such that it is not visible beyond the property boundaries.

2. Lighting used to illuminate the performance area may only be turned on during performances or rehearsals.

3. Lighting used to illuminate the seating areas, pathways and other areas of the amphitheater must meet all standards of this ordinance.

F. Signs: Signs may be unlighted, lighted externally, lighted internally or backlit. All sign lighting must be designed, directed and shielded in such a manner that the light source is not visible beyond the property boundaries where the sign is located. Lighting for signs must be directed such that only the sign face is illuminated. All lighted signs must have stationary and constant lighting. Signs that blink, flash, have moving text or images, or which have electronically

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modifiable text or images—including video, electronically variable messaging, mechanically or electronically activated lighting, or the like are prohibited.

1. Standards For Externally Illuminated Signs:

    a. Lighting for externally illuminated signs must be aimed and shielded so that light is directed only onto the sign face and does not trespass onto adjacent streets, roads or properties or into the night sky.

    b. Lighting for externally illuminated signs must be mounted at the top of the sign (or within 2 feet of the top of a building mounted sign), except for freestanding monument style signs which may be illuminated by ground mounted lighting.

2. Standards For Internally Illuminated Signs - Lighting Is Visible On Both Sides Of Sign:

    a. Only sign copy areas and logos may be illuminated on an internally illuminated sign.

    b. Internally illuminated signs shall use semiopaque materials for sign copy such that the light emanating from the sign is diffused. Transparent or clear materials are not allowed for sign copy. Noncopy portions of the sign (e.g., background and graphics) shall be made of completely opaque material.

3. Standards For Backlit Signs - Only One Side Of Sign Is Lit:

    a. Backlit signs shall be designed such that the light source is not visible.

    b. Backlit signs shall be designed such that harsh, direct illumination does not emanate out of the sign. Rather, the backlighting shall only allow indirect illumination to emanate from the sign. For example, signs that create a "halo" effect around sign copy are allowed.

    c. Backlit signs shall use low wattage light sources.

4. Illuminated Window Signage: Illuminated window signs positioned to be primarily visible outside the business structure are allowed only if there are no more than two (2) signs per business space and each sign measures less than three and one-half ($3^1/_2$) square feet in area. Such signs must not be illuminated when the business is closed.

8: HILLSIDES, RIDGELINES AND SPECIAL CASES:

In certain cases (such as, but not limited to, properties on or near ridgelines, bluffs, rock formations, or hillsides), additional shielding may be required to mitigate glare or light trespass. The need for additional shielding will be considered as part of the review process performed by the planning and zoning commission prior to approval of any business or residence.

A. All monopole, antenna, tower or support facility lighting not required by the federal aviation administration (FAA) or the federal communications commission (FCC) is prohibited.

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B. When lighting is required by the FAA or the FCC, such lighting shall not exceed the minimum requirements of those agencies. Collision markers should have a dual mode for day and night to minimize impact to the night sky and migrating birds.

C. All other lighting used on the property not regulated by the FAA or FCC shall conform to this ordinance.

10: EXEMPTIONS:

The following shall be exempt from the requirements of this ordinance:

A. Holiday lighting from October 25 to January 30 as long as it does not create a hazard or nuisance to surrounding businesses or residences. Lumens from holiday lighting shall not exceed property lighting allowance.

B. Traffic control signals and devices.

C. Temporary emergency lighting in use by law enforcement or government agencies, or at their direction.

D. The lighting of federal or state flags; provided, that the light is a narrow beam aimed and shielded to illuminate only the flag. Flag lighting should use appropriate illumination levels to light the flag, while at the same time fulfilling the purposes of this ordinance.

E. Low voltage LED lights and solar lights used to illuminate pathways in residential areas, provided the lights are installed no more than eighteen inches (18") above the adjacent ground level and have caps that direct the light downward.

F. The planning and zoning commission, as part of its review as outlined in this ordinance, may approve lighting that does not conform to these standards if need is established. An applicant requesting such lighting is required to provide proof of requirements of property insurance or findings of competent research demonstrating the need for the requested lighting. The planning and zoning commission may attach other conditions to the approval of such lighting that will make the lighting comply with the spirit of this ordinance.

11: PROHIBITED LIGHTING:

The following are prohibited:

A. Uplighting to illuminate buildings and other structures, or vegetation, except as allowed by other provisions in this ordinance.

B. Signs that blink, flash, have moving text or images, or which have electronically modifiable text or images—including video, electronically variable messaging, mechanically or electronically activated lighting, or the like, not including holiday lighting between October 25 and January 30.

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C. Floodlights or spotlights affixed to buildings for the purpose of lighting parking lots or sales display lot areas.

D. Searchlights, laser source lights or any similar high intensity light.

E. Except when used in window signage pursuant to subsection 7-F4 of this ordinance, neon or luminous tube lighting, either when outdoor mounted or indoor mounted if visible beyond the property boundaries.

12: VIOLATIONS:

The following constitute violations of this ordinance:

A. The installation, maintenance or operation of any lighting fixture not in compliance with the provisions of this ordinance if such fixture is installed subsequent to December 31, 2021.

B. The alteration of outdoor lighting fixtures after a certificate of occupancy has been issued without the review and approval of the planning and zoning commission when such alteration does not conform to the provisions of this ordinance.

C. Failure to shield, correct or remove lighting that is installed, operated, maintained or altered in violation of this ordinance as of December 31, 2021.

D. Light trespass beyond property lines.

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