

10.16 DARK SKIES LIGHTING

10.16.02 PURPOSE

It is the purpose and intent of this code to balance the goals of Hideout, to maintain its small-town character with the need to limit glare and light trespass, reduce night sky glow, conserve energy, provide safe lighting practices, and promote Dark Skies initiatives, while protecting individual property rights.

1. The use of outdoor lighting is often necessary for adequate nighttime safety and utility, but common lighting practices can also interfere with other legitimate public concerns. Principal among these concerns are:
 - a. The degradation of the nighttime visual environment by production of unsightly and dangerous glare.
 - b. Lighting practices that interfere with the health and safety of Hideout's citizens and visitors.
 - c. Unnecessary waste of energy and resources in the production of too much light or wasted light.
 - d. Interference in the use or enjoyment of property which is not intended to be illuminated at night, and the loss of the scenic view of the night sky due to increased urban sky glow.
 - e. Protect the quality of the natural ecology in the area.
2. The concerns of safety, utility and aesthetic appearance need not compete. Good modern lighting practices can provide adequate light for safety and utility without excessive glare or light pollution. In nearly all cases, careful attention to when, where and how much nighttime lighting is needed will lead to better lighting practices.
3. Accordingly, it is the intent of this code to require lighting practices and systems which will minimize or eliminate light pollution, glare, light trespass, and conserve energy while maintaining nighttime safety, utility, security and productivity.
4. In support of dark skies, events will be held two times per year to educate our community both about the value of this effort as well as about the sky itself. These events will be coordinated by the town of Hideout and may include visiting speakers and the creation of a dark skies community club or committee. These efforts will allow the Town of Hideout to pursue certification as a Dark Skies Community with the International Dark Skies Association.
5. Enforcement of this effort will be conducted by the enforcement officer under the direction of the mayor.

10.16.04 DEFINITIONS

Correlated color temperature (CCT): the temperature at which a blackbody emits radiant energy competent to evoke a color the same as that evoked by radiant energy from a given source (such as a lamp).

Dark sky fixture or fully shielded: any light fixture that is designed or shielded in such a manner that all light rays emitted by the fixture, either directly from the lamps or indirectly from the fixture are projected below a horizontal plane running through the lowest point of the shield.

Examples of Acceptable / Unacceptable Lighting Fixtures



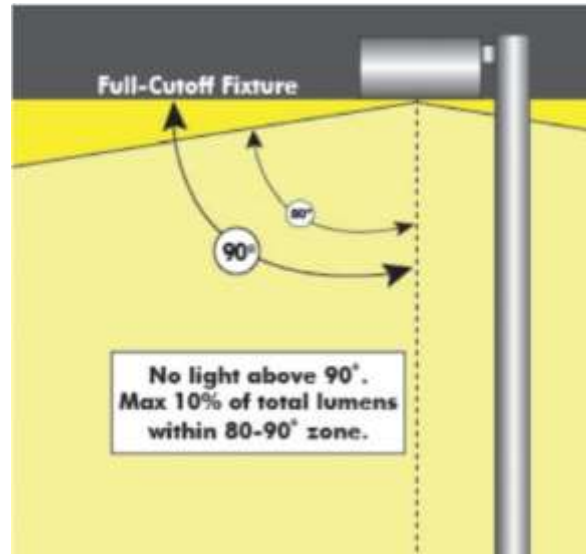
The lights on the left are non-conforming. Those on the right can be used in most cases. Depending on the mounting height and proximity to the property line, additional shielding may be necessary to prevent the luminous elements from being visible from any other property.

Dark sky shield: anything that is used to shield a light fixture so that it behaves as a fully shielded fixture. These include but are not limited to, for example, fixtures outfitted with caps or housings or installed under canopies, building overhangs, roof eaves or shielded by other structures, objects or devices.

Electronic messenger system (EMS): electronic messenger system with scrolling messages.

Emergency lighting: lighting as required by civil officers, agents, utilities and officials to perform their duties to maintain the public health, safety and welfare.

Full Cut-off Fixtures: fixtures, as installed, that are designed or shielded in such a manner that all light rays emitted by the fixture, either directly from the lamps or indirectly from the fixture, are projected below a horizontal plane running through the lowest point on the fixture where light is emitted.



Full cutoff fixtures do not allow any light to be emitted above the fixture. The fixture controls glare by limiting the light output at 10 degrees below the horizontal.

Holiday lighting: temporary lighting for a specific celebration which may be one of the following types:

- Holiday lighting is permitted from December 1st – March 31st and must be turned off from midnight to 6am daily.
- Festoon type low-output lamps, limited to small individual bulbs on a string.
- Uplighting of wreaths and similar holiday items is permitted provided that individual lamps are less than 10 watts and 70 lumens.
- Low-output lamps (less than 50 watts and 750 lumens) used to internally illuminate yard art.
- Flood or spotlights producing less than 2000 lumens each whose light source is not visible from any other property.

Kelvin: relating to, conforming to, or having a thermometric scale on which the unit of measurement equals the Celsius degree and according to which absolute zero is equal to -273 degrees Celsius.

Light fixture: any device intended to produce outdoor illumination.

Light trespass: light emitted from fixtures designed or installed in a manner that unreasonably causes light to fall on a property other than the one where the light is installed, in a motor vehicle driver's eyes, or upwards toward the sky.

Lumen: a unit of luminous flux equal to the light emitted in a unit solid angle by a uniform point source of one candle intensity.

Major addition: enlargement of 25% or more of the buildings gross floor area, seating capacity, or parking spaces, either with a single construction project or cumulative series of construction projects after the enactment of this ordinance. The term also includes replacement of 25% or more of installed outdoor lighting.

Minor addition: enlargement of less than 25% of the buildings gross floor area, seating capacity or parking spaces, either with a single construction project or cumulative series of construction projects after the enactment of this ordinance. The term also includes replacement of less than 25% of installed outdoor lighting.

Motion sensor: any device that turns a light fixture on when it detects motion and off when motion stops or very shortly thereafter (5-10 minutes).

Nits (candela): the base unit of luminous intensity in the International System of Units that is equal to the luminous intensity in a given direction of a source which emits monochromatic radiation.

Switch: any device that can be manually controlled by a person to turn a light fixture on and off. For the purpose of this chapter, switches include motion sensors, but switches do not include light sensors or timers.

Temporary: refers to lighting as required by citizens to carry out legally approved activities for durations as specified in the permits for those activities. These include but are not limited to, for example, activities such as nighttime agricultural operations, construction work lighting, and seasonal decorations, but in no case for more than a period of 60 days without an exemption granted by the town of Hideout.

10.16.06 APPLICABILITY AND EXEMPTIONS

All exterior outdoor lighting installed after the effective date hereof in the town shall conform to the requirements established by this chapter. This chapter does not apply to indoor lighting. However, light trespass from interior lighting that negatively impacts adjacent properties is also prohibited.

1. Exemptions.
 - a. Temporary lighting for decoration/seasonal, theatrical, television, performance areas, and construction sites, except as allowed by permit at the discretion of the town council.
 - b. Town entrance lighting such as trees with strings of white lighting at the intersection of North Hideout Trail and SR248 and the trees within the traffic circle at the western terminus of North Hideout Trail.
 - c. Underwater lighting in swimming pools and other water features.
 - d. Lighting that is only used under emergency conditions.
 - e. Lighting required by federal, state, county or city ordinances and regulations.
 - f. Outdoor recreational facilities are exempt from lumen cap and shielding but must comply with 3,000 degrees Kelvin temperature requirement. Lights must be extinguished promptly after a sponsored event.

10.16.08 OUTDOOR LIGHTING STANDARDS.

1. Temperature of Lamps. Lamps shall not exceed a maximum correlated color temperature (CCT) of 3,000 degrees Kelvin.
2. Lamp and Shielding. All light fixtures are required to be fully shielded and installed so that the shielding complies with the definition of a fully shielded light fixture.
3. Light Trespass Standard. All light fixtures, including motion sensing fixtures and security lighting, shall be aimed and shielded so that the direct illumination shall be confined to the property boundaries of the source, including any public or private street or road.
4. Signs:
 - a. Front Lit: Any light with the intention to illuminate a sign must be oriented from the top and shine down.
 - b. Back Lit:
 - I. The sign design may not contain any more than 10 percent white, including lettering.
 - II. Transparent or clear materials are not allowed.
 - III. Nonface portions of the sign (e.g., background and sides) shall be made of completely opaque material.
 - IV. Internal lights must not exceed 3,000 degrees Kelvin if greater than or equal to 1,500 lumens.
 - c. Neon: Any sign consisting of more than three feet of neon must be extinguished no more than four hours after sundown during daylight savings and six hours during regular mountain time.
 - d. Electronic:
 - I. EMS signs are for public safety purposes only and prohibited for private or commercial use.
 - II. Luminance levels for operation after sundown and until sunrise shall not exceed 100 nits (candela per square meter) as measured under conditions of a full white display.
 - III. Messages appearing on Electronic Messenger Systems (EMS) shall not be displayed for less than 30 seconds and require no longer than 0.25 seconds to transition from one message to another. Moving text is prohibited.
 - IV. The luminous surface area of an individual EMS shall not exceed 50 square feet.
 - V. EMSs shall not be placed within 1,500 feet (300 meters) of other off-premises changeable electronic variable message sign on the same side of the highway, regardless of face orientation.
 - VI. EMSs shall not be placed within 1,500 feet (300 meters) of residential areas.
 - VII. The device owner or the permit holder shall continuously monitor signs 24 hours per day, including monitoring the reliability of hardware, software, network and other support infrastructure.
 - VIII. Signs shall contain a default mechanism so that in the event 10 percent or more of an EMS's LED emitters have failed, the sign will immediately revert to an unlit black screen and remain in such condition until the malfunction is corrected.
5. Parking Lots:
 - a. Spot or flood lighting of parking lots from a building or other structure is prohibited.

- b. The overall height of any light post used to illuminate parking lots in commercial zones shall not exceed 20 feet. All post mounted parking lot lights shall be set back from property lines a distance that is determined appropriate by the planning commission.
 - c. The overall height of any light post used to illuminate parking lots in residential zones shall not exceed 16 feet.
 - d. The lighting in commercial parking lots must be turned down by at least 75% of all light fixtures (or 75% of total light emitted) two (2) hours after closing time in the evening or from 10pm to 6am, whichever is the most restrictive.
 - e. All parking lot lighting shall use full cutoff fixtures.
6. 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.
 7. Total Outdoor Light Output Standards – Commercial and Multifamily Uses.
 - a. Total outdoor light output shall not exceed 15,000 lumens per net acre for all development except single-family residential uses. This cap is not intended to be achieved in all cases or as a design goal. Instead, design goals should be the lowest levels of lumens necessary to meet the lighting requirements of the site.
 - b. Seasonal decorations are not counted toward this limit.
 8. Total Outdoor Light Output Standards – Single-Family Residential Uses:
 - a. Outdoor lighting for single-family residential uses is subject to a lumen per net acre cap of 10,000 lumens net.
 - b. Outdoor lighting for single-family residential uses is subject to the lamp fixture and shielding requirements.
 9. Roadway/Streetlights. Streetlights are allowable as recommended by the public works administrator or town council. All streetlights shall utilize lamp types that are energy efficient and minimize sky glow and other negative impacts of artificial lighting. They shall not exceed 10,000 lumens per net acre. Lighting shall meet safety concerns with a goal of using the lowest levels of lumens necessary.
 10. New Public Lighting – Streetlights/Public Property and Rights-of-Way:
 - a. All new streetlights are allowed as recommended by public works administrator and town council. They will adhere to all standards as indicated including energy efficient lighting which minimizes sky glow. They shall not exceed 10,000 lumens per net acre. Lighting shall meet safety concerns with a goal of using the lowest levels of lumens necessary.
 - b. Public Property. Properties owned by Hideout such as parks and other community gathering spaces will adhere to all standards as indicated. They will adhere to all standards as indicated including energy efficient lighting which minimizes sky glow. Lighting shall meet safety concerns with a goal of using the lowest levels of lumens necessary.
 - c. Rights-of-Way. All rights-of-way will adhere to all standards as indicated including energy efficient lighting which minimizes sky glow. Lighting shall meet safety concerns with a goal of using the lowest levels of lumens necessary.

- d. All new public lighting will be part of the planning and zoning process in which public buildings, public property and rights-of-way lighting is determined. This will be incorporated as part of the zoning process moving forward to ensure compliance with this chapter.

11. Prohibited Lighting:

- a. Up lighting to illuminate buildings, other structures or vegetation.
- b. Flashing, blinking, intermittent or other lights that move or give the impression of movement, not including temporary holiday lighting.
- 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 (10.16.06 (4.C) of this section, neon or luminous tube lighting, either when outdoor mounted or indoor mounted, if visible beyond the property boundaries.

10.16.10 LIGHTING CONTROL.

- 1. Light fixtures with motion sensors and/or timers are required to minimize the duration of nighttime lighting from midnight to 6 a.m.
- 2. Fully shielded fixtures are required where any lights, even those below 1,500 lumens, are mounted on structures or poles higher than the first level above ground level to protect the view of the night sky, minimize ground reflection, and reduce light scatter beyond the property line.
- 3. Statuary and flags shall be lit from above to minimize sky glow.

10.16.12 IMPLEMENTATION.

- 1. New Uses, Buildings and Major Additions or Modifications: All building permit applications must include an outdoor lighting plan which includes the following information:
 - a. The location of all existing and proposed light fixtures (may be included on site plan).
 - b. Specification sheets for all existing and proposed light fixtures.
 - c. Acknowledgement that the Applicant has received notification of this Article.
 - d. Verification that a residential or commercial construction project requiring a building permit application has complied with the provisions of this code section shall occur during the final electrical inspection done by the towns designated building inspector.
- 2. Minor Additions or modifications: If the work requires a permit than the procedures shall be the same as for a Major addition.
- 3. New Lighting. Any new lighting on the site shall meet the requirements of this code with regard to shielding and lamp type; the total outdoor light output after the modifications are complete shall not exceed that on the site before the modification, or that permitted by this code, whichever is larger.
- 4. Resumption of Use after Abandonment. If a property or use with nonconforming lighting is abandoned, then all outdoor lighting shall be reviewed and brought into compliance with this code before the use is resumed.
- 5. Existing Lighting: On or before three years, all outdoor lighting shall comply with this code. This may be done through replacement or retrofitting.
- 6. Public Roadways:

- a. In general, this code does not apply to county and state rights-of-way. However, all new streetlights on such roadways or rights-of-ways must be fully shielded.

10.16.14 ENFORCEMENT AND PENALTIES.

All code, including lighting code, requires enforcement. Lighting code enforcement is essential to achieving a sustained reduction of light pollution and conservation of the night sky.

1. The penalty for violation of any portion of this chapter shall be:
 - a. First Notice. A notice to the property owner requesting compliance within three months.
 - b. Second Notice. If after three months the violation exists a notice will be given to appear before the Hideout Town Council to discuss options to come into compliance.
 - c. Third Notice. If after six months a violation of the provisions of this chapter shall be an infraction punishable by penalties up to \$1,000 per day per residential/commercial unit.
2. Violations regarding 10.16.10 lighting control (not withstanding 10.16.14.1) :
 - a. First notice. A notice to the property owner requesting compliance within 72 hours.
 - b. Second notice. If after 72 hours a violation of this light control shall be an infraction punishable by penalties up to \$50 per day until compliance.

10.16.16 CONFLICTS.

Where any provision of federal, state, county, or city statutes, codes, or laws conflicts with any provision of this code, the most restrictive shall govern unless otherwise regulated by law. If any provision of the Hideout Town Code should conflict with the provisions of this chapter, this chapter shall supersede and be the controlling and enforceable provision.