

Planning Commission

Staff Report

Meeting Date: July 11, 2016

Planning Item # 1

Subject: AMD2016-0002: Exterior Lighting Regulations

Applicant: Wyoming Stargazing

Property Owner: n/a

Presenter: Regan Kohlhardt

REQUESTED ACTION

Amend the Land Development Regulations (LDRs), pursuant to Section 8.7.1, LDR Text Amendments to better align Section 5.3.1. Exterior Lighting standards with dark skies best practices and to make other related changes throughout the LDRs.

Applicable Land Development Regulations (LDRs)

- Section 5.3.1, Exterior Lighting
- Section 8.7.1, LDR Text Amendment

Project Description

The purpose of this amendment is to improve upon existing exterior lighting standards as outlined in Section 5.3.1. of the LDRs through the use of new language that is more precise and easily interpreted by landowners and through the incorporation of new standards that comply with the International Dark Sky Association best practices that promote dark skies.

Why now?

The applicant has undertaken this amendment because there is evidence that the current standard is not sufficiently deterring lighting practices that contribute to skyglow and light pollution in the Jackson/Teton County community.

First, both the public and Staff have had difficulty interpreting the existing regulations. The use of footcandles for measuring maximum illumination and light trespass requires either a light meter or a lighting professional to demonstrate compliance with the existing regulation. Even with a light meter, it is difficult to isolate the lighting being measured from other ambient lighting including moonlight or interior lighting. The standard that requires light fixtures to be shielded is cryptic and needs simplification. While staff and the public have worked to apply the current standard, they require an unnecessary amount of education and interpretation, which make compliance and enforcement more difficult.

Second, lighting standards that are hard to understand and implement contributes to unsafe lighting practices. The applicant has pointed out that lights that contribute to glare, lights that are not properly shielded and that refract light away from what they should be illuminating, lights that are too bright, and lights that distort color and depth perception all have significant impacts on nighttime visibility. This amendment is therefore about how to incorporate smart and effective lighting into the community, which then has the added benefit of protecting our night skies.

Third, a major critique of the existing standard from the standpoint of dark skies best practices is that it does not establish a maximum limit to illumination per site or per acre. In effect, this means a landowner can light up their property as bright as they want. Even if they follow existing regulations on properly shielding lights at the horizontal and not allowing light to trespass onto their neighbor's property, light will reflect skyward off of the ground and off of particles in the air, resulting in light pollution that the Exterior Lighting Standards should be designed to limit and prevent in order to retain dark skies.

Finally, Mr. Singer in partnership with Mike Cavoroc from Free Roaming Photography have produced visual evidence that the Jackson/Teton County community is suffering from light pollution and sky glow. The pictures below show the skyglow currently produced by developed areas in the community.



Photo courtesy of Mike Cavaroc, Free Roaming Photography

WYOMING



Photo courtesy of Mike Cavaroc, Free Roaming Photography



Photo courtesy of Mike Cavaroc, Free Roaming Photography

How are the regulations in the amendment different than current standards?

To address the deficiencies of the current standard, the applicant has proposed a series of changes to the exterior lighting standard. The tables below show the similarities and differences between the existing regulations and the proposed amendment. The justification for changes to the existing regulations has also been included.

Important Similarities
Both require shielding of light fixtures and limit light emitted to 90 degrees or to a horizontal plane.
Both prohibit light trespass on adjacent properties.
Both prohibit flickering/flashing lights, searchlights, & strings of lights (with an exemption for holiday lighting). It should be noted that the proposed amendment shortens the time period from November through April to November through January.
Maximum heights of 15 feet in residential zones and 18 feet in other zones.

The amendment proposes six significant changes to the existing standard.

Measurement

How light is measured makes a difference in compliance with exterior lighting standards by making it easier for property owners to understand the standard. The new standard proposes changing measurements from footcandles to lumens as shown in the chart below. A footcandle is a measurement of how well lit a surface is. A lumen, on the other hand, is a measurement of light output. Lumens are indicated on lighting packaging. The change from footcandles to lumens is therefore meant to simplify interpretation of the regulations for both property owners and Staff.

Current	Proposed	Community Impacts
Measures maximum permitted illumination in footcandles, which is difficult to measure.	Measures maximum permitted illumination in lumens, a measurement commonly found on lighting packaging.	Improves ability of average resident to comply with standards. Improves staff's ability to enforce standards.

Maximum Illumination

Current regulations limit maximum illumination per light, and thus do not prevent situations where multiple lights – all of which could be compliant with current regulations – contribute to light pollution on a property.

	Current	Proposed	Current	Proposed	Current	Proposed
	<i>Per light</i>	<i>Per light</i>	<i>Per Acre of Site Development</i>	<i>Per Acre of Site Development</i>	<i>Per Site</i>	<i>Per Site</i>
AR, R-1, R-2, R-3, BC, NC, S, R	No limit.	Not applicable	No limit.	No limit	No limit.	5,000 lumen for properties 1 acre or less. 10,000 lumen for properties greater than 1 acre.
Other zones		20,000 lumen		50,000 lumen		250,000 lumen
Community Impact: Prevents situations where multiple lights on a property will contribute inordinately to light pollution. Reduces overall max illumination permitted.						

For context, a typical stadium light like those at the County Fairgrounds emits about 20,000 lumens. Typical parking lot lights might range from 900 lumens to 15,000 lumens.

A standard 60 watt non-halogen bulb produces approximately 800 lumens. Under the proposed standard, any residential property could have six 60 watt exterior lights. A standard 7,500 sq ft non-residential property would be allowed ten 60 watt exterior lights.

Light Color

Correlated color temperature and color rendering index play a significant role in the ability of both humans and animals to see at night. Correlated color temperature measures the ‘warmth’ or the ‘coolness’ of a light. Color rendering index indicates the accuracy of an object’s coloring when illuminated by a light. Color temperature and color accuracy outside of the ranges specified in the proposed amendment contribute to glare (oncoming bright headlights are the classic example of high correlated color temperature producing glare), distorted color, and disrupted circadian rhythms of people and animals alike. Both correlated color temperature and color rendering are generally indicated on light packaging.

Current regulations do not address light color.

Current	Proposed	Community Impacts
No standard.	Restricts correlated color temperature to under 3000 Kelvin and Color rendering index to over 65. (on package)	Reduces nighttime glare and night blindness.

Adaptive Controls and Lighting Reduction

The existing standard has no requirements for adaptive controls or lighting reduction. In the proposed amendment, these two requirements work together to conserve energy and require reduction in nighttime lighting levels. Property owners may choose the kind of adaptive control they use for their lighting in order to meet regulations for extinguishing lighting during the day. The use of such adaptive controls will then assist them in meeting the lighting reduction requirement of 30% at night.

Residential properties are exempted from the adaptive control requirement. Residential landscape lighting is subject to the lighting reduction curfew, but lighting affixed to residential buildings is exempted.

Current	Proposed	Community Impacts
No adaptive controls required.	Requires adaptive controls to extinguish exterior lights during the day.	Conserves energy and promotes extinguishing lights when an area is not being utilized. May be considered burdensome for landowners. Requiring adaptive controls helps property owners meet the Lighting Reduction standard (below).
No lighting reductions required.	Establishes a lighting reduction curfew of 12:00 am at which time lights must be reduced by 30% or extinguished.	Reduces unnecessary nighttime illumination. This will especially impact businesses that operate 24 hours a day, specifically gas stations who use lighting to attract customers.

Outdoor Recreation, Special Events, and Other Complex Uses

The current standard generally exempts complex uses such as outdoor recreation facilities, special events, construction sites, or industrial sites from the exterior lighting standards. The proposed amendment provides flexible standards while still limiting the overall light pollution that can be produced by these types of uses.

Current	Proposed	Community Impacts
Exempts outdoor recreation so long as luminaires are shielded and as long as they do not exceed a post height of 40 feet.	Provides more comprehensive standards for outdoor recreation uses. These standards include establishing an overall limit to the total illumination at these sites, establishing a 10:00 pm or end-of-operations curfew, maximum post height of 60 feet, requiring shielding of lights, and prohibiting light trespass.	Regulates uses that were formerly considered exempt from exterior lighting standards, reduces light nuisance from complex uses, and achieves overall reduction in nighttime light levels.

BACKGROUND

History

Samuel Singer, Executive Director of Wyoming Stargazing has proposed this amendment to reduce light pollution in the Jackson/Teton County community and to improve the nighttime natural environment.

Wyoming Stargazing is a nonprofit, educational organization that facilitates public and private stargazing programs throughout the community. The organization is running a 'Save Our Night Skies' campaign to reduce light pollution in the community. Amending current Land Development Regulations (LDRs) regarding exterior lighting is part of this campaign.

Mr. Singer, on behalf of Wyoming Stargazing, first brought the issue of light pollution to the attention of Town Council and the Board of County Commissioners at the July 2015 JIM. He was invited at that time to pursue an LDR Amendment, which he submitted in January 2016. The amendment will affect both Town and County exterior lighting standards and is being pursued in parallel in both jurisdictions. A Town Council Workshop was held June 20th on the amendment to invite feedback and questions from Council members. A Board of County Commissioners Workshop was held June 27th to also invite feedback and questions on the topic.

The attached amendment is a *revised draft* of what Wyoming Stargazing originally submitted. The revised draft reflects changes suggested by Staff and by the Planning Review Committee and that Wyoming Stargazing has agreed to incorporate into the amendment. Importantly, Wyoming Stargazing originally proposed changes to exterior lighting standards on private property, public property, and in the public right-of-way (specifically street lights). Staff recommended dividing the amendment into two parts – Part 1 being this amendment that addresses exterior lighting on private and public property and Part 2 being a separate amendment that addresses exterior lighting in the public right-of-way to be considered at a later date.

This amendment does not apply in the public right-of-way. The separation of the amendment into two parts will allow Staff to more carefully consider, at a later date, the safety implications associated with exterior lighting standards in the public right-of-way. In the future, staff intends to incorporate exterior lighting standards for the public right-of-way into our Community Streets Plan as well as the LDRs, thereby ensuring the use of lighting that is appropriate for the varying types of right-of-way (main thoroughfare, side street, bike path, etc).

While on the topic of public safety implications, it is worth noting that this amendment in no way requires the complete extinguishment of all lights after dark. Lighting at night is always permitted, and exceptions to the standards in this amendment are made where appropriate for public safety and for building code requirements. The overall intention of the amendment is to maintain public safety as paramount.

STAFF ANALYSIS

KEY ISSUE 1: Are the regulations usable by the public?

The amendment is designed to be easier for the public to understand than the old regulations. Illumination is measured in lumens, which is located on lighting packages. Correlated Color Temperature and Color Rendering Index are also included on most lighting packages. According to the applicant, the lighting industry is increasingly adopting the practice of incorporating these two measurements on packaging.

To ensure compliance with the regulations proposed in this amendment, landowners will be required to submit documentation proving adherence to the regulations with any physical development permit. Staff proposes to incorporate these submittal requirements into a brochure, which will also function as an educational tool for helping the public better understand the requirements of the standard. Staff also intends to work with Energy Conservation Works to help the public understand what is allowed and what is not allowed. The applicant has also expressed intentions to provide public outreach on the matter.

Submittal requirements will include the following:

1. The location and height of all light fixtures
2. Compliance with Sec. 5.3.1.C.4. prohibiting light trespass offsite. This can be demonstrated through submittal of one of the following:
 - a. A picture taken post-installation of the light fixture(s) showing zero illumination from the fixture at the property line, or
 - b. A sketch of the expected path of the light as determined by the cutoff angle of light as it is emitted from the light fixture, or
 - c. A photometric distribution map produced by a lighting professional showing no illumination at the property line

3. Lumens of each luminaire and the total lumens on the site
4. A description of the luminaires and any adaptive controls to be used to comply with Sec. 5.3.1.C.6 and 5.3.1.C.7. The description may include catalogue illustrations from the manufacturer.
5. Correlated Color Temperature and Color Rendering Index of lights as indicated on the light packaging

Landowners changing out light fixtures or light bulbs will not be required to submit the above prior to installation. However, if a compliance issue arises staff will expect the landowner to use the above submittal requirements to demonstrate compliance. The above submittal requirements will be required along with new physical development and staff will review a lighting replacement project if requested by a landowner.

KEY ISSUE 2: Impact on existing nonconforming lights

If this amendment is approved, existing lights and light fixtures that do not comply with the new regulation will become nonconforming and will be subject to the existing nonconformity regulations. There are essentially three categories of nonconformities that would be created by this amendment:

1. Nonconforming Light Fixtures. Light fixtures that do not cut off the light at the horizontal, that are affixed above the height limitations, or that do not incorporate adaptive controls will become nonconforming. The unshielded flood lights that many property owners have above their garages be nonconforming. It also means that the landscape lighting that some property owners direct upwards towards the sky in order to illuminate trees will be nonconforming.
2. Nonconforming Lights. Light bulbs that do not meet Correlated Color Temperature, Color Rendering Index, or limit on lumens from a single source become nonconforming if this amendment is passed. Lastly, those properties that exceed the maximum illumination specifications become nonconforming.
3. Nonconforming hours of illumination. Most landowners should have the ability to reduce their lighting by 30% or extinguish their lights altogether by 12 am. Similarly, they should also have the ability to extinguish their lights during the day. If, however, there is a situation where a 24 hour business requires nighttime illumination and does not have the ability to dim their lights by 30% or to turn off 30% of the lights on the property, they will be considering nonconforming.

Nonconforming lights and light fixtures are subject to Section 1.9.2.B of the LDRs. If they are replaced they must be brought into conformity. For example if you change out a fixture it must comply; if you change out a bulb it must comply with individual bulb standards. Replacement of a single fixture or bulb does not require replacement of all fixtures and bulbs. If the maximum illumination for a site is exceeded, a bulb maybe replaced so long as the amount of light for the entire site does not increase.

Nonconforming hours of illumination and cumulative amount of light on a site have to be remedied when the lighting on the site as a whole is being updated. Once a site is brought into compliance its past nonconforming status is lost and can no longer be used to justify lighting that does not comply.

Realistically, compliance with the new amendment will come more quickly and will be more effective if pursued through a public awareness and educational campaigns than if pursued only through the nonconformities provisions. Again, Staff intends to work with Energy Conservation Works and with the applicant to ensure there is public outreach on the new standards.

KEY ISSUE 3: Applicability

This amendment is designed mostly to limit commercial lighting. Commercial lighting along with lighting in the public-right-of-way is the predominant culprit for contributing to light pollution. As such, residential properties are exempted from the requirement to incorporate adaptive controls. Residential properties are also not required to reduce most of their exterior lighting at night, though they are required to reduce landscape lighting by 12 am. Most property owners do this already, and thus it serves to encourage an existing practice that improves neighbor

relations. As discussed, both Staff and the applicant will work to pursue ways to educate or encourage residential property owners to use adaptive controls and reduce exterior lighting.

There is some question whether lighting beneath covered decks should be exempted from some of the standards proposed in the amendment. The argument is that the canopy itself serves to shield the light from contributing to light pollution. Such light however is only exempted from the adaptive controls requirement for extinguishing lighting during the day. The justification for this is to ensure public safety in areas that may be poorly illuminated during the day. Lights under canopies should still be properly shielded because they can still contribute to light trespass. The deck canopy does not necessarily prevent light from spilling off of the deck onto the ground where it may also reflect back into the sky. Light shielding, however, can prevent both light trespass and can limit illumination to where it will be most useful – on the porch itself.

Lastly, it should be noted that the amendment applies only to exterior lighting. Any lighting located within what the LDRs define as a building is not regulated by the standards in this amendment. There has been some question as to whether lighting from greenhouses should be regulated. The Exterior Lighting Standards section is not the appropriate section for regulating greenhouse lighting because greenhouse lighting is interior.

KEY ISSUE 4: Special needs

The intent of the amendment is to promote safe lighting while limiting excessive lighting. In no way does the amendment propose to reduce illumination where needed for public safety or other special needs.

Throughout the amendment, exceptions to the standards are made for public safety. Lighting used by emergency response personnel is exempted from the entire Exterior Lighting Standard. The standard also exempts lighting used to ensure public safety (e.g., hospital, jail, airport, etc.) from the Adaptive Controls requirement and from the Lighting Reduction requirements. Lighting used for public safety is still required to be shielded at a 90 degree angle, stay within maximum lumen specifications, meet light color restrictions, prevent light trespass, and stay below 60 feet in height. These five standards actually serve to make lighting safer in that they reduce glare, ensure specific illumination of the intended area, and improve depth perception.

Exceptions similar to those made for public safety are made for Building Code requirements. Building Code lighting requirements are designed to ensure individuals can safely enter and exit a building. As such, all means of egress must be illuminated, this includes second and third floor doorways. Building Code lighting is therefore exempted from incorporating adaptive controls to extinguish lights during the day, reducing lighting at night, and from the height restriction. Like lighting for public safety, Building Code must follow shielding, maximum lumen, light color, and light trespass requirements, but again, these requirements are designed to improve visibility not to reduce it.

Findings for Approval

Pursuant to Section 8.7.1.C, *LDR Text Amendment Findings* of the LDRs, the advisability of amending the text of these LDRs is a matter committed to the legislative discretion of the Board of County Commissioners and is not controlled by any one factor. In deciding to adopt or deny a proposed LDR text amendment the Planning Commission shall consider factors including, but not limited to, the extent to which the proposed amendment:

1. Is consistent with the purposes and organization of the LDRs.

Complies. The purposes of the LDRs are enumerated in Division 1.3, and are generally to implement the Comprehensive Plan and to promote the health, safety, and general welfare of the present and future inhabitants of the community. This amendment is consistent with those purposes in that it helps to implement the Jackson/Teton County Comprehensive Plan and in that it considers the impacts of light pollution on the health of residents and wildlife in the community.

2. Improves the consistency of the LDRs with other provisions of the LDRs.

Complies. The amendment proposes more specific, more comprehensive standards for exterior lighting. This improves consistency of the exterior lighting standards with Div. 5.3. Scenic Standards, which states that “dark skies are vital to the community’s natural character.” The current standards do not achieve the same level of protection of this vital resource that the proposed amendment will do. The amendment also ensures consistency with other standards such as the Building Code. To illustrate, the Building Code has certain requirements for egress illumination, which are exempted from these standards.

3. Provides flexibility for landowners within standards that clearly define desired character.

Complies. The amendment more clearly defines the regulations for outdoor lighting and thus helps landowners understand where flexibility exists in terms of selecting outdoor lighting for their property. It also empowers landowners to understand their compliance with the regulation.

4. Is necessary to address changing conditions, public necessity, and/or state or federal legislation.

Complies. The permanent and effective population of Teton County continues to grow. With this growth, a growth in light pollution can also be expected. The Comprehensive Plan outlines dark skies as being integral to the natural character of this community. Not addressing the limitations in the current standard now will likely result in the installation of new light fixtures that will continue to contribute to light pollution for years to come.

5. Improves implementation of the Comprehensive Plan.

Complies. The proposed amendment directly reflects Principle 1.3: Maintain the scenic resources of the community and Policy 1.3.d.: Maintain dark skies. Policy 1.3.d. states that “non-essential lighting will be limited and all lighting will be designed to meet dark skies best practices,” with the exception of lighting needed for public safety. Strategy 1.3.S.2 of Principle 1.3 specifically recommends evaluating and amending lighting standards based on dark skies best practices. The amendment proposes best practices, as identified through work with the International Dark Sky Association (IDA) and review of other model lighting skies, for maintaining dark skies. The IDA is widely considered the leading authority on best exterior lighting practices for protecting night-time skies.

The amendment also works towards implementing other Comprehensive Plan principles including:

Principle 1.1 – Maintain healthy populations of all native species

Excessive exterior lighting has been shown to have negative impacts on wildlife, including impacts to circadian rhythms, night vision, and reproductive patterns.

Principle 2.1 – Reduce energy consumption of non-renewable energy

By reducing unnecessary lighting and incorporating adaptive controls, the amendment reduces energy consumption.

Principle 2.4 – Increase energy efficiency in buildings.

Again, the requirement for adaptive controls promotes energy efficiency and is in line with Policy 2.4.d, which recommends incorporating technology into building systems and appliances for conserving energy.

Principle 6.1 – Measure prosperity in natural and economic capital

By protecting dark skies and qualifying Jackson/Teton County as an International Dark Skies Community, the amendment increases opportunities for eco-tourism in the community and further establishes the community’s identity as a “green” community.

6. Is consistent with other adopted County Resolutions.

Complies. This amendment has no impact on other adopted County Resolutions.

DEPARTMENTAL REVIEWS

- Town Building Official, Steve Haines (no written comments received)
- County Building Official, Kelly Sluder (no written comments received)
- Parks and Recreation, Steve Ashworth (no written comments received)
- Pathways Coordinator, Brian Schilling (no written comments received)
- Police Chief, Todd Smith (comments attached)
- Town Engineer, Shawn O'Malley (no written comments received)
- START, Janice Sowder (no written comments received)

PUBLIC COMMENTS

Neighbor notifications were not sent for this application because it applies County-wide. To date, no comments specific to this amendment have been received. One comment specific to lighting in Town was submitted independently of this amendment and is attached.

ATTACHMENTS

1. Revised Amendment AMD2016-0002 dated June 29, 2016
2. Original Application
3. Departmental Reviews
4. Public Comment

RECOMMENDATION/CONDITIONS OF APPROVAL

Staff recommends **APPROVAL** of **AMD2016-0002**, amendments to the exterior lighting regulations, dated June 29, 2016.

SUGGESTED MOTION

I move to recommend **APPROVAL** of **AMD2016-0002**, amendments to the exterior lighting regulations, dated June 29, 2016; being able to make the findings recommended by staff.

Proposed Amendments to LDR 5.3.1. Exterior Lighting Standard (June 29, 2016)

5.3.1. EXTERIOR LIGHTING STANDARD

The purpose of this standard is to allow necessary and reasonable lighting of public and private property for the safety and convenience of occupants and the general public, while eliminating or reducing the nuisance and hazards of light pollution, including, but not limited to: glare, light trespass, sky glow, energy waste, and negative impacts on the nocturnal environment.

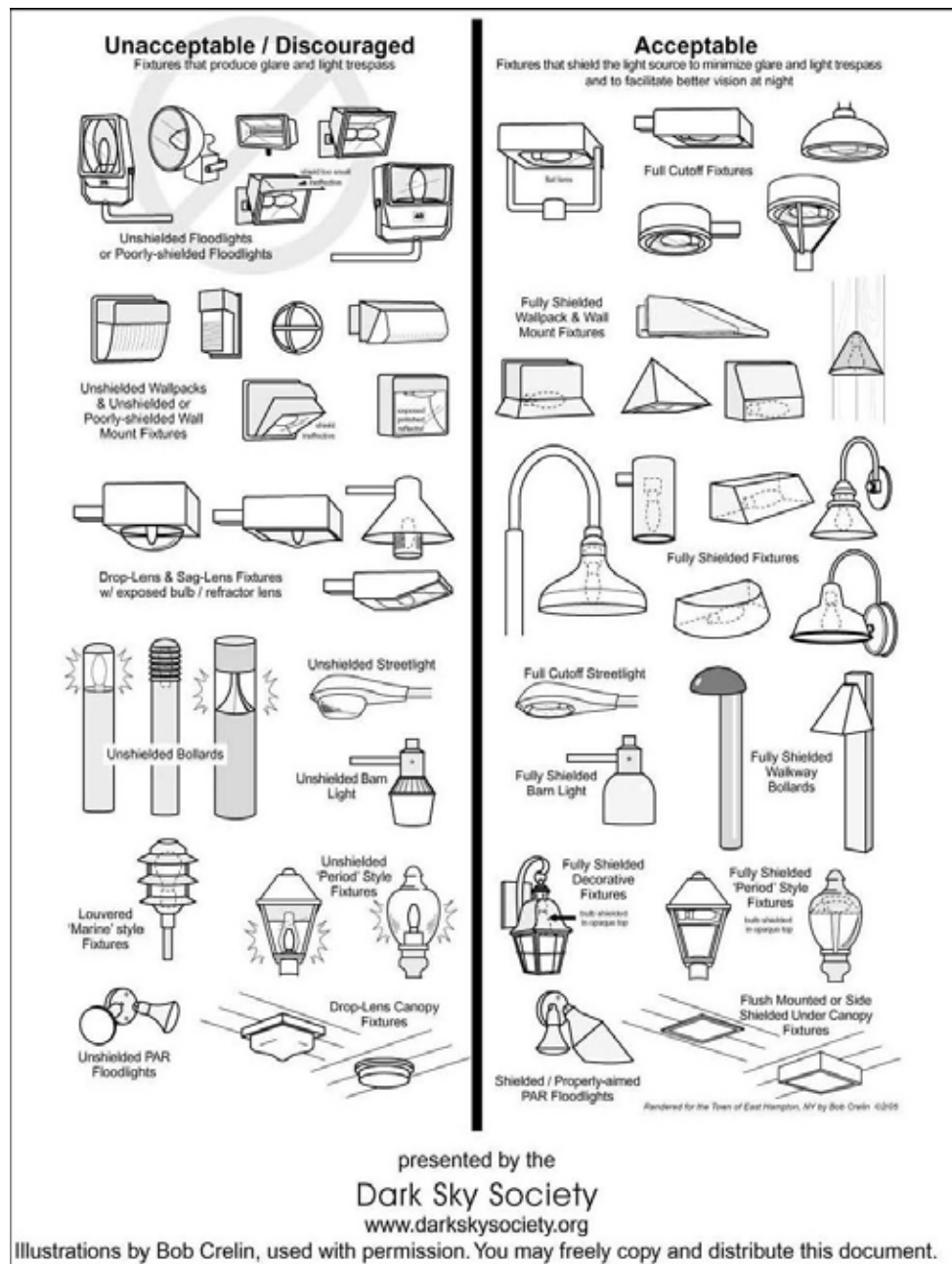
- A. Applicability. All exterior lighting, unless exempted below, shall comply with the regulations set forth in this Section. This includes, but is not limited to: lighting attached to structures, poles, the earth, or any other location, including lighting installed by any third party.

1. Exempt Lighting

- a. Lighting in the public right of way.
- b. Open flame gas lamps.
- c. Flagpole lighting that is directed downward from the top of the flagpole.
- d. Underwater lighting in swimming pools and other water features
- e. Lighting that is only used by emergency response personnel
- f. Lighting solely for signs (lighting for signs is regulated by Div. 5.6)
- g. Lighting used solely for agricultural purposes.

B. Standards.

1. Fully Shielded Light Fixtures. Any light source whose initial output exceeds 1,500 lumens shall be fully shielded. Any structural part of the luminaire providing full shielding shall be permanently attached. Fixtures shall be mounted such that no light is emitted above the horizontal plane of the fixture. Examples of Unshielded (Unacceptable/Discouraged) and Shielded (Acceptable) lights and luminaires limiting light to the horizontal plane are shown below.



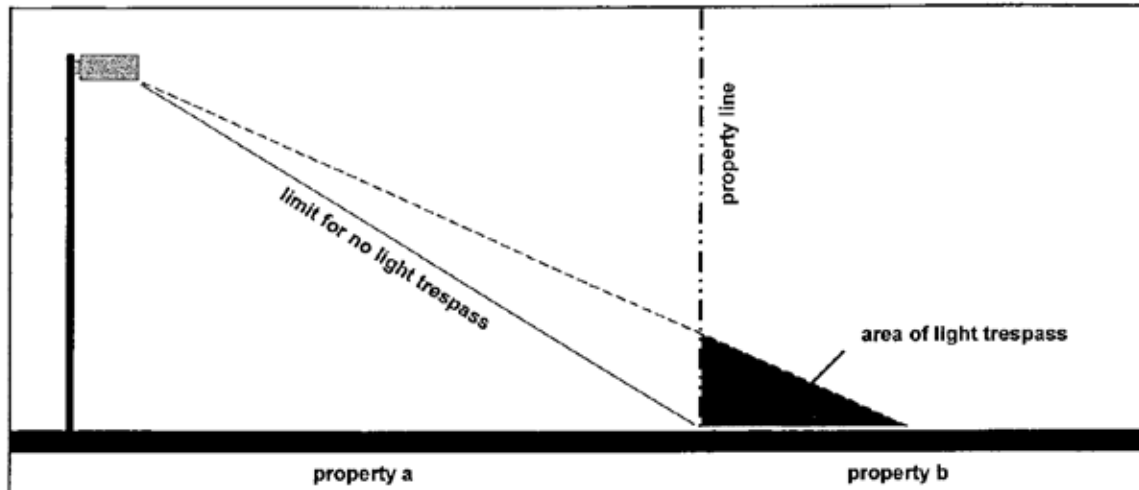
2. Total Exterior Light Output. Total exterior light output for light fixtures on a site shall not exceed the following limits shown in the table below. These lumen per acre and total site limits are upper limits and not a design goal; design goals should be the lowest levels of lighting possible.

How much light is permitted?	All Fixtures	Unshielded Fixtures (for lights emitting fewer than 1,500 lumens)
Maximum lumens per acre of site development:		
AC, WC, OP, BP, BC, MHP, P/SP, Park	50,000 per acre of site development	25,000 per acre of site development
Complex Uses (outdoor recreation, construction, etc. See Sec. E)	100,000 per acre of site development	Not applicable
Maximum lumens per site:		
AC, WC, OP, BP, MHP, P/SP, Park	250,000	250,000
AR, R-1, R-2, R-3, BC, NC, S, R	5,000 lumens per site for lots equal to or less than 1 acre. 10,000 lumens per site for lots greater than 1 acre.	2,500 lumens per site for lots equal to or less than 1 acre. 5,000 lumens per site for lots greater than 1 acre.

3. Light Color. Correlated color temperature of any exterior light source shall not exceed 3000 Kelvin. Color rendering index (Color Accuracy) of any outdoor light source shall not be less than 65.

Example: Many light bulb manufacturers include correlated color temperature on packaging. Where packaging does not indicate light color in Kelvins, it is often indicated in descriptive terms. Lights with a "cool" quality typically exceed 3000 Kelvin in color temperature. Light bulbs that create a more "warm" tone are typically under 3000 K.

4. Light Trespass. All lighting fixtures shall limit horizontal light levels at property lines to zero illumination as shown in the diagram below.

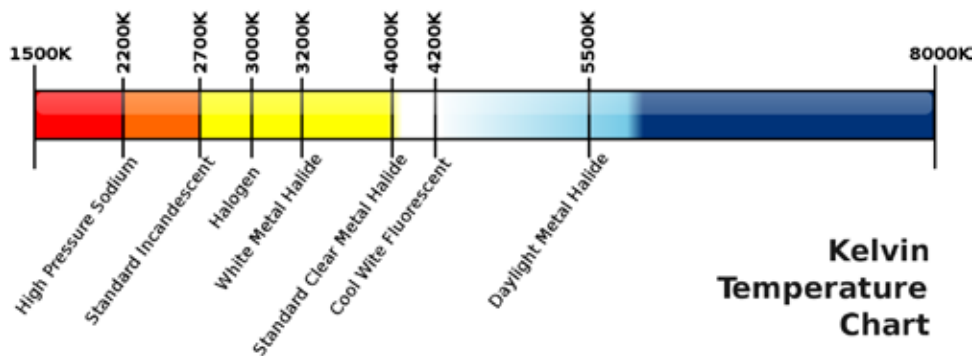


5. Maximum Height of Light Fixture. The maximum height of any luminaire on residential properties shall not exceed 15 feet. The maximum height of any luminaire on non-residential properties shall not exceed 18 feet.
 - a. Exception. Where lighting fixtures are required by Building Code to illuminate egress located above 15 and 18 feet, luminaires shall be permitted so long as they adhere to the other applicable standards in this Section.
6. Adaptive Controls. All lighting fixtures on nonresidential properties shall employ automatic lighting controls that extinguish exterior lighting when sufficient daylight is available. Such controls include, but are not limited to: timers, wireless remote monitoring with turn on/off capabilities, photo sensitive light controls, photoelectric switches, astronomic time switches or equivalent functions from a programmable lighting controller, building automation system or lighting energy management system, all with battery or similar backup power or device.
 - a. Exceptions:
 - i. Lighting required by Building Code
 - ii. Lighting necessary for public safety
 - iii. Lighting under canopies
 - iv. Lighting for tunnels, parking garages, garage entrances, and similar conditions.
7. Lighting Reduction. After 12:00 AM a site's total exterior lighting lumens shall be extinguished or reduced by at least 30%.
 - a. Exceptions:
 - i. Motion activated lighting
 - ii. Lighting affixed to residential buildings (Landscape lighting not affixed to a building remains subject to this Standard.)
 - iii. Lighting required by Building Code

- iv. Lighting necessary for public safety
 - v. Lighting governed by a conditional use permit in which times of operation are specifically identified
 - vi. When the exterior lighting consists of only one luminaire
- C. Prohibited Lighting. The following lighting systems are prohibited from being installed or used.
- 1. Flickering or flashing lights. No flickering or flashing lights shall be permitted.
 - 2. Searchlights. No searchlights, laser lights, aerial lasers, or holograms are permitted.
 - 3. Strings of Light. Strings or strands of lights used to highlight a sign, perimeter of a sign, or any portion of a building are not permitted, except for Christmas-type decorative lighting displayed between November 15 and January 10.
 - 4. Lighting in which any single luminaire exceeds 20,000 initial lumens.
- D. Complex Uses
- 1. Complex uses such as stadiums, ball diamonds, playing fields, outdoor rinks, ski areas, rodeo grounds, special events, tennis courts, construction sites, parking structures, urban parks, theme and amusement parks, ornamental and architectural lighting of bridges, public monuments, statuary and public buildings, correctional facilities, and industrial sites all have unique requirements for nighttime visibility and often have limited hours of operation. They shall be exempted from the above standards of this Section, if the below standards are met or if their lighting has been approved via issuance of a Conditional Use Permit or Special Event Permit.
 - a. Maximum height. Exterior luminaires shall not exceed a maximum post height of 60 feet.
 - b. Fully Shielded. Each luminaire shall be fully shielded in either its orientation or by landscaping to prohibit glare and light trespass to adjacent residential property and must be installed and maintained with minimum aiming angles of 25 degrees downward from the horizontal.
 - c. Lights Extinguished. Lights shall be extinguished by 10:00 PM or at the conclusion of events, whichever is later. Lighting is not allowed to remain on overnight.
 - d. Maximum lumens. Overall site lumens shall not exceed 100,000 lumens.

Definitions:

Correlated color temperature. Correlated color temperature indicates the 'warmth' or the 'coolness' of a light's appearance (see image below). Color temperature is generally indicated on light bulb packaging. Specifically, correlated color temperature is defined as the absolute temperature of a blackbody radiator whose chromaticity most nearly resembles that of the light source.



Color rendering index (CRI). Color rendering index indicates the accuracy of an object's coloring when illuminated by a light. It is the measurement of the degree of color shift objects undergo when illuminated by the light source as compared to those same objects when illuminated by a reference source of comparable color temperature. It is also referred to as Color Accuracy. CRI is generally indicated on light bulb packaging.

Fully shielded light fixtures. Fully shielded light fixtures are luminaires that are constructed and installed in such a manner that all light emitted by the luminaire, either directly from the lamp or a diffusing element, or indirectly by reflection or refraction from any part of the luminaire, is projected below the horizontal plane through the luminaire's lowest light-emitting part as determined by photometric test or certified by the manufacturer. This applies to all lateral angles around the luminaire.

Glare. Glare means lighting entering the eye directly from luminaires or indirectly from reflective surfaces that causes visual discomfort or reduced visibility.

Luminaire. Luminaire means a complete lighting fixture, consisting of a lamp, or lamps and ballast(s) (when applicable), together with the parts designed to distribute the light from the fixture (i.e., reflector, lens, diffuser), to position and protect the fixture, and to connect the fixture to the power supply.

Light trespass. Light trespass means lighting that falls beyond the boundaries of the property from which it is emitted.

Lumen. Lumen is a measure of light emission. Lumen measurements are commonly indicated on light bulb packaging. Specifically, a lumen is the amount of light emitted per second in a unit solid angle of one steradian from a uniform source of one candela.

Application for a
Land Development Regulation
Amendment

Submittal date: January 6th, 2016

Applicant:

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Introduction

This application proposes to amend Article 5. Physical Development Standards Applicable in All Zones, Div. 5.3. Scenic Standards, 5.3.1. Exterior Lighting Standards as adopted by Teton County/Town of Jackson Land Development Regulations. The current exterior lighting standards used by the Town and County are outdated and do not provide the necessary protections to safeguard the natural resource of dark skies. A much more comprehensive exterior lighting standard is necessary in order reach the goals set forth in Policy 1.3.d: Maintain dark night skies in the Comprehensive Plan's Environmental Stewardship Section. In accordance with requirements set forth in the Land Development Regulations this application will outline how the proposed amendment to the exterior lighting standard:

- Is consistent with the purposes and organization of the LDRs;
- Improves the consistency of the LDRs with other provisions of the LDRs;
- Provides flexibility for landowners within standards that clearly define desired character;
- Is necessary to address changing conditions, public necessity, and/or state or federal legislation;
- Improves implementation of the Comprehensive Plan; and
- Is consistent with other adopted Town Ordinances.

Exterior Lighting Standard Overview: Maintaining Dark Skies

The Exterior Lighting Standard (5.3.1.) is intended "to allow necessary and reasonable lighting of public and private property for the safety, security, and convenience of occupants and the general public, while eliminating or reducing the nuisance and hazards of excessive light and glare." It is a section within the Scenic Standards Division (5.3) of the County/Town LDRs which states that "dark skies are vital to the community's natural character."

Preservation of the community's natural character is the central focus of the Vision and Common Values set forth in the Comprehensive Plan. That Plan states that "to achieve our desired community character, the community must protect and enhance the ecosystem in which we live." Specifically, the Plan highlights the importance of maintaining dark skies in policy 1.3.d. That policy suggests that:

The prominence of nature over the built environment should extend beyond daytime viewsheds. Lighting of individual developments cumulatively impacts the ability to see dark and starry night skies. Although lighting is required for public safety, especially along pedestrian corridors, non-essential lighting will be limited and all lighting will be designed to meet dark skies best practices. Existing development will also be encouraged to implement best practices.

In addition to that specific policy and to the language within the Scenic Standard Division within the LDRs, the following principles of all three Common Values within the Comprehensive Plan support and are supported by the intentions of an exterior lighting standard:

- Maintain healthy populations of all native species (Principle 1.1)
- Protect and steward open space (Principle 1.4)
- Reduce consumption of non-renewable energy (Principle 2.1)
- Promote vibrant, walkable mixed use areas (Principle 4.2)
- Enhance civic spaces, social functions, and environmental amenities to make Town a more desirable Complete Neighborhood (Principle 4.4)
- Measure prosperity in natural and economic capital (Principle 6.1)
- Promote a stable and diverse economy (Principle 6.2)

Proposed Comprehensive Exterior Lighting Standard Overview

Unfortunately, the current Exterior Lighting Standard 5.3.1. is failing to maintain dark skies in the ways that the Scenic Standard 5.3 in the LDRs and Policy 1.3.d. in the Comprehensive Plan suggest that it should be maintained. Two poignant examples are along the new bike path on West Broadway and in the newly paved parking lot next to Miller Park where the skies have become much less dark because of unshielded lighting that was recently installed. In order to maintain and restore Jackson Hole's dark night skies a new comprehensive exterior lighting standard is necessary.

Our proposal is a comprehensive exterior lighting standard that emphasizes the restoration of dark skies in Teton County by requiring fully shielded light fixtures on all luminaires that exceed 1500 lumens of initial light output, by limiting the total light output/acre, by requiring specific color temperature of luminaires, and by regulating new exterior lighting installations with curfews and adaptive controls. Our proposal uses best practice language from the most up-to-date and effective dark sky ordinances used around the country that are in-line with standards set forth by the International Dark Sky Association.

Consistency with LDRs

We have left the structure and placement of the exterior lighting standard intact within the LDRs so that it remains consistent with the purpose and organization of the LDRs. Furthermore, our proposed exterior lighting standard improves consistency with the language in the Scenic Standard Division by more effectively maintaining the "dark skies [that] are vital to the community's natural character." It is also more consistent with the intent of the original exterior lighting standard as it promotes increased safety and security by reducing glare through the use of fully shielded luminaires.

Clear Definitions and Flexibility

Our proposal removes contradictory language, exceptions, and exemptions from the current exterior lighting standard. Doing so improves the clarity of the desired community character that this standard is focused on maintaining, namely dark night skies. The addition of clear and precise definitions assists property owners and developers to easily understand how to be in compliance with the new standards for several specific types of lights and uses. Furthermore, our decision of restricting the requirements of fully shielded fixtures by total output, as well as by only limiting total light output by acre allows a large amount of flexibility for selecting outdoor luminaires below those maximum outputs and the placement of lighting within property boundaries.

Necessity of Addressing Changing Conditions

Development in Jackson including, but not limited to new walkways, new bike pathways, and driving bypasses require extensive new exterior lighting. Careful decision making is necessary to maintain our dark night skies during this development. The current exterior lighting standard fails as an adequate guideline for making those decisions, however, our proposed standard provides that guidance. Furthermore, with new advanced dark sky lighting and adaptive controls becoming more widely available and affordable, a more comprehensive exterior lighting standard, such as our proposed standard, is much more easily implemented as compared to the situation that existed when the original exterior lighting standard was adopted.

Improved Implementation of the Comprehensive Plan

The Comprehensive Plan is clear and direct in its intent to maintain dark night skies as part of preserving ecological aspects of Jackson's community character. Unfortunately, that section of the Comprehensive Plan seems to have been largely unimplemented in decision making regarding exterior lighting at the Town or County levels. Our proposed exterior lighting standard aims to maintain and restore dark night skies using "best practices"--as is proposed in Policy 1.3.d.--that have been approved by the International Dark Sky Association, one of the global leaders in promoting dark sky legislation. If followed, our proposed exterior lighting standard would lead to precise, accurate, and complete implementation of Policy 1.3.d of the Comprehensive Plan.

In addition, our proposed Exterior Lighting Standard supports implementation of other policies from all three common values of the Comprehensive Plan. The adverse effects of outdoor artificial lighting at night on wildlife have been well documented. Implementing our standard will reduce those adverse effects and thus will help to "maintain healthy populations of all native species" (Principle 1.1). Reducing light pollution will also "protect and steward open spaces" (Principle 1.4), as well as "reduce consumption of non-renewable energy" (Principle 2.1). Outdoor lighting in compliance with our standard will lead to increased safety, security, and the outdoor aesthetic of Jackson thus "promoting vibrant, walkable mixed use areas"

(Principle 4.2), as well as “enhanc[ing] civic spaces and environmental amenities [which] make Town a more desirable Complete Neighborhood” (Principle 4.4). Furthermore, restoring and promoting our dark skies will provide an opportunity to “measure prosperity in natural...capital” (Principle 6.1) as many other Amenity West communities have done. Promoting Jackson as a dark sky community will likely help to “promote a stable and diverse economy (Principle 6.2) as it has in those other Amenity West Communities.

Consistency with Town Ordinances

To the best of our knowledge there are no inconsistencies with our exterior lighting standard and any adopted Town or County Ordinances. However, there is currently an inconsistency between the Town and County versions of the current Exterior Lighting Standard. That inconsistency regarding antique or ornamental luminaires would no longer be an issue if our exterior lighting standard is adopted at both the Town and County levels. There is also an unadopted Town Construction Standard for Mid Block Street Lights that would need to be replaced in order for it to be consistent with Policy 1.3.d. of the Comprehensive Plan and our proposed Exterior Lighting Standard.

Summary

Fully implementing the Comprehensive Plan’s objectives pertaining to maintaining dark night skies through compliance of the LDRs will require a large degree of cooperation and committed effort from both the private and public sectors. Due to the development of new walkways, biking pathways, and eventually new roadways that all require new exterior lighting, as well as recent advances in dark sky lighting technology and availability, current Town and County guidance necessitates an amendment to the exterior lighting standard. After a great deal of independent research and correspondence with the International Dark Sky Association we believe that a more comprehensive exterior lighting standard is necessary in order to more fully implement the Vision, Common Values, and specific policies of the Comprehensive Plan regarding maintaining dark night skies. Enhancing the current exterior lighting standard by adopting our proposed amendment will meet that need and will make Jackson a leader among Amenity West Communities in our preservation of this often overlooked natural resource that is a crucial part of our community character.

In summary, approving this amendment:

- **Is consistent with the purposes and organization of the LDRs** by preserving the current Exterior Lighting Standards intent, structure, and placement within the LDRs.
- **Improves the consistency of the LDRs with other provisions of the LDRs** by more closely adhering to the language set forth in the Scenic Standard Division.
- **Provides flexibility for landowners within standards that clearly define desired character** by removing inconsistencies, exemptions, and exceptions from the current

exterior Lighting Standard and additional clear, accurate, and precise definitions of lighting types and uses.

- **Is necessary to address changing conditions** brought on by development of walkways, bike pathways, and upcoming driving bypasses that will require the installation of exterior lighting that is carefully selected with appropriate guidelines found in our proposal.
- **Improves implementation of the Comprehensive Plan** by beginning to implement Policy 1.3.d. and by supporting other policies within all three common values.
- **Is consistent with other adopted Town Ordinances** and will provide guidance on adopting a compliant Town Construction Standard for Mid Block Street Lights.

Proposed Amendments to LDR 5.3.1.: Exterior Lighting Standard

5.3.1. EXTERIOR LIGHTING STANDARD

- I. Purpose. The purpose of this standard is to allow necessary and reasonable lighting of public and private property for the safety and convenience of occupants and the general public, while eliminating or reducing the nuisance and hazards of light pollution, defined in this ordinance as including, but not limited to: glare, light trespass, sky glow, energy waste, compromised safety and security, and impacts on the nocturnal environment. Specifically, the ordinance will:
 - A. Permit the use of exterior lighting that does not exceed the maximum levels specified in Illuminating Engineering Society recommended practices for night-time safety, utility, security, productivity, enjoyment, and commerce.
 - B. Minimize adverse offsite impacts of lighting such as light trespass and obtrusive light.
 - C. Curtail light pollution, reduce skyglow, and improve the nighttime environment for the appreciation of residents and visitors.
 - D. Help protect the natural environment from the adverse effects of night lighting.
 - E. Conserve energy and resources to the greatest extent possible.
- II. General Requirements.
 - A. All exterior lighting, unless otherwise noted below, installed prior to the effective date of the Section, shall meet the requirements of this Section on January 1st, 2021, and shall be considered nonconforming if they do not comply with the requirements of this Section by that date.
- III. Standards.
 - A. Luminaries. The maximum permitted illumination and mounting height of the luminaire or fixture for all zones shall be determined by the standards contained in the current edition of the Illuminating Engineering Society of North America (IESNA) Lighting Handbook in section RP-33 "Lighting for Exterior Environments".
 - B. Fully Shielded Light Fixtures. Any luminaire whose initial output exceeds 1500 lumens shall be fully shielded. Any structural part of the luminaire providing full shielding shall be permanently attached. Fixtures shall be mounted such that no light is emitted above the horizontal plane of the fixture. Furthermore, no emitted light within a property line shall radiate onto an adjacent property.
 1. Exceptions:
 - a) Open flame gas lamps.

- b) Lighting installed with a vacancy sensor, where the sensor extinguishes the lights no more than 5 minutes after the area is vacated.
- C. Total Exterior Light Output. Total exterior light output for fully shielded light fixtures, excluding streetlights and pedestrian lighting used to illuminate public rights-of-way and any interior lighting, shall not exceed the following limits averaged over the entire development: 50,000 lumens per acre non-residential and 5,000 lumens per acre residential. Furthermore, the total lumens per non-residential development shall not exceed 250,000 lumens and the total lumens per residential development shall not exceed 25,000 lumens even if said developments are larger than 5 acres in size. The total exterior light output limits on unshielded light fixtures shall be 10% of the above values. These lumen per net acre limits are upper limits and not a design goal; design goals should be the lowest levels that meet the requirement of the task.
- D. Light Color. Correlated color temperature of any exterior light source shall not exceed 3000 Kelvin. Color rendering index of any outdoor light source shall not be less than 65.
- E. Installation of New Exterior Lighting Fixtures. New outdoor lighting fixtures shall only be allowed when new buildings and infrastructure are constructed and when existing buildings and infrastructures are modified with physical alterations or by a change of use and the need for outdoor lighting to provide nighttime safety and utility is deemed necessary by the City/County. New lighting fixtures may also be installed on existing buildings and infrastructure in the case where the City/County determines that a hazardous nighttime situation exists.
- F. Installation of New Street Lights. With the establishment of any new subdivision development where street rights-of-way will be dedicated to the City/County, the City/County shall not allow the installation of street lights. In rare cases where it is determined that a street light is deemed necessary in public rights-of way for safety and/or security needs, all lighting will adhere to these standards.
- G. Lighting Reduction. The City/County shall establish curfew time(s) after which total exterior lighting lumens shall be reduced by at least 30% or extinguished when they are not necessary for public safety.
 - 1. Lighting reductions are not required for any of the following:
 - a) With the exception of landscape lighting, lighting for residential properties including multiple residential properties not having common areas.
 - b) Code required lighting for steps, stairs, walkways, and building entrances.

- c) When in the opinion of the Authority, lighting levels must be maintained.
- d) Motion activated lighting.
- e) Lighting governed by special use permit in which times of operation are specifically identified.
- f) Businesses that operate on a 24 hour basis when the outdoor lighting consists of only one luminaire.

H. Adaptive Controls. Exclusive of any lighting fixtures necessary for public safety concerns such as, pedestrian walkways, stairways and entryways with security needs, and where additional restrictions on such lighting fixtures could create unsafe or hazardous conditions for the public or employees, all new lighting fixtures shall employ adaptive controls that automatically extinguish all exterior lighting when sufficient daylight is available. Such controls include but are not limited to motion detection sensors, timers, wireless remote monitoring with turn on/off capabilities, photo sensitive light controls, photoelectric switches, astronomic time switches or equivalent functions from a programmable lighting controller, building automation system or lighting energy management system, all with battery or similar backup power or device.

1. Exceptions: Automatic lighting controls are not required for the following:

- a) Lighting under canopies.
- b) Lighting for tunnels, parking garages, garage entrances, and similar conditions.

IV. Exemptions. The following are not regulated by this standard:

- A. Flag Poles. Flagpole lighting is permitted when the lighting is directed downward from the top of the flagpole using a solar or battery powered device.
- B. Underwater lighting in swimming pools and other water features.
- C. Lighting that is only used by emergency response personnel.

V. Special Standards

A. Prohibited Lighting. The following lighting systems are prohibited from being installed or used.

- 1. Flickering or flashing lights. No flickering or flashing lights shall be permitted.
- 2. Searchlights. No searchlights, laser lights, aerial lasers, or holograms are permitted, with the exception of hand held laser pointers.
- 3. Strings of Light. Strings or strands of lights used to highlight a sign, perimeter of a sign, or any portion of a building are not permitted, except for Christmas-type decorative lighting displayed between November 15 and

January 10, and except that, where "alpine" lights were legally in use on October 12, 1994, such use is allowed to continue, including expansions approved by the Town of Jackson.

4. Temporary lighting in which any single luminaire exceeds 20,000 initial luminaire lumens or the total lighting load exceeds 160,000 lumens.
 5. Other very intense lighting defined as having a light source exceeding 200,000 initial luminaire lumens or an intensity in any direction of more than 2,000,000 candelas.
- A. Complex and Non-Conforming Uses. Facilities such as stadiums, ball diamonds, playing fields, outdoor rinks, ski areas, tennis courts, as well as construction sites, parking structures, urban parks, theme and amusement parks, ornamental and architectural lighting of bridges, public monuments, statuary and public buildings, correctional facilities and industrial sites having special requirements, such as petrochemical manufacturing or storage, shipping piers, etc. all have unique requirements for nighttime visibility and generally may have limited hours of operation. They shall be exempted from these standards, if the below standards are met.
1. Complies with requirements. The proposed development meets all other requirements of these Land Development Regulations and the applicable standards as contained in the current edition of Illuminating Engineering Society of North America (IESNA) Lighting Handbook RP-6 ("Sports and Recreation Area Lighting"), as determined by the Planning Director. The Planning Director or applicant may refer detailed lighting plans for compliance with these provisions to the Town Council. (Ord. 623 § 1, 1999).
 2. Do not exceed maximum height. Exterior light sources do not exceed a maximum post height of forty (40) feet, unless an alternative height is approved via issuance of a Conditional use permit pursuant to Section 5140, Conditional and Special Use.
 3. Luminaire Fully Shielded. The luminaire must be fully shielded in either its orientation or by landscaping to prevent glare and light trespass to adjacent residential property and must be installed and maintained with minimum aiming angles of 25 degrees downward from the horizontal. The maximum permitted illumination at the nearest interior setback line for a principal residential structure shall not exceed 5.4 lux (0.5 footcandle).
 4. Lights Extinguished. Lights are extinguished by 10PM or at the conclusion of events, whichever is later. Lighting is not allowed to remain on overnight.
 5. Overall site lumens are capped at 100,000 lumens per acre to prevent situations where nighttime light levels are almost comparable to daylight.

Definitions:

- A. *Correlated color temperature* means the absolute temperature of a blackbody radiator whose chromaticity most nearly resembles that of the light source.
- B. *Color rendering index* means a measurement of the degree of color shift objects undergo when illuminated by the light source as compared to those same objects when illuminated by a reference source of comparable color temperature.
- C. *Footcandle* is the unit of measurement expressing the quantity of light received on a surface. One footcandle is the illuminance produced by a candle on a surface one foot square from a distance of one foot.
- D. *Fully shielded light fixtures* are luminaires that are constructed and installed in such a manner that all light emitted by the luminaire, either directly from the lamp or a diffusing element, or indirectly by reflection or refraction from any part of the luminaire, is projected below the horizontal plane through the luminaire's lowest light-emitting part as determined by photometric test or certified by the manufacturer. This applies to all lateral angles around the luminaire.
- E. *Glare* means lighting entering the eye directly from luminaires or indirectly from reflective surfaces that causes visual discomfort or reduced visibility.
- F. *Luminaire* means a complete lighting fixture, consisting of a lamp, or lamps and ballast(s) (when applicable), together with the parts designed to distribute the light from the fixture (i.e., reflector, lens, diffuser), to position and protect the fixture, and to connect the fixture to the power supply.
- G. *Light trespass* means lighting that falls beyond the boundaries of the property it is intended to illuminate.
- H. *Lumen* is the amount of light emitted per second in a unit solid angle of one steradian from a uniform source of one candela.
- I. *Lux* means one lumen per square meter.
- J. *Sky glow* means the brightening of the nighttime sky that results from scattering and reflection of artificial light by moisture and dust particles in the atmosphere, caused by light directed or reflected upwards or sideways, and, which reduces ability to view the night sky.

Town of Jackson
Project Plan Review History

Project Number P16-051
Project Name Lighting - LDR Amendment
Type LAND DEV REGS
Subtype TEXT AMENDMENT
Status STAFF REVIEW

Applied 4/26/2016
Approved JC
Closed
Expired
Status

Applicant**Owner****Site Address****City****State****Zip****Subdivision****Parcel No****General Plan**

Type of Review	Status	Dates			Remarks
		Sent	Due	Received	
Building Steve Haines		4/26/2016	5/3/2016		

Fire None		4/26/2016	5/3/2016		
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Legal A Cohen-Davis		4/26/2016	5/3/2016		
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Parks and Rec None		4/26/2016	5/3/2016		
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Pathways Brian Schilling		4/26/2016	5/3/2016		
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Planning Tyler Sinclair		4/26/2016	5/3/2016		
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Police None	APPROVED W/CONDITI	4/26/2016	5/3/2016	4/27/2016	
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In reading this, I wonder who and how the TOJ decides what lighting is for safety? Lighting prevents crime, which is closely tied to safety and would appear to be difficult in defining who needs to be safe vs. who does not.

Todd Smith

Type of Review Contact Notes	Status	Dates			
		Sent	Due	Received	Remarks
Public Works Shawn OMalley		4/26/2016	5/3/2016		
.....					
START Janice Sowder		4/26/2016	5/3/2016		
.....					
TC Housing Authority None		4/26/2016	5/3/2016		
.....					

Public Comment

Don,

I thought I would address this to you and let you pass it on to other council member.

I'm not sure why the lights are on in the rodeo grounds ALL NIGHT 7 days a week?

I know they have broom ball but that certainly isn't played until the sun comes up in the morning.

It seems like Jackson has taken a step back since the early 90's and is not addressing light pollution in the valley.

Other examples would be the street lights placed on Broadway, Cache and other streets that do not direct the light down. Actually the few lights that DO direct the light down provide more light.

We now call the new vertical garden the towering inferno as that's what it looks like from Snow King. (and the lights are on 24/7 there as well)

We are loosing our ability to enjoy the night sky because of all the light pollution that the town is allowing to be installed.

I would love to see the council address what can be done to reduce light pollution perhaps by looking what is being done in other towns. Even Boulder Colorado has a very stringent policy on lighting to reduce the effects on their town

Thanks

Jeff

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