

1. 2:00 P.M. Agenda

Documents:

[2020-06-16 Planning Commission Work Session Agenda.pdf](#)

2. 2:00 P.M. Meeting Materials

Documents:

[2020-05-19 Planning Work Session Minutes.pdf](#)

[2020-06-16 Danos Lighting Notes After May 19.Pdf](#)

[2020-06-16 Lighting Draft Ordinance.pdf](#)

[2020-06-16 Lighting Research Dickinson.pdf](#)

[2020-06-16 Mattison Lighiting Code Ideas.pdf](#)



CITY OF YACHATS
PLANNING COMMISSION MEETING
441 Hwy 101 N., Yachats Commons, Room 1
Tuesday, June 16, 2020: 3:00 pm

You can join to the meeting using the following means:

Join Zoom Meeting

TBD

WORK SESSION AGENDA

- I. Call to Order
- II. Minutes
 - a. May 19, 2020 Work Session and Regular Meetings
- III. Business
 - a. Lighting Draft Ordinance
 - b. Danos – Lighting Notes 5/19/20
 - c. Dickinson – Lighting Research
 - d. Planner – Lighting Code Ideas
- VI. Other
 - A. From the Commission
 - B. From Staff

Commission meets the third Tuesday of each month.

This meeting is open to the public and all interested persons are invited to attend via *Zoom*. Minutes of all public meetings are available for review on the City website at www.yachatsoregon.org.

In accordance with ORS 192.630, City of Yachats will make a good faith effort to provide accommodations for any person desiring to attend a public meeting, if the request is made at least 48 hours in advance of the meeting time. Call City Hall at 541-547-3565 or Oregon Relay 1-800-735-2900 (TDD).

This meeting is open to the public and all interested persons are invited to attend. This meeting will be audio taped. All items to be considered by the Commission must be submitted to City Hall no later than one week prior to the meeting. Minutes of all public meetings are available for review at City Hall, or on the City website at www.yachatsoregon.org. In accordance with ORS 192.630, City of Yachats will make a good faith effort to provide accommodations for any person desiring to attend a public meeting, if the request is made at least 48 hours in advance of the meeting time. The meeting room is physically accessible to persons with mobility devices; a sign language or foreign language interpreter may be available, with advance notice. Call City Hall at 541- 547-3565 or Oregon Relay 1- 800-735-2900 (TDD) two days in advance. Posted 5/8/20



City of Yachats

YACHATS PLANNING COMMISSION

May 19, 2020

Work Session Draft Minutes

Vice-Chair Lance Bloch called the May 19, 2020 work session of the Yachats Planning Commission to order at 2:06 pm via Zoom. Members present: Helen Anderson, Lance Bloch, Jacqueline Danos Christine Orchard, Mary Ellen O'Shaughnessey, and Loren Dickinson. Absent: Doug Conner. Staff Present: City Planner Dave Mattison, City Manager Shannon Beaucaire, and Deputy Clerk Kimmie Jackson. Also present: COG Planner Justin Peterson. Audience: 3.

I. City Manager Report

Manager Beaucaire recalled a plan to have the Council of Governments (COG) hire a Coastal Planner for Yachats (2 days per week), Waldport (2 days per week), and Toledo (1 day per week). She reported the pandemic has altered the hiring process so Planner Dave Mattison will be working to transition the City Planning duties to COG Planner Justin Peterson until the Coastal Planner position is filled. She reported Mattison's contract will end on June 30, 2020.

II. Lighting Ordinance Draft

Bloch confirmed all Commissioners had reviewed the latest draft of the lighting ordinance.

For Section 9.42.050.C - Commercial Uses

Pole Heights

Commissioner Danos recalled someone was going to explore pole heights and suggested more shorter poles were preferable. Bloch clarified that the poles would be limited to 30 feet as that was the limit on building heights. He suggested considering a height limit of 25 feet.

Commissioner Dickinson recalled 24-25 feet for pole height was a common standard. Danos noted the increased potential for trespass lighting with taller light poles. Bloch noted there was a trespass lighting restriction elsewhere in the code. Danos believed the higher pole lights were more glaring from distances. Dickinson added that it was harder to get cutoff lighting as pole heights increased.

1 Danos suggested Commissioners research pole heights and bring results back to the
2 next meeting. Several Commissioners leaned toward a 20 feet limit. Commissioner
3 Anderson suggested setting a height limit of 20 feet and asked that Commissioners
4 submit alternative limits if they find information that would warrant something different.
5

6 High Intensity Lights

7 Danos recalled that the issue for “high intensity” lights was to limit brightness and color
8 of intense lighting. Peterson suggested setting a limit using lumens as that was what
9 was used in the residential section. He noted a heat (color temperature) could be
10 added as well. Anderson noted residential properties have a limit of 800 lumens per
11 light, but there was not one for multi-family lots.
12

13 Bloch noted that the total lumens for a commercial site would likely be a factor of the
14 size of the lot. Anderson suggested they could use a lumens per square foot. Danos
15 suggested looking up what other cities have done in their commercial lighting. Danos
16 volunteered to do this research.
17

18 Bloch recalled that the maximum on multi-family lots was not the same as residential
19 because those lots might need higher lumen lights for parking areas.
20

21 Dickinson recalled that commercial properties have greater concern for safety and
22 security rather than parking lighting. Dickinson indicated he would research this issue.
23

24 Lower Level Security Lighting Clarification

25 Commissioners discussed Item 2 on lower level security lighting. Anderson clarified
26 that businesses can leave on their internal lights. Bloch suggested that when
27 businesses are closed, they follow the residential lighting. Dickinson noted there could
28 be issues with having to have two sets of regulations. Mattison suggested simply
29 creating a definition for “security lighting.”
30

31 Commissioners discussed possible definitions of security lighting, including lighting that
32 addresses ingress and egress for buildings and maximum height. Bloch noted some
33 buildings have second stories, so it might be useful to say the lighting cannot exceed
34 the building height.
35

36 Commissioners discussed lighting at driveway entrances. Orchard noted reflector lights
37 could serve that purpose.
38

39 There was consensus to add “except for security lighting at doors and pathways” to
40 9.42.050.C.2.
41

42 Mattison suggested adding a definition for “area of illumination.”
43

44 Time to Come into Compliance

45 Peterson raised an issue about the time to come into compliance. He noted the
46 language implies that compliance is required within 30 days of passage, so it sounded

1 like poles must be shortened to 20 feet within 30 days. Commissioners discussed how
2 to create language to allow for existing poles to remain. Anderson suggested that
3 requirement 5 be phrased in terms of "new installations." Danos wanted to ensure a
4 major remodel would be considered a new installation. Peterson suggested using the
5 language from nonconforming signs that refers to 50% replacement value. Peterson
6 noted they would need to make it clear whether the 50% would be calculated as a
7 function of the site or a particular pole. Dickinson stated that changing one pole among
8 several in a parking lot can lead to extensive construction costs, as a shorter pole might
9 require additional poles and additional costs.

10
11 Orchard noted high output light in Bend was defined as more than 1,800 lumens.

12
13 Bloch asked Commissioners to get their input to the Chair before the next meeting.

14
15 Deputy Recorder Jackson read a chat question that indicated the Model Lighting
16 Ordinance has definitions.

17
18 Bloch adjourned the work session at 3:11 pm.

19
20
21
22
23 _____
Lance Bloch, Vice-Chair

Date

24
25 Minutes prepared by H H Anderson on June 5, 2020.
26

I apologize for not being totally present going over the lighting ordinance. I have had other things in my brain and lighting simply got pushed out of frame. I only looked into the areas I volunteered for yesterday but will take a better look through the ordinance draft Dave & I wrote up a while back to make sure there isn't anything I missed on my reading of this one.

In re-reading the ordinance we already cover repairs to existing luminaires in General Lighting Requirements C (Exceptions) 4: Repairs to existing luminaires not exceeding 25% of the total value of the luminaire.

So the issues raised regarding current light poles and one being broken has been covered here.

If we as a group feel this doesn't cover the issue enough I have highlighted below in green another option from Omak, WA.

I have also included a few other samples of wording we might want to look at. I highlighted in green the parts I think we should take into consideration. I believe the wording from Pittsburgh regarding resumption of use after abandonment should be included.

Why do we include this this particular temperature choice? Maybe a typo - Meant to read: Residential luminaires shall not exceed 3,000 Kelvin?

Residential luminaires shall be 3,000 Kelvin or higher.

This is from the Boulder, Co lighting ordinance:

No lights should have a color temperature of over 3,000 degrees Kelvin

This is listed on most light fixture packaging n Lights of 3,000 degrees Kelvin are usually called "warm white," and are similar to the color of an indoor incandescent bulb

High-color-temperature lights are often called "daylight white."

These include most outdoor LED lights (there are 3,000-degree versions available, for no additional cost).

We do not prohibit uplighting and I believe that we should. Those are lights directed upwards to either highlight the front of a building, trees or other object. If we want to allow it on flagpoles (I wouldn't) we can make that an exception. Here is the definition:

"Uplighting" means lighting that is directed in such a manner as to shine light rays above the horizontal plane.

Another one I feel we need to specify as not permitted are Flood Lights. Here is a definition:

"Floodlight" means a light that produces up to one thousand eight hundred lumens and is designed to "flood" a well defined area with light. Generally, floodlights produce from one thousand to one thousand eight hundred lumens.

From Code Publishing; Omak Washington:

Maybe we simply specify halogen & Mercury Vapor lighting is prohibited since most High Intensity Discharge Lighting is now replaced LED anyway.

Definition of High Intensity Lighting:

High Intensity Discharge Lamps. Lamps which produce visible light directly by the electrical heating or excitation of a gas. Examples of such lighting include, but are not limited to, metal halide, high-pressure sodium, low-pressure sodium and mercury vapor.

18.17.030 Scope and applicability.

(a) New Lighting. All exterior outdoor lighting installed after the effective date of the ordinance codified in this chapter in any and all zones in the city of Omak shall conform with the requirements established by this chapter and other applicable ordinances unless otherwise exempted. This chapter does not apply to indoor lighting.

(b) Existing Lighting. All existing lighting located on a subject property that is part of a land use application or building permit, dependent on the value of the project, shall be brought into conformance with this chapter.

(1) When development or redevelopment exceeds fifty percent of the Okanogan County assessor's actual value of the existing structure, then:

(A) All exterior lighting, except existing parking lot lighting, shall be brought up to conformance with this chapter; and

(B) All existing parking lot light fixtures shall be retrofitted with shielding to prevent light trespass.

(2) When development or redevelopment exceeds seventy-five percent of the Okanogan County assessor's actual value of the existing structure, then all exterior lighting fixtures shall be brought into full conformance with the requirements of this chapter.

(3) Replacement of Fixtures. If an existing light fixture is removed, it shall be replaced with a conforming light fixture.

(c) Conformity shall occur prior to issuance of certificate of occupancy, final inspection, or final plat recordation, when applicable.

18.17.060 Submittals.

All applications for building permits or land use planning reviews which include installation of outdoor lighting shall include lighting plans conforming to the provisions of this chapter.

(1) The submittal shall contain the following information and be submitted as part of the site plan to the planning and building department for approval:

(A) Plans indicating the location, type, intensity, and height of luminaires including both building- and ground-mounted fixtures;

(B) A description of the luminaires, including lamps, poles or other supports and shielding devices, which may be provided as catalogue illustrations from the manufacturer;

(C) Photometric data, such as that furnished by the manufacturer, showing the angle of light emission and the foot-candles on the ground; and

(D) Additional information as may be required by the city in order to determine compliance with this chapter.

From the Palm Desert Lighting Ordinance:

"Height" means the distance from finished grade to the top most portion of any light emitting source, i.e.; lamp, surface or lens.

"Installed" means any legal installation of outdoor light fixtures after the effective date of this chapter.

"New development area" means any development in previously unimproved areas. This includes new developments generally recognized as planned housing, industrial or commercial developments.

"Pedestrian scale" means a luminaire mounted at no more than fourteen feet, zero inches to the top in a residential area and at no more than eighteen feet, zero inches to the top in a nonresidential area.

24.16.030 Materials and methods of installation.

This chapter intended to encourage the use of quality materials, methods and designs. It is not intended to prevent the use of any design, material or method of installation not specifically forbidden; provided, any such alternate has been approved. The director of community development or the city engineer may approve any such proposed alternate if it:

A. Provides at least approximate equivalence to the applicable specific requirements of this chapter; and

B. Is otherwise satisfactory and complies with intent of this chapter. (Ord. 826 § 1 (part), 1997)

24.16.052 Class II lighting (walkways and security).

B. All luminaries used primarily for walkway lighting shall be mounted no higher than fifteen feet, zero inches.

24.16.070 Time of operation.

A. All class I (means all outdoor lighting used for, but not limited to, outdoor retail or restaurant areas, automotive dealers (display areas only), assembly or repair areas, outdoor advertising displays and other signs, recreational facilities and similar applications where the use of the space or area requires colors to be rendered as accurately as possible.)

lighting shall be off between eleven p.m. and sunrise, except as follows

1. On-premises advertising signs may be illuminated all night;
2. Outdoor retail, commercial, assembly, repair and industrial areas may be lighted when such areas are actually in use;
3. Outdoor recreational facilities may remain lighted past ten p.m. to complete recreational activities that are in progress and under illumination at ten p.m. and still be in conformance with this chapter, i.e., activities in progress may complete after ten p.m., but they cannot start under illumination after ten p.m., However, in no case shall the illumination stay on past ten-thirty p.m.;
4. Lighting for golf driving ranges shall be off between ten p.m. and sunrise.

B. All class II (walkways & security) and IV (street lighting) lighting may remain on all night.

C. All class III (decorative) lighting shall be off between eleven p.m. and sunrise except for retail, restaurants and businesses during normal business hours. All class III lighting shall be shut off at the end of normal business hours when hours extend past eleven p.m.

D. All class V lighting may remain on all night except that reduced levels are required after eleven p.m., or when the use of the parking area ceases. Refer to Section 24.16.050(C)(2) for reduction requirements. (Ord. 826 § 1 (part), 1997)

From Ashland, Oregon:

Standards. As a guideline, lighting levels shall be no greater than necessary to provide for pedestrian safety, property/business identification, and crime prevention. All outdoor lighting, except streetlights, shall comply with the following standards.

1. Arrange and install artificial lighting so there is no direct illumination onto adjacent residential properties.
2. Provide light poles no greater than 14 feet in height for pedestrian facilities. (Pedestal- or bollard-style lighting is an alternative method for illuminating walkways located inside a development but not located in a public street right-of-way.)

3. Where a light standard is placed over a sidewalk or walkway, maintain a minimum vertical clearance of eight feet.
4. Install light fixtures where they will not obstruct public ways, driveways, or walkways. Where a light standard must be placed within a walkway, maintain an unobstructed pedestrian through zone per Americans with Disabilities Act (ADA) compliance.
5. Except as permitted for signs, direct outdoor light fixtures downward and have full shielding to minimize excessive light spillover onto adjacent properties.

Another option from Pittsburgh regard applicability of the ordinance:

- A. ***New uses and buildings.*** For all proposed new land uses, developments, buildings, and structures that require a permit, all outdoor lighting installations shall meet the requirements of this Code.
- B. ***Major additions and modifications.*** For all building additions or modifications exceeding twenty-five (25) percent in terms of additional dwelling units, gross floor area, or parking spaces, and that require a permit, either with a single addition or cumulative additions, shall invoke the requirements of this Code. This requirement shall hold for the entire property, including previously installed and any new outdoor lighting.
- C. ***Minor additions and modifications.*** For all additions or modifications of less than twenty-five (25) percent, gross floor area, or parking spaces, and that require a permit, new lighting on the site shall meet the requirements of 1201.06 Light Pollution. The total outdoor light output after the modifications are complete shall not exceed that on the site before modification, or that permitted by this chapter, whichever is smaller.
- D. ***Resumption of use following abandonment.*** If a property or use with non-conforming lighting is considered abandoned as classified by the City of Pittsburgh, then all outdoor lighting shall be reviewed and brought into compliance with this Code before the use is resumed.

Parking lot lighting from San Juan Capistrano:

Table 3-23

Parking Lot Lighting Design Standards

Feature	Standard
Fixture Height	Pole mounted fixtures shall not exceed 20 feet in height as measured from finish grade to the bottom of the light fixture. Concrete pedestals shall not exceed 24 inches and shall be included in the overall height. Building mounted fixtures shall be located below the roof eave and not exceed the height of the pole mounted fixture (20 feet) whichever is lower.
Light Source	Metal halide, high pressure sodium, and similar sources shall be permitted. Halogen and mercury vapor sources shall be prohibited.
Fixture Type	Within the Tourist Commercial (TC) District, contemporary styled fixtures shall be prohibited. Freestanding light fixtures must comply with the City-established list of pre-approved fixture styles using a horizontal light that does not project below the cut-off lenses. For building mounted fixtures, the Planning Director shall insure that the proposed fixture type will be in scale with the building elevation on which it is to be installed. The Planning Director may refer this latter determination to the Planning Commission.
Spacing of Fixtures	The distance separating lights shall be determined by the type of light fixture and the requirement to satisfy the intensity provisions for “Fixture Height” above.
Shielding	Shielding shall be required so that light measured 5 feet outside the property boundary shall not exceed 0.1 footcandle. Exterior lighting fixtures that will be visible from adjacent residential areas shall be oriented such that the light source is not visible from said adjacent property.

(2) Pedestrian walkway lighting. The minimum standards in Table 3-24 shall be satisfied to insure the safe movement of pedestrians within a commercial, industrial or public project (excluding public facilities where the site is closed during nondaylight hours). In areas where special pedestrian security is desired, the property owner should consider the specific recommendation for such activity areas noted in Table 3-25 for lighting illuminance. Maximum allowable lighting level shall be determined by applying the uniformity ratio (average to minimum/maximum) contained in Table 3-25 to the average illuminance required by Table 3-25.

Table 3-24
Pedestrian Ways Design Standards

Feature	Standard
Illuminance	Minimum lighting shall meet the requirements as set forth in this table. Furthermore said light shall be directed in such a manner that any changes in elevation of the walkway (i.e. steps or curbs) shall be illuminated such that said features are clearly discernable (without shadow).
Fixture Type	Pedestrian walkway light fixtures can be a combination of freestanding pole, bollard, in-place step or building mounted fixtures. For building mounted fixtures, the Planning Director shall insure that the proposed fixture type will be in scale with the building elevation on which it is to be installed. The Planning Director may refer this latter determination to the Planning Commission.
Fixture Heights	Light fixtures shall not exceed the following height provisions: Freestanding pole - Not greater than 14 feet as measured from finish grade to the bottom of the light fixture. Building-mounted - Shall be located below the roof eave or 14 feet whichever is less. Bollard - Said fixture type shall not exceed a height of 42 inches as measured from finish grade to the top of the fixture.

9.42 City of Yachats Lighting Ordinance

9.42.010 Purpose

The purpose of this Ordinance is to provide regulations for outdoor lighting that will accomplish the following goals:

- A. Permit the use of outdoor lighting that promotes health, safety, security, and productivity.
- B. Protect shoreline natural resources and wildlife.
- C. Enhance the view of the dark sky.
- D. Minimize the adverse effects of bright, outdoor lighting including “light trespass” and “glare”.

9.42.020 Definitions

Types of light are defined in part by their intended use and impact. Figure 1 provides basic distinctions between types of light.

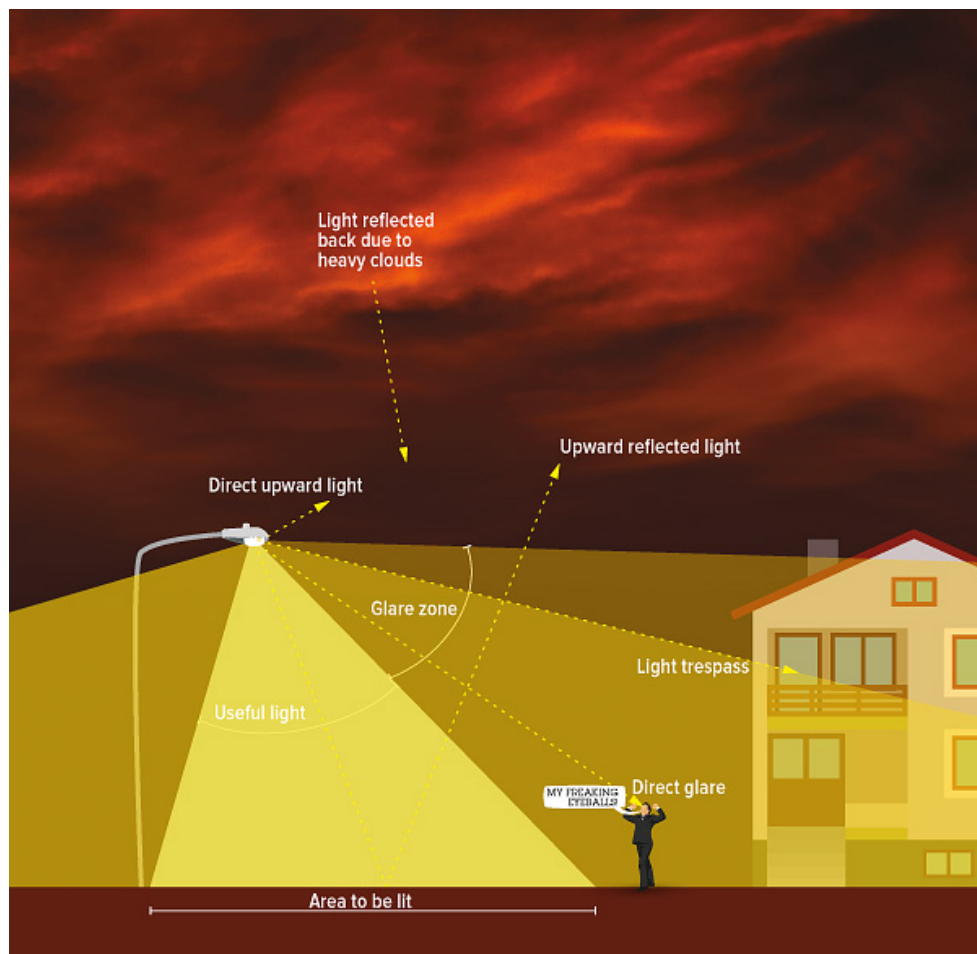


Figure 1. Types of Light

A. Area of Illumination: maybe use “Illumination Plan”

- B. Cut-off Angle (of a luminaire): The angle, measured from the lowest point between a vertical line from the center of the lamp extended to the ground and the first line of sight at which the bare source is not visible.
- C. Fixture (also called a luminaire or light fixture): a complete lighting unit including the light source (bulb), mounting, and shielding.
- D. **Floodlight**: A light that produces up to one thousand eight hundred lumens and is designed to “flood” a well-defined area with light.
- E. Foot-candle: a measure of luminance or a measure of how bright a light appears to the eye. One foot-candle is equal to one lumen per square foot. As an example, a typical 60-watt light (800 lumens) produces an illuminance of 0.1 foot candles at a distance of about 25 feet.
- F. Glare: Light that causes a visual impairment sensation due to excessive brightness from the light source, and can interfere with one's ability to see. See Figures 2 and 3.
- G. **Height**: The distance from finished grade to the top most portion of any light emitting source, i.e.; lamp, surface or lens.
- H. **High Intensity Lighting**: Lamps which produce visible light directly by the electrical heating or excitation of a gas. Examples of such lighting include, but are not limited to, metal halide, high-pressure sodium, low-pressure sodium and mercury vapor.



Figure 2. Example of glare from a light pole.



Figure 3. Example of glare from car headlights.

- I. Individual Lamp Limit: limit on output of any individual light source as enumerated in Section 9.42.040.C
- J. Individual Lot Limit: the maximum for the sum of all individual light sources on a given property as enumerated in 9.42.050.A and 9.42.050.C.
- K. Light Trespass: Any light emitted from an outdoor luminaire that shines directly beyond the property on which the luminaire is installed, or indirectly shines beyond the property on which the luminaire is installed at a brightness that exceeds 0.1 foot candles at 25 feet from the light source or at the property line, whichever is more restrictive. See Figure 4.



Figure 4. Light Trespass

- L. Luminaire: See definition for “fixture”.
- M. Marine Lighting: Bright light fixtures pointed at the ocean and coastal tide pools.
- N. Outdoor Lighting Fixture: A luminaire outside of an enclosed building or structure, or any luminaire directed such that it primarily illuminates outdoor areas.
- O. Shielding: An opaque covering for an Outdoor Lighting Fixture such that no light rays are emitted above the horizontal plane running through the lowest point of the fixture. Shielding can be extended downward as needed to prevent “Light Trespass” as defined above. See examples in Section 9.42.080.D.
- P. **Uplighting**: Lighting that is directed in such a manner as to shine light rays above the horizontal plane.

9.42.030 General Lighting Requirements

- A. Conformance with all applicable codes. All outdoor lighting shall be installed in conformance with the provisions of this ordinance, applicable Electrical and Energy codes, and applicable sections of the City, County and State building codes.
- B. Applicability. Except as described below, all outdoor lighting installed after the date of this ordinance shall comply with these requirements. This includes, but is not limited to, new lighting, replacement lighting, or any other lighting whether attached to structures, poles, the earth, or any other location, including lighting installed by any third party.
- C. Exemptions. The following are not regulated by this Ordinance:
 - 1. Lighting within the public right-of-way or easement for the principle purpose of illuminating streets or roads.
 - 2. Lighting for public monuments and statuary.
 - 3. Lighting solely for signs (Covered in Chapter 9.44).
 - 4. Repairs to existing luminaires not exceeding 25% of the total value of the luminaire.
 - 5. Temporary lighting for theatrical, musical, and other performance areas and construction sites.
 - 6. Underwater lighting in swimming pools.
 - 7. Temporary, seasonal lighting provided that individual lights are less than 10 lumens.
 - 8. Lighting that is only used under emergency conditions.
 - 9. Lighting identified in a specific use permit.
 - 10. Lighting required by County, State, or Federal government.

9.42.040 General Standards

- A. Outdoor lighting fixtures and accent lighting must be shielded and aimed downward, and it must be installed at the minimum height necessary so that the cut-off angle does not allow direct lighting of an adjacent property at a level exceeding 0.1 foot-candles at 25 feet from the light source. See examples in Section 9.42.080.

- B. All trespass lighting that exceeds 0.1 foot-candles at 25 feet from the light source or at the property line is prohibited.
- C. Motion activated security lights must not be triggered by motion on adjacent properties or streets. These lights must be shielded so that they do not shine onto adjacent properties in excess of 0.1 foot-candles at the property line.
- D. New marine lighting is prohibited. Marine lighting installed prior to passage of this ordinance shall be subject to a nighttime curfew of 10:00 pm from October through May and 11:00 pm from June through September.

9.42.050 Standards Based on Use

A. Residential Uses

- 1. Individual lamps on residential properties are limited an output of 800 lumens each. An 800-lumen output is approximately equivalent to:
 - a. Standard incandescent 60-watt bulb
 - b. Compact fluorescent 15-watt bulb
 - c. LED 8-watt bulb
- 2. Individual Lot Limit. The sum of the output of all lighting sources shall not exceed:
 - a. 5,600 lumens on lots greater than 0.3 acres
 - b. 3,200 lumens on lots less than 0.3 acres
- 3. Residential luminaires shall be less than a color temperature of 3,000 Kelvin.
- 4. Lights on stand-alone poles higher than 4 feet are prohibited.

B. Multi-Family Uses

- 1. Individual lamps on multi-family properties are limited an output of ### lumens each.
- 2. Individual Lot Limit. The sum of the output of all lighting sources shall not exceed:
 - a. 5,600 lumens on lots greater than 0.3 acres
 - b. 3,200 lumens on lots less than 0.3 acres

C. Commercial Uses

- 1. Commercial lots shall not exceed limits on trespass lighting as specified in 9.42.040.B.
- 2. Except for security lighting for pathways and building doors, outdoor lighting fixtures for commercial properties must be turned off when the business is not open. (OPTIONS: When businesses are closed, residential lighting requirements in 9.42.050.A apply).

3. Requirement of Area of Illumination Plan

- a. New developments for commercial uses shall provide an Area of Illumination Plan as part of the Site Plan.
- b. An Area of Illumination Plan shall be required with a change of commercial use or transfer of property for existing commercial uses.

c. An Area of Illumination Plan shall include:

(A) Plans indicating the location, type, intensity, and height of luminaires including both building- and ground-mounted fixtures;

(B) A description of the luminaires, including lamps, poles or other supports and shielding devices, which may be provided as catalogue illustrations from the manufacturer;

(C) Photometric data, such as that furnished by the manufacturer, showing the angle of light emission and the foot-candles on the ground; and

(D) Additional information as may be required by the city in order to determine compliance with this chapter.

4. High intensity lights shall be limited to 1,800 lumens per luminaire and SO MUCH PER SQ AREA

5. Poles for parking lot luminaires shall be limited to 20 feet in height.

9.42.060 Variances

To provide for reasonable interpretation of this Chapter, and in certain instances where this Chapter will produce a hardship, a property owner may apply for a variance pursuant to Chapter 9.80 of this Code.

9.42.070 Time to Become Compliant

A. The General Standards described in 9.42.040 require compliance within one year after the passage of this Ordinance.

B. The standards based on use in 9.42.050 require compliance within 30 days after the passage of this ordinance.

FROM SIGN CODE: Any sign deemed to be nonconforming at the time these sign regulations become effective shall be deemed to be in compliance if the sign was erected with an approved sign permit. In the event that a nonconforming sign is damaged or destroyed by any means to the extent of fifty (50) percent or more of its replacement value, the sign may not be rebuilt or used thereafter unless it conforms to all of the provisions of this title.

9.42.080 Examples

A. Example showing that bright lights are not always better for security. Glare from bright wall light masks person standing at gate.

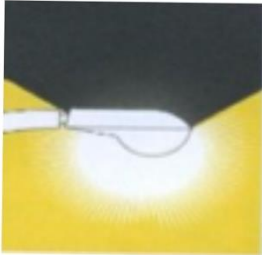


B. Example of before and after with addition of shielding on a street light. Shielded light better illuminates roadway and sidewalks.



C. Example of shielding reducing glare on property and providing for better illumination of area.

UNSHIELDED



SHIELDED



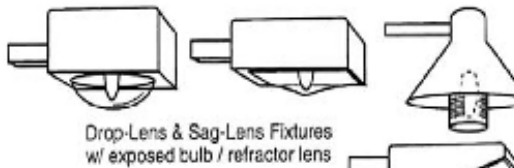
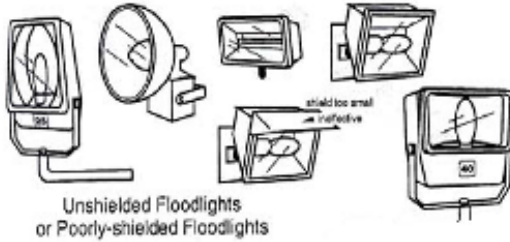
D. Examples of properly shielded light fixtures.

Examples of Light Fixtures

**Creates Lots of Light Pollution,
Glare and Light Trespass**

Unacceptable / Discouraged

Fixtures that produce glare and light trespass



Unshielded Streetlight



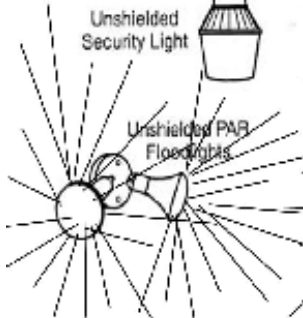
Unshielded
Security Light



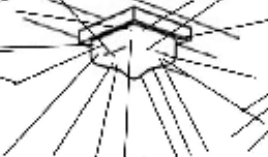
Unshielded
'Period' Style
Fixtures



Unshielded PAR
Floodlights



Drop-Lens Canopy
Fixtures

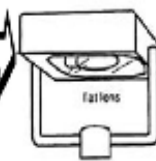


**UnControlled Light
About 60% Wasted Light**

**Only Reflected Light Causes
Light Pollution**

Acceptable

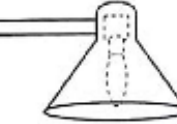
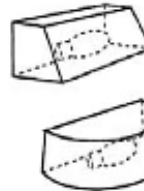
Fixtures that shield the light source to minimize glare and light trespass
and to facilitate better vision at night



Full Cutoff Fixtures



Fully Shielded
Wallpack & Wall
Mount Fixtures



Fully Shielded Fixtures

Full Cutoff Streetlight



Fully Shielded
Security Light



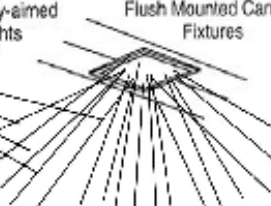
Fully Shielded
'Period' Style
Fixtures



Shielded / Properly-aimed
PAR Floodlights



Flush Mounted Canopy
Fixtures



Controlled Light

**Note:
Each Lamp has 16 rays of Light
Which one puts more Light on the ground?**

RESEARCH FOR LIGHTING ORDINANCE

April 25, 2020

During the April 19, 2020 Planning Commission Meeting, I volunteered to do some research into potential lighting requirements for inclusion in the proposed new Lighting Ordinance. Here are my findings:

QUESTION: In other Oregon coastal communities, what limitations for “per-fixture” lumens are established by ordinance in residential, multi-family and commercial zoning districts?

RESULTS OF RESEARCH: I looked into lighting ordinances and regulations in the cities of Waldport, Tillamook, Seaside, Lincoln City, Depoe Bay, Florence, and Coos Bay. Most of these communities had little or no formal, detailed lighting ordinances or regulations. None addressed “per-fixture” lumens. A couple of them had regulations about foot-candle levels within parking lots and outdoor sales areas (vehicle sales lots?), but nothing for other lighting.

QUESTION: In other Oregon coastal communities, are there any limitations to heights of pole lights and general lighting?

RESULTS OF RESEARCH:

Waldport: None

Tillamook: None

Seaside: Maximum 20 feet poles and for any and all lighting

Lincoln City: 20 foot maximum pole height

Depoe Bay: None

Florence:

Maximum 20 feet for any and all lighting adjacent to a residential district.

Max. 25 feet other zones.

Coos Bay: None

QUESTION: Do any coastal cities address requirements or restrictions for “security lighting”?

RESULTS OF RESEARCH: The only community that I could find had addressed “security lighting” is Florence. They require lighting to be turned off at certain hours, much like our draft ordinance, and further state that “minimal lighting remaining for personal and building security and safety after hours” is permissible. There is no definition for “minimal” or watt / lumen output regulations.

ADDITIONAL FINDINGS: I did find on-line a conversion chart for lumens to watts, that might be helpful:

Lumens	Incandescent watts	Fl. / LED watts
900	60	15
1125	75	18.75
1500	100	25
2250	150	37.5
3000	200	50

A conversion formula for higher-lumen output was provided.

SUMMARY OPINION: In the absence of any Per-fixture lumen limitations, it might be more prudent to seek limitations by other means. In most of the requirements I did find limited hours of operation for lighting, light trespass limitations, and cut-off fixture requirements, much as is proposed in the current draft Lighting Ordinance.

Loren Dickinson
Planning Commission

Area of Illumination Definition: the area illuminated by lighting in certain areas of a site plan.

Some Lighting Codes (Ashland)

18.4.4.050 Outdoor Lighting

A. Definitions. The following definitions apply to terms in this section:

1. Glare means stray, unshielded light striking the eye that may result in (a) nuisance or annoyance such as light shining into a window; (b) discomfort causing squinting of the eyes; (c) disabling vision by reducing the ability of the eyes to see into shadows; or (d) reduction of visual performance.

2. Shielding means an externally applied device such as a shroud or hood of metal, wood, opaque plastic or opaque painted glass so that light emitted by the fixture is directed downward below the horizontal plane onto the site and does not shine direct illumination or glare onto adjacent or nearby property.

3. Unshielded means light fixtures lacking any means to restrict the emitted light to below the horizontal plane or to shine or glare onto adjacent or nearby property.

4. Lighting means an artificial supply of light or the apparatus providing it.

5. Illumination means decorative lighting or lighting effects.

B. Purpose. This section contains regulations requiring adequate levels of outdoor lighting while minimizing light spillover onto adjacent properties

C. Applicability. All outdoor lighting is subject to the requirements of this section. Where a proposed development is subject to Type I, Type II, or Type III review, the approval authority may require specific lighting levels or limit lighting as a condition of approval to protect the public health, safety, and welfare.

D. Standards. As a guideline, lighting levels shall be no greater than necessary to provide for pedestrian safety, property/business identification, and crime prevention. All outdoor lighting, except streetlights, shall comply with the following standards.

1. Arrange and install artificial lighting so there is no direct illumination onto adjacent residential properties.

2. Provide light poles no greater than 14 feet in height for pedestrian facilities. (Pedestal- or bollard-style lighting is an alternative method for illuminating walkways located inside a development but not located in a public street right-of-way.)

3. Where a light standard is placed over a sidewalk or walkway, maintain a minimum vertical clearance of eight feet.

4. Install light fixtures where they will not obstruct public ways, driveways, or walkways. Where a light standard must be placed within a walkway, maintain an unobstructed pedestrian through zone per Americans with Disabilities Act (ADA) compliance.

5. Except as permitted for signs, direct outdoor light fixtures downward and have full shielding to minimize excessive light spillover onto adjacent properties.

6. Residential decorative lighting and low wattage lighting used for yards and driveways that do not shine glare, emit direct illumination, or cast a shadow onto adjacent property for no more than 60 days in one calendar year are exempt from the requirements of this section.

7. Low wattage lights used for holiday decorations for no more than 60 days in one calendar year are exempt from the requirements of this section.

9. Lighting of buildings and landscaping- Lighting fixtures shall be selected, located, aimed, and shielded so that direct illumination is focused exclusively on the building facade, plantings, and other intended site features and away from adjoining properties and the public street right-of-way

8. For streetlight requirements, see subsection 18.4.6.040.D.18.

E. Maintenance. Outdoor lighting shall be maintained in good condition, or otherwise replaced by the property owner.

F. Prohibited Types of Lights. Decorative lasers, continuously flashing lights.