



**STAFF REPORT TO THE PLANNING AND ZONING COMMISSION
DEPARTMENT OF PLANNING AND NEIGHBORHOOD SERVICES
COMMUNITY PLANNING DIVISION
CASE TYPE – TEXT AMENDMENT
CASE PLANNER: BOB BLEVINS**

Hearing Date August 26, 2024

Case Number: ZONE-42943-2024

Project Description: This is a request by the City of Yuma for Zoning Code Text Amendments to amend Title 15, Chapter 154: Article 01- Definitions, Article 14- Overlay Zoning Districts, Article 16- Off-Street Parking and Loading Regulations, and Article 18- Outdoor Lighting Regulations, all to update provisions related to outdoor lighting.

Staff recommendation: Staff recommends **APPROVAL** of the text amendments to Title 15, Chapter 154: Article 01- Definitions, Article 14- Overlay Zoning Districts, Article 16- Off-Street Parking and Loading Regulations, and Article 18- Outdoor Lighting Regulations, all to update provisions related to outdoor lighting

Suggested Motion: Move to **APPROVE** the text amendments in ZONE-42943-2024 as presented in the staff report.

Effect of the Approval: By approving the text amendments, the Planning and Zoning Commission is recommending approval to City Council for the request to amend Title 15, Chapter 154: Article 1- Definitions, Article 14- Overlay Zoning Districts, Article 16- Off-Street Parking and Loading Regulations, and Article 18- Outdoor Lighting Regulations, all to update provisions related to outdoor lighting.

Staff Analysis: The text amendments update the existing outdoor lighting regulations to:

- Add LED (light emitting diode) lighting to the code for shielding and color temperature.
- Bring photometric survey standards in line with modern practices.
- Clarify the bottom-mounted/ground-mounted light fixture angles.
- Extend the area for a photometric survey beyond the property line.
- For new fuel canopies: flush/recessed fixtures to reduce glare.
- Clarify limits on light trespass.

The goal of these text amendments is to provide adequate lighting while limiting excessive, unnecessary light trespass onto neighboring properties. With the advent of LED lighting and its unique characteristics, the City Code needs to acknowledge advances in lighting fixtures, methods to measure lighting, and positioning on the property for the most efficient coverage while keeping the light on the subject property.

Background:

Watts vs. Lumens

With more efficient lighting choices, there is a need to reconsider how the brightness of a “bulb” is rated in order for the consumer to make an accurate and educated selection. When shopping for lighting, you will notice the packaging lists “watts”, “watts equivalent”, and/or “lumens”.

For more than a century, most all lighting was incandescent, where a filament inside a bulb was heated by electricity with the by-product being light. In simple terms, the more electricity- the more light. It was easy to estimate the brightness of an incandescent bulb: the higher the wattage, the more light emitted. We all know that a 100 watt bulb is far brighter than a 40 watt bulb. Now with LED, halogen, or fluorescent lighting, the wattage is not an accurate way to measure output since these alternatives are vastly more energy-efficient and use less wattage.

To help better compare light output from different types of bulbs/fixtures, the lumen rating is included to help compare. Lumens measure the total amount of light emitted by the bulb, while watts measure the amount of power consumed by the bulb. Adding the more accurate lumens number on the bulb packaging gives a precise scale to compare how bright the light will be. The wattage is of course still of interest especially when comparing how little energy is used when comparing, for example, an incandescent bulb with an LED bulb.

Unique Characteristics of LED Lighting:

While this code update does not require LED outdoor lighting, most new and retrofit installations are LED due to the benefits of smaller fixtures, cost-savings, energy-efficiency, and controllable output of color and the ability to direct the light in precise ways.

LEDs emit very little heat. In comparison, incandescent bulbs release 90% of their energy as heat and fluorescent lights release about 80% of their energy as heat. The cooler LED light helps in the design of more efficient and creative light fixtures (luminaires).

The human eye may see warmer light is “not as bright” so considerations are needed to adjust the output to a higher lumen/footcandle for optimum coverage at night. A 3,000K light can have a variety of lumen outputs depending on the need.

LEDs can be designed for a variety of Correlated Color Temperatures (CCT). The color temperature of a light source is not necessarily the brightness of the light, but the color of the light ranging from a harsh blue (10,000K) to a warm yellow/orange (1,000K). The “K” stands for Kelvin, relating to the Kelvin Scale which is an industry-standard of measuring the characteristics of the light output, specifically in the code for LED lighting.

Typical LED outdoor lighting ranges from 2,700K to 5,000K. The City of Yuma uses street light fixtures of 3,000K which is also the goal of this text amendment. The warmer 3,000K lighting is proposed to uphold the Arizona Revised Statutes, Title 49, Chapter 7 with regard to light pollution and the “Dark Sky” goals of reducing waste, glare, light trespass, interference of artificial light, and adverse effects on wildlife; therefor increasing safety, and the visibility of the night sky. Additionally, the 3,000K standard will provide a seamless transition from the public right-of-way to private outdoor lighting.

A survey of other jurisdictions, focusing on Arizona, was done to see what their code standards require for new and retrofits of outdoor lighting.

Research found includes:

- Phoenix, Flagstaff, Coconino County and Sedona have 2,600K-2,700K maximums;
- Fountain Hills, Camp Verde, and Glendale has a 3,000K maximum;
- Goodyear has a 3,200-3,500K maximum;
- Tucson, Sahuarita, Pima County, and Prescott Valley have a 3,500K maximum;
- Chandler has a 4,000K maximum.

Parking Lots and Other Needs and Retrofits:

Public outreach brought forth the concern of how to deal with specific parking lot and other outdoor lighting (nighttime car dealer display, industrial outdoor manufacturing, outdoor spectator events, as examples) in relation to industry standards. The text amendment reflects a closer match to the industry standard for parking lot lighting and to minimize light trespass on residential properties. A process has been developed as part of this text amendment for exceptions from City lighting standards to accommodate particular lighting situations.

Light Trespass:

With increases in population and housing density, the use of outdoor lighting can cause conflicts when it spills over onto neighboring properties. Since LED lighting can be perceived to be brighter, and LEDs emit light in a specific direction - this Code update includes some shielding, height, and distance standards to moderate the unique LED attributes.

Public Outreach:

In order to involve and address industry issues and concerns with outdoor lighting, two rounds of stakeholder review were accomplished.

Round One: On April 23rd, 2024, the City hosted a Stakeholder Meeting to discuss lighting code issues for commercial projects. The conversation focused on a number of identified areas. Thirteen local electrical contractors, engineers, and suppliers were directly invited and 15 interested persons attended plus City Staff.

Round Two: A summary of the discussion and a review of the proposed changes was sent out after the Stakeholder Meeting to gather further input and any needed clarification. (See Attachment D)

This outreach enhanced the code update by bringing out situations encountered by the contractors, and suppliers who deal directly with their customers when creating site plans for new parking lots, work areas, and other outdoor venues and/or for energy-efficient upgrades to old light fixtures/luminaires.

Detailed Description of each Proposed Amendment:

Article 1 Definitions: Moving and updating definitions relating to outdoor lighting. The definitions will now be in Article 18- Outdoor Lighting Regulations.

Article 14 Aesthetic Overlay District: Updates the minimum and average footcandles required for properties located in the Aesthetic Overlay District. This is in keeping with current techniques for measuring light.

Article 16 Improvement of Parking Lots: Updates the minimum and average footcandles required for parking lots in keeping with current techniques for measuring light and the most efficient layout of light fixtures to limit wasted energy and for safety and visibility.

Article 18 Outdoor Lighting Regulations: Clarifies and updates: definitions for shielding, and bottom-mounted fixtures; adds LED lighting to the mix of light sources; updates some terminology and techniques for measuring and containing light; adds light trespass to the code and its limitations and exceptions; update of photometric survey requirements; and the design of under canopy lighting.

Criteria Questions:

1. Does the proposed amendment implement the goals, objectives and policies of the General Plan?

Yes.

2. Does the proposed amendment fit the overall purpose and intent of the zoning ordinance?

Yes. The proposed amendment fits the overall purpose and intent of the zoning ordinance.

3. Will the proposed amendment change the range of uses identified in the zoning code? If so, how?

No. The proposed amendment will change certain lighting standards and requirements for particular uses, but will have no impact on the range of uses permitted within the zoning code.

4. Will the proposed text amendment change the development standards of the zoning or subdivision ordinances? If so, how?

Yes. The proposed amendment will modify certain development standards of the lighting requirements within the zoning code.

5. What are the potential impacts of the proposed amendment?

No negative impacts have been identified with the proposed text amendment.

Potential positive impacts include lessening of Light Pollution by upholding the Arizona Revised Statutes "Dark Sky" goals of reducing waste, glare, light trespass, interference of artificial light, and adverse effects on wildlife; therefor increasing safety, and the visibility of the night sky.

6. Does the proposed amendment fit the overall purpose and intent of the subdivision ordinance?

Yes.

7. Does the proposed amendment conform to prior City Council actions regarding this issue?

Yes.

Public Comments Received: See Attachment D .

External Agency Comments: None Received.

Attachments:

A	B	C	D
Draft Text	Agency Notifications	List of all Stakeholders	Stakeholder Comments

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Assistant Director of Planning

Approved By: *Alyssa Linville* **Date:** 08/15/2024
Alyssa Linville
Director, Planning and Neighborhood Services

**ATTACHMENT A
DRAFT TEXT**

SECTION 1: That the Yuma City Code, Title 15, Chapter 154, Article 01 Section 07, Definitions, be amended to delete the strike through text:

~~**FULLY SHIELDED.** That fixtures are shielded in such a manner that light rays emitted by the fixture either directly from the lamp or indirectly from the fixture, are projected below a horizontal plane running through the lowest point on the fixture where light is emitted.~~

~~**MAINTAINED FOOTCANDLE.** Predicted footcandles, at a given location, calculated through application of a light loss factor.~~

~~**PARTIALLY SHIELDED.** That fixtures are shielded in such a manner that the bottom edge of the shield is below the plane of the centerline of the lamp reducing light above the horizontal.~~

SECTION 2: That the Yuma City Code, Title 15, Chapter 154, Article 14, Section 01 Aesthetic Overlay District (AO), Subsection D be amended to insert the bolded text and delete the strike through text:

- (6) *Lighting.* Minimum standards for lighting for properties located within the Aesthetic Overlay District are as follows.
- (a) Aisles, passageways and recesses related to and within the building complex shall be illuminated with an intensity of **an average of 0.5** ~~a minimum of one maintained~~ footcandles at the ground level and at seven feet vertical between sunset and sunrise.
 - (b) Open parking lots shall be illuminated with **an average of 0.5 footcandles with a minimum 0.2 footcandles over the parking spaces** ~~a minimum of one maintained footcandle of light on the parking surface~~ and at seven feet vertical between sunset and sunrise.
 - (c) All exterior entrances shall be illuminated with ~~a minimum~~ **an average** of five ~~maintained~~ footcandles at ground level and at seven feet vertical between the hours of sunset and sunrise, with a minimum 15-foot radius from the center point of the entrance.
 - (d) Closed and covered parking structures and carports shall be illuminated with ~~a minimum~~ **an average** of five ~~maintained~~ footcandles at ground level and at seven feet vertical between the hours of sunset and sunrise; during daylight hours, the area shall be illuminated with a minimum of ten footcandles.
 - (e) Greenway trails, pathways, linear parks, multi-use trails and similar facilities shall be illuminated with a minimum of **0.5** ~~one-half maintained~~ **average** footcandle at ground level and at seven feet vertical between sunset and sunrise.

Table No. 8 - Shielding Requirements

Fixture Lamp Type	Shielding Requirements
Any light source of 70W or less	None
Fluorescent	Fully shielded (3)

Glass tubes filled with neon, argon, krypton	None
High pressure sodium	Fully shielded
Incandescent 150W or less	None

Table No. 8 - Shielding Requirements

Fixture Lamp Type	Shielding Requirements
Low pressure sodium (1)	Partially shielded
Metal halide (2)	Fully shielded
Quartz (4)	Fully shielded

SECTION 3: That the Yuma City Code, Title 15, Chapter 154, Article 16, Section 03, Subsection B Improvement of Parking Lots be amended to insert the bolded text and delete the strike through text:

- (6) Lighting standards shall be placed so as to reflect the light away from the adjacent areas, and so as not to interfere with traffic movement or control. Illumination of **the** parking area shall be required for all parking areas with five or more parking spaces. Open parking lots **shall incorporate the requirements of Article 18 and** shall illuminate parking stalls with **an average of 0.5 footcandles with a minimum 0.2 footcandles over the parking spaces** ~~a minimum of one maintained footcandle of light on the parking surface~~ and seven feet vertical between sunset and sunrise.

SECTION 4: That the Yuma City Code, Title 15, Chapter 154, Article 18 Outdoor Lighting Regulations, Sections 01 through 04, be amended to insert the bolded text and delete the strike through text:

§ 154-18.01 Purpose.

The principal purpose of the outdoor lighting regulations is to create standards for outdoor lighting which do not conflict with the reasonable use and enjoyment of property within the city and with astronomical observations. It is the intention of this subchapter to encourage the conservation of energy while increasing night-time safety, utility, security and productivity, through regulation of the types, kinds, construction, installation and use of outdoor electrically powered illuminating devices, lighting practices and systems. **The provisions of Arizona Revised Statutes, Title 49- The Environment, Chapter 7- Light Pollution, shall be followed to uphold the “Dark Sky” goals of reducing waste, glare, light trespass, interference of artificial light, and adverse effects on wildlife; therefor increasing safety, and the visibility of the night sky.**

§ 154-18.02 General Requirements.

(A) *Definitions:*

FULLY SHIELDED. That fixtures are shielded in such a manner that light rays emitted by the fixture either directly from the lamp or indirectly from the fixture, are projected below a horizontal plane running through the lowest point on the fixture where light is emitted.

PARTIALLY SHIELDED. That fixtures are shielded in such a manner that the bottom edge of the shield is below the plane of the centerline of the lamp reducing light above the horizontal.

FOOTCANDLE, AND LUMEN: The footcandle and lumen measure light, although in different ways for different lighting situations. Light output is measured in lumens. The number of lumens measures the total amount of visible light emitted by a light source. It gauges the brightness of the light. The footcandle measures how much light falls upon a certain spot.

LIGHT TRESPASS: A condition in which artificial light emitted from a luminaire on one property, not inclusive of light incidentally scattered or reflected from adjacent surfaces, is directed in such a manner that the light source is visible from any other property.

(B) *Top-mounted.* Outdoor advertising sign lighting fixtures used to illuminate an outdoor advertising sign shall be mounted on the top of the sign structure. All such fixtures shall comply with the shielding requirements **noted in this section** in ~~Table No. 8.~~

~~(1) This is the preferred light source to minimize undesirable light emission into the night sky affecting astronomical observations.~~

~~(2) Metal halide lighting used primarily for display purposes shall not be used for security lighting after 11:00 p.m. Metal halide lamps shall be installed only in enclosed luminaires. These lamp fixtures shall be “filtered”, a glass, acrylic or translucent enclosure of the light source (quartz glass does not meet this requirement).~~

~~(3) Outdoor advertising signs of the type constructed of translucent materials and wholly illuminated from within, do not require shielding. Dark backgrounds with light lettering and warm white and natural lamps are preferred to minimize detrimental effects.~~

~~(4) For purposes of this subchapter, quartz lamps shall not be considered an incandescent light source.~~

(C) *Bottom-mounted. (ground-mounted, up-lighting, feature-lighting).* An outdoor advertising sign illuminated by any type of bottom-mounted outdoor lighting system or fixture, which is installed at or on **the ground or** the lower portion of any outdoor advertising sign or fixture shall be prohibited unless said lighting fixture is shielded to confine the light to the sign face. **All such fixtures with lighting which is directed upwards shall be placed so that the angle of the lamp shall not be greater than forty-five degrees (45°) measured from a horizontal plane to a line projected through the center of the lamp.**

(D) *Mercury vapor.* Mercury vapor lamps and fixtures are prohibited for use as outdoor lighting. ~~Mercury vapor lamps in use for outdoor lighting on the effective date of this chapter shall not be used after January 1, 2011.~~

(E) *Searchlights.* Prohibited.

(F) *Recreational facilities.* Public or private recreational facilities, which are illuminated with outdoor lighting fixtures conforming to these regulations may operate any time with such illumination. Outdoor recreational facilities not conforming to these regulations shall not be illuminated after 11:00 p.m. except to conclude a specific recreational or sporting event or any other similar activity conducted at or in the facility which was in progress under such illumination; prior to 11:00 p.m.

(G) *Outdoor advertising off-site signs.* The electrical illumination of outdoor advertising off-site signs including those internally illuminated, is prohibited between the hours of 12:00 a.m. midnight and sunrise.

- (H) *Flagpoles.* Outdoor lighting fixtures used to illuminate a flagpole shall be mounted on the top of the flagpole structure and adhere to the shielding requirements outlined in **this section** ~~Table No. 8~~. In cases where it is impossible to light a flagpole structure from the top, bottom-mounted lights shall be connected to a timer which extinguishes all but the minimal light source necessary to illuminate the flag between the hours of 11:00 p.m. and sunrise.
- (I) **The maximum light pole height is 12 feet when within 25 feet of a residential use.**
- (J) **Light Emitting Diode (LED) and Low Pressure Sodium are the preferred light sources to minimize undesirable light emissions to neighboring properties and the night sky.**
- (K) **Metal halide lighting used primarily for display purposes shall not be used for security lighting after 11:00 p.m. Metal halide lamps shall be installed only in enclosed luminaries. These lamp fixtures shall be “filtered”, a glass, acrylic or translucent enclosure of the light source (quartz glass does not meet this requirement) and this lighting requires full shielding.**
- (L) **Outdoor advertising signs of the type constructed of translucent materials and wholly illuminated from within, do not require shielding. Dark backgrounds with light lettering and warm white and natural lamps are preferred to minimize detrimental effects.**
- (M) **For purposes of this subchapter, quartz lamps shall not be considered an incandescent light source.**
- (N) **LED lighting must be 3,000K (Kelvin corrected color temperature (CCT)) or less for all commercial uses.**
- (O) **Any light source of 70 watts (700 lumens) or equivalent does not require shielding.**
- (P) **Neon, argon, and other noble gas glass tube lighting does not require shielding.**
- (Q) **High Pressure Sodium, low pressure sodium, and quartz halogen lighting requires full shielding.**
- (R) **Light trespass is prohibited, except for fixtures exempted from this ordinance or from shielding requirements in this section.**

§ 154-18.03 ~~Permanent~~ Exemptions.

- (A) *Nonconforming fixtures.* Legally installed outdoor lighting not conforming to the provisions of this chapter shall be allowed to remain, provided such fixtures are extinguished between the hours of 11:00 p.m. and sunrise by automatic shut-off device.
- (B) *Fossil fuel light.* All outdoor light fixtures producing light directly by the combustion of natural gas or other fossil fuels are exempt from all requirements of this code.
- (C) *State and federal facilities.* Outdoor light fixtures installed on, and in connection with those facilities and land owned or operated by the federal government or the State of Arizona, or any department, division, agency or instrumentality thereof, are exempt from all requirements of this chapter. Voluntary compliance with the intent of this chapter at those facilities is encouraged.

(D) Deviations from the lighting standards provided in this chapter may be approved for private properties if approved by the Zoning Administrator.

(E) Applications to deviate from the lighting standards shall include the following information:

- (1) A site plan depicting the location of proposed lighting on the site;**
- (2) A lighting inventory that provides, at minimum:**
 - a. The brightness (in lumens) and correlated color temperature (in Kelvin) of each luminaire;**
 - b. The height of each fixture;**
 - c. The directional angle of each fixture;**
 - d. The character of shielding for each luminaire, if any;**
 - e. Identification of luminaires that diverge from the standards of this Chapter and are subject to the deviation request;**
 - f. Detailed description of the circumstances which necessitate the deviation;**
 - g. Such other data and information as may be required by the Zoning Administrator.**
- (3) The deviation may be granted if the following findings are made:**
 - a. There are unique circumstances affecting the subject property or unique design and land use characteristics that make it infeasible or impractical to comply with strict application of the lighting standards detailed in this chapter.**
 - b. The proposed deviation will achieve the intent of this chapter to the maximum extent feasible.**

§ 154-18.04 Submittal of Plans.

- (A) Submittal contents.** The applicant for any permit required by any provision of the laws of this jurisdiction in connection with proposed work involving outdoor light fixtures shall submit (as part of the application for permit) evidence that the proposed work will comply with this chapter. The submittal shall contain, but shall not be limited to, the following:
- (1) Plans indicating the location on the premises, and the type of illuminating devices, fixtures, lamps, supports, reflectors and other devices;**
 - (2) Description of the illuminating devices, fixtures, lamps, supports, reflectors and other devices and the description may include, but is not limited to, catalog cuts by manufacturers and drawings (including sections where required); and**
 - (3) Photometric data, such as that furnished by manufacturers, or similar, showing the angle of cut off of light emissions. . **For commercial projects, a Photometric Survey is required, and it shall show lit areas including 1 foot beyond the subject property to show no light trespass onto neighboring properties.****
 - (4) For new construction or retrofits of fuel canopy lighting: Fully-recessed fuel canopy lighting/flat lenses are required. All light fixtures mounted on or recessed into the lower surface of service station canopies shall be fully shielded and utilize flat lenses. Such shielding must be provided by the fixture itself. Shielding by surrounding structures such as canopy edges is not a suitable alternative.**

- (B) *Subdivision plat certification.* If any subdivision proposes to have installed street or other common or public area outdoor lighting, the final plat shall contain a statement certifying compliance with the regulations of this chapter.

**ATTACHMENT B
AGENCY NOTIFICATIONS**

- Legal Ad Published: The Sun 08/02/24
- 34 Commenting/Reviewing Agencies noticed: 07/11/24
- Neighborhood Meeting: N/A
- Hearing Date: 08/26/24
- Comments due: 07/22/24

External List (Comments)	Response Received	Date Received	“No Comment”	Written Comments	Comments Attached
Yuma County Airport Authority	YES	07/15/24	X		
Yuma County Engineering	NR				
Yuma County Public Works	YES	07/12/24	X		
Yuma County Water Users’ Assoc.	YES	07/12/24	X		
Yuma County Planning & Zoning	NR				
Yuma County Assessor	NR				
Arizona Public Service	NR				
Time Warner Cable	NR				
Southwest Gas	NR				
Qwest Communications	NR				
Bureau of Land Management	NR				
YUHS District #70	NR				
Yuma Elem. School District #1	NR				
Crane School District #13	NR				
A.D.O.T.	NR				
Yuma Irrigation District	NR				
Arizona Game and Fish	NR				
United States Postal Service	NR				
Yuma Metropolitan Planning Org.	NR				
El Paso Natural Gas Co.	NR				
Western Area Power Administration	YES	07/11/24	X		
City of Yuma Internal List (Conditions)	Response Received	Date Received	“No Conditions”	Written Conditions	Comments Attached
Police	NR				
Parks & Recreation	NR				
Development Engineering	NR				
Fire	YES	07/15/24	X		
Building Safety	NR				
City Engineer	NR				
Traffic Engineer	NR				
MCAS / C P & L Office	YES	07/18/24	X		
Utilities	NR				
Public Works	NR				
Streets	NR				

ATTACHMENT C
LIST OF ALL STAKEHOLDERS

Isaac Liggett of Liggett Electrical

Orlando Morin, Joe Cabrera and Gibran Carbajal of O&M Electric

Fred Dammeyer and Ernesto Morales of D&H Electric

Nate Schug and Joe Montenegro of Westmoor Electric

Keith Boyd and Glenn Stewart of Klein's Electric

Robert Goin, Gilbert Felix and Juan C. Ramos of Yuma Winlectric

Jim Adler of JOL Enterprises

David Watson, Tim Locklear and Jedidiah Ward of Sternco Engineering

Jorge Nunez, Mark DeAnda and Ariel Sanchez of Specialty Electric

Alfred Moore of One Source Wholesale

Jeff Flermoen of C.E.D. Wholesale

Scott Thomson of T41 Architects

Chris Thompson of Thompson Design Architects

ATTACHMENT D Stakeholder Comments

Issue #1 – Clarify bottom-mounted/ground-mounted light fixture angle	
Summary of discussion:	
	<ul style="list-style-type: none"> ▪ Concern is that uplighting is not lighting the targeted area ▪ Need to better aim the light onto the subject sign or object ▪ Protect neighbors and traffic from glare ▪ This can also be resolved by limiting lumens
Staff recommendation:	
	<ul style="list-style-type: none"> • Clarify within the code that any bottom-mounted lighting includes shielding to limit the lighting to the area being illuminated and the angle is no more than 45 degrees
Issue #2 – Extend area for photometric survey beyond property line	
Summary of discussion:	
	<ul style="list-style-type: none"> ▪ Concern that light may trespass onto neighboring properties ▪ This discussion crossed over into the residential side noting concerns the code does not include a means to address light trespass from private homeowners
Staff recommendation:	
	<ul style="list-style-type: none"> • For commercial projects, expand the requirements for photometric surveys to within 1 foot of the property line • For residential uses, add to the code a means to address light trespass
Issue #3 – For new fuel canopies: flush/recessed fixtures	
Summary of discussion:	
	<ul style="list-style-type: none"> ▪ Concern that current allowed lighting may be causing glare and light trespass ▪ Need to quicken the adjustment of vision for people when moving from a dark area to a very bright area.
Staff recommendation:	
	<ul style="list-style-type: none"> • Add to code that for new fuel canopies lighting shall be completely recessed
Issue #4 – Add LED lighting to code for shielding and color temperature for commercial projects	
Summary of discussion:	
	<ul style="list-style-type: none"> ▪ To bring code up-to-date on modern lighting, suitable uses, and unique characteristics. ▪ LEDs are “directional” light sources, which means they emit light in a specific direction, unlike incandescent and CFL, which emit light and heat in all directions. ▪ Discussion on color of light (kelvin) and intensity of light (foot-candle) ▪ General discussion that 3,000K for color is acceptable and also what the county requires ▪ But 3,000K can be expensive and difficult to acquire ▪ Discussion on fully and partially shielded
Staff recommendation:	
	<ul style="list-style-type: none"> • Update Table 8 – Shielding Requirements (154-18.02) within the code to address LED’s with a maximum 3,000K color temperature • Update code to expand definitions for Fully and Partially Shielded fixtures and include examples • Staff will include a special exception process to be decided by the Zoning Administrator in cases where the color temperature should exceed 3,000K
Issue #5 – Parking Lot Lighting: 1 foot candle	
Summary of discussion:	
	<ul style="list-style-type: none"> ▪ The 1-foot candle maintained is in conflict with accepted standards and IES recommendations ▪ Consider adjusting pole height to limit light trespass
Staff recommendation:	
	<ul style="list-style-type: none"> • Allow .5-foot candle average with a minimum .2-foot candle over parking space areas • Require maximum pole height of 12 feet within 25 feet of residential areas

Additional issues discussed	
	Billboards – need to clarify/enforce time limits and brightness levels
	International Energy Conservation Code – discussion about updating code from 2009. <ul style="list-style-type: none"> - Staff will look into this issue during scheduled code updates
	Needs to be a means to allow for exceptions to the standards based on the use <ul style="list-style-type: none"> - Staff will include a special exception process to be decided by the Zoning Administrator