AGENDA ITEM

Meeting Name: Planning and Zoning Board

Meeting Date: March 4, 2024

Prepared By: Davila, F. CFM.

Item Title: Ordinance No. 766 – Exterior Lighting on Residential Housing and Addressing Spillover to Neighboring Properties.

BACKGROUND

At the March 6, 2023 Planning and Zoning Board meeting, the Board reviewed and discussed regulations regarding light spillover within the Town's Code of Ordinances and how other communities regulate spillover of lighting to neighboring properties. The Board unanimously recommended that the Town Council direct staff to draft an ordinance to address spillover lighting by utilizing portions of the Town of Jupiter and the Town of Palm Beach's regulations, including an examination of dark skies initiative principles and the appropriate foot candle limitations for residential properties, including those abutting environmentally sensitive lands.

At the March 22, 2023 Town Council meeting, Council gave consensus to direct Staff to proceed with the Board's recommendation.

At the June 5, 2023, Planning and Zoning Board meeting, the Board discussed proposed Ordinance No. 766 and the Board gave consensus to have staff clarify the language for spillage; review the permitted uses for sconces, remove the term "incandescent" in section (d); and include a reference chart.

At the January 24, 2024, Town Council meeting, Council directed staff to move forward with the proposed code text amendment for exterior lighting on residential housing and addressing spillover to neighboring properties without the use of an Engineer and the incorporation of a reference chart.

As directed by the Town Council, staff is bringing back proposed Ordinance No. 766 for the Board's review and recommendation. The proposed language includes the recommendations from the June 2023 Planning and Zoning Board meeting, with the exception of the reference chart.

DISCUSSION

The lighting regulation language from the Town of Jupiter, which had previously been provided to the Board, includes the following:

> **Town of Jupiter:** Division 24. – Lighting Regulations
> Sec.27-2592 (d)(4) Any exterior *lighting*, roof *lighting*, under canopy *lighting*, facade *lighting*, or *lighting* which forms a linear pattern shall be recessed and shielded or shall contain a cutoff luminaire within the structure or fixture in which it is located. The *lighting* source shall not be visible from adjacent properties and/or rights-of-way. Only white sources of *light* such as fluorescent, incandescent, metal halide or other similar *lights* shall be permitted.
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> Sec. 27-2592(g) Off-site *light* spillage.
> (1) Off-site *light* spillage may be permitted according to Table 1. The maximum footcandle to be spilled off-site to another property, including streets, rights-of-way, road easements, alleys, etc., and shall not exceed 0.3 footcandle.
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> (2) Off-site *light* spillage for residential uses. No off-site *light* spillage shall occur when residential uses are located adjacent to residential uses. The maximum footcandle to be spilled off-site to a nonresidential property shall not exceed the minimum footcandle requirements for the adjacent *lighting* zone.

The Town of Palm Beach Exterior Lighting Regulations are as follows:

> **Town of Palm Beach Exterior Lighting Requirements**
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> 1. Cut sheets depicting lighting details, and a site/plot plan showing lighting locations must be submitted.
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> 2. No light bulb or source of illumination shall be visible while standing at or outside of the property line. Wall sconces or column top fixtures are excluded. The light bulbs in eave fixtures must be shielded so that the lamp is not visible from off the property line. Decorative wall sconces that are visible from the street are allowed but shall be lamped with bulbs not exceeding 15 watts per bulb, and not more than 4 bulbs per fixture.
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> 3. No high-pressure or low-pressure sodium light bulbs can be used for landscape lighting.
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> 4. Any bulbs or sources of illumination in fixtures mounted in trees or above eye level on structures shall not be visible off the property. All down lighting shall not exceed 2 ft. candles on residential property and 8 ft. candles on commercial properties as measured at ground level directly below the source of illumination. Down lighting scheme must be approved by Town Staff through ARCOM or LPC Administrative Approval. The maximum wattage per acre for down lighting schemes shall not exceed 3,750 watts; however, shall not be counted as contributing to the total landscape (vertical illumination quantity) lighting system. The use of baffling, shielding
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> techniques, internal hex louvers and screening should reduce the total output to 3,000 watts. Baffling, shielding, internal hex louvers and screening is encouraged.
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> 5. Maximum cumulative wattage of light fixtures using mercury vapor and/or fluorescent light bulbs supplied at120 volts, 24 volts and 12 volts, per acre is 5,000 watts.

6. Maximum cumulative wattage of light fixtures using mercury vapor and/or florescent light bulbs supplied at 120 volts, 220 volts, 208 volts, and 277 volts, per acre is 5,000 watts. The use of baffling, shielding techniques, internal hex louvers and screening is encouraged.

7. Maximum cumulative wattage of light fixtures using metal halide light bulbs supplied at 120 volts, 220 volts, 208 volts and 277 volts, per acre is 2,000.

8. Maximum number of landscape lighting fixtures per acre is 150 regardless of wattage.

9. Illumination on the elevation of a residence or commercial building is discouraged unless architectural features and anchor points are the purpose of illumination. Visible security flood lighting is prohibited unless approved directly by ARCOM.

10. No more than one half foot-candle of light may be reflected off or spill off of a property. Furthermore, lighting shall not be directed or aimed in such a manner as to create a nuisance or glare to any abutting properties or to any passers-by (either by foot or in a moving vehicle). Violation of any one of these requirements shall be subject to action by the Code Enforcement Board.

11. No light shall be unshielded where the lighting element is visible in any fashion, i.e. wall packs and any approved security fixtures. Any light that egresses its property of installation must be shielded and directed to reduce light trespass to the satisfaction of ARCOM, the Planning Administrator or assigned staff.

12. Red, yellow, blue, and green incandescent light bulbs that are visible from the street or public right-of-way are prohibited except during Town approved holiday intervals.

13. Mixture of Kelvin ratings by lamp types is discouraged where the difference is more than 25%, i.e. 5,500 Kelvin and 4,100 Kelvin is permissible. Exceptions may be allowed in circumstances such as where incandescent lamps are used to illuminate sculpture or fountains.

14. Light fixtures mounted on the ground, unless decorative types, path lights, etc., are to be hidden in landscape material, and not visible from outside the property line.

In addition, staff reviewed Palm Beach County's (PBC) regulations regarding lighting that is adjacent to Environmental Sensitive Lands, and the Dark Sky Initiative.

Currently, neither PBC nor the Palm Beach County Department of Environmental Resources Management (PBCERM), have regulations for light spillage onto their Natural Areas. However, PBCERM staff recommends that the principles behind the Dark Sky Initiative, as they relate to wildlife (https://www.darksky.org/light-pollution/wildlife/), be taken into consideration.

Therefore, Town staff proposes the following language for the regulation of light spillage from residential properties (additional language is underlined):

Sec. 12-4. Lighting regulations for residential structures.

(a) *Definitions.* For the purposes of this section, the following words, terms, and phrases shall have the meanings ascribed herein, except where the context clearly indicates a different meaning:

Cutoff-type luminaire means a light fixture with elements such as a shield, reflectors, or reflector panels which direct and cutoff the light at an angle that is less than seventy-five (75) degrees. Typically, this type of fixture conceals the light source, thus reducing glare and spill-over of light.

Light spillage means the transmission of light spilled off-site to another property, including streets, road easements, alleys, and other rights-of-way.

Sky glow means a large fraction of lighting shining directly upward that washes out the view of a dark night sky.

(b) Any exterior lighting, roof lighting, under canopy lighting, or façade lighting shall be recessed and shielded or shall contain a cutoff-type luminaire within the structure or fixture in which it is located.

(c) All lighting installations shall be designed to minimize light spillage, sky glow, and hazardous interference with vehicular traffic on adjacent rights-of-way. All newly constructed residential structures shall utilize a cutoff-type luminaire for all proposed light fixtures.

(d) The town encourages the use of fixtures that have the IDA (International Dark-Sky Association) Fixture Seal of Approval, a third-party certification for lighting that minimizes glare, reduces light trespass, and does not pollute the night sky.

(e) The use of red, yellow, blue, and green light bulbs visible from the street or the adjacent public right-of-way are prohibited except during town-approved holiday intervals.

RECOMMENDATION

Staff recommends that the Planning and Zoning Board review proposed Ordinance No. 766 and provide a recommendation to the Town Council.

Attachment(s):

1. Ordinance No. 766

Notes for Staff

Lighting professionals **use a light meter (also called an illuminance meter or lux meter)** to measure the amount of light in a space/on a particular work surface. The light meter has a sensor that measures the light falling on it and provides the user with a measurable illuminance reading.

Jupiter- Sec. 27-2592(g) (h) Method of measurements. The *light* meter sensor shall be read at ground level or the established grade in a horizontal position. Readings shall be taken only after the *light* source has been exposed long enough to provide a constant reading. Measurements shall be taken after dark with the *light* sources to be measure on and subsequently off. The difference between the two readings shall be multiplied by the estimated *light* loss factor of the fixtures and shall be compared to the permitted illumination level for each *lighting* zone.

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