

ORDINANCE NO. 01-2020

**BOROUGH OF ROSELAND
COUNTY OF ESSEX, STATE OF NEW JERSEY**

**AN ORDINANCE TO AMEND CHAPTER 30 "LAND
DEVELOPMENT" REGARDING EXTERIOR LIGHTING**

WHEREAS, the Mayor and Council of the Borough of Roseland wish to amend Chapter XXX Land Development to repeal and replace Section 30-510 Lighting.

NOW, THEREFORE BE IT ORDAINED by the Mayor and Council of the Borough of Roseland that Chapter XXX "Land Development" of the Revised General Ordinances of the Borough shall be amended as follows:

SECTION I

Ordinance Section 30-510 Lighting is hereby repealed in its entirety and replaced with the following:

30-510 EXTERIOR LIGHTING

30-510.1 General Provisions

- a. Purpose: The general purpose of this chapter is to protect and promote the public health, safety and welfare, the quality of life, and the ability to view the night sky by establishing regulations and a process of review for exterior lighting. This chapter establishes standards for exterior lighting in order to accomplish the following:
 1. To provide safe roadways for motorists, cyclists and pedestrians;
 2. To ensure that sufficient lighting can be provided where needed to promote safety and security;
 3. To protect against adverse offsite impacts of lighting, such as direct glare, light trespass, obtrusive light, sky glow, and excessive lighting;
 4. To protect and reclaim the ability to view the night sky, and help preserve the quality of life and the tourist experience;
 5. To promote efficient and cost-effective lighting that will conserve energy and resources to the greatest extent possible;
 6. To allow for flexibility in the style of lighting fixtures;
 7. To provide exterior lighting guidelines; and
 8. To provide assistance to property owners and occupants in bringing nonconforming lighting into conformance with this chapter.
- b. Applicability: All exterior lighting installed after the effective date hereof in any and all zoning districts in the Borough of Roseland shall be in conformance with the requirements established by this chapter and any other applicable ordinances. 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. All existing lighting installed prior to the effective date hereof in any and all zoning districts in the Borough of Roseland shall be addressed as follows:

1. All existing lighting located on a subject property that is part of an application for development or building permit is required to be brought into conformance with this chapter. Conformity shall occur prior to issuance of a certificate of occupancy, final inspection, or final plat recordation, when applicable. For other permits, the applicant shall have a maximum of thirty (30) days from date of permit issuance to bring the lighting into conformance.
2. All existing exterior lighting for uses other than single-family and two-family dwellings that is not in conformance with this chapter shall be brought into conformance with this chapter within 1 year of adoption of this ordinance.
3. In the event of a discrepancy in applicable ordinances, the most restrictive shall apply.

c. Exemptions: The following are not regulated by this Ordinance:

1. Lighting within public right-of-way or easement for the principal purpose of illuminating streets or roads. No exemption shall apply to any lighting within the public right of way or easement when the purpose of the luminaire is to illuminate areas outside the public right of way or any easement, unless regulated with a streetlighting ordinance.
2. Lighting for public monuments and statuary.
3. Lighting solely for signs (lighting for signs is regulated by the Sign Ordinance).
4. Repairs to existing luminaires not exceeding 25% of total installed luminaires.
5. Temporary lighting for theatrical, television, performance areas and construction sites;
6. Underwater lighting in swimming pools and other water features
7. Temporary lighting and seasonal lighting provided that individual lamps are less than 10 watts and 70 lumens.
8. Lighting that is only used under emergency conditions.
9. In lighting zones LZ-2, LZ-3 and LZ-4, low voltage landscape lighting controlled by an automatic device that is set to turn the lights off at one hour after the site is closed to the public or at a time established by the Borough Agency.

- d. The Borough Agency shall have the authority to require new lighting and/or modification of existing lighting, pursuant to subsection 30-510.1b.1 of this chapter to meet the requirements of this chapter.
- e. Lighting Plans Required: All applications for development and/or building permits shall include lighting plans showing location, type, height, color temperature, lumen output and amount of all proposed and existing fixtures. The applicant shall provide sufficient information to verify that lighting conforms to the provisions of this chapter. The Borough Agency shall have the authority to request additional information in order to achieve the purposes of this chapter.

f. Definitions:

Absolute Photometry shall mean photometric measurements (usually of a solid-state luminaire) that directly measures the footprint of the luminaire.

Architectural Lighting shall mean lighting designed to reveal architectural beauty, shape and/or form and for which lighting for any other purpose is incidental.

Astronomic Time Switch shall mean an automatic lighting control device that switches outdoor lighting relative to time of solar day with time of year correction.

Backlight shall mean for an exterior luminaire, lumens emitted in the quarter sphere below horizontal and in the opposite direction of the intended orientation of the luminaire. For luminaires with symmetric distribution, backlight will be the same as front light.

Borough Agency shall mean the Roseland Borough entity having jurisdiction over outdoor lighting, including the Planning Board, Zoning Board, Zoning Officer, Borough Engineer, Construction Official, or Code Enforcement Officer, as applicable.

BUG shall mean the luminaire classification system that classifies backlight (B), uplight (U) and glare (G) to evaluate luminaire optical performance related to light trespass, sky glow, and high angle brightness control. The BUG ratings are based on a zonal lumen calculations for secondary solid angles, based on data from photometric testing procedures approved by the IESNA.

Canopy shall mean a covered, unconditioned structure with at least one side open for pedestrian and/or vehicular access. (An unconditioned structure is one that may be open to the elements and has no heat or air conditioning.)

Common Outdoor Areas shall mean one or more of the following: a parking lot; a parking; a common entrance or public space structure or covered vehicular entrance shared by all occupants of the domiciles.

Curfew shall mean a time defined by the Governing Body when outdoor lighting is reduced or extinguished.

Emergency Conditions shall mean, generally, lighting that is only energized during an emergency; lighting fed from a backup lighting power source; or the path for illuminating of egress solely during a fire or other emergency situation; or, lighting for security purposes used solely during an alarm.

Footcandle shall mean the unit of measure 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.

Forward Light shall mean for an exterior luminaire, lumens emitted in the quarter sphere below horizontal and in the direction of the intended orientation of the luminaire.

Fully Shielded Luminaire shall mean a luminaire 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.

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

Hardscape Area shall mean the area measured in square feet of all hardscape. It is used to calculate the Total Site Lumen Limit in both the Prescriptive Method and Performance Methods. Refer to Hardscape definition.

Hardscape Perimeter shall mean the perimeter measured in linear feet is used to calculate the Total Site Lumen Limit in the Performance Method. Refer to Hardscape definition.

Hardscape shall mean permanent hardscape improvements to the site including parking lots, drives, entrances, curbs, ramps, stairs, steps, medians, walkways and non-vegetated landscaping that is 10 feet or less in width. Materials may include concrete, asphalt, stone, gravel, etc.

IDA shall mean the International Dark-Sky Association.

IESNA shall mean the Illuminating Engineering Society of North America.

Impervious Material shall mean a material that is sealed to severely restrict water entry and movement.

Industry Standards Lighting Software shall mean lighting software that calculates point-by-point illuminance that includes reflected light using either ray-tracing or radiosity methods.

Lamp shall mean a generic term for a source of optical radiation (i.e. "light"), often called a "bulb" or tube". Examples include incandescent, fluorescent, high-intensity discharge (HID) lamps, and low-pressure sodium (LPS) lamps, as well as light-emitting diode (LED) modules and arrays.

Landscape Lighting shall mean lighting of trees, shrubs, or other plant material as well as ponds and other landscape features.

Landscape Lighting, Low Voltage shall mean landscape lighting powered at less than 15 volts and limited to luminaires having a rated initial luminaire lumen output of 525 lumens or less.

LED shall mean Light Emitting Diode.

Light Pollution shall mean any adverse effect of artificial light including, but not limited to, glare, light trespass, skyglow, energy waste, compromised safety and security, and impacts on the nocturnal environment.

Light Trespass shall mean light that falls beyond the property it is intended to illuminate.

Lighting Equipment shall mean equipment specifically intended to provide gas or electric illumination, including but not limited to, lamp(s), luminaire(s), ballast(s), poles, posts, lens(s), and related structures, electrical wiring, and other necessary or auxiliary components.

Lighting shall mean “electric” or “man-made” or “artificial” lighting. See “lighting equipment”.

Lighting Zone shall mean an overlay zoning system establishing legal limits for lighting for particular parcels, areas, or districts in a community.

Lumen shall mean the unit of measure used to quantify the amount of light produced by a lamp or emitted from a luminaire (as distinct from “watt,” a measure of power consumption). 1 Lumen per square foot is equivalent to 1 Footcandle. In terms of SI units 1 Lumen per square foot is approximately equivalent to 10.76 Lux.

Luminaire Lumens shall mean, for luminaires with relative photometry, it is calculated as the sum of the initial lamp lumens for all lamps within an individual luminaire, multiplied by the luminaire efficiency. If the efficiency is not known for a residential luminaire, assume 70%. For luminaires with absolute photometry, it is the total luminaire lumens. The lumen rating of a luminaire assumes the lamp or luminaire is new and has not depreciated in light output.

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

Lux shall mean the SI unit of illuminance. One lux is one lumen per square meter. 1 Lux is a unit of incident illuminance approximately equal to 1/10 footcandle.

Mounting Height shall mean the height of the photometric center of a luminaire above grade level. The horizontal spacing of poles is often measured in units of “mounting height”. Example: “The luminaires can be spaced up to 4 mounting heights apart.”

New Lighting shall mean lighting for areas not previously illuminated; newly installed lighting of any type except for replacement lighting or lighting repairs.

Object shall mean a permanent structure located on a site. Objects may include statues or artwork, garages or canopies, outbuildings, etc. Object Height The highest point of an entity, but shall not include antennas or similar structures.

Ornamental Lighting shall mean lighting that does not impact the function and safety of an area but is purely decorative, or used to illuminate architecture and/or landscaping, and installed for aesthetic effect.

Ornamental Street shall mean lighting shall mean a luminaire intended for illuminating streets that serves a decorative function in addition to providing optics that effectively deliver street lighting. It has a historical period appearance or decorative appearance, and has the following design characteristics:

- designed to mount on a pole using an arm, pendant, or vertical tenon;
- opaque or translucent top and/or sides;
- an optical aperture that is either open or enclosed with a flat, sag or drop lens;
- mounted in a fixed position; and
- with its photometric output measured using Type C photometry per IESNA LM-75-01.

Outdoor Lighting shall mean lighting equipment installed within the property line and outside the building envelopes, whether attached to poles, building structures, the earth, or any other location; and any associated lighting control equipment.

Partly Shielded Luminaire shall mean a luminaire with opaque top and translucent or perforated sides, designed to emit most light downward.

Pedestrian Hardscape shall mean stone, brick, concrete, asphalt or other similar finished surfaces intended primarily for walking, such as sidewalks and pathways.

Photoelectric Switch shall mean a control device employing a photocell or photodiode to detect daylight and automatically switch lights off when sufficient daylight is available.

Property Line shall mean the edges of the legally-defined extent of privately-owned property.

Relative Photometry shall mean photometric measurements made of the lamp plus luminaire, and adjusted to allow for light loss due to reflection or absorption within the luminaire. Reference standard: IES LM-63.

Repair(s) shall mean the reconstruction or renewal of any part of an existing luminaire for the purpose of its ongoing operation, other than relamping or replacement of components including capacitor, ballast or photocell. Note that retrofitting a luminaire with new lamp and/or ballast technology is not considered a repair and for the purposes of this ordinance the luminaire shall be treated as if new. "Repair" does not include normal relamping or replacement of components including capacitor, ballast or photocell.

Replacement Lighting shall mean lighting installed specifically to replace existing lighting that is sufficiently broken to be beyond repair.

Sales Area shall mean uncovered area used for sales of retail goods and materials, including but not limited to automobiles, boats, tractors and other farm equipment, building supplies, and gardening and nursery products.

Shielded Directional Luminaire shall mean a luminaire that includes an adjustable mounting device allowing aiming in any direction and contains a shield, louver, or baffle to reduce direct view of the lamp.

Sign shall mean advertising, directional or other outdoor promotional display of art, words and/or pictures.

Sky Glow shall mean the brightening of the nighttime sky that results from scattering and reflection of artificial light by moisture and dust particles in the atmosphere. Skyglow is caused by light directed or reflected upwards or sideways and reduces one's ability to view the night sky.

Temporary lighting shall mean lighting installed and operated for periods not to exceed 60 days, completely removed and not operated again for at least 30 days.

Temporary Seasonal Lighting shall mean lighting installed and operated in connection with holidays or traditions.

Third Party shall mean a party contracted to provide lighting, such as a utility company.

Time Switch shall mean an automatic lighting control device that switches lights according to time of day.

Translucent shall mean allowing light to pass through, diffusing it so that objects beyond cannot be seen clearly (not transparent or clear).

Unshielded Luminaire shall mean a luminaire capable of emitting light in any direction including downwards.

Uplight shall mean for an exterior luminaire, flux radiated in the hemisphere at or above the horizontal plane.

Vertical Illuminance shall mean illuminance measured or calculated in a plane perpendicular to the site boundary or property line.

30-510.2 Lighting Standards

- a. Light Trespass and Overlighting: All existing and/or new exterior lighting shall not cause light trespass and shall protect adjacent properties from glare and excessive lighting. All vehicle lighting originating from a commercial property shall be shielded from other adjacent properties. Incidental light trespass (lighting emanating from turning motor vehicles or motion sensor lighting) is permitted.
- b. Minimum maintained horizontal illumination shall be listed in Figure 1.

Figure 1: Minimum Maintained Horizontal Illumination

Use Classification	Footcandles	
	Nonresidential Use	Residential Use
Roadways	0.9	0.4
Sidewalks	0.9	0.2
Parking areas	0.6	0.2

Perimeter of parking areas	.3	.2
Other walkways	0.9	.02

- c. All lighting emitting from any zoning lot shall not cause the light level along any property line, as measured at a height of 60 inches above grade in a plane at any angle of inclination, to exceed the limitations listed in Figure 2: Light Trespass and Overlighting Matrix.

Figure 2: Light Trespass and Overlighting Matrix

Zone of Light Source	Impacted Zone	Maximum Foot-Candle Limits
Non-commercial Zones (C, C/R, R-1, R-2, R-3, R-4, R-5, R-6, AH-1/R-7, AH-2/R-8, AH-3/R-9)	Non-commercial Zones (C, C/R, R-1, R-2, R-3, R-4, R-5, R-6, AH-1/R-7, AH-2/R-8, AH-3/R-9)	0.1 foot-candles
Non-commercial Zones (C, C/R, R-1, R-2, R-3, R-4, R-5, R-6, AH-1/R-7, AH-2/R-8, AH-3/R-9)	Commercial Zones (B-1, B-2, OB-1, OB-2, OB-3)	0.5 foot-candles
Commercial Zones (B-1, B-2, OB-1, OB-2, OB-3)	Non-commercial Zones (C, C/R, R-1, R-2, R-3, R-4, R-5, R-6, AH-1/R-7, AH-2/R-8, AH-3/R-9)	0.1 foot-candles
Commercial Zones (B-1, B-2, OB-1, OB-2, OB-3)	Commercial Zones (B-1, B-2, OB-1, OB-2, OB-3)	0.5 foot-candles

- d. Nonessential Exterior Commercial and Residential Lighting: All nonessential exterior commercial and residential lighting shall be turned off after business hours and/or when not in use. Lights on a timer shall be used. Sensor activated lights shall be used to replace existing lighting that is desired for security purposes.

- e. Area Lights:

1. All area lights, including streetlights and parking area lighting, shall be level mounted and eighty-five degrees (85°) full cutoff type fixtures.
2. Residential Streetlights shall be limited to 1,125 lumens, unless otherwise recommended by the Department of Public Works or Borough Engineer.
3. Nonresidential Streetlights shall be limited to 1,500 lumens, unless otherwise recommended by the Department Public Works or Borough Engineer.
4. Lights on major intersections on state highways shall be limited to 3,000 lumens, unless otherwise recommended by the Department Public Works or Borough Engineer.
5. Parking area lights are encouraged to be greater in number, lower in height and lower in light level, as opposed to fewer in number, higher in height and higher in light level.
6. Parking lot lighting shall not exceed IESNA recommended illuminance (foot-candle) level and are encouraged to utilize the lowest range available.

7. All freestanding area lights within a residential zone, except streetlights, shall be mounted at a height no greater than the value " $3 + (D/3)$ ", where D is the distance in feet to the nearest property boundary.
 8. Luminaire Mounting Height: Freestanding luminaires shall be no higher than twenty-five feet (25') above the stand/pole base; except, that luminaires used for recreational playing fields shall be exempt from the height restriction, provided all other provisions of this chapter are met and the light is used only while the field is in use; and except, that streetlights used on major roads may exceed this standard if necessary as determined by the Borough Council, as advised by a lighting engineer. Building mounted luminaires shall be attached only to walls, and the top of the fixture shall not exceed the height of the parapet or roof, whichever is greater.
 9. Area lights on a timer, sensor activated, or turned off at 10:30 pm are exempt from section 30-510.2.b of this chapter, provided all other standards of this section are met.
- f. Uplighting: Uplighting is prohibited in all zoning districts, except where otherwise permitted in this chapter.
- g. Public Outdoor Lighting: Public outdoor lighting, including holiday lighting, shall be permitted to ensure the safety and enjoyment of the intended public use. All public lighting shall comply with the standards established herein and shall be turned off after hours of operation or when not in use. When practically possible, motion sensors may be used. Public Outdoor Lighting is exempt from lighting curfews and exempt from section 30-510.2.c of this chapter.
- h. Lighting Fixtures:
1. All exterior lighting shall comply with the acceptable lighting fixtures located in Figure 2. All exterior lighting fixtures shall be full cutoff fixtures with the light source fully shielded, except as exempted in this chapter.
 2. Figure 3 is incorporated into this chapter as a guideline for the public and the Borough for use in meeting the intent of this chapter. Figure 3 serves only as an example. The Borough does not endorse or discriminate against any manufacturer or company that may be shown, portrayed or mentioned by the examples.

Figure 3: Lighting Fixture Guidelines

Examples of Unacceptable/Discouraged and Acceptable Lighting Fixtures



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i. Lighting Fixture Exceptions and Additional Requirements: See Figure 4.

Figure 4: Light Fixture Exceptions and Additional Requirements

Type of Lighting Full Cutoff	Light Fixture	Light Trespass Standards	Additional Requirements
Canopy Lighting	Required	Not exempt	<ul style="list-style-type: none"> – All canopy lighting shall be recessed – sufficiently so as to ensure that no light source is visible from or causes glare on public rights of way or adjacent property
Holiday Lights	Not Required	Exempt	<ul style="list-style-type: none"> – Exempt from color temperature requirements set forth in this chapter. – All new holiday lighting shall be LED lighting, or bulb that has been demonstrated to be the most energy efficient technology available. – Flashing holiday lighting is permitted. – All private holiday lighting shall be turned off at the close of business hours in the B-1 and B-2 zoning districts, and after 12:00 Midnight in all other zoning districts. – Outdoor Public lighting shall not be subject to holiday lighting curfew.
Flagpole Lighting	Not Required	Exempt	<ul style="list-style-type: none"> – Upward flagpole lighting is permitted for governmental flags only. – The maximum lumen output shall be 1,300 lumens. – Flags are encouraged to be taken down at sunset to avoid the need for lighting.
Floodlights	Not Required	Not Exempt	<ul style="list-style-type: none"> – Floodlights with external shielding shall be angled provided that no light escapes above a 25-degree angle measured from the vertical line from the center of the light extended to the ground. – Floodlights shall not cause glare or light to shine directly on adjacent property or public rights of way. – Shall be encouraged to be motion sensor activated.
Neon Lights	Not Required	Not Exempt	<ul style="list-style-type: none"> – Neon Lights: Neon lights are only permitted pursuant to the sign ordinance.

Type of Lighting Full Cutoff	Light Fixture	Light Trespass Standards	Additional Requirements
Sensor Activated Lighting	Required	Exempt	<ul style="list-style-type: none"> – Shall be located so as to prevent lighting into adjacent properties or into a public right of way. – Lighting shall activate only when motion on the property is detected and shall deactivate within no more than five (5) minutes. – Lighting shall not be triggered by any activity off the property or in the public right of way. – The maximum lumen output shall be 600 lumens.
Temporary Lighting	Required	Exempt	<ul style="list-style-type: none"> – Lumens output shall be approved by the Department of Public Works.
Temporary Emergency Lighting	Not Required	Exempt	<ul style="list-style-type: none"> – Utilized by public safety services. Exempt from provisions of this chapter
Motor Vehicle Fueling Stations and Motor Vehicle Service Stations	Required	Not Exempt	<ul style="list-style-type: none"> – The average foot-candle lighting level at the pump for new and existing service stations is required to be no greater than 12.5 foot-candle average, as set by the IESNA for service stations.
Towers for Radio Communication and Navigation	Not Required	Not Exempt	<ul style="list-style-type: none"> – All radio, communication and navigation towers that require lights shall have dual lighting capabilities. – For daytime, the white strobe light may be used, and for nighttime, only red lights shall be used. – Lighting that is required by legal jurisdictions are exempt from this provision.

30-510.3 Prohibited Lighting

- a. Any light source that does not meet the requirements of this chapter is prohibited.
- b. Searchlights, beacons, laser source, and other high-intensity light fixtures are prohibited.
- c. Except as otherwise allowed by this title, any lighting that is flashing, blinking, rotating, chasing, or rapidly changing in color or intensity is prohibited.

- d. Neon lights shall be prohibited, except as may be permitted pursuant to Section 30-403.17 Signs.
- e. Window border lighting shall be prohibited.

30-510.4 Lighting Zones

- a. The Lighting Zones shall determine the limitations for lighting as specified in this ordinance. The Lighting Zones shall be shown in Figure 5:

Figure 5: Lighting Zones

Lighting Zone	Applicable Zoning Districts	Description
LZ-0: No ambient lighting	C Conservation Zone	Areas where the natural environment will be seriously and adversely affected by lighting. Impacts include disturbing the biological cycles of flora and fauna and/or detracting from human enjoyment and appreciation of the natural environment. Human activity is subordinate in importance to nature. The vision of human residents and users is adapted to the darkness, and they expect to see little or no lighting. When not needed, lighting should be extinguished.
LZ-1: Low ambient lighting	Single-Family Residential Zones (R-1, R-2, R-3, R-4)	Areas where lighting might adversely affect flora and fauna or disturb the character of the area. The vision of human residents and users is adapted to low light levels. Lighting may be used for safety and convenience, but it is not necessarily uniform or continuous. After curfew, most lighting should be extinguished or reduced as activity levels decline.
LZ-2: Moderate ambient lighting	Multi-Family Residential & Non-Residential Zones (R-5, R-6, AH-1/R-7, AH-2/R-8, AH-3/R-9, OB-1, OB-2, OB-3, B-1, B-2, Redevelopment Areas)	Areas of human activity where the vision of human residents and users is adapted to moderate light levels. Lighting may typically be used for safety and convenience, but it is not necessarily uniform or continuous. After curfew, lighting may be extinguished or reduced as activity levels decline.
LZ-3: Moderately high ambient lighting	No Applicable Zoning Districts within Roseland Borough, included for reference only	Areas of human activity where the vision of human residents and users is adapted to moderately high light levels. Lighting is generally desired for safety, security and/or convenience and it is often uniform and/or continuous. After curfew, lighting may be extinguished or reduced in most areas as activity levels decline.

Lighting Zone	Applicable Zoning Districts	Description
LZ-4: High ambient lighting	No Applicable Zoning Districts within Roseland Borough, included for reference only	Areas of human activity where the vision of human residents and users is adapted to high light levels. Lighting is generally considered necessary for safety, security and/or convenience and it is mostly uniform and/or continuous. After curfew, lighting may be extinguished or reduced in some areas as activity levels decline.

- b. The following outdoor lighting restrictions in Figure 6 shall apply to sites and structures based on their assigned lighting zone:

Figure 6: Lighting Zone-Based Restrictions

Lighting Zones	Color Temperature CCT Allowed Range	Mandatory Light Reduction	Maximum Light Output Percentage after curfew
LZ-0	1,900K – 3,000K	1 Hour after close of business	25%
LZ-1	1,900K – 3,000K	1 Hour after close of business or 11:00 PM	25%
LZ-2	1,900K – 3,500K	2 Hours after close of business or 11:00 PM	50%

30-510.5 Lighting Control Requirements

- a. Automatic Switching Requirements: Controls shall be provided that automatically extinguish all outdoor lighting when sufficient daylight is available using a control device or system such as a photoelectric switch, astronomic time switch 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.
- b. Automatic Lighting Reduction Requirements: Non-essential outdoor lighting lumens shall be reduced by at least 30% or extinguished within one hour after the close of business.
1. Exceptions: 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). When the outdoor lighting consists of only one luminaire.
 - (c). Code required lighting for steps, stairs, walkways, and building entrances for safety purposes.

- (d). When, in the opinion of the Borough Agency having jurisdiction, lighting levels must be maintained for safety or security purposes.
- (e). Motion activated lighting.
- (f). Lighting governed by site plan approval in which times of lighting operation are specifically identified.
- (g). Businesses that operate on a 24 hour basis.

30-510.6 Non-Residential and Multi-Family Residential Lighting

For all properties other than single-family and two-family residential dwellings, all outdoor lighting shall comply with this section.

- a. **Total Site Lumen Limit:** The total installed initial luminaire lumens of all outdoor lighting shall not exceed the total site lumen limit. The total site lumen limit shall be determined using either the Parking Space Method (Figure 7) or the Hardscape Area Method (Figure 8). Only one method shall be used per permit application, and for sites with existing lighting, existing lighting shall be included in the calculation of total installed lumens. The total installed initial luminaire lumens is calculated as the sum of the initial luminaire lumens for all luminaires.

Figure 7 - Allowed Total Initial Luminaire Lumens per Site for Non-residential Outdoor Lighting, Per Parking Space Method

May only be applied to properties up to 10 parking spaces (including handicapped accessible spaces).

LZ-0	LZ-1	LZ-2
350	490	630
lumens/space	lumens/space	lumens/space

Figure 8 - Allowed Total Initial Lumens per Site for Nonresidential Outdoor Lighting, Hardscape Area Method

May be used for any project. When lighting intersections of site drives and public streets or road, a total of 600 square feet for each intersection may be added to the actual site hardscape area to provide for intersection lighting.

Base Allowance			
LZ-0	LZ-1		LZ-2
0.5 lumens per square foot of Hardscape	1.25 lumens per square foot of Hardscape		2.5 lumens per square foot of Hardscape
Lumen Allowances, in Addition to Base Allowance			
	LZ-0	LZ-1	LZ-2
Additional allowances for sales and service facilities. No more than two additional allowances per site, “Use it or Lose it”.			

Outdoor Sales Lots. This allowance is lumens per square foot of uncovered sales lots used exclusively for the display of vehicles or other merchandise for sale, and may not include driveways, parking or other non sales areas. To use this allowance, luminaires must be within 2 mounting heights of sales lot area.	0	0	8 lumens per square foot
Outdoor Sales Frontage. This allowance is for lineal feet of sales frontage immediately adjacent to the principal viewing location(s) and unobstructed for its viewing length. A corner sales lot may include two adjacent sides provided that a different principal viewing location exists for each side. In order to use this allowance, luminaires must be located between the principal viewing location and the frontage outdoor sales area	0	0	1,000 per linear foot
Drive Up Windows. In order to use this allowance, luminaires must be within 20 feet horizontal distance of the center of the window.	0	0	4,000 lumens per drive-up window
Vehicle Service Station. This allowance is lumens per installed fuel pump.	0	0	8,000 lumens per pump (based on 5 fc horiz)

- b. **Maximum Allowable Backlight, Uplight, and Glare (BUG) Ratings:** All luminaires shall be rated and installed according to Figure 9 (a, b and c).

Figure 9a - Maximum Allowable Backlight, Uplight and Glare (BUG) Ratings

May be used for any project. A luminaire may be used if it is rated for the lighting zone of the site or lower in number for all ratings B, U and G. Luminaires equipped with adjustable mounting devices permitting alteration of luminaire aiming in the field shall not be permitted.

	LZ-0	LZ-1	LZ-2
Allowed Backlight Rating			
Greater than 2 mounting heights from property line	B1	B3	B4
1 to less than 2 mounting heights from property line and ideally oriented**	B1	B2	B3
0.5 to 1 mounting heights from property line and ideally oriented**	B0	B1	B2
Less than 0.5 mounting height to property line and properly oriented**	B0	B0	B0

*For property lines that abut public walkways, bikeways, plazas, and parking lots, the property line may be considered to be 5 feet beyond the actual property line for purpose of determining compliance with this section. For property lines that abut public roadways and public transit corridors, the property line may be considered to be the centerline of the public roadway or

public transit corridor for the purpose of determining compliance with this section. NOTE: This adjustment is relative to Figure 8a and 8c only and shall not be used to increase the lighting area of the site.

** To be considered 'ideally oriented', the luminaire must be mounted with the backlight portion of the light output oriented perpendicular and towards the property line of concern.

Figure 9b Maximum Allowable Uplight (BUG) Ratings – Continued

	LZ-0	LZ-1	LZ-2
Allowed Uplight Rating	U0	U1	U2
Allowed % light emission above 90° for street or Area lighting	0%	0%	0%

Figure 9c Maximum Allowable Glare (BUG) Ratings – Continued

	LZ-0	LZ-1	LZ-2
Allowed Glare Rating	G0	G1	G2
Any luminaire not ideally oriented*** with 1 to less than 2 mounting heights to any property line of concern	G0	G0	G1
Any luminaire not ideally oriented*** with 0.5 to 1 mounting heights to any property line of concern	G0	G0	G0
Any luminaire not ideally oriented*** with less than 0.5 mounting heights to any property line of concern	G0	G0	G0

*** Any luminaire that cannot be mounted with its backlight perpendicular to any property line within 2X the mounting heights of the luminaire location shall meet the reduced Allowed Glare Rating in Figure 8c.

c. **Maximum Vertical Illuminance:** Maximum Vertical Illuminance at any point in the plane of the property line shall comply with Figure 10.

Figure 10 Maximum Vertical Illuminance at any point in the plane of the property line

LZ-0	LZ-1	LZ-2
0.05 footcandles or 0.5 Lux	0.1 footcandles or 1.0 Lux	0.3 footcandles or 3.0 Lux

SECTION II

If any section or provision of this ordinance shall be invalid in any court, the same shall not affect the other sections or provisions of this ordinance except so far as the section of provision so declared invalid shall be inseparable from the remainder or any portion thereof.

SECTION III

All ordinances or parts of ordinances inconsistent herewith are hereby repealed to the extent of such inconsistency.

SECTION IV

This ordinance shall take effect upon publication as provided by law.

DATE OF INTRODUCTION: January 21, 2020

Motion to Introduce by: Councilwoman Bardi
Motion Seconded by: Councilman Trillo
Introduction Approved: 6-0 Voice Vote

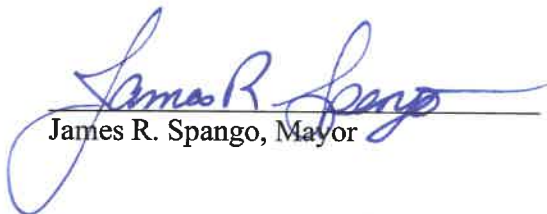
DATE OF AMENDMENT: March 3, 2020

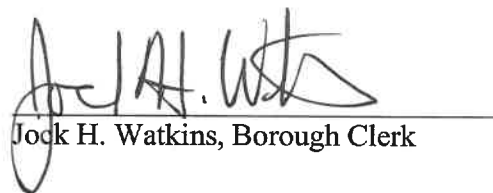
Motion to Amend by: Councilwoman Bardi
Motion Seconded by: Councilwoman Fishman
Amendment Approved: 5-0 Voice Vote (Trillo absent)

DATE OF ADOPTION: March 17, 2020

COUNCIL	MOTION	SECOND	AYE	NAY	ABSTAIN	RECUSE	ABSENT
Councilman Bardi	X		X				
Councilwoman Fishman		X	X				
Councilman Freda			X				
Councilwoman Perrotti			X				
Councilwoman Tolli			X				
Councilman Trillo			X				
Mayor Spango (In case of tie)							
VOTE:			6	0			

I hereby certify that the above Ordinance was duly adopted by the Mayor and Council of the Borough of Roseland at a meeting of Borough Council held on the 17th day of March, 2020.


James R. Spango, Mayor


Jock H. Watkins, Borough Clerk

Date of Publication: March 24, 2020, the Star Ledger



BOROUGH OF ROSELAND

ESSEX COUNTY, NEW JERSEY
140 EAGLE ROCK AVENUE, ROSELAND, NEW JERSEY 07068
(973) 226-8080

BOROUGH CLERK

Jock H. Watkins, RMC

CERTIFIED MAIL NO: 7018-1830-0002-1066-8753

January 23, 2020

Mr. David Antonio, P.P., AICP
Essex County Planning Board
900 Bloomfield Avenue
Verona, NJ 07044

RE: Ordinance No. 01-2020
Amend and Supplement Borough Code
Chapter XXX, Land Development

Dear Mr. Antonio:

Pursuant to N.J.S.A. 40:55D-15, enclosed is a copy of the above referenced ordinance(s) that was introduced by the Borough Council at a meeting held January 21, 2020. The Council will conduct a public hearing and consider final passage of the ordinance(s) during its regular meeting scheduled for March 17, 2020 at 7:30 PM at the Municipal Building, 19 Harrison Avenue, Roseland, NJ 07068.

Sincerely,

Jock H. Watkins
Municipal Clerk
jwatkins@roselandnj.org
973-403-6029

Enclosure(s)

Via Certified mail to Municipal Clerks of:

Borough of Essex Fells
Township of East Hanover
Township of Livingston
Township of West Caldwell
Township of West Orange

Certified Mail No. 7018-1830-0002-1066-8760
Certified Mail No. 7018-1830-0002-1066-8777
Certified Mail No. 7018-1830-0002-1066-8784
Certified Mail No. 7018-1830-0002-1066-8791
Certified Mail No. 7018-1830-0002-1066-8807

7018 1830 0002 1066 8777

7018 1830 0002 1066 8781

7018 1830 0002 1066 8807

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<input type="checkbox"/> Adult Signature Restricted Delivery	\$

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Se Ms. Paula A. Massaro, Clerk
 Township of East Hanover
 411 Ridgedale Avenue
 East Hanover, NJ 07936

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

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Ms. Mary Donovan, Clerk
 Township of West Caldwell
 30 Clinton Road
 West Caldwell, NJ 07006

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 Township of West Orange
 66 Main Street, Room 101
 West Orange, NJ 07052

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7018 1830 0002 1066 8760

7018 1830 0002 1066 8753

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Mr. Glenn R. Turteltaub, Clerk
 Township of Livingston
 357 South Livingston Avenue
 Livingston, NJ 07039

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

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<input type="checkbox"/> Adult Signature Restricted Delivery	\$

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Ms. Francine T. Pasercik, Clerk
 Borough of Essex Fells
 255 Roseland Avenue
 Essex Fells, NJ 07021

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

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<input type="checkbox"/> Certified Mail Restricted Delivery	\$
<input type="checkbox"/> Adult Signature Required	\$
<input type="checkbox"/> Adult Signature Restricted Delivery	\$

Postage
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Total Postage and Fees
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Mr. David Antonio, P.P., ACP
 Essex County Planning Board
 900 Bloomfield Avenue
 Verona, NJ 07044

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

SENDER: COMPLETE THIS SECTION		COMPLETE THIS SECTION ON DELIVERY		SENDER: COMPLETE THIS SECTION		COMPLETE THIS SECTION ON DELIVERY	
<p>Complete items 1, 2, and 3.</p> <ul style="list-style-type: none"> Print your name and address on the reverse so that we can return the card to you. Attach this card to the back of the mailpiece, or on the front if space permits. <p>Article Addressed to:</p> <p>Mr. David Antonio, P.P. AICP Essex County Planning Board 900 Bloomfield Avenue Verona, NJ 07044</p>  <p>9590 9402 5002 9063 1737 83</p> <p>Article Number (Transfer from service label) 701A 1A30 0002 1066 8753</p> <p>PS Form 3811, July 2015 PSN 7530-02-000-9053</p>		<p>A. Signature <input checked="" type="checkbox"/> Agent</p> <p>B. Received by (Printed Name) _____ C. Date of Delivery _____</p> <p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No</p> <p>Service Type <input type="checkbox"/> Adult Signature <input type="checkbox"/> Registered Mail Restricted Delivery <input type="checkbox"/> Certified Mail® <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Collect on Delivery <input type="checkbox"/> Signature Confirmation™ <input type="checkbox"/> Restricted Delivery</p>		<p>1. Article Addressed to:</p> <p>Ms. Francine T. Paserchia, Clerk Borough of Essex Fells 255 Roseland Avenue Essex Fells, NJ 07021</p>  <p>9590 9402 5002 9063 1737 38</p> <p>Article Number (Transfer from service label) 701A 1A30 0002 1066 8760</p> <p>PS Form 3811, July 2015 PSN 7530-02-000-9053</p>		<p>A. Signature <input checked="" type="checkbox"/> Agent</p> <p>B. Received by (Printed Name) _____ C. Date of Delivery _____</p> <p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No</p> <p>Service Type <input type="checkbox"/> Adult Signature <input type="checkbox"/> Registered Mail Restricted Delivery <input type="checkbox"/> Certified Mail® <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Collect on Delivery <input type="checkbox"/> Signature Confirmation™ <input type="checkbox"/> Restricted Delivery</p>	
<p>Complete items 1, 2, and 3.</p> <ul style="list-style-type: none"> Print your name and address on the reverse so that we can return the card to you. Attach this card to the back of the mailpiece, or on the front if space permits. <p>Article Addressed to:</p> <p>Ms. Paula A. Massaro, Clerk Township of East Hanover 411 Ridgedale Avenue East Hanover, NJ 07936</p>  <p>9590 9402 5002 9063 1737 69</p> <p>Article Number (Transfer from service label) 701A 1A30 0002 1066 8777</p> <p>PS Form 3811, July 2015 PSN 7530-02-000-9053</p>		<p>A. Signature <input checked="" type="checkbox"/> Agent</p> <p>B. Received by (Printed Name) _____ C. Date of Delivery _____</p> <p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No</p> <p>Service Type <input type="checkbox"/> Adult Signature <input type="checkbox"/> Registered Mail Restricted Delivery <input type="checkbox"/> Certified Mail® <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Collect on Delivery <input type="checkbox"/> Signature Confirmation™ <input type="checkbox"/> Restricted Delivery</p>		<p>1. Article Addressed to:</p> <p>Mr. Glenn R. Turtleaub, Clerk Township of Livingston 357 South Livingston Avenue Livingston, NJ 07039</p>  <p>9590 9402 5002 9063 1737 76</p> <p>Article Number (Transfer from service label) 701A 1A30 0002 1066 8784</p> <p>PS Form 3811, July 2015 PSN 7530-02-000-9053</p>		<p>A. Signature <input checked="" type="checkbox"/> Agent</p> <p>B. Received by (Printed Name) _____ C. Date of Delivery _____</p> <p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No</p> <p>Service Type <input type="checkbox"/> Adult Signature <input type="checkbox"/> Registered Mail Restricted Delivery <input type="checkbox"/> Certified Mail® <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Collect on Delivery <input type="checkbox"/> Signature Confirmation™ <input type="checkbox"/> Restricted Delivery</p>	

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1. Article Addressed to:

Ms. Mary Donovan, Clerk
Township of West Caldwell
30 Clinton Road
West Caldwell, NJ 07006



9590 9402 5002 9063 1737 52

2. Article Number (Transfer from service label)

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PS Form 3811, July 2015 PSN 7530-02-000-9053

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KATHY CARAN

C. Date of Delivery

1/27/15

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Ms. Karen J. Carnevale, Clerk
Township of West Orange
66 Main Street, Room 101
West Orange, NJ 07052



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2. Article Number (Transfer from service label)

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PS Form 3811, July 2015 PSN 7530-02-000-9053

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A. Signature

X

B. Received by (Printed Name)

KATHY CARAN

C. Date of Delivery

1/27/15

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

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