

ORDINANCE NO. _____ SUPPLEMENTAL
PROVIDING FOR THE REGULATION OF
EXTERIOR LIGHTING
IN THE CITY OF STAMFORD

WHEREAS, the City of Stamford is committed to provide adequate lighting for safety and security; and

WHEREAS, the City promotes efficient and cost effective lighting to conserve energy; and

WHEREAS, the City seeks to reduce light pollution, light trespass, glare and offensive light sources and prevent inappropriate, poorly designed or installed exterior lighting; and

WHEREAS, the City strives to provide an environmentally sensitive nighttime environment; and

WHEREAS, the City encourages quality lighting design, Light Fixture shielding, establish maximum uniformity ratios and establish maximum light levels within and on property lines.

NOW THEREFORE, BE IT ORDAINED BY THE CITY OF STAMFORD THAT:

Chapter 155, Lighting, Sections 155-1 – 155-10 be added to the Stamford Code as follows:

CHAPTER 155. - LIGHTING

Sec. 155-1. Purpose.

While it is recognized that adequate lighting for safety and security is necessary, Stamford residents have a right to and should be ensured an environment free from excessive light, light pollution and light trespass that may jeopardize their health, safety or welfare, degrade their quality of life, or impact negatively on the natural environment. This chapter is enacted to protect, preserve and promote the health, safety, welfare and quality of life and the natural environment for the residents of Stamford through the reduction, control and prevention of excessive light.

Sec. 155-2. Definitions

Chase Lighting. Chase Lighting is when strings of adjacent lights go on and off in a sequence to give the illusion of lights moving along the string.

Color Temperature, Correlated Color Temperature (CCT). Color temperature describes the light appearance provided by a light source and is measured in degrees of Kelvin (K) on a scale from 1,000 to 10,000. The lower the Color Temperature the “warmer” the light appears. Typical Color temperatures for incandescent bulbs are between 2,700K and 3,000K. The sun at noon on a clear day produces a light of approximately 5,500K.

Daylight Adaptation Controls. Daylight Adaptation Controls automatically turn on or off lights depending on the level of daylight and are controlled either by timers or sensors that measure the amount of daylight.

Downtown and the South End. The areas of Downtown and the South End located in either Master Plan Category 11 (Downtown) or 9 (Urban Mixed Use) of the City of Stamford Master Plan.

Exterior Lighting. Exterior Lighting is fixed artificial lighting to illuminate outdoor areas. Outdoor areas shall be considered all areas without permanent roofs, or areas not fully enclosed by walls, windows or doors such as porches, canopies or breezeways. The aim of the Exterior

LR30.088 - DRAFT 10/29/2019

Lighting is, by illuminating the area, to maintain or to improve visual performance of the persons conducting human activities.

Full Cutoff Light Fixture. A Full Cutoff Light Fixture is a Light Fixture that has no direct light emitted above horizontal and a limited intensity of light from the Luminaire in the region between 80° and 90°.

Fully Shielded Fixture: A Light Fixture that allows no emission above a horizontal plane through the Fixture.

IESNA. IESNA is the Illuminating Engineering Society of North America, an association of lighting professionals.

IESNA Type [x] Fixture. A classification system that describes the light distribution emanating from a Luminaire, from a lateral light distribution (Type I) to a concentric light distribution (Type V)

Type I Light Fixture – light distribution of $\approx \pm 15^\circ$ from the centerline of light source

Type II: $\approx \pm 25^\circ$

Type III $\approx \pm 40^\circ$

Typ IV $\approx \pm 60^\circ$

Type V $\approx \pm 90^\circ$

Lamp. A Lamp is a device that generates and emanates light, such as an incandescent light bulb, LED fluorescent light.

Linear Lamp. A Linear Lamp is where the light does not emanate from a point source but from an elongated light source.

Light Fixture. A Light Fixture is the assembly that holds the Lamp in a lighting system. It includes the elements designed to give light output control, such as a reflector (mirror) or refractor (lens), the ballast, housing, and the attachment parts.

Luminaire. A Luminaire is a complete lighting unit (Light Fixture plus Lamp) consisting of a Lamp or Lamps together with the parts designed to distribute the light, to position and protect the Lamps, and to connect the Lamps to the power supply.

Maximum Allowable Light Level. Maximum Allowable Light Level is the highest permitted intensity of a light source measured in lux.

Uniformity Ratio. The Uniformity Ratio is a measure of how evenly illumination is distributed, as the ratio of maximum-to-minimum illumination levels.

Pedestrian Lighting. Pedestrian Lighting is lighting intended to illuminate pedestrian areas such as sidewalks.

Residential Zoning Districts. For the purposes of this Ordinance the following Zoning Districts shall be considered Residential Zoning Districts: RA-3, RA-2, RA-1, R-20, R-10, R-7.5, R-6, R-5, R-MF, RM-1, R-H, V-C beyond 100 feet of an Arterial Street, as defined in the City of Stamford Zoning Regulations, Section 4.AA.11.3.I.

Shutoff. A mechanism to manually or automatically, e.g., through sensors or timers, turn off lights

Street Lighting. Street Lighting is lighting intended to illuminate the roadway to improve traffic safety.

Streetscape Lighting. Streetscape Lighting is all lighting that illuminates streets, sidewalks, and areas next to the street such as buildings and landscaping.

White Light Source. White light is the complete mixture of all of the wavelengths of the visible spectrum. A White Light Source is a light source that emits light at a broad band of wave lengths.

Sec. 155-3. Scope

This Chapter shall apply to all Exterior Lighting, including outdoor signs and façade lighting that impact the outdoor environment on all private property within the City of Stamford. For all lights owned by the City and Streetscape Lighting required by the City on private property, the standards established by the City of Stamford Engineering Bureau, as amended from time to time, shall apply.

Sec. 155-4. Prohibited Exterior Lighting

The following Lamps and Light Fixtures shall be prohibited within the City of Stamford:

- a. Mercury vapor Lamps;
- b. Low pressure sodium Lamps;
- c. Chase Lighting, blinking, flashing, moving, revolving, or flickering lighting, or lighting that changes in intensity or color, except lighting for temporary seasonal displays, lighting for public safety or required for air traffic safety;
- d. Any Light Fixture that may be confused with or construed as a traffic control device;
- e. Any upward oriented lighting except as otherwise provided for in this Chapter;
- f. Searchlights, beacons, and lasers;
- g. Exposed Linear Lamps that include, without limitation, neon, LEDs, and fluorescent lighting, primarily intended as an architectural highlight to attract attention or used as a means of identification or advertisement except as permitted by this Chapter; and
- h. Any Lamp, except for seasonal displays and landscape ornamental lighting, which is visible beyond the property line on which it is located.

Sec. 155-5. Design Standards

All Exterior Lighting shall meet the following requirements:

- a. Maximum Light Levels at Property Line. The light level at any point on a property line shall not exceed 0.1 footcandles in Residential Zoning Districts, or 0.2 footcandles in all other zoning districts except as follows:
 - (1) The light emitted by Light Fixtures mounted on a structure built within five feet of a public street right-of-way or sidewalk shall not exceed the maximum allowable light levels for "pedestrian areas" specified in Subsection 155-5.e for the underlying zoning district or use. The Maximum Allowable Light Level shall include any existing or proposed Street or Pedestrian Lighting located within the right-of-way. In no case shall the Maximum Allowable Light Level within the right-

of-way, excluding street lights, exceed 0.2 footcandles when measured at the curbline.

(2) In all non-residential zoning districts light levels exceeding 0.2 footcandles at the property line may be approved by the Director of Operations, or designee, upon finding that the increased light levels will not adversely affect an adjacent property owner. Evidence that the light will not adversely affect an adjacent property owner may include, without limitation, a statement from such property owner that it will not be adversely affected by the increased light levels. The maximum allowable light levels specified in Subsection 155-5.e of this section shall not be exceeded when measured on the property line.

(3) Where a property in a Residential District abuts on a property in a non-residential district, for said property line the 0.1 footcandle limit shall apply.

b. Aiming of light sources. All lighting shall be aimed

(1) Away from any adjacent property lines or public rights-of-way, except in instances where driveways, pedestrian walkways or parking areas are shared adjoining properties; and

(2) Downward but no more than 75 degrees from the vertical, except as permitted in Subsections 155-5.d. and 155-5.m., and only if in compliance with Subsections 155-5.a and 155-5.b.(1) of this Chapter.

c. White Light Source Required. White Light Sources that include, without limitation, LED, metal halide, fluorescent, or induction Lamps, but excluding incandescent and halogen Lamps, shall be required for any Luminaire which exceeds 2,400 lumens that is within a parking lot, driveways, or pedestrian area.

d. Architectural Lighting of Building Facades. The lighting of a building facade for architectural, aesthetic, or decorative purposes is permitted subject to the following restrictions:

(1) Upward aimed building facade lighting shall not exceed nine hundred lumens. All upward aimed light shall be fully shielded, fully confined from projecting into the sky by eaves, roofs, or overhangs, and mounted as flush to a wall.

(2) Building facade lighting exceeding nine hundred lumens shall be fully shielded, aimed downward, and mounted as flush to a wall.

(3) Building facade lighting shall be fully contained within the vertical surface of the wall being illuminated.

(4) In Downtown and the South End, exceptions to the regulations in this Subsection shall be permitted under Subsection 155-7.c., "District Lighting Plans".

e. Unshielded Lighting.

(1) In all Zoning Districts, Unshielded Lighting emitting more than 900 lumens shall be prohibited.

(2) In all non-Residential Districts, Lamps emitting more than 900 lumens shall be Fully Cutoff and Shielded, except as otherwise approved by the City of Stamford Engineering Bureau.

(3) In all Residential Districts all Lamps less than 900 lumens shall be within a Fully Shielded Fixture, or must be within a Light Fixture where the Lamp is obscured from view by a material that diffuses the light. (i.e., frosted or milk colored materials), except as otherwise permitted in this Chapter.

f. Signs: All signs shall be required to meet the standards for this section, in addition to the Regulations of Section 13 of the City of Stamford Zoning Regulations.

g. Lights Adjacent to Residential Districts. Standards for lights adjacent to Residential Zoning Districts, residential uses, or public rights of way: Any Light Fixture located within ten feet of a property line of a residential zoning district, an existing residential use, or within ten feet of a public right-of-way shall be:

(1) Classified as an IESNA Type III or Type IV Light Fixture; and

(2) Shielded on the side closest to the property line, Residential Zoning District, residential use, or public right-of-way.

h. Full Cutoff Fixtures. Full Cutoff Fixtures shall be installed in a horizontal position as designed.

i. Color Temperature. All Exterior Lighting shall have a Correlated Color Temperature of no more than 3,000 Kelvin.

j. Shutoff Requirements. All Light Fixtures shall have automatic Daylight Adaptation Controls and Shutoffs.

k. Maximum Pole Heights. The maximum height of light poles, including the base and Luminaire, shall not exceed the following heights:

(1) In Residential Zoning Districts for surface parking areas with ten or more parking spaces: 15 feet.

(2) In Residential Zoning Districts for pedestrian areas parking decks and similar structures higher than 5 feet above the average finished grade, and parking areas with 9 or less spaces: 10 feet.

(3) In all other zoning districts for surface parking areas with ten or more parking spaces: 20 feet.

(4) In all other zoning districts for pedestrian areas and parking decks and similar structures higher than 5 feet above the average finished grade, and parking areas with 9 or less spaces: 15 feet.

l. Canopy Lighting. Light Fixtures mounted under canopies used for vehicular shelter shall be aimed downward and installed in a way that the bottom of the Light Fixture is recessed or mounted flush with the bottom surface of the canopy. A Full Cutoff Light Fixture may project below the underside of a canopy. All light emitted by an under-canopy fixture shall be substantially confined to the ground surface directly beneath the perimeter of the canopy. No lighting, except that permitted by the Section 13 of the City of Stamford Zoning Regulations, shall be permitted on the top or sides of a canopy.

m. Flagpoles. Flagpoles may be illuminated by one upwardly aimed Fully Shielded spotlight which shall not exceed 3,500 lumens. The Light Fixture shall be placed as close to the base of the flagpole as reasonably possible.

Sec. 155-6. Maximum Light Standards

No Luminaire shall be permitted in excess of the levels specified in this Section.

a. General Zoning District Requirements.

	<u>Residential Zoning Districts</u>	<u>All other Zoning Districts</u>
<u>Maximum Allowable Light Level (measured in footcandles)</u>	<u>5.0 at building entries</u>	<u>5.0 at building entries</u>
	<u>3.0 in surface parking areas, used exclusively for residential uses; 5.0 for non-residential uses in residential districts, within parking structures and under buildings</u>	<u>5.0 in parking areas</u>
	<u>3.0 along pedestrian walkways</u>	<u>3.0 along pedestrian walkways</u>
	<u>2.0 in common open space areas</u>	<u>2.0 in storage areas</u>
<u>Maximum uniformity ratio (maximum to minimum)</u>	<u>15:1</u>	<u>10:1</u>
<u>Maximum lumen rating for a Full Cutoff Luminaire shielded from view of adjacent streets and properties</u>	<u>8,500 - parking areas of 10 or more spaces for exclusively residential uses; 14,000 - parking and loading areas for non-residential uses in Residential Districts</u>	<u>14,000 - parking and loading areas</u>
	<u>4,000 - walkway lights and common areas</u>	<u>8,500 - pedestrian areas</u>
	<u>1,800 stairways and entryways</u>	

b. Special Uses Requirements. The general zoning district requirements may be modified for the following uses:

- (1) Private and or commercial recreational and athletic uses: The lesser of 30 footcandles or the IESNA recommended standards for the specific sports venue (playing fields only).
- (2) Public recreational and athletic uses: The IESNA recommended standards for the specific sports venue (playing fields only).
- (3) Automobile Service Stations: 20.0 footcandles under service station canopies only.
- (4) Car Dealerships: 15.0 footcandles within vehicular display areas only
- (5) Drive-Thru establishments: 5.0 footcandles at drive-up windows

Sec. 155-7. Lighting Plans

a. Lighting Plans Required. A lighting plan shall be submitted with any building permit application in which Exterior Lighting is proposed or required. The lighting plan shall include:

- (1) A site plan showing the location of all buildings and building heights, parking, and pedestrian areas on the lot or parcel;
- (2) The location and description including mature height of existing and proposed trees and the location of Light Fixtures on adjacent properties or the street right-of-way within ten feet of the subject property;
- (3) The location and height above grade of all proposed and existing Light Fixtures on the subject property;
- (4) The type, initial lumen rating, color rendering index, and wattage of each Lamp source;
- (5) The general style of the Light Fixture such as Cutoff, lantern, coach light, globe, and a copy of the manufacturer's catalog information sheet and IESNA photometric distribution type, including any shielding information such as house side shields, internal, and/or external shields;
- (6) Control descriptions including type of controls (timer, photocell, motion sensor, astronomical, etc.), the Light Fixtures to be controlled by each type, and control schedule when required;
- (7) Aiming angles and diagrams for sports Light Fixtures; and
- (8) A light calculation which shows the maximum light levels on a grid not to exceed ten feet by ten feet across the entire site and a minimum of ten feet beyond the lot or parcel property line. The grid shall also indicate maximum to minimum uniformities for each specific use area such as parking and circulation areas, pedestrian areas, and other common public areas.

b. Exemptions from Lighting Plan Requirement. No Lighting Plan is required

- (1) When all proposed lighting is provided by fixtures of 900 lumens or less, or
- (2) For a single detached dwelling unit on an individual lot.

c. District Lighting Plans. The City of Stamford Zoning Board may, by Special Exception, approve a District Lighting Plan with lighting standards differing from this Chapter for Downtown and South End based on the following conditions and findings:

- (1) All District Lighting Plans shall be subject to Special Exception Review pursuant to Section 19.3 of the City of Stamford Zoning Regulations;
- (2) In addition to application requirements of Section 19.3. of the City of Stamford Zoning Regulations, a review pursuant to Subsection 155-7.a. shall be required; and
- (3) The District Lighting Plan creates a public benefit.

Sec. 155-8. Exceptions and Exemptions

a. Exceptions. The standards of this Chapter shall not apply to the following types of Exterior Lighting:

(1) Ornamental Lighting: Low voltage (twelve volts or less), low wattage ornamental landscape lighting fixtures, and solar operated light fixtures having self-contained rechargeable batteries, where any single Light Fixture does not exceed one hundred lumens.

(2) Seasonal Lighting Displays: Lighting displays from November 15 through January 30 of the following year.

(3) Historic Lighting: The Chief Building Official may grant an exception from the provisions of this Chapter if they find that:

(a) The lighting fixture is located on a property listed on the National or State Register of Historic Sites, a City of Stamford Historic District or the Stamford Cultural Resources Inventory;

(b) The lighting fixture is of historic significance to the property; and

(c) Removal of or a modification to the lighting that would otherwise be required to come into compliance with the requirements of this section would have an adverse impact on the historic character of the property.

(4) Public safety lighting used by the police or fire department or other emergency services temporarily in case of an emergency.

(5) Occupational safety lighting as required by law.

(6) Temporary Lighting: The Director of Operations, or designee, may, upon written request and in writing, grant an exemption from the requirements of this Chapter for temporary outdoor activities such as, fairs, carnivals, sporting events, concerts, or promotional activities, provided:

(a) The length of time that the temporary lighting is to be consecutively used is no longer than fifteen consecutive days, and no more than 30 days in total per calendar year; and

(b) The proposed temporary lighting is designed in such a manner as to minimize light pollution, light trespass, and glare as much as feasible.

(7) Approved Architectural Lighting, as defined in Subsection 155-5.d. in Downtown and the South End shall be permitted to remain for the life of such decorative lighting scheme.

b. Exemptions. Exemptions from the standards of this Chapter may be granted under if the Director of Operations, or such Director's designee, finds, upon written request and in writing the following:

(1) Additional lighting beyond the standards of this Chapter is necessary to improve public safety or security;

(2) The granting of an exemption is consistent with the purpose of this Chapter and will not be injurious to the neighborhood or otherwise detrimental to the public welfare; and

(3) The exemption provides the minimum relief required.

c. Equivalent Material. The provisions of this section are not intended to prevent the use of any design, material or method of installation not specifically prohibited by this section provided any such alternate has been approved by the Chief Building Official and any such alternative provides an approximate equivalent method of satisfying the standards of this Chapter.

Sec. 155-9. Enforcement

a. Building Department to Enforce. The Chief Building Official, or designee, shall not issue a Certificate of Occupancy unless the applicant provides certification that the Exterior Lighting as installed complies with the approved Lighting Plan and the requirements of this Chapter unless waived or amended by the Director of Operations, or such Director's designee, in writing. The certification shall be submitted in a format prescribed by the Chief Building Official and reviewed by the Department of Buildings. The certification shall be completed by the architect, electrical engineer, electrical contractor, or lighting consultant responsible for the plans or the final installation.

b. Violations and Penalties. The Chief Building Official, or such Official's designee, shall investigate complaints regarding the compliance with this Chapter. Should the Building Official, or such Official's designee, find any violation of this Chapter, the Building Official shall

(1) Send a Notice of Violation to the property owner and/or manager where such violation occurred requesting the violation to be corrected within eight days of the date of the Notice of Violation.

(2) Should the violation not be corrected after thirty (30) days of the date of the Notice of Violation, issue a Citation for such violation not exceeding the following amounts

(a) \$100.00 for each day the property is in violation for properties containing a single-family, two-family, or three family building;

(b) \$100.00 for each Luminaire per day not in compliance for all other properties.

Sec. 155-10. Compliance Required.

All Exterior Lighting on private property that is not explicitly approved by the City of Stamford Engineering Bureau and does not conform to the above standards shall be brought into compliance no later than one year after the effective date of this Chapter, with exception of the following which require immediate compliance:

a. Installation and operation of a Lamp that is prohibited under Section 155-4 of this Chapter

b. All Fixtures shall be aimed consistent with the requirements of Subsection 155-5.b. of this Chapter.