

**Borough of New Providence
Ordinance No. 2008-22**

“An Ordinance For the Establishment of Definitions and Creating Standards for Site lighting”

WHEREAS, the Governing Body of the Borough of New Providence is dedicated to improving and preserving the appearance of the Borough for the betterment of the community;

WHEREAS, this ordinance and standards established herein are intended to encourage reasonable outdoor lighting to provide nighttime safety, security, and enjoyment while preserving the setting of the night. The purpose is to enhance the nighttime environment and:

- 1) Provide lighting in outdoor public places where public health, safety, and welfare are potential concerns.
- 2) Protect drivers and pedestrians from the glare of non-vehicular light sources that shine into their eyes and thereby impair safe traverse.
- 3) Protect neighbors and the night sky from nuisance glare and stray light from poorly aimed, placed, applied, or shielded light sources.
- 4) Promote energy conservation through efficient lighting design.
- 5) Promote efficiencies by limiting the amount of lighting equipment and subsequent maintenance costs.

WHEREAS, the Borough has reviewed existing Code provisions for the Borough of New Providence, with regard to existing conditions.

NOW, WHEREFORE, IT IS HEREBY ORDAINED by the Governing Body of the Borough of New Providence as follows:

Definitions:

IESNA shall refer to The Illuminating Engineering Society of North America.

Sky Glow is light resulting from dust, water vapor, and other particles reflecting and scattering stray and reflected light that is emitted into the atmosphere (IESNA).

Light Trespass is any form of artificial luminance emanating from a light fixture or illuminated sign that penetrates other property and creates a nuisance. It may be caused by unwanted light onto adjacent properties or excessive brightness in the normal field of vision.

Glare is the sensation produced by luminance within the visual field that are sufficiently greater than the luminance to which the eyes are adapted, which causes annoyance, discomfort, or loss in visual performance and visibility.

Footcandle is a measurement of luminance equal to 1 lumen per square foot.

Trespass Lighting is any illumination at the property line exceeding the required horizontal or vertical footcandle requirements; and any light emanating from a fixture which is so positioned or aimed as to produce objectionable glare on any adjacent property;

Nadir is the angle pointing directly downward from a luminary, or 0 degrees.

Horizontal luminance is the amount of light striking a horizontal plane.

Full cut-off means the preventing all upward transmission of light.

Vertical luminance is the amount of light striking a vertical plane.

Lumens are a measurement of brightness of the illumination exiting a bulb.

Light Fixture on Luminary is a complete lighting unit consisting of a lamp or lamps and/or ballast or ballasts, together with the parts designed to distribute the light, to position and protect the lamps, and to connect the lamps to a supply of power.

Light is radiant energy that is capable of exciting the retina and producing a visual sensation.

Light Source is a bulb together with a lens, diffuser, or reflective enclosure.

Visibility is the quality or state of being perceivable by the eye.

§305-11. LIGHTING

Existing §305-11-C in Chapter 305 entitled "Subdivision and Site Plan Review" and entitled "Lighting" and Section 310-20E-2(a) of Article V shall be stricken and replaced by the following:

A. Lighting. Purpose and Intent.

Light pollution contributes to glowing skies and is caused by light aimed up at the sky or by light reflected by the ground or objects.

Except as otherwise provided herein, commercial and recreational lighting shall comport to the standards of the Illuminating Engineering Society of North

America.

No lighting shall shine directly into or reflect into windows or into streets and driveways in such a manner as to interfere with driver vision and negatively impact the public health or safety. The ordinance is intended to encourage reasonable outdoor lighting providing nighttime safety, security, and enjoyment while preserving the setting of the night. The purpose is to enhance the nighttime environment and:

- 1) Provide lighting in outdoor public places where public health, safety, and welfare are potential concerns.
- 2) Protect drivers and pedestrians from the glare of non-vehicular light sources that shine into their eyes and thereby impair safe traverse.
- 3) Protect neighbors and the night sky from nuisance glare and stray light from poorly aimed, placed, applied, or shielded light sources.
- 4) Promote conservation through efficient lighting design.

B. Applicability. Outdoor lighting shall be required for safety and personal security in areas of public assembly and traverse; including but not limited to the following: commercial, industrial, public-recreational, and institutional uses. The board may require lighting be incorporated for other uses or locations, as they deem necessary. The glare-control requirements herein contained apply to lighting in all above mentioned uses as well as, but not limited to, sign, architectural, and landscape.

C. Criteria. Illumination Levels except as specifically stated herein, lighting, where required by this Ordinance shall have intensities and uniformity ratios in accordance with the current recommended practices of the Illuminating Engineering Society of North America (IESNA) as contained in the IESNA Lighting Handbook 9th Edition, as amended. Future amendments to aforementioned recommended practices shall become a part of this Ordinance without further action by the Borough.

D. Luminance Requirements

General Parking and Pedestrian Areas		
Level of Activity	Footcandles (min)	Max Uniformity Ratio (Average: Minimum)
High	1.0	4:1
Low	0.5	4:1
Vehicular Use Areas		
High	2.0	3:1
Low	1.0	4:1

NOTES:

1. Maximum illumination level at property line. The level of illumination shall

not exceed 0.5 footcandles at any property line abutting a property used by or zoned for commercial use, and 0.1 footcandles at any property line abutting a property used by or zoned for residential use.

2. Although the footcandles are stated as minimum illumination levels at any point, the average illumination levels shall also not greatly exceed the levels resulting from applying the maximum uniformity ratio to the minimum illumination level. For example, if the minimum illumination level at any point is 0.6 footcandles, and the maximum uniformity ratio is 4:1, the average illumination level for the area shall not greatly exceed 2.4 footcandles ($0.6 \times 4 = 2.4$).
 3. For all commercial properties or recreational fields any proposed lighting design must indicate no hot spots on the property.
- E. Fixture Design. Control of Nuisance and Disabling Glare. All outdoor lighting, whether or not required by this Ordinance; on commercial, industrial, municipal, recreational, or institutional property; shall be aimed, located, designed, fitted, and maintained so as not to present a disabling glare hazard to drivers or pedestrians, or a nuisance glare concern to neighboring properties.
- F. Directional fixtures installed on commercial properties and recreational facilities, such as flood lights and spot lights, shall be installed or aimed at an angle no higher than forty-five (45) degrees above straight down (half-way between straight down and straight to the side) so that they do not shine directly into the window of a neighboring building, directly into a roadway, or skyward. In no case shall these lights extend above the lowest eave line. These lighting fixtures shall be full-cutoff lighting fixtures.
- G. Unless otherwise permitted or required by the Planning Board, all commercial outdoor lighting shall be controlled by automatic switching devices such as timers, motion detectors, and/or photocells, to extinguish offending sources between 11:00 p.m. to dawn, to mitigate glare and sky-lighting consequences. However in areas where security is a concern, lighting may be maintained throughout the night, with the understanding that the intensity of the illumination level be reduced during that timeframe of operation.
- H. Vegetation screens shall not be employed to serve as the primary means for controlling glare. Rather, such control shall be achieved primarily through the use of sharp cut-off fixtures, the appropriate application of mounting height, wattage, aiming angle, fixture placement, and fixture design, etc. and the additions of shields and baffles as necessary.
- I. Externally illuminated signs are preferred to be lighted by fixtures mounted at the top of the sign and aimed down rather than by fixtures mounted at the bottom of

the sign and aimed up, however in such cases where it may be necessary for up lighted fixtures, they shall conform to the standards of 6(b) below. Site lighting shall not include any unlighted fixture, except light fixtures used to illuminate the State or the National flag mounted on a pole, pedestal or platform shall use a narrow column beam of light that will not extend beyond the maximum extensions of the illuminated object.

J. Exceptions to Control of Glare.

- 1) Luminaries used for public-roadway illuminations should be installed as required by the Police Department and Engineering Department .
- 2) All temporary emergency lighting needed by the Police or Fire Department or other emergency services, as well as all vehicular Light fixtures shall be exempt from the requirements of this article.
- 3) Luminaries used primarily for sign illuminations may be mounted at any height to a maximum of twenty (20) feet or to the top of the sign, whichever is less.

K. Law Governing Conflicts. Where any provision of federal, state, county, or town statutes, codes, or laws conflicts with any provision of this code, the most restrictive shall govern unless otherwise regulated by law.

L. Installation of Commercial Lighting. Lighting fixtures on properties zoned for commercial use shall be mounted at the top of a pole at heights suitable to provide the best overall lighting design, but in no case shall the lights be mounted in excess of twenty-five (25) feet above grade.

- 1) Electrical feeds to lighting standards shall run underground, not overhead.
- 2) Lighting standards in parking areas shall be placed a minimum of five (5) feet outside the paved area, outside where vehicles may conflict with the placement of the fixture. Where the poles are five (5) feet outside the paved area, the base of the fixture shall be flush mounted with the ground.
- 3) Where, due to restrictions in light locations due to inadequate spacing between vehicle areas and light fixtures, lights may be placed on reinforced concrete pedestals at least thirty (30) inches high above the pavement, or by other acceptable protective means. Above ground mounting of light fixtures is not encouraged or desirable. Where due to space limitations, the concrete footing must extend above grade for protection of the poles, they shall be decoratively treated to complement the building materials.
- 4) Maintenance: Lighting fixtures shall be maintained so as to always meet the requirements of this Ordinance.
- 5) Fixture Location and Placement: The following are requirements for placement of street lighting fixtures:

- a) Any/all non-public roads, designed as a major thoroughfare through the proposed development shall have the placement/location of all fixtures designed to meet the same requirements as specified above.
- b) For the purpose of this Ordinance, any non-public road designed and/or used as a main thoroughfare through a land development shall be considered a public road as it pertains to the interpretation of this Ordinance.

6) Outdoor Advertising, Off-Premise Signs and Ground Signs

- a) Lighting fixtures used to illuminate an outdoor advertising sign shall be mounted on the top of the sign structure. All such fixtures shall be full cut-off fixtures.
- b) Bottom-mounted lighting shall be limited to the illumination of signs, and shall be designed or provided with sharp cut-off capability, and shall be restricted and focused so as to minimize up-light, light spillage, and glare. Outdoor advertising signs of the type constructed of translucent materials and wholly illuminated from within do not require shielding.
- c) Compliance Limit. Existing outdoor advertising structures shall be brought into conformance with the Code at the time of a sign upgrade or a change in occupancy.

7) Recreational Facilities.

- a) Any light source permitted by this Code may be used for lighting of outdoor recreational facilities (public or private), such as, but not limited to, football fields, soccer fields, baseball fields, softball fields, tennis courts, or show areas, provided all of the following conditions are met:
- b) For field sports, including but not limited to football, soccer, baseball, track and field, the maximum pole height shall be 80 feet.
- c) All fixtures used for event lighting shall be fully shielded as defined in this code, or be designed or provided with sharp cut-off capability, so as to minimized up-light, spill-light, and glare.
- d) Trespass lighting shall not be more than 0.1 foot-candle at any adjacent residential property line.
- e) All events requiring field lighting shall be scheduled to commence leaving sufficient time to complete all activity before or as near to 10:00 p.m. as practical. Under no circumstances shall any illuminations of a playing field, court, or track be permitted after 11:00 p.m., except to conclude a scheduled event that was in progress before 11:00 p.m. and circumstances prevented concluding before 11:00 p.m., or except for that lighting which

shall be necessary to ensure public safety following the conclusion of an event.

8) Temporary Outdoor Lighting.

- a) Any temporary outdoor lighting that conforms to the requirements of this Ordinance shall be allowed.
- b) Non-conforming temporary lighting, shall not be utilized past 9:00 .p.m. or for more than 3 consecutive hours.
- c) Laser Source Light. The use of laser source light or any similar high intensity light for outdoor advertising or entertainment, when projected above the horizontal is permitted, shall be permitted upon receipt of a temporary event zoning permit.
- d) Searchlights. The operation of searchlights for advertising purposes shall be permitted upon receipt of a temporary event-zoning permit.
- e) Compliance Monitoring. Safety Hazards. If the Code Enforcement Officer or Borough Engineer judges that a lighting installation creates a safety or personal security hazard, the person(s) responsible for the lighting shall be notified and requested to timely remedial actions.
- f) Temporary lighting used for educational or recreational purposes shall be exempt from the requirements of this Ordinance. Notwithstanding this exemption, temporary lighting used for educational or recreational purposes shall not be utilized past 10:00 p.m. in the months from the first day of June through the last day of August and 9:30 p.m. for the remaining months of the year."

(9) Plan Submission/Commercial Properties and Recreational Facilities

- a) Description of outdoor light fixtures including component specifications such as amps, reflectors, optics, angle of cutoff, supports, poles and include manufacturers catalog cuts.
- b) Locations and description of every outdoor light fixture and hours of operation and foundation details for light poles.
- c) Lighting plans submitted to the municipality for review and approval shall include a layout of the proposed fixture locations; the average footcandles, minimum footcandles, and maximum footcandles, and the minimal illuminance levels for the activity as recommended by the Illuminating Engineering Society of North America (IESNA).
- d) The horizontal illuminance of the site and the vertical light trespass around the site perimeter shall be provided.

- e) All point method lighting plans shall include all canopy, interior and building lights as well as the site lighting proposed.
- f) All site plans are required to provide a point method lighting plan according to light standards and illumination levels stated in this section.
- g) The photometrics plans shall contain a plan identification symbol or abbreviation, fixture type, lamp type, lamp lumens, lamp degree Kelvin, fixture lens height above lowest adjacent finished grade, and total light loss factor utilized.

M.

M. Lighting Impacting Residential Properties.

- 1.) In addition to the forgoing, any lighting source whether residential, commercial or recreational that impacts residential properties, such as directional fixtures, flood lights and spot lights shall be installed or aimed so that they do not shine directly into the window of a neighboring building, directly into a roadway, or skyward.

INTRODUCED: 12-15-2008
PUBLIC HEARING: 12-29-2008
ADOPTED: 12-29-2008

BOROUGH OF NEW PROVIDENCE
COUNTY OF UNION
STATE OF NEW JERSEY

John A. Thoms, Mayor

Attest:

Wendi B. Barry
Borough Clerk