

REV 6/16/2016

Exterior Lighting Working Draft Operative Provisions

LOCAL LAW INTRODUCTORY NO. 4 OF 2015
Village of Tuxedo Park

A LOCAL LAW AMENDING CHAPTER 100 OF THE VILLAGE CODE CONCERNING EXTERIOR LIGHTING

[Chapter 100 of the Village Code shall be amended to add section 100-21.1]

100-21.1 EXTERIOR LIGHTING

- A. Purpose. The purpose of this section is to establish provisions for nocturnal exterior lighting in all parts of the Village in order to:
- a. Minimize the impact of stray lighting on human health, habitats and the environment.
 - b. Provide safe roadways for pedestrians, cyclists and motorists.
 - c. Protect against direct glare and excessive lighting.
 - d. Prevent light trespass in all areas of the Village of Tuxedo Park.
 - e. Minimize skyglow and reclaim the ability to view the wonder of the night sky.
 - f. Provide lighting guidelines.
 - g. Discourage the waste of energy caused by excessive lighting.
 - h. Allow for flexibility in the style of lighting fixtures.
 - i. Provide clear guidelines for the Boards and enforcement staff of the Village to use in administering this section
- B. Background information on measurements of light: *watts, lumens, luminance and illuminance*

Watts: A unit of measure for the amount of energy a source of light uses to produce a combination of visible light and non-visible light, such as infra-red and ultra-violet. No longer a reliable measure of “brightness”, as technology of various light sources uses the same amount of energy, either more efficiently or less efficiently, to produce a varied mixture of visible and non-visible light (i.e., incandescent bulb vs LED). Regarding this instant Local Law, the wattage of a light source is not a relevant measure.

Lumens: A unit of measure for visible luminous flux (visible light output, the number of photons per second produced) of a lamp or LED or other light source. The measure of Lumens indicates the quantity of *total* light energy (visible luminous flux) the light source generates, without regard of direction, light beam quality, or beam configuration.

A source of light can have a very high value in lumens, and yet a low value in candelas or lux if the light output is gathered poorly and directed poorly. And, vice versa, a source of light can have a very low value in lumens, and yet a high value in candelas or lux if a low light output is gathered efficiently and directed in a very focused manner.

Luminance: A unit of measure for the amount of light is being produced *from distant source*, and directed at a specific angle into one’s eyes (a strong beam from a flashlight, spotlight, or

vehicular high-beams). Luminance is measured in Candelas-per-square-meter (Cd/m²) in the metric system, and in Foot-Lamberts (fL) in the US (imperial) system. For this Local Law, the metric unit of measure shall be used (Cd/m²), where 0.2919 fL = 1 Cd/m². The Village is not now requiring Luminance to be below any specific level of Cd/m² but may consider this in the future after further study.

Illuminance: A unit of measure for the amount of light projected *from a nearby source* onto a surface. For instance, a light source falling onto a white piece of paper and how well one is able to read what's written on the paper when one's head is turned away from the light source (ie, a photographer would measure illuminance when calibrating portrait photography). Illuminance is measured in Lux (Lx) in the metric system, and in Foot-candles (fC) in the US (imperial) system. For this Local Law, the metric unit of measure shall be used (Lx), where 0.09290 fC = 1 Lx.

C. Nuisance Lighting: Light trespass shall be considered nuisance lighting when:

(1) a light source produces illumination beyond the boundaries of the property on which it is located in excess of 5 Lx, measured anywhere at or immediately outside the property line (an average streetlight in Tuxedo Park of 100 watt incandescent bulb, measures 5 Lx when standing directly underneath); or

(2) a light source is seen from a neighboring property or roadway at sufficient intensity, or luminance, to cause discomfort or impaired visibility, or which produces glare; or

(3) a light source is of a flashing, dazzling, pulsating, or otherwise strobing source of illumination (other than such sources existing on the effective date of this local law).

D. Luminance and illumination levels shall be measured with a photoelectric photo meter in accordance with the standards published by the Illuminating Engineering Society of North America.

E. If the Village determines nuisance lighting to exist on a property, that lighting shall be abated by removing, replacing, shielding, retrofitting, relocating or re-aiming a fixture or re-lamping to reduce output of luminance and illuminance, such that the lighting is in compliance with this Section.

F. Building- or pole-mounted, shielded floodlights and/or shielded spotlights are permitted provided such lights are angled downward and do not to create glare as seen from above;

G. No lighting source shall be more than 20 feet above the ground level underneath it, as measured by taking the elevation difference between the average of a circular area measuring 10 feet in radius directly beneath the light source, and the light source.

H. Existing exterior lighting that is determined by municipal law enforcement to contribute to a condition of disabling or distracting glare onto a public roadway may be ordered to be changed or removed at any time.

- I. The Village encourages the raising and lowering of the national flag at sunrise and sunset instead of illumination. The national flag, as well as up to one additional secondary flag, that are not illuminated with downward lighting, may be illuminated only with a single ground-mounted narrow cone spotlight that confines the illumination to the flag, provided the light beam is focused, the source of the light is not visible from adjacent properties or public areas, and the total illumination of the flag cannot exceed 5 Lx as measured from any property line, regardless of the number of lamps. No other flags may be illuminated.
- J. Lighting of radio, communication and navigation towers shall not be permitted unless required by the Federal Aviation Administration (FAA) regulations, in which case required lighting shall be of the lowest permitted intensity and red, unless otherwise required by FAA regulations.
- K. Recreational Lighting currently installed within the boundaries of the Village, as of the effective date of this Section, may be used, and such use is regulated by the following provisions:
 - a) On each day of the week, with the exception of Friday and Saturday and federally recognized holidays, recreational lighting may not be used later than [**9pm or 10pm**] or earlier than 8am.
 - b) On Friday or Saturday or on any federally recognized holiday, recreational lighting may not be used later than [**11pm or 12pm**] or earlier than 10am.
- L. No new installation or use of Recreational Lighting shall be permitted in the Village. For purposes of this Section, "Recreational Lighting" means light fixtures used to illuminate courts, arenas, fields, tracks, and other outdoor recreational areas, and an "outdoor recreational area" means an area designed for active recreation, including but not limited to, baseball, soccer, football, golf, tennis, swimming pools, equestrian and similar recreational activities.
- M. Boat dock lighting: On all of the three lakes, floodlighting of boat docks and boat houses should be controlled by a motion detection device and powered for no longer than a 15 minute interval in any one hour time period. Low voltage shielded boat dock lighting is permitted. Boat house lighting shall be treated as residential lighting and shall conform to all of the applicable sections of this Local Law.
- N. Safety lighting: Any new installation of safety and convenience lighting, such as lights illuminating garbage cans or pathways, shall be activated by motion and are not powered for no longer than a 5 minute interval in any three hour time period.
- O. The installation or alteration of exterior lighting will often result in the alteration of the appearance of a property. Nothing in this Section is intended to detract from the provisions of Chapter 100-53 of the Village Code, which require approval of the Board of Architectural Review for projects or activities which alter a property's appearance.
- P. In any case where national and New York State building code requirements exceed the requirements of this section, the national and state requirements shall apply.
- Q. The provisions of this section may be enforced by [the Building Inspector, any police officer or the Board of Trustees] (the "Enforcement Officer"). It shall be unlawful for any person, firm, property owner, tenant, person in possession, partnership, corporation or other business entity (hereinafter "person and/or business entity") to install, alter, repair, move, equip, use or

maintain or allow such installation of any outdoor lighting in violation of any of the provisions of this article or to fail in any manner to comply with a notice, directive or order of the Enforcement Officer.

- R. If, after investigation, the Enforcement Officer finds that any provision of this Section is being violated or nuisance lighting exists, notice shall be given by hand delivery or by certified mail, return receipt requested, of such violation to the owner and/or to the occupant of such premises, and/or to the person or business entity believed not to have complied with this Section, instructing that the violation or nuisance lighting must be abated within the time specified in the notice or, in absence thereof, within 30 days of the date of hand delivery or of the date of mailing of the notice. If the violation is not abated within said period, the Enforcing Officer, in addition to any other rights or remedies available under the Village Code, may institute actions and proceedings, either legal or equitable, to enjoin, restrain or abate any violations of this Section.

Any person and/or business entity who violates this Section, or any provision thereof, shall be guilty of a violation punishable by a civil penalty not to exceed \$250 for residential violations after the expiration of the abatement period provided in clause R, and each day shall constitute a separate offense for the purpose of calculating the civil penalty; any person and/or business entity who violates this article after being convicted of a violation of this article within the preceding year shall be guilty of a violation punishable by a fine not to exceed \$500; any person and/or business entity who violates this article after being convicted of a violation of this article two or more times within the preceding three-year period shall be punishable by a fine not to exceed \$1,000.