

AN ORDINANCE OF THE BOARD
OF MAYOR AND ALDERMEN OF THE
TOWN OF LOUISVILLE, TENNESSEE,
AMENDING THE LOUISVILLE ZONING
ORDINANCE BY ADOPTING OUTDOOR
LIGHTING STANDARDS FOR COMMERCIAL,
INDUSTRIAL, MULTI-FAMILY AND SEMI-
PUBLIC USES

ORDINANCE NO. 2015 – 03

FIRST READING: 03-10-15

SECOND READING : 04-13-15

PLANNING COMMISSION
RECOMMENDED ON: 09-16-14

PUBLIC HEARING: 04-13-15

BE IT HEREBY ORDAINED BY THE BOARD OF MAYOR AND ALDERMEN OF THE
TOWN OF LOUISVILLE, TENNESSEE, AS FOLLOWS:

WHEREAS, the Louisville Board of Mayor and Aldermen, in accordance with TCA 13-7-203
and TCA 13-7-204 may amend the Zoning Ordinance of the Town of Louisville; and

WHEREAS, this ordinance was approved for passage by the Louisville Planning Commission

THEREFORE, IT IS ORDAINED:

1. Section 11-410 of the Louisville Zoning Ordinance is amended by renumbering present subsection 3 as 4, and adding a new subsection 3 as follows:
 3. Outdoor Lighting Standards. Proper design of lighting is important in order to address impacts on surrounding properties and the character of the community. A complete lighting plan shall be part of site plan documents, and the site plan approval body may set appropriate conditions for spill light mitigation during site plan review and approval. The following apply particularly to new developments, and shall also be applied to substantial additions or expansions to existing developments.

All lighting structures in existence prior to adoption of these regulations are exempt from further regulations, provided that replacement of structures shall meet all of these regulations.

- a. Maximum spill light (light trespass) at perimeter of the property shall be subject to the following performance standards and requirements:

For property boundaries adjacent to existing commercial use or commercially zoned land, maximum spill light shall be no greater than 0.8 footcandles.

For all other property boundaries, maximum spill light shall be no greater than 0.4 footcandles.

- b. Lighting Plan. A qualified professional, either electrical engineer, certified lighting contractor, or electrical contractor qualified in lighting plans and installation, shall prepare and certify a lighting plan conforming to requirements in these regulations. All lighting plans shall follow standards for footcandle output as established by the Illuminating Engineering Society of North America (IESNA). A light "point by point" footcandle diagram shall be shown on the site plan with a 10x10 foot maximum grid. The diagram shall cover at least ten feet on either side of property lines that border residential zones or uses.

The qualified professional who prepares the lighting plan shall inspect the installation of all lighting equipment, and conduct a performance verification to measure spill light illuminance levels of all lighting after lighting installation, to include night-time field measurements of spill light at a vertical height of 6 feet from ground level at points spaced no greater than fifty feet apart along the perimeter of the commercial property, and at points along the perimeter closest to lighting fixtures. Where lighting installation does not meet required performance standards, the qualified professional shall coordinate adjustment of the lighting installation to meet such standards and again conduct performance verification measurements specified above.

Upon completion of installation, inspection of installation, and performance verification measurements (with any necessary adjustments), the qualified professional shall submit a drawing showing the final measured spill light illumination levels specified at points along the perimeter identified above, with professional stamp (if applicable) and signed certification letter that lighting installation and performance meets all applicable standards and the approved site plan. For phased installation of lighting, new measurements for all lighting, drawing, and certification shall be required for each phase as specified above.

c. All lighting structures of greater than 1000 lumens shall be full cut-off type, mounted facing to the ground with no upward angle, to minimize unnecessary scattering of light. All lighting structures shall be designed and placed so as to minimize light spill and glare to surrounding residential properties.

d. The site plan for lighting shall include all lighting pole locations and luminaire mounting heights, all security and safety lighting structures, and projected spill light illuminance and glare of all lighting combined at property perimeter, meeting standards above. Means for minimizing and mitigating glare shall be part of the lighting plan submitted for site plan review and approval. No light shall be mounted at height greater than 20 feet.

e. Tall shrubs and trees may be considered as screens to reduce glare and spill light.

f. External lighting of the face of signs or walls of structures shall be placed above the sign or wall and shielded. Sign or wall lighting shall not reflect or glare beyond the face of the sign or wall.

g. Uplighting is prohibited except in cases where the fixture is shielded from the sky by a roof overhang or similar structural shield, and where the fixture does not cause light to extend beyond the structural shield. Exempt from this is lighting of governmental flags only, provided that the combined lighting is no more than 1300 lumens, and provided that the fixtures shall be shielded such that the lamp(s) is not visible outside a 15 foot radius.

h. Flashing or intermittent lights, lights of changing degree of intensity, or moving lights shall not be permitted, provided that holiday lights are exempt, and provided that necessary emergency and tower lighting is exempt, and provided that lighting cut-off or dimming at close of business is exempt and encouraged, and provided that sensor activated security lighting is exempt and encouraged.

i. Luminaires that have a maximum output of 260 lumens per fixture, regardless of number of bulbs, (equal to one 20 watt incandescent light), may be left unshielded provided that the fixture has an opaque top to keep light from shining directly up. Luminaires that have a maximum output of 1,000 lumens per fixture, regardless of number of bulbs, (equal to one 60 watt incandescent light) may be partially shielded, provided the bulb is not visible, and the fixture has an opaque top to keep light from shining directly up.

j. Canopy lights – all lighting shall be recessed to full cut-off standard and recessed sufficiently so as to ensure that no light source is visible from or causes glare on public rights-of-way or adjacent property.

k. All non-essential exterior lighting is to be turned off after business hours and when not needed. Lights with timer installed are encouraged. Sensor activated lights are encouraged to replace lighting that is desired for security purposes.

l. Sports lighting – sports field lighting fixtures shall be mounted no higher than 90 feet, provided that such sports field light fixtures shall be a distance 40 feet or height of pole whichever is greater from any adjacent residential or residentially zoned property boundary, and provided that no outside sporting event shall start after 10:00 p.m. or extend beyond 11:00 p.m. with all field lights out by 11:30 p.m., and provided that sports fields shall provide tall vegetative or other acceptable buffering from adjacent properties in order to reduce and mitigate glare.

m. Temporary lighting such as that used at construction sites or other uses of a temporary nature are exempt, provided that the temporary lighting shall be aimed so as to minimize glare and light trespass to adjacent properties, turned off after 11:00 p.m. (except for necessary security lighting), and turned off after completion of project.

n. Definitions

Bulb - the source of electric light. This is to be distinguished from the whole assembly (See Luminaire).

Fully Shielded - outdoor light fixtures shielded or constructed so that no light rays are emitted by the installed fixtures at angles above the horizontal plane. This means that the shield is not flush or parallel with the light source or bulb. This is referred to in this document as a full cut-off-fixture.

Fixture -- The assembly that holds the lamp (bulb) 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.

Flood Light - a lamp that produces up to 1800 lumens and is designed to "flood" a well defined area with light. Generally, flood lights produce from 1000 to 1800 lumens.

Full Cut-Off (fco) -- a light fixture which cuts off all upward transmission of light, and as installed, that are designed or shielded in such a manner that all light rays emitted by the fixture, either directly from the lamp or indirectly from the fixture, are projected below a horizontal plane running through the lowest point on the fixture where light is emitted as defined by the IESNA..

Footcandle - illuminance produced on a surface one foot from a uniform point source of one candela. Measured by a light meter.

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

IESNA - the Illuminating Engineering Society of North America (IESNA), the professional society of lighting engineers, including those from manufacturing companies, and others professionally involved in lighting.

Illuminance - the quantity of light, or luminous flux, arriving at a surface divided by the area of the illuminated surface, measured in lux or foot candles.

Lamp - the source of electric light: the bulb and its housing. This is to be distinguished from the whole assembly (See Luminaire).

Light trespass - light emitted by a lighting installation that falls outside the boundaries of the property on which the installation is sited (also called spill light)

Lumen -- a unit of light measurement, measure of brightness of the illumination exiting a bulb; the light output of a lamp with a uniform luminous intensity of one candela. One footcandle is one lumen per square foot.

Luminance - the physical quantity corresponding to the brightness of a surface (e.g. a lamp, luminaries, sky, or reflecting material) in a specified direction. It is the luminous intensity of an area of the surface divided by that area.

Luminaire - a complete lighting unit 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.

Outdoor Lighting and Light Fixtures - outdoor artificial illuminating devices, outdoor fixtures, lamps and other devices, permanent or portable, used for illumination or advertisement. Fixtures that are installed indoors that are intended to light something outside are considered outdoor lighting. Such devices shall include, but are not limited to search, spot, or flood lights for:

- 1) buildings and structures, including canopies and overhangs

- 2) recreational areas
- 3) parking lot lighting
- 4) landscape lighting
- 5) billboards and signs
- 6) display and service areas

Recessed - means that a fixture is built into a structure or portion of a structure such that the fixture is fully cutoff and no part of the lamp extends or protrudes beyond the underside or any portion of the structure.

Spill light - light emitted by a lighting installation that falls outside the boundaries of the property on which the installation is sited (also called light trespass).

Uplighting - lighting that is directed in such a manner as to shine light rays above the horizontal plane.

- 2. This Ordinance shall become effective immediately upon passage, the public welfare requiring it.



Mayor



Town Recorder