

ORDINANCE #94 LIGHTING NUISANCE

THIS ORDINANCE SUPERSEDES ORDINANCE 38C SECTION 4.2

Sec. 42-100. – Purpose and intent.

It is the intent of this article to preserve, protect, and enhance the lawful nighttime use and enjoyment of any and all property through the use of appropriate lighting practices and systems and curtail the degradation of the nighttime visual environment. Such individual fixtures and lighting systems are designed, constructed, and installed to: control glare and light trespass, minimize obtrusive light, conserve energy and resources while maintaining safety, security and productivity.

Sec. 42-101. – Definitions.

[As used in this article, the following words and terms shall have the meaning ascribed thereto:]

Cutoff angle (of a luminaries): The angle, measured up from the nadir, between the vertical axis and the first line of sight at which the bare sources is not visible.

Footcandle: A unit of luminance amounting to one lumen per square foot.

Full cut-off type fixture: A light fixture that, by design of the design of the housing, does not allow any light dispersion or direct glare to shine above a horizontal plane from the base of the fixture, the light source is hidden. Full cut-off fixtures must be installed in a horizontal position as designed, or the purpose of the design is defeated.

Fully shielded: A fully shielded luminaries is a luminary constructed or shielded in such a manner that all light emitted by the luminaries, either directly from the lamp or indirectly from the luminaries, is projected below the horizontal plane through the luminaries' lowest light emitting part as determined by photometry test or certified by the manufacturer. Fixtures will be installed in a horizontal position as designed, or disability glare will result.

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.

Light trespass: Direct light emitted by a lighting installation, which falls outside the boundaries of

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the property on which the installation is sited.

Luminance: The quantity of light, or luminous flux, arriving at a surface divided by the area of the illuminated surface, measured in lux or footcandles.

Luminance: The physical quantity corresponding to the brightness of a surface (e.g. a lamp, luminaries, sky, or reflecting material) in a special direction. It is the luminous intensity of an area of the surface divided by that area. The unit is candela per square meter.

Luminaries: 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.

Lux (lx): The SI unit of illuminates. One lux is one lumen per square meter.

Obtrusive light: Spill light which, because of quantitative, directional or spectral context, gives rise to annoyance, discomfort, distraction or a reduction in the ability to see essential information.

Spill light: Light emitted by lighting installation that falls outside the boundaries of the property on which the installation is sited.

Up lighting: Any light source that distributes illumination above a 90-degree horizontal plane is prohibited.

Sec. 42-102. – General provisions.

(a) *Curfew:* All nonessential lighting in any district will be required to be turned off after business hours in the commercial zones and after 10:30 p.m. in residential areas, leaving only the necessary lighting for site security (see Sec. 42-102b). The nonessential lighting shall remain off until dawn or one-half hour before a business opens, whichever is earlier. Examples of nonessential lighting are: display, billboards, aesthetic, parking, sign lighting, playground, or yard lights.

(b) *Light trespass limits:* No use or operation in any district shall be located or concentrated so as to produce intense glare or direct illumination across the bounding property line for a visible source of illumination nor shall any such light be of such intensity as to create a nuisance or detract from the use and enjoyment of adjacent property. The pre-curfew luminance level measured on the property line at eye height on a plane perpendicular to the line of sight shall be no greater than three lux. The post-curfew luminance level measured on the property line at

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eye height on a plane perpendicular to the line of sight shall be no greater than one lux.

(c) *Street lights*: All lights illuminating a parking area shall be designed and located so as to reflect away from any street and adjacent property.

Sec. 42-103. – Nonresidential provisions.

The following provisions shall apply to all nonresidential land uses including, but not limited to, commercial, light industrial, and open space.

- (1) All parking area lighting shall be full cut-off type fixtures. Pole mounted lights shall be a maximum height of 20 feet, measured from ground level to the base of the light fixture.
- (2) All building lighting for security or aesthetics will be full cutoff or a shielded type, not allowing any upward distribution of light. Floodlighting is discouraged, and if used, must be shielded to prevent:
 - a. Disability glare for drivers or pedestrians.
 - b. Light trespass beyond the property line.
 - c. Direct light above a horizontal plane.
- (3) Unshielded wall-pack type fixtures are unacceptable. (see Exhibit A for examples)
- (4) Adjacent to residential property, no direct light source will be visible at the property line at ground level or above.
- (5) Externally lit signs, display, building and aesthetic lighting must be lit from the top and shine downward. The lighting must be shielded to prevent direct glare and/or light trespass. The lighting must also be contained to the target area. Internally lighted signs are acceptable. (See sign ordinance for further restrictions on lighted signs.)
- (6) The "maintained horizontal illuminates recommendations" set by the Illuminating Engineering Society of North America (IES) shall be observed.
- (7) See Exhibit A for examples of unacceptable and acceptable outdoor light fixtures.

Sec. 42-104. – Site plan standards.

(a) All site plans shall include locations, size, height, orientation, wattage, design and plans of

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all outdoor lighting and lighted signs. For site plans showing a high level of illumination, the building and development department may require an iso-lux plan indicating levels of illumination in footcandles, at ground level. The plan shall adhere to the "maintained horizontal luminance recommendations" set by the Illuminating Engineering Society of North America (IES). (See Appendix A)

(b) Should any outdoor light fixture or the type of light source be changed after the site plan has been approved, a change request must be submitted in writing to the building official for his approval, together with adequate information to assure compliance with this article, which must be received prior to substitution.

Sec. 42-105. – Temporary lighting exemptions.

(a) Any person may submit a written request, on a form prepared by the city, to the building official for a temporary lighting exemption request. A temporary exemption shall contain the following information:

- (1) Specific exemption or exemptions requested.
- (2) Duration of time requested for exemption.
- (3) Type of lamp(s), fixture(s) and shielding provided.
- (4) Total wattage of lamp or lamps.
- (5) Proposed location on premises of the outdoor light fixture(s), including height.
- (6) Such other data and information as may be required by the city official.

(b) A city official shall have five business days from the date of submission of the request for temporary exemption to act, in writing, on the request. If approved, the exemption shall be valid for not more than 30 days from the date of issuance of the approval. The approval shall be renewable at the discretion of the building official upon a consideration of all the circumstances. Each such renewed exemption shall be valid for not more than 30 days.

Sec. 42-106. – Nonconforming lighting.

- (a) Existing lighting in conflict with this article shall be classified as nonconforming.
- (b) Nonconforming lighting shall not be altered, rebuilt, enlarged, extended, or relocated, unless

doing so brings it into conformance.

(c) Nonconforming lighting shall not be permitted to remain after cessation or change of the business or activity to which the lighting pertains.

Sec. 42-107. – Exemptions.

- (1) Traffic control signals and devices.
- (2) Temporary emergency lighting (i.e. fire, police, repair workers).
- (3) Moving vehicle lights.
- (4) Navigation Lights (i.e. airports, heliports, radio/television towers).
- (5) Decorative holiday lighting from November 15 through the next January 15.
- (6) Special situations approved by the City Council for temporary or periodic events.
- (7) Security lights of any wattage that are controlled by a motion-sensor switch and which do not remain on longer than five (5) minutes after activation.

Sec. 42-108. – Administration.

The duties and responsibility of administering this article shall be vested in a city official of the city, or such other person as may be designated from time to time by the City Council.

Sec. 42-109. – Penalty.

Any person, firm or corporation violating any of the provisions of this article shall be deemed guilty of a misdemeanor and, upon conviction, shall be punished by a penalty or fine not to exceed the sum of \$500.00 for each offense, and each and every day such offense is continued shall constitute a new and separate offense.

Sec. 42-110– Enforcement

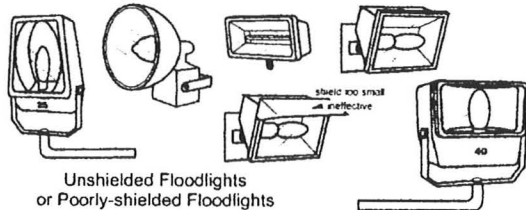
If, after investigation, the city official finds that any provision of this article is being violated, a city official shall give notice by hand delivery or by certified mail return receipt requested, of such violation to the owner and/or to the occupant of such premises, demanding that the violation be abated within thirty (30) days of the date of hand delivery or of the date of mailing of the notice. A city official shall be available to assist in working with the violator to correct said violation. If the violation is not abated within the thirty-day period, the city staff may institute actions and proceedings, either legal or equitable, to enjoin, restrain or abate any violations of this article and to collect the penalties for such violations.

Better Lights for Better Nights

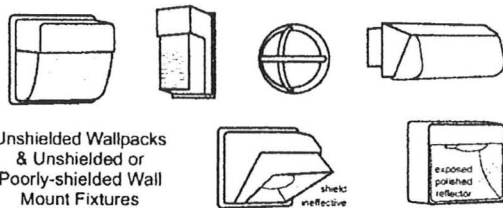
Help eliminate light pollution. Select the best fixture for your application using this guide. Use the lowest wattage bulb appropriate for the task and turn off the light when it's not being used.

Unacceptable / Do Not Use

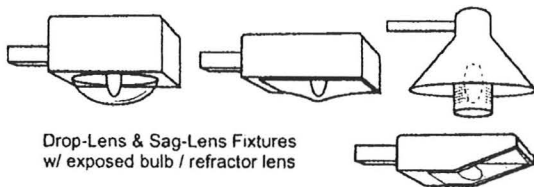
Fixtures that produce glare and light trespass



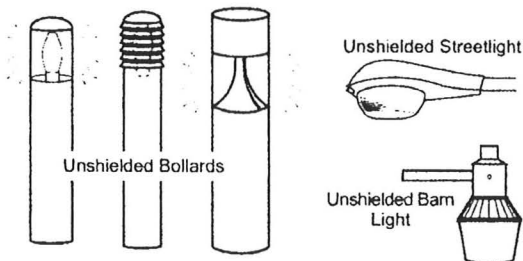
Unshielded Floodlights
or Poorly-shielded Floodlights



Unshielded Wallpacks
& Unshielded or
Poorly-shielded Wall
Mount Fixtures

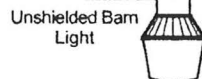


Drop-Lens & Sag-Lens Fixtures
w/ exposed bulb / refractor lens

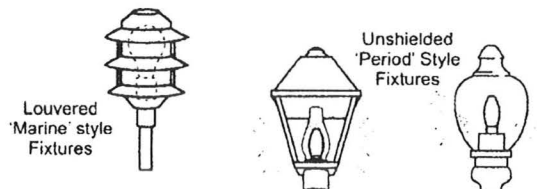


Unshielded Streetlight

Unshielded Bollards

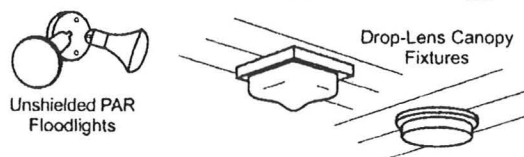


Unshielded Barn
Light



Louvered
'Marine' style
Fixtures

Unshielded
'Period' Style
Fixtures

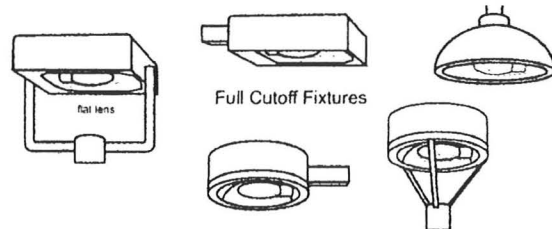


Unshielded PAR
Floodlights

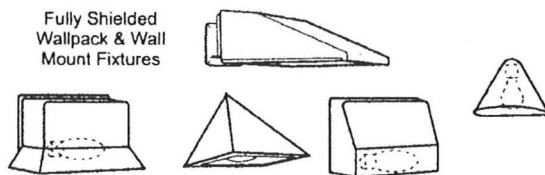
Drop-Lens Canopy
Fixtures

Acceptable

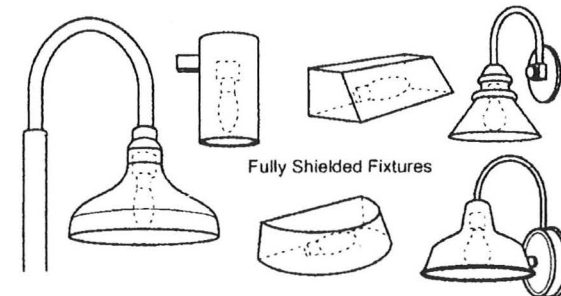
Fixtures that shield the light source to minimize glare and light trespass and to facilitate better vision at night



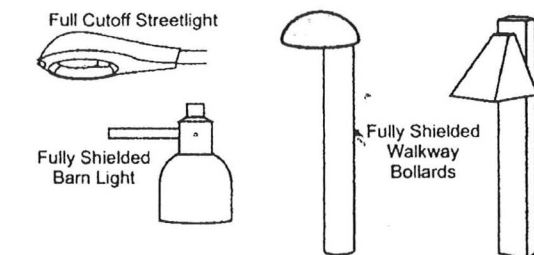
Full Cutoff Fixtures



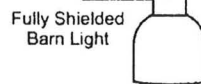
Fully Shielded
Wallpack & Wall
Mount Fixtures



Fully Shielded Fixtures

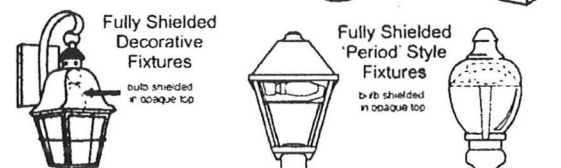


Full Cutoff Streetlight



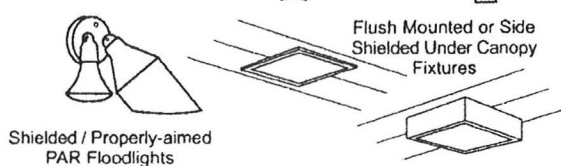
Fully Shielded
Barn Light

Fully Shielded
Walkway
Bollards



Fully Shielded
Decorative
Fixtures

Fully Shielded
'Period' Style
Fixtures



Shielded / Properly-aimed
PAR Floodlights

Flush Mounted or Side
Shielded Under Canopy
Fixtures


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Sec. 42-110- EFFECTIVE DATE:

Date Published in Official Newspaper Nov. 20, 2014

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Passed, ordained, approved and adopted on the 9th day of December, 2014.

By: 
Lorraine Dyche
Assistant City Secretary

By: 
Tom Van Buren
Mayor Town of Bayside, Texas

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