

PART FIVE: PERFORMANCE-BASED REGULATIONS THAT DO NOT USE A MAP

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§5-1 PERFORMANCE STANDARDS FOR OFF-SITE IMPACTS

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§5-1-1 OUTDOOR LIGHTING

[See Commentary]

§5-1-1.1 Purpose and Intent. These regulations are intended to reduce the problems created by improperly designed and installed outdoor lighting, eliminate problems of glare, and minimize light trespass, with regulations that avoid unnecessary direct light from shining onto abutting properties or streets.

§5-1-1.2 Definitions. For purposes of this code section, the following terms are defined as follows.

Direct light: Light emitted directly from the lamp, off of the reflector or reflector diffuser, or through the refractor or diffuser lens, of a luminaire.

Fixture: The assembly that houses the lamp(s) and can include all or some of the following parts: a housing, a mounting bracket or pole socket, a lamp holder, a ballast, a reflector or mirror, and/or a refractor or lens.

Footcandle: A unit of illuminance on a surface that is everywhere one foot from a uniform point source of light of one candle and equal to one lumen per square foot. One footcandle (FC) is the equivalent of 10.76 Lux (1 Lux = 0.0929 FC).

Glare: Light emitting from a luminaire with an intensity great enough to reduce a viewer's ability to see (and in extreme cases causing momentary blindness), or that causes annoyance or discomfort.

Illuminance: The area density of the luminous flux incident at a point on the surface. It is a measure of light incident on a surface, expressed in lux or footcandles.

Indirect light: Direct light that has been reflected or has scattered off of other surfaces.

Isofootcandle plan: A site plan of a proposed development showing proposed outdoor illuminance with a series of isofootcandle lines that join points on a surface where the illuminance is the same.

Light trespass: The shining of light produced by a luminaire beyond the boundaries of the property on which it is located.

Luminaire: A complete lighting system, including a lamp or lamps and a fixture. This term shall be interpreted broadly as applying to all outdoor electrically powered illuminating devices, outdoor lighting or reflective surfaces, lamps and similar devices (permanently installed or portable), used for illumination or advertisement.

Luminaire, full cutoff: Outdoor light fixtures shielded or constructed so that no direct light rays are emitted by the installed fixture at angles above the horizontal plane.

Outdoor lighting: The night-time illumination of an outside area or object by any man-made device located outdoors that produces light by any means.

Safety lighting: Exterior lighting that involves ensuring proper levels of illumination to provide safe working conditions, safe passage, and the identification of outdoor hazards.

Security lighting. Exterior lighting installed solely to enhance the security of people and property.

§5-1-1.3 Applicability. All public and private outdoor lighting installed in _____ County [the City of _____] shall be in conformance with the requirements established by these regulations.

§5-1-1.4 Exemptions. The following shall be exempt from the provisions of this Code section.

- (a) All temporary emergency lighting needed by police or fire departments or other emergency services.
- (b) All hazard warning luminaires required by federal regulatory agencies.
- (c) All vehicular luminaires.
- (d) Safety lighting, as defined in this section.
- (e) Security lighting, as defined in this section, including lighting activated by motion sensing devices.
- (f) All outdoor light fixtures producing light directly by the combustion of natural gas or other fossil fuels.
- (g) Public ball fields and tennis courts.

§5-1-1.5 Prohibitions. The following types of outdoor lighting are prohibited: searchlights, for advertising purposes, and the use of laser source light, or any similar high intensity light, for advertising purposes.

§5-1-1.6 Newly Installed Luminaires to Comply. All luminaires, except for those specifically exempted by this section, hereafter installed for outdoor lighting in _____ County [the City of _____] shall be full cutoff luminaires, as defined by this section, or another luminaire that does not emit any direct light above a horizontal plane through the lowest direct-light-emitting part of the luminaire.

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§5-1-1.7 Luminaires Creating Glare to be Redirected. Any luminaire that is aimed, directed, or focused such as to cause direct light from the luminaire to be directed toward residential buildings on adjacent or nearby land, or to create glare perceptible to persons operating motor vehicles on public ways, shall be redirected or its light output controlled as necessary to eliminate such conditions.

§5-1-1.8 Illuminance Levels. Illuminance levels for outdoor lighting fixtures shall comply with the following standards, measured at three feet above the ground or finished grade.

At Property Lines Including Rights-of-Ways	Minimum Footcandles	Maximum Footcandles	
At property line abutting a residential use	None	0.5	
At property line abutting an office or institutional use	None	1.0	
At property line abutting a commercial or light industrial use	None	1.5	
Off-Street Parking Lots	Minimum Footcandles	Average Footcandles	Maximum Footcandles
Residential areas	0.5	2	4
Office-professional areas	1.0	3	6
Commercial areas	2.0	6	12
Light industrial areas	1.0	4	8

[See Commentary]

§5-1-1.9 Lighting Plan Required. A lighting plan shall be required for all non-single-family residential developments of one acre or more in size. When required, lighting plans shall illustrate proposed lighting. The plan shall show areas of night illumination and the amount of light at various places measured in footcandles. When required, the lighting plan shall consist of either isofootcandles (connecting points of equal light illumination levels, similar to a topographic contour) or a photometric grid with individual spot readings. No lighting plan shall be approved which will result in direct light that exceeds the requirements or is otherwise inconsistent with this section.

[See Commentary]

§5-1-2 NOISE

[See Commentary]

§5-1-2.1 Definitions.

Noise: Any sound that annoys or disturbs humans or causes or tends to cause an adverse psychological or physiological effect on humans.

Noise disturbance: Any sound that endangers or injures the safety or health of humans or animals, or annoys or disturbs a reasonable person of normal sensitivities, or endangers or injures personal or real property.

Sound level: The intensity of sound, measured in decibels, produced by an operation or use.

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Sound level meter: An instrument designed to measure sound pressure levels and constructed in accordance with the requirements for General Purpose Sound Level Meters published in the American National Standards Institute.

§5-1-2.2 Noise Disturbance Prohibited. No person shall unnecessarily make, continue, or cause to be made or continued any noise disturbance.

§5-1-2.3 Measurement. Sound levels shall be measured with a sound level meter. Noises capable of being measured shall be those that cause rapid fluctuations of the needle of the sound level meter with a variation of no more than plus or minus two decibels. Noise measurements of a few minutes only will suffice to define any given noise level.

§5-1-2.4 Performance Standards. At no point on the boundary of property shall the sound pressure level of any operation exceed the decibel levels shown below:

Receiving Land Use Category	Noise Level (dB A)	
	10:00 p.m. to 7:00 a.m.	7:00 a.m. to 10:00 p.m.
All residential	45	60
Commercial	60	65
Industry	70	70

[See Commentary]

§5-1-2.5 Exemptions. The following activities or sources are exempt from these noise standards.

- (a) Emergency signaling devices, domestic power tools, air conditioning equipment, operating motor vehicles, and refuse collection vehicles.
- (b) The unamplified human voice.
- (c) Railway locomotives and cars.
- (d) Normal sounds of reasonably cared for agricultural or domestic animals, and the sounds of necessary farming equipment for a bona fide agricultural operation.
- (e) Aircraft operations.
- (f) Bells or chimes of churches or other places of worship.

§5-1-3 VIBRATION

No activity or operation shall cause or create vibrations that are recurring and perceptible at any property line without the aid of instruments. Any use that creates intense, earth-shaking vibration, such as are created by heavy drop forges or heavy hydraulic surges, shall be setback a minimum of 500 feet from the boundary of any property containing a residence.

[See Commentary]

§5-1-4 ODORS

The emission of noxious odors in such quantities as to be detectable at any point along property lines is prohibited.

[See Commentary]

§5-1-5 SMOKE OR PARTICULATE MATTER

The emission of smoke or particulate matter in such manner or quantity as to be detrimental to or endanger the public health, safety, comfort, or welfare is hereby declared to be a public nuisance and shall be unlawful. Emissions from fireplaces used for noncommercial or recreational purposes shall be exempt from this regulation. Dust and other types of air pollution, borne by the wind from such sources as storage areas, yards, roads, and driveways within lot boundaries, shall be kept to a minimum by appropriate landscaping, paving, or other acceptable means.

[See Commentary]

§5-1-6 ELECTROMAGNETIC INTERFERENCE

Any interference with normal radio, telephone, or television reception across property lines shall be prohibited.

[See References]