

The property owner shall be responsible for control of plant growth by pruning or trimming so that it will not interfere with the installation, maintenance or repair of any public utility, pedestrian or vehicular access or constitute a traffic hazard.

4.4.4 h. Outdoor Lighting

1) Purpose

Outdoor lighting standards are applicable to all development in the County. Outdoor lighting shall be designed and arranged to enhance the safety of areas designated for pedestrian use during evening hours, to provide security, to conserve energy, to protect the night sky and in particular, to prevent the spillover, nuisance or hazard effects of light and glare on adjacent locations and uses of land.

2) Definitions

- (a) cut-off - the point at which all light rays from the light source or luminaire is completely eliminated at a specific angle above the ground.
- (b) cut-off luminaire - a luminaire with shield, reflectors, reflector panels or other housing which directs and cuts off light rays from direct view.
- (c) footcandle - a unit of illumination produced on a surface, all points which are one (1) foot from a uniform point source of one (1) candle. A comparative measure is the brightness of a full moon which is equal to .01 footcandle.
- (d) glare - the brightness of a light source which causes eye discomfort.
- (e) luminaire - a complete lighting unit consisting of a light source and all necessary mechanical electrical and decorative parts.

3) Submittals

- (a) For all development involving outdoor lighting fixtures a lighting plan shall be submitted for master plan or preliminary development plan or Development Permit review, as applicable, showing the location, mounting height, types of luminaires, accessory equipment such as shades, deflectors or other housing controlling the direction of light on a surface and the beam direction of any luminaire. Descriptions of all illuminating devices shall include, as applicable, manufacturers' drawings showing sections and photometric data showing the angle of cut off of light emissions.
- (b) The plan shall be drawn to scale and shall also include elevations of building facades showing the location of, and shielding devices for, wall mounted luminaires and detailed drawings of the luminaires and accessory equipment to be used.
- (c) Additional submittals that may be required include, but are not limited to, preparation of a visual impact analysis for alternative types of lighting solutions for the project as those would affect and be seen from adjacent properties and public ways, a comparative analysis of performance standards relating mounting height, footcandles, footcandle levels and location for various types of lighting which could be developed for the proposed use and types of shields, deflectors and adjustments on orientation or other buffers which could be implemented to mitigate glare, nuisance or hazardous effects of any night lights.

4) Off-Street Lighting Design Standards

- (a) The use of cut-off type luminaires is required. All light bulbs and light sources shall be shielded so that they are not directly visible from any adjacent lot or public roadway. All outdoor lighting fixtures shall meet requirements for lamp type and shielding set forth in Table 3.1, Outdoor Lighting Requirements, below.
- (b) Spillover of lighting for adjacent properties shall not exceed one half of one (.50) footcandle measured at any point ten feet (10') beyond a property line.
- (c) For residential uses, no luminaire shall be installed higher than the building(s) on the lot. For all other uses and for parking lots for multi-family residential uses, no

- luminaire shall be installed higher than one and one half (1.5) the height of any structure proposed for development or twenty four feet (24'), whichever is less.
- (d) All light bulbs and light sources shall be recessed into any canopy structure that is designated for pedestrian use, loading or service, unless a suitable alternative is submitted for approval. Decorative lamps housing an incandescent light source of 160W or less for hanging under portals are exempted.
 - (e) In nonresidential districts building facades may be illuminated with ground floodlamps installed close to the structure; wall mounted floodlamps shall be shielded so that the light source is not visible. Spotlights without a shielding device are prohibited. Ground mounted luminaires for building facade illumination are not permitted in residential districts.
 - (f) Control of the distribution of illumination for outdoor recreation areas, outdoor storage areas or outdoor display of merchandise is subject to additional submittals.
 - (g) Automatic timing devices may be required to turn off lighting installed for display or outdoor sporting events at specified hours. The use of security lights using motion sensors is encouraged, especially for residential applications.
 - (h) A range of lighting design solutions for the various aspects of a development shall be considered over a single lighting solution.

5) Street Lighting Design Standards

- (a) It is the intent of these Regulations to require installation of street lights only where necessary to continue the urban streetscape or to provide for pedestrian and motorist safety. It is not the intent to require or encourage installation of street lights in subdivisions with a rural character.
- (b) Street lights are required in the following circumstances:
 - (1) on paved streets and roads where curb, gutter and sidewalk are required;
 - (2) for safety purposes on arterial roads or at intersections of any road with a highway or arterial.
- (c) Standards for street light installations:
 - (1) Lighting shall be provided in accordance with a plan designed using guidelines and standards set forth by the Illuminating Engineers Society (IES) Lighting Handbook, latest revision, and the standards set forth in this section. Recommended lighting levels and uniformity ratios are found in Appendix 3.B of the Code.
 - (2) Plans designed by utility companies shall meet the standards in this section.
 - (3) Low or high pressure sodium lamps or other energy efficient sources shall be used in all installations.
 - (4) Cut-off luminaires shall be used to direct light downward in order to prevent the spillover, nuisance or hazard effects of light and glare on any adjacent locations. Cobra head fixtures shall be equipped with skirting or other design features to shield the light source. See Table 3.1, Outdoor Lighting Requirements.
 - (5) Street lights shall be located and designed to enhance the safety of motorists and pedestrians during evening hours. Location shall be planned to provide a transition from unlit areas to lit areas and continuity and uniformity of lighting. Street lights shall be installed so as to create a transition from dark to illuminated areas and avoid blind spots or dark shadows which are hazardous to drivers.
 - (6) The maximum height of standards (upright supports) shall not exceed twenty-four feet (24'), except on public roads wider than two (2) lanes and arterials where taller standards up to thirty-six feet (36') may be used. This height limit may be varied by the Code Administrator if a site specific study clearly demonstrates that use of a taller standard will better achieve the purposes of this subsection 4.4.4 h, Outdoor Lighting, and these Street Light Design Standards.

- (7) Street lights in subdivisions shall be equipped with electric meters to allow billing to the developer or owners' association unless other arrangements are agreed to by the Board.
 - (8) All street light conductors shall be installed underground.
 - (d) Safety. Notwithstanding other requirements of this Section, the County Development Review Committee or Board may require installation of street lights whenever needed to protect the safety of motorists and pedestrians due to the particular characteristics or location of the site.
 - (e) Maintenance. Payments for operations, maintenance and energy charges shall be the responsibility of the developer or owners' association. The disclosure statement and owners' association by-laws shall set forth an acceptable method for charging each lot owner for maintenance and operation.
- 6) Non-Conforming Outdoor Lights
- (a) Mercury vapor lamps in use for outdoor lighting on the effective date of this amendment to the Code (April 30, 1996, Ordinance No. 1996-3) shall be removed or replaced with lamp fixtures meeting the standards of this Article III, Section 4 within five (5) years.
 - (b) All other outdoor light fixtures lawfully installed prior to and operable on the effective date of this Code amendment (April 30, 1996, Ordinance No. 1996-3) are exempt from the requirements of this Section. However, whenever there is a change in use or lamp type or any replacement or structural alteration made to such non-conforming outdoor light fixtures, they shall be made to conform to all applicable requirements of this Code.
 - (c) Non-conforming outdoor lights which are found by the Code Administrator or the County Development Review Committee to create a nuisance or hazard and are in violation of this ordinance shall be required to be replaced with lamp types or fixtures which conform to the requirements of this Code.

TABLE 3.1 OUTDOOR LIGHTING REQUIREMENTS		
FIXTURE LAMP TYPE	SHIELDING	DETAILED STANDARDS/NOTES
Low pressure sodium	Partial*	Shielding shall permit no more than ten percent (10%) of light rays emitted at angles above the horizontal plane running through the lowest part of the fixture as certified by photometric test report. This is the preferred light source to minimize undesirable light emission into the night sky.
High pressure sodium	Full*	Full shielding shall permit no light rays emitted by the installed fixture at angles above the horizontal plane running through the lowest part of the fixture, as certified by photometric test report.
Metal halide	Full*	To be used for display purposes; the light source shall be filtered by a glass, acrylic or translucent enclosure; may be subject to timing devices or restricted hours of operation.
Fluorescent, quartz, incandescent greater than 160W	Full*	Signs constructed of translucent materials and lit from within do not require shielding. See Art. VIII, Sign Regulations.
Incandescent 160W or less	None	
Any light 50W or less	None	
Halogen	Prohibited except for special uses approved by CDRC	For outdoor display of merchandise or sporting events; may be subject to timing devices or restricted hours of operation.
Mercury vapor, laser	Prohibited	
other sources	As approved by CDRC	May be conditioned as part of development approval or temporary use permit.

See Appendix 3.A for illustration.

SECTION 5 - MINERAL EXPLORATION AND EXTRACTION

5.1 General Provisions

5.1.1 Applicability

- A. Any person who conducts or intends to conduct a mineral exploration or extraction activity or an expanded use of a mining land use within Santa Fe County shall be subject to the provisions of this Code, as applicable, and this Section 5. Mining uses shall be allowed in mining zones established on Code Map 30 provided the requirements of this Section are met.

APPENDIX 3.A - SHIELDING STANDARDS FOR OUTDOOR LIGHTS

All light bulbs and light sources shall be shielded so that they are not directly visible from any adjacent lot or public roadway and so that no light rays are emitted by the installed luminaire at angles above the horizontal plane at the lowest part of the fixture, as certified by photometric test report. See Article III, Section 4.4.4, Development and Design Standards. See also Appendix F for streetlight design.

APPENDIX 3.B - STREELIGHT DESIGN CRITERIA

Reference Article III, Section 4.4.4, Development and Design Standards. Also see Appendix 3.A.

RECOMMENDED LIGHTING LEVELS*			
	Commercial	Industrial	Residential
Pedestrian areas:			
Sidewalks	0.9	0.6	0.2
Pedestrian ways	2.0	1.0	0.5
Roadways:			
Freeways	0.6	0.6	0.6
Major roads & expressways	2.0	1.4	1.0
Collectors	1.2	0.9	0.6
Local streets	0.9	0.6	0.4
Alleys	0.6	0.4	0.2
Parking areas:			
Self-parking	1.0	-	-
Attendant parking	2.0		
Buildings:			
Entrance & doorway areas	5.0	-	-
General grounds	1.0		

* Values are given in minimum average maintained horizontal footcandles source: *IES Lighting Handbook*, 4th ed., Illuminating Engineering, New York.

RECOMMENDED AVERAGE-TO-MINIMUM UNIFORMITY RATIOS	
For Roadways in:	Recommended Ratios
Commercial Areas	3:1
Intermediate Areas	3:1
Residential Areas	6:1