



CITY OF COUNTRYSIDE

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Permit # _____

EXTERIOR LIGHTING INFORMATION

COUNTRYSIDE JOB ADDRESS: _____

PHOTOMETRIC LIGHTING PLAN REQUIRED

- Read the entirety of the Countryside City Code Section **10-7C-8: OUTDOOR LIGHTING** so that you understand our requirements. Section 10-7C-8 of the City Code outlines the City's requirements for outdoor lighting. It is suggested that the Developer's lighting consultant review these requirements as it pertains to fixture cutoff, pole heights, up-lighting and light levels.
- Common code sections that are missing from photometric plan submittals are:
 - o **(C)(3/4):** All building and parking area lighting fixtures shall be rated U0 per IES TM 15-11, with no light above a ninety degree (90°) plane. Floodlighting and wall pack lighting fixtures are discouraged, and if used, shall be rated U0 per IES TM 15-11, with no light above a ninety degree (90°) plane to prevent disability glare for drivers or pedestrians and light trespass beyond the property line.
 - o **(C)(5):** Poles supporting lights shall be no taller than twenty three feet (23') in a residential district, twenty five feet (25') in a commercial district, including automobile dealerships, a commercial part of a residential planned unit development, including automobile dealerships, or in office/business park districts, and thirty two feet (32') in any industrial district.
 - o **(D)(4):** Sag lenses are prohibited from use on all site lighting luminaries. All new fixtures shall have flat lenses.
 - o **(D)(6):** Specifies the allowable foot-candles at the property line.
 - o **(H)(2):** The lighting photometric plan shall include a site plan indicating location of light fixtures and intensity of foot-candles on a ten foot (10') grid throughout the site, including across property lines, proposed luminaire schedule which indicates model numbers, an indication of which lights will be dimmed or turned off during post-curfew mode, light loss factors (LLF) for proposed fixtures and proposed mounting heights, and a summary table containing average foot-candles, minimum foot-candles, maximum foot-candles, uniformity ratio (average/minimum). The plan shall also contain a certification (signature) by the property owner or agent and the preparer of the plan that the exterior lighting depicted on the plan complies with the requirements of this section. Once the plan is approved, the exterior lighting of the property shall conform to the plan.
 - o **(I):** Manufacturer cut sheets for each proposed lighting fixture shall be required in conjunction with the photometric plan.

By signing below I am agreeing to the terms above and the following requirement:

AT THE TIME OF INSTALLATION, PHOTOS WILL BE TAKEN OF EACH LIGHT HEAD SHOWING THE MODEL NUMBER AND OF EACH LIGHT HEAD IN PLACE. PHOTOS WILL BE EMAILED TO THE CITY.

SUPERVISING ELECTRICIAN PRINTED NAME

SIGNATURE

DATE

Electrician's Company/Address: _____

10-7C-8: OUTDOOR LIGHTING:

A. Applicability: All public and private outdoor lighting installed in the City of Countryside shall be in conformance with the requirements set forth in this section.

B. Definitions:

EXTERIOR LIGHTING: The illumination of an outside area or object by any manmade device that produces light by any means.

FIXTURE: The assembly that houses the lamp or lamps 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.

FLAT LENSES: A glass or plastic element used in luminaires that is flush or inside the bottom edge of the luminaire.

FOOT-CANDLE (fc): A unit of illumination produced on a surface, all points of which are one foot (1') from a uniform point source of one standard candle.

FOOT-CANDLE HORIZONTAL MEASUREMENT (hfc): The measurement of foot-candles utilizing a direct reading, portable light meter mounted on a horizontal position.

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.

HEIGHT OF LUMINAIRE: The maximum height of a luminaire shall be measured from the ground directly below the centerline of the luminaire to the top of the pole or luminaire, whichever is higher.

LIGHT LOSS FACTOR (LLF): A factor applied to lamps which estimates the lumen output of a lamp sometime after installation. (For example, a lamp with an initial lumen rating of 10,000 which has a light loss factor of 0.8 is estimated to put out 8,000 lumens. A lamp with an initial lumen rating of 10,000, which has a light loss factor of 1.0, is estimated to put out 10,000 lumens.)

LUMINAIRE: A complete lighting unit consisting of a light source and all necessary mechanical, electrical, and decorative parts.

POST-CURFEW: The acceptable light levels during closed business hours.

PRE-CURFEW: The acceptable light levels during normal business hours.

SAG LENSES: A glass or plastic element used in luminaires that extends below the bottom edge of the luminaires.

UNIFORMITY RATIO: Describes the average level of illumination in relation to the lowest level of illumination for a given area.

C. Luminaire Design Factors:

- 1. The style of the light and light standard shall be consistent with the architectural style of the principal building.
- 2. Pathways, sidewalks, and trails shall be lighted with low level fixtures not to exceed eight feet (8') in pole height.
- 3. All building lighting fixtures for security or aesthetics shall be rated U0 per IES TM 15-11, with no light above a ninety degree (90°) plane. Floodlighting and wallpack lighting fixtures are discouraged, and if used, shall be rated U0 per IES TM 15-11, with no light above a ninety degree (90°) plane to prevent disability glare for drivers or pedestrians and light trespass beyond the property line.
- 4. All parking area lighting fixtures shall be rated U0 per IES TM 15-11, with no light above a ninety degree (90°) plane.
- 5. Poles supporting lights shall be no taller than twenty three feet (23') in a residential district, twenty five feet (25') in a commercial district, including automobile dealerships, a commercial part of a residential planned unit development, including automobile dealerships, or in office/business park districts, and thirty two feet (32') in any industrial district.

D. Standards And Requirements:

- 1. Lighting shall be provided in accordance with the standards of the Illuminating Engineering Society of North America (IESNA) as follows for all uses, with the exception of automotive dealerships.

IESNA Parking Lot Levels Of Activity	Maintained Horizontal Illuminance Standards (Foot-Candles)	
	Pre-Curfew (Average)	Post-Curfew (Average)
High - Includes high intensity business or industrial districts	5.0	2.0
Medium - Includes business zone districts; commercial mixed use and heavy industrial and/or manufacturing zone districts	2.5	1.5

Low - Includes neighborhood business districts; churches, schools and neighborhood recreational facilities; and light industrial zoning with modest nighttime uses or lighting requirements	1.0	0.5
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2. Lighting shall be provided in accordance with the standards of the Illuminating Engineering Society of North America (IESNA) as follows for automotive dealerships:

Areas Of Activity	Description	Maintained Horizontal Illuminance Standards (Foot-Candles)	
		Pre-Curfew (Average)	Post-Curfew (Average)
Feature display area	The first row of vehicles adjacent to a major/minor arterial, including the area in front of the vehicle up to the property line and behind the vehicle up to the merchandise area and/or the circulation area including drive aisles	80	25
Merchandise area	All other rows of vehicles on a lot used for general auto sales, including all areas surrounding the vehicle up to the defined circulation area including related drive aisles	35	5
Circulation area	Includes all portions of the lot dedicated to customer parking, employee parking, site entrance areas and inventory areas including related drive aisles	5	2
Security lighting, Monday - Sunday	The average amount of light found on site within each of the areas of activity, including the feature display area, merchandise area, and circulation area from 10:00 P.M. until sunrise	5	n/a

3. In determining the average foot-candle standard, all foot- candle measurements shall be taken at a height of three and one- half feet (3.5') above the ground at ten foot (10') increments throughout the areas of activity.
4. Sag lenses are prohibited from use on all site lighting luminaries. All new fixtures shall have flat lenses.
5. Light shields used to control light and reduce glare shall be made of nonreflective material.
6. Exterior lighting shall be designed at or below the following average maintained foot-candles at the property line:

Location	Maximum Foot-Candles At Property Line - Horizontal Measurement
Residential to residential	Horizontal fc: 0.10
Nonresidential to nonresidential	Horizontal fc: 2.0
Nonresidential to residential	Horizontal fc: 0.10
Intensity at adjoining right-of-way	Horizontal fc: 2.0

7. The light loss factor (LLF) shall be a minimum of 0.75 to a maximum of 0.8 for metal halide and high pressure sodium fixtures, and a minimum of 0.90 to a maximum of 0.95 for LED fixtures.

- E. Measuring Light Levels:
 1. Metering Equipment: Light levels of both direct and indirect light shall be measured in foot-candles with a direct reading, portable light meter. Readings shall be taken only after the cell has been exposed long enough to provide a constant reading.
 2. Method Of Measurement: Foot-candle horizontal measurements shall be taken at a height of three and one-half feet (3.5') above ground.
- F. Exceptions And Variances:

1. Because of their unique requirement for nighttime visibility and their limited hours of operation, ball diamonds, playing fields, tennis courts, and other outdoor recreational facilities shall be exempted from the general standards of this section. Lighting for outdoor recreational facilities shall be shielded to minimize light and glare from spilling onto adjacent residential properties. The maximum permitted illumination at adjoining residential property lines shall be one-half ($\frac{1}{2}$) foot-candle. The maximum permitted illumination at adjoining nonresidential property lines shall be two (2) foot-candles.

2. Luminaires used for public roadway illumination by the City or any other public transportation agency shall be exempt from the requirements of this section but may be subject to the regulations of Federal or State agencies or by intergovernmental agreements.

3. Decorative seasonal lighting shall be limited to a power rating of less than or equal to seventy five (75) watts.

4. Temporary emergency lighting used by police, firefighters, and other emergency services, as well as all vehicular luminaires shall be exempt.

5. Hazard warning lights that are required by local or Federal regulatory agencies shall be exempt.

6. Transportation facilities shall be exempt.

7. Public walkways shall be exempt.

8. When site characteristics are unique and the requirements of this section cannot be met, the Zoning Administrator has the authority to approve nonconforming lighting designs if the illumination levels and/or uniformity ratios are within twenty percent (20%) of the values set forth in this section. All other nonconforming designs shall be subject to approval of the Plan Commission/City Council through the variance procedure or by annexation agreement or development agreement.

G. Nonconforming Outdoor Lighting: Outdoor lighting in existence on the effective date of this section that does not comply with this section shall be exempt from the standards of this section and shall be considered legally nonconforming. Such fixtures, luminaires and poles may be repaired and maintained. However, the following restrictions will apply:

1. If greater than ten percent (10%) of existing luminaires are replaced during a 12-month period, they shall be replaced with new luminaires that comply photometrically to this section.

2. If greater than ten percent (10%) of existing fixtures utilizing sag lenses are replaced during a 12-month period, they shall be replaced with new flat lenses that comply photometrically to this section.

3. If at any time after the adoption of this section, lighting poles which do not comply with the height restrictions shown in this section are replaced, the replacement pole heights shall comply with the height restrictions set forth.

H. Exterior Lighting Photometric Plan Required:

1. A lighting photometric plan shall be required any time exterior lighting is proposed, or modified, that is associated with a residential use of greater density than a one- or two- family dwelling or with any commercial, office, industrial or other use. The photometric lighting plan shall be submitted with the site plan information as required.

2. The lighting photometric plan shall include a site plan indicating location of light fixtures and intensity of foot- candles on a ten foot (10') grid throughout the site, including across property lines, proposed luminaire schedule which indicates model numbers, an indication of which lights will be dimmed or turned off during post-curfew mode, light loss factors (LLF) for proposed fixtures and proposed mounting heights, and a summary table containing average foot-candles, minimum foot-candles, maximum foot-candles, uniformity ratio (average/minimum). The plan shall also contain a certification by the property owner or agent and the preparer of the plan that the exterior lighting depicted on the plan complies with the requirements of this section. Once the plan is approved, the exterior lighting of the property shall conform to the plan.

I. Manufacturer Cut Sheets Required:

1. Manufacturer cut sheets for each proposed lighting fixture shall be required in conjunction with the photometric plan, as described above. (Ord. 17-40-0, 11-8-2017)