

Ordinance #23-00448

LIGHTING

Section 1. Purpose, Applicability, and Exemptions.

(a) Purpose

Standards for controlling fixed and temporary outdoor lighting and glare are set forth to reduce annoyance and inconvenience to property owners, reduce traffic hazards to motorists, conserve energy and resources, and promote dark skies. These standards are intended to allow reasonable enjoyment of adjacent and nearby properties by their owners and occupants while requiring adequate levels of lighting for nonresidential areas, such as parking lots.

(b) Applicability

Except as described below, all outdoor lighting installed after the effective date of the adoption of this Ordinance shall comply with these requirements. This includes, but is not limited to, new lighting, replacement lighting, or any other lighting whether attached to structures, poles, the earth, or any other location, including lighting installed by any third party.

This Section applies to all development and properties within the City limits.

All private and public outdoor lighting shall be installed in conformance with the provisions of this Ordinance, applicable Electrical and Energy Codes, and applicable sections of the Building Code.

(c) Use of Outdoor Public Lighting

Public outdoor lighting shall only be installed when necessary for lighting within the public Right-of-Way or easement for the principal purpose of illuminating roads and highways, to address a public safety need, recreational need, and in conformance with this Ordinance.

(d) Exemptions

- (1) Lighting for public monuments and statuary.
- (2) Repairs to existing luminaires not exceeding 25 percent (25%) of total installed luminaires.
- (3) Temporary lighting for film, theatrical, television, performance areas and construction sites.
- (4) Underwater lighting in swimming pools and other water features.
- (5) Temporary lighting and seasonal lighting provided that individual lamps are less than 10 watts and 70 lumens.
- (6) Lighting that is only used under emergency conditions.

(7) Lighting that is required by Federal or State regulations.

(8) Lighting for flagpoles displaying the flags of the United States of America or the State of Texas.

(9) Internally illuminated street signs and street signal lights.

Section 2. Definitions.

Foot candle means a unit of light measurement equal to one lumen per square foot.

Full cut-off fixture means a fixture that is 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.

Light trespass means light emitted from fixtures design or installed in a manner that unreasonably causes light to fall on a property other than the one where the light is installed, in a motor vehicle driver's eyes, or upwards to the sky.

Lighting means any source of light that does not include natural light emitted from celestial objects or fire. The term includes any type of lighting, fixed or movable, designed or used for outdoor illumination of buildings or homes, including lighting for billboards, streetlights, canopies, gas-line station islands, searchlights, illuminated advertising signs, and area-type lighting.

Light pollution means any adverse effect of artificial light including such things as sky glow. See also *Light trespass*.

Lumen means the unit of measurement used to quantify the amount of light produced by a bulb or emitted from a fixture (as distinct from "watt," a measure of power consumption). For the purposes of this Article, the lumen output values shall be the initial lumen output ratings of a lamp as defined by the manufacturer, multiplied by the lamp efficiency. Lamp efficiency of 95 percent (95%) shall be used for all solid-state lamps and 80 percent (80%) for all other lamps unless an alternate efficiency rating is supplied by the manufacturer. The initial lumen rating associated with a given lamp is generally indicated on its packaging or may be obtained from the manufacturer.

Lumens per acre means the total number of lumens produced by all lamps utilized in outdoor lighting on a property divided by the number of acres, or part of an acre, with outdoor illumination on the property.

Outdoor lighting means the temporary or permanent lighting that is installed, located, or used in such a manner to cause light rays to shine outdoors. Nonresidential fixtures that are installed indoors that cause light to shine outside are considered outdoor lighting. Residential fixtures installed indoors generating more than 6,200 lumens that cause light to shine outside are also considered outdoor lighting.

Seasonal lighting means temporary lighting usually associated with specific celebrations that include the following types:

- (1) Festoon-type low-output lamps limited to small individual bulbs on a string.
- (2) Low-output lamps used to internally illuminate yard art.
- (3) Flood or spotlights producing less than 2,000 lumens each, whose light source is not visible from any other property, and which are used only as temporary lighting.

Temporary lighting means lighting intended for uses which by their nature are of limited duration. Examples include holiday decorations, construction projects, and community events.

Uplighting means lighting that is directed in such a manner as to project light rays above the horizontal plane running through the lowest point on the fixture where light is emitted.

Section 3. Nonconforming Existing Lighting.

(a) Allowance of Nonconforming Existing Lighting

All existing outdoor lighting legally installed before the enactment of this Ordinance, that does not conform with the standards specified by this Ordinance shall be considered nonconforming. Nonconforming outdoor lighting is allowed to remain until required to be replaced pursuant to the terms of this Ordinance.

(b) Expiration of Nonconforming Lighting Allowance

All public lighting shall be brought into conformance within five (5) years from the date of adoption of this Ordinance.

(c) Expiration of Nonconforming Lighting if Property Destroyed

If more than 50 percent (50%) of the total appraised value of a structure (as determined from the records of the Caldwell and Hays County Appraisal District), has been destroyed, the nonconforming status expires, and the structure's previously nonconforming outdoor lighting must be removed and may only be replaced with outdoor lighting that conforms with this Ordinance.

(d) Expiration of Nonconforming Lighting for Additions or Alterations

Nonresidential properties shall bring outdoor lighting into conformance when applying for a rezoning application, conditional use permit, subdivision approval, or a building permit for a major remodel or addition before issuance of a certificate of occupancy or final plat recordation.

(e) Expiration of Nonconformance Lighting after Abandonment

If a property with nonconforming lighting was abandoned for a period of six months or more, then all outdoor lighting shall be brought into compliance.

Section 4. Enforcement (Per Fee Schedule)

Section 5. Lighting Plan.

(a) Lighting Plan Required

All development or building permit applications that propose outdoor lighting shall submit a lighting plan. The lighting plan shall show how the proposed development will comply with the regulation within this Ordinance.

(b) Lighting Plan Application Submittal

An Application for a lighting plan shall be submitted and approved or denied by the City Planner and/or City Engineer as part of a Site Plan for site lighting and as part of the subdivision improvement plans for residential projects.

(1) Elements of a Lighting Plan

(A) A photometric analysis that shows the foot-candle levels on a grid including the property lines (only required for Nonresidential).

(B) The type of illuminating devices, fixtures, lamps, supports, reflectors, and other devices, and their respective location on the site and specific measurements in feet for the areas to be illuminated;

(C) Manufacturer's specification sheets of the illuminating devices, fixtures, lamps, supports, reflectors, and other devices (such as catalog cuts by manufacturers and drawings);

(D) Photometric data, such as furnished by manufacturers, or similar data showing the angle of cut-off or light emissions;

(E) A lumen calculation sheet to determine the lumens per net acre. It must include the square footage of the total area to be illuminated, the light fixture catalog descriptions or ordering number, lamp types (i.e., incandescent, low-pressure sodium, compact fluorescent, LED, etc.), the Kelvin rating for the lamp; the backlight, uplight, and glare rating for the selected fixture (if available); the number of fixtures or lamps (use the same unit corresponding to the unit used to determine how many lumens are produced), fixture or lamp initial lumens, the location from the edge of a canopy (if applicable), and mounting height of all existing and proposed lamps; and

(F) Nonresidential and multifamily projects shall also include a photometric plan that shows the lighting location, luminaires, and light output across the site and impacts to adjacent properties.

(G) Acknowledgment by the Applicant that they have reviewed the provisions of this Ordinance.

(2) The lighting plan shall show such information in sufficient detail to enable the City Planner and/or City Engineer to readily determine whether the lighting plan complies with the requirements within this Ordinance.

(A) If the City Planner and/or City Engineer cannot readily make this determination, then the Applicant shall be required to submit reports of tests performed and certified by a recognized testing laboratory. Such reports must provide sufficient evidence such that the City Planner and/or City Engineer is thereby able to ensure compliance.

Section 6. General Regulations.

(a) Maintenance

(1) Structure

Piers for light poles taller than eight (8) feet shall be designed by an engineer competent in structural engineering. Soil condition and wind loading shall be accounted for in the pier design.

(2) Quality and Appearance

All fixtures and supports shall be painted or otherwise treated to resist rust and corrosion and shall be maintained in an attractive condition and in a manner consistent with the surrounding architecture.

(3) Condition

All fixtures and lamps shall be maintained in a working, serviceable condition at all times.

(b) Prohibitions

(1) The installation of any mercury vapor fixture or lamp for use as outdoor lighting is prohibited.

(2) Luminaires rated at more than 3000 Kelvin (K) are prohibited.

(3) The installation of any barn-light style fixture for use as outdoor lighting is prohibited unless the fixture includes a full opaque reflector instead of the standard translucent lens.

(4) The operation of searchlights for advertising purposes is prohibited.

(5) Up-lighting is prohibited, including but not limited to lighting for buildings, signage, and landscaping.

(6) Light trespass is prohibited where light emitted from a fixture causes unreasonable interference with the neighboring property owner's use and enjoyment of their property or onto public right-of-way creating a nuisance.

(c) Street Lighting

Street lighting will be installed in conformance with this Ordinance and the American National Standard Institute ("ANSI") RP-8 Standard Practice for Roadway and Street Lighting and the American Association of State Highway and Transportation Officials ("AASHTO") Roadway Lighting Design Guide GL-7, as amended. Passive reflective roadway markings are encouraged.

(d) Lighting Units

(1) General

(A) Light sources shall be of a down-light, indirect, diffused, or shield type or so installed and maintained to reduce glare effect and consequent interference with the use of adjacent properties and boundary streets.

(B) Full cutoff fixtures shall be required where no light may be emitted above the fixture.

(2) Appearance and Height

Standards, poles, and fixtures shall be of a single color compatible with the architecture of the building(s) served. The height of such standards, poles, and fixtures, excluding those mounted on a building, shall not exceed the height of the highest roofline of the building(s) within the site, except as provided in 0 below and in Table 1. Mounting Heights for Lighting in Parking Areas.

(3) Type of Fixtures

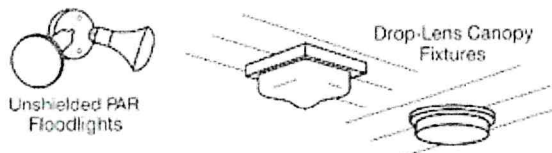
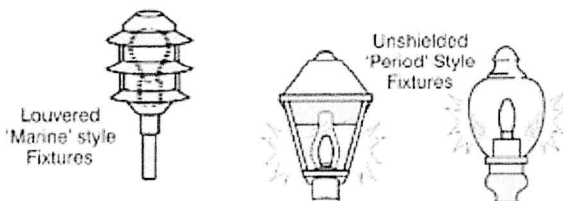
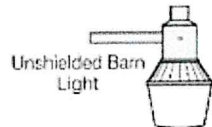
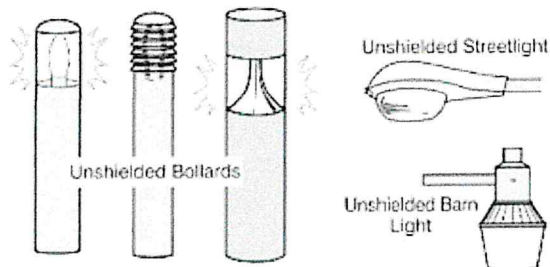
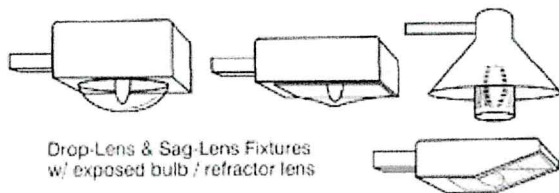
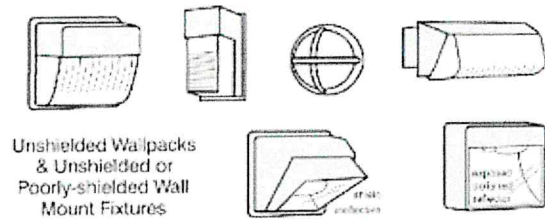
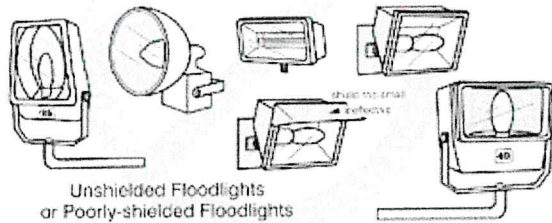
All lighting fixtures shall be restricted to full cutoff types (see Figure 1, **next page**).

Figure 1: Types of Fixtures

Examples of Acceptable / Unacceptable Lighting Fixtures

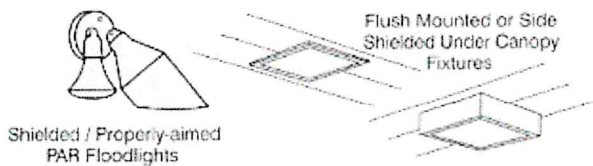
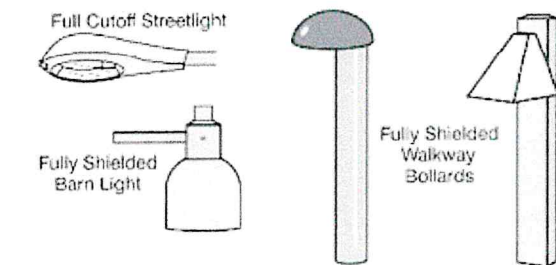
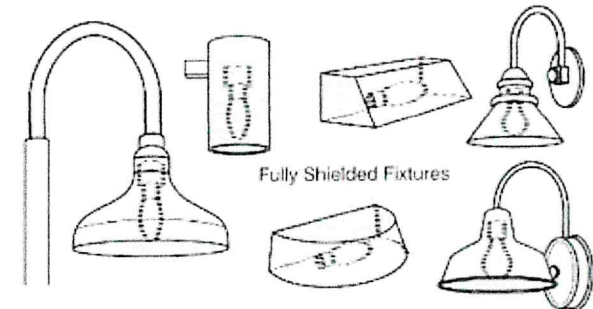
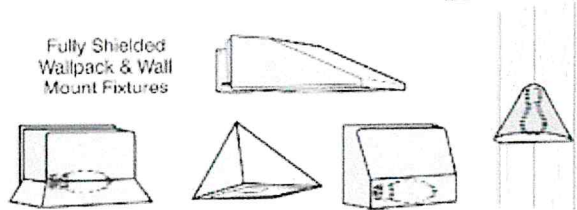
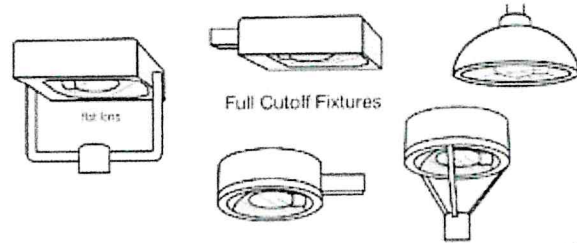
Unacceptable / Discouraged

Fixtures that produce glare and light trespass



Acceptable

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



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(e) Total Site Lumen Limit

(1) Residential

The aggregate total outdoor lighting on any residential property shall not exceed 17,500 lumens per net acre.

(2) Nonresidential

The aggregate total outdoor lighting on any nonresidential property shall not exceed 60,000 lumens per net acre unless approved by the City of Mustang Ridge City Council.

(f) Recreational Area Lighting

(1) Outdoor recreational lighting shall provide levels of illuminance consistent with the Illuminating Engineering Society of North America ("IESNA") "Recommended Practice for Sports and Recreational Area Lighting," (IESNA RP-6-01) or current successor recommendations; and shall not exceed a temperature of 4000 K.

(2) Height

Lighting for recreational uses (including athletic courts and fields) may employ standards, poles, and fixtures in excess of the heights prescribed in this Subsection 4 below.

(3) Living Screen Required

Where recreational uses are adjacent to residential uses regardless of separation by streets, and such recreational use is illuminated in such a manner as to produce a light intensity in excess of 0.5-foot candles at the property line of the residential use, a living screen shall be required in accordance with the following.

(A) A variety of trees that normally grow to or in excess of a height of forty (40) feet shall be provided.

(B) Trees shall be planted at least thirty (30) feet on center along the property line abutting the residential use.

(C) The tree variety shall maintain a crown width sufficient to form a continuous screen at a height between ten (10) feet and thirty (30) feet above grade.

(D) Such trees shall be a minimum of one-third (1/3) the required height at the time of planting.

(4) Recreational Lighting Shield Requirements

Outdoor recreational lighting shall be shielded to prevent light from shining up from the source and to prevent the source of the light from being visible from another property.

(5) Recreational Lighting Curfew

Recreational lighting must be shut off by 10:30 p.m. on Sunday through Thursday and 11:30 p.m. on Friday or Saturday nights.

(e) Nonresidential, Multi-Family, and Mixed-Use Regulations

(1) Site Lighting

All off-street parking areas for nonresidential and mixed uses that are used at night shall be illuminated beginning no later than thirty (30) minutes after sunset. Lighting may be constant or by motion sensor.

(2) Parking and Loading Lighting

(A) General Requirements:

(i) Nonresidential and public uses that abut Residential Zoning Districts shall be required to cease illumination of parking areas at the termination of hours of use. In case only a portion of a parking area is offered for use after dark, only that part is required to be illuminated in accordance with these standards. However, the portion offered for use shall be clearly designated.

(ii) Illumination of parking areas shall be sufficient to ensure the visibility of pedestrians and the safe movement of traffic within the site.

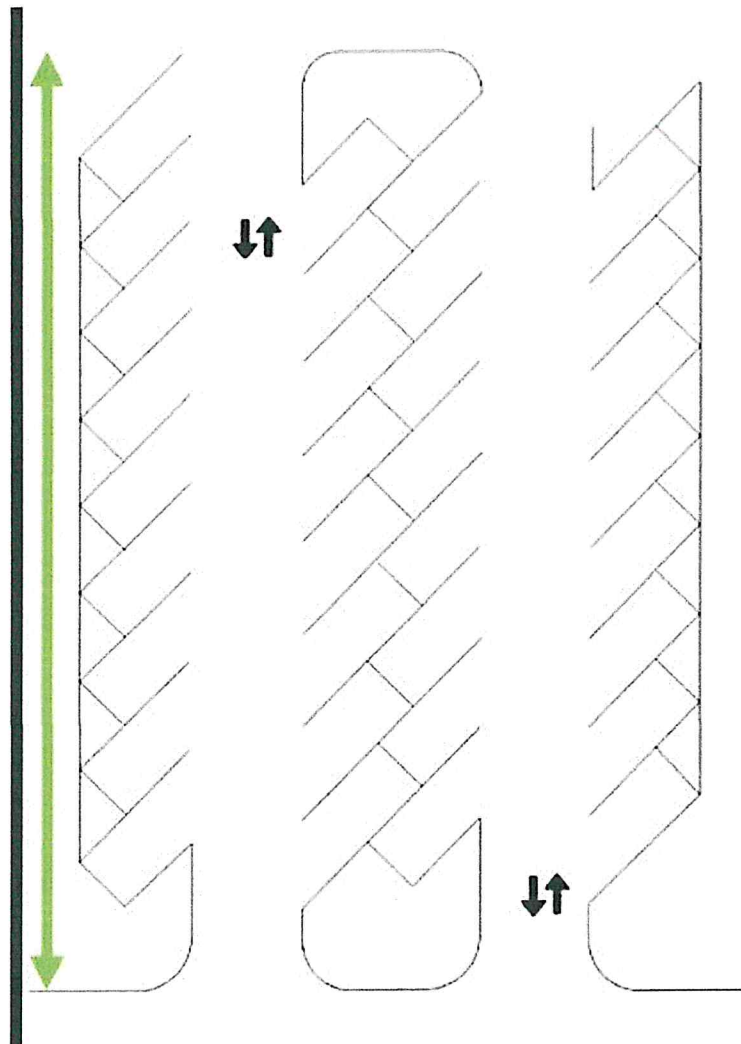
(3) Mounting Height

The mounting height of lighting fixtures shall not exceed the heights specified in Table 1. Mounting Heights for Lights in Parking Areas.

Table 1. Mounting Heights for Lighting in Parking Areas

Longest Dimension of Parking Area	Maximum Lighting Unit Mounting Height
Zero – 60 Feet	14 Feet
61 – 100 Feet	20 Feet
101 Feet or Greater	30 Feet

Figure 2. Longest Dimension of Parking Area



(4) Appearance

Standards, poles, and fixtures shall be of a single color, compatible with the architecture of the building.

(5) Lighting Control Requirements

(A) Automatic Switching Requirements

Controls shall be provided that automatically extinguish all outdoor lighting when sufficient daylight is available using a control device or system such as a photoelectric switch, astronomic time switch or equivalent functions from a programmable lighting controller, building automation system or lighting energy management system, all with battery or similar backup power or device. Automatic lighting controls are not required for lights under canopies or for tunnels, parking garages, garage entrances, and similar conditions.

(B) Automatic Lighting Reduction Requirements

Nonresidential outdoor lighting shall be reduced to 25 percent (25%) or less of the total outdoor light output one (1) hour after the business is closed. Lighting reductions are not required for any of the following:

- (i) With the exception of landscape lighting, lighting for residential properties including multiple residential properties not having common areas.
- (ii) When the outdoor lighting consists of only one (1) luminaire.
- (iii) Code required lighting for steps, stairs, walkways, and building entrances.
- (iv) When in the opinion of the Building Official, lighting levels must be maintained.
- (v) Motion-activated lighting.
- (vi) Lighting governed by special use permit in which times of operation are specifically identified.
- (vii) Businesses that operate on a 24-hour basis.

(e) Walkway Lighting

(1) Intensity

All outdoor pedestrian areas and uncovered walkways, separate from parking areas or buildings but essential to the nighttime operation of nonresidential uses within non-residential districts, shall be continually illuminated between sunset and sunrise.

The level of intensity of illumination, measured at the walkway surface, shall be a minimum average of 0.8 foot candles.

(2) Mounting Height

The mounting height of lighting fixtures shall not exceed twelve (12) feet.

(3) Type of Fixtures

Pole-mounted and wall-mounted fixtures mounted above six (6) feet shall be full cutoff.

(f) Accent and Security Lighting

(1) Accent Lighting

Accent lighting shall not exceed 600 lumens.

(A) Lighting shall be shielded to prevent light pollution or glare beyond the element intended for accent illumination.

(2) Security Lighting

(A) Pole-mounted and wall-mounted fixtures mounted above six (6) feet shall be of a down-light or cutoff type.

(B) If a rear yard security light is mounted higher than ten (10) feet, it shall be directed away from adjacent properties.

(g) Outdoor Sign Lighting

Outdoor internally illuminated signs shall conform to the City of Mustang Ridge sign regulations.

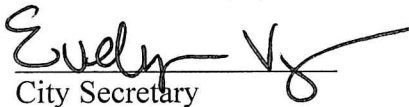
PASSED by the City Council of Mustang Ridge, Texas, on the 13th of July, 2023



Mayor David Bunn



ATTEST:



City Secretary