

## Section 15 Lighting Standards

### 15.1 Introduction

This section does not cover public street lighting. For public street lighting refer to Section 10. Additionally, this section applies only to outdoor lighting; indoor lighting is not restricted except by the City building regulations.

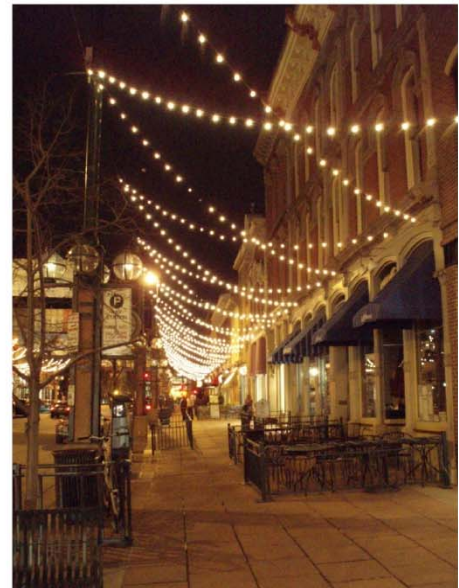
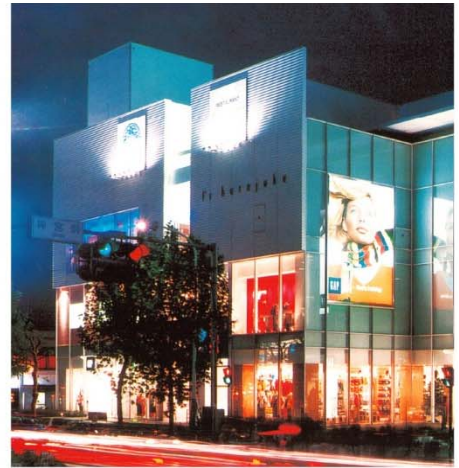
Mesa Proving Grounds lighting standards are created to ensure proper illumination is achieved across the community. Lighting is one of the many urban characteristics that Mesa Proving Grounds will be known for. The goal of lighting is not to provide a uniform blanket of nighttime illumination across the Property, rather the character of the lighting will vary greatly across the community and will be instrumental in bringing out the individual character of the neighborhoods and districts after dark. Illumination in Mesa Proving Grounds will vary from romantic, dimly lighted, turn of the century neighborhoods to vibrant, energizing, entertainment districts. A one size fits all applications approach will not successfully create the desired diversity of character. Refer to *Exhibit 15.1* - Lighting Character for the lighting character depicted for mixed-use, urban environments. Refer to *Exhibit 15.2* - Lighting Character for the lighting character depicted for more passive, residential settings.

The urban vision for lighting at Mesa Proving Grounds includes:

- Allowance of alternative light details for private streets while not compromising light levels
- Allowance of up-lighting of buildings and landscape that promote pedestrian movement and quality light design - ambient, reflective light and visual accent and interest
- Provide appropriate light level intensities for each LUG, including allowance of higher light levels within the more urban LUGs and less intense lighting within the less intense LUGs
- Varied intensity and methods to complement each LUG
- Vibrant, colorful and powerful lighting to add to the energy of the core in LUG GU and LUG UC
- Ambient subtle lighting that is within LUG V
- Custom fixtures permitted to complement the character of the area and sized appropriately for the setting
- Wide variety of bulb types permitted for color and energy efficiency
- Various mountings permitted
  - Pole
  - Wire strung
  - Building mounted
- Lighting of landscape and buildings as well as general area lighting
  - Up-lighting
  - Wraps and outlines
  - Down-lighting
  - Wall wash
- Artistic lighting for dramatic effect
- Lighting for recreation uses for night-time play

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## Exhibit 15.1 - Lighting Character



Note: photos are intended to be representative of the character and quality of the types of lighting within Mesa Proving Grounds and are not intended to express specific design details, colors or materials.



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Exhibit 15.2 - Lighting Character



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## 15.2 General

- A. Private property lighting and street lighting are to be designed to minimize glare and light trespass into residential properties adjacent to the Property.
- B. Some areas of the Property may be unlit or have reduced lighting levels.
- C. General area lighting may be created not only by direct illumination but also by the use of reflected light used to illuminate buildings, walls, artwork, landscape and hardscape.
- D. Thematic poles and fixtures may be used that complement the architecture, landscape or district design. More detail about thematic character for street furniture may be provided and approved as part of the DUDG process.
- E. Murals may be illuminated as artwork.
- F. Signage may be illuminated per Section 16.
- G. Flags, pennants, or insignia of any nation, state, county, city, or other political unit, or any church or religious organization may be lighted from ground or pole mounted fixtures per Illuminating Engineering Society ("IES") recommendations.
- H. All exterior walkways, parks, parking lots, sales areas, or similar facilities which are intended to be occupied by the public during hours of darkness shall be provided with appropriate levels of illumination per recommended guidelines by IES standards for the use intended, during hours of normal occupation.
- I. For light spillage, the light level at the boundary of the Property, measured thirty-six inches (36") above ground level, shall be not more than 0.5 foot candles (5 Lux) above ambient light level. Where the Property is adjacent to a public street, the property line may be considered to be the centerline of the street. Light spillage between parcels internal to the Property shall not be restricted.
- J. Visibility of fixtures or the lamps contained within them shall not be restricted except at the boundary of the Property.
- K. Fixtures used to illuminate buildings or structures are exempt from any maximum wattage for mounting height requirements.
- L. There shall be no limitation to the hours of operation on illumination for outdoor advertising in the LUGs UC, R, GU, or C except as may be specified as a condition of approval for a comprehensive sign plan.
- M. For landscape and architectural features, energy efficient alternatives with equivalent lumen output to 150W (or less) incandescent fixtures shall be permitted to be unshielded where used for illumination of landscape, hardscape, structures or architectural elements.
- N. For indirect area lighting indirect lighting fixtures that direct light upwards onto a reflector for down-lighting applications shall be permitted where fixtures are specifically designed with cutoff optics to minimize light pollution.
- O. For LED lighting, fiber optic, and new technologies, outdoor lighting fixtures that utilize new technologies such as Light Emitting Diodes (LED), Electro-luminescence, and fiber optics shall be permitted to be unshielded where the fixture lumen output is equal to or less than a 150W incandescent fixture. Higher lumen fixtures are to be shielded where used for general area illumination.

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- P. For architectural façade illumination, lighting fixtures shall be permitted to illuminate architectural facades and building elements by means of unshielded, up-lighting techniques where photometric analysis indicates that no more than ten percent (10%) of the light output of the fixture is directed into the night sky. Up-lights shall incorporate louvers or be located to minimize glare to pedestrian and vehicle traffic.
- Q. The lighting of tensile fabric or similar structures is permitted. Such lighting may be up-lighting, and may use the canopy, fabric or structure to achieve the shielding requirements.
- R. Cable mounted lighting strung over streets, patios, paths or other outdoor areas for ambient effect is permitted.
- S. Holiday or seasonal celebration lighting of all types is permitted so long as it does not cause or create a public nuisance.
- T. Glass tubes filled with neon, argon or krypton without shielding or filtering are anticipated in various LUGs throughout the community, but require an administrative approval by the Planning Director unless approved as signage or building elevations as determined during site plan review. The Planning Director's review shall be based upon the following criteria, and any other guidelines as delineated by the applicable Development Unit Design Guidelines:
1. Constitutes a design component of the overall building architecture; and
  2. Is integrated into the primary physical elements of the building or development and is harmonious with the architectural style of the structure(s); and
  3. Serves only for the purpose of embellishing the nighttime architecture of the building and does not portray an advertising message; and
  4. Is compatible with the land use and architecture of adjacent developments.
  5. Any approval by the Planning Director for exposed building illumination requires that :
    - a. If any component of the lighting becomes nonfunctional, neither the entire lighting system nor any portion thereof may be illuminated until the entire lighting system is repaired. If the system remains nonfunctional and nonilluminated for more than thirty (30) consecutive days, the approval by the Board may be revoked by direction of the Superintendent of Building Inspections after forty-eight (48) hours' prior notice. The revocation of the approval may be appealed to the City Council in accordance with the Administration and Procedures chapter of this Ordinance.
    - b. The illumination complies with the outdoor light control/provisions of the Mesa City Code, as amended by this Community Plan, and as evidenced by submittal of complete design plans and specifications.
- U. Nothing in this Section shall be construed as an alteration to any State regulations regarding lighting.
- V. Nothing in this Section shall be construed as an alteration to the public street lighting standards. For standards relating to public street lighting refer to Section 10.

### 15.3 Parking Lot Lighting

- A. Light Standard Heights. Maximum standard height shall be appropriate to the surrounding context.
- B. Where appropriate house side shielding may be provided on all light standards adjacent to residential development.
- C. Building mounted lights shall be placed at appropriate heights and where appropriate incorporated into the building architecture.

- D. Lighting is permitted in covered parking areas. The lighting may be up-lighting, and may use the canopy to achieve the shielding requirements.

## 15.4 Open Space Lighting

- A. Active recreation and sports fields may be constructed in various forms. The Master Developer will have the exclusive right to determine the appropriate location(s), programming and sports field lighting requirements, subject to the following conditions:
- B. Sports field lights shall be located at a minimum of the mounting height distance from single-family residential homes;
- C. Sports field lighting systems shall be designed to minimize glare and spillover where possible;
- D. Sports field lighting may be mounted on adjacent structures;
- E. Sports field light poles may be used to co-locate telecommunication towers;
- F. Passive recreation areas shall be illuminated if intended for nighttime use;
- G. Retention areas and/or open space not intended for nighttime use shall not require illumination.

## 15.5 Signage Lighting

- A. Lighting installed to illuminate outdoor signage shall comply with Section 16.

## 15.6 Exempt Lighting

- A. The following types of lights are exempt from the standards in this section:
  1. Lighting used for single-family homes and accessory buildings, provided no measurable light spills over to adjacent property.
  2. Lighting specifically directed at a flag may be unshielded and unfiltered provided that the beam spread and fixtures are designed per IES recommendations.
  3. Lighting of baseball fields, softball fields, football fields, soccer fields, golf courses and golf driving ranges, and other similar sporting and recreational venues, shall be allowed to exceed any maximum illumination limitation until 11:00 p.m. No outdoor recreational facility, public or private, shall be illuminated after 11:00 p.m. except to conclude any recreational or sporting event or other activity conducted at a ball park, outdoor amphitheater, arena, or similar facility in progress prior to 11:00 p.m.
  4. Fossil fuel light produced directly or indirectly by the combustion of natural gas or other utility-type fossil fuels is exempt from the provisions of this section.
  5. Ornamental lighting installed for holiday or seasonal celebrations is exempt from the provisions of this section and is a permitted lighting installation.
  6. Lighting necessary for construction or emergencies is exempt from the provisions of this section, provided said lighting is temporary and is discontinued immediately upon completion of the construction work or abatement of the emergency necessitating said lighting.

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7. Searchlights or similar lighting devices for advertising purposes are allowed until 11:00 pm with a Special Events Permit.
8. Marquee lighting.

B. Temporary exemptions to the requirements of this section may be granted by the Planning Director upon finding that the exemption does not violate any provision of the LUGs or General Development Standards, and it would not pose a hardship on any adjacent property or use, as determined by the Planning Director. Such requests shall be submitted in writing to the Planning Director and include the following information:

1. Specific exemption(s) requested;
2. Type and use of exterior light involved;
3. Duration of time for requested exemption;
4. Type of lamp and foot-candles;
5. Total wattage of lamp(s);
6. Proposed location of exterior light.