

# A16.4 Outdoor Lighting Standards

## GENERAL

Designers shall verify that all applicable portions of these standards are incorporated into the project's design, drawings, specifications and final construction. Requests for variances from these standards shall be submitted in writing to the DCM Project Manager, using the KU Standards Variance Request Form found in [Appendix A1.1](#), for review and written approval or rejection as indicated on the form.

## OBJECTIVE OF STANDARD

- To acquaint Designers and other interested parties with the University's outdoor lighting standards.
- To insure consistent design, drawings, specifications and installation of outdoor lighting systems on the main campus.

## BACKGROUND

The University has an ongoing program to upgrade the campus site lighting, which has been funded in large part by student fees. This program was established to improve the overall safety of the campus for students and other pedestrians after-dark.

Early in the year 2000, the University learned that the outdoor lighting fixture that up to then had been the KU standard was to be discontinued in production. University personnel investigated all of the known fixtures that were potentially equivalent replacements for this fixture, examining their construction and testing their lighting performance. It was concluded that only the Kim Lighting, Inc. fixture, as noted elsewhere herein, meets the University's needs.

## GENERAL

Outdoor lighting systems shall be designed to provide the illumination levels indicated in the chart at the end of this section, using the following University-standard poles and luminaires.

**Pedestrian Walkways, Bicycle Paths & Bike Rack Areas:** 20' poles with 175-watt metal halide luminaires.

**Roadways & Parking Lots:** 30' poles with 400-watt metal halide luminaires.

**Light Pole Bases:** Provide cast-in-place concrete light pole bases, per KU's standard details in Appendix A16.5, Light Pole Base Detail. Designers shall include these details in the construction documents for all projects that include outdoor lighting.

- ❑ Note that pole bases are NOT to be less than 30" diameter, nor less than 6' embedded depth for 20' high poles, nor less than 8' embedded depth for 30' light poles. Exceptions will only be allowed if structural engineering calculations are provided that confirm that lesser dimensions will meet all required wind, snow and ice loading conditions for the applicable soil conditions.

**Wall-Mounted Site Lighting:** Designers are NOT to use "wall packs" or wall-mounted luminaires for general site lighting, as they are a source of glare and uneven lighting.

**Lighting Bollards:** Designers are discouraged from using lighting bollards, which have proven to be more difficult to maintain, unless site conditions would make them more effective than pole lighting and their use has been specifically approved by DCM.

## **SPECIFICATIONS**

All exterior site lighting fixtures shall use metal halide lighting source, with dark bronze finish on light poles, support arms and luminaires.

**Light Poles:** Round tapered aluminum poles with cast aluminum tenons, as manufactured by Lexington Standard Corporation.

**Luminaires:** Arm-mount, square body luminaries with optional round slip-fitter and double fusing; "Matrix" series, as manufactured by Kim Lighting, Inc.

### ILLUMINATION LEVELS

Location	Min. Footcandle Level	Ave. Footcandle Level
Pedestrian Walkways	1.0	--
Bicycle Paths	1.0	--
Bike Racks	1.0	--
Roadways	0.25	1.0 to 1.5
Parking Lots	0.40	1.5 to 2.0
Building Entrances	5.0	1.5 times floodlighting design levels if the building has floodlighting

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