
265600 EXTERIOR LIGHTING

Part 1 – GENERAL

1.1 Description

A. This section details the guidelines and expectations for the design and installation of all exterior lighting on Johns Hopkins University Homewood Campus. Project conditions and requirements vary, thus precluding the absolute adherence to the items identified herein in all cases. However, unless there is adequate written justification and approval from the JHFRE Engineering and Energy Department, it is expected that these guidelines will govern the design and specifications.

1.2 Submittals

N/A

1.3 Quality Assurance

A. All work must meet NEC standards and materials must be UL Listed.

B. All exterior lighting shall be fed from an emergency power source.

1.4 Delivery and storage

A. Material deliveries and storage areas to be approved by Owner.

B. Material storage to comply with manufacturer's recommendations.

Part 2 – PRODUCTS

2.1 All exterior lights will be LED, metal halide or compact fluorescent. Metal halide fixtures currently are JHU's preference. Use of LED's is encouraged but must be proven to be beneficial and approved by JHFRE.

2.2 Use glass lenses on wall pack fixtures.

2.3 Roadway, Parking and Walkway Lighting:

A. Roadway and Open Parking Area Lighting: Match nearby existing lights. Verification of JHU ownership and specific approval from JHFRE required.



1. Luminaire: TBD

2. Pole: TBD

3. Concrete Base: Concrete bases shall utilize rebar reinforcement and embedded anchor bolts, and shall be designed to support the pole and luminaire assembly utilizing local wind load parameters and assembly effective projected area (EPA). Above grade concrete shall be smooth rubbed finish and free of honeycombing, fins, exposed aggregates or other defects.

B. Walkway Lighting:



1. Homewood Campus: Match nearby existing lights. Approval from JHFRE required.

a. Fixture/Lamp: Spring City SPRI LP-28165 Bryant Park LED Luminaire

b. Pole: Washington 10'6" Lamp Post

c. Light poles shall be capable of holding side mount banners.

d. Concrete Base: Concrete bases shall utilize rebar reinforcement and embedded anchor bolts and shall be designed to support the pole and luminaire assembly utilizing local wind load parameters and assembly effective projected area (EPA). All above grade concrete shall be free of honeycombing, fins, exposed aggregates or other defects.

Part 3 – EXECUTION

3.1 Lighting Levels:

A. Roadway and Open Parking Area Lighting

1. Illumination Levels: Roadway and open parking area illumination levels shall comply with the following tables or the latest IES recommendations whichever is more stringent.

ROADWAYS		
	AVG MAINTAINED MINIMUM OVER TIME, (FOOT CANDLES) FC	Area AVG : Area MIN
ROADWAY ILLUMINATION @ GRADE	1.50	3 : 1

EXTERIOR OPEN PARKING FACILITIES			
	AVG MAINTAINED MINIMUM OVER TIME, FC	AVG / MIN	MAX / MIN
GENERAL PARKING AND PEDESTRIAN AREAS	1.0	4 : 1	7 : 1

B. Walkway Lighting

1. Illumination Levels: Walkway area illumination levels shall comply with the following table or the latest IES recommendations, whichever is more stringent. Walkway calculation areas (distant from roadways) shall include a 6' area bordering the walk on each side, illuminated to a level of one-third the levels suggested for walkways for additional pedestrian safety.

WALKWAY CLASSIFICATION	AVG MAINTAINED OVER TIME, FC (MIN) @ GRADE	AVG VERTICAL FC @ 6FT ABOVE GRADE	AVG / MIN
WALKWAYS	1.0	1.5	4 : 1

3.2 Where two or more poles are installed supporting metal halide lights, they will be controlled by an electrically held contactor. The contactor will be controlled by a single photo eye. The control circuit for the contactor will have a bypass switch located adjacent to the contactor.

3.3 Bollard lights shall be considered for areas where low lighting is needed.

3.4 Landscape lighting shall be considered around buildings.

3.5 Flood lights are discouraged because the light output is overpowering and washout any landscape lighting.

3.6 Light Pollution:

A. The maximum lighting level 20' past the edge of JHU property shall be 0.1 FC.

B. All luminaires shall have full cut-off.

3.7 Altering of the bases by drilling or any other method for the purpose of enlarging the holes is not permitted.

3.8 Every end of line light base will have an extra conduit stubbed out and capped.

3.9 Junction boxes shall not be placed in the ground.

3.10 All conduits in the base shall be PVC.

3.11 Unless otherwise noted, provide centralized photocell control, timeclock control, or central lighting system control for all exterior building-mounted lighting in lieu of each luminaire having an integral photocell.

3.12 BAS Integration

A. Designer shall work with JHU Facilities Shops to confirm project requirements for interface with building BAS.

B. Networked lighting control systems shall be BACnet compatible for integration with BAS system (if applicable).

C. Preferred lighting controls manufacturer: Lutron Athena