

SECTION 26 56 00
EXTERIOR LIGHTING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
1. Exterior luminaires with lamps and ballasts.
 2. Photocell controls.
- B. Related Sections include the following:
1. Section 26 06 50.16 - Lighting Fixture Schedule.
 2. Section 26 09 43 – Network Lighting Controls

1.3 DEFINITIONS

- A. CRI: Color-rendering index.
- B. Luminaire: Complete lighting fixture, including ballast housing if provided.

1.4 SUBMITTALS

- A. Product Data: For each luminaire, and support component, arranged in order of lighting unit designation. Include data on features, accessories, finishes, and the following:
1. Physical description of luminaire, including materials, dimensions, effective projected area, and verification of indicated parameters.
 2. Details of attaching luminaires and accessories.
 3. Details of installation and construction.
 4. Luminaire materials.
 5. Ballasts, including energy-efficiency data.
 6. Lamps, including life, output, and energy-efficiency data.
 7. Materials, dimensions, and finishes of poles.
 8. Means of attaching luminaires to supports, and indication that attachment is suitable for components involved.

1.5 QUALITY ASSURANCE

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
- B. Comply with IEEE C2, "National Electrical Safety Code."
- C. Comply with NFPA 70.

- D. LED luminaires shall be IES LM-80 certified.

1.6 WARRANTY

- A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace products that fail in materials or workmanship; that corrode; or that fade, stain, perforate, erode, or chalk due to effects of weather or solar radiation within specified warranty period. Manufacturer may exclude lightning damage, hail damage, vandalism, abuse, or unauthorized repairs or alterations from special warranty coverage.
- B. Warranty Period for Luminaires: one year from date of Substantial Completion.
- C. Warranty Period for Lamps: Replace lamps and fuses that fail within 1 month from date of Substantial Completion.

1.7 EXTRA MATERIALS

- A. Furnish extra materials described below that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
 1. Lamps: 12 of each type and rating installed.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. In Lighting Fixture Schedule in Section 26 06 50.16 provide products as specified.

2.2 LUMINAIRES, GENERAL REQUIREMENTS

- A. Luminaires shall comply with UL 1598 and be listed and labeled for installation in wet locations by an NRTL acceptable to authorities having jurisdiction.
- B. Metal Parts: Free of burrs and sharp corners and edges.
- C. Housings: Rigidly formed, weather- and light-tight enclosures that will not warp, sag, or deform in use. Provide filter/breather for enclosed luminaires.
- D. Exposed Hardware Material: Stainless steel.
- E. Lenses and Refractors Gaskets: Use heat- and aging-resistant resilient gaskets to seal and cushion lenses and refractors in luminaire doors.

2.3 BALLASTS FOR HIGH INTENSITY DISCHARGE LAMPS

- A. Metal Halide Ballasts: Pulse start core and coil magnetic ballasts.
 1. Power Factor: 90 percent, minimum
 2. Starting Temperature: -20 F
 3. Insulation Class: H
 4. ANSI Code:
 - a. M102 for 150 watt lamps

2.4 LAMPS

- A. Manufacturers
 - 1. *Phillips*
 - 2. Substitutions: None Permitted
- B. HID Lamps:
 - 1. Metal Halide
 - a. Type: Pulse Start, clear
 - b. Watts: As indicated in the Lighting Fixture Schedule

2.5 PHOTOCELLS

- A. Manufacturers
 - 1. *Tork* Model 2101/73866.
 - 2. Substitutions: Or Approved Equal.
- B. Description: Photocell control UL listed for wet locations with STSP contact. Photocell shall be provided with bracket for wall mounting.
 - 1. Voltage: 120 VAC
 - 2. Operating Range: ON-1-5FC; OFF-3-15FC

PART 3 - EXECUTION

3.1 LUMINAIRE INSTALLATION

- A. Install lamps in each luminaire.
- B. Fasten luminaire to indicated structural supports.
- C. Use fastening methods and materials selected to resist seismic forces defined for the application and approved by manufacturer.

3.2 LIGHTING CONTROL INSTALLATION

- A. Install photocell on north face of building at height as directed by the Engineer. Wire photocell to Network Lighting Control Panel LC1 as specified under section 26 09 43.

3.3 GROUNDING

- A. Ground metal luminaires according to Section 26 05 26 "Grounding".

3.4 FIELD QUALITY CONTROL

- A. Inspect each installed fixture for damage. Replace damaged fixtures and components.
- B. Illumination Observations: Verify normal operation of lighting units after installing luminaires and energizing circuits with normal power source.

END OF SECTION 26 56 00