

SECTION 16512
HIGH INTENSITY DISCHARGE LIGHTING (HID)

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawing and general provisions of the Contract, including General and Supplementary Conditions apply to this Section.

1.2 SUMMARY

- A. This Section includes the following lighting systems:
 - 1. HID Luminaires.
 - 2. Luminaire Accessories.
 - 3. Ballasts.
 - 4. Lamps.
- B. Related Sections: The following Sections contain requirements that relate to this section:
 - 1. Division 16120, "Building Wire and Cable, 600V and Below".
 - 2. Division 16145, "Lighting Control Devices".

1.3 REFERENCES

- A. American National Standards Institute (ANSI):
 - 1. ANSI C82.4-85, Ballasts for High-Intensity-Discharge and Low-Pressure Sodium Lamps (Multiple Supply Type).
- B. National Fire Protection Association (NFPA):
 - 1. NFPA 70-99, National Electrical Code, NEC.
- C. Underwriter's Laboratories, Inc. (UL):
 - 1. Electrical Construction Materials Directories, Latest Editions.

1.4 SUBMITTALS

- A. Submit each item in this Section according to the conditions of the Contract and General and Supplementary Conditions.
 - 1. Products furnished from Listed Manufacturers are pre-approved but still require submittal.
 - 2. Submit Proposed Substitutions for approval in accordance with General and Supplementary Conditions.

1.5 QUALITY ASSURANCE

- A. UL Listing: Furnish Fixtures, Ballasts, Trim and Accessories listed by UL and classified as suitable for the purpose specified.
- B. Coordination: Coordinate layout, modify fixture locations, and installation of Light Fixtures with Mechanical, Plumbing, Architectural, and Structural elements to provide an unobstructed lighting system.

1.6 DELIVERY, STORAGE AND HANDLING

- A. Deliver equipment as a Factory Assembled Module with protective shipping containers, crating, and packaging.
- B. Store equipment in a clean and dry storage, out of the elements and not exposed to condensing humidity.
- C. Handle the Fixtures carefully while in the original shipping cartons. When ready to install the Fixture handle so as to prevent degradation of the reflecting surfaces and exposed surfaces of the Fixtures with dirt or grease.

1.7 SEQUENCING AND SCHEDULING

- A. Coordinate locations for Lighting Fixture Supports with other overhead systems.

PART 2 - PRODUCTS

2.1 LUMINARIES AND ACCESSORIES

- A. Furnish and install HID fixtures as indicated on the drawings.
- B. Acceptable Manufacturers:
 - 1. General Electric.
 - 2. Holophane.
 - 3. Abolite
 - 4. Crouse-Hinds.
 - 5. Prescolite.
 - 6. Daybrite.
 - 7. Spaulding Lighting.
 - 8. Lithonia.
 - 9. And as listed on drawings.

2.2 BALLASTS

- A. Acceptable Manufacturers:
 - 1. General Electric.
 - 2. Holophane.
 - 3. Westinghouse.
 - 4. Crouse-Hinds.
 - 5. Prescolite.
 - 6. Daybrite.
 - 7. Spaulding Lighting.
 - 8. And as listed on the drawings.
- B. Description: ANSI C82.4; UL listed; energy-saving-type ballast, prewired ballast to lamp socket and terminal board.
 - 1. High-power factor, Class P, Certified Ballast Manufacturers.
 - 2. Protection provided by built-in, thermally actuated, automatic-reclosing device.
 - 3. Rating: Based on lamp size.
 - 4. Voltage Rating: As specified.

2.3 LAMPS

- A. High Pressure Sodium and Metal Halide:
 - 1. General Electric.
 - 2. Sylvania/Osram.

3. Philips

- B. Provide lamp type shown for each fixture.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine structure and location for fixtures to determine suitability for installation that is free from potential damage from other construction activities.
- B. Examine each fixture to determine suitability for lamps specified.

3.2 INSTALLATION

- A. Install lighting fixtures in accordance with manufacturer's instructions and in compliance with Article 410 of the NEC.
- B. Install surface-mounted luminaires plumb, and adjust to align with building lines and with each other. Secure to prohibit movement.
- C. Install wall-mounted luminaires at heights indicated on drawings.
- D. Install accessories furnished with each luminaire.
- E. Connect luminaires to branch circuits as specified on the drawings.
- F. Bond products and metal accessories to branch circuit equipment grounding conductor.
- G. Install specified lamps in each luminaire.

3.3 FIELD QUALITY CONTROL

- A. Operate each luminaire after installation and connection. Verify proper connection and operation.
- B. Verify proper operation of all local switching equipment.
- C. Verify branch circuit conductors connecting inside of fixtures are of the type specified.

3.4 ADJUSTING

- A. Adjust work as required for proper alignment and appearance.
- B. Relamp luminaires, which have failed lamps, at completion of job.
- C. Adjust reflector brackets and lamp socket positions for photometric characteristics shown.

3.5 CLEANING

- A. Clean electrical parts to remove conductive and deleterious materials.
- B. Remove dirt and debris from enclosure.
- C. Clean photometric control surfaces as recommended by manufacturer.

D. Clean finishes and touch up damage.

3.6 DEMONSTRATION

A. Provide a minimum 2 hours demonstration of luminaire operation.

END OF SECTION 16512