

## SECTION 086200 - UNIT SKYLIGHTS

## 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. Section Includes:

- 1. Unit skylights mounted on prefabricated curbs.

- B. Related Requirements:

## 1.3 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site .

## 1.4 ACTION SUBMITTALS

- A. Product Data: For each type of unit skylight.

- 1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for unit skylights.

- B. Shop Drawings: For unit skylight work.

- 1. Include plans, elevations, sections, details, and connections to supporting structure and other adjoining work.

- C. Aluminum Finish Samples: For each type of exposed finish required, in a representative section of each unit skylight in manufacturer's standard size.

- D. Glazing Samples: For each color and finish of glazing indicated, 12 inches square and of same thickness indicated for the final Work.

## 1.5 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For qualified and .

- B. Sample Warranty: For special warranty.

## 1.6 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For unit skylights to include in maintenance manuals.

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## 1.7 WARRANTY

- A. Special Warranty: Manufacturer agrees to repair or replace components of unit skylights that fail in materials or workmanship within specified warranty period.
1. Failures include, but are not limited to, the following:
    - a. Uncontrolled water leakage.
    - b. Deterioration of metals, metal finishes, and other materials beyond normal weathering.
    - c. Yellowing of acrylic glazing.
    - d. Breakage of polycarbonate glazing.
    - e. Deterioration of insulating-glass hermetic seal.
  2. Warranty Period: Five years from date of Substantial Completion.

## PART 2 - PRODUCTS

## 2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
1. Wasco Products, Inc.

## 2.2 PERFORMANCE REQUIREMENTS

- A. Unit Skylight Standard: Comply with AAMA/WDMA/CSA 101/I.S.2/A440 for definitions and minimum standards of performance, materials, components, accessories, and fabrication unless more stringent requirements are indicated.
1. Performance Class and Grade: Class CW-PG 40 .
  2. Certification: AAMA-, WDMA-, or CSA-certified unit skylights with label attached to each.
- B. Thermal Transmittance: NFRC 100 maximum U-factor of 0.50 Btu/sq. ft. x h x deg F .
- C. Solar Heat-Gain Coefficient (SHGC): NFRC 200 maximum SHGC of 0.40 .
- D. Windborne-Debris-Impact Resistance: Provide unit skylights that pass basic -protection testing requirements in ASTM E 1996 for Wind Zone 1 when tested according to ASTM E 1886. Test specimens shall be no smaller in width and length than unit skylights indicated for use on Project and shall be installed in same manner as unit skylights indicated for use on Project.
1. Small-Missile Test: For unit skylights located more than 30 feet above grade.
- E. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

## 2.3 UNIT SKYLIGHTS

- A. General: Provide factory-assembled unit skylights that include glazing, extruded-aluminum glazing retainers, gaskets, and inner frames and that are capable of withstanding performance requirements indicated.
- B. Unit Shape and Size: As indicated .
- C. Polycarbonate Glazing: Thermoformable, extruded monolithic sheets, UV resistant, burglar-resistance rated according to UL 972, and with average impact strength of 12 to 16 ft-lb/in. of width when tested according to ASTM D 256, Test Method A (Izod).

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1. Double-Glazing Profile: Dome, 25 percent rise .
    - a. Thicknesses: Not less than thicknesses required to exceed performance requirements .
    - b. Outer Glazing Color: As selected by Architect from full range of industry colors .
  2. Self-Ignition Temperature: 650 deg F or more for plastic sheets in thickness indicated when tested according to ASTM D 1929.
  3. Smoke-Production Characteristics: Smoke-developed index of 450 or less when tested according to ASTM E 84, and smoke density of 75 or less when tested according to ASTM D 2843
  4. Burning Characteristics: Tested according to ASTM D 635. Class CC1, burning extent of 1 inch or less for nominal thickness of 0.060 inch or thickness indicated for use.
- D. Glazing Gaskets: EPDM, neoprene, partially vulcanized butyl tape, or liquid-applied elastomeric sealant .
- E. Prefabricated Curb: As specified in Section 077200 "Roof Accessories."
- F. Condensation Control: Fabricate unit skylights with integral internal gutters and nonclogging weeps to collect and drain condensation to the exterior.
- G. Thermal Break: Fabricate unit skylights with thermal barrier separating exterior and interior metal framing.
- H. Operable Systems: Equip operable unit skylights with manufacturer's standard hinges, chain-driven operating hardware, and weather-sealing gaskets.

## 2.4 ACCESSORY MATERIALS

- A. Fasteners: Same metal as metal being fastened, nonmagnetic stainless steel, or other noncorrosive metal as recommended by manufacturer. Finish exposed fasteners to match material being fastened.
1. Where removal of exterior exposed fasteners might allow access to building, provide nonremovable fastener heads.
- B. Bituminous Coating: Cold-applied asphalt mastic, compounded for 15-mil dry film thickness per coat.

## 2.5 ALUMINUM FINISHES

- A. Clear Anodic Finish: AAMA 611, AA-M12C22A41, Class I, 0.018 mm or thicker.

# PART 3 - EXECUTION

## 3.1 EXAMINATION

- A. Examine openings, substrates, structural support, anchorage, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

## 3.2 INSTALLATION

- A. Coordinate installation of unit skylight with installation of substrates, vapor retarders, roof insulation, roofing membrane, and flashing as required to ensure that each element of the Work performs properly and that combined elements are waterproof and weathertight.
- B. Comply with recommendations in AAMA 1607 and with manufacturer's written instructions for installing unit skylights.

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- C. Install unit skylights level, plumb, and true to line, without distortion.
- D. Anchor unit skylights securely to supporting substrates.
- E. Where aluminum surfaces of unit skylights will contact another metal or corrosive substrates, such as preservative-treated wood, apply bituminous coating on concealed metal surfaces or provide other approved permanent separation recommended in writing by unit skylight manufacturer.

### 3.3 FIELD QUALITY CONTROL

- A. Testing Agency: Owner will engage a qualified testing agency to perform tests and inspections.
- B. After completion of installation and nominal curing of sealant and glazing compounds but before installation of interior finishes, test for water leaks according to AAMA 501.2.
- C. Perform test for total area of each unit skylight.
- D. Work will be considered defective if it does not pass tests and inspections.
- E. Additional testing and inspections, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.
- F. Prepare test and inspection reports.

### 3.4 CLEANING

- A. Clean exposed unit skylight surfaces according to manufacturer's written instructions. Touch up damaged metal coatings and finishes.
- B. Remove excess sealants, glazing materials, dirt, and other substances.
- C. Remove and replace glazing that has been broken, chipped, cracked, abraded, or damaged during construction period.
- D. Protect unit skylight surfaces from contact with contaminating substances resulting from construction operations.
- E. Unit Skylight Operating System: Clean and lubricate joints and hardware. Adjust for proper operation.

END OF SECTION 086200