

SECTION 086300 – METAL-FRAMED SKYLIGHTS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes skylights with metal framing.
- B. Related Sections:
 - 1. Section 061000 – Rough Carpentry.
 - 2. Section 075216 – SBS Modified Bituminous Membrane Roofing
 - 3. Section 076200 – Sheet Metal Flashing and Trim
 - 4. Section 079200 – Joint Sealants.
 - 5. Section 088000 – Glazing.
 - 6. Section 099113 – Exterior Painting
 - 7. Section 099123 – Interior Painting
- C. Reference and Industry Standards
 - 1. The following reference standards shall be applicable to this Section:
 - a. 2020 Enterprise Green Communities (EGC) Criteria, 15th Anniversary edition and the 2020 New York City Overlay dated April 6, 2020.
 - b. New York City Building Code, **current** edition, as amended, inclusive of:
 - Chapter 15 Roof Assemblies and Rooftop Structures
 - Chapter 24 Glass and Glazing
 - 2. Industry Standards
 - AAMA (American Architectural Manufacturers Association)
 - ASTM (American Society for Testing and Materials)
- D. The NYC Overlay of the 2020 Enterprise Green Communities Criteria
 - 1. Mandatory Requirements: See the NYC Overlay of the 2020 EGC reference standards for full specifications.
 - a. All projects must achieve compliance with the mandatory criteria measures that are applicable:
 - Criterion 6.4: Healthier Material Selection
 - Criterion 6.9: Managing Moisture: Roofing and Wall Systems
 - Criterion 6.10: Construction Waste Management
 - 2. Optional Project Requirements for Certification Points

- a. Additionally, rehab projects are required to achieve **55** optional points. Criteria with optional points related to this Specification Section include, but may not be limited to:

- Criterion 6.1: Ingredient Transparency for Material Health
- Criterion 6.2: Recycled Content and Ingredient Transparency
- Criterion 6.4: Healthier Material Selection
- Criterion 6.7: Regional Materials
- Criterion 6.10: Construction Waste Management

1.2 PREINSTALLATION MEETINGS

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

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Shop Drawings: For metal-framed skylights. Include plans, elevations, sections, and attachment details.

1.4 INFORMATIONAL SUBMITTALS

- A. Product test reports.
- B. Field quality-control reports.
- C. Sample warranties.
- D. Documentation for compliance with Enterprise Green Communities Criteria.

1.5 WARRANTY

- A. Manufacturer's Warranty: Manufacturer agrees to repair or replace components of metal-framed skylights that fail in materials or workmanship within specified warranty period.

1. Warranty Period: Five (5) years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 NEW YORK CITY APPROVED METAL-FRAMED SKYLIGHTS

- A. Materials

1. Galvanized Steel: **[26 gauge] [24 gauge]**.
2. Sheet and Plate: ASTM B209.
3. Extruded Bars, Rods, Profiles, and Tubes: ASTM B221.
4. Structural Profiles: ASTM B308.

- B. Pressure Caps: Manufacturer's standard components that mechanically retain glazing.

- C. Brackets and Reinforcements: Manufacturer's standard galvanized steel with non-staining, non-ferrous shims for aligning skylight components.
- D. Fasteners and Accessories: Manufacturer's standard, corrosion-resistant, non-staining, non-bleeding fasteners and accessories compatible with adjacent materials.
- E. Concealed Flashing: Manufacturer's standard, corrosion-resistant, non-staining, non-bleeding flashing compatible with adjacent materials.
- F. Exposed Flashing and Closures: Manufacturer's standard components.
- G. Framing Sealants: As recommended in writing by manufacturer.
- H. Corrosion-Resistant Coating: Cold-applied asphalt mastic.

2.2 GLAZING

- A. Glazing: As specified in *Section 088000 – Glazing*.
- B. Glazing Gaskets: Manufacturer's standard sealed-corner pressure-glazing system of black, resilient elastomeric glazing gaskets, setting blocks, and shims or spacers.
- C. Glazing Sealants: As recommended in writing by manufacturer.

2.3 FABRICATION

- A. Fabricate galvanized steel components that, when assembled, have the following characteristics:
 - 1. Profiles that are sharp, straight, and free of defects or deformations.
 - 2. Accurately fitted joints with ends coped or mitered.
 - 3. Physical and thermal isolation of glazing from framing members.
 - 4. Accommodations for thermal and mechanical movements of glazing and framing to maintain required glazing edge clearances.
- B. Fabricate sill closures with weep holes and for installation as continuous component.
- C. Reinforce components as required to receive fastener threads.
- D. Factory-Glazed, Metal-Framed Skylights: Comply with requirements in *Section 088000 – Glazing*.
- E. After fabrication, clearly mark components to identify their locations in Project according to Shop Drawings.

2.4 ALUMINUM FINISHES

- A. Clear Anodic Finish: AAMA 611, or thicker.
- B. Baked-Enamel or Powder-Coat Finish: AAMA 2603 except with a minimum dry film thickness of 1.5 mils.

1. Color and Gloss: **[As selected by Design-Professional-of-Record from manufacturer's full range] [As selected by Owner from manufacturer's full range].**

PART 3 - EXECUTION

3.1 INSTALLATION

- A. General: Comply with manufacturer's written instructions.
 1. Do not install damaged components.
 2. Fit joints between aluminum components to produce hairline joints free of burrs and distortion.
 3. Rigidly secure nonmovement joints.
 4. Install anchors with separators and isolators to prevent metal corrosion and electrolytic deterioration and to prevent impeding movement of moving joints.
 5. Seal joints watertight unless otherwise indicated.
- B. Metal Protection: Where aluminum will contact dissimilar materials, protect against galvanic action by painting contact surfaces with protective coating or by installing nonconductive spacers as recommended in writing by manufacturer for this purpose.
- C. Install continuous aluminum sill closure with weatherproof expansion joints and locked and sealed or welded corners. Locate weep holes at rafters.
- D. Install components to drain water passing joints, and moisture migrating within skylight to exterior.
- E. Install components plumb and true in alignment with established lines and elevations.
- F. Glazing: Install glazing as specified in *Section 088000 – Glazing*.
- G. Erection Tolerances: Install metal-framed skylights to comply with the following maximum tolerances:
 1. Alignment: Limit offset from true alignment to 1/32 inch where surfaces abut in line, edge to edge, at corners, or where a reveal or protruding element separates aligned surfaces by less than 3 inches; otherwise, limit offset to 1/8 inch.
 2. Location and Plane: Limit variation from true location and plane to 1/8 inch in 12 feet but no greater than 1/2 inch over total length.

3.2 FIELD QUALITY CONTROL

- A. Testing Agency: Owner will engage a qualified testing agency to perform tests and inspections.
 1. Water-Spray Test: Before installation of interior finishes has begun, skylights shall be tested according to AAMA 501.2 and shall not evidence water penetration.
- B. Repair or remove work where test results and inspections indicate that it does not comply with specified requirements.

- C. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.
- D. Prepare test and inspection reports.

END OF SECTION 086300