

OKLAHOMA STATE UNIVERSITY - BUILDING DESIGN STANDARDS

DESIGNER NOTE: SPECIFIC APPROVAL MUST BE OBTAINED FROM OSU ARCHITECTURE SERVICES PRIOR TO INCORPORATING SKYLIGHTS INTO BUILDING DESIGN. FOR DAYLIGHTING OF INTERIOR SPACES, CONSIDER USE OF CLERESTORIES. USE OF TRANSLUCENT PANEL SKYLIGHTS IS PREFERABLE TO METAL FRAMED GLASS SKYLIGHTS.

PART 1 GENERAL

1.01 SYSTEM DESCRIPTION:

A. System:

1. Designed by manufacturer to withstand wind and snow loads and to be and remain free from air and water leakages and excessive condensation with outdoor temperature of 10 degrees F., indoor temperature of 70 degrees F., 40 percent relative humidity.

B. Design Loads: Per IBC requirements.

C. Performance Requirements:

1. Water Penetration: No water penetration shall occur when system is tested in accordance with ASTM E331 using a differential static pressure of 20 percent of the inward acting design wind load pressure, but not less than 6.25 psf. Water penetration is defined as the appearance of uncontrolled water other than condensation on the interior surface of any part of the skylight.
2. Thermal Movement: Provide such expansion and contraction of component materials as will be caused by a surface temperature range of ± 50 degrees F. without causing buckling, stresses on panels, failure of seals, undue stress on structural elements, reduction of performance or other detrimental effects.

1.02 SUBMITTALS:

A. Shop drawings indicating details and interfaces.

B. Calculations: Submit structural calculations prepared in accordance with the Aluminum Association's Specifications for Aluminum Structures (SAS30) by a structural engineer qualified in design of selfsupporting sloped translucent panel systems licensed in the State of Oklahoma.

1.03 QUALITY ASSURANCE:

A. Installer Qualifications:

1. Work shall be accomplished by mechanics having had at least five years experience in this type of work.

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1.04 WARRANTY:

- A. Furnish manufacturer's written warranty against defective design, materials, and workmanship and against air and water leakage and excessive condensation for a period of five years from date of final acceptance.

DESIGNER TO SELECT PANEL FACE SHEET COLORS, LIGHT TRANSMISSIONS AND SHADING COEFFICIENT TO MEET PROJECT REQUIREMENTS.

PART 2 PRODUCTS

2.01 MANUFACTURERS:

- A. Kalwall Corp.
- B. Major.
- C. Skywall.
- D. An approved equal.

2.02 MATERIALS:

- A. Extrusions shall be 6063T5 alloy and temper (ASTM B331 alloy 6063T5). Fasteners, where exposed, shall be stainless steel.
- B. Perimeter anchors shall be aluminum.
- C. Translucent Panels:
 - 1. Thickness: 2.75".
 - 2. Exterior Face Sheets: 0.070" thick with protective gel coat finish.
 - 3. Interior Face Sheets: 0.045" thick.
 - 4. Face Sheet Tolerance: ± 10 percent of specified thicknesses.
 - 5. U-Factor: Not more than 0.10.
 - 6. Insulation: Translucent glass fiber uniformly distributed, so panels do not look deformed.

END OF SECTION 08950