SECTION 07830
TRANSLUCENT PANEL SKYLIGHTS

PART 1 - GENERAL

1.1 SUMMARY:

A. Section Includes:
   1. Metal framed skylight system.
   2. Translucent insulating panels.

B. Related Sections:
   1. Section 07820 - Metal Framed Skylights.
   2. Section 07900 - Joint Sealers.
   3. Section 08800 - Glazing.

1.2 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°F., indoor temperature of 70°F., 40% relative humidity.

B. Design Loads: Per UBC 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% 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°F. without
      causing buckling, stresses on panels, failure of seals, undue stress on structural
      elements, reduction of performance or other detrimental effects.

1.3 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 self-supporting sloped translucent panel systems licensed in the
   State of Colorado.

1.4 QUALITY ASSURANCE:

   DESIGNER NOTE: SPECIFIC APPROVAL
   MUST BE OBTAINED FROM UCB STAFF
   PRIOR TO INCORPORATING SKYLIGHTS
   INTO BUILDING DESIGN. FOR DAY-
   LIGHTING OF INTERIOR SPACES, CON-
   SIDER USE OF CLERESTORIES. USE OF
   TRANSLUCENT PANEL SKYLIGHTS IS
   PREFERABLE TO METAL FRAMED
   GLASS SKYLIGHTS BECAUSE OF ENER-
   GY EFFICIENCY AND GLARE.
A. Installer Qualifications:

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

1.5 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.

PART 2 - PRODUCTS

2.1 MANUFACTURERS:

A. Kalwall Corp.
B. Major.
C. Skywall.
D. Approved substitute.

2.2 MATERIALS:

A. Extrusions shall be 6063-T5 alloy and temper (ASTM B331 alloy 6063-T5). 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% of specified thicknesses.
5. U-Factor: Not more than 0.10.
6. Insulation: Translucent glass fiber uniformly distributed so panels don't look "splotchy".

PART 3 - EXECUTION
3.1 INSTALLATION:

A. Set on a curb which is a minimum of 8" in height above lowest point of roof surface.

B. Protect panels to ensure panels are not scratched during remainder of construction period.

3.2 TOLERANCES:

A. All parts of the work, when completed, shall be within the following tolerances:

1. Maximum variation from plane or location shown on approved shop drawings: 0.125" per 12 feet of length or 0.5" in total length.

2. Complete surface contact between skin material and perimeter or muntin-mullion to a tolerance of ±0.004".

END OF SECTION 07830