Super Sky Products' typical glazing system consists of glass panels or "lites" which are attached to the main framing members using extruded aluminum "retainers" or "pressure plates". These retainers are typically fastened to the main framing members with Torx fasteners, which are sealed with a vinyl washer and located at a maximum spacing of 12" on center. EPDM glazing gaskets separate the glass from the aluminum above and below. Retainers are then continuously wet-sealed in the field with high performance silicone sealant and covered with a finished aluminum "snap-on cap" extrusion to conceal the retainer fasteners.

At horizontal framing members, the glass is retained to the frame by using structural silicone sealant joints between the glass edges and the crossrafter glass stop. This design creates a flush joint that eliminates water damming and debris build-up. A slide-in PVC glass stop is standard at this detail to reduce thermal transfer from exterior to interior. All crossrafter structural joints and continuous pressure plate weather seal joints are married together to create a complete water-tight installation.
Super Sky Products’ total flush glazing system (TFG) is based on silicone sealant technology and uses unique continuous extruded aluminum retainers and intermittent hold-down clips for the attachment of the glass to the frame. The retainers are adhered to the glass using structural silicone sealant which is applied and cured in the glass fabricator’s controlled factory environment. There are no exterior fasteners or aluminum caps beyond the glass surface, thereby providing a true thermal break system.

Each lite is independent of its adjacent lites, and can be replaced without removal of others. The exterior weather seals are high performance silicone, which is applied after all lites have been secured. The entire exterior surface of the glass is one flat plane with no obstructions to dam water or cause dirt and debris build-up.
SILL & HEADS assure proper perimeter interface with the adjacent construction, and are fitted with formed sheet metal flashing to provide a water tight condition between the skylight and the adjacent construction. Sill conditions are typically the low point for the skylight condensation guttering system and allow for evacuation of any potential condensation collection through the use of weep holes, which are shop located and drilled in the sill extrusion. Typically the weep holes are located at each rafter.

1. SELF-FLASHING SILL
   - GLASS
   - EXTR. ALUM. SILL
   - EXTR. ALUM. SELF-FLASHING SILL BASE
   - SCALE: 3" = 1'-0"

2. VARIABLE SILL
   - EXTR. ALUM. SILL
   - WEER HOLE
   - WEATHER SEALANT FLASHING
   - 90° TO 135°
   - SCALE: 3" = 1'-0"

3. VARIABLE SILL w/ INSULATED CLOSURE
   - GLASS STOP
   - STRUCTURAL SEALANT
   - EXTR. ALUM. SILL
   - WEEP HOLE
   - WEATHER SEALANT
   - EXTR. ALUM. SILL BASE
   - FLASHING
   - SCALE: 3" = 1'-0"

4. CROSS RAFTER SILL
   - EXTR. ALUM. CAP & RET.
   - GLASS
   - ZEE-CLIP, IF REQ'D,
   - BY ENGINEERING
   - EXTR. ALUM. TUBE
   - SCALE: 3" = 1'-0"

SUPER SKY RECOMMENDS THAT ROOFING MEMBRANE BE EXTENDED UP AND OVER THE CURB AS SHOWN; TO PROVIDE SEPARATION BETWEEN THE DISSIMILAR MATERIALS AS WELL AS PROVIDING AN ADDITIONAL BARRIER AGAINST WATER PENETRATION.
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SUPPORT & MOUNTING methods are used to connect Super Sky extrusions to supporting structures when all aluminum structures may be impractical due to spanning length. Even with accurate support structures, the ability to level, adjust and permit thermal movement is important. Plate and fastener sizes are engineered for each particular project, based on project specific loading requirements.
RIDGES & HIPS allow changes in the planes of the glass, often with single extruded members. Structural analysis governs the sizes. The shapes are governed by the skylight geometry and the angles of the intersecting rafters.
CONNECTIONS are as important as the size of spanning members to the skylight design. This section shows methods employed to join multiple members together.

CLIPS, PLATES and FASTENERS are shown at standard configuration for detailing purposes, but all connections will vary according to the specific design loads & resultant calculations.
GUTTERS have many possible forms and are primarily detailed at the base of a skylight to quickly drain water to a discharge point. Eave gutters provide water and ice control at the transition from sloped to vertical glass planes over doors and walkways. Gutters are also used at skylight clusters with a built-in slope for quick discharge.

Gutters can be formed or extruded, and contain pitched sheet metal or neoprene liners, sloped to scuppers or drain locations. Gutters are to be insulated to reduce formation of condensation on the interior and provide support for the pitched liners. Gutter details can be directly related to support details.
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THERMAL EXPANSION provisions are typically included in each horizontal crossrafter, so that thermal expansion is managed incrementally, not accumulated at one end. There are also expansion joints in the sills and heads every 10 to 20 feet, to accommodate movement yet maintain water-tightness.

There are some combinations of size, geometry, and supporting structure which may require double members bridged by expansion materials. This condition will always occur when the skylight frame intersects building expansion joints, and the frame needs to be separated to accommodate movement of the building.

Seismic activity in some areas requires specific engineering, using sliding connections and expansion type joints to avoid racking of the frame (not shown).
SNOW GUARDS

1. SNOW GUARD
   SCALE: 3" = 1'-0"

   CONT. 3/8" ALUM. ANGLE
   FABRICATED TEE SUPPORT @ EA. RAFTER

   STAINLESS STEEL RETAINER PLATES
   5/16" ST. STEEL TUBE

2. SNOW GUARD
   SCALE: 3" = 1'-0"

   3/8" ALUM. TUBE
   STAINLESS STEEL RETAINER PLATES
   5/8" SPLICE PIN
   5/8" ST. STEEL TUBE

SUNSCREEN SHADES

3. SUNSCREEN
   SCALE: 3" = 1'-0"

   EXTR. ALUM. RAFTER TUBE
   ALUMINUM SUNSCREEN
VENTED RIDGES

CABLES

SUPER SKY PRODUCTS ENTERPRISES, LLC
www.supersky.com
10301 N. Enterprise Drive
Mequon, Wisconsin 53092
Phone: 262.242.2000
Fax: 262.242.7409

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OPERABLE VENTS