



TRAC Rail Roof Curb System™ Installation Instructions



**From Coordination to Construction, the Flat-Flange
Roof Curb System is designed for superior
integration with all Pre-Engineered Metal Buildings.**

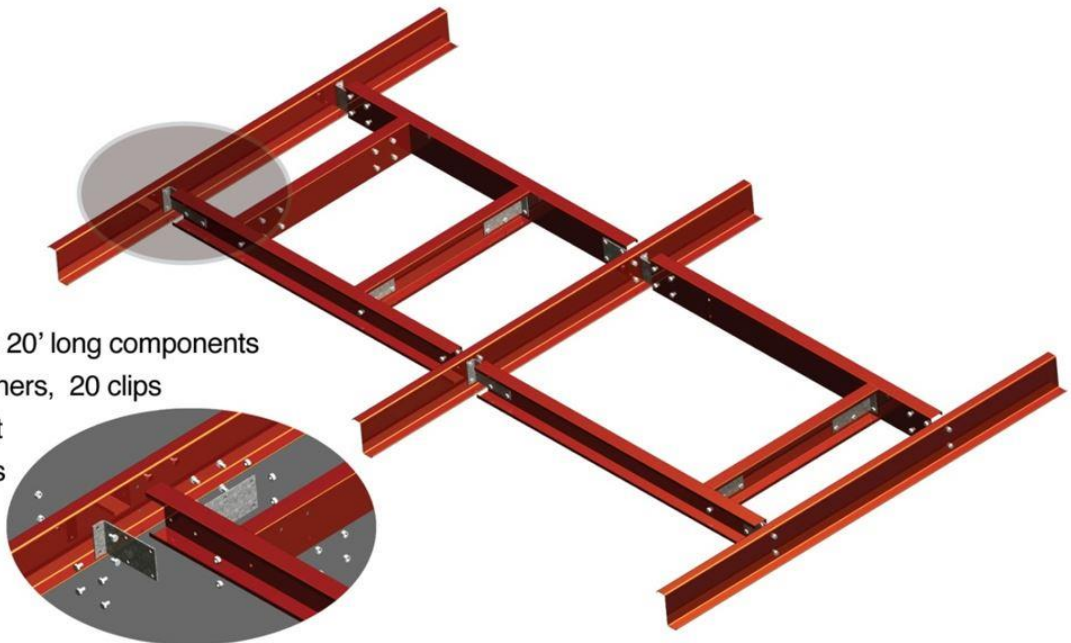
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Individual Components can be a Pain in the Rear...



Components

- Field fabricated from 20' long components
- 84 bolts, nuts & washers, 20 clips
- 2-3 men & scissor lift
- Labor 5-7 man hours



The component sub-framing approach can be very expensive in terms of labor and material. Additionally, this detail is extremely difficult to execute for controlling the elevation of the supports to match the panel standoff produced by the roof clip height that is critical for proper curb support not to mention the risk this approach poses for pinning a curb to the static steel. **Don't set your building up for failure.**



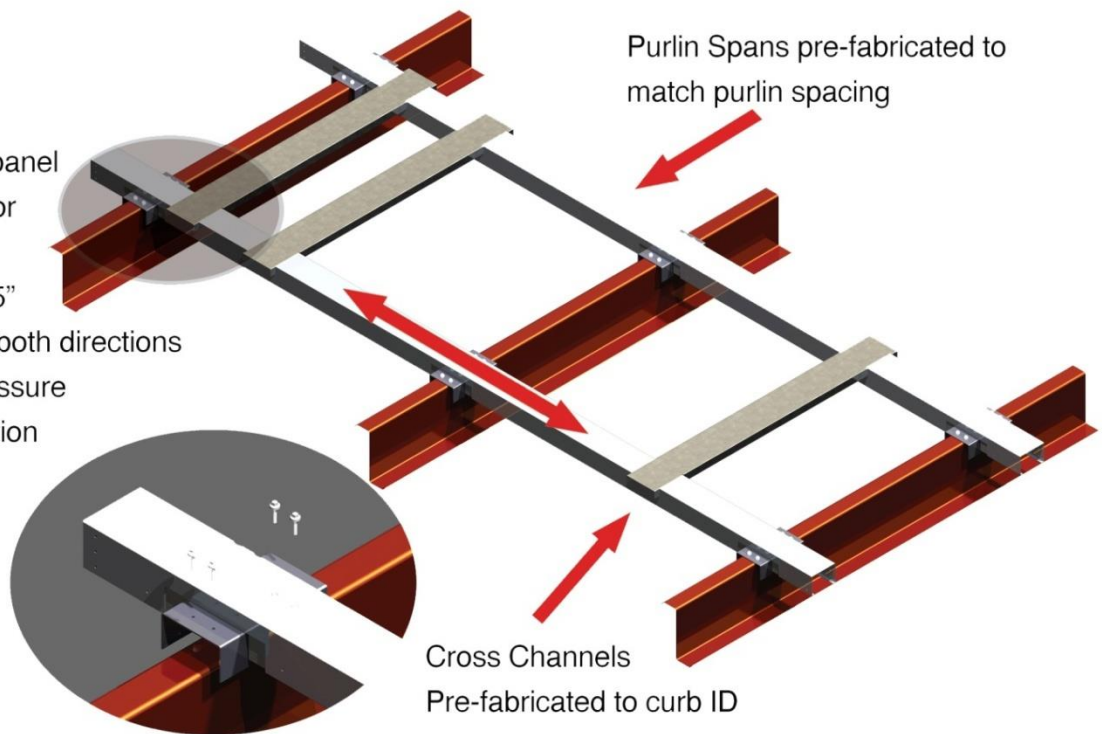
Total Systems Approach

TRAC Rail™ Curb Support



TRAC Rail

- Elevated to match panel elevation: high clip or low clip
- Pre-centered for 1.5" thermal movement both directions
- Resist negative pressure
- 10 - 15 min Installation
- Purlins or Bar Joist



- Proven 10 to 15 minute installation
- Factory elevated to match roof system floating clip height (low or high)
- Factory notched cross channels to eliminate field notching
- Pre-centered span channels provide 1.5" thermal movement in each direction
- Uniform flange dimensions simplify layout; asymmetrical curb flange compatible
- No floating plates to contend with or specialty fasteners to slow you down
- **Faster, safer, and lower overall installation cost**



Installation Labor Comparison

10-15 Minutes for TRAC Rail or 5-7 Man Hours for Components, you decide...

TRAC Rail

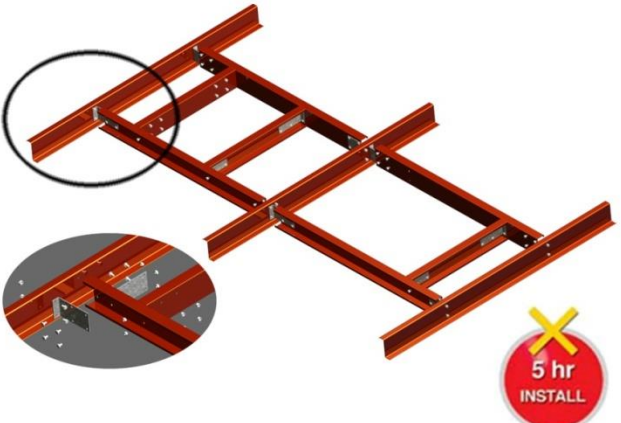
- Pre-Fabricated
- 24 Fasteners
- Installs from the top
- Labor: 10-15 Min



15 min
INSTALL

Components

- Field Fabricate from 20' Long Components
- 84 Bolts, Nuts, and Washers, 14 clips
- 2-3 Men & Scissor Lift - Labor: 5-7 man hours



5 hr
INSTALL

Our Roof Curb Systems begin with our proprietary TRAC Rail Floating Curb Support System to ease the installation burden on erectors and address all of the critical dynamics of Standing Seam Roofs:

- Pre-centered for **thermal movement**
- Resistant to **negative pressure**
- Factory elevated to match the **roof clip/panel stand-off**, i.e., 3/8", 1-3/8" or 2"
- **Full perimeter curb support** with factory notched cross channels (backer plates)

For Pre-Engineered Metal Buildings, you don't want roof curbs; you need Roof Curb Systems™.



TRAC Rail™ is Fully Engineered

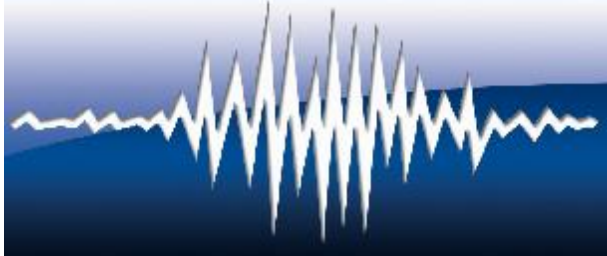
Over 70,000 Successful Installations



**Dead Load with 100 lb
Ground Snow**



**200 MPH Hurricane
Wind Force (Wx & Wz)**

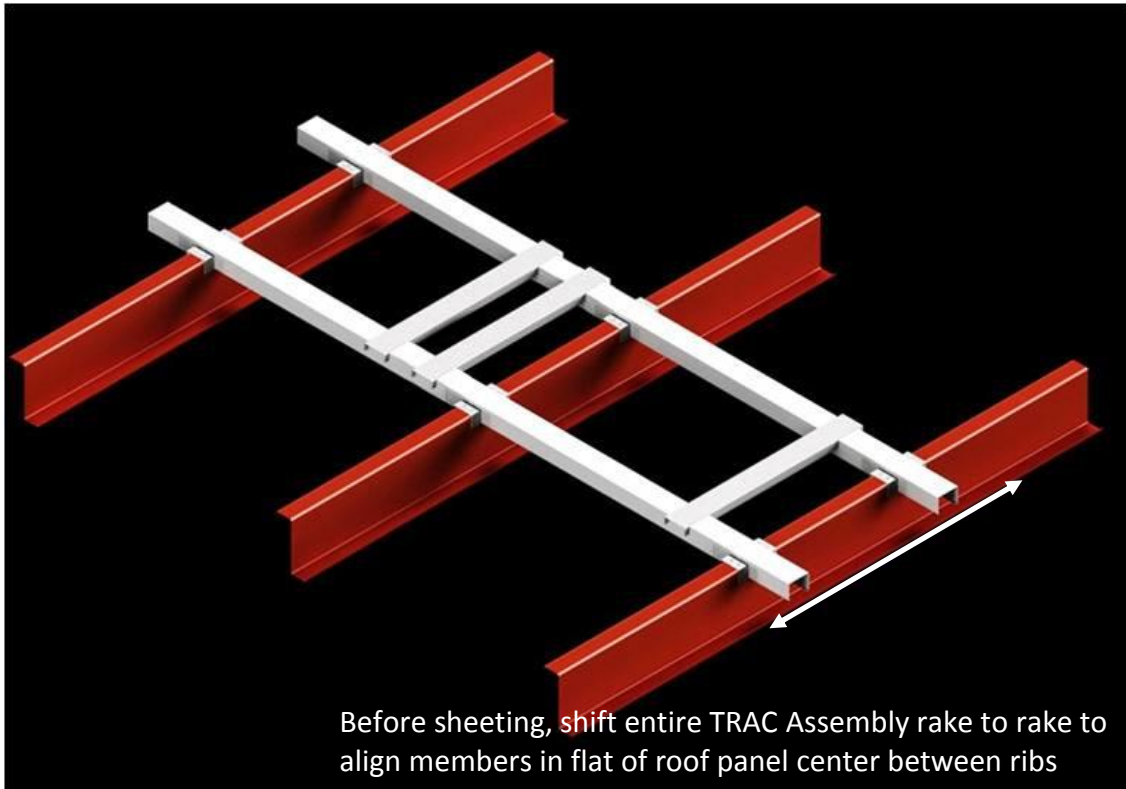


**Seismic 250% Ground
Acceleration (Ex, Wy & Ez)**

For testing, we began with TRANE and Carrier HVAC units, 3 to 20 ton RTUs which range from 350 lbs. to 2500 lbs. We performed calculations both narrow side and wide side blocking water orientations with four purlin spacing: 36", 48", 54", and 60".

Calculations were also performed on two types of exhaust fans; the commonly used Centrifugal & Up-blast types to be specific. We passed with all configurations and determined that if the purlins or joists will carry it, then TRAC Rail will support it. Engineering data is available upon request.

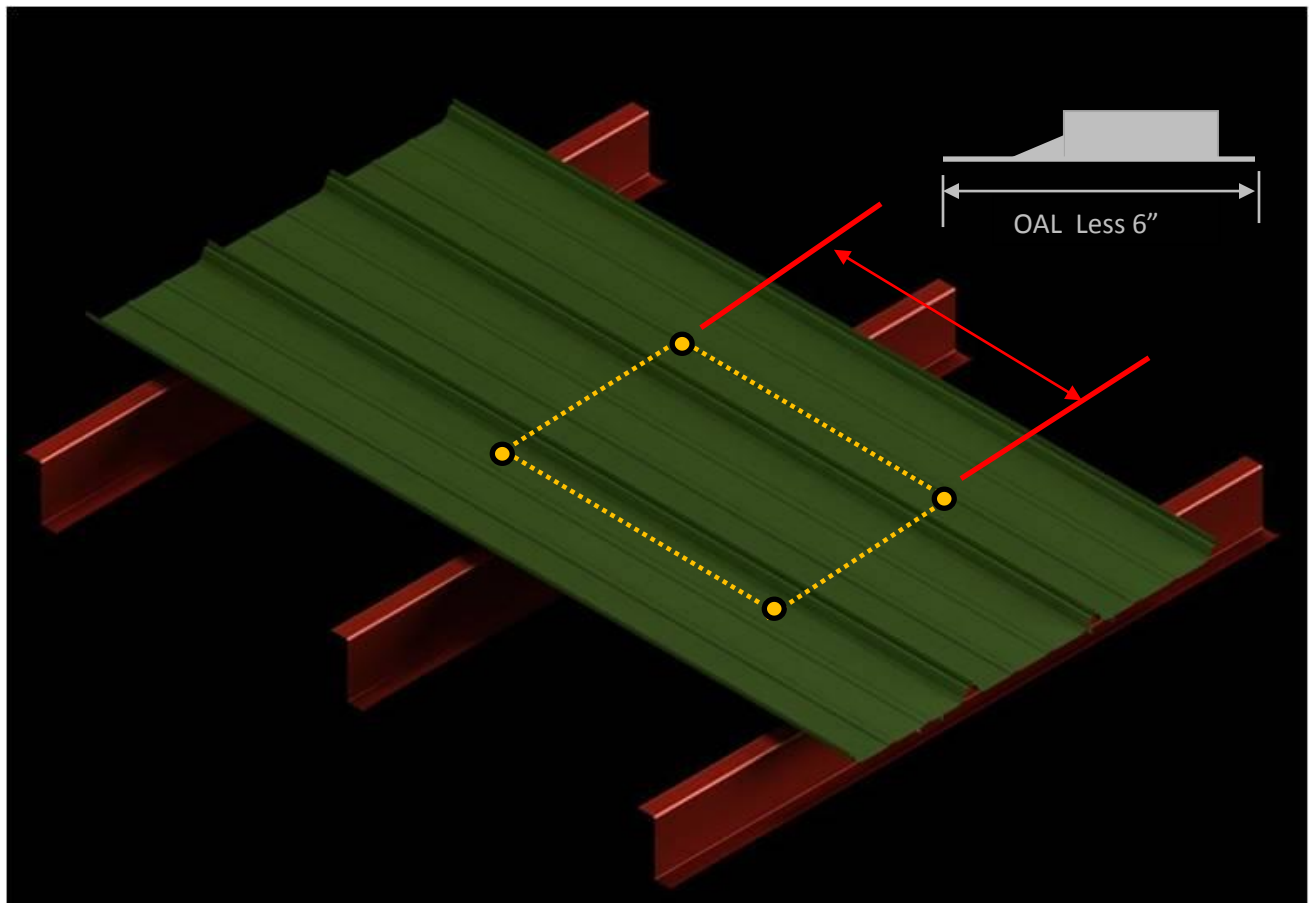
Install TRAC Rail during the roof sheeting process.



1. Before sheeting, arrange the entire TRAC assembly in alignment within the flat of the roof panel layout leaving a recommended 5" or more between the curb wall and panel high rib.
2. Once in the desired location, fasten TRAC span channels to purlins in the factory drilled holes.
3. Position the cross channels at the upslope and downslope curb flanges to act as backer plates and the curb to roof panel transitions.
4. The third cross channel is meant to terminate the insulation within the desired curb opening.
5. Score and remove fiberglass insulation without damaging the facing within the framed box created by the TRAC assembly.
6. Install double faced tape over TRAC at the curb opening to secure insulation facing.
7. Cut an "X" in the insulation facing within the curb opening and pull the facing back onto the TRAC channels for a uniformly trimmed opening.
8. Proceed with the roof sheeting process.

Important: Always follow the safety guidelines as mandated by OSHA and local agencies when working on roofs and with associated tools/equipment to accomplish this installation.

Roof curb installation can be performed during or after the roof sheeting process.



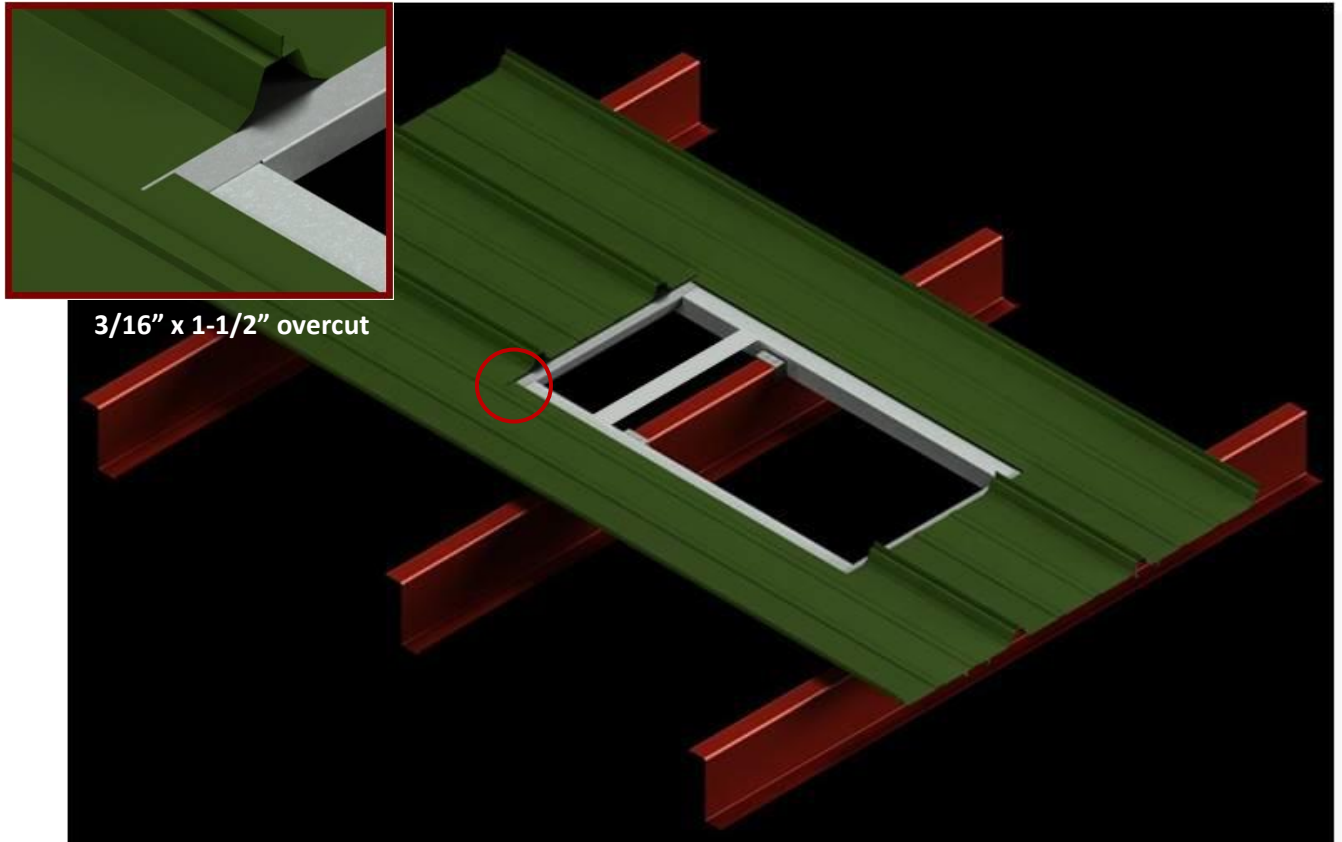
1. Cut roof panels lengthwise as required to allow a 3" lap at the upslope and 3" lap on the downslope curb to roof panel transitions.
2. Cut roof panels widthwise in accordance with the curb wall OD plus ½" to prevent sharp edges within the curb opening.
3. The curb is factory notched 1-1/2" at the upslope flange corners where it transitions at the upslope flange from under the roof panel to over the roof panel for a shingled style installation.

Pro Tip: It is good practice to dry fit and mark before installation.

Use felt markers only for marking roof panels, never use a graphite pencil on a metal roof.

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Roof Panel Cut & Detail of Lead Edge

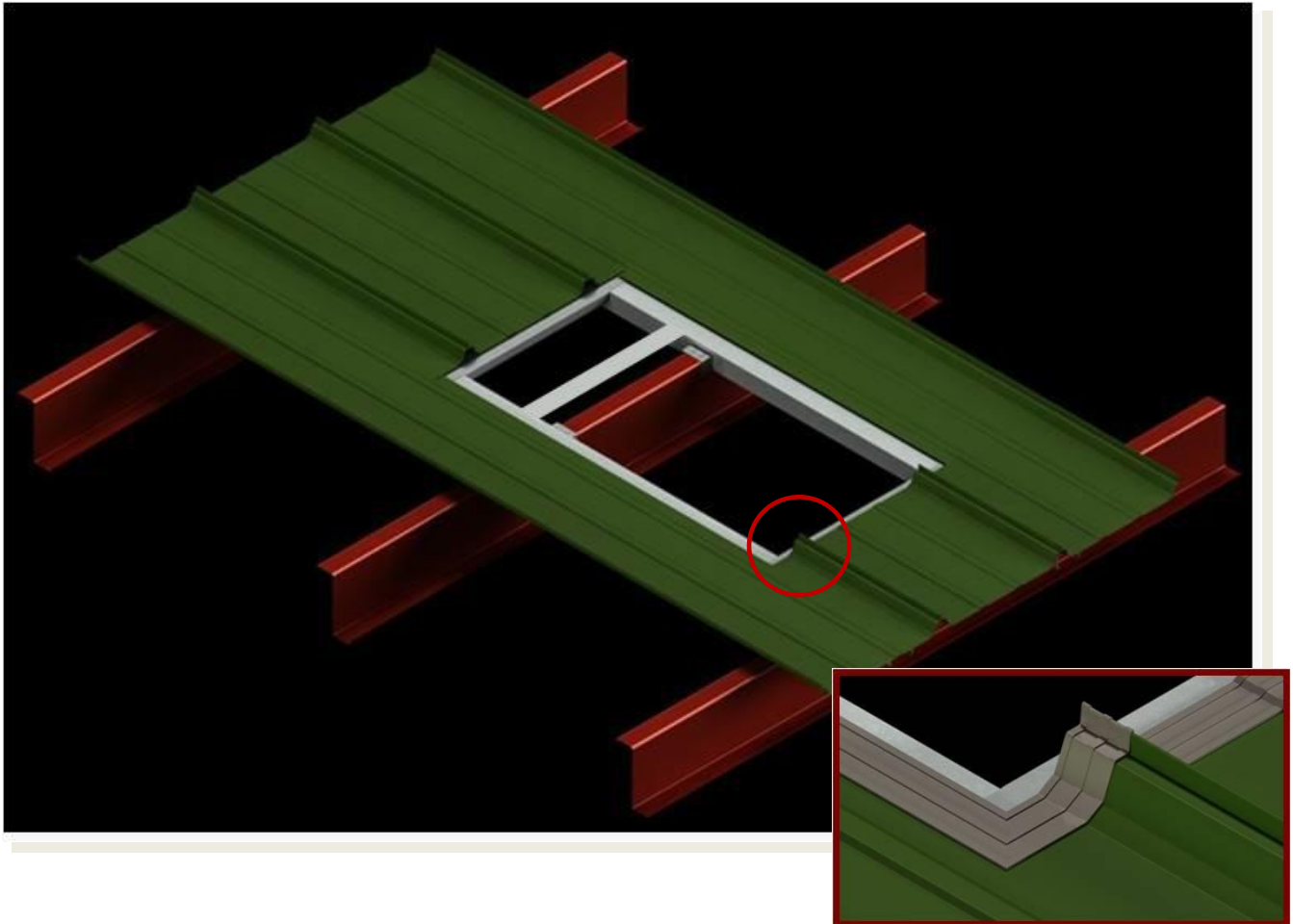


Using a nibbler or hand shears, cut a 3/16" x 1-1/2" overcut at the upslope corners of the roof opening perpendicular to the panel rib direction to allow the upslope flange to be tucked under the roof panels. The curb is factory notched 1-1/2" at the front flange corners where it transitions at the upslope flange from under the roof panel to over the roof panel for a shingled style installation.

Unique Detail: Thoroughness is critical for the execution of this step to ensure a resilient weather-tight installation.

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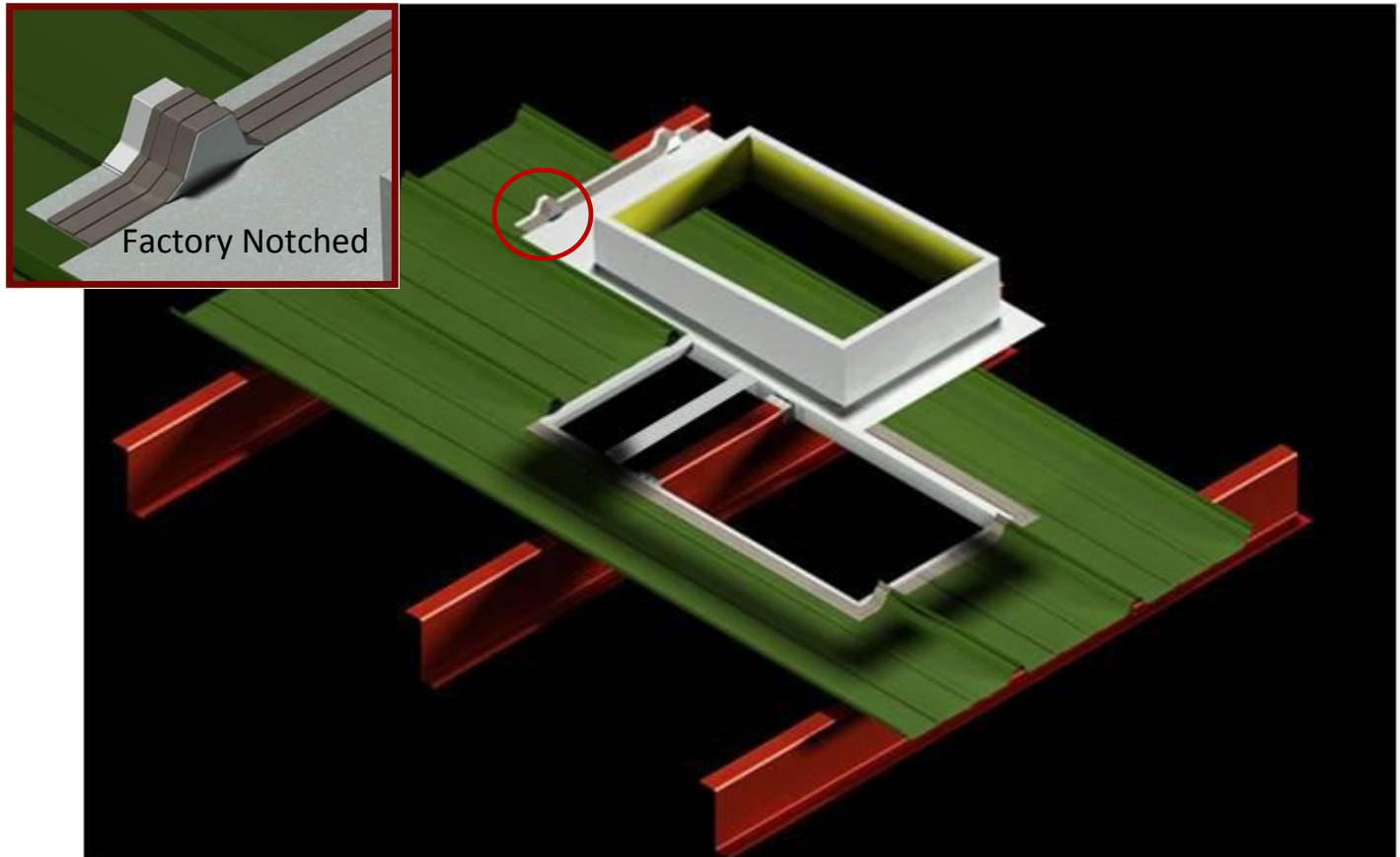
Ensure a complete mastic band without gaps before shingling the curb into the roof.



1. Before the curb can be tucked, it is critical to apply a row of 3" Curb Tape mastic laterally across the downslope panels at the curb flange/roof panel connection and also along the sides of the roof opening without any gaps. (The panel high ribs must be crimped prior to mastic placement)
2. After the sides and downslope roof panels are prepped with the single row of mastic, apply an additional row of 3" Curb Tape mastic to the roof panels and cross channel at the downslope end forming a 6" wide band of mastic at this location only.

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Plug & Mastic Details at Upslope Flange

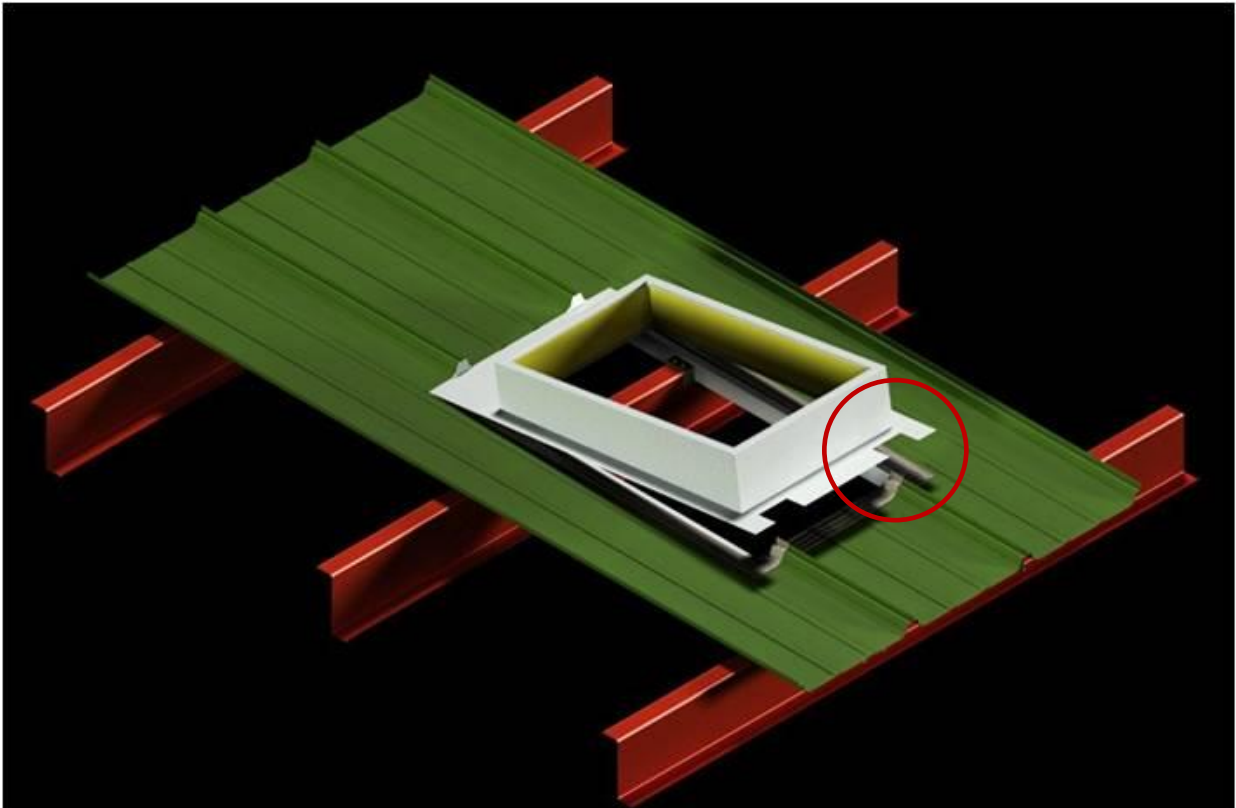


1. A row of 3" Curb Tape mastic must also be applied laterally across the upslope flange of the curb without gaps prior to placing the high rib plugs/closures.
2. The supplied plugs should be laid out in accordance with the high rib layout on top of the band of mastic across the curb front flange. The Curb Tape mastic must then be applied across the top of the plugs continuously without gaps and intersecting with the mastic band on the curb flange.
3. Install Minor Rib Tape per manufacturer specifications to the curb flange/roof panel connections where applicable.

Pro Tip: It is good practice to apply the supplied Butyl caulk onto the plugs/caps and mastic bands to allow easier tucking of the flanges while maintaining the composition of the mastic.

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Downslope Curb Flange Notch and Curb Tuck

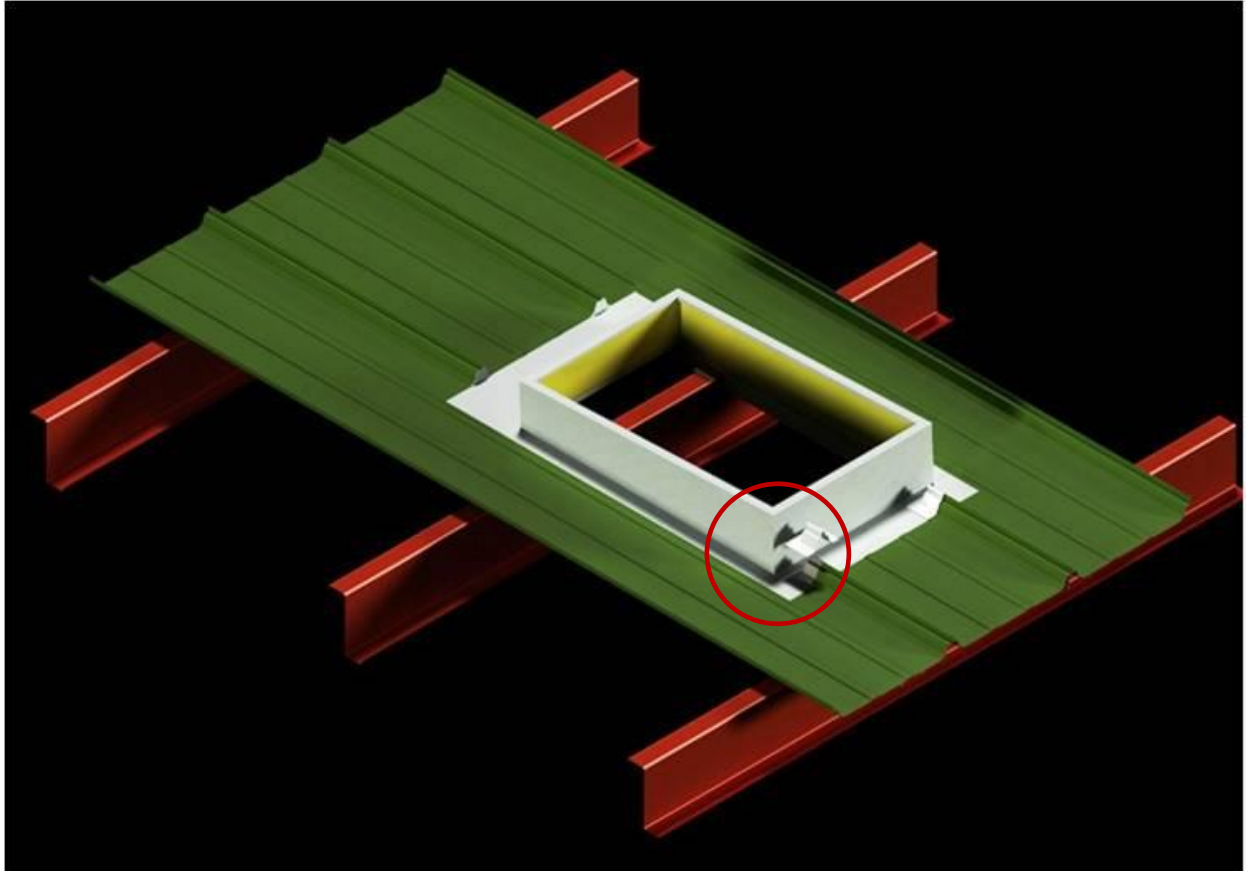


1. The downslope curb flange must be field notched 3" deep by the width of the high rib in accordance with the high rib layout so the flange can lay over the roof panels.
2. Once the mastic, plugs, and rear notch steps are complete, tuck the upslope curb flange under the roof panels so the flange is supported by the underlying front cross channel which provides a backer plate for the fasteners that will be installed in the flat of the panels.

Note: The front flange is factory notched in the corners to keep the panel slit condition in position over the 14 gauge cross channel for a compression connection at the under/over transition.

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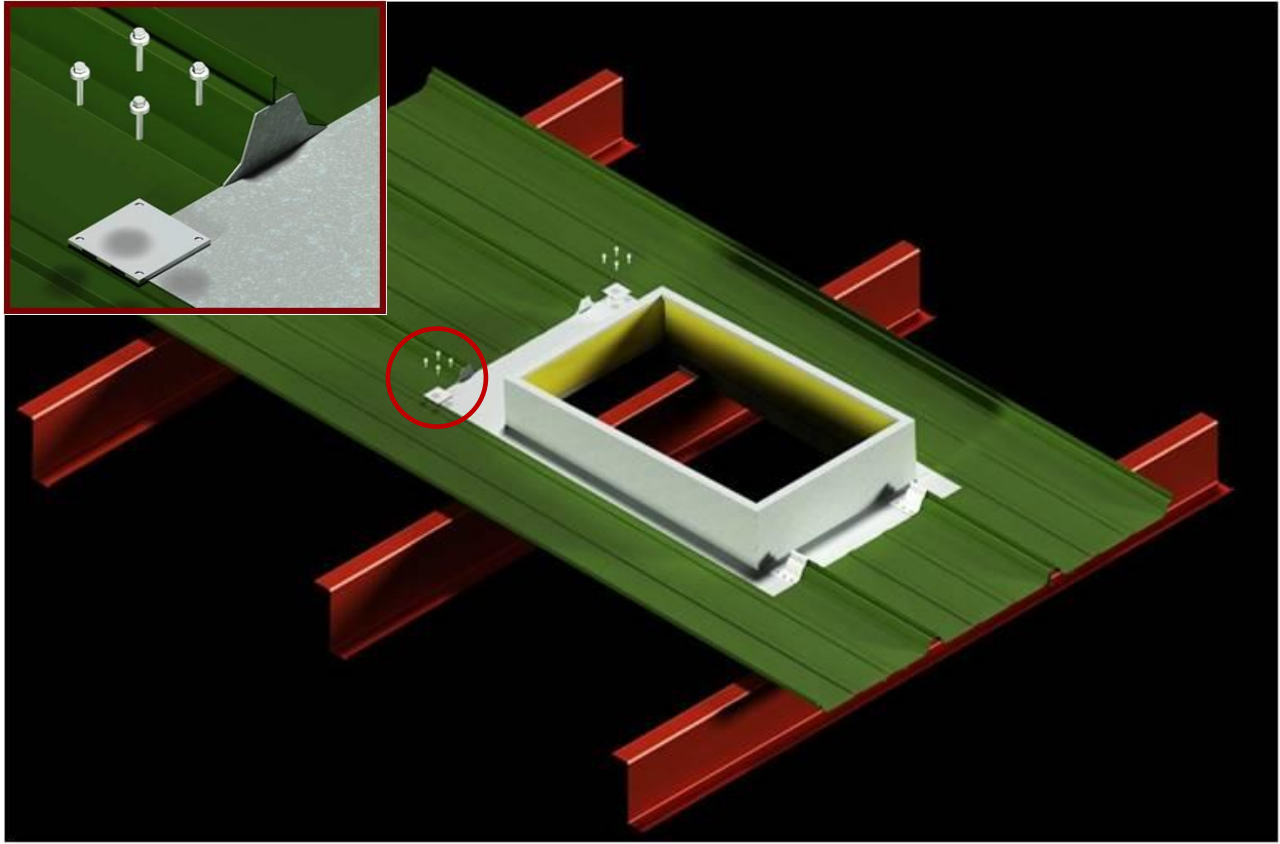
Loose Rib Cap Prep and Placement



1. Before the Rib Caps can be installed at the downslope curb flange/panel connection, all intersecting panel rib areas must be crimped to the finished phase condition if not already completed. If continuous mastic was not positioned over the panel high rib at the mastic prep step, then it must be applied without gaps before the Rib Cap can be placed onto the panel high rib.
2. To begin the Rib Cap prep, apply the 3" Curb Tape mastic fully to the inside flanges in alignment with the bottom edges of the cap perimeter.
3. Apply a generous bead of the supplied butyl caulk throughout the inside of the Rib Cap open end without gaps.
4. Press the Rib Caps onto the panel high ribs for proper compression of the sealants and in alignment with the edge of the downslope curb flange.

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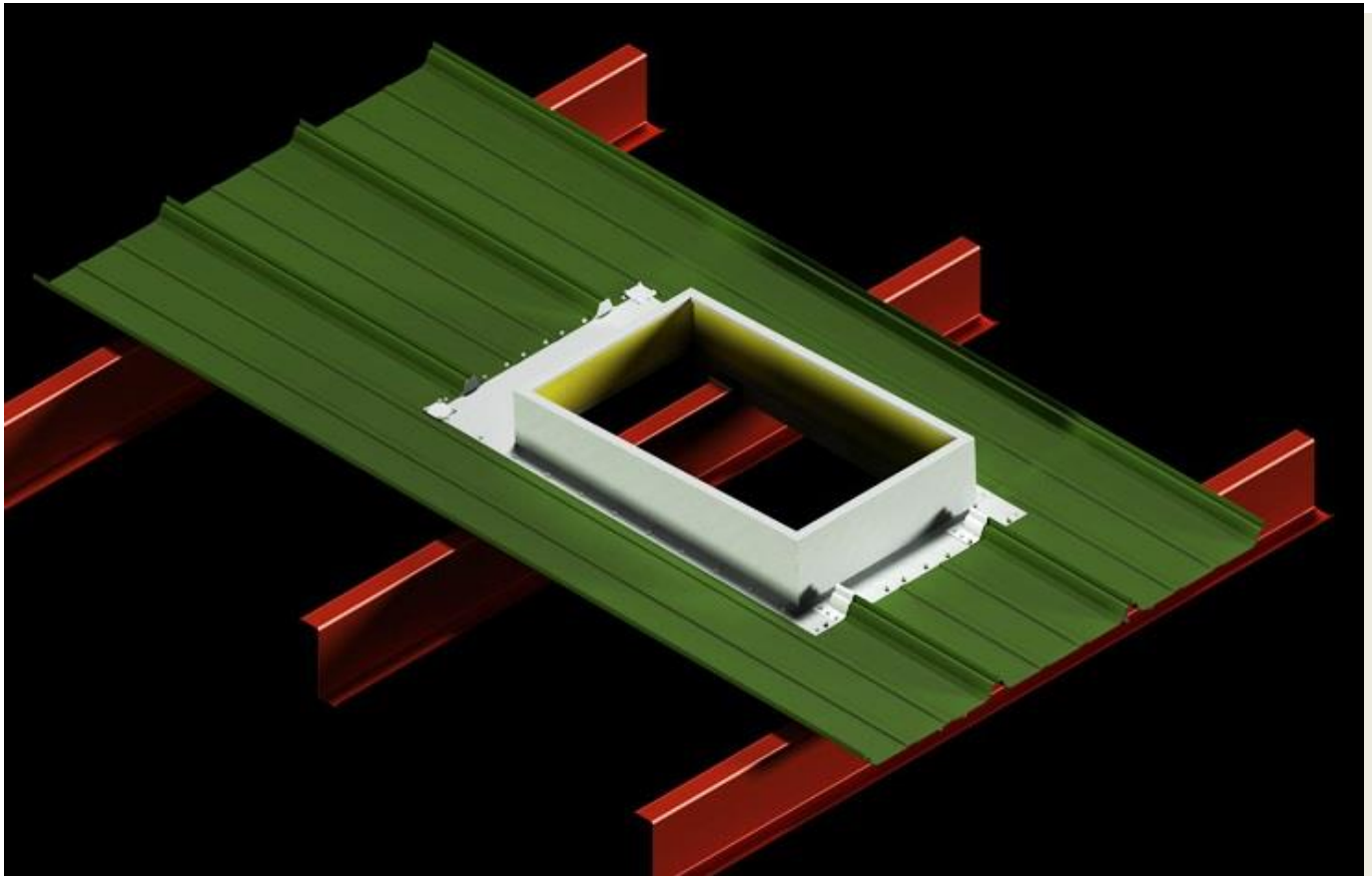
Properly tightened fasteners are the key to a long-lasting, weather-tight seal.



1. The supplied Slit Plate should be prepped with a complete layer of 3" Curb Tape on the bottom. Position the Slit Plate so it is centered on top of the corner overcut where the curb transitions from under the upslope roof panels to over. Fasteners (#12 X 1-1/2") should be installed in the factory drilled holes of the slit plate.
2. Install the supplied #12 X 1-1/2" Long Life Fasteners 3" on center throughout the flats of the perimeter curb flange/roof panel connections. All fasteners will go into the 14 gauge cross channels of the TRAC system.
3. For the High Ribs of the roof panel where the loose plugs and caps are positioned on the curb, install the supplied #14 X 7/8" Long Life Fastener into each side of the trapezoid.

Pro Tip: Do not stand or rest your weight on the roof panel that you are fastening to the curb as the added deflection is sure to cause ponding water on low-slope roofs.

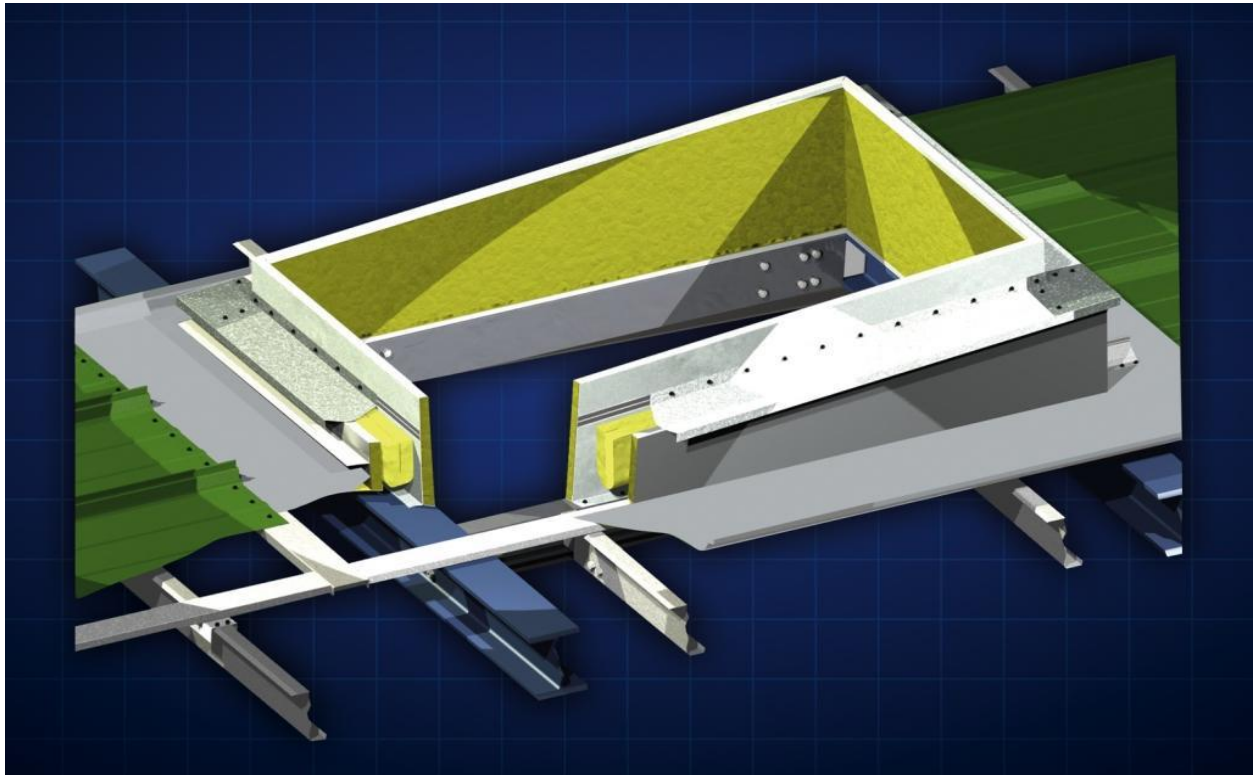
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The Flat-Flange Roof Curb System installation is complete. Make sure to clean up the work area and sweep or vacuum any metal shavings/debris.

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Double Curb Systems are available for larger/heavier rooftop equipment.



Double Curb Systems are used for primarily for two reasons:

1. Unit weight cannot be supported by purlins and the weight must be transferred to main frames via I-Beams.
2. A full clear opening is required for the duct work and a purlin must be cut.

Double Curb System includes:

- Inner Structural Curb
- Outer Floating Curb that mates to the roof system
- CEE-TRAC to support the outer floating curb (high clip only)
- Flash Collar to tie the curbs together

Note: This is only an overview, full installation booklet for Double Curbs is available.

