MasterRib®
Installation Manual

July 2010

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Rev. 7/10
IMPORTANT NOTICE

This manual contains suggestions and guidelines on how to install the subject Union Corrugating panels and trim details. The contents of this manual include the guidelines that were in effect at the time this publication was originally printed. In an effort to keep pace with the ever-changing code environment, Union Corrugating retains the right to change specifications and / or designs at any time without incurring any obligations. To insure you have the latest information available, please inquire or visit our web site. Application and design details are for illustrative purposes only and may not be appropriate for all environmental conditions and/or building designs. Projects should be engineered and installed to conform to applicable building codes, regulations, and accepted industry practices.
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Introduction

The MasterRib® panel is an industry leader in strength and durability. This popular and versatile panel features classic looks and is used in a wide range of applications including residential, commercial, and post-frame buildings. MasterRib® was designed with extra-wide ribs to increase strength and ease handling and installation. In addition, the oversized anti-siphoning channel on the under-lap provides extra leak resistance in the presence of extreme wind and rain loads.

MasterRib® is available in 19 different paint colors and in both 26 and 29 gauge steel. It is also available in unpainted Galvalume® or unpainted galvanized. Our paint system and Galvalume® substrate are individually covered by a limited warranty. Please see our color chart for details on our paint system.

The MasterRib® panel is available in 36” coverage. The panel has five major support ribs at ¾” high that add rigidity and strength to the panel.

MasterRib® is Metal Construction Association certified. Below is a list of all of the MasterRib® panels approvals and certifications.

- Dade County NOA #07-0713.03 & ASCE 7-98 Compliant
- Florida Building Code Approval #FL4586.3, #FL9555.2, #FL9555.3, #FL9555.4, #FL9555.5, #FL9557.1, #FL9557.2, #FL9610.4, #FL10528.1
- Texas Department of Insurance Approval #116
- UL 790 Fire Resistance Class A
- UL 2218 Impact Resistance Class 4
- UL 580 Uplift UL Class 90 CONSTRUCTION #584

Allowable Uniform Loads Per Square Foot

<table>
<thead>
<tr>
<th>SPAN (INCHES)</th>
<th>18”</th>
<th>24”</th>
<th>30”</th>
<th>36”</th>
<th>48”</th>
<th>54”</th>
</tr>
</thead>
<tbody>
<tr>
<td>29 Gauge 199</td>
<td>211</td>
<td>221</td>
<td>118</td>
<td>76</td>
<td>52</td>
<td>29</td>
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<tr>
<td>26 Gauge 268</td>
<td>276</td>
<td>283</td>
<td>155</td>
<td>99</td>
<td>69</td>
<td>38</td>
</tr>
</tbody>
</table>

NOTES:
1. Theoretical allowable loads are based on section properties and allowables calculated in accordance with 2001 AISI Specifications.
2. Theoretical allowable loads are based on three or more uniform spans.
3. For roof panels, deduct self weight for actual ‘live load’ capacity of the panel.
4. These loads are for panel strength. Frames, purlins, decks and fasteners must be designed to resist all loads imposed on the panel.
5. Check local building codes if panel testing is required.
Panel Installation Guide

Storage
If metal is not to be used immediately, store inside in a well ventilated, dry location. Condensation or other moisture can form between the sheets during storage causing water stains or white rust which detract from the appearance of the product and may affect the product’s useful life. Trapped moisture between sheets of painted metal can cause white rust to form underneath the paint. This can cause the paint to flake off the panel immediately or several years later. To prevent white rust and staining, break the shipping bands on the material. Store the material on end or on an incline of at least 8” with a supporting board underneath to prevent sagging. Fan the sheets slightly at the bottom to allow for air circulation. Keep the sheets off of the ground with an insulator such as wood. Any outdoor storage is at the customer’s own risk. If outdoor storage cannot be avoided, protect the metal using a canvas cover or waterproof paper. Never cover the metal with plastic as this will cause condensation to form.

Some Safety Precautions
Always wear heavy gloves when working with steel panels to avoid cuts from sharp edges. When cutting or drilling steel panels, always wear safety glasses and sweep off any metal shavings immediately to prevent eye injury from flying metal fragments. If you must walk on a metal roof, take great care. Metal panels can become slippery, so always wear shoes with non-slip soles. Avoid working on metal roofs during wet conditions when the panels can become extremely slippery. Walking or standing on a metal roof which does not have a plywood or other deck beneath it is not recommended. However, if you must do so, always walk on the purlins, never between. Do not for any reason walk on a roof made of material thinner than 29 gauge.

General Installation Information
Insure that the structure is square and true before beginning panel installation. If the structure is not square, the panels will not properly seal at the sidelaps. Start the first panel square to eave by using 3, 4, 5 Triangle Method. Green or damp lumber is not recommended. Moisture released from the damp lumber may damage the metal panels. Nails installed in green or damp lumber may back out. Remove any loose metal shavings left on the roof surface immediately to prevent corrosion. After installing roof, remove any debris such as leaves or dirt to prevent moisture from getting trapped on panels. Do not install in direct contact with chemically treated lumber.

Fastening
If you wish to predrill fastener holes, use a cover sheet to prevent hot shavings from sticking to panels. Screws - For best results, use a 1-1/2” double washered wood screw in the flat of the panel as shown in the illustration below. Fasteners should be applied at every purlin. Drive the fastener so that the washer is compressed securely against the metal. Do not over drive the fastener as this will form a dimple that can collect water and cause leakage. Do not leave any loose fasteners that have missed the purlin. Use a #14 stitch screw or caulk to fill the hole.

Figure #1 - Fastening Patterns for MasterRib®

RECOMMENDED FASTENING PATTERN FOR 1 1/2” SCREWS

SCREW FASTENERS – EAVE, RIDGE, & ENDLAPS

SCREW FASTENERS – INTERMEDIATE SUPPORTS

Figure #3

Oversized Antisiphoning Channel
Roofing
Slopes of less than 3" on 12" are not recommended. For slopes of 3" on 12" or greater, end lap panels 6". Side laps should face away from the prevailing wind. Lay the first sheet along the eave at the down-wind side of the roof, farthest away from the direction of the prevailing winds (See Figure #4). Install sheets in the sequence shown in Figure #4.

Figure #4

![Prevaling Winds](image)

Maximum Purlin Spacing for Roof 2’ on Center

Figure #5 - Installation Options

**Option 1**
Install Metal Directly to Wood Frame
- Use Maximum 2’ Purlin Spacing
- Install Metal

*DO NOT USE THIS OPTION FOR HEATED SPACES UNLESS INSULATION AND MOISTURE BARRIER PROTECTION IS USED

**Option 2**
Install Metal on Solid Deck
- Lay Plywood Deck
- Apply Union REPEL Synthetic Underlayment or other Moisture Barrier Protection
- Install Metal

**Option 3**
Install Metal Over Existing Shingles
- Apply Union REPEL Synthetic Underlayment or other Moisture Barrier Protection
- Install Metal

* Proper ventilation and vapor barrier protection recommended for heated spaces

Allow an overhang a minimum of 1" at the eave to provide for a drip edge. Use inside closure at eave to prevent water infiltration, insect or bird infestation at openings. To protect against uplifting winds and to provide a finished appearance, apply rake trim or other standard gable trim. For slopes less than 3:12, apply 3/8” tape sealant as shown in Figure #6 along the top of all lap ribs. Do not block the siphon channel with the tape. For best results, apply a 7/8” lap tek screw into the crown of the rib to secure the side lap.

Figure #6 - Proper Application of Side Lap Tape

Allowable Uniform Loads Per Square Foot

<table>
<thead>
<tr>
<th>SPAN (INCHES)</th>
<th>LIVE LOAD (PSF)</th>
<th>WIND LOAD (PSF)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>18” 24” 30” 36” 48” 54”</td>
<td>18” 24” 30” 36” 48” 54”</td>
</tr>
<tr>
<td>29 Gauge</td>
<td>199 112 71 49 28 22</td>
<td>211 118 76 52 29 23</td>
</tr>
<tr>
<td>26 Gauge</td>
<td>268 150 96 67 37 29</td>
<td>276 155 99 69 38 30</td>
</tr>
</tbody>
</table>

NOTES:
1. Theoretical allowable loads are based on section properties and allowables calculated in accordance with 2001 AISI Specifications.
2. Theoretical allowable loads are based on three or more uniform spans.
3. For roof panels, deduct self weight for actual ‘live load’ capacity of the panel.
4. These loads are for panel strength. Frames, purlins, decks and fasteners must be designed to resist all loads imposed on the panel.
5. Check local building codes if panel testing is required.
Using two tape measures, locate point C by hooking one tape to a nail at point A and the second tape to a nail at point B. Extend the tapes until they cross and meet at 4' on the first tape and 5' on the second tape and place a temporary nail where 4' and 5' meet.

...the 4' and 5' measurements are the 4 and 5 sides of the 3...4...5... triangle.

Estimate a line from point A to point B by temporarily marking each point with a nail. The line must be parallel to the eave and in this example 3' long (this is the 3 side of the 3...4...5... Triangle).

Note:
For larger 3...4...5...Triangles multiple each side of the triangle by the desired increase in size. For example, if the roof panels are 25' from eave to ridge, multiply each side by a factor of 6 for an 18'..24'..30'..Triangle. Obviously, the closer the triangle vertical leg length is to matching the panel length, the greater the squaring accuracy.

Hook a chalk line to point A and pull it in line with point C and mark a chalk line on the roof deck.

This will be the square reference line for the MasterRib® panel installation.
Mark chalk lines parallel with the square reference line out ahead of panel installation so that panel square can be checked as the panels are installed. Suggested line spacing is one foot beyond 3 panels wide or about 10 feet.

Check for square by measuring the distance from the installed panel edge to the chalk line at both the eave and ridge. If the measurements match, then the installed panels are square, if not, adjustments must be made to bring the panels back into square.
Accessories

Pop Rivet (stainless)  cccSSPR.125 (1/8” x 3/16”)

#14 x 7/8” Hex Head Lap Tek Screw Metal-to-Metal Connection GLTEK

#9 x 1-1/2” Hex Head Woodmate Screw Metal-to-Wood Connection cccWS150

#9 x 2” Hex Head Woodmate Screw Metal-to-Wood Connection cccWS200

#10 x 1” Pancake Head Woodscrew GPHWS100250

1” Pancake Head Tek Screw GPHDS100250

Pipe Boot MF3 (Various sizes, heat treated & retrofit also available)

Emseal Expandable Universal Closure RCUNEXVMRSV

Versavent Universal Vented Closure VRCUNIVERSAL

Urethane Tube Sealant TUBESEALANT (10.3 oz)

26ga Flat Sheet cccGFS26415120 (41-9/16” x 10’)

29ga Flat Sheet cccPFS29415120 (41-1/4” x 10’)

Single Bead Butyl Tape BTLSLST (3/8” x 3/32” x .45”)

Double Bead Butyl Tape DBBTLSLST (7/8” x 3/16” x 40’)

Vented Closure Strip VRCMRO

REPEL Synthetic Roof Underlayment REPEL48X250SRU
### Trim Dimensions

<table>
<thead>
<tr>
<th>Trim Style</th>
<th>Dimensions</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>4-½” “T” Style Drip Edge</td>
<td>2-¼”</td>
<td>ccc4TSRE</td>
</tr>
<tr>
<td>6” “T” Style Drip Edge</td>
<td>3”</td>
<td>ccc6TSRE</td>
</tr>
<tr>
<td>2 X 2 Eave Edge</td>
<td>2”</td>
<td>ccc2X2RE</td>
</tr>
<tr>
<td>3 X 3 Eave Edge</td>
<td>3”</td>
<td>ccc3X3RE</td>
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<tr>
<td>3-½” Fascia Trim</td>
<td>½”</td>
<td>cccCFAH</td>
</tr>
<tr>
<td>5-½” Fascia Trim</td>
<td>½”</td>
<td>cccBFCAH</td>
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## Trim Dimensions

<table>
<thead>
<tr>
<th>7-½” Fascia Trim</th>
<th>Rake Trim</th>
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<tbody>
<tr>
<td>cccAFCAH</td>
<td>cccRAKEH</td>
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<tr>
<td>½”</td>
<td>7/8”</td>
</tr>
<tr>
<td>7-½”</td>
<td>3-¼”</td>
</tr>
<tr>
<td>½”</td>
<td>½”</td>
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<tr>
<td>1-½”</td>
<td>4-1/8”</td>
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<table>
<thead>
<tr>
<th>Preformed Valley</th>
<th>Transition Flashing</th>
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<tbody>
<tr>
<td>ccc20PV</td>
<td>cccTRANSH</td>
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<tr>
<td>½”</td>
<td>½”</td>
</tr>
<tr>
<td>8-½”</td>
<td>6-3/8”</td>
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<tr>
<td>1”</td>
<td>Specify Pitch</td>
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<table>
<thead>
<tr>
<th>Notched Transition Flashing</th>
<th>Gambrel Flashing</th>
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<tbody>
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<td>cccGNTRANS</td>
<td>cccGMBRLH</td>
</tr>
<tr>
<td>6”</td>
<td>6”</td>
</tr>
<tr>
<td>5-¼”</td>
<td>Specify Pitch</td>
</tr>
<tr>
<td>¾”</td>
<td>Specify Pitch</td>
</tr>
<tr>
<td>Length 41” (Coverage 36”)</td>
<td>5-¼”</td>
</tr>
<tr>
<td></td>
<td>Specify Pitch</td>
</tr>
<tr>
<td></td>
<td>¾”</td>
</tr>
</tbody>
</table>
## Trim Dimensions

### Notched Gambrel Flashing
- **cccGNGAMBREL**
  - 6-3/8”
  - 5-¼”
  - ¾”
  - Specify Pitch
  - Length 41” (Coverage 36”)

### Ridge & Hip Cap
- **cccRC14H126**
  - ½”
  - 1-¼”
  - 7/8”
  - 4-½”
  - Specify Pitch

### High Side Peak
- **cccGHSP**
  - 4-½”
  - 7/8”
  - 1-¼”
  - ½”
  - 4-1/8”
  - 4-½”
  - ½”
  - ½”
  - Specify Pitch

### Low Wall Flashing
- **cccLOWWALL**
  - ½”
  - 6”
  - 14”
  - Pitch

### Side Wall Trim
- **ccc105AH**
  - 4”
  - 4-1/8”
  - 7/8”
  - ⅛”
  - ½”

### End Wall Trim
- **cccB105AH**
  - 4-½”
  - 7/8”
  - Specify Pitch

### Notched End Wall Trim
- **cccGNENDWALL**
  - 6”
  - 5-¼”
  - ¾”
  - Specify Pitch
Install the roof substrate according to local building code requirements.

Install moisture barrier according to the manufacture’s recommended procedure and in compliance with local building code requirements.

Install the Fascia trim and butt ends.

Fasten trim with Pancake Screws 2’ apart along the length of the trim.

Fasten trim with Wood Screws spaced 2’ apart along the length of the trim.

Numbers indicate suggested trim assembly sequence.
Install moisture barrier according to the manufacturer's recommended procedure and in compliance with local building code requirements.

Fasten trim with Pancake Screws spaced 12” apart along the length of the trim.

Install continuous along drip edge at 1” up from face.

Install the “T” Style trim and butt ends.

Install the roof substrate according to local building code requirements.

Install the panel and overhang the panel a minimum of 1” beyond the “T” Style trim edge. See panel squaring method in this manual.

Apply Tube Sealant to the top side of the Inside Closure.

Place the Inside Closure over the top of the Butyl Tape.

Install continuous along drip edge at 1” up from face.

Fasten wood screw at the Inside Closure on each side of major ribs.
Moisture Barrier  
Install moisture barrier according to the manufacturer's recommended procedure and in compliance with local building code requirements.

Trim Pancake Screw  
Fasten trim with Pancake Screws spaced 12” apart along the length of the trim.

Tape Sealant  
Install continuous along drip edge at 1” up from face.

Eave Edge Trim  
Install the Eave Edge trim and butt ends.

Roof Substrate  
Install the roof substrate according to local building code requirements.

MasterRib® Panel  
Install the panel and overhang the panel a minimum of 1” beyond the Eave Edge trim edge. See panel squaring method in this manual.

Tube Sealant  
Apply Tube Sealant to the top side of the Inside Closure.

Inside Closure  
Place the Inside Closure over the top of the Butyl Tape.

Tape Sealant  
Install continuous along drip edge at 1” up from face.

Panel Wood Screw  
Fasten wood screw at the Inside Closure on each side of major ribs.
Rake

Numbers indicate suggested trim assembly sequence.

**Tape Sealant**
Apply Butyl Tape along the length of the panel.

**MasterRib® Panel**
Install the panel and overhang the panel a minimum of 1" beyond the "T" Style trim edge. See panel squaring method in this manual.

**Panel Wood Screw**
Fasten panels to the roof substrate using Wood Screws spaced according to the recommended fastening pattern and frequency, and in compliance with local building codes.

**Moisture Barrier**
Install moisture barrier according to the manufacture's recommended procedure and in compliance with local building code requirements.

**Roof Substrate**
Install the roof substrate according to local building code requirements.

**Rake Trim**
Install the Rake trim and overlap the ends 4". See lapping diagram in this manual.

**Trim Wood Screw**
Fasten trim with Wood Screws spaced 12" apart along the length of the trim.

**Trim Wood Screw**
Fasten trim with Wood Screws spaced 12" apart along the length of the trim.
Preformed Valley

Numbers indicate suggested trim assembly sequence.

1. Roof Substrate
   Install the roof substrate according to local building code requirements.

2. Moisture Barrier
   Install moisture barrier according to the manufacturer’s recommended procedure and in compliance with local building code requirements.

3. Preformed Valley Trim
   Install the Valley trim and overlap the ends 4”. See lapping diagram in this manual.

4. Trim Pancake Screw
   Fasten trim with Pancake Screws spaced 12” apart along the length of the trim. See lapping diagram fastener pattern in this manual.

5. MasterRib® Panel
   Install the panel a minimum of 3” up from the water diverter at the bottom of the Valley and minimum of 3” down from the top of the Valley. See panel squaring method in this manual.

6. Tube Sealant
   Apply Tube Sealant to the top side of the Inside Closure.

7. EMSEAL Closure
   Place EMSEAL, a self-sealing closure, parallel to each side of the Valley center water diverter. Closure should be up from the panel end about 1”. See panel minimum set back above.

8. Panel Wood Screw

Notes:
1. See Valley Lapping - Page 25
2. See Valley Cutting - Page 26
**Transition**

*Numbers indicate suggested trim assembly sequence.*

- **MasterRib® Panel**
  Install the panel up 1" the transition bend. See panel squaring method in this manual.

- **Trim Pancake Screw**
  Fasten trim with Pancake Screws spaced 12" apart along the length of the trim.

- **Inside Closure**
  Place the Inside Closure over the top of the Butyl Tape. The closure should be about 1" up from the panel end.

- **Tube Sealant**
  Apply Tube Sealant to the top side of the Inside Closure.

- **Panel Wood Screw**
  Fasten panels to the roof substrate using Wood Screws spaced according to the recommended fastening pattern and frequency, and in compliance with local building codes.

- **Transition Trim**
  Place the Transition Flashing Trim over the Outside Closure.

- **Trim Wood Screw**
  Fasten trim with Wood Screws spaced 18" apart along the length of the trim, through the rib. See lapping diagram.

- **Tape Sealant**
  Apply Butyl tape across the width of the panel.

- **Tube Sealant**
  Apply Tube Sealant to the top side of the Outside Closure.

- **Outside Closure**
  Place the Outside Closure over the top of the Butyl Tape.

- **Tape Sealant**
  Apply Butyl Tape across the width of the panel.

- **Panel Wood Screw**
  Fasten panels to the roof substrate using Wood Screws spaced according to the recommended fastening pattern and frequency, and in compliance with local building codes.

- **MasterRib® Panel**
  Install the panel and overhang the panel a minimum of 1" beyond the eave edge. See panel squaring method in this manual.

- **Moisture Barrier**
  Install moisture barrier according to the manufacture's recommended procedure and in compliance with local building code requirements.

- **Roof Substrate**
  Install the roof substrate according to local building code requirements.
Gambrel

Numbers indicate suggested trim assembly sequence.

MasterRib® Panel
Install the panel up 1" the transition bend. See panel squaring method in this manual.

Trim Pancake Screw
Fasten trim with Pancake Screws spaced 12" apart along the length of the trim.

Panel Wood Screw
Fasten panels to the roof substrate using Wood Screws spaced according to the recommended fastening pattern and frequency, and in compliance with local building codes.

Tube Sealant
Apply Tube Sealant to the top side of the Inside Closure.

Gambrel Trim
Place the Gambrel Flashing Trim over the Outside Closure.

Tube Sealant
Apply Tube Sealant to the top side of the Inside Closure.

Trim Wood Screw
Fasten trim with Wood Screws spaced 18" apart along the length of the trim, through the rib.

MasterRib® Panel
Install the panel and overhang the panel a minimum of 1" beyond the eave edge.

Inside Closure
Place the Inside Closure over the top of the Butyl Tape up about 1" from the panel end.

Tape Sealant
Apply Butyl Tape across the width of the panel.

Panel Wood Screw
Fasten panels to the roof substrate using Wood Screws spaced according to the recommended fastening pattern and frequency, and in compliance with local building codes.

Outside Closure
Place the Outside Closure over the top of the Butyl Tape.

Tape Sealant
Apply Butyl Tape across the width of the panel.

Moisture Barrier
Install moisture barrier according to the manufacturer’s recommended procedure and in compliance with local building code requirements.

Roof Substrate
Install the roof substrate according to local building code requirements.
Trim Wood Screw
Fasten trim with Wood Screws spaced 18” apart along the length of the trim, through the rib. See lapping diagram.

Tube Sealant
Apply Tube Sealant to the top side of the Outside Closure.

Hip Trim
Place the HipTrim over the EMSEAL Closure.

EMSEAL Closure
Place EMSEAL self sealing closure parallel to each side of the hip center line so that hip fastener penetrates the center of the closure. Closure should be up from the panel end about 1”.

Tape Sealant
Apply Butyl Tape across the width of the panel.

Panel Wood Screw
Fasten panels to the roof substrate using Wood Screws spaced according to the recommended fastening pattern and frequency, and in compliance with local building codes.

MasterRib® Panel
Install the panel and overhang the panel a minimum of 1” beyond the eave edge. See panel squaring method in this manual.

Moisture Barrier
Install moisture barrier according to the manufacturer’s recommended procedure and in compliance with local building code requirements.

Roof Substrate
Install the roof substrate according to local building code requirements.
Ridge
Numbers indicate suggested trim assembly sequence.

Trim Wood Screw
Fasten trim with Wood Screws spaced 18” apart along the length of the trim, through the rib. See lapping diagram.

Tube Sealant
Apply Tube Sealant to the top side of the Outside Closure.

Ridge Trim
Place the Ridge Trim over the Outside Closure.

Outside Closure
Place the Outside Closure over the top of the Butyl Tape.

Tape Sealant
Apply Butyl Tape across the width of the panel.

Panel Wood Screw
Fasten panels to the roof substrate using Wood Screws spaced according to the recommended fastening pattern and frequency, and in compliance with local building codes.

MasterRib® Panel
Install the panel and overhang the panel a minimum of 1” beyond the eave edge. See panel squaring method in this manual.

Moisture Barrier
Install moisture barrier according to the manufacturer’s recommended procedure and in compliance with local building code requirements.

Roof Substrate
Install the roof substrate according to local building code requirements.
Vented Ridge

Numbers indicate suggested trim assembly sequence.

Trim Wood Screw
Fasten trim with Wood Screws spaced 18" apart along the length of the trim, through the rib. See lapping diagram fastener pattern in this manual.

Ridge Trim
Place the Ridge Trim over the Outside Closure.

Vent Closure
Apply the self stick Versa Vent to the underside along the outside edge of the Ridge Cap Trim.

Panel Wood Screw
Fasten panels to the roof substrate using Wood Screws spaced according to the recommended fastening pattern and frequency, and in compliance with local building codes.

MasterRib® Panel
Install the panel and overhang the panel a minimum of 1" beyond the eave edge. See panel squaring method in this manual.

Moisture Barrier
Install moisture barrier according to the manufacture’s recommended procedure and in compliance with local building code requirements.

Roof Substrate
Install the roof substrate according to local building code requirements.
High Side Peak

Numbers indicate suggested trim assembly sequence.

Trim Wood Screw
Fasten trim with Wood Screws spaced 2' apart along the length of the trim.
See lapping diagram.

High Side Peak Trim
Place the High Side Peak Trim over the Outside Closure.

Trim Wood Screw
Fasten trim with Wood Screws spaced 18" apart along the length of the trim, through the rib.
See lapping diagram.

Tube Sealant
Apply Tube Sealant to the top side of the Inside Closure.

Outside Closure
Place the Outside Closure over the tip of the Butyl Tape.

MasterRib® Panel
Install the panel and overhang the panel a minimum of 1" beyond the eave edge. See panel squaring method in this manual.

Tape Sealant
Apply Tape Sealant across the width of the panel.

Panel Wood Screw
Fasten panels to the roof substrate using Wood Screws spaced according to the recommended fastening pattern and frequency, and in compliance with local building codes.

Moisture Barrier
Install moisture barrier according to the manufacturer's recommended procedure and in compliance with local building code requirements.

Roof Substrate
Install the roof substrate according to local building code requirements.
Side Wall

 Numbers indicate suggested trim assembly sequence.

1. **Roof Substrate**
   - Install the roof substrate according to local building code requirements.

2. **MasterRib® Panel**
   - Install the panel and overhang the panel a minimum of 1” beyond the eave edge. See panel squaring method in this manual.

3. **Panel Wood Screw**
   - Fasten panels to the roof substrate using Wood Screws spaced according to the recommended fastening pattern and frequency, and in compliance with local building codes.

4. **Trim Wood Screw**
   - Fasten trim with Wood Screws spaced 2’ apart along the length of the trim. See lapping diagram.

5. **Tape Sealant**
   - Apply Butyl Tape along the length of the panel.

6. **Side Wall Trim**
   - Place the Side Wall Trim over the Butyl tape and overlap the ends 4”.
     See lapping diagram in this manual.

7. **Counter Flashing**
   - Position the Counter Flashing above the Side Wall Trim as shown. Some applications may not need counter flashing.

8. **Counter Flashing**
   - Position the Counter Flashing above the Side Wall Trim as shown. Some applications may not need counter flashing.

9. **Trim Wood Screw**
   - Fasten trim with Wood Screws spaced 2’ apart along the length of the trim. If wall material is not wood, fasteners will be by others.

10. **Tube Sealant**
    - Apply Tube Sealant continuously along the Counter Flashing and generously filling the space between the flashing and the wall. Round or slope the Sealant top so that water will run off.

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**Side Wall Trim**

- Numbers indicate suggested trim assembly sequence.
End Wall

Numbers indicate suggested trim assembly sequence.

- **Tube Sealant**
  - Apply Tube Sealant continuously along the Counter Flashing and generously filling the space between the flashing and the wall. Round or slope the Sealant top so that water will run off.

- **Trim Wood Screw**
  - Fasten trim with Wood Screws spaced 2’ apart along the length of the trim. If wall material is not wood, fasteners will be by others.

- **Counter Flashing**
  - Position the Counter Flashing above the Side Wall Trim as shown. Some applications may not need counter flashing.

- **End Wall Trim**
  - Place the End Wall Trim over the Butyl tape and overlap the ends 4”. See lapping diagram in this manual.

- **Outside Closure**
  - Place the Outside Closure over the top of the Butyl Tape.

- **Tube Sealant**
  - Apply Tube Sealant along the length of the Outside Closure.

- **Trim Wood Screw**
  - Fasten trim with Wood Screws spaced 18” apart along the length of the trim, through the rib. See lapping diagram.

- **MasterRib® Panel**
  - Install the panel and overhang the panel a minimum of 1” beyond the eave edge. See panel squaring method in this manual.

- **Moisture Barrier**
  - Install moisture barrier according to the manufacture’s recommended procedure.

- **Roof Substrate**
  - Install the roof substrate according to local building code requirements.

- **Tape Sealant**
  - Apply Butyl Tape along the length of the panel.

- **Panel Wood Screw**
  - Fasten panels to the roof substrate using Wood Screws spaced according to the recommended fastening pattern and frequency, and in compliance with local building codes.
Valley Lapping

After cutting notches and applying Tube Sealant, slide the up slope valley into the hem groove while lapping over the top of the low slope valley 4”.

Apply two rows of Tube Sealant spaced 2” apart.
Valley Cutting at Eave

1. Cut along dashed lines
2. Bend Line, bend left tab down 90°
3. Bend Line, bend right tab down 90°
Pipe Flashing

Cut pipe flashing along the pipe diameter marking.

Apply tube sealant to the underside of the pipe flashing.

Slide pipe flashing down over the pipe.

Press the pipe flashing into contours of panel configuration and fasten to the MasterRib® panel with self-sealing stitch screws. Apply additional sealant around base if desired.
**STEP 1**

Install panels around curb.

- Remove panel material to outside edges of major rib.
- 18” min.

**Note:** Curb framing and underlayment not shown for clarity. Curb must be properly wrapped with approved membrane underlayment prior to installation of panels/flashings.

**STEP 2**

Apply Headwall and Sidewall flashings.

Alternate pre-notched highwall flashing.
STEP 3
Install low wall flashing.

Set flashing and field trace against curb to determine trim profile prior to cut.

Detail A-A typical

STEP 4
Install Counter Flashing.

Remove panel material each side

See detail A-A
STEP 5
Install foam closure and prepare for upper panel install.

STEP 6
Fasten upper panel over Low Wall flashing.