



### AGRICULTURAL

LIGHT COMMERCIAL

RESIDENTIAL

### **STANDARD DETAILS & TOTAL SYSTEMS** FOR METAL ROOFING AND SIDING

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Due to Product improvements, changes and other factors, Fabral reserves the right to change or delete information herein without prior notice or obligation to make changes in products previously purchased.

The details and written instructions described in this manual are suggested installation methods to ensure quality application of our products, and should be considered as a guideline only. FABRAL recognizes that installation techniques can vary based on builder and geographical preferences, and that there are other acceptable ways to install our products.

### INSTALLATION INSTRUCTIONS

#### Building Design and Construction

In order to ensure the anticipated performance andlongevity, protect metal panels from potentially corrosive situations and materials. When treated lumber will be in direct contact with metal panels or flashings please note the following: Galvanized steel is compatible with the CCA (Chromated Copper Arsenate) pressure-treated lumber that was predominantly used before 2004, but not with the older Penta treated lumber or the new ACQ (Alkaline Copper Quartenary), CA (Copper Azole), or CBA (Copper Boron Azole). Stainless steel or other special treated fasteners should be used into these non-compatible pressure treated lumbers. Aluminum must be separated from contact with all treated wood since the soluble copper in the preservative is corrosive to aluminum. Likewise, dissimilar metals also require a protective barrier between them to prevent galvanic corrosion. Request FABRAL Technical Bulletins #803, 106, and 107 for more information on treated lumber and dissimilar metals.

PLASTIC, BUILDERS' FELT, BITUMINOUS PAINT, CAULKING, OR GASKET MATERIAL MAY BE USED TO SEPARATE PANELS FROM TREATED WOOD AND DISSIMILAR METALS. When using aluminum panels in direct contact with steel, use a separator as described above and fasten with Stainless Steel screws.

Fertilizer, lime, acids, feeds, manure, soils, and many other compounds also cause corrosion in metal panels. Contact between metal panels and any potentially corrosive materials should be prevented.

Porous insulation materials may absorb and retain moisture, and should not be used in direct contact with metal panels. Use a vapor barrier such as polyethylene plastic or 30-lb felt to prevent moisture from contacting both the insulation and the metal panel.

FABRAL's translucent panels are intended for siding applications only. In all situations, foot traffic should be avoided on translucent panels. Translucent panels used in roofing applications will break down in a short time and cause staining and premature corrosion of the metal panels below. If used on roofs, apply butyl caulking to separate the fiberglass panels from the metal. Translucent panels should be cleaned and sealed regularly, as recommended by the translucent panel manufacturer.

#### Purlins, Girts and Roof Deck

The substructure to which the metal panels are fastened must be properly spaced and sufficiently thick to provide a roof or wall system able to meet required design loads.

A 2" nominal lumber thickness or 1" nominal thickness are both acceptable purlins. If snow guards are to be installed in the future, a 2 x 8 purlin can be installed in the area for snow guard installation. Call engineering for locations of 2 x 8 purlins. When using purlins, FABRAL recommends a maximum spacing of 24" on-center (note that 5V requires solid decking). Pullout values decrease if the fasteners protrude completely through the purlins. Kiln-dried softwood is recommended for purlins or decking (pine, fir, hemlock, and spruce). Hardwoods are difficult to fasten into without splitting and contain tannic acids that are corrosive to metal panels. Green (non-kiln-dried) lumber may warp, twist, and shrink as the wood seasons fully, causing waviness in the panels as well as loosening and leaking of the fasteners.

Solid decking is required for all residential applications. When using solid decking or sheathing, always use 30-lb felt or underlayment and plan on using closer fastener spacing and larger diameter #14 screws. (Refer to the tables on page 6).

On re-roofing projects where the condition of the old decking is in question, or where existing shingles will be left in place, new 2x4 or 1x4 purlins should be fastened through the decking and into the rafters. This will provide a solid framework for attaching the metal panels. For more detailed information on re-roofing applications, consult FABRAL Technical Bulletin #721, Re-Roofing With Metal. Load tables are available for all FABRAL panels; contact FABRAL for additional information.

#### Roofing

Panel sidelaps should face away from wind driven rain. To accomplish this, begin by installing the first sheet square with the eave and gable at the down wind end of the roof, farthest away from the source of prevailing winds or away from the primary viewing location.

In applications requiring a panel endlap, please refer to the detailed instructions in this booklet. For best results, lap panels as shown and install in the indicated sequence. ALL ENDLAPS REQUIRE SEALANT. WHEN WEATHER-TIGHTNESS IS CRITICAL LISE SEAL ANT TAPE IN ALL

TIGHTNESS IS CRITICAL, USE SEALANT TAPE IN ALL SIDELAPS.

To provide a drip edge, allow an overhang of 1 to 2 inches at the eave. At the gable edge, use a gable or sidewall flashing. This will keep weather out, prevent lifting in high winds, and provide a neat, finished appearance. The trim and roofing sheet should be fastened every 12 to 24 inches along the gable edge. Do not step on panel ribs or on trim pieces to prevent kinking.

#### Roof Pitch

The metal roofing panels shown in this manual require a minimum slope of 2½" per foot to ensure proper drainage. Refer to the rain-carrying table in this booklet for the maximum allowable panel length per slope that will provide adequate drainage. For longer slopes and lower roof pitches, contact FABRAL for other suitable profiles.

#### Bending and Bowing

Aluminum and Steel roofing and siding sheets are rollformed from hardened, tempered metal for maximum strength. If a sheet must be bent, a gentle 90-degree bend is the maximum recommended. Metal should not be re-bent once it has been formed, nor should it be folded back on itself. When a metal roofing sheet must be installed on a curved roof, screws should be installed at every overlapping rib at the sheet ends to resist the natural tendency of the metal to spring back. The standard fastening pattern is permitted over the rest of the sheet. When installing the metal panels shown in this booklet over a curved arch, the minimum radius of the arch is 18' for aluminum panels and 24' for steel panels. Use sealant tape or butyl caulking at all sidelaps and endlaps. Additional care and fasteners must be provided when securing the top and bottom purlins on an arched rafter building to prevent the curved panels from pulling the purlins loose from the rafters. Ring-shank pole barn nails, heavy wood screws, lag screws, or bolts are often used for attaching these purlins.

#### Siding

Siding should be installed using the standard fastening and overlap patterns to ensure optimum performance. For strong, neat corners use hemmed corner flashings. DO NOT RUN SIDING SHEETS ALL THE WAY TO THE GROUND. INSTEAD, PROVIDE A PROTECTIVE BASE OF CONCRETE, MASONRY, TREATED WOOD, OR SIMILAR MATERIAL AND TERMINATE THE SIDING SHEETS 6" ABOVE GRADE.

If siding sheets are installed horizontally, use sealant tape or butyl caulking at the vertical laps to ensure weather-tight joints. Install panels from the bottom up so that water is directed away from, and not into, the lap joints.

#### Fastening

FABRAL can supply either screws or nails for fastening into dimension lumber. Always use screws with solid sheathing. Screws for use with steel panels are galvanized and then coated with an organic polymer for optimum corrosion resistance. For best results with aluminum panels, use #300 series stainless steel screws.



Wood screws with combination metal and neoprene washers should be installed in the flat area of the panel adjacent to the ribs, and tightened such that the washer is compressed as illustrated above. This will ensure a lasting, leak-proof seal. **REMOVE ANY METAL FILINGS CREATED BY THE DRILLING ACTION OF THE SCREWS OR PRE-DRILLING OF THE HOLES TO AVOID RUST STAINING ON THE PANEL SURFACE.** Stitch screws should be used in the panel side joints when butyl sealant is used. They may also be used any time the side joint is not pulled together tightly to improve the appearance. Refer to the fastening schedules in this booklet for the correct fastener locations.

#### Panels adhered with CondenStop

Full length panels from eave to ridge are recommended, eave overhangs, valleys and any other edges exposed to the weather should be painted to seal microfibers from absorbing moisture from the outside. The use of butyl sealant tape at these locations will also help to seal the microfibers and prevent moisture from passing beyond the butyl. Wet stack storage still applies to panels with condenstop applied. Please store properly by covering and tilting one end. It's always best if they can be stored inside if not being immediately installed.

#### Flashing and Trim

Always begin flashing installation from the bottom and work up, so that upper flashings are lapped on top of lower flashings. This will prevent moisture from leaking under the flashings and into the structure. Endlap flashings a minimum of 6" and seal the lap joints with sealant. Extend flashings 4-6" beyond the building, cut along the bend lines, apply sealant, and fold the side flaps in and the top flaps down to cap off the ends. Secure with pop-rivets or stitch screws.

Some roof conditions, such as valleys, may require a longer endlap and/or a larger flashing to properly drain moisture from the roof. Factors that influence flashing size, shape, and endlap requirements include roof pitch, roof geometry, slope length, and climatic factors (such as heavy snowfall or rainfall).

Whenever possible, begin trim installation at the downwind end of the roof, farthest away from the source of prevailing winds, to allow flashing laps to face away from wind-driven rain. Refer to the details in this book for the proper location of fasteners and sealants.

The flashings and trims shown in this book are standard parts. Custom trims are available to meet your specific design needs. Contact a Fabral dealer for information on custom trim.

Refer to the SMACNA Architectural Sheet Metal Manual for additional information about detailing and installing flashings.

#### Safety

Work safely when installing metal products and use extreme caution on the roof at all times. Wear gloves and safety glasses to reduce the risk of injury, and use hearing protection when operating power tools. Be sure that ladders are safely positioned and properly secured. Safety harnesses or other special equipment may be required; Consult OSHA guidelines for compliance with all safety requirements.

Do Not walk on panels until all the fasteners are installed. Metal roofing panels are slippery when wet, dusty, frosty, or oily -- Do Not attempt to walk on a metal roof under these conditions. Wear softsoled shoes to improve traction and to minimize damage to the paint finish. Always be aware of your position on the roof relative to any roof openings, roof edges, co-workers, and penetrations. Installing metal panels or flashings on a windy day can be dangerous and should be avoided if possible.

#### **Cutting Aluminum Panels**

To make a cut parallel to the ribs, score the panel deeply with a sharp utility knife and bend back-and-forth along the score, breaking the metal off cleanly. For cuts across the ribs, use straight-cut snips, electric or pneumatic shears, a portable profile shear, or an electric nibbler. Some installers prefer using a circular saw with a metal cutting blade (a fine-tooth hardwood blade, or a standard combination blade reversed in the saw works also). Light oil or soap on the blade will make cutting easier.

#### **Cutting and Drilling Steel Panels**

Steel panels may be cut with metal snips, electric or pneumatic shears, a portable profile shear, or an electric nibbler. Some installers prefer using a circular saw to cut metal panels. Do Not use selfconsuming abrasive blades because of the following: 1. Abrasive blades burn the paint and galvanizing at the cut edge, leaving edges that are jagged and unsightly and rust more quickly 2. Abrasive blades produce hot metal filings that embed in the paint and cause rust marks on the face of the panel. If saw cutting cannot be avoided, select a carbide-tipped blade specially designed for cutting light-gage ferrous metal panels. These blades are now available at many home centers and lumber yards. 1. All saw cut panels must be turned face down and cut in a location down-wind and well away from the building and other panels to avoid embedment of metal filings on other panels 2. All saw cut panels must be thoroughly wiped to ensure the removal of all metal filings. Pre-drilling wall panels gives uniform alignment of screw rows. BE SURE TO REMOVE ANY FILINGS ONCE PANELS ARE INSTALLED TO AVOID RUST MARKS FROM THE FILINGS.

#### **Building Maintenance**

A metal roof should be inspected annually and cleaned as necessary to maintain its beauty and performance. Any debris or residue, including leaves, twigs, and dust should be cleaned off promptly to prevent moisture entrapment against the metal, which may lead to finish deterioration or premature corrosion. Flashings may need to be re-sealed periodically in order to maintain optimum weathertightness.

#### **Proper Storage**

Store metal panels indoors when possible; if outdoors, cover and elevate. Elevate one side higher for water drainage. Never cover in plastic; us a tarp that can breath. Allow for air circulation. If a bundle gets wet, break bands and separate sheets; allow sheets to dry completely and only re-stack if completely dry. Product should be stored for a maximum of 2-4 weeks before being installed.

#### Spray Foam Insulation

When insulating metal with spray foam insulation, the first application layer should be getting the insulation behind all framing members. When completing the insulation, ensure the spray foam is installed in 2" thick layers (maximum) until desired thickness is achieved.

## ESTIMATING & ROOF TYPES

#### Estimating Metal Roofing, Siding & Flashings

Panel lengths are to be determined by the truss top chord or actual field measurements. Remember to add for overhangs at the eaves; subtract for a gap at the ridge. Siding should be kept up away from the ground with a skirt board.

### Number of Panels

The coverage of the panel being used will determine the number of panels at a length (i.e., 3' coverage panel on a 30 ft. long building would require 10 panels on each side of the ridge or 20 panels at the particular length).

### Horizontal Measurement to a Roof

Divide the building width in half, then multiply by the slope factor (i.e., 40' wide building with 4/12 slope. 40 divided by 2 equals 20' times 1.054 equals 21'-1" in slope dimension). Allow for 1/2" to 1" gap at peak and 1" to 2" eave overhang.

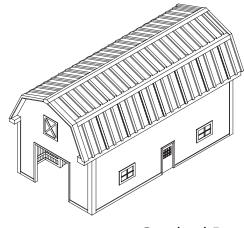
Roof Pitch	Slope Factor
3/12	1.031
4/12	1.054
5/12	1.083
6/12	1.120
8/12	1.202
10/12	1.302
12/12	1.414

### **Flashing Conditions**

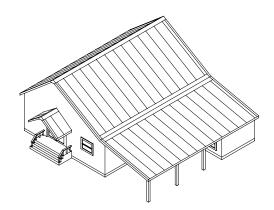
Roof - Eave, Ridge, Gable, Sidewall, Endwall, Valley, Hip, Transition, Gambrel, Soffits Siding - Base Perimeter, Corners, Inside Corners, Man Doors, Windows, Sliding Doors, Overhead Doors

Please contact Fabral's Engineering Department for all your estimating & specification needs.

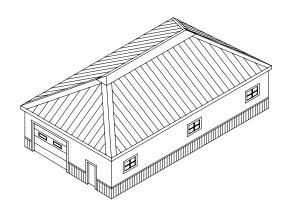
800.477.2741 717.735.1257 Fax



Gambrel Roof



**Transition Roof** 





## LOAD TABLES & TESTING

### LOAD TABLES & TESTING

### Wind Speed Tables for Grandrib 3<sup>®</sup>, GRG & MightiRib

Substrate	Fastener	9"	12"	15"	18"	21"	24"
3/4" Plywood	#14 Woodtite	317 mph	274 mph	245 mph	225 mph	207 mph	195 mph
5/8" Plywood	#14 Woodtite	245 mph	212 mph	189 mph	172 mph	159 mph	150 mph
1/2" Plywood	#14 Woodtite	269 mph	233 mph	209 mph	190 mph	176 mph	164 mph
19/32" OSB	#14 Woodtite	205 mph	177 mph	158 mph	144 mph	133 mph	125 mph
7/16" OSB	#14 Woodtite	171 mph	148 mph	133 mph	120 mph	112 mph	104 mph
SPF #2 (1.5" Pen.)	#14 Woodtite	388 mph	336 mph	300 mph	275 mph	242 mph	212 mph
SPF #2 (1" Pen.)	#10 Woodtite HLX	273 mph	236 mph	211 mph	193 mph	178 mph	167 mph
SPF #2 (1.5" Pen.)	#10 Woodtite HLX	359 mph	311 mph	278 mph	254 mph	234 mph	212 mph
	Screws Per Square	210	160	130	110	90	80

Spacing of Fastener Rows

Table per ASCE 7-10: category II (residential), exposure B (neighborhood), 4:12 gable roof, mean roof height 18', roof zone 3

This table is provided as a courtesy to our customers to give approximate allowable wind speeds for typical residential buildings using the standard fastening schedule as shown in this book. Fasteners shall have an embedment depth listed above or fully penetrating plywood or OSB. Contact Fabral Engineering for detailed design values.

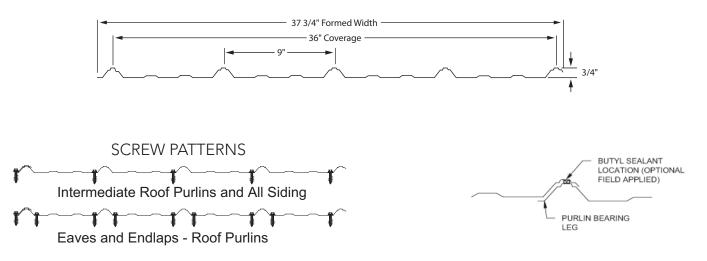
### **UL RATINGS**

UL790 Class A Fire Rating applies to all Steel panels 29 ga and thicker and all Aluminum panels .032" and thicker.

UL2218 Class 4 Hail Impact Rating applies to all Steel panels 29 ga and thicker and all Aluminum panels .032" and thicker.

# STEEL EXPOSED FASTENER PANELS





80 screws per square. See page 6 for a load table

### **GRANDRIB 3+**

This enhanced version of the original Grandrib 3 panel has a G-90 coating for better weather performance and durability. Grandrib 3 Plus is a thicker metal panel, increasing strength and appearance while still providing the traditional benefits of a metal roof. Complete with a wide range of color selections, this panel is a superior choice.

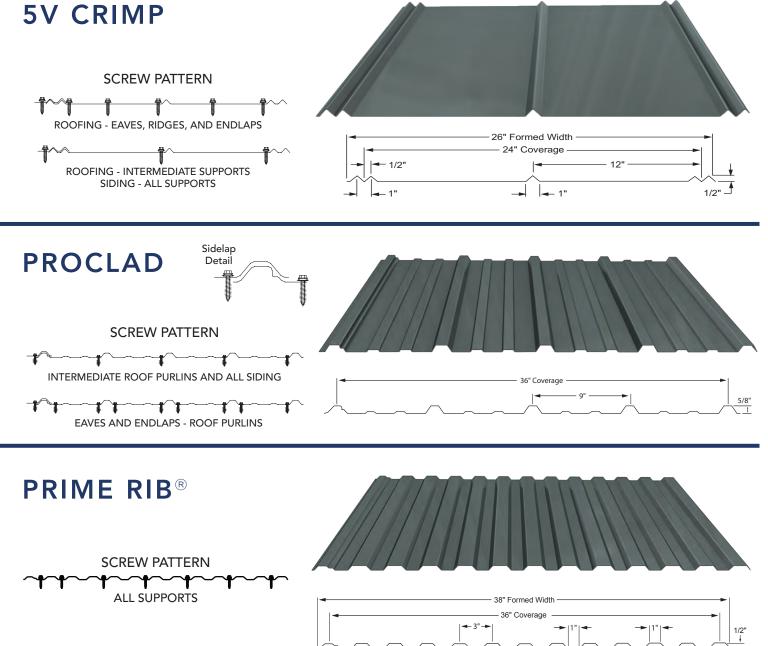
### **GRANDRIB 3**®

Grandrib 3 is the "benchmark of the industry" and can be used for walls and roofs. This unique and versatile panel is available in a variety of popular colors. The panels have clean traditional lines, and are manufactured from the best structural steel available.

### GRG

These panels are made of utility grade construction with zinc aluminum protective coating. The vertical lines and twenty-one popular colors make this an economical and durable solution for a variety of structures.

### 39" Formed Width - 36" Coverage - 12" -► | - 4 3/8" - | 3 1/4" | - 4 3/8" -1 3/16" 4



#### ROOFING - EAVES, RIDGES AND ENDLAPS └──┲╯ ~+⁄ $\sim$ ᡯ

+″ 4

**ROOFING - INTERMEDIATE SUPPORTS** SIDING - ALL SUPPORTS

SCREW PATTERN

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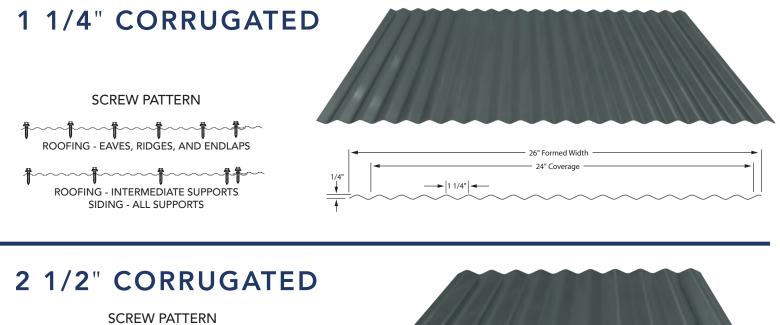
# **MIGHTI-RIB**<sup>®</sup>

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# STEEL EXPOSED FASTENER PANELS

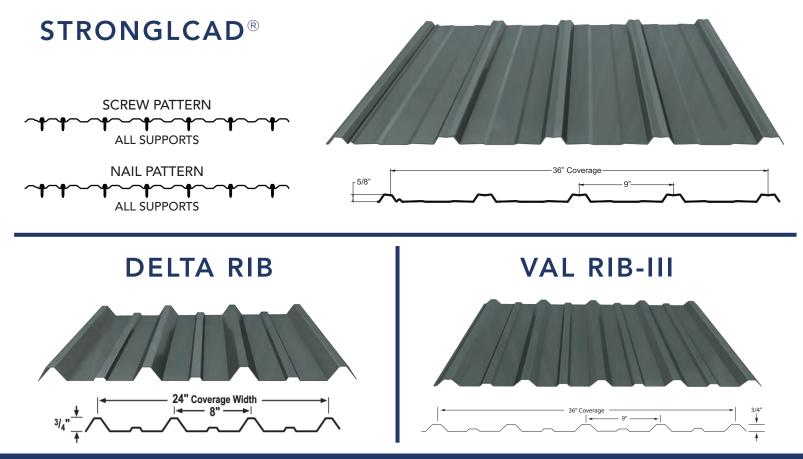




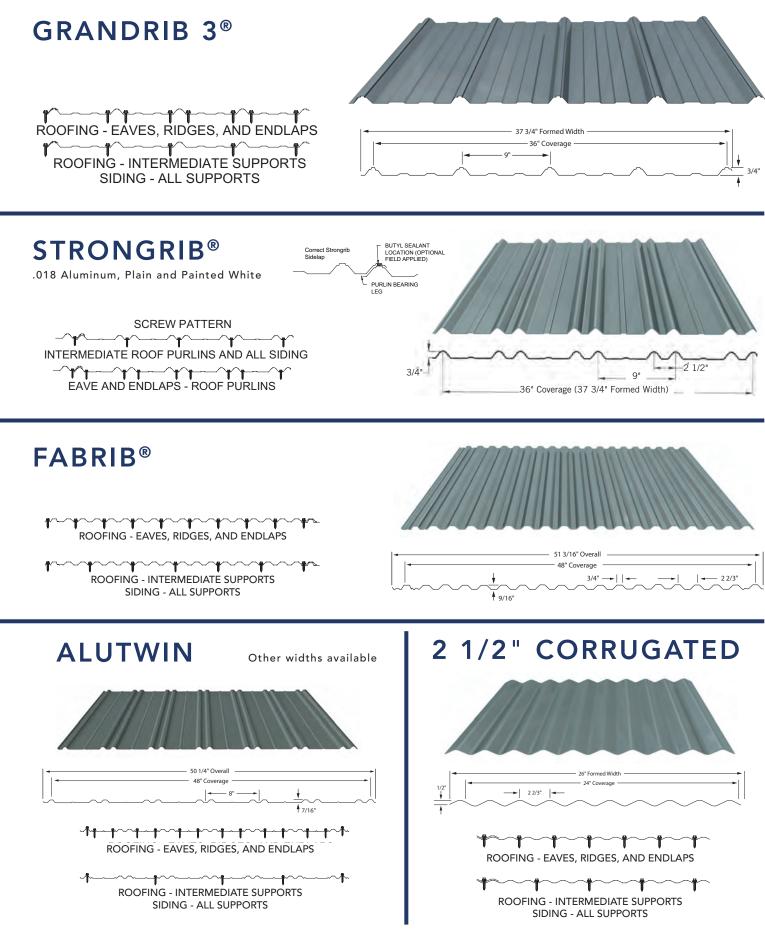
ROOFING - INTERMEDIATE SUPPORTS SIDING - ALL SUPPORTS 26" Formed Width → 1/2" → 24" Coverage →

Note: Roofing panels require side laps cover two corrugations.

\* Wall application- 24" coverage with 1 rib overlap • Roof application- 21 1/3" coverage with 2 rib overlap



# ALUMINUM EXPOSED FASTENER PANELS



Lengths greater than 16' on aluminum panels are not recommended due to expansion and contraction.

## FLASHING DETAILS - POST FRAME

### **ENDLAP & RAIN CARRYING TABLES**

1. Apply 3/32" x 1/2" butyl endlap sealant on bottom ENDLAP panel just below centerline of purlin (see endlap diagram for location) on panel #1. 2. Apply sidelap sealant on panel #1 and connect to endlap sealant. STEEL (2 runs) 3. Place panel #2 so it overlaps panel #1, 12" FASTENERS @ ENDLAP PATTERN as shown. Install screws per endlap fastening ROOF PANEL pattern. DOWN SLOPE 4. Apply sidelap sealant on panel #2 to connect to A 6 1/2 sidelap sealant of panel #1. OVERLAPPING 5. Place panel #3 over sidelap of #1 and #2. 3 1/2 FROM PURI IN EDGE 12" Total Lap 6. Apply endlap sealant on panel #3. PREVAILING WIND 7. Apply sidelap sealant on panel #3 and connect with endlap sealant. 8. Place panel #4 over endlap of panel #3. Install screws per endlap pattern. ENDLAP TAPE ALIGN 9. Repeat sequence for entire roof. WITH PURLIN EDGE INSTALLATION SEQUENCE FOR STRONGRIB, GRANDRIB 3. 5V CRIMP, ALU-TWIN ENDLAP TAPE SIDELAP TAPE THIS EDGE THIS EDGE SIDELAP TAPE THIS EDGE ß **%** EAVE OVERHANG 1" TO 2" WHEN INSTALLING 2 1/2" OR 1 1/4" "L" (INFEET) CORRUGATED ROOFING USE SKIRT BOARD OF INSTALLATION SEQUENCE AS SHOWN TREATED LUMBER OR STARTEND FOUNDATION OF BLOCK 12" TO 18" FROM GROUND LEVEL

#### ALLOWABLE PANEL LENGTHS (ft.) ALONG THE SLOPE FOR 4" RAINFALL PER HOUR

Danal		Roof Slope					
Panel Name	Minimum Slope	2 1/2:12	3:12	3 1/2:12	4:12	5:12	6:12
Grandrib 3	2 1/2:12	58	61	64	67	73	78
Prime Rib	2 1/2:12	39	41	43	45	49	53
5V	2 1/2:12	43	45	47	49	54	58
2 1/2" Corrugated	2 1/2:12	28	29	31	32	35	38
1 1/4" Corrugated	2 1/2:12	16	16	17	18	20	21
Alutwin	2 1/2:12	37	39	41	43	46	50
Fabrib	2 1/2:12	32	34	36	38	41	44

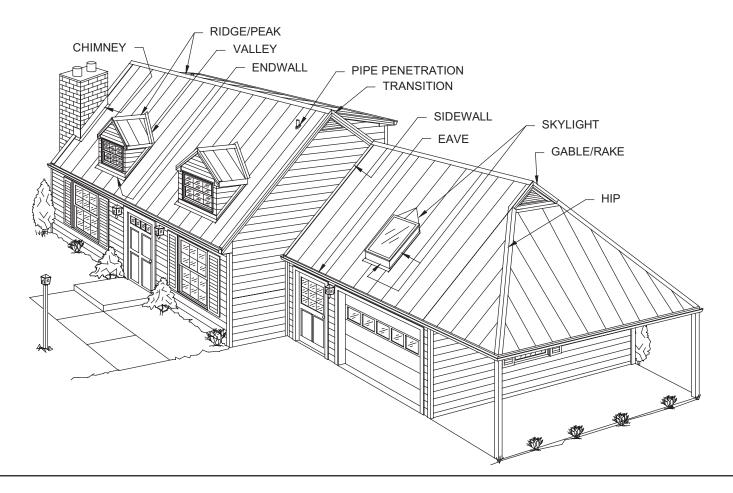
#### Notes For Rain-Carrying Tables

- 1. All values based on a 1-hour duration storm of 4"/hr. intensity.
- 2. Values represent the point at which the panel ribs will flood.
- 3. Size and frequency of penetrations can greatly reduce the amount of water removed from a roof.
- 4. All panel endlaps must be caulked.
- 5. When weather-tightness is crtical, use sealant tape in all sidelaps.

#### ALUMINUM (All runs or steel 3+runs)

## **EXPOSED FASTENER PANEL - RESIDENTIAL**

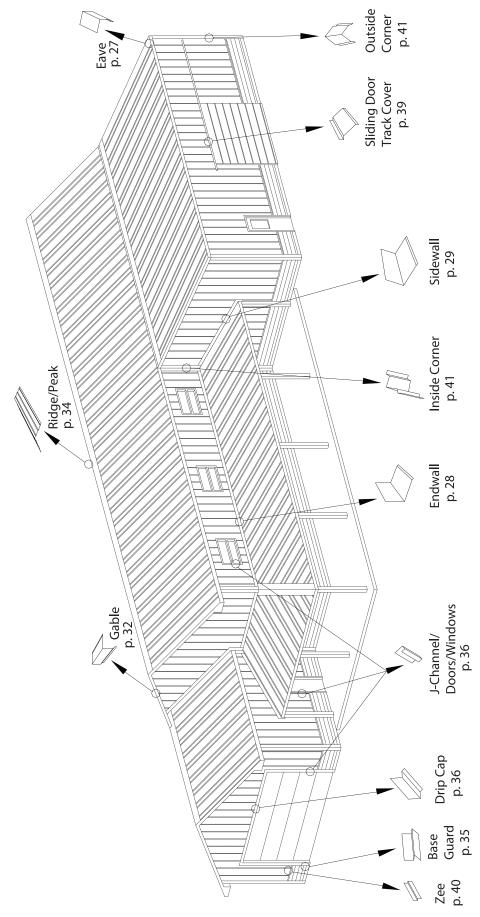
### **BUILDING DETAILS**



- 1. Determine the thickness and type of substrate to be used to support the metal roofing. Solid decking is required for all residential applications (i.e., plywood, OSB).
- 2. Refer to the Load-Span tables to select the proper fastener and spacing to meet loads on your structure.
- 3. Consult local building codes and restrictions to determine acceptable methods of construction for residential applications in your area.
- 4. Solid decking with 30# felt or synthetic underlayment for residential applications is required. Ice & water shield or similar self-adhesive membrane is recommended at all valleys, dormers, chimneys, transitions, skylights and other critical areas.
- 5. When re-roofing with metal panels over an existing shingle roof, metal panels may be installed directly over shingles with underlayment, or 2x4 purlins or 1x4 furring strips.
- 6. Zip board sheathing, which has a "built in" vapor barrier, is an acceptable substrate and vapor barrier.
- 7. Request Fabral's technical bulletins #720 and #721 for more details on residential roofing.

## **EXPOSED FASTENER - POST FRAME**

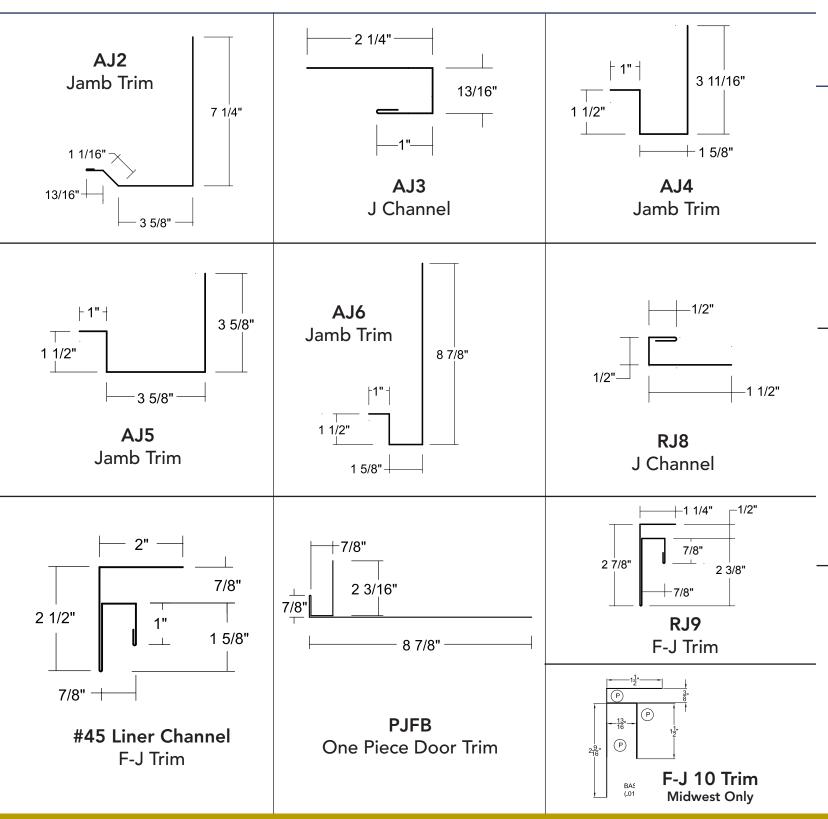
### **BUILDING DETAILS**

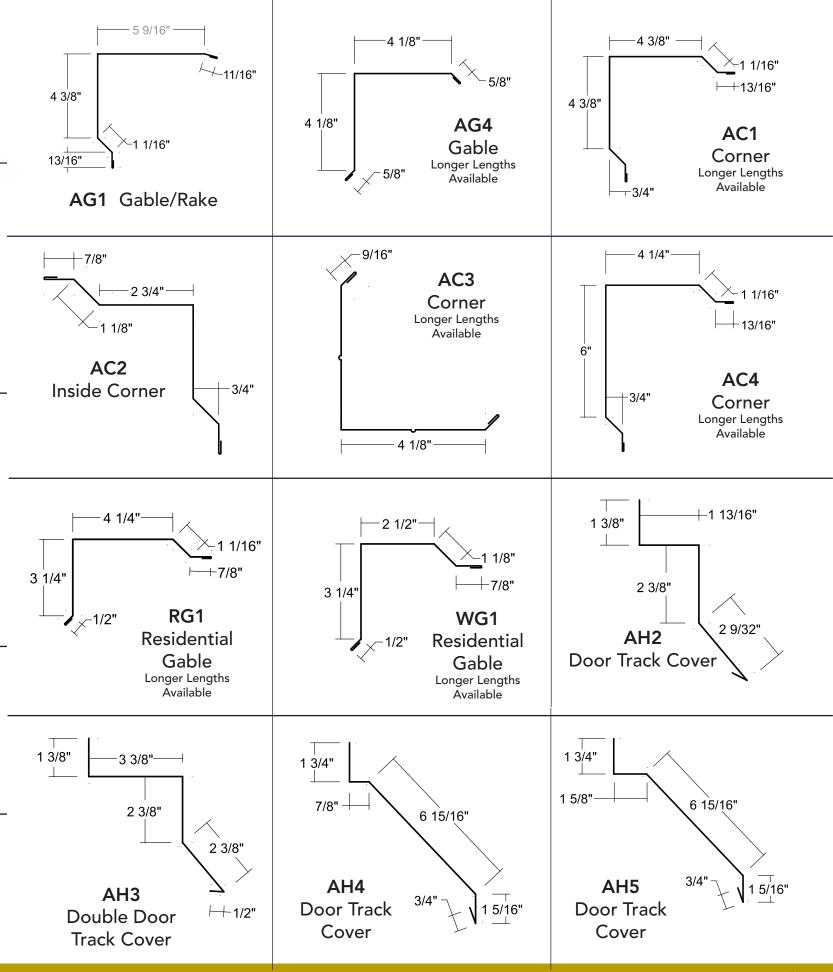




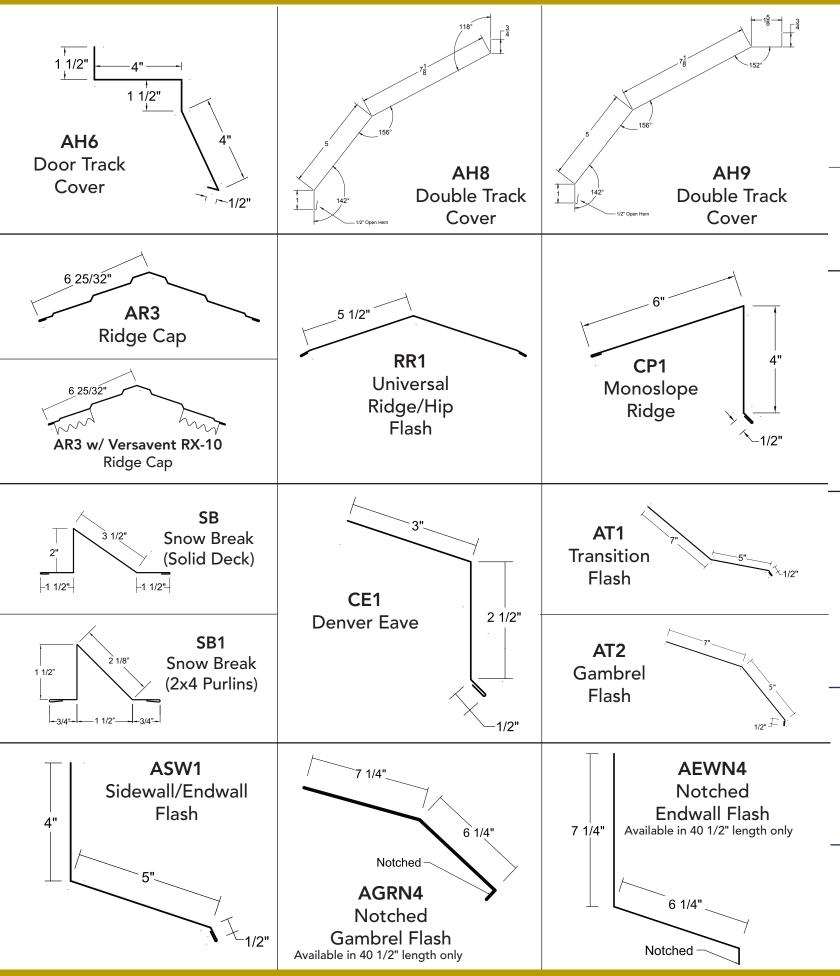

## FLASHING & TRIM - POST FRAME

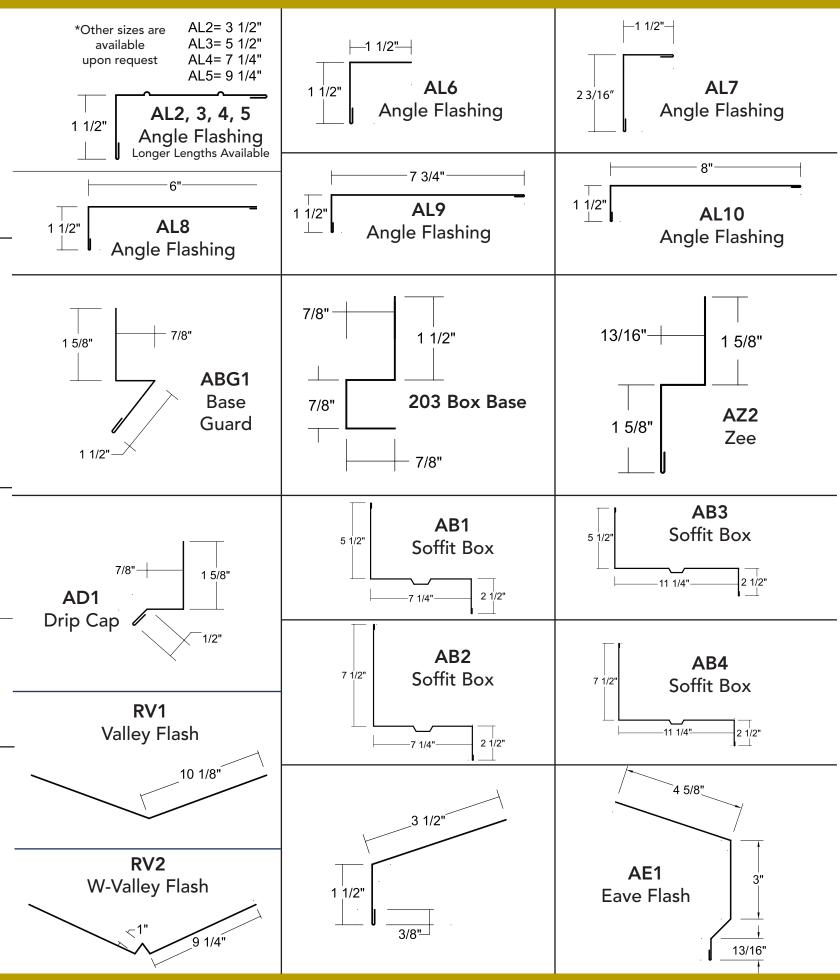
All flashing is 10' 6" in length & available in steel & aluminum, unless otherwise noted. Please contact Fabral for specifics on the trim available in your area.





## FLASHING & TRIM - POST FRAME

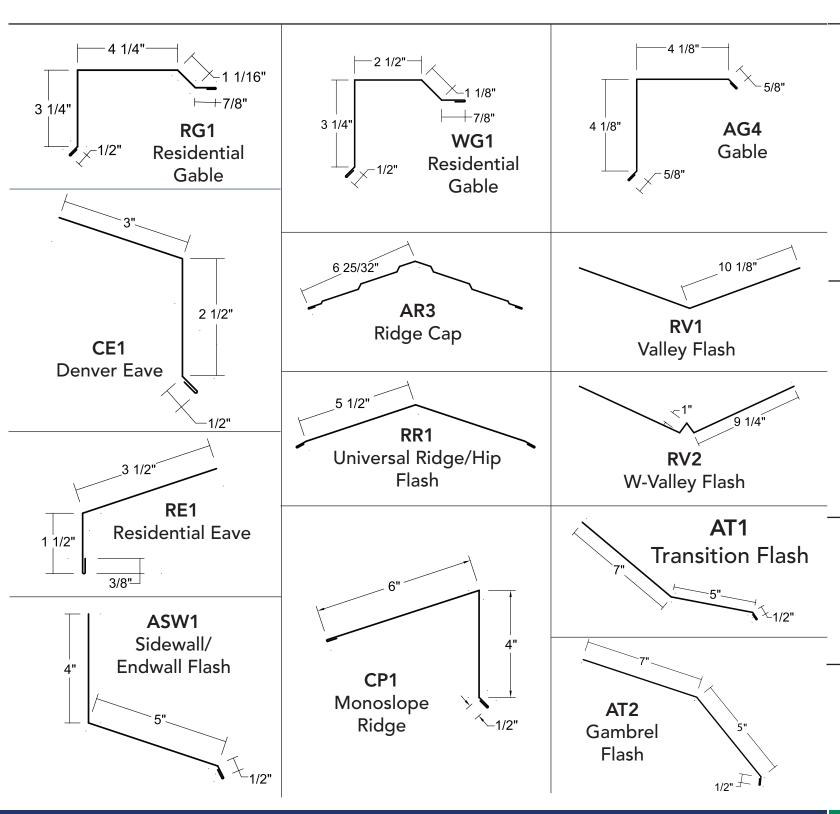




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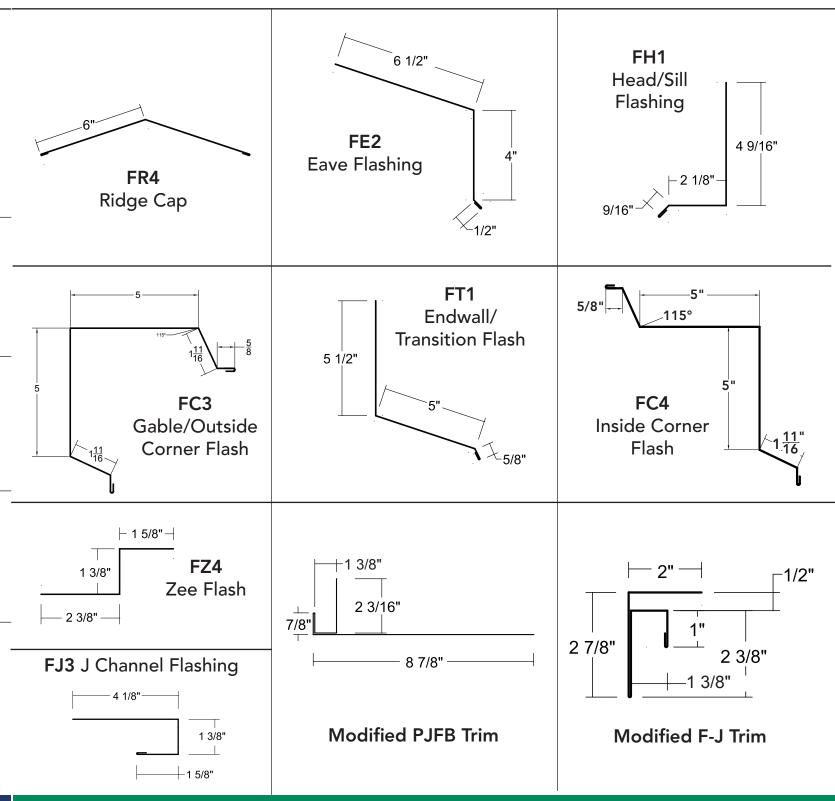
## FLASHING & TRIM - EXPOSED-FASTENER PANEL

All flashing is 10' 6" in length & available in steel & aluminum, unless otherwise noted. Please contact Fabral for specifics on the trim available in your area.



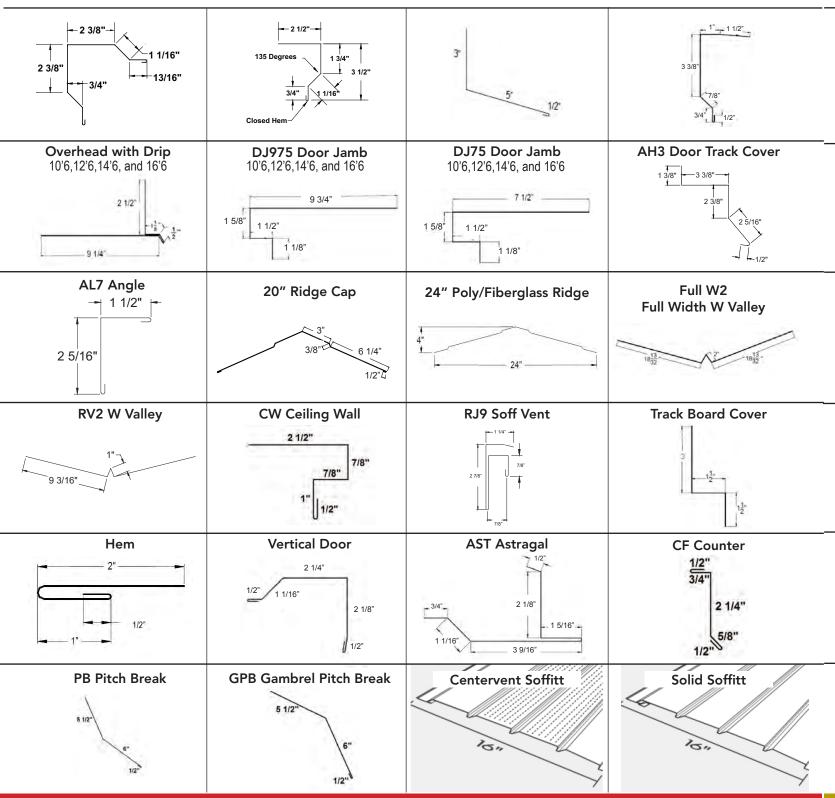
## FLASHING & TRIM - MIGHTI-RIB®

All Mighti-Rib<sup>®</sup> specific flashing is 10' 6" in length & available in steel, unless otherwise noted. Please contact Fabral for specifics on the trim available in your area.



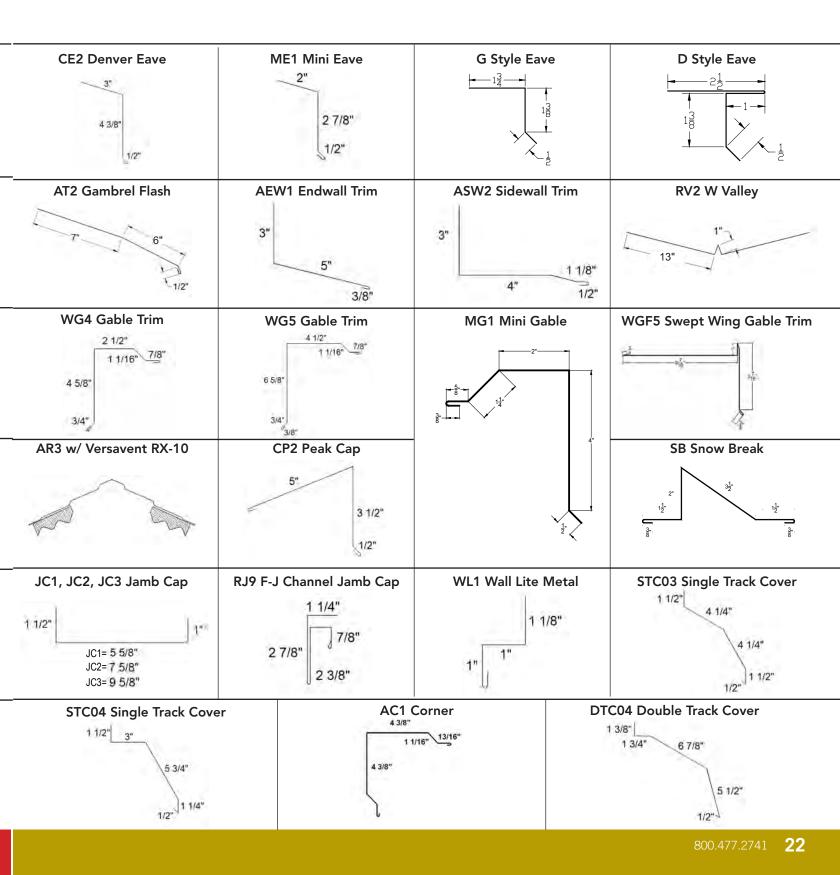
## FLASHING & TRIM - ST. JOSEPH, MN

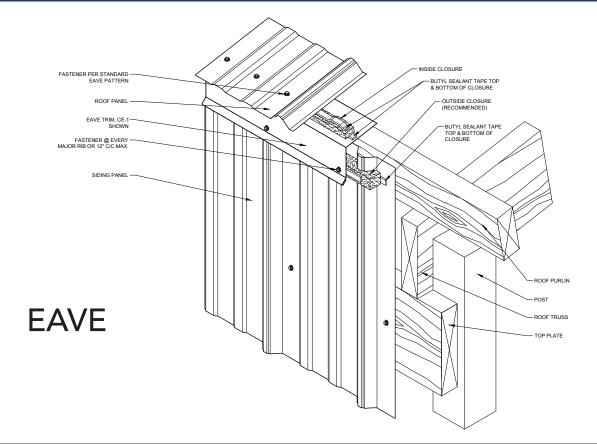
Regionally specific flashings & trims offered in addition to the standard offering. All flashing is 10' 6" in length & available in steel & aluminum, unless otherwise noted. Please contact Fabral for specifics on the trim available in your area.

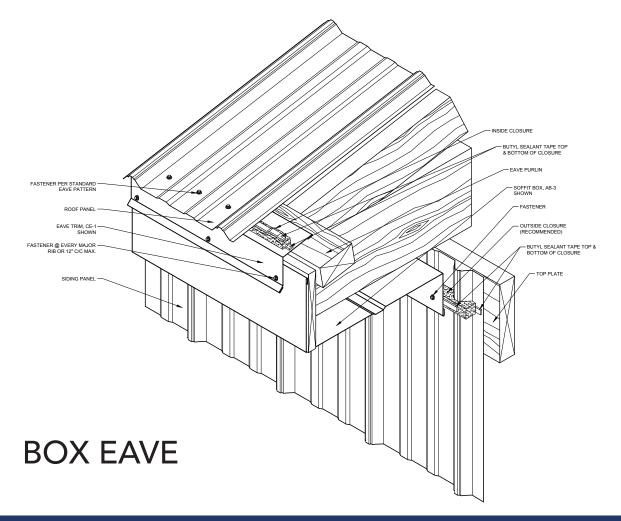


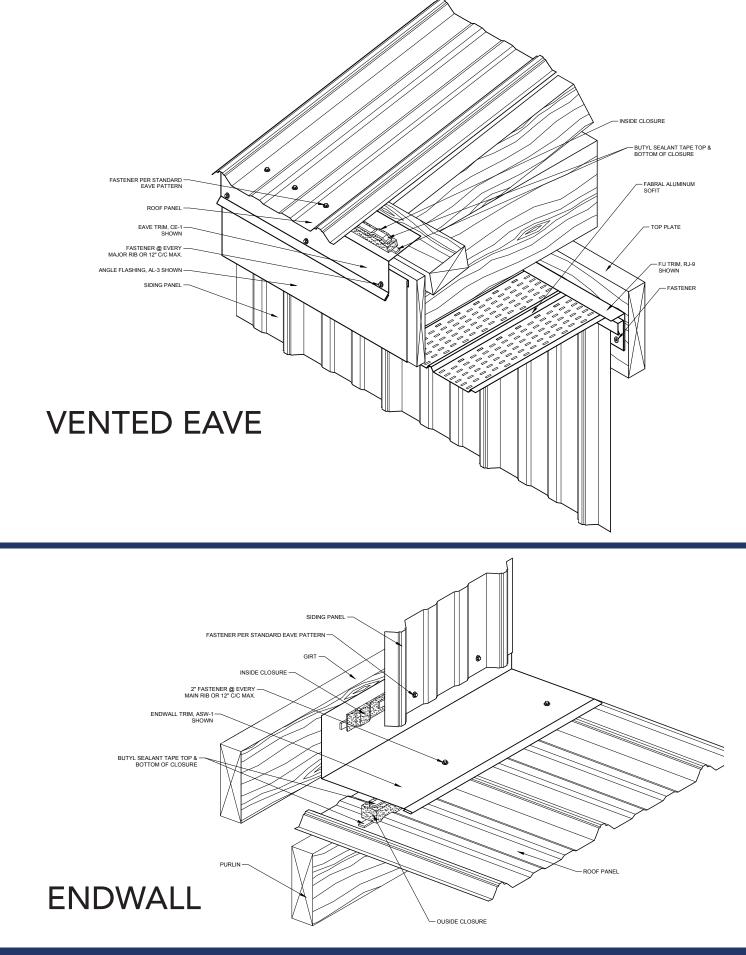
## FLASHING & TRIM - WESTERN REGION

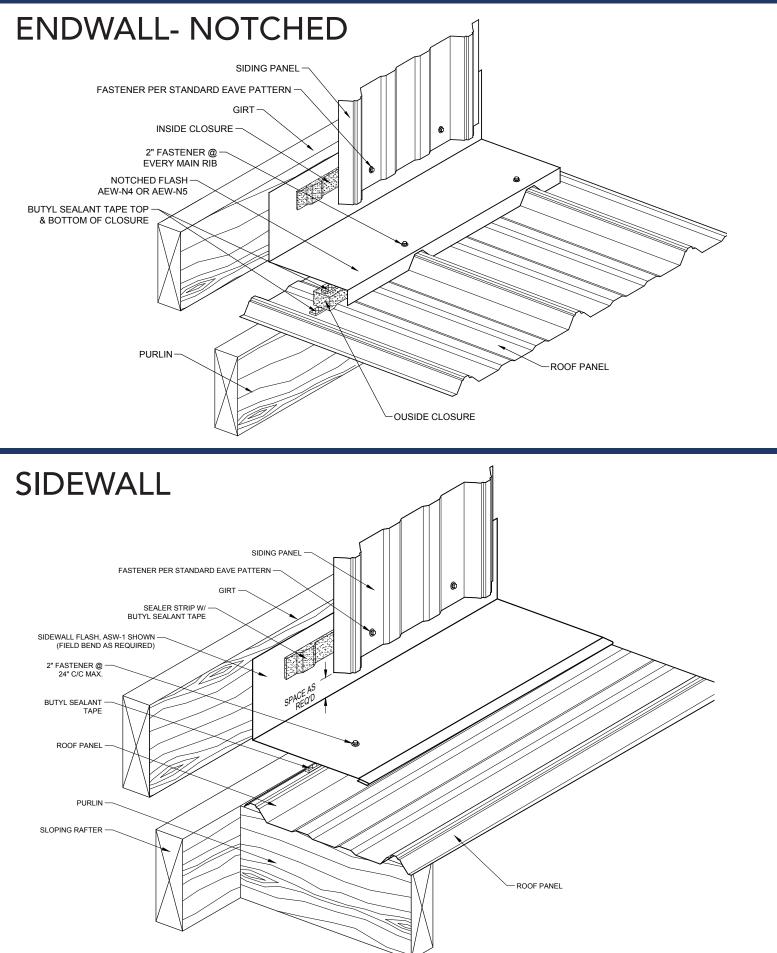
All Mighti-Rib specific flashing is 10' 6" in length & available in steel, unless otherwise noted. Please contact Fabral for specifics on the trim available in your area.

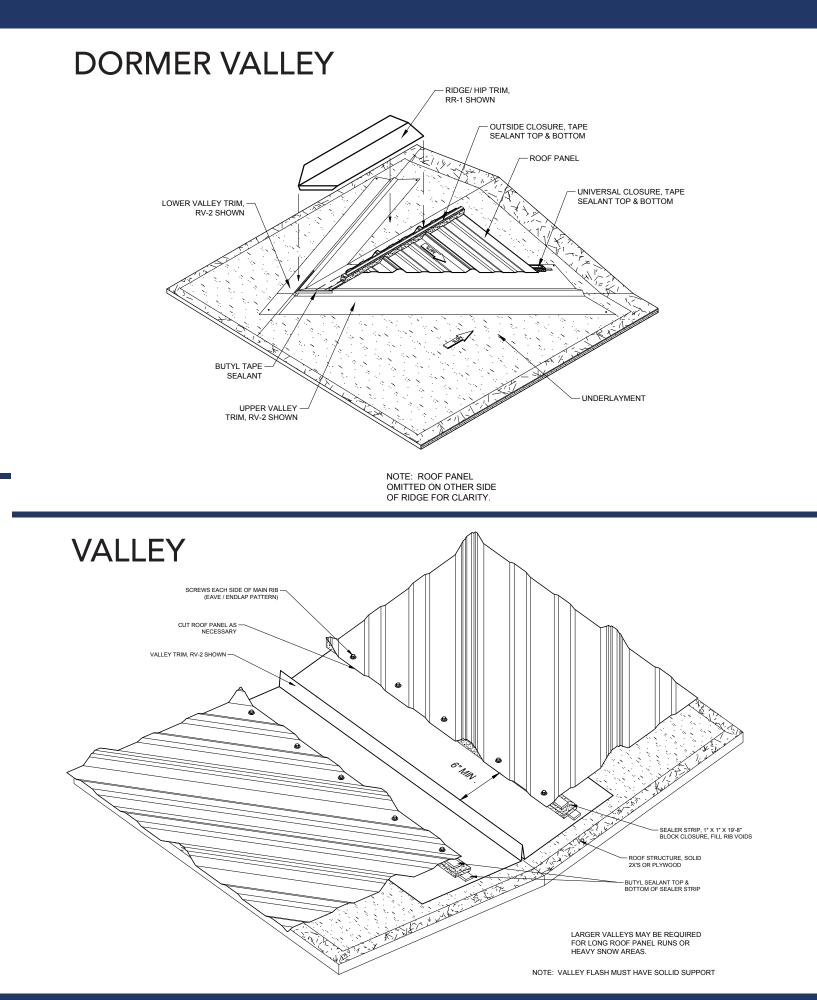


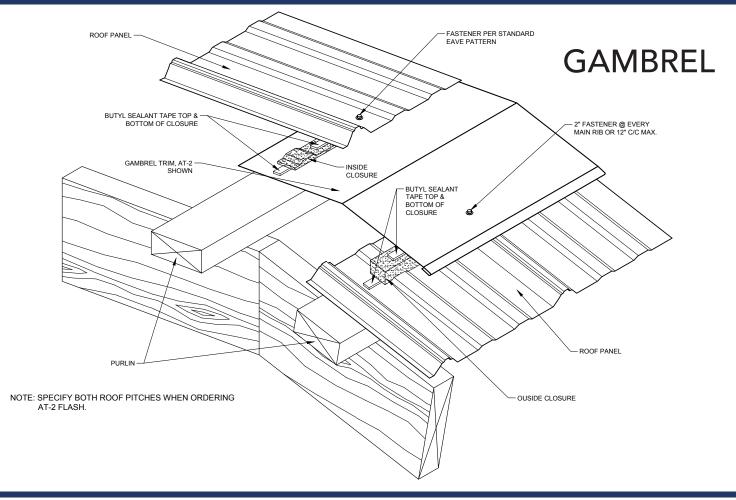


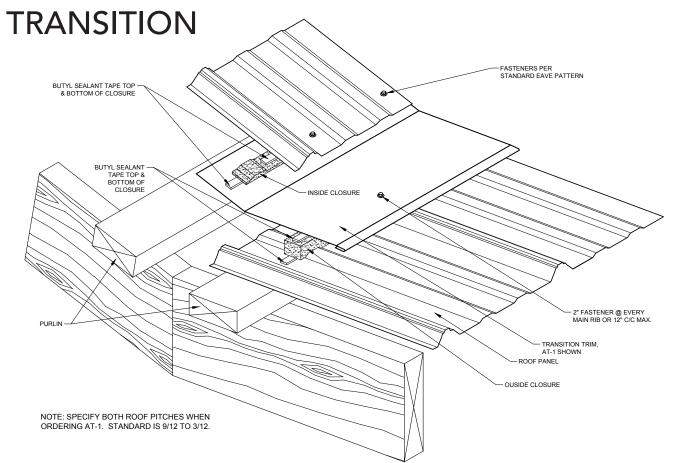


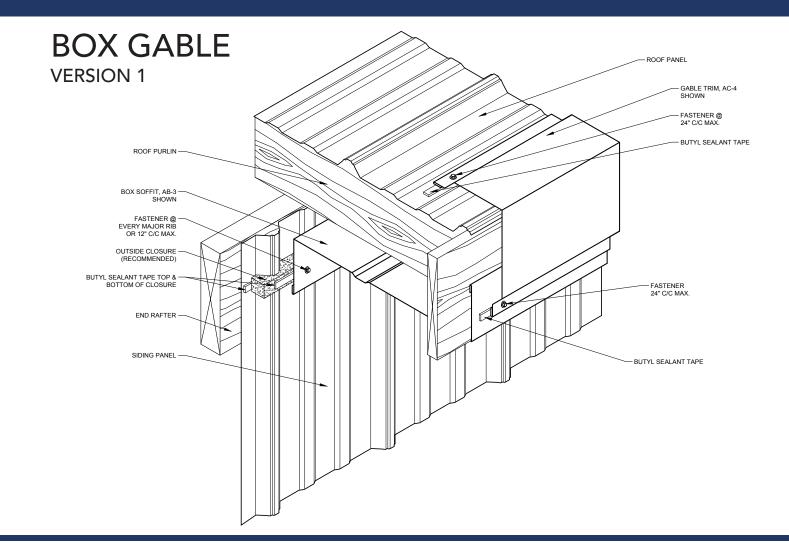


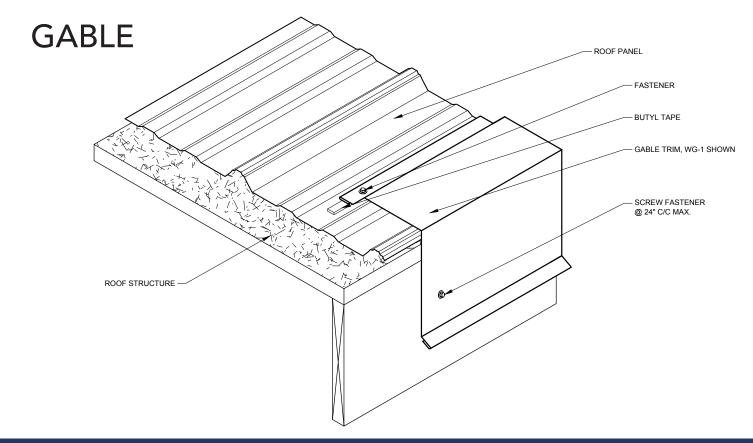


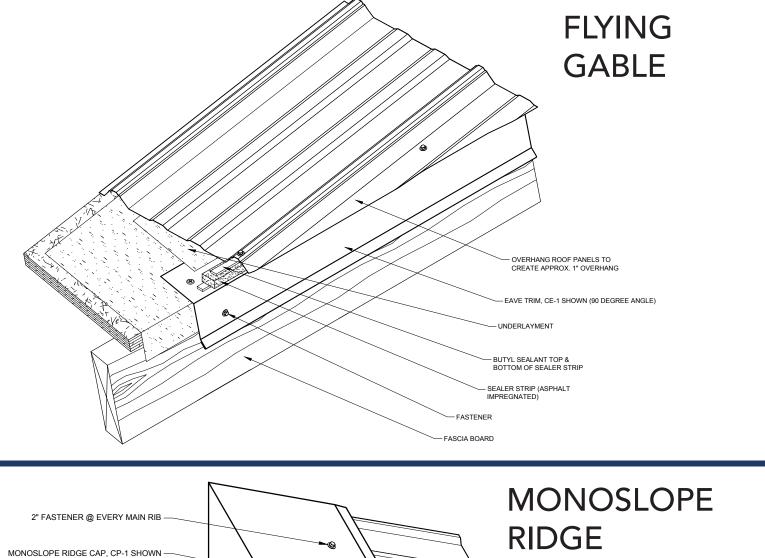


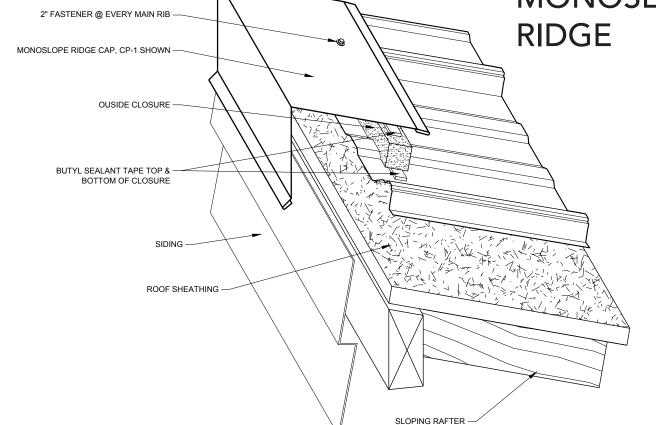


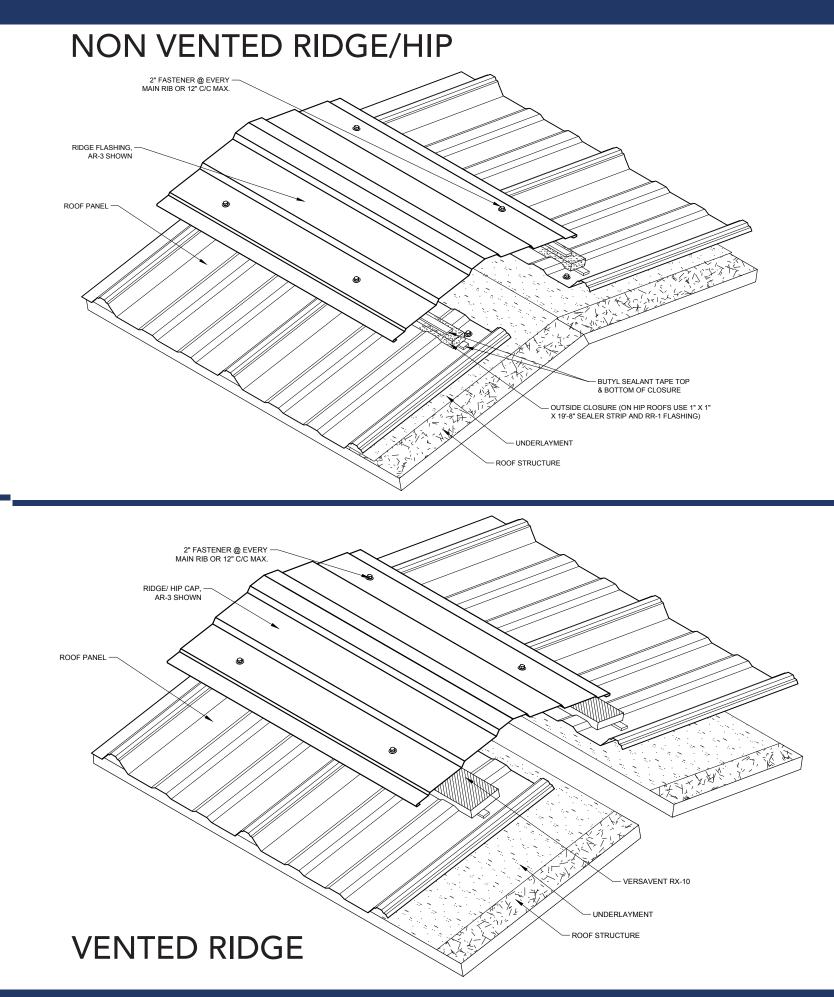


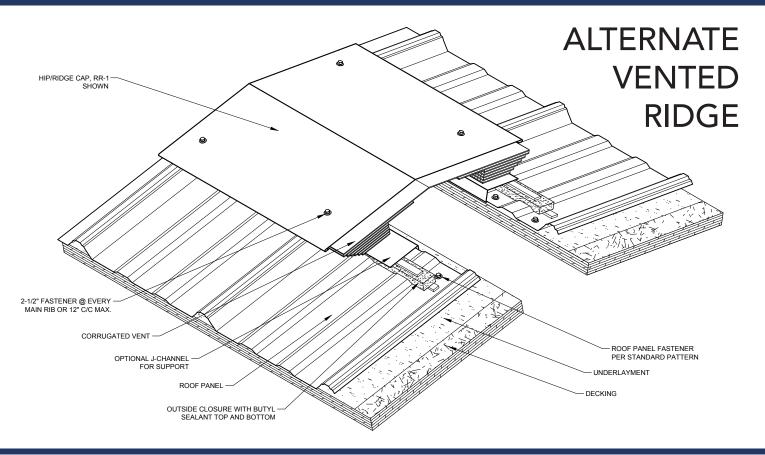


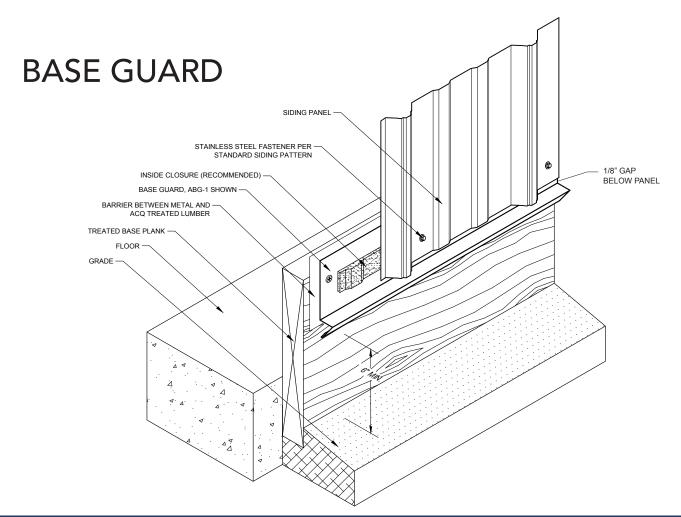


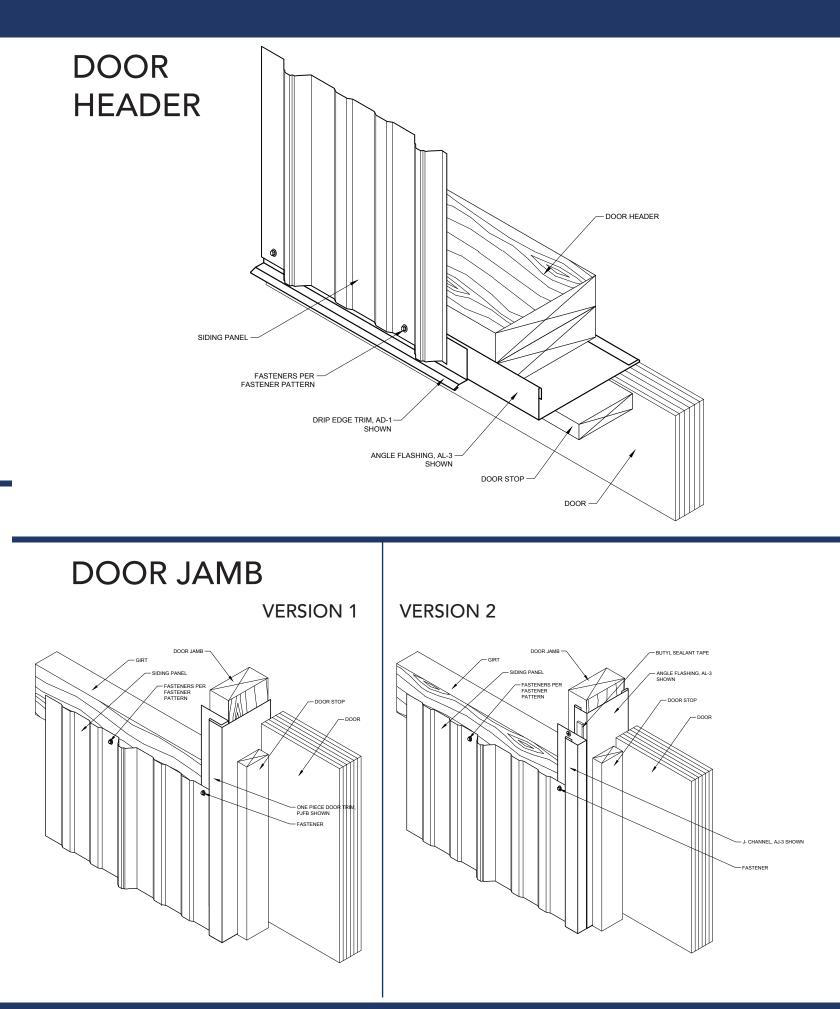




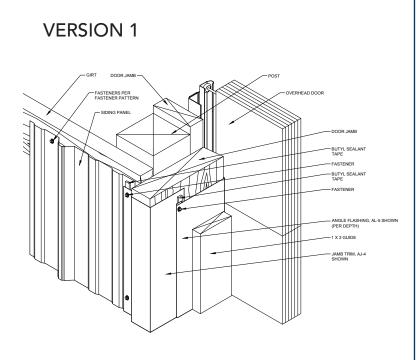




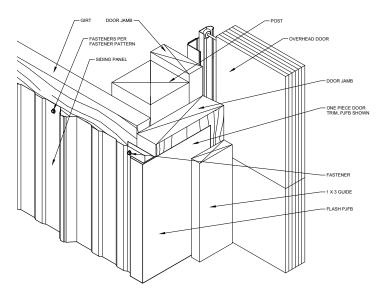




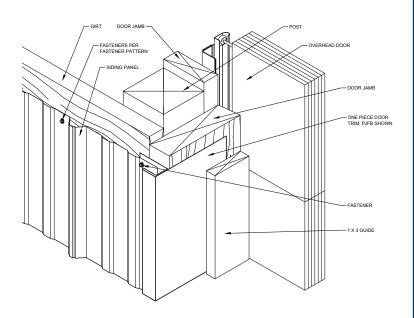
## OVERHEAD DOOR JAMBS



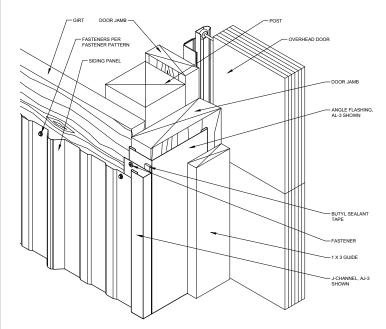
VERSION 3

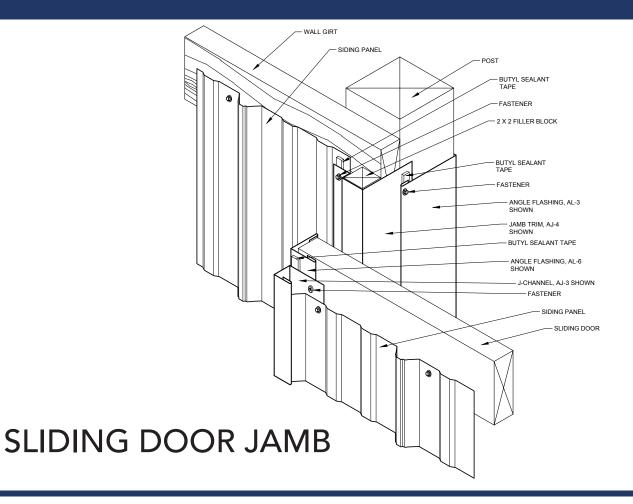


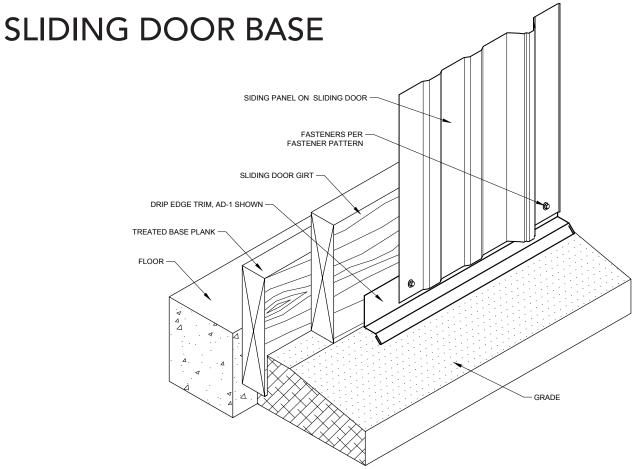
### **VERSION 2**



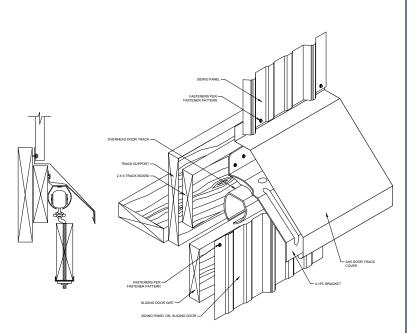
**VERSION 4** 



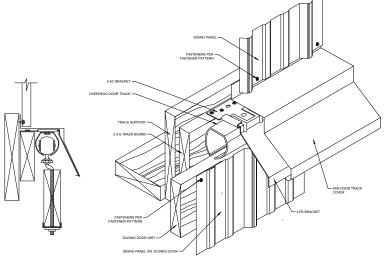




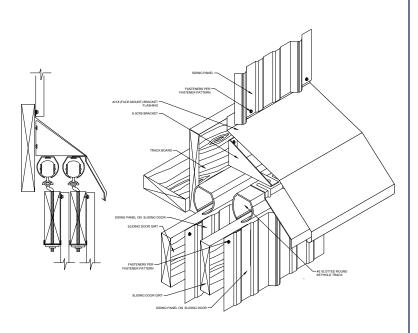
## SLIDING DOOR FACE MOUNT HEADER



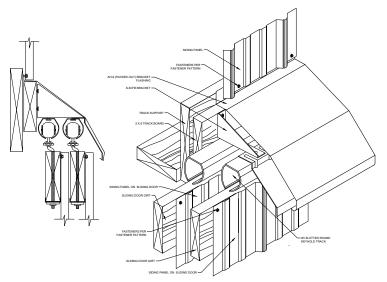
## SLIDING DOOR TOP MOUNT HEADER

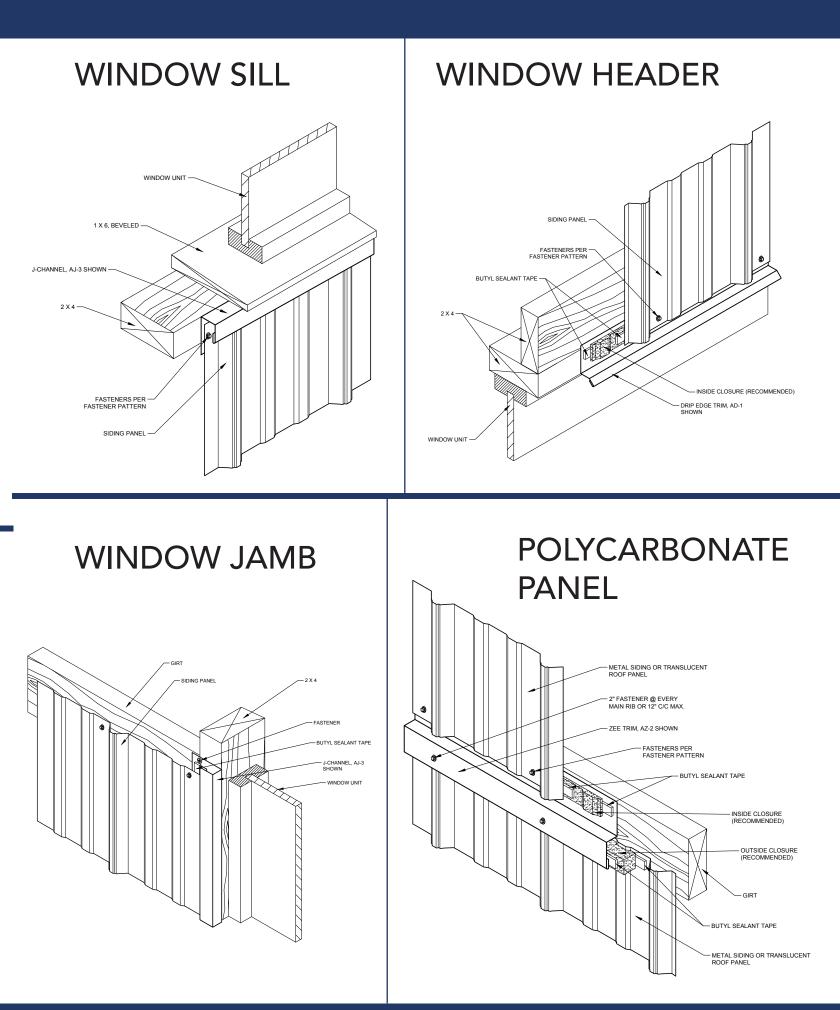


## SLIDING DOUBLE DOOR HEADER

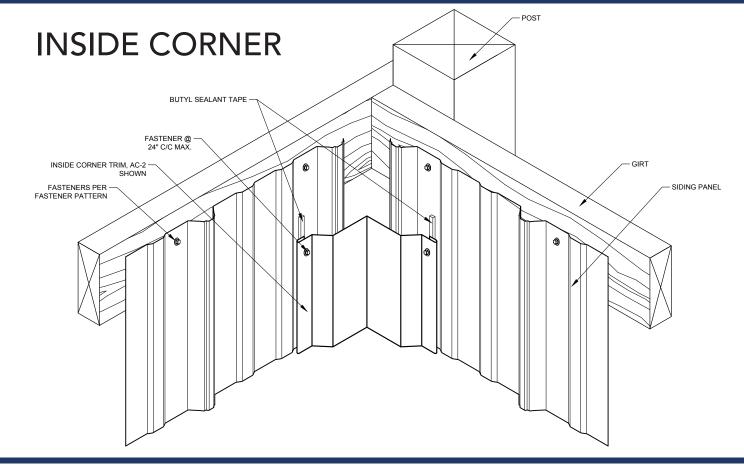


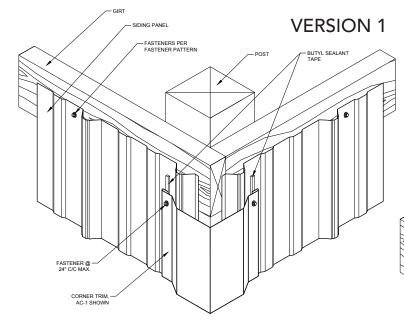
## SLIDING DOUBLE PACKED-OUT DOOR HEADER



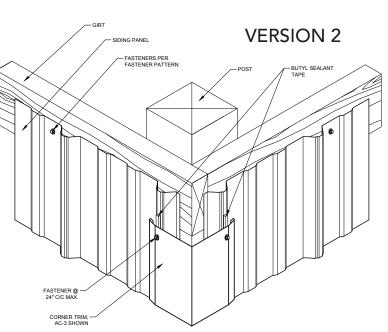


## TRIM DETAILS - POST FRAME

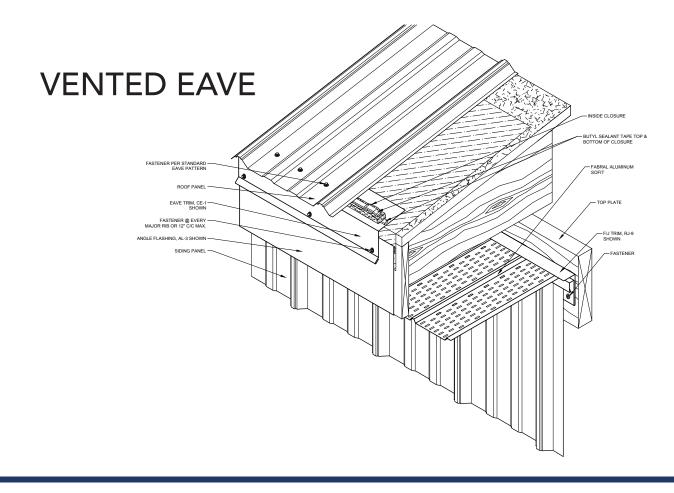


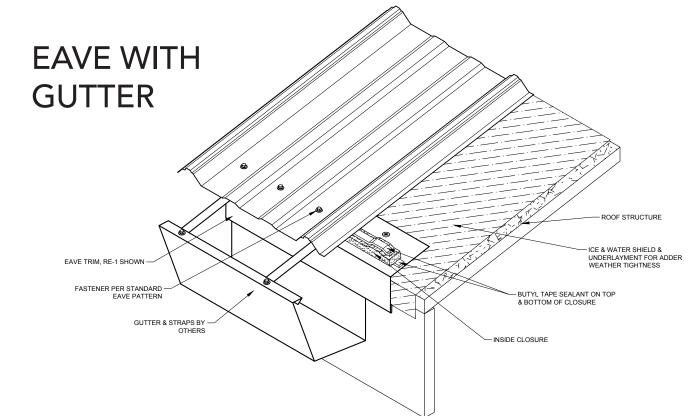


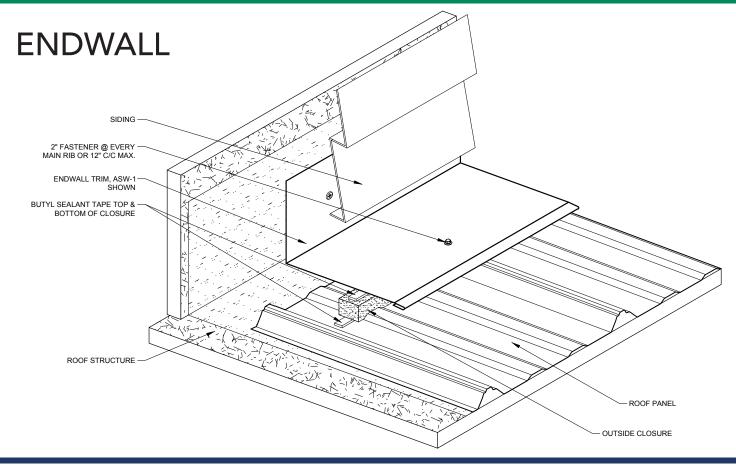
### OUTSIDE CORNERS

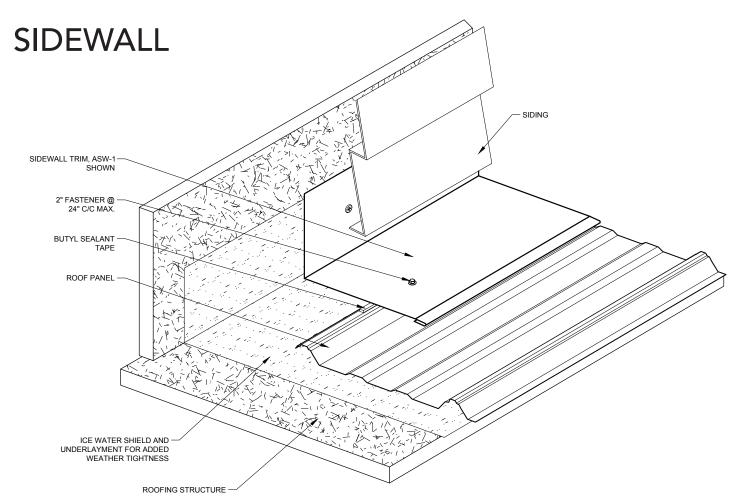


All residential flashings are formed for a 4/12 pitch unless otherwise requested by the customer.

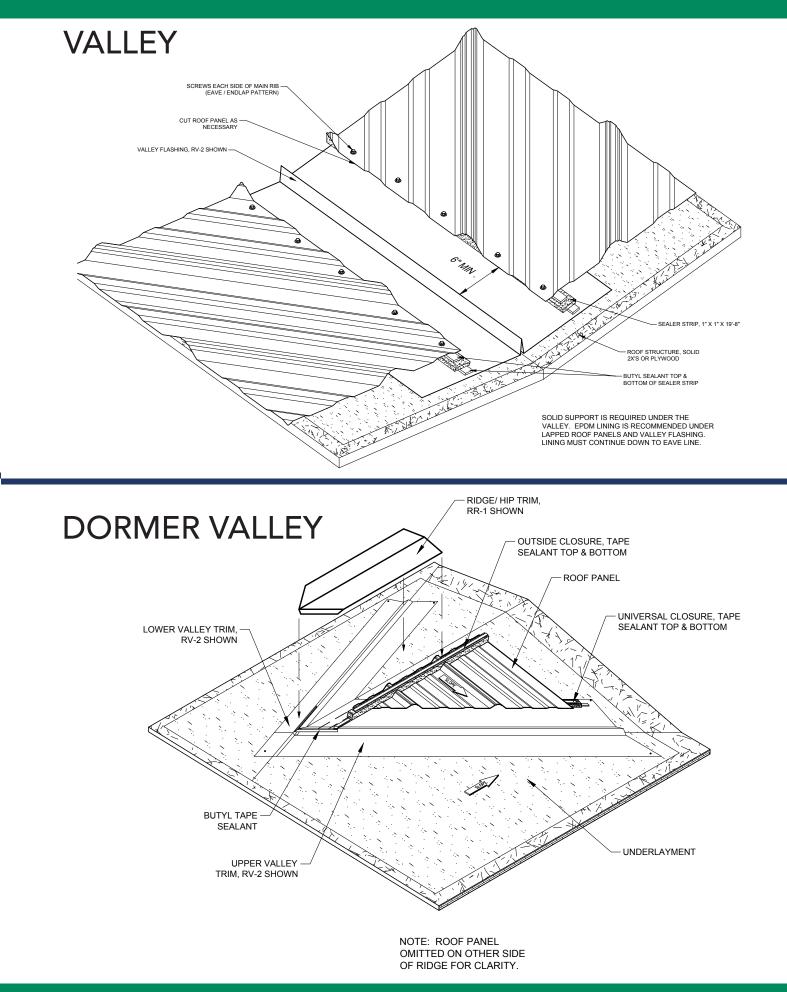


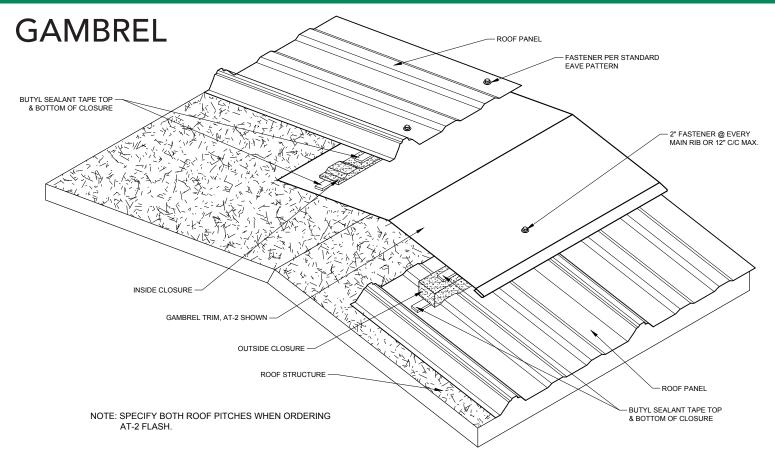


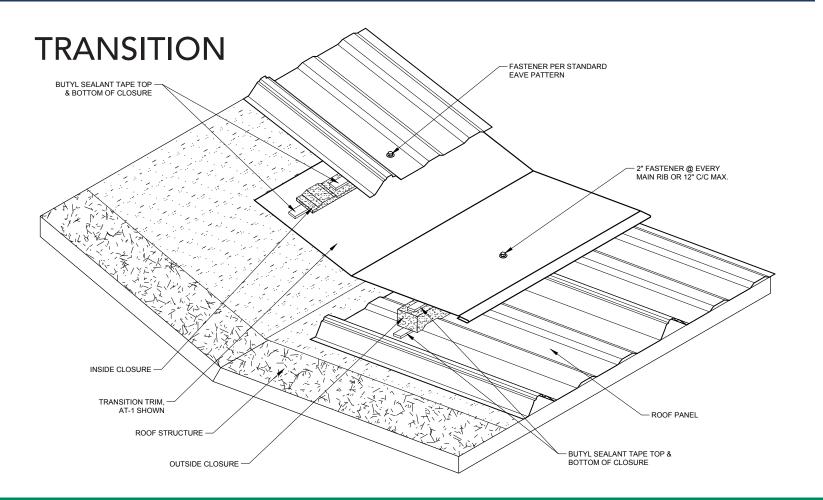


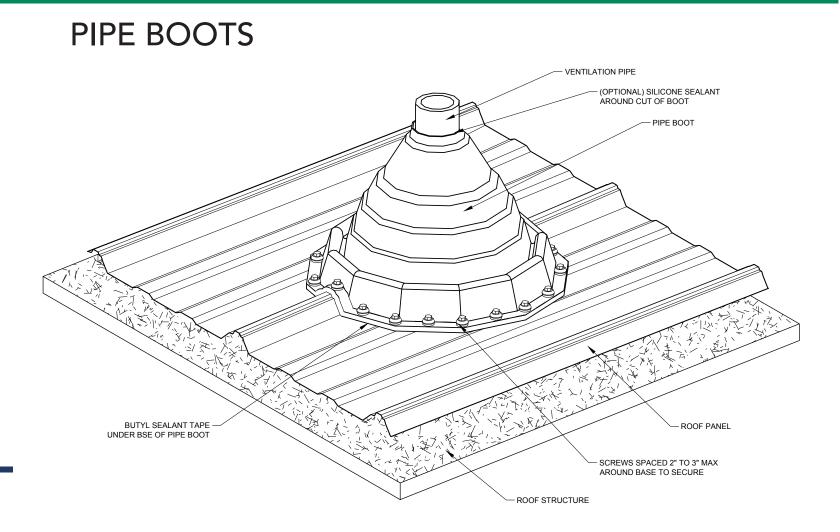


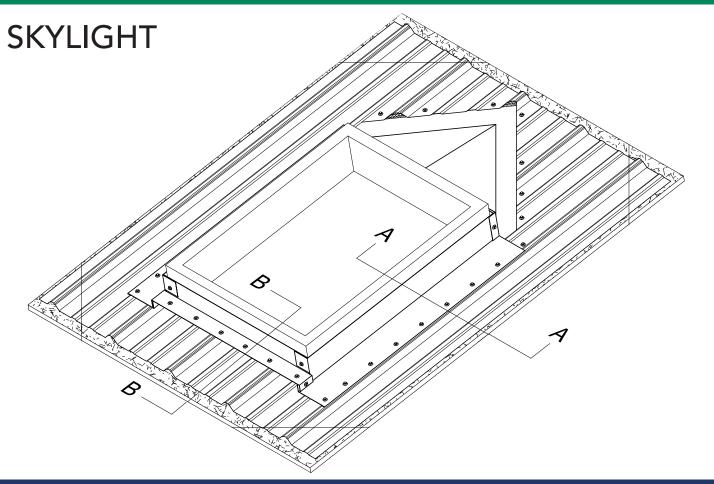
**39** FABRAL.COM

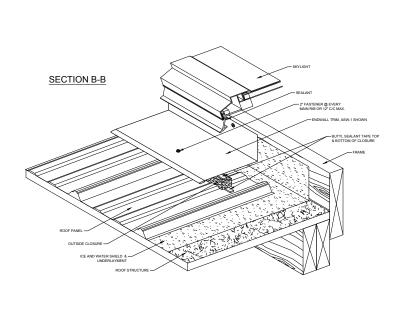


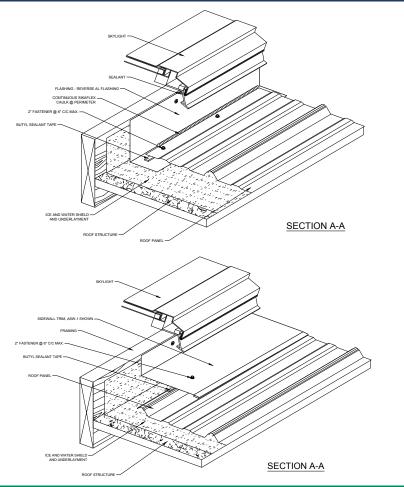


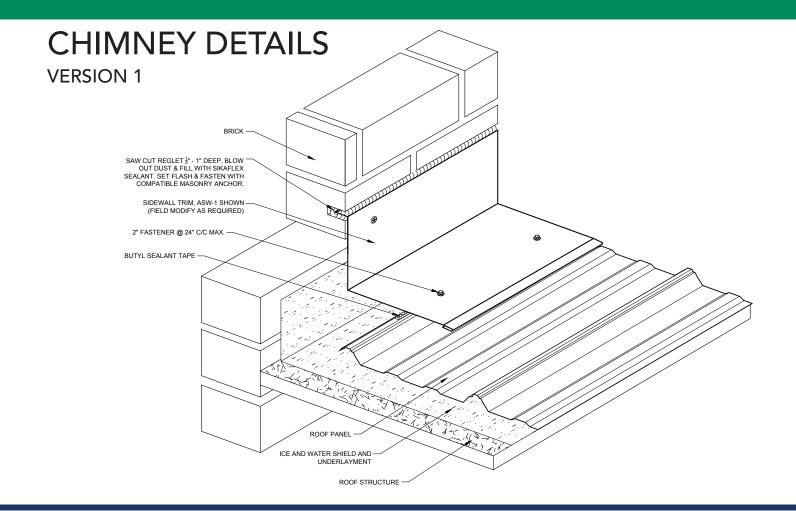


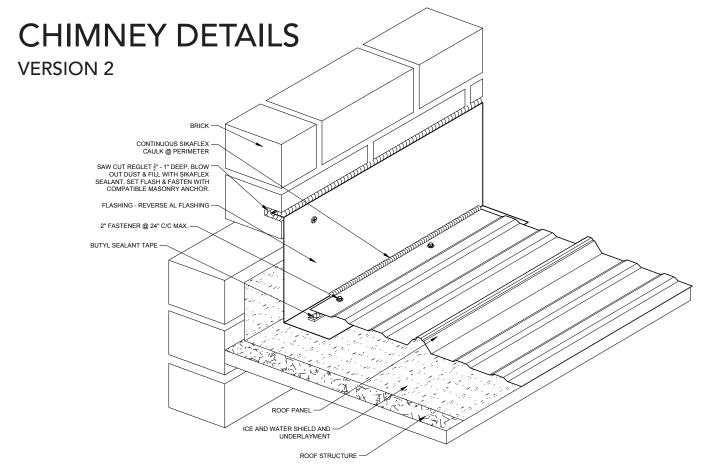


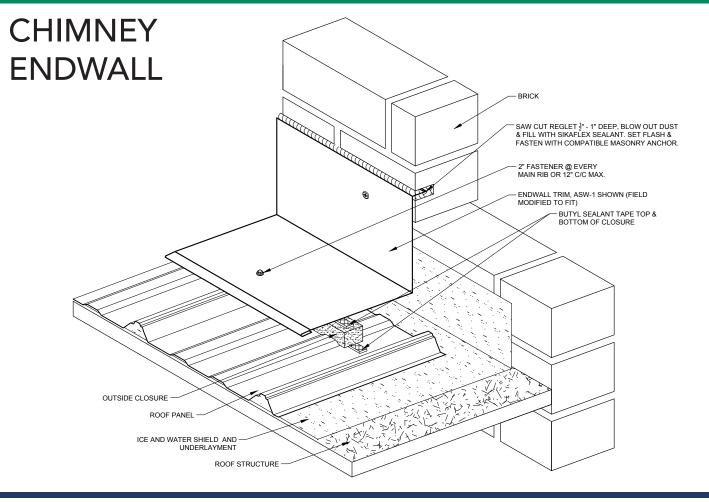


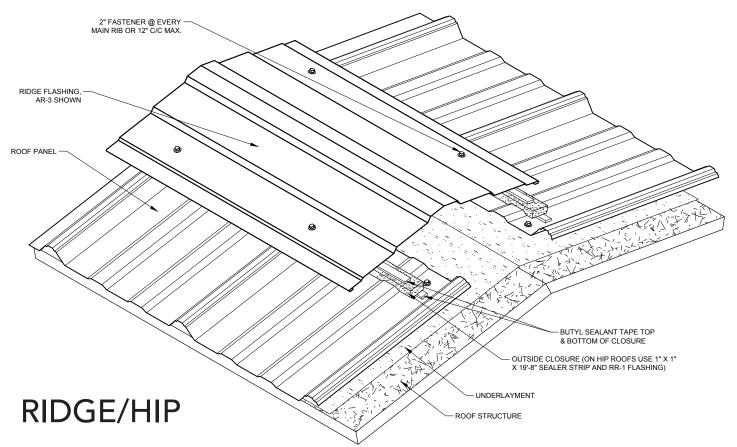


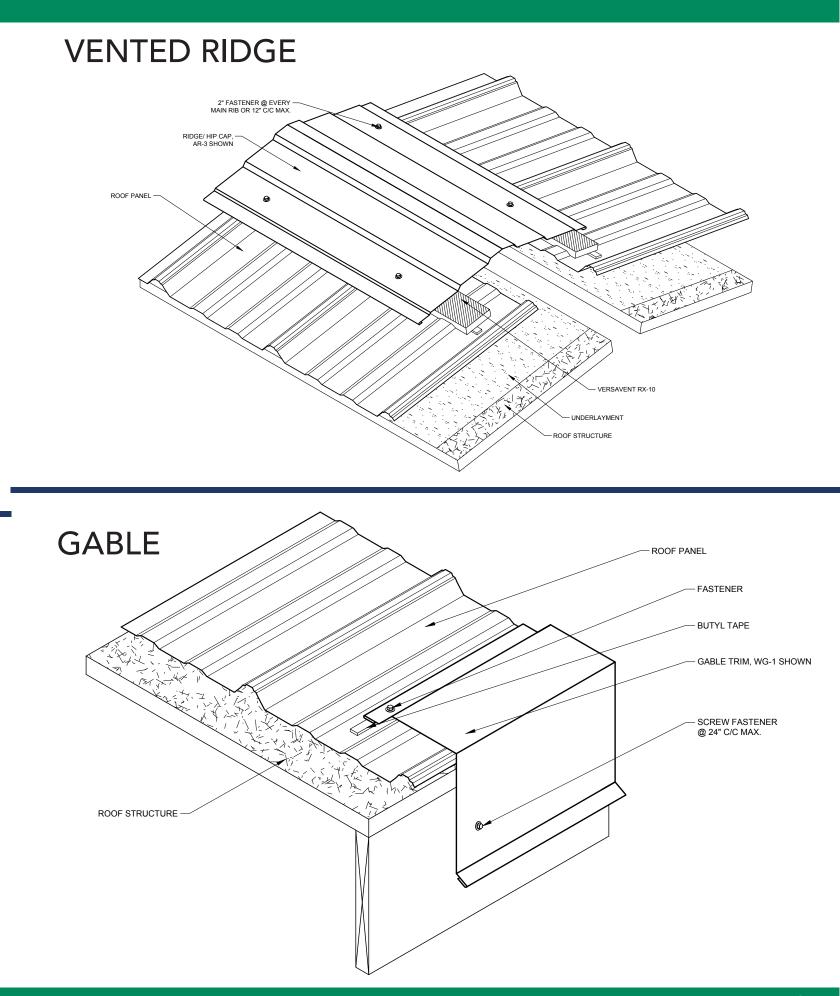












## SYSTEM COMPONENTS

### FLASHING AND TRIM



### SOFFITS

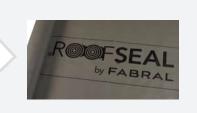
Soffit panels keep buildings ventilated allowing them to "breathe" and helping to prevent damaging moisture from being trapped in attics and eaves. Various ventilation patterns can be accomplished by alternating solid and vented or perforated panels.

### SOFFIT DETAILS

- Full, Center, and Non-Vented Soffit Panels
- Aluminum recyclable and sustainable
- Pre-cut 16" coverage
- Quad 4 vented 12.96 sq.in./lineal ft free airspace
- Available in standard and custom lengths

### ROOFSEAL

Fabral offers the total system solution with RoofSeal underlayment. By combining superior performance and protection with skid-resistant traction, RoofSeal helps you get the job done right.



### SPECS

- Width: 4'
- Length: 250'
- Weight: 32 lbs
- Thickness: 13.25 mils
- UV exposure up to 180 days

### HIGH TEMPERATURE UNDERLAYMENT PEEL & STICK

Fabral High-Temperature Underlayment is a durable, self-adhering, modified composite underlayment, specifically designed to withstand the rigors of most roofing applications. It is available to use as flashing tape to provide a secondary water barrier.

- 30 year warranty out of the box
- Adds to the complete system for Fabral roofing

### POLYCARBONATE PANELS

Translucent panels transmit natural light affording for better work conditions and potentially reducing energy costs. These wall siding panels are ideal for use in agricultural, light commercial, warehouse, and industrial facilities. Available in lengths: 8', 10' and 12'.

#### POLYCARBONATE

- Virtually unbreakable
- Will not yellow
- Easily and safely installed on sidewalls
- Colors: Clear and White (Grandrib 3, Mighti-Rib, Ridge Caps)

### LINER PANELS

Fabral liner panels are perfect for interior projects requiring additional insulation, strength or acoustical control. Additionally these panels are an economical light gauge panel solution for projects requiring partitions. Fabral offers a standard package of flashing and trim for a variety of applications. Flashing is factoryformed at 10' 6" lengths and available in steel and aluminum with coordinating Enduracote finishes and colors. Flat metal sheets are also available when installer fabrication is preferred. Flashing details and assistance with flashing details are available from your FabralCORE Customer Care representative. Standard details are illustrated in the Fabral Blue Book on pages 23-46.

Fabral Soffits are available in three pre-formed engineered profiles - two ventilated (center and full) for increased air flow and one solid.



#### CENTER VENT



# FULL VENT

- Water Vapor Permeance: .06 perms
- QAI & ICC-ES building code compliant
- Contributes to LEED and NGBP ratings
- 100% inorganic, will not rot or mold
- 10 squares per roll
- 36 rolls per pallet

### ROOFSEAL FEATURES

- Durability: stronger than traditional felt
- Quality: skid-resistant traction
- Performance: UV exposure up to 180 days
- Peace of mind: 50 year warranty against leaking

#### FEATURES:

- UV protected surface 90-day exposure
- High-temperature stability 260° F
- 50 mil thickness
- Soft-surfaced polyester face
- Self-adhering and cold applied
- No special adhesives necessary
- Direct-to-deck metal application

#### CODES & COMPLIANCES:

- Underwriters Laboratories Class A and Class C Fire Rating Based on roof covering
- ASTM D1970, Standard Ice Dam Underlayment
- Florida Building Code Approved FL 17322
- Miami-Dade County Product Control Approved, MiamiDade County, Florida



D (1		Thicknesses (mm)			Standard Lengths (ft)				Colors				
Profile Name	Basic Profile Dimensions <sup>†</sup>	0.8	1.0*	1.20 *	8'	10'	10½' *	12'	16' *	Clear	Soft White	White	Solar Gray*
GrandRib 3 GRG	347 + 348 - 234 + 388 - 97	•			•	•		•		•	•		
Mighti-Rib		•	•					•		•	•		
Ridge Caps	Bend as required 10°.6° Length 136°.40°		•	•						•	•		

\*Visit Fabral.com for additional non-stocked specialty profiles.



- Custom cut lengths up to 40'
- Easy to clean
- Polyester paint finish
- Acoustical panels perforated across entire panel
- 36" coverage

## SYSTEM COMPONENTS

### SNOW RETENTION SYSTEMS

Snow retention systems are a smart decision. Because metal roofs are naturally slippery, snow and ice move quickly over the smooth surface, possibly damaging plumbing stacks and lower roof planes, as well as possibly endangering people and property. Any project in a freeze/thaw zone should employ a snow retention system.

### EXPOSED FASTENER

#### RTCLSR RTCLSM



#### CL SNOW GUARD

- Premium polycarbonate plastic with UV stabilizers
- Unique vent rib systems allows for adhesive out gassing
- Three-to-one base-to-blade ratio adds significantly to strength

#### RT MINI CLEAR SNOW GUARD

- Premium polycarbonate plastic with UV stabilizers
- Maximum protection, moderatly priced
- Two-to-one base-to-blade ratio
- 4.5 sq.in. and gusseted blade snow pocket
- Typically installed by adhering to and mechanically fastened to the roofing panel

### FASTENERS

Understanding and installing which fasteners are best for which application is critical to any project. Be sure to match the correct screw or fastener option with the appropriate roof or wall system. For more information check with your FabralCore representative.

\* Painted \*\* Plain All fasteners 250/bag

### VENTING AND CLOSURES

Roof ventilation and uniform airflow are key to keeping metal clad buildings "healthy." Correctly engineered vent and closure systems "manage" weather limiting wind-driven rain from entering the ridge area and facilitating "moisture release."

#### #10-14 410 STAINLESS STEEL

- Use with 26 gauge or thinner to avoid pre-drilling
- $\bullet$  Available in 1", 1½", and 2"
- 1/4" hex head, EPDM/metal washer
- Use with steel panels installed on treated lumber

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#### #10-16 300 SERIES STAINLESS STEEL

- Use for high corrosive environments
- Use with ALUMINUM panels
- Available in 1", 1<sup>1</sup>/<sub>2</sub>", and 2"
- 1/4" hex head, EPDM/metal washer
- Use with treated lumber

#### **CLOSURE SPECS**

• Available in Grandrib 3, Strongrib, 1¼" Corrugated, 2½" Corrugated, ProClad and 5V profiles

Ommanding Inside (Eave)

SEALANTS

Fabral sealants provide a weather-tight seal against water, wind, dust, and dirt. Excellent for use on a variety of metal roof, trim siding, gutters, flashing and downspouts, sealants are available in over 50 colors (some special order) to coordinate with the full range of Fabral metal finishes.

### SNOW DEFENDER<sup>™</sup> SERIES



#### 1500 & 4500 - EXPOSED FASTENER

- EPDM rubber seal
- Powder coat or mill finish
- No caulk needed
- 16 guage type 304 stainless steel
- Patented, Made in the USA

#### PC240 & BUSTER - EXPOSED FASTENER

- UV stable, very strong
- Polycarbonate Lexan 103-112
- (3/16" thick for BUSTER)
- Mounted with screws or adhesives
- Patented, Made in the USA

#### \* Not all locations stock

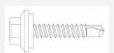


#### 6500 - CONCEALED FASTENER

- Does not penetrate metal
- Powder coated or mill finish
- Type 304 stainless steel
- No caulk needed
- Patented, Made in the USA



- Does not penetrate metal
- Powder coated or mill finish
- Use with clamps such as the S-51!<sup>™</sup> clamps
- Type 304 stainless steel
- No caulk needed
- Patented. Made in the USA



#### #12-14 FLATTOP

 Use to fasten into light gauge metal framing

• 5/16" hex head with EPDM washer

• Type 3 point can drill through .21" steel

#10 WOODTITE HLX High Low

• Available in 1", 11/2", 2", 21/2" and 3"

• 1/4" hex head, EPDM/metal washer

Use with dimensional lumber

Oxyseal Long-Life Coating

• Available in 1" and 1  $\frac{1}{2}$ "



#### **#14-10 WOODTITE**

- Use to fasten metal to plywood, OSB, or zip
- Use for trim attachment
- Available in 1", 1<sup>1</sup>/<sub>2</sub>", and 2"
- 5/16" hex head, EPDM/metal washer
- Oxyseal Long-Life Coating

#### #12x3/4" STITCH\*\*

- Use to stitch sidelap for exposed fastener panels
- 1/4" hex head, EPDM/metal washer

#### **RIDGE CAP VENT\***

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- Factory applied to the ridge cap
- Save up to half of your installation time
- Non-profile specific material
- Clean, dust free installation
- Virtually NO WASTED material
- 1<sup>1</sup>/<sub>2</sub>" x 3" material provides 17 sq. inches/lineal foot free area at the ridge

#### LP2 RIDGE VENT

- Available in Horizon S, Grandrib 3 and Mighti-Rib profiles
- Lower, custom-fit profile
- Moisture and pest barrier
- Non-obtrusive appearance
- Reduces utility costs
- One-person installation

#### **RV35 AND RV100\*\***

- 10' metal ridge vent
- Variety of colors available

#### **PROFILE FIT VENT-ROLL**

• Available in Grandrib 3, 5V and SSR

\*\*Midwest Only

• 10.66 sq. in. per lineal ft. of ridge (5.33 / side)

\*Available attached to ridge cap as RX-10 version and as X-10 version for field installation; not pre-applied to ridge cap

#### PLOYURETHANE SEALANT

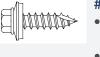
- Waterproof sealant to fill gaps up to 1"
- Permanent flexibility won't crack
- Standard color: Gray (stocked)
- UV-resistant
- Up to 50 additional color options (non stocked)

#### SEALANT TAPE

- 3/16" x <sup>1</sup>/2" x 40' (sidelap)
- 3/32" x <sup>1</sup>/<sub>2</sub>" x 50' (endlap)
- 1/8" x 2" x 30'

#### SEALER STRIP

- •Use at valleys and hips
- •1" x 1" x 19' 6.8" long



## SYSTEM COMPONENTS

### CONDENSTOP™

Stop condensation with Fabral factory applied CondenStop<sup>™</sup>. CondenStop saves time and money by reducing labor costs and installation time versus other condensation barriers. Easily and effectively prevent condensation and the problems caused by condensation by installing Fabral panels featuring CondenStop.



- Protects assets and investments from moisture
- Adds to interior corrosion protection
- Light gray color enhances the indoor look of an open framing structure roof
- Must be used on open purlin systems. Do not use CondenStop over solid decking
- Available for the Grandrib 3 painted panel offerings

## ACCESSORIES

## FLAT SHEETS

Fabral Flat Metal Sheets may be ordered for on-the-job fabrication. A wide variety of substrates are available including aluminum, galvanized steel, galvalume, copper and stainless steel. Flat sheets may be coated with our premium Enduracote paint system offered in a full range of colors.

#### **PRODUCT SPECIFICATIONS**

- Used for filed forming crickets around the chimney, skylights, penetrations, and special flashing as necessary.
- 29 gauge painted and plain galvanized
- Full width (40 13/16" 10'6")
- Grade 33 steel for better hemming, forming and flexibility for field forming.

## CUPOLAS

Cupolas are an excellent way to bring architectural detail to any structure. Fabral cupolas are built to order and are offered in a variety of sizes (up to 66" x 66"), shapes and colors. Flashings can be built to any roof pitch and optional windows may be built into the side panels. Base sizes include 24" x 24", 36" x 36", and 48" x 48".





## ACCESSORIES

## PIPE BOOTS

Sealing small pipes is made easier with pipe boots from Fabral. The metal base with a dome-shaped boot serves as a covering for vent pipes.

#### SILICON SPECIFICATIONS

- Colors: Orange
- Up to 450° F
- Ranging for pipe sizes from 1" to 13"
- Larger sizes available upon request

#### PIPE SIZES

Base Diameter	Item No.	Min	Max
7 3/4"	3	1/4"	5"
10 3/4"	5	4 1/4"	7 1/2"
16 1/2"	8	7"	13"

#### EPDM SPECIFICATIONS

- Colors: Gray and Black
- Up to 250° F

\*Retrofit boots available. Sizes vary.

## DOOR AND DOOR TRACKS

Fabral Door Systems include four door types and the complete corresponding track systems. For information on product availability, contact your FabralCore representative.

#### **3100 SERIES DOOR**

- Pre-hung 4-way universal swing
- 1-3/4" galvanized steel door
- Pressure injected with polyurethane foam
- Pre-painted with two coats of polyester paint

#### **5100 SERIES DOOR**

- Light commercial post frame entry door
- Rolled edge door panel
- 24-gauge polyester painted galvanized steel
- Heavy internal aluminum stiles and rails
- Heavy-duty 16-gauge 3-1/2" wide painted steel jambs
- 12-gauge stainless steel 4-1/2" x 4" fixed pin hinges

#### PARTNER DOOR

- Pre-finished/pre-hung 6-bend steel or extruded aluminum
- Pre-hung 4-way universal swing
- 29-gauge steel exterior

#### **RESPONDER DOOR**

- Pre-finished/pre-hung 6-bend steel or extruded aluminum
- Pre-hung 2-way universal swing
- 29-gauge steel exterior

#### DOOR TRACK SYSTEM

- Doors tracks, frames, bottom guide systems
- Trolleys, brackets, latches
- Rollers
- Sliding door accessories

\*Doors are not available in all markets and non-stock.

### **TOUCH-UP PAINT**

Fabral offers touch up paints in a full range of Enduracote colors. Contact your FabralCore representative to order the color you require.

## ENVIRONMENTALLY CONSCIOUS

One of the most environmentally responsible things we can do is build for life. Using metal building materials ensures long-lasting solutions which will reduce the amount of building materials placed in landfills.



30 Year asphalt roof vs. 60 Year metal roof

### FABRAL AND SUSTAINABLE BUILDINGS

Fabral metal substrates are excellent options for constructing sustainable buildings. Aluminum, stainless steel, Galvalume, copper and galvanized steel are recyclable materials. Additionally, Fabral metal products contain post-consumer as well as pre-consumer recycled content qualifying the project for LEED points. Since metal is a long-lasting product (up to 60 years), it's inherently a better option than products that do not last as long.



### FABRAL FOR LEED

In addition to utilizing a high percentage of post consumer recycled content in their manufacture, metal roofing can be installed directly over an existing roof providing an extra layer of insulation and preventing the old roof from finding its way to the landfill. A key component in evaluating buildings for LEED is the ability to reduce or eliminate building materials from being deposited in landfills.



### FABRAL REFLECTIVE ROOFING

One of the most beneficial aspects of metal roofing is its ability to reflect sunlight. Rather than absorbing into asphalt shingles, which can heat up a building, metal roofs have been known to reduce energy bills (during summer months) by up to 20%.

### **BUILD WITH CONFIDENCE**

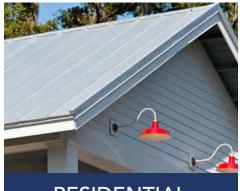
Fabral offers metal panels, system components, and accessories to meet all of your needs. Whether an agricultural, light commercial or residential project, exploring this guide will help find your answers.



Fabral metal roofing and siding systems will work for you by protecting your assets within barns and other agricultural buildings with little maintenance. Metal provides security when durability and longevity are essential.



For your light commercial needs, Fabral offers metal roofing and walls with easy installation and minimal maintenance. Design flexibility allows you to use these panels on various applications.



RESIDENTIAL

Homeowners can feel confident that Fabral metal roofing will provide the durability and energy efficiency they deserve. This investment provides a lifetime of satisfaction due to its low maintenance properties and curb appeal.

### You challenge us. And we like it.

Your vision for a building and what you want to achieve makes us think harder. It'd be easy to say, "That won't work." Instead we go with, "Let's see what we can do." As the leading provider of metal for building envelope solutions, we push the envelope.

We like it when you bring us a problem because we know we'll find the solution. We have the products, the manufacturing and the know-how. We offer everything you need for the total building envelope solution. At our core, we relish a challenge.



## WARRANTY

Fabral offers some of the most competitive, enduring warranties in the industry.	Grandrib 3 Plus	drib 3		Grandrib 3 26 ga	Mighti-Rib	5V Crimp 26 ga	e Rib	ad	StrongClad	1/2" Corrugated Painted	1 1/2" SSR	Horizon S® (Climaguard®, Horizon 16®)
Finish Warranty	Grano	Grandrib	GRG	Grano	Might	5V Cr	Prime Rib	ProCl	Stron	2 1/2	1 1/2	Horiz (Clim
Availability												
Northeast / Mid-Atlantic												
Southern												
Midwest												
Western												
Lifetime film integrity warranty for walls and roofs												
30-year warranty against fade and chalk walls and roofs	•											
10-year edge rust warranty against acid rain									•			
15-year edge rust warranty painted panels												
25-year non-perforated warranty against acid rain for walls; 20 years for roofs	•											
20-year non-perforated warranty												
30-year prorated chalk and fade for walls & roofs												
40-year film integrity for walls & roofs			•									

#### The Enduracote® PLUS Warranty

- Lifetime film integrity for walls & roofs
- 30-year against fade & chalk for walls and roofs
- 15-year edge rust against acid rain
- 25-year non-perforation against acid rain for walls;
- 20-years for roof

For profiles: Grandrib 3 PLUS

#### GRG<sup>™</sup> Warranty

- 40-year film integrity
- 30-year fade and chalk prorated at a subsequent 5% every year beginning at year 10

#### The Enduracote® Warranty for Galvalume® Panels

- Lifetime film integrity for walls & roofs
- 30-year against fade & chalk for walls and roofs
- 20 year non-perforation warranty

For profiles: Grandrib 3, 1 1/2" SSR, Mighti-Rib, Horizon S, Horizon 16, Ultra-Loc, Ultra-Rib

#### The Enduracote® Warranty for Galvanized Panels

- Lifetime film integrity for walls & roofs
- 30-year against fade & chalk for walls and roofs
- 10-year edge rust against acid rain

For profiles: Grandrib 3, 5V Crimp, ProClad, StrongClad, Prime Rib

#### Galvalume<sup>®</sup> Perforation Warranty

20-year non-perforation warranty for Grandrib 3, Mighti-Rib , Horizon S and 1 1/2" SSR

#### Aluminum Product Guarantee

**OTHER WARRANTIES** 

• 30-year corrosion guarantee

Galvalume is a registered trademark of BIEC International.

### **CONTACT INFORMATION**

#### Contact by Phone - Nationwide Plant Locations

Cedar City, UT	(800) 432-2725	Marshfield, WI	(800) 528-0878
Fort Worth, TX	(800) 477-9066	Spokane, WA*	(800) 456-9124 (800) 477-8028
Gridley, IL	(800) 451-3974		
Lancaster, PA	(800) 477-2741	St. Joseph, MN	(800) 873-3440
	· · · · /	Tifton, GA	(800) 749-8144

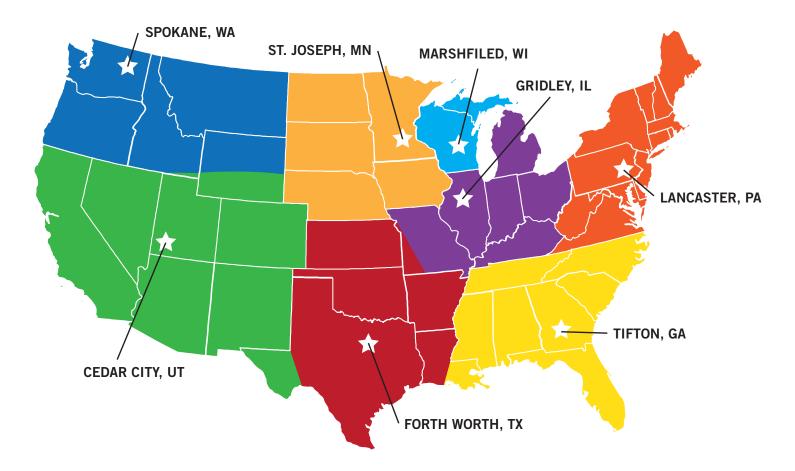
\*Both numbers service Northern California, Oregon, Washington areas

#### Contact by Email

info@fabral.com

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### FABRAL LOCATIONS & SERVICE AREAS





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