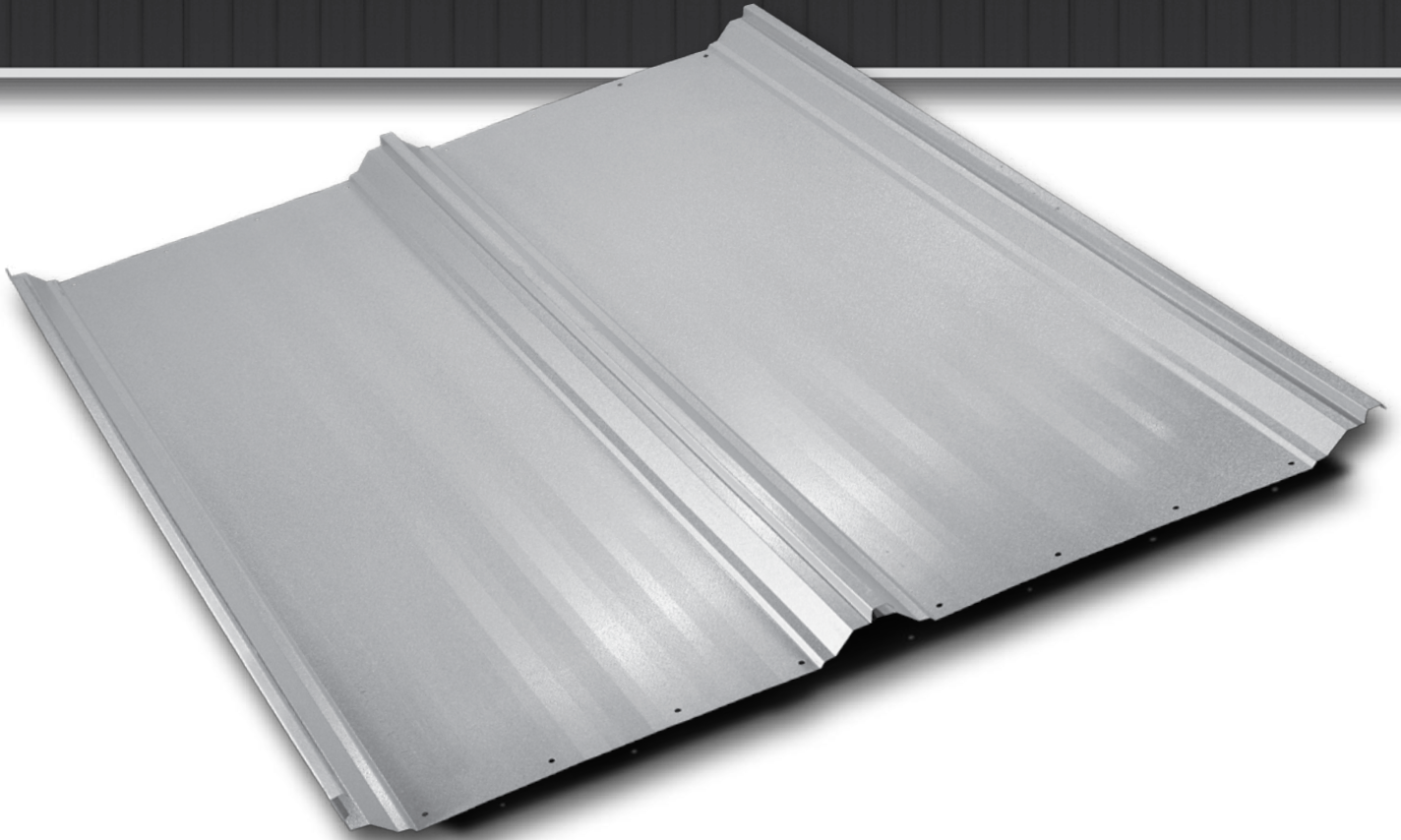


TRIAD CORRUGATED METAL, INC.

COMMERCIAL | RESIDENTIAL | AGRICULTURAL



TS-324 Panel Guide

The TS-324 Roof System is a heavy-duty structural roof system designed for use where water penetration resistance, expansion / contraction control, and load capacity are of prime importance.

The Triad Corrugated Metal TS-324 is designed to have superior wind and water resistance, flexibility of application, and long lifespan for commercial and industrial roof installations. Three levels of uplift resistance are available with Single-Lok, Double-Lok, or Triple-Lok seaming.

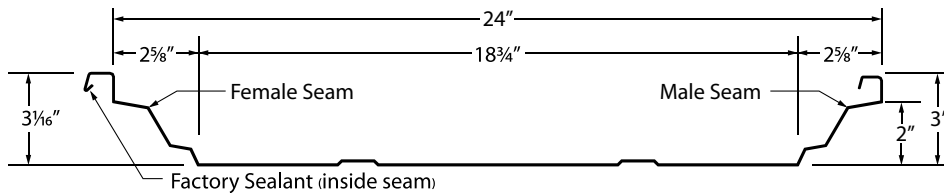
Table of Contents

General Information	1
TS-324 Panel Description & Summary Test Data	2
Eave Section - Eave Gutter	3
Eave Gutter - ISO View	4
Eave Section - High Eave Trim	5
High Endwall Section - Transition Flashing	6
Ridge Section	7
Ridge - ISO View	8
Starting Rake Section - Rake Trim	9
Valley Section	10

TS-324

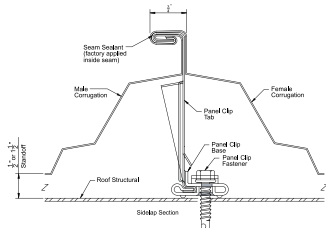


The TS-324 Trapezoidal SSR System with the Double-Lok seam is installed with the recommended anchor clip, then the panels are snapped together and hand seamed at each clip location, providing added separation and uplift resistance. The Triple-Lok seam is made by running a power seamer over the Double-Lok, forming a tight seam the full length of the panel. The Triple-Lok seam becomes more tightly engaged as the panel is subjected to wind uplift loads. Where maximum wind load resistance is called for, the Quad-Lok seam is formed by using the power seamer to provide an additional fold to the Triple-Lok for the full panel length.



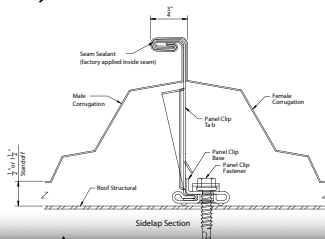
DoubleLok

Crimp seamed at clips only



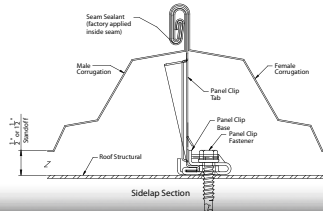
TripleLok

Fully seamed from end to end



QuadLok

Adds final 90° bend



- **Finishes:** Classic Sil-Poly & Premium Kynar
- **Metals:** Galvanized, Galvalume® and Aluminum
- **Gauges:** 26ga, 24ga & 22ga
- **Features :**
 - Δ Applies over open framing or solid substrate
 - Δ Lengths cut to the inch
 - Δ Minimum roof slope: 1/4:12
 - Δ Self ventilating

ACCESSORIES



Number in circles refer to page numbers in TCM Metal Roofing Guide.



TS-324

Panel Description
& Summary
Test Data

PANEL DESCRIPTION: 3" Trapizoidal Mechanical Seam Panel, 24 gauge standard (0.023" min.), (ASTM 792, Grade 50), AZ50 aluminum/zinc coated steel, 24" max. width, 3" tall rib, painted or unpainted. Bare galvanized limited warranty - 20 years for integrity and corrosion perforation, "Galvalume" limited warranty - 25 years.

PAINT SYSTEMS: Silicone polyester (Limited warranty 40 year for integrity and adhesion, 30 year for chalking, 30 year for fade resistance.) Kynar Fluoropon (Limited warranty 35 years for integrity and adhesion, 30 years for chalking, 30 years for fade)

PANEL CLIP & FASTENER: Clips -One piece 22 GA,G90 Galvanized, 3.75" long @ each purlin spacing. Fastener (2) #14 X 1-1/4", #2 Phillips Drive, Low profile head screw per clip. Alternate -Two piece floating, 22GA(upper) 16GA(lower), G90 galvanized, 4.9" long @ each purlin spacing, Fastener (2) #10-12 X 1", #2 Phillips Drive, Low profile head screw per clip. (Corrosion resistant per FBC 2007 Section 1507.4.4)

MAXIMUM ALLOWABLE PANEL UPLIFT PRESSURE: Per testing listed below based on UL 580/UL 1897 testing, ASTM E-1592 testing, FM 4471 testing.

ROOF PANEL FIRE RATING: Panel has a Class A fire exposure rating in accordance with FBC Section 1505.3 without an additional fire barrier.

MINIMUM ROOF SLOPE: 1/4:12 Minimum slope, 6:12 Maximum recommended.

SUBSTRATE: Steel purlins spaced 5'-0" O.C. Purlins support capacity is not addressed in this testing.

VAPOR BARRIER: N/A

TESTING (Dated July, 2008) **

TEST BASIS:

Tested: 24 gauge 24" wide trapizoidal panel with 3" rib installed over steel purlin @ 5', and 2.5' spacing, with MPS 602 or MPS 603 Clip.
Underwriters Laboratories Inc. Construction # 552, 552A, 552B. UL 580/UL1897 test.
Factory Mutual 4471 Uplift Test ASTM E 1592 Uplift Test

24 GA. TS 324 MECHANICAL SEAM, 3" HIGH / 24" WIDE								
PANEL WIDTH	PANEL GAUGE	PURLIN SPACING	SEAM	UPLIFT TEST RESULTS			AIR INFILTRATION	WATER LEAKAGE
				UL	FM 4471	ASTM E-1592 Allowable Uplift	ASTM E 1680	ASTM E 1646
24"	24 GA.	5'-0"	ROLL-LOCK	UL-90	Jan-60	24.1	.0005 CFM/sq.ft.	NONE @ 12PSF.
	22 GA.		ROLL-LOCK		1-90	33.8	.0005 CFM/sq.ft.	NONE @ 12PSF.
	24 GA.		TRIPLE-LOCK	UL-90	1-90	42.1	.0005 CFM/sq.ft.	NONE @ 12PSF.
	22 GA.		TRIPLE-LOCK		1-165	24.1	.0005 CFM/sq.ft.	NONE @ 12PSF.
	24GA.		QUAD LOCK		1-165	48.3	.0005 CFM/sq.ft.	NONE @ 12PSF.
	22 GA.		QUAD LOCK		NA	NO TEST	NA	NA
24"	24 GA.	2'-6"	ROLL-LOCK		1-90	42.2	.0005 CFM/sq.ft.	NONE @ 12PSF.
	22 GA.		ROLL-LOCK		1-90	57.2	.0005 CFM/sq.ft.	NONE @ 12PSF.
	24 GA.		TRIPLE-LOCK			62.4	.0005 CFM/sq.ft.	NONE @ 12PSF.
	22 GA.		TRIPLE-LOCK		1-165	59.8	.0005 CFM/sq.ft.	NONE @ 12PSF.
	24 GA.		QUAD LOCK		1-165	90.5	.0005 CFM/sq.ft.	NONE @ 12PSF.
	22 GA.		QUAD LOCK		NA	NO TEST	NA	NA

** Additional design criteria and performance testing available on request.

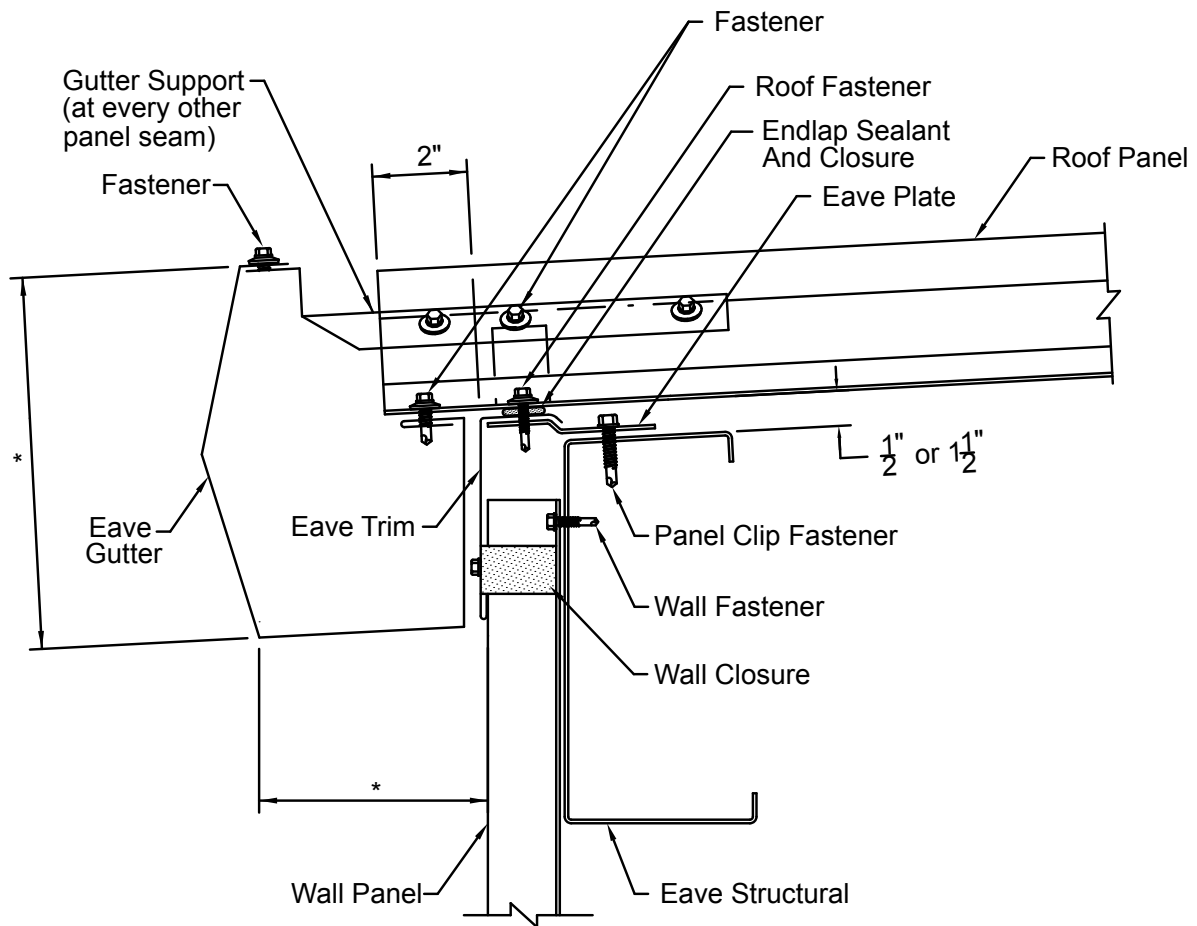




TS-324

Eave Section - Eave Gutter

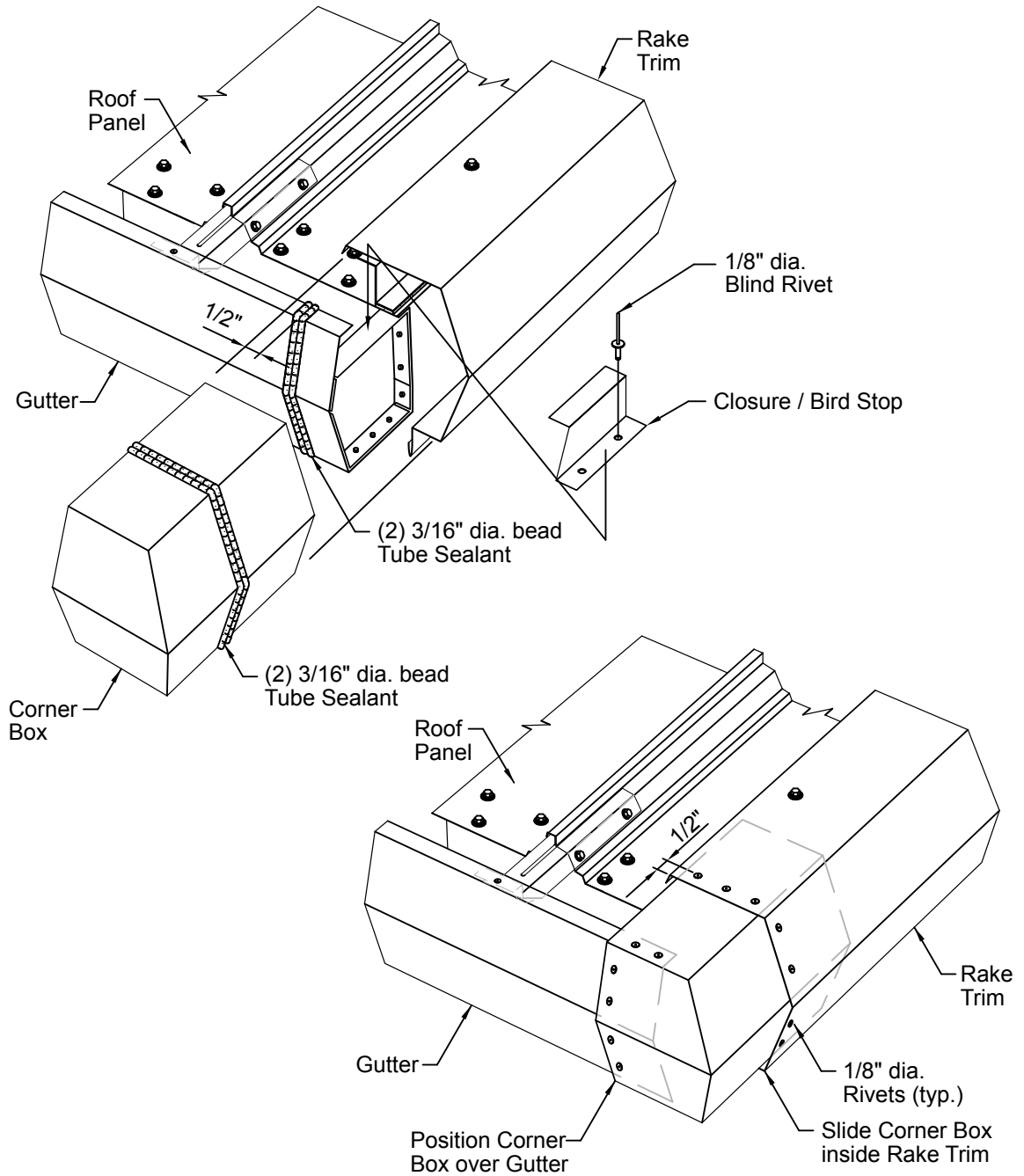
Note: For Clarity Of Detail,
Roof Insulation Is Not Shown



See TCM standard gutter design.



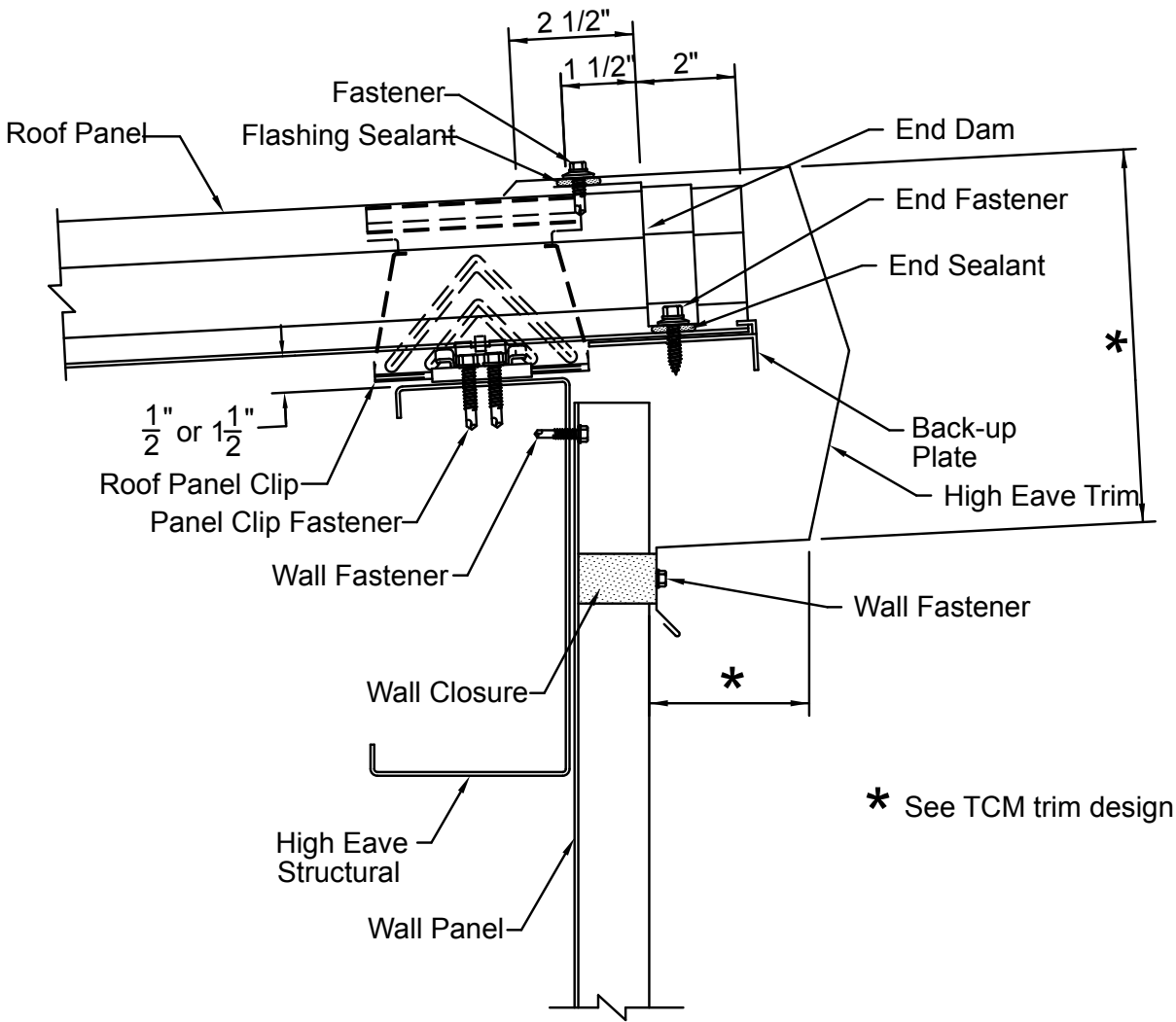
Eave Gutter ISO View





TS-324

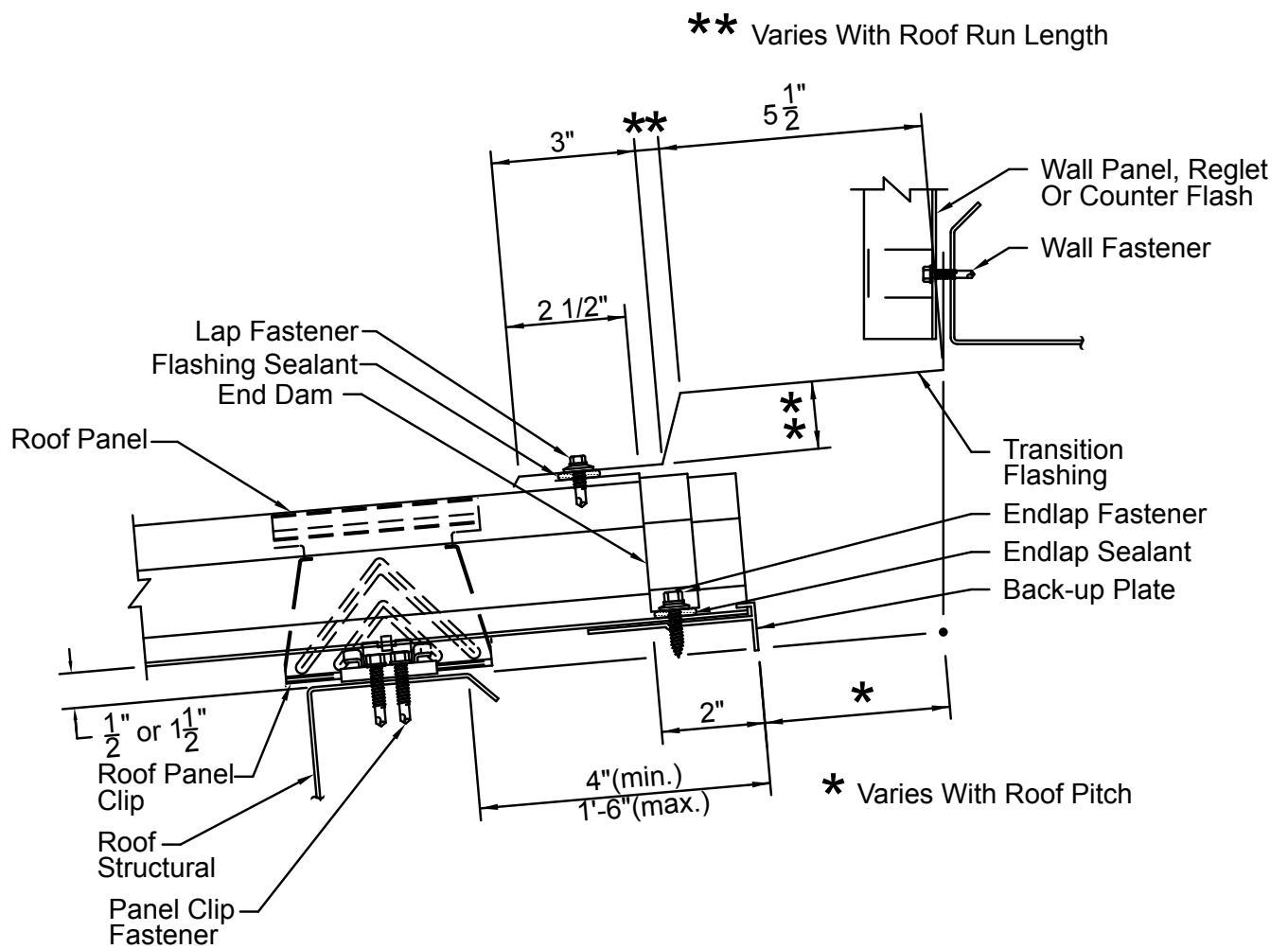
Eave Section - High Eave Trim





TS-324

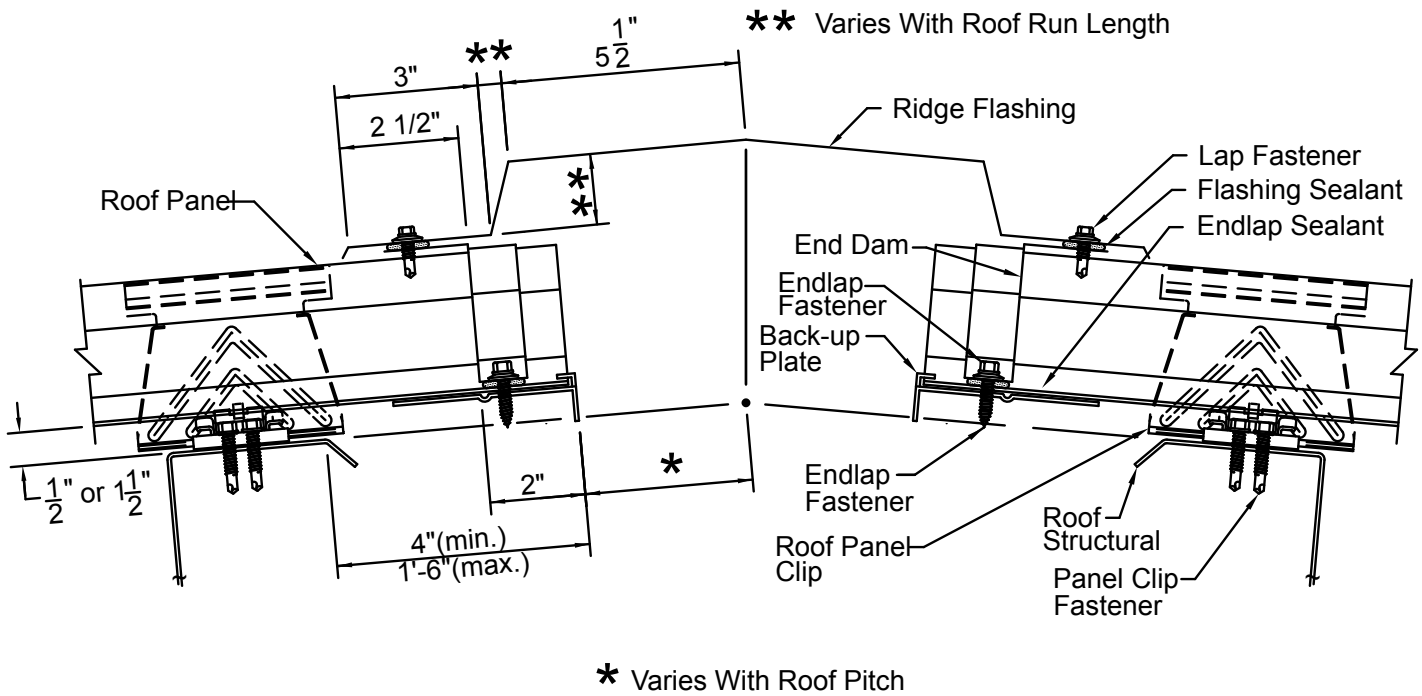
High Endwall Section - Transition Flashing





TS-324

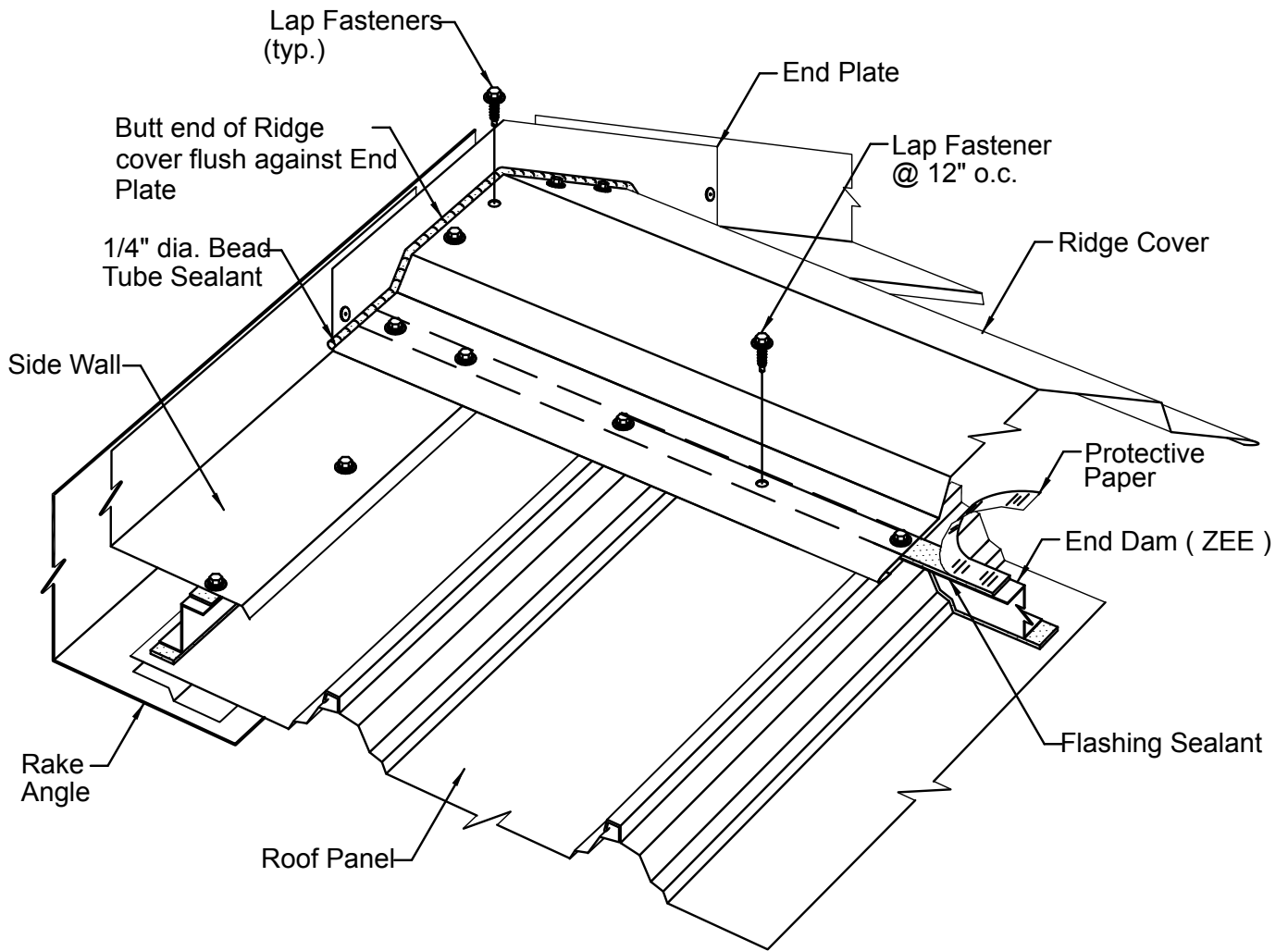
Ridge Section





TS-324

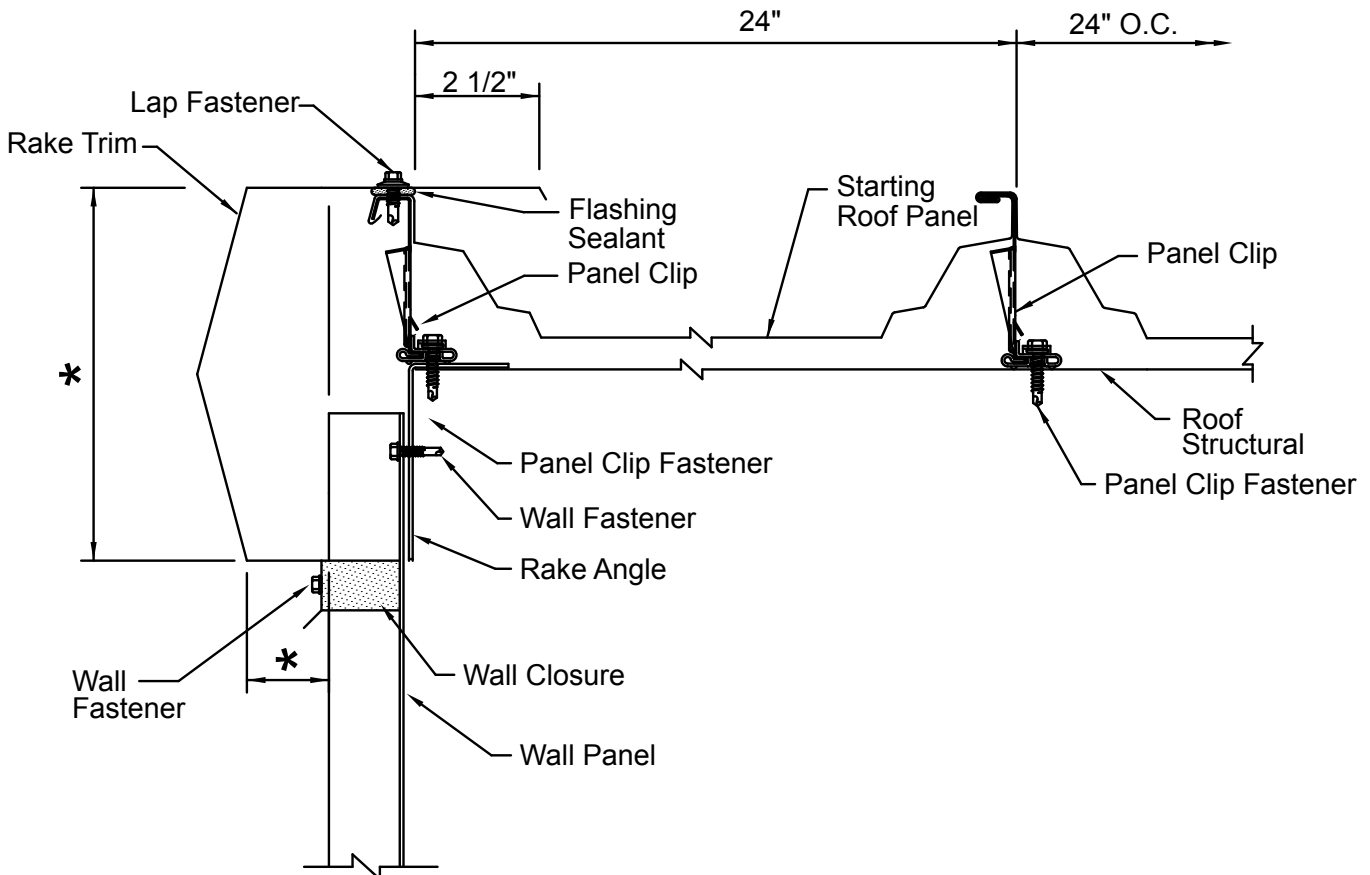
Ridge ISO View





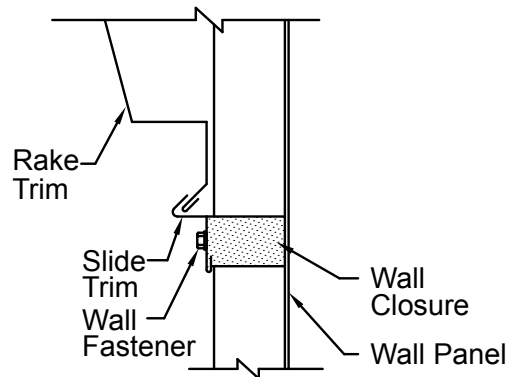
TS-324

Starting Rake Section - Rake Trim



* Determined By Manufacturer.

Note: For Clarity Of Detail,
Roof Insulation Is Not Shown



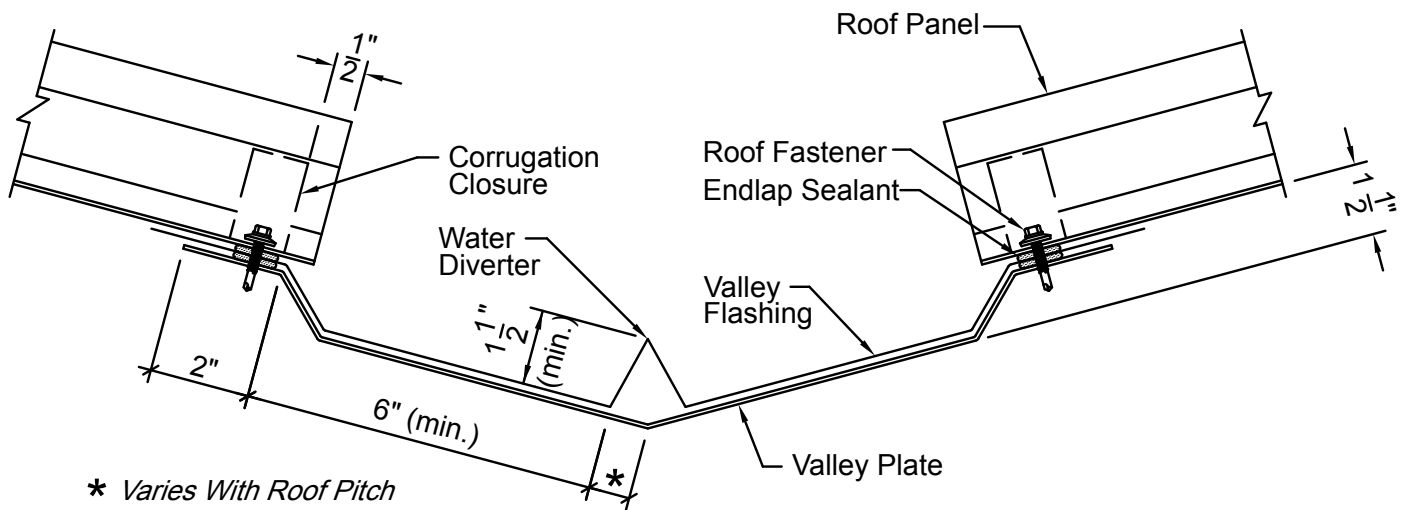
Alternate
Sliding Rake
Trim (Allows Expansion Movement Of Rake
Trim, Required When Roof Run Exceeds 50')



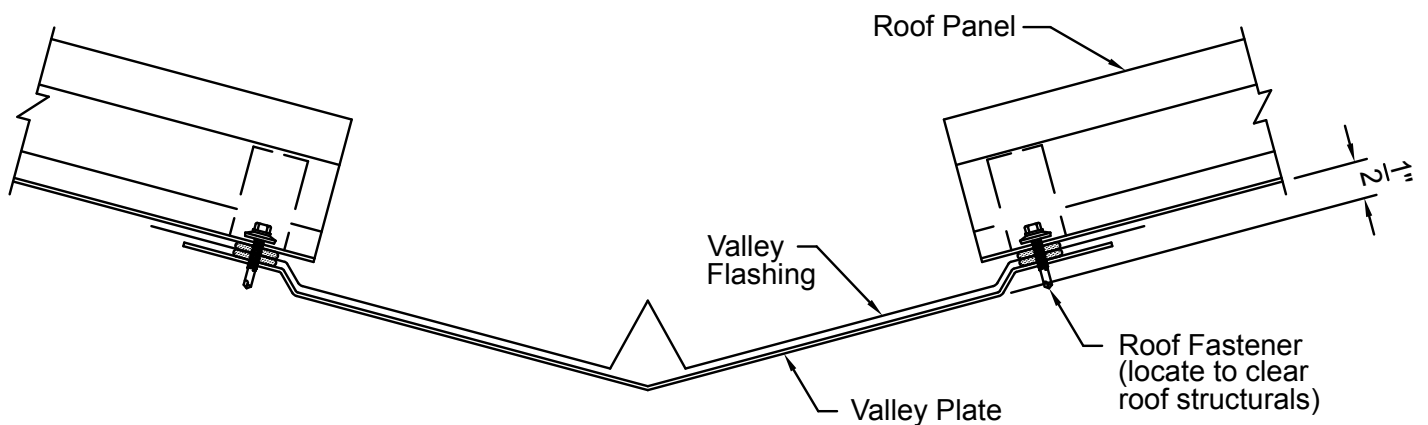
TS-324

Valley Section

Note: For Clarity Of Detail,
Roof Insulation Is Not Shown



Valley For Roof Systems
With High Panel Clips



Valley For Roof Systems
With Low Panel Clips



**A  Greener Choice for Your Metal
Roofing and Building Systems!**

TRIAD CORRUGATED METAL, INC.

208 Luck Road Asheboro, NC 27205

Phone: 336 625 9727 • Fax: 336 625 9722

www.triadmetalroof.com