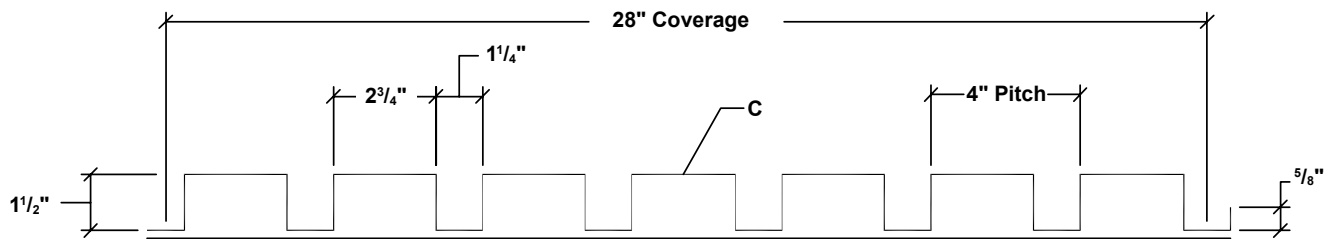


Product	Page No.
Panel Information	
T10-A Panel Profile.....	PV-2
T10-A Panel Overview.....	PV-2
T10-C Panel Profile.....	PV-3
T10-C Panel Overview.....	PV-3
Flashing Profiles	
Cleat.....	PV-4
Custom Soffit Cleat.....	PV-4
Coping.....	PV-4
Outside Corner.....	PV-4
Inside Corner.....	PV-4
Custom Sill/Head.....	PV-4
Custom Sill to Soffit.....	PV-4
Custom Jamb.....	PV-4
Custom Head Channel.....	PV-4
Head/Jamb Cover.....	PV-5
Custom Base.....	PV-5
Accessory Profiles	
Universal Closure.....	PV-5
Touch-Up Paint.....	PV-5
Tape Sealant.....	PV-5
Testing Information	
Section Properties and General Information.....	PV-6-8
Design/Installation Considerations	
Fastening Patterns.....	PV-9
Detail Conditions	
Coping Detail (Vertical).....	PV-10
Coping Detail (Horizontal).....	PV-10
Outside Corner Detail (Vertical).....	PV-11
Outside Corner Detail (Horizontal) (+option).....	PV-11
Inside Corner Detail (Vertical).....	PV-12
Inside Corner Detail (Horizontal) (+option).....	PV-12
Sill/Head Detail (Vertical).....	PV-13
Sill/Head Detail (Horizontal).....	PV-13
Sill to Soffit Detail (Vertical) (+option).....	PV-14
Sill to Soffit Detail (Horizontal) (+option).....	PV-14
Jamb Detail (Vertical).....	PV-15
Jamb Detail (Horizontal).....	PV-15
Head Channel Detail (Vertical).....	PV-16
Head Channel Detail (Horizontal).....	PV-16
Base Detail (Vertical).....	PV-17
Base Detail (Horizontal).....	PV-17
Notes	
Notes.....	PV-18

VERTI-LINE SERIES T10-A PANEL OVERVIEW

T10-A PANEL PROFILE



SUBSTRATE

T10-A panel is designed to be utilized over open structural framing, but can easily be used with a solid substrate. The recommended substrate is $\frac{5}{8}$ " plywood with a 30 pound felt moisture barrier. To avoid panel distortion, use a properly aligned and uniform substructure.

COVERAGE

Each panel has a coverage of 28".

LENGTH

Lengths under 5'-0" are available with some cutting restrictions. The maximum panel length is 24'-0" (see PGI-2 and PGI-3 for locations).

AVAILABILITY

Panels are available in 24 through 18 gauge. Minimum quantities may apply.
Custom capabilities include:
-Perforated panels for wind screens and liner panels.

APPLICATION

Commercial, Industrial and Architectural panels

FASTENING SYSTEM

Direct Fastened (exposed)

FASTENERS

The fastener selection guide should be consulted for choosing proper fasteners for specific applications. Quantity and type of fastener must meet necessary loading and code requirements (see PGI-12 through PG-14).

MATERIALS

24 and 22 gauge: Steel Grade 50, AZ50 or AZ55 per ASTM A 792
20 and 18 gauge: Steel Grade 33, G90 per ASTM A 653
Optional material: stainless steel, copper and aluminum

FINISH

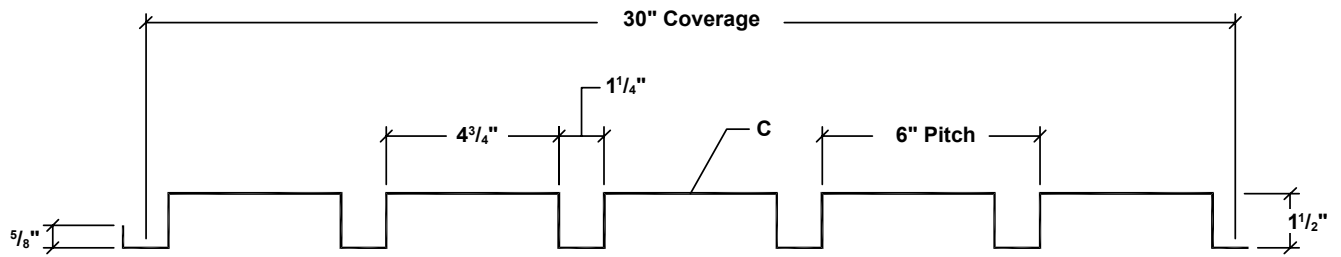
- ▶ *Acrylic Coated Galvalume® (ACG): AZ55 per ASTM A 792
- ▶ Prepainted Galvalume®: AZ50 per ASTM A 792
- ▶ MS Colorfast45®
- ▶ **PVDF
- ▶ Multi-Pass Kynar 500®
- ▶ Marbilique
- ▶ Plastisol
- ▶ Polyester

* Differential appearance of Acrylic Coated Galvalume® roofing materials is not a cause for rejection.

** Meets both Kynar 500® and Hylar 5000® specifications.

VERTI-LINE SERIES T10-C PANEL OVERVIEW

T10-C PANEL PROFILE



SUBSTRATE

T10-C panel is designed to be utilized over open structural framing, but can easily be used with a solid substrate. The recommended substrate is $\frac{5}{8}$ " plywood with a 30 pound felt moisture barrier. To avoid panel distortion, use a properly aligned and uniform substructure.

COVERAGE

Each panel has a coverage of 30".

LENGTH

Lengths under 5'-0" are available with some cutting restrictions. The maximum panel length is 32'-0" except for 18 gauge panels which is 28'-0" max (see PGI-2 and PGI-3 for locations).

AVAILABILITY

Panels are available in 24 through 18 gauge. Minimum quantities may apply.
Custom capabilities include:
-Perforated panels for wind screens and liner panels.

APPLICATION

Commercial and Industrial panels

FASTENING SYSTEM

Direct Fastened (exposed)

FASTENERS

The fastener selection guide should be consulted for choosing proper fasteners for specific applications. Quantity and type of fastener must meet necessary loading and code requirements (see PGI-12 through PG-14).

MATERIALS

24 and 22 gauge: Steel Grade 50, AZ50 or AZ55 per ASTM A 792
20 and 18 gauge: Steel Grade 33, G90 per ASTM A 653
Optional material: stainless steel, copper and aluminum

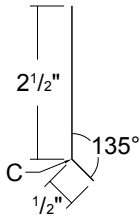
FINISH

- ▶ *Acrylic Coated Galvalume® (ACG): AZ55 per ASTM A 792
- ▶ Prepainted Galvalume®: AZ50 per ASTM A 792
- ▶ MS Colorfast45®
- ▶ **PVDF
- ▶ Multi-Pass Kynar 500®
- ▶ Marbilique
- ▶ Plastisol
- ▶ Polyester

* Differential appearance of Acrylic Coated Galvalume® roofing materials is not a cause for rejection.

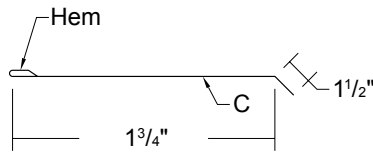
** Meets both Kynar 500® and Hylar 5000® specifications.

CLEAT



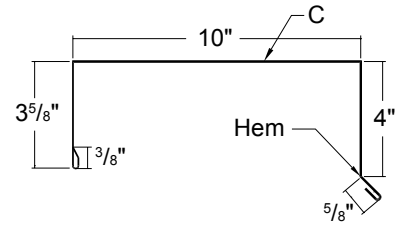
Length 10'-0"

CUSTOM SOFFIT CLEAT



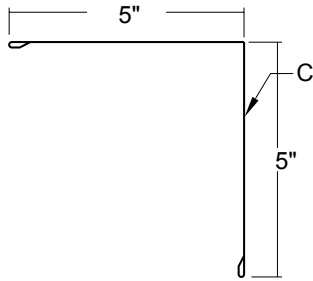
Length 10'-0"

COPING



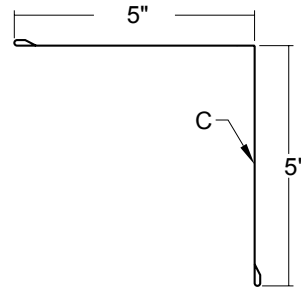
Lengths 10'-2" and 20'-3"

OUTSIDE CORNER



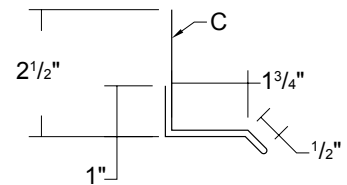
Length 10'-0"

INSIDE CORNER



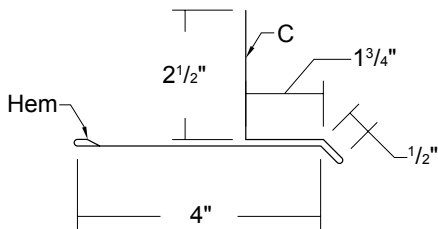
Length 10'-0"

CUSTOM SILL/HEAD



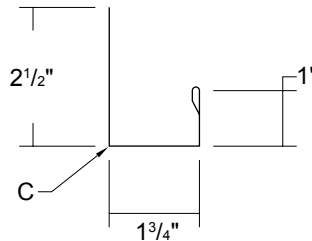
Length 10'-0"

CUSTOM SILL TO SOFFIT



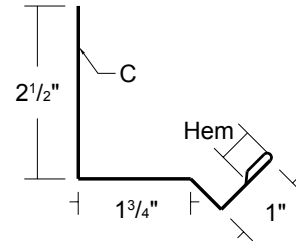
Length 10'-0"

CUSTOM JAMB



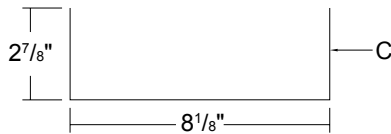
Length 10'-0"

CUSTOM HEAD CHANNEL



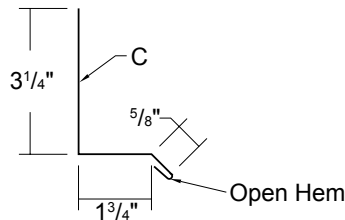
Length 10'-0"

HEAD/JAMB COVER



Length 10'-0"

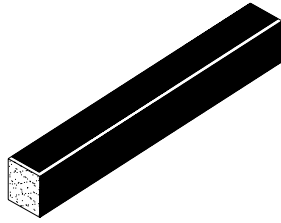
CUSTOM BASE



Length 10'-0"

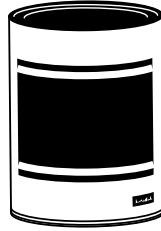
C- Indicates color side of flashing.

UNIVERSAL CLOSURE



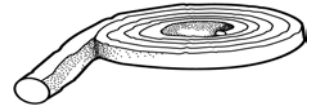
1" x 1 1/2" x 50' Polyethylene Foam
1" x 1 1/2" x 10' Polyethylene Foam

TOUCH-UP PAINT



Available in 2 oz Bottles
PVDF / MS Colorfast45®

TAPE SEALANT



3/8" X 3/32" X 50'
Single Bead Tape Sealant
Butyl - Gray

T10-A CLOSURES



Inside Closure



Outside Closure

Polyethylene Foam

T10-C CLOSURES



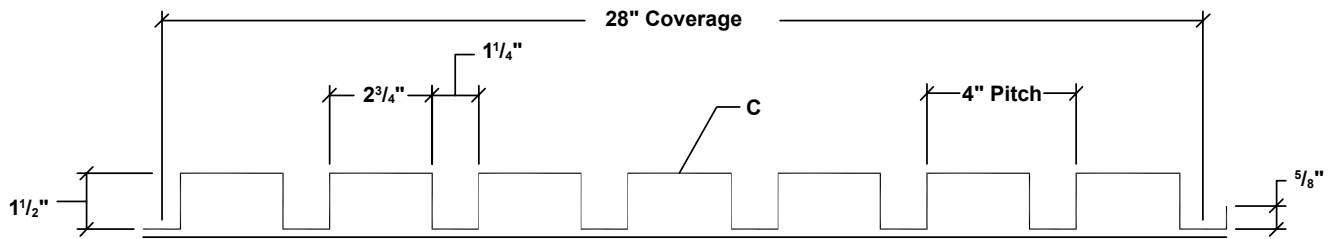
Inside Closure



Outside Closure

Polyethylene Foam

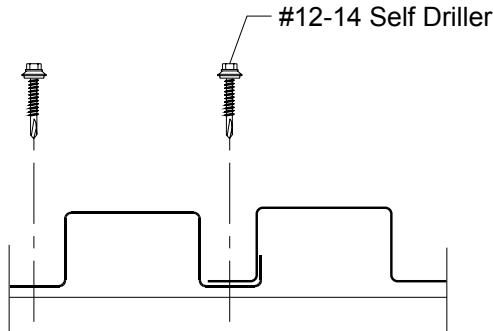
VERTI-LINE SERIES T10-A SECTION PROPERTIES AND GENERAL INFORMATION



SECTION PROPERTIES								ALLOWABLE UNIFORM LOADS psf (3 or More Equal Spans)											
Ga	Width in	Yield ksi	Weight psf	Top in Compression		Bottom in Compression		Inward Load				Outward Load							
				I _{xx} in ⁴ /ft	S _{xx} in ³ /ft	I _{xx} in ⁴ /ft	S _{xx} in ³ /ft	5'	6'	7'	8'	10'	12'	5'	6'	7'	8'	10'	12'
24	28	50	1.57	0.1219	0.1569	0.1537	0.1657	153	107	79	55	28	16	145	101	74	55	28	16
22	28	50	2.05	0.1715	0.2251	0.2107	0.2329	215	150	106	71	36	21	208	145	106	71	36	21
20	28	33	2.50	0.2384	0.2856	0.2597	0.2896	176	123	91	69	44	25	174	121	89	68	44	25
18	28	33	3.28	0.3341	0.3785	0.3369	0.3767	229	160	118	90	57	33	230	161	118	91	57	33

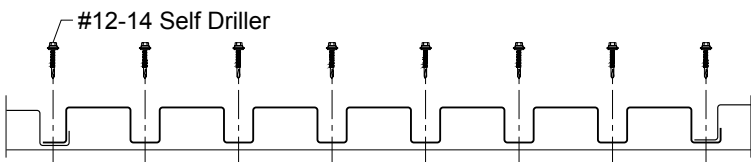
- Theoretical section properties have been calculated per AISI 2012 "Specifications for the Design of Cold-formed Steel Structural Members." I_{xx} and S_{xx} are effective section properties for deflection and bending.
- Allowable load is calculated in accordance with AISI 2012 specifications considering bending, shear, combined bending and shear and deflection. Allowable load considers the 3 or more equal span condition. Allowable load does not address web crippling, fasteners/support connection or load testing. Panel weight is not considered.
- Deflection consideration is limited by a maximum deflection ratio of L/180 of span.
- Allowable loads do not include a 1/3 stress increase in uplift.

ATTACHMENT DETAIL

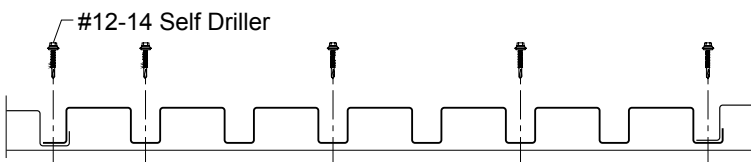


FASTENING PATTERNS

Ends of Panel



Field of Panel



GENERAL INFORMATION

► Substructure

T10-A Panels are designed to be utilized over open structural framing or a solid substrate.

► Coverage

T10-A Panels are available in a 1 1/2" depth with a coverage width of 28".

► Length

Minimum factory cut length is 5'-0".
Maximum available panel length is 24'-0".

► Fasteners

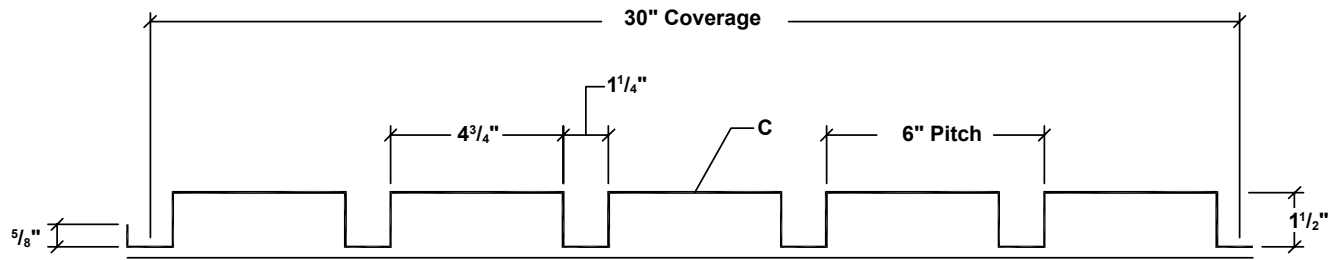
The fastener selection guide should be consulted for choosing the proper fastener for specific applications. Quantity and type of fastener must meet necessary loading and code requirements.

NOTE: All panels are subject to surface distortion due to improperly applied fasteners. Overdriven fasteners will cause stress and induce oil canning across the face of the panel at or near the point of attachment.

► Availability

Finishes: PVDF (Kynar 500®) standard;
optional: multi-pass Kynar 500®, Marblique, Plastisol, Polyester and MS Colorfast45® (SMP)
Gauges: 24ga, 22ga, 20ga and 18ga

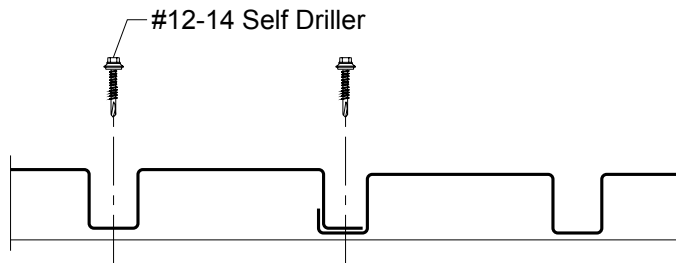
VERTI-LINE SERIES T10-C SECTION PROPERTIES AND GENERAL INFORMATION



SECTION PROPERTIES								ALLOWABLE UNIFORM LOADS psf (3 or More Equal Spans)											
Ga	Width in	Yield ksi	Weight psf	Top in Compression		Bottom in Compression		Inward Load						Outward Load					
				Ixx in ⁴ /ft	Sxx in ³ /ft	Ixx in ⁴ /ft	Sxx in ³ /ft	5'	6'	7'	8'	10'	12'	5'	6'	7'	8'	10'	12'
24	30	50	1.36	0.0839	0.1075	0.1254	0.1190	110	77	56	43	23	14	99	69	51	39	23	14
22	30	50	1.78	0.1189	0.1560	0.1730	0.1675	154	108	79	59	30	18	144	100	74	57	30	18
20	30	33	2.18	0.1699	0.1996	0.2151	0.2103	128	89	66	50	32	21	121	85	62	48	31	21
18	30	33	2.86	0.2456	0.2669	0.2801	0.2747	167	116	86	66	42	27	162	113	83	64	41	27

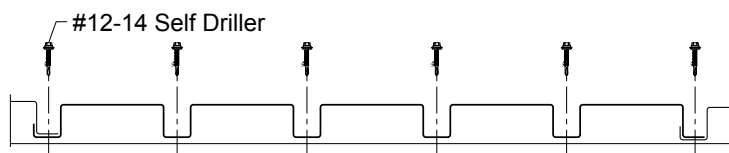
- Theoretical section properties have been calculated per AISI 2012 "Specifications for the Design of Cold-formed Steel Structural Members." Ixx and Sxx are effective section properties for deflection and bending.
- Allowable load is calculated in accordance with AISI 2012 specifications considering bending, shear, combined bending and shear and deflection. Allowable load considers the 3 or more equal span condition. Allowable load does not address web crippling, fasteners/support connection or load testing. Panel weight is not considered.
- Deflection consideration is limited by a maximum deflection ratio of L/180 of span.
- Allowable loads do not include a 1/3 stress increase in uplift.

ATTACHMENT DETAIL

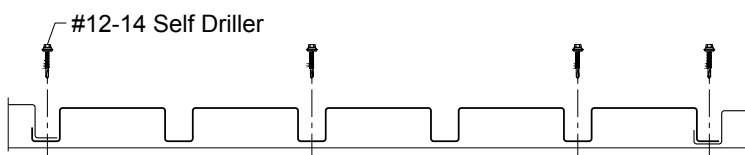


FASTENING PATTERNS

Ends of Panel



Field of Panel



GENERAL INFORMATION

► Substructure

T10-C Panels are designed to be utilized over open structural framing or a solid substrate.

► Coverage

T10-C Panels are available in a 1 1/2" depth with a coverage width of 30".

► Length

Minimum factory cut length is 5'-0".
Maximum available panel length is 32'-0" except for 18 gauge panels which is 28'-0" max.

► Fasteners

The fastener selection guide should be consulted for choosing the proper fastener for specific applications. Quantity and type of fastener must meet necessary loading and code requirements.

NOTE: All panels are subject to surface distortion due to improperly applied fasteners. Overdriven fasteners will cause stress and induce oil canning across the face of the panel at or near the point of attachment.

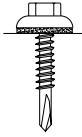
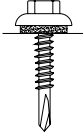

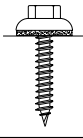

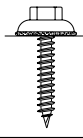
► Availability

Finishes: PVDF (Kynar 500®) standard;
optional: multi-pass Kynar 500®, Marblique, Plastisol, Polyester and MS Colorfast45® (SMP)
Gauges: 24ga, 22ga, 20ga and 18ga

FASTENER INSTALLATION TECHNIQUE

Recommended Tool Type - Use depth locating nose or adjustable clutch on screw gun to prevent overdrilling and strip out. **Do not use impact tools or runners.**

Seating the washer - Apply sufficient torque to seat the washer - do not overdrive the fastener.

	CORRECT Sealing material slightly visible at edge of metal washer. Assembly is watertight.	TOO LOOSE Sealing material is not visible; not enough compression to seal properly.	TOO TIGHT Metal washer deformed; sealing material pressed beyond washer edge.
SELF DRILLER			
WOODSCREW			

To prevent wobbling - Make sure fastener head is completely engaged in the socket. If the head does not go all the way in the socket - tap the magnet deeper into the socket to allow full head engagement. Metal chips will build up from drilling and should be removed from time to time.

Protect drill point - Push only hard enough on the screw gun to engage clutch. This prevents excess friction and burn out of the drill point. Correct pressure will allow screw to drill and tap without binding.

Drilling through sheet and insulation - Ease up on pressure when drilling through insulation to avoid striking the purlin or girt with the point - apply more pressure after drill point contacts purlin or girt.

Drilling through purlin overlaps - Drilling through lapped purlins requires extra care. Excessive voids between purlins sometimes damages drill points and two self-drillers might be necessary to complete the operation. It is sometimes advantageous to predrill.

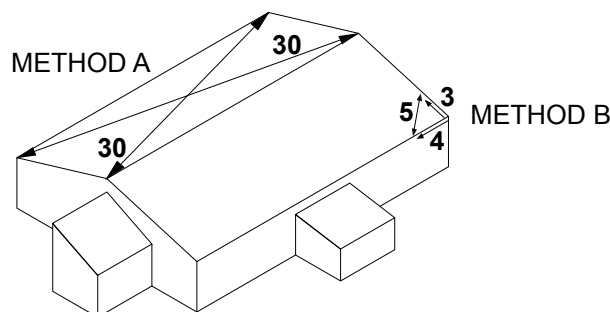
CONDITION OF SUBSTRUCTURE

Whether over solid substrate or open structural framing, panel distortion may occur if not applied over properly aligned and uniform substructure.

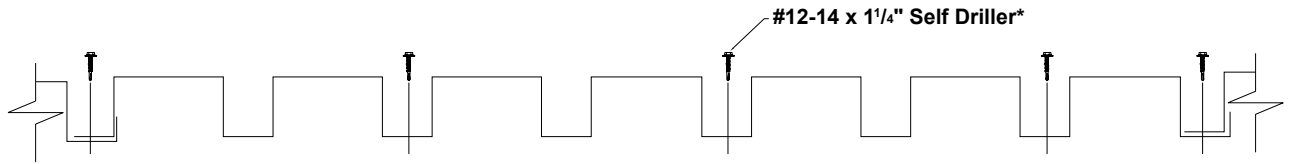
The installer should check the roof deck for squareness before installing Verti-Line panels. Several methods can be used to verify squareness of the structure for proper installation of the panels.

METHOD "A" - One method for checking the roof for squareness is to measure diagonally across one slope of the roof from similar points at the ridge and eave and obtain the same dimension.

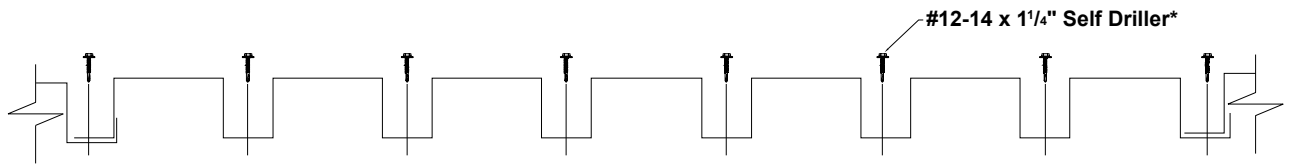
METHOD "B" - The 3-4-5 triangle system may also be used. To use this system measure a point from the corner along the edge of the roof at a module of three (3). Measure a point from the same corner along another edge at a module of four (4). Then by measuring diagonally between the two points established, the dimension should be exactly a module of five (5) to have a square corner. Multiple uses of this system may be required to determine building squareness. If the endwall cannot be made square, the roof system cannot be installed as shown in these instructions.



T10-A FASTENING PATTERNS



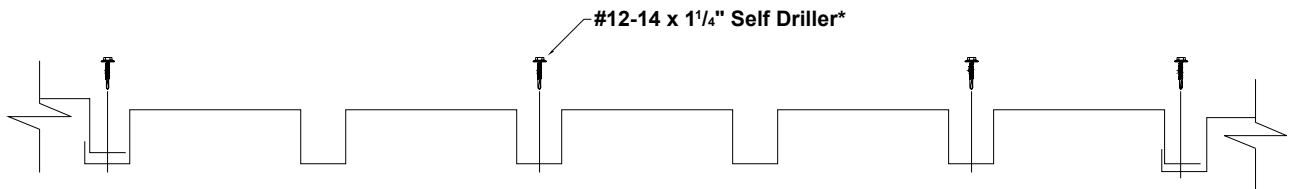
T10-A Panel Fastening Pattern in field



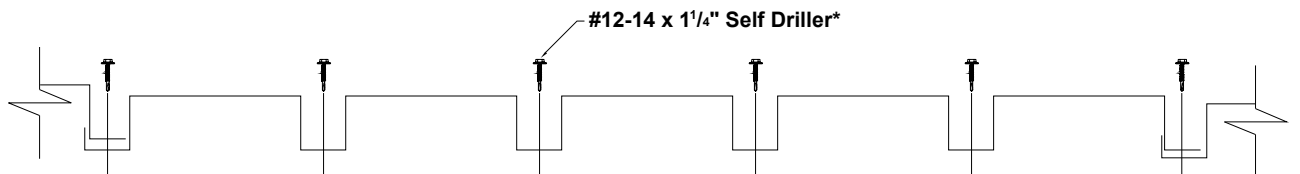
T10-A Panel Fastening Pattern at Ends

Note: #12-14 x 1" Self Driller is used for non-insulated applications.

T10-C FASTENING PATTERNS



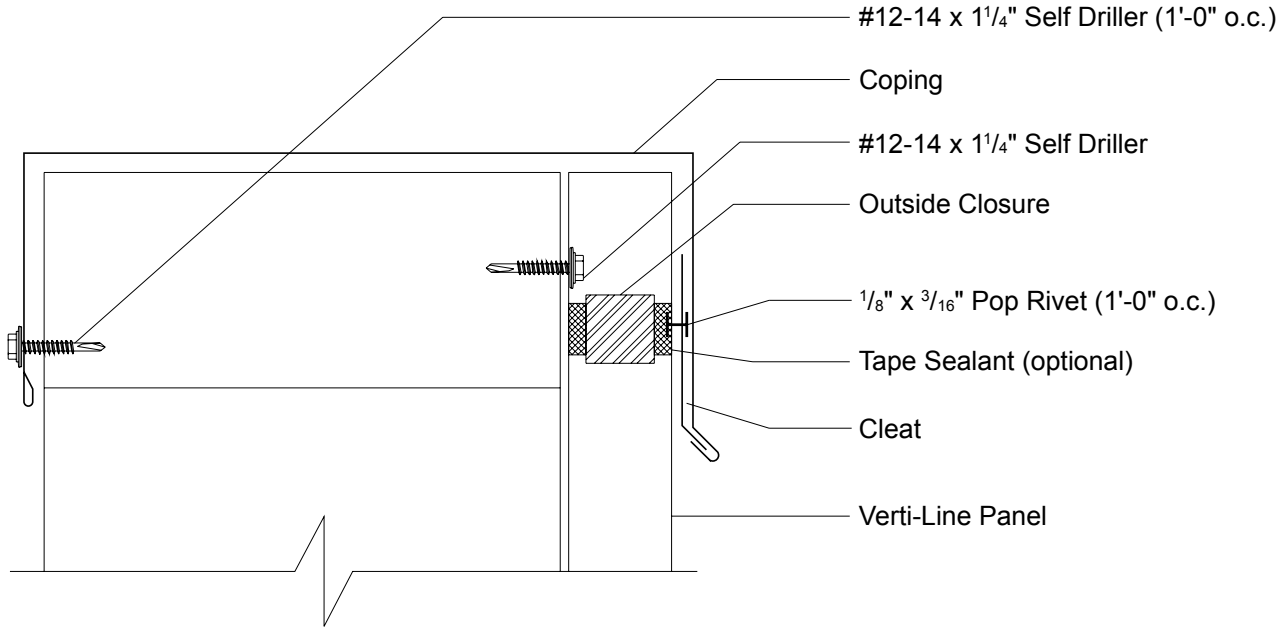
T10-C Panel Fastening Pattern in Field



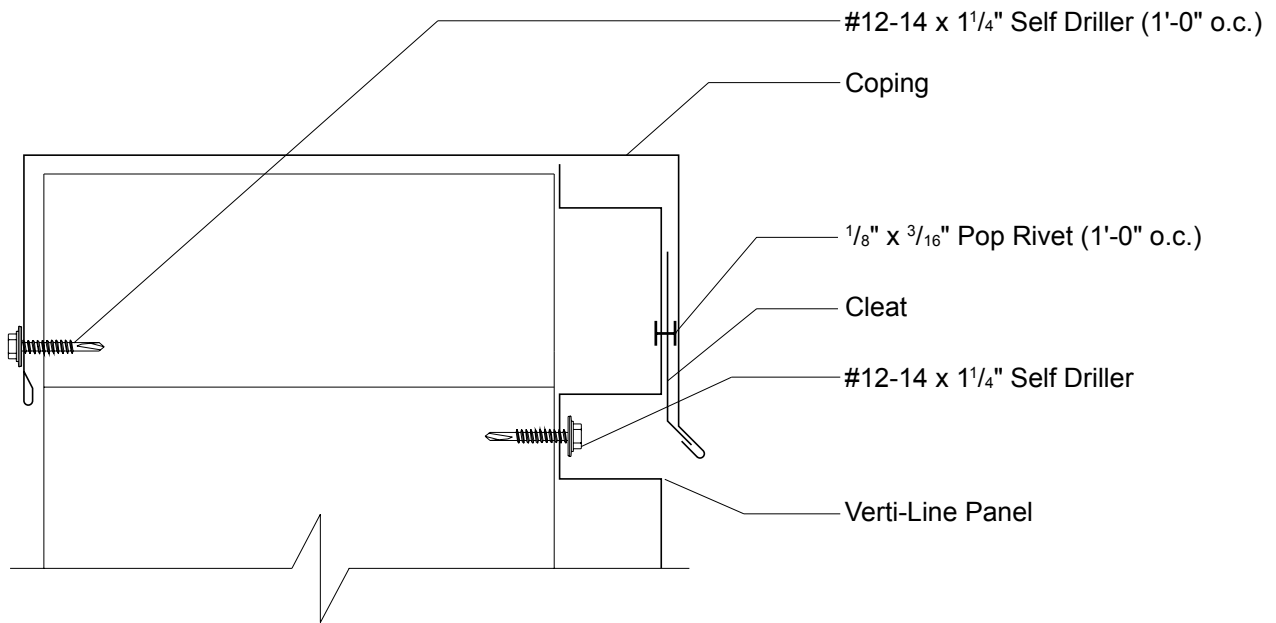
T10-C Panel Fastening Pattern at Ends

Note: #12-14 x 1" Self Driller is used for non-insulated applications.

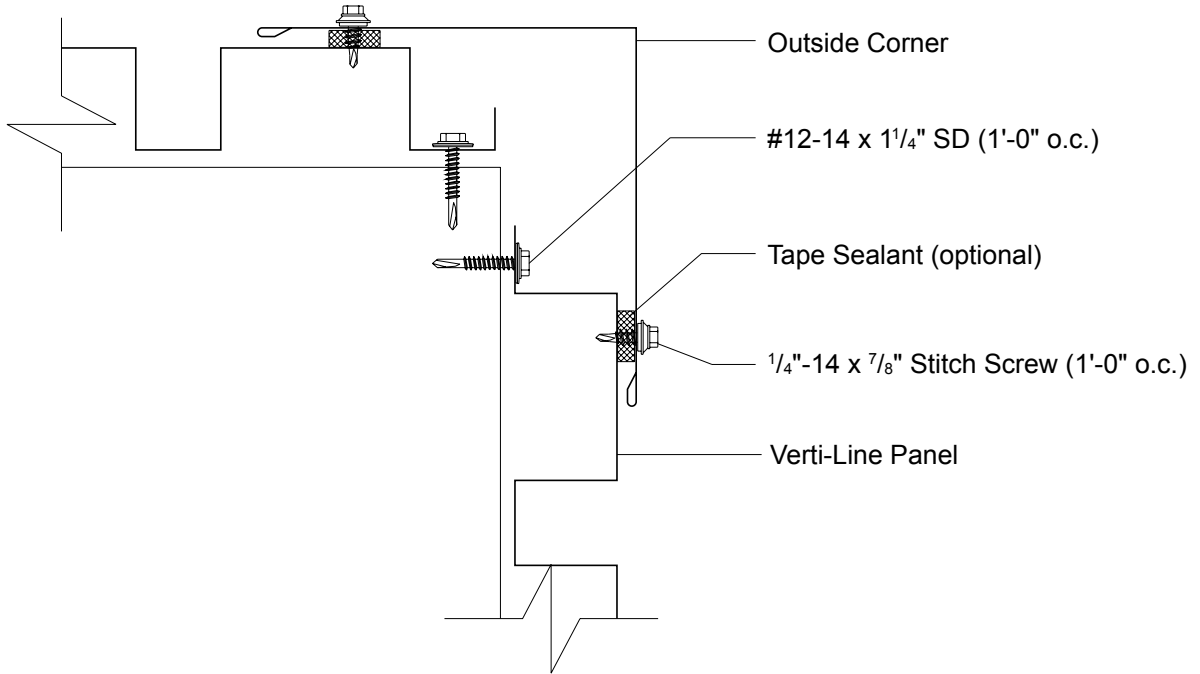
VERTI-LINE SERIES COPING DETAIL (VERTICAL)



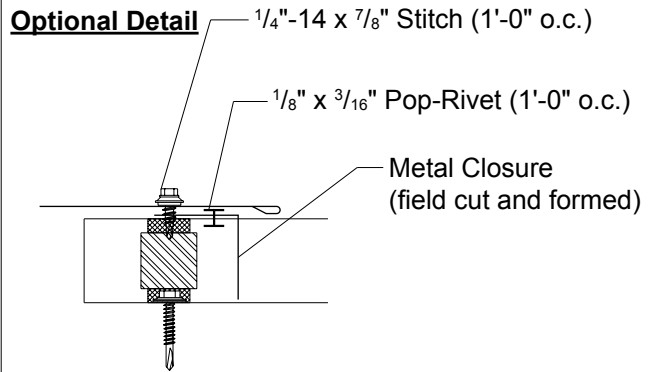
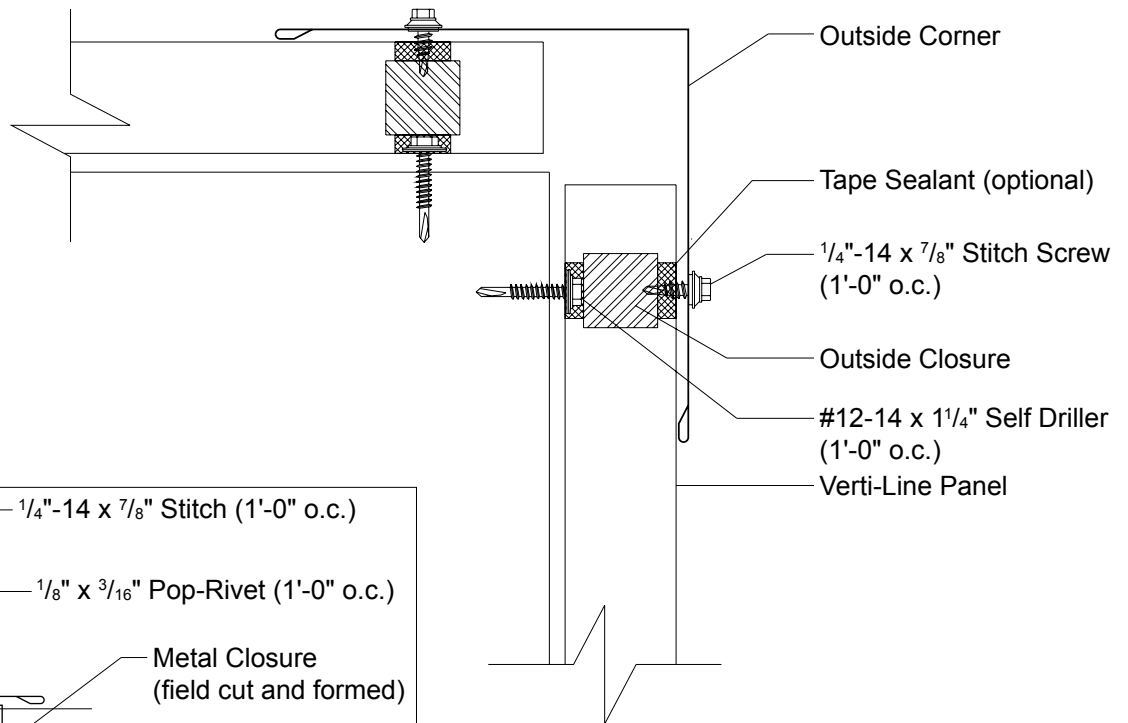
VERTI-LINE SERIES COPING DETAIL (HORIZONTAL)



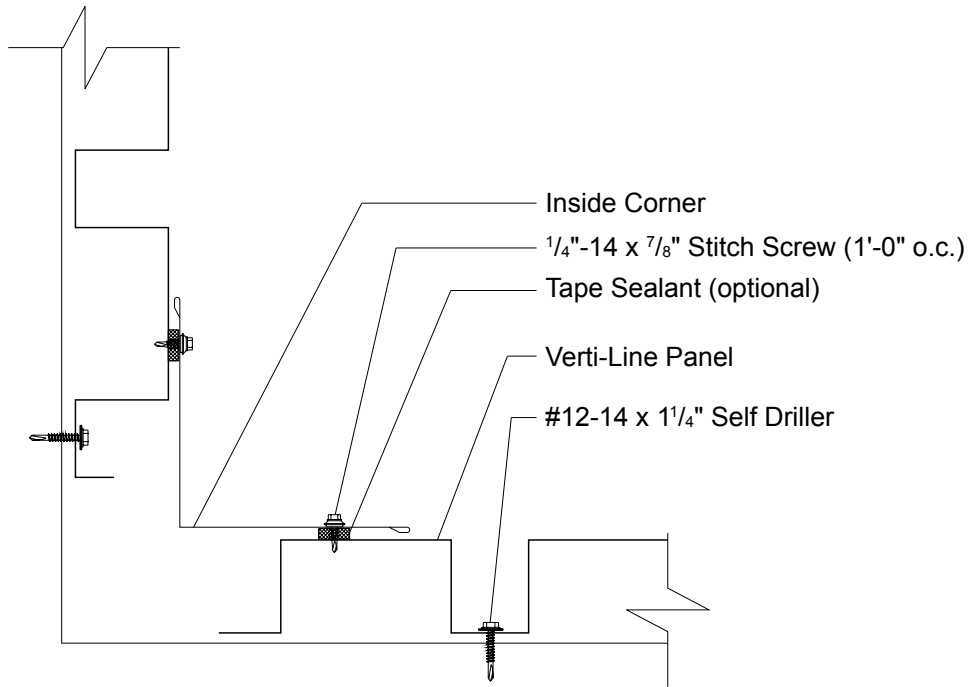
VERTI-LINE SERIES OUTSIDE CORNER DETAIL (VERTICAL)



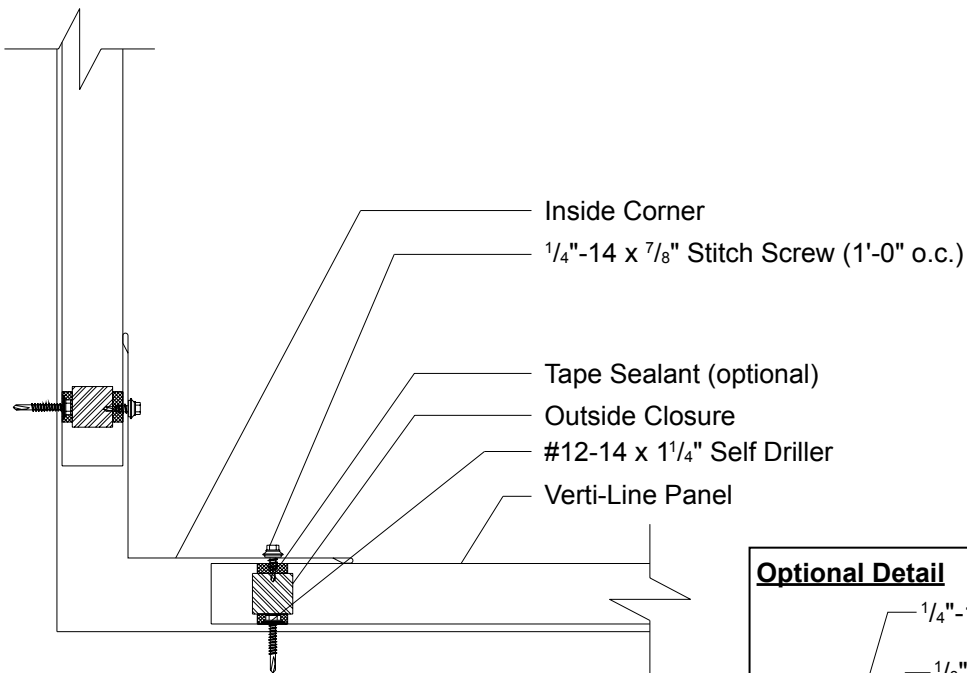
VERTI-LINE SERIES OUTSIDE CORNER DETAIL (HORIZONTAL) AND OPTION



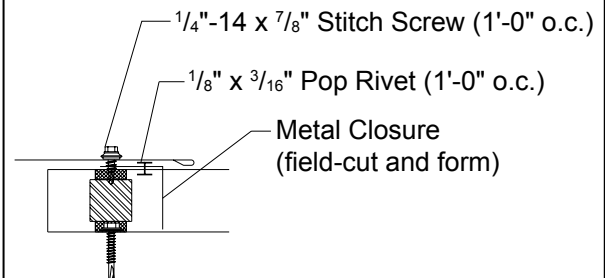
VERTI-LINE SERIES INSIDE CORNER DETAIL (VERTICAL)



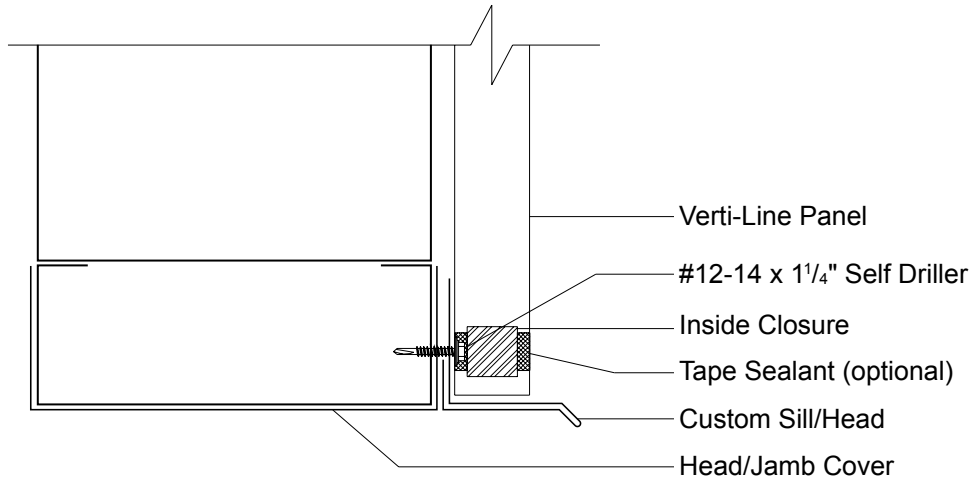
VERTI-LINE SERIES INSIDE CORNER DETAIL (HORIZONTAL) AND OPTION



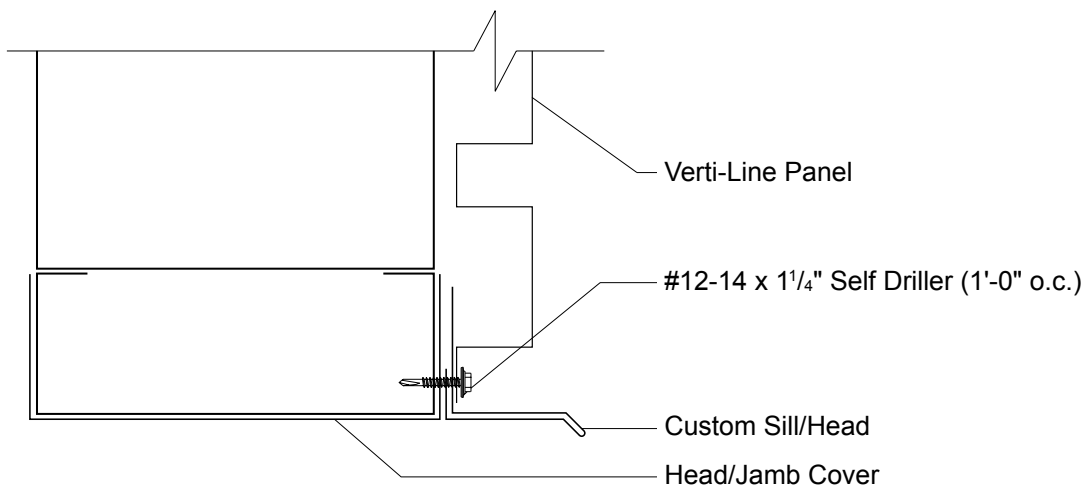
Optional Detail



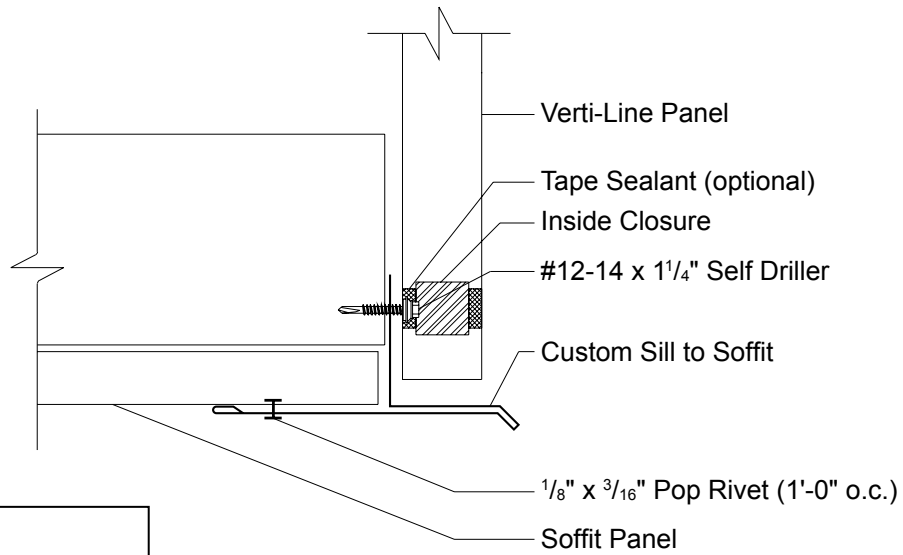
VERTI-LINE SERIES SILL/HEAD DETAIL (VERTICAL)



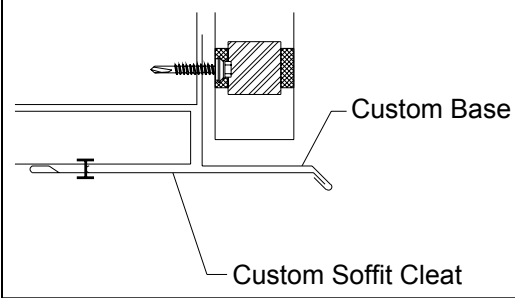
VERTI-LINE SERIES SILL/HEAD DETAIL (HORIZONTAL)



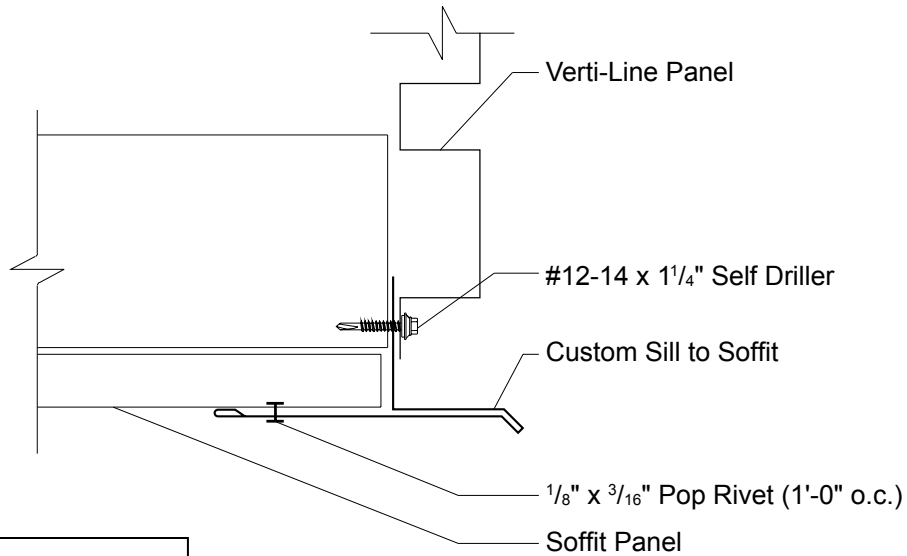
VERTI-LINE SERIES SILL TO SOFFIT DETAIL (VERTICAL) AND OPTION



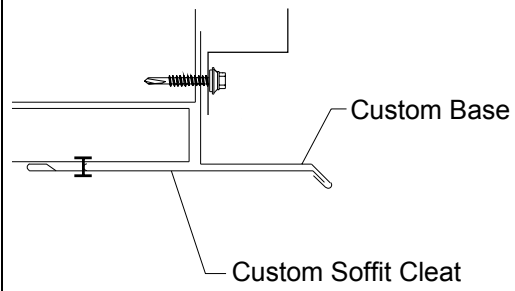
Optional Detail



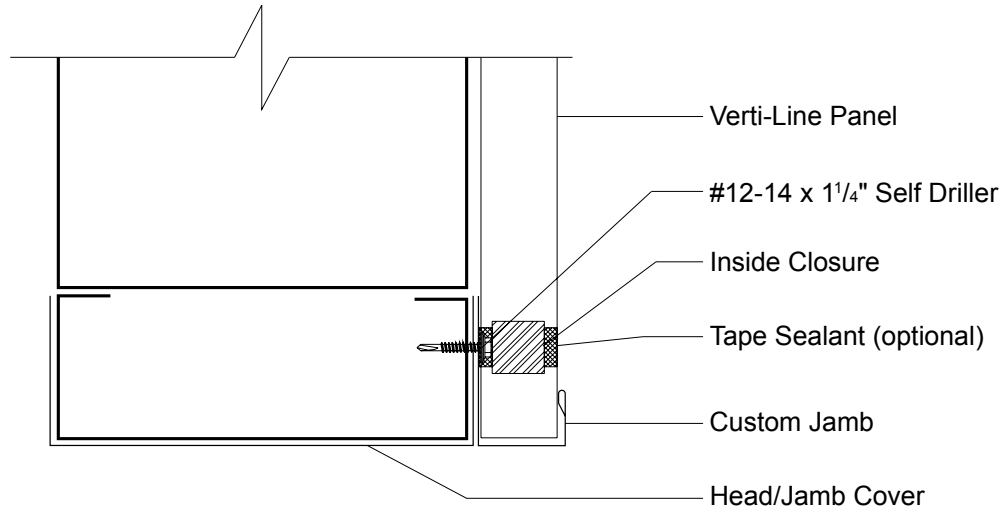
VERTI-LINE SERIES SILL TO SOFFIT DETAIL (HORIZONTAL) AND OPTION



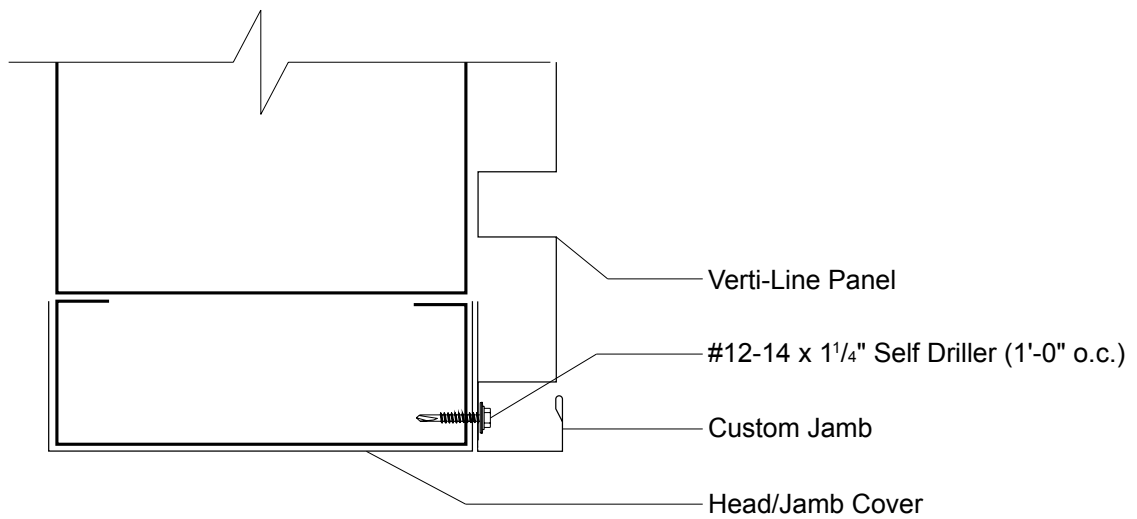
Optional Detail



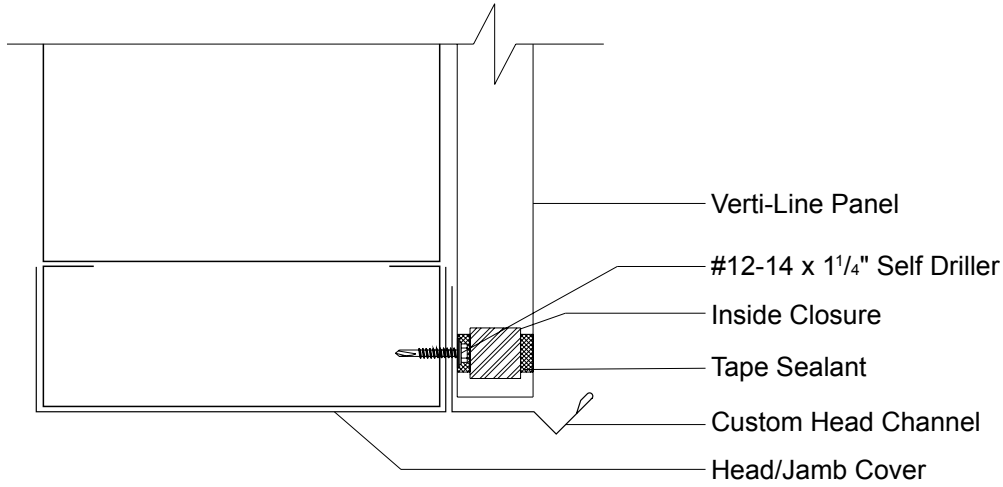
VERTI-LINE SERIES JAMB DETAIL (VERTICAL)



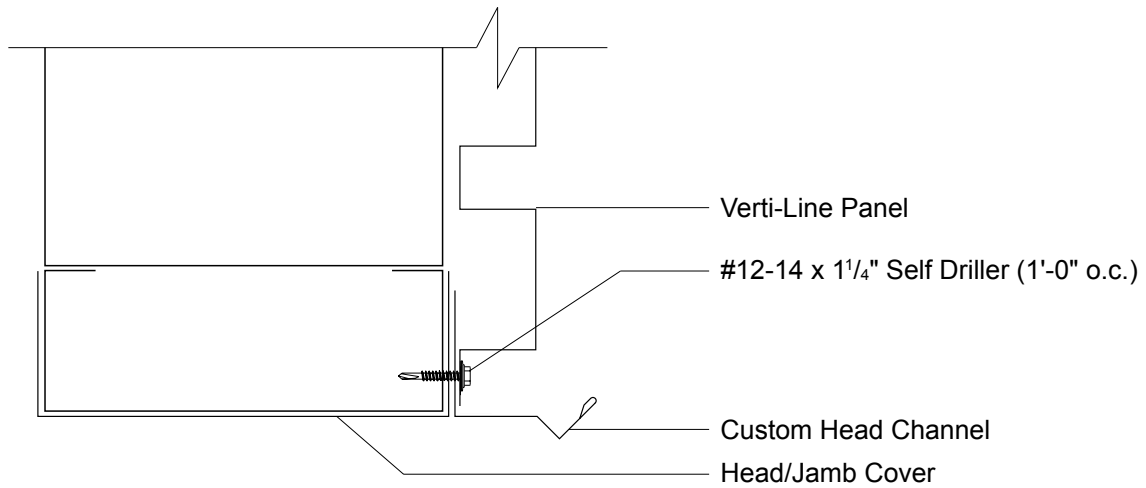
VERTI-LINE SERIES JAMB DETAIL (HORIZONTAL)



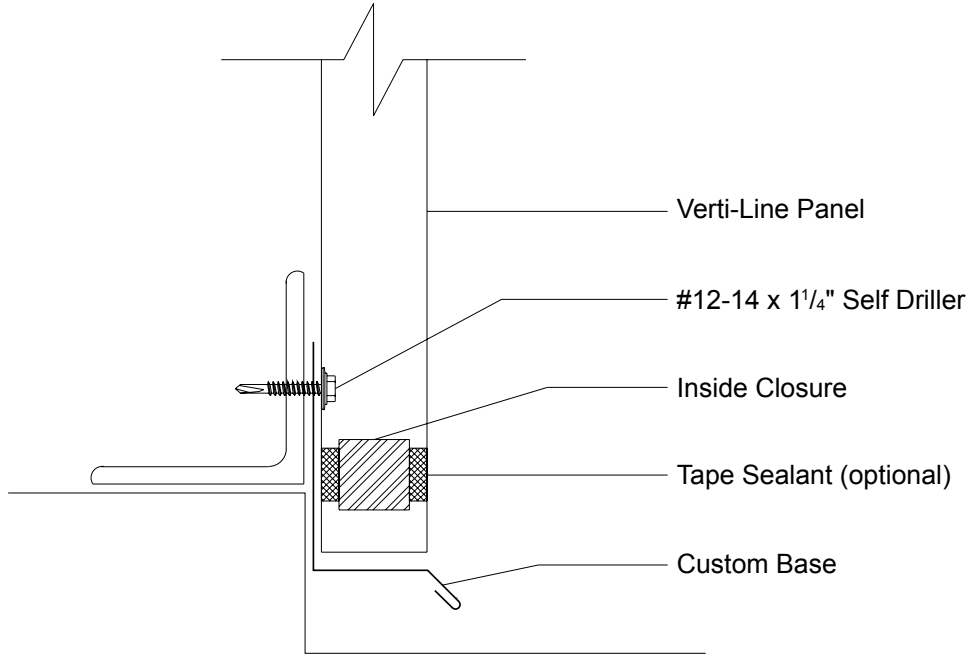
VERTI-LINE SERIES HEAD CHANNEL DETAIL (VERTICAL)



VERTI-LINE SERIES HEAD CHANNEL DETAIL (HORIZONTAL)



VERTI-LINE SERIES BASE DETAIL (VERTICAL)



VERTI-LINE SERIES BASE DETAIL (HORIZONTAL)

