

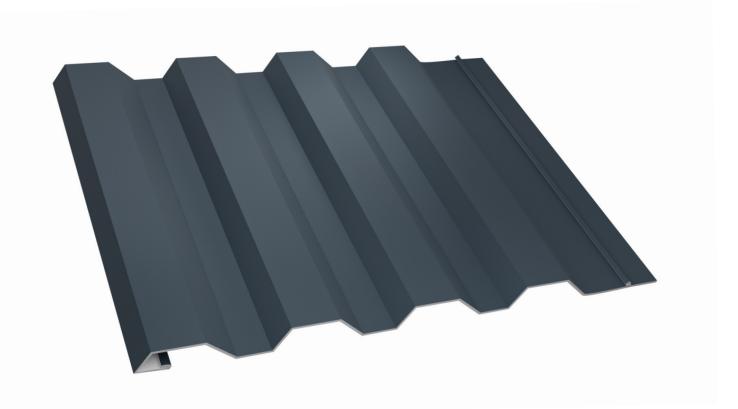
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## WESTERN STATES METAL ROOFING

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# WESTERN WAVE® HORIZONTAL

## **INSTALLATION GUIDE** WITH TRIM, FLASHINGS AND DETAILS





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 Was

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## Western States "Western Wave®" Wall and Soffit Panels

Installation, Flashings & Shop Drawing Detail Guide

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Installation, Flashings & Shop Drawing Detail Guide

#### Notes to Designer and Installers

The details contained in this guide are proven industry details and are intended to be used as a design aid and installation guide. It does not depict all situations that may be encountered on all projects. Modifications are the responsibility of the designer/ owner/ installer. Consideration should be given for Fit for Purpose, Building use, Climate conditions such as temperature, snow, wind, and moisture, Governing Building Codes, and Maintenance. It is highly recommended that all trims and flashings be of the same material as the panels (metal, gauge, finish) to ensure long term performance and durability. Where possible, flashing edges should be hemmed to strengthen the edge and protect the cut edge from exposure.

#### Framing and Substrates

"Western Wave <sup>®</sup>" panels are used over all type of substrates like Steel Framing, girts, spaced sheathing, and wood surface such as plywood. Most details in this guide are shown with panels attached to Solid Wood Decking.

#### Note on Underlayment

Not all conditions require an underlayment, However metal siding is susceptible to Condensation and it is recommended that an appropriate underlayment be use on all wood substrates to protect the structure during installation. For added protection from rain and snow, it is recommended to use rubberized Ice and water shield.

#### **Technical Assistance**

Contact your WSDI sales or technical representative for any additional information or assistance.

#### Oil Canning

Oil canning is a condition common with flat metal surfaces. This waviness is caused by steel mill tolerances, forming, variations in the structures surfaces, and hardness of the steel. Measures are taken at the roll forming process, like profile design, steel gauge, corrective leveling, to minimize the effects of oil canning. Oil Canning is a Characteristic of steel and can not be eliminated totally and therefore is not reason for rejection of the panels.

#### Job Site Storage

While waiting to be installed on the job site, Storage of panels, trim crates, and flat sheet should be sloped in order to allow for proper moisture run off. One end should be elevated so as not to allow ponding of water on the metal surface. When using tarps for protection, proper ventilation should be provided to prevent condensation. Moisture or condensation that is trapped inside a bundle can lead to white rust on sheeting.

#### References

For other installation techniques and details, The Sheet Metal and Air Conditioning Contractors National Association Inc. (SMACNA) and NRCA manuals are great resource for working with sheet metal.

#### Western States Metal Siding "Western Wave ®" Panel

Installation, Flashings & Shop Drawing Detail Guide

#### **Fastener Selection**

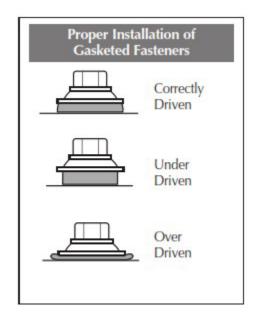
#### Notes to Installers:

Fastener Selection will vary depending on type and thickness of substrate. Design Calculations for fastener spacing should be completed by the design engineer. The use of Butyl tape mastic, Butyl sealants and Curing Sealants is always recommended to insure weather tight installation.

Panels and flashings should never be installed in contact with dissimilar metals. Use only those flashings and accessories designed for use with this panel. Attachment screws must be long enough to fully penetrate through roof deck substrate or penetrate solid lumber at least one inch.

Exposed Trim Fasteners should have sealing washers and be coated to provide protection against corrosion. Screws must be properly driven to ensure holding strength and proper seal. (see diagram) Recommended drill speed is 2000rpm. Improper setting of drill speed can lead to snapping of screw heads.

Pre drilling of screw holes may be necessary with heavy gauge metals.



#### Western States Metal Siding "Western Wave <sup>®</sup>" Panel

Installation, Flashings & Shop Drawing Detail Guide

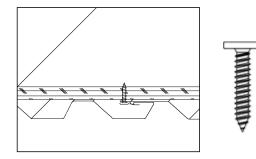
#### **Fastener Selection**

Description

Application

14 x 7/8" Lap Self tap 14 x7/8 Lap Stainless Used to attach Trims . Stainless to be used with A606-4 Steel

#10-12 x1" Pancake head Wood #10-12 x 1" SD PH Self Driller Steel Used to attach Panel. Used to secure trims to substrates. Also available in Stainless Steel.

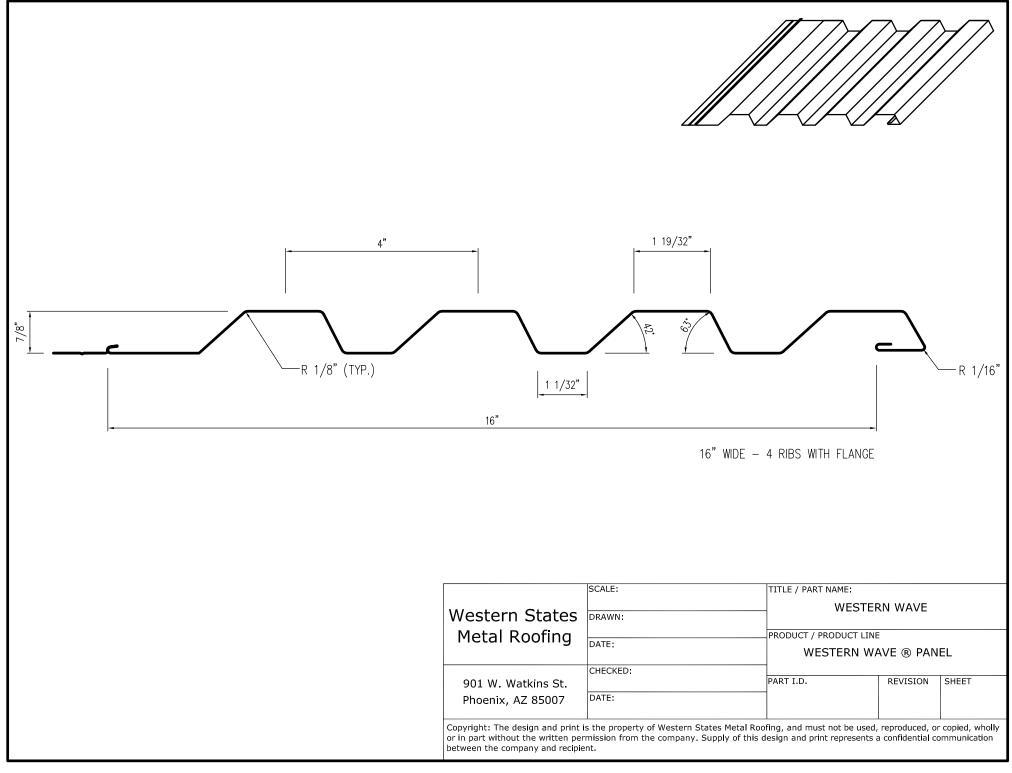


1/8" Stainless Rivets

Used for Trim to Trim attachment or trim to wall panels.

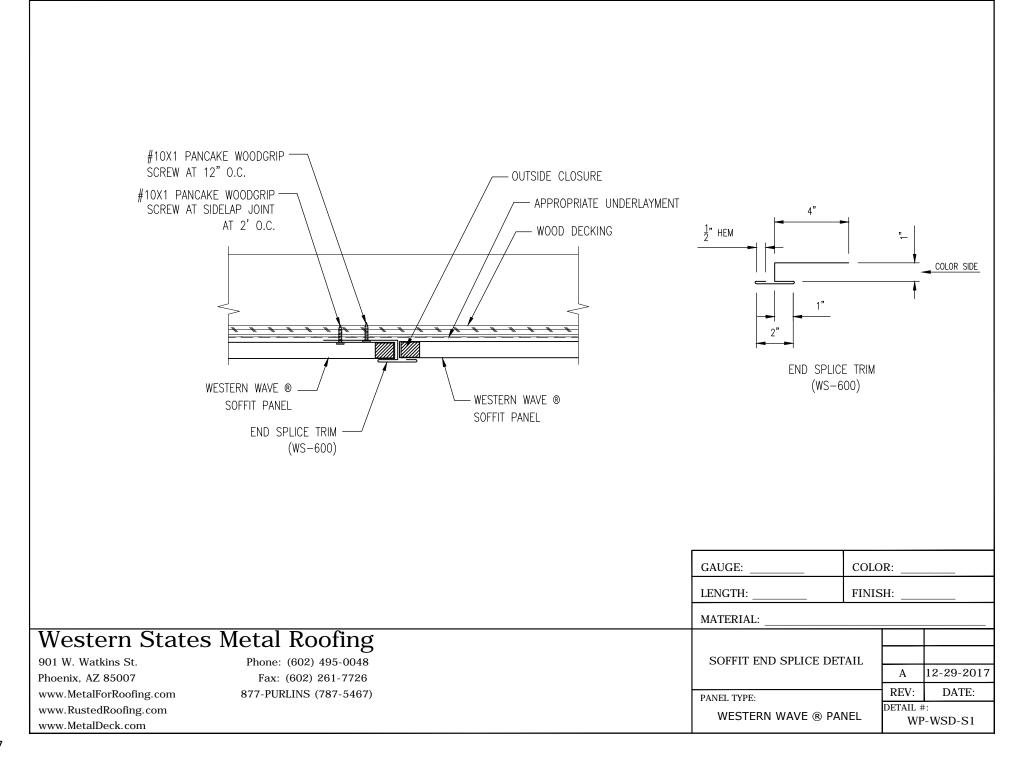


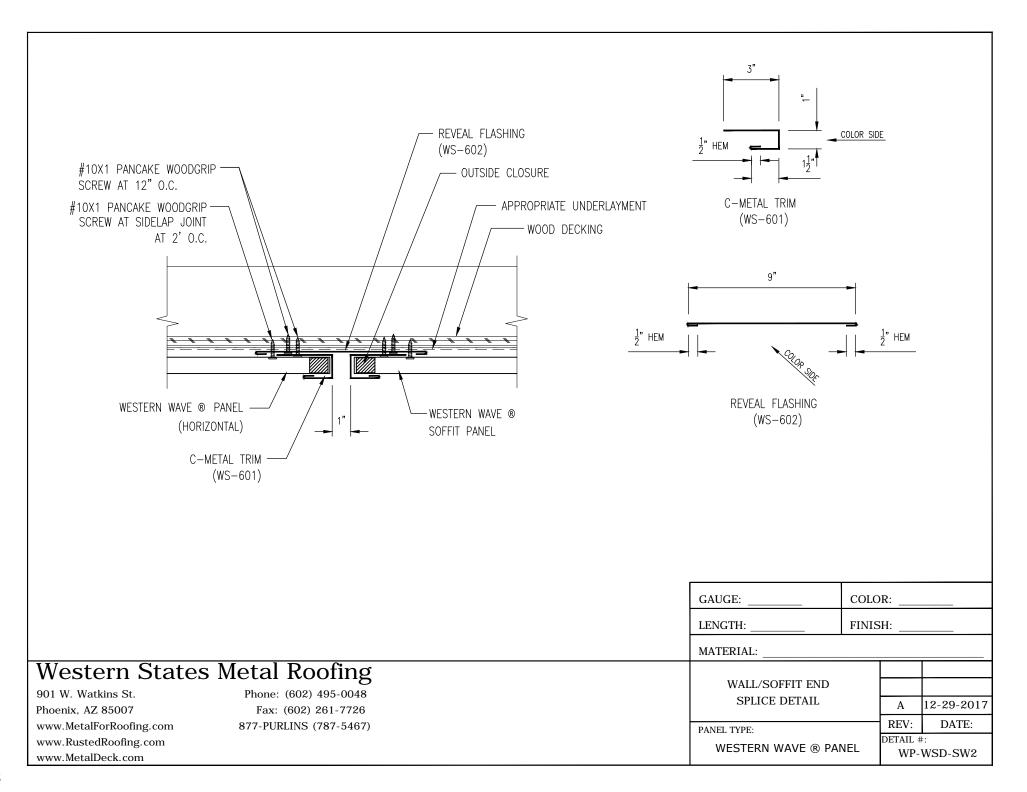
The table above shows the panel Fasteners provided by WSD. Special order screws are available.

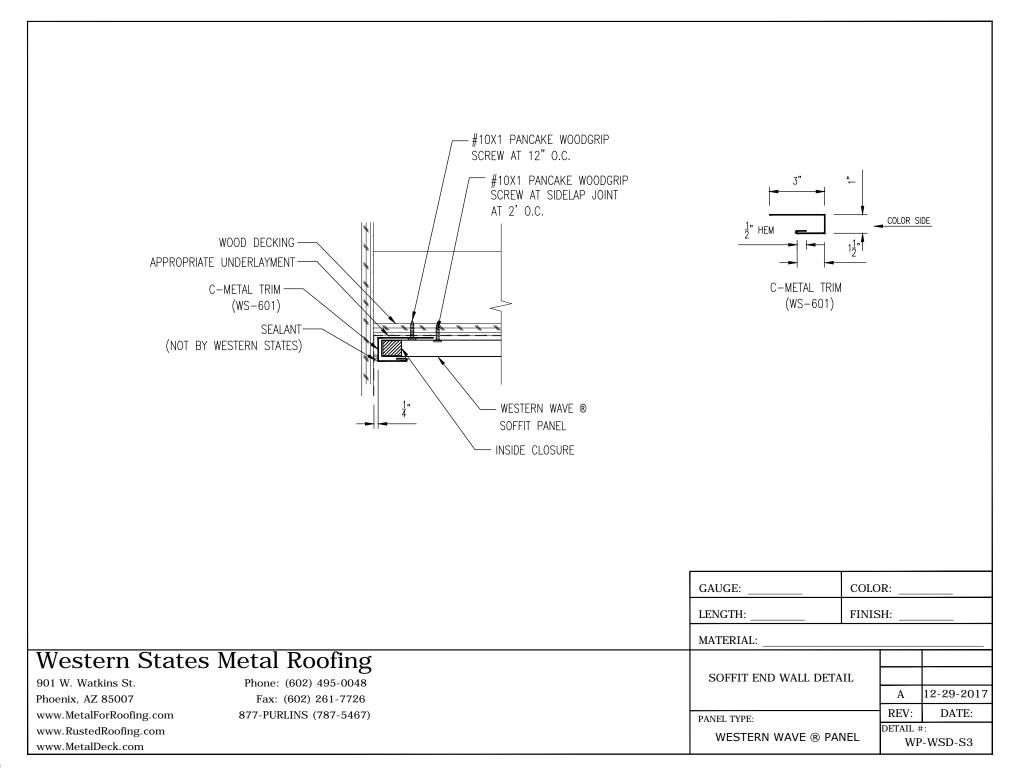


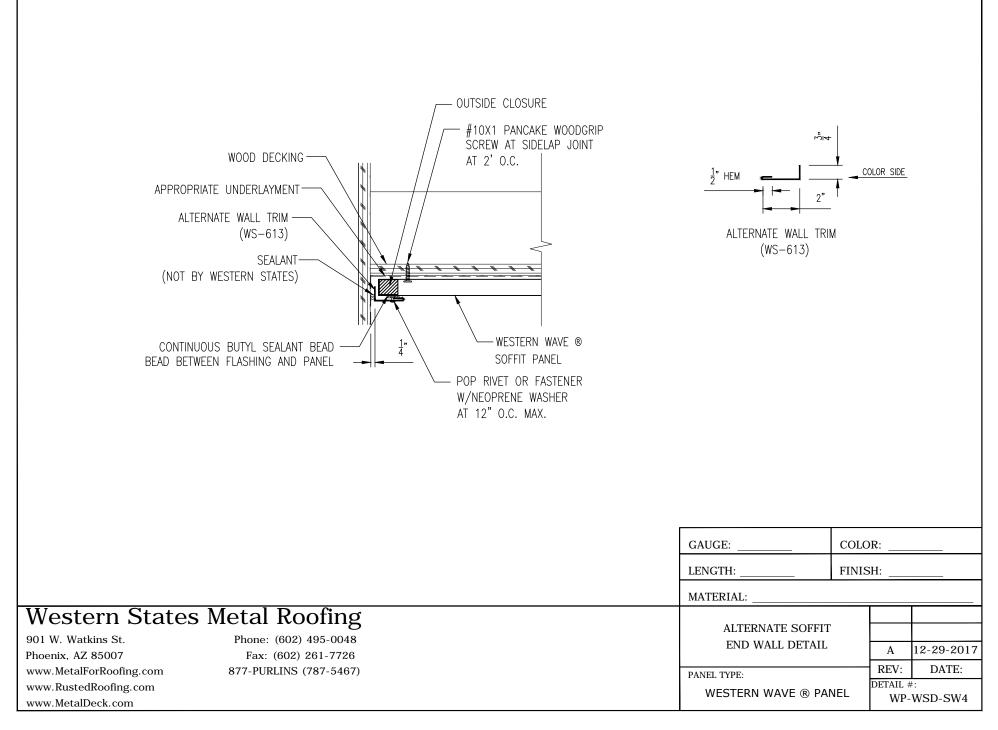
END SPLICE WS-600	C METAL (J-TRIM) WS-601	REVEAL FLASHING WS-602	SILL DRIP TRIM WS-603
	$\frac{1}{2}$ " HEM $\frac{1}{12}$ " $\frac{1}{2}$ " $\frac{1}{2}$ " $\frac{1}{2}$	2" HEM	
ALTERNATE SILL DRIP TRIM WS-604	Z METAL TRIM WS-605	INSIDE CORNER TRIM WS-606	OUTSIDE CORNER TRIM WS-607
		<sup>1</sup> / <sub>2</sub> " HEM ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓	4' 2' HEM 2' HEM COLOR SIDE COLOR SIDE COLOR SIDE
TRANSITION/SILL TRIM WS-608	DOOR/WINDOW HEAD TRIM WS-609	DOOR/WINDOW JAMB TRIM WS-6	310 PARAPET CAP WS-611
	COLOR SIDE		VERIFY DIMENSION
Western States Metal Roofing         901 W. Watkins St.       Phone: (602) 495-0048         Phoenix, AZ 85007       Fax: (602) 261-7726         www.MetalForRoofing.com       877-PURLINS (787-5467)         www.RustedRoofing.com       www.MetalDeck.com			STANDARD TRIMS A 12-29-2017 REV: DATE: WESTERN WAVE ® PANEL WP-WSD-ST1

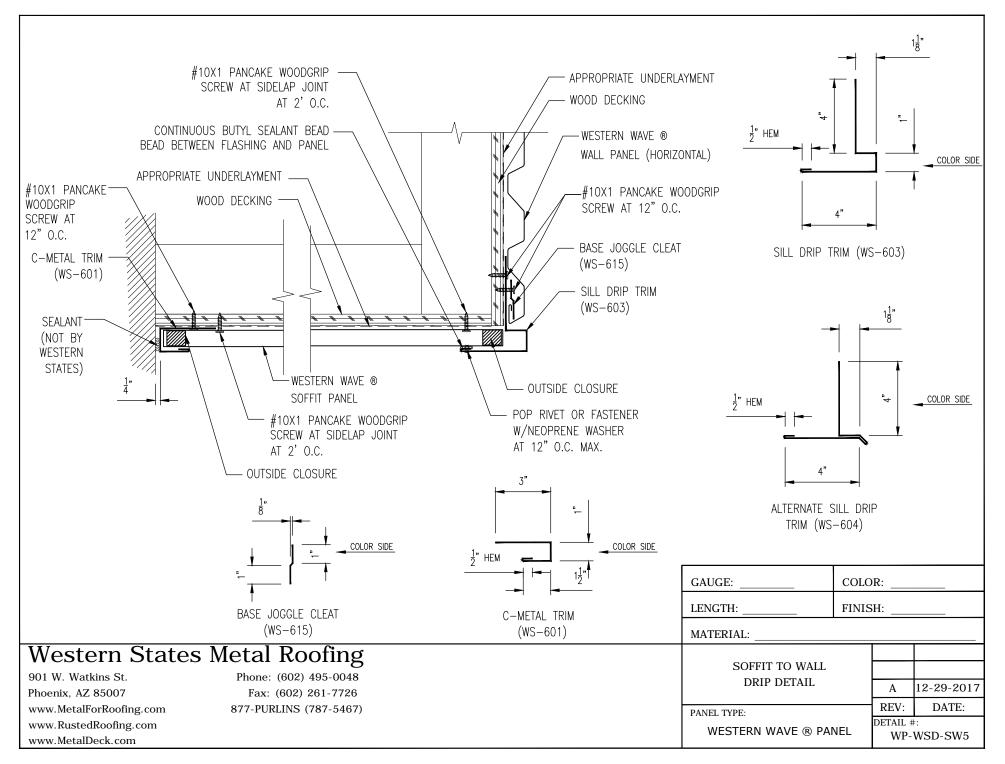
TRIM CLEAT WS-612	ALTERNATE WALL TRIM WS-613	BASE TRIM WS-614	BASE JOGO	GLE CLEAT WS-615
State COLOR SIDE	<u>1</u> <sup>1</sup> HEM <u>COLOR SIDE</u> <u>2</u> <sup>1</sup> HEM <u>COLOR SIDE</u> <u>2</u> <sup>1</sup>	COLOR SIDE	<u>COLOR SIDE</u>	
PBR TRANSITION TRIM WS-616	BASE TRIM WS-617	RW TRANSITION TRIM WS-6	518 7/8" TRANSI	TION TRIM WS-619
	COLOR SDE		<u>COLOR SIDE</u>	
WR TRANSITION TRIM WS-620	TG TRANSITION TRIM WS-621			
Phoenix, AZ 85007 Fa	al Roofing he: (602) 495-0048 x: (602) 261-7726 PURLINS (787-5467)	P.	STANDARD TRIMS PANEL TYPE: WESTERN WAVE ® PAN	A 12-29-2017 REV: DATE: DETAIL #: WP-WSD-ST2

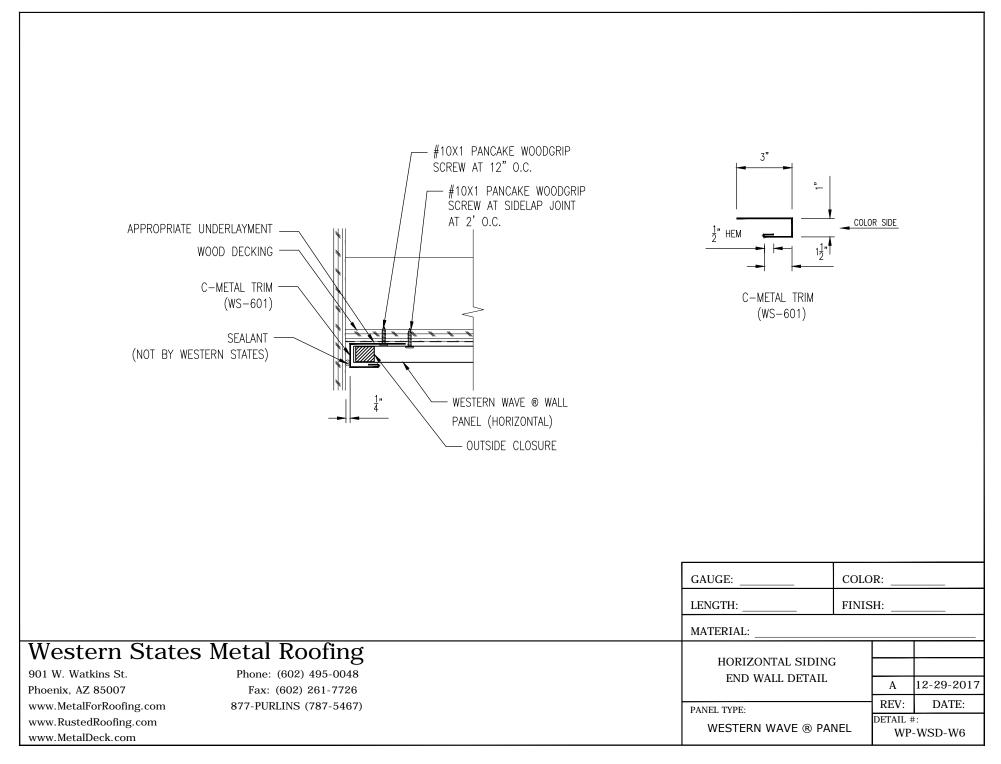


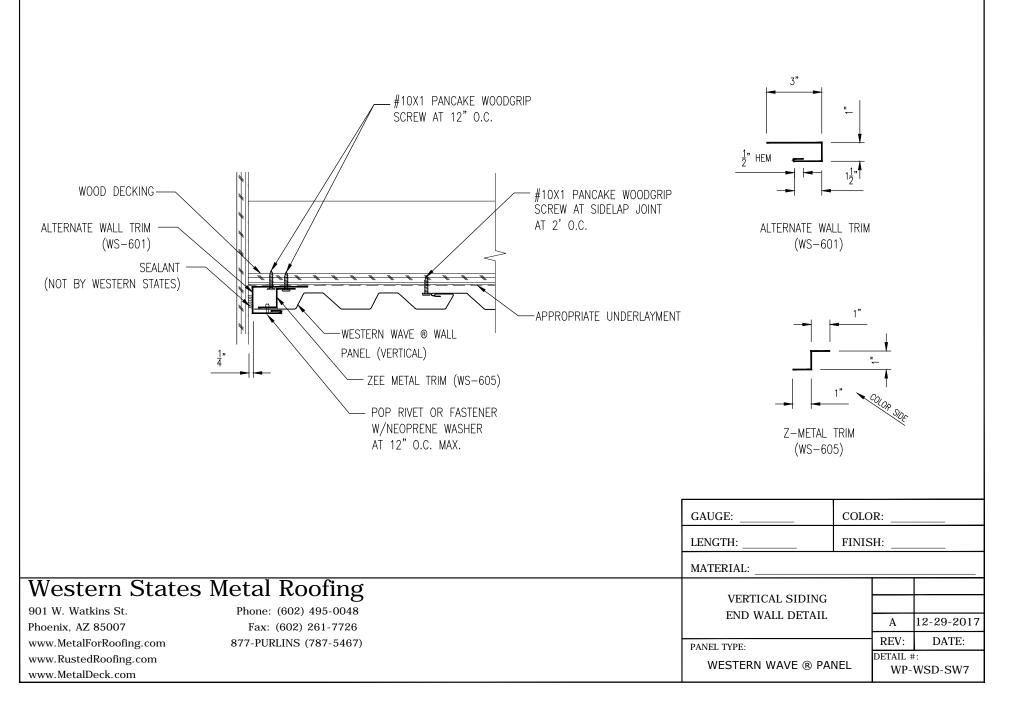


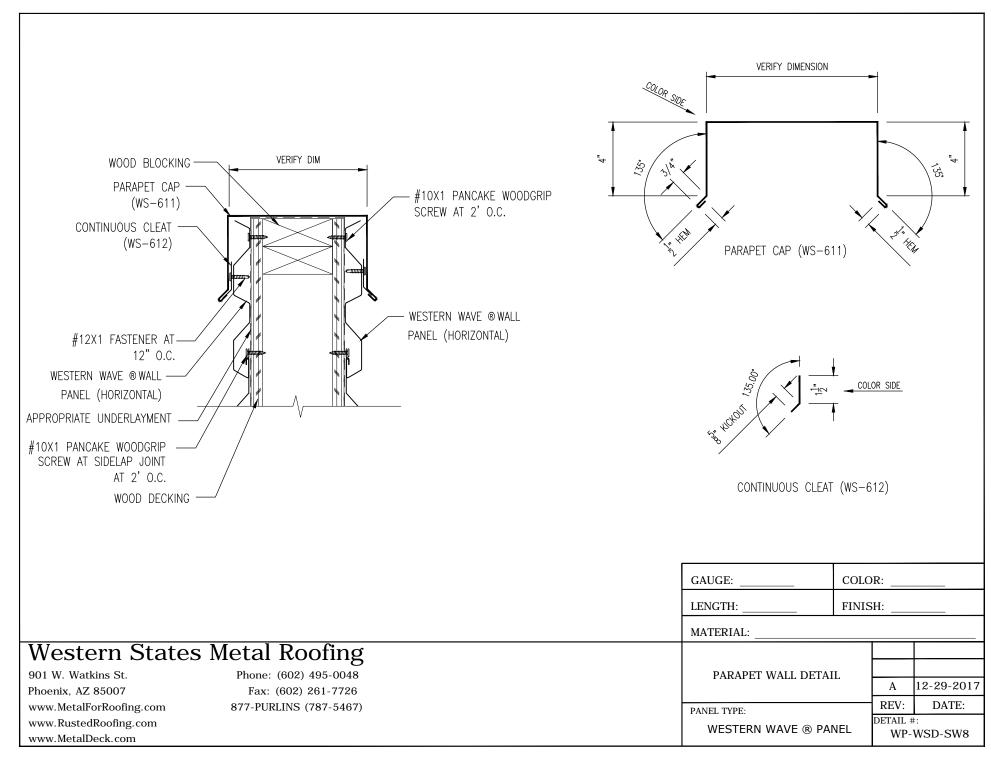


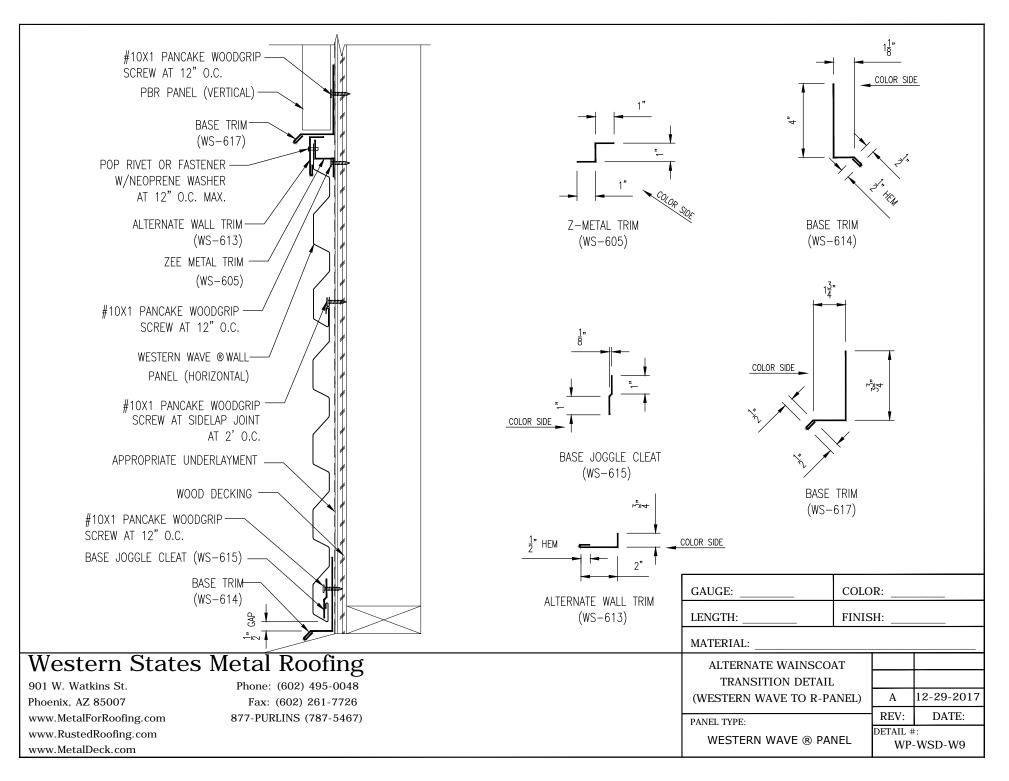


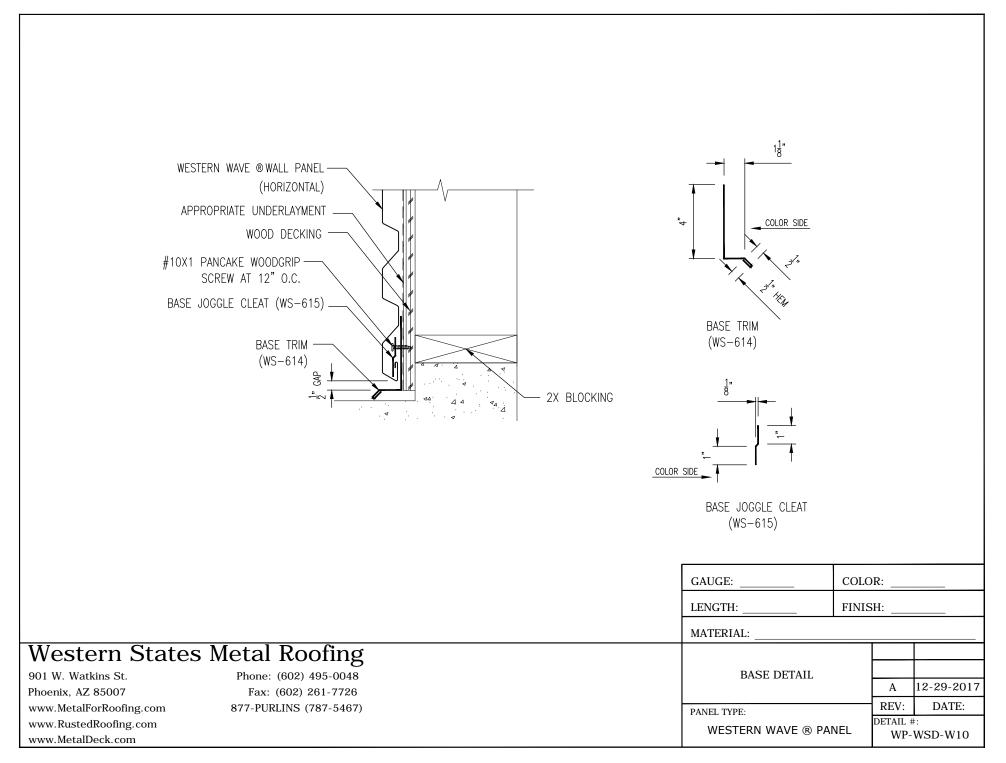


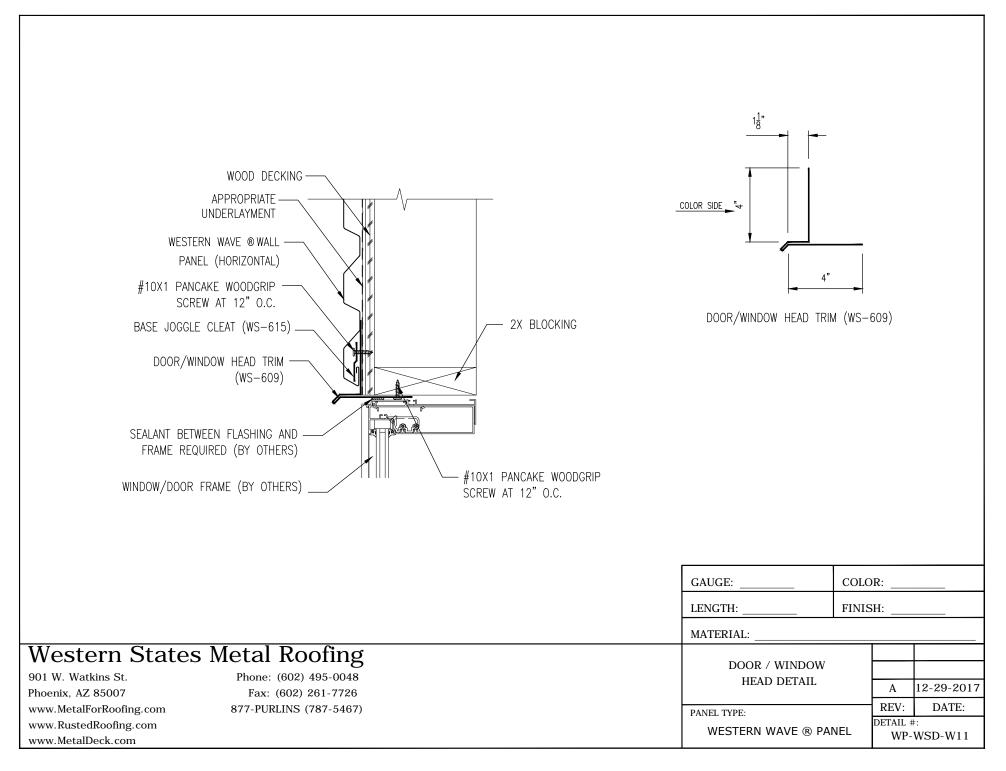


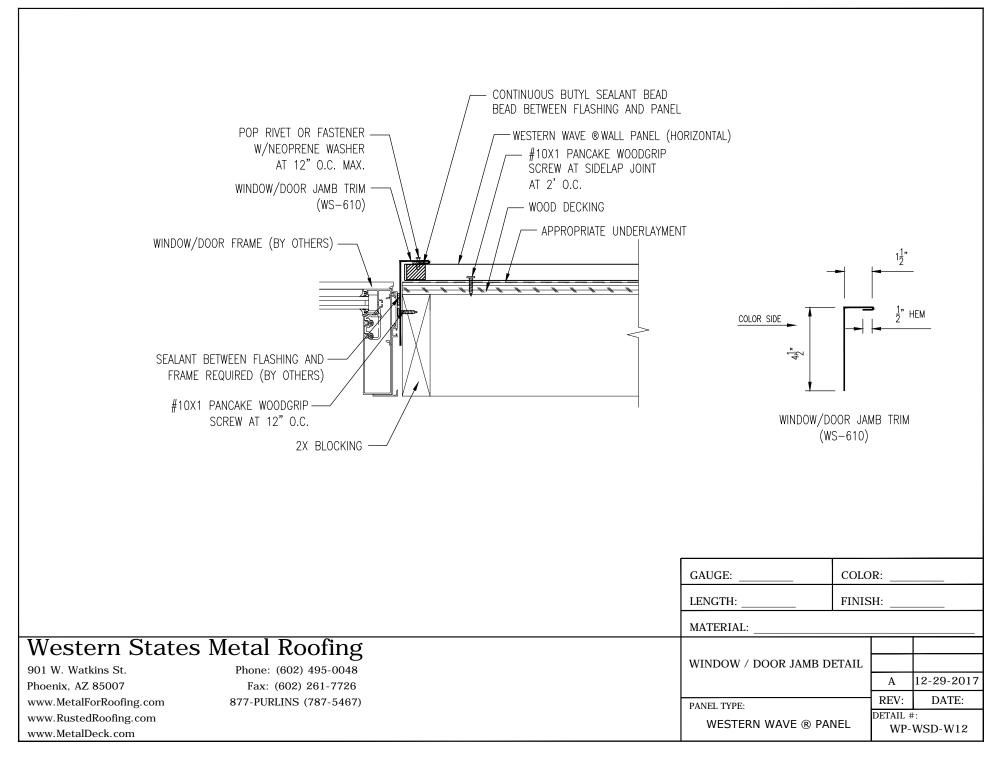


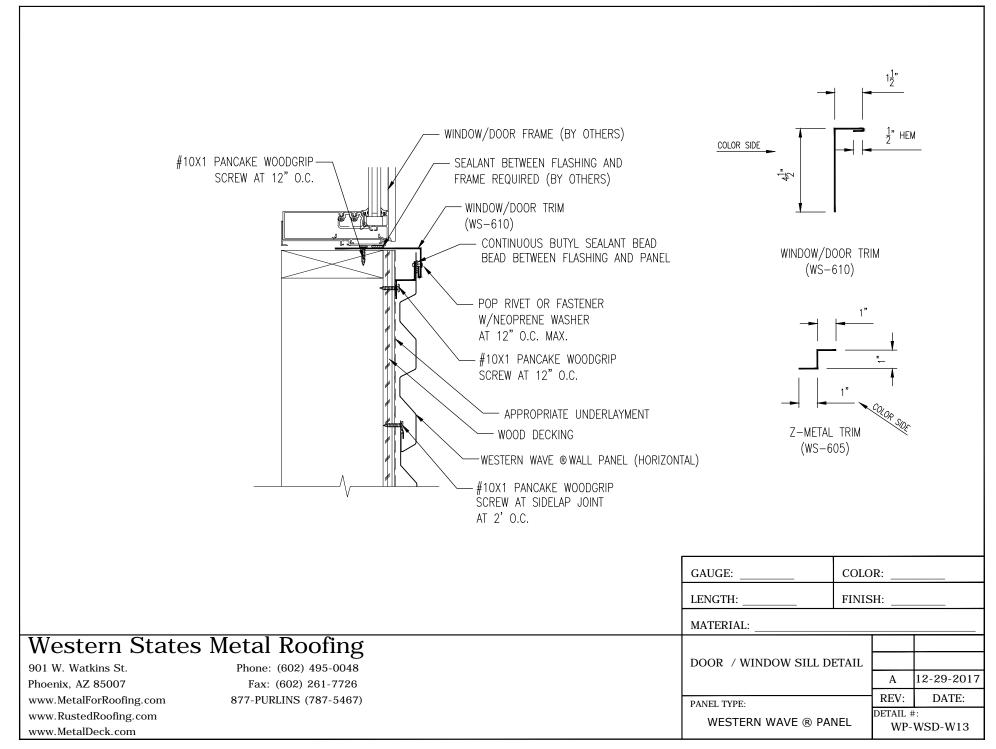


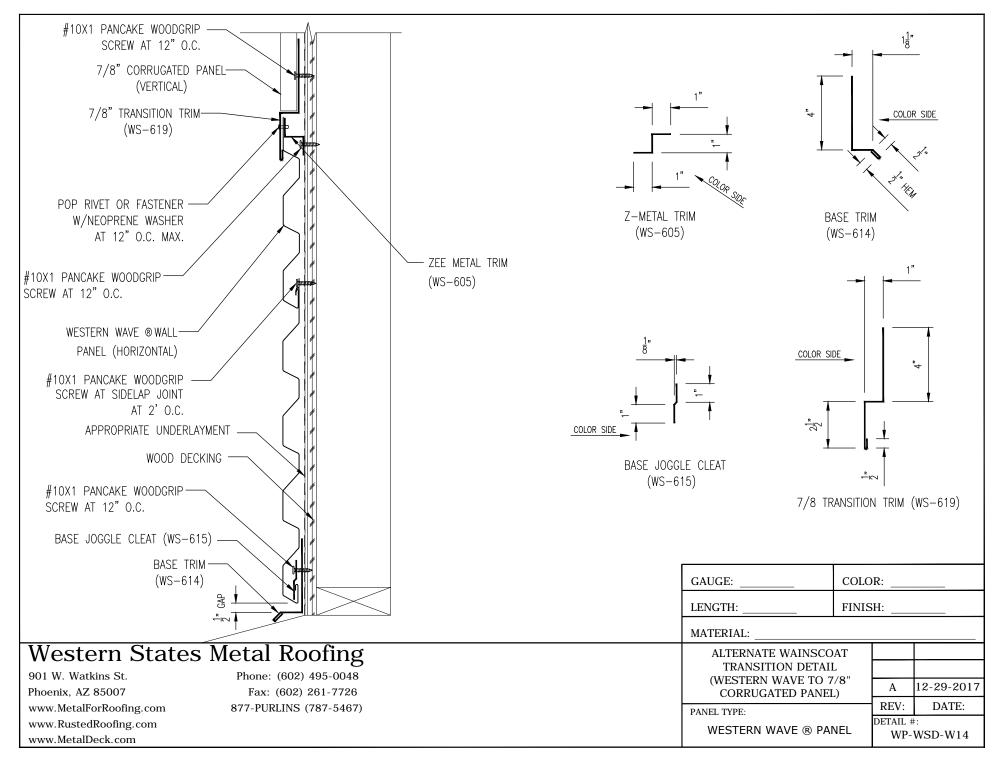


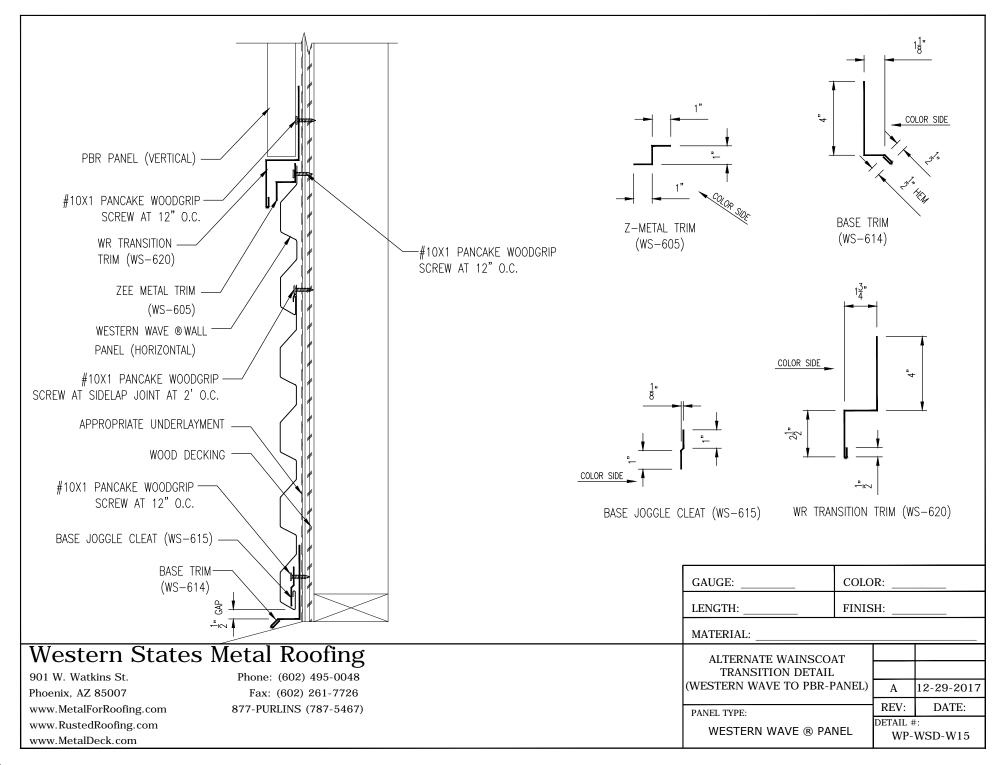


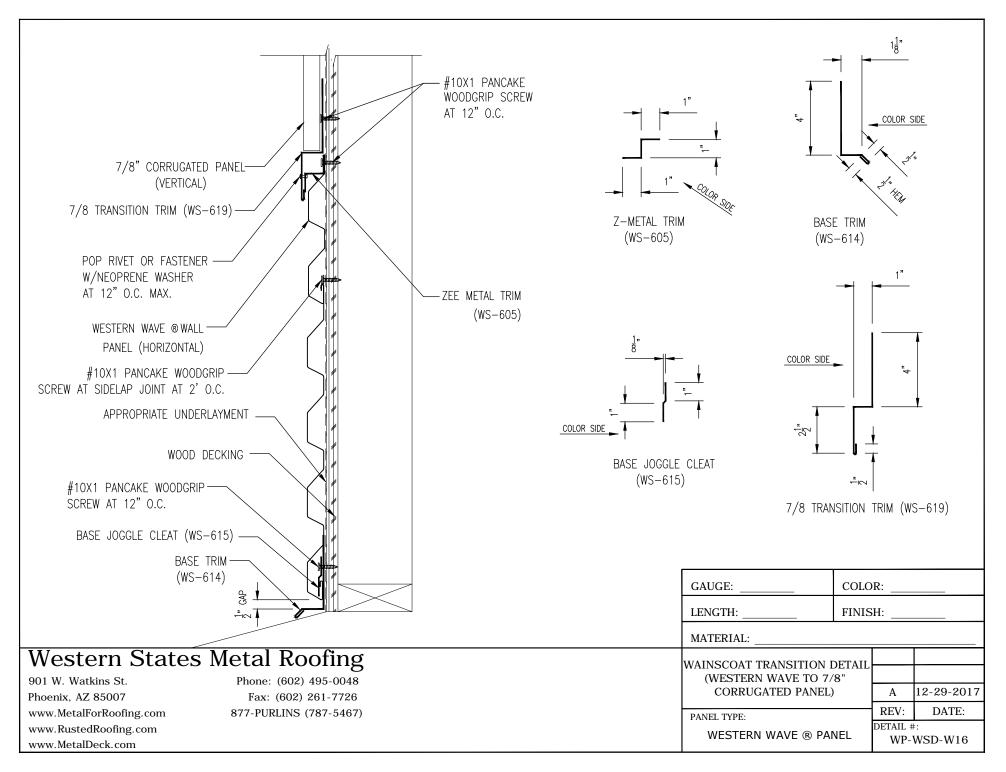


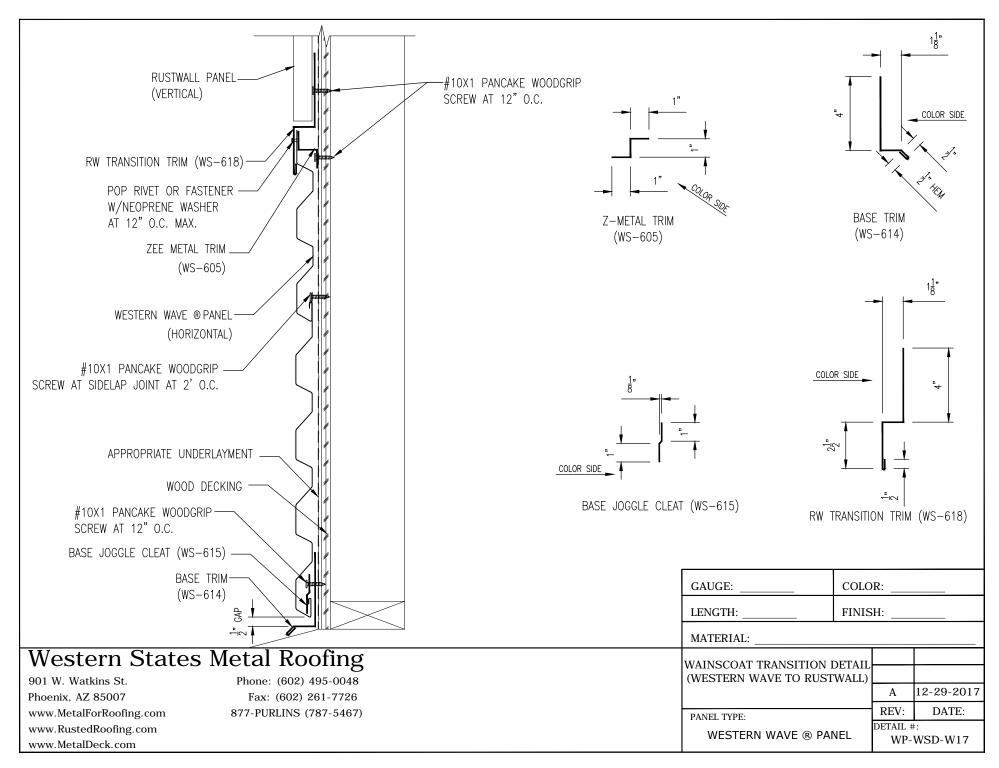


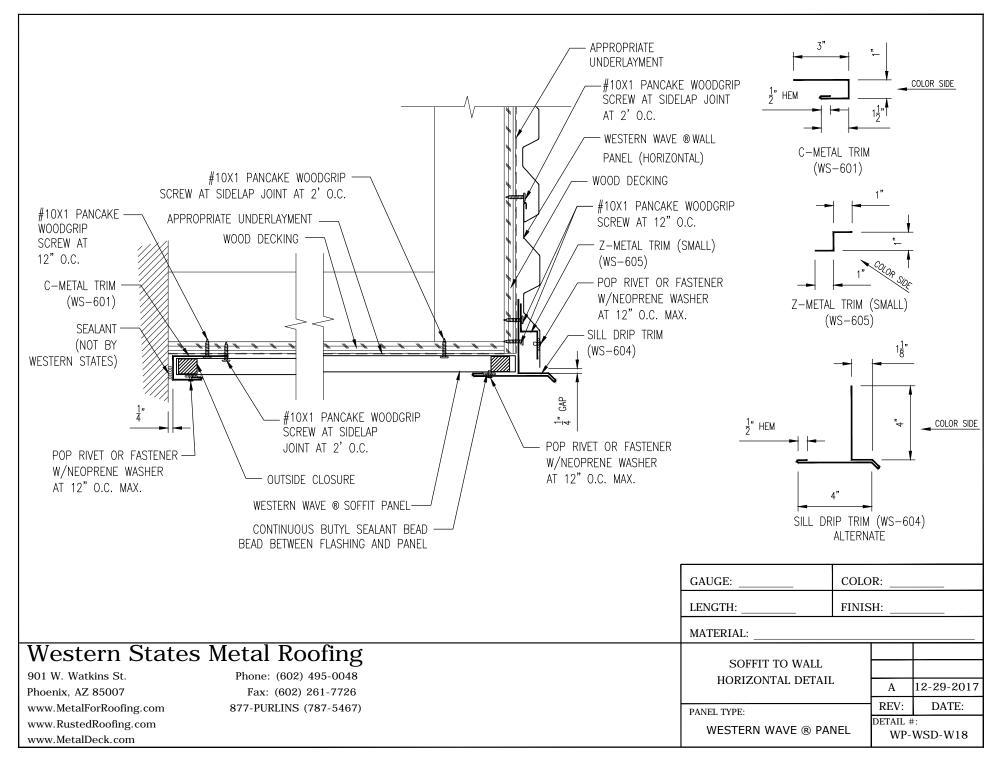


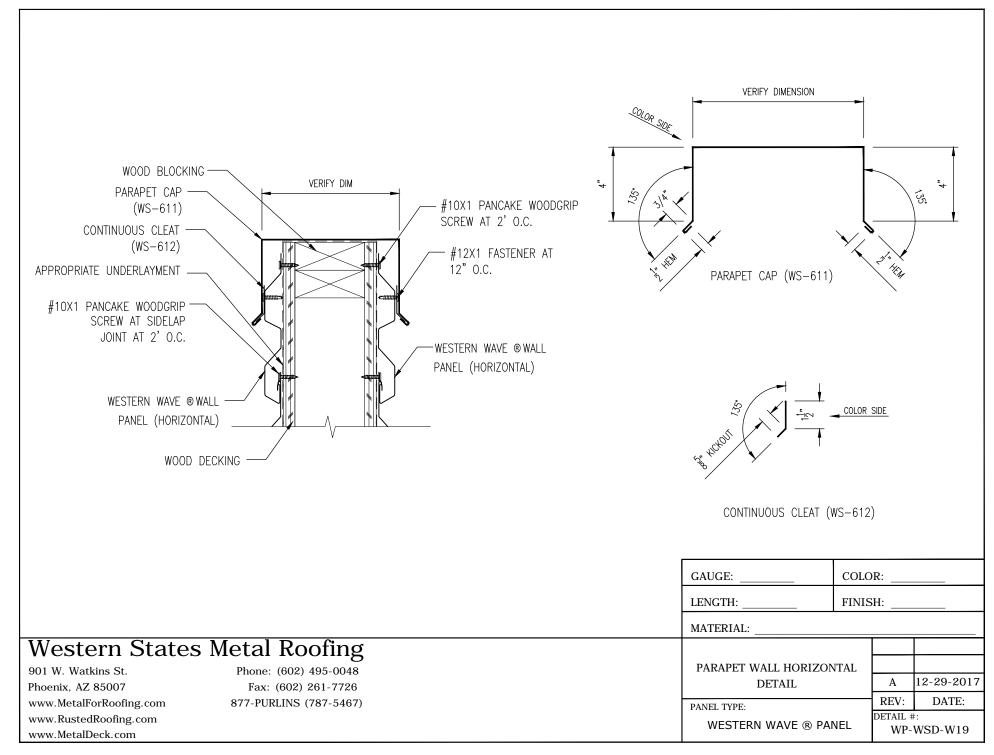


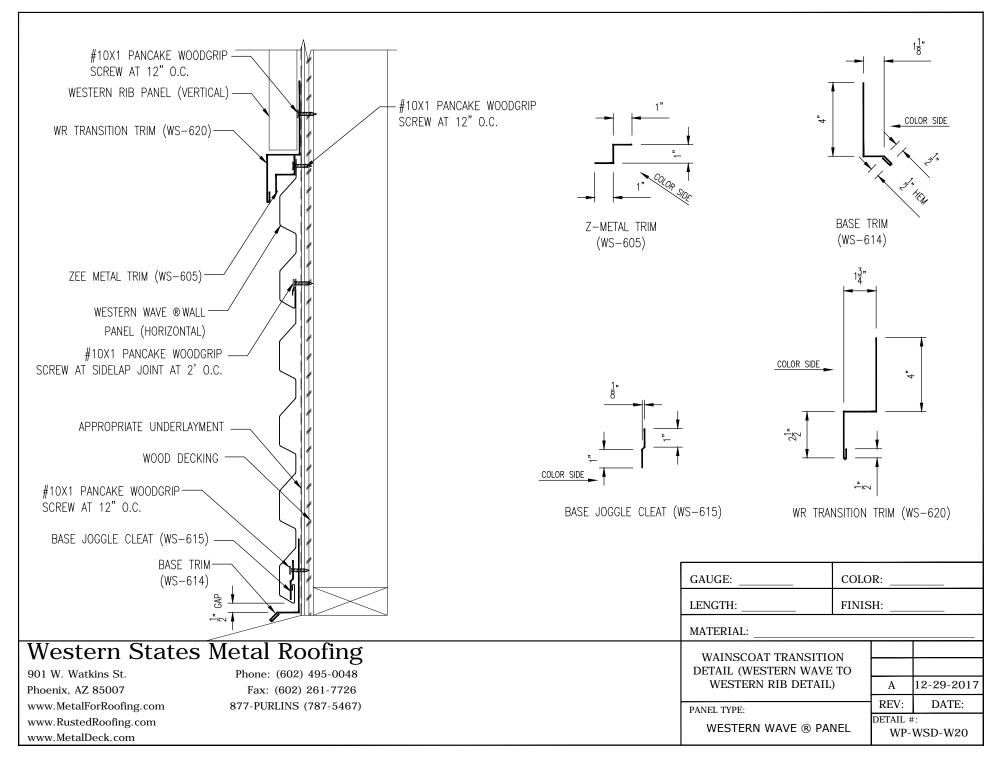


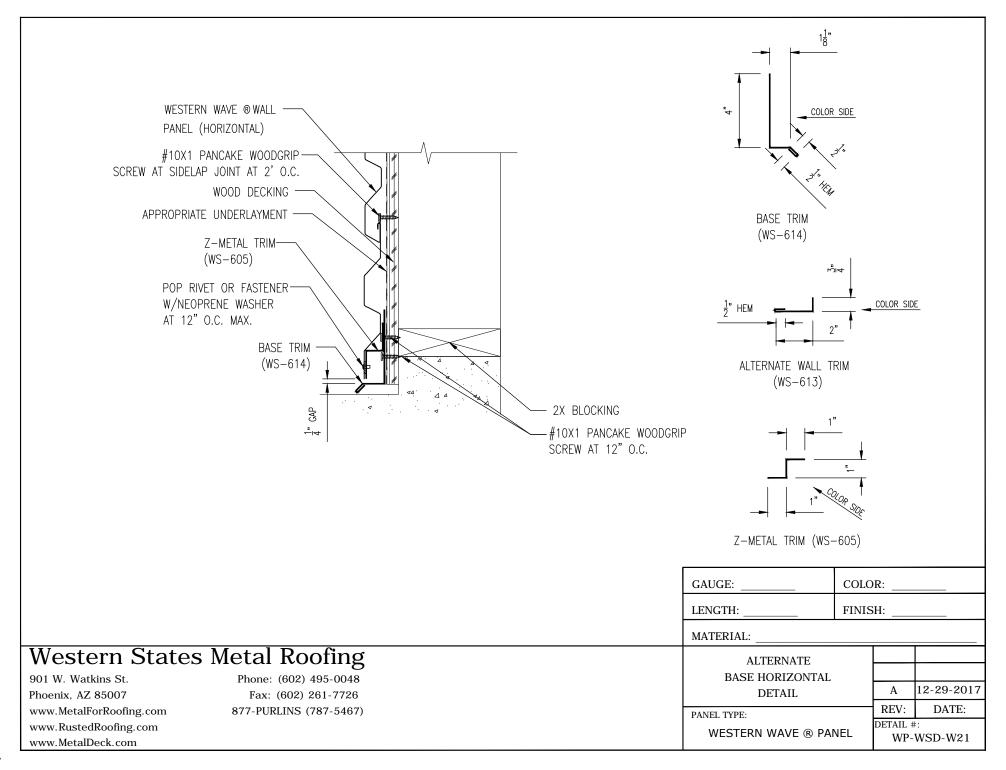


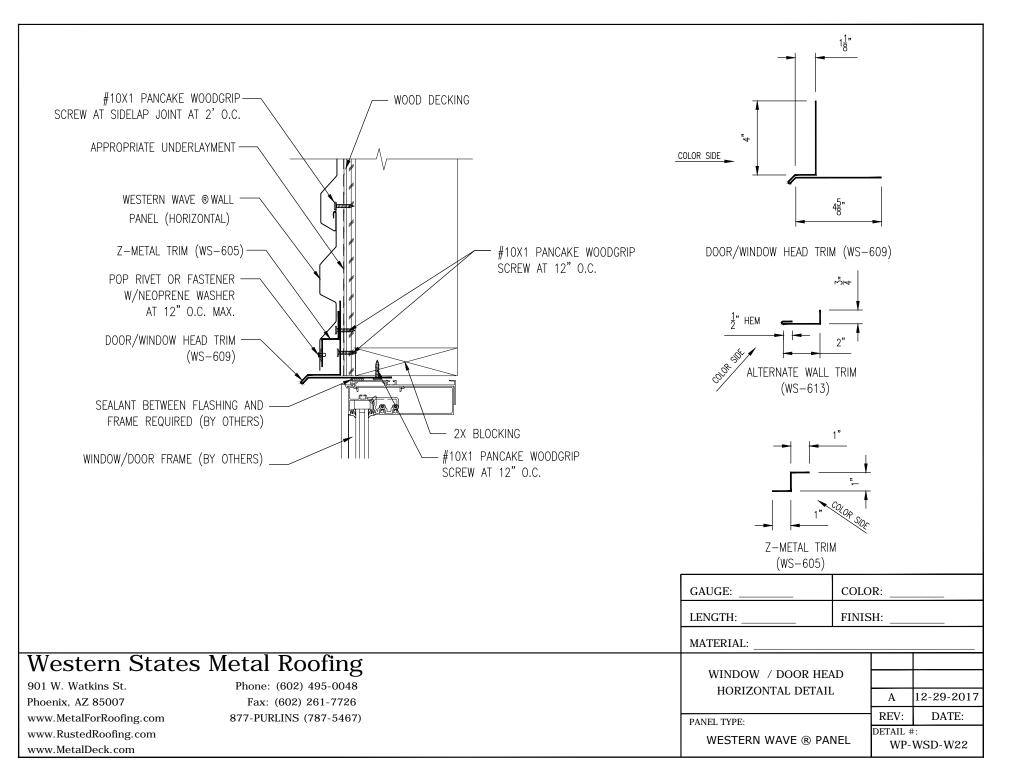


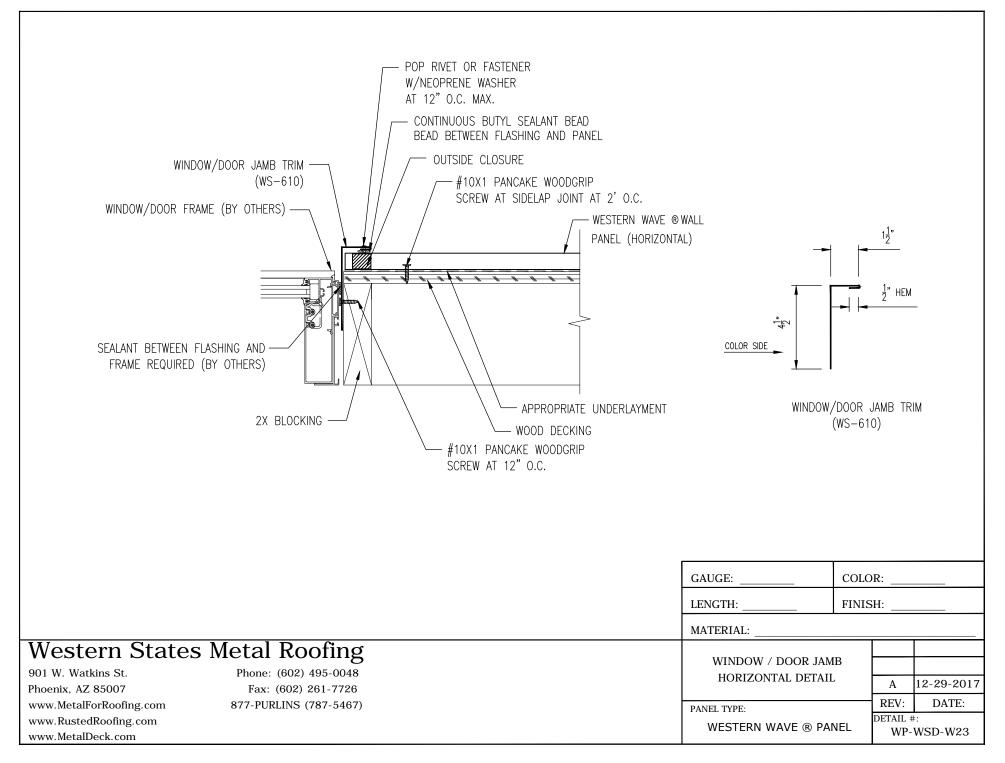


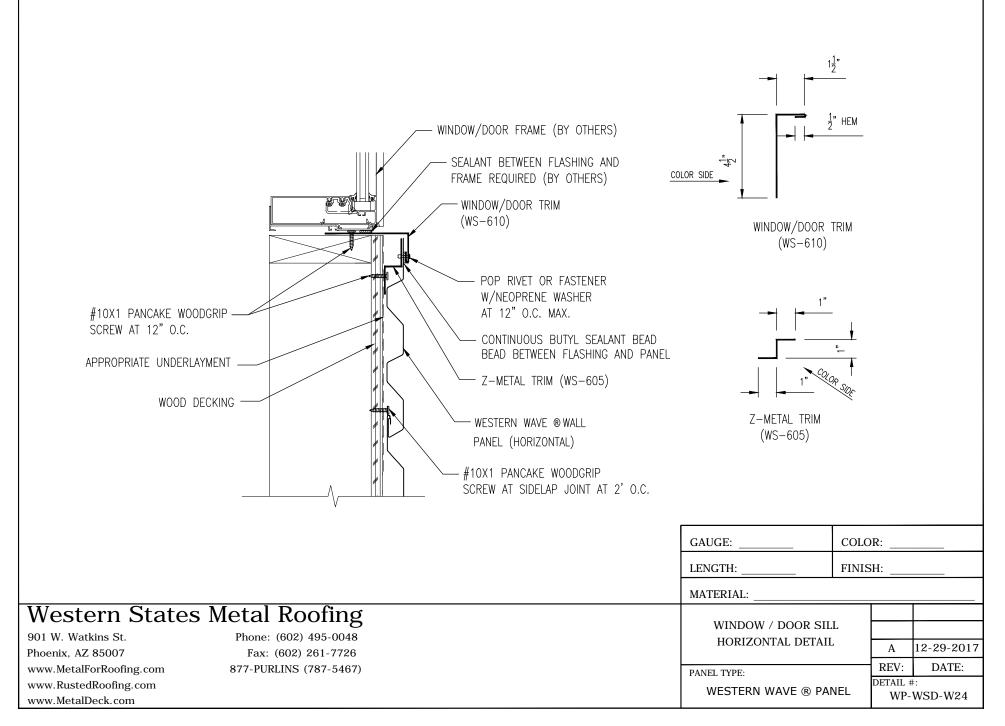


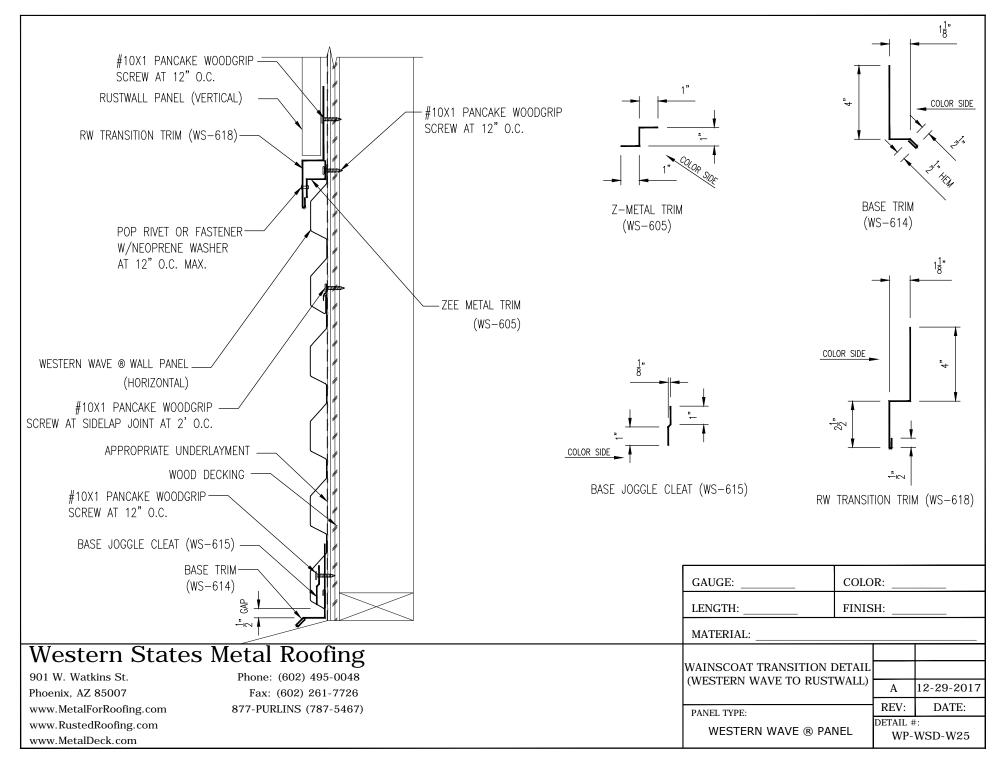


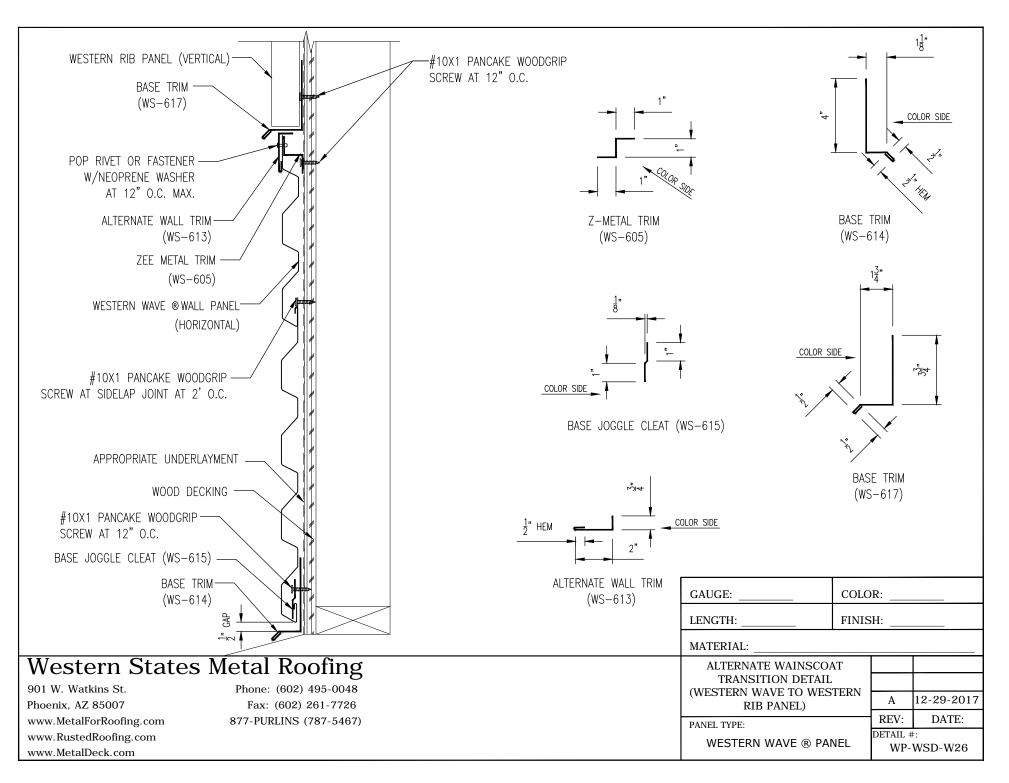


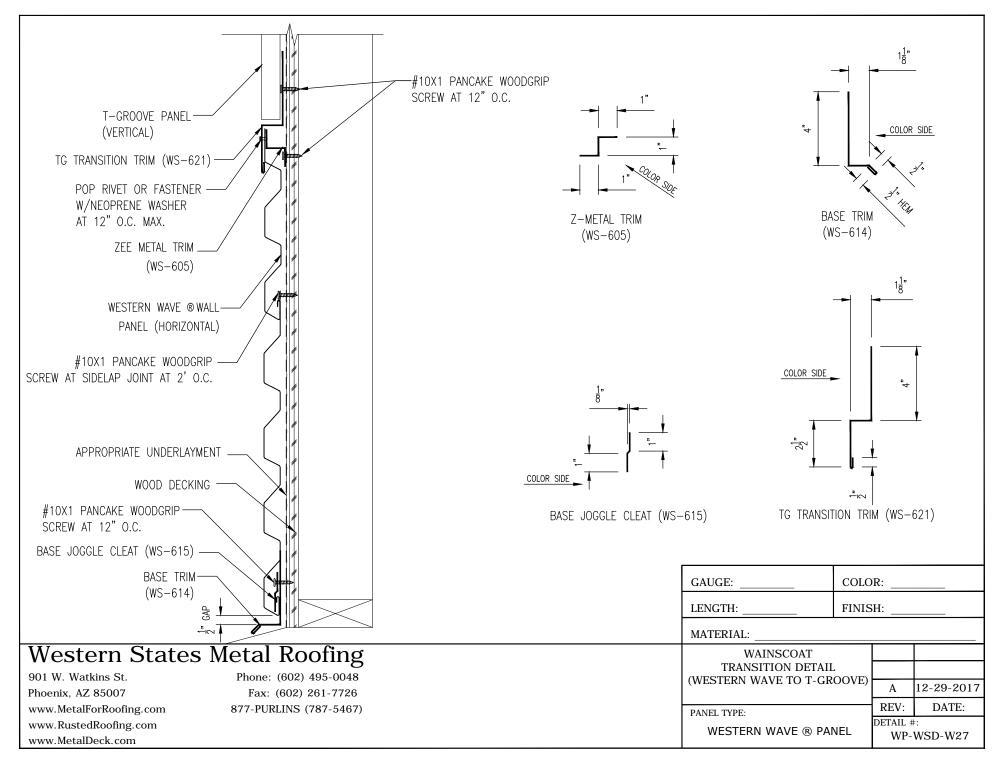


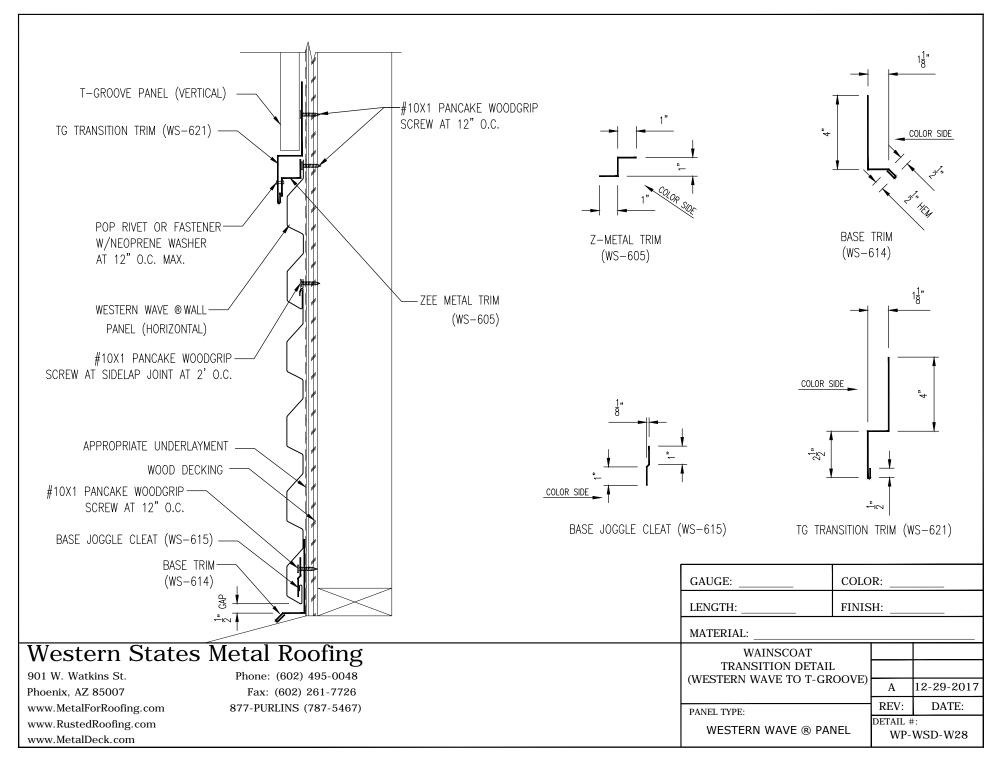


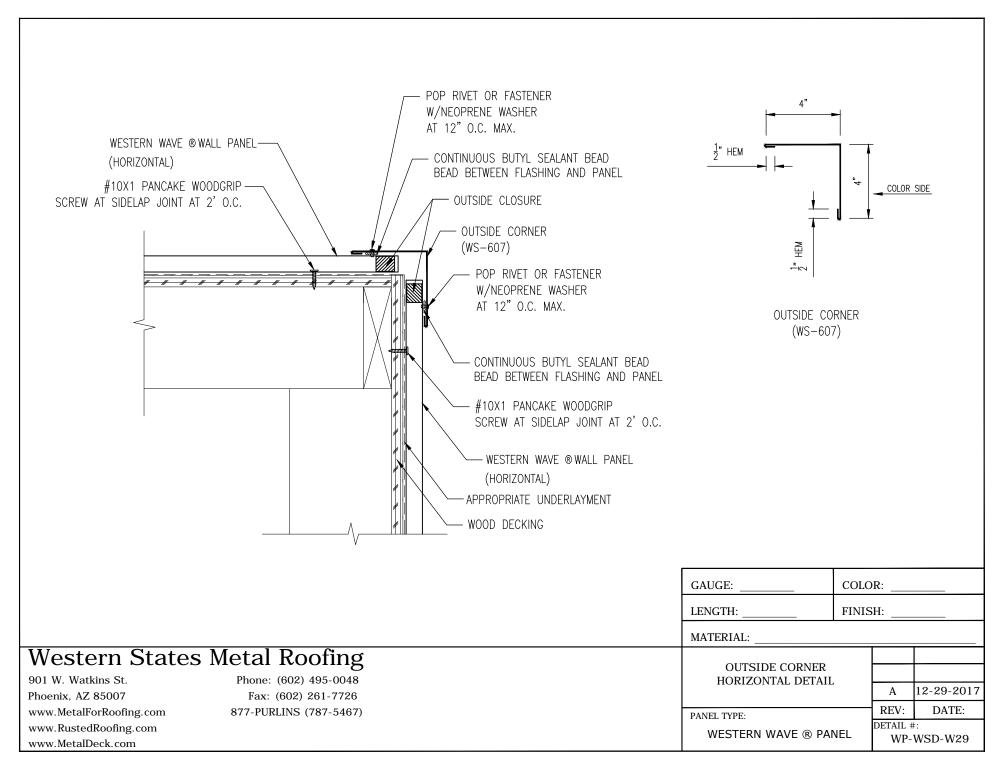


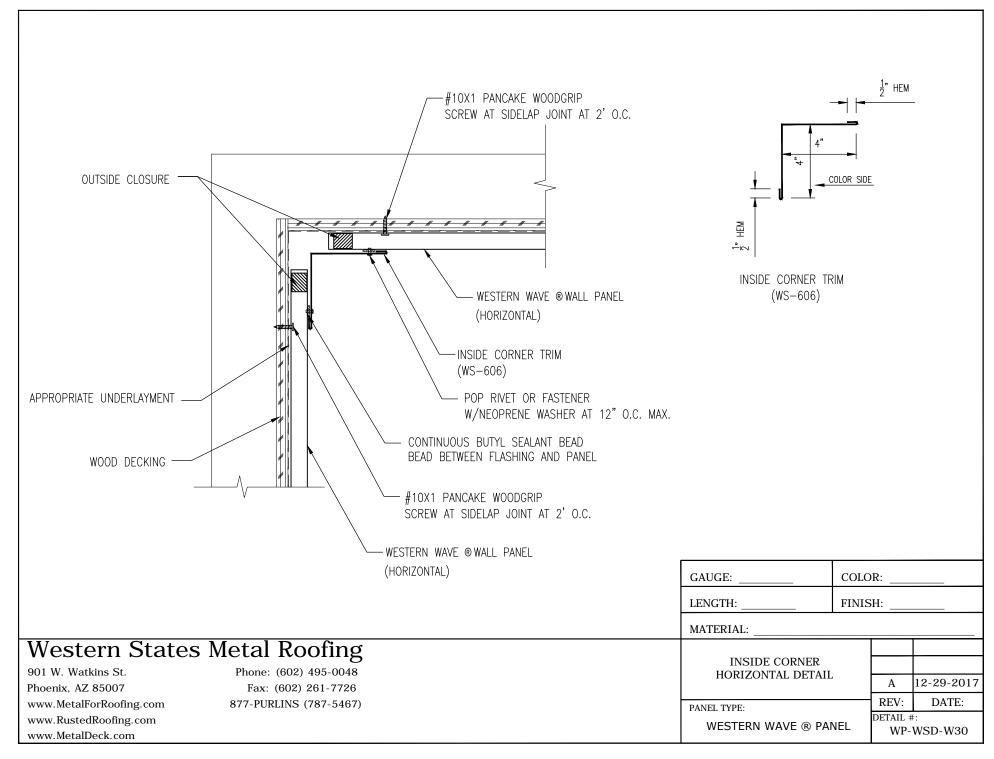












NOTES:		
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## CUSTOM TRIM

	GAUGE: COLOR: _		DR:	
	BREAKS:	FINISH:		
	LENGTH: STRET		ETCH OUT:	
	MATERIAL:	<u> </u>		
Western States Metal Roofing	CUSTOM TRIM NAME:			
901 W. Watkins St.         Phone: (602) 495-0048           Phoenix, AZ 85007         Fax: (602) 261-7726			A	12-29-2017
www.MetalForRoofing.com     877-PURLINS (787-5467)       www.MetalDeck.com     877-PURLINS (787-5467)	PANEL TYPE: WESTERN WAY	NEL TYPE: WESTERN WAVE		DATE: #: WSD-CT28

#### Western States "Western Wave ®" Panel

Installation, Flashings & Shop Drawing Detail Guide

#### **Special Design Considerations**

The details contained in this guide are proven industry details and are intended to be used as a design aid and installation guide. It does not depict all situations that may be encountered on all projects. Modifications are the responsibility of the designer/ owner/ installer.

Consideration should be given for Fit for Purpose, Building use, Climate conditions such as temperature, snow, wind, and moisture, Governing Building Codes, and Maintenance.

It is highly recommended that all trims and flashings be of the same material as the panels (metal, gauge, finish) to ensure long term performance and durability. Where possible, flashing edges should be hemmed to strengthen the edge and protect the cut edge from exposure.

#### Acceptance

Use of this manual is strictly voluntary. Details that are provided are to be used as a guide only. Details may not be applicable for all situations. This guide provides one standard detail and WSDI accepts that other installation details may be needed and other details may exist. WSDI makes no guarantee as to the Weather Tightness of the system or details found with in this guide. The information in this manual is believed to be correct and accurate at the time of printing. WSDI reserves the right to change details, discontinue products, change designs at any time without incurring obligation. It is best to consult your Design Engineer for recommendations.

#### Underlayment

There are many types of underlayment's on the market today. All designed with a special purpose depending on the type of Metal and profile. Many different types of metal will require a different type of underlayment, such as A606-4 (Corten) which requires a High Temperature underlayment. It is best to consult your Design Engineer for recommendations.

#### **Snow Design**

Design and dimension must be the proper width to accommodate high snow, rain, ice, and slope conditions. If possible, splices, penetrations, should be minimized in areas of high snow and ice accumulations. Details found in this manual may not pertain in areas of high snow and ice accumulations.

#### Panel coverage and fastening

Normal panel width of Western Wave panels are 16". Please consult with your WSDI representative for details and fastening recommendations.

#### Safety and Maintenance

Extreme care should always be used when working with metals. Safety should always be a top priority and approved fall protection and equipment as approved by OSHA should always be used. No Structure is immune to severe weather or is completely maintenance free. To keep your Siding performing as it was designed; an inspection and comprehensive maintenance program should be implemented.

#### References

For other installation techniques and details, The Sheet Metal and Air Conditioning Contractors National Association Inc. (SMACNA) and NRCA manuals are great resource for working with sheet metal.

#### **Technical Assistance**

Contact your WSDI sales or technical representative for any additional information or assistance. To insure you have the latest information available, please inquire or visit our web sites at WWW.Metalforroofing.com



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