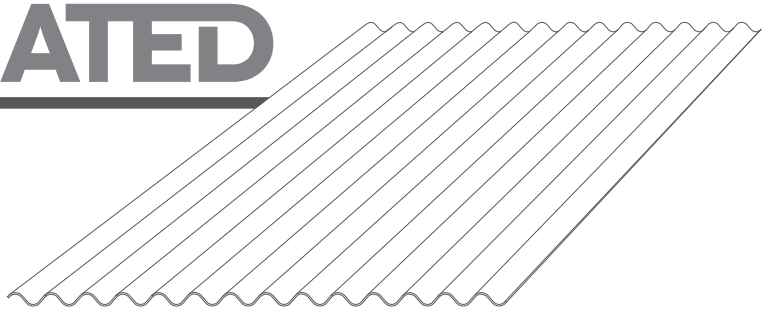
Quality Metals
ROOF AND WALL SYSTEMS

EXPOSED
FASTENER
ROOF AND WALL
SYSTEMS

Installation Manual

CORRUGATED



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www.saqualitymetals.com

IMPORTANT NOTICE

THIS MANUAL CONTAINS SUGGESTIONS AND GUIDELINES ON HOW TO INSTALL THE SUBJECT QUALITY METALS CORRUGATED PANELS AND TRIM DETAILS.

THE CONTENTS OF THIS MANUAL INCLUDE THE GUIDELINES THAT WHERE IN EFFECT AT THE TIME THIS PUBLICATION WAS ORIGINALLY PRINTED. IN AN EFFORT TO KEEP PACE WITH THE EVER CHANGING CODE ENVIRONMENT, QUALITY METALS RETAINS THE RIGHT TO CHANGE SPECIFICATIONS AND/OR DESIGNS AT ANY TIME WITHOUT INCURRING ANY OBLIGATIONS.
TO INSURE YOU HAVE THE LATEST INFORMATION AVAILABLE, PLEASE INQUIRE OR VISIT OUR WEBSITE.

APPLICATION AND DESIGN DETAILS ARE FOR ILLUSTRATIVE PURPOSES ONLY AND MAY NOT BE APPROPRIATE FOR ALL ENVIRONMENTAL CONDITIONS AND/OR BUILDING DESIGNS. PROJECTS SHOULD BE ENGINEERED AND INSTALLED TO CONFORM TO APPLICABLE BUILDING CODES, REGULATIONS AND ACCEPTED INDUSTRY PRACTICES.

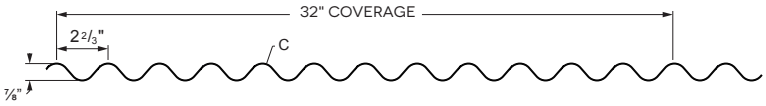
READ THIS MANUAL COMPLETELY PRIOR TO BEGINNING THE INSTALLATION OF QUALITY METALS CORRUGATED WALL AND ROOFING SYSTEMS.

ALWAYS INSPECT EACH AND EVERY PANEL AND ALL ACCESSORIES BEFORE INSTALLATION, NEVER INSTALL ANY QUALITY METALS PRODUCT IF ITS DAMAGE, NOTIFY QUALITY METALS IMMEDIATELY IF ANY PRODUCT IS NOT ACCORDING TO SPECIFICATION OR HAS BEEN DAMAGE.

Quality Metals
ROOF AND WALL SYSTEMS

EXPOSED FASTENER ROOF AND WALL SYSTEMS

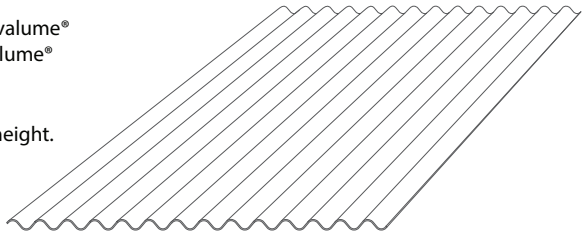
CORRUGATED



The **7/8 Corrugated** is commonly used for a wide variety of architectural, agricultural, commercial and industrial applications. **7/8 Corrugated** is a structural panel and an exposed fastener panel that can be used for wall and roof applications.
7/8 Corrugated is designed for industrial, commercial, and steel-frame building applications.

PRODUCT SPECIFICATIONS

- Finishes: Standard: Painted, Bare Galvanized and Galvalume®
- Corrosion Protection: **AZ55** per **ASTM A 792** for unpainted Galvalume®
  AZ50 per **ASTM A 792** for painted Galvalume®
  G90 per **ASTM A 653** for Galvanized
- Gauges: 26 ga and 24 ga standard; 22 ga and 20 ga optional.
- 32" panel coverage, alternate coverages are available, 7/8" rib height.
- Panel Length: Minimum: 3'; Maximum: 45' recommended.
- Applies over open framing or solid substrate.
- Panels can be installed horizontally or vertically.



STORAGE

For optimal storage conditions of ***Quality Metals Corrugated Panels:*** If the metal is not intended for immediate installation, it should be stored indoors in a well-ventilated, dry area. Moisture, including condensation, can accumulate between the metal sheets during storage, leading to unsightly water stains or the formation of white rust. This not only affects the product's appearance but also its long-term durability. White rust can develop underneath painted surfaces, potentially causing paint to peel off either immediately or in the future. To prevent the occurrence of white rust and staining, it is essential to break the shipping bands on the material. Store the material upright or at an incline of at least 8 inches, with a supportive board underneath to prevent sagging. Slightly fan out the sheets at the bottom to facilitate proper air circulation. Ensure that the sheets are elevated from the ground, using an insulating material like wood. Please note that any outdoor storage carries inherent risks. If outdoor storage is unavoidable, protect the metal with a canvas cover or waterproof paper, but avoid using plastic covers as they can lead to condensation formation. Your careful storage practices will help maintain the quality of your metal products.

GENERAL INSTALLATION INFORMATION

Before commencing panel installation, it is crucial to ensure that the structure is both square and level. Panels will not effectively seal at the side laps if the structure lacks squareness. Additionally, it's advisable to avoid using green or damp lumber, as the moisture released from such lumber can potentially harm the metal panels. To maintain the integrity of the roof, promptly remove any loose metal shavings present on the roof surface to prevent corrosion. It's also essential to keep the roof free of debris that could trap moisture on the metal, as this can lead to corrosion-related issues.

1. **Safety First:** Prioritize safety by wearing sturdy, heavy gloves when handling steel panels to prevent cuts from sharp edges.

2. **Eye Protection:** Always wear safety glasses when power cutting or drilling steel panels to shield your eyes from potential injury caused by flying metal fragments.

3. **Caution on Metal Roofs:** Exercise extreme caution when walking on metal roofs. Metal panels can become slippery, so ensure your footwear has non-slip soles. Avoid working on metal roofs in wet conditions when they can become exceptionally slippery.

4. **Proper Footing:** When walking or standing on a metal roof without a plywood or other supporting deck, it's not recommended. However, if necessary, step on the purlins, maintaining balance between them.

5. **Thickness Matters:** Never, under any circumstances, walk on a roof made of material thinner than 29 gauge.

PANEL PROPERTIES AT ROOF

SECTION PROPERTIES								ALLOWABLE UNIFORM LIVE 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	2'	2.5'	3'	3.5'	4'	5'	2'	2.5'	3'	3.5'	4'	5'
26	32"	80	1.02	0.0278	0.0624	0.0278	0.0624	418	272	170	107	72	37	418	272	170	107	72	37
24	32"	50	1.33	0.0338	0.0801	0.0338	0.0801	156	143	131	113	99	80	156	143	131	113	99	80
22	32"	50	1.73	0.0450	0.1029	0.0450	0.1029	574	373	262	173	116	59	574	373	262	173	116	59
20	32"	33	2.11	0.0525	0.1234	0.0525	0.1234	454	295	207	153	117	69	454	295	207	153	117	69

1. Section properties and allowable loads are calculated per AISI 2001 including 2004 Supplement.
2. Ixx and Sxx are effective section properties for deflection and bending.
3. Allowable loads/spans are calculated considering bending, shear, combined bending and shear and deflection.
4. Allowable loads/spans calculations do not include consideration for web crippling, fastener / connection limitations or uplift testing.
5. Allowable loads/spans do not include a 1/3 stress increase.
6. Allowable loads for 24 ga on 16 ga purlins are based on ASTM E 1592 test results.

FASTENING

1. Pre-Drilling Tips: To pre-drill fastener holes, it's advisable to use a cover sheet to prevent hot metal shavings from adhering to the panels.

2. Cutting Technique: For optimal results, consider cutting panels upside down using a nibbler. This method can yield cleaner and more precise cuts.

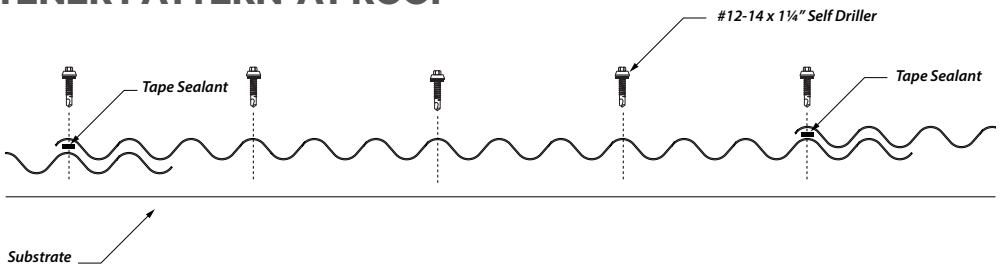
3. Fastener Recommendations: When fastening, use double washer screws that are a minimum of 1 1/2 inches in length. These should be applied at every purlin for secure installation.

4. Avoid Overdriving: Be cautious not to overdrive the screws, as this can create a dimple that may collect water and lead to leaks.

5. Handling Loose Screws: If you encounter any loose screws that have missed the purlin, promptly remove them and seal the hole either with caulk or a stitch screw.

6. Anti-Shopping Channel: Avoid applying screws through the anti-shopping channel, as it may compromise the integrity of the installation.

FASTENER PATTERN AT ROOF



Slope: The minimum recommended slope for 7/8" Corrugated roofing panel is 1:12.

Substructure: Corrugated panel is designed to be utilized over open structural framing but can easily be used with a solid substrate. To avoid panel distortion use a properly aligned and uniform substructure.

Coverage: Corrugated panel has a coverage width of 32"

PANEL PROPERTIES AT WALL

SECTION PROPERTIES								ALLOWABLE UNIFORM LIVE 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	2'	3'	4'	5'	6'	7'	2'	3'	4'	5'	6'	7'
26	34.67"	80	0.94	0.0255	0.0580	0.0255	0.0580	386	156	66	34	20	8	386	156	66	34	20	8
24	34.67"	50	1.22	0.0330	0.0744	0.0330	0.0744	175	151	127	102	78	30	175	151	127	102	78	30
22	34.67"	50	1.60	0.0413	0.0955	0.0413	0.0955	530	241	107	55	32	13	530	241	107	55	32	13
20	34.67"	33	1.95	0.0488	0.1146	0.0488	0.1146	419	191	108	64	37	16	419	191	108	64	37	16

1. Section properties and allowable loads are calculated per AISI 2001 including 2004 Supplement.
2. Ixx and Sxx are effective section properties for deflection and bending
3. Allowable loads/spans are calculated considering bending, shear, combined bending and shear and deflection.
4. Allowable loads/spans calculations do not include consideration for web crippling, fastener / connection limitations or uplift testing.
5. Allowable loads/spans do not include a 1/3 stress increase.
6. Allowable loads for 24 ga. are based on ASTM E 330 test results attaching to 16 ga. girts

FASTENING

1. Pre-Drilling Tips: To pre-drill fastener holes, it's advisable to use a cover sheet to prevent hot metal shavings from adhering to the panels.

2. Cutting Technique: For optimal results, consider cutting panels upside down using a nibbler. This method can yield cleaner and more precise cuts.

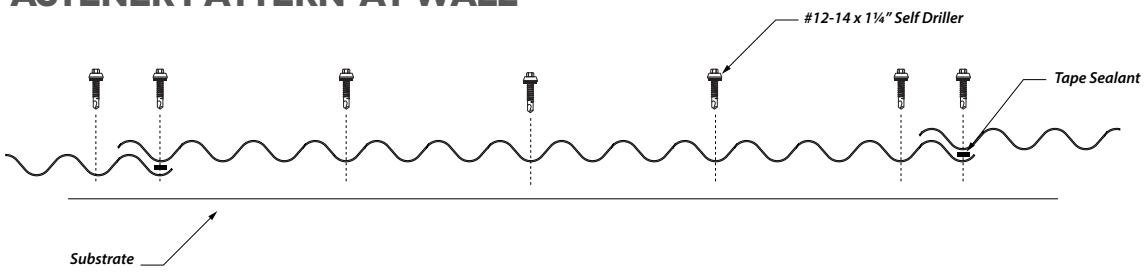
3. Fastener Recommendations: When fastening, use double washer screws that are a minimum of 1 1/2 inches in length. These should be applied at every purlin for secure installation.

4. Avoid Overdriving: Be cautious not to overdrive the screws, as this can create a dimple that may collect water and lead to leaks.

5. Handling Loose Screws: If you encounter any loose screws that have missed the purlin, promptly remove them and seal the hole either with caulk or a stitch screw.

6. Anti-Shopping Channel: Avoid applying screws through the anti-shopping channel, as it may compromise the integrity of the installation.

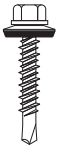
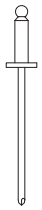
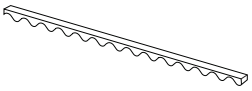
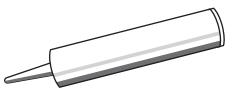
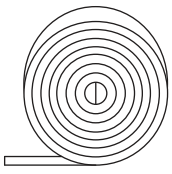
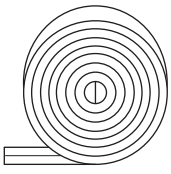
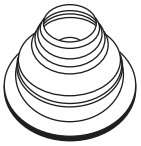
FASTENER PATTERN AT WALL



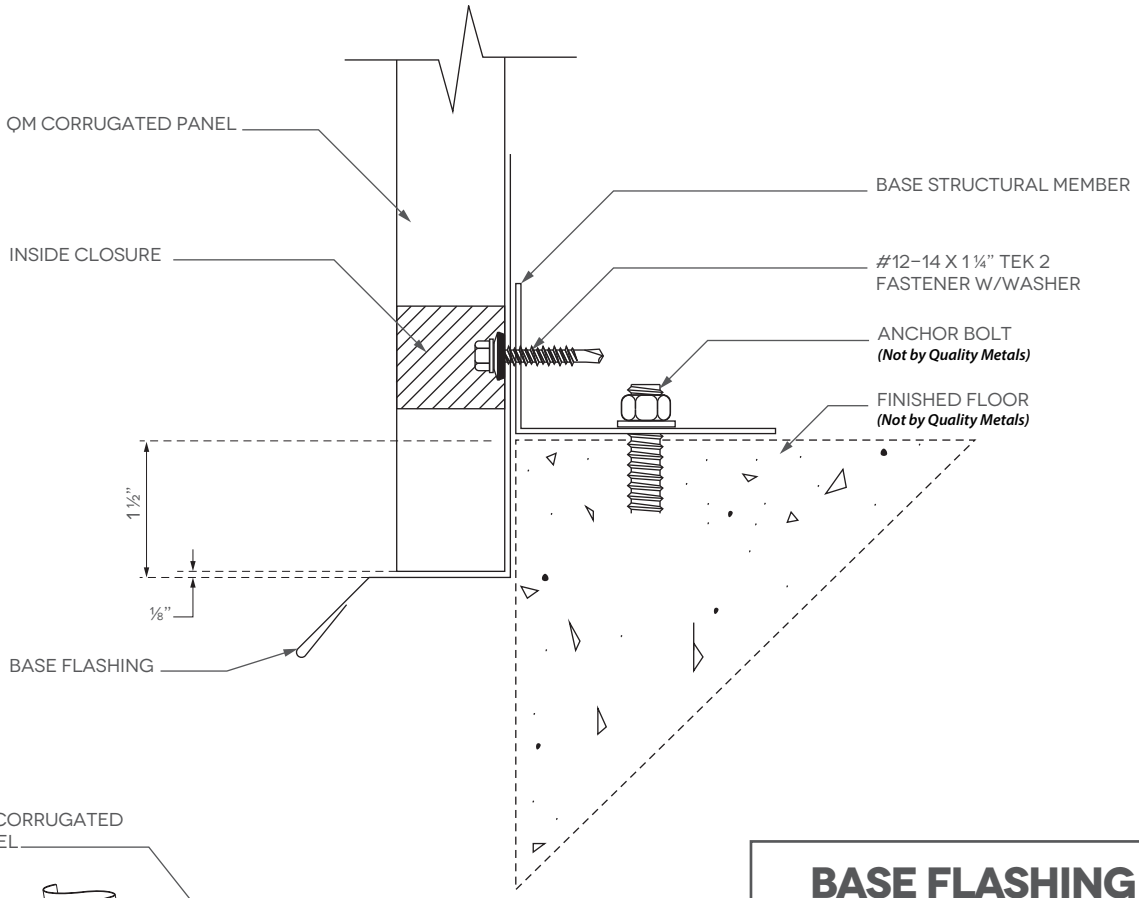
Substructure: Corrugated panel is designed to be utilized over open structural framing but can easily be used with a solid substrate. To avoid panel distortion use a properly aligned and uniform substructure.

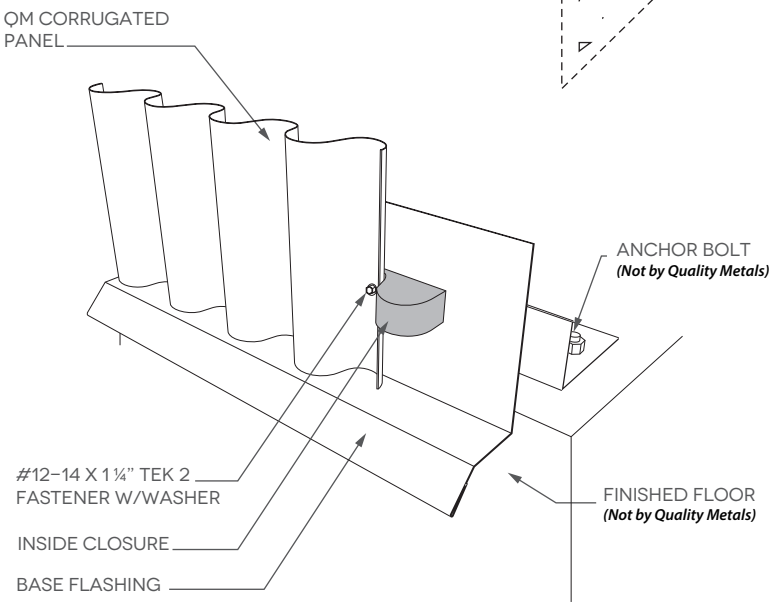
Coverage: Corrugated panel has a coverage width of 34 2/3"

ACCESSORIES

			
14 X ⅞" Hex Head Lap Tek SCREW METAL TO METAL	14 X ⅞" Hex Head Lap Tek SCREW METAL TO WOOD	#10 x 1 ½" Hex Head WOODATE SCREW METAL TO WOOD	#10 x 1 ¼" Tek 2 WOODATE SCREW METAL TO METAL
			
1/8" Stainless Rivets	#10 x 1" Pancake Head SCREW TO METAL	Inside Closure	Outside Closure
			
Tube Sealant	Single Bead Butyl Tape	Double Bead Butyl Tape (7/8" X 3/16" X 40')	Pipe Boot (VARIOUS SIZED, HEAT TRATED & RETRO FIT ALSO AVAILABLE)

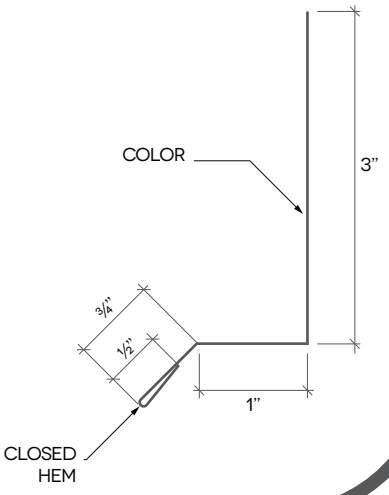
BASE FLASHING DETAIL



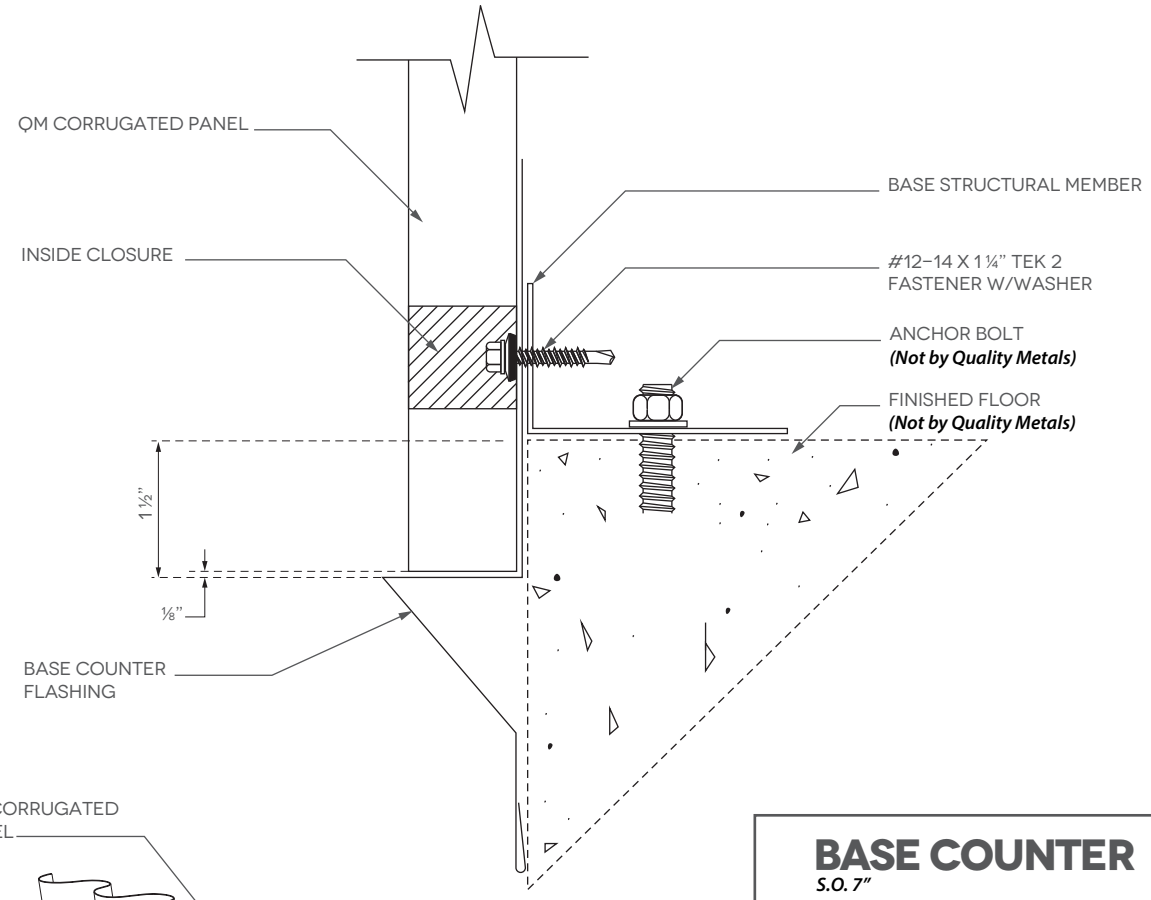


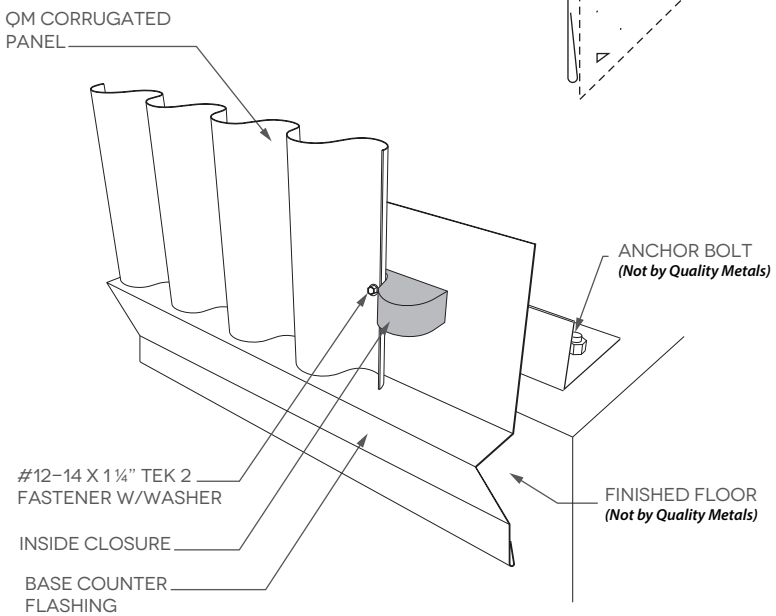
BASE FLASHING

S.O. 5.25"



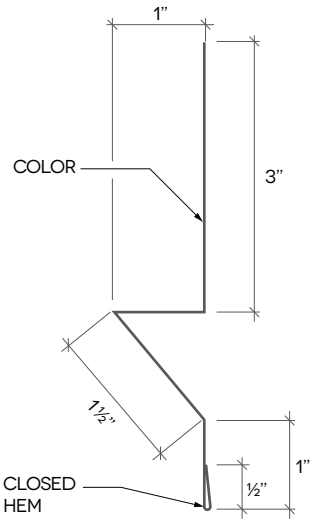
BASE COUNTER DETAIL



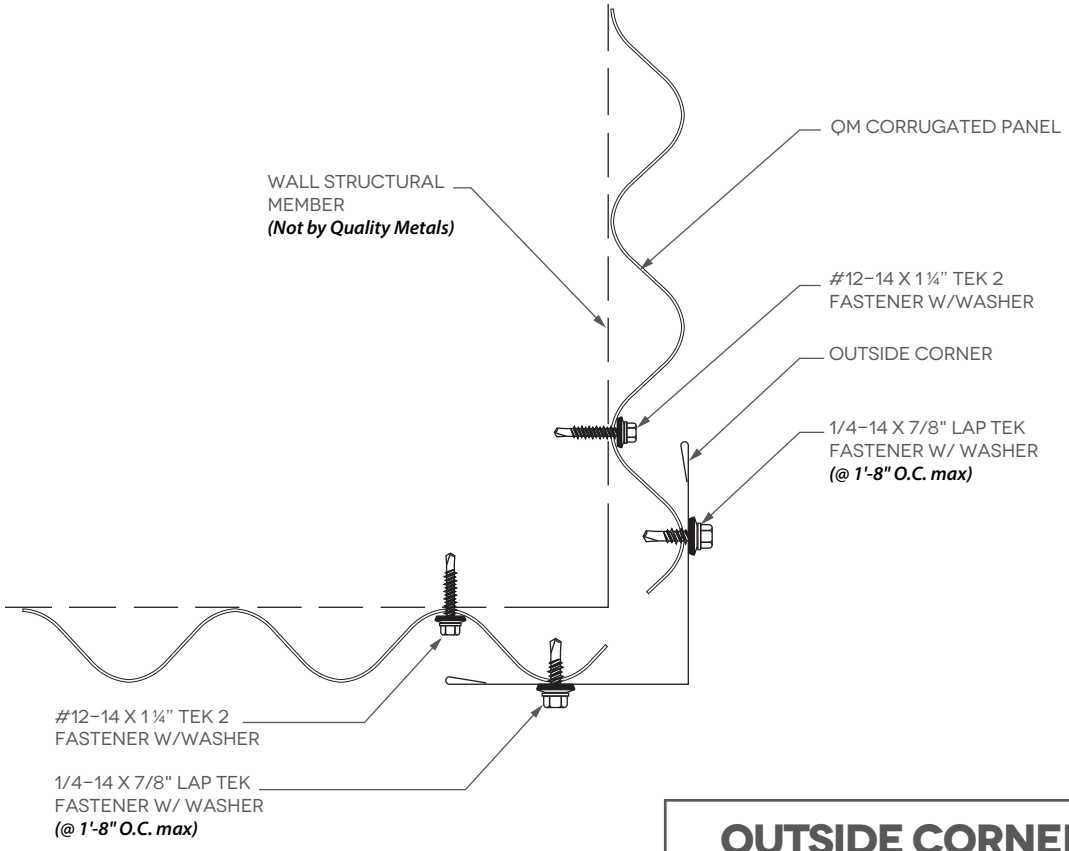


BASE COUNTER

S.O. 7"

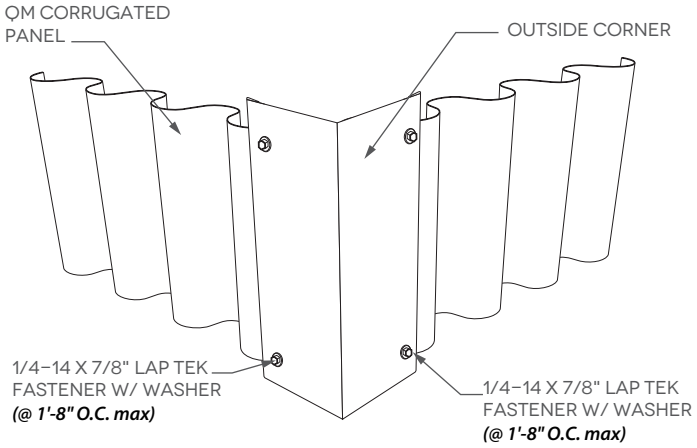


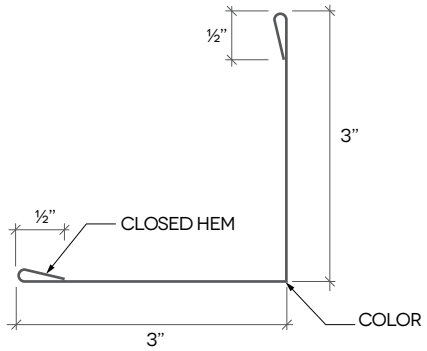
OUTSIDE CORNER DETAIL



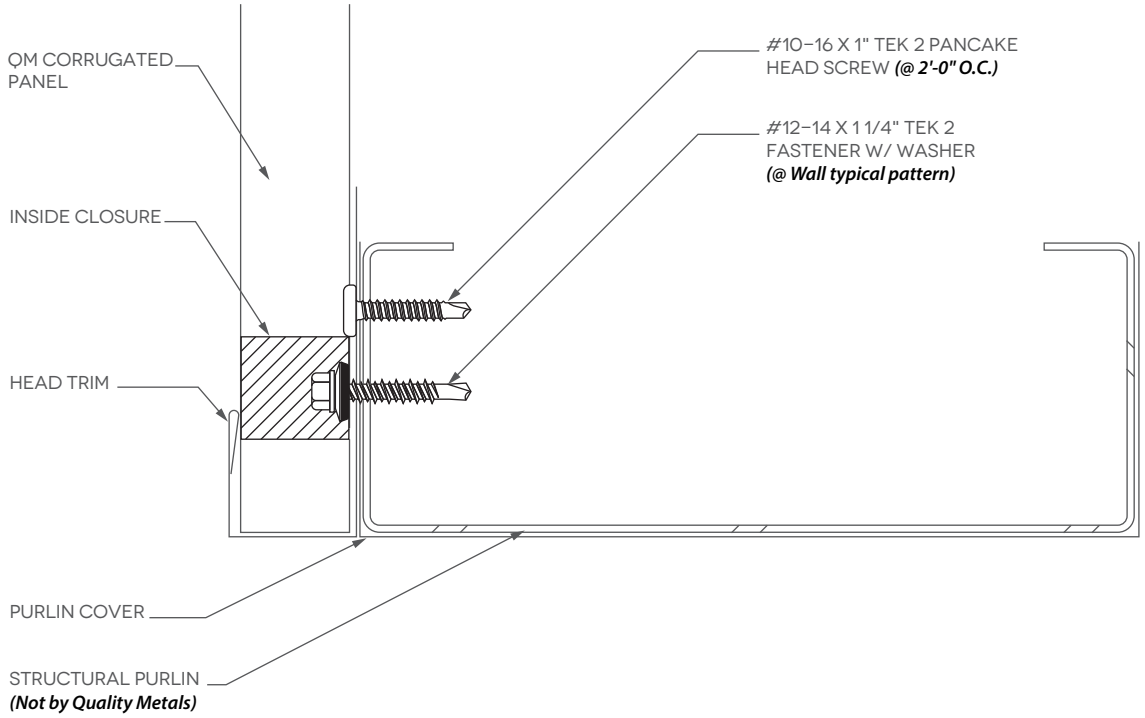
OUTSIDE CORNER

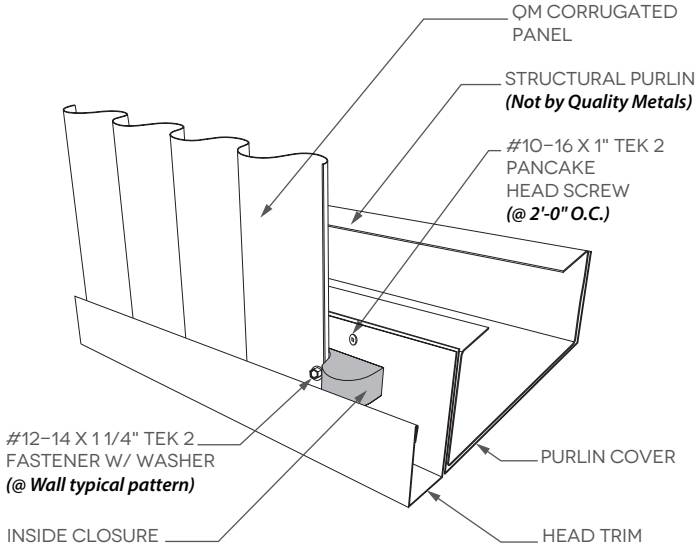
S.O. 7"





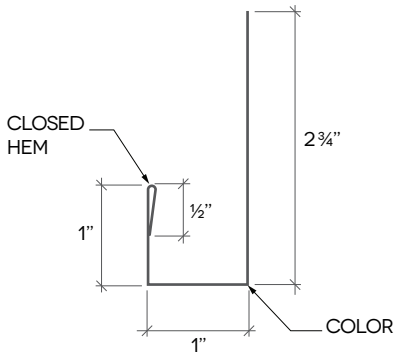
HEAD DETAIL



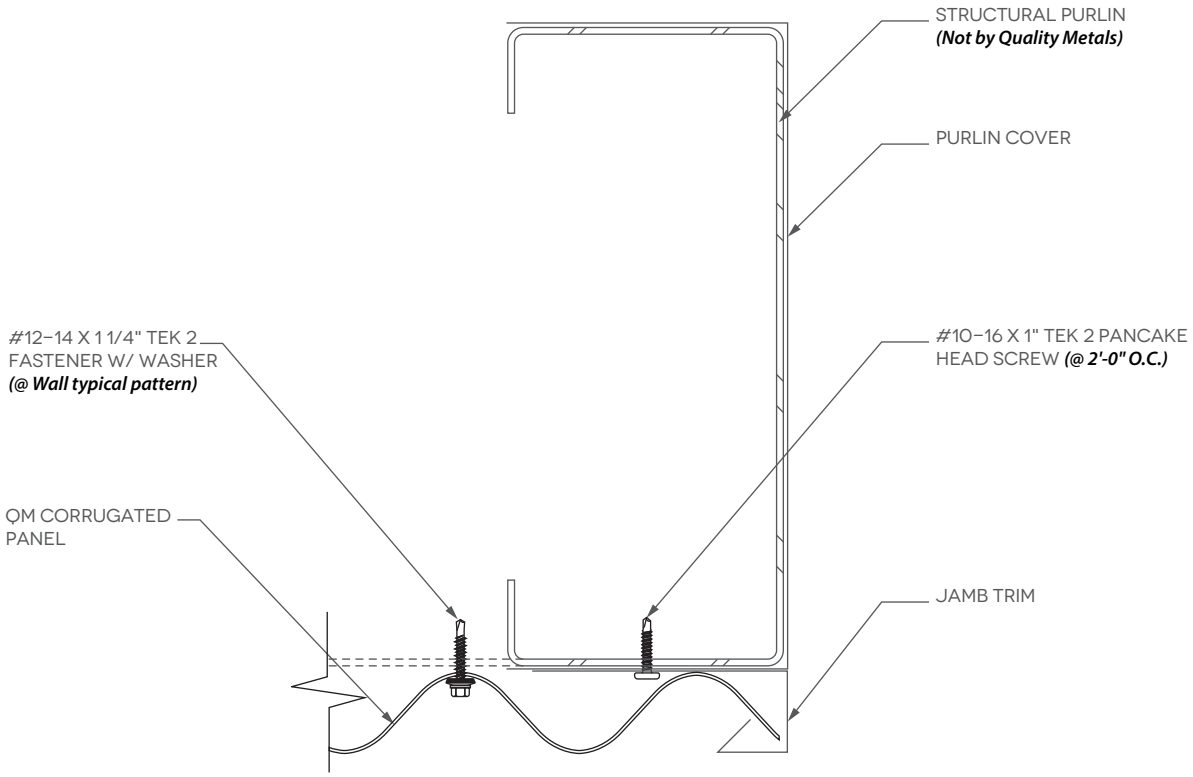


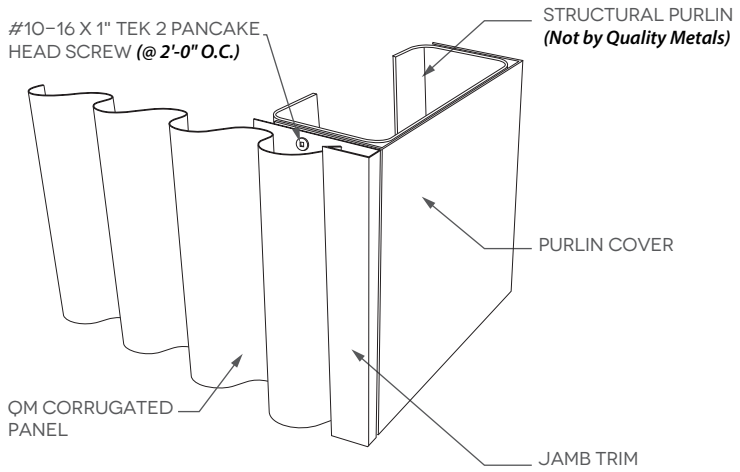
HEAD TRIM

S.O. 5.25"



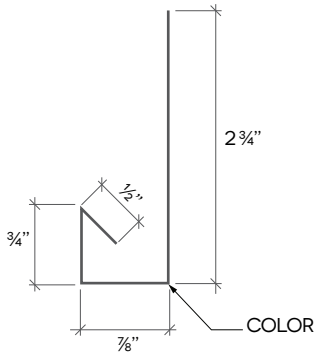
JAMB DETAIL



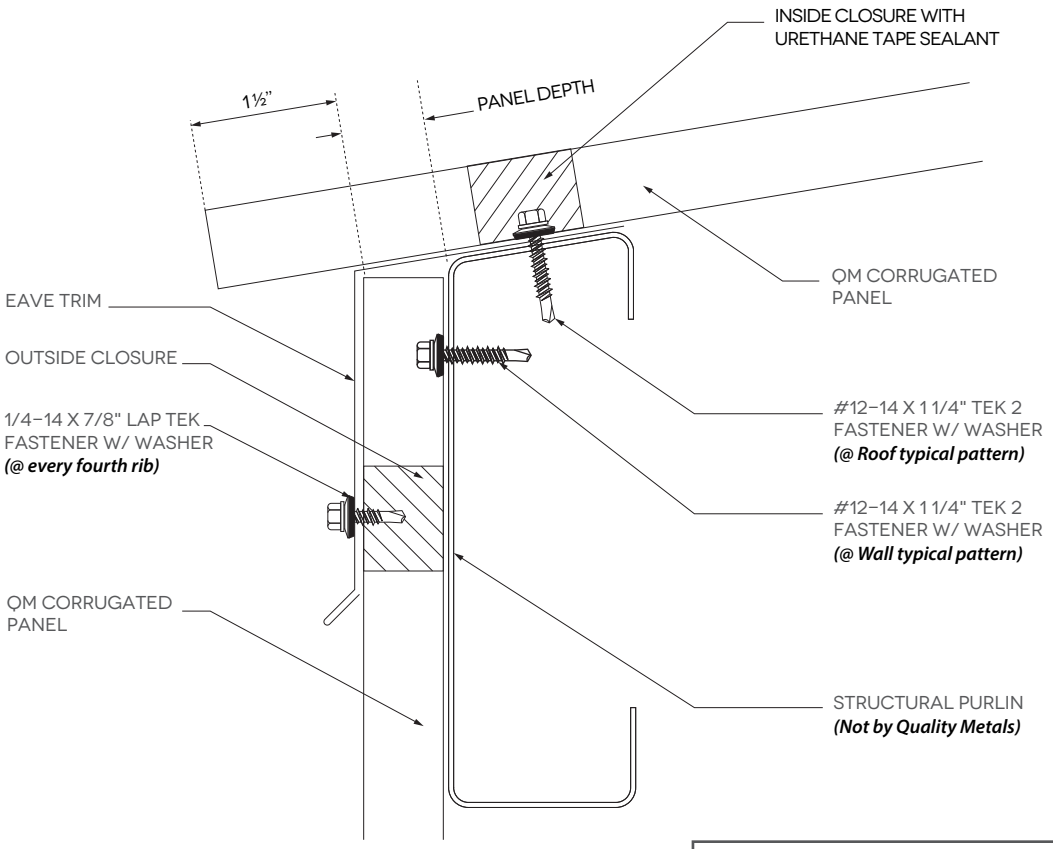


JAMB TRIM

S.O. 4.875"



EAVE DETAIL



EAVE TRIM

S.O. 7.5"