## Redi-Roof<sup>\*</sup>

# Technical Information and Flashing Details



### **Product Information:**

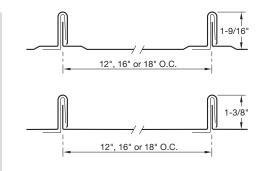
PAGE 2	Redi-Roof® Standing Seam Spec. Sheet
PAGE 3	Redi-Roof <sup>®</sup> Batten Spec. Sheet
PAGES 4-10	UL List Cards - UL Construction Numbers 350, 353, 615, 263, 790
PAGES 11-29	Redi-Roof Standing Seam Flashing Details
PAGES 30-32	SPEC-DATA® Sheet
PAGES 33-41	MANUSPEC® Sheets

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### Redi-Roof® Standing Seam





Redi-Roof® 12", 16" or 18" O.C. 1-3/4" high

.032 aluminum 24 gauge steel 16 oz. copper

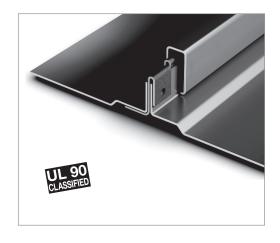
### U.L. Construction Numbers 350, 615

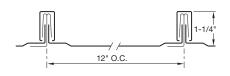
The Redi-Roof panel features an offset profile which adds strength and allows room for a hex head fastener. The clip, with its button punch design, insures an extra snug fit. There is less labor required to install this panel due to its one piece panel design. This panel is available with or without the offsets.

Features:	.032 aluminum, 24 ga. steel, 16 oz. copper 12" o.c., 16" o.c., 18" o.c.	
	Tension Leveled	
Requirements:	Solid Substrate, (plywood, OSB (oriented strand board))	
	Vapor Barrier (#30 felt or ice and water shield)	
	Clips should be spaced at 18" on-center (Minimum 2 fasteners per clip)	
	Minimum Roof Pitch: 3" on 12"	
Finish:	PAC-CLAD® (Kynar 500® or Hylar 5000®)	
Air & Water Infiltration Tested:	ASTM E283/1680 and E331/1646	
Note:	When a U.L. Rating is required, Petersen Aluminum Corporation must be	
	notified prior to fabrication of the panels.	

### PETERSEN ALUMINUM CORPORATION

### Redi-Roof® Batten





Redi-Roof® 12" O.C. 1-1/4" high

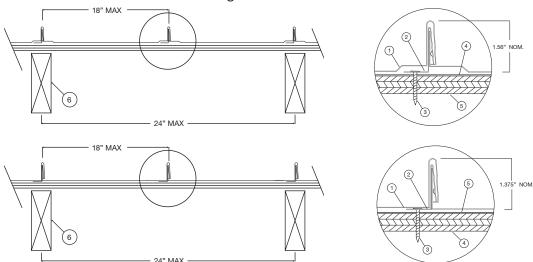
.032 aluminum 24 gauge steel

### U.L. Construction Numbers 353

The Redi-Roof panel features an offset profile which adds strength and allows room for a hex head fastener. The clip, with its button punch design, insures an extra snug fit. There is less labor required to install this panel due to its one piece panel design. This panel is only available with offsets.

Features:	.032 aluminum, 24 ga. steel 12" o.c. Tension Leveled
Requirements:	Solid Substrate, (plywood, OSB (oriented strand board)) Vapor Barrier (#30 felt or ice and water shield) Clips should be spaced at 18" on-center (Minimum 2 fasteners per clip) Minimum Roof Pitch: 3" on 12"
Finish:	PAC-CLAD® (Kynar 500® or Hylar 5000®)
Air & Water Infiltration Tested:	ASTM E283/1680 and E331/1646
Note:	When a U.L. Rating is required, Petersen Aluminum Corporation must be notified prior to fabrication of the panels.

### Uplift - Class 90 / Fire Not Investigated



### 1 Metal Roof Deck Panels \* / "Redi-Roof Standing Seam"

No. 24 MSG min thick coated steel; panel width max 18 in., min 12 in. Panel may be with or without offsets at ribs. Rib height with offsets 1-9/16 in. Rib height without offsets 1-3/8 in. Panels continuous over three or more clips with no end laps. A bead of sealant may be used at panel side joints.

### 2 Roof Deck Fasteners\* (Panel Clips) / "Redi-Roof Standing Seam Clip"

One piece assembly, 2-1/4 in. wide, 1-3/8 in. high. No. 24 MSG min thick coated steel. Clips spaced 18 in. OC, fastened to plywood deck (Item 5).

#### 3 Fasteners (Screws)

Fasteners used to attach panel clips (Item 2) to plywood (Item 5) to be No. 10-12 by 1-5/8 in. long truss head, No. 2 Phillips drive coated steel screws. Min two fasteners per clip to be used.

### 4 Underlayment

Underlayment used over plywood deck to be 30 lb organic felt. Sides overlapped min 8 in., end laps per manufacturer's instructions. Felt nailed to plywood deck with staples at a random spacing.

Plywood decking to be graded per PS83 specification, nom 5/8 in., (19/32 in. actual) thick, exposure 1, APA rated 42/20 square edged. Butt ends not blocked.

#### 6 Supports (Not Shown)

Spaced max of 24 in. OC. Any of the following types may be used to support the plywood decking:

- A Nom 2 by 6 in. (min) No. 2 grade A.F.P.A. S-P-F Hemlock Fir, Douglas Fir or Southern Pine.
- B Wood trusses with a 2 by 4 in. (min) upper chord of the same Grade as Item a.
- C No. 22 MSG min cold formed coated steel (min yield to be 33,000 psi).

### 7 Plywood Fasteners (Not Shown)

Fasteners used to attach the plywood deck to the supports to be as follows:

- A For plywood-to-wood supports No. 8-18 by 1-7/8 in. long bugle-head steel screws with a No. 2 Phillips drive, a "Hi-Low" thread pattern and an "S-Point".
- B As an alternate to Item a, 8d by 2-1/2 in. long deformed shank common nails may be used.
- C For plywood-to-steel supports for a steel thickness less than No. 20 MSG, No. 7-19 by 1-1/4 in. long bugle-head steel screws with a No. 2 Phillips head drive "Hi-Low" threads and an "S-Point". For a steel thickness greater than No. 20 MSG to No. 16 MSG, No. 6-20 by 1-1/4 in. long bugle-head steel screws with a No. 2 Phillips drive and an S12 (TEKS/3)® point.

Spacing: Fastener spacing for all fastener types to be 6 in. OC at the plywood butt edges and 12 in. OC in the interior.

Refer to General Information, Roof Deck Construction for items not evaluated.

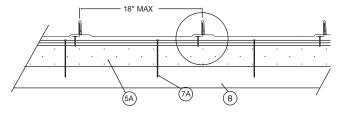
\*Bearing the UL Classification Marking

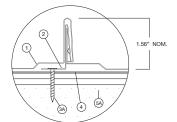
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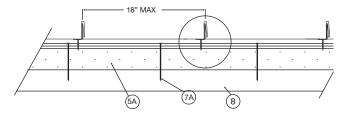
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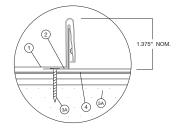
### UL Construction No. 350 (Alternate Construction)

### Uplift - Class 90 / Fire Not Investigated









### 1 Metal Roof Deck Panels \* / "Redi-Roof Standing Seam"

No. 24 MSG min thick coated steel; panel width max 18 in., min 12 in. Panel may be with or without offsets at ribs. Rib height with offsets 1-9/16 in. Rib height without offsets 1-3/8 in. Panels continuous over three or more clips with no end laps. A bead of sealant may be used at panel side joints.

### 2 Roof Deck Fasteners\* (Panel Clips) / "Redi-Roof Standing Seam Clip"

One piece assembly, 2-1/4 in. wide, 1-3/8 in. high. No. 24 MSG min thick coated steel. Clips spaced 18 in. OC, fastened to nailable insulation (Item 5A).

### 3A Fasteners (Screws)

Fasteners used to attach panel clip (Item 2) to nailable insulation (Item 5A) to be No. 8-8 by 1-1/4 in. long bugle-head coated steel wood screws with a No. 2 Phillips drive. Min two fasteners per clip to be used.

### 4 Underlayment

Underlayment used over plywood deck to be 30 lb organic felt. Sides overlapped min 8 in., end laps per manufacturer's instructions. Felt nailed to plywood deck with staples at a random spacing.

#### 5A Nailable Insulation

Consisting of 1 in. min to 3-1/2 in. max thickness. Classified Polyisocyanurate foamed plastic with a factory laminated 7/16 in. thick APA rated O.S.B density of foamed plastic to be 2 pcf.

### 6A Supports (Purlins) / (Not Shown)

Purlins used for liner panel support to be cold formed steel sections. As alternatives, structural steel components (hold rolled beams, channels, open web joists, etc.) may be used. Min gauge and yield to depend on design considerations for uplift loading. Max spacing to depend on design considerations for uplift loading.

### 7A Fasteners (Screws)

Fasteners used to attach nailable insulation to steel deck (Item 8) to be No. 11-13, No. 3 Phillips drive, truss head, painted steel screws. Length to depend on overall thickness of deck and to penetrate steel deck 1/2 in. min. A 2 in. diameter formed pressure plate fabricated from No. 22 MSG coated steel to be used with each screw. Fasteners located in three rows along the 8 ft length of the nailable insulation beginning 6 in. from the 8 ft edges with a row down the center and spaced 21 in. beginning 6 in. from the 4 ft edges OC. A total of 15 fasteners used for each 4 by 8 ft board.

#### 8 Liner Panel (Steel Deck)

No. 22 MSG min thickness coated steel. Min depth 1-1/2 in. max pitch 6 in. fabricated to various profiles. Min yield strength 33,000 psi. Fastened to supports (Item 6A) with fastener type and spacing per liner panel manufacturers instructions for uplift loading.

#### 9 Gypsum Board (Optional) / (Not Shown)

Max thickness 5/8 in. supplied in 4 by 8 ft sheets. Butt joints located over crests of steel deck. Fastened to deck with same fasteners used for nailable insulation.

Refer to General Information, Roof Deck Construction for items not evaluated.

\*Bearing the UL Classification Marking

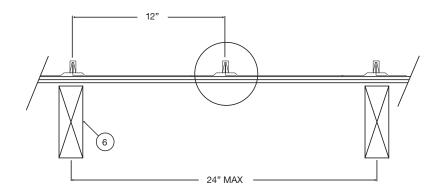
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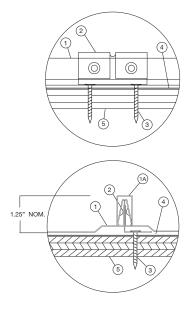
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### Uplift - Class 90 / Fire Not Investigated





#### 1 Metal Roof Deck Panels \* / "Redi-Roof Batten"

No. 24 MSG min coated steel, panels, 12 in. wide, 1-1/4 in. high at side ribs. Panels continuous over three or more clips with no endlaps. A bead of sealant may be used at panel side joints.

### 1A Panel Cap\* / "Redi-Roof Cap"

No. 24 MSG min coated steel. 1 in. high, 1/2 in. wide "U" shaped with 1/8 in. hems on each leg. Designed to snap over panel clips (Item 2).

### 2 Roof Deck Fasteners\* (Panel Clips) / "Redi-Roof Clip"

One piece assembly, 2-1/4 in. wide, 1-1/2 in. high. Min thickness No. 24 MSG coated steel. Clips spaced 18 in. OC fastened to plywood deck.

### 3 Fasteners (Screws)

Fasteners used to attach panel clips (Item 2) to plywood to be No. 10 by 1 in. long coated steel screws. Min two fasteners per clip to be used.

### 4 Underlayment

Underlayment used over plywood deck to be type 30 lb. organic felt. Sides overlapped min 2 in., end laps per manufacturer's instructions. Felt nailed to plywood deck with 1 in. long galvanized steel roofing nails, located per manufacturer's instructions. Nail spacing to be max 12 in. OC at the side lap and max 24 in. OC in interior rows.

### 5 Plywood Decking

Plywood decking to be graded per PS83 specification, 19/32 in. thick, exposure 1, APA Rated 20 in. OC, square edged. Butt ends not blocked.

### 6 Supports (Not Shown)

Spaced maximum of 24 in. OC. Any of the following types may be used to support the plywood decking:

- A 2 by 6 in. minimum No. 2 grade A.F.P.A. S-P-F Hemlock Fir, Douglas Fir, Douglas Fir or Southern Pine or equivalent.
- B Wood trusses with a nominal 2 by 4 in. upper chord of the same grade as Item a.
- C No. 22 MSG min cold formed coated steel (min yield to be 33,000 psi).

### 7 Plywood Fasteners (Not Shown)

Fasteners used to attach the plywood deck to the supports to be as follows:

- A For plywood-to-wood supports No. 8-18 by 1-7/8 in. long bugle-head steel screws with a No. 2 Phillips drive, a "Hi-Low" thread pattern and an "S-Point".
- B As an alternate to Item a, 8d by 2-1/2 in. long deformed shank common nails may be used.
- C For plywood-to-steel supports for a steel thickness less than No. 20 MSG No. 7-19 by 1-1/4 in. long bugle head steel screws with a No. 2 Phillips head drive "Hi-Low" threads and an "S-Point". For a steel thickness greater than No. 20 MSG to No. 16 MSG, No. 6-20 by 1-1/4 in. long bugle-head steel screws with a No. 2 Phillips drive and an S12 (TEKS/3)® point.

Spacing: Fastener spacing for all fastener types to be 6 in. OC at the plywood edges and 12 in. OC in the interior.

Refer to General Information, Roof Deck Construction for items not evaluated.

\*Bearing the UL Classification Marking

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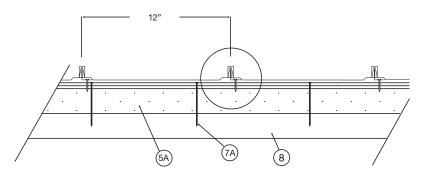
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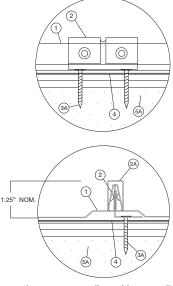
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10551 PAC Road Tyler, TX 75707 P: 800-441-8661 F: 903-581-8592 350 73rd Ave., NE, Ste 1 Fridley, MN 55432 P: 877-571-2025 F: 866-901-2935

# UL Construction No. 353 (Alternate Construction)

Uplift - Class 90 / Fire Not Investigated





#### 1 Metal Roof Deck Panels \* / "Redi-Roof Batten"

No. 24 MSG min coated steel, panels, 12 in. wide, 1-1/4 in. high at side ribs. Panels continuous over three or more clips with no endlaps. A bead of sealant may be used at panel side joints.

#### 1A Panel Cap\* / "Redi-Roof Cap"

No. 24 MSG min coated steel. 1 in. high, 1/2 in. wide "U" shaped with 1/8 in. hems on each leg. Designed to snap over panel clips (Item 2).

#### 2 Roof Deck Fasteners\* (Panel Clips) / "Redi-Roof Clip"

One piece assembly, 2-1/4 in. wide, 1-1/2 in. high. Min thickness No. 24 MSG coated steel. Clips spaced 18 in. OC fastened to nailable insulation.

#### 3A Fasteners (Screws)

Fasteners used to attach panel clip (Item 2) to Nailable Insulation (Item 5A) to be 8-8 by 1-1/4 in. long bugle-head coated steel wood screws with a No. 2 Phillips drive. Minimum two fasteners per clip to be used.

### 4 Underlayment

Underlayment used over plywood deck to be type 30 lb, organic felt. Sides overlapped min 2 in., end laps per manufacturer's instructions. Felt nailed to plywood deck with 1 in. long galv steel roofing nails, located per manufacturer's instructions. Nail spacing to be max 12 in. OC at the side lap and max 24 in. OC in interior rows.

### 5A Nailable Insulation

Consisting of 1 in. min to 3-1/2 in. maximum nominal thickness. Classified Polyisocyanurate foamed plastic with a factory laminated 7/16 in. thick APA rated O.S.B. Density of foamed plastic to be 2 pcf.

### 6A Supports (Purlins) / (Not Shown)

Purlins used for liner panel support to be cold formed steel sections. As alternatives, structural steel components (hot rolled beams, channels, open web joists, etc.) may be used. Min gauge and yield to depend on design considerations for uplift loading. Max spacing to depend on design considerations for uplift loading.

### 7A Fasteners (Screws)

Fasteners used to attach nailable insulation to steel deck (Item 8) to be No. 11-13, No. 3 Phillips drive, truss head, painted steel screws. Length to depend on overall thickness of deck and to penetrate steel deck 1/2 in. min. A 2 in. diameter formed pressure plate fabricated from No. 22 MSG coated steel to be used with each screw. Fasteners located in three rows along the 8 ft. length of the nailable insulation beginning 6 in. from the 8 ft. edges with a row down the center and spaced 21 in. beginning 6 in. from the 4 ft. edges OC. A total of 15 fasteners used for each 4 by 8 ft board.

#### 8 Liner Panel (Steel Deck)

No. 22 MSG min thickness coated steel. Min depth 1-1/2 in. max pitch 6 in. fabricated to various profiles. Min yield strength 33,000 psi. Fastened to supports (Item 6A) with fastener type and spacing per liner panel manufacturers instructions for uplift loading.

### 9 Gypsum Board (Optional) / (Not Shown)

Max thickness 5/8 in. supplied in 4 by 8 ft sheets. Butt joints located over crests of steel deck. Fastened to deck with same fasteners used for nailable insulation.

Refer to General Information, Roof Deck Construction for items not evaluated.

\*Bearing the UL Classification Marking

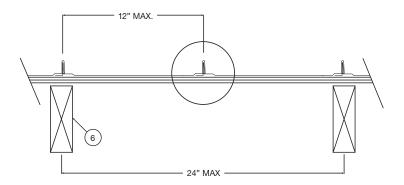
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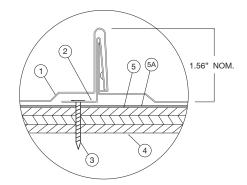
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### Uplift - Class 90 / Fire Not Investigated





#### 1 Metal Roof Deck Panels \* / "Redi-Roof Standing Seam"

Max 12 in. wide, 1-9/16 in. high, fabricated from 16 oz, half-hard copper. Panels continuous over three or more clips with no end laps. A bead of sealant may be used at panel side joints.

### 2 Roof Deck Fasteners\* (Panel Clips) / "Redi-Roof Standing Seam Clip"

One piece assembly, 2-1/4 in. wide, 1-3/8 in. high. No. 24 MSG min thick coated stainless steel. Clips spaced max 24 in. OC, fastened to plywood deck (Item 5).

#### 3 Fasteners (Screws)

Fasteners used to attach the panel clip (Item 2) to the plywood (Item 5) to be No. 10-16 by 1 in. long pancake head coated stainless steel screws. Two screws per clip are required.

#### 4 Plywood Decking

Plywood decking to be graded per PS83 specification, 19/32 in. thick, Grade B-C, exposure 1, APA rated 42/20 square edged. All plywood joints to be sealed against leakage with caulk or a one part urethane sealant.

### 5 Underlayment\*

Any UL Classified base or ply sheet, mechanically fastened with nails or staples.

#### 5A Underlayment

Rosin paper, any thickness, mechanically fastened with nails or staples.

#### 6 Supports

Spaced max of 24 in. OC. Any of the following types may be used to support the plywood decking:

- A Nom 2 by 6 in. (min) No. 2 grade A.F.P.A. S-P-F Hemlock Fir, Douglas Fir or Southern Pine.
- B Wood trusses with a 2 by 4 in. (min) upper chord of the same Grade as Item a.
- C No. 22 MSG min cold formed coated steel (min yield to be 33,000 psi).

### 7 Plywood Fasteners (Not Shown)

Fasteners used to attach the plywood deck to the supports to be as follows:

- A For plywood-to-wood supports No. 8-18 by 1-7/8 in. long bugle-head steel screws with a No. 2 Phillips drive, a "Hi-Low" thread pattern and an "S-Point".
- B As an alternate to Item a, 8d by 2-1/2 in. long deformed shank common nails may be used.
- C For plywood-to-steel supports for a steel thickness less than No. 20 MSG, No. 7-19 by 1-1/4 in. long bugle-head steel screws with a No. 2 Phillips head drive "Hi-Low" thread and an "S-Point". For a steel thickness greater than No. 20 MSG to No. 16 MSG, No. 6-20 by 1-1/4 in. long bugle-head steel screws with a No. 2 Phillips drive and an S12 (TEKS/3) point.

Spacing: Fastener spacing for all fastener types to be 6 in. OC at the plywood butt edges and 12 in. OC in the interior.

Refer to General Information, Roof Deck Construction for items not evaluated.

\*Bearing the UL Classification Marking

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### Metal Roof Deck Panels / File R14293

### Mechanically Attached Metal Roof Panels

1	Mechanically Attached
	Metal Roof Panels

Type "Snap-Clad" roof deck panels (No. 24 MSG min gauge coated steel or 0.032 min. gauge coated aluminum) placed over specified insulation and/or roof covering for respective designs. Type "Snap-Clad" panels are secured by "Snap-Clad Clips" with the upper portion of the clip engaging the panel rib. A 4-1/2 by 6 in. bearing plate fabricated from No. 26 MSG coated steel is used under each panel clip (the bearing plate shall be placed over the specified insulation). Panel clips are attached to the steel deck with No. 14 steel screws having a No. 3 Phillips-drive truss head with an off-set drill-type point. Two fasteners per clip are used.

### For use in Design Numbers:

P225, P227, P230, P233, P237, P259, P508, P510, P512, P514, P701, P711, P717, P720, P722, P723, P724, P726, P731, P734, P736, P801, P815, P819 and P821.

### 2 Mechanically Attached Metal Roof Panels

Types "High Snap-On Standing Seam", "Snap-On Standing Seam", "Integral Batten", "Integral Standing Seam", "Redi-Roof Standing Seam", "Redi-Roof Batten", "Snap-Clad", "Tite-Loc", "Tite-Loc Plus" roof deck panels (No. 24 MSG min. gauge coated steel or 0.032 min. gauge coated aluminum) placed over specified insulation and/or roof covering for respective designs. Panels secured to a top layer of 7/16 in. APA-Rated oriented stand board (OSB) laminated to rigid insulation or 5/8 in. plywood over rigid insulation. Panels secured to oriented strand board or plywood at side ribs with panel clips designed specifically for these panels. Panel clips spaced 18 in. OC using No. 10 by 1-1/4 in. long self-drilling, self tapping wafer head. Zinc-plated carbon steel screws. The oriented strand board laminated insulation or plywood covered rigid insulation are mechanically fastened to steel roof deck and covered with a 30 lb. felt.

### For use in Design Numbers:

P225, P227, P230, P233, P237, P259 P508, P510, P512, P514, P515, P701, P711, P717, P720, P722, P723, P724, P726, P731, P734, P736, P801, P815, P819 and P821.

### 3 Mechanically Attached Metal Roof Panels

Types "Tite-Loc" and "Tite-Loc Plus" roof deck panels (No. 24 MSG min. gauge coated steel or 0.032 min. gauge coated aluminum) placed over specified insulation and/or roof covering for respective designs. Both types secured to hat sections+ or bearing plates++ with panel clips designed for the particular panel.

#### For use in Design Numbers:

P225, P227, P230, P233, P237, P508, P510, P512, P701, P711, P715, P717, P720, P722, P724, P726, P731, P734, P736, P801, P815, P819, P821

+Hat-shaped member to be a minimum of 16 MSG, 1 in. min. depth. Member to be fastened through the roof insulation to the steel roof deck with No. 14 self-drilling and/or self-tapping fasteners. Spacing to be determined by the structural loading requirements. In addition, any compressible UL Classified glass fiber compressible blanket insulation with or without a vapor retarding facing may be used between the specified roof insulation and the metal roof panels.

++Bearing plate to be a minimum of 16 MSG. Member to be fastened through the roof insulation to the steel deck with No. 14 self-drilling and/or self-tapping fasteners.

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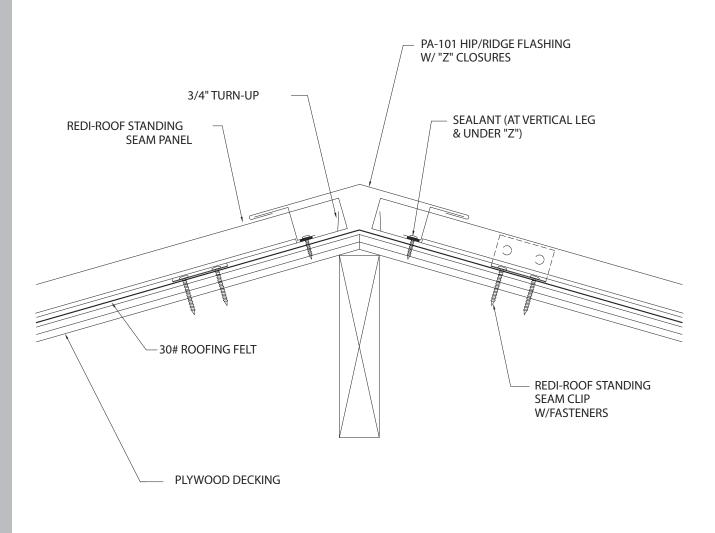
### Class A

Coated Steel and aluminum panel identified as "Snap-On Standing Seam", "High Snap-On Standing Seam", "Snap-On Batten", "Integral Batten", "Redi-Roof Batten", "Redi-Roof Standing Seam", "Snap-Clad", "Integral Standing Seam", "Tite-Loc" and "Tite-Loc Plus".

1	Deck:	NC
	Incline:	No Limitations
	Barrier Board:	1/4 in. min G-P Gypsum DensDeck®
	Ply Sheet (optional):	Any UL Classified Type G1, G2 or G3 base/ply sheet, Type 15, 20 or 30 felt or UL Classified prepared roofing accessory or WR Grace "Ice and Water Shield"
	Surfacing:	Steel or aluminum roofing panels, mechanically fastened
2	Deck:	NC
	Incline:	No Limitations
	Barrier Board:	5/8 in min. plywood
	Ply Sheet (optional):	Any UL Classified Type G1, G2 or G3 base/ply sheet, Type 15, 20 or 30 felt or UL Classified
	, (1 /	prepared roofing accessory or WR Grace "Ice and Water Shield"
	Surfacing:	Steel roofing panels, mechanically fastened
		,,,
3	Deck:	NC
	Incline:	No Limitations
	Barrier Board:	7/16 OBS or 5/8 in. plywood over polyisocyanurate insulation board or polyisocyanurate
		composite board, any thickness
	Ply Sheet (optional):	Any UL Classified Type G1, G2 or G3 base/ply sheet, Type 15, 20 or 30 felt or UL Classified
	, , ,	prepared roofing accessory or WR Grace "Ice and Water Shield"
	Surfacing:	Steel or aluminum roofing panels, mechanically fastened
4	Deck:	NC
	Incline:	No Limitations
	Insulation:	Polyisocyanurate, glass fiber, perlite or wood fiber, any thickness
	Ply Sheet (optional):	Any UL Classified Type G1, G2 or G3 base/ply sheet, Type 15, 20 or 30 felt or UL Classified
	, , ,	prepared roofing accessory or WR Grace "Ice and Water Shield"
	Surfacing:	Steel or aluminum roofing panels, mechanically fastened
5	Deck:	NC
	Incline:	No Limitations
	Surfacing:	Steel roofing panels, mechanically attached to metal purlins
6	Deck:	C-15/32
	Incline:	No Limitations
	Barrier Board:	1/4 in. min G-P Gypsum DensDeck® with all joints staggered a min of 6 in. from the
		plywood joints
	Ply Sheet (optional):	Any UL Classified Type G1, G2 or G3 base/ply sheet, Type 15, 20 or 30 felt or UL Classified
	-	prepared roofing accessory or WR Grace "Ice and Water Shield"
	Surfacing:	Steel or aluminum roofing panels mechanically fastened
		·

### PETERSEN ALUMINUM CORPORATION

### Hip/Ridge Detail



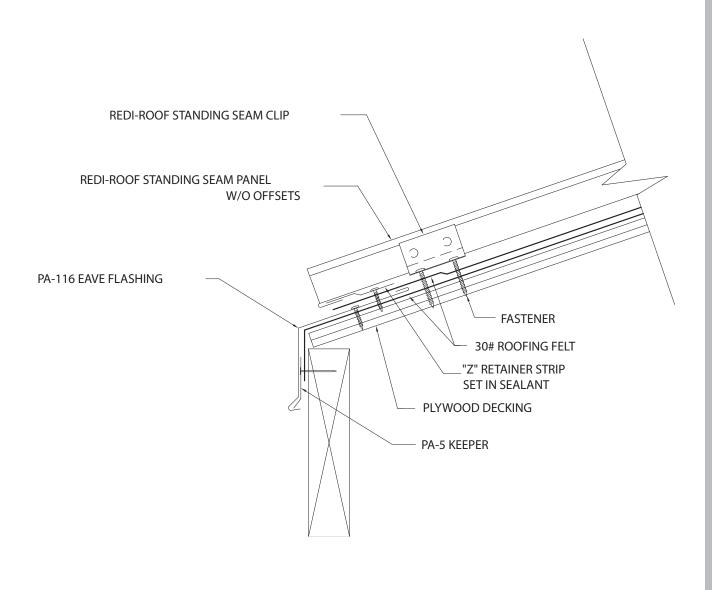
Job Name:	
Date:	
Contractor:	Notes:

### PETERSEN ALUMINUM CORPORATION

www.pac-clad.com / email: sales@petersenmail.com

F: 866-901-2935

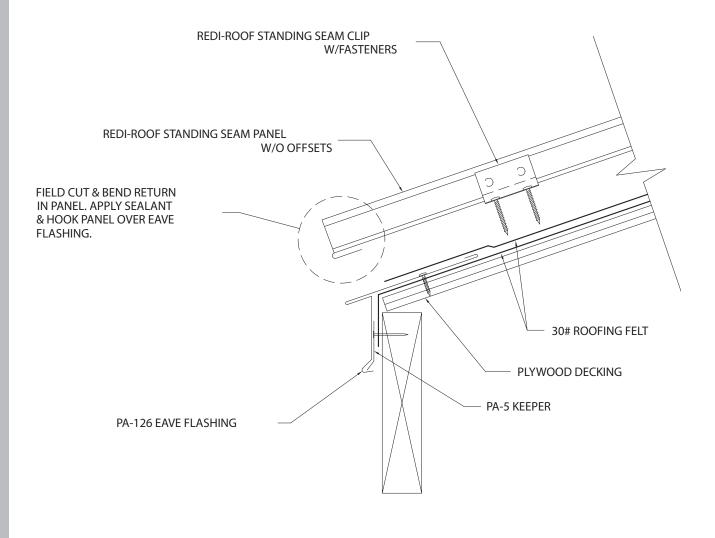
### **Eave Detail**



Job Name:	
Date:	
Contractor:	Notes:

### PETERSEN ALUMINUM CORPORATION

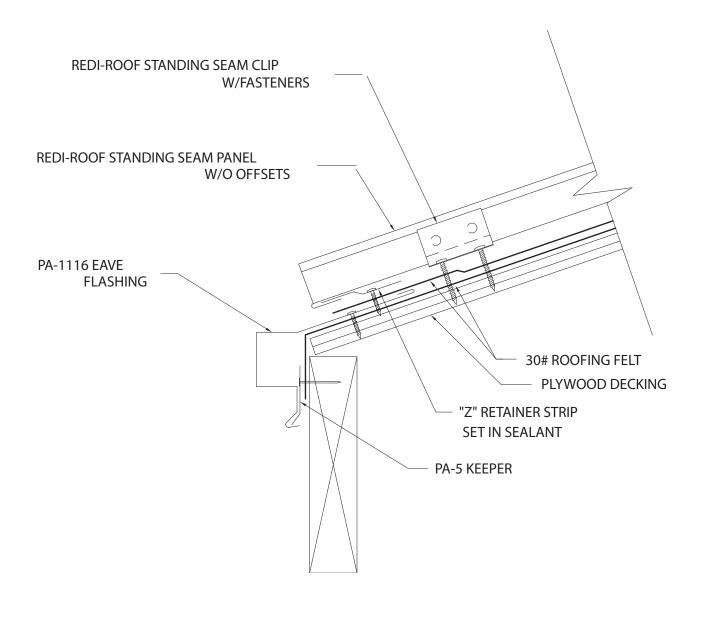
### Eave Detail



Job Name:	
Date:	
Contractor:	Notes:

### PETERSEN ALUMINUM CORPORATION

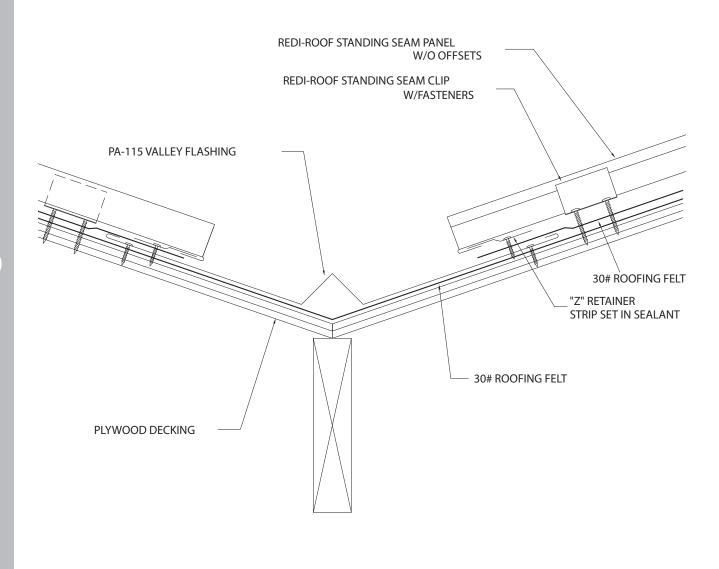
### **Eave Detail**



Job Name:	
_	
Date:	
Contractor:	Notes:

### PETERSEN ALUMINUM CORPORATION

### Valley Detail



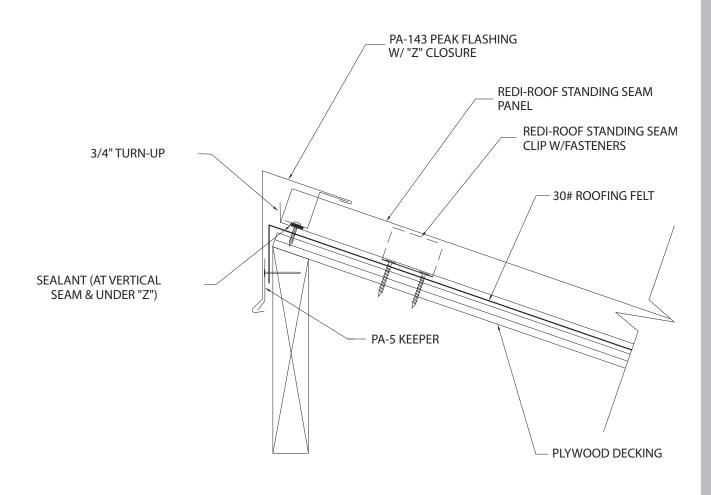
Job Name:	
Date:	
Contractor:	Notes:

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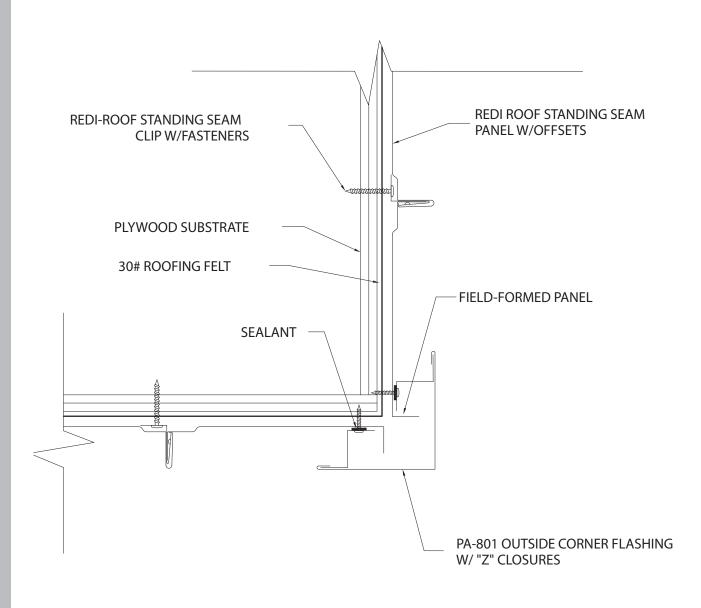
### Peak Detail



Job Name:	
Date:	
Contractor:	Notes:

### PETERSEN ALUMINUM CORPORATION

### Outside Corner Detail



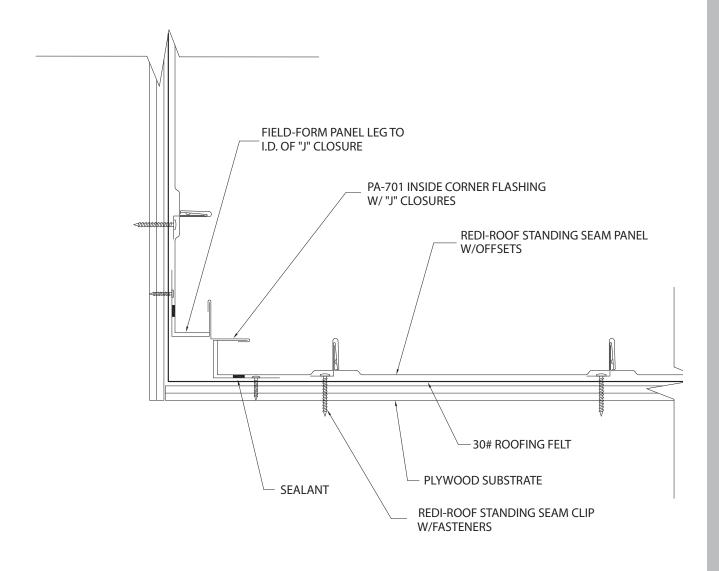
Job Name:	
Date:	
Contractor:	Notes:

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F: 866-901-2935

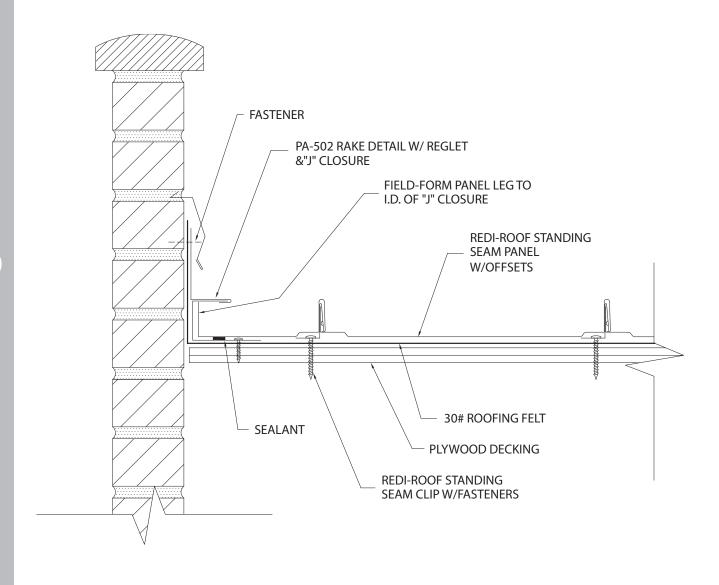
### Inside Corner Detail



Job Name:	
Date:	
Contractor:	Notes:

### PETERSEN ALUMINUM CORPORATION

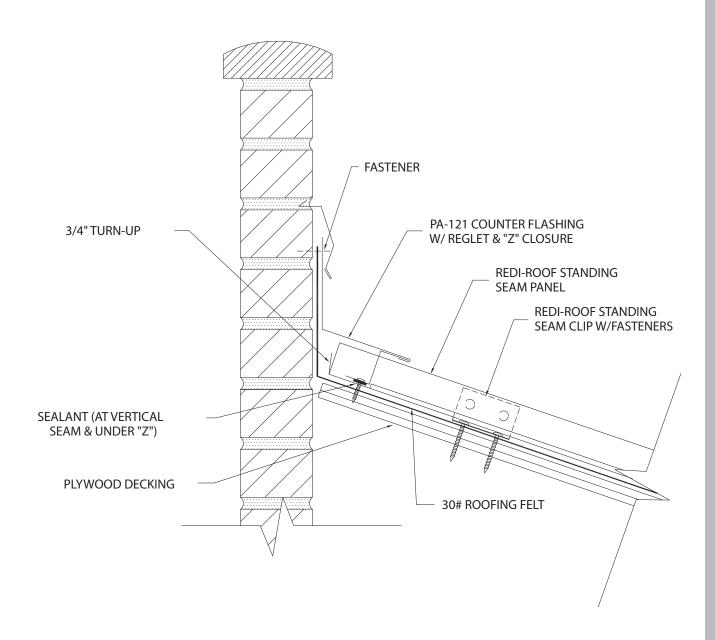
### Rake Detail



Job Name:	
Date:	
Contractor:	Notes:

### PETERSEN ALUMINUM CORPORATION

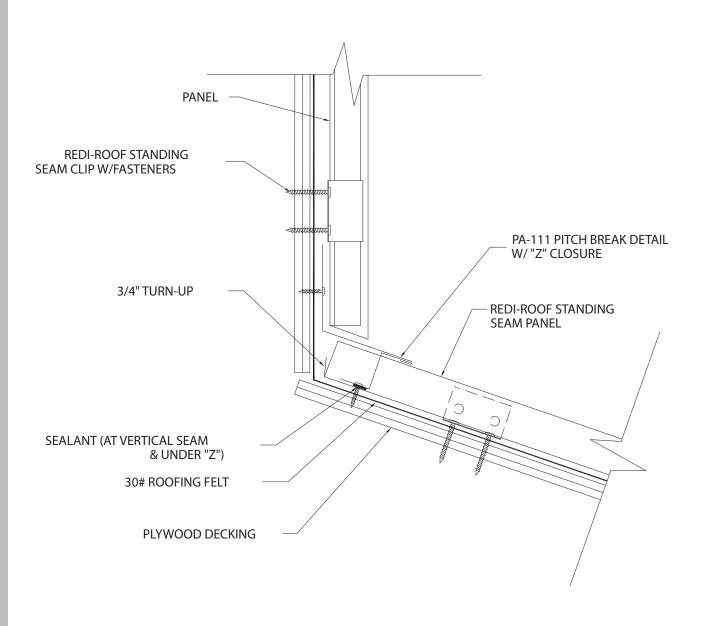
### Head Wall Detail



Job Name:	
Date:	
Contractor:	Notes:

### PETERSEN ALUMINUM CORPORATION

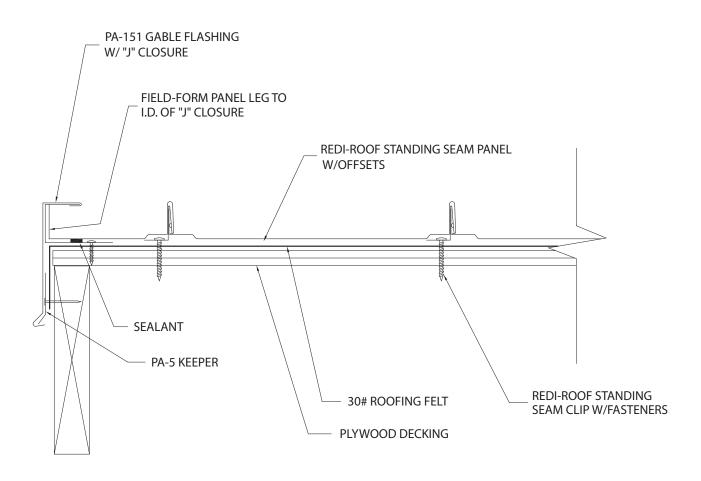
### Pitch Break Detail



Job Name:	
Date:	
Contractor:	Notes:

### PETERSEN ALUMINUM CORPORATION

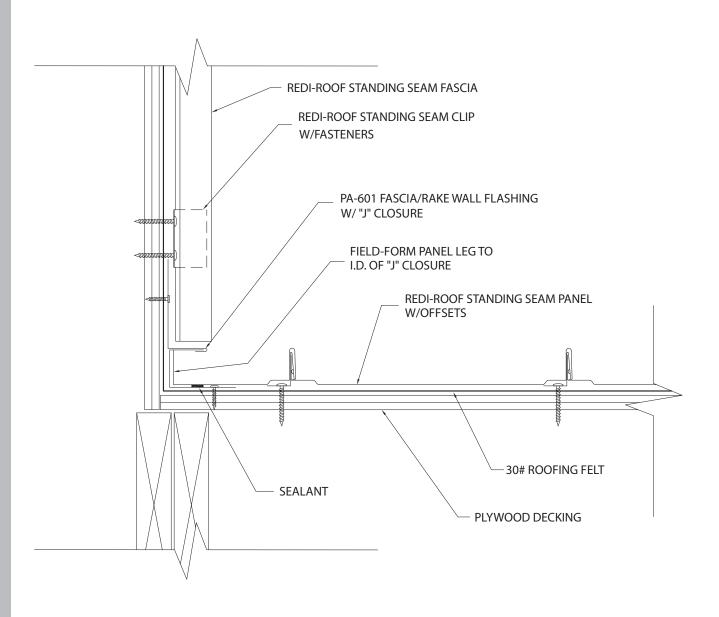
### Gable Detail



Job Name:	
Date:	
Contractor:	Notes:

### PETERSEN ALUMINUM CORPORATION

### Fascia/Rake Wall Detail



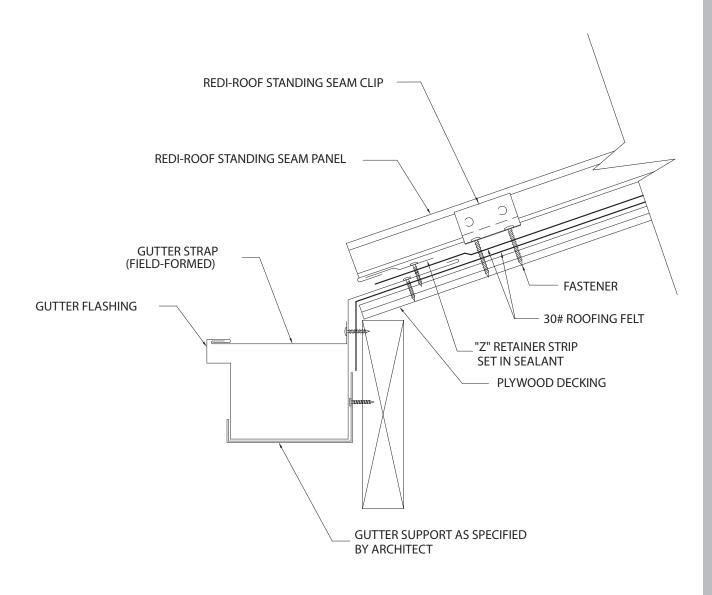
Job Name:	
Date:	
Contractor:	Notes:

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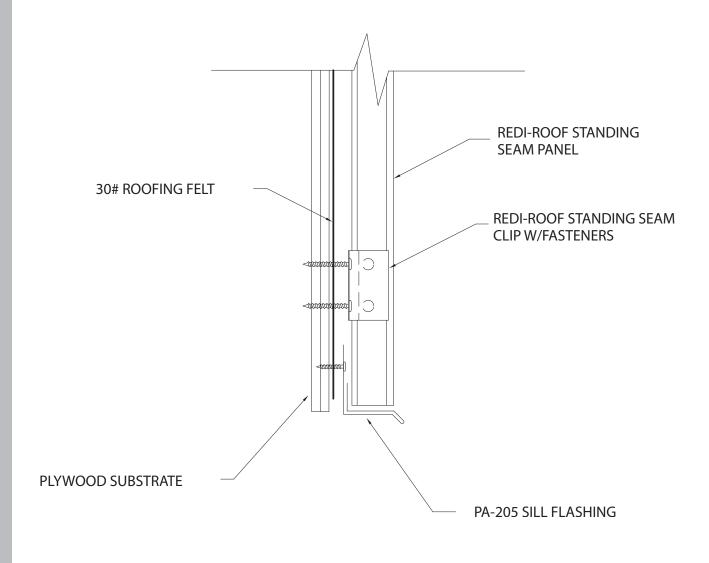
### **Gutter Detail**



Job Name:	
Date:	
Contractor:	Notes:

### PETERSEN ALUMINUM CORPORATION

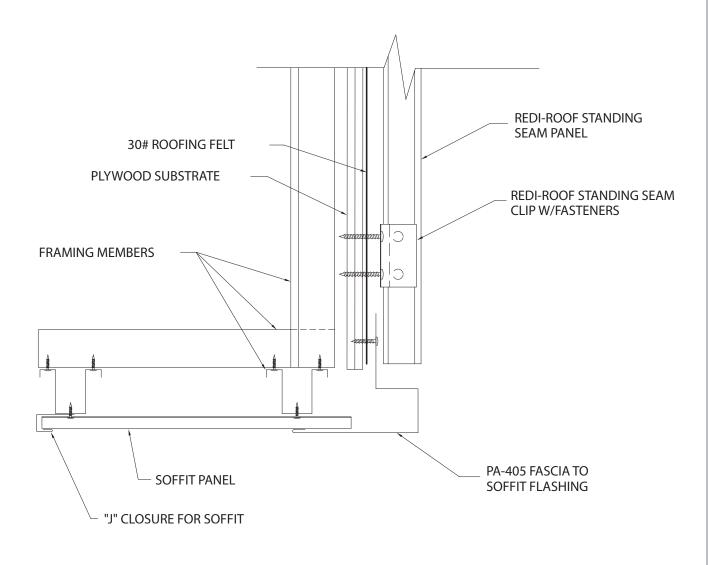
### Sill Detail



Job Name:	
Date:	
Contractor:	Notes:

### PETERSEN ALUMINUM CORPORATION

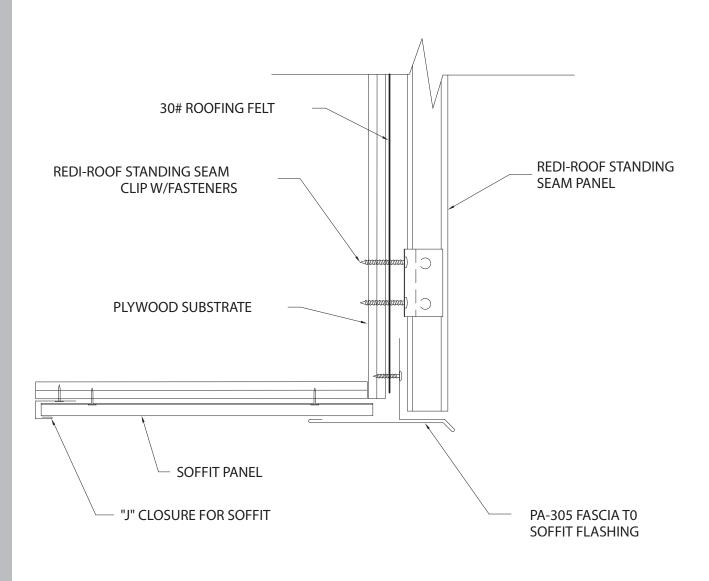
### Facia to Soffit Transition



Job Name:	
Date:	
Contractor:	Notes:

### PETERSEN ALUMINUM CORPORATION

### Fascia to Soffit Transition



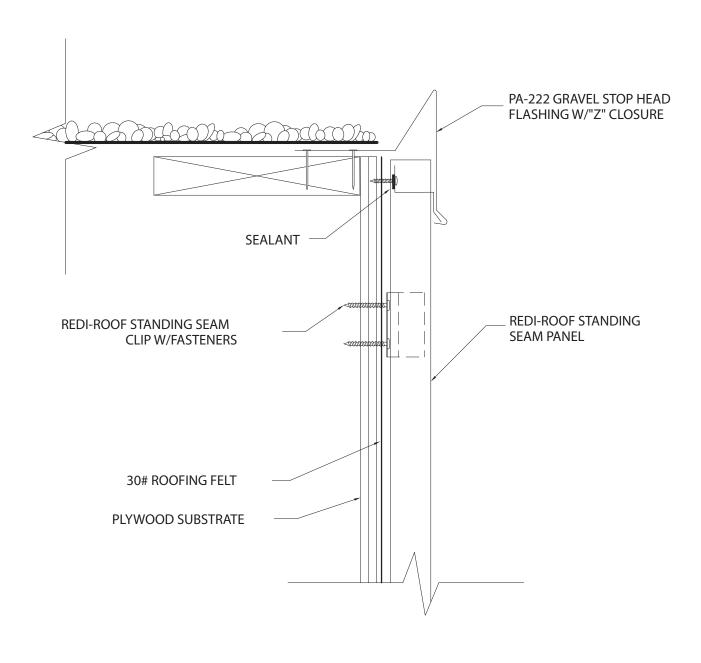
Job Name:	
Date:	
Contractor:	Notes:

### PETERSEN ALUMINUM CORPORATION

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F: 866-901-2935

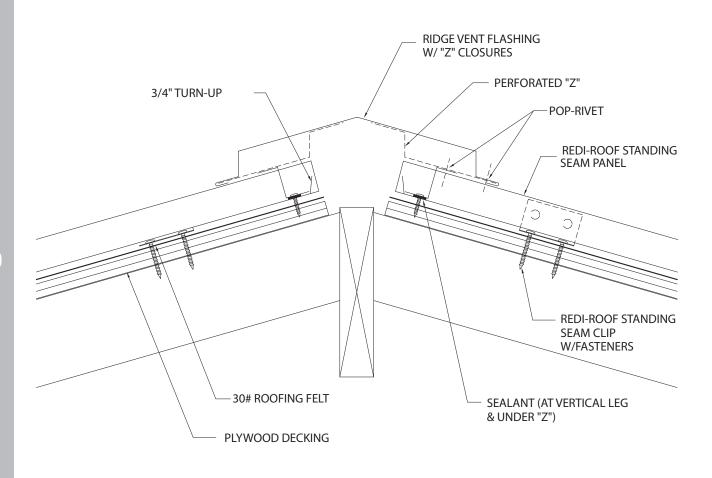
### Gravel Stop/Head Detail



Job Name:	
Date:	
Contractor:	Notes:

### PETERSEN ALUMINUM CORPORATION

### Vented Ridge Detail



Job Name:	
Date:	
Contractor:	Notes:

### PETERSEN ALUMINUM CORPORATION

### SPEC DATA®

### Sheet Metal Roofing 07610 Petersen Aluminum Corporation

#### 1 PRODUCT NAME

PAC-CLAD® - Prefinished Sheet Aluminum & Steel

### **2 MANUFACTURER**

Petersen Aluminum Corporation 1005 Tonne Road Elk Grove Village, IL 60007 P: 800-323-1960 847-228-7150 F: 800-722-7150 www.pac-clad.com

#### 3 PRODUCT DESCRIPTION

PAC-CLAD is a pre-finished specification grade aluminum sheet or a commercial quality extra-smooth galvanized steel sheet, primed and coated with Petersen's full strength fluoropolymer (PVDF) high-performance coating system of 1.0 mil (0.025 mm) total dry film thickness and, on the reverse side, a wash coat of 0.3 – 0.4 mil (0.008 – 0.01 mm) dry film thickness.

Basic Use: PAC-CLAD is for general sheet metal use in building applications. PAC-CLAD is frequently used in the following forms:

- Fascia and soffit panels
- Gravel stops and copings
- Store front components
- Roofing and mansard panels: flat, batten and standing seam types

Materials and Finishes: PAC-CLAD consists of either Aluminum Association specification ASTM B209 aluminum sheet, temper H14 or H34, or hot-dipped ASTM A 653 Grade A structural quality steel sheets, AISI G90 galvanized, commercial weight. PAC-CLAD sheets are coated with a 2-coat system using a combination of 70% Kynar 500° polyvinylidenefluoride (PVDF), acrylic resins, pigments and solvents. The system consists of Fluropon° top coat applied over a polyester primer. A wash coat is applied to the reverse side for additional protection.

Standard Sizes: Aluminum is available in .032" - .080" (0.8 - 2 mm) thickness in 48" (1219 mm) widths. Galvanized steel is available in 24 ga in 48" (1219 mm) widths.

Special Sizes: Aluminum is available in thickness to .125" (3.2 mm) and in widths to 60" (1524 mm) on special order. Minimum quantity is 20,000 lb (9080 kg). Galvanized steel is available in gauges from 26 – 18 and in widths up to 60" (1525 mm) on special order. Minimum quantity is 20,000 lb (9080 kg).

Colors: For standard colors, refer to Table 1. Custom match colors are available in minimum quantities of 10,000 lb (4540 kg).

Finish: Sheens available – Dull, matte and specular, gloss rating of 25 – 35% at 60° viewing angle. Textures available: Smooth; stucco embossed texture E-5.

Limitations: PAC-CLAD performance depends on the integrity of the coating film, and in galvanized steel, on the underlying coating of zinc. PAC-CLAD should not be used in areas of high abrasion or where it will be subject to mechanical damage.

### **4 TECHNICAL DATA**

Applicable Standards: Aluminum Association – Specifications for

Aluminum Structures American Iron and Steel Institute (AISI)

- AISI G90 Hot Dipped Galvanized Steel Sheet, Commercial Weight
- Specifications for Cold-Formed Steel Design Manual

American Society for Testing & Materials (ASTM)

- ASTM A525 Steel Sheet,
   Zinc-Coated by the Hot Dip Process
- ASTM A653/A653-97 Steel Sheet, Zinc-Coated (Galvanized) by the Hot Dip Process, Structural Physical Quality
- ASTM B117-95 Operating Salt Spray (Fog) Apparatus
- ASTM B209/B209M-97 Aluminum and Aluminum Alloy Sheet and Plate
- ASTM D523-89(1994)el –
   Spectral Gloss
- ASTM D659 Discontinued standard replaced by ASTM D4214
- ASTM D968-93 Abrasion
   Resistance of Organic Coatings by
   Falling Abrasive
- ASTM D1737-97 Discontinued standard, replaced by ASTM D522
- ASTM D1808 Discontinued standard
- ASTM 2247-94 Testing Water Resistance of Coatings in 100% Relative Humidity
- ASTM 2794-93 Resistance of Organic Coatings to the Effects of Rapid Deformation (Impact)
- ASTM 3281 Discontinued standard
- ASTM 3359-95a Measuring Adhesion by Tape Test
- ASTM D3363-82e1 Film Hardness by Pencil Test
- ASTM G23-96 Operating Light-Exposure Apparatus (Carbon Arc Type) With and Without Water

Factory Mutual (FM) – Loss Prevention Data Sheets 1-7 and 1-49

National Coil Coaters Association (NCAA)

- NCAA Procedure No. 11-5
- NCCA Procedure No. 11-18
- NCCA Technical Bulletin No. 11-6

Sheet Metal & Air Conditioning Contractors National Association, Inc. (SMACNA) - Architectural Sheet Metal Manual

### Physical Properties of Fluoropolymer Coating:

- Abrasion Resistance ASTM D968, coefficient of sand abrasion 65 ± 10
- Accelerated Weathering, Chalk -ASTM G23, Type EH, 5000 hours, rating of 8 or better
- Accelerated Weathering, Color -ASTM G23. Type EH, 5000 hours,
   ≤ 5 ΔE (Hunter Units) color change
- Adhesion ASTM D3359/NCCA
   Procedure No. 11-5 cross-cut tape test, pass
- Chalk Resistance ASTM D659, no chalk rating 9 – 10
- Color Change 20 years, ≤ 5 ∆E (Hunter Units) change, after removal of external deposits
- Chemical/Acid Pollution Resistance
   ASTM D1808; pass, no color change
- Formability ASTM D3281 and ASTM D1737, can be formed without film fracture using normal shop practices to a 1 to 2-T bend radius
- Gloss ASTM D523 Specular gloss of 30° + 5 (low gloss/sheen available) at 60; 26 ga PAC-CLAD GLOSS 10 + 5 AT 60°
- Hardness ASTM D3363 ≥ F pencil hardness
- Humidity Resistance ASTM D2247, 1000 hours, no change in hardness
- Impact Resistance ASTM D2794 and NCCA Technical Bulletin No. 11-6, 70 lb-inch (7.9 Nom.), no tape pick-off

- Life Expectancy ASTM G23. Type EM, weatherometer, 5000 hours, chalk rating of 8 or better
- Salt Spray Resistance, Aluminum ASTM B117, 2000 hours, creepage at scribe ≤ 1/32" (0.8 mm), no blisters
- Salt Spray Resistance, Steel ASTM B117, 1000 hours, creepage at scribe ≤ 1/8" (3.2 mm), few #8 blisters
- Solvent Resistance NCCA procedure 11-18, (no comparable ASTM test), pass

#### 5 INSTALLATION

Methods: Fabricate and install PAC-CLAD sheet metal in accordance with SMACNA sheet metal practices. PAC-CLAD can be cut, formed, nailed, screwed or riveted using conventional hand or power tools. PAC-CLAD coatings must be mechanically removed if soldering or welding are necessary. For best results, cutting edges should be kept sharp, clean, properly dressed and closely aligned.

A strippable vinyl film can be applied for protection during fabrication and installation is desired. Vinyl film may remain on the coating during fabrication and erection. Vinyl must be removed prior to or immediately after installation.

PAC-CLAD is a finished material; care must be taken during fabrication and erection to avoid damage to the surface. Proper bend radii must be used in fabrication.

### 6 AVAILABILITY & COST

Availability: PAC-CLAD panels are available nation-wide and are stocked in standard colors for rapid shipping within 72 hours. Special finishes require additional time for color matching and approvals.

There is a 20,000 lb (9080 kg) minimum for non-standard widths and

colors. Delivery time and price will be quoted upon inquiry.

Cost: Cost for PLAC-CLAD panels is generally 60% of copper roofing sheet, 25% to 50% less than hardcoat anodized finishes and approximately equal to shop or field painted galvanized steel. Contact the manufacturer for specific costs.

### 7 WARRANTY

A 20-yeaar, non-prorated warranty covering color, fade, chalking and film integrity is available at no additional cost. The warranty is issued on a per project basis upon request.

#### 8 MAINTENANCE

Maintenance is not required. The panel finish is a member of the Teflon® family and is self-cleaning. If cleaning is desired, panels can be washed with mild soap and water followed by a clean water rinse.

### 9 TECHNICAL SERVICES

Technical services are available from Petersen Aluminum Corporation and regional architectural representatives.

### 10 FILING SYSTEMS

- Architects' First Source for Products
- MANU-SPEC ®
- · Sweet's Catalog Files

### PAC-CLAD Color Availability

PAC-CLAD Standard	Reflectivity	Emissivity	3 Year	SRI*	Steel		Aluminum			
			Exposure		24ga.	22ga.	.032	.040	.050	.063
Almond	0.56	0.89	0.57	66	√	√	√	√	√	
Arcadia Green	0.33	0.84	0.33	33	√		$\sqrt{}$			
Bone White	0.73	0.89	0.71	89	√	√		√	√	√
Cardinal Red	0.37	0.89	0.38	41	1		<b>√</b>		<b>√</b>	
Charcoal	0.28	0.89		29	√		<b>√</b>		√	
Cityscape	0.37	0.85	0.34	39	√		$\sqrt{}$	√	√	
Colonial Red	0.32	0.89		34	√		<b>√</b>	√	√	
Dark Bronze	0.25	0.89		25	√	√	$\sqrt{}$	√	√	√
Evergreen	0.26	0.88		26	<b>√</b>		<b>√</b>			
Granite*	0.36	0.89	0.35	40	<b>V</b>	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>	
Hemlock Green	0.30	0.90		32	√	√	<b>√</b>		√	
Hunter Green	0.26	0.88		26	<b>√</b>		<b>√</b>			
Mansard Brown	0.25	0.88		25	<b>V</b>	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>	
Matte Black**	0.25	0.85		23	1		<b>√</b>	<b>√</b>	<b>√</b>	1
Medium Bronze	0.27	0.90		28	1	√	<b>√</b>	1	1	1
Military Blue	0.34	0.88		36	1		<b>√</b>			
Musket Gray	0.31	0.89		33	1	1	<b>√</b>		1	
Patina Green	0.34	0.89		37	1		<b>√</b>			
Sandstone	0.53	0.89	0.49	62	1	1	<b>√</b>	1	1	1
Sierra Tan	0.36	0.89	0.35	40	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>	
Slate Blue	0.26	0.87		26	<b>√</b>		<b>√</b>			
Slate Gray	0.36	0.89		40	1	1	<b>V</b>	1	√	
Stone White	0.64	0.88	0.59	77	1	1	<b>√</b>	<b>√</b>	<b>√</b>	<b>V</b>
Teal	0.26	0.88		26	1		√			
Terra Cotta	0.36	0.89	0.37	40	1		1		<b>√</b>	

### PAC-CLAD Metallic

Aged Copper	0.28	0.89		29	√	√		√	
Champagne	0.41	0.80	0.40	43	√	√		√	
Copper Penny	0.49	0.87	0.47	56	<b>√</b>	1	<b>√</b>	1	
Silver	0.60	0.83	0.55	70	√	√	√	√	
Weathered Zinc	0.30	0.81		28	√	√		√	
Zinc	0.32	0.89	0.31	34	<b>√</b>	<b>√</b>		1	

### PAC-CLAD Standard Colors (do not meet cool roof requirements)

	`		,						
Award Blue				√		√		√	
Berkshire Blue*				√					
Burgundy				√		√		√	
Forest Green				√	√	√	√	√	
Hartford Green				√		√	√	√	
Interstate Blue				J		<b>√</b>		1	

<sup>\*</sup>Low Gloss Colors

<sup>\*\*</sup> Matte Black (SRI Color) in steel only

# MANU-SPEC<sup>™</sup>

This MANU-SPEC® utilizes the Construction Specifications Institute (CSI) Project Resource Manual (PRM), including MasterFormat<sup>TM</sup>, SectionFormat<sup>TM</sup> and PageFormat<sup>TM</sup>. A MANU-SPEC is a manufacturer-specific proprietary product specification using the proprietary method of specifying applicable to project specifications and master guide specifications. Optional text is indicated by brackets []; delete optional text in final copy of specification. Specifier Notes precede specification text; delete notes in final copy of specification. Trade/brand names with appropriate symbols typically are used in Specifier Notes; symbols are not used in specification text. Metric conversion, where used, is soft metric conversion.

This MANU-SPEC specifies factory-formed metal wall, soffit and roof panels. These products are manufactured by Petersen Aluminum Corp. Revise MANU-SPEC section number and title below to suit project requirements, specification practices and section content. Refer to CSI MasterFormat for other section numbers and titles.

### SECTION 07410: Metal Boof & Wall Panels

#### **PART 1 GENERAL**

### 1.01 SUMMARY

- A. Section Includes: This Section specifies factory-formed metal wall, soffit and roof panels.
- B. Related Sections:

Specifier Note: Include in this Article only those sections that directly affect the work of this section. Do not include Division 00 or Division 01 sections since it is assumed that all technical sections are related to all project Division 00 and Division 01 sections to some degree.

1. Section [\_\_\_\_].

Specifier Note: Article below may be omitted when specifying manufacturer's proprietary products and recommended installation. Retain Reference Article when specifying products and installation by an industry reference standard. If retained, list standard(s) referenced in this section. Indicate issuing authority name, acronym, standard designation and title. Establish policy for indicating edition date of standard referenced. Conditions of the Contract or Section 01 42 19 - Reference Standards may establish the edition date of standards. This article does not require compliance with standard, but is merely a listing of references used. Article below should list only those industry standards referenced in this section. Retain only those reference standards to be used within the text of this Section. Add and delete as required for specific project.

#### 1.02 REFERENCES

- A. ASTM International:
  - ASTM A653/A653 Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
  - 2. ASTM A792/A792M Standard Specification for Steel Sheet, 55% Aluminum-Zinc Alloy-Coated by the Hot Dip Process.
  - 3. ASTM B209 Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate.
  - 4. ASTM E283 Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen.

- 5. ASTM E331 Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference.
- 6. ASTM E1592 Standard Test Method for Structural Performance of Sheet Metal Roof and Siding Systems by Uniform Static Air Pressure Difference.
- 7. ASTM E1646 Standard Test Method for Water Penetration of Exterior Metal Roof Panel Systems by Uniform Static Air Pressure Difference.
- 8. ASTM E1680 Standard Test Method for Rate of Air Leakage Through Exterior Metal Roof Panel Systems.
- B. FM Global (Factory Mutual):
  - 1. FM Class I-90.
- C. Sheet Metal and Air Conditioning Contractor's National Association (SMACNA):
  - 1. SMACNA Architectural Sheet Metal Manual.
- D. Underwriters Laboratories, Inc. (UL):
  - 1. UL 263 Fire Tests of Building Construction and Materials.
  - 2. UL 580 Tests for Uplift Resistance of Roof Assemblies.
  - 3. UL 790 Standard Test Methods for Fire Tests of Roof Coverings.
  - 4. UL 2218 Impact Resistance of Prepared Roof Covering Materials.

### 1.03 SYSTEM DESCRIPTION

- A. Materials:
  - 1. G90 hot-dipped galvanized Grade A structural quality steel in compliance with ASTM A653.
  - 2. Alloy 3105 [H14] [H34] aluminum panels in compliance with ASTM B209.
  - 3. Cold-rolled copper.
- B. Performance Requirements:
  - 1. Wind uplift in compliance with UL Classification 580 for UL Classified 90 rated assemblies.
  - 2. Static air infiltration of 0.06 cfm/sf (0.028 liters/second) with 6.24 psi (43 kPa) air pressure differential as tested in accordance with ASTM E283.
  - 3. No water infiltration at inward static air pressure differential of not less than 6.24 psi (43 kPa) and not more than 12 psi (83 kPa) as tested in accordance with ASTM E331.

Specifier Note: Article below includes the submittal of relevant data to be furnished by Contractor before, during or after construction. Coordinate this article with Architect's and Contractor's duties and responsibilities in Conditions of the Contract and Section 01 33 00 - Submittal Procedures.

### 1.04 ACTION SUBMITTALS

A.	General: Submit listed action submittals in accordance with Conditions of the Contract and Section [01 33 00 - Submittal Procedures] [].
B.	<ul><li>Shop Drawings: Indicate information on shop drawings as follows:</li><li>1. Layout, profiles and product components including dimensions, anchorage, erection details, flashing details elevations, plans and sections required to indicate conditions.</li></ul>
C.	Samples: Submit as follows:  1. [Duplicate] [], [12 inch × 12 inch (305 × 305 mm)] [] samples of each [Roofing] [Soffit]  [Wall panel] [] [And] [Flashing] product to show selected [Colors] [Finishes] [Textures] used on project.
D.	Product Data: Submit product data, including manufacturer's SPEC-DATA® product sheet, for specified products.  1. Material Safety Data Sheets (MSDS).

### 1.05 INFORMATION SUBMITTALS

- A. Quality Assurance:
  - Test Reports: Certified test reports showing compliance with specified performance characteristics and physical properties.
  - 2. Certificates: Product certificates signed by manufacturer certifying materials comply with specified performance characteristics and criteria and physical requirements.
  - 3. Manufacturer's Instructions: Manufacturer's installation instructions.

Specifier Note: Coordinate paragraph below with Part 3 Field Quality Requirements Article. Retain or delete as applicable.

B. Manufacturer's Field Reports: Manufacturer's field reports specified.

### 1.06 CLOSEOUT SUBMITTALS

- A. Warranty: Submit warranty documents specified.
- B. Operation and Maintenance Data: Submit operation and maintenance data for installed products in accordance with Section [01 78 00 Closeout Submittals] [\_\_\_\_\_].
  - 1. Include:
    - a. Manufacturer's instructions covering maintenance requirements.

#### 1.07 QUALITY ASSURANCE

- A. Qualifications:
  - 1. Installer experienced in performing work of this section who has specialized in installation of work similar to that required for this project.
  - Manufacturer Qualifications: Manufacturer capable of providing field service representation during construction and approving erection method.

Specifier Note: Paragraph below should list obligations for compliance with specific code requirements particular to this section. General statements to comply with a particular code are typically addressed in Conditions of the Contract and Section 01 41 00 - Regulatory Requirements. Repetitive statements should be avoided. Current data on building code requirements and product compliance may be obtained from manufacturer technical support specialists.

- B. Regulatory Requirements:
  - 1. FM Class I-90.
  - 2. SMACNA Architectural Sheet Metal Manual.
  - 3. UL 263.
  - 4. UL 580.
  - 5. UL 790.
  - 6. UL 2218.
- C. Preinstallation Meetings: Conduct preinstallation meeting to verify project requirements, manufacturer's installation instructions and manufacturer's warranty requirements. Comply with [Section 01 31 19 Project Meetings] [\_\_\_\_\_].

### 1.08 DELIVERY, STORAGE & HANDLING

- A. General: Comply with [01 61 00 Common Product Requirements] [ ].
- B. Ordering: Comply with manufacturer's ordering instructions and lead time requirements to avoid construction delays.
- C. Delivery:
  - 1. Deliver materials in manufacturer's original packaging with identification labels intact.

- D. Storage and Protection:
  - 1. Store materials protected from exposure to harmful weather conditions and at temperature conditions recommended by manufacturer.
  - 2. Stack prefinished material to prevent twisting, bending, abrasion, scratching and denting.
  - 3. Elevate one end of each skid to allow for moisture runoff.
  - 4. Prevent contact with material that may cause corrosion, discoloration or staining.
  - 5. Provide factory installed strippable vinyl film protective coating to panels.
- E. Waste Management and Disposal:

Specifier Note: Environment: The disposal of packaging waste into landfill site demonstrates an inefficient use of natural resources and consumes valuable landfill space. Specifying appropriate packaging and construction waste management and disposal procedures may contribute to points required for LEED® construction project certification.

1. Separate waste materials for [Reuse] [And] [Recycling] [\_\_\_\_] in accordance with [Section 01 74 19 - Construction Waste Management and Disposal] [\_\_\_\_].

Specifier Note: Manufacturer may take back packaging and delivery materials for recycling.

 Remove from site and dispose of packaging materials at appropriate recycling facilities. Collect and separate for disposal [Paper] [Plastic] [Polystyrene] [Corrugated cardboard] [\_\_\_\_\_] packaging material [In appropriate on site bins] [\_\_\_\_\_] for recycling.

Specifier Note: Coordinate article below with Conditions of the Contract and with [01 78 36 - Warranties] [\_\_\_\_\_].

### 1.09 PROJECT AMBIENT CONDITIONS

A. Installation Location: Assemble and erect components only when temperatures are above 40 degrees F (4 degrees C).

### 1.010 SEQUENCING

A. Sequence With Other Work: Comply with manufacturer's written recommendations for sequencing construction operations.

### 1.011 WARRANTY

- A. Project Warranty: Refer to Conditions of the Contract for project warranty provisions.
- B. Manufacturer's Warranty: Submit, for Owner's acceptance, manufacturer's standard warranty document executed by authorized company official. Manufacturer's warranty is in addition to, and not a limitation of, other rights Owner may have under Contract Documents.

Specifier Note: Coordinate article below with manufacturer's warranty requirements.

C. Warranty: Commencing on date of acceptance by [Owner] [Architect] [Consultant] [\_\_\_\_\_].

### 1.012 MAINTENANCE

A. Comply with manufacturer's written instructions to maintain installed product.

### 1.013 EXTRA MATERIALS

A. Provide maintenance materials in accordance with Section [01 78 00 - Closeout Submittals] [\_\_\_\_\_].

#### **PART 2 PRODUCTS**

#### 2.01 MANUFACTURERS

A. Ensure manufacture has minimum [5] [\_\_\_\_\_] years experience in manufacturing components similar to or exceeding requirements of project.

Specifier Note: Retain article below for proprietary method specification. Add product attributes, performance characteristics, material standards and descriptions as applicable. Use of such phrases as "or equal" or "or approved equal" or similar phrases may cause ambiguity in specifications. Such phrases require verification (procedural, legal and regulatory) and assignment of responsibility for determining "or equal" products.

### 2.02 SHEET METAL ROOFS, SOFFITS, WALL PANELS, TILES

- A. Manufacturer: Petersen Aluminum Corp.
  - Contact: 1005 Tonne Rd., Elk Grove Village, IL 60007; Telephone: (800) 323-7960, (847) 228-7150;
     Fax: (800) 722-7150; website: www.pac-clad.com.
- B. Proprietary Products/Systems:

Specifier Note: If more than one metal panel product is required for the project, copy and edit the following articles as required and identify metal panels and other variables in a schedule at the end of Part 3 of this section.

- 1. Roof Panels [RP-1] [\_\_\_\_]:
  - a. Panel Description: [TITE-LOC] [TITE-LOC HS] [TITE-LOC PLUS].
    - 1) Width: [12 inches (305 mm)] [16 inches (406 mm)] 18 inches (457 mm)].
    - 2) Height: 2 inches (51 mm).
  - b. Panel Description: SNAP-CLAD Standing Seam.
    - 1) Width: [10 inches (254 mm)] [12 inches (305 mm)] [16 inches (406 mm)] [18 inches (457 mm)].
    - 2) Height: 1 3/4 inches (45 mm).
  - c. Panel Description: SNAP-ON Standing Seam.
    - 1) Width: [12 inches (305 mm)] [16 inches (406 mm)] [18 inches (457 mm)] [20 inches (508 mm)].
    - 2) Height: 1 inch (25.4 mm).
  - d. Panel Description: High SNAP-ON Standing Seam.
    - 1) Width: [11 inches (279 mm)] [18 inches (457 mm)] [19 inches (483 mm)].
    - 2) Height: 1 1/2 inches (38.1 mm).
  - e. Panel Description: SNAP-ON Batten.
    - 1) Width: [11 inches (279 mm)] [12 inches (305 mm)] [18 inches (457 mm)].
    - 2) Height: 1 1/2 inches (38.1 mm).
  - f. Panel Description: Redi-Roof Standing Seam.
    - 1) Width: [12 inches (305 mm)] [16 inches (406 mm)] [18 inches (457 mm)] [20 inches (508 mm)].
    - 2) Height: 1 9/16 inches (40 mm).
  - g. Panel Description: Redi-Roof Batten.
    - 1) Width: 12 inches (305 mm).
    - 2) Height: 1 1/4 inches (32 mm).
  - h. Material: [22 gauge (0.85 mm) hot-dipped galvanized steel] [24 gauge (0.70 mm)] hot-dipped galvanized steel] [0.032 inch (0.81 mm) aluminum alloy 3105-H14] [0.040 inch (1.02 mm) aluminum alloy 3105-H14] [16 oz (0.45 kg) cold rolled copper].
  - i. Type: [Standing seam] [High snap-on standing seam] [Batten] [With offsets].
  - j. Radius: [Concave] [Convex] available in TITE-LOC, SNAP-ON Standing Seam and Redi-Roof Batten
  - k. Sealant: Factory applied and available on TITE-LOC, TITE-LOC PLUS and SNAP-CLAD Standing Seam.
  - I. Striations (optional).

m. Stiffening Beads: [None] [1] [2] [3] manufacturer applied. n. Texture: [Smooth] [Stucco embossed]. o. Topside Panel Finish: [From manufacturer's standard colors] [\_\_\_\_\_]. p. Panel Underside Finish: Polyester wash coat with dry film thickness of 0.3 mil. a. Eave notched. 2. Wall Panels [WP-1] [\_\_\_\_]: a. Panel Description: Flush Panel. 1) Width: [7 inches (178 mm)] [11 inches (279 mm)] [18 inches (457 mm)]. 2) Height: 1 inch (25.4 mm). b. Panel Description: Reveal Panel. 1) Width: [7 inches (178 mm)] [11 inches (279 mm)] [18 inches (457 mm)]. 2) Height: 1 inch (25.4 mm). c. Panel Description: M-Panel. 1) Width: [36 inches (914 mm)] [42 inches (1067 mm)]. 2) Height: 3/4 inch (19.1 mm). d. Panel Description: R-Panel. 1) Width: [36 inches (914 mm)] [41 inches (1041 mm)]. 2) Height: 1 1/4 inch (32 mm). e. Panel Description: 7/8 inch (22.2 mm) Panel. 1) Width: Variable. 2) Height: 1 1/2 inches (38.1 mm). f. Panel Description: 1/2 inch (12.7 mm) Panel. 1) Width: 40 inches (1016 mm). 2) Height: 1/2 inch (12.7 mm). g. Panel Description: 7.2 Rib Panel. 1) Width: 36 inches (914 mm). 2) Height: 1 1/2 inches (38.1 mm). h. Material: [22 gauge (0.85 mm) hot-dipped galvanized steel] [24 gauge (0.70 mm) hot-dipped galvanized steel] [0.032 inch (0.81 mm) aluminum alloy 3105-H14] [0.040 inch (1.02 mm) aluminum alloy 3105-H14]. i. Stiffening Beads: Number [None] [1] [2] [3] manufacturer applied. j. Texture: [Smooth] [Stucco embossed]. k. Venting: [Non-vented] [1 row] [2 rows] available on Flush Panels. I. Topside Panel Finish: [From manufacturer's standard colors] [ m. Panel Underside Finish: Polyester wash coat with dry film thickness of 0.3 mil. 3. Soffit Panels [SP-1] [ ]: a. Panel Description: Flush Panel. 1) Width: [7 inches (178 mm)] [11 inches (279 mm)]. 2) Height: 1 inch (25.4 mm). 3) Material: [22 gauge (0.85 mm) hot-dipped galvanized steel] [24 gauge (0.70 mm)] hot-dipped galvanized steel] [0.032 inch (0.81 mm) aluminum alloy 3105-H14] [0.040 inch (1.02 mm) aluminum

alloy 3105-H14].

alloy 3105-H14].

b. Panel Description: Reveal Panel.

2) Height: 1 inch (25.4 mm).

c. Panel Description: PAC-750 Soffit Panel.1) Width: 12 inches (305 mm).

1) Width: [7 inches (178 mm)] [11 inches (279 mm)].

3) Material: [22 gauge (0.85 mm) hot-dipped galvanized steel] [24 gauge (0.70 mm)] hot-dipped

galvanized steel] [0.032 inch (0.81 mm) aluminum alloy 3105-H14] [0.040 inch (1.02 mm) aluminum

- 2) Height: 1/2 inch (12.7 mm).
- 3) Material: 0.032 inch (0.81 mm) aluminum alloy 3105-H14.
- d. Panel Description: PAC-850 Soffit Panel.
  - 1) Width: 12 inches (305 mm).
  - 2) Height: 1/2 inch (12.7 mm).
  - 3) Material: 0.032 inch (0.81 mm) aluminum alloy 3105-H14.
- e. Stiffening Beads: Number [None] [1] [2] [3] manufacturer applied.
- f. Texture: [Smooth] [Stucco embossed].

Specifier Note: Retain article below to specify venting options for PAC-750 Soffit or PAC-850 Soffit panels.

g. Venting: [Full Vent] [Half Vent].

Specifier Note: Retain article below to specify venting options for Flush panels.

- h. Venting: [Non-vented] [1 row] [2 rows].
- i. Topside Panel Finish: [From manufacturer's standard colors] [\_\_\_\_\_].
- j. Panel Underside Finish: Polyester wash coat with dry film thickness of 0.3 mil.
- 4. Tiles [TP-1] [\_\_\_\_]:
  - a. Material: [Copper coated] [Zinc-titanium].
  - b. Tile Dimension: 39 3/8 inches  $\times$  13 3/8 inches (1000  $\times$  340 mm).
  - c. Acceptable Material: Petersen Aluminum Corp. Pac-Clad Tegola [Prestige Elite] [Prestige Compact]
     [Prestige Traditional] [ZT Compact] [ZT Prestige Pre-Patina Elite] [ZT Prestige Pre-Patina Compact]
     Tiles.
- 5. Flashing and Trim:
  - Material: [0.033 inch (0.85 mm) hot-dipped galvanized steel] [0.027 inch (0.70 mm)] hot-dipped galvanized steel] [[0.032 inch (0.81 mm)] [0.040 inch (1.02 mm)] [0.051 inch (1.29 mm)] [0.064 inch (1.63 mm)] [0.080 inch (2.05 mm)] alloy 3105-H14 aluminum] [16 oz (0.45 kg) cold rolled copper].
  - b. Profiles: [To manufacturer's standard flashing and trim profiles] [As detailed] [\_\_\_\_\_].
  - c. [Color and finish to match [Roof] [Wall] [Soffit] [Tile] panels] [\_\_\_\_\_].

### 2.03 SOURCE QUALITY CONTROL

A. Ensure cladding/roofing components and materials are from single manufacturer.

Specifier Note: Edit Paragraph below to suit project requirements. If substitutions are permitted, edit text below. Add text to refer to Section 01 25 13 - Product Substitution Procedures.

### 2.04 PRODUCT SUBSTITUTIONS

A. Substitutions: [In accordance with Section 01 25 13 - Product Substitution Procedures] [\_\_\_\_\_] [No substitutions permitted].

### **PART 3 EXECUTION**

### 3.01 MANUFACTURER'S INSTRUCTIONS

Specifier Note: Article below is an addition to the CSI SectionFormat and a supplement to MANU-SPEC. Revise article below to suit project requirements and specifier's practice.

 Compliance: Comply with manufacturer's written data, including product technical bulletins, product catalog installation A. instructions, product carton installation instructions and Petersen Aluminum Corp. PAC-CLAD SPEC-DATA sheets.

#### 3.02 EXAMINATION

- A. Site Verification of Conditions:
  - Verify that substrate conditions, which have been previously installed under other sections or contracts, are acceptable for product installation in accordance with manufacturer's instructions prior to installation of [Roof] [Wall] [Soffit] [Tile] panels.

### 3.03 PREPARATION

- A. Ensure surfaces are clean and free of dirt and other foreign matter harmful to performance of [Roof] [Wall] [Soffit] [Tile] materials.
- B. Remove manufacturer's protective film from panel surfaces.
- C. Coordinate panel installation with work of other trades to provide a noncorrosive and leakproof installation.
- D. Prevent galvanic action of dissimilar metals in proximity to one another.

### 3.04 INSTALLATION

Specifier Note: Coordinate installation with the manufacturer's written installation details and instructions.

- A. Seams: Provide uniform, neat seams.
- B. Fasteners: Conceal fasteners where possible in exposed work. Cover and seal fasteners and anchors for watertight and leakproof installation.
- C. Sealant-Type Joints: Provide sealant-type joint where indicated. Form joints to conceal sealant.

### 3.05 FIELD QUALITY CONTROL

Specifier Note: Use the following Articles only when manufacturer's field services are desired to verify the quality of the installed components. Establish the number and duration of periodic site visits required by manufacturer and specify below. Consult manufacturer for services required. Delete if field services are not required.

- A. Have manufacturer of products supplied under this Section review work involved in handling, installation/application, protection and cleaning of its product(s), and submit written reports in acceptable format to verify compliance of work with Contract.
- B. Manufacturer's Field Services: Provide manufacturer's field services consisting of product use recommendations and periodic site visits for inspection of product installation in accordance with manufacturer's instructions.
- C. Schedule Site Visits to Review Work at Stages Listed:
  - After delivery and storage of products, and when preparatory Work on which Work of this Section depends is complete, but before installation begins.
  - 2. [Twice] [\_\_\_\_] during progress of Work at [25%] [\_\_\_\_] and [60%] [\_\_\_\_] complete.
  - 3. Upon completion of Work, after cleaning is carried out.
- D. Obtain reports within [3] [\_\_\_\_\_] days of review and submit.

### 3.06 TESTING AND VERIFICATION

- A. Perform tests recommended and required by manufacturer to verify required performance of panel system, under supervision and monitoring process of accredited and designated design engineer.
- B. Perform and meet tests required by [Owner] [Architect] [Consultant] [Authorities having jurisdiction] [\_\_\_\_\_].

### 3.07 FINAL CLEANING

- A. Do cleanup in accordance with Section [01 74 00 Cleaning and Waste Management] [\_\_\_\_\_].
- B. Upon completion, remove surplus and excess materials, rubbish, tools and equipment.

### 3.08 PROTECTION

Specifier Note: Coordinate the following Article with Section 01 76 00 - Protecting Installed Construction.

A. Protect installed product from damage during construction in accordance with Section [01 76 00 - Protecting Installed Construction] [\_\_\_\_\_].

### 3.09 SCHEDULE

Specifier Note: Include a schedule of panel types and locations to suit project requirements.

- A. Roof Panel Type RP-1: [Location].
- B. Roof Panel Type RP-2: [Location].
- C. Wall Panel Type WP-1: [Location].
- D. Soffit Panel Type SP-1: [Location].
- E. Tile Type TP-1: [Location].

**END OF SECTION** 

