



**NEMO|etc.**

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Oxford, CT 06478  
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ENGINEER

EVALUATE

TEST

CONSULT

**EVALUATION REPORT BY FLORIDA P.E.**

**ICP Construction, Inc.**  
12505 NW 44<sup>th</sup> Street  
Coral Springs, FL 33065  
**(888) 774-1419**

**Evaluation Report 02768.02.06-R10**  
**FL6276-R10**  
**Date of Issuance: 03/21/2006**  
**Revision 10: 10/06/2022**

**SCOPE:**

This Evaluation Report is issued under **Rule 61G20-3** and the applicable rules and regulations governing the use of construction materials in the State of Florida. The documentation submitted has been reviewed by Robert Nieminen, P.E. for use of the product under the Florida Building Code. The products described herein have been evaluated for compliance with the [7<sup>th</sup> Edition \(2020\) Florida Building Code sections noted herein](#).

**DESCRIPTION: APOC® POLYSET® RTA-1**

**LABELING:** Labeling shall be in accordance with the requirements of the Accredited Quality Assurance Agency noted herein.

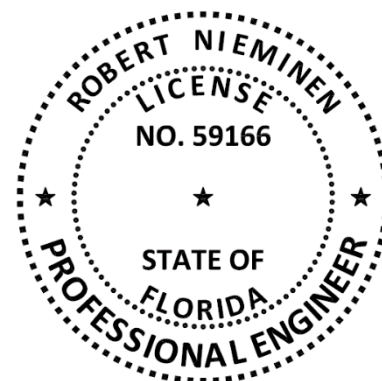
**CONTINUED COMPLIANCE:** This Evaluation Report is valid until such time as the named product(s) changes, the referenced Quality Assurance or production facility location(s) changes, or Code provisions that relate to the product(s) change. Acceptance of our Evaluation Reports by the named client constitutes agreement to notify NEMO ETC, LLC of any changes to the product(s), the Quality Assurance or the production facility location(s). NEMO ETC, LLC requires a complete review of its Evaluation Report relative to updated Code requirements with each Code Cycle.

**ADVERTISEMENT:** The Florida Product Approval Number (FL#) preceded by the words "Nemo P.E. Evaluated" may be displayed in advertising literature. If any portion of the Evaluation Report is displayed, then it shall be done in its entirety.

**INSPECTION:** Upon request, a copy of this entire Evaluation Report shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This Evaluation Report consists of pages 1 through 9.

**Prepared by:**



**CERTIFICATION OF INDEPENDENCE:**

1. NEMO ETC, LLC does not have, nor does it intend to acquire or will it acquire, a financial interest in any company manufacturing or distributing products it evaluates.
2. NEMO ETC, LLC is not owned, operated or controlled by any company manufacturing or distributing products it evaluates.
3. Robert Nieminen, P.E. does not have nor will acquire, a financial interest in any company manufacturing or distributing products for which the evaluation reports are being issued.
4. Robert Nieminen, P.E. does not have, nor will acquire, a financial interest in any other entity involved in the approval process of the product.
5. This is a building code evaluation. Neither NEMO ETC, LLC nor Robert Nieminen, P.E. are, in any way, the Designer of Record for any project on which this Evaluation Report, or previous versions thereof, is/was used for permitting or design guidance unless retained specifically for that purpose.



**ROOFING COMPONENT EVALUATION:**
**1. SCOPE:**

**Product Category:** Roofing

**Sub-Category:** Roof Tile Adhesive

**Product Approval Method:** Method 1, Option D – Codified Material, Evaluation by Engineer

**Compliance Statement:** APOC® POLYSET® RTA-1, as produced by ICP Construction, Inc., has demonstrated compliance with the following sections of the **7<sup>th</sup> Edition (2020) Florida Building Code** through testing in accordance with the Standards set forth herein. Compliance is subject to the Installation Requirements and Limitations / Conditions of Use set forth herein.

**2. STANDARDS:**

SECTIONS	PROPERTY	STANDARD	YEAR
1504.2.1.1	Overturning resistance	SSTD 11	1997

**3. REFERENCES:**

ENTITY	EXAMINATION	REFERENCE	DATE
ERD (TST6049)	Static Uplift – SSTD 11	E42730.08.13	08/23/2013
ERD (TST6049)	Static Uplift – SSTD 11	ECM-SC6795.12.14-2	02/27/2015
Miami-Dade (CER 1592)	HVHZ compliance	18-0131.02	07/12/2018
NEMO (TST6049)	Static Uplift – SSTD 11	4L-ICP-18-001.05.18-1	05/15/2018
NEMO (TST6049)	Tensile Adhesion (underlayments)	4S-ICP-18-001.07.18-R1	08/01/2018
NEMO (TST6049)	Static Uplift – SSTD 11	4S-ICP-18-001.10.18-1	10/04/2018
NEMO (TST6049)	Static Uplift – SSTD 11	4S-ICP-18-001.10.18-3	10/04/2018
NEMO (TST6049)	Tensile Adhesion (ridge metal)	4i-ECM-20-SSCRT-01	09/29/2020
PRI (TST5878)	Static Uplift – SSTD 11	PFI-006-02-01	05/09/2005
PRI (TST5878)	Static Uplift – SSTD 11	PFI-008-02-03	12/14/2005
PRI (TST5878)	Static Uplift – SSTD 11	PFI-008-02-04	12/14/2005
PRI (TST5878)	Static Uplift – SSTD 11	FOP-009-02-05 Rev2	06/01/2015
IAPMO UES (QUA10547)	Quality Assurance	Service Confirmation	08/17/2020

**4. PRODUCT DESCRIPTION:**

- 4.1 **APOC® POLYSET® RTA-1** is a single component polyurethane foam roof tile adhesive distributed in factory, pre-mixed canisters.

**5. LIMITATIONS:**

- 5.1 This is a building code evaluation. Neither NEMO ETC, LLC nor Robert Nieminen, P.E. are, in any way, the Designer of Record for any project on which this Evaluation Report, or previous versions thereof, is/was used for permitting or design guidance unless retained specifically for that purpose.
- 5.2 This Evaluation Report is not for use in FBC High Velocity Hurricane Zone jurisdictions (i.e., Broward and Miami-Dade Counties).
- 5.3 This Evaluation Report pertains to above-deck roof components. Roof decks and structural members shall be in accordance with FBC requirements to the satisfaction of the Authority Having Jurisdiction.
- 5.4 This Evaluation Report does not include evaluation of fire classification. Refer to **FBC 1505** or **R902** for requirements and limitations regarding roof assembly fire classification. Refer to **FBC 2603** for requirements and limitations concerning the use of foam plastic insulation.
- 5.5 This Evaluation Report does not include evaluation of roof edge termination.
- 5.6 **APOC® POLYSET® RTA-1** may be used with flat, low and high profile tiles having a current Florida Statewide Product Approval or approved on a local-level by the Authority Having Jurisdiction.



- 5.7 Field tiles, meeting the limitations of **FBC 1609.5.3** and installed using **APOC® POLYSET® RTA-1** are limited to projects having an Aerodynamic Uplift Moment (Ma), determined in accordance with Table 2HB, 2HC, 2HD, 2GB, 2GC or 2GD of [FRSA/TRI Florida High Wind Concrete and Clay Roof Tile Installation Manual, Sixth Edition](#) or **FBC 1609.5.3**, not greater than the following Allowable Overturning Moment values. Refer to [Section 10](#) and ICP Construction, Inc. published installation instructions for Adhesive Paddy Placement details.

<b>TABLE 1: FIELD TILES IN APOC® POLYSET® RTA-1</b> <b>ALLOWABLE OVERTURNING MOMENT PERFORMANCE DATA</b> <b>(MARGINS OF SAFETY ALREADY APPLIED)</b>				
TILE (FBC 1609.5.3)		ADHESIVE PADDY PLACEMENT ( <a href="#">SECTION 10</a> )		ALLOWABLE OVERTURNING MOMENT (FT-LBF)
TYPE	PROFILE	PLACEMENT DETAIL	PADDY DETAILS	
Clay or Concrete	Flat / Low	#1	<u>Interdependent</u> : Two (2) ribbons, 11 grams each Ensure minimum 8 in <sup>2</sup> contact area to underside of tile, and minimum 10 in <sup>2</sup> contact area at the tile head lap	50
Concrete	Medium	#2	<u>Interdependent</u> : Two (2) ribbons, 11 grams each Ensure minimum 6 in <sup>2</sup> contact area to underside of tile, and minimum 10 in <sup>2</sup> contact area at the tile head lap	44
Clay	High	#3	<u>Interdependent</u> : Two (2) ribbons: <ul style="list-style-type: none"> <li>• 22 grams tail-to-substrate</li> <li>• 11 grams at head-lap</li> </ul> Ensure minimum 12 in <sup>2</sup> contact area to underside of tile, and minimum 18 in <sup>2</sup> contact area at the tile head lap	36
Concrete	High			33
Clay	Cap & Pan (Barrel)	#4	<u>Independent</u> : <u>Pan Tile to Underlayment</u> : Two (2) ~7-inch long x ~6 gram oblong shaped beads on underlayment, side-by-side, where the center of the pan tile contacts the deck starting ~2 to 3-inches from the eave end of the pan tile <u>Cap Tile to Pan Tile</u> : One (1) ~7-inch long x ~6 gram oblong shaped bead at each long edge of the cap tile, ¾ to 1-inch from each edge, starting ~2 to 3-inches from the eave end working towards the ridge. Turn cap tile over and install onto pan, butting the second course pan tile eave end on underlayment, side-by-side, where the center of the pan tile contacts the deck starting ~2 to 3-inches from the eave end of the pan tile.	93
Clay or Concrete	Low/Flat	#5	<u>Interdependent</u> : Two (2) #8 wood screws at tail & one (1) ribbon, 11 gram at headlap Ensure minimum 10 in <sup>2</sup> contact area at the tile head lap	73
Concrete	Medium	#6	<u>Interdependent</u> : Two (2) #8 wood screws at tail & one (1) ribbon, 11 gram at headlap Ensure minimum 10 in <sup>2</sup> contact area at the tile head lap	65
Clay	High	#7	<u>Interdependent</u> : Two (2) #8 wood screws at tail & one (1) ribbon, 11 gram at headlap	44
Concrete	High			63

- 5.7.1 Data in [Table 1](#) relates to installation over a TWO-PLY underlayment system, as detailed in the [FRSA/TRI Florida High Wind Concrete and Clay Roof Tile Installation Manual, Sixth Edition](#), using a hot-asphalt-applied, ASTM D6380, Class M cap sheet (commonly called a '30/90 system').

Alternate underlayment systems are those having a current Florida Statewide Product Approval and/or approved on a local-level by the Authority Having Jurisdiction, listed specifically for use with **APOC® POLYSET® RTA-1**.



- 5.7.2 Tile roof systems using tile types or profiles other than those listed above acquiring acceptance for use with **APOC® POLYSET® RTA-1** shall be tested in accordance with **SSTD 11** or **Testing Application Standard TAS 101**. For the interdependent multi-paddy method, an additional 2-to-1 margin of safety above that specified in **SSTD 11** or **Testing Application Standard TAS 101** shall be applied in determining the ‘allowable overturning moment’.
- 5.8 Hip and ridge tiles using **APOC® POLYSET® RTA-1** are limited to projects having hip/ridge design pressure requirements, determined in accordance with Table 1A of [FRSA/TRI Florida High Wind Concrete and Clay Roof Tile Installation Manual, Sixth Edition](#) or the applicable design pressure determined in accordance with **FBC 1609** or **FBC Residential Chapter 3**, not greater than the following values. Refer to **ICP Construction, Inc.** published installation instructions for Adhesive Paddy Placement details.

<b>TABLE 2: HIP &amp; RIDGE TILES IN APOC® POLYSET® RTA-1</b> <b>ALLOWABLE UPLIFT RESISTANCE PERFORMANCE DATA</b> <b>(MARGINS OF SAFETY ALREADY APPLIED)</b>				
TILE	SUBSTRATE	DETAIL <a href="#">(SECTION 10)</a>	ATTACHMENT DETAILS	ALLOWABLE DESIGN PRESSURE (PSF)
Clay or Concrete	2x PT ridge board	#8	<u>Interdependent:</u> Head: One (1) #10 x 2½" screw; Overlap: 1x6-inch x ~10.5 gram	187
Clay or Concrete	East Coast Metals "Trim Lock™" (FBC FL5394): <i>aluminum</i> or East Coast Metals "Trim Lock™ Plus" (FBC FL5394): <i>aluminum, Galvalume® or stainless steel</i>	#9	<u>Interdependent:</u> On Trim-Lock™ metal: One (1) ~7-inch long x ~10 gram oblong shaped paddy centered on metal. At Tile Headlap: One (1) ~7-inch long x ~10 gram oblong shaped bead at tile headlap.	93
Clay or Concrete	East Coast Metals "Trim Lock™" (FBC FL5394): <i>Galvalume® or stainless steel</i>			110

## 6. INSTALLATION:

- 6.1 **APOC® POLYSET® RTA-1** and the tile roof assembly shall be installed in accordance with the manufacturers' current published instructions, but not less than the requirements of **FBC 1507.3** and the [FRSA/TRI Florida High Wind Concrete and Clay Roof Tile Installation Manual, Sixth Edition](#), subject to the limitations in [Section 5](#).
- 6.1.1 Installation of **APOC® POLYSET® RTA-1** shall be performed by applicators that hold a valid **Qualified Applicator Card** presented by **ICP Construction, Inc.**
- 6.2 Underlayment shall hold current Florida Product Approval for use with tile roofing systems. The underlayment Product Approval shall specify allowable use with **APOC® POLYSET® RTA-1**. The underlayment Product Approval shall specify attachment methods for the underlayment system to resist wind uplift design loads in accordance with Table 1A of [FRSA/TRI Florida High Wind Concrete and Clay Roof Tile Installation Manual, Sixth Edition](#) or the critical (highest) design pressure determined in accordance with **FBC 1609** or **FBC Residential Chapter 3**.
- 6.3 Hip and ridge boards or hip/ridge metal shall be installed in accordance with the [FRSA/TRI Florida High Wind Concrete and Clay Roof Tile Installation Manual, Sixth Edition](#). Proprietary hip and ridge metal shall be installed in accordance with the manufacturer's Florida Product Approval.

## 7. BUILDING PERMIT REQUIREMENTS:

As required by the Building Official or Authority Having Jurisdiction to properly evaluate the installation of this product.

## 8. MANUFACTURING PLANTS:

Norton, OH

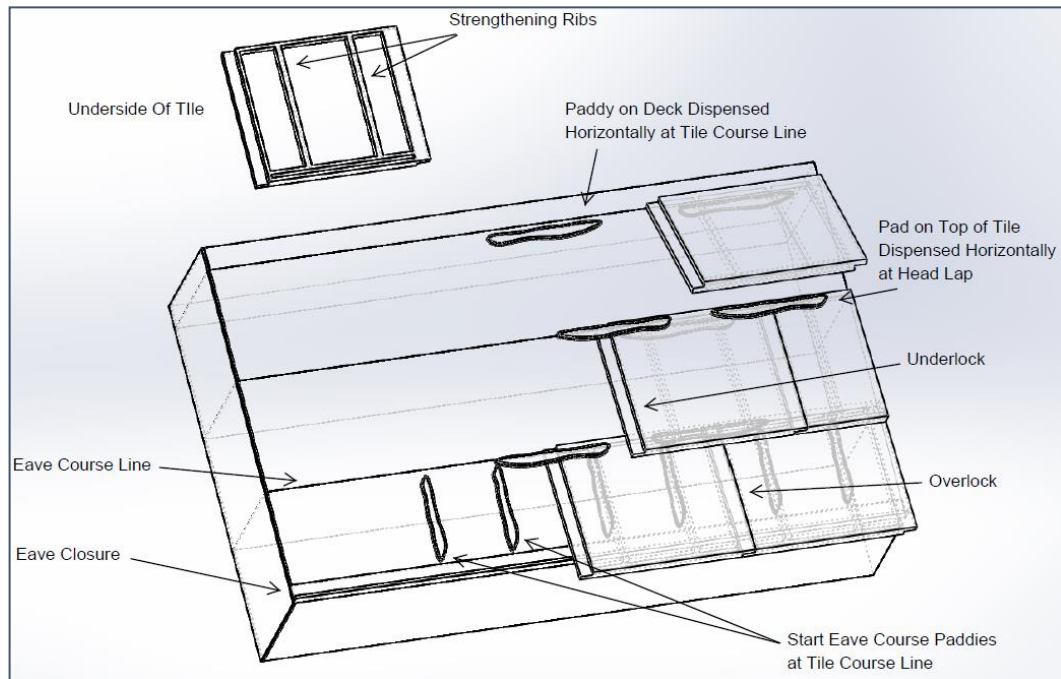
## 9. QUALITY ASSURANCE ENTITY:

IAPMO UES – QUA10547; (909) 223-4422; [barry.johnson@uniform-es.org](mailto:barry.johnson@uniform-es.org)

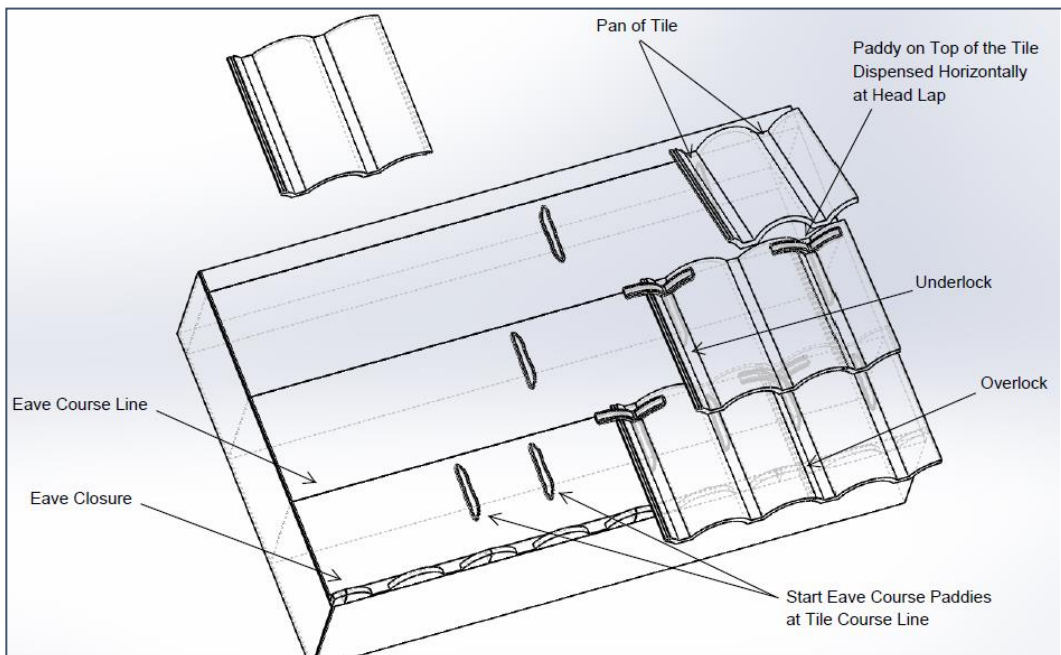


**10. PADDY PLACEMENT DETAILS (FROM ICP CONSTRUCTION, INC. PUBLISHED LITERATURE):**

**10.1 Detail #1: Flat Profile Tile:**

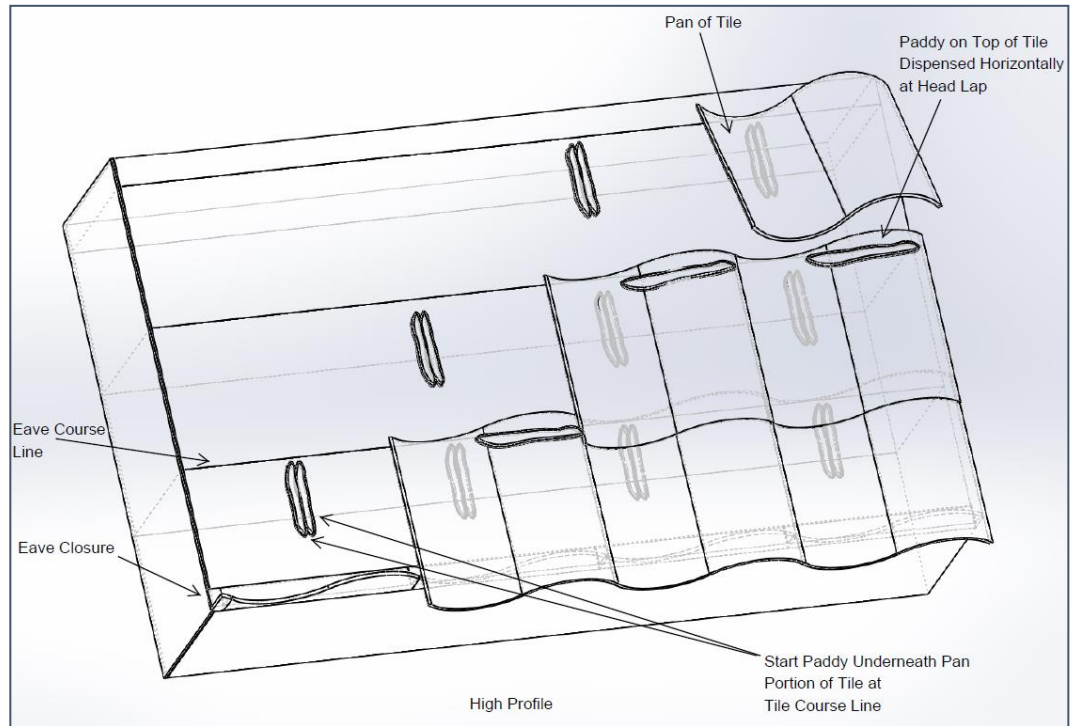


**10.2 Detail #2: Low/Medium Profile Tile:**

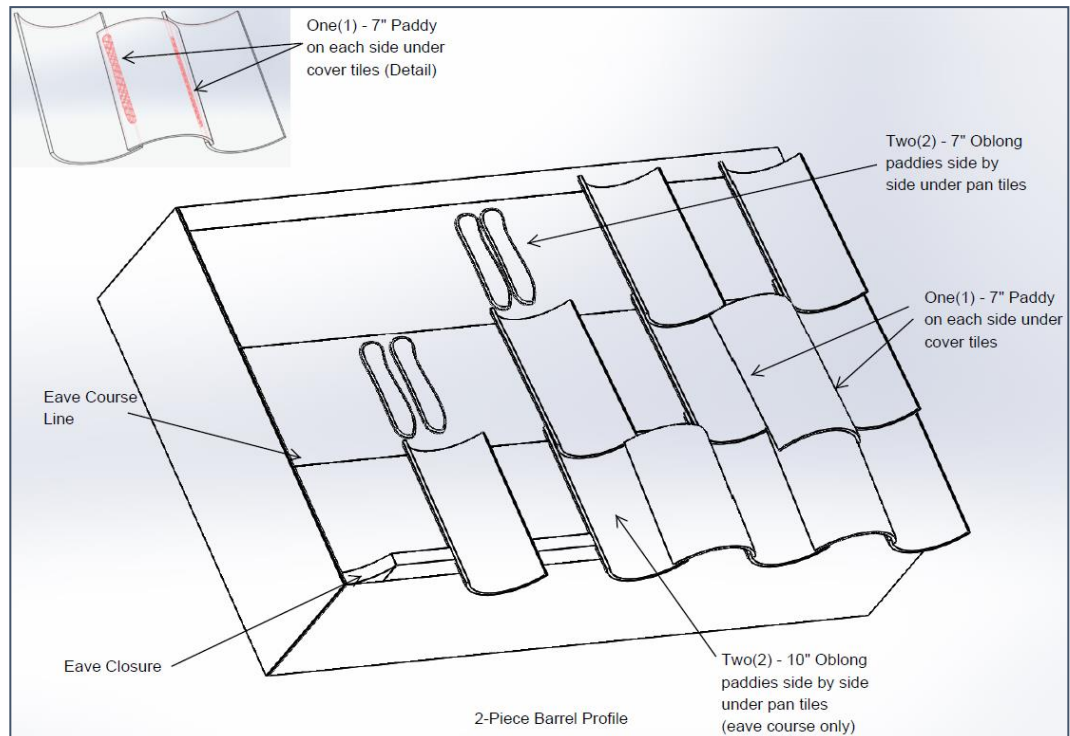




10.3 **Detail #3: High Profile Tile:**

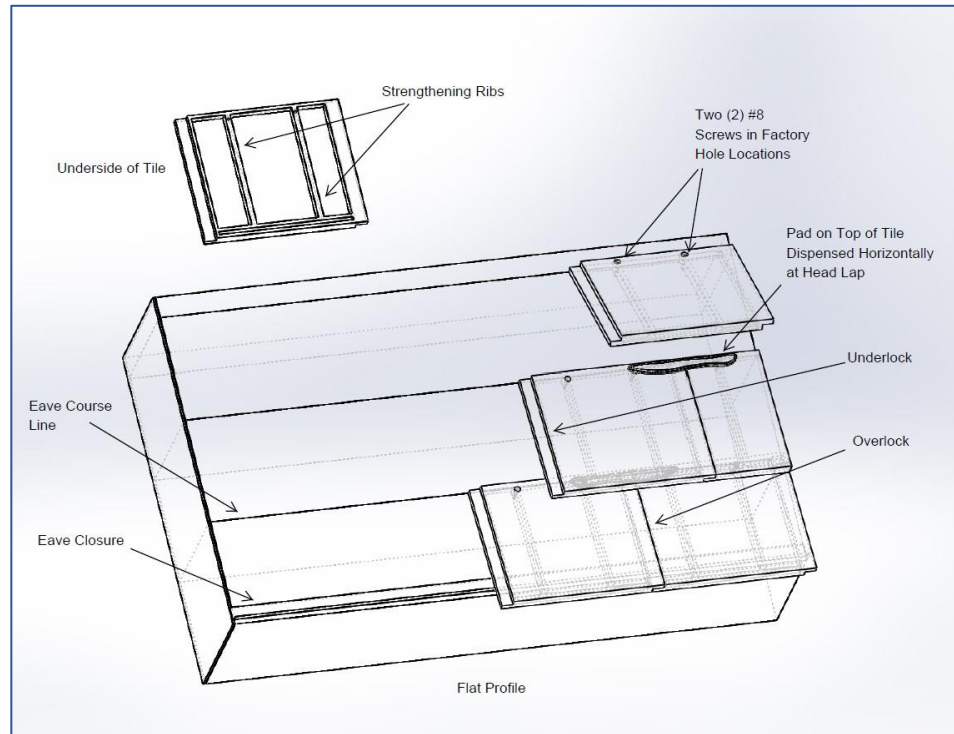


10.4 **Detail #4: Two Piece Barrel (Cap & Pan) Tile:**

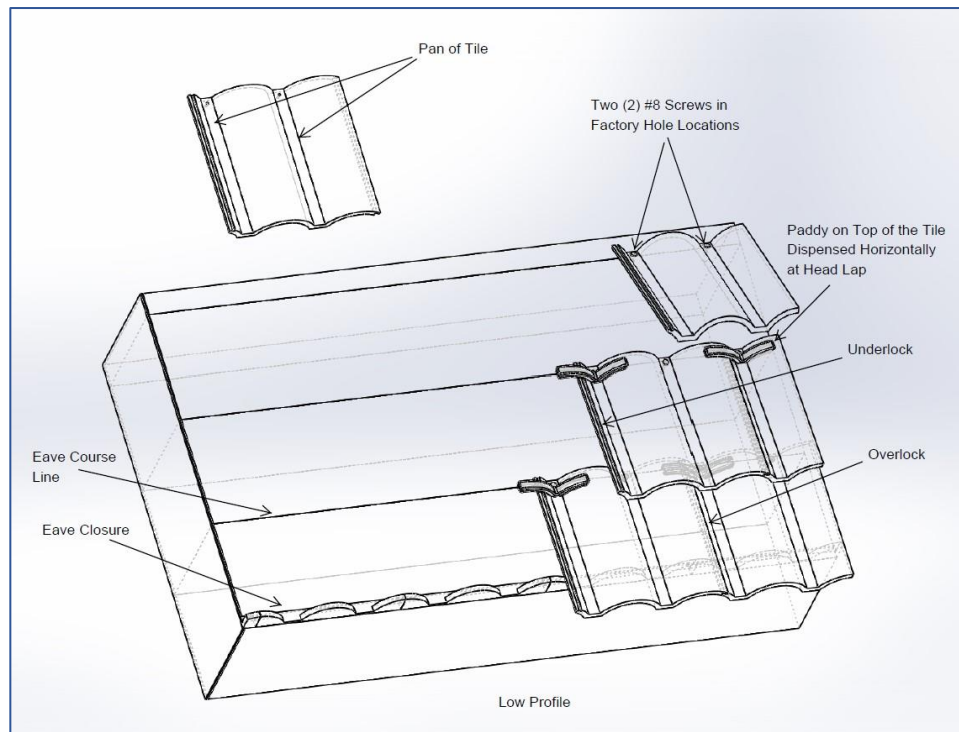




10.5 **Detail #5: Low/Flat Profile Tile; Hybrid System:**

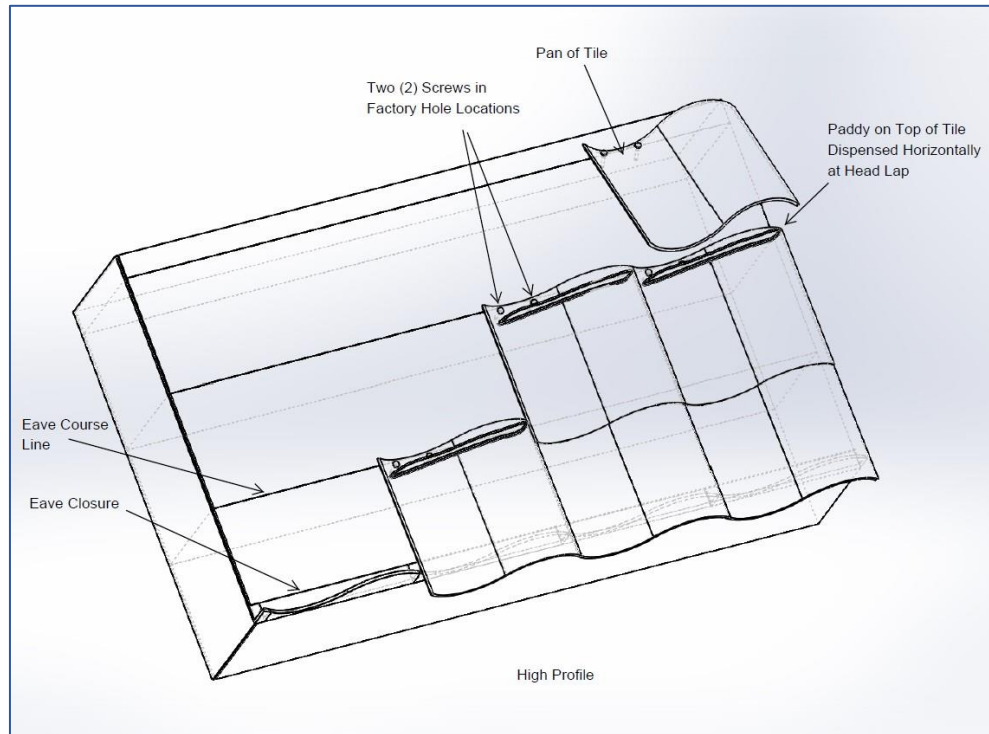


10.6 **Detail #6: Medium Profile Tile; Hybrid System:**

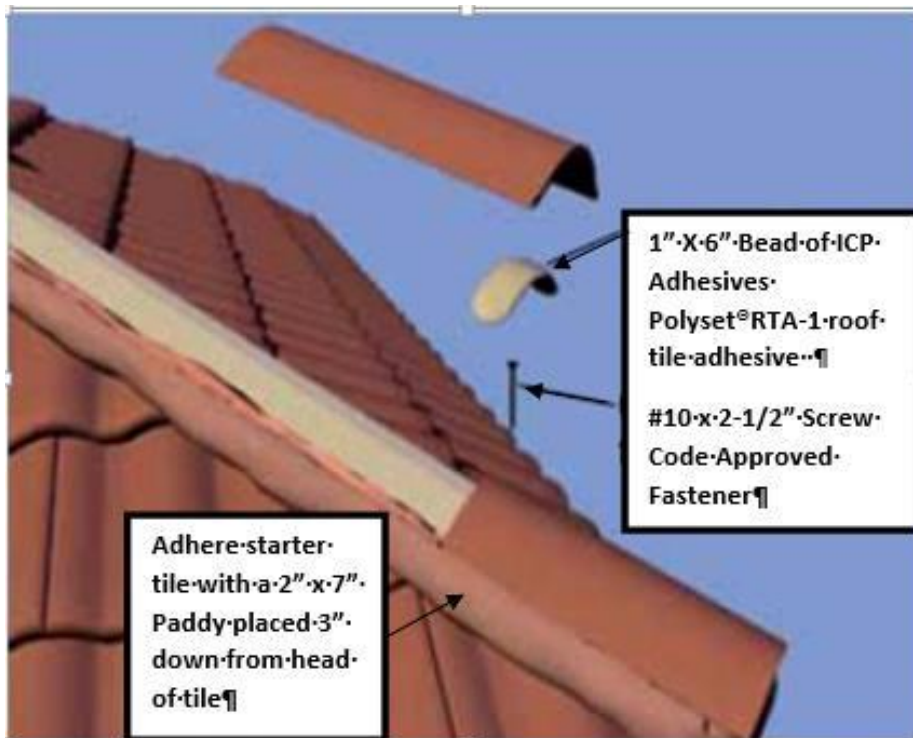




10.7 **Detail #7: High Profile Tile; Hybrid System:**

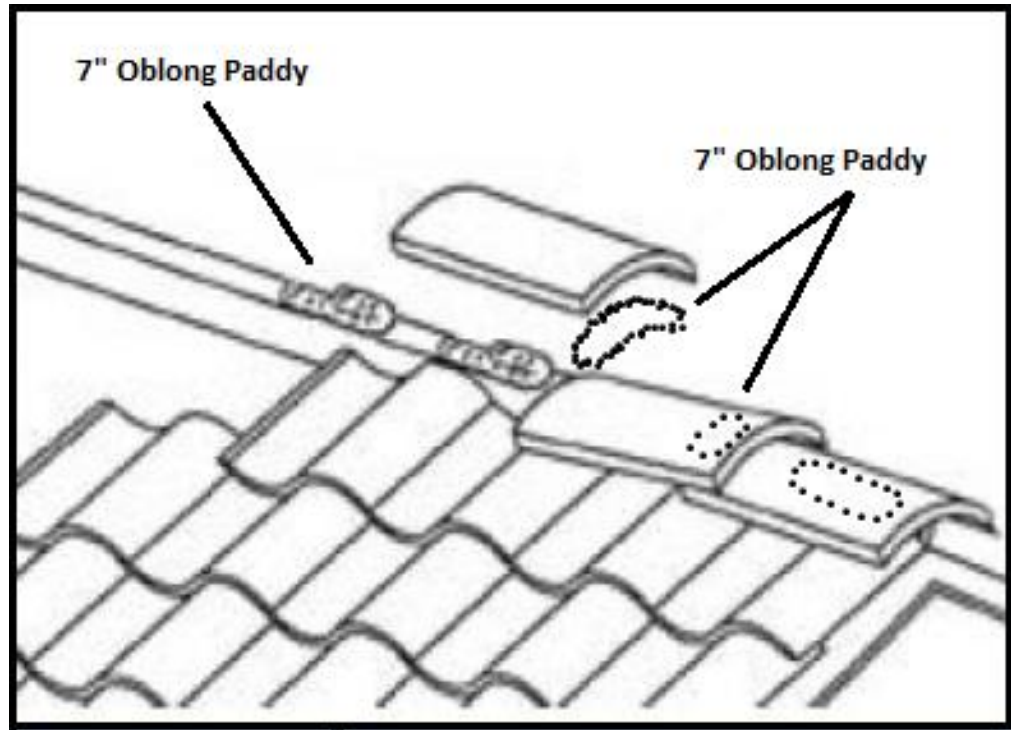


10.8 **Detail #8: Hip and Ridge (interdependent with screw):**





10.9 Detail #9: Hip and Ridge (interdependent placement):



- END OF EVALUATION REPORT -