Force Engineering & Testing
19530 Ramblewood Drive
Humble, Texas 77338
Phone: (281) 540-6603 FAX: (281) 540-9966
Website: www.forceengineeringtesting.com

# Product Evaluation Report
## *REINKE SHAKES*

## *Reinke Shake LT Aluminum over 19/32" Plywood*

## Florida Product Approval # 30521.1 R1

**Florida Building Code 2020**
**Per Rule 61G20-3**
**Method: 1 –D**

**Category: Roofing**
**Subcategory: Metal Roofing**
**Compliance Method: 61G20-3.005(1)(d)**
**HVHZ**

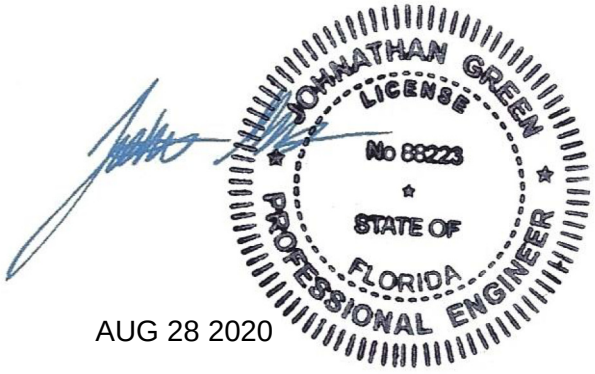
**Product Manufacturer:**
**Reinke Shakes**
**210 S. 4th Street**
**Hebron, NE 68370**

**Engineer Evaluator:**
**Johnathan Green, P.E. #88223**
**Florida Evaluation ANE ID: 12901**

**Validator:**
**Brian Jaks P.E. #70159**

**Contents:**



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**Compliance Statement:** The product as described in this report has demonstrated compliance with the Florida Building Code 2020, Sections 1518.9, 1523.6.5.2.4.

**Product Description:** Reinke Shake LT Aluminum Roof Shake, 0.030" Aluminum, 12 ½" x 16" Coverage, over 19/32" APA Plywood decking. Non-structural Application.

**Panel Material/Standards:** Material: 0.030" Bare 3105-H22 Aluminum, unpainted or painted with PPG Duranar conforming to Florida Building Code 2020 Section 1507.4.3.
Yield Strength: Min. 18.0 ksi
Corrosion Resistance: Panel Material shall comply with Florida Building Code 2020, Section 1507.4.3

**Shake Dimension(s):**
Thickness: 0.030" bare thickness, 0.032" coated thickness
Coverage: 12 ½" x 16"
Height: ¼"

**Shake Nail:** 4d x 1 ½" Ring Shank Double Hot Dip Galvanized Nail
See details for nail patterns
Corrosion Resistance: Per Florida Building Code 2020, Section 1517.6.

**Substrate Description:** 19/32" or greater APA Rated plywood or wood plank. Design of plywood and plywood supports are outside the scope of this evaluation. Substrate must be designed in accordance w/ Florida Building Code.

**Allowable Design Uplift Pressures:**

**Table "A"**

| | | |
|---|---|---|
| **Maximum Total Uplift Design Pressure:** | 78.5 psf | 161.0 psf |
| **Nail Fastener Pattern (See Detail)** | A | B |
| | | |

*Design Pressure includes a Safety Factor = 2.0.


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**Code Compliance:**

The product described herein has demonstrated compliance with The Florida Building Code 2020, Section 1518.9, 1523.6.5.2.4.

**Evaluation Report Scope:**

The product evaluation is limited to compliance with the structural wind load requirements of the Florida Building Code 2020, as relates to Rule 61G20-3.

**Performance Standards:**

The product described herein has demonstrated compliance with:

- TAS 125-03
- UL 580-06 - Test for Uplift Resistance of Roof Assemblies
- UL 1897-2012 - Uplift Test for Roof Covering Systems
- TAS 100-95 - Test Procedure for Wind and Wind Driven Rain Resistance of Discontinuous Roof Systems
- TAS 110-00 - Accel. Weathering ASTM G 152 / Salt Spray ASTM B 117
- UL 790-04- Fire Tests of Roof Coverings

**Reference Data:**

1. TAS 125-03: UL 580-06 / 1897-2012 Uplift Test
   Force Engineering & Testing, Inc. (FBC Organization # TST-5328)
   Report No. 681-0180T-18
2. TAS 100-95
   Farabaugh Engineering & Testing, Inc. (FBC Organization # TST-1654)
   Report No. T317-18
3. TAS 110-00: PPG Duranar Coatings
4. UL 790 File R8491 Project No. 4788695599, Passed Class B Fire Classification.
5. Certificate of Independence
   By Johnathan Green, P.E. (No. 88223) @ Force Engineering & Testing
   (FBC Organization # ANE ID: 12901)

**Quality Assurance Entity:**

The manufacturer has established compliance of roof panel products in accordance with the Florida Product Code and Rule 61G20-3.005 (3) for manufacturing under a quality assurance program audited by an approved quality assurance entity.

**Minimum Slope Range:**

4:12. Minimum Slope shall comply with Florida Building Code 2020, including Sections 1515.2.2 and in accordance with Manufacturers recommendations.

**Installation:**

Install per manufacturer's recommended attached details and RAS 133.


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**Underlayment:** Henry Eaveguard Self-Adhered Shingle Underlayment 57 mil thick adhered to mechanically attached anchor sheet. Installed per Manufacturer's installation guidelines and Florida Building Code 2020 Section 1507.1.1, 1518.2.1, & 1518.3.

**Fire Classification:** Class B.

**Shear Diaphragm:** Shear diaphragm values are outside the scope of this report.

**Design Procedure**: Based on the dimensions of the structure, appropriate wind loads are determined using Chapter 16 of the Florida Building Code 2020 for roof cladding wind loads. These component wind loads for roof cladding are compared to the allowable pressure listed above. The design professional shall select the appropriate erection details to reference in his drawings for proper fastener attachment to his structure and analyze the panel fasteners for pullout and pullover. Support framing must be in compliance with Florida Building Code 2020 Chapter 22 for steel, Chapter 23 for wood and Chapter 16 for structural loading.


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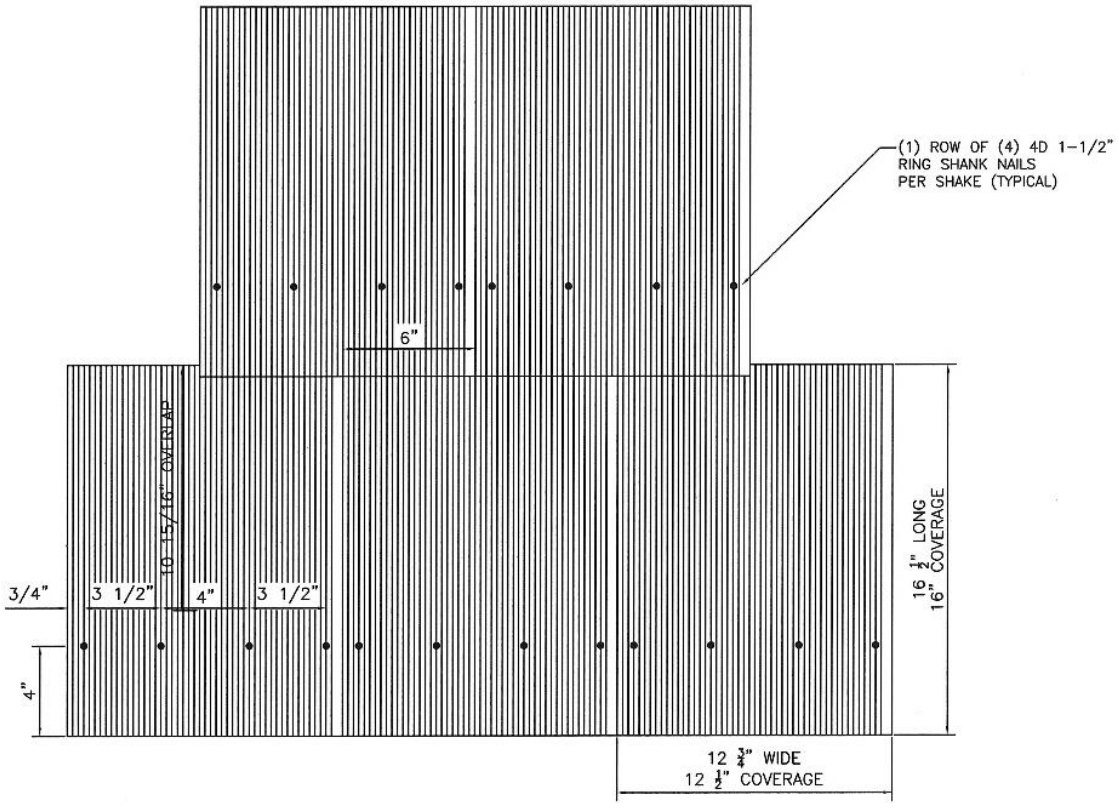
# SHAKE NAIL PATTERN A





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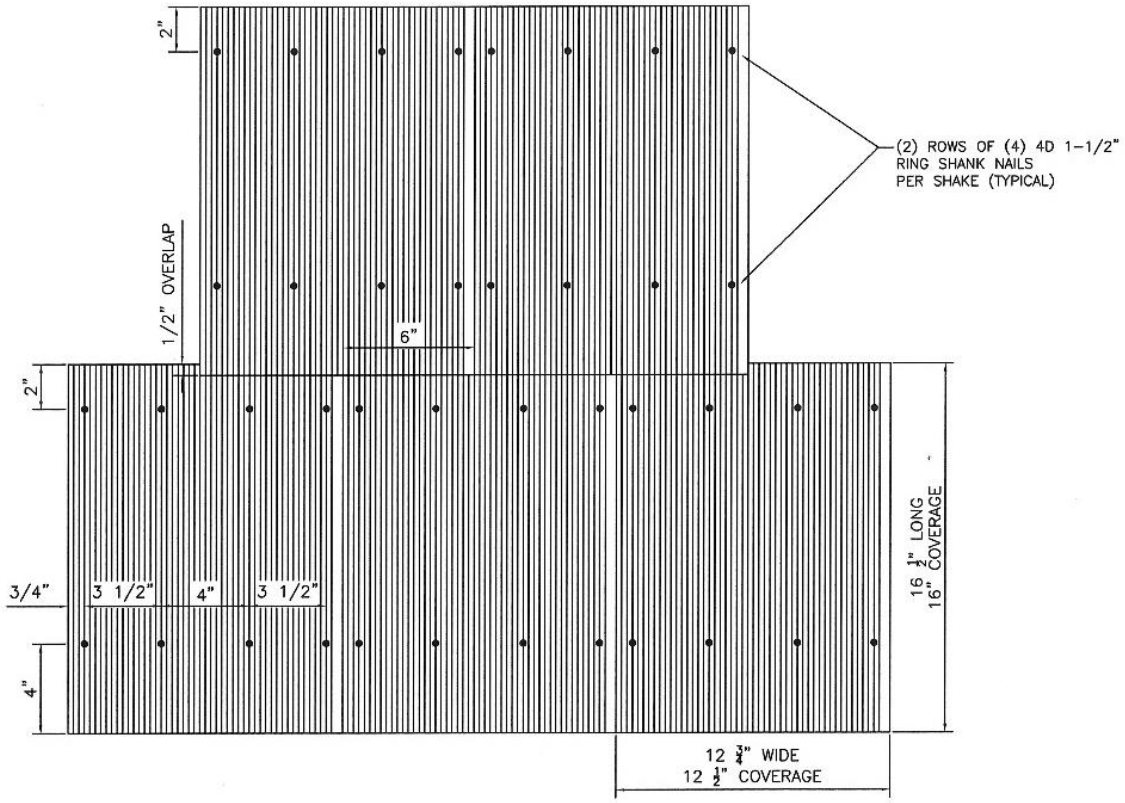
# SHAKE NAIL PATTERN B




JOHNATHAN GREEN LICENSE No 88223 STATE OF FLORIDA PROFESSIONAL ENGINEER

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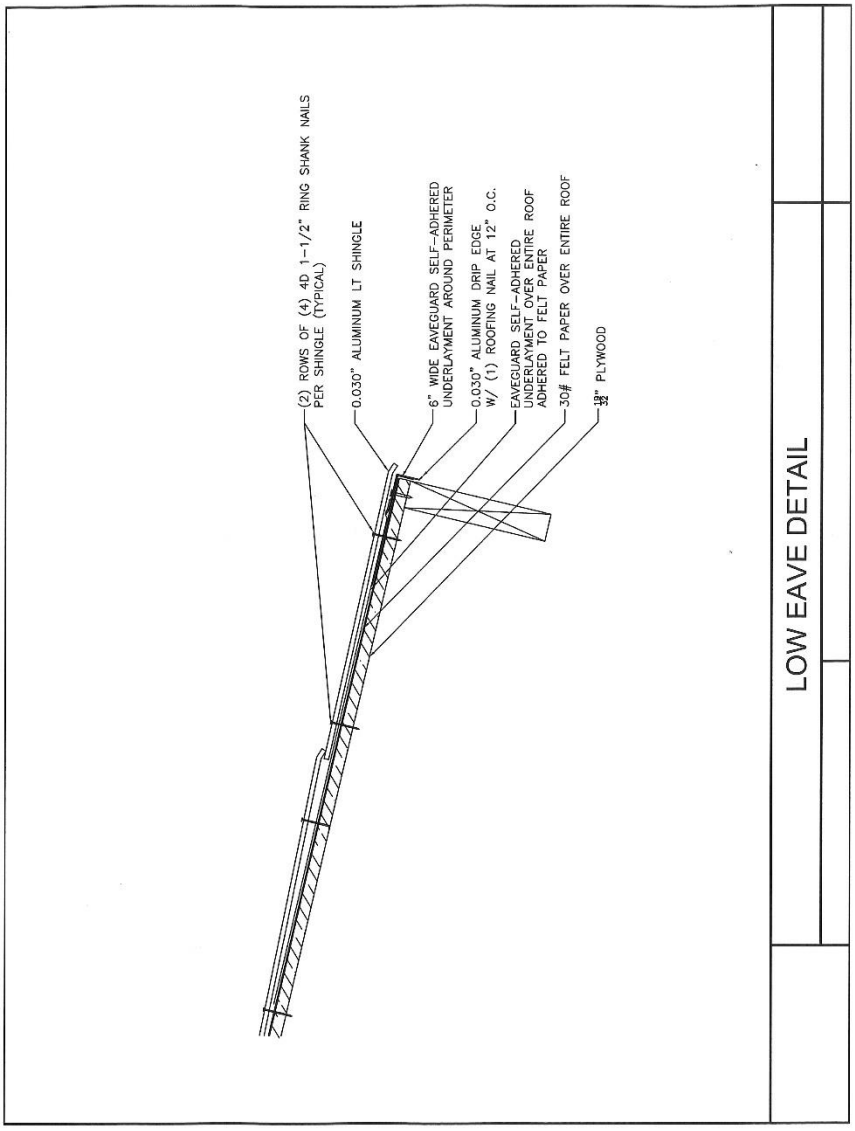



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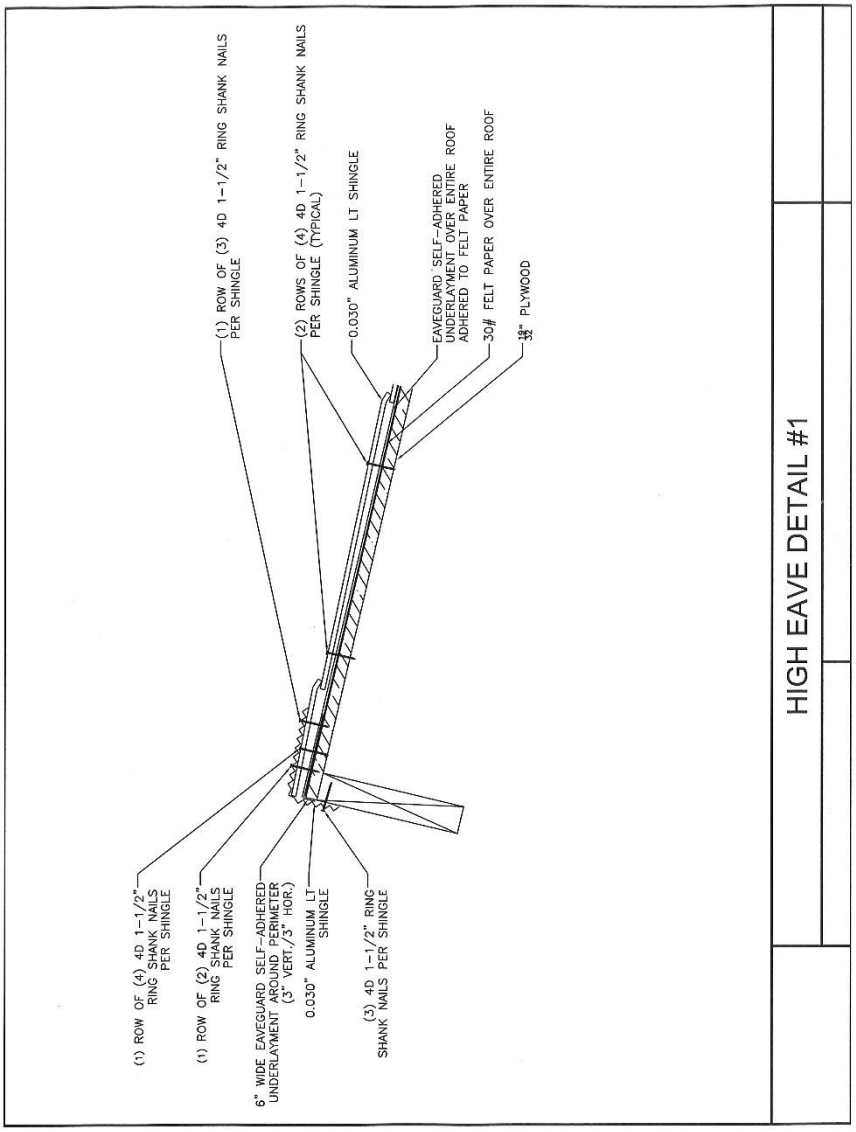


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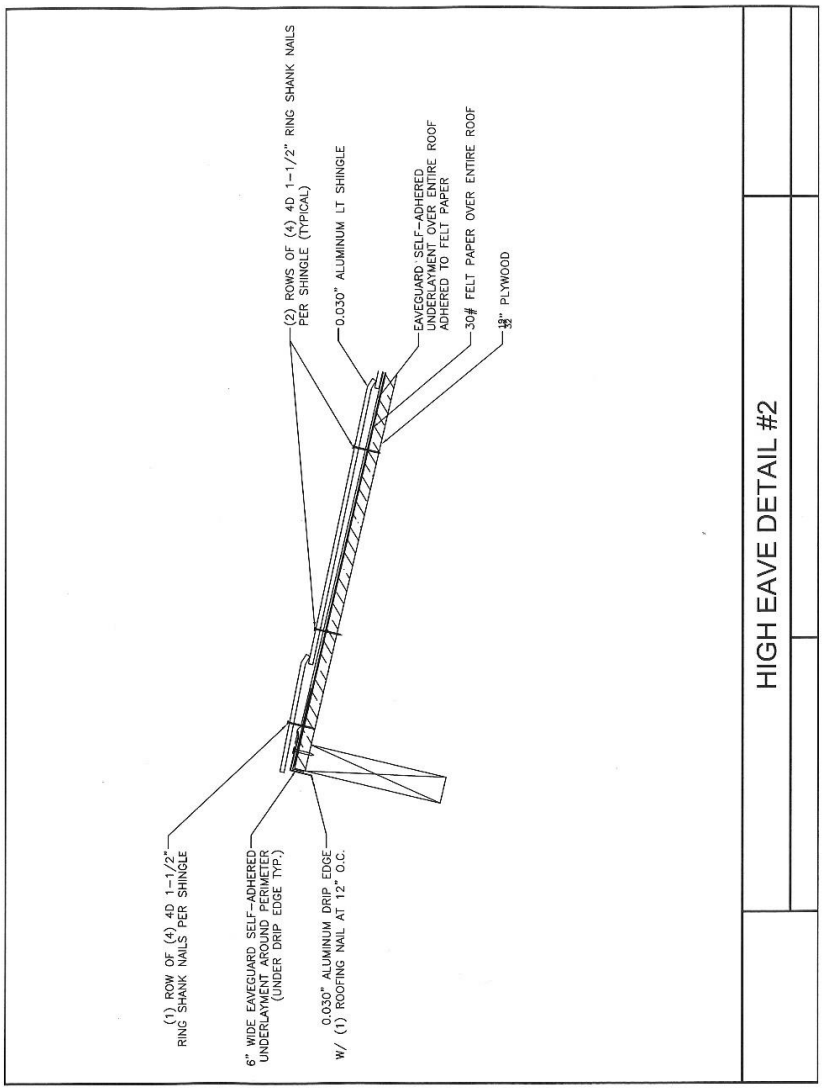



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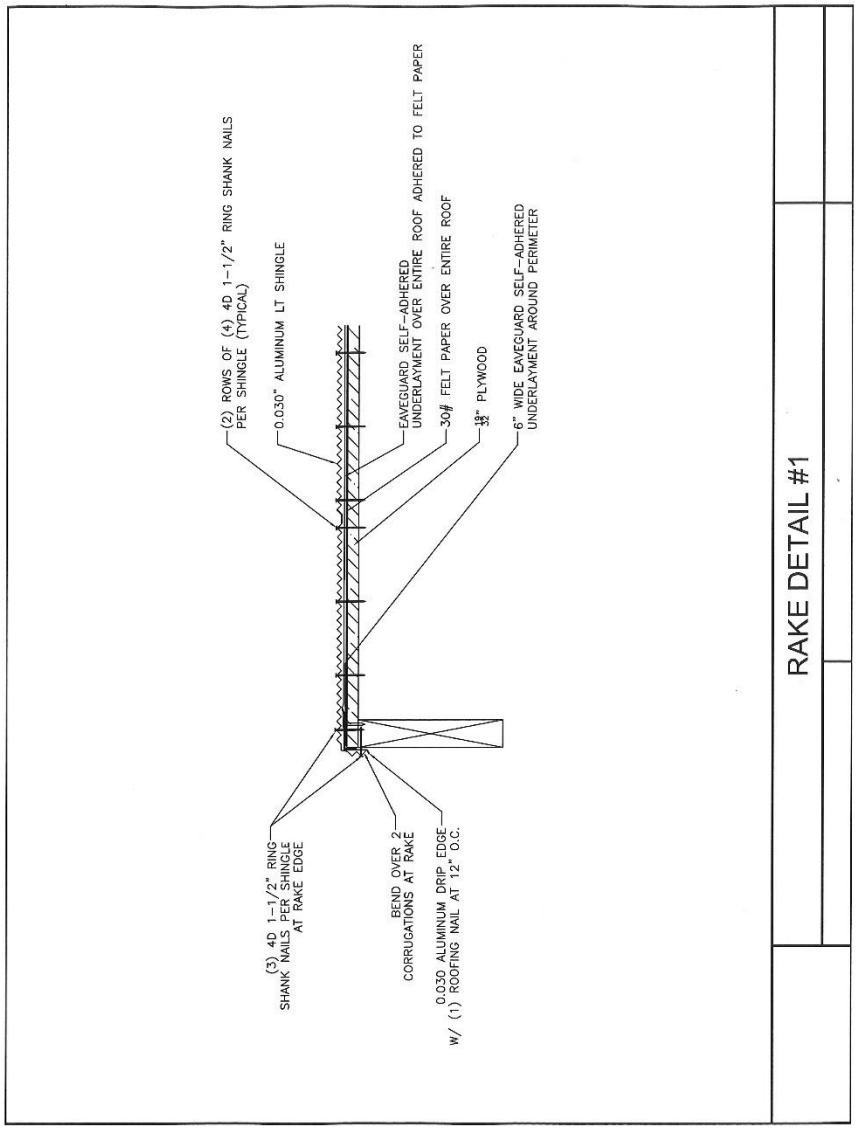



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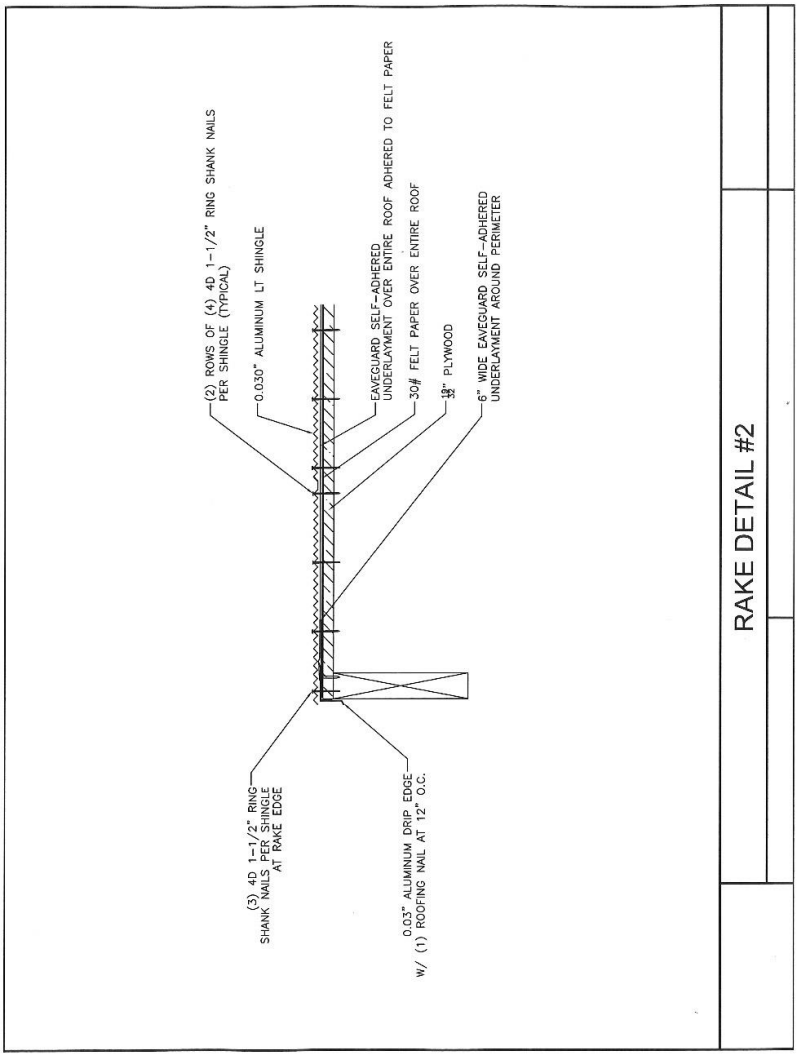



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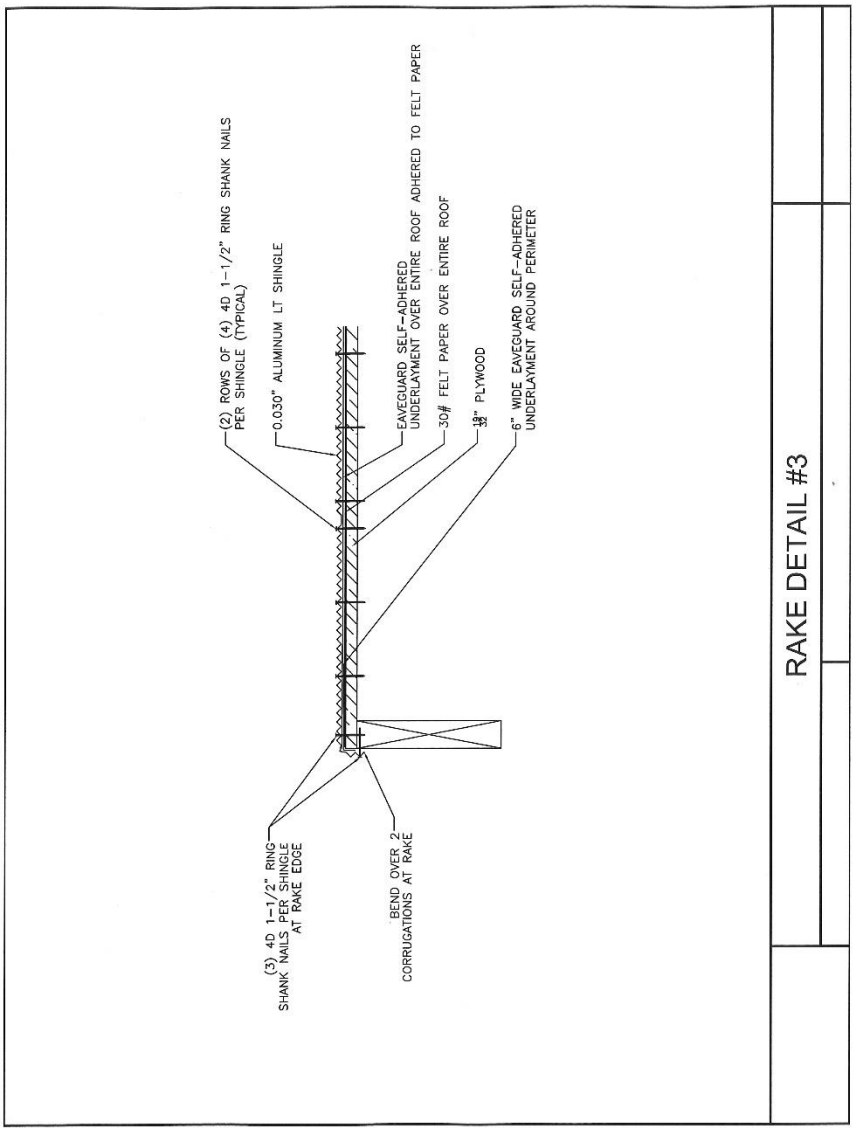



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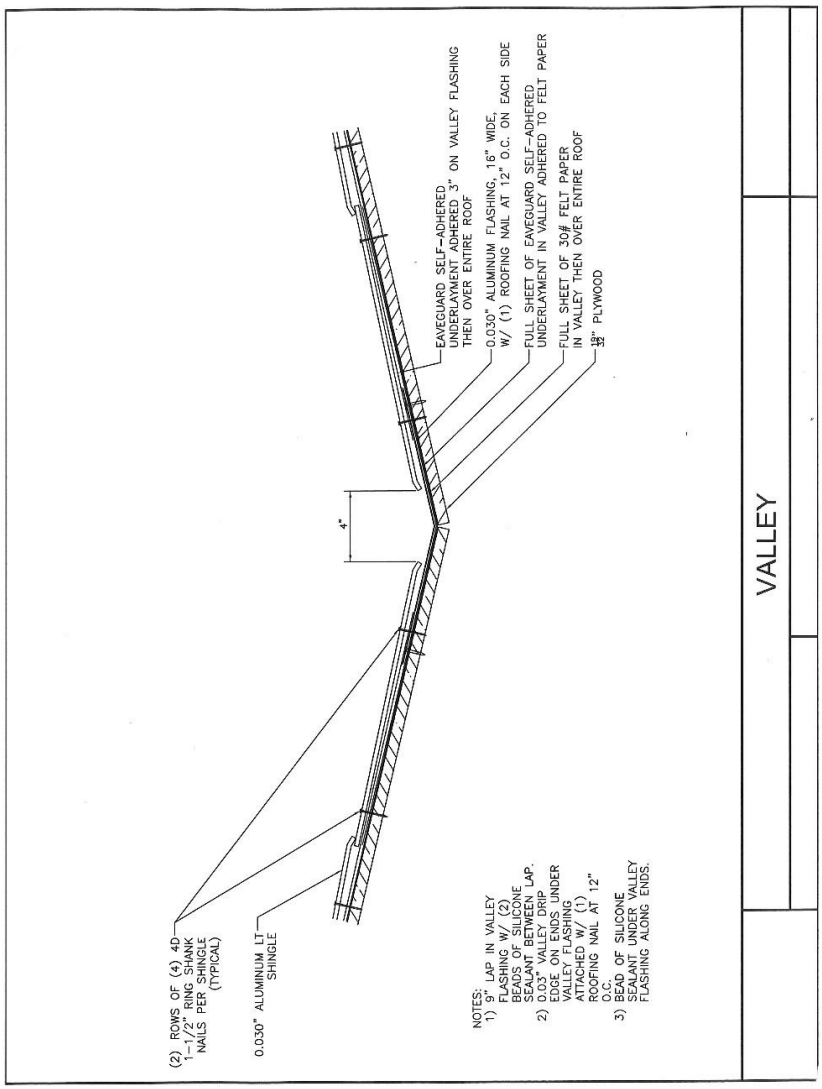


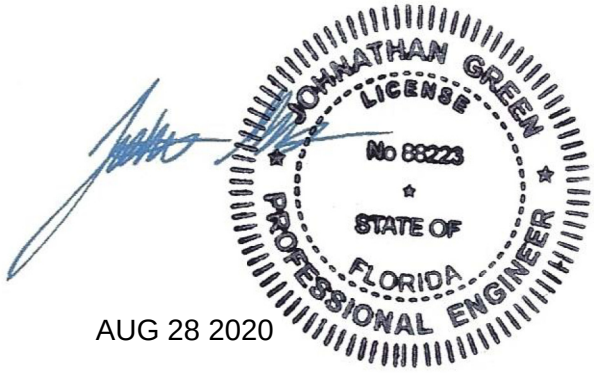


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