



NEMO|etc.

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ENGINEER

EVALUATE

TEST

CONSULT

EVALUATION REPORT BY FLORIDA P.E.

GAF

1 Campus Drive
Parsippany, NJ 07054
(800) 766-3411

Evaluation Report 01506.01.08-R34

FL10124-R32

Date of Issuance: 01/03/2008

Revision 34: 06/10/2022

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 product described herein has been evaluated for compliance with the **7th Edition (2020) Florida Building Code** sections noted herein.

DESCRIPTION: GAF Asphalt Roof Shingles for use in FBC non-HVHZ jurisdictions

LABELING: Labeling shall be in accordance with the requirements of the Accredited Quality Assurance Agency noted herein and **FBC 1507.2.7.1 / R905.2.6.1**

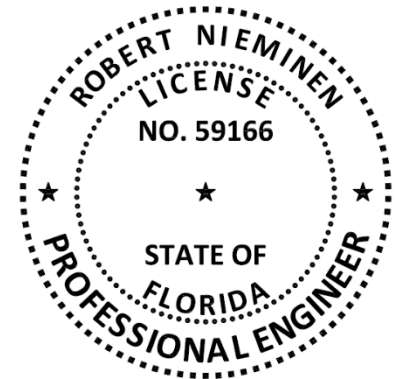
CONTINUED COMPLIANCE: This Evaluation Report is valid until such time as the named product(s) changes, the referenced Quality Assurance or production facility location(s) changes, or Code provisions that relate to the product(s) change. Acceptance of our Evaluation Reports by the named client constitutes 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 7.

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 SYSTEMS EVALUATION:
1. SCOPE:

Product Category: Roofing
Sub-Category: Asphalt Shingles
Product Approval Method: Method 1, Option D – Codified Material, Evaluation by Engineer
Compliance Statement: **GAF Asphalt Roof Shingles**, as produced by **GAF**, have demonstrated compliance with the following sections of the **7th Edition (2020) Florida Building Code** through testing in accordance with the following Standards. Compliance is subject to the Installation Requirements and Limitations / Conditions of Use set forth herein.

2. STANDARDS:

Section	Property	Standard	Year
1507.2.4, R905.2.3	Material standard	ASTM D1970	2015
1507.2.5, R905.2.4	Material standard	ASTM D3462	2010
1507.2.7.1, R905.2.6.1	Wind Resistance	ASTM D3161	2016
1507.2.7.1, R905.2.6.1	Wind Resistance	ASTM D7158	2019
1507.2.7.1, R905.2.6.1	Wind Resistance	TAS 107	2020

3. REFERENCES:

ENTITY	EXAMINATION	REFERENCE	DATE
PRI (TST 5878)	ASTM D1970	GAF-324-02-01	2011-12-01
PRI (TST 5878)	ASTM D3462	GAF-897-02-01	2018-11-08
PRI (TST 5878)	ASTM D3462	GAF-898-02-01	2018-11-08
PRI (TST 5878)	ASTM D3462	GAF-899-02-01	2018-11-15
PRI (TST 5878)	ASTM D3462 (IN-MV)	376T0133	2021-02-05
PRI (TST 5878)	ASTM D3462 (CA-S)	376T0135	2021-02-05
PRI (TST 5878)	ASTM D3462 (IN-MV)	376T0163	2021-04-20
UL (TST 1740)	ASTM D3462	93NK6295	1993-11-29
UL (TST 1740)	TAS 107	94NK9632	2000-03-29
UL (TST 1740)	ASTM D3161	04NK30546	2005-03-10
UL (TST 1740)	ASTM D3462, D3161	04NK22009	2005-05-06
UL (TST 1740)	ASTM D3161, D3462	06CA35251	2006-10-18
UL (TST 1740)	ASTM D3462	06CA31603	2006-12-01
UL (TST 1740)	ASTM D3161, D3462	06CA41095	2006-12-27
UL (TST 1740)	ASTM D3161	06CA31611	2007-04-04
UL (TST 1740)	ASTM D3161	06CA61148	2007-04-09
UL (TST 1740)	ASTM D3161, D3462	07CA31742	2007-11-08
UL (TST 1740)	ASTM D3161, D7158, D3462	08CA06100	2008-03-13
UL (TST 1740)	ASTM D3161, D3462	09CA10592	2009-03-26
UL (TST 1740)	ASTM D3161, D3462	09CA06856	2009-05-15
UL (TST 1740)	ASTM D3161, D7158, D3462	09CA27281	2009-08-27
UL (TST 1740)	ASTM D3161, D7158, D3462	10CA35554	2010-03-05
UL (TST 1740)	ASTM D3161, D7158, D3462	10CA13686	2010-05-15
UL (TST 1740)	ASTM D3462	10CA11953	2010-10-29
UL (TST 1740)	ASTM D3161, D7158, D3462	10CA53934	2011-03-31
UL (TST 1740)	ASTM D3161, D7158, D3462	11CA48924	2011-10-22
UL (TST 1740)	ASTM D3161, D7158, D3462	11CA47919	2011-12-03
UL (TST 1740)	ASTM D3161, D7158, D3462	11CA48725	2011-12-09
UL, LLC. (TST 9628)	ASTM D3462	12CA34891	2012-10-12
UL, LLC. (TST 9628)	ASTM D3161	12CA38083	2013-02-26
UL, LLC. (TST 9628)	ASTM D3161, D7158, D3462	4786875675	2015-07-27
UL, LLC. (TST 9628)	ASTM D3161, D7158, D3462	4787434542	2016-05-17
UL, LLC. (TST 9628)	ASTM D3161, D7158, D3462	4788717529	2016-09-09
UL, LLC. (TST 9628)	ASTM D3161, D7158, D3462	4788198026	2017-11-28

ENTITY	EXAMINATION	REFERENCE	DATE
UL, LLC. (TST 9628)	ASTM D3161	4788698165	2018-11-09
UL, LLC. (TST 9628)	ASTM D3161	4788669132	2018-12-13
UL, LLC. (TST 9628)	ASTM D3161	4788891098	2019-02-14
UL, LLC. (TST 9628)	ASTM D3161, D7158, D3462	4788932264	2019-08-16
UL, LLC. (TST 9628)	ASTM D3161, D7158, D3462	4789115488	2019-10-03
UL, LLC. (TST 9628)	ASTM D3161, D3462	4788959558	2019-10-17
UL, LLC. (TST 9628)	ASTM D3161, D7158, D3462	4786508528	2019-11-01
UL, LLC. (TST 9628)	ASTM D3161	4789132672	2020-10-27
UL, LLC. (TST 9628)	ASTM D3161	4789732437	2021-04-15
UL, LLC. (TST 9628)	ASTM D3462	4790002635	2022-01-26
UL, LLC. (TST 9628)	ASTM D3161, D7158, D3462	4788198026	2022-05-23
UL, LLC. (QUA 9625)	Quality Control	Service Confirmation	2018-10-18
UL, LLC. (QUA 9625)	Quality Control	Florida BCIS	Current

4. PRODUCT DESCRIPTION:

TABLE 1: ASPHALT SHINGLE COMPONENTS				
TYPE	PRODUCT	DESCRIPTION	MATERIAL STANDARD	PLANT(S)
ACCESSORY STARTER STRIPS	Pro-Start® Starter Strip Shingles	starter strips for asphalt roof shingles	ASTM D3462	CA-S, IN-MV
	QuickStart® Peel & Stick Starter Roll	mineral-surfaced, fiberglass-reinforced, self-adhering SBS modified bitumen starter strip, nominal 9-inch x 33 ft roll, for use with asphalt shingles with exposure of 6-inch or less	ASTM D1970	CA-S
ACCESSORY STARTER STRIPS	StarterMatch® Starter Strip Shingles	color-coordinated starter strips for use with Grand Canyon® and Grand Sequoia® series asphalt shingles. StarterMatch® are installed as the second starter for Grand Canyon® and Grand Sequoia® series installations	ASTM D3462	CA-F
	WeatherBlocker™ Premium Starter Strip Shingles	starter strips for asphalt roof shingles	ASTM D3462	IN-MV
ASPHALT SHINGLES	Marquis WeatherMax®	fiberglass reinforced 3-tab asphalt roof shingles	ASTM D3462	IN-MV
	Royal Sovereign®			AL, CA-F, FL, GA, IN-MV, PA, TX-D
	Camelot® II	fiberglass reinforced, laminated asphalt roof shingles	ASTM D3462	IN-MV
	Fortitude®			PA
	Glenwood®			IN-MV
	Grand Canyon®			CA-F, IN-MV
	Grand Sequoia®			CA-F, IN-MV
	Grand Sequoia® AS			CA-F
	Timberline® AH			AL, CA-F, IN-MC, PA
	Timberline® AS II			TX-E
	Timberline® CS			CA-F
	Timberline HD®			AL, CA-S, CA-F, FL, IN-MC, MD, MN, PA, TX-D, TX-E
	Timberline® Solar HD			CA-F, CA-S, IN-MV
	Timberline HDZ®			AL, CA-F, CA-S, FL, IN-MC, MD, MN, PA, TX-D, TX-E
	Timberline® Solar HDZ®			IN-MV
Timberline® NS	AL, CA-S, FL, IN-MC, MD, MN, PA, TX-D, TX-E			
Timberline Ultra HD®	AL, CA-S, IN-MC, MN, PA, TX-E			

TABLE 1 (CONTINUED): ASPHALT SHINGLE COMPONENTS				
TYPE	PRODUCT	DESCRIPTION	MATERIAL STANDARD	PLANT(S)
ASPHALT SHINGLES	Timberline® UHD	fiberglass reinforced, laminated asphalt roof shingles	ASTM D3462	AL, CA-S, IN-MC, MN, PA, TX-E
	Woodland®			IN-MV
	Slateline™	fiberglass reinforced 5-tab asphalt roof shingle	ASTM D3462	IN-MV
HIP & RIDGE SHINGLES	Seal-A-Ridge® AS ArmorShield® SBS-Modified IR Ridge Cap Shingles	fiberglass reinforced, hip and ridge asphalt roof shingles	ASTM D3462	GA
	Seal-A-Ridge® Ridge Cap Shingles			GA, IN-MV
	Timbertex® Premium Ridge Cap Shingles			IN-MV

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** 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 **Wind Classification:** Refer to Section 6 for installation requirements to meet wind classifications

TABLE 2A: WIND CLASSIFICATIONS, ASPHALT SHINGLES	
PRODUCT	FBC TABLE 1507.2.7.1 OR R905.2.6.1
Marquis WeatherMax®	ASTM D3161(F) & ASTM D7158(H)
Royal Sovereign®	ASTM D3161(F) & ASTM D7158(H)
Camelot® II	ASTM D3161(F) & ASTM D7158(H)
Fortitude®	ASTM D3161(F) & ASTM D7158(H)
Glenwood®	ASTM D3161(F) & ASTM D7158(H)
Grand Canyon®	ASTM D3161(F) & ASTM D7158(H)
Grand Sequoia®	ASTM D3161(F) & ASTM D7158(H)
Grand Sequoia® AS	ASTM D3161(F) & ASTM D7158(H)
Timberline® AH	ASTM D3161(F) & ASTM D7158(H)
Timberline® AS II	ASTM D3161(F) & ASTM D7158(H)
Timberline® CS	ASTM D3161(F) & ASTM D7158(H)
Timberline HD®	ASTM D3161(F) & ASTM D7158(H)
Timberline® Solar HD	ASTM D3161(F) & ASTM D7158(H)
Timberline HDZ®	ASTM D3161(F) & ASTM D7158(H)
Timberline® Solar HDZ®	ASTM D3161(F) & ASTM D7158(H)
Timberline® NS	ASTM D3161(F) & ASTM D7158(H)
Timberline Ultra HD®	ASTM D3161(F) & ASTM D7158(H)
Timberline® UHD	ASTM D3161(F) & ASTM D7158(H)

TABLE 2A: WIND CLASSIFICATIONS, ASPHALT SHINGLES	
PRODUCT	FBC TABLE 1507.2.7.1 OR R905.2.6.1
Woodland®	ASTM D3161(F) & ASTM D7158(H)
Slateline™	ASTM D3161(F) & ASTM D7158(H)

5.5.1 Classification by ASTM D7158:

ASTM D7158, Class H applies only to **exposure category B or C** and a **building height of 60 feet or less**. Calculations by a qualified design professional are required for conditions outside these limitations. Contact the shingle manufacturer for data specific to each shingle.

TABLE 2B: WIND CLASSIFICATIONS, STARTER STRIPS AND HIP & RIDGE		
TYPE	PRODUCT	FBC TABLE 1507.2.7.1 OR R905.2.6.1
STARTER STRIPS	Pro-Start® Starter Strip Shingles	ASTM D3161, Class F
	WeatherBlocker™ Premium Starter Strip Shingles	ASTM D3161, Class F
HIP & RIDGE SHINGLES	Seal-A-Ridge® AS ArmorShield® SBS-Modified IR Ridge Cap Shingles	ASTM D3161, Class F
	Seal-A-Ridge® Ridge Cap Shingles	ASTM D3161, Class F
	Timbertex® Premium Ridge Cap Shingles	ASTM D3161, Class F (sealant required, See Section 6)

5.6 All components in the roof assembly shall have quality assurance audit in accordance with **F.A.C. Rule 61G20-3**. Refer to the Product Approval of the component manufacturer for components that are produced by a Product Manufacturer other than the report holder on Page 1 of this Evaluation Report.

6. INSTALLATION:

6.1 GENERAL:

- 6.1.1 Roof deck, slope, underlayment and fasteners shall comply with FBC 1507.2 / R905.2 and the shingle manufacturer's minimum requirements.
- 6.1.2 Underlayment shall be acceptable to GAF and shall hold current Florida Statewide Product Approval, or be Locally Approved per Rule 61G20-3, per FBC Sections 1507.2.3, 1507.2.4 or R905.2.3.
- 6.1.3 Fasteners shall be in accordance with manufacturer's published requirements, but not less than FBC 1507.2.6 or R905.2.5. Staples are not permitted.
- 6.1.4 GAF asphalt shingles are acceptable for use in reroof (tear-off) or recover applications, subject to the limitations set forth in FBC Section 1511 or R908 and GAF published installation instructions.

6.2 STARTER SHINGLES OR STARTER STRIP:

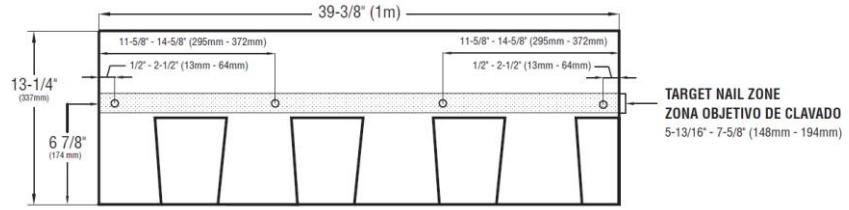
- 6.2.1 Installation of Pro-Start® Starter Strip Shingles, WeatherBlocker™ Premium Starter Strip Shingles and QuickStart® Peel & Stick Starter Roll shall comply with the GAF current published instructions.

6.3 ASPHALT SHINGLES:

- 6.3.1 Installation of asphalt shingles shall comply with the GAF current published instructions, using minimum four (4) nails per shingle in accordance with FBC 1507.2.7 or R905.2.6, with the following exceptions:
 - Camelot® II, Grand Canyon®, Grand Sequoia® and Woodland® require minimum five (5) nails per shingle.
 - Slateline™ requires minimum six (6) nails per shingle.

6.3.2 The following depict nail-placement locations for GAF shingles designed with a ‘target nail zone’. Where the roof slope exceeds 21 units vertical in 12 units horizontal, special methods of fastening are required. Contact the GAF for details.

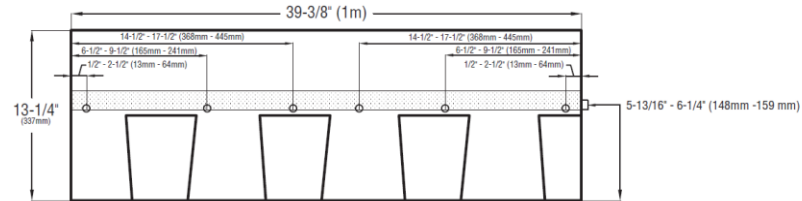
6.3.2.1 Fortitude®, Timberline® AH, Timberline® CS and Timberline® HDZ®; slopes 2:12 up to 21:12.



STANDARD NAILING PATTERN:

Nail shingles approximately 6 7/8" (174 mm) from bottom of shingle, in nailing area, as shown. Nails must not be exposed. Not for use on Mansard roofs (21:12 slope and above).

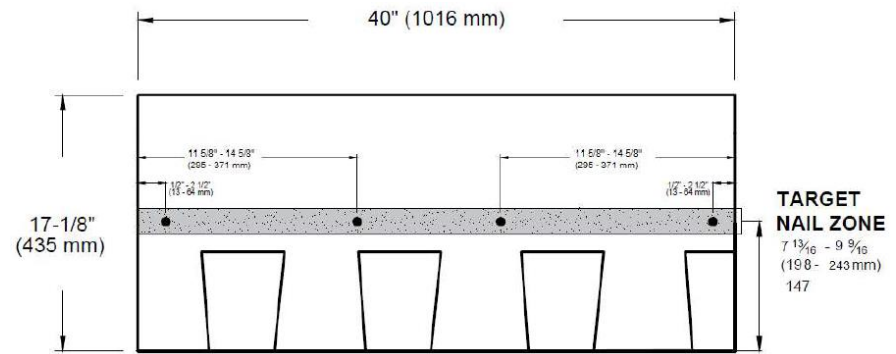
6.3.2.2 Fortitude®, Timberline® AH, Timberline® CS and Timberline® HDZ®; slopes greater than 21:12



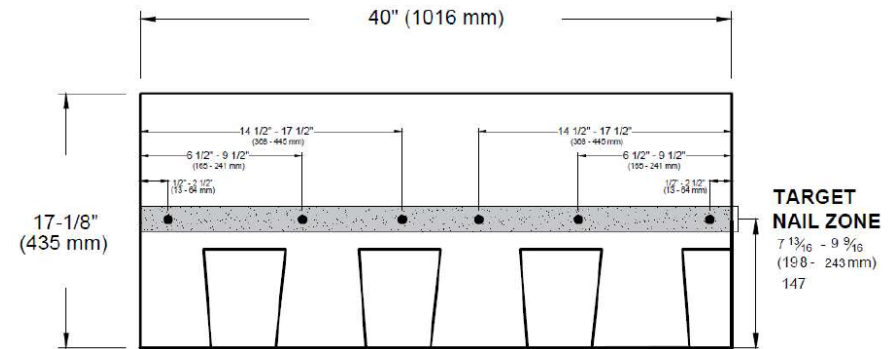
ENHANCED NAILING PATTERN:*

These shingles **MUST** be nailed a nominal 6" (152 mm) from bottom of shingle, above the cut-outs, as shown. Nails must not be exposed.

6.3.2.3 Timberline® Solar HDZ®; slopes 2:12 up to 21:12.

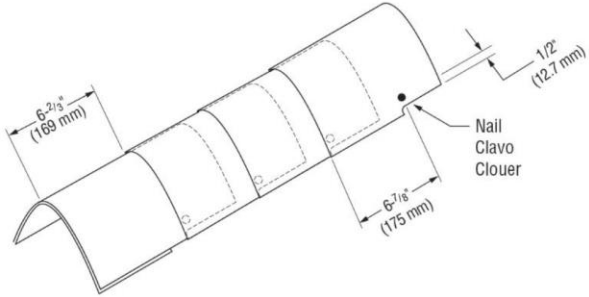


6.3.2.4 Timberline® Solar HDZ®; slopes greater than 21:12

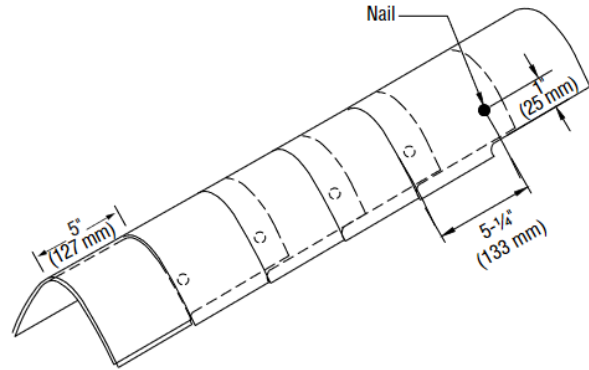


6.4 HIP & RIDGE SHINGLES:

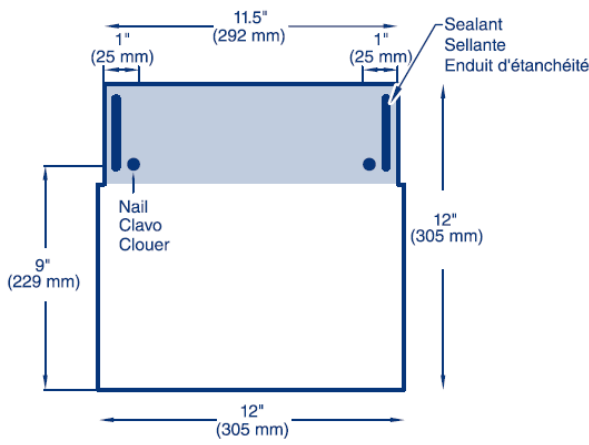
6.4.1 Installation of Seal-A-Ridge® Ridge Cap Shingles shall comply with the GAF current published instructions with a minimum two (2) nails, minimum 3/8-inch head diameter located 6-7/8-inch back from the exposed end and 0.5-inch from the edge.



6.4.2 Installation of Seal-A-Ridge® AS ArmorShield® SBS-Modified IR Ridge Cap Shingles shall comply with the GAF current published instructions with a minimum two (2) nails, minimum 3/8-inch head diameter, per shingle located 5.25-inch back from the exposed end and 1-inch from the edge.



6.4.3 Installation of Timbertex® Premium Ridge Cap Shingles shall comply with GAF current published instructions with a minimum two (2) nails, minimum 3/8-inch head diameter, per shingle and beads of Henkel “Loctite PL Roof & Flashing Polyurethane Sealant”.



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:

Contact the named QA entity for manufacturing facilities covered by **F.A.C. Rule 61G20-3** QA requirements. Refer to Section 4 herein for products and production locations having met codified material standards.

9. QUALITY ASSURANCE ENTITY:

UL, LLC – QUA9625: (360) 817-5512; bsai.inspections@ul.com

- END OF EVALUATION REPORT -