City of Belle Isle

Universal Engineering Sciences 3532 Maggie Blvd., Orlando, FL 32811
Tel 407-581-8161 * Fax 407-581-0313 * www.universalengineering.com

PERMIT CARD – PLEASE POST AT JOB SITE

THIS DOCUMENT BECOMES YOUR PERMIT WHEN PROPERLY VALIDATED

Per FBC 105.3.3: An enforcing authority may not issue a building permit for any building construction, erection, alteration, modification, repair or addition unless the permit either includes on its face or there is attached to the permit the following statement: "**NOTICE: In addition to the requirements of this permit, there may be additional restrictions applicable to this property that may be found in the public records of this county, and there may be additional permits required from other governmental entities such as water management districts, state agencies, or federal agencies.**" The issuance of this permit does not grant permission to violate any applicable City, Orange County, State of Florida and/or Federal codes and/or ordinances. Separate permits are required for Signs, Roofing, Electrical, Gas, Plumbing and Mechanical services. This permit becomes VOID if the work authorized is not commenced within 6 months, or is suspended or abandoned for a period of 6 months after commencement. WORK SHALL BE CONSIDERED SUSPENDED IF AN APPROVED INSPECTION HAS NOT BEEN MADE WITHIN A 6 MONTH PERIOD. PERMISSION IS GRANTED TO DO THE FOLLOWING WORK ACCORDING TO THE CONDITIONS HEREON AND THE APPROVED PLANS AND SPECIFICATIONS, SUBJECT TO COMPLIANCE WITH THE ORDINANCES OF THE CITY OF BELLE ISLE, FLORIDA.

Scope of Work: ROOF: New Roof over existing patio

Comments: Separate Building Permit 2018-08-002 has been issued

Project Information

Address: 3219 Cullen Lake Shore Dr, Belle Isle, FL 32812
Parcel ID: 17-23-30-4378-04-040
Property Owner: Caplan, Carolyn & John
Phone Number: 407 859 5531

****

Company Name: BY OWNER
Contractor Name:
License Number:
Address:
Phone Number:

Permit Number: 2016-08-003

Date of Application: 07/29/2016
Date Permit Issued: 08/01/2016

WARNING TO OWNER: "YOUR FAILURE TO RECORD A NOTICE OF COMMENCEMENT MAY RESULT IN YOU PAYING TWICE FOR IMPROVEMENTS TO YOUR PROPERTY. IF YOU INTEND TO OBTAIN FINANCING, CONSULT WITH YOUR LENDER OR AN ATTORNEY BEFORE RECORDING YOUR NOTICE OF COMMENCEMENT." ON THE JOB INSPECTION(S) MUST BE MADE BEFORE PROCEEDING WITH SUBSEQUENT WORK. THIS CARD MUST BE DISPLAYED OUTSIDE AND BE PROTECTED FROM THE WEATHER WHILE BEING VISIBLE FROM THE STREET UNTIL THE FINAL INSPECTIONS HAVE BEEN APPROVED.

BUILDING FEATURES

IMPACT FEES

School	$
Traffic	$

ZONING FEES

Zoning Fee	$none - new

UNIVERSAL ENG - BUILDING FEES

Demo	$
Building	$
Fence	$
Driveway	$
Shed	$
Window(s)	$
Door(s)	$
PrePower	$
Electrical	$
Temp Pole	$
Plumbing	$
Mechanical	$
Gas	$
Roofing	$45.00
Boat Dock	$
Screen Encl	$
Swimming Pool	$

SURCHARGE FEES

Surcharge Fee	$2.00
Surcharge Fee	$2.00

TOTAL FEES $49.00

Date Paid 8-3-16

CC or Check # 3517

Amount Paid 49.00

The person accepting this permit shall conform to the terms of the application on file and construction shall conform to the requirements of the Florida Building Code (FS 553).

BUILDING INSPECTOR USE ONLY

IF APPLICABLE:

Have Zoning Approval Conditions Been Met? YES NO **Have Stormwater Approval Conditions Been Met?** YES NO **Silt fencing in place?** YES NO **Turbidity Barrier in place?** YES NO

☐ **BUILDING**

1st _____ (Footing/Foundation)
Survey specific foundation plan must be onsite before slab pour. Approved Plan on Site? ____

2nd _____ (Slab)

3rd _____ (Lintel)(Wall Reinforcing on Masonry Building)

4th _____ (Exterior Framing)(Roof/Wall Sheathing)

5th _____ (Framing) (To be made after Plumbing/ Mechanical/ Electrical Rough-Ins & Windows/Doors Installed)

6th _____ (Insulation to be Made After Roof Installed)

7th _____ (Drywall)

8th _____ (Sidewalk/Driveway)

9th _____ (Other)

10th _____ (Final – After MEP and Other Applicable Finals)

☐ **ROOFING**

1ST ROOFING Deck Nailing/Dry-in/Flashing _____

2nd ROOFING Covering In-Progress _____

3rd ROOFING Covering Final _____

☐ **PLUMBING** (Pool-Piping, Solar, Irrigation, Water Treatment Equip, Etc...)

1ST _____ (Underground) 2nd _____ (Sewer)

3rd _____ (Rough-In/Tub Set) 4th _____ (Final)

CHECK APPROPRIATE BOX

☐ **GAS** __Natural ___LP ☐ **MECHANICAL** ☐**ELECTRICAL** ☐ **LOW VOLTAGE**

1st _____ (Rough-In) 2nd _____ (Final)

Inspection requests are to be emailed to BIDscheduling@UniversalEngineering.com; a confirmation email will be sent back to you upon scheduling. Next-Day Inspection requests must be made by 4pm. Please include the following in your request: Permit #, project address, type of inspection, date of the requested inspection, a contact name & a contact phone number. AM or PM may be requested but cannot be guaranteed.

For a copy of your permit, or to check inspection results, please visit https://universalengineering.sharefile.com
login ID = cobi@universalengineering.com password = universal13

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AUG 01 2016
BY:

City of Belle Isle

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APPLICATION FOR ROOFING PERMIT

WARNING TO OWNER: YOUR FAILURE TO RECORD A NOTICE OF COMMENCEMENT MAY RESULT IN YOUR PAYING TWICE FOR IMPROVEMENTS TO YOUR PROPERTY. A NOTICE OF COMMENCEMENT MUST BE RECORDED AND POSTED ON THE JOB SITE BEFORE THE FIRST INSPECTION. IF YOU INTEND TO OBTAIN FINANCING, CONSULT WITH YOUR LENDER OR AN ATTORNEY BEFORE RECORDING YOUR NOTICE OF COMMENCEMENT.

DATE OF APPLICATION: July 29 2016 **ROOF PERMIT NUMBER** 2016-08-003

PLEASE PRINT. The undersigned hereby applies for a permit to make installations as indicated below:

Project Address 3219 Cullen Lake Shore Dr, Belle Isle, FL ___32809 ✓32812

Property Owner John & Carolyn Caplan Phone 407 859-5531

Property Owner's Mailing Address 3219 Cullen Lake Shore Dr City Belle Isle

State FL Zip Code 32812 **Parcel Id Number:** 17-23-30-4378-04-040

REQUIRED! To obtain this information, please visit http://www.ocpafl.org/Searches/ParcelSearch.aspx

Class of Building: Old ☐ New ☑ **Type of Building:** Residential ☑ Commercial ☐ Other ☐

Type of Work: New Roof ☑ ReRoof ☐

- **REQUIRED! Florida Product Approval Screen Printout from www.floridabuilding.org showing the Code Version**
- **REQUIRED! Florida Product Approval Installation Instructions from www.floridabuilding.org (not the manufacturer instructions)**
- **REQUIRED! Copies of your General Liability & Worker's Comp Insurance Certificate & State and Local Licenses**

Please indicate the nature of work by completing the information below:

Roof Square Footage: 350 **Number of Stories:** 1 **Job Valuation: $** 1500.00

Type: Asphalt Shingles ☑ Metal ☐ Modified Bitumen ☐ Other: _____

I hereby certify that the above is true and correct to the best of my knowledge and make Application for Permit as outlined above, and if same is granted I agree to conform to all Florida Building Code Regulations and City Ordinances regulating same and in accordance with plans submitted. The issuance of this permit does not grant permission to violate any applicable Town and/or State of Florida codes and/or ordinances. By signing below, I recognize Republic Services is by legal contract the sole authorized provider of garbage, recycling, yard waste, and commercial garbage and construction debris collection and disposal services with the city limits of the City. Contractors, homeowners and commercial businesses may contact Republic Services at 407-293-8000 to setup accounts for Commercial, Construction Roll Off, or other services needed. Rates are fixed by contract and are available at City Hall or from Republic Services. The City enforces the contract through its code enforcement office. Failure to comply will result in a stop work order.

LICENSE HOLDER SIGNATURE BY OWNER LICENSE # _____

LICENSE HOLDER NAME _____ COMPANY NAME _____

Street Address _____

City _____ State _____ Zip Code _____ Phone Number _____

Email Address _____

Building Official _____ Date 8.1.16

Verified Contractor's Licenses & Insurance are on file ☑ Date 8-1-16 O/B discussion

Zoning Fee	$ 0 (new)
Permit Fee	$ 30
Review Fee	$ 15
3% Florida Surcharge	$ 4
Total Permit Fee	$ 49.00

NOTE: The Building Permit Number is required if the Roof Installation is associated with any construction or alteration where a Building Permit has been issued. Building Permit Number _____

1ST 1K 25
15x1
1/30 ÷ 2 (NEW)
15
45

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OWNER BUILDER DISCLOSURE STATEMENT

Per Florida Statue 455.228:

Homeowners hiring unlicensed Contractors may be subject a fine of up to $5,000.00!

Before me this day personally appeared John Caplan, who being duly sworn, deposes, and says as follows. "I hereby acknowledge that I have read and fully understand the individual provisions of this instrument."

1. I understand that state law requires construction to be done by a licensed contractor and have applied for an owner-builder permit under an exemption from the law. The exemption specifies that I, as the owner of the property listed, may act as my own contractor with certain restrictions even though I do not have a license _____ Initial

2. I understand that building permits are not required to be signed by a property owner unless he or she is responsible for the construction and is not hiring a licensed contractor to assume responsibility. _____ Initial

3. I understand that, as an owner-builder, I am the responsible party of record on a permit. I understand that I may protect myself from potential financial risk by hiring a licensed contractor and having the permit filed in his or her name instead of my own name. I also understand that a contractor is required by law to be licensed in Florida and to list his or her license numbers on permits and contracts. _____ Initial

4. I understand that I may build or improve a one-family or two-family residence or a farm outbuilding. I may also build or improve a commercial building if the costs do not exceed $75,000.00. The building or residence must be for my own use or occupancy. It may not be built or substantially improved for sale or lease. If a building or residence that I have built or substantially improved myself is sold or leased within 1 year after the construction is complete, the law will presume that I built or substantially improved it for sale or lease, which violates the exemption. _____ Initial

5. I understand that, as the owner-builder, I must provide direct, onsite supervision of the construction. Initial

6. I understand that I may not hire an unlicensed person to act as my contractor or to supervise persons working on my building or residence. It is my responsibility to ensure that the persons whom I employ have the licenses required by law and by county or municipal ordinance. _____ Initial

7. I understand that it is a frequent practice of unlicensed persons to have the property owner obtain an owner-builder permit, that erroneously implies that the property owner is providing his or her own labor and materials. I, as an owner-builder, may be held liable and subjected to serious financial risk for any injuries sustained by an unlicensed person or his or her employees while working on my property. My homeowner's insurance may not provide coverage for those injuries. I am willfully acting as an owner-builder and am aware of the limits of my insurance coverage for injuries to workers on my property. _____ Initial

8. I understand that I may not delegate the responsibility for supervising work to a licensed contractor who is not licensed to perform the work being done. Any person working on my building who is not licensed must work under my direct supervision and must be employed by me, which means that I must comply with laws requiring the withholding of federal income tax and social security contributions under the Federal Insurance Contributions Act (FICA) and must provide workers' compensation for the employee. I understand that my failure to follow these laws may subject me to serious financial risk. _____ Initial

9. I agree that, as the party legally and financially responsible for this proposed construction activity, I will abide by all applicable laws and requirements that govern owner-builders as well as employers. I also understand that the construction must comply with all applicable laws, ordinances, building codes, and zoning regulations. _____ Initial

10. I understand that I may obtain more information regarding my obligations as an employer from the Internal Revenue Service, the United States Small Business Administration, the Florida Department of Financial Services, and the Florida Department of Revenue. I also understand that I may contact the Florida Construction Industry Licensing Board at (850)487-1395 or www.Call.Center@dbpr.state.fl.us for more information about licensed contractors. _____ Initial

11. I am aware of, and consent to, an owner-builder building permit applied for in my name and understand that I am the party legally and financially responsible for the proposed construction activity at the following address:
Project Address: 3219 Cullen Lake Shore Dr Orl FL 32812 ____ Initial

12. I agree to notify the City of Belle Isle Building/Zoning Department immediately of any additions, deletions, or changes to any of the information that I have provided on this disclosure. ____ Initial

13. FBC 105.3.6 requires asbestos abatement to be done by licensed contractors. You have applied for a permit under an exemption to that law. The exemption allows you, as the owner of your property, to act as your own asbestos abatement contractor even though you do not have a license. You must supervise the construction yourself. You may move, remove or dispose of asbestos-containing materials on a residential building where you occupy the building and the building is not for sale or lease, or the building is a farm outbuilding on your property. If you sell or lease such building within 1 year after the asbestos abatement is complete, the law will presume that you intended to sell or lease the property at the time the work was done, which is a violation of this exemption. You may not hire an unlicensed person as your contractor. Your work must be done according to all local, state and federal laws and regulations which apply to asbestos abatement projects. It is your responsibility to make sure that people employed by you have licenses required by state law and by county or municipal licensing ordinances. ____ Initial

Licensed contractors are regulated by laws designed to protect the public. If you contract with a person who does not have a license, the Construction Industry Licensing Board and Department of Business and Professional Regulation may be unable to assist you with financial loss that you sustain as a result of a complaint. Your only remedy against an unlicensed contractor may be in civil court. It is also important for you to understand that, if any unlicensed contractor or employee of an individual or firm is injured while working on your property, you may be held liable for damages. If you obtain an owner-builder permit and wish to hire a licensed contractor, you will be responsible for verifying whether the contractor is property licensed and the status of the contractor's workers' compensation coverage.

Before a building permit can be issued, this disclosure statement must be completed and signed by the property owner and returned to the local permitting agency responsible for issuing the permit. A copy of the property owner's driver license, the notarized signature of the property owner, or other type of verification acceptable to the local permitting agency is required when the permit is issued.

Signature: _____ Print: John W. Caplan
(Signature of the property owner) (Name of the property owner)

Signature: _____ Print: _____
(Signature of the property owner) (Name of the property owner)

Owner's Address: 3219 Cullen Lake Shore Dr, Belle Isle

The foregoing instrument was acknowledged before me this 07 / 29 / 16

by John W. Caplan who is personally known to me / who produced the following

FL DL # C145-479-58-066-0 as identification and who did not take an oath.

State of Florida / County of Orange Seal:

Notary Signature Collina Gast

COLLINA GAST
Commission # FF 079689
Expires February 19, 2018
Bonded Thru Troy Fain Insurance 800-385-7019

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BY:

Product Approval Form

DATE: July 28 2016 PERMIT # 201608-003

PROJECT ADDRESS 3219 Cullen Lake Shore Dr, Belle Isle, FL 32809 ✓ 32812

As required by Florida Statue 553.842 and Florida Administrative Code 9B-72m, please provide the information and approval numbers of the building components listed below if they will be utilized on the building or structure. FL Approved products are listed online at **www.floridabuilding.org** or can be obtained from the local product supplier. The following information must be turned in with permit application and available onsite for inspections:

1. **This Product Approval Cover Sheet**
2. **Internet screen from FloridaBuilding.org showing PA#, approval and code edition stamped**
3. **Manufacturer's *installation* details from FloridaBuilding.org and requirements for each product stamped**

Product Type	Manufacturer	Model/Series	FL Product Approval #
EXTERIOR DOORS			
Swinging			
Sliding			
Sectional/Rollup			
Other			
WINDOWS			
Single/Dbl Hung			
Horizontal Slider			
Casement			
Fixed			
Mullion			
Skylights			
Other			
STRUCTURAL COMPONENTS			
Wood Connectors			
Wood Anchors			
Truss Plates			
Insulation Forms			
Lintels			
Other			

Product Type	Manufacturer	Model/Series	FL Product Approval #
WALL PANELS			
Sliding			
Soffits			
Storefront			
Glass Block			
Other			
ROOFING PRODUCTS			
Asphalt Shingles			1956-R12
Non Struct Metal			
Roofing Tiles			
Single Ply Roof			
Underlayment			10626-R12
Other			
OTHER			

It is the applicant's responsibility to verify that specific products have been installed in accordance with their limitations and with the minimum required design pressures for the structure. Specific compliance will be verified during field inspections.

Applicant Signature _____ Date 7/28/16

FL #	FL1956-R12
Application Type	Editorial Change
Code Version	2014
Application Status	Approved
	*Approved by DBPR. Approvals by DBPR shall be reviewed and ratified by the POC and/or the Commission if necessary.
Comments	
Archived	
Product Manufacturer	TAMKO Building Products, Inc.
Address/Phone/Email	PO Box 1404 Joplin, MO 64802 (417) 624-6644 Ext 2305 kerri_eden@tamko.com
Authorized Signature	Kerri Eden kerri_eden@tamko.com
Technical Representative	Kerri Eden
Address/Phone/Email	PO Box 1404 Joplin, MO 64802 (417) 624-6644 Ext 2305 kerri_eden@tamko.com
Quality Assurance Representative	
Address/Phone/Email	
Category	Roofing
Subcategory	Asphalt Shingles
Compliance Method	Certification Mark or Listing
Certification Agency	UL LLC
Validated By	Robert J. M. Nieminen, PE ✓ Validation Checklist - Hardcopy Received

Referenced Standard and Year (of Standard)

Standard	Year
ASTM D3161	2009
ASTM D3462	2009
ASTM D7158	2008

Equivalence of Product Standards Certified By	
Product Approval Method	Method 1 Option A
Date Submitted	09/17/2015

Date Validated	10/06/2015
Date Pending FBC Approval	
Date Approved	10/09/2015

Summary of Products

FL #	Model, Number or Name	Description
1956.1	Elite Glass-Seal	A three tab asphalt shingle.
Limits of Use **Approved for use in HVHZ:** No **Approved for use outside HVHZ:** Yes **Impact Resistant:** N/A **Design Pressure:** N/A **Other:** Asphalt shingles shall be used only on roof slopes of 2:12 or greater. Nails must be used as the method of attachment.		**Certification Agency Certificate** FL1956_R12_C_CAC_FL1956_R11_C_CAC_Tamko_Serv_Conf_FL_1956_2015.pdf FL1956_R12_C_CAC_UL_certification_10-11-12.pdf **Quality Assurance Contract Expiration Date** 09/17/2018 **Installation Instructions** FL1956_R12_II_Glass_Seal_Elite_Glass_Seal_app_inst.pdf Verified By: Robert Nieminen 59166 Created by Independent Third Party: No **Evaluation Reports** Created by Independent Third Party:
1956.2	Glass-Seal	A three tab asphalt shingle.
Limits of Use **Approved for use in HVHZ:** No **Approved for use outside HVHZ:** Yes **Impact Resistant:** N/A **Design Pressure:** N/A **Other:** Asphalt shingles shall be used only on roof slopes of 2:12 or greater. Nails must be used as the method of attachment.		**Certification Agency Certificate** FL1956_R12_C_CAC_FL1956_R11_C_CAC_Tamko_Serv_Conf_FL_1956_2015.pdf FL1956_R12_C_CAC_UL_certification_10-11-12.pdf **Quality Assurance Contract Expiration Date** 09/17/2018 **Installation Instructions** FL1956_R12_II_Glass_Seal_Elite_Glass_Seal_app_inst.pdf Verified By: Robert Nieminen PE 59166 Created by Independent Third Party: No **Evaluation Reports** Created by Independent Third Party:
1956.3	Heritage	A dimensional asphalt shingle.
Limits of Use **Approved for use in HVHZ:** No **Approved for use outside HVHZ:** Yes **Impact Resistant:** N/A **Design Pressure:** N/A **Other:** Asphalt shingles shall be used only on roof slopes of 2:12 or greater. Nails must be used as the method of attachment.		**Certification Agency Certificate** FL1956_R12_C_CAC_FL1956_R11_C_CAC_Tamko_Serv_Conf_FL_1956_2015.pdf FL1956_R12_C_CAC_UL_certification_10-11-12.pdf **Quality Assurance Contract Expiration Date** 09/17/2018 **Installation Instructions** FL1956_R12_II_Heritage_D_F_J_P_app inst.pdf FL1956_R12_II_Heritage_F_app_inst.pdf FL1956_R12_II_Heritage_T_app_inst.pdf Verified By: Robert J. M. Nieminen FL 59166 Created by Independent Third Party: No **Evaluation Reports** Created by Independent Third Party:
1956.4	Heritage 30	A dimensional asphalt shingle.
Limits of Use **Approved for use in HVHZ:** No **Approved for use outside HVHZ:** Yes **Impact Resistant:** N/A **Design Pressure:** N/A **Other:** Asphalt shingles shall be used only on roof slopes of 2:12 or greater. Nails must be used as the method of attachment.		**Certification Agency Certificate** FL1956_R12_C_CAC_FL1956_R11_C_CAC_Tamko_Serv_Conf_FL_1956_2015.pdf FL1956_R12_C_CAC_UL_certification_10-11-12.pdf **Quality Assurance Contract Expiration Date** 09/17/2018 **Installation Instructions** FL1956_R12_II_heritage_30_app_inst_april_10.pdf FL1956_R12_II_heritage_30_app_inst_f_april_10.pdf Verified By: Robert Nieminen PE 59166 Created by Independent Third Party: No **Evaluation Reports** Created by Independent Third Party:
1956.5	Heritage 50	A dimensional asphalt shingle.
Limits of Use **Approved for use in HVHZ:** No **Approved for use outside HVHZ:** Yes **Impact Resistant:** N/A **Design Pressure:** N/A **Other:** Asphalt shingles shall be used only on roof slopes of 2:12 or greater. Nails must be used as the method of attachment.		**Certification Agency Certificate** FL1956_R12_C_CAC_FL1956_R11_C_CAC_Tamko_Serv_Conf_FL_1956_2015.pdf FL1956_R12_C_CAC_UL_certification_10-11-12.pdf **Quality Assurance Contract Expiration Date** 09/17/2018 **Installation Instructions** FL1956_R12_II_heritage_50_app_inst_april_10.pdf FL1956_R12_II_heritage_50_app_inst_f_april_10.pdf Verified By: Robert Nieminen PE 59166 Created by Independent Third Party: No **Evaluation Reports** Created by Independent Third Party:

1956.6	Heritage Premium	A dimensional asphalt shingle.
Limits of Use **Approved for use in HVHZ:** No **Approved for use outside HVHZ:** Yes **Impact Resistant:** N/A **Design Pressure:** N/A **Other:** Asphalt shingles shall be used only on roof slopes of 2:12 or greater. Nails must be used as the method of attachment.		**Certification Agency Certificate** FL1956_R12_C_CAC_FL1956_R11_C_CAC_Tamko_Serv_Conf_FL_1956_2015.pdf FL1956_R12_C_CAC_UL_certification_10-11-12.pdf **Quality Assurance Contract Expiration Date** 09/17/2018 **Installation Instructions** FL1956_R12_II_Heritage_Premium_D_P_app_inst.pdf FL1956_R12_II_Heritage_Premium_F_app_inst.pdf FL1956_R12_II_Heritage_Premium_T_app_inst.pdf Verified By: Robert Nieminen 59166 Created by Independent Third Party: No **Evaluation Reports** Created by Independent Third Party:

1956.7	Heritage Vintage	A heavy weight dimensional asphalt shingle.
Limits of Use **Approved for use in HVHZ:** No **Approved for use outside HVHZ:** Yes **Impact Resistant:** N/A **Design Pressure:** N/A **Other:** Asphalt shingles shall be used only on roof slopes of 2:12 or greater. Nails must be used as the method of attachment.		**Certification Agency Certificate** FL1956_R12_C_CAC_FL1956_R11_C_CAC_Tamko_Serv_Conf_FL_1956_2015.pdf FL1956_R12_C_CAC_UL_shingle_matrix.pdf **Quality Assurance Contract Expiration Date** 09/17/2018 **Installation Instructions** FL1956_R12_II_Heritage_Vintage_app_inst.pdf Verified By: Robert J. M. Nieminen PE 59166 Created by Independent Third Party: No **Evaluation Reports** Created by Independent Third Party:

1956.8	Heritage Vintage 12 X 12 Hip and Ridge	Hip and ridge shingles
Limits of Use **Approved for use in HVHZ:** No **Approved for use outside HVHZ:** Yes **Impact Resistant:** N/A **Design Pressure:** N/A **Other:** Asphalt shingles shall be used only on roof slopes of 2:12 or greater. Nails must be used as the method of attachment.		**Certification Agency Certificate** FL1956_R12_C_CAC_FL1956_R11_C_CAC_Tamko_Serv_Conf_FL_1956_2015.pdf FL1956_R12_C_CAC_UL_shingle_matrix.pdf **Quality Assurance Contract Expiration Date** 09/17/2018 **Installation Instructions** FL1956_R12_II_TAMKO®_Heritage®_12_x_12_Hip_and_Ridge_Application_Instructions.pdf Verified By: Robert J. M. Nieminen PE 59166 Created by Independent Third Party: No **Evaluation Reports** Created by Independent Third Party:

1956.9	Heritage Woodgate	A dimensional asphalt shingle.
Limits of Use **Approved for use in HVHZ:** No **Approved for use outside HVHZ:** Yes **Impact Resistant:** N/A **Design Pressure:** N/A **Other:** Asphalt shingles shall be used only on roof slopes of 2:12 or greater. Nails must be used as the method of attachment.		**Certification Agency Certificate** FL1956_R12_C_CAC_FL1956_R11_C_CAC_Tamko_Serv_Conf_FL_1956_2015.pdf FL1956_R12_C_CAC_UL_certification_10-11-12.pdf **Quality Assurance Contract Expiration Date** 09/17/2018 **Installation Instructions** FL1956_R12_II_Heritage_Woodgate_D_app_inst.pdf FL1956_R12_II_Heritage_Woodgate_F_app_inst.pdf Verified By: Robert Nieminen 59166 Created by Independent Third Party: No **Evaluation Reports** Created by Independent Third Party:

1956.10	Heritage XL	A dimensional asphalt shingle.
Limits of Use **Approved for use in HVHZ:** No **Approved for use outside HVHZ:** Yes **Impact Resistant:** N/A **Design Pressure:** N/A **Other:** Asphalt shingles shall be used only on roof slopes of 2:12 or greater. Nails must be used as the method of attachment.		**Certification Agency Certificate** FL1956_R12_C_CAC_FL1956_R11_C_CAC_Tamko_Serv_Conf_FL_1956_2015.pdf FL1956_R12_C_CAC_UL_certification_10-11-12.pdf **Quality Assurance Contract Expiration Date** 09/17/2018 **Installation Instructions** FL1956_R12_II_heritage_xl_app_inst_d_april_10.pdf FL1956_R12_II_heritage_xl_app_inst_f_april_10.pdf Verified By: Robert Nieminen PE 59166 Created by Independent Third Party: No **Evaluation Reports** Created by Independent Third Party:

1956.11	Hip and Ridge Shingles	Hip and ridge shingles
Limits of Use **Approved for use in HVHZ:** No		**Certification Agency Certificate** FL1956_R12_C_CAC_FL1956_R11_C_CAC_Tamko_Serv_Conf_FL_1956_2015.pdf FL1956_R12_C_CAC_UL_certification_10-11-12.pdf

Approved for use outside HVHZ: Yes **Impact Resistant:** N/A **Design Pressure:** N/A **Other:** Hip and Ridge shingles shall be used only on roof slopes of 2:12 or greater. Nails must be used as the method of attachment.	**Quality Assurance Contract Expiration Date** 09/17/2018 **Installation Instructions** FL1956_R12_II_12.25x12_Hip_and_Ridge.pdf FL1956_R12_II_12_x_12_Hip_Ridge_Application_Instructions.pdf FL1956_R12_II_12-1-4x12_HipRidge_Sealant_Dab_Illustrations.pdf FL1956_R12_II_12x12_HipRidge_Sealant_Dab_Illustrations.pdf Verified By: Robert Nieminen 59166 Created by Independent Third Party: No **Evaluation Reports** Created by Independent Third Party:

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TAMKO BUILDING PRODUCTS

ELITE GLASS-SEAL®
GLASS-SEAL
3-TAB ASPHALT SHINGLES

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THESE ARE THE MANUFACTURER'S APPLICATION INSTRUCTIONS FOR THE ROOFING CONDITIONS DESCRIBED. TAMKO BUILDING PRODUCTS, INC. ASSUMES NO RESPONSIBILITY FOR LEAKS OR OTHER ROOFING DEFECTS RESULTING FROM FAILURE TO FOLLOW THE MANUFACTURER'S INSTRUCTIONS. FAILURE TO FOLLOW THESE INSTRUCTIONS WILL ADVERSELY AFFECT COVERAGE UNDER THE LIMITED WARRANTY. SEE THE LIMITED WARRANTY FOR DETAILS.

THIS PRODUCT IS COVERED BY A LIMITED WARRANTY, THE TERMS OF WHICH ARE PRINTED ON THE WRAPPER.

IN COLD WEATHER (BELOW 40°F), CARE MUST BE TAKEN TO AVOID DAMAGE TO THE EDGES AND CORNERS OF THE SHINGLES.

IMPORTANT: It is not necessary to remove the plastic strip from the back of the shingles.

I. ROOF DECK

These shingles are for application to roof decks consisting of plywood or sheathing boards capable of receiving and retaining fasteners, and to inclines of not less than 2 in. per foot. For roofs having pitches 2 in. per foot to less than 4 in. per foot, refer to special instructions titled "Low Slope Application". For roofs having pitches greater than 21 in. per foot, refer to special instructions titled "Mansard Roof or Steep Slope Roof". Shingles must be applied properly. TAMKO assumes no responsibility for leaks or defects resulting from improper application, or failure to properly prepare the surface to be roofed over.

NEW ROOF DECK CONSTRUCTION: Roof deck must be smooth, dry and free from warped surfaces. It is recommended that metal drip edges be installed at eaves and rakes.

PLYWOOD: All plywood shall be exterior grade as defined by the Engineered Wood Association. Plywood shall be a minimum of 3/8 in. thickness and applied in accordance with the recommendations of the Engineered Wood Association.

SHEATHING BOARDS: Boards shall be well-seasoned tongue-and-groove boards and not over 6 in. nominal width. Boards shall be a 1 in. nominal minimum thickness. Boards shall be properly spaced and nailed.

2. VENTILATION

Inadequate ventilation of attic spaces can cause accumulation of moisture in winter months and a build up of heat in the summer. These conditions can lead to:

1. Vapor Condensation
2. Buckling of shingles due to deck movement.
3. Rotting of wood members.
4. Premature failure of roof.

To insure adequate ventilation and circulation of air, place louvers of sufficient size high in the gable ends and/or install continuous ridge and soffit vents. FHA minimum property standards require one square foot of net free ventilation area to each 150 square feet of space to be vented, or one square foot per 300 square feet if a vapor barrier is installed on the warm side of the ceiling or if at least one half of the ventilation is provided near the ridge. If the ventilation openings are screened, the total area should be doubled.

IT IS PARTICULARLY IMPORTANT TO PROVIDE ADEQUATE VENTILATION.

3. FASTENERS

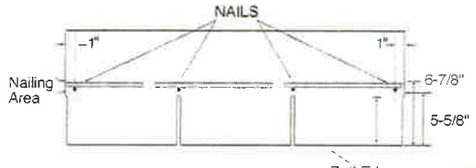
NAILS: TAMKO recommends the use of nails as the preferred method of application.

WIND CAUTION: Extreme wind velocities can damage these shingles after application when proper sealing of the shingles does not occur. This can especially be a problem if the shingles are applied in cooler months or in areas on the roof that do not receive direct sunlight. These conditions may impede the sealing of the adhesive strips on the shingles. The inability to seal down may be compounded by prolonged cold weather conditions and/or blowing dust. In these situations, hand sealing of the shingles is required. To insure immediate sealing, apply 4 quarter-sized dabs of TAM-PRO® Premium SBS Adhesive or TAMKO Tam-Seal Adhesive on the back of the shingle 1 in. (25mm) and 13 in. (330mm) in from each side and 1 in. (25mm) up from the bottom of the shingle. Press shingle firmly into the adhesive. For maximum wind resistance along rakes, cement shingles to the underlayment and each other in a 4 in. (102mm) width of TAM-PRO SBS Adhesive or TAMKO Tam-Seal Adhesive. Caution: Apply ONLY a thin uniform layer of adhesive less than 1/8 in. (3mm) thick. Excessive amounts can cause blistering of the shingles and may soften the asphalt in certain underlayments resulting in the asphalt flowing, dripping and staining. Shingles must also be fastened according to the fastening instructions described below.

Correct placement of the fasteners is critical to the performance of the shingle. If the fasteners are not placed as shown in the diagram and described below, this will result in the termination of TAMKO's liabilities under the Limited Warranty. TAMKO will not be responsible for damage to shingles caused by winds in excess of the applicable mph as stated in the Limited Warranty. See Limited Warranty for details.

FASTENING PATTERNS: Fasteners must be placed above or below the factory applied sealant in an area between 5-5/8 in. and 6-7/8 in. from the butt edge of the shingle. Fasteners should be located horizontally according to the diagram below. Do not nail into the sealant. TAMKO recommends nailing below the sealant whenever possible for greater wind resistance.

1) Standard Fastening Pattern. (For use on decks with slopes 2 in. per foot to 21 in. per foot.) One fastener 1 in. back from each end and one 12 in. back from each end of the shingle for a total of 4 fasteners. (See Standard Fastening Pattern illustrated below).

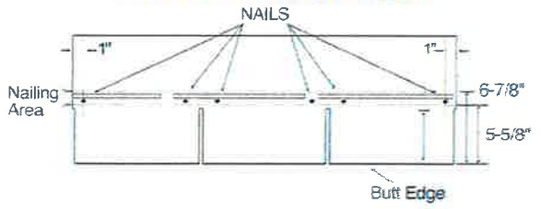


(Continued)

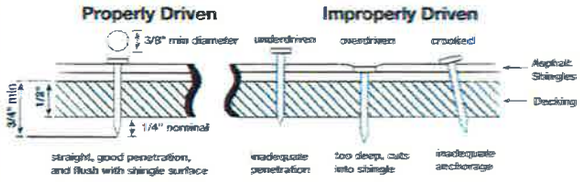
(CONTINUED from page 1)

2) Mansard Fastening Pattern. (For use on decks with slopes greater than 21 in. per foot.) One fastener 1 in. back from each end and one fastener 10-1/2 in. back from each end and one fastener 13-1/2 in. back from each end for a total of 6 fastener per shingle. (See Mansard Fastening Pattern illustrated below.)

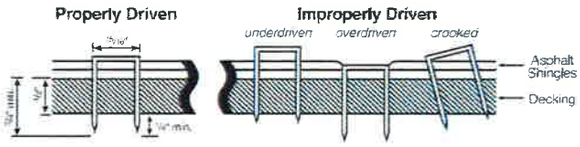
MANSARD FASTENING PATTERN



NAILS: TAMKO recommends the use of nails as the preferred method of application. Standard type roofing nails should be used. Nail shanks should be made of minimum 12-gauge wire, and a minimum head diameter of 3/8 in. Nails should be long enough to penetrate 3/4 in. into the roof deck. Where the deck is less than 3/4 in. thick, the nails should be long enough to penetrate completely through plywood decking and extend at least 1/8 in. through the roof deck. Drive nail head flush with the shingle surface.



STAPLES: If staples are used in the attaching process, follow the above instructions for placement. All staples must be driven with pneumatic staplers. The staple must meet the following minimum dimensional requirements. Staples must be made from a minimum 16 gauge galvanized wire. Crown width must be at least 15/16 in. (staple crown width is measured outside the legs). Leg length should be a minimum of 1-1/4 in. for new construction and 1-1/2 in. for reroofing thus allowing a minimum deck penetration of 3/4 in. The crown of the staple must be parallel to the length of the shingle. The staple crown should be driven flush with the shingle surface. Staples that are crooked, underdriven or overdriven are considered improperly applied.



CAUTION: DO NOT FASTEN INTO THE FACTORY APPLIED ADHESIVE.

4. UNDERLAYMENT

UNDERLAYMENT: An underlayment must be applied over the entire deck before the installation of TAMKO shingles. Failure to add underlayment can cause premature failure of the shingles which is not covered by TAMKO's Limited Warranty.

Products which are acceptable for use as underlayment are:

Asphalt Saturated Felt Underlayments:

- TAMKO No. 15 Asphalt Saturated Organic Felt
- Any TAMKO non-perforated asphalt saturated organic felt
- A non-perforated asphalt saturated organic felt which meets ASTM: D226, Type I or II or ASTM D4869

Specialty Underlayments:

- Tam-Shield® Synthetic Underlayment
- TAMKO TW Metal and Tile Underlayment, TW Underlayment and Moisture Guard Plus® (additional ventilation may be required. Contact TAMKO's Technical Services Department for more information.)

For Asphalt Saturated Felt Underlayments:

Apply the felt when the deck is dry. On roof decks with slopes 4 in. per foot and greater apply the felt parallel to the eaves lapping each course of the felt over the lower course at least 2 in. Where ends join, lap the felt 4 in. If left exposed, the felt may be adversely affected by moisture and weathering. Laying of the felt and the shingle application must be done together.

For All Other Specialty Underlayments:

On roof decks with slopes 4 in. per foot and greater apply the underlayment parallel to the eaves in accordance with underlayment written application instructions. The underlayment should not be left exposed for a longer period of time than is specified in the underlayments written application instructions. The final roof covering must be installed before the structure is exposed to adverse weather conditions, such as wind driven rain, high wind, hail, ice storms, etc.

In areas where ice builds up along the eaves or a back-up of water from frozen or clogged gutters is a potential problem, TAMKO's Moisture Guard Plus®, TW Metal and Tile Underlayment or TW Underlayment (or any specialty eaves flashing product) may be applied to eaves, rakes, ridges, valleys, around chimneys, skylights or dormers to help prevent water damage. Contact TAMKO's Technical Services Department for more information.

Substitute products as shingle underlayment should not be used.

(Continued)

TAMKO BUILDING PRODUCTS

ELITE GLASS-SEAL®
GLASS-SEAL
3-TAB ASPHALT SHINGLES

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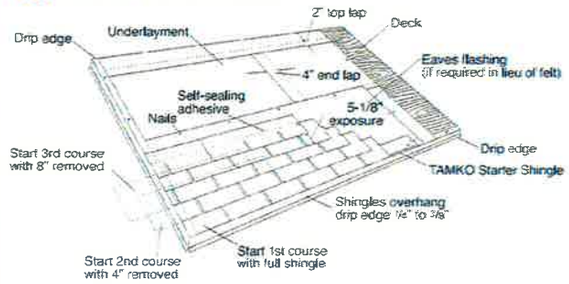
5. APPLICATION INSTRUCTIONS

STARTER COURSE: A starter course may consist of TAMKO Shingle Starter, self-sealing 3-tab shingles or a 9 inch wide strip of mineral surface roll roofing. If self-sealing 3-tab shingles are used, remove the exposed tab portion and install with the factory applied adhesive adjacent to the eaves. Attach the starter course with approved fasteners along a line parallel to and 3 in. to 4 in. above the eaves edge. The starter course should overhang both the eaves and rake edges 1/4 in. to 3/8 in. If a roll roofing is used, seal down the shingles in the first course by applying adhesive cement in four spots equally spaced to the surface of the starter strip and press the shingle down on the spots of cement. Plastic cement should be used sparingly, as excessive amounts may cause blistering.

SHINGLE APPLICATION: There are three different offset methods for applying strip shingles: the 4-inch method, the 5-inch method and the 6-inch method. By removing different lengths from the first shingle, cutouts in one course of shingles do not line up directly with those of the course below. It is recommended that the shingles be laid according to one of these methods consistent with procedures outlined in ARMA's Residential Asphalt Roofing Manual. This panel will feature the 4-inch method. For information regarding the other methods, please refer to the ARMA Residential Asphalt Roofing Manual.

CAUTION: Never use an alignment system where shingle joints are closer than 4 in. to one another.



6. LOW SLOPE APPLICATION

On pitches 2 in. per foot to 4 in. per foot cover the deck with two layers of underlayment. Begin by applying the underlayment in a 1/2-sheet width along the eaves and overhanging the drip edge by 1/4 to 3/4 in. Place a full-sheet width over the 1/2-sheet width starter piece, completely overlapping it. All succeeding courses will be positioned to overlap the preceding course by 1/2-sheet width. If winter temperatures average 25°F or less, thoroughly cement the laps of the entire underlayment to each other with TAM-PRO or TAMKO Plastic Roof Cement from eaves and rakes to a point of a least 24 in. inside the interior wall line of the building. As an alternative, TAMKO's Moisture Guard Plus® self-adhering waterproofing underlayment may be used in lieu of the cemented felts.

7. MANSARD ROOF OR STEEP SLOPE ROOF

If the slope exceeds 21 in. per foot (60°), each shingle must be sealed with TAM-PRO SBS Adhesive or TAMKO Tam-Seal Adhesive immediately upon installation. Quarter-sized dabs of cement must be applied to shingles with a 5-1/8 in. exposure, use 6 fasteners per shingle. See Section 3 for the Mansard Fastening Pattern.

8. RE-ROOFING

Before re-roofing, be certain to inspect the roof decks. All plywood shall meet the requirements listed in Section 1.

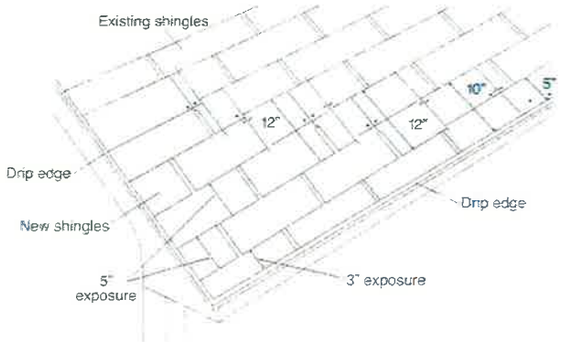
Nail down or remove curled or broken shingles from the existing roof. Replace all missing shingles with new ones to provide a smooth base. Shingles that are buckled usually indicate warped decking or protruding nails. Hammer down all protruding nails or remove them and refasten in a new location. Remove all drip edge metal and replace with new.

If re-roofing over an existing roof where new flashing is required to protect against ice dams (freeze/thaw cycle of water and/or the backup of water in frozen or clogged gutters), remove the old roofing to a point at least 24 in. beyond the interior wall line and apply TAMKO's Moisture Guard Plus® waterproofing underlayment. Contact TAMKO's Technical Services Department for more information.

The nesting procedure described below is the preferred method for re-roofing over square tab strip shingles with a 5-1/8 in. exposure.

Starter Course: Begin by using TAMKO Shingle Starter or by cutting shingles into 5-1/8 x 36 inch strips. This is done by removing the 5-1/8 in. tabs from the bottom and approximately 2 in. from the top of the shingles so that the remaining portion is the same width as the exposure of the old shingles. Apply the starter piece so that the self-sealing adhesive lies along the eaves and is even with the existing roof. The starter strip should be wide enough to overhang the eaves and carry water into the gutter. Remove 3 in. from the length of the first starter shingle to ensure that the joints from the old roof do not align with the new.

First Course: Cut off approximately 2 in. from the bottom edge of the shingles so that the shingles fit beneath the existing third course and align with the edge of the starter strip. Start the first course with a full 36 in. long shingle and fasten according to the instructions printed in Section 3.



Second and Succeeding Courses: According to the off-set application method you choose to use, remove the appropriate length from the rake end of the first shingle in each succeeding course. Place the top edge of the new shingle against the butt edge of the old shingles in the courses above. The full width shingle used on the second course will reduce the exposure of the first course to 3 in. The remaining courses will automatically have a 5-1/8 in. exposure.

(Continued)

TAMKO BUILDING PRODUCTS

ELITE GLASS-SEAL®
GLASS-SEAL
3-TAB ASPHALT SHINGLES

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9. VALLEY APPLICATION

Over the shingle underlayment, center a minimum 36 in. wide sheet of Moisture Guard Plus® or a minimum 50 lb. roll roofing in the valley. Nail the underlayment only where necessary to hold it in place and then only nail the outside edges.

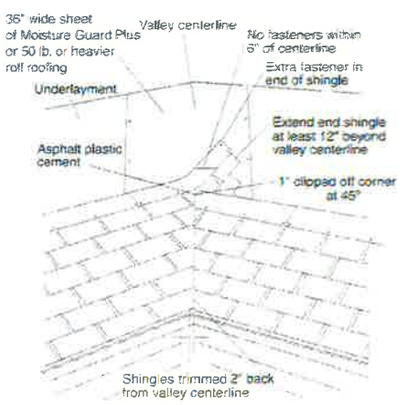
IMPORTANT: PRIOR TO INSTALLATION WARM SHINGLES TO PREVENT DAMAGE WHICH CAN OCCUR WHILE BENDING SHINGLES TO FORM VALLEY.

After valley flashing is in place:

- Apply the first course of shingles along the eaves of one of the intersecting roof planes and across the valley.

  Note: For proper flow of water over the trimmed shingle, always start applying the shingles on the roof plane that has the lower slope or less height.
- Extend the end shingle at least 12 in. onto the adjoining roof. Apply succeeding courses in the same manner, extending them across the valley and onto the adjoining roof.
- Do not trim if the shingle length exceeds 12 in. Lengths should vary.
- Press the shingles tightly into the valley.
- Use normal shingle fastening methods.

  Note: No fastener should be within 6 in. of the valley centerline, and two fasteners should be placed at the end of each shingle crossing the valley.
- To the adjoining roof plane, apply one row of shingles extending it over previously applied shingles and trim a minimum of 2 in. back from the centerline of the valley.
- Clip the upper corner of each shingle at a 45-degree angle and embed the end of the shingle in a 3 in. wide strip of asphalt plastic cement. This will prevent water from penetrating between the courses by directing it into the valley.
- **CAUTION:** Adhesive must be applied in smooth, thin, even layers. Excessive use of adhesive will cause blistering to this product. TAMKO assumes no responsibility for blistering.



FOR ALTERNATE VALLEY APPLICATION METHODS, PLEASE CONTACT TAMKO'S TECHNICAL SERVICES DEPARTMENT AT 800-641-4691.

10. HIP AND RIDGE FASTENING DETAIL

Apply the shingles with a 5-1/8 in. exposure beginning at the bottom of the hip or from the end of the ridge opposite the direction of the prevailing winds. Secure each shingle with one fastener 5-5/8 in. back from the exposed end and 1 in. up from the edge. Do not nail directly into the sealant.

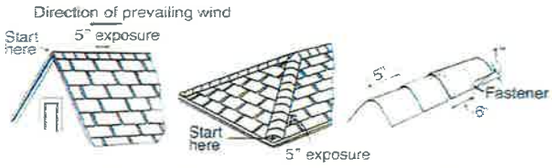
TAMKO recommends the use of TAMKO Hip & Ridge shingle products. Where matching colors are available, it is acceptable to use TAMKO's Glass-Seal or Elite Glass-Seal shingles cut down to 12 in. pieces.

NOTE: Use only Shingles and Hip & Ridge shingles with the Algae Relief feature on Glass-Seal or Elite Glass-Seal shingles with the Algae Relief feature.

Fasteners should be 1/4 in. longer than the one used for shingles.

IMPORTANT: PRIOR TO INSTALLATION, CARE NEEDS TO BE TAKEN TO PREVENT DAMAGE WHICH CAN OCCUR WHILE BENDING SHINGLES IN COOL WEATHER.

THESE ARE THE MANUFACTURER'S APPLICATION INSTRUCTIONS FOR THE ROOFING CONDITIONS DESCRIBED. TAMKO BUILDING PRODUCTS, INC. ASSUMES NO RESPONSIBILITY FOR LEAKS OR OTHER ROOFING DEFECTS RESULTING FROM FAILURE TO FOLLOW THE MANUFACTURER'S INSTRUCTIONS. FAILURE TO FOLLOW THESE INSTRUCTIONS WILL ADVERSELY AFFECT COVERAGE UNDER THE LIMITED WARRANTY. SEE THE LIMITED WARRANTY FOR DETAILS. IF YOU HAVE ANY QUESTIONS REGARDING THESE APPLICATION INSTRUCTIONS, PLEASE CONTACT TAMKO'S TECHNICAL SERVICES DEPARTMENT AT 800-641-4691.



Information included in these application instructions was current at time of printing. To obtain a copy of the most current version of these application instructions, visit us online at tamko.com or call us at 800-641-4691.

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Product Approval
USER: Public User

Product Approval Menu > Product or Application Search > Application List > **Application Detail**

OFFICE OF THE SECRETARY

FL #	FL10626-R12
Application Type	Revision
Code Version	2014
Application Status	Approved
Comments	
Archived	
Product Manufacturer	GAF
Address/Phone/Email	1 Campus Drive Parisppany, NJ 07054 (973) 872-4421 lindareith@trinityerd.com
Authorized Signature	Beth McSorley lindareith@trinityerd.com
Technical Representative	Beth McSorley (current)
Address/Phone/Email	1 Campus Drive Parsippany, NJ 07054 (973) 872-4421 bmcsorley@gaf.com
Quality Assurance Representative	
Address/Phone/Email	
Category	Roofing
Subcategory	Underlayments
Compliance Method	Evaluation Report from a Florida Registered Architect or a Licensed Florida Professional Engineer ✓ Evaluation Report - Hardcopy Received
Florida Engineer or Architect Name who developed the Evaluation Report	Robert Nieminen
Florida License	PE-59166
Quality Assurance Entity	UL LLC
Quality Assurance Contract Expiration Date	11/12/2016
Validated By	John W. Knezevich, PE ✓ Validation Checklist - Hardcopy Received
Certificate of Independence	FL10626_R12_COI_2015_01_COI_Nieminen.pdf

Referenced Standard and Year (of Standard)

Standard	Year
ASTM D1970	2009
ASTM D6164	2005
ASTM D6757	2007
FM 4474	2004
FRSA/TRI April 2012 (04-12)	2012
TAS 103	1995

Equivalence of Product Standards Certified By

Sections from the Code

Product Approval Method	Method 1 Option D
Date Submitted	03/31/2015
Date Validated	04/08/2015
Date Pending FBC Approval	04/12/2015
Date Approved	06/23/2015

Summary of Products

FL #	Model, Number or Name	Description
10626.1	GAF Roof Underlayments	Roofing underlayments for use in sloped roof systems
Limits of Use **Approved for use in HVHZ:** No **Approved for use outside HVHZ:** Yes **Impact Resistant:** N/A **Design Pressure:** +N/A/-45.0 **Other:** 1.) The design pressure noted in this application relates to one particular underlayment system for use under foam-on tile systems. Refer to ER Section 5.6.4 for details. 2.) Refer to ER Section 5 for other Limits of Use.		**Installation Instructions** FL10626_R12_II_2015_03_FINAL_ER_GAF_Underlayments_FL10626-R12.pdf Verified By: Robert Nieminen PE-59166 Created by Independent Third Party: Yes **Evaluation Reports** FL10626_R12_AE_2015_03_FINAL_ER_GAF_Underlayments_FL10626-R12.pdf Created by Independent Third Party: Yes

Back Next

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PHONE: (203) 262-9245
FAX: (203) 262-9243

TRINITY ERD

EVALUATION REPORT

GAF
1Campus Drive
Parsippany, NJ 07054

Evaluation Report 01506.04.08-R12
FL10626-R12
Date of Issuance: 04/25/2008
Revision 12: 03/31/2015

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 and Florida Building Code, Residential Volume. The products described herein have been evaluated for compliance with the 5th Edition (2014) Florida Building Code sections noted herein.

DESCRIPTION: GAF Roof Underlayments

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

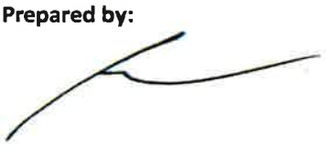
CONTINUED COMPLIANCE: This Evaluation Report is valid until such time as the named product(s) changes, the referenced Quality Assurance documentation changes, or provisions of the Code that relate to the product change. Acceptance of this Evaluation Report by the named client constitutes agreement to notify Robert Nieminen, P.E. if the product changes or the referenced Quality Assurance documentation changes. Trinity|ERD requires a complete review of this Evaluation Report relative to updated Code requirements with each Code Cycle.

ADVERTISEMENT: The Evaluation Report number preceded by the words "Trinity|ERD Evaluated" may be displayed in advertising literature. If any portion of the Evaluation Report is displayed, then it shall be done in its entirety.

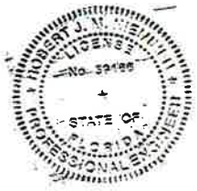
INSPECTION: Upon request, a copy of this entire Evaluation Report shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This Evaluation Report consists of pages 1 through 8.

Prepared by:



Robert J.M. Nieminen, P.E.
Florida Registration No. 59166, Florida DCA ANE1983



The facsimile seal appearing was authorized by Robert Nieminen, P.E. on 03/31/2015. This does not serve as an electronically signed document. Signed, sealed hardcopies have been transmitted to the Product Approval Administrator and to the named client

CERTIFICATION OF INDEPENDENCE:

1. Trinity|ERD 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. Trinity|ERD 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 Trinity|ERD 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: Underlayment
Compliance Statement: GAF Roof Underlayments, as produced by GAF, have demonstrated compliance with the following sections of the 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
1504.3.1	Wind Uplift	FM 4474	2004
1507.2.4, 1507.2.9.2, 1507.5.3, 1507.7.3	Physical Properties	ASTM D1970	2009
1507.2.3	Physical Properties	ASTM D6757	2007
1507.11.2	Physical Properties	ASTM D6164	2005
1523.6.5.2.1	Physical Properties	TAS 103	1995
1507.3.3	Installation Practice	FRSA/TRI April 2012 (04-12)	2012

3. REFERENCES:

Entity	Examination	Reference	Date
ERD (TST 6049)	Physical Properties	G12210.06.09	08/03/2009
ERD (TST 6049)	Physical Properties	G34150.08.11	11/14/2011
ERD (TST 6049)	Physical Properties	G40630.01.14-2B	01/07/2014
ERD (TST 6049)	Physical Properties	G46160SC	04/14/2014
PRI (TST 5878)	Physical properties	GAF-026-02-01	03/26/2002
PRI (TST 5878)	Physical properties	GAF-027-02-01	03/26/2002
PRI (TST 5878)	Physical properties	GAF-042-02-02	03/12/2004
PRI (TST 5878)	Physical properties	GAF-042-02-01	06/03/2005
PRI (TST 5878)	Physical properties	GAF-154-02-01	02/06/2007
PRI (TST 5878)	Physical properties	RGM-023-02-01	02/09/2007
PRI (TST 5878)	Physical properties	ELK-311-02-01	09/11/2007
PRI (TST 5878)	Physical properties	GAF-238-02-01	03/03/2010
PRI (TST 5878)	Physical properties	GAF-275-02-01	11/11/2010
PRI (TST 5878)	Physical properties	GAF-349-02-01	06/19/2012
PRI (TST 5878)	Wind Uplift	GAF-434-02-01	09/16/2013
PRI (TST 5878)	Wind Uplift	GAF-434-02-03	09/16/2013
PRI (TST 5878)	Wind Uplift	GAF-434-02-04	09/16/2013
ITS (TST 1509)	Physical properties	3077464-002	09/14/2005
ITS (TST 1509)	Physical properties	3077464-02	01/09/2006
UL (TST 1740)	Physical properties	02NK22569	06/04/2002
UL (TST 1740)	Physical properties	10NK11990	05/18/2011
Miami-Dade (CER 1592)	HVHZ compliance	13-1104.05	02/20/2014
Miami-Dade (CER 1592)	HVHZ compliance	13-1104.11	03/06/2014
Miami-Dade (CER 1592)	HVHZ compliance	14-1022.26	02/05/2015
ICC-ES (EVL2396)	IBC compliance	ESR-1322	01/01/2014
UL, LLC. (QUA 9625)	Quality Control	Inspect, File R10689, Stockton, CA	11/12/2014
UL, LLC. (QUA 9625)	Quality Control	Inspect, File R10689, Hickory, NC	03/04/2015
UL, LLC. (QUA 9625)	Quality Control	Inspect, File R10689, Mt. Vernon, IN	01/16/2015
UL, LLC. (QUA 9625)	Quality Control	Inspect, File R10689, Pryor, OK	02/05/2015

4. PRODUCT DESCRIPTION:

4.1 **Self-Adhering Underlayments:**

4.1.1 **Liberty™ SBS Self-Adhering Base/Ply Sheet** is a smooth-surfaced, fiberglass-reinforced, self-adhering SBS modified bitumen roof underlayment.

4.1.2 **StormGuard® Film Surfaced Leak Barrier** is a film-surfaced, fiberglass-reinforced, self-adhering SBS modified bitumen roof underlayment. StormGuard® Film Surfaced Leak Barrier is also used as a secondary water barrier to seal roof decks.

4.1.3 **UnderRoof™ 2 Polyester-Surfaced Leak Barrier** is a spun-bond-glass-reinforced-polyester-mat-surfaced, composite-reinforced, SBS self-adhering modified bitumen roof underlayment.

4.1.4 **UnderRoof™ HT High Temperature Leak Barrier** is a polyester-mat-surfaced, fiberglass-reinforced, self-adhering SBS modified bitumen roof underlayment.

4.1.5 **WeatherWatch® Mineral Surfaced Leak Barrier** is a mineral-surfaced, fiberglass-reinforced, self-adhering SBS modified bitumen roof underlayment. WeatherWatch® Mineral Surfaced Leak Barrier is also used as a secondary water barrier to seal roof decks.

4.1.6 **WeatherWatch® XT Mat Surfaced Leak Barrier** is a coated-mat-surfaced, fiberglass-reinforced, self-adhering SBS modified bitumen roof underlayment.

4.2 **Mechanically Fastened Underlayments:**

4.2.1 **VersaShield® Fire-Resistant Roof Deck Protection** is a non-asphaltic, fiberglass-based roof underlayment and/or fire barrier.

4.3 **Asphalt-Applied Underlayments:**

4.3.1 **Ruberoid® Mop Granule** is a granule-surfaced, polyester-reinforced, asphalt-applied SBS modified bitumen roof underlayment.

4.3.2 **Ruberoid® Mop Granule FR** ***(formerly Ruberoid® Mop 170 FR)*** is a granule-surfaced, polyester-reinforced, asphalt-applied SBS modified bitumen roof underlayment.

5. LIMITATIONS:

5.1 This is a building code evaluation. Neither Trinity|ERD 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 the HVHZ.

5.3 Fire Classification is not part of this Evaluation Report; refer to current Approved Roofing Materials Directory or test report from accredited testing agency for fire ratings of this product.

5.4 GAF Roof Underlayments may be used with any prepared roof cover where the product is specifically referenced within FBC approval documents. If not listed, a request may be made to the AHJ for approval based on this evaluation combined with supporting data for the prepared roof covering.

5.5 Allowable roof covers applied atop GAF Roof Underlayments are follows:

TABLE 1: ROOF COVER OPTIONS

Underlayment	Asphalt Shingles	Nail-On Tile	Foam-On Tile	Metal	Wood Shakes & Shingles	Slate or Simulated Slate
VersaShield® Fire-Resistant Roof Deck Protection	Yes	No	No	No	No	No
Liberty™ SBS Self-Adhering Base/Ply Sheet	Yes	No	No	No	No	No
StormGuard® Film Surfaced Leak Barrier	Yes	No	No	Yes	No	No
UnderRoof™ 2 Polyester-Surfaced Leak Barrier	Yes	Yes	Yes See 5.5.1	No	No	Yes
UnderRoof™ HT High Temperature Leak Barrier	Yes	No	No	Yes	No	No
WeatherWatch® Mineral Surfaced Leak Barrier	Yes	No	No	No	No	No
WeatherWatch® XT Mat Surfaced Leak Barrier	Yes	No	No	No	No	No
Ruberoid® Mop Granule	Yes	Yes	Yes See 5.5.1	No	Yes	Yes
Ruberoid® Mop Granule FR	Yes	Yes	Yes See 5.5.1	No	Yes	Yes

5.5.1 "Foam-On Tile" is limited to use of the following unless tensile adhesion / long term aging data from an accredited testing laboratory is provided.

Underlayment(s)	Adhesive Option(s)
UnderRoof™ 2 Polyester-Surfaced Leak Barrier	3M™ 2-Component Roof Tile Adhesive AH-160 (FL6332)
Ruberoid® Mop Granule; Ruberoid® Mop Granule FR	Dow TileBond (FL717)

5.6 Allowable substrates are noted below:

5.6.1 Liberty™ SBS Self-Adhering Base/Ply Sheet; StormGuard® Film Surfaced Leak Barrier; UnderRoof™ 2 Polyester-Surfaced Leak Barrier; UnderRoof™ HT High Temperature Leak Barrier; WeatherWatch® Mineral Surfaced Leak Barrier and WeatherWatch® XT Mat Surfaced Leak Barrier, Self-Adhered to Deck:

- New untreated plywood;
- Existing untreated ASTM D41 primed plywood.

Ruberoid® Mop Granule and Ruberoid® Mop Granule FR, Asphalt-Applied to Deck:

- ASTM D41 primed structural concrete.

5.6.2 Liberty™ SBS Self-Adhering Base/Ply Sheet; StormGuard® Film Surfaced Leak Barrier; UnderRoof™ 2 Polyester-Surfaced Leak Barrier; UnderRoof™ HT High Temperature Leak Barrier; WeatherWatch® Mineral Surfaced Leak Barrier and WeatherWatch® XT Mat Surfaced Leak Barrier, Self-Adhered to Mechanically Attached Base Underlayment:

- ASTM D226, Type II felt.
- StormSafe™ Anchor Sheet

Ruberoid® Mop Granule and Ruberoid® Mop Granule FR, Asphalt-Applied to Mechanically Attached Base Underlayment:

- GAFGLAS® #80 Ultima™ Base Sheet;
- Ruberoid® 20 Smooth.

For installations under mechanically attached prepared roof coverings, base layer shall be attached per minimum codified requirements. For installations under foam-on tile systems, base layer shall be attached per minimum requirements of FRSA/TRI April 2012 (04-12) or as detailed below.

5.6.3 Bond to Other Substrate Types:

- ASTM D41 primed metal (flashing metal, valley metal, etc.)

5.6.4 Wind Resistance for Underlayment Systems in Foam-On Tile Applications: FRSA/TRI April 2012 (04-12) does not address wind uplift resistance of all underlayment systems beneath foam-on tile systems, where the underlayment forms part of the load-path. The following wind uplift limitations apply to underlayment systems that are not addressed in FRSA/TRI April 2012 (04-12) and are used in foam-on tile applications. Maximum Design Pressure is the result of testing for wind load resistance based on allowable wind loads, and reflects the ultimate passing pressure divided by 2 (the 2 to 1 margin of safety per FBC 1504.9 has already been applied). Refer to FBC 1609 for determination of design wind loads.

5.6.4.1 Maximum Design Pressure = -45 psf.

Deck:	Min. 15/32-inch plywood to meet project requirements to satisfaction of AHJ.
Primer:	(Optional) ASTM D41
Underlayment:	UnderRoof™ 2 Polyester-Surfaced Leak Barrier, self-adhered

5.6.4.2 Maximum Design Pressure = -45 psf.

Deck:	Min. 19/32-inch plywood to meet project requirements to satisfaction of AHJ.
Base Layer:	GAFGLAS® #80 Ultima™ Base Sheet or Ruberoid® 20 Smooth mechanically attached with 12 ga., min. 1.25-inch long ring shank nails through 32 ga., 1-5/8 inch diameter tin caps spaced 9-inch o.c. at the 4-inch wide side laps and 9-inch o.c. at two (2), equally spaced, staggered center in the field of the sheet.
Top Layer:	Ruberoid® Mop Granule or Ruberoid® Mop Granule FR applied in full mopping of ASTM D312, Type IV hot asphalt at 20 to 25 lbs/square.

5.6.4.3 Maximum Design Pressure = -45 psf.

Deck:	Min. 19/32-inch plywood to meet project requirements to satisfaction of AHJ.
Base Layer:	GAFGLAS® #80 Ultima™ Base Sheet or Ruberoid® 20 Smooth mechanically attached with 12 ga., min. 1.25-inch long ring shank nails through 32 ga., 1-5/8 inch diameter tin caps spaced 8-inch o.c. at the 4-inch wide side laps and 8-inch o.c. at three (3), equally spaced, staggered center in the field of the sheet.
Top Layer:	Ruberoid® Mop Granule or Ruberoid® Mop Granule FR applied in full mopping of ASTM D312, Type IV hot asphalt at 20 to 25 lbs/square.

5.7 Exposure Limitations:

5.7.1 Liberty™ SBS Self-Adhering Base/Ply Sheet; StormGuard® Film Surfaced Leak Barrier; UnderRoof™ HT High Temperature Leak Barrier; WeatherWatch® Mineral Surfaced Leak Barrier and WeatherWatch® XT Mat Surfaced Leak Barrier shall not be left exposed for longer than 30-days after installation.

5.7.2 VersaShield® Fire-Resistant Roof Deck Protection, UnderRoof™ 2 Polyester-Surfaced Leak Barrier, Ruberoid® Mop Granule and Ruberoid® Mop Granule FR shall not be left exposed for longer than 180-days after installation.

6. INSTALLATION:

6.1 GAF Roof Underlayments shall be installed in accordance with GAF published installation instructions subject to the Limitations set forth in Section 5 herein and the specifics noted below.

6.2 Re-fasten any loose decking panels, and check for protruding nail heads. Sweep the substrate thoroughly to remove any dust and debris prior to application, and prime the substrate (if applicable).

6.3 Install self-adhering underlayments when ambient temperatures are minimum 45°F and rising.

6.4 All metal surfaces shall be primed with Matrix™ 307 Premium Asphalt Primer or alternate GAF accepted ASTM D41 primer prior to application of self-adhering membranes.

6.5 **VersaShield® Fire-Resistant Roof Deck Protection:**

6.5.1 Install VersaShield® Fire-Resistant Roof Deck Protection in compliance with manufacturer's published installation instructions and the requirements for ASTM D6757 underlayment in FBC Section 1507.2.3 for the type of prepared roof covering to be installed. A double layer is required for 2:12 ≤ roof slope < 4:12. No hammer tacks or staples are permitted

6.5.2 Optional, or if required by the Authority Having Jurisdiction: Install a leak barrier of Liberty™ SBS Self-Adhering Base/Ply Sheet; StormGuard® Film Surfaced Leak Barrier; UnderRoof™ 2 Polyester-Surfaced Leak Barrier; UnderRoof™ HT High Temperature Leak Barrier; WeatherWatch® Mineral Surfaced or WeatherWatch® XT Mat Surfaced Leak Barrier at vulnerable leak areas, including but not limited to eaves, valleys, rakes, skylights and dormers. At eaves and valleys, install the leak barrier prior to installation of the underlayment. Along the rake, install the underlayment, leaving 6 to 8-inch of the deck exposed, and then install the leak barrier over the underlayment and exposed decking. At other areas, install the leak barrier over the underlayment.

6.6 **Liberty™ SBS Self-Adhering Base/Ply Sheet:**

6.6.1 Install Liberty™ SBS Self-Adhering Base/Ply Sheet in compliance with manufacturer's published installation instructions and the requirements for ASTM D1970 underlayments in FBC Sections 1507 for the type of prepared roof covering to be installed.

6.6.2 The minimum and maximum roof slopes are ½:12 and 6:12, respectively. Back-nailing is required when slope is 1:12 or greater. Back-nailing shall consist of minimum 1-inch square or round cap nails spaced 18" o.c. within 3-inch side laps.

6.6.3 For non-tile applications, direct to deck:

For direct-bond to deck applications plywood shall be primed with Matrix™ 307 Premium Asphalt Primer or alternate GAF accepted ASTM D41 primer at ½ to ¾ gallon per square.

Prior to removal of release film, align sheets properly starting at the low-point of the roof (eave) with the selvage edge upslope and for minimum 2-inch overhang at eaves and rakes. Roll out sheet and allow to 'relax' for min. 30 minutes. Remove the lower piece of release film and bond to substrate and fold the overhanging 2-inch over the eave and nail into place 12" o.c. Remove the top piece of release film and bond to substrate. Install primed drip edge and fasten to meet FBC Chapter 16 wind load requirements. Install 1/8-inch troweling of Matrix™ 201 Premium SBS Flashing Cement over drip edge.

Continue upslope in a similar manner, maintaining minimum 3-inch side-laps and minimum 6-inch end-laps. Ensure all end laps are staggered at least 18-inch apart.

Use a weighted lawn or linoleum roller to ensure complete adhesion to the substrate. Use a hand roller to firmly bond side and end laps.

6.6.4 For non-tile applications, to mechanically attached anchor sheet:

Install ASTM D226, Type II felt in accordance with codified requirements or StormSafe™ Anchor Sheet in accordance with Section 6.6.

Install Liberty™ SBS Self-Adhering Base/Ply Sheet over the mechanically attached anchor sheet as noted above.

6.7 **StormGuard® Film Surfaced Leak Barrier:**

6.7.1 Install StormGuard® Film Surfaced Leak Barrier in compliance with manufacturer's published installation instructions and the requirements for ASTM D1970 underlayments in FBC Sections 1507 for the type of prepared roof covering to be installed.

6.7.2 Back-nailing is required. Back-nailing shall consist of minimum 1-inch square or round cap nails spaced 18" o.c. within 3-inch side laps.

6.7.3 For non-tile applications, direct to deck:

Prior to removal of release film, align sheets properly starting at the low-point of the roof (eave) with the selvage edge upslope and for minimum 2-inch overhang at eaves and rakes. Remove the lower piece of release film and bond to substrate and fold the overhanging 2-inch over the eave and nail into place 12" o.c. Remove the top piece of release film and bond to substrate. Install primed drip edge and fasten to meet FBC Chapter 16 wind load requirements. Install 1/8-inch troweling of Matrix™ 201 Premium SBS Flashing Cement over drip edge.

Continue upslope in a similar manner, maintaining minimum 3-inch side-laps and minimum 6-inch end-laps. Ensure all end laps are staggered at least 18-inch apart.

Use a hand roller to firmly bond side and end laps.

6.7.4 For non-tile applications, to mechanically attached anchor sheet:

Install ASTM D226, Type II felt in accordance with codified requirements or StormSafe™ Anchor Sheet in accordance with Section 6.6.

Install StormGuard® Film Surfaced Leak Barrier over the mechanically attached anchor sheet as noted above.

6.8 **UnderRoof™ 2 Polyester-Surfaced Leak Barrier:**

6.8.1 Install UnderRoof™ 2 Polyester-Surfaced Leak Barrier in compliance with manufacturer's published installation instructions and the requirements for ASTM D1970 underlayments in FBC Sections 1507 for the type of prepared roof covering to be installed.

6.8.2 The minimum and maximum roof slopes are 2:12 and 12:12, respectively. Back-nailing is required when slope is 4:12 or greater. Back-nailing shall consist of minimum 1-inch square or round cap nails spaced 12" o.c. within 4-inch side laps.

6.8.3 For tile roof installations:

Reference is made to FRSA/TRI April 2012 (04-12) Installation Manual and Table 1 herein, using the instructions noted herein as a guideline. Tile shall be loaded and staged in a manner that prevents tile slippage and/or damage to the underlayment.

6.8.4 For non-tile applications, direct to deck:

Prior to removal of release film, align sheets properly starting at the low-point of the roof (eave) with the selvage edge upslope and for minimum 2-inch overhang at eaves and rakes. Remove the lower piece of release film and bond to substrate and fold the overhanging 2-inch over the eave and nail into place 12" o.c. Remove the top piece of release film and bond to substrate. Install primed drip edge and fasten to meet FBC Chapter 16 wind load requirements. Install 1/8-inch troweling of Matrix™ 201 Premium SBS Flashing Cement over drip edge.

Continue upslope in a similar manner, maintaining minimum 4-inch side-laps and minimum 6-inch end-laps. Ensure all end laps are staggered at least 3-feet apart. End laps shall be sealed with a $1/16^{th}$ to $1/8^{th}$ inch thick trowel application of Matrix™ 201 Premium SBS Flashing Cement.

Use a hand roller to firmly bond side and end laps.

6.8.5 For non-tile applications, to mechanically attached anchor sheet:

Install ASTM D226, Type II felt in accordance with codified requirements or StormSafe™ Anchor Sheet in accordance with Section 6.6.

Install UnderRoof™ 2 Polyester-Surfaced Leak Barrier over the mechanically attached anchor sheet as noted above.

6.9 **UnderRoof™ HT High Temperature Leak Barrier:**

6.9.1 Install UnderRoof™ HT High Temperature Leak Barrier in compliance with manufacturer's published installation instructions and the requirements for ASTM D1970 underlayments in FBC Sections 1507 for the type of prepared roof covering to be installed.

6.9.2 The minimum and maximum roof slopes are 1:12 and 12:12, respectively. Back-nailing is required when slope is 4:12 or greater. Back-nailing shall consist of minimum 1-inch square or round cap nails spaced 12" o.c. within 4-inch side laps.

6.9.3 For non-tile applications, direct to deck:

Prior to removal of release film, align sheets properly starting at the low-point of the roof (eave) with the selvage edge upslope and for minimum 2-inch overhang at eaves and rakes. Remove the lower piece of release film and bond to substrate and fold the overhanging 2-inch over the eave and nail into place 12" o.c. Remove the top piece of release film and bond to substrate. Install primed drip edge and fasten to meet FBC Chapter 16 wind load requirements. Install 1/8-inch troweling of TopCoat® FlexSeal™ Caulk Grade over drip edge.

Continue upslope in a similar manner, maintaining minimum 4-inch side-laps and minimum 6-inch end-laps. Ensure all end laps are staggered at least 3-feet apart.

Use a hand roller to firmly bond side and end laps.

6.9.4 For non-tile applications, to mechanically attached anchor sheet:

Install ASTM D226, Type II felt in accordance with codified requirements or StormSafe™ Anchor Sheet in accordance with Section 6.7.

Install UnderRoof™ HT High Temperature Leak Barrier over the mechanically attached anchor sheet as noted above.

6.10 **WeatherWatch® Mineral Surfaced Leak Barrier or WeatherWatch® XT Mat Surfaced Leak Barrier:**

6.10.1 Install WeatherWatch® Mineral Surfaced Leak Barrier or WeatherWatch® XT Mat Surfaced Leak Barrier in compliance with manufacturer's published installation instructions and the requirements for ASTM D1970 underlayments in FBC Sections 1507 for the type of prepared roof covering to be installed.

6.10.2 WeatherWatch® Mineral Surfaced Leak Barrier may be installed as a secondary water barrier using minimum 4-inch wide rolls to seal plywood deck joints prior to installation of the primary underlayment system.

6.10.3 Back-nailing is required. Back-nailing shall consist of minimum 1-inch square or round cap nails spaced 18" o.c. within 4-inch side laps.

6.10.4 For non-tile applications, direct to deck:

Prior to removal of release film, align sheets properly starting at the low-point of the roof (eave) with the selvage edge upslope and for minimum 2-inch overhang at eaves and rakes. Remove the lower piece of release film and bond to substrate and fold the overhanging 2-inch over the eave and nail into place 12" o.c. Remove the top piece of release film and bond to substrate. Install primed drip edge and fasten to meet FBC Chapter 16 wind load requirements. Install 1/8-inch troweling of Matrix™ 201 Premium SBS Flashing Cement over drip edge.

Continue upslope in a similar manner, maintaining minimum 3-inch side-laps and minimum 6-inch end-laps. Ensure all end laps are staggered at least 18-feet apart.

Use a hand roller to firmly bond side and end laps.

6.10.5 For non-tile applications, to mechanically attached anchor sheet:

Install ASTM D226, Type II felt in accordance with codified requirements or StormSafe™ Anchor Sheet in accordance with Section 6.6.

Install WeatherWatch® Mineral Surfaced Leak Barrier or WeatherWatch® XT Mat Surfaced Leak Barrier over the mechanically attached anchor sheet as noted above.

6.11 **Ruberoid® Mop Granule; Ruberoid® Mop Granule FR:**

6.11.1 Shall be installed in compliance with current GAF published installation requirements, subject to the limitations herein.

6.11.2 Non-Tile Applications:

6.11.2.1 Fully adhere in ASTM D312, Type IV hot-asphalt to the substrates noted in Section 5.5. Side laps shall be minimum 4-inch and end-laps minimum 6-inch wide, and offset end-laps minimum 3-feet from course to course. Side and end-laps shall be fully adhered in a complete mopping of hot asphalt with asphalt extending approximately 3/8-inch beyond the lap edge. Consult GAF instructions regarding back-nailing requirements.

6.11.3 Tile Applications:

6.11.3.1 Refer to FRSA/TRI April 2012 (04-12) Installation Manual and Table 1 herein.

6.11.3.2 Tile shall be loaded and staged in a manner that prevents tile slippage and/or damage to the underlayment.

7. BUILDING PERMIT REQUIREMENTS:

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

8. MANUFACTURING PLANTS:

Contact the manufacturer or the named QA entity for information on plants covered under Rule 61G20-3 QA requirements.

9. QUALITY ASSURANCE ENTITY:

UL, LLC. – QUA9625; (847) 664-3281

- END OF EVALUATION REPORT -