City of Belle Isle Job Site Permit Card ROOF 2021-04-074

Class: Residential **Site Address:** 5106 St Marie Ave - Belle Isle, FL 32812

Parcel Number: 17-23-30-4378-02-040 . Municipality Belle Isle

INSPECTIONS CANNOT BE SCHEDULED IF A NOC IS PENDING FOR THIS PROJECT.

Description of Work: ROOF for SFR

Number of Stories: 1

ASPHALT SHINGLES with underlayment Square Footage: 3000.

MODIFIED BITUMEN Square Footage: 500.

==========

Issued: Issued: STRATUS ROOFING- FACEMIRE, ROGER WAYNE

License # CCC1326094

Contact# 407 625-5866

Payment/ Issued Date & Method: 4 / 19 / 2021

☐ Picked up by _____ ☐ Sent by mail to the mailing address ☑ Emailed

☐ Visa ☑ Master Card ☐ Amex ☐ Discover ☐ Check / Money Order#

8185

ROOF	INSPECTOR	DATE	COMMENTS
NEW ROOFS ONLY Code 700 Deck Nailing, Dry-In, Flashing			This inspection only applies for a NEW roof only!
Both new & re-roof Code 710 In - Progress			Underlayment & Dry-in with UP TO 25% shingle coverage.
Both new & re-roof Code 720 Final			Schedule when roof is COMPLETE.

PLEASE NOTE: In order to schedule any inspections, the **PERMIT / plans-specs.** must be issued and **POSTED** on the **JOB SITE! THIS WILL AVOID ANY FAILED INSPECTIONS & RE-INSPECTION FEES.** A permit **expires** in 6 months if approved inspections are not recorded /scheduled within that time frame. You are responsible for scheduling and keeping track all of your inspections -

☆ **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 3:00 p.m. Please include the following requirements in your request:**

- **Project Address**
- **Corresponding Permit Number**
- **Type of Inspection** (Please reference your permit card for inspection codes)
- **Date of Inspection** (If no date is specified, the inspection will be scheduled for the next business day)
- **Contact Name**
- **Contact Phone Number**
- **Gate / Entry code** (If applicable)
- **AM, PM, or Any Time** (We do our best to accommodate time requests but cannot guarantee an exact arrival)

Universal Engineering Sciences - 3532 Maggie Blvd., Orlando, FL 32811407-581-8161 * Fax 407-581-0313 www.universalengineering.com

"WARNING TO OWNER: YOUR FAILURE TO RECORD A NOTICE OF COMMENCEMENT MAY RESULT IN YOUR 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."

City of Belle Isle

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

APPLICATION FOR ROOFING PERMIT

RECEIVED BY: APR 14 2021

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: 4-9-21 **ROOF PERMIT NUMBER** 2021-04-074

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

Project Address 5106 St Marie Ave Orl FL 32807 Belle Isle, FL ___ 32809 X 32812

Property Owner Leblanc Investment Group LLC Phone 321 217 2021

Property Owner's Mailing Address 2423 S. Orange Ave City Orl FL 32806

State FL Zip Code 32806 **Parcel Id Number:** 17 23 30 4378 02 040

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 Form – NOTE: installation instructions must be posted on-site before your first inspection!!**

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

Roof Square Footage: 3500 **Number of Stories:** 1 **Job Valuation:** $ 11800 ✓

Type: Asphalt Shingles ☒ 30 Sq Metal ☐ Modified Bitumen ☒ 5 Sq 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 Roger Facemire LICENSE # CCC1326094

LICENSE HOLDER NAME Roger Facemire COMPANY NAME Stratus Roofing

Street Address 1081 9th St

City Winter Garden State FL Zip Code 34787 Phone Number 407-625-5866

Email Address RCABallero@stratusroofing.com

Building Official: OTC **Date** 4.14.2021

Verified Contractor's Licenses & Insurance are on file [signature] **Date** 4.14.2021

UPDATED

Zoning Fee	$ 30.00
Building Fee	$ 80.00
Review Fee	$ —
1% BCAIB Fee	$ 2.00
1.5% DCA Fee	$ 2.00
Total Permit Fee	$ 114.00

25 15th
55 5x11
80

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 ___

MC 81.85
PAID 4-19-2021

DOC # 20210221002
04/13/2021 15:05 PM Page 1 of 1
Rec Fee: $10.00
Deed Doc Tax: $0.00
Mortgage Doc Tax: $0.00
Intangible Tax: $0.00
Phil Diamond, Comptroller
Orange County, FL
Ret To: SIMPLIFILE LC

Permit Number: _____
Folio/Parcel Identification Number: 17-23-30-4378-02-040
Prepared by: _____
_____
Roger Facemire
Return to: _____
4310 Piermont Ct
Ocl FL 32817

NOTICE OF COMMENCEMENT

State of Florida, County of Orange
The undersigned hereby gives notice that improvement will be made to certain real property, and in accordance with Chapter 713, Florida Statutes, the following information is provided in this Notice of Commencement.

1. **Description of property** (legal description of the property, and street address if available)
   5106 St Marie Ave Orlando FL 32812
2. **General description of improvement**
   Re Roof
3. **Owner information or Lessee information if the Lessee contracted for the improvement**
   Name LeBlanc Investment Group LLC
   Address 2423 S Orange Ave Ocl FL 32806
   Interest in Property Owner
   Name and address of fee simple titleholder (if different from Owner listed above)
   Name _____
   Address _____
4. **Contractor**
   Name Roger Facemire Telephone Number 407 416 0206
   Address 4310 Piermont Ct Ocl FL 32817
5. **Surety** (if applicable, a copy of the payment bond is attached)
   Name N/A Telephone Number _____
   Address _____ Amount of Bond $ _____
6. **Lender**
   Name N/A Telephone Number _____
   Address _____
7. **Persons within the State of Florida designated by Owner upon whom notices or other documents may be served as provided by §713.13(1)(a)7, Florida Statutes.**
   Name _____ Telephone Number _____
   Address _____
8. **In addition to himself or herself, Owner designates the following to receive a copy of the Lienor's Notice as provided in §713.13(1)(b), Florida Statutes.**
   Name _____ Telephone Number _____
   Address _____
9. **Expiration date of notice of commencement** (the expiration date may not be before the completion of construction and final payment to the contractor, but will be 1 year from the date of recording unless a different date is specified) _____

WARNING TO OWNER: ANY PAYMENTS MADE BY THE OWNER AFTER THE EXPIRATION OF THE NOTICE OF COMMENCEMENT ARE CONSIDERED IMPROPER PAYMENTS UNDER CHAPTER 713, PART I, SECTION 713.13, FLORIDA STATUTES, AND CAN 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 COMMENCING WORK OR RECORDING YOUR NOTICE OF COMMENCEMENT.

Under penalty of perjury, I declare that I have read the foregoing notice of commencement and that the facts stated in it are true to the best of my knowledge and belief.

X _____
Signature of Owner or Lessee, or Owner's or Lessee's Authorized Officer/Director/Partner/Manager

Owner
Signatory's Title/Office

The foregoing instrument was acknowledged before me this 8 day of Apr 21 by Rima LeBlanc
month/year name of person

as Owner for _____
Type of authority, e.g., officer, trustee, attorney in fact Name of party on behalf of whom instrument was executed

_____
Signature of Notary Public – State of Florida

_____
Print, type, or stamp commissioned name of Notary Public

Personally Known ____ OR Produced ID X
Type of ID Produced DL

MY COMMISSION # HH 071978
EXPIRES: December 14, 2024
Bonded Thru Notary Public Underwriters

Form Revised: September 26, 2011

State of FLORIDA. County of ORANGE.
Per §668.50, F.S., which defines and permits electronic signatures, I certify that this is a true copy of the document as reflected in the Official Records.
PHIL DIAMOND, COUNTY COMPTROLLER

Jose Rivera 04/14/2021
Deputy Comptroller Date

COUNTY COMPTROLLER SEAL ORANGE COUNTY, FLORIDA

CITY OF BELLE ISLE, FLORIDA

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

POWER OF ATTORNEY

Date: 4/14/2021 Permit #: _____

I hereby name and appoint ROSSMAR CABALLERO (print name) of STRAUS Roofing (company name) to be my lawful attorney-in-fact to act for me and apply to the City of Belle Isle Building Department for a Roofing (type of permit) permit for work to be performed at the following location:

5106 St Mazie Ave (street address), Belle Isle, FL ☐ 32809 ☒ 32812 and

to sign my name and do all things necessary to this appointment.

Certified Contractor's Printed Name: Roger Freemire

License Number: CCC 1326094

Certified Contractor's Signature: Roger Jr

The foregoing instrument was acknowledged before me this 14 days of 04 of 2021

by Roger Freemire who is personally known to me or who produced _____ as identification and who did not take an oath.

State of Florida
County of Orange

Martha Sanchez
Notary Public Orange County, Florida

MARTHA SANCHEZ
MY COMMISSION # HH 071978
EXPIRES: December 14, 2024
Bonded Thru Notary Public Underwriters

(seal)

City of Belle Isle

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

Product Approval Form

DATE: 4/9/21 PERMIT #_____

PROJECT ADDRESS 5106 St MARIE Av Belle Isle, FL 32809 X 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:

* NOTE: The installation instructions must be posted on-site before your first inspection!!

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			
Siding			
Soffits			
Storefront			
Glass Block			
Other			
ROOFING PRODUCTS			
Asphalt Shingles	Certainteed	Landmark	5444.R16
Non Struct Metal			
Roofing Tiles			
Single Ply Roof			
Underlayment	Poly glass	DRK	5254.1
Other			
Modified	Certainteed	SA Flintastic	2533-R24
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 Roy Jr Date 4/9/21

FL #	FL5444-R16
Application Type	Revision
Code Version	2020
Application Status	Approved
Comments	
Archived	
Product Manufacturer Address/Phone/Email	CertainTeed, LLC (Roofing) 20 Moores Road Malvern, PA 19355 (610) 893-5400 mark.d.harner@saint-gobain.com
Authorized Signature	Mark Harner mark.d.harner@saint-gobain.com
Technical Representative Address/Phone/Email	Mark D. Harner 18 Moores Road Malvern, PA 19355 (610) 651-5847 Mark.D.Harner@saint-gobain.com
Quality Assurance Representative Address/Phone/Email	
Category	Roofing
Subcategory	Asphalt Shingles
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	11/13/2022
Validated By	John W. Knezevich, PE Validation Checklist - Hardcopy Received
Certificate of Independence	FL5444_R16_COI_2020_01_COI_NIEMINEN.pdf

Referenced Standard and Year (of Standard)	Standard	Year
	ASTM D3161	2016
	ASTM D3462	2010
	ASTM D7158	2019

Equivalence of Product Standards Certified By	
Sections from the Code	

Product Approval Method	Method 1 Option D
Date Submitted	07/30/2020
Date Validated	08/04/2020
Date Pending FBC Approval	08/08/2020
Date Approved	10/13/2020

Summary of Products

FL #	Model, Number or Name	Description
5444.1	CertainTeed Asphalt Roof Shingles	3-tab, 4-tab, strip (no-cut-outs), laminated and architectural asphalt roof 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:** Refer to ER Section 5 for Limits of Use		**Installation Instructions** FL5444_R16_II_2020_07_24_FINAL_ER_CERTAINTEED_FL5444-R16.pdf Verified By: Robert Nieminen, PE PE-59166 Created by Independent Third Party: Yes **Evaluation Reports** FL5444_R16_AE_2020_07_24_FINAL_ER_CERTAINTEED_FL5444-R16.pdf Created by Independent Third Party: Yes

Back Next

NEMO|etc.
Certificate of Authorization #32455
353 Christian Street, Unit #13
Oxford, CT 06478
(203) 262-9245

ENGINEER EVALUATE TEST CONSULT

EVALUATION REPORT

CertainTeed, LLC
20 Moores Road
Malvern, PA 19355
(610) 893-5400

Evaluation Report 3532.09.05-R17
FL5444-R16
Date of Issuance: 09/22/2005
Revision 17: 07/24/2020

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: CertainTeed Asphalt Roof Shingles.

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|etc. 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 14.

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 07/24/2020. This does not serve as an electronically signed document.

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.

NEMO | etc.

ROOFING SYSTEMS EVALUATION:

1. SCOPE:

Product Category: Roofing
Sub-Category: Asphalt Shingles

Compliance Statement: **CertainTeed Asphalt Roof Shingles**, as produced by **CertainTeed, LLC**, 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
1507.2.5, 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

3. REFERENCES:

Entity	Examination	Reference	Date
PRI (TST 5878)	ASTM D3161	256T0015	08/12/2019
UL (TST 1740)	ASTM D3161	99NK26506	11/23/1999
UL (TST 1740)	ASTM D3161	03CA12702	05/27/2003
UL (TST 1740)	ASTM D3161	03CA12702	06/16/2003
UL (TST 1740)	ASTM D3161	03NK29847	10/03/2003
UL (TST 1740)	ASTM D3161	04CA11329	05/24/2004
UL (TST 1740)	ASTM D3161	04CA32986	12/03/2004
UL (TST 1740)	ASTM D3161	05NK07049	04/15/2005
UL (TST 1740)	ASTM D3161	05NK16778	05/12/2005
UL (TST 1740)	ASTM D3161	05CA16778	05/12/2005
UL (TST 1740)	ASTM D3161	05NK14836	05/22/2005
UL (TST 1740)	ASTM D3161	05NK22800	06/22/2005
UL (TST 1740)	ASTM D3462	R684	09/21/2005
UL (TST 1740)	ASTM D7158	05NK08037	06/28/2006
UL (TST 1740)	ASTM D3161 & D3462	09CA28873	07/23/2009
UL (TST 1740)	ASTM D3462	10CA41303	10/07/2010
UL (TST 1740)	ASTM D3161	10CA41303	10/08/2010
UL (TST 1740)	ASTM D7158	10CA41303	10/27/2010
UL (TST 1740)	ASTM D3161 & D3462	10CA44960	11/11/2010
UL LLC (TST 9628)	ASTM D3161, D3462 & D7158	13CA32897	11/21/2013
UL LLC (TST 9628)	ASTM D3161, D3462	TFWZ.R684	04/22/2014
UL LLC (TST 9628)	ASTM D7158	TGAH.R684	04/22/2014
UL LLC (TST 9628)	ASTM D3161 & D3462	4786334434	09/16/2014
UL LLC (TST 9628)	ASTM D3161 & D3462	4786570826	02/12/2015
UL LLC (TST 9628)	ASTM D3161	4786821352	02/21/2015
UL LLC (TST 9628)	ASTM D3161, D3462 & D7158	4786570717	12/16/2015
UL LLC (TST 9628)	ASTM D3161 & D3462	4787195678	02/09/2016
UL LLC (TST 9628)	ASTM D3161, D3462 & D7158	4787592174	10/21/2016
UL LLC (TST 9628)	ASTM D3161, D3462 & D7158	4787380356	10/26/2016
UL LLC (TST 9628)	ASTM D3462	4787380357	10/13/2016
UL LLC (TST 9628)	ASTM D7158	4787380357	11/08/2016
UL LLC (TST 9628)	ASTM D3161	4787380357	11/09/2016
UL LLC (TST 9628)	ASTM D3161, D3462 & D7158	4787586427	01/25/2017
UL LLC (TST 9628)	ASTM D3161 & D3462	4788042412	11/15/2017
UL LLC (TST 9628)	ASTM D3161, D3462 & D7158	4788362767	03/03/2018
UL LLC (QUA 9625)	Quality Control	Service Confirmation	11/13/2019

4. PRODUCT DESCRIPTION:

TABLE 1: ASPHALT SHINGLE COMPONENTS

Type	Product	Description	Material Standard	Plant(s)
Starter Strips	High-Performance Starter	Fiberglass reinforced starter shingle, measuring 10" x 36", for use with Grand Manor® and Highland Slate®	ASTM D3462	NC
	Presidential® Starter	Fiberglass reinforced starter shingle, measuring 13-1/4" x 40", with a reinforcement on the underside, for use with Presidential Shake® and Presidential Shake® TL	ASTM D3462	CA(F)
	Presidential® Starter IR	Fiberglass reinforced starter shingle, measuring 13-1/4" x 40", for use with Presidential Shake® IR	ASTM D3462	CA(F)
	SwiftStart® Starter Shingle	Fiberglass reinforced starter strip, measuring 15-1/4" x 38-3/4"	ASTM D3462	MN
	Universal Starter	Fiberglass reinforced starter shingle, measuring 7" x 36", for use with shingles measuring 12" x 36" having a weather exposure ≤ 5"	ASTM D3462	NC
Asphalt Shingles	CT 20™	Fiberglass reinforced, 3-tab asphalt roof shingle	ASTM D3462	LA, NC
	CT 20™ Metric			OR
	XT™ 25			LA, MN, NC, OH
	XT™ 25 Metric			OH, OR
	XT™ 30 IR			LA
	Highland Slate®	Fiberglass reinforced, 4-tab asphalt roof shingle	ASTM D3462	NC
	Arcadia™	Fiberglass reinforced, laminated asphalt roof shingle	ASTM D3462	CA(F)
	Belmont®			NC
	Belmont® IR			NC
	Carriage House®			NC
	Grand Manor®			NC
	Landmark®			CA(W), GA, LA, MA, MO, MN, NC, OH, OR, TX
	Landmark® Pro			CA(W), GA, MA, MO, MN, OH, NC
	Landmark® Pro Architect 80			OR
	Landmark Pro Solaris®			CA(W)
	Landmark® Premium			CA(W), MA, MN, OR, NC
	Landmark Solaris®			CA(W), OR
	Landmark Solaris® Gold/Platinum			OR
	Landmark® TL			CA(F)
	Landmark® TL Solaris			CA(F)
	NorthGate®	Fiberglass reinforced, laminated, SBS modified bitumen roof shingle	ASTM D3462	MN, OR
	Presidential Shake®	Fiberglass reinforced, architectural asphalt roof shingle	ASTM D3462	CA(F), MN
	Presidential Shake® IR			MN
	Presidential Shake® TL			CA(F), MN
	Presidential Solaris®			CA(F)
	Presidential TL Solaris			CA(F)
	Patriot	Fiberglass reinforced asphalt roof strip-shingle; laminated appearance	ASTM D3462	OH, OR

Note: Any of the above listed shingles may be produced in AR (algae resistant) versions

TABLE 1 (CONTINUED): ASPHALT SHINGLE COMPONENTS				
Type	**Product**	**Description**	**Material Standard**	**Plant(s)**
Hip & Ridge Shingles	Shangle Ridge®	Fiberglass reinforced accessory shingles for hip and ridge installation	ASTM D3462	NC
	Shadow Ridge®		ASTM D3462	MA, MN, NC, OH
	Shadow Ridge® Metric		ASTM D3462	OR
	Cedar Crest®		None	NC
	Cedar Crest® IR		None	NC
	NorthGate® Ridge		ASTM D3462	OR
	NorthGate® Accessory		ASTM D3462	MN

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**
CT 20™	ASTM D3161(F) & ASTM D7158(H)
CT 20™ Metric	ASTM D3161(F) & ASTM D7158(H)
XT™ 25	ASTM D3161(F) & ASTM D7158(H)
XT™ 25 Metric	ASTM D3161(F) & ASTM D7158(H)
XT™ 30 IR	ASTM D3161(F) & ASTM D7158(H)
Arcadia™	ASTM D3161(F) & ASTM D7158(H)
Belmont®	ASTM D3161(F) & ASTM D7158(H)
Belmont® IR	ASTM D3161(F) & ASTM D7158(H)
Carriage House®	ASTM D3161(F) & ASTM D7158(H)
Grand Manor®	ASTM D3161(F) & ASTM D7158(H)
Landmark®	ASTM D3161(F) & ASTM D7158(H)
Landmark® Pro	ASTM D3161(F) & ASTM D7158(H)
Landmark® Pro Architect 80	ASTM D3161(F) & ASTM D7158(H)
Landmark Pro Solaris®	ASTM D3161(F) & ASTM D7158(H)
Landmark® Premium	ASTM D3161(F) & ASTM D7158(H)
Landmark Solaris®	ASTM D3161(F) & ASTM D7158(H)
Landmark Solaris® Gold/Platinum	ASTM D3161(F) & ASTM D7158(H)
Landmark® TL	ASTM D3161(F) & ASTM D7158(H)
NorthGate®	ASTM D3161(F) & ASTM D7158(H)
Presidential Shake®	ASTM D3161(F) & ASTM D7158(H)
Presidential Shake® IR	ASTM D3161(F) & ASTM D7158(H)

TABLE 2A: WIND CLASSIFICATIONS, ASPHALT SHINGLES	
Product	**FBC Table 1507.2.7.1 or R905.2.6.1**
Presidential Shake® TL	ASTM D3161(F) & ASTM D7158(H)
Presidential Solaris®	ASTM D3161(F) & ASTM D7158(H)
Presidential TL Solaris	ASTM D3161(F) & ASTM D7158(H)
Highland Slate®	ASTM D3161(F) & ASTM D7158(H)
Patriot	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.

Analysis in accordance with ASTM D7158 indicates the measured uplift resistance (R_T or R_A) for the CertainTeed asphalt Roof shingles listed in Table 1 (*except Presidential Solaris®, Landmark Pro Solaris® and Landmark Solaris® Gold/Platinum*) exceeds the calculated uplift force (F_T) under the following conditions:

- maximum design wind speed of V_{asd} = 150 mph (V_{ult} = 194 mph)
- located in Exposure D conditions
- no topographical variations (flat terrain)
- having a mean roof height less than or equal to 60 feet.

The shingles (*except Presidential Solaris®, Landmark Pro Solaris® and Landmark Solaris® Gold/Platinum*) are permissible under Code for installation in these conditions using the installation procedures detailed in this Evaluation Report and CertainTeed minimum requirements, subject to minimum codified fastening requirements established within any local jurisdiction, which shall take precedence.

TABLE 2B: WIND CLASSIFICATIONS, STARTER STRIPS AND HIP & RIDGE		
Type	**Product**	**FBC Table 1507.2.7.1 or R905.2.6.1**
Starter Strips	High-Performance Starter	ASTM D3161, Class F
	Presidential® Starter	ASTM D3161, Class F
	Presidential® Starter IR	ASTM D3161, Class F
	SwiftStart® Starter Shingle	ASTM D3161, Class F
	Universal Starter	ASTM D3161, Class F
Hip & Ridge Shingles	Shangle Ridge®	ASTM D3161, Class F (sealant required, See Section 6)
	Shadow Ridge® *(NC production)*	ASTM D3161, Class F
	Shadow Ridge® *(MA, MN or OH production)*	ASTM D3161, Class F (sealant required, See Section 6)
	Shadow Ridge ® Metric *(OR production)*	ASTM D3161, Class F (sealant required, See Section 6)
	Cedar Crest®	ASTM D3161, Class F (sealant required, See Section 6)
	Cedar Crest® IR	ASTM D3161, Class F (sealant required, See Section 6)
	NorthGate® Ridge	ASTM D3161, Class F
	NorthGate® Accessory	ASTM D3161, Class F

5.5.2 **High-Performance Starter** shingles are limited to use with **Grand Manor®** and **Highland Slate®** shingles.

5.5.3 **Presidential® Starter** shingles must be applied using two (2) overlapping layers and are limited to use with **Presidential Shake®** and **Presidential Shake® TL** shingles.

5.5.4 **Presidential® Starter IR** shingles must be applied using two (2) overlapping layers and are limited to use with **Presidential Shake® IR** shingles.

5.5.5 **Universal Starter** shingles are limited to use with CertainTeed shingles measuring 12" x 36" having a weather exposure ≤ 5".

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 Roof deck, slope, underlayment and fasteners shall comply with **FBC 1507.2 / R905.2** and the shingle manufacturer's minimum requirements.

6.1.1 Underlayment shall be acceptable to **CertainTeed, LLC** 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.**

6.2 Installation of asphalt shingles shall comply with the **CertainTeed, LLC** current published instructions, using minimum four (4) nails per shingle in accordance with **FBC 1507.2.7** or **Section R905.2.6** and the minimum requirements herein.

6.2.1 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.

6.2.2 Where the roof slope exceeds 21 units vertical in 12 units horizontal, use the "Steep Slope" directions.

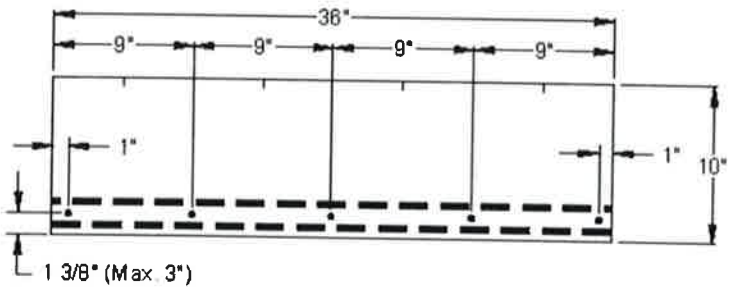
6.3 CertainTeed asphalt shingles are acceptable for use in reroof (tear-off) or recover applications, subject to the limitations set forth in **FBC Section 1511 or R908** and CertainTeed published installation instructions.

6.4 HIGH-PERFORMANCE STARTER:

6.4.1 Eaves: For the first starter shingle in each roof corner, use five (5) nails as shown below. All other starter shingles require four (4) nails per shingle. Nails must be of sufficient length to penetrate into the deck 3/4" or through the thickness of the decking, whichever is less. Nails are to be 11 or 12 gauge, corrosion-resistant roofing nails with 3/8" heads. Apply the 10" starter shingle with its factory-applied sealant stripes at the shingle's lower-most edge and nail firmly into the roof deck as near as possible *(maximum 3") to the eaves edge while avoiding the sealant. With the starter shingle well fastened to the deck and the sealant low on the starter shingle, it can firmly adhere to the first course shingles. *If nailing within 3" is not possible, nail as closely as possible, then lift and adhere the starter shingle to the underlayment and to the supporting structure with CertainTeed FlintBond™ Asphalt Roofing Cement-Caulk Grade, or approved equal.

Rakes: Prior to installation of the field shingles, starter shingles may be applied up the slope along the rake edge with sealant edge placed closest to the rake edge. Fasten as indicated below.

HIGH-PERFORMANCE STARTER SHINGLES



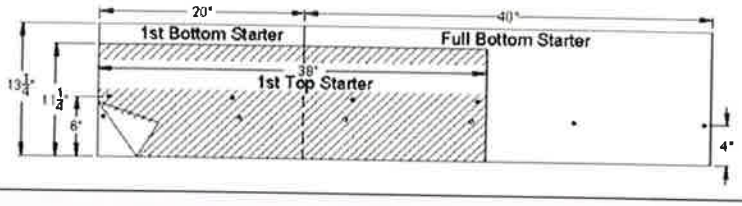
6.5 PRESIDENTIAL® STARTER AND PRESIDENTIAL® STARTER IR:

6.5.1 General: These shingles shall be applied by using two (2) overlapping layers. Begin application of the bottom/lower layer of starter shingles by cutting and applying a 13-3/4" x 20" piece at the lower left rake/eaves corner overhanging rakes and eaves 1/4" to 3/4". Continue along the eaves with full-size 13-1/4" x 40" starter shingles. Each top/upper starter course shingle shall have its 2" top section removed at the perforations, resulting in 11-1/4" x 40" shingles. The colored granule portion of the "top" starter shingles shall be located nearest the lowermost eave edge. Install the first top/upper starter shingle so that it is flush to the left side and bottom edges of the first bottom/lower starter shingle. This first top/upper starter shingle shall be 11-1/4" x 38". Continue along the eaves with 11-1/4" x 40" top/upper starter shingles ensuring that the lower edges are flush with the lower edges of the bottom/lower layer. Reference the product's wrapper for more specific details.

Eaves: Fasten as shown below. Rakes: After applying the starter shingles at the eaves, but prior to installing the field shingles, starter shingles may be applied up the slope at the rake edge. Fasten as shown below.

Fastening: Four nails are required per shingle. Nails shall be of sufficient length to penetrate into the deck 3/4" or through the thickness of the decking, whichever is less. Nails are to be 11 or 12 gauge, corrosion-resistant roofing nails with 3/8" heads.

Presidential Starter and Presidential IR Starter Shingles



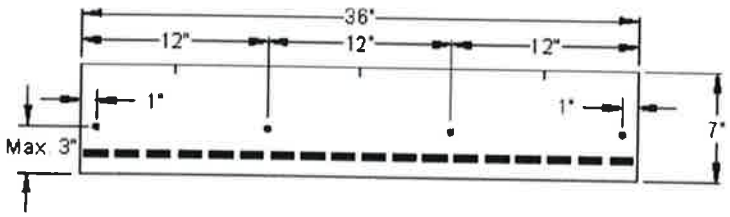
6.6 UNIVERSAL STARTER:

6.6.1 General: While Universal Starter Strip shingles are specifically designed to be used with shingles 36" length and having a weather exposure of ≤ 5", they may be installed beneath shingles of any length if special precautions are taken. IMPORTANT: In all cases the end joints of the starter and the first course shingles shall NEVER BE LESS THAN 3-1/2" apart.

Eaves: The sealant on starter courses should face out and lie as close as possible to the eaves edge of the roof. Fasten as described below. Rakes: After applying the starter shingles at the eaves, but prior to installing the field shingles, starter shingles may be applied up the slope at the rake edge with sealant facing out and nearest to the outer roof edge. Fasten as described below.

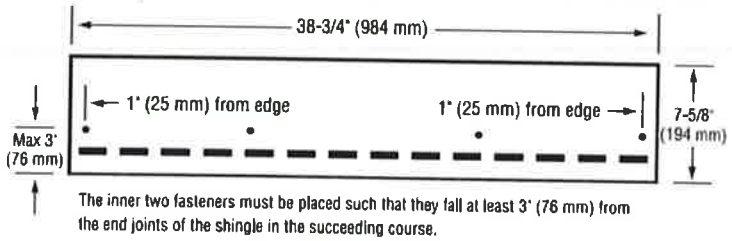
Fastening: Use four nails on these starter shingles as shown below. The sealant on starter courses shall lie as close as possible to the eaves edge of the roof. Nails shall be of sufficient length to penetrate into the deck 3/4" or through the thickness of the decking, whichever is less. Nails are to be 11 or 12 gauge, corrosion-resistant roofing nails with 3/8" heads.

UNIVERSAL STARTER SHINGLES



6.7 SWIFTSTART® STARTER SHINGLE:

Fastening: Use four nails, located as shown below

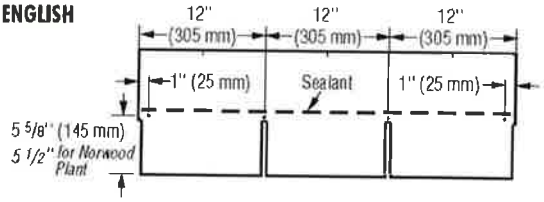


The inner two fasteners must be placed such that they fall at least 3" (76 mm) from the end joints of the shingle in the succeeding course.

6.8 CT 20™, XT™ 25, XT™ 30 IR:

LOW AND STANDARD SLOPE

ENGLISH



METRIC

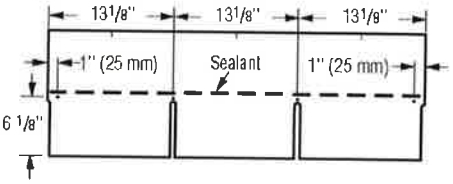
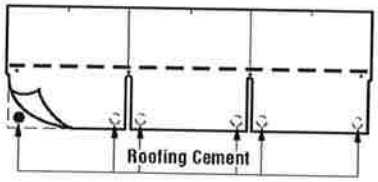


*Figure 11-3: Use **four** nails for every full shingle.*

STEEP SLOPE

Use **four** nails and six spots of asphalt roofing cement* for every full shingle (*Figure 11-4*). Asphalt roofing cement meeting ASTM D4586 Type II is suggested.



Apply 1" (25 mm) spots of asphalt roofing cement under each tab corner.

*Figure 11-4: Use **four** nails and six spots of asphalt cement on steep slopes.*

***CAUTION:** Excessive use of roofing cement can cause shingles to blister.

Hip & Ridge: Cut Shingles

Note: The use of BASF "Sonolastic® NP1™" adhesive or Henkel "PL® Polyurethane Roof & Flashing Sealant" in accordance with CertainTeed requirements is required for the ASTM D3161, Class F wind rating.

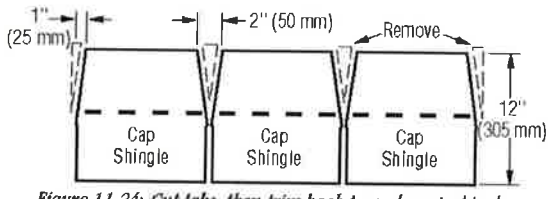


Figure 11-24: Cut tabs, then trim back to make cap shingles (English dimensions shown).

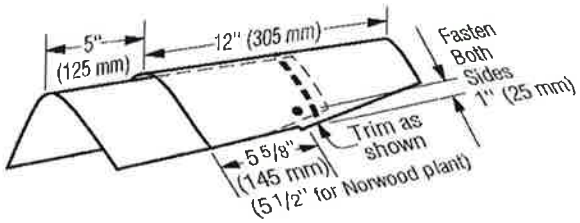


Figure 11-25: Installation of caps along the hips and ridges.

6.9 ARCADIA™:

LOW AND STANDARD SLOPE

Use SIX nails for every full shingle located as shown below.

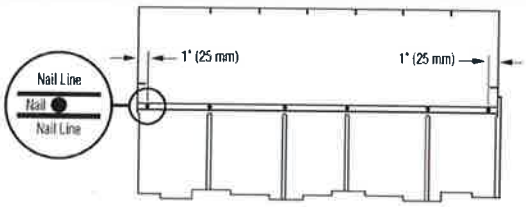


Figure 2: Use six nails for every full shingle.

STEEP SLOPE

Use SIX nails and FOUR spots of asphalt roofing cement for every full shingle as shown below. Apply asphalt roofing cement 1" (25 mm) from edge of shingle. Asphalt roofing cement meeting ASTM D 4586 Type II is suggested.

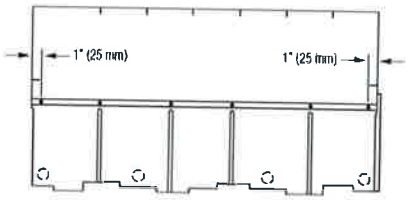
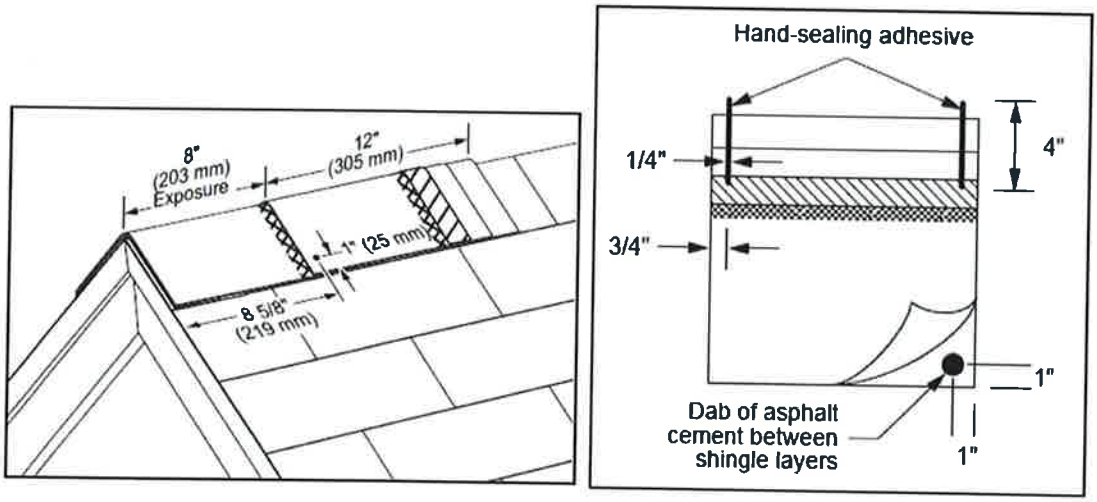


Figure 3: Use six nails and four spots of asphalt roofing cement on steep slopes.

Hip & Ridge: **Cedar Crest® or Cedar Crest® IR**

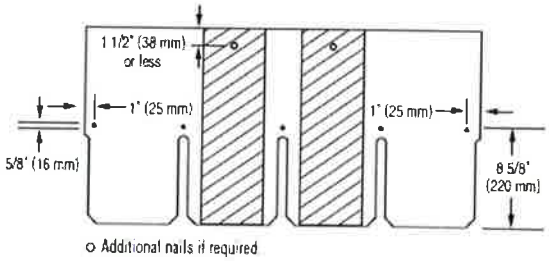
Use two (2), minimum 1¾-inch long fasteners per shingle. For the starter shingle, place fastener 1-inch from each side edge and about 2-inch up from the starter shingle's exposed butt edge, ensuring minimum ¾-inch embedment into the deck, or full penetration through the deck. For each full Cedar Crest shingle, place fasteners 8-5/8-inch up from its exposed butt edge and 1-inch from each side edge.

Note: The use of BASF "Sonolastic® NP1™" adhesive or Henkel "PL® Polyurethane Roof & Flashing Sealant" in accordance with CertainTeed requirements is required for the ASTM D3161, Class F wind rating.

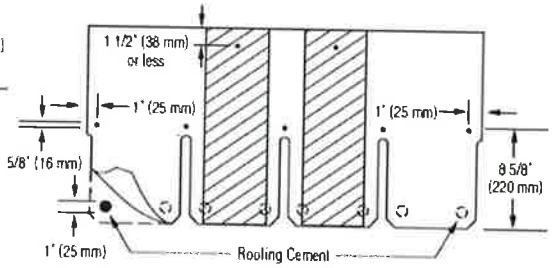


6.10 BELMONT® OR BELMONT® IR:

Low and Standard Slope (2:12 to 21:12):
Use FIVE nails for every full Belmont shingle, located as shown below.



Steep Slope (greater than 21:12):
Use SEVEN nails and EIGHT spots of asphalt roofing cement** for every full Belmont shingle. Apply asphalt roofing cement 1" (25mm) from edge of shingle. See below. Asphalt roofing cement meeting ASTM D4586 Type II is suggested.



Hip & Ridge:

Option 1: For Belmont®, refer to instructions for **Cedar Crest®** or **Cedar Crest® IR**.
For Belmont® IR, refer to instructions for **Cedar Crest® IR**.
Note: The use of BASF "Sonolastic® NP1™" adhesive or Henkel "PL® Polyurethane Roof & Flashing Sealant" in accordance with CertainTeed requirements is required for the ASTM D3161, Class F wind rating.

Option 2: For Belmont®: **Shangle® Ridge**
Note: The use of BASF "Sonolastic® NP1™" adhesive or Henkel "PL® Polyurethane Roof & Flashing Sealant" in accordance with CertainTeed requirements is required for the ASTM D3161, Class F wind rating.

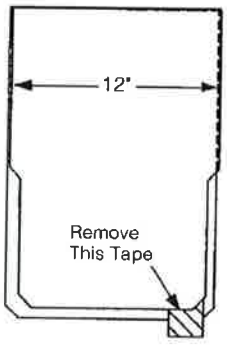


Figure 17-18: Shangle® Ridge.

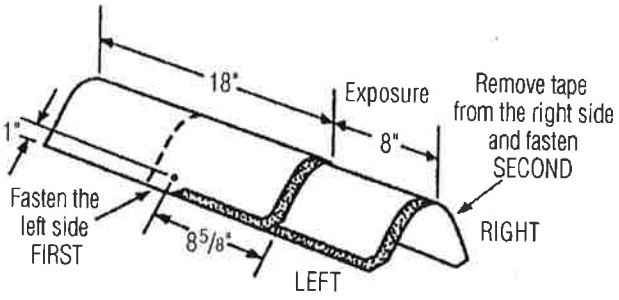


Figure 17-19: Installation of Shangle® Ridge shingles on hips and ridges.

6.11 CARRIAGE HOUSE® AND GRAND MANOR®:

LOW AND STANDARD SLOPE

Use **five** nails for every full Shangle.

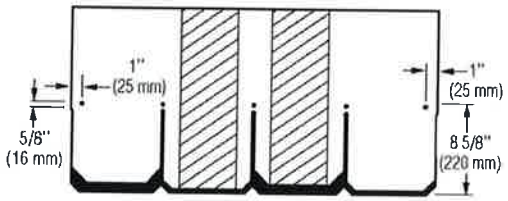


Figure 17-4: Use five nails for every full Grand Manor Shangle, Carriage House Shangle, or Centennial Slate.

STEEP SLOPE

Use **seven** nails and three spots of asphalt roofing cement for every full Grand Manor Shangle. Use **five** nails and three spots of asphalt roofing cement for every full Carriage House Shangle and Centennial Slate. Apply asphalt roofing cement 1" (25 mm) from edge of shingle (*Figure 17-5*). Asphalt roofing cement meeting ASTM D4586 Type II is suggested.

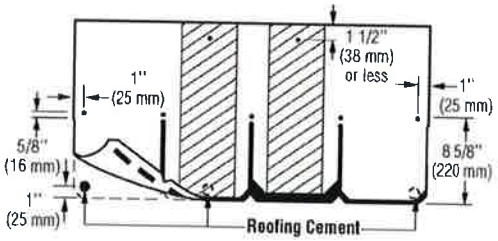
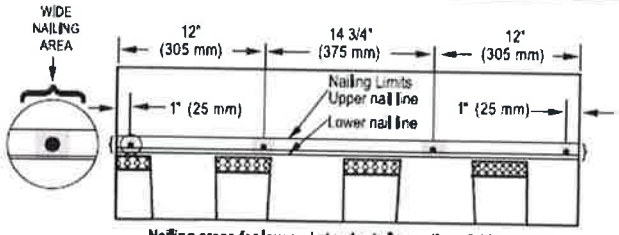


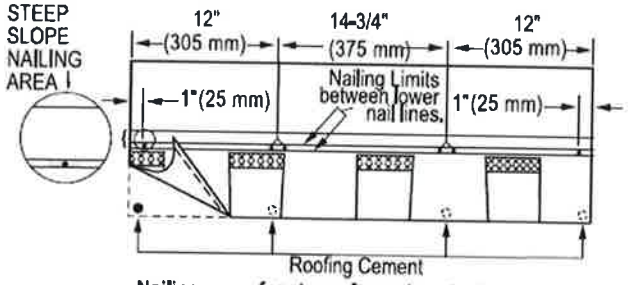
*Figure 17-5: When installing Grand Manor Shangles on steep slopes, use **seven** nails and three spots of asphalt roofing cement.*

Hip & Ridge: Refer to instructions for **Shangle® Ridge.**

6.12 LANDMARK®, LANDMARK® PRO, LANDMARK® PRO ARCHITECT 80, LANDMARK PRO SOLARIS®, LANDMARK® PREMIUM, LANDMARK SOLARIS®, LANDMARK SOLARIS® IR, LANDMARK SOLARIS® GOLD/PLATINUM OR NORTHGATE®:



Nailing areas for low and standard slopes (from 2:12 to 21:12)
Nail between upper & lower lines as shown above.



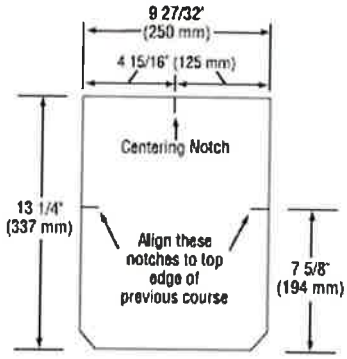
Nailing areas for steep slopes (greater than 21:12)
and "Storm-Nailing"
Nail between lower 2 nail lines as shown above.

Hip & Ridge:

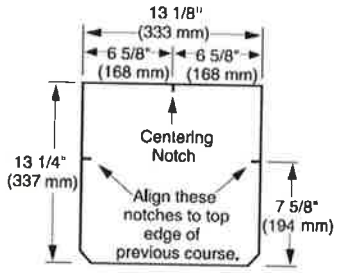
Option 1: Refer to instructions for **Cedar Crest® or Cedar Crest® IR.**

Option 2: **NorthGate® Accessory** or **Shadow Ridge®**

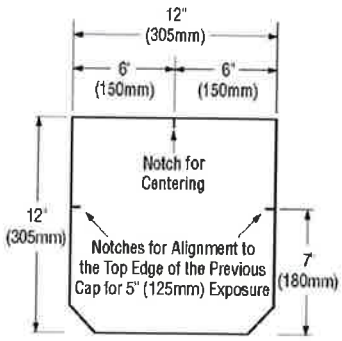
Note: The use of BASF "Sonolastic® NP1™" adhesive or Henkel "PL® Polyurethane Roof & Flashing Sealant" in accordance with CertainTeed requirements is required for the ASTM D3161, Class F wind rating. (Use of sealant is optional for Shadow Ridge® produced in Oxford, NC.)



NorthGate® Ridge

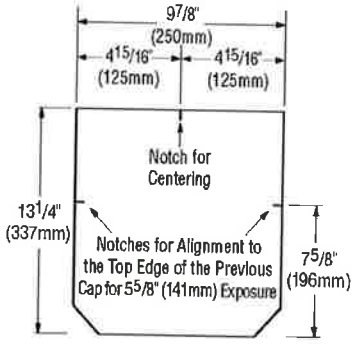


NorthGate® Accessory



English Dimension

Shadow Ridge®



Metric Dimension

Shadow Ridge®

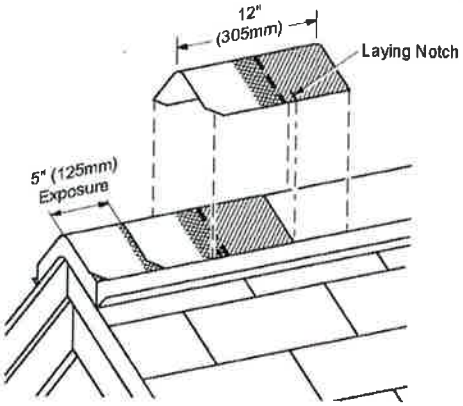


Figure 13-20: Use laying notches to center shingles on hips and ridges, and to locate the correct exposure.

6.13 LANDMARK® TL:

LANDMARK TL

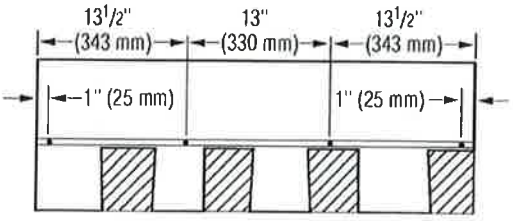


Figure 13-4: Use four nails for every full shingle.

LANDMARK TL

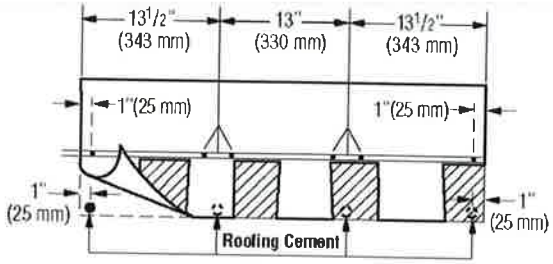


Figure 13-5: Use six nails and four spots of asphalt roofing cement on steep slopes.

Hip & Ridge: Refer to instructions for **Cedar Crest®, Cedar Crest® IR, NorthGate® Accessory** or **Shadow Ridge®.**

6.14 PRESIDENTIAL SHAKE®, PRESIDENTIAL SHAKE® IR, PRESIDENTIAL SHAKE® TL, PRESIDENTIAL SOLARIS®:

LOW AND STANDARD SLOPE:

For low and standard slopes, use five nails for each full Presidential shingle as shown below.

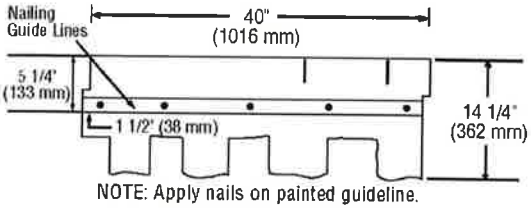


Figure 16-6: Fastening Presidential and Presidential TL Shake shingles on low and standard slopes.

STEEP SLOPE:

For steep slopes, use nine nails for each full Presidential shingle and apply 1" diameter spots of asphalt roofing cement under each shingle tab. After applying 5 nails in between the nailing guide lines, apply 4 nails 1" above tab cutouts making certain tabs of overlying shingle cover nails.

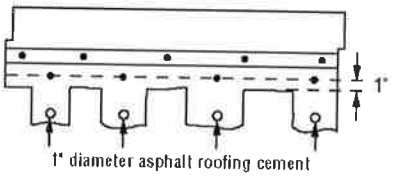


Figure 16-7: Fastening Presidential and Presidential TL Shake shingles on steep slopes.

Hip & Ridge: Refer to instructions for **Cedar Crest®** or **Cedar Crest® IR.**

6.15 HIGHLAND SLATE®:

LOW AND STANDARD SLOPE:

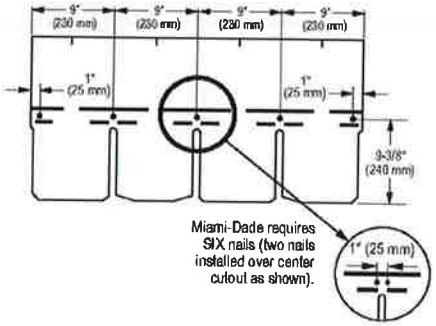


Figure 11-3: Use FIVE nails for every Highland Slate shingle.

STEEP SLOPE:

Use **FIVE** nails and **EIGHT** spots of asphalt roofing cement* for each full Highland Slate shingle. For Miami-Dade, **SIX nails** are required. Apply 1" diameter spots of asphalt roofing cement under each tab corner. Asphalt roofing cement meeting ASTM D4586 Type II is suggested.

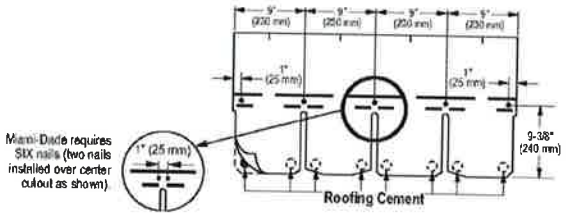


Figure 11-3A: Use FIVE nails and eight spots of asphalt roofing cement under each tab corner.

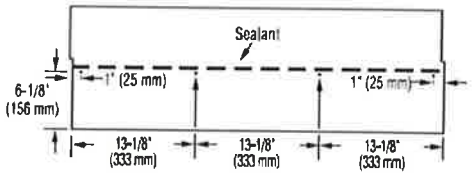
***CAUTION:** Excessive use of roofing cement can cause shingles to blister.

Hip & Ridge: Refer to instructions for **Cedar Crest®**, **Cedar Crest® IR** or **Shangle Ridge®**.

6.16 PATRIOT:

LOW AND STANDARD SLOPE

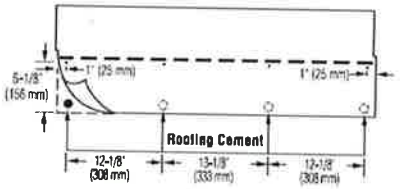
Use FOUR nails for every full shingle located as shown below.



STEEP SLOPE

Use FOUR nails and four spots of asphalt roofing cement for every full shingle as shown below. Asphalt roofing cement meeting ASTM D4586 Type II is suggested. Apply 1"(25 mm) spots of asphalt roofing cement as shown.

CAUTION: Excessive use of roofing cement can cause shingles to blister.



Hip & Ridge: Refer to instructions for **Cedar Crest®**, **Cedar Crest® IR**, **NorthGate® Accessory, Shadow Ridge®** or **Shangle Ridge®**.

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 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; (414) 248-6409; karen.buchmann@us.ul.com

- END OF EVALUATION REPORT -

FL #	FL2533-R24
Application Type	Revision
Code Version	2020
Application Status	Approved
Comments	
Archived	☐
Product Manufacturer Address/Phone/Email	CertainTeed, LLC (Roofing) 20 Moores Road Malvern, PA 19355 (610) 893-5400 mark.d.harner@saint-gobain.com
Authorized Signature	Mark Harner mark.d.harner@saint-gobain.com
Technical Representative Address/Phone/Email	Mark D. Harner 18 Moores Road Malvern, PA 19355 (610) 651-5847 Mark.D.Harner@saint-gobain.com
Quality Assurance Representative Address/Phone/Email	
Category	Roofing
Subcategory	Modified Bitumen Roof System
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	09/15/2023
Validated By	John W. Knezevich, PE ☑ Validation Checklist - Hardcopy Received
Certificate of Independence	FL2533_R24_COI_2020_01_COI_NIEMINEN.pdf

Referenced Standard and Year (of Standard)

Standard	Year
ASTM D1970	2015
ASTM D2178	2015
ASTM D4601	2012
ASTM D4897	2009
ASTM D6163	2015
ASTM D6164	2011
ASTM D6222	2011
ASTM D6509	2015
ASTM G155	2013
FM 4470	2016

Equivalence of Product Standards
Certified By

Sections from the Code

Product Approval Method	Method 1 Option D
Date Submitted	07/30/2020
Date Validated	08/04/2020
Date Pending FBC Approval	08/08/2020
Date Approved	10/13/2020

Summary of Products

FL #	Model, Number or Name	Description
2533.1	Flintlastic Modified Bitumen Roof Systems	Modified Bitumen 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/-635 **Other:** 1.) Refer to ER Section 5 for Limits of Use. 2.) The design pressure noted in this application relates to one specific system. Refer to the ER Appendix for all systems and max design pressures.		**Installation Instructions** FL2533_R24_II_2020_07_20_FINAL_A1_ER_CERTAINTEED_MODBIT_FL2533-R24.pdf Verified By: Robert Nieminen, PE PE-59166 Created by Independent Third Party: Yes **Evaluation Reports** FL2533_R24_AE_2020_07_20_FINAL_ER_CERTAINTEED_MODBIT_FL2533-R24.pdf Created by Independent Third Party: Yes

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Appendix 1: Attachment Requirements for Wind Uplift Resistance

TABLE	DECK	APPLICATION	TYPE	DESCRIPTION	PAGE
1A	Wood	New or Reroof (Tear-Off)	A-1	Bonded Insulation, Bonded Roof Cover	5
1B	Wood	New or Reroof (Tear-Off)	A-2	Mech. Attached Anchor Sheet, Bonded Insulation, Bonded Roof Cover	6-8
1C	Wood	New, Reroof (Tear-Off) or Recover	B	Mech. Attached Base Insulation, Bonded Top Insulation, Bonded Roof Cover	8
1D	Wood	New, Reroof (Tear-Off) or Recover	C	Mech. Attached Insulation, Bonded Roof Cover	9-10
1E	Wood	New, Reroof (Tear-Off) or Recover	D	Insulated, Mech. Attached Base Sheet, Bonded Roof Cover	11-13
1F-1	Wood	New, Reroof (Tear-Off)	E	Non-Insulated, Mech. Attached Base Sheet, Bonded Roof Cover	13-16
1F-2	Wood	New, Reroof (Tear-Off) or Recover	E	Non-Insulated, Mech. Attached Base Sheet, Bonded Roof Cover	16-18
1G	Wood	New or Reroof (Tear-Off)	F	Non-Insulated, Bonded Roof Cover	18
2A	Steel or Structural concrete	New, Reroof (Tear-Off) or Recover	B	Mech. Attached Base Insulation, Bonded Top Insulation, Bonded Roof Cover	19-21
2B	Steel or Structural concrete	New, Reroof (Tear-Off) or Recover	C	Mech. Attached Insulation, Bonded Roof Cover	22-26
2C	Steel or Structural concrete	New, Reroof (Tear-Off) or Recover	D	Insulated, Mech. Attached Base Sheet, Bonded Roof Cover	27-29
3A	Structural concrete	New or Reroof (Tear-Off)	A-1	Bonded Insulation, Bonded Roof Cover	30-39
3B	Structural concrete	New or Reroof (Tear-Off)	A-3	Bonded Temp Roof/Vapor Barrier, Bonded Insulation, Bonded Roof Cover	40
3C	Structural concrete	New or Reroof (Tear-Off)	F	Non-Insulated, Bonded Roof Cover	40
4A	LWIC / steel	New or Reroof (Tear-Off)	A-1	Bonded Insulation, Bonded Roof Cover	41-42
4B	LWIC / structural concrete	New or Reroof (Tear-Off)	A-1	Bonded Insulation, Bonded Roof Cover	43-46
4C	LWIC / structural concrete	New, Reroof (Tear-Off)	A-1	Bonded Vapor Barrier, Bonded Insulation, Bonded Roof Cover	47-48
4D	LWIC / steel	New or Reroof (Tear-Off)	A-2	Mech. Attached Anchor Sheet, Bonded Insulation, Bonded Roof Cover	49-51
4E	LWIC / steel or struct. conc.	New or Reroof (Tear-Off)	E	Non-Insulated, Mech. Attached Base Sheet, Bonded Roof Cover	52-57
4F	LWIC / steel	Reroof (Tear-Off) or Recover	E	Non-Insulated, Mech. Attached Base Sheet, Bonded Roof Cover	57
4G	LWIC / steel	Reroof (Tear-Off)	F	Non-Insulated, Bonded Roof Cover	58
5A	Cementitious wood fiber	New or Reroof (Tear-Off)	A-1	Bonded Insulation, Bonded Roof Cover	59
5B	Cementitious wood fiber	New or Reroof (Tear-Off) or Recover	A-2	Mech. Attached Anchor Sheet, Bonded Insulation, Bonded Roof Cover	60
5C	Cementitious wood fiber	Reroof (Tear-Off) or Recover	C	Mech. Attached Insulation, Bonded Roof Cover	61
5D	Cementitious wood fiber	New, Reroof (Tear-Off) or Recover	E	Non-Insulated, Mech. Attached Base Sheet, Bonded Roof Cover	61
6A	Existing gypsum	Reroof (Tear-Off)	A-1	Bonded Insulation, Bonded Roof Cover	62-64
6B	Existing gypsum	Reroof (Tear-Off)	A-2	Mech. Attached Anchor Sheet, Bonded Insulation, Bonded Roof Cover	64-65
6C	Existing gypsum	Reroof (Tear-Off)	C	Mech. Attached Insulation, Bonded Roof Cover	65
6D	Existing gypsum	Reroof (Tear-Off)	E	Non-Insulated, Mech. Attached Base Sheet, Bonded Roof Cover	66
7A	Various	Recover	A-1	Bonded Insulation, Bonded Roof Cover	67-74
7B	Various	Recover	F	Non-Insulated, Bonded Roof Cover	74

9. For mechanically attached components or partially-bonded insulation, the maximum design pressure for the selected assembly shall meet or exceed at least the Zone 1 PRIME design pressure determined in accordance with FBC Chapter 16. Elevated pressure zones shall employ an attachment density designed by a qualified design professional to resist the elevated pressure criteria. Commonly used methods are ANSI/SPRI WD1, FM Loss Prevention Data Sheet 1-29, Roofing Application Standard RAS 117 and Roofing Application Standard RAS 137. Assemblies marked with an asterisk* carry the limitations set forth in Section 2.2.10.1 of FM Loss Prevention Data Sheet 1-29 (February 2020) for Zone 2/3 enhancements.

10. For assemblies with all components fully bonded, the maximum design pressure for the selected assembly shall meet or exceed critical design pressure determined in accordance with FBC Chapter 16. No rational analysis is permitted for these systems.

11. For mechanically attached components over existing decks, fasteners shall be tested in the existing deck for withdrawal resistance. A qualified design professional shall review the data for comparison to the minimum requirements for the system. Testing and analysis shall be in accordance with ANSI/SPRI FX-1 or Testing Application Standard TAS 105.

12. For bonded insulation or membrane over existing substrates in a re-roof (tear off) or recover installation, the existing deck or existing roof surface shall be examined for compatibility with the adhesive to be installed. If any surface conditions exist that bring system performance into question, field uplift testing in accordance shall be conducted on mock-ups of the proposed new roof assembly. For bonded insulation or membrane over existing substrates in a recover installation, the existing roof system shall be capable of resisting project design pressures on its own merit to the satisfaction of the Authority Having Jurisdiction, as documented through field uplift testing. Field uplift testing shall be in accordance with ASTM E907, FM Loss Prevention Data Sheet 1-52 or Testing Application Standard TAS 124.

13. Refer to **FBC 1511** for requirements and limitations regarding recover installations. For Structural Concrete Deck or Recover Applications using System Type D, the insulation is optional. Alternatively, an FBC Approved insulation board or coverboard may be used as a separation layer. Board products shall be preliminarily attached prior to roof cover installation (Note 5 herein). The separator component shall be documented as meeting FBC 1505 and, for foam plastic, FBC Chapter 26, when installed with the roof cover in Recover applications.

14. Lightweight insulating concrete (LWIC) shall be cast in accordance with FBC Section 1917 to the satisfaction of the Authority Having Jurisdiction. For systems where specific LWIC is referenced, refer to current LWIC Product Approval for specific deck construction and limitations. Unless otherwise noted, for systems where specific LWIC is not referenced, the minimum design mix shall be 300 psi. In all cases, the minimum top-coat thickness is 2-inches. For LWIC over structural concrete, reference is made to FBC Section 1917.4.1, Point 1. For "pre-existent" LWIC references, listings were established through testing over lightweight concrete cast using only foaming agent (ASTM C896), water and Portland cement (ASTM C150), with no proprietary additives, in accordance with procedures adopted by Miami-Dade BCCO (FBC CER1592). Use of these listings in new construction or re-roof (tear-off) applications is at the discretion of the Designer or Record and Authority Having Jurisdiction.

15. Unless otherwise noted, refer to the following references for bonded applications.

MEMBRANE / ADHESIVE COMBINATIONS			
REFERENCE	**LAYER**	**MATERIAL**	**APPLICATION**
SBS-CA1	Base Ply:	Flintlastic Base 20, Flintlastic Poly SMS Base, Flintlastic Ultra Poly SMS Base	FlintBond Brush or Karnak No. 81 Cold Process Modified Bitumen Adhesive Brush Grade at 1 gal/square
	Note:	Base ply cures overnight prior to application of the ply or cap ply.	
	Ply:	Flintlastic Base 20, Flintlastic Poly SMS Base, Flintlastic Ultra Poly SMS Base	
	Cap Ply:	Flintlastic FR Cap 30, Flintlastic FR Cap 30 CoolStar, Flintlastic FR-P, Flintlastic FR-P CoolStar, Flintlastic Premium FR-P, Flintlastic Premium FR-P CoolStar, Flintlastic GMS, Flintlastic GMS CoolStar	
BP-CA2	Base Ply:	Glasbase, All Weather/Empire Base, Flexiglas Base, Flintlastic Base 20	
SBS-CA2	Base Ply:	Flintlastic Base 20, Flintlastic Poly SMS Base, Flintlastic Ultra Poly SMS Base	Henry #903 Adhesive at 1.5 gal/square.
	Ply:	Flintlastic Base 20, Flintlastic Poly SMS Base, Flintlastic Ultra Poly SMS Base	
	Cap Ply:	Flintlastic FR Cap 30, Flintlastic FR Cap 30 CoolStar, Flintlastic FR-P, Flintlastic FR-P CoolStar, Flintlastic Premium FR-P, Flintlastic Premium FR-P CoolStar, Flintlastic GMS, Flintlastic GMS CoolStar	
BP-CA3	Base Ply:	Glasbase, All Weather/Empire Base, Flexiglas Base, Flintlastic Base 20	
SBS-CA3	Base Ply:	Flintlastic Base 20, Flintlastic Poly SMS Base, Flintlastic Ultra Poly SMS Base	Millennium Hurricane Force Membrane Adhesive, beads spaced 6-inch o.c.
	Ply:	Flintlastic Base 20, Flintlastic Poly SMS Base, Flintlastic Ultra Poly SMS Base	
	Cap Ply:	Flintlastic FR Cap 30, Flintlastic FR Cap 30 CoolStar, Flintlastic FR-P, Flintlastic FR-P CoolStar, Flintlastic Premium FR-P, Flintlastic Premium FR-P CoolStar, Flintlastic GMS, Flintlastic GMS CoolStar	

TABLE 1A: WOOD DECKS – NEW CONSTRUCTION OR REROOF (TEAR-OFF)
SYSTEM TYPE A-1: BONDED INSULATION, BONDED ROOF COVER

Sys. No.	Deck (Note 1)	Base Insulation		Top Insulation		Primer	Roof Cover (Note 15)			MDP (psf)
		Type	Attach (Notes 6,7,8)	Type	Attach (Notes 6,7,8)		Base Ply	Ply	Cap Ply	
SELF-ADHERING SYSTEMS:										
W-1	Min. 15/32-inch APA rated CDX plywood; 24-inch span	Min. 1.5-inch FlintBoard ISO, ACFoam II, FlintBoard H ISO, H-Shield	M-OSFA or M-PG1	(Optional) Additional layer(s) of base insulation and/or min. 0.25-inch DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board.	M-OSFA or M-PG1	FlintPrime or FlintPrime SA	SBS-SA	(Optional) SBS-SA	SBS-SA	-60.0
W-2	Min. 15/32-inch APA rated CDX plywood; 24-inch span; blocked 48-inch o.c.	Min. 1.5-inch FlintBoard ISO, ACFoam II, FlintBoard H ISO, H-Shield	M-OSFA or M-PG1, 6-inch o.c.	(Optional) Additional layer(s) of base insulation and/or min. 0.25-inch DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board.	M-OSFA or M-PG1, 6-inch o.c.	FlintPrime or FlintPrime SA	SBS-SA	(Optional) SBS-SA	SBS-SA	-97.5
HYBRID SYSTEMS:										
W-3	Min. 15/32-inch APA rated CDX plywood; 24-inch span	Min. 1.5-inch FlintBoard ISO, ACFoam II, FlintBoard H ISO, H-Shield	M-OSFA or M-PG1	(Optional) Additional layer(s) of base insulation and/or min. 0.25-inch DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board.	M-OSFA or M-PG1	None	SBS-SA-H	(Optional) BP-AA, SBS-AA, SBS-TA or APP-TA	SBS-AA, SBS-TA or APP-TA	-60.0
W-4	Min. 15/32-inch APA rated CDX plywood; 24-inch span; blocked 48-inch o.c.	Min. 1.5-inch FlintBoard ISO, ACFoam II, FlintBoard H ISO, H-Shield	M-OSFA or M-PG1, 6-inch o.c.	(Optional) Additional layer(s) of base insulation and/or min. 0.25-inch DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board.	M-OSFA or M-PG1, 6-inch o.c.	None	SBS-SA-H	(Optional) BP-AA, SBS-AA, SBS-TA or APP-TA	SBS-AA, SBS-TA or APP-TA	-97.5
CONVENTIONAL SYSTEMS:										
W-5	Min. 15/32-inch APA rated CDX plywood; 24-inch span	Min. 1.5-inch FlintBoard ISO, ACFoam II, FlintBoard H ISO, H-Shield	M-OSFA or M-PG1	Optional additional layers of base insulation, followed by min. 0.25-inch DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board	M-OSFA or M-PG1	None	BP-AA, SBS-AA, SBS-TA or APP-TA	(Optional) BP-AA, SBS-AA, SBS-TA or APP-TA	SBS-AA, SBS-TA or APP-TA	-60.0
W-6	Min. 15/32-inch APA rated CDX plywood; 24-inch span; blocked 48-inch o.c.	Min. 1.5-inch FlintBoard ISO, ACFoam II, FlintBoard H ISO, H-Shield	M-OSFA or M-PG1, 6-inch o.c.	Optional additional layers of base insulation, followed by min. 0.25-inch DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board.	M-OSFA or M-PG1, 6-inch o.c.	None	BP-AA, SBS-AA, SBS-TA or APP-TA	(Optional) BP-AA, SBS-AA, SBS-TA or APP-TA	SBS-AA, SBS-TA or APP-TA	-97.5

NEMO|etc.

TABLE 1B: WOOD DECKS – NEW CONSTRUCTION OR REROOF (TEAR-OFF)
SYSTEM TYPE A-2: MECHANICALLY ATTACHED ANCHOR SHEET, BONDED INSULATION, BONDED ROOF COVER

Sys. No.	Deck (Note 1)	Anchor Sheet			Base Insulation		Top Insulation		Primer	Roof Cover (Note 15)			MDP (psf)
		Type	Fasteners	Attach	Type	Attach (Notes 6,7,8)	Type	Attach (Notes 6,7,8)		Base Ply	Ply	Cap Ply	
W-12	Min. 19/32-inch plywood; 24-inch span	Glasbase, All Weather Empire, Flexiglas Base, Flintlastic Base 20; Poly SMS; Ultra Poly SMS; Yosemite Venting Base	32 ga., 1-5/8-inch dia. tin caps with 11 ga. annular ring shank nails	9-inch o.c. in 4-inch lap and 12-inch o.c. in two (2), equally spaced, staggered center rows	Min. 1.5-inch ACFoam II, FlintBoard ISO, ENRGY-3, H-Shield or Multi-Max FA3	HA	None	N/A	None	SBS-SA-H	(Optional) BP-AA, SBS-AA, SBS-TA or APP-TA	SBS-AA, SBS-TA or APP-TA	-45.0*
W-13	Min. 19/32-inch plywood at max. 24-inch	Glasbase; Flintglas Premium Ply 6; Yosemite Venting Base	32 ga., 1-5/8-inch dia. tin caps with 11 ga. annular ring shank nails	8-inch o.c. in 3-inch lap and 8-inch o.c. in three (3), equally spaced, staggered center rows	Min. 1.5-inch ACFoam II, FlintBoard ISO, ENRGY-3, H-Shield or Multi-Max FA3	HA	None	N/A	None	SBS-SA-H	(Optional) BP-AA, SBS-AA, SBS-TA or APP-TA	SBS-AA, SBS-TA or APP-TA	-60.0
CONVENTIONAL SYSTEMS:													
W-14	Min. 19/32-inch plywood; 24-inch span	Glasbase, All Weather Empire, Flexiglas Base, Flintlastic Base 20; Poly SMS; Ultra Poly SMS; Yosemite Venting Base	32 ga., 1-5/8-inch dia. tin caps with 11 ga. annular ring shank nails	9-inch o.c. in 4-inch lap and 12-inch o.c. in two (2), equally spaced, staggered center rows	Min. 1.5-inch ACFoam II, FlintBoard ISO, ENRGY-3, H-Shield or Multi-Max FA3	HA	Min. 0.25-inch DensDeck	HA	FlintPrime	BP-AA, SBS-AA, SBS-TA or APP-TA	(Optional) BP-AA, SBS-AA, SBS-TA or APP-TA	SBS-AA, SBS-TA or APP-TA	-45.0*
W-15	Min. 19/32-inch plywood; 24-inch span	Glasbase, All Weather Empire, Flexiglas Base, Poly SMS or Ultra Poly SMS	32 ga., 1-5/8-inch dia. tin caps with 11 ga. annular ring shank nails	8-inch o.c. in 3-inch lap and 8-inch o.c. in three (3), equally spaced, staggered center rows	Min. 1.5-inch ACFoam II, FlintBoard ISO, ENRGY-3, H-Shield or Multi-Max FA3	HA full coverage or OB500, M-OSFA, A-PD, D-IS, ICP BOARD-MAX or CR-20, 4-inch o.c.	Min. 0.25-inch DensDeck	HA full coverage or OB500, M-OSFA, A-PD, D-IS, ICP BOARD-MAX or CR-20, 6-inch o.c.	FlintPrime	BP-AA, SBS-AA, SBS-TA or APP-TA	(Optional) BP-AA, SBS-AA, SBS-TA or APP-TA	SBS-AA, SBS-TA or APP-TA	-52.5
W-16	Min. 19/32-inch plywood; 24-inch span	Yosemite Venting Base Sheet	32 ga., 1-5/8-inch dia. tin caps with 11 ga. annular ring shank nails	8-inch o.c. in 3-inch lap and 8-inch o.c. in three (3), equally spaced, staggered center rows	Min. 1.5-inch ACFoam II, FlintBoard ISO, ENRGY-3, H-Shield or Multi-Max FA3	HA	Min. 0.25-inch DensDeck	HA	FlintPrime	BP-AA, SBS-AA, SBS-TA or APP-TA	(Optional) BP-AA, SBS-AA, SBS-TA or APP-TA	SBS-AA, SBS-TA or APP-TA	-52.5
W-17	Min. 19/32-inch plywood; 24-inch span	Glasbase, All Weather Empire, Flexiglas Base, Poly SMS or Ultra Poly SMS	32 ga., 1-5/8-inch dia. tin caps with 11 ga. annular ring shank nails	8-inch o.c. in 3-inch lap and 8-inch o.c. in three (3), equally spaced, staggered center rows	(Optional) Min. 1.5-inch ACFoam II, FlintBoard ISO, ENRGY-3, H-Shield or Multi-Max FA3	HA full coverage or OB500, M-OSFA, A-PD, D-IS, ICP BOARD-MAX or CR-20, 4-inch o.c.	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	HA full coverage or OB500, M-OSFA, A-PD, D-IS, ICP BOARD-MAX or CR-20, 6-inch o.c.	None	BP-AA, SBS-AA, SBS-TA or APP-TA	(Optional) BP-AA, SBS-AA, SBS-TA or APP-TA	SBS-AA, SBS-TA or APP-TA	-60.0

NEMO | etc.

TABLE 1D: WOOD DECKS – NEW CONSTRUCTION, REROOF (TEAR-OFF) OR RECOVER
SYSTEM TYPE C: MECHANICALLY ATTACHED INSULATION, BONDED ROOF COVER

System No.	Deck (Note 1)	Base Insulation Layer	Top Insulation Layer			Primer	Roof Cover (Note 15)			MDP (psf)
			Type	Fasteners	Attach		Base Ply	Ply	Cap Ply	
SELF-ADHERING SYSTEMS:										
W-23	Min. 15/32-inch plywood; 24-inch span	(Optional) One or more layers, any combination, loose laid	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	FlintFast 3 in. Insulation Plates with FlintFast #12 or #14	1 per 3.2 ft²	None	SBS-SA	(Optional) SBS-SA	SBS-SA	-30.0*
W-24	Min. 19/32-inch plywood; 24-inch span	(Optional) One or more layers, any combination, loose laid	Min. 0.25-inch DensDeck	Note 2	1 per 1.3 ft²	FlintPrime or FlintPrime SA	SBS-SA	(Optional) SBS-SA	SBS-SA	-45.0
W-25	Min. 19/32-inch plywood; 24-inch span	(Optional) One or more layers, any combination, loose laid	Min. 3/8-inch SECUROCK Gypsum-Fiber Roof Board	FlintFast 3 in. Insulation Plates with FlintFast #12 or #14	1 per 2.7 ft²	None	SBS-SA	(Optional) SBS-SA	SBS-SA	-45.0*
W-26	Min. 19/32-inch plywood; 24-inch span	(Optional) One or more layers, any combination, loose laid	Min. 1.5-inch ACFoam II, ENRGY 3, H-Shield, Multi-Max FA3 or FlintBoard ISO	FlintFast 3 in. Insulation Plates with FlintFast #12 or #14	1 per 2.0 ft²	FlintPrime or FlintPrime SA	SBS-SA	(Optional) SBS-SA	SBS-SA	-45.0*
W-27	Min. 15/32-inch plywood; 24-inch span	(Optional) One or more layers, any combination, loose laid	Min. 1.5-inch FlintBoard ISO	FlintFast #14 HD with FlintFast 3" Insulation Plates or Trufast HD with Trufast 3" Metal Insulation Plates	1 per 1.6 ft²	FlintPrime or FlintPrime SA	SBS-SA	(Optional) SBS-SA	SBS-SA	-52.5
W-28	Min. 19/32-inch plywood; 24-inch span	(Optional) One or more layers, any combination, loose laid	Min. 1.5-inch ACFoam II, ENRGY 3, H-Shield, Multi-Max FA3 or FlintBoard ISO	Note 2	1 per 1.5 ft²	FlintPrime or FlintPrime SA	SBS-SA	(Optional) SBS-SA	SBS-SA	-60.0
HYBRID SYSTEMS:										
W-29	Min. 15/32-inch plywood; 24-inch span	(Optional) One or more layers, any combination, loose laid	Min. 0.25-inch DensDeck; DensDeck Prime	FlintFast 3 in. Insulation Plates with FlintFast #12 or #14	1 per 2.0 ft²	None	SBS-SA-H	(Optional) BP-AA, SBS-AA, SBS-TA or APP-TA	SBS-AA, SBS-TA or APP-TA	-30.0*
W-30	Min. 15/32-inch plywood; 24-inch span	(Optional) One or more layers, any combination, loose laid	Min. 1.5-inch FlintBoard ISO	FlintFast #14 HD with FlintFast 3" Insulation Plates or Trufast HD with Trufast 3" Metal Insulation Plates	1 per 1.6 ft²	None	SBS-SA-H	(Optional) SBS-TA or APP-TA	SBS-TA or APP-TA	-52.5
W-31	Min. 15/32-inch plywood; 24-inch span	(Optional) One or more layers, any combination, loose laid	Min. 1.5-inch ACFoam II, FlintBoard ISO, ENRGY 3 or Multi-Max FA3	Note 2	1 per 1.3 ft²	None	SBS-SA-H	(Optional) BP-AA or SBS-AA	SBS-AA	-52.5
W-32	Min. 19/32-inch plywood; 24-inch span	(Optional) One or more layers, any combination, loose laid	Min. 1.5-inch ACFoam II, FlintBoard ISO, H-Shield, FlintBoard ISO_H	Note 2	1 per 1.5 ft²	None	SBS-SA-H	(Optional) BP-AA, SBS-AA, SBS-TA or APP-TA	SBS-AA, SBS-TA or APP-TA	-60.0

TABLE 1E: WOOD DECKS – NEW CONSTRUCTION, REROOF (TEAR-OFF) OR RECOVER
SYSTEM TYPE D: INSULATED, MECHANICALLY ATTACHED BASE SHEET, BONDED ROOF COVER

System No.	Deck (Note 1)	Insulation Layer(s) (Note 13)		Base Sheet			Primer	Roof Cover (Note 15)		MDP (psf)
		Type	Attach	Type	Fasteners	Attach		Base Ply	Cap Ply	
SELF-ADHERING SYSTEMS:										
W-40	Min. 19/32-inch plywood; 24-inch span	Min. 1.5-inch, One or more layers, any combination	Prelim. Attach	Flintlastic SA NailBase	Note 2	8-inch o.c. at min. 3-inch lap and 8-inch o.c. in two (2), equally spaced, staggered center rows	FlintPrime or FlintPrime SA at plates	(Optional) SBS-SA	SBS-SA	-82.5*
W-41	Min. 15/32-inch plywood; 24-inch span	Min. 1.5-inch, One or more layers, any combination	Prelim. Attach	Flintlastic SA NailBase	FlintFast 3 in. Insulation Plates with FlintFast #12 or #14; Trufast 3" Metal Insulation Plates with DP or HD; OMG 3 in. Round Metal Plates with OMG #14 HD	6-inch o.c. at min. 2-inch lap and 6-inch o.c. in three (3), equally spaced, staggered center rows	FlintPrime or FlintPrime SA at plates	(Optional) SBS-SA	SBS-SA	-97.5*
W-42	Min. 15/32-inch plywood; 24-inch span	Min. 1.5-inch, One or more layers, any combination	Prelim. Attach	Flintlastic SA NailBase	FlintFast 3 in. Insulation Plates with FlintFast #12 or #14; Trufast 3" Metal Insulation Plates with DP or HD; OMG 3 in. Round Metal Plates with OMG #14 HD	6-inch o.c. at min. 2-inch lap and 6-inch o.c. in four (4), equally spaced, staggered center rows	FlintPrime or FlintPrime SA at plates	(Optional) SBS-SA	SBS-SA	-127.5*
HYBRID SYSTEMS:										
W-43	Min. 15/32-inch plywood; 24-inch span	Min. 1.5-inch, One or more layers, any combination	Prelim. Attach	Glasbase; Flexiglas; Flintlastic Base 20; Poly SMS Base; Ultra Poly SMS Base	FlintFast 3 in. Insulation Plates with FlintFast #12 or #14; Trufast 3" Metal Insulation Plates with DP or HD; OMG 3 in. Round Metal Plates with OMG #14 HD	6-inch o.c. at 4-inch lap and 6-inch o.c. in three (3), equally spaced, staggered center rows	FlintPrime or FlintPrime SA at plates	SBS-SA-H	SBS-AA, SBS-TA or APP-TA	-97.5
W-44	Min. 19/32-inch plywood; 24-inch span	Min. 1.5-inch, One or more layers, any combination	Prelim. Attach	Glasbase; Flexiglas; Flintlastic Base 20; Poly SMS Base; Ultra Poly SMS Base	Note 2	7-inch o.c. at 3-inch lap and 7-inch o.c. in three (3), equally spaced, staggered center rows	None	SBS-SA-H	SBS-AA, SBS-TA or APP-TA	-105.0
W-45	Min. 15/32-inch plywood; 24-inch span	Min. 1.5-inch, One or more layers, any combination	Prelim. Attach	Glasbase; Flexiglas; Flintlastic Base 20; Poly SMS Base; Ultra Poly SMS Base	FlintFast 3 in. Insulation Plates with FlintFast #12 or #14; Trufast 3" Metal Insulation Plates with DP or HD; OMG 3 in. Round Metal Plates with OMG #14 HD	6-inch o.c. at 4-inch lap and 6-inch o.c. in four (4), equally spaced, staggered center rows	FlintPrime or FlintPrime SA at plates	SBS-SA-H	SBS-AA, SBS-TA or APP-TA	-127.5
CONVENTIONAL SYSTEMS:										

TABLE 1E: WOOD DECKS – NEW CONSTRUCTION, REROOF (TEAR-OFF) OR RECOVER
SYSTEM TYPE D: INSULATED, MECHANICALLY ATTACHED BASE SHEET, BONDED ROOF COVER

System No.	Deck (Note 1)	Insulation Layer(s) (Note 13)		Base Sheet			Primer	Roof Cover (Note 15)		MDP (psf)
		Type	Attach	Type	Fasteners	Attach		Base Ply	Cap Ply	
W-53	Min. 19/32-inch plywood; 24-inch span	Min. 1.5-inch, One or more layers, any combination	Prelim. Attach	Flintlastic APP Base T	OMG 3 in. Round Metal Plates with OMG #14 HD or Dekfast Hex Plate with Dekfast #14	7-inch o.c. at 3-inch lap and 7-inch o.c. in three (3), equally spaced, staggered center rows	None	APP-TA	APP-TA	-105.0
W-54	Min. 15/32-inch plywood; 24-inch span	Min. 1.5-inch, One or more layers, any combination	Prelim. Attach	Glasbase; Flexiglas; Flintlastic Base 20; Poly SMS Base; Ultra Poly SMS Base; Yosemite Venting Base	FlintFast 3 in. Insulation Plates with FlintFast #12 or #14; Trufast 3" Metal Insulation Plates with DP or HD; OMG 3 in. Round Metal Plates with OMG #14 HD	6-inch o.c. at 4-inch lap and 6-inch o.c. in four (4), equally spaced, staggered center rows.	None	(Optional) BP-AA, SBS-AA, SBS-TA or APP-TA	SBS-AA, SBS-TA or APP-TA	-127.5
W-55	Min. 15/32-inch plywood; 24-inch span	Min. 1.5-inch, One or more layers, any combination	Prelim. Attach	Flintlastic APP Base T	OMG 3 in. Round Metal Plates with OMG #14 HD	6-inch o.c. at 4-inch lap and 6-inch o.c. in four (4), equally spaced, staggered center rows.	None	APP-TA	APP-TA	-127.5
COLD-APPLIED SYSTEMS:										
W-56	Min. 15/32-inch plywood; 24-inch span	Min. 1-inch, One or more layers, any combination	Loose-laid	Glasbase; Flexiglas Base; Flintlastic Base 20; All Weather / Empire Base; Yosemite Venting Base; Flintlastic Poly SMS Base; Flintlastic Ultra Poly SMS Base	FlintFast 3 in. Insulation Plates with FlintFast #12 or #14; Trufast 3" Metal Insulation Plates with DP or HD	8-inch o.c. at 4-inch lap and 8-inch o.c. in three (3), equally spaced, staggered center rows	None	(Optional) SBS-CA1	SBS-CA1	-52.5

TABLE 1F-1: WOOD DECKS – NEW CONSTRUCTION OR REROOF (TEAR-OFF)
SYSTEM TYPE E: NON-INSULATED, MECHANICALLY ATTACHED BASE SHEET, BONDED ROOF COVER

System No.	Deck (Note 1)	Base Sheet			Primer	Roof Cover (Note 15)		MDP (psf)
		Base	Fasteners	Attach		Base Ply	Cap Ply	
SELF-ADHERING SYSTEMS:								
W-57	Min. 15/32-inch plywood; 24-inch span	Flintlastic SA NailBase	Simplex MAXX Cap	9-inch o.c. at min. 3-inch lap and 12-inch o.c. in two (2), equally spaced, staggered center rows	FlintPrime at plates	(Optional) SBS-SA	SBS-SA	-45.0*
W-58	Min. 15/32-inch plywood; 24-inch span	Flintlastic SA NailBase	Min. 1-inch long, 12 ga. Simplex Metal Cap Nails	6-inch o.c. at min. 2-inch lap and 6-inch o.c. in four (4), equally spaced, staggered center rows	None	(Optional) SBS-SA	SBS-SA	-52.5
W-59	Min. 19/32-inch plywood; 24-inch span	Flintlastic SA NailBase	32 ga., 1-5/8-inch dia. tin caps with 11 ga. annular ring shank nails	8-inch o.c. at min. 2-inch lap and 8-inch o.c. in three (3), equally spaced, staggered center rows	None	(Optional) SBS-SA	SBS-SA	-52.5

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TABLE 1F-1: WOOD DECKS – NEW CONSTRUCTION OR REROOF (TEAR-OFF)
SYSTEM TYPE E: NON-INSULATED, MECHANICALLY ATTACHED BASE SHEET, BONDED ROOF COVER

System No.	Deck (Note 1)	Base Sheet			Primer	Roof Cover (Note 15)		MDP (psf)
		Base	Fasteners	Attach		Base Ply	Cap Ply	
CONVENTIONAL SYSTEMS:								
W-72	Min. 19/32-inch plywood; 24-inch span	Glasbase; Flexiglas; Flintlastic Base 20; All Weather / Empire Base; Poly SMS Base; Ultra Poly SMS Base; Yosemite Venting Base	32 ga., 1-5/8-inch dia. tin caps with 11 ga. annular ring shank nails	9-inch o.c. at 4-inch lap and 12-inch o.c. in two (2), equally spaced, staggered center rows	None	BP-AA, SBS-AA, SBS-TA or APP-TA	SBS-AA, SBS-TA or APP-TA	-45.0*
W-73	Min. 15/32-inch plywood; 24-inch span	Glasbase; Flexiglas; Flintlastic Base 20; All Weather / Empire Base; Poly SMS Base; Yosemite Venting Base	Simplex MAXX Cap	9-inch o.c. at 2-inch lap and 18-inch o.c. in two (2), equally spaced, staggered center rows	None	(Optional) BP-AA, SBS-AA, SBS-TA or APP-TA	SBS-AA, SBS-TA or APP-TA	-45.0*
W-74	Min. 15/32-inch plywood; 24-inch span	Flintlastic APP Base T	Simplex MAXX Cap	9-inch o.c. at 2-inch lap and 18-inch o.c. in two (2), equally spaced, staggered center rows	None	(Optional) APP-TA	APP-TA	-45.0*
W-75	Min. 15/32-inch plywood; 24-inch span	Glasbase; Flexiglas; Flintlastic Base 20; All Weather / Empire Base; Poly SMS Base; Ultra Poly SMS Base; Yosemite Venting Base	Min. 1-inch long, 12 ga. Simplex Metal Cap Nails	6-inch o.c. at 3-inch lap and 6-inch o.c. in four (4), equally spaced, staggered center rows	None	(Optional) BP-AA, SBS-AA, SBS-TA or APP-TA	SBS-AA, SBS-TA or APP-TA	-52.5
W-76	Min. 19/32-inch plywood; 24-inch span	Glasbase; Flexiglas; Flintlastic Base 20; All Weather / Empire Base; Poly SMS Base; Ultra Poly SMS Base; Yosemite Venting Base	32 ga., 1-5/8-inch dia. tin caps with 11 ga. annular ring shank nails	8-inch o.c. at 4-inch lap and 8-inch o.c. in three (3), equally spaced, staggered center rows	None	BP-AA, SBS-AA, SBS-TA or APP-TA	SBS-AA, SBS-TA or APP-TA	-52.5
W-77	Min. 15/32-inch plywood; 24-inch span	Glasbase; Flexiglas; Flintlastic Base 20; All Weather / Empire Base; Poly SMS Base; Yosemite Venting Base	Simplex MAXX Cap	9-inch o.c. at 2-inch lap and 12-inch o.c. in two (2), equally spaced, staggered center rows	None	(Optional) BP-AA, SBS-AA, SBS-TA or APP-TA	SBS-AA, SBS-TA or APP-TA	-52.5
W-78	Min. 15/32-inch plywood; 24-inch span	Flintlastic APP Base T	Simplex MAXX Cap	9-inch o.c. at 2-inch lap and 12-inch o.c. in two (2), equally spaced, staggered center rows	None	(Optional) APP-TA	APP-TA	-52.5
W-79	Min. 19/32-inch plywood; 24-inch span	Glasbase; Flexiglas; Flintlastic Base 20; All Weather / Empire Base; Poly SMS Base; Ultra Poly SMS Base; Yosemite Venting Base	32 ga., 1-5/8-inch dia. tin caps with 11 ga. annular ring shank nails	8-inch o.c. at 4-inch lap and 8-inch o.c. in three (3), equally spaced, staggered center rows	None	BP-AA, SBS-AA, SBS-TA or APP-TA	SBS-AA, SBS-TA or APP-TA	-60.0
W-80	Min. 15/32-inch plywood; 24-inch span	Glasbase; Flexiglas; Flintlastic Base 20; All Weather / Empire Base; Poly SMS Base; Ultra Poly SMS Base; Yosemite Venting Base	Cap nails: 1-inch diameter, 0.032-inch thick metal cap with 0.120-inch shank diameter, annular ring shank nails.	6-inch o.c. at 4-inch lap and 6-inch o.c. at five (5) equally spaced, staggered center rows	None	(Optional) BP-AA, SBS-AA or SBS-TA	SBS-AA or SBS-TA	-67.5
W-81	Min. 19/32-inch plywood; 24-inch span	Glasbase; Flexiglas; Flintlastic Base 20; All Weather / Empire Base; Poly SMS Base; Ultra Poly SMS Base; Yosemite Venting Base	32 ga., 1-5/8-inch dia. tin caps with 11 ga. annular ring shank nails	6-inch o.c. at 4-inch lap and 6-inch o.c. in four (4), equally spaced, staggered center rows	None	BP-AA, SBS-AA, SBS-TA or APP-TA	SBS-AA, SBS-TA or APP-TA	-82.5

FL #	FL5259-R32
Application Type	Revision
Code Version	2020
Application Status	Approved
Comments	
Archived	☐
Product Manufacturer Address/Phone/Email	POLYGLASS USA 1111 W. Newport Center Drive Deerfield Beach, FL 33442 (954) 233-1330 Ext 242 malpert@polyglass.com
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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	12/23/2023
Validated By	John W. Knezevich, PE ☑ Validation Checklist - Hardcopy Received
Certificate of Independence	FL5259_R32_COI_2020_01_COI_NIEMINEN.pdf

Referenced Standard and Year (of Standard)

Standard	Year
ASTM D1970	2015
ASTM D226	2009
ASTM D4798	2011
ASTM D6163	2015
ASTM D6164	2011
ASTM D6222	2011
ASTM D6509	2015

FM 4474	2011
FRSA/TRI, Sixth Edition	2018
TAS 103	2020
UL 1897	2015

Equivalence of Product Standards Certified By

Sections from the Code

Product Approval Method	Method 1 Option D
Date Submitted	12/21/2020
Date Validated	12/21/2020
Date Pending FBC Approval	12/26/2020
Date Approved	02/09/2021

Summary of Products

FL #	Model, Number or Name	Description
5259.1	Polyglass Roof Underlayments (HVHZ)	Polyglass roof underlayments for use in FBC HVHZ jurisdictions.
Limits of Use **Approved for use in HVHZ:** Yes **Approved for use outside HVHZ:** No **Impact Resistant:** N/A **Design Pressure:** N/A **Other:** Refer to ER Section 5 for Limits of Use.		**Installation Instructions** FL5259_R32_II_2020_12_21_FINAL_ER_PLYG_UNDERLAYMENTS_FL5259-R32 (HVHZ).pdf Verified By: Robert Nieminen PE-59166 Created by Independent Third Party: Yes **Evaluation Reports** FL5259_R32_AE_2020_12_21_FINAL_ER_PLYG_UNDERLAYMENTS_FL5259-R32 (HVHZ).pdf Created by Independent Third Party: Yes
5259.2	Polyglass Roof Underlayments (non-HVHZ)	Polyglass roof underlayments, for use in FBC non-HVHZ jurisdictions.
Limits of Use **Approved for use in HVHZ:** No **Approved for use outside HVHZ:** Yes **Impact Resistant:** N/A **Design Pressure:** +N/A/-622.5 **Other:** 1.) The design pressure in this application relates to one particular underlayment system for use in tile roof systems. Refer to ER Section 5.8.3 for other systems and associated maximum design pressures. 2.) Refer to ER Section 5 for other limits of use.		**Installation Instructions** FL5259_R32_II_2020_12_21_FINAL_ER_PLYG_UNDERLAYMENTS_FL5259-R32 (NON-HVHZ).pdf Verified By: Robert Nieminen PE-59166 Created by Independent Third Party: Yes **Evaluation Reports** FL5259_R32_AE_2020_12_21_FINAL_ER_PLYG_UNDERLAYMENTS_FL5259-R32 (NON-HVHZ).pdf Created by Independent Third Party: Yes

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ENGINEER EVALUATE TEST CONSULT

EVALUATION REPORT

Polyglass USA, Inc.
1111 West Newport Center Drive
Deerfield Beach, FL 33442
(954) 233-1330

Evaluation Report 3m-PLYG-20-FBCER.A
FL5259-R32 (HVHZ)
Date of Issuance: 12/21/2020

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 **7th Edition (2020) Florida Building Code** sections noted herein.

DESCRIPTION: Polyglass Roof Underlayments, for use in FBC HVHZ jurisdictions

LABELING: Labeling shall be in accordance with the requirements the Accredited Quality Assurance Agency noted herein and FBC 1507.1.1.

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|etc. 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 11.

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 12/21/2020. This does not serve as an electronically signed document.

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.

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ROOFING COMPONENT EVALUATION:

1. SCOPE:

Product Category: Roofing
Sub-Category: Underlayment
Compliance Statement: **Roof Underlayments**, as produced by **Polyglass USA, Inc.**, 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
RAS 115, TAS 110	Material standard	ASTM D226	2009
TAS 110	Material standard	ASTM D1970	2015
TAS 110	Material standard	TAS 103	2020
TAS 110	Material standard	ASTM D6163	2015
TAS 110	Material standard	ASTM D6164	2011
TAS 110	Material standard	ASTM D6222	2011
TAS 110	Accelerated Weathering	ASTM D4798	2011

3. REFERENCES:

Entity	Examination	Reference	Date
ERD (TST 6049)	TAS 114(J)	11757.08.01-1	8/13/2001
ERD (TST 6049)	TAS 114(C)	P1740.01.07	1/4/2007
ERD (TST 6049)	ASTM D1623, TAS 103	P11030.11.09-1	11/30/2009
ERD (TST 6049)	TAS 117(B) / TAS 114(C)	P11030.11.09-2	11/30/2009
ERD (TST 6049)	ASTM D4977 / TAS 103	P11030.11.09-3	11/30/2009
ERD (TST 6049)	ASTM D1970, D4798	P37300.10.11	10/19/2011
ERD (TST 6049)	TAS 103	P40390.08.12-1	8/6/2012
ERD (TST 6049)	ASTM D1623, TAS 103	P40390.08.12-2	8/7/2012
ERD (TST 6049)	ASTM D1623, TAS 103	C41420.09.12-3	9/11/2012
ERD (TST 6049)	ASTM D6509	P37590.03.13-1-R1	2/5/2013
ERD (TST 6049)	TAS 114(J)	P39680.03.13	3/4/2013
ERD (TST 6049)	ASTM D6164	P37590.03.13-3A	3/6/2013
ERD (TST 6049)	ASTM D6164	P37590.07.13-1	7/2/2013
ERD (TST 6049)	ASTM D4601	P45940.09.13	9/4/2013
ERD (TST 6049)	ASTM D1623, TAS 103	P45270.05.14	5/12/2014
ERD (TST 6049)	ASTM D1623, TAS 103	6020.09.14-6	9/8/2014
ERD (TST 6049)	TAS 103	P44360.10.14-R1	10/7/2014
ERD (TST 6049)	ASTM D1970, D4798	P43290.10.14	10/17/2014
ERD (TST 6049)	TAS 114(J)	P39680.03.13	3/4/2013
ERD (TST 6049)	ASTM D1970, D4798	PLYG-SC10130.06.16-1	6/27/2016
ERD (TST 6049)	ASTM D1623, TAS 103	PLYG-SC10130.06.16-2	6/27/2016
ERD (TST 6049)	TAS 103	PLYG-SC10130.06.16-3	6/27/2016
ERD (TST 6049)	TAS 103 (tile slippage)	PLYG-SC13040.12.16	12/27/2016
ERD (TST 6049)	TAS 103 (tile slippage)	PLYG-SC12115.08.17	8/8/2017
ERD (TST 6049)	TAS 103	PLYG-SC13035.08.17	10/31/2017
NEMO (TST 6049)	ASTM D1970	4-PLYG-18-004.03.18	3/29/2018
NEMO (TST 6049)	ASTM D1623, TAS 103	4S-ICP-18-001.07.18-R1	7/23/2018
NEMO (TST 6049)	ASTM D6163	4S-PLYG-18-002.01.19-A	1/24/2019
NEMO (TST 6049)	ASTM D6222	4S-PLYG-18-002.05.19-C	5/20/2019
NEMO (TST 6049)	TAS 103	4S-PLYG-18-004.10.19-G	10/8/2019
NEMO (TST 6049)	TAS 103	4S-PLYG-18-004.10.19-I	10/8/2019
NEMO (TST 6049)	TAS 103	4S-PLYG-18-004.10.19-L	10/9/2019
NEMO (TST 6049)	TAS 103	4S-PLYG-18-004.12.19-F	12/18/2019
NEMO (TST 6049)	TAS 103	4j-PLYG-19-SSUDL-02.A	1/2/2020
NEMO (TST 6049)	ASTM D1970, D4798	4S-PLYG-18-004.01.20.H	1/14/2020
NEMO (TST 6049)	ASTM D1970, D4798	4S-PLYG-18-004.01.20.K	1/14/2020
NEMO (TST 6049)	TAS 103 (tile slippage)	4S-PLYG-18-004.01.20.A	1/16/2020
NEMO (TST 6049)	ASTM D6164	4S-PLYG-18-004.01.20.B	1/16/2020
NEMO (TST 6049)	TAS 103	PLYG-SC15855.05.20.A	5/29/2020
NEMO (TST 6049)	TAS 103	4j-PLYG-20-SSUDL-01	7/6/2020
NEMO (TST 6049)	ASTM D6222	4q-PLYG-19-SSMBB-05.A	7/23/2020
NEMO (TST 6049)	ASTM D4798, D1623	4j-PLYG-19-SSUDL-05.A	9/10/2020
NEMO (TST 6049)	ASTM D1970	4J-PLYG-20-SSUDL-05.A	9/30/2020
NEMO (TST 6049)	TAS 103	4J-PLYG-20-SSUDL-05.C	9/30/2020
NEMO (TST 6049)	TAS 103	4j-PLYG-20-SSUDL-11.A	10/21/2020
NEMO (TST 6049)	ASTM D1970, D4798	4S-PLYG-18-004.12.19.D	10/27/2020
NEMO (TST 6049)	ASTM D1623, TAS 103	4p-ICP-20-SSLAP-01.A	12/15/2020
UL (QUA9625)	Quality Control	Service Confirmation (FL)	09/13/2018
UL (QUA9625)	Quality Control	Service Confirmation (TX)	11/07/2019
UL (QUA9625)	Quality Control	Florida BCIS	Current

4. PRODUCT DESCRIPTION:

	Product	Material Standard	Plant(s)	Description
4.1	Elastobase	ASTM D6163	FL	Fiberglass-reinforced, SBS modified bitumen base sheet
4.2	Elastobase P	ASTM D6164	FL	Polyester-reinforced, SBS modified bitumen base sheet
4.3	Elastoflex S6 G	ASTM D6164 TAS 103 (partial)	FL, PA	Polyester-reinforced, SBS modified bitumen cap sheet
4.4	Elastoflex S6 G FR	ASTM D6164 TAS 103 (partial)	FL	Polyester-reinforced, SBS modified bitumen cap sheet
4.5	Polyflex G	ASTM D6222 TAS 103 (partial)	FL	Polyester-reinforced, APP modified bitumen cap sheet
4.6	Polyflex G FR	ASTM D6222 TAS 103 (partial)	FL	Polyester-reinforced, APP modified bitumen cap sheet
4.7	Polyflex SA P	ASTM D6222 TAS 103 (partial)	FL, TX	Polyester-reinforced, APP modified bitumen cap sheet
4.8	Polyflex SA P FR	ASTM D6222 TAS 103 (partial)	FL, TX	Polyester-reinforced, APP modified bitumen cap sheet
4.9	Polystick IR-Xe	ASTM D1970	FL, PA, TX	Nominal 60-mil thick rubberized asphalt waterproofing membrane, glass fiber reinforced, with an aggregate surface
4.10	Polystick MTS Plus	ASTM D1970 TAS 103	FL, NV, PA, TX	Nominal 60-mil thick rubberized asphalt waterproofing membrane, glass fiber reinforced, surfaced with poly-film surface
4.11	Polystick TU Max	ASTM D1970 TAS 103	FL, PA, TX	Nominal 60-mil thick rubberized asphalt waterproofing membrane with a 190 g/m^2 polyester fabric surface
4.12	Polystick TU P	TAS 103	FL, PA, TX	Nominal 130-mil thick rubberized asphalt waterproofing membrane, glass-fiber/polyester reinforced, with a granular surface
4.13	Polystick TU Plus	ASTM D1970 TAS 103	FL, PA, TX	Nominal 80-mil thick rubberized asphalt waterproofing membrane, glass fiber reinforced, with a polyester fabric surface
4.14	Polystick XFR	ASTM D1970 TAS 103	NV, TX	Nominal 80-mil thick rubberized asphalt waterproofing membrane, glass fiber reinforced, surfaced with a textured film surface

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 Non-High Velocity Hurricane Zone jurisdictions (i.e., outside of 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 1516** 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 **Polyglass 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 Authority Having Jurisdiction for approval based on this evaluation combined with supporting data for the prepared roof covering.

5.6 Allowable Roof Covers:

TABLE 1: ROOF COVER OPTIONS

FBC Section:	*TAS 110(S10), RAS 115*	*TAS 110(S11), RAS 118, 119 & 120*		*RAS 133*	*TAS 110(S11)*	*RAS 130*
Underlayment	**Asphalt Shingles**	**Clay and Concrete Tile**		**Metal**	**Slate or Slate-Type Shingles**	**Wood**
		Mechanical Attach	**Adhesive-Set**			
Elastobase	Yes (Alternate to D226, Type II)	Yes (as Base Sheet, See 5.8)	Yes (as Base Sheet, See 5.8)	Yes (Alternate to D226, Type II)	Yes (Alternate to D226, Type II)	Yes (Alternate to D226, Type II)
Elastobase P	Yes (Alternate to D226, Type II)	Yes (as Base Sheet, See 5.8)	Yes (as Base Sheet, See 5.8)	Yes (Alternate to D226, Type II)	Yes (Alternate to D226, Type II)	Yes (Alternate to D226, Type II)
Elastoflex S6 G	No	Yes	Yes (See 5.6.1)	No	No	No
Elastoflex S6 G FR	No	Yes	No	No	No	No
Polyflex G	No	Yes	Yes (See 5.6.1)	No	No	No
Polyflex G FR	No	Yes	No	No	No	No
Polyflex SA P	No	Yes	Yes (See 5.6.1)	No	No	No
Polyflex SA P FR	No	Yes	No	No	No	No
Polystick IR-Xe	Yes	No	No	No	Yes	Yes
Polystick MTS Plus	Yes	Yes	No	Yes	Yes	Yes
Polystick TU Max	No	Yes	Yes (See 5.6.1)	Yes	No	Yes
Polystick TU P	No	Yes	No	No	No	Yes
Polystick TU Plus	Yes	Yes	Yes (See 5.6.1)	Yes	Yes	Yes
Polystick XFR	Yes	Yes	No	Yes	Yes	Yes

5.6.1 Adhesive-set tile is limited to use of the following underlayment / tile-adhesive combinations.

TABLE 1A: ALLOWABLE UNDERLAYMENT / TILE-ADHESIVE COMBINATIONS[1]

Underlayment	Adhesive	Florida Product Approval
Polystick TU Max or Polystick TU Plus	DAP Foam "Touch 'n Seal StormBond Roof Tile Adhesive"	NOA 20-0309.05
Polystick TU Max or Polystick TU Plus	Dupont "Tile Bond™ Roof Tile Adhesive"	FL22525
Elastoflex S6 G, Polyflex G, Polyflex SA P, Polystick TU Max or Polystick TU Plus	ICP Adhesives and Sealants "Polyset® AH-160"	NOA 17-0322.03
Polystick TU Max or Polystick TU Plus	ICP Adhesives and Sealants "Polyset® RTA-1"	NOA 18-0131.02

[1] *Refer to Tile Manufacturer's or Adhesive Manufacturer's Florida Product Approval for Overturning Moment Resistance Performance.*

5.7 Allowable Substrates:

TABLE 2: SUBSTRATE OPTIONS FOR ADHERED UNDERLAYMENTS				
Underlayment	Application	Substrates (designed to meet wind loads for project)		
		Type	Primer	Material(s)
Polystick IR-Xe, Polystick MTS Plus, Polystick TU Max, Polystick TU P, Polystick TU Plus, Polystick XFR, Polyflex SA P or Polyflex SA P FR	self-adhering	Deck	ASTM D41	structural concrete
		Base Sheet	N/A	ASTM D226, Type II felt, Elastobase, Elastobase P
Elastoflex S6 G or Elastoflex S6 G FR	hot asphalt	Deck	ASTM D41	structural concrete
		Base Sheet	N/A	ASTM D226, Type II felt, Elastobase, Elastobase P
Polyflex G or Polyflex G FR	torch-applied	Deck	ASTM D41	structural concrete
		Base Sheet	N/A	Elastobase, Elastobase P

5.8 Attachment Limitations:

Refer to Section 6

5.9 Exposure Limitations:

TABLE 3: EXPOSURE LIMITATIONS		
Underlayment	Prepared Roof Cover Installation Type	Maximum Exposure (days)
Elastobase, Elastobase P, Polyglass G2 Base or Polyglass Base	Mechanically attached	30
Polystick IR-Xe	Mechanically attached	90
Polystick MTS Plus, Polystick TU Max, Polystick TU P, Polystick TU Plus or Polystick XFR	Any type (per Table 1)	180
Elastoflex S6 G, Polyflex G or Polyflex SA P	Adhesive-set tile roof system	180
Elastoflex S6 G, Elastoflex S6 G FR, Polyflex G, Polyflex G FR, Polyflex SA P or Polyflex SA P FR	Mechanically attached	UNLIMITED

5.10 Tile Slippage Limitations: When loading roof tiles on the underlayment in direct-deck tile roof assemblies, the maximum roof slope shall be as follows. These slope limitations can only be exceeded by using battens during loading of the roof tiles.

TABLE 4: TILE SLIPPAGE LIMITATIONS FOR DIRECT-DECK TILE INSTALLATIONS			
Underlayment	Tile Profile	Staging Method	Maximum Staging Slope
Elastoflex S6 G or S6 G FR	Flat or Lugged	6-tile stack (4 over 2)	Prohibited without battens
Polyflex G or G FR	Flat or Lugged	6-tile stack (4 over 2)	4:12
Polyflex SA P or SA P FR	Flat or Lugged	6-tile stack (4 over 2)	4:12
Polystick MTS Plus	Flat	6-tile stack (4 over 2)	5:12
	Lugged	6-tile stack (4 over 2)	4:12
Polystick TU Max	Flat	6-tile stack (4 over 2) or 10-tile stack	7:12
	Lugged	6-tile stack (4 over 2)	7:12
	Lugged	10-tile stack	6:12
Polystick TU P	Flat or Lugged	6-tile stack (4 over 2)	7:12
Polystick TU Plus	Flat or Lugged	6-tile stack (4 over 2)	7:12
	Flat or Lugged	10-tile stack	6:12
Polystick XFR	Flat or Lugged	Prohibited without battens	Prohibited without battens

6. INSTALLATION:

6.1 **Polyglass Roof Underlayments** shall be installed in accordance with **Polyglass** 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 **Approved Assemblies:**

6.3.1

Deck Type 1:	Wood, Non-Insulated
Deck Description:	Min. 19/32" plywood or wood plank
System Type E:	Underlayment mechanically fastened to deck
Underlayment:	One or more plies of Elastobase or Elastobase P with a minimum 4-inch side lap and 6-inch end lap, mechanically fastened to deck.
Fastening:	FBC HVHZ Approved nails and tin caps (FBC HVHZ 1517.5), 6-inch o.c. at the lap-edges and 12-inch o.c. in a grid-pattern between the overlaps.
Surfacing:	FBC HVHZ Approved asphalt shingles, metal panels, metal shingles, slate, slate-type shingles, wood shakes or wood shingles.

6.3.2

Deck Type 1:	Wood, Non-Insulated
Deck Description:	Min. 19/32" plywood or wood plank
System Type E:	Base sheet mechanically fastened to deck; underlayment adhered to base sheet
Base Sheet:	One or more plies of Elastobase, Elastobase P or FBC HVHZ Approved ASTM D226, Type II felt with a minimum 4-inch side lap and 6-inch end lap, mechanically fastened to deck.
Fastening:	FBC HVHZ Approved nails and tin caps (FBC HVHZ 1517.5), 6-inch o.c. at the lap-edges and 12-inch o.c. in a grid-pattern between the overlaps.
Cap Ply:	Elastoflex S6 G applied in hot asphalt or Polyflex G torch-applied or Polyflex SA P, self-adhering and back-nailed max. 12-inch o.c. using FBC HVHZ Approved nails and tin caps (FBC HVHZ 1517.5).
Surfacing:	FBC HVHZ Approved mechanically attached or adhesive-set tile roof system. Refer to Table 1A for allowable tile adhesives and Table 4 for tile stagging limitations.

6.3.3

Deck Type 1:	Wood, Non-Insulated
Deck Description:	Min. 19/32" plywood or wood plank
System Type E:	Base sheet mechanically fastened to deck; underlayment adhered to base sheet
Base Sheet:	One or more plies of Elastobase, Elastobase P or FBC HVHZ Approved ASTM D226, Type II felt with a minimum 4-inch side lap and 6-inch end lap, mechanically fastened to deck.
Fastening:	FBC HVHZ Approved nails and tin caps (FBC HVHZ 1517.5), 6-inch o.c. at the lap-edges and 12-inch o.c. in a grid-pattern between the overlaps.
Cap Ply:	Elastoflex S6 G FR applied in hot asphalt or Polyflex G FR torch-applied or Polyflex SA P FR or Polystick TU P, self-adhering and back-nailed max. 12-inch o.c. using FBC HVHZ Approved nails and tin caps (FBC HVHZ 1517.5).
Surfacing:	FBC HVHZ Approved mechanically attached tile roof system. Refer to Table 4 for tile stagging limitations.

6.3.4	Deck Type 1:	Wood, Non-Insulated
	Deck Description:	Min. 19/32" plywood or wood plank
	System Type E:	Base sheet mechanically fastened to deck; underlayment adhered to base sheet
	Base Sheet:	One or more plies of Elastobase, Elastobase P or FBC HVHZ Approved ASTM D226, Type II felt with a minimum 4-inch side lap and 6-inch end lap, mechanically fastened to deck.
	Fastening:	FBC HVHZ Approved nails and tin caps (FBC HVHZ 1517.5), 6-inch o.c. at the lap-edges and 12-inch o.c. in a grid-pattern between the overlaps.
	Cap Ply:	Polystick IR-Xe self-adhering and back-nailed max. 12-inch o.c. using FBC HVHZ Approved nails and tin caps (FBC HVHZ 1517.5).
	Surfacing:	FBC HVHZ Approved asphalt shingles, slate, slate-type shingles, wood shakes or wood shingles.
6.3.5	Deck Type 1:	Wood, Non-Insulated
	Deck Description:	Min. 19/32" plywood or wood plank
	System Type E:	Base sheet mechanically fastened to deck; underlayment adhered to base sheet
	Base Sheet:	One or more plies of Elastobase, Elastobase P or FBC HVHZ Approved ASTM D226, Type II felt with a minimum 4-inch side lap and 6-inch end lap, mechanically fastened to deck.
	Fastening:	FBC HVHZ Approved nails and tin caps (FBC HVHZ 1517.5), 6-inch o.c. at the lap-edges and 12-inch o.c. in a grid-pattern between the overlaps.
	Base Ply:	(Optional) Polystick MTS Plus or Polystick XFR, self-adhering and back-nailed max. 12-inch o.c. using FBC HVHZ Approved nails and tin caps (FBC HVHZ 1517.5)
	Cap Ply:	Polystick MTS Plus or Polystick XFR, self-adhering and back-nailed max. 12-inch o.c. using FBC HVHZ Approved nails and tin caps (FBC HVHZ 1517.5).
	Surfacing:	FBC HVHZ Approved asphalt shingles, mechanically attached tile roof system, metal panels, metal shingles, slate, slate-type shingles, wood shakes or wood shingles. Refer to Table 4 for tile stagging limitations.
6.3.6	Deck Type 1:	Wood, Non-Insulated
	Deck Description:	Min. 19/32" plywood or wood plank
	System Type E:	Base sheet mechanically fastened to deck; underlayment adhered to base sheet
	Base Sheet:	One or more plies of Elastobase, Elastobase P or FBC HVHZ Approved ASTM D226, Type II felt with a minimum 4-inch side lap and 6-inch end lap, mechanically fastened to deck.
	Fastening:	FBC HVHZ Approved nails and tin caps (FBC HVHZ 1517.5), 6-inch o.c. at the lap-edges and 12-inch o.c. in a grid-pattern between the overlaps.
	Base Ply:	(Optional) Polystick MTS Plus or Polystick XFR, self-adhering and back-nailed max. 12-inch o.c. using FBC HVHZ Approved nails and tin caps (FBC HVHZ 1517.5)
	Cap Ply:	Polystick TU Max, self-adhering and back-nailed max. 12-inch o.c. using FBC HVHZ Approved nails and tin caps (FBC HVHZ 1517.5).
	Surfacing:	FBC HVHZ Approved mechanically attached tile roof system, metal panels, metal shingles, wood shakes or wood shingles. Refer to Table 4 for tile stagging limitations.

6.3.7	Deck Type 1:	Wood, Non-Insulated
	Deck Description:	Min. 19/32" plywood or wood plank
	System Type E:	Base sheet mechanically fastened to deck; underlayment adhered to base sheet
	Base Sheet:	One or more plies of Elastobase, Elastobase P or FBC HVHZ Approved ASTM D226, Type II felt with a minimum 4-inch side lap and 6-inch end lap, mechanically fastened to deck.
	Fastening:	FBC HVHZ Approved nails and tin caps (FBC HVHZ 1517.5), 6-inch o.c. at the lap-edges and 12-inch o.c. in a grid-pattern between the overlaps.
	Base Ply:	(Optional) Polystick MTS Plus or Polystick XFR, self-adhering and back-nailed max. 12-inch o.c. using FBC HVHZ Approved nails and tin caps (FBC HVHZ 1517.5)
	Cap Ply:	Polystick TU Plus, self-adhering and back-nailed max. 12-inch o.c. using FBC HVHZ Approved nails and tin caps (FBC HVHZ 1517.5).
	Surfacing:	FBC HVHZ Approved asphalt shingles, mechanically attached tile roof system, metal panels, metal shingles, wood shakes or wood shingles. Refer to Table 4 for tile stagging limitations.
6.3.8	Deck Type 1:	Wood, Non-Insulated
	Deck Description:	Min. 19/32" plywood or wood plank
	System Type E:	Base sheet mechanically fastened to deck; underlayment adhered to base sheet
	Base Sheet:	One or more plies of Elastobase, Elastobase P or FBC HVHZ Approved ASTM D226, Type II felt with a minimum 4-inch side lap and 6-inch end lap, mechanically fastened to deck.
	Fastening:	FBC HVHZ Approved nails and tin caps (FBC HVHZ 1517.5), 6-inch o.c. at the lap-edges and 12-inch o.c. in a grid-pattern between the overlaps.
	Base Ply:	(Optional) Polystick MTS Plus, self-adhering and back-nailed max. 12-inch o.c. using FBC HVHZ Approved nails and tin caps (FBC HVHZ 1517.5)
	Cap Ply:	Polystick TU Max or Polystick TU Plus, self-adhering and back-nailed max. 12-inch o.c. using FBC HVHZ Approved nails and tin caps (FBC HVHZ 1517.5).
	Surfacing:	FBC HVHZ Approved adhesive-set tile roof system. Refer to Table 1A for allowable tile adhesives and Table 4 for tile stagging limitations.
6.3.9	Deck Type 1:	Wood, Non-Insulated
	Deck Description:	Min. 19/32" plywood or wood plank
	System Type E:	Base sheet mechanically fastened to deck; underlayment adhered to base sheet
	Base Sheet:	One or more plies of Elastobase or Elastobase P with a minimum 2-inch side lap and 6-inch end lap, mechanically fastened to deck.
	Fastening:	Simplex MAXX Cap Fastener (NOA 18-1227.05), 9-inch o.c. at the lap-edges and 18-inch o.c. in two (2) equally spaced, staggered center rows.
	Cap Ply:	Elastoflex S6 G applied in hot asphalt or Polyflex G torch-applied and back-nailed max. 12-inch o.c. using FBC HVHZ Approved nails and tin caps (FBC HVHZ 1517.5).
	Surfacing:	FBC HVHZ Approved mechanically attached or adhesive-set tile roof system. Refer to Table 1A for allowable tile adhesives and Table 4 for tile stagging limitations.

6.3.10	Deck Type 1:	Wood, Non-Insulated
	Deck Description:	Min. 19/32" plywood or wood plank
	System Type E:	Base sheet mechanically fastened to deck; underlayment adhered to base sheet
	Base Sheet:	One or more plies of Elastobase or Elastobase P with a minimum 3-inch side lap and 6-inch end lap, mechanically fastened to deck.
	Fastening:	Simplex MAXX Cap Fastener (NOA 18-1227.05), 8-inch o.c. at the lap-edges and 8-inch o.c. in three (3) equally spaced, staggered center rows.
	Primer:	PG100 or ASTM D41 primer applied to stress plates
	Cap Ply:	Polyflex SA P, self-adhering and back-nailed max. 12-inch o.c. using FBC HVHZ Approved nails and tin caps (FBC HVHZ 1517.5).
	Surfacing:	FBC HVHZ Approved mechanically attached or adhesive-set tile roof system. Refer to Table 1A for allowable tile adhesives and Table 4 for tile stagging limitations.
6.3.11	Deck Type 1:	Wood, Non-Insulated
	Deck Description:	Min. 19/32" plywood or wood plank
	System Type E:	Base sheet mechanically fastened to deck; underlayment adhered to base sheet
	Base Sheet:	One or more plies of Elastobase or Elastobase P with a minimum 2-inch side lap and 6-inch end lap, mechanically fastened to deck.
	Fastening:	Simplex MAXX Cap Fastener (NOA 18-1227.05), 9-inch o.c. at the lap-edges and 18-inch o.c. in two (2) equally spaced, staggered center rows.
	Cap Ply:	Elastoflex S6 G FR applied in hot asphalt or Polyflex G FR torch-applied and back-nailed max. 12-inch o.c. using FBC HVHZ Approved nails and tin caps (FBC HVHZ 1517.5).
	Surfacing:	FBC HVHZ Approved mechanically attached tile roof system. Refer to Table 4 for tile stagging limitations.
6.3.12	Deck Type 1:	Wood, Non-Insulated
	Deck Description:	Min. 19/32" plywood or wood plank
	System Type E:	Base sheet mechanically fastened to deck; underlayment adhered to base sheet
	Base Sheet:	One or more plies of Elastobase or Elastobase P with a minimum 3-inch side lap and 6-inch end lap, mechanically fastened to deck.
	Fastening:	Simplex MAXX Cap Fastener (NOA 18-1227.05), 8-inch o.c. at the lap-edges and 8-inch o.c. in three (3) equally spaced, staggered center rows.
	Primer:	PG100 or ASTM D41 primer applied to stress plates
	Cap Ply:	Polyflex SA P FR or Polystick TU P, self-adhering, self-adhering and back-nailed max. 12-inch o.c. using FBC HVHZ Approved nails and tin caps (FBC HVHZ 1517.5).
	Surfacing:	FBC HVHZ Approved mechanically attached tile roof system. Refer to Table 4 for tile stagging limitations.

6.3.13	Deck Type 1:	Wood, Non-Insulated
	Deck Description:	Min. 19/32" plywood or wood plank
	System Type E:	Base sheet mechanically fastened to deck; underlayment adhered to base sheet
	Base Sheet:	One or more plies of Elastobase, Elastobase P felt with a minimum 3-inch side lap and 6-inch end lap, mechanically fastened to deck.
	Fastening:	Simplex MAXX Cap Fastener (NOA 18-1227.05), 8-inch o.c. at the lap-edges and 8-inch o.c. in three (3) equally spaced, staggered center rows.
	Primer:	PG100 or ASTM D41 primer applied to stress plates
	Base Ply:	(Optional) Polystick MTS Plus or Polystick XFR, self-adhering and back-nailed max. 12-inch o.c. using FBC HVHZ Approved nails and tin caps (FBC HVHZ 1517.5)
	Cap Ply:	Polystick MTS Plus or Polystick XFR, self-adhering and back-nailed max. 12-inch o.c. using FBC HVHZ Approved nails and tin caps (FBC HVHZ 1517.5).
	Surfacing:	FBC HVHZ Approved asphalt shingles, mechanically attached tile roof system, metal panels, metal shingles, slate, slate-type shingles, wood shakes or wood shingles. Refer to Table 4 for tile stagging limitations.

6.3.14	Deck Type 1:	Wood, Non-Insulated
	Deck Description:	Min. 19/32" plywood or wood plank
	System Type E:	Base sheet mechanically fastened to deck; underlayment adhered to base sheet
	Base Sheet:	One or more plies of Elastobase, Elastobase P or FBC HVHZ Approved ASTM D226, Type II felt with a minimum 4-inch side lap and 6-inch end lap, mechanically fastened to deck.
	Fastening:	Simplex MAXX Cap Fastener (NOA 18-1227.05), 8-inch o.c. at the lap-edges and 8-inch o.c. in three (3) equally spaced, staggered center rows.
	Primer:	PG100 or ASTM D41 primer applied to stress plates
	Base Ply:	(Optional) Polystick MTS Plus or Polystick XFR, self-adhering and back-nailed max. 12-inch o.c. using FBC HVHZ Approved nails and tin caps (FBC HVHZ 1517.5)
	Cap Ply:	Polystick TU Max, self-adhering and back-nailed max. 12-inch o.c. using FBC HVHZ Approved nails and tin caps (FBC HVHZ 1517.5).
	Surfacing:	FBC HVHZ Approved mechanically attached tile roof system, metal panels, metal shingles, wood shakes or wood shingles. Refer to Table 4 for tile stagging limitations.

6.3.15	Deck Type 1:	Wood, Non-Insulated
	Deck Description:	Min. 19/32" plywood or wood plank
	System Type E:	Base sheet mechanically fastened to deck; underlayment adhered to base sheet
	Base Sheet:	One or more plies of Elastobase, Elastobase P or FBC HVHZ Approved ASTM D226, Type II felt with a minimum 4-inch side lap and 6-inch end lap, mechanically fastened to deck.
	Fastening:	Simplex MAXX Cap Fastener (NOA 18-1227.05), 8-inch o.c. at the lap-edges and 8-inch o.c. in three (3) equally spaced, staggered center rows.
	Primer:	PG100 or ASTM D41 primer applied to stress plates
	Base Ply:	(Optional) Polystick MTS Plus or Polystick XFR, self-adhering and back-nailed max. 12-inch o.c. using FBC HVHZ Approved nails and tin caps (FBC HVHZ 1517.5)
	Cap Ply:	Polystick TU Plus, self-adhering and back-nailed max. 12-inch o.c. using FBC HVHZ Approved nails and tin caps (FBC HVHZ 1517.5).
	Surfacing:	FBC HVHZ Approved asphalt shingles, mechanically attached tile roof system, metal panels, metal shingles, wood shakes or wood shingles. Refer to Table 4 for tile stagging limitations.

6.3.16	Deck Type 1:	Wood, Non-Insulated
	Deck Description:	Min. 19/32" plywood or wood plank
	System Type E:	Base sheet mechanically fastened to deck; underlayment adhered to base sheet
	Base Sheet:	One or more plies of Elastobase, Elastobase P or FBC HVHZ Approved ASTM D226, Type II felt with a minimum 4-inch side lap and 6-inch end lap, mechanically fastened to deck.
	Fastening:	Simplex MAXX Cap Fastener (NOA 18-1227.05), 8-inch o.c. at the lap-edges and 8-inch o.c. in three (3) equally spaced, staggered center rows.
	Primer:	PG100 or ASTM D41 primer applied to stress plates
	Base Ply:	(Optional) Polystick MTS Plus, self-adhering and back-nailed max. 12-inch o.c. using FBC HVHZ Approved nails and tin caps (FBC HVHZ 1517.5)
	Cap Ply:	Polystick TU Max or Polystick TU Plus, self-adhering and back-nailed max. 12-inch o.c. using FBC HVHZ Approved nails and tin caps (FBC HVHZ 1517.5).
	Surfacing:	FBC HVHZ Approved adhesive-set tile roof system. Refer to Table 1A for allowable tile adhesives and Table 4 for tile stagging limitations.

6.3.17	Deck Type 3:	Structural concrete, non-insulated
	Deck Description:	Min. 2,500 psi structural concrete
	System Type F:	Underlayment adhered
	Primer:	ASTM D41
	Underlayment:	Elastoflex S6 G applied in hot asphalt or Polyflex G torch-applied or Polyflex SA P, self-adhering
	Surfacing:	FBC HVHZ Approved adhesive-set tile roof system. Refer to Table 1A for allowable tile adhesives and Table 4 for tile stagging limitations.

6.3.18	Deck Type 3:	Structural concrete, non-insulated
	Deck Description:	Min. 2,500 psi structural concrete
	System Type F:	Underlayment adhered
	Primer:	ASTM D41
	Base Ply:	(Optional) Polystick MTS Plus, self-adhering
	Cap Ply:	Polystick TU Max or Polystick TU Plus, self-adhering
	Surfacing:	FBC HVHZ Approved adhesive-set tile roof system. Refer to Table 1A for allowable tile adhesives and Table 4 for tile stagging limitations.

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; (414) 248-6409; Karen.buchmann@ul.com

- END OF EVALUATION REPORT -

Ron DeSantis, Governor

Halsey Beshears, Secretary

STATE OF FLORIDA
DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION

CONSTRUCTION INDUSTRY LICENSING BOARD

THE ROOFING CONTRACTOR HEREIN IS CERTIFIED UNDER THE
PROVISIONS OF CHAPTER 489, FLORIDA STATUTES

FACEMIRE, ROGER WAYNE

STRATUS ROOFING
1081 NINTH STREET
WINTER GARDEN FL 34787

LICENSE NUMBER: CCC1326094

EXPIRATION DATE: AUGUST 31, 2022

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CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 03/26/2021

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER
Comegys Insurance Agency
One Beach Drive S. E. Ste. 230
Saint Petersburg FL 33701

CONTACT NAME: Mary Hurley
PHONE (A/C, No, Ext): (727) 521-2100 **FAX (A/C, No):** (727) 528-0626
E-MAIL ADDRESS: maryh@comegys.com

INSURER(S) AFFORDING COVERAGE		NAIC #
INSURER A :	Ironshore Specialty Insurance Co.	
INSURER B :	Berkshire Hathaway & Lloyds of London	
INSURER C :	U S Risk LLC	
INSURER D :	R T Specialty LLC	
INSURER E :		
INSURER F :		

INSURED
Stratus Construction and Roofing, LLC
1081 Ninth Street,
Winter Garden FL 34787

COVERAGES **CERTIFICATE NUMBER:** 21/22 GL/Umb 20/21 WC **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	[X] COMMERCIAL GENERAL LIABILITY [ ] CLAIMS-MADE [X] OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: [ ] POLICY [X] PRO-JECT [ ] LOC [ ] OTHER:			RCS0066903	03/22/2021	03/22/2022	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG Blanket AI/WOS/P&NC	$ 1,000,000 $ 100,000 $ 5,000 $ 1,000,000 $ 2,000,000 $ 2,000,000 $
B	AUTOMOBILE LIABILITY [ ] ANY AUTO [ ] OWNED AUTOS ONLY [X] SCHEDULED AUTOS [X] HIRED AUTOS ONLY [X] NON-OWNED AUTOS ONLY			05APM02466701	11/21/2020	11/21/2021	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident) Uninsured motorist	$ 1,000,000 $ $ $ $ 1,000,000
A	[X] UMBRELLA LIAB [X] OCCUR EXCESS LIAB [ ] CLAIMS-MADE [ ] DED [ ] RETENTION $			RUS0027901	03/22/2021	03/22/2022	EACH OCCURRENCE AGGREGATE	$ 5,000,000 $ 5,000,000 $
C	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) Y/N: N If yes, describe under DESCRIPTION OF OPERATIONS below	N / A		AVWCFL2927592020	09/11/2020	09/11/2021	[X] PER STATUTE [X] OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	 $ 1,000,000 $ 1,000,000 $ 1,000,000
D	Professional Liability			121AE019300200	01/19/2021	01/19/2022	Limit	$2,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

CERTIFICATE HOLDER
City of Belle Isle
1600 Nela Avenue
Belle Isle FL 32809

CANCELLATION
SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Tax Collector Scott Randolph

Local Business Tax Receipt

Orange County, Florida

This local Business Tax Receipt is in addition to and not in lieu of any other tax required by law or municipal ordinance. Businesses are subject to regulation of zoning, health and oth lawful authorities. This receipt is valid from October 1 through September 30 of receipt year. Delinquent penalty is added October 1.

2020 **EXPIRES** **9/30/2021**

5000	BUSINESS OFFICE	$60.00	35 EMPLOYEES	1806	ROOFING CONTRACTOR	$30.00	5000-1154290 1 EMPLOYEE

TOTAL TAX	$90.00
PREVIOUSLY PAID	$90.00
TOTAL DUE	$0.00

1081 9TH ST (MOBILE)
C - WINTER GARDEN, 34787
CCC1331354
PAID: $90.00 2005-06326958 9/16/2020

SCOTT RANDOLPH, TAX COLLECTOR • ORANGE COUNTY, FLORIDA •

STRATUS CONSTRUCTION & ROOFING LLC
KNAPP ARTHUR D III - QUALIFIER

STRATUS ROOFING
STRATUS CONSTRUCTION & ROOFING LLC
1081 9TH ST
WINTER GARDEN FL 34787

This receipt is official when validated by the Tax Collector.

Orange County Code requires this local Business Tax Receipt to be displayed conspicuously at the place of business in public view. It is subject to inspection by all duly authorized officers of the County.

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