

BROWARD COUNTY BOARD OF RULES & APPEALS

ROOFING COMMITTEE AUGUST 10, 2022

AGENDA

TO: Members of the Broward County Roofing Committee

VACANT Chair	Guillermo Echezabel	Adam LeBlanc	Abbas Zackria
Daniel Lavrich,	John Famularo	Gary Waldrep	Victor Blanco
Vice-Chair			
Mike Duskin	Ernest Fontan	Karen Warseck	

FROM: Jack Morell, Chief Structural Code Compliance Officer

SUBJECT: Roofing Code Modifications.

A virtual meeting of the Board's Roofing Committee has been called for Wednesday, August 10, 2022, via Zoom, commencing at 1:30 p.m. Zoom Information: https://broward-org.zoomgov.com/j/1601109380 -- Meeting ID 160 110 9380

AGENDA

Roll Call:

Approval of Minutes – March 11, 2020

Business Items:

- 1. Consideration of Formal Interpretation: rooftop equipment clearance requested by the Committee .
- 2. Consideration of Proposed Roof Top Equipment Affidavit requested by the Committee.
- 3. Consideration of Formal Interpretation: product approval documentation requested by the Committee for paper reduction.
- 4. Consideration of Uniform Permit Matrix for Solar, Thermal and Solar Electric installation requested by the Committee.

- 5. Consideration of recommendation to ensure anything on the roof is removed and reinstalled like a new installation requested by the Committee
- 6. Discussion concerning Florida Building Code Section 1518.3 proposed code modification 10176 eliminating a mechanically fastened base sheet under peal and stick membrane and allowing peal and stick directly to the roof deck.
- 7. Definition of roof section in Senate Bill (SB) 4-B and Florida Statute 553.844.
- 8. Discussion for removal of note under Method 2 in the Uniform Roof Permit Application Section 1525, Florida Building Code.
- 9. Discussion Code Modification 9910 Nail penetration
- 10. Public Comment 3-minute time limit
- 11. Set Next Meeting Date (if necessary)
- 12. Adjournment



Broward County Board of Rules and Appeals Certification Standards Review Committee March 11, 2020 Meeting Minutes

Call to order:

Chairman William Flett called a published meeting of the Roofing Committee to order at 1:30 p.m. in Room 237 of the West Regional Library, 8601 West Broward Boulevard, Plantation, Florida. The roll was called, and the following members were present:

Present:
William Flett, Chair
Daniel Lavrich, Vice Chair
Guillermo A. Echezabal
Ernest Fontan
Adam LeBlanc
Gary Waldrep
Victor Blanco

Approval of Minutes – January 10, 2005, August 8, 2006, April 10, 2007 and August 10, 2020

A motion was made by Mr. Fontan and seconded by Mr. Lavrich to approve all sets of minutes as submitted. Motion passed by unanimous vote of 7-0.

Business Items:

1. Discussion concerning a) how to handle inspections for re-roofs that require solar panels to be removed and re-installed, and b) notification to Building Departments that solar panels have been removed so that the government knows to reinspect – Committee suggestions for County-wide guidelines

Mr. Ted Fowler, Chief Structural Code Compliance Officer, explained this topic was raised at the January Board of Rules and Appeals (Board). The majority of building departments use a cover sheet that asks if there is any rooftop mounted equipment although it may not be specific to photovoltaic or solar-thermal. With this information, it would signal the need for an electrical or plumbing permit to remove and re-install photovoltaic or solar-thermal equipment. Chairman Flett suggested a space be provided on the uniform cover sheet.

Mr. Lavrich commented on problems associated with such installations and re-roofing. A general discussion ensued of examples in the field. As a code writing and enforcement body, Mr. Lavrich felt the Board should be looking out for the lack of public knowledge about water tightness and structural/electrical integrity of a roof and re-roofing associated with such equipment placed onto the roof. Mr. LeBlanc pointed out and more discussion ensued about the difficulty inspecting installations as well as hitting the truss on center.

Mr. Flett asked about product approval for these installations. Mr. Ken Castronovo, Chief

Electrical Code Compliance Officer, advised there is no product approval but they are designed for the wind load; a bracket is attached to the rails where the solar panels sit. There are specifications. Sealed plans are approved by Florida Solar Energy Commission and then it is required that those plans be submitted to the city or an engineer can approve the plans based on specifications that will match the wind load. A permit is required.

Mr. Fowler noted that product approval would not be required for re-installations. The re-installation only has to do with the photovoltaic panels, not the brackets. For re-installations, the roof is no longer disturbed.

Ms. Shalanda Giles-Nelson, member of the Board of Rules and Appeals, explained that on most of the re-roofs she has gone to inspect, she was not aware of any existing solar installation. The question is two parts. When is comes down to maintaining the roof, what signals the government of the solar. A permit is not being obtained for re-installation. There are two types of systems. If a roofer disconnects a solar system, it voids the warranty. The solar company should be required to come back out to remove and re-install. She felt the cover sheet should be revised to include solar equipment. Mr. Duskin pointed out that after-the-fact reinstallations and lack of need to be addressed.

It was concluded that equipment on a roof could only include the A.C., solar-thermal or solar photovoltaic. Mr. Fontan referred to the idea of providing a checkbox on the cover sheet which would then trigger what other permits would be required in a re-roofing. He felt this would be the most simple approach to make sure the customer is getting what they are paying for. A general discussion ensued about what would be revealed in a demolition permit as well as removal of the photovoltaic supports. A permit would be required for installing another system after a re-roofing. However, the work is often done without a permit. Mr. Lavrich did not think there is any way to assure that people will do things without permits. It is possible to regulate a re-roofing and discussion should be about how to have permit applications that show what is proposed to be done. And, what will be required on a re-roof with a photovoltaic or a solar hot water heating system. Mr. Waldrep indicated that there is also an existing checkbox as to whether there is gas on the roof.

Mr. James DiPietro, Administrative Director, noted that the Board has just mandated a standardized form countywide for change-outs. In July there will be a mandatory standardized form for windows as well. A.C. units were made mandatory last July. If a change was placed in the alternative on the cover sheet, it would need to be addressed in each of the thirty-one municipalities. For a recent matter of notary signatures, a voluntary attachment was used instead of the cover sheet. Mr. Fowler agreed with Mr. DiPietro. It would be difficult to change the cover sheet and do away with the outdated. Discussion followed about the pros and cons of changing the countywide uniform cover sheet versus adding an attachment. Mr. DiPietro explained that the Board of Rules and Appeals could vote for the attachment to be mandatory for re-roofs. Mr. Echezabel suggested the form be dated to identify if the current form is being used. Mr. Guerasio indicated that it is not dated. Mr. DiPietro advised that use of it started when it was adopted as a Chapter 1 code amendment occurred. Mr. Fontan supported uniformity countywide. Mr. Duskin pointed out that often municipal websites are not maintained. Mr. Fontan noted that whatever is done in this case will need to lend itself to e-permitting. Mr. Waldrep commented on the checkbox for rooftop equipment that Fort Lauderdale documentation provides.

Mr. Lavrich elaborated on his belief that nothing should be on the roof. Chairman Flett raised

the idea of a metal roof if solar panels are installed but it was thought that would be too much of a challenge. Mr. Lavrich felt it would be a battle on the State level.

A motion was made by Mr. Lavrich and seconded by Mr. Fontan directing staff to develop something for the Committee to review with the objective of ensuring that anything on the roof is removed and reinstalled like a new installation. After some further discussion below, the motion passed by unanimous vote of 7-0.

Mr. Duskin asked staff to look at the existing A.C. form could be modified to address this.

Mr. Echezabel suggested requiring a U-bracket that exposes studs be used in truss situations. Mr. Lavrich did not think it would be feasible. Mr. Fowler pointed out that securing of such rooftop equipment is currently addressed in the building code. It is an inspection issue. At some point, contractors and homeowners have to be accountable and responsible for their actions. Mr. DiPietro raised the idea of an interpretation indicating it would be an acceptable method to comply with the code. Mr. Lavrich felt that would be moving into design that he would not recommend. Mr. Fowler commented that historically he has required an engineer's certification that everything was installed pursuant to the drawings if all of the fasteners cannot be seen. Mr. Lavrich was more concerned with being somewhat assured that things are at least being looked at and properly permitted along with the proper product approvals. When reroofing occurs, panels are removed and reinstalled the same as a new installation. Historically significant changes were made to the building code after seeing what occurred during a hurricane.

Mr. Echezabel believed there is a potential problem with lag screws hitting the center of the truss. Mr. Lavrich commented that if the work is being inspected until failures happen, it is unknown whether there is a problem. There are a lot of varying viewpoints on this issue.

In response to Mr. Michael Guerasio, Chief Structural Code Compliance Officer, there was general consensus that it was unnecessary for a specific timeline for staff to bring back a recommendation.

2. Discussion concerning how to reduce the possibility of leaks when solar panels are reinstalled for re-roof replacements – Committee suggestions for County-wide guidelines

This item was addressed together with Item 1.

 Comparison of Miami-Dade "Solar Thermal/Electric Instructions and Recommendations" (2017) and Broward County "Administrative Guidelines for Processing Solar Thermal/Electric Permits" (2009) for the purpose of updating the Broward document

Mr. James DiPietro, Administrative Director, highlighted points of interest in the Miami-Dade Instructions and Recommendations. Broward's Paragraph A is included in Miami-Dade's introduction and otherwise the two documents are virtually identical. He suggested adopting Miami-Dade's format. He questioned if there is some reason to retain pages 21-31. Mr. Ted Fowler, Chief Structural Code Compliance Officer, added that Miami-Dade removed residential references. Also, Broward's document on pages 34 and 35 has been revised to match Miami-Dade.

A motion was made by Mr. Lavrich and seconded by Mr. Fontan directing staff to revise the

Uniform Permit Submittal Matrix for Solar Thermal and Solar Electric Installations in the High Velocity Hurricane Zone to be consistent with the Miami-Dade document (Pages 15 & 16). The motion passed by unanimous vote of 7-0. Mr. Lavrich asked that the revision be submitted to the Committee. A copy of Miami-Dade's Matrix is attached to these minutes.

Mr. Fowler drew attention to the 2007 Formal Interpretation concerning clearance on rooftop equipment which exempted the photovoltaic and solar-thermal panels. In Chapter 15, it provides for how high above the roof would have to be to allow re-roofing in the future. When the guidelines for photovoltaic and solar-thermal equipment were developed in 2009, it was realized that it would not be practical to raise the equipment four to six feet. Consequently a formal interpretation was issued exempting those types of permits. The interpretation sunsetted and needs to be renewed.

A motion was made by Mr. Lavrich and seconded by Mr. Fontan directing staff to update this interpretation and submit it to the Committee for their approval. The motion passed by unanimous vote of 7-0.

4. Consideration of Permit Paperwork Reduction, Specifically Product Approvals/Notice of Acceptances (NOA's)

Chairman Flett questioned why the full product approval document must be submitted with a permit application. During a general discussion, Mr. Lavrich suggested staff develop a formal interpretation, providing that product approvals need only to include pertinent areas of site specific. Chairman Flett suggested the product approval documentation could be available on an electronic tablet.

A motion was made by Mr. Lavrich and seconded by Mr. Fontan directing staff to develop a formal interpretation on product approval documentation with permit application submittals and submit it to the Committee for their approval. The motion passed by unanimous vote of 7-0.

- 5. Public Comment 3-minute time limit none
- 6. Set Next Meeting Date
- 7. Adjournment

There being no further business, the meeting adjourned at 3:08 p.m.



PHONE (954) 765-4500 FAX: (954) 765-4504 http://www.broward.org/codeappeals

To: **BORA Roof Committee**

From: Jack Morell

Date: TBD

RE: Rooftop Clearance requirements Section 1522.3, 1522.3.1

REASON:

Previous Formal interpretation sunsetted.

Recommendation:

Consider new formal interpretation exempting solar panels from rooftop clearance requirements FBC Section 1522.3,1522.3.1 for Board Approval



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Phone: 954-765-4500 Fax: 954-765-4504

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Mr. Daniel Rourke

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Mr. Gregg D'Attile,

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Board Attorney

Charles M. Kramer, Esq.

Board Administrative Director

James DiPietro

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BROWARD COUNTY BOARD OF RULES AND APPEALS

FBC 7th Edition (2020) FORMAL INTERPRETATION

ТО:	All Building Officials
FROM:	James DiPietro, Administrative Director
DATE:	
SUBJECT:	Rooftop Clearance Requirements-Section 1522.3, 1522.3.1
At its meeting o	of, the Board approved an interpretation of the FBC 7 th
Edition (2020) S	sections 1522.3, 1522.3.1
The ROOFTO	P CLEARANCE REQUIREMENTS FOR PERMANENTLY
MOUNTED EQ	QUIPMENT as specified in FBC Section 1522.3, 1522.3.1 are not
intended to be	applied to rooftop mounted photovoltaic panels and solar thermal
installations.	

*****PLEASE POST AT YOUR PERMIT COUNTER****

EFFECTIVE DATE:

F.I #25 Page I of I



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BROWARD COUNTY BOARD OF RULES AND APPEALS

To: BORA

From: Jack Morell Structural Chief Code Compliance Officer.

Date: TBD

Subject: Roof Top Mounted Equipment Affidavit

RECOMMENDATION:

1. It is recommended that BORA adopts the Roof Top Mounted Equipment Affidavit (See Attached Affidavit)

REASONS:

The roofing committee directed staff at the committee meeting held on March 11, 2020 to develop a Roof Top Mounted Equipment Affidavit to accompany all HVHZ re-roof uniform permit application submittals. The purpose of the affidavit is to identify if there is any existing roof top equipment: I.E. A/C, Photovoltaic Panels, Solar Thermal or Gas Vents. This information will then be utilized to obtain the appropriate permits to remove and reinstall the identified equipment during the re-roof inspection process.

ROOF TOP MOUNTED EQUIPMENT AFFIDAVIT

ALL EQUIPMENT THAT IS ROOF TOP MOUNTED IS REQUIRED TO BE IDENTIFIED BY THIS AFFIDAVIT AND SUBMITTED WITH THE HIGH VELOCITY HURRICANE ZONE UNIFORM ROOFING PERMIT APPLICATION

Permit Number:
Site Address:
Company Name:
Address:
Name of Qualifier:
License Number: Contact No
PLEASE CHECK ALL APPLICABLE EXISTING ROOF TOP EQUIPMENT:
☐ A/C EQUIPMENT ☐ PHOTOVOLTAIC PANELS ☐ SOLAR THERMAL ☐ GAS VENTS
PERMITS ARE REQUIRED FOR:
REMOVAL AND REINSTALLATION OF PHOTVOLTAIC PANELS. PER ADVAL AND REINSTALLATION OF SOLAR THERMAL
 REMOVAL AND REINSTALLATION OF SOLAR THERMAL. REMOVAL AND REINSTALLATION OF GAS VENTS.
IF A/C EQUIPMENT IS CHECKED ABOVE:
IS THERE AN EXISTING CODE APPROVED CURB OR STAND? YES NO
IF YOU ANSWERD NO, A MECHANICAL PERMIT IS REQUIRED FOR THE INSTALLATION OF THE PROPOSED CURB OR STAND.
NOTE All above permits may be considered as deferred submittals.
CONTRACTOR/OWNER BUILDER SIGNATURE DATE
PRINT CONTRACTOR/OWNER BUILDER NAME



PHONE (954) 765-4500 FAX: (954) 765-4504 http://www.broward.org/codeappeals

To: **BORA Roof Committee**

From: Jack Morell

Date: TBD

RE: Formal Interpretation

REASON:

Roof Notices of Acceptance contain multiple systems. The Board has determined that the entire Notice of Acceptance is unnecessary.

Recommendation:

In order to reduce paperwork this interpretation allows for submittal of only the necessary pages are required for submittal.



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BROWARD COUNTY BOARD OF RULES AND APPEALS

FBC 7th Edition (2020) FORMAL INTERPRETATION ()

DATE: TBD

TO: All Building Officials

FROM: James DiPietro, Administrative Director

SUBJECT: Section FBC 1512.2.1 (Product Approval)

At its regularly scheduled meeting on ______, the Board of Rules and Appeals approved an interpretation of Section 1512.2.1 of the FBC Building, 7th Edition (2020)

Formal Interpretation.

The intent of FBC Section 1512.2.1 is that when a proposed permitted roofing system utilizes a current and valid product approval, these product approvals may contain multiple pages describing a multitude of various roof systems. The Board has determined that it is not necessary to submit the entire product approval package with the roofing application submittal.

In an effort to reduce paperwork, it has been deemed only the necessary pages are required for permit submittal. Please select the system that matches your installation criteria and include only those pages that apply.

I.E. Cover Pages, Product Data sheets, Specific Installation Pages, General Limitations, etc.

EFFECTIVE DATE:

****PLEASE POST AT YOUR PERMIT COUNTER****



PHONE (954) 765-4500 FAX: (954) 765-4504 http://www.broward.org/codeappeals

To: **BORA Roof Committee**

From: Jack Morell

Date: TBD

RE: Uniform Permit Matrix for Solar Thermal, and Solar Electric Installation

REASON:

Roofing Committee directed staff to prepare a Uniform Permit Submittal Matrix consistent with Miami-Dade for Solar Thermal and Solar Electric installations.

RECOMMENDATION:

Approval of the Matrix for approval by the Board

UNIFORM PERMIT SUBMITTAL MATRIX for SOLAR THERMAL AND SOLAR ELECTRIC INSTALLATIONS

in

THE HIGH VELOCITY HURRICANE ZONE FBC 7th Edition (2020)

General Requirement	Submittal Requirements	F.S./Code Section
1. Permit Application		
		BCAP 105.3
2. Building/Equipment Layout Plan		
		BCAP 107
3. Structural Design		
Photovoltaic Roof Mounted Panel & Solar Thermal Equipment.	Submit signed and sealed drawings & design calculations by licensed Professional Engineer or Registered Architect showing: • Documentation/verification exposed solar panel equipment meet wind loads. • Documentation/verification support framing meets both uplift and lateral forces. • Design of connections for the wind loads. • Documentation/verification structural supports will accommodate additional dead loads.	FBCB 1522.2 FBCEB 603 FBCB 1616.1.2 FBCEB 706 FBCB 1605 FBCB 1620.1 FBCB 1620.2 FBCB 1620.3 FBCB 1621 Note: Dead load compliance with the Exception contained in the FBCEB Section 706.2 may be demonstrated by Providing the Dead Load criteria from the original plans.
4. Roof Design		
 Building Integrated Photovoltaic (BIPV). 	Submit a Uniform HVHZ Permit Application.	FBCB 1512.3 FBCB 1512.2.1 FBCB 1516.2
 Photovoltaic Roof Mounted Panel. 	Submit a detail of the roof penetration flashing.	FBCB 1514
Solar Thermal.	Submit a detail of the roof penetration flashing.	FBCB 1514

5. System Components		
Solar Water Heater.	Submit FSEC Approval/Listing and System Reference Drawing.	FBCB 107 FBCEC R403.4.3 BCAP 101
 Solar Water Heater using a PV powered pump. 	Submit listing for PV panel and pump.	NEC Article 690
 Solar Swimming Pool Water Heater. 	Manufacturers selected system installation manual/detail and system specifications.	FBCB 107 BCAP 106
 Solar Swimming Pool Water Heater. 	Submit FSEC Approval/Listing and System Reference Drawing.	FBCB 107 F.S. 377.705 BCAP 101
Photovoltaic System.	Plans must be signed and sealed by a Florida Professional Engineer or Certified by FSEC.	F.S. 471.025 F.S. 377.705(4)(d)
Statutory Requirement.	FSEC will generate a System Certification Approval Form or signed and sealed by a Florida Professional Engineer.	F.S. 377.705(4)(d)
Electrical Diagram	Submit electrical diagram including components interconnects, conductor types and sizes, conduit types and sizes, disconnects, and point of interconnection.	National Electrical Code NEC Article 690 NEC Article 705
Component Documentation	FSEC Certification or signed and sealed by a Florida Professional Engineer.	F.S. 377.705(4)(d)
 Abbreviations 	BCAP - Broward County Administrative FBCB - Florida Building Code, Building V FBCEB - Florida Building Code, Existing FBCEC - Florida Building Code, Energy C F.S - Florida Statute FSEC - Florida Solar Energy Center NEC - National Electric Code	olume Building Volume



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To: **BORA Roof Committee**

From: Jack Morell

Date: TBD

RE: Discussion Code Modification 10176 Florida Building Code Building.

REASON:

This modification removes the requirement for a mechanically fastened base sheet under a self-adhered sheet.

RECOMMENDATION:

Consideration and possible action

FLORIDA DEPARTMENT OF

Business & Professional Regulation



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Proposed Code Modifications Menu > Registered User Validation > Modification Search > Modification List > Modification Detail

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Modification # R10176

Name Michael Silvers (FRSA) Address 3728 59th Ave Cir E

City Ellenton
State FL
Zip Code Manatee

Email silvers@floridaroof.com
Primary Phone (407) 671-3772 Ext 169

Alternate Phone (727) 214-7649

Fax

Modification Status Verified

View Request History

TAC Roofing

TAC Recommendation Pending Review
Commission Action Pending Review

Archived No

Code Version 2023

Code Change Cycle 2023 Triennial Original Modification 01/04/2022 - 02/15/2022

Sub Code Building

Chapter & Topic Chapter 15 - Roof Assemblies and Rooftop Structures

Section 1518

Related Modifications 10175, 10179, 10180 and 10238

Affects High Velocity Hurricane

Zone (HVHZ)

Yes

Summary of Modification

This modification will align HVHZ roof underlayment requirements with the more stringent secondary water barrier requirements used in the rest of Florida and will also allow the use of self-adhering membrane applied direct to deck in the HVHZ.

Text of Modification

1518.1 General.

Prepared roof coverings shall be as defined in Section 1513 and in general limited to application over sloped roof decks capable of receiving mechanical fasteners. Prepared roof coverings may be mechanically fastened or, in specific limited cases when noted in the product approval, set in with an adhesive bond.

Roof coverings shall be applied in accordance with the applicable provisions of this section and the manufacturer's installation instructions.

-

1518,2 Underlayments,

Underlayment shall be as defined in Section 1513. Underlayment shall be installed in compliance with the roofing component product approval and shall be in compliance with the following minimum requirements:

Underlayment for roof slopes 2:12 and greater shall conform to the applicable standards listed in this chapter. Underlayment materials required to comply with ASTM D226, D1970, D4869, D6757 and ASTM D8257 shall bear a label indicating compliance to the standard designation and, if applicable, type classification indicated. Underlayment for roof slopes 2:12 and greater shall be applied and attached in accordance with Section 1518.1, 1518.2, 1518.5, 1518.6, 1518.7, 1518.8, 1518.9, 1518.10, or 1518.11 as applicable.

Exceptions:

- 1. For areas of a roof that cover exterior walkways and roofs of agricultural buildings, underlayment shall comply with the manufacturer's installation instructions.
- 2. Compliance with Section 1507.1.1.1 is not required for structural metal panels that do not require a substrate or underlayment.

1518.2.1

Underlayment <u>described in 1518.4 (1), (2) and (3)</u> shall be attached to a nailable deck in a grid pattern of 12 inches (305 mm) between the overlaps, with 6-inch (152 mm) spacing at the overlaps.

<u>Underlayment for asphalt shingles, metal roof panels or shingles, mineral surfaced roll roofing, slate and slate-type shingles:</u>

<u>Underlayment for asphalt shingles, metal roof panels or shingles, mineral surfaced roll roofing, slate and slate-type shingles shall comply with one of the following methods:</u>

1. The entire roof deck shall be covered with an approved self-adhering polymer modified bitumen underlayment complying with ASTM D1970 installed in accordance with both the underlayment manufacturer's and roof covering manufacturer's installation instructions for the deck material, roof ventilation configuration and climate exposure for the roof covering to be installed.

Exception:

- 1. An existing self-adhering modified bitumen underlayment that has been previously installed over the roof decking and, where it is required, renailing off the roof sheathing in accordance with Section 706.7.1 of the Florida Building Code, Existing Building can be confirmed or verified. An approved underlayment in accordance with Table 1507.1.1.1 for the applicable roof covering shall be applied over the entire roof over the existing self-adhered modified bitumen underlayment.
- 2. A minimum 3-3/4 -inch-wide (102 96 mm) strip of selfadhering polymer-modified bitumen membrane complying with ASTM D1970 or selfadhering flexible flashing tape complying with AAMA 711, Level 3 [for exposure up to 176°F (80°C)], installed in accordance with the manufacturer's instructions for the deck material, shall be applied over all joints in the roof decking. An approved underlayment in accordance with Table 1518.2.1 for the applicable roof covering shall be applied over the entire roof over the membrane strips.
- 3. Two layers of ASTM D226 Type II or ASTM D4869 Type III, Type IV, or ASTM D8257 underlayment shall be installed as follows: Apply a strip of underlayment that is half the width of a full sheet parallel to and starting at the eaves, fastened sufficiently to hold in place. Starting at the eave, apply full sheets of reinforced underlayment, overlapping successive sheets half the width of a full sheet plus 2 inches. End laps shall be 6 inches (152 mm) and shall be offset by 6 feet (1829 mm). Underlayment shall be attached to a nailable deck with corrosion-resistant fasteners with a maximum fastener spacing measured horizontally and vertically of 12 inches (305 mm) o.c. between side laps, and one row at the end and side laps fastened 6 inches (152 mm) o.c. Underlayment shall be attached using annular ring or deformed shank nails with metal or plastic caps with a nominal cap diameter of not less than 1 inch (25.4 mm). Metal caps are required where the ultimate design wind speed, Vult, equals or exceeds 170 mph. Metal caps shall have a thickness of not less than 32-gage sheet metal. The minimum thickness of the outside edge of plastic caps shall be 0.035 inch (0.889 mm). The cap nail shank shall be not less than 0.083 inch (2.1082 mm) for ring shank cap nails. The cap nail shank shall have a length sufficient to penetrate through the roof sheathing or not less than 3/4 inch (19.05 mm) into the roof sheathing.

TABLE 1518.2.1UNDERLAYMENT WITH SELF-ADHERING STRIPS OVER ROOF DECKING JOINTS

		<u>Underlayment Attachment</u>		
Roof Underlayment Covering Type		Roof Slope 2:12 and Less Than 4:12	Roof Slope 4:12 and Greater	
Asphalt Shingles, Metal Roof Panels, Photovoltaic Shingles	ASTM D226Type IIASTM D4869Type III or IV	Apply in accordance with Section 1518.2.1, Item 3	Underlayment shall be applied shingle fashion, parallel to and starting from the eave and lapped 4 inches; end laps shall be 6 inches and shall be offset by 6 feet. Underlayments shall be fastened with approved minimum 12 gage by 11/4 in. corrosion-resistant annular ring shank roofing nails	

Metal Roof Shingles, Mineral- Surface Roll Roofing, Slate and Slate-type Shingles, Wood Shingles.	ASTM D 675 ASTM D226Type II ASTM D4869 Type III or IV	fastened through minimum 32 gage by 15/8 in. diameter approved tin caps. Underlayment shall be attached to a nailable deck in a grid pattern of 12 inches (305 mm) between the overlaps, with 6-inch (152 mm) spacing at the overlaps. Nails shall be of sufficient length to penetrate through the sheathing or wood plank a minimum of 3/16 in. or penetrate 1 inch (25 mm) or greater thickness of lumber a minimum of 1 in., except where architectural appearance is to be preserved, in which case a minimum of 3/4 in. nail may be used	
	<u>III or IV</u>		

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 mile per hour = 0.447 m/s

1518.2.2

Where the architectural appearance of the underside is to be preserved, the underlayment shall be secured in accordance with Section 1519.5.2.

1518.2.3

Tin caps and nails or cap nails shall be as defined in Section 1517.5.2.

1518,2,4

Underlayment nails shall be as defined in Section 1517.5.1.

1518.3 Reserved.

If the underlayment is a self-adhering membrane, the membrane shall be applied over a mechanically attached anchor sheet, attached in compliance with Section 1518.2.1.

1518.4 Reserved

All underlayment applications for prepared roof coverings shall be applied in compliance with the manufacturer roofing assembly product approval, and shall be not less than one of the following:

- (1) a double layer of an ASTM D226 Type I II, with a 19 inch (483 mm) headlap; or
- (2) a single layer of an ASTM D226, Type II with a 4-inch (102 mm) headlap; or
- (3) a single layer of an ASTM D2626 coated base sheet with a 4 inch (102 mm) headlap,

and (4 6) all endlaps shall be a minimum of 6 inches (152 mm).

1518.8 Clay and concrete roof tile.

Tile shall be clay, concrete or composition material of various configurations complying with the physical property requirements of this code. All tile and tile systems shall be tested in compliance with the provisions set forth in Section 1523. Tile shall have a product approval for a complete tile system, which shall include the tile, underlayment and all tile related accessories required to provide a waterproof system.

Note: Remaining sections remain unchanged.

Rationale

This modification will align HVHZ roof underlayment requirements with the more stringent secondary water barrier requirements used in the rest of Florida and will also allow the use of self-adhering membrane applied direct to deck in the HVHZ. Self-adhering underlayments have been accepted outside the HVHZ for well over a decade. They have proven to be the most effective secondary water barrier (SWB) capable of helping building owners and occupants to utilize their structures after hurricanes. Their proven resistance to wind uplift and wind driven rain makes them an excellent SWB. They have also shown to be an important part of

Fiscal Impact Statement

Impact to local entity relative to enforcement of code (553.73(9)(b),F.S.)

History

Does not discriminate.

Does not degrade the effectiveness of the code (553.73(9)(a)5,F.S.)

2/17/22, 12:12 PM

https://www.floridabuilding.org/cm/cm_code_dtl.aspx?param=z%2fKt%2fx6RhURNKG7Po1TpC0R3GAKKM5JmiOnCUXfsamIh6...

Date Submitted 02/14/2022
Date Verified 02/15/2022
Date TAC Recommendation Set 02/14/2022
Date Commission Action Set 02/14/2022
DBPR Staff Notes

Record of Modification

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PHONE (954) 765-4500 FAX: (954) 765-4504 http://www.broward.org/codeappeals

To: **BORA Roof Committee**

From: Jack Morell

Date: TBD

Definition of Roof Section FBC 1502 RE:

REASON:

This modification defines a roof section contained in SB-4-B and FS 553.844

RECOMMENDATION:

Consideration and possible action

FLORIDA DEPARTMENT OF

Business & Professional Regulation



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OFFICE OF THE SECRETARY

Modification # R9883

Name Michael Silvers (FRSA) Address 3728 59th Ave Cir E

City Ellenton
State FL
Zip Code Manatee

Email silvers@floridaroof.com
Primary Phone (407) 671-3772 Ext 169

Alternate Phone (727) 214-7649

Fax

Modification Status Verified
TAC Roofing

TAC Recommendation Pending Review
Commission Action Pending Review

Archived No

Code Version 2023

Code Change Cycle 2023 Triennial Original Modification 01/04/2022 - 02/15/2022

Sub Code Existing Building

Chapter & Topic Chapter 7 - Alterations - Level 1

Section 706.1.1

Related Modifications

Affects High Velocity Hurricane Zone (HVHZ)

No

Summary of Modification

Adds an exclusion the 706.1.1 often referred to the 25% rule. Currently it requires the balance of the undamaged roof or roof section to be replaced without regard for the remaining serviceable life of the the undamaged portion. The exclusion would allow roofs up to 9 years old to remain in use.

Text of Modification

706.1.1 Not more than 25 percent of the total roof area or roof section of any existing building or structure shall be repaired, replaced or recovered in any 12-month period unless the entire existing roofing system or roof section is replaced to conform to requirements of this code.

<u>Exception:</u> Replacement of the entire existing roof or roof section is not required if the existing roof covering was permitted and installed in compliance with this code or the two previous versions of the Florida Building Code.

Rationale

Current language requires replacement of the entire roof systems when repairing replacing and recovering more than 25% of a roof or roof section. It does not take into account the age of the existing roof. This leads to many roofs being completely replaced with years of serviceable life remaining. The cost to replace these compliant when installed and currently undamaged roof areas fall to the owner or most often their insurer. Some reasonable consideration of remaining serviceable life should be allowed. By using the applicable code edition when the roof was permitted and installed the exclusion will not require roofs up to 9 years to be

Fiscal Impact Statement
Impact to local entity relative to enforcement of code (553.73(9)(b),F.S.)
No impact.
Д.
Impact to building and property owners relative to cost of compliance with code (553.73(9)(b),F.S.)
Will reduce property owners and their insurers cost by not forcing replacement of serviceable portions of the roof. It will also reduce the cost of property insurance.
Impact to industry relative to the cost of compliance with code (553.73(9)(b),F.S.)
No impact.
Impact to small business relative to the cost of compliance with code (553.73(9)(b),F.S.)
Will reduce property owners and their insurers cost by not forcing replacement of serviceable portions of the roof. It will also reduce the cost of property insurance.
Requirements
Has a reasonable and substantial connection with the health, safety, and welfare of the general public (553.73(9)(a)2,F.S.)
Will reduce property owners and their insurers cost by not forcing replacement of serviceable portions of the roof. It will also reduce the cost of property insurance.
Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction (553.73(9)(a)3,F.S.)
Improves the code.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities (553.73(9)(a)4,F.S.)

Does not discriminate			
			//
Does not degrade the effectivenes	ss of the code (553.73	3(9)(a)5,F.S.)	
Does not degrade.			
History			
Date Submitted	01/11/2022		
Date Verified	01/12/2022		
Date TAC Recommendation Set	01/11/2022		
Date Commission Action Set	01/11/2022		
DBPR Staff Notes			

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Board of Rules & Appeals

ONE NORTH UNIVERSITY DRIVE, SUITE 3500-B, PLANTATION, FLORIDA 33324

PHONE (954) 765-4500 FAX: (954) 765-4504 http://www.broward.org/codeappeals

To: BORA Roof Committee

From: Jack Morell

Date: TBD

RE: Florida Building Code Section 1525 Uniform Roof Application Form Section E

REASON:

Note under Method 2 in the Uniform Roof Permit Application Florida Building Code Section 1525 that references a list that does not exist.

RECOMMENDATION:

Committee to approve the removal of this note to be presented to the roof TAC committee in October.

ROOF ASSEMBLIES AND ROOFTOP STRUCTURES

Florida Building Code 7th Edition (2020) **High-Velocity Hurricane Zone Uniform Permit Application Form**

Section E (Tile Calculations)

For Moment based tile systems, choose either Method 1 or 2. Compare the values for M_r with the values from M_f . If the M_f values are greater than or equal to the M, values, for each area of the roof, then the tile attachment method is acceptable.

(Zone 1:	_ × λ	_ = _) – Mg:	= M _{r1}	Product Approval M _f
(Zone 2e:	× λ	=) – Mg:	= M _{r2e}	Product Approval M _f
) – Mg:		Product Approval M _f
(Zone 2r:	_ ×	= _) – Mg:	= M _{r2r}	Product Approval M _r
(Zone 3e:	_ × λ	=_) – Mg:	= M _{r3e}	Product Approval M _f
(Zone 3r:	_ × λ	_ = _) – Mg:	= M _{r3r}	Product Approval M _r

Method 2 "Simplified Tile Calculations Per Table Below"

Required Moment of Resistance (M_r) From Table Below ______ Product Approval M_r.

	M _r red	quired Moment F	Resistance*		
Mean Roof Height Roof Slope	15'	20′	25′	30′	40'
2:12	34.4	36.5	38.2	39.7	42.2
3:12	32.2	34.4	36.0	37.4	39.8
4:12	30.4	32.2	33.8	35.1	37.3
5:12	28.4	30.1	31.6	32.8	34.9
6:12	26.4	28.0	29.4	30.5	32.4
7:12	24.4	25.9	27.1	28.2	30.0

*Must be used in conjunction with a list of moment based tile systems endorsed by the Broward County Board of Rules and Appeals.

For Uplift based tile systems use Method 3. Compare the values for F' with the values for F_r . If the F' values are greater than or equal to the F_r values, for each area of the roof, then the tile attachment method is acceptable.

Method 3 "Uplift Based Tile Calculations Per RAS 127"

(Zone 1: ×	L :	= ×	w: =)	– W: :	cos r	= F _{r1}	Product Approval F'
(Zone 2e:>	د L	= >	w: =) – W:	× cos r	_ = F _{r2e}	Product Approval F'
(Zone 2n:>	د L	= >	w: =) – W:	× cos r	= F _{r2n}	Product Approval F'
(Zone 2r: ×	L	= ×	w: =	– W:	× cos r	= F _{r2r}	Product Approval F'
(Zone 3e:>	۲ L	= >	W: =) – W:	× cos r	= F _{r3e}	Product Approval F'
(Zone 3r: ×	L	= ×	w: =) – W:	× cos r	= F _{r3r}	Product Approval F'

Where to Obtain Information								
Description	Symbol	Where to find From applicable table in RAS 127 or by an engineering analysis prepared by PE based on ASCE 7						
Design Pressure	Zones 1, 2e, 2n, 2r, 3e, 3r							
Mean Roof Height	Н	Job Site						
Roof Slope	θ	Job Site						
Aerodynamic Multiplier	λ	Product Approval						
Restoring Moment due to Gravity	M _a	Product Approval						
Attachment Resistance	$M_{\rm f}$	Product Approval						
Required Moment Resistance	M _q	Calculated						
Minimum Attachment Resistance	F ^r	Product Approval						
Required Uplift Resistance	F _r	Calculated						
Average Tile Weight	W	Product Approval						
Tile Dimensions	L = length W = width	Product Approval						
All calculations must be submitted	to the building official at the ti	me of permit application.						



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To: **BORA Roof Committee**

From: Jack Morell

Date: TBD

RE: Roof Nail Penetration through the sheeting

REASON:

Roof Tac Committee approved Code Modification Number 9910 to reduce the penetration of the fastener through the thickness of the sheeting.

RECOMMENDATION:

Informational update.

Business & Professional Regulation

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Modification # R9910

Name Aaron Phillips

Address Asphalt Roofing Manufacturers Association

2331 Rock Spring Road

City Forest Hill State Zip Code 21050

Email aphillips@asphaltroofing.org

Primary Phone (620) 202-0922

Alternate Phone

Modification Status Verified TAC

Roofing TAC Recommendation Approved as Submitted

Commission Action Pending Review

Archived No

Code Version 2023

Code Change Cycle 2023 Triennial Original Modification 01/04/2022 - 02/15/2022

Sub Code Building

Chapter & Topic Chapter 15 - Roof Assemblies and Rooftop Structures

Section 1518 Related Modifications 9909

Affects High Velocity Hurricane

Zone (HVHZ)

Yes

Summary of Modification

Nail penetration distance.

Text of Modification

Revise FBC-Building as shown:

1518.7.3.2 Asphaltic shingles shall be installed in compliance with the product approval, but in no case with less than six approved roofing nails or approved fastening devices which penetrate through the thickness of sheathing or wood plank a minimum of 3/16 1/8 inch (4.8 3.2 mm) or penetrate into a 1 inch (25 mm) or greater thickness of lumber a minimum of 1 inch (25 mm), except where architectural appearance is to be preserved, in which case a minimum of 3/4 inch (19 mm) ring shank roofing nail may be used.

Date	Attached File				
04/20/2022	Mod 9910 TextOfModification.pdf				

This modification related to fastener penetration is consistent with guidance from ARMA and NRCA. Comp MOD 9909 makes the same change in RAS 115.	anion
	//
Fiscal Impact Statement	
Impact to local entity relative to enforcement of code (553.73(9)(b),F.S.) No impact to local entity enforcement of code.	
	//
Impact to building and property owners relative to cost of compliance with code (553.73(9)(b),F.S.) Clarifications should not impact cost of compliance.	
and the impact cost of compliance.	
	//
Impact to industry relative to the cost of compliance with code (553.73(9)(b),F.S.)	
Clarifications should not impact cost of compliance.	
	1.
Impact to small business relative to the cost of compliance with code (553.73(9)(b),F.S.)	
Clarifications should not impact cost of compliance.	
	11
Requirements Has a reasonable and substantial connection with the health, safety, and welfare of the general public (553 (a)2,F.S.)	3.73(9)
Adjusts nail penetration to industry standard to clarify requirement for installers.	
	11
Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction (553.73(9)(a)3,F.S.)	
Adjusts nail penetration to industry standard to clarify requirement for installers.	
	11

Rationale

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities (553.73(9)(a)4,F.S.)

Does not discriminate.

Does not degrade the effectiveness of the code (553.73(9)(a)5,F.S.)

Does not degrade code effectiveness.

History

Date Submitted 01/18/2022

Date Verified 01/19/2022

Date TAC Recommendation Set 06/29/2022

Date Commission Action Set 01/18/2022

DBPR Staff Notes

Record of Modification

There are no records that match the search criteria.

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