

**ROOFING**  
PART 1 OF 3  
WITHOUT COMMENTS

**Proposed Code Modifications**

This document created by the Florida Department of Business and Professional Regulation -  
850-487-1824

Total Mods for Roofing in Approved as Modified: 6

Total Mods for report: 85

## Sub Code: Residential

R5509

1

<b>Date Submitted</b>	7/21/2012	<b>Section</b>	R905.4.5 Application.	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	9	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Modified				
<b>Commission Action</b>	Pending Review				

### Comments

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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### Related Modifications

### Summary of Modification

Provides and carries forward current 2010 FBC Florida-specific criteria.

### Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

### Fiscal Impact Statement

#### Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

#### Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

#### Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

### Requirements

#### Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

#### Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

#### Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

#### Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

**R905.4.5 Application.**

Metal roof shingles shall be secured to the roof in accordance with this chapter and the ~~approved manufacturer's installation instructions~~ installed in accordance with the approved manufacturer's installation instructions. The product approval shall state the allowable uplift resistance for the attachment system. The installation of metal roof shingles shall be limited to roofs where the allowable uplift resistance is equal to or greater than the design uplift pressure for the roof listed in Table R301.2(2).



**R905.4.5 Application.**

Metal roof shingles shall ~~be secured to the roof in accordance with this chapter and the approved manufacturer's installation instructions~~ installed in accordance with the approved manufacturer's installation instructions. The product approval shall state the allowable uplift resistance for the attachment system. The installation of metal roof shingles shall be limited to roofs where the allowable uplift resistance is equal to or greater than the design uplift pressure for the roof listed in Table R301.2(2).

<b>Date Submitted</b>	7/21/2012	<b>Section</b>	TABLE R905.6.5 SLATE SHINGLES	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	9	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Modified				
<b>Commission Action</b>	Pending Review				

**Comments**

**General Comments** No **Alternate Language** No

**Related Modifications****Summary of Modification**

Provides and carries forward current 2010 FBC Florida-specific criteria. bottom of table should be (Slope greater than or equal to 20:12) will not take when submitted.

**Rationale**

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

**Fiscal Impact Statement****Impact to local entity relative to enforcement of code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to building and property owners relative to cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to industry relative to the cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Requirements****Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Does not degrade the effectiveness of the code**

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

**Refer to uploaded support document.**

This is a test.

TABLE R905.6.5 SLATE SHINGLE HEADLAP

SLOPE	HEADLAP (inches)
4:12 = slope < 8:12	4
8:12 = slope < 20:12	3
Slope <u>=</u> 20:12	2

For SI: 1 inch = 25.4 mm.

<b>Date Submitted</b> 7/21/2012	<b>Section</b> R905.7.8 Flashing.	<b>Proponent</b> Mark Zehnal
<b>Chapter</b> 9	<b>Affects HVHZ</b> No	<b>Attachments</b> No
<b>TAC Recommendation</b> Approved as Modified		
<b>Commission Action</b> Pending Review		

**Comments**

<b>General Comments</b> No	<b>Alternate Language</b> No
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**Related Modifications**

**Summary of Modification**

Provides and carries forward current 2010 FBC Florida-specific criteria.

**Rationale**

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

**Fiscal Impact Statement**

- Impact to local entity relative to enforcement of code**  
No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.
- Impact to building and property owners relative to cost of compliance with code**  
No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.
- Impact to industry relative to the cost of compliance with code**  
No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Requirements**

- Has a reasonable and substantial connection with the health, safety, and welfare of the general public**  
Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.
- Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**  
Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.
- Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**  
Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.
- Does not degrade the effectiveness of the code**  
Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?  
YES

The provisions contained in the proposed amendment are addressed in the applicable international code?  
NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?  
YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?  
NO

### R905.7.8 Flashing.

**R905.7.8 Flashing.** At the juncture of the roof and vertical surfaces, flashing and counter flashing shall be provided in accordance with the manufacturer's installation instructions, and where of metal, shall not be less than ~~0.017-~~ 0.019 inch (0.48 mm) (No. 26 galvanized sheet gage) corrosion-resistant metal.

**R905.7.8.1 Valley flashing.** Roof flashing shall be not less than No. 26 gage [~~0.017~~ 0.019 inches (0.48 mm)] corrosion-resistant sheet metal and shall extend 10 inches (254 mm) from the centerline each way for roofs having slopes less than 12 units vertical in 12 units horizontal (100-percent slope), and 7 inches (178 mm) from the centerline each way for slopes of 12 units vertical in 12 units horizontal and greater. Sections of flashing shall have an end lap of not less than 4 inches (102 mm).

**R905.7.8 Flashing.**

At the juncture of the roof and vertical surfaces, flashing and counter flashing shall be provided in accordance with the manufacturer's installation instructions, and where of metal, shall not be less than 0.017-inch (0.48 mm) (No. 26 galvanized sheet gage) corrosion-resistant metal.

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Roof flashing shall be not less than No. 26 gage [0.017 inches (0.48 mm)] corrosion-resistant sheet metal and shall extend 10 inches (254 mm) from the centerline each way for roofs having slopes less than 12 units vertical in 12 units horizontal (100-percent slope), and 7 inches (178 mm) from the centerline each way for slopes of 12 units vertical in 12 units horizontal and greater. Sections of flashing shall have an end lap of not less than 4 inches (102 mm).



<b>Date Submitted</b>	7/21/2012	<b>Section</b>	R905.8.10 Flashing.	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	9	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Modified				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications****Summary of Modification**

Provides and carries forward current 2010 FBC Florida-specific criteria.

**Rationale**

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

**Fiscal Impact Statement****Impact to local entity relative to enforcement of code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to building and property owners relative to cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to industry relative to the cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Requirements****Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**

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**Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**

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**Does not degrade the effectiveness of the code**

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

## R905.8.10 Flashing.

### **R905.8.10 Flashing.**

At the juncture of the roof and vertical surfaces, flashing and counter flashing shall be provided in accordance with the manufacturer's installation instructions, and where of metal, shall not be less than 0.017- 0.019 inch (0.48 mm) (No. 26 galvanized sheet gage) corrosion-resistant metal.

### **R905.8.10.1 Valley flashing.**

Valley flashing shall extend at least 11 inches (279 mm) from the centerline each way and have a splash diverter rib not less than 1 inch (25 mm) high at the flow line formed as part of the flashing. Sections of flashing shall have an end lap of not less than 4 inches (102 mm). For roof slopes of four (4) units vertical in twelve (12) units horizontal (33-percent slope) and over, the valley flashing shall have a 36-inch-wide (914 mm) underlayment of one layer of ASTM D 226 Type I underlayment running the full length of the valley, in addition to other required underlayment per Table R903.2.1 Valley flashing and flashing metal shall be a minimum thickness as provided in Table R903.2.1 for nonferrous metal or stainless steel.

**R905.8.10 Flashing.**

At the juncture of the roof and vertical surfaces, flashing and counter flashing shall be provided in accordance with the manufacturer's installation instructions, and where of metal, shall not be less than 0.017-inch (0.48 mm) (No. 26 galvanized sheet gage) corrosion-resistant metal.

**R905.8.10.1 Valley flashing.**

Valley flashing shall extend at least 11 inches (279 mm) from the centerline each way and have a splash diverter rib not less than 1 inch (25 mm) high at the flow line formed as part of the flashing. Sections of flashing shall have an end lap of not less than 4 inches (102 mm). For roof slopes of four (4) units vertical in twelve (12) units horizontal (33-percent slope) and over, the valley flashing shall have a 36-inch-wide (914 mm) underlayment of one layer of ASTM D 226 Type I underlayment running the full length of the valley, in addition to other required underlayment per Table R903.2.1 Valley flashing and flashing metal shall be a minimum thickness as provided in Table R903.2.1 for nonferrous metal or stainless steel.

<b>Date Submitted</b>	7/6/2012	<b>Section</b>	2301.2.2	<b>Proponent</b>	Michael Goolsby
<b>Chapter</b>	23	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Modified				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications****Summary of Modification**

Section formatting

**Rationale**

While this entire Chapter is applicable for the HVHZ it makes reference and provides direction to sections which are not applicable. The purpose of this proposed modification is to provide guidance to the applicable and equivalent HVHZ sections. In this way, compliance with the intent of these provisions can be maintained in all jurisdictions.

**Fiscal Impact Statement****Impact to local entity relative to enforcement of code**

Removes confusion by providing accurate direction regarding application of applicable code sections.

**Impact to building and property owners relative to cost of compliance with code**

Removes confusion by providing accurate direction regarding application of applicable code sections.

**Impact to industry relative to the cost of compliance with code**

Removes confusion by providing accurate direction regarding application of applicable code sections.

**Requirements****Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

It does so by ensuring direction to applicable sections of the code are provided.

**Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**

It does so by ensuring direction to applicable sections of the code are provided.

**Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**

This modification provides guidance to the applicable code sections and does not limit the use or compliance of materials.

**Does not degrade the effectiveness of the code**

This modification provides guidance to the applicable code sections and does not limit the use or compliance of materials.

Is the proposed code modification part of a prior code version? No

**M2301.2.2 Roof-mounted collectors.** The roof shall be constructed to support the loads imposed by roof-mounted solar collectors. Roof-mounted solar collectors that serve as a roof covering shall conform to the requirements for roof coverings in Chapter 9 (the HVHZ shall comply with Chapter 44) of this code. Where mounted on or above the roof coverings, the collectors and supporting structure shall be constructed of noncombustible materials or fire-retardant-treated wood equivalent to that required for the roof construction.

**(Parenthetical correction)**

<b>Proponent</b>	Jack Glenn	<b>Submitted</b>	9/23/2012	<b>Attachments</b>	No
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**Comment:**

This change is not necessary as Section R301.1 directs users to the provisions of Chapter 44 for structures located in the High Velocity Hurricane Zone.

R4980-G1

**M2301.2.2 Roof-mounted collectors.** The roof shall be constructed to support the loads imposed by roof-mounted solar collectors. Roof-mounted solar collectors that serve as a roof covering shall conform to the requirements for roof coverings in Chapter 9 the HVHZ shall comply with Chapter 44) of this code. Where mounted on or above the roof coverings, the collectors and supporting structure shall be constructed of noncombustible materials or fire-retardant-treated wood equivalent to that required for the roof construction.

<b>Date Submitted</b>	7/6/2012	<b>Section</b>	2302.2.1	<b>Proponent</b>	Michael Goolsby
<b>Chapter</b>	23	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Modified				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications****Summary of Modification**

Section formatting

**Rationale**

While this entire Chapter is applicable for the HVHZ it makes reference and provides direction to sections which are not applicable. The purpose of this proposed modification is to provide guidance to the applicable and equivalent HVHZ sections. In this way, compliance with the intent of these provisions can be maintained in all jurisdictions.

**Fiscal Impact Statement****Impact to local entity relative to enforcement of code**

Removes confusion by providing accurate direction regarding application of applicable code sections.

**Impact to building and property owners relative to cost of compliance with code**

Removes confusion by providing accurate direction regarding application of applicable code sections.

**Impact to industry relative to the cost of compliance with code**

Removes confusion by providing accurate direction regarding application of applicable code sections.

**Requirements****Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

It does so by ensuring direction to applicable sections of the code are provided.

**Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**

It does so by ensuring direction to applicable sections of the code are provided.

**Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**

This modification provides guidance to the applicable code sections and does not limit the use or compliance of materials.

**Does not degrade the effectiveness of the code**

This modification provides guidance to the applicable code sections and does not limit the use or compliance of materials.

Is the proposed code modification part of a prior code version? No



## 2302.2.1

**M2302.2.1 Roof-mounted panels and modules.** Where photovoltaic panels and modules are installed on roofs, the roof shall be constructed to support the loads imposed by such modules. Roof-mounted photovoltaic panels and modules that serve as roof covering shall conform to the requirements for roof coverings in Chapter 9 (the HVHZ shall comply with Chapter 44). Where mounted on or above the roof coverings, the photovoltaic panels and modules and supporting structure shall be constructed of noncombustible materials or fire-retardant treated wood equivalent to that required for the roof construction.

**(Parenthetical correction)**

<b>Proponent</b>	Jack Glenn	<b>Submitted</b>	9/23/2012	<b>Attachments</b>	No
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**Comment:**

This change is not necessary as Section R301.1 directs users to the provisions of Chapter 44 for structures located in the High Velocity Hurricane Zone. Roof mounted equipment requirements should be consistent statewide.

R4982-G1

**M2302.2.1 Roof-mounted panels and modules.** Where photovoltaic panels and modules are installed on roofs, the roof shall be constructed to support the loads imposed by such modules. Roof-mounted photovoltaic panels and modules that serve as roof covering shall conform to the requirements for roof coverings in Chapter 9 the HVHZ shall comply with Chapter 44. Where mounted on or above the roof coverings, the photovoltaic panels and modules and supporting structure shall be constructed of noncombustible materials or fire-retardant treated wood equivalent to that required for the roof construction.

Total Mods for **Roofing** in **Approved as Submitted: 79**

Total Mods for report: 85

**Sub Code: Building**

**R4958**

7

<b>Date Submitted</b>	7/6/2012	<b>Section</b>	1515.2.2.1	<b>Proponent</b>	Michael Goolsby
<b>Chapter</b>	15	<b>Affects HVHZ</b>	Yes	<b>Attachments</b>	Yes
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications**

**Summary of Modification**

Establish minimum roof slopes consistent with base code

**Rationale**

The requirement appears in many base code sections. For simplicity and to avoid repetitive code modifications, a single HVHZ reference is proposed in order to provide overall consistency with the base code.

**Fiscal Impact Statement**

- Impact to local entity relative to enforcement of code**  
None. Has been an FBC requirement since its original implementation.
- Impact to building and property owners relative to cost of compliance with code**  
None. Has been an FBC requirement since its original implementation.
- Impact to industry relative to the cost of compliance with code**  
None. Has been an FBC requirement since its original implementation.

**Requirements**

- Has a reasonable and substantial connection with the health, safety, and welfare of the general public**  
Provides necessary consistency between the base code requirement and the HVHZ.
- Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**  
Provides necessary consistency between the base code requirement and the HVHZ.
- Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**  
Provides necessary consistency between the base code requirement and the HVHZ.
- Does not degrade the effectiveness of the code**  
Provides necessary consistency between the base code requirement and the HVHZ.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?  
NO

1515.2.2.1 In new construction the minimum deck slope shall be not less than 1/4:12.

The modification is not adding a new code requirement; instead, the modification is intended to ensure the current base code provision is applicable in the HVHZ.

<b>Date Submitted</b> 7/6/2012	<b>Section</b> 1516	<b>Proponent</b> Michael Goolsby
<b>Chapter</b> 15	<b>Affects HVHZ</b> Yes	<b>Attachments</b> Yes
<b>TAC Recommendation</b> Approved as Submitted		
<b>Commission Action</b> Pending Review		

**Comments**

<b>General Comments</b> No	<b>Alternate Language</b> No
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**Related Modifications**

**Summary of Modification**

Roof Fire Classification

**Rationale**

Establish criteria relating to fire resistance ratings for roof assemblies, intended to minimized the likelihood of fires spreading from the roof of one structure to the roofs of nearby adjacent structures.

**Fiscal Impact Statement**

- Impact to local entity relative to enforcement of code**  
None. Has been an FBC requirement since its original implementation.
- Impact to building and property owners relative to cost of compliance with code**  
None. Has been an FBC requirement since its original implementation.
- Impact to industry relative to the cost of compliance with code**  
None. Has been an FBC requirement since its original implementation.

**Requirements**

- Has a reasonable and substantial connection with the health, safety, and welfare of the general public**  
Provides minimum life safety requirements regarding the fire resistance of roof assemblies for building and structures.
- Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**  
Provides minimum life safety requirements regarding the fire resistance of roof assemblies for building and structures.
- Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**  
Provides minimum life safety requirements regarding the fire resistance of roof assemblies for building and structures.
- Does not degrade the effectiveness of the code**  
Provides minimum life safety requirements regarding the fire resistance of roof assemblies for building and structures.

Is the proposed code modification part of a prior code version?  
YES

The provisions contained in the proposed amendment are addressed in the applicable international code?  
NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?  
YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?  
NO

**1st Comment Period History** 08/09/2012 - 09/23/2012

<b>Proponent</b> Jack Glenn	<b>Submitted</b> 9/23/2012	<b>Attachments</b> No
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**Comment:**

Creates a new section in the code for the HVHZ that is not wind related and doesnot demonstrate a Florida specific need. (roofing fire requirements)

R4959-G1



**SECTION 1516****HIGH-VELOCITY HURRICANE ZONES-FIRE CLASSIFICATION**

1516.1 General. Roof assemblies shall be divided into the classes defined below. Class A, B and C roof assemblies and roof coverings required to be listed by this section shall be tested in accordance with ASTM E 108 or UL 790. In addition, fire retardant treated wood roof coverings shall be tested in accordance with ASTM D 2898.

1516.2 Fire resistant roofing assemblies and coverings shall be provided on all structures. Fire classification of roofing assemblies and coverings shall be based on the exposure hazard as follows:

1516.2.1 Class A. Zero feet to 20 feet (0 to 6.1 m) distance separation measured horizontally from the closest point of any building edge to the nearest point to an adjoining structure, and all buildings with occupation greater than 300 persons.

Exception: Brick, masonry, slate, clay or concrete roof tile and exposed concrete roof deck are considered to meet Class A roof covering provisions without testing.

1516.2.2 Class B. All other structures, except as noted below

1516.2.3 Class C. Structures not occupied by humans.

1516.2.4 All roofing assemblies shall be installed at a slope no greater than the maximum allowed for the required fire classification.

1516.2.5 Waterproofing assembly must possess a Class A, Class B or Class C fire rating as required herein.

The modification addresses the local lack of sufficient water delivery resources necessary to combat fires leaping from one the roof of one structure to the roof of the next.

<b>Date Submitted</b>	7/6/2012	<b>Section</b>	1522	<b>Proponent</b>	Michael Goolsby
<b>Chapter</b>	15	<b>Affects HVHZ</b>	Yes	<b>Attachments</b>	Yes
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications****Summary of Modification**

Elevation of rooftop equipment

**Rationale**

The modification is intended to require that permanently mounted rooftop equipment have the prescribed clearances which will eliminate disruption and delay of service for occupants, by having to disconnect equipment, require other trades participation, and will ensure the removal of the potential cause of unhealthy or life threatening conditions for building occupants.

**Fiscal Impact Statement****Impact to local entity relative to enforcement of code**

None. Has been an FBC requirement since its original implementation.

**Impact to building and property owners relative to cost of compliance with code**

Not having to remove permanently mounted equipment to repair or re-roof saves costs. Further, when moving the equipment due to lack of clearance, requiring that the re-installation meet the prescribed clearances mitigates the future costs.

**Impact to industry relative to the cost of compliance with code**

The roofing industry would be spared from additional costs by not having to remove the permanently mounted equipment.

**Requirements****Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

This modification works towards minimizing disruption to systems and equipments servicing a structure when roofing is being repaired or replaced. Therefore, helps protect the health and welfare of the public.

**Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**

This modification improves the code by acknowledging and mitigating future costs. It also helps simplify the work.

**Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**

Provides minimum life safety requirements regarding the fire resistance of roof assemblies for building and structures.

**Does not degrade the effectiveness of the code**

This modification enhances the code by acknowledging and establishing parameters that mitigate costs and simplify the work.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

1522.3 Machinery, piping, conduit, ductwork, signs and similar equipment may be mounted on roofs in compliance with the following:

1522.3.1 Permanently mounted rooftop equipment shall be installed to provide clearances, in accordance with Table 1522.3, to permit repairs, replacement and/or maintenance of the roofing system or any of its components.

TABLE 1522.3

ROOF MOUNTED EQUIPMENT HEIGHT REQUIREMENTS

<u>WIDTH OF EQUIPMENT</u> (in.)	<u>HEIGHT OF LEGS</u> (in.)
<u>Up to 24</u>	<u>14</u>
<u>25 to 36</u>	<u>18</u>
<u>37 to 48</u>	<u>24</u>
<u>49 to 60</u>	<u>30</u>
<u>61 and wider</u>	<u>48</u>

For SI: 1 inch = 25.4 mm.

1522.3.2 When reroofing, recovering, performing repair or roof maintenance, and where the roof top equipment is moved to properly execute such work, the minimum clearances of the said equipment support shall be in accordance with Table 1522.3.

1522.3.3 In buildings where the existing rooftop equipment, in the opinion of the building official, provides sufficient clearance to repair, recover, replace and/or maintain the roofing system or any of its components, such existing equipment need not comply with Table 1522.3.

1522.3.4 Electrical conduit, mechanical piping or any other service lines running on the roof shall be raised not less than 8 inches (203 mm) above the finished roof surface.

1522.3.5 Condensate lines shall not drain on the roofing system or any of its components. Condensate lines need not comply with the minimum clearance requirements.

HVAC systems are an essential building component providing environmental control on a year-round basis for buildings and structures in Florida. Cooling equipment not meeting elevation requirements necessary for repairs and reroofing would need to be disconnected from service in order to conduct such work, in many cases for extended periods. Disconnection of equipment not only creates discomfort for building occupants, but will often adversely affect life safety. This situation is exacerbated by the ambient temperatures experienced in Florida and the reliance on HVAC for moderation of interior building temperatures.

<b>Date Submitted</b>	7/18/2012	<b>Section</b>	1502	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	15	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications****Summary of Modification**

Provides current Florida-specific criteria

**Rationale**

To carry forward previous Commission approved code language providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

**Fiscal Impact Statement****Impact to local entity relative to enforcement of code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to building and property owners relative to cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to industry relative to the cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Requirements****Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**

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**Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**

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**Does not degrade the effectiveness of the code**

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Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

**SECTION 1502 DEFINITIONS****1502.1 Definitions General.**

The following terms are defined in [Chapter 2](#):

The following words and terms shall, for the purposes of this chapter and as used elsewhere in this code, have the meanings shown herein.

~~AGGREGATE.~~

~~BALLAST.~~

~~BUILT UP ROOF COVERING.~~

~~INTERLAYMENT.~~

~~MECHANICAL EQUIPMENT SCREEN.~~

~~METAL ROOF PANEL.~~

~~METAL ROOF SHINGLE.~~

~~MODIFIED BITUMEN ROOF COVERING.~~

~~PENTHOUSE.~~

~~PHOTOVOLTAIC MODULES/SHINGLES.~~

~~POSITIVE ROOF DRAINAGE.~~

~~REROOFING.~~

~~ROOF ASSEMBLY.~~

~~ROOF COVERING.~~

~~ROOF COVERING SYSTEM.~~

~~ROOF DECK.~~

~~ROOF RECOVER.~~

~~ROOF REPAIR.~~

~~ROOF REPLACEMENT.~~

~~ROOF VENTILATION.~~

~~ROOFTOP STRUCTURE.~~

~~SCUPPER.~~

~~SINGLE PLY MEMBRANE.~~



**UNDERLAYMENT.**

**AGGREGATE.** In roofing, crushed stone, crushed slag or water-worn gravel used for surfacing for roof coverings.

**BALLAST.** In roofing, ballast comes in the form of large stones or paver systems or light-weight interlocking paver systems and is used to provide uplift resistance for roofing systems that are not adhered or mechanically attached to the roof deck.

**BUILDING INTEGRATED PHOTOVOLTAIC ROOFING.** A roofing product consisting of electricity generating photovoltaic component integrated into a roof covering.

**BUILT-UP ROOF COVERING.** Two or more layers of felt cemented together and surfaced with a cap sheet, mineral aggregate, smooth coating or similar surfacing material.

**INTERLAYMENT.** A layer of felt or nonbituminous saturated felt not less than 18 inches (457 mm) wide, shingled between each course of a wood-shake roof covering.

**MECHANICAL EQUIPMENT SCREEN.** A partially enclosed rooftop structure used to aesthetically conceal heating, ventilating and air conditioning (HVAC) electrical or mechanical equipment from view.

**METAL ROOF PANEL.** An interlocking metal sheet having a minimum installed weather exposure of 3 square feet (0.279 m<sup>2</sup>) per sheet.

**METAL ROOF SHINGLE.** An interlocking metal sheet having an installed weather exposure less than 3 square feet (0.279 m<sup>2</sup>) per sheet.

**MODIFIED BITUMEN ROOF COVERING.** One or more layers of polymer-modified asphalt sheets. The sheet materials shall be fully adhered or mechanically attached to the substrate or held in place with an approved ballast layer.

**PENTHOUSE.** An enclosed, unoccupied structure above the roof of a building, other than a tank, tower, spire, dome cupola or bulkhead.

**POSITIVE ROOF DRAINAGE.** The drainage condition in which consideration has been made for all loading deflections of the roof deck, and additional slope has been provided to ensure drainage of the roof within 48 hours of precipitation.

**REROOFING.** The process of recovering or replacing an existing roof covering. See "Roof recover" and "Roof replacement."

**ROOF ASSEMBLY.** A system designed to provide weather protection and resistance to design loads. The system consists of a roof covering and roof deck or a single component serving as both the roof covering and the roof deck. A roof assembly includes the roof deck, vapor retarder, substrate or thermal barrier, insulation, vapor retarder and roof covering.

The definition of "Roof assembly" is limited in application to the provisions of Chapter 15.

**ROOF COVERING.** The covering applied to the roof deck for weather resistance, fire classification or appearance.

**ROOF COVERING SYSTEM.** See "Roof assembly."

**ROOF DECK.** The flat or sloped surface not including its supporting members or vertical supports.

**ROOF RECOVER.** The process of installing an additional roof covering over a prepared existing roof covering without removing the existing roof covering.

**ROOF REPAIR.** Reconstruction or renewal of any part of an existing roof for the purposes of its maintenance.

**ROOF REPLACEMENT.** The process of removing the existing roof covering, repairing any damaged substrate and installing a new roof covering.

**ROOF SECTION.** A separation or division of a roof area by existing joints, parapet walls, flashing (excluding valleys), difference of elevation (excluding hips and ridges), roof type or legal description; not including the roof area required for a proper tie-off with an existing system.

**ROOF VENTILATION.** The natural or mechanical process of supplying conditioned or unconditioned air to, or removing such air from, attics, cathedral ceilings or other enclosed spaces over which a roof assembly is installed.

**ROOFTOP STRUCTURE.** An enclosed structure on or above the roof of any part of a building.

**SCUPPER.** An opening in a wall or parapet that allows water to drain from a roof.

**SINGLE-PLY MEMBRANE.** A roofing membrane that is field applied using one layer of membrane material (either homogeneous or composite) rather than multiple layers.

**UNDERLAYMENT.** One or more layers of felt, sheathing paper, nonbituminous saturated felt or other approved material over which a steep-slope roof covering is applied.

<b>Date Submitted</b>	7/18/2012	<b>Section</b>	1507.10 Built-up roofs.	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	15	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
-------------------------	----	---------------------------	----

**Related Modifications****Summary of Modification**

Provides current Florida-specific criteria

**Rationale**

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

**Fiscal Impact Statement****Impact to local entity relative to enforcement of code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to building and property owners relative to cost of compliance with code**

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**Impact to industry relative to the cost of compliance with code**

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**Requirements****Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

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**Does not degrade the effectiveness of the code**

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

**1507.10 Built-up roofs.**

The installation of built-up roofs shall comply with the provisions of this section.

**1507.10.1 Slope.**

Built-up roofs shall have a design slope of a minimum of one-fourth unit vertical in 12 units horizontal (2-percent slope) for drainage, except for coal-tar built-up roofs that shall have a design slope of a minimum one-eighth unit vertical in 12 units horizontal (1-percent slope).

**1507.10.2 Material standards.**

Built-up roof covering materials shall comply with the standards in Table 1507.10.2 or UL 55A.

**TABLE 1507.10.2 BUILT-UP ROOFING MATERIAL STANDARDS**

MATERIAL STANDARD	STANDARD
Acrylic coatings used in roofing	ASTM D 6083
Aggregate surfacing	ASTM D 1863
Asphalt adhesive used in roofing	ASTM D 3747
Asphalt cements used in roofing	ASTM D 3019; D 2822; D 4586
Asphalt-coated glass fiber base sheet	ASTM D 4601
Asphalt coatings used in roofing	ASTM D 1227; D 2823; D 2824; D 4479
Asphalt glass felt	ASTM D 2178
Asphalt primer used in roofing	ASTM D 41
Asphalt-saturated and asphalt-coated organic felt base sheet	ASTM D 2626
Asphalt-saturated organic felt (perforated)	ASTM D 226
Asphalt used in roofing	ASTM D 312
Coal-tar cements used in roofing	ASTM D 4022; D 5643
Coal-tar saturated organic felt	ASTM D 227
Coal-tar pitch used in roofing	ASTM D 450; Type I or II
Coal-tar primer used in roofing, dampproofing and waterproofing	ASTM D 43
Glass mat, coal tar	ASTM D 4990
Glass mat, venting type	ASTM D 4897
Mineral-surfaced inorganic cap sheet	ASTM D 3909
Thermoplastic fabrics used in roofing	ASTM D 5665, D 5726

**1507.10.3 Red rosin paper.**

**Red rosin paper shall be used when the membrane is applied directly to a wood deck or cementitious fiber decks.**

<b>Date Submitted</b>	7/18/2012	<b>Section</b>	1507.5 Metal roof shingles.	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	15	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments****General Comments**

No

**Alternate Language**

No

**Related Modifications****Summary of Modification**

Provides current Florida-specific criteria

**Rationale**

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

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**Impact to industry relative to the cost of compliance with code**

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**Requirements****Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

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**Does not degrade the effectiveness of the code**

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Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

### 1507.5 Metal roof shingles.

The installation of metal roof shingles shall comply with the provisions of this section.

#### 1507.5.1 Deck requirements.

Metal roof shingles shall be applied to a solid or closely fitted deck, except where the roof covering is specifically designed to be applied to spaced sheathing.

#### 1507.5.2 Deck slope.

Metal roof shingles shall not be installed on roof slopes below three units vertical in 12 units horizontal (25-percent slope).

##### 1507.5.2.1

Underlayment shall be installed as per manufacturer's installation guidelines.

#### 1507.5.3 Underlayment.

Underlayment shall comply with ASTM D 226, Type I or Type II, ASTM D 4869, Type I or Type II.

##### 1507.5.3.1 Underlayment and high wind.

~~Underlayment applied in areas subject to high winds [ $V_{ws}$  greater than 110 mph (49 m/s) as determined in accordance with [Section 1609.3.1](#)] shall be applied with corrosion resistant fasteners in accordance with the manufacturer's installation instructions. Fasteners are to be applied along the overlap not farther apart than 36 inches (914 mm) on center.~~

~~Underlayment installed where  $V_{ws}$ , in accordance with [Section 1609.3.1](#), equals or exceeds 120 mph (54 m/s) shall comply with ASTM D 226 Type II or ASTM D 4869 Type IV. The underlayment shall be attached in a grid pattern of 12 inches (305 mm) between side laps with a 6 inch spacing (152 mm) at the side laps. Underlayment shall be applied in accordance with the manufacturer's installation instructions except all laps shall be a minimum of 4 inches (102 mm). Underlayment shall be attached using metal or plastic cap nails with a head diameter of not less than 1 inch (25 mm) with a thickness of at least 32 gauge [0.0134 inch (0.34 mm)] sheet metal. The cap nail shank shall be a minimum of 12 gauge [0.105 inch (2.67 mm)] with a length to penetrate through the roof sheathing or a minimum of  $\frac{3}{4}$  inch (19.1 mm) into the roof sheathing.~~

~~**Exception:** As an alternative, adhered underlayment complying with ASTM D 1970 shall be permitted. Reserved.~~

#### 1507.5.4 Ice barrier.

~~In areas where there has been a history of ice forming along the eaves causing a backup of water, an ice barrier that consists of at least two layers of underlayment cemented together or of a self-adhering polymer modified bitumen sheet shall be used in lieu of normal underlayment and extend from the lowest edges of all roof surfaces to a point at least 24 inches (610 mm) inside the exterior wall line of the building.~~

~~**Exception:** Detached accessory structures that contain no conditioned floor area. Reserved.~~

**1507.5.5 Material standards.**

Metal roof shingle roof coverings shall comply with Table 1507.4.3(1). The materials used for metal-roof shingle roof coverings shall be naturally corrosion resistant or provided with corrosion resistance in accordance with the standards and minimum thicknesses specified in the standards listed in Table 1507.4.3(2).

**1507.5.6 Attachment.**

Metal roof shingles shall be secured to the roof in accordance with the approved manufacturer's installation instructions.

**1507.5.7 Flashing.**

Roof valley flashing shall be of corrosion-resistant metal of the same material as the roof covering or shall comply with the standards in Table 1507.4.3(1). The valley flashing shall extend at least 8 inches (203 mm) from the centerline each way and shall have a splash diverter rib not less than  $\frac{3}{4}$  0.75 inch (19.1 mm) high at the flow line formed as part of the flashing. Sections of flashing shall have an end lap of not less than 4 inches (102 mm). ~~In areas where the average daily temperature in January is 25°F (-4°C) or less or where there is a possibility of ice forming along the eaves causing a backup of water, the metal valley flashing shall have a 36-inch wide (914 mm) underlayment directly under it consisting of either one layer of underlayment running the full length of the valley or a self-adhering polymer-modified bitumen sheet complying with ASTM D 1970, in addition to underlayment required for metal roof shingles. The metal valley flashing underlayment shall be solidly cemented to the roofing underlayment for roof slopes under seven units vertical in 12 units horizontal (58 percent slope) or self-adhering polymer-modified bitumen sheet shall be installed.~~

<b>Date Submitted</b>	7/18/2012	<b>Section</b>	1507.17 Photovoltaic modules/sh	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	15	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications**

**Summary of Modification**

Provides current Florida-specific criteria

**Rationale**

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

**Fiscal Impact Statement**

- Impact to local entity relative to enforcement of code**  
No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.
- Impact to building and property owners relative to cost of compliance with code**  
No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.
- Impact to industry relative to the cost of compliance with code**  
No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Requirements**

- Has a reasonable and substantial connection with the health, safety, and welfare of the general public**  
Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.
- Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**  
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- Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**  
Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.
- Does not degrade the effectiveness of the code**  
Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?  
YES

The provisions contained in the proposed amendment are addressed in the applicable international code?  
NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?  
YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?  
NO



**1507.17 Photovoltaic modules/shingles.**

~~The installation of~~ Building integrated P photovoltaic roofing modules/shingles. The installation of building integrated P photovoltaic roofing modules/shingles shall comply with the provisions of this section.

**1507.17.1 Material standards.**

Building integrated P photovoltaic roofing modules/shingles shall be listed and labeled in accordance with UL 1703.

**1507.17.2 Attachment.**

Building integrated P photovoltaic roofing modules/shingles shall be attached in accordance with the manufacturer's installation instructions.

**1507.17.3 Wind resistance.**

Building integrated P photovoltaic roofing modules/shingles shall be tested in accordance with procedures and acceptance criteria in ASTM D 3161 or TAS 107. Building integrated P photovoltaic roofing modules/shingles shall comply with the classification requirements of Table 1507.2.7.1(2) for the appropriate maximum ~~nominal design~~ basic wind speed. Building integrated P photovoltaic roofing modules/shingle packaging shall bear a label to indicate compliance with the procedures in ASTM D 3161 or TAS 107 and the required classification from Table 1507.2.7.1(2) .

<b>Date Submitted</b>	7/19/2012	<b>Section</b>	1503.2.1 Locations.	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	15	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications****Summary of Modification**

Provides current 2010 Florida Building Code specific criteria

**Rationale**

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**Impact to industry relative to the cost of compliance with code**

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The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

**1503.2.1 Locations.**

Flashing shall be installed at wall and roof intersections, at gutters, wherever there is a change in roof slope or direction and around roof openings. Where flashing is of metal, the metal shall be corrosion resistant with a thickness not less than 0.019 inch (0.483 mm) (No. 26 galvanized sheet) provided in Table 1503.2.

Exception: This requirement does not apply to hip and ridge junctions.

<b>Date Submitted</b>	7/19/2012	<b>Section</b>	1503.2 Flashing	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	15	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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NO

**1503.2 Flashing.**

Flashing shall be installed in such a manner so as to prevent moisture entering the wall and roof through joints in copings, through moisture-permeable materials and at intersections with parapet walls and other penetrations through the roof plane.

**TABLE 1503.2  
METAL FLASHING MATERIAL**

<u>MATERIAL</u>	<u>MINIMUM THICKNESS (INCHES)</u>	<u>GAGE</u>	<u>WEIGHT (LBS PER SQ FT)</u>
<u>Copper</u>			<u>1 (16 oz)</u>
<u>Aluminum</u>	<u>0.024</u>		
<u>Stainless Steel</u>		<u>28</u>	
<u>Galvanized Steel</u>	<u>0.0179</u>	<u>26 (zinc coated G90)</u>	
<u>Aluminum Zinc Coated Steel</u>	<u>0.0179</u>	<u>26 (AZ50 Alum Zinc)</u>	
<u>Zinc Alloy</u>	<u>0.027</u>		
<u>Lead</u>			<u>2.5 (40 oz)</u>
<u>Painted Terne</u>			<u>1.25 (20 oz)</u>

<b>Date Submitted</b>	7/19/2012	<b>Section</b>	1503.4.1 Secondary (emergency)	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	15	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications****Summary of Modification**

Provides current 2010 Florida Building Code specific criteria

**Rationale**

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

**Fiscal Impact Statement****Impact to local entity relative to enforcement of code**

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YES

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NO

**1503.4.1 Secondary (emergency overflow) drains or scuppers.**

Where roof drains are required, secondary (emergency overflow) roof drains or scuppers shall be provided where the roof perimeter construction extends above the roof in such a manner that water will be entrapped if the primary drains allow buildup for any reason. The installation and sizing of secondary emergency overflow drains, leaders and conductors shall comply with Sections 1106 and ~~1108~~ 1107, as applicable, of the ~~International Plumbing Code~~ Florida Building Code, Plumbing, Chapter 11 .

<b>Date Submitted</b>	7/19/2012	<b>Section</b>	1503.4.2.1 Overflow scuppers.	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	15	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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NO



**1503.4.2.1 Overflow scuppers.**

When other means of drainage of overflow water is not provided, overflow scuppers shall be placed in walls or parapets not less than 2 inches (51 mm) nor more than 4 inches (102 mm) above the finished roof covering and shall be located as close as practical to required vertical leaders or downspouts or wall and parapet scuppers. An overflow scupper shall be sized in accordance with the Florida Building Code, Plumbing.

<b>Date Submitted</b>	7/19/2012	<b>Section</b>	1503.4.2 Scuppers.	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	15	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments****General Comments**

No

**Alternate Language**

No

**Related Modifications****Summary of Modification**

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YES

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NO

**1503.4.2 Scuppers.**

When scuppers are used for secondary (emergency overflow) roof drainage, the quantity, size, location and inlet elevation of the scuppers shall be sized to prevent the depth of ponding water from exceeding that for which the roof was designed as determined by Section 1611.1. Scuppers shall not have an opening dimension of less than 4 inches (102 mm). The flow through the primary system shall not be considered when locating and sizing scuppers.

Where required for roof drainage, a scupper shall be placed level with the roof surface in a wall or parapet. The scupper shall be located as determined by the slope and the contributing area of the roof. The exterior facing or lining of a scupper, if metal, shall be the same as flashing material required by Sections 1503 through 1510 for the particular type of covering specified for the building. For other type materials, follow manufacturer's specifications.

<b>Date Submitted</b>	7/19/2012	<b>Section</b>	1503.4 Roof drainage.	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	15	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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NO

**1503.4 Roof drainage.**

Unless roofs are sloped to drain over roof edges, the design and installation of roof drainage systems shall comply with Section 1503 of this code and Sections 1106 and 1108, as applicable, of and the *Florida Building Code, Plumbing*, Chapter 11 *International Plumbing Code*.

<b>Date Submitted</b>	7/19/2012	<b>Section</b>	1503.5 Roof ventilation.	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	15	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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NO

**1503.5 Roof ventilation.**

Attic ventilation ~~intake and exhaust vents~~ shall be provided in accordance with Section 1203.2 and the manufacturer's installation instructions.

<b>Date Submitted</b>	7/19/2012	<b>Section</b>	1504.1.1 Wind resistance of asphalt	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	15	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments****General Comments**

No

**Alternate Language**

No

**Related Modifications****Summary of Modification**

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NO



**1504.1.1 Wind resistance of asphalt shingles.**

Asphalt shingles shall ~~comply~~ be designed for wind speeds in accordance with Section 1507.2.7.

<b>Date Submitted</b>	7/19/2012	<b>Section</b>	1504.3.2 Metal panel roof system	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	15	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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NO

**1504.3.2 Metal panel roof systems.**

Metal panel roof systems through fastened or standing seam shall be tested in accordance with UL 580 or ASTM E 1592 or TAS 125.

<b>Date Submitted</b>	7/19/2012	<b>Section</b>	1504.5 Edge securement for low-slopes	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	15	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
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NO

**1504.5 Edge securement for low-slope roofs.**

Low-slope built-up, modified bitumen and single-ply roof system metal edge securement, except gutters, shall be designed and installed for wind loads in accordance with Chapter 16 and tested for resistance in accordance with Test Methods RE-1, RE-2 and RE-3 of ANSI/SPRI ES-1, or RAS 111 except  $V_{ult}$  wind speed shall be determined from Figure 1609A, 1609B, or 1609C as applicable.

<b>Date Submitted</b>	7/19/2012	<b>Section</b>	1504.6 Physical properties.	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	15	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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NO

**1504.6 Physical properties.**

Roof coverings installed on low-slope roofs (roof slope < 2:12) in accordance with Section 1507 shall demonstrate physical integrity over the working life of the roof based upon 2,000 hours of exposure to accelerated weathering tests conducted in accordance with ASTM G 152, ASTM G 153, ASTM G 155 or ASTM G 154. Those roof coverings that are subject to cyclical flexural response due to wind loads shall not demonstrate any significant loss of tensile strength for unreinforced membranes or breaking strength for reinforced membranes when tested as herein required.

<b>Date Submitted</b> 7/19/2012	<b>Section</b> 1504.6 Physical properties.	<b>Proponent</b> Mark Zehnal
<b>Chapter</b> 15	<b>Affects HVHZ</b> No	<b>Attachments</b> No
<b>TAC Recommendation</b> Approved as Submitted		
<b>Commission Action</b> Pending Review		

**Comments**

<b>General Comments</b> No	<b>Alternate Language</b> No
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**Related Modifications**

**Summary of Modification**

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NO



**1504.7 Impact resistance.**

Roof coverings installed on low-slope roofs (roof slope < 2:12) in accordance with Section 1507 shall resist impact damage based on the results of tests conducted in accordance with ASTM D 3746, ASTM D 4272, CGSB 37-GP-52M or the "Resistance to Foot Traffic Test" in Section 5.5 of FM 4470. All structural metal roofing systems having a thickness equal to or greater than 22 gage and all non-structural metal roof systems having a thickness equal to or greater than 26 gage shall be exempt from the tests listed above.

<b>Date Submitted</b>	7/19/2012	<b>Section</b>	1504.8 Aggregate.	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	15	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications****Summary of Modification**

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**Rationale**

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**Fiscal Impact Statement****Impact to local entity relative to enforcement of code**

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YES

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NO

**1504.8 Aggregate.**

~~Aggregate used as surfacing for roof coverings and aggregate, gravel or stone used as ballast shall not be used on the roof of a building located in a hurricane-prone region as defined in Section 202, or on any other building with a mean roof height exceeding that permitted by Table 1504.8 based on the exposure category and basic wind speed at the site. shall be permitted as roof surfacing when installed on slopes of 3:12 or less, not less than 400 pound (182 kg) of roofing gravel or 300 pounds (145 kg) of slag per square shall be applied. A minimum of 50 percent of the total aggregate shall be embedded in the flood coat of bitumen or installed in accordance with its product approval. Aggregate shall be dry and free from dirt and shall be in compliance with the sizing requirements set forth in ASTM D 1863. A building official may request a test to confirm compliance with these requirements.~~

**TABLE 1504.8 MAXIMUM ALLOWABLE MEAN ROOF HEIGHT PERMITTED FOR BUILDINGS WITH AGGREGATE ON THE ROOF IN AREAS OUTSIDE A HURRICANE-PRONE REGION**

NOMINAL DESIGN WIND SPEED, $V_{wind}$ (mph) <sup>b,7</sup>	MAXIMUM MEAN ROOF HEIGHT (ft) <sup>a,8</sup>		
	Exposure category		
	B	C	D
85	170	60	30
90	110	35	15
95	75	20	NP
100	55	15	NP
105	40	NP	NP
110	30	NP	NP
115	20	NP	NP
120	15	NP	NP
Greater than 120	NP	NP	NP

For SI: 1 foot = 304.8 mm; 1 mile per hour = 0.447 m/s.

a. Mean roof height as defined in ASCE 7.

b. For intermediate values of  $V_{wind}$ , the height associated with the next higher value of  $V_{wind}$  shall be used, or direct interpolation is permitted.

c. NP = gravel and stone not permitted for any roof height.

~~d.  $V_{wind}$  shall be determined in accordance with Section 1609.3.1.~~

Reserved.

<b>Date Submitted</b>	7/19/2012	<b>Section</b>	1505.7 Special purpose roofs.	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	15	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

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<b>General Comments</b>	No	<b>Alternate Language</b>	No
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NO

**1505.7 Special purpose roofs.**

~~Special purpose wood shingle or wood shake roofing shall conform with the grading and application requirements of Section 1507.8 or 1507.9. In addition, an underlayment of  $\frac{5}{8}$ -inch (15.9 mm) Type X water-resistant gypsum backing board or gypsum sheathing shall be placed under minimum nominal  $\frac{3}{4}$ -inch thick (12.7 mm) wood structural panel solid sheathing or 1-inch (25 mm) nominal spaced sheathing.~~

Reserved.

<b>Date Submitted</b>	7/19/2012	<b>Section</b>	1506.5 Nails.	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	15	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

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<b>General Comments</b>	No	<b>Alternate Language</b>	No
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YES

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NO

**1506.5 Nails.**

Nails shall be corrosion resistant nails conforming to ASTM F 1667. The corrosion resistance shall meet ASTM A 641, Class 1 or an equal corrosion resistance by coating, electro galvanization, mechanical galvanization, hot dipped galvanization, stainless steel, nonferrous metal and alloys or other suitable corrosion resistant material.

<b>Date Submitted</b>	7/19/2012	<b>Section</b>	1506.6 Screws.	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	15	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments****General Comments**

No

**Alternate Language**

No

**Related Modifications****Summary of Modification**

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YES

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NO



**1506.6 Screws.**

Wood screws conform to ANSI/ASME B 18.6.1. Screws shall be corrosion resistant by coating, galvanization, stainless steel, nonferrous metal or other suitable corrosion resistant material. The corrosion resistance shall be demonstrated through one of the following methods:

1. Corrosion resistance equivalent to ASTM A 641, Class 1;
2. Corrosion resistance in accordance with TAS114, *Appendix E*; or
3. Corrosion resistant coating exhibiting not more than 5 percent red rust after 1000 hours exposure in accordance with ASTM B 117.

<b>Date Submitted</b>	7/19/2012	<b>Section</b>	1506.7 Clips.	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	15	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
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**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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NO

**1506.7 Clips.**

Clips shall be corrosion resistant clips. The corrosion resistance shall meet 0.90 ounce per square foot (0.458 kg/m<sup>2</sup>) measured according to ASTM A 90/A 90M, TAS 114 Appendix E or an equal corrosion resistance coating, electro galvanization, mechanical galvanization, hot dipped galvanization, stainless steel, nonferrous metals and alloys or other suitable corrosion resistant material. Stainless steel clips shall conform to ASTM A 167, Type 304.

<b>Date Submitted</b>	7/19/2012	<b>Section</b>	1507.2.5 Asphalt shingles.	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	15	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
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**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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NO

**1507.2.5 Asphalt shingles.**

Asphalt shingles shall have self-seal strips or be interlocking and comply with ASTM D 225 or ASTM D 3462. Shingles shall also comply with Table 1507.2.7.1. Asphalt shingle packaging shall bear labeling indicating compliance with one of the required classifications as shown in Table 1507.2.7.1.

<b>Date Submitted</b>	7/19/2012	<b>Section</b>	1507.2.6.1	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	15	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
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**Comments**

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NO

**1507.2.6.1**

The nail component of plastic cap nails shall meet the corrosion resistance requirements of Section 1506.5.

<b>Date Submitted</b>	7/19/2012	<b>Section</b>	1507.2.7 Attachment.	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	15	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
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NO



**1507.2.7 Attachment.**

Asphalt shingles shall have the minimum number of fasteners required by the manufacturer, ~~but~~ and Section 1504.1. Asphalt shingles shall be secured to the roof with not less than four fasteners per strip shingle or two fasteners per individual strip shingle or two fasteners per individual shingle. Where the roof slope exceeds 21 units vertical in 12 units horizontal (21:12), asphalt shingles shall be installed as required by in accordance with the manufacturer's printed installation instructions for steep-slope roof applications.

<b>Date Submitted</b>	7/19/2012	<b>Section</b>	1507.2.8.1 High wind attachment	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	15	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
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**1507.2.8.1 High wind attachment.**

~~Underlayment applied in areas subject to high winds [ $V_{wsf}$  greater than 110 mph (49 m/s) as determined in accordance with Section 1609.3.1] shall be applied with corrosion-resistant fasteners in accordance with the manufacturer's instructions. Fasteners are to be applied along the overlap at a maximum spacing of 36 inches (914 mm) on center.~~

~~Underlayment installed where  $V_{wsf}$  in accordance with Section 1609.3.1, equals or exceeds 120 mph (54 m/s) shall comply with ASTM D 226 Type II, ASTM D 4869 Type IV, or ASTM D 6757. The underlayment shall be attached in a grid pattern of 12 inches (305 mm) between side laps with a 6-inch (152 mm) spacing at the side laps. Underlayment shall be applied in accordance with Section 1507.2.8 except all laps shall be a minimum of 4 inches (102 mm). Underlayment shall be attached using metal or plastic cap nails with a head diameter of not less than 1-inch (25 mm) with a thickness of at least 32-gauge [0.0134 inch (0.34 mm)] sheet metal. The cap nail shank shall be a minimum of 12-gauge [0.105 inch (2.67 mm)] with a length to penetrate through the roof sheathing or a minimum of  $\frac{3}{4}$ -inch (19.1 mm) into the roof sheathing.~~

~~**Exception:** As an alternative, adhered underlayment complying with ASTM D 1970 shall be permitted. Reserved~~

<b>Date Submitted</b>	7/19/2012	<b>Section</b>	1507.2.8.2 Ice barrier	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	15	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
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No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Requirements****Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**

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**Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Does not degrade the effectiveness of the code**

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

**1507.2.8.2 Ice barrier.**

In areas where there has been a history of ice forming along the eaves causing a backup of water, an ice barrier that consists of at least two layers of underlayment cemented together or of a self-adhering polymer modified bitumen sheet shall be used in lieu of normal underlayment and extend from the lowest edges of all roof surfaces to a point at least 24 inches (610 mm) inside the *exterior wall* line of the building.

~~Exception: Detached accessory structures that contain no conditioned floor area.~~

Reserved.

<b>Date Submitted</b>	7/19/2012	<b>Section</b>	1507.2.8 Underlayment application	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	15	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications****Summary of Modification**

Provides current 2010 Florida Building Code -specific slope criteria addressed in DEC Statement DCA08-DEC-331 and removes unnecessary language.

**Rationale**

To simplify intent and carry forward previous Commission approved DEC Statement DCA08-DEC-331. Remove unnecessary language found in manufacturers specifications and correlates with Residential Code. To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

**Fiscal Impact Statement****Impact to local entity relative to enforcement of code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to building and property owners relative to cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to industry relative to the cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Requirements****Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**

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**Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**

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**Does not degrade the effectiveness of the code**

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

NO

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

**1507.2.8 Underlayment application.**

For roof slopes from two units vertical in 12 units horizontal (17-percent slope) and ~~up to~~ less than four units vertical in 12 units horizontal (33-percent slope), underlayment shall be two layers applied in the following manner. Apply a minimum 19-inch-wide (483 mm) strip of underlayment felt parallel with and starting at the eaves, fastened sufficiently to hold in place. Starting at the eave, apply 36-inch-wide (914 mm) sheets of underlayment overlapping successive sheets 19 inches (483 mm), by fastened sufficiently to hold in place. ~~Distortions in the underlayment shall not interfere with the ability of the shingles to seal.~~ For roof slopes of four units vertical in 12 units horizontal (33-percent slope) or greater, underlayment shall be one layer applied in the following manner. Underlayment shall be applied shingle fashion, parallel to and starting from the eave and lapped 2 inches (51 mm), fastened sufficiently to hold in place. ~~Distortions in the underlayment shall not interfere with the ability of the shingles to seal.~~

<b>Date Submitted</b>	7/19/2012	<b>Section</b>	1507.2.9.1 Base and counter flash	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	15	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications****Summary of Modification**

Provides current 2010 Florida Building Code -specific slope criteria.

**Rationale**

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

**Fiscal Impact Statement****Impact to local entity relative to enforcement of code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to building and property owners relative to cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to industry relative to the cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Requirements****Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Does not degrade the effectiveness of the code**

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO



**1507.2.9.1 Base and ~~cap~~ counter flashing.**

~~Base and cap counter flashing shall be installed in accordance with the manufacturer's instructions. Base flashing shall be of either corrosion-resistant metal of minimum nominal 0.019 inch (0.483 mm) thickness or mineral-surfaced roll roofing weighing a minimum of 77 pounds per 100 square feet (3.76 kg/m<sup>2</sup>). Cap flashing shall be corrosion-resistant metal of minimum nominal 0.019 inch (0.483 mm) thickness, as follows:~~

Base and counter flashing shall be installed as follows:

1. In accordance with manufacturer's installation instructions, or
2. A continuous metal minimum 4" x 4" "L" flashing shall be set in approved flashing cement and set flush to base of wall and over the underlayment. Both horizontal and vertical metal flanges shall be fastened 6 inches (152 mm) on center with approved fasteners. All laps shall be a minimum of 4 inches (102 mm) fully sealed in approved flashing cement. Flashing shall start at the lower portion of roof to insure water-shedding capabilities of all metal laps. The entire edge of the horizontal flange shall be sealed covering all nail penetrations with approved flashing cement and membrane. Shingles will overlap the horizontal flange and shall be set in approved flashing cement.

Base flashing shall be of either corrosion resistant metal with a minimum thickness provided in Table 1503.2 or mineral surface roll roofing weighing a minimum of 77 pounds per 100 square feet (3.76 kg/m<sup>2</sup>). Counter flashing shall be corrosion resistant metal with a minimum thickness provided in Table 1503.2.

<b>Date Submitted</b>	7/19/2012	<b>Section</b>	1507.2.9.2 Valleys.	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	15	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications****Summary of Modification**

Provides current 2010 Florida Building Code specific criteria.

**Rationale**

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

**Fiscal Impact Statement****Impact to local entity relative to enforcement of code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to building and property owners relative to cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to industry relative to the cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Requirements****Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Does not degrade the effectiveness of the code**

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

## 1507.2.9.2 Valleys.

Valley linings shall be installed in accordance with the manufacturer's instructions before applying shingles. Valley linings of the following types shall be permitted:

1. For open valleys (valley lining exposed) lined with metal, the valley lining shall be at least ~~24~~ 16 inches (~~610~~ 406 mm) wide and of any of the corrosion-resistant metals in Table 1507.2.9.2.
2. For open valleys, valley lining of two plies of mineral-surfaced roll roofing complying with ASTM D 3909 or ASTM D 6380 Class M shall be permitted. The bottom layer shall be 18 inches (457 mm) and the top layer a minimum of 36 inches (914 mm) wide.
3. For closed valleys (valleys covered with shingles), valley lining of one ply of smooth roll roofing complying with ASTM D 6380 Class S, and at least 36 inches (914 mm) wide or types as described in Item 1 or 2 above shall be permitted. Self-adhering polymer modified bitumen underlayment complying with ASTM D 1970 shall be permitted in lieu of the lining material.

TABLE 1507.2.9.2 VALLEY LINING MATERIAL

MATERIAL	MINIMUM THICKNESS	GAGE	WEIGHT
Aluminum	0.024 in.	—	—
Cold-rolled copper	0.0216 in.	—	ASTM B 370, 16 oz. per square ft.
Copper	—	—	16 oz
Galvanized steel	0.0179 in.	26 (zinc-coated G90)	—
High yield copper	0.0162 in.	—	ASTM B 370, 12 oz. per square ft.
Lead	—	—	2.5 pounds
Lead-coated copper	0.0216 in.	—	ASTM B 101, 16 oz. per square ft.
Lead-coated high yield copper	0.0162 in.	—	ASTM B 101, 12 oz. per square ft.
Painted terne	—	—	20 pounds
Stainless steel	—	28	—
Zinc alloy	0.027 in.	—	—

For SI: 1 inch = 25.4 mm, 1 pound = 0.454 kg, 1 ounce = 28.35 g, 1 square foot = 0.093 m<sup>2</sup>.

Reserved.



<b>Date Submitted</b>	7/19/2012	<b>Section</b>	1507.2.9.3 Drip edge.	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	15	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications****Summary of Modification**

Provides current 2010 Florida Building Code specific criteria.

**Rationale**

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

**Fiscal Impact Statement****Impact to local entity relative to enforcement of code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to building and property owners relative to cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to industry relative to the cost of compliance with code**

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**Requirements****Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

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**Does not degrade the effectiveness of the code**

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Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

**1507.2.9.3 Drip edge.**

Provide drip edge at eaves and gables of shingle roofs. Overlap to be a minimum of ~~2~~ 3 inches (~~51~~ 76 mm). Eave drip edges shall extend ~~1/2~~ 1 1/2 inch (~~6.4~~ 13 mm) below sheathing and extend back on the roof a minimum of 2 inches (51 mm). Drip edge at eaves shall be permitted to be installed either over or under the underlayment. If installed over the underlayment, there shall be a minimum 4 inches (51 mm) width of roof cement installed over the drip edge flange. Drip edge shall be mechanically fastened a maximum of 12 inches (305 mm) on center. Where the  $V_{asd}$  as determined in accordance with Section 1609.3.1 is 110 mph (177 km/h) or greater or the mean roof height exceeds 33 feet (10 058 mm), drip edges shall be mechanically fastened a maximum of 4 inches (102 mm) on center.

<b>Date Submitted</b>	7/19/2012	<b>Section</b>	1507.3.1 Deck requirements	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	15	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications****Summary of Modification**

Provides current 2010 Florida Building Code specific criteria.

**Rationale**

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

**Fiscal Impact Statement****Impact to local entity relative to enforcement of code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to building and property owners relative to cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to industry relative to the cost of compliance with code**

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**Requirements****Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

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**Does not degrade the effectiveness of the code**

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Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

**1507.3.1 Deck requirements.**

Concrete and clay tile shall be installed only over solid sheathing or except where the roof covering is specifically designed and tested in accordance with Section 1609.5.2 to be applied over ~~space~~ structural spaced sheathing boards.



<b>Date Submitted</b>	7/19/2012	<b>Section</b>	1507.3.3.2 High-slope roofs.	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	15	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications****Summary of Modification**

Provides current 2010 Florida Building Code specific criteria.

**Rationale**

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

**Fiscal Impact Statement****Impact to local entity relative to enforcement of code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to building and property owners relative to cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to industry relative to the cost of compliance with code**

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**Requirements****Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

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**Does not degrade the effectiveness of the code**

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

**1507.3.3.2 High-slope roofs.**

~~For roof slopes of four units vertical in 12 units horizontal (33 percent slope) or greater, underlayment shall be a minimum of one layer of underlayment felt applied shingle fashion, parallel to, and starting from the eaves and lapped 2 inches (51 mm), fastened only as necessary to hold in place. Reserved.~~

<b>Date Submitted</b>	7/19/2012	<b>Section</b>	1507.3.3.3 High wind attachment	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	15	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications****Summary of Modification**

Provides current 2010 Florida Building Code specific criteria.

**Rationale**

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

**Fiscal Impact Statement****Impact to local entity relative to enforcement of code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to building and property owners relative to cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to industry relative to the cost of compliance with code**

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**Requirements****Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

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**Does not degrade the effectiveness of the code**

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

### 1507.3.3.3 High wind attachment.

Underlayment applied in areas subject to high wind [ $V_{wsf}$  greater than 110 mph (49 m/s) as determined in accordance with Section 1609.3.1] shall be applied with corrosion resistant fasteners in accordance with the manufacturer's installation instructions. Fasteners are to be applied along the overlap not farther apart than 36 inches (914 mm) on center.

~~Underlayment installed where  $V_{wsf}$  in accordance with Section 1609.3.1, equals or exceeds 120 mph (54 m/s) shall be attached in a grid pattern of 12 inches (305 mm) between side laps with a 6 inch (152 mm) spacing at the side laps. Underlayment shall be applied in accordance with Sections 1507.3.3.1 and 1507.3.3.2 except all laps shall be a minimum of 4 inches (102 mm). Underlayment shall be attached using metal or plastic cap nails with a head diameter of not less than 1 inch (25 mm) with a thickness of at least 32 gauge [0.0134 inch (0.34 mm)] sheet metal. The cap nail shank shall be a minimum of 12 gauge [0.105 inch (2.67 mm)] with a length to penetrate through the roof sheathing or a minimum of  $\frac{3}{4}$  inch (19.1 mm) into the roof sheathing.~~

~~**Exception:** As an alternative, adhered underlayment complying with ASTM D 1970 shall be permitted.~~ Reserved.

<b>Date Submitted</b>	7/19/2012	<b>Section</b>	1507.4.4 Attachment.	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	15	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications****Summary of Modification**

Provides current 2010 Florida Building Code specific criteria.

**Rationale**

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

**Fiscal Impact Statement****Impact to local entity relative to enforcement of code**

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**Impact to building and property owners relative to cost of compliance with code**

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**Requirements****Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

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**Does not degrade the effectiveness of the code**

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

**1507.4.4 Attachment.**

Metal roof panels shall be secured to the supports in accordance with the *approved* manufacturer's fasteners. In the absence of manufacturer recommendations, the following fasteners shall be used:

1. Galvanized fasteners shall be used for steel roofs.
2. Copper, brass, bronze, copper alloy or 300 series stainless-steel fasteners shall be used for copper roofs.
3. Aluminum-zinc coated fasteners are acceptable for aluminum-zinc coated roofs.
4. Stainless-steel fasteners are acceptable for all types of metal roofs.

<b>Date Submitted</b>	7/19/2012	<b>Section</b>	1507.5.2.1	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	15	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications****Summary of Modification**

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**Rationale**

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YES

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NO

1507.5.2.1

Underlayment shall be installed as per manufacturer's installation guidelines.



<b>Date Submitted</b>	7/19/2012	<b>Section</b>	1507.5.3 Underlayment.	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	15	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
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NO

**1507.5.3 Underlayment.**

Underlayment shall comply with ASTM D 226, Type I or Type II or ASTM D 1970 or ASTM D 4869.

<b>Date Submitted</b>	7/19/2012	<b>Section</b>	1507.5.4 Ice barrier.	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	15	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
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YES

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NO

**1507.5.4 Ice barrier.**

In areas where there has been a history of ice forming along the eaves causing a backup of water, an ice barrier that consists of at least two layers of underlayment cemented together or of a self-adhering polymer modified bitumen sheet shall be used in lieu of normal underlayment and extend from the lowest edges of all roof surfaces to a point at least 24 inches (610 mm) inside the exterior wall line of the building.

~~Exception:~~ Detached accessory structures that contain no conditioned floor area. Reserved.

<b>Date Submitted</b>	7/19/2012	<b>Section</b>	1507.5.7 Flashing.	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	15	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
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**1507.5.7 Flashing.**

Roof valley flashing shall be of corrosion-resistant metal of the same material as the roof covering or shall comply with the standards in Table 1507.4.3(1). The valley flashing shall extend at least 8 inches (203 mm) from the centerline each way and shall have a splash diverter rib not less than  $\frac{3}{4}$  0.75 inch (19.1 mm) high at the flow line formed as part of the flashing. Sections of flashing shall have an end lap of not less than 4 inches (102 mm). ~~In areas where the average daily temperature in January is 25°F (-4°C) or less or where there is a possibility of ice forming along the eaves causing a backup of water, the metal valley flashing shall have a 36-inch wide (914 mm) underlayment directly under it consisting of either one layer of underlayment running the full length of the valley or a self-adhering polymer modified bitumen sheet complying with ASTM D 1970, in addition to underlayment required for metal roof shingles. The metal valley flashing underlayment shall be solidly cemented to the roofing underlayment for roof slopes under seven units vertical in 12 units horizontal (58-percent slope) or self-adhering polymer modified bitumen sheet shall be installed.~~

<b>Date Submitted</b>	7/19/2012	<b>Section</b>	1507.6.3 Underlayment.	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	15	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
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<b>General Comments</b>	No	<b>Alternate Language</b>	No
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NO

**1507.6.3 Underlayment.**

Underlayment shall comply with ASTM D 226, Type I or Type II or [ASTM D 1970](#) or ASTM D 4869.



<b>Date Submitted</b>	7/19/2012	<b>Section</b>	1507.6.4 Ice barrier.	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	15	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
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**1507.6.4 Ice barrier.**

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~~Exception: Detached accessory structures that contain no conditioned floor area.~~ Reserved.

<b>Date Submitted</b>	7/19/2012	<b>Section</b>	1507.6.5 Material standards.	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	15	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
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NO

**1507.6.5 Material standards.**

Mineral-surfaced roll roofing shall conform to ASTM D 3909 or ASTM D 6380 Class M or Class WS

<b>Date Submitted</b>	7/19/2012	<b>Section</b>	1507.7.3 Underlayment.	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	15	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
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NO

**1507.7.3 Underlayment.**

Underlayment shall comply with ASTM D 226, Type I or ASTM D 4869 Type II.

<b>Date Submitted</b>	7/19/2012	<b>Section</b>	1507.7.4 Ice barrier.	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	15	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
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<b>Date Submitted</b>	7/19/2012	<b>Section</b>	1507.7.7 Flashing.	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	15	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
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**1507.7.7 Flashing.**

Flashing and counterflashing shall be made with sheet metal. Valley flashing shall be a minimum of ~~15~~ 16 inches (381 mm) wide. Valley and flashing metal shall be a minimum ~~uncoated thickness of 0.0179 inch (0.455 mm) zinc-coated G90~~ thickness provided in Table 1503.2 nonferrous metal or stainless steel. ~~Chimneys, stucco or brick walls shall have a minimum of two plies of felt for a cap flashing consisting of a 4-inch-wide (102 mm) strip of felt set in plastic cement and extending 1 inch (25 mm) above the first felt and a top coating of plastic cement. The felt shall extend over the base flashing 2 inches (51 mm).~~

<b>Date Submitted</b>	7/19/2012	<b>Section</b>	1507.8.1.1 Solid sheathing requirements	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	15	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
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Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Does not degrade the effectiveness of the code**

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

**1507.8.1.1 Solid sheathing required.**

Solid sheathing is required in areas where the average daily temperature in January is 25°F (- 4°C) or less or where there is a possibility of ice forming along the eaves causing a backup of water. Reserved.

<b>Date Submitted</b>	7/19/2012	<b>Section</b>	1507.8.3 Underlayment.	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	15	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications****Summary of Modification**

Provides current 2010 Florida Building Code specific criteria.

**Rationale**

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

**Fiscal Impact Statement****Impact to local entity relative to enforcement of code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to building and property owners relative to cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to industry relative to the cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Requirements****Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

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**Does not degrade the effectiveness of the code**

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Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

**1507.8.3 Underlayment.**

Underlayment shall comply with ASTM D 226, Type I or ASTM D 4869 Type II.

<b>Date Submitted</b>	7/19/2012	<b>Section</b>	1507.8.4 Ice barrier.	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	15	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications****Summary of Modification**

Provides current 2010 Florida Building Code specific criteria.

**Rationale**

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

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No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to building and property owners relative to cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

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Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

**1507.8.4 Ice barrier.**

In areas where there has been a history of ice forming along the eaves causing a backup of water, an ice barrier that consists of at least two layers of underlayment cemented together or of a self-adhering polymer modified bitumen sheet shall be used in lieu of normal underlayment and extend from the lowest edges of all roof surfaces to a point at least 24 inches (610 mm) inside the exterior wall line of the building.

~~Exception: Detached accessory structures that contain no conditioned floor area.~~

Reserved



<b>Date Submitted</b>	7/19/2012	<b>Section</b>	1507.8.8 Flashing.	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	15	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications****Summary of Modification**

Provides current 2010 Florida Building Code specific criteria.

**Rationale**

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

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No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

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**Impact to industry relative to the cost of compliance with code**

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NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

**1507.8.8 Flashing.**

At the juncture of the roof and vertical surfaces, flashing and counterflashing shall be provided in accordance with the manufacturer's installation instructions, and where of metal, ~~shall not be less than 0.019 inch (0.48 mm) (No. 26 galvanized sheet gage) corrosion-resistant metal~~ comply with Table 1503.2. The valley flashing shall extend at least 11 inches (279 mm) from the centerline each way and have a splash diverter rib not less than 1 inch (25 mm) high at the flow line formed as part of the flashing. Sections of flashing shall have an end lap of not less than 4 inches (102 mm). For roof slopes of three units vertical in 12 units horizontal (25-percent slope) and over, the valley flashing shall have a 36-inch-wide (914 mm) layer of underlayment of either one layer of Type I underlayment running the full length of the valley or a self-adhering polymer-modified bitumen sheet complying with ASTM D 1970, in addition to other required underlayment. ~~In areas where the average daily temperature in January is 25°F (-4°C) or less or where there is a possibility of ice forming along the eaves causing a backup of water, the metal valley flashing underlayment shall be solidly cemented to the roofing underlayment for slopes under seven units vertical in 12 units horizontal (58 percent slope) or self-adhering polymer-modified bitumen sheet shall be installed.~~

<b>Date Submitted</b>	7/19/2012	<b>Section</b>	1507.9.1.1 Solid sheathing requirements	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	15	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications****Summary of Modification**

Provides current 2010 Florida Building Code specific criteria.

**Rationale**

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

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NO

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YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

**1507.9.1.1 Solid sheathing required.**

Solid sheathing is required in areas where the average daily temperature in January is 25°F (- 4°C) or less or where there is a possibility of ice forming along the eaves causing a backup of water. Reserved.

<b>Date Submitted</b>	7/19/2012	<b>Section</b>	1507.9.3 Underlayment.	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	15	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications****Summary of Modification**

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YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

**1507.9.3 Underlayment.**

Underlayment shall comply with ASTM D 226, Type I or ASTM D 4869 Type I.

<b>Date Submitted</b>	7/19/2012	<b>Section</b>	1507.9.4 Ice barrier.	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	15	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications****Summary of Modification**

Provides current 2010 Florida Building Code specific criteria.

**Rationale**

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YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

**1507.9.4 Ice barrier.**

In areas where there has been a history of ice forming along the eaves causing a backup of water, an ice barrier that consists of at least two layers of underlayment cemented together or of a self-adhering polymer modified bitumen sheet shall be used in lieu of normal underlayment and extend from the lowest edges of all roof surfaces to a point at least 24 inches (610 mm) inside the exterior wall line of the building.

~~Exception: Detached accessory structures that contain no conditioned floor area.~~ Reserved.



<b>Date Submitted</b>	7/19/2012	<b>Section</b>	1507.9.9 Flashing.	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	15	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications****Summary of Modification**

Provides current 2010 Florida Building Code specific criteria.

**Rationale**

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

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The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

**1507.9.9 Flashing.**

At the juncture of the roof and vertical surfaces, flashing and counterflashing shall be provided in accordance with the manufacturer's installation instructions, and where of metal, ~~shall not be less than 0.019 inch (0.48 mm) (No. 26 galvanized sheet gage) corrosion resistant metal~~ comply with Table 1503.2. The valley flashing shall extend at least 11 inches (279 mm) from the centerline each way and have a splash diverter rib not less than 1 inch (25 mm) high at the flow line formed as part of the flashing. Sections of flashing shall have an end lap of not less than 4 inches (102 mm). For roof slopes of three units vertical in 12 units horizontal (25-percent slope) and over, the valley flashing shall have a 36-inch-wide (914 mm) layer of underlayment of either one layer of Type I underlayment running the full length of the valley or a self-adhering polymer-modified bitumen sheet complying with ASTM D 1970, in addition to other required underlayment. ~~In areas where the average daily temperature in January is 25°F (-4°C) or less or where there is a possibility of ice forming along the eaves causing a backup of water, the metal valley flashing underlayment shall be solidly cemented to the roofing underlayment for slopes under seven units vertical in 12 units horizontal (58-percent slope) or self-adhering polymer-modified bitumen sheet shall be installed.~~

<b>Date Submitted</b>	7/19/2012	<b>Section</b>	1510.3 Recovering versus replacement	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	15	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications****Summary of Modification**

Provides current 2010 Florida Building Code specific criteria.

**Rationale**

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

**Fiscal Impact Statement****Impact to local entity relative to enforcement of code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to building and property owners relative to cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to industry relative to the cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Requirements****Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

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**Does not degrade the effectiveness of the code**

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

**1510.3 Recovering versus replacement.**

New roof coverings shall not be installed without first removing all existing layers of roof coverings down to the roof deck where any of the following conditions occur:

1. Where the existing roof or roof covering is water soaked or has deteriorated to the point that the existing roof or roof covering is not adequate as a base for additional roofing.
2. Where the existing roof covering is wood shake, slate, clay, cement or asbestos-cement tile.
3. Where the existing roof has two or more applications of any type of roof covering.

4. When blisters exist in any roofing, unless blisters are cut or scraped open and remaining materials secured down before applying additional roofing.

5. Where the existing roof is to be used for attachment for a new roof system and compliance with the securement provisions of Section 1504.1 cannot be met.

**Exceptions:**

1. Complete and separate roofing systems, such as standing-seam metal roof systems, that are designed to transmit the roof loads directly to the building's structural system and that do not rely on existing roofs and roof coverings for support, shall not require the removal of existing roof coverings.

~~2. Metal panel, metal shingle and concrete and clay tile roof coverings shall be permitted to be installed over existing wood shake roofs when applied in accordance with Section 1510.4. Reserved.~~

3. The application of a new protective coating over an existing spray polyurethane foam roofing system shall be permitted without tear-off of existing roof coverings.

4. Where the existing roof assembly includes an ice barrier membrane that is adhered to the roof deck, the existing ice barrier membrane shall be permitted to remain in place and covered with an additional layer of ice barrier membrane in accordance with Section 1507.

<b>Date Submitted</b>	7/20/2012	<b>Section</b>	1514.4	<b>Proponent</b>	Michael Goolsby
<b>Chapter</b>	15	<b>Affects HVHZ</b>	Yes	<b>Attachments</b>	Yes
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications****Summary of Modification**

Section Formatting

**Rationale**

Separate mods delete section 1617 HVHZ and adopt base Code section 1611. This mod corrects the reference to reflect the relevant code section for roof drainage issues.

**Fiscal Impact Statement****Impact to local entity relative to enforcement of code**

None. Deletes a code section which will no longer exists, formatting only.

**Impact to building and property owners relative to cost of compliance with code**

None. Deletes a code section which will no longer exists, formatting only.

**Impact to industry relative to the cost of compliance with code**

None. Code provisions are now found in the base code, formatting only.

**Requirements****Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

N/A. Deletes a code section which no longer exists, formatting only and provides guidance to relevant base code provision.

**Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**

N/A. Deletes a code section which no longer exists, and provides reference to relevant base code provision, formatting only.

**Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**

Does not discriminate, establishes relevant base code section.

**Does not degrade the effectiveness of the code**

N/A. Deletes a code section which no longer exists, formatting only.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

**1514.4 Roof drainage.** Unless roofs are sloped to drain over roof edges, roof drains shall be installed at each low point of the roof. Where required for roof drainage, scuppers shall be placed level with the roof surface in a wall or parapet. The scupper shall be located as determined by the roof slope and contributing roof area. Scuppers shall be sized in accordance with the provisions contained in ASCE 7, Section 8 with commentary and shall comply with Section 16171 herein.

The code modification does not add a Florida specific code provision; instead, it provides guidance to the relevant base code provision, formatting only.

<b>Date Submitted</b>	7/26/2012	<b>Section</b>	1504.9	<b>Proponent</b>	James L. Buckner P.E. @CBUCK Engin
<b>Chapter</b>	15	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications****Summary of Modification**

To reinstate the margin of safety from the 2007 and 2010 FBC that is applicable to the roof assemblies performance requirements, section 1504.

**Rationale**

This modification provides a uniform application of the various test standards applicable to roof coverings in section 1504. About half of the test report results contains a design safety factor (usually 2 : 1) and the other half reports the ultimate or the maximum test pressure. This modification will also provide uniform nomenclature for the state product approvals.

**Fiscal Impact Statement****Impact to local entity relative to enforcement of code**

None. Section 1504.9 is currently stated in the 2007 and 2010 Code. No new requirements are being established.

**Impact to building and property owners relative to cost of compliance with code**

None. Section 1504.9 is currently stated in the 2007 and 2010 Code. No new requirements are being established.

**Impact to industry relative to the cost of compliance with code**

None. Section 1504.9 is currently stated in the 2007 and 2010 Code. No new requirements are being established.

**Requirements****Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

Carried over from previous 2007 and 2010 FBC

**Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**

Carried over from previous 2007 and 2010 FBC, and helps provide uniform method of reporting roof design resistance.

**Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**

Carried over from previous 2007 and 2010 FBC, and applies to all roof systems performance which will be reported with a design safety factor.

**Does not degrade the effectiveness of the code**

Does not reduce the scope of test standards, and is carried over from previous 2007 and 2010 FBC.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

OTHER

**Explanation of Choice**

To be consistent with the Florida Statutes and to implement to commision plan to update the 2013 Code

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO



**1504.9 Margin of Safety.** A margin of safety of 2:1 shall be applied to all wind uplift resistance test results except when a margin of safety is specified in the test standard.

**Exception:** Asphalt shingles testing resulting in a miles per hour rating as required in section 1507.2.7.

<b>Date Submitted</b>	7/31/2012	<b>Section</b>	1508.2 Material Standards for Roofing	<b>Proponent</b>	Deborah Lawson
<b>Chapter</b>	15	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications**

#5738 and #5742

**Summary of Modification**

Adds Lightweight Insulating Concrete and appropriate ASTM reference to chart of "material standards for roof insulation."

**Rationale**

Lightweight insulating concrete is a proven insulation material utilized effectively in the state of Florida including high velocity hurricane zones because of its properties and performance. It should be included in the material standards for Florida.

**Fiscal Impact Statement****Impact to local entity relative to enforcement of code**

None.

**Impact to building and property owners relative to cost of compliance with code**

None.

**Impact to industry relative to the cost of compliance with code**

None.

**Requirements****Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

Improves comprehensiveness and clarity of code with respect to existing use of lightweight insulating concrete as a roof insulation material.

**Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**

Improves clarity of the code with respect to use of lightweight insulating concrete as a roof insulation material.

**Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**

Proposed modification adds an existing product to the list of products referenced and does not discriminate against materials, products, methods or systems.

**Does not degrade the effectiveness of the code**

Improves the effectiveness of the code.

Is the proposed code modification part of a prior code version? No

**1508.2 Material standards.**

Above-deck thermal insulation board shall comply with the standards in Table 1508.2.

**TABLE 1508.2 MATERIAL STANDARDS FOR ROOF INSULATION**

Cellular glass board	<a href="#">ASTM C 552</a>
Composite boards	<a href="#">ASTM C 1289</a> , Type III, IV, V or VI
Expanded polystyrene	<a href="#">ASTM C 578</a>
Extruded polystyrene board	<a href="#">ASTM C 578</a>
Lightweight insulating concrete	<a href="#">ASTM C 495</a> , <a href="#">C513</a> , <a href="#">C796</a> , <a href="#">C869</a>
Perlite board	<a href="#">ASTM C 728</a>
Polyisocyanurate board	<a href="#">ASTM C 1289</a> , Type I or Type II
Wood fiberboard	<a href="#">ASTM C 208</a>

<b>Date Submitted</b>	7/31/2012	<b>Section</b>	1519.5.3 Lightweight insulating ceiling	<b>Proponent</b>	Deborah Lawson
<b>Chapter</b>	15	<b>Affects HVHZ</b>	Yes	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications**

#5748 and #5749

**Summary of Modification**

Technical correction to terminology.

**Rationale**

Provides consistency of terminology used in the code.

**Fiscal Impact Statement****Impact to local entity relative to enforcement of code**

None - this is a technical change to correct inconsistent terminology.

**Impact to building and property owners relative to cost of compliance with code**

None - this is a technical change to correct inconsistent terminology.

**Impact to industry relative to the cost of compliance with code**

None - this is a technical change to correct inconsistent terminology.

**Requirements****Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

Improves clarity of the code.

**Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**

Improves clarity of the code.

**Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**

Does not discriminate - purely a technical change to create consistent terminology.

**Does not degrade the effectiveness of the code**

Improves the code.

Is the proposed code modification part of a prior code version? No

**1519.5.3 Lightweight insulating concrete.**

All lightweight insulating ~~insulated~~ concrete shall be vented per roofing system manufacturer recommendations.

**1519.5.3.1**

Lightweight concrete shall not be applied over an existing roof deck unless the supporting structure has been approved as adequate to sustain the added weight. Calculations verifying the adequacy of the existing structure to sustain the added weight shall be prepared, signed, sealed and dated by a Florida-registered architect or engineer, who is proficient in structural design, and submitted with the uniform roofing permit application.

<b>Date Submitted</b>	7/31/2012	<b>Section</b>	1521.7	<b>Proponent</b>	Deborah Lawson
<b>Chapter</b>	15	<b>Affects HVHZ</b>	Yes	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications**

#5746 and # 5749

**Summary of Modification**

Technical correction to terminology.

**Rationale**

Provides consistency of terminology used in the code.

**Fiscal Impact Statement****Impact to local entity relative to enforcement of code**

None - this is a technical change to correct inconsistent terminology.

**Impact to building and property owners relative to cost of compliance with code**

None - this is a technical change to correct inconsistent terminology.

**Impact to industry relative to the cost of compliance with code**

None - this is a technical change to correct inconsistent terminology.

**Requirements****Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

Improves clarity of the code.

**Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**

Improves clarity of the code.

**Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**

Does not discriminate - purely a technical change to create consistent terminology.

**Does not degrade the effectiveness of the code**

Improves the code.

Is the proposed code modification part of a prior code version? No

**1521.7**

On lightweight insulating concrete, gypsum and cementitious wood fiber roof decks a field fastener withdrawal resistance test, in compliance with TAS 105, shall be carried out to confirm compliance with wind load requirements of Chapter 16 (High-Velocity Hurricane Zones).

<b>Date Submitted</b>	7/31/2012	<b>Section</b>	1521.20	<b>Proponent</b>	Deborah Lawson
<b>Chapter</b>	15	<b>Affects HVHZ</b>	Yes	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications**

# 5746 and #5748

**Summary of Modification**

Technical correction to terminology.

**Rationale**

Provides consistency of terminology used in the code.

**Fiscal Impact Statement****Impact to local entity relative to enforcement of code**

None - this is a technical change to correct inconsistent terminology.

**Impact to building and property owners relative to cost of compliance with code**

None - this is a technical change to correct inconsistent terminology.

**Impact to industry relative to the cost of compliance with code**

None - this is a technical change to correct inconsistent terminology.

**Requirements****Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

Improves clarity of the code.

**Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**

Improves clarity of the code.

**Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**

Does not discriminate - purely a technical change to create consistent terminology.

**Does not degrade the effectiveness of the code**

Improves the code.

Is the proposed code modification part of a prior code version? No



**1521.20**

Lightweight ~~insulating insulated~~ concrete shall not be applied over an existing roofing system unless the existing roofing assembly is verified to be adequate to accept the new lightweight insulating concrete and is in compliance with the testing required herein.

<b>Date Submitted</b>	7/31/2012	<b>Section</b>	1507.3.6	<b>Proponent</b>	Randall Shackelford
<b>Chapter</b>	15	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications**

FBC-R R905.3.6

**Summary of Modification**

Adds methods for determining corrosion resistance of screws for roof tile.

**Rationale**

Because so much of Florida is in proximity to the coast, corrosion resistance of roof tile fasteners is critical. This proposal gives guidance on evaluating the corrosion resistance of roof tile screws.

**Fiscal Impact Statement****Impact to local entity relative to enforcement of code**

No impact. Nearly identical to requirements in 2010 FBC.

**Impact to building and property owners relative to cost of compliance with code**

No impact. Nearly identical to requirements in 2010 FBC.

**Impact to industry relative to the cost of compliance with code**

No impact. Nearly identical to requirements in 2010 FBC. Adds an additional option of ASTM A153 so that nails are covered.

**Requirements****Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

This proposal will ensure that roof tile fasteners are adequately corrosion resistant. If roof tile fasteners rust, tiles can become dislodged in wind events and become missiles, damaging nearby structures, and leaving the roof of the structure unprotected.

**Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**

Improves the base code by giving a way to define what "corrosion resistant" is.

**Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**

Does not discriminate. Nearly identical to 2010 FBC. Provides both prescriptive and performance standards so many types of alternate materials can be evaluated.

**Does not degrade the effectiveness of the code**

Does not degrade. Similar to what was in 2010 FBC.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

OTHER

**Explanation of Choice**

Very similar wording is contained in the ICC 600-2008, Standard for Residential Construction in High-Wind Regions. See Section 304.3.1

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

OTHER

**Explanation of Choice**

Submitted successfully to ICC 600.

**1507.3.6 Fasteners.** Tile fasteners shall be corrosion resistant and not less than 11 gage, 5/16-inch (8.0 mm) head, and of sufficient length to penetrate the deck a minimum of 3/4 inch (19.1 mm) or through the thickness of the deck, whichever is less. Attaching wire for clay or concrete tile shall not be smaller than 0.083 inch (2.1 mm). Perimeter fastening areas include three tile courses but not less than 36 inches (914 mm) from either side of hips or ridges and edges of eaves and gable rakes. The corrosion resistance of fasteners shall be demonstrated through one of the following methods:

1. Corrosion resistance equivalent to [ASTM A 641](#), Class 1;

2. Corrosion resistance in accordance with [ASTM A153](#).

3. Corrosion resistance in accordance with [TAS114](#), Appendix E; or

4. Corrosion resistant coating exhibiting not more than 5 percent red rust after 1000 hours exposure in accordance with [ASTM B 117](#).

<b>Date Submitted</b>	7/23/2012	<b>Section</b>	SECTION - REFERENCED	<b>STAND</b>	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	35	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No	
<b>TAC Recommendation</b>	Approved as Submitted					
<b>Commission Action</b>	Pending Review					

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications****Summary of Modification**

Provides update to previous Commission approved code referenced standard.

**Rationale**

To carry forward the updated version of a previous Commission approved code standard designed with ASCE 7-10 to provide for the proper installation of tile roofing systems and components connected to Florida's unique environmental conditions including enduring high wind tropical rains and life/property threatening high wind events.

**Fiscal Impact Statement****Impact to local entity relative to enforcement of code**

Required design criteria of 2010 FBC referenced standard ASCE 7-10.

**Impact to building and property owners relative to cost of compliance with code**

Required design criteria of 2010 FBC referenced standard ASCE 7-10.

**Impact to industry relative to the cost of compliance with code**

Required design criteria of 2010 FBC referenced standard ASCE 7-10.

**Requirements****Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

Strengthens code to meet required design criteria of 2010 FBC referenced standard ASCE 7-10.

**Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**

Strengthens code to meet required design criteria of 2010 FBC referenced standard ASCE 7-10.

**Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**

Does not discriminate. Strengthens code to meet required design criteria of 2010 FBC referenced standard ASCE 7-10.

**Does not degrade the effectiveness of the code**

Does not degrade. Strengthens code to meet required design criteria of 2010 FBC referenced standard ASCE 7-10.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

FRSA

Florida Roofing, Sheet Metal and Air Conditioning Contractors Association

4111 Metric Drive

Winter Park, Florida 32792

Standard reference number

FRSA/TRI ~~07320/8-05~~ April 2012 (04-12)

Title

Florida High Wind Concrete and Clay Roof Tile Installation Manual, ~~Fourth~~ Fifth Edition

Referenced in code section number

1507.3.2, 1507.3.3, 1507.3.3.1, 1507.3.6, 1507.3.7, 1507.3.8, 1507.3.9

R5140

71

<b>Date Submitted</b>	7/16/2012	<b>Section</b>	101	<b>Proponent</b>	Ken Cureton
<b>Chapter</b>	1	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications**

None

**Summary of Modification**

Modify SECTION 101.6 ADD SECTION 101.8

**Rationale**

To comply with s. 553.73(7)(a) Florida Statutes, the proposed modification will supplement the most current version of the International Existing Building Code (IEBC) base code with Florida specific requirements in accordance with the Commission's approved code change process for the update to the 2013 Florida Building Code. The proposed modification is necessary in order to maintain compliance with Florida Statutes.

**Fiscal Impact Statement**

**Impact to local entity relative to enforcement of code**

None. Proposed language is currently adopted by the 2010 Florida Building Code.

**Impact to building and property owners relative to cost of compliance with code**

None. Proposed language is currently adopted by the 2010 Florida Building Code.

**Impact to industry relative to the cost of compliance with code**

None. Proposed language is currently adopted by the 2010 Florida Building Code.

**Requirements**

**Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

Yes. The Proposed language for this Modification is currently included in the 2010 Florida Building Code.

**Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**

Yes. The Proposed language for this Modification is currently included in the 2010 Florida Building Code.

**Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**

It does not. The Proposed language for this Modification is currently included in the 2010 Florida Building Code.

**Does not degrade the effectiveness of the code**

It does not. The Proposed language for this Modification is currently included in the 2010 Florida Building Code.

**Is the proposed code modification part of a prior code version?**

YES

**The provisions contained in the proposed amendment are addressed in the applicable international code?**

NO

**The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?**

OTHER

**Explanation of Choice**

The proposed code change was submitted in accordance with the Commission's update process for the 2013 FBC in order to maintain compliance with Florida Statutes.

**The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?**

NO

**1st Comment Period History**

08/09/2012 - 09/23/2012

Page 163 of 505

<b>Proponent</b>	BOAF CDC	<b>Submitted</b>	9/17/2012	<b>Attachments</b>	No
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**Comment:**

The section 101.6 Appendices should not be reserved. The choice of adopting appendices should be left to the AHJ and individual jurisdictions.

This code requirement should not be removed per the Commission' 2013 FBC update process. "IBC requirements not applicable to Florida (i.e.; snow and seismic requirements) remain in the Code for purposes of formatting consistency with the Foundation Codes."

R5140-G1

**1st Comment Period History**

08/09/2012 - 09/23/2012

<b>Proponent</b>	Ken Cureton	<b>Submitted</b>	9/21/2012	<b>Attachments</b>	No
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**Comment:**

The proposal provides for provisions for existing mechanical equipment on roof as per 553.73(15) FS.

R5140-G2

**1st Comment Period History**

08/09/2012 - 09/23/2012

<b>Proponent</b>	BOAF CDC	<b>Submitted</b>	9/23/2012	<b>Attachments</b>	No
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**Comment:**

Changing 101.6 is unnecessary; the decision to utilize the Appendices should remain with the local jurisdiction and AHJ. 101.8 is a statutory issue FS 553.73 (15) and a reference to that would be sufficient.

R5140-G3

Modify SECTION 101.6 as follows:

**101.6 Appendices.** ~~The code official is authorized to require rehabilitation and retrofit of buildings, structures or individual structural members in accordance with the appendices of this code if such appendices have been individually adopted. Reserved.~~

Add SECTION 101.8 as follows:

**101.8 Existing mechanical equipment.** An agency or local government may not require that existing mechanical equipment on the surface of a roof be installed in compliance with the requirements of the Florida Building Code until the equipment is required to be removed or replaced.



<b>Date Submitted</b> 7/6/2012	<b>Section</b> [B]706.1	<b>Proponent</b> Michael Goolsby
<b>Chapter</b> 7	<b>Affects HVHZ</b> No	<b>Attachments</b> Yes
<b>TAC Recommendation</b>	Approved as Submitted	
<b>Commission Action</b>	Pending Review	

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications****Summary of Modification**

Section formatting

**Rationale**

This proposed modification is intended to reinstate a wind related reference to the relevant HVHZ sections which was deleted as a consequence of the removal of the underlying Florida specific sections as contained in the 2010 edition of the FBC. Replacement of this direction to appropriate sections of the HVHZ is consistent with the legislative intent to maintain wind related HVHZ requirements.

**Fiscal Impact Statement****Impact to local entity relative to enforcement of code**

None. The result of this proposed modification is a continuation of the applicability of building code requirements for HVHZ structures that has existed in all previous editions of the FBC, Existing.

**Impact to building and property owners relative to cost of compliance with code**

None. The result of this proposed modification is a continuation of the applicability of building code requirements for HVHZ structures that has existed in all previous editions of the FBC, Existing.

**Impact to industry relative to the cost of compliance with code**

None. The result of this proposed modification is a continuation of the applicability of building code requirements for HVHZ structures that has existed in all previous editions of the FBC, Existing.

**Requirements****Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

This modification reinstates HVHZ provisions that were not to subject to the sunset provisions of the legislature. Therefore, helps protect the health and welfare of the public by having the wind related provisions for roof installations remain in the base code.

**Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**

This modification enhances the code by reinstating specific wind provisions for HVHZ roof systems that were not carried forward in establishing the base code for the 2013 FBC. Reinstatement of these provisions helps bring uniformity to the design and installation of these products.

**Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**

This modification does not curtail the use of any material, products, methods or systems of construction already deemed acceptable by the Florida Building Code or any alternate materials, design and methods of construction and equipment acceptable to the code official.

**Does not degrade the effectiveness of the code**

This modification does not degrade the effectiveness of the code; instead, it enhances the code by maintaining the applicability of relevant base code requirements as has been the case since the first edition of the FBC, Existing.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

**[B] 706.1 General.** Where alteration work includes replacement of equipment that is supported by the building or where a reroofing permit is required, the provisions of this section shall apply.

Exception: Buildings and structures located within the High Velocity Hurricane Zone shall comply with Sections 1512-1525 of the *Florida Building Code, Building*.

This proposed modification does not add new Florida specific provisions; instead, it only adds direction to the applicable and equivalent HVHZ code sections. Additionally, these wind provisions were acknowledged to be unique to Florida by the Florida Legislature, and were not intended to sunset since they are structurally wind related and applicable in the HVHZ.

<b>Date Submitted</b>	7/17/2012	<b>Section</b>	711.7.2	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	7	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

**General Comments** No **Alternate Language** No

**Related Modifications****Summary of Modification**

Include ASTM D 4869 Type II & Type IV as underlayment option to correlate with underlayment's available in Chapter 9 of the Florida Residential Code and clarify fastening installation language.

**Rationale**

To carry forward previous Commission approved code language and standards found in Chapter 9 of the Florida Residential Code and correlate with Chapter 6 of the Florida Existing Building Code. Unify shingle underlayment's and fastening requirements.

**Fiscal Impact Statement****Impact to local entity relative to enforcement of code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to building and property owners relative to cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to industry relative to the cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Requirements****Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Does not degrade the effectiveness of the code**

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

<b>Proponent</b>	BOAF CDC	<b>Submitted</b>	9/23/2012	<b>Attachments</b>	No
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**Comment:**

The provision this is based upon has sunset with the other Florida Changes to the 2010 FBC

Because a code provision was in the 2010 FBC does not make it Florida specific.

The amendment does not demonstrate by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variations addressed by the foundation code. Per FS 553.73 (7) (g)

The proposed amendment was does not appear to have been submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process.

R5244-G1

### 711.7.2 Roof secondary water barrier for site-built single family residential structures.

A secondary water barrier shall be installed using one of the following methods when roof covering is removed and replaced:

-

#### 1. In either HVHZ or Non-HVHZ regions:

a) All joints in structural panel roof sheathing or decking shall be covered with a minimum 4 inch (102 mm) wide strip of self-adhering polymer modified bitumen tape applied directly to the sheathing or decking. The deck and self-adhering polymer modified bitumen tape shall be covered with one of the underlayment systems approved for the particular roof covering to be applied to the roof.

b) The entire roof deck shall be covered with an approved asphalt impregnated 30# felt underlayment or approved synthetic underlayment installed with nails and tin-tabs in accordance with Sections R4402.7.2, R4402.7.3, or R4402.7.4 of the Florida Building Code, Residential. (No additional underlayment shall be required over the top of this sheet.) The synthetic underlayment shall be fastened in accordance with the manufacturer's recommendations.

#### 2. Outside the High Velocity Hurricane Zone:

a) The entire roof deck shall be covered with an approved self-adhering polymer modified bitumen sheet meeting ASTM D 1970 or an approved self-adhering synthetic underlayment installed in accordance with the manufacturer's installation instructions. No additional underlayment shall be required on top of this sheet for new installations.

b) An underlayment system approved for the particular roof covering shall be applied with the following modification:

(1) For roof slopes that require one layer of underlayment, a layer of approved asphalt impregnated ASTM D 226 Type I or Type II, ASTM D 4869, Type II or Type IV underlayment or approved synthetic underlayment shall be installed. The felt is to be fastened with 1 inch (25 mm) round plastic cap, metal cap nails or nails and tin-tabs attached to a nailable deck with two staggered rows in the field of the sheet with a maximum fastener spacing of 12 in. o.c. (305 mm), and one row at the overlaps fastened 6 in. o.c. (152 mm). Synthetic underlayment shall be fastened in accordance with this section and the manufacturer's recommendations.

(2) For roof slopes that require two layers of underlayment, an approved asphalt impregnated ASTM D 226 Type I or Type II, ASTM D 4869, Type II or Type IV underlayment shall be installed in a shingle-fashion and lapped 19 inch (483 mm) and fastened with 1 inch (25 mm) round plastic cap, metal cap nails or nails and tin-tabs, attached to a nailable deck with one row in the field of the sheet with a maximum fastener spacing of 12 in. o.c. (305 mm), and one row at the overlaps fastened 6 in. o.c. (152 mm). An approved synthetic underlayment shall be installed in accordance with this section and the manufacturer's installation instruction. (No additional underlayment shall be required over the top of this sheet.)

#### Exceptions:

1. Roof slopes < 2:12 having a continuous roof system shall be deemed to comply with Section 711.7.2 requirements for a secondary water barrier.

2. Clay and concrete tile roof systems installed as required by the Florida Building Code are deemed to comply with the requirements of Section 711.7.2 for Secondary Water Barriers.

R5300

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<b>Date Submitted</b>	7/18/2012	<b>Section</b>	R904	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	9	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications**

**Summary of Modification**

Provides current Florida-specific criteria

**Rationale**

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

**Fiscal Impact Statement**

**Impact to local entity relative to enforcement of code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to building and property owners relative to cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to industry relative to the cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Requirements**

**Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Does not degrade the effectiveness of the code**

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO





## SECTION R904 MATERIALS

### R904.1 Scope.

The requirements set forth in this section shall apply to the application of roof covering materials specified herein. Roof assemblies shall be applied in accordance with this chapter and the manufacturer's installation instructions. Installation of roof assemblies shall comply with the applicable provisions of Section R905.

### R904.2 Compatibility of materials.

Roof assemblies shall be of materials that are compatible with each other and with the building or structure to which the materials are applied.

### R904.3 Material specifications and physical characteristics.

Roof covering materials shall conform to the applicable standards listed in this chapter. In the absence of applicable standards or where materials are of questionable suitability, testing by an approved testing agency shall be required by the building official to determine the character, quality and limitations of application of the materials.

### R904.4 ~~Product identification~~ Fasteners.

~~Roof covering materials shall be delivered in packages bearing the manufacturer's identifying marks and approved testing agency labels when required. Bulk shipments of materials shall be accompanied by the same information issued in the form of a certificate or on a bill of lading by the manufacturer.~~

#### R904.4.1 Nails.

Nails shall be corrosion resistant nails conforming to ASTM F 1667. The corrosion resistance shall meet ASTM A 641, Class I or an equal corrosion resistance by coating, electro galvanization, mechanical galvanization, hot dipped galvanization, stainless steel, nonferrous metal and alloys or other suitable corrosion-resistant material. Metal or plastic cap nails shall have a head diameter of not less than 1 inch (25.4 mm) with a thickness of at least 32-gauge sheet metal. Metal tin-tabs shall be not less than 1<sup>5</sup>/<sub>8</sub> inches (41 mm) and not more than 2 inches (51 mm) in diameter and of not less than 32 gage (0.010 inch) sheet metal in compliance with the corrosion resistance requirements.

#### R904.4.2 Screws.

Wood screws shall conform to ANSI/ASME B 18.6.1. Screws shall be corrosion resistant by coating, galvanization, stainless steel, nonferrous metal or other suitable corrosion resistant material. The corrosion resistance shall be demonstrated through one of the following methods:

1. Corrosion resistance equivalent to ASTM A 641, Class 1;
2. Corrosion resistance in accordance with TAS 114, Appendix E;
3. Corrosion resistant coating exhibiting not more than 5 percent red rust after 1000 hours exposure in accordance with ASTM B 117.

#### R904.4.3 Clips.

Clips shall be corrosion resistant clips. The corrosion resistance shall meet 0.90 ounce per square foot (0.458 kg/m<sup>2</sup>) measured according ASTM A 90/A 90M, TAS 114 Appendix E or an equal corrosion resistance coating, electro galvanization, mechanical galvanization, hot dipped galvanization, stainless steel, nonferrous metals and alloys or other suitable corrosion resistant material. Stainless steel clips shall conform to ASTM A167, Type 304.

~~R904.4~~ **R904.5 Product identification.**

Roof covering materials shall be delivered in packages bearing the manufacturer's identifying marks and approved testing agency labels when required. Bulk shipments of materials shall be accompanied by the same information issued in the form of a certificate or on a bill of lading by the manufacturer.

<b>Date Submitted</b>	7/18/2012	<b>Section</b>	R905.9 Built-up roofs.	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	9	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications****Summary of Modification**

Provides current Florida-specific criteria

**Rationale**

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

**Fiscal Impact Statement****Impact to local entity relative to enforcement of code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to building and property owners relative to cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to industry relative to the cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Requirements****Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Does not degrade the effectiveness of the code**

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

**R905.9 Built-up roofs.**

The installation of built-up roofs shall comply with the provisions of this section.

**R905.9.1 Slope.**

Built-up roofs shall have a design slope of a minimum of one-fourth unit vertical in 12 units horizontal (2-percent slope) for drainage, except for coal-tar built-up roofs, which shall have a design slope of a minimum one-eighth unit vertical in 12 units horizontal (1-percent slope).

**R905.9.2 Material standards.**

Built-up roof covering materials shall comply with the standards in Table R905.9.2 or UL 55A.

**R905.9.2.1**

**Red rosin paper shall be used when the membrane is applied directly to a wood deck or cementitious fiber decks.**

**TABLE R905.9.2 BUILT-UP ROOFING MATERIAL STANDARDS**

MATERIAL STANDARD	STANDARD
Acrylic coatings used in roofing	ASTM D 6083
Aggregate surfacing	ASTM D 1863
Asphalt adhesive used in roofing	ASTM D 3747
Asphalt cements used in roofing	ASTM D 2822; D 3019; D 4586
Asphalt-coated glass fiber base sheet	ASTM D 4601
Asphalt coatings used in roofing	ASTM D 1227; D 2823; D 2824; D 4479
Asphalt glass felt	ASTM D 2178
Asphalt primer used in roofing	ASTM D 41
Asphalt-saturated and asphalt-coated organic felt base sheet	ASTM D 2626
Asphalt-saturated organic felt (perforated)	ASTM D 226
Asphalt used in roofing	ASTM D 312
Coal-tar cements used in roofing	ASTM D 4022; D 5643
Coal-tar primer used in roofing, dampproofing and waterproofing	ASTM D 43
Coal-tar saturated organic felt	ASTM D 227
Coal-tar used in roofing	ASTM D 450, Type I or II
Glass mat, coal tar	ASTM D 4990
Glass mat, venting type	ASTM D 4897
Mineral-surfaced inorganic cap sheet	ASTM D 3909
Thermoplastic fabrics used in roofing	ASTM D 5665; D 5726

**R905.9.3 Application.**

Built-up roofs shall be installed according to this chapter and the manufacturer's installation instructions.

<b>Date Submitted</b>	7/18/2012	<b>Section</b>	R905.15 Liquid-applied roofing.	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	9	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications****Summary of Modification**

Provides current Florida-specific criteria

**Rationale**

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

**Fiscal Impact Statement****Impact to local entity relative to enforcement of code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to building and property owners relative to cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to industry relative to the cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Requirements****Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Does not degrade the effectiveness of the code**

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

**R905.15 Liquid-applied roofing.**

The installation of liquid-applied roofing shall comply with the provisions of this section.

**R905.15.1 Slope.**

Liquid-applied roofing shall have a design slope of a minimum of one-fourth unit vertical in 12 units horizontal (2-percent slope).

**R905.15.2 Material standards.**

Liquid-applied roofing shall comply with ASTM C 836, C 957, D 1227, D 3468, D 6083, D 6694 or D 6947.

**R905.15.3 Application.**

Liquid-applied roof coatings shall be installed according to this chapter and the manufacturer's installation instructions. The approved allowable uplift resistance for the liquid-applied coatings shall be equal to or greater than the uplift resistance for the roof based on Table R301.2(2).

<b>Date Submitted</b>	7/18/2012	<b>Section</b>	R905.11 Modified bitumen roofing	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	9	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications****Summary of Modification**

Provides current Florida-specific criteria

**Rationale**

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

**Fiscal Impact Statement****Impact to local entity relative to enforcement of code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to building and property owners relative to cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to industry relative to the cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Requirements****Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Does not degrade the effectiveness of the code**

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

**R905.11 Modified bitumen roofing.**

The installation of modified bitumen roofing shall comply with the provisions of this section.

**R905.11.1 Slope.**

Modified bitumen membrane roofs shall have a design slope of a minimum of one-fourth unit vertical in 12 units horizontal (2-percent slope) for drainage.

**R905.11.2 Material standards.**

Modified bitumen roof coverings shall comply with the standards in Table R905.11.2.

**TABLE R905.11.2 MODIFIED BITUMEN ROOFING MATERIAL STANDARDS**

MATERIAL	STANDARD
Acrylic coating	ASTM D 6083
Asphalt adhesive	ASTM D 3747
Asphalt cement	ASTM D 3019
Asphalt coating	ASTM D 1227; D 2824
Asphalt primer	ASTM D 41
Modified bitumen roof membrane	ASTM D 6162; D 6163; D 6164; D 6222; D 6223; D 6298; <b><u>D 6509</u></b> CGSB 37â€"GPâ€"56M

**R905.11.3 Application.**

Modified bitumen roofs shall be installed according to this chapter and the manufacturer's installation instructions. The approved allowable uplift resistance for the modified bitumen roof shall be equal to or greater than the uplift resistance for the roof based on Table R301.2(2).



<b>Date Submitted</b>	7/18/2012	<b>Section</b>	R905.12 Thermoset single-ply roofing	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	9	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications****Summary of Modification**

Provides current Florida-specific criteria

**Rationale**

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

**Fiscal Impact Statement****Impact to local entity relative to enforcement of code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to building and property owners relative to cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to industry relative to the cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Requirements****Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Does not degrade the effectiveness of the code**

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

**R905.12 Thermoset single-ply roofing.**

The installation of thermoset single-ply roofing shall comply with the provisions of this section.

**R905.12.1 Slope.**

Thermoset single-ply membrane roofs shall have a design slope of a minimum of one-fourth unit vertical in 12 units horizontal (2-percent slope) for drainage.

**R905.12.2 Material standards.**

Thermoset single-ply roof coverings shall comply with ASTM D 4637, ASTM D 5019 or CGSB 37-GP-52M.

**R905.12.3 Application.**

Thermoset single-ply roofs shall be installed according to this chapter and the manufacturer's installation instructions. The approved allowable uplift resistance for the thermoset single-ply membrane roof shall be equal to or greater than the uplift resistance for the roof based on Table R301.2(2).

<b>Date Submitted</b>	7/18/2012	<b>Section</b>	R905.13 Thermoplastic single-ply	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	9	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications****Summary of Modification**

Provides current Florida-specific criteria

**Rationale**

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

**Fiscal Impact Statement****Impact to local entity relative to enforcement of code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to building and property owners relative to cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to industry relative to the cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Requirements****Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Does not degrade the effectiveness of the code**

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

**R905.13 Thermoplastic single-ply roofing.**

The installation of thermoplastic single-ply roofing shall comply with the provisions of this section.

**R905.13.1 Slope.**

Thermoplastic single-ply membrane roofs shall have a design slope of a minimum of one-fourth unit vertical in 12 units horizontal (2-percent slope).

**R905.13.2 Material standards.**

Thermoplastic single-ply roof coverings shall comply with ASTM D 4434, ASTM D 6754, ASTM D 6878 or CGSB CAN/CGSB 37.54.

**R905.13.3 Application.**

Thermoplastic single-ply roofs shall be installed according to this chapter and the manufacturer's installation instructions. The approved allowable uplift resistance for the thermoplastic single-ply roof shall be equal to or greater than the uplift resistance for the roof based on Table R301.2(2).

<b>Date Submitted</b>	7/18/2012	<b>Section</b>	R905.14 Sprayed polyurethane foam	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	9	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications****Summary of Modification**

Provides current Florida-specific criteria

**Rationale**

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

**Fiscal Impact Statement****Impact to local entity relative to enforcement of code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to building and property owners relative to cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to industry relative to the cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Requirements****Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Does not degrade the effectiveness of the code**

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

**R905.14 Sprayed polyurethane foam roofing.**

The installation of sprayed polyurethane foam roofing shall comply with the provisions of this section.

**R905.14.1 Slope.**

Sprayed polyurethane foam roofs shall have a design slope of a minimum of one-fourth unit vertical in 12 units horizontal (2-percent slope) for drainage.

**R905.14.2 Material standards.**

Spray-applied polyurethane foam insulation shall comply with ASTM C 1029, Type III or IV.

**R905.14.3 Application.**

Foamed-in-place roof insulation shall be installed in accordance with this chapter and the manufacturer's installation instructions. A liquid-applied protective coating that complies with ~~Table R905.14.3~~ Section R905.15 shall be applied no less than 2 hours nor more than 72 hours following the application of the foam. The approved allowable uplift resistance for the sprayed polyurethane foam roofing shall be equal to or greater than the uplift resistance for the roof based on Table R301.2(2).

**TABLE R905.14.3 PROTECTIVE COATING MATERIAL STANDARDS**

MATERIAL	STANDARD
Acrylic coating	ASTM D 6083
Silicone coating	ASTM D 6694
Moisture-cured polyurethane coating	ASTM D 6947

**R905.14.4 Foam plastics.**

Foam plastic materials and installation shall comply with Section R316.

<b>Date Submitted</b>	7/21/2012	<b>Section</b>	R903.2.1 Locations.	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	9	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications****Summary of Modification**

Provides and carries forward current 2010 FBC Florida-specific criteria

**Rationale**

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

**Fiscal Impact Statement****Impact to local entity relative to enforcement of code**

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YES

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NO

**R903.2.1 Locations.**

Flashings shall be installed at wall and roof intersections, wherever there is a change in roof slope or direction and around roof openings. ~~A flashing shall be installed to divert the water away from where the eave of a sloped roof intersects a vertical sidewall.~~ Where flashing is of metal, the metal shall be corrosion resistant with a thickness of not less than 0.019 inch (0.5 mm) (No. 26 galvanized sheet) provided in Table R903.2.1.

Exception: Flashing is not required at hip and ridge junctions.

**TABLE R903.2.1 METAL FLASHING MATERIAL**

<u>MATERIAL</u>	<u>GAGE MINIMUM THICKNESS (INCHES)</u>	<u>GAGE</u>	<u>WEIGHT (lbs per sq ft)</u>
<u>Copper</u>	<u>0.024</u>	<u>1 (16 oz)</u>	
<u>Aluminum</u>	<u>0.024</u>		
<u>Stainless steel</u>	<u>28</u>		
<u>Galvanized steel</u>	<u>0.0179</u>	<u>26 (zinc coated G90)</u>	<u>26 (zinc coated G90)</u>
<u>Aluminum zinc coated steel</u>	<u>0.0179</u>	<u>26 (AZ50 alum zinc)</u>	<u>26 (AZ50 alum zinc)</u>
<u>Zinc alloy</u>	<u>0.027</u>		
<u>Lead</u>	<u>2.5 (40 oz)</u>		
<u>Painted terne</u>	<u>1.25 (20 oz)</u>		



<b>Date Submitted</b>	7/21/2012	<b>Section</b>	R903.2.3 Membrane flashings.	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	9	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications****Summary of Modification**

Provides and carries forward current 2010 FBC Florida-specific criteria

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NO

R903.2.3 Membrane flashings.

All membrane flashing shall be installed according to the roof assembly manufacturer's published literature.

<b>Date Submitted</b>	7/21/2012	<b>Section</b>	R903.4 Roof drainage.	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	9	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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NO

**R903.4 Roof drainage.**

Unless roofs are sloped to drain over roof edges, roof drains shall be installed at each low point of the roof. Where required for roof drainage, scuppers shall be placed level with the roof surface in a wall or parapet. The scupper shall be located as determined by the roof slope and contributing roof area.

<b>Date Submitted</b>	7/21/2012	<b>Section</b>	R905.2.2 Slope.	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	9	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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NO

**R905.2.2 Slope.**

Asphalt shingles shall be used only on roof slopes of two units vertical in 12 units horizontal (2:12) or greater. For roof slopes from two units vertical in 12 units horizontal (2:12) ~~up to~~ and less than four units vertical in 12 units horizontal (4:12), double underlayment application is required in accordance with Section R905.2.7.

<b>Date Submitted</b>	7/21/2012	<b>Section</b>	R905.2.4.1 Wind resistance of asphalt	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	9	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

**General Comments** No **Alternate Language** No

**Related Modifications****Summary of Modification**

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NO

#### R905.2.4.1 Wind resistance of asphalt shingles

Asphalt shingles shall be ~~tested in accordance with ASTM D 7158. Asphalt shingles shall meet the classification requirements of Table R905.2.4.1(1) for the appropriate maximum basic wind speed. Asphalt shingle packaging shall bear a label to indicate compliance with ASTM D 7158 and the required classification in Table R905.2.4.1(1)~~ installed in accordance with Section R905.2.6. and R905.2.6.1.

~~Exception: Asphalt shingles not included in the scope of ASTM D 7158 shall be tested and labeled to indicate compliance with ASTM D 3161 and the required classification in Table R905.2.4.1(2).~~

TABLE R905.2.4.1(1) CLASSIFICATION OF ASPHALT ROOF SHINGLES PER ASTM D 7158

MAXIMUM BASIC WIND SPEED FROM FIGURE 301.2(4)A (mph)	CLASSIFICATION REQUIREMENT
85	D, G or H
90	D, G or H
100	G or H
110	G or H
120	G or H
130	H
140	H
150	H

For SI: 1 mile per hour = 0.447 m/s.

Reserved.

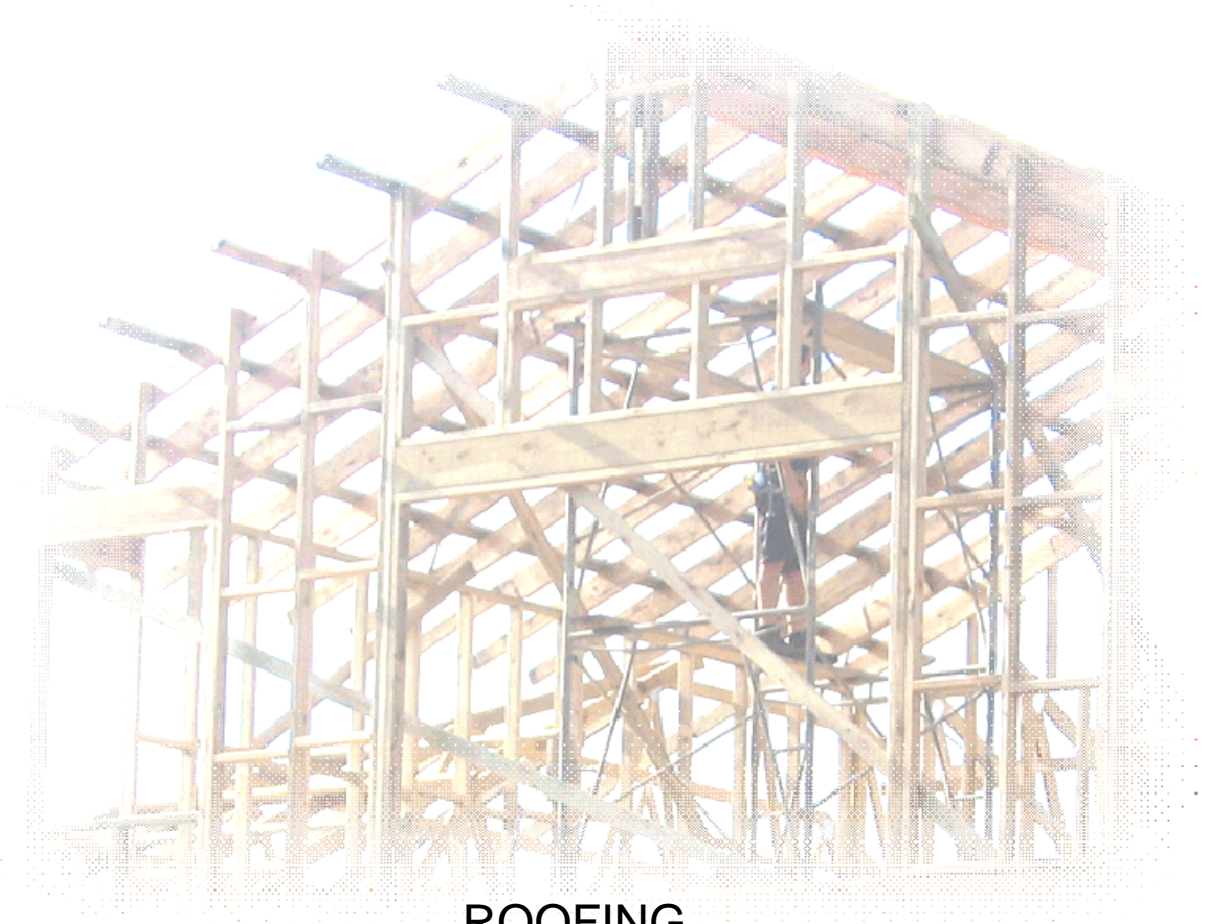
TABLE R905.2.4.1(2) CLASSIFICATION OF ASPHALT SHINGLES PER ASTM D 3161

MAXIMUM BASIC WIND SPEED FROM FIGURE 301.2(4)A (mph)	CLASSIFICATION REQUIREMENT
85	A, D or F
90	A, D or F
100	A, D or F
110	F
120	F
130	F
140	F
150	F

For SI: 1 mile per hour = 0.447 m/s.

Reserved.





**ROOFING**  
PART 2 OF 3  
WITHOUT COMMENTS  
**Proposed Code Modifications**

This document created by the Florida Department of Business and Professional Regulation -  
850-487-1824

Total Mods for **Roofing** in **Approved as Submitted: 53**

Total Mods for report: 85

**Sub Code: Residential**

**R5488**

1

<b>Date Submitted</b>	7/21/2012	<b>Section</b>	R905.2.7.1 Ice barrier.	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	9	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

**General Comments** **No** **Alternate Language** **No**

**Related Modifications**

**Summary of Modification**

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NO

**R905.2.7.1 Ice barrier.**

~~In areas where there has been a history of ice forming along the eaves causing a backup of water as designated in Table R301.2(1), an ice barrier that consists of a least two layers of underlayment cemented together or of a self-adhering polymer modified bitumen sheet, shall be used in lieu of normal underlayment and extend from the lowest edges of all roof surfaces to a point at least 24 inches (610 mm) inside the exterior wall line of the building.~~

~~**Exception:** Detached accessory structures that contain no conditioned floor area. Reserved.~~

<b>Date Submitted</b>	7/21/2012	<b>Section</b>	R905.2.7.2 Underlayment and high	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	9	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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### R905.2.7.2 Underlayment and high winds.

~~Underlayment applied in areas subject to high winds [above 110 mph (49 m/s) in accordance with Figure R301.2(4)A] shall be applied with corrosion-resistant fasteners in accordance with manufacturer's installation instructions. Fasteners are to be applied along the overlap not farther apart than 36 inches (914 mm) on center.~~

~~Underlayment installed where the basic wind speed equals or exceeds 120 mph (54 m/s) shall comply with ASTM D 226 Type II, ASTM D 4869 Type IV, or ASTM D 6757. The underlayment shall be attached in a grid pattern of 12 inches (305 mm) between side laps with a 6-inch (152 mm) spacing at the side laps. Underlayment shall be applied in accordance with Section R905.2.7 except all laps shall be a minimum of 4 inches (102 mm). Underlayment shall be attached using metal or plastic cap nails with a head diameter of not less than 1 inch (25.4 mm) with a thickness of at least 32-gauge sheet metal. The cap nail shank shall be a minimum of 12-gauge (0.105 inches) with a length to penetrate through the roof sheathing or a minimum of  $\frac{3}{4}$  inch (19 mm) into the roof sheathing.~~

~~**Exception:** As an alternative, adhered underlayment complying with ASTM D 1970 shall be permitted. Reserved.~~

<b>Date Submitted</b>	7/21/2012	<b>Section</b>	R905.2.8.1 Base and cap flashing	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	9	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
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NO

**R905.2.8.1 Base and cap counter flashing.**

~~Base and cap counter flashing shall be installed in accordance with manufacturer's installation instructions. Base flashing shall be of either corrosion resistant metal of minimum nominal 0.019 inch (0.5 mm) thickness or mineral surface roll roofing weighing a minimum of 77 pounds per 100 square feet (4 kg/m<sup>2</sup>). Cap flashing shall be corrosion resistant metal of minimum nominal 0.019 inch (0.5 mm) thickness as follows:~~

1. In accordance with manufacturer's installation instructions, or

2. A continuous metal minimum 4 inch by 4 inch "L" flashing shall be set in approved flashing cement and set flush to base of wall and over the underlayment. Both horizontal and vertical metal flanges shall be fastened 6 inches (152 mm) on center with approved fasteners. All laps shall be a minimum of 4 inches (102 mm) fully sealed in approved flashing cement. Flashing shall start at the lower portion of roof to ensure water-shedding capabilities of all metal laps. The entire edge of the horizontal flange shall be sealed covering all nail penetrations with approved flashing cement and membrane. Shingles shall overlap the horizontal flange and shall be set in approved flashing cement.

Base flashing shall be of either corrosion-resistant metal provided in Section R905.2.8.1 or mineral surface roll roofing weighing a minimum of 77 pounds per 100 square feet (3.76 kg/m<sup>2</sup>). Counter flashing shall be corrosion-resistant metal with a minimum thickness provided in Table R903.2.1.



<b>Date Submitted</b>	7/21/2012	<b>Section</b>	R905.2.8.2 Valleys.	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	9	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

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NO

### R905.2.8.2 Valleys.

Valley linings shall be installed in accordance with the manufacturer's installation instructions before applying shingles. Valley linings of the following types shall be permitted:

1. For open valleys (valley lining exposed) lined with metal, the valley lining shall be at least ~~24~~ 16 inches (~~610~~ 406 mm) wide and of any of the corrosion-resistant metals in Table ~~R905.2.8.2~~ R903.2.1.
2. For open valleys, valley lining of two plies of mineral surfaced roll roofing, complying with ASTM D 3909 or ASTM D 6380 Class M, shall be permitted. The bottom layer shall be 18 inches (457 mm) and the top layer a minimum of 36 inches (914 mm) wide.
3. For closed valleys (valley covered with shingles), valley lining of one ply of smooth roll roofing complying with ASTM D 6380 Class S and at least 36 inches wide (914 mm) or valley lining as described in Item 1 or 2 above shall be permitted. Self-adhering polymer modified bitumen underlayment complying with ASTM D 1970 shall be permitted in lieu of the lining material

TABLE R905.2.8.2 VALLEY LINING MATERIAL

MATERIAL	MINIMUM THICKNESS (inches)	GAGE	WEIGHT (pounds) per square foot
Cold-rolled copper	0.0216 nominal	—	ASTM B 370, 16 oz. per square foot
Lead coated copper	0.0216 nominal	—	ASTM B 101, 16 oz. per square foot
High yield copper	0.0162 nominal	—	ASTM B 370, 12 oz. per square foot
Lead coated high yield copper	0.0162 nominal	—	ASTM B 101, 12 oz. per square foot
Aluminum	0.024	—	—
Stainless steel	—	28	—
Galvanized steel	0.0179	26 (zinc coated G90)	—
Zinc alloy	0.027	—	—
Lead	—	—	2 <sup>1</sup> / <sub>2</sub>
Painted terne	—	—	20

For SI: 1 inch = 25.4 mm, 1 pound = 0.454 kg. Reserved.

<b>Date Submitted</b>	7/21/2012	<b>Section</b>	R905.2.8.3 Sidewall flashing	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	9	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications****Summary of Modification**

Provides and carries forward current 2010 FBC Florida-specific criteria.

**Rationale**

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

**Fiscal Impact Statement****Impact to local entity relative to enforcement of code**

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**Impact to building and property owners relative to cost of compliance with code**

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**Impact to industry relative to the cost of compliance with code**

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**Requirements****Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

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Is the proposed code modification part of a prior code version?

YES

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NO

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YES

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NO

### R905.2.8.3 Sidewall flashing.

~~Base flashing against a vertical sidewall shall be by the step-flashing method or continuous "L" flashing method, continuous or step flashing and shall be a minimum of 4 inches (102 mm) in height and 4 inches (102 mm) in width and shall direct water away from the vertical sidewall onto the roof and/or into the gutter. Where siding is provided on the vertical sidewall, the vertical leg of the flashing shall be continuous under the siding. Where anchored masonry veneer is provided on the vertical sidewall, the base flashing shall be provided in accordance with this section and counterflashing shall be provided in accordance with Section R703.7.2.2. Where exterior plaster or adhered masonry veneer is provided on the vertical sidewall, the base flashing shall be provided in accordance with this section and Section R703.6.3.~~

<b>Date Submitted</b>	7/21/2012	<b>Section</b>	R905.2.8.5 Drip edge.	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	9	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications****Summary of Modification**

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**Rationale**

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YES

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NO

**R905.2.8.5 Drip edge.**

~~A drip edge shall be provided at eaves and gables of shingle roofs. Adjacent pieces of drip edge shall be overlapped a minimum of 2 inches (51 mm). Drip edges shall extend a minimum of 0.25 inch (6.4 mm) below the roof sheathing and extend up the roof deck a minimum of 2 inches (51 mm). Drip edges shall be mechanically fastened to the roof deck at a maximum of 12 inches (305 mm) o.c. with fasteners as specified in Section R905.2.5. Underlayment shall be installed over the drip edge along eaves and under the underlayment on gables. Unless specified differently by the shingle manufacturer, shingles are permitted to be flush with the drip edge.~~

Provide drip edge at eaves and gables of shingle roofs. Overlap to be a minimum of 3 inches (76 mm). Eave drip edges shall extend  $\frac{1}{2}$  inch (13 mm) below sheathing and extend back on the roof a minimum of 2 inches (51 mm). Drip edge at eaves shall be permitted to be installed either over or under the underlayment. If installed over the underlayment, there shall be a minimum 4 inch (51 mm) width of roof cement installed over the drip edge flange. Drip edge shall be mechanically fastened a maximum of 12 inches (305 mm) on center. Where the  $V_{asd}$  as determined in accordance with Section R301.2.1.3 is 110 mph (177 km/h) or greater or the mean roof height exceeds 33 feet (10 058 mm), drip edges shall be mechanically fastened a maximum of 4 inches (102 mm) on center.

<b>Date Submitted</b>	7/21/2012	<b>Section</b>	R905.3.1 Deck requirements.	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	9	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications****Summary of Modification**

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**Rationale**

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Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

**R905.3.1 Deck requirements.**

Concrete and clay tile shall be installed only over solid sheathing or, except where the roof covering is specifically designed and tested in accordance with Chapter 16, Florida Building Code, Building to be applied over spaced structural sheathing boards.



<b>Date Submitted</b>	7/21/2012	<b>Section</b>	R905.3.3.2 High slope roofs	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	9	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications**

**Summary of Modification**

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**Rationale**

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**Fiscal Impact Statement**

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No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.
- Impact to building and property owners relative to cost of compliance with code**  
No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.
- Impact to industry relative to the cost of compliance with code**  
No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Requirements**

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- Does not degrade the effectiveness of the code**  
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Is the proposed code modification part of a prior code version?  
YES

The provisions contained in the proposed amendment are addressed in the applicable international code?  
NO

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YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?  
NO

### R905.3.3.2 High slope roofs

~~For roof slopes of four units vertical in 12 units horizontal (4:12) or greater, underlayment shall be a minimum of one layer of underlayment felt applied shingle fashion, parallel to and starting from the eaves and lapped 2 inches (51 mm), fastened sufficiently in place. Reserved~~

<b>Date Submitted</b>	7/21/2012	<b>Section</b>	R905.4.3.1 Ice barrier.	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	9	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications****Summary of Modification**

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YES

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NO

**R905.4.3.1 Ice barrier.**

~~In areas where there has been a history of ice forming along the eaves causing a backup of water as designated in Table R301.2(1), an ice barrier that consists of at least two layers of underlayment cemented together or a self-adhering polymer modified bitumen sheet shall be used in place of normal underlayment and extend from the lowest edges of all roof surfaces to a point at least 24 inches (610 mm) inside the exterior wall line of the building.~~

~~**Exception:** Detached accessory structures that contain no conditioned floor area. Reserved.~~

<b>Date Submitted</b>	7/21/2012	<b>Section</b>	R905.4.6 Flashing.	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	9	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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YES

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NO

**R905.4.6 Flashing.**

Roof valley flashing shall be of corrosion-resistant metal of the same material as the roof covering or shall comply with the standards in Table R905.10.3(1) R905.4.4. ~~The V~~ valley flashing shall extend at least 8 inches (203 mm) from the centerline each way and shall have a splash diverter rib not less than  $\frac{3}{4}$  inch (19 mm) high at the flow line formed as part of the flashing. Sections of flashing shall have an end lap of not less than 4 inches (102 mm). The metal valley flashing shall have a 36-inch-wide (914 mm) underlayment directly under it consisting of one layer of underlayment running the full length of the valley, in addition to underlayment required for metal roof shingles. ~~In areas where the average daily temperature in January is 25°F (4°C) or less, the metal valley flashing underlayment shall be solid cemented to the roofing underlayment for roof slopes under seven units vertical in 12 units horizontal (58 percent slope) or self-adhering polymer modified bitumen sheet.~~

<b>Date Submitted</b>	7/21/2012	<b>Section</b>	R905.5.3.2 Underlayment and high	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	9	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications****Summary of Modification**

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YES

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NO

### R905.5.3.2 Underlayment and high winds.

~~Underlayment applied in areas subject to high winds [above 110 mph (49 m/s) in accordance with Figure R301.2(4)A] shall be applied with corrosion resistant fasteners in accordance with manufacturer's installation instructions. Fasteners are to be applied along the overlap not farther apart than 36 inches (914 mm) on center.~~

~~Underlayment installed where the basic wind speed equals or exceeds 120 mph (54 m/s) shall comply with ASTM D 226 Type II or ASTM D 4869 Type IV. The underlayment shall be attached in a grid pattern of 12 inches (305 mm) between side laps with a 6 inch (152 mm) spacing at the side laps. Underlayment shall be applied in accordance with Section R905.2.7 except all laps shall be a minimum of 4 inches (102 mm). Underlayment shall be attached using metal or plastic cap nails with a head diameter of not less than 1 inch (25.4 mm) with a thickness of at least 32-gauge sheet metal. The cap nail shank shall be a minimum of 12 gauge (0.105 inches) with a length to penetrate through the roof sheathing or a minimum of  $\frac{3}{4}$  inch (19 mm) into the roof sheathing.~~

~~**Exception:** As an alternative, adhered underlayment complying with ASTM D 1970 shall be permitted. Reserved.~~



<b>Date Submitted</b>	7/21/2012	<b>Section</b>	R905.5.4 Material standards	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	9	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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YES

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NO

**R905.5.4 Material standards.**

Mineral-surfaced roll roofing shall conform to ASTM D 3909 or ASTM D 6380, Class M or Class WS.

<b>Date Submitted</b>	7/21/2012	<b>Section</b>	R905.6.3.1 Ice barrier.	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	9	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

**R905.6.3.1 Ice barrier.**

~~In areas where there has been a history of ice forming along the eaves causing a backup of water as designated in Table R301.2(1), an ice barrier that consists of at least two layers of underlayment cemented together or a self-adhering polymer modified bitumen sheet shall be used in lieu of normal underlayment and extend from the lowest edges of all roof surfaces to a point at least 24 inches (610 mm) inside the exterior wall line of the building.~~

~~**Exception:** Detached accessory structures that contain no conditioned floor area. Reserved.~~

<b>Date Submitted</b>	7/21/2012	<b>Section</b>	R905.6.6 Flashing.	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	9	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications****Summary of Modification**

Provides and carries forward current 2010 FBC Florida-specific criteria.

**Rationale**

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

**Fiscal Impact Statement****Impact to local entity relative to enforcement of code**

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**Impact to building and property owners relative to cost of compliance with code**

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Is the proposed code modification part of a prior code version?

YES

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NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

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NO

**R905.6.6 Flashing.**

Flashing and counter flashing shall be made with sheet metal. Valley flashing shall be a minimum of ~~15~~ 16 inches (~~381~~ 406 mm) wide. Valley and flashing metal shall be a minimum ~~uncoated~~ thickness of ~~0.0179~~ 0.0179 inch (~~0.5~~ 0.5 mm) ~~zinc coated G90~~ as provided in Table R903.2.1 for nonferrous metal or stainless steel. Chimneys, stucco or brick walls shall have a minimum of two plies of felt for a cap flashing consisting of a 4-inch-wide (102 mm) strip of felt set in plastic cement and extending 1 inch (25 mm) above the first felt and a top coating of plastic cement. The felt shall extend over the base flashing 2 inches (51 mm).

<b>Date Submitted</b>	7/21/2012	<b>Section</b>	R905.6.7	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	9	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

**General Comments** No **Alternate Language** No

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NO

**R905.6.7**

Slate and slate-type shingles shall be installed in accordance with this chapter and the manufacturer's installation instructions. The product approval shall state the allowable uplift resistance for the attachment system. The installation of slate and slate-type shingles shall be limited to roofs where the allowable uplift resistance is equal to or greater than the design uplift pressure for the roof listed in Table R301.2(2).



<b>Date Submitted</b>	7/21/2012	<b>Section</b>	R905.7.1.1 Solid sheathing requirements	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	9	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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YES

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NO

**R905.7.1.1 Solid sheathing required.**

~~In areas where the average daily temperature in January is 25°F ( 4°C) or less, solid sheathing is required on that portion of the roof requiring the application of an ice barrier. Reserved.~~

<b>Date Submitted</b>	7/21/2012	<b>Section</b>	R905.7.3.1 Ice barrier.	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	9	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

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NO

**R905.7.3.1 Ice barrier.**

~~In areas where there has been a history of ice forming along the eaves causing a backup of water as designated in Table R301.2(1), an ice barrier that consists of at least two layers of underlayment cemented together or a self-adhering polymer modified bitumen sheet shall be used in lieu of normal underlayment and extend from the lowest edges of all roof surfaces to a point at least 24 inches (610 mm) inside the exterior wall line of the building.~~

~~**Exception:** Detached accessory structures that contain no conditioned floor area. Reserved.~~

<b>Date Submitted</b>	7/21/2012	<b>Section</b>	R905.7.3.2 Underlayment and high	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	9	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications****Summary of Modification**

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YES

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NO

### R905.7.3.2 Underlayment and high winds.

~~Underlayment applied in areas subject to high winds [above 110 mph (49 m/s) in accordance with Figure R301.2(4)A] shall be applied with corrosion resistant fasteners in accordance with manufacturer's installation instructions. Fasteners are to be applied along the overlap not farther apart than 36 inches (914mm) on center.~~

~~Underlayment installed where the basic wind speed equals or exceeds 120 mph (54 m/s) shall comply with ASTM D 226 Type II or ASTM D 4869 Type IV. The underlayment shall be attached in a grid pattern of 12 inches (305 mm) between side laps with a 6 inch (152 mm) spacing at the side laps. Underlayment shall be applied in accordance with Section R905.2.7 except all Head laps shall be a minimum of 4 inches (102 mm). Underlayment shall be attached using metal or plastic cap nails with a head diameter of not less than 1 inch (25.4 mm) with a thickness of at least 32 gauge sheet metal. The cap nail shank shall be a minimum of 12 gauge (0.105 inches) with a length to penetrate through the roof sheathing or a minimum of  $\frac{3}{4}$  inch (19 mm) into the roof sheathing.~~

~~**Exception:** As an alternative, adhered underlayment complying with ASTM D 1970 shall be permitted. Reserved.~~

<b>Date Submitted</b>	7/21/2012	<b>Section</b>	R905.7.5 Application.	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	9	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications****Summary of Modification**

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YES

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NO

**R905.7.5 Application Attachment.**

Wood shingles shall be installed according to this chapter and the manufacturer's installation instructions. ~~Wood shingles shall be laid with a side lap not less than 1 1/2 inches (38 mm) between joints in courses, and no two joints in any three adjacent courses shall be in direct alignment. Spacing between shingles shall not be less than 1/4 inch to 3/8 inch (6 mm to 10 mm). Weather exposure for wood shingles shall not exceed those set in Table R905.7.5. Fasteners for wood shingles shall be corrosion resistant with a minimum penetration of 1/2 inch (13 mm) into the sheathing. For sheathing less than 1/2 inch (13 mm) in thickness, the fasteners shall extend through the sheathing. Wood shingles shall be attached to the roof with two fasteners per shingle, positioned no more than 3/4 inch (19 mm) from each edge and no more than 1 inch (25 mm) above the exposure line. Attachment in accordance with Table R905.7.5 shall be used for roofs with a mean roof height of 40 feet or less and in regions with a V<sub>30d</sub> as determined in accordance with Section R301.2.1.3 to be 100 mph or less~~

**TABLE R905.7.5 WOOD SHINGLE WEATHER EXPOSURE AND ROOF SLOPE AND SHAKE INSTALLATION**

ROOFING MATERIAL	LENGTH (inches)	GRADE	EXPOSURE (inches)	
			3:12 pitch to	4:12 pitch or steeper
Shingles of naturally durable wood	16	No. 1	3 3/4	5
		No. 2	3 1/2	4
		No. 3	3	3 1/2
	18	No. 1	4 1/4	5 1/2
		No. 2	4	4 1/2
		No. 3	3 1/2	4
	24	No. 1	5 3/4	7 1/2
		No. 2	5 1/2	6 1/2
		No. 3	5	5 1/2

For SI: 1 inch = 25.4 mm.

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-  
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<u>ROOF ITEM</u>	<u>WOOD SHINGLES</u>	<u>WOOD SHAKES</u>
	Shingles shall be applied to roofs with solid or spaced sheathing. Where spaced sheathing is used, sheathing boards shall not be less than 1? x 4?	Shakes shall be applied to roofs with solid or spaced sheathing. Where spaced sheathing is used, sheathing boards shall not be less than 1? x 4? nominal dimensions and shall be spaced on center equal to the weather exposure to
<u>1. Deck Requirements</u>		



	<u>nominal dimensions and shall be spaced on center equal to the weather exposure to coincide with the placement of fasteners.</u>	<u>coincide with the placement of fasteners. When 1? × 4? spaced sheathing is installed at 10 inches, boards must be installed between the sheathing boards.</u>
<u>2. Interlayment</u>	<u>No requirements.</u>	<u>Interlayment shall comply with ASTM D 226, Type 1.</u>
<u>3. Underlayment</u>	<u>Underlayment shall comply with ASTM D 226, Type 1.</u>	<u>No requirements.</u>
<u>4. Application</u>	<u>—</u>	<u>—</u>
<u>Attachment</u>	<u>Fasteners for wood shingles shall be corrosion resistant with a minimum penetration of <math>\frac{3}{4}</math> inch into the sheathing. For sheathing less than <math>\frac{1}{2}</math> inch thick, the fasteners shall extend through the sheathing a minimum of <math>\frac{3}{8}</math> inch.</u>	<u>Fasteners for wood shakes shall be corrosion resistant with a minimum penetration of <math>\frac{3}{4}</math> inch into the sheathing. For sheathing less than <math>\frac{1}{2}</math> inch thick, the fasteners shall extend through the sheathing a minimum of <math>\frac{3}{8}</math> inch.</u>
<u>No. of fasteners</u>	<u>Wood shingles shall be attached to the roof with two fasteners per shingle, positioned no more than <math>\frac{3}{4}</math> inch (19.1 mm) from each edge and no more than <math>1\frac{1}{2}</math> inch (38.1 mm) above the exposure line.</u>	<u>Wood shakes shall be attached to the roof with two fasteners per shake, positioned no more than 1 inch (25.4 mm) from each edge and no more than <math>1\frac{1}{2}</math> inches (38.1 mm) above the exposure line.</u>

For SI: 1 inch = 25.4 mm

<b>Date Submitted</b>	7/21/2012	<b>Section</b>	R905.7.6.1 Fasteners.	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	9	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
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**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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NO

**R905.7.6.1 Fasteners.****R905.7.6.1.1 Nails.**

Nails to attach the wood shakes shall be 3d stainless-steel ring-shank nails. The nails shall have sufficient length to penetrate through the wood shakes and shall penetrate through the sheathing.

**R905.7.6.1.2 Screws.**

Screws to attach the battens to the framing shall be No. 8 by 2<sup>1</sup>/<sub>2</sub> inches (64 mm) long corrosion resistant wood screws. Wood screws shall be corrosion resistant screws conforming to ANSI/ASME B 18.6.1. The corrosion resistance shall meet ASTM A 641, Class 1 or an equal corrosion resistance by coating, electro galvanization, mechanical galvanization, stainless steel, nonferrous metal or other suitable corrosion resistant material.

**R905.7.6.1.3 Wood battens.**

1 — 4 wood battens shall be attached to the wood joists with 2 screws per joist. The first batten shall be located 6 inches (152 mm) from the outer edge of the wood joist. Second batten shall be spaced 1<sup>1</sup>/<sub>4</sub> inches (32 mm) from the first batten. The remaining battens shall be spaced a maximum 2 inches (51 mm) apart, except the last one which shall be spaced no greater than <sup>3</sup>/<sub>4</sub> inches (19 mm) from the previous batten.

**R905.7.6.1.4 Shingles.**

Shingles shall be attached to the battens with 2 nails for each shingle placed 1<sup>1</sup>/<sub>2</sub> inch (38 mm) above the exposure line. The nails shall be <sup>3</sup>/<sub>4</sub> to 1 inch (19 to 25 mm) from the shingle edges.

<b>Date Submitted</b>	7/21/2012	<b>Section</b>	R905.7.6 Valley flashing	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	9	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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NO

**R905.7.6 Valley flashing Attachment for  $V_{asd}$  as determined in accordance with Section R301.2.1.3 greater than 100 mph.**

Roof flashing shall be not less than No. 26 gage [0.019 inches (0.5 mm)] corrosion resistant sheet metal and shall extend 10 inches (254 mm) from the centerline each way for roofs having slopes less than 12 units vertical in 12 units horizontal (100 percent slope), and 7 inches (178 mm) from the centerline each way for slopes of 12 units vertical in 12 units horizontal and greater. Sections of flashing shall have an end lap of not less than 4 inches (102 mm). Wood shingles installed in accordance with Table R905.7.5 and the requirements of R905.7.6 have an allowable uplift resistance of 45 psf. The installation of wood shingles shall be limited to roofs where the allowable uplift resistance is equal to or greater than the design uplift pressure for the roof listed in Table R301.2(2).

<b>Date Submitted</b>	7/21/2012	<b>Section</b>	R905.7.7 Label required	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	9	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications****Summary of Modification**

Provides and carries forward current 2010 FBC Florida-specific criteria.

**Rationale**

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

**Fiscal Impact Statement****Impact to local entity relative to enforcement of code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to building and property owners relative to cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to industry relative to the cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Requirements****Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**

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**Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**

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**Does not degrade the effectiveness of the code**

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

**R905.7.7 Label required Application**

**Each bundle of shingles shall be identified by a label of an approved grading or inspection bureau or agency. Wood shingles shall be installed according to this chapter and the manufacturer's installation instructions. Weather exposure for wood shingles shall not exceed those set in Table R905.7.7.**

**TABLE R905.7.7 WOOD SHINGLE WEATHER EXPOSURE AND ROOF SLOPE**

<u>ROOFING MATERIAL</u>	<u>LENGTH (inches)</u>	<u>GRADE</u>	<u>EXPOSURE (inches)</u>	
			<u>3:12 pitch to &lt; 4:12</u>	<u>4:12 pitch or steeper</u>
Shingles of naturally durable wood	16	No. 1	3 <sup>3</sup> / <sub>4</sub>	5
		No. 2	3 <sup>1</sup> / <sub>2</sub>	4
		No. 3	3	3 <sup>1</sup> / <sub>2</sub>
	18	No. 1	4 <sup>1</sup> / <sub>4</sub>	5 <sup>1</sup> / <sub>2</sub>
		No. 2	4	4 <sup>1</sup> / <sub>2</sub>
		No. 3	3 <sup>1</sup> / <sub>2</sub>	4
	24	No. 1	5 <sup>3</sup> / <sub>4</sub>	7 <sup>1</sup> / <sub>2</sub>
		No. 2	5 <sup>1</sup> / <sub>2</sub>	6 <sup>1</sup> / <sub>2</sub>
		No. 3	5	5 <sup>1</sup> / <sub>2</sub>

**For SI: 1 inch = 25.4 mm.**

<b>Date Submitted</b>	7/21/2012	<b>Section</b>	R905.7.9 Label required	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	9	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications****Summary of Modification**

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The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO



R905.7.9 Label required.

Each bundle of shingles shall be identified by a label of an approved grading or inspection bureau or agency.

<b>Date Submitted</b>	7/21/2012	<b>Section</b>	R905.8.1.1 Solid sheathing requirements	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	9	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications****Summary of Modification**

Provides and carries forward current 2010 FBC Florida-specific criteria.

**Rationale**

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**Fiscal Impact Statement****Impact to local entity relative to enforcement of code**

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Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

**R905.8.1.1 Solid sheathing required.**

~~In areas where the average daily temperature in January is 25°F ( 4°C) or less, solid sheathing is required on that portion of the roof requiring an ice barrier.~~ Reserved.

<b>Date Submitted</b>	7/21/2012	<b>Section</b>	R905.8.2 Deck slope.	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	9	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

**General Comments** No **Alternate Language** No

**Related Modifications****Summary of Modification**

Provides and carries forward current 2010 FBC Florida-specific criteria.

**Rationale**

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Is the proposed code modification part of a prior code version?

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The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

**R905.8.2 Deck slope.**

Wood shakes shall only be used on slopes of ~~three~~ four (4) units vertical in twelve (12) units horizontal (~~25~~ 33-percent slope) or greater.

<b>Date Submitted</b>	7/21/2012	<b>Section</b>	R905.8.3.1 Ice barrier.	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	9	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications****Summary of Modification**

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**Rationale**

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YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

**R905.8.3.1 Ice barrier.**

~~In areas where there has been a history of ice forming along the eaves causing a backup of water as designated in Table R301.2(1), an ice barrier that consists of at least two layers of underlayment cemented together or a self-adhering polymer modified bitumen sheet shall be used in place of normal underlayment and extend from the lowest edges of all roof surfaces to a point at least 24 inches (610 mm) inside the exterior wall line of the building.~~

~~Exception: Detached accessory structures that contain no conditioned floor area.~~ Reserved.

<b>Date Submitted</b>	7/21/2012	<b>Section</b>	R905.8.3.2 Underlayment and high	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	9	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications****Summary of Modification**

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YES

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NO



### R905.8.3.2 Underlayment and high winds.

~~Underlayment applied in areas subject to high winds [above 110 mph (49 m/s) in accordance with Figure R301.2(4)A] shall be applied with corrosion resistant fasteners in accordance with manufacturer's installation instructions. Fasteners are to be applied along the overlap not farther apart than 36 inches (914 mm) on center.~~

~~Underlayment installed where the basic wind speed equals or exceeds 120 mph (54 m/s) shall comply with ASTM D 226 Type II or ASTM D 4869 Type IV. The underlayment shall be attached in a grid pattern of 12 inches (305 mm) between side laps with a 6 inch (152 mm) spacing at the side laps. Underlayment shall be applied in accordance with Section R905.2.7 except all laps shall be a minimum of 4 inches (102 mm). Underlayment shall be attached using metal or plastic cap nails with a head diameter of not less than 1 inch (25.4 mm) with a thickness of at least 32-gauge sheet metal. The cap nail shank shall be a minimum of 12 gauge (0.105 inches) with a length to penetrate through the roof sheathing or a minimum of  $\frac{3}{4}$  inch (19 mm) into the roof sheathing.~~

~~**Exception:** As an alternative, adhered underlayment complying with ASTM D 1970 shall be permitted. Reserved.~~

<b>Date Submitted</b>	7/21/2012	<b>Section</b>	R905.8.3.2 Underlayment and high	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	9	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications****Summary of Modification**

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**Rationale**

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YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

**R905.8.4 3.3 Interlayment.**

Interlayment shall comply with ASTM D 226, Type I.

<b>Date Submitted</b>	7/21/2012	<b>Section</b>	R905.8.4 Interlayment.	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	9	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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YES

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NO

**R905.8.4 Interlayment Attachment.**

~~Interlayment shall comply with ASTM D 226, Type I.~~

Attachment in accordance with Table R905.7.5 shall be used for roofs with a mean roof height of 40 feet or less and in regions with a  $V_{asd}$ , as determined in accordance with Section R301.2.1.3, of 100 mph or less.

<b>Date Submitted</b>	7/21/2012	<b>Section</b>	R905.8.6 Application.	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	9	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications****Summary of Modification**

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NO

### R905.8.6 Application.

~~Wood shakes shall be installed according to this chapter and the manufacturer's installation instructions. Wood shakes shall be laid with a side lap not less than 1<sup>1</sup>/<sub>2</sub> inches (38 mm) between joints in adjacent courses. Spacing between shakes in the same course shall be <sup>3</sup>/<sub>8</sub> inch to <sup>5</sup>/<sub>8</sub> inch (9.5 mm to 15.9 mm) for shakes and tapersawn shakes of naturally durable wood and shall be <sup>3</sup>/<sub>8</sub> inch to <sup>5</sup>/<sub>8</sub> inch (9.5 mm to 15.9 mm) for preservative-treated taper-sawn shakes. Weather exposure for wood shakes shall not exceed those set forth in Table R905.8.6. Fasteners for wood shakes shall be corrosion-resistant, with a minimum penetration of <sup>1</sup>/<sub>2</sub> inch (12.7 mm) into the sheathing. For sheathing less than <sup>1</sup>/<sub>2</sub> inch (12.7 mm) thick, the fasteners shall extend through the sheathing. Wood shakes shall be attached to the roof with two fasteners per shake, positioned no more than 1 inch (25 mm) from each edge and no more than 2 inches (51 mm) above the exposure line.~~

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**TABLE R905.8.6 WOOD SHAKE WEATHER EXPOSURE AND ROOF SLOPE**

ROOFING MATERIAL	LENGTH (inches)	GRADE	EXPOSURE (inches)
			4:12 pitch or steeper
Shakes of naturally durable wood	18	No. 1	7 <sup>1</sup> / <sub>2</sub>
	24	No. 1	10 <sup>0</sup>
Preservative-treated taper sawn shakes of Southern Yellow Pine	18	No. 1	7 <sup>1</sup> / <sub>2</sub>
	24	No. 1	10
Taper sawn shakes of naturally durable wood	18	No. 2	5 <sup>1</sup> / <sub>2</sub>
	24	No. 2	7 <sup>1</sup> / <sub>2</sub>

For SI: 1 inch = 25.4 mm.

a. For 24 inch by <sup>3</sup>/<sub>8</sub> inch handsplit shakes, the maximum exposure is 7<sup>1</sup>/<sub>2</sub> inches.

Reserved.

<b>Date Submitted</b>	7/21/2012	<b>Section</b>	R905.8.7.1 Fasteners.	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	9	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications****Summary of Modification**

Provides and carries forward current 2010 FBC Florida-specific criteria.

**Rationale**

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

**Fiscal Impact Statement****Impact to local entity relative to enforcement of code**

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**Impact to building and property owners relative to cost of compliance with code**

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**Requirements****Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

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**Does not degrade the effectiveness of the code**

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Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO



**R905.8.7.1 Fasteners.****R905.8.7.1.1 Nails.**

Nails to attach the wood shakes shall be 6d stainless-steel ring-shank nails. The nails shall have sufficient length to penetrate through the wood shakes and shall penetrate through the sheathing.

**R905.8.7.1.2 Screws.**

Screws to attach the battens to the framing shall be No. 8 by 2 1/2 inches long corrosion resistant wood screws. Wood screws shall be corrosion resistant screws conforming to ANSI/ASME B 18.6.1. The corrosion resistance shall meet ASTM A 641, Class 1 or an equal corrosion resistance by coating, electro galvanization, mechanical galvanization, stainless steel, nonferrous metal or other suitable corrosion resistant material.

**R905.8.7.1.3 Wood battens.**

1 x 6 wood battens shall be attached to the wood joists with 2 screws per joist. The first batten shall be located 6 inches from the outer edge of the wood joist. The second batten shall be spaced 1-1/4 inches from the first batten. The remaining battens shall be spaced a maximum 2 inches apart, except the last one, which shall be spaced no greater than 3/4 inches from the previous batten.

**R905.8.7.1.4 Shakes.**

Shakes shall be attached to the battens with 2 nails for each shake placed 1 1/2 inch above the exposure line. The nails shall be 3/4 to 1 inch from the shake edges.

<b>Date Submitted</b>	7/21/2012	<b>Section</b>	R905.8.7 Shake placement	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	9	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications****Summary of Modification**

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YES

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NO

**R905.8.7 Shake placement Attachment for  $V_{asd}$  as determined in accordance with Section R301.2.1.3 greater than 100 mph.**

The starter course at the eaves shall be doubled and the bottom layer shall be either 15 inch (381 mm), 18 inch (457 mm) or 24 inch (610 mm) wood shakes or wood shingles. Fifteen inch (381 mm) or 18 inch (457 mm) wood shakes may be used for the final course at the ridge. Shakes shall be interlaid with 18 inch wide (457 mm) strips of not less than No. 30 felt shingled between each course in such a manner that no felt is exposed to the weather by positioning the lower edge of each felt strip above the butt end of the shake it covers a distance equal to twice the weather exposure. Wood shakes installed in accordance with Table R905.7.5 and the requirements of R905.8.7 have an allowable uplift resistance of 90 psf. The installation of wood shakes shall be limited to roofs where the allowable uplift resistance is equal to or greater than the design uplift pressure for the roof listed in Table R301.2(2).

<b>Date Submitted</b>	7/21/2012	<b>Section</b>	R905.8.8 Valley flashing.	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	9	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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YES

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NO

**R905.8.8 Valley flashing Application.**

**Roof valley flashing shall not be less than No. 26 gage [0.019 inch (0.5 mm)] corrosion-resistant sheet metal and shall extend at least 11 inches (279 mm) from the centerline each way. Sections of flashing shall have an end lap of not less than 4 inches (102 mm).**

**Wood shakes shall be laid with a side lap not less than 1 1/2 inches (38 mm) between joints in adjacent courses. Spacing between shakes in the same course shall be 3/8 to 5/8 inches (9.5 to 15.9 mm) for shakes and taper sawn shakes of naturally durable wood and shall be 1/4 to 3/8 inch (6.4 to 9.5 mm) for preservative taper sawn shakes. Weather exposure for wood shakes shall not exceed those set in Table R905.8.8.**

**TABLE R905.8.8 WOOD SHAKE WEATHER EXPOSURE AND ROOF SLOPE**

<u>ROOFING MATERIAL</u>	<u>LENGTH</u>	<u>GRADE</u>	<u>EXPOSURE (inches)</u>
	<u>(inches)</u>		<u>4:12 pitch or steeper</u>
<u>Shakes of naturally durable wood</u>	<u>18</u>	<u>No. 1</u>	<u>7 1/2</u>
	<u>24</u>	<u>No. 1</u>	<u>10<sup>a</sup></u>
<u>Preservative-treated taper sawn shakes of Southern Yellow Pine</u>	<u>18</u>	<u>No. 1</u>	<u>7 1/2</u>
	<u>24</u>	<u>No. 1</u>	<u>10</u>
	<u>18</u>	<u>No. 2</u>	<u>5 1/2</u>
	<u>24</u>	<u>No. 2</u>	<u>7 1/2</u>
<u>Taper-sawn shakes of naturally durable wood</u>	<u>18</u>	<u>No. 1</u>	<u>7 1/2</u>
	<u>24</u>	<u>No. 1</u>	<u>10</u>
	<u>18</u>	<u>No. 2</u>	<u>5 1/2</u>
	<u>24</u>	<u>No. 2</u>	<u>7 1/2</u>

For SI: 1 inch = 25.4 mm.

a. For 24-inch by 3/8-inch handsplit shakes, the maximum exposure is 7 1/2 inches.

<b>Date Submitted</b>	7/21/2012	<b>Section</b>	R905.10.4.1 Application.	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	9	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications****Summary of Modification**

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**Rationale**

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NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

**R905.10.4.1 Application.**

Metal roof panels shall be installed in accordance with this chapter and the manufacturer's installation instructions. The installation's instruction shall state the allowable uplift resistance for the attachment system. The installation of metal roof panels shall be limited to roofs where the allowable uplift resistance is equal to or greater than the design uplift pressure for the roof listed in Table R301.2(2).

<b>Date Submitted</b>	7/21/2012	<b>Section</b>	R905.10.4 Attachment.	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	9	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO



**R905.10.4 Attachment.**

Metal roof panels shall be secured to the supports in accordance with this chapter and the manufacturer's installation instructions. Metal roofing fastened directly to steel framing shall be attached by approved fasteners. ~~In the absence of manufacturer's installation instructions,~~ The following fasteners shall be used:

1. Galvanized fasteners shall be used for galvanized roofs.
2. Hard C-copper, ~~brass, bronze,~~ or copper alloy or 300 series stainless steel fasteners shall be used for copper roofs.
3. Stainless steel fasteners are acceptable for all types of metal roofs.
4. Aluminum-zinc coated fasteners are acceptable for aluminum-zinc coated roofs.

<b>Date Submitted</b>	7/21/2012	<b>Section</b>	R905.10.5.1 Underlayment and sheathing	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	9	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications****Summary of Modification**

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**Rationale**

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YES

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NO

### R905.10.5.1 Underlayment and high winds.

~~Underlayment applied in areas subject to high winds [above 110 mph (49 m/s) in accordance with Figure R301.2(4)A] shall be applied with corrosion-resistant fasteners in accordance with manufacturer's installation instructions. Fasteners are to be applied along the overlap not farther apart than 36 inches (914 mm) on center.~~

~~Underlayment installed where the basic wind speed equals or exceeds 120 mph (54 m/s) shall comply with ASTM D 226 Type II. The underlayment shall be attached in a grid pattern of 12 inches (305 mm) between side laps with a 6-inch (152 mm) spacing at the side laps. Underlayment shall be applied in accordance with Section R905.2.7 except all laps shall be a minimum of 4 inches (102 mm). Underlayment shall be attached using metal or plastic cap nails with a head diameter of not less than 1 inch (25.4 mm) with a thickness of at least 32-gauge sheet metal. The cap-nail shank shall be a minimum of 12-gauge (0.105 inches) with a length to penetrate through the roof sheathing or a minimum of  $\frac{3}{4}$  inch (19 mm) into the roof sheathing.~~

~~**Exception:** As an alternative, adhered underlayment complying with ASTM D 1970 shall be permitted. Reserved.~~

<b>Date Submitted</b>	7/21/2012	<b>Section</b>	TABLE R905.11.2 MODIFIED	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	9	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications****Summary of Modification**

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YES

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NO

TABLE R905.11.2 MODIFIED BITUMEN ROOFING MATERIAL STANDARDS

MATERIAL	STANDARD
Acrylic coating	ASTM D 6083
Asphalt adhesive	ASTM D 3747
Asphalt cement	ASTM D 3019
Asphalt coating	ASTM D 1227; D 2824
Asphalt primer	ASTM D 41
Modified bitumen roof membrane	ASTM D 6162; D 6163; D 6164; D 6222; D 6223; D 6298; <b><u>D 6509</u></b> CGSB 37-GP-56M

<b>Date Submitted</b>	7/21/2012	<b>Section</b>	R905.11.3 Application.	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	9	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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YES

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NO

**R905.11.3 Application.**

Modified bitumen roofs shall be installed according to this chapter and the manufacturer's installation instructions. The approved allowable uplift resistance for the modified bitumen roof shall be equal to or greater than the uplift resistance for the roof based on Table R301.2(2).

<b>Date Submitted</b>	7/21/2012	<b>Section</b>	R905.12.3 Application.	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	9	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

**General Comments** No **Alternate Language** No

**Related Modifications****Summary of Modification**

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Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Does not degrade the effectiveness of the code**

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO



**R905.12.3 Application.**

Thermoset single-ply roofs shall be installed according to this chapter and the manufacturer's installation instructions. The approved allowable uplift resistance for the thermoset single-ply membrane roof shall be equal to or greater than the uplift resistance for the roof based on Table R301.2(2).

<b>Date Submitted</b>	7/21/2012	<b>Section</b>	R905.13.3 Application.	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	9	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications****Summary of Modification**

Provides and carries forward current 2010 FBC Florida-specific criteria.

**Rationale**

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

**Fiscal Impact Statement****Impact to local entity relative to enforcement of code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to building and property owners relative to cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to industry relative to the cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Requirements****Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Does not degrade the effectiveness of the code**

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

**R905.13.3 Application.**

Thermoplastic single-ply roofs shall be installed according to this chapter and the manufacturer's installation instructions. The approved allowable uplift resistance for the thermoplastic single-ply roof shall be equal to or greater than the uplift resistance for the roof based on Table R301.2(2).

<b>Date Submitted</b>	7/21/2012	<b>Section</b>	R905.14.3 Application.	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	9	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications****Summary of Modification**

Provides and carries forward current 2010 FBC Florida-specific criteria.

**Rationale**

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

**Fiscal Impact Statement****Impact to local entity relative to enforcement of code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to building and property owners relative to cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to industry relative to the cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Requirements****Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Does not degrade the effectiveness of the code**

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

**R905.14.3 Application.**

Foamed-in-place roof insulation shall be installed in accordance with this chapter and the manufacturer's installation instructions. A liquid-applied protective coating that complies with ~~Table R905.14.3~~ Section R905.15 shall be applied no less than 2 hours nor more than 72 hours following the application of the foam. The approved allowable uplift resistance for the sprayed polyurethane foam roofing shall be equal to or greater than the uplift resistance for the roof based on Table R301.2(2).

<b>Date Submitted</b>	7/21/2012	<b>Section</b>	R905.16 Photovoltaic modules/sh	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	9	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications****Summary of Modification**

Provides and carries forward current 2010 FBC Florida-specific criteria.

**Rationale**

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

**Fiscal Impact Statement****Impact to local entity relative to enforcement of code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to building and property owners relative to cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to industry relative to the cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Requirements****Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Does not degrade the effectiveness of the code**

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

**R905.16 Building integrated ~~P~~ photovoltaic roofing modules/shingles.**

The installation of building integrated photovoltaic roofing modules/shingles shall comply with the provisions of this section.

**R905.16.1 Material standards.**

Building integrated~~P~~ photovoltaic roofing modules/shingles shall be listed and labeled in accordance with UL 1703.

**R905.16.2 Attachment.**

Building integrated ~~P~~ photovoltaic roofing modules/shingles shall be attached in accordance with the manufacturer's installation instructions.

**R905.16.3 Wind resistance.**

Building integrated ~~P~~ photovoltaic roofing modules/shingles shall be tested in accordance with procedures and acceptance criteria in ASTM D 3161 or TAS 107. Building integrated ~~P~~ photovoltaic roofing modules/shingles shall comply with the classification requirements of Table R905.2 ~~4-4(2)~~ .6.1 for the appropriate maximum basic wind speed. Building integrated ~~P~~ photovoltaic roofing modules/shingle packaging shall bear a label to indicate compliance with the procedures in ASTM D 3161 or TAS 107 and the required classification from Table R905.2 ~~4-4(2)~~ .6.1.

<b>Date Submitted</b>	7/21/2012	<b>Section</b>	R905.17 SOLAR PHOTOVOLTAIC PANELS/MODULES	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	9	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

**General Comments** No **Alternate Language** No

**Related Modifications****Summary of Modification**

Provides requirements for Photovoltaic Systems not considered with Integrated Roofing Photovoltaic. Incorporates intent of foundation code in chapter 15 of IBC- Section 1511.

**Rationale**

To incorporate the intent of the foundation code and correlate with Chapter 15.

**SECTION 1511 SOLAR PHOTOVOLTAIC PANELS/MODULES****1511.1 Solar photovoltaic panels/modules.**

Solar photovoltaic panels/modules installed upon a roof or as an integral part of a roof assembly shall comply with the requirements of this code and the International Fire Code.

**1511.1.1 Structural fire resistance.**

The structural frame and roof construction supporting the load imposed upon the roof by the photovoltaic panels/modules shall comply with the requirements of Table 601.

**Fiscal Impact Statement****Impact to local entity relative to enforcement of code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to building and property owners relative to cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to industry relative to the cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Requirements****Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

Strengthens code.

**Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**

Strengthens code.

**Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**

Does not discriminate. Strengthens code.

**Does not degrade the effectiveness of the code**

Does not degrade. Strengthens code.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

YES

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO



**R905.17 Photovoltaic systems.**

Rooftop mounted photovoltaic systems shall be designed in accordance with this section.

**R905.17.1 Wind resistance.**

Rooftop mounted photovoltaic systems shall be designed for wind loads for component and cladding in accordance with Chapter 16 using an effective wind area based on the dimensions of a single unit frame.

**R905.17.2 Fire classification.**

Rooftop mounted photovoltaic systems shall have the same fire classification as the roof assembly required by Section R902.

**R905.17.3 Installation.**

Rooftop mounted photovoltaic systems shall be installed in accordance with the manufacturer's installation instructions.

**R905.17.4 Photovoltaic panels and modules.**

Photovoltaic panels and modules mounted on top of a roof shall be listed and labeled in accordance with UL 1703 and shall be installed in accordance with the manufacturer's installation instructions.

<b>Date Submitted</b>	7/31/2012	<b>Section</b>	R905.3.6	<b>Proponent</b>	Randall Shackelford
<b>Chapter</b>	9	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications**

FBC 1507.3.6

**Summary of Modification**

Adds methods for determining corrosion resistance of screws for roof tile.

**Rationale**

Because so much of Florida is in proximity to the coast, corrosion resistance of roof tile fasteners is critical. This proposal gives guidance on evaluating the corrosion resistance of roof tile screws.

**Fiscal Impact Statement****Impact to local entity relative to enforcement of code**

No impact. Nearly identical to requirements in 2010 FBC-R.

**Impact to building and property owners relative to cost of compliance with code**

No impact. Nearly identical to requirements in 2010 FBC-R.

**Impact to industry relative to the cost of compliance with code**

No impact. Nearly identical to requirements in 2010 FBC-R. Adds an additional option of ASTM A153 so that nails are covered.

**Requirements****Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

This proposal will ensure that roof tile fasteners are adequately corrosion resistant. If roof tile fasteners rust, tiles can become dislodged in wind events and become missiles, damaging nearby structures, and leaving the roof of the structure unprotected.

**Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**

Improves the base code by giving a way to define what "corrosion resistant" is.

**Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**

Does not discriminate. Nearly identical to 2010 FBC. Provides both prescriptive and performance standards so many types of alternate materials can be evaluated.

**Does not degrade the effectiveness of the code**

Does not degrade. Similar to what was in 2010 FBC.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

OTHER

**Explanation of Choice**

ICC 600 contains nearly identical requirements for corrosion resistance of fasteners.

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

OTHER

**Explanation of Choice**

Amendment was successfully submitted to ICC 600-08, see section 304.3.1.

**R905.3.6 Fasteners.** Nails shall be corrosion resistant and not less than 11 gage, 5/16-inch (11 mm) head, and of sufficient length to penetrate the deck a minimum of 3/4 inch (19 mm) or through the thickness of the deck, whichever is less. Attaching wire for clay or concrete tile shall not be smaller than 0.083 inch (2 mm). Perimeter fastening areas include three tile courses but not less than 36 inches (914 mm) from either side of hips or ridges and edges of eaves and gable rakes. Screws shall be corrosion resistant. The corrosion resistance of fasteners shall be demonstrated through one of the following methods:

1. Corrosion resistance equivalent to [ASTM A 641](#), Class 1;
2. Corrosion resistance in accordance with [ASTM A153](#).
3. Corrosion resistance in accordance with [TAS114](#), Appendix E; or
4. Corrosion resistant coating exhibiting not more than 5 percent red rust after 1000 hours exposure in accordance with [ASTM B 117](#).

<b>Date Submitted</b> 7/9/2012	<b>Section</b> 4401	<b>Proponent</b> Michael Goolsby
<b>Chapter</b> 44	<b>Affects HVHZ</b> Yes	<b>Attachments</b> No
<b>TAC Recommendation</b> Approved as Submitted		
<b>Commission Action</b> Pending Review		

**Comments**

<b>General Comments</b> No	<b>Alternate Language</b> No
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**Related Modifications**

**Summary of Modification**

Eliminating unnecessary duplication of Chapter 44 HVHZ provisions

**Rationale**

Since the inception of the FBC, the content of Chapter 44 of the FBC, R has been a duplication of the sections contained in the FBC, Building volume. This proposed modification is intended to maintain the continuation of the current level of safety for the protection of life and property unchanged. Importantly, the proposed modification eliminates the need to unnecessarily duplicate more than one-hundred pages into the FBC, R volume, thereby reducing the size of the text contained in the FBC. Additionally, the proposed modification prevents the need to replace all of the non-wind related sections which were removed by legislative directive with dozens of individual modifications, each requiring review and approval; this process would otherwise be unavoidable in order to create a crucial integration of applicable and relevant building code sections into Chapter 44 requirements. In short, this proposed modification is a simplified approach resulting in identical code requirements but through a less time consuming, less complicated and less duplicative process.

**Fiscal Impact Statement**

**Impact to local entity relative to enforcement of code**

None. The end result is a continuation of the applicability of base building code requirements for HVHZ residences as has existed in all previous editions of the Florida Building Code.

**Impact to building and property owners relative to cost of compliance with code**

None. The end result is a continuation of the applicability of base building code requirements for HVHZ residences as has existed in all previous editions of the Florida Building Code.

**Impact to industry relative to the cost of compliance with code**

None. The end result is a continuation of the applicability of base building code requirements for HVHZ residences as has existed in all previous editions of the Florida Building Code.

**Requirements**

**Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

It does so by ensuring direction to applicable sections of the code are provided.

**Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**

It does so by eliminating the need to unnecessarily duplicate building code provisions and affects a reduction in the number of code pages to be compiled, reviewed, edited and printed.

**Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**

This modification does not curtail the use of any material, products, methods or systems of construction already deemed acceptable by the Florida Building Code or any alternate materials, design and methods of construction and equipment acceptable to the code official.

**Does not degrade the effectiveness of the code**

This modification does not degrade the effectiveness of the code; instead, it maintains the applicability of relevant base code requirements as has been the case since the first edition of the Florida Building Code.

Is the proposed code modification part of a prior code version? No

**1st Comment Period History**

08/09/2012 - 09/23/2012

<b>Proponent</b> Jack Glenn	<b>Submitted</b> 9/23/2012	<b>Attachments</b> No
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**Comment:**

Creates a reference to Chapter 14 of the FBC-B. The FBC-R was created to be a free standing document and as such should include the language if it meets the criteria for a Florida specific amendment.

R5008-G1

## SECTION R4401

## HIGH-VELOCITY HURRICANE ZONES — EXTERIOR WALL COVERING

R4401.1 Refer to Chapter 14 of the Florida Building Code, Building.

~~R4401.2 Asphalt shingles. Asphalt shingles shall be applied only to solid wood sheathing and shall be in tin-capped and spot-stuck, as set forth in Section R4402.~~

~~R4401.3 Roll slate or felt. Roll slate or felt shall be applied only to solid wood sheathing and shall be secured by nailing, as set forth in Section R4402.~~

~~R4401.4 Metal shingles. Metal shingles shall be applied only to solid wood sheathing and shall be secured as set forth in Section Section R4402.~~

~~R4401.5 Steel shingles. Steel siding shall be designed and applied as set forth in Section R4408.~~

~~R4401.6 Aluminum siding. Aluminum siding shall be designed and applied as set forth in Section R4406.~~

~~R4401.7 Veneers. Masonry veneers shall be applied as set forth in Section R4407.~~

~~R4401.9 Other materials. Any cladding materials or assembly not addressed in this code shall be classified by the building official as the one it most nearly resembles, and shall comply with the requirements for loading and fire resistance herein required for such materials and assemblies.~~

<b>Date Submitted</b> 7/9/2012	<b>Section</b> 4402	<b>Proponent</b> Michael Goolsby
<b>Chapter</b> 44	<b>Affects HVHZ</b> Yes	<b>Attachments</b> Yes
<b>TAC Recommendation</b> Approved as Submitted		
<b>Commission Action</b> Pending Review		

**Comments**

<b>General Comments</b> No	<b>Alternate Language</b> No
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**Related Modifications**

**Summary of Modification**

Eliminating unnecessary duplication of Chapter 44 HVHZ provisions

**Rationale**

Since the inception of the FBC, the content of Chapter 44 of the FBC, R has been a duplication of the sections contained in the FBC, Building volume. This proposed modification is intended to maintain the continuation of the current level of safety for the protection of life and property unchanged. Importantly, the proposed modification eliminates the need to unnecessarily duplicate more than one-hundred pages into the FBC, R volume, thereby reducing the size of the text contained in the FBC. Additionally, the proposed modification prevents the need to replace all of the non-wind related sections which were removed by legislative directive with dozens of individual modifications, each requiring review and approval; this process would otherwise be unavoidable in order to create a crucial integration of applicable and relevant building code sections into Chapter 44 requirements. In short, this proposed modification is a simplified approach resulting in identical code requirements but through a less time consuming, less complicated and less duplicative process.

**Fiscal Impact Statement**

- Impact to local entity relative to enforcement of code**  
None. The end result is a continuation of the applicability of base building code requirements for HVHZ residences as has existed in all previous editions of the Florida Building Code.
- Impact to building and property owners relative to cost of compliance with code**  
None. The end result is a continuation of the applicability of base building code requirements for HVHZ residences as has existed in all previous editions of the Florida Building Code.
- Impact to industry relative to the cost of compliance with code**  
None. The end result is a continuation of the applicability of base building code requirements for HVHZ residences as has existed in all previous editions of the Florida Building Code.

**Requirements**

- Has a reasonable and substantial connection with the health, safety, and welfare of the general public**  
It does so by ensuring direction to applicable sections of the code are provided.
- Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**  
It does so by eliminating the need to unnecessarily duplicate building code provisions and affects a reduction in the number of code pages to be compiled, reviewed, edited and printed.
- Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**  
This modification does not curtail the use of any material, products, methods or systems of construction already deemed acceptable by the Florida Building Code or any alternate materials, design and methods of construction and equipment acceptable to the code official.
- Does not degrade the effectiveness of the code**  
This modification does not degrade the effectiveness of the code; instead, it maintains the applicability of relevant base code requirements as has been the case since the first edition of the Florida Building Code.

Is the proposed code modification part of a prior code version? No

**1st Comment Period History** 08/09/2012 - 09/23/2012

<b>Proponent</b> Jack Glenn	<b>Submitted</b> 9/23/2012	<b>Attachments</b> No
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**Comment:**

Creates a reference to Chapter 15 of the FBC-B. The FBC-R was created to be a free standing document and as such should include the language if it meets the criteria for a Florida specific amendment.

R5009-G1

SECTION R4402  
HIGH-VELOCITY HURRICANE ZONES —  
ROOF ASSEMBLIES AND ROOFTOP STRUCTURES

**R4402.1. General** Refer to Chapter 15 of the Florida Building Code, Building.

~~**R4402.1.1 Scope.** The provisions of this section shall set forth minimum requirements for the installation of roofing components, roofing systems, roofing assemblies and the waterproofing thereof.~~

~~**R4402.1.2 Application.** These High velocity Hurricane Zone roofing requirements with associated roofing application standards (RAS) and testing application standards (TAS) are solely to be implemented in areas of high basic wind speeds, and where the jurisdiction having authority has adopted their use.~~

~~**R4402.1.2.1** All roofing components, roofing systems and roofing assemblies for construction regulated by this code shall comply with this chapter. All roofing components, roofing systems and roofing assemblies shall have a valid and current, referred to as product approval hereinafter. In the event that the manufacturers published literature or instructions are in conflict with those of the product approval, the product approval shall prevail. Where items specifically and expressly addressed in this section are in conflict with the product approval, the provisions of this section shall prevail.~~

~~**R4402.1.2.2** Innovative products and/or systems outside those currently recognized under this chapter may have a product approval issued based on performance testing; in such case(s) the conditions set in the product approval shall prevail.~~

~~**R4402.1.2.3** For roofing systems to be installed on a specific building or structure, where an existing product approval may not be applied, such roofing system may be granted a onetime approval by the authority having jurisdiction, provided the applicant demonstrates, by testing and/or rational analysis that such roofing system complies with the provision of this code.~~

~~**R4402.1.2.4** Where a product approval does not address a detail for a specific job condition, the permit applicant may propose to the building official an alternate detail to address the specific need of the job. The building official may accept such proposal if it can be demonstrated that the provisions of this code will be met.~~

~~**R4402.1.2.5 Workmanship standards.** All roofing work shall be performed by a qualified contractor licensed to perform roofing, in compliance with the tolerances, quality and methods of construction established herein or set forth in the standards adopted by these high velocity hurricane zone requirements. Roofing assemblies detailed in product approvals shall be installed in strict compliance with the method of application set forth in such product approval or, if not part of the product approval, in compliance with manufacturer's published application instructions, or as approved by the building official. (Aesthetic issues not affecting the performance of the roof are not part of this section.)~~

~~**R4402.1.2.5.1 Appearance.** If the architectural appearance is to be preserved from below, an alternate method of attachment complying with the wind load requirements of Section R4402 may be proposed unless otherwise addressed in Section R4402. The alternative attachment shall be prepared, signed and sealed by a Florida registered architect or a Florida registered engineer, which architect or engineer shall be proficient in structural design.~~

~~**R4402.1.3** Permits outside these High Velocity Hurricane Zone requirements shall comply with Section 105 of the Florida Building Code, Building. Permits within high wind areas shall be required for all work in connection with the application, repair or maintenance of any roofing component or any roofing assembly and/or any of its components except as otherwise permitted in Section 105 of the Florida Building Code, Building.~~

~~**R4402.1.3.1** All new roofing construction, including recovering and reroofing, repair and maintenance shall have a uniform roofing permit application, as established by the authority having jurisdiction, completed and executed by a licensed contractor.~~

~~**R4402.1.3.2** The uniform roofing permit shall include calculations per Section R4403 of this code, unless the roofing assembly is less than the height/pressure threshold allowed in the applicable protocols herein.~~

~~**4402.1.3.3** Reserved.~~

~~**R4402.1.3.4** Attachments to the uniform roofing permit application shall include two copies of each of the following documents: properly executed OWNERS NOTIFICATION FOR ROOFING CONSIDERATIONS herein; the fire directory listing pages product approval cover sheet, product approval specific system description, product approval specific system limitation, product approval general limitations, and applicable detail drawings; the municipal permit application; other components approvals; and any other additional data reasonably required by the authority having jurisdiction needed to determine the integrity of the roofing system.~~

~~**R4402.1.4.1** All roofing work for which a permit is required shall be inspected by the building official. One or more inspections may be performed at the same time at the request of the roofing contractor or when feasible. Lack of~~



~~roofing contractor's personnel at the job site, in and of itself, shall not be cause to fail the inspection. Certain roofing inspections shall be performed during specific phases of the applications as noted below:~~

~~R4402.1.4.2 For discontinuous roofing systems (as defined herein or Chapter 2):~~

~~R4402.1.4.2.1 During or after application of the base sheet, anchor sheet or underlayment of any roofing system.~~

~~R4402.1.4.2.2 During the installation of the cap sheet.~~

~~R4402.1.4.2.3 During the installation of any prepared roof covering, such as shingles, tiles, slates, shakes, and similar.~~

~~R4402.1.4.2.4 Upon completion of all adhesive set and mortar set tile systems, and prior to the final inspection, a field verification and static uplift test, in compliance with TAS 106 shall be required to confirm tile adhesion. This test may be required by the building official for mechanically attached tile systems. All results of this test shall be submitted to the building official.~~

~~R4402.1.4.3 For continuous roofing systems (as defined in herein or Chapter 2):~~

~~R4402.1.4.3.1 During application of any roofing system prior to the full concealment of the adhesion/attachment process to the roof deck or to the existing roofing assembly.~~

~~R4402.1.4.3.2 In cases where a roof area is less than 1,500 square feet (139 m<sup>2</sup>), and when the building official is not able to perform any of the above requested inspection in a timely manner, the building official may authorize to continue with the work and may require that satisfactory evidence be provided to show that the covered work was performed in compliance with this code.~~

~~R4402.1.4.3.3 After all roofing work has been completed; a final inspection shall be performed by the building official.~~

**SECTION R4402.2**  
**HIGH VELOCITY HURRICANE ZONES — DEFINITIONS**

~~**R4402.2.1 Definitions.** For definitions outside Section R4402 and accompanied RAS and TAS, see Chapter 2. For the purposes of Section R4402, accompanying RAS, TAS and roofing products product approval, roofing terms shall be defined in compliance with ASTM D 1079, unless otherwise defined below. The definitions listed below shall take preference. Other terms used herein shall be defined as set forth in Chapter 2 of this code.~~

~~**AIR PERMEABLE ROOFING SYSTEM.** A roofing system consisting of a prepared roof covering over an approved underlayment on a sloped roof. The components within the prepared roof covering are discontinuously laid and small, with unsealed side and head laps. Air permeable roofing systems shall be applied over sheathed decks with either mechanical attachment or a mortar/adhesive bond. Any roofing system with sealed side or head laps shall not be defined as an air permeable roofing system. The authority having jurisdiction may require testing in compliance with TAS 116, to determine whether a roofing system is air permeable.~~

~~**ANCHOR SHEET.** A roofing felt mechanically attached to a nailable deck with approved fasteners to which insulation is then installed in a solid mopping of asphalt. The roofing membrane is then installed to the insulation in the usual manner.~~

~~**ARCHITECTURAL METAL PANEL.** Water shedding (hydrokinetic) roof panel fastened to a roof deck.~~

~~**ASTM (ASTM International).** A scientific and technical organization that is responsible for the development of standards on characteristics and performance of materials, products, systems, as adopted for the high velocity hurricane zone.~~

~~**NET FREE VENTILATING AREA (NFVA).** The gross area of the smallest plane area of the ventilating device reduced by the percentage of physical obstruction to the plane area.~~

~~**BASE SHEET.** The bottom or first ply of a roofing assembly over which subsequent roofing plies are applied. A base sheet may be designed for mechanical attachment, full or partial adhesion to the substrate.~~

~~**BUILDING INTEGRATED PHOTOVOLTAIC ROOFING.** A roofing product consisting of an electricity generating photovoltaic component integrated into a roof covering.~~

~~**CLASS A ROOFING ASSEMBLY.** A roofing assembly that, in combination with the roof slope, has been classified by an approved testing agency, with a listing and follow up service, as "Class A" in compliance with ASTM E 108 or UL 790.~~

~~**CLASS B ROOFING ASSEMBLY.** A roofing assembly that, in combination with the roof slope, has been classified by an approved testing agency, with a listing and follow up service, as "Class B" in compliance with ASTM E 108 or UL 790.~~

~~**CLASS C ROOFING ASSEMBLY.** A roofing assembly that, in combination with the roof slope, has been classified by an approved testing agency, with a listing and follow up service, as "Class C" in compliance with ASTM E 108 or UL 790.~~

~~**CONTINUOUS ROOFING SYSTEM.** An impervious roof covering, composed from a single or multiple layers, forming a homogenous membrane over the entire roof surface, applied to either a flat or pitched roof surfaces.~~

~~**CORROSION RESISTANT.** Any component that passes appendix of FMRC's Test Standard 4470, as modified, and set forth in TAS 114.~~

~~**COUNTER BATTENS.** Vertical wood strips installed on sloped roofs over which horizontal battens are secured. The primary roof covering is attached or secured to these horizontal battens.~~

~~**COUNTERFLASHING.** Formed metal or elastomeric sheeting secured on or into a wall, curb, pipe, roof top unit or other surface to cover and protect the upper edge of a base flashing and its associated fasteners.~~

~~**DISCONTINUOUS ROOFING SYSTEM.** A roofing system with unsealed overlapping components, where the combined roofing system has openings at the point of overlap, applied to a sloped surface with a pitch of 2:12, or greater. Discontinuous roofing systems include asphalt shingles; concrete, clay or metal tile; wood shingles or shakes; and cement fiber roofing systems.~~

~~**DRY IN.** The process of applying the first layer of felt in a roofing system.~~

~~**FM APPROVALS.** A research and testing organization that is responsible for examination and testing of construction and other products.~~

~~**FASTENER WITHDRAWAL RESISTANCE TEST.** A static pullout test of mechanical fasteners, which are used to anchor any roofing component, to determine the force required to withdraw a fastener from the substrate. Testing shall be in compliance with the test procedure detailed in TAS 105.~~

~~**FIRE RESISTANT ROOF COVERING.** Any Class A, Class B or Class C roofing system applied to the appropriate deck type within the specified slope of the listed classification.~~

~~**FLASHING.** The roofing component used to seal roofing systems, where the system is interrupted or terminated.~~

~~**LAP.** See NRCA Manual fourth edition.~~

~~**METAL PROFILE.** Including but not limited to eave and gable drip, gravel stop, raised edge systems and fascia systems. All composite and nonmetallic flashing materials shall have a Product Approval.~~

~~**MINIMUM CHARACTERISTIC RESISTANCE FORCE.** A force or pressure which is representative of data from withdrawal resistance testing, static uplift testing, and/or wind uplift testing after the data has been statistically analyzed to a 95 percent level of precision.~~

~~**METAL ROOF PANEL.** An interlocking metal sheet having an installed weather exposure equal or greater than three square feet per sheet.~~

~~**METAL ROOF SHINGLE.** An interlocking metal sheet having an installed weather exposure less than three square feet per sheet.~~

~~**MOMENT.** A quantity that represents the affect of a force applied at a particular point in relation to a specific point or axis.~~

~~**NRCA.** The NRCA Roofing and Waterproofing Manual, fifth edition, as published by the National Roofing Contractors Association.~~

~~**PREPARED ROOF COVERING.** Any manufactured or processed roof covering designed for use as the top layer of a discontinuous roofing system applied to a sloped roof.~~

~~**RAS. Roofing Application Standards.**~~

~~**RECOVERING.** The process of covering an existing roofing assembly with a new roofing system or a prepared roofing system.~~

~~**REPAIR.** The work of corrective procedures by replacing or altering an existing roofing component or system to eliminate water intrusion.~~

~~**REROOFING.** The process of recovering or replacing an existing roofing system, either in its entirety or in existing sections.~~

~~**RIDGE VENT.** A ventilator located within 18 inches (457 mm) of the ridge that allows the escape of warm and/or moist air from the attic area or rafter cavity.~~

~~**ROOFING ACCESSORY.** A type of roofing product as described in Section R4402.6.6 of this code.~~

~~**ROOFING ASSEMBLY.** An assembly of interacting roofing components [includes the roof deck, vapor retarder (if present), insulation, and roof covering].~~

~~**ROOFING COATINGS, ADHESIVES AND MASTICS.** Any and all liquid materials applied to the roofing membrane layer to enhance ultraviolet light resistance; increase resistance to fire; increase reflectivity of the roofing assembly; or, in some way, enhance the performance of the roofing assembly. Roofing coatings, adhesives or mastics shall not contain asbestos materials.~~

~~**ROOF COVERING.** An assembly of multiple field applied components or a single component designed to weatherproof a building's top surface. A roof covering may be a roofing assembly or form a portion thereof.~~

~~**ROOFING COMPONENT.** A roofing product that is incorporated into various roofing assemblies.~~

~~**ROOF DECK.** Solid or spaced sheathing to which the roofing or waterproofing system is applied.~~

~~**ROOFING MAINTENANCE.** Is the work of extending the longevity of a roofing system through preventative care, such as re-filling pitch pans, applying coatings, re-graveling, resurfacing and re-caulking.~~

~~**ROOF SECTION.** A separation or division of a roof area by existing expansion joints, parapet walls, flashing (excluding valleys), difference of elevation (excluding hips and ridges), roof type or legal description; not including the roof area required for a proper tie-off with an existing system.~~

~~**ROOFING SYSTEM.** A system of interacting roofing components, generally consisting of membrane or primary roof covering and insulation (not including the roof deck) designed to weatherproof, and sometimes to improve, the building's thermal resistance.~~

~~**HIGH ROOF TILE PROFILE.** Those tiles having a rise to width ratio greater than 0.20~~

~~**LOW ROOF TILE PROFILE.** Those tiles having a rise to width ratio less or equal than 0.20; except those tiles meeting the flat profile definition.~~

~~**FLAT ROOF TILE PROFILE.** Those tiles with less than 1/2 inch (12.7 mm) rise.~~

~~**STRUCTURAL METAL PANEL.** Roof covering intended to be self supporting between structural members (see Sections R4406.1.8.2 and R4408.9.4).~~

~~**TAS.** Testing Application Standard.~~

~~**UNDERLAYMENT.** One or more water shedding layers applied to a sloped roof prior to the application of a prepared roof covering. The primary purpose of an underlayment is defined as a water shedding layer to function in combination with a prepared roof covering.~~

~~**WOOD SHAKES.** Tapered or straight pieces of red cedar, or other wood types, of widths ranging from 3 inches to 14 inches (76 mm to 356 mm) ranging in lengths from 18 inches to 32 inches (437 mm to 819 mm) applied to a sloped roof, in conjunction with an approved underlayment, forming a discontinuous prepared roof system.~~

~~WOOD SHINGLES. Tapered pieces of red cedar, or other wood types, sawn on both faces, of widths ranging from 3 inches to 14 inches (76 mm to 356 mm) and lengths of 16 inches, 18 inches, and 24 inches (406 mm to 610 mm) applied to a sloped roof forming a discontinuous prepared roof system.~~

**SECTION R4402.3**  
**~~HIGH VELOCITY HURRICANE ZONES — WEATHER PROTECTION~~**

~~**R4402.3.1 General.** Roof decks shall be covered with roof coverings secured to the building or structure in accordance with the provisions of this section. Roof coverings shall be designed, installed and maintained in accordance with this code and the manufacturer's installation instructions such that the roof covering shall serve to protect the building or structure. All roof coverings, roof systems and roof assemblies shall be designed and installed to resist the wind load requirements of Section R4403 of this code.~~

~~**R4402.3.2.2 Membrane flashings.** All membrane flashing shall be installed according to the roof assembly manufacturer's published literature and in accordance with the provisions set forth in RAS 111.~~

~~**R4402.3.2.3 Metal flashings and terminations.** Metal flashing and terminations shall be of the material and thickness described in Section R4402.6.6 and RAS 111 of this code, and shall be designed and installed in accordance with RAS 111.~~

~~**R4402.3.2.3.1** Such felts shall be embedded in hot bitumen or an approved adhesive.~~

~~**R4402.3.2.3.2** Metal surfaces shall be primed with an ASTM D 41 or ASTM D 43 primer, as appropriate and allowed to dry prior to receiving hot bitumen or cold adhesive.~~

~~**R4402.3.2.4 Metal counterflashing.** Metal counterflashing shall be of the material and thickness described in Sections R4402.6.6 and RAS 111 of this code, and shall be installed in accordance with RAS 111.~~

~~**R4402.3.2.4.1** Metal counterflashing shall be built into walls, set in reglets or applied as stucco type and shall be turned down over base flashing not less than 3 inches (76 mm).~~

~~**R4402.3.2.4.2** Metal counterflashing shall be side lapped a minimum of 4 inches (102 mm).~~

~~R4402.3.2.4.3 Metal counterflashing, where set in reglets or surface mounted, shall be waterproofed, in accordance with applicable application standards.~~

~~R4402.3.2.4.4 Where metal counterflashing is used as the means of sealing (such as a vented system) it shall be set in an approved sealant, sealed with an approved adhesive on the top flange and all joints shall be sealed with an approved sealant and lapped a minimum of 4 inches (102 mm).~~

#### ~~R4402.3.2.5 Roof penetration flashing.~~

~~R4402.3.2.5.1 All pipes shall be flashed with approved lead sleeve type, pitch pans or other approved methods detailed in the roofing system assembly product approval. Lead flashing shall not be less than 2.5 pound per square foot (12.2 kg/m<sup>2</sup>). Flanges shall be a minimum of 4 inches (102 mm).~~

~~R4402.3.2.5.2 Other roof penetrations shall be suitably flashed with curbs, collars, pitch pans, in compliance with RAS 111 or an approved method, in compliance with the roofing system assembly Product Approval.~~

~~R4402.3.2.5.3 No roof penetration shall be located in roof valleys.~~

~~R4402.3.3 Coping. Copings shall be designed and installed to resist the wind load requirements of Section R4403 of this code, and shall be in accordance with the provisions set forth in RAS 111.~~

~~R4402.3.4 Roof drainage. Unless roofs are sloped to drain over roof edges, roof drains shall be installed at each low point of the roof. Where required for roof drainage, scuppers shall be placed level with the roof surface in a wall or parapet. The scupper shall be located as determined by the roof slope and contributing roof area. Scuppers shall be sized in accordance with the provisions contained in ASCE 7, Section 8 with commentary and shall comply with Section R4403.6.~~

~~R4402.3.4.1.1 Gutters shall be in compliance with RAS 111.~~

~~R4402.3.4.2 Overflow drains and scuppers. Where roof drains are required, overflow drains or overflow scuppers sized in accordance with Florida Building Code, Plumbing shall be installed with the inlet flow line located not less than 2 inches (51 mm) or more than 4 inches (102 mm) above the low point of the finished roofing surface, excluding sumps. Overflow scuppers shall be a minimum of 4 inches (102 mm) in any dimension and shall be~~



~~placed in walls or parapets and shall be located as close as practical to required vertical leaders, conductors or downspouts. Overflow drains and scuppers shall also comply with the Florida Building Code, Plumbing, and Section R4403.6 of this code.~~

~~**R4402.3.4.2.1** When overflow scuppers and roof drains are installed, they shall be lined with approved metal or other approved materials set forth in the roofing system assembly Product Approval.~~

~~**R4402.3.4.2.2** When recovering, reroofing or repairing an existing roof, the existing number of scuppers and/or roof drains shall not be reduced, unless a new drainage system is designed by an architect or engineer, in compliance with the provisions of this code.~~

~~**R4402.3.4.3 Sizing and discharge.** Roof drains, gutters, conductors and leaders shall be sized and discharge in accordance with the Florida Building Code, Plumbing.~~

#### **SECTION R4402.4 HIGH VELOCITY HURRICANE ZONES — PERFORMANCE REQUIREMENTS**

~~**R4402.4.1 General.** All roof assemblies, roof coverings and roof systems shall have Product Approval, and shall meet the following minimum requirements.~~

~~**R4402.4.1.1** All continuous roofing assemblies shall be tested in compliance with FMRC Test Standards 4470 and/or 4471 (for metal roofing), as modified for the purposes of this code and set forth in TAS 114. Only those components listed within the roofing assembly Product Approval shall be approved for use with the roof covering. Roofing assemblies shall be acceptable for use in this code's jurisdiction providing they are in compliance with the fire classification required for the structure to which the roofing assembly is to be installed.~~

~~**R4402.4.1.2** All fastening devices and fastening assemblies used for insulation, anchor sheet or roof coverings shall be tested in compliance with Section R4402.12 of this code.~~

~~**R4402.4.1.3** All roofing assemblies shall be tested by a testing laboratory certified.~~

~~**R4402.4.1.4** All roofing membranes and components shall be tested in compliance with the physical property test requirements detailed in TAS 110.~~

~~R4402.4.1.5 No loose laid ballasted or non ballasted system shall be allowed.~~

~~R4402.4.2 Guidelines for roofing applications.~~

~~R4402.4.2.1 Decks. All roofing systems and prepared roof coverings shall be installed over solid decks, unless otherwise specifically allowed in other sections of this code.~~

~~R4202.4.2.2 Minimum slope. All roofing assemblies must be installed in compliance with the slope requirements specified in the product approval, in compliance with Table R4402.4.2~~

**TABLE R4402.4.2  
MINIMUM SLOPE**

<b>SYSTEM TYPE</b>	<b>SLOPE</b>
Fibrous Cement Shingles	4:12
Metal Panels	2:12
Architectural	
Metal Shingles	4:12
Mortar or Adhesive Tile	2:12
Mechanically Fastened Tile	4:12
Asphalt Shingles	2:12
Laminated	
3-Tab	
Quarry Slate	3 1/2:12
Wood	2:12
Shakes	4:12
Shingles	3 1/2:12

~~R4402.4.2.3.2 All eaves shall provide a firm nailable substrate for secure attachment of perimeter edge metal in compliance with RAS 111.~~

~~R4402.4.2.3.3 Perimeter edge metal shall be fastened with nails or fasteners fabricated from similar or compatible material. The nails or fasteners shall be as set forth in the roofing assembly product approval.~~

~~R4402.4.2.4 Impact resistance.~~ Roof coverings installed on low slope roofs in accordance with R4402.8 shall resist impact damage based on the results of test conducted in accordance with ASTM D 3746, ASTM D 4272, CGSB 37-52, FM 4470, or TAS 114.

~~R4402.4.2.5 Ridge vents.~~ Ridge vents shall have product approval, and shall be tested for wind driven rain in accordance with TAS 110 and R4402.12.

## **SECTION R4402.6 HIGH VELOCITY HURRICANE ZONES — MATERIALS**

~~R4402.6.1 Scope.~~ Every roofing component shall comply with the applicable ASTM material standards adopted by this code. All such products shall bear the testing logo imprinted on the material and/or container or shall be marked in a distinctive manner to define compliance with the standards and shall be subject to be evaluated for compliance.

~~R4402.6.4 Product identification.~~ All roofing components shall be labeled and/or identified as mandated by the Product Approval.

~~R4402.6.4.1~~ ASTM standard roll goods shall be marked with a yellow line to identify the ASTM standard, or such other marking as may be deemed appropriate by the Product Approval.

### **R4402.6.5 Fasteners.**

~~R4402.6.5.1~~ Nails shall be minimum 12 gauge, annular ring shank nails having not less than 20 rings per inch, heads not less than 3/8 inch (9.5 mm) in diameter, and lengths sufficient to penetrate through the thickness of plywood panel or wood plank decking not less than 3/16 inch (4.8 mm), or to penetrate into a 1 inch (25 mm) or greater thickness of lumber not less than 1 inch. Nails or wood screws shall be hot dipped electro or mechanically galvanized to a thickness sufficient to resist corrosion in compliance with TAS 114 Appendix E, Section 2 (ASTM G 85). All nails shall be Product Approved. All nail cartons or carton labels shall be labeled to note compliance with the corrosion resistance requirements. No roofing material shall be fully or partially adhered, unless otherwise noted in the roof assembly Product Approval directly to a nailable deck.

~~R4402.6.5.2~~ Such fasteners shall be applied through tin caps no less than 15/8 inches (41 mm) and not more than 2 inches (51 mm) in diameter and of not less than 32 gauge (0.010 inch) sheet metal. Cap nails or prefabricated

~~fasteners with integral heads complying with this section shall be an acceptable substitute. All tin caps, cap nails or prefabricated fasteners with integral heads shall be tested for corrosion resistance in compliance with TAS 114 Appendix E, Section 2 (ASTM G 85), and shall have Product Approval. All cartons or carton labels for tin caps, cap nails or prefabricated fasteners with integral heads shall note compliance with the corrosion resistance requirements.~~

~~**R4402.6.6 Metal roofing accessories.** All metal accessories for roofs shall be not less than 26 gauge G 90 galvanized or stainless steel, 16 ounce copper, 0.025 inch (0.6 mm) thick aluminum, lead sheet with a minimum 2.5 pound per square foot (12.2 kg/m<sup>2</sup>) or equivalent noncorrosive metal alloys or composite materials manufactured for use as roof termination. All composite and nonmetallic flashing materials shall have Product Approval.~~

~~**R4402.6.6.1** Metal accessories may be of a manufactured, shop fabricated or field fabricated type, providing the materials and fasteners are in compliance with the minimum requirements of this code and shall be sized, designed and installed in compliance with methods set forth in RAS 111.~~

~~**R4402.6.6.2** Gravel stop or drip edge profiles shall be as follows:~~

~~**R4402.6.6.2.1** The vertical face shall be a minimum of 1 1/2 inches (38 mm) and shall extend down not less than 1/2 inch (12.7 mm) below the sheathing or other member immediately contiguous thereto. In all cases, the deck flange shall be not less than 2 inches (51 mm) in width. Gravel stop or drip edge shall be sized, designed and installed in compliance with RAS 111.~~

~~**R4402.6.6.2.2** Gravel stop or drip edge shall be designed so that the bottom (the kick of the metal) of the drip edge shall have a minimum of 1/2 inch (12.7 mm) clearance from the structure.~~

~~**R4402.6.6.2.3** Reserved.~~

~~**R4402.6.6.2.4** Gravel stops shall be installed after all roofing felts have been applied, or in compliance with the application method set forth in the roofing assembly product approval. All asphalt or approved cold adhesive bonding areas shall be coated with ASTM D 41 or ASTM D 43, as required, and allowed to dry prior to application.~~

~~**R4402.6.6.2.5** Gravel stop and drip edges shall be joined by lapping a minimum of 4 inches (102 mm) and the entire interior of the joints shall be coated with approved flashing cement. Cover and splice plates shall be of the same material as the gravel stop and drip edge, and shall be sized, fabricated and installed in compliance with RAS 111.~~

~~R4402.6.6.2.6 The deck flange shall be nailed with an approved minimum 12-gauge annular ring shank nail at 4 inches (102 mm) o.c. The nail shall be manufactured from similar and/or compatible material to the termination profile. All composite materials shall be fastened with nonferrous nails.~~

### SECTION R4402.7

#### ~~HIGH VELOCITY HURRICANE ZONES — ROOF COVERINGS WITH SLOPES 2:12 OR GREATER~~

~~R4402.7.1 General. Prepared roof coverings shall be as defined in Section R4402.2 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 noted in the Product Approval, set in an adhesive bond.~~

~~R4402.7.2 Underlayments. Underlayment shall be as defined in Section R4402.2. Underlayment shall be installed in compliance with the roofing component Product Approval and shall be in compliance with the following minimum requirements:~~

~~R4402.7.2.1 Underlayment shall be attached to a nailable deck in a grid pattern of 12 inches (305 mm) between the side laps, with 6 inch (152 mm) spacing at the side laps.~~

~~R4402.7.2.2 Where the architectural appearance of the underside is to be preserved, the underlayment shall be secured in accordance with Section R4402.8.5.2.~~

~~R4402.7.2.3 Tin caps and nails or cap nails shall be as defined in Section R4402.6.5.2.~~

~~R4402.7.2.4 Underlayment nails shall be as defined in R4402.6.5.1.~~

~~R4402.7.3 If the underlayment is a self-adhering membrane, the membrane shall be applied over a mechanically attached anchor sheet, attached in compliance with R4402.7.2.1.~~

~~R4402.7.4 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 D 226 Type I, with a 19 inch headlap; or (2) A single layer of an ASTM D 226, Type II with a 4 inch (102 mm) headlap; or (3) A single layer of an ASTM D 2626 coated base sheet with a 4 inch (102 mm) headlap, and (4) All endlaps shall be a minimum of 6 inches (152 mm).~~

~~**R4402.7.5 Fiber cement shingles.** Fiber cement shingles shall be applied in compliance with the shingle manufacturer's roofing assembly Product Approval. The roofing system assembly product approval shall meet the following minimum requirements:~~

~~**R4402.7.5.1** All non-asbestos fiber cement shingles shall conform to ASTM C 1225.~~

~~**R4402.7.5.2** Fiber cement shingles shall be installed in compliance with the nailing requirements set forth in the product approval; however, attachment of each component shall be with not less than two corrosion resistant fasteners. If adhesive is used at the head or side laps, the system shall be defined as a "sealed system" with load calculations in compliance with Section R4403.~~

~~**R4402.7.5.3** All intersections shall be flashed in metal as provided in Section R4402.6.6 and RAS 111.~~

~~**R4402.7.5.4** Fiber cement shingles shall be tested as set forth in Section R4402.12.~~

~~**R4402.7.6 Quarry slate.** Quarry slates shall be applied in compliance with the slate manufacturer's Product Approval. The roofing assembly Product Approval shall meet the following minimum requirements:~~

~~**R4402.7.6.1** Quarry slates shall be installed with not less than two approved fasteners per slate.~~

~~**R4402.7.6.2** All terminations and intersections shall be flashed in metal as provided in Section R4402.6.6 and RAS 111.~~

~~**R4402.7.6.3** Quarry slates shall be tested in compliance with the requirements set forth in Section R4402.12.~~

~~**R4402.7.6.4** Installation of all quarry roof slates shall be limited to a roof mean height of 33 feet (10 m), unless otherwise specifically noted in the Product Approval.~~

~~**R4402.7.7 Asphaltic shingles.** Asphaltic shingles layout, alignment and placement of mechanical attachment shall be in compliance with the Product Approval, and shall be installed in accordance with RAS 115.~~

~~R4402.7.7.1 Underlayments exceeding minimum underlayments, as detailed in Section R4402.7, shall be applied in compliance with the application methods detailed in the Product Approval. Where the architectural appearance of the underside of the roof is to be preserved, refer to Section R4402.8.5.2.~~

~~R4402.7.7.2 Installation of all asphaltic shingles shall be limited to a roof mean height of 33 feet (10 m), unless otherwise specifically noted in the Product Approval.~~

~~R4402.7.7.3 The asphaltic shingle Product Approval shall meet the following minimum requirements:~~

~~R4402.7.7.3.1 Where asphaltic shingles are to be installed over insulated roof deck, a suitable nailable substrate, in accordance with Section R4402.9.5.7 must be installed over the insulation prior to the installation of approved underlayment and shingles.~~

~~R4402.7.7.3.2 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 3/8 inch (4.8 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.~~

~~R4402.7.7.3.3 Intersections, eaves, rakes, valleys, gable ends, and the starter course of asphaltic shingles shall be set in an 8 inch (203 mm) wide bed of approved cold adhesive or roofing cement. Application of adhesive or cement shall be in compliance with the application instructions of the Product Approval. Shingles shall not extend more than 1/4 inch (6.4 mm) beyond the eave drip.~~

~~R4402.7.7.3.4 All perimeter termination and valleys shall be fabricated from metal. Minimum metal requirements are set forth in Section R4402.6.6, and RAS 111.~~

~~R4402.7.7.3.5 Asphaltic shingles shall be tested in compliance with the provisions set forth in Section R4402.12.~~

~~**R4402.7.8 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 R4402.12. 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.~~

~~R4402.7.8.1 Application. All tile systems shall be installed over solid sheathed decks. All tile installation shall be in accordance with RAS 118, RAS 119, and RAS 120, as applicable.~~

~~R4402.7.8.1.1 Roof tile mortar shall either be a pre-mixed unit having a Product Approval and tested in compliance with TAS 123 or a job-site mix approved by the building official and in compliance with TAS 113.~~

~~R4402.7.8.2 The roof tile product approval shall specify the slope requirement for each tile and underlayment system in accordance with Table R4402.4.2.~~

~~R4402.7.8.3 All roof tile fasteners shall be tested and comply with the requirements set forth in Section R4402.12.~~

~~R4402.7.8.4 All tile systems. All tile application designs shall comply with the following limitations in order to withstand the wind loads prescribed in this section, as well as all wind load requirements set forth in Section R4403.~~

~~R4402.7.8.4.1 Roof tiles systems, combining mechanically fastened tile and mortar and/or adhesive, shall be acceptable.~~

~~R4402.7.8.4.2 In an air permeable tile roofing systems: (1) the length of each tile shall be not less than 12 inches (305 mm) and not greater than 21 inches (533 mm) and the exposed width of the tile shall be between 8.5 inches and 15 inches (216 and 381 mm); (2) the maximum thickness of the nose (leading edge) of the tile shall not exceed 1.3 inches (33 mm); and (3) mortar or adhesive set system shall have at least two-thirds of the tile free of mortar and/or adhesive contact.~~

~~R4402.7.8.5 The proposed method of attachment for tile systems which are considered to be air permeable, shall provide sufficient attachment resistance (Mf) (listed in tile product approval) to meet or exceed the moment of resistance (Mr) as determined by following the procedures outlined in RAS 127. The aerodynamic multiplier (k) needed in RAS 127 shall be part of the tile Product Approval and shall be derived from the following formula:~~

~~For direct deck application  $k = (0.156) \times (b) \times (l)^2$~~

~~For batten application  $k = (0.144) \times (b) \times (l)^2$~~



~~Where b (in feet) ————— = exposed width of the tiles~~

~~Where l (in feet) ————— = length of tiles~~

~~R4402.7.8.6 The proposed method of attachment for tile systems which are not considered air permeable shall provide a minimum characteristic force (F') (listed in tile product approval) to meet or exceed the required uplift resistance (Fr) as determined by following the procedures outlined in RAS 127.~~

~~R4402.7.8.7 Tile systems shall extend beyond the drip edge (not including the rake) not less than ¾ inch (19 mm) but not more than 2 inches (51 mm).~~

~~R4402.7.8.10 Mortar or adhesive set tiles applied at an incline from 6:12 up to and including 7:12 shall have the first course of tile (this applies to pan only on two piece barrel tile) mechanically fastened with not less than one fastener per tile. As an alternate, the first course of tile shall be applied in mortar over a single layer of minimum 20 gauge galvanized wire mesh with openings of not less than ½ inch (12.7 mm) or greater than 1 ½ inches (38 mm) with minimum exposure of 12 inches (305 mm) which is mechanically attached to the deck through the underlayment with approved fasteners and tin cap when back nailing the cap sheet. Additionally, for roof inclines of 6:12 up to and including 7:12, every third tile of every fifth course, shall be mechanically fastened with not less than one fastener per tile. For roof inclines above 7:12, in addition to the mortar or adhesive, all tiles shall be mechanically fastened with not less than one fastener per tile. Apply approved flashing cement to seal all tile fastener penetrations, for all roof inclines.~~

~~R4402.7.8.11 All tile systems shall be shingle lapped interlocking and installed with the headlap as specified in the tile system Product Approval. In no case shall the minimum headlap be less than 2 inches (51 mm) for mortar or adhesive set tile, or less than 3 inches (76 mm) for mechanically set tile, unless restricted by product design.~~

~~R4402.7.8.12 Where tiles are to be installed over an insulated roof deck, a suitable available substrate, in accordance with Sections R4402.9.5.6 and R4402.9.5.7 must be installed over the insulation prior to the installation of approved underlayment and tiles.~~

~~R4402.7.8.13 For mortar or adhesive set tile, no more than two tiles shall be loose per roofing square [100 square feet (9.3 m<sup>2</sup>)]. No loose tile shall be adjacent to each other.~~

~~R4402.7.9 Metal panels/shingles. Steel panels/shingles shall be a minimum of G 90 corrosion resistant, and shall be not less than 26 gauge in thickness. Aluminum panels/shingles shall not be less than 0.025 inch (0.685 mm)~~

~~thick. All other metal panel/shingle products shall be an equivalent weight. All metal panel/shingle assemblies shall be capable of withstanding foot traffic without damage to the metal panels/shingles. Metal panels/shingles shall have Product Approval for a complete metal system, which shall include the panel/shingle, underlayment and all related accessories to provide a complete waterproof system.~~

~~R4402.7.9.1 All metal panels/shingles assemblies shall be tested in accordance with Section R4402.12, and TAS 125.~~

~~R4402.7.9.2 The entire application method of all metal panel/shingle systems shall be detailed in the Product Approval and RAS 133, as applicable.~~

~~R4402.7.9.3 Metal shingles may be applied as a recover over a single layer of asphaltic shingles or smooth surface roofing, providing the deck is solid sheathed and in compliance with the provisions of this code, the existing prepared roof covering is in compliance with provisions of this code and the entire metal shingle system is applied as set forth in the Product Approval.~~

~~R4402.7.9.4 Metal panel/shingle systems shall not extend more than 1 inch (25 mm) beyond the roof eave.~~

~~R4402.7.9.5 All intersections shall be flashed in metal as provided in Section R4402.6.6, RAS 111 and the roof assembly Product Approval.~~

~~R4402.7.10 Wood shingles and shakes. All wood shingles and shakes shall be installed in accordance with RAS 130. Installation of all wood shingles and shakes shall be limited to a roof mean height of 33 feet (10 m), unless otherwise specifically noted in the Product Approval.~~

~~R4402.7.10.1 All wood shingle/shake systems shall be tested in accordance with Section R4402.12.~~

~~R4402.7.11 Building integrated photovoltaic roofing modules/shingles. The installation of building integrated photovoltaic roofing modules/shingles shall comply with the provisions of this section.~~

~~R4402.7.11.1 Material standards. Building integrated photovoltaic roofing modules/shingles shall be listed and labeled in accordance with UL 1703.~~

~~R4402.7.11.2 Attachment. Building integrated photovoltaic roofing modules/shingles shall be attached in accordance with the manufacturer's product approval.~~

~~1518.11.3 Wind resistance. Building integrated photovoltaic roofing modules/shingles shall be tested in accordance with procedures and acceptance criteria in TAS 107. Building integrated photovoltaic roofing modules/shingle packaging shall bear a label to indicate compliance with the procedures in TAS 107.~~

**SECTION R4402.8**  
**HIGH VELOCITY HURRICANE ZONES — ROOF COVERINGS WITH SLOPES LESS THAN 2:12**

~~**R4402.8.1 General.** All adhered roofing components shall be bonded to the various types of substrates in compliance with the requirements set forth in the roofing assembly Product Approval and the following minimum requirements. The authority having jurisdiction may adopt RAS 150 as the means of complying with the requirements listed in this section.~~

~~**R4402.8.2** All packaged asphalt shall have the following data printed on the carton wrapper:~~

~~**R4402.8.2.1** ASTM designation and type;~~

~~**R4402.8.2.2** Flash point as determined by ASTM D 92, Flash and Fire Point , by Cleveland open cup; and~~

~~**R4402.8.2.3** Equiviscous temperature (EVT) at which the asphalt attains a viscosity of 125 centipoise (25 centipoise for coal tar) as determined by ASTM D 4402, Viscosity Determinations of Unfilled Asphalt Using The Brookfield Thermocet Apparatus.~~

~~**R4402.8.3** Asphalt types, as defined by ASTM D 312, shall be employed in all roofing assemblies. Application of asphalt shall be in compliance with Table R4402.8.3A and Table R4402.8.3B or as detailed in the roofing assembly Product Approval.~~

**TABLE R4402.8.3A**  
**SLOPE AND APPLICATION TEMPERATURE CRITERIA**

ASTM D312 TYPES OF ASPHALT		MAXIMUM1-		
		SLOPE (in./ft)	TEMPERATURE °F	
			MOP	MECHANICAL
Type I	Dead level	1/4	350 +/- 25	375 +/- 25
Type II	Flat		400 +/- 25	425 +/- 25

		1/2		
Type III	Steep	3	425 +/- 25	450 +/- 25
Type IV	Special steep (All roof tile systems)	N/A	450 +/- 25	475 +/- 25

1 inch = 25.4 mm; C° = [(°F) - 32]/1.8

1. Temperature and slope measurements are at point of application

**TABLE R4402.8.3B**  
**SLOPE AND APPLICATION TEMPERATURE CRITERIA**

ASTM 450 COAL TAR TYPE NO.	TYPE OF COAL TAR	MAXIMUM SLOPE (in./ft)	TEMPERATURE RANGE (°F)
Type I	Coal tar pitch	1/4	360 +/- 25
Type III	Coal Tar bitumen	1/4	375 +/- 25

1 inch = 25.4 mm; C° = [(°F) - 32]/1.8

**R4402.8.4** Back nailing of inter-ply sheets shall not be required when using ASTM D 312 Type IV asphalt on slopes less than 3:12.

**R4402.8.5 Mechanical attachment.** All mechanically attached roofing components shall be attached to the various types of substrates in compliance with the requirements set forth in the roofing assembly Product Approval and the following minimum requirements:

**R4402.8.5.1 Base sheet attachment on wood decks.** Nails shall be minimum 12 gauge, annular ring shank nails having not less than 20 rings per inch; heads not less than 3/8 inch (9.5 mm) in diameter; and lengths sufficient to penetrate through the thickness of plywood panel or wood plank decking not less than 3/16 inch (4.8 mm), or to penetrate into a 1 inch (25.4 mm), or greater, thickness of lumber not less than 1 inch (25.4 mm). Nails shall be hot dipped; electro or mechanically galvanized to a thickness sufficient to resist corrosion in compliance with Appendix E of TAS 114. All nails shall be Product Approved. All nail cartons or carton labels shall be labeled to note compliance with the corrosion resistance requirements. No roofing material shall be fully or partially adhered, unless otherwise noted in the roof assembly Product Approval directly to a nailable deck.

**R4402.8.5.1.1** Tin caps shall meet the requirements of Section 4402.6.5.2.

~~R4402.8.5.1.2 Prefabricated fastener systems complying with Sections R4402.8.5.1 and R4402.8.5.1.1 may be used, provided they have Product Approval.~~

~~R4402.8.5.1.3 Spacing of such fasteners shall be in compliance with patterns set forth in the roofing assembly Product Approval.~~

~~R4402.8.5.2 Where the architectural appearance of the underside is to be preserved, a base sheet may be secured in an alternate method of attachment prepared, signed, and sealed by a Florida registered architect or engineer, or in buildings where the mean roof height does not exceed 15 feet (4.6 m), a base sheet may be secured with 1 1/4 inch (32 mm) fasteners on supporting members, with a minimum of 1/2 inch (12.7 mm) fasteners between the supporting members, all of which shall be secured through tin caps and nailed 6 inches (152 mm) o.c. in all directions.~~

~~R4402.8.5.3 Lightweight insulating concrete. All lightweight insulated concrete shall be vented per roofing system manufacturer recommendations.~~

~~R4402.8.5.3.1 Lightweight concrete shall not be applied over an existing roof deck unless the supporting structure has been approved as adequate to sustain the added weight. Calculations verifying the adequacy of the existing structure to sustain the added weight shall be prepared, signed, sealed and dated by a Florida registered architect or engineer, which architect or engineer is proficient in structural design, and submitted with the uniform roofing permit application.~~

~~R4402.8.5.4 Other nailable decks. The mechanical attachment of roofing components to other nailable decks shall be governed by the roofing assembly Product Approval.~~

~~R4402.8.6 Cast in place and precast structural concrete decks. Cast in place and precast structural concrete decks are considered non nailable. Concrete decks shall be clean, dry and fully primed with ASTM D 41 or ASTM D 43, as required, primer applied at a rate of not less than 1 gallon (3.8 L) per square. Hot asphalt or cold adhesive shall not be applied until the primer has fully dried.~~

~~R4402.8.7 Steel decks. Steel decks shall be covered with a roof insulation panel having its own Product Approval and listed in the roofing assembly product approval. Insulation panels shall be mechanically fastened in compliance with the mechanical attachment patterns listed in the roofing assembly product approval, and in accordance with the provisions of RAS 117.~~

~~R4402.8.7.1 If the deck thickness, on an existing steel deck, is less than 22-gauge, a field fastener withdrawal resistance test shall be conducted, in compliance with TAS 105, to confirm compliance with the wind load requirements of Section R4403. Test results shall be submitted with the uniform roofing permit application for review prior to issuance of the roofing permit. The field fastener withdrawal resistance test shall be carried out by a certified testing laboratory.~~

~~R4402.8.7.2 Steel decks shall be welded or mechanically attached to the structure in compliance with the design pressure requirements set forth in Section R4403.~~

~~R4402.8.7.3 Composite wood and insulation panels shall be mechanically attached to steel decks in compliance with the attachment requirements enumerated in the insulation roofing component Product Approval. The composite wood insulation panel shall be in compliance with the minimum sheathing requirements of this code.~~

~~R4402.8.8 Flashing. All flashing shall be installed according to the roof assembly manufacturer's published details and literature and in accordance with RAS 111.~~

~~R4402.8.9 Valleys. Valleys in BUR shall be installed in according to the roof assembly manufacturer's published literature for high wind areas and in compliance with the applicable detail described in the Product Approval.~~

~~R4402.8.10 Parapet walls. All parapet wall details shall be installed in accordance with the roofing system product approval, manufacturer's published details and literature and in accordance with approved methods detailed in RAS 111.~~

~~R4402.8.11 Insulation. Roof insulation shall be applied in compliance with the roofing system Product Approval and RAS 117.~~

~~R4402.8.12 Surfacing. Roofing assemblies shall be surfaced in compliance with the Product Approval. Surfacing shall be in sufficient quantity to comply with the required fire classification. Aggregate surfacing shall not be used on slopes greater than 3:12. Aggregate shall be embedded in a flood coat of bitumen applied over a prepared top ply.~~

~~R4402.8.12.1 On slopes of 3:12 or less, not less than 400 pounds (182 kg) of roofing gravel or 300 pounds (145 kg) of slag per square shall be applied. A minimum of 50 percent of the total aggregate shall be embedded in the flood coat of bitumen. Aggregate shall be dry and free from dirt and shall be in compliance with the sizing requirements set forth in ASTM D 1863. A building official may as an option, request a test to confirm compliance with these requirements.~~

~~R4402.8.12.2 On inclines greater than 3:12, a smooth surface coating shall be applied.~~

~~R4402.8.12.3 Mineral surfaced cap sheet applications shall not require any additional surfacing unless required with the particular assembly for a fire classification.~~

~~R4402.8.12.4 All smooth surface applications shall be coated with an aluminized or emulsion coating, having a valid and current Product Approval and shall be in compliance with the application instructions in said Product Approval. Coating quantity shall be in compliance with the required fire rating classification for the structure.~~

~~R4402.8.13 Attachment of metal termination. All edge metal and terminations shall be installed according to manufacturers published literature, provided it meets the minimum requirements as set for in RAS 111 and Section R4403.~~

~~R4402.8.14 Expansion joints. Expansion joint covers and expansion joint components shall be constructed and installed in accordance with the roofing assembly manufacturer's published literature.~~

~~R4402.8.15 Venting roofing assemblies. All roof assemblies shall be applied to a dry substrate. Vapor retarders shall be installed, where applicable, to reduce moisture vapor flow into insulation from the warm, humid building interior, leading to internal condensation. Vents shall be installed to assist in the expulsion of moisture vapor where such vapor may enter the roofing assembly or moisture, as defined in Section R4402.11.12, has been left in an existing roofing assembly. Venting units shall not allow vapor to enter the roofing assembly when the high vapor pressure side is above the roofing membrane.~~

~~R4402.8.16 Waterproofing. Waterproofing systems may be installed in lieu of an approved roof system over sloped or horizontal decks specifically designed for pedestrian and/or vehicular traffic, whether the deck is above occupied or unoccupied space. In new construction the minimum deck slope shall be ¼ : 12.~~

~~R4402.8.16.1 The waterproofing system must possess a current and valid product approval.~~

~~R4402.8.16.2 If an overburden or wearing surface is not to be installed, the waterproofing system must be approved by the manufacturer for use in vehicular and/or pedestrian traffic locations.~~

~~R4402.8.16.4 If any portion of the waterproofing membrane is to remain exposed, the waterproofing system shall be ultraviolet resistant.~~

~~R4402.8.16.5~~ Flashings must be installed according to the waterproofing manufacturer's published specifications and in compliance with the material and attachment standards of RAS 111.

~~R4402.8.16.6~~ The waterproofing system shall be flood tested in accordance with ASTM D 5957.

~~R4402.8.16.6.1~~ The flood test shall take place after installation of the waterproofing membrane and prior to the installation of any above membrane components, wearing surface or overburden.

~~R4402.8.16.6.2~~ An approved testing lab shall provide written verification to the building official confirming that the flood test was performed along with the results, prior to final inspection.

#### **SECTION R4402.9 HIGH VELOCITY HURRICANE ZONES — ROOF INSULATION**

~~R4402.9.1~~ **General.** All roof insulation shall have Product Approval as an approved roofing component for use in roofing assemblies. All insulation shall be tested for physical properties in accordance with TAS 110.

~~R4402.9.2.1~~ Foam insulation panels shall be overlaid with a perlite, fiberglass, wood fiber or mineral wool overlay unless specifically stated to the contrary in the roof assembly Product Approval.

~~R4402.9.4~~ **Insulation fasteners, membrane fasteners and stress plates.** All Insulation fasteners, membrane fasteners and stress plates shall have a roof component Product Approval, and shall be tested in compliance with RAS 117, Appendixes A, B and C, and TAS 110 and TAS 114, Appendix E, Section 3 (DIN 50018), for corrosion resistance.

~~R4402.9.5~~ **Application.** Roof insulation shall be applied in strict compliance with the application methods detailed in the roof assembly Product Approval and with the requirements set forth in RAS 117.



~~R4402.9.5.1 Roof insulation, either on the ground or on the roof top, shall be kept dry. The building official shall instruct the removal of the insulation from the job when elevated moisture levels are found in the insulation or where panels cannot achieve 85 percent adhesion.~~

~~R4402.9.5.2 When applied in hot asphalt or cold adhesive, no insulation panel's dimension shall be greater than 4 feet (1219 mm).~~

~~R4402.9.5.3 Strip or spot mopping of insulation panels shall be used as an application method only when approved in the roof assembly Product Approval.~~

~~R4402.9.5.4 Where more than one layer of insulation is applied, joints between layers shall be staggered.~~

~~R4402.9.5.5 Application in approved cold adhesive shall be as detailed in the Product Approval and shall be in compliance with the required fire classification.~~

~~R4402.9.5.6 Nail boards or composite panels with a nailable surface may be applied to sloped decks for the application of prepared roof covering or metal roofing systems, providing that the nailing surface is minimum 15/32-inch (12 mm) exterior grade plywood sheathing, and has been attached to the deck with approved fastening assemblies in accordance with the windload requirements of Section R4403. Composite panels shall be gapped a minimum of 1/8 inch (3.2 mm) to allow for expansion of the sheathing panel.~~

~~R4402.9.5.7 Suitable nailable decks installed over rigid board roof insulation in buildings of mean roof height of 35 feet (10.7 m) or less, shall be a minimum of 15/32-inch (12 mm) exterior grade plywood sheathing. These decks shall be fastened to every structural roof frame member or to the existing deck under the insulation, at intervals of not more than 24 inches (610 mm) apart, with a minimum #12 approved insulation fastener spaced at a maximum of 12 inches (305 mm) apart in one direction with a minimum penetration of 1 1/4 inches (38 mm) into the structural member or deck. In these cases the maximum thickness of the rigid insulation board shall not exceed 2 inches (51 mm). An alternate method of attachment may be proposed, provided it is in compliance with Section R4403, and it is prepared, signed and sealed by a Florida registered architect or a Florida professional engineer, which architect or engineer shall be proficient in structural design.~~

~~R4402.9.5.8 Mechanical attachment of insulation panels at uneven areas shall be acceptable. Hollowing, cutting or scoring of insulation panels to provide contact shall not be acceptable.~~

**SECTION R4402.10**  
**HIGH VELOCITY HURRICANE ZONES — REROOFING**

~~**R4402.10.1 General.** Materials and methods of application used for recovering or replacing an existing roof covering, system or assembly shall comply with the requirements set forth in Sections R4402.1 through R4402.14.~~

~~**R4402.10.2** Repairs shall be carried out with roofing components as defined in this section having Product Approval.~~

~~**R4402.10.3** Repairs shall be carried out in such a manner as to not to create additional ponding water.~~

~~**R4402.10.4** 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.~~

~~**R4402.10.5** A roofing system shall not be applied over an existing roof or over an existing roof deck where the roof sheathing has not been fastened in compliance with this code or where the roof sheathing will not permit effective fastening or where sheathing is water soaked or deteriorated so that effective attachment is not possible. All areas of deteriorated sheathing shall be removed and replaced. The building official shall not be required to inspect the re-nailing of the sheathing under this section.~~

~~**R4402.10.6** Structural concrete decks shall be allowed to dry or shall be dried prior to application of an ASTM D 41 or ASTM D 43, as required, or roofing system proprietary primer where the base sheet or base insulation layer is bonded to the concrete deck.~~

~~**R4402.10.7** On lightweight concrete, gypsum and cementitious wood fiber roof decks a field fastener withdrawal resistance test, in compliance with TAS 105, shall be carried out to confirm compliance with wind load requirements of Section R4403.~~

~~**R4402.10.7.1** If the tested fasteners exhibit a minimum characteristic resistance force less than 80 percent than that listed in the product approval, a structural engineer shall examine the deck's integrity and provide a proposed attachment specification. Such specification shall be submitted with the uniform roofing permit application for review and approval by the building official prior to the issuance of a roofing permit. Calculations for the attachment of the anchor sheet/base sheet or insulation over these deck types, shall be in compliance with RAS 117.~~

~~R4402.10.8 Steel decks shall be examined prior to recover for indication of corrosion. Any corrosion identified and exposed on the roof side shall be treated with a rust inhibitor, providing the field fastener withdrawal resistance values of the proposed mechanical fasteners comply with the requirements of Section R4403 of this code. All steel decks less than 22 gauge shall be field tested for fastener withdrawal resistance for compliance with Section R4403 prior to application of a new roofing system. Test results shall be submitted with the uniform roofing permit application.~~

~~R4402.10.9 One additional roofing system may be applied over an original roofing assembly, providing the existing roofing assembly complies with the requirements of Section R4402.10.~~

~~R4402.10.10 If the recover roofing assembly is to be bonded to an existing roofing membrane, the existing roofing membrane shall be tested in compliance with TAS 124 for uplift resistance. The existing roofing membrane shall resist the design pressures calculated under Section R4403 of this code. Test results shall be submitted with the uniform roofing permit application.~~

~~R4402.10.11 If the recover roofing assembly is mechanically attached through either a base sheet or insulation layer, the attachment assembly shall be field tested for fastener withdrawal resistance, in compliance with TAS 105, and laboratory tested for pull over resistance to ensure compliance with wind uplift requirements set forth in Section R4403 of this code. Test results shall be submitted with the uniform roofing permit application. Recover roofing assembly anchor sheet or base sheet shall not be mechanically fastened directly to existing gravel roof unless all gravel is completely removed.~~

~~R4402.10.12 Moisture content of the existing roofing assembly to be covered by a new roofing system shall not exceed 5 percent by weight in the roofing membrane and 8 percent by weight in the insulation system, as verified by moisture survey performed in accordance with TAS 126. Test results shall be submitted with the uniform roofing permit application.~~

~~R4402.10.13 Prior to starting the work the contractor has the responsibility of notifying the owner, by means of the roofing permit and required owners notification for roofing considerations herein, of any possibility of ponding water and recommend a structural review if ponding water is a possibility.~~

~~R4402.10.14 If the new roofing system is to be bonded to the existing roof surface, the surface shall be free of all loose gravel, dirt and silt and dry prior to commencement of the roofing application. All blisters shall be cut and repaired prior to roofing application.~~

~~R4402.10.14.1 If the existing roof surface has gravel embedded in hot asphalt, all loose gravel shall be removed together with any dirt and silt. The dry membrane surface shall be primed with ASTM D 41 primer or proprietary~~

~~roofing system primer and allowed to dry thoroughly. A flood coat of ASTM D 312, type III or IV asphalt shall be applied to sufficient depth to cover the remaining embedded gravel. The prepared substrate shall be suitable for application of a new insulation layer only.~~

~~**R4402.10.14.2** In the case of existing coal tar assemblies, the existing roof surface shall be primed with ASTM D 43 primer or covered with a mechanically attached separation board prior to application of a new coal tar assembly. If an existing coal tar assembly is to be covered with an asphalt applied roofing system, only the separation board is acceptable. The attachment of the entire assembly, including the separation board, shall meet the design pressure requirements set forth in Section R4403.~~

~~**R4402.10.14.3** Insulation shall have product approval as a roofing component approved for use as a part of the roofing assembly. The insulation panels shall be bonded or mechanically attached in compliance with the Product Approval and RAS 117.~~

~~**R4402.10.15** Where an existing sloped roof is sheathed with spaced sheathing, any existing prepared roof covering shall be removed. New sheathing shall be applied in compliance with Section R4403, or open spacing shall be filled with dimensional lumber to create solid wood sheathing providing the spaced sheathing is in compliance with this code. Spaced sheathing is approved for use with wood shakes and wood shingles only.~~

~~**R4402.10.16** No recover application shall take place over existing wood shingles, shakes, slate, tile or metal shingles.~~

~~**R4402.10.17** Asphaltic shingle assemblies may be applied over one existing layer of asphaltic shingles having not more than 1/8 inch (3.2 mm) difference in level in the existing shingle material. Recover over an existing shingle system shall be with a product having Product Approval as prepared roof covering, in strict compliance with the application method detailed in the Product Approval.~~

~~**R4402.10.17.1** Application of elastomeric and or maintenance coating systems over existing asphalt shingles shall be in accordance with the shingle manufacturer's approved installation instructions.~~

~~**R4402.10.18** Sprayed polyurethane foam (PUF) and elastomeric coating systems may be applied over existing roofing assemblies providing the PUF system has obtained Product Approval, the deck has been prepared in compliance with the Product Approval and this code, the application is in strict compliance with the foam manufacturer's published application instructions for the environmental conditions at the time of application and post application inspections conform to RAS 109.~~

~~**R4402.10.18.1** No sprayed polyurethane foam (PUF) shall be applied over existing composition shingles.~~

~~R4402.10.18.2 Upon completion of a PUF system, an inspection of the system shall be carried out by an authorized representative of the coating manufacturer. A certification shall be furnished to the building official within 30 days of completion, confirming that the quality control tests detailed in the PUF system Product Approval have been carried out with satisfactory results.~~

~~R4402.10.18.3 Should a PUF system have inadequate adhesion to meet the design pressures, as set forth in Section R4403, the roofing system shall be removed and replaced with a roofing system tested to adequate adhesion. An additional inspection shall be required once the roofing system has been replaced. A field adhesion test may be requested by the building official during the application or at the completion of the project to confirm adequate adhesion.~~

~~R4402.10.18.4 The PUF system shall comply with R4402.10.~~

~~R4402.10.18.5 All PUF systems shall be installed by licensed roofing contractors holding an applicator's certificate from the manufacturer holding the Product Approval for the PUF system.~~

~~R4402.10.19 Roof coverings or roofing components, such as tile, slate or similar, shall not be applied over an existing roofing system.~~

~~R4402.10.20 Lightweight insulated concrete shall not be applied over an existing roofing system unless the existing roofing assembly is verified to be adequate to accept the new lightweight insulating concrete and is in compliance with the testing required herein.~~

#### ~~SECTION R4402.11~~

#### ~~HIGH VELOCITY HURRICANE ZONES — ROOFTOP STRUCTURES AND COMPONENTS~~

~~R4402.11.1 Rooftop structures. Rooftop structures shall be designed and constructed in accordance with the Florida Building Code, Building.~~

~~R4402.11.2 Rooftop mounted equipment. All rooftop equipment and supports shall be secured to the structure in compliance with the loading requirements of Section R4403. The use of wood "sleepers" shall not be permitted.~~

**SECTION R4402.12**  
**HIGH VELOCITY HURRICANE ZONES — TESTING**

~~**R4402.12.1 Scope.** This section defines the minimum testing requirements for substrates, roofing components, roofing systems and roofing assemblies. All roofing products shall be tested for physical properties, water infiltration, uplift performance and fire resistance, as addressed within this code.~~

~~**R4402.12.1.1** Testing requirements for physical properties of all roofing products shall be as set forth in TAS 110.~~

~~**R4402.12.2 Application.** Testing for substrates, roofing components, roofing systems and roofing assemblies shall comply with the provisions herein and those of Florida Building Code, Building TAS and RAS listed in this code.~~

~~**R4402.12.3 Laboratory certification.** All testing required by this code shall be performed by a certified testing laboratory.~~

~~**R4403.12.4 Margin of safety.** A margin of safety of 2:1 shall be applied to all wind uplift resistance test results. All in situ (on site) testing shall have an applied 1.45:1 margin of safety.~~

~~**R4403.12.5 Material labeling.** All products shall be identified with the product approval number or logo; or the manufacturer's name or logo. ASTM standard roll goods shall be marked with a yellow line to identify the ASTM standard, or such other marking indicated in the Product Approval.~~

~~**R4402.12.5.1** All asphaltic shingles, tile products and metal roofing panels and clips shall be labeled on the underside with the Florida Building Code, Building insignia, or Product Approval number, or the wording "Florida Building Code, Building Product Approved," and manufacturer's initials or manufacturer's logo, or as specified in the manufacturer's Product Approval.~~

~~**R4402.12.6 Testing requirements.**~~

~~**R4402.12.6.1 Reserved.**~~

~~**R4402.12.6.2 Continuous roofing systems.** All continuous roofing systems shall be tested in compliance with TAS 110 and TAS 114 in its entirety. All continuous roofing systems shall resist a minimum of 90 pound per square foot~~

~~(psf) (4309 Pa) tested wind uplift pressure resistance. Continuous roofing system testing requirements shall be as follows:~~

~~**R4402.12.6.2.1 Spray applied polyurethane foam.** All spray applied polyurethane foam systems shall be tested in compliance to RAS 109 and TAS 110 and TAS 114.~~

~~**R4402.12.6.2.1.1 Physical properties testing for acrylic coatings used on spray applied polyurethane foam roofing assemblies shall be tested in compliance with ASTM D 6083 97a and Federal Specification TTC 555B, Test Specification for Wind Driven Rain Infiltration Resistance.**~~

~~**R4402.12.6.3 Liquid applied roofing membranes systems.** All liquid applied roofing membranes systems shall be tested in compliance with TAS 114, in addition to the physical properties testing requirements set forth in TAS 110, and fire resistance.~~

~~**R4402.12.6.3.1** For liquid applied acrylic roofing membrane assemblies, physical properties testing shall be in compliance with ASTM D 6083 97a and Federal Specification TTC 555B, Test Specification for Wind Driven Rain Infiltration Resistance.~~

~~**R4402.12.6.4** The building official may request that a quality control field uplift test be carried out on a continuous roofing system in compliance with test procedure TAS 124. Single ply systems are not required to meet the deflection requirements established in the test protocol. The roofing system shall resist the design pressures as calculated in compliance with Section R4403 and as established in TAS 124.~~

~~**R4402.12.6.4.1** Should a roofing system fail to meet a quality control field uplift test, the roofing contractor may propose to the building official an acceptable method of repair that is in compliance with the requirements of this code.~~

~~**R4402.12.6.5 Discontinuous roofing systems.** All discontinuous roofing systems shall be tested in compliance with TAS 100 for wind driven water infiltration resistance. Test specimens used for this test shall be constructed at the approved test facility. Testing requirements shall be as follows:~~

~~**R4402.12.6.5.1 Asphaltic shingle systems.** All asphaltic shingle systems shall comply with the following requirements: TAS 100, TAS 107, ASTM D 3462 and ASTM D 3018. Asphaltic shingle systems shall have a quality control testing program by an approved independent listing agency.~~

~~**R4402.12.6.5.2 Clay and cement roof tiles.** All roof tiles shall be tested in compliance with TAS 100. Physical properties testing for clay roof tiles shall be in compliance with ASTM D 1167. Physical properties testing for concrete roof tiles shall be in compliance with TAS 112. All roof tiles shall resist a minimum wind uplift resistance as determined by Section R4403 of this code and RAS 127. Clay and cement roof tile systems requirements are as follows:~~

~~**R4402.12.6.5.2.1 Underlayment.** All underlayments used in discontinuous roof tile systems shall be tested in compliance with TAS 103 and TAS 104, unless otherwise specifically listed in the applicable RAS.~~

~~**R4402.12.6.5.2.2 Mortar or adhesive set roof tile systems.** All mortar or adhesive set tile systems shall be tested for static uplift resistance in compliance with TAS 101, the results of which shall be listed in the system manufacturer's Product Approval.~~

~~**R4402.12.6.5.2.2.1** Additionally, roof tile system manufacturers may test for wind characteristics in compliance with TAS 108, provided the system is determined to be air permeable by testing in compliance with TAS 116; and the tiles meet the size criteria set forth in TAS 108. The result from this testing shall be an aerodynamic multiplier ( $I$ ) which represents the system's wind characteristics and shall be listed in the system manufacturer's Product Approval.~~

~~**R4402.12.6.5.2.2.2** Systems which are tested for characteristics, in compliance with TAS 108 as specified above, shall have the results of the TAS 101 testing treated as attachment resistance moment ( $M_f$ ), which is representative of the tile bond's resistance to overturning moment, and the tile's restoring moment due to gravity ( $M_g$ ). Such systems shall use the system's aerodynamic multiplier ( $I$ ) in conjunction with the system's attachment resistance moment ( $M_f$ ) and restoring moment due to gravity ( $M_g$ ), as determined from the TAS 101 static uplift testing. These results shall be used in conjunction with the attachment calculations outlined in TAS 115 as a moment based system. Such calculations shall be submitted to the building official for review.~~

~~**R4402.12.6.5.2.2.3** Systems that are not tested in compliance with TAS 108 as specified above shall have their Product Approval based on the system's uplift minimum characteristic resistance force ( $F'$ ), as determined from TAS 101 static uplift testing. These results shall be used in conjunction with the attachment calculations outlined in TAS 115 as an uplift based system. Such calculations shall be submitted to the building official for review.~~

~~**R4402.12.6.5.2.2.4** Testing in accordance with TAS 106 shall be considered a product application quality control test to determine the general adhesion properties of the system.~~

~~**R4402.12.6.5.2.3 Mechanically fastened, rigid roofing systems.** All mechanically attached set tile systems shall be tested for static uplift resistance in compliance with TAS 102 or TAS 102(A), the results of which shall be listed in the system manufacturer's Product Approval.~~



~~R4402.12.6.5.2.3.1~~ Additionally, roof tile system manufacturers may test for wind characteristics in compliance with TAS 108, provided the system is determined to be air permeable by testing in compliance with TAS 116; and the tiles meet the size criteria set forth in TAS 108. The result from this testing shall be an aerodynamic multiplier ( $I$ ) which represents the system's wind characteristics and shall be listed in the system manufacturer's Product Approval.

~~R4402.12.6.5.2.3.2~~ Systems which are tested for wind characteristics in compliance with TAS 108 as specified above shall have the results of the TAS 102 or TAS 102(A) testing treated as an attachment resistance moment ( $M_f$ ) which is representative of the rigid component's attachment resistance to an overturning moment, and the tile's restoring moment due to gravity ( $M_g$ ). Such systems shall use the system's aerodynamic multiplier ( $I$ ), in conjunction with the system's attachment resistance moment ( $M_f$ ) and restoring moment due to gravity ( $M_g$ ), as determined from the TAS 102 or TAS 102(A) static uplift testing. These results shall be used in conjunction with the attachment calculations outlined in TAS 115 as a moment based system. Such calculations shall be submitted to the building official for review.

~~R4402.12.6.5.2.3.3~~ Systems that are not tested in compliance with TAS 108 as specified above shall have their Product Approval based on the system's uplift minimum characteristic resistance force ( $F'$ ), as determined from TAS 102 or TAS 102(A) static uplift testing. These results shall be used in conjunction with the attachment calculations outlined in TAS 115 as an uplift based system. Such calculations shall be submitted to the building official for review.

~~R4402.12.6.5.2.3.4~~ TAS 106 quality control field static uplift testing shall be considered a product application quality control test to determine the general uplift resistance properties of the system.

~~R4402.12.6.5.2.4~~ **Metal shingles/panels.** All metal roofing shall be tested in compliance with TAS 100. All metal roofing shall resist a minimum wind uplift resistance as determined by Section R4403 for a roof slope of 9.5 degrees (0.0166 rad) and a roof mean height of 15 feet (4.6 m). All metal roofing systems testing requirements shall be as follows:

~~R4402.12.6.5.2.4.1~~ All metal roofing shall be test in compliance with requirements set forth in TAS 110 and TAS 125, and shall be tested for wind driven rain infiltration resistance in compliance with TAS 100.

~~R4402.12.6.5.2.4.2~~ Rigid metal shingle systems may be tested in an identical manner to nail on or batten tile systems as set forth in this code.

~~R4402.12.6.5.2.5~~ **Wood shingles or shakes.** All wood shingles and shakes shall be tested, as a system, for wind driven rain infiltration resistance in compliance with TAS 100. The same specimens as tested in TAS 100 shall be tested for pull through tear resistance, and such values shall be listed in the manufacturer's Product Approval.

~~**R4402.12.6.5.2.6 Fiber cement shingle or tile panels.** All fiber cement shingles or tiles shall resist a minimum wind uplift resistance as determined by Section ~~R4402~~ for a roof slope of 9.5 degrees (0.0166 rad) and a roof mean height of 15 ft (4.6 m). All fiber cement shingle or tiles shall be tested in compliance with the following requirements. Wind driven water resistance in compliance with TAS 100, Physical properties in compliance with TAS 110, TAS 135 and uplift resistance.~~

~~**R4402.12.6.5.2.6.1** Additionally, fiber cement tile system manufacturers may test for wind characteristics in compliance with TAS 108, provided the system is determined to be air permeable by testing in compliance with TAS 116 and the tiles meet the size criteria set forth in TAS 108. The result from this testing shall be an aerodynamic multiplier ( $I$ ) which represents the system's wind characteristics and shall be listed in the system manufacturer's Product Approval.~~

~~**R4402.12.6.5.2.6.2** Systems which are tested for wind characteristics in compliance with TAS 108 as specified above shall have the results of the TAS 102 or TAS 102(A) testing treated as an attachment resistance moment ( $M_f$ ) which is representative of the rigid component's attachment resistance to an overturning moment, and the tile's restoring moment due to gravity ( $M_g$ ). Such systems shall use the system's aerodynamic multiplier ( $I$ ), in conjunction with the system's attachment resistance moment ( $M_f$ ) and restoring moment due to gravity ( $M_g$ ), as determined from the TAS 102 or TAS 102(A) static uplift testing. These results shall be used in conjunction with the attachment calculations outlined in TAS 115 as a moment based system. Such calculations shall be submitted to the building official for review.~~

~~**R4402.12.6.5.2.6.3** Systems that are not tested in compliance with TAS 108 as specified above shall have their Product Approval based on the system's uplift minimum characteristic resistance force ( $F'$ ), as determined from TAS 102 or TAS 102(A) static uplift testing. These results shall be used in conjunction with the attachment calculations outlined in TAS 115 as an uplift based system. Such calculations shall be submitted to the building official for review.~~

~~**R4402.12.6.5.2.6.4** TAS 106 quality control field static uplift testing shall be considered a product application quality control test to determine the general uplift resistance properties of the system.~~

~~**R4402.12.6.5.2.7 Quarry roof slate.** All quarry roof slate shall be tested in compliance with TAS 100 and TAS 110.~~

~~**R4402.12.6.5.2.8 Roof board insulation.** All roof board insulation shall be tested for physical properties as set forth in Section 7 of TAS 110.~~

~~**R4402.12.6.5.2.9 Insulation fasteners, membrane fasteners and stress plates.** All insulation fasteners, membrane fasteners and stress plates shall be tested in compliance with TAS 117 Appendices A, B and C, and TAS 110 and TAS 114, Appendix E, Section 3, (DIN 50018), for corrosion resistance.~~

~~R4402.12.6.5.2.10 Roofing nails and tin caps.~~ All roofing nails and tin caps shall be tested for corrosion resistance in compliance with TAS 114, Appendix E, Section 2 (ASTM G 85).

~~R4402.12.6.5.2.11 Roof tile nails or fasteners.~~ All roof tile nails or fasteners, except those made of copper, monel, aluminum or stainless steel, shall be tested for corrosion in compliance with TAS 114, Appendix E, Section 2 (ASTM G 85), for salt spray for 1,000 hours.

~~R4402.12.6.5.2.11.1~~ Tile fasteners used in coastal building zones, as defined in Section R4403 shall be copper, monel, aluminum or stainless steel.

~~R4402.12.6.5.2.12 Roofing adhesives, mastics and coatings.~~ All roofing adhesives, mastics and coatings shall be tested in compliance with TAS 110 and TAS 121.

~~R4402.12.6.5.2.12.1~~ All roofing adhesives, mastics and coatings shall have a quality control testing program by an approved independent listing agency having unannounced follow up visits.

~~R4402.12.6.5.2.12.2~~ Acrylic roof coatings shall be tested for physical properties in compliance with ASTM D 6082-97a.

~~R4402.12.6.5.2.13 Ridge vents of metal, plastic or composition material.~~ All ridge vents shall be tested in compliance with TAS 110(A) for wind driven water infiltration. All ridge ventilators shall be restricted to roof mean height as tested in compliance with TAS 100(A), and shall be listed in the system manufacturer's Product Approval.

~~R4402.12.6.5.2.13.1~~ All plastic ridge ventilators shall be tested for physical properties as set forth in TAS 110 and R4412.

~~R4402.12.6.5.2.13.2~~ All plastic ridge ventilator manufacturers shall have an unannounced follow up quality control program from an approved listing agency. Follow up test results shall be made available upon request.

~~R4402.12.6.5.2.14 Edge metal, flashings, and coping.~~ All edge metal, flashing and copings, not specifically described in RAS 111, shall be tested in compliance with TAS 110, TAS 111(A), TAS 111(B) or TAS 111(C), respectively.

~~R4402.12.6.5.2.15~~ Roof tile premixed bagged mortar. All premixed roof tile mortar shall comply with the requirements set forth in TAS 110 and TAS 123, and shall have a quality control testing program by an approved independent listing agency having unannounced follow-up visits. Follow-up test results shall be made available upon request.

~~R4402.12.6.5.2.16~~ Roof tile adhesive used in repair or supplemental tile attachment. All roof tile adhesive used in repair or supplemental tile attachment shall comply with the requirements set forth in TAS 110 and TAS 123(A).

~~R4402.12.6.5.2.17~~ Roof tile adhesive used in adhesive set tiles systems. All roof tile adhesive used in adhesive set tile systems shall comply with the requirements set forth in TAS 110 and TAS 123. Physical properties shall be as follows:

~~R4402.12.6.5.2.17.1~~ Tested for compressive strength in compliance with ASTM D 1621 with a minimum strength of 18 psi (121 kPa) parallel to rise, and 12 psi (82.7 kPa) perpendicular to rise.

~~R4402.12.6.5.2.17.2~~ Tested for density in compliance with ASTM D 1622 with a minimum density of 1.6 pcf (25.6 kg/m<sup>3</sup>).

~~R4402.12.6.5.2.17.3~~ Tested for tensile strength in compliance with ASTM D 1623 with a minimum requirement of 28 psi (193 kPa) parallel to rise.

~~R4402.12.6.5.2.17.4~~ Tested for dimensional stability taken from a free rise sample specimen. Tested in compliance with ASTM D 2126 with a maximum volume change of 10.07 percent volume change at 40°F ( 40°C) for two weeks; and 16.0 percent volume change at 158°F (70°C) and 100 percent RH for two weeks.

~~R4402.12.6.5.2.17.5~~ Tested in compliance with ASTM D 2856 from a free rise sample specimen with a minimum requirement for 85 percent.

~~R4402.12.6.5.2.17.6~~ Tested for water absorption in compliance with ASTM D 2842 with a maximum requirement of 10 percent.

~~R4402.12.6.5.2.17.7~~ Tested in compliance with ASTM E 96 for moisture vapor transmission for a maximum of 3.1 perms.

**SECTION R4402.13  
HIGH-VELOCITY HURRICANE ZONES — REQUIRED OWNERS NOTIFICATION FOR ROOFING  
CONSIDERATIONS**

~~R4402.13.1 Scope. As it pertains to this section, it is the responsibility of the roofing contractor to provide the owner with the required roofing permit, and to explain to the owner the content of this section. The provisions of Section R4402 govern the minimum requirements and standards of the industry for roofing system installations. Additionally, the following items should be addressed as part of the agreement between the owner and the contractor. The owner's initial in the designated space indicates that the item has been explained.~~

~~2. **Renailing wood decks:** When replacing roofing, the existing wood roof deck may have to be re-nailed in accordance with the current provisions of Section R4403. (The roof deck is usually concealed prior to removing the existing roof system).~~

~~4. **Exposed ceilings:** Exposed, open beam ceilings are where the underside of the roof decking can be viewed from below. The owner may wish to maintain the architectural appearance; therefore, roofing nail penetrations of the underside of the decking may not be acceptable. The provides the option of maintaining this appearance.~~

~~6. **Overflow scuppers (wall outlets):** It is required that rainwater flow off so that the roof is not overloaded from a buildup of water. Perimeter/edge walls or other roof extensions may block this discharge if overflow scuppers (wall outlets) are not provided. It may be necessary to install overflow scuppers in accordance with the requirements of Sections R4402, R4403 and R4413.~~

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
Owner's/Agent's Signature      Date      Contractor's Signature

~~Exception: Attic spaces, designed by a Florida licensed engineer or registered architect to eliminate the attic venting, venting shall not be required.~~

**SECTION R4402.14**  
**HIGH VELOCITY HURRICANE ZONES — UNIFORM PERMIT APPLICATION**

[Use forms as found in the 2010 Residential code]

**SECTION R4402**  
**HIGH-VELOCITY HURRICANE ZONES —**  
**ROOF ASSEMBLIES AND ROOFTOP STRUCTURES**

**R4402.1. General** Refer to Chapter 15 of the Florida Building Code, Building.

**R4402.1.1 Scope.** The provisions of this section shall set forth minimum requirements for the installation of roofing components, roofing systems, roofing assemblies and the waterproofing thereof.

**R4402.1.2 Application.** These High velocity Hurricane Zone roofing requirements with associated roofing application standards (RAS) and testing application standards (TAS) are solely to be implemented in areas of high basic wind speeds, and where the jurisdiction having authority has adopted their use.

**R4402.1.2.1** All roofing components, roofing systems and roofing assemblies for construction regulated by this code shall comply with this chapter. All roofing components, roofing systems and roofing assemblies shall have a valid and current, referred to as product approval hereinafter. In the event that the manufacturer's published literature or instructions are in conflict with those of the product approval, the product approval shall prevail. Where items specifically and expressly addressed in this section are in conflict with the product approval, the provisions of this section shall prevail.

**R4402.1.2.2** Innovative products and/or systems outside those currently recognized under this chapter may have a product approval issued based on performance testing; in such case(s) the conditions set in the product approval shall prevail.

**R4402.1.2.3** For roofing systems to be installed on a specific building or structure, where an existing product approval may not be applied, such roofing system may be granted a onetime approval by the authority having jurisdiction, provided the applicant demonstrates, by testing and/or rational analysis that such roofing system complies with the provision of this code.

**R4402.1.2.4** Where a product approval does not address a detail for a specific job condition, the permit applicant may propose to the building official an alternate detail to address the specific need of the job. The building official may accept such proposal if it can be demonstrated that the provisions of this code will be met.

**R4402.1.2.5 Workmanship standards.** All roofing work shall be performed by a qualified contractor licensed to perform roofing, in compliance with the tolerances, quality and methods of construction established herein or set forth in the standards adopted by these high-velocity hurricane zone requirements. Roofing assemblies detailed in product approvals shall be installed in strict compliance with the method of application set forth in such product approval or, if not part of the product approval, in compliance with manufacturer's published application instructions, or as approved by the building official. (Aesthetic issues not affecting the performance of the roof are not part of this section.)

**R4402.1.2.5.1 Appearance.** If the architectural appearance is to be preserved from below, an alternate method of attachment complying with the wind load requirements of Section ~~R4403~~ may be proposed unless otherwise addressed in Section ~~R4402~~. The alternative attachment shall be prepared, signed and sealed by a Florida-registered architect or a Florida registered engineer, which architect or engineer shall be proficient in structural design.

**R4402.1.3** Permits outside these High Velocity Hurricane Zone requirements shall comply with Section 105 of the *Florida Building Code, Building*. Permits within high wind areas shall be required for all work in connection with the application, repair or maintenance of any roofing component or any roofing assembly and/or any of its components except as otherwise permitted in Section 105 of the *Florida Building Code, Building*.

**R4402.1.3.1** All new roofing construction, including recovering and reroofing, repair and maintenance shall have a uniform roofing permit application, as established by the authority having jurisdiction, completed and executed by a licensed contractor.

**R4402.1.3.2** The uniform roofing permit shall include calculations per Section ~~R4402~~ of this code, unless the roofing assembly is less than the height/pressure threshold allowed in the applicable protocols herein.

**4402.1.3.3** Reserved.

**R4402.1.3.4** Attachments to the uniform roofing permit application shall include two copies of each of the following documents: properly executed OWNERS NOTIFICATION FOR ROOFING CONSIDERATIONS herein; the fire directory listing pages product approval cover sheet, product approval specific system description, product approval specific system limitation, product approval general limitations, and applicable detail drawings; the municipal permit application; other components approvals; and any other additional data reasonably required by the authority having jurisdiction needed to determine the integrity of the roofing system.

**R4402.1.4.1** All roofing work for which a permit is required shall be inspected by the building official. One or more inspections may be performed at the same time at the request of the roofing contractor or when feasible. Lack of roofing contractor's personnel at the job site, in and of itself, shall not be cause to fail the inspection. Certain roofing inspections shall be performed during specific phases of the applications as noted below:

**R4402.1.4.2** For discontinuous roofing systems (as defined herein or Chapter 2):

**R4402.1.4.2.1** During or after application of the base sheet, anchor sheet or underlayment of any roofing system.

**R4402.1.4.2.2** During the installation of the cap sheet.

**R4402.1.4.2.3** During the installation of any prepared roof covering, such as shingles, tile, slate, shake, and similar.

**R4402.1.4.2.4** Upon completion of all adhesive set and mortar set tile systems, and prior to the final inspection, a field verification and static uplift test, in compliance with



TAS 106 shall be required to confirm tile adhesion. This test may be required by the building official for mechanically attached tile systems. All results of this test shall be submitted to the building official.

**R4402.1.4.3** For continuous roofing systems (as defined in herein or Chapter 2):

**R4402.1.4.3.1** During application of any roofing system prior to the full concealment of the adhesion/attachment process to the roof deck or to the existing roofing assembly.

**R4402.1.4.3.2** In cases where a roof area is less than 1,500 square feet (139 m<sup>2</sup>), and when the building official is not able to perform any of the above requested inspection in a timely manner, the building official may authorize to continue with the work and may require that satisfactory evidence be provided to show that the covered work was performed in compliance with this code.

**R4402.1.4.3.3** After all roofing work has been completed, a final inspection shall be performed by the building official.

## SECTION R4402.2 HIGH VELOCITY HURRICANE ZONES — DEFINITIONS

**R4402.2.1 Definitions.** For definitions outside Section R4402 and accompanied RAS and TAS, see Chapter 2. For the purposes of Section R4402, accompanying RAS, TAS and roofing products product approval, roofing terms shall be defined in compliance with ASTM D 1079, unless otherwise defined below. The definitions listed below shall take preference. Other terms used herein shall be defined as set forth in Chapter 2 of this code.

**AIR PERMEABLE ROOFING SYSTEM.** A roofing system consisting of a prepared roof covering over an approved underlayment on a sloped roof. The components within the prepared roof covering are discontinuously laid and small, with unsealed side and head laps. Air permeable roofing systems shall be applied over sheathed decks with either mechanical attachment or a mortar/adhesive bond. Any roofing system with sealed side or head laps shall not be defined as an air permeable roofing system. The authority having jurisdiction may require testing in compliance with TAS 116, to determine whether a roofing system is air permeable.

**ANCHOR SHEET.** A roofing felt mechanically attached to a nailable deck with approved fasteners to which insulation is then installed in a solid mopping of asphalt. The roofing membrane is then installed to the insulation in the usual manner.

**ARCHITECTURAL METAL PANEL.** Water shedding (hydrokinetic) roof panel fastened to a roof deck.

**ASTM (ASTM International).** A scientific and technical organization that is responsible for the development of standards on characteristics and performance of materials, products, systems, as adopted for the high velocity hurricane zone.

**NET FREE VENTILATING AREA (NFVA).** The gross area of the smallest plane area of the ventilating device reduced by the percentage of physical obstruction to the plane area.

**BASE SHEET.** The bottom or first ply of a roofing assembly over which subsequent roofing plies are applied. A base sheet may be designed for mechanical attachment, full or partial adhesion to the substrate.

**BUILDING INTEGRATED PHOTOVOLTAIC ROOFING.** A roofing product consisting of an electricity generating photovoltaic component integrated into a roof covering.

**CLASS A ROOFING ASSEMBLY.** A roofing assembly that, in combination with the roof slope, has been classified by an approved testing agency, with a listing and follow up service, as "Class A" in compliance with ASTM E 108 or UL 790.

**CLASS B ROOFING ASSEMBLY.** A roofing assembly that, in combination with the roof slope, has been classified by an approved testing agency, with a listing and follow up service, as "Class B" in compliance with ASTM E 108 or UL 790.

**CLASS C ROOFING ASSEMBLY.** A roofing assembly that, in combination with the roof slope, has been classified by an approved testing agency, with a listing and follow up service, as "Class C" in compliance with ASTM E 108 or UL 790.

**CONTINUOUS ROOFING SYSTEM.** An impervious roof covering, composed from a single or multiple layers, forming a homogenous membrane over the entire roof surface, applied to either a flat or pitched roof surfaces.

**CORROSION RESISTANT.** Any component that passes appendix of FMRC's Test Standard 4470, as modified, and set forth in TAS 114.

**COUNTER BATTENS.** Vertical wood strips installed on sloped roofs over which horizontal battens are secured. The primary roof covering is attached or secured to these horizontal battens.

**COUNTERFLASHING.** Formed metal or elastomeric sheeting secured on or into a wall, curb, pipe, roof-top unit or other surface to cover and protect the upper edge of a base flashing and its associated fasteners.

**DISCONTINUOUS ROOFING SYSTEM.** A roofing system with unsealed overlapping components, where the combined roofing system has openings at the point of overlap, applied to a sloped surface with a pitch of 2:12, or greater. Discontinuous roofing systems include asphalt shingles; concrete, clay or metal tile; wood shingles or shakes; and cement fiber roofing systems.

**DRY-IN.** The process of applying the first layer of felt in a roofing system.

**FM APPROVALS.** A research and testing organization that is responsible for examination and testing of construction and other products.

**FASTENER WITHDRAWAL RESISTANCE TEST.** A static pullout test of mechanical fasteners, which are used to anchor any roofing component, to determine the force required to withdraw a fastener from the substrate. Testing shall be in compliance with the test procedure detailed in TAS 105.

**FIRE-RESISTANT ROOF COVERING.** Any Class A, Class B or Class C roofing system applied to the appropriate deck type within the specified slope of the listed classification.

**FLASHING.** The roofing component used to seal roofing systems, where the system is interrupted or terminated.

**LAP.** See NRCA Manual fourth edition.

**METAL PROFILE.** Including but not limited to eave and gable drip, gravel stop, raised edge systems and fascia systems. All composite and nonmetallic flashing materials shall have a Product Approval.

**MINIMUM CHARACTERISTIC RESISTANCE FORCE.** A force or pressure which is representative of data from withdrawal resistance testing; static uplift testing; and/or wind uplift testing after the data has been statistically analyzed to a 95 percent level of precision.

**METAL ROOF PANEL.** An interlocking metal sheet having an installed weather exposure equal or greater than three square feet per sheet.

**METAL ROOF SHINGLE.** An interlocking metal sheet having an installed weather exposure less than three square feet per sheet.

**MOMENT.** A quantity that represents the effect of a force applied at a particular point in relation to a specific point or axis.

**NRCA.** The NRCA Roofing and Waterproofing Manual, fifth edition, as published by the National Roofing Contractors Association.

**PREPARED ROOF COVERING.** Any manufactured or processed roof covering designed for use as the top layer of a discontinuous roofing system applied to a sloped roof.

**RAS.** Roofing Application Standards.

**RECOVERING.** The process of covering an existing roofing assembly with a new roofing system or a prepared roofing system.

**REPAIR.** The work of corrective procedures by replacing or altering an existing roofing component or system to eliminate water intrusion.

**REROOFING.** The process of recovering or replacing an existing roofing system, either in its entirety or in existing sections.

**RIDGE VENT.** A ventilator located within 18 inches (457 mm) of the ridge that allows the escape of warm and/or moist air from the attic area or rafter cavity.

**ROOFING ACCESSORY.** A type of roofing product as described in Section R4402.6.6 of this code.

**ROOFING ASSEMBLY.** An assembly of interacting roofing components [includes the roof deck, vapor retarder (if present), insulation, and roof covering].

**ROOFING COATINGS, ADHESIVES AND MASTICS.** Any and all liquid materials applied to the roofing membrane layer to enhance ultraviolet light resistance; increase resistance to fire; increase reflectivity of the roofing assembly; or, in some way, enhance the performance of the roofing assembly. Roofing coatings, adhesives or mastics shall not contain asbestos materials.

**ROOF COVERING.** An assembly of multiple field-applied components or a single component designed to weatherproof a building's top surface. A roof covering may be a roofing assembly or form a portion thereof.

**ROOFING COMPONENT.** A roofing product that is incorporated into various roofing assemblies.

**ROOF DECK.** Solid or spaced sheathing to which the roofing or waterproofing system is applied.

**ROOFING MAINTENANCE.** Is the work of extending the longevity of a roofing system through preventative care, such as refilling pitch pans, applying coatings, re-graveling, resurfacing and re-caulking.

**ROOF SECTION.** A separation or division of a roof area by existing expansion joints, parapet walls, flashing (excluding valleys), difference of elevation (excluding hips and ridges), roof type or legal description; not including the roof area required for a proper tie-off with an existing system.

**ROOFING SYSTEM.** A system of interacting roofing components, generally consisting of membrane or primary roof covering and insulation (not including the roof deck) designed to weatherproof, and sometimes to improve, the building's thermal resistance.

**HIGH ROOF TILE PROFILE.** Those tiles having a rise to width ratio greater than 0.20

**LOW ROOF TILE PROFILE.** Those tiles having a rise to width ratio less or equal than 0.20; except those tiles meeting the flat profile definition.

**FLAT ROOF TILE PROFILE.** Those tiles with less than  $\frac{1}{2}$  inch (12.7 mm) rise.

**STRUCTURAL METAL PANEL.** Roof covering intended to be self supporting between structural members (see Sections [R4406.1.8.2](#) and [R4408.9.4](#)).

**TAS.** Testing Application Standard.

**UNDERLAYMENT.** One or more water shedding layers applied to a sloped roof prior to the application of a prepared roof covering. The primary purpose of an underlayment is defined as a water shedding layer to function in combination with a prepared roof covering.

**WOOD SHAKES.** Tapered or straight pieces of red cedar, or other wood types, of widths ranging from 3 inches to 14 inches (76 mm to 356 mm) ranging in lengths from 18 inches to 32 inches (437 mm to 819 mm) applied to a sloped roof, in conjunction with an approved underlayment, forming a discontinuous prepared roof system.

**WOOD SHINGLES.** Tapered pieces of red cedar, or other wood types, sawn on both faces, of widths ranging from 3 inches to 14 inches (76 mm to 356 mm) and lengths of 16 inches, 18 inches, and 24 inches (406 mm to 610 mm) applied to a sloped roof forming a discontinuous prepared roof system.

### **SECTION R4402.3 HIGH-VELOCITY HURRICANE ZONES — WEATHER PROTECTION**

**R4402.3.1 General.** Roof decks shall be covered with roof coverings secured to the building or structure in accordance with the provisions of this section. Roof coverings shall be designed, installed and maintained in accordance with this code and the manufacturer's installation instructions such that the roof covering shall serve to protect the building or structure. All roof coverings, roof systems and roof assemblies shall be designed and installed to resist the wind load requirements of Section [R4402.3](#) of this code.

**R4402.3.2.2 Membrane flashings.** All membrane flashing shall be installed according to the roof assembly manufacturer's published literature and in accordance with the provisions set forth in RAS 111.

**R4402.3.2.3 Metal flashings and terminations.** Metal flashing and terminations shall be of the material and thickness described in Section R4402.6.6 and RAS 111 of this code, and shall be designed and installed in accordance with RAS 111.

**R4402.3.2.3.1** Such felts shall be embedded in hot bitumen or an approved adhesive.

**R4402.3.2.3.2** Metal surfaces shall be primed with an ASTM D 41 or ASTM D 43 primer, as appropriate and allowed to dry prior to receiving hot bitumen or cold adhesive.

**R4402.3.2.4 Metal counterflashing.** Metal counterflashing shall be of the material and thickness described in Sections [R4402.6.6](#) and RAS 111 of this code, and shall be installed in accordance with RAS 111.

**R4402.3.2.4.1** Metal counterflashing shall be built into walls, set in reglets or applied as stucco type and shall be turned down over base flashing not less than 3 inches (76 mm).

**R4402.3.2.4.2** Metal counterflashing shall be side lapped a minimum of 4 inches (102 mm).

**R4402.3.2.4.3** Metal counterflashing, where set in reglets or surface mounted, shall be waterproofed, in accordance with applicable application standards.

**R4402.3.2.4.4** Where metal counterflashing is used as the means of sealing (such as a vented system) it shall be set in an approved sealant, sealed with an approved adhesive on the top flange and all joints shall be sealed with an approved sealant and lapped a minimum of 4 inches (102 mm).

**R4402.3.2.5 Roof penetration flashing.**

~~R4402.3.2.5.1~~ All pipes shall be flashed with approved lead sleeve type, pitch pans or other approved methods detailed in the roofing system assembly product approval. Lead flashing shall not be less than 2.5 pound per square foot (12.2 kg/m<sup>2</sup>). Flanges shall be a minimum of 4 inches (102 mm).

~~R4402.3.2.5.2~~ Other roof penetrations shall be suitably flashed with curbs, collars, pitch pans, in compliance with RAS 111 or an approved method, in compliance with the roofing system assembly Product Approval.

~~R4402.3.2.5.3~~ No roof penetration shall be located in roof valleys.

~~R4402.3.3~~ **Coping.** Copings shall be designed and installed to resist the wind load requirements of Section R4403 of this code, and shall be in accordance with the provisions set forth in RAS 111.

~~R4402.3.4~~ **Roof drainage.** Unless roofs are sloped to drain over roof edges, roof drains shall be installed at each low point of the roof. Where required for roof drainage, scuppers shall be placed level with the roof surface in a wall or parapet. The scupper shall be located as determined by the roof slope and contributing roof area. Scuppers shall be sized in accordance with the provisions contained in ASCE 7, Section 8 with commentary and shall comply with Section [R4403.6](#).

~~R4402.3.4.1.1~~ Gutters shall be in compliance with RAS 111.

~~R4402.3.4.2~~ **Overflow drains and scuppers.** Where roof drains are required, overflow drains or overflow scuppers sized in accordance with *Florida Building Code, Plumbing* shall be installed with the inlet flow line located not less than 2 inches (51 mm) or more than 4 inches (102 mm) above the low point of the finished roofing surface, excluding sumps. Overflow scuppers shall be a minimum of 4 inches (102 mm) in any dimension and shall be placed in walls or parapets and shall be located as close as practical to required vertical leaders, conductors or downspouts. Overflow drains and scuppers shall also comply with the *Florida Building Code, Plumbing*, and Section [R4403.6](#) of this code.

~~R4402.3.4.2.1~~ When overflow scuppers and roof drains are installed, they shall be lined with approved metal or other approved materials set forth in the roofing system assembly Product Approval.

~~R4402.3.4.2.2~~ When recovering, reroofing or repairing an existing roof, the existing number of scuppers and/or roof drains shall not be reduced, unless a new drainage system is designed by an architect or engineer, in compliance with the provisions of this code.

~~R4402.3.4.3~~ **Sizing and discharge.** Roof drains, gutters, conductors and leaders shall be sized and discharge in accordance with the *Florida Building Code, Plumbing*.

## **SECTION R4402.4 HIGH-VELOCITY HURRICANE ZONES — PERFORMANCE REQUIREMENTS**

**R4402.4.1 General.** All roof assemblies, roof coverings and roof systems shall have Product Approval, and shall meet the following minimum requirements.

**R4402.4.1.1** All continuous roofing assemblies shall be tested in compliance with FMRC Test Standards 4470 and/or 4471 (for metal roofing), as modified for the purposes of this code and set forth in TAS 114. Only those components listed within the roofing assembly Product Approval shall be approved for use with the roof covering. Roofing assemblies shall be acceptable for use in this code's jurisdiction providing they are in compliance with the fire classification required for the structure to which the roofing assembly is to be installed.

**R4402.4.1.2** All fastening devices and fastening assemblies used for insulation, anchor sheet or roof coverings shall be tested in compliance with Section [R4402.12](#) of this code.

**R4402.4.1.3** All roofing assemblies shall be tested by a testing laboratory certified.

**R4402.4.1.4** All roofing membranes and components shall be tested in compliance with the physical property test requirements detailed in TAS 110.

**R4402.4.1.5** No loose-laid ballasted or non-ballasted system shall be allowed.

**R4402.4.2 Guidelines for roofing applications.**

**R4402.4.2.1 Decks.** All roofing systems and prepared roof coverings shall be installed over solid decks, unless otherwise specifically allowed in other sections of this code.

**R4402.4.2.2 Minimum slope.** All roofing assemblies must be installed in compliance with the slope requirements specified in the product approval, in compliance with Table [R4402.4.2](#)

**TABLE R4402.4.2  
MINIMUM SLOPE**

SYSTEM TYPE	SLOPE
Fibrous Cement Shingles	4:12
Metal Panels Architectural	2:12
Metal Shingles	4:12
Mortar or Adhesive Tile	2:12
Mechanically Fastened Tile Asphalt Shingles Laminated 3-Tab	4:12 2:12 2:12
Quarry Slate	3- <sup>1</sup> / <sub>2</sub> :12
Wood Shakes Shingles	2:12 4:12 3- <sup>1</sup> / <sub>2</sub> :12

**R4402.4.2.3.2** All eaves shall provide a firm nailable substrate for secure attachment of perimeter edge metal in compliance with RAS 111.

**R4402.4.2.3.3** Perimeter edge metal shall be fastened with nails or fasteners fabricated from similar or compatible material. The nails or fasteners shall be as set forth in the roofing assembly product approval.

**R4402.4.2.4 Impact resistance.** Roof coverings installed on low slope roofs in accordance with R4402.8 shall resist impact damage based on the results of test conducted in accordance with ASTM D 3746, ASTM D 4272, CGSB 37-52, FM 4470, or TAS 114.

**R4402.4.2.5 Ridge vents.** Ridge vents shall have product approval, and shall be tested for wind driven rain in accordance with TAS 110 and R4402.12.

## **SECTION R4402.6 HIGH VELOCITY HURRICANE ZONES — MATERIALS**

**R4402.6.1 Scope.** Every roofing component shall comply with the applicable ASTM material standards adopted by this code. All such products shall bear the testing logo imprinted on the material and/or container or shall be marked in a distinctive manner to define compliance with the standards and shall be subject to be evaluated for compliance.

**R4402.6.4 Product identification.** All roofing components shall be labeled and/or identified as mandated by the Product Approval.

**R4402.6.4.1** ASTM standard roll goods shall be marked with a yellow line to identify the ASTM standard, or such other marking as may be deemed appropriate by the Product Approval.

### **R4402.6.5 Fasteners.**

**R4402.6.5.1** Nails shall be minimum 12 gauge, annular ring shank nails having not less than 20 rings per inch, heads not less than 3/8 inch (9.5 mm) in diameter, and lengths sufficient to penetrate through the thickness of plywood panel or wood plank decking not less than 3/16 inch (4.8 mm), or to penetrate into a 1 inch (25 mm) or greater thickness of lumber not less than 1 inch. Nails or wood screws shall be hot dipped electro or mechanically galvanized to a thickness sufficient to resist corrosion in compliance with TAS 114 Appendix E, Section 2 (ASTM G 85). All nails shall be Product Approved. All nail cartons or carton labels shall be labeled to note compliance with the corrosion resistance requirements. No roofing material shall be fully or partially adhered, unless otherwise noted in the roof assembly Product Approval directly to a nailable deck.

**R4402.6.5.2** Such fasteners shall be applied through tin caps no less than 15/8 inches (41 mm) and not more than 2 inches (51 mm) in diameter and of not less than 32 gauge (0.010 inch) sheet metal. Cap nails or prefabricated fasteners with integral heads complying with this section shall be an acceptable substitute. All tin caps, cap nails or prefabricated fasteners with integral heads shall be tested for corrosion resistance in compliance with TAS 114 Appendix E, Section 2 (ASTM G 85), and shall have Product Approval. All cartons or carton labels for tin caps, cap nails or prefabricated fasteners with integral heads shall note compliance with the corrosion resistance requirements.



**R4402.6.6 Metal roofing accessories.** All metal accessories for roofs shall be not less than 26 gauge G-90 galvanized or stainless steel, 16 ounce copper, 0.025 inch (0.6 mm) thick aluminum, lead sheet with a minimum 2.5 pound per square foot (12.2 kg/m<sup>2</sup>) or equivalent noncorrosive metal alloys or composite materials manufactured for use as roof termination. All composite and nonmetallic flashing materials shall have Product Approval.

**R4402.6.6.1** Metal accessories may be of a manufactured, shop fabricated or field fabricated type, providing the materials and fasteners are in compliance with the minimum requirements of this code and shall be sized, designed and installed in compliance with methods set forth in RAS 111.

**R4402.6.6.2** Gravel stop or drip edge profiles shall be as follows:

**R4402.6.6.2.1** The vertical face shall be a minimum of 1 1/2 inches (38 mm) and shall extend down not less than 1/2 inch (12.7 mm) below the sheathing or other member immediately contiguous thereto. In all cases, the deck flange shall be not less than 2 inches (51 mm) in width. Gravel stop or drip edge shall be sized, designed and installed in compliance with RAS 111.

**R4402.6.6.2.2** Gravel stop or drip edge shall be designed so that the bottom (the kick of the metal) of the drip edge shall have a minimum of 1/2 inch (12.7 mm) clearance from the structure.

**R4402.6.6.2.3** Reserved.

**R4402.6.6.2.4** Gravel stops shall be installed after all roofing felts have been applied, or in compliance with the application method set forth in the roofing assembly product approval. All asphalt or approved cold adhesive bonding areas shall be coated with ASTM D 41 or ASTM D 43, as required, and allowed to dry prior to application.

**R4402.6.6.2.5** Gravel stop and drip edges shall be joined by lapping a minimum of 4 inches (102 mm) and the entire interior of the joints shall be coated with approved flashing cement. Cover and splice plates shall be of the same material as the gravel stop and drip edge, and shall be sized, fabricated and installed in compliance with RAS 111.

**R4402.6.6.2.6** The deck flange shall be nailed with an approved minimum 12-gauge annular ring shank nail at 4 inches (102 mm) o.c. The nail shall be manufactured from similar and/or compatible material to the termination profile. All composite materials shall be fastened with nonferrous nails.

## SECTION R4402.7 HIGH VELOCITY HURRICANE ZONES — ROOF COVERINGS WITH SLOPES 2:12 OR GREATER

**R4402.7.1 General.** Prepared roof coverings shall be as defined in Section [R4402.2](#) 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 noted in the Product Approval, set in an adhesive bond.

**R4402.7.2 Underlayments.** Underlayment shall be as defined in Section [R4402.2](#). Underlayment shall be installed in compliance with the roofing component Product Approval and shall be in compliance with the following minimum requirements:

**R4402.7.2.1** Underlayment shall be attached to a nailable deck in a grid pattern of 12 inches (305 mm) between the side laps, with 6 inch (152 mm) spacing at the side laps.

**R4402.7.2.2** Where the architectural appearance of the underside is to be preserved, the underlayment shall be secured in accordance with Section [R4402.8.5.2](#).

**R4402.7.2.3** Tin caps and nails or cap nails shall be as defined in Section R4402.6.5.2.

**R4402.7.2.4** Underlayment nails shall be as defined in R4402.6.5.1.

**R4402.7.3** If the underlayment is a self-adhering membrane, the membrane shall be applied over a mechanically attached anchor sheet, attached in compliance with R4402.7.2.1.

**R4402.7.4** 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 D 226 Type I, with a 19 inch headlap; or (2) A single layer of an ASTM D 226, Type II with a 4 inch (102 mm) headlap; or (3) A single layer of an ASTM D 2626 coated base sheet with a 4 inch (102 mm) headlap, and (4) All endlaps shall be a minimum of 6 inches (152 mm).

**R4402.7.5 Fiber cement shingles.** Fiber cement shingles shall be applied in compliance with the shingle manufacturer's roofing assembly Product Approval. The roofing system assembly product approval shall meet the following minimum requirements:

**R4402.7.5.1** All non-asbestos fiber cement shingles shall conform to ASTM C 1225.

**R4402.7.5.2** Fiber cement shingles shall be installed in compliance with the nailing requirements set forth in the product approval; however, attachment of each component shall be with not less than two corrosion resistant fasteners. If adhesive is used at the head or side laps, the system shall be defined as a "sealed system" with load calculations in compliance with Section [R4402](#).

**R4402.7.5.3** All intersections shall be flashed in metal as provided in Section [R4402.6.6](#) and RAS 111.

**R4402.7.5.4** Fiber cement shingles shall be tested as set forth in Section [R4402.12](#).

**R4402.7.6 Quarry slate.** Quarry slates shall be applied in compliance with the slate manufacturer's Product Approval. The roofing assembly Product Approval shall meet the following minimum requirements:

**R4402.7.6.1** Quarry slates shall be installed with not less than two approved fasteners per slate.

**R4402.7.6.2** All terminations and intersections shall be flashed in metal as provided in Section [R4402.6.6](#) and RAS 111.

~~R4402.7.6.3 Quarry slates shall be tested in compliance with the requirements set forth in Section [R4402.12](#).~~

~~R4402.7.6.4 Installation of all quarry roof slates shall be limited to a roof mean height of 33 feet (10 m), unless otherwise specifically noted in the Product Approval.~~

**R4402.7.7 Asphaltic shingles.** Asphaltic shingles layout, alignment and placement of mechanical attachment shall be in compliance with the Product Approval, and shall be installed in accordance with RAS 115.

~~R4402.7.7.1 Underlayments exceeding minimum underlayments, as detailed in Section [R4402.7](#), shall be applied in compliance with the application methods detailed in the Product Approval. Where the architectural appearance of the underside of the roof is to be preserved, refer to Section [R4402.8.5.2](#).~~

~~R4402.7.7.2 Installation of all asphaltic shingles shall be limited to a roof mean height of 33 feet (10 m), unless otherwise specifically noted in the Product Approval.~~

~~R4402.7.7.3 The asphaltic chingle Product Approval shall meet the following minimum requirements:~~

~~R4402.7.7.3.1 Where asphaltic shingles are to be installed over insulated roof deck, a suitable nailable substrate, in accordance with Section [R4402.9.5.7](#) must be installed over the insulation prior to the installation of approved underlayment and shingles.~~

~~R4402.7.7.3.2 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 3/8 inch (4.8 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.~~

~~R4402.7.7.3.3 Intersections, eaves, rakes, valleys, gable ends, and the starter course of asphaltic shingles shall be set in an 8 inch (203 mm) wide bed of approved cold adhesive or roofing cement. Application of adhesive or cement shall be in compliance with the application instructions of the Product Approval. Shingles shall not extend more than 1/4 inch (6.4 mm) beyond the eave drip.~~

~~R4402.7.7.3.4 All perimeter termination and valleys shall be fabricated from metal. Minimum metal requirements are set forth in Section [R4402.6.6](#), and RAS 111.~~

~~R4402.7.7.3.5 Asphaltic shingles shall be tested in compliance with the provisions set forth in Section [R4402.12](#).~~

**R4402.7.8 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 [R4402.12](#). 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.

**R4402.7.8.1 Application.** All tile systems shall be installed over solid sheathed decks. All tile installation shall be in accordance with RAS 118, RAS 119, and RAS 120, as applicable.

**R4402.7.8.1.1** Roof tile mortar shall either be a pre-mixed unit having a Product Approval and tested in compliance with TAS 123 or a job site mix approved by the building official and in compliance with TAS 113.

**R4402.7.8.2** The roof tile product approval shall specify the slope requirement for each tile and underlayment system in accordance with Table [R4402.4.2](#).

**R4402.7.8.3** All roof tile factories shall be tested and comply with the requirements set forth in Section [R4402.12](#).

**R4402.7.8.4 All tile systems.** All tile application designs shall comply with the following limitations in order to withstand the wind loads prescribed in this section, as well as all wind load requirements set forth in Section [R4403](#).

**R4402.7.8.4.1** Roof tiles systems, combining mechanically fastened tile and mortar and/or adhesive, shall be acceptable.

**R4402.7.8.4.2** In an air permeable tile roofing systems: (1) the length of each tile shall be not less than 12 inches (305 mm) and not greater than 21 inches (533 mm) and the exposed width of the tile shall be between 8.5 inches and 15 inches (216 and 381 mm); (2) the maximum thickness of the nose (leading edge) of the tile shall not exceed 1.3 inches (33 mm); and (3) mortar or adhesive set system shall have at least two-thirds of the tile free of mortar and/or adhesive contact.

**R4402.7.8.5** The proposed method of attachment for tile systems which are considered to be air permeable, shall provide sufficient attachment resistance ( $M_t$ ) (listed in tile product approval) to meet or exceed the moment of resistance ( $M_r$ ) as determined by following the procedures outlined in RAS 127. The aerodynamic multiplier ( $k$ ) needed in RAS 127 shall be part of the tile Product Approval and shall be derived from the following formula:

For direct deck application  $k = (0.156) \times (b) \times (l)^2$

For batten application  $k = (0.144) \times (b) \times (l)^2$

Where  $b$  (in feet) = exposed width of the tiles

Where  $l$  (in feet) = length of tiles

**R4402.7.8.6** The proposed method of attachment for tile systems which are not considered air permeable shall provide a minimum characteristic force ( $F_c$ ) (listed in tile product approval) to meet or exceed the required uplift resistance ( $F_r$ ) as determined by following the procedures outlined in RAS 127.

**R4402.7.8.7** Tile systems shall extend beyond the drip edge (not including the rake) not less than ¾ inch (19 mm) but not more than 2 inches (51 mm).

**R4402.7.8.10** Mortar or adhesive set tiles applied at an incline from 6:12 up to and including 7:12 shall have the first course of tile (this applies to pan only on two-piece barrel tile) mechanically fastened with not less than one fastener per tile. As an alternate, the first course of tile shall be applied in mortar over a single layer of minimum 20-gauge galvanized wire mesh with openings of not less than ½ inch (12.7 mm) or greater than 1 ½ inches (38 mm) with minimum exposure of 12 inches (305 mm) which is mechanically attached to the deck through the underlayment with approved fasteners and tin-cap when back-nailing the cap sheet. Additionally, for roof inclines of 6:12 up to and including 7:12, every third tile of every fifth course, shall be mechanically fastened with not less than one fastener per tile. For roof inclines above 7:12, in addition to the mortar or adhesive, all tiles shall be mechanically fastened with not less than one fastener per tile. Apply approved flashing cement to seal all tile fastener penetrations, for all roof inclines.

**R4402.7.8.11** All tile systems shall be shingle-lapped interlocking and installed with the headlap as specified in the tile system Product Approval. In no case shall the minimum headlap be less than 2 inches (51 mm) for mortar or adhesive set tile, or less than 3 inches (76 mm) for mechanically set tile, unless restricted by product design.

**R4402.7.8.12** Where tiles are to be installed over an insulated roof deck, a suitable nailable substrate, in accordance with Sections [R4402.9.5.6](#) and [R4402.9.5.7](#) must be installed over the insulation prior to the installation of approved underlayment and tiles.

**R4402.7.8.13** For mortar or adhesive set tile, no more than two tiles shall be loose per roofing square [100 square feet (9.3 m<sup>2</sup>)]. No loose tile shall be adjacent to each other.

**R4402.7.9 Metal panels/chingles.** Steel panels/chingles shall be a minimum of G-90 corrosion resistant, and shall be not less than 26-gauge in thickness. Aluminum panels/chingles shall not be less than 0.025-inch (0.635 mm) thick. All other metal panel/chingle products shall be an equivalent weight. All metal panel/chingle assemblies shall be capable of withstanding foot traffic without damage to the metal panels/chingles. Metal panels/chingles shall have Product Approval for a complete metal system, which shall include the panel/chingle, underlayment and all related accessories to provide a complete waterproof system.

**R4402.7.9.1** All metal panels/chingles assemblies shall be tested in accordance with Section [R4402.12](#), and TAS 125.

**R4402.7.9.2** The entire application method of all metal panel/chingle systems shall be detailed in the Product Approval and PAS 133, as applicable.

**R4402.7.9.3** Metal chingles may be applied as a recover over a single layer of asphaltic shingles or smooth surface roofing, providing the deck is solid sheathed and in compliance with the provisions of this code, the existing prepared roof covering is in compliance with provisions of this code and the entire metal chingle system is applied as set forth in the Product Approval.

~~R4402.7.9.4 Metal panel/chingle systems shall not extend more than 1 inch (25 mm) beyond the roof eave.~~

~~R4402.7.9.5 All intersections shall be flashed in metal as provided in Section [R4402.6.6](#), RAS 111 and the roof assembly Product Approval.~~

~~R4402.7.10 Wood shingles and shakes. All wood shingles and shakes shall be installed in accordance with RAS 130. Installation of all wood shingles and shakes shall be limited to a roof mean height of 33 feet (10 m), unless otherwise specifically noted in the Product Approval.~~

~~R4402.7.10.1 All wood chingle/chake systems shall be tested in accordance with Section [R4402.12](#).~~

~~R4402.7.11 Building integrated photovoltaic roofing modules/chingles. The installation of building integrated photovoltaic roofing modules/chingles shall comply with the provisions of this section.~~

~~R4402.7.11.1 Material standards. Building integrated photovoltaic roofing modules/chingles shall be listed and labeled in accordance with UL 1703.~~

~~R4402.7.11.2 Attachment. Building integrated photovoltaic roofing modules/chingles shall be attached in accordance with the manufacturer's product approval.~~

~~1518.11.3 Wind resistance. Building integrated photovoltaic roofing modules/chingles shall be tested in accordance with procedures and acceptance criteria in TAS 107. Building integrated photovoltaic roofing modules/chingle packaging shall bear a label to indicate compliance with the procedures in TAS 107.~~

## **SECTION R4402.8 HIGH VELOCITY HURRICANE ZONES — ROOF COVERINGS WITH SLOPES LESS THAN 2:12**

~~R4402.8.1 General. All adhered roofing components shall be bonded to the various types of substrates in compliance with the requirements set forth in the roofing assembly Product Approval and the following minimum requirements. The authority having jurisdiction may adopt RAS 150 as the means of complying with the requirements listed in this section.~~

~~R4402.8.2 All packaged asphalt shall have the following data printed on the carton wrapper:~~

~~R4402.8.2.1 ASTM designation and type;~~

~~R4402.8.2.2 Flash point as determined by ASTM D 92, *Flash and Fire Point*, by Cleveland open cup; and~~

~~R4402.8.2.3 Equiviscous temperature (EVT) at which the asphalt attains a viscosity of 125 centipoise (25 centipoise for coal tar) as determined by ASTM D 4402, *Viscosity Determinations of Unfilled Asphalt Using The Brookfield Thermoset Apparatus*.~~

**R4402.8.3** Asphalt types, as defined by ASTM D 312, shall be employed in all roofing assemblies. Application of asphalt shall be in compliance with Table R4402.8.3A and Table R4402.8.3B or as detailed in the roofing assembly Product Approval.

**TABLE R4402.8.3A**  
**SLOPE AND APPLICATION TEMPERATURE CRITERIA**

ASTM D312 TYPES OF ASPHALT		MAXIMUM <sup>1</sup>		
		SLOPE (in./ft) MOP	TEMPERATURE <sup>2</sup>	
			MECHANICAL	
Type I	Dead level	1/4	350 +/- 25	375 +/- 25
Type II	Flat	1/2	400 +/- 25	425 +/- 25
Type III	Steep	3	425 +/- 25	450 +/- 25
Type IV	Special steep (All roof tile systems)	N/A	450 +/- 25	475 +/- 25

<sup>1</sup> 1 inch = 25.4 mm; C° = [(°F) - 32]/1.8

<sup>2</sup> Temperature and slope measurements are at point of application

**TABLE R4402.8.3B**  
**SLOPE AND APPLICATION TEMPERATURE CRITERIA**

ASTM 450 COAL TAR TYPE NO.	TYPE OF COAL TAR	MAXIMUM SLOPE (in./ft)	TEMPERATURE RANGE (°F)
Type I	Coal tar pitch	1/4	360 +/- 25
Type III	Coal Tar bitumen	1/4	375 +/- 25

<sup>1</sup> 1 inch = 25.4 mm; C° = [(°F) - 32]/1.8

**R4402.8.4** Back nailing of inter ply sheets shall not be required when using ASTM D 312 Type IV asphalt on slopes less than 3:12.

**R4402.8.5 Mechanical attachment.** All mechanically attached roofing components shall be attached to the various types of substrates in compliance with the requirements set forth in the roofing assembly Product Approval and the following minimum requirements.

**R4402.8.5.1 Base sheet attachment on wood decks.** Nails shall be minimum 12 gauge, annular ring shank nails having not less than 20 rings per inch; heads not less than  $\frac{3}{8}$  inch (9.5 mm) in diameter; and lengths sufficient to penetrate through the thickness of plywood panel or wood plank decking not less than  $\frac{3}{16}$  inch (4.8 mm), or to penetrate into a 1 inch (25.4 mm), or greater, thickness of lumber not less than 1 inch (25.4 mm). Nails shall be hot dipped; electro or mechanically galvanized to a thickness sufficient to resist corrosion in compliance with Appendix E of TAS 114. All nails shall be Product Approved. All nail cartons or carton labels shall be labeled to note compliance with the corrosion resistance requirements. No roofing material shall be fully or partially adhered, unless otherwise noted in the roof assembly Product Approval directly to a nailable deck.

**R4402.8.5.1.1** Tin caps shall meet the requirements of Section 4402.6.5.2.

~~R4402.8.5.1.2 Prefabricated fastener systems complying with Sections [R4402.8.5.1](#) and [R4402.8.5.1.1](#) may be used, provided they have Product Approved.~~

~~R4402.8.5.1.3 Spacing of such fasteners shall be in compliance with patterns set forth in the roofing assembly Product Approval.~~

~~R4402.8.5.2 Where the architectural appearance of the underside is to be preserved, a base sheet may be secured in an alternate method of attachment prepared, signed, and sealed by a Florida registered architect or engineer, or in buildings where the mean roof height does not exceed 15 foot (4.6 m), a base sheet may be secured with 1 ¼ inch (32 mm) fasteners on supporting members, with a minimum of ½ inch (12.7 mm) fasteners between the supporting members, all of which shall be secured through tin caps and nailed 6 inches (152 mm) o.c. in all directions.~~

~~R4402.8.5.3 Lightweight insulating concrete. All lightweight insulated concrete shall be vented per roofing system manufacturer recommendations.~~

~~R4402.8.5.3.1 Lightweight concrete shall not be applied over an existing roof deck unless the supporting structure has been approved as adequate to sustain the added weight. Calculations verifying the adequacy of the existing structure to sustain the added weight shall be prepared, signed, sealed and dated by a Florida registered architect or engineer, which architect or engineer is proficient in structural design, and submitted with the uniform roofing permit application.~~

~~R4402.8.5.4 Other nailable decks. The mechanical attachment of roofing components to other nailable decks shall be governed by the roofing assembly Product Approval.~~

~~R4402.8.6 Cast in place and precast structural concrete decks. Cast in place and precast structural concrete decks are considered non-nailable. Concrete decks shall be clean, dry and fully primed with ASTM D 41 or ASTM D 43, as required, primer applied at a rate of not less than 1 gallon (3.8 L) per square. Hot asphalt or cold adhesive shall not be applied until the primer has fully dried.~~

~~R4402.8.7 Steel decks. Steel decks shall be covered with a roof insulation panel having its own Product Approval and listed in the roofing assembly product approval. Insulation panels shall be mechanically fastened in compliance with the mechanical attachment patterns listed in the roofing assembly product approval, and in accordance with the provisions of RAS 417.~~

~~R4402.8.7.1 If the deck thickness, on an existing steel deck, is less than 22 gauge, a field fastener withdrawal resistance test shall be conducted, in compliance with TAS 105, to confirm compliance with the wind load requirements of Section [R4403](#). Test results shall be submitted with the uniform roofing permit application for review prior to issuance of the roofing permit. The field fastener withdrawal resistance test shall be carried out by a certified testing laboratory.~~

~~R4402.8.7.2 Steel decks shall be welded or mechanically attached to the structure in compliance with the design pressure requirements set forth in Section [R4403](#).~~

~~R4402.8.7.3 Composite wood and insulation panels shall be mechanically attached to steel decks in compliance with the attachment requirements enumerated in the~~



~~insulation roofing component Product Approval. The composite wood insulation panel shall be in compliance with the minimum sheathing requirements of this code.~~

~~**R4402.8.8 Flashing.** All flashing shall be installed according to the roof assembly manufacturer's published details and literature and in accordance with RAS 111.~~

~~**R4402.8.9 Valleys.** Valleys in BUR shall be installed in according to the roof assembly manufacturer's published literature for high wind areas and in compliance with the applicable detail described in the Product Approval.~~

~~**R4402.8.10 Parapet walls.** All parapet wall details shall be installed in accordance with the roofing system product approval, manufacturer's published details and literature and in accordance with approved methods detailed in RAS 111.~~

~~**R4402.8.11 Insulation.** Roof insulation shall be applied in compliance with the roofing system Product Approval and RAS 117.~~

~~**R4402.8.12 Surfacing.** Roofing assemblies shall be surfaced in compliance with the Product Approval. Surfacing shall be in sufficient quantity to comply with the required fire classification. Aggregate surfacing shall not be used on slopes greater than 3:12. Aggregate shall be embedded in a flood coat of bitumen applied over a prepared top ply.~~

~~**R4402.8.12.1** On slopes of 3:12 or less, not less than 400 pounds (182 kg) of roofing gravel or 300 pounds (145 kg) of slag per square shall be applied. A minimum of 50 percent of the total aggregate shall be embedded in the flood coat of bitumen. Aggregate shall be dry and free from dirt and shall be in compliance with the sizing requirements set forth in ASTM D 1863. A building official may as an option, request a test to confirm compliance with these requirements.~~

~~**R4402.8.12.2** On inclines greater than 3:12, a smooth surface coating shall be applied.~~

~~**R4402.8.12.3** Mineral surfaced cap sheet applications shall not require any additional surfacing unless required with the particular assembly for a fire classification.~~

~~**R4402.8.12.4** All smooth surface applications shall be coated with an aluminized or emulsion coating, having a valid and current Product Approval and shall be in compliance with the application instructions in said Product Approval. Coating quantity shall be in compliance with the required fire rating classification for the structure.~~

~~**R4402.8.13 Attachment of metal termination.** All edge metal and terminations shall be installed according to manufacturers published literature, provided it meets the minimum requirements as set for in RAS 111 and Section [R4403](#).~~

~~**R4402.8.14 Expansion joints.** Expansion joint covers and expansion joint components shall be constructed and installed in accordance with the roofing assembly manufacturer's published literature.~~

~~**R4402.8.15 Venting roofing assemblies.** All roof assemblies shall be applied to a dry substrate. Vapor retarders shall be installed, where applicable, to reduce moisture vapor flow into insulation from the warm, humid building interior, leading to internal condensation. Vents shall be installed to assist in the expulsion of moisture vapor where such vapor may enter the roofing assembly or moisture, as defined in Section R4402.11.12, has been left in~~

an existing roofing assembly. Venting units shall not allow vapor to enter the roofing assembly when the high vapor pressure side is above the roofing membrane.

~~**R4402.8.16 Waterproofing.** Waterproofing systems may be installed in lieu of an approved roof system over sloped or horizontal decks specifically designed for pedestrian and/or vehicular traffic, whether the deck is above occupied or unoccupied space. In new construction the minimum deck slope shall be 1/4 : 12.~~

~~**R4402.8.16.1** The waterproofing system must possess a current and valid product approval.~~

~~**R4402.8.16.2** If an overburden or wearing surface is not to be installed, the waterproofing system must be approved by the manufacturer for use in vehicular and/or pedestrian traffic locations.~~

~~**R4402.8.16.4** If any portion of the waterproofing membrane is to remain exposed, the waterproofing system shall be ultraviolet resistant.~~

~~**R4402.8.16.5** Flashings must be installed according to the waterproofing manufacturer's published specifications and in compliance with the material and attachment standards of RAS 111.~~

~~**R4402.8.16.6** The waterproofing system shall be flood tested in accordance with ASTM D 5957.~~

~~**R4402.8.16.6.1** The flood test shall take place after installation of the waterproofing membrane and prior to the installation of any above membrane components, wearing surface or overburden.~~

~~**R4402.8.16.6.2** An approved testing lab shall provide written verification to the building official confirming that the flood test was performed along with the results, prior to final inspection.~~

## SECTION R4402.9

### HIGH VELOCITY HURRICANE ZONES — ROOF INSULATION

~~**R4402.9.1 General.** All roof insulation shall have Product Approval as an approved roofing component for use in roofing assemblies. All insulation shall be tested for physical properties in accordance with TAS 110.~~

~~**R4402.9.2.1** Foam insulation panels shall be overlaid with a perlite, fiberglass, wood fiber or mineral wool overlay unless specifically stated to the contrary in the roof assembly Product Approval.~~

~~**R4402.9.4 Insulation fasteners, membrane fasteners and stress plates.** All Insulation fasteners, membrane fasteners and stress plates shall have a roof component Product Approval, and shall be tested in compliance with RAS 117, Appendixes A, B and C, and TAS 110 and TAS 114, Appendix E, Section 3 (DIN 50018), for corrosion resistance.~~

**R4402.9.5 Application.** Roof insulation shall be applied in strict compliance with the application methods detailed in the roof assembly Product Approval and with the requirements set forth in RAS 117.

**R4402.9.5.1** Roof insulation, either on the ground or on the roof top, shall be kept dry. The building official shall instruct the removal of the insulation from the job when elevated moisture levels are found in the insulation or where panels cannot achieve 85 percent adhesion.

**R4402.9.5.2** When applied in hot asphalt or cold adhesive, no insulation panel's dimension shall be greater than 4 feet (1219 mm).

**R4402.9.5.3** Strip or spot mopping of insulation panels shall be used as an application method only when approved in the roof assembly Product Approval.

**R4402.9.5.4** Where more than one layer of insulation is applied, joints between layers shall be staggered.

**R4402.9.5.5** Application in approved cold adhesive shall be as detailed in the Product Approval and shall be in compliance with the required fire classification.

**R4402.9.5.6** Nail boards or composite panels with a nailable surface may be applied to sloped decks for the application of prepared roof covering or metal roofing systems, providing that the nailing surface is minimum 15/32-inch (12 mm) exterior grade plywood sheathing, and has been attached to the deck with approved fastening assemblies in accordance with the windload requirements of Section [R4403](#). Composite panels shall be gapped a minimum of 1/8 inch (3.2 mm) to allow for expansion of the sheathing panel.

**R4402.9.5.7** Suitable nailable decks installed over rigid board roof insulation in buildings of mean roof height of 35 feet (10.7 m) or less, shall be a minimum of 15/32-inch (12 mm) exterior grade plywood sheathing. These decks shall be fastened to every structural roof frame member or to the existing deck under the insulation, at intervals of not more than 24 inches (610 mm) apart, with a minimum #12 approved insulation fastener spaced at a maximum of 12 inches (305 mm) apart in one direction with a minimum penetration of 1½ inches (38 mm) into the structural member or deck. In these cases the maximum thickness of the rigid insulation board shall not exceed 2 inches (51 mm). An alternate method of attachment may be proposed, provided it is in compliance with Section [R4403](#), and it is prepared, signed and sealed by a Florida-registered architect or a Florida professional engineer, which architect or engineer shall be proficient in structural design.

**R4402.9.5.8** Mechanical attachment of insulation panels at uneven areas shall be acceptable. Hollowing, cutting or scoring of insulation panels to provide contact shall not be acceptable.

## **SECTION R4402.10 HIGH-VELOCITY HURRICANE ZONES — REROOFING**

~~**R4402.10.1 General.** Materials and methods of application used for recovering or replacing an existing roof covering, system or assembly shall comply with the requirements set forth in Sections [R4402.1](#) through [R4402.14](#).~~

~~**R4402.10.2** Repairs shall be carried out with roofing components as defined in this section having Product Approval.~~

~~**R4402.10.3** Repairs shall be carried out in such a manner as to not to create additional ponding water.~~

~~**R4402.10.4** 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.~~

~~**R4402.10.5** A roofing system shall not be applied over an existing roof or over an existing roof deck where the roof sheathing has not been fastened in compliance with this code or where the roof sheathing will not permit effective fastening or where sheathing is water soaked or deteriorated so that effective attachment is not possible. All areas of deteriorated sheathing shall be removed and replaced. The building official shall not be required to inspect the nailing of the sheathing under this section.~~

~~**R4402.10.6** Structural concrete decks shall be allowed to dry or shall be dried prior to application of an ASTM D 41 or ASTM D 43, as required, or roofing system proprietary primer where the base sheet or base insulation layer is bonded to the concrete deck.~~

~~**R4402.10.7** On lightweight concrete, gypsum and cementitious wood fiber roof decks a field fastener withdrawal resistance test, in compliance with TAS 105, shall be carried out to confirm compliance with wind load requirements of Section [R4403](#).~~

~~**R4402.10.7.1** If the tested fasteners exhibit a minimum characteristic resistance force less than 80 percent than that listed in the product approval, a structural engineer shall examine the deck's integrity and provide a proposed attachment specification. Such specification shall be submitted with the uniform roofing permit application for review and approval by the building official prior to the issuance of a roofing permit. Calculations for the attachment of the anchor sheet/base sheet or insulation over these deck types, shall be in compliance with RAS 117.~~

~~**R4402.10.8** Steel decks shall be examined prior to recover for indication of corrosion. Any corrosion identified and exposed on the roof side shall be treated with a rust inhibitor, providing the field fastener withdrawal resistance values of the proposed mechanical fasteners comply with the requirements of Section R4403 of this code. All steel decks less than 22-gauge shall be field tested for fastener withdrawal resistance for compliance with Section R4403 prior to application of a new roofing system. Test results shall be submitted with the uniform roofing permit application.~~

~~R4402.10.9 One additional roofing system may be applied over an original roofing assembly, providing the existing roofing assembly complies with the requirements of Section [R4402.10](#).~~

~~R4402.10.10 If the recover roofing assembly is to be bonded to an existing roofing membrane, the existing roofing membrane shall be tested in compliance with TAS 124 for uplift resistance. The existing roofing membrane shall resist the design pressures calculated under Section [R4403](#) of this code. Test results shall be submitted with the uniform roofing permit application.~~

~~R4402.10.11 If the recover roofing assembly is mechanically attached through either a base sheet or insulation layer, the attachment assembly shall be field tested for fastener withdrawal resistance, in compliance with TAS 105, and laboratory tested for pull-over resistance to ensure compliance with wind uplift requirements set forth in Section [R4402](#) of this code. Test results shall be submitted with the uniform roofing permit application. Recover roofing assembly anchor sheet or base sheet shall not be mechanically fastened directly to existing gravel roof unless all gravel is completely removed.~~

~~R4402.10.12 Moisture content of the existing roofing assembly to be covered by a new roofing system shall not exceed 5 percent by weight in the roofing membrane and 8 percent by weight in the insulation system, as verified by moisture survey performed in accordance with TAS 126. Test results shall be submitted with the uniform roofing permit application.~~

~~R4402.10.13 Prior to starting the work the contractor has the responsibility of notifying the owner, by means of the roofing permit and required owners notification for roofing considerations herein, of any possibility of ponding water and recommend a structural review if ponding water is a possibility.~~

~~R4402.10.14 If the new roofing system is to be bonded to the existing roof surface, the surface shall be free of all loose gravel, dirt and silt and dry prior to commencement of the roofing application. All blisters shall be cut and repaired prior to roofing application.~~

~~R4402.10.14.1 If the existing roof surface has gravel embedded in hot asphalt, all loose gravel shall be removed together with any dirt and silt. The dry membrane surface shall be primed with ASTM D 41 primer or proprietary roofing system primer and allowed to dry thoroughly. A flood coat of ASTM D 312, type III or IV asphalt shall be applied to sufficient depth to cover the remaining embedded gravel. The prepared substrate shall be suitable for application of a new insulation layer only.~~

~~R4402.10.14.2 In the case of existing coal tar assemblies, the existing roof surface shall be primed with ASTM D 43 primer or covered with a mechanically attached separation board prior to application of a new coal tar assembly. If an existing coal tar assembly is to be covered with an asphalt applied roofing system, only the separation board is acceptable. The attachment of the entire assembly, including the separation board, shall meet the design pressure requirements set forth in Section [R4402](#).~~

~~R4402.10.14.3 Insulation shall have product approval as a roofing component approved for use as a part of the roofing assembly. The insulation panels shall be bonded or mechanically attached in compliance with the Product Approval and RAS 117.~~

~~R4402.10.15 Where an existing sloped roof is sheathed with spaced sheathing, any existing prepared roof covering shall be removed. New sheathing shall be applied in compliance with~~

~~Section R4402, or open spacing shall be filled with dimensional lumber to create solid wood sheathing providing the spaced sheathing is in compliance with this code. Spaced sheathing is approved for use with wood shakes and wood shingles only.~~

~~R4402.10.16 No recover application shall take place over existing wood shingles, shakes, slate, tile or metal shingles.~~

~~R4402.10.17 Asphaltic shingle assemblies may be applied over one existing layer of asphaltic shingles having not more than 1/8 inch (3.2 mm) difference in level in the existing shingle material. Recover over an existing shingle system shall be with a product having Product Approval as prepared roof covering, in strict compliance with the application method detailed in the Product Approval.~~

~~R4402.10.17.1 Application of elastomeric and or maintenance coating systems over existing asphalt shingles shall be in accordance with the shingle manufacturer's approved installation instructions.~~

~~R4402.10.18 Sprayed polyurethane foam (PUF) and elastomeric coating systems may be applied over existing roofing assemblies providing the PUF system has obtained Product Approval, the deck has been prepared in compliance with the Product Approval and this code, the application is in strict compliance with the foam manufacturer's published application instructions for the environmental conditions at the time of application and post-application inspections conform to RAS 109.~~

~~R4402.10.18.1 No sprayed polyurethane foam (PUF) shall be applied over existing composition shingles.~~

~~R4402.10.18.2 Upon completion of a PUF system, an inspection of the system shall be carried out by an authorized representative of the coating manufacturer. A certification shall be furnished to the building official within 30 days of completion, confirming that the quality control tests detailed in the PUF system Product Approval have been carried out with satisfactory results.~~

~~R4402.10.18.3 Should a PUF system have inadequate adhesion to meet the design pressures, as set forth in Section R4403, the roofing system shall be removed and replaced with a roofing system tested to adequate adhesion. An additional inspection shall be required once the roofing system has been replaced. A field adhesion test may be requested by the building official during the application or at the completion of the project to confirm adequate adhesion.~~

~~R4402.10.18.4 The PUF system shall comply with R4402.10.~~

~~R4402.10.18.5 All PUF systems shall be installed by licensed roofing contractors holding an applicator's certificate from the manufacturer holding the Product Approval for the PUF system.~~

~~R4402.10.19 Roof coverings or roofing components, such as tile, slate or similar, shall not be applied over an existing roofing system.~~

~~R4402.10.20~~ Lightweight insulated concrete shall not be applied over an existing roofing system unless the existing roofing assembly is verified to be adequate to accept the new lightweight insulating concrete and is in compliance with the testing required herein.

### **SECTION R4402.11 HIGH VELOCITY HURRICANE ZONES — ROOFTOP STRUCTURES AND COMPONENTS**

~~R4402.11.1~~ **Rooftop structures.** Rooftop structures shall be designed and constructed in accordance with the *Florida Building Code, Building*.

~~R4402.11.2~~ **Rooftop mounted equipment.** All rooftop equipment and supports shall be secured to the structure in compliance with the loading requirements of Section ~~R4402~~. The use of wood "sleepers" shall not be permitted.

### **SECTION R4402.12 HIGH VELOCITY HURRICANE ZONES — TESTING**

~~R4402.12.1~~ **Scope.** This section defines the minimum testing requirements for substrates, roofing components, roofing systems and roofing assemblies. All roofing products shall be tested for physical properties, water infiltration, uplift performance and fire resistance, as addressed within this code.

~~R4402.12.1.1~~ Testing requirements for physical properties of all roofing products shall be as set forth in TAS 110.

~~R4402.12.2~~ **Application.** Testing for substrates, roofing components, roofing systems and roofing assemblies shall comply with the provisions herein and those of *Florida Building Code, Building* TAS and RAS listed in this code.

~~R4402.12.3~~ **Laboratory certification.** All testing required by this code shall be performed by a certified testing laboratory.

~~R4402.12.4~~ **Margin of safety.** A margin of safety of 2:1 shall be applied to all wind uplift resistance test results. All in situ (on-site) testing shall have an applied 1.45:1 margin of safety.

~~R4402.12.5~~ **Material labeling.** All products shall be identified with the product approval number or logo; or the manufacturer's name or logo. ASTM standard roll goods shall be marked with a yellow line to identify the ASTM standard, or such other marking indicated in the Product Approval.

~~R4402.12.5.1~~ All asphaltic shingles, tile products and metal roofing panels and clips shall be labeled on the underside with the *Florida Building Code, Building* insignia, or Product Approval number, or the wording "Florida Building Code, Building Product Approved," and manufacturer's initials or manufacturer's logo, or as specified in the manufacturer's Product Approval.

~~R4402.12.6~~ **Testing requirements.**

**~~R4402.12.6.1 Reserved.~~**

~~**R4402.12.6.2 Continuous roofing systems.** All continuous roofing systems shall be tested in compliance with TAS 110 and TAS 114 in its entirety. All continuous roofing systems shall resist a minimum of 90 pound per square foot (psf) (4309 Pa) tested wind uplift pressure resistance. Continuous roofing system testing requirements shall be as follows:~~

~~**R4402.12.6.2.1 Spray applied polyurethane foam.** All spray applied polyurethane foam systems shall be tested in compliance to RAS 109 and TAS 110 and TAS 114.~~

~~**R4402.12.6.2.1.1** Physical properties testing for acrylic coatings used on spray applied polyurethane foam roofing assemblies shall be tested in compliance with ASTM D 6083 97a and Federal Specification TTC 555B, *Test Specification for Wind Driven Rain Infiltration Resistance*.~~

~~**R4402.12.6.3 Liquid applied roofing membranes systems.** All liquid applied roofing membranes systems shall be tested in compliance with TAS 114, in addition to the physical properties testing requirements set forth in TAS 110, and fire resistance.~~

~~**R4402.12.6.3.1** For liquid applied acrylic roofing membrane assemblies, physical properties testing shall be in compliance with ASTM D 6083 97a and Federal Specification TTC 555B, *Test Specification for Wind Driven Rain Infiltration Resistance*.~~

~~**R4402.12.6.4** The building official may request that a quality control field uplift test be carried out on a continuous roofing system in compliance with test procedure TAS 124. Single ply systems are not required to meet the deflection requirements established in the test protocol. The roofing system shall resist the design pressures as calculated in compliance with Section [R4403](#) and as established in TAS 124.~~

~~**R4402.12.6.4.1** Should a roofing system fail to meet a quality control field uplift test, the roofing contractor may propose to the building official an acceptable method of repair that is in compliance with the requirements of this code.~~

~~**R4402.12.6.5 Discontinuous roofing systems.** All discontinuous roofing systems shall be tested in compliance with TAS 100 for wind driven water infiltration resistance. Test specimens used for this test shall be constructed at the approved test facility. Testing requirements shall be as follows:~~

~~**R4402.12.6.5.1 Asphaltic shingle systems.** All asphaltic shingle systems shall comply with the following requirements: TAS 100, TAS 107, ASTM D 3462 and ASTM D 3018. Asphaltic shingle systems shall have a quality control testing program by an approved independent listing agency.~~

~~**R4402.12.6.5.2 Clay and cement roof tiles.** All roof tiles shall be tested in compliance with TAS 100. Physical properties testing for clay roof tiles shall be in compliance with ASTM D 1167. Physical properties testing for concrete roof tiles shall be in compliance with TAS 112. All roof tiles shall resist a minimum wind uplift resistance as determined by Section [R4403](#) of this code and RAS 127. Clay and cement roof tile systems requirements are as follows:~~



**R4402.12.6.5.2.1 Underlayment.** All underlayments used in discontinuous roof tile systems shall be tested in compliance with TAS 103 and TAS 104, unless otherwise specifically listed in the applicable RAS.

**R4402.12.6.5.2.2 Mortar or adhesive set roof tile systems.** All mortar or adhesive set tile systems shall be tested for static uplift resistance in compliance with TAS 101, the results of which shall be listed in the system manufacturer's Product Approval.

**R4402.12.6.5.2.2.1** Additionally, roof tile system manufacturers may test for wind characteristics in compliance with TAS 108, provided the system is determined to be air permeable by testing in compliance with TAS 116; and the tiles meet the size criteria set forth in TAS 108. The result from this testing shall be an aerodynamic multiplier ( $I$ ) which represents the system's wind characteristics and shall be listed in the system manufacturer's Product Approval.

**R4402.12.6.5.2.2.2** Systems which are tested for characteristics, in compliance with TAS 108 as specified above, shall have the results of the TAS 101 testing treated as attachment resistance moment ( $M_a$ ), which is representative of the tile bond's resistance to overturning moment, and the tile's restoring moment due to gravity ( $M_g$ ). Such systems shall use the system's aerodynamic multiplier ( $I$ ) in conjunction with the system's attachment resistance moment ( $M_a$ ) and restoring moment due to gravity ( $M_g$ ), as determined from the TAS 101 static uplift testing. These results shall be used in conjunction with the attachment calculations outlined in TAS 115 as a moment based system. Such calculations shall be submitted to the building official for review.

**R4402.12.6.5.2.2.3** Systems that are not tested in compliance with TAS 108 as specified above shall have their Product Approval based on the system's uplift minimum characteristic resistance force ( $F$ ), as determined from TAS 101 static uplift testing. These results shall be used in conjunction with the attachment calculations outlined in TAS 115 as an uplift based system. Such calculations shall be submitted to the building official for review.

**R4402.12.6.5.2.2.4** Testing in accordance with TAS 106 shall be considered a product application quality control test to determine the general adhesion properties of the system.

**R4402.12.6.5.2.3 Mechanically fastened, rigid roofing systems.** All mechanically attached set tile systems shall be tested for static uplift resistance in compliance with TAS 102 or TAS 102(A), the results of which shall be listed in the system manufacturer's Product Approval.

**R4402.12.6.5.2.3.1** Additionally, roof tile system manufacturers may test for wind characteristics in compliance with TAS 108, provided the system is determined to be air permeable by testing in compliance with TAS 116; and the tiles meet the size criteria set forth in TAS 108. The result from this testing shall be an aerodynamic multiplier ( $I$ ) which represents the system's

wind characteristics and shall be listed in the system manufacturer's Product Approval.

**R4402.12.6.5.2.3.2** Systems which are tested for wind characteristics in compliance with TAS 108 as specified above shall have the results of the TAS 102 or TAS 102(A) testing treated as an attachment resistance moment ( $M_f$ ) which is representative of the rigid component's attachment resistance to an overturning moment, and the tile's restoring moment due to gravity ( $M_g$ ). Such systems shall use the system's aerodynamic multiplier ( $I$ ), in conjunction with the system's attachment resistance moment ( $M_f$ ) and restoring moment due to gravity ( $M_g$ ), as determined from the TAS 102 or TAS 102(A) static uplift testing. These results shall be used in conjunction with the attachment calculations outlined in TAS 115 as a moment based system. Such calculations shall be submitted to the building official for review.

**R4402.12.6.5.2.3.3** Systems that are not tested in compliance with TAS 108 as specified above shall have their Product Approval based on the system's uplift minimum characteristic resistance force ( $F$ ), as determined from TAS 102 or TAS 102(A) static uplift testing. These results shall be used in conjunction with the attachment calculations outlined in TAS 115 as an uplift based system. Such calculations shall be submitted to the building official for review.

**R4402.12.6.5.2.3.4** TAS 106 quality control field static uplift testing shall be considered a product application quality control test to determine the general uplift resistance properties of the system.

**R4402.12.6.5.2.4 Metal shingles/panels.** All metal roofing shall be tested in compliance with TAS 100. All metal roofing shall resist a minimum wind uplift resistance as determined by Section [R4403](#) for a roof slope of 9.5 degrees (0.0166 rad) and a roof mean height of 15 feet (4.6 m). All metal roofing systems testing requirements shall be as follows:

**R4402.12.6.5.2.4.1** All metal roofing shall be test in compliance with requirements set forth in TAS 110 and TAS 125, and shall be tested for wind driven rain infiltration resistance in compliance with TAS 100.

**R4402.12.6.5.2.4.2** Rigid metal shingle systems may be tested in an identical manner to nail on or batten tile systems as set forth in this code.

**R4402.12.6.5.2.5 Wood shingles or shakes.** All wood shingles and shakes shall be tested, as a system, for wind driven rain infiltration resistance in compliance with TAS 100. The same specimens as tested in TAS 100 shall be tested for pull through tear resistance, and such values shall be listed in the manufacturer's Product Approval.

**R4402.12.6.5.2.6 Fiber cement shingle or tile panels.** All fiber cement shingles or tiles shall resist a minimum wind uplift resistance as determined by Section [R4403](#) for a roof slope of 9.5 degrees (0.0166 rad) and a roof mean height of 15 ft

(4.6 m). All fiber cement shingle or tiles shall be tested in compliance with the following requirements. Wind driven water resistance in compliance with TAS 100, Physical properties in compliance with TAS 110, TAS 135 and uplift resistance.

**R4402.12.6.5.2.6.1** Additionally, fiber cement tile system manufacturers may test for wind characteristics in compliance with TAS 108, provided the system is determined to be air permeable by testing in compliance with TAS 116 and the tiles meet the size criteria set forth in TAS 108. The result from this testing shall be an aerodynamic multiplier ( $I$ ) which represents the system's wind characteristics and shall be listed in the system manufacturer's Product Approval.

**R4402.12.6.5.2.6.2** Systems which are tested for wind characteristics in compliance with TAS 108 as specified above shall have the results of the TAS 102 or TAS 102(A) testing treated as an attachment resistance moment ( $M_f$ ) which is representative of the rigid component's attachment resistance to an overturning moment, and the tile's restoring moment due to gravity ( $M_g$ ). Such systems shall use the system's aerodynamic multiplier ( $I$ ), in conjunction with the system's attachment resistance moment ( $M_f$ ) and restoring moment due to gravity ( $M_g$ ), as determined from the TAS 102 or TAS 102(A) static uplift testing. These results shall be used in conjunction with the attachment calculations outlined in TAS 115 as a moment based system. Such calculations shall be submitted to the building official for review.

**R4402.12.6.5.2.6.3** Systems that are not tested in compliance with TAS 108 as specified above shall have their Product Approval based on the system's uplift minimum characteristic resistance force ( $F$ ), as determined from TAS 102 or TAS 102(A) static uplift testing. These results shall be used in conjunction with the attachment calculations outlined in TAS 115 as an uplift based system. Such calculations shall be submitted to the building official for review.

**R4402.12.6.5.2.6.4** TAS 106 quality control field static uplift testing shall be considered a product application quality control test to determine the general uplift resistance properties of the system.

**R4402.12.6.5.2.7 Quarry roof slate.** All quarry roof slate shall be tested in compliance with TAS 100 and TAS 110.

**R4402.12.6.5.2.8 Roof board insulation.** All roof board insulation shall be tested for physical properties as set forth in Section 7 of TAS 110.

**R4402.12.6.5.2.9 Insulation fasteners, membrane fasteners and stress plates.** All insulation fasteners, membrane fasteners and stress plates shall be tested in compliance with TAS 117 Appendices A, B and C, and TAS 110 and TAS 114, Appendix E, Section 3, (DIN 50018), for corrosion resistance.

**R4402.12.6.5.2.10 Roofing nails and tin caps.** All roofing nails and tin caps shall be tested for corrosion resistance in compliance with TAS 114, Appendix E, Section 2 (ASTM G 85).

**R4402.12.6.5.2.11 Roof tile nails or fasteners.** All roof tile nails or fasteners, except those made of copper, monel, aluminum or stainless steel, shall be tested for corrosion in compliance with TAS 114, Appendix E, Section 2 (ASTM G 85), for salt spray for 1,000 hours.

**R4402.12.6.5.2.11.1** Tile fasteners used in coastal building zones, as defined in Section [R4403](#) shall be copper, monel, aluminum or stainless steel.

**R4402.12.6.5.2.12 Roofing adhesives, mastics and coatings.** All roofing adhesives, mastics and coatings shall be tested in compliance with TAS 110 and TAS 121.

**R4402.12.6.5.2.12.1** All roofing adhesives, mastics and coatings shall have a quality control testing program by an approved independent listing agency having unannounced follow-up visits.

**R4402.12.6.5.2.12.2** Acrylic roof coatings shall be tested for physical properties in compliance with ASTM D 6083-97a.

**R4402.12.6.5.2.13 Ridge vents of metal, plastic or composition material.** All ridge vents shall be tested in compliance with TAS 110(A) for wind driven water infiltration. All ridge ventilators shall be restricted to roof mean height as tested in compliance with TAS 100(A), and shall be listed in the system manufacturer's Product Approval.

**R4402.12.6.5.2.13.1** All plastic ridge ventilators shall be tested for physical properties as set forth in TAS 110 and R4412.

**R4402.12.6.5.2.13.2** All plastic ridge ventilator manufacturers shall have an unannounced follow up quality control program from an approved listing agency. Follow up test results shall be made available upon request.

**R4402.12.6.5.2.14 Edge metal, flashings, and coping.** All edge metal, flashing and copings, not specifically described in TAS 111, shall be tested in compliance with TAS 110, TAS 111(A), TAS 111(B) or TAS 111(C), respectively.

**R4402.12.6.5.2.15 Roof tile premixed bagged mortar.** All premixed roof tile mortar shall comply with the requirements set forth in TAS 110 and TAS 123, and shall have a quality control testing program by an approved independent listing agency having unannounced follow up visits. Follow up test results shall be made available upon request.

**R4402.12.6.5.2.16 Roof tile adhesive used in repair or supplemental tile attachment.** All roof tile adhesive used in repair or supplemental tile attachment shall comply with the requirements set forth in TAS 110 and TAS 123(A).

**R4402.12.6.5.2.17 Roof tile adhesive used in adhesive set tile systems.** All roof tile adhesive used in adhesive set tile systems shall comply with the requirements set forth in TAS 110 and TAS 123. Physical properties shall be as follows:

~~R4402.12.6.5.2.17.1~~ Tested for compressive strength in compliance with ASTM D 1621 with a minimum strength of 18 psi (121 kPa) parallel to rise, and 12 psi (82.7 kPa) perpendicular to rise.

~~R4402.12.6.5.2.17.2~~ Tested for density in compliance with ASTM D 1622 with a minimum density of 1.6 pcf (25.6 kg/m<sup>3</sup>).

~~R4402.12.6.5.2.17.3~~ Tested for tensile strength in compliance with ASTM D 1623 with a minimum requirement of 28 psi (193 kPa) parallel to rise.

~~R4402.12.6.5.2.17.4~~ Tested for dimensional stability taken from a free rise sample specimen. Tested in compliance with ASTM D 2126 with a maximum volume change of +0.07 percent volume change at -40°F (-40°C) for two weeks; and +6.0 percent volume change at 158°F (70°C) and 100 percent RH for two weeks.

~~R4402.12.6.5.2.17.5~~ Tested in compliance with ASTM D 2856 from a free rise sample specimen with a minimum requirement for 85 percent.

~~R4402.12.6.5.2.17.6~~ Tested for water absorption in compliance with ASTM D 2842 with a maximum requirement of 10 percent.

~~R4402.12.6.5.2.17.7~~ Tested in compliance with ASTM E 96 for moisture vapor transmission for a maximum of 3.1 perme.

### **SECTION R4402.13 HIGH VELOCITY HURRICANE ZONES — REQUIRED OWNERS NOTIFICATION FOR ROOFING CONSIDERATIONS**

~~R4402.13.1 Scope.~~ As it pertains to this section, it is the responsibility of the roofing contractor to provide the owner with the required roofing permit, and to explain to the owner the content of this section. The provisions of Section [R4402](#) govern the minimum requirements and standards of the industry for roofing system installations. Additionally, the following items should be addressed as part of the agreement between the owner and the contractor. The owner's initial in the designated space indicates that the item has been explained.

- ~~2. **Re-nailing wood decks:**~~ When replacing roofing, the existing wood roof deck may have to be re-nailed in accordance with the current provisions of Section [R4402](#). (The roof deck is usually concealed prior to removing the existing roof system).
- ~~4. **Exposed ceilings:**~~ Exposed, open beam ceilings are where the underside of the roof decking can be viewed from below. The owner may wish to maintain the architectural appearance; therefore, roofing nail penetrations of the underside of the decking may not be acceptable. The provides the option of maintaining this appearance.

~~6. **Overflow scuppers (wall outlets):** It is required that rainwater flow off so that the roof is not overloaded from a buildup of water. Perimeter/edge walls or other roof extensions may block this discharge if overflow scuppers (wall outlets) are not provided. It may be necessary to install overflow scuppers in accordance with the requirements of Sections R4402, R4403 and R4413.~~

~~\_\_\_\_\_~~  
~~Owner's/Agent's Signature      Date      Contractor's Signature~~

~~Exception: Attic spaces, designed by a Florida licensed engineer or registered architect to eliminate the attic venting, venting shall not be required.~~

**SECTION R4402.14  
HIGH VELOCITY HURRICANE ZONES — UNIFORM PERMIT APPLICATION**

**[Use forms as found in the 2010 Residential code]**

<b>Date Submitted</b>	7/23/2012	<b>Section</b>	SECTION - REFERENCED	<b>STAND</b>	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	45	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No	
<b>TAC Recommendation</b>	Approved as Submitted					
<b>Commission Action</b>	Pending Review					

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications**

R905.3, R905.3.2, R905.3.3, R905.3.3.1, R905.3.6, R905.3.7, R905.3.7.1, R905.3.8

**Summary of Modification**

Provides update to previous Commission approved code referenced standard.

**Rationale**

To carry forward the updated version of a previous Commission approved code standard designed with ASCE 7-10 to provide for the proper installation of tile roofing systems and components connected to Florida's unique environmental conditions including enduring high wind tropical rains and life/property threatening high wind events.

**Fiscal Impact Statement****Impact to local entity relative to enforcement of code**

Required design criteria of 2010 FBC referenced standard ASCE 7-10.

**Impact to building and property owners relative to cost of compliance with code**

Required design criteria of 2010 FBC referenced standard ASCE 7-10.

**Impact to industry relative to the cost of compliance with code**

Required design criteria of 2010 FBC referenced standard ASCE 7-10.

**Requirements****Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

Strengthens code to meet required design criteria of 2010 FBC referenced standard ASCE 7-10.

**Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**

Strengthens code to meet required design criteria of 2010 FBC referenced standard ASCE 7-10.

**Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**

Does not discriminate. Strengthens code to meet required design criteria of 2010 FBC referenced standard ASCE 7-10.

**Does not degrade the effectiveness of the code**

Does not degrade. Strengthens code to meet required design criteria of 2010 FBC referenced standard ASCE 7-10.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO



FRSA

Florida Roofing, Sheet Metal and Air Conditioning Contractors Association

4111 Metric Drive

Winter Park, Florida 32792

Standard reference number

FRSA/TRI ~~07320/8-05~~ April 2012 (04-12)

Title

Florida High Wind Concrete and Clay Roof Tile Installation Manual, ~~Fourth~~ Fifth Edition

Referenced in code section number

R905.3, R905.3.2, R905.3.3, R905.3.3.1, R905.3.6, R905.3.7, R905.3.7.1, R905.3.8

R5035

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<b>Date Submitted</b>	7/9/2012	<b>Section</b>	15	<b>Proponent</b>	Jaime Gascon
<b>Chapter</b>	1	<b>Affects HVHZ</b>	Yes	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications**

**Summary of Modification**

Correlating reference weathering standards with latest versions already adopted in base code.

**Rationale**

These standards were superseded several years ago, and the newer versions have been deemed equivalent. The latest standards specify test equipment in generic terms, where the earlier versions specify proprietary equipment. This MOD would make the references current.

**Fiscal Impact Statement**

**Impact to local entity relative to enforcement of code**  
None. The newer standards have been in use since 2005.

**Impact to building and property owners relative to cost of compliance with code**  
None. The weathering requirements remain the same.

**Impact to industry relative to the cost of compliance with code**  
None. The weathering requirements remain the same.

**Requirements**

**Has a reasonable and substantial connection with the health, safety, and welfare of the general public**  
This modification updates standards to the latest available versions, which are based on the latest technologies available.

**Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**  
This modification updates standards to the latest available versions, which are based on the latest technologies available.

**Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**  
This modification does not discriminate since it will allow for the use of other brand equipment capable of achieving the same exposure at the test specified time and irradiance.

**Does not degrade the effectiveness of the code**  
This modification improves the code since it will allow for the use of other brand equipment capable of achieving the same exposure at the test specified time and irradiance.

**Is the proposed code modification part of a prior code version?** No

## 15. Metal Panel Roof Assemblies:

15.1 All structural and nonstructural metal panel roof assemblies, and the roofing components therein, shall be tested in compliance with the following requirements, as applicable.

...

Product	Test	Test Standard
Structural and Non- Structural Metal Panel Roof Assembly	Standard Requirements	TAS 125
Structural and Non- Structural Metal Panel Roof Assembly	Fire Resistance	E 108 (min. Class "B")
Structural and Non- Structural Metal Panel Continuous Roof Assembly	Accelerated Weathering	G <del>23</del> <u>152</u> or G <del>26</del> <u>155</u> (2000 hours)
Structural or Non- Structural Metal Panels	Salt Spray	B 117 (1000 hours)
Insulated Metal Panels	Thermal Value	C 518 (report)

<b>Date Submitted</b>	7/9/2012	<b>Section</b>	2.7	<b>Proponent</b>	Jaime Gascon
<b>Chapter</b>	1	<b>Affects HVHZ</b>	Yes	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

**General Comments** No **Alternate Language** No

**Related Modifications****Summary of Modification**

Correlating reference weathering standards with latest versions already adopted in base code.

**Rationale**

These standards were superseded several years ago, and the newer versions have been deemed equivalent. The latest standards specify test equipment in generic terms, where the earlier versions specify proprietary equipment. This MOD would make the references current.

**Fiscal Impact Statement****Impact to local entity relative to enforcement of code**

None. The newer standards have been in use since 2005.

**Impact to building and property owners relative to cost of compliance with code**

None. The weathering requirements remain the same.

**Impact to industry relative to the cost of compliance with code**

None. The weathering requirements remain the same.

**Requirements****Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

This modification updates standards to the latest available versions, which are based on the latest technologies available.

**Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**

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**Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**

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**Does not degrade the effectiveness of the code**

This modification improves the code since it will allow for the use of other brand equipment capable of achieving the same exposure at the test specified time and irradiance.

Is the proposed code modification part of a prior code version? No

- 2.7 ASTM Standards:
- A 90 Standard Test Method for Weight of Coating on Zinc-Coated (Galvanized) Iron or Steel Articles
  - A 641 Standard Specification for Zinc-Coated (Galvanized) Carbon Steel Wire
  - B 117 Standard Test Method for Salt Spray (Fog) Testing
  - D 638 Standard Test Method for Tensile Properties of Plastics
  - D 751 Standard Test Methods for Coated Fabrics
  - D 1781 Standard Test Method for Climbing Drum Peel for Adhesives
  - E 70 Standard Test Method for pH of Aqueous Solutions With the Glass Electrode
  - E 108 Standard Test Methods for Fire Tests of Roof Coverings
  - E 380 Excerpts from the Standard Practice for Use of the International System of Units (SI) (the Modernized Metric System)
  - G ~~23~~152 Standard Practice for Operating Open Flame Carbon Arc Light-Exposure Apparatus (Carbon-Arc Type) With and Without Water for Exposure of Nonmetallic Materials
  - G ~~26~~155 Standard Practice for Operating Xenon Arc Light-Exposure Apparatus (Xenon-Arc Type) With and Without Water for Exposure of Nonmetallic Materials
  - G ~~53~~154 Standard Practice for Operating Fluorescent Light- and Water-Exposure Apparatus (Fluorescent UV-Condensation Type) for UV Exposure of Nonmetallic Materials
  - G 85 Standard Practice for Modified Salt Spray (Fog) Testing

<b>Date Submitted</b>	7/9/2012	<b>Section</b>	8.7	<b>Proponent</b>	Jaime Gascon
<b>Chapter</b>	1	<b>Affects HVHZ</b>	Yes	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications****Summary of Modification**

Correlating reference weathering standards with latest versions already adopted in base code.

**Rationale**

These standards were superseded several years ago, and the newer versions have been deemed equivalent. The latest standards specify test equipment in generic terms, where the earlier versions specify proprietary equipment. This MOD would make the references current.

**Fiscal Impact Statement****Impact to local entity relative to enforcement of code**

None. The newer standards have been in use since 2005.

**Impact to building and property owners relative to cost of compliance with code**

None. The weathering requirements remain the same.

**Impact to industry relative to the cost of compliance with code**

None. The weathering requirements remain the same.

**Requirements****Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

This modification updates standards to the latest available versions, which are based on the latest technologies available.

**Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**

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**Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**

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**Does not degrade the effectiveness of the code**

This modification improves the code since it will allow for the use of other brand equipment capable of achieving the same exposure at the test specified time and irradiance.

Is the proposed code modification part of a prior code version? No

8.7 Accelerated weathering:

8.7.1 Accelerated weathering testing shall be in strict compliance with ASTM G ~~23~~152 or G ~~26~~155.

<b>Date Submitted</b>	7/9/2012	<b>Section</b>	2 & 10.17 & 10.18	<b>Proponent</b>	Jaime Gascon
<b>Chapter</b>	1	<b>Affects HVHZ</b>	Yes	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications**

**Summary of Modification**

Correlating reference weathering standards with latest versions already adopted in base code.

**Rationale**

These standards were superseded several years ago, and the newer versions have been deemed equivalent. The latest standards specify test equipment in generic terms, where the earlier versions specify proprietary equipment. This MOD would make the references current.

**Fiscal Impact Statement**

- Impact to local entity relative to enforcement of code**  
None. The newer standards have been in use since 2005.
- Impact to building and property owners relative to cost of compliance with code**  
None. The weathering requirements remain the same.
- Impact to industry relative to the cost of compliance with code**  
None. The weathering requirements remain the same.

**Requirements**

- Has a reasonable and substantial connection with the health, safety, and welfare of the general public**  
This modification updates standards to the latest available versions, which are based on the latest technologies available.
- Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**  
This modification updates standards to the latest available versions, which are based on the latest technologies available.
- Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**  
This modification does not discriminate since it will allow for the use of other brand equipment capable of achieving the same exposure at the test specified time and irradiance.
- Does not degrade the effectiveness of the code**  
This modification improves the code since it will allow for the use of other brand equipment capable of achieving the same exposure at the test specified time and irradiance.

Is the proposed code modification part of a prior code version? No

**1st Comment Period History** 08/09/2012 - 09/23/2012

<b>Proponent</b>	Ken Cureton	<b>Submitted</b>	9/21/2012	<b>Attachments</b>	No
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**Comment:**

The proposal provides for provisions with regard to wind mitigation as per 553.844 FS.

R5040-G1



## 2. Referenced Documents:

## 2.1 ASTM Standards

D 412 Test Method for Rubber Properties in Tension

D 471 Test Method for Rubber Property - Effect of Liquids

D 573 Test method for Rubber-Deterioration in an Air Oven

D 624 Test Method for Rubber Property - Tear Resistance

D 751 Method of Testing Coated Fabrics

D 816 Methods of Testing Rubber Cements

D 1149 Test Method for Rubber Deterioration - Surface Ozone Cracking in a Chamber (Flat Specimens)

D 1204 Test Method for Linear Dimensional Changes of Non-rigid Thermoplastic Sheeting or Film at Elevated Temperature

D 2137 Test Method for Rubber Property - Brittleness Point of Flexible Polymers and Coated Fabrics

G ~~26155~~26155 Standard Practice for Operating Xenon Arc Light-Exposure Apparatus for Exposure of Nonmetallic MaterialsG ~~53154~~53154 Standard Practice for Operating Fluorescent Light Apparatus for UV-Condensation (QUV) Exposure of Nonmetallic Materials

D 1822 Tensile Impact Testing

E 96 Water Vapor Permeability, Method BW

E 380 Excerpts from Use of the International System of Units (SI) (The Modernized Metric System)

...

10.17 Weather Resistance - Practice G ~~26155~~26155

...

10.18 Weather Resistance - Practice G ~~53154~~53154

<b>Date Submitted</b>	7/9/2012	<b>Section</b>	2 & 8.4 & 9.3	<b>Proponent</b>	Jaime Gascon
<b>Chapter</b>	1	<b>Affects HVHZ</b>	Yes	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications****Summary of Modification**

Correlating reference weathering standards with latest versions already adopted in base code.

**Rationale**

These standards were superseded several years ago, and the newer versions have been deemed equivalent. The latest standards specify test equipment in generic terms, where the earlier versions specify proprietary equipment. This MOD would make the references current.

**Fiscal Impact Statement****Impact to local entity relative to enforcement of code**

None. The newer standards have been in use since 2005.

**Impact to building and property owners relative to cost of compliance with code**

None. The weathering requirements remain the same.

**Impact to industry relative to the cost of compliance with code**

None. The weathering requirements remain the same.

**Requirements****Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

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**Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**

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**Does not degrade the effectiveness of the code**

This modification improves the code since it will allow for the use of other brand equipment capable of achieving the same exposure at the test specified time and irradiance.

Is the proposed code modification part of a prior code version? No

2. Referenced Documents:

2.1 ASTM Standards

B 209 Specification for Aluminum and Aluminum-Alloy Sheet and Plate

D 16 Terminology Relating to Paint, Varnish, Lacquer and Related Products

D 562 Standard Test Method for Consistency of Paints Using the Stormer Viscometer

D 1079 Definitions of Terms Relating to Roofing, Waterproofing, and Bituminous Materials

D 2824 Specification for Aluminum-Pigmented Asphalt Roof Coatings

D 2939 Standard Test Method of Testing Emulsified Bitumens Used as Protective Coatings

D 4798 Standard Test Method for Accelerated Weathering Test Conditions and Procedures for Bituminous Materials (Xenon - ARC Method)

D 4799 Standard Test Method for Accelerated Weathering Test Conditions and Procedures for Bituminous Materials (Fluorescent UV and Condensation Method)

E 380 Excerpts from Standard Practice for Use of the International System of Units (SI) (the Modernized Metric System)

~~G 26155 Standard Test Method for Practice for Operating Xenon Arc Light Exposure Apparatus (Xenon - ARC Type) With and Without Water for Exposure of Non-metallic Materials~~

~~G 53154 Standard Test Method Practice for Operating Fluorescent Light and Water Exposure Apparatus (Fluorescent UV Condensation Type) for UV Exposure of Nonmetallic Materials~~

...

8.4 Accelerated Weathering - Test Method G ~~53154~~ or G ~~26155~~ (Test Method A)

...

9.3 Procedure, G ~~53154~~, Section 9.

<b>Date Submitted</b>	7/9/2012	<b>Section</b>	2 & 7.11	<b>Proponent</b>	Jaime Gascon
<b>Chapter</b>	1	<b>Affects HVHZ</b>	Yes	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Approved as Submitted				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications****Summary of Modification**

Correlating reference weathering standards with latest versions already adopted in base code.

**Rationale**

These standards were superseded several years ago, and the newer versions have been deemed equivalent. The latest standards specify test equipment in generic terms, where the earlier versions specify proprietary equipment. This MOD would make the references current.

**Fiscal Impact Statement****Impact to local entity relative to enforcement of code**

None. The newer standards have been in use since 2005.

**Impact to building and property owners relative to cost of compliance with code**

None. The weathering requirements remain the same.

**Impact to industry relative to the cost of compliance with code**

None. The weathering requirements remain the same.

**Requirements****Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

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**Does not degrade the effectiveness of the code**

This modification improves the code since it will allow for the use of other brand equipment capable of achieving the same exposure at the test specified time and irradiance.

Is the proposed code modification part of a prior code version? No

2. Referenced Documents:

2.1 ASTM Standards

- C 661 Standard Test Method for Indentation Hardness of Elastomeric-Type Sealants by Means of a Durometer
- C 794 Standard Test Method for Adhesion-in-Peel of Elastomeric Joint Sealants
- D 412 Standard Test Methods for Vulcanized Rubber and Thermoplastic Rubbers and Thermoplastic Elastomers - Tension
- D 471 Test Method for Rubber-Effects of Liquids
- D 562 Standard Test Method for Consistency of Paints Using the Stormer Viscometer
- D 1079 Standard Definitions of Terms Relating to Roofing, Waterproofing, and Bituminous Materials
- D 2196 Standard Test Methods for Rheological Properties of Non-Newtonian Material by Rotational (Brookfield) Viscometer
- D 2697 Test Methods for Volume Nonvolatile Matter in Clear or Pigmented Coatings
- D 2824 Standard Specification for Aluminum-Pigmented Asphalt Roof Coatings
- E 96 Standard Test Methods for Water Vapor Transmission of Materials
- E 380 Excerpts from Standard Practice for Use of the International System of Units (SI) (the Modernized Metric System)
- G 21 Standard Practice for Determining Resistance of Synthetic Polymeric Materials to Fungi
- G ~~26155~~ Standard Practice for Operating Xenon Arc Light-Exposure Apparatus (Xenon-Arc Type) With and Without Water for Exposure of Nonmetallic Materials
- ...
- 7.11 *Accelerated Weathering* - Test Method G ~~26155~~, except as noted below.

Total Mods for **Roofing** in **No Affirmative Recommendation with a Second: 2**

Total Mods for report: 85

## Sub Code: Building

**R5355**

54

Date Submitted	7/19/2012	Section	1505.2 Class A roof assemblies.	Proponent	Mark Zehnal
Chapter	15	Affects HVHZ	No	Attachments	No
TAC Recommendation	No Affirmative Recommendation with a Second				
Commission Action	Pending Review				

### Comments

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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#### Related Modifications

#### Summary of Modification

Provides current 2010 Florida Building Code specific criteria

#### Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

#### Fiscal Impact Statement

**Impact to local entity relative to enforcement of code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to building and property owners relative to cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to industry relative to the cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

#### Requirements

**Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Does not degrade the effectiveness of the code**

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Is the proposed code modification part of a prior code version?**

YES

**The provisions contained in the proposed amendment are addressed in the applicable international code?**

NO

**The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?**

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

**1505.2 Class A roof assemblies.**

Class A roof assemblies are those that are effective against severe fire test exposure. Class A roof assemblies and roof coverings shall be *listed* and identified as Class A by an *approved* testing agency. Class A roof assemblies shall be permitted for use in buildings or structures of all types of construction.

**Exceptions:**

1. Class A roof assemblies include those with coverings of brick, masonry or an exposed concrete roof deck.
2. Class A roof assemblies also include ferrous or copper shingles or sheets, metal sheets and shingles, clay or concrete roof tile or slate installed on noncombustible decks or ferrous, copper or metal sheets installed without a roof deck on noncombustible framing.
3. Class A roof assemblies include minimum 16 oz/sq. ft. (0.0416 kg/m<sup>2</sup>) copper sheets installed over combustible decks.



<b>Date Submitted</b>	8/1/2012	<b>Section</b>	1512	<b>Proponent</b>	Craig Chown
<b>Chapter</b>	15	<b>Affects HVHZ</b>	Yes	<b>Attachments</b>	Yes
<b>TAC Recommendation</b>	No Affirmative Recommendation with a Second				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
-------------------------	----	---------------------------	----

**Related Modifications**

Chapter 35 - Reference Standards

**Summary of Modification**

Existing codes are not germane to new technology EPOX-Z roof coatings. Standards needed for "real world" conditions to protect the public include ASTM D5894 (weatherability); ASTM D1635 (permeability); ASTM D714 (blistering); ASTM D1654 (corrosion resistance); ASTM D4214 (chalking).

**Rationale**

Existing code standards are not sufficient to address real world weather and other conditions in Florida. Use of U.S. Energy Star standards, and recommended ASTM standards will enhance consumer protection and satisfaction. The recommended standards include ASTM D5894 (weatherability); ASTM D1635 (permeability); ASTM D714 (blistering); ASTM D1654 (corrosion resistance); and ASTM D4214 (chalking). Use of approved national ASTM labs and testing facilities will ensure that cool roof coating products are evaluated and tested properly to maximize consumer protection and satisfaction.

**Fiscal Impact Statement****Impact to local entity relative to enforcement of code**

Proposed code changes will enhance consumer protection and documented enhanced performance standards will facilitate code enforcement activities.

**Impact to building and property owners relative to cost of compliance with code**

Consumer protection and cool roof performance will be enhanced. Cost savings will be realized through reduced energy bills, roof preventative maintenance, and reduced instances of expensive water and mold damage resulting from leaks. Utility companies offer customer rebates and other incentives.

**Impact to industry relative to the cost of compliance with code**

The enhanced standards will reduce issues related to cool roof coating use and failures in Florida. Use of nationally approved ASTM labs to certify cool roof coating products meet enhanced performance standards will speed up the process and get rid of duplicate testing requirements in Florida.

**Requirements****Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

Yes. EPOX-Z NRG cool roof coating products have zero VOC's (Volatile Organic Compounds). Elimination of roof leaks will reduce water infiltration and mold issues.

**Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**

Proposed standards address "real world" weather and other conditions in Florida, and will ensure products meet meaningful tougher standards to protect the public.

**Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**

The proposed ASTM standards are nationally recognized and utilized by the Cool Roof Rating Council for cool roof coating products.

**Does not degrade the effectiveness of the code**

The proposed nationally recognized ASTM standards for cool roof performance will enhance the code and protection of the public.

**Is the proposed code modification part of a prior code version? No**

## Section 1512 High Velocity Hurricane Zones - General

1512.5 Cool Roof Coating Products

1512.51 Cool roof coatings shall be listed with and approved by the Cool Roof Rating Council (CRRC), and shall meet U.S. Energy Star standards.

1512.52 Cool roof coatings shall be evaluated based on real world conditions in Florida based on the following ASTM standards:

ASTM D5894 (weatherability);

ASTM D1635 (permeability);

ASTM D714 (blistering);

ASTM D1654 (corrosion resistance); and

ASTM D4214 (chalking).

1512.53 Cool roof coatings shall be eligible for Florida product approval if they meet U.S. Energy Star requirements, and the aforementioned ASTM standards as evaluated and determined by approved national ASTM labs and testing facilities.



# Accelerated Weathering Methodology for Cool Roof Coating Materials

Anthony S. Camarota  
President & CEO  
EPOX-Z Corporation

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## Accelerated Weathering Methodology

Lack of an accelerated aging methodology for rating and listing Cool Roof Coatings has slowed the introduction of new advanced materials into the cool roof coating market. To be a good Cool Roof Coating the coating first has to be able to withstand the weathering conditions present on roofs.

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## Accelerated Weathering Methodology Coating Failures

For cool roof coatings to deliver on the promise of long term energy savings and reduction of Urban Heat Island Effect they must first be a good coating and provide long term environmental service along with TSR and Emissivity. To this end it will be instructive to examine the causes of coating failures.

A decorative graphic consisting of three overlapping, curved, green bands that resemble a stylized wave or a roof profile, positioned above the company name.

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## Accelerated Weathering Methodology Coating Failures

Coating Failures can generally be categorized into four main categories:

- Coating manufacturer related or caused
- Owner/specifier related or caused
- Coating applicator related or caused
- Environmental services related or caused



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## Accelerated Weathering Methodology Coating Failures

Service Environment failures are due to:

- Exposure to excessive moisture (such as ponding water), or temperatures (hot and cold) than anticipated.
- Exposure to different or more concentrated chemicals than anticipated.
- Exposure to abrasion, impact or mechanical damage.
- Combinations of the above.

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# Accelerated Weathering Methodology Coating Failures

Unanticipated exposure conditions -- may stress the coating system beyond its ability to perform in a given environment.

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## Accelerated Weathering Methodology Coating Failures

Normal environmental effects that cause or contribute to coating deterioration are:

- Internal stresses-coating drying and curing.
- External stresses-Vibration, flexing, mechanical damage.
- Solar energy.
- Heat.
- Permeation (water, chemicals, oxygen).

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# Accelerated Weathering Methodology Coating Failures



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# Accelerated Weathering Methodology Coating Failures

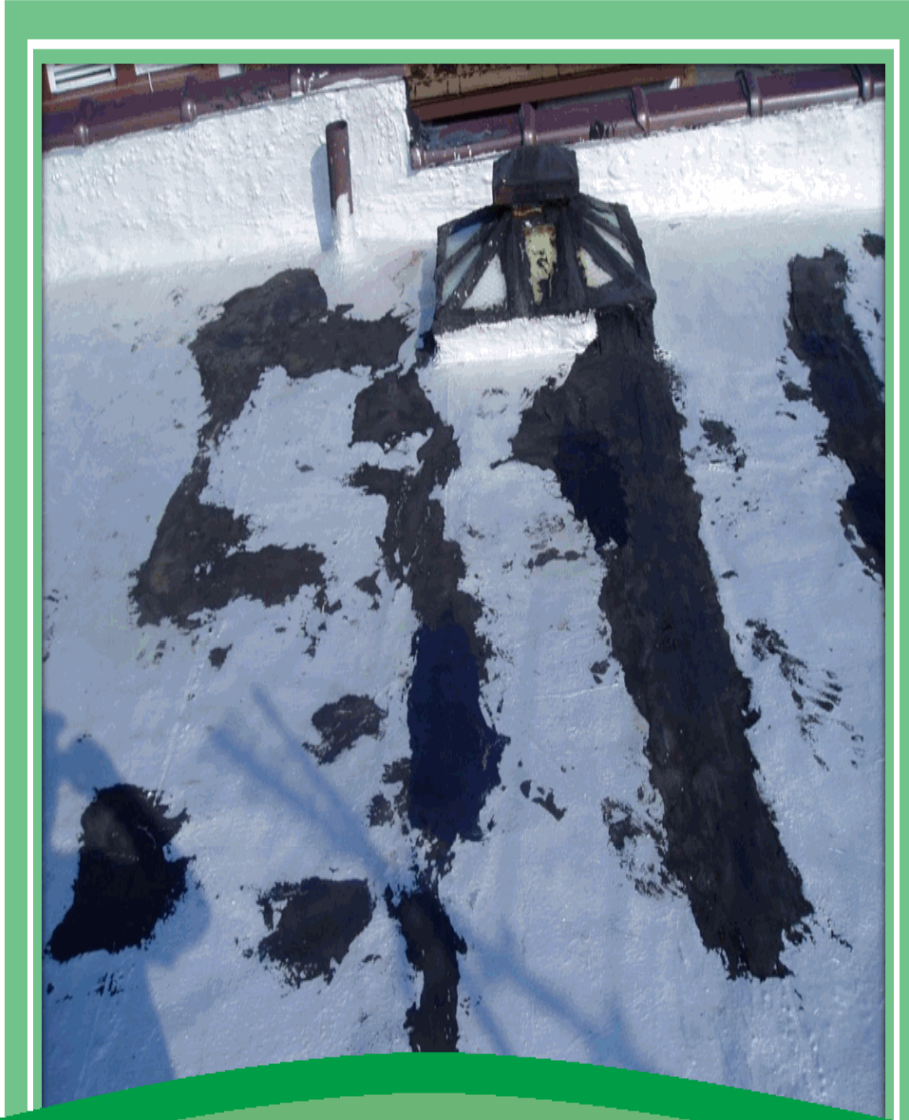


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# Accelerated Weathering Methodology Coating Failures



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# Accelerated Weathering Methodology Coating Failures



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## Accelerated Weathering Methodology Coating Failures

**Permeation** of a coating by moisture and chemicals in a service environment is a major factor in the deterioration of the coating. Coatings are specifically formulated and tested to resist certain environments in immersion or atmospheric conditions.

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## Accelerated Weathering Methodology Coating Failures

Once water enters the coating film, it may force resin covalent bonds further apart, and adhesive bonds to the substrate may be swelled and/or broken. The volume of the coating may increase as much as 20-50% when in contact with water.

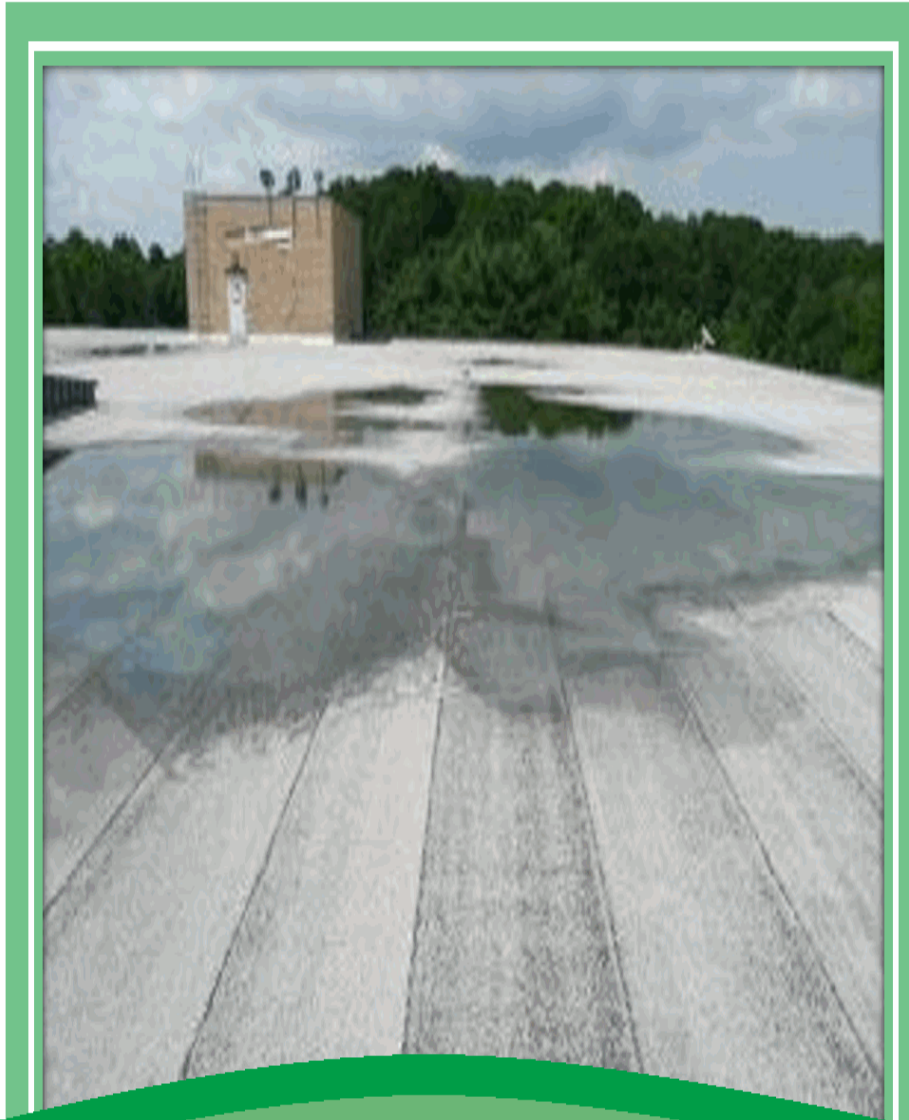
A decorative graphic consisting of three overlapping, curved, green bands that resemble a wave or a stylized roofline, positioned above the footer text.

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# Accelerated Weathering Methodology Coating Failures



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# Accelerated Weathering Methodology Coating Failures



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# Accelerated Weathering Methodology Coating Failures



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# Accelerated Weathering Methodology Coating Failures



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## Accelerated Weathering Methodology Relevant ASTM Protocols

- **ASTM D5894 - 10** Standard Practice for Cyclic Salt Fog/UV Exposure of Painted Metal
- **ASTM D1653 - 03(2008)** Standard Test Methods for Water Vapor Transmission of Organic Coating Films
- **ASTM C1549 - 09** Standard Test Method for Determination of Solar Reflectance Near Ambient Temperature Using a Portable Solar Reflectometer
- **ASTM C1371 - 04a(2010)e1** Standard Test Method for Determination of Emittance of Materials Near Room Temperature Using Portable Emisometers

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## Accelerated Weathering Methodology Accelerated Testing

Architectural and maintenance coating companies have utilized accelerated weathering tests for a number of years to help predict in service coating performance.

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## Accelerated Weathering Methodology Cyclic Corrosion Testing

Actual atmospheric exposures usually include both wet and dry conditions; therefore, it makes sense to pattern accelerated laboratory tests after these natural cyclic conditions.

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## Accelerated Weathering Methodology Cyclic Corrosion Testing

Cyclic tests usually give better correlation to outdoors than conventional salt spray tests. They are effective for evaluating a variety of corrosion mechanisms.

Cyclic corrosion testing is intended to produce failures representative of the type found in outdoor corrosive environments.

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# Accelerated Weathering Methodology

## Corrosion Testing

Test Method	Conditions Rated	Latex	Epoxy
Cyclic wet/dry corrosion test (2,000 hours)	➤ Blistering (size, frequency)	10/10	10/10
	➤ Rust-through	10	10
	➤ Undercutting	7	7
	Overall	37	37
Exterior exposure industrial site (12 months)	➤ Blistering (size, frequency)	10/10	10/10
	➤ Rust-through	10	10
	➤ Undercutting	10	8
	Overall	40	38

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## Accelerated Weathering Methodology Conclusion

The adoption of the suite of existing ASTM protocols discussed in this paper can make the difference between selecting a cool roof coating system that affords effective protection and selecting one that fails.

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# Accelerated Weathering Methodology Questions

Anthony S. Camarota  
President & CEO  
EPOX-Z Corporation  
tony@epox-z.com

A decorative graphic consisting of three overlapping, curved green bands that resemble a stylized wave or a roofline. The top band is a dark green, the middle is a medium green, and the bottom is a light green. They are all centered horizontally and span most of the width of the page.

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# CCRICS

## Creative Cool Roof & Industrial Coatings Solutions, LLC

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E-Mail: [craigchown@gmail.com](mailto:craigchown@gmail.com)  
[www.ccrics.com](http://www.ccrics.com)

July 30, 2012

Florida Building Commission (FBC)  
Attn: Mr. Jim Richmond, Executive Director  
Department of Business & Professional Regulation  
1940 North Monroe Street  
Tallahassee, FL 32399

Dear Jim:

Per our previous discussions with you and your staff, you advised me that the Florida Building Commission (FBC) was in the process of accepting input and feedback for updates and revisions to the rules and guidelines governing cool roof coatings and product approval. I would like to thank the FBC and you for providing us the opportunity to provide our input and feedback relating to these important issues. As you know, CCRICS is a Florida company that markets and sells EPOX-Z NRG cool roof coating products. Our input and feedback consists of 3 general areas of concern and recommendations:

- Existing FBC rules and guidelines for cool roof coating products are not germane to EPOX-Z NRG cool roof coating products;
- Nationally recognized cool roof coating performance standards should be included in FBC standards and guidelines governing cool roof coating products (including EPOX-Z NRG); and
- FBC should accept certified test results from nationally accredited and reliable testing organizations based on nationally accepted standards approved by the FBC.

Background information on EPOX-Z NRG cool roof coating products, and each of the three aforementioned issues will be provided and addressed below.

### **Background Information: EPOX-Z NRG Cool Roof Coatings**

EPOX-Z NRG is a cool roof coating product that is applied onto approved roofs in a single coat at approximately 12 mils (about the thickness of a matchbook cover). EPOX-Z NRG is a two part thermoset resin product specially engineered as a cool roof coating product. Part A is mixed with Part B and either rolled or sprayed onto roofs which are appropriate for cool roof coating products.

Page 1 of 5

EPOX-Z began as a materials science consulting group specializing in the design and implementation of high performance solutions for the construction, transportation, aerospace and polymer industries. EPOX-Z coatings are based upon a completely unique polymer chemistry and cutting-edge technology. The proprietary polymer utilized in the coating system improves the environmental impact of the coating and thus eliminates the inclusion of toxic solvents. EPOX-Z NRG cool roof coating products have **Zero Volatile Organic Compounds (VOC's)**, which is a benefit environmentally. Furthermore, the revolutionary and proprietary curing agents used in the EPOX-Z NRG coating enables it to outperform other coatings available in the market. Most of the coatings available in the market (such as elastomerics) are part of a multi-coat system that consists of a primer coat, an intermediate coat, and a topcoat. EPOX-Z NRG cool roof coatings are applied in single coat, which significantly reduces the total quantity of coating material needed to accomplish a particular project. The efficiency of the EPOX-Z NRG single coat product vs. multiple coat products results in significant cost savings for the end users.

The U.S Department of Energy (USDOE) strongly recommends use of cool roof coatings to enhance our environment. According to USDOE, cool roofs reduce air conditioning and utility costs; reduce "heat island" effects in urban areas due to the energy and heat absorption from the sun; reduce carbon emission impacts due to reduced energy consumption, etc. For further information on USDOE support of cool roof coating products, refer to our website home page at [www.ccrics.com](http://www.ccrics.com) (see U.S. Department of Energy video on our home page) .

**CCRICS Input, Feedback & Recommendations Regarding FBC Rules & Guidelines Governing Cool Roof Coating Products & FBC Product Approval.**

1. Existing FBC rules and guidelines for cool roof coating products are not germane to EPOX-Z NRG cool roof coating products.

The existing Florida code standards used to evaluate roof coatings do not apply to EPOX-Z NRG cool roof coatings. Under 1507.15, all roof coatings must comply with the provisions of Section 1507 and section 1507 requires compliance with a series of ASTM standards. The current FBC ASTM standards that coatings must comply with are:

- 836 – only applies to elastomerics
- 957 – only applies to elastomerics
- 1227 – only applies to asphaltic emulsions
- 3468 – only applies to Neoprene
- 6083 – only applies to acrylic
- 6694 – only applies to silicone
- 6947 – only applies to polyurethane



2. Nationally recognized cool roof coating performance standards should be included in FBC standards and guidelines governing cool roof coating products (including EPOX-Z NRG).

As noted above, existing FBC standards used to evaluate roof coatings are not germane to EPOX-Z cool roof coating products. EPOX-Z NRG cool roof and other roof coating products should be evaluated based on practical real world conditions and standards including:

ASTM D5894 (weatherability);  
ASTM D1635 (permeability - for issues such as ponding water on flat roofs);  
ASTM D714 (blistering);  
ASTM D1654 (corrosion resistance); and  
ASTM D4214 (chalking).

Additionally, the roof coating should be environmentally compliant have a permeability rating of less than 1 as defined by the Roof Consultants International directory of terms; exhibit a minimum pull off strength of 1200 psi as measured by ASTM D 4551 and be a listed product by the Cool Roof Rating Council.

The best way to determine if a coating will be effective for exterior applications such as a roof is to rely upon a standard published by a recognized third party entity. The ASTM developed and published a standard in 1998 for this exact purpose ASTM D 5894. This protocol replicates real world conditions and has the added value of allowing consumers to compare the relative performance of various coatings to aid in the buying decision.

3. FBC should accept certified test results from nationally accredited and reliable testing organizations based on nationally accepted standards approved by the FBC. The key test for a thermoset resin roof coating is weatherability also known as accelerated exposure testing.

Accelerated exposure tests are fundamental to the specification and development of organic coatings for atmospheric service. For these tests to be useful, they must incorporate important destructive factors found in atmospheric service that cause the degradation of coatings and corrosion of substrates. These destructive factors include corrosive atmospheres, rain, condensation, sunlight, wet/dry cycling, and temperature cycling. Frequently, these destructive factors have a synergistic effect on one another. If one of the critical factors is absent from a test, real-life conditions will not be simulated, and the test will have little meaning. While no single accelerated exposure test can duplicate all atmospheric conditions, a recently adopted ASTM standard on accelerated testing offers an improved technique for simulating natural conditions to compare the relative durability of protective coatings. This method, ASTM D5894, is titled Standard Practice for Cyclic Salt Fog/UV Exposure of Painted Metal.

## The Testing Procedure

ASTM D5894 is a comprehensive accelerated coating test method expected to replace the long-standing salt fog method (ASTM B117) for testing of coatings. The important distinctions of ASTM D5894 are threefold.

First, controlled wet/dry cycles ensure the dryness of the test specimens at the end of each dry cycle. Second, the test uses a relatively low-concentration electrolyte that incorporates ammonium sulphate and sodium chloride. Third, and most significant, UV/condensation cycles are integrated into the test. ASTM D5894 is more involved than ASTM B117, but it is still rather simple and inexpensive to perform. As with most accelerated tests, the composition, size, and preparation of test specimens used in ASTM D5894 can be determined by the coating specifier. However, basic guidelines are provided in the standard (e.g., 75- by 150-mm flat specimens can be used). At least one, and preferably two, control products (one of high durability and one of low durability) should be included in every test. It also suggests testing no fewer than three replicates of each product used to compensate for variations within the chambers and among specimens.

The importance of incorporating the principal stresses on a coating when designing a laboratory test is well accepted. For years the coatings industry used ASTM B117 to evaluate the corrosion-resistant properties of coatings. Research conducted during the last 15 years has shown that this method does not correlate with actual atmospheric exposures. Today, with the reformulation of many protective coatings to comply with regulations on volatile organic compounds, an accurate corrosion acceleration test method that correlates with actual atmospheric exposures is needed more than ever. ASTM D5894 addresses this need. Its use can make the difference between selecting a coating system that affords effective protection and selecting one that fails.

Since various ASTM protocols are relied upon throughout the FBC, any laboratory which is approved by ASTM to perform any stated protocol would streamline the evaluation process and provide the FBC with accurate data. Companies would benefit from a reduction of time and expense for the duplication of tests that have already been completed by a recognized ASTM laboratory.

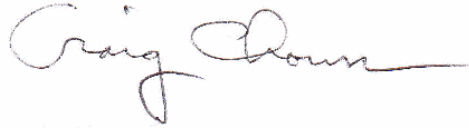
Again, we appreciate the opportunity to provide continued input and feedback for the FBC rules and guidelines governing EPOX-Z NRG and other cool roof coating products. If you have any questions or need additional information, please contact Craig Chown via e-mail at [craigchown@gmail.com](mailto:craigchown@gmail.com), or by telephone at (850) 210-6284.

Additionally, Mr. Tony Camarota, CEO / President, EPOX-Z Corporation, is willing to provide feedback and answer questions as necessary. Mr. Camarota's impressive background includes:

- the founder, President and Chief Executive Officer of the EPOX-Z Corporation;
- a national leader in the field of polymer science.
- holds multiple patents in resin technologies and is the inventor of EPOX-Z's high performance coatings;
- member of the Society of Plastic Engineers and the Society for the Advancement of Material and Process Engineering;
- a much sought after speaker, who has addressed the Advanced Energy Conference, the Sustainability Institute and the International Workshop on Advances in Cool Roof Research;

- two time recipient of the prestigious Frost and Sullivan product innovation award for resin technologies;
- former Massachusetts “Businessman of the Year”; and
- testified as an expert witness in small business development before the United States Congress.

With Kind Regards,



Craig Chown  
CEO / President  
CCRICS

cc: Mo Madani, FBC  
Tony Camarota, CEO, President, EPOX-Z Corporation  
Jeff Cooper, CFO, COO, EPOX-Z Corporation  
Fred Dudley, Holland & Knight

Page 5 of 5



Total Mods for **Roofing** in **Withdrawn**: 30

Total Mods for report: 85

## Sub Code: Building

**R5260**

56

Date Submitted	7/18/2012	Section	1503
Chapter	15	Affects HVHZ	No
TAC Recommendation	Withdrawn		
Commission Action	Pending Review		
Proponent	Mark Zehnal		
Attachments	No		

### Comments

<b>General Comments</b>	<b>No</b>
<b>Alternate Language</b>	<b>No</b>

### Related Modifications

### Summary of Modification

Provides current Florida-specific criteria

### Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

### Fiscal Impact Statement

**Impact to local entity relative to enforcement of code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to building and property owners relative to cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to industry relative to the cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

### Requirements

**Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Does not degrade the effectiveness of the code**

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Is the proposed code modification part of a prior code version?**

YES

**The provisions contained in the proposed amendment are addressed in the applicable international code?**

NO

**The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?**

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

## SECTION 1503 WEATHER PROTECTION

### 1503.1 General.

Roof decks shall be covered with approved roof coverings secured to the building or structure in accordance with the provisions of this chapter. Roof coverings shall be designed and installed in accordance with this code and the approved manufacturer's instructions such that the roof covering shall serve to protect the building or structure.

### 1503.2 Flashing.

Flashing shall be installed in such a manner so as to prevent moisture entering the wall and roof through joints in copings, through moisture-permeable materials and at intersections with parapet walls and other penetrations through the roof plane.

#### 1503.2.1 Locations.

Flashing shall be installed at wall and roof intersections, at gutters, wherever there is a change in roof slope or direction and around roof openings. Where flashing is of metal, the metal shall be corrosion resistant with a thickness not less than 0.019 inch (0.483 mm) (No. 26 galvanized sheet) provided in Table 1503.2.

Exception: This requirement does not apply to hip and ridge junctions.

**TABLE 1503.2 METAL FLASHING MATERIAL**

<u>MATERIAL</u>	<u>MINIMUM THICKNESS (INCHES)</u>	<u>GAGE</u>	<u>WEIGHT (LBS PER SQ FT)</u>
Copper	1 (16 oz)		
Aluminum	0.024		
Stainless Steel	28		
Galvanized Steel	0.0179	26 (zinc coated G90)	
Aluminum Zinc Coated Steel	0.0179	26 (AZ50 Alum Zinc)	
Zinc Alloy	0.027		
Lead	2.5 (40 oz)		
Painted Terne	-	1.25 (20 oz)	

### 1503.3 Coping.

Parapet walls shall be properly coped with noncombustible, weatherproof materials of a width no less than the thickness of the parapet wall.

#### [P] 1503.4 Roof drainage.

Unless roofs are sloped to drain over roof edges, D-design and installation of roof drainage systems shall comply with [Section 1503](#) of this code and [Sections 1106 and 1108](#), as applicable, of and the [Florida Building Code, Plumbing, Chapter 11](#) International Plumbing Code.

#### [P] 1503.4.1 Secondary (emergency overflow) drains or scuppers.

Where roof drains are required, secondary (emergency overflow) roof drains or scuppers shall be provided where the roof perimeter construction extends above the roof in such a manner that water will be entrapped if the primary drains allow buildup for any reason. The installation and sizing of secondary emergency

overflow drains, leaders and conductors shall comply with Sections 1106 and 1108, as applicable, of the International Plumbing Code Florida Building Code, Plumbing.

#### 1503.4.2 Scuppers.

~~When scuppers are used for secondary (emergency overflow) roof drainage, the quantity, size, location and inlet elevation of the scuppers shall be sized to prevent the depth of ponding water from exceeding that for which the roof was designed as determined by [Section 1611.1](#). Scuppers shall not have an opening dimension of less than 4 inches (102 mm). The flow through the primary system shall not be considered when locating and sizing scuppers.~~

Where required for roof drainage, a scupper shall be placed level with the roof surface in a wall or parapet. The scupper shall be located as determined by the slope and the contributing area of the roof. The exterior facing or lining of a scupper, if metal, shall be the same as flashing material required by Sections 1503 through 1510 for the particular type of covering specified for the building. For other type materials, follow manufacturer's specifications.

##### 1503.4.2.1 Overflow scuppers.

When other means of drainage of overflow water is not provided, overflow scuppers shall be placed in walls or parapets not less than 2 inches (51 mm) nor more than 4 inches (102 mm) above the finished roof covering and shall be located as close as practical to required vertical leaders or downspouts or wall and parapet scuppers. An overflow scupper shall be sized in accordance with the Florida Building Code, Plumbing.

#### 1503.4.3 Gutters.

Gutters and leaders placed on the outside of buildings, other than Group R-3, private garages and buildings of Type V construction, shall be of noncombustible material or a minimum of Schedule 40 plastic pipe.

#### 1503.5 Roof ventilation.

Attic ventilation Intake and exhaust vents shall be provided in accordance with [Section 1203.2](#) and the manufacturer's installation instructions.

#### 1503.6 Crickets and saddles.

A cricket or saddle shall be installed on the ridge side of any chimney or penetration greater than 30 inches (762 mm) wide as measured perpendicular to the slope. Cricket or saddle coverings shall be sheet metal or of the same material as the roof covering.

~~Exception: Unit skylights installed in accordance with [Section 2405.5](#) and flashed in accordance with the manufacturer's instructions shall be permitted to be installed without a cricket or saddle~~

<b>Date Submitted</b>	7/18/2012	<b>Section</b>	1504	<b>Proponent</b>	Mark Zehnal
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<b>TAC Recommendation</b>	Withdrawn				
<b>Commission Action</b>	Pending Review				

**Comments**

**General Comments** No **Alternate Language** No

**Related Modifications****Summary of Modification**

Provides current Florida-specific criteria

**Rationale**

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**Fiscal Impact Statement****Impact to local entity relative to enforcement of code**

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**Impact to building and property owners relative to cost of compliance with code**

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Is the proposed code modification part of a prior code version?

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The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

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NO

## SECTION 1504 PERFORMANCE REQUIREMENTS

### 1504.1 Wind resistance of roofs.

Roof decks and roof coverings shall be designed for wind loads in accordance with [Chapter 16](#) and [Sections 1504.2, 1504.3](#) and [1504.4](#).

#### 1504.1.1 Wind resistance of asphalt shingles.

Asphalt shingles shall ~~comply~~ be designed for wind speeds in accordance with [Section 1507.2.7](#).

#### 1504.2 Wind resistance of clay and concrete tile.

Wind loads on clay and concrete tile roof coverings shall be in accordance with [Section 1609.5](#).

#### 1504.3 Wind resistance of nonballasted roofs.

Roof coverings installed on roofs in accordance with [Section 1507](#) that are mechanically attached or adhered to the roof deck shall be designed to resist the design wind load pressures for components and cladding in accordance with [Section 1609](#).

##### 1504.3.1 Other roof systems.

Roof systems with built-up, modified bitumen, fully adhered or mechanically attached single-ply through fastened metal panel roof systems, and other types of membrane roof coverings shall also be tested in accordance with FM 4474, UL 580 or UL 1897.

##### 1504.3.2 Metal panel roof systems.

Metal panel roof systems through fastened or standing seam shall be tested in accordance with UL 580 or ASTM E 1592 or TAS 125.

**Exception:** Metal roofs constructed of cold-formed steel, where the roof deck acts as the roof covering and provides both weather protection and support for structural loads, shall be permitted to be designed and tested in accordance with the applicable referenced structural design standard in [Section 2210.1](#).

#### 1504.4 Ballasted low-slope roof systems.

Ballasted low-slope (roof slope < 2:12) single-ply roof system coverings installed in accordance with [Sections 1507.12](#) and [1507.13](#) shall be designed in accordance with [Section 1504.8](#) and ANSI/SPRI RP-4.

#### 1504.5 Edge securement for low-slope roofs.

Low-slope built-up, modified bitumen and single-ply roof system metal edge securement, except gutters, shall be designed and installed for wind loads in accordance with [Chapter 16](#) and tested for resistance in accordance with Test Methods RE-1, RE-2 and RE-3 of ANSI/SPRI ES-1, or RAS 111 except  $V_{ult}$  wind speed shall be determined from Figure 1609A, 1609B, or 1609C as applicable.

#### 1504.6 Physical properties.

Roof coverings installed on low-slope roofs (roof slope < 2:12) in accordance with [Section 1507](#) shall demonstrate physical integrity over the working life of the roof based upon 2,000 hours of exposure to accelerated weathering tests conducted in accordance with [ASTM G 152](#), [ASTM G 153](#), [ASTM G 155](#) or [ASTM G 154](#). Those roof coverings that are subject to cyclical flexural response due to wind loads shall not

demonstrate any significant loss of tensile strength for unreinforced membranes or breaking strength for reinforced membranes when tested as herein required.

#### 1504.7 Impact resistance.

Roof coverings installed on low-slope roofs (roof slope < 2:12) in accordance with [Section 1507](#) shall resist impact damage based on the results of tests conducted in accordance with [ASTM D 3746](#), [ASTM D 4272](#), CGSB 37-GP-52M or the "Resistance to Foot Traffic Test" in Section 5.5 of FM 4470. All structural metal roofing systems having a thickness equal to or greater than 22 gage and all non-structural metal roof systems having a thickness equal to or greater than 26 gage shall be exempt from the tests listed above.

#### 1504.8 Aggregate.

~~Aggregate used as surfacing for roof coverings and aggregate, gravel or stone used as ballast shall not be used on the roof of a building located in a hurricane-prone region as defined in [Section 202](#), or on any other building with a mean roof height exceeding that permitted by Table 1504.8 based on the exposure category and basic wind speed at the site.~~ shall be permitted as roof surfacing when installed on slopes of 3:12 or less, not less than 400 pound (182 kg) of roofing gravel or 300 pounds (145 kg) of slag per square shall be applied. A minimum of 50 percent of the total aggregate shall be embedded in the flood coat of bitumen or installed in accordance with its product approval. Aggregate shall be dry and free from dirt and shall be in compliance with the sizing requirements set forth in [ASTM D 1863](#). A building official may request a test to confirm compliance with these requirements.

TABLE 1504.8 MAXIMUM ALLOWABLE MEAN ROOF HEIGHT PERMITTED FOR BUILDINGS WITH AGGREGATE ON THE ROOF IN AREAS OUTSIDE A HURRICANE-PRONE REGION

NOMINAL DESIGN WIND SPEED, $V_{asd}$ (mph) <sup>b,c</sup>	MAXIMUM MEAN ROOF HEIGHT (ft) <sup>a,e</sup>		
	Exposure category		
	B	C	D
85	170	60	30
90	110	35	15
95	75	20	NP
100	55	15	NP
105	40	NP	NP
110	30	NP	NP
115	20	NP	NP
120	15	NP	NP
Greater than 120	NP	NP	NP

For SI: 1 foot = 304.8 mm; 1 mile per hour = 0.447 m/s.

a. Mean roof height as defined in ASCE 7.

b. For intermediate values of  $V_{asd}$ , the height associated with the next higher value of  $V_{asd}$  shall be used, or direct interpolation is permitted.

c. NP = gravel and stone not permitted for any roof height.

d. ~~V<sub>asd</sub>~~ shall be determined in accordance with [Section 1609.3.1.](#)

Reserved.

1504.9 Margin of Safety.

A margin of safety of 2:1 shall be applied to all wind uplift resistance test results except when a margin of safety is specified in the test standard.

Exception: Asphalt shingles testing resulting in a miles per hour rating as required in [Section 1507.2.7.](#)



<b>Date Submitted</b>	7/18/2012	<b>Section</b>	1505	<b>Proponent</b>	Mark Zehnal
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<b>TAC Recommendation</b>	Withdrawn				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications****Summary of Modification**

Provides current Florida-specific criteria

**Rationale**

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NO

## SECTION 1505 FIRE CLASSIFICATION

### 1505.1 General.

Roof assemblies shall be divided into the classes defined below. Class A, B and C roof assemblies and roof coverings required to be listed by this section shall be tested in accordance with ASTM E 108 or UL 790. In addition, fire-retardant-treated wood roof coverings shall be tested in accordance with ASTM D 2898. The minimum roof coverings installed on buildings shall comply with Table 1505.1 based on the type of construction of the building.

Exception: Skylights and sloped glazing that comply with [Chapter 24](#) or [Section 2610](#).

TABLE 1505.1<sup>a, b</sup> MINIMUM ROOF COVERING CLASSIFICATION FOR TYPES OF CONSTRUCTION

IA	IB	IIA	IIB	IIIA	IIIB	IV	VA	VB
B	B	B	C <sup>c</sup>	B	C <sup>c</sup>	B	B	C <sup>c</sup>

For SI: 1 foot = 304.8 mm, 1 square foot = 0.0929 m<sup>2</sup>.

- Unless otherwise required in accordance with the International Wildland-Urban Interface Code or due to the location of the building within a fire district in accordance with Appendix D.
- Nonclassified roof coverings shall be permitted on buildings of Group R-3 and Group U occupancies, where there is a minimum fire-separation distance of 6 feet measured from the leading edge of the roof.
- Buildings that are not more than two stories above grade plane and having not more than 6,000 square feet of projected roof area and where there is a minimum 10-foot fire-separation distance from the leading edge of the roof to a lot line on all sides of the building, except for street fronts or public ways, shall be permitted to have roofs of No. 1 cedar or redwood shakes and No. 1 shingles.

### 1505.2 Class A roof assemblies.

Class A roof assemblies are those that are effective against severe fire test exposure. Class A roof assemblies and roof coverings shall be listed and identified as Class A by an approved testing agency. Class A roof assemblies shall be permitted for use in buildings or structures of all types of construction.

Exceptions:

- Class A roof assemblies include those with coverings of brick, masonry or an exposed concrete roof deck.
- Class A roof assemblies also include ferrous or copper shingles or sheets, metal sheets and shingles, clay or concrete roof tile or slate installed on noncombustible decks or ferrous, copper or metal sheets installed without a roof deck on noncombustible framing.
- ~~Class A roof assemblies include minimum 16 oz/sq. ft. (0.0416 kg/m<sup>3</sup>) copper sheets installed over combustible decks.~~

### 1505.3 Class B roof assemblies.

Class B roof assemblies are those that are effective against moderate fire-test exposure. Class B roof assemblies and roof coverings shall be listed and identified as Class B by an approved testing agency.

**1505.4 Class C roof assemblies.**

Class C roof assemblies are those that are effective against light fire-test exposure. Class C roof assemblies and roof coverings shall be listed and identified as Class C by an approved testing agency.

**1505.5 Nonclassified roofing.**

Nonclassified roofing is approved material that is not listed as a Class A, B or C roof covering.

**1505.6 Fire-retardant-treated wood shingles and shakes.**

Fire-retardant-treated wood shakes and shingles shall be treated by impregnation with chemicals by the full-cell vacuum-pressure process, in accordance with AWPA C1. Each bundle shall be marked to identify the manufactured unit and the manufacturer, and shall also be labeled to identify the classification of the material in accordance with the testing required in [Section 1505.1](#), the treating company and the quality control agency.

**1505.7 Special purpose roofs.**

~~Special purpose wood shingle or wood shake roofing shall conform with the grading and application requirements of [Section 1507.8](#) or [1507.9](#). In addition, an underlayment of  $\frac{5}{8}$ -inch (15.9 mm) Type X water-resistant gypsum backing board or gypsum sheathing shall be placed under minimum nominal  $\frac{1}{2}$ -inch thick (12.7 mm) wood structural panel solid sheathing or 1-inch (25 mm) nominal spaced sheathing.~~

**Reserved.****1505.8 Photovoltaic systems.**

Rooftop installed photovoltaic systems that are adhered or attached to the roof covering or photovoltaic modules/shingles installed as roof coverings shall be labeled to identify their fire classification in accordance with the testing required in [Section 1505.1](#).

<b>Date Submitted</b>	7/18/2012	<b>Section</b>	1506	<b>Proponent</b>	Mark Zehnal
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<b>TAC Recommendation</b>	Withdrawn				
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**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications****Summary of Modification**

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NO

## SECTION 1506 MATERIALS

### 1506.1 Scope.

The requirements set forth in this section shall apply to the application of roof-covering materials specified herein. Roof coverings shall be applied in accordance with this chapter and the manufacturer's installation instructions. Installation of roof coverings shall comply with the applicable provisions of [Section 1507](#).

### 1506.2 Compatibility of materials.

Roofs and roof coverings shall be of materials that are compatible with each other and with the building or structure to which the materials are applied.

### 1506.3 Material specifications and physical characteristics.

Roof-covering materials shall conform to the applicable standards listed in this chapter. In the absence of applicable standards or where materials are of questionable suitability, testing by an approved agency shall be required by the building code official to determine the character, quality and limitations of application of the materials.

### 1506.4 Product identification.

Roof-covering materials shall be delivered in packages bearing the manufacturer's identifying marks and approved testing agency labels required in accordance with [Section 1505](#). Bulk shipments of materials shall be accompanied with the same information issued in the form of a certificate or on a bill of lading by the manufacturer.

### 1506.5 Nails.

Nails shall be corrosion resistant nails conforming to [ASTM F 1667](#). The corrosion resistance shall meet [ASTM A 641](#), Class 1 or an equal corrosion resistance by coating, electro galvanization, mechanical galvanization, hot dipped galvanization, stainless steel, nonferrous metal and alloys or other suitable corrosion resistant material.

### 1506.6 Screws.

Wood screws conform to [ANSI/ASME B 18.6.1](#). Screws shall be corrosion resistant by coating, galvanization, stainless steel, nonferrous metal or other suitable corrosion resistant material. The corrosion resistance shall be demonstrated through one of the following methods:

1. Corrosion resistance equivalent to [ASTM A 641](#), Class 1;
2. Corrosion resistance in accordance with [TAS 114](#), Appendix E; or
3. Corrosion resistant coating exhibiting not more than 5 percent red rust after 1000 hours exposure in accordance with [ASTM B 117](#).

### 1506.7 Clips.

Clips shall be corrosion resistant clips. The corrosion resistance shall meet 0.90 ounce per square foot (0.458 kg/m<sup>2</sup>) measured according to [ASTM A 90/A 90M](#), [TAS 114](#) Appendix E or an equal corrosion resistance coating, electro galvanization, mechanical galvanization, hot dipped galvanization, stainless steel, nonferrous metals and alloys or other suitable corrosion resistant material. Stainless steel clips shall conform to [ASTM A167](#), Type 304.

<b>Date Submitted</b>	7/18/2012	<b>Section</b>	1507.3 Clay and concrete tile.	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	15	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Withdrawn				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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NO

### 1507.3 Clay and concrete tile.

The installation of clay and concrete tile shall comply with the provisions of this section.

#### 1507.3.1 Deck requirements.

Concrete and clay tile shall be installed only over solid sheathing ~~or except where the roof covering is specifically designed and tested in accordance with Section 1609.5.2 to be applied over spaced structural spaced sheathing boards.~~

#### 1507.3.2 Deck slope.

Clay and concrete roof tile shall be installed ~~on roof slopes of 2<sup>1</sup>/<sub>2</sub> units vertical in 12 units horizontal (21-percent slope) or greater. For roof slopes from 2<sup>1</sup>/<sub>2</sub> units vertical in 12 units horizontal (21-percent slope) to four units vertical in 12 units horizontal (33-percent slope), double underlayment application is required in accordance with Section 1507.3.3, in accordance with the recommendations of FRSA/TRI 07320 where the  $V_{asd}$  as determined in accordance with Section 1609.3.1 or the recommendations of RAS 118, 119 or 120.~~

#### 1507.3.3 Underlayment.

Unless otherwise noted, required underlayment shall conform to: ASTM D 226, Type II; ASTM D 2626, [ASTM D 1970](#) or ASTM D 6380, Class M mineral-surfaced roll roofing. Underlayment shall be applied according to the tile manufacturer's installation instructions or the recommendations of the FRSA/TRI 07320 where the basic wind speed,  $V_{asd}$ , is determined in accordance with Section 1609.3.1 or the recommendations of RAS 118, 119 or 120.

##### 1507.3.3.1 ~~Low-slope roofs~~ Slope and underlayment requirements.

~~For roof slopes from 2<sup>1</sup>/<sub>2</sub> units vertical in 12 units horizontal (21-percent slope), up to four units vertical in 12 units horizontal (33-percent slope), underlayment shall be a minimum of two layers applied as follows:~~

- ~~1. Starting at the eave, a 19-inch (483 mm) strip of underlayment shall be applied parallel with the eave and fastened sufficiently in place.~~
- ~~2. Starting at the eave, 36-inch wide (914 mm) strips of underlayment felt shall be applied overlapping successive sheets 19 inches (483 mm) and fastened sufficiently in place. Refer to FRSA/TRI 07320 where the basic wind speed,  $V_{asd}$ , is determined in accordance with Section 1609.3.1 for underlayment and slope requirements for specific roof tile systems or the recommendations of RAS 118, 119 or 120.~~

##### 1507.3.3.2 High-slope roofs.

~~For roof slopes of four units vertical in 12 units horizontal (33-percent slope) or greater, underlayment shall be a minimum of one layer of underlayment felt applied shingle fashion, parallel to, and starting from the eaves and lapped 2 inches (51 mm), fastened only as necessary to hold in place. Reserved.~~

##### 1507.3.3.3 High wind attachment.

~~Underlayment applied in areas subject to high wind [ $V_{asd}$  greater than 110 mph (49 m/s) as determined in~~

accordance with [Section 1609.3.1](#) shall be applied with corrosion-resistant fasteners in accordance with the manufacturer's installation instructions. Fasteners are to be applied along the overlap not farther apart than 36 inches (914 mm) on center.

Underlayment installed where  $V_{asd}$  in accordance with [Section 1609.3.1](#), equals or exceeds 120 mph (54 m/s) shall be attached in a grid pattern of 12 inches (305 mm) between side laps with a 6-inch (152 mm) spacing at the side laps. Underlayment shall be applied in accordance with [Sections 1507.3.3.1](#) and [1507.3.3.2](#) except all laps shall be a minimum of 4 inches (102 mm). Underlayment shall be attached using metal or plastic cap nails with a head diameter of not less than 1 inch (25 mm) with a thickness of at least 32-gauge [0.0134 inch (0.34 mm)] sheet metal. The cap nail shank shall be a minimum of 12-gauge [0.105 inch (2.67 mm)] with a length to penetrate through the roof sheathing or a minimum of  $\frac{3}{4}$  inch (19.1 mm) into the roof sheathing.

Exception: As an alternative, adhered underlayment complying with ASTM D 1970 shall be permitted. Reserved.

#### 1507.3.4 Clay tile.

Clay roof tile shall comply with ASTM C 1167.

#### 1507.3.5 Concrete tile.

Concrete roof tile shall comply with ASTM C 1492.

#### 1507.3.6 Fasteners.

Tile fasteners shall be corrosion resistant and not less than 11 gage,  $\frac{5}{16}$ -inch (8.0 mm) head, and of sufficient length to penetrate the deck a minimum of  $\frac{3}{4}$  0.75 inch (19.1 mm) or through the thickness of the deck, whichever is less or in accordance with the FRSA/TRI 07320 where the basic wind speed,  $V_{asd}$  is determined in accordance with [Section 1609.3.1](#) or in accordance with RAS 118, 119 or 120. Attaching wire for clay or concrete tile shall not be smaller than 0.083 inch (2.1 mm). Perimeter fastening areas include three tile courses but not less than 36 inches (914 mm) from either side of hips or ridges and edges of eaves and gable rakes.

#### 1507.3.7 Attachment.

Clay and concrete roof tiles shall be fastened in accordance with [Table 1507.3.7](#) [Section 1609](#) or in accordance with FRSA/TRI 07320 where the basic wind speed,  $V_{asd}$  is determined in accordance with [Section 1609.3.1](#).

TABLE 1507.3.7 CLAY AND CONCRETE TILE ATTACHMENT<sup>a, b, c</sup>

GENERAL - CLAY OR CONCRETE ROOF TILE			
Maximum Nominal Design Wind Speed, $V_{asd}$ <sup>f</sup> (mph)	Mean roof height (feet)	Roof slope < 3:12	Roof slope 3:12 and over
85	0-60	One fastener per tile. Flat tile without vertical laps, two fasteners per tile.	Two fasteners per tile. Only one fastener on slopes of 7:12 and less for tiles with installed weight exceeding 7.5 lbs./sq. ft. having a width no greater than 16 inches.
100	0-40		



100	>40-60	The head of all tiles shall be nailed. The nose of all eave tiles shall be fastened with approved clips. All rake tiles shall be nailed with two nails. The nose of all ridge, hip and rake tiles shall be set in a bead of roofer's mastic.
110	0-60	The fastening system shall resist the wind forces in <a href="#">Section 1609.5.3.</a>
120	0-60	The fastening system shall resist the wind forces in <a href="#">Section 1609.5.3.</a>
130	0-60	The fastening system shall resist the wind forces in <a href="#">Section 1609.5.3.</a>
All	>60	The fastening system shall resist the wind forces in <a href="#">Section 1609.5.3.</a>

**INTERLOCKING CLAY OR CONCRETE ROOF TILE WITH PROJECTING ANCHOR LUGS<sup>d,e</sup>**  
 (Installations on spaced/solid sheathing with battens or spaced sheathing)

Maximum Nominal Design Wind Speed, $V_{nod}^f$ (mph)	Mean roof height (feet)	Roof slope < 5:12	Roof slope 5:12 < 12:12	Roof slope 12:12 and over
85	0-60			
100	0-40	Fasteners are not required. Tiles with installed weight less than 9 lbs./sq. ft. require a minimum of one fastener per tile.	One fastener per tile every other row. All perimeter tiles require one fastener. Tiles with installed weight less than 9 lbs./sq. ft. require a minimum of one fastener per tile.	One fastener required for every tile. Tiles with installed weight less than 9 lbs./sq. ft. require a minimum of one fastener per tile.
100	>40-60	The head of all tiles shall be nailed. The nose of all eave tiles shall be fastened with approved clips. All rake tiles shall be nailed with two nails. The nose of all ridge, hip and rake tiles shall be set in a bead of roofer's mastic.		
110	0-60	The fastening system shall resist the wind forces in <a href="#">Section 1609.5.3.</a>		
120	0-60	The fastening system shall resist the wind forces in <a href="#">Section 1609.5.3.</a>		
130	0-60	The fastening system shall resist the wind forces in <a href="#">Section 1609.5.3.</a>		
All	>60	The fastening system shall resist the wind forces in <a href="#">Section 1609.5.3.</a>		

**INTERLOCKING CLAY OR CONCRETE ROOF TILE WITH PROJECTING ANCHOR LUGS**  
 (Installations on solid sheathing without battens)

Maximum Nominal Design Wind Speed, $V_{asd}^f$ (mph)	Mean roof height (feet)	All roof slopes
85	0-60	One fastener per tile.
100	0-40	One fastener per tile.

100	<del>&gt; 40 60</del>	The head of all tiles shall be nailed. The nose of all eave tiles shall be fastened with approved clips. All rake tiles shall be nailed with two nails. The nose of all ridge, hip and rake tiles shall be set in a bead of roofer's mastic.
110	<del>0-60</del>	The fastening system shall resist the wind forces in <a href="#">Section 1609.5.3.</a>
120	<del>0-60</del>	The fastening system shall resist the wind forces in <a href="#">Section 1609.5.3.</a>
130	<del>0-60</del>	The fastening system shall resist the wind forces in <a href="#">Section 1609.5.3.</a>
All	<del>&gt; 60</del>	The fastening system shall resist the wind forces in <a href="#">Section 1609.5.3.</a>

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 mile per hour = 0.447 m/s, 1 pound per square foot = 4.882 kg/m<sup>2</sup>.

- a. ~~Minimum fastener size. Corrosion resistant nails not less than No. 11 gage with  $\frac{5}{16}$  inch head. Fasteners shall be long enough to penetrate into the sheathing  $\frac{3}{4}$  inch or through the thickness of the sheathing, whichever is less. Attaching wire for clay and concrete tile shall not be smaller than 0.083 inch.~~
- b. ~~Snow areas. A minimum of two fasteners per tile are required on battens and one fastener.~~
- c. ~~Roof slopes greater than 24:12. The nose of all tiles shall be securely fastened.~~
- d. ~~Horizontal battens. Battens shall be not less than 1 inch by 2 inch nominal. Provisions shall be made for drainage by a minimum of  $\frac{1}{8}$  inch riser at each nail or by 4 foot long battens with at least a  $\frac{1}{2}$  inch separation between battens. Horizontal battens are required for slopes over 7:12.~~
- e. ~~Perimeter fastening areas include three tile courses but not less than 36 inches from either side of hips or ridges and edges of eaves and gable rakes.~~
- f.  ~~$V_{asd}$  shall be determined in accordance with [Section 1609.3.1.](#)~~

Reserved.

### 1507.3.8 Application.

Tile shall be applied according to the manufacturer's installation instructions or recommendations of the FRSA/TRI 07320 where the basic wind speed,  $V_{asd}$ , is determined in accordance with [Section 1609.3.1](#) or the recommendation of RAS 118, 119 or 120.

~~;~~ ~~based on the following:~~

- ~~1. Climatic conditions.~~
- ~~2. Roof slope.~~
- ~~3. Underlayment system.~~
- ~~4. Type of tile being installed.~~

### 1507.3.9 Flashing.

At the juncture of the roof vertical surfaces, flashing and counterflashing shall be provided in accordance with the manufacturer's installation instructions, ~~and where of metal, shall not be less than 0.019 inch (0.48~~

~~mm) (No. 26 galvanized sheet gage) corrosion-resistant metal. The valley flashing shall extend at least 11 inches (279 mm) from the centerline each way and have a splash diverter rib not less than 1 inch (25 mm) high at the flow line formed as part of the flashing. Sections of flashing shall have an end lap of not less than 4 inches (102 mm). For roof slopes of three units vertical in 12 units horizontal (25 percent slope) and over, the valley flashing shall have a 36-inch-wide (914 mm) underlayment of either one layer of Type I underlayment running the full length of the valley, or a self-adhering polymer-modified bitumen sheet complying with ASTM D 1970, in addition to other required underlayment. In areas where the average daily temperature in January is 25°F (4°C) or less or where there is a possibility of ice forming along the eaves causing a backup of water, the metal valley flashing underlayment shall be solid cemented to the roofing underlayment for slopes under seven units vertical in 12 units horizontal (58 percent slope) or self-adhering polymer-modified bitumen sheet shall be installed or the recommendations of the FRSA/TRI 07320 where the basic wind speed,  $V_{asd}$ , is determined in accordance with [Section 1609.3.1](#) or the recommendation of RAS 118, 119 or 120.~~

<b>Date Submitted</b>	7/19/2012	<b>Section</b>	1504.9 Margin of Safety.	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	15	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Withdrawn				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications****Summary of Modification**

Provides current 2010 Florida Building Code specific criteria

**Rationale**

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

**Fiscal Impact Statement****Impact to local entity relative to enforcement of code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to building and property owners relative to cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to industry relative to the cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Requirements****Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Does not degrade the effectiveness of the code**

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

**1504.9 Margin of Safety.**

A margin of safety of 2:1 shall be applied to all wind uplift resistance test results except when a margin of safety is specified in the test standard.

**Exception:** Asphalt shingles testing resulting in a miles per hour rating as required in Section 1507.2.7.

<b>Date Submitted</b>	7/19/2012	<b>Section</b>	1507.3.2 Deck slope.	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	15	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Withdrawn				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications****Summary of Modification**

Provides current 2010 Florida Building Code specific criteria.

**Rationale**

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

**Fiscal Impact Statement****Impact to local entity relative to enforcement of code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to building and property owners relative to cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to industry relative to the cost of compliance with code**

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**Does not degrade the effectiveness of the code**

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Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

**1507.3.2 Deck slope.**

Clay and concrete roof tile shall be installed ~~on roof slopes of 2<sup>+</sup>/<sub>2</sub> units vertical in 12 units horizontal (21 percent slope) or greater. For roof slopes from 2<sup>+</sup>/<sub>2</sub> units vertical in 12 units horizontal (21 percent slope) to four units vertical in 12 units horizontal (33 percent slope), double underlayment application is required in accordance with Section 1507.3.3.~~ in accordance with the recommendations of FRSA/TRI 07320 where the  $V_{asd}$  as determined in accordance with Section 1609.3.1 or the recommendations of RAS 118, 119 or 120.

<b>Date Submitted</b>	7/19/2012	<b>Section</b>	1507.3.3.1 Slope and underlayment	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	15	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Withdrawn				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications****Summary of Modification**

Provides current 2010 Florida Building Code specific criteria.

**Rationale**

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

**Fiscal Impact Statement****Impact to local entity relative to enforcement of code**

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**Impact to building and property owners relative to cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to industry relative to the cost of compliance with code**

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**Requirements****Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

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**Does not degrade the effectiveness of the code**

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Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO



**1507.3.3.1 ~~Low-slope roofs~~ Slope and underlayment requirements.**

~~For roof slopes from 2<sup>1</sup>/<sub>2</sub> units vertical in 12 units horizontal (21 percent slope), up to four units vertical in 12 units horizontal (33 percent slope), underlayment shall be a minimum of two layers applied as follows:~~

- ~~1. Starting at the eave, a 19-inch (483 mm) strip of underlayment shall be applied parallel with the eave and fastened sufficiently in place.~~
- ~~2. Starting at the eave, 36-inch wide (914 mm) strips of underlayment felt shall be applied overlapping successive sheets 19 inches (483 mm) and fastened sufficiently in place. Refer to FRSA/TRI 07320 where the basic wind speed,  $V_{asd}$ , is determined in accordance with Section 1609.3.1 for underlayment and slope requirements for specific roof tile systems or the recommendations of RAS 118, 119 or 120.~~

<b>Date Submitted</b>	7/19/2012	<b>Section</b>	1507.3.3 Underlayment.	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	15	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Withdrawn				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications****Summary of Modification**

Provides current 2010 Florida Building Code specific criteria.

**Rationale**

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

**Fiscal Impact Statement****Impact to local entity relative to enforcement of code**

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**Impact to building and property owners relative to cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to industry relative to the cost of compliance with code**

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**Requirements****Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

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**Does not degrade the effectiveness of the code**

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Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

**1507.3.3 Underlayment.**

Unless otherwise noted, required underlayment shall conform to: ASTM D 226, Type II; ASTM D 2626, ASTM D 1970 or ASTM D 6380, Class M mineral-surfaced roll roofing. Underlayment shall be applied according to the tile manufacturer's installation instructions or the recommendations of the FRSA/TRI 07320 where the basic wind speed,  $V_{asd}$ , is determined in accordance with Section 1609.3.1 or the recommendations of RAS 118, 119 or 120.

<b>Date Submitted</b>	7/19/2012	<b>Section</b>	1507.3.6 Fasteners.	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	15	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Withdrawn				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications****Summary of Modification**

Provides current 2010 Florida Building Code specific criteria.

**Rationale**

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

**Fiscal Impact Statement****Impact to local entity relative to enforcement of code**

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**Impact to building and property owners relative to cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to industry relative to the cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Requirements****Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

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**Does not degrade the effectiveness of the code**

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Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

**1507.3.6 Fasteners.**

Tile fasteners shall be corrosion resistant and not less than 11 gage,  $\frac{5}{16}$ -inch (8.0 mm) head, and of sufficient length to penetrate the deck a minimum of  $\frac{3}{8}$  0.75 inch (19.1 mm) or through the thickness of the deck, whichever is less or in accordance with the FRSA/TRI 07320 where the basic wind speed,  $V_{asd}$ , is determined in accordance with Section 1609.3.1 or in accordance with RAS 118, 119 or 120. Attaching wire for clay or concrete tile shall not be smaller than 0.083 inch (2.1 mm). ~~Perimeter fastening areas include three tile courses but not less than 36 inches (914 mm) from either side of hips or ridges and edges of eaves and gable rakes.~~

<b>Date Submitted</b>	7/19/2012	<b>Section</b>	1507.3.7 Attachment.	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	15	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Withdrawn				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications****Summary of Modification**

Provides current 2010 Florida Building Code specific criteria.

**Rationale**

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

**Fiscal Impact Statement****Impact to local entity relative to enforcement of code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to building and property owners relative to cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to industry relative to the cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Requirements****Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

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**Does not degrade the effectiveness of the code**

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

**1507.3.7 Attachment.**

**Clay and concrete roof tiles shall be fastened in accordance with ~~Table 1507.3.7~~Section 1609 or in accordance with FRSA/TRI 07320 where the basic wind speed,  $V_{asd}$ , is determined in accordance with Section 1609.3.1.**

**TABLE 1507.3.7 CLAY AND CONCRETE TILE ATTACHMENT<sup>a, b, c</sup>**

<b>GENERAL - CLAY OR CONCRETE ROOF TILE</b>				
<b>Maximum Nominal Design Wind Speed, <math>V_{asd}</math><sup>f</sup> (mph)</b>	<b>Mean roof height (feet)</b>	<b>Roof slope &lt; 3:12</b>	<b>Roof slope 3:12 and over</b>	
85	0-60	One fastener per tile. Flat tile without vertical laps, two fasteners per tile.	Two fasteners per tile. Only one fastener on slopes of 7:12 and less for tiles with installed weight exceeding 7.5 lbs./sq. ft. having a width no greater than 16 inches.	
100	0-40			
100	>40-60	The head of all tiles shall be nailed. The nose of all eave tiles shall be fastened with approved clips. All rake tiles shall be nailed with two nails. The nose of all ridge, hip and rake tiles shall be set in a bead of roofer's mastic.		
110	0-60	The fastening system shall resist the wind forces in Section 1609.5.3.		
120	0-60	The fastening system shall resist the wind forces in Section 1609.5.3.		
130	0-60	The fastening system shall resist the wind forces in Section 1609.5.3.		
All	>60	The fastening system shall resist the wind forces in Section 1609.5.3.		
<b>INTERLOCKING CLAY OR CONCRETE ROOF TILE WITH PROJECTING ANCHOR LUGS<sup>d, e</sup></b>				
<b>(Installations on spaced/solid sheathing with battens or spaced sheathing)</b>				
<b>Maximum Nominal Design Wind Speed, <math>V_{asd}</math><sup>f</sup> (mph)</b>	<b>Mean roof height (feet)</b>	<b>Roof slope &lt; 5:12</b>	<b>Roof slope 5:12 &lt; 12:12</b>	<b>Roof slope 12:12 and over</b>
85	0-60	Fasteners are not required. Tiles with installed weight less than 9 lbs./sq. ft. require a minimum of one fastener per tile.	One fastener per tile every other row. All perimeter tiles require one fastener. Tiles with installed weight less than 9 lbs./sq. ft. require a minimum of one fastener per tile.	One fastener required for every tile. Tiles with installed weight less than 9 lbs./sq. ft. require a minimum of one fastener per tile.
100	0-40			
100	>40-60	The head of all tiles shall be nailed. The nose of all eave tiles shall be fastened with approved clips. All rake tiles shall be nailed with two nails. The nose of all ridge, hip and rake tiles shall be set in a bead of roofer's mastic.		

110	0-60	The fastening system shall resist the wind forces in Section 1609.5.3.
120	0-60	The fastening system shall resist the wind forces in Section 1609.5.3.
130	0-60	The fastening system shall resist the wind forces in Section 1609.5.3.
All	>60	The fastening system shall resist the wind forces in Section 1609.5.3.
<b>INTERLOCKING CLAY OR CONCRETE ROOF TILE WITH PROJECTING ANCHOR LUGS</b> (Installations on solid sheathing without battens)		
<b>Maximum Nominal Design Wind Speed, <math>V_{asd}</math><sup>f</sup></b> (mph)	<b>Mean roof height (feet)</b>	<b>All roof slopes</b>
85	0-60	One fastener per tile.
100	0-40	One fastener per tile.
100	> 40-60	The head of all tiles shall be nailed. The nose of all eave tiles shall be fastened with approved clips. All rake tiles shall be nailed with two nails. The nose of all ridge, hip and rake tiles shall be set in a bead of roofer's mastic.
110	0-60	The fastening system shall resist the wind forces in Section 1609.5.3.
120	0-60	The fastening system shall resist the wind forces in Section 1609.5.3.
130	0-60	The fastening system shall resist the wind forces in Section 1609.5.3.
All	>60	The fastening system shall resist the wind forces in Section 1609.5.3.

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 mile per hour = 0.447 m/s, 1 pound per square foot = 4.882 kg/m<sup>2</sup>.

a. Minimum fastener size. Corrosion resistant nails not less than No. 11 gage with <sup>5</sup>/<sub>16</sub> inch head. Fasteners shall be long enough to penetrate into the sheathing <sup>3</sup>/<sub>4</sub> inch or through the thickness of the sheathing, whichever is less. Attaching wire for clay and concrete tile shall not be smaller than 0.083 inch.

b. Snow areas. A minimum of two fasteners per tile are required on battens and one fastener.

c. Roof slopes greater than 24:12. The nose of all tiles shall be securely fastened.

d. Horizontal battens. Battens shall be not less than 1 inch by 2 inch nominal. Provisions shall be made for drainage by a minimum of <sup>1</sup>/<sub>8</sub> inch riser at each nail or by 4 foot long battens with at least a <sup>1</sup>/<sub>2</sub> inch separation between battens. Horizontal battens are required for slopes over 7:12.

e. Perimeter fastening areas include three tile courses but not less than 36 inches from either side of hips or ridges and edges of eaves and gable rakes.

f.  $V_{asd}$  shall be determined in accordance with Section 1609.3.1.

Reserved.



<b>Date Submitted</b>	7/19/2012	<b>Section</b>	1507.3.8 Application.	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	15	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Withdrawn				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications****Summary of Modification**

Provides current 2010 Florida Building Code specific criteria.

**Rationale**

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

**Fiscal Impact Statement****Impact to local entity relative to enforcement of code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to building and property owners relative to cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to industry relative to the cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Requirements****Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Does not degrade the effectiveness of the code**

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

**1507.3.8 Application.**

Tile shall be applied according to the manufacturer's installation instructions or recommendations of the FRSA/TRI 07320 where the basic wind speed,  $V_{asd}$ , is determined in accordance with Section 1609.3.1 or the recommendation of RAS 118, 119 or 120.

~~, based on the following:~~

- ~~1. Climatic conditions.~~
- ~~2. Roof slope.~~
- ~~3. Underlayment system.~~
- ~~4. Type of tile being installed.~~

<b>Date Submitted</b>	7/19/2012	<b>Section</b>	1507.3.9 Flashing.	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	15	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Withdrawn				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications****Summary of Modification**

Provides current 2010 Florida Building Code specific criteria.

**Rationale**

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

**Fiscal Impact Statement****Impact to local entity relative to enforcement of code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to building and property owners relative to cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to industry relative to the cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Requirements****Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Does not degrade the effectiveness of the code**

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

**1507.3.9 Flashing.**

At the juncture of the roof vertical surfaces, flashing and counterflashing shall be provided in accordance with the manufacturer's installation instructions, ~~and where of metal, shall not be less than 0.019 inch (0.48 mm) (No. 26 galvanized sheet gage) corrosion-resistant metal.~~ The valley flashing shall extend at least 11 inches (279 mm) from the centerline each way and have a splash diverter rib not less than 1 inch (25 mm) high at the flow line formed as part of the flashing. Sections of flashing shall have an end lap of not less than 4 inches (102 mm). ~~For roof slopes of three units vertical in 12 units horizontal (25 percent slope) and over, the valley flashing shall have a 36-inch wide (914 mm) underlayment of either one layer of Type I underlayment running the full length of the valley, or a self-adhering polymer modified bitumen sheet complying with ASTM D 1970, in addition to other required underlayment.~~ In areas where the average daily temperature in January is 25°F (-4°C) or less or where there is a possibility of ice forming along the eaves causing a backup of water, the metal valley flashing underlayment shall be solid cemented to the roofing underlayment for slopes under seven units vertical in 12 units horizontal (58-percent slope) ~~or self-adhering polymer modified bitumen sheet shall be installed~~ or the recommendations of the FRSA/TRI 07320 where the basic wind speed,  $V_{asd}$ , is determined in accordance with Section 1609.3.1 or the recommendation of RAS 118, 119 or 120.

<b>Date Submitted</b>	7/19/2012	<b>Section</b>	1507.6.3.1 Underlayment and high	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	15	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Withdrawn				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications****Summary of Modification**

Provides current 2010 Florida Building Code specific criteria.

**Rationale**

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

**Fiscal Impact Statement****Impact to local entity relative to enforcement of code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to building and property owners relative to cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to industry relative to the cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Requirements****Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Does not degrade the effectiveness of the code**

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

### 1507.6.3.1 Underlayment and high wind.

Underlayment applied in areas subject to high winds [ $V_{99.9}$  greater than 110 mph (49 m/s) as determined in accordance with Section 1609.3.1] shall be applied with corrosion resistant fasteners in accordance with the manufacturer's installation instructions. Fasteners are to be applied along the overlap not farther apart than 36 inches (914 mm) on center.

~~Underlayment installed where  $V_{99.9}$  in accordance with Section 1609.3.1, equals or exceeds 120 mph (54 m/s) shall comply with ASTM D 226 Type II. The underlayment shall be attached in a grid pattern of 12 inches (305 mm) between side laps with a 6 inch (152 mm) spacing at the side laps. Underlayment shall be applied in accordance with the manufacturer's installation instructions except all laps shall be a minimum of 4 inches (102 mm). Underlayment shall be attached using metal or plastic cap nails with a head diameter of not less than 1 inch (25 mm) with a thickness of at least 32-gauge [0.0134 inch (0.34 mm)] sheet metal. The cap nail shank shall be a minimum of 12 gauge [0.105 inch (2.67 mm)] with a length to penetrate through the roof sheathing or a minimum of  $\frac{3}{4}$  inch (19.1 mm) into the roof sheathing.~~

~~**Exception:** As an alternative, adhered underlayment complying with ASTM D 1970 shall be permitted.~~

**RESERVED**

<b>Date Submitted</b>	7/19/2012	<b>Section</b>	1507.10.3 Red rosin paper.	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	15	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Withdrawn				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications****Summary of Modification**

Provides current 2010 Florida Building Code specific criteria.

**Rationale**

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

**Fiscal Impact Statement****Impact to local entity relative to enforcement of code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to building and property owners relative to cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to industry relative to the cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Requirements****Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Does not degrade the effectiveness of the code**

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

**1507.10.3 Red rosin paper.**

Red rosin paper shall be used when the membrane is applied directly to a wood deck or cementitious fiber decks.



<b>Date Submitted</b>	7/19/2012	<b>Section</b>	1507.17 Photovoltaic modules/sh	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	15	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Withdrawn				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications****Summary of Modification**

Provides current 2010 Florida Building Code specific criteria.

**Rationale**

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

**Fiscal Impact Statement****Impact to local entity relative to enforcement of code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to building and property owners relative to cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to industry relative to the cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Requirements****Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Does not degrade the effectiveness of the code**

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

**1507.17 Photovoltaic modules/shingles.**

Building integrated photovoltaic roofing modules/shingles. The installation of building integrated photovoltaic roofing modules/shingles shall comply with the provisions of this section.

**1507.17.1 Material standards.**

Building integrated ~~P~~-photovoltaic roofing modules/shingles shall be listed and labeled in accordance with UL 1703.

**1507.17.2 Attachment.**

Building integrated ~~P~~-photovoltaic roofing modules/shingles shall be attached in accordance with the manufacturer's installation instructions.

**1507.17.3 Wind resistance.**

Building integrated ~~P~~ photovoltaic roofing modules/shingles shall be tested in accordance with procedures and acceptance criteria in ASTM D 3161 or TAS 107. Building integrated ~~P~~-photovoltaic roofing modules/shingles shall comply with the classification requirements of Table 1507.2.7.1(2) for the appropriate maximum ~~nominal design~~ basic wind speed. Building integrated ~~P~~-photovoltaic roofing modules/shingle packaging shall bear a label to indicate compliance with the procedures in ASTM D 3161 or TAS 107 and the required classification from Table 1507.2.7.1(2) .

<b>Date Submitted</b>	7/21/2012	<b>Section</b>	1507.2.8.1 High wind attachment	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	15	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Withdrawn				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications****Summary of Modification**

Provides and carries forward current 2010 FBC Florida-specific criteria.

**Rationale**

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

**Fiscal Impact Statement****Impact to local entity relative to enforcement of code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to building and property owners relative to cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to industry relative to the cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Requirements****Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Does not degrade the effectiveness of the code**

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

### 1507.2.8.1 High wind attachment.

~~Underlayment applied in areas subject to high winds [ $V_{\text{wind}}$  greater than 110 mph (49 m/s) as determined in accordance with Section 1609.3.1] shall be applied with corrosion resistant fasteners in accordance with the manufacturer's instructions. Fasteners are to be applied along the overlap at a maximum spacing of 36 inches (914 mm) on center.~~

~~Underlayment installed where  $V_{\text{wind}}$ , in accordance with Section 1609.3.1, equals or exceeds 120 mph (54 m/s) shall comply with ASTM D 226 Type II, ASTM D 4869 Type IV, or ASTM D 6757. The underlayment shall be attached in a grid pattern of 12 inches (305 mm) between side laps with a 6 inch (152 mm) spacing at the side laps. Underlayment shall be applied in accordance with Section 1507.2.8 except all laps shall be a minimum of 4 inches (102 mm). Underlayment shall be attached using metal or plastic cap nails with a head diameter of not less than 1 inch (25 mm) with a thickness of at least 32 gauge [0.0134 inch (0.34 mm)] sheet metal. The cap nail shank shall be a minimum of 12 gauge [0.105 inch (2.67 mm)] with a length to penetrate through the roof sheathing or a minimum of  $\frac{3}{4}$  inch (19.1 mm) into the roof sheathing.~~

~~**Exception:** As an alternative, adhered underlayment complying with ASTM D 1970 shall be permitted. Reserved~~

<b>Date Submitted</b>	7/21/2012	<b>Section</b>	1507.3.3.3 High wind attachment	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	15	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Withdrawn				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications****Summary of Modification**

Provides and carries forward current 2010 FBC Florida-specific criteria.

**Rationale**

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

**Fiscal Impact Statement****Impact to local entity relative to enforcement of code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to building and property owners relative to cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to industry relative to the cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Requirements****Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Does not degrade the effectiveness of the code**

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

### 1507.3.3.3 High wind attachment.

~~Underlayment applied in areas subject to high wind [ $V_{wsd}$  greater than 110 mph (49 m/s) as determined in accordance with Section 1609.3.1] shall be applied with corrosion resistant fasteners in accordance with the manufacturer's installation instructions. Fasteners are to be applied along the overlap not farther apart than 36 inches (914 mm) on center.~~

~~Underlayment installed where  $V_{wsd}$  in accordance with Section 1609.3.1, equals or exceeds 120 mph (54 m/s) shall be attached in a grid pattern of 12 inches (305 mm) between side laps with a 6 inch (152 mm) spacing at the side laps. Underlayment shall be applied in accordance with Sections 1507.3.3.1 and 1507.3.3.2 except all laps shall be a minimum of 4 inches (102 mm). Underlayment shall be attached using metal or plastic cap nails with a head diameter of not less than 1 inch (25 mm) with a thickness of at least 32 gauge [0.0134 inch (0.34 mm)] sheet metal. The cap nail shank shall be a minimum of 12 gauge [0.105 inch (2.67 mm)] with a length to penetrate through the roof sheathing or a minimum of  $\frac{3}{4}$  inch (19.1 mm) into the roof sheathing.~~

~~**Exception:** As an alternative, adhered underlayment complying with ASTM D 1970 shall be permitted.~~ Reserved.

<b>Date Submitted</b>	7/23/2012	<b>Section</b>	1507.3.2	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	15	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Withdrawn				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications**

1507.3.3, 1507.3.3.1, 1507.3.6, 1507.3.7, 1507.3.8, 1507.3.9

**Summary of Modification**

Provides current Florida-specific criteria including update to previous Commission approved code referenced standard.

**Rationale**

To carry forward previous Commission approved code language and tables including the updated version of referenced standard designed in compliance with ASCE 7-10 providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

**Fiscal Impact Statement****Impact to local entity relative to enforcement of code**

No impact. Current 2010 FBC code language and tables including updated code standard designed in compliance with ASCE 7-10.

**Impact to building and property owners relative to cost of compliance with code**

No impact. Current 2010 FBC code language and tables including updated code standard designed in compliance with ASCE 7-10.

**Impact to industry relative to the cost of compliance with code**

No impact. Current 2010 FBC code language and tables including updated code standard designed in compliance with ASCE 7-10.

**Requirements****Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

Current, Commission approved 2010 FBC performance proven code language including updated code referenced standard designed in compliance with ASCE 7-10.

**Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**

Current, Commission approved 2010 FBC performance proven code language including updated code referenced standard designed in compliance with ASCE 7-10.

**Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language including updated code referenced standard designed in compliance with ASCE 7-10.

**Does not degrade the effectiveness of the code**

Does not degrade. Current, Commission approved 2010 FBC performance proven code language including updated code referenced standard designed in compliance with ASCE 7-10.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

**1507.3.2 Deck slope.**

Clay and concrete roof tile shall be installed ~~on roof slopes of 2<sup>+</sup>/<sub>2</sub> units vertical in 12 units horizontal (21 percent slope) or greater. For roof slopes from 2<sup>+</sup>/<sub>2</sub> units vertical in 12 units horizontal (21 percent slope) to four units vertical in 12 units horizontal (33 percent slope), double underlayment application is required in accordance with Section 1507.3.3.~~ in accordance with the recommendations of FRSA/TRI 07320 04-12 where the  $V_{asd}$  as determined in accordance with Section 1609.3.1 or the recommendations of RAS 118, 119 or 120.



<b>Date Submitted</b>	7/31/2012	<b>Section</b>	1519.5.3 Lightweight insulating ceiling	<b>Proponent</b>	Deborah Lawson
<b>Chapter</b>	15	<b>Affects HVHZ</b>	Yes	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Withdrawn				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications**

#5748 and #5749

**Summary of Modification**

Technical correction to terminology.

**Rationale**

Provides consistency of terminology used in the code.

**Fiscal Impact Statement**

**Impact to local entity relative to enforcement of code**

None - this is a technical change to correct inconsistent terminology.

**Impact to building and property owners relative to cost of compliance with code**

None - this is a technical change to correct inconsistent terminology.

**Impact to industry relative to the cost of compliance with code**

None - this is a technical change to correct inconsistent terminology.

**Requirements**

**Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

Improves clarity of the code.

**Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**

Improves clarity of the code.

**Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**

Does not discriminate - purely a technical change to create consistent terminology.

**Does not degrade the effectiveness of the code**

Improves the code.

Is the proposed code modification part of a prior code version? No

**1519.5.3 Lightweight insulating concrete.**

All lightweight insulating ~~insulated~~ concrete shall be vented per roofing system manufacturer recommendations.

**1519.5.3.1**

Lightweight concrete shall not be applied over an existing roof deck unless the supporting structure has been approved as adequate to sustain the added weight. Calculations verifying the adequacy of the existing structure to sustain the added weight shall be prepared, signed, sealed and dated by a Florida-registered architect or engineer, who is proficient in structural design, and submitted with the uniform roofing permit application.

R5297

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<b>Date Submitted</b>	7/18/2012	<b>Section</b>	R901	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	9	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Withdrawn				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications**

**Summary of Modification**

Provides current Florida-specific criteria

**Rationale**

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

**Fiscal Impact Statement**

**Impact to local entity relative to enforcement of code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to building and property owners relative to cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to industry relative to the cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Requirements**

**Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Does not degrade the effectiveness of the code**

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

**SECTION R901 GENERAL**

**R901.1 Scope.**

The provisions of this chapter shall govern the design, materials, construction and quality of roof assemblies.

Exception: Buildings and structures located within the High-Velocity Hurricane Zone shall comply with the provisions of Chapter 44.

<b>Date Submitted</b>	7/18/2012	<b>Section</b>	R905.16	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	9	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Withdrawn				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications****Summary of Modification**

Provides current Florida-specific criteria

**Rationale**

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

**Fiscal Impact Statement****Impact to local entity relative to enforcement of code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to building and property owners relative to cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to industry relative to the cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Requirements****Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Does not degrade the effectiveness of the code**

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

**R905.16 Building integrated ~~P~~ photovoltaic roofing modules/shingles.**

The installation of building integrated photovoltaic roofing modules/shingles shall comply with the provisions of this section.

**R905.16.1 Material standards.**

Building integrated-~~P~~ photovoltaic roofing modules/shingles shall be listed and labeled in accordance with UL 1703.

**R905.16.2 Attachment.**

Building integrated ~~P~~ photovoltaic roofing modules/shingles shall be attached in accordance with the manufacturer's installation instructions.

**R905.16.3 Wind resistance.**

Building integrated ~~P~~ photovoltaic roofing modules/shingles shall be tested in accordance with procedures and acceptance criteria in ASTM D 3161 or TAS 107. Building integrated ~~P~~ photovoltaic roofing modules/shingles shall comply with the classification requirements of Table R905.2 ~~4-1(2)~~ .6.1 for the appropriate maximum basic wind speed. Building integrated ~~P~~ photovoltaic roofing modules/shingle packaging shall bear a label to indicate compliance with the procedures in ASTM D 3161 or TAS 107 and the required classification from Table R905.2 ~~4-1(2)~~ .6.1.

Date Submitted 7/21/2012  
Chapter 9

Section R904.4.1 Nails.  
Affects HVHZ No

Proponent Mark Zehnal  
Attachments No

TAC Recommendation Withdrawn  
Commission Action Pending Review

### Comments

General Comments No

Alternate Language No

### Related Modifications

### Summary of Modification

Provides and carries forward current 2010 FBC Florida-specific criteria

### Rationale

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

### Fiscal Impact Statement

#### Impact to local entity relative to enforcement of code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

#### Impact to building and property owners relative to cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

#### Impact to industry relative to the cost of compliance with code

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

### Requirements

#### Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

#### Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

#### Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

#### Does not degrade the effectiveness of the code

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

**R904.4.1 Nails.**

Nails shall be corrosion resistant nails conforming to ASTM F 1667. The corrosion resistance shall meet ASTM A 641, Class I or an equal corrosion resistance by coating, electro galvanization, mechanical galvanization, hot dipped galvanization, stainless steel, nonferrous metal and alloys or other suitable corrosion-resistant material.



<b>Date Submitted</b>	7/21/2012	<b>Section</b>	R904.4.2 Screws.	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	9	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Withdrawn				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications****Summary of Modification**

Provides and carries forward current 2010 FBC Florida-specific criteria

**Rationale**

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

**Fiscal Impact Statement****Impact to local entity relative to enforcement of code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to building and property owners relative to cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to industry relative to the cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Requirements****Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Does not degrade the effectiveness of the code**

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

**R904.4.2 Screws.**

-

Wood screws shall conform to ANSI/ASME B 18.6.1. Screws shall be corrosion resistant by coating, galvanization, stainless steel, nonferrous metal or other suitable corrosion resistant material. The corrosion resistance shall be demonstrated through one of the following methods:

1. Corrosion resistance equivalent to ASTM A 641, Class 1;
2. Corrosion resistance in accordance with TAS 114, Appendix E;
3. Corrosion resistant coating exhibiting not more than 5 percent red rust after 1000 hours exposure in accordance with ASTM B 117.

<b>Date Submitted</b>	7/21/2012	<b>Section</b>	R904.4.3 Clips.	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	9	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Withdrawn				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications****Summary of Modification**

Provides and carries forward current 2010 FBC Florida-specific criteria

**Rationale**

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

**Fiscal Impact Statement****Impact to local entity relative to enforcement of code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to building and property owners relative to cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to industry relative to the cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Requirements****Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Does not degrade the effectiveness of the code**

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

**R904.4.3 Clips.**

-

Clips shall be corrosion resistant clips. The corrosion resistance shall meet 0.90 ounce per square foot (0.458 kg/m<sup>2</sup>) measured according ASTM A 90/A 90M, TAS 114 Appendix E or an equal corrosion resistance coating, electro galvanization, mechanical galvanization, hot dipped galvanization, stainless steel, nonferrous metals and alloys or other suitable corrosion resistant material. Stainless steel clips shall conform to ASTM A167, Type 304.

<b>Date Submitted</b>	7/21/2012	<b>Section</b>	R904.4 Product identification	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	9	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Withdrawn				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications****Summary of Modification**

Provides and carries forward current 2010 FBC Florida-specific criteria

**Rationale**

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

**Fiscal Impact Statement****Impact to local entity relative to enforcement of code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to building and property owners relative to cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to industry relative to the cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Requirements****Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Does not degrade the effectiveness of the code**

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

**R904.4 ~~Product identification~~ Fasteners.**

~~Roof covering materials shall be delivered in packages bearing the manufacturer's identifying marks and approved testing agency labels when required. Bulk shipments of materials shall be accompanied by the same information issued in the form of a certificate or on a bill of lading by the manufacturer.~~

<b>Date Submitted</b>	7/21/2012	<b>Section</b>	R904.4 Product identification	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	9	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Withdrawn				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications****Summary of Modification**

Provides and carries forward current 2010 FBC Florida-specific criteria

**Rationale**

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

**Fiscal Impact Statement****Impact to local entity relative to enforcement of code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to building and property owners relative to cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to industry relative to the cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Requirements****Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Does not degrade the effectiveness of the code**

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

~~R904.4~~ R904.5 **Product identification.**

Roof covering materials shall be delivered in packages bearing the manufacturer's identifying marks and approved testing agency labels when required. Bulk shipments of materials shall be accompanied by the same information issued in the form of a certificate or on a bill of lading by the manufacturer.



<b>Date Submitted</b>	7/21/2012	<b>Section</b>	R905.3.2 Deck slope.	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	9	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Withdrawn				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications****Summary of Modification**

Provides and carries forward current 2010 FBC Florida-specific criteria.

**Rationale**

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

**Fiscal Impact Statement****Impact to local entity relative to enforcement of code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to building and property owners relative to cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to industry relative to the cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Requirements****Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Does not degrade the effectiveness of the code**

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

**R905.3.2 Deck slope.**

Clay and concrete roof tile shall be installed on roof slopes of two and one half units vertical in 12 units horizontal ( $2\frac{1}{2}:12$ ) or greater. For roof slopes from two and one half units vertical in 12 units horizontal ( $2\frac{1}{2}:12$ ) to four units vertical in 12 units horizontal ( $4:12$ ), double underlayment application is required in accordance with Section R905.3.3. in accordance with the recommendations of FRSA/TRI 07320 where the  $V_{asd}$  is determined in accordance with Section R301.2.1.3 or the recommendations of RAS 118, 119 or 120.

<b>Date Submitted</b>	7/21/2012	<b>Section</b>	R905.3.3.1 Low slope roofs.	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	9	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Withdrawn				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications****Summary of Modification**

Provides and carries forward current 2010 FBC Florida-specific criteria.

**Rationale**

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

**Fiscal Impact Statement****Impact to local entity relative to enforcement of code**

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**Impact to building and property owners relative to cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to industry relative to the cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Requirements****Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

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**Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**

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**Does not degrade the effectiveness of the code**

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

**R905.3.3.1 Low slope and underlayment requirements roofs.**

~~For roof slopes from two and one half units vertical in 12 units horizontal ( $2\frac{1}{2}:12$ ), up to four units vertical in 12 units horizontal (4:12), underlayment shall be a minimum of two layers underlayment applied as follows:~~

- ~~1. Starting at the eave, a 19 inch (483 mm) strip of underlayment shall be applied parallel with the eave and fastened sufficiently in place.~~
- ~~2. Starting at the eave, 36 inch wide (914 mm) strips of underlayment felt shall be applied, overlapping successive sheets 19 inches (483 mm), and fastened sufficiently in place. Refer to FRSA/TRI 07320 where the  $V_{asd}$  is determined in accordance with Section R301.2.1.3 or RAS 118, 119 or 120 for underlayment and slope requirements for specific roof tile systems.~~

<b>Date Submitted</b>	7/21/2012	<b>Section</b>	R905.3.3 Underlayment.	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	9	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Withdrawn				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications****Summary of Modification**

Provides and carries forward current 2010 FBC Florida-specific criteria.

**Rationale**

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

**Fiscal Impact Statement****Impact to local entity relative to enforcement of code**

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**Impact to building and property owners relative to cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to industry relative to the cost of compliance with code**

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**Requirements****Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

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**Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Does not degrade the effectiveness of the code**

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

**R905.3.3 Underlayment.**

~~Unless otherwise noted, r~~ Required underlayment shall conform ~~to~~ with ASTM D 226, Type II; ASTM D 2626, Type ~~r~~ II; ASTM D 1970 or ASTM D 6380, Class M mineral surfaced roll roofing and shall be installed in accordance with FRSA/TRI 07320 where the  $V_{asd}$  is determined in accordance with Section R301.2.1.3 or the recommendations of RAS 118, 119 or 120.



## ROOFING PART 3 OF 3

### WITHOUT COMMENTS **Proposed Code Modifications**

This document created by the Florida Department of Business and Professional Regulation -  
850-487-1824

Total Mods for **Roofing** in **Withdrawn: 9**

Total Mods for report: 10

## Sub Code: Residential

**R5501**

1

<b>Date Submitted</b> 7/21/2012	<b>Section</b> R905.3.6 Fasteners.	<b>Proponent</b> Mark Zehnal	
<b>Chapter</b> 9	<b>Affects HVHZ</b> No	<b>Attachments</b> No	
<b>TAC Recommendation</b> Withdrawn			
<b>Commission Action</b> Pending Review			

**Comments**

<b>General Comments</b> No	<b>Alternate Language</b> No
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**Related Modifications**

**Summary of Modification**

Provides and carries forward current 2010 FBC Florida-specific criteria.

**Rationale**

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

**Fiscal Impact Statement**

**Impact to local entity relative to enforcement of code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to building and property owners relative to cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to industry relative to the cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Requirements**

**Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Does not degrade the effectiveness of the code**

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Is the proposed code modification part of a prior code version?**

YES

**The provisions contained in the proposed amendment are addressed in the applicable international code?**

NO

**The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?**

YES



The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

**R905.3.6 Fasteners.**

Nails shall be corrosion-resistant and not less than 11 gage,  $\frac{5}{16}$ -inch (7.95 mm) head, and of sufficient length to penetrate the deck a minimum of  $\frac{3}{4}$  inch (19.1 mm) or through the thickness of the deck, whichever is less, or in accordance with the FRSA/TRI 07320 where the  $V_{asg}$  is determined in accordance with Section R301.2.1.3 or in accordance with the recommendations of RAS 118, 119 or 120. Attaching wire for clay or concrete tile shall not be smaller than 0.083 inch (2.1 mm). ~~Perimeter fastening areas include three tile courses but not less than 36 inches (914 mm) from either side of hips or ridges and edges of eaves and gable rakes.~~

<b>Date Submitted</b>	7/21/2012	<b>Section</b>	R905.3.7.1 Hip and ridge tiles	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	9	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Withdrawn				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications****Summary of Modification**

Provides and carries forward current 2010 FBC Florida-specific criteria.

**Rationale**

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

**Fiscal Impact Statement****Impact to local entity relative to enforcement of code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to building and property owners relative to cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to industry relative to the cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Requirements****Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Does not degrade the effectiveness of the code**

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

**R905.3.7.1 Hip and ridge tiles.**

Hip and ridge tiles shall be installed in accordance with FRSA/TRI 07320 where the  $V_{asd}$  is determined in accordance with Section R301.2.1.3.

<b>Date Submitted</b>	7/21/2012	<b>Section</b>	R905.3.7 Application.	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	9	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Withdrawn				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications****Summary of Modification**

Provides and carries forward current 2010 FBC Florida-specific criteria.

**Rationale**

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

**Fiscal Impact Statement****Impact to local entity relative to enforcement of code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to building and property owners relative to cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to industry relative to the cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Requirements****Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Does not degrade the effectiveness of the code**

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

**R905.3.7 Application.**

**Tile shall be applied in accordance with this chapter and the manufacturer’s installation instructions, or recommendations of the FRSA/TRI 07320 based on the following:**

**Attachment. Clay and concrete roof tiles shall be fastened in accordance with FRSA/TRI 07320 where the  $V_{asd}$  is determined in accordance with Section R301.2.1.3, based on the following:**

- 1. Climatic conditions.**
- 2. Roof slope.**
- 3. Underlayment system.**
- 4. Type of tile being installed.**

**Clay and concrete roof tiles shall be fastened in accordance with this section and the manufacturer’s installation instructions. Perimeter tiles shall be fastened with a minimum of one fastener per tile. Tiles with installed weight less than 9 pounds per square foot ( $0.4 \text{ kg/m}^2$ ) require a minimum of one fastener per tile regardless of roof slope. Clay and concrete roof tile attachment shall be in accordance with the manufacturer’s installation instructions where applied in areas where the wind speed exceeds 100 miles per hour (45 m/c) and on buildings where the roof is located more than 40 feet (12 192 mm) above grade. In areas subject to snow, a minimum of two fasteners per tile is required. In all other areas, clay and concrete roof tiles shall be attached in accordance with Table R905.3.7.**

**. TABLE R905.3.7 CLAY AND CONCRETE TILE ATTACHMENT**

<b>SHEATHING</b>	<b>ROOF SLOPE</b>	<b>NUMBER OF FASTENERS</b>
Solid without battens	All	One per tile
Spaced or solid with battens and slope < 5:12	Fasteners not required	—
Spaced sheathing without battens	5:12 = slope < 12:12	One per tile/every other row
	12:12 = slope < 24:12	One per tile

**Reserved.**

-  
:

<b>Date Submitted</b>	7/21/2012	<b>Section</b>	R905.3.8 Flashing.	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	9	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Withdrawn				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications****Summary of Modification**

Provides and carries forward current 2010 FBC Florida-specific criteria.

**Rationale**

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

**Fiscal Impact Statement****Impact to local entity relative to enforcement of code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to building and property owners relative to cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to industry relative to the cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Requirements****Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Does not degrade the effectiveness of the code**

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

**R905.3.8 Flashing.**

At the juncture of roof vertical surfaces, flashing and counterflashing shall be provided in accordance with this chapter and the manufacturer's installation instructions and, where of metal, shall not be less than 0.019 inch (0.5 mm) (No. 26 galvanized sheet gage) corrosion resistant metal. The valley flashing shall extend at least 11 inches (279 mm) from the centerline each way and have a splash diverter rib not less than 1 inch (25 mm) high at the flow line formed as part of the flashing. Sections of flashing shall have an end lap of not less than 4 inches (102 mm). For roof slopes of three units vertical in 12 units horizontal (25 percent slope) and greater, valley flashing shall have a 36 inch wide (914 mm) underlayment of one layer of Type I underlayment running the full length of the valley, in addition to other required underlayment. In areas where the average daily temperature in January is 25°F (-4°C) or less, metal valley flashing underlayment shall be solid cemented to the roofing underlayment for slopes less than seven units vertical in 12 units horizontal (58 percent slope) or be of self adhering polymer modified bitumen sheet. instructions or recommendations of the FRSA/TRI 07320 where the  $V_{asd}$  is determined in accordance with Section R301.2.1.3 or the recommendations of RAS 118, 119 or 120.



<b>Date Submitted</b>	7/21/2012	<b>Section</b>	R905.3 Clay and concrete tile.	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	9	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Withdrawn				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications****Summary of Modification**

Provides and carries forward current 2010 FBC Florida-specific criteria.

**Rationale**

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

**Fiscal Impact Statement****Impact to local entity relative to enforcement of code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to building and property owners relative to cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to industry relative to the cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Requirements****Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Does not degrade the effectiveness of the code**

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

**R905.3 Clay and concrete tile.**

The installation of clay and concrete shall ~~comply with the provisions of this section~~ be in accordance with the manufacturer's installation instructions, or recommendations of FRSA/TRI 07320 where the  $V_{asd}$  is determined in accordance with Section R301.2.1.3 or the recommendations of RAS 118, 119 or 120.

<b>Date Submitted</b>	7/21/2012	<b>Section</b>	R905.5.3.1 Ice barrier.	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	9	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Withdrawn				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications****Summary of Modification**

Provides and carries forward current 2010 FBC Florida-specific criteria.

**Rationale**

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

**Fiscal Impact Statement****Impact to local entity relative to enforcement of code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to building and property owners relative to cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to industry relative to the cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Requirements****Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Does not degrade the effectiveness of the code**

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

**R905.5.3.1 Ice barrier.**

~~In areas where there has been a history of ice forming along the eaves causing a backup of water as designated in Table R301.2(1), an ice barrier that consists of at least two layers of underlayment cemented together or a self-adhering polymer modified bitumen sheet shall be used in place of normal underlayment and extend from the lowest edges of all roof surfaces to a point at least 24 inches (610 mm) inside the exterior wall line of the building.~~

~~**Exception:** Detached accessory structures that contain no conditioned floor area. Reserved.~~

<b>Date Submitted</b>	7/21/2012	<b>Section</b>	R905.9.2.1	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	9	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Withdrawn				
<b>Commission Action</b>	Pending Review				

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications****Summary of Modification**

Provides and carries forward current 2010 FBC Florida-specific criteria.

**Rationale**

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

**Fiscal Impact Statement****Impact to local entity relative to enforcement of code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to building and property owners relative to cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to industry relative to the cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Requirements****Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Does not degrade the effectiveness of the code**

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

R905.9.2.1

Red rosin paper shall be used when the membrane is applied directly to a wood deck or cementitious fiber decks.

<b>Date Submitted</b>	7/21/2012	<b>Section</b>	R905.15.3 Application.	<b>Proponent</b>	Mark Zehnal
<b>Chapter</b>	9	<b>Affects HVHZ</b>	No	<b>Attachments</b>	No
<b>TAC Recommendation</b>	Withdrawn				
<b>Commission Action</b>	Pending Review				

**Comments**

**General Comments** No **Alternate Language** No

**Related Modifications****Summary of Modification**

Provides and carries forward current 2010 FBC Florida-specific criteria.

**Rationale**

To carry forward previous Commission approved code language, standards and tables, providing continuity for the proper installation of roofing systems and components from one code edition to the next connected to Florida's unique environmental conditions including extreme temperatures, enduring tropical rain events and life/property threatening high wind events.

**Fiscal Impact Statement****Impact to local entity relative to enforcement of code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to building and property owners relative to cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Impact to industry relative to the cost of compliance with code**

No impact. Current 2010 FBC code language, standards and tables, without any new requirements being established.

**Requirements****Has a reasonable and substantial connection with the health, safety, and welfare of the general public**

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**

Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**

Does not discriminate. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

**Does not degrade the effectiveness of the code**

Does not degrade. Current, Commission approved 2010 FBC performance proven code language, standards and tables, without any new requirements being established.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

**R905.15.3 Application.**

Liquid-applied roof coatings shall be installed according to this chapter and the manufacturer's installation instructions. The approved allowable uplift resistance for the liquid-applied coatings shall be equal to or greater than the uplift resistance for the roof based on Table R301.2(2).



<b>Date Submitted</b> 7/24/2012	<b>Section</b> R901.1	<b>Proponent</b> Michael Goolsby
<b>Chapter</b> 9	<b>Affects HVHZ</b> Yes	<b>Attachments</b> Yes
<b>TAC Recommendation</b> Withdrawn	<b>Commission Action</b> Pending Review	

**Comments**

<b>General Comments</b> No	<b>Alternate Language</b> No
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**Related Modifications**

**Summary of Modification**

Section formatting

**Rationale**

The provisions contained in this chapter have unique specifications for application in the HVHZ. The beginning of the chapter needs to refer the reader to Chapter 44 for the applicable HVHZ requirements.

**Fiscal Impact Statement**

- Impact to local entity relative to enforcement of code**  
No impact. It provides clarity and direction in the code.
- Impact to building and property owners relative to cost of compliance with code**  
No impact. It provides clarity and direction in the code.
- Impact to industry relative to the cost of compliance with code**  
Cost savings by providing clarity and direction in the code.

**Requirements**

- Has a reasonable and substantial connection with the health, safety, and welfare of the general public**  
None. The MOD provides direction and clarity for applicable HVHZ requirements.
- Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**  
Strengthens the code by providing clarity and direction when working in the HVHZ.
- Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**  
The modification does not discriminate against materials, products, methods or systems of construction.
- Does not degrade the effectiveness of the code**  
This modification enhances the code by directing users to the proper chapter of the code.

Is the proposed code modification part of a prior code version?  
YES

The provisions contained in the proposed amendment are addressed in the applicable international code?  
NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?  
YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?  
NO

**1st Comment Period History** 08/09/2012 - 09/23/2012

<b>Proponent</b> Jack Glenn	<b>Submitted</b> 9/23/2012	<b>Attachments</b> No
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**Comment:**

This change is not necessary as Section R301.1 directs users to the provisions of Chapter 44 for structures located in the High Velocity Hurricane Zone.

R5631-G1

**R901.1 Scope.** The provisions of this chapter shall govern the design, materials, construction and quality of roof assemblies.

Exception: Buildings and structures located within the High-Velocity Hurricane Zone shall comply with the provisions of Chapter 44.

This proposed modification reinstates guidance to applicable HVHZ sections of the code maintaining consistency with the legislative intent to preserve HVHZ wind provisions.

Total Mods for **Roofing** in **No Affirmative Recommendation without a Second**: 1

Total Mods for report: 10

## Sub Code: Building

**R6020**

10

<b>Date Submitted</b>	8/2/2012	<b>Section</b>	ASTM
<b>Chapter</b>	35	<b>Affects HVHZ</b>	No
<b>TAC Recommendation</b>	No Affirmative Recommendation without a Second		
<b>Commission Action</b>	Pending Review		
<b>Proponent</b>	Craig Chown		
<b>Attachments</b>	No		

**Comments**

<b>General Comments</b>	No	<b>Alternate Language</b>	No
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**Related Modifications**

Section 1512.5

**Summary of Modification**

Includes ASTM reference standards for cool roof coating products as a supplement to proposals under Section 1512.5 in a related modification.

**Rationale**

The referenced code standards are a companion to a proposed modification under 1512.5.

**Fiscal Impact Statement**

- Impact to local entity relative to enforcement of code**  
Referenced standards are a companion to a proposed modification under Section 1512.5.
- Impact to building and property owners relative to cost of compliance with code**  
Referenced standards are a companion to a proposed modification under Section 1512.5.
- Impact to industry relative to the cost of compliance with code**  
Referenced standards are a companion to a proposed modification under Section 1512.5.

**Requirements**

- Has a reasonable and substantial connection with the health, safety, and welfare of the general public**  
Referenced standards are a companion to a proposed modification under Section 1512.5.
- Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction**  
Referenced standards are a companion to a proposed modification under Section 1512.5.
- Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities**  
Referenced standards are a companion to a proposed modification under Section 1512.5.
- Does not degrade the effectiveness of the code**  
Referenced standards are a companion to a proposed modification under Section 1512.5.

**Is the proposed code modification part of a prior code version?** No

CHAPTER 35  
REFERENCED STANDARDS

Standard Reference Number	
Title	Referenced in code section number
<u>ASTM D5894-10</u>	Standard Practice for Cyclic Salt
<u>Fog/UV Exposure of Painted Metal</u>	<u>1512.5</u>
<u>ASTM D1653-03</u>	Standard Test Methods for Water
<u>Vapor Transmission of Organic Coating Films</u>	<u>1512.5</u>
<u>ASTM D714-02</u>	Standard Test Method for
<u>Evaluating Degree of Blistering of Paints</u>	<u>1512.5</u>
<u>ASTM D1654-08</u>	Standard Test Method for
<u>Evaluation of Painted or Coated Specimens Subjected to Corrosive Environments</u>	<u>1512.5</u>
<u>ASTM D4214-07</u>	Standard Test Methods for
<u>Evaluating the Degree of Chalking of Exterior Paint Films</u>	<u>1512.5</u>