




MEMORANDUM

TO: All FRSA Members

FROM: Steve Munnell, Executive Director 

DATE: February 20, 2008

SUBJECT: *New Rule 9B-3.0475 Hurricane Mitigation Retrofits for Existing Site-Built Single Family Residential Structures*

The Florida Building Commission (FBC) is in the process of issuing a new **Rule 9B-3.0475** which contains a number of revisions requested by FRSA. As reported to you earlier the Commission agreed to make the revisions as the result of several meetings with FRSA in December and January. We anticipate that the new rule will officially go into effect in late March.

Attached is a copy of the new rule. It contains a number of revisions that provide greater flexibility in complying with the secondary water barrier provisions and the roof-to-wall connection requirements. There are also changes designed to make the new rule easier for building departments to interpret and enforce. We have posted a copy of this memo and the new rule on the FRSA website, www.floridarooft.com. Please refer any interested persons to our website where they may view and/or print a copy of the new rule.

Discussion of Changes to Rule 9B-3.0475

101 Retrofits Required

New language: **Site built single-family residential structures shall mean site built single family detached residential structures** has been added to clarify that only single family structures are covered by the rule. It does not apply to condominiums, duplexes, townhouses or any commercial structures.

201.1 Roof sheathing fastening for site-built single family residential structures

Two of the dimensions for 8d ring shank nails have been further clarified:

5. **Ring shank to extend a minimum of 1 ½" from the tip of the nail.**
6. **Minimum 2 ¼ inch nail length**

Table 201.1 Supplemental Fasteners at Panel Edges and Intermediate Framing

This table has been revised to allow existing 8d nails to be used to achieve the required spacing for fastening of the deck.

201.2 Roof secondary water barrier for site-built single family residential structures

There are now several options for meeting the secondary water barrier requirements of the rule.

- (a) All joints in structural panel roof sheathing or decking shall be covered with a minimum 4 in. 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 self-adhering polymer modified bitumen sheet. No additional underlayment shall be required on top of this sheet for new installations.
- c) The entire roof deck shall be covered with an approved asphalt impregnated 30# felt underlayment installed with nails and tin-tabs as required for the HVHZ. (No additional underlayment shall be required over the top of this sheet).

Option (c) will primarily be used in the high velocity hurricane zone (HVHZ) area of Florida. This is Miami-Dade and Broward counties.

- d) Outside of the HVHZ, an underlayment complying with section 1507.2.3 of the Florida Building Code, Building fastened as described below or a layer of asphalt impregnated approved #30 felt shall be installed. The felt is to be fastened with 1" round plastic cap or metal cap nails, attached to a nailable deck in a grid pattern of 12 inches (305 mm) staggered between the overlaps, with 6-inch (152 mm) spacing at the overlaps. For slopes of 2:12 to 4:12 an additional layer of felt shall be installed in a shingle-fashion and lapped 19" and fastened as described above. (No additional underlayment shall be required over the top of this sheet).

Option (d) allows the roofing contractor to use any of the underlayments provided for in section 1507.2.3 of the Florida Building Code and requires them to be attached using the special fastening pattern provided. Section 1507.2.3 is the underlayment requirement section for asphalt shingles (section 1507.2). It reads as follows:

1507.2.3 Underlayments.

Unless otherwise noted, required underlayment shall conform to ASTM D 226, Type I or Type II, or ASTM D 4869 Type I or Type II.

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ASTM D 226, Type I felt is commonly known as No. 15 asphalt felt.
ASTM D 226, Type II felt is commonly called No. 30 asphalt felt.
ASTM D 4869 Type I or II are also underlayments used in steep slope roofing.

The new rule has two exceptions to the secondary water barrier requirement as follows:

1. Roof slopes <2:12 having a continuous roof system shall be deemed to comply with section 201.2 requirements for a secondary water barrier.

This would include built-up systems, modified bitumen systems, and single-ply roofing systems.

2. Clay and Concrete tile roof systems installed as required by the Florida Building Code are deemed to comply with the requirements of section 201.2 for Secondary Water Barriers.

Clay and concrete tile roof systems are exempt from the secondary water barrier requirements.

Roof-To-Wall Connections for Site-Built Single Family Residential Structures

Sections 101.2 and 101.3 outline when roof-to-wall connections are required during replacement of the roof on a single-family site built residential structure. The structure has to be located in the wind-borne debris region, have an insured value (or tax value) of at least \$300,000 on the structure and have been built prior to the implementation of the Florida Building Code (March 1, 2002).

There are important new exceptions in section 201.3. They are:

EXCEPTIONS:

1. Where it can be demonstrated (by code adoption date documentation and permit issuance date) that roof-to-wall connections and/or roof-to-foundation continuous load path requirements were required at the time of original construction.

Many homes built in prior to the implementation of the Florida Building Code (March 1 of 2002) were constructed with roof-to-wall connections that meet the requirements of the retrofit rule. Some jurisdictions around the state required them as far back as the early 1980s. If you know when the house was built (permit date) the permitting building department should be able to determine if roof-to-wall connections meeting the retrofit requirements were part of the code. If they were required then the structure is deemed to comply with the retrofit rule.

2. Roof-to-wall connections shall not be required unless evaluation and installation of connections at gable ends or all corners can be completed for 15% of the cost of roof replacement.

This is an extremely important exception to the rule. It provides that unless the roof-to-wall connections at all corners or at the gable ends can be completed for 15% or less of the cost of roof replacement, then no roof-to-wall connections shall be required. This cost includes the expense to evaluate (inspect) the existing structure to see if there are connections and if they comply with the rule requirements.

201.3.1 Access for Retrofitting Roof-To-Wall Connections

This new section has been added to clarify the means of gaining access to the structural elements of the roof and wall to retrofit the connections. It provides that the connections can be made by access under the eave, from above through the roof, or from the exterior of the house. It provides that for above access only roof panels or sections of roof **large enough for access, viewing, and installing the retrofit connectors and fasteners** must be removed. This section also provides that when existing panels are removed, they shall not be reused. New panels must be used.

201.3.2 Partially inaccessible straps: Where part of a strap is inaccessible, if the portion of the strap that is observed is fastened in compliance with these requirements, the inaccessible portion of the strap shall be presumed to comply with these requirements.

This new section is provided to help prevent the destruction of wall board, concrete block, and other masonry components in order to inspect inaccessible parts of the roof-to-wall connection.

Sections 201.3.3 through 201.3.6 provide the prescriptive methods for attachment of the roof-to-wall connections for gable roofs on a wood frame wall; gable roofs on a masonry wall; hip roofs on a wood frame wall; and hip roofs on a masonry wall. In each of these sections the provisions that required that certain areas of sheathing be removed have been eliminated. Instead the sections provide that the inspection of the anchorage should be completed, but there is no requirement that any specific amount of deck be removed.

201.3.75 Priorities for mandated roof-to-wall retrofit expenditures. For houses with both hip and gable roof ends, the priority shall be to retrofit the gable end roof-to-wall connections unless the width of the hip end is more than 1.5 times greater than the width of the gable end. Priority shall be given to connecting the corners of roofs to walls below where the spans of the roofing members are greatest.

This section remains the same. However, if the cost to retrofit all corners (including cost to inspect/evaluate) exceeds 15% of the cost of the roof replacement, then the roof-to-wall retrofit would not be required.

Nothing in **Appendix A – Gable End Wall Bracing Retrofit** has changed. This is optional under the rule.