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Office of Codes and Standards
Department of Business and Professional Regulation
2601 Blair Stone Road
Tallahassee, Florida 32399

DS 2021-039

Attn: Mr. Mo Madani

Petition for Declaratory Statement before the Florida Building Commission

Mr. Madani:

My name is David Ross. I am the Director of the Forensic Engineering Division at Tierra, Inc. I inspected a single-family residential structure in Naples, Florida. The structure consists of concrete masonry unit (CMU) construction clad with a painted stucco veneer and is covered by a combination hip and gable roof clad with a concrete tile roofing system. The structure bears on a soil-supported shallow foundation and concrete slab-on-grade. The Collier County Property Appraiser's website¹ indicates that the residence was built in 2007. The homeowner is the original homeowner and has not changed the roof since it was built in 2007. Our assignment consisted of evaluating the roof for wind damage after Hurricane Irma.

As defined in the Florida Building Code (FBC) Existing Building, a roof section is a separating or division of a roof area by existing expansion joints, parapet walls, flashing (excluding valley), 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.

The roof at the subject residence had a difference of elevation between two sections of the roof, and therefore consisted of two separate roof section. The main roof section at the subject residence was 4,474 square feet. There was another small roof section that measured 256 square feet. During our site visit, it was determined that 1,300 square feet of the main roof section and 70 square feet of the smaller roof section were damaged as a result of Hurricane Irma. This is approximately 29 percent of the main roof section and 27 percent of the smaller roof section.

The purpose of this letter is to make a petition before the Florida Building Commission for a Declaratory Statement regarding whether the entire roofing surface of both roof sections are required to be replaced by the FBC or whether a repair could be performed to remediate the wind damage and still be in accordance with the FBC.

¹ <https://www.collierappraiser.com/>

Establishment of Re-nailing Requirement

The 7th Edition (2020) of the FBC – Existing Building, Section 706.1.1 states: “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.”

I would like to call attention to the last portion of this section: “. . . unless the entire existing roofing system or roof section is replaced to conform to requirements of this code.”

When referencing “this code”, it is my understanding that the FBC is referencing the establishment of the FBC. The First Edition of the FBC was the 2001 Edition that was adopted on March 1, 2002; however, the first version of the “Existing Building” Section of the FBC was not introduced until the 2004 Edition of the FBC, which was adopted on October 1, 2005.

The 2004 Edition of the FBC – Existing Building, Section 507.2.2 Roof Diaphragm, states: “Where roofing materials are removed from more than 50 percent of the roof diaphragm of a building or section of a building where the roof diaphragm is part of the main windforce-resisting system the integrity of the roof diaphragm shall be evaluated and if found deficient because of insufficient or deteriorated connections, such connections shall be provided or replaced.”

In the 2007 Edition of the FBC – Existing Building, Section 611.7.1, roof decking attachment for site-built single-family residential structures was introduced into the FBC outlining re-nailing requirements for roofs that get replaced. This section has been maintained through subsequent versions of the FBC, although the location within the code have been changed in some of these code editions.

Therefore, it is my interpretation of Section 706.1.1, “. . . unless the entire existing roofing system or roof section is replaced to conform to the requirements of this code” to mean that if a permit was issued after October 1, 2005, and subsequently approved, the roof would already conform to the “requirements of this code” and therefore, no replacement to conform with the code would be required. The significance is that for a roof permitted after October 1, 2005, the roof would not require a full replacement, even if more than 25 percent of the roof was damaged.

New Interpretation

At the subject residence we have 29 percent of the main roof section and 27 percent of the smaller roof section that have been damaged. Since the subject residence was built in 2007, it is my opinion that the roof has already been installed to conform with the requirements of this code which went into effect since October 1, 2005. There is a slight variation in the FBC that was introduced in the 2017 Edition of the FBC. I wanted to confirm that this variation in the code has not changed the meaning of the code because of the variation in wording.

The 2014 Edition of the FBC – Existing Building, Section 708.1.1, states, “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 roofing system or roof section conforms to requirements of this code ”

In the 2017 Edition of the FBC – Existing Building, Section 706.1.1, the language is as follows with the variations in all-caps: 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.

The new language introduced in the 2017 Edition of the FBC adds, “is replaced” into the code. I would like to confirm that this new language that has been introduced in the 2017 Edition of the FBC **does not** imply that regardless of whether the roof currently “conforms” (old language) to the current FBC (permitted after October 1, 2005 and subsequently approved), that both roof sections would need “[to be] replaced to conform” (new language) to the requirements of the code.

It is my opinion that changes from the 2014 Edition of the FBC to the 2017 Edition of the FBC did not intend to have this consequence. The Analysis of Changes for the 6th Edition (2017) Florida Codes provided by the Florida Building Commission was intended to provide a comprehensive comparison of the provisions in the 5th Edition (2014) FBC – Existing Building and the 6th Edition (2017) FBC – Existing Building. It should be noted that this document did not list this change as part of their comprehensive comparison, which leads me to believe that this change in the FBC was not intended to require all roofs, regardless of whether they conform to the code or not (permitted after October 1, 2005 and subsequently approved), to be replaced if the damage on the roof exceeds 25 percent of the total roof area.

Petition

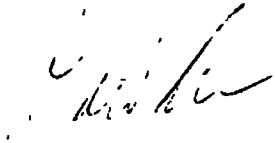
I request that a declaratory statement be issued with regard to the new language introduced in the 2017 Edition of the FBC – Existing Building, Section 706.1.1, and which is also currently in the 2020 Edition of the FBC.

Specifically,

1. Does the entire roof at the subject residence need to “[to be] replaced to conform to the requirements of this code” even if it has been permitted after October 1, 2005 and subsequently approved (language from 2020 Edition of the FBC)? My answer to this question is **no**.
2. Can the roof at the subject residence that has been permitted after October 1, 2005 and subsequently approved and conforms to the requirements of this code be repaired even if more than 25 percent of the roof was damaged? My answer to this question is **yes**.

Your consideration in this matter is greatly appreciated.

Respectfully Submitted,

A handwritten signature in black ink, appearing to read "David Ross". The signature is written in a cursive style with a large, sweeping initial "D".

David Ross, P E.
Senior Project Engineer
Florida License No. 81413