



Technical Bulletin FC 2019-01

First Release:

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Prepared by:

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Applicable Standards:

FORTIFIED Commercial™–Wind

Applicable FORTIFIED Levels:



Existing Construction: Wood-Framed Roofs Constructed Pre-2000 International Building Code (IBC)

Scope

This document provides additional guidance for existing buildings with wood-framed roofs that have been construction pre-2000 IBC or where the construction code is unknown.

Applicable FORTIFIED Levels

Existing buildings that meet the requirements of this technical bulletin may seek FORTIFIED Roof™ or FORTIFIED Silver™ designation or certification in hurricane-prone or high-wind-prone regions.

Requirements

The structural engineer of record must verify that all existing roof structural framing members (i.e., trusses, wood I-joists, stick framing, etc.) are free of any damage or deterioration. They must also be evaluated to ensure they have sufficient residual capacity to handle the minimum loads and load combinations outlined in section 3.1.1.3.1. All damaged, deteriorated, and/or capacity-insufficient members must be repaired or replaced.

Existing roof-structural-framing-member-to-wall connections (also known as roof-to-wall connections) must meet the minimum loads and load combinations outlined in section 3.1.1.3.1. All damaged, deteriorated, and/or capacity-insufficient connections must be replaced.

Members without an existing roof-to-wall connection should be retrofit with an adequate connection (i.e., hurricane straps) so that capacity meets the minimum loads and load combinations outlined in section 3.1.1.3.1.

For buildings with replacement of all existing roof structural framing members and their roof-to-wall connections must be designed to meet the minimum loads and load combinations outlined in section 3.1.1.3.1.



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Required Documentation

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The structural engineer of record must provide the following calculations and/or reports as they apply to the building-specific parameters:

1. Existing roof structural framing members:
 - a. Framing member conditions report that highlights any members that have damage or deterioration. This is not necessary if all roof framing members are being replaced (see item #3).
 - b. Calculation set verifying the framing members have residual capacity to handle the minimum loads and load combinations outlined in section 3.1.1.3.1.
 - c. Documentation providing retrofit solutions.
2. Existing roof-to-wall connections:
 - a. Calculation set verifying that the capacity of the connection meets the minimum loads and load combinations outlined in section 3.1.1.3.1.
 - b. If there are any damaged, deteriorated, or capacity-insufficient connections, provide documentation highlighting the replacement connection's capacity.
3. Replacement of all roof structural framing members and their roof-to-wall connections:
 - a. New structural framing plan.
 - b. Calculation set verifying that the capacity of the structural framing member and their connections meet the minimum loads and load combinations outlined in section 3.1.1.3.1.

Required Photographs

Provide in-progress photos with identifiable traits or landmarks of the property showing the following (if applicable):

1. Existing truss overview
2. Existing truss retrofit or replacement (1 for each condition)
3. Existing truss roof-to-wall connection (1 for each connection type)
4. Existing truss roof-to-wall connection retrofit or replacement (1 for each condition)
5. Overview of new roof structural framing
6. New roof-structural-framing-member-to-wall connection (1 for each connection type)