



FORTIFIED MULTIFAMILY™– 2025 WIND EXISTING CONSTRUCTION, STEEP-SLOPED (>10°) RE-ROOFING

This form captures the specific construction details for existing construction, steep-sloped re-roofing. Qualifications are listed in section 3.1.1 of the *FORTIFIED Multifamily– 2025 Wind Standard*.

This form is to be filled out by the project architect, a licensed structural engineer, and the general contractor and/or roofer. It confirms the requirements for the selected FORTIFIED level have been included in the building documents and the contractor and/or roofer is aware of these requirements.

Fill out only the applicable sections. Some portions of the sections may pertain only to Hurricane or High Wind—fill out accordingly depending on your building's exposure.

Compliance Agreement

I, the DESIGNER COMPLETING THIS CHECKLIST, understand and agree that:

1. The *FORTIFIED Multifamily– 2025 Wind Existing Construction, Steep-Slope Re-Roofing Form* must be completed FULLY and CORRECTLY for the applicable hazards.
2. I will provide engineered plans (and all other necessary documentation) that verify the structure meets FORTIFIED design criteria BEFORE construction starts. These plans and documents must be:
 - Legible
 - Complete
 - Certified by the Professional of Record
 - Included with this document
3. The plans submitted will comply with all local building codes and with the FORTIFIED Multifamily criteria as detailed in the *FORTIFIED Multifamily– 2025 Wind Standard*.

Full Name: _____

License/Registration Number: _____

Signature: _____

Date: _____

Hazard and FORTIFIED Level

Select the site-specific hazard¹: ☐ Hurricane ☐ High Wind

Select the FORTIFIED Commercial Wind level being pursued:

- ☐ **FORTIFIED Roof™**—Enhanced roof performance
- ☐ **FORTIFIED Silver™**—FORTIFIED Roof requirements plus building envelope protection and reduction of business operations downtime
- ☐ **FORTIFIED Gold™**—FORTIFIED Silver requirements plus enhanced structural performance and maintaining business operations

BUILDING OVERVIEW

Street Address: _____

City: _____

State: _____

Zip Code: _____

Year of Construction: _____

Existing buildings with wood frame roofs must be constructed in accordance with the 2000 IBC or later for eligibility.

☐ Yes ☐ No ☐ N/A

Please select the option which best describes the buildings proximity to saltwater:

- ☐ Within 300 feet
- ☐ More than 300 ft but less than 1,000 ft
- ☐ More than 1,000 ft but less than 3,000 ft
- ☐ More than 3,000 ft

Corrosion protection requirements defined in section 3.1.4 of the *FORTIFIED Multifamily– 2025 Wind Standard* have been implemented ☐ Yes ☐ No

Project Status

Tentative Re-Roofing Start Date: _____

Tentative Completion Date: _____

- ☐ Re-covering applications are not permitted.
Check this box to confirm this method is not being used.

Select the options that best describe the building:

- ☐ Steep-slope re-roofing using existing structural roof deck²
- ☐ Steep-slope re-roofing with new structural roof deck
- ☐ Steep-slope re-roofing with new structural roof deck and new roof framing members
- ☐ Other³: _____

¹Hurricane-prone regions are areas vulnerable to hurricanes as defined in ASCE 7. See section 1.4 of the *FORTIFIED Multifamily– 2025 Wind Standard* for more information.

²All damaged or deteriorated roof deck must be removed and replaced. See section 3.1.1.2.2 of the *FORTIFIED Multifamily– 2025 Wind Standard*.

³Must be confirmed/approved by IBHS and/or the FORTIFIED Multifamily Evaluator.



General Building Characteristic

Number of Stories: _____

Roof Slope: _____

Gross Square Footage (sq ft): _____

Building Dimensions (ft):

Length: _____

Width: _____

Height: _____

Occupancy Type: _____

Wall/Framing (gravity system) [select all that apply]:

- ☐ Concrete ☐ Masonry
☐ Steel ☐ Light Gauge
☐ Wood
☐ Other: _____

Lateral System [select all that apply]:

- ☐ Moment Frames or Braced Frames
☐ Shear Walls
☐ Other: _____

Flood—Recommended Whole-Building Protection (Not Required)

While protecting electrical and mechanical systems from flood is a requirement of FORTIFIED Silver, whole-building protection against the flood hazard is not be required under FORTIFIED Multifamily.

First finished floor elevation (ft): _____

FEMA-designated flood zone⁴: _____

If located in a FEMA-designated flood zone (V, A, B, D, and X-shaded), please select one of the following options:

- ☐ The building's first finished floor is located above the 500-year flood level.
500-year flood level (ft): _____
- ☐ The building's first finished floors is located 3 ft above the base flood elevation.
Flood level (ft): _____
- ☐ Dry flood protection such as flood gates, walls, or doors, inflatable barriers, sand bags, or similar devices are readily available on site to help mitigate water intrusion.
- ☐ Not applicable (N/A)

Hail—Recommended Protection (Not Required)

Are you seeking the Hail Supplement? ☐ Yes ☐ No

If yes, select one of the following options for the installed roof cover:

- ☐ FM Approval Standard 4473 Class 4
☐ UL 2218 Class 4
☐ Not Applicable

EXISTING CONDITIONS VERIFICATION

Foundations

Check the box beside each requirement to indicate that the existing foundation is in accordance with the standard. Fill out requested information where indicated.

- ☐ The existing foundation system is NOT constructed of unrestrained stacked masonry or stone (dry-stacked foundation).
- ☐ The existing foundation system has adequate positive connections from the floor or wall structure to support the foundation.⁵

Steep-Slope Re-Roofing Using Existing Structural Roof Deck

Yes ☐ No ☐

If the existing structural roof deck is going to be re-used, complete the following section.

Check the box beside each requirement to indicate that the existing structural roof deck is in accordance with the standard. Fill out requested information where indicated.

Existing deck material [select all that apply]:

- ☐ Structural Metal Panel
- ☐ Plywood
Thickness (in.): _____
- ☐ Oriented Strand Board
Thickness (in.): _____
- ☐ Other: _____

- ☐ The existing structural roof deck was inspected after old roofing materials were removed.

Were there any locations where the existing structural roof deck was damaged or deteriorated?⁶ ☐ Yes ☐ No

If YES was selected, please describe the type of damage.

⁴Flood zone as defined by FEMA.

⁵When seeking FORTIFIED Gold, the existing foundation systems must be evaluated by the structural engineer of record. Additional information and on-site testing may be required to verify the structural capacity of the existing conditions.

⁶Damage or deterioration could be from moisture, weathering, or insect infestation. Damaged or deteriorated deck would generally be marked by one of more of the following characterizes: soft or spongy wood, wood swelling or buckling, delaminating (plywood), excessive rusting or crumbling and flaking of the wood.



Fill out the following if damage or deterioration to existing structural deck was indicated:

Supporting wood members were not cut or notched when removing the damaged existing deck.

☐ Yes ☐ No ☐ N/A

The damaged sections of the deck were removed, and the entire sheet was replaced with the same deck type and thickness as the existing.

☐ Yes ☐ No

If the roof deck is damaged, there is a possibility that the framing members are damaged as well.

Roof framing members below the deteriorated roof deck were evaluated for damage.

☐ Yes ☐ No

For wood, $\frac{1}{4}$ in. of the surface was deteriorated or damaged?

☐ Yes ☐ No ☐ N/A

If Yes was indicated, that $\frac{1}{4}$ in. of the structural framing member was damaged or deteriorated, then the members must be evaluated by a structural engineer. Please provide the signed and sealed conditions report by a licensed structural engineer.

Steep-Slope Re-Roofing with New Structural Roof Deck Yes ☐ No ☐

If the existing structural roof deck is going to be replaced with a new one, please complete the following section. Check the appropriate box for each requirement to indicate that the existing structural roof framing is in accordance with the standard. Fill out requested information where indicated.

Supporting wood members were not cut or notched when removing the damaged existing deck.

☐ Yes ☐ No ☐ N/A

Roof framing members below the deteriorated roof deck were evaluated for damage.

☐ Yes ☐ No

$\frac{1}{4}$ in. of the surface was deteriorated or damaged?

☐ Yes ☐ No ☐ N/A

If Yes was indicated, that $\frac{1}{4}$ in. of the structural framing member was damaged or deteriorated, then the members must be evaluated by a structural engineer. Please provide the signed and sealed conditions report by a licensed structural engineer.

Steep-Slope Re-Roofing with New Structural Roof Deck and New Roof Framing Members Yes ☐ No ☐

If the existing structural roof deck and roof framing members are going to be replaced with new ones, please complete the following section.

The roof framing plans are submitted with this document.

☐ Yes ☐ No

FORTIFIED Roof™

Roof Configuration

Does the building have more than one roof type? ☐ Yes ☐ No

If yes, please fill out the steep slope roof details section for the corresponding quantity of roof systems.

There are _____ different roof types.

Does the building have roofs at multiple heights? ☐ Yes ☐ No

If yes, are the heights different enough that roof systems with different wind ratings are specified? ☐ Yes ☐ No

If yes, fill out the steep slope roof details section for each roof system with a different wind rating.

General Information

Roof Type Number: _____ Out of: _____

Roof Slope (degrees): _____

Average Roof Height (ft): _____

ASCE 7 Roof Dimension "a" (ft): _____

Re-roofing Code Specification

Select the applicable code and fill out the corresponding information:

☐ ASCE 7-10

☐ Risk Category II

☐ Risk Category III

☐ Risk Category IV

Design wind speed (V_{ult}): _____ mph

☐ ASCE 7-16

☐ Risk Category II

☐ Risk Category III

☐ Risk Category IV

Design wind speed (V_{ult}): _____ mph

☐ ASCE 7-22

☐ Risk Category II

☐ Risk Category III

☐ Risk Category IV

Design wind speed (V_{ult}): _____ mph

Select the applicable building code:

☐ IBC 2000 ☐ IBC 2012

☐ IBC 2003 ☐ IBC 2015

☐ IBC 2006 ☐ IBC 2018

☐ IBC 2009 ☐ IBC 2021



Exposure Category and Classification

The exposure category per ASCE 7 is: ☐ C ☐ D

In accordance with the code selected in the above section, please identify the building exposure classification:

☐ Partially enclosed

☐ Enclosed

☐ Open

Steep-Slope Re-Roofing Details

Asphalt Shingles and Architectural Metal Panel

Yes ☐ N/A ☐

Select either asphalt shingles or architectural metal panels and fill out the corresponding information. Additionally, provide information regarding the sealed roof deck.

Asphalt Shingles Yes ☐ N/A ☐

If the building is less than 60 ft tall, select one of the following options from the table. If not, additional engineering calculations are required and must be submitted with this form.

Selection	Wind speed (v_{asd})	Wind speed (v_{ult})	Shingle testing standard / classification
<input type="checkbox"/>	100 MPH	129 MPH	ASTM D3161 (Class F) or ASTM D7158 (Class G or H)
<input type="checkbox"/>	110 MPH	142 MPH	
<input type="checkbox"/>	120 MPH	155 MPH	
<input type="checkbox"/>	130 MPH	168 MPH	
<input type="checkbox"/>	140 MPH	180 MPH	
<input type="checkbox"/>	150 MPH	194 MPH	

Manufacturer Name: _____

Number of nails used to install shingles for high wind rating (per shingle tab)⁷: _____

Shingles are installed at eaves using (check one):

☐ Option 1: 8-in.-wide x 1/8-in.-thick bed of flashing cement

☐ Option 2: Shingle manufacturer approved ASTM D1970

fully adhered starter strip

Shingles are installed at rakes/gable edges using (check one):

☐ Option 1: 8-in.-wide x 1/8-in.-thick bed of flashing cement

☐ Option 2: Manufacturer approved starter strip set in an 8-in.-wide x 1/8-in.-thick bed of flashing cement

☐ Option 3: Shingle manufacturer approved ASTM D1970 fully adhered starter strip

Shingles installed at intersections and valleys:

☐ 8-in.-wide x 1/8-in.-thick bed of flashing cement

☐ Not applicable

Architectural Metal Panels Yes ☐ N/A ☐

A check in the box beside each requirement indicates that the architectural metal panel installation is in accordance with the standard.

☐ The architectural metal panels were designed to meet the design wind pressures as defined in section 3.1.1.3.1 of the *FORTIFIED Multifamily– 2025 Wind Standard*.

Provide the applicable design wind pressures (psf) for an effective wind area of 10 sq ft based on section 3.1.1.3.1 of the *FORTIFIED Multifamily–2025 Wind Standard*.

Field: _____ (psf)

Perimeter: _____ (psf)

Corner: _____ (psf)

Select architectural metal panel system approval:

☐ Florida Product Approval

☐ ICC-ES

☐ Miami-Dade

☐ TDI

☐ UL

Provide the documentation number associated with the approved system (i.e., FL Number for FPA):

☐ Multiple systems

☐ Single system: _____

☐ Enhancements (describe):

Sealed Roof Deck Options for Asphalt Shingles and Metal Panels

Select one of the following options to indicate how the roof deck is sealed:

☐ **OPTION 1: FLASHING TAPE AND UNDERLAYMENT-**

Tape the seams between roof sheathing that forms the roof deck and add an approved underlayment.

☐ 4" wide ASTM D1970 self-adhering polymer-modified bitumen flashing tape.

☐ AAMA 711-13, Level 3 self adhering flashing tape.

And apply a code compliant underlayment options over the self adhering tape:

☐ ASTM D226 Type II (#30)

☐ ASTM D4869 Type III or Type IV(#30)

☐ ASTM D6757 (for asphalt shingles only)

⁷6 nails per shingle are usually required by shingle manufacturers for high wind installation.



☐ Reinforced synthetic roof underlayment which has an ICC approval as an alternative to ASTM D226 Type II felt paper with a minimum tear strength of 15lbf in accordance with ASTM D4533 and a minimum tensile strength of 20 lbf.in. in accordance with ASTM D5035.

☐ **OPTION 2: SELF ADHERED MEMBRANE-** Cover the entire roof deck with a full layer of self-adhering polymer-modified bitumen membrane meeting ASTM D1970 requirements.

☐ **OPTION 3: TWO LAYERS OF FELT UNDERLAYMENT-** Install two (2) layers of one of the following code-compliant underlayment options:

- ☐ ASTM D226 Type II (#30)
- ☐ ASTM D4869 Type III or Type IV (#30)
- ☐ ASTM D6757 (for asphalt shingles only)

☐ **OPTION 4: 2-PLY SYNTHETIC UNDERLAYMENT-** Install two (2) layers of one of the following code-compliant synthetic underlayment options:

- ☐ ASTM D8257 – Mechanically Attached Polymeric Roof Underlayment Used in Steep Slope Roofing.
- ☐ Reinforced synthetic roof underlayment which has a current ICC, AC 188 approval as an alternate to ASTM D226 Type II felt paper. The synthetic underlayment must have a minimum tear strength of 15 lbf in accordance with ASTM D4533, a minimum tensile strength of 20 lbf/in. in accordance with ASTM D5035 and pass the ASTM D4869 liquid water transmission test.

Concrete and Clay Tile Yes ☐ N/A ☐

Concrete and Clay Tile Material and Installation

Concrete and Clay Tile Material and Installation
A check in the box beside each requirement indicates that the tile installation is in accordance with the standard.

Select the Concrete and Clay Tile approval:

- ☐ Florida Product Approval ☐ TDI
- ☐ ICC-ES
- ☐ Miami-Dade

☐ Clay and concrete tiles are installed over a minimum $1\frac{5}{32}$ -in.-thick plywood.

☐ Mortar-set tile or mortar-set hip and ridge tiles are not used.

☐ Hip and ridge boards or metal must be attached to the roof framing to resist the uplift pressure for the site design wind speed and exposure or in accordance with the tile manufacturer's product approval.

☐ Hip and ridge tiles must be secured to the hip and ridge boards or metal with mechanical fasteners and/or an approved roof tile adhesive.

Concrete and Clay Tile Sealed Roof Deck

In some areas of the country, the availability of underlayment products that meet these criteria are becoming limited. ASTM D6757 is acceptable in place of ASTM D226 Type II (#30) or ASTM D4869 Type IV (#30) as specified in section 3.1.3.3.1 of the *FORTIFIED Multifamily Wind Standards*.

Select one of the following options to indicate how the roof deck is sealed:

☐ **OPTION 1A: SELF-ADHERING POLYMER-MODIFIED BITUMEN FLASHING TAPE** at least 4-in. wide meeting ASTM D1970. It shall be applied directly to the roof deck (or primer if required by manufacturer) to all horizontal and vertical joints in the roof deck; then a #30 ASTM D226 Type II felt or #30 ASTM D4869 Type IV felt underlayment or a reinforced synthetic underlayment which has an ICC approval as an alternate to ASTM D226 Type II felt paper installed over the entire roof deck and secured with button cap nails (with 1-in. diameter) at maximum 6 in. o.c. at laps and 12 in. o.c. vertically and horizontally in the field. Horizontal laps must be minimum of 4 in. and end laps must be a minimum of 6 in.¹⁰

☐ **OPTION 1B: SELF-ADHERING AAMA 711-13, LEVEL 3 (FOR EXPOSURE UP TO 80°C/176°F) COMPLIANT FLEXIBLE FLASHING TAPE**, at least 3¾-in. wide, applied directly to the roof deck (or primer if required by manufacturer) to all horizontal and vertical joints in the roof deck; then a #30 ASTM D226 Type II felt or #30 ASTM D4869 Type IV felt underlayment or a reinforced synthetic underlayment which has an ICC approval as an alternate to ASTM D226 Type II felt paper installed over the entire roof deck and secured with button cap nails at maximum 6 in. o.c. at laps and 2 rows spaced evenly in the field at 12 in. o.c.

☐ **OPTION 2: A FULL LAYER OF SELF-ADHERING POLYMER-MODIFIED BITUMEN MEMBRANE** ("peel-and-stick") meeting ASTM D1970 is installed over the entire roof deck with a second layer of minimum ASTM D226 Type I felt installed as a "bond break" between the peel-and-stick and the shingles.

Other Roof Coverings Yes ☐ N/A ☐

Roof type: _____

Manufacturer: _____

Describe how the roof covering meets the design pressures as outline in section 3.1.1.3 and that the attachments meet the design pressures as outline in section 3.1.1.3.1.

If applicable, please describe the sealed roof deck method:



Structural Roof Deck and Attachment

Select the appropriate structural roof deck and fill out the corresponding information.

Plywood and Oriented Strand Board Yes ☐ N/A ☐

Select the structural deck: ☐ Plywood ☐ OSB

Check the box beside each requirement to indicate that the structural roof deck and attachment installation is in accordance with the *FORTIFIED Multifamily–2025 Wind Standard*.

- ☐ Roof sheathing can resist the loads and load combinations specified in ASCE 7 as defined section 3.1.1.3.1 of the *FORTIFIED Multifamily–2025 Wind Standard*.
- ☐ Wood structural panel thickness is not less than $7/16$ in. and no less than $15/32$ in. for the installation of new clay or concrete roof tiles.

Sheathing Fastening:

Roof peak height (ft.): _____

Sheathing fastening and roof member spacing for roofs with a peak height greater than 30 feet must be designed by a structural engineer. Calculations must be provided with this submittal.

Roof Square Footage (sq. ft.): _____

Sheathing fastening for roofs with a peak height of 30 feet or less and a roof square footage greater than 5000 sq. ft. must be designed by a structural engineer. Calculations must be provided with this submittal.

Roof member spacing (in.)⁸: _____

Sheathing thickness (in.): _____

Fastener type:

Note: Smooth-shank nails are not permitted.

- ☐ 8d ring-shank nails
- ☐ 10d ring-shank nails
- ☐ Other (engineer of record must provide calculations)

Fastener spacing⁹:

Field:

- ☐ 4 in o.c. ☐ Other: _____

Perimeter:

- ☐ 4 in o.c. ☐ Other: _____

Corner:

- ☐ 4 in o.c. ☐ Other: _____

Sawn Lumber or Wood Boards Yes ☐ N/A ☐

Check the box beside each requirement to indicate that the sawn lumber or wood boards are in accordance with the standard. Fill out requested information where indicated.

- ☐ Sawn lumber or wood board roof deck can resist the loads and load combinations specified in ASCE 7 as defined in section 3.1.1.3.1 of the *FORTIFIED Multifamily–2025 Wind Standard*.

Manufacturer: _____

Dimensions:

Width (in): _____

Thickness (in): _____

Roof member spacing (in.)¹⁰: _____

- ☐ Sawn lumber or wood board roof deck attachments can resist the loads and load combinations specified in ASCE 7 as defined in section 3.1.1.3 of the *FORTIFIED Multifamily–2025 Wind Standard*.

Describe the attachment detail:

Structural Steel Decks Yes ☐ N/A ☐

Check the box beside each requirement to indicate that the sawn lumber or wood boards are in accordance with the standard. Fill out requested information where indicated.

- ☐ Structural steel deck can resist the loads and load combinations specified in ASCE 7 as defined in section 3.1.1.3.1 of the *FORTIFIED Multifamily–2025 Wind Standard*.

Gauge: _____

Roof member spacing (in.): _____

- ☐ Structural steel deck attachments can resist the loads and load combinations specified in ASCE 7 as defined in section 3.1.1.3 of the *FORTIFIED Multifamily–2025 Wind Standard*.

Describe the attachment details¹¹:

- ☐ The structural steel deck and attachment have been verified by a structural engineer.

Drip Edge (Edge Flashing) Yes ☐ N/A ☐

Check the box beside each requirement to indicate that the drip edge is in accordance with the standard. Fill out requested information where indicated.

- ☐ Minimum 26 gauge
- ☐ Joints are overlapped a minimum of 3 in.

⁸For mean roof height less than 30 ft, the maximum allowed roof member spacing is 24 in. o.c. unless calculations are provided by the engineer of record. For height greater than 30 feet, calculations must be provided.

⁹For fastener spacing see section 3.1.3.2.1 of the *FORTIFIED Multifamily–2025 Wind Standard*.

¹⁰Measured from centerline to centerline in inches.

¹¹Include attachment method (i.e. weld, screw), size, and spacing.



- ☐ Drip edge extends ½ in. below sheathing and extends back on the roof a minimum of 2 in.
- ☐ Mechanically fastened at 4 in. o.c. and fasteners are alternating (staggered)
- ☐ Drip edge is installed **over** the underlayment

Flashing (all non-edge flashing applications)

Yes ☐ N/A ☐

Check the box beside each requirement to indicate that the flashing is in accordance with the standard. Fill out requested information where indicated.

- ☐ Meets the 2018 IBC
- ☐ Meets the manufacturer's installation guidelines

Ridge and Off-Ridge Vents Yes ☐ N/A ☐

Check the box beside each requirement to indicate that the ridge and off-ridge vents are in accordance with the standard. Fill out requested information where indicated.

- ☐ Ridge and off-ridge vents are TAS 100(A) rated for resisting water intrusion in high winds.
- ☐ Attached to the roof per the manufacturer's installation guidelines.

Gable End Vents Yes ☐ N/A ☐

IBHS recommends against including gable end vents in new commercial buildings built in hurricane-prone regions. If they must be used to meet code they must meet:

- ☐ Gable end vents are TAS 100(A) rated for resisting water intrusion in high winds.
- ☐ Attached to the roof per the manufacturer's installation guidelines.

Skylights Yes ☐ N/A ☐

Check the box beside each requirement to indicate that the skylights are in accordance with the FORTIFIED Commercial– 2025 Wind standard.

- ☐ Skylights and their attachments are designed and detailed for the ASCE 7 wind loads and provide an uplift resistance as defined in section 3.1.1.3.1.

Skylights must be tested and approved at a minimum to (check one that applies):

- ☐ AAMA/WDMA/CSA 101/ CSA 101/ A440, ASTM E330
- ☐ The Florida Building Code Testing Application Standard TAS 202

- ☐ Installation meets the air and water infiltration requirements of ASTM E330 and ASTM E331.

- ☐ The curb is designed to meet the minimum required uplift requirements with additional factor of safety as defined in section 3.1.1.3.

Roof-Mounted Structures and Equipment

Yes ☐ N/A ☐

Check the box beside each requirement to indicate that the RME are in accordance with the *FORTIFIED Multifamily–2025 Wind Standard*.

- ☐ Ballasted systems are NOT used.

- ☐ All RME and their attachments have been designed with a minimum factor of safety as defined in section 3.1.1.3 of the *FORTIFIED Multifamily–Wind Standard*.

All RME and their attachments are in accordance with one of the following:

- ☐ ASCE 7-10 Section 29.5.1 (h≤60ft)
- ☐ ASCE 7-16 Section 29.4

Photovoltaic Systems Yes ☐ N/A ☐

Photovoltaic (PV) systems and their attachments are designed with a minimum factor of safety defined in section 3.1.1.3 of the *FORTIFIED Multifamily–2025 Wind Standard* and in accordance with (select all that apply):

- ☐ ASCE 7-16
- ☐ ASCE 7-22
- ☐ SEAOC PV2
- ☐ Model-scale wind tunnel study that meets the requirements of ASCE 49-12 (documentation must be submitted)

Re-Roofing Photo Documentation

This section outlines the photo documentation required to be submitted to the FORTIFIED Multifamily evaluator.

Photo documentation is a supplementary tool that helps the FORTIFIED Multifamily Evaluator inspect the roofing job more efficiently. Clear and focused photos help ensure all items are captured and could reduce the time of the overall inspection process.

Please submit a compressed file including all requested photos with this form. Please correspond titles of photos to the titles mentioned in this document. All photos must be clear and focused on item(s) of interest. IBHS or the FORTIFIED Multifamily Evaluator may request more photos.

Example photos are provided at the end of this section for reference purposes only.

On-Site Material Verification

Wood Deck Attachment- Fastener Yes ☐ N/A ☐

- ☐ Photo - manufacturer label on box showing the fastener details
- ☐ Photo - nails (see figure 1)

Sealed Roof Deck Yes ☐ N/A ☐

- ☐ Photo - manufacturer label of all materials used in accordance with §3.1.3.3 of the *FORTIFIED Multifamily–2025 Wind Standard* (i.e., reinforced synthetic underlayment, flashing tape, self-adhering modified bitumen membrane; see figure 2)
- ☐ Photo - (if applicable) underlayment mechanical fastener manufacturer label

**Shingles and Fasteners** Yes ☐ N/A ☐

- ☐ Photo - shingle nails manufacturer label
- ☐ Photo - starter strip or mastic manufacturer label
- ☐ Photo - shingles manufacturer label indicating wind testing standard/classification

Clay and Concrete Tiles and Attachments Yes ☐ N/A ☐

- ☐ Photo - (if applicable) tile nails manufacturer label
- ☐ Photo - (if applicable) roof tile adhesive
- ☐ Photo - tile manufacturer label indicating wind testing standard/classification

Metal Panels, Fasteners and Accessories Yes ☐ N/A ☐

- ☐ Photos - manufacturer labels of all applicable products designated by the approved system and manufacturer installation guidelines.¹²
- ☐ Photo - manufacturer label on box showing the fastener details
- ☐ Photo(s) - screws¹³

Gutters, Downspouts and Hold-downs Yes ☐ N/A ☐

- ☐ Photo - manufacturer label

Ridge Vents or Off-Ridge Vents Yes ☐ N/A ☐

- ☐ Photo - manufacturer label on box

Existing Conditions Documentation

Overview

- ☐ Photo(s) - exposed structural deck with removed cover (shingles, architectural metal panel, or other deck) in the corner, perimeter, and field conditions ¹⁴

Damaged or Deteriorated Structural Deck and Framing MembersYes ☐ N/A ☐

- ☐ Photo(s) - damaged or deteriorated existing structural deck
- ☐ Photo(s) - photos of the structural framing members under the damaged or deteriorated existing structural deck (damaged deck removed)

Roof System Installation

Structural Deck Fastening Yes ☐ N/A ☐

Use a measuring tape to show spacing of existing fasteners and additional fasteners added to meet the minimum spacing requirement specified in the *FORTIFIED Multifamily–2025 Wind Standard*.

- ☐ Photos (Minimum of 2 locations) - decking in the corner area
- ☐ Photos (Minimum of 2 locations) - decking in the field area
- ☐ Photos (Minimum of 2 locations) - decking at the roof ridge or top of a mono-sloped roof
- ☐ Photos (if applicable)- decking at the valley

Sealed Roof Deck Yes ☐ N/A ☐

View sample photos 3–6 for examples.

☐ Self-Adhering Polymer-Modified Bitumen Flashing Tape

- ☐ Photo(s) - 4-in.-wide min tape applied to roof deck in corner areas
- ☐ Photo - 4-in.-wide min tape applied to roof deck in field areas
- ☐ Photo - underlayment direction of placement
- ☐ Photo(s) - (if applicable) Underlayment placement at valleys and hips
- ☐ Photo(s) - underlayment button cap nail fastening- corner and field areas

☐ Self-Adhering AAMA 711-13, Level 3 Compliant Flexible Flashing tape

- ☐ Photo(s) - 4-in.-wide min tape applied to roof deck in corner areas
- ☐ Photo - 4-in.-wide min tape applied to roof deck in field areas
- ☐ Photo - underlayment direction of placement
- ☐ Photo(s) - (if applicable) underlayment placement at valleys and hips
- ☐ Photo(s) - underlayment button cap nail fastening- corner and field areas

☐ A Full Layer of Self-Adhering Polymer-Modified Bitumen Membrane

- ☐ Photo - direction of placement
- ☐ Photo(s) - placement at valleys and hips
- ☐ Photo(s) - bond break installation over entire roof

☐ Install Two (2) Layers of ASTM D226 Type II or ASTM D4869 Type IV (#30)

- ☐ Photo - underlayment direction of placement
- ☐ Photo(s) - underlayment placement at valleys and hips
- ☐ Photo(s) - underlayment fastening - annual-ring or deformed-shank nails with 1-in.-diameter caps - corner and field areas

Edge Conditions Yes ☐ N/A ☐

- ☐ Photo - (if applicable) drip edge fastened at 4 in. o.c. staggered (verify with tape measurer)
- ☐ Photo - (if applicable) drip edge overlapped a minimum of 3 in. (verify with tape measurer)
- ☐ Photo(s) - (if applicable) drip edge with self-adhering starter strip or mastic bed for the first course/starter strip
- ☐ Photo(s) - (if applicable) architectural metal panel flashing attachment per manufacturer specifications in the corner and perimeter locations

¹²Provide photos for all applicable products including but not limited to panel sheets, fire barriers, tape/tube sealant, and universal closures.

¹³Provide a photo per different fastener required by the approved system. This includes but is not limited to wood screws and stitch screws.

¹⁴A photo is required in all areas of the roof; for example, if the roof has four corner conditions, four corner conditions are captured.

Cover Installation¹⁵

Yes ☐ N/A ☐

- ☐ Photo (minimum of 2 locations) - fastening pattern in the corner area
- ☐ Photo (minimum of 2 locations) - fastening pattern in the field area
- ☐ Photo (minimum of 2 locations) - fastening pattern at the roof ridge or top of a mono-sloped roof
- ☐ Photo (if applicable) - fastening pattern at the valleys

Example Photos



Sample Photo 1: Photo of Nails



Sample Photo 2: Photo of Starter Strip Manufacturer Label



Sample Photo 3: Underlayment Nailing



Sample Photo 4: Underlayment "peel-and-stick"



Sample Photo 5: Mastic Application Over Drip Edge for Starter Strip Adhesion



Sample Photo 6: Drip Edge with Self-Adhering Starter Strip

¹⁵Cover installation includes but is not limited to shingles, concrete and clay tiles, and architectural metal panels. All other cover installations must be approved by the FORTIFIED Multifamily Evaluator and shall be photo documented. If necessary, the FORTIFIED Multifamily Evaluator may request additional photos outside of this list.



FORTIFIED SILVER

All FORTIFIED Roof™ requirements must be satisfied.

For this section, check the box beside each requirement or respond to the item to indicate that items are in accordance with the *FORTIFIED Multifamily–2025 Wind Standard*.

Opening Protection

Wall Design Pressures

Provide select and fill out the appropriate wind pressures.

- ☐ ASCE 7-10 design pressures (psf) using minimum terrain Exposure C or D and effective wind area of 10 sq ft

Please select the method used to obtain base pressures:

- ☐ ASD ☐ LRFD

Specify the wind pressures (psf):

Zone 4: _____

Zone 5: _____

- ☐ ASCE 7-16/22 design pressures (psf) using minimum terrain Exposure C or D and effective wind area of 10 sq ft

Please select the method used to obtain base pressures:

- ☐ ASD ☐ LRFD

Specify the wind pressures (psf):

Zone 4: _____

Zone 5: _____

Windows and Glazed Openings

Yes ☐ N/A ☐

Select the type(s) of window system:

- ☐ Single-pane
☐ Double-pane
☐ Laminated glass
☐ Impact-rated laminated window and frame system
☐ Triple-pane impact-rated laminated window and frame system

Check the box beside each requirement or respond to the item to indicate that the windows are in accordance with the *FORTIFIED Multifamily–2025 Wind Standard*.

- ☐ Windows and glazed openings are designed for the load combinations defined in section 3.2.1 of the *FORTIFIED Multifamily–2025 Wind Standard*.

Hurricane-Prone Regions: Fill out the following if you are located in a hurricane-prone region. If you are not located in a hurricane-prone region, continue to high-wind-prone region.

- ☐ Labels verifying the impact rating and pressure capacity are visible on the installed windows.

Windows, glazed openings, curtain walls meet (select one of the following):

- ☐ AAMA/WDMA/CSA 101/ CSA 101/ A440, ASTM E330
☐ The Florida Building Code Testing Application Standard TAS 202

Impact Protection:

Within 30 Feet of Grade: Windows, glazed openings, curtain walls meet (select one of the following):

- ☐ Large Missile Level D (9 lb 2x4 impacting end on at 50 ft/sec) as defined in ASTM E1996 and ASTM E1886 and AAMA 506
☐ The Florida Building Code Testing Application Standards TAS 201 and TAS 203

30 Feet or Higher: Windows, glazed openings, curtain walls meet:

- ☐ ASTM E1886 cyclic pressure and Small Missile Level A as defined in ASTM E1996, ASTM E1886 and AAMA 506.

☐ Yes ☐ N/A

Large Commercial Doors

Yes ☐ N/A ☐

☐ All large commercial doors including roll-up, overhead, and sectional (garage doors) are designed for the load combinations defined in section 3.1.1.3.1 of the *FORTIFIED Commercial– 2025 Wind standard*.

Large commercial doors meet (select one of the following):

- ☐ AAMA/WDMA/CSA 101/ CSA 101/ A440, ASTM E330
☐ ANSIDASMA 108
☐ The Florida Building Code Testing Application Standard TAS 202

Impact Protection:

Large commercial doors meet (select one of the following):

- ☐ Large Missile D (9 lb 2x4 impacting end on at 50 ft/sec) as defined in ASTM E1996 and ASTM E1886 and AAMA 506
☐ ANSI/DASMA 115 Standard Method for Testing Sectional Doors, Rolling Doors, and Flexible Doors: Determination of Structural Performance Under Missile Impact and Cyclic Wind Pressure
☐ The Florida Building Code TAS 201 (Impact Test Procedures), 202 (Criteria for Testing Impact & Nonimpact Resistant Building Envelope Components Using Uniform Static Air Pressure), and 203 (Criteria for Testing Products Subject to Cyclic Wind Pressure Loading)

Exterior Personnel Doors

Yes ☐ N/A ☐

☐ All personnel doors are designed for the load combinations defined in section 3.2.1.1 of the *FORTIFIED Multifamily–2025 Wind Standard*.

Hurricane-Prone Regions: The following applies if you are located in a hurricane-prone region.

Exterior personnel doors meet (select one of the following):

- ☐ AAMA/WDMA/CSA 101/ CSA 101/ A440, ASTM E330
☐ The Florida Building Code Testing Application Standard TAS 202



Exterior Walls and Wall Protection

Wall Types

Select all that apply; for hurricane-prone regions, exterior walls must be impact rated (denoted as “IR” below).

- ☐ Reinforced concrete block (IR)
- ☐ Precast concrete/tilt up panels (IR)
- ☐ Cast-in-place concrete (IR)
- ☐ Brick veneer over wood or metal frame
- ☐ Brick with concrete block backing (IR)
- ☐ Metal walls
 - ☐ Metal wall systems are designed and tested for resistance in accordance with ASTM E1592. Each assembly shall be tested for a load equal to 1.5 times the design pressure.
- ☐ Insulated concrete form
- ☐ Sandwich panel wall systems
 - ☐ Meets the International Code Council (ICC) Evaluation Service – Acceptance Criteria for Sandwich Panels AC04. Any adhesives used shall comply with ASTM D2559 or the ICC Acceptance Criteria for Sandwich Panel Adhesives AC05.
- ☐ Exterior insulating finishing systems (EIFS) ¹⁶
 - ☐ For all new construction applications, EIFS systems shall be installed by a qualified professional with an active Association of the Wall and Ceiling Industry (AWCI)- EIFS Mechanics certification.
 - ☐ **Hurricane-Prone Regions Only:** EIFS Installed on a metal or wood frame are not permitted unless they are a Miami-Dade County Approved system.
- ☐ Solid insulated concrete forms / ¾-in. plywood/ ≥7/16-in. wood structural panel sheathing with one of the following finishes:
 - ☐ ½-in. stucco (IR)
 - ☐ ½-in. thick wood (IR)
 - ☐ ½-in. fiber-cement-based planking (IR)
 - ☐ ≥¾-in.-thick wood structural panel sheathing with vinyl or aluminum siding (IR)
- ☐ Other walls

Describe “Other” wall system:

- ☐ Wall systems are designed for the load combinations as defined in section 3.1.1.3.1 of the *FORTIFIED Multifamily–2025 Wind Standard*

Hurricane-Prone Regions: Fill out the following if you are located in a hurricane-prone region.

- ☐ Wall impact resistance meets the requirements of ASTM E1886 and ASTM E1996 for the impact of a 9-lb nominal 2x4 lumber missile impacting end on at 34 mph (50 ft/s) (large missile impact level D).

Parapets

Yes ☐ N/A ☐

Is the parapet taller than 3 ft from base connection to free end?

- ☐ Yes ☐ No

If Yes, is structural bracing (internal or external) provided and does it meet the minimum ASCE 7 standards?

- ☐ Yes ☐ No

Gable Ends

Yes ☐ N/A ☐

- ☐ Gable end walls are designed in accordance with ASCE 7 as defined in section 3.1.1.3.1.

- ☐ Gable end wall sheathing has sufficient strength and fastening to resist wall design wind pressures specified in ASCE 7 as outlined in Section 3.1.1.3.1.

- ☐ Gable end bracing is designed by the structural engineer of record to meet the minimum design wind pressures specified in ASCE 7 as outlined in Section 3.1.1.3.1. and the engineer addressed the bending capacity of the gable wall, bracing of the gable wall at its top and bottom, and connection of the bottom of the gable wall to the wall below.

- ☐ Gable end overhangs are constructed and attached to gable framing to resist the site-specific wind pressures specified in ASCE 7 as outlined in Section 3.1.1.3.1. Gable end overhangs greater than 12 inches should be designed as an outlooker by the structural engineer of record and calculations must be provided to the FORTIFIED Commercial Evaluator.

Hurricane Prone Regions:

- ☐ Gable end rake soffits are unvented.

Chimneys

Yes ☐ N/A ☐

- ☐ Chimneys have adequate load path members and connections capable of resisting the loads and load combinations specified in ASCE 7 as outlined in section 3.1.1.3.1.

¹⁶For all existing EIFS that meet these criteria, a qualified professional with an active AWCIEIFS Inspectors certification shall inspect the EIFS and provide supporting documentation regarding its condition. EIFS that are not visibly damaged, deteriorated, chipped, or cracked, that have structurally sound horizontal and vertical seals including around windows and penetrations, are free of leaks, and have at least 5 years of useful life remaining are eligible for a FORTIFIED Silver designation. EIFS that do not meet these conditions and/or do not have at least 5 years of useful life remaining will require repairs or replacement to be eligible for a FORTIFIED Silver designation.



Electrical/ Mechanical Systems

Flood Protection

All electrical and mechanical equipment and connections necessary to operate critical systems are located above the 500-year flood level if known, or at least 3 ft above the known base flood elevation (100-year flood level) or advisory flood elevation.

☐ Yes ☐ N/A

If the building is located out of a 500-year and 100-year flood zone, all electrical and mechanical equipment and connections necessary to operate critical systems are not exposed to flood waters.

☐ Yes ☐ N/A

Electrical Connections for Backup Power ☐ Yes ☐ N/A

Recommended- not required

- ☐ Transfer switch or docking station (sometimes referred to as a storm switch), that support connection of a generator capable of powering, at a minimum, the critical systems needed to provide continuity of operation.

All electrical connections for backup power are located above the 500-year flood level, if known, or at least 3 ft above the known base flood elevation (100-year flood level) or advisory flood elevation.

☐ Yes ☐ N/A

FORTIFIED GOLD

All FORTIFIED Silver requirements must be satisfied.

For this section, check the box beside each requirement or respond to the item to indicate that items are in accordance with the FORTIFIED Multifamily–2025 Wind Standard.

Continuous Load Path

- ☐ A continuous and adequate load path from the roof to the foundation of the building exist. The building has positive connections from the roof to foundation as a means to transmit wind uplift and lateral loads safely to the ground. This includes providing roof-to-wall connection hardware (e.g., hurricane straps for wood) with the required roof uplift resistance as determined by the designer or specified in the prescriptive method being used.
- ☐ Inter-story connections in multi-story structures have a continuous load path through the wall to the foundation.

Attached and Accessory Structures

Yes ☐ N/A ☐

- ☐ Canopies, carports, porte cocheres or any other vehicle-type drive-through structures will have adequate load path members and connections to resist the loads and load combinations specified in ASCE 7 as defined in section 3.1.1.3.1.

Backup Power Yes ☐ N/A ☐

Recommended, not required.

- ☐ Backup power shall be available and capable of powering critical electrical and mechanical systems that maintain vital business operations. All equipment shall be installed in accordance with the requirements of Electrical Systems (Flood) described in section 3.2.3.