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ESR-1473

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DIVISION: 06 00 00—WOOD, PLASTICS AND COMPOSITES

SECTION: 06 16 00—SHEATHING

DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION

SECTION: 07 30 05—ROOFING FELT AND UNDERLAYMENT

REPORT HOLDER:

HUBER ENGINEERED WOODS, LLC

**ONE RESOURCE SQUARE
10925 DAVID TAYLOR DRIVE, SUITE 300
CHARLOTTE, NORTH CAROLINA 28262**

EVALUATION SUBJECT:

ZIP SYSTEM® AND ZIP SYSTEM+™ ROOF SHEATHING



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**DIVISION: 06 00 00—WOOD, PLASTICS, AND
COMPOSITES****Section: 06 16 00—Sheathing****DIVISION: 07 00 00—THERMAL AND MOISTURE
PROTECTION****Section: 07 30 05—Roofing Felt and Underlayment****REPORT HOLDER:**

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EVALUATION SUBJECT:**ZIP SYSTEM® AND ZIP SYSTEM+™ ROOF SHEATHING****1.0 EVALUATION SCOPE****Compliance with the following codes:**

- 2015, 2012 and 2009 *International Building Code*® (IBC)
- 2015, 2012 and 2009 *International Residential Code*® (IRC)
- 2013 *Abu Dhabi International Building Code* (ADIBC)[†]

[†]The ADIBC is based on the 2009 IBC. 2009 IBC code sections referenced in this report are the same sections in the ADIBC.

Properties evaluated:

- Structural—wind uplift resistance
- Nonclassified roof covering
- Classified roof covering
- Weather resistance

2.0 USES

ZIP System® and ZIP System+™ roof sheathing panels are used as combination roof sheathing and roof underlayment.

3.0 DESCRIPTION

The ZIP System® and ZIP System+™ roof Sheathing panels are wood structural panels having a laminated facer. The ZIP System+™ panels are manufactured using a different resin than the Zip System® panels. . The panels are installed with a proprietary seam tape, which allows the systems to be used as an alternate to the underlayment

required in Chapter 15 of the IBC and Chapter 9 of the IRC. The OSB substrate complies with U.S. DOC PS-2 for wood structural panels and is overlaid on one side with a medium-density, phenol-impregnated, polymer-modified sheet material. The standard-size panels are nominally 4 feet by 8 feet. Oversize panels, wider than 4 feet (1219 mm) or longer than 8 feet (2438 mm), or both, are also produced. The panels are available with either a square-finished-edge profile a tongue-and-groove edge profile or a machined edge profile. The proprietary seam tape is a self-adhering sheet-type membrane consisting of acrylic adhesive laminated to a polyolefin backing, and the face of the tape is labeled with ESR-1473. The tape is 0.012 inch thick (0.30 mm) with a minimum width of 3 inches (76.2 mm), and comes in rolls of varying length.

4.0 INSTALLATION**4.1 General:**

Installation of ZIP System® and ZIP System+™ roof sheathing must comply with the applicable code, this report and the manufacturer's published installation instructions. The installation instructions are to be available at the jobsite at all times during installation. The instructions within this report must govern if there are any conflicts between the manufacturer's published instructions and this report.

4.2 Application:

The ZIP System® and ZIP System+™ roof sheathing panels must be installed with the longer dimension perpendicular to the roof framing and fastened to the roof framing in accordance with the applicable code for wood structural panels. The panels must be installed in accordance with the panel span rating as shown on the panels. All corners are to be securely fastened. Tongue-and-groove and machined edge panels are designed to provide the correct gap size at the panel edges during installation. Squared-edged panels must be spaced apart a minimum of 1/8 inch (3.18 mm) at the time of installation. End joints of adjacent panel runs must be staggered. The panel must be installed with the laminated phenol-impregnated polymer-modified sheet material facing to the exterior. All ZIP System® and ZIP System+™ roof sheathing seams must be sealed with the Zip System® tape. All overlay surfaces must be free of any significant presence of debris, particles or sawdust prior to installation of the ZIP System® tape. Overlay surfaces must be void of any free water prior to application of the ZIP System® tape. The ZIP System® tape edges must be sealed and the tape is to be centered within +/- 1/2 inch (12.7 mm) of all panel edge seam centers. All ZIP System® and ZIP System+™

***Revised November 2015**

roof sheathing surface defects, openings, cracks, etc., that completely penetrate the overlay and substrate, and caused by handling or construction work, must be covered with the ZIP System® tape. The ZIP System® tape must extend a minimum of 1 inch (25.4 mm) past the panel edge T-joint intersections. The ZIP System® tape must be adhered to the ZIP System® and ZIP System+™ roof sheathing. Wrinkles in the ZIP System seam tape are acceptable unless they create a leak path to the panel seam.

4.3 Roof Assemblies

4.3.1 Classified Roof Coverings

4.3.1.1 Class A: Underlayment is not required for a minimum 1/2-inch thick Zip System+™ roof sheathing with Class A asphalt glass fiber mat shingles.

4.3.1.2 Class B: Underlayment is not required for a minimum 7/16-inch thick Zip System® roof sheathing with Class A asphalt glass fiber mat shingles.

4.3.2 Nonclassified Roof Coverings: The ZIP System® and ZIP System+™ roof sheathing panels are limited to installation on buildings permitted to have nonclassified roof coverings using code-complying asphalt-fiberglass shingles, metal shingles, metal panels, wood shakes, wood shingles, built-up roofing, slate and slate-type shingles, and clay and concrete tile roof coverings. Roof coverings may be applied directly to the taped ZIP System® and ZIP System+™ roof panels unless multi-layer underlayments are required.

4.4 Wind Uplift Resistance:

Wind uplift design loads and ZIP System® and ZIP System+™ roof wood structural panel allowable uplift resistance shall be determined in accordance with Sections 1609 and 2304.8.2 of the 2015 IBC or 2304.7.2 of the 2012 and 2009 IBC and Section R301.2.1 of the IRC. Roof coverings must be fastened to the sheathing with mechanical fasteners sufficient to resist the design uplift load.

5.0 CONDITIONS OF USE

The ZIP System® and ZIP System+™ roof sheathing panels described in this report comply with, or are suitable alternatives to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

- 5.1 This evaluation report and the manufacturer's published installation instructions, when required by the code official, must be submitted at the time of permit application.
- 5.2 The ZIP System® and ZIP System+™ roof sheathing panels must be manufactured, identified and installed in accordance with this report and the manufacturer's published installation instructions.
- 5.3 The ZIP System® and ZIP System+™ roof sheathing panels are limited to code-approved structural use for

wood structural panels with either a 24/16, 32/16 or 40/20 span rating.

- 5.4 In jurisdictions enforcing the IBC, the roof covering system incorporating the panels is limited to installations in the following construction types:

- Type III-B and Type V-B
- Type III-A or Type V-A under the conditions specified in footnote d of IBC Table 601
- Type III-A or Type V-A under the conditions specified in footnote b of IBC Table 601, for occupancies other than Group F-1, H, M and S-1

In jurisdictions enforcing the IRC, the roof covering system incorporating the panels may be installed on structures constructed in accordance with the IRC.

- 5.5 Enclosed attics and rafter spaces must be ventilated in accordance with the applicable code, except where unvented conditioned attic assemblies are permitted by 2015 and 2012 IRC Section R806.5 or 2009 IRC Section R806.4.
- 5.6 An ice barrier must be provided as required by Section 1507.2.8.2 of the IBC and Section R905.2.7 of the 2015 IRC and Section R905.2.7.1 of the 2012 and 2009 IRC.
- 5.7 Installation is limited to roofs having a slope of 2:12 (16.67% slope) or greater.
- 5.8 ZIP System® and ZIP System+™ roof sheathing panels are manufactured by Huber Engineered Woods, LLC, in Crystal Hill, Virginia; Commerce, Georgia; Broken Bow, Oklahoma; and Easton, Maine, under a quality-control program with inspections by ICC-ES.

6.0 EVIDENCE SUBMITTED

Data in accordance with the ICC-ES Acceptance Criteria for Wood Structural Panel Roof Sheathing Factory-laminated with an Alternative Roof Underlayment (AC266), dated May 2008 (editorially updated October 2015).

7.0 IDENTIFICATION

Each ZIP System® and ZIP System+™ roof sheathing panel covered by this report must bear a label that includes the manufacturer's name (Huber Engineered Woods, LLC) and address; the product name; the evaluation report number (ESR-1473); and the grade, performance category and bond classification.

The panel mill label and span rating, grade, performance category and bond classification label must be visible on the bottom face of panels, opposite the laminated facer.

The ZIP System® tape roll is labeled with the product name and the evaluation report number (ESR-1473).

ICC-ES Evaluation Report**ESR-1473 FBC Supplement**

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www.huberwood.com**EVALUATION SUBJECT:****ZIP SYSTEM® AND ZIP SYSTEM+™ ROOF SHEATHING****1.0 REPORT PURPOSE AND SCOPE****Purpose:**

The purpose of this evaluation report supplement is to indicate that ZIP System® and Zip System+™ roof sheathing, recognized in ICC-ES master evaluation report ESR-1473, has also been evaluated for compliance with the codes noted below.

Applicable code editions:

- 2014 *Florida Building Code—Building*
- 2014 *Florida Building Code—Residential*

2.0 CONCLUSIONS

The ZIP System® and ZIP System+™ roof sheathing, described in Sections 2.0 through 7.0 of the master evaluation report ESR-1473, complies with the 2014 *Florida Building Code—Building* and the 2014 *Florida Building Code—Residential*, provided the design and installation are in accordance with the *International Building Code*® provisions noted in the master report, and with the condition that wind uplifting design loads must be determined in accordance with Section 1609 of the *Florida Building Code—Building* and Section R301.2.1 of the *Florida Building Code—Residential*.

Use of the ZIP System® and ZIP System+™ roof sheathing for compliance with the High-Velocity Hurricane Zone provisions of the 2014 *Florida Building Code—Building* and the 2014 *Florida Building Code—Residential* has not been evaluated and is outside the scope of the evaluation report.

For products falling under Florida Rule 9N-3, verification that the report holder's quality-assurance program is audited by a quality-assurance entity approved by the Florida Building Commission for the type of inspections being conducted is the responsibility of an approved validation entity (or the code official, when the report holder does not possess an approval by the Commission).

This supplement expires concurrently with the master report, reissued September 2015 and revised November 2015.