

# ICC-ES Evaluation Report

**ESR-2057**

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**DIVISION: 06 00 00—WOOD, PLASTICS AND  
COMPOSITES****Section: 06 02 00—Design Information****REPORT HOLDER:****NAHB RESEARCH CENTER  
400 PRINCE GEORGE'S BOULEVARD  
UPPER MARLBORO, MARYLAND 20774  
(301) 249-4000  
[www.nahbrc.org](http://www.nahbrc.org)****EVALUATION SUBJECT:****STANDARD FOR WOOD-BASED STRUCTURAL-USE  
PANELS****1.0 EVALUATION SCOPE****Compliance with the following codes:**

- 2006 *International Building Code*® (IBC)
- 2006 *International Residential Code*® (IRC)

**Property evaluated:**

Product performance standard for floor, roof and wall sheathing

**2.0 USES**

The NAHB Research Center standard for wood-based structural-use panels provides performance, design, and installation requirements for roof sheathing, wall sheathing, subfloor and engineered applications.

**3.0 DESCRIPTION****3.1 Product Performance Standard:**

**3.1.1 General:** The product performance standard used by the NAHB Research Center for mat-formed panels (i.e., oriented strand board) is U.S. DOC PS 2-04, which is equivalent to U.S. DOC PS 2-92 referenced by the codes listed in Section 1.0 of this report. The standard provides requirements for dimensional tolerances and squareness of panels, wood materials, panel construction, panel performance (including adhesive bond performance), panel moisture content, qualification testing, panel certification and marking.

**3.1.2 Sheathing:** The standard includes performance tests for sheathing used as covering or bracing elements of subfloors and walls. Wall span ratings include 16 and 24 inches (406 mm and 610 mm); roof span ratings include 16, 20, 24, 32, 40, 48, 54 and 60 inches (406, 508, 610, 813, 1016, 1219, 1372 and 1524 mm); and subfloor span ratings include 16, 20, 24, 32 and 48 inches (406, 508, 610, 813 and 1219 mm).

**3.1.3 Single Floor:** The standard includes performance tests for Single Floor sheathing used as combination subfloor-underlayment (Single Floor). The thicknesses of the panels rated Single Floor vary between  $1^{9/32}$  and  $1^{1/4}$  inches (15.1 and 31.7 mm). Single Floor span ratings include 16, 20, 24, 32 and 48 inches (406, 508, 610, 813 and 1219 mm).

**3.2 Performance Requirements:**

The wood structural panels rated Sheathing and Single Floor must be qualified in accordance with the applicable performance requirements of U.S. DOC PS 2-04, depending on the applicable code requirements. The span ratings and load capacities are based on untreated panels. Preservative-treated or fire-retardant-treated wood-based panels are outside the scope of this report and require evaluation in accordance with the applicable code.

**4.0 DESIGN AND INSTALLATION****4.1 Design:**

**4.1.1 General:** The panels rated Sheathing and Single Floor must be designed to comply with the end-use conditions permitted by the applicable code.

**4.1.2 Prescriptive Design:** Prescriptive design of building elements and systems constructed utilizing the panels rated Sheathing and Single Floor must be in accordance with the applicable code.

**4.1.3 Engineered Design:** Where engineered design is required by the building code, such design must be in accordance with the applicable code provisions and the edition of the National Design Specification (NDS) for Wood Construction referenced in the applicable code.

**4.2 Installation:**

Panel installations, including fastening to the supporting members, must be in accordance with the applicable code according to the span rating indicated on the panels.

**5.0 CONDITIONS OF USE**

The wood-based structural-use panel product performance standard described in this report complies with, or is a suitable alternative to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

**5.1** Wood-based structural-use panels developed in accordance with the product performance standard described in this report must be evaluated in a current ICC-ES evaluation report, and the NAHB Research Center must be the inspection agency.

**5.2** Qualification testing, product evaluations, and test methods of wood-based structural-use panels must be in accordance with U.S. DOC PS 2-04, depending on the applicable code requirements.

**5.3** Preservative-treated or fire-retardant-treated wood-based panels are outside the scope of this report and require evaluation in accordance with the applicable code.

**6.0 EVIDENCE SUBMITTED**

**6.1** Descriptive information.

**6.2** NAHB Research Center, Quality Assurance Program for Engineered Wood Panel Producers, 2005.

**7.0 IDENTIFICATION**

The wood-based structural-use panels shall be identified in accordance with individual product evaluation reports issued by ICC-ES that recognize the specific panels.