

ICC-ES Evaluation Report

ESR-2857

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DIVISION: 06—WOOD AND PLASTICS
Section: 06500—Structural Plastics**REPORT HOLDER:****WESTECH BUILDING PRODUCTS, INC.**
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MOUNT VERNON, INDIANA 47620
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info@westechbp.com**EVALUATION SUBJECT****6/12 REVERSIBLE DECK BOARD****1.0 EVALUATION SCOPE****Compliance with the following codes:**

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

Properties evaluated

- Structural
- Durability
- Surface-burning characteristics

2.0 USES

6/12 Reversible Deck Board is limited to use as deck boards for exterior balconies, porches, stair treads and decks of Type V-B (IBC) construction or buildings constructed in accordance with the IRC.

3.0 DESCRIPTION**3.1 General:**

The 6/12 Reversible Deck Board is a rectangular ribbed polyvinyl chloride (PVC) deck board. Each board is co-extruded, and is 1½ inches (38.1 mm) thick by 11⁷/₈ inches (301.6 mm) wide. The board is configured with a tongue and groove on the board's edges. The reversible feature of the board is that one face of the board resembles a 12-inch-wide (305 mm) board and the other face resembles two 6-inch-wide (152 mm) boards. See Figure 1. The boards are manufactured in three colors: pebblestone, white and almond.

3.2 Durability:

When subjected to weathering, insect attack and other decaying elements, 6/12 Reversible Deck Board material is equivalent in durability to preservative-treated or naturally durable lumber. Accordingly, the material is permitted to be used as an alternative to preservative-treated or naturally

durable lumber on exterior decks, porches, balconies and stair treads. The 6/12 Reversible Deck Board has been evaluated for use in ambient air temperatures between -20°F (-29°C) and 125°F (52°C).

3.3 Surface-burning Characteristics:

When tested in accordance with ASTM E 84, 6/12 Reversible Deck Board has a flame-spread index of no greater than 200.

4.0 DESIGN AND INSTALLATION**4.1 General:**

6/12 Reversible Deck Board must be installed in accordance with the manufacturer's published installation instructions, subject to the conditions of use in this report. A copy of the manufacturer's published installation instructions must be available on the jobsite at all times during installation.

4.2 Deck Boards:

The 6/12 Reversible Deck Board must be limited to the maximum allowable uniform loads indicated in Table 1. Each 6/12 Reversible Deck Board must be installed to the supporting construction, which is limited to a maximum spacing as prescribed in Table 1. The ends of the boards must be supported by double joists where butt joints occur.

4.3 Deck Boards Used as Stair Treads:

Each 6/12 Reversible Deck Board, when used as a stair tread, is sufficient to resist the code-prescribed concentrated load of 300 lbf (1.33 kN) when installed at a maximum center-to-center spacing of the supporting construction and when the leading edge is supported with a 2-by-6 riser or 2-by-6 support as noted in Table 2. See Figures 2 and 3 for installation schematics.

4.4 Fasteners:

4.4.1 Deck Board Fasteners: Each 6/12 Reversible Deck Board must be fastened with one No. 8 by 2-inch-long (51 mm) stainless steel wood screw at each supporting solid sawn wood member. The screws are installed into the groove portion of the board. The tongue of the next board is inserted into the groove of the previously fastened board. The allowable uplift capacity of the deck is 51 psf.

4.4.2 Stair Tread Fasteners: Stair treads must be fastened to the stair stringer with two No. 8 by 2-inch-long (51 mm) stainless steel screws at each stringer for each tread. A 5/8-inch-diameter (16 mm) hole is drilled through the top surface of the stair to accommodate screw application.

5.0 CONDITIONS OF USE

The 6/12 Reversible Deck Board described in this report complies with, or is suitable alternative to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

- 5.1 This product is limited to exterior use as a deck board for balconies, porches, decks and stair treads and similar appendages of Type V-B (IBC) construction and structures constructed in accordance with the IRC.
- 5.2 Installation must comply with this report, the manufacturer’s published instructions and the applicable code. When the manufacturer’s published installation instructions differ from this report, this report governs.
- 5.3 The use of the 6/12 Reversible Deck Board as a component of a fire-resistance-rated assembly is outside the scope of this report.
- 5.4 The compatibility of the fasteners with the supporting construction, including chemically treated wood, is outside the scope of this report.
- 5.5 The 6/12 Reversible Deck Board must be directly fastened to supporting construction. Where required by the code official, engineering calculations and construction documents consistent with this report must be submitted for approval. The calculations must

verify that the supporting construction complies with the applicable building code requirements and is adequate to resist the loads imparted upon it from the products and systems discussed in this report. The documents must contain details of the attachment to the supporting structure consistent with the requirements of this report. The documents must be prepared by a registered design professional where required by the statutes of the jurisdiction in which the project is to be constructed.

- 5.6 The 6/12 Reversible Deck Board is produced in Mount Vernon, Indiana, under a quality control program with inspections by Architectural Testing, Inc. (ATI) (AA-676).

6.0 EVIDENCE SUBMITTED

Data in accordance with applicable portions of the ICC-ES Acceptance Criteria for Deck Board Span Ratings and Guardrail Systems (AC174), dated February 2007 (editorially revised April 2008).

7.0 IDENTIFICATION

The deck board described in this report must be identified by a label on the packaging bearing the Westech Building Products, Inc., name and address, the 6/12 Reversible Deck Board name, the name of the inspection agency (ATI) and the evaluation report number (ESR-2857).

TABLE 1— DECK BOARD SPAN RATING

PRODUCT NAME	MAXIMUM SPAN ¹ (in)	ALLOWABLE CAPACITY ² (lbf/ft ²)
6/12 Reversible Deck Board	24	100

For **SI**: 1 inch = 25.4 mm; 1 lbf/ft² = 47.9 Pa.

¹Maximum span is measured center-to-center of the supporting construction.

²Maximum allowable capacity is adjusted for durability. No further increases are permitted.

TABLE 2—MAXIMUM STAIR TREAD SPANS²

DECK BOARDS USED AS STAIR TREADS	MAXIMUM SPAN (in) ¹
6/12 Reversible Deck Board (with riser Method 1)	16
6/12 Reversible Deck Board (with flat-wise support Method 2)	12

For **SI**: 1 inch = 25.4 mm; 1 lbf/ft² = 47.9 Pa.

¹Maximum span is measured center-to-center of the supporting construction.

²Based on a minimum 2-span installation.

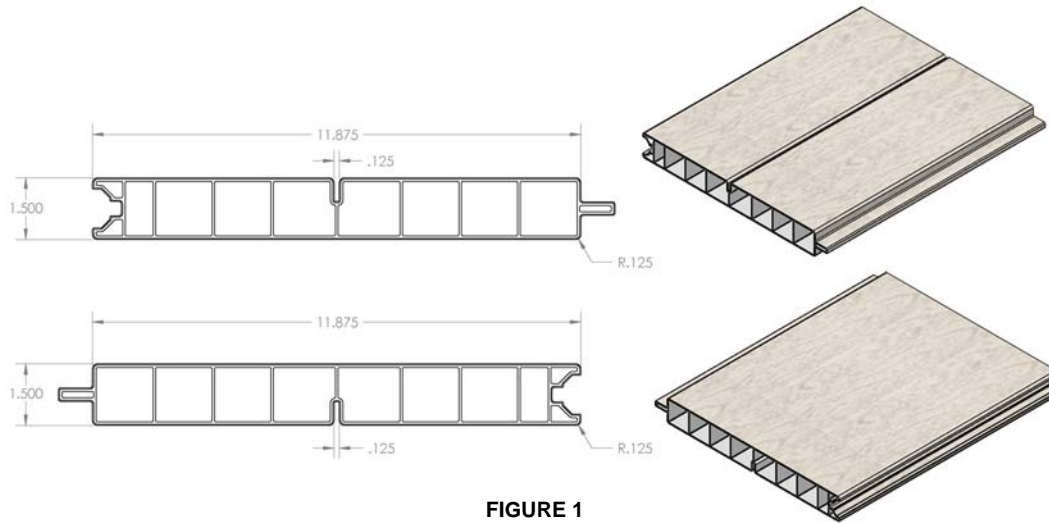


FIGURE 1

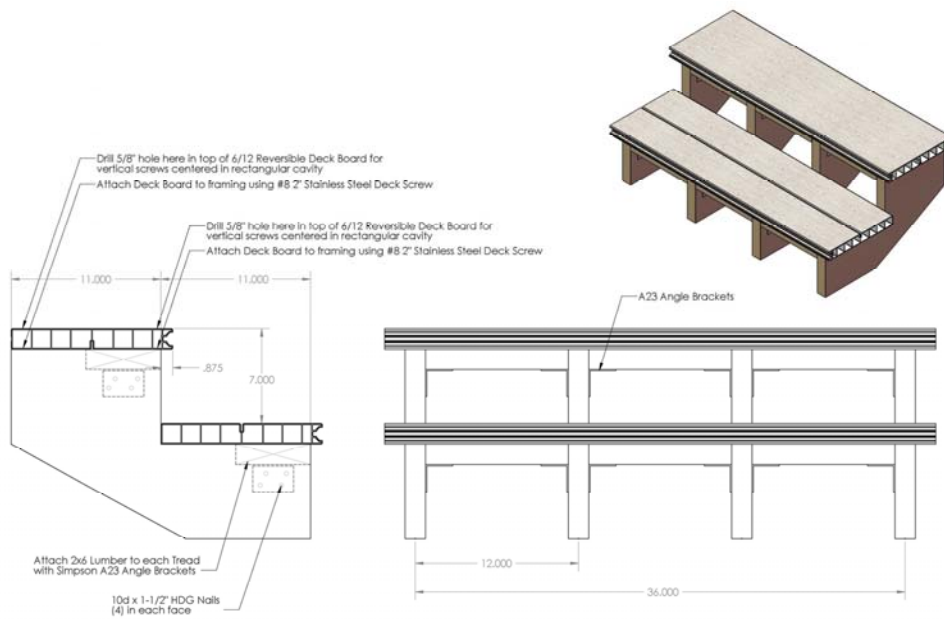


FIGURE 2

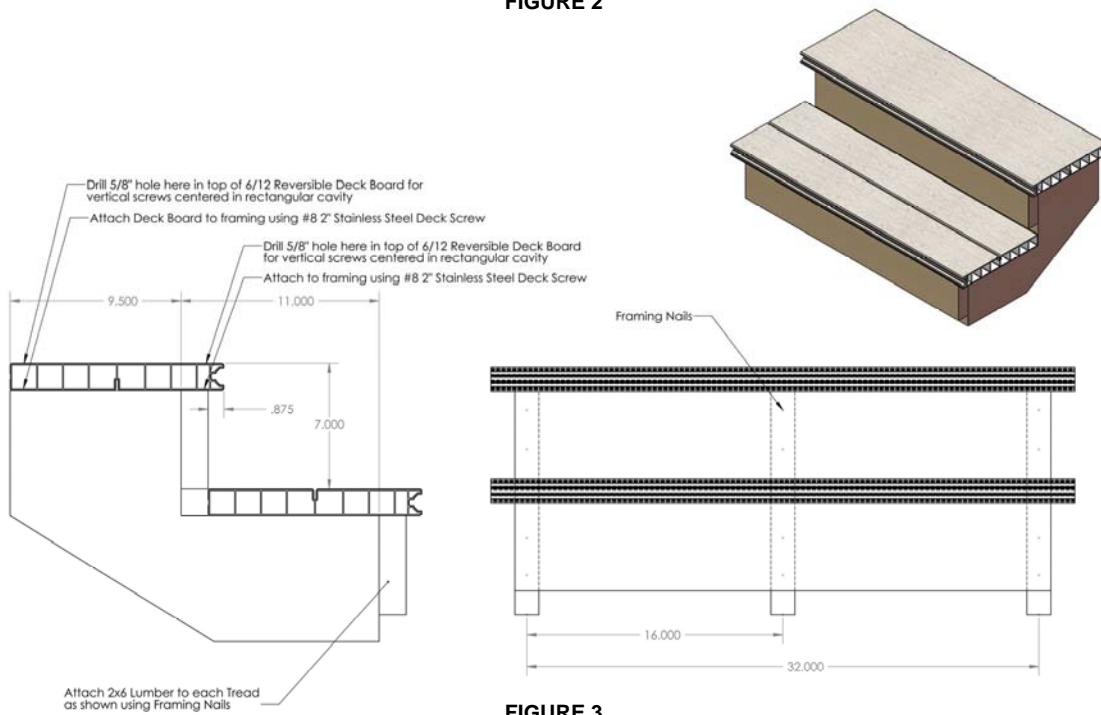


FIGURE 3