



DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION

Section: 07 46 33—Plastic Siding

REPORT HOLDER:

FIBER COMPOSITES, LLC

EVALUATION SUBJECT:

FIBERON COMPOSITE CLADDING BOARDS

1.0 EVALUATION SCOPE

Compliance with the following codes:

- 2018, 2015, and 2012 *International Building Code*® (IBC)
- 2018, 2015, and 2012 *International Residential Code*® (IRC)

Properties evaluated:

- Structural
- Durability
- Ignition resistance

2.0 USES

Fiberon Wildwood and Concordia boards are used for exterior, open joint cladding applications.

3.0 DESCRIPTION

Fiberon Wildwood and Concordia boards are solid rectangular shapes manufactured with a composite polyethylene (PE) and wood fiber core with a high density polyethylene (HDPE) capstock. Available board dimensions and evaluated colors are shown in Table 1. Concordia boards have also been evaluated for use as deck boards and trim, as described in ESR-4947.

4.0 DESIGN AND INSTALLATION

4.1 Design:

The cladding boards have been evaluated for installation as part of a rainscreen system. They are fastened to furring strips, which allow for a drainage cavity behind the boards. The allowable positive and negative wind pressures for boards installed horizontally, vertically and at an angle of 45 degrees are shown in Table 2.

When installed as described in Section 4.2, the cladding boards meet the requirement of IBC Section 1405.1.1.1.1 (2015 and 2012 IBC Section 1406.2.1.1.1), based on testing in accordance with NFPA 268, and may be installed on exterior walls of Types I, II, III and IV construction.

4.2 Installation:

4.2.1 General: The cladding boards must be installed in accordance with the manufacturer’s published installation instructions and this report. The manufacturer’s published installation instructions must be available at the jobsite at all times during installation. In the case of a conflict between the manufacturer’s published installation instructions and this report, this report governs.

4.2.2 Substrate Preparation: The cladding boards have been evaluated for installation over wood-framed walls with studs spaced no more than 16 inches (406 mm) on center. The studs must have a minimum assigned specific gravity of 0.42, in accordance with the ANSI/AWC *National Design Specification for Wood Construction*® (NDS). The walls must be sheathed with wood structural panel sheathing complying with DOC PS1 or PS2, having a minimum thickness of 7/16 inch (11.1 mm). The sheathing must be covered with a water-resistive barrier complying with IBC Section 1403.2 (2015 and 2012 IBC Section 1404.2), and flashing must be installed in accordance with IBC Section 1404.4 (2015 and 2012 IBC Section 1405.4). The cladding must be installed over furring strips, to create a drainage cavity. For horizontal installation and diagonal installation up to an angle of 45 degrees, the furring strips must be installed vertically, and fastened to the center of the studs. For vertical installation, the furring strips must be installed horizontally at a maximum spacing of 16 inches (406 mm) on center. For diagonal installation of more than 45 degrees, the furring strips must be installed horizontally at a maximum spacing of 12 inches (305 mm) on center.

4.2.3 Cladding Board Installation:

4.2.3.1 General: The boards must be installed with a 3/16 inch (4.8 mm) gap between them. At butt joints, the boards must be gapped in accordance with the report holder’s installation instructions, taking into account the ambient temperature at the time of installation.

Screws used to fasten the cladding boards to the wall must be intended for use with composite deck board material. They must be minimum #9 screws having a minimum outside thread diameter of 0.200 inch (5.1 mm), and a minimum head diameter of 0.265 (6.73 mm). The fastener length must be selected to meet the penetration requirements described in Sections 4.2.3.2 and 4.2.3.3. Where exposed to saltwater, stainless steel screws are recommended.

Screws must be installed a minimum of 1 inch (25.4 mm) from each edge of the board and a minimum of 1 inch (25.4 mm) from the ends of the board.

4.2.3.2 Horizontal Installation: Board ends must be supported by furring. At each furring strip, the board must be fastened with two screws having sufficient length to penetrate a minimum of 1/2 inch (12.7 mm) into the stud. See Figure 1 for typical installation.

4.2.3.3 Vertical Installation: Board ends must be supported by furring. At each furring strip, the board must be fastened with two fasteners having sufficient length to penetrate through the sheathing a minimum of 1/2 inch (12.7 mm). See Figure 2 for typical installation.

4.2.3.4 Diagonal Installation: Board ends must be supported by furring. At each furring strip, the board must be fastened with two screws having sufficient length to penetrate a minimum of 1/2 inch (12.7 mm) into the stud (for angles up to 45 degrees) or to penetrate through the sheathing a minimum of 1/2 inch (12.7 mm) (for angles greater than 45 degrees). See Figures 3 and 4 for typical installation.

5.0 CONDITIONS OF USE

The Fiberon cladding boards 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 The Fiberon boards must be installed in accordance with this report and the manufacturer’s published installation instructions. In the case of a conflict between the manufacturer’s published installation instructions and this report, the more restrictive requirements govern.
- 5.2 Adequacy of the exterior wall envelope has not been evaluated and is subject to the approval of the code official.
- 5.3 Durability of furring strip material has not been evaluated and must be justified to the satisfaction of the code official.

5.4 For installation over horizontal furring strips, the adequacy of the sheathing and furring strips to transfer the loads to the framing members is outside the scope of this evaluation, and must be justified to the satisfaction of the code official.

5.5 The Fiberon cladding boards are produced in North Carolina and Idaho under quality control programs with inspections by ICC-ES.

6.0 EVIDENCE SUBMITTED

Data in accordance with the Acceptance Criteria for Wood-plastic Composite Products Used as Exterior Siding (AC524), dated June 2021.

7.0 IDENTIFICATION

7.1 Packages of Fiberon Wildwood boards must be identified with the report holder name (Fiber Composites), the product name (Fiberon Wildwood), the nominal board size and length, the color and the evaluation report number (ESR-4944).

7.2 Packages of Fiberon Concordia boards must be identified with the report holder name (Fiber Composites), the product name (Fiberon Concordia), the nominal board size and length, the color and one or both of the following evaluation report numbers: ESR-4944 or ESR-4947.

7.3 The report holder’s contact information is the following:

FIBER COMPOSITES, LLC
181 RANDOM DRIVE
NEW LONDON, NORTH CAROLINA 28127
(800) 573-8841
www.fiberondecking.com
info@fiberondecking.com

TABLE 1—FIBERON COMPOSITE CLADDING DESCRIPTIONS

PRODUCT NAME	DESCRIPTION ²	NOMINAL BOARD SIZE	ACTUAL DIMENSIONS (inches)	AVAILABLE LENGTHS (feet)	EVALUATED COLORS
Wildwood	Solid board with HDPE capstock on three sides	1 x 6	0.75 x 6	12, 16, 20	Koa, Meranti, Mora, Mulga, Palo, Sumac, Tupelo, Wenge
		1 x 8	0.75 x 7 1/4	12	
		1 x 12	0.75 x 11 1/4	12	
Concordia	Solid board with HDPE capstock on four sides	1 x 6	0.935 x 5.4	12, 16, 20	Burnt Umber, Castle Gray, Cinnabar, Graphite, Ipe, Rosewood, Tudor Brown, Warm Sienna
		1 x 8	0.75 x 7 1/4	12	
		1 x 12	0.75 x 11 1/4	12	

For SI: 1 inch = 25.4 mm, 1 foot = 305 mm.

TABLE 2—ALLOWABLE POSITIVE AND NEGATIVE WIND DESIGN PRESSURE

CLADDING TYPE AND SIZE	CLADDING ORIENTATION	WALL FRAMING SPACING (inches)	FURRING STRIP SPACING (inches)	ALLOWABLE DESIGN PRESSURE (psf)
Concordia 1 x 6	Horizontal	16	16	106
	Vertical	16	16	85
	Diagonal	16	16	80
Wildwood 1 x 6, 1 x 8 Concordia 1 x 8	Horizontal	16	16	76
	Vertical	16	16	55
	Diagonal	16	16	52
Wildwood 1 x 12 Concordia 1 x 12	Horizontal	16	16	59
	Vertical	16	16	55
	Diagonal	16	16	52

For SI: 1 inch = 25.4 mm, 1 psf = 47.9 Pa.

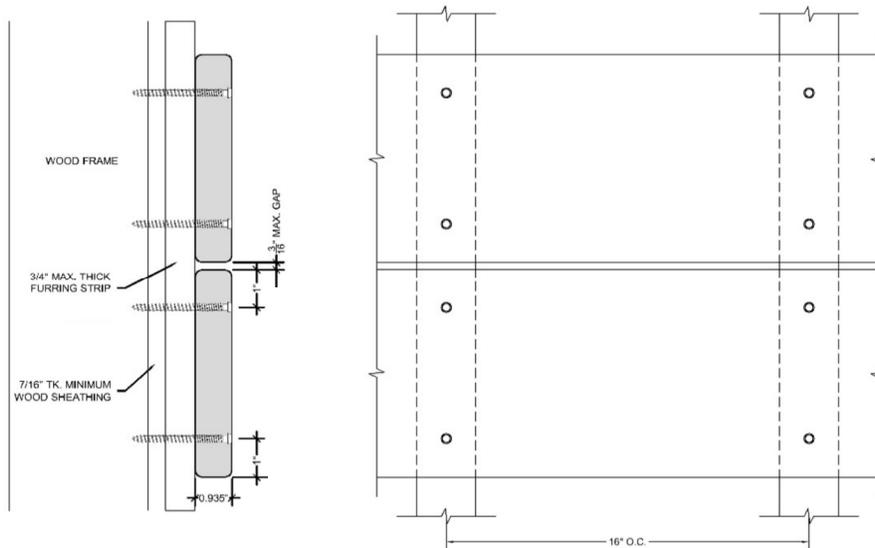


FIGURE 1—HORIZONTAL INSTALLATION OF FIBERON CLADDING BOARDS

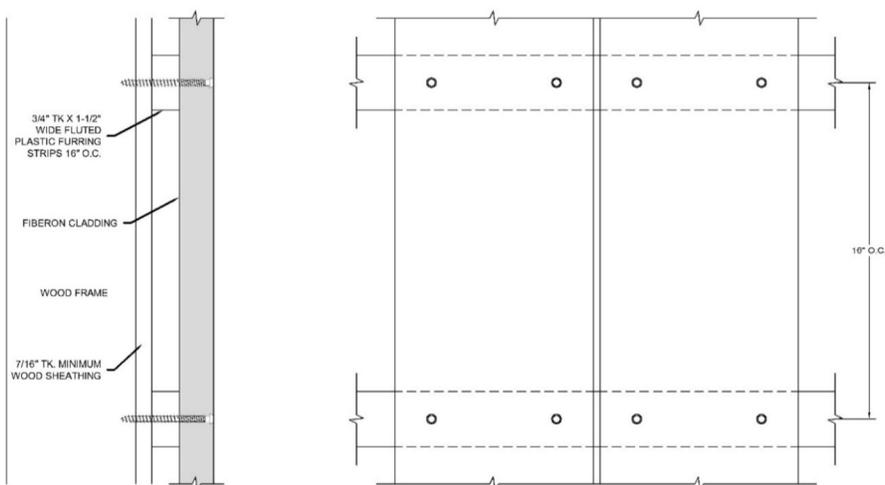


FIGURE 2—VERTICAL INSTALLATION OF FIBERON CLADDING BOARDS

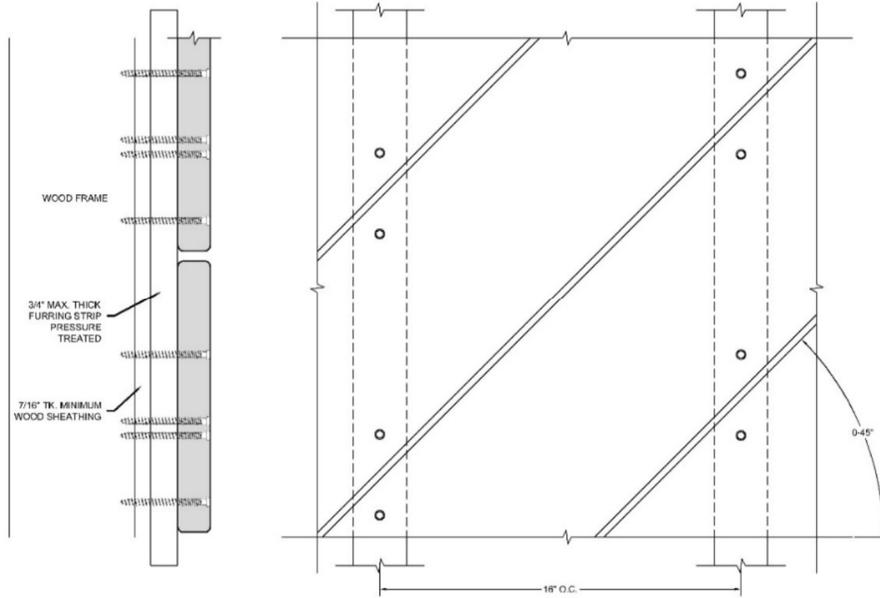


FIGURE 3—DIAGONAL INSTALLATION (UP TO 45 DEGREES) OF FIBERON CLADDING BOARDS

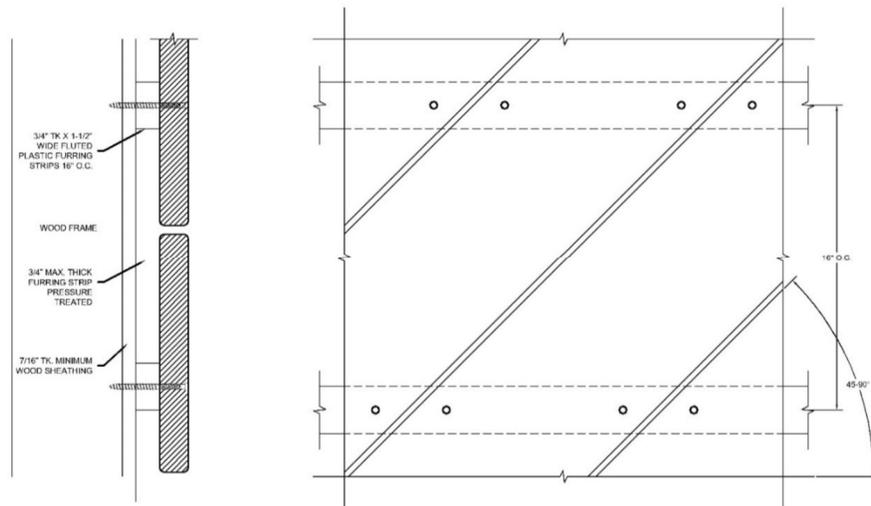


FIGURE 4—DIAGONAL INSTALLATION (OVER 45 DEGREES) OF FIBERON CLADDING BOARDS