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DIVISION: 06—WOOD AND PLASTICS
Section: 06170—Prefabricated Structural Wood

REPORT HOLDER:

PRODUITS FORESTIERS LAMCO INC.
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EVALUATION SUBJECT:

RELAM-LAMINATED FLOOR SYSTEM® (LFS) RIMBOARD

1.0 EVALUATION SCOPE

Compliance with the following codes:

- 2003 *International Building Code*® (IBC)
- 2003 *International Residential Code*® (IRC)
- BOCA® *National Building Code*/1999 (BNBC)
- 1999 *Standard Building Code*® (SBC)
- 1997 *Uniform Building Code*™ (UBC)

Property evaluated:

Structural

2.0 USES

The product described in this evaluation report is an alternative to sawn lumber for use as a continuously supported structural element, located at the same elevation and having the same depth as the floor joists, in wood-framed floor construction. It is oriented either parallel or perpendicular to the floor joists, and is used for any combination of the following:

- a. To transfer, from above to below, vertical loads at the rim board location.
- b. To provide diaphragm attachment (fasteners driven through sheathing, into top edge of rim board).
- c. To transfer in-plane lateral loads from the diaphragm to the wall plate below.
- d. To provide lateral support to the joist or rafter (resistance against rotation) through attachment to the joist or rafter.
- e. To provide closure for ends of joists or rafters.
- f. To provide an attachment base for siding and/or a point of attachment for an exterior deck ledger.

3.0 DESCRIPTION

Relam-LFS Rimboard consists of kiln-dried, nominally dimensioned 2-by-3, 2-by-4 and 2-by-6 spruce-pine-fir (SPF)

lumber, laminated along the edges and then finger-jointed lengthwise with an emulsion polymer isocyanate structural adhesive complying with ASTM D 2559. The rimboard is available in thicknesses of 1¹/₄ and 1¹/₂ inches (32 and 38 mm), and depths of 9¹/₂, 11⁷/₈, 14, and 16 inches (241, 302, 356 and 406 mm). Available lengths range from 8 feet to 24 feet (2.44 to 7.32 m).

4.0 DESIGN AND INSTALLATION

4.1 General:

The design and installation of Relam-LFS Rimboard must comply with this report, the manufacturer's published installation instructions, and the applicable code. Design provisions for wood construction noted in IBC Section 2301.2.1, IRC Section R301.1.3, and Chapter 23 of the BNBC, SBC and UBC are applicable to Relam-LFS Rimboard. The manufacturer's published installation instructions must be available at the jobsite at all times during installation.

4.2 Allowable Design Values:

4.2.1 General: Values for allowable vertical uniform load transfer capacity and in-plane lateral load transfer capacity are given in Table 1. Toe-nailed connections required in Section 4.3 are not limited by the 150 plf (2189 N/m) lateral load capacity noted for Seismic Design Categories D, E, and F in IBC Section 2305.1.4. No duration of load increase is permitted to be applied to these design values.

4.2.2 Fastener Design Values: For design of connections other than those required in Section 4.3, mechanical connections in Relam-LFS Rimboard have allowable lateral design values as provided by the NDS (ANSI/AF&PA NDS-2001 National Design Specification for Wood Construction) for lumber having a specific gravity of 0.42 (such as SPF). Adjustment factors must be applied as applicable in accordance with the NDS.

4.3 Installation:

Relam-LFS Rimboard must have continuous, full-width support along its length. It must be supported by a sill plate or top plate consisting of minimum nominally 2-by-4 lumber having a minimum assigned specific gravity of 0.42, as determined by Table 11.3.2A of the NDS. Two 8d common nails must be driven through the rimboard and into each perpendicular floor joist, one at the top and one at the bottom. The rimboard must be secured to the sill plate with 8d common nails toe-nailed along the base of the rimboard at 6 inches (152 mm) on center. Wood structural panel floor sheathing complying with PS-1 or PS-2 must be applied over the rimboard and floor joists, such that the edge is flush with the exterior face of the rimboard, and must be nailed to the top edge of the rimboard with 8d common nails at 6 inches (152 mm) on center. Installation details are given in Figure 1.

4.4 In-service Moisture Conditions:

The rimboard properties and allowable loads in this report are based on interior installations with dry conditions of use. Dry conditions of use are those environmental conditions represented by sawn lumber in which the equilibrium moisture content is less than 16 percent.

4.5 Fire Blocking:

When installed in accordance with Section 4.3, the 1 $\frac{1}{2}$ -inch-thick Relam-LFS Rimboard complies with IBC Section 717.2, IRC Section R602.8.1, BNBC Section 721.2, SBC Section 705.3, and UBC Section 708.2 as a fire-blocking material.

5.0 CONDITIONS OF USE

The rimboard 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 Relam-LFS Rimboard must be manufactured, identified and installed in accordance with this report and the manufacturer's instructions. In the event of a conflict between this report and the manufacturer's instructions, this report governs.
- 5.2 Design calculations and details complying with Section 4.0 must be furnished to the code official, verifying that the material is used in compliance with this report. The calculations must be prepared by a registered design

professional where required by the statutes of the jurisdiction in which the project is to be constructed.

- 5.3 Use of the rimboards in installations where the moisture content exceeds 16 percent is outside the scope of this report.
- 5.4 With the exception of cutting to length for final installation, cutting, notching or drilling of Relam-LFS is outside the scope of this report.
- 5.5 Use of the 1 $\frac{1}{4}$ -inch-thick Relam-LFS Rimboard as a fire-blocking material is outside the scope of this report.
- 5.6 Relam-LFS Rimboard is produced at the LAMCO Forest Products manufacturing plant located in Saint-Felicien, Quebec, Canada, with quality control inspections by PFS Corporation (AA-652).

6.0 EVIDENCE SUBMITTED

Data in accordance with the ICC-ES Acceptance Criteria for Rim Board Products (AC124), dated October 2004.

7.0 IDENTIFICATION

Relam-LFS Rimboard is identified with stamps noting the product and company names, rimboard thickness, plant number (#628), the name of the inspection agency (PFS), the date of manufacture and the evaluation report number (ESR-2162).

TABLE 1—ALLOWABLE DESIGN VALUES FOR RELAM-LFS RIMBOARD^{1,2,3}

THICKNESS (inches)	DEPTH (inches)	ALLOWABLE VERTICAL LOAD ⁴ (plf)	ALLOWABLE IN-PLANE LATERAL LOAD ⁵ (plf)
1 $\frac{1}{4}$ and 1 $\frac{1}{2}$	9 $\frac{1}{2}$	2560	260
	11 $\frac{7}{8}$		
	14		
	16		

For SI: 1 inch = 25.4 mm, 1 plf = 14.59 N/m.

¹Relam-LFS Rimboard is permitted for use in structures complying with conventional construction requirements as defined in IBC Section 2308, BNBC Section 2305.0, SBC Section 2301.1.2, and UBC Section 2320, and with light-framed construction requirements as defined in IRC Section R301.

²Compression perpendicular-to-grain capacities of the sill plate and floor sheathing must be checked.

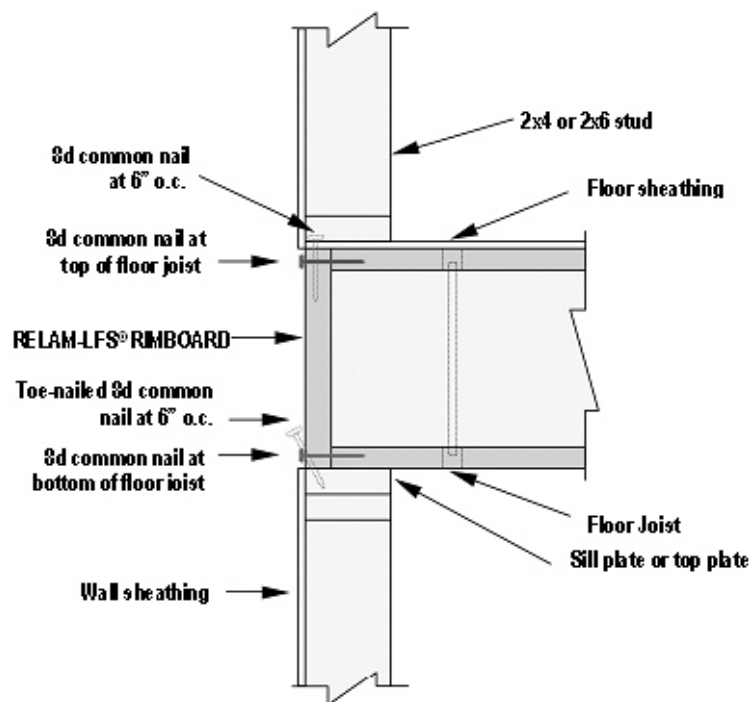
³Values in this table may not be increased for duration of load.

⁴Allowable vertical load values are based on the condition of continuous, full-width support for the rimboard, and full-width bearing between the floor sheathing and the rim board.

⁵Allowable lateral load values are based on the condition that the rimboard is installed in accordance with Section 4.3.

INSTALLATION

- Rimboard to sill plate: Use 8d common nails at 6 inches on-center, toe-nailed in accordance with the NDS.
- Rimboard to floor joist: Use two 8d common nails, one each at top and bottom.
- Floor sheathing to Rimboard: Use 8d common nails at 6 inches o.c.

**HANDLING AND STORAGE**

- Store indoors or undercover
- Use supports to keep rim boards up off the ground

For SI: 1 inch = 25.4 mm.

FIGURE 1—INSTALLATION DETAILS