



## ICC-ES Listing Report

Reissued July 2024

### ESL-1305

This listing is subject to renewal July 2025.

**CSI:** DIVISION: 06 00 00—WOOD, PLASTICS AND COMPOSITES  
Section: 06 12 00—Structural Panels

#### Product Certification System:

The ICC-ES product-certification system includes evaluating reports of tests of standard manufactured product, prepared by accredited testing laboratories and provided by the listee, to verify compliance with applicable codes and standards. The system also involves factory inspections, and assessment and surveillance of the listee's quality system.

#### Product:

TIMBER BLOCK

Timber Block wall panels are factory-assembled and consist of 5<sup>7</sup>/<sub>8</sub>-inch-thick by 7-inch-high (149 mm by 178 mm) logs installed horizontally and connected together using 3<sup>3</sup>/<sub>8</sub>-inch-diameter (9.5 mm) threaded rods and nuts; and come in various overall panel widths and lengths. Each log consists of a foamed in-place polyurethane rigid core insulation with 7-inch high eastern white pine lap sidings on the exterior and interior facers.

#### Listee:

TIMBER BLOCK (THERMO STRUCTURE, INC.)

#### Evaluation:

Timber Block wall panels were evaluated when tested in accordance with the following standard:

- ASTM E72 (-15, -14a, -14, -13a, -10, and -02), Standard Test Methods of Conducting Strength Tests of Panels for Building Construction, ASTM International.

#### Assembly:

See Figures 1, 2, and 3 for details of various widths and heights.

**LOGS:** 5<sup>7</sup>/<sub>8</sub>-inch-thick by 7-inch-high ( 149 mm by 178 mm) with 1<sup>1</sup>/<sub>2</sub>-inch by 1/2-inch thick (38.1 by 12.7 mm) grooves at horizontal edges. Each log consists of two-component, foamed in-place polyurethane rigid core insulation adhered to 7/8-inch-thick (22.2 mm) #2 Eastern White Pine lap sidings on the interior (stained) and exterior (stained and urethane-coat) facers. The logs are horizontally stacked at grooves for lap connections and connected together with 3/8-inch-diameter (9.5 mm) zinc-plated threaded rods and nuts at spacing not exceeding 24 inches on-center (610 mm); 1/4-inch-diameter (6.4 mm) bead of adhesive used to adhere the panels edges/seams and threaded rods. Angled (shaved from nominal 2 by 4 #2 SPF) block studs spacing must not exceed 24 inches on-center (610 mm).

**EDGE STIFFENERS:** 3<sup>1</sup>/<sub>2</sub>-inch-thick by 3<sup>1</sup>/<sub>2</sub>-inch-high (89 mm by 89 mm), continuous, Nordic Lam glulam members connected at each wall edge with 0.639-inch-head diameter (16.2 mm) by 5-inch-long (127 mm) wood screws [major: 0.248-inch (6.3 mm); minor: 0.171-inch (4.3 mm)] spaced at 24 inches on-center (610 mm).

**TOP PLATES:** Two – nominal 2 by 4 #2 SPF; 1<sup>st</sup> plate connected to the top of the wall panel with 3/8-inch-diameter (9.5 mm) zinc-plated threaded rods with nuts; and the 2<sup>nd</sup> top plate fastened to the 1<sup>st</sup> plate with 0.123-inch-diameter (3.1 mm) by 3 1/4-inch-long (83 mm) spiral nails spaced at 8-inches on-center (203 mm).

**BOTTOM PLATE:** One – 3/4-inch-thick by 4<sup>3</sup>/<sub>8</sub>-inch wide (19.1 mm by 111.1 mm) 6-ply structural plywood adhered to the bottom side of the log panel with the two component, foamed in-placed polyurethane rigid core

insulation.  $\frac{3}{8}$ -inch-diameter (9.5 mm) zinc-plated threaded rods with T-nuts are located at the centerline of the plate, spaced not exceeding 24 inches on-center (610 mm).

**Findings:** The assembly, as described under in the Assembly section above, has average ultimate axial loading as specified in Table 1; and average ultimate transverse loading as specified in Table 2 below. Results are based on testing in accordance with Sections 9 and 11 of ASTM E72.

**TABLE 1: AXIAL LOADING (SECTION 9 OF ASTM E72)**

STANDARD	TEST SPECIMENS		AVERAGE ULTIMATE LOAD (lbf/ft of width) <sup>1</sup>
	SIZE (WIDTH BY SPAN) (INCHES X INCHES)	STIFFENERS	
ASTM E72 – SECTION 9: AXIAL LOADING	92 x 101 $\frac{5}{8}$	NO	22,398
	96 x 101 $\frac{3}{4}$	YES	29,163
	96 x 234 $\frac{3}{4}$	YES	13,061

For SI: 1 inch = 25.4 mm; 1 lbf/ft = 14.6 N/m

<sup>1</sup>Average load at 1/8-inch deflection was not reached during testing.

**TABLE 2: TRANSVERSE LOADING (SECTION 11 OF ASTM E72)**

STANDARD	TEST SPECIMENS		AVERAGE ULTIMATE TRANSVERSE LOAD (psf)	AVERAGE TRANSVERSE LOAD AT L/180 (psf)
	SIZE (WIDTH BY SPAN) (INCHES X INCHES)	STIFFENERS		
ASTM E72 – SECTION 11: TRANSVERSE LOADING	192 x 101 $\frac{1}{2}$	YES	80	19
	96 x 234 $\frac{1}{2}$	YES	28	3

For SI: 1 inch = 25.4 mm; 1 psf = 0.0479 kPa

**Identification:**

1. Packaging of the Timber Block panels carry a label indicating the manufacturer's name (Timber Block (Thermo Structure Inc.)) and address, batch number / production date, the product name, ICC-ES listing number (ESL-1305), and when applicable, the ICC-ES listing mark.
2. The report holder's contact information is the following:

**TIMBER BLOCK (THERMO STRUCTURE INC.)**  
**600 RUE SICARD**  
**MASCOUCHE, QC J7K 3G5**  
**(514) 996-3450**  
[www.timberblock.com](http://www.timberblock.com)

**Installation:** The product must be installed in accordance with Timber Block (Thermo Structure Inc.)'s published Construction Plans and Assembly Guide instructions.

**Conditions of Listing:**

1. The listing report addresses only conformance with the standard noted above.
2. Approval of the product's use is the sole responsibility of the local code official.
3. The listing report applies only to the materials tested and as submitted for review by ICC-ES.
4. The Timber Block panels are manufactured under a quality control program with inspections by ICC-ES.

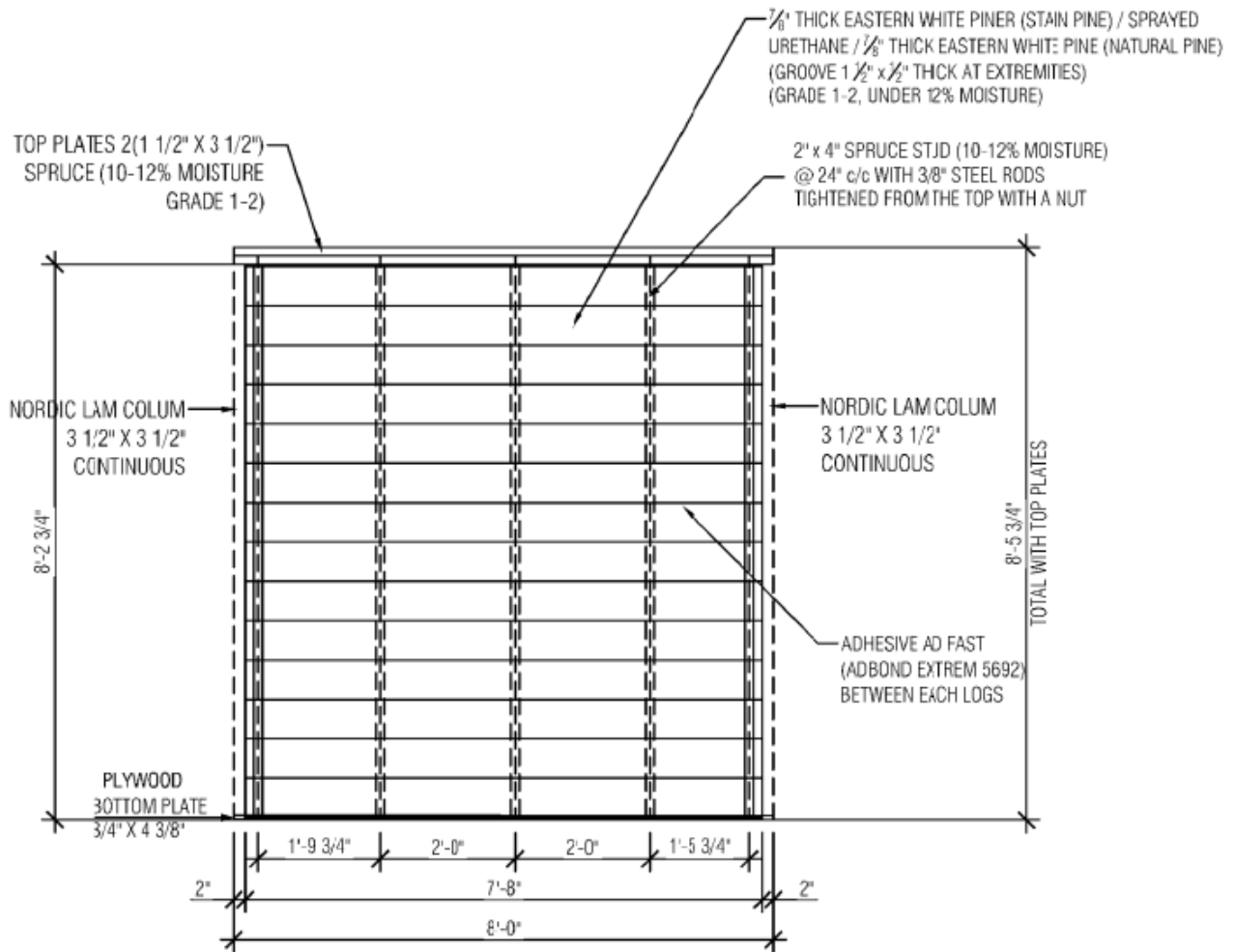


FIGURE 1: 96 x 101 3/4 WALL PANEL (WITH STIFFENERS)

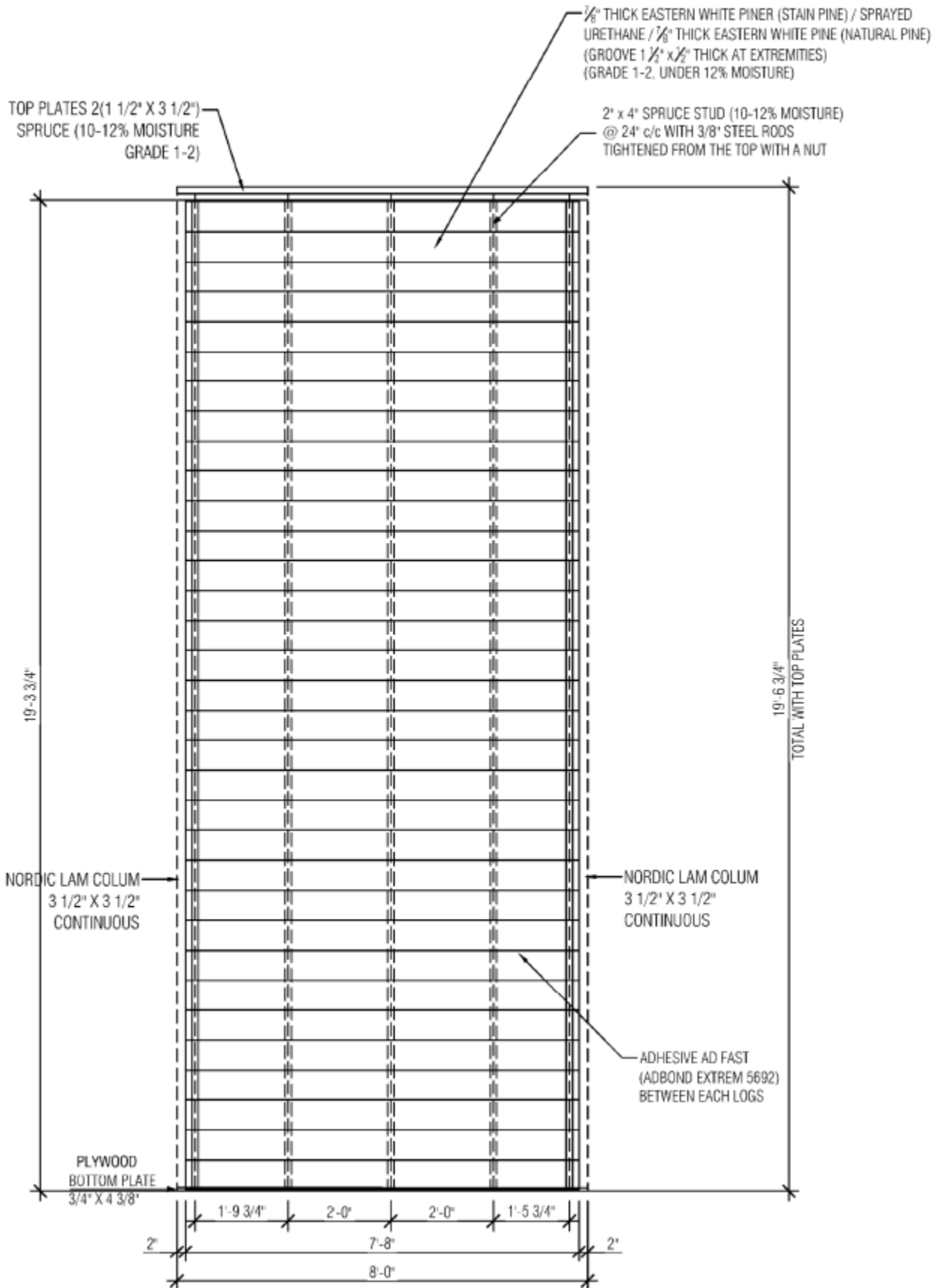


FIGURE 2: 96 x 234 3/4 WALL PANEL (WITH STIFFENERS)

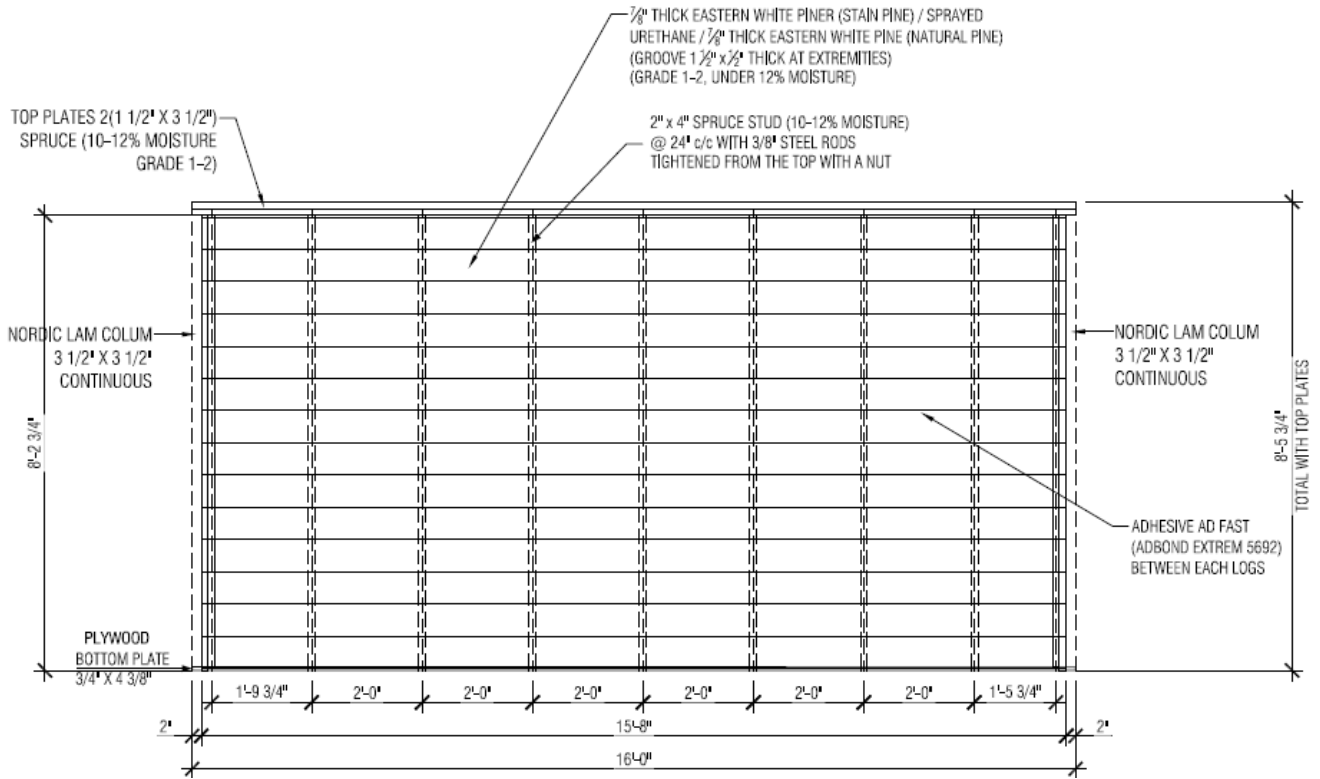


FIGURE 3: 192 x 101 3/4 WALL PANEL (WITH STIFFENERS)