

# ICC-ES Evaluation Report

**ESR-1829**

Reissued November 1, 2010

This report is subject to re-examination in one year.

[www.icc-es.org](http://www.icc-es.org) | (800) 423-6587 | (562) 699-0543

A Subsidiary of the International Code Council®

**DIVISION: 10 00 00—SPECIALTIES**  
**Section: 10 22 19—Demountable Partitions**
**REPORT HOLDER:**
**STEELCASE, INC.**  
**POST OFFICE BOX 1967**  
**GRAND RAPIDS, MICHIGAN 49501**  
**(616) 698-4183**  
[www.steelcase.com](http://www.steelcase.com)
**EVALUATION SUBJECT:**
**PRIVACY WALL SYSTEM**
**1.0 EVALUATION SCOPE**
**Compliance with the following code:**

 2006 *International Building Code*® (IBC)

**Properties evaluated:**

- Structural
- Surface-burning characteristics

**2.0 USES**

The Privacy Wall System is a relocatable, floor-to-ceiling, nonload-bearing, nonfire-resistance-rated interior wall partition system. The system is recognized for installation in buildings classified as Type I, II, III, IV, and V construction.

**3.0 DESCRIPTION**
**3.1 General:**

The wall system consists of prefabricated solid wall panels and steel tracks. The Privacy Wall System series GPSS and GPSM are recognized in this report. The GPSS and GPSM series are the same except that the GPSS panels are  $1\frac{5}{16}$  inches (33.3 mm) wider than the GPSM panels. When the wall system is installed in accordance with this report and the manufacturer's published instructions, the wall system resists the 5 psf (24 N/m<sup>2</sup>) transverse design load specified in IBC Section 1607.13.

**3.2 Materials:**

**3.2.1 Privacy Solid Wall Panels:** The panels consist of steel-sheet facings on both sides fastened with rivets and screws to steel splines along the panel's vertical ends and to a horizontal reinforcing channel at the top of the panel. Post extensions are fastened to the steel splines with rivets. Steel sheet facings are adhesively backed with mineral board, resulting in a hollow (open core)

construction. The mineral board is  $\frac{5}{8}$  inch (15.9 mm) thick and has a flame-spread index of 25 or less and a smoke-developed index of 450 or less when tested in accordance with ASTM E 84. The bottoms of the steel-sheet facings are fastened together with No. 12 by  $\frac{5}{8}$ -inch-long (15.9 mm) pan-head tapping screws. The facing material is No. 22 gage [0.030 inch (0.762 mm) base-metal thickness] steel complying with ASTM A 1008.

Wall covering materials must comply with the interior finish requirements in Chapter 8 of the IBC. The panels are factory-assembled, range in width from 6 to 60 inches (152 to 1524 mm), and have a maximum standard height of 120 inches (3048 mm) and a nominal thickness of  $2\frac{3}{8}$  inches (60 mm).

**3.2.1.1 Steel Splines:** Two steel splines are fastened along the panel's vertical edges of the steel-sheet facings using  $\frac{3}{16}$ -inch-diameter-by- $\frac{1}{2}$ -inch-long (4.8 mm by 12.7 mm) pop rivets and No. 12 by  $\frac{5}{8}$ -inch-long (15.9 mm) truss-head tapping screws. The steel splines are No. 16 gage [0.059 inch (1.5 mm) base-metal thickness], high-strength, low-alloy, cold-formed steel complying with ASTM A 568, with a minimum yield strength of 50,000 psi (344.7 MPa).

**3.2.1.2 Horizontal Reinforcing Channel:** The top of the steel-sheet facings is fastened to the horizontal reinforcing channel with No. 8 by  $\frac{1}{2}$ -inch-long (12.7 mm), pan-head tapping screws. The horizontal reinforcing channel is No. 22 gage [0.030 inch (0.762 mm) base-metal thickness] steel complying with ASTM A 1008.

**3.2.1.3 Post Extension:** Two post extensions are fastened to the steel splines using  $\frac{3}{16}$ -inch-diameter-by- $\frac{1}{2}$ -inch-long (4.8 mm by 12.7 mm) pop rivets. The post extensions are cold-formed M130 Martensite, No. 20 gage [0.036 inch (0.914 mm) base-metal thickness] steel complying with ASTM A 568, with a minimum tensile strength of 130,000 psi (896.3 MPa).

**3.2.1.4 Leveling Device:** The leveling device is composed of a leveling bracket that is manufactured from cold-formed No. 11 gage [0.118 (3 mm) base-metal thickness] steel complying with ASTM A 568. The leveler stem is inserted through the bracket. The leveler stem is cold-headed/roll-formed  $\frac{1}{2}$ -13 UNC (Unified National Coarse) (1018 carbon steel) steel complying with ASTM A 510.

**3.2.1.5 Floor Channel:** Two leveling devices are attached to the floor channel by clips. The clips are cold-formed M130 Martensite, No. 20 gage [0.036 inch (0.914 mm) base-metal thickness] steel in conformance with ASTM A 568, with a minimum tensile strength of

130,000 psi (896.3 MPa). The floor channel is cold-formed, CQCR, No. 20 gage [0.036 inch (0.914 mm) base-metal thickness], precoated steel complying with ASTM A 1008.

**3.2.2 Floor Gripper:** The U-shaped floor gripper is No. 18 gage [0.048 inch (1.22 mm) base-metal thickness] steel complying with ASTM A 366, measuring 0.905 inch (23 mm) wide by 0.890 inch (22.6 mm) deep by 16.125 inches (409.6 mm) long.

**3.2.3 Overlapping Ceiling Track:** The C-shaped overlapping ceiling track is powder-coated, cold-formed, commercial-quality, cold-rolled (CQCR) sheet steel, No. 18 gage [0.048 inch (1.219 mm) base-metal thickness], complying with ASTM A 1008.

**3.2.4 Trim:** The base trim is powder-coated, cold-rolled, No. 22 gage [0.030 inch (0.76 mm) base-metal thickness], high-strength, low-alloy (HSLA) steel complying with ASTM A 568, with a minimum yield strength of 50,000 psi (344.7 MPa). A plastic feature strip is snapped along the panels' vertical joints. The feature strip has a flame-spread index of 25 or less and a smoke-developed index of 450 or less when tested in accordance with ASTM E 84. End caps and corner trim are powder-coated, extruded 6063-T6 aluminum alloy [0.062 inch (1.57 mm) base-metal thickness] complying with ASTM B 221.

## 4.0 INSTALLATION

### 4.1 Ceiling Grid Installation:

T-bar ceiling connection clips must be used to attach the overlapping ceiling track to an existing suspended ceiling grid system. Clips must be tightened against the existing ceiling grid system using a  $\frac{1}{4}$ -20 UNC (6.4 mm) threaded stud at a maximum spacing of 30 inches (762 mm) on center. A structural analysis to determine adequacy of the ceiling grids to resist lateral loads imposed by the wall system in accordance with Section 1621.1.2 of the IBC, must be provided to the code official for approval. The analysis must be prepared by a registered design professional.

### 4.2 Floor Channel Installation:

For installation of wall panels over concrete floor substrates, two floor grippers must be used when installing panels at each end of the panel. Each floor gripper must engage with the floor channel a minimum of 6 inches (152 mm). Each floor gripper must be fastened to the concrete substrate with two  $\frac{3}{16}$ -inch-diameter (4.8 mm) Tapcon<sup>®</sup> screw anchors with a minimum embedment of 1.5 inches (38 mm) and a spacing of 4 inches (101.6 mm) on center. The screw anchors must be installed in accordance with ICC-ES evaluation report [ESR-2202](#).

### 4.3 Panel Installation:

Each panel must be positioned beneath the overlapping ceiling track so that the top of the panel engages the overlapping ceiling track and the base of the panel is angled away from the ceiling track. The panels must be positioned under the overlapping ceiling track with a maximum allowable gap between the top of the ceiling track and the top of the panel of 0.75 (19.1 mm). The panel must then be leveled and plumbed. The post extension must then be engaged by inserting a screwdriver into the slots and slowly tapping the extension upward by engaging the small holes in the extension. The extension must be

extended fully to the top of the ceiling channel. Additional panels must be installed in the same manner and aligned side by side. After all the panels have been put into position and aligned to each other, the feature strip can be pressed into the seams between panels and the base trim snapped onto the floor channel. See Figure 1 for an illustration of the panel.

## 5.0 CONDITIONS OF USE

The Privacy Wall System described in this report complies with, or is a suitable alternative to what is specified in, the code indicated in Section 1.0 of this report, subject to the following conditions:

- 5.1 The system must be manufactured, identified, and installed in accordance with this report and the manufacturer's published installation instructions. Where differences exist between this evaluation report and the manufacturer's published installation instructions, this evaluation report shall govern.
- 5.2 The maximum partition height is 120 inches (3048 mm).
- 5.3 Panel installation is limited to interior nonload-bearing applications.
- 5.4 Use of the panels to support furniture loads, and incorporation of door components, glass components or electrical wiring, are outside the scope of this report.
- 5.5 Adequacy of the ceiling grids to resist lateral loads imposed by the Privacy Wall System must be justified to the code official.
- 5.6 Connectors used to connect the partition system to supporting members must be shown or defined in drawings or specifications and approved by the code official.
- 5.7 Calculations to justify the use of the ceiling grid and connections described in Sections 5.5 and 5.6 of this report must be submitted, at the time of permit application, for approval by the code official. The calculations and/or details must be prepared by a registered design professional where required by the statutes of the jurisdiction in which the project is to be constructed.

## 6.0 EVIDENCE SUBMITTED

- 6.1 Data and reports of tests in accordance with the ICC-ES Acceptance Criteria for Sandwich Panels (AC04), dated June 2007.
- 6.2 Test data in accordance with ASTM E 84 for acoustical insulation.

## 7.0 IDENTIFICATION

Each panel must be identified by a label that remains visible after the panel is erected. The label must note the Steelcase Composite Panels name, the evaluation report number (ESR-1829). The panel skids and cartons containing wall panel components are identified by a packing slip or label bearing the Steelcase, Inc., name; the product name and identification; date of manufacture; the ICC-ES evaluation report number (ESR-1829).

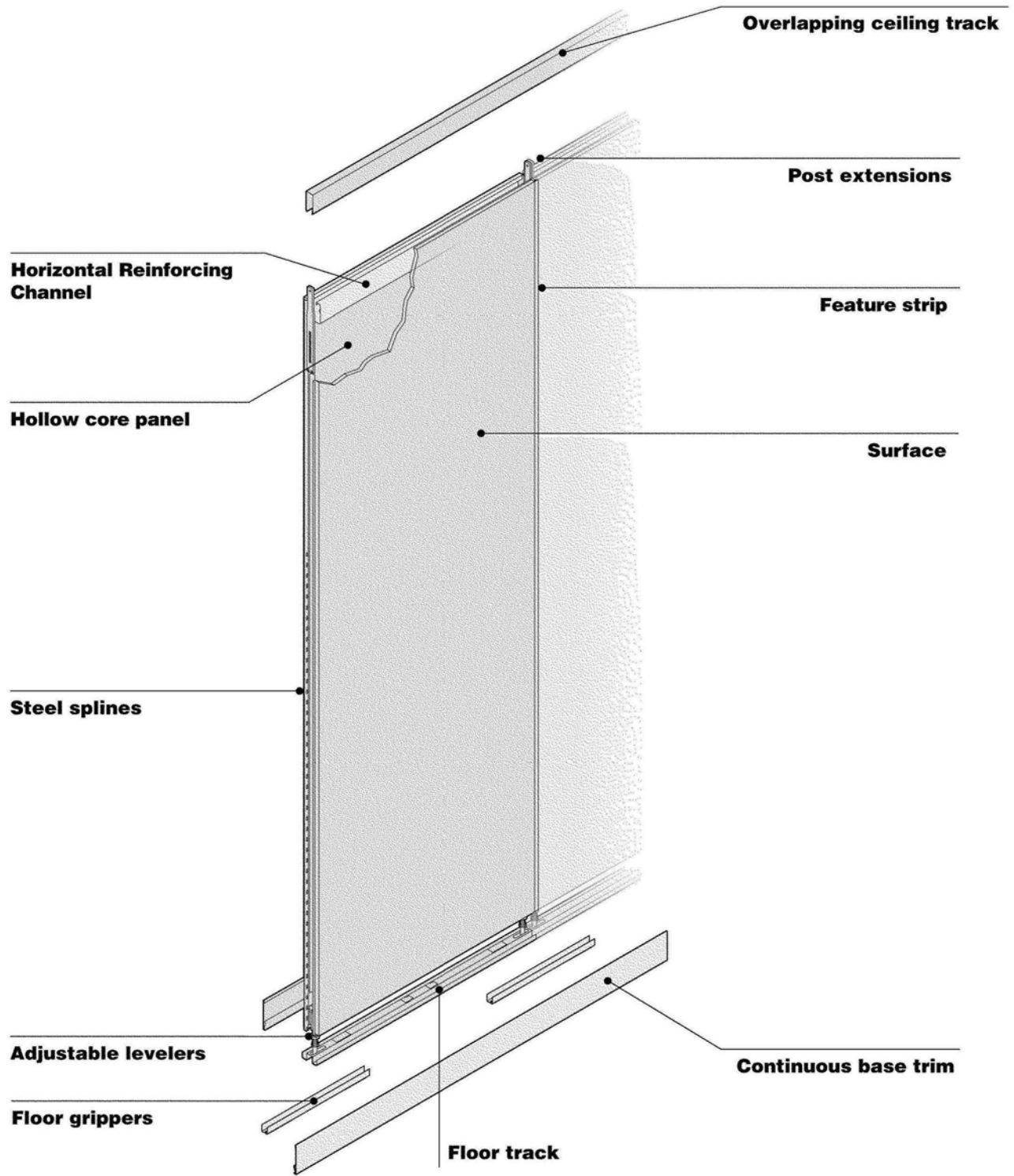


FIGURE 1