

ICC-ES Evaluation Report

ESR-5010

Reissued November 2024

This report also contains:


- [City of Chicago Supplement](#)

Subject to renewal November 2025

- [FL Supplement](#)

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<p>DIVISION: 31 00 00— EARTHWORK</p> <p>Section: 31 60 00— Special Foundations and Load-Bearing Elements</p>	<p>REPORT HOLDER: INDEPENDENCE MATERIALS GROUP (IMG)</p>	<p>EVALUATION SUBJECT: INTELLIBRACE FOUNDATION WALL SUPPORT</p>	
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1.0 EVALUATION SCOPE

Compliance with the following codes:

- 2021, 2018, 2015, and 2012 [International Building Code® \(IBC\)](#)
- 2021, 2018, 2015, and 2012 [International Residential Code \(IRC\)](#)

Property evaluated:

- Structural

2.0 USES

The IntelliBrace Foundation Wall Support system is used to provide support for interior masonry or concrete foundation walls that have bowing or inward movement. The system is intended to stabilize the existing wall system.

3.0 DESCRIPTION

3.1 General: The IntelliBrace Foundation Wall Support system consists of a Bottom Beam Retainer Plate, Vertical I-Beam, Locking Bolt, Load Positioning Bracket, Joist Mounting Bracket and Flow Tube Base Plate. The system intended to be mounted to an existing basement foundation or floor slab. The top of the IntelliBrace is attached by a bracket mounted to the existing wood floor joists and adjusted, tightened and locked by a bolt.

3.2 Materials:

General: All components are coated to meet one of the following; ASTM A153, 43µm; ASTM B695 class 25 or ASTM B633 Fe/Zn 12.

3.2.1 Bottom Beam Retainer Plate: A 4³/₈ x 6 x 0.31-inch (111.1 x 152.4 x 7.9 mm) formed L-shape, steel complying with ASTM A36. Two pieces of 1 x 1 x 1/4-inch by 2-inch-long angle iron (25.4 x 25.4 x 6.4 mm by 50.8 mm long) welded to the formed plate. See [Figure 1](#).

3.2.2 Vertical I-Beam: S4 x 7.7 steel or larger I-beam complying with ASTM A992 and zinc electroplated.

3.2.3 Locking Bolt: A 1-inch-diameter (25.4 mm) bolt complying with ASTM F1554-55 with a heavy hex nut tack welded to the bolt. Bolt is zinc electroplated.

3.2.4 Load Positioning Bracket: A 1/4-inch-thick (6.4 mm) steel, complying with ASTM A36, formed into a bracket shaped to fit around the I-Beam flange with a 1-inch-diameter (25.4 mm), Schedule 40 pipe welded to the bracket to receive the threaded locking bolt. Bracket is zinc electroplated.

3.2.5 Joist Mounting Bracket: A 6 x 8½ x ¼-inch (152.4 x 215.9 mm x 6.4 mm) ASTM A36 steel mounting plate with a ⅜-inch (9.5 mm) formed engagement bracket and a ¼-inch (6.4 mm) ASTM A36 steel cross brace. All components are zinc electroplated. See [Figure 2](#).

3.2.6 Flow Tube Base Plate: A 2 x 4 x ¼-inch by 8-inch-long, (50.8 x 101.6 x 6.4 mm by 203.2 mm long) ASTM A500-Grade B steel tube. The tube is zinc electroplated.

4.0 DESIGN AND INSTALLATION

4.1 Design:

1. A Registered Design Professional shall provide a structural evaluation on a site-specific basis with at least the following considerations;
 - a. The condition of the existing foundation wall.
 - b. The soil conditions, loading potential and any site location requirements.
 - c. Load carrying capacity of the applicable existing building components.
 - d. Load carrying capacity of the IntelliBrace attachment points to the existing building and required fasteners.
 - e. The load carrying capacity of the overall IntelliBrace system, quantity needed and required spacing.
 - f. Designed to resist static soil pressure only.
 - g. The IntelliBrace system load resistance capacity after consideration of a. thru f. above.
2. The maximum wall height to be supported by the IntelliBrace is 8.8 ft. (2.68 m) measured from footing to top of wall.
3. Unbalanced fill shall not exceed 8 feet (2.44 m).

4.2 Installation:

The IntelliBrace Foundation Wall Support system is to be mounted to an existing basement foundation or floor slab in accordance with the report holder's published installation instructions. The top of the IntelliBrace is attached by a bracket mounted to the existing wood floor joists and adjusted, tightened and locked by a bolt with the joist mounting bracket as shown in [Figures 3, 4 and 5](#).

5.0 CONDITIONS OF USE:

The IntelliBrace Foundation Wall Support system 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:

1. The IntelliBrace Foundation Wall Support system must be installed in accordance with the report holder's published installation instructions, this report and the applicable code. If there is a conflict between this report and the report holder's published installation instructions, this report governs.
2. The IntelliBrace Foundation Wall Support system must be installed by trained installers approved by the report holder.
3. The report holder's published installation instructions must be available on the jobsite at the time of installation.
4. The system is not designed to push the walls back to their original position or to straighten the walls unless the soil is removed beforehand and is approved by the onsite engineer of record.
5. Concrete anchors must be installed in accordance with the report holder's manufacturer's published installation instructions, the concrete anchor manufacturer's published installation instructions and the applicable code.
6. Special inspection must be in accordance with IBC Section 1705.

6.0 EVIDENCE SUBMITTED

Design calculations in accordance with the ANSI/AISC 360.

Quality documentation in accordance with [ICC-ES Acceptance Criteria for Quality Documentation \(AC10\)](#), dated November 2021.

7.0 IDENTIFICATION

- 7.1 Product labeling shall include the name of the report holder and the ICC-ES mark of conformity. The listing or evaluation report number (ICC-ES ESR-5010) may be used in lieu of the mark of conformity.

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

INDEPENDENCE MATERIALS GROUP (IMG)
1741 CORPORATE LANDING PARKWAY
VIRGINIA BEACH, VIRGINIA 23454
(803) 807-8629
www.independencematerialsgroup.com

TABLE 1—MAXIMUM HORIZONTAL LOAD

LOCATION	MAXIMUM HORIZONTAL LOAD
Base Mount	5,800 Lbs. (2,630.4 kg)
I-Beam center	4,900 Lbs. (2,222.2 kg)
Joist Mount	2,770 Lbs. (1,256.2 kg)

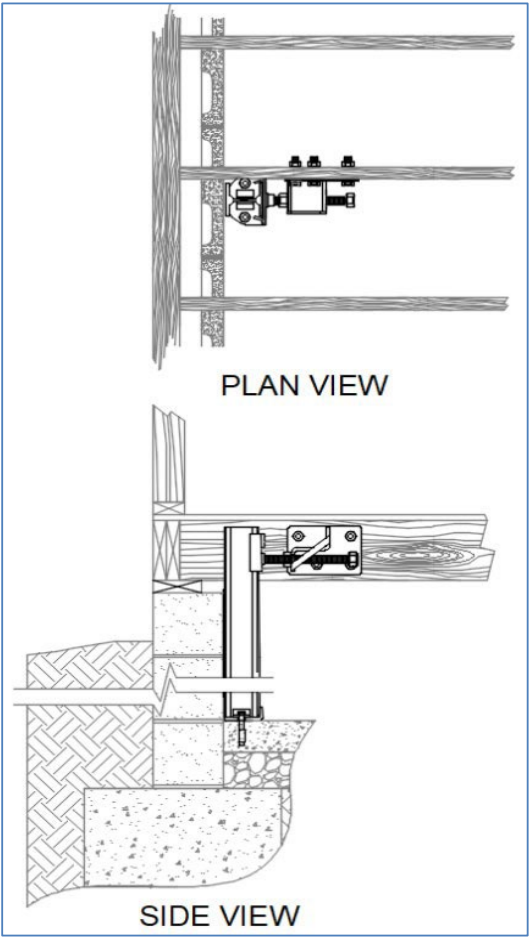


FIGURE 3—PERPENDICULAR JOISTS

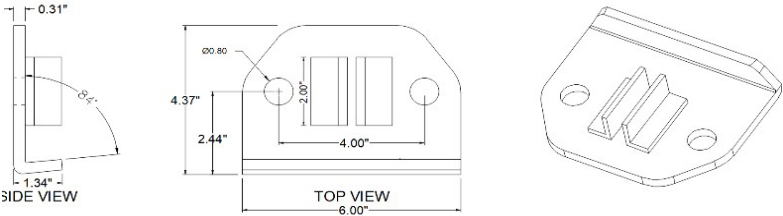


FIGURE 1—BOTTOM BEAM RETAINER PLATE

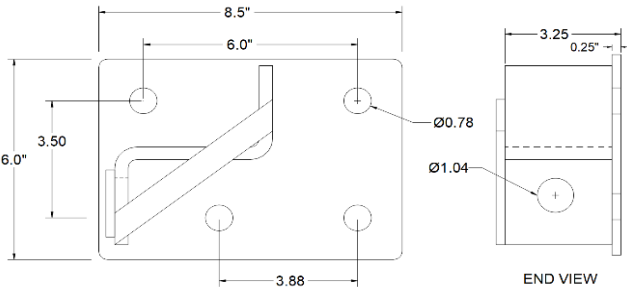


FIGURE 2—JOIST MOUNTING BRACKET

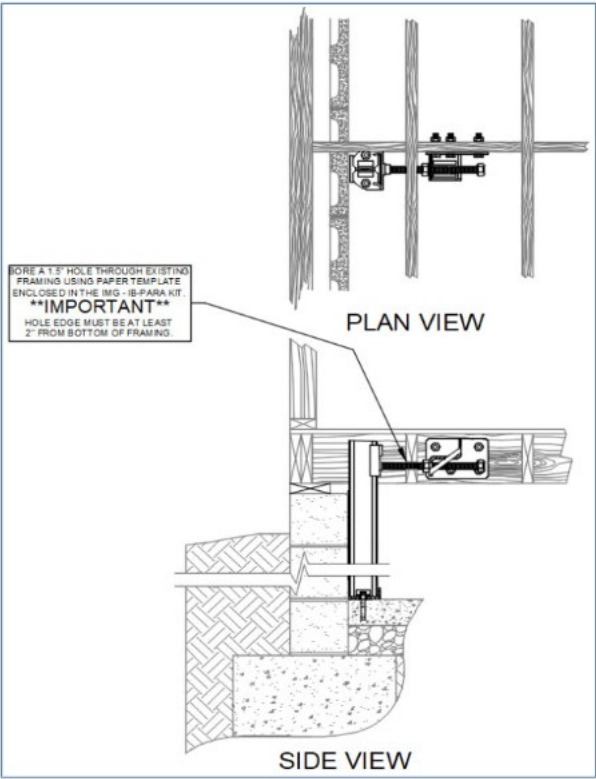


FIGURE 4—PARALLEL JOISTS OPTION 1

All blocking & securement shall be designed by the site Engineer

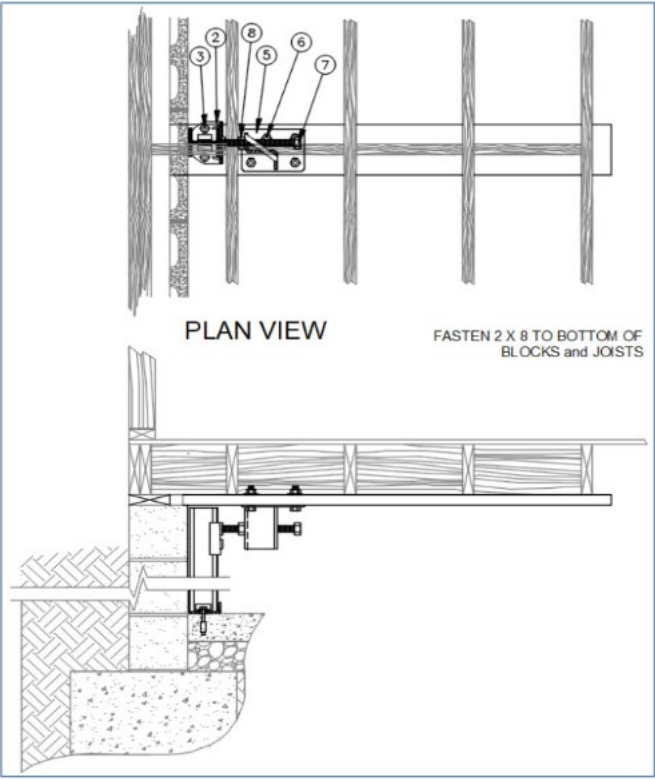


FIGURE 5—PARALLEL JOISTS OPTION 2

All blocking & securement shall be designed by the site Engineer

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A Subsidiary of the International Code Council®

DIVISION: 31 00 00—EARTHWORK

Section: 31 60 00—Special Foundations and Load-Bearing Elements

REPORT HOLDER:

INDEPENDENCE MATERIALS GROUP (IMG)

EVALUATION SUBJECT:

INTELLIBRACE FOUNDATION WALL SUPPORT

1.0 REPORT PURPOSE AND SCOPE

Purpose:

The purpose of this evaluation report supplement is to indicate that IntelliBrace Foundation Wall Support system, described in ICC-ES evaluation report [ESR-5010](#), has also been evaluated for compliance with the Chicago Construction Codes (Title 14 of the Chicago Municipal Code) as noted below.

Applicable code edition:

2019 *Chicago Building Code* (Title 14B)

2.0 CONCLUSIONS

The IntelliBrace Foundation Wall Support system, described in Sections 2.0 through 7.0 of the evaluation report [ESR-5010](#), complies with Title 14B, and is subject to the conditions of use described in this supplement.

3.0 CONDITIONS OF USE

The IntelliBrace Foundation Wall Support system described in this evaluation report supplement must comply with all of the following conditions:

- All applicable sections in the evaluation report [ESR-5010](#).
- The design, installation, conditions of use and identification of the IntelliBrace Foundation Wall Support system is in accordance with the 2018 *International Building Code*® (IBC) provisions noted in the evaluation report [ESR-5010](#).
- The design, installation and inspection are in accordance with additional requirements of Chapters 16 and 17 of Title 14B, as applicable. In particular, the foundation wall support shall be designed considering the soil lateral loads required by Section 1610 of Title 14B.

This supplement expires concurrently with the evaluation report, reissued November 2024.

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ESR-5010 FL Supplement

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1.0 REPORT PURPOSE AND SCOPE

Purpose:

The purpose of this evaluation report supplement is to indicate that IntelliBrace Foundation Wall Support System, described in ICC-ES evaluation report ESR-5010, has also been evaluated for compliance with the codes noted below.

Applicable code editions:

- 2020 *Florida Building Code—Building*
- 2020 *Florida Building Code—Residential*

2.0 CONCLUSIONS

The IntelliBrace Foundation Wall Support System, described in Sections 2.0 through 7.0 of ICC-ES evaluation report ESR-5010, complies with the *Florida Building Code—Building* and the *Florida Building Code—Residential*. The design requirements must be determined in accordance with the *Florida Building Code—Building* and the *Florida Building Code—Residential*, as applicable. The installation requirements noted in ICC-ES evaluation report ESR-5010 for the 2018 *International Building Code*® meet the requirements of the *Florida Building Code—Building* and the *Florida Building Code—Residential*, as applicable.

Use of the IntelliBrace Foundation Wall Support System has also been found to be in compliance with the High-Velocity Hurricane Zone provisions of the *Florida Building Code—Building* or the *Florida Building Code—Residential*.

For products falling under Florida Rule 61G20-3, verification that the report holder's quality assurance program is audited by a quality assurance entity approved by the Florida Building Commission for the type of inspections being conducted is the responsibility of an approved validation entity (or the code official when the report holder does not possess an approval by the Commission).

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