Construction Details for the Use of Foam Plastic Insulating Sheathing (FPIS) in Light-Frame Construction

DIVISION: 07 00 00 – THERMAL AND MOISTURE PROTECTION
Section: 07 21 00 – Thermal Insulation
Section: 07 25 00 – Water-Resistive Barriers/Weather Barriers

1. Code Compliance Process Evaluated:

1.1. Construction detailing concepts for application of foam plastic insulating sheathing (FPIS) from the manufacturers listed in Section 4.1, up to and including 6” thickness, when used as a continuous insulation material on light-frame wood or cold-formed steel exterior wall assemblies.

1.2. For the most recent version of this report, visit drjengineering.org. For more detailed state professional engineering and code compliance legal requirements and references, visit drjengineering.org/statelaw. DrJ is fully compliant with all state professional engineering and code compliance laws.

1.3. This code compliance report can be used to obtain product approval in any country that is an IAF MLA Signatory (all countries found here) and covered by an IAF MLA Evaluation per the Purpose of the MLA (as an example, see letter to ANSI from the Standards Council of Canada). Manufacturers can go to jurisdictions in the U.S., Canada and other IAF MLA Signatory Countries and have their products readily approved by authorities having jurisdiction.

1.4. Building code regulations require that evaluation reports are provided by an approved agency meeting specific requirements. Any agency accredited in accordance with ANSI ISO/IEC 17065 meets this requirement within ANSI’s scope of accreditation. For a list of accredited agencies, visit ANSI’s website. For more information, see drjcertification.org.

1.5. Requiring an evaluation report from a specific organization (ICC-ES, IAPAMO, CCMC, DrJ, etc.) can be viewed as discriminatory and is a...
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violation of international, federal, state, provincial and local anti-trust and free trade regulations.

1.6. Where assistance is needed with any aspect of the foregoing information please contact DrJ at email DrJ or 608-310-6748. For further support information please visit DrJ's ANSI accreditation or drjengineering.org.

2. Applicable Codes and Standards:


2.2. 2012, 2015, and 2018 International Residential Code (IRC)


2.4. ASTM C578 – Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation

2.5. ASTM C1289 – Standard Specification for Faced Rigid Cellular Polyisocyanurate Thermal Insulation Board

2.6. ANSI/SBCA FS100 – Standard Requirements for Wind Pressure Resistance of Foam Plastic Insulating Sheathing Used in Exterior Wall Covering Assemblies

NOTE

With a couple exceptions, details in this research report only illustrate solid wood structural framing members. However, the same principles apply for typical shapes used for cold-formed steel light-frame construction. The general concepts may also be used with CMU or Concrete construction with slight modification.

3. Evaluation Scope:

3.1. This research report addresses the general construction framing details for applying FPIS continuous insulation in wood or steel light-frame exterior wall assemblies and mass walls (CMU or Concrete), and integrating with various code-required wall components such as cladding, water-resistant barriers (WRB), vapor retarders, and air barriers.

3.2. Specific code compliance considerations are outside of the scope of this research report and must be verified by the user for a given selection and arrangement of materials or products for a given building location and climate condition, including but not limited to, continuous insulation amounts, wall cavity insulation amount and type, location and type of WRB, location and type of vapor retarder, location and type of air barrier, structural requirements, thermal resistance or fire endurance, and flame spread characteristics.

3.3. Consult the FPIS manufacturer and manufacturers of other wall components for material property data regarding vapor permeability, WRB qualification, air barrier qualification, fire performance properties, and other matters required to ensure an overall code-compliant wall assembly.

3.4. Any code compliance issues not specifically addressed in this section are outside the scope of this evaluation.

3.5. For guidance on specific matters of code compliance, refer to the locally applicable building code, manufacturer's installation instructions for specified materials, and the research reports listed in Section 7 that address specific code compliance topics for appropriate application of FPIS materials.

4. Product Description and Materials:

4.1. This research report applies to the following manufacturers and products:


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4.1.3. GAF – “EnergyGuard™”
4.1.5. Johns Manville – “AP Foil Faced Foam Sheathing”

4.2. FPIS products used in accordance with this research report shall comply with the following material standards:
   4.2.1. Expanded polystyrene (EPS) manufactured in compliance with ASTM C578
   4.2.2. Extruded polystyrene (XPS) manufactured in compliance with ASTM C578
   4.2.3. Polyisocyanurate (Polyiso) manufactured in compliance with ASTM C1289

4.3. FPIS products are produced under proprietary manufacturing processes and are formed into rigid insulation panels.

4.4. Where wind pressure resistance is required, FPIS products used in accordance with this research report shall comply with ANSI/SBCA FS100.³

4.5. EPS and XPS foam plastic sheathing complying with ASTM C578 are used with:
   4.5.1. No facings
   4.5.2. Facings on one side
   4.5.3. Facings on both sides

4.6. Polyiso foam plastic sheathing complying with ASTM C1289 must have facings on both sides.

4.7. FPIS products are typically available in the following sizes:
   4.7.1. Thicknesses range from ½" to 6".⁴
   4.7.2. The standard product width is 48".
   4.7.3. Standard lengths include 96", 108" and 120".

4.8. Consult manufacturer for availability of product in non-standard widths or lengths.

4.9. Consult FPIS manufacturer and manufacturers of other wall components for material property data regarding vapor permeability, WRB qualification, air barrier qualification, fire performance properties, and other matters required to ensure an overall code-compliant wall assembly. See Section 7 for additional information.

Photo 1: Examples of Polyiso, XPS & EPS Foam Plastic Insulating Sheathing

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³ For FPIS applied directly over an approved structural sheathing material (“oversheathing”) separately capable of resisting the full wind load, FPIS is not required to comply with ANSI/SBCA FS100 for wind pressure resistance.
⁴ For FPIS thicknesses over 2" or 3", it is preferable to layer FPIS and off-set the joints. If FPIS is specified as the WRB in a layered application, only the outer layer of FPIS functions as the WRB.
5. Applications:

5.1. General Requirements

5.1.1. All wall assembly components shall be approved, installed, and inspected in accordance with the applicable building code, approved construction documents, manufacturer installation instructions, and good practice.

5.1.2. FPIS products shall be attached to and supported by the wall framing in accordance with the manufacturer's installation instructions.

5.2. Terminology

5.2.1. Air Barrier – Material(s) assembled and joined together to provide a barrier to air leakage through the building envelope. An air barrier may be a single material or a combination of materials.

5.2.2. Continuous Insulation (CI) – Insulating material that is continuous across all structural members without thermal bridges other than fasteners and service openings. It is installed on the interior or exterior or is integral to any opaque surface of the building envelope.

5.2.3. Flashing – Materials used to aid in the integration of fenestration products and penetrations into a wall assembly to direct liquid water to the exterior side of the WRB. Flashing materials consist of many types based on application (e.g., head, jamb, cap, sill, etc.) and may be attached using various methods (e.g., mechanical, self-adhered, liquid or spray applied, etc.).

5.2.4. Vapor Retarder – Material placed within a wall assembly to control the flow of water vapor through the assembly.

5.2.5. Water-Resistive Barrier (WRB) – A material behind an exterior wall covering assembly or cladding that is intended to resist liquid water that has penetrated behind the exterior covering from further intruding into the exterior wall assembly. Function may be provided by taped joints and penetrations of FPIS if tested by the manufacturer and installed per the manufacturer's installation instructions. A separate WRB membrane may also be placed to the inside or outside of the FPIS.

6. Installation:

6.1. The details shown in this research report are conceptual in nature and are intended to provide the user with code compliance and best practices for detailing walls using FPIS. Suitability for a specific application is the responsibility of the building designer. See Section 9 for specific conditions of use.

6.2. Basic Wall Assembly Variations

6.2.1. Wall assembly showing: structural framing (e.g., wood or cold-formed steel), interior finish, vapor retarder, cavity insulation, wall bracing (e.g., structural sheathing or wood let-in brace or metal strap brace), FPIS (continuous insulation), WRB, and exterior finish (siding and trim).

6.2.1.1. Light-frame wall with structural panel bracing, FPIS, WRB (no furring) and lap siding
Figure 1a: Wood Frame Wall with Structural Panel (as required) Bracing and Exterior Finish of FPIS, WRB & Lap Siding

Light-frame wall with structural panel bracing, FPIS (joints taped) as WRB and furring

Figure 1b: Wood-Frame Wall with Structural Panel (as required) Bracing and Exterior Finish of FPIS as WRB, Furring & Lap Siding

Furring as shown in Figure 1b is optional unless specifically required for the cladding installation (e.g., horizontal furring for wood shake and shingle installation). Furring is recommended for applications where additional drainage and ventilation of cladding is preferable and where FPIS thickness exceeds approximately 2".
6.2.2 Light-frame wall with structural panel bracing, FPIS, WRB and furring

Figure 1c: Wood-Frame Wall with Structural Panel Bracing (as required) and Exterior Finish of FPIS, WRB, Furring & Lap Siding

6.2.3 Light-frame wall with let-in bracing (LIB), WRB, FPIS, furring and lap siding

Figure 1d: Wood-Frame Wall (LIB) with Exterior Finish of WRB, FPIS\(^6\), Furring & Lap Siding

\(^6\) When FPIS is out-bound of the WRB, special consideration must be given regarding how wall penetrations after installation will be flashed to the concealed WRB layer to prevent water intrusion.
6.2.4 Light-frame wall with LIB bracing, FPIS and stucco

Figure 1e: Wood-Frame Wall (LIB) with Exterior Finish of FPIS, WRB, Drainage Space, PC Stucco

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See the stucco provisions in 2018 and 2015 *IBC Section 2510.6* and *IRC Section R703.7.3* regarding water resistant barrier (WRB) application. WRB Layer 1 is not necessary where FPIS with taped joints is used as the WRB Layer 1. WRB Layer 2 is not necessarily required where self-furring lath is used to create a drainage space and separate the PC Stucco from bonding to the WRB surface. However, WRB Layer 2 is recommended to provide added protection WRB Layer 1 during installation of lath.
6.2.5 Light-frame wall with LIB bracing, FPIS, two (2) layers WRB, brick veneer (anchored and separately supported)

Figure 1f: Wood-Frame Wall (LIB), FPIS as WRB, 2 Layers WRB, Brick Veneer

6.2.6 Light-frame wall with LIB bracing, FPIS as WRB, furring, lath and stucco veneer

Figure 1g: Wood-Frame Wall (LIB), FPIS, Furring (or Drainage Mat), Stucco

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8 See the stucco provisions in IBC Section 2510.6 regarding WRB application. The WRB layer would not be required if the FPIS were approved and specified as a WRB and joints sealed with an approved tape or sealing method.
6.3. Inside corner – Light-frame wall, FPIS, WRB and no furring

Figure 2: Wood Frame Wall with Continuous Insulation, FPIS, WRB, & Lap Siding
Provide sufficient framing to attach siding trim & siding as well as interior finish

6.4. Inside corner – Light-frame wall, FPIS taped for WRB and furring

Figure 3: Inside Corner Wood-Frame Wall with Continuous Insulation, FPIS Taped as WRB, Furring & Lap Siding
Provide sufficient framing to attach siding trim & siding as well as interior finish.
6.5. Outside corner – Light-frame wall, FPIS, WRB and siding

Figure 4: Outside Corner – Generic Wood-Frame Wall with Continuous Insulation, FPIS Taped (WRB), Furring & Lap Siding
Provide sufficient framing to attach siding trim & siding as well as interior finish.

6.6. FPIS at bottom of wall (not code required and typically recommended with FPIS thickness over 1”)

Figure 5a: Bottom of FPIS Covered with Flashing & Extending Down Foundation
Figure 5b: FPIS Extending Over Foundation with Protection Board Where Exposed Above Grade

Figure 5c: FPIS Extending Over Foundation with Termite Shield, Horizontal Mechanical Flashing, and Protection Board (or Coating) over FPIS Where Exposed Above Grade
Figure 5d: Concrete or CMU Wall, (1-1/2" or less) FPIS, 2 layers WRBs, Stucco
Alternate WRB options: (1) one separate WRB behind FPIS (2) FPIS taped joints + 1 layer WRB (building paper)

Figure 5e: Concrete or CMU Wall, (1-1/2" or greater) FPIS (taped as WRB), Wood Furring, Stucco
Alternate WRB options: (1) one separate WRB behind FPIS (2) on separate WRB in front of FPIS
6.7. Top of wall – Gable (unconditioned attic space illustrating non-FPIS sheathing at gable)

**Figure 6a**: Top of Wall at Gable End with Gable End Frame Sheathed with WSP & Supported Over FPIS with 2x, Which Also Extends to Inside of Wall to Supply Attachment for Ceiling Finish
Note: Bracing is not shown

**Figure 6b**: Top of Wall at Gable End with Gable End Frame Sheathed with WSP & Cantilevered Over Wall
Note: Gable bracing is not shown. Contact component manufacturer for load-specific details
6.8. Top of wall – Gable (conditioned attic space illustrating FPIS sheathing at gable)

Figure 7: Top of Wall at Gable End with Gable End Frame Sheathed with FPIS Continuous from Wall Below
Note: Bracing is not shown.

6.9. Top of wall – Eave – rafter, standard truss heel, high truss heel and cantilevered truss

Figure 8a: Top of Wall at Eave with Rafter Construction
**Figure 8b:** Top of Wall at Eave with Standard Heel Truss

**Figure 8c:** Top of Wall at Eave with Cantilever Truss
**Figure 8d:** Top of Wall at Energy Heel Truss

**Figure 8e:** Top of Wall Standard Truss Eave Detail with Eave Ledger Attached to Structural Framing Through FPIS
6.10. Roof intersecting with wall (two views of same application)

![Figure 9a: Roof Intersecting with Wall](image1)

![Figure 9b: Roof Intersecting with Wall (from inside) – Blocking](image2)
6.11. Deck ledger – 2" FPIS CI at patio door opening (two views of same application) with 1" FPIS behind ledger

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An alternative is to specify a separately supported deck. For additional information, see IBC Section 1604.8.3, IRC Section R507 and AWC TR12.

Deck ledger connect to house through FPIS must be designed.
6.12. Window/Door Penetration Details for support and weather resistance

6.12.1. Frame walls as required by the applicable code. Ensure rough opening is square and true. Ensure appropriate framing in accordance with window installation method selected and support for FPIS edges is provided.


6.12.2.1. **Standard installation** concept with window flanges mounted directly over a limited thickness of FPIS. The most common method for installing windows in walls with up to approximately 2-inches-thick FPIS and using FPIS as the WRB. Use of a separate WRB material is also common and acceptable with appropriate installation and detailing.

The following details include windows with integral mounting flanges.

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**Figure 11a:** Standard Installation - Sill

**Figure 11b:** Standard Installation – Jambs
6.12.2.2. Lumber Window Buck installation concept is a common method for installing windows in walls with generally more than 1 ½ to 2-inches-thick FPIS and using FPIS as the WRB. Use of a separate WRB material is also common and acceptable with appropriate installation and detailing.
Figure 11e: Wood Buck Installation – Jamb

Figure 11f: Wood Buck Installation – Header
6.12.2.3. **Picture Frame** installation concept with window flanges mounted directly to the picture frame. Represents a common method for installing windows typically used for foam thicknesses of ¾ inch to 1½ inches to match common lumber dimensions and using FPIS as the WRB. Use of a separate WRB material is also common and acceptable with appropriate installation and detailing.

**Figure 11g:** Picture Frame Installation – Sill

**Figure 11h:** Picture Frame Installation – Jamb
6.12.2.4. **Rainscreen** installation concept with window flanges and furring mounted directly over any thickness of FPIS. Uses FPIS as the WRB. Use of a separate WRB material is also common and acceptable with appropriate installation and detailing.

**Figure 11j**: Rainscreen Installation – Sill
Figure 11k: Rainscreen Installation – Jamb

Figure 11l: Rainscreen Installation – Header
6.13. Other Penetrations

Figure 12: Penetration – 2" FPIS Taped Joints, Furring, Lap Siding

7. References:

7.1. DRR No. 1202-01: NFPA 285 Tested Assemblies Using Foam Plastic Insulating Sheathing Products
7.2. DRR No. 1202-03: Foam Plastic Insulating Sheathing Products in Type V Construction
7.3. DRR No. 1202-04: Foam Plastic Insulating Sheathing Products in Type I, II, III or IV Construction
7.4. DRR No. 1303-04: Attachment of Exterior Wall Coverings Through Foam Plastic Insulating Sheathing (FPIS) to Wood or Steel Wall Framing
7.5. DRR No. 1304-01: Attachment of Windows with Integral Flanges through Foam Plastic Insulating Sheathing to Wood Framing
7.6. DRR No. 1410-03: Assessment of Water Vapor Control Methods for Modern Insulated Light-Frame Wall Assemblies
7.7. DRR No. 1410-05: Foam Plastic Insulating Sheathing Products & Accessories Used as a Code Compliant Water-Resistive Barrier (WRB) System
7.8. DRR No. 1410-06: Foam Plastic Insulating Sheathing Used as an Air Barrier Material in an Air Barrier Assembly
7.9. DRR No. 1504-03: Water-Resistive Barriers: Assuring Consistent Assembly Water-Penetration Resistance
7.11. Installation Guide, Foam Plastic Insulating Sheathing Used as a Water-Resistive Barrier System
7.12. Installation Guide, Installation Instructions for Attachment of Exterior Wall Coverings Through FPIS
7.14. Some information contained herein is the result of testing, review of documented accepted practices, and/or data analysis by other sources, which DrJ relies on to be accurate as it undertakes its engineering analysis.
7.15. DrJ has reviewed and found the data provided by other professional sources are credible. This information has been approved in accordance with DrJ’s procedure for acceptance of data from approved sources.
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7.16. DrJ’s responsibility for data provided by approved sources is in accordance with professional engineering law.

7.17. Where appropriate, DrJ relies on the derivation of design values, which have been codified into law through codes and standards (e.g., IRC, WFCM, IBC, SDPWS, etc.). This includes review of code provisions and any related test data that helps with comparative analysis or provides support for equivalency to an intended end-use application.

7.18. The Foam Sheathing Committee (FSC) of the American Chemistry Council sponsors research and tools to support the reliable, efficient, and economic design and installation of foam sheathing. This report is developed by DrJ from a grant provided by FSC. Learn more about foam sheathing at www.continuousinsulation.org. DrJ is a professional engineering company, an independent approved source and an ANSI accredited 17065 certification body.

8. Findings:

8.1. The details shown herein are details for the installation of FPIS in accordance with the applicable codes referenced herein.

8.2. IBC Section 104.11 and IRC Section R104.11 (IFC Section 104.9 is similar) state:

104.11 Alternative materials, design and methods of construction and equipment. The provisions of this code are not intended to prevent the installation of any material or to prohibit any design or method of construction not specifically prescribed by this code, provided that any such alternative has been approved. An alternative material, design or method of construction shall be approved where the building official finds that the proposed design is satisfactory and complies with the intent of the provisions of this code, and that the material, method or work offered is, for the purpose intended, at least the equivalent of that prescribed in this code. Where the alternative material, design or method of construction is not approved, the building official shall respond in writing, stating the reasons the alternative was not approved.

9. Conditions of Use:

9.1. The details shown in this research report are conceptual in nature and are intended to provide the user with code compliance and best practices for detailing walls using FPIS. Suitability for a specific application is the responsibility of the building designer.

9.2. Where required by the authority having jurisdiction (AHJ) in which the project is to be constructed, this report and the installation instructions shall be submitted at the time of permit application.

9.3. The insulated sheathing products listed in Section 4.1 of this report shall be installed in compliance with the manufacturer’s installation instructions, the applicable building code sections, structural requirements, fire requirements, wind pressure requirements, exterior wall covering requirements, flashing requirements, moisture barrier requirements, and this research report.

9.4. Use of the details in this research report are subject to the following conditions:

9.4.1 Interior finish shall comply with the locally applicable building code and approved construction documents (typically ½” gypsum wall board is used on the interior to comply with thermal barrier requirements for walls with FPIS on the exterior side).

9.4.2 Interior vapor retarder class (Class I, II or III) shall be in accordance with the locally applicable building code and approved construction documents. Refer to additional information in Section 7.6.

9.4.3 Wood or cold-formed steel framing shall comply with the locally applicable building code and approved construction documents. Where required, framing or blocking shall be provided for attachment of interior and exterior finish materials.

9.4.4 Wall bracing method and amount shall comply with the locally applicable building code and approved construction documents; applicable bracing methods include continuous or intermittent structural panel bracing, wood let-in bracing, and metal strap bracing. Where intermittent panel bracing is used, FPIS continuous insulation thickness shall be reduced to maintain a uniform wall thickness as permitted by the locally applicable energy code.

9.4.5 Cavity insulation type and amount shall comply with the locally applicable energy code.

9.4.6 Continuous insulation type shall comply with this research report (Section 1.1 and Section 4) and shall be installed in accordance with the manufacturer’s installation instructions, the locally applicable building code; the amount of continuous insulation shall comply with the locally applicable building code (depending on

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class of interior vapor retarder used, climate zone, and amount of cavity insulation) and the locally applicable energy code (depending on climate zone). Refer to additional information in Section 7.11.

9.4.7 The water-resistive barrier installation and flashing or sealing method at wall penetrations and transitions or discontinuities shall comply with the locally applicable building code, approved construction documents, WRB and flashing manufacturer installation instructions, and window and door component manufacturer installation instructions. The WRB layer may be a separate membrane, FPIS sheathing, or other method approved for use as a water-resistive barrier. Refer to additional information DRR No. 1410-05.

9.4.8 A continuous air-barrier layer shall be provided in accordance with the locally applicable energy code; the air-barrier layer may be designated as the FPIS layer, the interior finish layer, the WRB layer, the structural sheathing layer, or other continuous material layer meeting the requirements for an air barrier. Joints, penetrations and transitions shall be sealed to maintain continuity of the air barrier. Refer to the manufacturer data and installation instructions for approved air-barrier materials, components and assemblies. Refer to additional information in DRR No. 1410-06.

9.4.9 Window and door installations shall comply with the manufacturer installation instructions; where application over FPIS is not addressed, refer to DRR No.1304-01 and Best Practices Guide.

9.4.10 Cladding installation over foam sheathing shall comply with the locally applicable building code or an approved design, or an approved attachment method complying with DRR No. 1303-04. Cladding fasteners shall penetrate into framing members for the required minimum embedment depth. Attachment to an approved sheathing material on when approved by design or specifically permitted by the locally applicable building code. Refer to additional information in Section 7.13.

9.4.11 Furring installation over FPIS, where used as a means of cladding installation, shall comply with the locally applicable building code, approved design, or an approved attachment method complying with DRR No. 1303-04. Cladding attachment to furring shall comply with the cladding manufacturer’s installation instructions and the locally applicable building code.

9.4.12 Fire safety requirements for walls with FPIS shall comply with the locally applicable building code and approved construction documents; refer to DRR No. 1202-01, DRR No. 1202-03 and DRR No. 1202-04.

9.4.13 It is the user’s responsibility to ensure the wall assembly as a whole and all specified materials or components (as generally represented in this research report) are properly integrated as a system that complies with all applicable building code provisions, approved construction documents, manufacturer installation instructions, and good construction practice.

9.4.14 It is the user’s responsibility to determine appropriate construction sequence and inspection sequence to ensure a quality installation that meets or exceeds the administrative and functional intent of the building code. Items that will be concealed during construction, such as the WRB layer and flashing, should be inspected and functionally verified prior to concealment. A functioning WRB layer and flashing system and other necessary weather-resistive barrier components should be installed to prevent moisture intrusion prior to installation of wall cavity insulation, vapor retarders and interior finishes. It is the responsibility of the user to ensure materials are dry prior to wall enclosure.

9.5 Design

9.5.1 Building Designer Responsibility

9.5.1.1 Unless the AHJ allows otherwise, the Construction Documents shall be prepared by a Building Designer (e.g., Owner, Registered Design Professional, etc.) for the Building and shall be in accordance with IRC Section R106 and IBC Section 107.

9.5.1.2 The Construction Documents shall be accurate and reliable and shall provide the location, direction and magnitude of all applied loads and shall be in accordance with IRC Section R301 and IBC Section 1603.

9.5.2 Construction Documents

9.5.2.1 Construction Documents shall be submitted to the Building Official for approval and shall contain the plans, specifications and details needed for the Building Official to approve such documents.

9.6 Responsibilities
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9.6.1 The information contained herein is a product, engineering or building code compliance research report performed in accordance with the referenced building codes, testing and/or analysis through the use of accepted engineering procedures, experience and technical judgment.

9.6.2 Product, design and code compliance quality control are the responsibility of the respective company listed on Page 1. Consult the respective company listed on Page 1 for the proper detailing and application for the intended purpose. Consult your local jurisdiction or design professional to assure compliance with the local building code.

9.6.3 DrJ research reports provide an assessment of only those attributes specifically addressed in the Products Evaluated or Code Compliance Process Evaluated section.

9.6.4 The engineering evaluation was performed on the dates provided in this research report, within DrJ's professional scope of work.

9.6.5 The actual design, suitability and use of this research report for any particular building is the responsibility of the Owner, the Owner's authorized agent or the Building Designer.

10. Identification:

10.1. Where required by the applicable building code, wall assembly components shall be marked and bear the label of an approved agency on the product or packaging.

10.2. Additional technical information and related research reports can be found at the company websites listed on Page 1 and from DrJ Engineering.

11. Review Schedule:

11.1. This research report is subject to periodic review and revision. For the most recent version of this report, visit driengineering.org.

11.2. For information on the current status of this report, contact DrJ Engineering.