



10/25/2018

Permitting and Inspections Department
Michael A. Russell, MS, Director

New Commercial Structure and Addition Checklist

(Including accessory structure, ramp, stair)

All applications shall be submitted online via the Citizen Self Service portal. Refer to the attached documents for complete instructions. The following items shall be submitted for all applications (please check and submit all items):

- New Commercial Structures and Additions Checklist** (this form)
- Plot plan/site plan** showing lot lines, shape and location of existing and proposed structures
- Stamped boundary survey and copy of final approved site plan** (for new commercial structures that were subject to Site Plan approval only)
- Proof of Ownership** (e.g. deed, purchase and sale agreement) if purchased within the last six months N/a
- Administrative Authorization Application** from the Planning Department (required for new structures 500 square feet or less): <http://me-portland.civicplus.com/DocumentCenter/View/2809> N/a

Please note: All plans shall be drawn to a measurable scale (e.g., 1/4 inch = 1 foot) and include dimensions. Construction documents prepared and stamped by a licensed architect or engineer shall be required for certain projects in accordance with the stated [Policy on Requirements for Stamped or Sealed Drawings](#).

Applications for detached accessory structures 120 square feet or less (for storage only) shall also include: One of the following which includes the length, width and height of the structure: N/a

- A copy of the brochure from the manufacturer; or
- A picture or sketch/plan of the proposed shed/structure

Applications for new structures and additions shall also include the following (As each project has varying degrees of complexity and scope of work, some information may not be applicable. Please check and submit only those items that are applicable to the proposed project.)

- Complete Code Reviews** per 2009 IBC and 2009 NFPA 101 with project applicable details
- Geotechnical report** N/a
- Structural load design criteria** per 2009 IBC
- Statement of Special Inspections**
- Certificate of Accessible Building Compliance**
- ComCheck** <https://www.energycodes.gov/comcheck/> or **ResCheck** <https://www.energycodes.gov/rescheck/> with certificates of compliance for thermal envelope and MEP systems
- One complete set of construction drawings with the following:**
 - Life safety plan showing egress capacity, any egress windows, occupancy load, travel distances, common path distance, dead end corridor length, separation of exits, illumination and marking of exits, portables fire extinguishers, fire separations and any fire alarm or fire sprinklers systems.
 - Foundation, floor and wall structural framing plans for each story and roof
 - Stair details with dimensions, direction of travel, handrails and guardrails
 - Wall/floor/ceiling partition types including listed fire rated assemblies and continuity
 - Sections and details showing all construction materials, floor to ceiling heights and stair headroom
 - Building Elevations, existing and proposed for each side of the building
 - Door and window schedules
 - Insulation R-factors of foundation/slab, walls, ceilings, floors, roof and window U-factors
 - Accessibility features and design details
 - Complete electrical, plumbing and mechanical plans To be design/build under a separate permit
 - Project specifications manual N/a
 - A copy of the State Fire Marshal construction and barrier free permits. For these requirements visit: http://www.maine.gov/dps/fmo/plans/about_permits.html N/a

Separate permits are required for internal and external plumbing, electrical installations, heating, ventilating and air conditioning (HVAC) systems, appliances and commercial kitchen hoods.



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Certificate of Accessible Building Compliance

All facilities for the use of a public entity shall be readily accessible by individuals with disabilities.

Project Name: 30 Fox

Project Address: 30 Fox Street, Portland, ME 04101

Classification: Title II (State/Local Government)

Title III (Public Accommodation/Commercial Facility)

New Building

- Americans with Disabilities Act (ADA)
- Maine Human Rights Act (MHRA)
 - Barrier Free Certification (\$75,000+ scope of work)
 - State Fire Marshal Plan Review Approval

Alteration/Addition

- Existing Building Completion date:
 - Original Building: _____
 - Addition(s)/Alteration(s): _____
- Americans with Disabilities Act (ADA)
 - Path of Travel Yes No
- Maine Human Rights Act (MHRA)
 - Exceeds 75% of existing building replacement cost
 - Barrier Free Certification (\$75,000+ scope of work)
 - State Fire Marshal Plan Review Approval

Occupancy Change/Existing Facility

- New Ownership – Readily Achievable Barrier Removal: _____

Residential

- Americans with Disabilities Act (ADA)
- Fair Housing Act (4+ units, first occupancy)
- Maine Human Rights Act (MHRA)
 - Covered Multifamily Dwelling (4+ units)
 - Public Housing (20+ units)
- Uniform Federal Accessibility Standards (UFAS)
- None, explain: 3-unit building does not trigger accessibility

Contact Information

Design Professional: Evan A. Carroll

Signature
(This is a legal document and your electronic signature is considered a legal signature per Maine state law.)

Name: Evan Carroll, Bild Architecture

Address: 30 Danforth Street, Suite 213
Portland, ME 04101

Phone: 207-408-0168

Maine Registration #: 3687

Owner: [Signature]

Signature
(This is a legal document and your electronic signature is considered a legal signature per Maine state law.)

Name: Simon Norwalk, Dyer Neck Development LLC

Address: 29 Kellogg Street, #3
Portland, ME 04101

Phone: 207-837-0799



Permitting and Inspections Department
Michael A. Russell, MS, Director

Dear Applicant,

Beginning March 19, 2018, all building permits shall be submitted online via the City of Portland's Citizen Self Service (CSS) portal. Online submission of permit applications will help to streamline the application intake process and will improve transparency for the permitting process. In order to submit an application, you will need to register with CSS using a valid e-mail address. Refer to the instructions on the Citizen Self Service homepage, or via the links at the bottom of this page. Please verify that you have selected the correct permit type and checklist and that you have compiled all the required drawings and documents before beginning the application process.

Please note that our format for application submissions has changed. All application documentation shall be compiled into two PDF files-- one file containing all drawing sheets and a second PDF file containing all supporting documentation. Refer to the Requirements for Electronic Submissions for specific instructions on how to prepare your application submission and to the appropriate checklist for required submission items. The review of your application will not begin until a complete application has been submitted and the permit fee has been paid in full. Work may not commence until the permit has been issued.

If you have questions, please contact the Permitting and Inspections Department at (207) 874-8703 or permitting@portlandmaine.gov. Thank you in advance for your patience as we transition to a new and improved permitting system.

For more information:

[How to Apply for a Permit](#)

[How to Register with CSS](#)

[Permit Type Guide](#)

[Requirements for Electronic Submissions](#)

[Citizen Self Service](#)

Permitting and Inspections Department
Michael A. Russell, MS, Director

How to Apply for a Permit

All permit applications shall be submitted online through the City of Portland's [Citizen Self Service](#) (CSS) portal. Online submissions will streamline the application intake process and will allow for greater transparency for applicants during the permit review process. You will be able to view the progress of your permit application, pay invoices, resubmit files and request inspections through CSS. Before submitting an application, please read the instructions below:

1. To begin, review the [Permit Type Guide](#) to determine the appropriate permit type and work class for your project.
2. Once you have determined the correct permit type, refer to the corresponding submission checklist and instructions for that permit type.
3. Compile all the required drawings and documentation as listed on the checklist into two PDF files (one file containing all drawing sheets and one file for all supporting documentation).
4. Go to the [CSS website](#) to apply for your permit. If you have not registered with CSS, see the instructions for registering, [here](#).
5. Once you have logged in to CSS, go to Apply and select the correct permit type. For a full list of all permit types, select All, under Permits.
6. Select Apply, next to the correct permit type. This will take you to the online application form.
7. Complete the form. All fields with a red asterisk are required.
 - a. To add a location, click on the plus sign and search for the project address. If the address cannot be found in the search, go to the City's [Parcel Map Viewer](#), to find the correct parcel address (this may be different than your street address or mailing address. Please input a parcel address that is recognized by the system to avoid delays in the intake process). For the Search function, entering less in the Search box will return more results.
 - b. To add a Contact, click the plus sign under the appropriate contact type and search.
 - c. Complete all other relevant and required fields and click Next. Once you've completed all pages of the form, you will have the opportunity to review the information before submitting. Once submitted, you cannot change your application information.
8. After reviewing your application information, click Submit. You will receive an e-mail confirming receipt of your application.
9. Permitting staff will review your application for completeness. You will be notified via e-mail if any items are missing. Upload requested items via CSS Attachments.
10. When the application is complete, you will receive an e-mail directing you to CSS to pay your invoice.
11. Once payment is received, your permit will go into review.

Permitting and Inspections Department
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Requirements for Electronic Submissions

In order to ensure a timely review of the application, please read and follow the requirements below for all submissions:

- **Initial submission files shall be submitted via the Citizen Self Service portal. Before submitting an application, review [How to Apply for a Building Permit](#).**
- **Submissions should include two PDF files—one file containing all drawing sheets and one file containing all other supporting documents.** Only PDF files are acceptable for plan review. Files should be labeled either “Drawings” or “Documents” with the project address included in the file name.
- **Drawing files shall be bookmarked with names based on the drawing sheet number and name.** It is recommended to include a Category/Discipline letter (such as A for Architectural), a sheet number and a descriptive title (e.g., A1 Existing Exterior Elevation).
- **A graphic scale or a scale to reference shall be included on each drawing sheet.**
- **Plans prepared by a design professional shall include a Code Analysis sheet,** referencing the Maine Uniform Building and Energy Code and Portland City Code, Chapter 10 – Fire Prevention and Protection, which includes NFPA 1, Fire Code and NFPA 101, Life Safety Code. Chapter 10 of the City Code can be viewed at:
<http://www.portlandmaine.gov/citycode/chapter010.pdf>.
- **Submissions should include all required documents and drawings as listed on the appropriate Submission Checklist sheet specific to the type of work being performed.**
- **Corrections made by City of Portland plan reviewers will be available for the applicant to view by logging into CSS and selecting “eReviews”.**
- **Revisions submitted in response to plan review comments should be uploaded directly in eReview by logging into CSS, going to the permit record and selecting eReviews.**

For further information and to access PDF versions of this and other forms, visit the Permitting and Inspections Department online at <http://portlandmaine.gov/1728/Permitting-Inspections>.



Reviewed for Code Compliance
 Permitting and Inspections Department
 Approved with Conditions
10/25/2018



REScheck Software Version 4.6.5 Compliance Certificate

Project 30 Fox

Energy Code: **2009 IECC**
 Location: **Portland, Maine**
 Construction Type: **Multi-family**
 Project Type: **New Construction**
 Conditioned Floor Area: **3,062 ft²**
 Glazing Area **12%**
 Climate Zone: **6 (7378 HDD)**
 Permit Date:
 Permit Number:

Construction Site:
 30 Fox Street
 Portland, ME 04101

Owner/Agent:
 Simon Norwalk
 Dyer Neck Development LLC
 29 Kellogg St
 Portland, ME 04101
 207-837-0799
 simon072889@gmail.com

Designer/Contractor:
 Bild Architecture
 30 Danforth Street
 Suite 213
 Portland, ME 04101
 207-408-0168
 evan@bildarchitecture.com

Compliance: Passes using UA trade-off

Compliance: **18.7% Better Than Code** Maximum UA: **482** Your UA: **392**

The % Better or Worse Than Code Index reflects how close to compliance the house is based on code trade-off rules. It DOES NOT provide an estimate of energy use or cost relative to a minimum-code home.

Envelope Assemblies

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	U-Factor	UA
Ceiling 1: Flat Ceiling or Scissor Truss	1,286	20.0	30.0	0.020	26
Wall 1: Wood Frame, 16" o.c.	4,314	20.9	6.6	0.040	151
Window 1: Vinyl/Fiberglass Frame:Double Pane with Low-E	447			0.350	156
Door 1: Glass	92			0.350	32
Floor 1: All-Wood Joist/Truss:Over Unconditioned Space	1,055	52.0	0.0	0.020	21
Floor 2: Other Floor: Over Outside Air	331			0.019	6

Compliance Statement: The proposed building design described here is consistent with the building plans, specifications, and other calculations submitted with the permit application. The proposed building has been designed to meet the 2009 IECC requirements in REScheck Version 4.6.5 and to comply with the mandatory requirements listed in the REScheck Inspection Checklist.

Evan Carroll, Principal
 Name - Title

Signature

5/7/18
 Date



New! Oregon Building Compliance
Permitting and Inspections Department
Approved with Conditions

10/25/2018



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ICC-ES Report

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ESR-3373

Reissued 06/2017
This report is subject to renewal 06/2019.

DIVISION: 06 00 00—WOOD, PLASTICS AND COMPOSITES

SECTION: 06 12 00—STRUCTURAL PANELS

SECTION: 06 16 00—SHEATHING

DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION

SECTION: 07 21 00—THERMAL INSULATION

SECTION: 07 25 00—WATER-RESISTIVE BARRIERS/WEATHER BARRIERS

SECTION: 07 27 00—AIR BARRIERS

REPORT HOLDER:

HUBER ENGINEERED WOODS, LLC

ONE RESOURCE SQUARE
10925 DAVID TAYLOR DRIVE, SUITE 300
CHARLOTTE, NORTH CAROLINA 28262

EVALUATION SUBJECT:

ZIP SYSTEM® R-SHEATHING (INSULATING SHEATHING)



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ICC-ES Evaluation Report

ESR-3075/2018

Reissued June 2017

This report is subject to renewal June 2019.

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DIVISION: 06 00 00—WOOD, PLASTICS AND COMPOSITES

Section: 06 12 00—Structural Panels

Section: 06 16 00—Sheathing

DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION

Section: 07 21 00—Thermal Insulation

Section: 07 25 00—Water-Resistive Barriers/Weather Barriers

Section: 07 27 00—Air Barriers

REPORT HOLDER:

HUBER ENGINEERED WOODS, LLC
ONE RESOURCE SQUARE
10925 DAVID TAYLOR DRIVE, SUITE 300
CHARLOTTE, NORTH CAROLINA 28262
(800) 933-9220

www.huberwood.com

EVALUATION SUBJECT:

ZIP SYSTEM® R-SHEATHING (INSULATING SHEATHING)

1.0 EVALUATION SCOPE

Compliance with the following codes:

- 2015, 2012 and 2009 *International Building Code*® (IBC)
- 2015, 2012 and 2009 *International Residential Code*® (IRC)
- 2015, 2012 and 2009 *International Energy Conservation Code*® (IECC)

Properties evaluated:

- Structural
- Thermal resistance
- Air leakage
- Weather resistance

2.0 USES

ZIP System® R-Sheathing panels are used as combination wall sheathing and continuous insulation in conventional light wood-framed walls of Type V construction (IBC) and dwellings constructed in accordance with the IRC. R-Sheathing is used to resist transverse loads in accordance with the PS-2 span rating shown on the panels. The panels are used to satisfy the continuous insulation and insulated sheathing allowances of 2015 IRC

Table N1102.1.2, 2012 IRC Table N1102.1.1 or 2009 IRC Table N1102.1.2 and 2015 IECC Tables R402.1.2 and C402.1.3, 2012 IECC Tables R402.1.1 and C402.2, or 2009 IECC Tables 402.1.1 and 502.2(1), as applicable. When installed with ZIP System™ Flexible Flashing seam tape, R-Sheathing may be used as an alternative to the water-resistive barrier required by IBC Section 1404.2 and IRC Section R703, and to address air leakage in the building envelope as required by Sections R402.4 and C402.5 of the 2015 IECC, Sections R402.4 and C402.4 of the 2012 IECC or Sections 402.4.1 and 502.4.3 of the 2009 IECC.

ZIP System R-Sheathing panels may be used as intermittent wall bracing panels within designated braced wall lines in accordance with Section 4.5, and as shear wall panels in accordance with Section 4.6, of this report.

3.0 DESCRIPTION

ZIP System® R-Sheathing is an insulated sheathing made by combining ⁷/₁₆-inch-thick ZIP System® Wall Sheathing recognized in [ESR-1474](#) with a layer of maximum 2-inch-thick (25.4 mm) rigid foam plastic insulation laminated to its interior face using polyvinyl alcohol (PVA) adhesive. The ZIP System® Wall Sheathing is OSB complying with U.S. DOC PS 2 for wood structural panels as Exposure 1 with a 24/0, 24/16, or Wall 24 span rating, and is overlaid on the exterior side with a Grade D water-resistive barrier. The rigid foam plastic insulation is Rboard® recognized in [ESR-1375](#) which complies with the ICC-ES Acceptance Criteria for Foam Plastic Insulation (AC12). The foam plastic insulation boards have a nominal density of 2.0 pcf, compressive strength of 20 psi (138 kPa), vapor permeance of less than 1.0 perm, a flame-spread index of 75 or less and a smoke-developed index of 450 or less. The ZIP System® R-Sheathing panels are nominally 4 feet wide by 8, 9, 10, 11 or 12 feet long and have a square-finished-edge or machined-edge profile.

4.0 INSTALLATION

4.1 General:

ZIP System® R-Sheathing panels must be installed over wood-framed walls with minimum nominally “2-by” framing spaced at a maximum of 24 inches (406 mm) on center. In accordance with the manufacturer’s published installation instructions, it is recommended that the square edges of the panels be installed with a gap between adjacent panels and that the panels be separated from dissimilar materials. ZIP System® R-Sheathing panels may be installed vertically or horizontally. When use is in the construction of braced wall panels in accordance with Section 4.5, or as wood shear walls in accordance with



Section 4.6, all joints and panel edges must be backed by framing.

When the panels are used as wall bracing panels or shearwall panels, fastening must be as described in Tables 1 or Table 2. ZIP System® R-Sheathing panels that are not used for structural bracing or shearwalls must be installed with minimum 8d common nails (or equivalent) at a maximum spacing of 6 inches on center on panel edges and 12 inches on center in the field. Nails must have a minimum 1-inch embedment into framing.

4.2 Water-resistive Barrier:

To qualify as a water-resistive barrier, ZIP System® R-Sheathing panels must be installed with the polymer-modified sheet overlay facing the exterior and all panel seams must be sufficiently sealed with ZIP System™ Flexible Flashing Tape in accordance with [ESR-1474](#). All overlay surfaces must be dry and free of sawdust and dirt prior to application of the ZIP System™ seam tape. The seam tape must extend a minimum of 1 inch (25.4 mm) past the panel edge T-joint intersections and must be centered, within 1/2 inch (12.7 mm), over the middle of panel seams. The tape must be pressed firmly to adhere to the surfaces and seal the seams. Wrinkles in the ZIP System™ seam tape are acceptable unless they create a leak path to the panel seam.

Flashing complying with the applicable code must be installed at the perimeter of door and window assemblies, penetrations and terminations of exterior wall assemblies, exterior wall intersections with roofs, chimneys, porches, decks, balconies, and similar projections, and at built-in gutters and similar locations where moisture could enter the wall. An adhesive-backed flashing tape that complies with the ICC-ES Acceptance Criteria for Flashing Materials (AC148) must be installed to seal all ZIP System® R-Sheathing flashing joints. Penetration items must be sealed to the panels. The adhesive-backed flashing tape must be installed in accordance with the manufacturer's published installation instructions.

4.3 Air Barrier:

ZIP System® R-Sheathing fastened to maximum 24-inch-on-center (610 mm) wood wall framing, using 8d nails spaced at 6 inches (152 mm) around panel edges and at 12 inches (305 mm) in the field, leaving a 1/8-inch (3.18 mm) gap between panels, forms an air barrier assembly when the gaps between panels and the perimeter of penetrations are sealed with ZIP System™ seam tape recognized in [ESR-2227](#). The assembly has demonstrated a maximum air leakage of 0.0072 cfm/ft² [0.037 L/(s•m²)] infiltration and 0.0023 cfm/ft² [0.012 L/(s•m²)] exfiltration at a pressure differential of 1.57 psf (75 Pa).

4.4 Thermal Resistance:

ZIP System® R-Sheathing panels have nominal thermal resistance in accordance with the R-Sheathing Type shown in Tables 1 or 2.

4.5 Braced Wall Panels in Accordance with the 2015, 2012, and 2009 IRC:

ZIP System® R-Sheathing panels are recognized for use in intermittent braced wall panel construction in accordance with IRC Section R602.10.2 when installed in accordance with Table 1. The panels are recognized as equivalent to wood structural panels used in Bracing Method WSP and may be used with amounts of bracing (lengths) specified in 2015 and 2012 IRC Table R602.10.3(1) and 2009 IRC Table R602.10.1.2(1), entitled "Bracing Requirements Based on Wind Speed." The minimum effective braced

wall panel length must be 48 inches (1219 mm) for heights up to 10 feet (3048 mm), 4 feet 5 inches (1346 mm) for walls not exceeding 11 feet (3352 mm) in height, and 4 feet 10 inches (1473 mm) for walls not exceeding 12 feet (3658 mm) in height. For prescriptive wall bracing under this section (Section 4.5), 2015 and 2012 IRC recognition is limited to use in areas where wind design is not required per IRC Section R301.2.1.1 and in Seismic Design Categories (SDC) A, B, and C (excluding townhouses in SDC C); use of sheathing in other conditions is outside the scope of this report. For prescriptive wall bracing under this section (Section 4.5), 2009 IRC recognition is limited to use in areas where the design wind speed is less than 110 mph and in Seismic Design Categories A, B, and C (excluding townhouses in SDC C); use of the sheathing in other conditions is outside the scope of this report. Holes and notches in wood framing are permitted in accordance with IRC Section R602.6.

4.6 Wood Framed Shear Walls in accordance with the 2015, 2012, and 2009 IBC and IRC:

ZIP System® R-Sheathing panels may be used in the construction of wood shear walls when the design is in accordance with Table 2 and 2015, 2012, or 2009 IBC Sections 2305 and 2306, as applicable. The Allowable Shear Capacity values in Table 2 must be used in lieu of the values shown in the code. Under this section (Section 4.6), recognition is limited to resisting in-plane wind loads and to use in Seismic Design Categories (SDC) A, B, and C, with earthquake load resistance determined using the maximum values of $R = 2.0$, $\Omega_0 = 2.5$, and $C_d = 2.0$. Holes and notches in the framing are permitted in accordance with the applicable code, code-referenced documents, and engineered design.

Shearwalls using ZIP System® R-Sheathing panels installed in accordance with this report may be used under the 2015, 2012, and 2009 IRC when an engineered design is submitted in accordance with 2015, 2012, and 2009 IRC Section R301.1.3, as applicable.

5.0 CONDITIONS OF USE

The ZIP System® R-Sheathing panels described in this report comply with, or are suitable alternatives to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

- 5.1 The ZIP System® R-Sheathing panels must be manufactured, identified and installed in accordance with this report and the manufacturer's published installation instructions. In the event of a conflict between the instructions and this report, this report governs.
- 5.2 When required by the code official, this evaluation report and the manufacturer's published installation instructions must be submitted at the time of permit application.
- 5.3 Walls sheathed with the panels must not be used to resist in-plane horizontal loads from concrete or masonry walls.
- 5.4 The ZIP System® R-Sheathing panels must be covered with a code-complying exterior wall covering or one that is recognized in a current ICC-ES evaluation report.
- 5.5 Siding installed over R-Sheathing must be installed in accordance with code and with the siding manufacturer's recommendations. Siding installers must account for any extra fastener length required to attach siding through the foam backed panel and into framing.



- 5.6 Where foam plastic is used in areas where the probability of termite infestation is “very heavy,” safeguards must be followed in accordance with the protection against subterranean termite provisions in Chapter 26 of the IBC or Chapter 3 of the IRC, as applicable.
- 5.7 Fire-resistance-rated construction is outside the scope of this report.
- 5.8 Under the 2015 IBC, special inspection must be provided in accordance with IBC Sections 1704.3 and 1705.11 for sheathing installed in shear walls on buildings in Exposure B locations where V_{ASD} is 120 mph (53.6 m/s) or greater and in Exposures C and D locations where V_{ASD} is 110 mph (49.2 m/s) or greater. Under the 2012 IBC, special inspection must be provided in accordance with IBC Sections 1704.3 and 1705.10 for sheathing installed in shear walls on buildings in Exposure B locations where V_{ASD} is 120 mph (53.6 m/s) or greater and in Exposures C and D locations where V_{ASD} is 110 mph (49.2 m/s) or greater. Under the 2009 IBC, special inspection must be provided in accordance with IBC Sections 1705.1, 1705.2 and 1705.4 for sheathing installed in shear walls on buildings in Exposure B locations where the basic wind speed is 120 mph (53.6 m/s) or greater and in Exposures C and D locations where the basic wind speed is 110 mph (49.2 m/s) or greater. A statement of special inspections complying with 2015 or 2012 IBC Section 1704.3 or 2009 IBC Section 1705 (as applicable) must be provided to the code official (this includes addressing requirements in 2015 IBC Sections 1704.3.3 and 1705.11 or 2012 IBC Sections 1704.3.3 and 1705.10 or 2009 IBC Sections 1705.4.1 and 1705.4.2, as applicable).
- 5.9 Cutting openings and penetrations in designated braced wall panels is not permitted.
- 5.10 Gypsum wallboard is required to be installed on the side of the wall opposite the proprietary sheathing in accordance with 2015 and 2012 IRC Section R602.10.4.3 and 2009 IRC Section R602.10.2.1.
- 5.11 Use of ZIP System® R-Sheathing panels to resist combined wind uplift and shear must be approved by the code official.

- 5.12 ZIP System® R-Sheathing panels are laminated facilities located in Camp Hill, Pennsylvania, Diboll, Texas, Crystal Hill, Virginia, Broken Bow, Oklahoma, East Moline, Illinois, and Northglenn, Colorado under a quality-control program with inspections provided by ICC-ES.

6.0 EVIDENCE SUBMITTED

- 6.1 Data in accordance with the ICC-ES Acceptance Criteria for Water-resistive Membranes Factory-bonded to Wood-based Structural Sheathing, Used as Water-resistive Barriers (AC310), dated May 2008 (editorially revised, August 2015).
- 6.2 For recognition under the 2015, 2012 and 2009 IBC and IRC for use in shear walls, data in accordance with the ICC-ES Acceptance Criteria for Proprietary Sheathing Jobsite-attached to Wood Light-frame Wall Construction Used as Shear Walls (AC269.2), dated October 2013 (editorially revised, February 2016).
- 6.3 For recognition under the 2015, 2012, and 2009 IRC for use as an alternative to prescriptive intermittent braced wall panels, data in accordance with the ICC-ES Acceptance Criteria for Proprietary Sheathing Attached to Wood Light-frame Wall Construction Used as Braced Wall Panels under the IRC (AC269.1), dated March 2017.
- 6.4 Air leakage data in accordance with ASTM E2357.

7.0 IDENTIFICATION

Each ZIP System® R-Sheathing panel described in this report must bear a label that includes the manufacturer’s name (Huber Engineered Woods, LLC) and address, the product name, the R-Sheathing type, the date of manufacture or a tracking number, the manufacturing plant identifier, and the evaluation report number (ESR-3373).

PRESCRIPTIVE METHOD (INTERMITTENT WALL BRACING)

TABLE 1—FASTENING REQUIREMENTS FOR ZIP SYSTEM® R-SHEATHING WITH FRAMING OF DOUGLAS FIR-LARCH FOR WIND OR SEISMIC LOADING UNDER THE 2015, 2012, AND 2009 IRC (WSP METHOD)

Code Compliance
Permitting and Inspections Department
Approved with Conditions

R-SHEATHING TYPE ³ (R-Value of foam)	FRAMING ⁴		FASTENING REQUIREMENT		
	Nominal Stud Size (min.)	Maximum Stud Spacing (inches)	Fastener Specifications ²	Edge/Field Spacing (inches)	Minimum Penetration into Framing (inches)
R-3	2-by-4	24	0.131-inch shank nails	⁴ / ₁₂	1.5
R-3	2-by-4	16	16ga staples, ⁷ / ₁₆ -inch crown, 2-inch length	³ / ₆	1.0
R-6	2-by-4	24	0.131-inch shank nails	⁴ / ₁₂	1.5
			15ga staples, ⁷ / ₁₆ -inch crown, 2.5-inch length	³ / ₆	1.0
R-9	2-by-4	24	0.131-inch shank nails	³ / ₁₂	1.5
R-12	2-by-4	24	0.131-inch shank nails	³ / ₁₂	1.5

For SI: 1 inch = 25.4 mm

¹All fasteners must be located a minimum of ³/₈ inch from panel edges.

²Fasteners must be common nails or equivalent, or staples, of a type generally used to attach wood sheathing.

³Type R-12 R-Sheathing panels have a foam plastic insulation thickness of 2.0 inch. Type R-9 R-Sheathing panels have a foam plastic insulation thickness of 1.5 inch. Type R-6 R-Sheathing panels have a foam plastic insulation thickness of 1.0 inch. Type R-3 R-Sheathing panels have a foam plastic insulation thickness of 0.5 inch.

⁴All panel edges must be backed by framing.

ENGINEERED METHOD (SHEARWALL PANELS)

TABLE 2—FASTENING REQUIREMENTS AND ALLOWABLE SHEAR CAPACITY FOR ZIP SYSTEM® R-SHEATHING WITH FRAMING OF DOUGLAS FIR-LARCH² FOR WIND OR SEISMIC LOADING UNDER THE 2015, 2012 AND 2009 IBC

R-SHEATHING TYPE ⁴ (R-Value of foam)	FRAMING		FASTENING REQUIREMENT			ALLOWABLE SHEAR CAPACITY ^{5,6,7} (plf)
	Nominal Stud Size (min.)	Maximum Stud Spacing (inches)	Fastener Specifications ³	Edge/Field Spacing (inches)	Minimum Penetration into Framing (inches)	
R-3	2-by-4	24	0.131-inch shank nails	⁴ / ₁₂	1.5	245
R-3	2-by-4	24	0.131-inch shank nails	³ / ₁₂	1.5	280
R-3	2-by-4	16	16ga staples, ⁷ / ₁₆ -inch crown, 2-inch length	³ / ₆	1.0	210
R-6	2-by-4	24	0.131-inch shank nails	⁴ / ₁₂	1.5	230
R-6	2-by-4	24	0.131-inch shank nails	³ / ₁₂	1.5	255
R-9	2-by-4	24	0.131-inch shank nails	³ / ₁₂	1.5	240
R-12	2-by-4	24	0.131-inch shank nails	³ / ₁₂	1.5	215

For SI: 1 inch = 25.4 mm, 1 plf = 14.6 N/m.

¹All fasteners must be located a minimum of ³/₈ inch from panel edges.

²For framing of other species, the shear value above must be multiplied by the Specific Gravity Adjustment Factor = [1 - (0.50 - SG)], where SG is the specific gravity of the framing lumber in accordance with the AWC NDS. This adjustment factor must not be greater than 1.

³Fasteners must be common nails or equivalent, or staples, of a type generally used to attach wood sheathing.

⁴Type R-6 R-Sheathing panels have a foam plastic insulation thickness of 1.0 inch. Type R-3 R-Sheathing panels have a foam plastic insulation thickness of 0.5 inch.

⁵The maximum height-to-width aspect ratio of shear walls is 2:1.

⁶The allowable shear capacity may be increased by 40% for wind in Allowable Stress Design in accordance with Section 2306.3 of the 2015, 2012 and 2009 IBC.

⁷All panel edges must be backed by framing.