

Using Foam Sheathing as a Water Resistive Barrier (WRB)

Installation Instructions
Revised July 7, 2020



[Applied Building Technology Group \(ABTG\)](#) is committed to using sound science and generally accepted engineering practice to develop research supporting the reliable design and installation of foam sheathing. ABTG's educational program work with respect to foam sheathing is provided through a grant by the [Foam Sheathing Committee \(FSC\)](#) of the [American Chemistry Council](#).

ABTG is a [professional engineering firm](#), an [approved source](#) as defined in [Chapter 2](#) and [independent](#) as defined in [Chapter 17](#) of the IBC.

Foam sheathing research reports, code compliance documents, educational programs and best practices can be found at www.continuousinsulation.org.



Step 1: Verify Code Compliance

- Check the manufacturer's code evaluation report for approved use as a WRB. The report should include:
 - Installation requirements
 - Approved joint treatments (tapes and/or sealants)
 - Details for flashing openings and penetrations

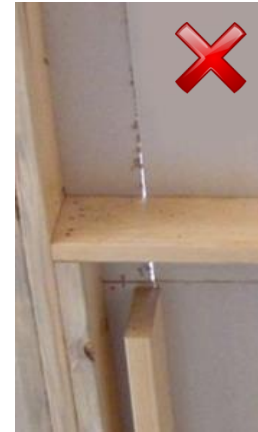
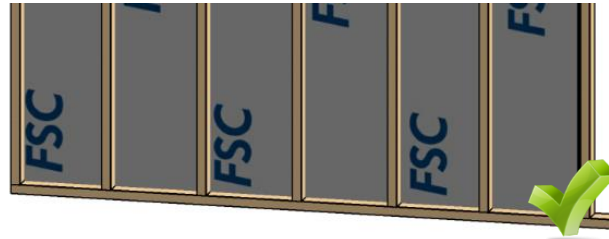
Step 2: Verify Framing

- Ensure wall is square and true.
- Verify stud spacing, blocking, and bracing requirements with manufacturer.
- Provide vertical framing or blocking for attachment of siding and trim at transitions



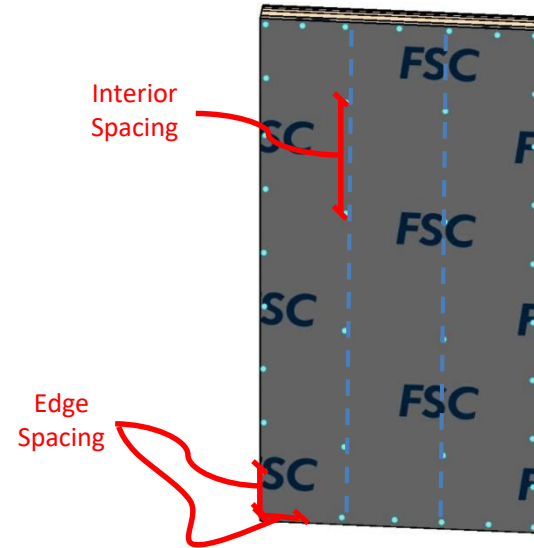
Step 3: Install Insulation Boards

- Align boards with bottom edge of wall
- Vertical joints should be aligned with framing members
- Vertical seams should not be visible from interior



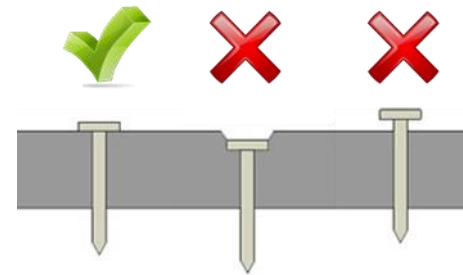
Step 3: Install Insulation Boards

- Space fasteners per manufacturer's instructions
 - Around edges of panel
 - Through panels and into interior members



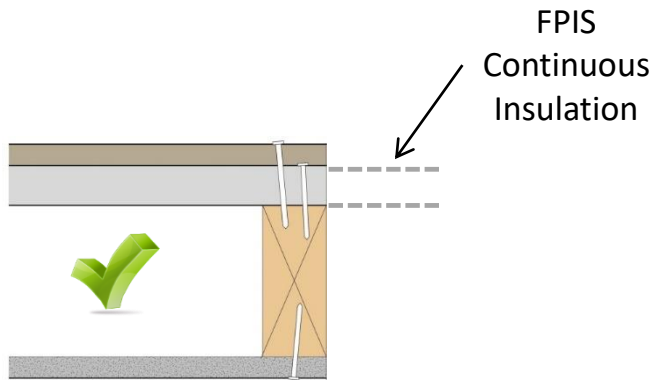
Step 3: Install Insulation Boards

- Drive nails flush and snug
- Do not overdrive nails
- Do not underdrive nails



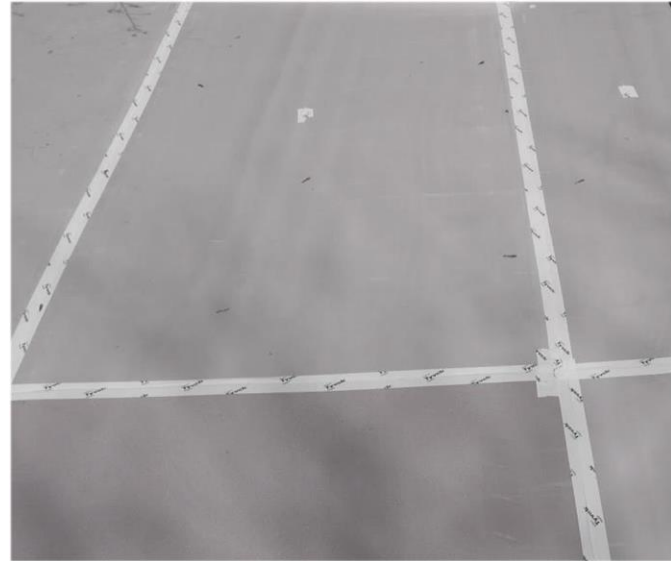
Step 4: Trim Boards at Openings

- Trim boards at all window and door openings
- Cover all framing with FPIS
- Fit joints tightly



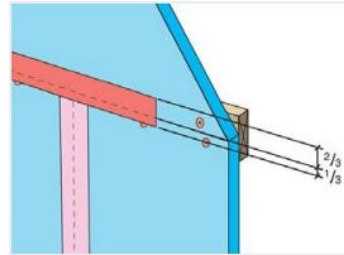
Step 5: Apply WRB Tape

- Ensure clean and dry surface for proper adhesion
- Apply tape in shingle fashion, working upward from the bottom of the assembly

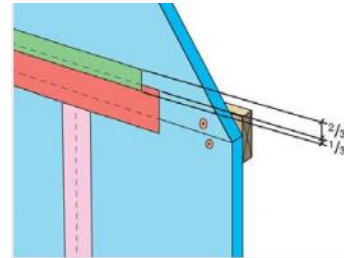


Step 5: Apply WRB Tape

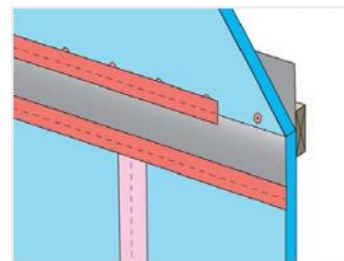
- Center tape over vertical joints to cover fasteners
- Tape horizontal joints using one of the options shown at right
- Avoid “fish mouths”, wrinkles, or interruption by fasteners along top edge of tape
- Install windows and flashing using standard industry details
- See [DRR 1304-01](#) for guidance on window installation over FPIS



Good:
3-4 in. acrylic tape



Better:
4-6 in. wide butyl tape with 2
in. acrylic termination tape
(recommended for thicker tapes)

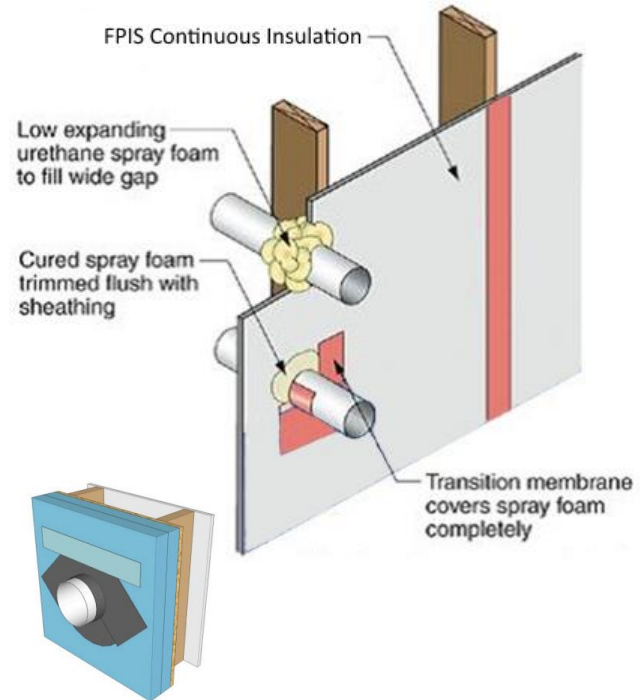


Best:
Butyl Z-flashing with 2 in.
acrylic termination tape
(recommended for joints subject to
high amounts of water or pressure)

Source:
DOE Building America

Step 6: Seal Penetrations

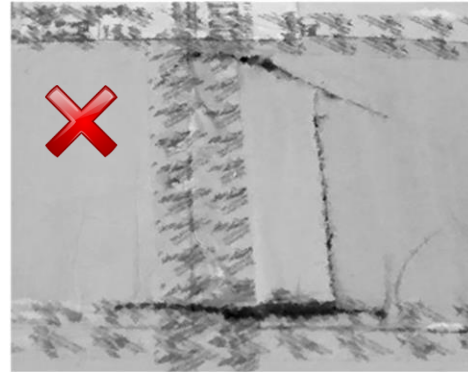
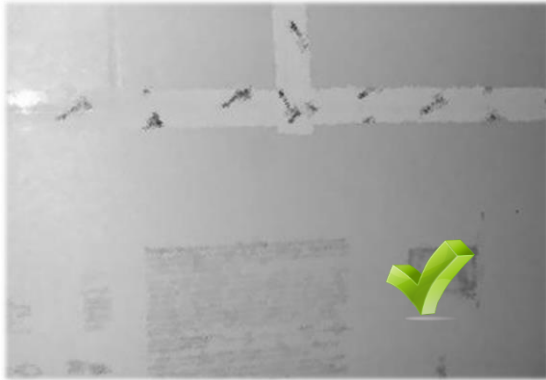
- At pipe and other small penetrations, seal gaps with silicone or expanding spray foam sealant
- Seal joints and openings with joint tape per manufacturer's instructions



Source:
DOE Building America

Step 6: Seal Penetrations

- Repair damaged areas per manufacturer's instructions



Step 7: Apply Cladding

- Inspect WRB installation and flashing details to verify code compliance prior to cladding installation.
- Install cladding as soon as is practical or per manufacturer's instructions
- See [ABTG RR 1503-02](#), [DRR 1303-04](#), and [DRR 1707-02](#) for additional guidance



Suggested Resources

- [Water Resistive Barrier - ContinuousInsulation.org](https://www.continuousinsulation.org/water-resistive-barrier)
- [Water Resistive Barrier Applications - ContinuousInsulation.org](https://www.continuousinsulation.org/water-resistive-barrier-applications)