

For Applications of Exterior Wall Coverings

## **EZ Exterior Wall Sidings Permit**

Obtain permits for the application of exterior wall sidings without submitting plans by meeting the Conditions and Design Limitations below. Any deviations from this permit standard will result in permit revocation.

### **Conditions**

- Exterior Insulation Finish Systems subject to special inspections <u>are not</u> applicable to the EZ permit process.
- Historically certified buildings are not applicable to the EZ permit process.

### **General Construction Requirements**

- To conform with requirements of specific exterior wall covering applications to be used
- All proprietary applications to be installed in accordance to manufacturer's installation instructions
- Manufacturer's installation instructions to be provided in field for inspectors
- Wall covering fasteners shall be with approved aluminum, stainless steel, zinc-coated, or other corrosion-resistive fasteners <u>unless</u> specified otherwise.

### **Flashing**

- Corrosion resistant, shingle fashioned application to extend to surface of exterior wall finish
- To be installed in the following locations:
  - Exterior Window/Door Openings
  - At built-in gutters
  - Wall/Roof intersections
  - Continuously above all wood trims
- At exterior porch, deck, or stair attachments to a wall/floor assembly of wood-frame construction
- At chimney or other masonry construction intersections with frame/stucco walls, with protecting lips on both sides under stucco coping

### Water-Resistive Barrier

- Min. one (1) layer of No. 15 asphalt felt to comply with ASTM D226 <u>OR</u> other approved water resistive barrier
- To be applied over studs or sheathing
- Continuous to top of wall, and terminated at penetrations and building appendages
- Lapping: Min. 2-in horizontal lap of upper layer over lower layer; Min. 6-in lap at all joints
- Water-resistive vapor permeable barrier to be applied where specified by exterior wall covering application type

### **Applicable Exterior Wall Covering Application Types**

<ul> <li>Vinyl Siding</li> <li>Fiber Cement Siding</li> <li>Wood Veneer</li> <li>Wood, Hardboard, Wood Structural Panel Siding</li> </ul>		Wood Shakes & Shingles Exterior Plaster & Stucco Stone & Masonry Veneer
---	--	---

		Page <b>1</b> of _
AP#	Applicant's Signature	



Philadelphia, Pennsylvania 19102

## EZ PERMIT EXTERIOR WALL COVERINGS

For Applications of Exterior Wall Coverings

### **Fiber Cement Siding**

- Shall be certified in conformance with ASTM C1186, Type A, Min. Grade II
- Panel Min. Nominal Thickness: 5/16"

### **Fiber Cement Panel Siding**

- Panel installation to have long dimension parallel or perpendicular to framing
- Vertical/Horizontal joints shall occur over framing members
- Joints to be sealed with caulk or covered with battens.

### Fastening

- 6d common corrosion-resistant nails
- Direct to studs: 4d common corrosion-resistant nails
- Shall conform with approved manufacturer's installation instructions

### **Fiber Cement Lap Siding**

• Maximum width: 12-in

Min. Lap Siding Dimension: 1½-in

#### Joints

- End joints of lap siding to conform with one of the following:
  - Located over a strip of
- To be sealed with caulk
- flashing 

   H-section joint cover to be installed
- Seal and cover shall not be required for tongue and groove end joints

### Fastening

- 6d common corrosion resistant nails, at overlapping planks at each stud
- Direct to studs: 11 ga roofing nail at the top of each plank of each stud
- Max Spacing: 6-in O.C. on edges; 12-in O.C. at intermediate studs
- Shall be installed in accordance with approved manufacturer's installation instructions

		Pageof
P#	Applicant's Signature	



For Applications of Exterior Wall Coverings

### Vinyl Siding

Shall be certified in conformance to ASTM D3679

Philadelphia, Pennsylvania 19102

- Height of siding application to be limited to 40'-0".
  - Applications of vinyl siding over 40'-0" in height shall have wind exposure determined by design professional. Category C exposure shall not be applicable to the EZ permit process.
- Siding Min. Nominal Thickness: 0.035-in
- Vinyl siding, soffit, and accessories to be installed in accordance with manufacturer's instructions.
- Soffit panels to be individually fastened to a supporting component (ie. nailing strip, fascia, or subfascia component) or as specified by manufacturer's instructions.

### Foam Plastic Sheathing (for buildings under the scope of the IRC 2009)

The following foam plastic sheathing backing layers shall be permitted for vinyl siding:

- Nom. ½" thick min. Extruded Polystyrene per ASTM C578
- Nom. ½" thick min. Polyisocyanurate per ASTM C1289
- Nom. 1" thick min. Expanded Polystyrene per ASTM C578

### Fastening

- Shall not be fastened directly to studs
- Fastener: 0.120-in nail (shank) with 0.313-in head OR 16 Ga staple with 3/8-in or ½-in crown
  - All fasteners to be corrosion-resistant, fastened directly to study or nailing strips.
- Min. Fastening Depth: 0.75-in
  - For foam plastic sheathing (applicable to buildings under the scope of the IRC 2009):
    - Min. Fastening Depth: 1.25-in penetration into wood framing OR
    - As per manufacturer's installation instructions for siding with an approved design wind pressure rating
    - Max. Spacing: 16-in O.C. OR as per manufacturer's instructions

		Page _	_of
AP#	Applicant's Signature		



For Applications of Exterior Wall Coverings

### **Wood Veneers**

(Only applicable to buildings under the scope of IBC, 2009, except Type V construction)

- Nominal thickness of wood veneers = 1"
  - 0.438" for exterior hardboard siding
  - 0.375" for exterior type wood structural panels or particle boards
- Wood veneer height shall be limited to 40'-0".
  - Fire-retardant-treated wood veneer shall be limited to an application height of 60'-0"
- Veneer attached to or furred from a non-combustible backing that is fire-resistance rated as required by the International Building Code 2009.
- Open or spaced wood veneers, without concealed spaces, shall not project more than 24" from the building wall.

### Wood, Hardboard, and Wood Structural Panel Siding

(Only applicable to buildings under the scope of IRC 2009)

### Vertical Panel Siding

- Vertical joints to be shiplapped <u>OR</u> covered with batten
  - o To occur over framing members
- Horizontal joints shall be lapped 1-in min,, shiplapped, OR flashed with Z-flashing
  - o To occur over solid-blocking, wood or wood structural panel sheathing

### **Horizontal Lap Siding**

- To be installed in accordance with manufacturer's recommendations
- Siding to conform with one of the following requirements:
  - Lapped 1-in min
- Batten covered joints
- o ½-in rabbeted
- Sealed and installed over strip of flashing
- Ends Caulked

### **Fastening**

#### Hardboard Siding

Panel siding vertical

- Min. 0.092-in nail (shank), 0.225-in head diameter
- Min. 1½-in penetration into wood framing
- Spacing: 6-in on panel edges, 12-in at intermediate supports

### Lap Siding Horizontal

- 0.099-in nail (shank), 0.240-in head diameter
- Min. 1½-in penetration into wood framing
- Spacing: 8-in O.C. along bottom edge

### Wood Structural Panel Siding

- Direct to Studs OR Into Wood/WSP Sheathing: 0.099-in nails, Min. 2-in penetration
- Fiberboard/Gypsum Sheathing to Studs: 0.113-in nails, Min. 2½-in penetration
- Spacing: 8-in O.C. along bottom edge (Lap siding); 6-in on panel edges and 12-in at intermediate supports (Panel Siding)

### **Wood Panel Siding**

- Min. 1-in penetration from sheathing into studs
- Direct to stud: 0.113-in nail, Min. 2½-in penetration, or Staple, Min. 2-in penetration
- Face nailing spacing: 1 nail per bearing for max. 6-in O.C.; 2 nails per bearing for min. 8-in O.C.,

		Page _	of
AP#	Applicant's Signature		



For Applications of Exterior Wall Coverings

### **Wood Shakes & Shingles**

### (Only applicable to buildings under the scope of IRC, 2009)

- To conform with CSSB Grading Rules for Wood Shakes and Shingles
- Single or Double Course application permitted, and to be placed over:
  - ½-in wood-based sheathing OR
  - o furring strips covering ½-in non-wood sheathing
- Bottom courses shall be doubled
- Water-resistive vapor permeable barrier required over all sheathing
  - Lapping: 2-in (Horizontal); 6-in (Vertical)
- Max. exposure of shake/shingle to conform with [IRC 2009, Table R703.5.2]

## TABLE R703.5.2 MAXIMUM WEATHER EXPOSURE FOR WOOD SHAKES AND SHINGLES ON EXTERIOR WALLS<sup>a,b,c</sup> (Dimensions are in inches)

LENGTH	EXPOSURE FOR SINGLE COURSE	EXPOSURE FOR DOUBLE COURSE
Shingles <sup>a</sup> 16 18 24	$7^{1}/_{2}$ $8^{1}/_{2}$ $11^{1}/_{2}$	12 <sup>b</sup> 14 <sup>c</sup> 16
Shakes <sup>a</sup> 18 24	$\begin{array}{c c} 8^{1}/_{2} \\ 11^{1}/_{2} \end{array}$	14 18

- a. Dimensions given are for No. 1 grade.
- b. A maximum 10-inch exposure is permitted for No. 2 grade.
- c. A maximum 11-inch exposure is permitted for No. 2 grade.

### Furring Strips

- 1-in x 3-in strips OR 1-in x 4-in strips
- Fasteners: 7d or 8d box nails
- Max Fastener Spacing: As specified by "Max. Weather Exposure" dimensions from [Table R703.5.2]

### Adjacent Wood Shake/Shingle Spacing & Gap Tolerances

Max. Adj. Gap Tolerance: 1/4-in (Shingles); 1/2-in (Shakes)

Min. Spacing for Joints of Adj. Courses: 11/2-in

### Fasteners for Shakes & Shingles

- Each shake/shingle to be held in place by min. two (2) hot-dipped zinc-coated, stainless steel, or aluminum nails/staples
- Min. Penetration into sheathing or furring strip: ½-in [Shall not to be overdriven]
- Staple Fasteners
  - o Min. 16 ga., 7/16-in crown
  - Fastener concealed by course above
  - Attachment: Crown parallel with butt of shake/shingle
  - Fastener Location
    - Single Course: 1-in above butt line, ¾-in from all edges
    - <u>Double Course</u>: Two (2) casing nails on exposed shake/shingle, face-nailed; 2-in above buttline, ¾-in from all edges
    - For shingle widths > 8-in, two (2) additional nails required to be nailed near center of shingle at distance 1-in apart

		Pageof
AP#	Applicant's Signature	



For Applications of Exterior Wall Coverings

### **Exterior Plaster & Stucco**

- Installation to be in conformance with ASTM C926 or ASTM C 1063.
- No work to be performed when ambient temperature is below 40 °F Applications to be protected from freezing for a period not less than 24 hours after set has occurred.
- Water-Resistive barrier to be installed
  - Wood-based sheathing backing shall require a water-resistive vapor-permeable barrier, with min. equivalent performance of two (2) layers of Grade D paper
- Metal/wire lath backing: Three (3) Coat Layer
- Masonry, Concrete, Pressure-treated or Decay-Resistant Wood: Two (2) Coat Layer
  - Each coat shall be kept in moist condition for at least 48 hours prior to application of the next coat. [Except ASTM C 926 applications]
  - Minimum curing times, shown below, shall be maintained prior to application of next coat.

Plaster Coating System	Layer	Min. Curing Time Prior to Next Layer
Two Coats	First	7 days
Thurs Cooks	First	48 hours
Three Coats	Second	7 days

### **Weep Screed**

- Corrosion Resistant Weep Screed <u>OR</u> Plastic Weep Screed
- Min. 0.019-in (No. 26 Galvanized Sheet Gage)
- Min. Elevation Above Grade: 4-in for Earth; 2-in for Paved Areas
- Min. vertical attachment flange of 3½-in, at or below foundation plate line
  - Water Resistant Barrier to lap attachment flange
  - Exterior lath to cover and terminate on attachment flange

### Fastening (Lath)

- 11 Ga nails, 11/2-in long, with 7/16" head OR
- 16 Ga staples, 7/8" long
- Max. Spacing: 6-in O.C.

### **Plaster Thickness**

Finished thickness of plaster shall conform to dimensions of [IRC 2009 Table R702.1(1)] for respective plaster bases.

### **TABLE R702.1(1) THICKNESS OF PLASTER**

	FINISHED THICKNESS OF PLASTER FROM FACE OF LATH, MASONRY, CONCRETE (inches)		
PLASTER BASE	Gypsum Plaster	Cement Plaster	
Expanded metal lath	<sup>5</sup> / <sub>8</sub> , minimum <sup>a</sup>	<sup>5</sup> / <sub>8</sub> , minimum <sup>a</sup>	
Wire lath	<sup>5</sup> / <sub>8</sub> , minimum <sup>a</sup>	<sup>3</sup> / <sub>4</sub> , minimum (interior) <sup>b</sup> <sup>7</sup> / <sub>8</sub> , minimum (exterior) <sup>b</sup>	
Gypsum lath <sup>g</sup>	¹/₂, minimum	<sup>3</sup> / <sub>4</sub> , minimum (interior) <sup>b</sup>	
Masonry walls <sup>c</sup>	¹/₂, minimum	<sup>1</sup> / <sub>2</sub> , minimum	
Monolithic concrete walls <sup>c, d</sup>	<sup>5</sup> / <sub>8</sub> , maximum	<sup>7</sup> / <sub>8</sub> , maximum	
Monolithic concrete ceilings <sup>c, d</sup>	³/ <sub>8</sub> , maximum <sup>e</sup>	¹/₂, maximum	
Gypsum veneer base <sup>f, g</sup>	¹/ <sub>16</sub> , minimum	³/ <sub>4</sub> , minimum (interior) <sup>b</sup>	
Gypsum sheathing <sup>g</sup>	<del>-</del>	<sup>3</sup> / <sub>4</sub> , minimum (interior) <sup>b</sup> <sup>7</sup> / <sub>8</sub> , minimum (exterior) <sup>b</sup>	

- a) When measured from back plane of expanded metal lath, exclusive of ribs, or self-furring lath, plaster thickness shall be 3/4 inch minimum.
- b) When measured from face of support or backing.
- c) Because masonry and concrete surfaces may vary in plane, thickness of plaster need not be uniform.
- d) When applied over a liquid bonding agent, finish coat may be applied directly to concrete surface.
- e) Approved acoustical plaster may be applied directly to concrete or over base coat plaster, beyond the maximum plaster thickness shown.
- f) Attachment shall be in accordance with Table R702.3.5.
- g) Where gypsum board is used as a base for cement plaster, a water-resistive barrier complying with Section R703.2 shall be provided.

		Pageof
AP#	Applicant's Signature	



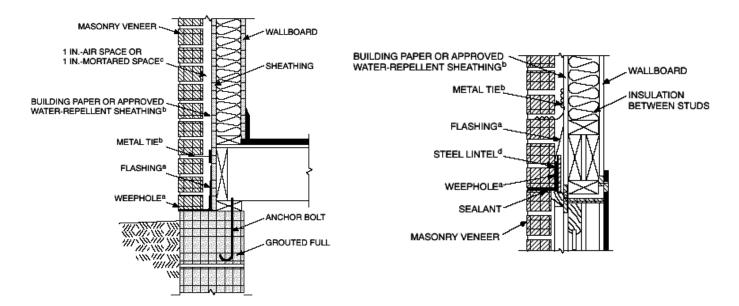
For Applications of Exterior Wall Coverings

### **Stone & Masonry Veneer**

(Only applicable to buildings under the scope of IRC 2009)

### **Conditions & Design Limitations**

- Veneer Story Limitation: Two (2) stories for Steel Framing; Three (3) stories for Wood Framing
- Veneer Height Limitation: Max. 30-ft above non-combustible foundation
- Maximum Nominal Veneer Thickness: 5-in
- Maximum Weight of Veneer: 50 psf
- Min. Steel Angle Support: L 6 x 4 x 5/16 angle with long leg placed vertically, and anchored to double 2x4 wood studs at a maximum 16" O.C.
- Steel Angle Anchorage: At every double stud spacing; Min. two (2)-7/16" diameter by 4" lag screw.
- Min. Clearance of Steel Angle to Underlying Construction: 1/16"
- Min. Steel Angle Bearing: 2/3 of width of masonry veneer thickness.
- Max. Height of Masonry Veneer Above the Steel Angle Support: 12'-8".
- Flashing and weep holes to be located in masonry veneer wythe in accordance with Figure R703.7 (Figure Below)



### **Max Air Space**

- Wood Backing: 1-in (Corrugated sheet metal ties); 4 ½-in (Metal strand wire ties)
- Steel Backing: 4 ½-in (Adjustable metal strand wire ties)

(Mortar or grout shall be alternately permitted to fill the air space with the application of required weather resistant membrane or building paper over study or sheathing.)

	Pageof
Applicant's Signature	

AP#



For Applications of Exterior Wall Coverings

### Stone & Masonry Veneer (Cont'd)

### Lintels

Masonry veneer shall not support any vertical loads other than the dead load of the veneer above.

- Steel Lintels: Shop-coated with rust-inhibitive paint; Corrosion resistant; or Corrosion Resistance-Coated Steel
- Min. Bearing Length: 4-in
- *Max. Allowable Span*: As per Table R703.7.3.1

## TABLE R703.7.3.1 ALLOWABLE SPANS FOR LINTELS SUPPORTING MASONRY VENEER $^{\rm a, \, b, \, c, \, d}$

SIZE OF STEEL ANGLE <sup>a, c, d</sup> (inches)	NO STORY ABOVE	ONE STORY ABOVE	TWO STORIES ABOVE	NO. OF ½" OR EQUIVALENT REINFORCING BARS IN REINFORCED LINTEL <sup>b, d</sup>
$3 \times 3 \times \frac{1}{4}$	6'-0"	4'-6"	3'-0"	1
$4 \times 3 \times \frac{1}{4}$	8'-0"	6'-0"	4'-6"	1
5 × 3 ½ × 5/16	10'-0"	8'-0"	6'-0"	2
6 × 3 ½ × 5/16	14'-0"	9'-6"	7'-0"	2
2-6 × 3 ½ × 5/16	20'-0"	12'-0"	9'-6"	4

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm.

- a. Long leg of the angle shall be placed in a vertical position.
- b. Depth of reinforced lintels shall not be less than 8 inches and all cells of hollow masonry lintels shall be grouted solid. Reinforcing bars shall extend not less than 8 inches into the support.
- c. Steel members indicated are adequate typical examples; other steel members meeting structural design requirements may be used.
- d. Either steel angle or reinforced lintel shall span opening.

### **Veneer Wall Ties**

- *Material*: Corrosion-resistant metal ties
- Min. extension into veneer: 1½-in (Min. 5/8-in mortar or grout cover to outside face)
- Strand Wire: Min. No. 9 US Gage (hood embedded in mortar joint)
- Sheet Metal: Min. No. 22 US Gage x 7/8-in corrugated
- Tie spacing: 24-in O.C. max. (horizontally & vertically) [Maximum area of support: 2.67 sq. ft.]
  - Additional wall ties to be provided for wall openings greater than 16-in in either direction:
    - Placed within 12-in of wall opening
    - Spacing: 36-in O.C. max

### **Flashing**

Approved corrosion-resistive flashing to be installed at exterior wall envelope in such a manner to prevent entry of water into wall cavity or penetration of water to the building structural framing components.

- Installation locations:
  - First (1<sup>st</sup>) course of masonry above finished ground level or slab
  - At all points of support (structural floors, shelf angles, and lintels)

### **Weepholes**

- *Diameter*: 3/16-in
- Installation Location: Immediately above flashing
   Spacing: 33-in O.C. outside wythe of masonry wall

		Pageof
1P#	Applicant's Signature	