

## BULLETIN NO. PC 2016-02

TO: ALL PROPERTY AND CASUALTY INSURERS; RATING AND  
ADVISORY ORGANIZATIONS

RE: LAWS and ORDINANCES, ADDITIONAL COVERAGE; FORTIFIED  
HOME™—HIGH WIND AND HAIL PROGRAM

FROM: JOHN D. DOAK, OKLAHOMA INSURANCE COMMISSIONER

DATE: April 25, 2016

The Department is issuing this Bulletin in response to a number of complaints concerning coverage for the repair of storm damaged roofs.

Policyholders are being advised by roofing contractors that applicable building codes require solidly sheathed decks or decks sheathed to the shingles manufacturer's installation instructions.

The standard HO-3 form excludes coverage for loss caused by ordinances or laws requiring or regulating the repair of insured property, but provides limited "Additional Coverage" for the increased costs incurred due to the enforcement of any law which requires or regulates the construction, demolition, remodeling, renovation or repair of a structure damaged by a peril insured against.

We have considered the facts and circumstances surrounding these complaints and find as follows:

1. On July 15, 2015, Oklahoma adopted The International Residential Code (2015) and that code is in effect throughout the State of Oklahoma.

2. The International Residential Code 2015, as amended and revised by the rules ("IRC"), constitutes the statewide minimum standards for residential construction pursuant to 59 O.S. § 1000.23 and OAC 748:20-5-11.1.

3. Chapter 9 of the IRC, as adopted provides in relevant part as follows"

Sheathing requirements. Asphalt shingles shall be fastened to solidly sheathed decks in accordance with Section R803 or to the asphalt shingles manufacturer's installation instructions.

4. Certain property insurance policies purport to provide "additional coverage" for the increased cost incurred due to enforcement of any law which regulates demolition,

remodeling, renovation or repair of a covered building.

5. The enforcement or failure to enforce a law does not invalidate the law; it only means execution of the law is wanting.

6. Conditioning insurance coverage on the vagaries, inconsistencies and uncertainties of enforcement, is tantamount to encouraging and facilitating repair of insured property in contravention of laws designed to ensure public safety.

7. Additionally, we find that the sale of "additional insurance" to cover a known nonexistent risk constitutes the sale of illusory and unfairly discriminatory coverage.

Companies are instructed that for purposes of providing "additional coverages, as an exception to the ordinance or law exclusion, you shall consider all building codes as being strictly enforced.

Questions concerning any aspect of this bulletin should be directed to the Oklahoma Insurance Department, Five Corporate Plaza, 3625 N.W. 56<sup>th</sup> St., Oklahoma City, OK 73112 Attn: Tyler Laughlin, Chief of Operations ([tyler.laughlin@oid.ok.gov](mailto:tyler.laughlin@oid.ok.gov)) or Gordon C. Amini, General Counsel ([gordon.amini@oid.ok.gov](mailto:gordon.amini@oid.ok.gov)).

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#### Fortified Home™—High Wind and Hail Program

As a separate but related matter, Commissioner Doak reminds insurers that the Oklahoma Insurance Department and the Insurance Institute for Business & Home Safety (IBHS) have launched a new FORTIFIED Home™—High Wind and Hail Program.

IBHS is a science-based research organization that promotes effective actions to strengthen homes, businesses and communities against natural disasters.

The Commissioner is encouraging property owners, insurers and contractors to evaluate the benefits of the Fortified Home. IBHS engineers believe property damage to homes from EF-0 and EF-1 tornadoes can be virtually eliminated if they are built or retrofitted using FORTIFIED standards. For more information please contact Ms. Tiffany O'Shea, Director of Public Affairs, IBHS at [toshea@ibhs.org](mailto:toshea@ibhs.org), Office: 813.675.1047 • Mobile: 512.636.7811



# ROOF VENTILATION REQUIREMENTS

## SECTION R806 ROOF VENTILATION

### R806.1 Ventilation required.

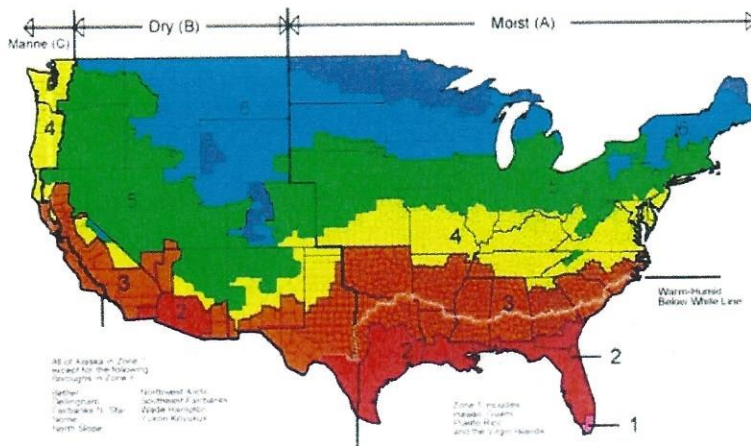
Enclosed attics and enclosed rafter spaces formed where ceilings are applied directly to the underside of roof rafters shall have cross ventilation for each separate space by ventilating openings protected against the entrance of rain or snow. Ventilation openings shall have a least dimension of  $\frac{1}{16}$  inch (1.6 mm) minimum and  $\frac{1}{4}$  inch (6.4 mm) maximum. Ventilation openings having a least dimension larger than  $\frac{1}{4}$  inch (6.4 mm) shall be provided with corrosion-resistant wire cloth screening, hardware cloth or similar material with openings having a least dimension of  $\frac{1}{16}$  inch (1.6 mm) minimum and  $\frac{1}{4}$  inch (6.4 mm) maximum. Openings in roof framing members shall conform to the requirements of Section R802.7. Required ventilation openings shall open directly to the outside air.

### R806.2 Minimum vent area.

The minimum net free ventilating area shall be  $\frac{1}{150}$  of the area of the vented space.

**Exception:** The minimum net free ventilation area shall be  $\frac{1}{300}$  of the vented space provided one or more of the following conditions are met:

1. In Climate Zones 6, 7 and 8, a Class I or II vapor retarder is installed on the warm-in-winter side of the ceiling.
2. Not less than 40 percent and not more than 50 percent of the required ventilating area is provided by ventilators located in the upper portion of the attic or rafter space. Upper ventilators shall be located not more than 3 feet (914 mm) below the ridge or highest point of the space, measured vertically, with the balance of the required ventilation provided by eave or cornice vents. Where the location of wall or roof framing members conflicts with the installation of upper ventilators, installation more than 3 feet (914 mm) below the ridge or highest point of the space shall be permitted.



Example: 1,000 sq ft attic space will require the following exhaust ventilation:

12" Turbines	4	24" x 24" Static Vent	3
2000 Power Vent	2	550 Static Vent	10
9" x 4' Ridge Vent	27'	750 Static Vent	10
12" x 4' Ridge Vent	40'	960 Static Vent	8



# DRIP EDGE REQUIREMENTS

## **R905.2.8.5 Drip edge.**

A drip edge shall be provided at eaves and rake edges of shingle roofs. Adjacent segments of drip edge shall be overlapped not less than 2 inches (51 mm). Drip edges shall extend not less than  $\frac{1}{4}$  inch (6.4 mm) below the roof sheathing and extend up back onto the roof deck not less than 2 inches (51 mm). Drip edges shall be mechanically fastened to the roof deck at not more than 12 inches (305 mm) o.c. with fasteners as specified in Section R905.2.5. Underlayment shall be installed over the drip edge along eaves and under the drip edge along rake edges.

# ICE & WATER SHIELD REQUIREMENTS

## **R905.1.2 Ice barriers.**

In areas where there has been a history of ice forming along the eaves causing a backup of water as designated in Table R301.2(1), an ice barrier shall be installed for asphalt shingles, metal roof shingles, mineral-surfaced roll roofing, slate and slate-type shingles, wood shingles and wood shakes. The ice barrier shall consist of not fewer than two layers of underlayment cemented together, or a self-adhering polymer-modified bitumen sheet shall be used in place of normal underlayment and extend from the lowest edges of all roof surfaces to a point not less than 24 inches (610 mm) inside the exterior wall line of the building. On roofs with slope equal to or greater than 8 units vertical in 12 units horizontal, the ice barrier shall also be applied not less than 36 inches (914 mm) measured along the roof slope from the eave edge of the building.

**TABLE R301.2(1)**  
**CLIMATIC AND GEOGRAPHIC DESIGN CRITERIA**

GROUND SNOW LOAD	WIND SPEED <sup>d</sup> (mph)	SEISMIC DESIGN CATEGORY <sup>f</sup>	SUBJECT TO DAMAGE FROM			WINTER DESIGN TEMP <sup>g</sup>	ICE BARRIER UNDERLAYMENT REQUIRED <sup>h</sup>	FLOOD HAZARDS <sup>i</sup>	AIR FREEZING INDEX <sup>j</sup>	MEAN ANNUAL TEMP <sup>k</sup>
			Weathering <sup>a</sup>	Frost line depth <sup>b</sup>	Termite <sup>c</sup>					

For SI: 1 pound per square foot = 0.0479 kPa, 1 mile per hour = 0.447 m/s.

- Weathering may require a higher strength concrete or grade of masonry than necessary to satisfy the structural requirements of this code. The weathering column shall be filled in with the weathering index (i.e., "negligible," "moderate" or "severe") for concrete as determined from the Weathering Probability Map [Figure R301.2(5)]. The grade of masonry units shall be determined from ASTM C 34, C 55, C 62, C 73, C 90, C 129, C 145, C 216 or C 652.
- The frost line depth may require deeper footings than indicated in Figure R403.1(1). The jurisdiction shall fill in the frost line depth column with the minimum depth of footing below finish grade.
- The jurisdiction shall fill in this part of the table to indicate the need for protection depending on whether there has been a history of local subterranean termite damage.
- The jurisdiction shall fill in this part of the table with the wind speed from the basic wind speed map [Figure R301.2(4)]. Wind exposure category shall be determined on a site-specific basis in accordance with Section R301.2.1.4.
- The outdoor design dry-bulb temperature shall be selected from the columns of 97 $\frac{1}{2}$ -percent values for winter from Appendix D of the *International Plumbing Code*. Deviations from the Appendix D temperatures shall be permitted to reflect local climates or local weather experience as determined by the building official.
- The jurisdiction shall fill in this part of the table with the seismic design category determined from Section R301.2.2.1.
- The jurisdiction shall fill in this part of the table with (a) the date of the jurisdiction's entry into the National Flood Insurance Program (date of adoption of the first code or ordinance for management of flood hazard areas), (b) the date(s) of the currently effective FIRM and FBFM, or other flood hazard map adopted by the community, as may be amended.
- In accordance with Sections R905.2.7.1, R905.4.3.1, R905.5.3.1, R905.6.3.1, R905.7.3.1 and R905.8.3.1, where there has been a history of local damage from the effects of ice damming, the jurisdiction shall fill in this part of the table with "YES". Otherwise, the jurisdiction shall fill in this part of the table with "NO".
- The jurisdiction shall fill in this part of the table with the 100-year return period air freezing index (BF-days) from Figure R403.3(2) or from the 100-year (99%) value on the National Climatic Data Center data table "Air Freezing Index- USA Method (Base 32°Fahrenheit)" at [www.ncdc.noaa.gov/ipsf.html](http://www.ncdc.noaa.gov/ipsf.html).
- The jurisdiction shall fill in this part of the table with the mean annual temperature from the National Climatic Data Center data table "Air Freezing Index-USA Method (Base 32°Fahrenheit)" at [www.ncdc.noaa.gov/ipsf.html](http://www.ncdc.noaa.gov/ipsf.html).

## **SADDLE REQUIREMENTS**

### **R903.2.2 Crickets and saddles.**

A cricket or saddle shall be installed on the ridge side of any chimney or penetration more than 30 inches (762 mm) wide as measured perpendicular to the slope. Cricket or saddle coverings shall be sheet metal or of the same material as the roof covering.

## **DECKING REQUIREMENTS**

### **R905.1 Roof covering application.**

Roof coverings shall be applied in accordance with the applicable provisions of this section and the manufacturer's installation instructions. Unless otherwise specified in this section, roof coverings shall be installed to resist the component and cladding loads specified in Table R301.2(2), adjusted for height and exposure in accordance with Table R301.2(3).

### **OWENS CORNING INSTALLATION INSTRUCTIONS**

ROOF DECK: • 6" Minimum roof deck boards • Minimum 3/8" plywood • Minimum 7/16" OSB  
Regardless of deck type used, the roofing installer must: 1. Install the deck material in strict compliance with the deck manufacturer's instructions. 2. Prevent the deck from getting wet before, during and after installation.

### **GAF INSTALLATION INSTRUCTIONS**

ROOF DECKS: Use minimum 3/8" (10mm) plywood or OSB decking as recommended by APA-The Engineered Wood Assn. Wood decks must be well-seasoned and supported having a maximum 1/8" (3mm) spacing, using minimum nominal 1"(25mm) thick lumber, a maximum 6" (152mm) width, having adequate nail-holding capacity and a smooth surface. Do NOT fasten shingles directly to insulation or insulated deck unless authorized in writing by GAF. Roof decks and existing surfacing material must be dry prior to application of shingles.

### **TAMKO INSTALLATION INSTRUCTIONS**

ROOF DECK: Roof deck must be smooth, dry and free from warped surfaces. It is recommended that metal drip edges be installed at eaves and rakes. PLYWOOD: All plywood shall be exterior grade as defined by APA - The Engineered Wood Association. Plywood shall be a minimum of 3/8 in. thickness and applied in accordance with the recommendations of APA - The Engineered Wood Association. SHEATHING BOARDS: Boards shall be well-seasoned tongueand-groove boards and not over 6 in. nominal width. Boards shall be a 1 in. nominal minimum thickness. Boards shall be properly spaced and nailed.



**CHAPTER 9 ROOF ASSEMBLIES****SECTION R901 GENERAL****R901.1 Scope.**

The provisions of this chapter shall govern the design, materials, construction and quality of roof assemblies.

**SECTION R902 FIRE CLASSIFICATION****R902.1 Roofing covering materials.**

Roofs shall be covered with materials as set forth in Sections R904 and R905. Class A, B or C roofing shall be installed in jurisdictions designated by law as requiring their use or where the edge of the roof is less than 3 feet (914 mm) from a lot line. Class A, B and C roofing required by this section to be listed shall be tested in accordance with UL 790 or ASTM E 108.

**Exceptions:**

1. Class A roof assemblies include those with coverings of brick, masonry and exposed concrete roof deck.
2. Class A roof assemblies include ferrous or copper shingles or sheets, metal sheets and shingles, clay or concrete roof tile, or slate installed on noncombustible decks.
3. Class A roof assemblies include minimum 16 ounces per square foot copper sheets installed over combustible decks.
4. Class A roof assemblies include slate installed over underlayment over combustible decks.

**R902.2 Fire-retardant-treated shingles and shakes.**

Fire-retardant-treated wood shakes and shingles shall be treated by impregnation with chemicals by the full-cell vacuum-pressure process, in accordance with AWPAC1. Each bundle shall be marked to identify the manufactured unit and the manufacturer, and shall be *labeled* to identify the classification of the material in accordance with the testing required in Section R902.1, the treating company and the quality control agency.

**R902.3 Building-integrated photovoltaic product.**

Building-integrated photovoltaic products installed as the roof covering shall be tested, listed and labeled for fire classification in accordance with Section R902.1.

**R902.4 Rooftop-mounted photovoltaic panels and modules.**

Rooftop-mounted photovoltaic panels and modules installed on or above the roof covering shall be tested, listed and identified with a fire classification in accordance with UL 1703. Class A, B or C photovoltaic panels and modules shall be installed in jurisdictions designated by law as requiring their use or where the edge of the roof is less than 3 feet (914 mm) from a lot line.

**SECTION R903 WEATHER PROTECTION****R903.1 General.**

Roof decks shall be covered with *approved* roof coverings secured to the building or structure in accordance with the provisions of this chapter. Roof assemblies shall be designed and installed in accordance with this code and the *approved* manufacturer's instructions such that the roof assembly shall serve to protect the building or structure.

is less than 3 feet (914 mm) from a lot line.

## SECTION R903 WEATHER PROTECTION

### R903.1 General.

Roof decks shall be covered with *approved* roof coverings secured to the building or structure in accordance with the provisions of this chapter. Roof assemblies shall be designed and installed in accordance with this code and the *approved* manufacturer's instructions such that the roof assembly shall serve to protect the building or structure.

### R903.2 Flashing.

Flashings shall be installed in a manner that prevents moisture from entering the wall and roof through joints in copings, through moisture permeable materials and at intersections with parapet walls and other penetrations through the roof plane.

#### R903.2.1 Locations.

Flashings shall be installed at wall and roof intersections, wherever there is a change in roof slope or direction and around roof openings. A flashing shall be installed to divert the water away from where the eave of a sloped roof intersects a vertical sidewall. Where flashing is of metal, the metal shall be corrosion resistant with a thickness of not less than 0.019 inch (0.5 mm) (No. 26 galvanized sheet).

#### R903.2.2 Crickets and saddles.

A cricket or saddle shall be installed on the ridge side of any chimney or penetration more than 30 inches (762 mm) wide as measured perpendicular to the slope. Cricket or saddle coverings shall be sheet metal or of the same material as the roof covering.

**Exception:** Unit skylights installed in accordance with Section R308.6 and flashed in accordance with the manufacturer's instructions shall be permitted to be installed without a cricket or saddle.

### R903.3 Coping.

Parapet walls shall be properly coped with noncombustible, weatherproof materials of a width not less than the thickness of the parapet wall.

### R903.4 Roof drainage.

Unless roofs are sloped to drain over roof edges, roof drains shall be installed at each low point of the roof.

#### R903.4.1 Secondary (emergency overflow) drains or scuppers.

Where roof drains are required, secondary emergency overflow roof drains or scuppers shall be provided where the roof perimeter construction extends above the roof in such a manner that water will be entrapped if the primary drains allow buildup for any reason. Overflow drains having the same size as the roof drains shall be installed with the inlet flow line located 2 inches (51 mm) above the low point of the roof, or overflow scuppers having three times the size of the roof drains and having a minimum opening height of 4 inches (102 mm) shall be installed in the adjacent parapet walls with the inlet flow located 2 inches (51 mm) above the low point of the roof served. The installation and sizing of overflow drains, leaders and conductors shall comply with Sections 1106 and 1108 of the *International Plumbing Code*, as applicable.

Overflow drains shall discharge to an *approved* location and shall not be connected to roof drain lines.

## SECTION R904 MATERIALS

### R904.1 Scope.

The requirements set forth in this section shall apply to the application of roof covering materials specified herein. Roof assemblies shall be applied in accordance with this chapter and the manufacturer's installation instructions. Installation of roof assemblies shall comply with the applicable provisions of Section R905.

### R904.2 Compatibility of materials.

Roof assemblies shall be of materials that are compatible with each other and with the building or structure to which the materials are applied.



sufficient to penetrate through the roof sheathing or not less than  $\frac{3}{4}$  inch into the roof sheathing.

For SI: 1 inch = 25.4 mm.

### R905.1.2 Ice barriers.

In areas where there has been a history of ice forming along the eaves causing a backup of water as designated in Table R301.2(1), an ice barrier shall be installed for asphalt shingles, metal roof shingles, mineral-surfaced roll roofing, slate and slate-type shingles, wood shingles and wood shakes. The ice barrier shall consist of not fewer than two layers of underlayment cemented together, or a self-adhering polymer-modified bitumen sheet shall be used in place of normal underlayment and extend from the lowest edges of all roof surfaces to a point not less than 24 inches (610 mm) inside the exterior wall line of the building. On roofs with slope equal to or greater than 8 units vertical in 12 units horizontal, the ice barrier shall also be applied not less than 36 inches (914 mm) measured along the roof slope from the eave edge of the building.

**Exception:** Detached accessory structures not containing conditioned floor area.

### R905.2 Asphalt shingles.

The installation of asphalt shingles shall comply with the provisions of this section.

#### R905.2.1 Sheathing requirements.

Asphalt shingles shall be fastened to solidly sheathed decks.

#### R905.2.2 Slope.

Asphalt shingles shall be used only on roof slopes of two units vertical in 12 units horizontal (2:12) or greater. For roof slopes from two units vertical in 12 units horizontal (2:12) up to four units vertical in 12 units horizontal (4:12), double underlayment application is required in accordance with Section R905.1.1.

#### R905.2.3 Underlayment.

Underlayment shall comply with Section R905.1.1.

#### R905.2.4 Asphalt shingles.

Asphalt shingles shall comply with ASTM D 3462.

##### R905.2.4.1 Wind resistance of asphalt shingles.

Asphalt shingles shall be tested in accordance with ASTM D 7158. Asphalt shingles shall meet the classification requirements of Table R905.2.4.1 for the appropriate ultimate design wind speed. Asphalt shingle packaging shall bear a label to indicate compliance with ASTM D 7158 and the required classification in Table R905.2.4.1.

**Exception:** Asphalt shingles not included in the scope of ASTM D 7158 shall be tested and labeled to indicate compliance with ASTM D 3161 and the required classification in Table R905.2.4.1.

**TABLE R905.2.4.1 CLASSIFICATION OF ASPHALT ROOF SHINGLES**

MAXIMUM ULTIMATE DESIGN WIND SPEED, $V_{ult}$ FROM FIGURE R301.2(4)A (mph)	MAXIMUM BASIC WIND SPEED, $V_{ASD}$ FROM TABLE R301.2.1.3 (mph)	ASTM D 7158 <sup>a</sup> SHINGLE CLASSIFICATION	ASTM D 3161 SHINGLE CLASSIFICATION
110	85	D, G or H	A, D or F
116	90	D, G or H	A, D or F
129	100	G or H	A, D or F
142	110	G or H	F
155	120	G or H	F
168	130	H	F
181	140	H	F
194	150	H	F

For SI: 1 foot = 304.8 mm; 1 mph = 0.447 m/s.

a. The standard calculations contained in ASTM D 7158 assume Exposure Category B or C and building height of 60 feet or less. Additional calculations are required for conditions outside of these assumptions.



Where required, ice barriers shall comply with Section R905.1.2.

#### **R905.2.8 Flashing.**

Flashing for asphalt shingles shall comply with this section.

##### **R905.2.8.1 Base and cap flashing.**

Base and cap flashing shall be installed in accordance with manufacturer's instructions. Base flashing shall be of either corrosion-resistant metal of minimum nominal 0.019-inch (0.5 mm) thickness or mineral-surfaced roll roofing weighing not less than 77 pounds per 100 square feet (4 kg/m<sup>2</sup>). Cap flashing shall be corrosion-resistant metal of minimum nominal 0.019-inch (0.5 mm) thickness.

##### **R905.2.8.2 Valleys.**

Valley linings shall be installed in accordance with the manufacturer's instructions before applying shingles. Valley linings of the following types shall be permitted:

1. For open valleys (valley lining exposed) lined with metal, the valley lining shall be not less than 24 inches (610 mm) wide and of any of the corrosion-resistant metals in Table R905.2.8.2.
2. For open valleys, valley lining of two plies of mineral-surfaced roll roofing, complying with ASTM D 3909 or ASTM D 6380 Class M, shall be permitted. The bottom layer shall be 18 inches (457 mm) and the top layer not less than 36 inches (914 mm) wide.
3. For closed valleys (valley covered with shingles), valley lining of one ply of smooth roll roofing complying with ASTM D 6380 and not less than 36 inches wide (914 mm) or valley lining as described in Item 1 or 2 shall be permitted. Self-adhering polymer modified bitumen underlayment complying with ASTM D 1970 shall be permitted in lieu of the lining material.

**TABLE R905.2.8.2 VALLEY LINING MATERIAL**

MATERIAL	MINIMUM THICKNESS (inches)	GAGE	WEIGHT (pounds)
Cold-rolled copper	0.0216 nominal	—	ASTM B 370, 16 oz. per square foot
Lead-coated copper	0.0216 nominal	—	ASTM B 101, 16 oz. per square foot
High-yield copper	0.0162 nominal	—	ASTM B 370, 12 oz. per square foot
Lead-coated high-yield copper	0.0162 nominal	—	ASTM B 101, 12 oz. per square foot
Aluminum	0.024	—	—
Stainless steel	—	28	—
Galvanized steel	0.0179	26 (zinc coated G90)	—
Zinc alloy	0.027	—	—
Lead	—	—	2 <sup>1</sup> / <sub>2</sub>
Painted terne	—	—	20

For SI: 1 inch = 25.4 mm, 1 pound = 0.454 kg

##### **R905.2.8.3 Sidewall flashing.**

Base flashing against a vertical sidewall shall be continuous or step flashing and shall be not less than 4 inches (102 mm) in height and 4 inches (102 mm) in width and shall direct water away from the vertical sidewall onto the roof or into the gutter. Where siding is provided on the vertical sidewall, the vertical leg of the flashing shall be continuous under the siding. Where anchored masonry veneer is provided on the vertical sidewall, the base flashing shall be provided in accordance with this section and counterflashing shall be provided in accordance with Section R703.7.2.2. Where exterior plaster or adhered masonry veneer is provided on the vertical sidewall, the base flashing shall be provided in accordance with this section and Section R703.6.3.

##### **R905.2.8.4 Other flashing.**

Flashing against a vertical front wall, as well as soil stack, vent pipe and chimney flashing, shall be applied in accordance with the asphalt shingle manufacturer's printed instructions.

##### **R905.2.8.5 Drip edge.**

A drip edge shall be provided at eaves and rake edges of shingle roofs. Adjacent segments of drip edge shall be