

WSR 23-23-107

PERMANENT RULES

BUILDING CODE COUNCIL

[Filed November 15, 2023, 10:04 a.m., effective March 16, 2024]

Effective Date of Rule: March 16, 2024.

Purpose: Reconciling state amendments with section renumbering and model code modifications in the 2021 International Wildland-Urban Interface Code; correcting errors and omissions.

Citation of Rules Affected by this Order: Amending two sections in chapter 51-55 WAC.

Statutory Authority for Adoption: RCW 19.27.031, 19.27.074.

Other Authority: RCW 19.27.031, 19.27.074.

Adopted under notice filed as WSR 23-14-124 on July 5, 2023.

Changes Other than Editing from Proposed to Adopted Version:

WAC	Section	Change	Rationale/Discussion
51-55-008	Implementation	Implementation date is changed from October 29, 2023, to March 15, 2024.	The state building code council voted to delay implementation of all codes on September 15, 2023.
51-55-0300	Table 302.3.1	Table was moved and reformatted from below section 302.3.6.2 to below section 302.3.1. Contents of section remain unchanged.	Section was moved for clarity and proximity to the relevant code section associated with the table. No intended change in regulatory effect.
	Table 302.3(1)	Added title to table.	Title needed to identify table and relevant section. No intended change in regulatory effect.
	Table 302.3(2)	Table was reformatted. Contents of section remain unchanged.	Section was reformatted for clarity. No intended change in regulatory effect.

A final cost-benefit analysis is available by contacting Dustin Curb, 1500 Jefferson Street S.E., Olympia, WA 98504, phone 360-972-4158, email [dustin.curb@des.wa.gov](mailto:dustin.curb@des.wa.gov), website <https://www.sbcc.wa.gov/>.

Number of Sections Adopted in Order to Comply with Federal Statute: New 0, Amended 0, Repealed 0; Federal Rules or Standards: New 0, Amended 0, Repealed 0; or Recently Enacted State Statutes: New 0, Amended 0, Repealed 0.

Number of Sections Adopted at the Request of a Nongovernmental Entity: New 0, Amended 0, Repealed 0.

Number of Sections Adopted on the Agency's own Initiative: New 0, Amended 0, Repealed 0.

Number of Sections Adopted in Order to Clarify, Streamline, or Reform Agency Procedures: New 0, Amended 2, Repealed 0.

Number of Sections Adopted using Negotiated Rule Making: New 0, Amended 0, Repealed 0; Pilot Rule Making: New 0, Amended 0, Repealed 0; or Other Alternative Rule Making: New 0, Amended 2, Repealed 0.

Date Adopted: October 20, 2023.

Tony Doan  
Council Chair

OTS-4733.4

AMENDATORY SECTION (Amending WSR 23-02-056, 23-12-109, and 23-20-028, filed 1/3/23, 6/7/23, and 9/25/23, effective 3/15/24)

**WAC 51-55-008 Implementation.** The International Wildland-Urban Interface Code adopted by this chapter shall become effective in all counties and cities of this state on (~~July 1, 2023~~) March 15, 2024.

AMENDATORY SECTION (Amending WSR 23-02-056, 23-12-109, and 23-20-028, filed 1/3/23, 6/7/23, and 9/25/23, effective 3/15/24)

**WAC 51-55-0300 Wildland-urban interface areas.**

**301 General.**

**301.1 Scope.** Wildland urban interface areas shall be determined using the Washington wildland urban interface map (WA-WUI). WA-WUI designations are permitted to be modified, upon approval of a finding of fact in accordance with Section 302.

**User note:** The WA-WUI map is available at (~~https://data-wadnr.opendata.aregis.com/apps/wildland-urban-interface-viewing-app/explore~~) <https://geo.wa.gov/maps/786aaa1dbbd748e6ae04bc43c8f127fe/explore>.

**301.2 Construction in wildland-urban interface or intermix areas.**

Where a structure is proposed to be constructed in an area designated by the WA-WUI map as wildland-urban interface or intermix, the construction shall comply with the provisions of this code.

**301.3 Construction in wildlands areas.** Where a structure is proposed to be constructed in an area designated by the WA-WUI map as wildlands, the applicable wildland urban interface area designation shall be based on a finding of fact in accordance with Section 302.

**302 Wildland-urban interface area designations.**

**302.1 General.** Wildland urban interface area designations are permitted to be established in accordance with this section.

**302.2 Finding of fact.** The applicable wildland urban interface designation shall be based on a finding of fact. The finding of fact shall comply with the provisions of Appendix E or is permitted to be based on the worksheet and procedures in Section 302.3.

**302.3 Simplified wildland urban interface designation worksheet.** The wildland urban interface designation is permitted to be established using the procedure outlined in (~~Figure~~) Table 302(1), using the worksheet in (~~Figure~~) Table 302(2).

**302.3.1 Area to be evaluated.** For the purposes of establishing structure and vegetation densities, the area covered by a square of 1320 feet on a side (40 acres) shall be evaluated. The square area shall be located such that the site under consideration is in its center, except where the square would overlap a water body shown on the WA-WUI map with a surface area greater than 200,000 square feet, the location shall be adjusted such that no part of the square overlaps the water body.

**Table 302.3(1)**

**Outline of Simplified Procedure for Determining Wildland Interface Designation**

<b><u>For the area to be evaluated in Section 302.3.1:</u></b>
<u>1. Determine structure density category (uninhabited, very low, low, medium, or high).</u>
<u>2. Determine vegetation density category (nonvegetated or vegetated).</u>
<u>3. Determine proximity category (near or distant).</u>
<u>4. Based on structure density, vegetation density, and proximity categories, determine if compliance with this code is required (WUIC applies, WUIC does not apply).</u>
<u>5. Where compliance with this code is required, determine wildland urban interface area designation (intermix or interface).</u>

**302.3.2 Structure density category.** The structure density category shall be determined by counting the number of structures within the area to be evaluated per Section 302.3.1. The structure density category shall be determined as follows:

UNINHABITED:	0 structures
VERY LOW:	1 structure
LOW:	2 to 8 structures
MEDIUM:	9 to 120 structures
HIGH:	more than 120 structures

**302.3.3 Vegetation density category.** Vegetation coverage within the area to be evaluated per Section 302.3.1 shall be determined in accordance with Chapter 9. Vegetation density shall be determined by dividing the vegetation coverage by 1,742,400 square feet (40 acres). Where the vegetation density is less than 50 percent, the vegetation density category for the site shall be nonvegetated. Where the vegetation density is 50 percent or more, the vegetation density category for the site shall be vegetated.

**302.3.4 Proximity category.** The distance from the site being evaluated to a high-density vegetated area shall be measured from the closest edge of the site boundary to the closest edge of the nearest high-density vegetated area. Where the distance is less than 1.5 miles, the proximity category shall be near. Where the distance is 1.5 miles or more, the proximity category shall be distant.

**302.3.5 WUIC applicability.** The WUIC shall apply, and the site shall be designated as intermix or interface in accordance with Section 302.3.6 under either of the following conditions:

1. The structure density category is very low to high, and the vegetation density category is vegetated.
2. The structure density category is very low to high, and the proximity category is near.

The WUIC shall not apply under either of the following conditions:

1. The structure density category is uninhabited, and the site is not located within an area designated as intermix or interface on the WA-WUI map.
2. The structure density category is uninhabited to high, the vegetation density category is nonvegetated, and the proximity category is distant.

**302.3.6 Wildland urban interface area designation.** Where required by Section 302.3.5, the site shall be designated as intermix or interface in accordance with Section 302.3.6.1 or 302.3.6.2.

**302.3.6.1 Intermix designation.** The site shall be designated as intermix where the structure density category is very low to high, and the vegetation density category is vegetated.

**302.3.6.2 Interface designation.** The site shall be designated as interface where the structure density category is very low to high, and the proximity category is near.

~~(For the area to be evaluated in Section 302.3.1:~~

- ~~1. Determine structure density category (uninhabited, very low, low, medium, or high).~~
- ~~2. Determine vegetation density category (nonvegetated or vegetated).~~
- ~~3. Determine proximity category (near or distant).~~
- ~~4. Based on structure density, vegetation density, and proximity categories, determine if compliance with this code is required (WUIC applies, WUIC does not apply).~~
- ~~5. Where compliance with this code is required, determine wildland urban interface area designation (intermix or interface).~~

**Figure 302(1). Outline of simplified procedure for determining wildland interface designation**

~~1. Determine structure density category in accordance with Section 302.3.2. Numbers in table are the number of structures within the area determined by Section 302.3.1.~~

UNINHABITED	VERY LOW	LOW	MEDIUM	HIGH
0	1	2 TO 8	9 TO 120	MORE THAN 120

~~2. Determine vegetation density category within the area determined by Section 302.3.1.~~

NONVEGETATED	VEGETATED
Less than 50% vegetated	50% or more vegetated

~~3. Determine proximity category to the nearest high-density vegetated area.~~

NEAR	DISTANT
Less than 1.5 mi (2.414 km)	1.5 mi (2.414 km) or more

~~4. Use structure density, vegetation density, and proximity categories from above to determine if WUIC applies.~~

WUIC Applies	WUIC Does Not Apply
<ul style="list-style-type: none"> <li>• Structure density category is very low to high; and</li> <li>• Vegetation density category is vegetated.</li> </ul>	<ul style="list-style-type: none"> <li>• Structure density category is uninhabited; and</li> <li>• The site is not located within an area designated as intermix or interface on the WA WUI map.</li> </ul>
<ul style="list-style-type: none"> <li>• Structure density category is very low to high; and</li> <li>• Proximity category is near.</li> </ul>	<ul style="list-style-type: none"> <li>• Structure density category is uninhabited to high; and</li> <li>• Vegetation density category is nonvegetated; and</li> <li>• Proximity category is distant.</li> </ul>

5. Where WUIC applies, the site shall be designated as intermix or interface as follows:

INTERMIX	INTERFACE
<ul style="list-style-type: none"> <li>• Structure density category is very low to high; and</li> <li>• Vegetation density category is vegetated.</li> </ul>	<ul style="list-style-type: none"> <li>• Structure density category is very low to high; and</li> <li>• Proximity category is near.)</li> </ul>

**Table 302(1). Outline of simplified procedure for determining wildland interface designation**

1. Determine structure density category in accordance with Section 302.3.2. Numbers in table are the number of structures within the area determined by Section 302.3.1.

UNINHABITED	VERY LOW	LOW	MEDIUM	HIGH
0	1	2 TO 8	9 TO 120	MORE THAN 120

2. Determine vegetation density category within the area determined by Section 302.3.1.

NONVEGETATED	VEGETATED
Less than 50% vegetated	50% or more vegetated

3. Determine proximity category to the nearest high-density vegetated area.

NEAR	DISTANT
Less than 1.5 mi (2.414 km)	1.5 mi (2.414 km) or more

4. Use structure density, vegetation density, and proximity categories from above to determine if WUIC applies.

WUIC Applies	WUIC Does Not Apply
<ul style="list-style-type: none"> <li>• Structure density category is very low to high; and</li> <li>• Vegetation density category is vegetated.</li> </ul>	<ul style="list-style-type: none"> <li>• Structure density category is uninhabited; and</li> <li>• The site is not located within an area designated as intermix or interface on the WA-WUI map.</li> </ul>
<ul style="list-style-type: none"> <li>• Structure density category is very low to high; and</li> <li>• Proximity category is near.</li> </ul>	<ul style="list-style-type: none"> <li>• Structure density category is uninhabited to high; and</li> <li>• Vegetation density category is nonvegetated; and</li> <li>• Proximity category is distant.</li> </ul>

5. Where WUIC applies, the site shall be designated as intermix or interface as follows:

INTERMIX	INTERFACE
<ul style="list-style-type: none"> <li>• Structure density category is very low to high; and</li> <li>• Vegetation density category is vegetated.</li> </ul>	<ul style="list-style-type: none"> <li>• Structure density category is very low to high; and</li> <li>• Proximity category is near.</li> </ul>

**((Figure)) Table 302(2). Worksheet for simplified procedure for determining wildland interface designation**

**302.4 Review of wildland-urban interface areas.** The code official shall review for approval evaluated areas for new or modified findings of fact. Where a new or modified findings of fact are approved, the code official shall recommend to WADNR a modification to the wildland-urban interface areas mapping.

AMENDATORY SECTION (Amending WSR 23-02-056, 23-12-109, and 23-20-028, filed 1/3/23, 6/7/23, and 9/25/23, effective 3/15/24)

**WAC 51-55-0500 Special building construction regulations.**

**Section 501 General.**

**501.1 General.** Buildings and structures hereafter constructed, modified, or relocated into or within the *wildland-urban interface area* shall meet the construction requirements of Sections 501.4 through 501.8.

EXCEPTIONS:

1. Buildings and structures with fire hazard severity determined in Section 502 and with ignition-resistant construction classification determined in Section 503.
2. Accessory structures not exceeding 200 square feet (((H)) 18.5 m<sup>2</sup>) in floor area and where located not less than 50 feet (15,240 mm) from buildings or structures containing habitable spaces.
3. Agricultural buildings located not less than 50 feet (15,240 mm) from buildings or structures containing habitable spaces.

**501.2 Objective.** This section is not adopted.

**501.4 Roof covering.** Roofs shall have a roof assembly that complies with a Class A rating when tested in accordance with ASTM E108 or UL 790. For roof assemblies where the profile allows a space between the roof covering and roof deck, the space at the eave ends shall be fire-stopped to preclude entry of flames or embers or have one layer of 72-pound (32.4 kg) mineral-surfaced, nonperforated cap sheet complying with ASTM D3909 installed over the combustible roof deck.

EXCEPTIONS:

1. Class A roof assemblies including those with coverings of brick, masonry, or an exposed concrete roof deck.
2. Class A roof assemblies also include ferrous or copper shingles or sheets, metal sheets and shingles, clay or concrete roof tile or slate installed on noncombustible decks or ferrous, copper or metal sheets installed without a roof deck on noncombustible framing.
3. Class A roof assemblies include minimum 16 oz/sq. ft. (0.0416 kg/m<sup>2</sup>) copper sheets installed over combustible roof decks.

**501.4.1 Roof valleys.** Where provided, valley flashings shall be not less than 0.019-inch (0.48 mm) (No. 26 galvanized sheet gage) corrosion-resistant metal installed over a minimum 36-inch-wide (914 mm) underlayment consisting of one layer of 72-pound (32.4 kg) mineral-surfaced, nonperforated cap sheet complying with ASTM D3909 running the full length of the valley.

**501.5 Exterior walls and projections other than decks.** Exterior walls and projections other than decks, of buildings, or structures, or *accessory structures* attached to buildings or structures with habitable spaces, shall be constructed with one of the following methods, with materials extending from the top of the foundation to the underside of the roof sheathing:

1. Materials approved for not less than one hour fire-resistance rated construction on the exterior side;
2. Approved noncombustible materials;
3. Heavy timber or log wall construction;
4. Fire-retardant-treated wood on the exterior side. The fire-retardant-treated wood shall be labeled for exterior use and meet the requirements of Section 2303.2 of the International Building Code; or
5. Ignition-resistant materials, complying with Section 503.2 on the exterior side.

EXCEPTION: Unenclosed accessory structures attached to buildings with habitable spaces and projections, such as decks, attached to the first floor of a building, if when the structure is built with building materials at least two inches nominal depth and the area below the unenclosed accessory structure is screened with material with openings no greater than 1/4-inch maximum to prevent accumulation of combustibles and to prevent embers from coming in underneath.

**501.6 Decks and appendages.** The material of decks, porches, balconies, and stairs shall be constructed with any of the following materials:

1. Ignition-resistant material that complies with the minimum performance requirement of Section 503.2.
2. Exterior fire-retardant-treated wood.
3. Noncombustible material.

4. Any material that complies with the minimum performance requirements of Section 503.2 when attached exterior wall covering is also either noncombustible or ignition-resistant material.

5. Heavy timber construction consisting of the following:

5.1. Posts shall be a minimum of 6 inches x 6 inches nominal dimension.

5.2. Beams shall be a minimum of 6 inches x 8 inches nominal dimension.

5.3. Joists shall be a minimum of 4 inches x 8 inches nominal dimension spaced at no greater than 24 inches on center.

**501.6.1 Clearance.** Decks with less than 48 inches of clearance from finished grade to deck joists shall be enclosed with screen material with openings no greater than 1/4-inch maximum to prevent accumulation of combustibles and to prevent embers from coming in underneath.

**501.6.2 Walking surfaces.** The walking surface material of decks, porches, balconies, and stairs shall be constructed with one of the following materials:

1. Ignition-resistant material that complies with the performance requirements of Section 503.2.

2. Exterior fire-retardant-treated wood.

3. Noncombustible material.

4. Where the deck, porch, balcony, or stairs are constructed of heavy timber in accordance with Section 501.6, natural wood decking products shall be:

4.1. 2-inch nominal dimension lumber; or

4.2. ((5/4)) 1 1/4-inch nominal hardwood (i.e., teak, mahogany, or other approved hardwood).

5. Material that complies with the performance requirements of Section 501.6.2.1 when tested in accordance with ASTM E2632 and when attached exterior wall covering is also composed of only noncombustible or ignition-resistant materials.

EXCEPTION: Wall material shall be permitted to be of any material that otherwise complies with Section 501.5 when the decking surface material complies with the performance requirements of ASTM E84 with a Class B flame spread index.

**501.6.2.1 Material in Section 501.6.2, Item 5.** The walking surface material shall be tested in accordance with ASTM E2632 and shall comply with the following condition of acceptance. The ASTM E2632 test shall be conducted on a minimum of three test specimens and the peak heat release rate shall be less than or equal to 25 kW/ft<sup>2</sup> (269 kW/m<sup>2</sup>). If any one of the three tests does not meet the conditions of acceptance, three additional tests shall be run. All the additional tests shall meet the condition of acceptance.

**501.7 Exterior glazing.** Exterior windows, window walls and glazed doors, windows within exterior doors, and skylights shall be tempered glass, multilayered glazed panels, glass block, or have a fire protection rating of not less than 20 minutes.

**501.8 Vents.** Attic ventilation openings, foundation or underfloor vents, or other ventilation openings in vertical exterior walls and vents through roofs shall not exceed 144 square inches (0.0929 m<sup>2</sup>) each. Such vents shall be covered with noncombustible corrosion-resistant mesh with openings not to exceed 1/4 inch (6.4 mm), or shall be designed and approved to prevent flame or ember penetration into the structure.

1. Attic ventilation openings shall not be located in soffits, in eave ((overhands)) overhangs, between rafters at eaves, or in other

overhang areas. Gable end and dormer vents shall be located not less than 10 feet (3048 mm) from lot lines. Underfloor ventilation openings shall be located as close to grade as possible.

## 502 Fire hazard severity.

**502.1 General.** The fire hazard severity of building sites for buildings hereafter constructed, modified, or relocated into *wildland-urban interface areas* shall be established in accordance with Table 502.1. See also Chapter 8.

**502.2 Fire hazard severity reduction.** The fire hazard severity identified in Table 502.1 is allowed to be reduced by implementing a vegetation management plan in accordance with Chapter 7.

**TABLE 502.1**  
**FIRE HAZARD SEVERITY**  
(No change to the table)

## 504 Class 1 ignition-resistant construction.

**504.7 Appendages and projections.** *Accessory structures* attached to buildings with habitable spaces and projections other than decks, porches, balconies, or stairs, shall be not less than 1-hour fire-resistance-rated construction, *heavy timber construction*, or constructed of one of the following:

1. *Approved noncombustible* materials.
2. Fire-retardant-treated wood identified for exterior use and meeting the requirements of Section 2303.2 of the *International Building Code*.
3. Ignition-resistant building materials in accordance with Section 503.2.

EXCEPTION: Not adopted.

**504.8 Decks and appendages.** The material of decks, porches, balconies, and stairs shall be constructed with any of the following materials:

1. Ignition-resistant material that complies with the minimum performance requirement of Section 503.2.
2. Exterior fire-retardant-treated wood.
3. Noncombustible material.
4. Any material that complies with the minimum performance requirements of Section 503.2 when attached exterior wall covering is also either noncombustible or ignition-resistant material.
5. Heavy timber construction consisting of the following:
  - 5.1. Posts shall be a minimum of 6 inches x 6 inches nominal dimension.
  - 5.2. Beams shall be a minimum of 6 inches x 8 inches nominal dimension.
  - 5.3. Joists shall be a minimum of 4 inches x 8 inches nominal dimension spaced at no greater than 24 inches on center.

**504.8.1 Clearance.** Decks with less than 48 inches of clearance from finished grade to deck joists shall be enclosed with screen material with openings no greater than 1/4-inch maximum to prevent accumulation of combustibles and to prevent embers from coming in underneath.

**504.8.2 Walking surfaces.** The walking surface material of decks, porches, balconies, and stairs shall be constructed with one of the following materials:

1. Ignition-resistant material that complies with the performance requirements of Section 503.2.



2. Exterior fire-retardant-treated wood.
3. Noncombustible material.
4. Where the deck, porch, balcony, or stairs are constructed of heavy timber in accordance with Section 501.6, natural wood decking products shall be:
  - 4.1. 2-inch nominal dimension lumber; or
  - 4.2. ((5/4)) 1 1/4-inch nominal hardwood (i.e., teak, mahogany, or other approved hardwood).
5. Material that complies with the performance requirements of Section 504.8.2.1 when tested in accordance with ASTM E2632 and when attached exterior wall covering is also composed of only noncombustible or ignition-resistant materials.

EXCEPTION: Wall material shall be permitted to be of any material that otherwise complies with Section 501.5 when the decking surface material complies with the performance requirements of ASTM E84 with a Class B flame spread index.

**504.8.2.1 Material in Section ((504.8.1)) 504.8.2, Item 5.** The walking surface material shall be tested in accordance with ASTM E2632 and shall comply with the following condition of acceptance. The ASTM E2632 test shall be conducted on a minimum of three test specimens and the peak heat release rate shall be less than or equal to 25 kW/ft<sup>2</sup> (269 kW/m<sup>2</sup>). If any one of the three tests does not meet the conditions of acceptance, three additional tests shall be run. All the additional tests shall meet the condition of acceptance.

**504.9 Exterior glazing.** Exterior windows, window walls and glazed doors, windows within exterior doors, and skylights shall be tempered glass, *multilayered glazed panels*, glass block or have a fire protection rating of not less than 20 minutes.

**504.10 Exterior doors.** Exterior doors shall be *approved* noncombustible construction, solid core wood not less than 1 3/4 inches thick (44 mm), or have a fire protection rating of not less than 20 minutes. Windows within doors and glazed doors shall be in accordance with Section 504.8.

EXCEPTION: Vehicle access doors.

**504.11 Vents.** Attic ventilation openings, foundation or underfloor vents, or other ventilation openings in vertical exterior walls and vents through roofs shall not exceed 144 square inches (0.0929 m<sup>2</sup>) each. Such vents shall be covered with *noncombustible* corrosion-resistant mesh with openings not to exceed 1/4 inch (6.4 mm), or shall be designed and *approved* to prevent flame or ember penetration into the structure.

**504.11.1 Vent locations.** Attic ventilation openings shall not be located in soffits, in eave overhangs, between rafters at eaves, or in other overhang areas. Gable end and dormer vents shall be located not less than 10 feet (3048 mm) from lot lines. Underfloor ventilation openings shall be located as close to grade as practical.

**504.12 Detached accessory structures.** Detached accessory structures located less than 50 feet (15,240 mm) from a building containing habitable space shall have exterior walls constructed with materials *approved* for not less than 1-hour *fire-resistance-rated construction*, heavy timber, *log wall construction*, or constructed with *approved noncombustible* materials or fire-retardant-treated wood on the exterior side. The fire-retardant-treated wood shall be labeled for exterior use and meet the requirements of Section 2303.2 of the *International Building Code*.

**504.12.1 Underfloor areas.** Where the detached structure is located and constructed so that the structure or any portion thereof projects over a descending slope surface greater than 10 percent, the area below the structure shall have underfloor areas enclosed to within 6 inches (152 mm) of the ground, with exterior wall construction in accordance with Section 504.5 or underfloor protection in accordance with Section 504.6.

EXCEPTION: The enclosure shall not be required where the underside of exposed floors and exposed structural columns, beams and supporting walls are protected as required for exterior 1-hour *fire-resistance-rated construction* or *heavy timber construction* or fire-retardant-treated wood on the exterior side. The fire-retardant-treated wood shall be labeled for exterior use and meet the requirements of Section 2303.2 of the *International Building Code*.

**505 Class 2 ignition-resistant construction.**

**505.7 Appendages and projections.** *Accessory structures* attached to buildings with habitable spaces and projections, other than decks, porches, balconies, or stairs, shall be not less than 1-hour *fire-resistance-rated construction*, *heavy timber construction* or constructed of one of the following:

1. *Approved noncombustible materials.*
2. Fire-retardant-treated wood identified for exterior use and meeting the requirements of Section 2303.2 of the *International Building Code*.
3. Ignition-resistant building materials in accordance with Section 503.2.

EXCEPTION: Not adopted.

**505.8 Decks and appendages.** The material of decks, porches, balconies, and stairs shall be constructed with any of the following materials:

1. Ignition-resistant material that complies with the minimum performance requirement of Section 503.2.
2. Exterior fire-retardant-treated wood.
3. Noncombustible material.
4. Any material that complies with the minimum performance requirements of Section 503.2 when attached exterior wall covering is also either noncombustible or ignition-resistant material.
5. Heavy timber construction consisting of the following:
  - 5.1. Posts shall be a minimum of 6 inches x 6 inches nominal dimension.
  - 5.2. Beams shall be a minimum of 6 inches x 8 inches nominal dimension.
  - 5.3. Joists shall be a minimum of 4 inches x 8 inches nominal dimension spaced at no greater than 24 inches on center.

**505.8.1 Clearance.** Decks with less than 48 inches of clearance from finished grade to deck joists shall be enclosed with screen material with openings no greater than 1/4-inch maximum to prevent accumulation of combustibles and to prevent embers from coming in underneath.

**505.8.2 Walking surfaces.** The walking surface material of decks, porches, balconies, and stairs shall be constructed with one of the following materials:

1. Ignition-resistant material that complies with the performance requirements of Section 503.2.
2. Exterior fire-retardant-treated wood.
3. Noncombustible material.
4. Where the deck, porch, balcony, or stairs are constructed of heavy timber in accordance with Section 501.6, natural wood decking products shall be:

4.1. 2-inch nominal dimension lumber; or

4.2. 5/4-inch nominal hardwood (i.e., teak, mahogany, or other approved hardwood).

5. Material that complies with the performance requirements of Section ((~~505.8.1.1~~) 505.8.2.1) when tested in accordance with ASTM E2632 and when attached exterior wall covering is also composed of only noncombustible or ignition-resistant materials.

EXCEPTION: Wall material shall be permitted to be of any material that otherwise complies with Section 501.5 when the decking surface material complies with the performance requirements of ASTM E84 with a Class B flame spread index.

**505.8.2.1 Material in Section ((~~505.8.1~~) 505.8.2, Item 5.** The walking surface material shall be tested in accordance with ASTM E2632 and shall comply with the following condition of acceptance. The ASTM E2632 test shall be conducted on a minimum of three test specimens and the peak heat release rate shall be less than or equal to 25 kW/ft<sup>2</sup> (269 kW/m<sup>2</sup>). If any one of the three tests does not meet the conditions of acceptance, three additional tests shall be run. All the additional tests shall meet the condition of acceptance.

**505.9 Exterior glazing.** Exterior windows, window walls and glazed doors, windows within exterior doors, and skylights shall be tempered glass, *multilayered glazed panels*, glass block or have a fire protection rating of not less than 20 minutes.

**505.10 Exterior doors.** Exterior doors shall be *approved noncombustible* construction, solid core wood not less than 1 3/4 inches thick (45 mm), or have a fire protection rating of not less than 20 minutes. Windows within doors and glazed doors shall be in accordance with Section 505.8.

EXCEPTION: Vehicle access doors.

**505.11 Vents.** Attic ventilation openings, foundation or underfloor vents or other ventilation openings in vertical exterior walls and vents through roofs shall not exceed 144 square inches (0.0929 m<sup>2</sup>) each. Such vents shall be covered with *noncombustible* corrosion-resistant mesh with openings not to exceed 1/4 inch (6.4 mm) or shall be designed and *approved* to prevent flame or ember penetration into the structure.

**505.11.1 Vent locations.** Attic ventilation openings shall not be located in soffits, in eave overhangs, between rafters at eaves, or in other overhang areas. Gable end and dormer vents shall be located not less than 10 feet (3048 mm) from lot lines. Underfloor ventilation openings shall be located as close to grade as practical.

**505.12 Detached accessory structures.** Detached accessory structures located less than 50 feet (15,240 mm) from a building containing habitable space shall have exterior walls constructed with materials *approved* for not less than 1-hour *fire-resistance-rated construction*, heavy timber, *log wall construction*, or constructed with *approved noncombustible* materials or fire-retardant-treated wood on the exterior side. The fire-retardant-treated wood shall be labeled for exterior use and meet the requirements of Section 2303.2 of the *International Building Code*.

**505.12.1 Underfloor areas.** Where the detached *accessory structure* is located and constructed so that the structure or any portion thereof projects over a descending slope surface greater than 10 percent, the area below the structure shall have underfloor areas enclosed to with-

in 6 inches (152 mm) of the ground, with exterior wall construction in accordance with Section 505.5 or underfloor protection in accordance with Section 505.6.

EXCEPTION: The enclosure shall not be required where the underside of exposed floors and exposed structural columns, beams and supporting walls are protected as required for exterior 1-hour *fire-resistance-rated construction* or heavy-timber construction or fire-retardant-treated wood on the exterior side. The fire-retardant-treated wood shall be labeled for exterior use and meet the requirements of Section 2303.2 of the *International Building Code*.

## **507 Replacement or repair of roof coverings.**

**507.1 General.** The *roof covering* on buildings or structures in existence prior to the adoption of this code that are replaced or have 50 percent or more replaced in a 12-month period shall be replaced with a *roof covering* required by Section 501.4 or based on the type of ignition-resistant construction as determined by Section 501.1 Exception 1.