

3. Ignition-resistant building materials in accordance with Section 503.2.

**Exception:** Coated materials shall not be used as the walking surface of decks.

**504.7.1 Underfloor areas.** Where the attached 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.

**504.8 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.

**504.9 Exterior doors.** Exterior doors shall be *approved noncombustible* construction, solid-core wood not less than 1<sup>3</sup>/<sub>4</sub> 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.

**504.10 Vents.** Where provided, ventilation openings for enclosed attics, gable ends, ridge ends, under eaves and cornices, enclosed eave soffit spaces, enclosed rafter spaces formed where ceilings are applied directly to the underside of roof rafters, underfloor ventilation, foundations and crawl spaces, or any other opening intended to permit ventilation, either in a horizontal or vertical surface, shall be in accordance with Section 504.10.1 or Section 504.10.2 to resist building ignition from the intrusion of burning embers and flame through the ventilation openings.

**504.10.1 Performance requirements.** Ventilation openings shall be fully covered with listed vents, tested in accordance with ASTM E2886, to demonstrate compliance with all the following requirements:

1. There shall be no flaming ignition of the cotton material during the Ember Intrusion Test.
2. There shall be no flaming ignition during the Integrity Test portion of the Flame Intrusion Test.
3. The maximum temperature of the unexposed side of the vent shall not exceed 662°F (350°C).

**504.10.2 Prescriptive requirements.** Where provided, attic ventilation openings, foundation or underfloor vents, or other ventilation openings in vertical or horizontal surfaces 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 1/8 inch (3.2 mm) or shall be designed and approved to prevent flame or ember penetration into the structure.

**504.10.3 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.

**504.11 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*.

**504.11.1 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*.

## SECTION 505—CLASS 2 IGNITION-RESISTANT CONSTRUCTION

**505.1 General.** Class 2 ignition-resistant construction shall be in accordance with Sections 505.2 through 505.11.

**505.2 Roof assembly.** Roofs shall have a *roof assembly* that complies with not less than a Class A rating when tested in accordance with ASTM E108 or UL 790, or an *approved noncombustible roof covering*. For *roof assemblies* where the profile allows a space between the *roof covering* and *roof deck*, the space at the eave ends shall be firestopped to preclude entry of flames or embers, or have one layer of cap sheet complying with ASTM D3909 installed over the combustible *roof deck*.

**505.2.1 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.

**505.3 Protection of eaves.** Combustible eaves, fascias and soffits shall be enclosed with solid materials with a minimum thickness of 3/4 inch (19 mm). Exposed rafter tails shall not be permitted unless constructed of heavy timber materials.

**505.4 Gutters and downspouts.** Gutters and downspouts shall be constructed of *noncombustible* material. Gutters shall be provided with an *approved* means to prevent the accumulation of leaves and debris in the gutter.

