



For SI: 1 mil = 0.0254 mm, 1 inch = 25.4 mm.

FIGURE R804.3.8(3)  
ROOF BLOCKING DETAIL

**SECTION R805  
CEILING FINISHES**

**R805.1 Ceiling installation.** Ceilings shall be installed in accordance with the requirements for interior wall finishes as provided in Section R702.

**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 1/16 inch (1.6 mm) minimum and 1/4 inch (6.4 mm) maximum. Ventilation openings having a least dimension larger than 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 1/16 inch (1.6 mm) mini-

um and 1/4 inch (6.4 mm) maximum. Openings in roof framing members shall conform to the requirements of Section R802.7.

**R806.2 Minimum area.** The total net free ventilating area shall not be less than 1/150 of the area of the space ventilated except that reduction of the total area to 1/300 is permitted provided that at least 50 percent and not more than 80 percent of the required ventilating area is provided by ventilators located in the upper portion of the space to be ventilated at least 3 feet (914 mm) above the eave or cornice vents with the balance of the required ventilation provided by eave or cornice vents. As an alternative, the net free cross-ventilation area may be reduced to 1/300 when a Class I or II vapor barrier is installed on the warm-in-winter side of the ceiling.

**R806.3 Vent and insulation clearance.** Where eave or cornice vents are installed, insulation shall not block the free flow of air. A minimum of a 1-inch (25 mm) space shall be provided between the insulation and the roof sheathing and at the location of the vent.

**R806.4 Unvented attic assemblies.** Unvented *attic* assemblies (spaces between the ceiling joists of the top *story* and the roof rafters) shall be permitted if all the following conditions are met:

1. The unvented *attic* space is completely contained within the *building thermal envelope*.
2. No interior vapor retarders are installed on the ceiling side (*attic floor*) of the unvented *attic* assembly.
3. Where wood shingles or shakes are used, a minimum 1/4 inch (6 mm) vented air space separates the shingles or shakes and the roofing underlayment above the structural sheathing.
4. In climate zones 5, 6, 7 and 8, any *air-impermeable insulation* shall be a vapor retarder, or shall have a vapor retarder coating or covering in direct contact with the underside of the insulation.
5. Either Items 5.1, 5.2 or 5.3 shall be met, depending on the air permeability of the insulation directly under the structural roof sheathing.
  - 5.1. *Air-impermeable insulation only.* Insulation shall be applied in direct contact with the underside of the structural roof sheathing.
  - 5.2. *Air-permeable insulation only.* In addition to the air-permeable installed directly below the structural sheathing, rigid board or sheet insulation shall be installed directly above the structural roof sheathing as specified in Table R806.4 for condensation control.

- 5.3. *Air-impermeable and air-permeable insulation.* The *air-impermeable insulation* shall be applied in direct contact with the underside of the structural roof sheathing as specified in Table R806.4 for condensation control. The air-permeable insulation shall be installed directly under the *air-impermeable insulation*.

**SECTION R807  
ATTIC ACCESS**

**R807.1 Attic access.** Buildings with combustible ceiling or roof construction shall have an *attic* access opening to *attic* areas that exceed 30 square feet (2.8 m<sup>2</sup>) and have a vertical height of 30 inches (762 mm) or greater. The vertical height shall be measured from the top of the ceiling framing members to the underside of the roof framing members.

The rough-framed opening shall not be less than 22 inches by 30 inches (559 mm by 762 mm) and shall be located in a hallway or other readily accessible location. When located in a wall, the opening shall be a minimum of 22 inches wide by 30 inches high. When the access is located in a ceiling, minimum unobstructed headroom in the *attic* space shall be 30 inches (762 mm) at some point above the access measured vertically from the bottom of ceiling framing members. See Section M1305.1.3 for access requirements where mechanical *equipment* is located in *attics*.

**TABLE R806.4  
INSULATION FOR CONDENSATION CONTROL**

CLIMATE ZONE	MINIMUM RIGID BOARD ON AIR-IMPERMEABLE INSULATION R-VALUE <sup>a</sup>
2B and 3B tile roof only	0 (none required)
1, 2A, 2B, 3A, 3B, 3C	R-5
4C	R-10
4A, 4B	R-15
5	R-20
6	R-25
7	R-30
8	R-35

a. Contributes to but does not supersede Chapter 11 energy requirements.