

## CHAPTER 12

# INTERIOR ENVIRONMENT

### SECTION 1201 GENERAL

**1201.1 Scope.** The provisions of this chapter shall govern ventilation, temperature control, lighting, yards and courts, sound transmission, room dimensions, surrounding materials and rodent proofing associated with the interior spaces of buildings.

### SECTION 1202 DEFINITIONS

**1202.1 General.** The following terms are defined in Chapter 2:

**SUNROOM.**

**THERMAL ISOLATION.**

### SECTION 1203 VENTILATION

**1203.1 General.** Buildings shall be provided with natural ventilation in accordance with Section 1203.4, or mechanical ventilation in accordance with the *California Mechanical Code*.

**1203.2 Attic spaces.** Enclosed attics and enclosed rafter spaces formed where ceilings are applied directly to the underside of roof framing members shall have cross ventilation for each separate space by ventilation openings protected against the entrance of rain and snow. Blocking and bridging shall be arranged so as not to interfere with the movement of air. An airspace of not less than 1 inch (25 mm) shall be provided between the insulation and the roof sheathing. The net free ventilating area shall not be less than 1/150<sup>th</sup> of the area of the space ventilated.

#### Exceptions:

1. (*Not adopted by HCD*) The net free cross-ventilation area shall be permitted to be reduced to 1/300 provided that not less than 50 percent and not more than 80 percent of the required ventilating area provided by ventilators located in the upper portion of the space to be ventilated at least 3 feet (914 mm) above eave or cornice vents with the balance of the required ventilation provided by eave or cornice vents.
2. (*Not adopted by HCD*) The net free cross-ventilation area shall be permitted to be reduced to 1/300 where a Class I or II vapor barrier is installed on the warm-in-winter side of the ceiling.
3. Attic ventilation shall not be required when determined not necessary by the building official due to atmospheric or climatic conditions.

4. [*HCD 1 & HCD 2*] The net cross-ventilation area shall be permitted to be reduced to 1/300, provided that at least 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 no 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.

5. [*HCD 1 & HCD 2*] The net cross-ventilation area shall be permitted to be reduced to 1/300 in Climate Zones 14 and 16, where a Class I or II vapor retarder is installed on the warm-in-winter side of the ceiling.

**1203.2.1 Openings into attic.** Exterior openings into the attic space of any building intended for human occupancy shall be protected to prevent the entry of birds, squirrels, rodents, snakes and other similar creatures. Openings for ventilation having a least dimension of not less than 1/16 inch (1.6 mm) and not more than 1/4 inch (6.4 mm) shall be permitted. Openings for ventilation having a least dimension larger than 1/4 inch (6.4 mm) shall be provided with corrosion-resistant wire cloth screening, hardware cloth, perforated vinyl or similar material with openings having a least dimension of not less than 1/16 inch (1.6 mm) and not more than 1/4 inch (6.4 mm). Where combustion air is obtained from an attic area, it shall be in accordance with Chapter 7 of the *California Mechanical Code*.

**1203.3 Under-floor ventilation.** The space between the bottom of the floor joists and the earth under any building except spaces occupied by basements or cellars shall be provided with ventilation openings through foundation walls or exterior walls. Such openings shall be placed so as to provide cross ventilation of the under-floor space.

**1203.3.1 Openings for under-floor ventilation.** The net area of ventilation openings shall not be less than 1 square foot for each 150 square feet (0.67 m<sup>2</sup> for each 100 m<sup>2</sup>) of crawl-space area. Ventilation openings shall be covered for their height and width with any of the following materials, provided that the least dimension of the covering shall be not greater than 1/4 inch (6 mm):

1. Perforated sheet metal plates not less than 0.070 inch (1.8 mm) thick.
2. Expanded sheet metal plates not less than 0.047 inch (1.2 mm) thick.
3. Cast-iron grilles or gratings.
4. Extruded load-bearing vents.