



# ADDENDA

**ANSI/ASHRAE Addendum j to  
ANSI/ASHRAE Standard 62.2-2010**

# **Ventilation and Acceptable Indoor Air Quality in Low-Rise Residential Buildings**

Approved by the ASHRAE Standards Committee on January 21, 2012; by the ASHRAE Board of Directors on January 25, 2012; and by the American National Standards Institute on February 24, 2012.

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- c. offering constructive criticism for improving the Standard, or
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## FOREWORD

*This addendum adds new definitions, revises Sections 6 and 7, and adds a new Section 8 with requirements specific to multifamily buildings. The changes in requirements account for unique features of multifamily buildings as compared to single-family buildings and include (1) adjusting the whole-building ventilation rate due to the fact that infiltration cannot be relied on for individual units in multifamily buildings; (2) provision of ventilation to common spaces and common parking garages, which do not exist in single-family buildings; and (3) prevention of contaminant transfer from other units through walls or ducts.*

***Note:** In this addendum, changes to the current standard are indicated in the text by underlining (for additions) and ~~strikethrough~~ (for deletions) unless the instructions specifically mention some other means of indicating the changes.*

### Addendum j to Standard 62.2-2010

*[Add the following new definitions to Section 3.]*

***dwelling unit:*** *a single unit providing complete, independent living facilities for one or more persons, including permanent provisions for living, sleeping, eating, cooking, and sanitation.*

***mixed-use building:*** *a building containing commercial space (corridors, parking garages, and other common spaces may be present but are not classified as commercial space) in addition to dwelling units.*

***multifamily building:*** *a building containing multiple dwelling units.*

*[Revise Sections 6.1 and 6.1.1 as follows:]*

**6.1 Adjacent Spaces.** Measures shall be taken to minimize air movement across envelope components separating dwelling units, and to dwelling units occupiable spaces from garages, unconditioned crawl spaces, and unconditioned attics.

Supply and balanced ventilation systems shall be designed and constructed to provide ventilation air directly from the outdoors.

**6.1.1 Multifamily Buildings.** All doors between dwelling units and common hallways shall be gasketed or made substantially airtight with weather stripping except when the ventilation system design explicitly requires transfer air from corridors into units.

*[Revise Section 7.3 as follows.]*

**7.3 Multibranch Exhaust Ducting.** If more than one of the exhaust fans in a dwelling unit shares a common exhaust duct, each fan shall be equipped with a back-draft damper to prevent the recirculation of exhaust air from one room to another through the exhaust ducting system. ~~Exhaust fans in separate dwelling units shall not share a common exhaust duct. Exhaust outlets from more than one dwelling unit may be served by a single exhaust fan downstream of all the exhaust inlets if the fan is designed and intended to run continuously or if each outlet is equipped with a back-draft damper to prevent cross-contamination when the fan is not running.~~

*[Add new Section 8 as follows.]*

## 8. MULTIFAMILY BUILDINGS

**8.1 Summary.** This section provides requirements for multifamily residential buildings. Multifamily buildings shall meet all the requirements of this standard, except as modified in this section.

**8.2 Whole-Building Mechanical Ventilation.** For multifamily buildings, the term “building” in Section 4 refers to a single dwelling unit.

**8.2.1 Ventilation Rate.** The required dwelling unit mechanical ventilation rate,  $Q_{fan}$ , shall be the rate in Section 4.1 plus 0.02 cfm per ft<sup>2</sup> (10 L/s per 100 m<sup>2</sup>) of floor area or, equivalently, the rate from Tables 8.2.1a and 8.2.1b. The required mechanical ventilation rate shall not be reduced as described in Section 4.1.3.

**8.2.2 Other Spaces.** Corridors and other common areas within the conditioned space shall be provided with ventilation at a rate of 0.06 cfm per ft<sup>2</sup> (30 L/s per 100 m<sup>2</sup>) of floor area.

**8.2.3 Mixed-Use Buildings.** Nonresidential spaces in mixed-use buildings shall meet the requirements of ANSI/ASHRAE Standard 62.1, *Ventilation for Acceptable Indoor Air Quality*.

**TABLE 8.2.1a (I-P)**  
**Dwelling Unit Ventilation Air Requirements, cfm**

Floor Area, ft <sup>2</sup>	Bedrooms				
	1	2	3	4	≥5
<500	30	40	45	55	60
500–1000	45	55	60	70	75
1001–1500	60	70	75	85	90
1501–2000	75	85	90	100	105
2001–2500	90	100	105	115	120
2501–3000	105	115	120	130	135
3001–3500	120	130	135	145	150
≥3501	135	145	150	160	165

**TABLE 8.2.1b (SI)**  
**Dwelling Unit Ventilation Air Requirements, L/s**

Floor Area, m <sup>2</sup>	Bedrooms				
	1	2	3	4	>5
<46	14	19	21	26	28
47–93	21	26	28	33	35
94–139	28	33	35	40	42
140–186	35	40	42	47	50
187–232	42	47	50	54	57
233–279	50	54	57	61	64
280–325	57	61	64	68	70
>326	63	68	70	75	78

**8.3 Parking Garage Exhaust.** Common parking garages adjoining occupiable spaces shall be provided with exhaust ventilation at a rate of 0.4 cfm per ft<sup>2</sup> (200 L/s per 100 m<sup>2</sup>) of floor area.

**Exception:** Parking garages with at least two walls that are at least 50% open to the outside.

#### 8.4 Other Requirements

**8.4.1 Transfer Air.** Measures shall be taken to minimize air movement across envelope components separating dwelling units, including sealing penetrations in the common walls, ceilings, and floors of each unit and by sealing vertical chases adjacent to the units. All doors between dwelling units and common hallways shall be gasketed or made substantially airtight.

**8.4.1.1 Compliance.** One method of demonstrating compliance with Section 8.4.1 shall be to verify a leakage rate below a maximum of 0.2 cfm per ft<sup>2</sup> (100 L/s per 100 m<sup>2</sup>) of the dwelling unit envelope area (i.e., the sum of the area of walls between dwelling units, exterior walls, ceiling, and floor) at a test pressure of 50 Pa by a blower door test conducted in accordance with either ANSI/ASTM-E779-03,

*Standard Test Method for Determining Air Leakage Rate By Fan Pressurization*, or ANSI/ASTM-E1827, *Standard Test Methods for Determining Airtightness of Buildings Using an Orifice Blower Door*. The test shall be conducted with the dwelling unit as if it were exposed to outdoor air on all sides, top, and bottom by opening doors and windows of adjacent dwelling units.

#### 8.5 Air-Moving Equipment

**8.5.1 Exhaust Ducts.** Exhaust fans in separate dwelling units shall not share a common exhaust duct. Exhaust inlets from more than one dwelling unit may be served by a single exhaust fan downstream of all the exhaust inlets if the fan is designed and intended to run continuously or if each inlet is equipped with a back-draft damper to prevent cross-contamination when the fan is not running.

**8.5.2 Supply Ducts.** Supply outlets to more than one dwelling unit may be served by a single fan upstream of all the supply outlets if the fan is designed and intended to run continuously or if each supply outlet is equipped with a back-draft damper to prevent cross-contamination when the fan is not running.

[Add the following references to the current Section 9 as shown.]

*ANSI/ASHRAE Standard 62.1-2010, Ventilation for Acceptable Indoor Air Quality*. American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc., Atlanta, GA.

ANSI/ASTM E779-03, “*Standard Test Method for Determining Air Leakage Rate By Fan Pressurization*,” ASTM International, West Conshohocken, PA.

ANSI/ASTM E1827-07 “*Standard Test Methods for Determining Airtightness of Buildings Using an Orifice Blower Door*” ASTM International, West Conshohocken, PA.

[Renumber the existing Sections 8 and 9, including the figures and tables.]

#### 98. CLIMATE DATA

#### 109. REFERENCES

**POLICY STATEMENT DEFINING ASHRAE'S CONCERN  
FOR THE ENVIRONMENTAL IMPACT OF ITS ACTIVITIES**

ASHRAE is concerned with the impact of its members' activities on both the indoor and outdoor environment. ASHRAE's members will strive to minimize any possible deleterious effect on the indoor and outdoor environment of the systems and components in their responsibility while maximizing the beneficial effects these systems provide, consistent with accepted standards and the practical state of the art.

ASHRAE's short-range goal is to ensure that the systems and components within its scope do not impact the indoor and outdoor environment to a greater extent than specified by the standards and guidelines as established by itself and other responsible bodies.

As an ongoing goal, ASHRAE will, through its Standards Committee and extensive technical committee structure, continue to generate up-to-date standards and guidelines where appropriate and adopt, recommend, and promote those new and revised standards developed by other responsible organizations.

Through its *Handbook*, appropriate chapters will contain up-to-date standards and design considerations as the material is systematically revised.

ASHRAE will take the lead with respect to dissemination of environmental information of its primary interest and will seek out and disseminate information from other responsible organizations that is pertinent, as guides to updating standards and guidelines.

The effects of the design and selection of equipment and systems will be considered within the scope of the system's intended use and expected misuse. The disposal of hazardous materials, if any, will also be considered.

ASHRAE's primary concern for environmental impact will be at the site where equipment within ASHRAE's scope operates. However, energy source selection and the possible environmental impact due to the energy source and energy transportation will be considered where possible. Recommendations concerning energy source selection should be made by its members.

