



**BSR/ASHRAE Addendum s
to ANSI/ASHRAE Standard 62.2-2022**

Public Review Draft

Proposed Addendum s to Standard 62.2-2022, Ventilation and Acceptable Indoor Air Quality in Residential Buildings

**First Public Review (November 2024)
(Draft shows Proposed Changes to Current Standard)**

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(This foreword is not part of this standard. It is merely informative and does not contain requirements necessary for conformance to the standard. It has not been processed according to the ANSI requirements for a standard and may contain material that has not been subject to public review or a consensus process. Unresolved objectors on informative material are not offered the right to appeal at ASHRAE or ANSI.)

FOREWORD

Proposed Addendum s adds an informative appendix on how to implement infectious risk management to reduce the risk of disease transmission due to infectious aerosols in dwelling units. As an informative appendix, this addendum is optional, meaning that compliance with the standard does not require compliance with the appendix. But the addendum is written in enforceable language so that it can be adopted by an authority having jurisdiction, if one chooses. The appendix is based on ASHRAE Standard 241, Control of Infectious Aerosols.

[Note to Reviewers: This addendum makes proposed changes to the current standard. These changes are indicated in the text by underlining (for additions) and ~~striketrough~~ (for deletions) except where the reviewer instructions specifically describe some other means of showing the changes. Only these changes to the current standard are open for review and comment at this time. Additional material is provided for context only and is not open for comment except as it relates to the proposed changes.]

Addendum s to 62.2-2022

Add the following new definition to Section 3.1.

3.1 Terms

equivalent clean airflow: the theoretical flow rate of pathogen-free air that, if distributed uniformly within the breathing zone, would have the same effect on infectious aerosol concentration as the sum of actual outdoor airflow, filtered airflow, and inactivation of infectious aerosols.

Add a new Informative Appendix X as shown below.

(This appendix is not part of this standard. It is merely informative and does not contain requirements necessary for conformance to the standard. It has not been processed according to the ANSI requirements for a standard and may contain material that has not been subject to public review or a consensus process. Unresolved objectors on informative material are not offered the right to appeal at ASHRAE or ANSI.)

INFORMATIVE APPENDIX X **CONTROL OF INFECTIOUS AEROSOLS**

X1 Overview

This appendix provides prescriptive requirements for infectious risk management mode (IRMM) to reduce risk of long-range disease transmission due to infectious aerosols in dwelling units.

X2 Dwelling Unit Ventilation Rate During Infection Risk Management Mode

Dwelling units shall comply with ASHRAE Standard 241 or Section X.2.1.

X2.1 The ventilation rate (Q_{tot}) required in the dwelling unit to mitigate long-range transmission risk during

infection risk management mode shall be no less than the greater of Q_{tot} as determined in Section 4.1.1 and $Q_{tot,IRMM}$ as determined in accordance with Equation X-1. Infiltration credit per Section 4.1.2 shall not be taken.

$$Q_{tot,IRMM} = ECA_i \times P_{DU,IRMM} - \sum V_{ACS} \quad (X-1)$$

where

$Q_{tot,IRMM}$ = minimum total required ventilation rate during all occupied hours in IRMM, cfm (L/s)

ECA_i = required *equivalent clean airflow* per person for infection risk mitigation, 30 cfm (15 L/s) per person;

$P_{DU,IRMM}$ = number of people in the dwelling unit in IRMM. $P_{DU,IRMM}$ shall be no less than the number of occupants per Section 4.1.3.

V_{ACS} = *infectious air cleaning system equivalent clean airflow rate*, determined per Section 7 of ASHRAE Standard 241, cfm (L/s)

X3 Additional Requirements

X3.1 General Requirements

X3.1.1 All toilets shall be provided with lids. The Building Readiness Plan (BRP) shall indicate that lids are to be closed when flushing.

X3.1.2 All plumbing traps shall be filled with water.

X3.1.3 Fans used to meet the requirements of this appendix that are connected to ductwork exceeding 3 ft (1 m) shall have their flows measured in accordance with either Section 4.3 or 5.4.

X3.2 Building Readiness Plan (BRP). A BRP shall be created to describe the engineering and non-engineering controls and their operation that will be used to achieve its *total required ventilation rate* ($Q_{tot,IRMM}$) during IRMM. The BRP shall be included in a section of the operations and maintenance plan required by Section 8 of Standard 62.2. The BRP shall require that local exhaust ventilation be operated in bathrooms and toilets when in use.

X3.3 Multifamily Dwellings. Existing buildings with forced-air HVAC systems supplying air that is returned through ductwork from more than one dwelling unit shall have at least MERV13A filtration or ePM1 of 50 % per Table 7-1 of Standard 241 filtration or equivalent. Otherwise the HVAC systems shall be blocked off and portable HVAC and air filtration/*air cleaning* units shall be provided.

X4 Separation Areas

When a dwelling unit has infected or vulnerable occupants, a separate fully-enclosed space shall be used as a separation area. It shall be permitted to have a single space comply non-simultaneously with both Section X4.1 and X4.2 provided operation and any reconfiguration is described in the BRP. The BRP shall specify what protections caregivers shall take when entering a separation area. Where the separation area does not have restroom facilities, the BRP shall document how occupants of that area will access restroom facilities outside the area while minimizing infection risk.

X4.1 Separation Area for Infected Occupants. The separation area for infected occupants shall meet either X4.1.1 or X4.1.2.

X4.1.1 The separation area shall be air sealed from the rest of the dwelling unit. Unsealed transfer grilles or jump ducts shall have a damper that operates during IRMM to prevent flow from the separation space to other parts of

the dwelling unit. An exhaust ventilation system capable of a minimum of 140 cfm, shall be operated to exhaust the separation area to outdoors. A fan installed in a window or other opening shall be permitted. Any supply registers and return grilles in the room that are part of the dwelling's central conditioning systems shall be sealed, with temporary space conditioning provided as needed.

X4.1.2 The separation area shall contain an exhaust ventilation system that can maintain a measured negative pressure of 5 Pa with respect to the rest of the dwelling unit.

X4.2 Separation Area for Vulnerable Occupants. The separation area for vulnerable occupants, as determined in accordance with the Authority Having Jurisdiction, shall meet either X4.2.1 or X4.2.2. Air that is mechanically recirculated from other parts of the dwelling unit into the separation area, such as via supply registers, shall meet the requirements of X3.3.

Exception to X4.2: No separation area for vulnerable occupants is required when the dwelling unit *equivalent clean airflow* meets or exceeds required V_{ECAi} per Equation x1-1 using ECA_i of 70 cfm (35 L/s) per person. For attached dwelling units, any ventilation greater than Q_{tot} from Section 4.1.1 shall not be provided by exhaust ventilation.

X4.2.1 The separation area shall be air sealed from other parts of the dwelling unit. Unsealed transfer grilles or jump ducts shall have a damper that operates during IRMM to prevent flow to the separation space from other parts of the dwelling unit. A supply ventilation system capable of a minimum of 140 cfm shall be operated to supply equivalent clean air to the separation area. A fan installed in a window or other opening shall be permitted.

X4.2.2 The separation area shall contain a supply system that can maintain a measured positive pressure of 5 Pa with respect to other parts of the dwelling unit is required.

X5. References

X5.1 ASHRAE Standard 241-2023, *Control of Infectious Aerosols*.