STANDARD

ANSI/ASHRAE/ASHE Standard 170-2025

(Supersedes ANSI/ASHRAE/ASHE Standard 170-2021)

Includes ANSI/ASHRAE/ASHE addenda listed in Appendix G

Ventilation of Health Care Facilities

See Informative Appendix G for approval dates by ASHRAE, the American Society for Health Care Engineering, and the American National Standards Institute.

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Ventilation of Health Care Facilities

NOTE

Approved addenda, errata, or interpretations for this standard can be downloaded free of charge from the ASHRAE website at www.ashrae.org/technology.

(This foreword is not part of this standard. It is merely informative and dues 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

The 2025 edition of ASHRAE/ASHE Standard 170 includes significant improvements to the 2021 edition. The 2025 edition continues Us collaboration with FGI and the upcoming 2026 publications of the following codes:

- *FGI Code for Planning ami Design of Hospitals*
- *FGI Code for PIanning and Design of Ontpatient Settings*
- *FGI Code for Planning and Design of Residential Care and Support Settings*

As a continuous maintenance document. Standard 170 publishes addenda continually and updates on a four-year cycle in alignment with the FGI documents.

Improvements to the 2025 edition include the following:

- *Addition of requirements for the optional use of natural ventilation*
- *Calculation of total outdoor air at the systems level for systems serving both Standards 170 and 62A spaces*
- *Updated requirements for Class 2 and 3 imaging rooms and their associated nonimaging spaces and clarification regarding nuclear medicine*
- *ClarificaHon of unoccupied turndown requirements in ontpatient spaces*
- *Clarification of separation distances and stack discharge heights based on complex situations*
- *Additional junction of space types for behavioral health*
- *Updated cooling and heating reserve capacity and fuel on-site requirements*
- *Reorganized and updated Section 10 for ventilation during construction*
- *Indication of equivalent acceptable alternative filtration testing requirements to allow for easier international use of the standard*
- *Updates to have similar requirements for similar space types across the different tablest when appropriate*
- *Clarificalion of hranchoscopy requirements*
- *Provision of new space types to coordinate with FGI 2026 space types*

The committee appreciates the hard work invested in this edition by everyone who participated. We are grateful for the partnership with FGI and other ASHRAE committees. The committee also appreciates the feedback received from the public review and continuous maintenance proposal processes. Future input from the public is always welcome.

This standard does not constitute a design guide. Rather, it comprises a set of minimum requirements intended for adoption by code-enforcing agencies. For wide-ranging guidancer we refer the user to ASHRAE Handbook—HVAC Applications, HVAC Design Manual for Hospitals and Clinics, and ASHRAE/ASHE Guideline 43-2025, Operations Guideline for Ventilation of Health Care Facilities.

Standard 170 originated with an agreement between ASHRAE and FGI (publishers of the FGI Codes/Guidelines) that an ASHRAE standard would provide the best location for ventilation requirements for the health care industry. The American Society for Health Care Engineering (ASHE) was also included in this process, which resulted in the initial (2008) edition of this standard—the first standard jointly sponsored by ASHRAE and ASHE.

1. PURPOSE

The purpose of this standard is to define ventilalion system design requirements that provide environmental control in health care facilities.

2. SCOPE

2.1 The requirements in this standard apply to patient care areas, resident care areas, and related support areas within health care facilities.

2.2 This standard applies to new buildings, additions to existing buildings, and those alterations to existing buildings that are identified within this standard.

2.3 This standard considers chemical, physical, and biological contaminants that can affect the delivery of medical care to patients and residents; the convalescence of patients and residents; and the safety of patients, residents, health care workers, and visitors.

2.4 This standard establishes design requirements for temperature and humidity.

2.5 This standard establishes design requirements for odor control and asepsis.

2.6 This standard establishes design requirements for ventilation rates, including, but not limited to, outdoor air to serve health care facilities.

2.7 This standard docs not establish comprehensive thermal comfort design requirements.

3. DEFINITIONS

absorption distance: the distance downstream of a humidifier that is required for all moisture to be absorbed into the airstream.

addition: an extension or increase in floor area or height of a building, building system, or equipment.

airborne infection isolation (AII): the isolation of patients infected with organisms spread by airborne droplet nuclei less than 5 pm in diameter. For the purposes of this standard, the abbreviation "AH" refers to the room that provides isolation. ***(Informative Note:*** See ***FGI Codes*** [F1,F2,F3] and **CDC** guidance [F4 F5] in Informative Appendix F.)

airborne infection isolation (AH) room: a room that is designed according to the requirements of this standard and that is intended to provide airborne infection isolation.

alteration: a significant change in the function or size of a space, in the use of its systems, or in the use of its equipment, either through rearrangement, replacement, or addition. Routine maintenance and service shall not constitute an alteration.

authority having jurisdiction (AHJ): the agent or agency responsible for enforcing this standard.

average velocity: the volumetric flow rate obtained by dividing the air quanlity issuing from an air distribution device by the nominal face area of the device.

building: a structure that is wholly or partially enclosed within exterior walls and a roof, or within exterior and party walls and a roof, and that affords shelter to persons, animals, or property. In this standard, a building is a structure intended for use as a hospital or health care facility.

equipment: devices for heating, ventilating, and/or air conditioning, including, but not limited to, furnaces, boilers, air conditioners, heat pumps, chillers, and heat exchangers.

facility: a discrete physical entity composed of various functional units as described in the ***FGI Codes***. [***Informative Note:*** This may be a portion of a building or a portion of a floor within a building. (For more information, refer to the ***FGI Codes*** [FFF2tF3] in Informative Appendix FP)

health care facility: an inpatient, outpatient, or residential health, care, and support facility.

heating and cooling central systems: systems that provide heating or cooling fluid for distribution via pumps or pressure to more than a single air-distribution system in the facility.

HEFA filter: a high-efficiency particulate air (HEPA) filter is a particulate air filter tested to a minimum particle capture efficiency value according lo one of the following test methods:

a. IEST RP-CC001—Minimum efficiency of **Type** A of 99.97% at 0.3 pm particles
b. EN-1822—Minimum efficiency of Type H 13 of 99.95% at MPPS (most penetrating particle size)
c. ISO 29463—Minimum efficiency of Class 35H of 99.95% at MPPS (most penetrating particle size)

high-risk immunocompromised patients: patients who have the greatest risk of infection caused by airborne or waterborne microorganisms. These patients include, but are not limited to, allogeneic stem-cell transplant patients and intensive chemotherapy patients.

hybrid operating room: a room that meets the definition of an operating room (OR) and has permanently installed equipment to enable diagnostic imaging before, during, and after surgical procedures. (***Informative Note:*** This space is functionally equivalent to Class 3 imaging rooms. Imaging equipment may include MRl, fixed single-plane and bi-plane tomographic imaging systems, and computed tomography equipment. Use of portable imaging technology does not make an OR a hybrid operating room.)

immunocompromised patients: patients whose immune mechanisms arc deficient because of immunologic disorders, chronic diseases, or immunosuppressive therapy.

Informative Notes:

1. Examples of immunologic disorders include human immunodeficiency virus (HIV) infection or congenital immune deficiency syndrome.
2. Examples of chronic diseases include diabetes, cancer, emphysema, or cardiac failure.

3. Examples of immunosuppressive therapy include radiation, cytotoxic chemotherapy, antirejection medication, or steroids.
4. For more information, see CDC guidance[4] in Informative Appendix F.

infection control risk assessment (tCRA): a determination of the potential risk of transmission of various infectious agents in the facility, a classification of those risks, and a list of required practices for mitigating those risks during construction or renovation.

inpatient: a patient whose stay at the health care facility is anticipated to require twenty-four hours or more of patient care.

nonaspirating diffuser: a diffuser that has unidirectional downward airflow from the ceiling with minimum entrainment of room air. Classified as ASHRAE Group E, these diffusers generally have very low average velocity. For the purposes of this standard, the performance of these diffusers is to be measured in terms of average velocity.

nursing facility: a facility that provides resident care, treatment, and services areas (including skilled nursing, subacute care, and Alzheimer's and other dementia facilities).

outpatient: a patient whose stay at the health care facility does not meet the standard's definition of "inpatient."

patient: a person receiving medical, surgical, or psychiatric care.

patient care area: an area used primarily for the provision of clinical care to patients. Such care includes monitoring, evaluation, and treatment services.

protective environment (PE) room: a patient room that is designed according to this standard and intended to protect a high-risk immunocompromised patient from human and environmental airborne pathogens.

resident: a person living and receiving health, care, and/or support services in a nursing home, hospice facility, assisted living facility, independent living setting, or inpatient rehabilitation facility.

resident care area: an area used primarily for the provision of health and/or care services to residents. {***Informative Note:*** Resident care and service include, but are not limited to, activities, personal care, food service, and medication administration.)

residential care and support facilities: category of facilities in which services such as assistance with activities of daily living and/or instrumental activities of daily living are provided to residents. For the purposes of this standard, these are assisted-living facilities.

residential health facilities: category of facilities in which long-term health services are provided. For the purposes of this standard. these are nursing homes and hospice facilities.

triage: the process of determining the severity of the illness of or injury to patients so that those who have the most emergent illnesscs/injuries can be treated immediately and those less severely injured can be treated later or in another area.

4. COMPLIANCE

4.1 Compliance Requirements

4.1.J New **Buildings.** New buildings shall comply with the provisions of this standard.

4.1.2 Existing Buildings

4.1.2.1 Additions to Existing Buildings. Additions shall comply with the provisions of this standard.

4.1.2.2 Alterations to Existing Buildings. Portions of a heating, ventilating, and air-conditioning system and other systems and equipment that are being altered shall comply with the applicable requirements of this standard.

4.1.2.2.1 Heating, Ventilation, and Air-Conditioning System Alterations. Alterations to mechanical systems serving the building heating, cooling, or ventilating needs shall comply with the requirements of Section 6, "Systems and Equipment," applicable to those specific portions of the building and its systems that are being altered. Any new mechanical equipment installed in conjunction with the alteration as a direct replacement of existing mechanical equipment shall comply with the provisions of Sections 6.2, 6.4, 6.5, and 6.6.

44.2.2.2 Space Alterations. Alterations to spaces listed in Tables 7-1, 8-1, 8-2, and 9-1 shall comply with the requirements of Sections 6.7, 7, 8, and 9 applicable to those specific portions of the building and its systems that arc being altered. Any alteration to existing patient or resident care space in a building that will continue to treat patients during construction shall comply whLh Sections 5.4, 5.5, and 10.1.

4.2 Administrative Requirements. Administrative requirements relating to permit requirements, enforcement by the authority having jurisdiction (AHJ), interpretations, claims of exemption, approved calculation methods, rights of approved calculation methods, and rights of appeal arc specified by the AHJ.

4.3 Compliance Documents

4.3.1 General. Compliance documents are those plans, specifications, engineering calculations, diagrams, reports, and other data that are approved as part of the permit by the AHJ. The compliance documents shall include all specific construction-related requirements of the owner's infection control risk assessment.

4.3.2 Construction Details. Compliance documents shall contain all pertinent data and features of the building, equipment, and systems in sufficient detail to allow a determination of compliance by the AHJ and to indicate compliance with the requirements of this standard.

4.3.3 Supplemental Information. Supplemental information necessary to verify compliance with this standard, such as calculations, worksheets, compliance forms, vendor literature, or other data, shall be made available when required by the AHJ.

4.4 **Alternate Materials, Methods of Construction, or Design.** The provisions of this standard are not intended to prevent the use of any material, method of construction, design, or building system not specifically prescribed herein, provided that such construction, design, or building system has been approved by the AIU as meeting the intent of this standard

4.5 Informative Appendices. The informative appendices to this standard and informative notes located within this standard contain recommendations, explanations, and other nonmandatory information and are not part of this standard.

4.6 Criteria Ranges. This standard often specifies a range of values that will comply with a specific requirement of the standard. If it is permitted by the AHJ, compliance with this requirement may be achieved by the presentation of compliance documents that demonstrate a system's ability to perform within the specified range.

4.7 **Space Planning.** In a building that contains spaces programmed for inpatient use as well as spaces programmed for outpatient use, the inpatient care spaces shall be designed solely for inpatient use, and the outpatient care spaces shall be designed solely for outpatient use. Individual spaces that arc dual programmed for either inpatient use or outpatient use shall meet the design requirements for inpatient use of the space.

5. PLANNING

5.1 General. Space programming and planning details that impact the 11VAC design shall be identified and addressed in the planning phase of design.

Facilities without operating rooms, that consist of spaces designed solely for outpatient or residential health, care, and support use, need only comply with Seel ions 5.2, 5.3, and 5.4.

5.2 **Owner Requirements.** Owners/managers of health care facilities shall do the following:

a. Space Program: Prepare a space program, including the clinical service expected in each space and specific user equipment to be used. The program shall include space names and paragraph numbering references from the applicable version of the relevant *FGI Codes* for each space noted within the program. {***Informative Note:*** For more information, refer to the *FGI Codes* [F1,F2,F3] in Informative Appendix F.) Specify needs for temperature, humidity, air filtration, localized and general exhaust, and pressure control that arc not covered or arc different than the requirements in this standard.
b. Mcdical/Clinical Organizations: Provide specific medical and clinical requirements that are different than the requirements in this standard.
c. Facility Operational Plan: Provide an operational plan in event of extended power or fuel outage. See Sections 6.1.2.1 and 6.1.2.2.

5.3 **Planning for HVAC Services in** a New **Facility.** Design documents for new construction shall meet the following requirements:

a. Mechanical Equipment
    1. Locate mechanical rooms to avoid the intrusion of maintenance personnel into surgical, critical-care-patient or other patient- or mcdical-staff-scnsitivc areas.
    2. Provide sufficient space to comply with HVAC equipment manufacturers' minimum required access for operation, maintenance, and replacement.
    3. Provide safe and practical means of accessing equipment.
    4. Floors in mechanical rooms shall be sealed—including sealing around all penetrations—when they are above surgical suites and critical care spaces.
b. Space Allocation for HVAC Distribution Systems
    1. HVAC Distribution Systems: Coordinate ceiling plenum height, underfloor, and other areas where HVAC distribution systems are intended to be installed to allow for installation, inspection, and maintenance.

2. Mechanical Shafts: Allow for needed access for damper installation (if required), inspection, and service. Access doors shall be sized to meet code minimum for service requirements.

5.4 Planning for the HVAC Services in an Existing Facility. If any existing air-handling, cooling, or heating equipment is to be reused, the designer shall evaluate the capacity of the equipment to determine whether it will meet the requirements of this standard for the remodeled space.

5.5 Planning for Infection Control During Remodeling of an Existing Facility. Where required, prior to beginning modifications or remodeling of HVAC systems in an existing facility, an owner shall conduct an infection control risk assessment (ICRA). The ICRA shall establish those procedures required to minimize the disruption of facility operation and the distribution of dust, odors, and particulates.

5.6 Planning for HVAC Systems Operating During Construction. Owner and design team shall determine if, and under what conditions, the permanent HVAC systems can be used for providing temporary heating, cooling, and/or dehumidifying during construction.

5.7 **Emergency Conditions.** HVAC system design and arrangement shall address the applicable recommendations contained in the facility's operational and emergency plan.

Informative Note: Refer to Informative Appendix E for additional guidance and considerations.

6. SYSTEMS AND EQUIPMENT

Air-handling and distribution systems are required to provide health care facilities not only with a comfortable environment but also with ventilation to dilute and remove contaminants, provide conditioned air, and assist in controlling the transmission of airborne infection. In order to meet these requirements, air-handling and distribution systems shall be designed according to the requirements of this standard.

6.1 Utilities

6.1.1 Ventilation Upon Loss of Electrical Power. The space ventilation and pressure relationship requirements of Tables 7-1, 8-1, and 9-1 shall be maintained for the following spaces, even in the event of loss of normal electrical power:

a. Airborne infection isolation (AII) rooms
b. Protective environment (PE) rooms (inpatient only)
c. Operating rooms (ORs), including delivery rooms (Cesarean) (inpatient and outpatient only)

Exception to 6.1.1: When an essential power system is not provided or required, operation of space ventilation and pressure relationships is not required.

Informative Note: For further information, see NFPA 99.

6.1.2 Heating and Cooling Central Systems

6.1.2.1 For facilities that have spaces listed in Sections 7.1, 8.1, and 9.1 of this standard, design the heating and cooling central systems in number and arrangement sufficient to accommodate the facility needs (reserve capacity), even when any one of the sources is not operating due to failure or maintenance. The reserve capacity shall be a minimum of 50% of the peak heating and cooling design loads, or as required by the owner's project requirements (OPR) or operational plan.

Informative Note: The 50% reserve capacity is not intended to indicate individual equipment quantity and size but rather that when the largest piece of equipment fails, what remains can satisfy the 50% of the design cooling or heating load.

Exception to 6.1.2.1: Reserve capacity for heating is not required if the ASHRAE 99% heating dry-bulb temperature for the facility is greater than or equal to 25°F (–4°C).[FIO]

6.1.2.2 For facilities that have spaces listed in Sections 7.1 and 9.1 of this standard, provide fuel/energy storage to ensure facility heating and cooling operation for a minimum of 24 hours for the reserve design capacity upon loss of primary energy source.

Informative Notes:

1. Refer to NFPA 99 [r6] for emergency power requirements.
2. Facilities should evaluate water storage capacity for heating and cooling systems based on their operational needs.

6.2 Air-Handling Unit (AHU) Design

6.2.1 AHU Casing. The casing of the AHU shall be designed to prevent water intrusion, resist corrosion, and permit access for inspection and maintenance. All airstream surfaces of AHUs shall comply with ASHRAE Standard 62.1,[1] Section 5.11.

Table 6-1 Air Intake Minimum Separation Distance

Potential Outdoor Contaminant Source	Minimum Distance, ft (m)
Class 2 ait outlet	10 (3)
Required exhaust from AS1 IRAE Standard 62.1, Table 6-2 of this standard, or other codes	25 (7.5)
Required exhaust from Table 7-1, 8-1, 8-2, or 9-1 of this standard or Class 3 air exhaust outlet	25 (7.5)
Required exhaust from Section 6.3.2.2 of this standard or Class 4 air exhaust outlet	30 (10)
Plumbing vents	25 (7.5)
Vents, chimneys, and flues from combustion appliances and equipment	25(7.5)
Garage entry, automobile loading area, or drive-in queue	See Note 1
Truck loading area or dock, bus parkmg/idling area	See Note 1
Driveway, landscaped grade, sidewalk, street, or parking place directly below intake	5 (1.6)
Thoroughfare with high vehicle traffic volume	See Note 1
Roof or other above-grade surface directly below intake	3 (1)
Garbage storagc/pick-up area, dumpsters	Sec Note 1
Cooling tower exhaust, intake, or basin	25 (7.5)

Note 1: Refer to ASHRAF Standard 62.1,[1] Tabic 5-1.

6.3 Outdoor Air [makes and Exhaust Discharges

6.3.1 Outdoor Air Intakes

Exception to 6.3.1: Equipment serving notisurgical spaces designed solely for outpatient or residential health, care, and support use shall not be required to comply with Sections 6.3.1.1, 6.3.1.2, 6.3.1.3, or 6.3.1.4, provided the equipment complies with ASHRAE Standard 62. ITable 5-1.

6.3.1.1 General. Outdoor air intakes for AHUs shall be located such that the shortest distance from the intake to any specific potential outdoor contaminant source shall be equal to or greater than the separation distance listed in Table 6-1 and comply with all other requirements of this section. New facilities with moderate-to-high risk of natural or man-made extraordinary incidents shall locate air intakes away from public access. All intakes shall be designed to prevent the entrainment of wind-driven rain, shall contain features for draining away precipitation, and shall be equipped with a birdscreen of mesh no smaller than 0.5 in. (13 mm).

Exceptions to 6.3.1.1:

1. For gas-fired, packaged rooftop units, the separation distance of the unit's outdoor air intake from its Hue may be less than 25 ft (8 m). The separation distance shall be greater than or equal to the distance prescribed inASIIRAE Standard 62.1 Section 5.4.1.2.
2. For plumbing vents terminating with stack-type air admittance valves installed less than 3 ft (1 m) above the level of the outdoor air intake, the minimum separation distance may be 10 ft (3 m). For plumbing vents terminating w ith stack-type air admittance valves installed at least 3 ft (1 m) above the level of the outdoor air intake, the minimum separation distance may be 3 ft (1 m).
3. If permitted by the AHJ, based on an engineering analysis of reentrainment, separation distances may be decreased below Tabic 6-1 values for cooling towers and exhaust and vent discharges. and an alternate location may be used. The submitted reentrainment analysis shall demonstrate that an exhaust discharge oullei located at a distance less than required by Table 6-1 provides a lower concentration of reentrainment than all the areas located at a distance greater than required by Table 6-1 on the roof level where the exhaust discharge is located. (***Informative Note:*** For example, located adjacent to an air intake but with the exhaust discharge point above the top of the air intake.)

6.3.1.2 Air-Handling System Controls. Provide air-handling systems and equipment with manual or automatic controls to maintain the required space minimum outdoor airflow and space minimum total air changes per hour under all design conditions, including any space unoccupied turndown conditions.

6.3.1.2.1 All systems shall allow for field verification of outdoor air intake flowr during operation and be provided with manual or automatic controls to maintain not less than the outdoor air intake flow required by Section 7, Section 8, and Section 9 under all load conditions or unoccupied turndown conditions.

6.3.1.3 **Relief Air.** Air that could be returned to the AHU from the occupied spaces but is being discharged to the outdoors to maintain building pressurization (such as during air-side economizer operation) is

exempt from the separation requirement listed in Table 6-1 for the respective AHL's outdoor air intake opening.

Informative Note: For more information, see Informative Appendix C and ASHRAE Standard 62.1.[i]

6.3.1.4 Areaways. In the case of an areaway, the bottom of the air intake opening shall be at least 6 ft (2 m) above grade. The bottom of the air intake opening from the areaway into the building shall be at least 3 ft (1 m) above the bottom of the areaway.

Informative Note: See Informative Appendix A, Figure A-1.

6.3.2 Exhaust Discharges

6.3.2.1 General. Exhaust discharge outlets that discharge air from All rooms. bronchoscopy rooms, emergency department public waiting areas, nuclear medicine hot labs, radiology wailing rooms programmed to hold patients who arc waiting for chest x-rays for diagnosis of respiratory disease, pharmacy hazardous-drug exhausted enclosures, and laboratory work-area chemical fume hoods shall

a. Be designed so that all ductwork within the building is under negative pressure.

   Exception to (a): Ductwork located within mechanical equipment rooms. Positive-pressure exhaust ductwork located within mechanical equipment rooms shall be sealed in accordance with SMACNA duet Seal Class A.“

b. Re located such that they reduce the potential for the recirculation of exhausted air back into the building.

6.3.2.2 Additional Requirements

a. Exhaust discharge outlets from AH rooms, bronchoscopy rooms, pharmacy hazardous-drug exhausted enclosures, and laboratory work-area chemical fume hoods shall additionally be arranged to discharge to the atmosphere in a vertical direction (with no rain cap or other device to impede the vertical momentum) and meet the following:

   1. A discharge termination shall be a minimum of 10 ft (3 m) above service access level.
   2. Discharge termination shall be higher than any roof surface within 4 ft (1.2 m).
   3. Discharge termination shall be a minimum of 6 ft (1.8 m) from exterior walls.
   4 Discharge termination shall be a minimum of 30 ft (10 m) from outdoor air intakes, openable windows/doors, and areas that arc normally accessible to the public.

   Exceptions to (a):

   1. All room and bronchoscopy room exhaust that first passes through a HEPA filter.
   2. If permitted by the AHJ, an alternate location may be used ***(Informative Note:*** e.g., located adjacent to an air intake but with the exhaust discharge point above the top of the air intake). The submitted reentrainment analysis shall demonstrate that an exhaust discharge outlet located at a distance less than 30 ft (10 m) horizontally provides a lower concentration of reentrainment than all the areas located at a distance greater than 30 ft (10 m) horizontally on the roof level where the exhaust discharge is located.

b. Exhaust discharge outlets from laboratory work-area chemical fume hoods shall discharge with a stack velocity of at least 3000 fpm {15.24 L/s).

   Exception **to** (b)**:** Lower discharge velocity may be permitted when an engineering analysis can demonstrate that the specific design meets the dilution criteria necessary to reduce concentration of hazardous materials in the exhaust to safe levels at all potential receptors. (See ANSI/AIHA/ASSE Z9.5/ Section 6.4.6.)

6.3.23 Health Care Facilities with Attached Parking Garages. In order to minimize the entry of vehicular exhaust into occupiable spaces, health care facilities with attached parking garages shall comply with ASHRAE Standard 62.***ij*** Section 5.2.

6.3.3 **Combustion** Air. Fuel-burning appliances, both vented and unvested, shall comply with ASHRAE Standard 62.1,[1] Section 5.15.

6.4 Filtration. Filtration of mechanically supplied air shall be provided as follows:

a. Particulate matter filters, minimum **MERV-8,** shall be provided upstream of the first heat exchanger surface of any air-conditioning system that combines return air from multiple rooms or introduces outdoor air.
b. Outdoor air shall be filtered in accordance with Table 7 1, 8-1, 8-2, or 9-1.
c. Air supplied from equipment serving multiple or different spaces shall be filtered in accordance with **Table** 7-1, 8-1, 8-2, or 9-1.
d. Air recirculated within a room shall be filtered in accordance with Table 7-1, 8-1, 8-2, or 9-1, or Section 7.1(a)(5), 8.1(a)(5), 8.2(a)(5), or 9.1(a)(5).