

ADDENDA

**ANSI/ASHRAE/ASHE Addendum d to
ANSI/ASHRAE/ASHE Standard 170-2013**

Ventilation of Health Care Facilities

Approved by ASHRAE on May 29, 2015; by the American Society of Healthcare Engineering on May 1, 2015; and by the American National Standards Institute on June 1, 2015.

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FOREWORD

This addendum clarifies the requirements for certain exhaust discharges. Terminology for the Emergency Department public waiting area is made consistent within the standard and with the FGI Guidelines (refer to Paragraph 2.2-3.1.3.4 from the FGI-2014). Terminology for nuclear medicine hot lab is made consistent within the standard and with the FGI Guidelines (refer to Paragraph 2.2-3.6.6.16 of FGI-2014).

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

Addendum d to Standard 170-2013

Revise Section 6.3.2 as follows.

6.3.2 Exhaust Discharges.

6.3.2.1 General. Exhaust discharge outlets from All rooms, bronchoscopy and sputum collection and pentamidine administration rooms, ~~e~~ Emergency ~~d~~ Department public waiting areas ~~rooms~~, nuclear medicine hot labs ~~laboratories~~, radiology waiting rooms programmed to hold patients who are 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: Ductwork located within mechanical equipment rooms. Positive-pressure exhaust ductwork located within

mechanical equipment rooms shall be sealed in accordance with SMACNA duct leakage Seal Class A.¹⁰

- b. discharge in a vertical direction at least 10 ft (3 m) above roof level and shall be located not less than 10 ft horizontally from air intakes, openable windows/doors, or areas that are normally accessible to the public or maintenance personnel and that are higher in elevation than the exhaust discharge; and
- ~~eb.~~ be located such that they ~~minimize~~ reduce the potential for the recirculation of exhausted air back into the building.

6.3.2.2 Additional Requirements

- a. Exhaust discharge outlets from All rooms, bronchoscopy and sputum collection exhaust, 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 at least 10 ft (3 m) above the adjoining roof level.
- b. Exhaust discharge outlets from laboratory work area chemical fume hoods shall discharge with a stack velocity of at least 2500 fpm (1180 L/s).
- c. Exhaust discharge outlets from All rooms, bronchoscopy and sputum collection exhaust, and laboratory work area chemical fume hoods shall be located not less than 25 ft (8 m) horizontally from outdoor air intakes, openable windows/doors, and areas that are normally accessible to the public.

Exception to Section 6.3.2.2(c): If permitted by the authority having jurisdiction, an alternate location (e.g., located adjacent to an air intake but with the exhaust discharge point above the top of the air intake) may be utilized. The submitted reentrainment analysis shall demonstrate that an exhaust discharge outlet located at a distance less than 25 ft (8 m) horizontally provides a lower concentration of reentrainment than all the areas located at a distance greater than 25 ft (8 m) horizontally on the roof level where the exhaust discharge is located.

Revise Table 7.1 as shown below. The remainder of Table 7.1 is unchanged.

TABLE 7.1 Design Parameters

Function of Space	Pressure Relationship to Adjacent Areas (n)	Minimum Outdoor ach	Minimum Total ach	All Room Air Exhausted Directly to Outdoors (j)	Air Recirculated by Means of Room Units (a)	Design Relative Humidity (k), %	Design Temperature (l), °F/°C
SURGERY AND CRITICAL CARE							
ER Emergency Department public waiting area rooms	Negative	2	12	Yes (q)	N/R	Max 65	70–75/21–24

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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.

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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.

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