

2. SCOPE

2.1 This standard applies to spaces intended for human occupancy within buildings except those within dwelling units in residential occupancies in which occupants are nontransient.

2.2 This standard defines requirements for ventilation and air-cleaning-system design, installation, commissioning, and operation and maintenance.

2.3 Additional requirements for laboratory, industrial, health care, and other spaces may be dictated by workplace and other standards, as well as by the processes occurring within the space.

2.4 Although the standard may be applied to both new and existing buildings, the provisions of this standard are not intended to be applied retroactively when the standard is used as a mandatory regulation or code.

2.5 This standard does not prescribe specific ventilation rate requirements for spaces that contain smoking or that do not meet the requirements in the standard for separation from spaces that contain smoking.

2.6 Ventilation requirements of this standard are based on chemical, physical, and biological contaminants that can affect air quality.

2.7 Consideration or control of thermal comfort is not included.

2.8 This standard contains requirements, in addition to ventilation, related to certain sources, including outdoor air, construction processes, moisture, and biological growth.

2.9 Acceptable indoor air quality may not be achieved in all buildings meeting the requirements of this standard for one or more of the following reasons:

- a. Because of the diversity of sources and contaminants in indoor air
- b. Because of the many other factors that may affect occupant perception and acceptance of indoor air quality, such as air temperature, humidity, noise, lighting, and psychological stress
- c. Because of the range of susceptibility in the population
- d. Because outdoor air brought into the building may be unacceptable or may not be adequately cleaned

3. DEFINITIONS (SEE FIGURE 3.1)

acceptable indoor air quality: air in which there are no known contaminants at harmful concentrations as determined by cognizant authorities and with which a substantial majority (80% or more) of the people exposed do not express dissatisfaction.

air-cleaning system: a device or combination of devices applied to reduce the concentration of airborne contaminants such as microorganisms, dusts, fumes, respirable particles, other particulate matter, gases, vapors, or any combination thereof.

air conditioning: the process of treating air to meet the requirements of a conditioned space by controlling its temperature, humidity, cleanliness, and distribution.

air, ambient: the air surrounding a building; the source of outdoor air brought into a building.

air, exhaust: air removed from a space and discharged to outside the building by means of mechanical or natural ventilation systems.

air, indoor: the air in an enclosed occupiable space.

air, makeup: any combination of outdoor and transfer air intended to replace exhaust air and exfiltration.

air, outdoor: ambient air and ambient air that enters a building through a ventilation system, through intentional openings for natural ventilation, or by infiltration.

air, primary: air supplied to the ventilation zone prior to mixing with any locally recirculated air.

air, recirculated: air removed from a space and reused as supply air.

air, return: air removed from a space to be recirculated or exhausted.

air, supply: air delivered by mechanical or natural ventilation to a space and composed of any combination of outdoor air, recirculated air, or transfer air.

air, transfer: air moved from one indoor space to another.

air, ventilation: that portion of supply air that is outdoor air plus any recirculated air that has been treated for the purpose of maintaining acceptable indoor air quality.

breathing zone: the region within an occupied space between planes 3 and 72 in. (75 and 1800 mm) above the floor and more than 2 ft (600 mm) from the walls or fixed air-conditioning equipment.

cognizant authority: an agency or organization that has the expertise and jurisdiction to establish and regulate concentration limits for airborne contaminants, or an agency or organization that is recognized as authoritative and has the scope and expertise to establish guidelines, limit values, or concentrations levels for airborne contaminants.

concentration: the quantity of one constituent dispersed in a defined amount of another.

conditioned space: that part of a building that is heated or cooled, or both, for the comfort of occupants.

contaminant: an unwanted airborne constituent with the potential to reduce acceptability of the air.

contaminant mixture: two or more contaminants that target the same organ system.

demand-controlled ventilation (DCV): any means by which the breathing zone outdoor airflow (V_{bz}) can be varied to the occupied space or spaces based on the actual or estimated number of occupants, ventilation requirements of the occupied zone, or both.

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.

energy recovery ventilation system: a device or combination of devices applied to provide the outdoor air for ventilation in which energy is transferred between the intake and exhaust airstreams.