APPROVED BY THE CALIFORNIA BUILDING STANDARDS COMMISSION

DECEMBER 17, 2024

# FINAL EXPRESS TERMS FOR PROPOSED BUILDING STANDARDS OF THE DEPARTMENT OF HEALTH CARE ACCESS AND INFORMATION/ OFFICE OF STATEWIDE HOSPITAL PLANNING AND DEVELOPMENT REGARDING THE 2025 CALIFORNIA MECHANICAL CODE CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 4 (OSHPD 01/24)

The state agency shall draft the regulations in plain, straightforward language, avoiding technical terms as much as possible and using a coherent and easily readable style. The agency shall draft the regulation in plain English. A notation shall follow the express terms of each regulation listing the specific statutes authorizing the adoption and listing specific statutes being implemented, interpreted, or made specific (Government Code Section 11346.2(a)(1)).

If using assistive technology, please adjust your settings to recognize underline, strikeout, italic and ellipsis.

## LEGEND for EXPRESS TERMS (Based on model codes - Parts 2, 2.5, 3, 4, 5, 9, 10)

* Model Code language appears upright
* Existing California amendments appear in *italic*
* Amended model code or new California amendments appear *underlined & italic*
* Repealed model code language appears ~~upright and in strikeout~~
* Repealed California amendments appear in *~~italic and strikeout~~*
* Ellipses ( …) indicate existing text remains unchanged

## Final EXPRESS TERMS

### ITEM 1 CHAPTER 1 ADMINISTRATION *DIVISION I CALIFORNIA ADMINISTRATION* Sections *1.1.0 General, 1.10 Office of Statewide Hospital Planning and Development*

Adopt 2024 Uniform Mechanical Code (UMC). Adopt specific sections of Chapter 1 for OSHPD 1, 2, 3, 4, 5 and 6. Carry forward existing amendments of the 2022 California Mechanical Code (CMC) Chapter 1 for OSHPD 1, 1R, 2, 3, 4 and 5 and as amended below.

***1.1.3 Scope****…*

…

***1.1.3.2 State-Regulated Buildings, Structures, and Applications****. …*

*…*

*(13) General acute care hospitals, acute psychiatric hospitals, skilled nursing and/or intermediate care facilities, clinics licensed by the Department of Public Health and correctional treatment centers regulated by the Department of Health Care Access and Information/Office of Statewide ~~Health~~ Hospital Planning and Development. See Section 1.10.0 for additional scope provisions.*

*...*

***1.10.0 Department of Health Care Access and Information/Office of Statewide ~~Health~~ Hospital Planning and Development.***

***1.10.1 OSHPD 1 and OSHPD 1R.*** *Specific scope of application of the agency responsible for enforcement, enforcement agency, specific authority to adopt and enforce such provisions of this code, unless otherwise stated.*

***OSHPD 1 and OSHPD 1R***

***Application*** *–* ***[OSHPD 1]*** *General acute-care hospital buildings.* ***[OSHPD 1R]*** *Non-conforming hospital SPC or freestanding buildings that have been removed from acute care service.*

***Enforcing Agency*** *– Health Care Access and Information/Office of Statewide ~~Health~~ Hospital Planning and Development (OSHPD). The office shall enforce the Division of the State Architect access compliance regulations and the regulations of the Office of the State Fire Marshal for the above stated facility types.*

*...*

***1.10.2 OSHPD 2.*** *Specific scope of application of the agency responsible for enforcement, enforcement agency, specific authority to adopt and enforce such provisions of this code, unless otherwise stated.*

***OSHPD 2***

***Application*** *– Skilled nursing facilities and intermediate care facility buildings.*

***Enforcing Agency*** *– Health Care Access and Information/Office of Statewide ~~Health~~ Hospital Planning and Development (OSHPD). The office shall also enforce the Division of the State Architect access compliance regulations and the regulations of the Office of the State Fire Marshal for the above stated facility type.*

*...*

***1.10.3 OSHPD 3.*** *Specific scope of application of the agency responsible for enforcement, enforcement agency, specific authority to adopt and enforce such provisions of this code, unless otherwise stated.*

***OSHPD 3***

***Application*** *– Licensed clinics and any freestanding building under a hospital license where outpatient clinical services are provided*

***Enforcing Agency*** *– Local building department.*

...

***1.10.4 OSHPD 4.*** *Specific scope of application of the agency responsible for enforcement, enforcement agency, specific authority to adopt and enforce such provisions of this code, unless otherwise stated.*

***OSHPD 4***

***Application*** *– Correctional Treatment Centers.*

***Enforcing Agency*** *– Health Care Access and Information/Office of Statewide ~~Health~~ Hospital Planning and Development (OSHPD). The Office shall also enforce the Division of the State Architect access compliance regulations and the regulations of the Office of the State Fire Marshal for the above stated facility types.*

*...*

***1.10.5 OSHPD 5.*** *Specific scope of application of the agency responsible for enforcement, enforcement agency and the specific authority to adopt and enforce such provisions of this code, unless otherwise stated.*

***OSHPD 5***

***Application*** *– Acute psychiatric hospital buildings.*

***Enforcing Agency*** *– Health Care Access and Information/Office of Statewide ~~Health~~ Hospital Planning and Development (OSHPD). The office shall also enforce the Division of the State Architect – Access Compliance regulations and the regulations of the Office of the State Fire Marshal for the above-stated facility types.*

*...*

***1.10.6 OSHPD 6.*** *Specific scope of application of the agency responsible for enforcement, enforcement agency and the specific authority to adopt and enforce such provisions of this code, unless otherwise stated.*

***OSHPD 6***

***Application—****Chemical dependency recovery hospital not within an acute care hospital building or an acute psychiatric facility.*

***Enforcing agency —*** *Local building department.*

***1.10.6.1******Applicable Administrative Standards.***

*(1) Title 24, Part 1, California Code of Regulations: Chapter 7.*

*(2)* *Title 24, Part 2, California Code of Regulations: Section 1.1 and 1.10, Chapter 1 Division I, and as indicated in the adoption matrix for Chapter I, Division II.*

***1.10.6.2 Applicable Building Standards.*** *California Building Standards Code, Title 24, Parts 2, 3, 4, 5, 6, 9, 10 and 11.*

***Authority Cited –*** *Health and Safety Code Sections 1275, 18929 and 129850.*

***References –*** *Health and Safety Code Sections 1250.3 and 129675-130070.*

***1.10.6.3 Adopting Agency Identification.*** *The provisions of this code applicable to buildings identified in this Subsection 1.10.6 will be identified in the Matrix Adoption Tables under the Acronym OSHPD 6.*

#### Notation:

Authority: Health and Safety Code, Sections 1275, 18929, 129850

Reference(s): Health and Safety Code, Section 1250.3, 1418.22, 129675-130070

### ITEM 2 CHAPTER 2 DEFINITIONS

Adopt 2024 Uniform Mechanical Code (UMC) Chapter 2 for OSHPD 1, 1R, 2, 3, 4, 5 and 6. Carry forward existing amendments of the 2022 California Mechanical Code (CMC) Chapter 2 for OSHPD 1, 1R, 2, 3, 4, and 5 and as amended below.

**203.0** **– A –**

...

***Air, Relief. [OSHPD 1,~~1R,~~ 2, 3, 4 and 5]*** *Air being exhausted…*

*…*

**Air Pollution Control Devices.** Equipment and devices…

***Air Terminal Device. [OSHPD 1, 2, 3, 4 and 5]*** *Any device (e.g., grille, register, diffuser) placed in an opening to a room, through which controlled air enters or leaves. Component of the air-distribution system which has the purpose of achieving the predetermined movement of air into or from a treated space.*

*...*

**Authority Having Jurisdiction.** The organization, office, or individual responsible for enforcing the requirements of a code or standard, or for approving equipment, materials, installations, or procedures. The Authority Having Jurisdiction shall be a federal, state, local, or other regional department or an individual such as a plumbing official, mechanical official, labor department official, health department official, building official, or others having statutory authority. In the absence of statutory authority, the Authority Having Jurisdiction may be some other responsible party. This definition shall include the Authority Having Jurisdiction’s duly authorized representative. ***[HCD 1, HCD 2, OSHPD 1, 1R, 2, 3, 4, ~~&~~ 5 & 6 and SFM]*** *“Authority Having Jurisdiction” shall mean “Enforcing Agency” as defined in Section 207.0 of this code.*

**204.0** **– B –**

...

**Building Code.** The building code that is adopted by this jurisdiction. ***[HCD 1, HCD 2, OSHPD 1, 1R, 2, 3, 4, ~~&~~ 5 & 6 and SFM]*** *“Building Code” shall mean the California Building Code, Title 24, Part 2.*

**207.0 – E –**

...

***Enforcing Agency. [HCD 1, HCD 2, SFM and OSHPD 1, 1R, 2, 3, ,4 ~~&~~ 5 & 6] “****Enforcing Agency” is the designated department or agency as specified by statute and regulation.*

**210.0 – H –**

...

***Health Facilities. [OSHPD 1, 1R, 2, 3, 4, ~~&~~ 5 & 6]*** *Buildings specified within the statutory authority of the Health Care Access and Information/Office of Statewide ~~Health~~ Hospital Planning and Development.*

**223.0 – U –**

***UMC. [HCD 1, HCD 2, OSHPD 1, 1R, 2, 3, 4, ~~&~~ 5 & 6]*** *The most recent edition of Uniform Mechanical Code published by the International Association of Plumbing and Mechanical Officials.*

#### Notation:

Authority: Health and Safety Code, Sections 1275, 18928, 129850

Reference(s): Health and Safety Code, Section 1250.3, 1418.22, 129675-130070

### ITEM 3 CHAPTER 3 GENERAL REGULATIONS Sections *318.0 Scope, 321.0 Essential Mechanical Provisions, 322.0 Sensitive Areas or Rooms*

Adopt 2024 Uniform Mechanical Code (UMC) Chapter 3 for OSHPD 1, 1R, 2, 3, 4, 5 and 6. Carry forward existing amendments of the 2022 California Mechanical Code (CMC) Chapter 3 for OSHPD 1, 1R, 2, 3, 4, and 5 and as amended below.

***318.0 Scope***

***318.1 Applicability.*** *This part is applicable to health facilities regulated by OSHPD. ~~(See Adoption Tables for application for specific sections).~~*

***Note:*** *This section has no corresponding provisions in the UMC. For the scope and authority of each state agency, refer to Chapter 1.*

***318.2 Services/Systems and Utilities.*** *Refer to Section 1224.4.1, 1225.2.1 and 1228.4.1.1 of the California Building Code.*

…

***321.0 Essential Mechanical Provisions. [OSHPD 1, ~~1R~~, 2, 3 (Surgical Clinics only) 4 & 5]*** *During periods of power outages essential electrical power shall be provided for the following equipment:*

***321.1*** *(Does not apply to OSHPD 3 surgical clinic.) All heating equipment and fans necessary to maintain a minimum temperature of 60°F (15.6°) in patient areas which are not specified in Section 322.0.*

***321.2*** *All heating equipment and fans necessary to maintain the minimum temperatures listed in Table 4-A for sensitive areas specified in Section 322.0.*

***321.3*** *Cooling equipment necessary to maintain temperature and humidity listed in Table 4-A for a minimum of one operating room and other spaces as identified in the functional program.*

***321.~~3~~ 4*** *Equipment necessary for humidification of the areas listed in Section 322.0.*

***~~321.4~~ 321.5*** *All supply, return, and exhaust fans required to maintain the positive and negative air balances as required in Table 4-A*.

***321.~~5~~ 6*** *All control components, ~~and~~ control systems and fire and smoke dampers necessary for the normal operation of equipment required to have essential electrical power.*

***321.~~6~~ 7*** *Alarms for airborne infection isolation rooms and protective environment rooms.*

***322.0 Sensitive Areas or Rooms. [OSHPD 1, ~~1R~~, 2, 3 (Surgical Clinics) 4 & 5]*** *The following are sensitive areas or rooms:*

[Note to publisher: Due to new items, many have been renumbered and reordered.]

*(1) Operating room~~, hybrid operating room~~*

*(2) Hybrid operating room*

*(3) Cesarean operating room*

*(4) Delivery room~~,cesaren operating room~~*

*(5) Surgical Cystoscopy*

*(6) Class 3 imaging*

*(7) Cardiac catheterization lab*

*(8) Trauma/cardiac room*

*(9) Post-anesthesia care unit*

*(10) Intensive care*

*(11) Newborn intensive-care nursery unit*

*(12) Newborn nursery*

*(13) Burn unit*

*(14) Protective Environment Room*

*(15) Procedure room*

*(16) Class 2 imaging*

*(17) Gastrointestinal endoscopy procedure room*

#### Notation:

Authority: Health and Safety Code, Sections 1275, 18928, 129850

Reference(s): Health and Safety Code, Section 1250.3, 1418.22, 129675-130070

### ITEM 4 CHAPTER 4 VENTILATION AIR Sections 401.0 General, 402.0 Ventilation Air, *406.0 Evaporative Cooling Systems for Health Care Facilities*

Adopt 2024 Uniform Mechanical Code (UMC). Adopt Chapter 4 for OSHPD 1, 1R, 2, 3, 4 and 5 except section 402.2 and 402.3. Adopt entire chapter for OSHPD 6. Carry forward existing amendments of the 2022 California Mechanical Code (CMC) Chapter 4 for OSHPD 1, 1R, 2, 3, 4, and 5 and as amended below.

**401.1 Applicability.** This chapter contains requirements for ventilation air supply, exhaust, and makeup air requirements for occupiable spaces within a building. ***[OSHPD 1, 1R, 2, 3, 4 & 5]*** *See Sections ~~404.~~0 406.0 through 4~~18.~~0 419.0.* ***[SFM]*** *Air filters shall comply with all requirements of Part 12, Title 24, Chapter 12-71, SFM Standard 12-71-1.* Spaces within buildings, except those within a dwelling unit in residential occupancies

where occupants are nontransient, shall comply with Section 402.0 through Section 404.0. Requirements for ventilation air rate for dwelling units in residential occupancies, where the occupants are nontransient, shall be in accordance with Section 405.0 or ASHRAE 62.2.

**402.0 Ventilation Air.**

**402.1 Occupiable Spaces.** Occupiable spaces listed in Table 402.1 ***~~[OSHPD 1, 1R, 2, 3, 4 & 5]~~*** *~~and Table 4-A~~* shall be designed to have ventilation (outdoor) air for occupants in accordance with this chapter. ***[DSA-SS & DSA-SS/CC]*** *Ventilation air requirements for occupancies regulated by the California Energy Commission are found in the California Energy Code.*

***[CEC]*** *Ventilation air requirements for occupancies regulated by the California Energy Commission and found in the California Energy Code supersede those of the California Mechanical Code.*

***[OSHPD 1, 2, 3, 4 & 5]*** *Health care spaces shall meet the ventilation requirements found in Table 4-A.* (relocated from 402.1.2)*Ventilation rates for areas not specified in Table 4-A shall have minimum ventilation and air change rates per ANSI/ASHRAE Standard 62.1. Where areas with prescribed ventilation rates in both Standards 62.1 and Table 4-A exist, the higher of the two air change rates shall be used.*

**402.1.1 Construction Documents.** …

**402.1.2 Ventilation in Health Care Facilities.** Mechanical ventilation for health care facilities shall be designed and installed in accordance with this code and ASHRAE 170, and NFPA 99. ***[OSHPD 1, 1R, 2, 3, 4 & 5]*** *Ventilation for health care facilities shall be designed and installed in accordance with this code and Table 4-A.*-*~~2013, through Addendum ae.~~ (relocate to 402.1) ~~Ventilation rates for areas not specified in Table 4-A shall have minimum ventilation and air change rates per ANSI/ASHRAE Standard 62.1.Where areas with prescribed ventilation rates in both Standards 62.1 and Table 4-A exist, the higher of the two air change rates shall be used.~~ All supply-air, return air, and exhaust-air systems shall comply with this code and ASHRAE 170. When the requirements of this code conflict with ASHRAE 170, the most restrictive requirements shall prevail. The text of ASHRAE 170 shall be modified as follows:*

(1) ASHRAE 170. Section 6.1.2.1 -- ~~Not adopted~~ Also see Section 319.0.

(2) ASHRAE 170. Section 6.3.1.~~2~~3 – Modify as follows:   
Relief air other than class 1 shall discharge ~~shall be~~ at least 10 feet (3048mm) from any outside air intake.

(3) ASHRAE 170. Section 6.3.2 -- ~~Not adopted~~ Also see Section 407.1.2 and 407.2.2.

~~(4) ASHRAE 170. Table 6.4 -- Not adopted.~~

~~(5)~~(4) ASHRAE 170. Section 6.4~~-6.4.4~~ -- ~~Not adopted~~ Modify as follows:   
c.: Replace Table 7-1, 8-1, 8-2, or 9-1 with Table 4-A.  
d.: Replace Table 7-1, 8-1, 8-2, or 9-1 with Table 4-A.

~~(6)~~(5) ASHRAE 170. Section 6.9 -- ~~Not adopted~~ See also Section 605.2 and 605.3.

~~(7)~~(6) ASHRAE 170. Section 7.1a -- Modify as follows: Replace reference to Table ~~7.1~~7-1 with reference to Table 4-A.

~~(8)~~(7) ASHRAE 170. Section 7.2.1~~a~~ c ~~through e~~ – Not adopted.

~~(9)~~(8) ASHRAE 170. Section 7.2.2 ~~a through c, and e~~ – ~~Not adopted~~ Also see Section 415.0.

~~(10)~~(9) ASHRAE 170. Section 7.2.3 -- Not adopted.

~~(11)~~(10) ASHRAE 170. Section 7.3.1 -- Modify as follows: Replace reference to Table ~~7.1~~7-1 with reference to Table 4-A.

~~(12)~~(11) ASHRAE 170. Section 7.4.1 -- Modify as follows: Delete the Exception that allows for high return grilles.

(12) ASHRAE 170. Section 8.1a -- Modify as follows: Replace reference to Table 8-1 with reference to Table 4-A.

(13) ASHRAE 170. Section 8.2 -- Modify as follows: Replace reference to Table 8-2 with reference to Table 4-A.

(14) ASHRAE 170. Section 9.1a -- Modify as follows: Replace reference to Table 9-1 with reference to Table 4-A.

…

***406.0 Evaporative Cooling System for Health Care Facilities. [For OSHPD 1, ~~1R~~, 2, 3, 4 & 5]*** *Direct evaporative cooling systems where the air directly contacts the wetted surface or spray shall be limited in health facilities to nonpatient areas such as laundry rooms, ~~food preparation areas~~, and boiler or machinery rooms. Similar rooms with high heating-producing equipment will be considered when specifically approved by the enforcing agency. The evaporative pads shall be a synthetic type. Filters shall be required in accordance with Tables 4-B and 4-C except utility rooms, i.e.: boiler or machinery rooms.*

#### Notation:

Authority: Health and Safety Code, Sections 1275, 18928, 129850

Reference(s): Health and Safety Code, Section 1250.3, 1418.22, 129675-130070

### ITEM 5 CHAPTER 4 VENTILATION AIR Section *407.0 Ventilation System Details*

***407.1 General.***

***407.1.1*** *All supply-air, return air, and exhaust-air systems shall be mechanically operated and such systems for areas listed in Table 4-A shall be operated continuously. Natural ventilation through windows or other openings such as louvers will be considered as supplemental to the required mechanical ventilation systems.*

***Exceptions:***

*(1) Natural ventilation shall not be used in airborne infection isolation rooms and protective environment rooms.*

*(2) Unoccupied turndown shall be permitted in accordance with Section 407.7. ~~The number of air changes may be reduced to 25 percent of the indicated value in Table 4-A, when the room is unoccupied, if provisions are made to ensure the following:~~*

*~~(1) The number of air changes per hour indicated is reestablished whenever the space is occupied.~~*

*~~(2) The pressure relationship with the surrounding rooms is maintained when the air changes per hour are reduced. In areas requiring no continuous directional control as identified in accordance with Table 4-A, ventilation systems may be shut down when the space is unoccupied and ventilation is not otherwise required. Ventilation shall not be reduced in rooms specifically used for airborne infection control, such as waiting rooms, triage rooms, corridors, reception areas, areas adjacent to waiting areas, airborne infection isolation rooms, negative pressure exam room, negative pressure x-ray treatment rooms, and protective environment rooms. All operating and delivery rooms shall maintain a minimum of six air changes per hour of total air when not in use.~~*

…

***407.2 Outdoor Air Intakes and Exhaust Outlets.***

***407.2.1 Outdoor Air Intakes.***

…

***407.2.2 Exhaust Outlets.*** *Exhaust outlets shall be located a minimum of 10 feet (3048 mm) above adjoining grade and 10 feet (3048 mm) from doors, occupied areas, and operable windows.*

***Exception:*** *Airborne infection isolation rooms shall comply with Section 414.1.*

***407.2.2.1 Hazardous Exhaust Outlets.*** *Hazardous exhaust outlets from airborne infection isolation rooms, bronchoscopy and sputum collection exhaust, hazardous drug compounding, morgues, autopsy rooms and laboratory chemical fume hoods shall discharge a minimum of 10 feet (3048 mm) above the adjacent roof surface and a minimum of 30 feet (9144.mm) from outdoor air intakes, building openings and areas normally accessible to the public.*

***407.3 Air Balance.***

***407.3.1*** *The ventilation systems shall be designed and balanced to provide the general air balance relationship to adjacent areas, shown in Table 4-A. The ventilation systems shall be balanced in accordance with the latest edition of standards published by the Associated Air Balance Council (AABC), the National Environmental Balancing Bureau (NEBB), or the Testing, Adjusting and Balancing Bureau (TABB). Air balance tolerancing values shall not result in noncompliance of the minimum required pressurization per Table 4-A.*

***407.4 Air Circulation.***

***407.4.1*** *Design of the ventilation system shall provide air movement that is generally from clean to less clean areas.*

***407.4.1.1*** (formerly 420.0) ***~~420.0 Air Distribution Devices [OSHPD 1, 2, 3, 4, 5]~~*** *All air distribution devices and supply air outlets shall meet the requirements of ASHRAE 170~~-2013~~, Section 6.7.2 and Table ~~6.7.~~2 6-2.*

***407.4.1.2*** (formerly 407.4.1.6)*Supply outlets and return and exhaust air inlets shall be located to prevent short-circuiting.*

***407.4.1.3*** (formerly 407.4.1.1)*Air supplied to operating rooms, cesarean operating rooms, cardiac catheterization labs, surgical cystoscopy rooms, delivery rooms, and class 3 imaging shall be delivered by a primary supply diffuser array in accordance with ASHRAE 170, 7.4.1.~~at the ceiling of the area served~~. ~~In these areas and in morgues and autopsy rooms all air removed from the area shall be removed near floor level. Exhaust or recirculation inlets shall be located not less than 3 inches (76 mm) nor more than 8 inches (203 mm) above the finished floor, except in morgues and autopsy rooms where all of the exhaust air is removed through an autopsy table designed for this purpose. At least two exhaust or recirculation air inlets of equal capacity shall be used in all cardiac catheterization labs, cystoscopy rooms, operating rooms, and delivery rooms and shall be located not less than 3 inches (76 mm) nor more than 8 inches (203 mm) above the finished floor.~~*

***~~Exception:~~*** *~~For airborne infection isolation rooms and protective environment rooms, see Sections 414.0 and 415.0.~~*

***407.4.1.4*** *Air supplied to procedure rooms and Class 2 imaging shall be delivered over the patient table. Return or exhaust inlets shall be located at the perimeter of the room on a minimum of two sides to provide air movement from clean to less clean.*

***407.4.1.5*** *At least two exhaust or recirculation air inlets of equal capacity shall be provided on opposite corners in all operating rooms, cesarean operating rooms, cardiac catheterization labs, surgical cystoscopy rooms, delivery rooms and class 3 imaging. All air inlets in the room shall be located not less than 3 inches (76 mm) nor more than 8 inches (203 mm) above the finished floor.*

***407.4.1.6*** *Morgues and autopsy rooms shall exhaust air through an autopsy table designed for this purpose or through low sidewall exhaust inlets located not less than 3 inches nor more than 8 inches (203 mm) above the finished floor.*

***407.4.1.7*** *(formerly 407.4.1.2)* *Room supply air outlets and room recirculation and exhaust air inlets installed in nonsensitive areas shall be located not less than 3 inches (76 mm) above the floor.*

*Exception: For airborne infection isolation rooms and protective environment rooms, see Sections 414.0 and 415.0.*

***~~407.4.1.~~3 407.4.2*** *Corridors shall not be used to convey supply, return, transfer or exhaust air to or from any room ~~if the corridor is required to be fire resistive construction~~ per theCalifornia Building Code.*

***Exceptions:***

*(1) ~~Mechanically exhausted toilet rooms of 50 square feet (4.7 m2) or less and small rooms of 30 square feet (2.79 m2) or less such as janitor closets, housekeeping rooms, and electrical or telephone closets opening directly onto corridor.~~ Use of a corridor as a source of makeup air for exhaust systems in rooms that open directly onto such corridors is permitted where allowed by the California Building Code. The corridor air balance shall be equal based on the total net transfer air to or from the corridor.*

*(2) Air transfer caused by pressure differentials in rooms required to have a positive or negative air balance by Table 4-A.*

***~~407.4.1.~~4 407.4.3*** *No space above a ceiling may be utilized…*

***~~407.4.1.5~~ 407.4.4*** *Air from a patient room, exam room, treatment…*

***~~407.4.1.6~~*** (relocate text to 407.4.1.2)

***~~407.4.1.7~~ 407.4.5 Recirculating Room Units.*** *~~For spaces where Table 4-A permits air to be recirculated by room units, the portion of the minimum total air changes per hour required for a space that is greater than the minimum outdoor air changes per hour required component may be provided by recirculating room HVAC units. Such recirculating room HVAC units shall~~ Recirculating room units shall be permitted to provide a portion of the total air changes for a space in excess of the minimum outside air changes where indicated with a “yes” in the “Recirculated Room Units” column of Table 4-A. The following conditions shall be met:*

*(1) not receive nonfiltered, nonconditioned outdoor air;*

*(2) shall serve only a single space; and*

*(3) provide minimum MERV 8 filtration upstream of ~~per Section 408.2 and Section 408.3~~ ~~for airflow passing over~~ any surface that is designed to condense water. OSHPD 2 spaces shall be permitted to provide the manufacturer’s recommended filter for airflow passing over any surface that is designed to condense water*. *~~This filter shall be located upstream of any such cold surface, so that all of the air passing over the cold surface is filtered.~~*

*(4) Coils designed not to condense water shall maintain surfaces above the dew point temperature.*

***407.4.5.1 Recirculating Room Units for Unoccupied Spaces.*** *For normally unoccupied spaces not listed in Table 4-A and not directly connected to a patient care area, the minimum filtration for a recirculating room unit may be as recommended by the equipment manufacturer.*

***407.5 Variable Air Volume.***

***407.5.1 Variable Air Volume Systems (VAV).*** *Variable air volume systems subjecting the patient to a fluctuating air movement are not acceptable for airborne infection isolation rooms, protective environment rooms or those critically sensitive areas listed in Section 322.0. For nonsensitive areas, variable air volume systems meeting the following criteria can be considered:*

***407.5.1.1*** *The VAV system shall comply with code requirements for outside air, total air, and pressure relationship through the full range of operation from minimum to maximum.*

***407.5.1.2*** *The central return or exhaust fan shall be controlled to accomplish the variable air volume requirements of the individual rooms served by the fan as described in Section 407.5.1.3.*

***407.5.1.3*** *Spaces with pressure requirements per Table 4-A shall utilize an automatic modulating damper in the return or exhaust air for each space. The damper will modulate from full open to minimum position in conjunction with the supply air VAV terminal equipment to maintain space pressurization.*

***407.5.1.4*** *Sensitive areas or rooms shall be provided with controls on the return or exhaust duct system to maintain constant air flows.*

***407.5.1.5*** *Return air controls shall be provided for each system, floor or area with similar conditions.*

***407.6 Economizers.***

***407.6.1*** *Systems with economizers shall include modulating relief and/or return fans to ensure compliance with the pressure requirements of spaces listed in Table 4-A.*

***407.7 Unoccupied Turndown.***

***407.7.1*** *Where indicated with a “yes” in the Unoccupied turndown column of Table 4-A, the number of air changes shall be permitted to be reduced. The following conditions shall be met:*

1. *The number of air changes may be reduced to 25 percent of the indicated value in Table 4-A for pressurized spaces when the room is unoccupied.*
2. *The number of air changes per hour indicated is reestablished whenever the space is occupied.*
3. *The pressure relationship with surrounding rooms is maintained when the air changes per hour are reduced.*
4. *All operating, class 3 imaging and cesarean delivery rooms shall maintain a minimum of six air changes per hour of total air when not in use.*

***407.8******Building Pressurization.***

***407.8.1*** *The outdoor air intake design for air handling systems shall be set to maintain the intake air rate to equal or exceed the building exhaust under all conditions including variable air volume and unoccupied turndown.*

#### Notation:

Authority: Health and Safety Code, Sections 1275, 18928, 129850

Reference(s): Health and Safety Code, Section 1250.3, 1418.22, 129675-130070

### ITEM 6 CHAPTER 4 VENTILATION AIR Section *408.0 Filters*

***408.1 General.*** *…*

…

***408.1.5*** *Filter bank No. 1 shall be located upstream of the air-conditioning equipment. Filter bank No. 2 and additional filter banks ~~No. 3~~ shall be located downstream of the supply fan and all cooling and humidification equipment with efficiencies as indicated in Table 4-B or Table 4-C.*

***Exception:*** *Humidifiers for local room humidity control may be installed in the supply air duct downstream of the final filter bank where designs are specifically approved by the enforcing agency. Humidification shall be in accordance with 320.1.1.*

***408.1.6*** *Filter bank No. 2 and additional filter bank ~~No. 3~~ media shall be rigid or supported (noncollapsing type) and shall operate on the principles of impingement, straining, and diffusion. Filter bank No. 2 shall have sealing interface surfaces.*

***408.1.7*** *HEPA filtration shall be provided in the air terminal device where required by Table 4-B.*

***408.2 Filters for Hospitals.***

***408.2.1*** *All air-ventilation systems shall comply with code requirements of this section and shall have filter bank efficiencies as listed in Table 4-B.*

***~~408.2.2~~*** *~~Noncentral recirculating air systems providing cooling to high heat producing equipment located in nonsensitive areas shall have a filter with minimum efficiency reporting value (MERV) of 6 based on ASHRAE 52.2.~~*

***~~408.2.3~~*** *~~Noncentral air systems serving any areas not listed in Table 4-B shall have a filter with minimum efficiency reporting value (MERV) of 6 based on ASHRAE 52.2.~~*

***~~408.2.4~~*** *~~Noncentral recirculating air handling systems, for example, through-the-wall units, fan coil units, and heat pumps may be utilized for single patient rooms of one or more beds. Filtration for these units shall have a filter with minimum efficiency reporting value (MERV) of 6, based on ASHRAE 52.2. The air ventilation system providing the minimum air changes of outdoor air shall comply with Table 4-B. These units may be used as recirculating units only. All outdoor air requirements shall be met by a separate central air handling system.~~*

***408.3 Filters for Skilled Nursing Facilities, Intermediate Care Facilities, and Correctional Treatment Centers.***

***408.3.1*** *The air ventilation systems ~~shall comply with code requirements of this section~~ for skilled nursing facilities, intermediate care facilities and correctional treatment centers ~~and~~ shall have filter bank efficiencies as listed in Table 4-C.*

***~~408.3.2~~*** *~~Noncentral air systems serving single patient rooms of one or more beds shall comply with Table 4-C.~~*

***~~408.3.3~~*** *~~Noncentral recirculating air-handling systems, i.e. through the wall units, may be utilized for each patient room with one or more beds. Filtration for these units shall have a filter with minimum efficiency reporting value (MERV) of 6, based on ASHRAE 52.2. The air ventilation system providing the minimum air changes of outdoor air shall comply with Table 4-C. These units may be used as recirculating units only. All outdoor air requirements shall be met by a separate central air handling system.~~*

***~~408.3.4~~ 408.3.2*** *Airborne infection isolation rooms, protective environment rooms, and sensitive areas in correctional treatment centers shall comply with Section 408.2.*

***408.4 Filters for Outpatient Facilities.***

***408.4.1*** *The air ventilation systems ~~shall comply with code requirements of this section~~ for outpatient facilities ~~and~~ shall have filter bank efficiencies as listed in Table 4-B.*

***~~408.4.2~~*** *~~Noncentral recirculating room units shall have a filter with minimum efficiency reporting value (MERV) of 6 based on ASHRAE 52.2.~~ (Strike out revised language in supplement.)*

***408.5 Filters for Recirculating Room Units.***

***408.5.1*** *Filters for recirculating room units shall comply with Section 407.4.5. Where Table 4-A does not permit air recirculated by means of room units, room units with filtration per Table 4-B are permitted.*

#### Notation:

Authority: Health and Safety Code, Sections 1275, 18928, 129850

Reference(s): Health and Safety Code, Section 1250.3, 1418.22, 129675-130070

### ITEM 7 CHAPTER 4 VENTILATION AIR Sections *409.0 Ducts, 414.0 Airborne Infection Isolation Rooms, 417.0 Testing and Balancing Airborne Infection Isolation Rooms and Protective Environment Rooms, 420.0 Air Distribution Devices*

***409.0 Ducts. [OSHPD 1, 1R, 2, 3, 4 & 5]***

*...*

***~~409.3 Insulation of Ducts.~~*** *~~Cold air ducts shall be insulated wherever necessary or to prevent condensation.~~*

***~~409.4~~******409.3*** *The anchorage and supporting structural elements for airducts shall be designed to withstand the lateral forces as required by the California Building Code, Title 24, Part 2.*

...

***414.0 Airborne Infection Isolation Rooms. [OSHPD 1, 2, 3, 4 & 5]***

*...*

***414.1 Exhaust Systems.***

***414.1.1*** *Exhaust discharge from fan shall extend at least ~~7~~10 feet (~~2134~~ 3048 mm) above the roof and discharge vertically upward. Self-draining stacks or equivalent shall be used for rain protection. Rain caps which divert the exhaust toward the roof shall be prohibited.*

...

***417.0 Testing and Balancing Airborne Infection Isolation Rooms and Protective Environment Rooms. [OSHPD 1, 2, 3, 4 & 5]*** *Prior to acceptance of the rooms, all mechanical systems shall be tested, balanced, and operated to demonstrate to the owner or designated representative that the installation and performance of the systems conform to design intent. All testing and balancing shall be performed by a qualified independent agency certified by the Associated Air Balance Council (AABC): the National Environmental Balancing Bureau (NEBB); or the Testing, Adjusting and Balancing Bureau (TABB**).* *Air balance testing shall include a pressure test at all doors serving the isolation, protective environment, and ante rooms to provide the directional pressure relationships in Section 416.1.*

...

***~~420.0 Air Distribution Devices. [OSHPD 1, 2, 3, 4 & 5]~~*** *(relocate to 407.4.1.1)*

#### Notation:

Authority: Health and Safety Code, Sections 1275, 18928, 129850

Reference(s): Health and Safety Code, Section 1250.3, 1418.22, 129675-130070

### ITEM 8 CHAPTER 4 VENTILATION AIR *TABLE 4-A*

[Repeal all of *TABLE 4-A* and replace with ASHRAE Standard 170-2021, “Ventilation of Healthcare Facilities”, Table 7-1 with amendments. Selected functions related to HCAI authority are added to *TABLE 4-A* from ASHRAE Standard 170-2021, “Ventilation of Healthcare Facilities”, Tables 8-1, 8-2 and 9-1.]

***~~TABLE 4-A~~***

***~~PRESSURE RELATIONSHIP AND VENTILATION REQUIREMENTS FOR GENERAL ACUTE CARE~~***

***~~HOSPITALS, SKILLED NURSING FACILITIES, INTERMEDIATE CARE FACILITIES, CORRECTIONAL TREATMENT CENTERS, OUTPATIENT FACILITIES, AND LICENSED CLINICS~~***

| **~~FUNCTION OR SPACE~~** | **~~PRESSURE~~**  **~~RELATIONSHIP~~**  **~~TO ADJACENT~~**  **~~AREAS (f) (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~~** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| ~~Airborne infection isolation anteroom (u)~~ | ~~(e)~~ | ~~NR~~ | ~~10~~ | ~~Yes~~ | ~~No~~ | ~~NR~~ | ~~NR~~ |
| ~~Airborne infection isolation (u)~~ | ~~Negative~~ | ~~2~~ | ~~12~~ | ~~Yes~~ | ~~No~~ | *~~max 60~~* | *~~70-75/21-24~~* |
| *~~Airborne infection isolation treatment/exam room~~* | *~~Negative~~* | *~~2~~* | *~~12~~* | *~~Yes~~* | *~~No~~* | *~~max 60~~* | *~~70-75/21-24~~* |
| *~~Angiography room~~* | *~~Positive~~* | *~~3~~* | *~~15~~* | *~~NR~~* | *~~No~~* | *~~max 60~~* | *~~70-75/21-24~~* |
| ~~…~~ |  |  |  |  |  |  |  |

[Repeal entire *TABLE 4-A*, entire Table not shown]

…

***TABLE 4-A  
PRESSURE RELATIONSHIP AND VENTILATION REQUIREMENTS FOR GENERAL ACUTE CARE HOSPITALS, SKILLED NURSING FACILITIES, INTERMEDIATE CARE FACILITIES, ~~CORRECTIONAL TREATMENT CENTERS,~~ OUTPATIENT FACILITIES, ~~AND~~ LICENSED CLINICS,   
CORRECTIONAL TREATMENT CENTERS, AND ACUTE PSYCHIATRIC HOSPITALS [OSHPD 1, 2, 3, 4 & 5]***

| **Function of Space (ee)** | **Pressure Relationship (*d*)(n)** | **Minimum Outdoor ach** | **Minimum Total ach** | **Exhausted Directly to Outdoors (j)** | **Recirculated Room Units (a)** | **Unoccupied Turndown** | **Design Relative Humidity (k), %** | **Design Temperature  (l), °F/°C** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **NURSING UNITS AND OTHER PATIENT CARE AREAS** |  |  |  |  |  |  |  |  |
| AII anteroom *(1224.14.3.3)* (u) | (e) | NR | 10 | Yes | No | ~~Yes~~ *No* | NR | NR |
| AII room *(1224.14.3)* (u) | Negative | 2 | 12 | Yes | No | ~~Yes~~ *No* | Max 60 | 70-75/21-24 |
| *AII treatment/exam room (1224.4.4.1.3)* | *Negative* | *2* | *12* | *Yes* | *No* | *No* | *max 60* | *70-75/21-24* |
| Cesarean Delivery room *(1224.32.3.1.1)* (m), (o) | Positive | 4 | 20 | NR | No | Yes | 20-60 | 68-75/20-24 |
| ~~Combination Afl/PE anteroom~~ *~~(FGI 2.2-2.2.4.5)~~* | ~~(e)~~ | ~~NR~~ | ~~10~~ | ~~Yes~~ | ~~No~~ | ~~No~~ | ~~NR~~ | ~~NR~~ |
| ~~Combination All/PE room~~ *~~(FGI 2.2-2.2.4.5)~~* | ~~Positive~~ | ~~2~~ | ~~12~~ | ~~Yes~~ | ~~No~~ | ~~No~~ | ~~Max 60~~ | ~~70-75/21-24~~ |
| ~~Continued care nursery~~ *~~(FGI 2.2-2.10.3.2)~~* | ~~N/R~~ | ~~2~~ | ~~6~~ | ~~NR~~ | ~~No~~ | ~~Yes~~ | ~~30-60~~ | ~~72-78/22-26~~ |
| *Delivery room (1224.32.3.2) (m), (o)* | *Positive* | *4* | *20* | *NR* | *No* | *Yes* | *20-60* | *68-75/20-24* |
| Emergency department exam/treatment room *(1224.33.3.6)* (p) | NR | 2 | 6 | NR | NR | Yes (ff) | Max 60 | 70-75/21-24 |
| Emergency department human decontamination (1224.33) | Negative | 2 | 12 | Yes | No | ~~Yes (fl)~~ *No* | NR | NR |
| Emergency department public waiting area (1224.33.3.5) | Negative | 2 | 12 | Yes (q) | NR | ~~Yes (fl)~~ *No* | Max 65 | 70-75/21-24 |
| Emergency department trauma/resuscitation room *(1224.33.3.7)* (c) | Positive | 3 | 15 | NR | No | Yes | 20-60 | 70-75/21-24 |
| Emergency service triage area *(1224.33.3.3)* | Negative | 2 | 12 | Yes (q) | NR | ~~Yes (fl)~~ *No* | Max 60 | 70-75/21-24 |
| *Fast-track area (1224.33.4.2)* | *NR* | *2* | *6* | *NR* | *NR* | *Yes* | *NR* | *70-75/21-24* |
| *Infusion room (1224.39.4.2.3)* | *Positive* | *2* | *6* | *NR* | *NR* | *Yes* | *NR* | *70-75/21-24* |
| ~~Critical~~*Intensive* care patient ~~care station~~*space (1224.29.1.2)* (gg) | NR | 2 | 6 | NR | No | Yes | 30-60 | 70-75/21-24 |
| Intermediate care patient room *(1224.38)* (s) | NR | 2 | 6 | NR | NR | Yes | Max 60 | 70-75/21-24 |
| Labor/delivery/recovery (LDR) *(1224.32.3.7)* (s) | NR | 2 | 6 | NR | NR | Yes | Max 60 | 70-75/21-24 |
| Labor/delivery/recovery/postpartum (LDRP) (1224.32.3.7) (s) | NR | 2 | 6 | NR | NR | Yes | Max 60 | 70-75/21-24 |
| *Lactation (1224.32.5.1.3)* | *NR* | *2* | *6* | *NR* | *NR* | Yes | *NR* | *70-75/21-24* |
| Laser eye room *(1224)* | Positive | 3 | 15 | NR | No | Yes | 20-60 | 70-75/21-24 |
| ~~Neonatal~~*Newborn* intensive care *(1224.29.2.6)* | Positive | 2 | 6 | NR | No | Yes | 30-60 | 72-78/22-26 |
| *Newborn intensive care formula room (1224.29.2.10)* | *Positive* | *2* | *10* | *NR* | *No* | Yes | *NR* | *70-75/21-24* |
| Newborn*/well baby* nursery *(1224.32.5)* | NR | 2 | 6 | NR | No | Yes | 30-60 | 72-78/22-26 |
| Nourishment area or room *(1224.4.4.5)* | NR | NR | 2 | NR | NR | Yes | NR | NR |
| *Nurse station (1224.4.4.2) (aa)* | *(aa)* | *(aa)* | *2* | *(aa)* | *(aa)* | Yes | *(aa)* | *(aa)* |
| Nursery workroom *(1224.32.5.1.4)* | NR | 2 | 6 | NR | No | Yes | Max 60 | 72-78/22-26 |
| *Observation (1224.33.5.1)* | *NR* | *2* | *6* | *NR* | *NR* | Yes | *NR* | *70-75/21-24* |
| Operating room *(1224.15.2.1)* (m),(o) | Positive | 4 | 20 | NR | No | Yes | 20-60 | 68-75/20-24 |
| Operating/surgical cystoscopic rooms *(1224.15.2.2.1)* (m), (o) | Positive | 4 | 20 | NR | No | Yes | 20-60 | 68-75/20-24 |
| Patient care area corridor (1224.4.7) | NR | NR | 2 | NR | NR | Yes | NR | NR |
| Patient room *(CBC 1224.14.1)* | NR | 2 | 4 (y) | NR | NR | Yes | Max 60 | 70-75/21-24 |
| Patient bedroom, *behavioral* room *(1224.30.1/1228.14.1)* | NR | 2 | 2 | NR | NR | Yes | NR | NR |
| *Patient holding preparation (1224.16.2)* | *NR* | *2* | *6* | *NR* | *No* | Yes | *NR* | *70-75/21-24* |
| Patient toilet room *(CBC 1224.4.4.8)* | Negative | NR | 10 | Yes | No | Yes (ff) | NR | NR |
| PE anteroom *(FGI 2.2-2.2.4.4)* (t) | (e) | NR | 10 | NR | No | No | NR | NR |
| *Pediatric playroom (1224.30.3.1)* | *NR* | *2* | *6* | *NR* | *NR* | Yes | *NR* | *70-75/21-24* |
| ~~[Phase I PACU and Phase II recovery]~~ *Post-anesthesia care unit and recovery (1224.16.3)* | NR | 2 | 6 | NR | No | Yes | 20-60 | 70-75/21-24 |
| Procedure room *(1224.4.4.1.4)* (o)~~, (d)~~ | Positive | 3 | 15 | NR | No | Yes | 20-60 | 70-75/21-24 |
| Protective environment room *(1224.14.4)* (t) | Positive | 2 | 12 | NR | No | No | Max 60 | 70-75/21-24 |
| ~~PE~~*Protective Environment* anteroom *(1224.14.4.3)* (t) | (e) | NR | 10 | NR | No | No | NR | NR |
| Radiology waiting rooms *(1224.18)* | Negative | 2 | 12 | Yes (q),(w) | NR | Yes (ff) | Max 60 | 70-75/21-24 |
| *Recreation/activity room (1224.31.1.11/1224.35.1)* | *NR* | *2* | *6* | *NR* | *NR* | Yes | *NR* | *70-75/21-24* |
| Seclusion room *(1224.4.4.1.5/1228.14.5)* | NR | 2 | *~~4~~ 6* | NR | NR | Yes | Max 60 | 70-75/21-24 |
| *Semi-restricted corridor (1224.15.1)* | *NR* | *2* | *4* | *NR* | *NR* | *No* | *NR* | *NR* |
| Sterile processing room *(1224.15.3.3)* | NR | 2 | 6 | NR | No | Yes | NR | NR |
| Treatment room *(1224.4.4.1.2)* (p) | NR | 2 | 6 | NR | NR | Yes | 20-60 | 70-75/21-24 |
| *Waiting area primary care clinic (1226.4.16.1.2)* | *Negative* | *2* | *12* | *Yes (q)* | *No* | *No* | *Max 60* | *70-75/21-24* |
| Wound intensive care (bum unit) (1224.29.1) | Positive | 2 | 6 | NR | No | Yes | 40-60 | 70-75/21-24 |
| **DIAGNOSTIC AND TREATMENT** |  |  |  |  |  |  |  |  |
| Bronchoscopy, sputum collection, and pentamidine administration *(1224.39.3)* (n), (x) | Negative | 2 | 12 | Yes | No | Yes | NR | 68-73/20-23 |
| Cancer treatment area *(1224.39.4)* | NR | 2 | 6 | NR | NR | MERV-8 | 70- 75/21-24 |  |
| Class 1 imaging room *(1224.18)* | NR ~~(jj)~~ | 2 | 6 | NR | NR | Yes | Max 60 | 72- 78/22-26 |
| *CT Scan (1224.18.3)* | *NR* | *2* | *6* | *NR* | *NR* | Yes | *max 60* | *70-75/21-24* |
| *Fluoroscopy room (1224.18.1)* | *Negative* | *2* | *6* | *Yes* | *No* | Yes | *NR* | *70-75/21-24* |
| *MRI room (1224.18.4)* | *NR* | *2* | *6* | *NR* | *NR* | Yes | *NR* | *70-75/21-24* |
| *Negative-pressure x-ray room* | *Negative* | *2* | *12* | *Yes* | *No* | Yes | *max 60* | *72-78/22-26* |
| Class 2 imaging room *(1224.18.1/1224.28.4)*~~(d),~~ (p) | Positive | 3 | 15 | NR | No | Yes | Max 60 | 70-75/21-24 |
| *Angiography room (1224.18.2)* | *Positive* | *3* | *15* | *NR* | *No* | Yes | *max 60* | *70-75/21-24* |
| *Cardiac catheterization lab (1224.28.2)* | *Positive* | *3* | *15* | *NR* | *No* | Yes | *max 60* | *70-75/21-24* |
| ~~ECT~~*Electroconvulsive therapy* procedure room *(1224.28.6)* | *Positive* | *3* | *15* | *NR* | *No* | Yes | *20-60* | *70-75/21-24* |
| *Interventional imaging procedure room* (1224.28.4) | *Positive* | *5* | *15* | *NR* | *No* | Yes | *20-60* | *70-75/21-24* |
| Class 3 imaging room *(1224.28.5/1224.18.1)* (m), (o) | Positive | 4 | 20 | NR | No | Yes | 20-60 | 68-75/21-24 |
| *Hybrid operating room (1224.28.5) (m), (n), (o)* | *Positive* | *4* | *20* | *NR* | *No* | *Yes* | *20-60* | *68-75/20-24* |
| Dental treatment (1226.6.1.3) | NR | 2 | 3 | NR | NR | Yes | NR | 70–75/21–24 |
| Dialysis treatment area *(1224.36.2.3)* | NR | 2 | 6 | NR | NR | Yes | NR | 72-78/22-26 |
| Dialyzer reprocessing room *(1224.36.2.12)* | Negative | NR | I0(bb) | Yes | No | Yes (ff) | NR | NR |
| Gastrointestinal endoscopy procedure room *(1224.39.3)* (x) | NR | 2 | 6 | NR | No | Yes | 20-60 | 68-73/20-23 |
| General examination room *(1224.4.4.1.1)* | NR | 2 | 4 | NR | NR | Yes | Max 60 | 70-75/21-24 |
| Hydrotherapy *(1224.35)* | Negative | 2 | 6 | NR | NR | Yes | NR | 72-80/22-27 |
| Instrument processing room *(1224.39.3.2)* | Negative | 2 | 10 | Yes | No | No | NR | NR |
| Medication *preparation* room *(1224.4.4.1)* | NR | 2 | 4 | NR | NR | Yes | Max 60 | 70-75/21-24 |
| *Nuclear medicine (Gamma, PET, SPECT) (1224.34.1.2)* | *Negative* | *2* | *6* | *Yes* | *No* | *No* | *NR* | *70-75/21-24* |
| Nuclear medicine hot lab *(1224.34.1.3)* | Negative | NR | 6 | Yes | No | Yes (ff) | NR | 70-75/21-24 |
| Speech therapy room *(1224.35.4)* | NR | 2 | 2 | NR | NR | Yes | NR | 70–75/21–24 |
| Physical therapy *(1224.35.2)* | Negative | 2 | 6 | NR | NR | Yes | Max 65 | 72-80/22-27 |
| Occupational therapy *(1224.35.3)* | NR | 2 | 3 | NR | NR | Yes | NR | 70–75/21–24 |
| Special examination room (~~aa~~*g*) | NR | 2 | 6 | NR | NR | Yes | Max 60 | 70- 75/21-24 |
| ~~Treatment room~~ | ~~NR~~ | ~~2~~ | ~~6~~ | ~~NR~~ | ~~NR~~ | ~~Yes~~ | ~~Max 60~~ | ~~70- 75/21-24~~ |
| *Ultrasound (1224.18.5)* | *NR* | *2* | *6* | *NR* | *NR* | *Yes* | *Max 60* | *72-78/22/26* |
| **~~PATIENT~~ SUPPORT ~~FACILITIES~~*SERVICES*** |  |  |  |  |  |  |  |  |
| *Blood bank/tissue storage (1224.17.2.4)* | *NR* | *2* | *6* | *NR* | *NR* | *Yes* | *NR* | *NR* |
| *Blood draw/phlebotomy (1224.17.3)* | *NR* | *2* | *6* | *NR* | *NR* | *Yes* | *NR* | *70-75/21-24* |
| ~~Bedpan~~ | ~~Negative~~ | ~~NR~~ | ~~10~~ | ~~Yes~~ | ~~No~~ | ~~No~~ | ~~NR~~ | ~~NR~~ |
| ~~Environmental services room~~*Housekeeping* *(1224.4.15)* | Negative | NR | 10 | Yes | No | No | NR | NR |
| Food and supply storage *(1224.20.2.3)* | NR | NR | 2 | NR | No | No | NR | 72-78/22-26 |
| Food preparation areas *(1224.20.2.5)* (i) | NR | 2 | 10 | NR | No | Yes | NR | 72-78/22-26 |
| Laboratory work area, bacteriology *(1224.17.2)* (f), (v) | Negative | 2 | 6 | Yes | NR | Yes | NR | 70-75/21-24 |
| Laboratory work area, biochemistry *(1224.17.2)* (f), (v) | Negative | 2 | 6 | Yes | NR | Yes | NR | 70- 75/21-24 |
| Laboratory work area, cytology *(1224.17.2)* (f),(v) | Negative | 2 | 6 | Yes | NR | Yes | NR | 70-75/21-24 |
| Laboratory work area, general *(1224.17.2)* (f), (v) | Negative | 2 | 6 | NR | NR | Yes | NR | 70- 75/21-24 |
| Laboratory work area, glasswashing *(1224.17.2)* (f) | Negative | 2 | 10 | Yes | NR | Yes | NR | NR |
| Laboratory work area, histology *(1224.17.2)* (f),(v) | Negative | 2 | 6 | Yes | NR | Yes | NR | 70- 75/21-24 |
| Laboratory work area, media transfer *(1224.17.2)* (f),(v) | Positive | 2 | 4 | NR | NR | Yes | NR | 70-75/21-24 |
| Laboratory work area, microbiology *(1224.17.2)* (f), (v) | Negative | 2 | 6 | Yes | NR | Yes | NR | 70-75/21-24 |
| Laboratory work area, nuclear medicine *(1224.17.2)* (f), (v) | Negative | 2 | 6 | Yes | NR | Yes | NR | 70-75/21-24 |
| Laboratory work area, pathology *(1224.17.2)* (f), (v) | Negative | 2 | 6 | Yes | NR | No | NR | 70–75/21–24 |
| Laboratory work area, serology *(1224.17.2)* (f), (v) | Negative | 2 | 6 | Yes | NR | Yes | NR | 70–75/21–24 |
| Laboratory work area, sterilizing *(1224.17.2)* (f) | Negative | 2 | 10 | Yes | NR | Yes | NR | 70–75/21–24 |
| Pharmacy Services: Pharmacy Areas *(1224.19.2)* (b) | Positive | 2 | 4 | NR | NR | Yes | Max 60 | 70–75/21–24 |
| *Drug room (1224.19.1.2.1)* | *NR* | *2* | *4* | *NR* | *NR* | Yes | *NR* | 70–75/21–24 |
| *HD ante room (1224.19.3.3.3) (b)* | *Positive* | *NR* | *30* | *NR* | *NR* | *NR* | *<60* | *≤68/≤20* |
| *HD buffer room (1224.19.3.3.2) (b)* | *Negative* | *NR* | *30* | *Yes* | *No* | *NR* | *<60* | *≤68/≤20* |
| *HD SCA (1224.19.3.3.4) (cc)* | *Negative* | *NR* | *12* | *Yes* | *NR* | *NR* | *NR* | *NR* |
| *HD storage (1224.19.3.3) (b)* | *Negative* | *NR* | *12* | *Yes* | *NR* | *NR* | *NR* | *NR* |
| *Non-HD ante room (1224.19.3.2.3) (b)* | *Positive* | *NR* | *~~30~~20* | *NR* | *NR* | *NR* | *<60* | *≤68/≤20* |
| *Non-HD buffer room (1224.19.3.2.2) (b)* | *Positive* | *NR* | *30* | *NR* | *No* | *NR* | *<60* | *≤68/≤20* |
| *Non-HD SCA (1224.19.3.2.4) (dd)* | *NR* | *NR* | *NR* | *NR* | *NR* | *NR* | *NR* | *NR* |
| Toilet room *(1224.4.4.8)* | Negative | NR | 10 | Yes | No | Yes | NR | 72–78/22–26 |
| Warewashing *(1224.20.2.10)* (r) | Negative | NR | 10 | Yes | No | Yes | NR | NR |
| **~~GENERAL~~ SUPPORT ~~FACILITIES~~*SERVICES*: STERILE PROCESSING** |  |  |  |  |  |  |  |  |
| Clean assembly/workroom *(1224.22.1)* (z) | Positive | 2 | 4 | NR | No | No | Max 60 | 68–73/20–23 |
| Soiled workroom/decontamination room *(1224.22.1)* (z) | Negative | 2 | 6 | Yes | No | No | NR | 60–73/16–23 |
| Sterile storage room (clean/sterile medical/ surgical supplies) *(1224.22.1)* (z) | Positive | 2 | 4 | NR | NR | No | Max 60 | Max 75/24 |
| One-room sterile processing *(1224.22)* | NR | 2 | 6 | NR | No | No | NR | NR |
| *Sterilizing equipment room* | *Negative* | *NR* | *10* | *Yes* | *No* | *No* | *NR* | *NR* |
| **OTHER GENERAL SUPPORT ~~FACILITIES~~*SERVICES*** |  |  |  |  |  |  |  |  |
| *Morgues and* Autopsy room *(1224.24)* | Negative | 2 | 12 | Yes | No | No | NR | 68–75/20–24 |
| Clean linen storage room *(1224.27 & 1224.14.2.9)* | Positive | NR | 2 | NR | NR | Yes | NR | 72–78/22–26 |
| Hazardous material storage *(1224.4.14)* | Negative | 2 | 10 | Yes | No | No | NR | NR |
| Laundry, processing room *(1224.27)* | Negative | 2 | 10 | Yes | No | No | NR | NR |
| Linen and refuse chute room *(1224.27 & 1224.4.14)* | Negative | NR | 10 | Yes | No | No | NR | NR |
| Nonrefrigerated body holding room *(1224.24)* (h) | Negative | NR | 10 | Yes | No | No | NR | 70–75/21–24 |
| Regulated waste holding spaces *(1224.4.14)* | Negative | NR | 10 | Yes | No | No | NR | NR |
| ~~Toilet~~ | ~~Negative~~ | ~~NR~~ | ~~10~~ | ~~Yes~~ | ~~No~~ | ~~Yes~~ | ~~NR~~ | ~~NR~~ |
| *Unsterile supply (1225.4.5.2.4)* | *NR* | *2* | *2* | *NR* | *NR* | *No* | *NR* | *NR* |
| **SUPPORT AREAS FOR NURSING UNITS AND OTHER PATIENT CARE AREAS** |  |  |  |  |  |  |  |  |
| Clean supply room *(1224.4.4.6.1)* | Positive | NR | *2* | NR | NR | Yes | NR | NR |
| Clean *utility/*workroom *(1224.4.4.6)* | Positive | 2 | *4* | NR | NR | Yes | NR | NR |
| Soiled *utility/*workroom or soiled holding *(FGI 2.1–2.8.12)* | Negative | 2 | 10 | Yes | No | No | NR | NR |
| **SKILLED NURSING AND INTERMEDIATE CARE FACILITIES** |  |  |  |  |  |  |  |  |
| AII room (1225.4.1.9) (b) | Negative | 2 | 12 | Yes | No | Yes | Max 60 | 70-78/21-29 |
| AII anteroom (1225.4.1.9) (b) | Negative | NR | 10 | Yes | No | Yes | Max 60 | 70-78/21-29 |
| *Nurse station (aa)* | *(aa)* | *(aa)* | *2* | *(aa)* | *(aa)* | *(aa)* | *(aa)* | *(aa)* |
| Resident living/activity/dining (1225.5.1.4/1225.5.2.5.1) | NR | 4 | 4 | NR | NR | Yes | Max 60 | 70-78/21-29 |
| *Recreation/activity room (1225.5.1.4)* | *NR* | *2* | *6* | *NR* | *NR* | *Yes* | *NR* | *70-75/21-24* |
| Resident room (1225.5.1.2.1/1225.5.2.3) | NR | 2 | 2 | NR | NR | Yes | Max 60 | 70-78/21-29 |
| Resident corridor (1225) | NR | NR | 4 | NR | NR | Yes | NR | 70-78/21-29 |
| *Special purpose room (1225.4.1.8)* | *NR* | *2* | *6* | *Yes* | *NR* | Yes | Max 60 | *70-75/21-24* |
| *Shower room (1224.14.2.14)* | *Negative* | *NR* | *10* | *Yes* | *No* | *No* | *NR* | *70-75/21-24* |
| Toilet/bathing room (1225.4.1.6) | Negative | NR | 10 | Yes | No | No | NR | 70-78/21-29 |
| **SERVICE** |  |  |  |  |  |  |  |  |
| Clean linen storage (1225.4.5.2.1) | Positive | NR | 2 | NR | NR | No | NR | 72-78/22-26 |
| Dietary storage (1225.4.2.2.10) | NR | NR | 2 | NR | No | No | NR | 72-78/22-26 |
| Food preparation center (1225.4.2.2.3) (i) | NR | 2 | 10 | NR | No | Yes | NR | 72-78/22-26 |
| Hair salon (1225.6) | Negative | NR | 10 | Yes | NR | Yes | NR | 70-78/21-29 |
| Laundry, central and personal (1225.4.7/1225.5.2.5.7) | Negative | 2 | 10 | Yes | No | No | NR | NR |
| Linen and trash chute room (1225.4.7) | Negative | NR | 10 | Yes | No | No | NR | NR |
| Medication *preparation* room (1225.4.1.1.1) | NR | 2 | 4 | NR | NR | Yes | Max 60 | 70-75/21-24 |
| Soiled linen sorting and storage (1225.4.7) | Negative | NR | 10 | Yes | No | No | NR | NR |
| *Unsterile supply (1225.4.5.2.4)* | *NR* | *2* | *2* | *NR* | *NR* | *No* | *NR* | *NR* |
| Warewashing (1225.4.2.2.7) | Negative | NR | 10 | Yes | No | Yes | NR | NR |
| **SUPPORT SPACE** |  |  |  |  |  |  |  |  |
| Clean utility *room* (CBC 1225.4.1.3.1) | Positive | 2 | 4 | NR | NR | No | NR | NR |
| Hazardous waste storage (1225) | Negative | 2 | 10 | Yes | No | No | NR | NR |
| ~~Environmental services~~*Housekeeping* room (1225.4.6) (j) | Negative | NR | 10 | Yes | NR | No | NR | NR |
| Soiled utility*/workroom* or soiled holding (1225.4.1.3.2) | Negative | 2 | 10 | Yes | No | No | NR | NR |

Informative Notes: (1) NR = no requirement

*Table 4-A* is based on ASHRAE Standard 170-2021, “Ventilation of Healthcare Facilities”, Table 7-1, 8-1, 8-2 and 9-1 with amendments, and it is used with expressed written permission from ASHRAE. **Copyright notice for ASHRAE Standards** ©ASHRAE, [www.ashrae.org](https://gcc02.safelinks.protection.outlook.com/?url=http%3A%2F%2Fwww.ashrae.org%2F&data=05%7C02%7CMia.Marvelli%40hcai.ca.gov%7C29578e514112466691d408dc1238508c%7C28891a93888f489f9930e78b8f733ca6%7C0%7C0%7C638405280285491245%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C3000%7C%7C%7C&sdata=VnEfxdIOe3U4M1T%2F8lpkOwyE5oq2faqlO%2Fg3dPTdPKY%3D&reserved=0). 2021 ASHRAE Standard-170.

***Notes for Table 4-A:***

a. Except where indicated by a “No” in this column, recirculating room HVAC units (with heating or cooling coils) are acceptable for providing that portion of the minimum total air changes per hour that is permitted by Section ~~7.1 (subparagraph [a][5])~~*407.4.5*. Because of the cleaning difficulty and potential for buildup of contamination, recirculating room units shall not be used in areas marked “No.” Recirculating devices with high-efficiency particulate air (HEPA) filters shall be permitted in existing facilities as interim, supplemental environmental controls to meet requirements for the control of airborne infectious agents. The design of either portable or fixed systems should prevent stagnation and short circuiting of airflow. The design of such systems shall also allow for easy access for scheduled preventative maintenance and cleaning.

b. ~~Pharmacy compounding areas may have additional air changes and differential pressure requirements beyond the minimum of this table, depending on the type of pharmacy, the regulatory requirements (which may include adoption of USP-795, USP-797, and USP-800), the associated level of risk of the work, and the equipment used in the spaces. Minimum efficiency of filters for any space where compounding occurs shall be determined by USP 795 7, USP 797 8, or USP 800 9, as applicable.~~ *(2022 OSHPD Amendment) Additional air change, ISO class, continuous pressure monitoring and filtering requirements for compounding areas shall comply with California Board of Pharmacy* *regulations Title 16 §1735 & §1751, and USP <797> & <800>. Air supplied to the compounding buffer room and ante room must be introduced through 99.97% minimum HEPA filters located in the ceiling. At least 15 air changes per hour (ACPH) shall be provided to nonhazardous drug (non-HD) compounding buffer rooms through the ceiling. The HEPA filtered air from the PEC in the non-HD buffer room, when added to the HVAC-supplied HEPA filtered air, shall increase the total HEPA-filtered ACPH to at least 30. If the PEC is used to meet the minimum total ACPH requirements, the PEC must not be turned off except for maintenance. All hazardous drug (HD) compounding areas and PECs shall be externally vented. For both hazardous and non-hazardous compounding, minimum air changes shall be met under dynamic operating conditions as defined by USP. Returns and exhaust grilles shall be mounted low on the wall unless a visual smoke study demonstrates dilution of particles and sweeping out of particles from the entire room. One return/exhaust should be placed near the refrigerator compressor. Anteroom shall have a minimum pressure differential of +0.02 inches water column in relation to the adjacent, non-compounding spaces. Non-HD buffer room shall have a pressure differential of +0.02 to +0.05 inches water column in relation to the anteroom. HD buffer room shall have a pressure differential of -0.01 to -0.03 inches water column in relation to the anteroom.*

c. The term trauma/resuscitation roomas used herein is a first-aid room and/or emergency department room used for general initial treatment of accident victims. The OR within the trauma center that is routinely used for emergency surgery is considered to be an OR by this standard.

d. ~~Pressure relationships need not be maintained when the room is unoccupied.~~ *For operating rooms, cardiac catheterization labs, angiography rooms, cystoscopy rooms, delivery rooms, cesarean operating rooms, newborn intensive care, and class 3 imaging provide approximately 15% excess supply air to the room or a sufficient quantity of excess supply air to maintain an appropriate positive air balance based on the room tightness and number of doors. For all rooms not listed in this footnote or not listed in Section 322.0 requiring either a positive or negative air balance, provide approximately 10% differential cfm between supply and return/exhaust airflow but not less than 25 cfm differential shall be provided regardless of room size. Room function, size, and tightness may be considered when determining the differential airflow required. Where continuous directional control is not required, variations between supply cfm and return or exhaust cfm shall be minimized in accordance with Section 407.4.1.3.*

e. See Section ~~7.2.1~~*414.0 and 416.0* for AII ventilation requirements, including pressure relationship requirements, and Section ~~7.2.2~~ *415.0 and 416.0* for PE ventilation requirements, including pressure relationship requirements.

f. Higher ventilation rates above the total ach listed shall be used when dictated by the laboratory program requirements and the hazard level of the potential contaminants in each laboratory work area. Lower total ach ventilation rates shall be permitted when a hazard assessment, performed as part of an effective laboratory ventilation management plan per AIHA/ASSE Z9.5 3, determines that either (1) acceptable exposure concentrations in the laboratory work area can be achieved with a lower minimum total ach ventilation rate than is listed in Table ~~7-1~~*4-A* or (2) a demand control approach with active sensing of contaminants or appropriate surrogates is used as described in ASHRAE Handbook—HVAC Applications10, Chapter 16, “Laboratories.”

g. ~~Not used~~.(relocated from ‘aa’)*Examination rooms programmed for use by patients with undiagnosed gastrointestinal symptoms, undiagnosed respiratory symptoms, or undiagnosed skin symptoms.*

h. A nonrefrigerated body holding room is applicable only to facilities that do not perform autopsies on-site and use the space for short periods while waiting for the body to be transferred.

i. ~~Not used.~~ *Minimum total air changes per hour (ach) shall be that required to provide proper makeup air to kitchen exhaust systems as specified in Section 511.3. Commercial cooking areas shall be designed to prevent odors from entering patient spaces.*

j. ~~In some areas with potential contamination and/or odor problems,~~ *Where the “exhaust directly to Outdoors” column is marked yes, all* exhaust air shall be discharged directly to the outdoors and not recirculated to other areas. ~~Individual circumstances may require special consideration for air exhausted to the outdoors.~~ R*ecirculation room units may be provided where the column is marked yes provided air is not recirculated to other areas.* To satisfy exhaust needs, constant replacement air from the outdoors is necessary when the system is in operation.

k. The relative humidity (RH) ranges listed are the minimum and/or maximum allowable at any point within the design temperature range required for that space.

l. Systems shall be capable of maintaining the rooms within the range during normal operation. Lower or higher temperature shall be permitted when occupants’ comfort and/or medical conditions require those conditions.

m. National Institute for Occupational Safety and Health (NIOSH) criteria documents 11 regarding occupational exposure to waste anesthetic gases and vapors and control of occupational exposure to nitrous oxide indicate a need for both local exhaust (scavenging) systems and general ventilation of the areas in which the respective gases are used. (***Informative Note:*** Refer to NFPA 99 [202~~1~~*4*] for other requirements.)

n. If pressure-monitoring device alarms are installed, allowances shall be made to prevent nuisance alarms. Short-term excursions from required pressure relationships shall be allowed while doors are moving or temporarily open. Simple visual methods such as smoke trail, ball-in-tube, or flutterstrip shall be permitted for verification of airflow direction.

o. Surgeons or surgical procedures may require room temperatures, ventilation rates, humidity ranges, and/or air distribution methods that exceed the minimum indicated ranges.

p. Treatment rooms used for bronchoscopy shall be treated as bronchoscopy rooms. Treatment rooms used for procedures with nitrous oxide shall contain provisions for exhausting anesthetic waste gases.

q. In a recirculating ventilation system, HEPA filters shall be permitted instead of exhausting the air from these spaces to the outdoors, provided that the return air passes through the HEPA filters before it is introduced into any other spaces. The entire minimum total air changes per hour of recirculating airflow shall pass through HEPA filters. When these areas are open to larger, nonwaiting spaces, the exhaust air volume shall be calculated based on the seating area of the waiting area. (***Informative Note:*** The intent here is to not require the volume calculation to include a very large space [e.g., an atrium] just because a waiting area opens onto it.)

r. Exhaust rate shall meet or exceed local requirements.

s. For intermediate care, labor/delivery/recovery rooms, and labor/delivery/recovery/postpartum rooms, four total ach shall be permitted when supplemental heating and/or cooling systems (radiant heating and cooling, baseboard heating, etc.) are used.

t. The protective environment airflow design specifications protect the patient from common environmental airborne infectious microbes (i.e., *Aspergillus* spores). *The anteroom shall have negative air pressure in relation to the protective environment room. A door louver, transfer grille, or other acceptable means may be provided to allow for airflow from the protective environment room to the anteroom. The protective environment room shall have positive pressure in relation to the anteroom and adjoining toilet room. .*Recirculation HEPA filters shall be permitted to increase the equivalent room air exchanges; however, the outdoor air changes are still required. Constant-volume airflow is required for consistent ventilation for the protected environment. The pressure relationship to adjacent areas shall remain unchanged if the protective environment (PE) room is used as a normal patient room. Rooms with reversible airflow provisions for the purpose of switching between PE and AII functions shall not be permitted.

u. The AII room described in this standard shall be used for isolating the airborne spread of infectious diseases, such as measles, varicella, or tuberculosis*. The airborne infection isolation room shall have negative pressure in relation to the anteroom, and the adjoining toilet room shall have negative pressure in relation to the airborne infection isolation room.* Supplemental recirculating devices using HEPA filters shall be permitted to recirculate air within the AII room to increase the equivalent room air exchanges; however, the minimum outdoor air changes of Table 7-1 are still required. When the AII room is not used for airborne infection isolation, the pressure relationship to adjacent areas, when measured with the door closed, shall remain unchanged.~~, and the minimum total air change rate shall be 4 ach. Turndown of minimum air changes for the AII anteroom shall be based around the use of the associated AII room(s).~~

v. Room temperature ranges that exceed the minimum indicated range shall be permitted if required by the laboratory program or laboratory equipment.

w. The requirement that all room air be exhausted directly to outdoors applies only to radiology waiting rooms programmed to hold patients who are waiting for chest x-rays for diagnosis of respiratory disease.

x. If the planned space is designated in the organization’s operational plan to be used for both bronchoscopy and gastrointestinal endoscopy, the design parameters for “bronchoscopy, sputum collection, and pentamidine administration” shall be used.

y. For single-bed patient rooms using Group D diffusers, a minimum of six total ach shall be provided and calculated based on the volume from finished floor to 6 ft (1.83 m) above the floor.

z. See AAMI Standard ST79 12 for additional information for these spaces.

aa. (relocate to ‘g’) ~~Examination rooms programmed for use by patients with undiagnosed gastrointestinal symptoms, undiagnosed respiratory symptoms, or undiagnosed skin symptoms.~~ *Nurse station pressure relationship and ventilation requirements shall match the area in which it is located.*

bb. Lower total ach ventilation rates shall be permitted when use of the ASHRAE Standard 62.1 1, Section 6.5, “Exhaust Ventilation,” Performance Compliance Path determines that concentration of the contaminants of concern is lower than the corresponding concentration of interest. In addition to other contaminants of concern required by Standard 62,1 Section 6.5.2, the following contaminants of concern shall be considered for the space and maintained not greater than the concentration level indicated: hydrogen peroxide 1 ppm; glutaraldehyde 0.05 ppm; ethyl alcohol 1000 ppm; isopropyl alcohol 400 ppm. (***Informative Note:*** Listed concentrations of interest were determined by ACGIH [2001]; see Informative Appendix E.)

cc. ~~Table entries are the minimum filter efficiencies required for the space. Refer to Section 6.4 of this document for further clarification of filtration requirements. The minimum efficiency reporting value (MERV) is based on the method of testing described in ASHRAE Standard 52.2~~~~4~~~~.~~ *HD segregated compounding area shall have a differential pressure of -0.01 to -0.03 inches water column in relation to adjacent areas and a minimum of 12 air changes per hour.*

dd. ~~As an alternative to the requirement for HEPA filters in Filter Bank No. 2, MERV-14 rated filters may be used in Filter Bank No. 2 if a tertiary terminal HEPA filter is provided for this space. (~~***~~Informative Note:~~*** ~~HEPA filters are those filters that remove at least 99.97% of 0.3 micron sized particles at the rated flow in accordance with the testing methods of IEST RP-CC001.3 [2005] in Informative Appendix E~~*~~).~~The requirements for the non-HD segregated compounding area shall meet the minimum requirements for the room which it is located.*

ee. ***Informative Note:*** Parenthetic notations following a space name are ~~paragraph~~ references to the relevant ~~FGI Guidelines (FGI 2018a, 2018b, 2018c) in Informative Appendix E~~*California Building Code sections from Chapter 12*. These paragraph references are provided to the user to aid in the application of design requirements. *Functions from 1225, 1226, 1227, or 1228 not specifically identified in the table can refer to the appropriate section from 1224.*

ff. If this space uses unoccupied turndown it shall include time-delay controls such that turndown does not occur for the first 20 minutes after the space becomes unoccupied. (***Informative Note:*** The 20 minute delay approximates the time required for 90% reduction in airborne contamination at 6 ach, assuming perfect mixing.)

gg. ~~Minimum MERV-14 filters shall be required for spaces where sterile equipment is packed into sterile packages. Spaces where sterile products are stored but not packed shall not be required to have MERV-14 filters.~~ *Intensive care patient rooms that contain a modular toilet/sink combination unit within the room shall be provided with a minimum of 75 cfm (35.4 Lis) of exhaust directly over the modular toilet/sink combination unit.*

hh. ~~See also Section 7.4.1(c).~~

ii. ~~A minimum MERV-8 filter may be utilized for this space in lieu of a minimum MERV-14 filter if all room air is exhausted directly to the outdoors and the pressure relationship to adjacent areas is kept negative. If a filter rated less than MERV-14 is utilized, the space shall be considered “Negative” with regards to the table and must comply with all other requirements for negative spaces within the standard.~~

jj ~~Negative pressure is required if open mixing of isotopes or gaseous studies are performed as a part of nuclear treatment procedures within the imaging room. (~~***~~Informative Note:~~*** ~~Open mixing of isotopes is typically performed in the hot lab.)~~

#### Notation:

Authority: Health and Safety Code, Sections 1275, 18928, 129850

Reference(s): Health and Safety Code, Section 1250.3, 1418.22, 129675-130070

### ITEM 9 CHAPTER 4 VENTILATION AIR *TABLE 4-B*

***TABLE 4-B  
FILTER EFFICIENCIES FOR CENTRAL VENTILATION AND AIR-CONDITIONING SYSTEMS IN GENERAL ACUTE CARE HOSPITALS, ~~ACUTE PSYCHIATRIC HOSPITALS~~, OUTPATIENT FACILITIES, ~~AND~~ LICENSED CLINICS AND ACUTE PSYCHIATRIC HOSPITALS 1 [OSHPD 1, 3, & 5]***

*Table 4-B. Filter Efficiencies for central ventilation and air-conditioning systems in general acute care hospitals, outpatient facilities, licensed clinics and acute psychiatric hospitals (OSHPD 1, 3, & 5)

HCAI proposes to add an OSHPD banner to the title of Table 4-B. The title of the table also identifies the specific use types for which it applies to. The OSHPD banner is being added to clarify which OSHPD categories the amendments apply to. General acute care hospitals fall under OSHPD 1, outpatient facilities and licensed clinics fall under OSHPD 3 and acute psychiatric hospitals fall under OSHPD 5.
The column for filter bank number 3 includes a HEPA filter requirement. The table includes a MERV 17 rating and HEPA filtration for row number three. The MERV 17 filter does not meet the same level of filtration as a HEPA filter as noted by the national standard adopted by the 2024 Uniform Mechanical Code. HCAI proposes to remove the MERV 17 rating from the number three column which will leave the HEPA filter rating as the sole requirement. A new footnote 3 is being added for a definition for HEPA to coordinate with the national standard.*

*1 Based on ASHRAE 52.2.*

*2 ~~Based on DOP test in accordance with MIL-STD-282 or based on ASHRAE 52.2.~~ A.T.D. – Air terminal device serving the room or space.*

*3* *HEPA filters are those filters that remove at least 99.97% of 0.3 micron sized particles at the rated flow in accordance with the testing methods of IEST RP- CC001.*

*~~3~~4 HEPA filters shall be located ~~at~~ in the air terminal device of the room served ~~outlet or other locations when approved by the Authority Having Jurisdiction~~.*

*~~4~~5 HEPA filters shall be located in the air terminal device of the room served. HEPA filters shall be permitted to be located in the air handling unit subject to the exception in ASHRAE 170, Section 7.2.2(c). ~~supply duct which serves the positive-pressure isolation room or rooms may serve more than one supply outlet and more than one positive-pressure isolation room.~~ HEPA filter ~~or a filter with minimum efficiency reporting value (MERV) of 17~~ installation shall be designed and equipped to permit safe removal, disposal and replacement of filters.*

*~~5~~6 The numbers in parentheses represent MERV rating based on ASHRAE 52.2.*

*~~6~~7 Additional prefilters with a minimum efficiency of MERV 8 may be used to reduce maintenance for filters.*

#### Notation:

Authority: Health and Safety Code, Sections 1275, 18928, 129850

Reference(s): Health and Safety Code, Section 1250.3, 1418.22, 129675-130070

### ITEM 10 CHAPTER 4 VENTILATION AIR *TABLE 4-C*

***TABLE 4-C***

***FILTER EFFICIENCIES FOR CENTRAL VENTILATION AND AIR-CONDITIONING SYSTEMS IN SKILLED NURSING FACILITIES, ~~AND~~ INTERMEDIATE CARE FACILITIES AND CORRECTIONAL TREATMENT CENTERS1 [OSHPD 2 & 4]***

...[table not shown]

*2 Filters are not required for evaporative coolers serving laundries ~~and food preparation areas~~.*

#### Notation:

Authority: Health and Safety Code, Sections 1275, 18928, 129850

Reference(s): Health and Safety Code, Section 1250.3, 1418.22, 129675-130070

### ITEM 11 CHAPTER 5 EXHAUST SYSTEMS

Adopt 2024 Uniform Mechanical Code (UMC) Chapter 5 for OSHPD 1, 1R, 2, 3, 4, 5 and 6. Carry forward existing amendments of the 2022 California Mechanical Code (CMC) Chapter 5 for OSHPD 1, 1R, 2, 3, 4, and 5.

#### Notation:

Authority: Health and Safety Code, Sections 1275, 18928, 129850

Reference(s): Health and Safety Code, Section 1250.3, 1418.22, 129675-130070

### ITEM 12 CHAPTER 6 DUCT SYSTEMS Sections 603.0 Installation of Ducts, 605.0 Insulation of Ducts

Adopt 2024 Uniform Mechanical Code (UMC) Chapter 6 for OSHPD 1, 1R, 2, 3, 4, 5 and 6. Carry forward existing amendments of the 2022 California Mechanical Code (CMC) Chapter 6 for OSHPD 1, 1R, 2, 3, 4, and 5 and as amended below.

**603.0 Installation of Ducts.**

…

**603.4 Flexible Air Ducts.** …

**603.4.1 Length Limitation. *[Not permitted for OSHPD 1, ~~1R,~~ 2, 3, 4 & 5]*** Flexible air ducts shall be not more than 5 feet (1524 mm) in length and shall not be used in lieu of rigid elbows or fittings. Flexible air ducts shall be permitted to be used as an elbow at a terminal device.

**Exception:** Residential occupancies.

***603.4.1.1 Flexible Ducts. [OSHPD 1, ~~1R,~~ 2, 3, 4 & 5]*** *In hospital building projects and all other health-care facilities, including clinics and correctional treatment centers, flexible ducts of not more than 10 feet (3048 mm) in length may be used to connect supply, return or exhaust-air terminal devices to rigid duct systems. Where constant volume, variable volume or mixing boxes are utilized, flexible duct of not more than ~~10~~ 5 feet (~~3048~~1524 mm), may be used on the inlet side for alignment. An internal impervious liner shall be provided to isolate insulation material from conditioned air. Flexible duct is not permitted in corridors where fire or smoke dampers are omitted per CBC 717.5.4 and the duct is required to be constructed of steel not less than 0.019 inch (0.483 mm) in thickness.*

…

**605.0 Insulation of Ducts.**

…

***605.2 [OSHPD 1, ~~1R, 2,~~ 3 (Surgical Clinics), 4 & 5]*** *Thermal acoustical lining materials shall not be installed within ducts, terminal boxes, sound traps, and other in-duct systems serving areas such as operating, cesarean operating rooms, delivery rooms,* *class 3 imaging, hybrid operating rooms, post anesthesia care units, cystoscopy, cardiac catheterization labs, nurseries, intensive care units, newborn intensive care units, protective environment rooms and airborne infection isolation rooms unless filters with 90 percent average efficiency based on ASHRAE Standard 52.2 or minimum efficiency rating value (MERV) of 14 are installed downstream of the duct lining. See ASHRAE 170, section 6.9 for duct lining for non-sensitive areas or rooms.*

***605.3 [OSHPD 1, ~~1R~~, 2, 4 & 5]*** *Thermal or acoustical lining materials shall not be installed within ducts which are downstream of the 99.97 percent high-efficiency particulate air (HEPA) filter ~~or with minimum efficiency rating value (MERV) of 17~~ required in Section 408.2.1 for protective environment rooms.*

#### Notation:

Authority: Health and Safety Code, Sections 1275, 18928, 129850

Reference(s): Health and Safety Code, Section 1250.3, 1418.22, 129675-130070

### ITEM 13 CHAPTER 7 COMBUSTION AIR CHAPTER 8 CHIMNEYS AND VENTS

Adopt 2024 Uniform Mechanical Code (UMC) Chapter 7 and 8 for OSHPD 1, 1R, 2, 3, 4, 5 and 6.

#### Notation:

Authority: Health and Safety Code, Sections 1275, 18928, 129850

Reference(s): Health and Safety Code, Section 1250.3, 1418.22, 129675-130070

### ITEM 14 CHAPTER 9 INSTALLATION OF SPECIFIC APPLIANCES CHAPTER 10 BOILERS AND PRESSURE VESSELS

Adopt 2024 Uniform Mechanical Code (UMC) Chapters 9 and 10 for OSHPD 1, 1R, 2, 3, 4, 5 and 6. Carry forward existing amendments of the 2022 California Mechanical Code (CMC) Chapter 9 for OSHPD 1, 1R, 2, 4, and 5 and as renumbered by model code as shown below. Carry forward existing amendments of the 2022 California Mechanical Code (CMC) Chapter 10 for OSHPD 1, 1R, 2, 4, and 5.

**911.0 Decorative Appliances for Installation in Vented Fireplaces.**

**911.1**. **Application**. Decorative appliances for installation in vented fireplaces shall be listed in accordance with ANSI Z21.60/CSA 2.26. [NFPA 54:10.6.1]

**911.2** **Prohibited Installations**. Decorative appliances for installation in vented fireplaces shall not be installed in bathrooms or bedrooms unless the bedroom or bathroom has the required volume in accordance with Section 701.4. [NFPA 54:10.6.2]***[OSHPD 1, 1R, 2, 4 & 5]*** *A vented decorative appliance shall not be located in any hospital, skilled nursing facility, intermediate care facility, or correctional treatment center.*

#### Notation:

Authority: Health and Safety Code, Sections 1275, 18928, 129850

Reference(s): Health and Safety Code, Section 1250.3, 1418.22, 129675-130070

### ITEM 15 CHAPTER 11 REFRIGERATION TABLE 1104.1

Adopt 2024 Uniform Mechanical Code (UMC) Chapter 11 for OSHPD 1, 1R, 2, 3, 4, 5 and 6. Carry forward existing amendments of the 2022 California Mechanical Code (CMC) Chapter 11 for OSHPD 1, 1R, 2, 3, 4, and 5 and as amended below.

**TABLE 1104.1  
PERMISSIBLE REFRIGERATION SYSTEMS1**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **OCCUPANCY GROUP3** | **HIGH-PROBABILITY SYSTEM** | **LOW PROBABILITY SYSTEM** | **MACHINERY ROOM** |
|  | … | … | … | … |
| **~~[OSHPD 1, 1R, 2, 3, 4 & 5]~~** | *~~I-2.1~~* | *~~Group A1 only~~* | *~~Any~~* | *~~Any~~* |
|  |  |  |  |  |

…

#### Notation:

Authority: Health and Safety Code, Sections 1275, 18928, 129850

Reference(s): Health and Safety Code, Section 1250.3, 1418.22, 129675-130070

### ITEM 16 CHAPTER 12 HYDRONICS

Adopt 2024 Uniform Mechanical Code (UMC) Chapter 12 for OSHPD 1, 1R, 2, 3, 4, 5 and 6. Carry forward existing amendments of the 2022 California Mechanical Code (CMC) Chapter 12 for OSHPD 1, 1R, 2, 3, 4, and 5.

#### Notation:

Authority: Health and Safety Code, Sections 1275, 18928, 129850

Reference(s): Health and Safety Code, Section 1250.3, 1418.22, 129675-130070

### ITEM 17 CHAPTER 13 FUEL GAS PIPING CHAPTER 14 PROCESS PIPING

Adopt 2024 Uniform Mechanical Code (UMC) Chapters 13 and 14 for OSHPD 1, 1R, 2, 3, 4, 5 and 6.

#### Notation:

Authority: Health and Safety Code, Sections 1275, 18928, 129850

Reference(s): Health and Safety Code, Section 1250.3, 1418.22, 129675-130070

### ITEM 18 CHAPTER 15 SOLAR ENERGY SYSTEMS CHAPTER 16 STATIONARY POWER PLANTS CHAPTER 17 GEOTHERMAL

Entire Chapters 15, 16 and 17 not adopted by OSHPD.

#### Notation:

Authority: Health and Safety Code, Sections 1275, 18928, 129850

Reference(s): Health and Safety Code, Section 1250.3, 1418.22, 129675-130070

### ITEM 19 CHAPTER 18 REFERENCED STANDARDS

Adopt 2024 Uniform Mechanical Code (UMC) Chapter 18 for OSHPD 1, 1R, 2, 3, 4, 5 and 6. Carry forward existing amendments of the 2022 California Mechanical Code (CMC) Chapter 17 for OSHPD 1, 1R, 2, 3, 4, and 5 and as amended below. The 2024 Uniform Model Code revised Chapter 17 Referenced Standards to Chapter 18.

**TABLE 1801.1  
STANDARDS, PUBLICATIONS, PRACTICES, AND GUIDES**

|  |  |  |  |
| --- | --- | --- | --- |
| **STANDARD NUMBER** | **STANDARD TITLE** | **APPLICATION** | **REFERENCED**  **SECTION** |
| . . . | . . . | . . . | . . . |
| IAPMO PS 117-2021 | Press and Nail Connections | Fittings | Table 1210.1 |
| *IEST RP-CC001.7* | *HEPA and ULPA Filters* | *Filters* | *Table 4-B* |

#### Notation:

Authority: Health and Safety Code, Sections 1275, 18928, 129850

Reference(s): Health and Safety Code, Section 1250.3, 1418.22, 129675-130070

### ITEM 20 APPENDIX A RESIDENTIAL PLAN EXAMINER REVIEW FORM FOR HVAC SYSTEM DESIGN

Entire Appendix A not adopted by OSHPD.

#### Notation:

Authority: Health and Safety Code, Sections 1275, 18928, 129850

Reference(s): Health and Safety Code, Section 1250.3, 1418.22, 129675-130070

### ITEM 21 APPENDIX B Procedures to be Followed to Place Gas Equipment in Operation APPENDIX C Installation and Testing of Oil (Liquid) Fuel-Fired Equipment

Adopt 2024 Uniform Mechanical Code (UMC) Appendices B and C for OSHPD 1, 1R, 2, 3, 4, 5 and 6.

#### Notation:

Authority: Health and Safety Code, Sections 1275, 18928, 129850

Reference(s): Health and Safety Code, Section 1250.3, 1418.22, 129675-130070

### ITEM 22 APPENDICES D, E, F, G, H, I and J

Entire Appendices D, E, F, G, H, I and J not adopted by OSHPD.

#### Notation:

Authority: Health and Safety Code, Sections 1275, 18928, 129850

Reference(s): Health and Safety Code, Section 1250.3, 1418.22, 129675-130070