# INITIAL EXPRESS TERMSFOR PROPOSED BUILDING STANDARDSOF THE OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENTREGARDING THE 2022 CALIFORNIA MECHANICAL CODECALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 4(OSHPD 05/22)

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* Repealed model code language appears ~~upright and in strikeout~~
* Repealed California amendments appear in *~~italic and strikeout~~*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

## INITIAL EXPRESS TERMS

### ITEM 1CHAPTER 3 GENERAL REGULATIONS

#### *320.0 Air Conditioning and Heating Systems.320.1 Requirements for Hospitals and Optional Services Provided in Correctional Treatment Centers. [OSHPD 1, 1R, 4 & 5]*

***320.1.1*** *The systems shall be designed to provide the temperatures and relative humidity for sensitive areas or rooms shown in Table 4-A. When outdoor humidity and internal moisture sources are not sufficient to meet the requirements of sensitive areas or rooms in Table 4-A, humidification shall be provided by means of the healthcare facility air-handling systems. Temperature shall be individually controlled for each operating and delivery room. Burn unit patient rooms that require humidifiers to comply with the requirements of sensitive areas or rooms in Table 4-A shall be provided with individual humidity control. ~~All h~~Humidifiers shall be of the ~~use~~ dry steam or adiabatic type. Adiabatic humidifiers shall comply with the water treatment requirements in accordance with ASHRAE 170. Humidifiers shall be located within air handling systems or ductwork to avoid moisture accumulation in downstream components, including filters and insulation.*

#### *323.0 Mechanical Equipment Schedules. [OSHPD 1,1R, 2, 4 & 5]*

*Mechanical equipment schedules in the construction documents shall clearly indicate which equipment will be powered by essential power ~~or~~ and which equipment includes the appropriate special seismic certifications.*

#### *324.0 Diesel-Powered Emergency Generators. [OSHPD 1, 1R, 2, 3, 4 & 5]*

*The minimum horizontal distance between diesel-powered emergency electrical generator exhaust and operable doors, windows and intake openings shall be 30 feet. The minimum horizontal distance from the generator exhaust to a property line shall be 15 feet (4.57 m) or per the requirements of the local AHJ, whichever is greater.*

#### *325.0 Alternate Source of Power for Safe Temperatures. [OSHPD 2]*

*Mechanical equipment required to maintain a safe temperature for residents shall be powered by an alternate source of power per California Electrical Code Section 517.1.*

#### Notation:

Authority: Health and Safety Code, Sections 1275, 129675-130070

Reference(s): Health and Safety Code, Section 129850

### ITEM 2CHAPTER 4 VENTILATION AIR

#### 402.1 Occupiable Spaces.

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**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~~.~~ ***[OSHPD 1, 1R, 2, 3, 4 & 5]***-*2013, through addendum ae. 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 ASHRAE 170. The text of ASHRAE 170 shall be modified as follows:*

*(1) ASHRAE 170. Section 6.1.2.1 -- Not adopted.*

*(2) ASHRAE 170. Section 6.3.1.2 – Modify as follows: Relief air discharge shall be at least 10 feet from any outside air intake.*

*(~~2~~3) ASHRAE 170. Section 6.3.2 -- Not adopted.*

*(~~3~~4) ASHRAE 170. Table 6.4 -- Not adopted.*

*(~~4~~5) ASHRAE 170. Section 6.4-6.4.4 -- Not adopted.*

*(~~5~~6) ASHRAE 170. Section 6.9 -- Not adopted.*

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

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

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

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

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

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

#### Notation:

Authority: Health and Safety Code, Sections 1275, 129675-130070

Reference(s): Health and Safety Code, Section 129850

### ITEM 3CHAPTER 4 VENTILATION AIR

#### *407.0 Ventilation System Details. [OSHPD 1, 1R, 2, 3, 4 & 5]407.1 General.*

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***407.1.2*** *Fans serving exhaust systems shall be located at the discharge end of the system. Ductwork within the building shall be under negative pressure. The ventilation rates shown in Table 4-A shall be considered as minimum acceptable rates and shall not be construed as precluding the use of higher ventilation rates if they are required to meet design conditions.*

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

***407.2.1 Outdoor Air Intakes.*** *Outdoor air intakes shall be located at least 25 feet (7.62 m) from exhaust outlets of ventilating systems, combustion equipment stacks, medical-surgical vacuum systems, cooling towers, and areas that may collect vehicular exhaust or other noxious fumes. Plumbing vents shall be located in relation to outdoor air intakes per California Plumbing Code. The bottom of outdoor air intakes shall be located as high as practicable, but not less than 10 feet (3048 mm) above ground level. If installed above the roof, they shall be located 18 inches (457 mm) above roof level or 3 feet (914 mm) above a flat roof where heavy snowfall is anticipated. Outside air intakes located in a below grade areaway shall have the top of the areaway extend a minimum of 10 feet (3048 mm) above grade.*

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#### *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*** *Air supplied to operating rooms, cesarean operating rooms, cardiac catheterization labs, cystoscopy rooms, delivery rooms, and ~~nurseries~~ class 3 imaging* *shall be delivered at ~~or near~~ 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, class 3 imaging 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.*

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#### Notation:

Authority: Health and Safety Code, Sections 1275, 129675-130070

Reference(s): Health and Safety Code, Section 129850

### ITEM 4CHAPTER 4 VENTILATION AIR

#### *408.0 Filters. [OSHPD 1, 1R, 2, 3, 4 & 5]*

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***408.1.5*** *Filter bank No. 1 shall be located upstream of the air-conditioning equipment. Filter bank No. 2 and filter bank 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:*** *~~Dry steam-type h~~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. ~~Dry steam is that which is defined in the ASHRAE HVAC Systems and Equipment Handbook.~~ Humidification shall be in accordance with 320.1.1.*

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

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***408.4.2*** *Noncentral recirculating ~~air systems serving individual~~ room~~s~~ units shall ~~comply with Table 4-B~~ have a filter with minimum efficiency reporting value (MERV) of 6 based on ASHRAE 52.2.*

#### Notation:

Authority: Health and Safety Code, Sections 1275, 129675-130070

Reference(s): Health and Safety Code, Section 129850

### ITEM 5CHAPTER 4 VENTILATION AIR, *TABLE 4-A*

***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 treatment/exam room* | *Negative* | *2* | *12* | *Yes* | *No* | *~~NR~~max60* | *~~NR~~70-75/21-24* |
| *…* |  |  |  |  |  |  |  |
| *Blood draw/phlebotomy* | *NR* | *2* | *6* | *NR* | *NR* | *NR* | *~~NR~~70-75/21-24* |
| *…* |  |  |  |  |  |  |  |
| *Cardiac catheterization lab* | *Positive* | *3* | *15* | *NR* | *No* | *Max 60* | *70-75/21-24* |
| *Class 1 imaging*  | *NR* | *2* | *6* | *NR* | *NR* | *Max 60* | *72-78/22-26* |
| *Class 2 imaging (d),(p)* | *Positive* | *3* | *15* | *NR* | *No* | *Max 60* | *70-75/21-24* |
| *Class 3 imaging (m), (o)* | *Positive* | *4* | *20* | *NR* | *No* | *20-60* | *68-75/20-24* |
| *…* |  |  |  |  |  |  |  |
| Critical and intensive care (ac) | *NR* | *2* | *6* | *NR* | *No* | *30-60* | *70-75/21-24* |
| *CT Scan* | *NR* | *2* | *6* | *NR* | *NR* | *max60* | *~~NR~~70-75/21-24* |
| *…* |  |  |  |  |  |  |  |
| *Electroconvulsive therapy procedure room* | *Positive* | *3* | *15* | *NR* | *~~NR~~No* | *~~NR~~20-60* | *~~NR~~70-75/21-24* |
| *…* |  |  |  |  |  |  |  |
| *Fast track room* | *NR* | *2* | *6* | *NR* | *NR* | *NR* | *~~NR~~70-75/21-24* |
| *Fluoroscopy room* | *Negative* | *2* | *6* | *Yes* | *No* | *NR* | *~~NR~~70-75/21-24* |
| *…* |  |  |  |  |  |  |  |
| *Infusion room* | *Positive* | *2* | *6* | *NR* | *NR* | *NR* | *~~NR~~70-75/21-24* |
| *…* |  |  |  |  |  |  |  |
| *Interventional imaging**procedure room* | *Positive* | *5* | *15* | *NR* | *~~NR~~No* | *~~NR~~20-60* | *~~NR~~70-75/21-24* |
| *…* |  |  |  |  |  |  |  |
| *Lactation* | *NR* | *2* | *6* | *NR* | *NR* | *NR* | *~~NR~~70-75/21-24* |
| *…* |  |  |  |  |  |  |  |
| *MRI room* | *NR* | *2* | *6* | *NR* | *NR* | *NR* | *~~NR~~70-75/21-24* |
| *…* |  |  |  |  |  |  |  |
| *Newborn intensive care**formula room* | *Positive* | *2* | *10* | *NR* | *N~~O~~o* | *NR* | *~~NR~~70-75/21-24* |
| *…* |  |  |  |  |  |  |  |
| *Nuclear medicine (Gamma, PET, SPECT)* | *Negative* | *2* | *6* | *Yes* | *No* | *NR* | *~~NR~~70-75/21-24* |
| *…* |  |  |  |  |  |  |  |
| *Patient holding preparation* | *NR* | *2* | *6* | *NR* | *No* | *NR* | *~~NR~~70-75/21-24* |
| *…* |  |  |  |  |  |  |  |
| *Pediatric play area* | *NR* | *2* | *6* | *NR* | *NR* | *NR* | *~~NR~~70-75/21-24* |
| *…* |  |  |  |  |  |  |  |
| *HD ante room (b)* | *Positive* | *NR* | *~~NR~~30* | *NR* | *NR* | *<60* | *≤68/≤20* |
| *…* |  |  |  |  |  |  |  |
| *Non-HD segregated compounding area(ad)* | *NR* | *NR* | *NR* | *NR* | *NR* | *NR* | *NR* |
| *…* |  |  |  |  |  |  |  |
| *Pre-screening area* | *Negative* | *2* | *12* | *Yes(q)* | *NR* | *NR* | *~~NR~~70-75/21-24* |
| *…* |  |  |  |  |  |  |  |
| *Recreation/activity room* | *NR* | *2* | *6* | *NR* | *NR* | *NR* | *~~NR~~70-75/21-24* |
| *…* |  |  |  |  |  |  |  |
| *Seclusion room* | *NR* | *2* | *6* | *NR* | *NR* | *NR* | *~~NR~~70-75/21-24* |
| *…* |  |  |  |  |  |  |  |
| *Shower room* | *Negative* | *NR* | *10* | *Yes* | *No* | *NR* | *~~NR~~70-75/21-24* |
| *…* |  |  |  |  |  |  |  |
| *Special purpose room**(SNF & ICF only)* | *NR* | *2* | *6* | *Yes* | *NR* | *NR* | *~~NR~~70-75/21-24* |
| *Speech therapy/audiology room* | *NR* | *2* | *6* | *NR* | *NR* | *NR* | *~~NR~~70-75/21-24* |
| *…* |  |  |  |  |  |  |  |
| *Ultrasound room* | *NR* | *2* | *6* | *NR* | *NR* | *NR* | *~~NR~~70-75/21-24* |
| *…* |  |  |  |  |  |  |  |
| *Waiting area**(nuclear medicine)* | *Negative* | *2* | *12* | *Yes(q)* | *No* | *NR* | *~~NR~~70-75/21-24* |
| *Waiting area primary care clinic* | *Negative* | *2* | *~~10~~12* | *Yes(q)* | *NR* | *NR* | *~~NR~~70-75/21-24* |
| *…* |  |  |  |  |  |  |  |

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*b. 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 ~~exhausted~~ externally ~~through 99.97% HEPA filtration~~ 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.*

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f. *For operating rooms, cardiac catheterization labs, angiography rooms, cystoscopy rooms, delivery rooms, cesarean operating rooms, newborn intensive care, and ~~nurseries~~ 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.*

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*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 in the AII room to increase the equivalent room air exchanges; however, the minimum outdoor air changes of *Table 4-A* are still required. AII rooms that are retrofitted from standard patient rooms from which it is impractical to exhaust directly outdoors may be recirculated with air from the AII room, provided that air first passes through a HEPA filter. When the AII room is not utilized 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 6 ach. Switching controls for reversible airflow provisions shall not be permitted. *~~The anteroom shall have positive air pressure in relation to the airborne infection isolation room.~~* *A door louver, transfer grille, or other acceptable means may be provided to allow for airflow from the anteroom to the airborne infection isolation room.*

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*ac. 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.*

*ad. The requirements for the non-HD segregated compounding area shall meet the minimum requirements for the room which it is located.*

#### Notation:

Authority: Health and Safety Code, Sections 1275, 129675-130070

Reference(s): Health and Safety Code, Section 129850

### ITEM 6CHAPTER 4 VENTILATION AIR, *TABLE 4-B*



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*6. 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, 129675-130070

Reference(s): Health and Safety Code, Section 129850

### ITEM 7CHAPTER 4 VENTILATION AIR, *TABLE 4-C*

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*4. 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, 129675-130070

Reference(s): Health and Safety Code, Section 129850