

**INITIAL EXPRESS TERMS  
FOR  
PROPOSED BUILDING STANDARDS  
OF THE  
DIVISION OF THE STATE ARCHITECT–STRUCTURAL SAFETY (DSA-SS AND DSA-SS/CC)  
  
REGARDING PROPOSED CHANGES TO  
2019 CALIFORNIA MECHANICAL CODE  
CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 4**

The California Building Standards Code (California Code of Regulations, Title 24, Part 1, 2, 2.5, 3, 4, 5, 6, 8, 9, 10, 11, and 12) is published in its entirety every three years and is applicable to all buildings for which an application for a building permit is made during the Code's effective period. Each triennial edition of the California Building Standards Code becomes effective 180 days after its publication.

These proposed regulations will make effective the 2018 edition of the Uniform Mechanical Code (UMC) as the 2019 edition California Mechanical Code (CMC), for application by DSA-SS (Division of the State Architect–Structural Safety) to public elementary and secondary schools, community colleges, and state-owned or state-leased essential services buildings.

These proposed regulations will also make effective the 2018 edition of the UMC as the 2019 edition CMC, for application by DSA-SS/CC (Division of the State Architect–Structural Safety/Community Colleges) to community colleges, which a community college district may elect to use in lieu of standards promulgated by DSA-SS (refer to Education Code Section 81053).

Further, these proposed regulations will repeal the 2015 edition UMC articles adopted as the 2016 edition CMC.

**LEGEND FOR EXPRESS TERMS**

1. Existing California amendments or code language being modified are in italics when they appear in the model code text: All such language appears in *italics*, modified language is underlined.
2. New California amendments: All such language appears underlined and in italics.
3. Repealed text: All such language appears in ~~striketrough~~.

**CHAPTER 1  
ADMINISTRATION**

Carry forward Chapter 1, Division I (California Administration) of the 2016 triennial edition of the CMC for publication in the 2019 triennial edition of the CMC, with DSA proposed editorial amendments as shown below:

Adopting Agency	DSA-SS	DSA-SS/CC	Comments
Adopt Entire Chapter as amended (amended sections listed below)	X	X	
<i>1.1.0</i>	X	X	
<i>1.1.1</i>	X	X	
<i>1.1.2</i>	X	X	
<i>1.1.3</i>	X	X	
<i>1.1.3.1</i>	X	X	
<i>1.1.3.2</i>	X	X	

1.1.4	X	X	
1.1.5	X	X	
1.1.6	X	X	
1.1.7	X	X	
1.1.7.1	X	X	
1.1.7.2	X	X	
1.1.7.3	X	X	
1.1.8	X	X	
1.1.9	X	X	
1.1.10	X	X	
1.1.11	X	X	
1.1.12	X	X	
1.9.0	X	X	
1.9.2	X	X	
1.9.2.1	X		
1.9.2.1.1	X		
1.9.2.2	X	X	
1.9.2.2.13		X	
1.9.2.4		X	

**DIVISION I**  
**CALIFORNIA ADMINISTRATION**  
**DIVISION I**  
**CALIFORNIA ADMINISTRATION**

**1.1.0 General.**

**1.1.1 Title.** *These regulations shall be known as the California Mechanical Code, may be cited as such and will be referred to herein as “this code.” The California Mechanical Code is Part 4 of thirteen parts of the official compilation and publication of the adoption, amendment, and repeal of building regulations to the California Code of Regulations, Title 24, also referred to as the California Building Standards Code. This part incorporates by adoption the 2018~~5~~ Uniform Mechanical Code of the International Association of Plumbing and Mechanical Officials with necessary California amendments.*

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**1.9.2 Division of the State Architect – Structural Safety.**

~~**1.9.2.1 Adopting Agency Identification.** *The provisions of this code applicable to buildings identified in this Subsection 1.9.2.2 will be identified in the Matrix Adoption Tables under the acronym DSA-SS.*~~

**1.9.2.12 DSA-SS (Division of the State Architect – Structural Safety).**

**Application** – *Public elementary and secondary schools, community college buildings, and state-owned or state-leased essential services buildings.*

**Enforcing Agency** – *Division of the State Architect – Structural Safety (DSA-SS).*

*The Division of the State Architect has been delegated the responsibility and authority by the Department of General Services to review and approve the design and oversee and observe the construction of public elementary and secondary schools, community colleges, and state-owned or state-leased essential services buildings.*

**Authority Cited** – *Education Code Sections 17310 and 81142, and Health & Safety Code Section 16022.*

**References** – Education Code Sections 17280 through 17317 and 81130 through 81147, and Health & Safety Code Sections 16000 through 16023.

**1.9.2.1.1 Adopting Agency Identification.**

The provisions of this code applicable to buildings identified in this Subsection 1.9.2.1 will be identified in the Matrix Adoption Tables under the acronym DSA-SS.

~~**1.9.2.3 Adopting Agency Identification.** The provision of this code applicable to buildings identified in this Subsection 1.9.2.4 will be identified in the Matrix Adoption Tables under the acronym DSA-SS/CC.~~

**1.9.2.24. DSA-SS/CC (Division of the State Architect – Structural Safety/Community Colleges).**

**Application** – Community Colleges.

The Division of the State Architect has been delegated the authority by the Department of General Services to promulgate alternate building standards for application to community colleges, which a community college may elect to use in lieu of standards promulgated by DSA-SS in accordance with Section 1.9.2.12. Refer to Title 24, Part 2, Section 1.9.2.24.

**Enforcing Agency** – Division of the State Architect – Structural Safety/Community Colleges (DSA-SS/CC).

The Division of the State Architect has been delegated the authority by the Department of General Services to review and approve the design and oversee and observe the construction of community colleges electing to use the alternative building standards as provided in this section.

**Authority Cited** – Education Code Section 81053.

**References** – Education Code Sections 81052, 81053, and 81130 through 81147.

**1.9.2.2.1 Adopting Agency Identification.**

The provisions of this code applicable to buildings identified in this Subsection 1.9.2.2 will be identified in the Matrix Adoption Tables under the acronym DSA-SS/CC.

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**DIVISION II**  
**DIVISION II**  
**ADMINISTRATION**

**101.0 General.**

**101.1 Title.** This document shall be known as the “California Mechanical CodeUniform Mechanical Code”, may be cited as such, and will be referred to herein as “this code.”

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**CHAPTER 2**  
**DEFINITIONS**

Repeal Chapter 2 (Definitions) of the 2015 edition UMC.  
Adopt Chapter 2 (Definitions) of the 2018 edition UMC with existing California amendments carried forward for publication in the 2019 triennial edition of the CMC.

**CHAPTER 3**  
**GENERAL REQUIREMENTS**

Repeal Chapter 3 (General Requirements) of the 2015 edition UMC.  
Adopt Chapter 3 (General Requirements) of the 2018 edition UMC with existing California amendments carried forward for publication in the 2019 triennial edition of the CMC.

Adopting Agency	DSA-SS	DSA-SS/CC	Comments
Adopt Entire Chapter	✗	✗	
Adopt Entire Chapter as amended (amended sections listed below)	✕	✕	
303.7	✕	✕	
312.1	✕	✕	

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**312.1 General.** Water supply, sanitary drainage, and backflow protection shall be in accordance with the *California Plumbing Code* ~~Plumbing Code~~.

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#### CHAPTER 4 VENTILATION AIR SUPPLY

Repeal Chapter 4 (Ventilation Air Supply) of the 2015 edition UMC.  
Adopt Chapter 4 (Ventilation Air Supply) of the 2018 edition UMC with existing California amendments carried forward for publication in the 2019 triennial edition of the CMC.

Adopting Agency	DSA-SS	DSA-SS/CC	Comments
Adopt Entire Chapter	✗	✗	
Adopt Entire Chapter as amended (amended sections listed below)	✕	✕	
401.2	✕	✕	
401.2 <i>Exceptions 1 &amp; 2</i>	✕	✕	
401.2.1	✕	✕	
402.1	✕	✕	
Table 402.1	✕	✕	

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**[Relocated from 503.3] 401.2 Filters. [DSA-SS & DSA-SS/CC]** *In mechanically ventilated buildings, provide regularly occupied areas of the building with air filtration media for outside and return air that provides at least a Minimum Efficiency Reporting Value (MERV) of 138. MERV 138 filters shall be installed prior to occupancy, and recommendations for maintenance with filters of the same value shall be included in the operation and maintenance manual in compliance with Chapter 5, Division 5.5. of the California Green Building Standards Code (CALGreen).*

**Exceptions:**

1. An ASHRAE 10-percent to 15-percent efficiency filter shall be permitted for an HVAC unit ~~meeting the 2013 California Energy Code~~ having 60,000 Btu/h (17.6 kW) or less capacity per fan coil, if the energy use of the air delivery system is 0.4 W/cfm [848 W/(m<sup>3</sup>/s)] or less at design air flow.
2. Existing mechanical equipment.

**[Relocated from 503.3.1] 401.2.1 Labeling.** *Installed filters shall be clearly labeled by the*

*manufacturer indicating the MERV rating.*

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**402.1 Occupiable Spaces.** Occupiable spaces...with this chapter. *Ventilation air supply requirements for occupancies...*

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## CHAPTER 5 EXHAUST SYSTEMS

Repeal Chapter 5 (Exhaust Systems) of the 2015 edition UMC.

Adopt Chapter 5 (Exhaust Systems) of the 2018 edition UMC with existing DSA and California amendments carried forward for publication in the 2019 triennial edition of the CMC.

Adopting Agency	DSA-SS	DSA-SS/CC	Comments
Adopt Entire Chapter as amended (amended sections listed below)	X	X	
<del>503.3</del>	<del>X</del>	<del>X</del>	
<del>503.3 Exception 1 &amp; 2</del>	<del>X</del>	<del>X</del>	
<del>503.3.1</del>	<del>X</del>	<del>X</del>	
<del>511.1.6</del> 511.1.6	X	X	
<del>512.2.5</del>	<del>X</del>	<del>X</del>	
513.2.2	X	X	
513.2.2 Exception 2	X	X	
513.3.2	<del>X</del>	<del>X</del>	
513.11	<del>X</del>	<del>X</del>	
513.11.1	<del>X</del>	<del>X</del>	
516.2.7 Exception	<del>X</del>	<del>X</del>	
516.2.9(4)	<del>X</del>	<del>X</del>	

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[Note: Code section references 503.3 and 503.3.1 are proposed for relocation to Chapter 4, Ventilation Air, to new section numbers 401.2 and 401.2.1.]

**503.3 Filters. [DSA-SS & DSA-SS/CC]** *In mechanically ventilated buildings, provide regularly occupied areas of the building with air filtration media for outside and return air that provides at least a Minimum Efficiency Reporting Value (MERV) of 8. MERV 8 filters shall be installed prior to occupancy, and recommendations for maintenance with filters of the same value shall be included in the operation and maintenance manual in compliance with Chapter 5, Division 5.5. of the California Green Building Standards Code (CALGreen).*

**Exceptions:**

- ~~1. An ASHRAE 10-percent to 15-percent efficiency filter shall be permitted for an HVAC unit meeting the 2013 California Energy Code having 60,000 Btu/h (17.6 kW) or less capacity per fan coil, if the energy use of the air delivery system is 0.4 W/cfm [848 W/(m<sup>3</sup>/s)] or less at design air flow.~~
- ~~2. Existing mechanical equipment.~~

**503.3.1 Labeling.** *Installed filters shall be clearly labeled by the manufacturer indicating the MERV*

~~rating.~~

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### 513.0 Fire-Extinguishing Equipment

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**513.2.2 Standard.** *Commercial cooking equipment that produce grease laden vapors shall be provided with a Type I Hood, in accordance with this Code, and an automatic fire extinguishing system that is listed and labeled for its intended use as follows:*

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#### **Exceptions:**

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(2) **[DSA-SS and DSA-SS/CC]** *Public schools kitchens, without deep-fat fryers, shall be upgraded to a UL 300, Fire Testing of Fire Extinguishing Systems for Protection of Restaurant Cooking Equipment, compliant system during state-funded modernization projects that are under the jurisdiction of the Division of the State Architect.*

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## **CHAPTER 6 DUCT SYSTEMS**

Repeal Chapter 6 (Duct Systems) of the 2015 edition UMC.  
Adopt Chapter 6 (Duct Systems) of the 2018 edition UMC with existing California amendments carried forward for publication in the 2019 triennial edition of the CMC.

## **CHAPTER 7 COMBUSTION AIR**

Repeal Chapter 7 (Combustion Air) of the 2015 edition UMC.  
Adopt Chapter 7 (Combustion Air) of the 2018 edition UMC without amendment for publication in the 2019 triennial edition of the CMC.

## **CHAPTER 8 CHIMNEYS AND VENTS**

Repeal Chapter 8 (Chimneys and Vents) of the 2015 edition UMC.  
Adopt Chapter 8 (Chimneys and Vents) of the 2018 edition UMC without amendment for publication in the 2019 triennial edition of the CMC.

## **CHAPTER 9 INSTALLATION OF SPECIFIC APPLIANCES**

Repeal Chapter 9 (Installation of Specific Appliances) of the 2015 edition UMC.  
Adopt Chapter 9 (Installation of Specific Appliances) of the 2018 edition UMC without amendment for publication in the 2019 triennial edition of the CMC.

**CHAPTER 10  
BOILERS AND PRESSURE VESSELS**

Repeal Chapter 10 (Boilers and Pressure Vessels) of the 2015 edition UMC.  
Adopt Chapter 10 (Boilers and Pressure Vessels) of the 2018 edition UMC without amendment for publication in the 2019 triennial edition of the CMC.

**CHAPTER 11  
REFRIGERATION**

Repeal Chapter 11 (Refrigeration) of the 2015 edition UMC.  
Adopt Chapter 11 (Refrigeration) of the 2018 edition UMC with existing California amendment carried forward for publication in the 2019 triennial edition of the CMC.

**CHAPTER 12  
HYDRONICS**

Repeal Chapter 12 (Hydronics) of the 2015 edition UMC.  
Adopt Chapter 12 (Hydronics) of the 2018 edition UMC without amendment for publication in the 2019 triennial edition of the CMC.

**CHAPTER 13  
FUEL GAS PIPING**

Repeal Chapter 13 (Fuel Gas Piping) of the 2015 edition UMC.  
Adopt Chapter 13 (Fuel Gas Piping) of the 2018 edition UMC without amendment for publication in the 2019 triennial edition of the CMC.

**CHAPTER 14  
PROCESS PIPING**

Repeal Chapter 14 (Process Piping) of the 2015 edition UMC.  
Adopt Chapter 14 (Process Piping) of the 2018 edition UMC without amendment for publication in the 2019 triennial edition of the CMC.

**CHAPTER 15  
SOLAR ENERGY SYSTEMS**

Repeal Chapter 15 (Solar Energy Systems) of the 2015 edition UMC.  
Adopt Chapter 15 (Solar Energy Systems) of the 2018 edition UMC without amendment for publication in the 2019 triennial edition of the CMC.

**CHAPTER 16  
STATIONARY POWER PLANTS**

Repeal Chapter 16 (Stationary Power Plants) of the 2015 edition UMC.

Adopt Chapter 16 (Stationary Power Plants) of the 2018 edition UMC without amendment for publication in the 2019 triennial edition of the CMC.

### **CHAPTER 17 REFERENCED STANDARDS**

Repeal Chapter 17 (Referenced Standards) of the 2015 edition UMC.  
Adopt Chapter 17 (Referenced Standards) 2018 edition UMC with California amendments carried forward for publication in the 2019 triennial edition of the CMC.

Adopting Agency	DSA-SS	DSA-SS/CC	Comments
Adopt Entire Chapter as amended (amended sections listed below)	X	X	
Table 1701.1	X	X	
Table 1701.2	X	X	

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

DSA is not proposing the adoption of Appendix A (Residential Plan Examiner Review Form for HVAC System Design) of the 2018 edition UMC. DSA did not adopt Appendix A (Residential Plan Examiner Review Form for HVAC System Design) of the 2015 edition UMC.

### **APPENDIX B PROCEDURES TO BE FOLLOWED TO PLACE GAS EQUIPMENT IN OPERATION**

DSA is not proposing the adoption of Appendix B (Procedures to be Followed to Place Gas Equipment in Operation) of the 2018 edition UMC. DSA did not adopt Appendix B (Procedures to be Followed to Place Gas Equipment in Operation) of the 2015 edition UMC.

### **APPENDIX C INSTALLATION AND TESTING OF OIL (LIQUID) FUEL-FIRED EQUIPMENT**

DSA is not proposing the adoption of Appendix C (Installation and Testing of Oil [Liquid] Fuel-Fired Equipment) of the 2018 edition UMC. DSA did not adopt Appendix C (Installation and Testing of Oil [Liquid] Fuel-Fired Equipment) of the 2015 edition UMC.

### **APPENDIX D FUEL SUPPLY: MANUFACTURED/MOBILE HOME PARKS AND RECREATIONAL VEHICLE PARKS**

DSA is proposing to adopt Appendix D (Fuel Supply: Manufactured/Mobile Home Parks and Recreational Vehicle Parks) of the 2018 edition UMC. DSA adopted Appendix D (Fuel Supply: Manufactured/Mobile Home Parks and Recreational Vehicle Parks) of the 2015 edition UMC.

### **APPENDIX E**



## SUSTAINABLE PRACTICES

DSA is not proposing the adoption of Appendix E (Sustainable Practices) of the 2018 edition UMC. DSA did not adopt Appendix E (Sustainable Practices) of the 2015 edition UMC.

### APPENDIX F SIZING OF VENTING SYSTEMS AND OUTDOOR COMBUSTION AND VENTILATION OPENING DESIGN

DSA is not proposing the adoption of Appendix F (Sizing of Venting Systems and Outdoor Combustion and Ventilation Opening Design) of the 2018 edition UMC. DSA did not adopt Appendix F (Sizing of Venting Systems and Outdoor Combustion and Ventilation Opening Design) of the 2015 edition UMC.

### APPENDIX G EXAMPLE CALCULATION OF OUTDOOR AIR RATE

DSA is not proposing the adoption of Appendix G (Example Calculation of Outdoor Air Rate) of the 2018 edition UMC. DSA did not adopt Appendix G (Example Calculation of Outdoor Air Rate) of the 2015 edition UMC.

*(All existing amendments that are not revised above shall continue without any change)*

#### **Notation for [DSA-SS]**

**Authority:** Education Code § 17310 and 81142, and Health and Safety Code §16022.

**References:** Education Code §§ 17280–17317, and 81130–81147, and Health and Safety Code §§16000–16023.

#### **Notation for [DSA-SS/CC]**

**Authority:** Education Code § 81053.

**Reference:** Education Code §§ 81052, 81053, and 81130–81147.